## 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. Precision construction makes any housing AIR-TITE for added HVAC savings and code compliance. Compliant with NFPA 70, NEC section 410.16 (A)(1) and 410.16 (C)(3).

## **Specification Features**

## MECHANICAL

## Module-Trim

- Module construction includes LED, heat sink, reflector, lens, baffle and trim rina
- 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
- · Designer trim finish options (sold separately)
- White (Paintable) Trim Ring
- Satin Nickel Trim Ring
- Tuscan Bronze Trim Ring

#### Lens

- Regressed lens
- Impact-resistant polycarbonate · Convex form for lamp-like appear-
- ance High lumen transmission
- · Diffusing for even illumination
- Mounting
- Push-N-Twist universal installation clips
- Pre-installed clips designed to fit industry standard 5" and 6" recessed housings

## **Housing Compatibility**

See Housing Compatibility section.

## LED

- Color Temperature (CCT)<sup>†</sup> Options: 2700K, 3000K, 3500K, and 4000K
- Color Rendering Index (CRI)\* 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"

## LED Chromaticity

- A tight chromaticity specification ensures LED color uniformity, sus tainable Color Rendering Index (CRI) and Correlated Color Temperature (CCT) over the useful life of the LED
- LED chromaticity of 3 SDCM exceeds ENERGY STAR® color standards per ANSI C78.377-2008

- · 90 CRI model features high color performance with R9 greater than 50 Every Halo LED is guality tested,
- measured, and serialized in a permanent record to register lumens, wattage, CRI and CCT
- Halo LED serialized testing and measurement ensures color and lumen consistency on a per-unit basis, and validates long-term product consistency over time

# **ELECTRICAL**

## **Power Connections**

- LED connector is a non-screw base luminaire disconnect offering easy installation with Halo H995 Series LED 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 screwbase Edison adapter provides easy retrofit of incandescent housings (see Housing Compatibility)

## **Ground Connection**

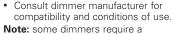
Separate grounding cable included on the RL4 module for attachment to the housing during installation.

## LED Driver

- Integral to the housing, 120V 50/60 Hz constant current dimmable driver provides high-efficiency operation
- Driver meets FCC 47CFR Part 15 EMI/RFI consumer limits for use in residential and commercial installations
- · Driver features high power factor and low THD and has integral thermal protection in the event of over temperature or internal failure
- If dimming is not required the fixture can be operated from a standard wall switch

#### Dimming

 Designed for continuous dimming capability to nominally 5% with many 120V Leading Edge (LE) and Trailing Edge (TE) Phase Control dimmers. (Dimmers with low end trim adjustment offer greater assurance of achieving 5% level.)



## neutral in the wallbox.

## Warranty

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

#### Compliance

- UL/cUL Listed 1598 Luminaire (with listed housings)
- UL Classified (with other housings see Housing Compatibility)
- UL/cUL Listed for Damp Location UL/cUL Listed for Wet Location -
- Shower Applications IP65 Ingress Protection rated
- May be installed in IC rated hous-
- ings in direct contact with air-permeable insulation\*\* and combustible material
- Airtight certified per ASTM E283 (not exceeding 2.0 CFM under 57 Pascals pressure difference) 90 CRI: Can be used to comply
- with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.\*
- 80 CRI: Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as an LED luminaire
- Can be used for International Energy Conservation Code (IECC) high efficiency luminaire compliance.
- Can be used for Washington State Energy Code compliance
- ENERGY STAR® Certified luminaire - consult ENERGY STAR® Certified Product List\*
- EMI/RFI per FCC 47CFR Part 15 Class B Consumer limits, suitable for use in residential and commercial installations
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79
- Lumen maintenance projections in accordance with IES LM-80 and TM-21
- Suitable for use in closets. Compliant with NFPA 70, NEC Sec. 410.16 (A)(1) and 410.16 (C)(3).





Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.





inal CCT

3000K

3500K

40006





**IECC** 

Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.



