HALO®

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. L70 at 50,000 hours.
- 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:
  - 90 CRI: 2700K, 3000K, 3500K, 4000K, and 5000K
  - 80 CRI: 2700K, 3000K, 3500K, and 4000K
- CRI options: 80 and 90†
  - 90 CRI can be used to comply with California Title 24 High Efficacy requirements. Certified to California Appliance Efficiency Database under JA8.

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

Eaton 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.
- 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, 5000K

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

HIGH-EFFICACY LED WITH INTEGRAL DRIVER - DIMMABLE

80 CRI nominal CCT 2700K 3000K 3500K 4000K

ENERGY STAR · Can be used for IECC International Energy Conservation Code High Efficacy Compliance · RoHS · air180 · Showerlight

Refer to ENERGY STAR® Certified Products List.

90 CRI nominal CCT 2700K 3000K 3500K 4000K 5000K

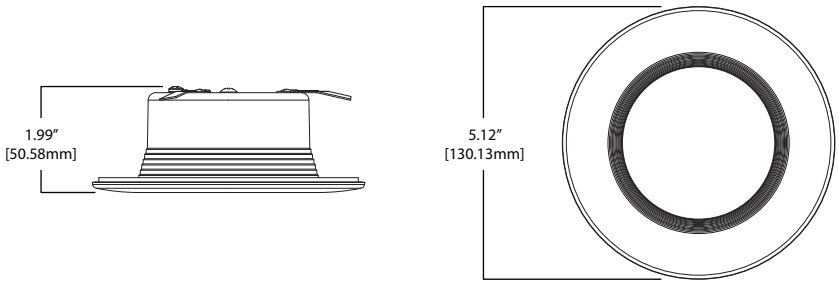
ENERGY STAR · Can be used for IECC International Energy Conservation Code High Efficacy Compliance · Efficiency Standards T24 California Title 24 Residential and Non-Residential Compliant · RoHS · air180 · Showerlight

Refer to ENERGY STAR® Qualified Products List.
Can be used to comply with California Title 24 High Efficacy requirements.
Certified to California Appliance Efficiency Database under JA8.
Indoor LED nominal CCT of 4000K or less.

Powering Business Worldwide

* 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.

RL4 Dimensions

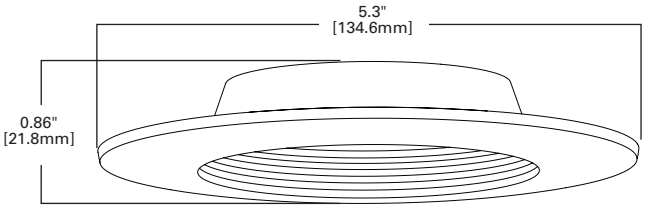


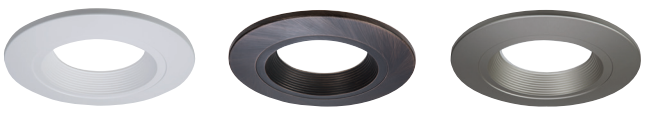
Energy Data

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)

Designer Trim Dimensions

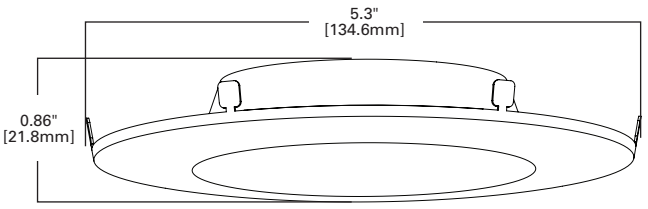




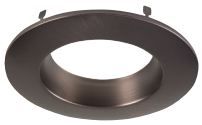
RL4TRMWHB
White (Paintable)

RL4TRMTBZB
Tuscan Bronze

RL4TRMSNB
Satin Nickel



RL4TRMWH
White (Paintable)



RL4TRMTBZ
Tuscan Bronze

RL4TRMSN
Satin Nickel

Ordering Information

Sample Number: **RL460WH927PK**

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
RL460WH950PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 5000K, Matte White

Accessories (Order Separately)

