

LED Luminaires

Retrofit Commercial Downlight

- Field Adjustable CCT and Lumen Output
- ELV/Triac or 0-10V Dimmable with one driver
- Two Finish Options: White Reflector & Flange or Haze Reflector with White Flange
- Integral quick-connect emergency battery backup

Specifications

Description

Halco's Retrofit Commercial Downlights are a quick, easy, and convenient way to reinvent commercial lighting spaces. Color temperatures and light output can be chosen before or after installation with the flip of a switch. There is no need to worry about what type of dimming is currently being used in the space as the integral fixture driver for the CDL Series can dim using either 0-10V or ELV/Triac phase cut protocols. When emergency lighting is needed, the CDLEM family offers an aesthetically pleasing integral emergency battery backup solution. The robust spring clips and quick connect metal clad cables makes installation of the fixture and battery backup a breeze and the low profile combination test switch and charging indicator light eliminate large, unsightly ceiling and fixture mounted buttons. White and Haze colored reflectors, combined with all the other fixture options of the CDL family complete the look and make your commercial retrofit lighting projects a success.

Performance

- Selectable Color Temperatures 2700K, 3000K, 3500K, 4000K, 5000K
- 90+ CRI
- 120-277V, 50/60 Hz, ELV/Triac and 0-10V dimming driver
- 70 Lumen Maintenance
- L70 Lumen Maintenance > 50,000 hours
- 5 Year Limited Warranty

Construction

- Powder Coated Steel (White) or Spun Aluminum (Haze) Reflectors
- Diffused, Textured Lens
- Robust, Universal Spring Clips



Applications

- Office Parks
- Commercial Buildings
- Commercial Maintenance Facilities
- K-12 Schools, Colleges and Universities
- Big Box Retail Stores

Certifications

- Energy Star Downlights V1.0
- ETL Listed and Classified
- RoHS compliant
- IP65
- Wet Location
- FCC Compliant
- CA Title 24 Compliant

Retrofit Commercial Downlight

Ordering Logic:

Series	Fixture Size	Lumen Output	Color Temperature	Reflector/Flange Finish	Voltage
CDL = Retrofit Commercial Downlight CDLEM = Retrofit Commercial Downlight with Emergency Battery Backup	4 = 4" Round 6 = 6" Round 8 = 8" Round 10 = 10" Round	LS = Lumen Selectable 4 - 600/800/1000 6 - 1000/1800/2500 8 - 1800/2700/3500 10 - 2800/3500/4500	CS = Color Selectable, 2700K/3000K/ 3500K/4000K/5000K	HZWH = Haze Reflector, White Flange WH = White Reflector, White Flange	DDV = Dual Dimming Universal 120-277V 0-10V or 120V TRIAC/ELV

Trim Ordering Logic:

Series	Fixture Size	Option	Reflector/Flange Finish
CDL = Retrofit Commercial Downlight	4 = 4" 6 = 6" 8 = 8" 10 = 10"	REFL = Snap-on Reflector and Flange Trim	HZT = Haze Reflector, Haze Flange

Ordering Information

Product SKU	Product Code	Product Description	Equiv Watts	Replaces SKU	Energy Star Unique Product ID
89210	CDL-4-LS-CS-WH-DDV	4in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	75W	88984	4005956
89211	CDL-6-LS-CS-WH-DDV	6in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	150W	88985	4005957
89212	CDL-8-LS-CS-WH-DDV	8in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	200W	88986	4005959
89213	CDL-10-LS-CS-WH-DDV	10in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	250W	88987	4005958
89214	CDL-4-LS-CS-HZWH-DDV	4in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	75W		4005956
89215	CDL-6-LS-CS-HZWH-DDV	6in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	150W		4005957
89216	CDL-8-LS-CS-HZWH-DDV	8in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	200W		4005959
89217	CDL-10-LS-CS-HZWH-DDV	10in Commercial Downlight, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	250W		4005958

Retrofit Commercial Downlight

Ordering Information

Product SKU	Product Code	Product Description	Equiv Watts	Replaces	Energy Star Unique Product ID
89218	CDLEM-4-LS-CS-WH-DDV	4in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	75W		4439214
89219	CDLEM-6-LS-CS-WH-DDV	6in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	150W		4439215
89220	CDLEM-8-LS-CS-WH-DDV	8in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	200W		4439216
89221	CDLEM-10-LS-CS-WH-DDV	10in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, White Reflector, White Flange	250W		4439217
89222	CDLEM-4-LS-CS-HZWH-DDV	4in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	75W		4439214
89223	CDLEM-6-LS-CS-HZWH-DDV	6in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	150W		4439215
89224	CDLEM-8-LS-CS-HZWH-DDV	8in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	200W		4439216
89225	CDLEM-10-LS-CS-HZWH-DDV	10in Commercial Downlight, Emergency Battery Ready, Lumen Output and CCT Select, 120-277V, Dimmable TRIAC/ELV & 0-10V, Haze Reflector, White Flange	250W		4439217
89226	CDLEM-EMBB	CDL Emergency Battery, 3.5W , For CDLEM 4in, 6in, 8in, 10in			
Accessories					
89227	CDL-4-REFL-HZT	4in Commercial Downlight Reflector Insert, Haze Reflector, Haze Flange			
89228	CDL-6-REFL-HZT	6in Commercial Downlight Reflector Insert, Haze Reflector, Haze Flange			
89229	CDL-8-REFL-HZT	8in Commercial Downlight Reflector Insert, Haze Reflector, Haze Flange			
89230	CDL-10-REFL-HZT	10in Commercial Downlight Reflector Insert, Haze Reflector, Haze Flange			

