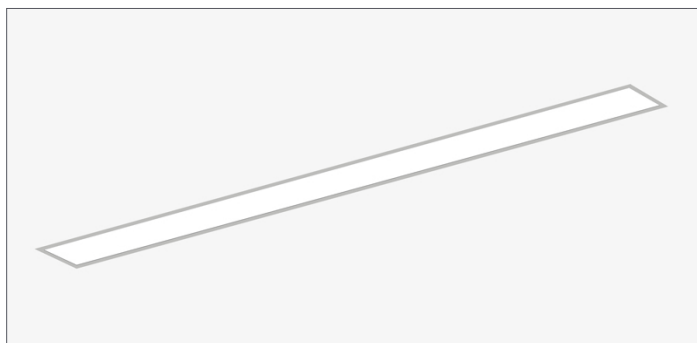
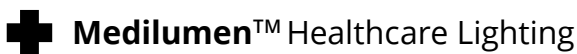


# RAIL 4 RM4D-MRI

MRI . LED . DIRECT



- Suitable for MRI applications with antimicrobial white finish
- Remote drivers reduce interference with MRI machines
- Optional Illuminated by BIOS version for Healthy Lighting and Well Building Applications
- Plenum rated, CCEA approved for recessed applications (drywall & t-bar)



PART #:	
PREP BY:	DATE:
PROJECT:	QTY:
NOTES:	
APPROVAL SIGNATURE:	DATE (DD/MM/YYYY):

## PERFORMANCE SUMMARY

		Meta Blanc	Luma Span	Luma Asym.	Luma Graze	Drop Lens
Light Level 3 (L3)						
Lumens per foot	80 CRI	596	697	723	719	608
	90 CRI	522	609	632	629	532
Wattage per foot		6.1	5.8	5.8	5.7	6.1
Efficacy	80 CRI	99	121	125	125	100
	90 CRI	85	105	109	110	87
L70 Estimate (h)		≥ 60,000 hrs				

See page 2 for the complete Light Level Performance chart.