RL4TRMSNB= 4" Satin Nickel Trim Ring, Baffle
RL4TRMTBZB= 4" Tuscan Bronze Trim Ring, Baffle
RL4TRMWHB= 4" White Paintable Trim Ring, Baffle
RL4TRMSN= 4" Satin Nickel Trim Ring
RL4TRMTBZ= 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)

Powering Business Worldwide

Housing Compatibility

The RL4 is UL Listed in Halo and All-Pro recessed housings, and is UL Classified for use with any 4 inch diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 62.3 in^3 in addition to those noted below:

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant)		
HALO LED	**Recessed Can Size**	**Catalog Number**
	4"	H995ICAT, H995RICAT, H245ICAT, H245RICAT
Compatible Halo Incandescent E26 Screwbase Housings		
HALO	**Recessed Can Size**	**Catalog Number**
	4"	H99ICAT, H99TAT, H99RTAT, E4ICATSB, E4TATSB, E4RTATSB
Compatible All-Pro Incandescent E26 Screwbase Housings		
ALL-PRO	**Recessed Can Size**	**Catalog Number**
	4"	EI400ATSB, ET400ATSB, ET400RATSB

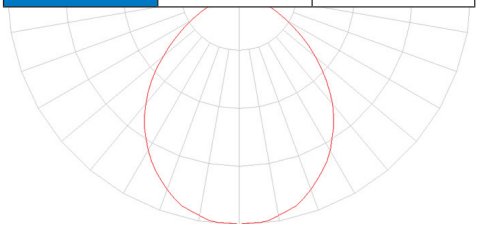
Product and Photometric Data

RL4

Cat No.	CRI	CCT	Lumens	Power (W)	LPW
RL460WH827PK	80	2700	600	7.4	81
RL460WH830PK	80	3000	587	7.2	82
RL460WH835PK	80	3500	589	7.22	82
RL460WH840PK	80	4000	713	7.21	99
RL460WH927PK	92	2700	530	8.0	66
RL460WH930PK	90	3000	570	8.0	71
RL460WH935PK	92	3500	550	8.0	69
RL460WH940PK	92	4000	560	8.0	67
RL460WH950PK	92	5000	600	8.2	73

RL4 Series Photometric*

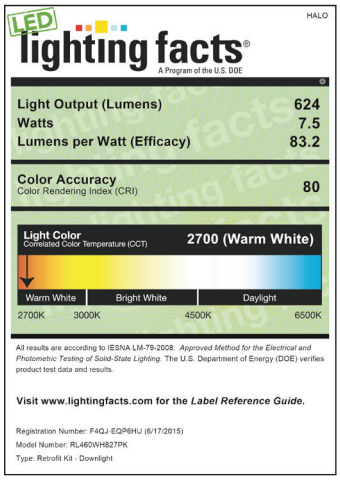
RL460WH6930PK		
Luminaire lumens		570
Input watts		8
LER (LPW)		71.3
Spacing Criteria	0-180	1.18
	90-270	1.18
	Diagonal	1.26
Beam angle (degrees)		93.1
Field angle (degrees)		141.1
Zonal lumen	**Lumens**	**% Lumens**
0-30	201	35.3
0-40	319	56
0-60	506	88.8
0-90	570	100



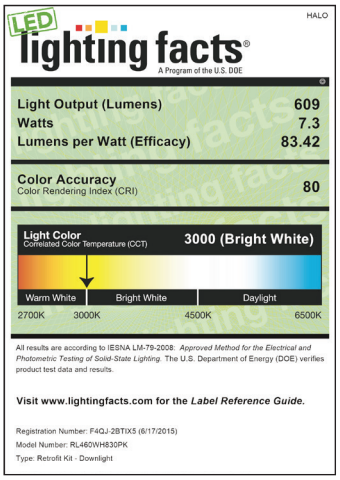
* Tested in accordance with IES LM63. Field results may vary.