Retrofit Commercial Downlight

Performance Table

Product SKU	Product Code	Selectable Wattage	2700K		3000K		3500K		4000K		5000K	
			Lumen Output (lm)	Efficacy (lm/W)	Lumen Output (lm)	Efficacy (lm/W)	Lumen Output (lm)	Efficacy (lm/W)	Lumen Output (lm)	Efficacy (lm/W)	Lumen Output (lm)	Efficacy (lm/W)
89210	CDL-4-LS-CS-WH-DDV	10W	1072	107	1101	111	1130	115	1147	117	1139	114
89211	CDL-6-LS-CS-WH-DDV	21W	2565	126	2647	129	2718	134	2763	136	2732	133
89212	CDL-8-LS-CS-WH-DDV	30W	3553	124	3650	128	3784	133	3835	134	3787	131
89213	CDL-10-LS-CS-WH-DDV	37W	4557	126	4686	129	4839	135	4907	136	4833	133
89214	CDL-4-LS-CS-HZWH-DDV	10W	1081	108	1111	112	1139	116	1156	118	1148	115
89215	CDL-6-LS-CS-HZWH-DDV	21W	2579	126	2665	130	2734	135	2776	137	2743	134
89216	CDL-8-LS-CS-HZWH-DDV	30W	3572	123	3691	126	3811	132	3861	134	3805	130
89217	CDL-10-LS-CS-HZWH-DDV	37W	4588	126	4734	130	4896	136	4969	137	4891	134
89218	CDLEM-4-LS-CS-WH-DDV	11W	1065	97	1097	101	1125	104	1139	105	1125	102
89219	CDLEM-6-LS-CS-WH-DDV	22W	2585	124	2651	126	2710	131	2735	131	2686	128
89220	CDLEM-8-LS-CS-WH-DDV	31W	3576	121	3684	124	3788	129	3826	130	3756	126
89221	CDLEM-10-LS-CS-WH-DDV	38W	4589	124	4731	128	4887	134	4948	135	4862	131
89222	CDLEM-4-LS-CS-HZWH-DDV	11W	1076	98	1101	101	1125	104	1138	105	1118	102
89223	CDLEM-6-LS-CS-HZWH-DDV	22W	2610	126	2673	129	2731	133	2764	134	2703	130
89224	CDLEM-8-LS-CS-HZWH-DDV	31W	3597	123	3701	126	3805	131	3847	132	3756	127
89225	CDLEM-10-LS-CS-HZWH-DDV	38W	4582	126	4699	128	4838	134	4901	135	4798	131

Dimmer Compatibility List

Type	Dimmer Brand	Series	Dimmer Model
COO	LUTRON	DIVA	DVTV
	LEVITON	IllumaTech	IP710-LFZ
	LUTRON	DIVA	DVSTV-WH
	COOPER	Decorator	DF10PC1
COO	LUTRON	Maestro C-L	MACL-153M
	LUTRON	Skylark C-L	SCL-153P
	LEVITON	Sureslide	Cat.NO.6674
	LUTRON	Diva C-L	DVCL-153P
	LEGRAND	Radiant	RHCL453PTC
	LEGRAND	Harmony	DCL453PTCCCV6
	LEGRAND	Harmony	HCL453PTCCCV6
	LUTRON	Skylark	CTCL-153PDH-WH
	LEVITON	IllumaTech	R50-IPL06-10M
	LUTRON	Diva C-L	DVWCL-153PH-WH

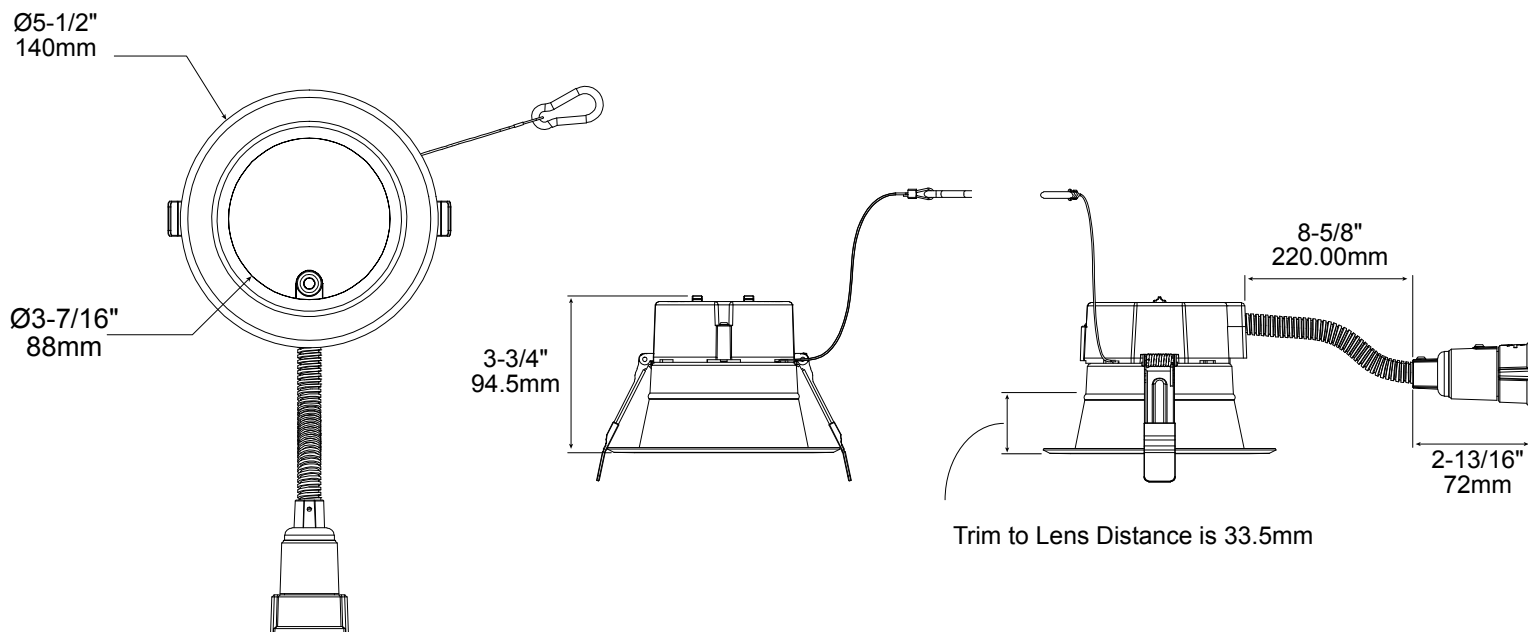
Retrofit Commercial Downlight Specifications Table

