A movement

m·r·z
/[em]-[ahr]-[zee]
noun
A multi-head, recessed, integral LED luminaire that is used in retail, commercial, and hospitality applications to intensify and beautify objects it illuminates. In addition, the option of sophisticated integrated controls systems enables the fixture to understand its environment and you.

A movement
Hospitality - accent
Where old meets new

How far we have come...

from the days of halogen, metal halide, and incandescent lamp sources, to a new era of high performing optical design, elegance, and performance.

One LED form that spans generations of lighting sources.

Introducing the RSA-MRZ

a new multi-head family of luminaires

Lumen range
250 to 1700

"To love beauty is to see light."
– Victor Hugo
Meet the family

The RSA-MRZ family is the next generation of multi-head adjustable, integral LED luminaires offering a wide breadth of options and features that place this family in a class by itself at an economical vantage point.

Available in: one, two, three or four head luminaire configurations

RSA-MRZ-1 One head  RSA-MRZ-2 Two head  RSA-MRZ-3 Three head  RSA-MRZ-4 Four head

Trim it

Choose between two different trim styles: Flanged or Mud-In

“The whole difference between construction and creation is exactly this: that a thing constructed can only be loved after it is constructed, but a thing created is loved before it exists.”

– Charles Dickens

The Flanged option comes in a slim 0.75” trim that helps to hide any imperfections from cutouts of ceiling materials.

The Mud-in trim offers a clean line where gypsum meets the housing. A tapered trim of 0.8” helps contractors have minimal depth variance.

ALL luminaires are IC Insulated Ceiling rated.

A Chicago Plenum option is also available for our friends in the Windy City.
Three different optical distributions are available to accommodate most accenting needs: 25° [narrow flood], 40° [flood], and 55° [wide flood] beam optics. The following is a demonstration of each effect.

The chart below shows representative Light Levels using: 4000K, 40º Optical Flood Distribution. Please view full suite of photometric files for other lumen levels on the website.

1 = 550 lumens @7W @97CRI
2 = 700 lumens @9W @97CRI
3 = 1000 lumens @12W @97CRI
4 = 1300 lumens @16W @97CRI

1 = 700 lumens @7W @80CRI
2 = 900 lumens @9W @80CRI
3 = 1300 lumens @12W @80CRI
4 = 1700 lumens @16W @80CRI

Illuminance: of a point source

\[ E = \frac{I \cos(\theta)}{d^2} \]

I = Luminous Intensity
d = distance
(\( \theta \)) = incident angle

Turn it

Each fixture head allows for 45° tilt out of the luminaire and 365° of rotation for full aiming flexibility. Put the light where you want it.

“...visual truth lies in the structure of light”  
- Richard Kelly
Retail department store

Connected Buildings solution options: WaveLinx™ or LumaWatt Pro
The RSA-MRZ has several “color” features. They include the housing/trim color options, the color of the LED (CCT), the color shift in LEDs (CRI), and the color quality as defined by TM-30.

### Color rendering index: CRI

**CRI:** the measure of the degree of color shift objects undergo when illuminated by the light source as compared with the color of those same objects illuminated by a reference source of comparable color temperature.

RSA-MRZ has two choices of CRI:
- 80 = 80 CRI
- 97 = 97 CRI

### Correlated color temperature: CCT

**CCT:** the absolute temperature of a blackbody whose chromaticity most nearly resembles that of a light source.

Four different color temperatures offered:
- 2700K
- 3000K
- 3500K
- 4000K

### Housing color

Three different combinations of housing and trim colors to choose.

- **W** = White Housing/White Trim
- **B** = Black Housing/Black Trim
- **BW** = Black Housing/White Trim

### Color vector graphic

The RSA-MRZ has excellent color quality in the higher CRI option (97+), resulting in higher quality TM-30 metrics.

#### TM-30

TM-30 is a method for evaluating light source color rendition. It includes numerous measures that quantify different aspects of color rendering, such as fidelity and gamut.

