# RAIL 2 ACOUSTIC (LIT)

**RM2DU-ACL . LED . PENDANT . DIRECT / INDIRECT**

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



## PERFORMANCE SUMMARY
3500K; Batwing Up, Meta Blanc Down

| | |
|---|---|
| Lumens per foot | 1500 |
| Wattage per foot | 14.7 |
| Efficacy (LPW) | 102 |
| 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.
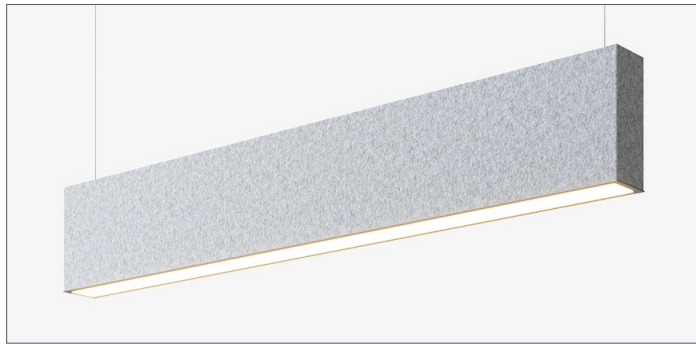
## FEATURES

- Optimal direct/indirect lighting partnered with sound absorbing baffle technology by EZO BORD
- Baffle height options of 8", 12" or 16"
- Baffle material is resistent to bacteria and moisture
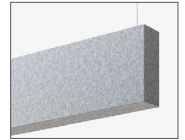
## COMPLEMENTARY PRODUCTS



Rail 2
RAIL2-ACL
Acoustic Lit
(Direct)
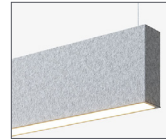


Rail 2
RAIL2-ACU
Acoustic Unlit

## ORDERING LOGIC

Example Part Number: RM2DU-ACL-35K-8-BWMB-08CG-500EM-PA18-1

| RM2DU | ACL | | | BWMB | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

| 1. SERIES | 2. MODEL | 3. COLOR TEMP | 4. LENGTH | 5. OPTICS | 6. ACOUSTIC BAFFLE | 7. LIGHT LEVEL / DRIVER (50% UP / 50% DOWN) |
|---|---|---|---|---|---|---|
| **RM2DU** | **ACL** Acoustic Lit | **30K** 3000K<br>**35K** 3500K<br>**40K** 4000K<br><br>90 CRI is available under OPTIONS | **4** 4 ft<br>**5** 5 ft<br>**6** 6 ft<br>**7** 7 ft<br>**8** 8 ft<br>**RA** Continuous Rows<br>**C** Custom Length (Consult factory)<br>**_** None (leave space empty) | **BWMB** Up: Batwing Down: Meta Blanc<br><br>**Meta Blanc:** Opal diffuse lens | Code example:<br><br>**08 SG**<br>Height 8 Inches / Color / Wood Print Silver Gray<br><br>**Height**<br>**08** 8 Inches<br>**12** 12 Inches<br>**16** 16 Inches<br><br>**Color / Wood Print**<br>See page 3 for options & codes | **100** 1000 lm/f<br>**150** 1500 lm/f<br>**200** 2000 lm/f<br>**C** Custom Range<br>Specify lumens:<br>Indirect **U** Direct **D**<br>(Combined lumens between 750-2500 at 50 lm intervals)<br><br>Select Driver below. See Light Level Performance chart on p2. |

| 8. CIRCUITRY | 9. MOUNTING | 10. VOLTAGE | 11. SENSORS | 12. CONTROLS | 13. OPTIONS |
|---|---|---|---|---|---|
| **1** 1 Circuit<br>**UD** Up / Down Switching<br>**EM** Emergency / Night Light<br>**B** Emergency Battery Pack[1] | **PAX** Pendant Aircraft Cable<br><br>Replace "X" with length (inches) selected below.<br>Select Hanger Length and indicate Canopy Finish below | **1** 120 V<br>**2** 277 V<br>**3** 347 V (Consult factory)<br>**4** UNV (120 - 277V) | Please see last page for fixture integrated SENSORS and CONTROLS Order Logic codes | | **90** 90 CRI (High R9)<br>**_** 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.
**NOTE: If no selection is made, a 48" hanger will be supplied.**

| 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 and Power Cord Finish

White canopy & cord is standard

| Canopy | Cord |
|---|---|
| ☐ Custom RAL: | ☐ Custom RAL: |

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FILE NAME: RM2DU_ACL_SPEC_SHEET_20230705

## PERFORMANCE

## LIGHT LEVEL

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

| Batwing Up / Meta Blanc Down Distribution: 50% Up / 50% Down (approx.) | | | |
|---|---|---|---|
| Light Level | Lumens per foot | Wattage per foot | Efficacy (lm/W) |
| **1000** | 1004 | 9.8 | 102 |
| **1500** | 1501 | 14.7 | 102 |
| **2000** | 2001 | 20 | 100 |

