

# DATA SHEET: COMMERCIAL LED DOWNLIGHT (Architectural LED Retrofit Downlight)

## DESCRIPTION

The Patriot LED 4inch Commercial Down Lights are suitable for 100~277V or 120V AC Input with fired-rated Junction box, which delivers high lumens of exceptional 80+ CRI, Lifetime > 100000H with 3000K, 4000K, 5000K color temperatures options. It can replace for most manufacturers incandescent, CFL or H.I.D. fixtures. Easy conversion method and installation can be performed from below the ceiling without removing existing fixture.

Our PATRIOT ARCHITECTURAL LED RETROFIT DOWNLIGHTS are backed with our industry-leading 100,000-hour rated lamp life and 10-year warranty. See Ordering Model table below for our BAA compliant products. Contact us for pricing or more information.

## SPECIFICATIONS

### LED Chip

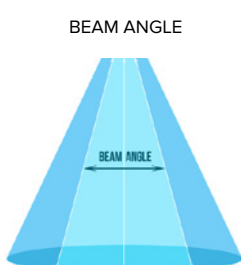
Superior-quality white LED light output using Chip on Board of cool ceramic, use CREE COB. LED sources has been LM80 test report from accredited testing laboratory in Accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

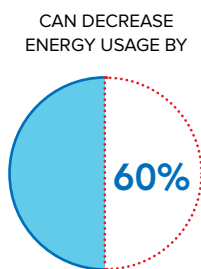
The source mounts directly to heat sink, extend aluminum heat sink with even distribution hackle cool board. High thermal conductivity, reasonable of radiation coefficient and convection coefficient to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

The reflector is made of metal material and with surface oxidized, which effectively enhances the lumen output ratio. Also its fish scale shape design on interior surface prevent lighting glare very well, making the light effect quite even and free from layering.



Patriot LED Light Distribution



vs. Similar Fluorescent Lamps

### WARRANTY



Our Industry-Leading 10-Year Limited Warranty Guarantees Unsurpassed Quality



## ORDERING MODEL

CATAGORY	SIZE	DIMMING	WATTAGE	VOLTAGE	CCT(XX)	CRI(X)
PT-CDL=Commercial	4=4inch 6=6inch 8=8inch 10=10inch	A=AC Dimming D=DC Dimming	14W=14W 18W=18W 27W=27W 40W=40W 54W=54W	100~277VAC 120VAC	30=3000K 40=4000K 50=5000K	E=80CRI H=90CRI
Product Code: Example						
Example: PT-CDL4-14W-30E						

## PRODUCT SPECIFICATION

PRODUCT NO.	BAA/TAA OPTION*	SIZE	WATTAGE	INPUT VOLTAGE	COLOR TEMP (K)	LUMINUS FLUX	RATED EFFICACY	CRI	RATED LIFE (HOURS)	DRIVER EFFICIENCY	THD	PF
<b>4INCH - ARCHITECTURAL LED RETROFIT DOWNLIGHT</b>												
PT-CDL4-14W-XXX	Yes	4inch	14W	100~277VAC	3000K/4000K/5000K	1960	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL4-14W-XXX	Yes		14W	120VAC	3000K/4000K/5000K	1960	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL4-D27W-XXX	Yes		27W	100~277VAC	3000K/4000K/5000K	3780	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL4-27W-XXX	Yes		27W	120VAC	3000K/4000K/5000K	3780	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
<b>6INCH - ARCHITECTURAL LED RETROFIT DOWNLIGHT</b>												
PT-CDL6-18W-XXX	Yes	6inch	18W	100~277VAC	3000K/4000K/5000K	2520	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL6-27W-XXX	Yes		27W	100~277VAC	3000K/4000K/5000K	3780	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL6-40W-XXX	Yes		40W	100~277VAC	3000K/4000K/5000K	5600	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
<b>8INCH - ARCHITECTURAL LED RETROFIT DOWNLIGHT</b>												
PT-CDL8-18W-XXX	Yes	8inch	18W	100~277VAC	3000K/4000K/5000K	2520	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL8-27W-XXX	Yes		27W	100~277VAC	3000K/4000K/5000K	3780	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL8-40W-XXX	Yes		40W	100~277VAC	3000K/4000K/5000K	5600	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL8-D54W-XXX	Yes		54W	100~277VAC	3000K/4000K/5000K	7560	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
<b>10-INCH - ARCHITECTURAL LED RETROFIT DOWNLIGHT</b>												
PT-CDL10-27W-XXX	Yes	10inch	27W	100~277VAC	3000K/4000K/5000K	3780	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL10-40W-XXX	Yes		40W	100~277VAC	3000K/4000K/5000K	5600	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9
PT-CDL10-D54W-XXX	Yes		54W	100~277VAC	3000K/4000K/5000K	7560	140 l/w	Ra>80	100,000	>87%	<20%	> 0.9

