



September 3, 2021

TO: HOLDERS LIST

SUBJECT: Administration Building Restroom Repairs
Contract No. 071547 | Project No. 101339.02

ADDENDUM NUMBER # 01

This addendum is issued to add, remove, clarify and amend the following:

SOLICITATION TIMELINE:

Issuance of Project	AUGUST 18, 2021
Last Day To Submit Questions	SEPTEMBER 1, 2021
Bid Opening	SEPTEMBER 8, 2021, SEPTEMBER 14, 2021

Specification Section 08 71 00

3.08 DOOR HARDWARE GROUPS-Group 1

Add doors 124 and 136

Drawing A4.0 - Details

Door Schedule - Hardware set column

Add Group 1 for all doors

Drawing E3.1 – Level 1 Power plan

Add the following note:

Provide ¾"C (3#12+12) from available circuit (field verify) from one of the existing panels located in the Electrical Room that is located within the Mechanical Room shown on the plans. Assume one new 20A/1 breaker is required. Route to provide power from available circuit to serve the following ADA actuator and doors 124,136,145 and 146. Electrical contractor shall install the power transfer cable (that connects the ADA pushbutton to the actuator) that is supplied with each door.



Drawing E3.2 – Level 2 Power plan

Add the following note:

Provide ¾"C (3#12+12) from available circuit (field verify) from one of the existing panels located in the Storage Room 238. Assume one new 20A/1 breaker is required. Route to provide power from available circuit to serve the following ADA actuator and doors 230 and 233. Electrical contractor shall install the power transfer cable (that connects the ADA pushbutton to the actuator) that is supplied with each door.

Drawing E3.2 – Level 2 Power plan

Delete the following:

Delete all references and callouts for Electric Hand Dryers. There are no electric hand dryers included in the project.

Substitution Request 1 – ASI Global Partitions

This substitution request is approved as noted:

Partition doors to have continuous hinges per specification.

Substitution Request 2 – Seatac Lighting and Controls

This substitution request is approved as noted:

EM and S1 are acceptable.

Substitution Request 3 – Lighting Group LLC

This substitution request is approved as noted:

Fixture S2 is acceptable.

Fixture W1 is **NOT** approved, it does not meet specified Lumen output.

Substitution Request 1

- a. **PROJECT TITLE: Administration Building Restroom Repairs PROJECT NO.:**
- a. SUBMITTED BY: _____ CONTRACT NO.: 071547
- a. PRIME/SUB/SUPPLIER: Barclay Dean DATE: 8/27/21
- a. _____
- a. Specification Title: HDPE Toilet Compartments Section No.: 10 21 14
- a. Description: High density polyethylene (HDPE) Paragraph: 2.02
- a. toilet compartments and screens Page No.: 2
- a. _____
- a. Proposed Substitution: ASI Global Partitions
- a. Trade Name: ASI Global Partitions Model No.: HDPE Partitions
- a. Manufacturer: ASI Group
- a. Address: 900 Clary Connector Eastanollee, Georgia 30538 Phone No.: 706.827.2700
- a. Installer: Barclay Dean
- a. Address: 22029 23rd Dr SE, Bothell, WA 98021 Phone No.: 425-368-2020
- a. Differences between proposed substitution and specified product: The ASI Group is a
- a. single source of lockers, toilet partitions, visual display products
- a. and washroom accessories providing warranty, parts and supply.
- a. ☐ Point-by-Point comparative data attached - REQUIRED
- a. _____
- a. Reason for not providing specified item: Allow ASI Global Partitions to be
- a. an approved manufacturer for this project
- a. Similar Installation:
- a. Project: U of O Hayward Field A/E: SRG Partnership
- a. Address: 1580 E 15th Ave Eugene, OR 97403
- a. Owner: University Of Oregon Date Installed: 2019
- a. Proposed substitution affects other parts of Work: ☐ No ☒ Yes; explain _____
- a. _____
- a. Supporting Data Attached:
- a. ☒ Drawings ☒ Product Data ☐ Samples ☒ Tests ☒ Reports ☐ Other: _____
- a. _____
- a. _____
- a. Applicable to Substitution Requests During Construction:
- a. Proposed to Port for accepting substitution: \$ _____
- a. Proposed substitution changes Contract Time: ☒ No ☐ Yes [Add] [Deduct] _____ # days.
- a. _____
- a. The Undersigned certifies:
- i. • Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

DIVISION 00 - Procurement and Contracting Requirements
SECTION 00 26 00 - Substitution Procedures

- i. • Same warranty will be furnished for proposed substitution as for specified product.
- i. • Same maintenance service and source of replacement parts, as applicable, is available.
- i. • Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- i. • Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- i. • Proposed substitution does not affect dimensions and functional clearances.
- i. • Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- i. • Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

a. _____
a. Submitted By: Nick Rogers
a. Signed By: _____ Firm: Barclay Dean Architectural Products
a. Address: 22029 23rd DR SE
a. Bothell, WA 98021
a. Telephone: 425 368 2020 Email: Nickr@bdap.com
a. Attachments: Data Sheets, Warranty, LEED & NFPA 286
a. _____
a. _____

a. A/E's REVIEW AND RECOMMENDATION

- i. ☐ Approved Substitution
- i. ☒ Approved Substitution as Noted ACCEPTABLE WITH THE FOLLOWING PROVISION: ALL PARTITION DOORS TO HAVE CONTINUOUS HINGES PER SPECS
- i. ☐ Reject Substitution - Use specified materials.
- i. ☐ Substitution Request received too late - Use specified materials.

a. _____
a. Signed by: [Signature] Date: 9.2.21
a. _____

a. ENGINEER'S REVIEW AND ACTION

- i. ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- i. ☒ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- i. ☐ Substitution Rejected - Use specified materials.
- i. ☐ Substitution Request received too late - Use specified materials.

a. _____
a. Signed by: [Signature] Date: 9/3/21

END OF SECTION

ASI GLOBAL SOLID PLASTIC (HDPE)

Solid Plastic (HDPE) partitions are environmentally safe, mildew, rust, graffiti and impact resistant.

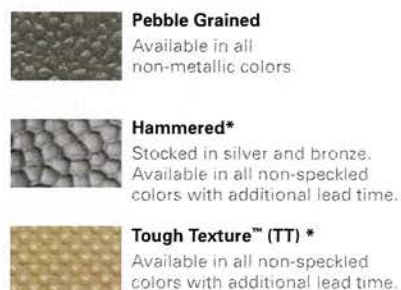
Solid Plastic partitions are water resistant, unaffected by steam or high humidity and have passed the NFPA 286 fire test criteria. For standard features see pages 18-19. **Options:** Stainless Steel Stirrup Brackets, Stainless Steel Door Hardware, Continuous Piano Hinges, Continuous Anodized Aluminum and Stainless Steel Brackets, Aluminum Door Hardware and No-Sight Privacy Strips. Our most popular colors are also available in 100% post-consumer recycled material.



SOLID PLASTIC (HDPE) COLOR SELECTION:



AVAILABLE FINISHES:



*Compartments limits also apply to the non-stocked colors. Consult color card for more definitive color matching.

ONLY ASI OFFERS THE LARGEST SELECTION OF DESIGNER OPTIONS IN THE INDUSTRY.

Solid Plastic (HDPE)



Solid Plastic (HDPE)

Highly resistant to common cleaning agents as well as to moisture, mildew and graffiti. Ideal choice for busy public facilities and high humidity applications—never needs painting and will not easily dent, rust or delaminate. Available in a wide variety of colors and mounting styles. Floor Anchored/ Overhead Braced, Ceiling Hung and Floor and Ceiling Anchored styles.

Warranty 25 years*

Cost Index 190**



VANDAL-RESISTANT FASTENERS

Special driver installs fasteners which virtually eliminates unauthorized removal and ensures easy installation.



EMERGENCY ACCESS

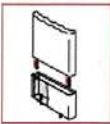
Meets ADA requirements. Slotted keeper coupled with gravity hinges allows access in an emergency.



8" ALUMINUM WRAP-AROUND HINGE

Mainstream choice.

Heavy-duty.



EASY-STALL SHOE

For floor anchored overhead braced.

Easily adjusted leveling bolt.

True concrete anchor screws designed for lasting holding power.

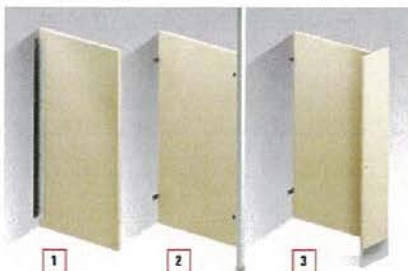
Anchor rated at 2770 lbs. pullout strength.

Fabricated of type 304 stainless steel.



Floor Anchored/Overhead Braced

This economical and sturdy mounting style installs just about anywhere. An anodized aluminum anti-grip head rail secures partitions firmly to the walls.



Urinal & Privacy Screens

1 Wall-Hung Screens

Available in three standard heights: 42", 48" and 58".

2 Post-Mounted Screens

1 3/4" sq. aluminum post in Floor Mounted or Floor to Ceiling Mounted.

3 Pilaster-Mounted Screens

Available in Floor Mounted, Ceiling Hung, Floor to Ceiling or Overhead Braced.

October 17, 2019

ASI Global Partitions warrants that its products will be free of defects in material or workmanship under normal usage from the date of invoice for a period as stated below.

Powder Coated Steel: Three (3) years against chipping, flaking, cracking or discoloration

Stainless Steel: Five (5) years against corrosion or discoloration

Moisture Guard™ Plastic Laminate: Five (5) years against discoloration or delamination

Legacy Plastic Laminate: Two (2) years against discoloration or delamination

Black Core/Color-Thru Phenolic: Twenty-five (25) years against delamination, breakage or corrosion

Solid Plastic (HDPE): Twenty-five (25) years against delamination, breakage or corrosion

If material is found to be defective during the above period, the material shall be repaired or replaced (at ASI Global Partitions' discretion) free of charge. No credits or allowances shall be issued for any labor or expenses relating to the repair replacement of components covered under the warranty plan. The repair or replacement of material shall be the sole remedy of purchaser and ASI Global Partitions shall not be liable for incidental, consequential or indirect damages caused by any defects in the partitions or any delay in repairing or replacing defective product.

These warranties shall not be applicable if vandalism, improper installation, or improper cleaning/maintenance of partitions has contributed as just cause for the partition failure. These warranties extend to commercial and industrial purchasers and do not extend to any other persons, including consumers of the partitions. These warranties are in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose or otherwise.

NFPA 286 CRITERIA TEST RESULTS

ASI Global Partitions' Solid Plastic (HDPE) partition and urinal screen material was tested by one of three accredited laboratories capable of conducting testing in accordance with the 2011 National Fire Protection Association (NFPA) 286 *Standard Methods of Fire Test for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*.

The test method is intended for evaluation of the flammability characteristics of wall and ceiling interior finishes and determines how much a material will contribute to a fire by measuring the amount of heat and smoke released, along with the combustion product released. Based on the test performed, the results, which are shown in the chart below, ASI Global Partitions' Solid Plastic sheet meets the standard acceptance criteria as listed in Annex C of NFPA 286 and used by NFPA 101 *Life Safety Code*, NFPA 5000 *Building Construction and Safety Code*, the *International Building Code*, and the *International Fire Code*.

