

Project		Catalog #		Type	
Prepared by		Notes		Date	



# HALO

## RL Retrofit Series

Recessed LED retrofit module

### Typical Applications

Residential

### Interactive Menu

- Order Information page 2
- Product Specifications page 5
- Energy Data page 5
- Photometric Data page 6
- Product Warranty
- Dimming Guide

### Top Product Features

- Available in 3", 4", 5/6" aperture
- 6 selectable color temperature options
  - 2700K, 3000K, 3500K, 4000K, 5000K
  - Dim-to-warm technology included: use your dimmer to warm color temperature from 3000K to 1800K
- Use with compatible recessed housings
- Dimmable down to 5%

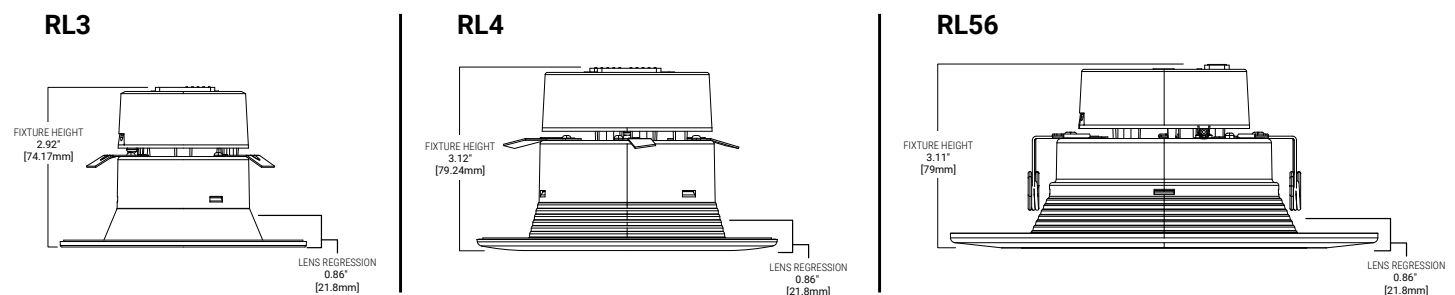
### Product Certification



### Product Features



### Dimensional and Mounting Details



additional product diagrams

## Order Information

SAMPLE ORDER NUMBER: **RL56069FSD2W1EWH**

3-inch	Lumens	CRI / CCT	Driver	Finish	3-inch Accessories
<b>RL3</b> = 3-inch recessed LED retrofit module	<b>05</b> = 500 lumens (nominal)	<b>9FSD2W</b> = 90 CRI, selectable CCT with D2W option	<b>1E</b> = 120V 60Hz, LE & TE phase cut 5% dimming	<b>WH</b> = matte white flange	<b>RL3TRMMW</b> = 3-inch overlay, Matte White <b>RL3TRMMB</b> = 3-inch overlay, Matte Black <b>RL3TRMSN</b> = 3-inch overlay, Satin Nickel <b>RL3TRMTBZ</b> = 3-inch overlay, Tuscan Bronze
Notes	Notes	Notes	Notes	Notes	Notes

4-inch	Lumens	CRI / CCT	Driver	Finish	4-inch Accessories
<b>RL4</b> = 4-inch recessed LED retrofit module	<b>LS</b> = 600/900 selectable lumens (nominal)	<b>9FSD2W</b> = 90 CRI, selectable CCT with D2W option	<b>1E</b> = 120V 60Hz, LE & TE phase cut 5% dimming	<b>WH</b> = matte white flange	<b>RL4TRMWHB</b> = 4-inch overlay, Matte White, Baffle <b>RL4TRMMBB</b> = 4-inch overlay, Matte Black, Baffle <b>RL4TRMSNB</b> = 4-inch overlay, Satin Nickel, Baffle <b>RL4TRMTBZB</b> = 4-inch overlay, Tuscan Bronze, Baffle <b>RL4TRMWH</b> = 4-inch overlay, Matte White, Splay <b>RL4TRMMB</b> = 4-inch overlay, Matte Black, Splay <b>RL4TRMSN</b> = 4-inch overlay, Satin Nickel, Splay <b>RL4TRMTBZ</b> = 4-inch overlay, Tuscan Bronze, Splay
Notes	Notes	Notes	Notes	Notes	Notes