- **Rf** Fidelity - closeness to a reference.
- **Rg** Gamut - the average increase or decrease in saturation.

Example: The RSA-MRZ TM-30 fidelity and gamut values for a 3500K, 97 CRI Flood is Rf = 90.1 and Rg = 97.2.

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“When you can measure what you are speaking about, and express it in numbers, you know something about it”

- Lord Kelvin [1883]
Options with benefits

The RSA-MRZ family has many additional options that provide added versatility. A few notable options are emergency battery option (not available in one head version), a ship ahead housing program that allows the fixture housing and trim to arrive ahead of the LEDs and driver tray, and a number of shielding media that help designers, shape light.

Compliance and Egress
The RSA-MRZ is available with an emergency battery option to aid in fixture conditions needing egress outputs. The battery can be located 2ft from the housing in flex conduit.

MRZH
Ship ahead housing program: Housing ships separately and ahead of electrical gear/ LED head assembly.

Lenses and Louvers - The RSA-MRZ has a variety of industry standard lenses: Linear Spread Lens, Soft Focus Lens, Hex Louver, and Snoot.

Linear spread lens (LSL)
The linear spread lens helps to frame and elongate the beam to highlight rectangular or horizontal shapes. Great for signage and other applications.

Soft focus lens (SFL)
The soft focus lens softens the beam and blends the field angle. Use this to remove hard edges and diffuse the beam edges.

Hex louver (HEX)
The hex louver is a honeycomb lens that helps to cut off the viewing angle into the fixture. Used when glare control is needed.

Snoot (SNT)
The snoot is used when sharp cutoff control is needed and sensitivity to light spill of the beam.

“For the rest of my life, I want to reflect on what light is.”
- Albert Einstein [1916]
High end retail - accent
A movement of design

The following information are simple guidelines or considerations on how to light a three dimensional object or flat vertical surface using the RSA-MRZ multi-head fixture. The following guidelines suggest methods to determine the distance away from an object the RSA-MRZ light fixture could be placed, as well as design considerations.

Consider the intensity and spill light of the beam as defined by:

**Beam** angle - the focused path of light. The angle between two directions where the intensity is 50% of the maximum intensity as measured through the nominal beam centerline.

**Field** angle - the angle between two directions where the intensity is 10% of the maximum intensity as measured in a plane through the nominal beam centerline.

In lighting artwork or vertical surfaces, lighting generally should provide uniform intensity over an entire vertical surface that is chosen to be illuminated. Below are typical height and distance recommendations. However, actual values should be determined per actual situation and take environment into consideration.

**Average viewing heights and distances from flat vertical surfaces:**

Reference: ANSI/IES RP-30-17
**Calculated viewing heights and distances from flat vertical surfaces:**
Luminaires positioned so the beams’ center axis is 30° from the vertical will produce minimal shadows and glare-free viewing while allowing the viewer to approach the object closely without casting his or her own shadow on the object. The following formula is a guide:

\[
\text{Optimal luminaire distance from wall} = (\text{ceiling height} - \text{eye level}) \times 0.577
\]

Wall-to-luminaire distances should be increased or decreased as required to avoid shadows, and the angle of incidence and reflection should be calculated to avoid glare to the viewer. Luminaires aimed 30° from the vertical plane, typically reduce glare.

Reference: RP-3-17 [6.1]
A movement of technique

The features of the RSA-MRZ can help illuminate objects, but where the luminaire is placed, is as important as what beam spread is used. The following are examples of what happens to an object when the luminaire is placed in different positions around the object. There are also factors like glare and reflections to consider when illuminating objects.

SIDE lighting is effective for revealing the depth and shape of three-dimensional objects, to enhance shadows and create contrast.

TOP lighting is another method for three-dimensional lighting and for separating an object from the background while adding depth to the object. Consider strong vertical occur.