Lighting Facts

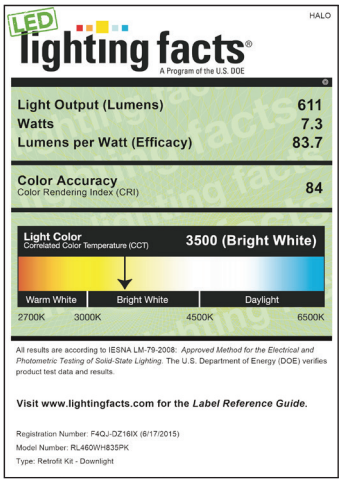
RL460WH827PK
2700K Source



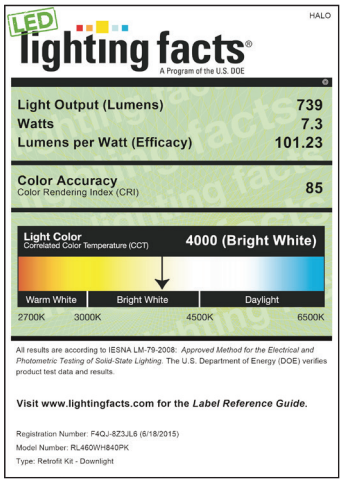
RL460WH830PK
3000K Source



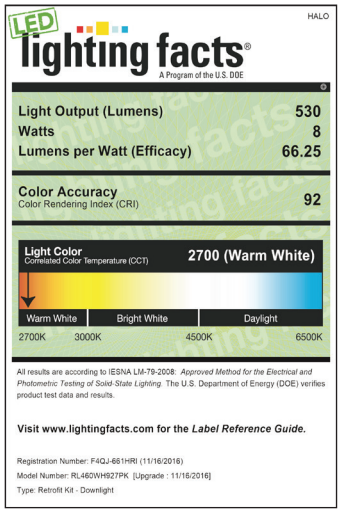
RL460WH835PK
3500K Source



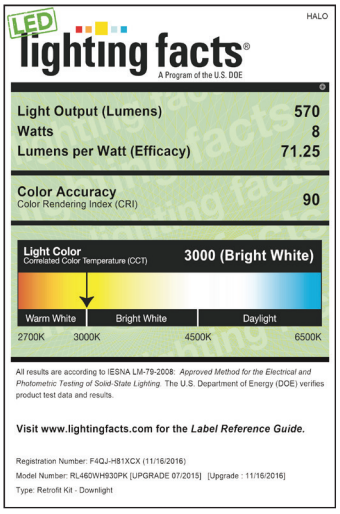
RL460WH840PK
4000K Source



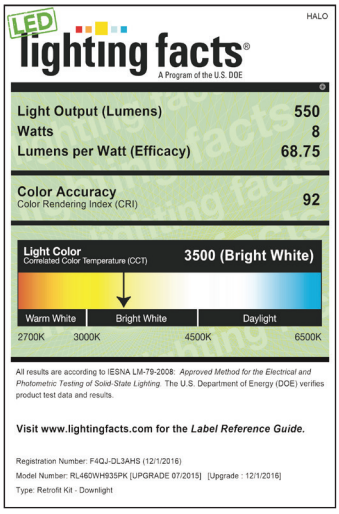
RL460WH927PK
2700K Source



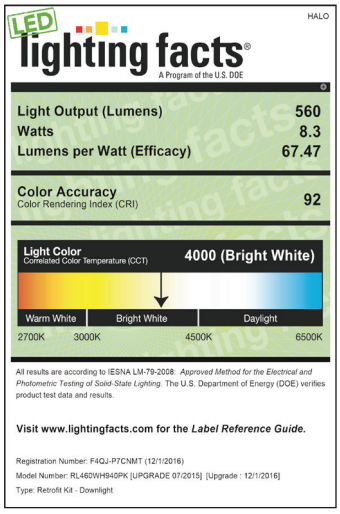
RL460WH930PK
3000K Source



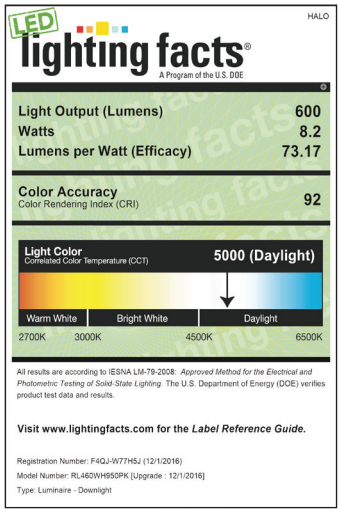
RL460WH935PK
3500K Source



RL460WH940PK
4000K Source



RL460WH950PK
5000K Source



Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

HALO®

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. L70 at 50,000 hours.
- 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:
  - 90 CRI: 2700K, 3000K, 3500K, 4000K, and 5000K
  - 80 CRI: 2700K, 3000K, 3500K, and 4000K
- CRI options: 80 and 90†
  - 90 CRI can be used to comply with California Title 24 High Efficacy requirements. Certified to California Appliance Efficiency Database under JA8.