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

## ACOUSTIC SOUND DATA

### Sound Absorption

| | |
|---|---|
| Material thickness: | 9 mm (3/8 inches) |
| Number of baffle objects: | 6 |
| Spacing: | 12 inches apart |
| **NRC:** | **1.10** |
| **SABINS Per Lineal Foot:** | **1.33** |
| **SABINS Per Lineal Meter:** | **4.35** |

### Sound Absorption Coefficients
**(ASTM C423-17)**

| NRC | 125 | 250 | 500 | 1000 | 2000 | 4000 |
|---|---|---|---|---|---|---|
| **1.10** | **0.2** | **0.39** | **0.64** | **0.92** | **1.17** | **1.29** |

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FILE NAME: RM2DU_ACL_SPEC_SHEET_20230705
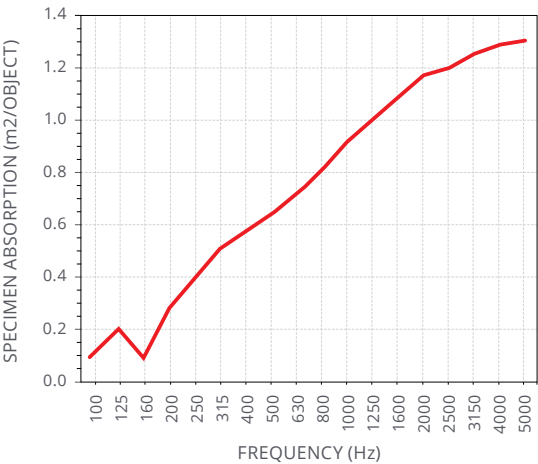
# BAFFLE OPTIONS

**EZO BORD**

## 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 |
| **EB** Evening Blue | **AB** Aegean Blue | **SP** Sunset Pink | **VC** Vanilla Cream | |
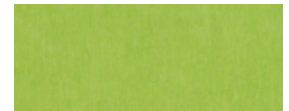
## WOOD GRAIN PRINTS
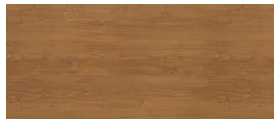
| | | | | |
|---|---|---|---|---|
| **WCM** Cherry Mate | **WGO** Gray Oak | **WAS** Ash | **WBS** Birch Sand | **WYO** Yellow Oak |
| **WMM** Marmar Maple | **WDO** Dark Oak | **WWL** Walnut | **WAP** Apple | **WWN** Wenge |
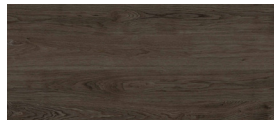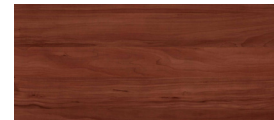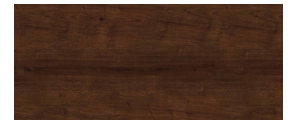
## BAFFLE SPECIFICATIONS

**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.

## EZOBORD COMMITMENT 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.
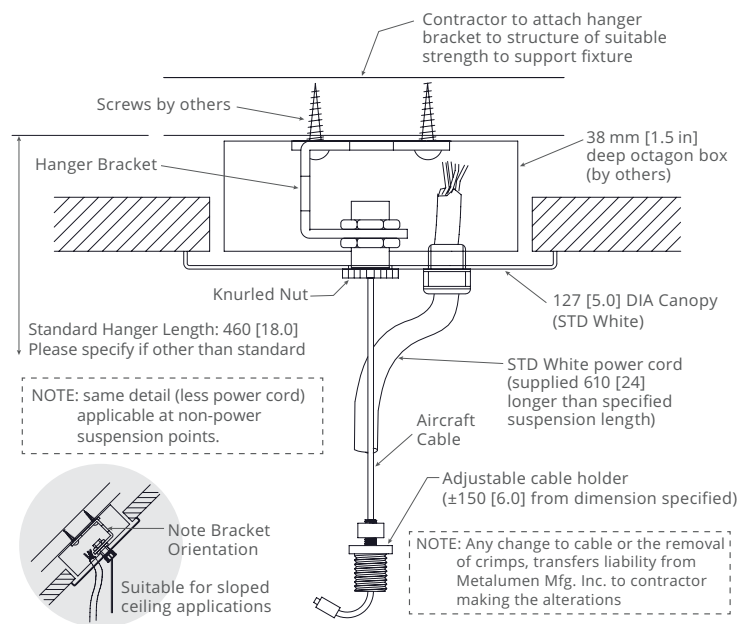
In 2007, the last year global statistics of oil consumption were available, between 32 million and 54 million barrels of oil were used to produce the

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.

