RAIL 4 RM4D
PENDANT . 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
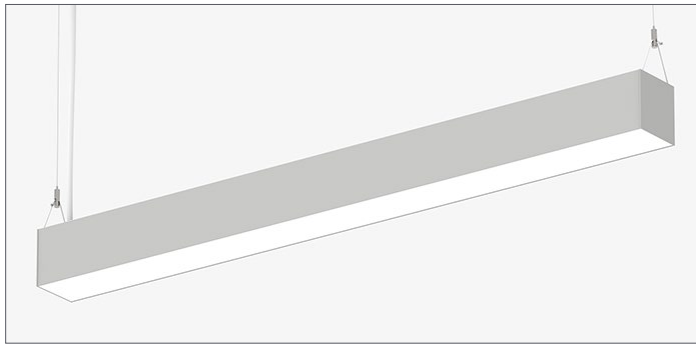
- 3/4" drop lens with seamless lines of light without pixels or shadows
- Integral drivers
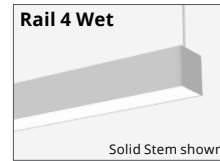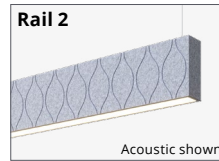- Option for daylight harvesting, occupancy sensing , dimming control and emergency lighting

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-PA18-1-DW-90

RM4D

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

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. PATTERN [1]
- **GA** Square
- **GAxB** Rectangle
- **UAxBxC** U-Shape
- **LAxB** L-Shape
- **C** Custom Pattern*
- **_** None (leave space empty)

Replace "A", "B", "C" with length in feet. See minimum lengths below

Standard Patterns Minimum Lengths

Square: A = 4 ft min. B = 4 ft min.
Rectangle
U-Shape: A = 3 ft min. B = 4 ft min. C = 3 ft min.
L-Shape: A = 3 ft min. B = 3 ft min.

Custom Patterns*
Lengths and a drawing of custom pattern are required on page 3
T-Shape | Cross / X

Select corner:
- ☑ Outside 90°
- ☑ Inside 90°

5. OPTICS
- **MB** Meta Blanc
- **M** Meta Ice
- **MD** Drop Lens **
- **LS** Luma Span (Batwing)
- **LA** Luma Asymmetric

MB, MD: Opal diffuse lens

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

See Photometric Data on p2

6. FINISH
- **SA** Satin Aluminum
- **W** White
- **B** Black
- **C** Custom Finish Specify RAL:

7. LIGHT LEVEL / DRIVER
- **L1** [3]
- **L2**
- **L3**
- **L4**

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

- **LX** Enter desired lm/ft:

8. CIRCUITRY
- **1** 1 Circuit
- **EM** Emergency / Night Light
- **B** Emergency Battery Pack [2]

9. MOUNTING
- **PAA** Pendant Aircraft Cable
- **PTA** Pendant Aircraft Cable for T-bar
- **SSA** Solid Stem

Replace "A" with length (inches) selected on next page.
Select Aircraft Cable or Solid Stem Length, Canopy Finish & Power Cord Color on next page.

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

11. SENSORS
12. CONTROLS

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

13. 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] Pattern record drawings showing mounting locations will be sent out upon order. | [2] Battery operates 4ft sections only. | [3] 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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Page **1** of **7**
FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

Select Aircraft Cable Length:

Total adjustment range is 6" up & down for each standard length. All other lengths are considered custom unless otherwise stated. **If no selection is made, 48" will be supplied.**

Select:	Imperial (in)	Metric (mm)
☐	12	305
☐	18	460
☐	24	610
☐	30	760
☐	36	915

Select:	Imperial (in)	Metric (mm)
☐	42	1067
☐	48	1220
☐	54	1372
☐	60	1525
☐	72	1830

Select:	Imperial (in)	Metric (mm)
☐	96	2440
☐	120	3050
☐	144	3660
☐	Custom Length: _____	

Select Canopy Finish & Power Cord Color

Canopy	
☐ White	☐ Custom Finish
☐ Black	RAL: _____

Power Cord
☐ White
☐ Black

Select Solid Stem Length - *1/2 OD Standard*:

