RAIL 2 RM2DU

ACCENT PATTERNS. PENDANT . DIRECT / INDIRECT
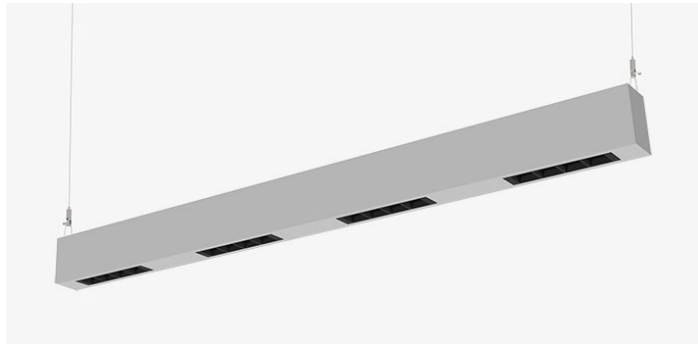
PART #:	
PREP BY:	DATE:
PROJECT:	
NOTES:	
APPROVAL SIGNATURE:	DATE (DD/MM/YYYY):

PERFORMANCE SUMMARY @ 3500K, 80 CRI

PERFORMANCE SUMMARY @ 3500K, 80 CRI	Recessed Downlight Low "A" Light Level (LL)
Lumens (lm) per foot	322
Distribution (Up / Down %)	0 / 100
Wattage (W) per foot	2.2
Efficacy (lm/W)	145
L70 Estimate (h)	≥ 60,000 hrs

See page 2 for the complete Light Level Performance chart.

FEATURES

- Available standard lengths of 4, 8 and 12 ft only
- Available with 50° or 80° beam spreads
- 90 CRI available

ORDERING LOGIC

Example Part Number: RM2DU-2L35K-G4-MBLM5-W-L3L31-PA18-1-DW-90

RM2DU											
1	2	3	4	5	6	7	8	9	10	11	12

1. SERIES
RM2DU

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

90 CRI is available under OPTIONS

3. PATTERN [1]
GA Square
GAx**B** Rectangle
UAx**B**x**C** U-Shape
LAx**B** L-Shape
C Custom Pattern*
_ None (leave space empty)

Standard Patterns Minimum Lengths

Square / Rectangle
A = 4 ft min.
B = 4 ft min.

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* (C)
Lengths and a drawing of custom pattern are required on page 3

T-Shape   Cross / X

Select corner:
☑ Outside 90°
☑ Inside 90°

4. OPTICS (UP / DOWN)
MBXX5 Meta Blanc / Accent, 50° Beamspread
MBXX8 Meta Blanc / Accent, 80° Beamspread
MRXX5 Rise Lens / Accent, 50° Beamspread
MRXX8 Rise Lens / Accent, 80° Beamspread

Replace **XX** with accent selected on p2.

ACCENT finish is black.

Meta Blanc & Rise Lens: Opal Diffuse Lens

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

6. LIGHT LEVEL (LL) / DRIVER

CODES:
L1LX
L2LX
L3LX
L4LX

Replace "**Y**" with ACCENT Light Level:
A = Low Light Level
B = Mid Light Level
C = High Light Level

Replace "**X**" with STANDARD LENS Light Level:
1 = Light Level 1
2 = Light Level 2
3 = Light Level 3
4 = Light Level 4
N = No Light Level (applicable when ACCENT configuration doesn't include lens)

Code example:

L3,**B**,**2**
Indirect: Light Level 3
Direct: Standard Light Level 2
Accent Mid Light Level

See and select driver options at the right.

See Light Level Performance chart on p2.

7. CIRCUITRY
1 1 Circuit
UD Up / Down Switching
EM Emergency / Night Light
B Emergency Battery Pack[2]

8. MOUNTING
PAA Pendant Aircraft Cable
PTA Pendant Aircraft Cable for T-bar

Replace "A" with length (in inches) selected below.

Select Aircraft Cable Length, Canopy Finish & Power Cord Color below

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
_ None (leave space empty)

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

* Consult factory. | ** Not available with patterns. | [1] Pattern record drawings showing mounting locations will be sent out upon order. | [2] Battery operates 4ft direct sections only.

