

DESCRIPTION

The Halo PD6RX Retrofit Kit is designed to be installed into existing Halo Commercial PD6 Housings. Recessed 6-inch LED shallow lens downlight retrofit is available in various distributions, lumen and CRI/CCT options. Non-conductive polymer "Dead Front" trim available. Installs from below the ceiling into existing open frame recessed housings. Use for general area lighting where high efficiency and visual comfort are required.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

MECHANICAL

Frame

Use to retrofit existing Halo Commercial PD6 series incandescent, compact fluorescent or metal halide recessed housings to LED.

Eaton Halo Commercial

- PD6H Series
- PD6V Series
- PD6P Series

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

Standard one piece parabolic aluminum reflector combines high optical efficiency with visual comfort. Non-conductive polymer "Dead Front" trim also available. Attaches to LED module with (3) speed clamps minimizing light leaks to lens. Self-flanged standard with an optional white painted flange.

Trim Retention

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

ELECTRICAL

Module Flex

Armored cable assembly attaches to junction box and provides tool-less connection to the LED module.

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 1% with 0 - 10V analog control. Mounted to a junction box cover to replace existing. Optional low voltage DC driver for use with Eaton's distributed low voltage power system.

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
- IP66 Ingress Protection Rated
- Non-IC rated for 2000 and 3000 Lumen fixtures. Insulation must be kept 3" from top and sides.
- IC rated for 1000 and 1500 Lumen fixtures.
- 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.
- 80 CRI: 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.



PD6RX10
PD6RX15
PD6RX20
PD6RX30

PDM6B

64V
64VDFW

1000, 2000 & 3000
Lumen Series

LED RETROFIT

6-Inch Aperture
Lens Downlight



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

Lumens	1000 Series	
Input Voltage	120V	277V
Input Current	0.083 A	0.041 A
Input Power	9.9 W	10.8 W
Efficacy	125 LPW	125 LPW
Inrush Current	0.53 A	1.3 A

Lumens	1500 Series	
Input Voltage	120V	277V
Input Current	0.114 A	0.053 A
Input Power	13.7 W	14.3 W
Efficacy	125 LPW	125 LPW
Inrush Current	0.63 A	1.7 A

Lumens	2000 Series	
Input Voltage	120V	277V
Input Current	0.166 A	0.079 A
Input Power	19.9 W	20.5 W
Efficacy	120 LPW	120 LPW
Inrush Current	0.59 A	2.7 A

Lumens	3000 Series	
Input Voltage	120V	277V
Input Current	0.232 A	0.103 A
Input Power	27.7 W	27.5 W
Efficacy	115 LPW	115 LPW
Inrush Current	0.73 A	2.9 A

ORDERING INFORMATION

SAMPLE NUMBER: PD6RX12D010BREM-PDM6B827-64VC

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

Housing	Lumens	Driver	Options	LED Module	CRI/CCT
PD6RX = 6" aperture LED downlight retrofit, less mounting frame PD6RXCP = 6" aperture LED downlight retrofit, less mounting frame, CCEA listed for City of Chicago plenum requirements	10 = 1,000 lumens (nominal) 15 = 1,500 lumens (nominal) 20 = 2,000 lumens (nominal) 30 = 3,000 lumens (nominal)	D010B = 120-277V 50/60Hz, 0-10V dimming DLV = Low voltage dimming driver	REM = Emergency operation with remote indicator and test switch (not available with PD6RXCP housing), 60 Hz ^{1,2} REM7 = 7W low voltage emergency module with remote test switch ^{1,2} REM14 = 14W low voltage emergency module with remote test switch ^{1,2} LWTPD1 = Factory installed LumaWatt Pro Wireless Sensor Kit (0-10V only) SWPD1 = Factory installed WaveLinX tilemount daylight sensor (includes control module, sensor, cable and tile mount)	PDM6B = Downlight LED module for PD6 housing, provides 1,000, 1,500, 2,000, or 3,000 lumens (nominal) depending on connected housing type	827 = 80 CRI, 2700K CCT 927 = 90 CRI, 2700K CCT 830 = 80 CRI, 3000K CCT 930 = 90 CRI, 3000K CCT 835 = 80 CRI, 3500K CCT 935 = 90 CRI, 3500K CCT 840 = 80 CRI, 4000K CCT 940 = 90 CRI, 4000K CCT

