ConTech LIGHTING | a LEVITON company

CATALOG NO.

DATE   **PROJECT**   **TYPE**

R6 SERIES | 6-Inch Round Downlights: R6SA StopAire™ Housing

Side View

6-3/4"

1/2"

6-1/2"

Bottom View

9-1/2"

14-3/4"
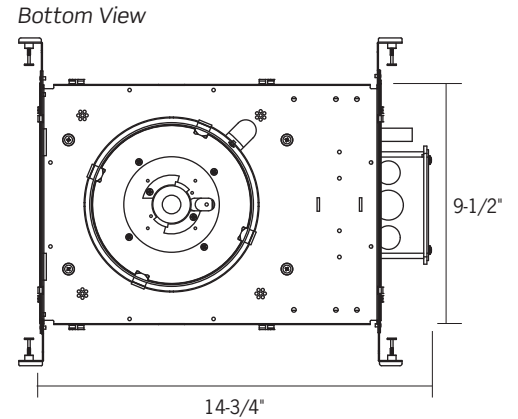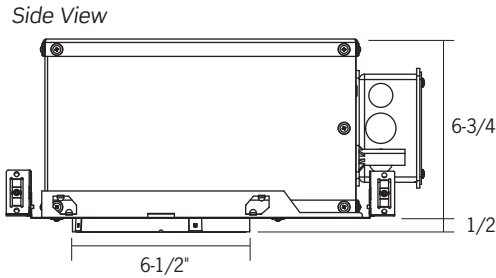
Ceiling Opening: 6-5/8-Inches
Ceiling Thickness: 1/2- to 2-Inches

	R6SA1	R6SA2	R6SA3	R6SA4	R6SA5	R6SA6
WATTAGE	12W	16W	21W	30W	38W	45W
LUMEN OUTPUT[1]	1100Lm	1600Lm	2200Lm	3000Lm	3700Lm	4100Lm
COLOR TEMPERATURE	2700K / 3000K / 3500K / 4000K					
CRI	83 (80min) / 90+					
INPUT WATTAGE	12W	16W	21W	30W	38W	45W
INPUT CURRENT (A) 120V/277V/347V	.08/.04/.03	.12/.06/.04	.17/.08/.06	.23/.11/.08	.31/.14/.11	.36/.16/.12
INPUT VOLTAGE Standard Driver	120VAC / 277VAC / 347VAC, 50/60Hz					
Lutron HiLume® Driver	120VAC, 50/60Hz				N/A	N/A
Lutron Eco-System® Driver	120VAC / 277VAC , 50/60Hz				N/A	N/A
eldoLED ECOdrive and SOLOdrive	120VAC / 277VAC , 50/60Hz					N/A
DRIVER POWER FACTOR	> 0.90					
TOTAL HARMONIC DISTORTION (THD)	< 20%					
LISTINGS	cCSAus Certified to UL Standards; Suitable for Damp Locations Conforms to Washington State Energy Code (WSEC) for Low Air Infiltration; tested in accordance with ASTM E283 (2.0 CRM or less) Chicago Plenum Housings are CCEA listed ENERGY STAR® Certified: – All Wattage/Lumen options are ENERGY STAR® Certified – ENERGY STAR® Certified Trims: C6322-PL, CN6322-PL, C6322-WHT, CN6322-WHT, C6322-CLR and CN6322-CLR (all beam distributions); –C (Clear Lens) and –SL (Sandblasted Lens) trim options are not ENERGY STAR® Certified – 347V Option, Lutron and eldoLED Dimming Options are not ENERGY STAR® Certified					
WARRANTY	Five (5) year replacement after date of purchase					
SYSTEM RATING	50,000 Hours @ 70% Lumen Maintenance					