5/6-inch	Lumens	CRI / CCT	Driver	Finish	5/6-inch Accessories
<b>RL56</b> = 5/6-inch recessed LED retrofit module	<b>06</b> = 600 lumens (nominal) <b>LS</b> = 900/1200 selectable lumens (nominal)	<b>9FSD2W</b> = 90 CRI, selectable CCT with D2W option	<b>1E</b> = 120V 60Hz, LE & TE phase cut 5% dimming	<b>WH</b> = matte white flange	<b>RL56TRMWHB</b> = 5/6-inch overlay, Matte White, Baffle <b>RL56TRMMBB</b> = 5/6-inch overlay, Matte Black, Baffle <b>RL56TRMSNB</b> = 5/6-inch overlay, Satin Nickel, Baffle <b>RL56TRMTBZB</b> = 5/6-inch overlay, Tuscan Bronze, Baffle <b>RL56TRMWH</b> = 5/6-inch overlay, Matte White, Splay <b>RL56TRMMB</b> = 5/6-inch overlay, Matte Black, Splay <b>RL56TRMSN</b> = 5/6-inch overlay, Satin Nickel, Splay <b>RL56TRMTBZ</b> = 5/6-inch overlay, Tuscan Bronze, Splay
Notes	Notes	Notes	Notes	Notes	Notes



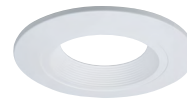
**RL3TRMMW**  
**RL4TRMWH**  
**RL56TRMWH**

White (Paintable), Splay



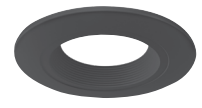
**RL3TRMMB**  
**RL4TRMMB**  
**RL56TRMMB**

Matte Black, Splay



**RL4TRMWHB**  
**RL56TRMWHB**

White (Paintable), Baffle



**RL4TRMMBB**  
**RL56TRMMBB**

Matte Black, Baffle



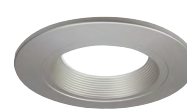
**RL3TRMSN**  
**RL4TRMSN**  
**RL56TRMSN**

Satin Nickel, Splay



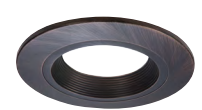
**RL3TRMTBZ**  
**RL4TRMTBZ**  
**RL56TRMTBZ**