RL460WH<sup>†</sup> White

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

## **80CRI** 2700K, 3000K, 3500K, 4000K

**90CRI** 2700K, 3000K, 3500K, 4000K

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

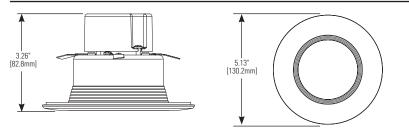
## **HIGH-EFFICACY LED** WITH INTEGRAL **DRIVER - DIMMABLE**

- Refer to ENERGY STAR® Certified Products List and CEC (T20) Appliance Database for listings.
- \*\* Not for use with housings in direct contact with spray foam insulation.
- See ordering information table for available models.

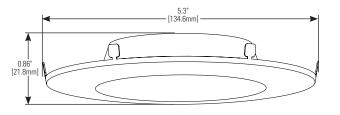
# **HALO<sup>®</sup>**

| Catalog #   | Туре |
|-------------|------|
| Project     |      |
| Comments    | Date |
| Prepared by |      |

#### **RL4 Dimensions**



## **Designer Trim Dimensions**





White (Paintable)



**RL4TRMTBZ** Tuscan Bronze



Energy Data

| RL4 Series (V                | alues at non-dimming line voltage)                            |
|------------------------------|---|
| Minimum Star                 | ting Temp: -30°C (-22°F)                                      |
| EMI/RFI: FCC 1               | Fitle 47 CFR, Part 15, Class B (Consumer)                     |
| Sound Rating:                | Class A   |
| Input Voltage:               | 120V  |
| Power Factor:                | >0.90   |
| Input Frequence              | :y: 50/60Hz   |
| THD: <20%                    |   |
| Input Power: 9               | .0W - 10.5W (per CRI and CCT)                                 |
| Input Current:               | 0.075A - 0.0875A (per input power)                            |
|                              | Agency Approvals: UL60950-1 Recognized,<br>8750 Compliant     |
|                              | nsulated Ceiling) Ambient Continuous<br>perature: 25°C (77°F) |
| Maximum Nor<br>Temperature 4 | n-IC Ambient Continuous Operating<br>0°C (104°F)              |



## **Ordering Information**

#### Sample Number: RL460WH827PK

Complete unit includes RL4 LED and Halo H995 series LED housing, or compatible 4" E26 screw based housing, ordered separately. Optional accessory designer trim ring ordered separately. RL4 LED and housing to be ordered separately.

| RL46  | Models |
|-------|--------|
| 00.00 | 1      |

80 CRI RL460WH827PK= 4" Retrofit Baffle - Trim LED Module, 80 CRI, 2700K, Matte White RL460WH830PK= 4" Retrofit Baffle - Trim LED Module, 80 CRI, 3000K, Matte White RL460WH835PK= 4" Retrofit Baffle - Trim LED Module, 80 CRI, 3500K, Matte White RL460WH840PK= 4" Retrofit Baffle - Trim LED Module, 80 CRI, 4000K, Matte White

#### <u>90 CRI</u>

RL460WH927PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 2700K, Matte White RL460WH930PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 3000K, Matte White RL460WH935PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 3500K, Matte White RL460WH940PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 4000K, Matte White

## Accessories (Order Separately) RL4TRMSN= 4" Satin Nickel Trim Ring

RL41KMSN= 4 Satin Nickel Irim Ring RL4TRTBZ= 4\* Tuscan Bronze Trim Ring RL4TRMWH= 4\* White Paintable Trim Ring HE26LED=Replacement screw base adapter (one included with unit)

## **Housing Compatibility**

RL4 Series LED Retrofit is UL Classified for retrofit in the follow 4" recessed housings:

The RL Series LED light module - trim combination is cULus Listed or UL Classified for use with any 4<sup>e</sup> diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 62.3 in<sup>3</sup> in addition to those noted above.

