

**The Philadelphia Parking Authority
701 Market Street, Suite 5400
Philadelphia, PA 19106**

Bid No. 24-27

**Tenant Fit-Out at Parkade on 8th Street Garage and Swanson Street Office
Renovations – Electrical Rebid
Addendum One**

To: See Email Distribution List

From: Shannon Stewart
Manager of Contract Administration

Date: October 16, 2024

No Pages: 3 plus Submittal

This addendum is issued on October 16, 2024, prior to the bid due date to add, delete, modify, clarify and/or to respond to questions submitted by Prospective Bidders regarding the work included in the above referenced solicitation.

MATERIAL SUBSTITUTION REQUEST

- 1. Substitution:** We are requesting to substitute Type A, Picasso Lighting: RAI-R2X2-DR3-35-90-OW With elite: 22-od1v-led-3400l-dim10-mvolt-35k-85 Located on Pages 2-8 of Submittal.

Approval: 8th & Parkade – Type A: The CRI on the substituted fixture is 85, we specify a CRI of 90 on all fixtures. The CRI should be the same on all fixtures, so we do not approve this substitution.
- 2. Substitution:** We are requesting to substitute Type B, Lucifer Lighting F4S-MFS-1-WH-WH-90S21A-35-40-NIC-04 with Elite: HH4SQ-LED-2000L-DIM10-MVOLT-MD-35K-90-LED-4614-CL-WH located on Pages 9-11 of submittal.

Approval: 8th & Parkade – Type B: Acceptable substitution.
- 3. Substitution:** We are requesting to substitute Type C, Picasso Lighting: TRU-PR-6-D7-I3-35-90-OW-BM-ZT1-BK with Elite: OLS-WD-LED-2-S-6-750L-DIM10-MVOLT-35K-85-BK located on P.12-20 of submittal.

Approval: 8th & Parkade – Type C: The CRI on the substituted fixture is 85, we specify a CRI of 90 on all fixtures. The CRI should be the same on all fixtures, so we do not approve this substitution. Additionally, the specified fixture has a 300LPF Indirect lamp as well as the direct lamp, this is not provided on the substitution fixture and accordingly we do not approve this substitution.
- 4. Substitution:** We are requesting to substitute Type D, Lucifer Lighting: CP2-XXXW-FB-WH-90C20A-35-40-CAS-4 with Elite: FPR1-LED-2200L-DIM10-MVOLT-35K-85-BK located on P.21-23 of submittal.

Approval: 8th & Parkade – Type D: Proposed light fixture is 3” taller than the current specified fixture. All other specifications and fixture requirements for the proposed fixture are in accordance with the current specified fixture. Contractor to confirm height of fixture in field to verify height does not conflict with the existing structure of proposed MEP.

5. **Substitution:** We are requesting to substitute Type EM1, Alcon Lighting: 16107-U-RD-BL-RC-SD with Elite: ELX-LED-713-R-B located on P. 24 of submittal.

Approval: 8th & Parkade – Type EM1: Acceptable substitution.

6. **Substitution:** We are requesting to substitute Type EM2, Alcon Lighting: 16103-BK-SDT-RC with Elite: ELX-LED-803-B located on P. 25-26 of submittal.

Approval: 8th & Parkade – Type EM2: Acceptable substitution.

7. **Substitution:** We are requesting to substitute Type U, Picasso Lighting: EZ-NIC-PD-C-4-D7-35-90-FWD-NCWPW-RE-W-NJRW-ZTU-W with Elite: 4-OEC-LED-3000L/4000L/5000L-DIM10-MVOLT-35K/40K/50K-85 OCGSS SO5-WH-6FT CANOPY located on P. 27-30 of submittal.

Approval: 8th & Parkade – Type U: Acceptable substitution.

8. **Substitution:** We are requesting to substitute Type A, Picasso Lighting: RAI-R2X2-DR3-35-90-OW-S-ZT-W with elite: 22-od1v-led-3400l-dim10-mvolt-35k-85 located on p.32-36 of submittal.

Approval: Swanson Street – Type A: The CRI on the substituted fixture is 85, we specify a CRI of 90 on all fixtures. The CRI should be the same on all fixtures, so we do not approve this substitution.

9. **Substitution:** We are requesting to substitute Type B, Picasso Lighting: RAI-R2X4-DR7-35-90-OW-S-ZT-W with elite: 24-od1v-led-8000l-dim10-mvolt-35k-85 located p. 37-41 of submittal.

Approval: Swanson Street – Type B: The CRI on the substituted fixture is 85, we specify a CRI of 90 on all fixtures. The CRI should be the same on all fixtures, so we do not approve this substitution.

10. **Substitution:** We are requesting to substitute Type C, Picasso Lighting: TRU-PR-6-D10-NN-35-90-OW-ACRS-ZT1-BK-CBPB with Elite: OLS-D-LED-2-S-6-750L-DIM10-MVOLT-35K-85-WH located on p. 42-50 of submittal.

Approval: Swanson Street – Type C: The CRI on the substituted fixture is 85, we specify a CRI of 90 on all fixtures. The CRI should be the same on all fixtures, so we do not approve this substitution. Additionally, the specified fixture has a 300LPF Indirect lamp as well as the direct lamp, this is not provided on the substitution fixture and accordingly we do not approve this substitution.

11. **Substitution:** We are requesting to substitute Type EX-1, Dual-Lite: HCX-U-R-W-03L-RC12 with Elite: ELX-LED-713-R-W located on p. 51 of submittal.

Approval: Swanson Street – Type EX-1: Acceptable substitution.

12. **Substitution:** We are requesting to substitute Type EX-2, Dual-Lite: EV-4-1 with Elite: ELX-LED-803-W.

Approval: Swanson Street – Type EX-2: Acceptable substitution.

QUESTIONS

1. **Question:** Regarding the Bid Form, page 2, work item 5 is the existing utility able to be used to provide temporary service for other trades in lieu of generator?

Response: For bidding purposes, please provide generator cost as indicated.

2. **Question:** Regarding the Bid Form, page 2, work item 4 is the existing utility able to be used to provide temporary service for building operation in lieu of generator?

Response: For bidding purposes, please provide generator cost as indicated.

3. **Question:** Is the site visit waived for previous bidders?

Response: No. Everyone must attend because this is a separate bid.

4. **Question:** There are only four (4) drawings related to the Swanson Street portion of this bid. Those drawings include: A-1 Cover Sheet, A-2 2nd FLR Demolition, A-3 2nd FLR Layout Plan & RCP, A-4 2nd FLR Interior Elevations & Details. Are there additional electrical drawings that refer to the scope and extent of the electrical work for the Swanson Street location? If so, please provide those drawings asap.

Response: Electrical scope is shown on A-3. See partition type notes, RCP, light fixture schedule, general electrical notes, and layout plan. All tele/data locations which require empty conduit and pull tabs are identified on plan. Electrical contractor to confirm all final locations of pull tabs with the owner in field.

END OF ADDENDUM ONE

Submitted by Penn Lighting Associates



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
22-OD1V-LED-3400L-DIM10-MVOLT-35K-85

Notes:

Type:

A

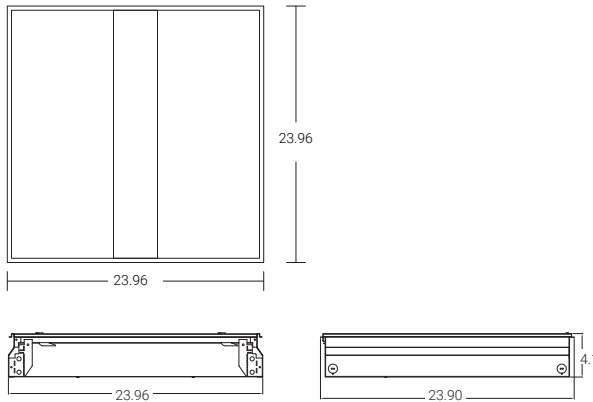
PENN24-257220



22-OD1V-LED

2'x2'

2' x 2' Architectural Volumetric Recessed LED Troffer



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
6000	6376	57 W
5000	5096	46 W
4000	4855	34 W
3400	3538	25 W

Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

FEATURES

The OD1V-LED combines exquisite style with uncompromised performance, featuring a fully-illuminated lens that creates a floating visual effect, blending seamlessly with the ceiling. The combination of a micro-prism center optical lens and an angled backlit lens creates a volumetric, uniform appearance, delivering a high angled distribution and higher intensity of illumination across the work plane. The glare-free illumination, high efficiency and sustainability of the luminaire makes it the ideal source for corporate offices, educational, healthcare, commercial, and retail applications.

LUMENS	3400, 4000, 5000, 6000
CCT & DYNAMIC PLATFORMS	27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	85+(standard), 90+
COLOR QUALITY	3 Step MacAdam Ellipse
SIZE	2'x2', 2'x4', 1'x4'
UGR	UGR <17
MOUNTING	Recessed
DIMMING & CONTROL	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUT2W, DIMST, ELDO10.1, ELDO10.1, DALI.1
EMERGENCY	10W - Up to 1000L output 20W - Up to 2000L output EMG-LED-G2-10W-SDT - Self Diagnostic (Consult Factory) EMG-LED-G2-20W-SDT - Self Diagnostic (Consult Factory)
LIFETIME	L70 at 167,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21



www.iuseelite.com

Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information. AS210326



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:

22-OD1V-LED-3400L-DIM10-MVOLT-35K-85

Notes:

Type:

A

PENN24-257220



22-OD1V-LED



2' x 2' Architectural Volumetric Recessed LED Troffer

MAINTENANCE

The micro-prism center optical lens door assembly is hinged, allowing easy access to LED boards and driver compartment, locking into place for secure closure of the luminaire. LED engines and drivers are removable and upgradable even after luminaire installation. Luminaire can be regularly and safely wiped down to ensure optimal performance.

OPTICAL SYSTEM

The LED light engine is secured to the body of the luminaire, with the body acting as a heat sink. A proprietary design of the lens results in zero pixilation, regardless of the viewing angle, with LEDs placed to promote a uniform appearance. The result is even illumination across the space, from luminaire to luminaire. A UGR (Unified Glare Rating) of less than 17 minimizes the effect of glare, enhancing well-being and reducing discomfort.

CONSTRUCTION

Body is constructed of heavy-duty 20-gauge cold rolled steel, post-painted and engineered for maximum strength and extended life. All corners interlock to prevent aesthetic damage to the luminaire, with sides and corners uniformly turned in and hemmed to remove sharp edges for safe handling and easy installation. Luminaire is supplied with multiple wiring entrances for easy daisy chain of luminaires, to add power packs, whips, or other accessories in the field, or for continuous row mounting.

FINISH

Post-painted with a 93% reflective white coat to improve luminaire efficacy, with all body components seamlessly interlocked for added structural strength.

MOUNTING

Luminaires accommodate lay-in ceilings, Slot T, and T-bar suspension systems for 5/8" and 3/8" ceiling thicknesses. Four corner tie points are standard for safety wire support when required, with built-in earthquake clips, standard. Luminaires may be available with flange kits, surface mounted kits, and other options.

OPTIONS

Luminaires can be shipped pre-installed with whips, modular wiring systems, daylight harvesting controls, occupancy sensors, and/or power packs for individual or room control applications.

WARRANTY

Five-year warranty for parts and components. (Labor not included)

DIMMING & DRIVER INFORMATION

DIM10 - Flicker Free 1% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277 or 347V.

LUT2W - Lutron LTEA2W Hi-Lume 1%. 2-wire LED driver (120V forward phase only).

LUTH - Lutron LDE1 Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology.

ELDO10.1 - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.

DALI - DALI DT6, DT8 dimming down to 1%.

ELDODMX - EldoLED PowerDrive dimming down to 0.1%.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

DIMST - Step Dimming

DRIVER ELECTRICAL INFORMATION

Powered by high-quality constant-current power LED drivers which are rated for 50 to 60Hz at 120/277V input. Available in 347V, produce less than 20% THD, and have a power factor of .90 to 1.00.

LED DYNAMIC PLATFORM OPTIONS

Tunable White with Smart White Technology utilizing the Lumenetix Platform allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across the tunable range of 8000 to 1650K. (Click here for more details)

Dims to Warm with Smart Dimming Technology. At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)

RGB+White with Smart Hue Technology provides full color mixing of RGB and white colors. Utilizing the Lumenetix Platform allows you to choose from unlimited RGB color options, via various controls. Ideal for Circadian Rhythm applications or to create the perfect human centric environment. (Click here for more details)

LISTINGS

c-UL-us - Listed for Feed Through Wiring.
Listed for DLC, California Title 24 compliant.

Example: **22-OD1V-LED-4000L-DIM10-MVOLT-30K-85**

22	OD1V	LED							
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	OTHER OPTIONS
22 - 2' X2'	OD1V - LED Volumetric Troffer	LED	3400L - 3400 lumens 4000L - 4000 lumens 5000L - 5000 lumens 6000L - 6000 lumens	DIM10 - 0-10V Dimming DIMST - Step Dimming LUTH - Lutron HiLume LUT2W - Lutron 2Wire ELDO10.1 - EldoLED 0-10V DALI.1 - EldoLED DALI ELDODMX.1 - EldoLED DMX	MVOLT 347* 120 277	27K 30K 35K 40K 50K	85 90	0-EMG-LED-10W 0-EMG-LED-20W 0-EMG-LED-G2-10W-SDT 0-EMG-LED-G2-20W-SDT	22FK - 2'x2' Flange Kit FBF - Internal Fast Blow Fuse SBF - Internal Slow Blow Fuse RIS - Radio Interference Suppressor USA - Made in America Compliance FS-PPV2 - Fixture Sensor Power Pack FD-301 - Low Voltage Daylight Dimming Photosensor LMFC-011 - Digital Lighting Manager LMFS-601 - Integrated Fixture Sensor & Controller FS-205 - Low Voltage Pir Fixture Integrated Occupancy Sensor

LUT2W are available in 120V only LUT2W up to 4000L

LUTH, ELDO10.1, ELDODALI.1, and ELDODMX.1 are available in 120V and 277V

-Reference last page for Control Options

*FD-301 & FS-205 require FS-PPV2- Power Pack



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Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information.



