

| Catalog #:    | Project : | Type:  |
|---------------|-----------|--------|
| Prenared Ry · |           | Date : |

# **Modular High Bay Light (MHB)**

## Industrial & Warehouse





Lumen Package (Im)









12.000 - 90.000







#### **QUICK LINKS**

| Color Temperature (K) | 4000K, 5000K           |
|-----------------------|------------------------|
| Wattage Range (W)     | 79 - 560               |
| Efficacy Range (LPW)  | 146 - 162              |
| Weight lbs (kg)       | 7.5 - 22.5 (3.3 - 9.9) |

**OVERVIEW** 

#### **FEATURES & SPECIFICATIONS**

#### Construction

- Constructed of 14 gauge die formed aluminum with a post-paint polyester coat finish
- · Module configurations are factory installed
- Access panel provides hinged access to wiring and driver connections
- Luminaire is certified to UL/cUL Standards for Damp Locations
- · Manufactured in the USA

#### **Optical System**

- High impact clear polycarbonate lens available in wide and narrow distributions
- Wide distributions also available with diffuse lens for smoother light
- Minimum CRI of 80

#### **Electrical**

- 0-10V dimming (10%-100%) standard
- Standard Universal Voltage (120-277 Vac) Input 50/60 or optional High Voltage (347-480V)
- L70 Calculated Life: >200K hours
- Total Harmonic distortion (THD): <20%
- Operating Temperature -35 to +50C (-31F to +122F)
- Standard surge protection rated to 20kV/10kA
- Power factor (PF): >.95

- High-performance programmable driver features overvoltage, under voltage, shortcircuit and over temperature protection. Custom lumen and wattage packages available.
- Optional emergency battery packs are available to meet critical life-safety lighting requirements.
- - Integral 10W for 120-277V
- External 30W for 120-277V or 347-480V

#### **Controls**

### • Stand-Alone Controls

External and Passive Infrared Bluetooth Motion/Photocell Sensor (OMSBTxL, IMSBTxL)

- Switches luminaire light levels based on motion and daylight (see the controls section for more details)
- Fixtures operate independently and can be commissioned via iOS or Android configuration app

#### LSI's AirLink™ Blue

- App based, wireless Bluetooth mesh lighting control system
- Automated control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule.

#### Installation

- Standard mounting with included V hangar
- Optional mounting accessories for chain, cable, or single (pendant) monopoint suspension.
- To maintain ambient listing, mount minimum 6" from ceiling

## Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <a href="https://www.lsicorp.com/resources/terms-conditions-warranty/">https://www.lsicorp.com/resources/terms-conditions-warranty/</a> for more information.
- 1 Year warranty on optional Battery Backup. Test regularly in accordance with local codes.

## Listings

- List for UL 1598 and UL 8750
- · Suitable for damp locations
- Meets Buy American Act Requirements
- State of California Title 24 compliant
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- IK08 rated luminaire per IEC 66262 mechanical impact code
- Lenses are IP5X rated (dust-resistant)





