Project		Catalog #		Type	
Prepared by		Notes		Date	

HALO

LCR4

4-Inch Round Canless LED Downlight and Wallwash

Typical Applications

Residential · Multi-family · Mixed-Use

Interactive Menu

- Order Information page 2
- Product Specifications page 2
- Photometric Data page 3
- Energy & Performance Data page 3
- Product Warranty
- Dimming Guide

Product Certification

ENERGY STAR | **IECC** Can be used for International Energy Conservation Code High Efficacy Compliance | **T24** Efficiency Standards Can be used to comply with 2016 Title 24 Part 6 LED Enclosed Light Source Requirements (JA8) | **UL CERTIFIED** | **RoHS COMPLIANT** | **IC RATED**

Refer to ENERGY STAR® Certified Products List.
Can be used to comply with California Title 24 High Efficacy requirements.
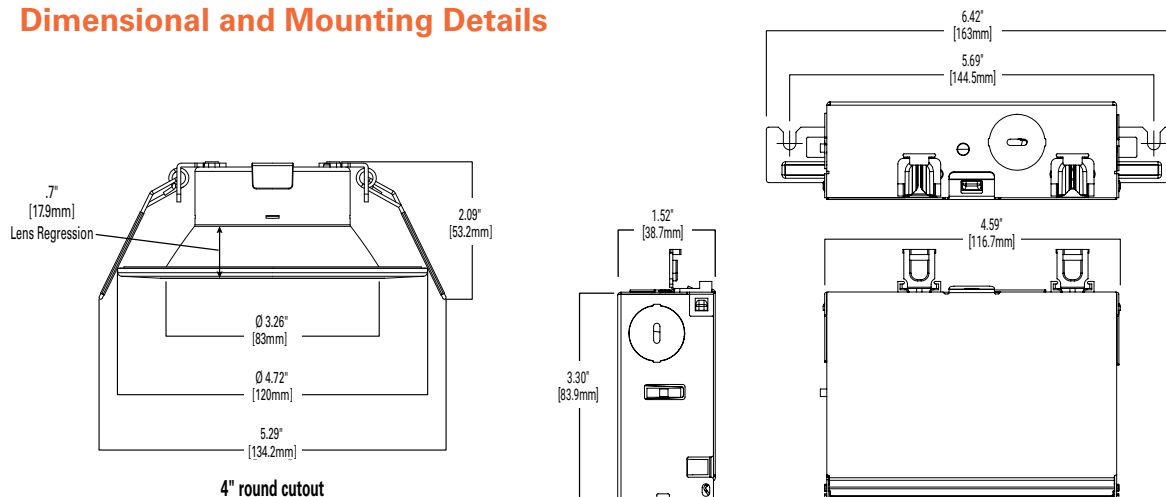Certified to California Appliance Efficiency Database under JA8.

Product Features

6 seleCCTable colors 2700K · 3000K · 3500K 4000K · 5000K · 6500K | air-tite | Showerlight | NO HOUSING NEEDED! | BATTERY BACKUP

Top Product Features

- Select from 6 CCTs via switch; 2700K, 3000K, 3500K, 4000K, 5000K, 6500K CCT; 90 CRI
- Up to 1200 Lumens; IC rated
- Canless - does not require recessed housing or junction box
- Dual Dim: 0-10V and Phase Cut, dimmable down to 5%
- Wet location listed for showers and protected ceilings - Downlights only

Dimensional and Mounting Details

.7" [17.9mm] Lens Regression

2.09" [53.2mm]

Ø 3.26" [83mm]

Ø 4.72" [120mm]

5.29" [134.2mm]

4" round cutout

1.52" [38.7mm]

3.30" [83.9mm]

6.42" [163mm]

5.69" [144.5mm]

4.59" [116.7mm]

additional product diagrams

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Order Information*

SAMPLE ORDER NUMBER: **LCR408RD9FSE020**

Models	Lumens	Shape	CRI/CCT	Driver
LCR4 = 4" Canless LED Downlight [1]	**08** = 800 lumens (nominal) **12** = 1200 lumens (nominal)	**RD** = Round **WW** = Wall Wash [1] [2]	**9FS** = 90 CRI minimum, field selectable CCT, choose 2700K, 3000K, 3500K, 4000K, 5000K or 6500K CCT	**E020** = UNV 120-277, 50/60Hz, Dual Dim with 0-10V and Phase Cut options for 100% to 5% dimming **E040** = UNV 120-277, 50/60Hz, Dual Dim with 0-10V and Phase Cut options for 100% to 5% dimming + Emergency Battery Pack [3] [4] [5]
Notes 1. Product available in Matte White finish as standard.	**Notes**	**Notes** 1. Battery backup option not available with WW option 2. Wet Location not available with WW option	**Notes**	**Notes** 3. Do not qualify for ENERGY STAR® 4. Only available in RD Shape option 5. Emergency battery with backup up to 90 minutes