1. Lumen values are approximate, see photometric test results

CSA LISTED | ENERGY STAR | WSEC Compliant | CCEA Approved

R6 SERIES | 6-Inch Round Downlights: R6SA StopAire™ Housing

ORDERING INFORMATION

Example Order: R6SA130K12D

Housing/LED Series	Color Temp/CRI	Electrical	Dimming
R6SA1 - 12W/1100lm	*83 (80min) CRI*	**12** - 120V	**D**[1] - TRIAC/ELV/0-10V Dimming
R6SA2 - 16W/1600lm	**27K** - 2700K	**27** - 277V	**D2**[2] - 347V 0-10V Dimming
R6SA3 - 21W/2200lm	**30K** - 3000K	**34**[2] - 347V	**D3**[3] - Lutron Hi-lume 1% 2-Wire Driver
R6SA4 - 30W/3000lm	**35K** - 3500K		(120V Forward Phase Only)
R6SA5 - 38W/3700lm	**40K** - 4000K		**D4**[3] - Lutron Hi-lume 1% EcoSystem Driver
R6SA6 - 45W/4100lm	*90+ CRI*		with Soft-on, Fade-to-Black
	27KC - 2700K		**D6**[4] - eldoLED ECOdrive, 0-10V, 1% Dimming
	30KC - 3000K		**D7**[4] - eldoLED ECOdrive, DALI, 1% Dimming
	35KC - 3500K		**D8**[4] - eldoLED SOLOdrive, 0-10V, 0.1% Dimming
	40KC - 4000K		**D9**[4] - eldoLED SOLOdrive, DALI, 0.1% Dimming

1. Triac and ELV Dimming for 120V only
2. 0-10V Dimming only dimming available for 347V option. Cannot be used with Emergency Battery Backup option.
3. Lutron Hi-Lume 2-Wire Dimming available in 120V only, Eco-System available for both 120V and 277V. Lutron Dimming options are available for Series 1 through 4 only (12W through 30W); not available for use with LED Series 5 or 6 (38W or 45W).
4. eldoLED Drivers are programmed for Linear Curve Dimming as standard; for Logarithmic Curve Dimming, consult factory

Accessories
Standard Hanger Bars Supplied with Housing
HB-30 - T-Bar Hanger Set

See "Trims for 6-Inch LED Downlights" Specification Sheet for compatible Trim information and details

R6 SERIES | 6-Inch Round Downlights:
R6SA StopAire™ Housing

PRODUCT DETAILS

Construction

- Specification Grade 6-inch Round 16 Gauge Galvanized Steel StopAire™ Housing with Die-Cast Aluminum Heat Sink
- Quick-connect Light Engine for easy installation and removal
- LED Drivers are fully accessible from below the ceiling and can be easily removed
- Dual Nailer Hanger Bars are adjustable for 16- and 24-inch center joists (14-1/4- to 24-1/2-inch). Nailer Bars may be extended to rest on T-Bar ceilings; optional clip-on T-Bar Hangers available.
- Pre-wired Junction Box with eight (8) 1/2-inch Knockouts and four (4) 3/4-inch Knockouts
- Output over-voltage, over-current and short circuit protection
- Approved for Through Circuit Wiring: max. eight (8) 12 AWG (4in/4out), wiring rated for at least 90ºC
- Requires minimum 3-inch clearance around Housing from insulation material; thermal protection provided in case of improper insulation use

Performance Summary

- 2700K, 3000K, 3500K and 4000K CCTs; 80 CRI min., 83 typical; high 90+ CRI available
- Excellent fixture-to-fixture color consistency with a 3-step MacAdam Ellipse tolerance
- All R6 Downlights are available for non-dimming and dimming applications; for compatible Dimmers, refer to the Dimming Specification Sheet
- Flanged or Trimless Specification Grade Trims in several different styles and finishes available
- Trimless options require use of a Mud Frame (MF6, ordered separately) for securing housing and trim in 1/2- to 1-inch ceiling thicknesses only
- Trimless options cannot be used with Remodel Style Housings (R6RM) or with Slope Ceiling Adapters (RSA6L)
- UL8750 and Class 2 Compliant; RoHS Compliant, US only
- Assembled in the USA

R6 SERIES | Trims for 6-Inch LED Downlights

FLANGED TRIM OPTIONS

C6322 - CLR
Clear Specular Reflector

C6323-CLR
Clear Reflector

C6322 Series
Specification Grade Reflector
5-3/4-Inch ID, 7-Inch OD, 4-1/4-Inch Height

Specification Grade Reflector. For Wet Location approved trim, add "–C" for Clear Lens or "–SL" for Sandblast Lens after finish code.