Standard supplied length is 18" (460mm). Hangers will be supplied at closest length. All other lengths are considered custom unless otherwise stated. **If no selection is made, 48" will be supplied.**

Select:	Imperial (in)	Metric (mm)
☐	12	305
☐	15	380
☐	18	460
☐	21	533
☐	24	610

Select:	Imperial (in)	Metric (mm)
☐	27	685
☐	30	760
☐	33	840
☐	36	915
☐	39	990

Select:	Imperial (in)	Metric (mm)
☐	42	1067
☐	45	1145
☐	48	1220
☐	Custom Length: _____	

LIGHT LEVEL PERFORMANCE & PHOTOMETRIC DATA

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

Light Level	Meta Blanc (MB)			Meta Ice (M)			Drop Lens (MD)			Luma Span (LS)			Luma Asymmetric (LA)		
	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	Meta Blanc (MB)	Meta Ice (M)	Drop Lens (MD)	Luma Span (LS)	Luma Asymmetric (LA)
	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

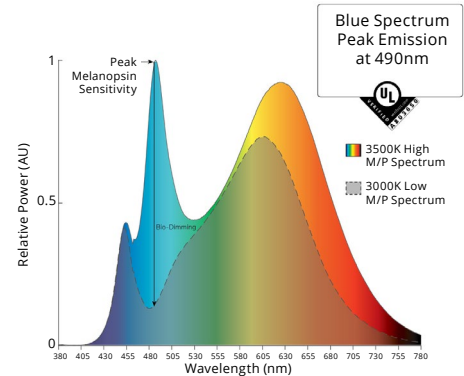|		Meta Blanc (MB)			Meta Ice (M)			Drop Lens (MD)		
		Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)	Lumens per foot	Wattage per foot	Efficacy (LPW)
Distribution % (Up/Down)		0 / 100			0 / 100			6 / 94		
Static	L2	590	9.4	63	656	9.4	70	622	9.4	66
	L3	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

Peak Melanopsin Sensitivity

UL

3500K High M/P Spectrum

3000K Low M/P Spectrum

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

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Page **2** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

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 52mm from end on top of fixture)

■ Emergency (EM) / Night Light Location

▨ EM or Battery Wire Entry Location
(located 52mm from end on top of fixture)

Mounting Points
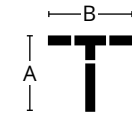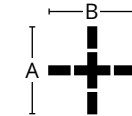
A = Distance Between Mounting Points

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

Example 20 ft run

☐ ☑ ☐ ▨ ☐ ☐

☐ ☐ ☐ ☑ ☐ ▨

Refer to page 3 for Hanger information

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

4': 1213 [47.8]
8': 2430 [95.7]
12': 3650 [143.7]
16': 2430 [95.7] | 2438 [96.0]
20': 3650 [143.7] | 2438 [96.0]
24': 3650 [143.7] | 3658 [144.0]
28': 2430 [95.7] | 3658 [144.0] | 2438 [96.0]
32': 3650 [143.7] | 2438 [96.0] | 3658 [144.0]
36': 3650 [143.7] | 3658 [144.0] | 3658 [144.0]
40': 3650 [143.7] | 2438 [96.0] | 2438 [96.0] | 3658 [144.0]
44': 3650 [143.7] | 3658 [144.0] | 2438 [96.0] | 3658 [144.0]
48': 3650 [143.7] | 3658 [144.0] | 3658 [144.0] | 3658 [144.0]

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Page **3** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

PATTERNS

Select Pattern:	☐ **T-SHAPE (C)**	☐ **CROSS / X-SHAPE (C)**
Pattern Configuration		
Indicate Desired Lengths (ft)	A = B =	A = B =
Minimum Lengths	A = 3 ft B = 6 ft	A = 6 ft B = 6 ft

A custom pattern configuration drawing is required in the grid below

Approval drawings will be sent out upon order showing mounting locations.

