

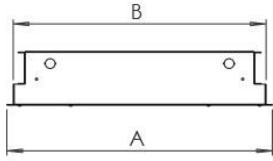
PROJECT:

NOTES:

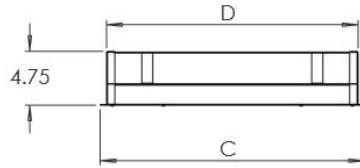
ORDERING INFORMATION:

**EXAMPLE** MRPA4 - M - 24 - F - A2 - E3 - PB - M4 - MV - AM - D  
 SERIES SECURITY NOM. LENGTH MOUNTING AMBIENT EXAM DFFUSER LENS VOLTAGE OPTIONS DRIVER

SHOP DRAWINGS



**2x2**  
 A - 23.75"  
 B - 22.65"  
 C - 23.75"  
 D - 22.57"



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



ORDERING INFORMATION

**SERIES**  
 MRPA4

**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

**NOMINAL LENGTH**  
 22 24" x 24"  
 24 24" x 48"

**MOUNTING**  
 T T-Bar  
 F Flange

**AMBIENT (Lumens, TempK, CRI)**  
 See page 2 and use code to specify the ambient compartment.  
 Ex: A2 = 3000 lm, 3500K, 80 CRI

**EXAM (Lumens, TempK, CRI)**  
 See page 2 and use code to specify the exam compartment.  
 Ex: E3 = 6000 lm, 4000K, 80 CRI  
 \*Maximum of 8000 lm for a 24"x 24"

**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  
 SD Stainless Steel Door  
 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 exam light compartments
- > Robust design with polycarbonate lens tightly secured by double-frame fastened internally with multiple screws
- > Minimum 80 CRI; color range 3000K - 5000K available
- > IP65 for recessed applications\*
- > 90 CRI Optional
- > COI Compliant Optional
- > Anti-microbial paint optional
- > Multiple dimming protocols available
- > Anti-ligature

\* 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 Facilities
- > Rehabilitation Centers

## LUMEN 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
A13	6,000	3,000	80
A14	6,000	3,500	80
A15	6,000	4,000	80
A16	6,000	3,000	90
A17	6,000	3,500	90
A18	6,000	4,000	90
TW*	TUNABLE WHITE		
C	CUSTOM LED PACKAGES		

\*Confirm protocol the TW will be controlled with

EXAM			
CODE	LUMENS	TEMP K	CRI
E1	6,000	3,500	80
E2	6,000	4,000	80
E3	6,000	5,000	80
E4	6,000	3,500	90
E5	6,000	4,000	90
E6	6,000	5,000	90
E7	7,000	3,500	80
E8	7,000	4,000	80
E9	7,000	5,000	80
E10	7,000	3,500	90
E11	7,000	4,000	90
E12	7,000	5,000	90
C	CUSTOM LED BOARDS		

\*MAXIMUM OF 8000 LM FOR A 24"x 24"

## 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 14 or 16-gauge die formed 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 at maximum allowable output current. L85 >50,000 hours

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

**Listings** –

- IP65
- cUL certified

**Warranty** – 5-year limited warranty

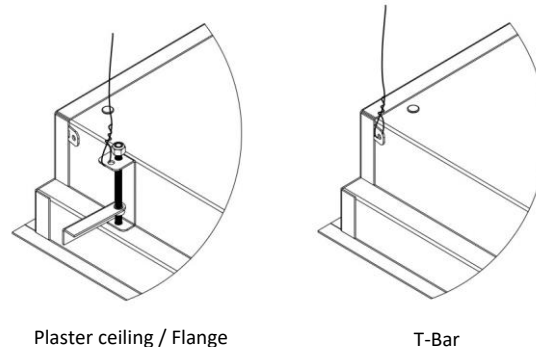
LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
PACKAGE 1 (2x4)			
AMBIENT (3,000 lm)	3,228	24	134
EXAM (4,000 lm)	4,244	44	96
AMBIENT/EXAM (7,000 lm)	7,453	68	110
PACKAGE 2 (2x4)			
AMBIENT (4,000 lm)	4,184	35	119
EXAM (7,000 lm)	7,290	77	95
AMBIENT/EXAM (11,000 lm)	11,536	112	103
PACKAGE 3 (2x4)			
AMBIENT (6,000 lm)	6,319	53	119
EXAM (7,000 lm)	7,290	77	95
AMBIENT/EXAM (13,000 lm)	13,752	130	105

