

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).

Catalog #		Type
Project		
Comments		Date
Prepared by		

Specification Features

MECHANICAL

Module-Trim

- Module construction includes LED, heat sink, reflector, lens, baffle and trim ring
- 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 appearance
- High lumen transmission
- Diffusing for even illumination

Mounting

- Push-N-Twist universal installation clips
- Clips are pre-installed and designed to fit 4" compatible recessed housings

Housing Compatibility

See Housing Compatibility section.

LED

- Color Temperature (CCT)[†]
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, sustainable 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 quality 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 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

- With the latest "driver-on-board" electronic technology, the driver is integrated in the module.
- 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.)

- Consult dimmer manufacturer for compatibility and conditions of use.

Note: some dimmers require a 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 housings in direct contact with air-permeable insulation** and combustible material
- Airtight certified per ASTM E283 (not exceeding 2.0 CFM under 75 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).



RL460WH[†]

White

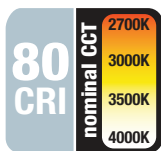
4-Inch LED Recessed Retrofit Module-Trim

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

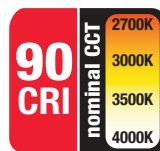
90CRI
2700K, 3000K,
3500K, 4000K

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

HIGH-EFFICACY LED WITH INTEGRAL DRIVER - DIMMABLE

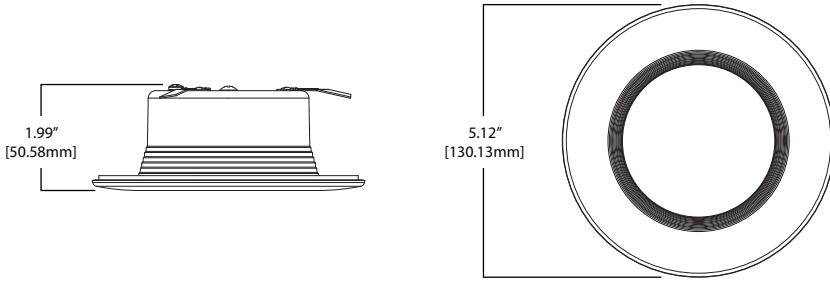


Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.

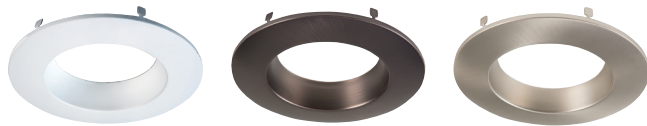
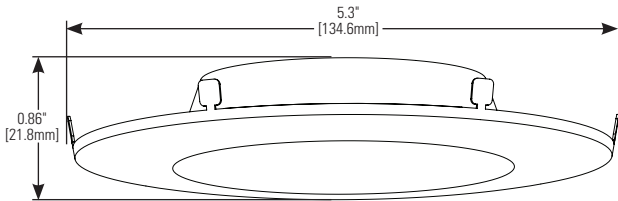


Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.

RL4 Dimensions



Designer Trim Dimensions



RL4TRMWH
 White (Paintable)

RL4TRMTBZ
 Tuscan Bronze

RL4TRMSN
 Satin Nickel

Energy Data

RL4 Series (Values at non-dimming line voltage)

Minimum Starting Temp: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)
Sound Rating: Class A
Input Voltage: 120V
Power Factor: >0.90
Input Frequency: 50/60Hz
THD: <20%
Input Power: 7.3W - 10.0W (per CRI and CCT)
Input Current: 0.075A - 0.0875A (per input power)
Maximum IC (Insulated Ceiling) Ambient Continuous Operating Temperature: 25°C (77°F)
Maximum Non-IC Ambient Continuous Operating Temperature 40°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

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

90 CRI

- 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
- RL4TRTBZ**= 4" Tuscan Bronze Trim Ring
- RL4TRMWH**= 4" White Paintable Trim Ring
- HE26LED**=Replacement screw base adapter (one included with unit)



E26 Screw base adapter for retrofit (included)

Housing Compatibility

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant - Title 24)

HALO LED	Recessed Can Size	Catalog Number
	4"	H995ICAT, H995RICAT

Compatible Halo Incandescent E26 Screwbase Housings

HALO	4"	H99ICAT, H99RTAT, H99TAT
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Compatible All-Pro Incandescent E26 Screwbase Housings