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
22-OD1V-LED-3400L-DIM10-MVOLT-35K-85

Type:

A

PENN24-257220



By Elite Lighting

22-OD1V-LED



2' x 2' Architectural Volumetric Recessed LED Troffer

22-OD1V-LED-3400L-DIM10-MVOLT-40K-85

TEST NO.: **EL111897**

INPUT WATTS: **25**

LUMENS: **3538**

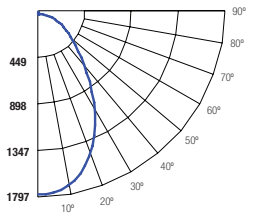
CRI: **85**

EFFICACY: **139**

CCT: **4000K**

SPACING CRITERIA: **1.14**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	636.75	N.A.	18.00
0-30	1290.3	N.A.	36.50
0-40	1975.69	N.A.	55.80
0-60	2987.94	N.A.	84.50
0-80	3451.91	N.A.	97.60
0-90	3505.98	N.A.	99.10

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	2334	2625	3673
55	1870	2006	2772
65	1666	1719	2112
75	1536	1591	1839
85	1164	1268	1701

Lumens Per Zone

Zone	Lumens
0-10	168.81
10-20	467.95
20-30	653.55
30-40	685.39
40-50	583.17
50-60	429.08
60-70	291.16
70-80	172.81
80-90	54.07

Candela Tabulation

0	1	5	15	25	35	45	55	65	75	85	90
1795.244	1786.300	1646.270	1339.070	949.400	613.870	399.060	261.820	147.910	37.720	1.970	

Cone of Light

Beam Diameter (ft)	Beam Diameter (m)	Beam Diameter (ft)	Beam Diameter (m)
2	449	2.9	4.2
4	112	5.8	8.4
6	49.9	8.6	12.6
8	28.1	11.5	16.8
10	18	14.4	21
12	12.5	17.3	25.2

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%		
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99					
1	110	105	102	98	107	103	100	96	96	91	91	91	85	81	77	82	78	76	73					
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	78	76	73						
3	93	83	76	70	91	82	75	70	79	73	68	76	71	67	73	69	66	64						
4	86	75	67	61	84	74	66	61	71	65	60	69	63	59	67	62	58	56						
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	51	49						
6	74	62	54	48	72	61	53	47	59	52	47	57	51	46	56	50	46	44						
7	69	57	48	43	67	56	48	43	54	47	42	53	47	42	51	46	42	40						
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36						
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33						
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30						

22-OD1V-LED-4000L-DIM10-MVOLT-40K-85

TEST NO.: **EL111895**

INPUT WATTS: **34**

LUMENS: **4855**

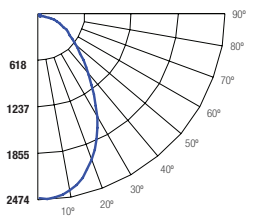
CRI: **85**

EFFICACY: **143**

CCT: **4000K**

SPACING CRITERIA: **1.14**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	874.94	N.A.	18.00
0-30	1773.11	N.A.	36.50
0-40	2714.08	N.A.	55.90
0-60	4101.11	N.A.	84.50
0-80	4737.59	N.A.	97.60
0-90	4811.14	N.A.	99.10

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	3207	3749	5077
55	2555	2848	3846
65	2299	2411	2894
75	2110	2223	2558
85	1525	1769	2361

Lumens Per Zone

Zone	Lumens
0-10	231.93
10-20	643.01
20-30	938.17
30-40	940.97
40-50	798.65
50-60	588.38
60-70	399.09
70-80	237.38
80-90	73.56

Candela Tabulation

0	1	5	15	25	35	45	55	65	75	85	90
2466.496	2459.182	2265.641	1838.743	1301.645	843.398	545.153	361.400	203.122	49.442	2.660	

Cone of Light

Beam Diameter (ft)	Beam Diameter (m)	Beam Diameter (ft)	Beam Diameter (m)
2	566	2.9	4.2
4	141	5.7	8.4
6	62.9	8.6	12.6
8	35.4	11.5	16.8
10	22.6	14.3	21
12	15.7	17.2	25.2

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%		
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99					
1	110	105	102	98	107	103	100	97	96	91	91	91	85	81	77	82	78	76	73					
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	78	76	73						
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	73	69	66	64						
4	86	75	67	61	84	74	66	61	71	65	60	69	63	59	67	62	58	56						
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	51	49						
6	74	62	54	48	72	61	53	47	59	52	47	57	51	46	56	50	46	44						
7	69	57	48	43	67	56	48	43	54	47	42	53	47	42	51	46	42	40						
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36						
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33						
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30						

22-OD1V-LED-5000L-DIM10-MVOLT-40K-85

TEST NO.: **EL111894**

INPUT WATTS: **46**

LUMENS: **5096**

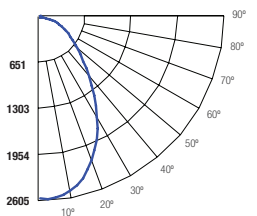
CRI: **85**

EFFICACY: **111**

CCT: **4000K**

SPACING CRITERIA: **1.14**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	919.14	18.00	18.00
0-30	1862.78	36.60	36.60
0-40	2851.26	56.00	55.90
0-60	4305.56	84.50	84.50
0-80	4972.84	97.60	97.60
0-90	5050.03	99.20	99.10

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	3367	3933	5335
55	2688	2991	4044
65	2419	2512	3039
75	2220	2337	2688
85	1601	1859	2483

Lumens Per Zone

Zone	Lumens
0-10	243.64
10-20	675.50
20-30	943.64
30-40	988.48
40-50	837.16
50-60	617.14
60-70	418.12
70-80	249.16
80-90	77.18

Candela Tabulation

0	1	5	15	25	35	45	55	65	75	85	90
2591.863	2590.170	2383.960	1934.210	1367.320	885.580	573.390	380.260	213.720	51.910	2.800	

Cone of Light

Beam Diameter (ft)	Beam Diameter (m)	Beam Diameter (ft)	Beam Diameter (m)
2	648	2.9	4.2
4	162	5.7	8.4
6	72	8.6	12.6
8	40.5	11.4	16.8
10	25.9	14.3	21
12	18	17.2	25.2

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%		
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101								



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
22-OD1V-LED-3400L-DIM10-MVOLT-35K-85

Type:

A

PENN24-257220



By Elite Lighting

22-OD1V-LED



2' x 2' Architectural Volumetric Recessed LED Troffer

22-OD1V-LED-6000L-DIM10-MVOLT-40K-85

TEST NO.: EL111896

INPUT WATTS: 58

LUMENS: 6376

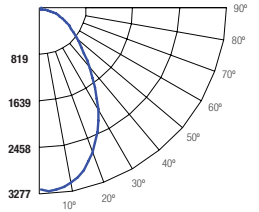
CRI: 85

EFFICACY: 110

CCT: 4000K

SPACING CRITERIA: 1.14

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1150.42	N.A.	18.00
0-30	2332.01	N.A.	36.60
0-40	3569.89	N.A.	56.00
0-60	5387.42	N.A.	84.50
0-80	6221.47	N.A.	97.60
0-90	6318.68	N.A.	99.10

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	4241	4735	6636
55	3390	3629	5017
65	2997	3072	3773
75	2799	2881	3326
85	2068	2284	3096

Lumens Per Zone

Zone	Lumens
0-10	304.86
10-20	845.56
20-30	1181.59
30-40	1237.89
40-50	1046.8
50-60	770.73
60-70	522.49
70-80	311.57
80-90	97.21

Candela Tabulation

Q	Candela
0	3243.338
5	3258.640
15	3000.580
25	2433.170
35	1722.340
45	1115.470
55	723.150
65	471.180
75	269.470
85	67.500
90	3.560

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

Cone of Light			
Beam Dia.	Beam Dia. at 50% F.C.	Beam Dia. at 50% F.C.	Beam Dia. at 50% F.C.
2	811	2.9	4.1
4	203	5.7	8.3
6	90.1	8.6	12.4
8	50.7	11.5	16.6
10	32.4	14.3	20.7
12	22.5	17.2	24.9

ROOM CAVITY RATIO	RC		80%		70%		50%		30%		10%		0%				
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
0	119	119	119	119	116	116	116	111	111	111	106	106	106	101	101	101	99
1	110	105	102	98	107	103	100	97	99	96	95	92	90	91	89	88	85
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	78	73
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	74	69	66
4	86	75	67	61	84	74	66	61	71	65	60	69	63	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	51
6	74	62	54	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	57	49	43	67	56	48	43	54	47	42	53	47	42	51	46	42
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38
9	61	48	41	35	59	48	40	35	46	40	35	45	39	35	44	39	35
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

RC - Ceiling Cavity Reflectance RW - Wall Reflectance



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
22-OD1V-LED-3400L-DIM10-MVOLT-35K-85
Notes:

Type:
A
PENN24-257220



22-OD1V-LED 2'x2'
2' x 2' Architectural Volumetric Recessed LED Troffer

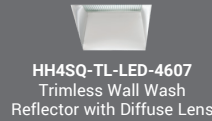
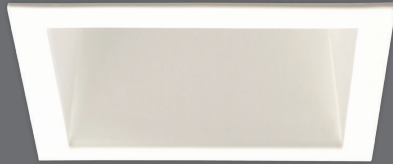
- 1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control systems
- 2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems
- 3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

BRAND	EASYFIT <small>by EnOcean</small>	LUTRON	enlighted	LEVITON	OSRAM	PHILIPS <small>EasySense</small>	legrand
CONTROL UNIT	<input type="checkbox"/> LEDRU LED Relay Zone Controller 0-10V ¹	<input type="checkbox"/> FCJS-0-10 Lutron Vive 0-10V Individual Control Models ^{1,4} <input type="checkbox"/> FCJS-ECO Lutron Vive Eco-system Individual Control Models ^{1,4}	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit ^{1,5}	<input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ^{1,6}	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module ^{1,7}	<input type="checkbox"/> XITANIUM SR LED DRIVER The Philips Advance Xitanium SR LED driver ^{1,8}	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller ^{1,9}
	<input type="checkbox"/> LEDDU LED Zone Controller 0-10V ¹	<input type="checkbox"/> A-WN-D01-RF-WH Athena wireless node (RF only) (White) <input type="checkbox"/> A-WN-D01-OCC-WH Athena wireless node with sensor (White)		<input type="checkbox"/> ZL027 -DLE Intellect Power Control Module ^{1,6}	<input type="checkbox"/> EN-ALC-ZB-BK-DR Wireless Area Lighting Control Module ^{1,7}		<input type="checkbox"/> FS-PP-V2 FS-PP Fixture Integrated Sensor Power Pack ^{1,9}
INTEGRATED OCCUPANCY & DAYLIGHT SENSOR	N/A	<input type="checkbox"/> DFCSJ-OEM-OCC Clear Connect (RF) and Occupancy/Daylight Sensing ²	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <input type="checkbox"/> SU-5E-CL Connected Micro Sensor <input type="checkbox"/> SU-5E-IL Independent Micro Sensor <input type="checkbox"/> SU-5S-H(IoT/CL/IL) Surface Mount Sensor (Must be Specified with CU-4E-FMH Control Unit)²	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System ² <input type="checkbox"/> ZL00J-DOW Intellect Intelligent Fixture Control System ²	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM ²	<input type="checkbox"/> SNS200 SNS200 for grouping ² <input type="checkbox"/> SNS300 SNS300 for networks ²	<input type="checkbox"/> FD-301 Fixture integrated Daylight Dimming Sensor ² <input type="checkbox"/> FS-205 Fixture integrated passive infrared occupancy sensor ² <input type="checkbox"/> LMFS-601 DLM Integrated Fixture Sensor and Controller, Occupancy, Daylight Harvesting, and IPv6/Bluetooth® Low Energy Technology
	*WIRELESS OCCUPANCY SENSOR	<input type="checkbox"/> E0SCU-W-E0 Occupancy Sensor - Ceiling Mounted ³	<input type="checkbox"/> LRF2-OCR2B-P-WH Ceiling mount 360° occupancy/vacancy sensor ³	N/A	N/A	<input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³	N/A
*WIRELESS DAYLIGHT SENSOR	<input type="checkbox"/> ELLSU-W-E0 Light Level Sensor - Ceiling Mounted ³	<input type="checkbox"/> LRF2-DCRB-WH Ceiling-mount daylight sensor ³	N/A	N/A	<input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³	N/A	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor ³
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <input type="checkbox"/> SU-5E-CL Connected Micro Sensor <input type="checkbox"/> SU-5E-IL Independent Micro Sensor <input type="checkbox"/> SU-5S-H(IoT/CL/IL) Surface Mount Sensor (Must be specified with CU-4E-FMH Control Unit)³	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System <input type="checkbox"/> ZL00J-DOW Intellect Intelligent Fixture Control System (Must be specified with ZL027-NOW and ZL00J-DOW Control unit)³	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM	<input type="checkbox"/> SNS200-CMP SNS-200 for Grouping ³	N/A
ACCESSORIES	N/A	N/A	<input type="checkbox"/> TMC-SU-5E Tile Mount Carrier <input type="checkbox"/> CBL-5E-CU4-30N 30 inch Sensor cable for CU-4 and IoT Ready <input type="checkbox"/> CBL-5E-CU4-7F 7 Foot sensor cable for CU-4 and IoT Ready Driver	N/A	N/A	N/A	N/A
NOTES	N/A	4- Luminaire will be compatible with LUTRON LRF2-OCR2B-PWH Ceiling mount 360deg occupancy/vacancy sensor & LRF2-DCRB-WH ceiling mount daylight sensor. Sensors must be orderd through Lutron	5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU-5S, Sensors	6- Luminaire will be compatible with LEVITON Intellect APP & Keypad room controller	7- Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless passive infrared occupancy and photo sensor	8- Luminaire will be compatible with philips field and wireless switch	9- Luminaire will be compatible with DLM Room control system LMPB-100. Sensors must be orderd through Legrand.

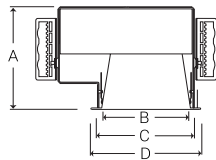
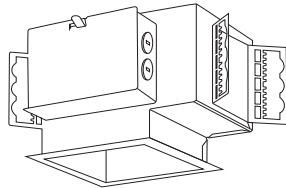




HH4SQ-LED 4"
4" Architectural High Lumen Square LED Downlight



REFLECTOR/
FLANGE COLORS



A: Height = 5-1/2"
B: Trim Aperture = 4-1/2"
C: Cut-Out = 5-1/8"
D: Trim Outside Dia = 5-3/4"

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
2000	2039	20 W
1500	1488	15 W
1000	1040	10W
900	894	9 W

Based on 4000K, 90+CRI with semi-specular chrome reflector.
Actual wattage may vary +/-5%

FEATURES

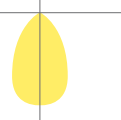
A highly sustainable and ultra-efficient architectural LED downlight that provides even, glare-free illumination. Available in a range of finishes and lumen packages, it is ideally suited for use in corporate office space, hospitality, healthcare, commercial, academic, churches and retail.

