

Project		Catalog #		Type	
Prepared by		Notes		Date	



RA56NFL

# HALO

## RA56 | LED Series

5-inch/6-inch Gimbals –  
Narrow & Very Wide Flood

### Typical Applications

Residential

### Interactive Menu

- Order Information page 2
- Photometric Data page 3
- Control Solutions page 4
- Connected Systems page 4
- Product Warranty

### Product Certification



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 JAB.  
Indoor LED nominal CCT of 4000K or less.

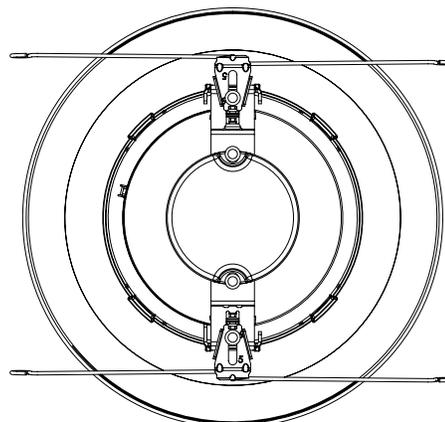
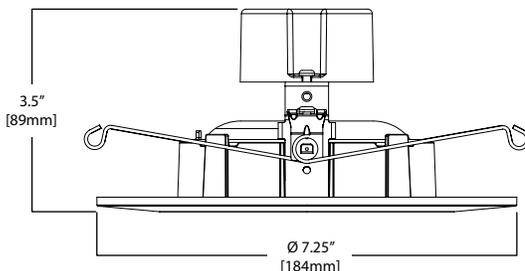
### Product Features



### Top Product Features

- Adjustable gimbal offers 35-degree tilt and up to 360-degree rotation
- 90 CRI
- For retrofit with screwbase adapter included
- For use with 5" H550 & 6" H750 LED housings-new construction & remodel
- Dimmable and operates at 10W

### Dimensional and Mounting Details



## Order Information\*

SAMPLE ORDER NUMBER: **RA5606930WH**

Complete unit includes RA56 LED and a 5" or 6" compatible housing, ordered separately (see: Housing Compatibility).

RA56 Series	Accessories (order separately)
<p><b>RA56 Series</b></p> <p><b>Very Wide Flood - VWFL Models</b>  <b>RA5606927WH</b> = 5"/6" LED Adjustable Gimbal, 90CRI, 2700K, White, Very Wide Flood  <b>RA5606930WH</b> = 5"/6" LED Adjustable Gimbal, 90CRI, 3000K, White, Very Wide Flood</p> <p><b>Narrow Flood - NFL Models</b>  <b>RA5606927NFLWH</b> = 5"/6" LED Adjustable Gimbal, 90CRI, 2700K, White, Narrow Flood  <b>RA5606930NFLWH</b> = 5"/6" LED Adjustable Gimbal, 90CRI, 3000K, White, Narrow Flood</p> <p><b>*CALIFORNIA - E-26 MODELS</b>  <b>RA5606927WH-CA</b>  <b>RA5606930WH-CA</b>  <b>RA5606927NFLWH-CA</b>  <b>RA5606930NFLWH-CA</b></p>	<p><b>Accessories (order separately)</b></p> <p><b>HE26LED</b> = Replacement screw base adapter (one included with unit)  <b>RL56CLIP</b> = Replacement 5"/6" Friction Blade Kit (one included with unit)  <b>OT400P</b> = Oversize Flat White Metal trim ring 6" I.D. x 9-1/4" O.D. (ring slips behind RA56 ring, in stepped configuration)  <b>OT403P</b> = Oversize White Plastic trim ring 6" I.D. x 8" O.D. (ring slips behind RA56 ring, in stepped configuration)  <b>TRM690WH</b> = Oversize Matte White Metal trim ring. Designed for RA56 ring to inset into oversize ring for an even (non-stepped) trim surface</p>

