

ADDENDUM NO. 2

DATE: September 15, 2023

PROJECT NAME: HopeWorks Counseling Renovation

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of the Contract Documents and modifies or supplements the Project Manual or the Drawings as indicated below. All other provisions of the Contract Documents shall remain unchanged. This Addendum is hereby made a part of the Contract Documents to the same extent as those provisions contained in the original documents and all itemized listings thereof. Bidders shall acknowledge receipt of this Addendum in the appropriate space on the Bid form.

I. CLARIFICATIONS

The following responses are provided to written questions:

- A. What will be the location of the temporary power?
Response: Temporary power may be pulled from the adjacent building to the south, owned by HopeWorks.
- B. Manufacturer stated that the model/design shown in the plans are no longer available from the manufacturer for the picnic tables. Are substitutions acceptable?
Response: Yes, similar style from other manufacturers are acceptable.

II. PROJECT MANUAL

- A. Add attached Section 101419 - DIMENSIONAL LETTER SIGNAGE to the Project Manual.
- B. Refer to the attached Prior Approval for Lighting, submitted by Schroeder Sales. This package has been approved as an appropriate substitution.

III. DRAWINGS

- A. Refer to SHEET A301 ROOF PLAN & DETAILS
 - a. Add General Sheet Note to read:
'D. REMOVE EXISTING ROOF EQUIPMENT, INCLUDING 4 RTUs, FLUES, PIPE PENETRATIONS, ETC. AND RELATED UTILITIES. PATCH OPENINGS WITH ROOFING SYSTEM TO MATCH EXISTING.'
 - b. Refer to Reference Keynote 08.11, revise to read:
'08.11 EXISTING SKYLIGHT TO REMAIN AND BE REPAIRED. MISSING GLAZING FROM NORTHERN SKYLIGHT IS ON THE ROOF AND IS INTACT. INSTALL 2 MISSING PANES WITH APPROPRIATE SEALANT TO MAINTAIN WATERPROOF CONDITIONS.'
 - c. Refer to ADD2-SK1 for additional information.
- B. Refer to SHEET A401 EXTERIOR ELEVATIONS
 - a. Replace this sheet in its entirety.
 - b. Refer to Detail 2 East Elevation, revise Window Type 'F' to end 3'-0" AFF. New exterior wall below to be metal stud construction with stucco finish. See 4/A501 sim.

- c. Refer to Detail 3 West Elevation, add 12" and 24" high aluminum dimensional letter signage per new Reference Keynotes 10.10 and 10.11. Provide number of letter/numbers as indicated. The name of the building (indicated by XXXXXXXX) is to be determined. Refer to the new Specification Section 101419 - DIMENSIONAL LETTER SIGNAGE.
- C. Refer to SHEET A601 DOOR & WINDOW SCHEDULES & DETAILS
 - a. Refer to Door Schedule, change door Number 141 to 001
 - b. Add the following note to Door Type 'D' to read:
'SEE 9/A003 FOR GATE DETAILS.'
- D. Refer to SHEET F101 FINISH PLAN
 - a. Add the following Rubber Base Specification to Floor Finish 'LVT':
'INSTALL 4" RUBBER COVE BASE (RB) ON ALL WALL WHERE LVT IS SPECIFIED.'
 - b. Refer to WT-2, add the following specification:
'Series ARTICULO
COLOR: EDITORIAL WHITE AR06'
- E. Refer to SHEET MP001 MECHANICAL AND PLUMBING COVER SHEET
 - a. Replace the sheet in its entirety. Refer to Addendum 2 notes.
- F. Refer to SHEET P401 ENLARGED PLUMBING PLANS
 - a. Replace this sheet in its entirety.
 - b. Refer to Detail 1, floor drains have been added to Restrooms 102 and 103.
- G. Refer to revised SHEET MP602 PLUMBING SCHEDULES
 - a. Replace this sheet in its entirety.
 - b. Refer to Plumbing Fixture Schedule, update specification for Fixture P3 Lavatory.
- H. Refer to revised SHEET E001 ELECTRICAL COVER SHEET
 - a. Replace the sheet in its entirety. Refer to Addendum 2 notes.
- I. Refer to new SHEET E004 ELECTRICAL SPECIFICATIONS
 - a. Add this new sheet.
 - b. Refer to new specifications regarding voice/data cabling and equipment.
- J. Refer to revised SHEET E101 ELECTRICAL PLANS
 - a. Replace this sheet in its entirety.
 - b. Refer to Door 104B, add a card reader (CR) on the Corridor side of the door to coordinates with the Hardware Schedule. This door is to have 'Read-In/Read-Out' capabilities.
 - c. Refer to new 'VOICE/DATA NOTES' to be added to the scope of the project.



Mullen Heller Architecture, PC
1718 Central Avenue SW | Suite D | Albuquerque, NM 87104
phone (505) 268-4144

IV. ATTACHMENTS

Specification SECTION 101419 - DIMENSIONAL LETTER SIGNAGE, dated 9/15/23
Approved 'Prior Approval' Lighting Package from Schroeder Sales, dated 9/14/23
Drawing ADD2-SK1 Existing Roof Plan, dated 9/15/23
Sheet A401 Exterior Elevations, dated 9/15/23
Sheet MP001 Mechanical and Plumbing Cover Sheet, dated 9/15/23
Sheet P401 Enlarged plumbing Plans, dated 9/15/23
Sheet MP602 Plumbing Schedules, dated 9/15/23
Sheet E001 Electrical Cover Sheet, dated 9/15/23
Sheet E004 Electrical Specifications, dated 9/15/23
Sheet E101 Electrical Plans, dated 9/15/23

END OF ADDENDUM NO. 2

SECTION 101419 - DIMENSIONAL LETTER SIGNAGE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Cast dimensional characters.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For dimensional letter signs.
 - 1. Include fabrication and installation details and attachments to other work.
 - 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 - 3. Show message list, typestyles, graphic elements, and layout for each sign at least half size.
- C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
 - 1. Aluminum.
- D. Samples for Verification: For each type of sign assembly showing all components and with the required finish, in manufacturer's standard size unless otherwise indicated and as follows:
 - 1. Dimensional Characters: Full-size Sample of each type of dimensional character.
 - 2. Exposed Accessories: Full-size Sample of each accessory type.
- E. Sign Schedule: Use same designations specified or indicated on Drawings or in a sign schedule.
- F. Include structural analysis calculations for signs as needed; signed and sealed by qualified professional engineer.

1.04 INFORMATIONAL SUBMITTALS

- A. Sample Warranty.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals.

1.06 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of finishes beyond normal weathering.
 - b. Separation or delamination of sheet materials and components.
 - 2. Warranty Period: Five years from date of Substantial Completion.

1.07 QUALITY ASSURANCE

- A. Installer Qualifications: Employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain each sign type indicated from a single manufacturer.
- C. Regulatory Requirements: Comply with applicable provisions in ADA Accessibility Guidelines.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: For exterior fabricated channel dimensional characters, allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- B. Structural Performance: Signs and supporting elements shall withstand the effects of gravity and other loads within limits and under conditions indicated.
 - 1. Include structural analysis calculations for signs as needed; signed and sealed by qualified professional engineer.

2.02 DIMENSIONAL CHARACTERS

- A. Cast Characters: Characters with uniform faces and side returns, sharp corners, and precisely formed lines and profiles, formed free from warp and distortion; internally braced for stability and for securing fasteners; and as follows.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ACE Sign Systems, Inc.
 - b. A. R. K. Ramos Signage Systems.
 - c. Metallic Arts.
 - d. Approved Equal.

2. Character Material: Cast aluminum.
3. Material Thickness: Manufacturer's standard for size and design of character.
4. Character Height: As indicated in Drawings.
5. Typeface: As indicated in Drawings.
6. Finishes:
 - a. Integral Aluminum Finish: Clear anodized.
 - b. Anodized color as selected by Architect from manufacturer's full range of industry colors and densities.
7. Mounting: Concealed studs.

2.03 DIMENSIONAL CHARACTER MATERIALS

- A. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; with strength and durability properties of Alloy 5005-H32.
- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; with strength and durability properties of Alloy 6063-T5.
- C. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for finish indicated.
- D. Paints and Coatings for Sheet Materials: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated.

2.04 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signage, noncorrosive and compatible with each material joined, and complying with the following:
 1. Use concealed fasteners and anchors unless indicated to be exposed.
 2. For exterior exposure, furnish stainless-steel devices unless otherwise indicated.
 3. Exposed Metal-Fastener Components, General:
 - a. Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.
- B. Adhesive: As recommended by sign manufacturer.

2.05 FABRICATION

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
3. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
4. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
5. Internally brace dimensional characters for stability, to meet structural performance loading without oil-canning or other surface deformation, and for securing fasteners.
6. Provide rabbets, lugs, and brackets necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.
7. Castings: Fabricate castings free of warp, cracks, blowholes, pits, scale, sand holes, and other defects that impair appearance or strength. Grind, wire brush, sandblast, and buff castings to remove seams, gate marks, casting flash, and other casting marks before finishing.

2.06 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
 - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
 - 3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Dimensional Characters: Mount characters using standard fastening methods to manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - 1. Flush Mounting: Mount characters with backs in contact with wall surface.
- C. Mounting Methods:
 - 1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
- D. Back Bar and Brackets: Remove loose debris from substrate surface and install backbar or bracket supports in position so that signage is correctly located and aligned.

3.03 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.

- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101419



Date: Sep 14, 2023

Schroeder Sales, Inc
215 Gold S.W.
Albuquerque NM 87102
Phone: (505) 764-1850
Fax: (505) 764-1920

Job Name
HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION
ALBUQUERQUE NM

Submittal Date
Sep 14, 2023

Architect:
MULLEN HELLER ARCHITECTURE
1718 Central Ave SW
Albuquerque NM 87104

Engineer:
BG BUILDINGWORKS
7007 Wyoming Blvd NE
Albuquerque NM 87109



Transmittal

Schroeder Sales, Inc
215 Gold S.W.
Albuquerque NM 87102
Phone: (505) 764-1850
From: Petra Zavakos

Project HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION
24379

Quote# SSI23-55878

Location ALBUQUERQUE NM
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input checked="" type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type

MFG

Part

PRIOR SUBMITTAL - 09/14/2023

LIGHTING FIXTURES


P1	ARANCIA LIGHTING	P73S-4-R-0-N-C-C-1-U-0-MOUNTING OPTION-5-MSF-MSF-JC12
P2	BARBICAN ARCHITECTURAL PRO	ARF-110-36D-16H-MSF-ACM-UNV-MSF- MSF-4000K-90-3850LM-SCDL- S010V10
P3	COOPER	PRLX-205-40K-LL5-UNV-STD-MSF-LF- WHHR-SR-MSF
P4	NEORAY	QS-S124DP-C-795D-8-40-C4-CEILING TYPE-8F0-1-U-DD-F-W
P4E	NEORAY	QS-S124DP-C-795D-8-40-C4-CEILING TYPE-8F0-1-B2-U-DD-F-W
P5	SPI LIGHTING / THE BUKAS LIGHTI	AIP12255/AIP12256-LIGHT SOURCE- 120-277V-4000K-DF_DIM1-DF_AC- OAH-SAP-MSF
P5E	SPI LIGHTING / THE BUKAS LIGHTI	AIP12255/AIP12256-LIGHT SOURCE- 120-277V-4000K-DF_DIM1-DF_AC- OAH-SAP-MSF-EMR
	Item Note: Shape per plans	
R1	SPITZER LIGHTING	BP2-24-60LC-U-CC
R2	NEORAY	QS-S124DR-S-795D-8-CEILING TYPE- 8F0-1-U-DD-F-W
R3	NEORAY	QS-S124DR-S-1020D-8-CEILING TYPE-8F0-1-U-DD-A-W
S	HALO	HU1148D9SP
S2	EVERGREEN LIGHTING	SHVNY-25LED-MW-WF-24"-CCT
X1	SURELITES	LPX7
X2	SURELITES	LPX7
X3	SURELITES	LPX7



Transmittal

Schroeder Sales, Inc
215 Gold S.W.
Albuquerque NM 87102
Phone: (505) 764-1850
From: Petra Zavakos

Type	MFG	Part
X4	SURELITES	SELHP100R3
X5	ISOLITE	RLP-G-U-WH-MTEB-SD
ZB1	EVERGREEN LIGHTING	COL-B-48"-4C-22W-9-WF-CCT
ZS1	SPITZER LIGHTING	ERS-0609L-R-5CC
ZS1E	SPITZER LIGHTING	ERS-0609L-R-5CC / BLD-CM15H-YYY
ZW1	EVERGREEN LIGHTING	BX-12X6-LR-12L-MN-WF-TBL-WET-41K
ZX1	ISOLITE	ELED-EM-BZ-MB

Submitted by Schroeder Sales, Inc		Catalog Number: PRIOR SUBMITTAL - 09/14/2023	Type:
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Notes:	SSI23-55878
<div style="border: 2px solid red; padding: 100px; text-align: center;"><p>PRIOR SUBMITTAL HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 09/14/2023</p></div>			




Date: Sep 14, 2023

Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING
RENOVATION 24379

LIGHTING FIXTURES

Bid Date: Sep 26, 2023

Submittal Date: Sep 14, 2023

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: P73S-4-R-0-N-C-C-1-U-0-MOUNTING OPTION-5-MSF-MSF-JC12 Notes:	Type: P1 SS123-55878
---	--	--	--



**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

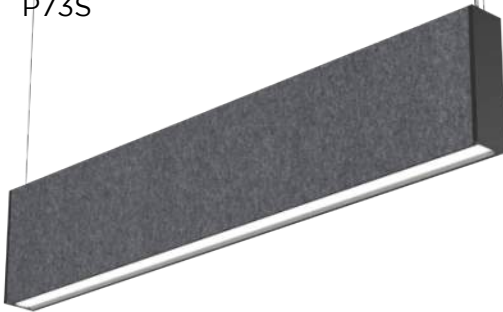
P73S-4-R-0-N-C-1-U-0-MOUNTING
OPTION-5-MSF-MSF-JC12

Notes:**Type:****P1**

SSI23-55878

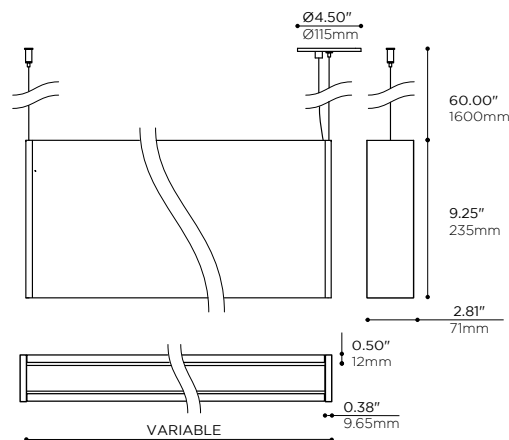
STELLA S

P73S



Ideal for open spaces and high ceilings, this slick linear integrates sound attenuation and lighting. Available in multiple lengths with direct and indirect light sources.

Idéal pour les espaces ouverts et les plafonds hauts, ce luminaire réunit l'atténuation de bruits et la lumière. Disponible en plusieurs longueurs, cet appareil offre une lumière directe et indirecte.



SHARED DIMENSIONS, SEE PRODUCT GUIDES FOR MORE INFO •
DIMENSIONS COMMUNES, POUR PLUS D'INFO VOIR GUIDES PRODUIT.

**PRODUCT CODE • CODE DE PRODUIT****MODEL • MODÈLE****P73S****NOMINAL LUMINAIRE LENGTH • LONGUEUR NOMINALE DU LUMINAIRE**

-2	24" • 610mm
-3	36" • 914mm
-4	48" • 1219mm
-5	60" • 1524mm
-6	72" • 1829mm
-7	84" • 2134mm
-8	96" • 2438mm

LENS OPTION 1 • OPTION DE LENTILLE 1

-R REGRESSED, 105° BEAM, OFFERS A LUMEN OUTPUT OF APPROX. 3000lm PER 4FT
EN RETRAIT, FAISCEAU DE 105°, RENDU LUMINEUX D'ENVIRON 3000lm POUR 4PI

-C CONVEX, 90° BEAM, OFFERS A LUMEN OUTPUT OF APPROX. 4500lm PER 4FT
CONVEXE, FAISCEAU DE 90°, RENDU LUMINEUX D'ENVIRON 4500lm POUR 4PI

INDIRECT LIGHT SOURCE COLOR • COULEUR SOURCE LUMINEUSE INDIRECTE

-O NONE • AUCUNE

-C LED • DEL • 4000K 90 CRI

-N LED • DEL • 3500K 90 CRI

-W LED • DEL • 3000K 90 CRI

-I LED • DEL • 2700K 90 CRI

-X2 LED CUSTOM COLOR • DEL COULEUR SUR MESURE • (2700K / 6000K)²

² CONSULT FACTORY FOR AVAILABILITY, PRICE AND DELAY
² CONSULTER L'USINE POUR DISPONIBILITÉ, PRIX ET DÉLAIS

INDIRECT POWER CLASS* • CATÉGORIE DE PUISSANCE INDIRECTE*

-A 14 W/FT (1000mA) • 14 W/PI (1000mA)

-B 9 W/FT (667mA) • 9 W/PI (667mA)

-C 5 W/FT (334mA) • 5 W/PI (334mA)

-N N/A

* SEE TABLE ON THE NEXT PAGE FOR POWER CONSUMPTION AND LUMEN OUTPUT
* VOIR LA PAGE SUIVANTE POUR LE RENDU DE PUISSANCE ET LUMINEUX

DIRECT LIGHT SOURCE COLOR • COULEUR SOURCE LUMINEUSE DIRECTE

-O NONE • AUCUNE

-C LED • DEL • 4000K 90 CRI

-N LED • DEL • 3500K 90 CRI

-W LED • DEL • 3000K 90 CRI

-I LED • DEL • 2700K 90 CRI

-X2 LED CUSTOM COLOR • DEL COULEUR SUR MESURE • (2700K / 6000K)²**DIRECT POWER CLASS • CATÉGORIE DE PUISSANCE DIRECTE**

-A 14 W/FT (1000mA) • 14 W/PI (1000mA)

-B 9 W/FT (667mA) • 9 W/PI (667mA)

-C 5 W/FT (334mA) • 5 W/PI (334mA)

-N N/A

CIRCUITS • # CIRCUITS

-1 1 CIRCUIT

-2 2 CIRCUITS

-E EMERGENCY CIRCUIT • CIRCUIT D'URGENCE

MAINS VOLTAGE • VOLTAGE CIRCUIT

-U 120- 277 V

-1 120 V

-3 347 V (NOT AVAILABLE WITH TRIAC • NON DISPONIBLE EN TRIAC)

DIMMING SPECIFICATION • OPTION DE GRADATION

-O 0-10V LED DIMMING • GRADATION DEL 0-10V

-T TRIAC LED DIMMING • GRADATION DEL TRIAC

MOUNTING OPTION • OPTIONS D'INSTALLATION

-C DRYWALL • GYPSE

-5 15/16" SUSPENDED CEILING GRID T-BAR • BARRES EN T 15/16" PLAFOND SUSPENDU

-9 9/16" SUSPENDED CEILING GRID T-BAR • BARRES EN T 9/16" PLAFOND SUSPENDU

CABLE LENGTH • LONGUEUR DE CÂBLE

-5 STANDARD LENGTH OF 5' • LONGUEUR STANDARD DE 1524mm

-XX SPECIFY CABLE LENGTH IN BOX • INDICUER LA COULEUR DU CÂBLE DANS LA CASE

FELT COLOR* • COULEUR DU FEUTRE*

-BK BLACK • NOIR

-CH CHARCOAL GREY • GRIS CHARBON

-GR GREY • GRIS

-WH WHITE • BLANC

-RD RED • ROUGE

-BL BLUE • BLEU

-YL YELLOW • JAUNE

-GN GREEN • VERT

STRUCTURE FINISH • FINI DE STRUCTURE

-AB BLACK ANODIZED • ANODISÉ NOIR

-AN CLEAR ANODIZED • ANODISÉ CLAIR

-BK BLACK POWDER COATED • FINI POUDRE NOIRE

-WH WHITE POWDER COATED • FINI POUDRE BLANCHE

-MG METALLIC GREY POWDER COAT • FINI POUDRE GRIS MÉTALLIQUE

-PB PEARL BEIGE POWDER COATED • FINI POUDRE BEIGE NACRÉ • RAL 1035

-SP CUSTOM, SPECIFY RAL COLOR • SUR MESURE, INDICUER LA COULEUR RAL



**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

P73S-4-R-0-N-C-C-1-U-0-MOUNTING
OPTION-5-MSF-MSF-JC12

Notes:

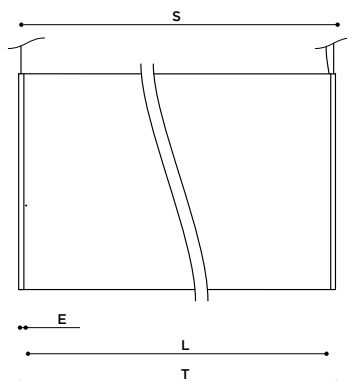
Type:**P1**

SSI23-55878

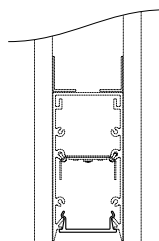
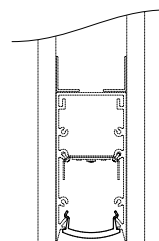
STELLA

P73 STANDALONE UNIT GUIDE • P73 GUIDE DES APPAREIL INDIVIDUELS

LEGEND • LÉGENDE



LENS OPTION • OPTION DE LENTILLE

REGRESSED
EN RETRAITCONVEX
CONVEXE

CODE	LENGTHS LONGUEURS				¹ POWER AND CURRENT PER DIRECTION OF LIGHT ¹ PUISSANCE ET COURANT ÉLECTRIQUE PAR DIRECTION DE LUMIÈRE		
	T OVERALL HORS TOUT	E ENDCAP THICKNESS ÉPAISSEUR EMBOUTS	L LIT SECTION SECTION ALLUMÉE	S MOUNTING POINTS POINTS D'ANCRAGE	A	B	C
-2	24.6" 626mm	0.38" 9.50mm	23.9" 607mm	24.3" 618mm	28W 1430 lm	19W 940 lm	10W 470 lm
-3	36.5" 926mm		35.8" 909mm	36.2" 919mm	42W 2135 lm	28W 1400 lm	14W 700 lm
-4	48.4" 1229mm		47.7" 1210mm	48.1" 1221mm	56W 2850 lm	34W 1880 lm	19W 940 lm
-5	60.3" 1532mm		59.6" 1513mm	60" 1524mm	70W 3560 lm	46W 3875 lm	23W 1175 lm
-6	72.2" 1833mm	0.38" 9.50mm	71.4" 1814mm	71.9" 1825mm	84W 4270 lm	56W 2820 lm	28W 1410 lm
-7	84.1" 2135mm		83.3" 2116mm	83.7" 2127mm	96W 4980 lm	64W 3285 lm	32W 1640 lm
-8	96.2" 2444mm		95.5" 2425mm	95.9" 2436mm	110W 5690 lm	72W 3755 lm	36W 1875 lm

LUMEN OUTPUT AND WATTAGE CALCULATED WITH REGRESSED LENS AND STANDARD
POWER CLASS • RENDU LUMINEUX ET WATTAGE EN CALCULÉS AVEC LENTILLE EN RETRAIT
ET SORTIE LUMEN STANDARD

¹ POWER OUTPUT IS BASED ON 0-10V DRIVER • ¹ LA PUISSANCE ÉLECTRIQUE EST CALCULÉ
AVEC UNE PILOTE 0-10V



STELLA

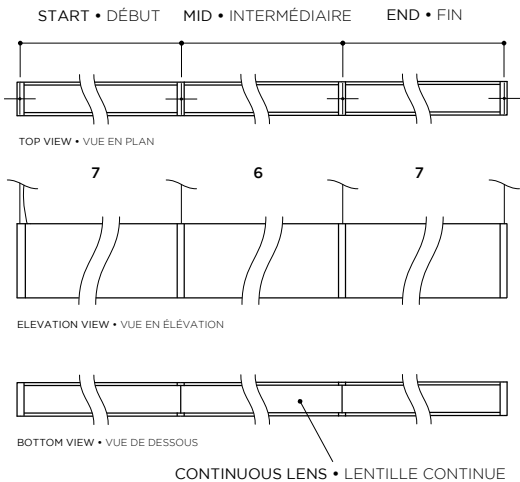
P73 SYSTEM GUIDE • P73 GUIDE DE SYSTÈMES

STELLA LINEAR SYSTEMS ARE MADE OF SEVERAL UNITS PUT TOGETHER, ONE AFTER ANOTHER. TABLE BELOW SHOWS COMPOSITION OF SYSTEMS FROM 9 FEET TO 48 FEET. COMPOSITIONS ARE MADE SO SYSTEMS APPEAR TO BE AS MOST UNIFORM AS POSSIBLE. STELLA OFFERS A CONTINUOUS LENS FOR DIRECT LIGHT SOURCE, SO LIGHT APPEARS TO BE A SINGLE CONTINUOUS LINE, NO MATTER HOW LONG YOUR SYSTEM IS.

LES SYSTÈMES LINÉAIRES STELLA SONT COMPOSÉS DE PLUSIEURS UNITÉS, MISES ENSEMBLE LES UNES À LA SUITE DES AUTRES. LE TABLEAU CI-DESSOUS MONTRE LA COMPOSITION DES SYSTÈMES ALLANT DE 9 PIEDS À 48 PIEDS. LES COMPOSITIONS SONT FAITES DE SORTE QUE LES SYSTÈMES APPARAISSENT LE PLUS UNIFORME POSSIBLE. STELLA OFFRE UNE LENTILLE CONTINUE POUR LA SOURCE D'ÉCLAIRAGE DIRECTE, CECI PERMET À LA LUMIÈRE D'APPARAÎTRE COMME UNE SIMPLE LIGNE CONTINUE, PEU IMPORTE LA LONGUEUR DE VOTRE SYSTÈME.

TO GET SUSPENSION DISTANCES FOR EACH UNITS OF A SYSTEM, REFER TO STANDALONE TABLE (SEE PREVIOUS PAGE) AND ADD SUSPENSION DISTANCES ACCORDINGLY TO YOUR SYSTEM COMPOSITION. EXAMPLE: DEPICTED SYSTEM IS A 20 FEET MADE OF 7'+6'+7', SUSPENSION DISTANCE WILL BE: 83.7"+71.9"+83.7"

POUR OBTENIR LES DISTANCES DE SUSPENSION DE CHAQUE UNITÉS D'UN SYSTÈME, SE RÉFÉRER AU TABLEAU DES UNITÉS INDIVIDUELLES (VOIR PAGE PRÉCÉDENTE) ET ADDITIONNER LES DISTANCES DU SUSPENSION SELON LA COMPOSITION DU SYSTÈME. EXEMPLE: LE SYSTÈME ILLUSTRÉ EST UN 20 PIEDS, FAIT DE 7'+6'+7', LES DISTANCES DE SUSPENSIONS VONT ÊTRE: 83.7"+71.9"+83.7".



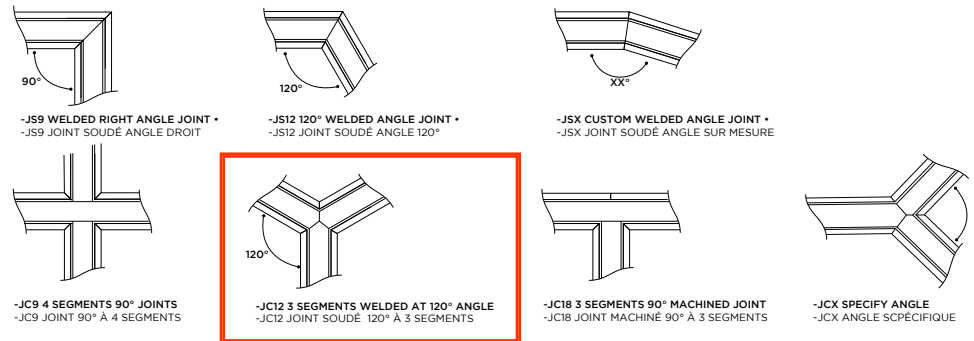
STELLA SYSTEM CONFIGURATION TABLE • TABLEAU DE CONFIGURATION STELLA					
NOMINAL LENGTH • LONGUEUR NOMINALE	SYSTEM COMPOSITION • COMPOSITION DU SYSTÈME	REAL TOTAL LENGTH • LONGUEUR TOTAL RÉELLE	NOMINAL LENGTH • LONGUEUR NOMINALE	SYSTEM COMPOSITION • COMPOSITION DU SYSTÈME	REAL TOTAL LENGTH • LONGUEUR TOTAL RÉELLE
9'	4 + 5	9'-3/8"	29'	7 + 7 + 7 + 8	28'-11 1/8"
10'	5 + 5	10'-1/4"	30'	8 + 7 + 8 + 7	29'-11"
11'	5 + 6	11'-1/8"	31'	8 + 8 + 8 + 7	30'-10 7/8"
12'	6 + 6	12'	32'	8 + 8 + 8 + 8	31'-10 3/4"
13'	6 + 7	13'	33'	6 + 7 + 7 + 7 + 6	32'-10 1/8"
14'	7 + 7	13'-11 7/8"	34'	7 + 7 + 7 + 7 + 6	33'-11"
15'	7 + 8	14'-11 5/8"	35'	7 + 7 + 7 + 7 + 7	34'-11"
16'	8 + 8	15'-11 5/8"	36'	7 + 7 + 8 + 7 + 7	35'-10 7/8"
17'	5 + 7 + 5	17'	37'	8 + 7 + 7 + 7 + 8	36'-10 3/4"
18'	6 + 6 + 6	17'-11 7/8"	38'	8 + 7 + 8 + 7 + 8	37'-10 5/8"
19'	6 + 7 + 6	18'-11 3/4"	39'	8 + 8 + 8 + 8 + 7	38'-10 1/2"
20'	7 + 6 + 7	19'-11 5/8"	40'	8 + 8 + 8 + 8 + 8	39'-10 3/8"
21'	7 + 7 + 7	20'-11 1/2"	41'	7 + 7 + 7 + 7 + 7 + 6	40'-10 3/4"
22'	7 + 8 + 7	21'-11 3/8"	42'	7 + 7 + 7 + 7 + 7 + 7	41'-10 5/8"
23'	8 + 7 + 8	22'-11 1/4"	43'	7 + 7 + 7 + 7 + 7 + 8	42'-10 1/2"
24'	8 + 8 + 8	23'-11 1/8"	44'	8 + 7 + 7 + 7 + 7 + 8	43'-10 1/2"
25'	6 + 6 + 6 + 7	24'-11 1/2"	45'	8 + 8 + 8 + 7 + 7 + 7	44'-10 3/8"
26'	6 + 7 + 7 + 6	25'-11 1/2"	46'	8 + 8 + 7 + 7 + 8 + 8	45'-10 1/4"
27'	7 + 7 + 7 + 6	26'-11 3/8"	47'	8 + 8 + 8 + 8 + 8 + 7	46'-10"
28'	7 + 7 + 7 + 7	27'-11 1/4"	48'	8 + 8 + 8 + 8 + 8 + 8	47'-10"

STELLA

P73 CUSTOM SYSTEM • P73 SYSTÈMES SUR MESURE

STELLA CAN BE ASSEMBLED IN ANY LAYOUT USING VARIOUS CORNER OPTIONS FROM WELDED TO MACHINED JOINER. TO GET A CUSTOM LAYOUT A SHOP DRAWING IS REQUIRED

LE STELLA PEUT ÊTRE AGENCÉ DANS N'IMPORTE QUELLE DISPOSITION À L'AIDE D'OPTIONS DE COINS VARIÉES, ALLANT DE SEGMENTS DIRECTEMENT SOUDÉS ENSEMBLE À CEUX TENUS PAR UN JOINT MACHINÉ. POUR COMMANDER UNE DISPOSITION SUR MESURE, UN DESSIN D'ATELIER EST NÉCESSAIRE.



EXAMPLES DEPICTED FROM BOTTOM VIEW • EXEMPLES ILLUSTRÉS DEPUIS LA VUE DE DESSOUS

HOW TO ORDER • COMMENT COMMANDER

TO ORDER CUSTOM LAYOUTS, CALCULATE TOTAL LENGTH OF SYSTEM (BASED ON PRODUCT CODE ON PAGE 2), THEN INDICATE NUMBER AND TYPE OF JOINT YOU WANT. EXAMPLE, DEPICTED S BELOW, WOULD BE YP73S18RONNA110C5GRBK (4+4+4+6) + JC18 + JSX. THEN DRAW THE LAYOUT ON THE GRID BELOW

POUR COMMANDER UN SYSTÈME SUR MESURE, CALCULEZ LA LONGUEUR TOTALE DU SYSTÈME (SE BASANT SUR LE CODE DE PRODUIT, À LA PAGE 2), INDIQUEZ ENSUITE LE NOMBRE ET LE TYPE DE JOINT QUE VOUS VOULEZ. L'EXEMPLE ILLUSTRÉ CI-DESSOUS SERAIT YP73S18RONNA110C5GRBK (4+4+4+6) + JC18 + JSX. DESSINEZ ENSUITE LA CONFIGURATION SUR LA GRILLE CI-DESSOUS.

	MINI JACK SEGMENT • SEGMENT MINI JACK -JC9 4 SEGMENTS 90° JOINTS • JC9 JOINT 90° À 4 SEGMENTS -JC12 3 SEGMENTS WELDED AT 120° ANGLE • JC12 JOINT SOUDÉ 120° À 3 SEGMENTS -JC18 3 SEGMENTS 90° MACHINED JOINT • JC18 JOINT MACHINÉ 90° À 3 SEGMENTS JS9 - RIGHT ANGLE WELDED JOINT • JS9 - JOINT SOUDÉ À ANGLE DROIT JS12 - 120° WELDED JOINT • JS12 - JOINT SOUDÉ 120° JSX - CUSTOM WELDED JOINT • JSX - JOINT SOUDÉ SUR MESURE PWR POWER DROP • ENTRÉE ALIMENTATION ÉLECTRIQUE	

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

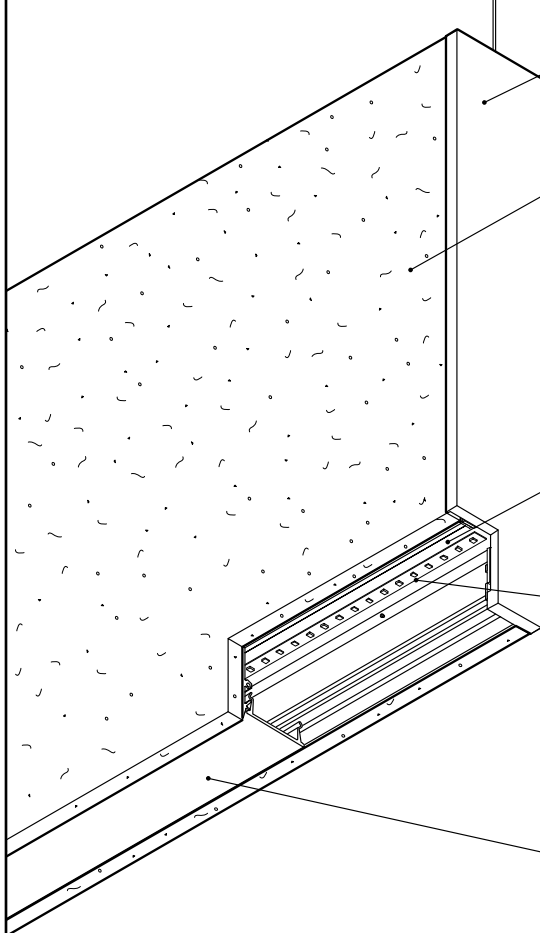
P73S-4-R-0-N-C-C-1-U-0-MOUNTING
OPTION-5-MSF-MSF-JC12

Notes:**Type:****P1**

SSI23-55878

STELLA

P73 FEATURES •
P73 CARACTÉRISTIQUES

**LUMINAIRE ASSEMBLY • CONSTRUCTION DU LUMINAIRE**

6061-T6 aluminum extrusion fastened to machined aluminum 6061-T6 endcap
Extrusion en aluminium 6061-T6 fixé à un embout d'aluminium machiné 6061-T6
Discrete inserted assembly of parts showing no apparent fasteners from sides
Assemblage discret des pièces par insertion permet de ne voir aucune vis des côtés

ACOUSTIC FELT • FEUTRE ACOUSTIQUE

Noise Reduction Coefficient (NRC) of 0.9 (subject to mounting conditions)
Coefficient de Réduction du Bruit (CRB) de 0.9 (variable selon l'installation)
Thickness of 1/2". Available in multiple colors. Refer to spec sheet
Épaisseur de 12mm. Disponible en plusieurs couleurs. Se référer à fiche technique
100% polyester, made from min. 75% of recycled material
100% polyester, fait à min. 75% matériaux recyclés
Does not emit VOC
N'émet aucun COV

Fire Testing : EN13501-12007 Class B / ASTM E84 Class A / ASTM E84 Class C
Test de feu : EN13501-12007 Class B / ASTM E84 Class A / ASTM E84 Class C

Glass transition temperature of 80°C
Température de transition vitreuse de 80°C

*Not to be installed in front of a window
*Ne pas installer devant une fenêtre

HEAT MANAGEMENT • GESTION THERMIQUE

Higher level of thermal conductivity than die cast heatsinks
Conductivité thermique plus élevée que pour des radiateurs moulés
Wide area heatsink exposed to open air, suitable for mid-power LEDs
Large surface de radiateur exposé à l'air libre, adapté aux DELs de puissance moyenne

CONNECTORS • CONNECTIQUE

Discrete power-carrying coaxial cable for streamlined-looking suspension
Câble électrique coaxial discret pour suspension au look allégé

LIGHT EMITTERS • SOURCES LUMINEUSES

Custom designed LED light engine
Source lumineuse à DELs conçue sur-mesure
ANSI binned LEDs for color consistency (MacAdam 3-step ellipse)
LEDs catégorisés selon norme ANSI (ellipse MacAdam à 3 échelons)

White light tones (CCT): 3000K, 3500K, 4000K
Tons de lumière blanche (CCT): 3000K, 3500K, 4000K

High color rendering index as standard (CRI): 90
Indice de rendu couleur élevé en standard (CRI): 90

Lifetime L80 : 72,000 hours
Durée de vie L80 : 72,000 heures

Lumen outputs : over 710lm per linear feet
Intensités lumineuses : plus de 710lm par pied linéaire

OPTICS • OPTIQUES

Integral diffuser made of extruded satin polymer
Diffuseur intégral fait de polymère satiné extrudé

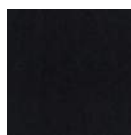
AVAILABLE FINISHES • FINIS DISPONIBLES

Choice of electrostatically applied smooth polyester powder coatings
Variété de revêtements électrostatiques lisses en poudre de polyester

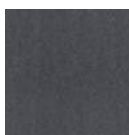
Custom requests are welcome, consult factory
Les demandes spéciales sont les bienvenues, contacter l'usine

WARRANTY • GARANTIE

5 years
5 ans



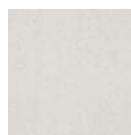
-BK BLACK
-BK NOIR



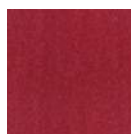
-CH CHARCOAL
-CH CHARBON



-GR GREY
-GR GRIS



-WH WHITE
-WH BLANC



-RD RED
-RD ROUGE



-BL BLUE
-BL BLEU



-GN GREEN
-GN VERT



-YL YELLOW
-YL JAUNE



**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

P73S-4-R-0-N-C-C-1-U-0-MOUNTING
OPTION-5-MSF-MSF-JC12

Notes:**Type:****P1**

SSI23-55878

ACOUSTIC PANEL

PANNEAU ACOUSTIQUE

This soft yet sturdy felt material made of 100% polyester is combined with different light fixtures to reduce echo, reverberation and excessive noise in any desired environment. This panel represents both a sound absorbing feature and decorative addition to light installations. Available in 8 different colors.

Ce matériau à la fois doux et robuste fait de polyester à 100% se combine avec différentes installations lumineuses afin de réduire l'écho, la réverbération et le bruit de l'environnement désiré. Il représente à la fois une addition décorative et réductrice de son pour les luminaires. Disponible dans 8 couleurs différentes.

AVAILABLE COLORS • COULEURS DISPONIBLES**MATERIAL • MATÉRIAU**

100% polyester fiber, made from min. 75% recycled material
Fibre polyester à 100%, fait au minimum avec 75% de matériaux recyclés

DIMENSIONS • DIMENSIONS

1/2" (12mm) thickness, variable width and length
1/2" (12mm) d'épaisseur, longueur et largeur variable

TRAITS • CARACTÉRISTIQUES

Density 2300g/sqm
Densité 2300g/m²

Noise Reduction Coefficient (NRC) of 0.9 (subject to mounting conditions)

Coefficient de Réduction du Bruit (CRB) de 0.9 (variable selon l'installation)

Does not emit VOC

N'émet aucun COV

Fire Testing : EN13501-12007 Class B / ASTM E84 Class A / ASTM E84

Class C

Teste de feu : EN13501-12007 Class B / ASTM E84 Class A / ASTM E84

Class C

Glass transition temperature of 80°C

Température de transition vitreuse de 80°C

* SEE GRAPH 1 FOR SOUND ABSORPTION DATA

* VOIR TABLEAU 1 POUR DONNÉES D'ABSORPTION DE SON

HANDLING AND CARE • MANIPULATION ET ENTRETIEN

Avoid exposure to heat 65°C (150°F) or greater

Éviter l'exposition à une température de 65°C (150°F) ou plus

Do not store product near radiators, steam pipes or in direct sunlight

Ne pas ranger près de radiateurs, tuyaux ou au soleil.

Remove dust and dirt by dusting, vacuuming, or with a soft cloth or sponge.

Éliminer la saleté et poussière en épuisettant, en passant l'aspirateur ou avec un chiffon ou une éponge.

To treat liquid stains, remove immediately using a damp cloth or sponge. Carpet and fabric cleaners can also be used.

Pour les dégâts liquides, nettoyer immédiatement avec un chiffon humide ou une éponge. Les nettoyeurs pour tapis et textiles peuvent être utilisés.

APPLICATION • UTILISATION

Used as a decorative sound reducing panel

Utilisé comme panneau décoratif réducteur de bruit

Can be installed on walls, ceilings, as decorative tiles and finished products

Peut être installé au mur, plafond, comme tuile décorative et sur les produits finis

*Not to be installed in front of a window

*Ne pas installer devant une fenêtre



ACOUSTIC PANEL

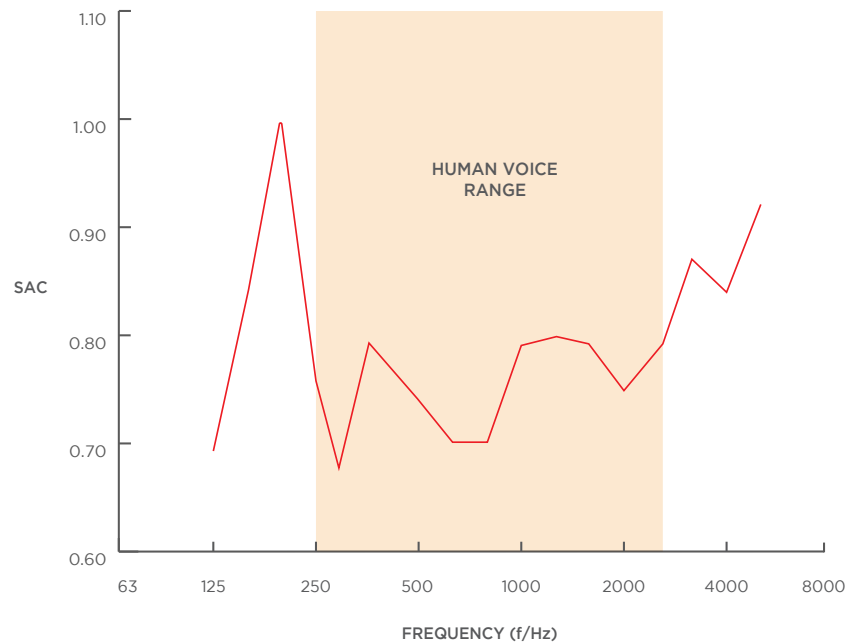
PANNEAU ACOUSTIQUE

SOUND ABSORPTION TEST REPORT • RAPPORT DE TEST D'ABSORPTION DE SON

TEST CONDITIONS • CONDITIONS DU TEST	
SAMPLE • ÉCHANTILLON	Polyester fiber acoustic panel - 600mm x 600mm x 9mm Panneau acoustique en fibre de polyester - 600mm x 600mm x 9mm
SET-UP • INSTALLATION	50mm cavity with substructure floor of the reverberation room - 10.8m² test specimen area Cavité de 50mm avec la structure du plancher de la salle de réverbération - zone du test 10.8m²
SOUND SOURCE • SOURCE DE SON	Omni-directional loudspeaker, Pink Noise Haut-parleur omni-directionnel, <i>Pink Noise</i>
EQUIPMENT • ÉQUIPEMENT	Sound level meter B&K2260 Panneau acoustique en fibre de polyester - 600mm x 600mm x 9mm
ENVIRONMENT • ENVIRONNEMENT	Standard reverberation room • Salle de réverbération standard : 273m³ Temperature • Température : 25 °C Relative humidity • Humidité relative : 65%

GRAPH 1. SOUND ABSORPTION TEST RESULTS • RÉSULTATS DU TEST D'ABSORPTION DE SON

Frequency f/Hz	SAC
100	1.14
125	0.69
160	0.84
200	1.00
250	0.75
315	0.67
400	0.79
500	0.75
630	0.71
800	0.71
1000	0.79
1250	0.81
1600	0.79
2000	0.75
2500	0.79
3150	0.87
4000	0.84
5000	0.92
SINGLE VALUE	0.80



* VALUES MAY DEPEND ON THE FELT'S CONFIGURATION
 * LES DONNÉES PEUVENT VARIER DÉPENDANT DES CONFIGURATION DU PANNEAU



**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

ARF-110-36D-16H-MSF-ACM-UNV-MSF-
MSF-4000K-90-3850LM-SCDL-S010V10

Notes:

Type:**P2**

SSI23-55878

Fraser

ACOUSTIC FIXTURE



The Fraser fixture is a variation of our Drum luminaire, one of the most popular and versatile options from Barbican.

Fraser helps to add some silence as well as aesthetic warmth, texture, and presence to a space combining the best elements of architectural and decorative lighting into a single luminaire.

RELATED PRODUCT



Aerie



Hamlin Uno



Hamlin Dos



Drum

AVAILABLE FINISH OPTIONS

Acoustic



carrot AR-CRT



cornflower AR-CNF



ebony AR-EBY



heather AR-HTH



linen AR-LIN



marble AR-MAR



moss AR-MOS



pacific AR-PAC



peridot AR-PRT



ruby AR-RBY



saffron AR-SFN



sand AR-SND



sangria AR-SGR



slate AR-SLT



ultramarine AR-UMR

Barbican - HQ
479 Central Avenue
Fort Erie, ON, CA, L2A 3T9

www.barbican.ca | 1.800.663.5781 | sales@barbican.ca

Barbican - USA
266 Elmwood Avenue, Unit #386
Buffalo, NY, 14222

Fraser

ACOUSTIC FIXTURE



ACOUSTIC SPECIFICATION

Fixture	Diameter	Height	Acoustic Material	Mounting
ARF-110				
ARF-110 Fraser	30D 30" 36D 36" 42D 42" 48D 48" 60D 60" 72D 72"	16H 16" 20H 20"	AR-CRT Carrot AR-CNF Cornflower AR-EBY Ebony AR-HTH Heather AR-LIN Linen AR-MAR Marble AR-MOS Moss AR-PAC Pacific AR-PRT Peridot AR-RBY Ruby AR-SFN Saffron AR-SND Sand AR-SGR Sangria AR-SLT Slate AR-UMR Ultramarine	ACM Aircraft Cable * Standard length 120" STM Stem Mount Standard length 48" CUSM Custom Consult factory Length is field adjustable. * Remote with escutcheons contact factory for maximum cable lengths

LIGHTING SPECIFICATION

Voltage	Power Cable Finish	Stem and/or Canopy Finish	Color Temperature
UNV			
UNV 120/277 Volts Consult factory for other voltages	WPC White BPC Black	WCF White BCF Black ACF Brushed Aluminum RAL Custom RAL North America; Consult factory	Static Colour 2700K 2700K 3000K 3000K 3500K 3500K 4000K 4000K 5000K 5000K 3000FS Full Spectrum 3000K 3500FS Full Spectrum 3500K Dynamic Colour -Consult factory 2765K Tunable White 2700K - 6500K RGBW RGBW CUSK Custom CT 2400K - 6000K; Full spectrum .95 reduced output contact factory
Color Rendering	Delivered Output		
90			
90 90+ CRI	White Sources Static/Tunable Low Output 1425LM - 15W 1425LM - 15W 2375LM - 25W 3800LM - 40W 5700LM - 60W 7600LM - 80W Standard 1950LM - 21W 2375LM - 25W 3800LM - 40W 5700LM - 60W 7600LM - 80W 9500LM -100W ---LM Custom Lumen Output* 3850LM	30" 36" 42" 48" 60" 72"	
	RGB / RGBW Sources Low Output 15W 15W 25W 40W 60W 80W Standard 21W 25W 40W 60W 80W 100W ---W Custom Output*	30" 36" 42" 48" 60" 72"	
	Consult factory for outputs outside of this range. Total lumen output up to 30,000 lm delivered based on diameter. Maximum Output varies by diameter		
Driver Location	Dimming Driver		
SCDL Surface Circular Canopy SSDL Surface Circular Side Entry CUSDL Custom Driver Consult factory for options.	S010V10 Standard 0-10V, 10% S010V01 Standard 0-10V, 1% E010V01 eldoLED 0-10V, 1% EDALI01 eldoLED DALI, 0.1% EDMX01 eldoLED DMX, 0.1% LECO01 Lutron Ecosystem, 1% SOFTB, (Soft-on, Fade-to-Black) LECOTW Lutron Ecosystem, 1%, Tunable White – T series MOLPOE Molex POE Node OTHERD Other Driver Options Consult factory for availability of other driver options		

Fraser

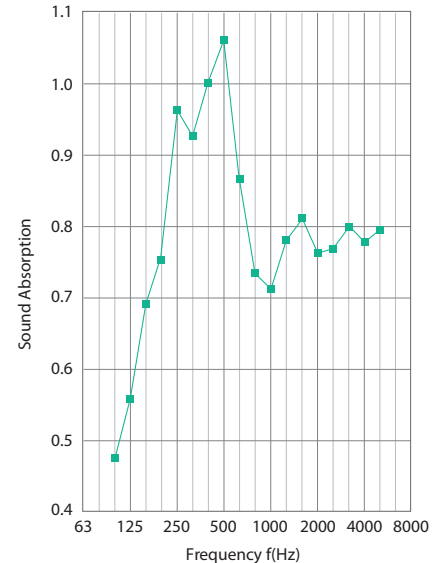
ACOUSTIC FIXTURE



NOISE REDUCTION COEFFICIENT

- The test was carried out by external laboratory (SGS) assessed as competent.
- TEST METHOD: EN ISO 354:2003 Acoustic Measurement of sound absorption in a reverberation room. Tested with back airspace of 200mm (7.87").
- TEST RESULT: Noise Reduction Coefficient: NRC = 0.85

f Hz	a _s
50	/
63	/
80	/
100	0.47
125	0.56
160	0.69
200	0.75
250	0.96
315	0.92
400	1.00
500	1.06
630	0.87
800	0.73
1000	0.71
1250	0.78
1600	0.81
2000	0.76
2500	0.77
3150	0.80
4000	0.78
5000	0.79
NRC	0.85



WRITTEN SPECIFICATIONS

LED System

- LED Circuitry is applied to minimum 0.0625" thick aluminum modules for excellent heat management. Modules are removeable for maintenance and are 90% recyclable.
- LEDs are 90+CRI, 3 SDCM.
- 36" x 8" fixture performance at 3000K 90CRI, 6896lms, 61.44 Watts, 112 LPW Delivered
- Full Spectrum, efficiency is 88 lm/W; CRI is 96+ with all R1-R15 values at 90 or higher and Rf (fidelity) of 95, Rg (gamut) of 105.
- Tunable White, efficiency is 90 lm/W; Delivered lumens is for both channels simultaneously at full output (maximum per individual channel is approximately 50% of total delivered lumens).
- RGBW lumen outputs per channel as follows:
White only: 85 lm/W @ 25% of W Red only: 24 lm/W @ 25% of W
Green only: 70 lm/W @ 25% of W Blue only: 13 lm/W @ 25% of W
All four channels max: 56 lm/W @ 100% of W (approx 9000K CCT)

Construction

- Acoustic felt: Acoustic baffle is made from 100% PET (polyethylene terephthalate) fabric, which is a rigid, dimensionally strong, and stable material that is water and moisture resistant. Baffle is completely recyclable and contains a minimum of 30% post-consumer recycled content. Thickness of base material, 9mm.
- Independent certifications: A flame spread index (FSI) and smoke-development index (SDI) test was carried out by external laboratory (SGS) based on ASTM E84-2020 Standard Test Method for Surface Burning Characteristics of Building Materials. Test Results - FSI-15; SDI 80; ATSM E84 Class A

- Metal construction to be aluminum minimum 0.0625" thickness. Fasteners are to be stainless steel.
- Cable grippers are nickel plated solid brass and stainless steel. Cables are 1/16" stainless steel.
- Canopies and driver housings are minimum 0.0625" aluminum.
- Barbican's Drum fixtures comes standard with the shade and light engine fully enclosed to protect from ingress of dirt, dust and other site conditions.