OPTICS AND REFLECTOR

The reflector has a 45° visual cutoff, and is shipped standard with a Solite lens in a smooth frosted finish. Spun from 0.05" thick aluminum, with a 1-step anodized finish, and available in different colors or custom RAL finishes. Reflector flange options include self-flanged and white painted flange.

LUMENS	900, 1000, 1500, 2000 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	22K, 27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	90+ Standard, 98+ Optional
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	MD (Medium Distribution), WD (Wide Distribution)
TRIM OPTIONS	Downlight, Wall Wash, Wet Location
REFLECTOR COLORS	CL (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), WT (Wheat), WH (White), MB (Black)
FLANGE COLORS	Self-Flanged WH (White), SCH (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), BK (Black)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFB, LUT2W, ELD010.1, ELD0DMX.1, ELDODALI.1, DIMTR
EMERGENCY	10W - Up to 1000L Output 20W - Up to 2000L Output EMG-LED-G2-10W-SDT - Self Diagnostic (Consult Factory)
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21

MD: Medium
Candlepower Distribution Curve



Reference IES files for additional distribution curve information.





Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
HH4SQ-LED-2000L-DIM10-MVOLT-MD-35K-90 LED-4614-CL-WH
Notes:

Type:
B
PENN24-257220



HH4SQ-LED 4"

4" Architectural High Lumen Square LED Downlight

THERMAL MANAGEMENT SYSTEM

Passive cooling die-cast aluminum heatsink. LED light engine and driver are replaceable, upgradeable, and can be accessed from below the ceiling. A unique locking mechanism aligns the reflector with the light engine for precise, uniform aiming.

MOUNTING FRAME & BRACKETS

Constructed from 16-gauge steel. Can be installed with 3/4" or 1-1/2" lathing channel, 1/2" EMT, or with optional C-channel mounting bars (Part# BP31) ordered separately. Housing can be adjusted from the inside of the ceiling.

DRIVER ELECTRICAL INFORMATION

The LED driver is rated for 50 to 60Hz at 120V/277V, also available in 347V input, produces less than 20%THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. Junction box and Driver can be accessed from below the ceiling and above the ceiling. Junction Box is Listed for through branch circuit wiring.

DIMMING & DRIVER INFORMATION

DIM10 - 0-10V dimming on either MVOLT 120, 277 or 347V. Dimmable down to 1% of initial lumens, standard.
DIMTR - Triac & Electronic low voltage dimming. Available in 120V, and up to 3000 lumens only.
LUT2W - Lutron LTEA2W Hi-Lume 1%. 2-wire LED Driver Forward Phase Control, 1% dimming in 120V only.
LUTH - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.
LUTFB - Lutron PEQ0 Hi-Lume Premier Eco System. 0.1% dimming with Soft in Fade to Black dimming technology. Available on all luminaires up to 20 watts.
ELDO10.1 - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.
DALI - DALI DT6, DT8 dimming down to 1%.
ELDODMX - EldoLED PowerDrive dimming down to 0.1%.
 Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

WARRANTY

Five-year warranty for parts and components. (Labor not included)

LED DYNAMIC PLATFORM OPTIONS

Tunable White with Smart White Technology utilizing the Lumenetix Platform allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across the tunable range of 8000 to 1650K. (Click here for more details)

Dim to Warm with Smart Dimming Technology. At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)

RGB+White with Smart Hue Technology provides full color mixing of RGB and white colors. Utilizing the Lumenetix Platform allows you to choose from unlimited RGB color options, via various controls. Ideal for Circadian Rhythm applications or to create the perfect human centric environment. (Click here for more details)

LISTINGS

c-UL-us - Listed for Wet Location.
 c-UL-us - Listed for Feed Through Wiring.
 U.S Patent No. - D685,118S

Example: HH4SQ-LED-900L-DIM10-MVOLT-MD-40K-90-LED-4607-CL-WH

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	REFLECTOR/FLANGE COLORS
HH4SQ-LED	<input type="checkbox"/> 900L <input type="checkbox"/> 1000L <input type="checkbox"/> 1500L <input checked="" type="checkbox"/> 2000L	<input checked="" type="checkbox"/> DIM10 <input type="checkbox"/> DIMTR <input type="checkbox"/> LUTH ² <input type="checkbox"/> LUTFTB ⁵ <input type="checkbox"/> ELDO10-1 ² <input type="checkbox"/> ELDODALI-1 ² <input type="checkbox"/> ELDODMX-1 ²	<input type="checkbox"/> 120 <input type="checkbox"/> 277 <input checked="" type="checkbox"/> MVOLT <input type="checkbox"/> 347 (DIM10 only)	<input type="checkbox"/> 22K <input type="checkbox"/> 27K <input type="checkbox"/> 30K <input checked="" type="checkbox"/> 35K <input type="checkbox"/> 40K <input type="checkbox"/> 50K ³	<input type="checkbox"/> EMG-LED-10W <input type="checkbox"/> EMG-LED-20W <input type="checkbox"/> INTG-EMG-LED-10W <input type="checkbox"/> INTG-EMG-LED-20W <input type="checkbox"/> EMG-LED-G2-10W-SDT* Typical lumen output of the luminaire is up to 1000L with EMG-LED-10W option & 2000L with EMG-LED-20W option in emergency mode. Contact the factory for details. Remote mounted installation *Consult Factory for Self Diagnostic	<input checked="" type="checkbox"/> LED-4614 Reflector with Frosted Glass Lens <input type="checkbox"/> LED-4607 Wall Wash Reflector with Diffuse Lens TRIMLESS <input type="checkbox"/> HH4SQ-TL-4614 Trimless Reflector with Frosted Glass Lens <input type="checkbox"/> HH4SQ-TL-4607 Trimless Wall Wash Reflector with Diffuse Lens	<input checked="" type="checkbox"/> CL-WH <input type="checkbox"/> CL-SCH <input type="checkbox"/> SHZ-WH <input type="checkbox"/> SHZ-SHZ <input type="checkbox"/> WT-WH <input type="checkbox"/> WH-WH <input type="checkbox"/> MB-WH <input type="checkbox"/> CL-BK <input type="checkbox"/> MB-BK

¹ DIMTR are available in 120V only available in 27K, 30K and 40K only
² 98+ CRI is² LUTH, ELDO10-1, ELDODALI-1, and ELDODMX-1 are available in 120V and 277V
³ 50K series are available with 85+ CRI only
⁴ Reference last
⁵ LUTFTB Available for luminaires up to 1500L
 * Only Available on 85+ CRI

page for Control Options





Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
HH4SQ-LED-2000L-DIM10-MVOLT-MD-35K-90 LED-4614-CL-WH
Notes:

Type:
B
PENN24-257220



HH4SQ-LED

4"

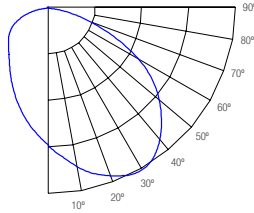
4" Architectural High Lumen Square LED Downlight

HH4SQ-LED-900L-DIM10-MVOLT-MD-40K-90-LED-4607-CL-WH

TEST NO.: EL011933

INPUT WATTS: 11.3 LUMENS: 860 CRI: 90 EFFICACY: 76 CCT: 4000K

SPACING CRITERIA: 0.92



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	281.18	N.A.	32.70
0-30	518.04	N.A.	60.20
0-40	687.43	N.A.	79.90
0-60	822.14	N.A.	95.60
0-80	856.69	N.A.	99.60
0-90	859.83	N.A.	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	8724	18656	28746
55	6961	11163	13443
65	3362	9755	11999
75	1072	7398	10927
85	227	7059	11274

Lumens Per Zone

Zone	Lumens
0-10	80.80
10-20	200.38
20-30	236.85
30-40	169.39
40-50	90.38
50-60	44.33
60-70	24.46
70-80	10.09
80-90	3.14

Candela Tabulation

0	10	20	30	40	50	60	70	80	90
0	880.14	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
5	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
10	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
15	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
20	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
25	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
30	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
35	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
40	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
45	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
50	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
55	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
60	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
65	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
70	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
75	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
80	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
85	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81
90	880.75	890.75	696.52	548.83	114.04	62.47	40.43	14.39	2.81

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

Cone of Light			
2	220	2.1	1.8
4	55	4.2	3.6
6	24.4	6.4	5.4
8	13.8	8.5	7.3
10	8.8	10.6	9.1
12	6.11	12.7	10.9

BEAM DIA. MEASURED AT 50% OF NAOR F.C.

ROOM CAVITY RATIO	RC	80%				70%				50%				30%				10%				0%
		RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100			
1	112	109	106	104	110	107	105	102	103	101	99	99	98	96	96	95	93	91	91			
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83	83			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76	76			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70	70			
5	89	79	73	68	87	78	72	67	76	71	67	75	70	66	73	69	66	64	64			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59	59			
7	79	69	62	57	78	68	62	57	67	61	57	65	60	57	64	60	56	55	55			
8	75	64	58	53	74	64	58	53	63	57	53	62	56	53	61	56	52	51	51			
9	71	61	54	50	70	60	54	50	59	53	49	58	53	49	57	53	49	48	48			
10	68	57	51	47	66	57	51	46	56	50	46	55	50	46	54	49	46	45	45			

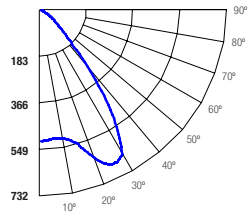
HH4SQ-LED-900L-DIM10-MVOLT-WD-40K-90-LED-4614-CL-WH

TEST NO.: EL011932

INPUT WATTS: 11.3 LUMENS: 894 CRI: 90 EFFICACY: 79 CCT: 4000K

SPACING CRITERIA: 1.24

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	199.67	N.A.	22.30
0-30	464.44	N.A.	52.00
0-40	705.54	N.A.	79.00
0-60	880.40	N.A.	98.50
0-80	892.85	N.A.	99.90
0-90	893.59	N.A.	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	14719	22980	25867
55	3662	6353	11924
65	601	1192	5776
75	385	652	740
85	363	940	1054

Lumens Per Zone

Zone	Lumens
0-10	47.24
10-20	152.43
20-30	264.77
30-40	241.10
40-50	131.29
50-60	43.57
60-70	10.75
70-80	1.70
80-90	0.74

Candela Tabulation

0	10	20	30	40	50	60	70	80	90
0	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
5	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
10	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
15	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
20	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
25	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
30	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
35	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
40	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
45	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
50	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
55	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
60	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
65	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
70	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
75	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
80	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
85	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01
90	499.26	491.18	573.25	518.62	199.45	105.40	21.27	2.57	1.01

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

Cone of Light			
2	125	2.5	2.8
4	31.2	5	5.5
6	13.9	7.5	8.3
8	7.8	10.1	11
10	4.99	12.6	13.8
12	3.47	15.1	16.6

BEAM DIA. MEASURED AT 50% OF NAOR F.C.

ROOM CAVITY RATIO	RC	80%				70%				50%				30%				10%				0%
		RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100			
1	113	109	106	104	110	107	105	102	103	101	99	99	98	96	96	95	93	92	92			
2	106	100	96	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83	83			
3	99	92	86	81	97	90	85	81	87	83	79	85	81	78	83	79	77	75	75			
4	93	84	78	73	91	83	77	72	81	75	71	79	74	70	77	73	70	68	68			
5	87	77	70	65	85	76	70	65	74	69	64	73	68	64	71	67	63	62	62			
6	82	71	64	59	80	70	64	59	69	63	59	67	62	58	66	61	58	56	56			
7	77	66	59	54	75	65	58	54	64	58	53	62	57	53	61	56	53	51	51			
8	72	61	54	49	71	60	54	49	59	53	49	58	53	49	57	52	48	47	47			
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43	43			
10	64	53	46	42	63	52	46	42	51	46	42	5										

Submitted by Penn Lighting Associates		Catalog Number: HH4SQ-LED-2000L-DIM10-MVOLT-MD-35K-90 LED-4614-CL-WH Notes:	Type: B PENN24-257220
	Job Name: PPA - Tenant Fit Out at Parkade on 8th		



HH4SQ-LED 4"

4" Architectural High Lumen Square LED Downlight

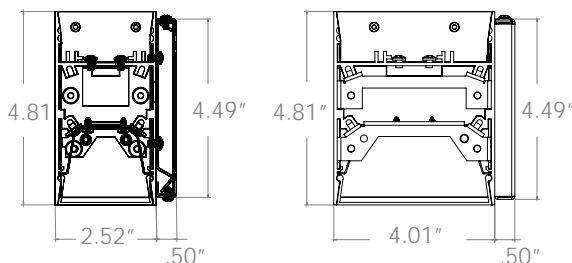
- 1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control systems
- 2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems
- 3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

BRAND	EASYFIT <small>by EnOcean</small>	LUTRON	enlighted	LEVITON [®]	OSRAM	PHILIPS <small>EasySense</small>	legrand [®]
CONTROL UNIT	<input type="checkbox"/> LEDRU LED Relay Zone Controller 0-10V ¹ <input type="checkbox"/> LEDDU LED Zone Controller 0-10V ¹	<input type="checkbox"/> FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴ <input type="checkbox"/> FCJS-ECO Lutron Vive Eco-system Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit ¹⁵	<input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ¹⁶ <input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ¹⁶	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module ¹⁷ <input type="checkbox"/> EN-ALC-ZB-BK-DR Wireless Area Lighting Control Module ¹⁷ <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM ¹⁷	<input type="checkbox"/> SBR-BS Titanium SR Bridge ¹⁸	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller ¹⁹
INTEGRAT SENSOR	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*WIRELESS OCCUPANCY SENSOR	<input type="checkbox"/> EOSCU-W-EO Occupancy Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) ³	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor ³
*WIRELESS DAYLIGHT SENSOR	<input type="checkbox"/> ELLSU-W-EO Light Level Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) ³	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor ³
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor ³ <input type="checkbox"/> SU-5E-CL Connected Lighting Micro Sensor ³ <input type="checkbox"/> SU-5E-IL Independent Lighting / Enlighted One Micro Sensor ³ <input type="checkbox"/> SU-5S-H-(IoT/CL/IL) Surface Mount Sensor ³ (Must be specified with CU-4E-FMH Control Unit)	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System ³ (Must be specified with ZL027 -NOW Control Unit)	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor <input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³ (Must be specified with EN-WCM2-ZB-DR or EN-ALC-ZB-BK-DR Control Unit)	<input type="checkbox"/> SNS200-CMP SNS200 for grouping ³	N/A
ACCESORIES	N/A	N/A	<input type="checkbox"/> TMC-SU-5E Tile Mount Carrier <input type="checkbox"/> CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4 and IoT Ready™ drivers <input type="checkbox"/> CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4 and IoT Ready™ drivers	N/A	N/A	N/A	N/A
NOTES	N/A	4- Luminaire will be compatible with Lutron LRF2-OCR2B-P-WH Ceiling mount 360° occupancy/vacancy sensor & LRF2-DCRB-WH Ceiling-mount daylight sensor. Sensors must be ordered through Lutron.	5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU-5S-H, Sensors.	6-Luminaire will be compatible with Leviton Intellect App & Keypad Room Controller	7-Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors	8-Luminaire will be compatible with Philips field an wireless switch.	9-Luminaire will be compatible with DLM Room control system LMPB-100. DLM control system must be orderd through Legrand.