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Select Aircraft Cable Length:
Total adjustment range is 6" up & down for each standard length.
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: _____	

Select Canopy Finish & Power Cord Color

Canopy
☐ White
☐ Black
☐ Custom Finish
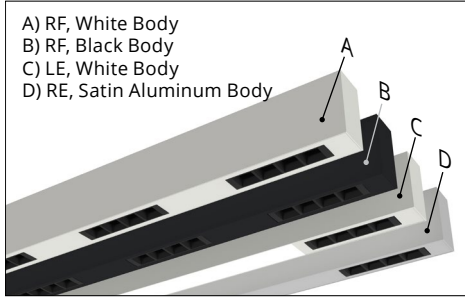RAL: _____

Power Cord
☐ White
☐ Black*
*consult factory

ACCENTS

Recessed Downlights

Recessed downlight sections are available in 4, 8 and 12 ft lengths with beam spreads of 50 or 80 degrees. Recessed downlight comes in black finish only.

A) RF, White Body
B) RF, Black Body
C) LE, White Body
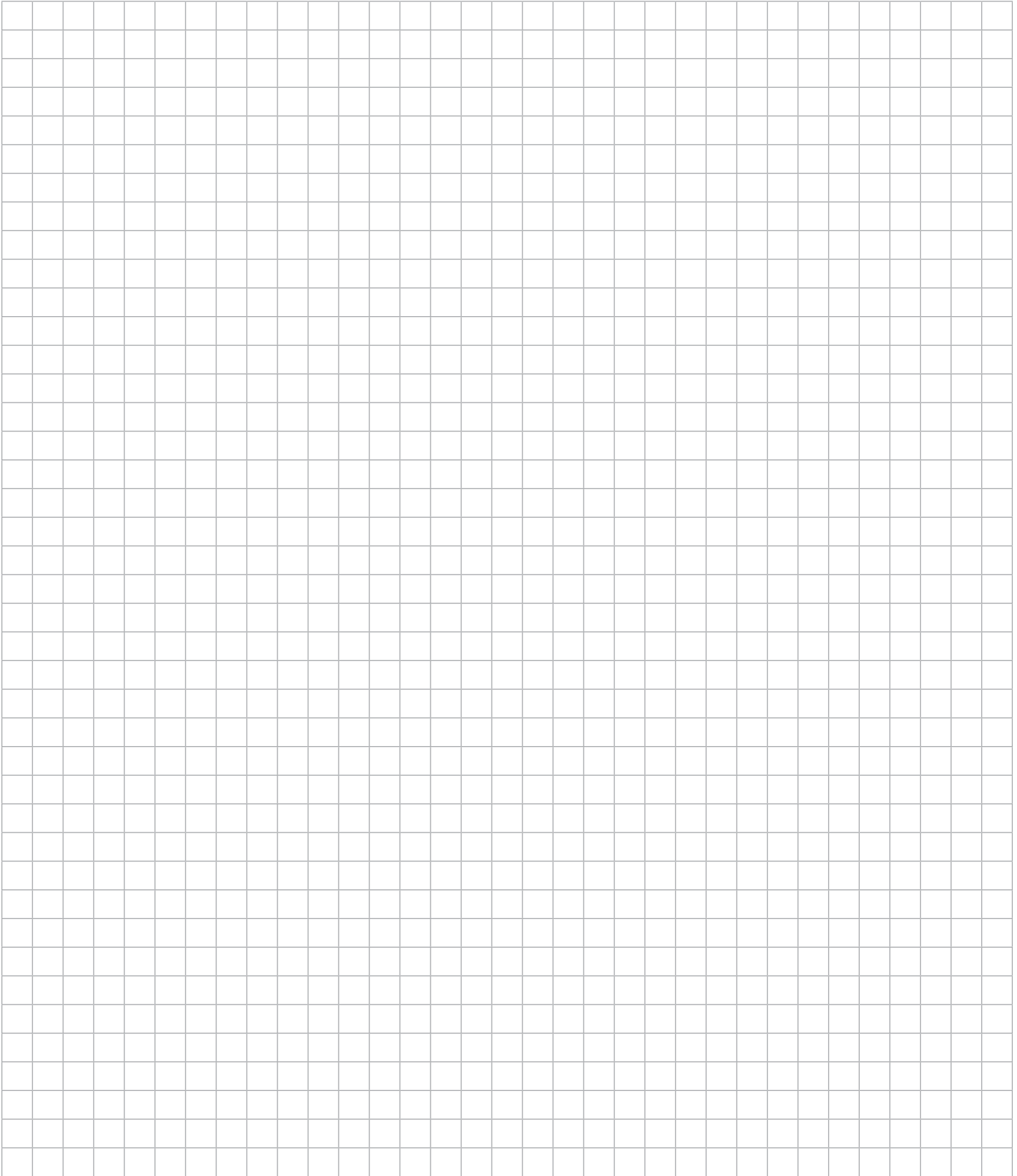D) RE, Satin Aluminum Body

Filler

Finished in the same color as the body, the filler appears smooth and seamless, completing the rhythmical aesthetic of the recessed downlight configurations.

