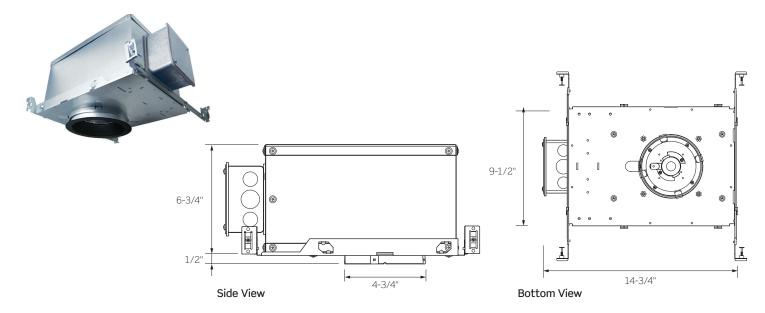


TYPE

**PROJECT** 

CATALOG NO.

# **R4IC SERIES** | 4-Inch Round Insulated Ceiling (IC)/StopAire™ Downlight















ASTM E283

Ceiling Opening: 4-7/8-Inches Ceiling Thickness: 1/2- to 1-1/2-Inches

	R4IC1	R4IC2	R4IC3	R4IC4
WATTAGE	12W	16W	21W	30W
LUMEN OUTPUT <sup>1</sup>	1100Lm	1600Lm	2200Lm	3000Lm
COLOR TEMPERATURE	2700K / 3000K / 3500K /	4000K		
CRI	83 (80min) / 90+			
DRIVER INPUT WATTAGE	12W	16W	21W	30W
INPUT CURRENT (A) 120V/277V/347V	.08/.04/.03	.12/.06/.04	.17/.08/.06	.23/.11/.08
INPUT VOLTAGE				,
120V - 277V Standard Driver	90-305VAC, 50/60Hz			
347V Standard Driver	347VAC, 50/60Hz			
Lutron Eco-System® Driver	river 120–277VAC, 50/60Hz			
eldoLED ECOdrive / SOLOdrive	120-277VAC, 50/60Hz			
DRIVER POWER FACTOR	> 0.90			
TOTAL HARMONIC DISTORTION	< 20%			
LISTINGS	cCSAus Certified to UL Standards; Suitable for Damp Locations ENERGY STAR® Certified			
	Conforms to Washington S ASTM E283 (2.0 CFM or le	tate Energy Code (WSEC) for ss)	Low Air Infiltration; tested in	accordance with
WARRANTY	ANTY Five (5) year replacement after date of purchase			
SYSTEM RATING	50,000 Hours @ 70% Lum	en Maintenance		

<sup>1.</sup> Approximate lumen output based on 3000K performance; see photometric test results for additional information



# R4IC SERIES | 4-Inch Round Insulated Ceiling (IC)/StopAire™ Downlight

#### ORDERING INFORMATION

Housing/LED Series	Color Temp/CRI	Electrical/Dimming
R4IC1 12W/1100lm R4IC2 16W/1600lm R4IC3 21W/2200lm R4IC4 30W/3000lm	83 (80min) CRI       90 CRI         27K       2700K       27KC       2700K         30K       3000K       30KC       3000K         35K       3500K       35KC       3500K         40K       4000K       40KC       4000K	MVD¹ 120-277V Forward/Reverse Phase/0-10V Dimming 34D2² 347V 0-10V Dimming MVD4³ Lutron Hi-lume 1% EcoSystem Driver with Soft-on, Fade-to-Black MVD6⁴ eldoLED ECOdrive, 0-10V, 1% Dimming MVD7⁴ eldoLED ECOdrive, DALI, 1% Dimming MVD8⁴ eldoLED SOLOdrive, 0-10V, 0.1% Dimming MVD9⁴ eldoLED SOLOdrive, DALI, 0.1% Dimming

<sup>1.</sup> Forward/Reverse Phase Dimming for 120V only

#### **ACCESSORY ORDERING INFORMATION**

#### **Mounting Accessories**

Standard Hanger Bars Supplied with Housing

HB-30 T-Bar Hanger Set

See page 3 for compatible Trim information and details

## **PRODUCT SPECIFICATIONS**

#### CONSTRUCTION

- Specification Grade 4-inch round 16 gauge Galvanized Steel Insulated Ceiling (IC)/StopAire™ Housing with Die-Cast Aluminum Heat Sink
- For use in applications with direct contact with insulation materials
- Quick-connect Light Engine; 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 concentric Knockouts
- Output over-voltage, over-current and short circuit protection
- Approved for Through Circuit Wiring: max. eight (8) 12 AWG (4-in/4-out), wiring rated to 90°C

