

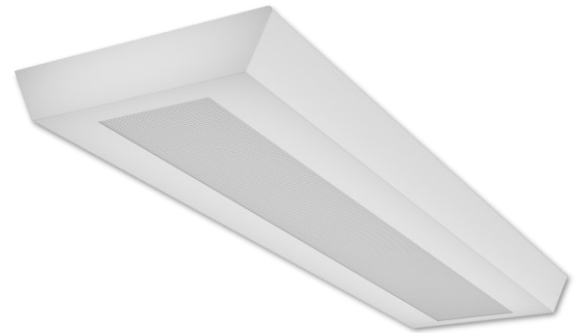
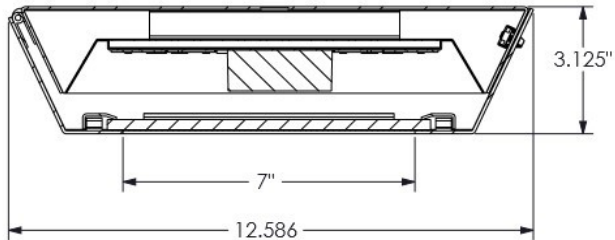
PROJECT:

NOTES:

ORDERING INFORMATION:

**EXAMPLE** PUWA - H - 4F - 40 - 9 - 40 - H5 - M4 - MV - EM - D  
 SERIES SECURITY Y NOM. LENGT LUMENS CRI KELVINS DIFFUSERS LENS VOLTAGE OPTIONS DRIVER

SHOP DRAWINGS



ORDERING INFORMATION

**SERIES**

PUWA
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**KELVIN**

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

**SECURITY LEVEL**

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

**DIFFUSERS**

A1	Acrylic K12
L1	Frosted Acrylic
H5	White Opal Acrylic

**NOMINAL LENGTH**

2F	23"
4F	45"

**SECURITY LENS (NOMINAL THICKNESS)**

M1	Clear Polycarbonate (1/8")
M3	Clear Polycarbonate (3/16")
M4	Clear Polycarbonate (1/4")
M5	Clear Polycarbonate (3/8")
M6	Clear Polycarbonate (1/2")

LUMENS

**VOLTAGE**

MV	120-277V
347	347V

Lumen Package*	Nominal Lumens
<b>2F</b>	
30	3,000
40	4,000
<b>4F</b>	
40	4,000
60	6,000
80	8,000

**OPTIONS**

EM	Emergency Power Pack
AM	Anti-Microbial Paint
SH	Stainless Steel Housing
NLA	Amber LED night light (500 lumens)
NLR	Red LED night light (500 lumens)
NL	White LED night light (500 lumens)*

**CRI**

BLANK	80 CRI
9	90 CRI

\*Confirm lumen packages and TempK with manufacture

**DRIVERS**

ND	Non-dimming applications
D	0-10V dimming
DA	DALI driver

FEATURES

- > Specification-grade LED luminaire for anti-vandal and maximum security applications
- > Robust design with concealed hinges, tamper-resistant fasteners and contraband trapping backplate
- > Security lens (multiple thicknesses available) secured with double frame
- > Double frame secured internally with multiple screws
- > Concealed piano hinge welded to door frame and fastened to backplate
- > Welded housing for additional strength
- > Minimum 80 CRI; color range 3000K - 5000K available
- > Multiple dimming protocols available
- > IK10+

APPLICATIONS

- > Correctional facilities
- > Corridors
- > Locker rooms
- > Public areas
- > Stairwells
- > Rough service applications

LED

FIXTURE PERFORMANCE DATA

SPECIFICATIONS

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

**Door Frame** – Single piece precision die formed frame with seam welded corners and tamper-resistant screws secure door frame to housing

**Shielding** – Variety of robust polycarbonate lenses available. Secured with double frame which is fastened with multiple screws.