Tuscan Bronze, Splay



**RL4TRMSNB**  
**RL56TRMSNB**

Satin Nickel, Baffle

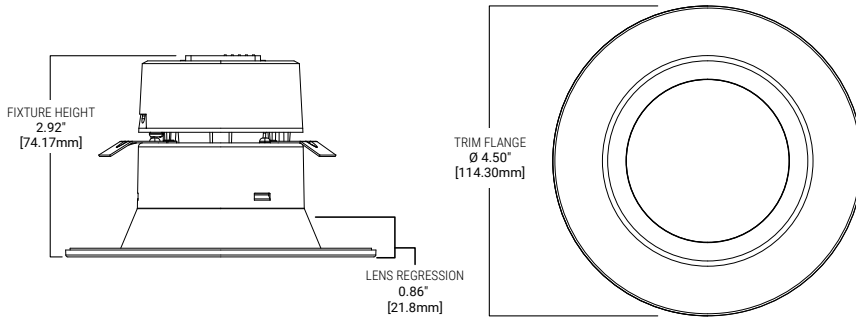


**RL4TRMTBZB**  
**RL56TRMTBZB**

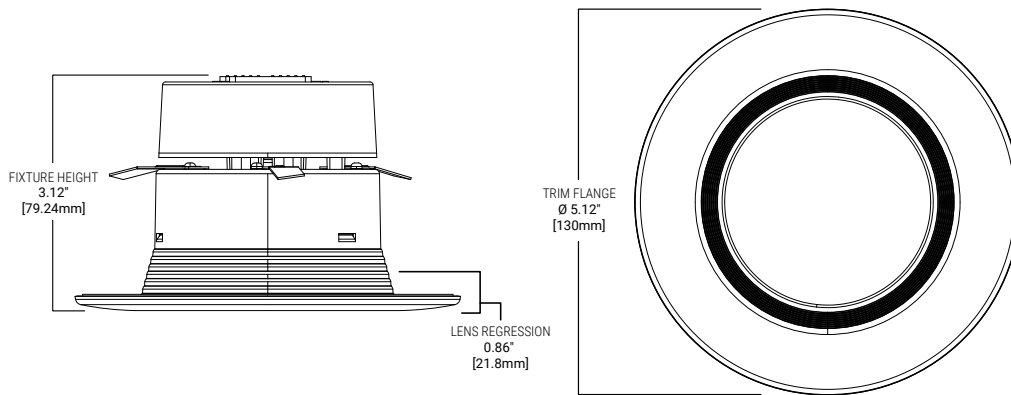
Tuscan Bronze, Baffle

## Dimensional and Mounting Details

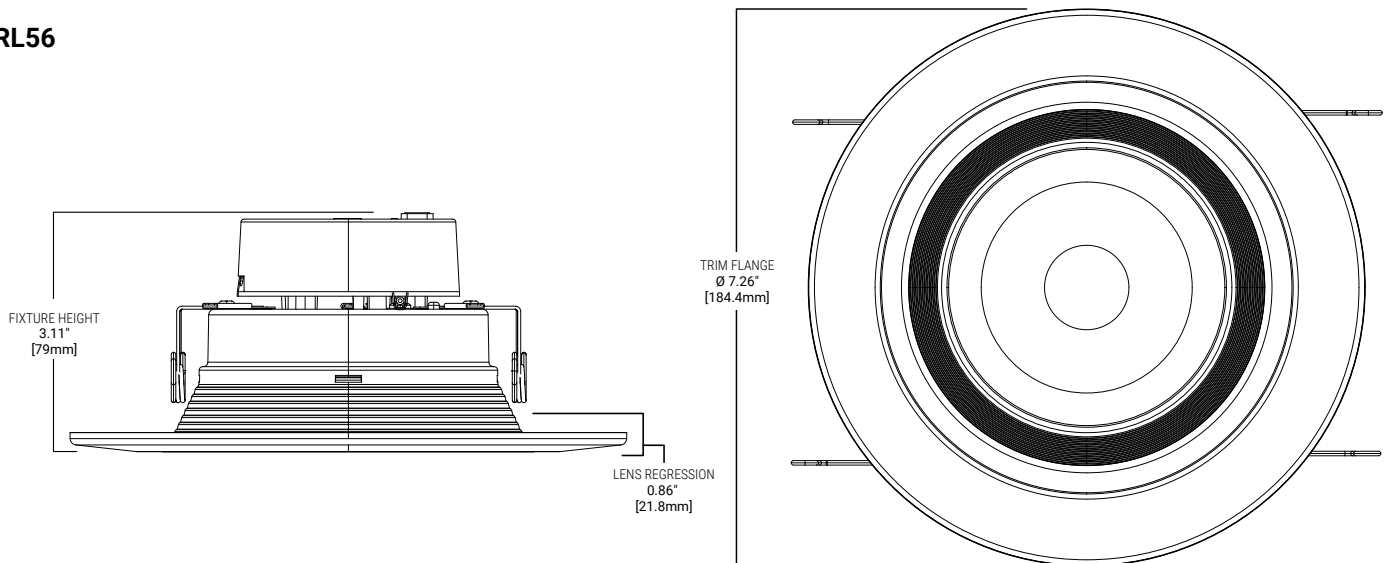
### RL3



### RL4



### RL56



## Compatible Housings

### HALO - 6" Housings<sup>1</sup>

HALO LED	H750ICAT, H750RICAT, H750T, H750TCP, H2750ICAT, H2750RICAT, H550ICAT, H550RICAT, E550ICAT, E550RICAT, E750ICAT, E750RICAT, H750FR2ICAT
HALO LED Retrofit	ML7BXRFK, ML7E26RFK
Standard Housing	H7ICAT, H7ICT, H7T, H7ICATNB, H7ICTNB, H7TNB, H7UICAT, H7TCP, H7RICAT, H7RICT, H7RT, E7ICAT, E7ICATNB, E7RICAT, E7RTAT, E7TAT, E7TATNB, H7UICAT, H7ICATNB, H7ICTNB, H7TNB, H7UICAT
Shallow Housing	H27ICAT, H27RICAT, H27ICT, H27RICT, H27T, H27RT, EI2700AT, EI2700, EI2700R, ET2700, ET2700R, E27ICAT, E27RICAT, E27TAT, E27RTAT

### HALO - 5" Housings<sup>1</sup>

Halo LED	H550ICAT, H550RICAT, E550ICAT, E550RICAT, H550FR2ICAT
Standard Housing	H5ICAT, H5ICATNB, H5RICAT, H5T, H5TNB, H5RT, E5ICAT, E5ICATNB, E5RICAT, E5RTAT, E5TAT, E5TATNB
Shallow Housing	H25ICAT, H25RICAT, H25ICATNB