\*Results based on 4000K, 80 CRI

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

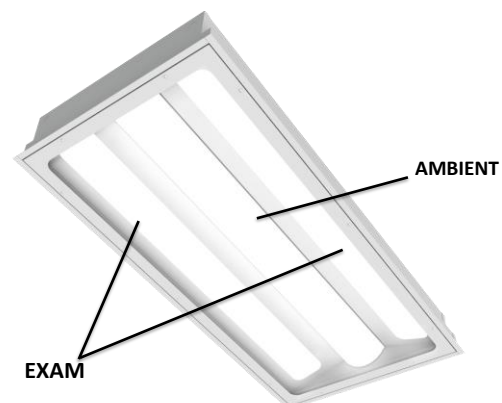
## FIXTURE DETAILS

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



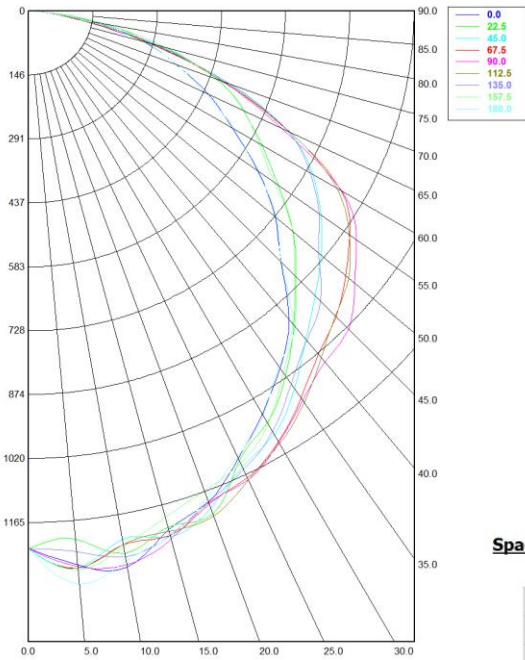
Plaster ceiling / Flange

T-Bar



PHOTOMETRY

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°	1,225.30	1,225.30	1,225.30	1,225.30	1,225.30	1,225.30	1,225.30	1,225.30	1,225.30
5.00°	1,266.71	1,207.62	1,274.18	1,274.88	1,270.50	1,274.05	1,236.59	1,277.98	1,310.98
10.00°	1,286.91	1,254.51	1,222.39	1,234.35	1,280.86	1,234.20	1,262.46	1,240.23	1,272.05
15.00°	1,274.05	1,217.23	1,240.28	1,237.01	1,246.39	1,227.56	1,236.81	1,194.79	1,238.48
20.00°	1,189.83	1,220.06	1,205.43	1,195.84	1,192.40	1,224.67	1,191.40	1,164.19	1,180.94
25.00°	1,124.56	1,129.59	1,146.27	1,173.36	1,178.50	1,179.12	1,152.43	1,137.02	1,120.44
30.00°	1,059.83	1,083.14	1,114.40	1,134.31	1,136.04	1,139.24	1,106.85	1,086.83	1,063.67
35.00°	994.41	1,016.53	1,051.25	1,077.82	1,084.49	1,090.24	1,038.45	1,007.41	990.77
40.00°	919.70	936.24	978.43	1,023.03	1,045.61	1,032.84	981.65	939.30	930.80
45.00°	810.56	853.95	918.76	985.45	1,025.57	983.37	936.51	858.49	812.31
50.00°	730.48	783.76	865.79	939.07	965.82	947.47	859.90	784.56	734.63
55.00°	633.87	691.50	809.44	889.72	908.21	888.22	804.66	681.87	631.06
60.00°	531.88	609.99	744.03	819.22	820.29	808.06	737.71	601.08	536.78
65.00°	448.66	536.43	652.81	655.72	635.65	658.57	650.93	539.98	439.71
70.00°	354.55	453.65	485.32	466.53	465.56	467.57	481.46	456.53	356.63
75.00°	270.32	317.26	301.12	287.02	275.22	279.36	299.17	321.03	263.01
80.00°	149.27	177.92	144.77	118.05	115.01	119.00	142.84	174.44	145.68
85.00°	50.27	52.88	38.18	34.51	34.65	35.43	38.60	52.70	46.91
90.00°	2.19	3.10	3.96	3.68	3.55	4.16	3.45	3.44	2.29

