Wireless Connected Lighting

**Design Considerations:**
- Gateway/WAC range: 150 feet to 250 feet LOS
- Number of interior walls: 2 walls
- Distance from WAC to 1st WCL device: 150 feet
- Distance between WCL devices: 75 feet
- Number of hops from WAC: 4 hops
- Number of areas per WAC: 18
- Number of zones per area: 3
- Number of scenes per area: 6

**Best Practice:**
- Gateway/WAC range: 300 feet LOS
- Number of interior walls: 3 walls
- Distance from WAC to 1st WCL device: 200 feet
- Distance between WCL devices: 150 feet
- Number of hops from WAC: 5 hops
- Number of areas per WAC: 16
- Number of zones per area: 16
- Number of scenes per area: 10

**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WAC-POE</td>
<td>Wireless Area Controller</td>
</tr>
<tr>
<td>1</td>
<td>W4S-RL-W</td>
<td>4 Small button scene wallstation</td>
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<tr>
<td>2</td>
<td>WR-15 or WR-20</td>
<td>Wireless Receptacle</td>
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<tr>
<td>2</td>
<td>WSP-CA-010</td>
<td>20A relay with 0-10V dimming</td>
</tr>
<tr>
<td>1</td>
<td>CWPD-1500</td>
<td>Wireless ceiling occupancy sensor</td>
</tr>
</tbody>
</table>

**SEQUENCE OF OPERATIONS:**

**LIGHTING**
- 0-10V lighting loads
- Up to 3 dimming zones
- Out of the box 75% high end trim

**OCCUPANCY**
- Out of the box auto 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 offices
- Not required in spaces without windows that are less than 120W.

**MANUAL CONTROLS**
- 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

**Typical Wiring Detail**

- Wireless Area Controller (WAC-POE) installed within 150ft of WCL devices
- Wireless Ceiling Mount Occupancy Sensor (CWPD-1500)
- 2x4 recessed light fixture with 0-10V dimming
- Wireless 4 small button scene wallstation (W4S-RL-W)
- 20A relay w/ 0-10V Dimming (WSP-CA-010)