### HALO - 4" Housings<sup>2</sup>

Halo LED	H45ICAT*, H45RICAT*, H450FR2ICAT*
Standard Housing	H99ICAT, H99RTAT, H99TAT, H995ICAT, H995RICAT, H99T, H99RT, H99ICT, E4ICATSB, E4TATSB, E4RTATSB
Shallow Housing	H245ICAT, H245RICAT

### HALO - 3" Housings<sup>3</sup>

Halo LED	H35ICAT, H35RICAT, H350FR2ICAT
Standard Housing	H36ICAT, H38ICAT, H36TAT, H36RTAT, H36PAR16ICAT, H36PAR16RICAT

## LUMINAIRES - UL Classified for retrofit compatibility

**Note:** Compatible with any 5" or 6" diameter recessed luminaire with an internal volume that exceeds 115 in<sup>3</sup> in addition to those listed below.

Juno	Standard Housing	IC22, IC22R, IC22W, IC22S, IC23, IC23W, TC2, TC2R, IC2
	Shallow Housing	IC21, IC21R
Capri	Standard Housing	CR1, PR1, QL1
	Shallow Housing	R9ASIC/PS9RM
Elco		HL7ICA (EL7ICA)
Thomas		PS1
Commercial Electric		C7ICA, H3

Lithonia Lighting	Standard Housing	LC6, L7X
	Shallow Housing	L7XP
Progress Lighting	Standard Housing	P87-AT**
	Shallow Housing	P86TG
Lightolier		1104ICS*, 1104ICR**

**1.** The RL56 SeleCCTable is UL Certified for use with any 5" or 6" diameter recessed luminaire constructed of steel or aluminum with an internal volume that exceeds 97.4" in<sup>3</sup> addition to those noted below and does not exceed the input rating of the luminaire.

**2.** The RL4 SeleCCTable is UL Certified for use with any 4" diameter recessed luminaire constructed of steel or aluminum with an internal volume that exceeds 47.8" in<sup>3</sup> addition to those noted below and does not exceed the input rating of the luminaire.

**3.** The RL3 SeleCCTable is UL Certified for use with any 3" diameter recessed luminaire constructed of steel or aluminum with an internal volume that exceeds 42.2" in<sup>3</sup> addition to those noted below and does not exceed the input rating of the luminaire.

## Product Specifications

### Selectable System

- Use the CCT select switch to choose between D2W, 2700K, 3000K, 3500K, 4000K, and 5000K CCT
- D2W option starts at 3000K and warms to 1800K as fixture dims
- Use the lumen select switch on lumen selectable fixtures to choose brightness level

### Module – Trim

- Module construction includes LED array, heat sink, reflector, lens, baffle and trim ring
- Regressed baffle
- Heat sink designed to conduct heat away from the LED array, keeping the junction temperatures below specified maximums, even when installed in insulated ceiling environments

### LED Array

- Mid power LED array provides a uniform source with high efficiency and no pixilation
- 90 CRI minimum, R9 greater than 50
- Color accuracy at 4 SDCM in between endpoints, provide color accuracy and uniformity.
- Color Temperature (CCT) is set to a factory default of 3000K

### Optical Assembly

- Regressed lens
- Impact-resistant polycarbonate
- Convex form and lamp-like appearance
- Diffuse for even illumination

### Driver

- Integral 120V 60 Hz constant current driver provides noise free operation
- Continuous, flicker-free dimming from 100% to 5%
- Inline electrical quick connect and E26 adapter (provided) provides mains connections
- See Dimming Guide for compatible dimmers

### Retention

- For 3-inch and 4-inch: Push-N-Twist universal installation clips are pre-installed and designed to fit compatible recessed housings.
- For 5/6-inch: Torsion springs are pre-installed and adjust to fit 5-inch or 6-inch housings. Push-N-Twist universal installation clips are also included

### Overlays (sold separately)

- Overlays are accessory rings that attach to the fixture for a decorative finish. Refer to the accessories table in the ordering information section for details

### Gaskets

- Closed cell gaskets achieve restrictive airflow requirements without additional caulking

### Compliance

- UL Certified for US and Canada for use with Halo housings, classified for use with other's housings, see instruction sheet for conditions of acceptability
- UL Certified for US and Canada, type IC suitable for direct contact with air permeable insulation
- Not for use in direct contact with spray foam insulation, reference NEMA LSD57-2013
- Wet and Damp location listed
- Airtight certified per ASTM-E283
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC 47CFR Part 15 consumer limits
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- Can be used for State of California Title 24 high efficacy luminaire compliance. Complies with Title 24 JA8-2022-E.
- Can be used International Energy Conservation Code (IECC) high efficiency luminaire compliance.
- ENERGY STAR® listed, reference database for current listings
- IP44 Ingress Protection rated

