

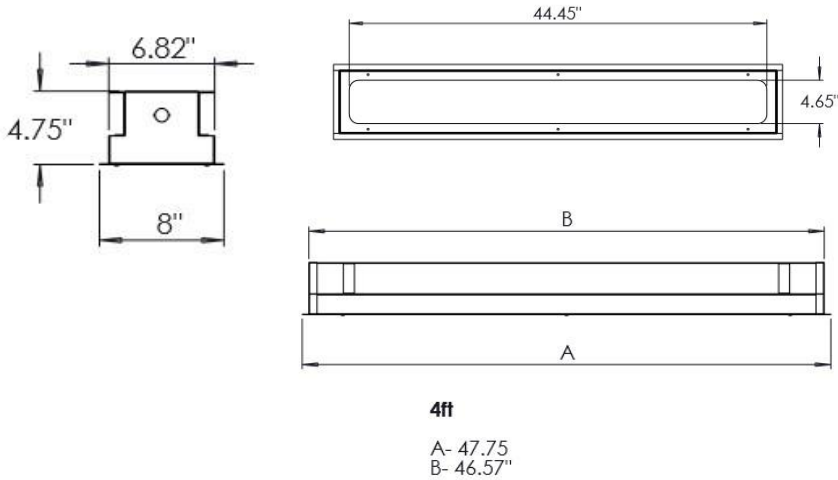
PROJECT:

NOTES:

ORDERING INFORMATION:

EXAMPLE MRGAL - M - 4F - F - 100 - 9 - 40 - H5 - M4 - MV - AM - D1
 SERIES SECURITY NOM. LENGTH MOUNTING LUMENS CRI KELVINS DIFFUSER LENS VOLTAGE OPTIONS DRIVER

SHOP DRAWINGS



ORDERING INFORMATION

SERIES

MRGAL

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 foot in SS and housing is CRS

NOMINAL LENGTH

(X)F Number of feet (length)*
 *Minimum of 2ft and maximum of 8ft
 (If not standard 4ft, contact manufacture for shop drawing and lumen outputs)

MOUNTING

T	T-Bar
F	Flange

LUMENS

50	500 Lumens Per Foot
75	750 Lumens Per Foot
100	1000 Lumens Per Foot
150	1500 Lumens Per Foot

*Other lumen packages available

CRI

BLANK	80 CRI
9	90 CRI

KELVIN

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

DIFFUSER

H5	White Opal Acrylic Underlay
H1	White Opal Acrylic (1/8")
A1	Acrylic K12 (1/8")
L1	Frosted Acrylic (1/8")

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
OS	Internal occupancy and daylight harvesting sensor (OSM3D-DDW)
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
D1	0-10V dimming to 1%
DA	DALI driver

FEATURES

- > Specification-grade patient room LED luminaire for anti-vandal behavioral healthcare applications
- > Features modern rectangle lens with rounded edges for visual comfort and efficiency
- > 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*
- > IK10 rated
- > 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 Healthcare Facilities
- > Rehabilitation Centers

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. 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
- cUL certified

Warranty – 5-year limited warranty

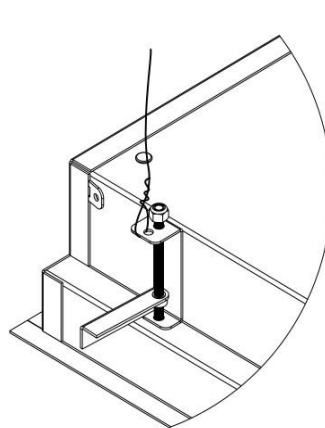
LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
4 FT			
500 lm / ft	2,151	18	120
1000 lm / ft	4,050	41	99
1500 lm / ft	6,066	59	103

*Results based on 4000K, 80 CRI, M4 (0.250") clear poly lens) and H5 white opal diffuser

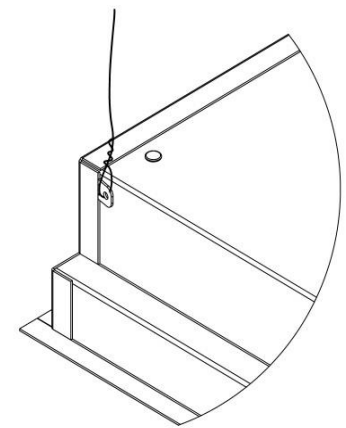
MULTIPLIER TABLE	
COLOR TEMPERATURE	
CCT/CRI	CONVERSION FACTOR
3000K / 80 CRI	0.95
3500K / 80 CRI	0.97
4000K / 80 CRI	1
5000K / 80 CRI	1.03