	CDL-4-LS-CS-xx-DDV CDLEM-4-LS-xx-DDV	CDL-6-LS-CS-xx-DDV CDLEM-6-LS-xx-DDV	CDL-8-LS-CS-xx-DDV CDLEM-8-LS-xx-DDV	CDL-10-LS-CS-xx-DDV CDLEM-10-LS-xx-DDV
Nominal Wattage	CDL - 6 / 8 / 10 CDLEM - 7 / 9 / 11	CDL - 10 / 17 / 21 CDLEM - 11 / 18 / 22	CDL - 16 / 24 / 30 CDLEM - 17 / 25 / 31	CDL - 24 / 30 / 37 CDLEM - 25 / 31 / 38
Delivered Lumens	600 / 800 / 1000	1000 / 1800 / 2500	1800 / 2700 / 3500	2800 / 3500 / 4500
Efficacy (lm/W)	100	125	125	125
CCT	Selectable - 2700K, 3000K, 3500K, 4000K or 5000K			
CRI	90+			
L70 Lifetime (hrs)	50,000			
Voltage	120-277V			
Power Factor	0.9			
Dimming	Yes (Triac/ELV or 0-10V)			
Beam Angle	80° ± 10°			
Housing Material	Powder Coated Steel (White) or Spun Aluminum (Haze) Reflectors			
Lens	Diffused, Textured Lens			
Operating Temperature	-4°F to 104°F (-20°C to 40°C)			
Listings	ETL Listed & Classified/FCC/Energy Star/T24			
Environment	IC, Air Tight, Wet			
Warranty	5 Years Standard			
Weight (lbs.)	1.1	1.5	2.0	2.2

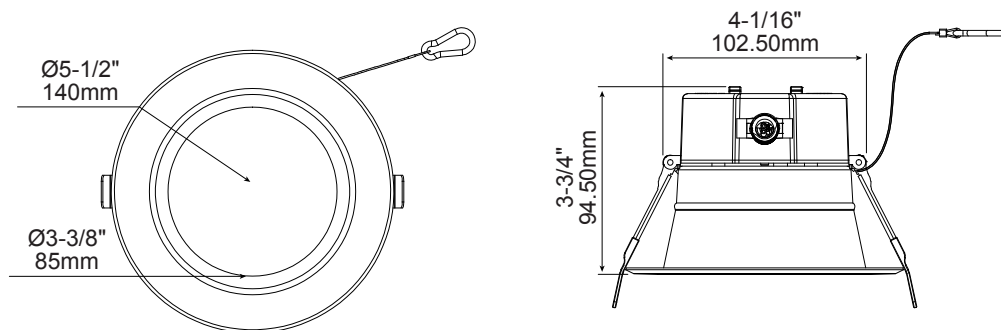
Retrofit Commercial Downlight

Dimensions

CDL-4-LS-CS-WH-DDV
CDL-4-LS-CS-HZWH-DDV



CDLEM-4-LS-CS-WH-DDV
CDLEM-4-LS-CS-HZWH-DDV

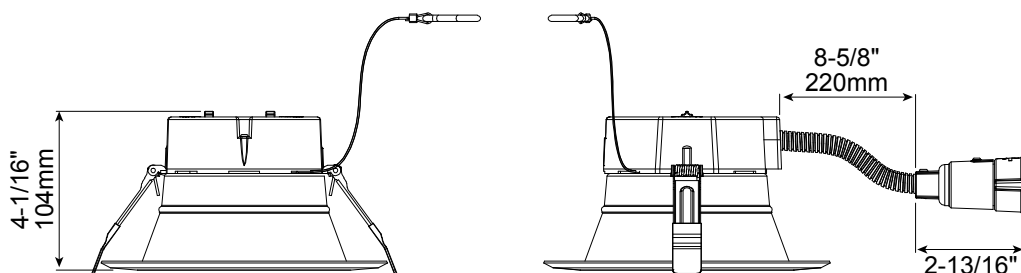
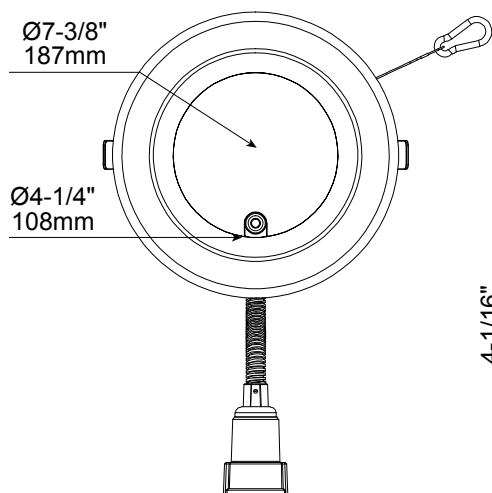


Ceiling Cut-Out: $4\text{-}5/16"$ (110mm)

Retrofit Commercial Downlight

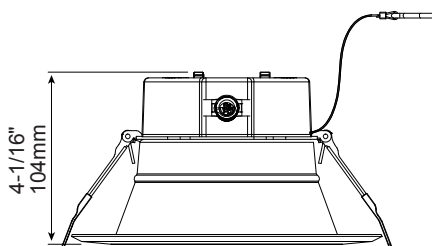
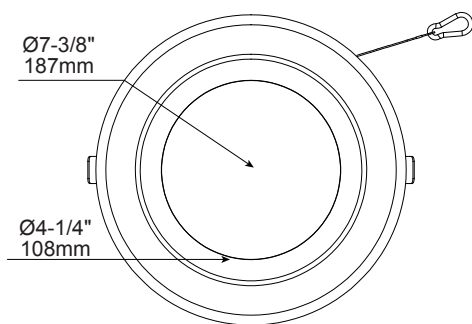
Dimensions

