

## DESCRIPTION

The Halo RL4 series is a retrofit LED Baffle-Trim Module for 4" aperture recessed downlights. The RL4 is designed for use with compatible 4" housings. The RL4 integral LED driver is dimmable at 120 volts. The RL4 lens provides uniform illumination and wet location listing. The RL4 die-cast construction makes any housing AIR-TITE for added HVAC savings and code compliance.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## SPECIFICATION FEATURES

### MECHANICAL Module-Trim

- Module construction includes LED, heat sink, reflector, lens, baffle and trim ring
- Durable die-cast aluminum construction
- Regressed baffle
- Heat sink designed to conduct heat away from the LED keeping the junction temperatures below specified maximums, even when installed in insulated ceiling environments
- Halo finish options
  - Matte White paint finish (WH)
  - Satin Nickel plated finish (SN)

### Lens

- Regressed lens
- Impact-resistant polycarbonate
- Convex form for lamp-like appearance
- High lumen transmission
- Diffusing for even illumination

### MOUNTING

#### Friction Blades

- Precision formed spring blades secure module to compatible housings.
- Friction blade design allows the RL4 to be installed in any position within the housing aperture (360 degrees).

### Housing Compatibility

See Housing Compatibility section.

### LED

- Color Temperature (CCT)<sup>†</sup>  
Options: 2700K, 3000K, and 3500K
- Color Rendering Index (CRI)<sup>†</sup>  
Options: 80 and 90
- LED is a chip on board design consisting of a multiple LED package with proximity phosphor coating to create one virtual white light source for a productive "cone of light"

### ELECTRICAL

#### Power Connections

- LED connector is a non-screw base luminaire disconnect offering easy installation with the matching Halo H995 Series housings.
- LED Connector meets California Title-24 high-efficacy luminaire requirement for a non-screw base socket, and where required to qualify as a high-efficacy luminaire.
- The included E26 medium screw-base Edison adapter provides easy retrofit of incandescent housings (see Housing Compatibility).

#### Ground Connection

- Separate grounding cable included on the RL4 module for attachment to the housing during installation.

#### LED Driver

- Dimmable driver is a 120 Volt, high efficiency, electronic power supply providing DC power to the LED.
- Driver meets FCC EMI/RFI Consumer Level limits for use in residential and commercial installations.
- Driver features high power factor, low THD, and has integral thermal protection in the event of over temperature or internal failure.
- Driver mounts externally to the module, allowing future replacement, if needed.

#### Dimming

- The Halo RL4 LED is designed for dimming capability to 10% in normal operation with standard 120V LED-Rated, electronic low voltage, and many incandescent dimmers. The LED module may also dim to 5% nominal using dimmers with low end trim adjustment. (Consult dimmer manufacturer for dimmer details. Note, some dimmers require a neutral in the wallbox.)

### Warranty

Cooper Lighting provides a five year limited warranty on the RL4 LED.

### COMPLIANCE Labels

- UL/cUL Listed 1598 Luminaire (with listed housings)
- UL/cUL Listed for Damp Location
- UL/cUL Listed for Wet Location – Shower Applications
- IP65 Ingress Protection rated
- May be installed in housings in direct contact with air-permeable insulation\*\* and combustible material

### Qualification

- ENERGY STAR<sup>®</sup> qualified residential and commercial\*
- Can be used for State of California Title 24 high efficacy luminaire compliance\*
- Can be used for Washington State Energy Code (WSEC) and International Energy Conservation Code (IECC) high efficacy luminaire compliance

### IC and AIR-TITE<sup>™</sup>

Certified under ASTM-E283 and listed UL/cUL 1598 with compatible housings, may be used to meet insulated ceiling\*\* and restricted air-flow requirements such as:

- Washington State Energy Code (WSEC)
- International Energy Conservation Code (IECC)
- New York State Energy Conservation Construction Code (NY-ECCC)
- State of California Title 24 "Recessed Luminaires in Insulated Ceilings."



