RAIL 4 RM4D

LED . WALL . DIRECT

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

PERFORMANCE SUMMARY

		Meta Blanc	Meta Ice	Drop Lens	Luma Span	Luma Asym.
		L3	L3	L3	L3	L3
Lumens per foot	80 CRI	596	662	608	697	723
	90 CRI	522	579	532	609	632
Wattage per foot		6.1	6.1	6.1	5.8	5.8
Efficacy	80 CRI	99	109	100	121	125
	90 CRI	85	95	87	105	109
L70 Estimate (h)		≥ 60,000 hrs				

See complete Light Level Performance and Photometric Data on p2

- 3/4" drop lens with seamless lines of light without pixels or shadows
- Integral drivers
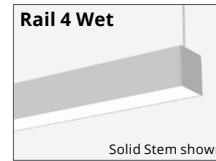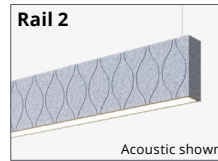- Option for daylight harvesting, occupancy sensing , dimming control and emergency lighting

5 YEAR WARRANTY | c UL us LISTED E360886 | DROP LENS | DAMP | BIOS ILLUMINATED | INTELLIGENT

OTHER RAIL PRODUCTS

Rail 2 — Acoustic shown

Rail 4 Wet — Solid Stem shown

Rail 6 — TechZone shown

ORDERING LOGIC

Example Part Number: RM4D-1L35K-12-MB-W-L31-W-1-DW-90

RM4D							W				
1	2	3	4	5	6	7	8	9	10	11	12

1. SERIES
RM4D

2. COLOR TEMP
1L30K 3000K
1L35K 3500K
1L40K 4000K

90 CRI is available under OPTIONS

BIOS is available under OPTIONS. See p2 for BIOS Naming Convention Reference

3. LENGTH
2 2 ft
3 3 ft
4 4 ft
5 5 ft
6 6 ft
7 7 ft
8 8 ft
9 9 ft
10 10 ft
11 11 ft
12 12 ft
RA Continuous Rows
Replace "A" with length in feet selected on p3
C Custom Length*
_ None (leave space empty)

4. OPTICS
MB Meta Blanc
M Meta Ice
MD Drop Lens**
LS Luma Span (Batwing)
LA Luma Asymmetric
Select throw direction:
☐ Away from wall
☐ Towards the wall

MB, MD: Opal diffuse lens

M, LS, LA: High output semi-diffuse lens

See Photometric Data on p2

5. FINISH
SA Satin Aluminum
W White
B Black
C Custom Finish
Specify RAL:

6. LIGHT LEVEL / DRIVER
L1[2]
L2
L3
L4

Select Driver below. See Light Level Performance and Photometric Data on p2

LX Enter desired lm/ft:

7. CIRCUITRY
1 1 Circuit
EM Emergency / Night Light
B Emergency Battery Pack[1]

8. MOUNTING
W Wall

9. VOLTAGE
1 120 V
2 277 V
3 347 V
4 UNV (120 - 277V)

10. SENSORS
11. CONTROLS
Please see last page for fixture integrated SENSORS and CONTROLS Order Logic codes

12. OPTIONS
90 90 CRI, High R9
BS BIOS Static
BD BIOS Dynamic
_ None (leave space empty)

*Consult factory. | ** Drop lens is not available with patterns. | [1] Battery operates 4ft sections only. | [2] Not available with BIOS.

Select Driver:
☐ Factory option 0-10V, 1% Dimming
☐ **LHE** Lutron H-Series Hi-lume 1% EcoSystem LED Driver
☐ **L5E** Lutron 5-Series EcoSystem LED Driver

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LIGHT LEVEL PERFORMANCE & PHOTOMETRIC DATA

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

		Meta Blanc (MB)			Meta Ice (M)			Drop Lens (MD)			Luma Span (LS)			Luma Asymmetric (LA)		
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	389	3.5	111	357	3.5	102	417	3.3	126	432	3.3	131
L2		439	4.4	99	487	4.4	110	447	4.4	101	521	4.3	121	539	4.3	125
L3		596	6.1	99	662	6.1	109	608	6.0	101	697	5.8	121	723	5.8	125
L4		1106	12.5	89	1232	12.5	99	1127	12.5	90	1277	11.9	108	1325	11.9	112
Light Level **L3**	IES File	RM4D-1L35K-4-MB-L3			RM4D-1L35K-4-M-L3			RM4D-1L35K-4-MD-L3			RM4D-1L35K-4-LS-L3			RM4D-1L35K-4-LA-L3		
	Distribution % (Down / Up)	100 / 0			100 / 0			94 / 6			100 / 0			100 / 0		
	Zonal Lumens (0–90 / 90–180)	2386 / 0			2649 / 0			2296 / 137			2787 / 0			2892 / 0		
	Distribution Curve															

