

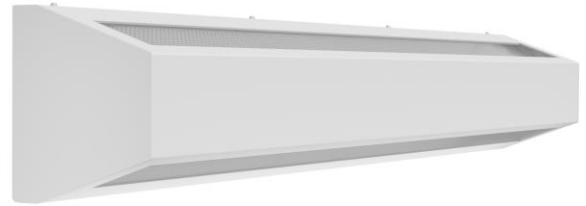
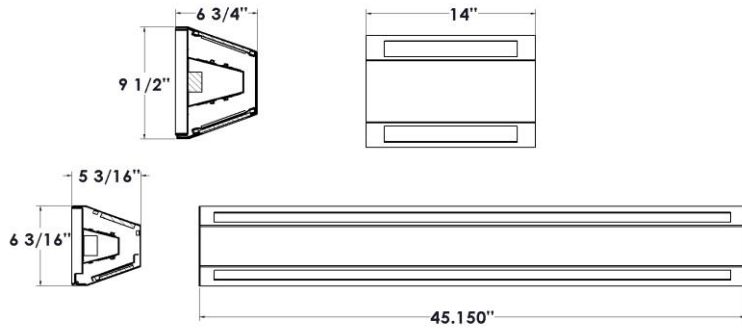
PROJECT:

NOTES:

ORDERING INFORMATION:

EXAMPLE PUOA - H - 45 - L - 40 - 20 - 9 - 40 - H5 M1 - MV - 1C - EM - CLE4- DM
 SERIES SECURITY LEVEL DIMENSIONS SOURCE LUMENS UP LUMENS DOWN CRI KELVINS DIFFUSERS LENS VOLTAGE CIRCUITS OPTIONS CONTROLS DRIVER

SHOP DRAWINGS



ORDERING INFORMATION

SERIES

PUOA

SECURITY LEVEL

X Extra Heavy (12 gauge)
 H Heavy (14 gauge)
 M Medium (16 gauge)
 L Light (18 gauge)

NOMINAL LENGTH

23 23"
 45 45"

SOURCE

L LED

LUMENS UP*

20 2,000
 40 4,000

LUMENS DOWN*

20 2,000
 40 4,000

*Other lumen packages available.

CRI

BLANK 80 CRI
 9 90 CRI

KELVIN

30 3000K
 35 3500K
 40 4000K
 50 5000K
 TW Tunable White

DIFFUSERS

A0 Acrylic K12 (0.95")
 A1 Acrylic K12 (0.125")
 H5 White Opal

SECURITY LENS

M1 Clear Polycarbonate (0.125")
 M3 Clear Polycarbonate (0.187")
 M4 Clear Polycarbonate (0.250")
 M5 Clear Polycarbonate (0.375")

VOLTAGE

MV 120-277V
 347 347V

CIRCUITS

1C 1 Circuit
 2C 2 Circuits

OPTIONS

EM Emergency Power Pack
 9C 90 CRI
 NL LED Night Light

CONTROLS

Click on the following link for control options:
<https://bit.ly/2KzMuAx>

DRIVER

BLANK Non-dimming applications
 DM Dimming applications

FEATURES

- > Specification-grade direct/indirect wall mounted LED luminaire for anti-vandal and maximum security applications
- > Robust clamshell housing designed to prevent penetration and contraband concealment
- > Two apertures provide up and down light
- > Security lens (multiple thicknesses available) secured with internal frame
- > Concealed piano hinge welded to door frame and fastened to backplate
- > Continuous welded and ground seams for optimal structural strength
- > Tamper resistant fasteners
- > Minimum 80 CRI; color range 3000K - 5000K available
- > Multiple dimming protocols available
- > Efficacies up to 134 lm/w
- > 100% made in Canada

APPLICATIONS

- > Prison cells
- > Correctional facilities
- > Corridors
- > Locker rooms
- > Public areas
- > Schools

FIXTURE PERFORMANCE DATA

SPECIFICATIONS

Housing – One-piece precision die-formed 12, 14, 16, 18-gauge C.R.S. with continuously welded end plates

Back-plate – Die-formed 12,14 or 16 gauge CRS with embossed mounting holes and contraband trap

Internal Frame – One piece precision die formed internal frame fastened to housing with multiple screws

Security Lens – Variety of robust polycarbonate lenses available (outer lens)

Diffuser - Variety of diffusers available for smooth and uniform illumination (inner lens)

Hinge – Concealed full-length piano style hinge with .500" knuckle and .125" pin welded to doorframe

Finish – Baked white enamel powder finish applied post production on all surfaces for smooth edges and safe handling

Electrical – High quality mid-power LED boards. L70 >50,000 hours.

Mounting – Surface Wall Mount

Listings –
 ■ CSA certified as luminaire suitable for dry or damp locations.
 ■ cUL certified as luminaire suitable for dry or damp locations.

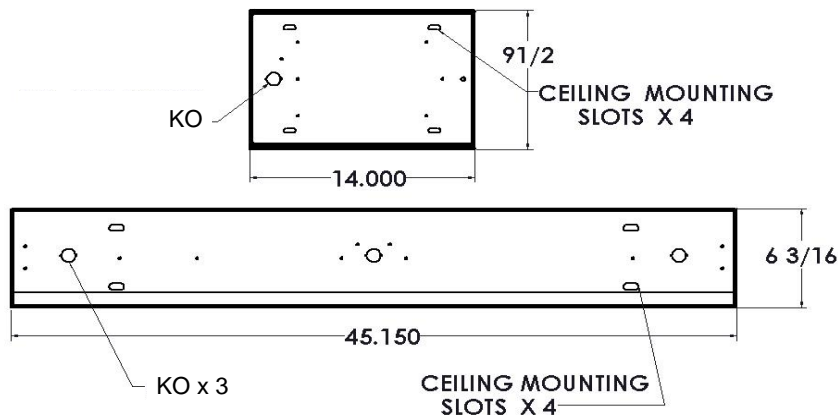
Warranty – 5-year limited warranty

LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
23"			
30	3,052	27	113
40	4,069	37	110
45"			
40	4,097	31	111
60	6,162	46	134