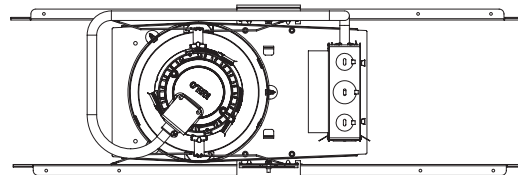
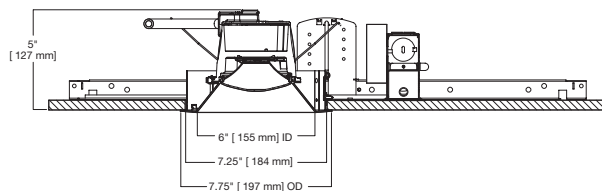
Reflector	Finish Option	Flange Option	Accessories
64V = 6" shallow parabolic reflector 64VDFW = 6" non-conductive polymer shallow parabolic reflector (white finish only)	C = Specular clear G = Specular gold H = Semi-specular clear W = White (white flange)	Blank = Polished flange standard with C, G, & H reflector finishes Blank = White flange standard with W WF = White flange option available with C, G, & H reflector finishes	BFR56NFL = Beam forming reflector kit, narrow flood distribution BFR56FL = Beam forming reflector kit, flood distribution BFR56MH = Media holder, accepts one 3.45" lens L345SF = 3.45" diameter soft focus lens H347 = Step down transformer for 347V input, 75VA max H347200 = Step down transformer for 347V input, 200VA max PORLWTPD1 = LumaWatt Pro Wireless Sensor Kit (0-10V only) TMSWPD1 = WaveLinX tilemount daylight sensor (includes control module, sensor, cable and tile mount)

Notes: 1. Not available with CP version.
2. UL qualified for US only (not Canada).

UL Listed into Halo Commercial Housings:

- Use to retrofit existing Halo Commercial PD6 series incandescent, compact fluorescent or metal halide recessed housings to LED
- Use PD6MB LED Light Engine: PD610x, PD615x, PD620x, and PD630X
- Designed to work with Halo Commercial LED trim series: 61Vx, 64Vx, 64VDFW, and 61WWx

DIMENSIONS



COMPLIANCE TABLE

1000 LUMEN

80 CRI								
Catalog #	PD6RX10D010B-PDM6B827		PD6RX10D010B-PDM6B830		PD6RX10D010B-PDM6B835		PD6RX10D010B-PDM6B840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	1200	121	1272	129	1307	132	1331	134
64VCWF	1187	120	1258	127	1292	130	1316	133
64VG	1172	118	1243	126	1276	129	1300	131
64VGWF	1167	118	1237	125	1271	128	1295	131
64VH	1153	116	1223	123	1255	127	1279	129
64VHWF	1151	116	1220	123	1253	127	1276	129
64VW	1199	121	1272	128	1306	132	1331	134

90 CRI								
Catalog #	PD6RX10D010B-PDM6B927		PD6RX10D010B-PDM6B930		PD6RX10D010B-PDM6B935		PD6RX10D010B-PDM6B940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	1024	103	1083	109	1146	116	1164	118
64VCWF	1012	102	1071	108	1133	114	1151	116
64VG	1000	101	1057	107	1119	113	1136	115
64VGWF	996	101	1053	106	1115	113	1132	114
64VH	984	99	1040	105	1101	111	1118	113
64VHWF	982	99	1038	105	1099	111	1116	113
64VW	1023	103	1082	109	1146	116	1163	117

1500 LUMEN

80 CRI								
Catalog #	PD6RX15D010B-PDM6B827		PD6RX15D010B-PDM6B830		PD6RX15D010B-PDM6B835		PD6RX15D010B-PDM6B840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	1629	119	1727	126	1774	129	1807	132
64VCWF	1611	118	1708	125	1754	128	1787	130
64VG	1591	116	1687	123	1732	126	1765	129
64VGWF	1584	116	1680	123	1725	126	1758	128
64VH	1565	114	1660	121	1704	124	1736	127
64VHWF	1562	114	1656	121	1701	124	1733	126
64VW	1628	119	1726	126	1773	129	1806	132

90 CRI								
Catalog #	PD6RX15D010B-PDM6B927		PD6RX15D010B-PDM6B930		PD6RX15D010B-PDM6B935		PD6RX15D010B-PDM6B940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	1390	101	1470	107	1556	114	1580	115
64VCWF	1375	100	1454	106	1539	112	1562	114
64VG	1358	99	1436	105	1520	111	1543	113
64VGWF	1352	99	1430	104	1513	110	1536	112
64VH	1336	97	1412	103	1495	109	1518	111
64VHWF	1333	97	1409	103	1492	109	1515	111
64VW	1389	101	1469	107	1555	114	1579	115