C6323 Series
Lensed Wall Wash Reflector Trim
5-5/8-Inch ID, 7-Inch OD, 4-1/4-Inch Height

	Quantity
C6322N-CLR* - 32° Narrow Beam Clear Specular Reflector	
C6322M-CLR* - 65° Medium Beam Clear Specular Reflector	
C6322W-CLR* - 74° Wide Beam Clear Specular Reflector	
C6322-PL* - 59° Platinum Reflector	
C6322-PLWHE - 59° Platinum Wheat Reflector	
C6322-WHT - 72° White Reflector	

Available with White Panted Flange, add "–WPF" to end of part number

	Quantity
C6323-CLR* - Clear Reflector	
C6323-PL* - Platinum Reflector	
C6323-WHT - White Reflector	

Available with White Panted Flange, add "–WPF" to end of part number

CTR6325L2-WHT-P
Floating Glass Disc,
White Reflector

CTR6325L2 Series
Floating Glass Disc
5-3/4-Inch ID; 7-7/8-Inch OD
Glass Diameter: 8-3/4-Inch

Cear or White Reflector with Floating Glass Disc; 1-1/4–inch drop from ceiling.

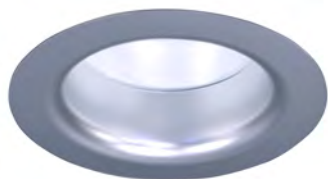|	Quantity
CTR6325L2-CLR-P - Floating Glass Disc/ Clear Reflector	
CTR6325L2-WHT-P - Floating Glass Disc/ White Reflector	

R6 SERIES | Trims for 6-Inch LED Downlights

FLANGED TRIM OPTIONS, CONTINUED

C6321-WHT-PL
White Reflector/Platinum Lower Cone

C6321 Cone Series
Two Piece Reflector with Lower Cone and Flat Lens
5-3/4-Inch ID, 7-Inch OD, 4-1/4-Inch Height

Two Piece Reflector: Upper Reflector, Lower Cone. Includes one (1) LF38-CL Clear Glass Lens. Approved for Wet Locations when Glass Lens is installed.

	Quantity
C6321-CLR-CLR - Clear Refl./Clear Lower Cone	
C6321-CLR-PL - Clear Refl./Platinum Lower Cone	
C6321-WHT-CLR - White Refl./Clear Lower Cone	
C6321-WHT-PL - White Refl./Platinum Lower Cone	

C6321-WHT-B
White Reflector/Black Baffle

C6321 Baffle Series
Two Piece Reflector with Lower Baffle and Flat Lens
5-3/4-Inch ID, 7-Inch OD, 4-1/4-Inch Height

Two Piece Reflector: White Upper Reflector, Black or White Lower Baffle. Includes one (1) LF38-CL Clear Glass Lens. Approved for Wet Locations when Glass Lens is installed.

	Quantity
C6321-CLR-B - Clear Reflector/Black Lower Baffle	
C6321-CLR-P - Clear Reflector/White Lower Baffle	
C6321-WHT-B - White Reflector/Black Lower Baffle	
C6321-WHT-P - White Reflector/White Lower Baffle	

C6327-CLR-PL
Clear Reflector/Platinum Lower Cone/
Regressed Prismatic Convex Lens

C6327 Cone Series
Two Piece Reflector:
Lower Cone with Prismatic Convex Lens
5-3/4-Inch ID, 7-Inch OD, 4-1/4-Inch Height

Two Piece Reflector with Prismatic Convex Lens: Clear or White Upper Reflector, Clear or Platinum Lower Cone, Prismatic Convex Lens with 1-1/2– inch regress. Wet Location Listed.

