

## DESCRIPTION

Recessed 5-inch/6-inch LED retrofit is available in various distributions, lumen and CRI/CCT options. Installs from below the ceiling into existing open frame recessed housings. Insulation must be kept 3" from top and sides of housing. Use for general area lighting where high efficiency and visual comfort are required.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## SPECIFICATION FEATURES

### MECHANICAL

#### Frame

Galvanized steel frame accommodates housing openings up to 6.60" diameter, 2" thick and installs with (2) remodel clips when installed from below the ceiling. UL listed or classified for use with the following housings. Consult installation instructions for specific housing types.

Cooper Lighting PDS

- PD6 Series

Philips Lightolier Calulite

- B600 Series
- S6132BU Series
- C670MH0E1 Series

Philips Omega

- OM6 Series

Philips Capri

- CM6 Series

Juno - Indy Performance Series (Elate)

- A6 Series
- C6 Series
- M6 Series

Juno

- CH6 Series
- CV6 Series
- MX6 Series
- TC906 Series

#### Junction Box

Provided with armored cables providing flexible connections to the LED module and existing junction box for mains voltage connections.

### OPTICAL

#### LED Module

Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation. Available in 80 or 90 CRI minimum, accuracy within 3 SDCM provides color uniformity. See ordering information for available CRI / CCT options. Passive thermal management achieves L70 at 50,000 hours in non IC applications. Integral diffuse lens provides visual shielding. Integral connector allows quick connection to housing flex.

#### Beam Forming Optics

Optional beam forming optics replace diffuse lens and provide narrow flood or flood distribution for long throws of light.

#### Reflector

Modular design accepts reflector, baffle, shallow baffle, wall wash and directional trims. Attaches to LED module with (3) speed clamps minimizing light leaks to lens.

#### Trim Retention

Reflectors are retained with two torsion springs holding the flange tightly to the finished ceiling surface.

### ELECTRICAL

#### Driver

Integral UNV 120 - 277V 50/60 Hz constant current driver provides noise free operation. For 347V input use Halo transformer H347 or H347200. Continuous, flicker-free dimming from 100% to 10% with leading or trailing edge phase cut at 120V or 0 -10V analog control.

#### Emergency Option

Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting. Available with remote charge indicator and test switch.

#### Compliance

- cULus classified for wet location
- cCSAus classified for wet location
- IP66 Ingress Protection Rated
- Insulation must be kept 3" from top and sides.
- Airtight per ASTM-E283.
- Optional City of Chicago environmental air (CCEA) marking for plenum applications.
- EMI/RFI emissions per FCC 47CFR Part 18 non-consumer limits.
- 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 to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.
- ENERGY STAR® listed for commercial applications, reference database for current listings.



**PD56R12**  
**PD56R18**

**PDM6**

**692, 693, 694**  
**695, 696**

**1,200 & 1,800**  
**Lumen Series**

**LED**

**5-Inch/6-Inch Aperture**  
**Retrofit System**

Lumens	1200 Series	
Input Voltage	120V	277V
Input Current	0.19A	0.1A
Input Power	23 W	23.2 W
Efficiency	80 LpW	80 LpW
Inrush Current	2.14A	4.1A

Lumens	1800 Series	
Input Voltage	120V	277V
Input Current	0.19A	0.1A
Input Power	29.5 W	29.4 W
Efficiency	76 LpW	76 LpW
Inrush Current	2.88A	6.94A

