

**Specifications/Features**

**Housing/Mounting**

Specification grade 2" downlight for remodel and new construction applications.

Two wattages available:

11W: Insulated ceiling (IC), Stopaire housing. Thermally protected for use in applications with direct contact with insulation materials.

16W: Non-insulated ceiling (Non-IC), Stopaire housing. Requires minimum 3" clearance around housing from insulation material. Thermal protection provided in case of improper insulation use.

Housing employs a die-cast aluminum collar and heat sink with the driver compartment and junction box made from 16 gauge steel. Housing has a black painted finish.

LED Drivers are fully accessible from below the ceiling.

Two spring steel friction springs provide secure support in ceiling thicknesses from 1/2" - 1".

**NOTE:** Certain regions require the use of a housing mounting frame in conjunction with the RA2LRM housing. The NCF1 new construction mounting frame (refer below) should be specified when required (ordered separately).

**Electrical**

UL8750 and Class 2 Compliant; RoHS Compliant, US only.

Output over voltage, over-current and short circuit protection.

Pre-wired junction box with a convenient screwdriver pry-out. (1) 1/2" Pryout.

A duplex electrical connector is provided to simplify daisy-chain wiring.

**Lamp**

Light engine consists of a high output multi-chip LED array arranged into a single LED package, enabling precise optical control without requiring lensing to diffuse multiple LED sources.

Precision TIR Optics produce Spot (12°), Medium (27°), and Flood (40°) beam distributions.

The Wall Wash housing/trim combination utilizes a unique angled TIR optic mounted to the trim to create a smooth, uniform beam distribution.

Excellent fixture-to-fixture color consistency with a 2-step MacAdam Ellipse tolerance.

System designed and rated for 50,000 hours at 70% lumen maintenance

**Dimming**

All RA2L downlights are available for non-dimming and dimming applications.

**Trims**

Specification Grade trims are available in different styles and finishes. Featuring a high quality Alzak™ finish; optically designed for reduced glare while maintaining maximum lumen output.

**Warranty**

This complete fixture is covered by ConTech's full five (5) year replacement guarantee after date of purchase.

**Labels/Usage**

cCSAus Certified to UL Standards. Suitable for damp locations.

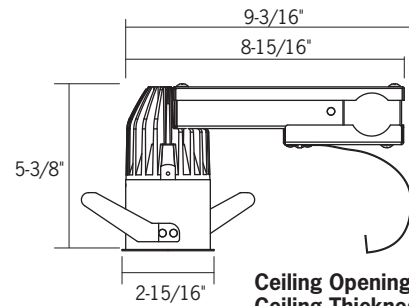
Energy Star approved when used with CST2322L and CST2322LSQ trims (all finishes).

CTR2323L Wall Wash Housing/trim combination is not Energy Star approved.

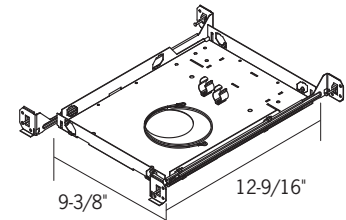
Conforms to Washington State Energy Code (WSEC) for low air infiltration. Tested in accordance with ASTM E283 (2.0 CFM or less).

The CP housing is Chicago Plenum CCEA listed.

Assembled in the USA.



**Ceiling Opening: 2-7/8"**  
**Ceiling Thickness: 1/2" - 1"**



**Optional Mounting Frame: NCF1**

	Series 1	Series 2
<b>Input Voltage</b>		
Non-Dimming: 120V	90-135V AC, 47-63Hz	90-135V AC, 47-63Hz
Non-Dimming: 277V	277V AC, 47-63Hz	277V AC, 47-63Hz
0-10V Dimming	Not Available	90-305V AC, 47-63Hz
Triac Dimming: 120V (F. Phase)	90-135V AC, 47-63Hz	90-135V AC, 47-63Hz
Triac Dimming: 277V (F. Phase)	Not Available	277V AC, 47-63Hz
ELV Dimming (R. Phase)	Not Available	90-305V AC, 47-63Hz
Lutron HiLume® Dimming	Not Available	Not Available
<b>Input Wattage</b>	11	16
<b>Output Current (mA)</b>	250	350
<b>Color Temperature</b>	2700K/3000K/3500K/4000K	2700K/3000K/3500K/4000K
<b>CRI Standard/High</b>	83 (80min)/90+	83 (80min)/90+
<b>Driver</b>		
Power Factor	> 0.90	> 0.90
THD	< 20%	< 20%
<b>Dimming</b>		
0-10V	Not Available	10-100%
Triac Dimming: (F. Phase)	10-100% (120V Only)	10-100% (120/277V)
ELV Dimming (R. Phase)	Not Available	10-100%
Lutron HiLume® Dimming	Not Available	Not Available
<b>Emergency Battery Backup</b>	Not Available	Not Available