	Quantity
C6327-CLR-CLR - Clear Refl./Clear Lower Cone	
C6327-CLR-PL - Clear Refl./Platinum Lower Cone	
C6327-WHT-CLR - White Refl./Clear Lower Cone	
C6327-WHT-PL - White Refl./Platinum Lower Cone	

C6327-CLR-P
Clear Reflector/White Lower Baffle/
Regressed Prismatic Convex Lens

C6327 Baffle Series
Two Piece Reflector:
Lower Baffle with Prismatic Convex Lens
5-3/4-Inch ID, 7-Inch OD, 4-1/4-Inch Height

Two Piece Reflector with Prismatic Convex Lens: Clear or White Upper Reflector, Black or White Lower Baffle, Prismatic Convex Lens with 1-1/2– inch regress. Wet Location Listed.

	Quantity
C6327-CLR-B - Clear Reflector/Black Lower Baffle	
C6327-CLR-P - Clear Reflector/White Lower Baffle	
C6327-WHT-B - White Reflector/Black Lower Baffle	
C6327-WHT-P - White Reflector/White Lower Baffle	

R6 SERIES | Trims for 6-Inch LED Downlights

TRIMLESS OPTIONS

Trimless Options require use of Mud Frame accessory (MF6, ordered separately)

CN6322 * - CLR
Specular Clear Reflector
Multiple Beam Spreads

CN6323-CLR
Clear Reflector

CN6322 Series
Specification Grade Trimless Reflector
5-7/8-Inch ID, 6-1/4-Inch OD, 4-1/4-Inch Height

Specification Grade Reflector. **Trim cannot be used on Remodel Housings (R6RM) or with Slope Ceiling Adapters (RSA6L). For use with 1/2- to 1-inch ceiling thicknesses only.** For Wet Location approved trim, add "–C" for Clear Lens or "–SL" for Sandblasted Lens after finish code.

CN6323 Series
Trimless Lensed Wall Wash Reflector
5-5/8-Inch ID; 6-1/4-Inch OD

Trim cannot be used on Remodel Housings (R6RM) or with Slope Ceiling Adapters (RSA6L). For use with 1/2- to 1-inch ceiling thicknesses only.

	Quantity
CN6323-CLR - Clear Reflector	
CN6323-PL - Platinum Reflector	
CN6323-WHT - White Reflector	

	Quantity
CN6322N-CLR - 32° Narrow Beam Clear Specular Refl.	
CN6322M-CLR - 65° Medium Beam Clear Specular Refl.	
CN6322W-CLR - 74° Wide Beam Clear Specular Refl.	
CN6322-PL - 59° Platinum Reflector	
CN6322-WHT - 72° White Reflector	
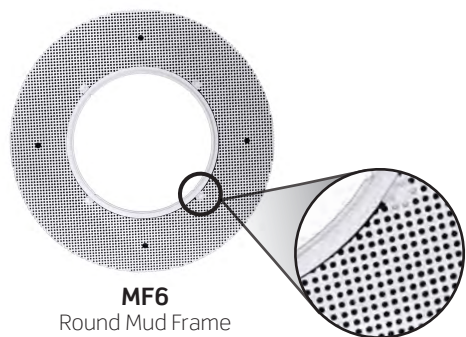
MF6
Round Mud Frame

MF6 Series
Round Mud Frame
12-Inch OD

Required for use with trimless options. Die-cast Ring with Steel Mesh Frame. Painted white.

|	Quantity
MF6 - 6-Inch Mud Frame	

R6 SERIES | 6-Inch Round Downlight Photometrics

R6NC630K12D / C6322N-CLR

Fixture Delivered Lumens: 4152.8
Total Watts@120V: 45.0
Lumens Per Watt: 92.3
Center Beam Candle Power: 10628
Beam Distribution: 31.5°
Spacing Criterion: 0.53
Color Rendering Index (CRI)[1]: 83.4
Color Temperature (CCT)[2]: 3065K

Designed for 50,000 Hour Lamp Life[3]
LM-63 Test No. G21070804
LM-79 Test No. S21072002