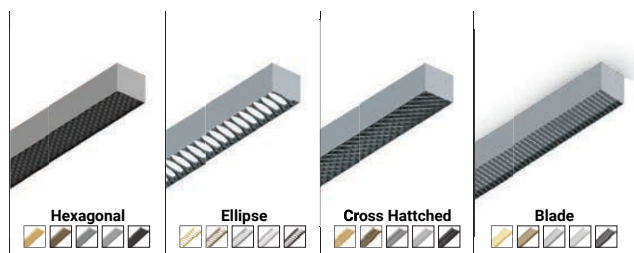


OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear



2" PROFILE

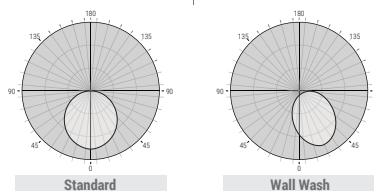
4" PROFILE



FEATURES

FLEX Architectural LED Wall Mount Linear delivers an endless array of flexibility, from straight runs to complex 90° turns. Available in small standard profiles of 2" and 4", or custom lengths, it accommodates most surfaces and installations, with fully illuminated corners to provide seamless, continuous lengths of light. Be inspired to create a long-lasting impression with a unique design that complements corporate offices, educational, commercial, and retail spaces.

LUMENS PER FOOT	500, 750, 1000, 1250, 1500, 2000 or Custom
CCT & DYNAMIC PLATFORMS	27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	85+ Standard, 90+
COLOR QUALITY	3 Step MacAdam Ellipses (+85), 2 Step MacAdam Ellipses (+90)
WIDTHS	2", 4"
LENGTHS	2', 4', 6', 8', Continuous with 1" Increments
DISTRIBUTION PATTERNS	Standard, Wall Wash, Blade Louver, Hexagonal Louver, Cross Hatched Louver, Ellipse Louver
CONFIGURATION PATTERNS & LENGTHS	Single, Continous, Square, Rectangular, L-Shape, Custom with 90°, 60°, or 45° Angles
MOUNTING	Wall
FINISH	WH (White), BK (Black), SI (Silver), Custom RAL
DIMMING & CONTROLS	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, ELDO10.1-LIN, ELDD0MX.1, DALI.1, DIMTR, DIM10-0-Off POE, ELDO10-LOG,BLE, XSR, DIM10-AUX
EMERGENCY	10W - Up to 1000L Output 20W - Up to 2000L Output EMG-LED-G2-10W-SDT - Self Diagnostic (Consult Factory) GTD-UL924, 0-EMG-C
LIFETIME	L70>60,000-hour reported lifetime L70>200,000-hour calculated lifetime
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21



Job Name:

PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:

OLS-WD-LED-2-S-6-750L-DIM10-MVOLT-35K-85-BK

Notes:

Type:**C**

PENN24-257220



OLS-WD-LED

FLEX Series LED Architectural Wall Mount Direct Linear

**OPTICS & PERFORMANCE**

Fabricated from 20-gauge aluminum, with mitered corners, and post-painted with 95% reflective premium paint. The optical system delivers high efficiency LED light that passes through a high-quality acrylic lens for optimal distribution patterns, creating a glare-free and even distribution. Distributions include Direct Downlight, Wall Wash, Blade Louver, Ellipse Louver, Cross Hatched Louver, Hexagonal Louver, with zero light leakage.

CONSTRUCTION

One-piece rigid aluminum extrusion, made of T6063-T5 aluminum, with cast aluminum end caps. A precision cut, smooth white extruded frosted lens with snap in design attaches firmly into the grooves of the body and can be easily removed for access to the driver and LED boards.

OPTICAL ASSEMBLY

Reflector is fabricated from 20-gauge aluminum, and post-painted finish with 95% reflective premium paint. Wall Wash reflectors are positioned at an angle.

DISTRIBUTION PATTERNS & DIFFUSER

Standard Distribution: A high-quality, smooth white frosted efficient acrylic lens is shipped standard for optimal distribution patterns, for most applications, and provides glare-free, even illumination. Wall Wash Distribution: Illuminates from the ceiling, down, for uniform vertical illumination.

CRM INSTALLATION

For continuous row mounting, the first luminaire in the row will always be the power supply feed. After plugging in the male and female harnesses, which are supplied with each luminaire, they will easily slide together, then secured with two screws from opposite directions in the connecting brackets.

DRIVER ELECTRICAL INFORMATION

Powered by high-quality constant-current power LED drivers which are rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00. Male and female 18-gauge 6 wire plug connectors are included with every luminaire to allow for simple hassle-free continuous wiring, and each luminaire must be installed male to female.

DIMMING & DRIVER INFORMATION

DIM10 - Flicker Free 1% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277 or 347V.

LUTH - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.

ELDO10.1-LIN - EldoLED SoloDrive 0-10V. Dimming down to 0.1%

Linear Dimming Curve

DALI - DALI DT6, DT8 dimming down to 1%.

ELDODMX - EldoLED PowerDrive dimming down to 0.1%.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

DIMTR - Triac & Electronic low voltage dimming. Available in 120V.

DIM10-0-OFF - Program DIM10-to OFF with linear dimming curve 0.1%.

ELDO10-LOG - ELDO10-LOG with logarithmic dimming curve.

POE- Power-over-Ethernet Depending on the PoE manufacturer selected, The Node will install the node in factory as either integral to the luminaire or as a remote module.

BLE - Luminaires may be controlled, grouped, scheduled or placed in scenes and or zones Via Cassambi Bluetooth 4.0 App.

XSR - Xitanium SR Dimming

DIM10-AUX -0-10V with Auxiliry power

LED DYNAMIC PLATFORM OPTIONS

Tunable White with Smart White Technology allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across a range of 6500 to 2700K. (Click here for more details)



Dims to Warm with Smart Dimming Technology. At 100% full brightness the luminaire is at 3500K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)



RGB+White with Smart Hue Technology provides full color mixing of RGB and white colors. Utilizing the Lumenitex Platform allows you to choose from unlimited RGB color options, via various controls. Ideal for Circadian Rhythm applications or to create the perfect human centric environment. (Click here for more details)

WARRANTY

Five-year warranty for parts and components. (Labor not included)

LISTINGS

c-UL-us - Listed for Feed Through Wiring.

All LED luminaires are rated and tested to LM-79 and LM-80 standards by an independent laboratory.

UI Listed for Damp location

cULus- Listed for protected damp locations, indoor use only.

FCC 15- EMI/RFI emissions per FCC 47CFR part 15 at 120VAC or 277VAC

RoHS- Contains no mercury or lead and RoHS compliant

Photometric testing completed in accordance with IES

LM-79 and TM-30 standards with calculated Life Time: L70 at 200,000 Hours

Can be used for State of California Title 24 high efficacy LED compliance

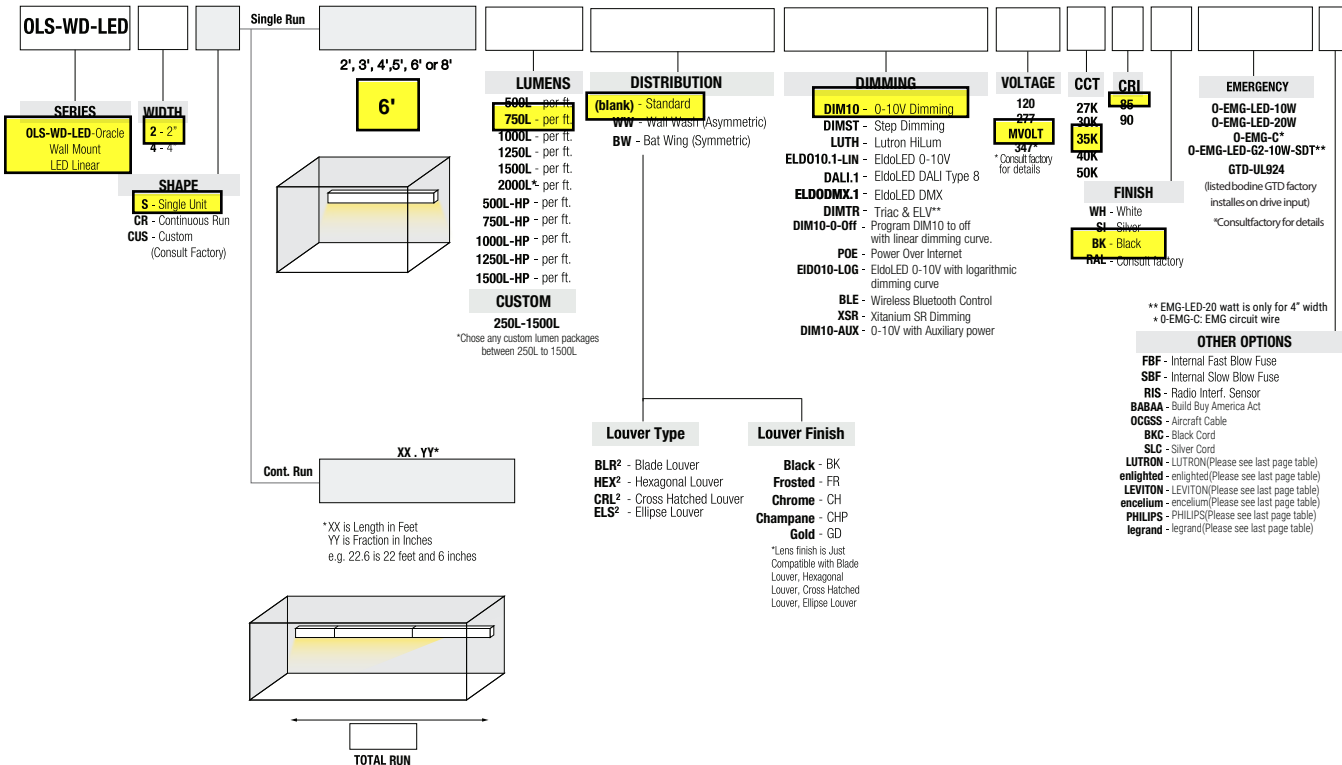
DLC®- certified, Listed for DLC, California Title 24 compliant.

BAA- Buy American Act Compliant government procurement requirements under FAR, DFARS and DOT regulations.



OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear

Example: **OLS-WD-LED-2-REC-W8-L6-500L-HEX-GD-DIM10-MVOLT-35K-85-WH**



- * Consult Factory
- * See last page for sensor options
- ** - Available in 120
- 1 HP (high performance) option is available on 3000K, 3500K and 4000K
- 2 Lens finishes just apply on BLR, HEX, CRL, ELS distribution

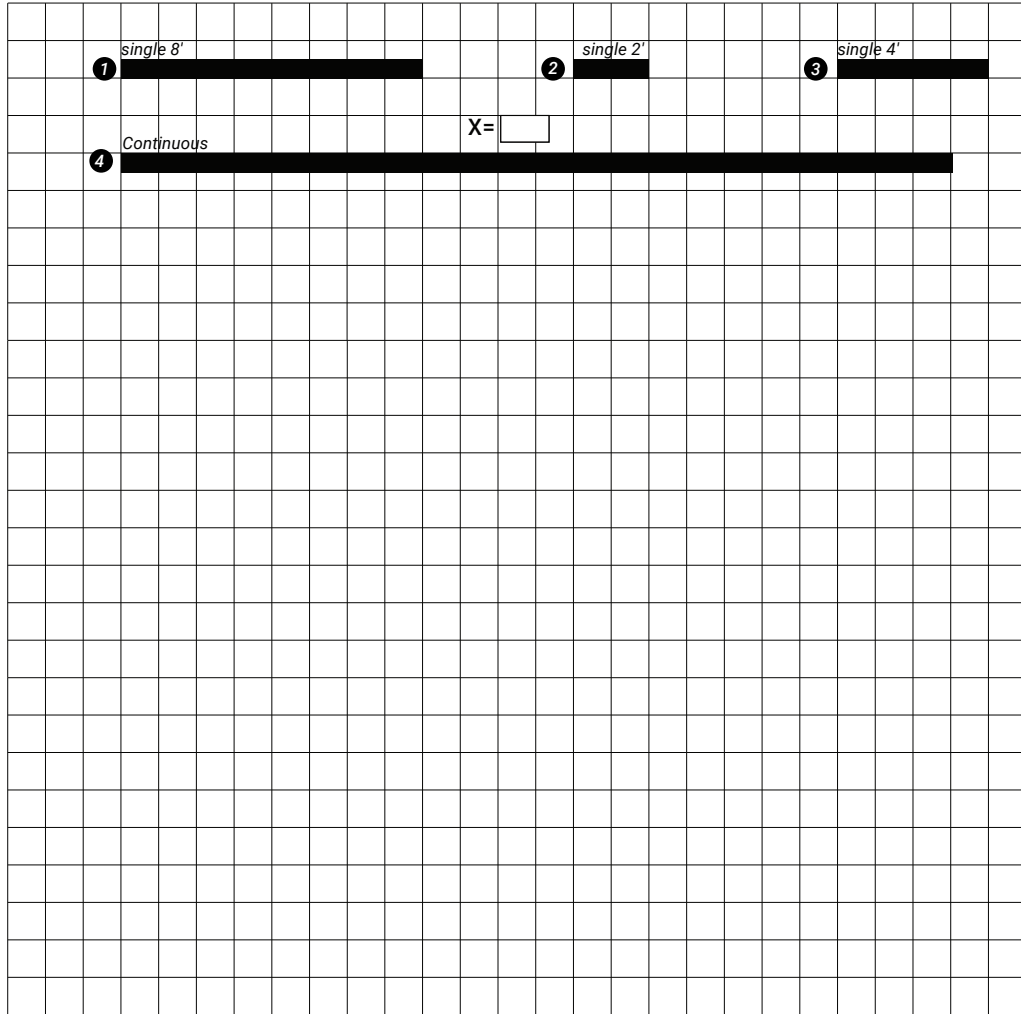
Lumen Packages

Direct Standard		Direct High Lumen	
LUMENS/FT	WATTS/FT	LUMENS/FT	WATTS/FT
2000	14.1	2000	17.5
1500	10.3	1500	12.7
1250	8.5	1250	10.5
1000	7.3	1000	8.2
750	5.5	750	6.5
500	3.5	500	4.5



OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear

Flex Recessed Mount configuration



RUN CHART

Run length (ft)	Section Lengths
9	5 + 4
10	6 + 4
11	7 + 4
12	8 + 4
13	8 + 5
14	8 + 6
15	8 + 7
16	8 + 8
17	8 + 5 + 4
18	8 + 6 + 4
19	8 + 7 + 4
20	8 + 8 + 4

Run length (ft)	Section Lengths
21	8 + 8 + 5
22	8 + 8 + 6
23	8 + 8 + 7
24	8 + 8 + 8
25	8 + 8 + 5 + 4
26	8 + 8 + 6 + 4
27	8 + 8 + 7 + 4
28	8 + 8 + 8 + 4
29	8 + 8 + 8 + 5
30	8 + 8 + 8 + 6
31	8 + 8 + 8 + 7
32	8 + 8 + 8 + 8

Run length (ft)	Section Lengths
33	8 + 8 + 8 + 5 + 4
34	8 + 8 + 8 + 6 + 4
35	8 + 8 + 8 + 7 + 4
36	8 + 8 + 8 + 8 + 4
37	8 + 8 + 8 + 8 + 5
38	8 + 8 + 8 + 8 + 6
39	8 + 8 + 8 + 8 + 7
40	8 + 8 + 8 + 8 + 8
41	8 + 8 + 8 + 8 + 5 + 4
428	+ 8 + 8 + 8 + 6 + 4
438	+ 8 + 8 + 8 + 7 + 4
448	+ 8 + 8 + 8 + 8 + 4

Run length (ft)	Section Lengths
45	8 + 8 + 8 + 8 + 8 + 5
46	8 + 8 + 8 + 8 + 8 + 6
478	+ 8 + 8 + 8 + 8 + 7
488	+ 8 + 8 + 8 + 8 + 8



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
OLS-WD-LED-2-S-6-750L-DIM10-
MVOLT-35K-85-BK
Notes:

Type:
C
PENN24-257220



OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear

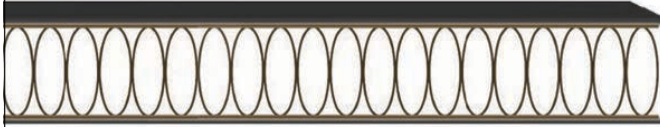
Sketch out your design using the grids space below.



OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear

LOUVER PATTERN

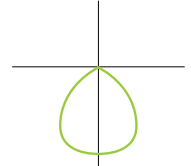
Ellipse Louver



Gold Champagne Chrome Frosted Black

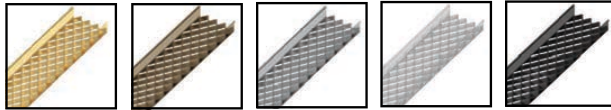


ELS

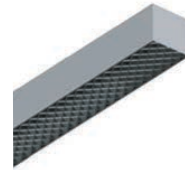


Up & Down
Ellipse Louver

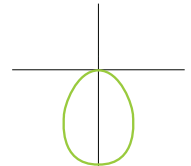
Cross Hatched Louver



Gold Champagne Chrome Frosted Black

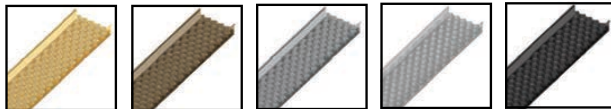
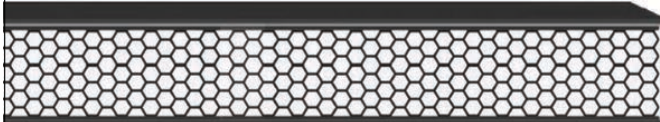


CRL

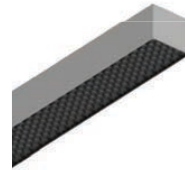


Up & Down
Cross Hatched Louver

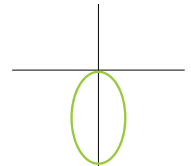
Hexagonal Louver



Gold Champagne Chrome Frosted Black

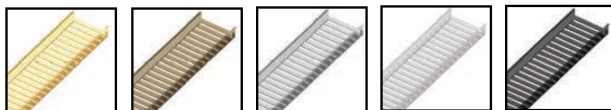


HEX

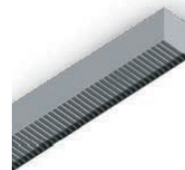


Up & Down
Hexagonal Louver

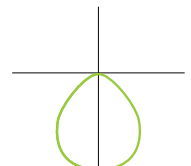
Blade Louver



Gold Champagne Chrome Frosted Black



BLR



Up & Down
Blade Louver



OLS-WD-LED 2" 4"
FLEX Series LED Architectural Wall Mount Direct Linear

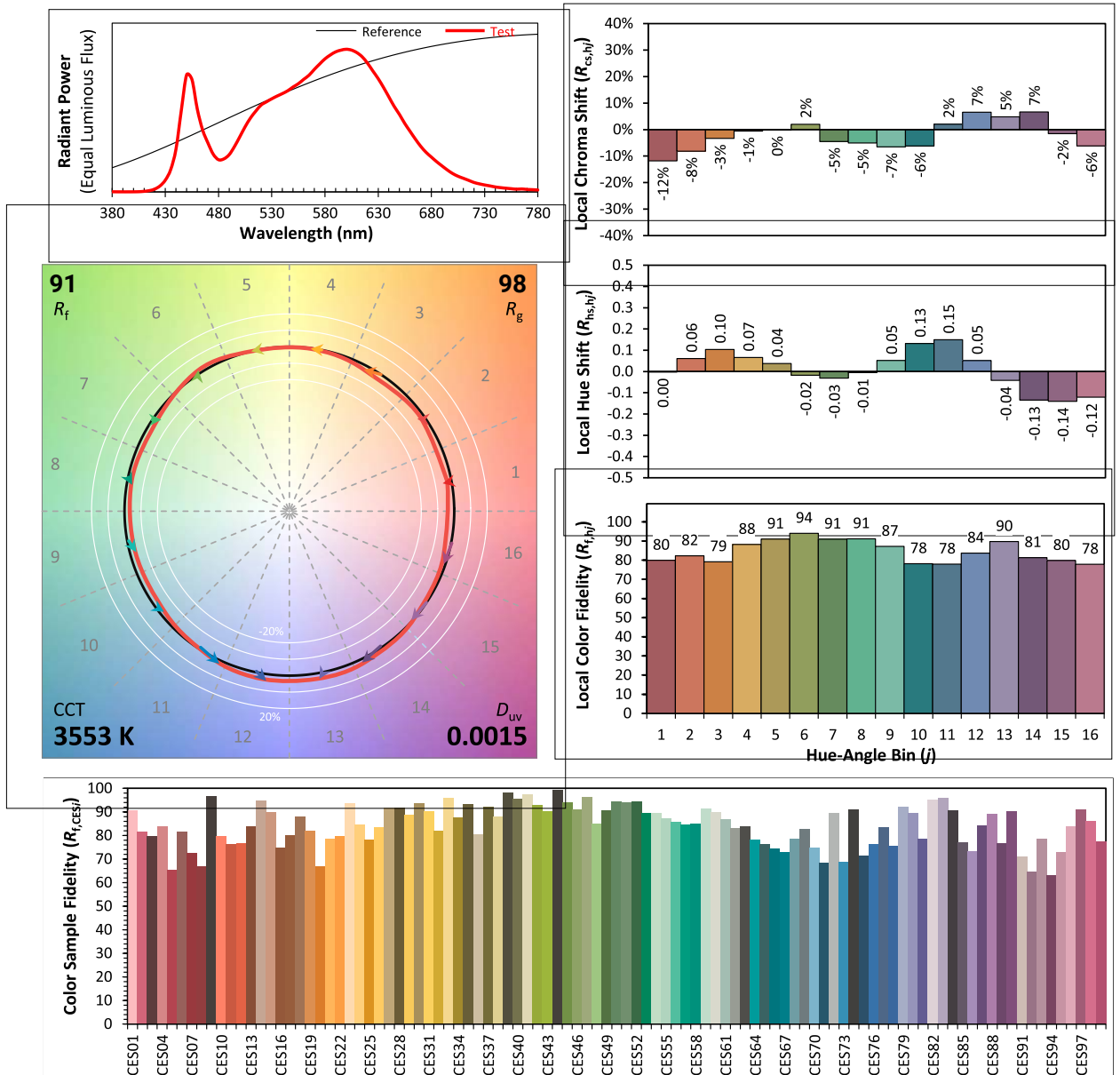
ANSI/IES TM-30-18 Color Rendition Report

Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x **0.4039**
 y **0.3935**
 u' **0.2337**
 v' **0.5122**

CIE 13.3-1995 (CRI)	
R_a	91
R_g	58

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.





OLS-WD-LED 2" 4"

FLEX Series LED Architectural Wall Mount Direct Linear

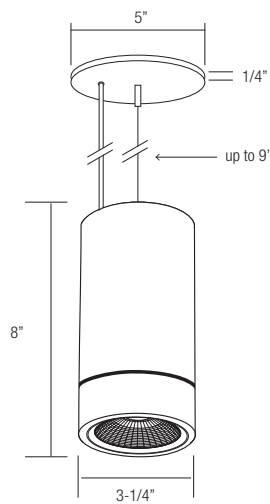
- 1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control systems
- 2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems
- 3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

BRAND	LUTRON	enlighted	LEVITON	ENCELIUM	PHILIPS <small>EasySense</small>	legrand®	NX LIGHTING <small>CONTROLS</small>
CONTROL UNIT	<input type="checkbox"/> FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴ <input type="checkbox"/> FCJS-ECO Lutron Vive Eco-system Pow Pak (Luminaire is shipped Vive Enabled) <input type="checkbox"/> A-WN-D01-RF-WH Athena wireless node (RF only) (White) <input type="checkbox"/> A-WN-D01-OCC-WH Athena wireless node with sensor (White)	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit ¹⁵	<input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ¹⁶ <input type="checkbox"/> ZL027 -DLE Intellect Power Control Module ¹⁶	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module ¹⁷ <input type="checkbox"/> EN-ALC-ZB-BK-DR Wireless Area Lighting Control Module ¹⁷	<input type="checkbox"/> XITANIUM SR LED DRIVER The Philips Advance Xitanium SR LED driver ¹⁸	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller ¹⁹ <input type="checkbox"/> FS-PP-V2 FS-PP Fixture Integrated Sensor Power Pack ¹⁹ <input type="checkbox"/> LMFS-601 Integrated Fixture Sensor & Controller	<input type="checkbox"/> NXFM-1R2D-0-UNV NX Fixture Module, Offset, 1 Relay, 2 0-10V Dimming Channels, 120-347VAC, Blue
INTEGRATED OCCUPANCY & DAYLIGHT SENSOR	<input type="checkbox"/> DFCSJ-OEM-OCC Clear Connect (RF) and Occupancy/Daylight Sensing ²	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <input type="checkbox"/> SU-5E-CL Connected Micro Sensor <input type="checkbox"/> SU-5E-IL Independent Micro Sensor <input type="checkbox"/> SU-5S-H(IoT/CL/IL) Surface Mount Sensor (Must be Specified with CU-4E-FMH Control Unit)²	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System ² <input type="checkbox"/> ZL00J-DOW Intellect Intelligent Fixture Control System ²	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensILUM™ Wireless Integrated Sensor <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM ²	<input type="checkbox"/> SNS200 SNS200 for grouping ² <input type="checkbox"/> SNS300 SNS300 for networks ²	<input type="checkbox"/> FD-301 Fixture integrated Daylight Dimming Sensor ² <input type="checkbox"/> FS-205 Fixture integrated passive infrared occupancy sensor ²	<input type="checkbox"/> NXRM HubbNETTM Radio Module <input type="checkbox"/> NXSMP2-OMNI Integrated Fixture Sensor & Controller <input type="checkbox"/> NXSMP2-LMI Integrated Fixture Sensor & Controller
*WIRELESS OCCUPANCY SENSOR	<input type="checkbox"/> LRF2-OCR2B-P-WH Ceiling mount 360° occupancy/vacancy sensor ³	N/A	N/A	<input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³	N/A	<input type="checkbox"/> LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor ³	<input type="checkbox"/> NXSMP2-SMI NX Slide Mount Indoor Sensor Module
*WIRELESS DAYLIGHT SENSOR	<input type="checkbox"/> LRF2-DCRB-WH Ceiling-mount daylight sensor ³	N/A	N/A	<input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³	N/A	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor ³	<input type="checkbox"/> LUXSTATLS Luxstat Light Sensor for Luxstat Control Modules, 3 to 6000 FC
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <input type="checkbox"/> SU-5E-CL Connected Micro Sensor <input type="checkbox"/> SU-5E-IL Independent Micro Sensor <input type="checkbox"/> SU-5S-H(IoT/CL/IL) Surface Mount Sensor (Must be specified with CU-4E-FMH Control Unit)³	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System <input type="checkbox"/> ZL00J-DOW Intellect Intelligent Fixture Control System	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensILUM™ Wireless Integrated Sensor <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM	<input type="checkbox"/> SNS200-CMP SNS-200 for Grouping ³	N/A	<input type="checkbox"/> NXSMDDT Indoor Ceiling Mount Sensor - OMNI
ACCESSORIES	N/A	<input type="checkbox"/> TMC-SU-5E Tile Mount Carrier <input type="checkbox"/> CBL-5E-CU4-30N 30 inch Sensor cable for CU-4 and IoT Ready <input type="checkbox"/> CBL-5E-CU4-7F 7 Foot sensor cable for CU-4 and IoT Ready Driver	N/A	N/A	N/A	N/A	N/A
NOTES	4- Luminaire will be compatible with LUTRON LRF2-OCR2B-PWH Ceiling mount 360deg occupancy/vacancy sensor & LRF2-DCRB-WH ceiling mount daylight sensor Sensors must be orderd through Lutron	5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU-5SH, Sensors	6- Luminaire will be compatible with LEVITON I ntellect APP & Keypad room controller	7- Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless passive infrared occupancy and photo sensor	8- Luminaire will be compatible with philips field and wireless switch	9- Luminaire will be compatible with DLM Room control system LMPB-100. Sensors must be orderd through Legrand.	N/A





FPR1-LED
ARCHITECTURAL LED PENDANT



FEATURES

A small profile LED pendant mounted luminaire that delivers optimal lumen output for general illumination, integrating into any design. Available in an array of color temperatures, it can accentuate the full spectrum of cool to warm tones, and is the perfect complement for commercial, retail, hospitality, or high-end residential applications.