Mounting

- Power cables are low voltage from the canopy drivers.
- Drivers:** All drivers are mounted in the canopy. Standard drivers include 0-10V 10% dimming 120/277V with Power Factor of > 9. Barbican works with most Control and Driver manufacturers including POE and can easily modify the driver housings for special control gear. Fixtures over 96W may require more than one driver per fixture.
- Emergency fixtures are supplied with leads and KO for UL924 relays (by others). Battery back up will usually only drive one or two of the cores in larger fixtures to maintain the 90 minute requirement. Maximum distance driver to fixture 15 feet.
- Labels:** ETL US and Canada, CE Europe and Middle East (Dry, Damp indoor use only)
- Finish:** Polyester Powder Coated standard, Hand Brushed Aluminum
- Lumen Maintenance:** Reported L90 > 10,000hrs, Calculated > 60,000hrs (TM-21)
- Warranty:** 5 years limited at 25 Celsius. Contact Barbican for additional information.

LABELS



Barbican - HQ
479 Central Avenue
Fort Erie, ON, CA, L2A 3T9

www.barbican.ca | 1.800.663.5781 | sales@barbican.ca

Barbican - USA
266 Elmwood Avenue, Unit #386
Buffalo, NY, 14222

Page 3 of 10

Last modified: 08/30/2023

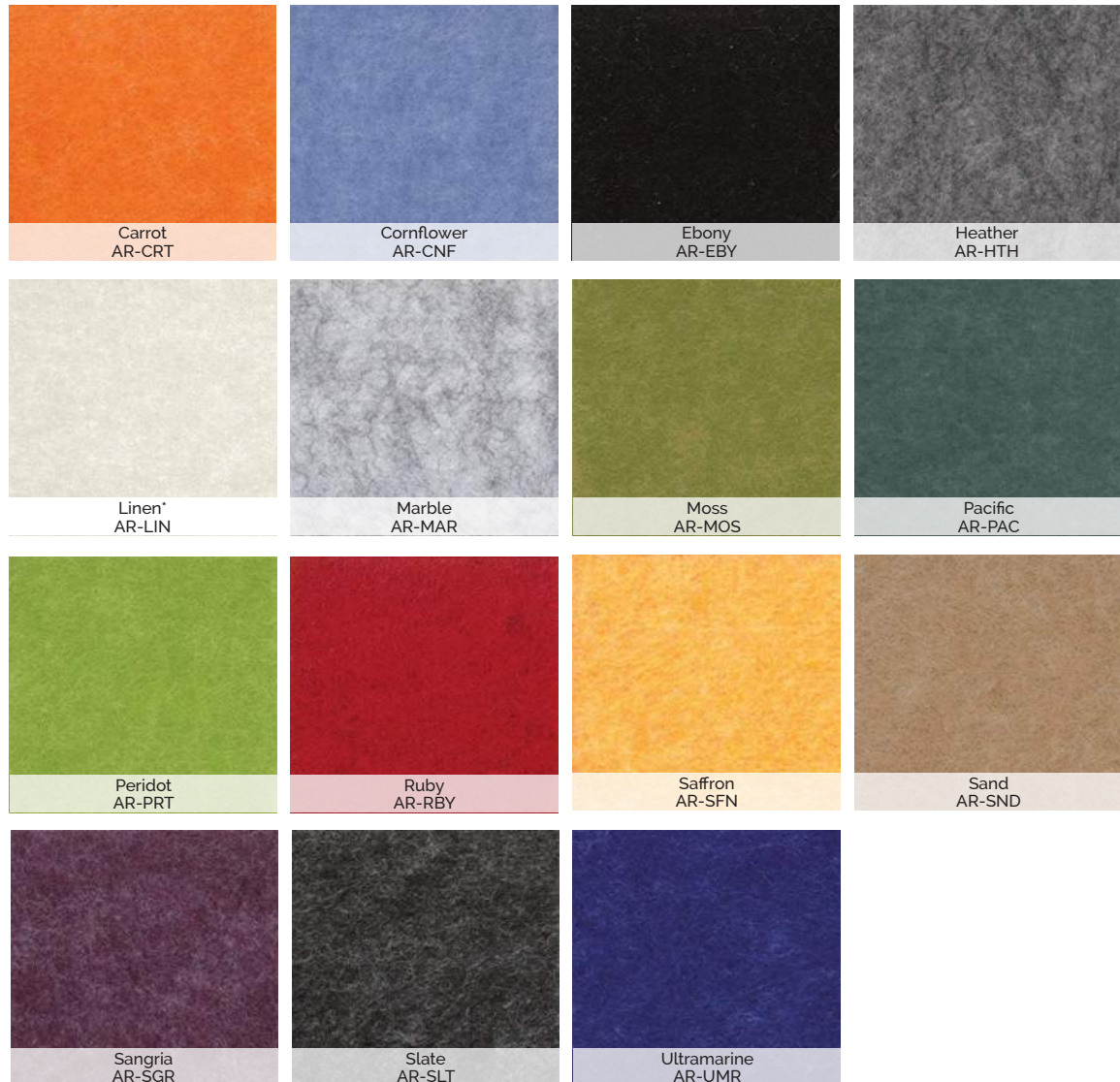
© 2023 Barbican. All Rights Reserved. Specifications subject to change or withdrawal without notice.

Fraser

ACOUSTIC FIXTURE



ACOUSTIC FELT Colour Samples



*LINEN is available for Acoustic Shapes, Sheets and Panels, but only select Lighting Fixtures.
Please consult with factory for availability.

Barbican - HQ
 479 Central Avenue
 Fort Erie, ON, CA, L2A 3T9

www.barbican.ca | 1.800.663.5781 | sales@barbican.ca

Barbican - USA
 266 Elmwood Avenue, Unit #386
 Buffalo, NY, 14222

Page 4 of 10

Last modified: 08/30/2023

© 2023 Barbican. All Rights Reserved. Specifications subject to change or withdrawal without notice.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

ARF-110-36D-16H-MSF-ACM-UNV-MSF-
MSF-4000K-90-3850LM-SCDL-S010V10

Notes:

Type:**P2**

SSI23-55878

Fraser

ACOUSTIC FIXTURE



SPECIFICATION MODIFIERS

Specification Modifiers

Barbican is well known for modifications to meet special requirements. We would be pleased to discuss any ideas you have to make our fixtures meet your needs. Some common modifiers would be; Size (diameter/height), Materials/Finishes, Mounting, Colour Temperature, Delivered Lumens, Driver Location or Dimming Drivers.

Please consult our Sales Department with your requirements.

Digitally Printed AR is available as a custom option.

Printed acoustic felt may include Printed Patterns, Natural Wood grain/stain options, Natural Stone, Barbican's Artisan Collection, and a variety of Printed Textures. Please take note that only the flat surface can be printed, **not the Acoustic Felt edge**. Some options may not be suitable for certain fixtures.

Please consult our Sales Department with your requirements.

You can view and download swatch flyers on our website at Resources > Reference.

Printed Patterns (56)



Natural Wood - for AR (36 - 6 grain, 6 stain combinations)



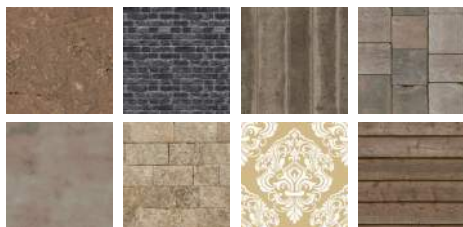
Natural Stone (18)



Artisan Collection (98 - 3 Artists)



Printed Textures (8 Categories, 98)



Aerie w/ARBEQ-STONX on AR-SND



Warmer tone prints such as Natural Wood are printed on 'Sand' Acoustic Felt (AR-SND).



Patterns, Art Prints and more neutral images are printed on Linen Acoustic Felt (AR-LIN).

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

ARF-110-36D-16H-MSF-ACM-UNV-MSF-
MSF-4000K-90-3850LM-SCDL-S010V10

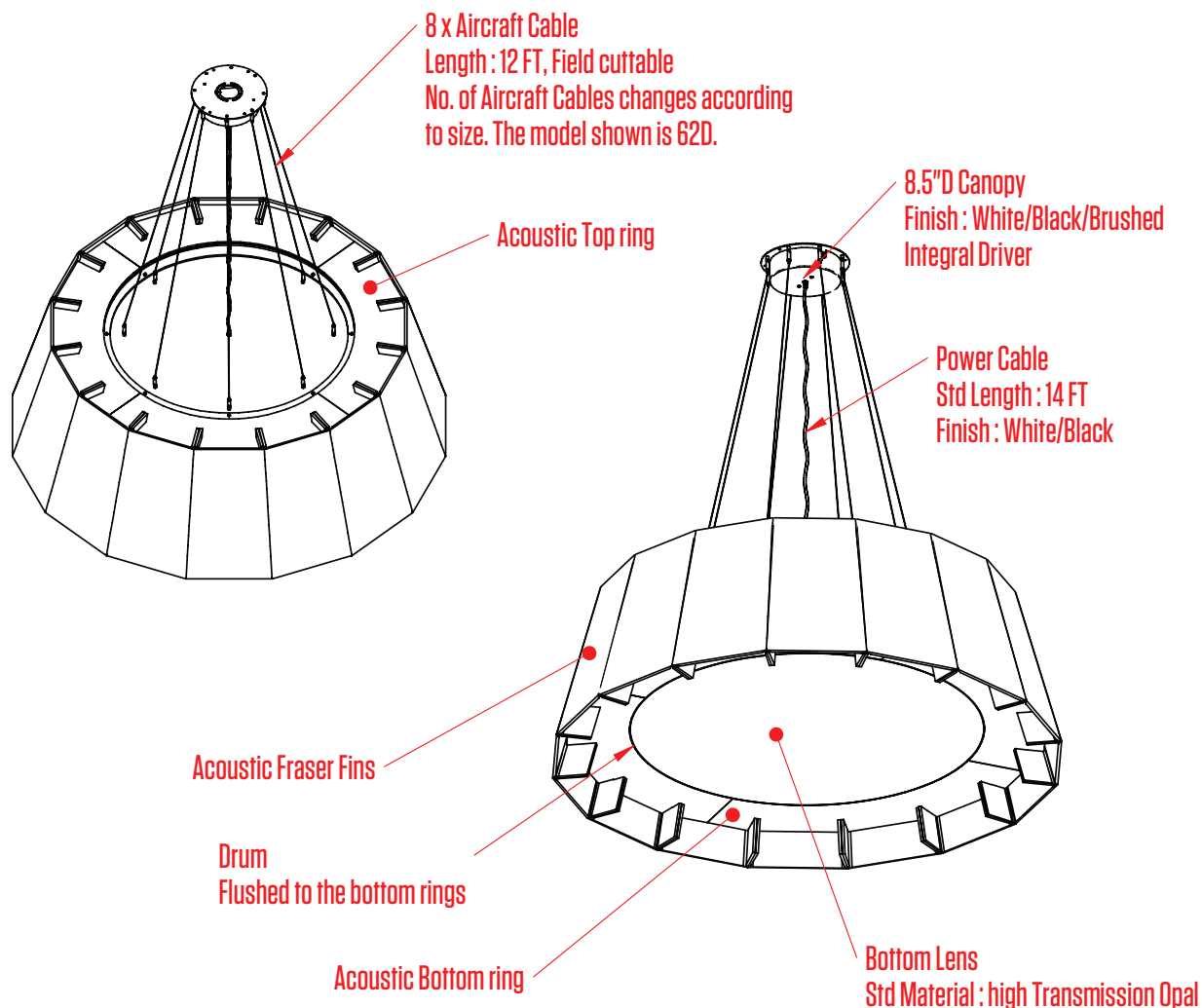
Notes:

Type:**P2**

SSI23-55878

Fraser

ACOUSTIC FIXTURE

**CONFIGURATION (lit)**

Barbican - HQ
479 Central Avenue
Fort Erie, ON, CA, L2A 3T9

www.barbican.ca | 1.800.663.5781 | sales@barbican.ca

Barbican - USA
266 Elmwood Avenue, Unit #386
Buffalo, NY, 14222

Page 8 of 10

Last modified: 08/30/2023

© 2023 Barbican. All Rights Reserved. Specifications subject to change or withdrawal without notice.

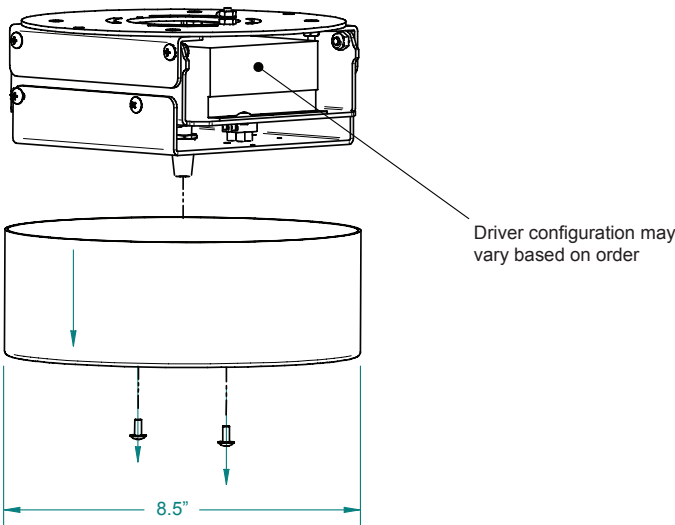
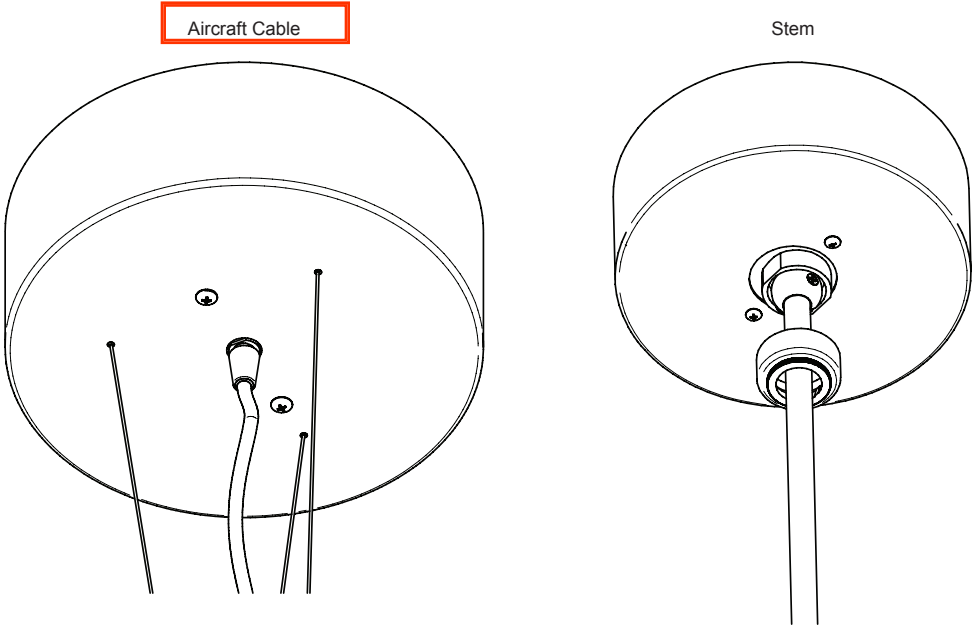
Fraser

ACOUSTIC FIXTURE



SPECIFICATION DETAILS (cont.)

Surface Circular Canopy
 (SCDL)



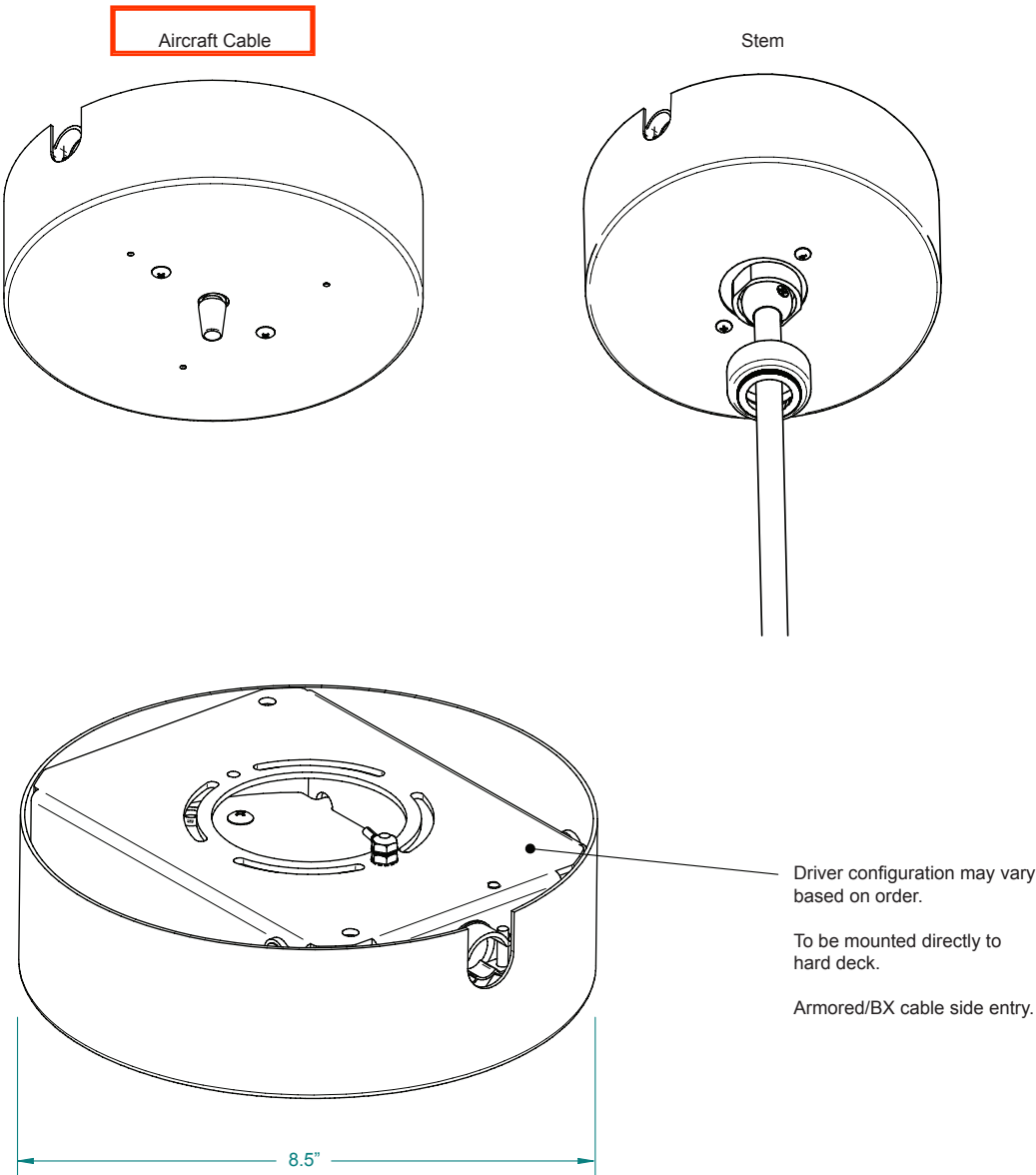
Fraser

ACOUSTIC FIXTURE



SPECIFICATION DETAILS (cont.)

Surface Circular Side Entry Canopy (SSDL)



Project		Catalog #		Type	
Prepared by		Notes		Date	



PrentaLux

205

3D Printed Luminaire
Integral LED Light Engine
Decorative

Typical Applications

• Office • Education • Healthcare • Hospitality • Retail • National Accounts

Interactive Menu

- Order Information [page 2](#)
- Product Specifications & Colors [page 3](#)
- Textures [page 4](#)
- Mounting [page 4](#)
- Lumen Maintenance & Photometric Data [page 5](#)
- Lumen/Wattage/LPW & UGR Data [page 5](#)

Certifications | Features | Awards

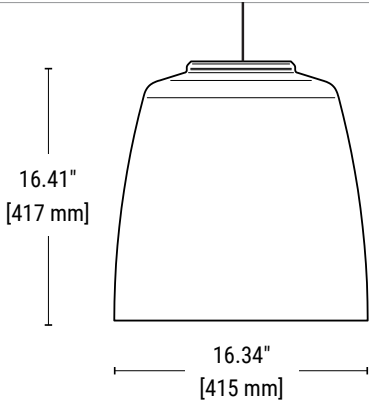


Filament only.
See page 6

Top Product Features

- PrentaLux 200's is a series of decorative products using Signify's 3D Printing technology with an integral LED light engine.
- Outer shade has 3 texture options, and inner shade has 3 different texture options.
- 16 opaque color options for outer shade and 4 opaque color options for inner shade.
- 2700K, 3000K, 3500K, 4000K and only available in 90 CRI.
- 8 Light Levels ranging from nominal 1000 to 7000+ lumens.
- Universal Voltage (120-277V).
- 1% Dimming.
- 3D printed mounting canopy available in disk or conical shape.
- 5 Year Warranty.
- Silver power cord.
- BAA compliant. RoHS compliant.
- Finishes available on [Material Bank](#)

Dimensions



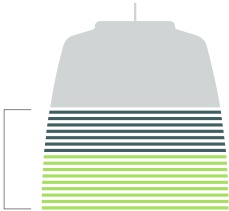
Sustainable Product Features

- PrentaLux 3D printed parts are produced with at least 55% mass balanced bio-circular materials. Effective Q3-2023.
- 61% of the 205 light fixture is made of 3D printed material.
- ISCC certified. Certification applies only to 3D printed material. See page 6
- [Declare compliant](#)
- LBC Red List Approved

Declare.



61%



55%

PrentaLux

205

Order Information

SAMPLE CATALOG NUMBER: PRLX-205-90-35K-LL5-UNV-STD-SLVR-LF-WHHR-BR-CC

Brand	Series	Color Rendering Index	Correlated Color Temperature	Lumens/ Wattage	Voltage	Dimming
Brand	Series	CRI	CCT	Light Level (See Lumen, Wattage, & Efficacy Chart on Page 3)	Voltage	Dimming
PRLX	205	90 = 90 CRI	27K = 2700K 30K = 3000K 35K = 3500K 40K = 4000K	LL1 = 1129 lms (at 3500K, 90CRI), 10W LL2 = 1608 lms (at 3500K, 90CRI), 13W LL3 = 2190 lms (at 3500K, 90CRI), 18W LL4 = 2857 lms (at 3500K, 90CRI), 24W LL5 = 3993 lms (at 3500K, 90CRI), 34W LL6 = 4547 lms (at 3500K, 90CRI), 40W LL7 = 5874 lms (at 3500K, 90CRI), 56W LL8 = 6807 lms (at 3500K, 90CRI), 73W See Lumen Table on Page 3 for exact CCT to Lumen table values.	UNV = Universal Voltage (120-277V)	STD = 1% Dimming
Notes	Notes	Notes	Notes	Notes 1. Lumen targets above are based on 90 CRI and 3500K values. Use IES files for accurate calculations.	Notes	Notes

Continue here to make complete selections

Outer Shade Color	Outer Shade Texture	Inner Shade Color	Inner Shade Texture	Mounting
Standard Outer Shade Colors (opaque): WHITE = White BLAK = Black DKGY = Dark Gray MCHA = Matcha CAPP = Cappuccino MYBL = Misty Blue STBL = Steel Blue ENGR = Enamel Green STBR = Stone Brown MEBL = Metallic Blue MEGR = Metallic Green MEPK = Metallic Pink MEPU = Metallic Purple SLVR = Silver GOLD = Gold BRNZ = Bronze	Standard Outer Shade Texture: LF = Layered Fine NL = Natural Lines VF = Vertical Fine	Standard Inner Shade Color: WHHR = High Reflective White Premium Inner Shade Color (opaque): GOLD = Gold Metallic SLVR = Silver Metallic BLAK = Black	Standard Inner Shade Texture: SR = Smooth reflector, layered fine texture BR = Baffle reflector, corrugated texture FL = Floral reflector, decorative texture CST = Custom Shade Texture (Consult factory for details and lead times. Shop drawings Required) Comments:	Canopy Shape and Color DW = Disk - White DB = Disk - Black DS = Disk - Silver DC = Disk - Custom (Custom = opaque color only. Translucents not available) CW = Conical - White CB = Conical - Black CS = Conical - Silver CC = Conical - Custom (Custom = opaque color only. Translucents not available)
Notes 1. See page 3 for color options.	Notes 1. See page 4 for texture details and options.	Notes 1. Consult factory on Premium Option lead times. 2. See page 3 for color options.	Notes 1. BR - Baffle and FL - Floral, textures only available for inner shade. 2. See page 4 for texture details and options.	Notes 1. Standard length of cord - 10ft [3050 mm]. Max available length is 25ft [7.62 m] and Consult factory for lengths longer than 10ft. 2. Power cord is always silver.

PrentaLux

205

Product Specifications

- Construction**
 - PrentaLux 200s consist of an integral LED light engine and a proprietary additive manufacturing process for the polycarbonate shade and components. Thermally, mechanically, and optically optimized for professional/commercial installations.
 - Designed, engineered, and printed in the United States.

Electrical
 - Standard 0-10V driver integrated into the pendant head (120/277V/ 50-60Hz).

LED and Light Engine
 - Available in 2700K, 3000K, 3500K, and 4000K CCT and 90 CRI only. Lumen packages ranging from nominal 1000, 1500, 2000, 3000, 4500, 6000, 7000+ lumens. (subject to specific CCT and Light Level).

Driver
 - Standard offering is 0-10V with 1% dimming.

Optics
 - Polar plot and UGR data on page 5.

Environment
 - Suited for 25° ambient. Dry location only.
- Shielding**
 - Shade optic depth and design provides excellent physical cut off.

Finish
 - 16 outer shade colors available. 4 inner shade colors, with standard option of high reflective white for maximum output and 3 colors as premium options with longer lead times. 3 inner shade textures offered. Additional colors and textures available with extended lead times. (Consult Factory)
 - Finishes are available for review on [Material Bank](#) under Cooper Lighting Solutions PrentaLux brand.

Mounting
 - Mounting options include UL certified cord and option of 3D printed disk shape or conical shape, mounting hardware.

Lengths
 - Fixture comes with 10ft cord. Lengths up to 25 ft possible. (Consult factory as longer lead times apply).

Weight
 - All products are light weight and much easier to install than traditional pendants. All fixtures are less than 10lbs

Warranty
 - Standard five-year limited warranty on all parts.
- Compliance**
 - Components are UL recognized and luminaires are cULus listed for 25° ambient environments. Dry Location Listed
 - Filament material is UL certified.
 - BAA compliant
 - RoHS compliant
 - Declare Compliant, LBC Red List Approved, ISCC Certified
 - Not to be installed in food prep areas and hazardous environments which may expose the product to pollutants such as oil, grease, or VOCs.
 - IK02 impact rated. Not for installations in locations such as gymnasiums, arenas, sports complexes, multi-purpose rooms, and any other locations where the fixture potentially will be subject to impacts from external sources.

Sustainable Products Specifications
 - PrentaLux 3D printed parts are produced with at least 55% mass balanced bio-circular materials. Effective Q3-2023.
 - 61% of the 205 lighting fixture, is made of 3D printed material.
 - ISCC certified. Certification applies only to 3D printed material. See page 6
 - Declare compliant
 - LBC Red List Approved

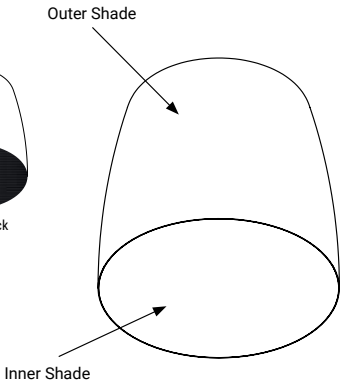
Outer Shade Colors



Inner Shade Color - Standard



Inner Shade Colors - Premium (consult factory for extended lead times)



PrentaLux
205

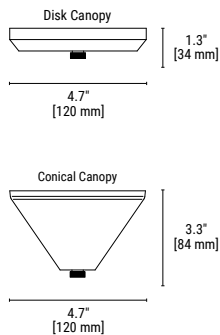
Outer Shade Textures
 Close up view of textures



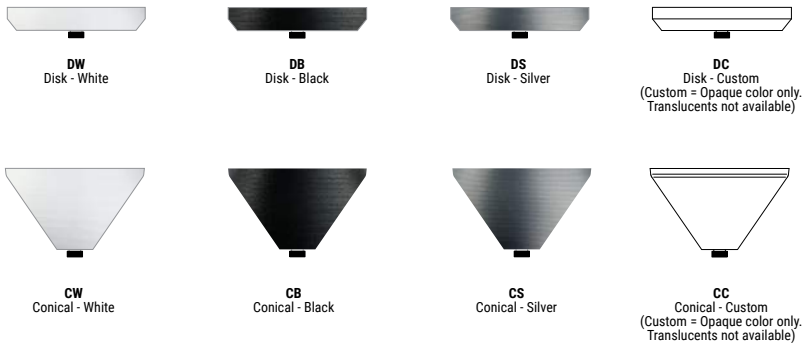
Inner Shade Textures
 Close up view of textures



Mounting Canopy Options



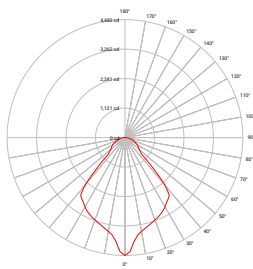
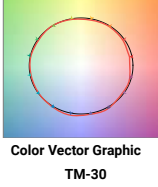
Mounting Canopy Colors



PrentaLux

205

Photometric Data

PRENTALUX - 205 - @ 3500K / 90 CRI									
	Light Level 1	Light Level 8	  <p>Color Vector Graphic TM-30</p> <table><tr><td>R_t</td><td>90.6</td></tr><tr><td>R_g</td><td>101.2</td></tr><tr><td>R9</td><td>60.2</td></tr></table>	R _t	90.6	R _g	101.2	R9	60.2
R _t	90.6								
R _g	101.2								
R9	60.2								
Filename	205-90-35K-LL1-UNV-STD-X-X-WHHR-SR-X.ies	205-90-35K-LL8-UNV-STD-X-X-WHHR-SR-X.ies							
Test No.	P600606	P600627							
Lumcat	205-90-35K-LL1-UNV-STD-X-X-WHHR-SR-X	205-90-35K-LL8-UNV-STD-X-X-WHHR-SR-X							
Lumens	1128.9 Lm	6807.4 Lm							
Input Watts	9.5 W	72.2 W							
Efficacy	118.8 Lm/W	94.3 Lm/W							
CCT	3500K	3500K							
SC (0/90/45)	1.01 / 1.01 / 1.17	1.01 / 1.01 / 1.17							

Lumen/Wattage/LPW Table

LUMEN Table per CRI, CCT, and Light Level			205 (inner diam nominal 16", inner textures)			WATTS	EFFICACY (Lm/W)
			Smooth	Floral	Baffle		
CRI	CCT	LL	SR	FL	BR		
90	2700	LL1	1031	1027	1036	10	96
		LL2	1468	1463	1475	13	105
		LL3	2000	1992	2009	18	103
		LL4	2609	2599	2621	24	101
		LL5	3646	3633	3663	34	99
		LL6	4152	4137	4172	40	96
		LL7	5364	5344	5389	56	89
		LL8	6215	6193	6245	73	79
	3000	LL1	1093	1089	1098	10	101
		LL2	1556	1551	1564	13	111
		LL3	2120	2112	2130	18	109
		LL4	2766	2756	2779	24	107
		LL5	3865	3851	3883	34	105
		LL6	4402	4386	4422	40	102
		LL7	5686	5666	5713	56	94
		LL8	6589	6565	6620	73	84
	3500	LL1	1129	1125	1134	10	105
		LL2	1608	1602	1616	13	115
		LL3	2190	2182	2201	18	113
		LL4	2857	2847	2871	24	110
		LL5	3993	3979	4012	34	109
		LL6	4547	4531	4569	40	105
		LL7	5874	5853	5902	56	97
		LL8	6807	6783	6840	73	86
	4000	LL1	1171	1167	1176	10	109
		LL2	1668	1662	1676	13	119
		LL3	2271	2263	2282	18	117
		LL4	2963	2953	2978	24	114
		LL5	4141	4126	4161	34	113
		LL6	4716	4699	4739	40	109
		LL7	6093	6071	6122	56	101
		LL8	7060	7035	7094	73	90

UGR Data Table

Light Level @ 3500K [205] Smooth Reflector		CCT	UGR [CIE 190:2010] ⁽¹⁾ (4H, 8H; Reflectance: 70% Ceiling, 50% Wall, 20% Ref. Plane	MAX LUMINANCE [45-90 DEG FROM NADIR] ⁽²⁾ (CD/M^2)
			90 CRI	90 CRI
LL1	1129	3500K	15.7	1608
	1608	3500K	16.9	2289
	2190	3500K	18.0	3119
	2857	3500K	18.9	4069
	3993	3500K	20.1	5687
	4547	3500K	20.5	6476
	5874	3500K	21.4	8366
	6807	3500K	21.9	9694

Lumen Maintenance

Ambient Temperature
25°C
Lumen Maintenance: TM-21-11 (60,000 Hours)
>80%
Theoretical L70 (Hrs)
>=66,000



HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

PRLX-205-40K-LL5-UNV-STD-MSF-
LF-WHHR-SR-MSF

Notes:

P3

SS123-55878

PrentaLux | Sustainability

205

Circularity

The Circular Economy is “an industrial system that is restorative or regenerative by intention and design.” and relates to the production and consumption through: Reducing, Reusing, and Recycling products. The PentaLux 3D printed lighting products contribute to the Circular Economy by reducing carbon emissions, reducing components by design and technology of 3D printing, reuse our misprints that reduce carbon dioxide impact, and are recycling waste from food processing and wood pulp industries to be repurposed into the filaments used to 3D print the PentaLux products.



REDUCE

35% weight reduction reduces carbon emissions by requiring less fuel for shipping



REUSE

When polycarbonate is recycled, it generates up to 86% lower CO2 impact compared to virgin polycarbonate.



RECYCLE

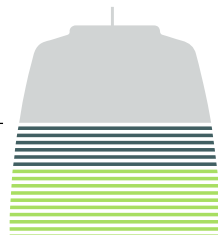
Our 3D printed parts are created with over 55% recycled or bio-circular materials.

Material Sustainability through Production and Supply Chain



Each of our 3D printing manufacturing plants have been audited by the ISCC (International Sustainability and Carbon Certification) organization to verify the implementation and use of environmentally, socially and economically sustainable production and materials.

* Pentalux products will convert to printing our 3D parts with over 55% recycled or bio-circular materials (using an ISCC certified mass balance approach) within Q3 2023. Bio-circular materials are raw materials from ISCC Plus certified waste streams and residues including tall oils from the wood processing industry or used cooking oil from the food processing industry.



PrentaLux products have a high percentage of the entire product that is 3D printed as well as having the filament come from bio-circular materials.

61%
of 205 fixture is made
with 3D Printed material

55%
PrentaLux 3D printed parts are produced with at least 55% mass balanced bio-circular materials



PrentaLux products are produced in a manufacturing facility where over 99% of generated waste is diverted from landfills

Material Transparency



**LIVING
BUILDING
CHALLENGE™**



The ILFI (International Living Future Institute) has created a program where manufacturers can disclose the components or “ingredients” of a product. This disclosure has a rating system that shows transparency in the materials chosen in developing products, and whether there are any chemicals of concern, to help meet the requirements of leading green building standards that support human and environmental health.



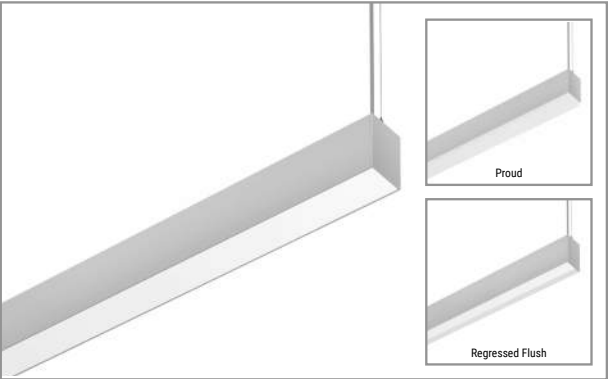
 LBC Red List Approved

- Disclosed 100% at content inventory of 100ppm
- Suitable as a compliance pathway for LEED v4.1 Material Ingredients credit Option 1 Material Ingredient Reporting
- Suitable as a compliance pathway for WELL v2 Feature X07 Materials Transparency Parts 1 and 2

To see the full listing of Cooper Lighting products that participate in Declare, click [here](#).



Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 4

4" LED
Suspended Pendant
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification



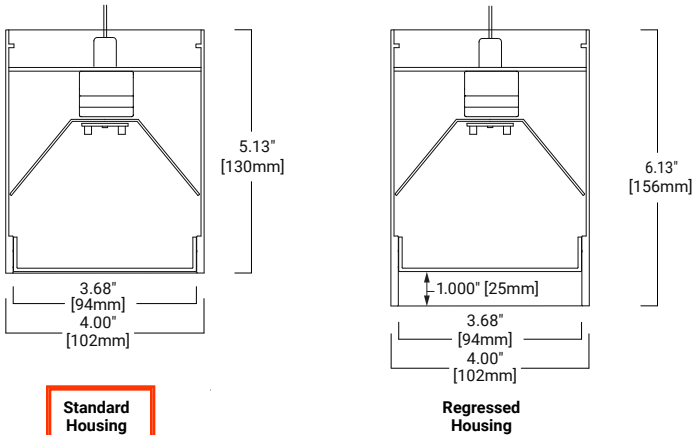
Product Features



Top Product Features

- Suspended Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available
- Options to meet Buy American Act requirements

Dimensional and Mounting Details



additional product diagrams

Neo-Ray

4" LED Suspended Pendant Direct

Order Information

Icon Key: Grey bar denotes available with 10-Day Quick Ship
Ø Consult factory for availability

SAMPLE ORDER NUMBER: **S124DP-C795D835-C4JB4F0-1T-UDD-F-W-SWPD1**

Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
(blank)=Standard BAA=Buy American Act	QS-S124DP=Define 4 Direct Pendant Quick Ship S124DP=Define 4 Direct Pendant S124RDP=Define 4 Regressed Direct Pendant	-C=Core -H=High Performance -V=VividTune Ø	350D=350 Lms/ft (2.9W/ft) 575D=575 Lms/ft (4.8W/ft) 795D=795 Lms/ft (6.7W/ft) 1020D=1020 Lms/ft (8.8W/ft) 1195D=1195 Lms/ft (10.6W) ___D=Custom Lms/ft Ø	8=80 9=90	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K 2765=2700K-6500K 3050=3000K-5000K	-C4=4ft Aircraft Cable -C10=10ft Aircraft Cable -C20=20ft Aircraft Cable -S4=4ft Stem Mount -S8=8ft Stem Mount	JB=Gypsum Board, Junction Box, Structure T1=15/16" T-Grid (ETG) T9=9/16" T-Grid (FTG) TS=9/16" Slot (STG), Tegalular (FTT), Interlude (ITG)	(blank)=White B=Black
Notes Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	Notes RDP regress of 1" will add an additional 1" to fixture depth.	Notes See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 795 lms/ft or greater.	Notes 3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 350 Lms/ft not available on 2ft fixture length.	Notes Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and WZA driver.	Notes	Notes	Notes	Notes White mounting hardware standard

Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
2F0= 2' Nominal Length 4F0= 4' Nominal Length 8F0= 8' Nominal Length ___F0=4' Incremental Run (e.g. 40F0 = 40' 0") ___F0=1' Incremental Run (e.g. 39F0 = 39' 0")	(blank)=12ft (std) /8=8ft	-1=Single Circuit -S=Secondary Circuit	E=Emergency Circuit B1=Surelite 7W 120-277V EM battery pack (EL7W) B2=Surelite 14W 120-277V EM battery pack (EL14W) B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	-U=Universal (120V-277V) -1=120V -2=277V -3=347V	DD=Standard 0-10V Dimming (1%-100%) SL=Full Light DALI (1%-100%) L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSys LH=Lutron HiLume (LDE1 series) 1%-100% EcoSys W2A=White Tuning, 0-10V Dimming (VividTune only)	-F=Satin White Diffuser -D=Satin Drop diffuser -A=Asymmetric Diffuser -L=Straight Blade Diffuser w/ diffuser Ø
Notes Minimum fixture length is 2ft. Specify to nearest foot in length.	Notes Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	Notes Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	Notes Battery available on fixture ≥ 4ft in length. B1-B2 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator.	Notes 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses. "L" option required RDP series and will require additional lead-time, please consult factory for details.

Options	Finish	Integrated Sensor
Options	Finish	Integrated Sensor
-R=GLR Fuse (Fast) -F=GMF Fuse (Slow)	-W=White -S=Silver -B=Black -C=Custom Match -R=RAL Custom	-WAA=WaveLinX Pro Wireless -WAB=WaveLinX Lite Wireless Ø -LWIPD1=Enlightened Wireless -SVPD1=Standalone (Blank)=None
Notes Additional lead-time may apply. Not available with 347V option.	Notes Contact factory for C and R options. W/S/B are standard.	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DP-C-795D-8-40-C4-
CEILING TYPE-8F0-1-U-DD-F-W

Notes:**Type:****P4**

SSI23-55878

Neo-Ray**4" LED Suspended Pendant Direct****Product Specifications****Construction**

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2'-12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Suspended

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available \emptyset

Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 4.0 lbs per foot

Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium, refer to www.designlights.org for details and listed configurations.

Warranty

- Five year warranty standard.

Shielding Options

Standard Flush Lens



Regressed Flush Lens



Standard Proud Lens



Asymmetric Lens

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DP-C-795D-8-40-C4-
CEILING TYPE-8F0-1-U-DD-F-W

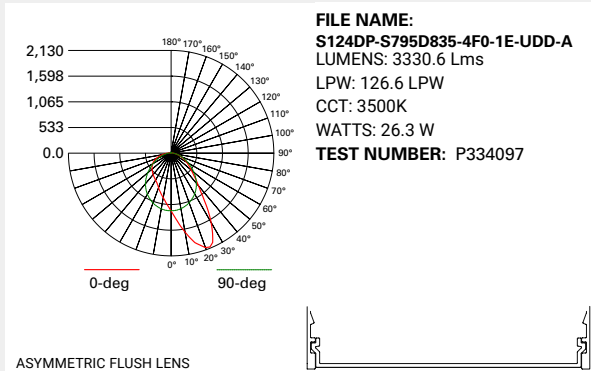
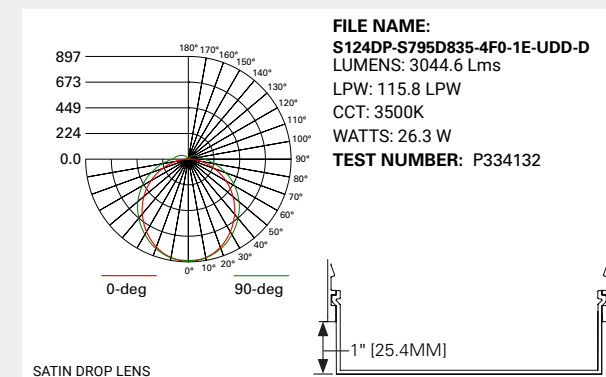
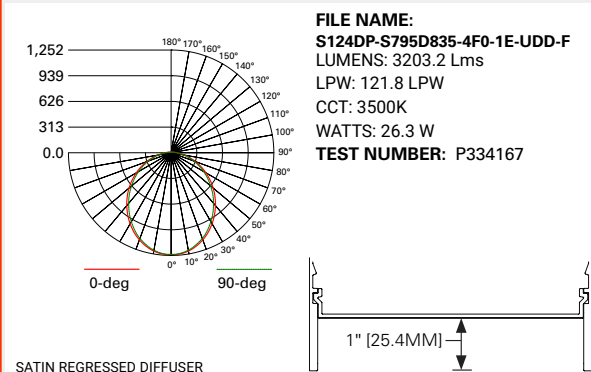
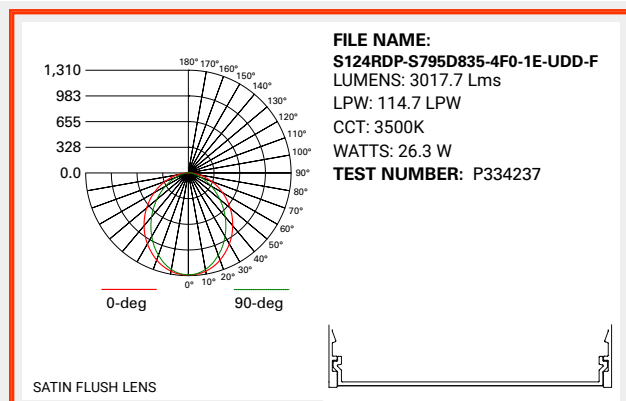
Notes:

Type:**P4**

SSI23-55878

Neo-Ray**4" LED Suspended Pendant Direct****Photometric Data**

View IES files

**Photometric Overview and Performance Data****Direct Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
350	2.9	133	2.9	136	3	129
575	4.8	134	4.4	140	4.9	130
795	6.7	131	6.1	141	6.7	128
1020	8.8	129	8.1	137	8.9	125
1195	10.6	124	9.7	132	10.7	121

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)

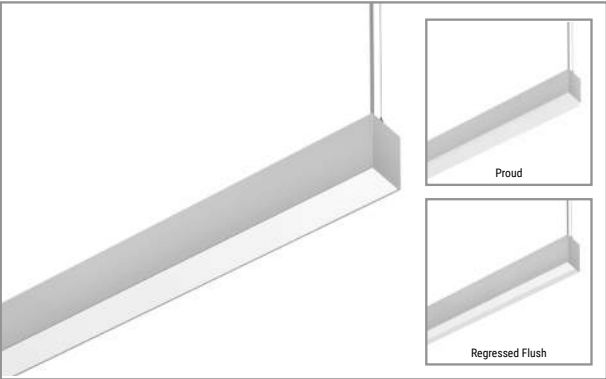
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	277-946
3000K	0.943	0.815	330-1127	285-974
3500K	1.000	0.861	350-1195	301-1029
4000K	1.010	0.892	354-1207	312-1066
5000K	1.010	0.892	354-1207	312-1066

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 4

4" LED
Suspended Pendant
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification



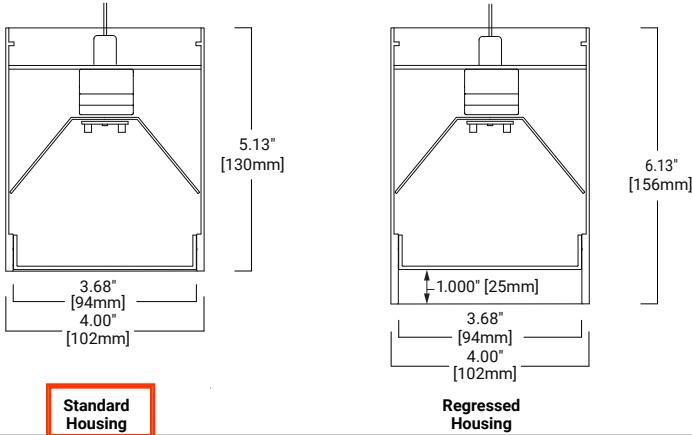
Product Features



Top Product Features

- Suspended Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available
- Options to meet Buy American Act requirements

Dimensional and Mounting Details



additional product diagrams

Neo-Ray

4" LED Suspended Pendant Direct

Order Information

SAMPLE ORDER NUMBER: **S124DP-C795D835-C4JB4F0-1T-UDD-F-W-SWPD1**

Icon Key: Grey bar denotes available with 10-Day Quick Ship
Ø Consult factory for availability

Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
(blank)=Standard BAA=Buy American Act	QS-S124DP=Define 4 Direct Pendant Quick Ship S124DP=Define 4 Direct Pendant S124RDP=Define 4 Regressed Direct Pendant	-C=Core -H=High Performance -V=VividTune Ø	350D=350 Lms/ft (2.9W/ft) 575D=575 Lms/ft (4.8W/ft) 795D=795 Lms/ft (6.7W/ft) 1020D=1020 Lms/ft (8.8W/ft) 1195D=1195 Lms/ft (10.6W) ___D=Custom Lms/ft Ø	8=80 9=90	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K 2765=2700K-6500K 3050=3000K-5000K	-C4=4ft Aircraft Cable -C10=10ft Aircraft Cable -C20=20ft Aircraft Cable -S4=4ft Stem Mount -S8=8ft Stem Mount	JB=Gypsum Board, Junction Box, Structure T1=15/16" T-Grid (ETG) T9=9/16" T-Grid (FTG) TS=9/16" Slot (STG), Tegalular (FTT), Interlude (ITG)	(blank)=White B=Black
Notes Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	Notes RDP regress of 1" will add an additional 1" to fixture depth.	Notes See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 795 lms/ft or greater.	Notes 3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 350 Lms/ft not available on 2ft fixture length.	Notes Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and WZA driver.	Notes	Notes	Notes	Notes White mounting hardware standard

Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
2F0= 2' Nominal Length 4F0= 4' Nominal Length 8F0= 8' Nominal Length ___F0=4' Incremental Run (e.g. 40F0 = 40' 0") ___F0=1' Incremental Run (e.g. 39F0 = 39' 0")	(blank)=12ft (std) /8=8ft	-1=Single Circuit -S=Secondary Circuit	E=Emergency Circuit R1=Surelite 7W 120-277V EM battery pack (EL14W) B2=Surelite 14W 120-277V EM battery pack (EL14W) B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	-U=Universal (120V-277V) -1=120V -2=277V -3=347V	DD=Standard 0-10V Dimming (1%-100%) SL=Full Light DALI (1%-100%) L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSys LH=Lutron HiLume (LDE1 series) 1%-100% EcoSys W2A=White Tuning, 0-10V Dimming (VividTune only)	-F=Satin White Diffuser -D=Satin Drop diffuser -A=Asymmetric Diffuser -L=Straight Blade Diffuser w/ diffuser Ø
Notes Minimum fixture length is 2ft. Specify to nearest foot in length.	Notes Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	Notes Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	Notes Battery available on fixture ≥ 4ft in length. B1-B2 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator.	Notes 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses. "L" option required RDP series and will require additional lead-time, please consult factory for details.

Options	Finish	Integrated Sensor
Options	Finish	Integrated Sensor
-R=GLR Fuse (Fast) -F=GMF Fuse (Slow)	-W=White -S=Silver -B=Black -C=Custom Match -R=RAL Custom	-WAA=WaveLinX Pro Wireless -WAB=WaveLinX Lite Wireless Ø -LWIPD1=Enlighted Wireless -SVPD1=Standalone (Blank)=None
Notes Additional lead-time may apply. Not available with 347V option.	Notes Contact factory for C and R options. W/S/B are standard.	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DP-C-795D-8-40-C4-
CEILING TYPE-8F0-1-B2-U-DD-F-W

Notes:**Type:****P4E**

SSI23-55878

Neo-Ray**4" LED Suspended Pendant Direct****Product Specifications****Construction**

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2'-12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥80CRI or ≥90CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Suspended

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 4.0 lbs per foot

Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium, refer to www.designlights.org for details and listed configurations.

Warranty

- Five year warranty standard.