### Warranty

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

## Energy Data

### RL3 - 500 Lumen

Lumens	500
Input Voltage	120V
Input current	55mA
Input Power	6.2W
Efficiency	80.24%
Inrush(A)	1.58
THD	13.7
PF	0.964
Sound Rating	<=22dba

### RL4 - 600/900 Lumen

Lumens	600/900
Input Voltage	120V
Input current	95mA
Input Power	11W
Efficiency	80.56%
Inrush(A)	2.5
THD	16.6
PF	0.983
Sound Rating	<=22dba

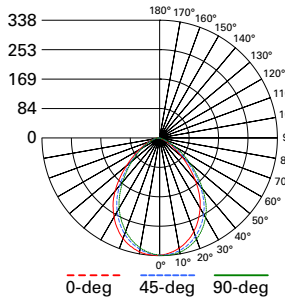
### RL56 - 600 Lumen

Lumens	600
Input Voltage	120V
Input current	60mA
Input Power	6.8W
Efficiency	80.80%
Inrush(A)	2.02
THD	18.9
PF	0.937
Sound Rating	<=22dba

### RL56 - 900/1200 Lumen

Lumens	900/1200
Input Voltage	120V
Input current	120mA
Input Power	14.5W
Efficiency	80.87%
Inrush(A)	3.8
THD	8.4
PF	0.986
Sound Rating	<=22dba

## Photometric Data

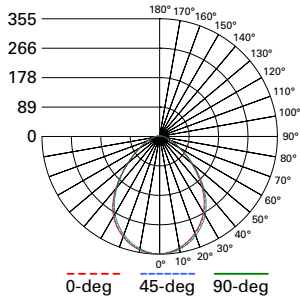
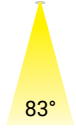


**RL3059FSD2W1EWH -500LM -3000K**  
 Spacing criterion:  
 (0-180) 1.11 | (90-270) 1.11 | (Diagonal) 1.16  
 Beam Angle: 83°  
 Field Angle: 132°  
 Lumens: 610  
 Input Watts: 6.4 W  
 Efficacy: 95.3 LPW  
 UGR: 17  
 Test Report: P639465

Zonal Lumen	Lumens	% Lumens
0-30	245	40.1
0-40	378	62
0-60	556	91.2
0-90	610	100

TM-30-15	Rf = 93
	Rg = 103
CRI/CIE	Ra = 96.6
	R9 = 89

CCT - Range of 2700K- 5000K

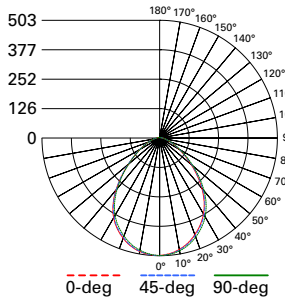


**RL4LS9FSD2W1EWH -600LM -3000K**  
 Spacing criterion:  
 (0-180) 1.15 | (90-270) 1.15 | (Diagonal) 1.2  
 Beam Angle: 86°  
 Field Angle: 137°  
 Lumens: 695  
 Input Watts: 6.9 W  
 Efficacy: 100.7 LPW  
 UGR: 19  
 Test Report: P639470

Zonal Lumen	Lumens	% Lumens
0-30	263	38.4
0-40	412	60.1
0-60	616	89.9
0-90	685	100

TM-30-15	Rf = 92
	Rg = 103
CRI/CIE	Ra = 96.3
	R9 = 85

CCT - Range of 2700K- 5000K



**RL4LS9FSD2W1EWH -900LM -3000K**  
 Spacing criterion:  
 (0-180) 1.15 | (90-270) 1.15 | (Diagonal) 1.2  
 Beam Angle: 86°  
 Field Angle: 137°  
 Lumens: 970  
 Input Watts: 10.9 W  
 Efficacy: 89 LPW  
 UGR: 20  
 Test Report: P639475

Zonal Lumen	Lumens	% Lumens
0-30	372	38.4
0-40	583	60.1
0-60	872	89.9
0-90	970	100

