

PROJECT:

NOTES:

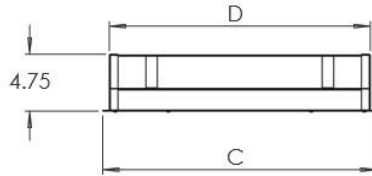
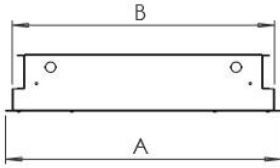
ORDERING INFORMATION:



MRPA1 - M - T - R2 - A4 - PB - M4 - MV - AM - D

SERIES SECURITY MOUNTING READING AMBIENT DIFFUSER LENS VOLTAGE OPTIONS DRIVER

SHOP DRAWINGS



2x4
 A - 23.75"
 B - 22.65"
 C - 47.75"
 D - 46.57"



ORDERING INFORMATION

SERIES

MRPA1

SECURITY LEVEL

H	14-Ga CRS (painted white)
M	16-Ga CRS (painted white)
L	18-Ga CRS (painted white)
HS	14-Ga SS (painted white)*
MS	16-Ga SS (painted white)*
LS	18-Ga SS (painted white)*
HB	14-Ga SS (brushed)*
MB	16-Ga SS (brushed)*
LB	18-Ga SS (brushed)*

*Overlapping floor in SS and housing is CRS

MOUNTING

T	T-Bar
F	Flange

READING (Lumens, TempK, CRI)

See page 2 and use code to specify the ambient compartment.
 Ex: R2 = 1500 lm, 3500K, 80 CRI

AMBIENT (Lumens, TempK, CRI)

See page 2 and use code to specify the ambient compartment.
 Ex: A1 = 3000 lm, 3000K, 80 CRI

DIFFUSER (Center ambient)

BLANK	Acrylic Ribbed Lens
PB	Perforated Basket

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")

VOLTAGE

MV	120-277V
347	347V

OPTIONS

AM	Anti-Microbial Paint
EM	Emergency Power Pack
CC	COI Compliant
NLA	Amber LED night light (500 lumens)
NLR	Red LED night light (500 lumens)
NL	White LED night light (500 lumens)*

*Confirm TempK with manufacture

DRIVERS

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

FEATURES

- > Specification-grade patient room LED luminaire for anti-vandal behavioral healthcare applications
- > Features ambient and reading light compartments
- > Robust design with security lens tightly secured by double-frame fastened internally with multiple screws
- > Door frame fastened with TORX tamper resistant screws
- > Welded housing for additional structural strength
- > Minimum 80 CRI; color range 3000K - 5000K available
- > 90 CRI Optional
- > Anti-microbial paint optional
- > Multiple dimming protocols available
- > IP65 for recessed applications*
- > Optional COI compliant

* Faceplate is sealed with multiple gaskets and luminaire is IP65 certified as providing protection against dust and water entering the luminaire through the faceplate in a recessed application. Note that the housing (which is designed to be recessed into ceiling and is not visible once installed) does not provide ingress protection against dust and water entering the luminaire from the plenum.

APPLICATIONS

- > Hospitals
- > Behavioral Healthcare Facilities
- > Rehabilitation Centers

LUMEN PACKAGES

READING			
CODE	LUMENS	TEMP K	CRI
R1	1,500	3,000	80
R2	1,500	3,500	80
R3	1,500	4,000	80
R4	1,500	3,000	90
R5	1,500	3,500	90
R6	1,500	4,000	90
R7	2,500	3,000	80
R8	2,500	3,500	80
R9	2,500	4,000	80
R10	2,500	3,000	90
R11	2,500	3,500	90
R12	2,500	4,000	90
C	CUSTOM LED PACKAGES		

AMBIENT			
CODE	LUMENS	TEMP K	CRI
A1	3,000	3,000	80
A2	3,000	3,500	80
A3	3,000	4,000	80
A4	3,000	3,000	90
A5	3,000	3,500	90
A6	3,000	4,000	90
A7	4,000	3,000	80
A8	4,000	3,500	80
A9	4,000	4,000	80
A10	4,000	3,000	90
A11	4,000	3,500	90
A12	4,000	4,000	90
TW*	TUNABLE WHITE		
C	CUSTOM LED PACKAGES		

*Confirm protocol the TW will be controlled with

LED

FIXTURE PERFORMANCE DATA

SPECIFICATIONS

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

Door Frame – Single piece precision die formed overlapping frame with tamper-resistant fasteners that secure door frame to housing

Security Lens – Variety of robust polycarbonate lenses available. Secured with internal frame that is fastened internally to door frame with multiple screws

Finish – Baked white enamel powder finish applied post production on all surfaces for smooth edges and safe handling. Anti-microbial finish optional.

Electrical – High quality mid-power LED boards. L70 >72,000 hours reported / 95,140 hours calculated. L85 >50,000 hours.