COMPLIANCE TABLE continued

2000 LUMEN

80 CRI								
Catalog #	PD6RX20D010B-PDM6B827		PD6RX20D010B-PDM6B830		PD6RX20D010B-PDM6B835		PD6RX20D010B-PDM6B840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	2306	116	2446	123	2511	126	2559	129
64VCWF	2281	115	2418	122	2483	125	2530	127
64VG	2253	113	2388	120	2453	123	2499	126
64VGWF	2243	113	2378	120	2442	123	2488	125
64VH	2216	111	2350	118	2413	121	2459	124
64VHWF	2212	111	2345	118	2408	121	2453	123
64VW	2305	116	2444	123	2510	126	2557	129

90 CRI								
Catalog #	PD6RX20D010B-PDM6B927		PD6RX20D010B-PDM6B930		PD6RX20D010B-PDM6B935		PD6RX20D010B-PDM6B940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	1968	99	2081	105	2203	111	2236	112
64VCWF	1946	98	2058	103	2178	109	2211	111
64VG	1922	97	2033	102	2152	108	2184	110
64VGWF	1914	96	2024	102	2143	108	2175	109
64VH	1891	95	2000	100	2117	106	2149	108
64VHWF	1887	95	1996	100	2112	106	2144	108
64VW	1967	99	2080	105	2202	111	2235	112

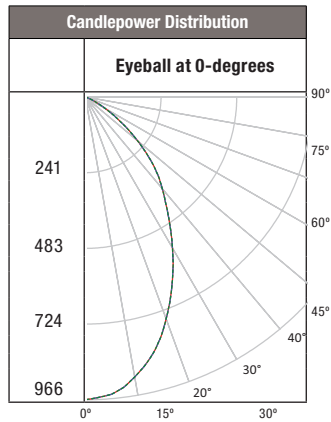
3000 LUMEN

80 CRI								
Catalog #	PD6RX30D010B-PDM6B827		PD6RX30D010B-PDM6B830		PD6RX30D010B-PDM6B835		PD6RX30D010B-PDM6B840	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	3007	109	3188	116	3274	119	3336	121
64VCWF	2973	108	3153	115	3237	118	3298	120
64VG	2937	107	3114	113	3197	116	3258	118
64VGWF	2924	106	3101	113	3184	116	3244	118
64VH	2889	105	3064	111	3146	144	3205	117
64VHWF	2883	105	3057	111	3139	144	3198	116
64VW	3005	109	3187	116	3272	119	3334	121

90 CRI								
Catalog #	PD6RX30D010B-PDM6B927		PD6RX30D010B-PDM6B930		PD6RX30D010B-PDM6B935		PD6RX30D010B-PDM6B940	
	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
64VC	2566	93	2713	99	2872	104	2916	106
64VCWF	2537	92	2683	98	2840	103	2883	105
64VG	2506	91	2650	96	2805	102	2848	104
64VGWF	2495	91	2639	96	2793	102	2836	103
64VH	2465	90	2607	95	2760	100	2802	102
64VHWF	2460	89	2602	95	2754	100	2796	102
64VW	2564	93	2712	99	2871	104	2914	106

PHOTOMETRY - 1000 lumen / 80 CRI

PD6RX10D010B-PDM6B835-64VC
Spacing Criteria = 0.94
Lumens per Watt = 132.0 Lm/W
Test No. P216040
Test Model: PD6RX10D010B-PDM6B835-64VC



Candela Distribution	
Degrees Vertical	Candela
0*	966
5	952
15	843
25	655
35	461
45	306
55	136
65	30
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	23723
55	13008
65	3956
75	0
85	0

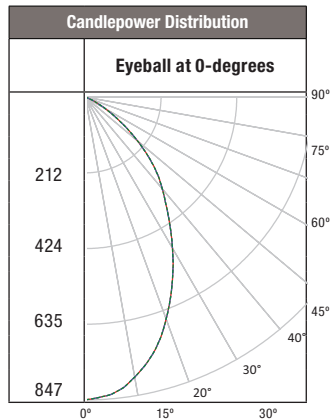
Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	31.9	5	5
7'	19.7	6.4	6.4
8'	15.1	7.4	7.4
9'	11.9	8.4	8.4
10'	9.7	9.4	9.4
12'	6.7	11.2	11.2