PARAMETER	NFPA 286 CRITERIA	TEST RESULT
Flame Spread during the 40 kW exposure	Flame shall not spread to the ceiling	Pass
Flame Spread throughout the test	Flame shall not spread to the outer extremity of the sample on any wall or ceiling	Pass
Flashover throughout the test	Shall not occur	Pass
Peak Heat Release Rate throughout the test	Rate shall not exceed 800 kW	Pass
Total Smoke Released throughout the test	Release shall not exceed 1,000 m ²	Pass

Sincerely,

Kyle Larson
Director of Sales



The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary standard for developing environmentally responsible, low emission, high-performance, sustainable buildings. It was developed by the U.S. Green Building Council, under contract with the US Department of Energy.

Individual materials and products used in buildings are not certified. The Version 4.1 certification process is for the entire construction project. The project earns “points” towards becoming certified. The categories where points can accumulate for ASI Global Partitions products are as follows:

Sourcing of Raw Materials: LEED V4.1 awards points for buildings that contain recycled, salvaged, reused, or refurbished materials, with points awarded as a function of amount of different manufacturers and sourcing and extraction criteria by cost (3 manufacturers and 20% cost = 1 point, 5 manufacturers and 40% cost = 2 points). Credit is based on the sum of post-consumer recycled material + ½ of post-industrial recycled material. This contributes to Recycled Content credit from “Materials and Resources”.

- For credit achievement calculation, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at twice their base contributing cost (or number of products), up to a maximum of 200% of cost, or 2 products.

ASI Global Partitions products qualify for LEED Certification points as follows:

LEED Category	Points	Description	Powder Coated Steel	Stainless Steel	Solid Polymer (HDPE)	Phenolic (black core)	Phenolic (Color - Thru)	Plastic Laminate
Sourcing of Raw Materials	1 – 2	Post-Consumer	64%	43.5%	0%	0%	0%	1.1%
		Post Industrial/Pre-Consumer	7%	10%	33%	12%	12%	78.8%
Materials and Resources		Final Assembly Point	Eastanollee, GA 30538					



Date: Aug 26, 2021

Substitution Request 2

Sea-Tac Lighting & Controls, LLC
15455 53rd Ave S
Tukwila WA 98188
Phone: (206) 575-6865
Fax:

Job Name
Port of Tacoma Administrative Building Restroom Repairs
SEATAC-WWA21-117569

Bid Date
Aug 26, 2021

Submittal Date
Aug 26, 2021



Transmittal

Sea-Tac Lighting & Controls, LLC
15455 53rd Ave S
Tukwila WA 98188
Phone: (206) 575-6865
From: Samantha Nyblod

Project Port of Tacoma Administrative Building
Restroom Repairs

Quote# SEATAC-WWA21-117569

Location
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

S1
EM

MISC
Industrial Lighting Products
Sure-Lites

SUBSTITUTION REQUEST FORM
SQ4-16WLED-UNIV-35
SEL25SDSQ

**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**

SUBSTITUTION REQUEST FORM

Type:

SEATAC-WWA21-117569

Notes:

DIVISION 00 - Procurement and Contracting Requirements
SECTION 00 26 00 - Substitution Proceduresa. **PROJECT TITLE: Administration Building Restroom Repairs PROJECT NO.:**

a. SUBMITTED BY: SEATAC LIGHTING AND CONTROLS CONTRACT NO.: 071547

a. PRIME/SUB/SUPPLIER: DATE: 08/26/21

a. _____

a. Specification Title: LIGHTING FIXTURES Section No.: 26 50 00

a. Description: INTERIOR LIGHTING Paragraph: ALL

a. Page No.: ALL

a. _____

a. Proposed Substitution: PLEASE SEE ATTACHED PRIOR FOR REVIEW

a. Trade Name: Model No.:

a. Manufacturer:

a. Address: Phone No.:

a. Installer:

a. Address: Phone No.:

a. Differences between proposed substitution and specified product: MANUFACTURER

a. _____

a. _____

a. ☐ Point-by-Point comparative data attached - REQUIRED

a. _____

a. Reason for not providing specified item: MANUFACTURER

a. _____

a. Similar Installation:

a. Project: AVAILABLE UPON REQUEST A/E: _____

a. Address: _____

a. Owner: Date Installed: _____

a. Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

a. _____

a. Supporting Data Attached:

a. ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other: _____

a. _____

a. _____

a. Applicable to Substitution Requests During Construction:

a. Proposed to Port for accepting substitution: \$ _____

a. Proposed substitution changes Contract Time: ☒ No ☐ Yes [Add] [Deduct] ____ # days.


a. _____

a. The Undersigned certifies:

- i. • Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

Project No. 101339.02
Contract No. 071547

00 26 00 - 5

Submitted by Sea-Tac Lighting & Controls, LLC		Catalog Number: SUBSTITUTION REQUEST FORM	Type:
	Job Name: Port of Tacoma Administrative Building Restroom Repairs	Notes:	SEATAC-WWA21-117569

DIVISION 00 - Procurement and Contracting Requirements
SECTION 00 26 00 - Substitution Procedures

- i. • Same warranty will be furnished for proposed substitution as for specified product.
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- i. • Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- i. • Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

a. _____
a. Submitted By: SAMANTHA NYBLOD
a. Signed By: SAMANTHA NYBLOD Firm: SEATAC LIGHTING AND CONTROLS
a. Address: 15455 53rd Ave S, Tukwila, WA 98188

a. _____
a. Telephone: 2067088081 Email: SNYBLOD@SEATACLIGHTING.COM
a. Attachments: _____
a. _____

a. A/E's REVIEW AND RECOMMENDATION

- i. ☐ Approved Substitution
- i. ☒ Approved Substitution as Noted EM AND S1 ARE ACCEPTABLE
- i. ☐ Reject Substitution - Use specified materials.
- i. ☐ Substitution Request received too late - Use specified materials.

a. _____
a. Signed by:  Date: 9.2.21
a. _____

a. ENGINEER'S REVIEW AND ACTION

- i. ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- i. ☒ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- i. ☐ Substitution Rejected - Use specified materials.
- i. ☐ Substitution Request received too late - Use specified materials.

a. _____
a. Signed by:  Date: 9/3/21

END OF SECTION

Project No. 101339.02
Contract No. 071547

00 26 00 - 6

**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**

SQ4-16WLED-UNIV-35

Notes:

Type:**S1**

SEATAC-WWA21-117569

Project Name:

Part Number:

Type:

SQ**CURVED WRAP****FEATURES**

- 2ft, 4ft and 8ft configurations
- Sleek curved profile frosted acrylic impact resistant lens
- .040" aluminum pre-painted white housing
- Ceiling, wall or suspension mounting options
- Multiple dimming & sensor options to fully control occupied & unoccupied light levels
- Suitable for installing in continuous runs
- 3000K - 5000K CCT
- 0-10V Dimmable Driver (100% - 5%)
- 120-277V Universal Voltage
- 5 Year Warranty (std); 10 Year Warranty Optional
- ETL Listed for Damp Location
- DesignLights Consortium® Qualified Luminaire

407-478-3759
www.ilp-inc.com**SUITABLE APPLICATIONS**

- Office
- Hospitals
- Education
- Hallways
- Work Station Task Lighting
- Multipurpose

ORDERING GUIDE:

SERIES	WATTS	DRIVER	CCT	WARRANTY
SQ2 2ft Curved Wrap	16WLED	UNIV 120-277V	50	BLANK 5 Year 10YR ¹ 10 Year
	22WLED		40	
			35	
SQ4 4ft Curved Wrap	16WLED		30	
	30WLED			
	44WLED			
SQ8 8ft Curved Wrap	32WLED			
	60WLED			
	88WLED			

OPTIONS		CONTROLS OPTIONS	
Factory Installed		Basic	
CORDx	Cord (x = ft)	FIOS ⁵	On/Off Occupancy Sensor
SR	Sensor Ready Driver	USBD ⁶	User Bi-Level Dim Sensor w/ Occ. Sensor
DR	DALI-Ready Driver	BDxx ⁶	Preset Bi-Level Dim Sensor (xx=%eg.20,30)
BLD	Bi-level Dimming Driver (2 hot leads)		
EM5	5W LED Factory Installed Battery Backup		
EM5/HE ²	5W LED Factory Installed Battery Backup		
EM7	7W LED Factory Installed Battery Backup		
EM7/HE ²	7W LED Factory Installed Battery Backup		
EM10	10W LED Factory Installed Battery Backup		
EM10/HE ²	10W LED Factory Installed Battery Backup		
EM12	12W LED Factory Installed Battery Backup		
RACEWAY/3WIRE ⁴	3 wire raceway wiring harness for continuous wiring through fixtures (non-dim function)		
RACEWAY/5WIRE ⁴	5 wire raceway wiring harness for continuous wiring through fixtures		
SD480 ³	480V Step Down Transformer		
SD347 ³	347V Step Down Transformer		
Ship With Accessories		Advanced	
WC	11 GA Wire Cage	ES ^{4,7}	EasySense Grouping Sensor
FMB ^{10,11}	Fixture Mounting Box	5E/CU/IL ⁶	Enlighted 5E Individual Lighting (IL) Sensor with Control Unit
HUB 3/4 ^{10,12}	Conduit Hub 3/4" for pendant mount	5E/CU/CL ⁶	Enlighted 5E Connected Lighting (CL) Sensor with Control Unit
HB-XX-18Y-PAD	Y-Toggle Cable System (xx = in)	5E/CU/IOT ⁶	Enlighted 5E Internet of Things (IOT) Sensor with Control Unit
ALBR	Alignment Bracket (used to align fixtures mounted in continuous rows)	5E/SW/IL ⁶	Enlighted 5E Individual Lighting (IL) Sensor w/ Aux Driver/5 Wire Connection
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch	5E/SW/CL ⁶	Enlighted 5E Connected Lighting (CL) Sensor w/ Aux Driver/5 Wire Connection
ES/PCD ⁸	Pre-installed app on controlled device for commissioning	5E/SW/IOT ⁶	Enlighted 5E Internet of Things (IOT) Sensor w/ Aux Driver/5 Wire Connection
		VDO ^{4,9}	Lutron Vive DFCSJ-OEM-OCC (Daylight & Occupancy)
		VRF ^{4,9}	Lutron Vive DFCSJ-OEM-RF (RF Only)

² Contact factory for more details³ CEC Title 20 Compliant⁴ Does not qualify for DLC⁵ Used only when mounting in continuous rows⁶ End Mounted Sensor⁷ Integral to fixture⁸ Must be used with ES/PCS for commissioning⁹ One needed per project¹⁰ Must be used with SR Driver¹¹ One needed per 4ft section¹² Must use with HUB 3/4¹³ Must use with FMB

SQSPEC0231



Job Name:
Port of Tacoma Administrative Building
Restroom Repairs

Catalog Number:
SQ4-16WLED-UNIV-35

Notes:

Type:

S1

SEATAC-WWA21-117569

SQ

CURVED WRAP

LED SYSTEMS INFO ¹		3000K CCT		3500K CCT		4000K CCT		5000K CCT		Watts ²	CRI	DLC
Part #		Lumens	Efficacy	Lumens	Efficacy	Lumens	Efficacy	Lumens	Efficacy			
SQ2-16WLED-UNIV-XX		1,876 lm	111 lm/W	1,929 lm	114 lm/W	1,983 lm	117 lm/W	2,036 lm	120 lm/W	17 W	>80	Standard
SQ2-22WLED-UNIV-XX		2,523 lm	112 lm/W	2,559 lm	113 lm/W	2,595 lm	115 lm/W	2,615 lm	116 lm/W	23 W	>80	Standard
SQ4-16WLED-UNIV-XX		1,995 lm	122 lm/W	2,037 lm	124 lm/W	2,078 lm	127 lm/W	2,120 lm	129 lm/W	16 W	>80	Standard
SQ4-30WLED-UNIV-XX		3,546 lm	118 lm/W	3,620 lm	121 lm/W	3,694 lm	123 lm/W	3,768 lm	126 lm/W	30 W	>80	Standard
SQ4-44WLED-UNIV-XX		4,984 lm	111 lm/W	4,984 lm	113 lm/W	5,086 lm	116 lm/W	5,188 lm	118 lm/W	44 W	>80	Standard
SQ8-32WLED-UNIV-XX		3,857 lm	121 lm/W	3,938 lm	123 lm/W	4,018 lm	126 lm/W	4,099 lm	128 lm/W	32 W	>80	Standard
SQ8-60WLED-UNIV-XX		7,035 lm	117 lm/W	7,182 lm	120 lm/W	7,329 lm	122 lm/W	7,476 lm	125 lm/W	60 W	>80	Standard
SQ8-88WLED-UNIV-XX		9,826 lm	110 lm/W	10,031 lm	113 lm/W	10,236 lm	115 lm/W	10,442 lm	117 lm/W	89 W	>80	Standard

¹LED Chips are frequently updated therefore values are nominal

²Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

CONTROLS OPTIONS

BASIC

FIOS

Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise. Sensor mounted off end cap of fixture. Inquire for mounting on center of driver cover.

USBD

User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output. Sensor mounted off end cap of fixture.

BDxx

Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output. Sensor mounted off end cap of fixture. Sensor mounted off end cap of fixture.



Job Name:
Port of Tacoma Administrative Building
Restroom Repairs

Catalog Number:
SQ4-16WLED-UNIV-35

Notes:

Type:

S1

SEATAC-WWA21-117569

SQ

CURVED WRAP

ADVANCED

EASYSense

ES

EasySense sensor combines occupancy sensing, daylight harvesting & institutional tuning in one compact solution. This is an ideal control for any commercial application. Each sensor allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time and occupancy time out/hold time. Requires the use of EasySense Pre-Programmed Control Device (ES/PCD), or approved phone from compatibility list; one needed per project.



ES/PCD

Pre-Programmed EasySense Control Device. One needed per project. Sensor can also be programmed with the approved compatible cell phone (listed below).

Compatible Cell Phones:

- LG G4
- Samsung S5
- Samsung Note 4
- Samsung S4 Mini
- Samsung S6
- Samsung Note Edge 1
- Samsung S4

ES/WWS/DR

Optional Wireless / Batteryless Dual Rocker Wall Switch. Up to 100ft range. Functions include: On/Off, dimming and setting of (2) scenes for full room control.

Specifications:

- Wireless
- Batteryless
- Dual Rocker
- ZigBee®
- 30-100ft Range

Functions:

1. On (Hold to brighten up)
2. Off (Hold to dim down)
3. Scene 1
4. Scene 2



LUTRON

VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication & sensing as desired. Provided with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information.



VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Providing with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information.



ENLIGHTED

5E/CU/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). Fixtures are controlled based on occupancy & ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information.



5E/CU/CL

Bundled System with Enlighted 5E sensor (SU-5E-CL), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by the Enlighted Smart Sensors for energy, occupancy and environment. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)

5E/CU/IOT

Bundled System with Enlighted 5E sensor (SU-5E-IOT), Control Unit (CU-4E-FM) and Cable (CBL-5E-CU4-30N). Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)

5E/5W/IL

Bundled System with Enlighted 5E sensor (SU-5E-IL) & Cable (CBL-5E-CU4-30N) paired with a driver with auxiliary power and 5 wire connection. Fixtures are controlled based on occupancy and ambient light. Includes ability to group fixtures together and connect to a switch to zone fixtures for group operation. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)

5E/5W/CL

Bundled System with Enlighted 5E sensor (SU-5E-CL) & Cable (CBL-5E-CU4-30N) paired with a driver with auxiliary power & 5 wire connection. Fixtures are controlled based on occupancy and ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by the Enlighted Smart Sensors for energy, occupancy and environment. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)

5E/5W/IOT

Bundled System with Enlighted 5E sensor (SU-5E-IOT) & Cable (CBL-5E-CU4-30N) paired w/ a driver w/ auxiliary power and 5 wire connection. Fixtures are controlled based on occupancy & ambient light. Includes individual lighting control plus connection to Enlighted Energy Manager. The Energy Manager provides data analysis for all data collected by Enlighted Smart Sensors for energy, occupancy & environment. Additionally, the IOT functionality takes the data access and function beyond just lighting to a wide range of applications beyond the standard connected lighting controls. Provided with factory installed components only. Enlighted system provided by others. Contact factory for more information. (see image above)



Job Name:
Port of Tacoma Administrative Building
Restroom Repairs

Catalog Number:
SQ4-16WLED-UNIV-35

Notes:

Type:

S1

SEATAC-WWA21-117569

SQ

CURVED WRAP

OPTIONS



CORDx

Cords available in 6ft, 10ft, 12ft &
20ft (Inquire for additional options)
Plug options available



FMB

Includes rigid box to attach to the fixture,
provides for dual point mounting to accept a
pendant, hook or conduit hub (sold separately)



HUB 3/4

Conduit Hub 3/4" for Pendant Mounting

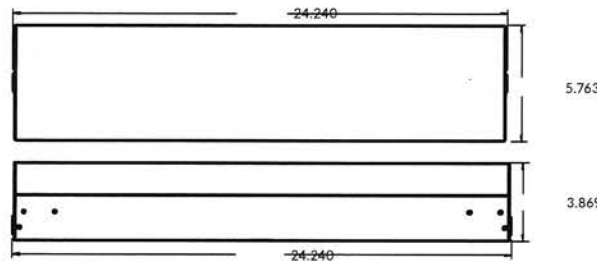
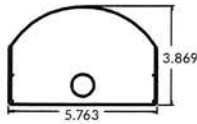


HB-XX-18Y-PAD

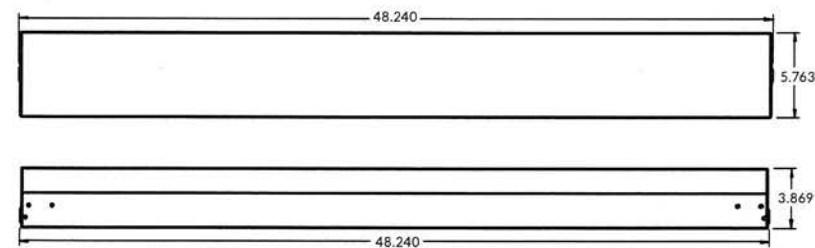
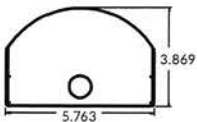
Includes 2 adjustable cable hangers.
Available in 60", 120", 180" & 240"

LINE DRAWINGS

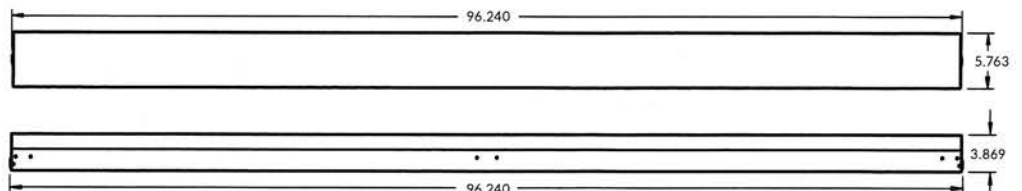
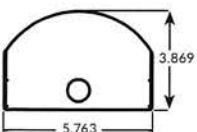
2ft Dimensions



4ft Dimensions



8ft Dimensions



SQSPEC0321



Job Name:
Port of Tacoma Administrative Building
Restroom Repairs

Catalog Number:
SQ4-16WLED-UNIV-35

Notes:

Type:

S1

SEATAC-WWA21-117569

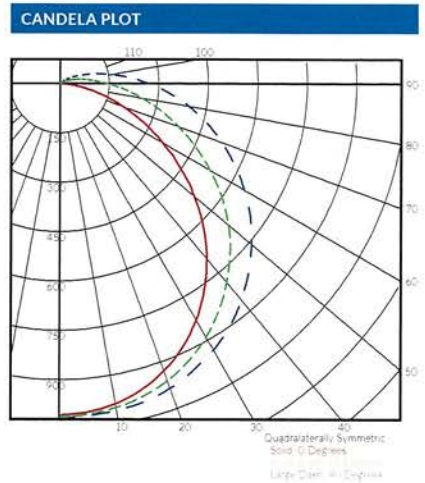
SQ

CURVED WRAP

PHOTOMETRIC DATA

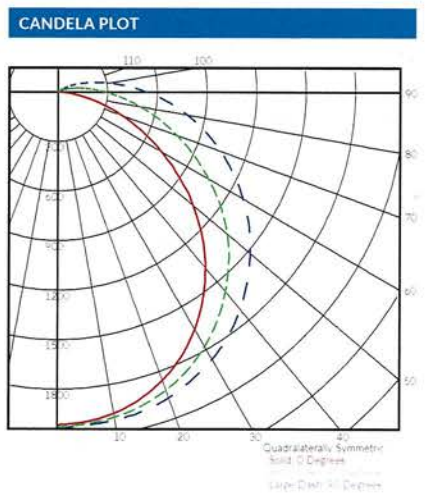
LUMINAIRE DATA	
Part Number	SQ4-30WLED-UNIV-40
Description	4ft Curved Wrap, 3,700 Lumens, 4000K, Frosted Lens
Fixture Lumens (lm)	3,694 lm
Wattage (W)	30 W
Efficacy (lm/W)	123 lm/W
Mounting	Pendant
Spacing Criteria	0° = 1.22, 90° = 1.37

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	1,331	37%
0° - 60°	2,417	67%
0° - 90°	3,389	94%
90° - 180°	200	5%
0° - 180°	3,694	100%



LUMINAIRE DATA	
Part Number	SQ8-60W
Description	8ft Curved Wrap, 7,300 Lumens, 4000K, Frosted Lens
Fixture Lumens (lm)	7,329 lm
Wattage (W)	60 W
Efficacy (lm/W)	122 lm/W
Mounting	Pendant
Spacing Criteria	0° = 1.22, 90° = 1.37

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	2,663	37%
0° - 60°	4,834	67%
0° - 90°	6,779	94%
90° - 180°	400	6%
0° - 180°	7,329	100%



**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**
SEL25SDSQ

Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-Lites**DESCRIPTION**

The Sure-Lites emergency series (SEL) is a UL 924 code compliant LED solution that provides from 25 feet to 60 feet of emergency egress coverage for a minimum of 90 minutes during a power outage. Key features include a polycarbonate housing, long life LED source, a no maintenance nickel cadmium battery, proprietary adjustable accuLED optics, and a labor savings self-diagnostic option that automatically performs required NFPA testing. Remote capable options providing from 4 watts to 10 watts are available which can power the SRP/SRM/ SRPA remotes providing maximum design flexibility for both indoor and outdoor applications. The Patented external battery disconnect and easy hang features reduce installation time and cost.

