



LED

**6" Pro-Optic® LED**  
**New Construction Downlight**  
**120-277V**  
**0-10V Dimming Option**

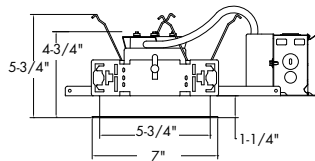
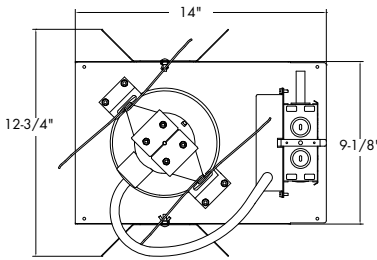
**Recessed**

All Items **MTO**

Type	-EB	-EBDM	-277EB	-277EBDM
P8216	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ceiling Cutout: see guide

Maximum Ceiling Thickness: 1-1/2"



**LED Housing**  
**Catalog No. Description**

P8216-EB	6" LED New construction 120V Housing
P8216-EBDM	6" LED New construction 120V Dimmable Housing
P8216-277EB	6" LED New construction 277V Housing
P8220-277EBDM	6" LED New construction 277V Dimmable Housing

**LED Trim**

**Catalog No.**

<input type="checkbox"/> P8104	6" 900lm module
<input type="checkbox"/> P8105	6" 1300lm module
<input type="checkbox"/> P8106	6" 1500lm module

**Reflector Finish**

<input type="checkbox"/> -28	White
(White flange standard)	

**LED Color Temp**

<input type="checkbox"/> /30K	3000 Kelvin
<input type="checkbox"/> /35K	3500 Kelvin
<input type="checkbox"/> /40K	4000 Kelvin

Example: P8120-21A/30K (Ordered separately)

**Specifications:**

General

- 6" commercial grade LED downlight utilizing remote phosphor technology to obtain color consistency, energy savings, and low maintenance costs
- 50,000 hours minimum life up to 35°C (95°F) P8104, 28°C (82°F) P8105, 25°C (77°F) P8106 in open plenum applications

Housing

- One-piece 22 gauge non-corrosive steel platform
- Pre-wired J-box with snap-on cover for easy access
- Snap-in connection from driver compartment allows easy installation of light engine/trim assembly without tools above or below the ceiling and can be upgraded to accommodate technology improvements
- Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring

Reflector

- High purity aluminum, semi-diffuse reflector
- Self-flanged trim standard
- White painted self-flanged trim (-28) option available

LED Light Engine

- The P8216 uses either 36, 54, 72 low power Nichia LED's. This technology provides controlled color consistency from fixture to fixture
- The system is designed for optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance)
- Both reflector and light engine assembly are mechanically retained to housing. The light engine comes standard with 80 CRI for all CCT's

LED Driver

- Driver is designed to match the 50,000 hour minimum life expectancy of the system
- Meets UL Class 2, inherent short circuit protection, self limited, overload protected
- Integrated thermal feedback loop will gradually reduce current to protect system life
- Universal driver 120V-277V

Dimming

- Flicker-free 0 – 10V dimming to 10%

Labeling

- cCSAus certified to US and Canadian safety standards
- Suitable for wet locations
- 5 year warranty

Progress Lighting  
 701 Millennium Blvd.  
 Greenville, South Carolina  
 29607

www.progresslighting.com



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**P8216/P8104/P8105/P8106**

**Recessed**

DRIVER DATA	P8104	P8105	P8106
Input Voltage	120V-277V	120V-277V	120V-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.143A (120V) 0.062A (277V)	0.200A (120V) 0.087A (277V)	0.148A (120V) 0.108A (277V)
Input Power	17.1W	24.0W	29.8W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR Part15, Class A	FCC 47CFR Part15, Class A	FCC 47CFR Part15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

**Lumen Multiplier Table**

Photometrics for the P8216 are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00

**Dimming 0-10V 100% to 10%**

Pro-Optic LED driver is compatible with 0-10V type dimming controls. Recommended dimming controls are listed below.

