RAIL 2 ACOUSTIC (LIT)

RM2D-ACL . LED . PENDANT . DIRECT

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

PERFORMANCE SUMMARY
3500K, Meta Blanc Optics

Lumens per foot	750
Wattage per foot	6.0
Efficacy (lm/W)	98
L70 Estimate (h)	≥ 60,000 hrs
NRC	1.10
Sabins	Per Lineal Foot: 1.33 / Per Lineal Meter: 4.35

See page 2 for complete performance data.
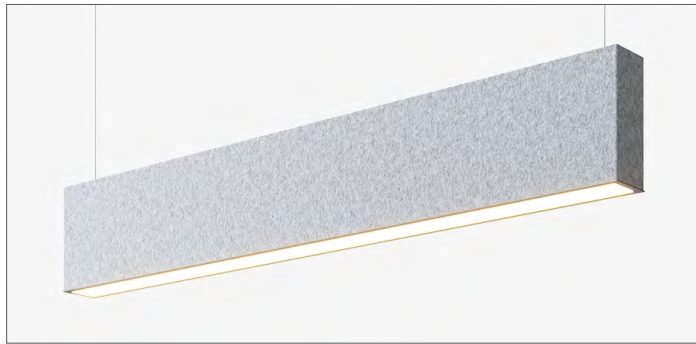
FEATURES

• Optimal lighting partnered with sound absorbing baffle technology by ezoBord
• Baffle height options of 8", 12" or 16"
• Baffle material is resistent to bacteria and moisture.

COMPLEMENTARY PRODUCT

Rail 2 Acoustic Unlit
RM2D-ACU

ORDERING LOGIC

Example Part Number: RM2D-ACL-1L35K-8-MB-08CG-500EM-TRT18-1

RM2D	ACL				MB								
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1. SERIES	2. MODEL	3. COLOR TEMP	4. LENGTH	5. PATTERN	6. OPTICS	7. ACOUSTIC BAFFLE
RM2D	**ACL** Acoustic Lit	**30K** 3000K **35K** 3500K **40K** 4000K	**2** 2 ft **3** 3 ft **4** 4 ft **5** 5 ft **6** 6 ft **7** 7 ft **8** 8 ft **RA** Continuous Rows **C** Custom Length / Configurations (Consult factory) **_** None (leave space empty)	Consult factory	**MB** Meta Blanc **Meta Blanc:** Opal diffuse lens	**XX XX** Baffle Height → ← Baffle Color Code example: **08 SG** 8 Inches → ← SG Silver Gray **BAFFLE HEIGHT:** **08** = 8 inches **12** = 12 inches **16** = 16 inches **BAFFLE COLOR / WOOD PRINT:** See page 3 for options & codes

8. LIGHT LEVEL / DRIVER	9. CIRCUITRY	10. MOUNTING	11. VOLTAGE	12. SENSORS	13. CONTROLS	14. OPTIONS
500 lm/ft **750** lm/ft **1000** lm/ft Select Driver below. See Light Level Performance chart on p2.	**C** Custom Range Specify lumens: (between 350-1000 at 50 lm intervals)	**1** 1 Circuit **EM** Emergency / Night Light **B** Emergency Battery Pack[1]	**PAX** Pendant Aircraft Cable **PTX** Pendant Aircraft Cable for T-bar **TRTX** Threaded Rod for T-bar **TRUX** Threaded Rod for Unistrut Replace "**X**" with length (inches) selected below. Select Hanger Length and indicate Canopy Finish below	**1** 120 V **2** 277 V **3** 347 V (Consult factory) **4** UNV (120 - 277V)	Please see last page for fixture integrated SENSORS and CONTROLS Order Logic codes		**90** 90 CRI (High R9) **_** None (leave space empty)

[1] Battery operates 4ft sections only.

Select Driver:

☐ Factory option 0-10V, 1% Dimming
☐ **LHE** Lutron H-Series Hi-lume 1% EcoSystem LED Driver
☐ **LA2** Lutron A-Series Hi-lume 1% 2-wire LED Driver
☐ **L5E** Lutron 5-Series EcoSystem LED Driver

Select Hanger Length:

Total aircraft adjustment range is 6" up & down for each standard length. See detailed hanger diagrams on page 5. All other lengths are considered custom unless otherwise stated.