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
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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

Eaton 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.
- 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, 5000K

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

HIGH-EFFICACY LED WITH INTEGRAL DRIVER - DIMMABLE

80 CRI nominal CCT 2700K 3000K 3500K 4000K

ENERGY STAR · Can be used for IECC International Energy Conservation Code High Efficacy Compliance · RoHS · air180 · Showerlight

Refer to ENERGY STAR® Certified Products List.

90 CRI nominal CCT 2700K 3000K 3500K 4000K 5000K

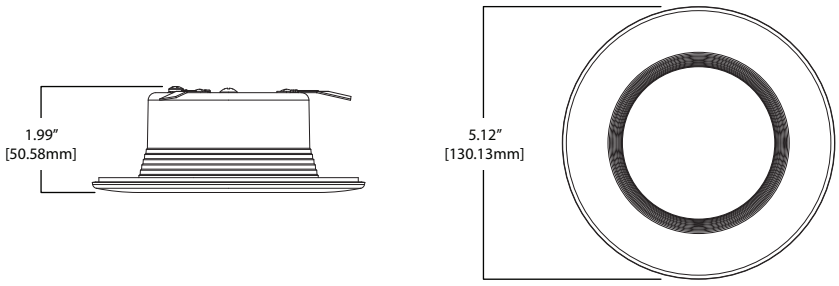
ENERGY STAR · Can be used for IECC International Energy Conservation Code High Efficacy Compliance · Efficiency Standards T24 California Title 24 Residential and Non-Residential Compliant · RoHS · air180 · Showerlight

Refer to ENERGY STAR® Qualified Products List.
Can be used to comply with California Title 24 High Efficacy requirements.
Certified to California Appliance Efficiency Database under JA8.
Indoor LED nominal CCT of 4000K or less.

Powering Business Worldwide

* 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.

RL4 Dimensions

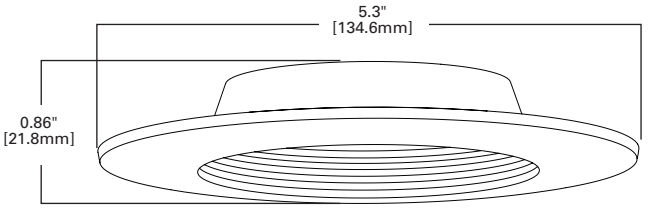


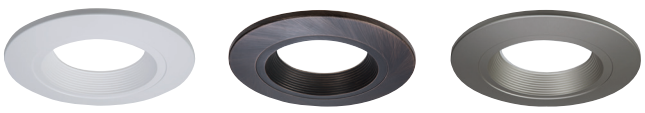
Energy Data

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)

Designer Trim Dimensions

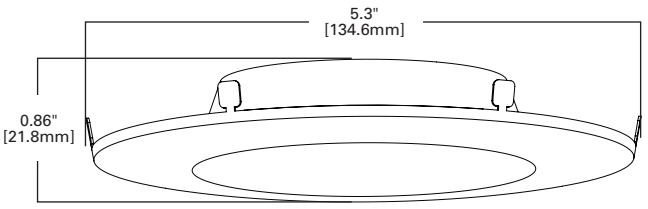




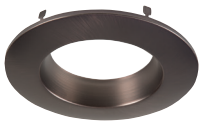
RL4TRMWHB
White (Paintable)

RL4TRMTBZB
Tuscan Bronze

RL4TRMSNB
Satin Nickel



RL4TRMWH
White (Paintable)



RL4TRMTBZ
Tuscan Bronze

RL4TRMSN
Satin Nickel

Ordering Information

Sample Number: **RL460WH927PK**

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
RL460WH950PK= 4" Retrofit Baffle - Trim LED Module, 90 CRI, 5000K, Matte White

Accessories (Order Separately)