*Results based on 4000K, 80 CRI, Security Lens (M1), Diffuser (H5)

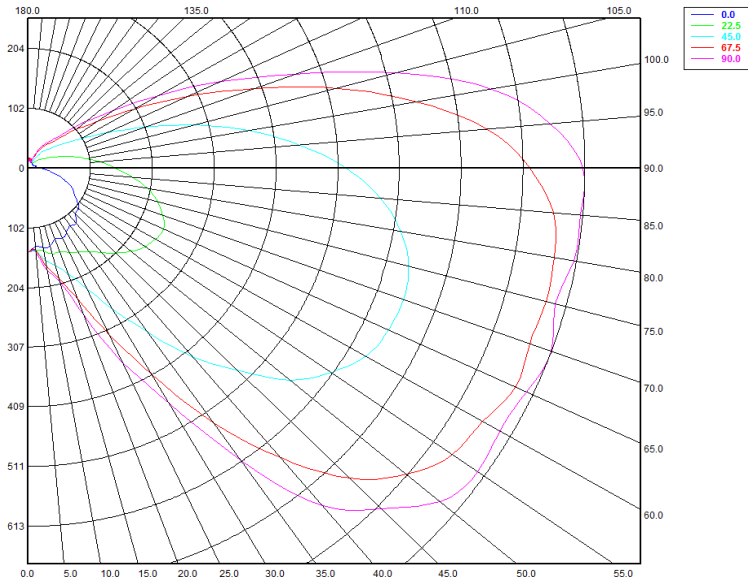
MULTIPLIER TABLE	
COLOR TEMPERATURE	
CCT/CRI	CONVERSION FACTOR
3000K / 80 CRI	0.95
3500K / 80 CRI	0.97
4000K / 80 CRI	1
5000K / 80 CRI	1.03

FIXTURE DETAILS



PHOTOMETRY

PUOA-45-LED-40-40-A1-M1-MVOLT Total Luminaire Output: 4,097 lumens; 31 Watts



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	144.07	144.07	144.07	144.07	144.07
5.00°	134.89	140.60	142.99	141.65	144.91
10.00°	137.71	143.57	158.41	169.17	176.80
15.00°	138.46	151.75	172.34	195.07	200.54
20.00°	129.06	152.02	192.78	240.76	270.04
25.00°	132.35	159.05	226.69	314.69	366.47
30.00°	126.47	165.45	281.20	409.24	466.20
35.00°	120.29	173.72	344.38	532.22	610.03
40.00°	122.67	188.30	423.28	647.82	754.65
45.00°	110.09	205.19	491.90	751.20	824.22
50.00°	107.97	220.89	564.84	816.00	888.13
55.00°	98.60	234.25	609.95	855.77	906.74
60.00°	87.77	241.82	643.82	867.37	900.73
65.00°	79.21	246.51	657.25	888.49	907.90
70.00°	65.62	235.79	660.36	881.76	919.66
75.00°	52.76	220.36	650.88	885.95	901.79
80.00°	38.17	199.78	625.95	882.08	915.08
85.00°	28.03	170.69	583.42	871.10	916.42
90.00°	20.05	142.90	524.19	828.57	916.76
95.00°	13.34	119.21	449.84	762.33	866.21
100.00°	12.25	95.44	368.37	651.67	777.88
105.00°	13.36	76.31	284.42	527.18	627.53
110.00°	12.05	57.31	203.27	396.66	469.61
115.00°	10.14	44.09	144.48	290.25	349.73
120.00°	8.83	34.01	100.32	202.51	248.46
125.00°	9.44	26.84	75.64	137.86	172.73
130.00°	9.12	21.83	55.37	101.93	122.49
135.00°	9.44	15.12	45.64	72.47	86.01
140.00°	10.10	12.24	36.45	55.35	64.13
145.00°	10.12	11.26	24.40	48.12	51.71
150.00°	11.15	12.66	14.59	33.80	41.58
155.00°	11.68	13.31	12.24	18.05	22.02
160.00°	14.72	13.39	14.14	10.76	9.36
165.00°	14.64	15.11	15.70	16.70	14.57
170.00°	16.53	15.41	16.11	14.77	13.83
175.00°	13.84	16.65	15.37	17.44	12.70
180.00°	14.94	14.94	14.94	14.94	14.94

Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	15.09	0.37%
10.00° - 20.00°	50.30	1.23%
20.00° - 30.00°	112.88	2.75%
30.00° - 40.00°	225.52	5.50%
40.00° - 50.00°	370.60	9.04%
50.00° - 60.00°	490.81	11.98%
60.00° - 70.00°	563.42	13.75%
70.00° - 80.00°	589.36	14.38%
80.00° - 90.00°	568.29	13.87%
90.00° - 100.00°	478.28	11.67%
100.00° - 110.00°	319.69	7.80%
110.00° - 120.00°	167.26	4.08%
120.00° - 130.00°	77.68	1.90%
130.00° - 140.00°	36.61	0.89%
140.00° - 150.00°	18.23	0.44%
150.00° - 160.00°	7.68	0.19%
160.00° - 170.00°	4.11	0.10%
170.00° - 180.00°	1.57	0.04%
0.00° - 90.00°	2,986.26	72.88%
90.00° - 180.00°	1,111.10	27.12%
0.00° - 180.00°	4,097.36	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.3
Two luminaires, plane 90°	4.19
Four luminaires	3.41