## PHYSICAL DATA

### 4 INCH

PRODUCT NO.	TEMPERATURE RATING	MOUNTING	DAMP RATED	CHIP	RECOMMENDED DIMMERS	CERTIFICATION	WARRANTY
PT-CDL4-14W-XXX	45°C and below room side and plenum side.	Recessed	Yes	CREE COB by Cree True White Technology	-	UL and cUL listed, FCC 47Part 15, Damp Rated, LM79 Report	5 Year (10 yrs. optional)
PT-CDL4-D27W-XXX	45°C and below room side and plenum side.	Recessed	Yes	CREE COB by Cree True White Technology	DIVA-DVT, NOVA T NTSTV-DV, IP710-DL	UL and cUL listed, FCC 47Part 15, Damp Rated, LM79 Report	5 Year (10 yrs. optional)
PT-CDL4-27W-XXX	45°C and below room side and plenum side.	Recessed	Yes	CREE COB by Cree True White Technology	DIVA-DVT, NOVA T NTSTV-DV, IP710-DL	UL and cUL listed, FCC 47Part 15, Damp Rated, LM79 Report	5 Year (10 yrs. optional)

### 6 INCH

PRODUCT NO.	TEMPERATURE RATING	MOUNTING	DRIVER EFFICIENCY	SIGNAL CURRENT	RECOMMENDED DIMMERS	CERTIFICATION	WARRANTY
PT-CDL6-18W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.95mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)
PT-CDL6-27W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.95mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)
PT-CDL6-40W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.96mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)

## PHYSICAL DATA

### 8 INCH

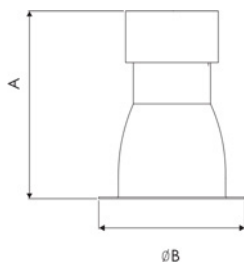
PRODUCT NO.	TEMPERATURE RATING	MOUNTING	DRIVER EFFICIENCY	SIGNAL CURRENT	RECOMMENDED DIMMERS	CERTIFICATION	WARRANTY
PT-CDL8-18W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.88mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)
PT-CDL8-27W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.95mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)
PT-CDL8-40W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.96mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL (E355621), Energy Star Listed, LM79 Report, Damp Rated	5 Year (10 yrs. optional)
PT-CDL8-D54W-XXX	45°C and below room side and plenum side.	Recessed	>87%	0.52mA	DIVA-DVTV (LUTRON)	UL (E355621), Damp Rated	5 Year (10 yrs. optional)

### 10 INCH

PRODUCT NO.	TEMPERATURE RATING	MOUNTING	SIGNAL CURRENT	RECOMMENDED DIMMERS	CERTIFICATION	WARRANTY
PT-CDL10-27W-XXX	45°C and below room side and plenum side.	Recessed	0.95mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL , Damp Rated	5 Year (10 yrs. optional)
PT-CDL10-40W-XXX	45°C and below room side and plenum side.	Recessed	0.96mA	DIVA-DVTV (LUTRON), NOVA T NTSTV-DV (LUTRON)	UL , Damp Rated	5 Year (10 yrs. optional)
PT-CDL10-D54W-XXX	45°C and below room side and plenum side.	Recessed	0.52mA	DIVA-DVTV (LUTRON)	UL , Damp Rated	5 Year (10 yrs. optional)

## DIMENSION

### 4 INCH

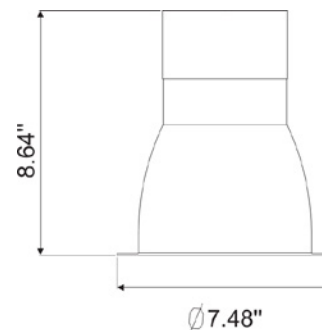
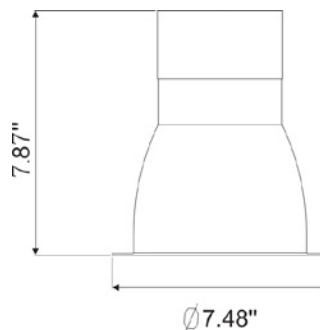
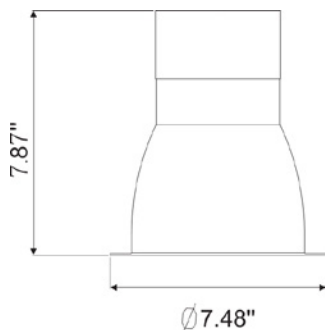