Shielding Options**Standard Flush Lens****Regressed Flush Lens****Standard Proud Lens****Asymmetric Lens**

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DP-C-795D-8-40-C4-
CEILING TYPE-8F0-1-B2-U-DD-F-W

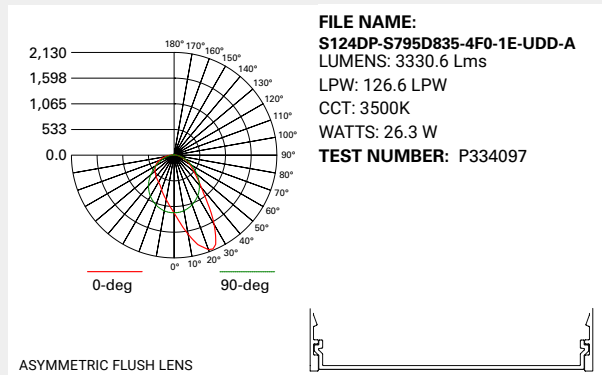
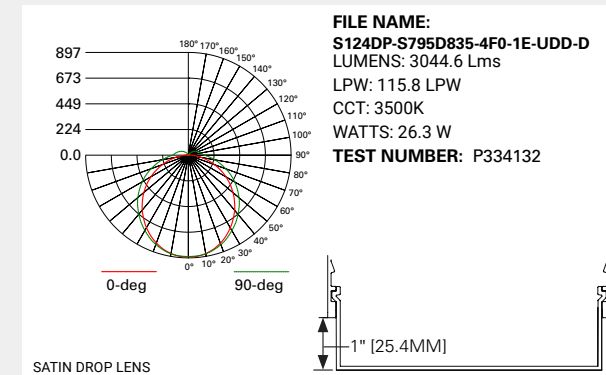
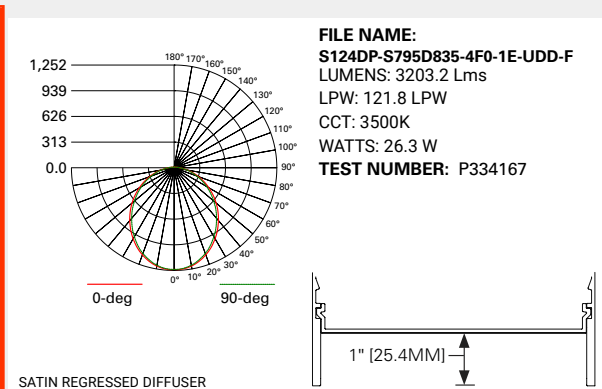
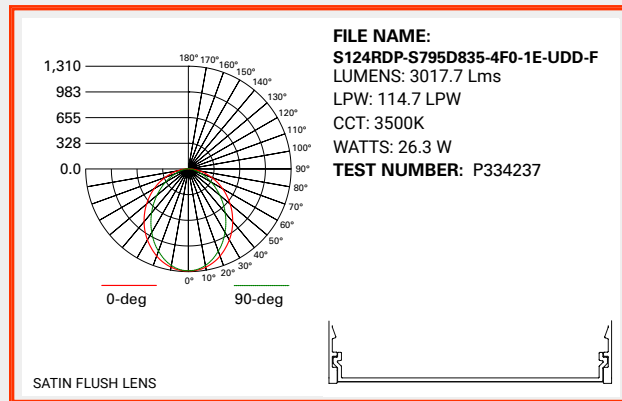
Notes:

Type:**P4E**

SSI23-55878

Neo-Ray**4" LED Suspended Pendant Direct****Photometric Data**

View IES files

**Photometric Overview and Performance Data****Direct Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
350	2.9	133	2.9	136	3	129
575	4.8	134	4.4	140	4.9	130
795	6.7	131	6.1	141	6.7	128
1020	8.8	129	8.1	137	8.9	125
1195	10.6	124	9.7	132	10.7	121

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft


Estimated efficacy = 121 LPW (find nearest value using table above)

Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	277-946
3000K	0.943	0.815	330-1127	285-974
3500K	1.000	0.861	350-1195	301-1029
4000K	1.010	0.892	354-1207	312-1066
5000K	1.010	0.892	354-1207	312-1066

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

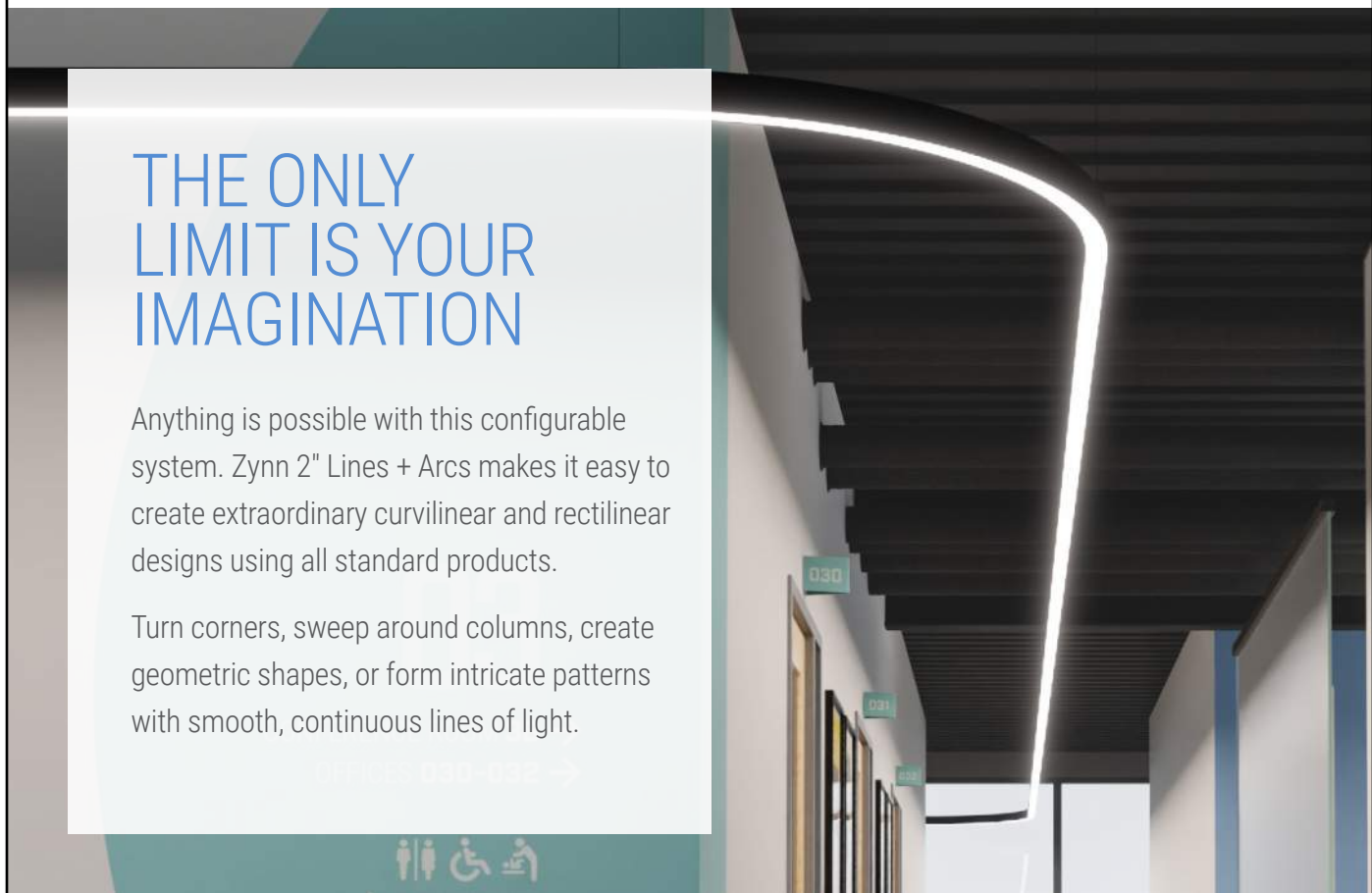
Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SS123-55878
---	--	---	---

THE ONLY
LIMIT IS YOUR
IMAGINATION

Anything is possible with this configurable system. Zynn 2" Lines + Arcs makes it easy to create extraordinary curvilinear and rectilinear designs using all standard products.

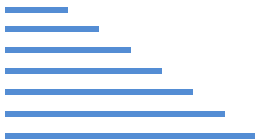
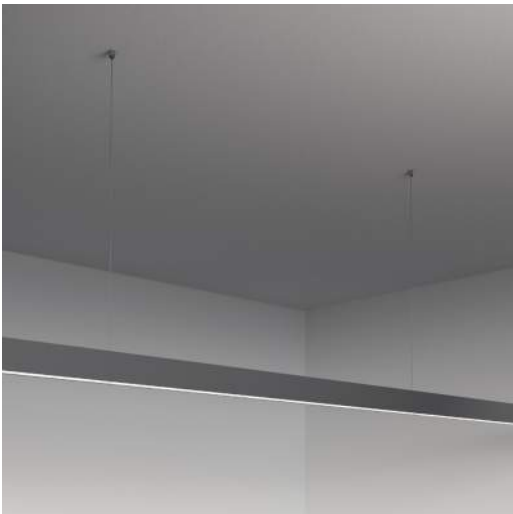
Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light.

OFFICES 030-032 →



LINES

Crisp and clean lines
Continuous runs or standalone pendants



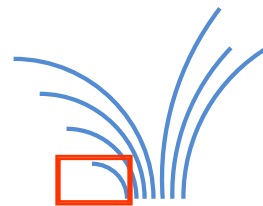
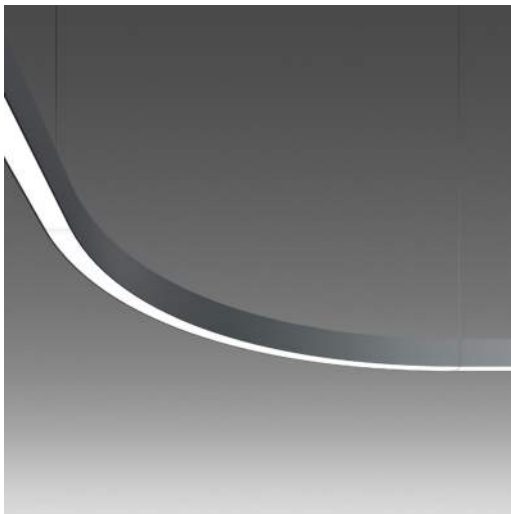
Catalog ID	Size	Wattage	Delivered Lumens
AIP12255	2'	11	945
		22	1,890
	3'	17	1,460
		34	2,921
	4'	22	1,890
		44	3,780
	5'	28	2,405
		56	4,810
	6'	34	2,921
		68	5,841
	7'	39	3,350
		79	6,786
	8'	44	3,780
		89	7,645

Power drop kit required for each continuous run (CPS12267)

ARCS

Sweeping curves and organic lines that flow with your design

Custom radii available; contact factory



Catalog ID	Radius	Wattage	Delivered Lumens
AIP12256	1' - 90° arc	11	791
		21	1,510
	2' - 90° arc	21	1,510
		42	3,020
	3' - 90° arc	32	2,301
		64	4,602
	4' - 90° arc	42	3,020
		85	6,112
	5' - 60° arc	35	2,517
		71	5,105
	6' - 45° arc	32	2,301
		64	4,602
	8' - 45° arc	42	3,020
		85	6,112

Power drop kit required for each continuous run (CPS12267)

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-
277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF

Notes: Shape per plans

Type:**P5**

SSI23-55878

Zynn 2" Lines + Arcs

SPILIGHTING

PROJECT DETAILS

AIP12255 2 in | Lines

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Anything is possible with this creative modular system of luminous lines. Zynn 2" Lines + Arcs makes it fast and easy for you to create extraordinary curvilinear and rectilinear designs – all with standard products. Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light. Professional and refined, the system delivers up to 960 lumens per foot. For a complimentary lighting layout, contact our applications team at SPItteam@spilighting.com.

FEATURES & BENEFITS



- Sleek 2" x 3" profile
- Clean, continuous lines of light with zero pixilation
- Up to 960 lm/ft
- Provides functional lighting with comfortable luminance levels and is ideal for separating open offices, providing wayfinding, or adding markings
- The system can go up to 500' with just one power drop
- Maneuvers easily around obstructions
- Superior fit and finish
- Keeps ceilings clean with minimal mounting hardware
- Hidden internal aircraft cable grippers are easy to adjust
- Integral power supplies with easy daisy chain wiring simplifies installation
- Arcs (AIP12256) and Connectors (AIP12257) are ordered separately
- Handcrafted in USA



SPECIFICATIONS

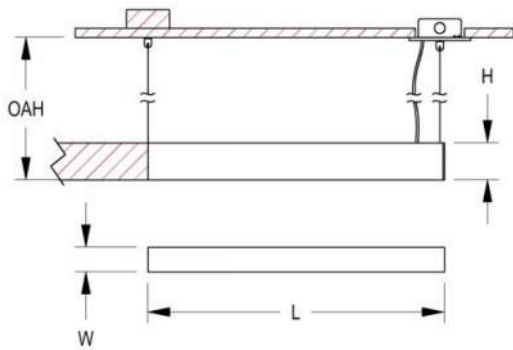
- **LIGHT SOURCE:** White LED light engine
- **DISTRIBUTION:** Direct
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L80 = >54,000 Hrs.
- **EFFICACY:** Up to 86 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard

SPILIGHTINGP:262.242.1420 | SPItteam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12255 | 1 of 6

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SSI23-55878
<div> <ul style="list-style-type: none"> • DRIVER: Integral Class 2 power supply. Power drop kit required for each continuous run; see catalog CPS12267 to order. Connect power drops anywhere along the run. • MAX AMBIENT OPERATING TEMP: 32°C (90°F) • DIMMING: 1% minimum dim level standard • CONTROLS: 0-10V standard. Lutron Athena, Current NX, and nLight AIR optional. Contact factory for other controls (e.g., Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi). • INTEGRATED SURGE PROTECTION: LED components are protected against minor surge events • EMERGENCY: Contact factory for remote options • DIFFUSER: Matte opal acrylic • CONSTRUCTION: Housing fabricated from 6000 series aluminum extrusion • FINISH: Choose from 26 standard thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request. • MODIFICATIONS: Consult factory for all modification requests, including custom lengths • APPROVALS: ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications </div> <div>  <div> P:262.242.1420 SPIteam@spilighting.com Last Revised: 9/13/2023 Design Rights Reserved AIP12255 2 of 6 </div> </div>			

SHAPE CONFIGURATION PER PLANS

DIMENSIONS



2FT	W 2 in 5.1 cm	L 24 in 61 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	---------------------	---------------------	--------------------------

Mounting Weight: Approximate: 5 lb (3 kg)

3FT	W 2 in 5.1 cm	L 36 in 91.4 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	-----------------------	---------------------	--------------------------

Mounting Weight: Approximate: 10 lb (5 kg)

4FT	W 2 in 5.1 cm	L 48 in 121.9 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	------------------------	---------------------	--------------------------

Mounting Weight: Approximate: 10 lb (5 kg)

5FT	W 2 in 5.1 cm	L 60 in 152.4 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	------------------------	---------------------	--------------------------

Mounting Weight: Approximate: 10 lb (5 kg)

6FT	W 2 in 5.1 cm	L 72 in 182.9 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	------------------------	---------------------	--------------------------

Mounting Weight: Approximate: 15 lb (7 kg)

7FT	W 2 in 5.1 cm	L 84 in 213.4 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	------------------------	---------------------	--------------------------

Mounting Weight: Approximate: 15 lb (7 kg)

8FT	W 2 in 5.1 cm	L 96 in 243.8 cm	H 3 in 7.6 cm	OAH 54 in 137.2 cm
-----	---------------------	------------------------	---------------------	--------------------------

Mounting Weight: Approximate: 20 lb (10 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/AIP12255. Not all options are available in all configurations; consult factory for details.

Required Field *


Catalog	Light Source*	Primary Finish*	Voltage*	Lamp Options*	Controls*	Mounting*	Other Than Standard Options	Configuration*
AIP12255								
	A	B	C	D	E	F	G	

A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

2 FOOT NOMINAL FIXTURE

☐ 2FT-L11W | White 11W LED Light Engine | Delivered Lumens: 945

Submitted by Schroeder Sales, Inc		Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF	Type: P5 SSI23-55878
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)		

☐ 2FT-L22W | White 22W LED Light Engine | Delivered Lumens: 1,890

3 FOOT NOMINAL FIXTURE

☐ 3FT-L17W | White 17W LED Light Engine | Delivered Lumens: 1,460

☐ 3FT-L34W | White 34W LED Light Engine | Delivered Lumens: 2,921

4 FOOT NOMINAL FIXTURE

☐ 4FT-L22W | White 22W LED Light Engine | Delivered Lumens: 1,890

☐ 4FT-L44W | White 44W LED Light Engine | Delivered Lumens: 3,780

5 FOOT NOMINAL FIXTURE

☐ 5FT-L28W | White 28W LED Light Engine | Delivered Lumens: 2,405

☐ 5FT-L56W | White 56W LED Light Engine | Delivered Lumens: 4,810

6 FOOT NOMINAL FIXTURE

☐ 6FT-L34W | White 34W LED Light Engine | Delivered Lumens: 2,921

☐ 6FT-L68W | White 68W LED Light Engine | Delivered Lumens: 5,841

7 FOOT NOMINAL FIXTURE

☐ 7FT-L39W | White 39W LED Light Engine | Delivered Lumens: 3,350

☐ 7FT-L79W | White 79W LED Light Engine | Delivered Lumens: 6,786

8 FOOT NOMINAL FIXTURE

☐ 8FT-L44W | White 44W LED Light Engine | Delivered Lumens: 3,780

☐ 8FT-L89W | White 89W LED Light Engine | Delivered Lumens: 7,645

See last page for finish options

B - VOLTAGE *

☐ 120-277V | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.


☐ 3000K¹ | 3000K CCT

☐ 3500K² | 3500K CCT

☐ 4000K | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens



P:262.242.1420 | SPLteam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12255 | 4 of 6

Submitted On: Sep 14, 20237/16Index Page

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SSI23-55878
-----------------------------------	--	---	---

D - CONTROLS *

Extended lead times may apply for controls other than 0-10V. Contact factory for additional control options such as Enlighted, Encelium, Wattstopper, WaveLinx, Casambi, or others.

- ☐ **DF_DIM1** | 0-10V Control, 1% Dimming (default)
- ☐ **AWN³** | Lutron Athena Wireless Node, 1% Dimming
- ☐ **NX³** | Current NX Wireless, 1% Dimming
- ☐ **NLTA³** | Acuity nLight Air, 1% Dimming

³ Contact factory for complimentary layout including controls package.

E - MOUNTING *

For mounting center information, go to <https://www.spilighting.com/AIP12255> > Downloads > Install Sheets. Power drop canopy mounts to standard 4" octagonal junction box. Field adjustable aircraft cables allow fixture to be mounted at an application appropriate height (up to OAH). The aircraft ceiling coupler can be connected to the power drop canopy or can be separated from the power drop canopy to gain flexibility in mounting. See Downloads on website for mounting center measurements. Aircraft cable suspension uses ceiling coupler to mount to structure above. Coupler accepts 1/4-20 threaded rod or can be anchored using through hole (hardware by others). **INSTALLATION NOTES:** During installation, the contractor is responsible for using the actual fixtures to ensure accurate mounting centers from one fixture to the next along the length of the linear run.

- ☐ **DF_AC** | Aircraft Cable (default)

F - OTHER THAN STANDARD OPTIONS

Specify overall height required from ceiling to the bottom of the fixture.

| Pendant suspension length other than standard

G - CONFIGURATION *

Start/End units feature one joiner end and one finished end. Common units feature two joiner ends. Start/End and Common sections do not come with a power drop; see CPS12267 to order separately. Contact the factory for help determining how many drops your layout requires.

- ☐ **COM⁴** | Common
- ☐ **SAP** | Standalone Pendant
- ☐ **S/E⁴** | Start/End

⁴ Excludes power drop kit; see catalog ID CPS12267 to order

Standard Finishes

The colors shown are representative. Their actual appearance may vary due to differences in display settings. You can request color chips by emailing contact@spilighting.com. Please note, finishes may not be available in all configurations.

Paint Colors

PT01 RAL9003 Signal White (Gloss)	PT51 Matte White (Textured)	PT02 White (Textured)	PT04 RAL9001 Cream (Textured)	PT67 RAL7044 Silk Grey (Textured)
PT53 RAL7035 Light Grey (Textured)	PT54 RAL7037 Dusty Grey (Textured)	PT55 RAL7012 Basalt Grey (Textured)	PT56 RAL7016 Anthracite Grey (Textured)	PT11 Black (Textured)
PT57 RAL1015 Light Ivory (Textured)	PT58 RAL8004 Copper Brown (Textured)	PT59 RAL6021 Pale Green (Textured)	PT60 RAL1019 Grey Beige (Textured)	PT61 RAL7006 Beige Grey (Textured)
PT62 RAL1003 Signal Yellow (Textured)	PT63 RAL3001 Signal Red (Textured)	PT64 RAL6001 Emerald Green (Textured)	PT65 RAL5005 Signal Blue (Textured)	PT66 RAL5003 Sapphire Blue (Textured)

Metallic Paint Colors

PT22 Platinum (Metallic Gloss)	PT48 Brass (Metallic Textured)	PT28 Dark Stainless (Metallic Gloss)	PT49 Bronze (Metallic Textured)	PT32 Dark Bronze (Metallic Gloss)
PT46 Aluminum (Metallic Textured)				

Specialty Finishes



More RAL®, Pantone®, and custom finishes are available upon request. Setup fee and additional lead time applies. Call factory for details.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-
277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF

Notes: Shape per plans

Type:**P5**

SSI23-55878

Zynn 2" Lines + Arcs

SPILIGHTING

PROJECT DETAILS

AIP12256 2 in | Arcs

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Anything is possible with this creative modular system of luminous lines. Zynn 2" Lines + Arcs makes it fast and easy for you to create extraordinary curvilinear and rectilinear designs – all with standard products. Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light. Professional and refined, the system delivers up to 960 lumens per foot. For a complimentary lighting layout, contact our applications team at SPItteam@spilighting.com.

FEATURES & BENEFITS



- Sleek 2" x 3" profile
- Clean, continuous lines of light with zero pixilation
- Up to 960 lm/ft
- Provides functional lighting with comfortable luminance levels and is ideal for separating open offices, providing wayfinding, or adding markings
- The system can go up to 500' with just one power drop
- Maneuvers easily around obstructions
- Superior fit and finish
- Keeps ceilings clean with minimal mounting hardware
- Hidden internal aircraft cable grippers are easy to adjust
- Integral power supplies with easy daisy chain wiring simplifies installation
- Lines (AIP12255) and Connectors (AIP12257) are ordered separately
- Handcrafted in USA



SPECIFICATIONS

- **LIGHT SOURCE:** White LED light engine
- **DISTRIBUTION:** Direct
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L80 = >54,000 Hrs.
- **EFFICACY:** Up to 72 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard

SPILIGHTINGP:262.242.1420 | SPItteam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12256 | 1 of 7

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SSI23-55878
<div> <ul style="list-style-type: none"> • DRIVER: Integral Class 2 power supply. Power drop kit required for each continuous run; see catalog CPS12267 to order. Connect power drops anywhere along the run. • MAX AMBIENT OPERATING TEMP: 32°C (90°F) • DIMMING: 1% minimum dim level standard • CONTROLS: 0-10V standard. Lutron Athena, Current NX, and nLight AIR optional. Contact factory for other controls (e.g., Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi). • INTEGRATED SURGE PROTECTION: LED components are protected against minor surge events • EMERGENCY: Contact factory for remote options • DIFFUSER: Matte opal acrylic • CONSTRUCTION: Housing fabricated from 6000 series aluminum extrusion • FINISH: Choose from 26 standard thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request. • MODIFICATIONS: Consult factory for all modification requests, including custom radii • APPROVALS: ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications </div> <div>  <div> P:262.242.1420 SPIteam@spilighting.com Last Revised: 9/13/2023 Design Rights Reserved AIP12256 2 of 7 </div> </div>			

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

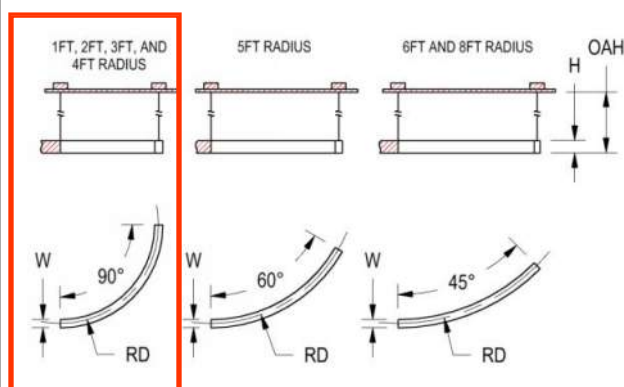
Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-
277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF

Notes: Shape per plans

Type:**P5**

SSI23-55878

SHAPE CONFIGURATION PER PLANS**DIMENSIONS**

1FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	12 in 30.5 cm

Mounting Weight: Approximate: 5 lb (3 kg)

2FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	24 in 61 cm

Mounting Weight: Approximate: 10 lb (5 kg)

3FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	36 in 91.4 cm

Mounting Weight: Approximate: 10 lb (5 kg)

4FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	48 in 121.9 cm

Mounting Weight: Approximate: 15 lb (7 kg)

5FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	60 in 152.4 cm

Mounting Weight: Approximate: 10 lb (5 kg)

6FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	72 in 182.9 cm

Mounting Weight: Approximate: 15 lb (7 kg)

8FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	96 in 243.8 cm

Mounting Weight: Approximate: 15 lb (7 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/AIP12256. Not all options are available in all configurations; consult factory for details.

Required Field *

Catalog	Light Source*	Primary Finish*	Voltage*	Lamp Options*	Controls*	Mounting*	Other Than Standard Options	Configuration*
AIP12256								
	A	B	C	D	E	F	G	

A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

1 FOOT RADIUS 90° FIXTURE

☐ **1FT-L11W** | White 11W LED Light Engine | Delivered Lumens: 791

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SSI23-55878
-----------------------------------	--	---	---

☐ **1FT-L21W** | White 21W LED Light Engine | Delivered Lumens: 1,510

2 FOOT RADIUS 90° FIXTURE

☐ **2FT-L21W** | White 21W LED Light Engine | Delivered Lumens: 1,510

☐ **2FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

3 FOOT RADIUS 90° FIXTURE

☐ **3FT-L32W** | White 32W LED Light Engine | Delivered Lumens: 2,301

☐ **3FT-L64W** | White 64W LED Light Engine | Delivered Lumens: 4,602

4 FOOT RADIUS 90° FIXTURE

☐ **4FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

☐ **4FT-L85W** | White 85W LED Light Engine | Delivered Lumens: 6,112

5 FOOT RADIUS 60° FIXTURE

☐ **5FT-L35W** | White 35W LED Light Engine | Delivered Lumens: 2,517

☐ **5FT-L71W** | White 71W LED Light Engine | Delivered Lumens: 5,105

6 FOOT RADIUS 45° FIXTURE

☐ **6FT-L32W** | White 32W LED Light Engine | Delivered Lumens: 2,301

☐ **6FT-L64W** | White 64W LED Light Engine | Delivered Lumens: 4,602

8 FOOT RADIUS 45° FIXTURE

☐ **8FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

☐ **8FT-L85W** | White 85W LED Light Engine | Delivered Lumens: 6,112

See last page for finish options

B - VOLTAGE *

☒ **120-277V** | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

☐ **3000K**¹ | 3000K CCT

☐ **3500K**² | 3500K CCT

☒ **4000K** | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	Type: <div>P5</div> SSI23-55878
-----------------------------------	--	---	---

D - CONTROLS *

Extended lead times may apply for controls other than 0-10V. Contact factory for additional control options such as Enlighted, Encelium, Wattstopper, WaveLinx, Casambi, or others.

- ☒ **DF_DIM1** | 0-10V Control, 1% Dimming (default)
- ☐ **AWN³** | Lutron Athena Wireless Node, 1% Dimming
- ☐ **NX³** | Current NX Wireless, 1% Dimming
- ☐ **NLTA³** | Acuity nLight Air, 1% Dimming

³ Contact factory for complimentary layout including controls package.

E - MOUNTING *

For mounting center information, go to <https://www.spilighting.com/AIP12256> > Downloads > Install Sheets. Power drop canopy mounts to standard 4" octagonal junction box. Field adjustable aircraft cables allow fixture to be mounted at an application appropriate height (up to OAH). The aircraft ceiling coupler can be connected to the power drop canopy or can be separated from the power drop canopy to gain flexibility in mounting. See Downloads on website for mounting center measurements. Aircraft cable suspension uses ceiling coupler to mount to structure above. Coupler accepts 1/4-20 threaded rod or can be anchored using through hole (hardware by others). **INSTALLATION NOTES:** During installation, the contractor is responsible for using the actual fixtures to ensure accurate mounting centers from one fixture to the next along the length of the linear run.

- ☒ **DF_AC** | Aircraft Cable (default)

F - OTHER THAN STANDARD OPTIONS

Specify overall height required from ceiling to the bottom of the fixture.


☒ **OAH** | Pendant suspension length other than standard Length:

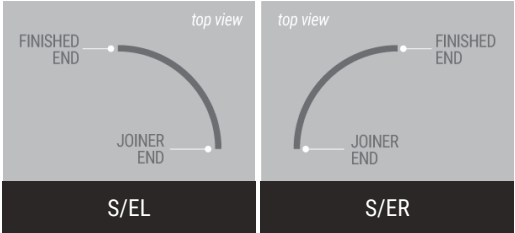
G - CONFIGURATION *

Start/End units feature one joiner end and one finished end. Common units feature two joiner ends. Start/End and Common sections do not come with a power drop; see CPS12267 to order separately. Contact the factory for help determining how many drops your layout requires.

- ☒ **COM⁴** | Common
- ☐ **S/EL⁴** | Start/End Left
- ☐ **S/ER⁴** | Start/End Right

⁴ Excludes power drop kit; see catalog ID CPS12267 to order

Submitted by Schroeder Sales, Inc		Catalog Number:	Type:
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF Notes: Shape per plans	P5 SSI23-55878



Standard Finishes

The colors shown are representative. Their actual appearance may vary due to differences in display settings. You can request color chips by emailing contact@spilighting.com. Please note, finishes may not be available in all configurations.

Paint Colors

PT01 RAL9003 Signal White (Gloss)	PT51 Matte White (Textured)	PT02 White (Textured)	PT04 RAL9001 Cream (Textured)	PT67 RAL7044 Silk Grey (Textured)
PT53 RAL7035 Light Grey (Textured)	PT54 RAL7037 Dusty Grey (Textured)	PT55 RAL7012 Basalt Grey (Textured)	PT56 RAL7016 Anthracite Grey (Textured)	PT11 Black (Textured)
PT57 RAL1015 Light Ivory (Textured)	PT58 RAL8004 Copper Brown (Textured)	PT59 RAL6021 Pale Green (Textured)	PT60 RAL1019 Grey Beige (Textured)	PT61 RAL7006 Beige Grey (Textured)
PT62 RAL1003 Signal Yellow (Textured)	PT63 RAL3001 Signal Red (Textured)	PT64 RAL6001 Emerald Green (Textured)	PT65 RAL5005 Signal Blue (Textured)	PT66 RAL5003 Sapphire Blue (Textured)


Metallic Paint Colors

PT22 Platinum (Metallic Gloss)	PT48 Brass (Metallic Textured)	PT28 Dark Stainless (Metallic Gloss)	PT49 Bronze (Metallic Textured)	PT32 Dark Bronze (Metallic Gloss)
PT46 Aluminum (Metallic Textured)				

Specialty Finishes



More RAL®, Pantone®, and custom finishes are available upon request. Setup fee and additional lead time applies. Call factory for details.


Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SS123-55878
---	--	--	---

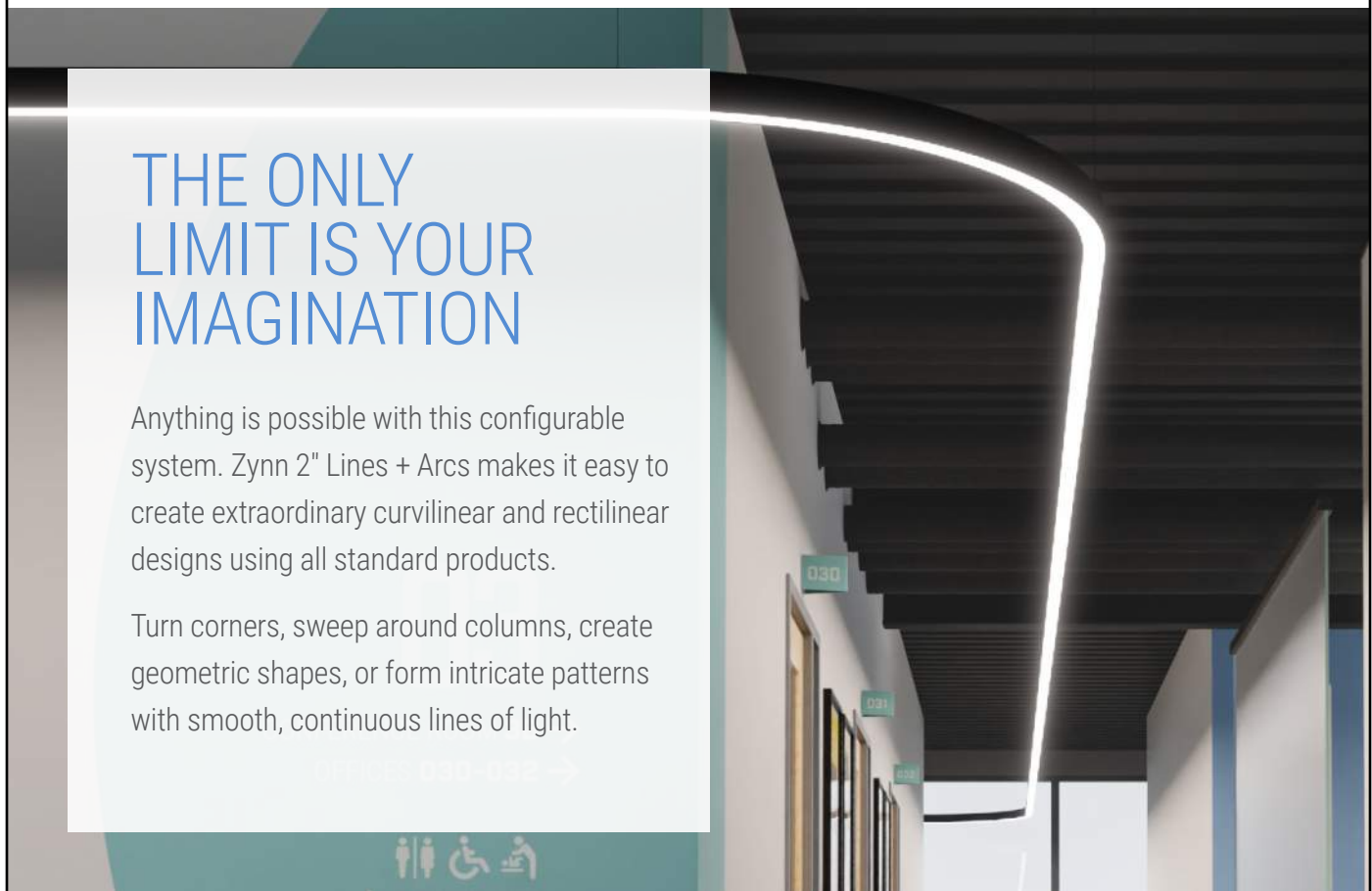
THE ONLY LIMIT IS YOUR IMAGINATION

Anything is possible with this configurable system. Zynn 2" Lines + Arcs makes it easy to create extraordinary curvilinear and rectilinear designs using all standard products.

Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light.

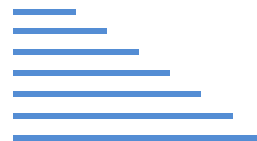
OFFICES 030-032 →





LINES

Crisp and clean lines
Continuous runs or standalone pendants



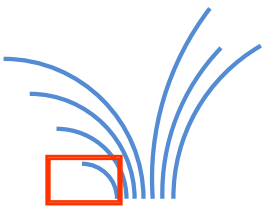
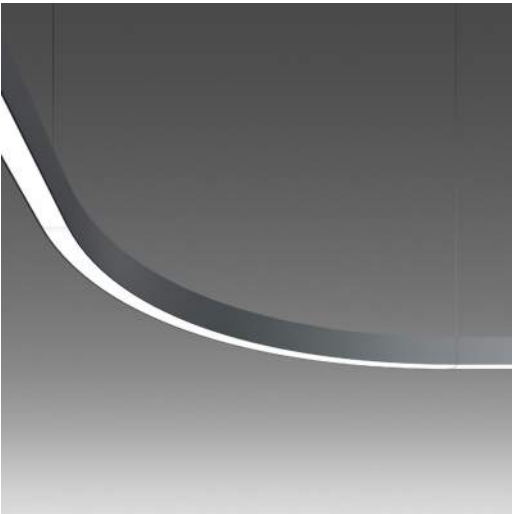
Catalog ID	Size	Wattage	Delivered Lumens
AIP12255	2'	11	945
		22	1,890
	3'	17	1,460
		34	2,921
	4'	22	1,890
		44	3,780
	5'	28	2,405
		56	4,810
	6'	34	2,921
		68	5,841
	7'	39	3,350
		79	6,786
	8'	44	3,780
		89	7,645

Power drop kit required for each continuous run (CPS12267)

ARCS

Sweeping curves and organic lines that flow with your design

Custom radii available; contact factory



Catalog ID	Radius	Wattage	Delivered Lumens
AIP12256	1' - 90° arc	11	791
		21	1,510
	2' - 90° arc	21	1,510
		42	3,020
	3' - 90° arc	32	2,301
		64	4,602
	4' - 90° arc	42	3,020
		85	6,112
	5' - 60° arc	35	2,517
		71	5,105
	6' - 45° arc	32	2,301
		64	4,602
	8' - 45° arc	42	3,020
		85	6,112

Power drop kit required for each continuous run (CPS12267)

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-277V-
4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR

Notes: Shape per plans

Type:**P5E**

SSI23-55878

Zynn 2" Lines + Arcs

SPILIGHTING

PROJECT DETAILS

AIP12255 2 in | Lines

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Anything is possible with this creative modular system of luminous lines. Zynn 2" Lines + Arcs makes it fast and easy for you to create extraordinary curvilinear and rectilinear designs – all with standard products. Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light. Professional and refined, the system delivers up to 960 lumens per foot. For a complimentary lighting layout, contact our applications team at SPITeam@spilighting.com.

FEATURES & BENEFITS


- Sleek 2" x 3" profile
- Clean, continuous lines of light with zero pixilation
- Up to 960 lm/ft
- Provides functional lighting with comfortable luminance levels and is ideal for separating open offices, providing wayfinding, or adding markings
- The system can go up to 500' with just one power drop
- Maneuvers easily around obstructions
- Superior fit and finish
- Keeps ceilings clean with minimal mounting hardware
- Hidden internal aircraft cable grippers are easy to adjust
- Integral power supplies with easy daisy chain wiring simplifies installation
- Arcs (AIP12256) and Connectors (AIP12257) are ordered separately
- Handcrafted in USA



SPECIFICATIONS

- **LIGHT SOURCE:** White LED light engine
- **DISTRIBUTION:** Direct
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L80 = >54,000 Hrs.
- **EFFICACY:** Up to 86 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard

SPILIGHTINGP:262.242.1420 | SPITeam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12255 | 1 of 6

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SSI23-55878
<div> <ul style="list-style-type: none"> • DRIVER: Integral Class 2 power supply. Power drop kit required for each continuous run; see catalog CPS12267 to order. Connect power drops anywhere along the run. • MAX AMBIENT OPERATING TEMP: 32°C (90°F) • DIMMING: 1% minimum dim level standard • CONTROLS: 0-10V standard. Lutron Athena, Current NX, and nLight AIR optional. Contact factory for other controls (e.g., Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi). • INTEGRATED SURGE PROTECTION: LED components are protected against minor surge events • EMERGENCY: Contact factory for remote options • DIFFUSER: Matte opal acrylic • CONSTRUCTION: Housing fabricated from 6000 series aluminum extrusion • FINISH: Choose from 26 standard thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request. • MODIFICATIONS: Consult factory for all modification requests, including custom lengths • APPROVALS: ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications </div> <div>  <div> P:262.242.1420 SPLteam@spilighting.com Last Revised: 9/13/2023 Design Rights Reserved AIP12255 2 of 6 </div> </div>			

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

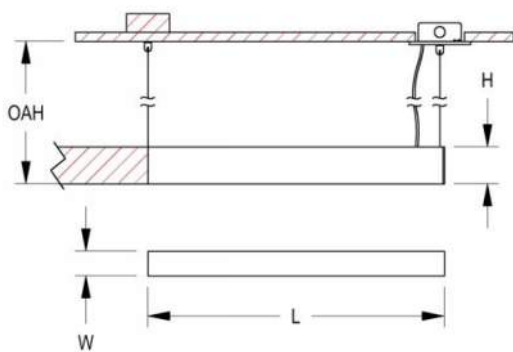
Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-277V-
4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR

Notes: Shape per plans

Type:**P5E**

SSI23-55878

SHAPE CONFIGURATION PER PLANS**DIMENSIONS**

2FT	W	L	H	OAH
	2 in 5.1 cm	24 in 61 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 5 lb (3 kg)

3FT	W	L	H	OAH
	2 in 5.1 cm	36 in 91.4 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 10 lb (5 kg)

4FT	W	L	H	OAH
	2 in 5.1 cm	48 in 121.9 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 10 lb (5 kg)

5FT	W	L	H	OAH
	2 in 5.1 cm	60 in 152.4 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 10 lb (5 kg)

6FT	W	L	H	OAH
	2 in 5.1 cm	72 in 182.9 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 15 lb (7 kg)

7FT	W	L	H	OAH
	2 in 5.1 cm	84 in 213.4 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 15 lb (7 kg)

8FT	W	L	H	OAH
	2 in 5.1 cm	96 in 243.8 cm	3 in 7.6 cm	54 in 137.2 cm

Mounting Weight: Approximate: 20 lb (10 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/AIP12255. Not all options are available in all configurations; consult factory for details.

Required Field *


Catalog	Light Source*	Primary Finish*	Voltage*	Lamp Options*	Controls*	Mounting*	Other Than Standard Options	Configuration*
AIP12255								
	A	B	C	D	E	F	G	

A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

2 FOOT NOMINAL FIXTURE

☐ **2FT-L11W** | White 11W LED Light Engine | Delivered Lumens: 945

Submitted by Schroeder Sales, Inc		Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR	Type: P5E SSI23-55878
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Notes: Shape per plans	

☐ 2FT-L22W | White 22W LED Light Engine | Delivered Lumens: 1,890

3 FOOT NOMINAL FIXTURE

☐ 3FT-L17W | White 17W LED Light Engine | Delivered Lumens: 1,460

☐ 3FT-L34W | White 34W LED Light Engine | Delivered Lumens: 2,921

4 FOOT NOMINAL FIXTURE

☐ 4FT-L22W | White 22W LED Light Engine | Delivered Lumens: 1,890

☐ 4FT-L44W | White 44W LED Light Engine | Delivered Lumens: 3,780

5 FOOT NOMINAL FIXTURE

☐ 5FT-L28W | White 28W LED Light Engine | Delivered Lumens: 2,405

☐ 5FT-L56W | White 56W LED Light Engine | Delivered Lumens: 4,810

6 FOOT NOMINAL FIXTURE

☐ 6FT-L34W | White 34W LED Light Engine | Delivered Lumens: 2,921

☐ 6FT-L68W | White 68W LED Light Engine | Delivered Lumens: 5,841

7 FOOT NOMINAL FIXTURE

☐ 7FT-L39W | White 39W LED Light Engine | Delivered Lumens: 3,350

☐ 7FT-L79W | White 79W LED Light Engine | Delivered Lumens: 6,786

8 FOOT NOMINAL FIXTURE

☐ 8FT-L44W | White 44W LED Light Engine | Delivered Lumens: 3,780

☐ 8FT-L89W | White 89W LED Light Engine | Delivered Lumens: 7,645

See last page for finish options

B - VOLTAGE *

☐ 120-277V | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

☐ 3000K¹ | 3000K CCT

☐ 3500K² | 3500K CCT

☐ 4000K | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

SPI LIGHTING

P:262.242.1420 | SPLteam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12255 | 4 of 6

Submitted On: Sep 14, 20237/16Index Page

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SSI23-55878
-----------------------------------	--	---	---

D - CONTROLS *

Extended lead times may apply for controls other than 0-10V. Contact factory for additional control options such as Enlighted, Encelium, Wattstopper, WaveLinx, Casambi, or others.

- ☒ **DF_DIM1** | 0-10V Control, 1% Dimming (default)
- ☐ **AWN³** | Lutron Athena Wireless Node, 1% Dimming
- ☐ **NX³** | Current NX Wireless, 1% Dimming
- ☐ **NLTA³** | Acuity nLight Air, 1% Dimming

³ Contact factory for complimentary layout including controls package.

E - MOUNTING *

For mounting center information, go to <https://www.spilighting.com/AIP12255> > Downloads > Install Sheets. Power drop canopy mounts to standard 4" octagonal junction box. Field adjustable aircraft cables allow fixture to be mounted at an application appropriate height (up to OAH). The aircraft ceiling coupler can be connected to the power drop canopy or can be separated from the power drop canopy to gain flexibility in mounting. See Downloads on website for mounting center measurements. Aircraft cable suspension uses ceiling coupler to mount to structure above. Coupler accepts 1/4-20 threaded rod or can be anchored using through hole (hardware by others). **INSTALLATION NOTES:** During installation, the contractor is responsible for using the actual fixtures to ensure accurate mounting centers from one fixture to the next along the length of the linear run.

- ☒ **DF_AC** | Aircraft Cable (default)

F - OTHER THAN STANDARD OPTIONS

Specify overall height required from ceiling to the bottom of the fixture.

☒ **OAH** | Pendant suspension length other than standard Length:

G - CONFIGURATION *

Start/End units feature one joiner end and one finished end. Common units feature two joiner ends. Start/End and Common sections do not come with a power drop; see CPS12267 to order separately. Contact the factory for help determining how many drops your layout requires.

- ☐ **COM⁴** | Common
- ☒ **SAP** | Standalone Pendant
- ☐ **S/E⁴** | Start/End

⁴ Excludes power drop kit; see catalog ID CPS12267 to order

EMR = REMOTE EMERGENCY BATTERY PACK

Standard Finishes

The colors shown are representative. Their actual appearance may vary due to differences in display settings. You can request color chips by emailing contact@spilighting.com. Please note, finishes may not be available in all configurations.

Paint Colors

PT01 RAL9003 Signal White (Gloss)	PT51 Matte White (Textured)	PT02 White (Textured)	PT04 RAL9001 Cream (Textured)	PT67 RAL7044 Silk Grey (Textured)
PT53 RAL7035 Light Grey (Textured)	PT54 RAL7037 Dusty Grey (Textured)	PT55 RAL7012 Basalt Grey (Textured)	PT56 RAL7016 Anthracite Grey (Textured)	PT11 Black (Textured)
PT57 RAL1015 Light Ivory (Textured)	PT58 RAL8004 Copper Brown (Textured)	PT59 RAL6021 Pale Green (Textured)	PT60 RAL1019 Grey Beige (Textured)	PT61 RAL7006 Beige Grey (Textured)
PT62 RAL1003 Signal Yellow (Textured)	PT63 RAL3001 Signal Red (Textured)	PT64 RAL6001 Emerald Green (Textured)	PT65 RAL5005 Signal Blue (Textured)	PT66 RAL5003 Sapphire Blue (Textured)

Metallic Paint Colors

PT22 Platinum (Metallic Gloss)	PT48 Brass (Metallic Textured)	PT28 Dark Stainless (Metallic Gloss)	PT49 Bronze (Metallic Textured)	PT32 Dark Bronze (Metallic Gloss)
PT46 Aluminum (Metallic Textured)				

Specialty Finishes



More RAL®, Pantone®, and custom finishes are available upon request. Setup fee and additional lead time applies. Call factory for details.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-277V-
4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR

Type:**P5E**

Notes: Shape per plans

SSI23-55878

Zynn 2" Lines + Arcs

SPILIGHTING

PROJECT DETAILS

AIP12256 2 in | Arcs

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Anything is possible with this creative modular system of luminous lines. Zynn 2" Lines + Arcs makes it fast and easy for you to create extraordinary curvilinear and rectilinear designs – all with standard products. Turn corners, sweep around columns, create geometric shapes, or form intricate patterns with smooth, continuous lines of light. Professional and refined, the system delivers up to 960 lumens per foot. For a complimentary lighting layout, contact our applications team at SPItteam@spilighting.com.

FEATURES & BENEFITS



- Sleek 2" x 3" profile
- Clean, continuous lines of light with zero pixilation
- Up to 960 lm/ft
- Provides functional lighting with comfortable luminance levels and is ideal for separating open offices, providing wayfinding, or adding markings
- The system can go up to 500' with just one power drop
- Maneuvers easily around obstructions
- Superior fit and finish
- Keeps ceilings clean with minimal mounting hardware
- Hidden internal aircraft cable grippers are easy to adjust
- Integral power supplies with easy daisy chain wiring simplifies installation
- Lines (AIP12255) and Connectors (AIP12257) are ordered separately
- Handcrafted in USA



SPECIFICATIONS

- **LIGHT SOURCE:** White LED light engine
- **DISTRIBUTION:** Direct
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L80 = >54,000 Hrs.
- **EFFICACY:** Up to 72 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard

SPILIGHTINGP:262.242.1420 | SPItteam@spilighting.com | Last Revised: 9/13/2023 | Design Rights Reserved | AIP12256 | 1 of 7

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SSI23-55878
<div> <ul style="list-style-type: none"> • DRIVER: Integral Class 2 power supply. Power drop kit required for each continuous run; see catalog CPS12267 to order. Connect power drops anywhere along the run. • MAX AMBIENT OPERATING TEMP: 32°C (90°F) • DIMMING: 1% minimum dim level standard • CONTROLS: 0-10V standard. Lutron Athena, Current NX, and nLight AIR optional. Contact factory for other controls (e.g., Enlighted, Encelium, Wattstopper, WaveLinx, or Casambi). • INTEGRATED SURGE PROTECTION: LED components are protected against minor surge events • EMERGENCY: Contact factory for remote options • DIFFUSER: Matte opal acrylic • CONSTRUCTION: Housing fabricated from 6000 series aluminum extrusion • FINISH: Choose from 26 standard thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request. • MODIFICATIONS: Consult factory for all modification requests, including custom radii • APPROVALS: ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications </div> <div>  <div> P:262.242.1420 SPLteam@spilighting.com Last Revised: 9/13/2023 Design Rights Reserved AIP12256 2 of 7 </div> </div>			

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

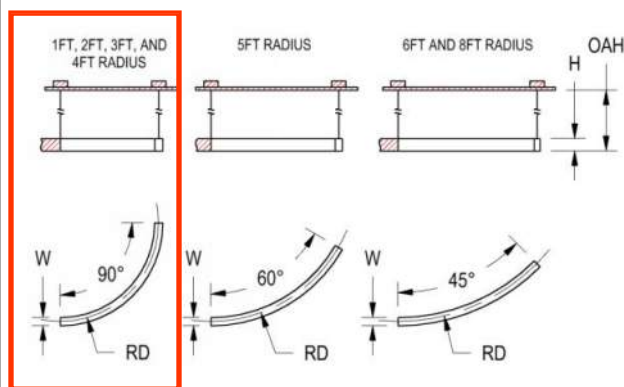
Catalog Number:

AIP12255/AIP12256-LIGHT SOURCE-120-277V-
4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR

Notes: Shape per plans

Type:**P5E**

SSI23-55878

SHAPE CONFIGURATION PER PLANS**DIMENSIONS**

1FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	12 in 30.5 cm

Mounting Weight: Approximate: 5 lb (3 kg)

2FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	24 in 61 cm

Mounting Weight: Approximate: 10 lb (5 kg)

3FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	36 in 91.4 cm

Mounting Weight: Approximate: 10 lb (5 kg)

4FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	48 in 121.9 cm

Mounting Weight: Approximate: 15 lb (7 kg)

5FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	60 in 152.4 cm

Mounting Weight: Approximate: 10 lb (5 kg)

6FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	72 in 182.9 cm

Mounting Weight: Approximate: 15 lb (7 kg)

8FT	W	H	OAH	RD
	2 in 5.1 cm	3 in 7.6 cm	54 in 137.2 cm	96 in 243.8 cm

Mounting Weight: Approximate: 15 lb (7 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/AIP12256. Not all options are available in all configurations; consult factory for details.

Required Field *


Catalog	Light Source*	Primary Finish*	Voltage*	Lamp Options*	Controls*	Mounting*	Other Than Standard Options	Configuration*
AIP12256								
	A	B	C	D	E	F	G	

A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

1 FOOT RADIUS 90° FIXTURE

☐ **1FT-L11W** | White 11W LED Light Engine | Delivered Lumens: 791

Submitted by Schroeder Sales, Inc 	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SSI23-55878
---	--	--	---

☐ **1FT-L21W** | White 21W LED Light Engine | Delivered Lumens: 1,510

2 FOOT RADIUS 90° FIXTURE

☐ **2FT-L21W** | White 21W LED Light Engine | Delivered Lumens: 1,510

☐ **2FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

3 FOOT RADIUS 90° FIXTURE

☐ **3FT-L32W** | White 32W LED Light Engine | Delivered Lumens: 2,301

☐ **3FT-L64W** | White 64W LED Light Engine | Delivered Lumens: 4,602

4 FOOT RADIUS 90° FIXTURE

☐ **4FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

☐ **4FT-L85W** | White 85W LED Light Engine | Delivered Lumens: 6,112

5 FOOT RADIUS 60° FIXTURE

☐ **5FT-L35W** | White 35W LED Light Engine | Delivered Lumens: 2,517

☐ **5FT-L71W** | White 71W LED Light Engine | Delivered Lumens: 5,105

6 FOOT RADIUS 45° FIXTURE

☐ **6FT-L32W** | White 32W LED Light Engine | Delivered Lumens: 2,301

☐ **6FT-L64W** | White 64W LED Light Engine | Delivered Lumens: 4,602

8 FOOT RADIUS 45° FIXTURE

☐ **8FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 3,020

☐ **8FT-L85W** | White 85W LED Light Engine | Delivered Lumens: 6,112

See last page for finish options

B - VOLTAGE *

☒ **120-277V** | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

☐ **3000K**¹ | 3000K CCT

☐ **3500K**² | 3500K CCT

☒ **4000K** | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR Notes: Shape per plans	Type: P5E SSI23-55878
-----------------------------------	--	---	---

D - CONTROLS *

Extended lead times may apply for controls other than 0-10V. Contact factory for additional control options such as Enlighted, Encelium, Wattstopper, WaveLinx, Casambi, or others.

- ☐ **DF_DIM1** | 0-10V Control, 1% Dimming (default)
- ☐ **AWN³** | Lutron Athena Wireless Node, 1% Dimming
- ☐ **NX³** | Current NX Wireless, 1% Dimming
- ☐ **NLTA³** | Acuity nLight Air, 1% Dimming

³ Contact factory for complimentary layout including controls package.

E - MOUNTING *

For mounting center information, go to <https://www.spilighting.com/AIP12256> > Downloads > Install Sheets. Power drop canopy mounts to standard 4" octagonal junction box. Field adjustable aircraft cables allow fixture to be mounted at an application appropriate height (up to OAH). The aircraft ceiling coupler can be connected to the power drop canopy or can be separated from the power drop canopy to gain flexibility in mounting. See Downloads on website for mounting center measurements. Aircraft cable suspension uses ceiling coupler to mount to structure above. Coupler accepts 1/4-20 threaded rod or can be anchored using through hole (hardware by others). **INSTALLATION NOTES:** During installation, the contractor is responsible for using the actual fixtures to ensure accurate mounting centers from one fixture to the next along the length of the linear run.

- ☐ **DF_AC** | Aircraft Cable (default)

F - OTHER THAN STANDARD OPTIONS

Specify overall height required from ceiling to the bottom of the fixture.


OAH | Pendant suspension length other than standard Length:

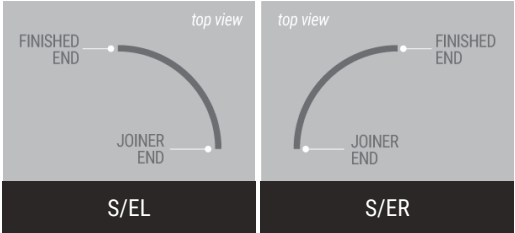
G - CONFIGURATION *

Start/End units feature one joiner end and one finished end. Common units feature two joiner ends. Start/End and Common sections do not come with a power drop; see CPS12267 to order separately. Contact the factory for help determining how many drops your layout requires.