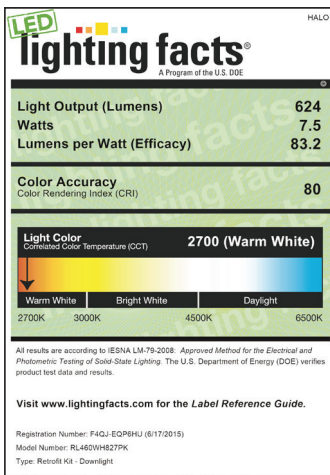
ALL-PRO	4"	ET400ATSB, ET400RATSB, ET400ATSB
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RL4 Series LED Retrofit is UL Classified for retrofit in the follow 4" recessed housings:

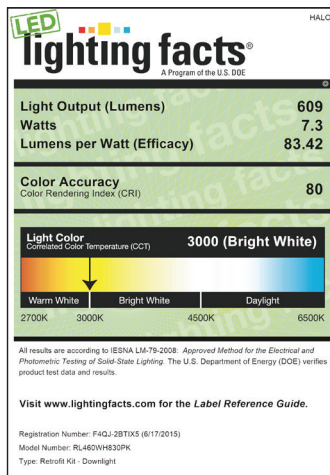
The RL Series LED light module - trim combination is cULus Listed or UL Classified for use with any 4" diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 62.3 in³ in addition to those noted above.

Lighting Facts

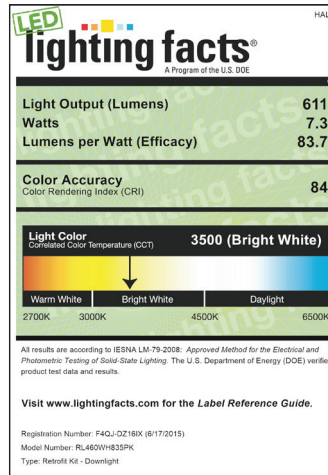
RL460WH827PK
2700K Source



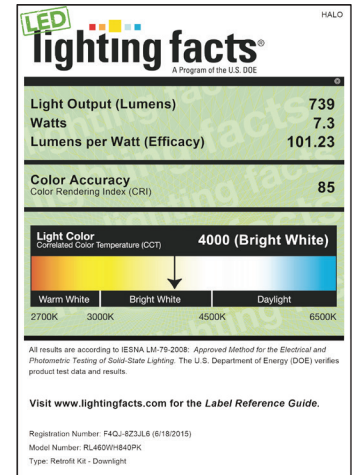
RL460WH830PK
3000K Source



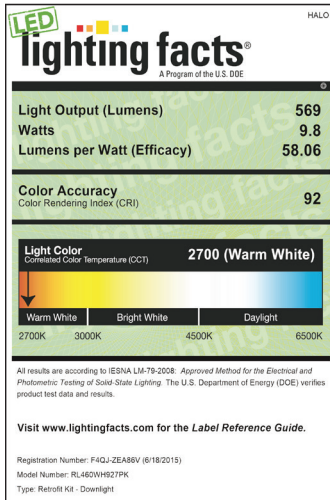
RL460WH835PK
3500K Source



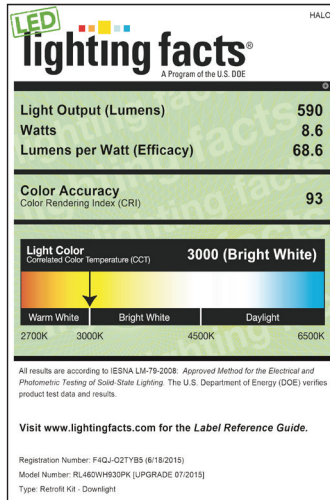
RL460WH840PK
4000K Source



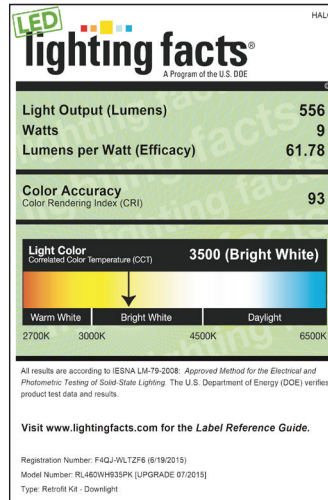
RL460WH927PK
2700K Source



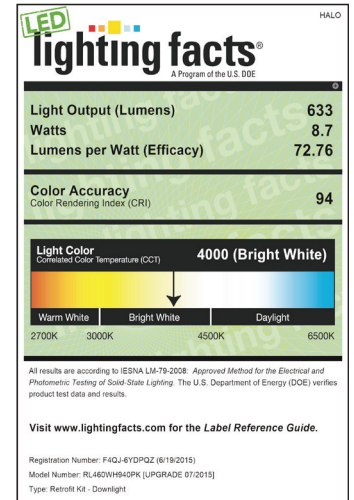
RL460WH930PK
3000K Source



RL460WH935PK
3500K Source



RL460WH940PK
4000K Source



Description

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Catalog #		Type
Project		
Comments		Date
Prepared by		