#### PERFORMANCE SUMMARY

- 2700K, 3000K, 3500K and 4000K CCTs; 80 CRI min., 83 typical; high CRI of 90+ available
- Excellent fixture-to-fixture color consistency with a 3-step MacAdam Ellipse tolerance

Example Order: R4IC230KCMVD9

- All R4 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 (MF4, ordered separately) for securing Downlight and Trim in a 1/2- to 1-inch ceiling thickness only
- Trimless options cannot be used on Remodel Style Housings (R4RM) or with RSA4L Slope Ceiling Adapters
- UL8750 and Class 2 Compliant; RoHS Compliant, US only
- Assembled in the USA

<sup>2.</sup> eldoLED Drivers are programmed for Linear Curve Dimming as standard; for Logarithmic Curve Dimming, consult factory



# R4 SERIES | Trims for 4-Inch Round Downlights

#### **TRIMMED OPTIONS**



C4321-WHT-PL



## C4321 Series: Cone Series

## Two Piece Reflector with Lower Cone

- 3-7/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- Two Piece Reflector: Upper Reflector with Lower Cone
- Includes one (1) LF20-CL Clear Glass Lens
- Approved for Wet Locations when Glass Lens is installed

Trim	
0.4004 01.0 01.0	
C4321-CLR-CLR	Clear Reflector/Clear Lower Cone
C4321-CLR-PL	Clear Reflector/Platinum Lower Cone
C4321-WHT-CLR	White Reflector/Clear Lower Cone
C4321-WHT-PL	White Reflector/Platinum Lower Cone



#### C4321 Series: Darrie Series

### Two Piece Reflector with Lower Baffle

- 3-7/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- Two Piece Reflector: Upper Reflector with Lower Baffle
- Includes one (1) LF20-CL Clear Glass Lens
- Approved for Wet Locations when Glass Lens is installed

Trim	
C4321-CLR-B	Clear Reflector/Black Lower Baffle
C4321-CLR-P	Clear Reflector/White Lower Baffle
C4321-WHT-B	White Reflector/Black Lower Baffle
C4321-WHT-P	White Reflector/White Lower Baffle



C4327-CLR-PL



#### C4321 Series: Cone Series

# Two Piece Reflector with Lower Cone and Prismatic Convex Lens

- 3-7/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- Two Piece Reflector: Upper Reflector with Lower Cone and Prismatic Convex Lens
- Lens has 1-1/2-inch regress
- Approved for Wet Locations

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#### C4327 Series: Baffle Series

C4327-CLR-P

# Two Piece Reflector with Lower Baffle and Prismatic Convex Lens

- 3-7/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- Two Piece Reflector: Upper Reflector with Lower Baffle and Regressed Prismatic Convex Lens
- Lens has 1-1/2-inch regress
- Approved for Wet Locations

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C4327-CLR-CLR	Clear Reflector/Clear Lower Cone
C4327-CLR-PL	Clear Reflector/Platinum Lower Cone
C4327-WHT-CLR	White Reflector/Clear Lower Cone
C4327-WHT-PL	White Reflector/Platinum Lower Cone



C4327-CLR-B	Clear Reflector/Black Lower Baffle
C4327-CLR-P	Clear Reflector/White Lower Baffle
C4327-WHT-B	White Reflector/Black Lower Baffle
C4327-WHT-P	White Reflector/White Lower Baffle



# R4 SERIES | Trims for 4-Inch Round Downlights

#### **TRIMMED OPTIONS**



C4322-CLR



#### C4322 Series

#### Specification Grade Reflector

- 4-3/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- For Wet Location approved trim, add "-C" for Clear Lens or "-SL" for Sandblast Lens after finish code
- White Painted Flange available for -CLR and -PL finish trims; add "-WPF" to the end of the part number

#### Trim

C4322N-CLR¹35° Narrow Beam Clear Specular ReflectorC4322M-CLR¹51° Medium Beam Clear Specular ReflectorC4322W-CLR¹80° Wide Beam Clear Specular Reflector

C4322-PL¹ 59° Platinum Reflector
C4322-PLWHE 59° Platinum Wheat Reflector
C4322-WHT 70° White Reflector

1. Finish available with White Panted Flange; add "-WPF" to end of part number



C4323-CLR

## C4323 Series

#### Lensed Wall Wash Reflector

• 4-Inch ID; 5-11/16-Inch OD

#### Trim

C4323-CLR¹ Clear Reflector
C4323-PL¹ Platinum Reflector
C4323-WHT White Reflector

 $1. \ {\it Finish available with White Panted Flange; add "-WPF" to end of part number} \\$ 



C4322DF Series

#### ISOWET Dead Front Reflector

- 4-3/8-Inch ID, 5-11/16-Inch OD, 3-1/8-Inch Height
- Isolated, Wet Location approved Thermoplastic Reflector
- Clear Glass Lens deeply regressed inside top of Reflector