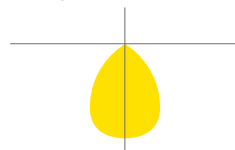
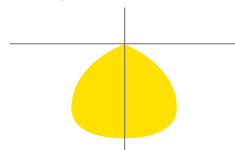
LUMENS	1200, 1800, 2200 WDM- 600, 900, 1200, 1500
CCT	27K, 30K, 35K, 40K, 50K WDM-30K-18K
CRI	90+
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTION	Spot (15°), Narrow Flood (25°), Flood (38°) Wide Flood (60°)
MOUNTING	Suspended, pendant and ceiling mount
FINISH	AWH (Architectural White) ABK (Architectural Black) Custom RAL
DIMMING	DIM10 (0-10V Dimming) DIMTR (Triac dimming)
LIFETIME	L70 at 100,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
2200	2506	32.4 W
1800	1862	21.7 W
1200	1198	13.4 W

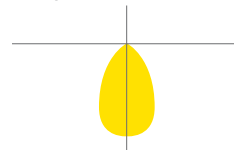
Based on 3000K, 90+ CRI. Actual wattage may vary +/- 5%

WARM DIMMING		
NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
1500	1454	21 W
1200	1173	17 W
900	909	13 W
600	610	9 W

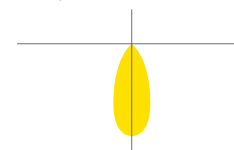
WFL: WIDE FLOOD Candlepower Distribution Curve **FL: FLOOD** Candlepower Distribution Curve



NFL: NARROW FLOOD Candlepower Distribution Curve




S/P SPOT Candlepower Distribution Curve



Reference IES files for additional distribution curve information.



Submitted by Penn Lighting Associates		Catalog Number: FPR1-LED-2200L-DIM10-MVOLT-FL-35K-90-BK-SM Notes:	Type: D PENN24-257220
	Job Name: PPA - Tenant Fit Out at Parkade on 8th		



FPR1-LED ARCHITECTURAL LED PENDANT

PERFORMANCE:

Available in (WDM) Warm Dim and 2700K, 3000K, 3500K, 4000K, and 5000K

Warm Dim with Smart Dim technology mimics traditional incandescent halogen lighting through dimming. Using Warm Dim, luminaires shift over the black body radiator curve as the light dims, transitioning into the rich amber tones that encourages relaxation. Ideal for hospitality, commercial, and residential applications, it maintains a high lumen output, and comes paired with a high CRI of 90+ that guarantees color consistency within a 2 step MacAdam Ellipse.

CONSTRUCTION:

Post-painted powder coated extruded aluminum body.

MOUNTING:

- Offered in various mounting options including cable, stem and surface
- Cable / Pendant mount supplied with complete canopy assembly and matched to housing finish
- Cables mount Height can be adjusted in the field up to 9ft.

OPTICS:

A polycarbonate optical refractor allows for precise beam control and even distribution, with a variety of lumen options. Optics are field changeable and available in NS (Narrow Spot), FL (Flood), and WFL (Wide Flood) options.

FINISH:

Post-painted available in white, black and custom RAL colors.

DIMMING & DRIVER INFORMATION

DIM10 - 0-10V dimming on either MVOLT or 120. Dimmable down to 1% of initial lumens, standard.

DIMTR - Triac & Electronic low voltage dimming, available in 120V.

MOUNTING BRACKET AND SUSPENSION SYSTEM

Ceiling mount bracket provided for direct installation with 3-1/4" to 4" octagonal and square junction box. Pedant mounted option is supplied with a 10ft. adjustable aircraft cable and power cord, which can be field adjusted for desired length. Please consult factory for custom mounting and stem options.

WARRANTY

All Fusion Pendants are designed using a proprietary coolLED Advanced Thermodynamic Design Heat management system is engineered for extremely long life and service period, with a 5-year limited warranty.

LISTING

c-UL-us-Listed

Example: FPR1-LED-2200L-DIM10-MVOLT-FL-30K-90-WH								
SERIES	LUMENS	DIMMING	VOLTAGE	OPTICS	CCT/CRI	COLOR	EMERGENCY	MOUNTING
FPR1-LED	<input type="checkbox"/> 1200L <input type="checkbox"/> 1800L <input type="checkbox"/> 2200L	<input type="checkbox"/> DIMTR <input type="checkbox"/> DIM10	<input type="checkbox"/> 120 <input type="checkbox"/> MVOLT	<input type="checkbox"/> SP (15°) <input type="checkbox"/> NFL (25°) <input type="checkbox"/> FL (38°) <input type="checkbox"/> WFL (60°)	<input type="checkbox"/> 27K-90 <input type="checkbox"/> 30K-90 <input type="checkbox"/> 35K-90 <input type="checkbox"/> 40K-90 <input type="checkbox"/> 50K-85	<input type="checkbox"/> BK(Black) <input type="checkbox"/> WH(White) <i>Custom colors available. Please consult factory</i>	<input type="checkbox"/> 0-EMG-LED-10W <input type="checkbox"/> 0-EMG-LED-20W <i>Remote Mount Please consult factory</i>	<input type="checkbox"/> SM - Suspended mount up to 9ft <input type="checkbox"/> PM12 - Pendant mount up to 12" <input type="checkbox"/> PM18 - Pendant mount up to 18" <input type="checkbox"/> PM24 - Pendant mount up to 24" <input type="checkbox"/> PM36 - Pendant mount up to 36" <input type="checkbox"/> PM48 - Pendant mount up to 48" <input type="checkbox"/> CM - Ceiling Mount
	<input type="checkbox"/> 600L <input type="checkbox"/> 900L <input type="checkbox"/> 1200L <input type="checkbox"/> 1500L	<input type="checkbox"/> DIMTR <input type="checkbox"/> DIM10	<input type="checkbox"/> 120 <input type="checkbox"/> MVOLT	<input type="checkbox"/> SP (15°) <input type="checkbox"/> NFL (25°) <input type="checkbox"/> FL (38°) <input type="checkbox"/> WFL (60°)	Warm Dim <input type="checkbox"/> WDM-30K-18K			

DIMTR is available on only 120V option



www.iuseelite.com

Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information.



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
FPR1-LED-2200L-DIM10-MVOLT-FL-35K-90-BK-SM

Type:

D

PENN24-257220



FPR1-LED
ARCHITECTURAL LED PENDANT

FPR1-LED-2200L-DIM10-MVOLT-FL-40K-90-WH

INPUT WATTS: **32.4**

LUMENS: **2506**

CRI: **90**

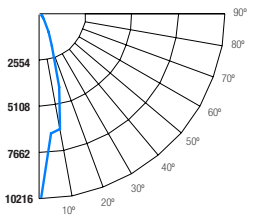
EFFICACY: **77**

CCT: **4000K**

TEST NO.: **EL061859**

SPACING CRITERIA: **0.46**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1820.94	74.90	72.70
0-30	2338.93	96.20	93.30
0-40	2442.99	100.50	97.50
0-60	2490.33	102.50	99.40
0-80	2503.31	103.00	99.90
0-90	2505.76	103.10	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	4278	5033	9625
55	2013	2508	2710
65	1727	1734	2238
75	1721	1984	2095
85	1201	3682	3932

Lumens Per Zone

Zone	Lumens
0-10	699.52
10-20	1121.42
20-30	517.99
30-40	104.06
40-50	34.21
50-60	13.13
60-70	7.97
70-80	5.01
80-90	2.45

Candela Tabulation

0	10	15	25	35	45	55	65	75	85	90
0	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
10	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
15	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
25	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
35	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
45	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
55	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
65	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
75	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
85	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06
90	10215.84	9029.99	3754.75	977.54	84.32	30.63	11.69	7.39	4.51	1.06

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

Cone of Light

Beam diameter	Initial Footcandle at Nadir	Footcandle at Nadir
4.0	35.3 fc	8.1 ft
8.0	8.84 fc	16.1 ft
12.0	3.93 fc	24.2 ft
16.0	2.21 fc	32.3 ft
20.0	1.41 fc	40.4 ft
24.0	0.98 fc	48.4 ft

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%		
ROOM CAVITY RATIO	0	123	123	123	123	120	120	120	120	115	115	115	110	110	110	105	105	105	105	105	105	103		
1	118	118	114	114	112	116	114	112	110	110	108	107	106	105	104	102	101	101	101	101	99	99		
2	114	110	107	104	112	108	105	103	105	103	100	102	100	98	99	98	98	98	98	98	96	95		
3	110	105	101	98	108	103	100	97	101	98	95	98	96	94	96	94	94	94	94	92	91	91		
4	106	100	96	92	104	99	95	92	97	94	91	95	92	90	93	91	91	91	91	89	88	88		
5	103	96	91	88	101	95	91	88	93	90	87	92	89	86	90	88	86	86	86	84	84	84		
6	99	92	88	84	98	92	87	84	90	86	83	89	85	83	88	85	82	81	81	81	81	81		
7	96	89	84	81	95	88	84	81	87	83	80	86	83	80	85	82	80	80	80	78	78	78		
8	93	86	81	78	92	85	81	78	84	80	77	83	80	77	82	79	77	77	77	76	76	76		
9	90	83	78	75	89	82	78	75	82	78	75	81	77	75	80	77	74	74	74	73	73	73		
10	88	80	76	73	87	80	75	73	79	75	72	78	75	72	78	74	72	72	72	71	71	71		

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

FPR1-LED-1800L-DIM10-MVOLT-FL-40K-90-WH

INPUT WATTS: **21.7**

LUMENS: **1862**

CRI: **90**

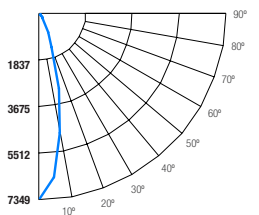
EFFICACY: **86**

CCT: **4000K**

TEST NO.: **EL061863**

SPACING CRITERIA: **0.46**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1387.36	76.60	74.50
0-30	1749.14	96.60	93.90
0-40	1819.66	100.50	97.70
0-60	1852.14	102.30	99.50
0-80	1860.53	102.80	99.90
0-90	1862.22	102.90	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average		
	0°	45°	90°
45	3666	4355	9636
55	1640	2085	2229
65	1377	1419	1877
75	1409	1695	1817
85	1197	3275	3534

Lumens Per Zone

Zone	Lumens
0-10	570.06
10-20	817.30
20-30	361.78
30-40	70.52
40-50	23.95
50-60	8.53
60-70	5.11
70-80	3.28
80-90	1.68

Candela Tabulation

0	10	15	25	35	45	55	65	75	85	90
0	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
10	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
15	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
25	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
35	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
45	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
55	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
65	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
75	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
85	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83
90	7349.16	6508.68	2736.30	721.22	57.16	20.62	7.48	4.63	2.90	0.83

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

Cone of Light

Beam diameter	Initial Footcandle at Nadir	Footcandle at Nadir
4.0	25.4 fc	8.1 ft
8.0	6.36 fc	16.3 ft
12.0	2.83 fc	24.4 ft
16.0	1.59 fc	32.5 ft
20.0	1.02 fc	40.7 ft
24.0	0.71 fc	48.8 ft

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%		
ROOM CAVITY RATIO	0	122	122	122	122	120	120	120	120	114	114	114	109	109	109	105	105	105	105	105	103	103		
1	118	116	114	114	112	116	114	112	110	109	108	107	106	105	104	102	101	101	101	101	99	99		
2	114	110	107	104	112	108	105	103	105	103	100	102	100	98	99	98	98	98	98	96	95	95		
3	110	105	101	98	108	104	100	97	101	98	96	99	96	94	96	94	94	94	94	92	91	91		
4	106	100	96	93	105	99	95	92	97	94	91	95	93	90	94	91	89	89	89	88	88	88		
5	103	96	92	89	101	96	91	88	94	90	88	92	89	87	91	88	86	86	86	85	85	85		
6	100	93	88	85	98	92	88	85	91	87	84	89	86	84	88	85	83	83	83	82	82	82		
7	97	90	85	82	95	89	85	82	88	84	81	87	83	81	86	83	81	81	81	80	80	80		
8	94	87	82	79	93	86	82	79	85	81	79	84	81	78	83	80	78	78	78	77	77	77		
9	91	84	79	76	90	83	79	76	83	79	76	82	78	76	81	78	76	76	76	75	75	75		
10	88	81	77	74	88	81	77	74	80	76	74	79	76	74	79	76	74	74	74	73	73	73		

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

FPR1-LED-1200L-DIM10-MVOLT-FL-40K-90-WH

INPUT WATTS: **13.4**

LUMENS: **1198**

CRI: **90**

EFFICACY: **89**

CCT: **4000K**

TEST NO.: **EL0**

ELX-713

LED Exit/Emergency Light Combo W/ Battery Back-Up & Remote Capable

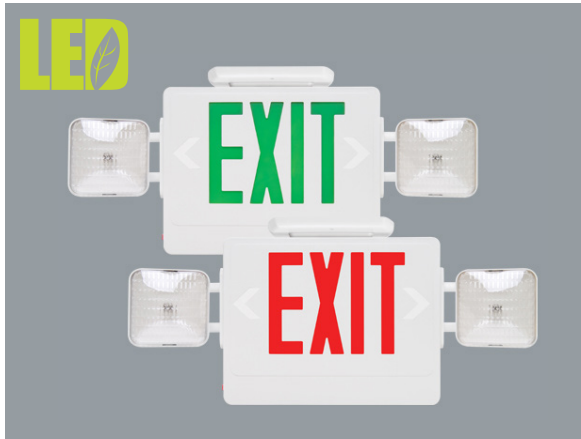
Exit/Emergency Light Combo

Catalog Number:

Project Name:

Type:

Note:



FEATURES

This product is an ideal when both an exit sign and an emergency light are required. Its design makes it suitable for use above doors or in other tight spaces. Full-range control of direction is made possible by the swivel-and-point design of the LED head. The operation of the product can easily be monitored and controlled with the use of a conveniently located test switch that indicates charge and diagnostic state. LED and PC circuitry have a rating of about 25 years without a drop in illumination.

BODY

- The thermoplastic housing of the product makes it corrosion-proof and scratch-and impact-resistant.
- UV-stabilization prevents discoloration of the product.
- Every fixture includes a canopy, extra faceplate, and replaceable chevron directional indicator knockouts for control of direction.
- Compartment shaped by injection.