Catalog No. \_\_\_\_\_

Type \_\_\_\_\_

Project \_\_\_\_\_

**Ordering Information**

Example Order:   —

Housing	LED Module/Color Temp	Electrical/Dimming	Beam Dist.	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**RA2LRM**

**11W Series 1 (IC, StopAire® Remodel)**

- |                             |                               |
|-----------------------------|-------------------------------|
| <b>127K</b> - 2700K, 83 CRI | <b>127KC</b> - 2700K, 93+ CRI |
| <b>130K</b> - 3000K, 83 CRI | <b>130KC</b> - 3000K, 93+ CRI |
| <b>135K</b> - 3500K, 83 CRI | <b>135KC</b> - 3500K, 93+ CRI |
| <b>140K</b> - 4000K, 83 CRI | <b>140KC</b> - 4000K, 90+ CRI |

**16W Series 2 (Non-IC, StopAire® Remodel)<sup>1</sup>**

- |                             |                               |
|-----------------------------|-------------------------------|
| <b>227K</b> - 2700K, 83 CRI | <b>227KC</b> - 2700K, 93+ CRI |
| <b>230K</b> - 3000K, 83 CRI | <b>230KC</b> - 3000K, 93+ CRI |
| <b>235K</b> - 3500K, 83 CRI | <b>235KC</b> - 3500K, 93+ CRI |
| <b>240K</b> - 4000K, 83 CRI | <b>240KC</b> - 4000K, 90+ CRI |

- |   |
|---|
| <b>12</b> - 120V Non-Dimming                              |
| <b>27</b> - 277V Non-Dimming                              |
| <b>12D1</b> - 120V Triac (F. Phase) Dimming               |
| <b>27D1<sup>2</sup></b> - 277V Triac (F. Phase) Dimming   |
| <b>MVD2<sup>2</sup></b> - 120/277V 0-10V Dimming          |
| <b>MVD5<sup>2</sup></b> - 120/277V ELV (R. Phase) Dimming |

- |                       |
|-----------------------|
| <b>S</b> - Spot       |
| <b>M</b> - Medium     |
| <b>F</b> - Flood      |
| <b>WW</b> - Wall Wash |

**CP** - Chicago Plenum

1. Series-2 is not available for use in Insulated Ceilings (IC).  
2. Series-1 is not available for use with 27D1, MVD2, or MVD5 dimming options.

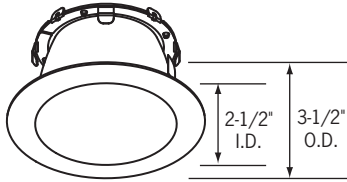
Trim

See below sheet for trim information and details.

Options

- |               |   |
|---------------|---|
| <b>NCF1</b>   | - New Construction Mounting Plate                                   |
| <b>RL-KIT</b> | - Commercial Mounting Brackets                                      |
| <b>HB-24</b>  | - 27" Flat Hanger Bars for RL-KIT                                   |
| <b>HBC-24</b> | - 25" C-Channel Hanger Bars for RL-KIT in Grid Ceiling Construction |
| <b>HB-30</b>  | - T-Bar Hanger Set  |

**Trims and Accessories**

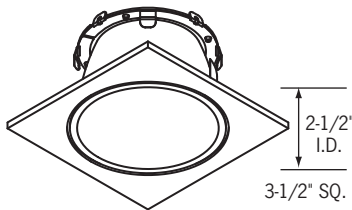


**Specification Grade Reflector Trim**



Reflector is available in anodized clear specular, anodized platinum, painted matte white, and painted matte black finishes. Trims are wet location certified when used with an LF16 60MM lens. Trim accepts one (1) FA-16 60MM 2-3/8" Dia. Black Honeycomb Louver or (1) LF16 60MM 2-3/8" Dia. Tempered Glass Lens.

**CST2322L-(BLK, CLR, PL, WHT)**

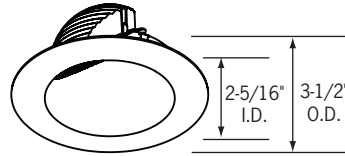


**Specification Grade Reflector with Square Trim Plate**



Reflector available in anodized clear specular, anodized platinum, painted matte white, and painted matte black. Trim Plate is available in painted matte white and painted matte black. Wet location certified when used with an LF16 60MM lens. Accepts one (1) FA-16 60MM 2-3/8" Dia. Black Honeycomb Louver or (1) LF16 60MM 2-3/8" Dia. Tempered Glass Lens.