**Hinge** – Concealed 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. L85 >50,000 hours.

**Mounting** – Suspended or surface

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

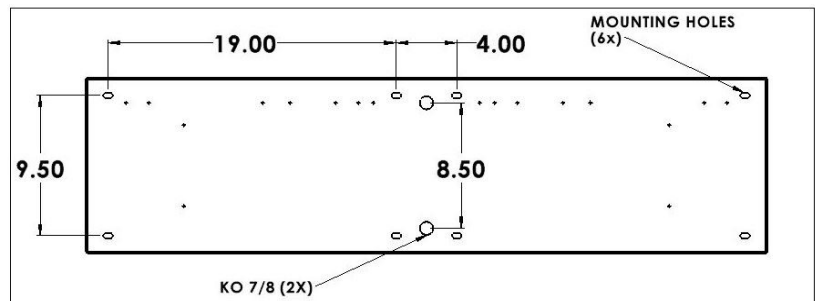
**Warranty** – 5-year limited warranty

LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
2F			
30	3,023	28	108
4F			
40	4,043	38	106
60	6,133	57	107

\*Results based on 4000K, 80 CRI, Diffuser A1, Lens M1

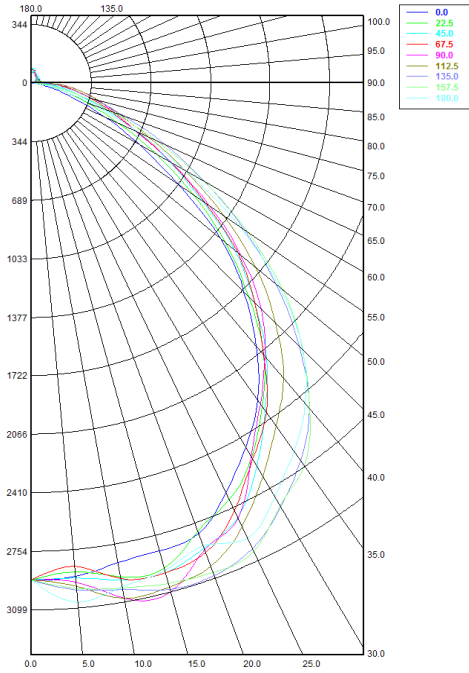
MULTIPLIER TABLE	
COLOR TEMPERATURE	
CCT/CRI	CONVERSION FACTOR
3000K / 80 CRI	0.95
3500K / 80 CRI	0.97
4000K / 80 CRI	1
5000K / 80 CRI	1.03