Select	Imperial (in)	Metric (mm)
☐	12	305
☐	18	460
☐	24	610
☐	30	760
☐	36	915
☐	42	1067
☐	48	1220

Select	Imperial (in)	Metric (mm)
☐	54	1372
☐	60	1525
☐	72	1830
☐	96	2440
☐	120	3050
☐	144	3660
☐	Custom Length:	

Canopy Finish

Standard canopy finish is white

Canopy Finish
☐ Custom RAL:

PERFORMANCE

LIGHT LEVEL

3500K, 80 CRI, 0-10V Dimming

Optics	Lumens per foot	Wattage per foot	Efficacy (lm/W)
Meta Blanc	500	5.0	99
	750	7.6	99
	1000	10.1	99

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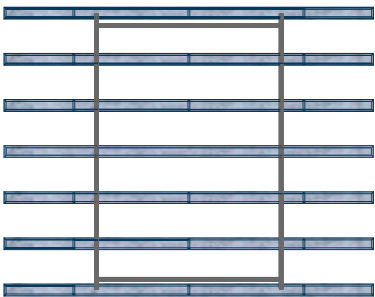
ACOUSTIC

Sound Absorption Report
9mm (3/8 inch)
(6 baffles, 12 inches apart)

NRC: 1.10

SABINS: Per Lineal Foot: 1.33
         Per Lineal Meter: 4.35

Metalumen

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FILE NAME: RM2D_ACL_SPEC_SHEET_20210126
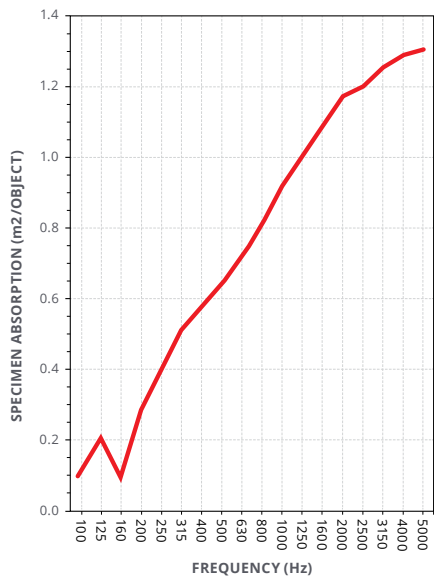
ezoBord BAFFLE OPTIONS

STANDARD COLORS

PB Pure Black	**CG** Charcoal Gray	**ES** Ebony Slate	**DG** Dark Gray
SG Silver Gray	**CW** Classic White	**LB** Light Beige	**DS** Desert Sand
SD Sunny Days	**TO** Tiger Orange	**RR** Ruby Red	**DP** DeepPurple
MN Midnight Navy	**PI** Polar Ice	**GA** Green Apple	

WOOD GRAIN PRINTS

WDO Dark Oak	**WGO** Gray Oak	**WWN** Wenge	**WAP** Apple
WCM Cherry Mate	**WWL** Walnut	**WAS** Ash	**WHO** Honey Oak
WWM White Maple	**WNB** Natural Birch		

ezoBord COMMITTMENT TO THE ENVIRONMENT

There are approximately 50 billion water bottles consumed around the world each year, and only about half of those get recycled. The rest end up in landfills, littered through our neighborhoods, or floating in our oceans.