DIMENSION 18W

DIMENSION 27W

DIMENSION 40W

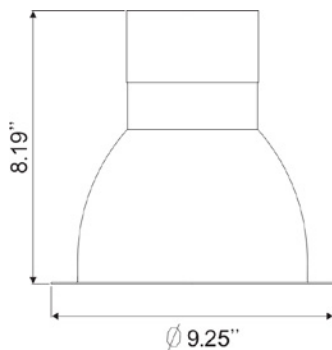
### 6 INCH



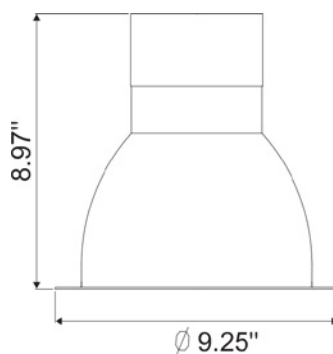
## DIMENSION

8 INCH

DIMENSION 18W, 27W, 40W

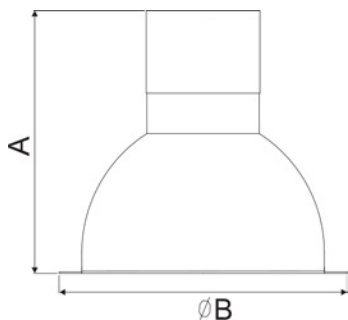


DIMENSION 54W



10 INCH

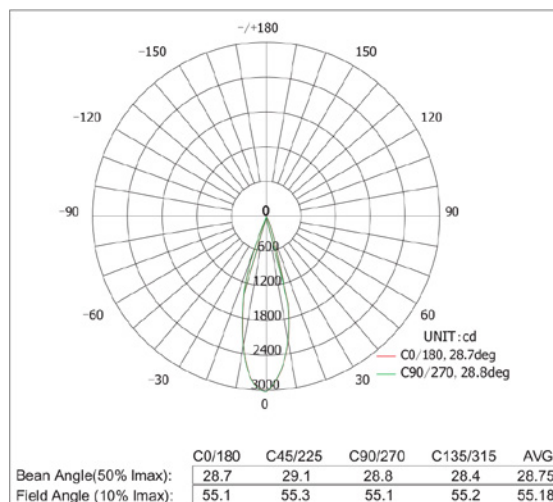
DIMENSION 27W, 40W, 54W



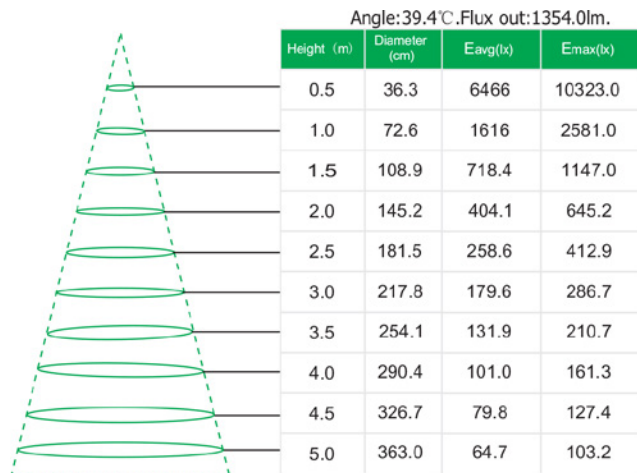
## PHOTOMETRIC

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08.

## LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### AVERAGE ILLUMINANCE CURVE



### LUMINOUS INTENSITY(CD) DISTRIBUTION DATA

Y	C	0°C	45°C	90°C
		0°C	5206	5206
	10°C	3948	3919	4048
	20°C	2439	2448	2546
	30°C	1300	1288	1370
	40°C	283	286	288
	50°C	115	111	97
	60°C	53	47	35
	70°C	21	18	13
	80°C	6	5	5
	90°C	0	0	0

### ZONAL LUMEN DENSITY MEASUREMENT

Deg	Flux (lm)	%
0-5	66.0	6.68
5-10	161.0	16.30
10-15	199.1	20.15
15-20	185.4	18.77
20-25	135.1	13.68
25-30	76.5	7.74
30-35	54.2	5.48
35-40	38.9	3.94
40-45	26.8	2.71
45-50	17.4	1.77
50-55	10.8	1.09
55-60	6.7	0.68
60-65	4.2	0.42
65-70	2.7	0.28
70-75	1.7	0.17
75-80	1.0	0.09
80-85	0.4	0.05
85-90	0	0

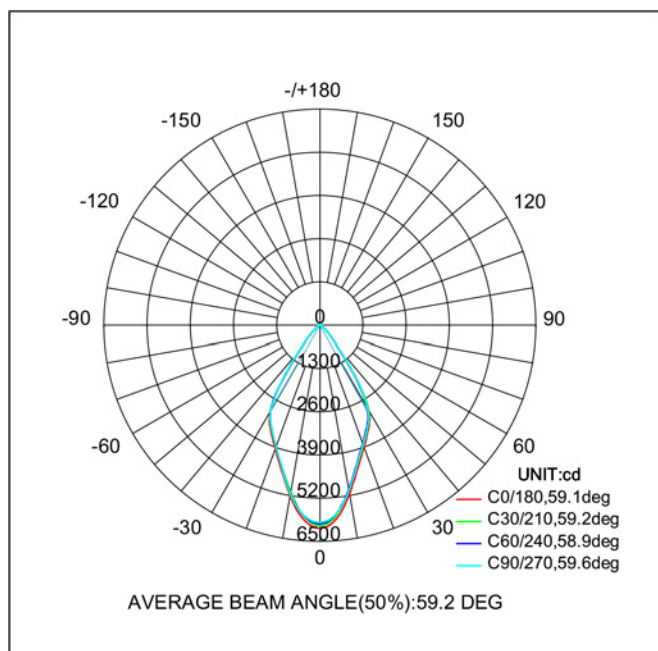
Deg	Flux (lm)	%
0-5	66.0	6.68
0-10	227.0	22.98
0-15	426.1	43.13
0-20	611.5	61.9
0-25	746.6	75.58
0-30	823.1	83.32
0-35	877.3	88.80
0-40	916.2	92.74
0-45	943.0	95.45
0-50	960.4	97.22
0-55	971.2	98.31
0-60	977.9	98.99
0-65	982.1	99.41
0-70	984.8	99.69
0-75	986.5	99.86
0-80	987.5	99.95
0-85	987.9	100.00
0-90	987.9	100.00

## PHOTOMETRIC 10 INCH

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

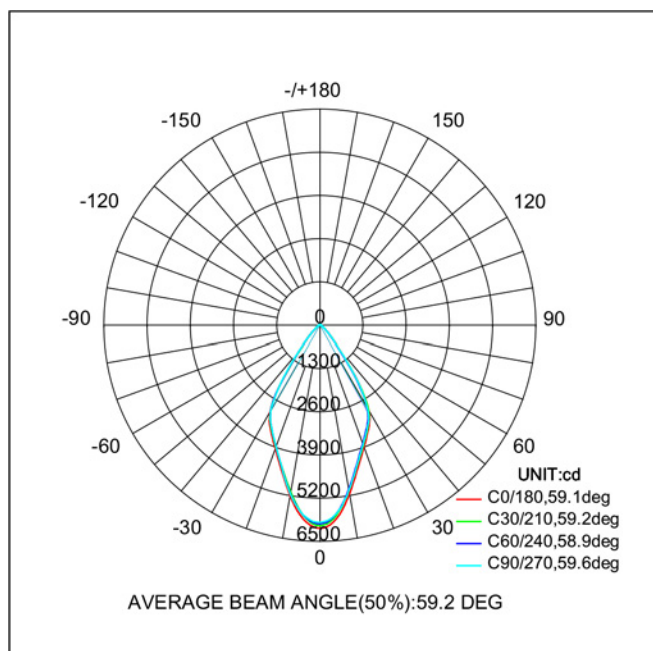
### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

#### PT-CDL10- 27W- XXX



### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

#### PT-CDL10- 40W- XXX



### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

#### PT-CDL10- D54W- XXX