CDL-6-LS-CS-WH-DDV
CDL-6-LS-CS-HZWH-DDV



Trim to Lens Distance is 38.9mm

CDLEM-6-LS-CS-WH-DDV
CDLEM-6-LS-CS-HZWH-DDV

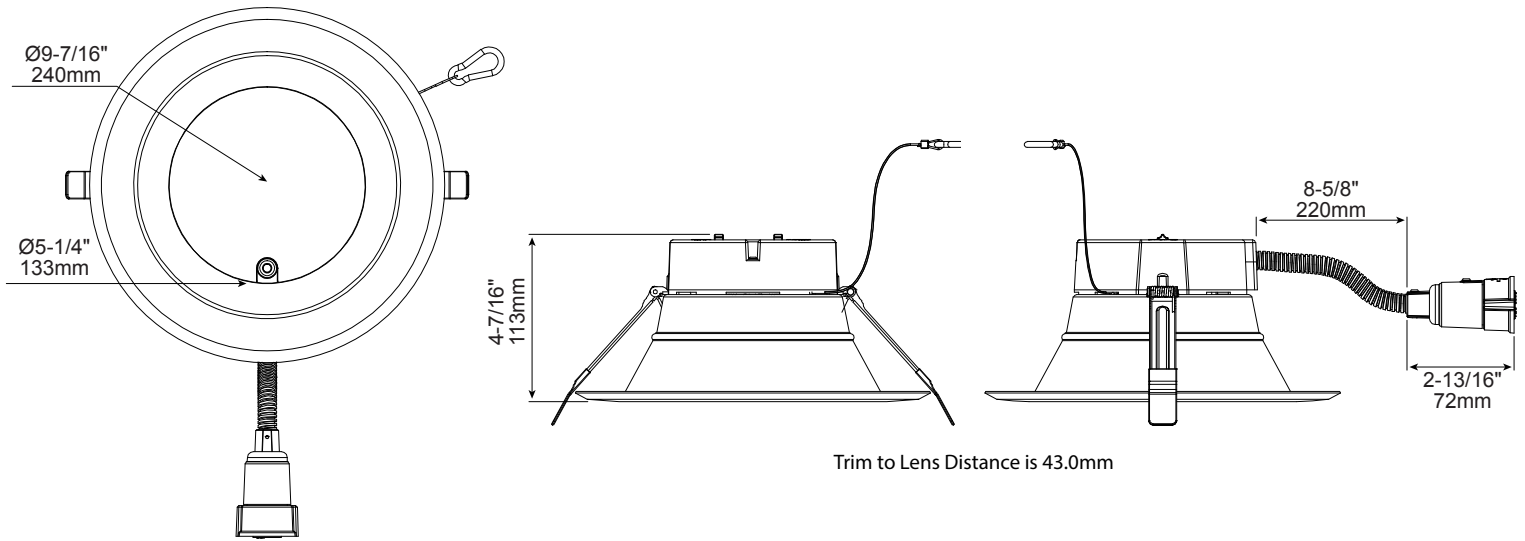


Ceiling Cut-Out: 6" (152mm)

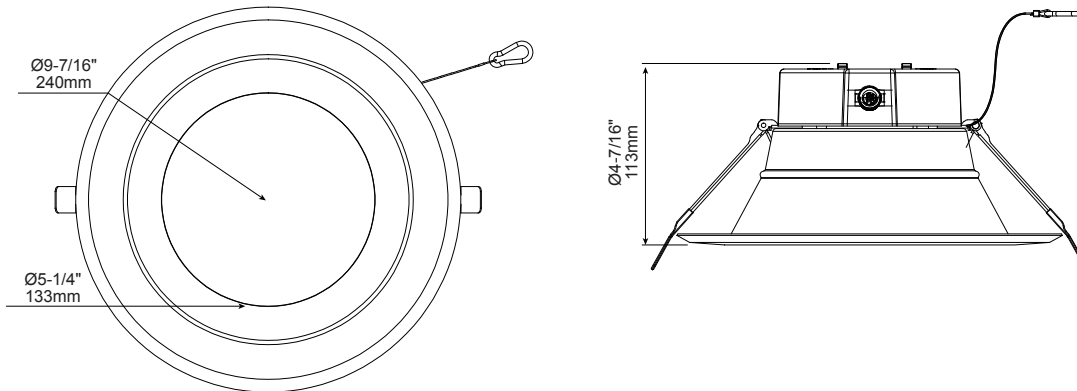
Retrofit Commercial Downlight

Dimensions

CDL-8-LS-CS-WH-DDV
CDL-8-LS-CS-HZWH-DDV



CDLEM-8-LS-CS-WH-DDV
CDLEM-8-LS-CS-HZWH-DDV

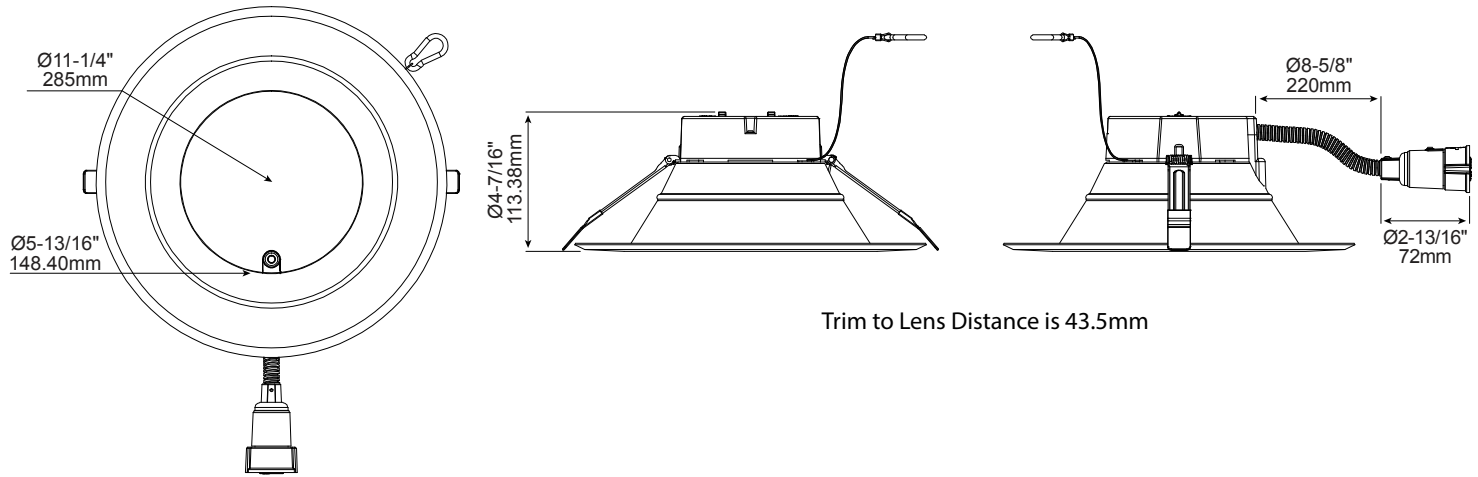


Ceiling Cut-Out: 8" (203mm)