**RL460WH<sup>†</sup>**  
White



**RL460SN<sup>†</sup>**  
Satin Nickel

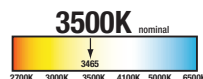
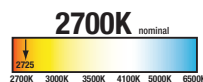
**80CRI**  
2700K, 3000K and 3500K

**90CRI**  
2700K, 3000K and 3500K

**4-Inch LED  
Recessed Retrofit  
Module-Trim**

**FOR USE IN  
INSULATED CEILING  
AND NON-INSULATED  
CEILING RATED  
HOUSINGS**

**HIGH EFFICACY LED  
WITH INTEGRAL  
DRIVER - DIMMABLE**



\* Qualified and compliant. Refer to ENERGY STAR<sup>®</sup> Qualified Products List and CEC (T24) Appliance Database for listings.



LIGHTING FACTS

**RL460WH827PK**  
2700K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	575
Watts	10.5
Lumens per Watt (Efficacy)	54

**Color Accuracy**  
Color Rendering Index (CRI) 81

**Light Color**  
Correlated Color Temperature (CCT) 2700 (Warm White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: F4QJ4N4HZ4 (1/2/2013)  
Model Number: RL460WH827 (approved 12/19/2012)  
Type: Recessed downlight

**RL460WH830PK**  
3000K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	600
Watts	10.5
Lumens per Watt (Efficacy)	57

**Color Accuracy**  
Color Rendering Index (CRI) 81

**Light Color**  
Correlated Color Temperature (CCT) 3000 (Bright White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: F4QJ4C3YXK (1/2/2013)  
Model Number: RL460WH830 (approved 12/19/2012)  
Type: Recessed downlight

**RL460WH835PK**  
3500K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	650
Watts	10.5
Lumens per Watt (Efficacy)	61

**Color Accuracy**  
Color Rendering Index (CRI) 81

**Light Color**  
Correlated Color Temperature (CCT) 3441 (Bright White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: F4QJ4K24X4 (6/24/2013)  
Model Number: RL460WH835 (UPGRADE 06/2013)  
Type: Recessed downlight

**RL460WH930PK**  
3000K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	525
Watts	10.5
Lumens per Watt (Efficacy)	50

**Color Accuracy**  
Color Rendering Index (CRI) 92

**Light Color**  
Correlated Color Temperature (CCT) 3000 (Bright White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: F4QJ4YKQY (8/4/2013)  
Model Number: RL460WH930  
Type: Recessed downlight

**RL460WH935PK**  
3500K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	550
Watts	10.5
Lumens per Watt (Efficacy)	52

**Color Accuracy**  
Color Rendering Index (CRI) 92

**Light Color**  
Correlated Color Temperature (CCT) 3500 (Bright White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: F4QJ4AR6SQ (8/28/2013)  
Model Number: RL460WH935  
Type: Recessed downlight

**RL460SN827PK**  
2700K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	525
Watts	10.5
Lumens per Watt (Efficacy)	50

**Color Accuracy**  
Color Rendering Index (CRI) 81

**Light Color**  
Correlated Color Temperature (CCT) 2700 (Warm White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: F4QJ4QY2X5 (1/4/2013)  
Model Number: RL460SN827  
Type: Recessed downlight

**RL460SN830PK**  
3000K Source

**lighting facts**  
A Program of the U.S. DOE

Light Output (Lumens)	550
Watts	10.5
Lumens per Watt (Efficacy)	52

**Color Accuracy**  
Color Rendering Index (CRI) 81

**Light Color**  
Correlated Color Temperature (CCT) 3000 (Bright White)

Warm White | Bright White | Daylight  
2700K | 3000K | 4500K | 6500K

Warranty\*\* Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

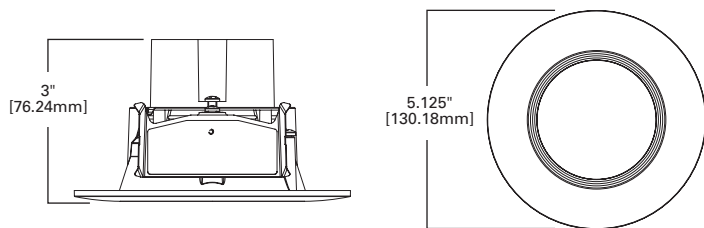
\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: F4QJ4R289R (1/2/2013)  
Model Number: RL460SN830 (approved 12/19/2012)  
Type: Recessed downlight