Mounting – Recessed (plaster or T-Bar ceiling). We strongly recommend to add wire hangers on each earthquake clips/brackets (see fixture details)

Listings –
 ■ IP65 certified.
 ■ cUL certified

Warranty – 5-year limited warranty

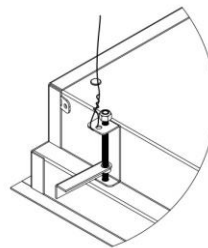
LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
24" x 48"			
READING (1,500 lm)	1,440	14	103
READING (2,500 lm)	2,484	24	104
AMBIENT-PB (3,000 lm)	3,021	33	92
AMBIENT-PB (4,000 lm)	4,039	46	88

*Results based on 4000K, 80 CRI, Perforated Basket Diffuser (Ambient), M3 Security Lens

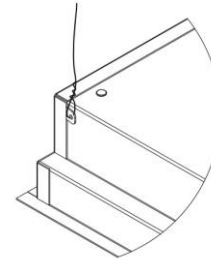
MULTIPLIER TABLE	
COLOR TEMPERATURE	
CCT/CRI	CONVERSION FACTOR
3000K / 80 CRI	0.95
3500K / 80 CRI	0.97
4000K / 80 CRI	1
5000K / 80 CRI	1.03

FIXTURE DETAILS

Hanging brackets to secure housing to structure (wires not supplied by PA-CO)



Plaster ceiling / Flange

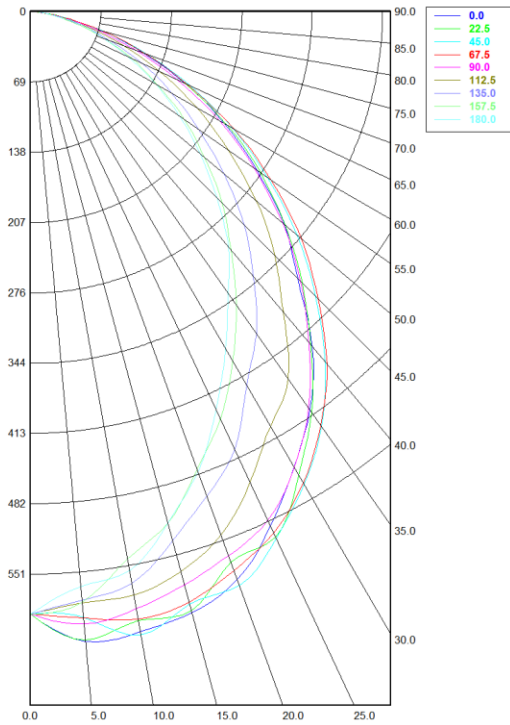


T-Bar



PHOTOMETRY

READING (1500 lumens / 4000K)



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°
0.00°	590.21	590.21	590.21	590.21	590.21	590.21	590.21	590.21	590.21
5.00°	619.39	617.84	595.66	596.31	602.28	581.52	578.78	581.06	565.17
10.00°	617.02	605.85	620.04	604.38	594.32	580.62	568.90	544.89	556.39
15.00°	609.58	607.68	600.85	598.83	581.31	567.99	536.88	518.96	518.92
20.00°	591.63	573.78	597.85	582.25	566.96	545.24	504.88	477.02	479.11
25.00°	556.39	568.04	569.59	563.53	549.96	508.44	472.46	439.79	429.69
30.00°	515.91	524.96	535.71	533.74	516.26	469.69	422.33	395.32	381.29
35.00°	477.08	479.90	496.79	495.38	474.72	440.15	384.77	350.75	336.71
40.00°	429.41	427.14	448.80	451.67	424.38	385.11	339.28	304.60	300.74
45.00°	370.00	376.49	394.96	398.00	374.21	338.92	295.16	264.82	257.14
50.00°	325.07	325.92	340.80	346.69	322.52	287.70	247.11	222.07	216.85
55.00°	270.13	274.45	284.09	287.68	266.29	235.49	200.60	183.58	178.04
60.00°	218.48	221.61	227.87	229.05	213.08	187.26	159.54	143.42	140.71
65.00°	167.19	167.67	171.98	168.54	157.84	139.66	121.49	109.65	105.10
70.00°	116.43	119.52	119.70	119.28	107.51	95.76	80.64	75.64	75.77
75.00°	70.82	70.47	70.70	71.47	62.84	56.97	51.03	47.04	52.30
80.00°	31.90	33.13	32.13	32.78	28.00	26.72	24.94	24.17	25.42
85.00°	8.29	9.21	8.86	8.45	7.68	7.66	9.12	10.72	11.65
90.00°	1.24	0.76	0.80	0.75	0.68	1.04	1.60	1.86	1.90