FIXTURE DETAILS

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



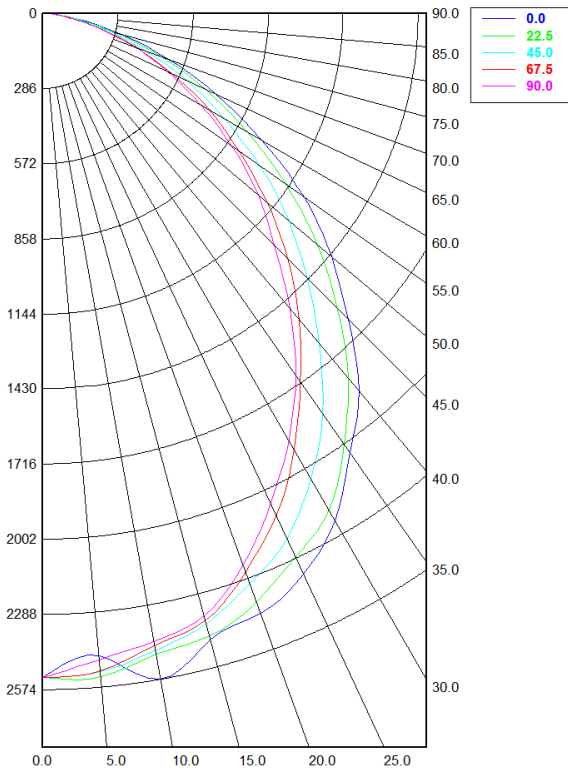
Plaster ceiling / Flange



T-Bar

PHOTOMETRY

MRGAL-M-4F-T-150-40-H5-M4-MV, Total Luminaire Output: 6,066 lumens; 59 watts



Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	2,526.90	2,526.90	2,526.90	2,526.90	2,526.90
5.00°	2,454.99	2,534.48	2,515.90	2,511.99	2,469.43
10.00°	2,573.91	2,477.98	2,462.06	2,443.98	2,428.49
15.00°	2,467.37	2,453.73	2,403.88	2,391.76	2,372.87
20.00°	2,429.44	2,381.74	2,307.94	2,260.63	2,233.12
25.00°	2,354.28	2,281.80	2,204.49	2,103.81	2,054.34
30.00°	2,230.50	2,184.84	2,045.32	1,917.49	1,874.12
35.00°	2,042.18	2,002.48	1,861.38	1,712.97	1,684.45
40.00°	1,877.59	1,813.08	1,639.52	1,521.33	1,464.50
45.00°	1,646.68	1,589.75	1,428.67	1,317.09	1,244.63
50.00°	1,436.47	1,369.15	1,221.54	1,110.35	1,069.63
55.00°	1,216.11	1,130.09	1,005.03	908.41	875.16
60.00°	958.68	894.86	793.02	727.04	692.14
65.00°	727.75	680.15	605.49	540.53	520.18
70.00°	508.98	473.73	416.11	376.35	364.86
75.00°	310.23	284.09	254.11	226.10	214.91
80.00°	150.09	139.01	121.55	113.78	106.72
85.00°	46.07	47.40	42.14	39.81	40.66
90.00°	7.16	9.24	7.90	8.73	9.07

Spacing Criterion:

Two luminaires, plane 0°	1.29
Two luminaires, plane 90°	1.11
Four luminaires	1.27

Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	252.45	4.16%
10.00° - 20.00°	678.07	11.18%
20.00° - 30.00°	1,007.74	16.61%
30.00° - 40.00°	1,158.37	19.09%
40.00° - 50.00°	1,112.87	18.34%
50.00° - 60.00°	911.32	15.02%
60.00° - 70.00°	606.22	9.99%
70.00° - 80.00°	279.50	4.61%
80.00° - 90.00°	59.83	0.99%
90.00° - 100.00°	2.33	0.04%
100.00° - 110.00°	0.00	0.00%
110.00° - 120.00°	0.00	0.00%
120.00° - 130.00°	0.00	0.00%
130.00° - 140.00°	0.00	0.00%
140.00° - 150.00°	0.00	0.00%
150.00° - 160.00°	0.00	0.00%
160.00° - 170.00°	0.00	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	6,066.37	100.00%
90.00° - 180.00°	2.33	0.04%
0.00° - 180.00°	6,066.37	100.00%