Retrofit Commercial Downlight

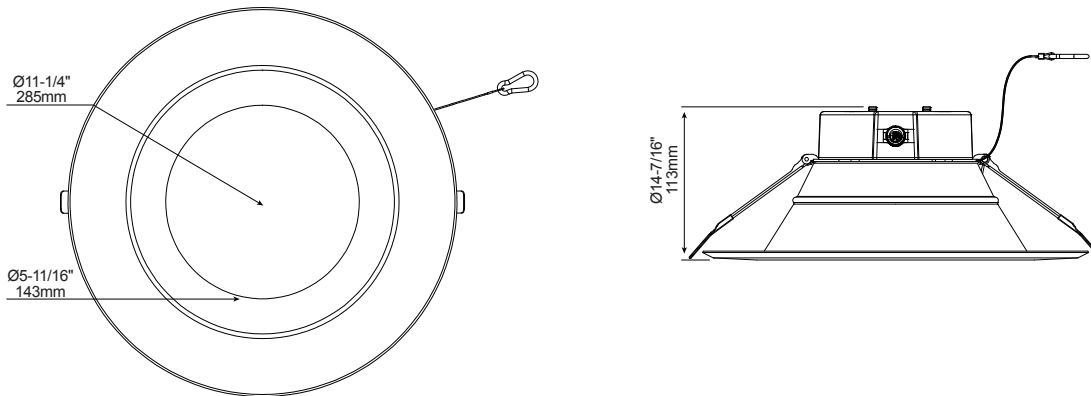
Dimensions

CDL-10-LS-CS-WH-DDV
CDL-10-LS-CS-HZWH-DDV



Trim to Lens Distance is 43.5mm

CDLEM-10-LS-CS-WH-DDV
CDLEM-10-LS-CS-HZWH-DDV

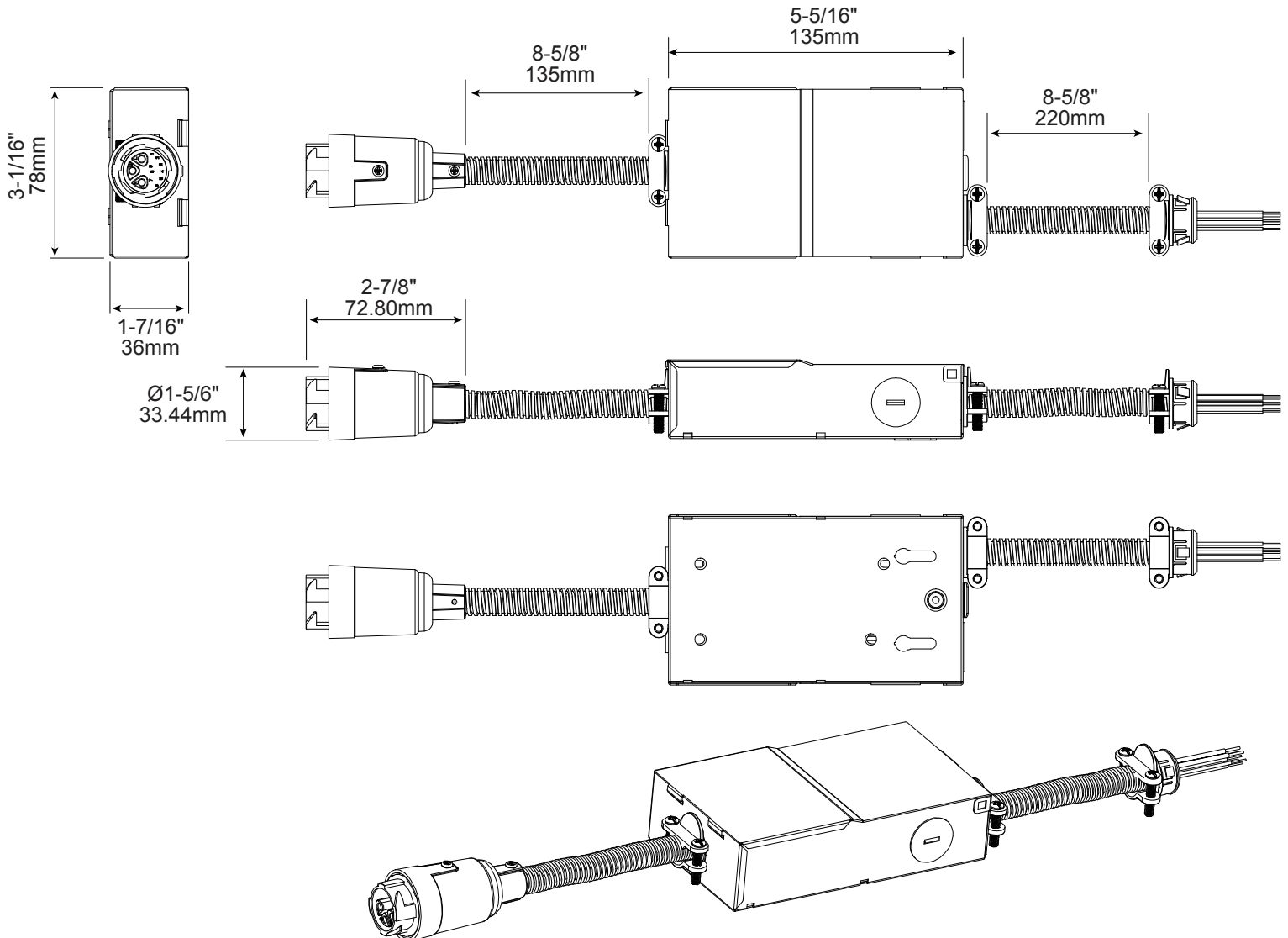


Ceiling Cut-Out: 9" (228mm)