- CST2322LSQ-CLR-B**  
Clear Specular Reflector, Black Trim Plate
- CST2322LSQ-CLR-P**  
Clear Specular Reflector, White Trim Plate
- CST2322LSQ-PL-B**  
Platinum Reflector, Black Trim Plate
- CST2322LSQ-PL-P**  
Platinum Reflector, White Trim Plate
- CST2322LSQ-WHT-P**  
White Reflector, White Trim Plate
- CST2322LSQ-BLK-B**  
Black Reflector, Black Trim Plate
- CST2322LSQ-BLK-P**  
Black Reflector, White Trim Plate

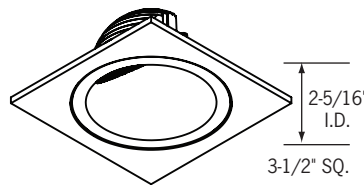


**Wall Wash Trim**



An angled TIR optic enables precise light control. Reflector is available in anodized clear specular, anodized platinum, painted matte white, and painted matte black finishes. Cannot be used with lenses or louvers.

**CTR2323L- (BLK, CLR, PL, WHT)**



**Wall Wash Trim with Square Trim Plate**



An angled TIR optic enables precise light control. Reflector is available in anodized clear specular, anodized platinum, painted matte white, and painted matte black finishes. Trim Plate is available in painted matte white and painted matte black finishes. Cannot be used with lenses or louvers.

- CTR2323LSQ-CLR-B**  
Clear Reflector, Black Trim Plate
- CTR2323LSQ-CLR-P**  
Clear Reflector, White Trim Plate
- CTR2323LSQ-PL-B**  
Platinum Reflector, Black Trim Plate
- CTR2323LSQ-PL-P**  
Platinum Reflector, White Trim Plate
- CTR2323LSQ-WHT-P**  
White Reflector, White Trim Plate
- CST2323LSQ-BLK-B**  
Black Reflector, Black Trim Plate
- CTR2323LSQ-BLK-P**  
Black Reflector, White Trim Plate

**2-3/8" Dia. Lenses/Louver**

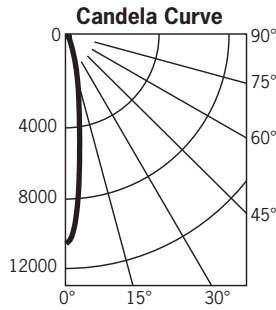
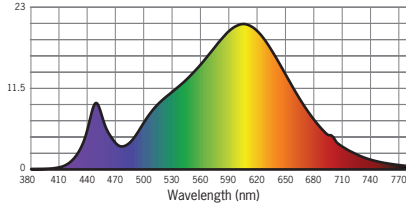


- FA-16 60MM** - Honeycomb Louver
- LF16-A 60MM** - Amber
- LF16-B 60MM** - Blue
- LF16-G 60MM** - Green
- LF16-LB 60MM** - Light Blue
- LF16-R 60MM** - Red
- LF16-RO 60MM** - Rose
- LF16-Y 60MM** - Yellow
- LF16-73 60MM** - Prismatic Spread
- LF16-CL 60MM** - Clear
- LF16-LS 60MM** - Linear Spread
- LF16-SL 60MM** - Soft Light Sandblasted
- LF16-SOL 60MM** - Solite
- LF16-UV 60MM** - Optivex UV Filter

**RA2LRM230K12S/CST2322L-PL**

Designed for 50,000 Hour Lamp Life\*; LM-63 Test No. 80870

Light Output (Fixture Delivered Lumens): 916  
Total Watts@120V: 14.7  
Lumens Per Watt: 62  
Color Rendering Index (CRI)<sup>1</sup>: 83  
Color Temperature (CCT)<sup>2</sup>: 2986K Warm White  
Spectral Power Distribution Chart<sup>3</sup>



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	10531	
5	6474	500
15	1200	332
25	97	49
35	29	19
45	13	10
55	4	4
65	1	1
75	1	1
85	0	0
95	0	

**Intensity Distribution**

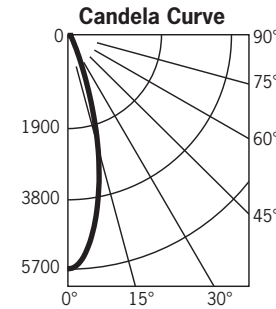
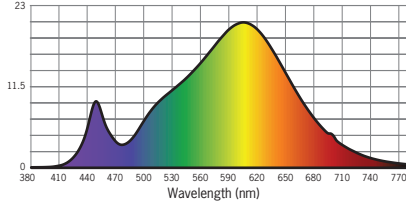
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	292.5	1.3
8'	164.5	1.7
10'	105.3	2.1
12'	73.1	2.6
14'	53.7	3.0
16'	41.1	3.4