#### Trin

C4322DF-SL¹ Satin Silver Painted Dead Front Reflector
C4322DF-WHT Matte White Painted Dead Front Reflector

1. Finish available with White Panted Flange; add "-WPF" to end of part number



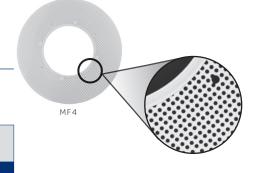
# R4 SERIES | Trims for 4-Inch Round Downlights

#### **MUD FRAME**

**NOTE:** The Mud Frame is required for trimless applications

#### **Mud Frame**

- · Die-cast ring with steel mesh frame, painted white
- 10-Inch Outer Diameter
- Required for trimless applications



Mud Frame

#### MF4

#### **TRIMLESS OPTIONS**



CN4322-CLR



#### CN4322 Series

#### Specification Grade Trimless Reflector

- 4-3/8-Inch ID, 4-3/4-Inch OD, 4-3/8-Inch Height
- For Wet Location approved trim, add "-C" for Clear Lens or "-SL" for Sandblast Lens after finish code
- For use with 1/2- to 1-inch ceiling thicknesses only
- Trim cannot be used on Remodel Housings (R4RM) or with Slope Ceiling Adapters (RSA4L)



CN4322N-CLR 35° Narrow Beam Clear Reflector
CN4322M-CLR 51° Medium Beam Clear Reflector
CN4322W-CLR 80° Wide Beam Clear Reflector
CN4322-PL 59° Platinum Reflector
CN4322-WHT 70° White Reflector

#### Lens Opitons

No Lens, Leave Blank

**C** Clear

SL Sandblast

# CN4323-PL

#### **CN4323 Series**

## Trimless Wall Wash Reflector with Lens

- 4-Inch ID, 4-3/4-Inch OD
- For use with 1/2- to 1-inch ceiling thicknesses only
- Trim cannot be used on Remodel Housings (R4RM) or with Slope Ceiling Adapters (RSA4L)

#### Trim

CN4323-CLR Clear Reflector
CN4323-PL Platinum Reflector
CN4323-WHT White Reflector



# R4 SERIES | 4-Inch Round Downlight Photometrics

## R4NC630K12D / C4322N-CLR: 3000K, 80 CRI, CLEAR REFLECTOR, NARROW BEAM

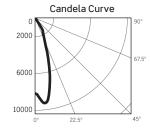
#### LM-63 Test No. G21070604; LM-79 Test No. S21072001

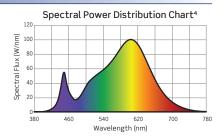
Fixture Delivered Lumens: 4105.5 Total Watts@120V: 45.2 Lumens Per Watt: 90.8 Center Beam Candle Power: 8153 Beam Distribution: 35.5° Spacing Criterion: 0.60

Color Rendering Index (CRI)<sup>1</sup>: 83.3 Color Temperature (CCT)<sup>2</sup>: 3079K Designed for 50,000 Hour Lamp Life<sup>3</sup>

## Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIA. (FT.)
6 FT	226.5	3.8
8 FT	127.4	5.1
10 FT	81.5	6.4
12 FT	56.6	7.7
14 FT	41.6	9.0
16/FT	31.8	10.2





#### R4NC630K12D / C4322M-CLR: 3000K, 80 CRI, CLEAR REFLECTOR, MEDIUM BEAM

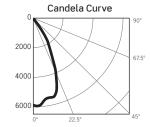
#### LM-63 Test No. G21070605; LM-79 Test No. S21072001 Fixture Delivered Lumens: 4176.6

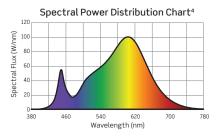
Total Watts@120V: 45.2 Lumens Per Watt: 92.4 Center Beam Candle Power: 5860 Beam Distribution: 51.2° Spacing Criterion: 0.79 Color Rendering Index (CRI)¹: 83.3 Color Temperature (CCT)²: 3079K

Designed for 50,000 Hour Lamp Life<sup>3</sup>

## Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIA. (FT.)
6 FT	162.8	5.8
8 FT	91.6	7.7
10 FT	58.6	9.6
12 FT /	40.7	11.5
14 FT	29.9	13.4
16/FT	22.9	15,3





#### R4NC630K12D / C4322W-CLR: 3000K, 80 CRI, CLEAR REFLECTOR, WIDE BEAM

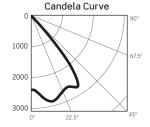
#### LM-63 Test No. G21070602; LM-79 Test No. S21072001 Fixture Delivered Lumens: 4220.8