Select one:	Code	Direct Accent Configuration (Available for 4, 8 and 12 ft sections only)	Light Level (LL) Performance		
			A Low LL	**B** Mid LL	**C** High LL
☐	RE	Recessed downlight located at Edge (Power entry located on same end as accent)	322 lm	611 lm	869 lm
☐	RM	Recessed downlight located at Middle	322 lm	611 lm	869 lm
☐	R2	Recessed downlights x2	644 lm	1222 lm	1738 lm
☐	R3	Recessed downlights x3	966 lm	1833 lm	2607 lm
☐	RF	Recessed downlights Full			
		4 ft — Full 4 ft section fits max. 4 recessed downlights	1288 lm	2444 lm	3476 lm
		8 ft — Full 8 ft section fits max. 8 recessed downlights	2576 lm	4888 lm	6952 lm
		12 ft — Full 12 ft section fits max. 12 recessed downlights	3864 lm	7332 lm	10428 lm
☐	LE	Recessed downlight located at Edge with Lens (Power entry located on same end as accent)	Consult factory		
☐	LM	Recessed downlight located at Middle (with Lens)	Consult factory		
☐	L2	Recessed downlights x2 (with Lens)	Consult factory		

For custom configurations, please provide a drawing on next page.

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

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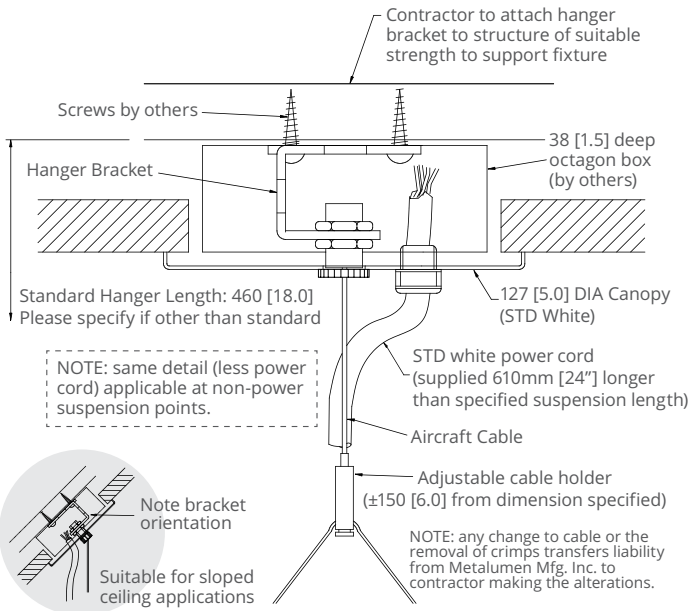# A custom length drawing is required in the grid below

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

HANGERS

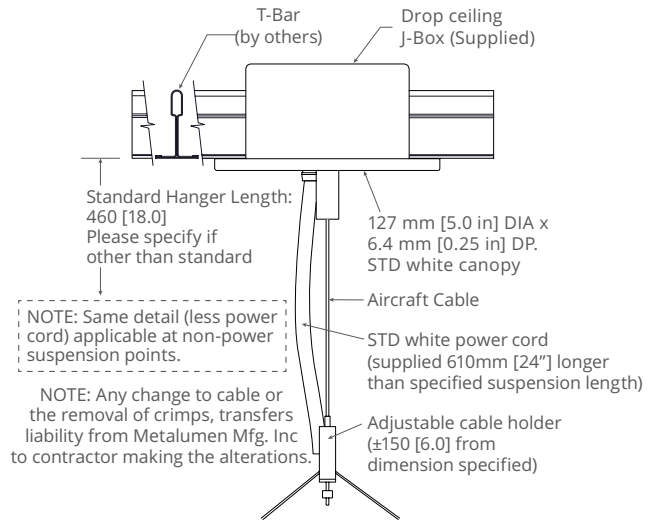### Aircraft Cable & Cord

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

Note bracket orientation

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

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)

WIRING

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

CROSS SECTIONS & DIMENSIONS

99 [3.9]

40 [1.6]