DIRECT GLARE is caused by direct line of sight from the viewer to the luminaire, usually caused by the fixture rotated too far from the vertical. This can cause visual discomfort and strain.

Veiling REFLECTIONS, also known as reflected glare, are specular reflections that appear on the object viewed, making the details difficult to view. This occurs when the luminaire shines onto glass or other highly specular surfaces. Be attentive to the design of surface finishes, especially highly reflective finishes.

SPOTLIGHT a concentrated beam angle and limiting field angle. Used to highlight objects with intensity and high contrast ratios.

BACK lighting helps to separate an object from the background, with less focus on the object.

Lighting the BACKGROUND creates depth in a space and also aides in separating an object from the background. This is the effect on the object. See WALL WASH to see what happens to the wall.

WALL WASH lighting can achieve uniform intensity over vertical surfaces from ceiling to floor.

“Light displays its brilliance only against a backdrop of darkness.”
- Tadao Ando

Reference: DG-18-08
To gain a perspective of creating an effect on an object, comparing and contrasting the intensity of light can be used to create this drama or not. Below is a table that shows contrast ratios that compare the illuminance values against one level of intensity. Here, 152 fc is used as the base value to compare to. If the intent is to dramatically illuminate an object, then choose a contrast ratio of 20:1 or 10:1. The image on the right depicts different illuminance values that when compared to the base 152 fc, is that illuminance ratio.

Example:
To highlight a display or a vignette in a department store, using a 10:1 contrast ratio is recommended. So the highest value is 10 times brighter than its surrounding. Here is how that contrast would look:

<table>
<thead>
<tr>
<th>Effect Desired</th>
<th>Contrast Ratios of Max to Min for Different Effects</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>Dominant 20:1 152 fc : 7.6 fc</td>
<td>High end retail - poignant displays / House of Worship/ Museums</td>
</tr>
<tr>
<td></td>
<td>Dramatic/Accent 10:1 152 fc : 15.2 fc</td>
<td>Department Store displays and vignettes at store entry. Corporate and Hospitality Lobbies; textured walls</td>
</tr>
<tr>
<td>Moderate</td>
<td>Feature 5:1 152 fc : 30.6 fc</td>
<td>Hospitality; destination features such as concierge/ front desk. Retail: Accentuated highlights and feature displays. Wall covering textured materials</td>
</tr>
<tr>
<td>Soft</td>
<td>Visual Edge 2:1 152 fc : 77.1 fc</td>
<td>Conference Rooms: art work wall materials, general task illuminance. Reception; artwork wall material features</td>
</tr>
<tr>
<td>Subtle</td>
<td>Visual Relief 1:1 152 fc : 152 fc</td>
<td>Office: art work, traditional residence</td>
</tr>
</tbody>
</table>

Controls, simplified.

WaveLinx – the simplest controls system you will love. This wireless controls solution gives you all the benefits of standard code compliant systems, for less cost and less labor. Instantly meet energy code as the system default settings meet Title 24 and ASHRAE 90.1. The devices instantly connect to each other with an IEEE 802.15.4 wireless mesh network. Useful for retail and commercial spaces that need simple controls. The RSA-MRZ family of fixtures can now be used to control your space, simply.

There’s an easy to use, drag-and-drop App for that!

Cost Savings improve by 50%

All devices Connect instantly

Be Sustainable and reduce wire runs by 60%

Increased energy savings for ASHRAE 90.1 and Title 24 and 55% for IECC

Meets Instant Code Compliance (Title 24) out of the Box

Decrease labor and commissioning time by 40%

"The history of architecture is the history of man’s struggle for light – the history of the window.”

- Mies van der Rohe
What’s in the box?

The WaveLinx wireless system is located in devices used throughout your space (light + wall station + receptacle + wireless area controller) and connects to each other instantly. This makes commissioning easy. Automatic code compliance and instant device to device connection out of the box!