Accessories		
Designer Trims **LCR4TRMAH** = 4" Haze, white flange **LCR4TRMSC** = 4" Specular, white flange **LCR4TRMTBZ** = 4" Tuscan bronze **LCR4TRMWH** = 4" Paintable white **LCR4WB** = 4" White Baffle Trim **LCR4BB** = 4" Matte Black Baffle Trim	**Overized Trim Ring** **HLB4ROTMW** = 4" round oversized trim, matte white **Mounting Frame** **HL4RSMF** = 4" round and square mounting frame	**Extension Cable	seleCCTable Driver/Jbox** **HLB06BLEEC** = 6 ft. extension cable **HLB12BLEEC** = 12 ft. extension cable **HLB20BLEEC** = 20 ft. extension cable

Product Specifications

Module
- Module construction includes LED Array, reflector, lens, and housing
- Integral aluminum heat sink provides passive thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications
- LED module provides .703" lens regression

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 within 3 SDCM and 7 SDCM at the CCT endpoints and 4 SDCM in between the endpoints, provide color accuracy and uniformity.
- Correlated Color Temperature (CCT) has a selectable range from 2700K to 6500K (factory default 3000K)
- Use the switch to choose between 2700K, 3000K, 3500K, 4000K, 5000K and 6500K CCT

Optical Assembly
- Regressed flat lens provides uniformity, UGR ≤ 10
- Exceeds ENERGY STAR® color angular uniformity requirements

Remote Driver/Junction Box
- Metal driver/junction box with captive hinged junction box cover. Listed for (6) #12 AWG 90˚C splice conductors, 2-in, 2-out plus (2) ground
- (4) 1/2" conduit pry-outs
- (2) Slide-N-Side™ non-metallic (NM) wire traps all accepts 14-2, 14-3, 12-2, 12-3 U.S and 14-2, 14-3, 12-2 Canadian NM cable
- (3) 4-port push wire nuts with clear caps for quick and reliable mains voltage connections
- Integral keyhole mounting slots facilitate direct mounting to building structure or new construction mounting frame

Driver
- Integral 120-277V, 50/60Hz constant current driver provides noise free operation
- Dual Dim with 0-10V and Phase Cut options for 100% to 5% dimming
- Continuous, flicker-free dimmer from 100% to 5%
- Plenum rated inline electrical quick connect provides low voltage connection to fixture fitting

Installation
- Can be installed in 3/8" to 1-1/4" thick ceilings
- Cutout can utilize standard round hole saw sizes, cutout template provided
- Mousetrap springs hold fixture fitting securely in the ceiling eliminating light leaks
- Can be removed from below the ceiling for service or replacement

Mounting / Retention
- The LCR4 requires no housing or third party junction box
- The remote enclosure may be used in direct contact with insulation.
- Installer must cut template out of drywall and install into aperture with the clips compressed.
- When released, the mousetrap springs will rest on to the back side of the drywall
- Not for installation in recessed cans

Emergency Battery Backup
- Emergency battery backup only available in downlight versions, not available in wall wash versions
- Emergency battery backup up to 90 minutes
- Emergency battery backup light will be at 6500K CCT
- Emergency battery backup is a separate battery junction box provided with unit.
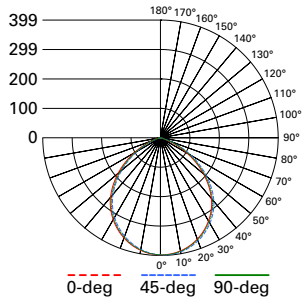
Compliance
- UL Certified for US and Canada, type IC suitable for direct contact with air permeable insulation
- Not for use in direct contact with spray foam insulation, reference NEMA LSD57-2013
- Wet location listed and IP64 ingress protection rated, covered ceiling only (downlights only)
- Airtight per ASTM-E283-04
- 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, CAN ICES-005(B)/NMB-005 (B)
- 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 LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 JA8 High Efficacy Lighting
- ENERGY STAR® certified, reference "Certified Light Fixtures" database (does not apply to EM versions)