- ☐ **COM⁴** | Common
- ☐ **S/EL⁴** | Start/End Left
- ☐ **S/ER⁴** | Start/End Right

⁴ Excludes power drop kit; see catalog ID CPS12267 to order

Submitted by Schroeder Sales, Inc		Catalog Number: AIP12255/AIP12256-LIGHT SOURCE-120-277V-4000K-DF_DIM1-DF_AC-OAH-SAP-MSF-EMR	Type: P5E
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Notes: Shape per plans	SSI23-55878



Standard Finishes

The colors shown are representative. Their actual appearance may vary due to differences in display settings. You can request color chips by emailing contact@spilighting.com. Please note, finishes may not be available in all configurations.

Paint Colors

PT01 RAL9003 Signal White (Gloss)	PT51 Matte White (Textured)	PT02 White (Textured)	PT04 RAL9001 Cream (Textured)	PT67 RAL7044 Silk Grey (Textured)
PT53 RAL7035 Light Grey (Textured)	PT54 RAL7037 Dusty Grey (Textured)	PT55 RAL7012 Basalt Grey (Textured)	PT56 RAL7016 Anthracite Grey (Textured)	PT11 Black (Textured)
PT57 RAL1015 Light Ivory (Textured)	PT58 RAL8004 Copper Brown (Textured)	PT59 RAL6021 Pale Green (Textured)	PT60 RAL1019 Grey Beige (Textured)	PT61 RAL7006 Beige Grey (Textured)
PT62 RAL1003 Signal Yellow (Textured)	PT63 RAL3001 Signal Red (Textured)	PT64 RAL6001 Emerald Green (Textured)	PT65 RAL5005 Signal Blue (Textured)	PT66 RAL5003 Sapphire Blue (Textured)

Metallic Paint Colors

PT22 Platinum (Metallic Gloss)	PT48 Brass (Metallic Textured)	PT28 Dark Stainless (Metallic Gloss)	PT49 Bronze (Metallic Textured)	PT32 Dark Bronze (Metallic Gloss)
PT46 Aluminum (Metallic Textured)				


Specialty Finishes



More RAL®, Pantone®, and custom finishes are available upon request. Setup fee and additional lead time applies. Call factory for details.

BACK-LIT PANEL SERIES

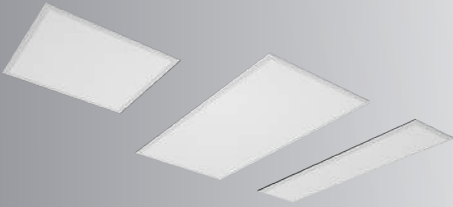
CCT and Lumen Selectable



INDOOR

Type:

Fixture:



TECHNICAL DATA








PRODUCT	BP2		
SIZE	1 X 4	2 X 2	2 X 4
WATTAGE CHANGEABLE	20W/25W/30W		35W/40W/46W
LUMENS	2660LM/3250LM/3810LM		4650LM/5200LM/5842LM
EFFICACY	UP TO 133 LM/W		
CC	3500K/4000K/5000K Color Changeable		
VOLTAGE	120 - 277V		
CONTROL	0 - 10V		
CRI	>80		
ENCLOSURE	DAMP LOCATION		
LUMEN MAINTENANCE	>50,000 HRS		
WORKING TEMP.	-4°F ~ 104°F		

DESCRIPTION

The CCT and Lumen Selectable Panel gives the user the ability to adjust the power as well as color temperature. The optical design greatly improves light utilization and evenness. This panel also carries a dimming function and is also suitable for damp locations.

INTENDED USE

The Back-Lit Panel series is widely used for indoor applications. This panel is excellent for offices, hallways, offices, conference rooms, supermarkets, and many other applications.

ORDERING INFORMATION

-


-

-

-

Series	Size	Lumen Package	Voltage	CC	EM Battery Backup
BP2 - (CCT and Lumen Selectable Panel)	14 - (1 FT x 4 FT) 22 - (2 FT x 2 FT)	40LC - (3800lm/3300lm/2600lm, 30W/25W/20W)	U - (120 - 277V)	CC - (35K / 40K / 50K)	EM1 - (15W)
	24 - (2 FT x 4 FT)	60LC - 5800lm 5200lm 4500lm, 46W 40W 35W			

*Additional cost and/or lead time on customized fixtures may apply.



www.spitzerlighting.com

702 Interchange Blvd., Newark, DE 19711

Specification is subject to change without notice

1/2

<h1>BACK-LIT PANEL SERIES</h1>		<div>INDOOR</div>
CCT and Lumen Selectable	Type:	

CONSTRUCTION
 Die-formed steel.

FINISH
 Painted in high gloss durable white finish.

OPTICS
 Frosted PC cover.

ELECTRICAL
 Class 2, constant current, 120V-277V, 50-60 HZ, 0.95Amp@100V. 0-10V dimming.

LISTINGS
 UL certified. DLC.

DesignLights Consortium (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified.

Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified."

**IES Files available upon request

Spitzer Model No.	DLC Product ID
BP2-14-40LC-U-CC	S-ZJR2NB
BP2-22-40LC-U-CC	S-1H7XPI
BP2-24-60LC-U-CC	S-LSJ6VW

DIMENSIONS

Product	A	B
BP2-14	47.8 in (1213 mm)	11.9 in (301 mm)
BP2-22	23.7 in (603 mm)	23.7 in (603 mm)
BP2-24	47.8 in (1213 mm)	23.7 in (603mm)

LUMEN CHART						
20W	25W	30W	35W	40W	46W	
2660 LM	3250 LM	3810 LM	4650 LM	5200 LM	5842 LM	

AVAILABLE ACCESSORIES
 *SOLD SEPARATELY

15W Emergency Backup Battery
LED Driver (Factory Installed)
BLD-YT15D

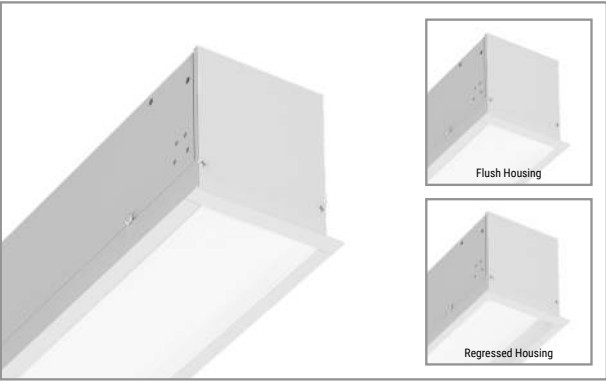
MOUNTING OPTIONS
 *SOLD SEPARATELY

Recessed Mount Kit
1 x 4 • **BP-RMK-1x4**
2 x 2 • **BP-RMK-2x2**
2 x 4 • **BP-RMK-2x4**

Ceiling Mount Kit
1 x 4 • **BP-CMKW-1x4**
2 x 2 • **BP-CMKW-2x2**
2 x 4 • **BP-CMKW-2x4**

Horizon Mount Kit
1 x 4 • **HRK14**
2 x 2 • **HRK22**
2 x 4 • **HRK24**

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 4

LED
Recessed
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information [page 2](#)
- Shielding Options [page 3](#)
- Photometric Data [page 4](#)
- Integrated Sensor Details [page 6](#)
- VividTune [page 7](#)

Product Certification



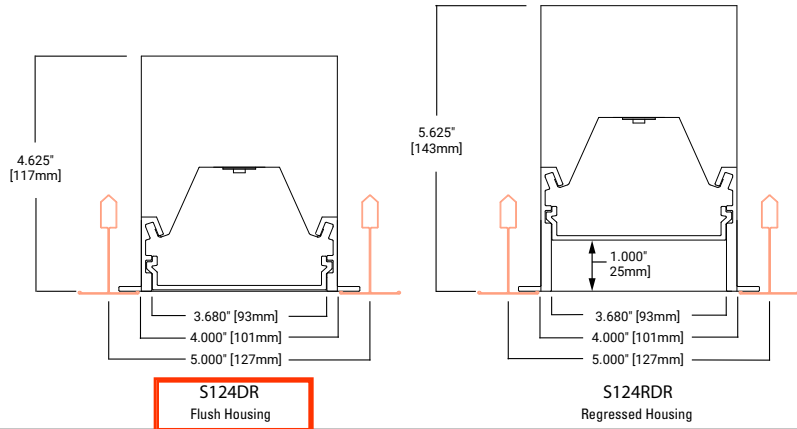
Product Features

VividTune
light color control

Top Product Features

- Specifiable to the nearest 1" in length
- Satin Lens, Asymmetric Lens and Drop Lens available
- Flush and Regressed Housing
- Customizable lumen packages
- Precision extended trims fit a variety of different architectural ceiling types
- Industry leading performance and efficacy
- [Standard and custom corners / transitions available](#)
- Options to meet Buy American Act requirements

Dimensions



 additional product diagrams

Neo-Ray

Define 4 LED Recessed

Order Information

SAMPLE ORDER NUMBER: S124DR-S795D840-ETG4F0-1B1-UDD-F-W-SWPD1

Icon Key: Grey bar denotes available with 10-Day Quick Ship
Ø Consult factory for availability

Domestic Preference	Light Distribution	Light Engine	Lumen Package Down	CRI	LED CCT	Ceiling Type	Length	Circuiting
Domestic Preference	Light Distribution	Light Engine	Lumen Package Down	CRI	LED CCT	Ceiling Type	Length	Circuiting
[Blank]=Standard BAA=Buy American Act	S124DR=Define 4 Direct Recessed S124RDR=Define 4 Regressed Direct Recessed QS-S124DR=Define 4 Direct Recessed Quick Ship	-S=Standard -H=High Performance -V=VividTune	350D=350 Lms/ft 575D=575 Lms/ft 795D=795 Lms/ft 1020D=1020 Lms/ft 1195D=1195 Lms/ft D=Custom Lms/ft	8=80 9=90	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K 2765=2700K-6500K 3050=3000K-5000K	-ETG=15/16" T-Grid -FTG=9/16" T-Grid -STG=9/16" Slot T-Grid -FTT=9/16" Tegular T-Grid -ITG=9/16" Interlude T-Grid -ETT=15/16" Tegular T-Grid -GYP=Gypsum board -FSR=Mud-in Gypsum board -FES="Finished" Extruded Side	2F0=2' Individual 4F0=4' Individual 8F0=8' Individual 12F0=12' Individual F0=4' Incremental Run (e.g. 40F0 = 40' 0") F=1" Incremental Run (e.g. 21F3 = 21' 3")	-1=Single Circuit -S=Secondary Circuit
Notes	Notes	Notes	Notes	Notes		Notes	Notes	Notes
Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to Domestic Preferences website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	RDR regress of 1" will add an additional 1" to fixture depth.	See performance table for add'l details. Light engine must be consistent across run length.	3500K/80CRI/DR housing/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 4. VividTune available with 795D, 1020D, and 1195D.	Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2700K not available in 80CRI. 2765 & 3050 VividTune configurations require V light engine, 90 CRI, and W2A driver.		Please refer to ceiling interface diagrams for additional detail and dimensions.		Secondary circuit similar to A/B switching. Price adder applies for "S" configuration. VividTune Secondary Circuit has shared CCT wiring.

Emergency	Voltage	Integral LED Driver	Shielding Down	Options	Color	Integrated Sensor
Emergency E=Emergency circuit B1=Surelite 7W UNV integral battery B2=Surelite 14W UNV integral battery B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	Voltage -U=UNV 120-277V -1=120V -2=277V -3=347V -4=48VDC Ø	Integral LED Driver DD=0-10 Volt Dimming, 1% 5L=DALI Dimming, 5%-100% LH=Lutron LDE1 w/ecosys LV1=DLVP Ø W2A=White Tuning, 0-10V Dimming (VividTune only)	Shielding Down -F=Satin Flush Diffuser -A=Asym Flush Optic -D=Satin Drop Diffuser -L=Straight blade louver with diffuser Ø	Options -CP=Chicago Plenum -R=GLR Fuse (Fast) -F=GMF Fuse (Slow)	Color -W=Matte White -S=Silver -B=Black -C=Custom Color Ø	Integrated Sensor -WAA=WaveLinX Pro Integral -WTA=WaveLinX Pro Tilemount -WAB=WaveLinX Lite Integral Ø -WTB=WaveLinX Lite Tilemount Ø -LWIPD1=Enlighted Integral -LWTPD1=Enlighted Tilemount -SVPD1=Standalone Sensor -SVTPD1=Standalone Sensor Tilemount
Notes Internal battery standard for fixtures ≥ 4ft and lumen output ≤1195 Lms/ft. Fixture Non-IC-Rated for internal battery and lumen output ≥1020 Lms/ft. External battery standard with fixtures <4ft and all Chicago plenum fixtures.	Notes 48V for use with LV1 driver. 347V only available with DD driver.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses. "L" option required RDR housing and may require additional lead-time, please consult factory for details. A option not available with VividTune.	Notes	Notes	Notes Please refer to page 6 for additional detail required to specify integrated or tile-mount sensors. Integral option not available with regressed, drop or asymmetric configurations. Tilemount configuration recommended for these applications.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-795D-8-CEILING
TYPE-8F0-1-U-DD-F-W

Notes:**Type:****R2**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Product Specifications****Construction**

- Available in Flush and Regressed Housing
- Precision cut housing trim extruded from 6063 aluminum with aluminum frame
- Extruded end-caps ensure a precise and uniform ceiling interface
- Nominal 2' -12' illuminated sections used in run configuration and/or individual fixtures

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector, light engine, led driver and quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with three next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or VividTune ranges of 2700K-6500K and 3000K-5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications
- Cooper Lighting Solutions's DLVP Low voltage drivers are available for 48VDC applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI, Lutron, DLVP) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Recessed

Lengths

- Available in any length (23" min) with a resolution of 1 inch. Max section length of 12ft (8ft max option available)
- Additional fixture lengths are available please consult factory. All lengths are nominal
- VividTune available as standard product in 1ft resolution
- Actual sizes are one inch shorter than nominal to allow easy in-grid installation
- For Gypsum or Flangeless installations add 1 inch to overall fixture length (e.g. 4F1 for 48" length)
- Refer to ceiling type section of specification sheet and submittal drawings for actual sizes

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered frame and lens components
- The frame is welded to ensure a precise and robust assembly
- Standard 90° horizontal and vertical corners as well as custom corners are available
- [Consult corner and pattern addendum for additional information](#)
- Alternative transition pieces such as T's, Y's, X's, etc. are also available (C)

Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 100,000+ hrs
- 70% (L70) of initial light output at 400,000+ hrs
- Derived from TM-21 standard @25°C ambient and typical operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- Estimate lumen output from the emergency section, multiply battery wattage x minimum fixture efficacy
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 6 for details

Weight

- 2.65 lbs per foot

Approvals

- cULus - listed for damp locations
- RoHS compliant
- Meets NYC requirements
- Meets CEC requirements
- IC Rated for insulation contact (except where noted)
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details

Warranty

- Five year warranty standard.

Shielding Options

S124DR with Flush
Satin Lens (F)



S124DR with Drop
Satin Lens (D)



S124DR with Flush
Asymmetric Lens (A)

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-795D-8-CEILING
TYPE-8F0-1-U-DD-F-W

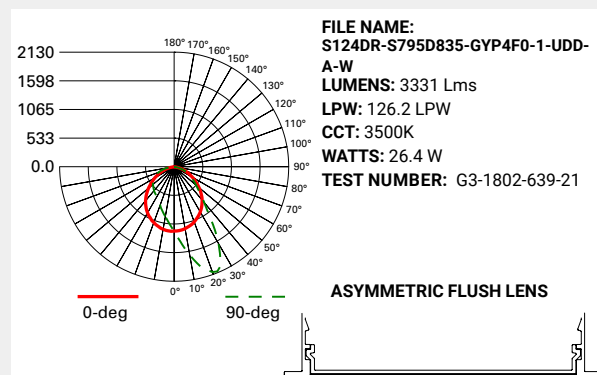
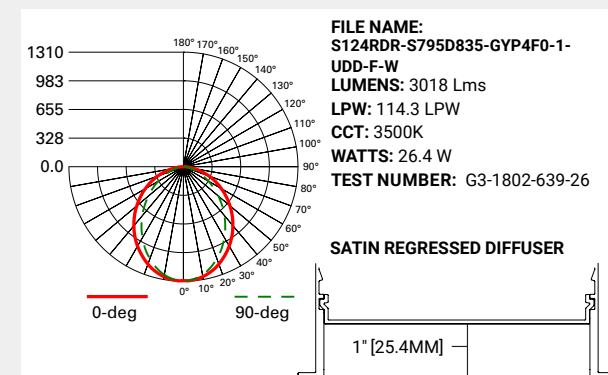
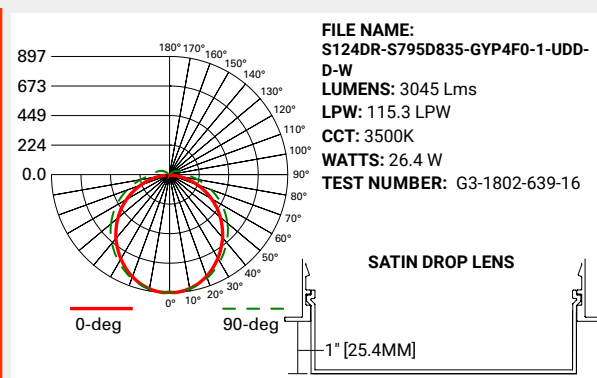
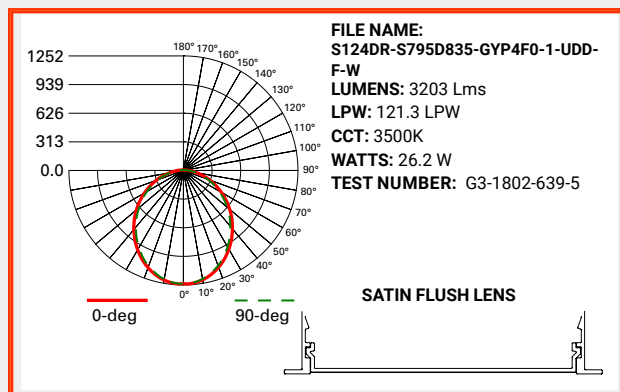
Notes:

Type:**R2**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Photometric Data**

View IES files

**Photometric Overview and Performance Data****Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard and VividTune Light Engine		High Performance Light Engine	
lms/ft	W/ft	lm/W	W/ft	lm/W
350	3.0	121	2.9	126
575	4.8	123	4.4	133
795	6.8	121	6.1	133
1020	8.9	118	8.1	130
1195	10.6	115	9.7	126

Lumen Adjustment Factors

CCT	80CRI	90CRI
2700K	N/A	0.801
3000K	0.943	0.815
3500K	1.000	0.861
4000K	1.010	0.892

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 lm/W (find nearest value using table above)
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	80CRI	90CRI
2700K	N/A	189-1058
3000K	222-1246	192-1077
3500K	236-1321	203-1138
4000K	238-1335	210-1179

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification.

Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-795D-8-CEILING
TYPE-8F0-1-U-DD-F-W

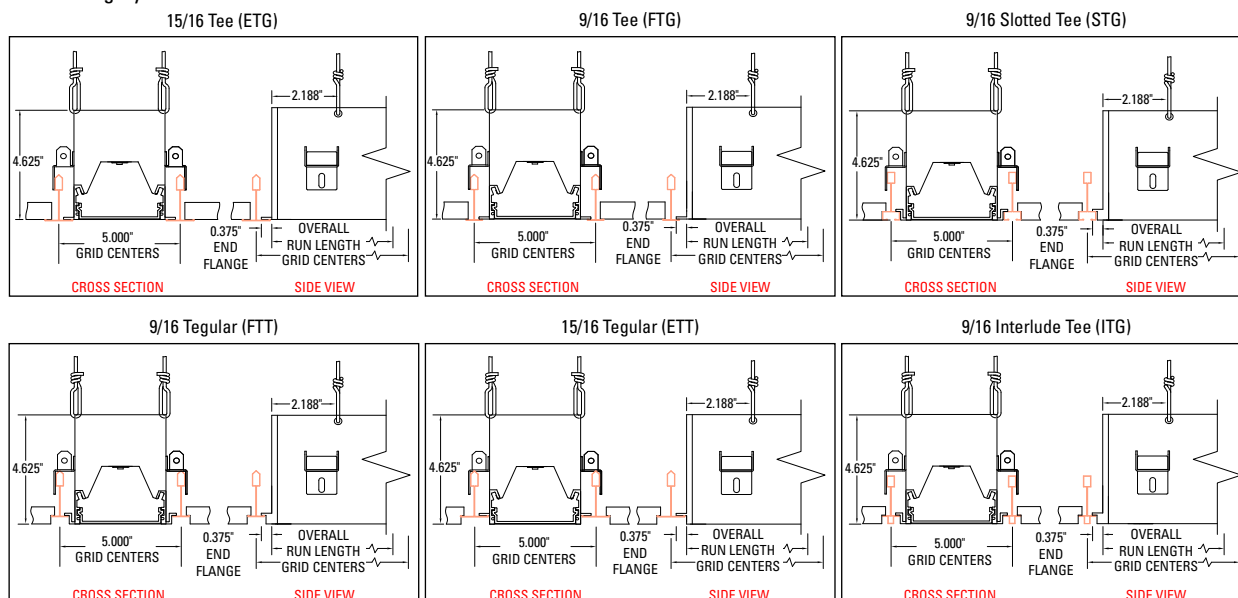
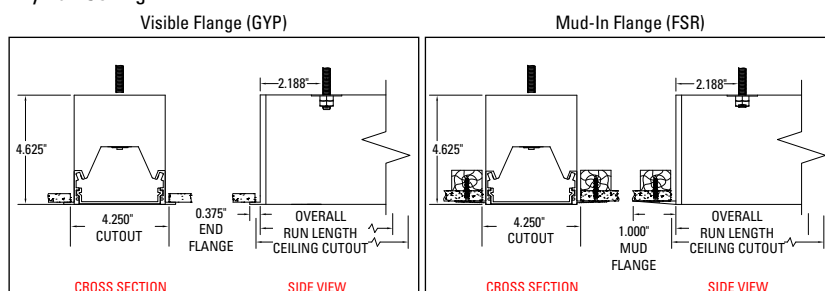
Notes:

Type:**R2**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Ceiling Type**

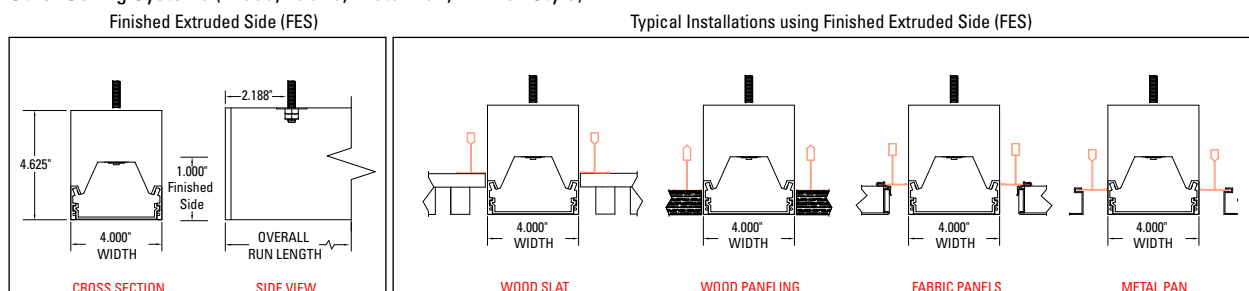
Extruded Trim Flange Details - Refer to submittal drawings for detailed flange information - for additional options consult factory.

Grid Ceiling Systems**Drywall Ceiling**

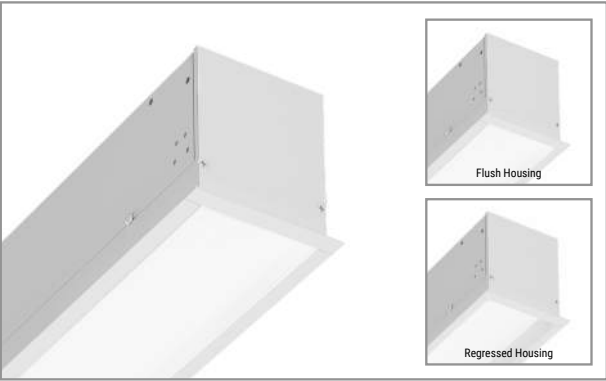
NOTE: ACTUAL LENGTH OF GYP/FSR FIXTURES
WILL BE 1" SHORTER IN LENGTH THAN
TOTAL REQUESTED RUN LENGTH FOR ALL
RECESSED / PERIMETER FIXTURES

OVERALL RUN LENGTH = 'FIXTURE ORDER
LENGTH' - 1" E.G. - OVERALL RUN LENGTH OF
3' 11" WILL SHIP WHEN ORDERING A '4FO' FIXTURE

CEILING CUTOUT = 'OVERALL RUN LENGTH'
+ 0.250" OR CEILING CUTOUT = 'FIXTURE ORDER
LENGTH' - 0.750" E.G. - CEILING CUTOUT WHEN
ORDERING A '4FO' LENGTH FIXTURE WILL BE 3' 11.250"

Other Ceiling Systems (Wood, Fabric, Metal Pan, HD Box Style)

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 4

LED
Recessed
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Shielding Options page 3
- Photometric Data page 4
- Integrated Sensor Details page 6
- VividTune page 7

Product Certification



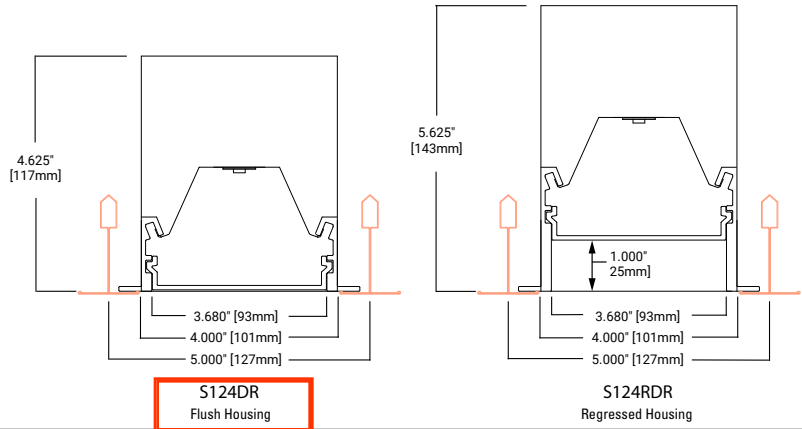
Product Features

VividTune
light color control

Top Product Features

- Specifiable to the nearest 1" in length
- Satin Lens, Asymmetric Lens and Drop Lens available
- Flush and Regressed Housing
- Customizable lumen packages
- Precision extended trims fit a variety of different architectural ceiling types
- Industry leading performance and efficacy
- [Standard and custom corners / transitions available](#)
- Options to meet Buy American Act requirements

Dimensions



 additional
product diagrams

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: QS-S124DR-S-1020D-8-CEILING TYPE-8F0-1-U-DD-A-W Notes:	Type: <div>R3</div> SSI23-55878
-----------------------------------	--	---	---

Neo-Ray

Define 4 LED Recessed

Order Information

Icon Key: Grey bar denotes available with 10-Day Quick Ship
 Consult factory for availability

SAMPLE ORDER NUMBER: S124DR-S795D840-ETG4F0-1B1-UDD-F-W-SWPD1

Domestic Preference	Light Distribution	Light Engine	Lumen Package Down	CRI	LED CCT	Ceiling Type	Length	Circuiting
Domestic Preference	Light Distribution	Light Engine	Lumen Package Down	CRI	LED CCT	Ceiling Type	Length	Circuiting
<div>Blank=Standard</div> <div>BAA=Buy American Act</div>	S124DR=Define 4 Direct Recessed S124RDR=Define 4 Regressed Direct Recessed <div>QS-S124DR=Define 4 Direct Recessed Quick Ship</div>	<div>S=Standard</div> <div>H=High Performance</div> <div>V=VividTune</div>	350D=350 Lms/ft 575D=575 Lms/ft 795D=795 Lms/ft <div>1020D=1020 Lms/ft</div> 1195D=1195 Lms/ft <div>D=Custom Lms/ft</div>	<div>8=80</div> <div>9=90</div>	27=2700K 30=3000K <div>35=3500K</div> <div>40=4000K</div> 50=5000K 2765=2700K-6500K 3050=3000K-5000K	<div>ETG=15/16" T-Grid</div> <div>FTG=9/16" T-Grid</div> <div>STG=9/16" Slot T-Grid</div> <div>FTT=9/16" Tegular T-Grid</div> <div>ITG=9/16" Interlude T-Grid</div> <div>ETT=15/16" Tegular T-Grid</div> <div>GYP=Gypsum board</div> <div>FSR=Mud-in Gypsum Board</div> <div>FES="Finished" Extruded Side</div>	2F0=2' Individual <div>4F0=4' Individual</div> <div>8F0=8' Individual</div> <div>12F0=12' Individual</div> <div>F0=4' Incremental Run (e.g. 40F0 = 40' 0")</div> <div>F=1" Incremental Run (e.g. 21F3 = 21' 3")</div>	<div>1=Single Circuit</div> <div>S=Secondary Circuit</div>
Notes	Notes	Notes	Notes	Notes	Notes	Notes	Notes	Notes
Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to Domestic Preferences website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	RDR regress of 1" will add an additional 1" to fixture depth.	See performance table for add'l details. Light engine must be consistent across run length.	3500K/80CRI/DR housing/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 4. VividTune available with 795D, 1020D, and 1195D.	Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2700K not available in 80CRI. 2765 & 3050 VividTune configurations require V light engine, 90 CRI, and W2A driver.	Please refer to ceiling interface diagrams for additional detail and dimensions.			Secondary circuit similar to A/B switching. Price adder applies for "S" configuration. VividTune Secondary Circuit has shared CCT wiring.

Emergency	Voltage	Integral LED Driver	Shielding Down	Options	Color	Integrated Sensor
Emergency	Voltage	Integral LED Driver	Shielding Down	Options	Color	Integrated Sensor
E=Emergency circuit B1=Surelite 7W UNV integral battery B2=Surelite 14W UNV integral battery B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	<div>-U=UNV 120-277V</div> <div>-1=120V</div> <div>-2=277V</div> <div>-3=347V</div> <div>-4=48VDC Ø</div>	<div>DD=0-10 Volt Dimming, 1%</div> <div>5L=DALI Dimming, 5%-100%</div> <div>LH=Lutron LDE1 w/ecosys</div> <div>LV1=DLVP Ø</div> <div>W2A=White Tuning, 0-10V Dimming (VividTune only)</div>	<div>-F=Satin Flush Diffuser</div> <div>A=Asym Flush Optic</div> <div>-D=Satin Drop Diffuser</div> <div>-L=Straight blade louver with diffuser Ø</div>	<div>-CP=Chicago Plenum</div> <div>-R=GLR Fuse (Fast)</div> <div>-F=GMF Fuse (Slow)</div>	<div>-W=Matte White</div> <div>-S=Silver</div> <div>-B=Black</div> <div>-C=Custom Color Ø</div>	<div>-WAA=WaveLinX Pro Integral</div> <div>-WTA=WaveLinX Pro Tilemount</div> <div>-WAB=WaveLinX Lite Integral Ø</div> <div>-WTB=WaveLinX Lite Tilemount Ø</div> <div>-LWIPD1=Enlighted Integral</div> <div>-LWTPD1=Enlighted Tilemount</div> <div>-SVPD1=Standalone Sensor</div> <div>-SVTPD1=Standalone Sensor Tilemount</div>
Notes	Notes	Notes	Notes	Notes	Notes	Notes
Internal battery standard for fixtures ≥ 4ft and lumen output ≤1195 Lms/ft. Fixture Non-IC-Rated for internal battery and lumen output ≥1020 Lms/ft. External battery standard with fixtures <4ft and all Chicago plenum fixtures.	48V for use with LV1 driver. 347V only available with DD driver.	DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	All lensing options are snap-in lenses. "L" option required RDR housing and may require additional lead-time, please consult factory for details. A option not available with VividTune.			Please refer to page 6 for additional detail required to specify integrated or tile-mount sensors. Integral option not available with regressed, drop or asymmetric configurations. Tilemount configuration recommended for these applications.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-1020D-8-CEILING
TYPE-8F0-1-U-DD-A-W

Notes:

Type:**R3**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Product Specifications****Construction**

- Available in Flush and Regressed Housing
- Precision cut housing trim extruded from 6063 aluminum with aluminum frame
- Extruded end-caps ensure a precise and uniform ceiling interface
- Nominal 2' -12' illuminated sections used in run configuration and/or individual fixtures

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector, light engine, led driver and quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with three next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or VividTune ranges of 2700K-6500K and 3000K-5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications
- Cooper Lighting Solutions's DLVP Low voltage drivers are available for 48VDC applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI, Lutron, DLVP) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Recessed

Lengths

- Available in any length (23" min) with a resolution of 1 inch. Max section length of 12ft (8ft max option available)
- Additional fixture lengths are available please consult factory. All lengths are nominal
- VividTune available as standard product in 1ft resolution
- Actual sizes are one inch shorter than nominal to allow easy in-grid installation
- For Gypsum or Flangeless installations add 1 inch to overall fixture length (e.g. 4F1 for 48" length)
- Refer to ceiling type section of specification sheet and submittal drawings for actual sizes

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered frame and lens components
- The frame is welded to ensure a precise and robust assembly
- Standard 90° horizontal and vertical corners as well as custom corners are available
- [Consult corner and pattern addendum for additional information](#)
- Alternative transition pieces such as T's, Y's, X's, etc. are also available (C)

Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 100,000+ hrs
- 70% (L70) of initial light output at 400,000+ hrs
- Derived from TM-21 standard @25°C ambient and typical operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- Estimate lumen output from the emergency section, multiply battery wattage x minimum fixture efficacy
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 6 for details

Weight

- 2.65 lbs per foot

Approvals

- cULus - listed for damp locations
- RoHS compliant
- Meets NYC requirements
- Meets CEC requirements
- IC Rated for insulation contact (except where noted)
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details

Warranty

- Five year warranty standard.

Shielding Options

S124DR with Flush
Satin Lens (F)



S124DR with Drop
Satin Lens (D)



S124DR with Flush
Asymmetric Lens (A)

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-1020D-8-CEILING
TYPE-8F0-1-U-DD-A-W

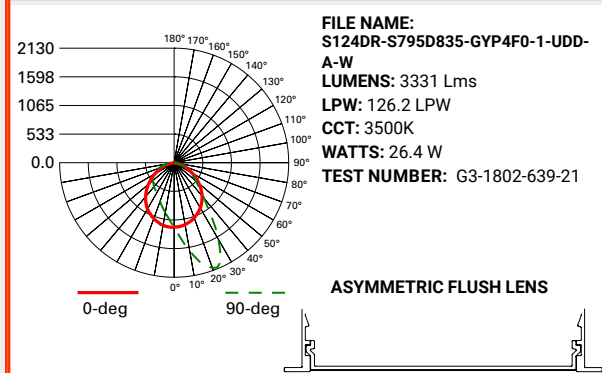
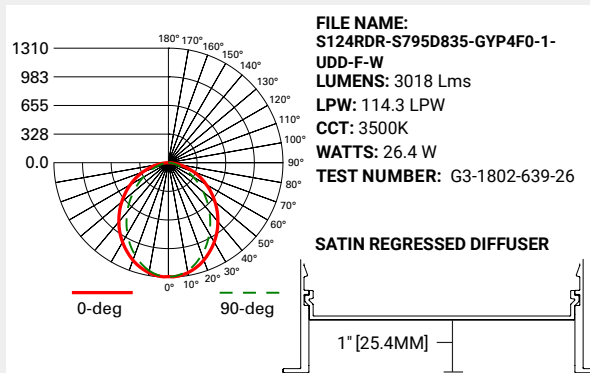
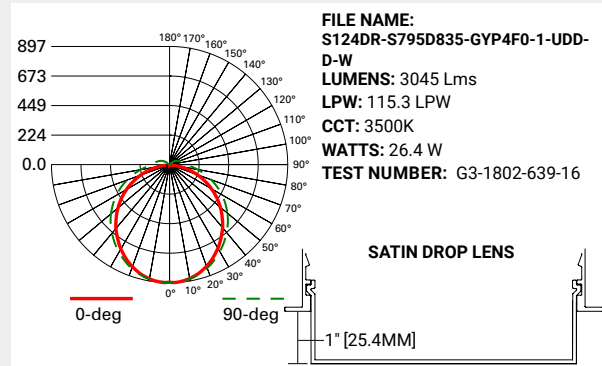
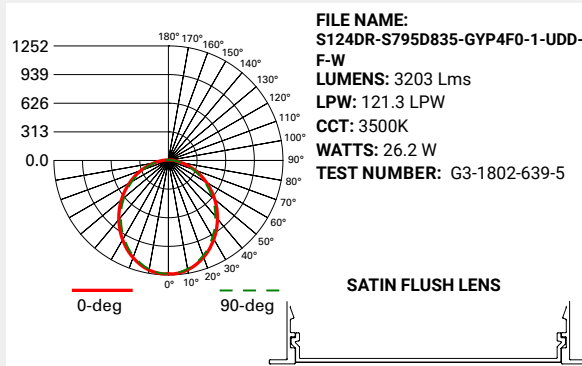
Notes:

Type:**R3**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Photometric Data**

View IES files

**Photometric Overview and Performance Data****Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard and VividTune Light Engine		High Performance Light Engine	
lms/ft	W/ft	lm/W	W/ft	lm/W
350	3.0	121	2.9	126
575	4.8	123	4.4	133
795	6.8	121	6.1	133
1020	8.9	118	8.1	130
1195	10.6	115	9.7	126

Lumen Adjustment Factors

CCT	80CRI	90CRI
2700K	N/A	0.801
3000K	0.943	0.815
3500K	1.000	0.861
4000K	1.010	0.892

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 lm/W (find nearest value using table above)
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	80CRI	90CRI
2700K	N/A	189-1058
3000K	222-1246	192-1077
3500K	236-1321	203-1138
4000K	238-1335	210-1179

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification.

Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

QS-S124DR-S-1020D-8-CEILING
TYPE-8F0-1-U-DD-A-W

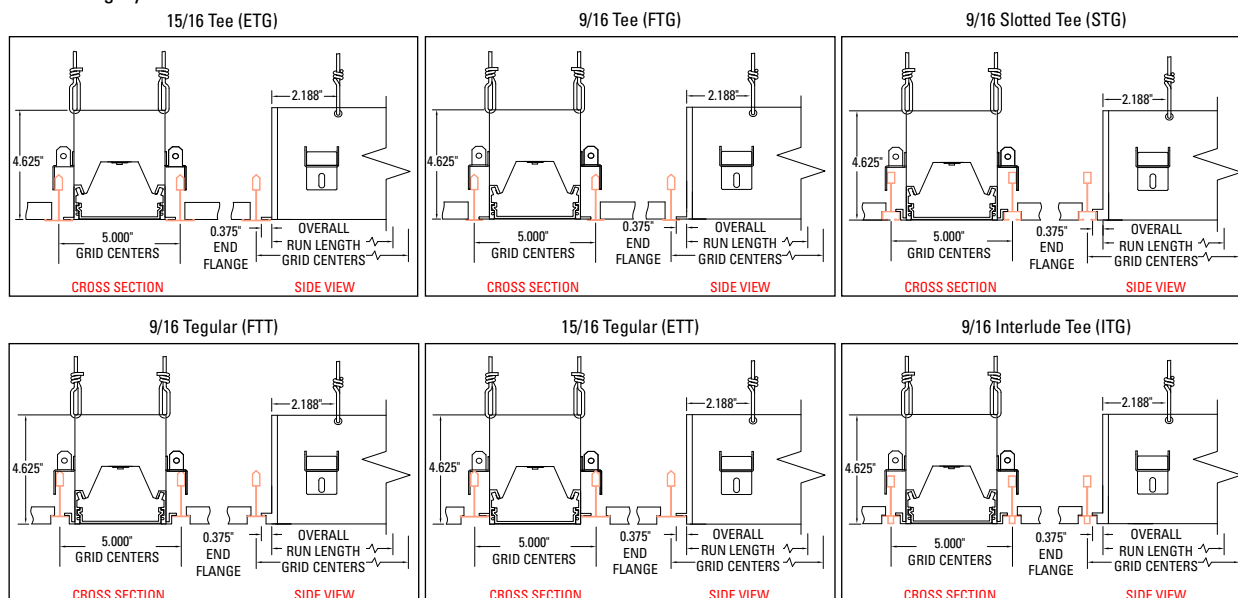
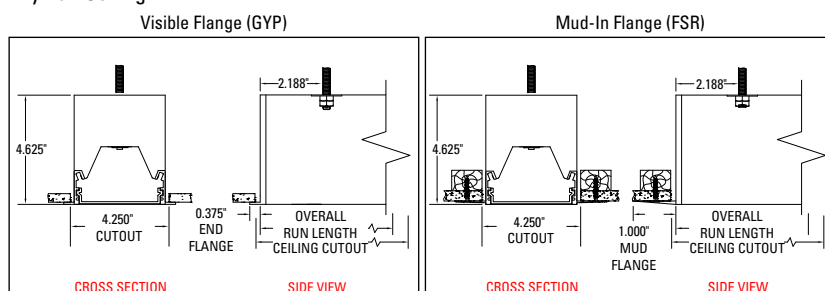
Notes:

Type:**R3**

SSI23-55878

Neo-Ray**Define 4 LED Recessed****Ceiling Type**

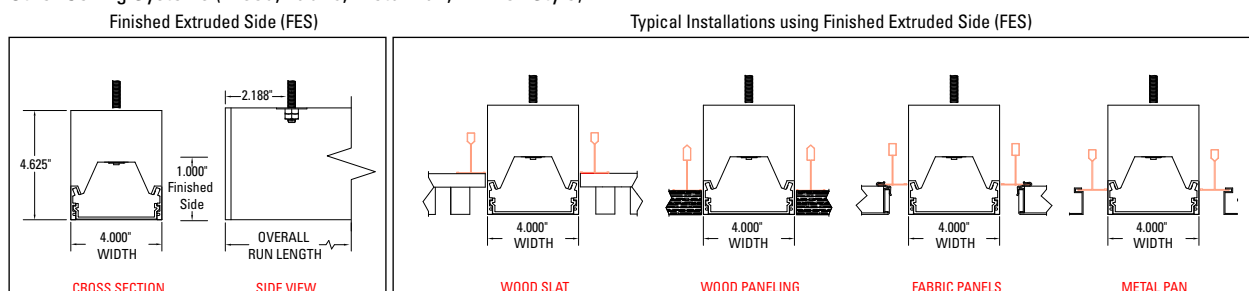
Extruded Trim Flange Details - Refer to submittal drawings for detailed flange information - for additional options consult factory.


Grid Ceiling Systems**Drywall Ceiling**

NOTE: ACTUAL LENGTH OF GYP/FSR FIXTURES
WILL BE 1" SHORTER IN LENGTH THAN
TOTAL REQUESTED RUN LENGTH FOR ALL
RECESSED / PERIMETER FIXTURES

OVERALL RUN LENGTH = 'FIXTURE ORDER
LENGTH' - 1" E.G. - OVERALL RUN LENGTH OF
3' 11" WILL SHIP WHEN ORDERING A '4FO' FIXTURE

CEILING CUTOUT = 'OVERALL RUN LENGTH'
+ 0.250" OR CEILING CUTOUT = 'FIXTURE ORDER
LENGTH' - 0.750" E.G. - CEILING CUTOUT WHEN
ORDERING A '4FO' LENGTH FIXTURE WILL BE 3' 11.250"

Other Ceiling Systems (Wood, Fabric, Metal Pan, HD Box Style)

Submitted by Schroeder Sales, Inc		Catalog Number: HU1148D9SP	Type: S
 Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)		Notes: SSI23-55878	

DESCRIPTION

Ideal for task, accent, office, cove, and utility, under and above cabinet lighting display, the Halo Undercabinet low-profile design delivers maximum energy savings with easy installation. Each fixture is equipped with a seleCCTable switch that allows users to customize color temperature of 2700K, 3000K and 4000K in 90 CRI. Fixtures are available in 9", 18", 24", 36" and 48" lengths with Matte White and Matte Black finishes. Each unit has an integrated on-off switch and offers smooth dimming down to 5% using standard dimmers**. Multiple wiring options make installation a simple task.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

HALO

SPECIFICATION FEATURES

Even Light Distribution

Specialized optical system consisting of tightly clustered proximity phosphor LEDs, advanced optical chamber coatings and lens materials resulting in soft illumination with high efficiency. These fixtures are ideal for task lighting.

Color Temperature

3 position external SeleCCTable color temperature switch allows users to choose between 2700K, 3000K, and 4000K and adjust per their lighting needs.

Wiring Flexibility

Use any combination of three different wiring methods: Bring flexible conduit or Romex directly to the 120V fixture. Conduit connector and romex strain relief hardware is included with each fixture. Otherwise users can utilize the available splice box and plug in connectors (sold separately) and to link additional fixtures to the circuit (See instructions sheets for more detail). * Link any combination of fixtures up to 450W total load using connectors.

Durable Low Profile Housing

Extruded aluminum housing and color matched end caps with a sleek over all height less than 1".

Mounting

Each unit is secured directly to the mounting surface with two integral fasteners keeping installation costs and efforts low. Can be mounted in horizontal and vertical orientations.

Optional Accessories

Optional splice box has a connection port on each side to allow for runs in either or both directions. Includes Romex/ 1/2" conduit connector. Various connector cable options and lengths provide flexibility of mounting location.

Finish Options

Fixtures and accessories are available in both White (P) and Matte Black (MB) finishes.

Electronic Driver & Dimming

Electronic driver provides flicker free light output and noise free operation. Designed for continuous dimming (ELV or TRIAC) down to 5% with compatible dimmers.**

Compliance & Certifications

- cULus listed
- Can be used to meet IECC, ASHRAE commercial and residential standards
- FCC Class B residential
- Damp location listed
- ENERGY STAR® certified
- Title 24
- Closet-Rated

Factory Defaults

The fixtures are factory pre-set to 3000K.

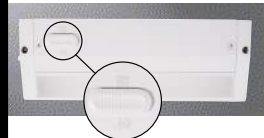
Warranty

Five-year limited warranty, consult website for details. www.cooperlighting.com

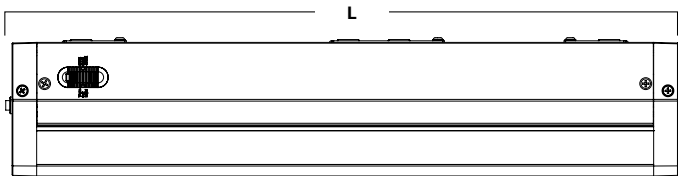


HU11

Value LED Undercabinet



DIMENSIONS



Size Description	9 in. Nominal	18 in. Nominal	24 in. Nominal	36 in. Nominal	48 in. Nominal
Length "L"	8.98" [228.1mm]	16.55" [420.4mm]	23.98" [609.1mm]	32.44" [824mm]	47.18" [1,198.4mm]
Wattage	4.5	8.0	11.0	15.5	21.0
Lumens***	300	560	785	1125	1540



ENERGY DATA
 Power Factor: >0.9
 THD: <20%
 Color Temperature: SeleCCTable 2700K, 3000K, 4000K
 Color Rendering Index: 90
 Nominal Lumens/Ft: 300



Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Appliance Efficiency Database under JAB.



* Plug in wire option is only available on either end (side) of the fixture. Back wire option is for romex or flexible conduit wiring only.

** See our website for dimming guidance information. www.cooperlighting.com

*** Performance metrics are measured at 3000K. The factory setting is 3000K.

HALO

HU11









ORDERING INFORMATION

SAMPLE NUMBER: HU1118D9SP (18 inch Dimmable fixture, SeleCCTable Color temperature, White Finish)

Family	Length	Dimming	Color Temperature	Finish
HU11 =Halo Integrated Undercabinet	09=9" 18=18" 24=24" 36=36" 48=48"	D9=Dimmable	S=Selectable (2700K, 3000K, 4000K)	P=White MB=Matte Black

1. 9" cannot be linked with direct-wire. Requires daisy chain connector accessory.

CONNECTORS & ACCESSORIES

				
HU101 3" Daisy Chain Connector	HU102 6" Daisy Chain Connector	HU1010 12" Daisy Chain Connector	HU1011 18" Daisy Chain Connector	HU103 24" Daisy Chain Connector
				
HU104 120" Daisy Chain Connector	HU115 48" Power Cord - 120V only	HU109 Splice Box	HU107 1-1/2" Male-to-Male Connector	HU10MS Master Switch

Finish: P = White; MB = Matte Black **Example:** HU101P = 3" Daisy Chain Connector, White

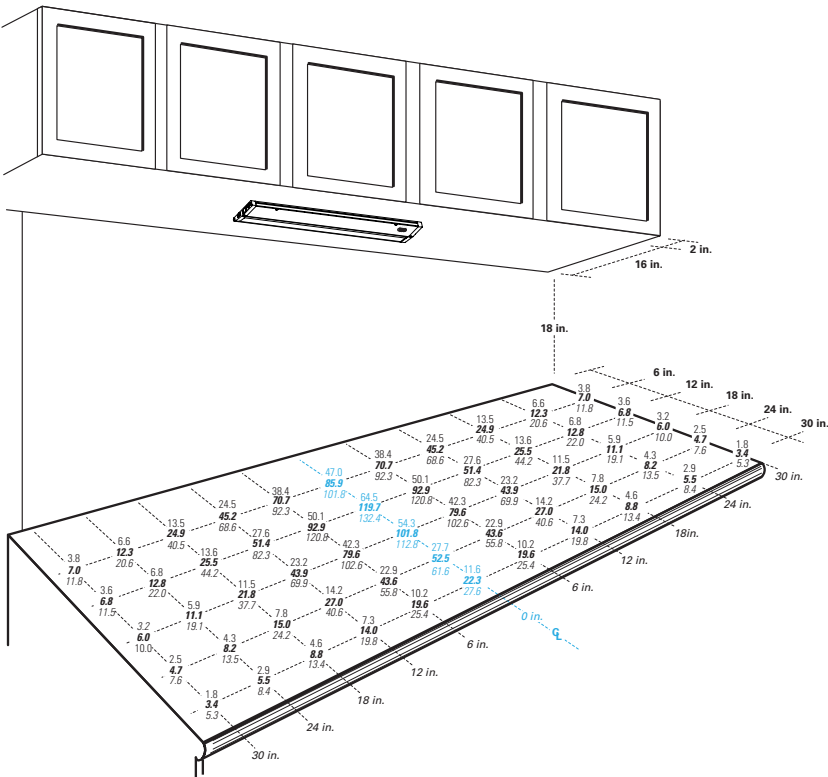
HALO

HU 11

PHOTOMETRY

Fixture Application Illustration

MOUNTING HEIGHT 18"



Top Number
Report: HU1109D9SMB-3000K.IES
Middle Number
Report: HU1118D9SMB-3000K.IES
Bottom Number
Report: HU1124D9SMB-3000K.IES

Countertop 60" x 30"

Diagram not to scale.

18" Mounting Height

Top Number Report - HU1109D9SMB-3000K
Middle Number Report - HU1118D9SMB-3000K
Bottom Number Report - HU1124D9SMB-3000K

Width											Length
30in	24in	18in	12in	6in	0in	6in	12in	18in	24in	30in	
3.8	6.6	13.5	24.5	38.4	47.0	38.4	24.5	13.5	6.6	3.8	
7.0	12.3	24.9	45.2	70.7	85.9	70.7	45.2	24.9	12.3	7.0	
11.8	20.6	40.5	68.6	92.3	101.8	92.3	68.6	40.5	20.6	11.8	
3.6	6.8	13.6	27.6	50.1	64.5	50.1	27.6	13.6	6.8	3.6	
6.8	12.8	25.5	51.4	92.9	119.7	92.9	51.4	25.5	12.8	6.8	
11.5	22.0	44.2	82.3	120.8	132.4	120.8	82.3	44.2	22.0	11.5	
3.2	5.9	11.5	23.2	42.3	54.3	42.3	23.2	11.5	5.9	3.2	
6.0	11.1	21.8	43.9	79.6	101.8	79.6	43.9	21.8	11.1	6.0	
10.0	19.1	37.7	69.9	102.6	112.8	102.6	69.9	37.7	19.1	10.0	
2.5	4.3	7.8	14.2	22.9	27.7	22.9	14.2	7.8	4.3	2.5	24 in
4.7	8.2	15.0	27.0	43.6	52.5	43.6	27.0	15.0	8.2	4.7	
7.6	13.5	24.2	40.6	55.8	61.6	55.8	40.6	24.2	13.5	7.6	
1.8	2.9	4.6	7.3	10.2	11.6	10.2	7.3	4.6	2.9	1.8	
3.4	5.5	8.8	14.0	19.6	22.3	19.6	14.0	8.8	5.5	3.4	30 in
5.3	8.4	13.4	19.8	25.4	27.6	25.4	19.8	13.4	8.4	5.3	

15" Mounting Height

Top Number Report - HU1109D9SMB-3000K
Middle Number Report - HU1118D9SMB-3000K
Bottom Number Report - HU1124D9SMB-3000K

Width											Length
30in	24in	18in	12in	6in	0in	6in	12in	18in	24in	30in	
3.0	5.5	12.0	23.8	41.7	54.2	41.7	23.8	12.0	5.5	3.0	
5.6	10.2	22.2	43.8	76.6	99.2	76.6	43.8	22.2	10.2	5.6	
9.7	17.9	37.9	70.6	100.8	111.3	100.8	70.6	37.9	17.9	9.7	
2.9	5.7	12.4	28.6	63.0	90.4	63.0	28.6	12.4	5.7	2.9	
5.4	10.7	23.0	53.3	116.9	167.5	116.9	53.3	23.0	10.7	5.4	
9.4	19.4	43.8	96.7	156.1	168.3	156.1	96.7	43.8	19.4	9.4	
2.5	4.8	10.3	23.7	51.9	73.9	51.9	23.7	10.3	4.8	2.5	
4.7	9.2	19.4	44.9	98.2	139.4	98.2	44.9	19.4	9.2	4.7	
8.1	16.6	36.8	80.4	129.5	139.9	129.5	80.4	36.8	16.6	8.1	
1.9	3.4	6.6	13.2	23.8	30.3	23.8	13.2	6.6	3.4	1.9	24 in
3.6	6.6	12.7	25.1	45.4	57.8	45.4	25.1	12.7	6.6	3.6	
6.0	11.2	21.7	40.2	58.4	64.5	58.4	40.2	21.7	11.2	6.0	
1.4	2.2	3.6	6.1	8.9	10.4	8.9	6.1	3.6	2.2	1.4	
2.6	4.2	7.0	11.6	17.3	20.1	17.3	11.6	7.0	4.2	2.6	30 in
4.0	6.6	10.9	16.9	22.3	24.4	22.3	16.9	10.9	6.6	4.0	

Cooper Lighting Solutions is a registered trademark.