Icon-ic
Look what I can do!

Talk to me!

Security first!

For more information about what WaveLinx can do for you, visit the WaveLinx Home Page

Yes, it’s that easy!
A confluence of light + technology

Architecture is alive...

Architecture has entered into a new era that is changing and challenging the built space. The evolution of architectural design, is taking a static building to a state of dynamic movement, response, and reaction. This is possible today, with the most sophisticated and advanced system on the market...

...LumaWatt Pro powered by Enlighted.

Evolution of the built space and how we design...

The new technology revolution is here. Buildings now have a pulse that can react to its inhabitants in real time, providing end user feedback on what their building is doing. End users pay for outcomes collected by devices positioned strategically, in their homes, retail, or commercial spaces. This outcome provides the services and response reactions to generate Return On Investment retention and monetization from the day it is installed. Whether through data collection or spacial analytics, the architectural space has now grown up.

Data is the new currency that provides end users with information about how their built space reacts to its inhabitants. End users pay for a service that tells them information about their space. Based on their interests, the App can maximize or streamline the efficiency of their space.

A few examples of this return on investment are:

Example 1: In a retail environment, being able to track customers’ “virtual paths” is key and critical in understanding how to maximize merchandising locations and for studying traffic flow.

Example 2: Occupants of a building space have “maximized” common spaces like conference rooms or hoteling work spaces, but in reality, the spaces are not being used correctly. The building facility managers can use the LWP system to monitor the occupied to unoccupied ratio, in real time to see if these spaces are truly being used to the buildings’ designed capacity levels. Facility managers can redirect the layout to meet maximum spatial efficiency by using the data collected via the sensor system.

Example 3: Reducing expense with janitorial services that may not need to clean low traffic areas daily. By observing the daily traffic usage pattern in large spaces, the cleaning expense can be saved.

Example 4: Track high value equipment in a space. Medical equipment in hospitals are often stowed away by staff and nurses. They can spend more than an hour trying to locate high value equipment. With tracking devices attached to these high value pieces of equipment, they can now be located in real time. This translates into valuable time saved, and maximizing labor efficiency.

Example 5: Fork lifts that have a certain amount of battery life and need to be re-charged, regularly. An owner can see the locations of these fork lifts, and when they are low in battery life have them sent back to their charging stations. This prevents down time and profitability loss.

Using digital sensors acting as data collection points, the system provides the end user analytical information about their built space unlike ever before. This data collection can provide many layers of solutions for whatever is happening in the space. The sensor resides in the density spacing of a light fixture layout, creating a grid network. The LumaWatt Pro sensor and analytic system has been designed and built to handle large infrastructure enterprises. The RSA-MRZ can encompass this technology for retail and commercial spaces that want to better understand their environment.

― Louis Kahn

“The sun never knew how great it was until it struck the side of a building.”
A movement of data and information

The LumaWatt Pro sensor is incorporated into the widest offering of light fixtures on the market under the Eaton platform. The sensor sends information back to a central location that stores this activity and information, which can be analyzed. How this information can be used is endless. However, three market-ready solutions are available today: (Space) app motion, frequency of occupation, and occupied or unoccupied observation through detection. (Where) app - real time location services of monitoring objects in motion. (Aire) app - energy management system.

Space
The movement of a path that defines a space is best explained by:

“...the perceptual thread that links the spaces of a building, to any series of interior or exterior spaces, together. We move through time, through a sequence of spaces, we experience a space in relation to where we’ve been, and where we anticipate going” - F Ching

The LWP system of Space utilization app lets you know the frequency of people’s physical locations, paths taken through a spaces, and how often the space is used.

Where
Through the advancement of using devices that can be markers placed on people, places or things, the LumaWatt Pro system enables the end user to track the physical location of that object in real time. Owners of spaces can see how high valued objects are used and where they might be at any given time. This eliminates waste of time, losing high value objects, and time spent looking for these objects. The tracking of people, places, and things can now be observed in real time with the LWP system and the (Where) app.