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/warranty

Photometric Data

LCR408RD9FSE020-11W-3000K

399
299
200
100
0

180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50° 40° 30° 20° 10° 0°

0-deg   45-deg   90-deg

Spacing criterion:
(0-180) 1.21 | (90-270) 1.21 | (Diagonal) 1.3
Beam Angle: 98°
Field Angle: 140°
Lumens: 890
Input Watts: 10.7 W
Efficacy: 83.2 LPW
UGR: 21
Test Report: P640192

Zonal Lumen	Lumens	% Lumens
0-30	304	34.2
0-40	490	55.1
0-60	800	89.8
0-90	889	99.9

TM-30-15	Rf = 92
	Rg = 104
CRI/CIE	Ra = 93
	R9 = 86.8

CCT - Range of 2700K- 6500K

warm ← → cool

98°

LCR412RD9FSE020-14W-3000K

579
434
290
145
0

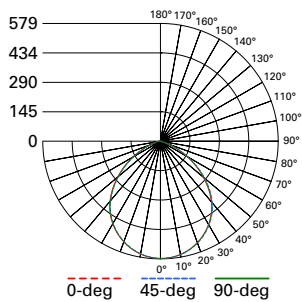180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50° 40° 30° 20° 10° 0°

0-deg   45-deg   90-deg

Spacing criterion:
(0-180) 1.22 | (90-270) 1.21 | (Diagonal) 1.3
Beam Angle: 98°
Field Angle: 140°
Lumens: 1295
Input Watts: 14.4 W
Efficacy: 89.9 LPW
UGR: 22
Test Report: P640180

Zonal Lumen	Lumens	% Lumens
0-30	442	34.2
0-40	714	55.1
0-60	1164	89.9
0-90	1294	99.9

TM-30-15	Rf = 93
	Rg = 103
CRI/CIE	Ra = 93
	R9 = 86.4

CCT - Range of 2700K- 6500K

warm ← → cool

98°

Energy and Performance Data

LCR4 - 800 Lumen Downlight		
	UNV	120V
Lumens	800	800
Input Voltage	120-277	120
Input current	0.1A	0.1A
Input Power	10.5W	10.5W
Efficiency	76.00%	76.00%
Inrush(A)	2	1
THD	<20%	<20%
PF	>0.9	>0.9
Sound Rating	<22dB	<22dB

LCR4 - 1200 Lumen Downlight		
	UNV	120V
Lumens	1200	1200
Input Voltage	120-277	120
Input current	0.13A	0.13A
Input Power	14.5W	14.5W
Efficiency	80.00%	80.00%
Inrush(A)	2	1
THD	<20%	<20%
PF	>0.9	>0.9
Sound Rating	<22dB	<22dB

Tested in accordance with IES LM63. Field results may vary.

Note: Refer to IES files for more product data.

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Photometric Data
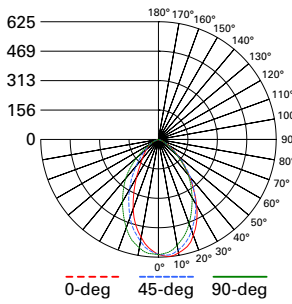
LCR408WW9FSE020-8W-3000K

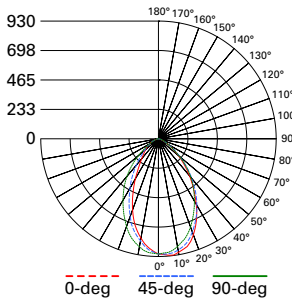Spacing criterion:
(0-180) 0.91 | (90-270) 0.97 | (Diagonal) 1
Lumens: 830
Input Watts: 8.1 W
Efficacy: 102.5 LPW
Test Report: P645612

0-deg   45-deg   90-deg

Zonal Lumen	Lumens	% Lumens
0-30	395	47.6
0-40	571	68.8
0-60	778	93.7
0-90	830	100