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	295.2	3.4
8 FT	166.1	4.5
10 FT	106.3	5.7
12 FT	73.8	6.8
14 FT	54.2	7.9
16 FT	41.5	9.0

Candela Curve

Spectral Power Distribution Chart[4]
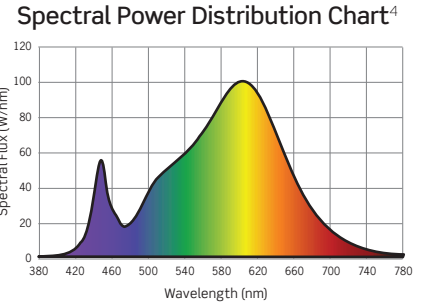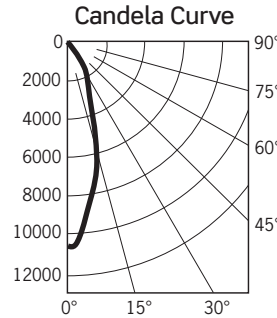
R6NC630K12D / C6322M-CLR

Fixture Delivered Lumens: 4069.6
Total Watts@120V: 45.0
Lumens Per Watt: 90.4
Center Beam Candle Power: 4259
Beam Distribution: 65.1°
Spacing Criterion: 0.95
Color Rendering Index (CRI)[1]: 83.4
Color Temperature (CCT)[2]: 3065K

Designed for 50,000 Hour Lamp Life[3]
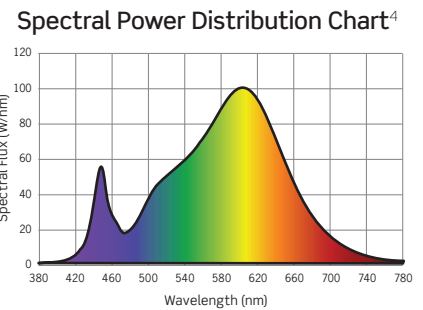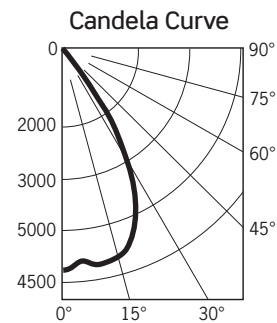LM-63 Test No. G21070803
LM-79 Test No. S21072002

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	118.3	7.7
8 FT	66.5	10.2
10 FT	42.6	12.8
12 FT	29.6	15.3
14 FT	21.7	17.9
16 FT	16.6	20.4

Candela Curve

Spectral Power Distribution Chart[4]

R6NC630K12D / C6322W-CLR

Fixture Delivered Lumens: 4197.4
Total Watts@120V: 45.0
Lumens Per Watt: 93.3
Center Beam Candle Power: 3135
Beam Distribution: 73.6°
Spacing Criterion: 1.1
Color Rendering Index (CRI)[1]: 83.4
Color Temperature (CCT)[2]: 3065K

Designed for 50,000 Hour Lamp Life[3]
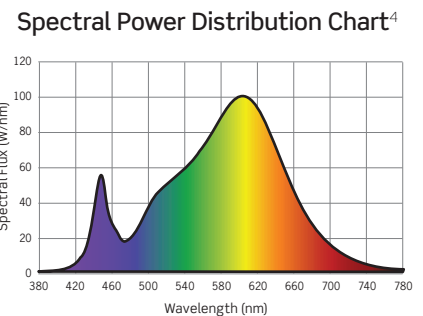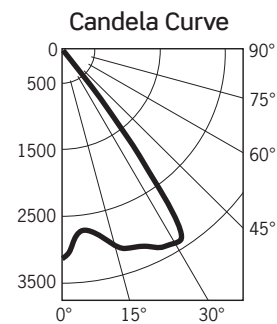LM-63 Test No. G21070806
LM-79 Test No. S21072002

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	87.1	9.0
8 FT	49.0	12.0
10 FT	31.3	15.0
12 FT	21.8	17.9
14 FT	16.0	20.9
16 FT	12.2	23.9

Candela Curve

Spectral Power Distribution Chart[4]