Aire
The LumaWatt Pro system can save you energy by enabling demand-driven heating or cooling. LumaWatt Pro’s Aire integrates with your building management system (BMS) by using the data collected by LumaWatt Pro’s advanced distributed sensor network and occupancy application. Aire enables facility managers to direct cooling or heating in real-time to the space where occupants are working.

Please visit LumaWatt Pro for more information.

“There exists limitless opportunities in every industry. Where there is an open mind, there will always be a frontier.”
– Charles Kettering
## Technical specifications

### Series
MRZ - Multi-Head Integral LED

<table>
<thead>
<tr>
<th>Size</th>
<th>1 - 1 Head Integral LED</th>
</tr>
</thead>
</table>

### Mounting
REC - Recessed

### Trim Type
- FLN - Flanged
- MUD - Mud-In

### Light Level/Head (@ 4000K and 80 CRI)
- 1 - 700 Lumens @ 7W
- 2 - 900 Lumens @ 9W
- 3 - 1300 Lumens @ 12W
- 4 - 1700 Lumens @ 16W

### Color Temp/Wattage
- L27 - 2700K
- L30 - 3000K
- L35 - 3500K
- L40 - 4000K

### CRI
- 80
- 97

### Beam Angle
- NFL - 25° Narrow Flood
- FL - 40° Flood
- WFL - 55° Wide Flood

### Voltage
- UNV - 120 - 277V

### Finish
- W - White housing/white trim
- B - Black housing/black trim
- BW - Black housing/white trim

### Drivers
- STD - Standard 0-10V (10%-100%)
- ELV - Electronic Low Voltage Dimming
- HCD - 0-10V (0.1%-100%)
- SLT - Fifth Light DALI
- SLTHD - Fifth Light DALI (1-100%)
- LUE - Lutron Ecosystem (1-100%)
- LUL - Lutron 3-Wire Line Voltage (1-100%)
- LUS - Lutron H-Series Ecosystem (1-100%)
- SFL - Soft Focus Lens
- HEX - Hex Louver
- SNT - Snoot

### Integral Control (Optional)
- LWIPD1 - LumaWatt Pro Integral Wireless Sensor
- SWPD1 - WaveLinx Integral Wireless Sensor

### Options (Optional)
- REM - Remote Emergency Battery
- CP - Chicago Plenum
- BF - Butterfly Brackets
- LSL - Linear Spread Lens

### Accessories (Optional Optics Kit)
- K1 - (1) 25°, (1) 40°, (1) 55° lens kit

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Refer to specification sheets for all technical notes, exceptions, and the latest information. IES files for all optics, louvers, lenses, and snoots available online.
Two head RSA-MRZ

Shown:
Flange Trim
Black Housing/ Black Trim

**Technical specifications**

**Series**
MRZ - Multi-Head Integral LED Head

**Size**
2 - 2 Head Integral LED

**Mounting**
REC - Recessed

**Trim Type**
FLN - Flanged
MUD - Mud In

**Light Level/Head (@ 4000K and 80 CRI)**
1 - 700 Lumens @ 7W
2 - 900 Lumens @ 9W
3 - 1300 Lumens @ 12W
4 - 1700 Lumens @ 16W

**Color Temp./Wattage**
L27 - 2700K
L30 - 3000K
L35 - 3500K
L40 - 4000K

**CRI**
80
97

**Beam Angle**
NFL - 25° Narrow Flood
FL - 40° Flood
WFL - 55° Wide Flood

**Voltage**
UNV - 120 - 277V

**Finish**
W - White housing/white trim
B - Black housing/black trim
BW - Black housing/white trim

**Drivers**
STD - Standard 0-10V (10%-100%)
ELV - Electronic Low Voltage Dimming
HCD - 0-10V (1%-100%)
DCD - 0-10V (0.1%-100%)
SLT - Fifth Light DALI
SLTHD - Fifth Light DALI (1-100%)
LUE - Lutron Ecosystem (1-100%)
LUL - Lutron 3-Wire Line Voltage (1-100%)
LU5 - Lutron Ecosystem (5-100%)
LUH - Lutron H-Series Ecosystem (1-100%)
Fade to Black