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	625.4	47.9
0-40	914.6	70.0
0-60	1272.4	97.4
0-90	1306.5	100

PHOTOMETRY - 1000 lumen / 90 CRI

PD6RX10D010B-PDM6B935-64VC
Spacing Criteria = 0.94
Lumens per Watt = 115.8 Lm/W
Test No. P216044
Test Model: PD6RX10D010B-PDM6B935-64VC



Candela Distribution	
Degrees Vertical	Candela
0*	847
5	835
15	740
25	575
35	404
45	268
55	119
65	27
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	20808
55	11412
65	3476
75	0
85	0

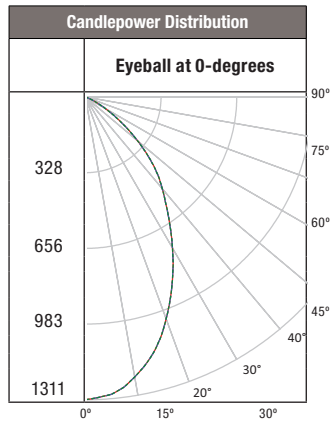
Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	28	5	5
7'	17.3	6.4	6.4
8'	13.2	7.4	7.4
9'	10.5	8.4	8.4
10'	8.5	9.4	9.4
12'	5.9	11.2	11.2

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	548.6	47.9
0-40	802.3	70.0
0-60	1116.1	97.4
0-90	1146.1	100

PHOTOMETRY - 1500 lumen / 80 CRI

PD6RX15D010B-PDM6B835-64VC
Spacing Criteria = 0.94
Lumens per Watt = 129.5 Lm/W
Test No. P216024
Test Model: PD6RX15D010B-PDM6B835-64VC



Candela Distribution	
Degrees Vertical	Candela
0*	1311
5	1292
10	1144
20	889
30	625
40	415
50	185
60	42
70	0
80	0
90	0

*CBCP

Luminance (Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	32205
55	17653
65	5383
75	0
85	0

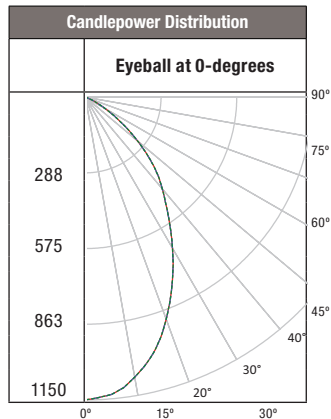
Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	43.3	5	5
7'	26.8	6.4	6.4
8'	20.5	7.4	7.4
9'	16.2	8.4	8.4
10'	13.1	9.4	9.4
12'	9.1	11.2	11.2

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	849.0	47.9
0-40	1241.7	70.0
0-60	1727.3	97.4
0-90	1773.7	100

PHOTOMETRY - 1500 lumen / 90 CRI

PD6RX15D010B-PDM6B935-64VC
Spacing Criteria = 0.94
Lumens per Watt = 113.6 Lm/W
Test No. P216028
Test Model: PD6RX15D010B-PDM6B935-64VC



Candela Distribution	
Degrees Vertical	Candela
0*	1150
5	1134
15	1004
25	780
35	549
45	364
55	162
65	36
75	0
85	0
90	0

*CBCP

Luminance (Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	28251
55	15493
65	4722
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	38	5	5
7'	23.5	6.4	6.4
8'	18	7.4	7.4
9'	14.2	8.4	8.4
10'	11.5	9.4	9.4
12'	8	11.2	11.2

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	744.8	47.9
0-40	1089.3	70.0
0-60	1515.3	97.4
0-90	1556.0	100

PHOTOMETRY - 2000 lumen / 80 CRI

PD6RX20D010B-PDM6B835-64VC

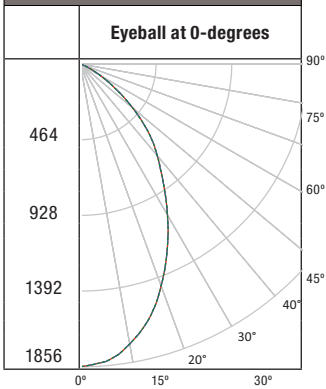
Spacing Criteria = 0.94

Lumens per Watt = 126.2 Lm/W

Test No. P216008

Test Model: PD6RX20D010B-PDM6B835-64VC

Candlepower Distribution



Candela Distribution	
Degrees Vertical	Candela
0*	1856
5	1830
15	1620
25	1259
35	886
45	588
55	262
65	59
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	45602
55	25003
65	7614
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	61.4	5	5
7'	37.9	6.4	6.4
8'	29	7.4	7.4
9'	22.9	8.4	8.4
10'	18.6	9.4	9.4
12'	12.9	11.2	11.2