65 [2.6]
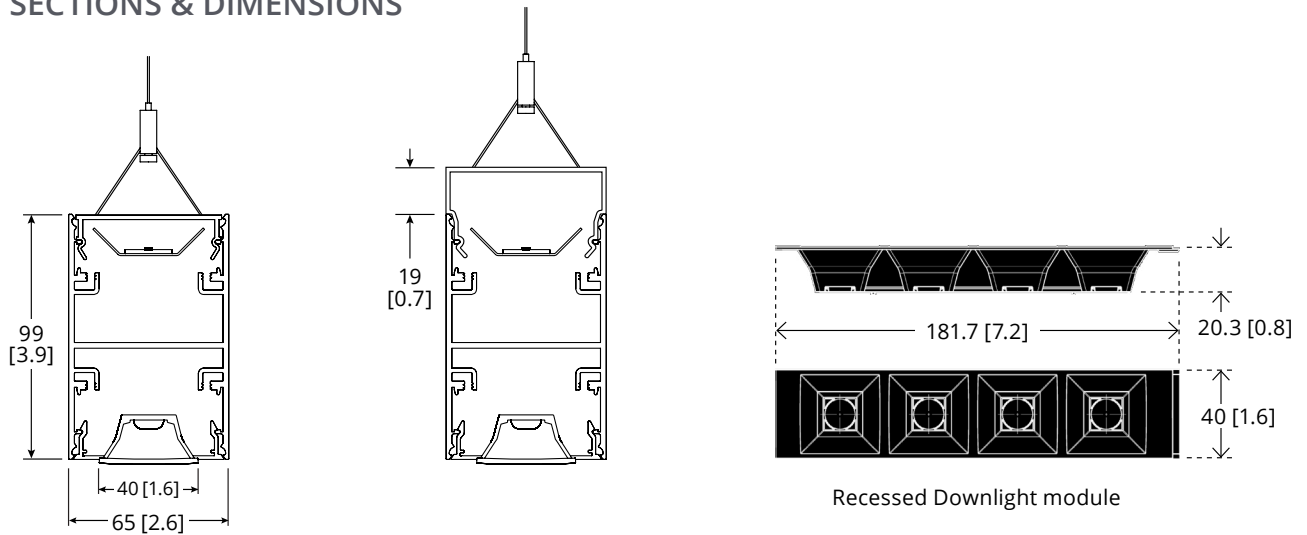
UP: Meta Ice or Meta Blanc
DOWN: Recessed Downlight

19 [0.7]

UP: Rise Lens
DOWN: Recessed Downlight

181.7 [7.2]

20.3 [0.8]

40 [1.6]

Recessed Downlight module

SPECIFICATIONS

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

Housing: Rigid extruded aluminum body, 2.3mm [0.09"] 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.
Finish: Satin aluminum, white and black are standard finishes. For custom finish, contact factory. Accent finish comes in black only.

Mounting: Aircraft cable complete with a Quick-Grip field adjustable suspension system provides for quick and easy on-site alignment.
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.

PHOTOMETRIC DATA - 3500K, 80 CRI

Optics Up: **Meta Blanc or Rise Lens**
Optics Down: **Recessed Downlight**
IES File: **RM2DU-2L35K-4-MBAN-L1**
Lumens: **322**   Wattage: **2.2**
Efficacy: **145**

PHOTOMETRIC CURVE
100% Down
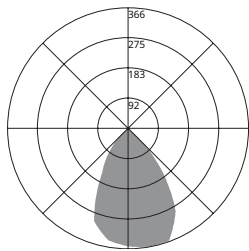
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-20	131	36.2
0-30	257	71.1
0-40	337	93.1
0-60	362	99.9
0-80	362	100
0-90	362	100
10-90	328	90.6
20-40	206	57
20-50	229	63.4
40-70	25	6.8
60-80	0	0.1
70-80	0	0
80-90	0	0
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	362	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	114	111	108	106	111	109	106	104	105	103	101
2	108	103	99	96	106	101	98	95	98	95	93
3	102	96	91	87	100	95	90	86	92	88	85
4	97	90	84	80	95	89	83	79	86	82	79
5	92	84	78	74	91	83	78	73	81	76	73
6	88	79	73	68	86	78	72	68	76	71	68
7	83	74	68	64	82	73	67	63	72	67	63
8	79	69	63	59	78	69	63	59	68	63	59
9	75	65	59	55	74	65	59	55	64	59	55
10	72	62	56	52	71	61	56	52	61	55	52

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0	45	90
45	34520	14376	853
55	482	1690	157
65	252	173	16
75	245	64	0
85	229	38	0

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	358	358	358	358	358
5	361	361	360	358	355
10	364	365	362	358	352
15	364	365	365	358	346
20	363	362	355	346	324
25	330	329	330	307	278
30	293	276	263	221	187
35	224	211	160	118	82
40	152	144	71	37	17
45	80	82	33	7	2
50	8	25	12	1	1
55	1	1	3	0	0
60	0	1	0	0	0
65	0	0	0	0	0
70	0	0	0	0	0
75	0	0	0	0	0
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

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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-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)	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