FACE

- Single or dual configuration. Solid face included if single face appearance is preferred
- 6" high text with color diffusion
- Knockout directional chevrons

MOUNTING

- Unique "snap-together" universal mounting design permits top, back and side mounting. Necessary hardware and canopy are provided electrical

ELECTRICAL

- Minimum 90 minutes of illumination
- 120V or 277V Dual Input
- Normally uses 3.8 watts of power, 15 watts in emergency use
- When battery is functioning, LED lights flash
- Emergency lighting by two adjustable, glare-free light heads 1W (8 LED's x 0.125) per head

BATTERY

- 6V 4.5 amp, sealed-lead acid battery
- Minimum 120 minutes of illumination
- Solid-state internal circuitry for charging

OPTIONS

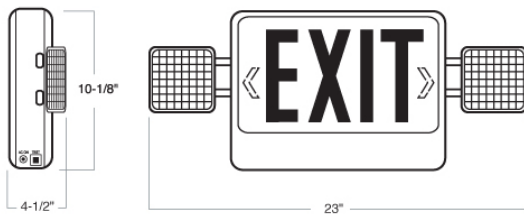
- RC: Remote capacity of up to 3.0 watts

TESTING

- Test Button
- Indicator light shows high charge and readiness for operation
- Safeguards against surges and short circuits

LISTED

- UL 924, NFPA, NEC, State & Municipal
- Damp location approved



ELX-713 ITEM SELECTOR: (Please check the boxes below for the option desired)

LETTER COLOR	HOUSING COLOR
<input type="checkbox"/> G - Green	<input type="checkbox"/> W - White
<input checked="" type="checkbox"/> R - Red	<input checked="" type="checkbox"/> B - Black



Specified:

ELX-713 _____ - _____
LETTER COLOR HOUSING COLOR



A division of
Elite Lighting

Submittal form is available @ www.maxilume.com
Tel: 323-888-1973 • Fax: 323-888-1977

Specifications and Dimensions subject to change without notice.
REV: MAXILUME-SPEC-03-10-2011

ELM-LED-803

LED Emergency Light W/ Battery Back-Up

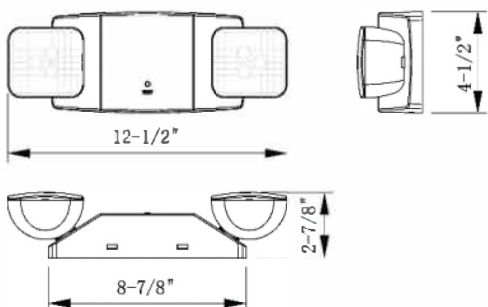
Emergency Lighting

Catalog Number:

Project Name:

Type:

Note:



FEATURES

This fixture is an excellent choice when an attractive emergency light is required. In cases of AC power loss, it provides a minimum of 90 minutes illumination. The LED heads may be adjusted through the full range of motion because of the special swivel-track design.

FACE

- The face has two square LED heads that are fit into bevels on either side and each has a reflector and diffuser

BATTERY

- Indicator light shows high charge and readiness for operation
- Ni-cad battery works during power failures
- Replaceable and requires no maintenance
- When completely charged, supplies emergency power for 90 minutes

ELECTRICAL

- 120/277VAC dual voltage, 50/60Hz.
- Charge 24hours, discharge 100 minutes
- Trickle charge after battery fully charge.
- Test Switch / Charge Indicator light.

HOUSING

- All components are injection molded, color stable, high impact material.
- Polymeric enclosure that serves to contain electronic part have SVA flammability rating.
- Black color optional.
- Friendly configuration design for quick installation.
- Fixture can be ceiling ,wall mounted.
- Universal J-box mounting pattern.

MOUNTING

- Suitable for wall mount and ceiling mount.
- Top knockout for conduit applications.

LAMP HEAD

- Standard model LED lamp head DC 3.6V, 0.9W, deliver 135 lm/head from whole unit, CCT 5700K.

CODE COMPLIANCE

- UL and cUL listed and meets or exceed all requirement in NFPA 70, NFPA 101 life safety code, suitable for U.S.A and Canada market.
- Suitable for 10°C - 40°C ambient temperature, suitable for damp location.

ELM-LED-803 - ITEM SELECTOR: (Please check the boxes below for the option desired)

HOUSING COLOR	CANOPY
<input type="checkbox"/> W - White	UNIVERSAL MOUNT TO WALL OR CEILING
<input checked="" type="checkbox"/> B - Black	

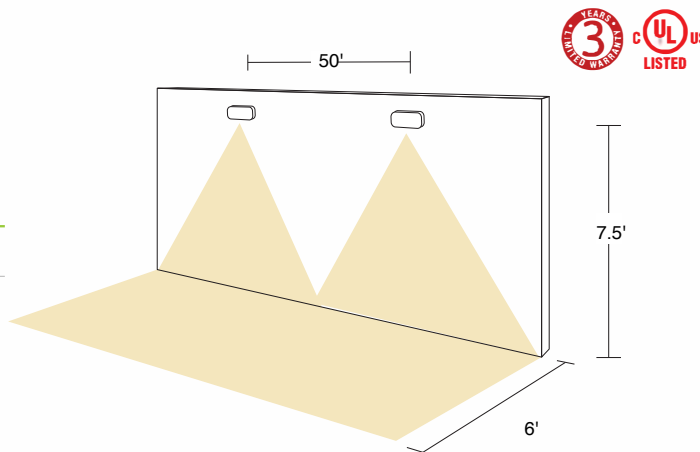
Specified:

ELM-LED-803

HOUSING COLOR

Maximum Spacing Guidelines- ELM-LED-803

Multiple Luminaire Coverage	Mounting Height	Illumination Level
6' Path of Egress	7.50'	1fc Average





Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:
ELM-LED-803-B

Notes:

Type:

EM2

PENN24-257220

ELM-LED-803-HL-W(1H)

TEST NO.: **EL11092223**

INPUT WATTS: **0.9**

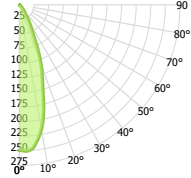
LUMENS: **86**

EFFICACY: **96**

BEAM ANGLE: **34**

SPACING CRITERIA: **0.58**

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	249	249
10°	216	184
20°	108	63
30°	33	21
40°	9	4
50°	3	1
60°	1	1
70°	1	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	6709	6709
45.00°	181	73
55.00°	87	42
65.00°	60	32
75.00°	57	29
85.00°	86	52

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	20
10° - 20°	34
20° - 30°	19
30° - 40°	7
40° - 50°	2
50° - 60°	1
60° - 70°	1
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LUMINAIRE
0° - 20°	53	62%
0° - 30°	72	84%
0° - 40°	80	93%
0° - 60°	83	97%
0° - 80°	84	98%
0° - 90°	84	99%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	6.9 fc	3.6 ft	2.8 ft
8.0 ft	3.9 fc	4.9 ft	3.7 ft
10.0 ft	2.5 fc	6.1 ft	4.7 ft
12.0 ft	1.7 fc	7.3 ft	5.6 ft
14.0 ft	1.3 fc	8.5 ft	6.5 ft
16.0 ft	1.0 fc	9.7 ft	7.4 ft
18.0 ft	0.8 fc	10.9 ft	8.4 ft
20.0 ft	0.6 fc	12.2 ft	9.3 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf	80%																70%				20%				30%				10%				0%
	pc	70%		50%		30%		10%		70%		50%		30%		10%		50%		30%		10%		50%		30%		10%		0%			
pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%						
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	99					
1	114	111	109	107	111	109	107	105	105	103	102	101	100	98	97	96	95	93	93	93	93	93	93	93	93	93	93	93					
2	109	105	101	98	107	103	100	97	99	97	95	96	94	92	93	92	90	88	86	84	84	84	84	84	84	84	84						
3	105	99	95	91	103	98	94	90	95	92	89	92	90	87	90	88	85	83	86	84	82	80	80	80	80	80	84						
4	100	94	89	86	99	93	88	85	90	87	84	88	85	83	86	84	82	80	84	82	80	80	80	80	80	80	80	80					
5	96	89	84	81	95	88	84	80	87	83	80	85	81	79	83	80	78	77	81	79	78	77	77	77	77	77	77						
6	93	85	80	77	91	85	80	76	83	79	76	82	78	75	80	77	75	74	78	75	74	74	74	74	74	74	73						
7	89	82	77	73	88	81	76	73	80	75	72	78	75	72	77	74	71	70	76	72	71	71	71	71	71	71	70						
8	86	78	73	70	85	78	73	70	77	72	69	76	72	69	75	71	69	67	74	69	67	67	67	67	67	67	67						
9	83	75	70	67	82	75	70	67	74	69	67	73	69	66	72	69	66	65	71	66	65	65	65	65	65	65	65						
10	80	72	68	64	79	72	67	64	71	67	64	70	66	64	70	66	64	62	68	64	62	62	62	62	62	62	62						

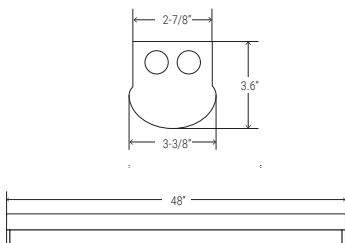


OEC-LED 4'
Architectural LED Suspended Linear-Direct



**MULTI-LUMEN
SELECTOR**

**EASY 3 COLORS
SELECTOR**
3500K • 4000K • 5000K



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
5000	5546	36W
4000	4265	28W
3000	3231	21W
6000	6278	46W
7000	7397	56W
8000	8038	63W

Based on 4000K, 85+ CRI. Actual wattage may vary +/- 5%

FEATURES

The OEC is a versatile LED strip light that can be suspended or surface mounted. Available in single pendant or continuous mounting with a form factor that ensures continuous illumination. An acrylic lens delivers low-glare, even illumination for comfortable environments. The slim 3-3/8" profile makes the OEC ideal for illuminating a variety of narrow applications such as aisles, hallways, corridors, parking garages, as well as education, healthcare, and transportation applications.

LUMENS	3000/4000/5000 6000/7000/8000
CCT	35K/40K/50K
CRI	85+
COLOR QUALITY	3 Step MacAdam Ellipse
LENGTH	2', 4' or 8'
MOUNTING	Suspended or Surface
DIMMING & CONTROL	0-10V Flicker Free 10% Dimming Standard (DIM10)
EMERGENCY	10W - Up to 1480L output
LIFETIME	L70 at 50,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21



Submitted by Penn Lighting Associates



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:

4-OEC-LED-3000L/4000L/5000L-DIM10-MVOLT-35K/40K/50K-85 OCGSS SO5-WH-6FT CANOPY KIT

Notes:

Type:

U

PENN24-257220



By Elite Lighting

OEC-LED

4'

Architectural LED Suspended Linear-Direct

OPTICS & PERFORMANCE

Frosted acrylic lens provides even, shadow-free illumination. Lens has tool-less removal, ensuring easy upgrading and maintenance.

CONSTRUCTION

Heavy-duty 20-gauge cold rolled steel body, post-painted. High-gloss white finish is pre-treated with 5-stage iron phosphate coating, which provides superior paint adhesion and protection against weathering.

INSTALLATION

Surface or suspended mounting; individual or continuous row mounting (CRM). The first luminaire in the row for CRM will always be the power supply feed. After plugging in the male and female harnesses, which are supplied with each luminaire, they will easily slide together. Secure with two screws in the connecting brackets.

DRIVER ELECTRICAL INFORMATION

Powered by high-quality constant-current power LED drivers, rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00. Male and female 18-gauge 6 wire plug connectors are included with every luminaire to allow for simple, hassle-free continuous wiring. Each luminaire must be installed male to female.

MULTI LUMEN/MULTI CCT

Easily field-selectable multi-lumen and multi-CCT selector switches allow you to easily change the intensity and CCT in the field.

DIMMING & DRIVER INFORMATION

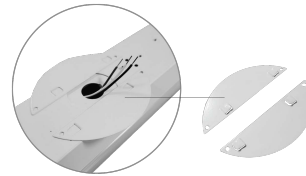
DIM10 - Flicker Free 10% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277V.

WARRANTY

Five-year warranty for parts and components. (Labor not included)

LISTINGS

c-UL-us - Listed for Feed Through Wiring.
c-UL-us - Listed for Damp Location.
Listed for DLC, California Title 24 compliant.



Cover for junction box is shipped standard with fixture, along with necessary hardware to secure cover to j-box.

Example: **4-OEC-LED-3000L/4000L/5000L-DIM10-MVOLT-35K/40K/50K-85**

4	OEC	LED									
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	MOUNTING	OTHER OPTIONS	
4-4'	OEC - LED General Linear	LED	3000L/4000L/5000L 5000L/7000L/8000L	DIM10 - 0-10V Dimming	MVOLT	35K/40K/50K 30K*	85	0-EMG-LED-10W	CRM - Continuous Row Mounting	OCGSS - Cable Gripper Suspension Kit 4-OCN-T8-WG-WH - WireGuard-White 4-OCN-T8-WG-AL - WireGuard-Aluminum S05 - Power cord with 5 conductors for 0-10v dimming fixtures S06 - Power cord with 6 conductors for 0-10V dimming and with emergency OCVH - V-Hook & chain MFG-BRACKET-CR-OEC - bracket for continuous row mounting	

*only for 3000/4000/5000

SO5-WH-6FT - Cord Canopy Kit

SIDE MOUNT SENSORS			
To order -S or -D model sensor, select one option from each column below and combine part numbers (as an example, FSP-301B-S-L2). Available in white only.			
Pole or Box Mount Sensor Voltage	Nipple Configuration	Lens Option	Color
<input type="checkbox"/> FSP-301B, 12-32VDC sensor	<input type="checkbox"/> -S, Straight Nipple	<input type="checkbox"/> -L2, 360° lens, max coverage 48'diameter from 8' height	White
<input type="checkbox"/> FSP-311B, 120/277VAC or 230VAC sensor	<input type="checkbox"/> -D, Drop Nipple	<input type="checkbox"/> -L3, 360° lens, max coverage 40'diameter from 20' height	
<input type="checkbox"/> FSP-321B, 100-347VAC or 208/230/480VAC sensor		<input type="checkbox"/> -L7, 360° lens, max coverage 100'diameter from 40' height	

Note: Unless used with a driver or ballast with a low voltage power supply, the FSP-301B requires a Wattstopper power pack (ordered separately) to operate. FSP-Lx series lens required for operation; order lens separately.