### **ORDERING GUIDE**

| TYPICAL ORD   | ER EXAMPLE: M   | HB 1   | LED  | 18L CPW UNV  | 40 EM  |  |  |                             |  |  |
|---|---|--|--|--|--|--|--|-----------------------------|--|--|
| Prefix  | Module Size   | Light S  | ource  | Lumen Package  | Lens/Optic   |  | Voltage  | Driver                      | Color Temperature / Rendering                          |  |
| MHB - Modular<br>High Bay Light   | <b>1</b> - Single (13.5")   | <b>15L</b> - 15,000 Lumens<br><b>18L</b> - 18,000 Lumens<br><b>24L</b> - 24,000 Lumens |  | <b>12L</b> - 12,000 Lumens<br><b>15L</b> - 15,000 Lumens<br><b>18L</b> - 18,000 Lumens<br><b>24L</b> - 24,000 Lumens<br><b>30L</b> - 30,000 Lumens | <b>CPW</b> - Clear Polycarbonate Wide <sup>3</sup> <b>DPW</b> - Diffuse Polycarbonate Wide <sup>3</sup> <b>CPN</b> - Clear Polycarbonate Narrow <sup>3</sup> |  | <b>UNV</b> - Universal Voltage (120 - 277V)<br><b>HV</b> - High Voltage (347-480V) | Standard - 0-10V<br>Dimming | <b>40</b> - 4000K / 80CRI<br><b>50</b> - 5000K / 80CRI |  |
|   | <b>2</b> - Double (27")   |  |  | <b>30L</b> - 30,000 Lumens<br><b>36L</b> - 36,000 Lumens<br><b>48L</b> - 48,000 Lumens<br><b>60L</b> - 60,000 Lumens                               |  |  |  |                             |  |  |
|   | <b>3</b> - Triple (40.5") <sup>1</sup>  |  |  | <b>72L</b> - 72,000 Lumens <b>90L</b> - 90,000 Lumens  |  |  |  |                             |  |  |
|   |   |  |  | Custom Lumens <sup>2</sup>   |  |  |  |                             |  |  |
| Controls  |   |  | EM Opt   | tions  |  | Options  |  |                             |  |  |
| OMS2 - External PIR sensor up to 40ft OMS2-480 - External PIR sensor up to 40ft for 480V applications OMSBT2L - External Bluetooth PIR motion and photo sensor up to 40ft IMSBT2L - Integral Bluetooth PIR motion and photo sensor up to 40ft ALBCS2 - AirLink Blue Wireless Motion & Photo |   | ng leads cord <sup>4,5</sup>   | <b>E6CN</b> - 6ft cord 16<br><b>E6CD</b> - 6ft cord 16<br><b>E10CN</b> - 10ft cord |  | L515P - 5<br>L615P - 6<br>PEND L715P - 7<br>L820P - 8<br>OP END L2420P - 1   | 15 plug only (120V) <sup>8,10</sup> -15P Twistlock Plug (125V) <sup>8,10</sup> -15P Twistlock Plug (250V) <sup>8,10</sup> -15P Twistlock Plug (277V) <sup>8,10</sup> -15P Twistlock Plug (277V) <sup>8,10</sup> -20P Twistlock Plug (480V) <sup>8,10</sup> 24-20P Twistlock Plug only (347V) <sup>8,10</sup> |  |                             |  |  |
| For low mounting hei  | (25–40' mounting heig<br>ght below 20ft, substitute "2"<br>" For programming, please se<br>Operations Charts. | 'in  |  |  |  | *See Cord Notes for spo  | ecific applications  |                             |  |  |



## **Need more information?**

Click here for our glossary

Have additional questions? Call us at (800) 436-7800



Note: Controls - For low mounting height below 20ft, substitute "2" in nomenclature with "1." For programming, please see "Sensors Sequence of Operations Charts."

## ACCESSORY ORDERING INFORMATION (Mounting Options are field installed)

| Part Number | Order Number           | Description   |
|-------------|------------------------|---|
| 744308      | MHB PMK <sup>5,6</sup> | Pendant Mount Kit   |
| 572488      | KIT SHC                | Single Hub/Chain Mount  |
| 783379R4    | MCH10 <sup>11</sup>    | 10' Mini Hook Cable Hanger (2 per) - Up/Down adjustable and Left/Right adjustable |

| Part Number | Order Number | Description     |
|-------------|--------------|-----------------|
| 751410      | MHB WG1      | MHB 1 Wireguard |
| 751411      | MHB WG2      | MHB 2 Wireguard |
| 781368      | MHB WG3      | MHB 3 Wireguard |

| Cord Application Notes              |                 |                          |           |                        |                        |                          |           |  |  |  |
|-------------------------------------|-----------------|--------------------------|-----------|------------------------|------------------------|--------------------------|-----------|--|--|--|
|                                     |                 |                          | Not Di    | Dimming                |                        |                          |           |  |  |  |
|                                     |                 | No Emergency or Controls | Emergency | Controls <sup>11</sup> | Emergency and Controls | No Emergency or Controls | Emergency |  |  |  |
| Switched Circuitry Using a          | Plug            | Yes                      | No        | Yes                    | No                     | No                       | No        |  |  |  |
| Wall Switch to Dim <sup>12</sup>    | # of Cord Wires | 3                        | 4         | 3                      | 4                      | 5                        | 6         |  |  |  |
| Non-Switched Circuitry              | Plug            | Yes                      | Yes       | Yes                    | Yes                    | No                       | No        |  |  |  |
| Using Controls to Dim <sup>13</sup> | # of Cord Wires | 3                        | 3         | 3                      | 3                      | 5                        | 6         |  |  |  |

- Pendant Mount Kit (PMK) not available with Triple module.
- Custom lumen and wattages available, consult factory. Values are within industry standard tolerances and not DLC listed.
- Lenses are IP5X rated (dust-resistant).
- Not available with HV.
- EM30 and EM30HV is externally mounted and only available in Double and Triple Modules (60L-90L).
- Pendant Mount options (MHB PMK, CLDSP) are not compatible with externally mounted EM (EM30, EM30HV).