Lumen Adjustment Factor (Standard)

Color Temp	80 CRI	90 CRI
3000K	0.984	0.880
3500K	1.000	0.875
4000K	1.032	0.879

BIOS PERFORMANCE

3500K

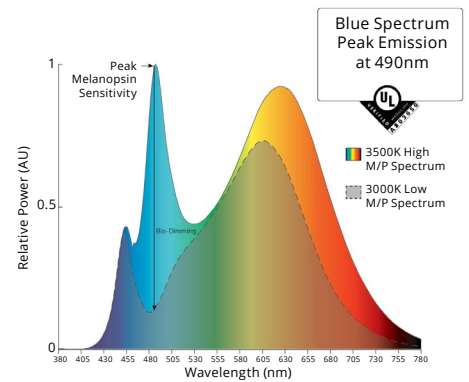|		Meta Blanc (MB)			Meta Ice (M)			Drop Lens (MD)		
		Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)
Distribution % (Up/Down)		0 / 100			0 / 100			6 / 94		
Static	L2	590	9.4	63	656	9.4	70	622	9.4	66
	L3	787	13.3	59	875	13.3	66	829	13.3	62
	L4	957	17.2	56	1063	17.2	62	1007	17.2	59
Dynamic	L2	531	9.4	56	590	9.4	63	559	9.4	59
	L3	708	13.3	53	787	13.3	59	746	13.3	56
	L4	861	17.2	50	957	17.2	56	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

Blue Spectrum Peak Emission at 490nm

3500K High M/P Spectrum

3000K Low M/P Spectrum
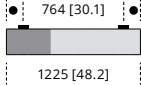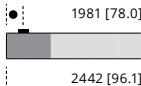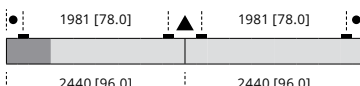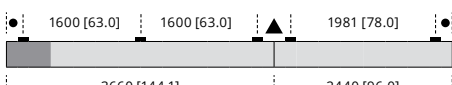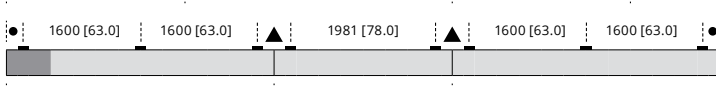
Metalumen's light level performance metrics are subject to manufacturers component tolerances.

570 Southgate Drive, Guelph, Ontario N1G 4P6
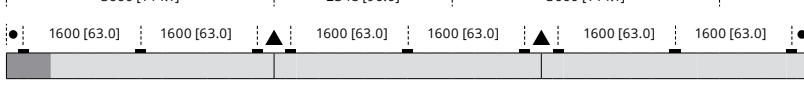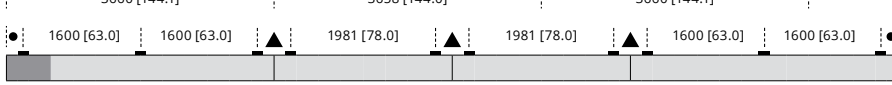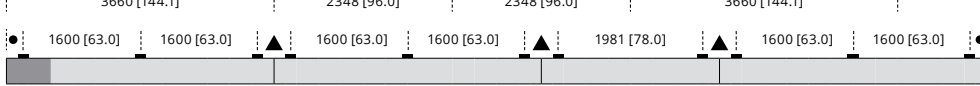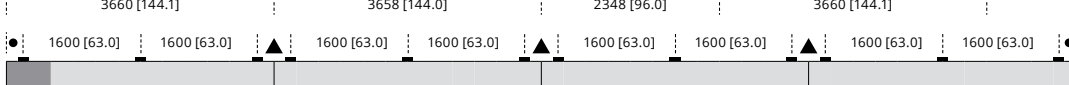Mailing Address: P.O. Box 1779 Guelph, Ontario, N1H 6Z9
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CONTINUOUS ROWS

Step 1) Indicate desired quantity of rows under the QTY column

Step 2) ☐← Pods →☐ If applicable, select pod(s) per row to indicate desired emergency lighting / night light / battery location. If a similar row requires a different Emergency lighting location, please fill out another sheet.