## OTHER HEALTHCARE PRODUCTS



## ORDERING LOGIC

Example Part Number: RM4D-MRI-1L35K-12-MB-AM-L31-T-1-90

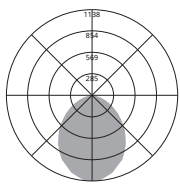
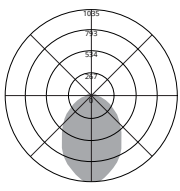
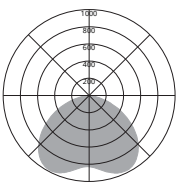
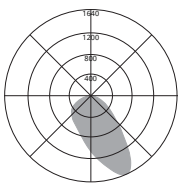
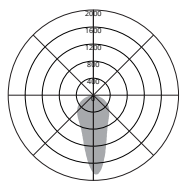
RM4D-MRI												
1	2	3	4	5	6	7	8	9	10	11	12	13
1. SERIES <b>RM4D-MRI</b>	2. COLOR TEMP <b>1L30K</b> 3000K <b>1L35K</b> 3500K <b>1L40K</b> 4000K	3. LENGTH <b>2</b> 2 ft <b>3</b> 3 ft <b>4</b> 4 ft <b>5</b> 5 ft <b>6</b> 6 ft <b>7</b> 7 ft <b>8</b> 8 ft <b>9</b> 9 ft <b>10</b> 10 ft <b>11</b> 11 ft <b>12</b> 12 ft <b>RA</b> Continuous Rows Replace "A" with length in feet selected on p2 <b>C</b> Custom Length* – None (leave space empty)	4. PATTERN <sup>1</sup> <b>GA</b> Square <b>GAxB</b> Rectangle <b>UAxBxC</b> U-Shape <b>LAxB</b> L-Shape <b>C</b> Custom Pattern* – None (leave space empty)  Standard Patterns Minimum Lengths   Custom Patterns* Lengths and a drawing of custom pattern are required on page 3   Select corner: <input type="checkbox"/> Outside 90° <input type="checkbox"/> Inside 90° 	5. OPTICS <b>MB</b> Meta Blanc <b>LS</b> Luma Span <b>LA</b> Luma Asymmetric <sup>3</sup> <b>LG</b> Luma Graze <b>MD</b> Drop Lens**  <b>MB, MD:</b> Opal diffuse lens  <b>LS, LA, LG:</b> Optical control lens		6. FINISH <b>SA</b> Satin Aluminum <b>W</b> White <b>B</b> Black <b>AM</b> Antimicrobial White <b>C</b> Custom Finish Specify RAL:						
	90 CRI is available under OPTIONS  BIOS is available under OPTIONS. See p2 for BIOS Naming Convention Reference											
7. LIGHT LEVEL / DRIVER <b>L1<sup>3</sup></b> <b>L2</b> Select Driver below. See p2 for max. wire length. <b>L3</b> See Light Level Performance chart on p2. <b>L4</b>		8. CIRCUITRY <b>1</b> 1 Circuit <b>EM</b> Emergency / Night Light <b>B</b> Emergency Battery Pack <sup>2</sup>		9. MOUNTING <b>D</b> Recessed Drywall Flanged <b>DF</b> Recessed Drywall Flangeless  <b>T</b> Recessed T-Bar <b>S</b> Surface		10. VOLTAGE <b>1</b> 120 V <b>2</b> 277 V <b>3</b> 347 V <b>4</b> UNV (120 - 277V)		11. SENSORS		12. CONTROLS  Tap to view <b>Sensors and Controls Reference Guide</b> 		13. OPTIONS <b>90</b> 90 CRI, High R9 <b>RF</b> Medical Power Line Filter <b>BS</b> BIOS Static <b>BD</b> BIOS Dynamic – None (leave space empty)
<b>LX</b> Enter desired lm/ft:												

\*Consult factory. | \*\*Drop lens is not available with patterns. | <sup>1</sup> Pattern record drawings showing mounting locations will be sent out upon order. | <sup>2</sup> Battery operates 4ft sections only. | <sup>3</sup> Not available with BIOS.

- Select Driver:
- ☐ Factory option 0-10V, 1% Dimming
  - ☐ **LHE** Lutron H-Series Hi-lume 1% EcoSystem LED Driver
  - ☐ **LSE** Lutron 5-Series EcoSystem LED Driver

LIGHT LEVEL PERFORMANCE & PHOTOMETRIC DATA

3500K, 80 CRI, 0-10V Dimming (Standard)

		Meta Blanc (MB)			Drop Lens (MD)			Luma Span (LS)			Luma Asymmetric (LA)			Luma Graze (LG)			Lumen Adjustment Factor (Standard)		
Light Level		Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)			
L1		350	3.5	100	357	3.5	102	417	3.3	126	432	3.3	131	410	3.3	128	<div>Color Temp</div> <div>80 CRI</div> <div>90 CRI</div> <div>3000K</div> <div>0.984</div> <div>0.880</div> <div>3500K</div> <div>1.000</div> <div>0.875</div> <div>4000K</div> <div>1.032</div> <div>0.879</div>		
L2		439	4.4	99	447	4.4	101	521	4.3	121	539	4.3	125	531	4.3	125			
L3		596	6.1	99	608	6.0	101	697	5.8	121	723	5.8	125	719	5.7	125			
L4		1106	12.5	89	1127	12.5	90	1277	11.9	108	1325	11.9	112	1362	11.7	116			
Light Level L3	IES File	RM4D-1L35K-4-MB-L3			RM4D-1L35K-4-MD-L3			RM4D-1L35K-4-LS-L3			RM4D-1L35K-4-LA-L3			RM4D-1L35K-4-LG-L3					
	Distribution % (Down / Up)	100 / 0			94 / 6			100 / 0			100 / 0			100 / 0					
	Zonal Lumens (0-90 / 90-180)	2386 / 0			2296 / 137			2787 / 0			2892 / 0			2892 / 0					
	Distribution Curve																		
Photometric performance is measured and scaled in accordance with IESNA LM-79.																			