RL4TRMSNB= 4" Satin Nickel Trim Ring, Baffle
RL4TRMTBZB= 4" Tuscan Bronze Trim Ring, Baffle
RL4TRMWHB= 4" White Paintable Trim Ring, Baffle
RL4TRMSN= 4" Satin Nickel Trim Ring
RL4TRMTBZ= 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)

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Housing Compatibility

The RL4 is UL Listed in Halo and All-Pro recessed housings, and is UL Classified for use with any 4 inch diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 62.3 in^3 in addition to those noted below:

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant)		
HALO LED	**Recessed Can Size**	**Catalog Number**
	4"	H995ICAT, H995RICAT, H245ICAT, H245RICAT
Compatible Halo Incandescent E26 Screwbase Housings		
HALO	**Recessed Can Size**	**Catalog Number**
	4"	H99ICAT, H99TAT, H99RTAT, E4ICATSB, E4TATSB, E4RTATSB
Compatible All-Pro Incandescent E26 Screwbase Housings		
ALL-PRO	**Recessed Can Size**	**Catalog Number**
	4"	EI400ATSB, ET400ATSB, ET400RATSB

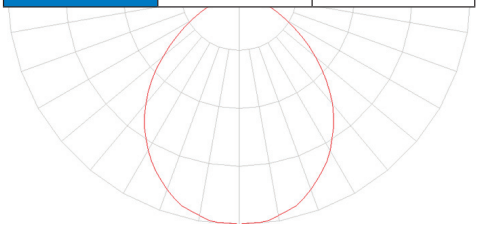
Product and Photometric Data

RL4

Cat No.	CRI	CCT	Lumens	Power (W)	LPW
RL460WH827PK	80	2700	600	7.4	81
RL460WH830PK	80	3000	587	7.2	82
RL460WH835PK	80	3500	589	7.22	82
RL460WH840PK	80	4000	713	7.21	99
RL460WH927PK	92	2700	530	8.0	66
RL460WH930PK	90	3000	570	8.0	71
RL460WH935PK	92	3500	550	8.0	69
RL460WH940PK	92	4000	560	8.0	67
RL460WH950PK	92	5000	600	8.2	73

RL4 Series Photometric*

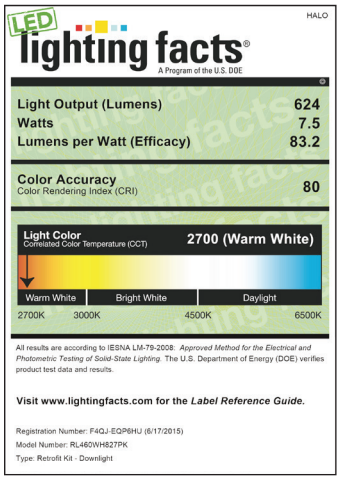
RL460WH6930PK		
Luminaire lumens		570
Input watts		8
LER (LPW)		71.3
Spacing Criteria	0-180	1.18
	90-270	1.18
	Diagonal	1.26
Beam angle (degrees)		93.1
Field angle (degrees)		141.1
Zonal lumen	**Lumens**	**% Lumens**
0-30	201	35.3
0-40	319	56
0-60	506	88.8
0-90	570	100



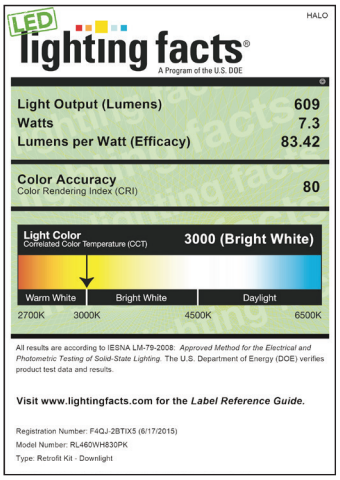
* Tested in accordance with IES LM63. Field results may vary.