- 8 EXT and CLDS leads are standarding 16/5 dimming.
- 9 Pendant mount requires CLDSP option.
- $10 \quad \text{Standard with 6' cord unless specified with cord/no plug option.} \\$
- See Product Dimensions section for accessory examples.
- 12 External dim leads not available with controls.
- Switched circuitry uses an external switched device to control dimming and requires a second hot to operate the EM.
- 14 Non-switched circuitry uses controls to operate dimming and can be ordered with battery, cord and plug. Battery is fed by the primary incoming hot.





## **PERFORMANCE**

| relivered Lumens |            |              |     |                  |           |         |                  |          |         |  |
|------------------|------------|--------------|-----|------------------|-----------|---------|------------------|----------|---------|--|
|                  |            |              | CDI |                  | 4000K CCT |         | 5000K CCT        |          |         |  |
| Lumen Package    | Model Size | Distribution | CRI | Delivered Lumens | Efficacy  | Wattage | Delivered Lumens | Efficacy | Wattage |  |
| 12L              | 1          | CPW          | 80  | 12,386           | 158       | 78      | 12,669           | 159      | 79      |  |
| 15L              | 1          | CPW          | 80  | 16,144           | 154       | 105     | 16,513           | 157      | 105     |  |
| 18L              | 1          | CPW          | 80  | 18,597           | 152       | 121     | 19,022           | 156      | 121     |  |
| 24L              | 1          | CPW          | 80  | 23,910           | 148       | 162     | 23,899           | 148      | 162     |  |
| 30L              | 1          | CPW          | 80  | 29,550           | 159       | 186     | 30,370           | 166      | 183     |  |
| 30L              | 2          | CPW          | 80  | 28,347           | 160       | 177     | 29,134           | 164      | 177     |  |
| 36L              | 2          | CPW          | 80  | 37,194           | 153       | 244     | 38,044           | 156      | 244     |  |
| 48L              | 2          | CPW          | 80  | 47,820           | 148       | 324     | 47,798           | 147      | 324     |  |
| 60L              | 2          | CPW          | 80  | 59,100           | 159       | 371     | 60,740           | 165      | 367     |  |
| 72L              | 3          | CPW          | 80  | 73,035           | 147       | 496     | 74,978           | 151      | 496     |  |
| 90L              | 3          | CPW          | 80  | 89,545           | 161       | 557     | 91,927           | 165      | 557     |  |
| 12L              | 1          | DPW          | 80  | 11,126           | 143       | 78      | 11,418           | 144      | 79      |  |
| 15L              | 1          | DPW          | 80  | 14,567           | 140       | 105     | 14,949           | 143      | 105     |  |
| 18L              | 1          | DPW          | 80  | 16,767           | 137       | 122     | 17,207           | 141      | 122     |  |
| 24L              | 1          | DPW          | 80  | 21,506           | 133       | 162     | 21,404           | 133      | 162     |  |
| 30L              | 1          | DPW          | 80  | 26,470           | 143       | 185     | 27,343           | 149      | 184     |  |
| 30L              | 2          | DPW          | 80  | 25,537           | 144       | 178     | 26,379           | 149      | 177     |  |
| 36L              | 2          | DPW          | 80  | 33,534           | 137       | 244     | 34,414           | 141      | 244     |  |
| 48L              | 2          | DPW          | 80  | 43,012           | 132       | 324     | 42,808           | 136      | 323     |  |
| 60L              | 2          | DPW          | 80  | 52,940           | 142       | 371     | 54,686           | 149      | 367     |  |
| 72L              | 3          | DPW          | 80  | 64,943           | 133       | 489     | 66,671           | 136      | 489     |  |
| 90L              | 3          | DPW          | 80  | 79,424           | 142       | 559     | 81,537           | 146      | 559     |  |
| 12L              | 1          | CPN          | 80  | 11,089           | 142       | 78      | 11,501           | 145      | 79      |  |
| 15L              | 1          | CPN          | 80  | 14,652           | 140       | 105     | 15,196           | 145      | 105     |  |
| 18L              | 1          | CPN          | 80  | 16,766           | 138       | 122     | 17,389           | 143      | 122     |  |
| 24L              | 1          | CPN          | 80  | 21,363           | 143       | 162     | 21,491           | 132      | 162     |  |
| 30L              | 1          | CPN          | 80  | 26,488           | 143       | 185     | 27,097           | 148      | 183     |  |
| 30L              | 2          | CPN          | 80  | 25,400           | 144       | 177     | 25,552           | 145      | 177     |  |
| 36L              | 2          | CPN          | 80  | 33,532           | 138       | 243     | 34,778           | 143      | 243     |  |
| 48L              | 2          | CPN          | 80  | 42,726           | 132       | 323     | 42,982           | 133      | 324     |  |
| 60L              | 2          | CPN          | 80  | 52,976           | 143       | 371     | 54,194           | 148      | 367     |  |
| 72L              | 3          | CPN          | 80  | 60,801           | 125       | 487     | 62,419           | 128      | 487     |  |
| 90L              | 3          | CPN          | 80  | 76,157           | 136       | 560     | 78,183           | 140      | 560     |  |