THD: ≤ 20%
PF: ≥ 0.90
T Ambient -30 - +40°C
Sound Rating ≤ 22dba

## ORDERING INFORMATION

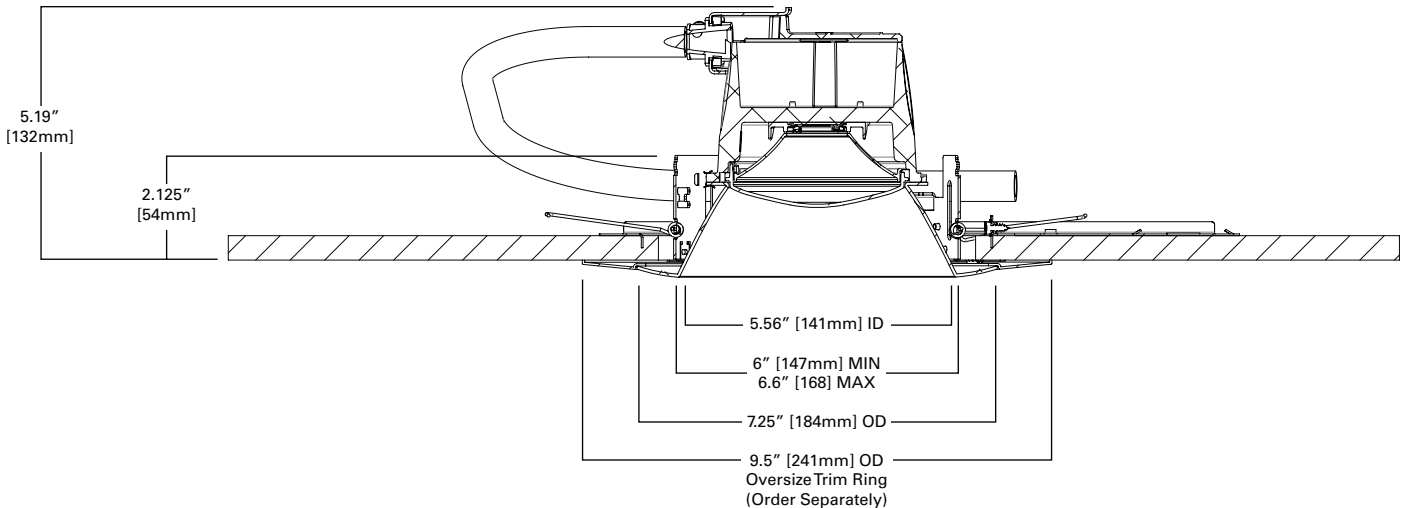
**SAMPLE NUMBER:** PD56R12ED010REM-PDM6827-692W

A complete luminaire consists of a housing, LED module and reflector, order separately.

Housing	Lumens	Driver	Options	LED Module	CRI/CCT
<b>PD56R</b> = 5"/6" aperture LED downlight retrofit <b>PD56RCP</b> = 5"/6" aperture LED downlight retrofit, CCEA listed for City of Chicago plenum requirements	<b>12</b> =1,200 lumens (nominal) <b>18</b> =1,800 lumens (nominal)	<b>ED010</b> =120-277V 50/60Hz, 0-10V andLE/TE phase cut dimming	<b>REM</b> =emergency operation with remote indicator and test switch (not available with PD56RCP housing)	<b>PDM6</b> =downlight LED module for PD6 housing, provides 1,200 or 1,800 lumens (nominal) depending on connected housing type	<b>827</b> =80 CRI, 2700K CCT <b>927</b> =90 CRI, 2700K CCT <b>830</b> =80 CRI, 3000K CCT <b>930</b> =90 CRI, 3000K CCT <b>835</b> =80 CRI, 3500K CCT <b>935</b> =90 CRI, 3500K CCT <b>840</b> =80 CRI, 4000K CCT <b>940</b> =90 CRI, 4000K CCT

Reflector	Finish Option	Accessories
<b>692</b> =6" reflector	<b>SC</b> =Specular clear with white flange <b>H</b> =Semi specular clear with white flange <b>W</b> =White with white flange	<b>BFR56NFL</b> = Beam forming reflector kit, narrow flood distribution <b>BFR56FL</b> = Beam forming reflector kit, flood distribution <b>BFR56MH</b> = Media holder, accepts one 3.45" lens <b>L345SF</b> = 3.45" diameter soft focus lens <b>WW695SC</b> = 6" wall wash kick reflector, specular clear (use for double or corner wall wash or replacement) <b>TRM690WH</b> = 6" LED oversize trim ring <b>H347</b> = Step down transformer for 347V input, 75VA max <b>H347200</b> = Step down transformer for 347V input, 200VA max
<b>693</b> =6" baffle	<b>WB</b> =White baffle with white flange <b>BB</b> =Black baffle with white flange <b>SNB</b> =Satin nickel baffle and flange <b>TBZB</b> =Tuscan bronze baffle and flange	
<b>694</b> =6" regressed eyeball directional	<b>WB</b> =White eyeball, baffle and flange <b>SNB</b> =Satin nickel eyeball, baffle and flange <b>TBZB</b> =Tuscan bronze eyeball, baffle and flange	
<b>695</b> =6" wall wash	<b>WW</b> =Specular reflector, repositionable specular kick reflector and white flange	
<b>696</b> =6" shallow baffle	<b>WB</b> =White baffle with white flange	