### Housing Compatibility

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant)	
<p><b>Halo LED 5-inch</b></p> <p><b>H550ICAT</b> = 5" LED, Insulated Ceiling, Air-Tite, New Construction Housing  <b>H550RICAT</b> = 5" LED, Insulated Ceiling, Air-Tite, Remodel Housing  <b>E550ICAT</b> = 5" LED, Insulated Ceiling, Air-Tite, New Construction Housing  <b>E550RICAT</b> = 5" LED, Insulated Ceiling, Air-Tite, Remodel Housing</p>	<p><b>Halo LED 6-inch</b></p> <p><b>H750ICAT</b> = 6" LED, Insulated Ceiling, Air-Tite, New Construction Housing  <b>H750RICAT</b> = 6" LED, Insulated Ceiling, Air-Tite, Remodel Housing  <b>H750T</b> = 6" LED, Non-IC, Air-Tite, New Construction Housing  <b>H750TCP</b> = 6" LED, Non-IC, New Construction/Remodel Chicago Plenum Housing  <b>H2750ICAT</b> = 6" LED, Shallow, Insulated Ceiling, Air-Tite, New Construction (use with 691X, 694X, 696X trims only)  <b>H2750RICAT</b> = 6" LED, Shallow, Insulated Ceiling, Air-Tite, Remodel (use with 691X, 694X, 696X trims only)  <b>E750ICAT</b> = 6" LED, Insulated Ceiling, Air-Tite, New Construction Housing  <b>E750RICAT</b> = 6" LED, Insulated Ceiling, Air-Tite, Remodel Housing</p>

### Housing Compatibility

Halo LED Retrofit Enclosures	
<p><b>Halo LED retrofit</b></p> <p><b>ML7E26RFK</b> = 6" Retrofit Enclosure, Non-IC, E26 Screw base Interface  <b>ML7BXFK</b> = 6" Retrofit Enclosure, Non-IC, BX Whip</p>	

### Housing Compatibility

Compatible Halo Incandescent E26 Screwbase Housings	
<p><b>Halo Standard Housings 5-inch</b></p> <p><b>H51CAT</b> = 5" Insulated Ceiling, Air-Tite New Construction Housing  <b>H51RICAT</b> = 5" Insulated Ceiling, Air-Tite Remodel Housing  <b>H51CATNBv5"</b> Insulated Ceiling, Air-Tite New Construction Housing, No Socket Bracket  <b>H5T</b> = 5" Non-IC, New Construction Housing  <b>H5RT</b> = 5" Non-IC, Remodel Housing  <b>H5TNB</b> = 5" Non-IC, New Construction Housing, No Socket Bracket  <b>E51CAT</b> = 5" Insulated Ceiling, Air-Tite New Construction Housing  <b>E51RICAT</b> = 5" Insulated Ceiling, Air-Tite Remodel Housing  <b>E51CATNB</b> = 5" Insulated Ceiling, Air-Tite New Construction Housing, No Socket Bracket  <b>E5TAT</b> = 5" Non-IC, New Construction Housing  <b>E5RTAT</b> = 5" Non-IC, Remodel Housing  <b>E5TATNB</b> = 5" Non-IC, New Construction Housing, No Socket Bracket</p> <p><b>Halo Shallow Housings 5-inch</b></p> <p><b>H251CAT</b> = 5" Shallow, Insulated Ceiling, Air-Tite New Construction  <b>H251RICAT</b> = 5" Shallow, Insulated Ceiling, Air-Tite Remodel  <b>H251CATNB</b> = 5" Shallow, Insulated Ceiling, Air-Tite New Construction, No Socket Bracket</p>	<p><b>Halo Standard Housings 6-inch</b></p> <p><b>H71CAT</b> = 6" Insulated Ceiling, Air-Tite New Construction Housing  <b>H71RICAT</b> = 6" Insulated Ceiling, Air-Tite Remodel Housing  <b>H71CT</b> = 6" Insulated Ceiling, New Construction Housing  <b>H71RICT</b> = 6" Insulated Ceiling, Remodel Housing  <b>H71CATNB</b> = 6" Insulated Ceiling, Air-Tite New Construction Housing, No Socket Bracket  <b>H71CTNB</b> = 6" Insulated Ceiling, New Construction Housing, No Socket Bracket  <b>H7T</b> = 6" Non-IC, New Construction Housing  <b>H7RT</b> = 6" Non-IC, Remodel Housing  <b>H7TNB</b> = 6" Non-IC, New Construction Housing, No Socket Bracket  <b>H7TCP</b> = 6" Non-IC, Chicago Plenum, New Construction/Remodel Housing  <b>H7UICAT</b> = 6" Insulated Ceiling, Universal, Air-Tite, New Construction Housing  <b>H71CAT</b> = 6" Insulated Ceiling, Air-Tite New Construction Housing  <b>E71CAT</b> = 6" Insulated Ceiling, Air-Tite Remodel Housing  <b>E71CATNB</b> = 6" Insulated Ceiling, Air-Tite New Construction Housing, No Socket Bracket  <b>E7TAT</b> = 6" Non-IC, New Construction Housing  <b>E7RTAT</b> = 6" Non-IC, Remodel Housing  <b>E7TATNB</b> = 6" Non-IC, New Construction Housing, No Socket Bracket</p> <p><b>Halo Shallow Housings 6-inch</b></p> <p><b>H271CAT</b> = 6" Shallow, Insulated Ceiling, Air-Tite New Construction  <b>H271RICAT</b> = 6" Shallow, Insulated Ceiling, Air-Tite Remodel Housing  <b>H27T</b> = 6" Shallow, Non-IC, New Construction Housing  <b>H27RT</b> = 6" Shallow, Non-IC, Remodel Housing  <b>E271CAT</b> = 6" Shallow, Insulated Ceiling, Air-Tite New Construction  <b>E271RICAT</b> = 6" Shallow, Insulated Ceiling, Air-Tite Remodel Housing  <b>E27TAT</b> = 6" Shallow, Non-IC, New Construction Housing  <b>E27RTAT</b> = 6" Shallow, Non-IC, Remodel Housing</p>