BIOS PERFORMANCE

3500K		Meta Blanc (MB)			Drop Lens (MD)		
		Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)
Distribution % (Up/Down)		0 / 100			6 / 94		
Static	L2	590	9.4	63	622	9.4	66
	L3	787	13.3	59	829	13.3	62
	L4	957	17.2	56	1007	17.2	59
Dynamic	L2	531	9.4	56	559	9.4	59
	L3	708	13.3	53	746	13.3	56
	L4	861	17.2	50	907	17.2	53
R9		≥ 90					
COI**		< 3.3					
EML or M/P*		0.8					

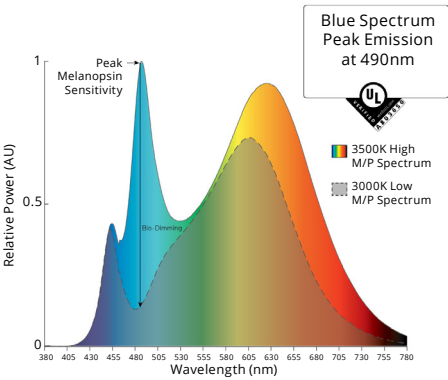
\* EML or M/P is a ratio that describes the relative melanopic lux (M) versus the photopic lux (P). BIOS provides the following m/p values: 3000K = 0.7, 3500K = 0.8, 4000K = 0.9. \*\* COI - Cyanosis Observation Index.

BIOS Naming Convention Reference

BIOS Static	3500K	35BIOSST
	4000K	40BIOSST
BIOS Dynamic	3500K	35BIOSDY
	4000K	40BIOSDY

BIOS | Lumen Adjustment Factor (LAF)

Color Temp	LAF
3500K	1.00
4000K	1.05

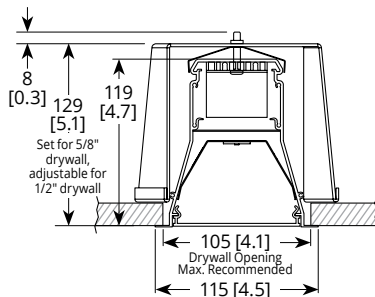


Metalumen's light level performance metrics are subject to manufacturers component tolerances.

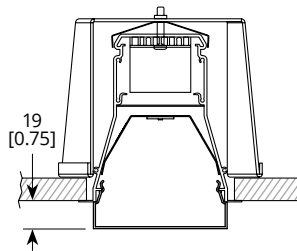
## CROSS SECTIONS

## Meta Blanc, Luma Optics

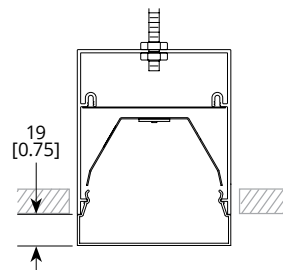
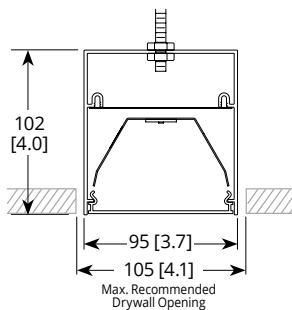
## Drywall Flanged



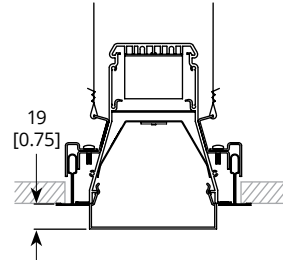
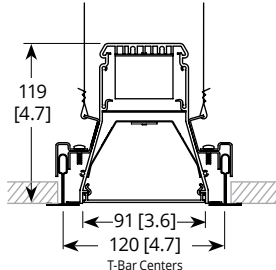
## Drop Lens