TM-30-15	Rf = 91
	Rg = 102
CRI/CIE	Ra = 93
	R9 = 70.7

CCT - Range of 2700K- 6500K

	SINGLE UNIT FOOTCANDLES						
	3' from wall (distance from fixture along wall)						
1	1.6	1.2	0.6	0.3	0.2	0.1	0
2	5.3	4.3	2.4	1.1	0.5	0.3	0.1
3	7.4	6.3	4.1	2.2	1	0.5	0.3
4	7.2	6.4	4.6	2.8	1.5	0.8	0.4
5	5.9	5.4	4.2	2.9	1.7	1	0.6
6	4.5	4.2	3.4	2.6	1.7	1.1	0.7
7	3.4	3.2	2.7	2.1	1.6	1.1	0.7
8	2.6	2.5	2.2	1.8	1.3	1	0.7
9	2	1.9	1.7	1.4	1.1	0.9	0.7
10	1.5	1.5	1.3	1.2	1	0.8	0.6

	MULTIPLE UNIT FOOTCANDLES		
	3' from wall (spacing between fixtures)		
		3	
1	1.8	1.7	1.9
2	6.3	6.3	6.4
3	9.4	10.4	9.6
4	9.8	11.1	9.9
5	8.7	9.6	8.8
6	7	7.7	7.1
7	5.5	6	5.6
8	4.3	4.6	4.3
9	3.3	3.6	3.4
10	2.6	2.8	2.7

LCR412WW9FSE020-12W-3000K

Spacing criterion:
(0-180) 0.91 | (90-270) 0.98 | (Diagonal) 1.01
Lumens: 1255
Input Watts: 12.1 W
Efficacy: 103.7 LPW
Test Report: P645618

0-deg   45-deg   90-deg

Zonal Lumen	Lumens	% Lumens
0-30	595	47.4
0-40	862	68.7
0-60	1176	93.7
0-90	1255	100

TM-30-15	Rf = 91
	Rg = 102
CRI/CIE	Ra = 93
	R9 = 69.7

CCT - Range of 2700K- 5000K

	SINGLE UNIT FOOTCANDLES						
	3' from wall (distance from fixture along wall)						
1	2.3	1.7	0.8	0.4	0.2	0.1	0.1
2	8	6.1	3.2	1.5	0.7	0.3	0.2
3	11.4	9.4	5.8	2.9	1.3	0.7	0.4
4	10.8	9.4	6.6	3.9	2.1	1.1	0.5
5	8.8	7.9	6.1	4.1	2.5	1.4	0.8
6	6.8	6.2	5	3.7	2.5	1.6	1
7	5.1	4.8	4	3.1	2.3	1.6	1
8	3.9	3.7	3.2	2.6	2	1.4	1
9	2.9	2.8	2.5	2.1	1.7	1.3	1
10	2.3	2.2	2	1.7	1.4	1.1	0.9

	MULTIPLE UNIT FOOTCANDLES		
	3' from wall (spacing between fixtures)		
		3	
1	2.7	2.6	2.7
2	9.7	9.6	9.5
3	14.7	15.7	14.3
4	15	16.6	14.7
5	13.1	14.3	12.9
6	10.6	11.5	10.5
7	8.3	8.9	8.2
8	6.5	6.9	6.4
9	5.1	5.4	5.1
10	4	4.2	4

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Energy and Performance Data

LCR4 - 800 Lumen Wall Wash		
	UNV	120V
Lumens	750	750
Input Voltage	120-277	120
Input current	0.09A	0.09A
Input Power	8.5W	8.5W
Efficiency	70.00%	70.00%
Inrush(A)	2	1
THD	<20%	<20%
PF	>0.9	>0.9
Sound Rating	<22dB	<22dB

LCR4 - 1200 Lumen Wall Wash		
	UNV	120V
Lumens	1100	1100
Input Voltage	120-277	120
Input current	0.12A	0.12A
Input Power	12.5W	12.5W
Efficiency	77.00%	77.00%
Inrush(A)	2	1
THD	<20%	<20%
PF	>0.9	>0.9
Sound Rating	<22dB	<22dB

Dimensional and Mounting Details

.7"
[17.9mm]
Lens Regression

2.09"
[53.2mm]

Ø 3.26"
[83mm]

Ø 4.72"
[120mm]

5.29"
[134.2mm]

4" round cutout

6.42"
[163mm]

5.69"
[144.5mm]

1.52"
[38.7mm]

4.59"
[116.7mm]

3.30"
[83.9mm]

Emergency Battery Backup

3.33"
[84.6mm]

5.1"
[129.6mm]

15"
[381mm]

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