## Product Specifications

### Mechanical

- Module includes LED, heat sink, reflector, lens optic, baffle reveal, and trim ring
- Trim ring is sized to conceal 5" and 6" housing openings, and features a visually appealing graduated step design
- Durable die-cast aluminum construction
- Integrated heat sink design conducts heat away from the LED keeping the junction temperatures below specified maximums, even when installed in insulated ceiling environments
- Halo matte white paint finish
- 35-degree tilt
- Up to 360-degree rotation

### Optics

#### NARROW FLOOD - NFL

- Precision acrylic lens
- Optical design creates a clean, uniform 25-degree beam distribution

#### VERY WIDE FLOOD - VWFL

- Impact-resistant polycarbonate
- Convex form for lamp-like appearance
- Diffusing, wide beam for even illumination

### Mounting

#### Torsion Spring Brackets

- Pre-installed precision formed torsion spring brackets secure torsion springs and adjust to fit 5" or 6" compatible housings

#### 5" & 6" Friction Blade Kit

- Precision formed friction blades kit included (2 - 5" and 2 - 6")
- Provide alternative to torsion springs for retrofit in 5" and 6" housings without torsion spring mounting tabs.
- Friction blade design allows the RL560 to be installed in any position within the housing aperture (360 degrees).
- Replacement Kit: RL56CLIP

### Housing Compatibility

See Housing Compatibility

### LED

- Color Temperature (CCT) Options: 2700K, 3000K
- Color Rendering Index (CRI) 92
- 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 5" H550 Series and 6" H750 and H2750 Series LED housings.
- LED Connector meets high-efficacy luminaire requirements for a non-screw base socket, and where required to qualify as a high-efficacy luminaire. (California Title-24)
- 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 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 RA56 LED is designed for dimming capability to 10% in normal operation with standard 120V leading edge (LE) and trailing edge (TE) phase control 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.)