## DIMENSIONS



## COMPLIANCE TABLE

### 1200 LUMEN

80 CRI								
Catalog #	PD56R12ED010 - PDM6827		PD56R12ED010 - PDM6830		PD56R12ED010 - PDM6835		PD56R12ED010 - PDM6840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
692H	1590	69	1652	72	1713	74	1737	76
692SC	1638	71	1701	74	1764	77	1789	78
692W	1613	70	1675	73	1737	76	1761	77
693BB	1170	51	1215	53	1260	55	1278	56
693SNB	1399	61	1453	63	1507	66	1528	66
693TBZB	1259	55	1307	57	1356	59	1375	60
693WB	1580	69	1641	71	1702	74	1725	75
694SNB	1647	72	1711	74	1774	77	1799	78
694TBZB	1630	71	1693	74	1755	76	1780	77
694WB	1689	73	1754	76	1819	79	1844	80
696WB	1660	72	1724	75	1788	78	1813	79

90 CRI								
Catalog #	PD56R12ED010 - PDM6927		PD56R12ED010 - PDM6930		PD56R12ED010 - PDM6935		PD56R12ED010 - PDM6940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
692H	1234	54	1323	58	1433	62	1431	62
692SC	1271	55	1363	59	1476	64	1474	64
692W	1251	54	1342	58	1453	63	1451	63
693BB	908	39	974	42	1055	46	1053	46
693SNB	1086	47	1164	51	1261	55	1259	55
693TBZB	977	42	1048	46	1134	49	1133	49
693WB	1226	53	1315	57	1424	62	1422	62
694SNB	1278	56	1371	60	1484	65	1482	64
694TBZB	1265	55	1356	59	1469	64	1466	64
694WB	1311	57	1406	61	1522	66	1519	66
696WB	1289	56	1382	60	1496	65	1494	65

**ES, T24**

ES = ENERGY STAR® Qualified

T24 = Can be used to comply with California Title 24 Non-Residential

## COMPLIANCE TABLE

### 1800 LUMEN

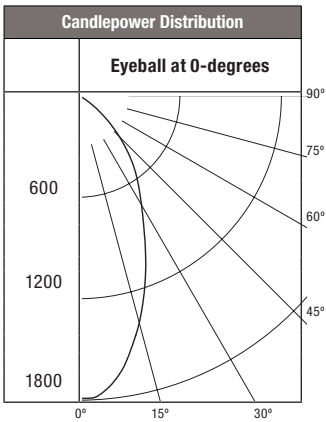
80 CRI								
Catalog #	PD56R18ED010 - PDM6827		PD56R18ED010 - PDM6830		PD56R18ED010 - PDM6835		PD56R18ED010 - PDM6840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
692H	1917	65	2008	68	2087	71	2111	72
692SC	1975	67	2068	70	2150	73	2175	74
692W	1944	66	2036	69	2117	72	2141	73
693BB	1411	48	1478	50	1536	52	1554	53
693SNB	1687	57	1766	60	1836	62	1858	63
693TBZB	1518	51	1589	54	1652	56	1671	57
693WB	1905	65	1995	68	2074	70	2098	71
694SNB	1986	67	2080	70	2162	73	2187	74
694TBZB	1965	67	2058	70	2139	73	2164	73
694WB	2036	69	2132	72	2217	75	2242	76
696WB	2002	68	2096	71	2179	74	2205	75

90 CRI								
Catalog #	PD56R18ED010 - PDM6927		PD56R18ED010 - PDM6930		PD56R18ED010 - PDM6935		PD56R18ED010 - PDM6940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
692H	1494	51	1611	55	1740	59	1758	60
692SC	1539	52	1660	56	1792	61	1810	61
692W	1515	51	1634	55	1765	60	1782	60
693BB	1099	37	1186	40	1281	43	1293	44
693SNB	1314	45	1418	48	1531	52	1546	52
693TBZB	1182	40	1275	43	1377	47	1391	47
693WB	1484	50	1601	54	1729	59	1746	59
694SNB	1547	52	1669	57	1802	61	1820	62
694TBZB	1531	52	1651	56	1784	60	1801	61
694WB	1586	54	1711	58	1848	63	1867	63
696WB	1560	53	1682	57	1817	62	1835	62

## PHOTOMETRY

### PD56R12ED010- PDM6835-692SC

Spacing Criteria = 0.77  
Lumens per Watt = 76.7 LpW  
Test No. P114642  
Test Model: PD56R12ED010- PDM6835-692SC



Candela Distribution	
Degrees Vertical	Candela
0*	1791
5	1754
15	1391
25	929
35	609
45	345
55	126
65	22
75	0
85	1
90	0

\*CBCP

Luminance	
(Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	26747
55	12033
65	2841
75	0
85	692

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	59.2	4.2	4.2
7'	36.5	5.4	5.4
8'	28	6	6
9'	22.1	6.8	6.8
10'	17.9	7.6	7.6
12'	12.4	9.2	9.2