Beam Distribution: 12°  
Spacing Criteria: 0.21

**RA2LRM230K12M/CST2322L-PL**

Designed for 50,000 Hour Lamp Life\*; LM-63 Test No. 80928

Light Output (Fixture Delivered Lumens): 1245  
Total Watts@120V: 14.7  
Lumens Per Watt: 85  
Color Rendering Index (CRI)<sup>1</sup>: 83  
Color Temperature (CCT)<sup>2</sup>: 2986K Warm White  
Spectral Power Distribution Chart<sup>3</sup>



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	5672	
5	5125	450
15	2391	631
25	220	142
35	21	16
45	5	4
55	2	2
65	1	1
75	0	0
85	0	0
95	0	

**Intensity Distribution**

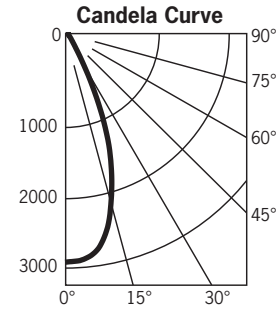
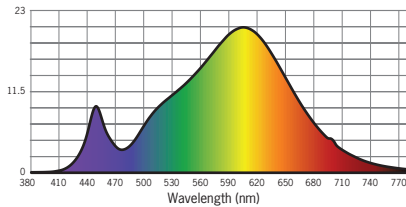
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	157.6	2.7
8'	88.6	3.7
10'	56.7	4.6
12'	39.4	5.5
14'	28.9	6.4
16'	22.2	7.3

Beam Distribution: 27°  
Spacing Criteria: 0.44

**RA2LRM230K12F/CST2322L-PL**

Designed for 50,000 Hour Lamp Life\*; LM-63 Test No. 80872

Light Output (Fixture Delivered Lumens): 1239  
Total Watts@120V: 14.7  
Lumens Per Watt: 84  
Color Rendering Index (CRI)<sup>1</sup>: 83  
Color Temperature (CCT)<sup>2</sup>: 2968K Warm White  
Spectral Power Distribution Chart<sup>3</sup>



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	2894	
5	2849	265
15	2112	578
25	729	339
35	67	47
45	7	7
55	2	2
65	1	1
75	0	0
85	0	0
95	0	

**Intensity Distribution**

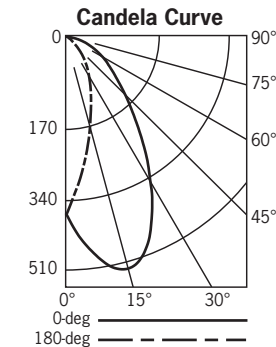
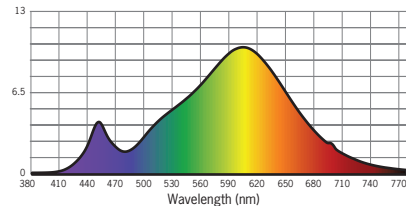
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	80.4	4.0
8'	45.2	5.3
10'	28.9	6.7
12'	20.1	8.0
14'	14.8	9.4
16'	11.3	10.7

Beam Distribution: 41°  
Spacing Criteria: 0.62

**RA2LRM230K12WW/CTR2323L-PL**

Designed for 50,000 Hour Lamp Life\*; LM-63 Test No. 83072

Light Output (Fixture Delivered Lumens): 496  
Total Watts@120V: 14.7  
Lumens Per Watt: 34  
Color Rendering Index (CRI)<sup>1</sup>: 83  
Color Temperature (CCT)<sup>2</sup>: 2096K Warm White  
Spectral Power Distribution Chart<sup>3</sup>



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	386	
5	452	35
15	520	89
25	428	107
35	283	96
45	174	72
55	110	50
65	68	31
75	32	13
85	2	2
95	0	

**Footcandles on Wall, Single Unit**

	0'	1'	2'	3'	4'	
Distance From Ceiling	1'	2.1	1.9	1.5	1.0	0.6
	2'	3.1	2.9	2.3	1.6	1.0
	3'	3.6	3.4	2.8	2.0	1.3
	4'	3.6	3.4	2.8	2.0	1.4
	5'	3.4	3.2	2.6	1.9	1.4
	6'	3.1	2.9	2.4	1.8	1.3
	7'	2.7	2.6	2.2	1.7	1.3
	8'	2.4	2.2	1.9	1.5	1.2
	9'	2.1	2.0	1.8	1.4	1.1

▼ is the beam center, 3' from wall

**Multiplication Factors**

CCT	STANDARD CRI	HIGH CRI	SERIES 1, 11W	WHITE REFLECTOR	BLACK REFLECTOR	CLEAR REFLECTOR
2700K	0.94	0.70	0.73	1.0	0.94	1.0
3000K	N/A	0.75	0.73	1.0	0.94	1.0
3500K	1.0	0.81	0.73	1.0	0.94	1.0
4000K	1.0	0.87	0.73	1.0	0.94	1.0

\*Dependent on surrounding temperatures

1. Accuracy of rendering colors  
2. Color appearance of light source  
3. Colors present within the light source