ENERGY DATA

Energy Data (Typical)	
Min. Starting Temp -30°C (-22°F)	Sound Rating: Class A
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Frequency: 50/60Hz	Input Voltage: 120V
THD: <20%	Power Factor: >0.90
Input Power: 9.0W - 10.5W (per CRI and CCT)	Input Current: 0.075A - 0.0875A (per input power)
Driver-Safety Agency Approvals: UL60950-1 Recognized, LPS output UL8750 Compliant	
Maximum IC (Insulated Ceiling) Ambient Continuous Operating Temperature: 25°C (77°F)	
Maximum Non-IC (NON-Insulated Ceiling) Ambient Continuous Operating Temperature: 40°C (104°F)	

**DIMENSIONS**



**ORDERING INFORMATION**

**RL4 LED Module**

**SAMPLE NUMBER:** RL460WH827PK

Complete unit includes RL4 LED and Halo H995 series LED housing, or compatible 4" E26 screw based housing (see: Housing Compatibility).

RL4 LED and housing to be ordered separately.

**RL460WH Models**

**80 CRI**

- RL460WH827PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 80 CRI, 2700K
- RL460SN827PK= 4" LED Retrofit Module with regressed baffle and lens, Satin Nickel Baffle and Ring, 80 CRI, 2700K
- RL460WH830PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 80 CRI, 3000K
- RL460SN830PK= 4" LED Retrofit Module with regressed baffle and lens, Satin Nickel Baffle and Ring, 80 CRI, 3000K
- RL460WH835PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 80 CRI, 3500K

**90 CRI**

- RL460WH927PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 90 CRI, 2700K
- RL460SN927PK= 4" LED Retrofit Module with regressed baffle and lens, Satin Nickel Baffle and Ring, 90 CRI, 2700K
- RL460WH930PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 90 CRI, 3000K
- RL460SN930PK= 4" LED Retrofit Module with regressed baffle and lens, Satin Nickel Baffle and Ring, 90 CRI, 3000K
- RL460WH935PK= 4" LED Retrofit Module with regressed baffle and lens, White Baffle and Ring, 90 CRI, 3500K

**Accessories (order separately)**

**HE26LED**=Replacement screw base adapter (one included with unit)

**LED Housing**

**Series**

- H995ICAT= 4" Dedicated LED Insulated Ceiling, AIR-TITE New Construction Housing with LED luminaire connector (high efficacy compliant)
- H995RICAT= 4" Dedicated LED Insulated Ceiling, AIR-TITE Remodel Housing with LED luminaire connector (high efficacy compliant)

**HOUSING COMPATIBLTY - E26 SCREW BASE RETROFIT**

RL460WH / RL460SN		
<b>UL Listed</b> UL/cUL Listed for installation in the following Halo and All-Pro 4" recessed E26 screw based and LED dedicated housings.	All-Pro™	ET400ATSB, ET400RATSB, EI400ATSB
	Halo®	H99ICAT, H99RTAT, H99TAT, H995ICAT, H995RICAT
<b>UL Classified</b> UL Classified for retrofit in the following 4" recessed E26 screw based housings.	Utilitech	CR04ICAT
	Thomas®	PS4
	Lithonia Lighting®	L3, L3R
	Commercial Electric™	HBR2000B
	Juno®	TC1, TC1R
	Progress Lighting®	P830-TG, P832-TG

Juno®, Lithonia Lighting®, Thomas® Lighting, Progress® Lighting, Utilitech, and Commercial Electric™ and their product brand names, where identified above, are tradenames or trademarks of each respective company and Cooper makes no representations on these trademarks.

**Note:** Specifications and Dimensions subject to change without notice.