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

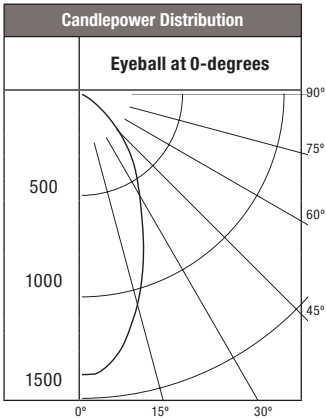
Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	977	55.4
0-40	1357	76.9
0-60	1738	98.5
0-90	1764	100

Scaling factor for the Battery back up:

- 1800 Lumen = 0.33
- 1200 Lumen = 0.27

### PD56R12ED010- PDM6930-692SC

Spacing Criteria = 0.77  
Lumens per Watt = 59.3 LpW  
Test No. P114645  
Test Model: PD56R12ED010- PDM6930-692SC



Candela Distribution	
Degrees Vertical	Candela
0*	1384
5	1356
15	1075
25	718
35	470
45	267
55	97
65	17
75	0
85	1
90	0

\*CBCP

Luminance	
(Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	20669
55	9300
65	2192
75	0
85	503

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	45.7	4.2	4.2
7'	28.2	5.4	5.4
8'	21.6	6	6
9'	17.1	6.8	6.8
10'	13.8	7.6	7.6
12'	9.6	9.2	9.2

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	755	55.4
0-40	1049	76.9
0-60	1343	98.5
0-90	1363	100

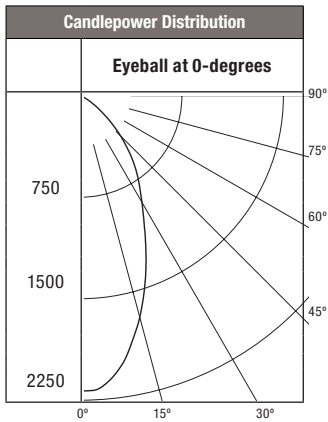
Scaling factor for the Battery back up:

- 1800 Lumen = 0.33
- 1200 Lumen = 0.27

## PHOTOMETRY

### PD56R18ED010- PDM6835-692SC

Spacing Criteria = 0.77  
Lumens per Watt = 72.9 LpW  
Test No. P114626  
Test Model: PD56R18ED010- PDM6835-692SC



Candela Distribution	
Degrees Vertical	Candela
0*	2182
5	2138
15	1695
25	1132
35	742
45	420
55	154
65	27
75	0
85	1
90	0

\*CBCP

Luminance	
(Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	32593
55	14671
65	3463
75	0
85	818

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	72.1	4.2	4.2
7'	44.5	5.4	5.4
8'	34.1	6	6
9'	26.9	6.8	6.8
10'	21.8	7.6	7.6
12'	15.2	9.2	9.2

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

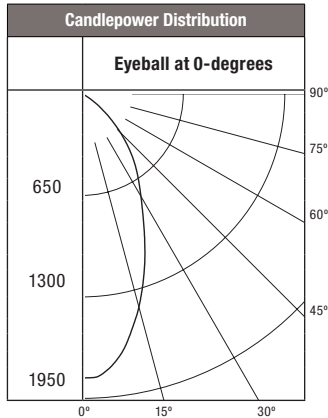
Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	1191	55.4
0-40	1654	76.9
0-60	2118	98.5
0-90	2150	100

Scaling factor for the Battery back up:

- 1800 Lumen = 0.33
- 1200 Lumen = 0.27

### PD56R18ED010- PDM6935-692SC

Spacing Criteria = 0.77  
Lumens per Watt = 60.8 LpW  
Test No. P114630  
Test Model: PD56R18ED010- PDM6935-692SC



Candela Distribution	
Degrees Vertical	Candela
0*	1819
5	1782
15	1413
25	944
35	619
45	350
55	128
65	22
75	0
85	1
90	0

\*CBCP

Luminance	
(Average Candela/M <sup>2</sup> )	
Degree	Avg. 0° Luminance
45	27173
55	12234
65	2893
75	0
85	692

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	60.1	4.2	4.2
7'	37.1	5.4	5.4
8'	28.4	6	6
9'	22.5	6.8	6.8
10'	18.2	7.6	7.6
12'	12.6	9.2	9.2

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	993	55.4
0-40	1379	76.9
0-60	1766	98.5
0-90	1792	100

Scaling factor for the Battery back up:

- 1800 Lumen = 0.33
- 1200 Lumen = 0.27