**Integral Control**
LWIPD1 - LumaWatt Pro Integral Wireless Sensor
SWPD1 - WaveLinx Integral Wireless Sensor

**Options**
REM - Remote Emergency Battery
CP - Chicago Plenum
BF - Butterfly Brackets
LSL - Linear Spread Lens
SFL - Soft Focus Lens
HEX - Hex Louver
SNT - Snoot

**Accessories**
K1 - (1) 25°, (1) 40°, (1) 55° lens kit
K2 - (2) 25°, (2) 40°, (2) 55° lens kit

REFER TO SPECIFICATION SHEETS FOR ALL TECHNICAL NOTES, EXCEPTIONS, AND THE LATEST INFORMATION. IES FILES FOR ALL OPTICS, LOUVERS, LENSES, AND SNOOTS AVAILABLE ONLINE.
### Three head RSA-MRZ

Shown:
- Mud-In Trim
- White Housing/White Trim

<table>
<thead>
<tr>
<th>Finish</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>White housing/white trim</td>
</tr>
<tr>
<td>B</td>
<td>Black housing/black trim</td>
</tr>
<tr>
<td>BW</td>
<td>Black housing/white trim</td>
</tr>
</tbody>
</table>

### Technical specifications

**Series**
- MRZ - Multi-Head Integral LED Head

**Size**
- 3 - 3 Head Integral LED

**Mounting**
- REC - Recessed

**Trim Type**
- FLN - Flanged
- MUD - Mud In

**Light Level/Head** (≥ 4000K and 80 CRI)
- 1 - 700 Lumens @ 7W
- 2 - 900 Lumens @ 9W
- 3 - 1300 Lumens @ 12W
- 4 - 1700 Lumens @ 16W

**Color Temp./Wattage**
- L27 - 2700K
- L30 - 3000K
- L35 - 3500K
- L40 - 4000K

**CRI**
- 80
- 97

**Beam Angle**
- NFL - 25° Narrow Flood
- FL - 40° Flood
- WFL - 55° Wide Flood

**Voltage**
- UNV - 120 - 277V
- 347 - 347V

**Finish**
- White housing

**Drivers**
- STD - Standard 0-10V (10%-100%)
- ELV - Electronic Low Voltage Dimming
- HCD - 0-10V (1%-100%)
- DCD - 0-10V (0.1%-100%)
- SLT - Fifth Light DALI
- SLTHD - Fifth Light DALI (1-100%)
- LUE - Lutron Ecosystem (1-100%)
- LUL - Lutron 3-Wire Line Voltage (1-100%)
- LU5 - Lutron Ecosystem (5-100%)
- LUH - Lutron H-Series Ecosystem (1-100% Fade to Black)

**Integral Control**
- LWIPD1 - LumaWatt Pro Integral Wireless Sensor
- SWPD1 - WaveLinx Integral Wireless Sensor

**Options**
- REM - Remote Emergency Battery
- CP - Chicago Plenum
- BF - Butterfly Brackets
- LSL - Linear Spread Lens
- SFL - Soft Focus Lens
- HEX - Hex Louver
- SNT - Snoot

**Accessories**
- K1 - (1) 25°, (1) 40°, (1) 55° lens kit
- K2 - (2) 25°, (2) 40°, (2) 55° lens kit
- K3 - (3) 25°, (3) 40°, (3) 55° lens kit

**Specifications**

- **Flange Trim**
  - Top View: 17.25" [439mm], 15.75" [401mm], 17.25" [439mm]
  - Section View: 16.15" [410mm], 17.25" [439mm], 5.75" [146mm]