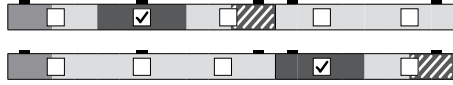Record drawings for rows not represented here will be sent out upon order.

LEGEND

■ Standard (STD) Wire Entry Location
(located on back of fixture either: 231 mm from end cap; or 229 mm from end of extursion without end cap)

■ Emergency (EM) / Night Light Location
(4 ft sections)

▨ EM Wire Entry or Battery Pack Location
(located 231 mm from end on back of fixture, except on the 4' alone).

← Wall bracket

● = 231 [9.1] Distance between end-cap and bracket
▲ = 458 [18.0] Distance between brackets at joiners
A = Distance between brackets
B = Extrusion lengths (includes end-caps)

EM / Night Light and EM or Battery Wire Entry location in relation to pod selections:

Example 20 ft run

ROWS IN PLAN VIEW
Rows are for demonstration purposes only and are not to scale.

QTY	Nominal Length	Run Length Overall	Alone / Start Length	Mid Length(s)	End Length
____	4'	1225 [48.2]	4		
____	8'	2442 [96.1]	8		
____	12'	3661 [144.1]	12		
____	16'	4881 [192.2]	8		8
____	20'	6100 [240.2]	12		8
____	24'	7319 [288.1]	12		12
____	28'	8538 [336.1]	8	12	8
____	32'	9757 [384.1]	12	8	12
____	36'	10977 [432.2]	12	12	12
____	40'	12196 [480.2]	12	8, 8	12
____	44'	13415 [528.1]	12	12, 8	12
____	48'	14634 [576.1]	12	12, 12	12

Plan view dimensions:
- 4': 764 [30.1]; 1225 [48.2]
- 8': 1981 [78.0]; 2442 [96.1]
- 12': 1600 [63.0] | 1600 [63.0]; 3661 [144.1]
- 16': 1981 [78.0] | 1981 [78.0]; 2440 [96.0] | 2440 [96.0]
- 20': 1600 [63.0] | 1600 [63.0] | 1981 [78.0]; 3660 [144.1] | 2440 [96.0]
- 24': 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 3660 [144.1]
- 28': 1981 [78.0] | 1600 [63.0] | 1600 [63.0] | 1981 [78.0]; 2440 [96.0] | 3658 [144.0] | 2440 [96.0]
- 32': 1600 [63.0] | 1600 [63.0] | 1981 [78.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 2348 [96.0] | 3660 [144.1]
- 36': 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 3658 [144.0] | 3660 [144.1]
- 40': 1600 [63.0] | 1600 [63.0] | 1981 [78.0] | 1981 [78.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 2348 [96.0] | 2348 [96.0] | 3660 [144.1]
- 44': 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1981 [78.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 3658 [144.0] | 2348 [96.0] | 3660 [144.1]
- 48': 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0] | 1600 [63.0]; 3660 [144.1] | 3658 [144.0] | 3658 [144.0] | 3660 [144.1]

WIRING

Standard	Emergency / Night Light	Emergency Battery Pack
BLACK - LINE WHITE - NEUTRAL GREEN - GROUND RED - CAPPED/SW LEAD VIOLET - DIM(+) PINK - DIM(-)	BLACK - LINE WHITE - NEUTRAL GREEN - GROUND RED - CAP OFF	BLACK - LINE WHITE - NEUTRAL GREEN - GROUND RED - UNSWITCHED HOT

CROSS SECTIONS

102 [4.0]
91 [3.6]
95 [3.7]
19 [0.7]
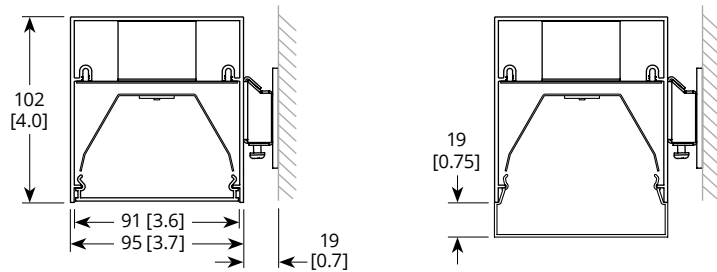
Meta Blanc, Meta Ice,
Luma Span, Luma Asymmetric

