**SLD Series** SLD4 and SLD6 - 4” and 6” Surface LED Luminaire

- Surface mount to standard and fire-rated 4” x 2-1/8” junction boxes
- May be used in 4”, 5”, or 6” Type IC, airtight, Halo LED housings
- WaveStream™ LED Technology
  - Downlight cone-of-light performance
  - AccuAim™ optics for directional control
- Lumens:
  - SLD4 - 650
  - SLD6 - 675
- Wattage: 12.5W
- Voltage: 120V
- 3000K CCT
- 90 CRI
- Five-year warranty

**ML56 Series** LED 5” and 6” Downlighting System

- **600 Series**: up to 700 lumens, 9.0 - 10.2 Watts, up to 78 LpW*
- **900 Series**: up to 1000 lumens, 13.4 Watts, up to 75 LpW*
- **1200 Series**: up to 1400 lumens, 17.5 Watts, up to 80 LpW*
- 90 CRI
- 2700K, 3000K, 3500K, 4000K CCT
- Rated for use in Type IC, airtight, Halo LED housings
- 5” and 6” trim options fit standard and shallow housings
- Universal voltage: 120V-277V input, 50/60Hz
- Dimmable at 120V to 5% with select dimmers
- Five-year warranty

**H4 Gen2 Series** 4” LED Downlight and Adjustable System

- H4 LED Downlight System
  - 90 CRI
  - 2700K, 3000K, 3500K, 4000K CCT
  - Up to 900 lumens depending on color temperature and trim selected
  - Wide selection of 4” trim options in reflector and baffle trim styles available with deep regressed dome lens or regressed Solite® lens.
  - High efficacy system with LED housing, light engine and trim
  - Five-year warranty
- H4 LED Adjustable Gimbal System
  - 90 CRI
  - 2700K, 3000K, 3500K, 4000K CCT
  - Up to 930 lumens depending on color temperature and trim selected
  - Adjustable 0-35° tilt
  - Round and square gimbal style trims with integral LED light engine
  - Interchangeable reflectors: 25° (included), 35° and 50° available
  - High efficacy system with LED housings and gimbal trim/light engine
  - Five-year warranty

**GU24 Series** 5” and 6” High Efficacy GU24 Solution

- Housings offered in 5” and 6” apertures designed for GU24 base self-ballasted lamps
- Housings are Type IC, airtight in accordance with ASTM-E283
- GU24 base energy-efficient self-ballasted lamps feature high lumens per watt
- For use in kitchens, baths, hallways, closets, laundry rooms and utility rooms
**RL Series** RL4 and RL56 - 4” and 6” LED Downlight

- Up to 640 lumens, 90 CRI
- 9.0W - 10.5W (per CRI and CCT), 120V
- 2700K, 3000K, 3500K CCT
- Rated for use in IC Type IC, airtight, Halo LED housings
- White and Satin Nickel finishes
- Dimmable to 5% with select dimmers
- Damp and wet location listed (shower rated)
- AIR-TITE certified per ASTM-E283.
- Field replaceable driver
- Diffusing, regressed lens
- Five-year warranty

**RA Series** RA4 and RA56 - 4” and 6” LED Adjustable Downlight

- 600 Lumens, 90 CRI
- 10W, 120V
- 2700K, 3000K CCT
- Adjustable gimbal; 35° tilt, up to 360° rotation
- Rated for use in Type IC, airtight, Halo LED housings
- Beam distribution options: NFL (Narrow Flood 25°) and VWFL (Very Wide Flood 80°)
- Dimmable to 5% with select dimmers
- Damp location listed
- AIR-TITE certified per ASTM-E283.
- Field replaceable driver
- Five-year warranty

**HU10 Series** Integrated LED Undercabinet *(New 90 CRI models coming Fall 2014)*

**Preview**

**Coming Fall 2014**

- 2700K, 3000K, 90 CRI
- Sleek 3/4” profile
- Fully dimmable with wall switch
- Integral ON/OFF switch
- Plug-in or direct wire with splice box
- Link any combination of fixtures up to 800W total load
- Damp location listed
- Five-year warranty

**Controls** Lighting Control Solutions by Eaton

**Vacancy Sensor Switches**

Vacancy Sensors require someone to manually turn ON the lights when required. The sensor will then automatically turn lights OFF when no presence is detected for a specified amount of time. These sensors ensure the highest level of energy savings since the lights will never automatically turn ON. These sensors also meet residential requirements for California Title 24.

