**WaveLinx Wireless Connected Lighting**

**ASHRAE 90.1 2016 DESIGN GUIDE**

**LOBBY WITH 0-10V DIMMING AND DEMAND RESPONSE**

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**SEQUENCE OF OPERATIONS:**

**LIGHTING**
- D-10V LIGHTING LOADS
- UP TO 3 DIMMING ZONES
- OUT OF THE BOX 75% HIGH END TRIM

**OCCUPANCY**
- AUTOMATIC ON TO 50%
- OPTIONAL VACANCY MODE
- OPTIONAL AUTO ON TO SCENE
- PLUG LOAD TURNS ON WITH OCCUPANCY
- AUTOMATIC OFF OF LIGHTING AND PLUG LOAD ON VACANCY

**DAYLIGHTING**
- CONTINUOUS DIMMING TO OFF
- INDIVIDUAL LUMINAIRE DAYLIGHT DIMMING
- DAYLIGHTING NOT REQUIRED FOR INDOOR SPACE
- NOT REQUIRED IN SPACES WITHOUT WINDOWS THAT ARE LESS THAN 120W.

**MANUAL CONTROLS**
- DOMINANT BUTTON IS 50% LIGHT LEVEL
- PROGRAMMABLE SCENES
- SCENE RAISE
- SCENE LOWER
- ALL OFF

**ADDITIONAL FEATURES**
- POWER MEASUREMENT REPORTING THROUGH MOBILE APPLICATION
- AUTOMATIC DEMAND RESPONSE AVAILABLE FROM WIRELESS AREA CONTROLLER
- SCHEDULING OF PARTIAL OFF LIGHT LEVELS AND TIMES FROM WIRELESS AREA CONTROLLER
- UL924 EMERGENCY CONTROL CAPABILITIES AVAILABLE VIA LUMINAIRE BATTERY BACKUP

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**Bill of Materials**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Catalog #</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WAC-POE</td>
<td>Wireless Area Controller</td>
<td>WAC-POE (WAC-POE) installed within 150 ft of WCL devices</td>
</tr>
<tr>
<td>2</td>
<td>W4S-R3-W</td>
<td>Small button scene wallstation</td>
<td>W4S-R3-W (W4S-R3-W)</td>
</tr>
<tr>
<td>1</td>
<td>WR-15</td>
<td>WaveLinx Receptacle</td>
<td>WR-15 (WR-15)</td>
</tr>
<tr>
<td>1</td>
<td>TM-SWPD1</td>
<td>WaveLinx Tile Mount Sensor</td>
<td>TM-SWPD1 (TM-SWPD1)</td>
</tr>
<tr>
<td>6</td>
<td>LD4 or LD6</td>
<td>Portfolio Commercial Recessed LED</td>
<td>LD4 or LD6 (LD4 or LD6)</td>
</tr>
<tr>
<td>2</td>
<td>22EN-LD2-34-UNV-L835-CD1-SWPD1-U</td>
<td>Encounter 2x2 with IInstinct Sensor</td>
<td>22EN-LD2-34-UNV-L835-CD1-SWPD1-U</td>
</tr>
</tbody>
</table>

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**TYPICAL WIRING DETAIL**

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**Design Considerations:**

<table>
<thead>
<tr>
<th>Design Consideration</th>
<th>Best Practice</th>
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</thead>
<tbody>
<tr>
<td>Gateway/WAC range</td>
<td>150 feet to 250 feet LOS</td>
<td>200 feet LOS</td>
</tr>
<tr>
<td>Number of interior walls</td>
<td>2 walls</td>
<td>3 walls</td>
</tr>
<tr>
<td>Distance from WAC to 1st WCL device</td>
<td>150 feet</td>
<td>200 feet</td>
</tr>
<tr>
<td>Distance between WCL devices</td>
<td>75 feet</td>
<td>150 feet</td>
</tr>
<tr>
<td>Number of hops from WAC</td>
<td>4 hops</td>
<td>5 hops</td>
</tr>
<tr>
<td>Number of areas per WAC</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Number of zones per area</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Number of scenes per area</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

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**Functional Controls:**

- Occupancy Sensor
- Daylighting Control
- Manual On/Off
- Tuning Control
- Manually Switched On/Off
- Manual Dimmer
- Receptacle Control
- Lumen Maintenance Control
- Demand Response