Specification Features

MECHANICAL

Module-Trim

- Module construction includes LED, heat sink, reflector, lens, baffle and trim ring
- Regressed baffle
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- 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 appearance
- High lumen transmission
- Diffusing for even illumination

Mounting

- Push-N-Twist universal installation clips
- Clips are pre-installed and designed to fit 4" compatible recessed housings

Housing Compatibility

See Housing Compatibility section.

LED

- Color Temperature (CCT)[†]
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"

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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 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

- With the latest "driver-on-board" electronic technology, the driver is integrated in the module.
- 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

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- 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.)

- Consult dimmer manufacturer for compatibility and conditions of use.

Note: some dimmers require a 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 housings in direct contact with air-permeable insulation** and combustible material
- Airtight certified per ASTM E283 (not exceeding 2.0 CFM under 75 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).



RL460WH[†]

White

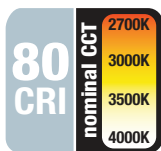
4-Inch LED Recessed Retrofit Module-Trim

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

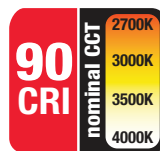
90CRI
2700K, 3000K,
3500K, 4000K

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

HIGH-EFFICACY LED WITH INTEGRAL DRIVER - DIMMABLE

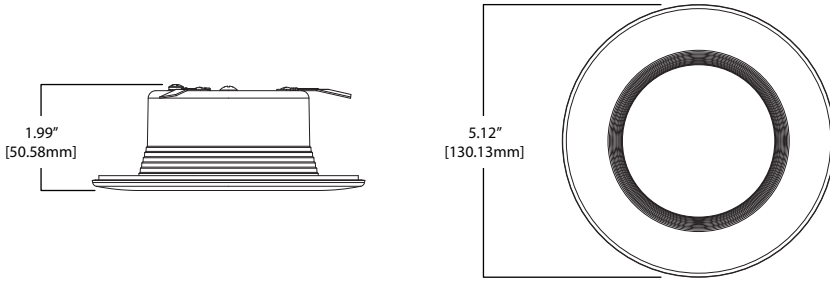


Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.

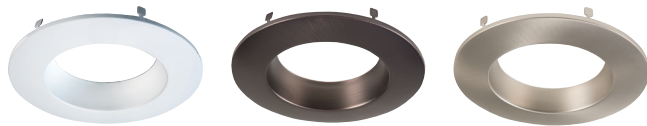
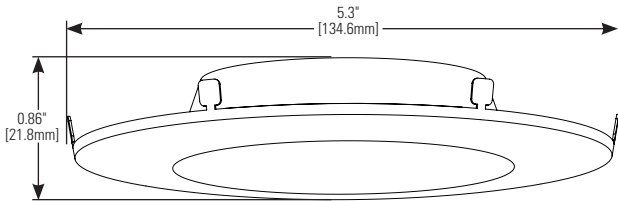


Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.

RL4 Dimensions



Designer Trim Dimensions



RL4TRMWH
 White (Paintable)

RL4TRMTBZ
 Tuscan Bronze

RL4TRMSN
 Satin Nickel

Energy Data

RL4 Series (Values at non-dimming line voltage)

Minimum Starting Temp: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)
Sound Rating: Class A
Input Voltage: 120V
Power Factor: >0.90
Input Frequency: 50/60Hz
THD: <20%
Input Power: 7.3W - 10.0W (per CRI and CCT)
Input Current: 0.075A - 0.0875A (per input power)
Maximum IC (Insulated Ceiling) Ambient Continuous Operating Temperature: 25°C (77°F)
Maximum Non-IC Ambient Continuous Operating Temperature 40°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

- 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

- 90 CRI**
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
RL4TRTBZ= 4" Tuscan Bronze Trim Ring
RL4TRMWH= 4" White Paintable Trim Ring
HE26LED=Replacement screw base adapter (one included with unit)



E26 Screw base adapter for retrofit (included)

Housing Compatibility

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant - Title 24)

HALO LED	Recessed Can Size	Catalog Number
	4"	H995ICAT, H995RICAT

Compatible Halo Incandescent E26 Screwbase Housings

HALO	4"	H99ICAT, H99RTAT, H99TAT
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Compatible All-Pro Incandescent E26 Screwbase Housings