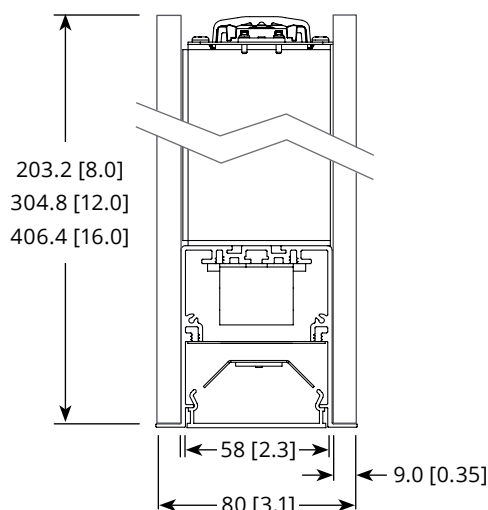**Metalumen**

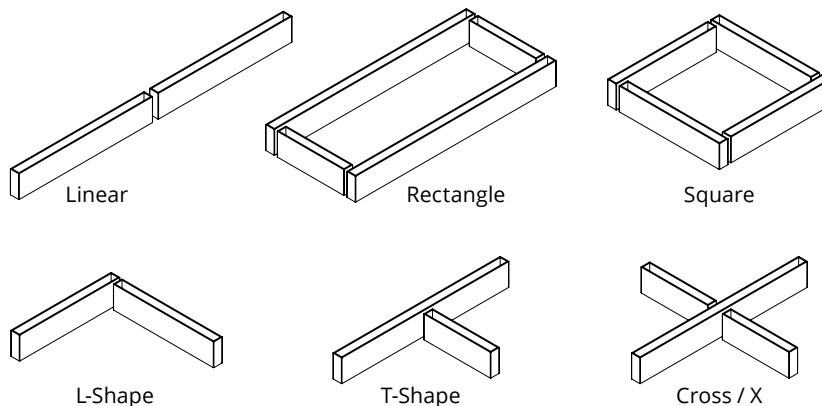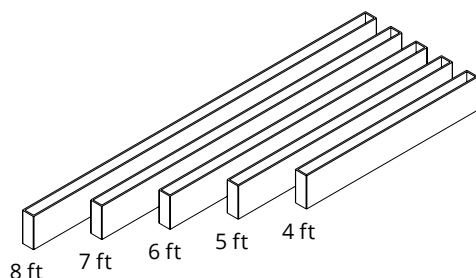570 Southgate Drive, Guelph, Ontario N1G 4P6
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## HANGER

### 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

STD White power cord (supplied 610 [24] longer than specified suspension length)

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

Aircraft Cable

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

Note Bracket Orientation

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

Suitable for sloped ceiling applications

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## WIRING

| Standard | Up/Down Switching | Emergency / Night Light | Emergency Battery Pack |
|---|---|---|---|
| BLACK - LINE<br>WHITE - NEUTRAL<br>GREEN - GROUND<br>RED - CAPPED/SW LEAD<br>VIOLET - DIM(+)<br>PINK - DIM(-) | BLACK - LINE (UP)<br>WHITE - NEUTRAL<br>GREEN - GROUND<br>RED - LINE (DOWN)<br>VIOLET - DIM(+)<br>PINK - DIM(-) | BLACK - LINE<br>WHITE - NEUTRAL<br>GREEN - GROUND<br>RED - CAP OFF | BLACK - LINE<br>WHITE - NEUTRAL<br>GREEN - GROUND<br>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

**4 ft -** 1219.2 [48.0]
**5 ft -** 1524.0 [60.0]
**6 ft -** 1828.8 [72.0]
**7 ft -** 2133.6 [84.0]
**8 ft -** 2438.4 [96.0]

8 ft    7 ft    6 ft    5 ft    4 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.
**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.*

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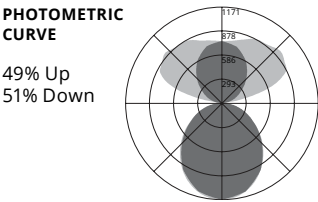FILE NAME: RM2DU_ACL_SPEC_SHEET_20230705

## 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: **Batwing**
Optics Down: **Meta Blanc**
IES File: **RM2DU-ACL-35K-4-BWMB-150**
Lumens: **1500/ft**  Wattage: **14.7/ft**
Efficacy: **102 LPW**

**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Fixt |
|------|--------|-------|
| 0-90 | 3030 | 51 |
| 90-180 | 2972 | 49 |
| 0-180 | 6002 | 100.0 |

**LUMINANCE DATA (CD/M2)**

| Vertical Angle | Horizontal Angle | | |
|------|------|------|------|
| | 0 | 45 | 90 |
| 45 | 12332 | 12455 | 12569 |
| 55 | 11477 | 11371 | 11583 |
| 65 | 10878 | 10379 | 10378 |
| 75 | 10673 | 9786 | 8806 |
| 85 | 10640 | 9658 | 5367 |

**PHOTOMETRIC CURVE**

49% Up
51% Down

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

![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:  RM2DU-ACL-35K-12-BWMB-12CG-L31-PA18-1-**DW**-90
Occupancy Sensor with Casambi Wireless Bluetooth Mesh Control Capability:  RM2DU-ACL-35K-12-BWMB-12CG-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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