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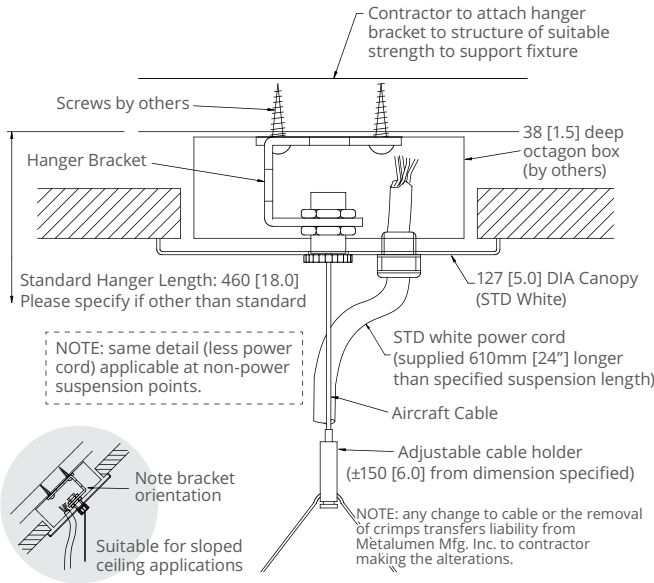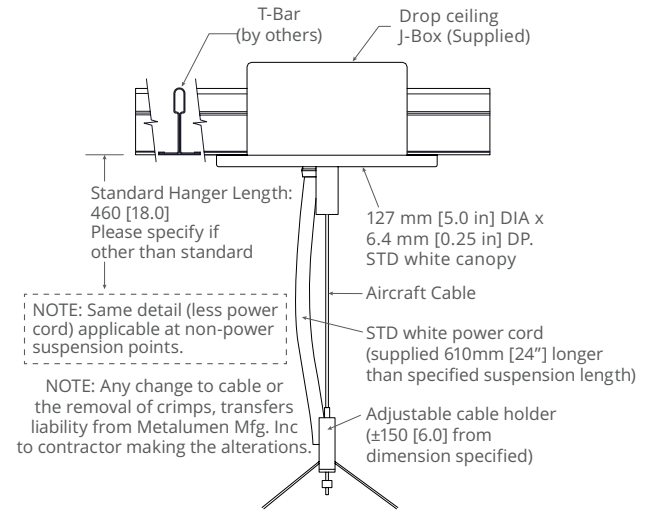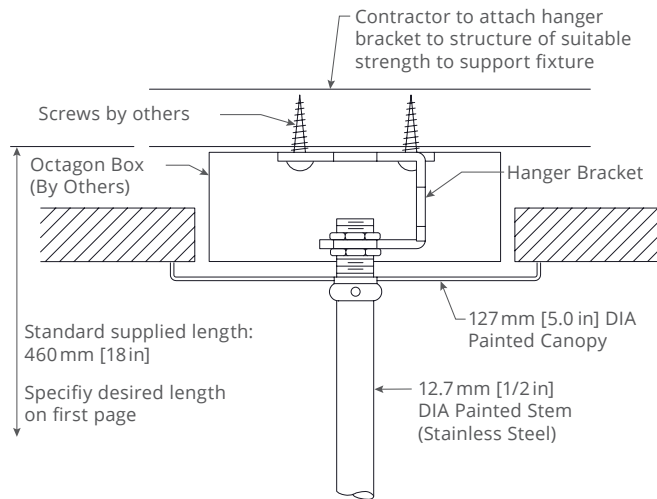Mailing Address: P.O. Box 1779 Guelph, Ontario, N1H 6Z9
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Page **4** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

HANGER

Aircraft Cable & Cord

Contractor to attach hanger bracket to structure of suitable strength to support fixture

Screws by others

Hanger Bracket

38 [1.5] deep octagon box (by others)

Standard Hanger Length: 460 [18.0] Please specify if other than standard

127 [5.0] DIA Canopy (STD White)

NOTE: same detail (less power cord) applicable at non-power suspension points.

STD white power cord (supplied 610mm [24"] longer than specified suspension length)

Aircraft Cable

Adjustable cable holder (±150 [6.0] from dimension specified)

Note bracket orientation

Suitable for sloped ceiling applications

NOTE: any change to cable or the removal of crimps transfers liability from Metalumen Mfg. Inc. to contractor making the alterations.

T-Bar Aircraft Cable & Cord

T-Bar (by others)

Drop ceiling J-Box (Supplied)

Standard Hanger Length: 460 [18.0] Please specify if other than standard

127 mm [5.0 in] DIA x 6.4 mm [0.25 in] DP. STD white canopy

Aircraft Cable

NOTE: Same detail (less power cord) applicable at non-power suspension points.