| Recommended Lumen Maintenance¹ - 12L-18L |                      |                       |                       |                       |                        |  |  |  |  |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|--|--|--|--|
| Ambient Temperature °C                   | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |  |  |  |  |
| 0-25                                     | 101%                 | 96%                   | 91%                   | 87%                   | 82%                    |  |  |  |  |
| 40                                       | 101%                 | 95%                   | 90%                   | 85%                   | 80%                    |  |  |  |  |

| Recommended Lumen Maintenance <sup>1</sup> – 30L |                      |                       |                       |                       |                        |  |  |  |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|--|--|--|
| Ambient Temperature °C                           | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |  |  |  |
| 40   | 99%                  | 97%                   | 94%                   | 92%                   | 90%                    |  |  |  |

| Recommended Lumen Maintenance <sup>1</sup> - 24L-30L Double Module |                      |                       |                       |                       |                        |  |  |  |  |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|--|--|--|--|
| Ambient Temperature °C   | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |  |  |  |  |
| 0-25   | 101%                 | 96%                   | 91%                   | 87%                   | 83%                    |  |  |  |  |
| 40   | 101%                 | 95%                   | 90%                   | 86%                   | 81%                    |  |  |  |  |

| Recommended Lumen Maintenance <sup>1</sup> – 36L |                      |                       |                       |                       |                        |  |  |  |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|--|--|--|
| Ambient Temperature °C                           | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |  |  |  |
| 0-25   | 101%                 | 96%                   | 91%                   | 87%                   | 82%                    |  |  |  |
| 40   | 101%                 | 95%                   | 90%                   | 85%                   | 80%                    |  |  |  |

| Recommended Lumen Maintenance¹ – 48L |                      |                       |                       |                       |                        |  |  |  |  |
|--------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|--|--|--|--|
| Ambient Temperature °C               | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |  |  |  |  |
| 0-25                                 | 101%                 | 96%                   | 91%                   | 87%                   | 83%                    |  |  |  |  |
| 40                                   | 101%                 | 95%                   | 90%                   | 86%                   | 81%                    |  |  |  |  |

| Recommended Lumen Maintenance <sup>1</sup> – 60L |                      |                       |                       |                       |                        |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| Ambient Temperature °C                           | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |
| 40   | 99%                  | 97%                   | 94%                   | 92%                   | 90%                    |

| Recommended Lumen Maintenance¹ - 72L |                      |                       |                       |                       |                        |
|--------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| Ambient Temperature °C               | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |
| 0-25                                 | 101%                 | 96%                   | 91%                   | 87%                   | 83%                    |
| 40                                   | 101%                 | 95%                   | 90%                   | 86%                   | 81%                    |

| Recommended Lumen Maintenance <sup>1</sup> – 90L |                      |                       |                       |                       |                        |
|--|----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| Ambient Temperature °C                           | Initial <sup>2</sup> | 25K hrs. <sup>2</sup> | 50K hrs. <sup>2</sup> | 75K hrs. <sup>3</sup> | 100K hrs. <sup>3</sup> |
| 40   | 99%                  | 97%                   | 94%                   | 92%                   | 90%                    |

Type : \_\_\_\_\_

<sup>1</sup> Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 and in-situ testing.

<sup>2</sup> In accordance with IESNA TM-21-11, projected values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.