Visit www.cooperwiringdevices.com for more information.
Title 24-2013 Overview of Residential Lighting Standards

Effective: July 1, 2014

HALO LED Recessed Lighting meets Title 24 requirements in all areas of the house when used with Halo LED recessed housings (non-screw base); for a complete high-efficacy luminaire.

HALO offers the largest selection of recessed LED certified to California Energy Commission Title 20 Appliance Efficiency Database.

Refer to CEC Title 24 Part 6 for complete code requirements: 2013 Building Energy Efficiency Standards and refer to the CEC Title 20 Appliance Efficiency Database for specific LED listings.

www.energy.ca.gov

Title 24 Residential High Efficacy Lighting

- High efficacy luminaires may not have a medium screwbase socket.
- High efficacy luminaires must meet minimum lumen per watt and light source criteria per T24 & JA-8 California Code Standards
- LED residential luminaires must be certified to the CA Energy Commission (Title 20)
- Indoor LED nominal correlated color temperature (CCT) range of 2700K to 4000K (outdoor 2700K to 5000K)
- LED luminaire must be capable of providing a minimum 90 Color Rendering Index (CRI)
- Pin-base CFL luminaires ≥13W
- Luminaires with GU-24 sockets rated for LED, CFL, or HID lamps are automatically qualified as high efficacy for residential use

<table>
<thead>
<tr>
<th>High Efficacy Luminaire - LPW</th>
<th>Minimum Efficacy (Lumens per Watt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminaire Power Rating</td>
<td></td>
</tr>
<tr>
<td>5 watts or less</td>
<td>30</td>
</tr>
<tr>
<td>over 5 watts to 15 watts</td>
<td>45</td>
</tr>
<tr>
<td>over 15 watts to 40 watts</td>
<td>60</td>
</tr>
<tr>
<td>over 40 watts</td>
<td>90</td>
</tr>
</tbody>
</table>
Kitchens include dining areas when dining is on the same lighting circuit.

Other rooms: hallways, closets, attics, home offices, dining, and family rooms.

**Laundry and Utility Rooms**

Lighting fixtures in laundry and utility rooms must be high efficacy and be controlled by a vacancy sensor.

Vacancy sensor: Manual on/automatic off occupancy sensor. Must be certified by the manufacturer to the CA Energy Commission Title 20 Appliance Efficiency Regulations.

**Kitchens**

Lighting in kitchen areas must have at least 50% of the total rated wattage as high efficacy. There is no limit on the total kitchen wattage or total illumination levels.

**Kitchens Low Efficacy Trade-off Option**

- When additional low efficacy lighting is needed (residential kitchen only)
- All kitchen lighting (low and high efficacy) must be controlled by vacancy sensors, dimmers, or lighting control system with vacancy and/or dimming function
- Refer to trade-off option wattage table

**Kitchen Low Efficacy Trade-off Option - Wattage**

<table>
<thead>
<tr>
<th>Dwelling Size</th>
<th>Additional Low Efficacy Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 2,500 ft²</td>
<td>up to 50W additional</td>
</tr>
<tr>
<td>&gt; 2,500 ft²</td>
<td>up to 100W additional</td>
</tr>
</tbody>
</table>

**Kitchen Lighting Controls**

Separate controls are required:
- High efficacy lighting
- Low efficacy lighting

Independent controls are recommended:
- Recessed lighting
- Undercabinet lighting
- Linear fluorescent lighting
- Uplights and task lighting

**Residential recessed luminaires:**
- UL Listed for IC, insulation contact
- Certified airtight label per ASTM E283 test standards
- Sealed gasket or caulk between luminaire and ceiling
- High efficacy luminaries must meet minimum lumens per watt and T-24 and JA-8 (per high efficacy definitions and LPW table)

**Bathrooms**

Lighting in bathrooms must have (1) minimum high efficacy fixture. All other lighting shall be high efficacy or be controlled by a vacancy sensor.

**Undercabinet**

Lighting mounted to a cabinet (not for inside cabinet lighting) shall be calculated as kitchen lighting where at least 50% of permanent lighting must be high efficacy. Lighting internal to cabinets shall use no more than 20W per linear foot of illumination cabinet.

**Laundry and Utility Rooms**

Lighting fixtures in laundry and utility rooms must be high efficacy and be controlled by a vacancy sensor.