### Compliance

#### Labels

- UL/cUL Listed 1598 Luminaire (with listed Halo housings)
- UL Classified (with other housings - see Housing Compatibility)
- UL/cUL Listed for Damp Location
- May be installed in housings in direct contact with air permeable insulation\*\* and combustible material
- IP ingress protection rating
- NFL models: IP35
- VWFL models: IP54

### Qualification

- ENERGY STAR® 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 (Insulated Ceiling)

Listed UL/cUL 1598 with compatible housings, may be used to meet insulated ceiling\*\* 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."

### Warranty

- Five year limited warranty, consult website for details. [www.cooperlighting.com/warranty](http://www.cooperlighting.com/warranty)

\*Non-California Product Only

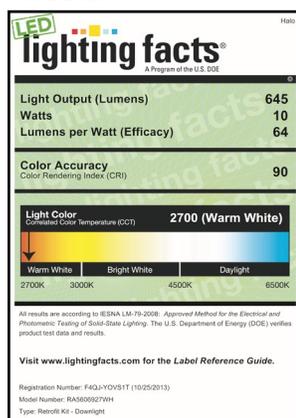
\*Qualified and compliant. Refer to ENERGY STAR® Qualified Products List and CEC (T24) Appliance Database for listings.

\*\*Not for use with housings in direct contact with spray foam insulation.

## Lighting Facts

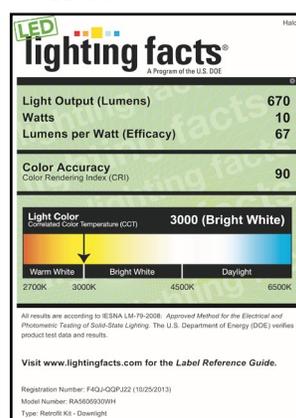
### RA5606927WH

2700K Source  
VWFL Beam



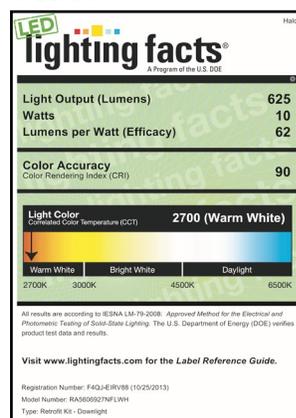
### RA5606930WH

3000K Source  
VWFL Beam



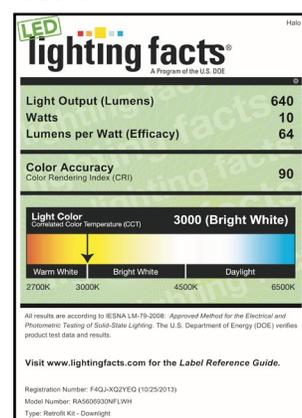
### RA5606927NFLWH

2700K Source  
NFL Beam



### RA5606930NFLWH

3000K Source  
NFL Beam



For further information refer to the Lighting Facts website at <http://lightingfacts.com/>.

## Photometry

### RA5606927WH

Reflector Beam Angle = VWFL Beam  
(Very Wide Flood)

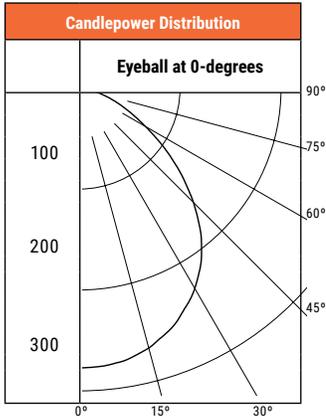
CCT = 2700K

Spacing Criteria = 1.23

Lumens per Watt = 64.5 Lm/W

Test No. P121913

Test Model: RA5606927WH



Cone of Light Footcandles 0 deg Aiming Angle Horizontal Illuminance on Floor				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
5.5'	9.2	6.6	6.6	
7'	5.7	8.4	8.4	
8'	4.3	9.8	9.8	
9'	3.4	11	11	
10'	2.8	12.2	12.2	

Cone of Light Footcandles 35 deg Aiming Angle Vertical Illuminance on Wall				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
2'	43.7	2.1	2.4	2.9
3'	19.4	3.1	3.8	4.3
4'	10.9	4.1	5	5.7
5'	7	5.2	6.2	7.1
6'	4.9	6.4	7.6	8.6
8'	2.7	8.4	10.2	11.4
10'	1.7	10.7	12.6	14.3