FIXTURE DETAILS



PHOTOMETRY

PUWA-H-4F-L-60-40-A1-M1-MV Total Luminaire Output: 6,133 lumens; 57 Watts



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°
0.00°	2,293.32	2,293.32	2,293.32	2,293.32	2,293.32	2,293.32	2,293.32	2,293.32	2,293.32
5.00°	2,171.35	2,240.36	2,270.76	2,255.56	2,297.28	2,269.90	2,320.75	2,276.33	2,399.38
10.00°	2,159.84	2,215.98	2,214.06	2,206.02	2,302.76	2,325.98	2,319.55	2,258.11	2,294.09
15.00°	2,139.65	2,182.08	2,234.16	2,284.21	2,261.70	2,294.31	2,330.67	2,307.62	2,305.10
20.00°	2,116.01	2,112.24	2,218.35	2,206.44	2,214.29	2,266.47	2,342.98	2,312.05	2,327.47
25.00°	1,975.37	2,052.00	2,110.34	2,110.44	2,144.08	2,176.88	2,282.33	2,288.08	2,272.03
30.00°	1,839.85	1,923.14	1,949.49	1,951.57	1,957.80	2,019.96	2,183.59	2,216.39	2,126.47
35.00°	1,693.94	1,765.21	1,793.36	1,787.90	1,765.69	1,883.02	2,043.93	2,084.91	2,044.53
40.00°	1,519.84	1,538.66	1,597.65	1,607.96	1,601.56	1,691.06	1,843.61	1,882.98	1,828.44
45.00°	1,324.11	1,352.36	1,396.83	1,398.56	1,438.46	1,503.67	1,650.58	1,686.90	1,673.45
50.00°	1,074.34	1,113.27	1,174.85	1,186.27	1,217.19	1,278.76	1,380.91	1,439.53	1,402.94
55.00°	778.01	853.98	911.49	937.33	952.65	1,029.35	1,143.43	1,172.23	1,110.80
60.00°	550.34	623.80	697.89	703.07	704.97	778.97	868.89	855.16	793.44
65.00°	353.21	425.25	508.61	502.94	498.94	553.82	642.80	599.52	507.93
70.00°	194.79	264.14	336.45	368.49	390.97	416.61	435.18	374.02	273.81
75.00°	114.09	151.42	223.40	271.86	291.81	297.50	280.24	214.23	151.27
80.00°	53.18	81.54	145.17	198.70	227.46	220.65	184.23	117.39	71.33
85.00°	19.60	44.08	86.44	128.44	147.46	148.37	115.23	61.36	25.05
90.00°	3.95	20.58	43.70	68.43	77.63	74.53	55.64	28.05	5.29
95.00°	5.33	15.16	27.19	44.90	53.91	48.17	36.61	19.05	6.90
100.00°	17.84	15.55	28.73	35.91	42.15	38.83	33.86	21.61	27.19
105.00°	33.85	16.94	20.50	33.45	39.83	38.70	20.98	20.30	43.16
110.00°	38.30	21.96	13.74	24.91	34.71	27.67	16.90	28.29	42.13
115.00°	34.66	27.92	15.92	17.62	18.43	18.86	17.86	29.32	39.42
120.00°	34.85	28.34	19.35	20.54	21.08	20.54	23.60	35.14	40.17
125.00°	38.35	30.71	21.49	21.34	24.44	27.42	25.70	34.47	36.90
130.00°	36.13	33.14	24.14	27.86	30.10	32.17	28.52	35.50	41.13
135.00°	33.18	31.70	27.14	32.52	31.79	36.19	32.01	38.39	39.28
140.00°	39.74	34.10	28.81	34.23	34.67	34.42	35.51	41.86	42.09
145.00°	35.16	35.57	32.71	35.46	38.06	38.30	38.63	45.05	46.88
150.00°	40.25	41.21	37.16	37.26	39.75	35.73	39.32	45.38	49.74
155.00°	48.47	40.17	42.03	42.41	42.89	43.59	47.69	49.16	54.28
160.00°	46.32	49.54	45.17	43.44	46.84	48.77	55.16	56.06	51.27
165.00°	57.45	49.43	56.14	49.37	54.74	55.83	51.91	52.91	53.67
170.00°	61.66	50.85	53.32	50.49	59.06	58.95	52.87	57.80	49.96
175.00°	67.63	60.28	64.12	60.33	56.98	61.35	58.62	60.44	56.20
180.00°	67.94	67.94	67.94	67.94	67.94	67.94	67.94	67.94	67.94

Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	229.99	3.75%
10.00° - 20.00°	638.45	10.41%
20.00° - 30.00°	987.51	16.10%
30.00° - 40.00°	1,162.38	18.95%
40.00° - 50.00°	1,136.93	18.54%
50.00° - 60.00°	884.30	14.42%
60.00° - 70.00°	524.45	8.55%
70.00° - 80.00°	255.84	4.17%
80.00° - 90.00°	105.98	1.73%
90.00° - 100.00°	37.99	0.62%
100.00° - 110.00°	29.95	0.49%
110.00° - 120.00°	24.19	0.39%
120.00° - 130.00°	25.20	0.41%
130.00° - 140.00°	25.71	0.42%
140.00° - 150.00°	23.74	0.39%
150.00° - 160.00°	20.51	0.33%
160.00° - 170.00°	14.78	0.24%
170.00° - 180.00°	5.91	0.10%
0.00° - 90.00°	5,925.83	96.61%
90.00° - 180.00°	207.98	3.39%
0.00° - 180.00°	6,133.81	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.19
Two luminaires, plane 90°	1.25
Four luminaires	1.37