All other trademarks are property of their respective owners.

Product availability, specifications, and compliances are subject to change without notice.



Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

© 2021 Cooper Lighting Solutions
All Rights Reserved
Printed in USA
Publication No. TD518359EN
February 2, 2021 1:30 PM

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

SHVNY-25LED-MW-WF-24"-CCT

Type:**S2**

Notes:

SSI23-55878



**EVERGREEN
LIGHTING**

WALL VANITY

SHVNY-25LED-MW-WF-24"-CCT

REV: 0

SPECIFICATION FEATURES

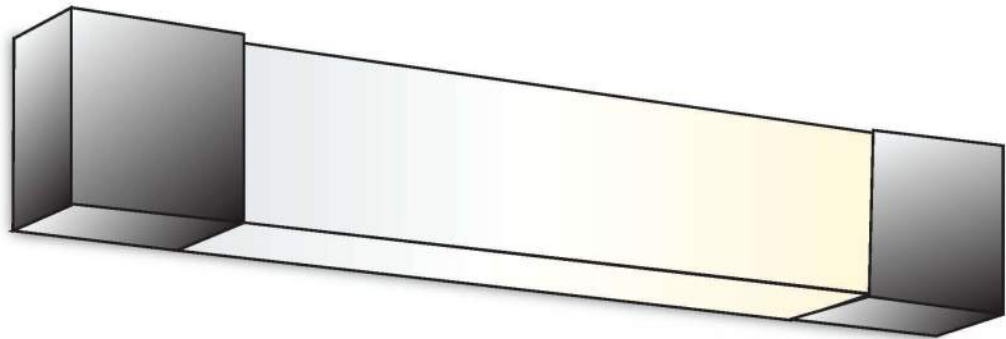
Date
12-27-16

PROJECT:

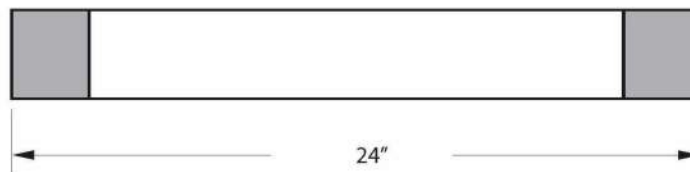
SPECIFIER:

Dimensions	4" H X 24" W X 3" D
Lamps	25 watts of Alta LED- 3500K
Material	Paintlok
Finish	Matte white
Lens	White Frosted Acrylic
Label	Damp Location
Voltage	120 / 277
Description	Wall Vanity
Type	

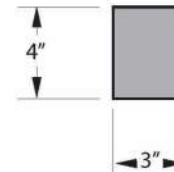
3500K, 2,375 Lumens



Front View



Side View



EVERGREEN LIGHTING WWW.EVERGREENLIGHTING.COM

1379 Ridgeway St. Pomona, CA 91768 PHONE: (909) 865-5599 FAX: (909) 865-5539



MADE IN USA • Information appearing hereon is proprietary and confidential and may not
be used without the permission of Evergreen Lighting.

MADE IN USA

Project		Catalog #		Type	
Prepared by		Notes		Date	



Sure-Lites

LPX Series

LED polycarbonate Exit with 90 minutes of run time

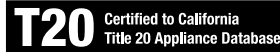
Typical Applications

Office • Education • Healthcare • Hospitality • Retail • Industrial • Manufacturing

Interactive Menu

- Order Information page 2
- Product Warranty

Product Certification



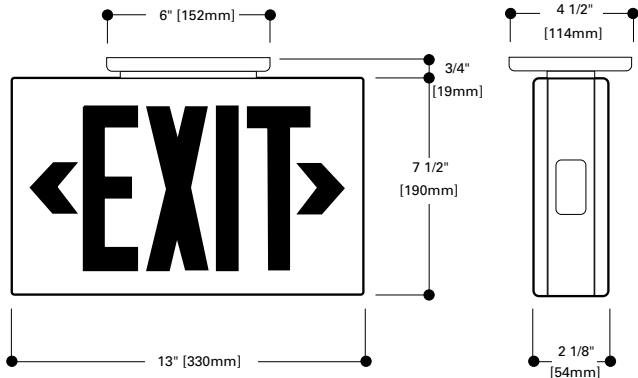
Product Features



Top Product Features

- LED Polycarbonate Exit available in white or black housings
- UL 924 damp location certified
- Field selectable for Red or Green illumination and single or double faces
- 90 minutes of emergency run time with self-powered (battery backup) models
- Maintenance free nickel cadmium battery
- Self-diagnostic and remote capacity options
- DLVP option

Dimensional Details



Sure-Lites

LPX Series

Ordering Information

SAMPLE ORDER NUMBER: LPX6, LPX6BK, LPX7SD, LPX7BKSD

Family	Series	Face Options	Housing Finish	Options	Accessories
Family	Series ⁽¹⁾	Face Options	Housing Finish ⁽²⁾	Options	Accessories
LPX=Polycarbonate Exit, LED	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White Housing BK=Black Housing (available with AC series and self-powered, self-diagnostics only)	[Blank]=No additional options SD=Self-diagnostics/LPX7 only	WG10 =Wall mount wire guard WGS11 =Ceiling or End VS1 =Polycarbonate Vandal Shield VS1WP =Polycarbonate Vandal Shield, Weather Proof Pendant Kit LPX18PKWH =18" Pendant Kit, White LPX18PKHTWH =18" Hang True Pendant Kit, White LPX18PKBK =18" Pendant Kit, Black LPX18PKHTBK =18" Hang True Pendant Kit, Black

Notes (1) Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation. (2) LPX7 (no self-diagnostics) units are not available in black. LPX7BKSD (self-diagnostics) units are available in black. (3) For 2 circuit capability on the LPX6 series, order the SL2CPK in addition to the exit sign. The 2 circuit kit does not accept two hot circuits.

LPXR5SD Ordering Information

Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
LPX=LED Polycarbonate Exit	non-applicable	R5=5 watts	[Blank]=White BK=Black	SD=Self-diagnostic (standard)	LPXR5SD, LPXR5BXSD

Remote Logic for LPXR5SD Only

SEL Series Outdoor Capable Remotes							
Series		Single Head Remotes			Double Head Remotes		
Catalog number		SRP/SRM13	SRP/SRM25	SRP/SRM30	SRP25D/SRM25D	SRP50D/SRM50D	SRP60D/SRM60D
Watts Consumed		1.25	2.5	4.1	2.5	5	8.2
Catalog Number	Remote Watts Available	# of SRP/SRM13 remotes fixture will power	# of SRP/SRM25 remotes fixture will power	# of SRP/SRM30 remotes fixture will power	# of SRP25D/SRM25D remotes fixture will power	# of SRP50D/SRM50D remotes fixture will power	# of SRP60D/SRM60D remotes fixture will power
LPXR5SD	5	4	2	1	2	1	NA

DLVP Options

Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
LPX=LED Polycarbonate Exit	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White BK=Black	SD=Self-diagnostics (standard for LPX7, not available for LPX6)	DLVP=DLVP	LPX6DLVP, LPX6BKDLVP, LPX7SDDLVP, LPX7BKSDDLVP

Energy and Performance Data

Maximum power consumption under all charge conditions:

AC Only

Input Voltage	Input Amps	Input Watts
120 Volts	0.07	1.02
277 Volts	0.07	1.12

AC Only, DLVP (57 Vdc)

Input Voltage	Input Amps	Input Watts
57Vdc	0.02	1.2

Self-Powered

Input Voltage	Input Amps
120 Volts	0.07
277 Volts	0.07

Self-Powered, LPX5R Only

Input Voltage	Input Watts
120 Volts	2.2
240 Volts	2.5
277 Volts	3.2

Self-Powered, DLVP (57 Vdc)

Input Voltage	Input Amps
57Vdc	0.07

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: LPX7 Notes:	Type: <div>X1</div> SSI23-55878
-----------------------------------	--	---	---

Sure-Lites

LPX Series

Product Specifications

- Electrical**
 - Field selectable red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts)
 - Dual Voltage Input 120/277 VAC, 60Hz
 - 2C capability enabled with the SL2CPK kit. Note: 2 circuit kit does not accept two hot circuits.
 - Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost
 - Sure-Lites EZ Key patented external battery disconnect feature - prevents unnecessary battery drainage, saves on installation time
 - Solid-state Voltage Limited Charger
 - Brownout Circuit
 - Low-Voltage Disconnect
 - Test Switch/Power Indicator Light
 - Standard 24 hour recharge time (max)
 - Self-Diagnostic feature available as option
 - DLVP enabled with field installable kit
- Housing Construction**
 - All components are injection molded, color stable, high impact UL 94-5VA rated, polycarbonate material
 - White or black textured finish standard
 - Faces can be field selectable as single or double faced
 - Snap-out or snap-in chevron directional indicators have full 3/4" stroke
 - Components are of snap-fit construction to facilitate under 5-minute installation
 - Reinforcing ribs throughout to provide maximum strength
 - Molded-in wireways facilitate internal wire routing and connections
 - All components including battery and electronics are located inside the exit housing
 - Knockout provided on housing for surface conduit attachment
 - Snap-fit canopy with captive mounting screws included with all exits
 - Exit can be ceiling, wall, or end mounted
 - Universal J-box mounting pattern
- Lamp Data**
 - AC LED: Red and green LED lamps provide uniform diffused illumination
 - DC: Red and green LED DC lamps (Brighter in emergency mode)
- Code Compliance**
 - UL 924 Listed
 - UL Damp Location (0-40° C)
 - Life Safety NFPA 101
 - NEC/OSHA
 - Most State and Local Codes
 - Suitable for Floor Proximity Installation
 - UL Listed for 2C (FTBR)
- Warranty**
 - 5 year product warranty
 - 7 year pro-rated battery warranty

Technical Data

- Lamps**
 - Long life, red and green LEDs, provide uniform diffuse illumination of the exit face
 - Low operating costs and no maintenance required
 - Consumes on average less than one watt
- Housing Construction**
 - Rugged, durable, injection molded polycarbonate
 - Structural components designed with reinforcing ribs for additional rigidity and structural integrity
 - Impact and scratch resistant
 - UV stabilized to resist discoloration due to age and ultraviolet radiation
 - Snap-fit construction (no mechanical fasteners) to facilitate installation in under five minutes
 - Installation components included (wire nuts, wire leads, universal metal J-box bracket, etc.)
 - Universal design enables exit to be field selectable as single face or double face
 - Wall, ceiling or end mounting
 - Rugged, snap-fit, low-profile canopy with captive screws included for ceiling and end mounting
 - Housing color available in white or black
- Lens**
 - Durable, impact-resistant polycarbonate
 - Field selectable red or green; ships with red lenses installed and green lenses included
 - Full 3/4" stroke snap-out or snap-in chevron directional indicators ensure maximum visibility and code compliances
- Sure-Lites EZ Key External Battery Disconnect (Self Powered Only*)**
 - The Patented EZ key is an external battery disconnect that allows the product to be shipped with the battery connected internally.
 - This prevents battery drain during the construction cycle to insure that the battery isn't damaged and is fully charged for inspection.
 - EZ Key also saves the labor of internally connecting the battery after construction is complete.
- Brownout Circuit (Self Powered Only*)**
 - Monitors the flow of AC current
 - Activates the emergency lighting system when a predetermined reduction/dip of AC power occurs (a dip in voltage will cause most ballasted products to extinguish, causing loss of normal lighting even though a total power failure has not occurred)
- Low Voltage Disconnect (Self Powered Only*)**
 - Low-voltage circuitry disconnects the lighting load when battery's terminal voltage falls
 - Disconnect remains in effect until normal utility power is restored, preventing deep battery discharge
- Test Switch/Power Indicator Light (Self Powered Only*)**
 - Switch located on the side of the exit permits the activation of the emergency circuit for complete operational systems check
 - Indicator light provides visual assurance that the AC power is on
 - LPXR5SD only - switch located on bottom of the exit
- Self-Diagnostics Option (Self Powered Only*)**
 - Automatically performs all tests required by UL924 and NFPA 101
 - Indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit
 - 90-minute battery power (emergency mode) simulation test occurs randomly once every 12 months
 - 30-second battery power simulation test occurs every 30 days
- Photocell Test Switch for LPXR5SD Model Only**
 - Allows verification of proper operation of the transfer circuit and emergency lamps with a laser pointer (laser is sold as an accessory). The emergency lamps will test for 30 seconds when activated.
 - Located on bottom of the unit
- "2C" Option (AC Only)**

Note: "2C" cannot accept 2 active hots

 - Enables the exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation-UL Category FTBR-Emergency Lighting and Power Equipment)
 - The "2C" Option alters the standard Exit such that it complies with and is UL Listed under the FTBR Category
 - This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits, but cannot support two hot inputs. Only one of the normal or emergency circuits can be powered. If both are powered simultaneously, it will make the Exit inoperable.
 - Both circuits have universal 120/277 VAC standard
- Sealed Nickel Cadmium Battery**
 - Sealed, maintenance-free nickel cadmium battery with 10-year typical life expectancy
 - Rechargeable battery offers high discharge rates and stable performance over a wide range of temperatures from 0°C to 40°C
- Warranty**
 - Five-year warranty against defects in material and workmanship
 - Nickel cadmium battery has a seven-year prorated warranty

* Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation.



Laser tester
Part Number=LASER
(sold separately)

Project		Catalog #		Type	
Prepared by		Notes		Date	



Sure-Lites

LPX Series

LED polycarbonate Exit with 90 minutes of run time

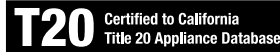
Typical Applications

Office • Education • Healthcare • Hospitality • Retail • Industrial • Manufacturing

Interactive Menu

- Order Information page 2
- Product Warranty

Product Certification



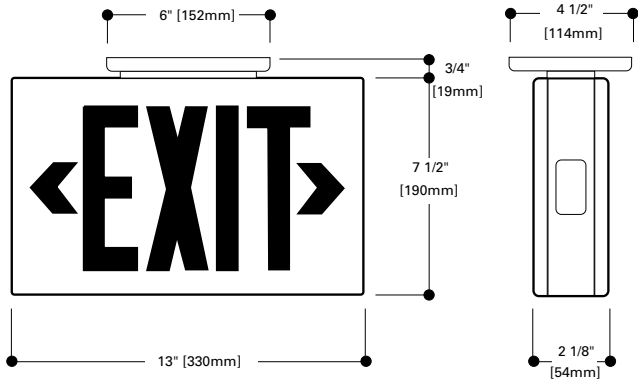
Product Features



Top Product Features

- LED Polycarbonate Exit available in white or black housings
- UL 924 damp location certified
- Field selectable for Red or Green illumination and single or double faces
- 90 minutes of emergency run time with self-powered (battery backup) models
- Maintenance free nickel cadmium battery
- Self-diagnostic and remote capacity options
- DLVP option

Dimensional Details



Sure-Lites

LPX Series

Ordering Information

SAMPLE ORDER NUMBER: LPX6, LPX6BK, LPX7SD, LPX7BKSD

Family	Series	Face Options	Housing Finish	Options	Accessories
Family	Series ⁽¹⁾	Face Options	Housing Finish ⁽²⁾	Options	Accessories
LPX=Polycarbonate Exit, LED	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White Housing BK=Black Housing (available with AC series and self-powered, self-diagnostics only)	[Blank]=No additional options SD=Self-diagnostics/LPX7 only	WG10=Wall mount wire guard WGS11=Ceiling or End VS1=Polycarbonate Vandal Shield VS1WP=Polycarbonate Vandal Shield, Weather Proof Pendant Kit LPX18PKWH=18" Pendant Kit, White LPX18PKHTWH=18" Hang True Pendant Kit, White LPX18PKBK=18" Pendant Kit, Black LPX18PKHTBK=18" Hang True Pendant Kit, Black

Notes (1) Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation. (2) LPX7 (no self-diagnostics) units are not available in black. LPX7BKSD (self-diagnostics) units are available in black. (3) For 2 circuit capability on the LPX6 series, order the SL2CPK in addition to the exit sign. The 2 circuit kit does not accept two hot circuits.

LPXR5SD Ordering Information

Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
LPX=LED Polycarbonate Exit	non-applicable	R5=5 watts	[Blank]=White BK=Black	SD=Self-diagnostic (standard)	LPXR5SD, LPXR5BXSD

Remote Logic for LPXR5SD Only

SEL Series Outdoor Capable Remotes							
Series		Single Head Remotes			Double Head Remotes		
Catalog number		SRP/SRM13	SRP/SRM25	SRP/SRM30	SRP25D/SRM25D	SRP50D/SRM50D	SRP60D/SRM60D
Watts Consumed		1.25	2.5	4.1	2.5	5	8.2
Catalog Number	Remote Watts Available	# of SRP/SRM13 remotes fixture will power	# of SRP/SRM25 remotes fixture will power	# of SRP/SRM30 remotes fixture will power	# of SRP25D/SRM25D remotes fixture will power	# of SRP50D/SRM50D remotes fixture will power	# of SRP60D/SRM60D remotes fixture will power
LPXR5SD	5	4	2	1	2	1	NA

DLVP Options

Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
LPX=LED Polycarbonate Exit	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White BK=Black	SD=Self-diagnostics (standard for LPX7, not available for LPX6)	DLVP=DLVP	LPX6DLVP, LPX6BKDLVP, LPX7SDDLVP, LPX7BKSDDLVP

Energy and Performance Data

Maximum power consumption under all charge conditions:

AC Only

Input Voltage	Input Amps	Input Watts
120 Volts	0.07	1.02
277 Volts	0.07	1.12

AC Only, DLVP (57 Vdc)

Input Voltage	Input Amps	Input Watts
57Vdc	0.02	1.2

Self-Powered

Input Voltage	Input Amps
120 Volts	0.07
277 Volts	0.07

Self-Powered, DLVP (57 Vdc)

Input Voltage	Input Amps
57Vdc	0.07

Self-Powered, LPX5R Only

Input Voltage	Input Watts
120 Volts	2.2
240 Volts	2.5
277 Volts	3.2

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: LPX7 Notes:	Type: <div>X2</div> SSI23-55878
-----------------------------------	--	---	---

Sure-Lites

LPX Series

Product Specifications

- Electrical**
 - Field selectable red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts)
 - Dual Voltage Input 120/277 VAC, 60Hz
 - 2C capability enabled with the SL2CPK kit. Note: 2 circuit kit does not accept two hot circuits.
 - Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost
 - Sure-Lites EZ Key patented external battery disconnect feature - prevents unnecessary battery drainage, saves on installation time
 - Solid-state Voltage Limited Charger
 - Brownout Circuit
 - Low-Voltage Disconnect
 - Test Switch/Power Indicator Light
 - Standard 24 hour recharge time (max)
 - Self-Diagnostic feature available as option
 - DLVP enabled with field installable kit
- Housing Construction**
 - All components are injection molded, color stable, high impact UL 94-5VA rated, polycarbonate material
 - White or black textured finish standard
 - Faces can be field selectable as single or double faced
 - Snap-out or snap-in chevron directional indicators have full 3/4" stroke
 - Components are of snap-fit construction to facilitate under 5-minute installation
 - Reinforcing ribs throughout to provide maximum strength
 - Molded-in wireways facilitate internal wire routing and connections
 - All components including battery and electronics are located inside the exit housing
 - Knockout provided on housing for surface conduit attachment
 - Snap-fit canopy with captive mounting screws included with all exits
 - Exit can be ceiling, wall, or end mounted
 - Universal J-box mounting pattern
- Lamp Data**
 - AC LED: Red and green LED lamps provide uniform diffused illumination
 - DC: Red and green LED DC lamps (Brighter in emergency mode)
- Code Compliance**
 - UL 924 Listed
 - UL Damp Location (0-40° C)
 - Life Safety NFPA 101
 - NEC/OSHA
 - Most State and Local Codes
 - Suitable for Floor Proximity Installation
 - UL Listed for 2C (FTBR)
- Warranty**
 - 5 year product warranty
 - 7 year pro-rated battery warranty

Technical Data

- Lamps**
 - Long life, red and green LEDs, provide uniform diffuse illumination of the exit face
 - Low operating costs and no maintenance required
 - Consumes on average less than one watt
- Housing Construction**
 - Rugged, durable, injection molded polycarbonate
 - Structural components designed with reinforcing ribs for additional rigidity and structural integrity
 - Impact and scratch resistant
 - UV stabilized to resist discoloration due to age and ultraviolet radiation
 - Snap-fit construction (no mechanical fasteners) to facilitate installation in under five minutes
 - Installation components included (wire nuts, wire leads, universal metal J-box bracket, etc.)
 - Universal design enables exit to be field selectable as single face or double face
 - Wall, ceiling or end mounting
 - Rugged, snap-fit, low-profile canopy with captive screws included for ceiling and end mounting
 - Housing color available in white or black
- Lens**
 - Durable, impact-resistant polycarbonate
 - Field selectable red or green; ships with red lenses installed and green lenses included
 - Full 3/4" stroke snap-out or snap-in chevron directional indicators ensure maximum visibility and code compliances
- Sure-Lites EZ Key External Battery Disconnect (Self Powered Only*)**
 - The Patented EZ key is an external battery disconnect that allows the product to be shipped with the battery connected internally.
 - This prevents battery drain during the construction cycle to insure that the battery isn't damaged and is fully charged for inspection.
 - EZ Key also saves the labor of internally connecting the battery after construction is complete.
- Brownout Circuit (Self Powered Only*)**
 - Monitors the flow of AC current
 - Activates the emergency lighting system when a predetermined reduction/dip of AC power occurs (a dip in voltage will cause most ballasted products to extinguish, causing loss of normal lighting even though a total power failure has not occurred)
- Low Voltage Disconnect (Self Powered Only*)**
 - Low-voltage circuitry disconnects the lighting load when battery's terminal voltage falls
 - Disconnect remains in effect until normal utility power is restored, preventing deep battery discharge
- Test Switch/Power Indicator Light (Self Powered Only*)**
 - Switch located on the side of the exit permits the activation of the emergency circuit for complete operational systems check
 - Indicator light provides visual assurance that the AC power is on
 - LPXR5SD only - switch located on bottom of the exit
- Self-Diagnostics Option (Self Powered Only*)**
 - Automatically performs all tests required by UL924 and NFPA 101
 - Indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit
 - 90-minute battery power (emergency mode) simulation test occurs randomly once every 12 months
 - 30-second battery power simulation test occurs every 30 days
- Photocell Test Switch for LPXR5SD Model Only**
 - Allows verification of proper operation of the transfer circuit and emergency lamps with a laser pointer (laser is sold as an accessory). The emergency lamps will test for 30 seconds when activated.
 - Located on bottom of the unit
- "2C" Option (AC Only)**

Note: "2C" cannot accept 2 active hots

 - Enables the exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation-UL Category FTBR-Emergency Lighting and Power Equipment)
 - The "2C" Option alters the standard Exit such that it complies with and is UL Listed under the FTBR Category
 - This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits, but cannot support two hot inputs. Only one of the normal or emergency circuits can be powered. If both are powered simultaneously, it will make the Exit inoperable.
 - Both circuits have universal 120/277 VAC standard
- Sealed Nickel Cadmium Battery**
 - Sealed, maintenance-free nickel cadmium battery with 10-year typical life expectancy
 - Rechargeable battery offers high discharge rates and stable performance over a wide range of temperatures from 0°C to 40°C
- Warranty**
 - Five-year warranty against defects in material and workmanship
 - Nickel cadmium battery has a seven-year prorated warranty

* Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation.



Laser tester
Part Number=LASER
(sold separately)

Project		Catalog #		Type	
Prepared by		Notes		Date	



Sure-Lites

LPX Series

LED polycarbonate Exit with 90 minutes of run time

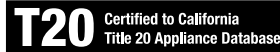
Typical Applications

Office • Education • Healthcare • Hospitality • Retail • Industrial • Manufacturing

Interactive Menu

- Order Information page 2
- Product Warranty

Product Certification



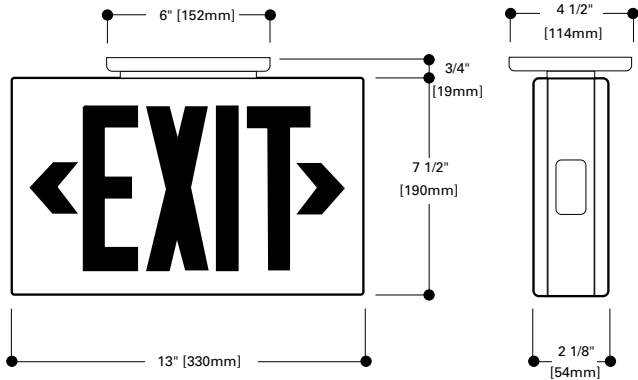
Product Features



Top Product Features

- LED Polycarbonate Exit available in white or black housings
- UL 924 damp location certified
- Field selectable for Red or Green illumination and single or double faces
- 90 minutes of emergency run time with self-powered (battery backup) models
- Maintenance free nickel cadmium battery
- Self-diagnostic and remote capacity options
- DLVP option

Dimensional Details



Sure-Lites

LPX Series

Ordering Information

SAMPLE ORDER NUMBER: LPX6, LPX6BK, LPX7SD, LPX7BKSD

Family	Series	Face Options	Housing Finish	Options	Accessories
Family	Series ⁽¹⁾	Face Options	Housing Finish ⁽²⁾	Options	Accessories
LPX=Polycarbonate Exit, LED	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White Housing BK=Black Housing (available with AC series and self-powered, self-diagnostics only)	[Blank]=No additional options SD=Self-diagnostics/LPX7 only	WG10=Wall mount wire guard WGS11=Ceiling or End VS1=Polycarbonate Vandal Shield VS1WP=Polycarbonate Vandal Shield, Weather Proof Pendant Kit LPX18PKWH=18" Pendant Kit, White LPX18PKHTWH=18" Hang True Pendant Kit, White LPX18PKBK=18" Pendant Kit, Black LPX18PKHTBK=18" Hang True Pendant Kit, Black
Notes (1) Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation. (2) LPX7 (no self-diagnostics) units are not available in black. LPX7BKSD (self-diagnostics) units are available in black. (3) For 2 circuit capability on the LPX6 series, order the SL2CPK in addition to the exit sign. The 2 circuit kit does not accept two hot circuits.					

LPXR5SD Ordering Information

Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
Family	Coverage	Remote Capability	Color	Self-Diagnostics	Full Catalog Logic
LPX=LED Polycarbonate Exit	non-applicable	R5=5 watts	[Blank]=White BK=Black	SD=Self-diagnostic (standard)	LPXR5SD, LPXR5BXSD

Remote Logic for LPXR5SD Only

SEL Series Outdoor Capable Remotes							
Series		Single Head Remotes			Double Head Remotes		
Catalog number		SRP/SRM13	SRP/SRM25	SRP/SRM30	SRP25D/SRM25D	SRP50D/SRM50D	SRP60D/SRM60D
Watts Consumed		1.25	2.5	4.1	2.5	5	8.2
Catalog Number	Remote Watts Available	# of SRP/SRM13 remotes fixture will power	# of SRP/SRM25 remotes fixture will power	# of SRP/SRM30 remotes fixture will power	# of SRP25D/SRM25D remotes fixture will power	# of SRP50D/SRM50D remotes fixture will power	# of SRP60D/SRM60D remotes fixture will power
LPXR5SD	5	4	2	1	2	1	NA

DLVP Options

Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
Family	Series	Face Options	Color	Options	DLVP	Full Catalog Logic
LPX=LED Polycarbonate Exit	6=AC Only 7=Self-Powered	[Blank]=Single and Double	[Blank]=White BK=Black	SD=Self-diagnostics (standard for LPX7, not available for LPX6)	DLVP=DLVP	LPX6DLVP, LPX6BKDLVP, LPX7SDDLVP, LPX7BKSDDLVP

Energy and Performance Data

Maximum power consumption under all charge conditions:

AC Only

Input Voltage	Input Amps	Input Watts
120 Volts	0.07	1.02
277 Volts	0.07	1.12

AC Only, DLVP (57 Vdc)

Input Voltage	Input Amps	Input Watts
57Vdc	0.02	1.2

Self-Powered

Input Voltage	Input Amps
120 Volts	0.07
277 Volts	0.07

Self-Powered, LPX5R Only

Input Voltage	Input Watts
120 Volts	2.2
240 Volts	2.5
277 Volts	3.2

Self-Powered, DLVP (57 Vdc)

Input Voltage	Input Amps
57Vdc	0.07

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: LPX7 Notes:	Type: <div>X3</div> SSI23-55878
-----------------------------------	--	---	---

Sure-Lites

LPX Series

Product Specifications

Electrical

- Field selectable red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts)
- Dual Voltage Input 120/277 VAC, 60Hz
- 2C capability enabled with the SL2CPK kit. Note: 2 circuit kit does not accept two hot circuits.
- Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost
- Sure-Lites EZ Key patented external battery disconnect feature - prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Self-Diagnostic feature available as option
- DLVP enabled with field installable kit

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated, polycarbonate material
- White or black textured finish standard
- Faces can be field selectable as single or double faced
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Knockout provided on housing for surface conduit attachment
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

Code Compliance

- UL 924 Listed
- UL Damp Location (0-40° C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation
- UL Listed for 2C (FTBR)

Warranty

- 5 year product warranty
- 7 year pro-rated battery warranty

Technical Data

Lamps

- Long life, red and green LEDs, provide uniform diffuse illumination of the exit face
- Low operating costs and no maintenance required
- Consumes on average less than one watt

Housing Construction

- Rugged, durable, injection molded polycarbonate
- Structural components designed with reinforcing ribs for additional rigidity and structural integrity
- Impact and scratch resistant
- UV stabilized to resist discoloration due to age and ultraviolet radiation
- Snap-fit construction (no mechanical fasteners) to facilitate installation in under five minutes
- Installation components included (wire nuts, wire leads, universal metal J-box bracket, etc.)
- Universal design enables exit to be field selectable as single face or double face
- Wall, ceiling or end mounting
- Rugged, snap-fit, low-profile canopy with captive screws included for ceiling and end mounting
- Housing color available in white or black

Lens

- Durable, impact-resistant polycarbonate
- Field selectable red or green; ships with red lenses installed and green lenses included
- Full 3/4" stroke snap-out or snap-in chevron directional indicators ensure maximum visibility and code compliances

Sure-Lites EZ Key External Battery Disconnect (Self Powered Only*)

- The Patented EZ key is an external battery disconnect that allows the product to be shipped with the battery connected internally.
- This prevents battery drain during the construction cycle to insure that the battery isn't damaged and is fully charged for inspection.
- EZ Key also saves the labor of internally connecting the battery after construction is complete.

Brownout Circuit (Self Powered Only*)

- Monitors the flow of AC current
- Activates the emergency lighting system when a predetermined reduction/dip of AC power occurs (a dip in voltage will cause most ballasted products to extinguish, causing loss of normal lighting even though a total power failure has not occurred)

Low Voltage Disconnect (Self Powered Only*)

- Low-voltage circuitry disconnects the lighting load when battery's terminal voltage falls
- Disconnect remains in effect until normal utility power is restored, preventing deep battery discharge

Test Switch/Power Indicator Light (Self Powered Only*)

- Switch located on the side of the exit permits the activation of the emergency circuit for complete operational systems check
- Indicator light provides visual assurance that the AC power is on
- LPXR5SD only - switch located on bottom of the exit

Self-Diagnostics Option (Self Powered Only*)

- Automatically performs all tests required by UL924 and NFPA 101
- Indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit
- 90-minute battery power (emergency mode) simulation test occurs randomly once every 12 months
- 30-second battery power simulation test occurs every 30 days

Photocell Test Switch for LPXR5SD Model Only

- Allows verification of proper operation of the transfer circuit and emergency lamps with a laser pointer (laser is sold as an accessory). The emergency lamps will test for 30 seconds when activated.
- Located on bottom of the unit



**Laser tester
Part Number=LASER
(sold separately)**

* Self-powered units have battery backup to provide 90 minutes of run time when A/C power is lost. Units must be connected to A/C power for standard operation.

Project		Catalog #		Type	
Prepared by		Notes		Date	



Interactive Menu

- Order Information [page 2](#)
- Photometric Data [page 3](#)
- Technical Data [page 4](#)
- Product Warranty

Top Product Features

- Provides emergency lighting for a minimum of 90 minutes
- Emergency egress coverage of 100 feet
- 3 Watts remote capacity
- Total system coverage of 130 feet with remote head
- Long life LED source with adjustable optics
- LiFePO₄ Battery
- Labor-saving self-diagnostics option for NFPA testing
- Universal input 120 ~ 277 VAC

Sure-Lites

SELHP100R3 Emergency Light

UL 924 Emergency Light
Up to 100 Feet Egress Coverage
Wall and Ceiling Mount
Self-diagnostics Option

Typical Applications

Retail • Industrial

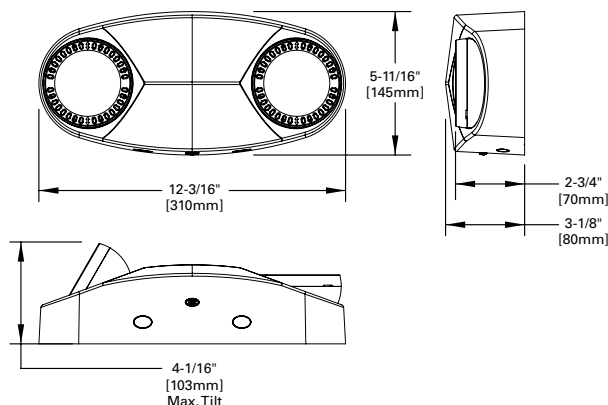
Product Certification




Product Features



Dimensional Details



Submitted by Schroeder Sales, Inc		Catalog Number: SELHP100R3	Type: X4
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)		

SSI23-55878

Sure-Lites

SELHP100R3

Catalog Logic for Remote Capable Versions

SAMPLE ORDER NUMBER: **SELHP100R3, SELHP100R3SD**

Series	Spacing	Battery	Remote Capacity	Color	Self Diagnostic	Full Catalog Options
SELHP=Emergency Light, High Power	100=100 feet	LiFePO ₄	R3=3 watts	_ =White	_ =No Self-Diagnostics SD=Self Diagnostic	SELHP100R3 SELHP100R3SD

Electrical Characteristics During Charging Mode

SELHP100R3, SELHP100R3SD

Model	120 volt			277 volt		
	Power (W)	Current (A)	PF	Power (W)	Current (A)	PF
SELHP100R3	2.4	0.04	0.45	2.6	0.03	0.245
SELHP100R3SD	4.5	0.07	0.54	4.6	0.05	0.33

Remote System Design Guidelines

SELHP100R3, SELHP100R3SD

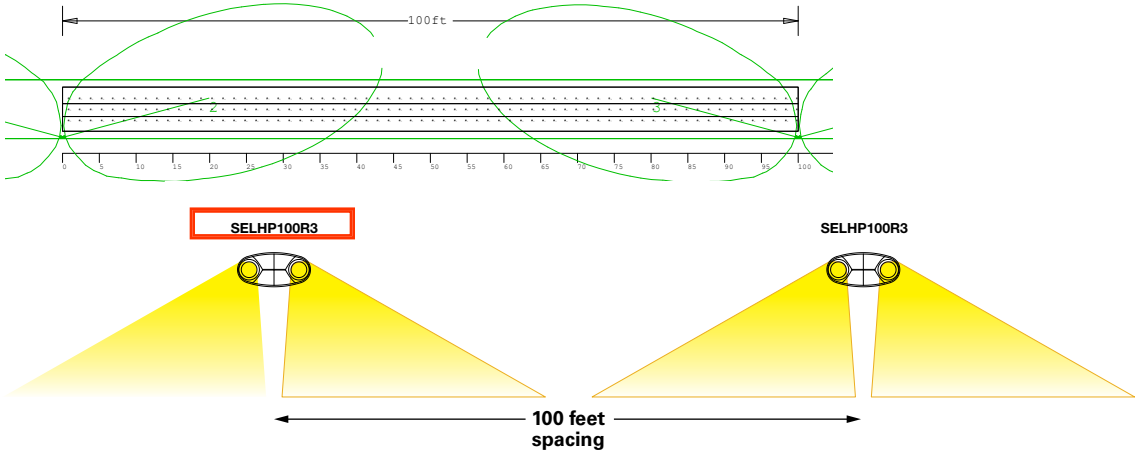
SEL Series Remote								
		Single Head Remotes				Double Head Remotes		
		SRPA	SRP13/SRM13	SRP25/SRM25	SRP30/SRM30	SRP25D/SRM25D	SRP50D/SRM50D	SRP60D/SRM60D
Watts Consumed		3.5	1.25	2.5	4.1	2.5	5	8.2
Catalog Number	Remote Watts Available	# of SRPA Remotes Fixture Will Power	# of SRP/SRM13 Remotes Fixture Will Power	# of SRP/SRM25 Remotes Fixture Will Power	# of SRP/SRM30 Remotes Fixture Will Power	# of SRP25D/SRM25D Remotes Fixture Will Power	# of SRP50D/SRM50D Remotes Fixture Will Power	# of SRP60D/SRM60D Remotes Fixture Will Power
SELHP100R3	3	1	2	1	NA	1	NA	NA
SELHP100R3SD	3	1	2	1	NA	1	NA	NA

Sure-Lites

SELHP100R3

Photometry
[View IES files](#)

SELHP100R3, SELHP100R3SD



Emergency Egress Coverage; Fixture Spacing ***					
Catalog Number		Output Lumens per Head	7.5 ft. Height Wall Mount	10 ft. Height Wall Mount	20 ft. Height Ceiling Mount
SELHP100R3	SELHP100R3SD	580	100 feet	100 feet	80 feet

***The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The fixture spacing shown above is with a corridor 100 feet long, 12 feet ceiling with an 8 foot wide walkway and a 3 foot path of egress.. The reflectances are 80% ceiling, 50% walls and 20% floors. Cooper Lighting Solutions assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

7.5 ft Height Wall Mount

X	Y	Z	Orient	Tilt
-0.2	3	20	180	40
0.2	3	20	0	40
79.8	3	20	180	40
80.2	3	20	0	40
159.8	3	20	180	40
160.2	3	20	0	40

Submitted by Schroeder Sales, Inc	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Catalog Number: SELHP100R3 Notes:	Type: <div>X4</div> SSI23-55878
-----------------------------------	--	---	---

Sure-Lites

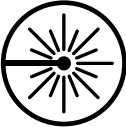
SELHP100R3

Technical Data

Mechanical Housing All components are injection molded with a color stable, high impact thermoplastic resin. The surface is textured to improve aesthetic appearance. The housing construction is designed with snap-fit components and reinforcement ribs to provide maximum strength at minimum installation effort. The mounting hole pattern is universal to junction box requirements and is suitable for both wall and ceiling mount applications.	Self Diagnostics The self-diagnostic software will automatically perform all tests required by UL924, and NFPA101 and will systematically calibrate itself in the field; thus reducing installation labor and eliminating manual calibration errors. The system indicates the status of the emergency light at all times using the LED indicator. A 90 minute battery power (emergency mode) simulation test will occur once every 12 months. A 30 second battery power simulation test will occur every 30 days. The Solid-State microprocessor based system has the ability to accurately detect and warn of system failures, plus it incorporates all of the standard electronic features that sets Sure-Lites apart from its competition.	Low Voltage Disconnect The low-voltage circuitry disconnects the lighting load to protect the battery after run times in excess of the 90 minute UL limit. The disconnect remains in effect until normal utility power is restored preventing deep battery discharge. Brownout Circuit The brownout circuit on the SEL emergency light monitors the flow of AC current to the unit and activates the emergency light heads when a predetermined reduction of AC power occurs. Warranty SEL units are backed by a five-year warranty on the fixtures.
--	---	--

Self-diagnostics Testing Operations

The Sure-Lites Self-diagnostics is continuously monitoring your emergency fixture, and will signal any failure through the two color indicator LED.

Initial Operation: When the unit is first powered up, the lamp heads may briefly illuminate and then it will go into a 24 hour fast charge, indicated by the indicator LED alternating between red and green. Once the unit has fully charged, it will perform a self-calibration, after which the LED will change to steady green, indicating the unit is fully charged and float charging the battery to maintain readiness.	 <div>Self-diagnostics</div>
Automatic Testing: The unit will perform battery capacity, lamp/LED and charge circuit test: <ul style="list-style-type: none"> • Every 30 days for 30 seconds. • Every 180 days for 30 minutes. • Every 365 days for 90 minutes. • The LED lamp heads will turn ON during the above tests. 	
Manual Testing: <ul style="list-style-type: none"> • 30-second Test - Press and release the test button once during float charge (steady green). The indicator LED will change to a blinking green to indicate the unit is performing a 30-second test of the batteries and lamps/LEDs • 30-Minute Test – Press and release the test button twice (within 2 seconds) during float charge (steady green). The indicator LED will change to blinking green (2 blinks) to indicate the unit is performing a 30-minute test of the batteries and lamps/LEDs. • 90-Minute Test – Press and release the test button thrice (within 2 seconds) during float charge (steady green). The indicator LED will change to blinking green (3 blinks) to indicate the unit is performing a 90-minute test of the batteries and lamps/LEDs. • Canceling Test – Press the test button for three seconds and then release during the 30-second/30-minute/90-minute test (blinking green) to return the fixture to its original state (hi-charge or float charge). 	
Clearing Failure Codes: <ul style="list-style-type: none"> • A battery failure (LED two blink red) can be cleared by replacing the battery. Or, starting a test and holding the test button for 6 seconds will reset the system and clear any error codes. However, the error will return if the battery is faulty. • Lamp/LED failure (LED four blink red) will clear when the unit successfully passes a manual or automatic 30 second test. If the error persists after retesting contact your Cooper Lighting Solutions representative for assistance. 	
Indicators: <ul style="list-style-type: none"> • LED Off - No power to unit, emergency mode. • LED Alternating Red/Green - Unit is in fast charge state. • LED Steady Green - Unit is fully charged and is float charging the battery to maintain readiness. • LED Steady Red - Battery is disconnected. • LED Green Blink - Unit is in test mode. • LED One Blink Red - Unit has failed a charging test. The electronics likely need to serviced. See "Clearing Failure Codes" above. • LED Two Blink Red - Battery has failed a capacity test, or the battery is disconnected. See "Clearing Failure Codes" above. • LED Four Blink Red - Unit has failed lamp load test. LEDs may have been burned out and need to be serviced. See "Clearing Failure Codes" above. 	
Maintenance: None required. Replace the batteries as needed according to ambient conditions. However, we recommend that the equipment be tested regularly in accordance with local codes.	

SELF DIAGNOSTIC LEGEND

● (STEADY) NORMAL SERVICE

● (BLINK) TESTING

● (RED/GREEN FLASH) HI CHARGE

● (STEADY) BATTERY DISCONNECTED

● (FLASH) BATTERY RECHARGE FAILURE

● (DOUBLE BLINK) BATTERY FAILURE

● (FOUR BLINK) LAMP FAILURE

● (FIVE BLINK) REMOTE LAMP FAILURE (WHEN APPLICABLE)

PRESS TEST SWITCH (WITHIN 2 SEC.)
 1 TIME = 30 SEC. 2 TIME = 30 MIN.
 3 TIME = 90 MIN.
 SYSTEM RESET: PUSH AND HOLD TEST SWITCH FOR 6 SECONDS

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNSELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

RLP-G-U-WH-MTEB-SD

Type:**X5**

Notes:

SSI23-55878

**RLP**

Damp Location Thermoplastic Pipe Exit & Emergency Combo

DATE:

PROJECT

COMMENTS:

**FEATURES**

- Damp location listed
- Exceptionally low energy consumption LED light source with 10+ year life expectancy
- Universal canopy included for end, wall, or ceiling mounting
- Remote capability allows for 2W of remote head capacity
- Compatible with Isolite MVH and MVI remote heads
- Available with full self-diagnostic option
- Dual rate charger recharges battery in 24 hours
- Line latch prevents unnecessary discharge of battery during installation
- Integral AC present indicator and push-to-test switch
- Reliable solid state transfer relay
- Two nickel cadmium batteries provide 90 minute emergency run-time
- Electronic control circuit and isolation transformer provide current control and circuit protection, ensuring optimum LED efficiency and life
- 120/277 VAC field-selectable inputs
- 184 lumens

ORDERING INFORMATION *RLP-G-U-BK-MTEB***1. SERIES**

RLP

2. ILLUMINATION

G Green
R Red

3. FACE COUNT

U

U Universal

4. FRAME COLOR

BK Black
WH White

5. MOUNTING

MTEB

MTEB Top/End/Back/Mount

6. OPTIONS

BLANK = NO OPTION
SD Self-Diagnostics

ACCESSORIES; ORDER SEPARATELY

- WG 2 = Wireguard 14.0" X 10.0" X 4.5"
- WG 3 = Wireguard 14.5" X 6.0" X 10.5"
- WG 10 = Wireguard 13.5" X 12.0" X 16.5"

SPECIFICATIONS**CONSTRUCTION**

- Snap together, Quick fit installation
- Injection Molded, 5VA flame retardant, high impact thermoplastic housing in White or Black finish

LETTERS

- 6.0" high; 0.75" stroke

ARROWS

- NFPA-Type, field selectable chevrons

APPROVALS

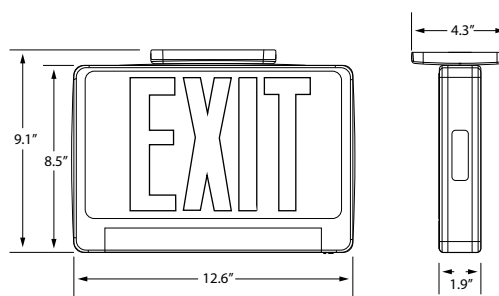
- UL 924
- UL Listed for Damp Location
- NFPA 101 Life Safety Code
- NFPA 70 - NEC
- OSHA

TEMPERATURE RATING

- From 32°F to 104°F

WARRANTY

Isolite offers a 3-year limited warranty. For further details, refer to General Warranty and Obligations in the Isolite manual or on our website. Lamps not warranted.

DIMENSIONS



Modified Colonnade Bollard

COL-B-48"-4C-22W-9-WF-CCT

SPECIFICATION FEATURES	Date
	06-25-19

PROJECT: _____

SPECIFIER: _____

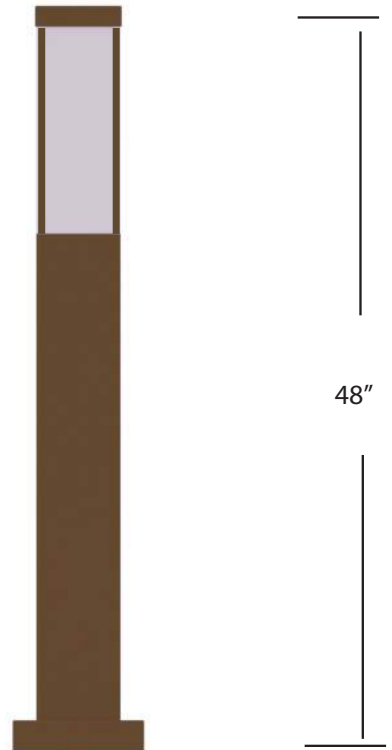
Dimensions	48" H x 4" x 4"
Lamps	with 24 watts of LED
Material	aluminum
Finish	STD Powdercoat TBD
Lens	White Frosted Acrylic
Label	WET Location
Voltage	120 / 277
Description	Anchor base bollard

2,700 lumens @ 3000K

Colonnade fixture with corner metal work added.



Top View - Square fixture



Concept drawings are not to scale.

EVERGREEN LIGHTING WWW.EVERGREENLIGHTING.COM
1379 Ridgeway St. Pomona, CA 91768 PHONE: (909) 865-5599 FAX: (909) 865-5539

MADE IN USA • Information appearing hereon is proprietary and confidential and may not be used without the permission of Evergreen Lighting.



MADE IN USA

ERS SERIES

4"/6"/8"/10" Round Slim

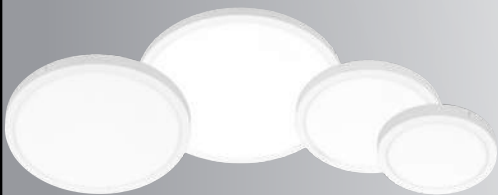
Spitzer

LIGHTING

INDOOR

Type:

Fixture:



TECHNICAL DATA

PRODUCT	ERS-0406L	ERS-0609L	ERS-0814L	ERS-1020L
SIZE	4"	6"	8"	10"
WATTAGE	11W	14W	20W	25W
LUMENS	650LM	950LM	1400LM	2000LM
EFFICACY	Up to 80LM/W			
VOLTAGE	120VAC			
RATING	DAMP LOCATION			
CCT	2700K/3000K/3500K/4000K/5000K COLOR CHANGEABLE			
CONTROL	PHASE/TRIAC DIMMING			
CRI	>80			
DISTRIBUTION	120°			
WORKING TEMP	-4°F ~ 104°F			
LUMEN MAINTENANCE	L70 >50,000 HOURS			
FINISH	WHITE			

DESCRIPTION

Slim flange, ultra-low profile & unobtrusive edge-lit LED surface mount light with field changeable 5 CCT function

INTENDED USE

Ideal for use in corridors, living spaces, closets, hallways, pantries, stairways and shower room.







ORDERING INFORMATION

-

-

-

Series	Lumen Package	Voltage	CCT
ERS- (Edge-Lit Round Slim)	0406L - (4in/650LM/11W)	R - (120V)	5CC - (27K/30K/35K/40K/50K Color Changeable)
	0609L - (6in/950LM/14W)		
	0814L - (8in/1400LM/20W)		
	1020L - (10in/2000LM/25W)		

*Additional cost and/or lead time on customized fixtures may apply. Customized fixtures may not be returned.

Spitzer

www.spitzerlighting.com

702 Interchange Blvd., Newark, DE 19711


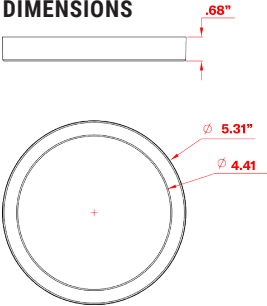
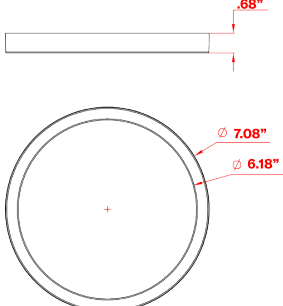
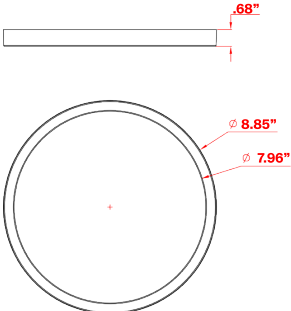
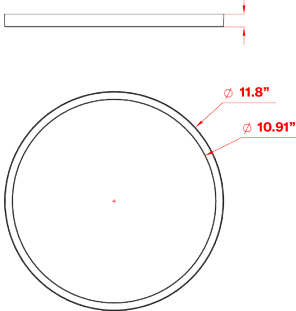

Specification is subject to change without notice

1/2

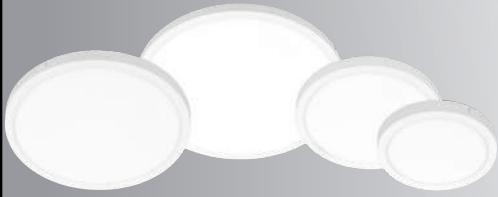
Submitted On: Sep 14, 2023

1/2

Index Page

Submitted by Schroeder Sales, Inc		Catalog Number: ERS-0609L-R-5CC	Type: ZS1
	Job Name: HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379 Architect: MULLEN HELLER ARCHITECTURE (Albuquerque)	Notes:	SSI23-55878
ERS SERIES		Spitzer LIGHTING	
4"/6"/8"/10" Round Slim		Type:	Fixture:
CONSTRUCTION Non-conductive PC housing, less than 0.8" housing profile, integrated aluminum heat sink and white finish.		ELECTRICAL Regular 120Vac at 60Hz with standard Triac dimming	
FINISH Painted in high gloss durable white finish.		LISTINGS Damp location. ETL listed. Energy Star.	
OPTICS Frosted PC cover.		MOUNTING Surface mount.	
**IES Files available upon request			
DIMENSIONS			
			
ERS-0406L		ERS-0609L	
			
ERS-0814L		ERS-1020L	
AVAILABLE ACCESSORIES *SOLD SEPARATELY			
			
MFR4 4" IC Fire-rated metallic electrical junction box housing			
Spitzer LIGHTING www.spitzerlighting.com		702 Interchange Blvd., Newark, DE 19711	Specification is subject to change without notice V.12

ERS SERIES




4"/6"/8"/10" Round Slim

Type:

Fixture:

TECHNICAL DATA

PRODUCT	ERS-0406L	ERS-0609L	ERS-0814L	ERS-1020L
SIZE	4"	6"	8"	10"
WATTAGE	11W	14W	20W	25W
LUMENS	650LM	950LM	1400LM	2000LM
EFFICACY	Up to 80LM/W			
VOLTAGE	120VAC			
RATING	DAMP LOCATION			
CCT	2700K/3000K/3500K/4000K/5000K COLOR CHANGEABLE			
CONTROL	PHASE/TRIAC DIMMING			
CRI	>80			
DISTRIBUTION	120°			
WORKING TEMP	-4°F ~ 104°F			
LUMEN MAINTENANCE	L70 >50,000 HOURS			
FINISH	WHITE			



INDOOR

DESCRIPTION
Slim flange, ultra-low profile & unobtrusive edge-lit LED surface mount light with field changeable 5 CCT function

INTENDED USE
Ideal for use in corridors, living spaces, closets, hallways, pantries, stairways and shower room.