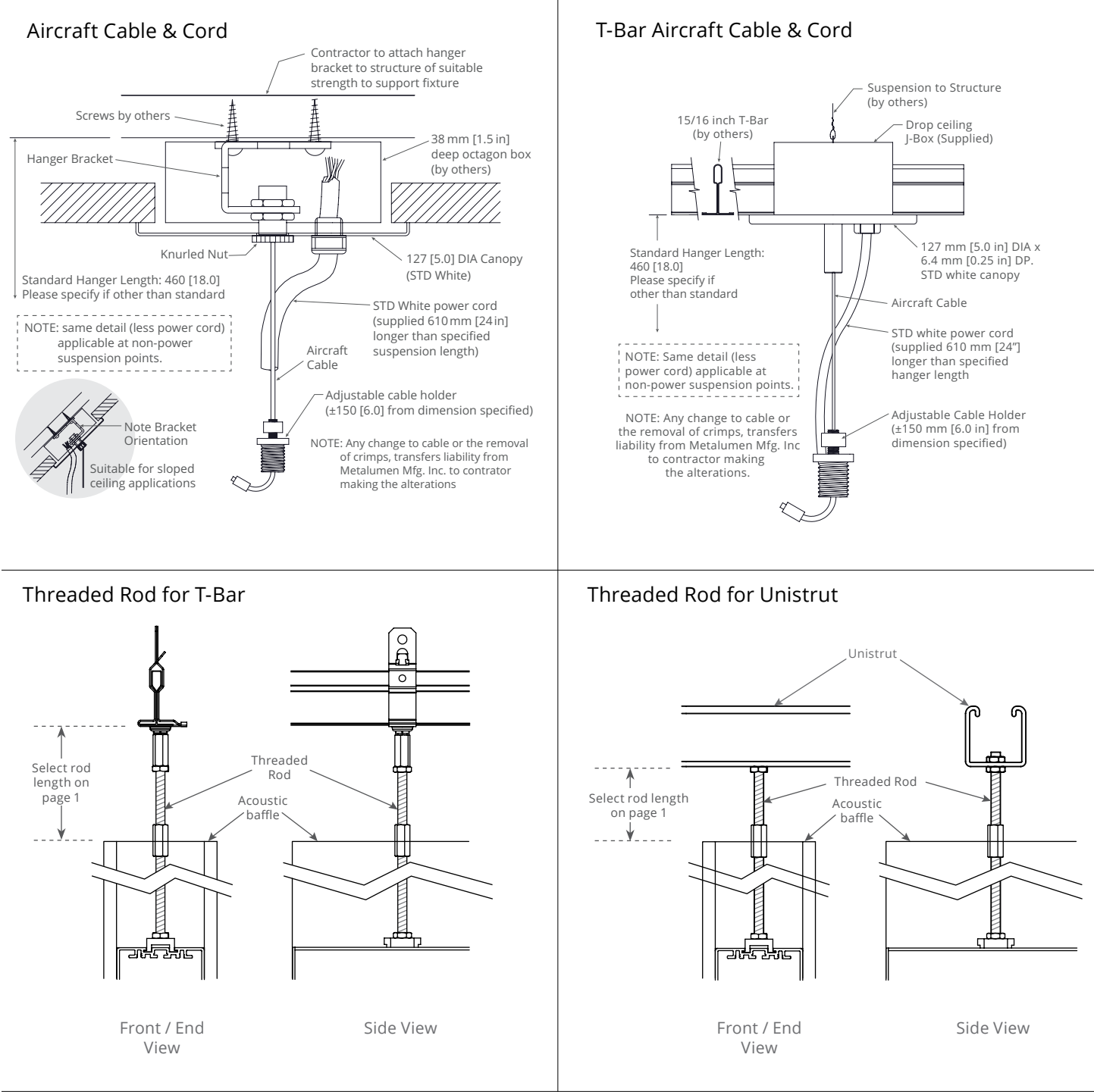Bottled water consumption has more than doubled since 2000; in 2015 there was the equivalent of more than 5 bottles of water consumed for every person in the USA every single week. This, of course, means that the amount of oil required to produce the energy used for the water bottling process continues to grow.

In 2007, the last year global statistics of oil consumption were available, between 32 million and 54 million barrels of oil were used to produce the bottled water that was consumed in the USA alone. This energy is used to make the bottles from PET pellets (1 million tons in the USA), treat water, bottle the water, label the bottles, and transport the bottled water. Most of the energy consumption occurs in the creation of the bottles themselves. To help in the lifecycle of this plastic product, we have chosen to manufacture our material so that it recycles these PET bottles. We are doing our part to reduce the waste. This acoustical and tackable material is made from PET bottles in a zero-waste process with postindustrial recycling. An environmentally friendly, sustainable, and waste reduced alternative to traditional acoustical/tackable material that looks great in any office, education, or open space installation.
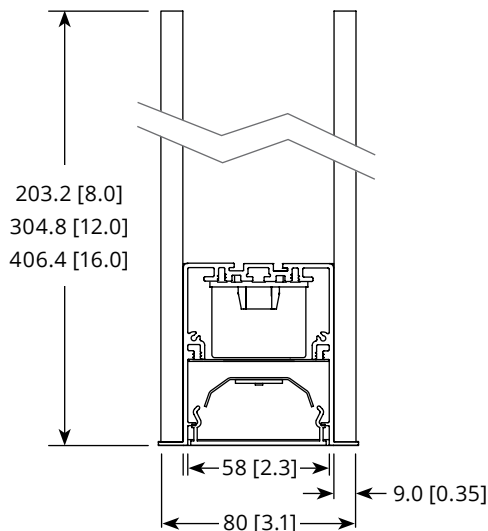
Metalumen