SPECIFICATION FEATURES**ELECTRICAL**

- Dual Voltage Input
120/277 VAC, 60Hz
- External Battery Disconnect
- Brownout circuit
- Low-voltage disconnect
- Overload / Short Circuit protection
- 4.8V Battery back-up
- Self-diagnostic option
- Laser test capability (self-diagnostic option)

HOUSING CONSTRUCTION

- Components injection molded, color stable, high impact polycarbonate
- White or black textured finish
- Black only available with self-diagnostic
- EZ Hang feature facilitates fast installation
- Suitable for ceiling, pendant or wall mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots
- Aesthetically designed with thin profile
- Heads available in circular or square shape for SEL25 and SEL50

BATTERY

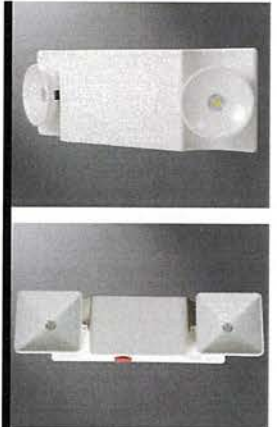
- Sealed Nickel Cadmium
- Full Recharge Time, 24 hours (max.)
- 0° to 40 °C (32 °F to 104 °F)

WARRANTY

- Five-year warranty
- Prorated five-year battery warranty

CODE COMPLIANCE

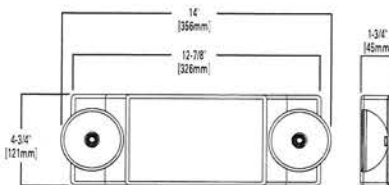
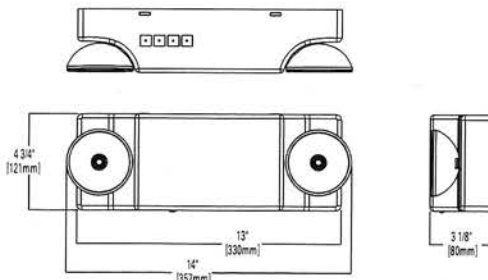
- UL924 Listed
- Damp Location
- Life Safety NFPA 101
- NEC/OSHA
- Most State & Local Codes
- California Energy Code

**SEL25/SEL50/SEL60****SEL Emergency Light****LED Emergency Light
Adjustable Optic
Self-Diagnostics****SEL****Remote Capacity****T20** Certified to California Title 20 Appliance Database**LUMEN OUTPUT**

Model	Lumens / Head
SEL25	109
SEL50	219
SEL60	309

HOW TO SPECIFY

Sure-lites LED emergency light with nickel cadmium battery, external battery disconnect, and adjustable optics.

DIMENSIONS**SEL25 / SEL25SD / SEL50 / SEL50SD****SEL25R10 / SEL50R7 / SEL60R4**TD505005EN
1-31-2018

**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**
SEL25SDSQ

Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-LitesSEL25
SEL50
SEL60**CATALOG LOGIC FOR NON-REMOTE CAPABLE VERSIONS**

SAMPLE NUMBER: SEL25, SEL50

Series	Coverage	Battery	Color	Self-Diagnostic	Head Shape	Full Catalog Options
SEL = LED Emergency Light	25 = 25 feet 50 = 50 feet	___ = NiCad	___ = White	___ = No Self-Diagnostic SD = Self-Diagnostic	___ = Circular SQ = Square	SEL25, SEL25SQ, SEL25SD, SEL25SDSQ, SEL50, SEL50SQ, SEL50SD, SEL50SDSQ
Series	Coverage	Battery	Color	Self-Diagnostic	Head Shape	Full Catalog Options
SEL = LED Emergency Light	25 = 25 feet	___ = NiCad	BK = Black	SD = Self-Diagnostic (standard)	___ = Circular SQ = Square	SEL25BKSD, SEL25BKSDSQ
SEL = LED Emergency Light	50 = 50 feet	___ = NiCad	BK = Black	SD = Self-Diagnostic (standard)	___ = Circular	SEL50BKSD

CATALOG LOGIC FOR REMOTE CAPABLE VERSIONS

SAMPLE NUMBER: SEL25R10, SEL50R7, SEL60R4

Series	Spacing	Battery	Remote Capacity	Color	Self-Diagnostic	Full Catalog Options
SEL = LED Emergency Light	25 = 25 feet	___ = NiCad	R10 = 10 watts	___ = White BK = Black	SD = Self-Diagnostic (standard)	SEL25R10SD SEL25R10BKSD
SEL = LED Emergency Light	50 = 50 feet	___ = NiCad	R7 = 7 watts	___ = White BK = Black	SD = Self-Diagnostic (standard)	SEL50R7SD SEL50R7BKSD
SEL = LED Emergency Light	60 = 60 feet	___ = NiCad	R4 = 4 watts	___ = White	___ = No SD SD = Self-Diagnostic	SEL60R4 SEL60R4SD
SEL = LED Emergency Light	60 = 60 feet	___ = NiCad	R4 = 4 watts	BK = Black	SD = Self-Diagnostic (standard)	SEL60R4BKSD

Emergency Egress Coverage; fixture spacing

Catalog Number	Output Lumens	0.1fc minimum		1fc minimum	
		7.5 foot height	20 foot height	7.5 foot height	20 foot height
SEL25	108	25 feet	12 feet	14 feet	12 feet
SEL50	218	50 feet	30 feet	21 feet	20 feet
SEL60	309	60 feet	52 feet	24 feet	30 feet

ELECTRICAL CHARACTERISTICS DURING CHARGING MODE

SEL25 / SEL50 / SEL60

Model	120 volt			277 volt		
	Power (W)	Current (A)	PF	Power (W)	Current (A)	PF
SEL25	0.6	0.07	0.06	0.64	0.07	0.03
SEL25SD	0.6	0.07	0.07	0.67	0.07	
SEL50	1.0	0.15	0.05	1.02	0.14	
SEL50SD	1.2	0.15	0.06	1.19	0.14	
SEL60R4	1.7	0.25	0.06	1.62	0.21	
SEL60R4SD	2	0.3	0.07	1.8	0.2	
SEL25R10SD	2	0.3	0.07	1.8	0.2	
SEL50R7SD	2	0.3	0.07	1.8	0.2	

**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**
SEL25SDSQ

Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-LitesSEL25
SEL50
SEL60**REMOTE SYSTEM DESIGN GUIDELINES**

SEL25 / SEL50 / SEL60

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
SEL60R4	4	1	3	1	NA	1	NA	NA
SEL60R4SD	4	1	3	1	NA	1	NA	NA
SEL60R4BKSD	4	1	3	1	NA	1	NA	NA
SEL60R4BK	4	1	3	1	NA	1	NA	NA
SEL25R10	10	2	8	4	2	4	2	1
SEL25R10BK	10	2	8	4	2	4	2	1
SEL50R7SD	7	2	5	2	1	2	1	NA
SEL50R7BKSD	7	2	5	2	1	2	1	NA
SEL50R7	7	2	5	2	1	2	1	NA
SEL50R7BK	7	2	5	2	1	2	1	NA
SEL25R10SD	10	2	8	4	2	4	2	1
SEL25R10BKSD	10	2	8	4	2	4	2	1



SRP



SRPD



SRM



SRMD



SRPA WHITE



SRPA BLACK



SRPA BRONZE



SRPA SILVER



Job Name:
Port of Tacoma Administrative Building
Restroom Repairs

Catalog Number:
SEL25SDSQ

Notes:

Type:

EM

SEATAC-WWA21-117569

Sure-Lites

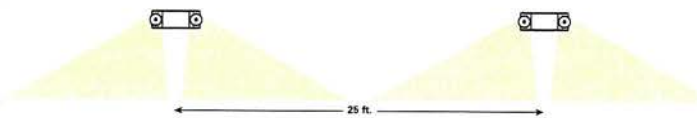
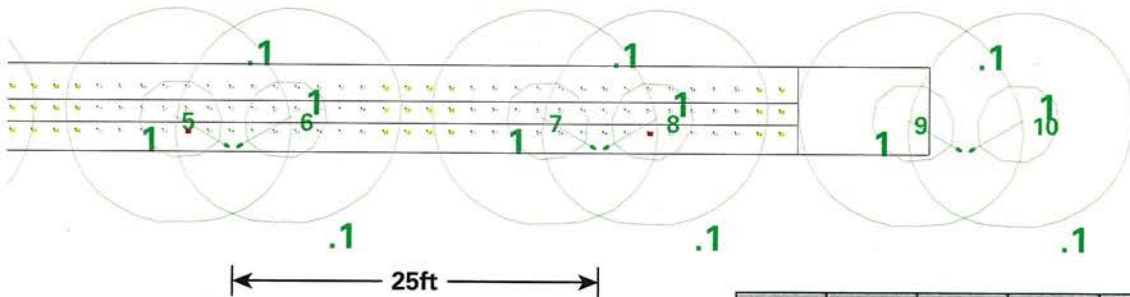
SEL25
SEL50
SEL60

REMOTE SYSTEM DESIGN GUIDELINES

LEM Series Remote Wattage Consumption					
Single Head Remotes			Double Head Remotes		
Catalog Number	LEMW1	LEMWR1	LEMW2	LEMWR2	
Watts Consumed	1.4	1.4	2.8	2.8	
LEM Series Remote Capacity					
Catalog Number	Remote Watts Available	# of LEMR1 Remotes Fixture Will Power	# of LEMWR1 Remotes Fixture Will Power	# of LEMR2 Remotes Fixture Will Power	# of LEMWR2 Remotes Fixture Will Power
SEL25R10SD	10	7	7	3	3
SEL25R10BKSD	10	7	7	3	3
SEL50R7SD	7	5	5	2	2
SEL50R7BKSD	7	5	5	2	2
SEL60R4	4	2	2	1	1
SEL60R4SD	4	2	2	1	1
SEL60R4BKSD	4	2	2	1	1

PHOTOMETRY

SEL25



X	Y	Z	Orient	Tilt
-0.5	0.25	7.5	125	27
0.5	0.25	7.5	55	27
16.5	0.211	7.5	125	27
17.5	0.212	7.5	55	27
33.5	0.172	7.5	125	27
34.5	0.173	7.5	55	27
50.5	0.132	7.5	125	27
51.5	0.135	7.5	55	27
67.5	0.093	7.5	125	27
68.5	0.096	7.5	55	27
84.5	0.054	7.5	125	27
85.5	0.058	7.5	55	27
101.5	0.015	7.5	125	27
102.5	0.019	7.5	55	27

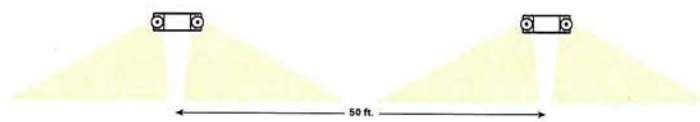
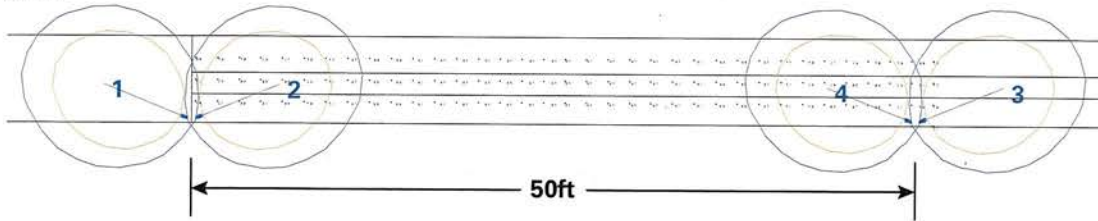
***The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet. 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.