19 [0.75]

Drop Lens

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. Zinc alloy die-cast 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, white and black are standard finishes. For custom finish, contact factory.
Weight: 1.3 kg/300 mm [2.9 lb/ft]
Mounting: Mounting plate provided.
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. Drivers are integral.
Approvals: Certified to NRTL and IES testing standards. This product is cULus listed. RoHS compliant.
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.

Metalumen

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SENSORS AND CONTROLS

Metalumen offers intelligent standalone and/or connected luminaires with various integrated sensing and control system* connectivity options. The table below outlines some of the more common combinations and solutions offered. If you do not see the controls solution or the type of sensing technology you require for your project please contact us and we will work with you to try and identify a solution to meet your needs.

*Control system, installation and commissioning provided by others.

Examples:
WattStopper Daylight Sensor Standalone Luminaire: RM4D-1L35K-12-MB-W-L31-W-1-**DW**-90
Occupancy Sensor with Casambi Wireless Bluetooth Mesh Control Capability: RM4D-1L35K-12-MB-W-L31-W-1-**O-CAB**-90

ORDER LOGIC FIELDS			SENSOR FEATURE / BEHAVIOR		LUMINAIRE CONTROL / CONNECTIVITY	DESCRIPTION
11. SENSORS		**12. CONTROLS**	OCCUPANCY (PIR)	DAYLIGHT HARVESTING		
OF	-		(occupancy)	None	Standalone	Factory Sensor - Occupancy Behaviors configured via BLE App
OW	-		(occupancy)	None	Standalone (WattStopper)	Wattstopper Standalone Occupancy Sensor
DW	-		None	(daylight)	Standalone (WattStopper)	Wattstopper Standalone Daylight Harvesting Sensor
ODW	-		(occupancy)	(daylight)	Standalone (WattStopper)	Wattstopper Standalone Occupancy and Daylight Harvesting Sensors
O	-	CAB	(occupancy)	None	Casambi Bluetooth Mesh	Casambi Bluetooth Mesh Connectivity with Occupancy Sensing
OD	-	CAB	(occupancy)	(daylight)	Casambi Bluetooth Mesh	Casambi Bluetooth Mesh Connectivity with Daylight Harvesting and Occupancy Sensing
	-	CAB	None	None	Casambi Bluetooth Mesh	Casambi Bluetooth Mesh Connectivity (no sensors)
O	-	SLVR	(occupancy)	None	Silvair Bluetooth Mesh	Open Standard Bluetooth Mesh Connectivity with Occupancy Sensing
OD	-	SLVR	(occupancy)	(daylight)	Silvair Bluetooth Mesh	Open Standard Bluetooth Mesh Connectivity with Daylight Harvesting and Occupancy Sensing
	-	SLVR	None	None	Silvair Bluetooth Mesh	Open Standard Bluetooth Mesh Connectivity (no sensors)
	-	OSRM	None	None	Osram Encelium	Osram Encelium connectivity
OD	-	OSRM	(occupancy)	(daylight)	Osram Encelium	Osram SensiLum Connectivity for Enclelium with Occupancy and Daylight Harvesting
OD	-	ENL	(occupancy)	(daylight)	Enlighted ONE	Occupancy and Daylight Harvesting Capable Supports EnlightedONE room control as well and upgrade path for Enlighted Connected and Enlighted IoT offering advanced applications, analytics and insights for Space Utilization/Optimization, Asset Tracking, Energy Monitoring, HVAC Integration etc..
	-	DALI	None	None	DALI addressable wired Luminaire	Generic DALI addressable luminaire
	-	ECOS	None	None	Lutron Ecosystem	Lutron Ecosystem addressable wired luminaire NOTE: See Driver Selection options for specific driver

Wattstopper®   **enlighted™** A Siemens Company   **SILVAIR**   **CASAMBI**

OSRAM   **LUTRON**   **HUBBELL®** Control Solutions   **Signify** PHILIPS

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