## LED Housings with LED Luminaire Connector (High Efficacy Compliant - Title 24, IECC, WSEC)

| Recessed Can Size | Catalog Number | Description  |
|-------------------|----------------|--|
| <b>Л</b> !!       | H995ICAT       | 4" LED, Insulated Ceiling, AIR-TITE, New Construction Housing (Title 24, IECC, WSEC) |
| 4                 | H995RICAT      | 4" LED, Insulated Ceiling, AIR-TITE, Remodel Housing (Title 24, IECC, WSEC)          |



## **Lighting Facts**

#### RL460WH827PK 2700K Source

| Lighting fac   | 10.3. DUC            |
|--|----------------------|
| Light Output (Lumens)<br>Watts<br>Lumens per Watt (Efficacy)   | 575<br>10.5<br>54.8  |
| Color Accuracy<br>Color Rendering Index (CRI)  | 81                   |
|  | 00 (Warm White)      |
| Warm White Bright White<br>2700K 3000K 4500  | Daylight<br>K 6500K  |
| All results are according to IESNA LM-79-2008: Approve<br>Photometric Testing of Solid-State Lighting. The U.S. De<br>product test data and results. |                      |
| Visit www.lightingfacts.com for the Lab  | bel Reference Guide. |
| Registration Number: F4QJ-6N4HZ4 (Revised 1/3/2013)<br>Model Number: RL460WH827 (upgraded 12/19/2012)<br>Type: Luminaire - Downlight                 |                      |

| Light Output | (Lumens)              | 600           |
|--------------|-----------------------|---------------|
| Watts        |                       | 10.           |
| Lumens per   | Watt (Efficacy)       | 57.*          |
|              |                       |               |
|              |                       |               |
| Warm White   | Bright White<br>4500K | Daylight 6500 |

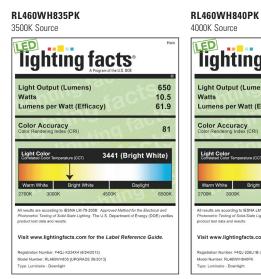
RL460WH830PK

Type: Luminaire - Downlight

RL460WH935PK

3500K Source

3000K Source



#### 4000K Source LED **lighting facts** Light Output (Lumens) 650 Watts Q Lumens per Watt (Efficacy) 72.22 Color Accuracy 82 Light Color Correlated Color Tempera 4000 (Bright White) Warm White Bright White Davlight 2700K 3000K 4500K 6500K esuits are according to IESNA LM-79-2008: Approved Method for the Electrical and tometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies just test data and results. Visit www.lightingfacts.com for the Label Reference Guide. istration Number: F4QJ-226U1B (7/30/2014) Model Number: RL460WH840PK Type: Luminaire - Downlight

## RL460WH930PK

3000K Source

| lighting facts   | Hal               |
|--|-------------------|
| Light Output (Lumens)<br>Watts<br>Lumens per Watt (Efficacy)   | 525<br>10.5<br>50 |
| Color Accuracy<br>Color Rendering Index (CRI)  | 92                |
| Light Color<br>Correlated Color Temperature (CCT) 3000 (Bri  | ght White)        |
| Warm White Bright White 1 2700K 3000K 4500K  | Daylight<br>6500K |
| All results are according to IESNA LM-79-2008: Approved Method f<br>Photometric Testing of Solid-State Lighting. The U.S. Department o<br>product test data and results. |                   |
| Visit www.lightingfacts.com for the Label Refe   | rence Guide.      |
| Registration Number: F4QJ-YLK4QY (6/4/2013)<br>Model Number: RL460/YH930<br>Type: Recessed downlight   |                   |

#### ED lighting facts Light Output (Lumens) 550 Watts 10.5 Lumens per Watt (Efficacy) 52 Color Accuracy Color Rendering Index (CRI) 92 Light Color 3500 (Bright White) Warm White Bright White Daylight 3000K

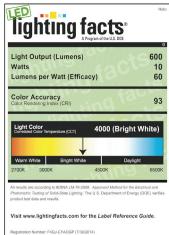
All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies conduct lest data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-54R65Q (6/28/2013) Model Number: RL460WH935 Type: Recessed downlight

## RL460WH940PK

4000K Source



Registration Number: RL460WH940PK Type: Luminaire - Downlight



Specifications and dimensions subject to change without notice.