**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**
SEL25SDSQ

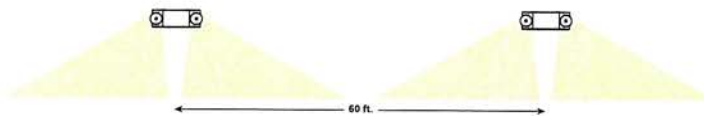
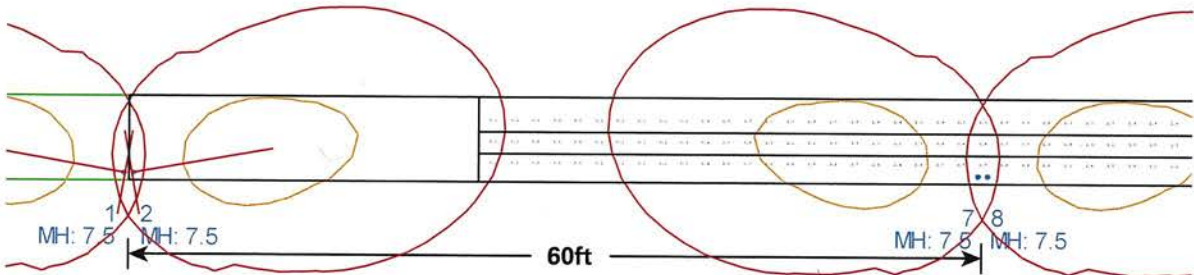
Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-LitesSEL25
SEL50
SEL60**PHOTOMETRY****SEL50**

X	Y	Z	Orient	Tilt
24.25	0.33	7.5	158	40
24.75	0.33	7.5	22	40
74.75	0.3	7.5	22	40
74.25	0.292	7.5	158	40

SEL60

X	Y	Z	Orient	Tilt
-0.25	0.5	7.5	170	57
0.25	0.5	7.5	10	57
120.25	0.5	7.5	10	57
119.75	0.5	7.5	170	57
59.75	0.5	7.5	170	57
60.25	0.5	7.5	10	57
180.25	0.5	7.5	10	57
179.75	0.5	7.5	170	57

***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 corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet. 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.



**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**

SEL25SDSQ

Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-Lites

SEL25
SEL50
SEL60**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.

EZ Key - External Power Disconnect

Prevents the battery from cycling during the construction phase and ensures battery is not drained from power cycling.

EZ Hang - Mounting Feature

The hands-free EZ Hang feature allows the installer to hang the emergency light face from the back plate in order to easily and efficiently make the power connections.

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.



EZ Key



EZ Hang

SELF-DIAGNOSTIC TESTING OPERATIONS

The Sure-Lites Self-Diagnostics is continuously monitoring your emergency fixture, and will signal any failure through the 3 color indicator LED.

Initial Operation:

When the unit is first powered up it will go into a 24 hour fast charge and the indicator LED will pulse green. Once the unit has fully charged it will perform a self calibration. After self calibration, the LED will change to steady green indicating the unit is fully charged and float charging the battery to maintain readiness.

Automatic Testing:

The unit will perform a battery capacity, lamp/LED, and charge circuit test every 30 days for 30 seconds. During this time, the indicator LED will change to a steady yellow. It will perform a full battery capacity (90 minute) test once per year. During this time, the indicator LED will change to a blinking yellow.

Manual Testing:

- 10 Second "Installation" test - Press and release the test button once during fast charge (blinking green) to initiate a 10 second quick test. The sign will switch to emergency mode for 10 seconds allowing the installer to verify proper installation of the unit, and the LED indicator will turn solid yellow.
- 30 Second Test - Press and release the test button once during float charge (steady green). The indicator LED will turn steady yellow to indicate the unit is performing a 30 second test of the batteries and lamps/LEDs.
- 90 Minute Test - Press and release the test button a second time during a 30 second test (steady yellow) to change to a 90 minute test. During this test, the LED indicator will change to blinking yellow, and the circuit will perform a full battery capacity, charge circuit, and LED test.
- Canceling Test - Press and release the test button during the 90 minute test (flashing yellow) to return the fixture to its original state (fast charge or float charge)

Laser Test:

The SEL SD products are equipped with a LaserTest function that allows the unit to be manually tested without the need to physically press the test button. Shining a laser pointer in the hole marked "LASERTEST" on the bottom of the unit has the same effect as a press and release of the test button.

Clearing Failure Codes:

- A battery failure (LED two blink red) can be cleared by replacing the battery. Disconnecting the battery and AC power, or performing a full 90 minute discharge will reset the error code, however, it will return if the battery is faulty
- Charge Circuit (LED three blink red) and lamp/LED failure (LED four blink red) will clear when the unit successfully passes a manual or automatic 30 second test.



**Job Name:**Port of Tacoma Administrative Building
Restroom Repairs**Catalog Number:**

SEL25SDSQ

Notes:

Type:**EM**

SEATAC-WWA21-117569

Sure-Lites

SEL25
SEL50
SEL60**SELF-DIAGNOSTIC TESTING OPERATIONS****Indicators:**

- LED Off - No power to unit, emergency mode.
- LED Steady Green - Unit is fully charged and is float charging the battery to maintain readiness.
- LED Green Pulse - Unit is in a 24 hour fast charge of the battery.
- LED Two Blink Red - Battery has failed a capacity test, or the battery is disconnected. See "Clearing Failure Codes" above.
- LED Three Blink Red - Battery charge circuit has failed. See "Clearing Failure Codes" above.
- LED Four Blink Red - Lamps have burned out, or on an EXIT/Combo, 50% or more of the LEDs have failed. See "Clearing Failure Codes" above.
- LED Steady Yellow - 30 second test or 10 second quick test (Fast Charge only).
- LED Blinking Yellow - 90 minute test.

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.

SURE-LITES SELF DIAGNOSTICS



- OFF - EMERGENCY
MODE / POWER OFF
- STEADY BLINK
GREEN - FAST
CHARGE
- STEADY GREEN -
FULL / FLOAT
CHARGE
- STEADY YELLOW -
QUICK TEST

- STEADY BLINK YELLOW
- 90 MINUTE TEST
- 2 BLINK RED -
BATTERY FAILURE
- 3 BLINK RED - CHARGE
CIRCUIT FAILURE
- 4 BLINK RED - LAMP /
LED FAILURE



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

Specifications and
dimensions subject to
change without notice



Date: Aug 26, 2021

Substitution Request 3

The Lighting Group LLC
5700 6th Ave South, Ste 215
Seattle WA 98108
Phone: (206) 298-9000
Fax: (206) 763-2764

Job Name
Port of Tacoma - Administration Building Plumbing Repairs Phase
LGNW21-83558
Tacoma Wa

Bid Date
Sep 8, 2021

Submittal Date
Aug 25, 2021

Architect:
Pending Architect

Engineer:
Hultz / BHU
2407 North 31st St.
Tacoma WA 98407



Transmittal

The Lighting Group LLC
 5700 6th Ave South, Ste 215
 Seattle WA 98108
 Phone: (206) 298-9000
From: Chris Hamaker

Project Port of Tacoma - Administration Building
Plumbing Repairs Phase
Quote# LGNW21-83558
Location Tacoma Wa
To Hultz / BHU
 2407 North 31st St.
 Tacoma WA 98407
 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 | |

Qty	Type	MFG	Part
0			*** LIGHTING ***
5	S2	Lithonia Lighting	JSF 7IN 10LM 35K 90CRI MVOLT ZT WH
13	W1	A-Light	ACL2-1FT-ILH+DLH-35-U-M-D-HE-R- STANDARD FINISH-1-D

a. **PROJECT TITLE: Administration Building Restroom Repairs PROJECT NO.:**

a. SUBMITTED BY: Lighting Group LLC CONTRACT NO.: 071547

a. PRIME/SUB/SUPPLIER: _____ DATE: _____

a. _____

a. Specification Title: 265000 Section No.: _____

a. Description: Lighting Paragraph: -1.01 - 3.07

a. _____ Page No.: 1-4

a. _____

a. Proposed Substitution: Attached - S2, W1

a. Trade Name: _____ Model No.: _____

a. Manufacturer: Lithonia, A Light

a. Address: _____ Phone No.: _____

a. Installer: _____

a. Address: _____ Phone No.: _____

a. Differences between proposed substitution and specified product: Proposed is

a. equal or better.

a. _____

a. ☐ Point-by-Point comparative data attached - REQUIRED

a. _____

a. Reason for not providing specified item: Proposed is equal or better.

a. _____

a. Similar Installation:

a. Project: N/A A/E: _____

a. Address: _____

a. Owner: _____ Date Installed: _____

a. Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

a. _____

a. Supporting Data Attached:

a. ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other: _____

a. _____

a. _____

a. Applicable to Substitution Requests During Construction:

a. Proposed to Port for accepting substitution: \$ _____

a. Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ # days.

a. _____

a. The Undersigned certifies:

- i. • Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

DIVISION 00 - Procurement and Contracting Requirements
SECTION 00 26 00 - Substitution Procedures

- i. • Same warranty will be furnished for proposed substitution as for specified product.
- i. • Same maintenance service and source of replacement parts, as applicable, is available.
- i. • Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- i. • Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- i. • Proposed substitution does not affect dimensions and functional clearances.
- i. • Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- i. • Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

a. _____
a. Submitted By: Chris Hamaker
a. Signed By: Chris Hamaker Firm: Lighting Group LLC
a. Address: 5700 6th Ave S
a. Seattle, Washington 98108
a. Telephone: 206-298-9000 Email: chamaker@lightinggroup.com
a. Attachments: _____
a. _____
a. _____

a. A/E's REVIEW AND RECOMMENDATION

- i. ☐ Approved Substitution
 - i. ☒ Approved Substitution as Noted - FIXTURE S2 IS ACCEPTABLE
 - i. ☐ Reject Substitution - Use specified materials. FIXTURE W1 IS NOT
 - i. ☐ Substitution Request received too late - Use specified materials. APPROVED - DOES
- a. NOT MEET SPECIFIED LUMEN OUTPUT
a. Signed by: Jerry Osler Date: 9/2/21
a. _____
a. _____

a. ENGINEER'S REVIEW AND ACTION

- i. ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
 - i. ☒ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
 - i. ☐ Substitution Rejected - Use specified materials.
 - i. ☐ Substitution Request received too late - Use specified materials.
- a. _____
a. Signed by: David P. Myer Date: 9/3/21

END OF SECTION

Submitted by The Lighting Group LLCChris Hamaker



Job Name:

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

*** LIGHTING ***

Notes:

Type:

LGNW21-83558

*** LIGHTING ***

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

JSF 7IN 10LM 35K 90CRI MVOLT ZT
WH
Notes:

Type:**S2**

LGNW21-83558

G1.8.54**JUNO™**

Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

JUNO SLIMFORM™ LED SURFACE MOUNT DOWNLIGHTS

FOR J-BOX INSTALLATION

5", 7", 11", 13" ROUND

JSF SERIES**PRODUCT DESCRIPTION**

Sleek, ultra-low profile energy efficient LED surface mount downlights in multiple sizes from 5" to 13" • Provides economical installation by mounting directly over standard and fire-rated junction boxes • Optional finish trims and shrouds available for custom, designer look similar to standard recessed downlights • Provides general illumination in residential and commercial applications including multi-family and hospitality • Ideal for use in corridors, living spaces, closets, hallways, pantries, stairways, outdoor covered areas without Emergency Option and much more.