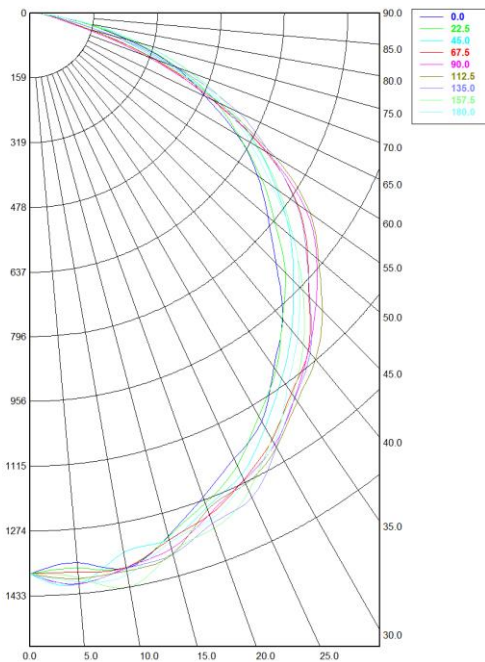
Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	59.86	4.16%
10.00° - 20.00°	160.52	11.14%
20.00° - 30.00°	237.85	16.51%
30.00° - 40.00°	273.87	19.01%
40.00° - 50.00°	264.85	18.39%
50.00° - 60.00°	218.16	15.14%
60.00° - 70.00°	145.37	10.09%
70.00° - 80.00°	66.55	4.62%
80.00° - 90.00°	12.98	0.90%
90.00° - 100.00°	0.32	0.02%
100.00° - 110.00°	0.02	0.00%
110.00° - 120.00°	0.02	0.00%
120.00° - 130.00°	0.02	0.00%
130.00° - 140.00°	0.02	0.00%
140.00° - 150.00°	0.02	0.00%
150.00° - 160.00°	0.02	0.00%
160.00° - 170.00°	0.02	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1,440.02	99.97%
90.00° - 180.00°	0.46	0.03%
0.00° - 180.00°	1,440.47	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.27
Two luminaires, plane 90°	1.27
Four luminaires	1.3

AMBIENT (4000 lumens / 4000K / Perforated Basket)



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°
0.00°	1,379.85	1,379.85	1,379.85	1,379.85	1,379.85	1,379.85	1,379.85	1,379.85	1,379.85
5.00°	1,357.09	1,370.38	1,410.13	1,379.63	1,410.03	1,395.87	1,408.88	1,393.95	1,404.14
10.00°	1,386.50	1,385.83	1,347.42	1,384.19	1,384.82	1,393.08	1,387.34	1,433.43	1,402.85
15.00°	1,331.96	1,334.00	1,341.91	1,341.48	1,363.99	1,377.85	1,378.62	1,372.88	1,347.89
20.00°	1,267.37	1,282.50	1,294.10	1,314.23	1,311.46	1,299.37	1,335.92	1,347.77	1,325.25
25.00°	1,208.81	1,227.42	1,252.45	1,266.29	1,267.81	1,277.70	1,315.41	1,297.74	1,273.05
30.00°	1,161.41	1,146.38	1,177.55	1,212.93	1,226.42	1,234.74	1,234.83	1,211.31	1,224.04
35.00°	1,065.22	1,074.75	1,099.50	1,141.71	1,156.17	1,166.95	1,156.61	1,146.43	1,125.49
40.00°	985.09	984.19	1,019.45	1,084.74	1,085.92	1,113.08	1,092.16	1,065.55	1,043.27
45.00°	872.63	905.58	933.95	988.48	1,013.81	1,036.13	991.30	967.80	954.65
50.00°	778.57	802.01	851.76	907.96	938.41	944.10	903.26	862.34	863.27
55.00°	696.37	709.17	755.06	817.80	844.90	856.88	814.43	762.82	741.02
60.00°	598.49	602.39	656.42	684.53	690.39	710.24	696.17	661.29	637.53
65.00°	482.07	511.56	524.66	500.11	502.95	518.09	572.81	552.07	530.17
70.00°	385.52	393.28	362.07	328.71	309.09	339.45	388.65	431.51	425.13
75.00°	251.05	264.21	207.35	152.16	130.82	154.58	211.97	287.29	288.26
80.00°	133.10	124.16	78.55	62.40	58.35	62.54	79.53	139.56	146.32
85.00°	34.75	35.08	27.42	27.31	26.79	26.27	25.67	33.88	34.24
90.00°	2.47	3.62	3.17	3.92	3.60	3.43	2.52	2.51	1.13

Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	140.93	3.49%
10.00° - 20.00°	381.33	9.44%
20.00° - 30.00°	581.67	14.40%
30.00° - 40.00°	706.53	17.49%
40.00° - 50.00°	746.31	18.48%
50.00° - 60.00°	694.79	17.20%
60.00° - 70.00°	513.14	12.70%
70.00° - 80.00°	231.41	5.73%
80.00° - 90.00°	42.14	1.04%
90.00° - 100.00°	0.85	0.02%
100.00° - 110.00°	0.01	0.00%
110.00° - 120.00°	0.01	0.00%
120.00° - 130.00°	0.01	0.00%
130.00° - 140.00°	0.01	0.00%
140.00° - 150.00°	0.01	0.00%
150.00° - 160.00°	0.01	0.00%
160.00° - 170.00°	0.01	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4,038.25	99.98%
90.00° - 180.00°	0.93	0.02%
0.00° - 180.00°	4,039.19	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.31
Four luminaires	1.4