Lighting Facts

RL460WH827PK
2700K Source



RL460WH830PK
3000K Source



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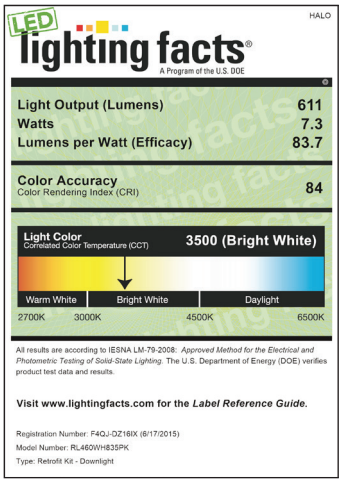
3500K Source



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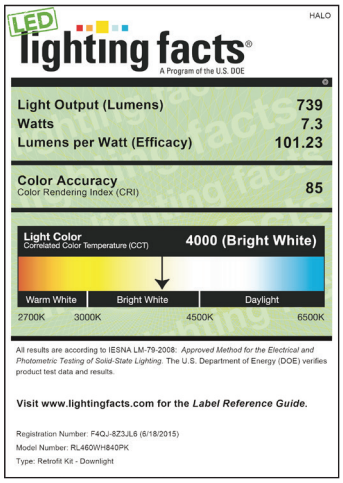
4000K Source



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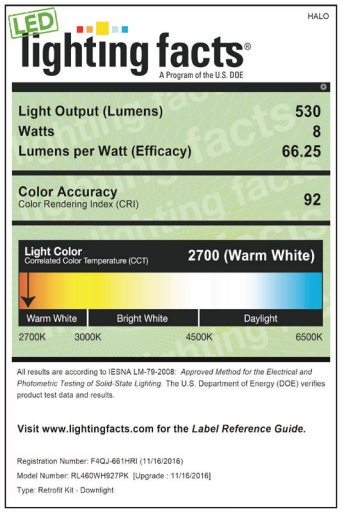
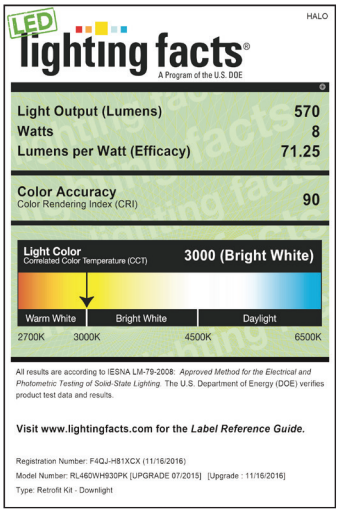
2700K Source



RL460WH930PK
3000K Source



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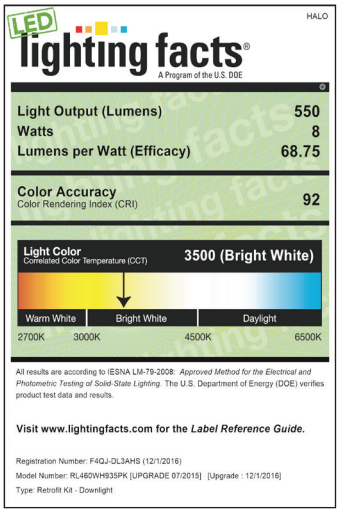
3500K Source



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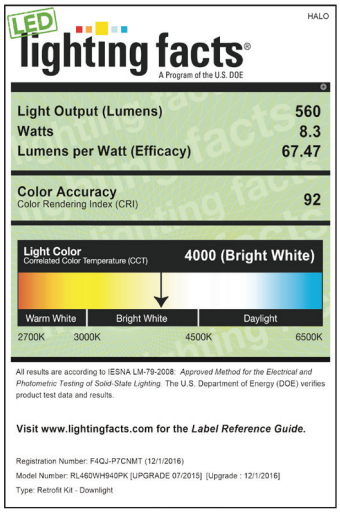
4000K Source



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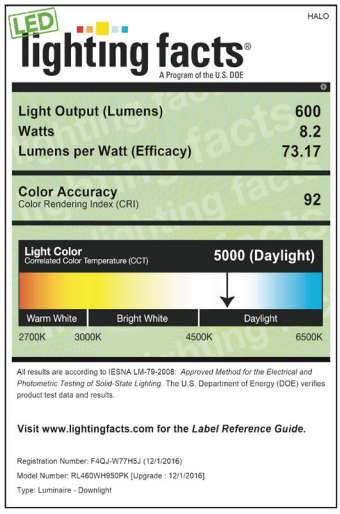
5000K Source



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Specifications and dimensions subject to change without notice.