Retrofit Commercial Downlight

Dimensions

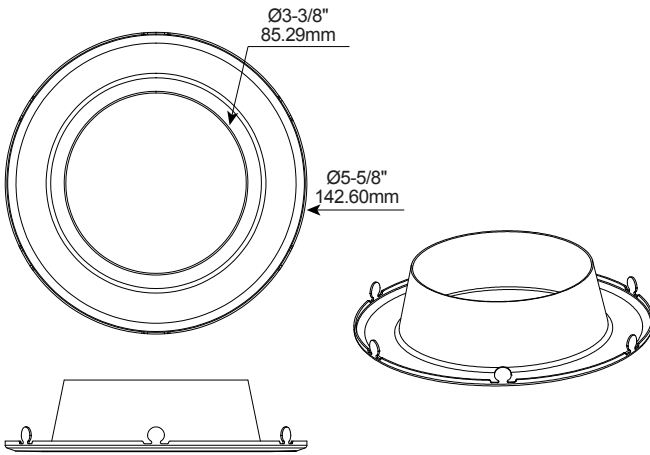
CDLEM-JB



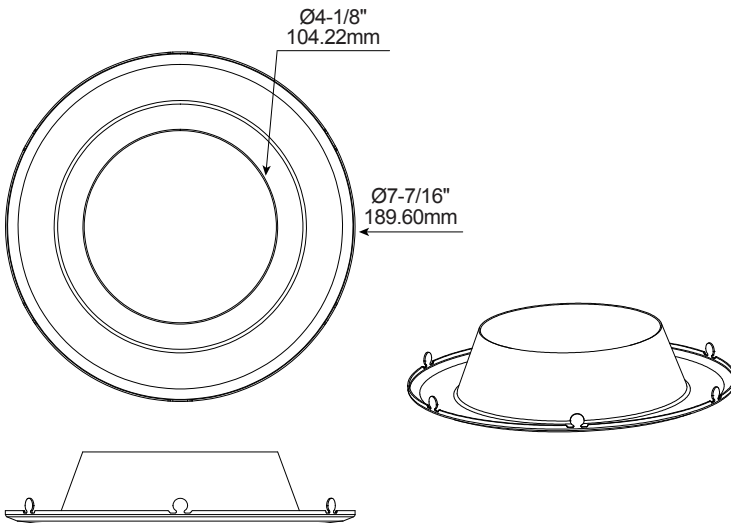
Retrofit Commercial Downlight

Trim Dimensions

CDL-4-REFL-HZT



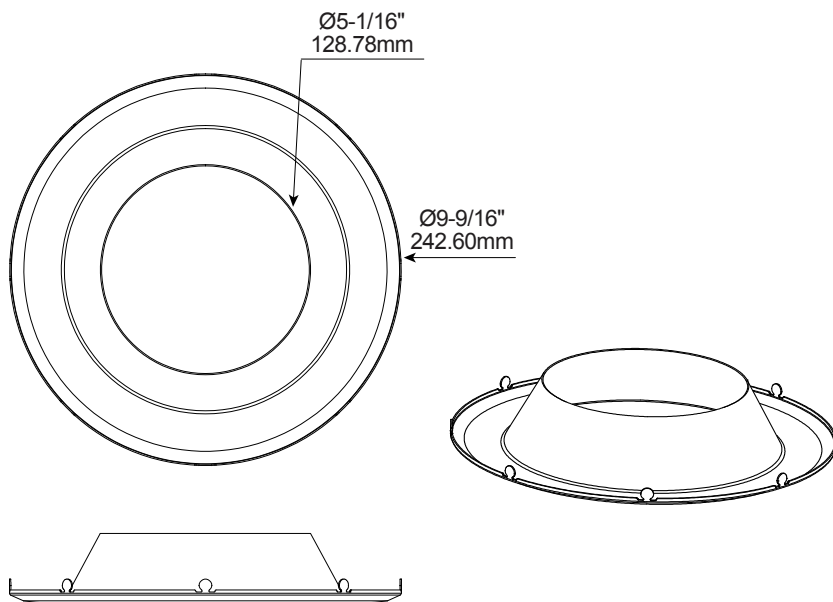
CDL-6-REFL-HZT



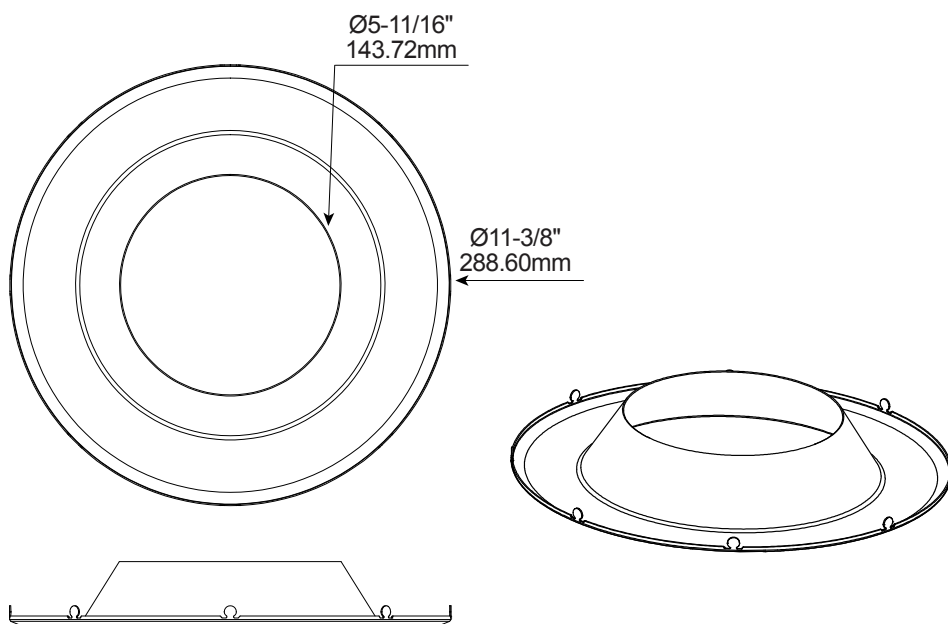
Retrofit Commercial Downlight

Trim Dimensions

CDL-8-REFL-HZT



CDL-10-REFL-HZT

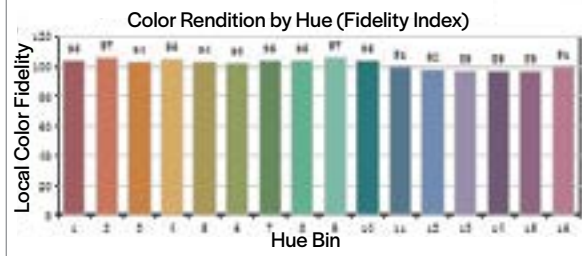


Retrofit Commercial Downlight

Photometric Information

89214 CDL-4-LS-CS-HZWH-DDV_4000K_30W

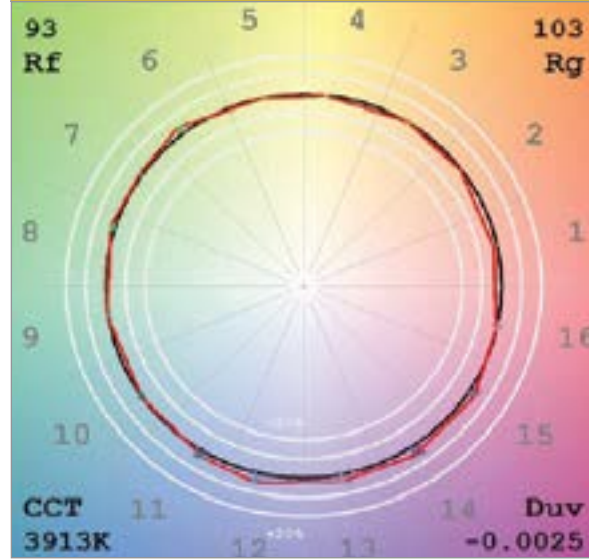
CDL-4-LS-CS-HZWH-DDV Set to 4000K



Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	64	6%
10° - 20°	174	15%
20° - 30°	260	22%
30° - 40°	282	24%
40° - 50°	215	19%