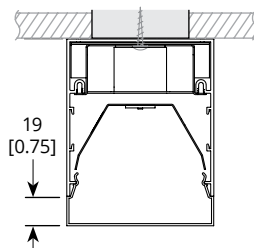
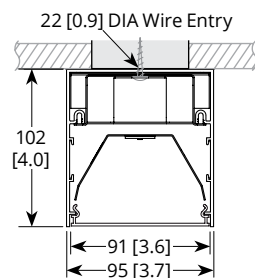
## Drywall Flangeless



## T-Bar



## Surface



## SPECIFICATIONS

Due to the Continuous Improvement Policy at Metalumen, we reserve the right to change our specifications without notice.

**Housing:** Rigid extruded aluminum body, 2.0mm (0.08") nominal wall thickness. Stainless steel hardware. Aluminum end caps.

**Optical System:** Metalumen luminaires are designed to utilize leading edge LED technology combined with luminaire optimized reflectors and our custom diffusers, resulting in industry leading optical performance.

**BIOS LED:** BIOS SkyBlue® solutions have a peak wavelength at 490nm to provide an enhanced spectrum with high M/P (melanopic to photopic) ratios while also providing a low Cyanosis Observation Index (COI), making it ideally suited for Healthcare and Healthy Lighting projects. BIOS® SkyBlue® lighting solutions also contribute to satisfying Circadian Lighting Design Feature for WELL Building Standard v1 and v2.

**CRI:** 83+ for 3500K, 80 minimum for all CCTs in standard configurations.

**Lumen Maintenance:** Minimum 50,000h with TM-21 lumen maintenance of 85% @ 25°C ambient temperature (calculated based on IESNA LM-80-08 LED test data). L70: ≥60,000hrs.

**Finish:** Satin aluminum, black, white and antimicrobial white are standard options. For custom finish, contact factory.

**Weight:** 1.3 kg/300 mm [2.9 lb/ft]

**Mounting:** **Drywall:** Mounting brackets provided. **T-bar:** Mounting brackets/clips provided. Fits 9/16" and 15/16" T-bar. **Surface:** Surface ceiling mount.

**Electrical:** Factory prewired with easy wire quick connect sections.

**Drivers:** Metalumen offers 0-10V dimming\* as a standard on our entire LED product offering. Dimming range is 1%-100%. Power factor is > 90%. Class 2 rating.

**MRI Application:** Luminaires are constructed with non-ferrous materials. Luminaire's power supply will be remote mounted, reducing interference with the MRI machine.

**Approvals:** All components are UL/CSA/QPS recognized or listed. RoHS compliant. cULus listed. Plenum rated - CCEA approved for recessed applications (drywall and t-bar).

**Environment:** Suitable for dry or damp locations.

\*Standard drivers compatible with passive/sinking dimmers. Please contact Metalumen if active/sourcing dimmer support is required.

## WARRANTY

Metalumen will warrant defective luminaires for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specification. If defective, Metalumen will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Metalumen.

## Remote Driver Mounting Max. Wire Length

Consult approval drawings for maximum remote mounting distances

Light Level	Driver Qty	Drive Current (mA)	Fixture Length	Distance in feet / Wire Gauge					
				22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.
L4	1	1200	4'	19	30	47	75	119	189
L4	2	1200	8'	19	30	47	75	119	189
L4	3	1200	12'	19	30	47	75	119	189
L3	1	600	4'	37	59	94	149	238	378
L3	1	1200	8'	19	30	47	75	119	189
L3	1	1800	12'	12	20	31	50	79	126
L2	1	440	4'	51	81	128	204	324	515
L2	1	880	8'	25	40	64	102	162	258
L2	1	1200	12'	17	27	43	68	108	172
L1	1	345	4'	65	103	163	260	413	657
L1	1	690	8'	32	51	82	130	207	329
L1	1	1035	12'	22	34	54	87	138	219

## WIRING

Standard	Emergency / Night Light	Emergency Battery Pack