PRODUCT SPECIFICATIONS

Construction Shallow, less than 1", solid ring with white finish • Non conductive fixture for shower light applications • Optional, field installable finish trims available for 5" and 7" versions to change the exterior finish of fixture • Optional, field installable decorative baffle and cone shrouds for 5" and 7" versions provide the aesthetic and source shielding similar to the experience of a fully recessed downlight.

Optics Light guide technology combined with diffusing lens conceals the LEDs from direct view and provides uniform lens luminance.

LED Light Engine LEDs mounted directly to heatsink designed to provide superior thermal management and ensure long life • 2700K, 3000K, 3500K or 4000K LED color temperature • LEDs binned for 4-step MacAdam ellipse color consistency • 90 CRI minimum.

LED Driver Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) driver that accommodates input voltages from 120-277 volts AC at 50/60Hz • Power factor > 0.9 at 120V input • 120 volt driver is dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage wall box dimmers • Universal voltage driver is dimmable with the use of most 0-10V wall box dimmers • External driver is only available on 5" and 7" models • For a list of compatible dimmers, see JUNOSLIMFORM-DIM.

Emergency Battery Option Available on fixture sizes 11" and larger • Battery factory assembled to fixture with integral test switch (EL option) • Drives LEDs for 90 minutes to meet Life Safety Code (NFPA-LSC), National Electrical Code (NEC), and UL requirements • Emergency battery not available in California due to Title 20 restrictions • EBX option provides back box without battery for consistent look when used in same space as fixtures with EL emergency option • Damp location only with emergency option.

Life Rated for 50,000 hours at >70% lumen maintenance.

Labels ENERGY STAR® certified • Certified to the high efficacy requirements of California T24 JA8-2016 • CSA listed for US and Canada • Suitable for wet locations (covered ceilings) • Damp location only with emergency option.

Testing All reports are based on published industry procedures; actual performance may differ as a result of the end-user environment and applications. All values are design or typical values, measured under laboratory conditions at 25 °C.

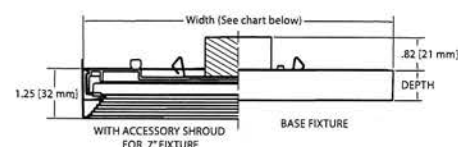
Warranty 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Specifications subject to change without notice.

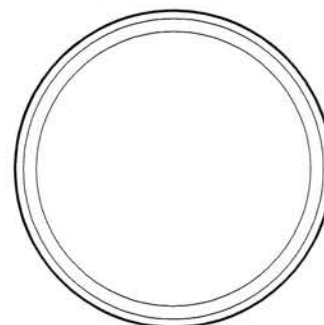
INSTALLATION

Junction Box Mounting Fixture provided with leads for direct wire connection in j-box • Installs directly to industry standard junction boxes • Compatible boxes include 4" metal or plastic octagonal standard and fire-rated junction boxes (3 1/2" junction box screw-hole spacing required for installation) • Minimum 2 1/8" deep junction box required for 5" and 7" fixtures (no depth requirement for 11" and larger fixtures) • Quick mount bracket provides fast installation of fully assembled fixture to junction box • Suitable for ceiling mount • Suitable for use within closet storage spaces when installed per NEC requirements.

Junction box sizes vary - Verify compatibility with fixture prior to installation

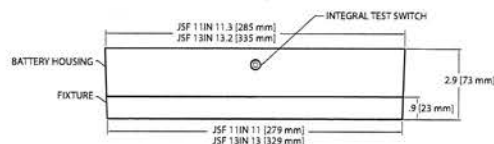
DIMENSIONS

External driver available on 5" and 7" models only.

**ROUND SPECIFICATIONS**

	Width	Depth
JSF 5IN	5.25 (13.34)	0.75 (1.91)
JSF 7IN	7.77 (19.74)	0.75 (1.91)
JSF 11IN	11.08 (28.14)	0.9 (2.29)
JSF 13IN	13.05 (33.15)	0.9 (2.29)

All dimensions are in inches (centimeters) unless otherwise indicated.

EMERGENCY BATTERY FOR 11" AND 13"

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

JSF 7IN 10LM 35K 90CRI MVOLT ZT
WH
Notes:

Type:**S2**

LGNW21-83558

G1.8.54

JUNO SLIMFORM™ LED SURFACE MOUNT DOWNLIGHTS

FOR J-BOX INSTALLATION
5", 7", 11", 13" ROUND
JSF SERIES

PERFORMANCE DATA

	JSF 5IN		JSF 7IN		JSF 11IN		JSF 13IN	
	120V	MVOLT	120V	MVOLT	120V	MVOLT	120V	MVOLT
Lumens	700	700	1000	1000	1300	1300	1800	1800
CRI	90CRI		90CRI		90CRI		90CRI	
CCT	27K, 30K, 35K, 40K		27K, 30K, 35K, 40K		27K, 30K, 35K, 40K		27K, 30K, 35K, 40K	
Voltage	120V	120V-277V	120V	120V-277V	120V	120V-277V	120V	120V-277V
Input Power	10W	10W	13W	13W	15W	15W	20W	20W
Input Current	110MA	50MA	150MA	60MA	180MA	80MA	240MA	110MA
Frequency	50/60Hz		50/60Hz		50/60Hz		50/60Hz	
Power Factor	>0.9		>0.9		>0.9		>0.9	

ORDERING INFORMATION

Example: JSF 5IN 07LM 27K 90CRI 120 FRPC WH

Series	Size/Lumens	Color Temperature	CRI	Voltage/Driver	Finish	Emergency Battery ^{1,2,3}
JSF SlimForm Surface Mount Downlight - Round	5IN 07LM 5", 700 Lumens	27K 2700K	90CRI 90+ CRI	120 FRPC Dedicated 120V, Forward Reverse Phase Dimming	WH White	EL ³¹ Battery Back-up Option EBX Empty Back Box for Aesthetics
	7IN 10LM 7", 1000 Lumens	30K 3000K				
	11IN 13LM 11", 1300 Lumens	35K 3500K		MVOLT ZT Universal Voltage 120V-277V, 0-10V Dimming		
	13IN 18LM 13", 1800 Lumens	40K 4000K				

†: EL Battery Back-up option is not Energy Star certified

ACCESSORIES

TRIM - Optional, field installable finish trim rings available to change the exterior finish of fixture.
Example: JSFTRIM 5IN BL

Series	Size	Finish
JSFTRIM SlimForm Accessory- Trim	5IN 5 inches	BL Black
	7IN 7 inches	BZ Bronze
		SN Satin Nickel

**TRIM**

SHROUD - Optional, field installable decorative baffle and cone shrouds provides the aesthetic and source shielding similar to the experience of a fully recessed downlight.
Example: JSFSHROUD 5IN DB WWH

Series	Size	Shroud Style	Finish
JSFSHROUD SlimForm Accessory Shroud - Round	7IN 7 inches	DB Downlight Baffle	WWH White trim, white shroud

**BAFFLE SHROUD****Notes:**

- Emergency battery available with 11IN and 13IN only.
- Emergency battery is only available with MVOLT ZT.
- Emergency battery option not available in California due to Title 20 restrictions.

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

JSF 7IN 10LM 35K 90CRI MVOLT ZT
WH
Notes:

Type:**S2**

LGNW21-83558

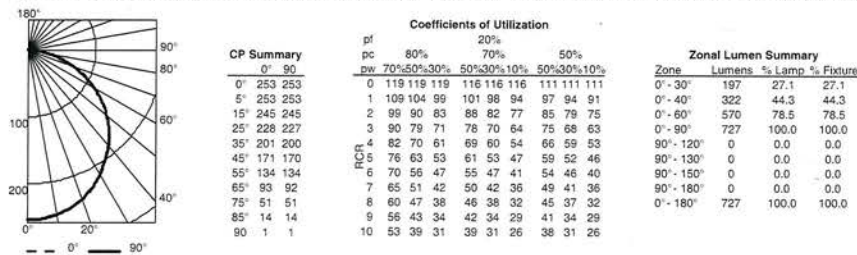
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JUNO SLIMFORM™ LED SURFACE MOUNT DOWNLIGHTS

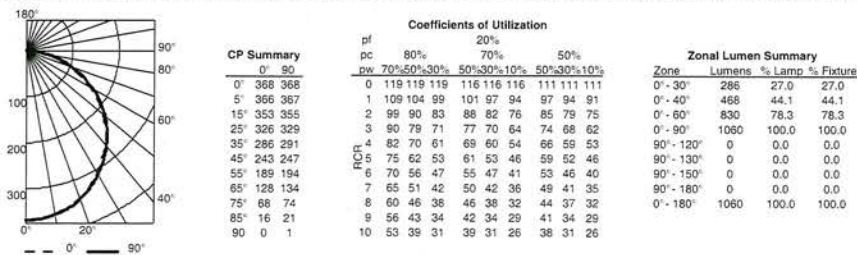
FOR J-BOX INSTALLATION
5", 7", 11", 13" ROUND
JSF SERIES

PHOTOMETRICS**Distribution Curve****Distribution Data****Coefficient of Utilization****Illuminance Data at 30" Above Floor for a Single Luminaire**

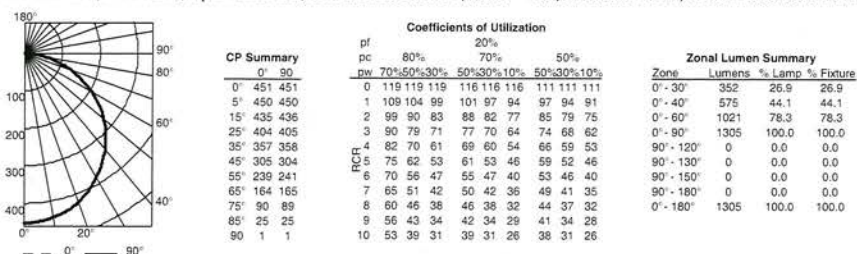
JSF 5IN 27K, 2700K LEDs, input watts: 9.72, delivered lumens: 727, LM/W = 74.8, test no. ISF 33599, tested in accordance to IESNA LM-79.