ORDERING INFORMATION

Series

Lumen Package

Voltage

CCT

ERS- (Edge-Lit Round Slim)

0406L - (4in/650LM/11W)

0609L - (6in/950LM/14W)


0814L - (8in/1400LM/20W)

1020L - (10in/2000LM/25W)

R - (120V)

5CC - (27K/30K/35K/40K/50K Color Changeable)

*Additional cost and/or lead time on customized fixtures may apply. Customized fixtures may not be returned.


www.spitzerlighting.com

702 Interchange Blvd., Newark, DE 19711

Specification is subject to change without notice

1/2

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

ERS-0609L-R-5CC / BLD-CM15H-
YYY

Notes:

Type:**ZS1E**

SSI23-55878

Emergency LED Driver

BLD-CM08H-YYY **BLD-CM15H-YYY** BLD-CM20H-YYY

Features:

- Meets standards CSA C22.2 NO.141and UL 924
- External lithium battery
- Battery protections: over charge protection, over discharge protection
- Indicator shows a variety working modes
- The batteries meet 500 cycles of standard charge and discharge
- RoHS compliant

Specifications:**Universal Input Voltage**

100-347Vac, 50/60Hz

AC Input Current

100mA max.

AC Input Power Rating

7.0W max.

Output Voltage

36-150Vdc

Emergency Time

1.5H

Full Warranty

5 Years

Test Switch Indicator LightIlluminated Test Switch,
indicator Light**Battery Charging Current**

≤350mA

Charging Time

24Hours

Temperature Rating (Ambient)

0°C to +50°C (32°F to 122°F)

**Operation:****AC Operation:**

AC power is present, The LED load from the LED driver is normal power supply, the emergency driver is charging in a standby mode, The green/red LED light on to indicate that it is charging.

Emergency operation:

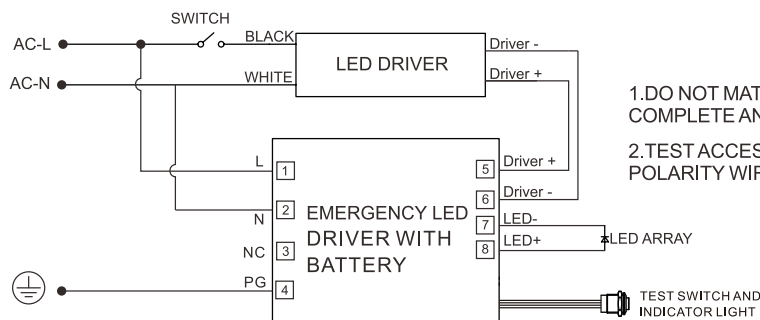
When the AC power goes out, The emergency driver detects the AC power outage and automatically switch to the working emergency mode. The green/red LED light off. When the AC power is restored, the emergency driver backs to AC power working and starts re-charging, the green/red LED light on.

Output Power

8W

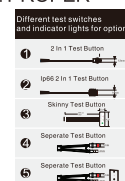
15W

20W

Wiring Diagram:

1. DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.

2. TEST ACCESSORY LEADS-OBSERVE PROPER POLARITY WIRING.





HOPE WORKS NEW BEHAVIORAL HEALTH FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

ERS-0609L-R-5CC / BLD-CM15H-
YYY

Notes:

Type:

ZS1E

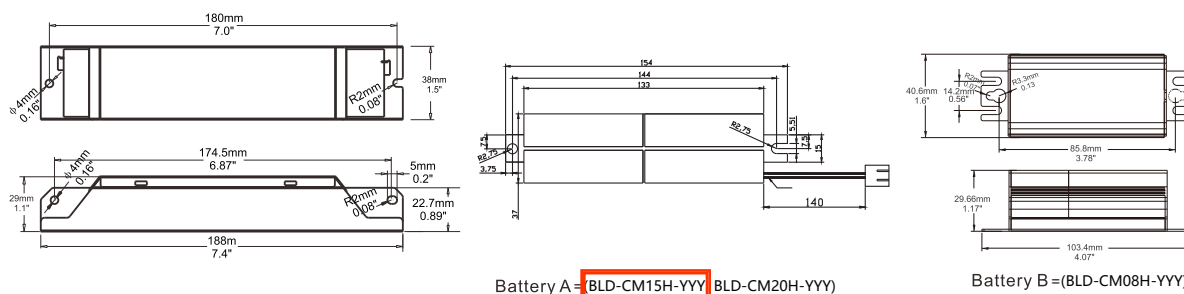
SS123-55878

Emergency LED Driver

BLD-CM08H-YYY BLD-CM15H-YYY BLD-CM20H-YYY

Dimensions:

Case-7.4"x1.5"x1.14"(mounting center-7.0")



IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED Emergency Backup. Check for enclosed wiring and components.
- Risk of fire or electric shock. This LED Emergency Backup installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.
- Before installing, make certain the AC power to the fixture is off.
- The electrical rating of this product is 100–347Vac. Installer must confirm that there is 100–347Vac to the fixture before installation.
- To prevent electrical shock only mate unit connector after installation is complete and before the AC power to the fixture is back on.
- Do not use in outdoor.
- This LED Emergency Backup unit requires an un-switched AC power source of 100–347Vac, 50/60Hz. The AC driver must be on the same branch circuit as the LED Emergency Backup unit.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Do not connect battery pack connector until all other wiring is complete and AC power is on.
- The emergency LED driver is for use with grounded, UL listed LED luminaires, shall be enclosed by the LED luminaire and bonded to the grounding of LED luminaire.
- Verify that all replacement lamp types marked on the installed luminaire are also identified as suitable for use with this emergency battery pack.
- The battery pack is fixed by the screw and the indicator lamp is attached to the shell of the luminaire by 3M tape
- Equipment should be mounted in locations and at heights where it is not be subjected to tampering by unauthorized personnel.
- The use of accessory equipment is not recommended by the manufacturer and may cause an unsafe condition.
- Do not use this equipment for other than its intended use.
- Use with grounded, UL Listed, dry or damp location rated fixtures.

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:

BX-12X6-LR-12L-MN-WF-TBL-WET-
41K

Notes:

Type:**ZW1**

SSI23-55878



**EVERGREEN
LIGHTING**

WALL FLUSH MOUNT

BX-12X6-LR-12L-MN-WF-TBL-WET-41K

SPECIFICATION FEATURES

Date
01-29-19

PROJECT:

SPECIFIER:

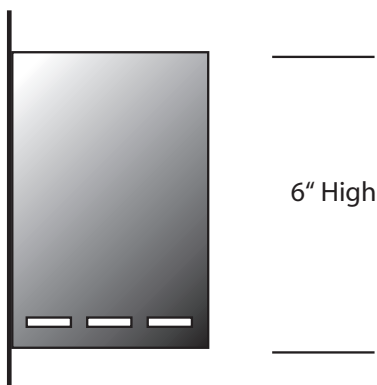
Dimensions	6" H x 12" W x 4" D
Lamps	12 watts of LED- 4100 K
Material	Aluminum
Finish	Metallic Nickel Powdercoat
Lens	White Frosted acrylic
Label	WET Location
Voltage	120 / 277
Description	Exterior Wall Fixture

Top and bottom View

4" Deep

660 Lumens up and 660 lumens down

Side view



6" High

12" Wide



Up Light and down Light

Laser rectangular cut-outs

Front View

EVERGREEN LIGHTING WWW.EVERGREENLIGHTING.COM
1379 Ridgeway St. Pomona, CA 91768 PHONE: (909) 865-5599 FAX: (909) 865-5539

MADE IN USA ● Information appearing hereon is proprietary and confidential and may not
be used without the permission of Evergreen Lighting.



MADE IN USA



ELED

Architectural Outdoor LED Light

DATE:

PROJECT

COMMENTS:



FEATURES

- Architecturally appealing wet location LED light for indoor and outdoor applications
- Suitable for NEMA 4X applications
- Cold Weather Option makes the ELED ideal for outdoor applications to -4°F
- Self Test / Self Diagnostic circuit comes standard reducing manual testing obligations
- Brief self-tests of lamp, battery, and electronic circuitry automatically run every 28 days
- Extended, 30-minute emergency duration tests automatically run every 28 days
- External test switch for manual diagnostic testing
- Photocell activation for nighttime/security lighting or switch controlled for normal lighting comes standard on both AC and EM models
- 5000K color temperature
- 11 watt high output LED module for superior illumination providing 1050 lumens and 50,000 hour lamp life
- UL listed 90 minute run-time
- Self-compensating solid state Constant Current Charger provides extended float life and rapid recharge
- Brownout detection ensures emergency illumination during periods of low line voltage
- Premium long-life high temperature Nickel Cadmium battery
- Integral push-to-test switch with easily visible bi-color LED diagnostic indicator
- Gasket sealed to suit universal junction boxes
- Conduit entry on top of unit
- 120/277 VAC field-selectable inputs
- Available as an AC only fixture

ORDERING INFORMATION *ELED-AC-BZ-MB*

1. SERIES	2. OPERATION	3. FRAME COLOR	4. MOUNTING	5. OPTIONS
ELED	-	-	MB	-
	AC AC Only EM Ni-Cad Battery Backup	BZ Bronze Frame WH White Frame	MB Back Mount	BLANK = NO OPTION HX Internal Heater (120/277 VAC) (EM Only)

ACCESSORIES; ORDER SEPARATELY

- WG 2 = Wire guard 14.0" X 10.0" X 4.5"

**Job Name:**

HOPE WORKS NEW BEHAVIORAL HEALTH
FACILITY - COUNCELING RENOVATION 24379
Architect: MULLEN HELLER ARCHITECTURE
(Albuquerque)

Catalog Number:**ELED-EM-BZ-MB**

Notes:

Type:**ZX1**

SSI23-55878

**ELED**

Architectural Outdoor LED Light

**CONSTRUCTION**

- Die-cast housing
- Polycarbonate lens and mirror reflector
- Vandal-resistant latch clips
- No visible hardware
- UV stabilized polycarbonate retractor resists yellowing and provides uniform light distribution

TEMPERATURE RATING

- Without Internal Heater: From 32°F to 122°F
- With Internal Heater: From -4°F to 122°F

WEIGHT

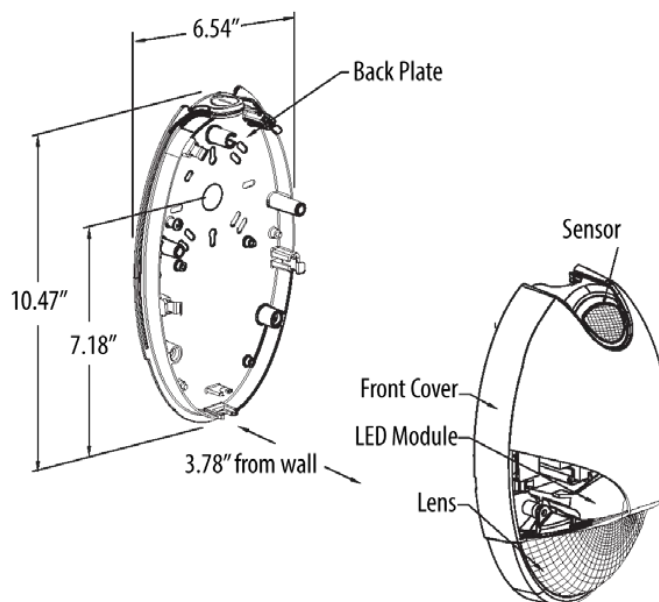
- 7 lb

APPROVALS

- UL 924 listed for Damp and Wet Location
- NFPA 101 Life Safety Code
- NFPA 70-NEC
- OSHA
- IP 65 rated

WARRANTY

- Isolite offers a 3-year limited warranty. For further details, refer to General Warranty and Obligations in the Isolite manual or on our website. Lamps not warranted

DIMENSIONS

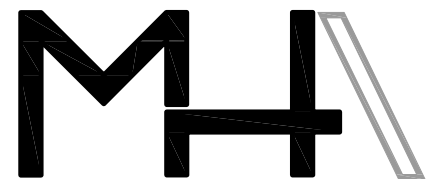


HopeWorks Counseling
Renovation

ADD2-SK1 (1 of 2)

JOB # 19-25

DATE 9/15/23



mullen heller architecture

**REMOVE
EXISTING RTU 1**

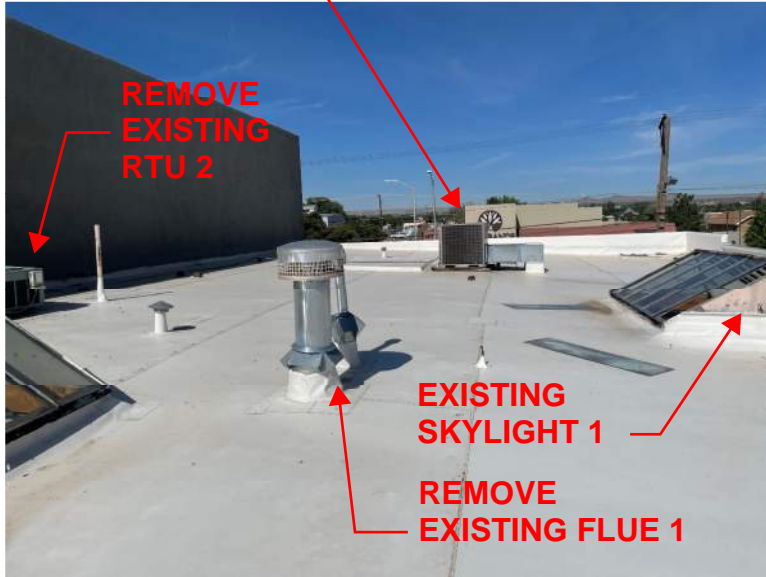


IMAGE 1 - LOOKING WEST



IMAGE 2 - SKYLIGHT 1

REMOVE EXISTING RTU 3

**REMOVE
EXISTING RTU 4**



IMAGE 3 - LOOKING EAST

EXISTING SKYLIGHT 2

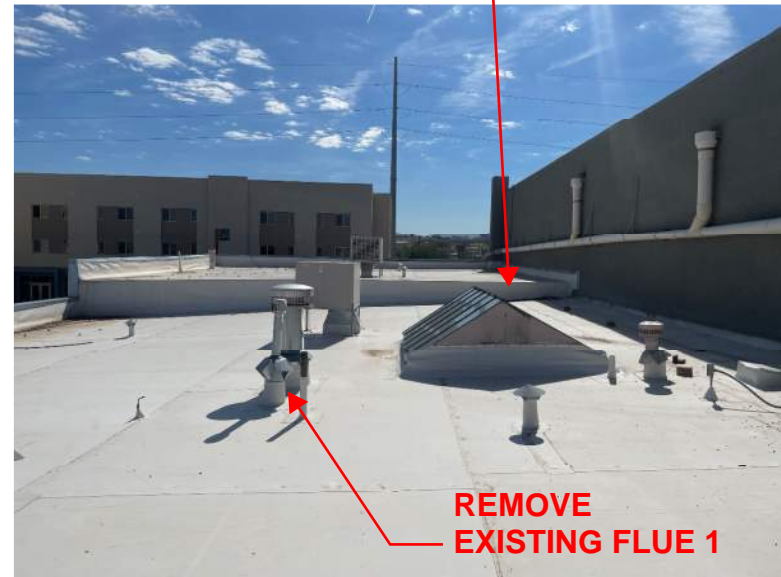


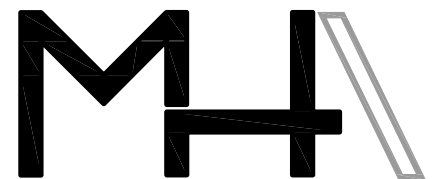
IMAGE 4 - LOOKING WEST

HopeWorks Counseling
Renovation

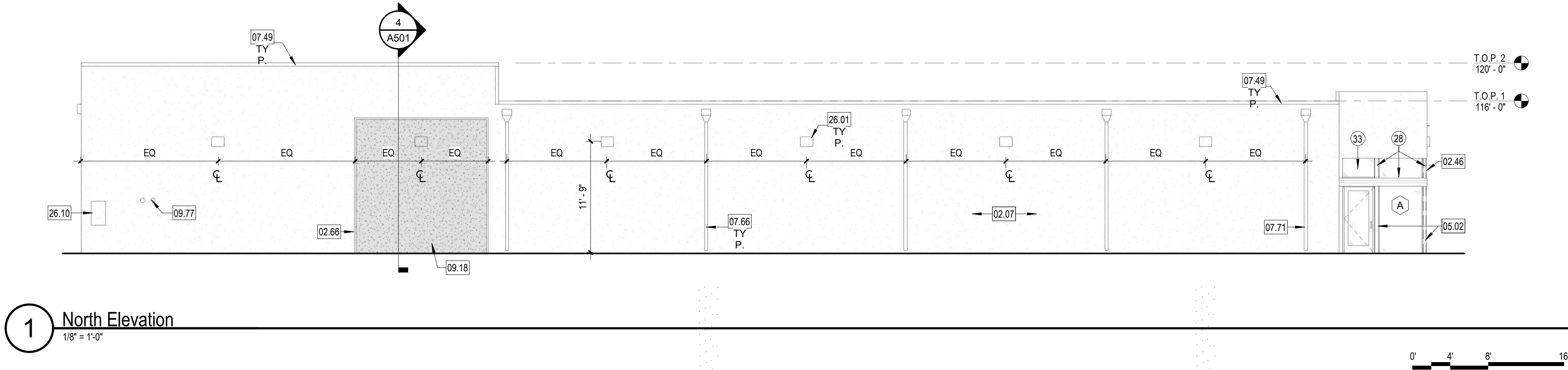
ADD2-SK1 (2 of 2)

JOB # 19-25

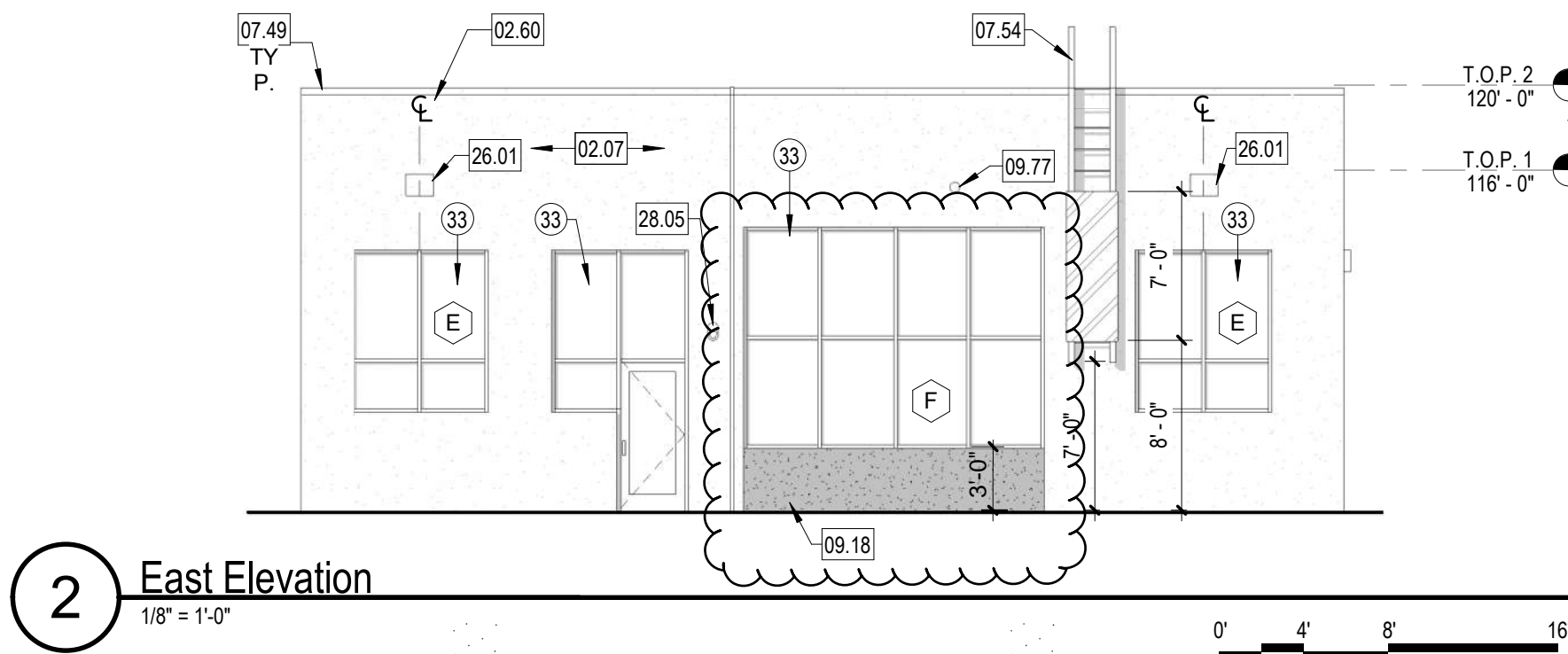
DATE 9/15/23



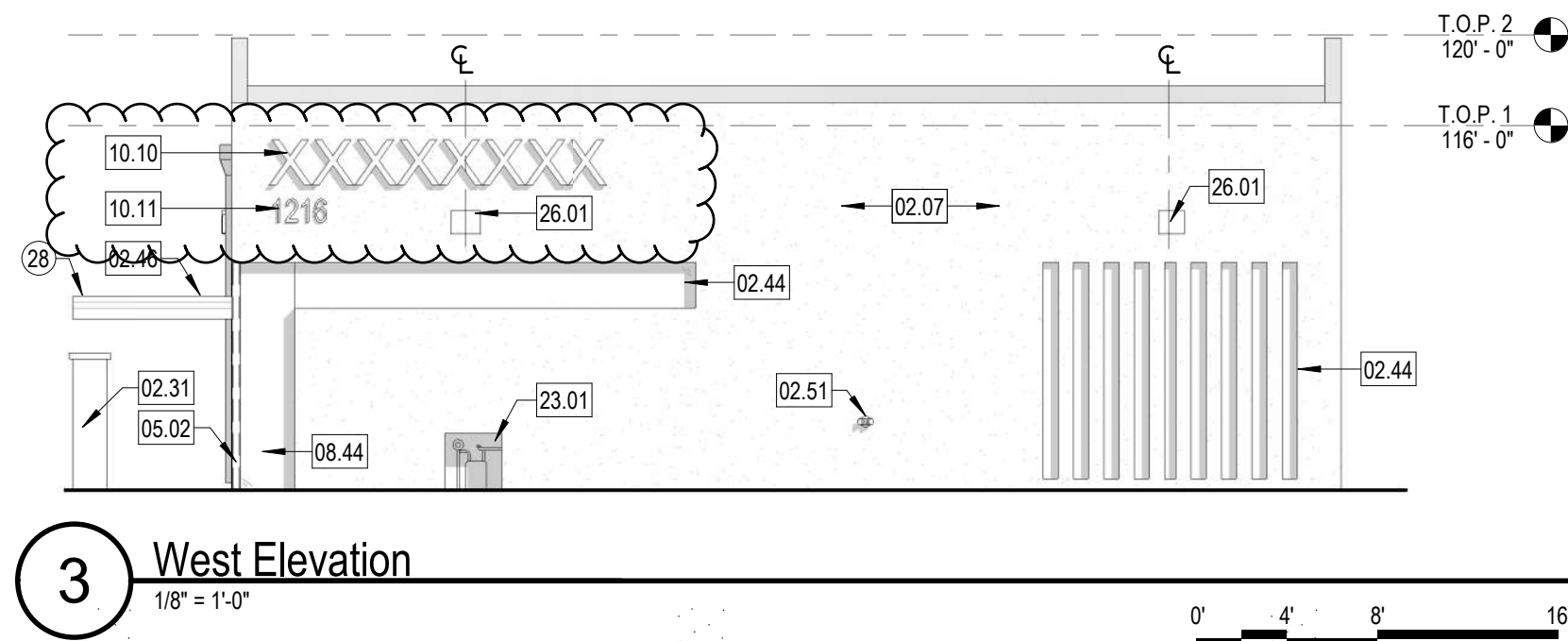
mullen heller architecture



1 North Elevation
1/8" = 1'-0"



2 East Elevation
1/8" = 1'-0"



3 West Elevation
1/8" = 1'-0"

GENERAL SHEET NOTES

- EXISTING STUCCO SYSTEM IS IN GOOD SHAPE. PROTECT DURING CONSTRUCTION. PATCH ANY STUCCO THAT IS DAMAGED DURING BUILDING RENOVATION.
- NO WORK ON EXTERIOR OF BUILDING OTHER THAN THAT NOTED ON THESE DOCUMENTS
- PATCH EXISTING STUCCO AS NECESSARY WHERE NEW WORK OCCURS, SUCH AS NEW MECHANICAL GRILLES, ETC.

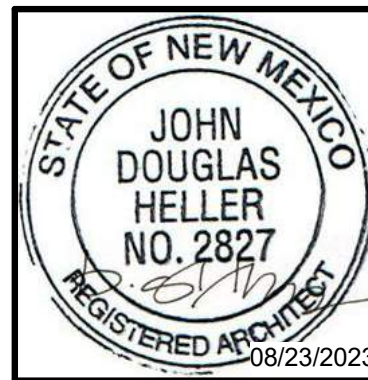
SHEET NOTES

- | | |
|----|--|
| 28 | REPAINT ALL EXPOSED STEEL STRUCTURE. |
| 33 | NEW STOREFRONT SYSTEM IN EXISTING OPENING. |

REFERENCE KEYNOTES

- | | |
|-------|--|
| 02.07 | EXISTING STUCCO SYSTEM TO REMAIN. |
| 02.31 | EXISTING CMU PILASTER TO REMAIN. |
| 02.44 | EXISTING WINDOW TO REMAIN. |
| 02.46 | EXISTING STEEL CANOPY TO REMAIN. |
| 02.51 | EXISTING FIRE DEPT. CONNECTION TO REMAIN. |
| 02.60 | EXISTING DATA CONDUITS TO REMAIN. |
| 02.66 | EXISTING STEEL CHANNEL AROUND EXISTING OPENING TO REMAIN. |
| 05.02 | EXISTING STEEL COLUMN TO REMAIN. PAINT. |
| 07.49 | EXISTING METAL PARAPET CAP TO REMAIN. PROTECT DURING CONSTRUCTION. REPLACE ANY DAMAGED PARAPET CAPS DURING RENOVATION. |
| 07.54 | NEW ROOF LADDER. SEE 2/A301. |
| 07.66 | EXISTING DOWNSPOUT WITH GUTTER BOX AND OVERFLOW TO REMAIN. |
| 07.71 | EXISTING DOWNSPOUT WITH GUTTER BOX AND OVERFLOW TO BE REINSTALLED. |
| 08.44 | NEW SECURITY FILM APPLIED TO EXTERIOR SURFACE OF GLAZING. |
| 09.18 | NEW 2-COAT STUCCO SYSTEM WITH ELASTOMERIC FINISH OVER EXPANDED METAL LATH. |
| 09.77 | PATCH EXISTING STUCCO. |
| 10.10 | 24" HIGH DIMENSIONAL CAST ALUMINUM LETTERS. |
| 10.11 | 12" HIGH DIMENSIONAL CAST ALUMINUM LETTERS. |
| 23.01 | EXISTING GAS METRIC ALUMINUM. |
| 26.01 | NEW EXTERIOR LIGHT FIXTURE AS SCHEDULED. REFER TO ELECTRICAL. |
| 26.10 | ELECTRICAL DEVICE. REFER TO ELECTRICAL (SHEET E101). |
| 28.05 | NEW EMERGENCY LIGHT WITH BATTERY BACK-UP. REFER TO ELECTRICAL. |

DESCRIPTION	BY	DATE	REV
ADDENDUM 2	MHA	9/15/23	



MULLEN HELLER ARCHITECTURE
1716 CENTRAL AVE. SW 1ST FL.
ALBUQUERQUE, NM 87109
P: 505.268.4144
F: 505.268.4244
www.mullenheller.com

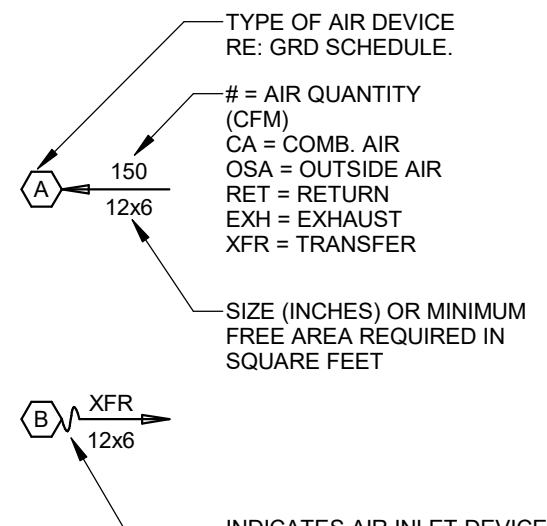
JOB NUMBER	19-25
DRAWN BY	ML
PROJECT MGR	JDH
DATE	08/23/2023
PHASE	100% CD

PROJECT
Hope Works Counseling Renovation
1216 Fourth Street NW
Albuquerque NM 87102

TITLE
EXTERIOR ELEVATIONS

MECHANICAL SYSTEMS LEGEND














































































AIR DEVICE DESIGNATION KEY



NOTES

1. ALL SYMBOLS, ABBREVIATIONS, AND DESIGNATIONS ON LEGEND SHEET ARE NOT NECESSARILY USED ON THIS PROJECT.
2. THIS DRAWING SET CONSISTS OF DATA GENERATED, IN PART, BY OTHER PARTIES. NOT ALL SYMBOLOGIES AND NOTATION CONVENTIONS OCCURRING IN THIS DRAWING SET ARE NECESSARILY DEFINED ON THESE LEGENDS. CONSULT THE ENGINEER IN THE EVENT SYMBOLOGY OR NOTATION INTERPRETATION IS REQUIRED.

DUCTWORK LEGEND

ROUND		DESCRIPTION	RECTANGULAR	
3D	PLAN		PLAN	3D
		DUCT RISER		
		DUCT DROP		
		90° ELBOW DN. (NEGATIVE PRESSURE)		
		90° ELBOW DN. (POSITIVE PRESSURE)		
		90° ELBOW UP (NEGATIVE PRESSURE)		
		90° ELBOW UP (POSITIVE PRESSURE)		
		SIZE OR SHAPE TRANSITION		
		ROUND FLEXIBLE DUCT CONNECTION		
		90° RADIUS ELBOW		
-	-	90° MITERED ELBOW W/ TURNING VANES		
		90° STRAIGHT TEE		
		90° CONICAL TEE		
		45° BRANCH		
		45° CONICAL BRANCH		
		COMBINATION FIRE AND SMOKE DAMPER		
		FIRE DAMPER		
		SMOKE DAMPER		
		MANUAL BALANCING DAMPER		
		MOTORIZED DAMPER		
		BACKDRAFT DAMPER		
		OFFSET TO CHANGE ELEVATION D = DROP R = RISE		
		DUCT SIZE TAG: FIRST NUMBER = PLAN WIDTH		-

FIXTURE CONNECTION SCHEDULE

DESCRIPTION	TAG	HW	CW	WASTE	VENT
WATER CLOSET (FLUSH VALVE)	WC	-	1"	4"	2"
WATER CLOSET (FLUSH TANK)	WC	-	1/2"	4"	2"
URINAL (BLOWOUT)	UR	-	1"	2"	1-1/2"
URINAL (WASHDOWN)	UR	-	3/4"	2"	1-1/2"
URINAL (WATERLESS)	UR	-	-	2"	1-1/2"
LAVATORY	LAV	1/2"	1/2"	1-1/2"	1-1/2"
HAND SINK	HS	1/2"	1/2"	1-1/2"	1-1/2"
SERVICE SINK	SS	1/2"	1/2"	3"	2"
MOP SERVICE BASIN	MSB	3/4"	3/4"	3"	2"
DRINKING FOUNTAIN/WATER COOLER	DF	-	1/2"	1-1/2"	1-1/2"
KITCHEN SINK W/ OR W/O DISPOSAL	KS	1/2"	1/2"	2"	1-1/2"
SHOWER	SHSHWR	3/4"	3/4"	2"	1-1/2"
SHOWER/BATHTUB	SH/BTUB	3/4"	3/4"	2"	1-1/2"
BATHTUB	TUB	3/4"	3/4"	2"	1-1/2"
CLOTHES WASHER OUTLET BOX	CW	1/2"	1/2"	2"	1-1/2"
DISH MACHINE ROUGH-IN	DM	3/4"	3/4"	2"	1-1/2"
DISHWASHER ROUGH-IN	DW	1/2"	-	2"	1-1/2"
BAR SINK	BS	1/2"	1/2"	1-1/2"	1-1/2"
FLOOR SINK	FS	-	-	2"	1-1/2"
REFRIG/ICE MAKER BOX	FRIG	-	1/2"	-	-
FLOOR DRAIN	FD	-	-	2"	1-1/2"
TRENCH DRAIN	TD	-	-	3"	2"
WORK SINK	WS	3/4"	3/4"	2"	1-1/2"
HOSE BIB	HB	-	3/4"	-	-

NOTES:

1. SIZES SHOWN ARE MINIMUM PIPE SIZES TO A SINGLE FIXTURE. LARGER SIZES MAY BE INDICATED ON PLANS WHERE REQUIRED.
2. MINIMUM DOMESTIC PIPE SIZE TO 2 OR MORE FIXTURES IS 3/4".
3. RE. MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INDIRECT WASTE SIZES.
4. WASTE AND VENT SIZES SHOWN ABOVE APPLY TO INDIVIDUAL VENTING ONLY WHERE ALLOWED. INDIVIDUAL VENT CONNECTIONS MAY BE USED FOR SIZES 1/2" AND 3/4" WHEN CIRCUIT VENTS, COMMON VENTS, WASTE STACK VENTS, WET VENTS, OR COMBINATION DRAIN AND VENT SYSTEMS ARE USED. PRIOR APPROVAL FROM THE ENGINEER IS REQUIRED TO USE THESE ALTERNATIVE VENTING METHODS.
5. PROVIDE TRAP PRIMER FOR ALL FLOOR DRAINS AND FLOOR SINKS NOT LOCATED FLOOR SERVICE AREAS.
6. MINIMUM SIZE FOR WASTE AND VENT PIPING BENEATH SLAB IS 2".
7. ALL FIXTURES LISTED ARE NOT NECESSARILY USED ON THIS PROJECT.
8. REFER TO APPLIANCE SCHEDULES (BY OTHERS) FOR ADDITIONAL PLUMBING FIXTURE CONNECTIONS SUCH AS INSTA-HOTS, COFFEE MAKERS, AND GARBAGE DISPOSALS.
9. PROVIDE ICE MAKER BOX RUGH IN W/ 1/2" CW CONNECTION FOR ALL REFRIGERATORS OR LOCATIONS.
10. DESIGNER TO CONFIRM FLOW RATE OF FLOOR DRAINS, FLOOR SINKS, ETC. WITH ACTUAL SIZE REQUIRED.

EQUIPMENT ABBREVIATIONS

AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER (HOT WATER)
BB	BASE BOARD
BT	BUFFER TANK
CC	COOLING COIL
CH	CHILLER
CP OR P	CIRC PUMP
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME BOX
DC	DUCT COIL
DEF	DISHWASHER EXHAUST FAN
EBH	ELECTRIC BASEBOARD HEATER
ECU	EVAPORATIVE COOLING UNIT
EF	EXHAUST FAN
ERU	ENERGY RECOVERY UNIT
ET	EXPANSION TANK
EW	ELECTRIC WATER HEATER
F	FURNACE
FC	FAN COIL
FP	FAN POWERED BOX
GF	GLYCOL FEEDER
H	HUMIDIFIER
HC	HEATING COIL
HP	HEAT PUMP
HX	HEAT EXCHANGER
KEF	KITCHEN EXHAUST FAN
MAU	MAKE-UP AIR UNIT
MCC	MOTOR CONTROL CENTER
MV	MIXING VALVE
P	PUMP (SEE PIPING LEGEND FOR DETAILS)
R	RETURN (OR RELIEF) AIR FAN
RZ	RADIANT ZONE
SA	SNOWMELT AREA
SB	SUMP BASIN
SF	SUPPLY FAN
ST	STORAGE TANK
TMV	THERMOSTATIC MIXING VALVE
UH	UNIT HEATER
VR	VARIABLE VOLUME BOX W/ REHEAT
VV	VARIABLE VOLUME BOX
WH	WATER HEATER




















PIPING SYMBOLS

	90° ELBOW DN
	90° ELBOW UP
	TEE DOWN
	TEE UP
	BUTTERFLY VALVE
	SHUT OFF (BALL, GATE, BUTTERFLY)
	GLOBE VALVE
	CHECK VALVE
	FLOW CONTROL VALVE
	BALL VALVE
	PLUG OR BALANCING VALVE
	FLOW BALANCING VALVE
	PLUG VALVE IN RISER
	GATE OR GLOBE VALVE IN RISER
	DRAIN VALVE W/ HOSE END
	TEMPERATURE CONTROL VALVE (2-WAY)
	TEMPERATURE CONTROL VALVE (3-WAY)
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
	VENTURIFLOW INDICATOR
	PUMP & EQUIPMENT CONNECTOR
	PIPE UNION
	DOUBLE CHECK BACKFLOW PREVENTER
	PIPE ANCHOR
	PIPE EXPANSION JOINT
	FLEXIBLE CONNECTOR
	SAFETY RELIEF VALVE
	AIR VENT
	PRESSURE - TEMP. TAP
	PRESSURE GAUGE W/ PIG TAIL & COCK
	THERMOMETER
	VACUUM BREAKER
	HORIZONTAL CLEANOUT
	VERTICAL CLEANOUT
	FLOOR DRAIN
	FLOOR SINK
	ROOF DRAIN
	STRAINER W/ BLOW-OFF VALVE
	SHOCK ABSORBER
	FLOW SWITCH
	HOSE BIBB or WALL HYDRANT
	STEAM TRAP
	FT-FLOAT & THERMOSTATIC
	TD-THERMODYNAMIC
	IB-INVERTED BUCKET
	TS-THERMOSTATIC
	BP-BALANCED PRESSURE
	STEAM TRAP TEST CHAMBER
	TEMPERATURE CONTROLLER OR SENSOR

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AUTO	AUTOMATIC
ABV	ABOVE
BCS	BUILDING CONTROL SYSTEM
BDD	BACK DRAFT DAMPER
BLDG	BUILDING
BFG	BELOW FINISHED GRADE
BOP	BOTTOM OF PIPE FROM FINISHED FLOOR
B/N	BETWEEN
C	COMMON
CA	COMBUSTION AIR
CC	CONTROLS CONTRACTOR
CFM	CUBIC FEET PER MINUTE (AIR FLOW RATE)
CIP	CAST IN PLACE
CLG	CEILING (OR COOLING)
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECT (OR CONNECTION)
CONTR'R	CONTRACTOR
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CW	DOMESTIC COLD WATER
DN	DOWN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OWNER
FCO	FLOOR CLEANOUT
FCT	FOR CONTINUATION
FFI	FOR FURTHER INFORMATION
FSD	COMBINATION FIRE/SMOKE DAMPER
GC	GENERAL CONTRACTOR
GHX	GROUND HEAT EXCHANGER
GPM	GALLONS PER MINUTE (WATER FLOW RATE)
HP	HORSE POWER
HW	DOMESTIC HOT WATER
HWC	HOT WATER RECIRCULATION
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LF	LINEAR FOOT
LWT	LEAVING WATER TEMPERATURE
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MOD	MOTOR OPERATED DAMPER
(N)	NEW
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OBD	OPPOSED BLADE VALVE DAMPER
OC	ON CENTER
OSA	OUTSIDE AIR
RA	RETURN AIR
REQ'D	REQUIRED
RE:	REFER TO:
REQ'MTS	REQUIREMENTS
SA	SUPPLY AIR
SF	SQUARE FOOT (FEET)
SP	STATIC PRESSURE
SS	STAINLESS STEEL
TA	THROW-AWAY (OR TRANSFER AIR)
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WCO	WALL CLEANOUT
XFR	TRANSFER

PLAN SYMBOLS

	CONTROL PANEL/RADIANT MANIFOLD
	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
	THERMOSTAT
	REMOTE TEMPERATURE SENSOR
	HUMIDISTAT
	DUCT STATIC PRESSURE SENSOR
	ROOM PRESSURE SENSOR
	EMERGENCY POWER OFF SWITCH
	PLUMBING RISER
	HEATING WATER RISER
	FIRE RISER
	HVAC RISER
	DIAGRAM CONTINUATION REFERENCE
	SECTION CUT LETTER/SHEET SHOWN ON
	POINT OF DISCONNECTION
	POINT OF NEW CONNECTION
	ACCESS PANEL
	SNOWMELT MANIFOLD

PIPING DESIGNATIONS

HYDRONIC PIPING	
— CS —	CONDENSER SUPPLY
— CR —	CONDENSER RETURN
— CHS —	CHILLED WATER SUPPLY
— CHS —	CHILLED WATER SUPPLY
— CCS —	CLOSED CONDENSER SUPPLY
— CCR —	CLOSED CONDENSER RETURN
— FCS —	FLOOR COOLING SUPPLY
— FCR —	FLOOR COOLING RETURN
— GLS —	GROUND LOOP SUPPLY
— GLR —	GROUND LOOP RETURN
— GF —	GLYCOL FEED
— GLS —	GEO THERMAL (OR GROUND) LOOP SUPPLY
— GLR —	GEO THERMAL (OR GROUND) LOOP RETURN
— HWS —	HEATING WATER SUPPLY
— HWR —	HEATING WATER RETURN
— HWS(LT) —	HEATING WATER SUPPLY (LOW TEMP)
— HWR(LT) —	HEATING WATER RETURN (LOW TEMP)
— HWS(HT) —	HEATING WATER SUPPLY (HIGH TEMP)
— HWR(HT) —	HEATING WATER RETURN (HIGH TEMP)
— HWS(H/P) —	HEATING WATER SUPPLY (HEAT PUMP)
— HWR(H/P) —	HEATING WATER RETURN (HEAT PUMP)
— RMS —	RADIANT FLOOR SUPPLY
— RMR —	RADIANT FLOOR RETURN
— SHWS —	SOLAR HEATING WATER SUPPLY
— SHWR —	SOLAR HEATING WATER RETURN
— SMS —	SNOWMELT SUPPLY
— SMR —	SNOWMELT RETURN
STEAM & CONDENSATE PIPING	
— HPS —	HIGH PRESURE STEAM
— HPR —	HIGH PRESURE CONDENSATE RETURN
— LPS —	LOW PRESURE STEAM
— LPR —	LOW PRESURE CONDENSATE RETURN
— MPS —	MEDIUM PRESURE STEAM
— MPR —	MEDIUM PRESURE CONDENSATE RETURN
— PC —	PUMPED CONDENSATE
PLUMBING PIPING	
— G —	NATURAL GAS
— MG —	MEDIUM PRESSURE GAS
— PG —	PROPANE GAS
— LPG —	LIQUID PROPANE GAS
— PD —	PROPANE DRAIN
— D —	DRAIN PIPE
— FOS —	FUEL OIL SUPPLY
— FOR —	FUEL OIL RETURN
— FOV —	FUEL OIL VENT
— FOF —	FUEL OIL FILL
— RS —	REFRIGERANT SUCTION
— RL —	REFRIGERANT LIQUID
— CW —	DOMESTIC COLD WATER (CW)
— HW —	DOMESTIC HOT WATER (HW)
— HWC —	HOT WATER RECIRCULATION (HWC)
— NS —	NON-SOFTENED DOMESTIC WATER

PROJECT ALTITUDE

5,200' ABOVE SEA LEVEL

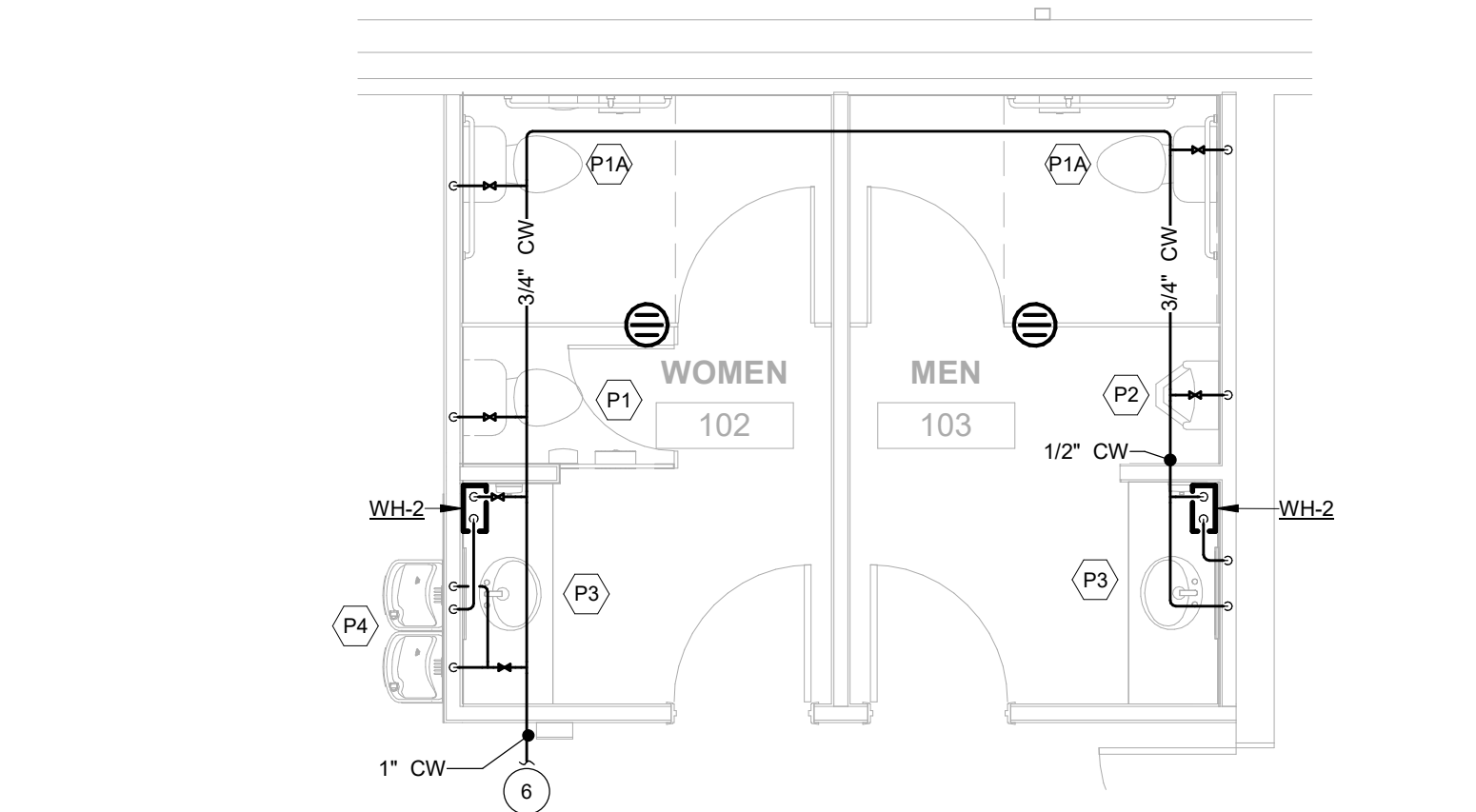
MECHANICAL SHEET INDEX

		ISSUE LOG									
#	TITLE	100% CD - 08-23-2023	ADDENDUM 2-09-15-2023								
MP001	MECHANICAL AND PLUMBING COVER SHEET	✓	✓								
MP002	MECHANICAL AND PLUMBING GENERAL NOTES	✓	✓								
PD101	PLUMBING DEMOLITION PLAN	✓	✓								
P101	PLUMBING PLAN	✓	✓								
P401	ENLARGED PLUMBING PLANS	✓	✓								
MD101	MECHANICAL DEMOLITION PLAN	✓	✓								
M101	MECHANICAL PLAN	✓	✓								
MP301	MECHANICAL ROOF PLAN	✓	✓								
MP501	MECHANICAL AND PLUMBING DIAGRAMS	✓	✓								
MP601	MECHANICAL SCHEDULES	✓	✓								
MP602	PLUMBING SCHEDULES	✓	✓								

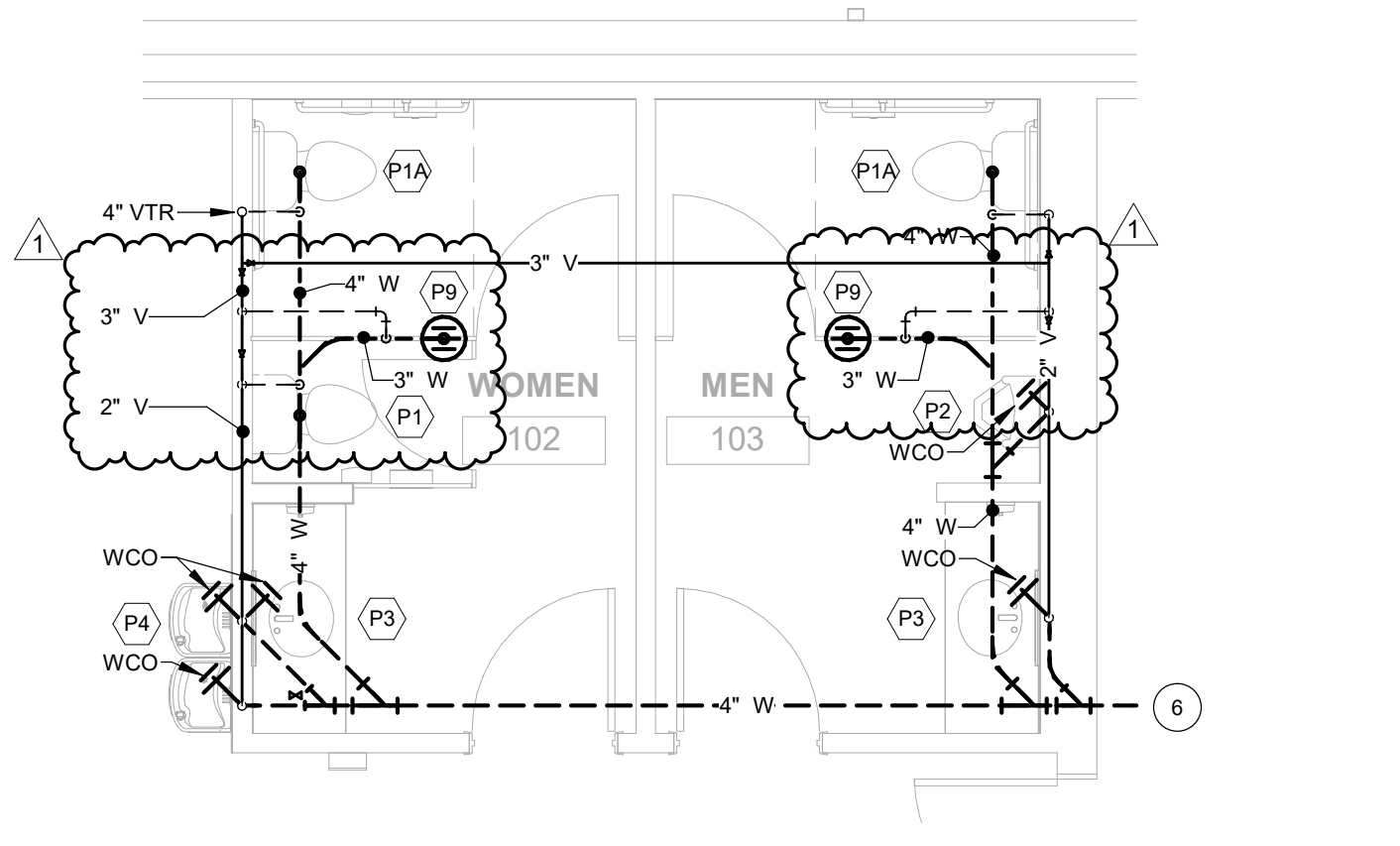
ISSUE LOG KEY:
 * ISSUED AS PART OF SET
 ** NOT PART OF SET
 *** ISSUED FOR INFORMATION ONLY

MECHANICAL EQUIPMENT WIRING AND CONNECTIONS

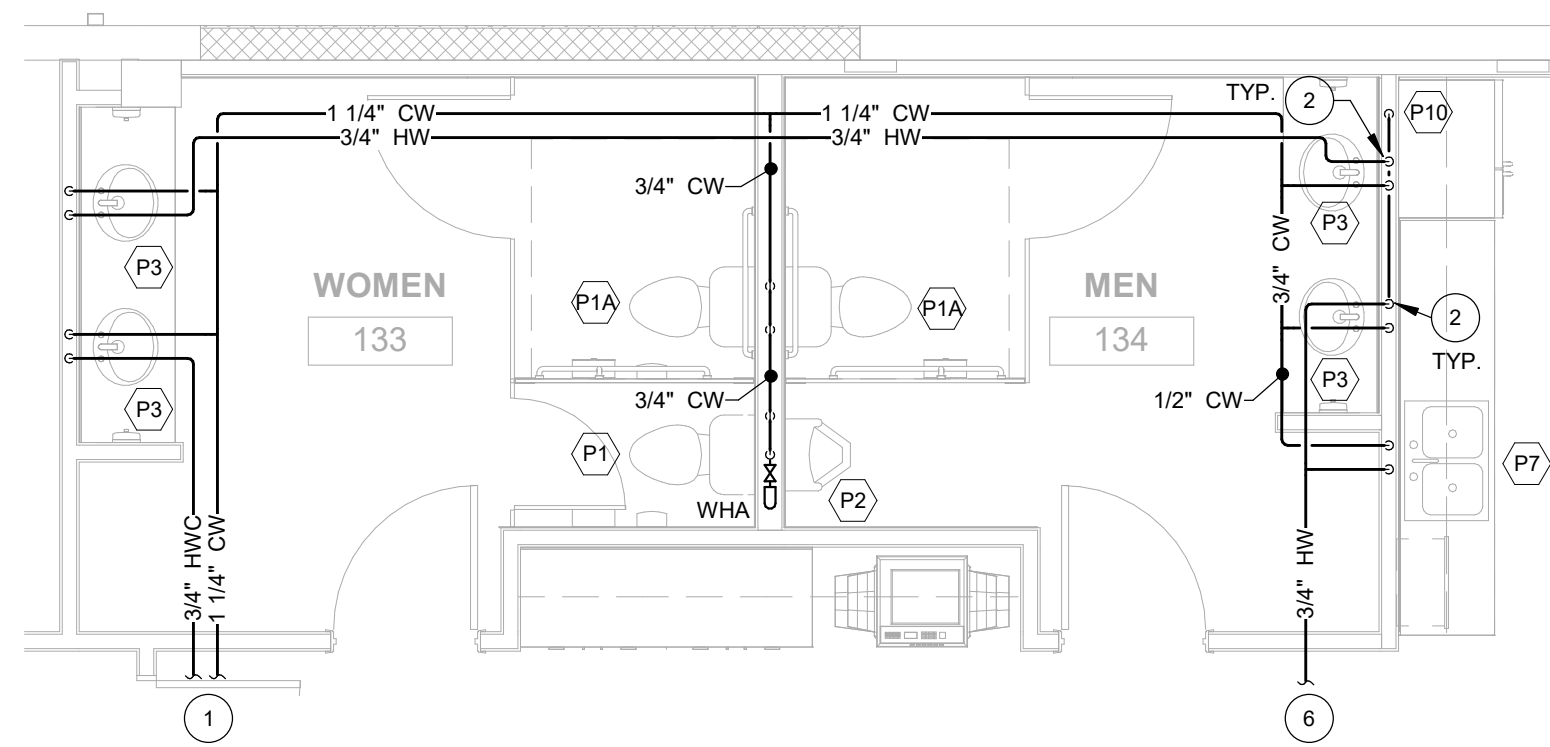
	ITEM	FURNISHED UNDER	SET IN PLACE OR MTD UNDER	WIRED/ CONNECTED UNDER
1.	EQUIPMENT MOTORS AND THERMAL OVERLOADS, RESISTANC...	MD	MD	ED
2.	VFD'S, MOTOR CONTROLLERS; MAGNETIC STARTERS, REDUCED VOLTAGE STARTERS AND OVERLOAD RELAYS.	MD	ED(a)	ED
3.	DISCONNECT SWITCHES (FUSED OR NON-FUSED), HP RATED SWITCHES, THERMAL OVERLOAD SWITCHES AND FUSES AND MANUAL OPERATING SWITCHES.	ED(a)	ED(a)	ED
4.	PUSHBUTTON STATIONS, PILOT LIGHTS, MULTI-SPEED SWITCHES, FLOAT SWITCHES, THERMOSTATS, CONTROL RELAYS, TIMELOCKS, CONTROL TRANSFORMERS, CONTROL PANELS, MOTOR VALVES, DAMPER ACTUATORS, SOLENOID VALVES, EP AND PE SWITCHES AND INTERLOCKS.	MD	MD	ED
5.	120 VOLT POWER FOR BAS PANELS, FIRE PROTECTION AND BOILER CONTROLS.	ED	ED	ED
6.	FIRE/SMOKE DAMPERS AND ELEVATOR VENT DAMPERS.	MD	MD	ED(c)
MD = MECHANICAL DIVISION				
ED = ELETRICAL DIVISION				
<u>NOTES:</u>				
(a) IF FURNISHED AS PART OF FACTORY-WIRED EQUIPMENT, THEN WIRING AND CONNECTIONS ONLY BY ED.				
(b)	IF ANY OF THESE DEVICES CARRY THE FULL LOAD CURRENT TO ANY MOTOR THEY SHALL BE CONNECTED BY ED. CONTROL DEVICES CARRYING FULL LOAD CURRENT FURNISHED BY MD AND WIRED BY ED SHALL BE LOCATED AT THE DEVICE BEING CONTROLLED, UNLESS SHOWN ON DRAWINGS OR MUTUAL AGREEMENT IS MADE BETWEEN THE CONTRACTORS WITH NO CHANGE IN THE CONTRACT PRICE.			
(c)	WIRING FROM ALARM CONTACTS TO ALARM SYSTEM BY ED, ALL CONTROL FUNCTION WIRING BY MD, DUCT DETECTORS FURNISHED BY ED, SET IN PLACE BY MD.			
GENERAL NOTES: THE ABOVE LIST DOES NOT ATTEMPT TO INCLUDE ALL COMPONENTS. ALL ITEMS NECESSARY FOR A COMPLETE SYSTEM SHALL BE INCLUDED IN THE BASE CONTRACT.				