TM-30-15	Rf = 92
	Rg = 103
CRI/CIE	Ra = 96.3
	R9 = 85

CCT - Range of 2700K- 5000K



## Product Specifications

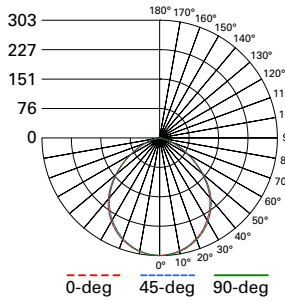
### RL3059FSD2W1EWH

PRODUCT SPECIFICATIONS	
Lumens	610
Watts	6.4
Lumens Per Watt (Efficacy)	95.3
Color Accuracy (CRI)	95
Light Color (CCT)	3000K
Correlated Color Temperature (CCT)	
warm white    soft white    bright white	

### RL4LS9FSD2W1EWH

PRODUCT SPECIFICATIONS	
Lumens	970
Watts	10.9
Lumens Per Watt (Efficacy)	88.9
Color Accuracy (CRI)	93
Light Color (CCT)	3000K
Correlated Color Temperature (CCT)	
warm white    soft white    bright white	

## Photometric Data

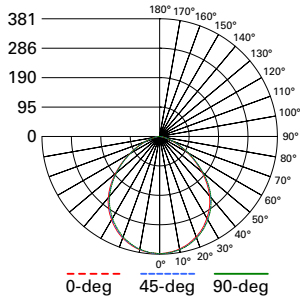


**RL56069FSD2W1EWH -600LM -3000K**  
 Spacing criterion:  
 (0-180) 1.21 | (90-270) 1.21 | (Diagonal) 1.3  
 Beam Angle: 98°  
 Field Angle: 145°  
 Lumens: 700  
 Input Watts: 6.8 W  
 Efficacy: 102.9 LPW  
 UGR: 19  
 Test Report: P639490

Zonal Lumen	Lumens	% Lumens
0-30	231	33
0-40	372	53.2
0-60	611	87.3
0-90	700	100

TM-30-15	Rf = 93
	Rg = 103
CRI/CIE	Ra = 96.4
	R9 = 87

CCT - Range of 2700K- 5000K

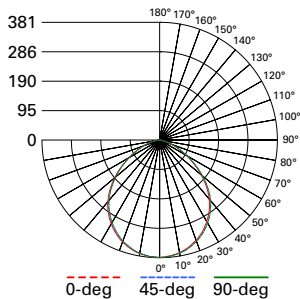


**RL56LS9FSD2W1EWH -900LM -3000K**  
 Spacing criterion:  
 (0-180) 1.21 | (90-270) 1.21 | (Diagonal) 1.3  
 Beam Angle: 98°  
 Field Angle: 145°  
 Lumens: 880  
 Input Watts: 8.5 W  
 Efficacy: 103.5 LPW  
 UGR: 20  
 Test Report: P639500

Zonal Lumen	Lumens	% Lumens
0-30	290	33
0-40	468	53.2
0-60	768	87.3
0-90	880	100

TM-30-15	Rf = 92
	Rg = 103
CRI/CIE	Ra = 95.6
	R9 = 81

CCT - Range of 2700K- 5000K



**RL56LS9FSD2W1EWH -1200LM -3000K**  
 Spacing criterion:  
 (0-180) 1.21 | (90-270) 1.21 | (Diagonal) 1.3  
 Beam Angle: 98°  
 Field Angle: 145°  
 Lumens: 1355  
 Input Watts: 14.3 W  
 Efficacy: 94.8 LPW  
 UGR: 20  
 Test Report: P639495

Zonal Lumen	Lumens	% Lumens
0-30	447	33
0-40	721	53.2
0-60	1183	87.3
0-90	1355	100

TM-30-15	Rf = 92
	Rg = 103
CRI/CIE	Ra = 95.6
	R9 = 81

CCT - Range of 2700K- 5000K



## Product Specifications

### RL56069FSD2W1EWH

PRODUCT SPECIFICATIONS	
Lumens	700
Watts	6.8
Lumens Per Watt (Efficacy)	102.9
Color Accuracy (CRI)	95
Light Color (CCT)	3000K
Correlated Color Temperature (CCT)	
warm white	soft white
2700K	3000K
4500K	6500K

### RL56LS9FSD2W1EWH

PRODUCT SPECIFICATIONS	
Lumens	1355
Watts	14.3
Lumens Per Watt (Efficacy)	94.7
Color Accuracy (CRI)	93
Light Color (CCT)	3000K
Correlated Color Temperature (CCT)	
warm white	soft white
2700K	3000K
4500K	6500K