1. Accuracy of Rendering Colors   2. Color Appearance of Light Source   3. Dependent on Surrounding Temperatures   4. Colors Present within the Light Source

PHOTOMETRIC MULTIPLICATION FACTORS

Lumen output values fluctuate based on Color Temperature, Luminaire Wattage/Output and Trim Selection. To estimate lumen output of these various options, multiply 3000K results by the following:

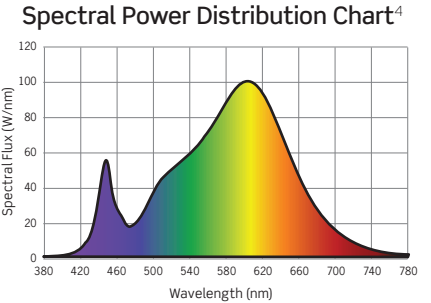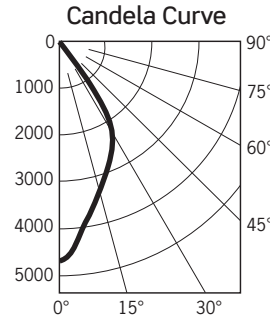| CCT MULTIPLIERS			OUTPUT MULTIPLIERS					TRIM MULTIPLIERS	
CCT	STD CRI	HIGH CRI	12W/SERIES 1	16W/SERIES 2	21W/SERIES 3	30W/SERIES 4	38W/SERIES 5	C6322-PL	C6322-WHT
2700K	0.94	0.70	0.28	0.39	0.54	0.72	0.88	1.02	0.92
3000K	N/A	0.75							
3500K	1.0	0.81							
4000K	1.0	0.87							

R6 SERIES | 6-Inch Round Downlight Photometrics

R6NC630K12D / C6322-PL

Fixture Delivered Lumens: 4141.0
Total Watts@120V: 45.0
Lumens Per Watt: 92.0
Center Beam Candle Power: 5337
Beam Distribution: 58.5°
Spacing Criterion: 0.91
Color Rendering Index (CRI)[1]: 83.4
Color Temperature (CCT)[2]: 3065K

Designed for 50,000 Hour Lamp Life[3]
LM-63 Test No. G21070805
LM-79 Test No. S21072002

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	148.3	6.7
8 FT	83.4	9.0
10 FT	53.4	11.2
12 FT	37.1	13.5
14 FT	27.2	15.7
16 FT	20.8	17.9

Candela Curve

Spectral Power Distribution Chart[4]

1. Accuracy of Rendering Colors   2. Color Appearance of Light Source   3. Dependent on Surrounding Temperatures   4. Colors Present within the Light Source

PHOTOMETRIC MULTIPLICATION FACTORS

Lumen output values fluctuate based on Color Temperature, Luminaire Wattage/Output and Trim Selection. To estimate lumen output of these various options, multiply 3000K results by the following:

CCT MULTIPLIERS			OUTPUT MULTIPLIERS					TRIM MULTIPLIERS	
CCT	STD CRI	HIGH CRI	12W/SERIES 1	16W/SERIES 2	21W/SERIES 3	30W/SERIES 4	38W/SERIES 5	C6322-PL	C6322-WHT
2700K	0.94	0.70	0.28	0.39	0.54	0.72	0.88	1.02	0.92
3000K	N/A	0.75							
3500K	1.0	0.81							
4000K	1.0	0.87							

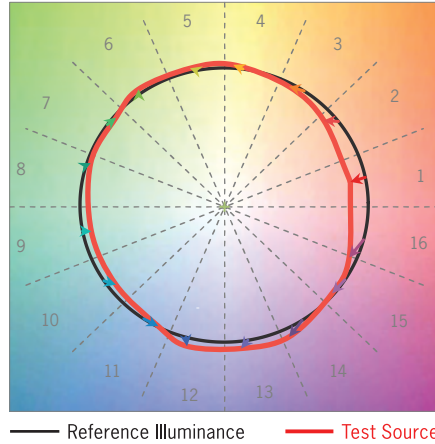# R6 SERIES | 6-Inch Round Downlight Photometrics