<sup>3</sup> In accordance with IESNA TM-21-11, calculated values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

**Have questions?** Call us at (800) 436-7800

### **PHOTOMETRICS**

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See https://www.lsicorp.com/product/modular-high-bay/ for detailed photometric data.

### MHB 24L CPW 50 80CRI

| Luminaire Data    |                     |  |
|-------------------|---------------------|--|
| Wide Distribution |                     |  |
| Description       | 5000 Kelvin, 80 CRI |  |
| Delivered Lumens  | 23,899              |  |
| Watts             | 162                 |  |
| Efficacy          | 148                 |  |

#### MHB 24L DPW 50 80CRI

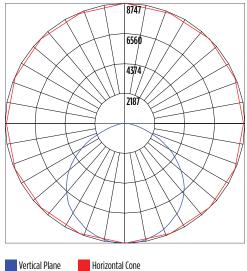
| Luminaire Data    |                     |  |
|-------------------|---------------------|--|
| Wide Distribution |                     |  |
| Description       | 5000 Kelvin, 80 CRI |  |
| Delivered Lumens  | 21,405              |  |
| Watts             | 162                 |  |
| Efficacy          | 132                 |  |

#### MHB 24L CPN 50 80CRI

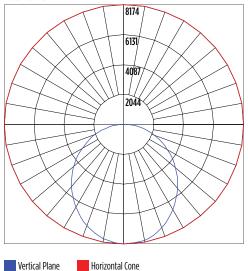
| Luminaire Data    |                     |  |  |
|-------------------|---------------------|--|--|
| Wide Distribution |                     |  |  |
| Description       | 5000 Kelvin, 80 CRI |  |  |
| Delivered Lumens  | 21,491              |  |  |
| Watts             | 162                 |  |  |
| Efficacy          | 133                 |  |  |

Type: \_\_\_\_\_

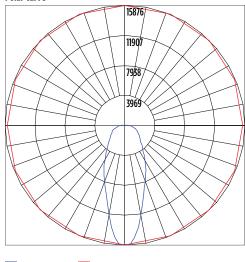
## **Polar Curve**







## **Polar Curve**







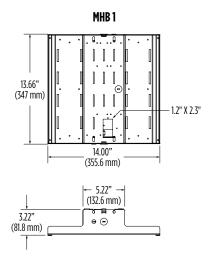


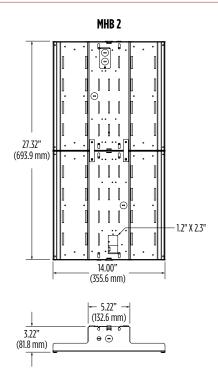


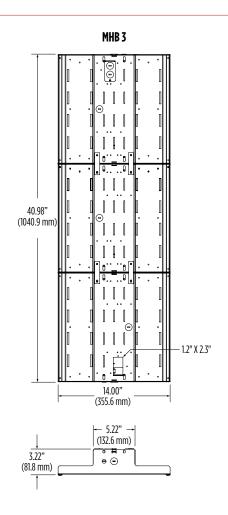
Type : \_\_\_\_\_

**Have questions?** Call us at (800) 436-7800

## **PRODUCT DIMENSIONS**









**High Bay Bottom Wireguard** 



**High Bay Pendant Mount Conduit** 



Components of the MCH10 Hardware Kit



MCH10 hooks attached to MHB



View of MHB with MCH10 hardware kit



#### **CONTROLS**

## Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT







**LEVITON App** 

Apple

Android

### AirLink Blue (ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue





AirLink Blue App

Apple

### **Sensor Sequence of Operations**

| Standard Programming | On Event | On Light Event | Dim Light Level | Delay to Dim | Delay to Off | Sensitivity |
|----------------------|----------|----------------|-----------------|--------------|--------------|-------------|
| OMSBTxL/IMSBTxL      | Motion   | 100%           | 50%             | 5 seconds    | 10 seconds   | High        |
| OMS                  | Motion   | N/A            | N/A             | N/A          | 30 seconds   | Auto        |

| Operation       | Description  |
|-----------------|--|
| On Event        | Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.   |
| Off Event       | Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.   |
| On Light Level  | The light level that the fixtures will turn on to when ON EVENT occurs.  |
| Dim Light Level | The light level that the fixtures will dim down to when no motion is detected.   |
| Delay to Dim    | The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.  |
| Delay to Off    | The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.  |
| Sensitivity     | The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view. |

Type: \_\_\_\_