STD white power cord (supplied 610mm [24"] longer than specified suspension length)

NOTE: Any change to cable or the removal of crimps, transfers liability from Metalumen Mfg. Inc to contractor making the alterations.

Adjustable cable holder (±150 [6.0] from dimension specified)

Solid Stem

Contractor to attach hanger bracket to structure of suitable strength to support fixture

Screws by others

Octagon Box (By Others)

Hanger Bracket

Standard supplied length: 460 mm [18 in]

Specifiy desired length on first page

127 mm [5.0 in] DIA Painted Canopy

12.7 mm [1/2 in] DIA Painted Stem (Stainless Steel)
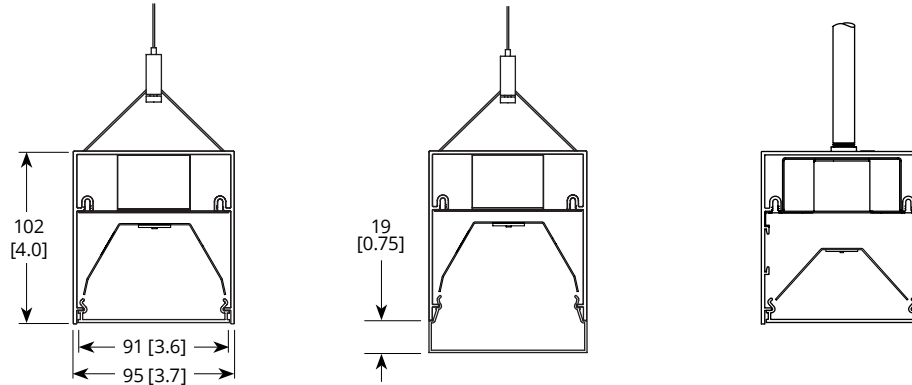
WIRING

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

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Page **5** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

CROSS SECTIONS

102 [4.0]

91 [3.6]

95 [3.7]

Meta Blanc, Meta Ice, Luma Span, Luma Asymmetric

19 [0.75]

Drop Lens

Solid Stem

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: Aircraft cable yoke complete with a Quick-Grip field adjustable suspension system provides for quick and easy onsite alignment. Stainless steel solid stem with a paint finish.
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: All components are UL/CSA/QPS recognized or listed. RoHS compliant. This product is cULus listed.
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.

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Page **6** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112

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-PA18-1-**DW**-90
Occupancy Sensor with Casambi Wireless Bluetooth Mesh Control Capability: RM4D-1L35K-12-MB-W-L31-PA18-1-**O-CAB**-90

ORDER LOGIC FIELDS			SENSOR FEATURE / BEHAVIOR		LUMINAIRE CONTROL / CONNECTIVITY	DESCRIPTION
11. SENSORS		**12. CONTROLS**	**OCCUPANCY (PIR)**	**DAYLIGHT HARVESTING**		
OF	-		(occupancy icon)	None	Standalone	Factory Sensor - Occupancy Behaviors configured via BLE App
OW	-		(occupancy icon)	None	Standalone (WattStopper)	Wattstopper Standalone Occupancy Sensor
DW	-		None	(daylight icon)	Standalone (WattStopper)	Wattstopper Standalone Daylight Harvesting Sensor
ODW	-		(occupancy icon)	(daylight icon)	Standalone (WattStopper)	Wattstopper Standalone Occupancy and Daylight Harvesting Sensors
O	-	CAB	(occupancy icon)	None	Casambi Bluetooth Mesh	Casambi Bluetooth Mesh Connectivity with Occupancy Sensing
OD	-	CAB	(occupancy icon)	(daylight icon)	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 icon)	None	Silvair Bluetooth Mesh	Open Standard Bluetooth Mesh Connectivity with Occupancy Sensing
OD	-	SLVR	(occupancy icon)	(daylight icon)	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 icon)	(daylight icon)	Osram Encelium	Osram SensiLum Connectivity for Enclelium with Occupancy and Daylight Harvesting
OD	-	ENL	(occupancy icon)	(daylight icon)	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

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Page **7** of **7**

FILE NAME: RM4D_LED_PA_PT_SPEC_SHEET_20241112