TM-30 DATA: R6NC630K12D / C6322M-CLR

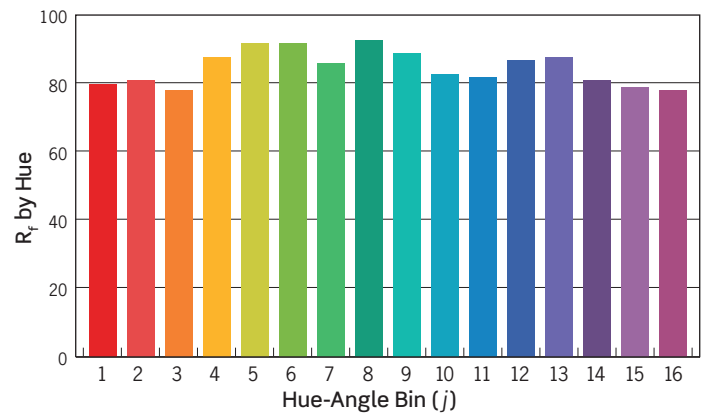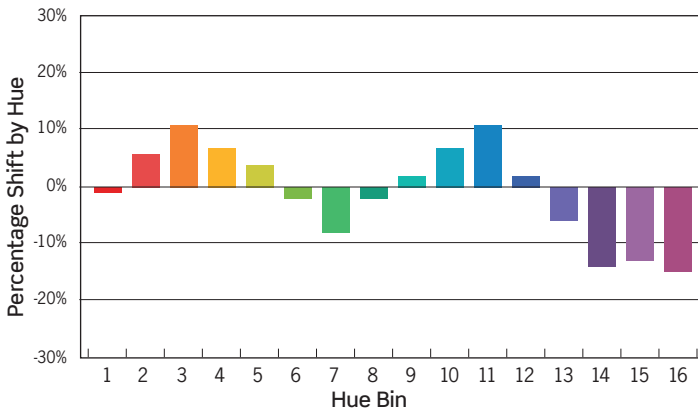ANSI/IES TM-30-18 Color Rendition Report Test No. S21072002   Colors are for visual orientation purposes only

Color Vector Graphic

Reference Illuminance — Test Source

R_f	86
R_g	97
CCT(K)	3065K
D_{uv}	0.0017
u^I	0.2477
v^I	0.5224

Spectral Power Distribution Comparison

Reference Illuminance
Test Source
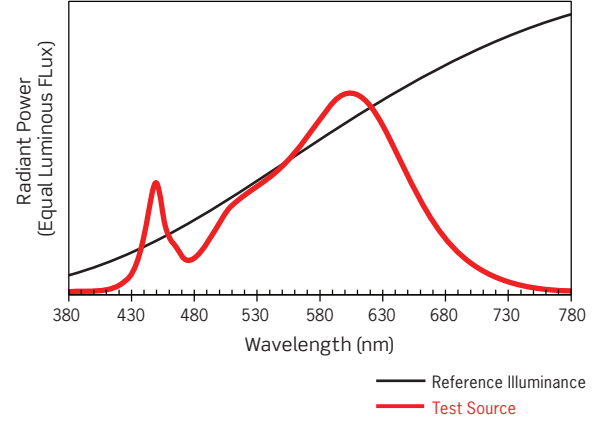
HUE BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HUE SHIFT	−1%	6%	11%	7%	4%	−2%	−8%	−2%	1%	7%	11%	2%	−6%	−14%	−13%	−15%
R_f VALUE	81	82	79	88	93	93	87	94	91	85	83	88	89	82	80	80