- **Mud-In Trim**
  - 17.75" [456mm], 15.75" [401mm], 17.95" [466mm]

- **Sensor Trim**
  - 18.50" [470mm], 6.50" [165mm], 17.56" [446mm]

- **Side View**
  - 16.17" [410mm], 17.56" [446mm]

**Accessories**

- K1 - (1) 25°, (1) 40°, (1) 55° lens kit
- K2 - (2) 25°, (2) 40°, (2) 55° lens kit
- K3 - (3) 25°, (3) 40°, (3) 55° lens kit

Refer to specification sheets for all technical notes, exceptions, and the latest information. IES files for all optics, louvers, lenses, and snoots available online.
### Technical specifications

**Series**
- MRZ - Multi-Head Integral LED Head

**Size**
- 4 - 4 Head Integral LED

**Mounting**
- REC - Recessed

**Trim Type**
- FLN - Flanged
- MUD - Mud In

**Light Level/Head (@ 4000K and 80 CRI)**
- 1 - 700 Lumens @ 7W
- 2 - 900 Lumens @ 9W
- 3 - 1300 Lumens @ 12W
- 4 - 1700 Lumens @ 16W

**Color Temp./Wattage**
- L27 - 2700K
- L30 - 3000K
- L35 - 3500K
- L40 - 4000K

**CRI**
- 80
- 97

**Beam Angle**
- NFL - 25° Narrow Flood
- FL - 40° Flood
- WFL - 55° Wide Flood

**Voltage**
- UNV - 120 - 277V
- 347 - 347V

**Finish**
- W - White housing/white trim
- B - Black housing/black trim
- BW - Black housing/white trim

**Drivers**
- STD - Standard 0-10V (10%-100%)
- ELV - Electronic Low Voltage Dimming
- HCD - 0-10V (1%-100%)
- DCD - 0-10V (0.1%-100%)
- 5LT - Fifth Light DALI
- 5LTHD - Fifth Light DALI (1-100%)
- LUE - Lutron Ecosystem (1-100%)
- LUL - Lutron 3-Wire Line Voltage (1-100%)
- LU5 - Lutron Ecosystem (5-100%)
- LUH - Lutron H-Series Ecosystem (1-100% Fade to Black)

**Integral Control**
- LWIPD1 - LumaWatt Pro Integral Wireless Sensor
- SWPD1 - WaveLinx Integral Wireless Sensor

**Options**
- REM - Remote Emergency Battery
- CP - Chicago Plenum
- BF - Butterfly Brackets
- LSL - Linear Spread Lens

**Accessories**
- K1 - (1) 25°, (1) 40°, (1) 55° lens kit
- K2 - (2) 25°, (2) 40°, (2) 55° lens kit
- K3 - (3) 25°, (3) 40°, (3) 55° lens kit
- K4 - (4) 25°, (4) 40°, (4) 55° lens kit

**Refer to specification sheets for all technical notes, exceptions, and the latest information. IES files for all optics, louvers, lenses, and snoots available online.**
**Lighting Product Lines**
- Halo
- Halo Commercial
- Portfolio
- Iris
- RSA
- Metalux
- Corelite
- Neo-Ray
- Fail-Safe
- MWS
- Ametrix
- Shaper
- io
- Lumark
- McGraw-Edison
- Invue
- Ephesus
- Lumière
- Streetworks
- AtLite
- Sure-Lites

**Controls Product Lines**
- Greengate
- iLumin
- Zero 88
- Fifth Light Technology
- iLight (International Only)

**Connected Lighting Systems**
- LumaWatt Pro
- WaveLinx
- Distributed Low-Voltage Power
- ConnectWorks

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**Special Thanks**
Artwork supplied by Selina Karim

**References**
- IESNA Handbook 10th Edition
  - RP-3-17
  - DG-18-08

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