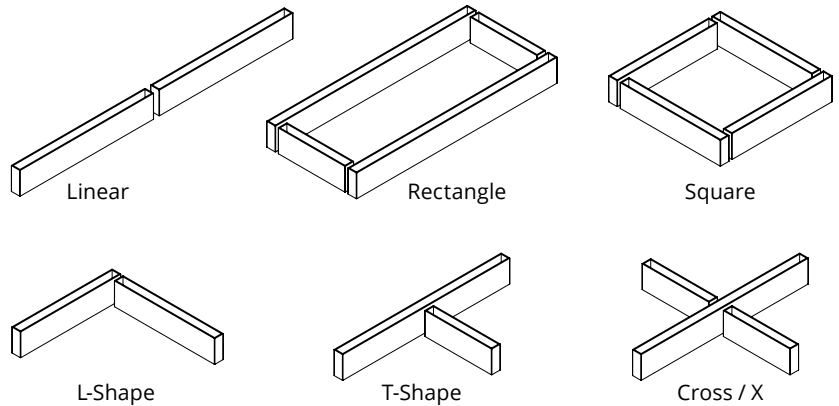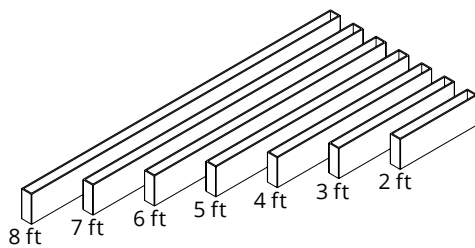570 Southgate Drive, Guelph, Ontario N1G 4P6
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HANGER

Aircraft Cable & Cord

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

Screws by others

Hanger Bracket

38 mm [1.5 in] deep octagon box (by others)

Knurled Nut

127 [5.0] DIA Canopy (STD White)

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

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

STD White power cord (supplied 610 mm [24 in] 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 contrator making the alterations

T-Bar Aircraft Cable & Cord

Suspension to Structure (by others)

15/16 inch 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

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

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

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 mm [6.0 in] from dimension specified)

Threaded Rod for T-Bar

Select rod length on page 1

Threaded Rod

Acoustic baffle

Front / End View

Side View

Threaded Rod for Unistrut

Unistrut

Select rod length on page 1

Threaded Rod

Acoustic baffle

Front / End View

Side View

WIRING

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

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CROSS SECTIONS

203.2 [8.0]
304.8 [12.0]
406.4 [16.0]

58 [2.3]

9.0 [0.35]

80 [3.1]

LENGTHS & CONFIGURATIONS

2 ft - 609.6 [24.0]   **6 ft -** 1828.8 [72.0]
3 ft - 914.4 [36.0]   **7 ft -** 2133.6 [84.0]
4 ft - 1219.2 [48.0]   **8 ft -** 2438.4 [96.0]
5 ft - 1524.0 [60.0]

8 ft   7 ft   6 ft   5 ft   4 ft   3 ft   2 ft

Linear   Rectangle   Square

L-Shape   T-Shape   Cross / X

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. 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.
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.
Paint Finish: White standard finish. For custom finish, contact factory.
Weight: 0.95 kg/300mm [2.1 lb/ft]
Mounting: Aircraft cable complete

with a Quick-Grip field adjustable suspension system. Threaded rod for t-bar and unistrut metal framing system.
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.