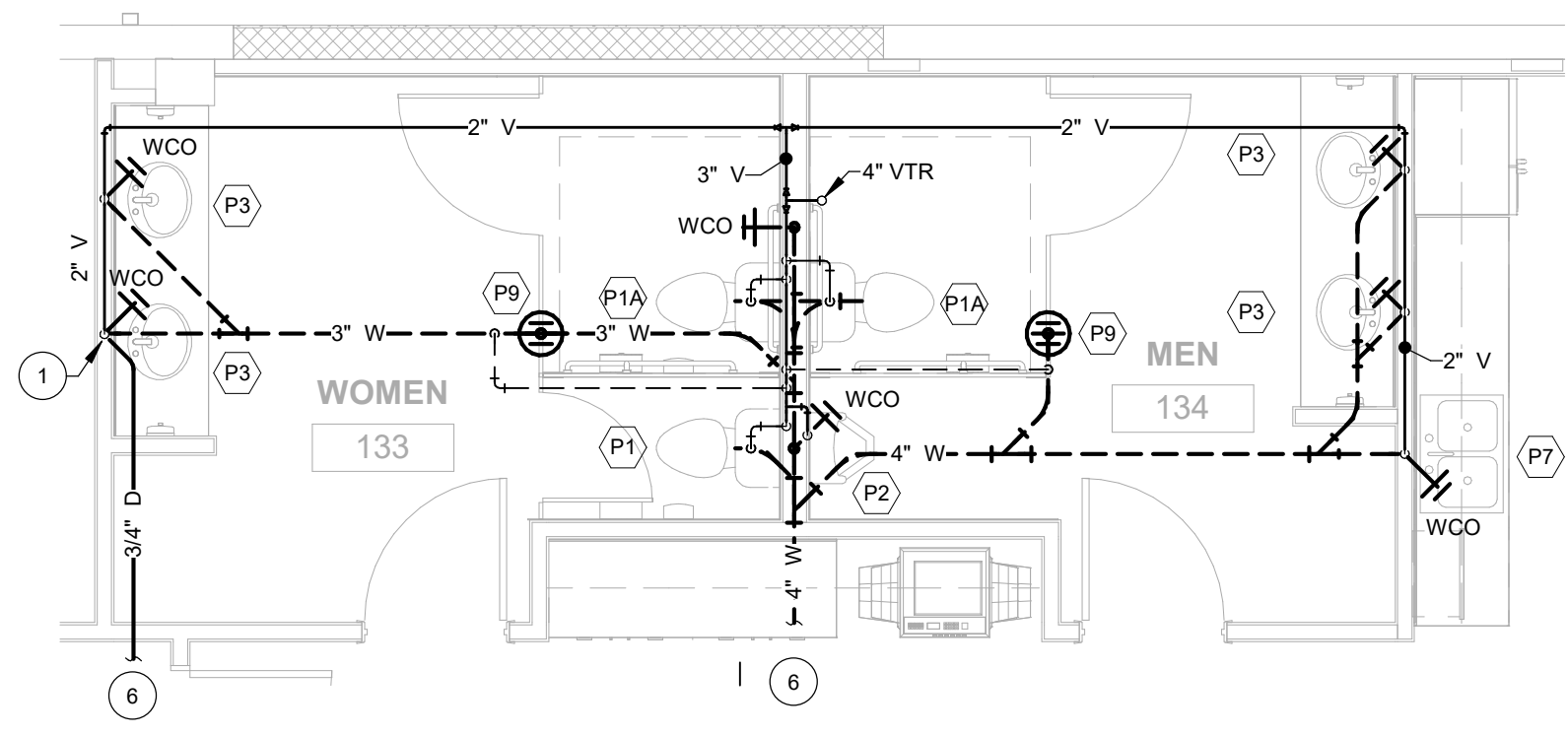
5 ENLARGED RESTROOM PLAN -DOMESTIC WATER
1/4" = 1'-0"



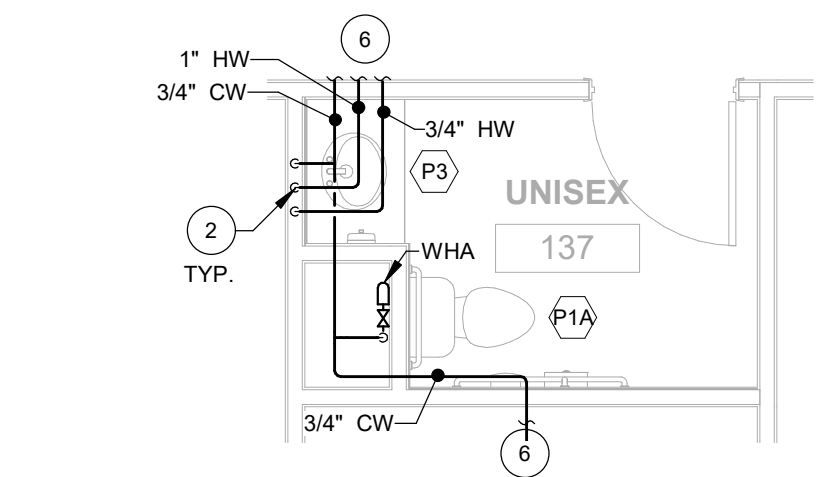
1 ENLARGED RESTROOM PLAN - SANITARY WASTE
1/4" = 1'-0"



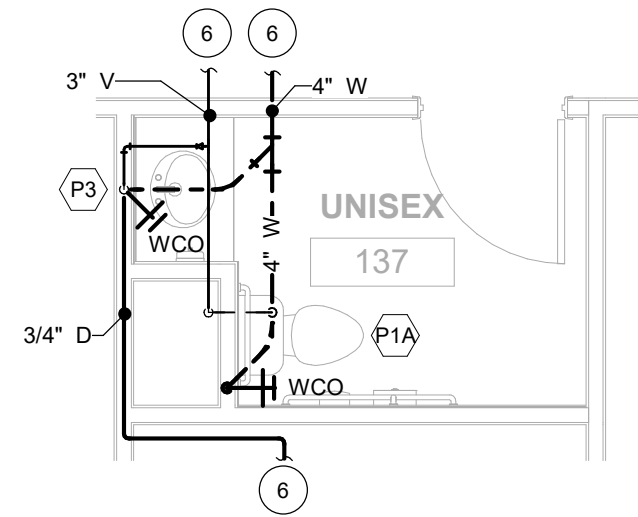
6 ENLARGED RESTROOMS - DOMESTIC WATER
1/4" = 1'-0"



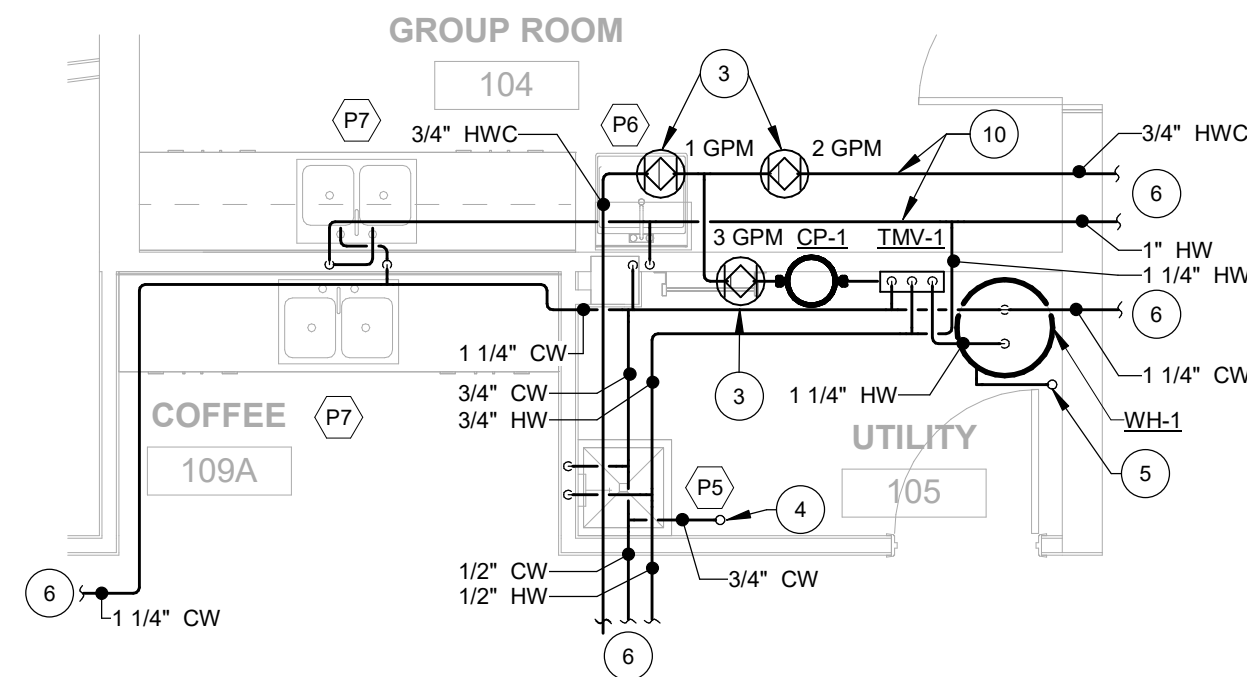
2 ENLARGED RESTROOMS - SANITARY WASTE
1/4" = 1'-0"



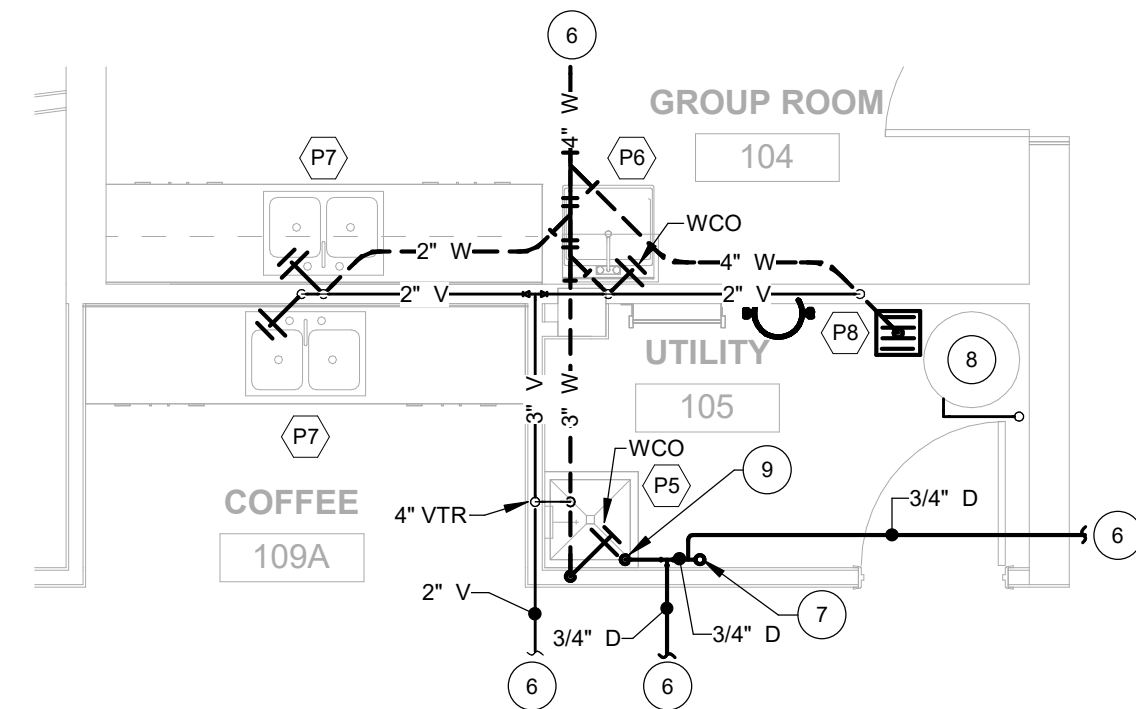
7 ENLARGED RESTROOM - DOMESTIC WATER
1/4" = 1'-0"



3 ENLARGED RESTROOM - SANITARY WASTE
1/4" = 1'-0"



8 ENLARGED PLUMBING PLANS - DOMESTIC WATER
1/4" = 1'-0"



4 ENLARGED PLUMBING PLANS - SANITARY WASTE
1/4" = 1'-0"

GENERAL NOTES:

- REFER TO PLUMBING LEGEND ON MP001
- REFER TO PLUMBING GENERAL NOTES ON P002
- REFER TO PLUMBING SCHEDULE AND DIAGRAMS ON P001.

FLAG NOTES:

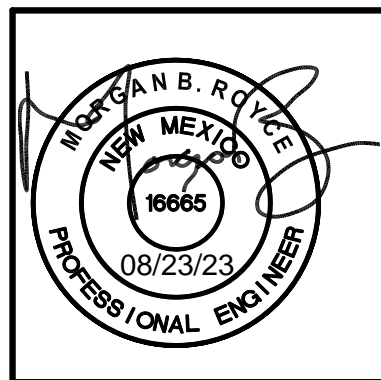
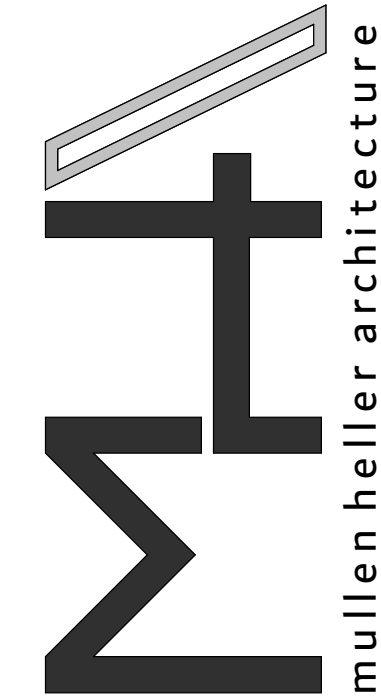
- ROUTE DRAIN PIPING FROM MECHANICAL UNITS AND ROOF TOP HYDRANT TO TAILPIECE OF SINK PER UPC CODE REQUIREMENTS.
- ROUTE HOT WATER DOWN TO WITHIN 2 FEET OF LAVATORY PER 2018 IECC CODE REQUIREMENTS.
- INSTALL CIRCUIT SETTER TYPE VALVE ABOVE ACOUSTICAL CEILING AT THIS LOCATION FOR BALANCING OF HOT WATER RECIRCULATING SYSTEM. SET VALVE FOR GPM SHOWN. PROVIDE ACCESS PANEL FOR VALVE MAINTENANCE.
- COLD WATER SUPPLY FOR ROOF TOP HYDRANT. SEE ROOF PLAN ON SHEET MP301 FOR CONTINUATION.
- NATURAL GAS PIPING FROM ROOF. SEE ROOF PLAN ON SHEET MP301 FOR CONTINUATION.
- SEE OVERALL PLUMBING FLOOR PLAN ON SHEET P101 FOR CONTINUATION.
- DRAIN PIPING FROM ROOF HYDRANT. SEE ROOF PLAN ON SHEET MP301 FOR CONTINUATION OF DRAIN PIPING.
- ROUTE DRAIN FROM T&P VALVE AND WATER HEATER DRAIN PAN TO FLOOR SINK.
- ROUTE DRAIN PIPING FROM ROOF TOP HYDRANT AND MECHANICAL UNIT TO MOP SINK AS SHOWN.
- PIPING IN THIS AREA SHOWN FOR CLARITY. INSTALL ALL PIPING IN UTILITY ROOM AND AWAY FROM ACCESS LADDER CLEARANCE.

DESCRIPTION
ADDENDUM 2

BY
MDP

DATE
09.15.2023

REV
A B C D E



MULLEN HELLER ARCHITECTURE
1718 CENTRAL AVE SWISTED D
ALBUQUERQUE, NM 87109
P1555-258-4144
F1555-258-4044
www.mullenheller.com

JOB NUMBER 19-25

DRAWN BY Author

PROJECT MGR JDH

DATE 08/23/23

PHASE CD

PROJECT
Hope Works Counseling Renovation
1216 Fourth Street NW
Albuquerque NM 87102

TITLE
ENLARGED PLUMBING PLANS

SHEET














P401



PLUMBING EQUIPMENT SCHEDULE						
SYM	TYPE	FINISH	MANUFACTURER* & MODEL #	REMARKS	INSTALLATION	ACCESSORIES
BFP1	BACKFLOW PREVENTER	BRONZE	ZURN MODEL NO. 375	PROVIDE WITH AIR GAP FOR DRAIN WATTS	1-1/4 IN.	SEE NOTES D & E
FCO	FINISHED FLOOR CLEANOUT	BRONZE	JAY R SMITH NO 4024	-	FLOOR MOUNTED	-
EX	EXPANSION TANK	STEEL	AMTROL NO. ST-12	MAX ACCEPT VOLUME OF GALLONS 3.2	-	-
*MANUFACTURERS:						
FIXTURE:						
GENERAL NOTES:						
A: FACTORY MOUNTED MIXING VALVE ASSEMBLY. CONTRACTOR TO INSTALL RECIRCULATION PUMP IN FIELD.						
B: PROVIDE MIXING STATION LESS CIRCULATOR. WITH PIPING METHOD #5 FOR FLOW OVER 25 GPM, 3/4" RETURN LINE AND FLOOR SUPPORT LEGS.						
C: ADJUSTABLE TEMPERATURE SETPOINT NOT TO EXCEED 120°						
D: REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS FOR INSTALLATION REQUIREMENTS AND DETAILS. PROVIDE ANCHOR KIT AND TEST PORT PER MANUFACTURER.						
E: COORDINATE FINAL LOCATION WITH OWNER / ARCHITECT BEFORE INSTALLATION.						

PUMP SCHEDULE											
MARK	SERVICE	TYPE	GPM	TDH (FT)	FLUID	MOTOR			MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
						FLA	RPM	VOLT/ PH			
CP1	RECIRCULATION	INLINE	5	19	WATER	1	-	120/1□	GRUNDFOS MAGNA3 MODEL NO. 32-60	SEE NOTE A	DHW RECIRCULATION PUMP
*MANUFACTURER:											
*											
GENERAL NOTES:											
A:		PROVIDE PUMP WITH TIME CLOCK AND AQUASTAT									
B:											

WATER HEATER SCHEDULE (ELECTRIC) INSTANTANEOUS										
MARK	TYPE	LOCATION	STORAGE CAPACITY (GAL.)	RECOV (GPM)	WATER TEMP. RISE (°F)	ELECTRICAL		MANUF* & MODEL #	ACCESSORY	REMARKS
						MAX WATTS	VOLT/ PH			
WH	ELECTRIC POINT OF USE	PUBLIC RESTROOM	INSTANTANEOUS	0.5 GPM	57	(1) 3,500 KW ELEMENT	120V/1PH	"EEMAX" MODEL NO: EEM12004	SEE NOTE A & B	VERIFY EXACT LOCATION WITH OWNER BEFORE INSTALLATION
* EEMAX, CHRONOMITE, OR EQUIVALENT										
GENERAL NOTES:										
A: IECC 504.3 COMPLIANT TEMPERATURE CONTROLS										
B: PROVIDE ACCESS OR ACCESS PANEL FOR WATER HEATER MAINTENANCE										

PLUMBING FIXTURE SCHEDULE								
SYMBOL	TYPE	A.D.A.	FINISH	MANUFACTURER* & MODEL #	FAUCET TRIM MFR.* & MODEL #	INSTALLATION	REMARKS	FLOW RATE
	WATER CLOSET TANK TYPE	NO	CHINA	"AMERICAN STANDARD" CADET 15" RIM HEIGHT	COORDINATE FLUSH HANDLE LOCATION WITH TOILET LOCATION	FLOOR MOUNTED	PROVIDE BEMIS HEAVY DUTY SEAT NO 1955SSCT WITH SELF-SUSTAINING STAINLESS STEEL CHECK HINGE AND ANTI-MICROBIAL PROTECTION.	1.28 GPF
	WATER CLOSET TANK TYPE	YES	CHINA	"AMERICAN STANDARD" CADET 16-1/2" RIM HEIGHT	COORDINATE HANDLE LOCATION WITH TOILET LOCATION	FLOOR MOUNTED	PROVIDE BEMIS HEAVY DUTY SEAT NO 1955SSCT WITH SELF-SUSTAINING STAINLESS STEEL CHECK HINGE AND ANTI-MICROBIAL PROTECTION.	1.28 GPF
	URINAL	YES	CHINA	"AMERICAN STANDARD" WASHBROOK	"SLOAN" MODEL NO. 186 SFSM	WALL MOUNT	BATTERY POWERED SENSOR FLUSH VALVE. PROVIDE CLEAN OUT WITH REMOVABLE CAP IN CHASE FOR EACH URINAL.	0.125 GPF
	LAVATORY	YES	VITREOUS CHINA	"AMERICAN STANDARD" OVALYN MODEL NO. 9482.00	"AMERICAN STANDARD" MODEL NO. 2275	UNDER MOUNT	PROVIDE 0.5 GPM AERATOR, STRAINER, P-TRAP, ANGLE STOPS, PROVIDE PLUMBEREX #396 ADA TRAP AND SUPPLY PROTECTION, STRAINER, 17 GAUGE P-TRAP, NIBCO QUARTER TURN ANGLE STOPS AND SUPPLIES AND ASSE 1070 COMPLAINT MIXING VALVE. COORDINATE FAUCET HOLES WITH FAUCET SPECIFICATIONS.	0.5 GPM
	DRINKING FOUNTAIN B-LEVEL WITH BOTTLE FILLER	YES	STAINLESS STEEL	"ELKAY" MODEL: LVRCTL8WSK	-	WALL MOUNTED DUAL LEVEL COORDINATE HEIGHT TO ALLOW PROPER CLEARANCES AND REQUIREMENTS, MECHANICAL OPERATION	115V/ 1PH, REFRIGERATED. UNIT SHALL BE CERTIFIED UL 399 AND SHALL BE LEAD FREE DESIGN CERTIFIED NSF/ANSI 61 & 372. PROVIDE WALL CARRIER. PROVIDE WITH LEWF172 WATERSENTRY VII FILTER KIT FOR SINGLE INSTALLATION OR EF1600VRBMC RETROFIT FILTRATION KIT FOR COMBINED WATER COOLERS. PROVIDE FILTER ACCESS.	8 GPH
	MOP SINK	YES	TERRAZO	"FIAT" MODEL NO. TS8 700	"FIAT" MODEL NO. 830AA	FLOOR MOUNT	PROVIDE VACUUM BREAKER HOSE, HOSE BRACKET, MOP HANGER, BASIN GUARDS, WALL GUARDS AND HOSE BIB.	2.5 GPM
	UTILITY SINK	NO	POLYPROPYLENE	"FIAT" MODEL NO. P-1	"FIAT" MODEL NO. A1000	FLOOR MOUNT	PROVIDE STRAINER, P-TRAP, ANGLE STOPS, IN-WALL FLOOR MOUNTED CONCEALED ARM CARRIER. PROVIDE PLUMBEREX #396 ADA TRAP AND SUPPLY PROTECTION, STRAINER, 17 GAUGE P-TRAP, NIBCO QUARTER TURN ANGLE STOPS AND SUPPLIES AND ASSE 1070 COMPLAINT MIXING VALVE. COORDINATE FAUCET HOLES WITH FAUCET SPECIFICATIONS.	2.5 GPM
	BREAK ROOM SINK	NO	STAINLESS STEEL	"ELKAY" MODEL NO. LRAD2918	"AMERICAN STANDARD" MODEL NO. 7074.040	TWO BASIN DROP-IN SINK	6-1/2" DEEP TWO-BASIN SINK. PROVIDE P-TRAPS, ANGLE STOPS, UNDERCOUNTER PROTECTION, ASSE 1070 COMPLAINT MIXING VALVE	1.5 GPM
	FLOOR SINK	NO	CAST IRON	"ZURN" MODEL NO. Z1902	-	FLOOR MOUNT	PROVIDE HALF GRATE, SURE SEAL TRAP GUARD. ALL FLOOR SINKS WASTE CONNECTIONS IN JANITORIAL OR MECHANICAL ROOMS SHALL BE 4" WITH 2" VENT.	-
	FLOOR DRAIN	NO	CAST IRON WITH NICKLE BRONZE TOP STRAINER	"ZURN" MODEL NO. Z415	-	FLOOR MOUNT	PROVIDE P-TRAP AND TRAP GUARD DEVICE	-
	STAINLESS STEEL SINK	YES	STAINLESS STEEL	"ELKAY" MODEL NO. LRAD202285PD	"AMERICAN STANDARD" MODEL NO. 650.173	SINGLE BASIN DROP-IN SINK	6-1/2" DEEP SINGLE-BASIN SINK. PROVIDE P-TRAPS, ANGLE STOPS, UNDERCOUNTER PROTECTION, ASSE 1070 COMPLAINT MIXING VALVE	-
	ROOF HYDRANT FREEZEPROOF	NO	STEEL	"PRIER" MODEL NO. P-RH2	-	ROOF MOUNTED	PROVIDE WITH UNIVERSAL MOUNTING BRACKET. BRACKET SHALL BE MOUNTED TO A STRUCTURAL MEMBER BELOW THE ROOF LINE FOR RIGIDITY. INCLUDE ROOF MOUNTING HARDWARE. ROUTE LINE SIZE DRAIN TO NEAREST FLOOR SINK/MOP SINK. PROVIDE WITH ISOLATION BALL VALVE IN AN ACCESSIBLE LOCATION.	-
	WALL HYDRANT FREEZEPROOF	NO	STEEL	"WOODFORD" MODEL NO. B65	-	WALL MOUNT	HYDRANT SHALL HAVE AUTOMATIC DRAINING CAPABILITIES WITH INTEGRAL VACUUM BREAKER/BACKFLOW PREVENTOR. HYDRANT SHAFT SHALL BE BRASS WITH THREADED AND SEALED CONNECTIONS. HYDRANT SHALL HAVE 3/4" HOSE CONNECTION WITH FREEZELESS WATER FLOW AND SELF-DRAINING FUNCTIONS. ONE PIECE VALVE PLUNGER, SATIN NICKEL FINISH, BRASS OPERATING ROD WITH POSITIVE TRIPLE SEAL SHUTOFF MECHANISM. HYDRANT SHALL BE APPROVED UNDER ASSE 1052 STANDARD. OPERATING KEY & WALL CLAMPING RING. TO BE FURNISHED WITH EACH HYDRANT. FURNISH AND INSTALL. OPTIONAL FLUSH-MOUNT HYDRANT BOX FOR EACH VALVE. HYDRANT BOX SHALL BE MANUFACTURED OF SOLID CAST BRASS WITH A SATIN NICKEL PLATED FINISH.	-
MANUFACTURERS:								
FIXTURE:								
FAUCET:								
DRAIN:								
GENERAL NOTES:								
A:								
B:								
C:								

MIXING VALVE SCHEDULE							
MARK	SERVICE	TYPE	MANUFACTURER* & MODEL #	INLET AND OUTLET SIZE	GPM MIN / GPM MAX	DESCRIPTION	ACCESSORIES
TMV-1	ELECTRONIC DOMESTIC WATER MIXING STATION	STEEL	"CALEFFT" MODEL NO. 5231	1-1/4" INLET AND 1-1/4" OUTLET	4.4 GPM MIN. / 40 GPM MAX.	WALL MOUNT	PROVIDE ACCESS FOR MAINTENANCE. PROVIDE MIXING STATION LESS CIRCULATOR. TEMPERATURE SETPOINT NOT TO EXCEED 120 DEG.
*MANUFACTURERS:							
FIXTURE: JR SMITH, ZURN							
GENERAL NOTES:							
A:							
B:							
C:							
D:							

WATER HEATER SCHEDULE (GAS-FIRED)											
MARK	TYPE	LOCATION	STORAGE CAPACITY (GAL.)	RECOV (GPM)	WATER TEMP. RISE (°F)	INPUT @ S.L. (MBH)	ELECTRICAL		MANUF* & MODEL #	ACCESSORY	REMARKS
							KW	VOLT/ PH			
WH1	ELECTRIC	BASEMENT MECHANICAL ROOM	50	43	90	40	-	120 / 1	"STATE" MODEL NO: GS6-50-UBPDT	SEE NOTE A,B,C & D	ENERGY STAR QUALIFIED POWER DIRECT VENT
* RUUD, OR LOCHINVAR EQUIVALENT											
GENERAL NOTES:											
A: IECC C404 COMPLIANT TEMPERATURE CONTROLS											
B: PROVIDE ACCESS FOR WATER HEATER MAINTENANCE											
C: PROVIDE CONDENSATE ACID NEUTRALIZER ON CONDENSATE DRAIN. PROVIDE (1) SPARE NEUTRALIZER FOR FUTURE USE.											
D: PROVIDE WITH POWER CORD											

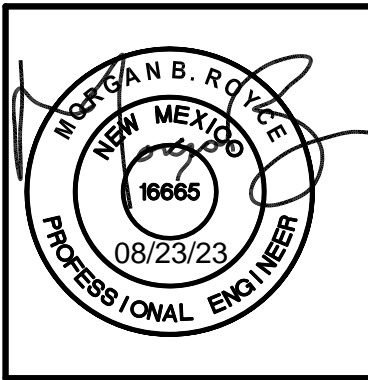
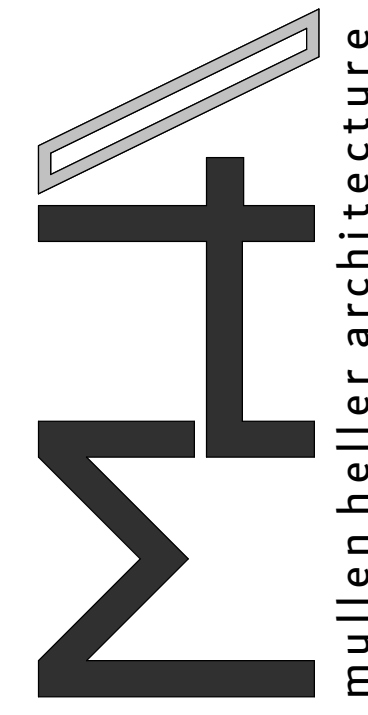


DESCRIPTION
ADDENDUM 2

BY
MDP

DATE
09.15.2023

REV
A B C D E



MULLEN HELLER ARCHITECTURE
1718 CENTRAL AVE SW1STE.D
ALBUQUERQUE, NM 87109
P1505.258.4144
F1505.268.4044
www.mullenheller.com

JOB NUMBER 19-25

DRAWN BY Author

PROJECT MGR JDH

DATE 08/23/23

PHASE CD

PROJECT
Hope Works Counseling Renovation
12/16 Fourth Street NW
Albuquerque NM 87102

TITLE
PLUMBING SCHEDULES

SHEET
MP602

VOICE/DATA			
WALL	FLOOR	CEILING	
			COMMUNICATIONS OUTLET
			ANALOG OUTLET
			COMBO ANALOG/COMMUNICATIONS OUTLET
			WIRELESS LAN (WI-FI) ACCESS POINT OUTLET
			POWER/TELECOM POLE
			MULTI-OUTLET WIREWAY
NUMBER OF DATA JACKS NUMBER OF VOICE JACKS NUMBER OF FIBER JACKS OUTLET DESIGNATIONS (XX) #D#V#F#F XX			
POS - POINT-OF-SALE		W - WALL PHONE PLATE WITH LUGS	
C - MOUNT ABOVE COUNTER		EM - EMERGENCY SERVICES	
E - ELEVATOR			

AUDIOVISUAL (AV)			
WALL	FLOOR	CEILING	
			TELEVISION OUTLET
			AUDIOVISUAL OUTLET
			MICROPHONE OUTLET
			LOUDSPEAKER
			LOUDSPEAKER OUTLET
			POINT SOURCE LOUDSPEAKER
			PROJECTION SCREEN, TV, OR OTHER DISPLAY EQPT
			VIDEO PROJECTOR
			SPEAKER ZONE HOMERUN

ELECTRONIC SAFETY & SECURITY (ESS)			
			CEILING MOUNTED CAMERA
			WALL MOUNTED CAMERA
			CORNER MOUNTED CAMERA
			INTRUSION MOTION SENSOR - WALL MOUNT
			INTRUSION MOTION SENSOR - CEILING MOUNT
			SECURITY KEYPAD
			RF GATEWAY - WIRELESS
			CARD READER LOCKSET COMBO
			CREDENTIAL READER
			B - BIOMETRIC
			P - PROXIMITY
			TF - TWO-FACTOR
			LOCKING DEVICE
			M - MAGNETIC LOCK
			R - ROD RETRACTOR
			Q - LATCH RETRACTOR (QEL)
			S - ELECTRIC STRIKE
			REQUEST-TO-EXIT DEVICE
			P - PUSH BUTTON
			M - MOTION (PIR)
			G - GARAGE DOOR
			M - MAGNETIC CONTACT
			LB - LATCHBOLT SWITCH
			PUSHBUTTON FUNCTION
			DR - DOOR RELEASE
			EM - PANIC / DURESS

LIGHTING FIXTURE SYMBOLS	
	RECESSED FIXTURE
	RECESSED WALL WASHER
	RECESSED ADJUSTABLE ACCENT
	RECESSED INGRADE UPLIGHT
	SURFACED MOUNTED LINEAR TROFFER / UNDERCABINET LIGHT
	RECESSED LINEAR TROFFER
	RECESSED LINEAR WALL WASH/GRAZE
	RECESSED INGRADE LINEAR UPLIGHT
	RECESSED INGRADE LINEAR WALL WASH/GRAZE
	LINEAR PENDANT MOUNTED LIGHT
	STRIP LIGHT
	SURFACE MOUNTED LED PANEL
	SURFACE MOUNTED LIGHT
	PENDANT MOUNTED LIGHT
	WALL MOUNTED LIGHT
	WALL MOUNTED DECORATIVE SCONCE
	WALL MOUNTED ADJUSTABLE LIGHT
	WALL MOUNTED UPLIGHT
	WALL MOUNTED READING LIGHT
	WALL MOUNTED SWING ARM LIGHT
	WALL MOUNTED LINEAR LIGHT
	ILLUMINATED MIRROR
	ADJUSTABLE MULTIHEAD LIGHT
	CEILING/PENDANT MOUNTED TRACK WITH ADJUSTABLE TRACK HEAD
	LINEAR TAPELIGHT OR COVE LIGHT
	LINEAR CLOSET ROD FIXTURE
	LINEAR LIGHTING (VERTICAL)
	RECESSED STEP LIGHT
	MONO-POINT LIGHTING FIXTURE
	MONO-POINT STAKE MOUNT ACCENT
	TABLE LAMP
	FLOOR LAMP
	CEILING MOUNTED EXIT SIGN W/ FACES & ARROWS AS SHOWN
	WALL MOUNTED EXIT SIGN W/ FACES & ARROWS AS SHOWN
	WALL MOUNTED COMBO EXIT SIGN / EGRESS LIGHT
	EMERGENCY LIGHTS
	EXTERIOR POLE MOUNTED LIGHT
	EXTERIOR POST (BOLLARD) MOUNTED LIGHT
	CEILING FAN
	CEILING FAN WITH LIGHT
	FIXTURE WITH EMERGENCY BACKUP OR ON EM CIRCUIT
LIGHTING CONTROL SYMBOLS	
	LINE VOLTAGE WALL MOUNTED SWITCH
	THREE-WAY SWITCH
	FOUR-WAY SWITCH
	DOOR JAMB SWITCH
	KEY SWITCH
	DIMMER SWITCH
	WALL MOUNTED DEVICE
	WIRELESS WALL MOUNTED DEVICE
	ROOM CONTROLLER
	PLUG LOAD CONTROLLER
	OCCUPANCY/VACANCY PROGRAMMED SENSOR - CEILING MOUNTED
	WIRELESS OCCUPANCY/VACANCY PROGRAMMED SENSOR - CEILING MOUNTED
	OCCUPANCY/VACANCY PROGRAMMED SENSOR - CORNER MOUNTED
	WIRELESS OCCUPANCY/VACANCY PROGRAMMED SENSOR - CORNER MOUNTED
	DAYLIGHT PHOTO SENSOR
	WIRELESS DAYLIGHT PHOTO SENSOR
LIGHTING DRAWING SYMBOLS	
	ALIGNMENT LINE
	CENTER LINE DESIGNATION
	DAYLIGHT ZONE
NOTE: SEE CONTROLS SCHEDULE FOR FURTHER SPECIFICATION INFORMATION	

POWER SYMBOLS	
	SINGLE RECEPTACLE - WALL MOUNTED
	DUPLEX RECEPTACLE - WALL MOUNTED
	DUPLEX RECEPTACLE WITH USB PORTS - WALL MOUNTED
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - WALL MOUNTED
	QUADPLEX RECEPTACLE - WALL MOUNTED
	DUPLEX RECEPTACLE, GFCI - WALL MOUNTED
	DUPLEX RECEPTACLE, HALF SWITCHED - WALL MOUNTED
	DUPLEX RECEPTACLE, ISOLATED GROUND - WALL MOUNTED
	DUPLEX RECEPTACLE, HALF DIMMED - WALL MOUNTED
	DUPLEX RECEPTACLE, FULL DIMMED - WALL MOUNTED
	SPECIAL OUTLET AS NOTED - WALL MOUNTED
	DUPLEX RECEPTACLE - CEILING MOUNTED, TYP. ALL TYPES
	DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED, TYP. ALL TYPES
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE AND TELECOM
	JUNCTION BOX - WALL MOUNTED
	JUNCTION BOX - FLUSH FLOOR MOUNTED
	JUNCTION BOX - CEILING MOUNTED
	MULTI-OUTLET PLUG STRIP
	POWER/TELECOM POLE
	MECHANICAL EQUIPMENT POWER CONNECTION
	KITCHEN EQUIPMENT POWER CONNECTION
	POOL EQUIPMENT POWER CONNECTION
	TIMER SWITCH
	FUSED DISCONNECT
	NON FUSED DISCONNECT
	MOTOR STARTER
	ENCLOSED CIRCUIT BREAKER
	PULL BOX
	PUSH BUTTON
	TIME CLOCK
	PHOTO-CELL
	TRANSFORMER
	LOCAL AREA NETWORK OR LOADCENTER
	CONTACTOR
	ELECTRIC MOTOR
	METER
	THERMOSTAT
	AUTOMATIC TRANSFER SWITCH
	CIRCUIT HOMERUN
	CONDUIT RUN
	CONDUIT RUN BELOW GRADE
	CONDUIT UP
	CONDUIT DOWN
	SWITCH
	THERMAL OVERLOAD SWITCH
	VARIABLE SPEED SWITCH
	KEY SWITCH
ONE-LINE DIAGRAM SYMBOLS	
	DISCONNECT SWITCH
	FUSE
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	METER
	VOLT-METER
	AMP-METER
	SURGE PROTECTION DEVICE
	SELECTOR SWITCH
	GROUND FAULT PROTECTION
	SHUNT TRIP
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	GROUND
	COLD WATER GROUND CONNECTION
	BUILDING STEEL GROUND CONNECTION
	TRANSFORMER
	DISCONNECT
	AUTOMATIC TRANSFER SWITCH
NOTE: ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.	

ABBREVIATIONS	
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
AP	ACCESS POINT
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFG	BELOW FINISH GRADE
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CATV	COMMUNITY (CABLE) ANTENNA TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CPU	CENTRAL PROCESSING UNIT
CT	CURRENT TRANSFORMER
DISP	GARBAGE DISPOSAL
DW	DISHWASHER
(E)	EXISTING
EM	EMERGENCY
EWV	ELECTRIC WATER COOLER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
IAW	IN ACCORDANCE WITH
IC	INTERMEDIATE CROSS-CONNECT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
IR	INFRARED
LAN	LOCAL AREA NETWORK
MDF	MAIN DISTRIBUTION FRAME
(N)	NEW
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
PA	PUBLIC ADDRESS
REF	REFRIGERATOR
SPD	SURGE PROTECTION DEVICE
T	TAMPER RESISTANT
TTB	TELECOMMUNICATIONS TERMINAL BOARD
TVTB	TELEVISION TERMINAL BOARD
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W	WATT
WAN	WIDE AREA NETWORK
WAP	WIRELESS ACCESS POINT
WLAN	WIRELESS LOCAL AREA NETWORK
WP	WEATHERPROOF
XP	EXPLOSIONPROOF
+18"	MOUNTING HEIGHT TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR (VERIFY W/ ARCH ELEVATIONS)
NOTE: - LIGHT LINEWEIGHT INDICATES EXISTING. - HATCHED AREAS INDICATE DEMOLITION. - 'C' ADJACENT TO A DEVICE INDICATES MOUNTING ABOVE COUNTERTOP.	

MECHANICAL EQUIPMENT WIRING AND CONNECTIONS			
ITEM	FURNISHED UNDER	SET IN PLACE OR MTD. UNDER	WIRED/ CONNECTED UNDER
1. EQUIPMENT MOTORS AND THERMAL OVERLOADS, RESISTANCE...	MD	MD	ED
2. VFD'S, MOTOR CONTROLLERS; MAGNETIC STARTERS, REDUCED VOLTAGE STARTERS AND OVERLOAD RELAYS.	MD	ED(a)	ED
3. DISCONNECT SWITCHES (FUSED OR NON-FUSED), HP RATED SWITCHES, THERMAL OVERLOAD SWITCHES AND FUSES AND MANUAL OPERATING SWITCHES.	ED(a)	ED(a)	ED
4. PUSHBUTTON STATIONS, PILOT LIGHTS, MULTI-SPEED SWITCHES, FLOAT SWITCHES, THERMOSTATS, CONTROL RELAYS, TIMECLOCKS, CONTROL TRANSFORMERS, CONTROL PANELS, MOTOR VALVES, DAMPER ACTUATORS, SOLENOID VALVES, EP AND PE SWITCHES AND INTERLOCKS.	MD	MD	ED
5. 120 VOLT POWER FOR BAS PANELS, FIRE PROTECTION AND BOILER CONTROLS.	ED	ED	ED
6. FIRE/SMOKE DAMPERS AND ELEVATOR VENT DAMPERS.	MD	MD	ED(c)
MD = MECHANICAL DIVISION ED = ELECTRICAL DIVISION			
NOTES: (a) IF FURNISHED AS PART OF FACTORY-WIRED EQUIPMENT, THEN WIRING AND CONNECTIONS ONLY BY ED. (b) IF ANY OF THESE DEVICES CARRY THE FULL LOAD CURRENT TO ANY MOTOR THEY SHALL BE CONNECTED BY ED. CONTROL DEVICES CARRYING FULL LOAD CURRENT FURNISHED BY MD AND WIRED BY ED SHALL BE LOCATED AT THE DEVICE BEING CONTROLLED, UNLESS SHOWN ON DRAWINGS OR MUTUAL AGREEMENT IS MADE BETWEEN THE CONTRACTORS WITH NO CHANGE IN THE CONTRACT PRICE. (c) WIRING FROM ALARM CONTACTS TO ALARM SYSTEM BY ED; ALL CONTROL FUNCTION WIRING BY MD. DUCT DETECTORS FURNISHED BY ED, SET IN PLACE BY MD.			
GENERAL NOTES: THE ABOVE LIST DOES NOT ATTEMPT TO INCLUDE ALL COMPONENTS. ALL ITEMS NECESSARY FOR A COMPLETE SYSTEM SHALL BE INCLUDED IN THE BASE CONTRACT.			

ELECTRICAL SHEET INDEX	
ISSUE LOG	
#	TITLE
E001	ELECTRICAL COVER SHEET
E002	ELECTRICAL ONE-LINE DIAGRAM
E003	ELECTRICAL SCHEDULES
E004	ELECTRICAL SPECIFICATIONS
ED101	ELECTRICAL DEMOLITION PLAN
E101	ELECTRICAL PLANS
E201	LIGHTING PLAN
E301	ELECTRICAL ROOF PLAN
E501	ELECTRICAL DIAGRAMS
ISSUE LOG KEY: ✓ ISSUED AS PART OF SET ✗ NOT PART OF SET ... ISSUED FOR INFORMATION ONLY	

- GENERAL NOTES:
- THESE DRAWINGS ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).
 - DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
 - VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
 - SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER - IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
 - SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE PORTABLE GENERATORS, CABLES, OUTLETS, ETC. AS REQUIRED TO MAINTAIN CONTINUITY OF SERVICE. PLACEMENT OF SUCH PORTABLE EQUIPMENT SHALL BE SUBJECT TO OWNER APPROVAL.
 - REVIEW ARCHITECTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.
 - WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
 - WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.
 - PROVIDE PERMITS AND INSPECTIONS REQUIRED.
 - PROVIDE 1/4" SCALE LAYOUT DRAWINGS OF ROOMS WITH ELECTRICAL SWITCHBOARDS AND TRANSFORMERS WITH SHOP DRAWING SUBMITTAL. LAYOUTS SHALL SHOW LOCATIONS OF, AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT. ALL EQUIPMENT SHALL BE DRAWN TO SCALE.
 - CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
 - VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO 90 PERCENT COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO SUBMIT A COMPLETE CONSTRUCTION DRAWING SET TO THE ELECTRICAL UTILITY COMPANY WITHIN 10 DAYS OF AWARD OF CONTRACT. COORDINATE TIMELINE OF THEIR REVIEW, APPROVAL, CONSTRUCTION SCHEDULING AND INSTALLATION OF THE UTILITY TRANSFORMER WITH THE UTILITY COMPANY. NOTIFY OWNER OF ANY SCHEDULING CONFLICTS.
 - EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE ELECTRICAL CONTRACTOR TO FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND TO INCLUDE IN HIS BID AN ALLOWANCE FOR REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK AS REQUIRED.
 - EXISTING ELECTRICAL DEMOLITION REQUIRED. REFER TO ARCHITECTURAL AND ELECTRICAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED.
 - PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, J-BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARMS DEVICES, ETC. COMPLETE WITH ASSOCIATED CIRCUITING TO SOURCE. WHERE IT IS NOT FEASIBLE TO REMOVE THE ABOVE, OUTLET SHALL BE ABANDONED, WIRE REMOVED, AND BLANK COVER PLATES PROVIDED.
 - ALL (E) EQUIPMENT, LAMPS, BALLASTS, ETC. BEING REMOVED SHALL BE DISCARDED IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.
 - EXISTING LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. BEING REMOVED SHALL BE RETURNED TO THE OWNER, EXCEPT FOR THOSE ITEMS BEING RELOCATED.
 - VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
 - INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
 - FINAL CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION, OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
 - ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
 - WIRING DEVICES SHALL BE SPECIFICATION GRADE AND RATED AT 20 AMPERES FOR LIGHT SWITCHES, AND 20 AMPERES FOR DUPLEX RECEPTACLES. THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT.
 - ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. EMT FITTINGS SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE. MINIMUM CONDUIT SIZE IS 3/4". FOLLOW NEC FOR MAXIMUM NUMBER OF CONDUCTORS PER CONDUIT. CONDUIT SHALL BE OF SUFFICIENT SIZE AND CONDUCTOR QUANTITY SHALL BE LIMITED TO ELIMINATE THE NEED TO DE-RATE CONDUCTORS. METAL CLAD CABLE IS [NOT] PERMITTED.
 - ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A 20LB NYLON PULL STRING OR EQUAL, AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION, AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
 - WIRE SHALL BE COPPER, 75 DEGREE CELSIUS RATED FOR GENERAL USE. WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS WIRE SHALL BE COPPER, MINIMUM 90 DEGREE CELSIUS RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREE CELSIUS AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
 - PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.
 - PANEL DIRECTORIES SHALL BE REMOVABLE. ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
 - FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE SEAL TITE FLEX AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
 - FIRE ALARM, SOUND, TELEPHONE, COMPUTER AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).
 - SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
 - GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
 - SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.

SECTION 26 00 10 - GENERAL PROVISIONS

PART 1 - GENERAL

1.01 PROJECT DESCRIPTION

- A. THIS PROJECT IS A RENOVATION TO AN EXISTING OFFICE BUILDING FOR HOPEWORKS IN ALBUQUERQUE, NEW MEXICO

1.02 PROVISIONS

- A. WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS OF DIVISION 1, AND THE ELECTRICAL DRAWINGS AND ALL ITEMS HEREINAFTER SPECIFIED

1. THE DRAWINGS AND SPECIFICATIONS FOR THE ELECTRICAL WORK ARE INTENDED TO DESCRIBE A COMPLETE ELECTRICAL SYSTEM; OMISSION OF MINOR ITEMS OBVIOUSLY NECESSARY TO ACCOMPLISH THE ABOVE INTENT SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SAID ITEMS.
2. PRIOR TO ANY WORK BEING PERFORMED UNDER THIS DIVISION EXAMINE ARCHITECTURAL, MECHANICAL AND INTERIOR DESIGN DRAWINGS AND SPECIFICATIONS AND IF ANY DISCREPANCIES OCCUR BETWEEN THEM AND THE ELECTRICAL DRAWINGS AND SPECIFICATIONS, REPORT SAME TO THE ARCHITECT IN WRITING AND OBTAIN WRITTEN INSTRUCTIONS FOR THE WORK.