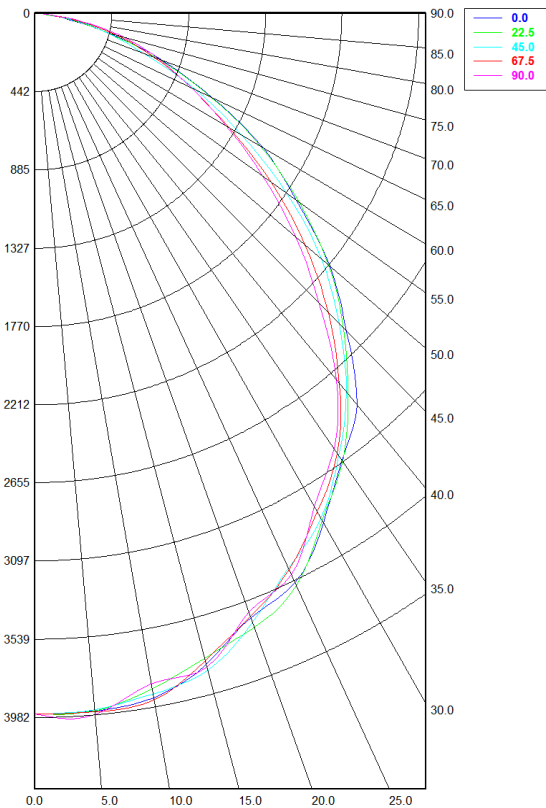
Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	127.21	3.16%
10.00° - 20.00°	346.13	8.59%
20.00° - 30.00°	531.00	13.19%
30.00° - 40.00°	653.44	16.23%
40.00° - 50.00°	710.90	17.65%
50.00° - 60.00°	702.83	17.45%
60.00° - 70.00°	581.76	14.45%
70.00° - 80.00°	310.69	7.71%
80.00° - 90.00°	62.29	1.55%
90.00° - 100.00°	0.95	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°	0.02	0.00%
160.00° - 170.00°	0.01	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4,026.26	99.97%
90.00° - 180.00°	1.01	0.03%
0.00° - 180.00°	4,027.27	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.27
Two luminaires, plane 90°	1.36
Four luminaires	1.46

EXAM (10000 lumens / 4000K)



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	3,960.81	3,960.81	3,960.81	3,960.81	3,960.81
5.00°	3,959.31	3,958.40	3,951.88	3,965.83	3,981.86
10.00°	3,930.49	3,878.69	3,907.52	3,942.31	3,849.51
15.00°	3,810.34	3,775.99	3,845.53	3,788.64	3,826.36
20.00°	3,636.00	3,692.31	3,661.67	3,629.00	3,600.58
25.00°	3,552.16	3,570.46	3,461.94	3,471.80	3,504.16
30.00°	3,328.76	3,312.64	3,299.00	3,257.98	3,223.80
35.00°	3,086.51	3,094.02	3,054.56	3,041.98	3,007.20
40.00°	2,888.11	2,807.33	2,795.61	2,731.91	2,703.48
45.00°	2,542.95	2,517.70	2,479.54	2,392.40	2,320.72
50.00°	2,222.41	2,211.51	2,158.11	2,033.96	1,963.83
55.00°	1,840.88	1,859.43	1,770.12	1,659.29	1,601.27
60.00°	1,511.21	1,495.83	1,370.65	1,284.13	1,270.97
65.00°	1,123.35	1,120.45	1,017.08	989.80	992.59
70.00°	784.43	757.51	674.94	729.38	761.83
75.00°	452.24	440.24	436.70	496.96	535.74
80.00°	194.00	206.62	231.69	265.20	285.47
85.00°	41.74	53.73	65.46	65.43	63.10
90.00°	2.68	4.74	4.20	4.85	5.10

Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	398.78	3.96%
10.00° - 20.00°	1,068.11	10.62%
20.00° - 30.00°	1,605.19	15.95%
30.00° - 40.00°	1,902.43	18.91%
40.00° - 50.00°	1,887.86	18.76%
50.00° - 60.00°	1,561.68	15.52%
60.00° - 70.00°	1,037.59	10.31%
70.00° - 80.00°	499.86	4.97%
80.00° - 90.00°	97.22	0.97%
90.00° - 100.00°	1.24	0.01%
100.00° - 110.00°	0.12	0.00%
110.00° - 120.00°	0.12	0.00%
120.00° - 130.00°	0.13	0.00%
130.00° - 140.00°	0.16	0.00%
140.00° - 150.00°	0.18	0.00%
150.00° - 160.00°	0.18	0.00%
160.00° - 170.00°	0.12	0.00%
170.00° - 180.00°	0.07	0.00%
0.00° - 90.00°	10,058.72	99.98%
90.00° - 180.00°	2.32	0.02%
0.00° - 180.00°	10,061.04	100.00%

Spacing Criterion:

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.21
Four luminaires	1.33