50° - 60°	108	9%
60° - 70°	41	4%
70° - 80°	11	1%
80° - 90°	1	0%
0° - 90°	1156	100%

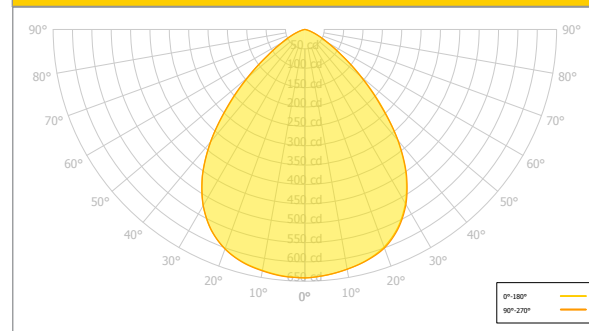
Color Vector Graphics



Information

RF	93
RG	103

CDL-4-LS-CS-HZWH-DDV Set to 4000K

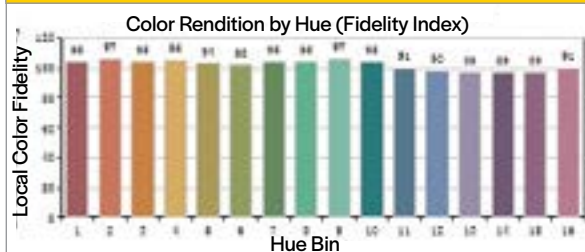


Retrofit Commercial Downlight

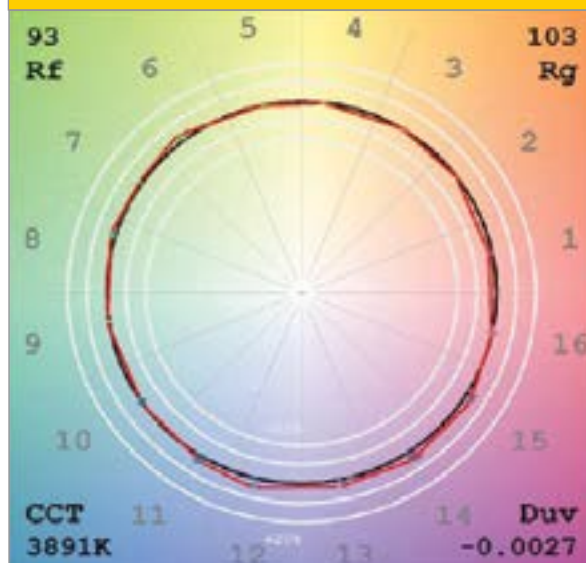
Photometric Information

89215 CDL-6-LS-CS-HZWH-DDV_4000K_30W

CDL-6-LS-CS-HZWH-DDV Set to 4000K



Color Vector Graphics



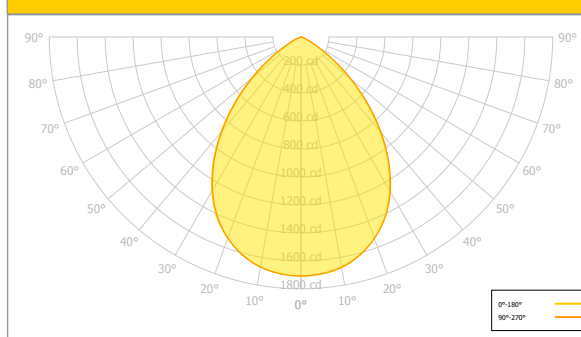
Information

RF	93
RG	103

Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	171	6%
10° - 20°	452	16%
20° - 30°	647	23%
30° - 40°	672	24%
40° - 50°	511	18%
50° - 60°	248	9%
60° - 70°	65	2%
70° - 80°	10	0%
80° - 90°	1	0%
0° - 90°	2776	100%