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:

4-OEC-LED-3000L/4000L/5000L-DIM10-MVOLT-35K/40K/50K-85 OCGSS SO5-WH-6FT CANOPY KIT

Type:

U

Notes:

PENN24-257220



By Elite Lighting

OEC-LED

4'

Architectural LED Suspended Linear-Direct

4-OEC-LED-3000L-4000L-5000L-DIM10-MVOLT-35K-40K-50K-85(5000L).

TEST NO.: **EL122719102**

INPUT WATTS: **36.5**

LUMENS: **5546**

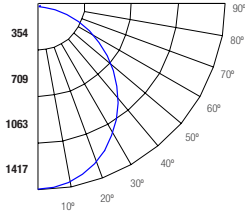
CRI: **85**

EFFICACY: **152**

CCT: **4000K**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	517.16	9.3	9.3
0-30	1100.39	19.9	19.8
0-40	1810.82	32.7	32.7
0-60	3291.15	59.4	59.3
0-80	4415.41	79.7	79.6
0-90	4773.18	86.1	86.1

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	10065	11552	12655
55	9398	11873	13590
65	8533	12869	15500
75	7347	16081	20506
85	5350	35601	47645

Lumens Per Zone

Zone	Lumens
0-10	133.77
10-20	383.39
20-30	583.23
30-40	710.43
40-50	755.81
50-60	724.52
60-70	629.26
70-80	495
80-90	357.77

Candela Tabulation

0			
0	5	15	25
0	1417.3	5	1409.5
5	1409.5	15	1349.3
15	1349.3	25	1232
25	1232	35	1068.9
35	1068.9	45	873.63
45	873.63	55	661.63
55	661.63	65	442.63
65	442.63	75	233.42
75	233.42	85	57.239
85	57.239	90	12.632

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%				50%			30%			10%			0%
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%			
0	116	116	116	116	112	112	112	112	103	103	103	96	96	96	89	89	89	86
1	103	97	92	88	99	94	89	85	87	83	80	81	78	75	75	72	70	67
2	93	84	76	70	89	81	74	68	75	69	64	69	65	61	64	61	57	54
3	84	73	64	57	81	70	62	56	65	58	53	61	55	50	56	52	48	45
4	77	64	55	48	73	62	53	47	58	50	45	54	47	42	50	45	40	38
5	71	57	48	41	67	55	46	40	51	44	38	48	42	36	45	39	35	32
6	65	51	42	35	62	50	41	35	46	39	33	43	37	32	40	35	30	28
7	60	46	37	31	58	45	36	30	42	35	29	39	33	28	37	31	27	25
8	56	42	33	27	54	41	33	27	38	31	26	36	30	25	34	28	24	22
9	52	39	30	25	50	37	30	24	35	28	23	33	27	22	31	26	22	20
10	49	35	27	22	47	34	27	22	33	26	21	31	25	20	29	24	20	18

RC - Ceiling Cavity Reflectance

4-OEC-LED-3000L-4000L-5000L-DIM10-MVOLT-35K-40K-50K-85(4000L).

TEST NO.: **EL122719101**

INPUT WATTS: **28**

LUMENS: **4265**

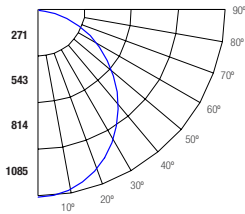
CRI: **85**

EFFICACY: **152**

CCT: **4000K**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	396.7	9.3	9.3
0-30	844.25	19.8	19.8
0-40	1391.68	32.7	32.6
0-60	2533.23	59.4	59.4
0-80	3396.98	79.7	79.6
0-90	3672.13	86.2	86.1

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	7719	8846	9704
55	7218	9084	10417
65	6649	9834	11888
75	5646	12406	15745
85	4086	27155	36990

Lumens Per Zone

Zone	Lumens
0-10	102.61
10-20	294.09
20-30	447.55
30-40	547.43
40-50	584
50-60	557.55
60-70	483.07
70-80	380.69
80-90	275.15

Candela Tabulation

0			
0	5	15	25
0	1085.4	5	1079.7
5	1079.7	15	1033
15	1033	25	944.05
25	944.05	35	819.14
35	819.14	45	670
45	670	55	508.18
55	508.18	65	344.93
65	344.93	75	179.36
75	179.36	85	43.712
85	43.712	90	8.793

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%				50%			30%			10%			0%
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%			
0	116	116	116	116	112	112	112	112	103	103	103	96	96	96	89	89	89	86
1	103	97	92	88	99	94	89	85	87	83	80	81	78	75	75	72	70	67
2	93	84	76	70	89	81	74	68	75	69	64	69	65	61	64	61	57	54
3	84	73	64	57	81	70	62	56	65	58	53	61	55	50	56	52	48	45
4	77	64	55	48	73	62	53	47	58	50	45	54	47	42	50	45	40	38
5	71	57	48	41	67	55	46	40	51	44	38	48	42	36	45	39	35	32
6	65	51	42	35	62	50	41	35	46	39	33	43	37	32	40	35	30	28
7	60	46	37	31	58	45	36	30	42	35	29	39	33	28	37	31	27	25
8	56	42	33	27	54	41	33	27	38	31	26	36	30	25	34	28	24	22
9	52	39	30	25	50	37	30	24	35	28	23	33	27	22	31	26	22	20
10	49	35	27	22	47	34	27	22	33	26	21	31	25	20	29	24	20	18

RC - Ceiling Cavity Reflectance

4-OEC-LED-3000L-4000L-5000L-DIM10-MVOLT-35K-40K-50K-85(3000L).

TEST NO.: **EL12271999**

INPUT WATTS: **21**

LUMENS: **3277**

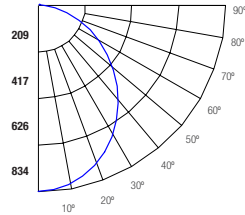
CRI: **85**

EFFICACY: **158**

CCT: **3500K**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	305.21	9.3	9.3
0-30	649.57	19.8	19.8
0-40	1069.22	32.7	32.6
0-60	1941.67	59.3	59.3
0-80	2602.34	79.5	79.4
0-90	2813.15	85.9	85.9

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	7468	6685	5889
55	8022	6802	5498
65	9158	7271	5007
75	12129	8935	4287
85	28233	19119	3299

Lumens Per Zone

Zone	Lumens
0-10	78.92
10-20	226.29
20-30	344.36
30-40	419.65
40-50	446.19
50-60	426.26
60-70	369.51
70-80	291.17
80-90	210.81

Candela Tabulation

0			
0	5	15	25
0	834.336	5	834.27
5	834.27	15	815.38
15	815.38	25	776.62
25	776.62	35	720.04
35	720.04	45	648.21
45	648.21	55	564.8
55	564.8	65	475.07
65	475.07	75	385.32
75	385.32	85	302.04
85	302.04	90	264.29

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%				50%			30%			10%			0%
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%			
0	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	103	97	92	88	99	94	89	85	87	83	80	80	77	75	75	72	70	67
2	93	84	76	70	89	81	74	68	75	69	64	69	65	60	64	60	57	54
3	84	73	64	57	81	70	62	56	65	58	53	60	55	50	56	51	48	45
4	77	64	55	48	73	62	53	47	58	50	45	54	47	42	50	45	40	38
5	71	57	48	41														



Job Name:
PPA - Tenant Fit Out at Parkade on 8th

Catalog Number:

4-OEC-LED-3000L/4000L/5000L-DIM10-MVOLT-35K/
40K/50K-85 OCGSS SO5-WH-6FT CANOPY KIT

Type:

U

Notes:

PENN24-257220



OEC-LED 4'
Architectural LED Suspended Linear-Direct

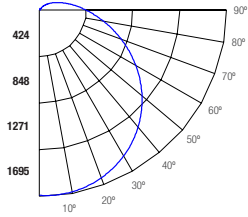
4-OEC-LED-6000L-7000L-8000L-DIM10-MVOLT-35K-40K-50K-85(6000L)

INPUT WATTS: **46.4** LUMENS: **6278** CRI: **85** EFFICACY: **135** CCT: **3500K**

TEST NO.: **EL12282061**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	611.68	9.70	9.70
0-30	1298.34	20.70	20.70
0-40	2128.87	33.90	33.90
0-60	3826.16	60.90	60.90
0-80	5077.92	80.90	80.90
0-90	5470.39	87.10	87.10

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	14764	17947	20094
55	13320	18321	21364
65	11628	19672	23871
75	9535	24309	30542
85	6173	52609	68407

Lumens Per Zone

Zone	Lumens
0-10	158.44
10-20	453.24
20-30	686.66
30-40	830.53
40-50	873.12
50-60	824.17
60-70	704.50
70-80	547.26
80-90	392.47

Candela Tabulation

0			
0-10	10-20	20-30	30-40
0.0	5.0	15.0	25.0
1676.219	1669.210	1584.850	1430.150
5.0	15.0	25.0	35.0
970.820	710.430	456.990	229.480
55.0	65.0	75.0	85.0
10.510	10.510	10.510	10.510

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%			50%			30%			10%			0%			
		70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%	
0	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87		
1	104	98	93	88	99	94	90	86	88	84	80	81	78	76	76	73	71	68		
2	93	84	77	70	89	81	74	68	76	70	65	70	66	62	65	62	58	55		
3	85	73	65	58	81	71	63	56	66	59	54	61	56	51	57	53	49	46		
4	77	65	55	48	74	63	54	47	58	51	45	54	48	43	51	46	41	39		
5	71	58	48	41	68	56	47	41	52	45	39	49	42	37	46	40	36	33		
6	65	52	43	36	63	50	41	35	47	39	34	44	38	33	41	36	31	29		
7	61	47	38	32	58	45	37	31	43	35	30	40	34	29	38	32	28	25		
8	56	43	34	28	54	41	33	28	39	32	27	37	30	26	35	29	25	23		
9	53	39	31	25	50	38	30	25	36	29	24	34	28	23	32	26	22	20		
10	49	36	28	23	47	35	27	22	33	26	22	31	25	21	30	24	20	18		

RC - Ceiling Cavity Reflectance

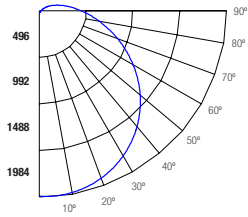
4-OEC-LED-6000L-7000L-8000L-DIM10-MVOLT-35K-40K-50K-85(7000L)

INPUT WATTS: **56.5** LUMENS: **7397** CRI: **85** EFFICACY: **131** CCT: **3500K**

TEST NO.: **EL12282062**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	721.10	9.70	9.70
0-30	1530.6	20.70	20.70
0-40	2509.75	33.90	33.90
0-60	4508.43	61.00	61.00
0-80	5981.21	80.90	80.90
0-90	6443.48	87.10	87.10

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	17352	21149	23708
55	15664	21572	25217
65	13681	23180	28172
75	11188	28658	36100
85	7263	62019	80766

Lumens Per Zone

Zone	Lumens
0-10	186.78
10-20	534.32
20-30	809.50
30-40	979.15
40-50	1029.14
50-60	969.53
60-70	827.99
70-80	644.80
80-90	462.27

Candela Tabulation

0			
0-10	10-20	20-30	30-40
0.0	5.0	15.0	25.0
1975.79	1962.81	1863.84	1681.95
5.0	15.0	25.0	35.0
1140.96	835.46	537.65	269.27
55.0	65.0	75.0	85.0
12.30	12.30	12.30	12.30

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%			50%			30%			10%			0%			
		70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%				
0	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87		
1	104	98	93	88	99	94	90	86	88	84	80	81	78	76	76	73	71	68		
2	93	84	77	70	89	81	74	68	76	70	65	70	66	62	65	62	58	55		
3	85	73	65	58	81	71	63	56	66	59	54	61	56	51	57	53	49	46		
4	77	65	55	48	74	63	54	47	58	51	45	54	48	43	51	46	41	39		
5	71	58	48	41	68	56	47	41	52	45	39	49	42	37	46	40	36	33		
6	65	52	43	36	63	50	41	35	47	39	34	44	38	33	41	36	31	29		
7	61	47	38	32	58	45	37	31	43	35	30	40	34	29	38	32	28	25		
8	56	43	34	28	54	41	33	28	39	32	27	37	30	26	35	29	25	23		
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	32	26	22	20		
10	49	36	28	23	47	35	27	22	33	26	22	31	25	21	30	24	20	18		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

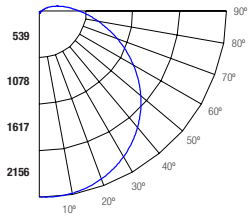
4-OEC-LED-6000L-7000L-8000L-DIM10-MVOLT-35K-40K-50K-85(8000L)

INPUT WATTS: **63.1** LUMENS: **8038** CRI: **85** EFFICACY: **127** CCT: **3500K**

TEST NO.: **EL12282063**

SPACING CRITERIA: **1.40**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	784.09	9.80	9.80
0-30	1664.28	20.70	20.70
0-40	2728.88	33.90	33.90
0-60	4901.04	61.00	61.00
0-80	6500.63	80.90	80.90
0-90	7002.91	87.10	87.10

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	18859	22974	25782
55	17032	23465	27397
65	14860	25194	30642
75	12151	31121	39262
85	7875	67431	87798

Lumens Per Zone

Zone	Lumens
0-10	203.08
10-20	581.01
20-30	880.19
30-40	1064.61
40-50	1118.93
50-60	1053.23
60-70	899.67
70-80	699.92
80-90	502.29

Candela Tabulation

0			
0-10	10-20	20-30	30-40
0.0	5.0	15.0	25.0
2148.161	2133.990	2027.090	1828.680
5.0	15.0	25.0	35.0
1240.040	908.430	583.990	292.450
55.0	65.0	75.0	85.0
13.280	13.280	13.280	13.280

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	RW	80%			70%			50%			30%			10%			0%			
		70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%	70%	50%	30%				
0	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87		
1	104	98	93	88	99	94	90	86	88	84	80	81	78	76	76	73	71	68		
2	93	84	77	70	89	81	74	68	76	70	65	70	66	62	65	62	58	55		
3	85	73	65	58	81	71	63	56	66	59	54	61	56	51	57	53	49	46		
4	77	65	56	48	74	63	54	47	58	51	45	54	48	43	51	46	41	39		
5	71	58	48	41	68	56	47	41	52	45	39	49	42	37	46	40	36	33		
6	65	52	43	36	63	50	41	35	47	39	34	44	38	33	41	36	31	29		
7	61	47	38	32	58	45	37	31	43	35	30	40	34	29	38	32	28	25		
8	56	43	34	28	54	41	33	28	39	32	27	37	30	26	35	29	25	23		
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	32	26	22	20		