3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION OF THE BUILDING WILL PERMIT. ALL CHANGES FROM DRAWINGS NECESSARY TO MAKE THE ELECTRICAL WORK CONFORM TO THE BUILDING AS CONSTRUCTED SHALL BE MADE WITHOUT COST TO THE OWNER.
4. COORDINATE THE ELECTRICAL WORK WITH THE GENERAL CONTRACTOR AND BE RESPONSIBLE TO HIM FOR SATISFACTORY PROGRESS OF SAME. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES ON THE PROJECT WITHOUT COST TO THE OWNER.
5. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
6. ALL WORK AND MATERIALS COVERED BY DRAWINGS AND SPECIFICATIONS SHALL BE SUBJECT TO REVIEW AT ANY TIME BY REPRESENTATIVES OF THE ARCHITECT AND OWNER. IF THE ARCHITECT OR OWNER'S AGENT FINDS ANY MATERIAL OR INSTALLATION THAT DOES NOT CONFORM TO THESE DRAWINGS AND SPECIFICATIONS, CONTRACTOR SHALL REMOVE THE MATERIAL FROM THE PREMISES AND CORRECT THE INSTALLATION TO THE SATISFACTION OF THE AGENT.
7. IN ACCEPTANCE OR REJECTION OF INSTALLED ELECTRICAL SYSTEMS, NO ALLOWANCE WILL BE MADE FOR LACK OF SKILL ON THE PART OF THE INSTALLERS.

1.03 WORK INCLUDED

- A. THE ELECTRICAL SYSTEM REQUIRED FOR THIS WORK TO INCLUDE, BUT IS NOT NECESSARILY LIMITED TO:
1. BRANCH CIRCUIT WIRING AS INDICATED ON DRAWINGS.
2. NEW PANEL TO ALARM/ALARMATE REMODEL.
3. EXPANSION OF EXISTING FIRE ALARM SYSTEM TO ACCOMMODATE REMODEL.
4. NEW LED LIGHTING AND ASSOCIATED CONTROL.

1.04 CODES AND STANDARDS

- A. THE APPLICABLE AND ENFORCED EDITIONS OF THE FOLLOWING CODES AND PUBLISHED STANDARDS (INCLUDING SUPPLEMENTS AND OFFICIAL INTERPRETATIONS) ARE MINIMUM REQUIREMENTS:
1. NFPA 70 - NATIONAL ELECTRICAL CODE (NEC).
2. NFPA 72 - NATIONAL FIRE ALARM CODE.
3. NFPA 101 - LIFE SAFETY CODE.
4. NFPA 110 - EMERGENCY POWER SYSTEMS.
5. CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.
6. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
7. NATIONAL ELECTRICAL SAFETY CODE (NESC).
8. AMERICANS WITH DISABILITIES ACTS (ADA) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) 117.
9. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).
10. AIA - "GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITAL AND HEALTHCARE FACILITIES".
11. UNDERWRITERS LABORATORIES (UL).
12. INSULATED CABLE ENGINEERS ASSOCIATION (ICEA).
13. INTERNATIONAL BUILDING CODE.
14. INTERNATIONAL MECHANICAL CODE.
15. INTERNATIONAL FIRE CODE.
16. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
17. SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).
- B. COMPLY WITH REQUIREMENTS OF UNDERWRITERS LABORATORIES FOR ALL ITEMS INSTALLED FOR WHICH U.L. STANDARDS HAVE BEEN ESTABLISHED.
- C. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, STATUTES, OR ORDINANCES IN EFFECT. APPLICABLE CODES, ORDINANCES, STANDARDS AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

1.05 EXAMINATION OF BIDDING DOCUMENTS

- A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY, AND NOT LATER THAN SEVEN DAYS PRIOR TO THE DATE OF RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ARCHITECT FOR INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS THEN WITHIN WHICH HE MAY DISCOVER. THE ARCHITECT WILL ISSUE ANY INTERPRETATION OR CORRECTION AS AN ADDENDUM. ONLY A WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD. IF DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS ARE NOT COVERED BY ADDENDUM OR WRITTEN DIRECTION, CONTRACTOR SHALL INCLUDE IN HIS BID, LABOR, MATERIALS AND METHODS OF CONSTRUCTION RESULTING IN HIGHER COST. AFTER AWARD OF CONTRACT, NO ALLOWANCE OR EXTRA COMPENSATION WILL BE MADE ON BEHALF OF THE CONTRACTOR DUE TO HIS FAILURE TO MAKE THE WRITTEN REQUESTS AS DESCRIBED ABOVE.
- B. FAILURE TO REQUEST CLARIFICATION DURING THE BID PHASE OF ANY INADEQUACY, OMISSION, OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES. THE SIGNING OF THE CONTRACT WILL BE CONSIDERED AS IMPLICITLY DENOTING THAT THE CONTRACTOR HAS A THOROUGH COMPREHENSION OF THE FULL INTENT AND SCOPE OF THE WORKING DRAWINGS AND SPECIFICATIONS.

1.06 EXAMINATION OF PREMISES

- A. VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

1.07 EXISTING CONDITIONS

- A. EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY." THE ELECTRICAL CONTRACTOR SHALL FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND IS TO INCLUDE IN HIS BID AN ALLOWANCE FOR EXTENSION, REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK.

1.08 PERMITS, FEES & NOTICES

- A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS AND CERTIFICATES THAT MAY BE NECESSARY FOR THE FULL COMPLETION OF THE WORK. FURNISH THE OWNER WITH A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE AIA OVER THE ELECTRICAL INSTALLATION.
- B. NOTIFY PROPER AUTHORITIES WHEN WORK IS READY FOR INSPECTIONS REQUIRED BY APPLICABLE CODES, RULES AND REGULATIONS, ALLOWING SUFFICIENT TIME FOR INSPECTIONS TO BE MADE WITHOUT HINDERING PROGRESS OF THE WORK. FURNISH TO THE OWNER COPIES OF INSPECTION CERTIFICATES OF ACCEPTANCE.

1.09 TESTS

- A. UPON COMPLETION OF ALL WORK AND ADJUSTMENT OF ALL EQUIPMENT, PROVIDE COMPLETE OPERATIONAL TESTS OF ALL ELECTRICAL EQUIPMENT PROVIDED UNDER THIS DIVISION.

1.10 WARRANTY

- A. GUARANTEE THAT ALL WORK GOVERNED BY THIS DIVISION SHALL BE FREE OF DEFECTS IN WORKMANSHIP, MATERIALS AND PARTS FOR A PERIOD OF ONE (1) YEAR AFTER WRITTEN ACCEPTANCE. PROMPTLY REPAIR, REVISE, AND REPLACE DEFECTS AS DIRECTED WITH NO ADDITIONAL COST TO THE OWNER (LAMPS AND FUSES ARE EXEMPT).

1.11 RECORD DRAWINGS

- A. DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEM. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, TRANSFER ALL RECORD DATA TO PRINTS OF THE ORIGINAL DRAWINGS. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERNATES, REWORKINGS, ETC. AS A CONDITION OF ACCEPTANCE OF THE PROJECT, DELIVER TO THE ARCHITECT ONE COPY OF THE RECORD DRAWINGS.

1.12 PROTECTION

- A. OF PEOPLE: ARRANGE BARRIERS, SIGNS, ETC. AS REQUIRED TO MINIMIZE THE HAZARD OF PEOPLE. COMPLY WITH APPLICABLE SAFETY AND HEALTH REGULATIONS. COORDINATE AS NECESSARY WITH THE OWNER AND THE GENERAL CONTRACTOR.
- B. OF WORK: TAKE ALL MEASURES NECESSARY TO PROTECT THE WORK BOTH BEFORE AND AFTER INSTALLATION, TO ASSURE THAT IT WILL BE IN CLEAN, UNDAMAGED, UNBLENISHED CONDITION WHEN TURNED OVER TO THE OWNER. REPAIR/REPLACE WORK DAMAGED DURING CONSTRUCTION.

PART 2 - PRODUCTS

2.01 STANDARD FOR MATERIALS

- A. ALL ELECTRICAL MATERIAL SHALL BE NEW AND OF THE QUALITY AND TYPE SPECIFIED.
- B. MANUFACTURER AND CATALOG NUMBER SHOWN IN THESE SPECIFICATIONS OR ON DRAWINGS ARE INTENDED AS A GUIDE TO QUALITY. EQUIVALENT MATERIALS AND EQUIPMENT OF OTHER MANUFACTURERS WILL BE CONSIDERED PROVIDED SUCH SUBSTITUTIONS ARE REQUESTED IN ACCORDANCE WITH THE PROVISIONS OF PARAGRAPH 1.03 AND SHALL INCLUDE ALL INFORMATION NECESSARY TO SUPPORT THE CLAIM OF EQUIVALENCY.
- C. NO EXTENSION OF COMPLETION DATE SHALL BE ALLOWED FOR TIME LOST IN CONSIDERATION, SHIPPING, OR INSTALLATION OF APPROVED SUBSTITUTIONS. REVIEW OF SUBSTITUTIONS SIGNIFIES GENERAL EQUALITY OF MATERIALS AND EQUIPMENT ONLY. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER OPERATION OF THE SYSTEM, COMPLIANCE WITH SPECIFICATIONS AND NECESSARY CHANGES DUE TO DIMENSIONAL DIFFERENCES OR SPACE REQUIREMENTS.

2.02 SUBMITTALS

- A. SUBMITTALS REQUIRED FOR THIS PROJECT ARE AS FOLLOWS:
1. LIGHTING FIXTURES
2. WIRING DEVICES
3. FUSES
4. CONDUIT
5. CONDUIT FITTINGS
6. FIRE ALARM
- B. PRESENT SUBMITTAL DATA AT ONE TIME, BOUND IN THREE-RING BINDERS, OR PDF SUBMITTALS INDEXED IN A NEAT AND ORDERLY MANNER. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. PROVIDE FOUR SETS OF SUBMITTAL DATA. UNLESS DEMONSTRATES HIS UNDERSTANDING BY INDICATING WHICH EQUIPMENT AND MATERIAL HE INTENDS TO PROVIDE AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE. CONTRACTOR FURTHER AGREES THAT IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SUBMITTALS AND CONTRACT DOCUMENTS IN THE FORM OF DESIGN DRAWINGS AND SPECIFICATIONS ARE DISCOVERED EITHER PRIOR TO OR AFTER SUBMITTALS, HE WILL CORRECT THEM PRIOR TO OR AFTER THE GUARANTEE PERIOD. THE OPERATING MANUAL AND PARTS LISTS SHALL GIVE COMPLETE INFORMATION AS TO WHOM THE OWNER SHALL CONTACT FOR SERVICE AND PARTS, INCLUDING THE ADDRESS AND PHONE NUMBER. FURNISH EVIDENCE THAT AN AUTHORIZED SERVICE ORGANIZATION REGULARLY CARRIES A COMPLETE STOCK OF REPAIR PARTS FOR THESE ITEMS (OR SYSTEMS), AND THAT THE ORGANIZATION IS AVAILABLE FOR SERVICE. SERVICE SHALL BE FURNISHED WITHIN TWENTY FOUR (24) HOURS AFTER REQUESTED.
- C. PLACE ORDERS FOR ALL EQUIPMENT IN TIME TO PREVENT ANY DELAY IN CONSTRUCTION SCHEDULE OR COMPLETION OF PROJECT. IF ANY MATERIALS OR EQUIPMENT ARE NOT ORDERED IN TIME, ADDITIONAL CHARGES MADE BY EQUIPMENT MANUFACTURERS TO COMPLETE THEIR EQUIPMENT IN TIME TO MEET CONSTRUCTION SCHEDULE, TOGETHER WITH ANY SPECIAL HANDLING CHARGES, SHALL BE BORNE BY THE CONTRACTOR.
- D. SUBMITTALS: CONTRACTOR AGREES THAT SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS; THAT THE PURPOSE OF SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, THAT HE DEMONSTRATES HIS UNDERSTANDING BY INDICATING WHICH EQUIPMENT AND MATERIAL HE INTENDS TO PROVIDE AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE. CONTRACTOR FURTHER AGREES THAT IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SUBMITTALS AND CONTRACT DOCUMENTS IN THE FORM OF DESIGN DRAWINGS AND SPECIFICATIONS ARE DISCOVERED EITHER PRIOR TO OR AFTER SUBMITTALS, HE WILL CORRECT THEM PRIOR TO OR AFTER THE GUARANTEE PERIOD. THE OPERATING MANUAL AND PARTS LISTS SHALL GIVE COMPLETE INFORMATION AS TO WHOM THE OWNER SHALL CONTACT FOR SERVICE AND PARTS, INCLUDING THE ADDRESS AND PHONE NUMBER. FURNISH EVIDENCE THAT AN AUTHORIZED SERVICE ORGANIZATION REGULARLY CARRIES A COMPLETE STOCK OF REPAIR PARTS FOR THESE ITEMS (OR SYSTEMS), AND THAT THE ORGANIZATION IS AVAILABLE FOR SERVICE. SERVICE SHALL BE FURNISHED WITHIN TWENTY FOUR (24) HOURS AFTER REQUESTED.
- D. CLEAN UP: REMOVE ALL MATERIALS, SCRAP, ETC., RELATIVE TO THE ELECTRICAL INSTALLATION AND LEAVE THE PREMISES AND ALL EQUIPMENT, LAMPS, FIXTURES, ETC. IN A CLEAN, ORDERLY CONDITION. ANY COSTS TO THE OWNER FOR CLEAN UP OF THE SITE WILL BE CHARGED AGAINST THE CONTRACTOR.
- E. ACCEPTANCE DEMONSTRATION: UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE ARCHITECT, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ENTIRE INSTALLATION, INCLUDING ALL SYSTEMS PROVIDED UNDER THIS CONTRACT.

2.03 BID ALTERNATES(S)

- A. REFER TO DIVISION 1 FOR ADDITIONAL INFORMATION.
- B. ALTERNATE(S) FOR MATERIAL AND EQUIPMENT

1. EQUIPMENT AND MATERIAL BID ALTERNATE(S) SHALL BE PROPOSED AS ADDITIVE OR DEDUCTIVE ALTERNATE(S) TO SPECIFIC MATERIALS, BY SUBMITTING IT AS A SEPARATE LINE ITEM FROM THE BASE BID ON THE BIDDERS LETTERHEAD.
2. SUCH BID ALTERNATE PROPOSALS SHALL NOT BE SUBSTITUTED OR INCLUDED IN THE BASE BID. BID ALTERNATE PROPOSAL(S) MUST BE ACCOMPANIED BY FULL DESCRIPTIVE DATA ON THE PROPOSED EQUIPMENT, TOGETHER WITH A STATEMENT OF THE BIDDER'S INTENT TO BE ADDED OR DEDUCTED FOR EACH ITEM. THE BID ALTERNATE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, CONNECTIONS, COORDINATION WITH ALL OTHER TRADES, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM.
3. THE CONTRACTOR SHALL SUBMIT THE BID ALTERNATES AT THE TIME THE BASE BIDS ARE DUE.

2.04 SUBSTITUTIONS

- A. BIDDERS' CHOICE: MATERIAL OR EQUIPMENT LISTED BY SEVERAL MANUFACTURERS' NAMES ARE INTENDED TO BE BIDDERS' CHOICE, AND ANY OF THE LISTED MANUFACTURERS MAY BE USED IN THE BASE BID.
- B. PERFORMANCE SPECIFICATIONS: WHEN ANY ITEM IS SPECIFIED BY REQUIREMENTS TO MEET A PERFORMANCE, INDUSTRY OR REGULATING BODY STANDARD, OR IS SPECIFIED BY A GENERIC SPEC, NO MANUFACTURERS NAME LISTED NO PRIOR REVIEW BY THE ENGINEER IS NEEDED UNLESS SPECIFICALLY CALLED FOR IN THESE SPECIFICATIONS.
- C. CONTRACTOR TO BE RESPONSIBLE FOR ANY CHANGES AND COSTS TO ACCOMMODATE ANY EQUIPMENT EXCEPT THE FIRST NAMED IN THE SPECIFICATION.
- D. SUBSTITUTIONS OF MATERIAL (CONTRACTOR AND OWNER INITIATED)
1. OTHER ITEMS OF MATERIAL AND EQUIPMENT NOT LISTED AS EQUIVALENTS MAY BE OFFERED (AT THE CONTRACTOR'S OPTION AS SUBSTITUTIONS TO SPECIFIED ITEMS BY SUBMITTING IT AS A SEPARATE PRICE WITH HIS BASE BID ON THE BIDDERS LETTERHEAD.
2. SUCH SUBSTITUTE PROPOSALS SHALL NOT BE INCLUDED UNDER THE BASE BID AND MUST BE ACCOMPANIED BY FULL DESCRIPTIVE DATA ON THE PROPOSED EQUIPMENT, TOGETHER WITH A STATEMENT OF THE COST TO BE DEDUCTED FOR EACH ITEM AND ALL DEVIATIONS FROM SPECIFIED ITEMS. HIGHLIGHT ALL DIFFERENCE FROM SPECIFIED EQUIPMENT. IF ANY SUCH SUBSTITUTIONS ARE TO BE CONSIDERED, THE CONTRACTOR SHALL SUBMIT A LIST OF THE PROPOSED SUBSTITUTION ITEMS WITHIN 14 DAYS OF AWARD OF CONTRACT. LATE REQUESTS FOR PROPOSED SUBSTITUTIONS SHALL NOT BE ACCEPTED BY THE ENGINEER DUE TO SCHEDULING OR DELIVERY CONCERNS.
3. IF SUBSTITUTIONS ARE REJECTED, ELECTRICAL CONTRACTOR SHALL SUPPLY BASE BID ITEM AS SPECIFIED.

2.05 PRODUCT HANDLING

- A. USE ALL MEANS NECESSARY TO PROTECT ELECTRICAL SYSTEM MATERIALS BEFORE, DURING AND AFTER INSTALLATION AND TO PROTECT THE INSTALLED WORK AND MATERIALS OF ALL OTHER TRADES.
- B. IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- C. UPON COMPLETION OF ALL INSTALLATIONS, LAMPING AND TESTING, THOROUGHLY INSPECT ALL EXPOSED PORTIONS OF THE ELECTRICAL INSTALLATION AND COMPLETELY REMOVE ALL EXCESS CONDUITS, WIRES, DEVICES, FIXTURES AND OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEMS TO ALL OTHER WORK REQUIRED FOR THIS PROJECT.

PART 3 - EXECUTION

3.01 WORKMANSHIP AND COMPLETION OF INSTALLATION

- A. CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS SELECTED TO PERFORM THE WORK SHALL BE WELL VERSED AND SKILLED IN THE TRADES INVOLVED.
- B. COORDINATE ELECTRICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
- C. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF ELECTRICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING THE BUILDING.
- D. ANY CHANGES OR DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS MUST BE ACCEPTED IN WRITING BY THE ARCHITECT/ENGINEER. ALL ERRORS IN INSTALLATION SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR. ALL SPECIALIES SHALL BE INSTALLED AS DETAILED ON THE DRAWINGS, WHERE DETAIL OR SPECIFIC INSTALLATION REQUIREMENTS ARE NOT PROVIDED, MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.
- E. UPON COMPLETION OF WORK, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED COMPLETE, THOROUGHLY CHECKED, CORRECTLY ADJUSTED, AND LEFT READY FOR INTENDED USE OR OPERATION. ALL WORK SHALL BE THOROUGHLY CLEANED AND ALL RESIDUE SHALL BE REMOVED FROM SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE DELIVERED IN A PERFECT, UNBLENISHED CONDITION.
- F. CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION, INCLUDING ALL REQUIRED LABOR, MATERIAL, CARGAGE, INSURANCE, PERMITS, AND TAXES.

3.02 PROGRESS OF WORK

- A. ORDER THE PROGRESS OF ELECTRICAL WORK TO CONFORM TO THE PROGRESS OF THE WORK OF THE OTHER TRADES. COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE CONDITION OF THE BUILDING WILL PERMIT. ANY COST RESULTING FROM DEFECTIVE OR IL-TIMED WORK PERFORMED UNDER THIS SECTION SHALL BE BORNE BY THIS CONTRACTOR.

3.03 CUTTING AND PATCHING

- A. PROVIDE ALL CUTTING, TRENCHING, BACKFILLING, PATCHING AND REFINISHING OR RESURFACING RECED FOR ELECTRICAL WORK IN A MANNER MEETING THE APPROVAL OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.
- B. ALL OPENINGS MADE IN FIRE-RATED WALLS, FLOORS, OR CEILINGS SHALL BE PATCHED AND MADE TIGHT IN A MANNER TO CONFORM TO THE FIRE RATING FOR THE SURFACE PENETRATED.

3.04 DELIVERY AND STORAGE OF MATERIALS

- A. ARRANGE AND BE HELD RESPONSIBLE FOR DELIVERY AND SAFE STORAGE OF MATERIALS AND EQUIPMENT FOR ELECTRICAL INSTALLATION.
- B. CAREFULLY CHECK MATERIALS FURNISHED TO THIS CONTRACTOR FOR INSTALLATION, AND PROVIDE RECEIPT ACKNOWLEDGING ACCEPTANCE OF DELIVERY AND CONDITION OF THE MATERIALS RECEIVED. THEREAFTER, ASSUME FULL RESPONSIBILITY FOR ITS SAFEKEEPING UNTIL THE FINAL INSTALLATION HAS BEEN REVIEWED AND ACCEPTED.

3.05 PROTECTION OF WORK AND PROPERTY

- A. WHERE THERE ARE EXISTING FACILITIES, BE RESPONSIBLE FOR THE PROTECTION THEREOF; WHETHER OR NOT SUCH FACILITY IS TO BE REMOVED OR RELOCATED. MOVING OR REMOVING ANY FACILITY MUST BE DONE SO AS NOT TO CAUSE INTERRUPTION OF THE WORK OF OWNERS OPERATION.
- B. CLOSE ALL CONDUIT OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. COVER ALL FIXTURES AND EQUIPMENT AND PROTECT AGAINST INJURY. AT THE FINAL COMPLETION, CLEAN ALL WORK AND DELIVER IN AN UNBLENISHED CONDITION, OR REFINISH AND REPAINT AT THE DISCRETION OF THE ARCHITECT.
- C. ANY EQUIPMENT OR CONDUIT SYSTEMS FOUND TO HAVE BEEN DAMAGED OR CONTAMINATED ABOVE "MIL" OR "SHOP" CONDITIONS SHALL BE REPLACED OR CLEANED TO THE ENGINEER'S SATISFACTION.

3.06 FINAL ACCEPTANCE

- A. FINAL ACCEPTANCE BY THE OWNER WILL NOT OCCUR UNTIL ALL OPERATING INSTRUCTIONS ARE RECEIVED AND OWNERS PERSONNEL HAVE BEEN THOROUGHLY INDOCTRINATED IN THE MAINTENANCE AND OPERATION OF ALL EQUIPMENT.
- B. OPERATING MANUAL, PARTS LISTS, AND INDOCTRINATION OF OPERATING AND MAINTENANCE PERSONNEL, FURNISH THE SERVICES OF A QUALIFIED REPRESENTATIVE OF THE SUPPLIER FOR EACH ITEM OR SYSTEM ITEMIZED BELOW WHO SHALL INSTRUCT PERSONNEL AS NECESSARY TO THE OWNER, IN THE OPERATION AND MAINTENANCE OF THAT ITEM OR SYSTEM.
- C. DELIVER THREE (3) COMPLETE OPERATING MANUALS AND PARTS LISTS TO THE OWNER (OR HIS DESIGNATED REPRESENTATIVE) AT THE TIME OF THE ABOVE REQUIRED INDOCTRINATION. FULLY EXPLAIN THE CONTENTS OF THE MANUALS AS PART OF REQUIRED INDOCTRINATION AND INSTRUCT THE OWNERS PERSONNEL TO THE CORRECT PROCEDURE IN OBTAINING SERVICE, BOTH DURING AND AFTER THE GUARANTEE PERIOD. THE OPERATING MANUAL AND PARTS LISTS SHALL GIVE COMPLETE INFORMATION AS TO WHOM THE OWNER SHALL CONTACT FOR SERVICE AND PARTS, INCLUDING THE ADDRESS AND PHONE NUMBER. FURNISH EVIDENCE THAT AN AUTHORIZED SERVICE ORGANIZATION REGULARLY CARRIES A COMPLETE STOCK OF REPAIR PARTS FOR THESE ITEMS (OR SYSTEMS), AND THAT THE ORGANIZATION IS AVAILABLE FOR SERVICE. SERVICE SHALL BE FURNISHED WITHIN TWENTY FOUR (24) HOURS AFTER REQUESTED.
- D. CLEAN UP: REMOVE ALL MATERIALS, SCRAP, ETC., RELATIVE TO THE ELECTRICAL INSTALLATION AND LEAVE THE PREMISES AND ALL EQUIPMENT, LAMPS, FIXTURES, ETC. IN A CLEAN, ORDERLY CONDITION. ANY COSTS TO THE OWNER FOR CLEAN UP OF THE SITE WILL BE CHARGED AGAINST THE CONTRACTOR.
- E. ACCEPTANCE DEMONSTRATION: UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE ARCHITECT, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ENTIRE INSTALLATION, INCLUDING ALL SYSTEMS PROVIDED UNDER THIS CONTRACT.

3.07 IDENTIFICATION

- A. GENERAL: PROVIDE THE FOLLOWING SERVICES AND MATERIALS TO ASSIST THE OWNER IN OPERATION AND MAINTENANCE.
- B. DIRECTORY CARDS, NAMEPLATES AND LABELS: NO TEMPORARY MARKINGS, WHICH ARE VISIBLE ON EQUIPMENT, SHALL REMAIN AFTER THE PROJECT IS COMPLETE. REPAIR TRIMS, HOUSING, ETC., WHERE SUCH MARKINGS CANNOT BE READILY REMOVED. DETACHED FINISHES MUST BE REFINISHED. ALL ENGRAVED METAL OR PLASTIC NAMEPLATES SHALL BE WHITE LETTERS ON A BLACK OR GRAY BACKGROUND. RANDED LETTERS SHALL NOT BE USED. NO ABBREVIATIONS IN LABELING WILL BE PERMITTED WITHOUT SPECIAL APPROVAL. ALL PANELBOARDS SHALL BE LABELED AS DESIGNATED ON THE ELECTRICAL DRAWINGS.
- C. CONDUIT IDENTIFICATION: PROVIDE IDENTIFICATION BY TYPE LABELS ARE APPLIED TO ASSURE ADHERENCE OF LABEL. DIRECTORY CARDS, NAMEPLATES, AND LABELS SHALL INDICATE THE GENERAL AREA AND TYPE OF ELECTRICAL LOAD SERVED BY EACH CIRCUIT. PROVIDE THE FOLLOWING TYPES OF LABELS AT THESE LOCATIONS:

1. ON EACH FEEDER SWITCH, COMBINATION STARTER, OR CIRCUIT BREAKER LOCATED IN MOTOR CONTROL CENTERS, MAIN SERVICE EQUIPMENT, THE MAIN SWITCHBOARD OR PANELBOARD, SUBDISTRIBUTION PANELBOARDS, AND ALL SPECIAL EQUIPMENT HOUSED IN CABINETS, THE LABELING SHALL BE: (1) MINIMUM HEIGHT STENCILED LETTERS IN PLAIN TYPE OR ONE-HALF INCH (1/2") ENGRAVED LETTERS ON LAMINATED NAMEPLATE. APPLY TO THE INSIDE OF EACH DOOR. ALL EMERGENCY PANELS AND DISCONNECTS SHALL BE PAINTED WITH RED ENAMEL.
2. THE CONTRACTOR SHALL SUBMIT THE BID ALTERNATES AT THE TIME THE BASE BIDS ARE DUE.
3. ON ALL BRANCH CIRCUIT PANELBOARDS INDICATE PANEL DESIGNATION, VOLTAGE AND PHASE. USE THREE-FOURTHS INCH (3/4") MINIMUM HEIGHT STENCILED LETTERS IN METAL TYPE OR ONE-HALF INCH (1/2") ENGRAVED LETTERS ON LAMINATED NAMEPLATE. APPLY TO THE INSIDE OF EACH DOOR. ALL EMERGENCY PANELS AND DISCONNECTS SHALL BE PAINTED WITH RED ENAMEL.
4. ON ALL BRANCH CIRCUIT PANELBOARD DIRECTORIES, PROVIDE NEATLY TYPED, REMOVABLE CARDS AND PROTECTIVE PLASTIC FACES. SPARE CIRCUIT BREAKERS SHALL BE IDENTIFIED AS SUCH.
5. FOR ALL DEVICE PLATES FOR SWITCHES UNDER TO CONTROL EXHAUST FANS OR OTHER EQUIPMENT, PROVIDE ONE-FOURTH INCH (1/4") MINIMUM HEIGHT BLACK FILLED, ENGRAVED LETTERS ON STAINLESS STEEL DEVICE PLATES.
6. FOR ALL RECEPTACLE DEVICE PLATES, PROVIDE ONE-EIGHTH INCH (1/8") MINIMUM HEIGHT LETTERS ON WHITE (NORMAL POWER) AND RED (EMERGENCY POWER) NAMEPLATES INDICATING PANEL AND CIRCUIT NUMBER.
7. FOR ALL EXPOSED CONDUITS, JUNCTION BOXES, WIRING OUTLETS, ETC., PROVIDE THREE-FOURTHS INCH (3/4") MINIMUM HEIGHT STENCILED LETTERS, OR ONE-HALF INCH (1/2") MINIMUM HEIGHT PRESSURE SENSITIVE LABELS EQUAL TO BRADY SELF-STICKING VINYL CLOTH. LABELS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
- a. ENTERING OR LEAVING PANELS OR SWITCHGEAR OR ENCLOSURES.
- b. ALL JUNCTION BOXES SHALL BE IDENTIFIED AS TO CIRCUITS CONTAINED WITHIN.
- c. EXPOSED CONDUITS CONTAINING CIRCUITS ABOVE 600 VOLTS SHALL HAVE VOLTAGE LABELED AT LEAST ONCE FOR EACH EXPOSED LENGTH OR NOT MORE THAN FIFTEEN FEET (15'-0") APART.

3.08 CONSTRUCTION LOGGING AND POWER

- A. PROVIDE ALL TEMPORARY FACILITIES REQUIRED TO SUPPLY CONSTRUCTION POWER AND LIGHT. INSTALL AND MAINTAIN FACILITIES IN A MANNER THAT WILL PROTECT THE PUBLIC AND WORKMEN, COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS.
- B. THE GENERAL CONTRACTOR SHALL PAY FOR ALL POWER AND LIGHT USED BY HIM AND HIS SUBCONTRACTORS WHERE CONSTRUCTION POWER IS SEPARATELY METERED, OR IS TAKEN FROM THE PERMANENT PROJECT METERED SERVICE SOLELY FOR CONSTRUCTION USE.

3.09 REMODELING PROVISIONS

- A. EXISTING SYSTEMS AND CONDITIONS SHOWN ON THE DRAWINGS ARE PROVIDED FOR GUIDANCE ONLY. THE ELECTRICAL CONTRACTOR SHALL FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND SHALL INCLUDE IN HIS BID AN ALLOWANCE FOR THE REMOVAL AND RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES AND OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEMS TO ALL OTHER WORK REQUIRED FOR THIS PROJECT.
- B. CONNECT NEW WORK TO EXISTING IN A MANNER THAT WILL ASSURE PROPER RACEWAY SCHEDULING THROUGHOUT THE PROJECT IN CONFORMANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) REQUIREMENTS.
- C. REMODEL WORK CUTTING AND PATCHING: THE CONTRACTOR SHALL PERFORM CUTTING, CHANNELING, CHASING, DRILLING, ETC., AS REQUIRED TO INSTALL OR REMOVE ELECTRICAL EQUIPMENT IN AREAS OF REMODELING. THIS WORK SHALL BE PERFORMED SO AS TO MINIMIZE DAMAGE TO PORTIONS OF WALL FINISHES, SURFACES, PLASTERING, OR THE STRUCTURE WHICH ARE TO BE REUSED, RESURFACED, PLASTERED OR PAINTED UNDER ANOTHER DIVISION OF THESE SPECIFICATIONS.
- D. CAREFULLY COORDINATE WITH THE REQUIRED REMODELING WORK, CUTTING AND PATCHING ETC., PERFORMED BY THE OTHER TRADES. REMOVE OR RELOCATE EXISTING ELECTRICAL CONDUITS, WIRES, DEVICES, FIXTURES AND OTHER EQUIPMENT AS NECESSARY.
- E. ALL OUTGAGES ON PORTIONS OF EXISTING ELECTRICAL SYSTEMS SHALL BE MINIMIZED AND SHALL BE AT A TIME AND OF DURATION AS ACCEPTED BY THE OWNER.

3.10 ELECTRICAL DEMOLITION

- A. EXAMINATION
1. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON DRAWINGS.
2. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
3. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION.
4. BEGINNING OF DEMOLITION MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.

B. PREPARATION

1. DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.
2. COORDINATION OUTGAGES WITH ARCHITECT/OWNER.
3. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.
4. FIRE PROTECTION, FIRE ALARM, AND DETECTION SYSTEMS SHALL BE MAINTAINED AND CAPABLE OF PROPER OPERATION DURING CONSTRUCTION. THE LOCAL FIRE MARSHAL SHALL BE NOTIFIED BEFORE CONSTRUCTION STARTS. WHEN SCHEDULED INTERRUPTIONS ARE EXPECTED AND AFTER CONSTRUCTION IS COMPLETE, PROTECT AND SUPPORT LIFE SAFETY SYSTEMS ROUTED THROUGH AREAS OF DEMOLITION.
5. EXISTING TELEPHONE SYSTEM, MAINTAIN EXISTING SYSTEM IN SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. NOTIFY THE OWNER/ARCHITECT IN WRITING AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION.
- C. DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK
1. DEMOLISH AND EXTEND EXISTING ELECTRICAL WORK UNDER PROVISIONS OF DIVISION 1, DIVISION 2, AND THIS SECTION.
2. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
3. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
4. REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES.
5. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.
6. DISCONNECT AND REMOVE ABANDONED PANELBOARDS AND DISTRIBUTION EQUIPMENT.
7. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED.
8. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.
9. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.
10. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS, WHICH REMAIN ACTIVE. MOOPY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
11. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATION, OR AS SPECIFIED IN INDIVIDUAL SECTION.
- D. CLEANING AND REPAIR
1. CLEAN AND REPAIR EXISTING MATERIALS AND EQUIPMENT, WHICH REMAIN OR ARE TO BE REUSED.
2. PANELBOARDS: CLEAN EXPOSED SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS. REFACE EXPOSED SURFACES WITH FINISHES AND PROVIDE CLOSURE PLATES FOR VACANT POSITIONS. PROVIDE TYPED CIRCUIT DIRECTORY SHOWING REVISED CIRCUITING ARRANGEMENT.
3. LUMINAIRES: REMOVE EXISTING LUMINAIRES FOR CLEANING. USE MILD DETERGENT TO CLEAN ALL EXTERIOR AND INTERIOR SURFACES. RINSE WITH CLEAN WATER AND WIPE DRY. REPLACE LAMPS, NON-OPERATIONAL, BALLASTS, AND BROKEN ELECTRICAL PARTS.
- E. INSTALLATION
1. INSTALL RELOCATED MATERIALS AND EQUIPMENT UNDER THE PROVISIONS OF DIVISION 1.

SECTION 26 10 00 - BASIC MATERIALS AND METHODS

PART 1 - PRODUCTS

1.01 RACEWAYS AND FITTINGS

A. CONDUIT:

1. EMT CONDUIT SHALL BE USED FOR FEEDERS AND IN EXPOSED LOCATIONS. MC CABLE IS PERMITTED TO BE USED ABOVE ACCESSIBLE CEILING AND IN CONCEALED LOCATIONS.
2. CONDUITS SUBJECT TO MECHANICAL DAMAGE OR WHERE OTHERWISE REQUIRED BY CODE SHALL BE GALVANIZED RIBB HEAVY WALL CONDUIT. ALL OTHER CONDUIT MAY BE ELECTRIC METALLIC TUBING.
3. FLEXIBLE METALLIC CONDUIT SHALL BE USED WHERE VIBRATION OR OTHER REASONS DO NOT ALLOW SOLD CONNECTIONS TO MOTORS, EQUIPMENT, ETC. FLEX MAY ALSO BE USED TO FISH IN EXISTING WALLS OR WHERE REQUIRED TO CONNECTION IN MILLWORK. THE USE OF FLEX SHALL BE HELD TO A MINIMUM OF 15'-0" APART.
- B. FITTINGS:
1. USE SET-SCREW OR COMPRESSION FITTINGS FOR ALL EMT CONDUIT.
- 1.02 WIRE AND CABLE
1. ALL WIRING SHALL BE COPPER WITH THINNTWH INSULATION.
2. VOLTAGE RANGE 0 TO 24: HIGH CONDUCTIVITY COPPER, THERMO-PLASTIC INSULATION, 300 VOLT RATING.
- 1.03 WIRE CONNECTIONS
- A. ALL ELECTRICAL CONNECTIONS SHALL BE ELECTRICALLY AND MECHANICALLY SECURE, USING THE FOLLOWING METHODS:
1. WIRE SIZE #6 AND SMALLER-PRESSURE TYPE CONNECTORS (SCOTCH-LOK) OR EQUIVALENT.
2. WIRE SIZE #6 AND LARGER-MECHANICAL OR COMPRESSION LUGS, BURNDY, T & B, ILSCO OR EQUIVALENT.
- B. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75°C.

1.04 OUTLET BOXES

- A. OUTLET BOXES SHALL BE: ONE PEECE STEEL, GALVANIZED, STEEL CITY ELECTRIC, APPLETON ELECTRIC, RACO OR APPROVED EQUIVALENT.
- 1.05 DEVICES
- A. WIRING DEVICES SHALL BE RATED AT 20 AMPERES FOR LIGHT SWITCHES AND 20 AMPERES FOR DUPLEX RECEPTACLES.
- B. GFCI RECEPTABLES SHALL BE STRAIGHT BLADE FEED THROUGH TYPE WITH INDICATOR LIGHT THAT IS LIGHTED WHEN DEVICE IS TRIPPED.
- C. SWITCHES SHALL BE 120/277V, 20A, ROCKER TYPE.
- D. WALL SWITCH OCCUPANCY SENSORS: 120/277V, ADJUSTABLE TIME DELAY UP TO 20 MINUTES, 180 DEGREE FIELD OF VIEW SWITCH WITH A MINIMUM COVERAGE AREA OF 300 SQUARE FEET. PASSIVE INFRARED TYPE SHALL BE WATT STOPPER WS-200. ADAPTIVE TECHNOLOGY TYPE SHALL BE WATT STOPPER WS-20.
- E. AREA OCCUPANCY SENSORS: 120/277V, ADJUSTABLE TIME DELAY UP TO 30 MINUTES 260 DEGREE FIELD OF VIEW. MANUFACTURE SHALL BE WATT STOPPER OR APPROVED EQUIV. MODEL NUMBER AS SHOWN IN THE FOLLOWING APPLICATIONS:
1. SMALL ROOM SENSOR - PASSIVE INFRARED TYPE, MINIMUM COVERAGE OF 500 SQUARE FEET. WS-C-300-1.
- F. WALL PLATES SHALL BE 0.035-INCH THICK, SATIN FINISHED STAINLESS STEEL MATERIAL FOR FINISHED SPACES.

SECTION 26 40 00 - ELECTRICAL SERVICE AND DISTRIBUTION

PART 1 - GENERAL

1.01 ELECTRICAL SERVICE CHARACTERISTICS

- A. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH THE UTILITY COMPANY FOR THIS PROJECT TO ENSURE THE INSTALLATION OF ELECTRICAL SERVICES SHALL BE COMPATIBLE WITH THE UTILITY COMPANY'S REQUIREMENTS.

PART 2 - PRODUCTS

2.01 DISTRIBUTION PANELBOARDS

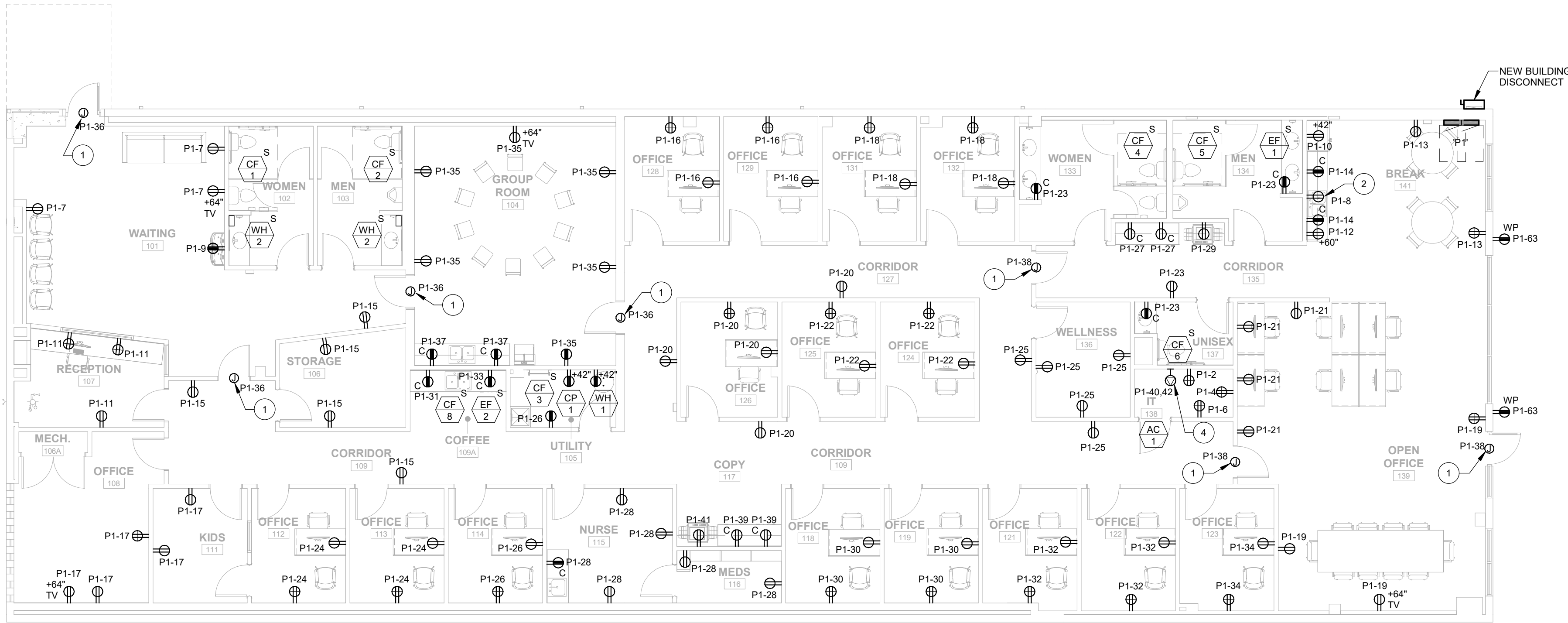
- A. PANELBOARDS SHALL BE COMPLETE WITH: MAIN AS SHOWN ON THE DRAWINGS AND BE COMPLETE WITH PULL OR TRAP BOXES, LUG LANDING SECTIONS, CROSS BUSHING, ETC.
- B. BRANCH CIRCUIT BREAKERS SHALL BE BOLT ON, REPLACEABLE WITHOUT DISTURBING ADJACENT UNITS.
- C. MINIMUM SHORT CIRCUIT RATING OF INTEGRATED ASSEMBLY SHALL NOT BE LESS THAN 42,000 AMPERES FOR PANELBOARDS UNLESS NOTED OTHERWISE.
- D. EQUIPMENT SHALL CONFORM TO U.L. STANDARD AND SERVICE EQUIPMENT SHALL BE CONFIGURED TO CONFORM TO THE SERVING UTILITY REQUIREMENTS.
- E. UNIT SHALL BE ENCLOSED IN A NEMA RATED HOUSING SUITABLE FOR LOCATION INSTALLED.
- F. EQUIPMENT SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, SQUARE D, SIEMENS OR CUTLER-HAMMER EQUIVALENT.

PART 3 - EXECUTION

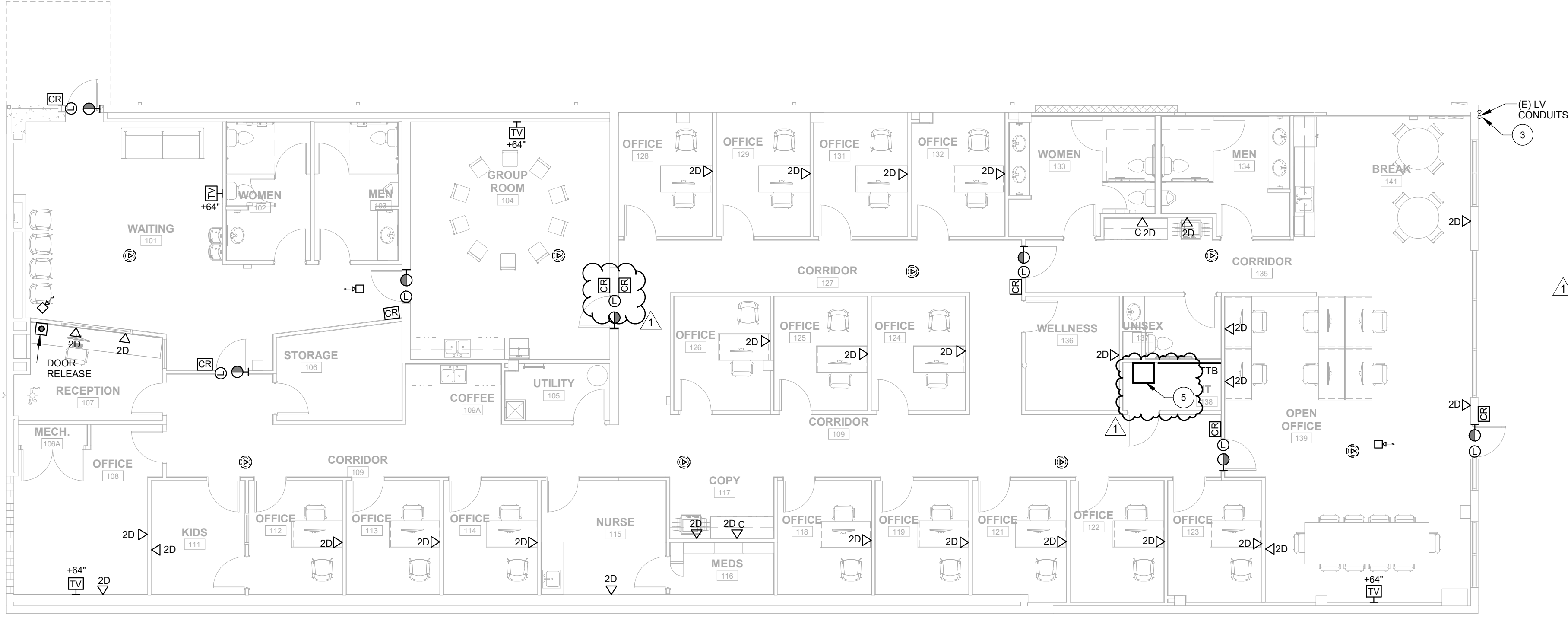
3.01 MOUNTING

- A. INSTALL DISTRIBUTION EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, AND AS SHOWN ON THE DRAWINGS.
- B. INSTALL WALL-MOUNTED EQUIPMENT 9" 0" CENTERLINE ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
- C. INSTALL TOP OF PANELBOARDS 8"0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON THE DRAWINGS. MOUNT PLUMB AND RIGID WITHOUT DISTORTION OF BOX. MOUNT RECESSED PANELBOARDS WITH FRONTS UNIFORMLY FLUSH WITH WALL FINISH.

A1 ELECTRICAL POWER PLAN
1/8" = 1'-0"



A3 ELECTRICAL SPECIAL SYSTEMS PLAN
1/8" = 1'-0"



DEVICE COORDINATION NOTE:

CONTRACTOR SHALL NOT SCALE THESE DRAWINGS TO DETERMINE LOCATIONS OF DEVICES SHOWN. IF EXACT DIMENSIONS ARE NECESSARY TO BE ADHERED TO, DIMENSIONS ARE INDICATED WITH CONSTRUCTION DOCUMENTS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REFER TO THE ARCHITECTURAL INTERIOR ELEVATIONS, DETAILS AND REFLECTED CEILING PLANS TO DETERMINE EXACT LOCATIONS OF COMPONENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REFER TO THE ARCHITECTURAL INTERIOR.

FIRE ALARM NOTE:

FIRE ALARM IS SHOWN AS THE BASIS-OF-DESIGN FOR BIDDING PURPOSES BY DESIGN-BUILD CONTRACTOR. ADDITIONAL DEVICES/EQUIPMENT MAY BE REQUIRED. REQUIREMENTS OR CODE AMENDMENTS BY THE AUTHORITY HAVING JURISDICTION (AHJ) SHALL SUPERSEDE INFORMATION CONTAINED HEREIN.

FIRE ALARM SHOP DRAWINGS SHALL BE PROVIDED BY THE FIRE ALARM SYSTEM CONTRACTOR AS A DEFERRED SUBMITTAL PER 20XX IBC 107.3.4.1.

VOICE/DATA NOTE:

THE ELECTRICAL CONTRACTOR SHALL ENGAGE QUALIFIED SUB-CONTRACTOR TO PROVIDE CAT 6 CABLEING FOR THE VOICE/DATA SYSTEM AS SHOWN ON THIS PLAN. TERMINATE PER TIA-568B STANDARDS.

POWER NOTES:

- REFER TO ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS FOR FINAL RECEPTACLE AND DEVICE PLACEMENT. COORDINATE ALL RECEPTACLE MOUNTING LOCATIONS WITH FIXTURES, APPLIANCES, FURNITURE, CABINETRY, AND OTHER EQUIPMENT PRIOR TO ROUGH-IN.
- REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR CIRCUIT, DISCONNECT, AND CONDUCTORS FOR MECHANICAL EQUIPMENT.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATING THE LOCATION OF ELECTRICAL EQUIPMENT, JUNCTION BOXES, DISCONNECTS, ETC. E.C. SHALL BE RESPONSIBLE FOR COORDINATION AND THE ROUTING OF FEEDERS, AND BRANCH CIRCUITS.
- COORDINATE POWER CONNECTIONS FOR OWNER PROVIDED EQUIPMENT AND APPLIANCES, AND ALL OTHER EQUIPMENT PROVIDED BY OTHER DIVISIONS WITH SUBMITTAL DATA CUT SHEETS, WIRING DIAGRAMS, AND MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. FIELD COORDINATE FINAL LOCATIONS OF EQUIPMENT AND POWER CONNECTIONS WITH GENERAL CONTRACTOR AND OTHER DIVISIONS/CONTRACTORS PRIOR TO ROUGH-IN. PROVIDE READILY ACCESSIBLE GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR RECEPTACLES FOR APPLIANCES LISTED AND IN LOCATIONS REQUIRED IN NEC 210.8.

SYSTEMS NOTES:

- PROVIDE CONDUIT SLEEVES THROUGH WALLS TO FACILITATE CABLEING. PROVIDE FIRESTOPPING AS REQUIRED.
- ALL LOW VOLTAGE CONDUIT STUBBED OUT ABOVE FINISHED CEILINGS SHALL HAVE LONG RADIUS SWEEPS.
- CABLE TIES SHALL BE RELEASABLE AND COMPOSED OF HOOK AND LOOP, RUBBER OR SOFT POLYMER. ZIP-TIES OR EQUAL SHALL NOT BE USED.
- CABLEING SHALL BE ROUTED VIA CONDUIT FROM OUTLET BOX TO ABOVE ACCESSIBLE CEILING.
- HOMERUN CABLEING TO SERVING DISTRIBUTION FRAME. USE J-HOOKS FOR PATHWAYS ABOVE ACCESSIBLE CEILING.
- CABLEING SHALL NOT RUN UNSUPPORTED FOR LENGTHS GREATER THAN 5'-0". ALL VOICE/DATA CABLEING SHALL BE TERMINATED ON RACK MOUNTED PATCH PANELS.
- PROVIDE EXPANSION CAPABILITY IN CONDUIT CROSSING BUILDING EXPANSION JOINTS. RE: ARCHITECTURAL DRAWINGS FOR LOCATIONS.
- ALL INFRASTRUCTURE SUPPORTING VOICE/DATA STRUCTURED CABLEING SYSTEMS (RACKING, GROUNDING, PATHWAYS, ETC.) SHALL MEET BICSI STANDARDS.
- CONTRACTOR TO PROVIDE BLOCKING AT PROJECTOR AND DISPLAY LOCATIONS TO SUPPORT 100LBS.
- LIGHT LINEWEIGHT INDICATES OFCI EQUIPMENT.

FLAG NOTES:

- PROVIDE 120V POWER CONNECTION FOR DOOR SECURITY ACCESS.
- PROVIDE RECEPTACLE FOR DISHWASHER WITH PASS-THRU HOLE FOR CONNECTION.
- UTILIZE EXISTING CONDUITS FOR FIBER/TELECOM. SEE ROOF PLAN, SHEET E301, FOR CONTINUATION.
- PROVIDE NEMA 6-30R RECEPTACLE FOR SERVER RACK UPS. VERIFY LOCATION AND CONNECTION REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- SUB-CONTRACTOR SHALL PROVIDE A WALL MOUNTED SWING-OUT RACK WITH MINIMUM 24U SPACE. PROVIDE (3) 48-PORT CAT 6 PATCH PANELS PLUS WIRE MANAGEMENT.