R6 SERIES | 6-Inch Round Downlights: Dimming Specifications

- Incandescent 120V AC Dimmers adjust the light with *Forward Phase Control,* where the Dimmer "chops" the forward part of the AC Wave to deliver less or more power to the light source. No Neutral Wire Connection required.
- Electronic Low Voltage 120V AC Dimmers adjust the light with *Reverse Phase Control,* where the Dimmer "chops" the back part of the AC Wave to deliver less or more power to the light source. Neutral Wire Connection required.
- 0–10V DC Low Voltage Dimmers operate using two (2) Low Voltage Dimming Wires that are separate from the 120V or 277V AC Power. The Dimmer sends a Variable Output Voltage to the luminaire based upon the dimming level. 10V Corresponds to undimmed operation, 5V to 50% and so on. Switching On/Off is controlled with the Line Voltage Power Input to the Dimmer (120V or 277V AC). Dimming operation is controlled with the 0–10V DC Low Voltage Wiring Connection between the Dimmer and the LED Driver. The Control Signal runs on two (2) low voltage control wires color coded Violet and Gray/Pink.
- Lutron HiLume and EcoSystem Drivers provide continuous dimming from 1%–100%. For a complete list of compatible Dimmers and Controls, visit www.lutron.com
- Use DALI approved Controls for dimming eldoLED ECOdrive, 1% Dimming (Dimming Option D7 or MVD7) and eldoLED SOLOdrive, 0.1% Dimming (Dimming Option D9 or MVD9).

Manufacturer	Product	Model	TRIAC, ELV, 0-10V DIMMING (12D, 27D or MVD Option*) Light Output	eldoLED ECOdrive 0-10V (12D6, 27D6 or MVD6 Option) Light Output	eldoLED SOLOdrive 0-10V (12D8, 27D8 or MVD8 Option) Light Output
Leviton	IllumaTech	IPI06-1LZ	1%-100%	NA	NA
Leviton	SureSlide	6631-2	1%-100%	NA	NA
Leviton	Vizia	VPE06	9%-100%	NA	NA
Leviton	Trimatron	6683-IW	6%-100%	NA	NA
Leviton	Decora	6161	15%-100%	NA	NA
Leviton	SureSlide	6633-P	1%-100%	NA	NA
Leviton	IllumaTech	IPE04	6%-100%	NA	NA
Leviton	IllumaTech	IP710-DLX	NA	1%-100%	0.1%-100%
Cooper	Devine	DLC03P	1%-100%	NA	NA
Cooper	Skye	SLC03P	0%-100%	NA	NA
Cooper	Decorator	DAL06P	0%-100%	NA	NA
Pass & Seymour	Titan	CD4FB-W	NA	1%-100%	0.1%-100%
Synergy		ISD BC	NA	1%-100%	0.1%-100%
Watt Stopper	Miro Decorator	DCLV1	NA	1%-100%	0.1%-100%
Lutron	Ariadni	TGCL-153P	1%-100%	NA	NA
Lutron	Ariadni	TG-600P	13%-100%	NA	NA
Lutron	Diva	DVCL-153P	1%-100%	NA	NA
Lutron	Diva	DV600P	6%-100%	NA	NA
Lutron	Diva	DVELV303P	6%-100%	NA	NA
Lutron	Diva	DVTV	NA	1%-100%	0.1%-100%
Lutron	Faedra	FAELV500	12%-100%	NA	NA
Lutron	Lumea	LG600P	8%-100%	NA	NA
Lutron	Maestro	MAELV600	16%-100%	NA	NA
Lutron	Nova	NFTV	NA	1%-100%	0.1%-100%
Lutron	Nova T	NTFTV	NA	1%-100%	0.1%-100%
Lutron	Skylark	S-603PG	5%-96%	NA	NA
Lutron	Skylark	S600P	5%-100%	NA	NA
Lutron	Skylark	SELV300P	10%-100%	NA	NA
Lutron	Skylark	CT103P	9%-100%	NA	NA

277V Triac Dimming is not available

NOTES
1. Testing was performed with a single luminaire connected to Dimmer.
2. Testing has been performed on these Dimmers, but this does not imply any warranty of compatibility.
3. Dimming performance can be influenced by different Loads, as well as variations in Dimmer Switches within the same Model.
4. Dimmer Maximum Load Rating with LED may differ from published Traditional Source Dimmer Ratings. Consult manufacturer for maximum Dimmer information.
5. Consult factory for additional dimming information.