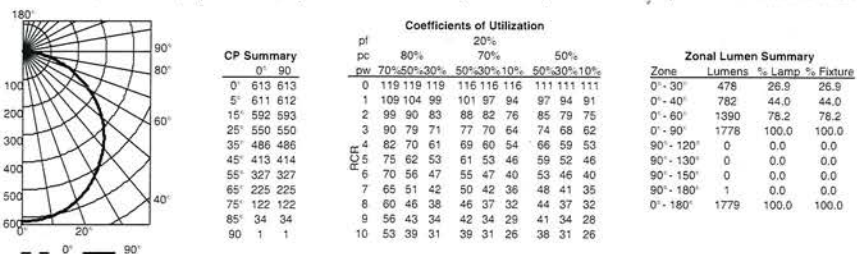
JSF 7IN 27K, 2700K LEDs, input watts: 12.8, delivered lumens: 1060, LM/W = 82.8, test no. ISF 33600, tested in accordance to IESNA LM-79.



JSF 11IN 27K, 2700K LEDs, input watts: 15.2, delivered lumens: 1305, LM/W = 85.9, test no. ISF 33661, tested in accordance to IESNA LM-79.



JSF 13IN 27K, 2700K LEDs, input watts: 20.2, delivered lumens: 1779, LM/W = 88, test no. ISF 33663, tested in accordance to IESNA LM-79.



For 30K fixtures, use 1.02 multiplier; For 35K fixtures, use 1.03 multiplier, For 40K fixtures, use 1.07 multiplier.

Submitted by The Lighting Group LLC Chris Hamaker

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

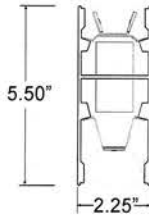
Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
STANDARD FINISH-1-D

Notes:

Type:**W1**

LGNW21-83558

ACL2 | SPECIFICATION GUIDE

ORDERING CODE

ACL2**D**

PROJECT INFO

DATE

TYPE

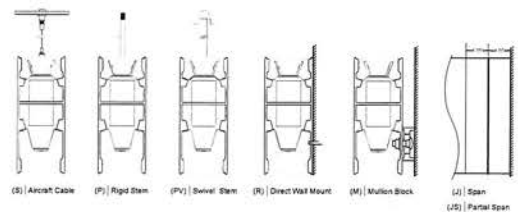
QUANTITY

PERFORMANCE AT 4000K

OUTPUT	DISTRIBUTION	NOMINAL LUMEN OUTPUT		INPUT WATTS	EFFICACY
		INDIRECT	DIRECT		
High	Symmetric	N/A	921 lm/ft	9.7 W/ft	95 lm/W
	Symmetric Wide	673 lm/ft	N/A	9 W/ft	75 lm/W
	Symmetric Narrow	912 lm/ft	N/A	9.6 W/ft	95 lm/W
	Asymmetric	670 lm/ft	N/A	9.6 W/ft	70 lm/W
Standard	Symmetric	N/A	460.5 lm/ft	5 W/ft	95 lm/W
	Symmetric Wide	352.5 lm/ft	N/A	5 W/ft	74 lm/W
	Symmetric Narrow	456 lm/ft	N/A	5 W/ft	95 lm/W
	Asymmetric	335 lm/ft	N/A	5 W/ft	70 lm/W

Custom tuned output available from 25% to 125% of high output. Please consult factory for custom lumen output and wattage.

MOUNTING OPTIONS



ACL2	+					
SERIES	LENGTH OR PATTERN TYPE	INTERSECTION TYPE	OUTPUT	LED CCT	LED CRI	VOLTAGE
ACL2	1FT Nominal Length*	IT "T" Intersection*	ILS Indirect LED Standard Output	27 2700K	80+ CRI	U 120V - 277V
	M_ Exact Length**	IX "X" Intersection*	ILH Indirect LED High Output	30 3000K	90CRI 90+ CRI	3 347V
	PL "L" Shape***	IY "Y" Intersection**	IC_ Indirect LED Custom Output*	35 3500K		
	PU "U" Shape***		+	40 4000K		
	PR Rectangle / Square***		DL S Direct LED Standard Output			
	CP Custom Pattern****		DLH Direct LED High Output			
			DC_ Direct LED Custom Output			

*Specify in feet to the nearest foot (i.e. 12)

**Specify in inches to the nearest 1/8 (i.e. M180 125)

***Specify in inches to the nearest 1/8 (See Pattern Guide for details)

****Contact Design Assist

*Available with Flat Blade Louvers only in 90° degrees

**Fully illuminated intersection available with HE Tech optic only

*Available from 25% to 125% of LED High Output

D				STANDARD FINISH		
INDIRECT DISTRIBUTION	INDIRECT OPTICS	DIRECT OPTICS	MOUNTING	FINISH	CIRCUITING	
M Symmetric Wide*	D Rigid Diffuse Dust Cover	HE HE Tech**	S Aircraft Cable*	T Titanium	1 Single Circuit	
G Symmetric Narrow		LV Flat Blade Louver*	P Rigid Stem**	W White	2 Multi-Circuit*	
N Asymmetric			PV Swivel Stem**	B Black	M Other Multi-Circuit**	
			R Direct Wall Mount	O_ Other*		
			M Mullion Blocks***			
			JS Partial Span			
			J Full Span			

*Not recommended for wall mount

*Aluminum Standard. Not available with Wet Location

*Standard 48" field adjustable cable, specify length to nearest inch if over 48". Black power cord provided for black and titanium finish and white power cord provided for all other finish finishes, unless otherwise specified.
**Indicate stem length to nearest inch, 1.00" minimum
***Enter "1" for 1" depth. Enter "5" for 1/2" depth.

*Specify RAL#

*Separate uplight and downlight circuits. **Submit multi-circuiting requirements

DIMMING	EMERGENCY	SENSORS	OPTIONS
D Standard 0-10V dimming*	EC Emergency - circuited	OC Occupancy Sensor - Ceiling	R Right Endcap Feed
D1 Philips Ecosystems 1% (E1D1)	E_ Emergency - battery*	PC Photocell / Daylight Sensor - Ceiling	L Left Endcap Feed
D2 ELV 5% dimming**		OF Occupancy Sensor - Fixture	N New York City Code
D3 DMX 0.1% dim-to-dark (EldoLED)		PF Photocell / Daylight Sensor - Fixture	K Natatorium Application*
D4 DALI dim-to-off (EldoLED)		OPC Occupancy & daylight Sensor - Ceiling	Q Wet Location**
NAIR nLight @AIR (dim-to-off)**		OPF Occupancy & daylight Sensor - Fixture	
NWIR nLight @Wired (dim-to-off)**			
DO Dimming - Other**			

*1% Dimming standard unless otherwise specified.
**Reference Lutron LTB44 driver for compatible dimmers.

*Factory-installed emergency battery pack. Specify desired quantity of batteries. Not available on fixtures > 4' length. Not available for SATV. See technical data for more information.

Sensor will be matched to dimming input.

*Not available with aircraft cable. See guide and contact Design Assist.
**Not available with aircraft cable. Wet location suitable in full coverage and/or mulion mounted applications (direct to sky not recommended). Not suitable for extreme weather applications. Refer to Wet Location brochure and contact Design Assist for more information.

a·light

2155 MARTINE WAY | OCEANAIRE, CA 90551
TEL: 310.441.1111 | ALIGHTS.COM | FAX: 310.441.1112



**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
STANDARD FINISH-1-D

Notes:

Type:**W1**

LGNW21-83558

ACL2 | PHOTOMETRY**LIGHT OUTPUT****DISTRIBUTION**

Indirect Symmetric Wide
Indirect Asymmetric
Direct Symmetric

OUTPUT

LH: High output - 10 W/ft
LS: Standard output - 5 W/ft
C: Custom tuned output - Specify Wattage

LIGHT LOSS FACTORS

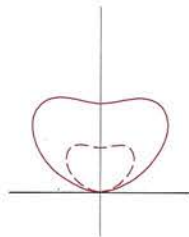
80+ CRI, 4000K, Baseline
80+ CRI, 3500K, 97%
80+ CRI, 3000K, 94%
80+ CRI, 2700K, 90%
90+ CRI, 4000K, 88%
90+ CRI, 3500K, 86%
90+ CRI, 3000K, 82%
90+ CRI, 2700K, 76%

PHOTOMETRIC DATA**INDIRECT SYMMETRIC WIDE**

ILH - 4000K, DUST COVER

Lumens: 673 lm/ft
Input watts: 9 W/ft
Efficacy: 75 lm/W

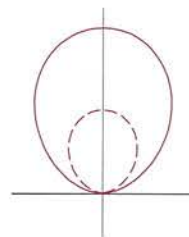
ILH ———
ILS - - - - -

**INDIRECT SYMMETRIC NARROW**

ILH - 4000K, DUST COVER

Lumens: 912 lm/ft
Input watts: 9.6 W/ft
Efficacy: 95 lm/W

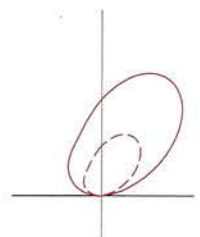
ILH ———
ILS - - - - -

**INDIRECT ASYMMETRIC**

ILH - 4000K, DUST COVER

Lumens: 670 lm/ft
Input watts: 9.6 W/ft
Efficacy: 70 lm/W

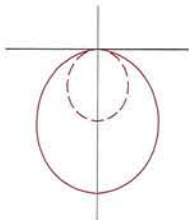
ILH ———
ILS - - - - -

**DIRECT SYMMETRIC**

DLH - 4000K, HE TECH

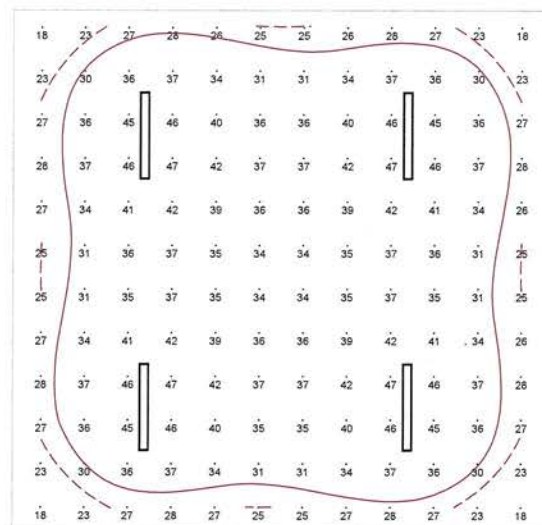
Lumens: 921 lm/ft
Input watts: 9.7 W/ft
Efficacy: 95 lm/W

DLH ———
DLS - - - - -

**SAMPLE INSTALLATION - OPEN ROOM**

INDIRECT / LH-SYMMETRIC / DIRECT / LH / HE / 4000K

Room dimensions: 30 ft x 30 ft x 12 ft
Reflectance: 80% / 50% / 20%
Mounting height: 10 ft A.F.F.
Fixture length: 4 ft
Calculation grid: 2 ft x 2 ft
Calculation plane (horizontal): 2.5 ft A.F.F.
Average Illuminance: 34 fc
Fixture spacing: 12 ft x 12 ft
Uniformity: 1.9:1 (avg/min)



TOP VIEW

30 ft ———
25 ft - - - - -

a·light

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
STANDARD FINISH-1-D

Notes:

Type:**W1**

LGNW21-83558

ACL2 | PHOTOMETRY**LIGHT LOSS FACTORS (LLF)**

OUTPUT	CCT	DIRECT		INDIRECT					
		SYMMETRIC		SYMMETRIC WIDE		SYMMETRIC NARROW		ASYMMETRIC	
		CRI 80 +	CRI 90 +	CRI 80 +	CRI 90 +	CRI 80 +	CRI 90 +	CRI 80 +	CRI 90 +
LH <small>(High Output)</small>	4000k	921 lm/ft	813 lm/ft	473 lm/ft	594 lm/ft	912 lm/ft	805 lm/ft	670 lm/ft	592 lm/ft
	3500k	902 lm/ft	787 lm/ft	459 lm/ft	575 lm/ft	893 lm/ft	779 lm/ft	654 lm/ft	572 lm/ft
	3000k	848 lm/ft	743 lm/ft	434 lm/ft	543 lm/ft	859 lm/ft	734 lm/ft	631 lm/ft	541 lm/ft
	2700k	834 lm/ft	705 lm/ft	410 lm/ft	515 lm/ft	824 lm/ft	698 lm/ft	607 lm/ft	513 lm/ft
LS <small>(Standard Output)</small>	4000k	441 lm/ft	407 lm/ft	353 lm/ft	311 lm/ft	454 lm/ft	403 lm/ft	335 lm/ft	294 lm/ft
	3500k	451 lm/ft	393 lm/ft	345 lm/ft	301 lm/ft	444 lm/ft	389 lm/ft	328 lm/ft	284 lm/ft
	3000k	434 lm/ft	372 lm/ft	332 lm/ft	284 lm/ft	430 lm/ft	368 lm/ft	314 lm/ft	270 lm/ft
	2700k	417 lm/ft	352 lm/ft	319 lm/ft	270 lm/ft	413 lm/ft	349 lm/ft	304 lm/ft	254 lm/ft

Factors above for high output (LH).
For standard output (LS) - 50%.

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
STANDARD FINISH-1-D

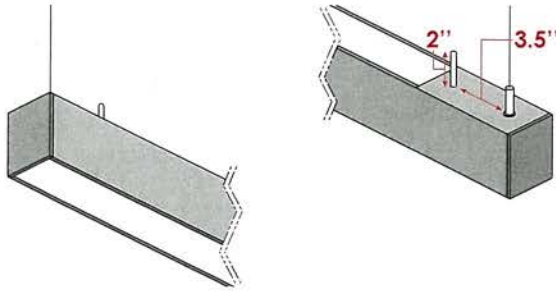
Notes:

Type:**W1**

LGNW21-83558

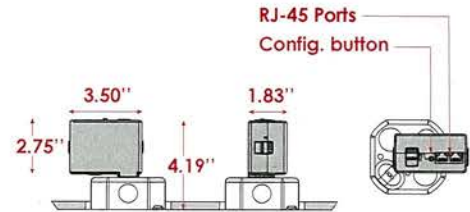
ACL2 | NLIGHT**NLIGHT DIMENSIONS**

AIR : r10



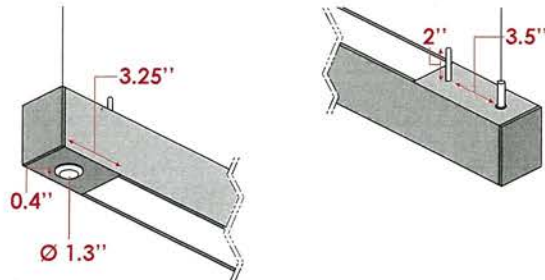
*Fixture mounted sensors and filler panel for nLight AIR only.

WIRED : nPP16



*Mounted on standard 4" octagonal j-box. Fits on any j-box with 5/8" knockouts

AIR : res7



*Fixture mounted sensors and filler panel for nLight AIR only.

AIR : rPP20



*Mounted on standard 4" octagonal j-box. Fits on any j-box with 5/8" knockouts

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 Plumbing Repairs Phase
 Architect: Pending Architect
 Engineer: Hultz / BHU (Tacoma)

Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
 STANDARD FINISH-1-D

Notes:**Type:****W1**

LGNW21-83558

ACL2 | TECHNICAL DATA**LINEAR DIMENSIONS**

Elements - 4', 8', and 12' nominal length individual fixtures that can be joined to create continuous row lengths.

Integrations - Nominal or exact lengths to the nearest 1/8th of an inch available as individual fixtures or joined to create continuous row lengths, minimum fixture lengths is 12 inches. Patterns comprised of 90 degree precisely welded fully illuminated corners provide a multitude of geometric options and architectural transitions.

Custom - Contact Design Assist for modifications to product not detailed within Elements or Integrations specification sheets.

OPTICS

He Tech™ patented high efficacy extruded diffuse acrylic lens technology with integrated opaque white reflector delivers superior lumen output with optimal uniform lens surface luminance for direct distribution. A rigid partially diffuse extruded dust cover lens optimized for indirect LED performance delivers 92% transmittance.

Flat Blade Louvers are used to cut down on glare and better control the light source on ACL2, ACL3 or ACL5. This option includes a linear film diffuser (inserted between the louvers and the LEDs), that enhances glare control and lends light sources. The standard finish is aluminum. Other colors and custom finish options available, specify RAL# or contact factory regarding custom finish requirement

LED LIGHT SOURCE

Custom manufactured linear board array uses high performance Nichia® LED in combination with a performance driven heat sink technology. Tested in accordance with LM79 and LM-80; L70>60,000hr; operated at reduced output for high efficacy and lumen maintenance. 3000K, 3500K, and 4000K with 80+ CRI standard; other color temperatures and 90+ CRI available upon request, contact factory. LED color variation maintained at a 3-step MacAdam ellipse (SDCM 3x). LEDs are available in Low, Standard, and High outputs. Refer to photometry for delivered lumens. Custom output available in the range 25% to 125% of high output, contact factory.

LED DIMMING DRIVER

Factory tuned constant current electronic 0-10V control dimming driver is standard. Specification grade dimming down to 1%. Driver life of 50,000 hrs with ambient operating temperature range of -20°C to 50°C, maximum case temperature of 80°C. Electrical specifications at maximum driver load: PF >0.9, THD <20%, >85% Efficiency. Other available drivers include Lutron Hi-lume 1% EcoSystem LED Driver (LDE1) with Soft On, Fade to Black dimming technology; and DMX and DALI protocol drivers. Other Lutron and specialty drivers available, contact factory.

EMERGENCY

This luminaire is provided with a factory installed LED emergency lighting battery pack for both normal and emergency operation, 120-277v only. This fixture integrated unit contains long-life Ni-Cad recyclable battery, 24 hour charger, and converter circuit. Test switch and charge indicator provided. Test button to be remote located within 3 feet of the luminaire, by others in accordance with local code. Emergency mode provides constant power to a nominal 12W LED load for a period of 90 minutes, delivering 1200 lumens of unwavering illumination throughout the full 90 minute emergency duration. Unless otherwise specified, the emergency battery pack will illuminate one 2 foot end in the direct portion of the fixture.

Emergency circuiting provided as a separate circuit from normal power circuit according to NEC requirements, specify circuit length and location.

CONTROLS

Low-profile integral occupancy and daylight sensors are available to deliver high performance control in an architecturally pleasing package.

Integrated nLight® for system networking wired and wireless:

nLIGHT® AIR WIRELESS

The integrated API smart sensor is part of each luminaire in the nLight® AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application. Optionally you can order nLight® AIR less sensors for compatibility with an nLight Air wireless system. The rIO, rES7, rMSOD, and rCMS models are available for integration.

CONTROLS AND SYSTEM NETWORKING OPTIONS

For wired networking via Cat-5e, choose an nLight® wired module. The nIO EZ PH, nIO EZDL CCT, nES7 and nCM are available for integration.

Other manufacturer controls may be available for product integration, contact factory.

a·light

**Job Name:**

Port of Tacoma - Administration Building
Plumbing Repairs Phase
Architect: Pending Architect
Engineer: Hultz / BHU (Tacoma)

Catalog Number:

ACL2-1FT-ILH+DLH-35-U-M-D-HE-R-
STANDARD FINISH-1-D

Notes:

Type:**W1**

LGNW21-83558

ACL2 | TECHNICAL DATA**MOUNTING**

Suspension with aircraft cables or pendant stems, and full or partial span mounting available.

Aircraft cable set includes 48" standard length 1/16" stainless steel adjustable aircraft cables with secure micro grippers to field set suspension length, comes factory installed in fixture. 4-1/2" x 4-1/2" square white canopies. Cord strain also included. Power cord options available for aircraft cable. Black power cord provided for black and titanium finish, white power cord provided for all other fixture finishes unless otherwise specified.

Rigid pendant stem set includes 1/4" hollow white threaded rod for suspension and power feed, standard specification length, 1" minimum. 5" square mono point white canopies.

Swivel stem set includes 1/4" hollow white threaded rod for suspension and power feed, standard specification length, 1" minimum. 5" square mono point white 45 degree angle swivel stem.

Specify if other suspension length is required. Canopies provided as required for quantity of power feed and non power feed locations (crossbar included). Specify if other shape, size, or color is required.

Direct wall mounting is ADA compliant. Fixture mounts directly to wall surface requiring field drilled mounting and power feed holes. Factory pre-drilled holes can be drilled and tapped for 1/2" chase nipple, submit dimension requirements when ordering.

MOUNTING CONTD.

Mullion blocks are used to mount fixture to a horizontal or vertical window mullion and can also be used to offset fixture from wall. 1/2" or 1" deep milled aluminum blocks are available standard. 3/8" and 2" deep blocks also available upon request. (2) blocks provided for fixtures 8ft or less, fixtures larger than 8ft provided with (3) blocks every 12ft. Quantity of power feed and non power feed blocks provided as required. Fixture mounting requires field drilled mounting and power feed holes. Factory pre-drilled holes can be drilled and tapped for 1/2" chase nipple, submit dimension requirements when ordering.

Specify if other suspension length is required. Canopies provided as required for quantity of power feed and non power feed locations (crossbar included with power feed only). Specify if other shape, size, or color is required.

Partial /Full span mounting conditions utilize special expansion joint end caps to mount fixture to wall (blocking required) and feed power through the end cap, specify end feed location. Additional attachment hardware provided as required depending on partial span condition. Provide architectural details at time of ordering for inclusion in factory shop drawings; field verified dimensions required for full span mounting.

STRUCTURE

Robust, high quality 60% recycled aluminum extruded housing. 0.040" thick aluminum internal gear trays. Flat or flanged aluminum end caps. Aluminum joiner brackets. 4 lbs/ft approximate fixture weight.

FINISH

Electrostatically applied powder coat finish. Standard finish options include titanium, white, and black. Other colors and custom finish options available, specify RAL# or contact factory regarding custom finish requirement.

LISTING

UL/CUL rated for Damp Locations. Tested in accordance with UL 1598 and certified to CEC/CSA C22.1, NEC, ANSI/NFPA 70, and NOM-001-SEDE.

WARRANTY

Limited defect-free manufactured equipment warranty provided under normal use and proper storage for a period of one (1) year. LED products (LED boards and drivers) will be covered for a period of five (5) years. Please refer to full terms and conditions on our website.