ezoBord ACOUSTIC BAFFLE SPECIFICATIONS

Composition: 100% PET (min. 50% recycled content)
Thickness: ⅜" (9mm) | ±0.5mm
Weight:⅜" (9mm) sheet: 8.4lbs (3.8kg) | ±5%
Hardness: 60-65 (Shore C)
Fire Testing:
• North America:
- ASTM E-84 Class A*- CAN ULC S102-10

• Europe and UK:
- EN13501-1: 2007
Acoustics: Refer to ASTM C423-17 test charts for specific absorption coefficients. NRC 0.75 (subject to mounting conditions)
Product Variances: Variation in fiber mix and colour may occur. All products will be supplied within commercial

tolerances.
General: Tackable, impact resistant, bacteria resistant, moisture resistant, installation friendly.
Environment: Made of polyester fiber, min. 50% of which comes from recycled water bottles which contributes to LEED MR Credit and BREEAM Health and Wellbeing, Materials points

due to recycled content, acoustic performance, and low emitting materials.
No VOC's: CDPH v1.2 and REACH SVHC Compliant.

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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.

PHOTOMETRIC DATA - 3500K, 80 CRI

Optics: **Meta Blanc**
IES File: **RM2D-ACL-1L35K-4-MB-L750**
Lumens: **500/ft**   Wattage: **5.0/ft**
Efficacy: **99 lm/W**

PHOTOMETRIC CURVE
100% Down

1328
996
664
332
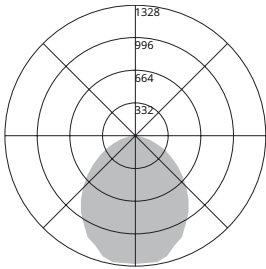
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-20	475	15.9
0-30	985	32.9
0-40	1560	52
0-60	2534	84.5
0-80	2963	98.8
0-90	2998	100
10-90	2873	95.8
20-40	1084	36.2
20-50	1625	54.2
40-70	1263	42.1
60-80	430	14.3
70-80	140	4.7
80-90	35	1.2
90-110	0	0
90-120	0	0
90-130	0	0
90-150	0	0
90-180	0	0
110-180	0	0
0-180	2998	100

COEFFICIENTS OF UTILIZATION
Zonal Cavity Method | Effective Floor Cavity Reflectance = .20

RC		80				70				50	
RW	70	50	30	10	70	50	30	10	50	30	10
RCR											
0	119	119	119	119	116	116	116	116	111	111	111
1	110	105	102	98	107	103	100	97	99	96	93
2	101	93	87	82	98	91	85	81	88	83	79
3	92	83	75	69	90	81	74	68	78	72	67
4	85	74	66	59	83	73	65	59	70	63	58
5	79	66	58	52	77	65	57	51	63	56	51
6	73	60	52	46	71	59	51	45	57	50	45
7	68	55	46	41	66	54	46	40	53	45	40
8	63	50	42	36	62	50	42	36	48	41	36
9	59	46	38	33	58	46	38	33	45	38	33
10	56	43	35	30	54	42	35	30	41	35	30

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0	45	90
45	13058	6938	5596
55	11151	4894	3719
65	8974	3136	2251
75	6139	1493	1051
85	2653	340	251

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1302	1302	1302	1302	1302
5	1296	1317	1328	1323	1292
10	1303	1297	1282	1290	1302
15	1265	1245	1244	1249	1231
20	1183	1179	1190	1176	1177
25	1135	1123	1108	1096	1089
30	1034	1050	1015	1002	998
35	952	944	921	897	889
40	852	835	815	780	767
45	740	740	702	670	659
50	630	624	590	554	538
55	525	516	483	448	438
60	415	413	385	361	347
65	324	312	292	266	257
70	229	223	202	189	181
75	147	143	126	116	113
80	78	75	69	62	60
85	30	29	25	24	24
90	7	6	5	6	5

Photometric performance is measured and scaled in accordance with IESNA LM-79.

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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: RM2D-1L35K-12-MB-W-L31-PA18-1-**DW**-90
Occupancy Sensor with Casambi Wireless Bluetooth Mesh Control Capability: RM2D-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

wattstopper®   enlighted™ A Siemens Company   SILVAIR   CASAMBI
OSRAM   LUTRON   HUBBELL Control Solutions   Signify PHILIPS