CDL-6-LS-CS-HZWH-DDV Set to 4000K

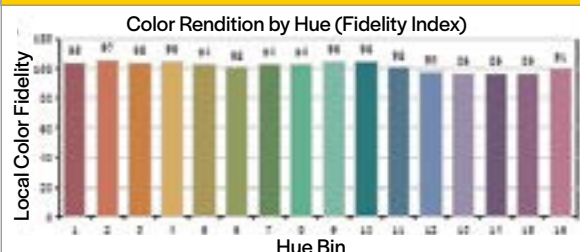


Retrofit Commercial Downlight

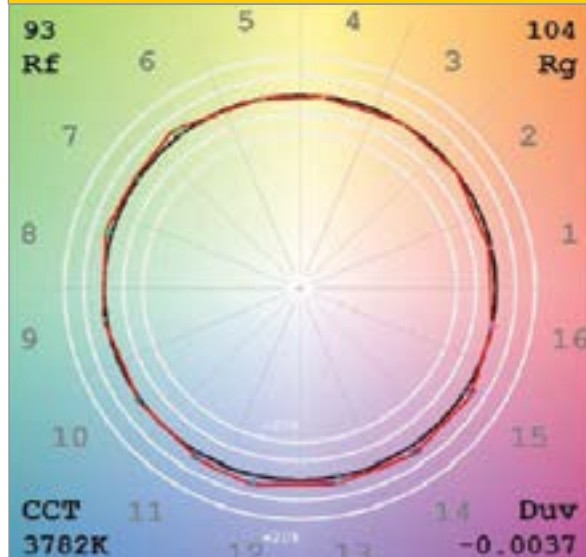
Photometric Information

89216 CDL-8-LS-CS-HZWH-DDV_4000K_30W

CDL-8-LS-CS-HZWH-DDV Set to 4000K



Color Vector Graphics



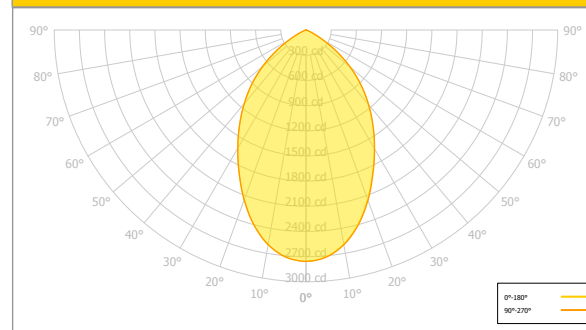
Information

RF	93
RG	104

Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	270	7%
10° - 20°	666	17%
20° - 30°	861	22%
30° - 40°	861	22%
40° - 50°	703	18%
50° - 60°	391	10%
60° - 70°	99	3%
70° - 80°	9	0%
80° - 90°	1	0%
0° - 90°	3861	100%

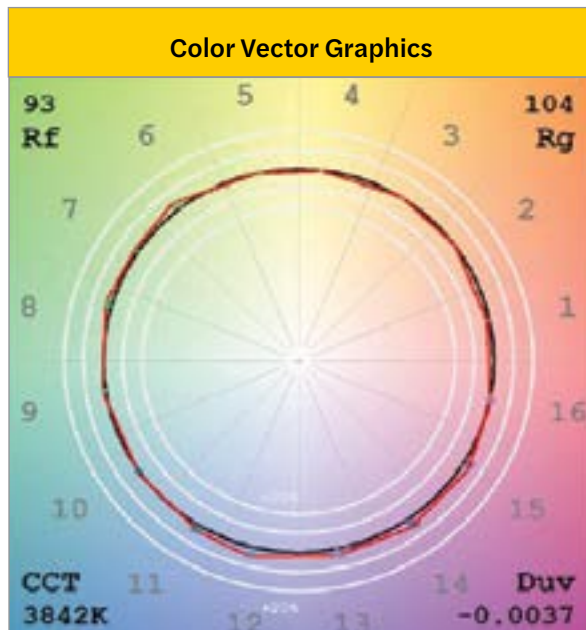
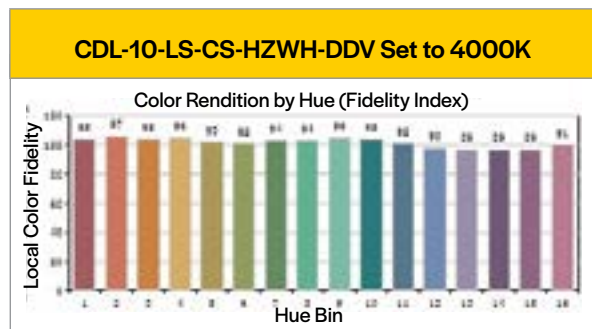
CDL-8-LS-CS-HZWH-DDV Set to 4000K



Retrofit Commercial Downlight

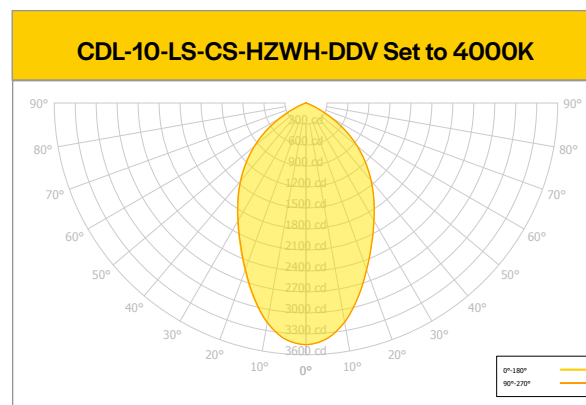
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89217 CDL-10-LS-CS-HZWH-DDV_4000K_30W



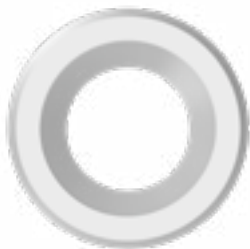
Information	
RF	93
RG	104

Zonal Lumen Summary		
Zonal	Lumens	% Fixture
0° - 10°	334	7%
10° - 20°	797	16%
20° - 30°	1018	20%
30° - 40°	1054	21%
40° - 50°	925	19%
50° - 60°	613	12%
60° - 70°	204	4%
70° - 80°	21	0%
80° - 90°	2	0%
0° - 90°	4969	100%

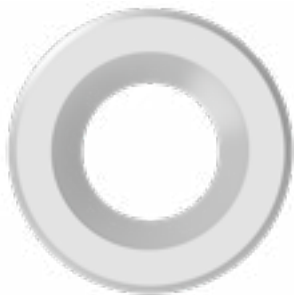


Retrofit Commercial Downlight Accessories

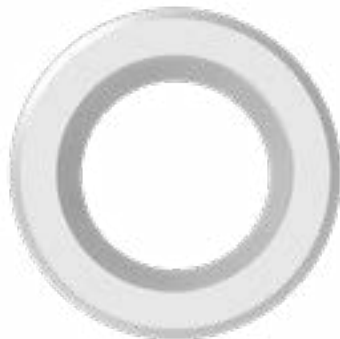
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89229-CDL-8-REFL-HZT



89228-CDL-6-REFL-HZT



989230-CDL-10-REFL-HZT