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	1202.1	47.9
0-40	1758.0	70.0
0-60	2445.6	97.4
0-90	2511.2	100

PHOTOMETRY - 2000 lumen / 90 CRI

PD6RX20D010B-PDM6B935-64VC

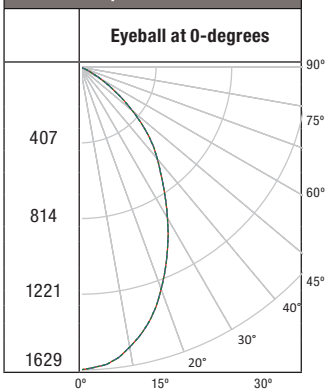
Spacing Criteria = 0.94

Lumens per Watt = 110.7 Lm/W

Test No. P216012

Test Model: PD6RX20D010B-PDM6B935-64VC

Candlepower Distribution



Candela Distribution	
Degrees Vertical	Candela
0*	1629
5	1605
15	1422
25	1105
35	777
45	516
55	230
65	52
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	40004
55	21935
65	6680
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	53.8	5	5
7'	33.2	6.4	6.4
8'	25.4	7.4	7.4
9'	20.1	8.4	8.4
10'	16.3	9.4	9.4
12'	11.3	11.2	11.2

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	1054.5	47.9
0-40	1542.2	70.0
0-60	2145.4	97.4
0-90	2203.0	100

PHOTOMETRY - 3000 lumen / 80 CRI

PD6RX30D010B-PDM6B835-64VC

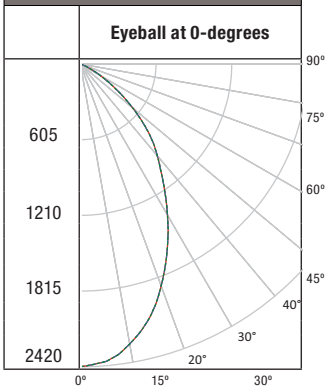
Spacing Criteria = 0.94

Lumens per Watt = 119.0 Lm/W

Test No. P216056

Test Model: PDRX630D010B-PDM6B835-64VC

Candlepower Distribution



Candela Distribution	
Degrees Vertical	Candela
0*	2420
5	2385
15	2112
25	1642
35	1154
45	767
55	341
65	76
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	59448
55	32591
65	9923
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	80	5	5
7'	49.4	6.4	6.4
8'	37.8	7.4	7.4
9'	29.9	8.4	8.4
10'	24.2	9.4	9.4
12'	16.8	11.2	11.2

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	1567.2	47.9
0-40	2291.9	70.0
0-60	3188.4	97.4
0-90	3273.9	100

PHOTOMETRY - 3000 lumen / 90 CRI

PD6RX30D010B-PDM6B935-64VC

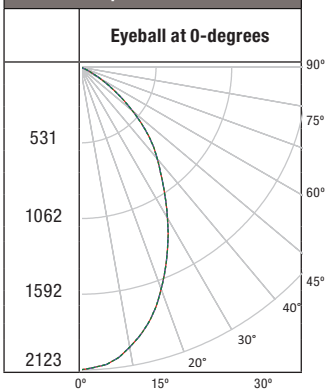
Spacing Criteria = 0.94

Lumens per Watt = 104.4 Lm/W

Test No. P216060

Test Model: PD6RX30D010B-PDM6B935-64VC

Candlepower Distribution



Candela Distribution	
Degrees Vertical	Candela
0*	2123
5	2092
15	1853
25	1440
35	1013
45	673
55	299
65	67
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	52153
55	28587
65	8704
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	70.2	5	5
7'	43.3	6.4	6.4
8'	33.2	7.4	7.4
9'	26.2	8.4	8.4
10'	21.2	9.4	9.4
12'	14.7	11.2	11.2

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	1374.8	47.9
0-40	2010.6	70.0
0-60	2797.1	97.4
0-90	2872.1	100