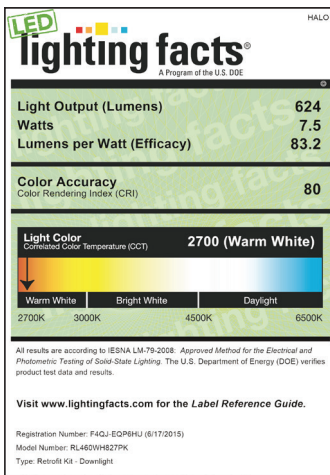
ALL-PRO	4"	ET400ATSB, ET400RATSB, ET400ATSB
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RL4 Series LED Retrofit is UL Classified for retrofit in the follow 4" recessed housings:

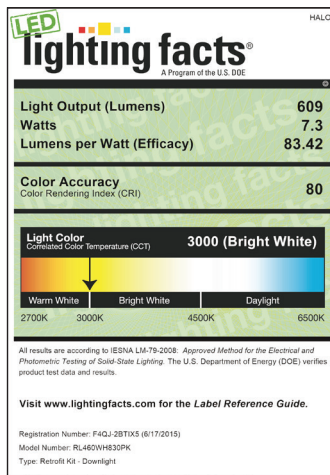
The RL Series LED light module - trim combination is cULus Listed or UL Classified for use with any 4" diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 62.3 in³ in addition to those noted above.

Lighting Facts

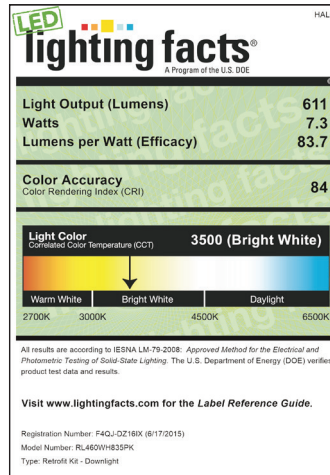
RL460WH827PK
2700K Source



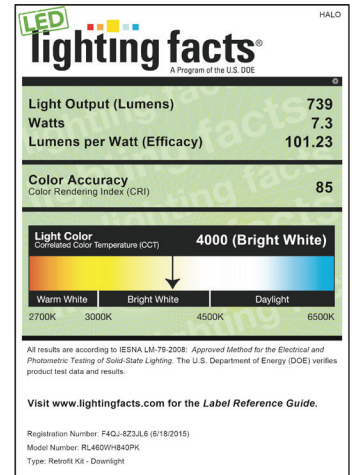
RL460WH830PK
3000K Source



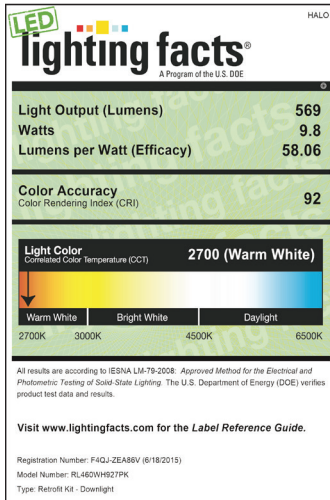
RL460WH835PK
3500K Source



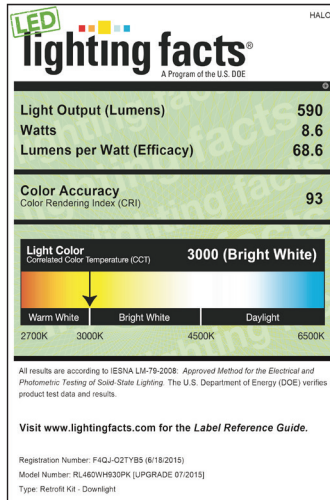
RL460WH840PK
4000K Source



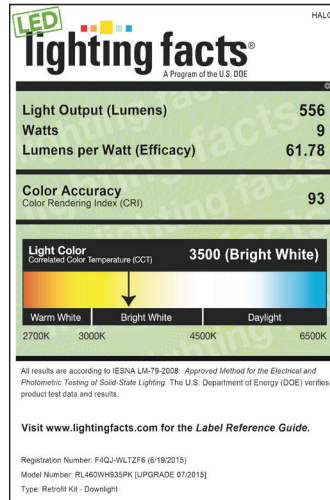
RL460WH927PK
2700K Source



RL460WH930PK
3000K Source



RL460WH935PK
3500K Source



RL460WH940PK
4000K Source