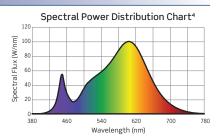
Total Watts@120V: 45.2 Lumens Per Watt: 93.4 Center Beam Candle Power: 2402 Beam Distribution: 80.0° Spacing Criterion: 1.2

Color Rendering Index (CRI)<sup>1</sup>: 83.3 Color Temperature (CCT)<sup>2</sup>: 3079K Designed for 50,000 Hour Lamp Life<sup>3</sup>

#### Intensity Distribution

	-	
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIA. (FT.)
6 FT	66.7	10.1
8 FT	37.5	13.4
10 FT	24.0	16.8
12 FT /	16.7	20.2
14 FT	12.3	23.5
16/FT	9.4	26.9





#### R4NC630K12D / C4322-PL: 3000K, 80 CRI, PLATINUM REFLECTOR, MEDIUM BEAM

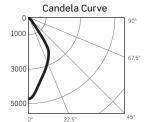
#### LM-63 Test No. G21070601; LM-79 Test No. S21072001

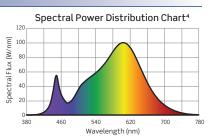
Fixture Delivered Lumens: 3781.4 Total Watts@120V: 45.2 Lumens Per Watt: 83.7 Center Beam Candle Power: 4724 Beam Distribution: 59.0° Spacing Criterion: 0.91 Color Rendering Index (CRI)<sup>1</sup>: 83.3 Color Temperature (CCT)<sup>2</sup>: 3079K

Designed for 50,000 Hour Lamp Life<sup>3</sup>

#### Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIA. (FT.)
6 FT	131.2	6.8
8 FT	73.8	9.0
10 FT	47.2	11.3
12 FT /	32.8	13.5
14 FT	24.1	15.8
16/FT	18.5	18.1





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 the various CCT/CRI options, multiply 3000K (80 CRI min) results by the following:

CCT MULTIPLIERS							
CCT	STANDARD CRI	HIGH (90+) CRI					
2700K	0.94	0.70					
3000K	1.00	0.75					
3500K	1.02	0.81					
4000K	1.04	0.87					

OUTPUT MULTIPLIERS								
12W/SERIES 1	16W/SERIES 2	21W/SERIES 3	30W/SERIES 4	38W/SERIES 5				
0.28	0.39	0.54	0.72	0.89				

TRIM MULTIPLIERS						
C4322-PL	C4322-WHT					
0.91	0.93					



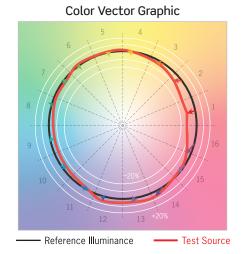
# R4 SERIES | 4-Inch Round Downlight Photometrics

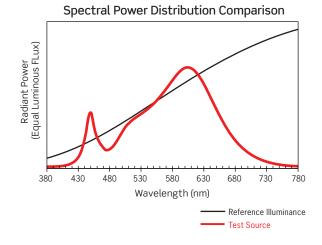
## TM-30 DATA: R4NC630K12D / C4322M-CLR

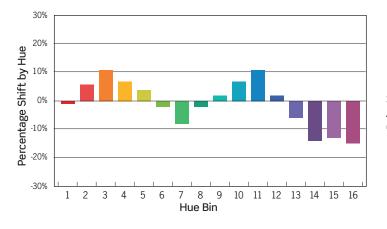
ANSI/IES TM-30-18 Color Rendition Report Test No. S21072001

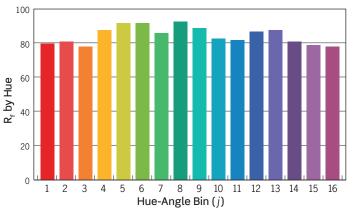
Colors are for visual orientation purposes only

R <sub>f</sub>	86
$R_{\rm g}$	97
CCT(K)	3079K
D <sub>uv</sub>	0.0016
u¹	0.2473
V <sup>I</sup>	0.5220









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%	2%	7%	11%	2%	-6%	-14%	-13%	-15%
R <sub>f</sub> VALUE	81	82	79	89	93	93	87	94	90	84	83	88	89	82	80	79



# R4 SERIES | 4-Inch Round Downlights: Dimming Specifications

			PHASE/0-10V DIMMING (D, D2, or MVD Option*)	eldoLED ECOdrive 0-10V (D6, D8, MVD6, or MVD8 Option)	eldoLED SOLOdrive 0-10V (D7, D9, MVD7, or MVD9 Option)
Manufacturer	Product	Model	Light Output	Light Output	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 Phase Dimming is not available

#### PHASE DIMMING

- 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 DIMMING

• 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 Pink/Gray.

#### EcoSystem/ECOdrive DIMMING

- Lutron 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).

#### **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.