Candela Distribution	
Degrees Vertical	Candela
0*	277
5	276
15	267
25	244
35	211
45	160
55	103
65	55
75	23
85	4
90	0

Luminance (Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	31342
55	24818
65	17873
75	12507
85	6032

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	214	33.2
0-40	345	53.5
0-60	560	86.9
0-90	645	100

\*CBCP

### RA5606930WH

Reflector Beam Angle = VWFL Beam  
(Very Wide Flood)

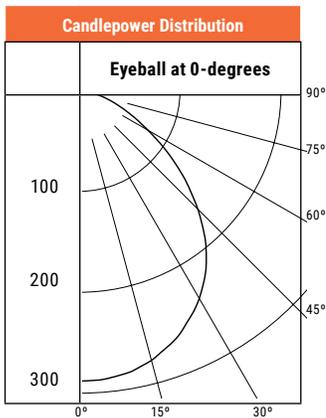
CCT = 3000K

Spacing Criteria = 1.23

Lumens per Watt = 67 Lm/W

Test No. P121915

Test Model: RA5606930WH



Cone of Light Footcandles 0 deg Aiming Angle Horizontal Illuminance on Floor				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
5.5'	9.5	6.6	6.6	
7'	5.9	8.4	8.4	
8'	4.5	9.8	9.8	
9'	3.6	11	11	
10'	2.9	12.2	12.2	

Cone of Light Footcandles 35 deg Aiming Angle Vertical Illuminance on Wall				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
2'	45.4	2.1	2.4	2.9
3'	20.2	3.1	3.8	4.3
4'	11.3	4.1	5	5.7
5'	7.3	5.2	6.2	7.1
6'	5	6.4	7.6	8.6
8'	2.8	8.4	10.2	11.4
10'	1.8	10.7	12.6	14.3

Candela Distribution	
Degrees Vertical	Candela
0*	288
5	287
15	277
25	253
35	219
45	166
55	107
65	57
75	24
85	4
90	0

Luminance (Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	32555
55	25783
65	18560
75	12988
85	6349

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	222	33.2
0-40	358	53.5
0-60	582	86.9
0-90	670	100

\*CBCP

## Photometry

### RA5606927NFLWH

Reflector Beam Angle = NFL Beam (Narrow Flood)

CCT = 2700K

Spacing Criteria = 0.36

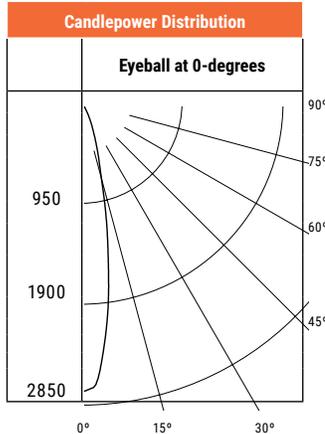
Lumens per Watt = 62.5 Lm/W

Test No. P121911

Test Model: RA5606927NFLWH

Cone of Light Footcandles 0 deg Aiming Angle Horizontal Illuminance on Floor				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
5.5'	90.3	1.8	1.8	
7'	55.8	2.4	2.4	
8'	42.7	2.8	2.8	
9'	33.7	3.2	3.2	
10'	27.3	3.6	3.6	

Cone of Light Footcandles 35 deg Aiming Angle Vertical Illuminance on Wall				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
2'	157.4	1.7	1	2.9
3'	70	2.6	1.6	4.3
4'	39.4	3.5	2.2	5.7
5'	25.2	4.4	2.8	7.1
6'	17.5	5.3	3.4	8.6
8'	9.8	7	4.4	11.4
10'	6.3	8.8	5.6	14.3



Candela Distribution	
Degrees Vertical	Candela
0*	2732
5	2371
15	740
25	239
35	69
45	27
55	16
65	9
75	3
85	0
90	0

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	4649
55	2981
65	1846
75	828
85	97

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	530	84.7
0-40	576	92.1
0-60	612	97.9
0-90	625	100

\*CBCP

### RA5606930NFLWH

Reflector Beam Angle = NFL Beam (Narrow Flood)

CCT = 3000K

Spacing Criteria = 0.36

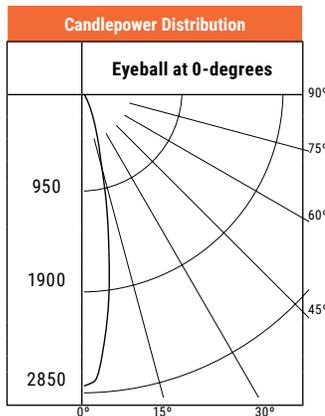
Lumens per Watt = 64 Lm/W

Test No. P121912

Test Model: RA5606930NFLWH

Cone of Light Footcandles 0 deg Aiming Angle Horizontal Illuminance on Floor				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
5.5'	92.5	1.8	1.8	
7'	57.1	2.4	2.4	
8'	43.7	2.8	2.8	
9'	34.5	3.2	3.2	
10'	28	3.6	3.6	

Cone of Light Footcandles 35 deg Aiming Angle Vertical Illuminance on Wall				
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)		CB
		L Length	W Width	
2'	161.2	1.7	1	2.9
3'	71.6	2.6	1.6	4.3
4'	40.3	3.5	2.2	5.7
5'	25.8	4.4	2.8	7.1
6'	17.9	5.3	3.4	8.6
8'	10.1	7	4.4	11.4
10'	6.4	8.8	5.6	14.3



Candela Distribution	
Degrees Vertical	Candela
0*	2798
5	2428
15	758
25	245
35	70
45	28
55	17
65	9
75	3
85	0
90	0

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	4751
55	3055
65	1909
75	853
85	97

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	542	84.7
0-40	590	92.1
0-60	627	97.9
0-90	640	100

\*CBCP

Note: Specifications and Dimensions subject to change without notice.

Visit our web site at [www.cooperlighting.com](http://www.cooperlighting.com)

Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801  
Cooper Lighting 5925 McLaughlin Rd. Mississauga, Ontario, Canada L5R 1B8 905.507.4000 FAX 905.568.7049

## Housings – UL Classified

For retrofit in the following 5" and 6" recessed housings:

<b>Juno®</b>	IC22, IC22R, IC22W, IC22S, IC23, IC23W, IC21, IC21R, IC2, TC2, TC2R, IC20, IC20R, IC25, IC25R, IC25W, IC25S, TC20, TC20R
<b>Capri Lighting</b>	CR1, PR1, QL1, R9ASIC, R5*
<b>Lightolier®</b>	1104ICS*, 1104ICR*, 1104SIC*, 1104SICR*, 1004ICS*, 1004ICR*, 1004SIC*, 1004SICR* 1104ICX - Requires installation of ML7RAB retrofit adapter band accessory (not included).
<b>Progress® Lighting</b>	P87-AT*, P86TG
<b>Lithonia Lighting®</b>	L7X, L7XP
<b>Thomas® Lighting</b>	PS1, R9ASIC/PS9RM
<b>Prescolite®</b>	IBXS
<b>Commercial Electric™</b>	C7ICA (H3), H18
<b>Elco Lighting®</b>	(HL7ICA) EL7ICA

\*Requires replacement of torsion springs with included friction clips (accessory replacement kit: RL56CLIP).

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

## Energy Data

RA56 Series	Driver-Safety Agency Approvals:
Minimum Starting Temp: -30°C (-22°F)	<ul style="list-style-type: none"> <li>- UL60950-1 Recognized</li> <li>- LPS output</li> <li>- UL8750 Compliant</li> </ul>
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Sound Rating: Class A standards	
Input Voltage: 120V	Maximum IC (Insulated Ceiling) Ambient Continuous Operating Temperature: 25°C (77°F)
Power Factor: >0.90	Maximum Non-IC (NON-Insulated Ceiling) Ambient Continuous Operating Temperature 40°C (104°F)
Input Frequency: 50/60Hz	
THD: <20%	
Input Power: 10W	
Input Current: 85mA	