Control Manufacturer	Wallbox Dimmer	Power Booster Available
Douglas Lighting controls	WPC 5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V) Tap Glide Heatsink TGH1500FAM120 (120V) Oasis OA2000FAMU (120/277V)	
Honeywell, Inc.	EL 7315A1019 and EL7315A1009	EL7305A1010
HUNT Dimming	Preset Slide: PS-010-IV-120V and PS-010-WH-120V Preset Slide: PS-010-3W-IV-120V and PS-010-3W-WH-120V Preset Slide: PS-010-IV-277V and PS-010-WH-277V Preset Slide: PS-010-3W-IV-277V and PS-010-3W-WH-277V Preset Slide, controls FD-010: PS-IFC-010-IV- and PS-IFC-010-WH-120/277V Preset Slide, controls FD-010: PS-IFC-010-3W-IV- and PS-IFC-010-3W-WH-120/277V Remoted mounted unit: FD-010-120V and FD-010-277V	
Lehigh Electric Products Co.	Solitaire	PBX
Leviton Lighting Controls Div.	Leviton Centura Fluorescent Control System IllumaTech™ IP7 Series	CN100 PE300
Lutron Electronics Co., Inc.	Visit <a href="http://www.lutron.com/advance">www.lutron.com/advance</a> for the latest control information and selection	
PDM Electrical products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DAL Inet router
The Watt Stopper, Inc.	LS4 used with LCD-101 and LCD-103	



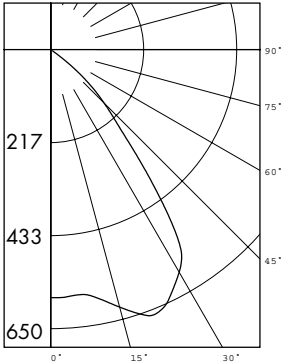


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**New Construction Downlight**  
**P8216/P8104/P8105/P8106**

**Recessed**

**P8216-EB P8104-28/35K**  
 LED Light Engine: 3500K, 80+ CRI  
 System Wattage: 17.1W  
 Fixture Delivered Lumens: 925  
 Fixture Efficacy: 54.0  
 Spacing Criteria: 1.3



**CANDELA DISTRIBUTION**

DEG	CANDELA
0	560
5	552
15	593
25	621
35	444
45	161
55	10
65	2
75	1
85	0
90	0

Test No. 1911.6074  
 Tested at 25°C Ambient in accordance to IESNA LM-79-2008

**ZONAL LUMEN SUMMARY**

ZONE	LUMENS
0-60	920.4
0-90	925.1
90-180	0.0
0-180	925.1

**LUMINANCE DATA IN CANDELA/SQ. METER**

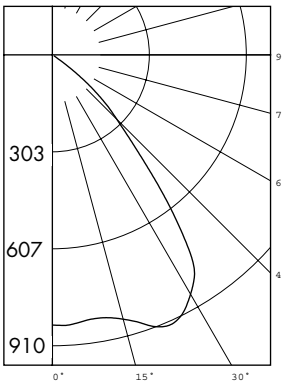
Angle in Vertical	Average - 0°
45°	12691
55°	873
65°	326
75°	164
85°	62

**COEFFICIENTS OF UTILIZATION** Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94			
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86			
3	100	93	87	83	98	91	86	82	89	84	81	86	83	80	84	81	78			
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	75	72			
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65			
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	63	60			
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55			
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51			
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47			
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43			

P8216-EB P8104-28/35K Test No. 1911.6074

**P8216-EB P8105-28/35K**  
 LED Light Engine: 3500K, 80+ CRI  
 System Wattage: 24.0W  
 Fixture Delivered Lumens: 1375  
 Fixture Efficacy: 57.3  
 Spacing Criteria: 1.3



**CANDELA DISTRIBUTION**

DEG	CANDELA
0	836
5	824
15	847
25	869
35	649
45	249
55	16
65	4
75	1
85	0
90	0

Test No. 1910.6073  
 Tested at 25°C Ambient in accordance to IESNA LM-79-2008

**ZONAL LUMEN SUMMARY**

ZONE	LUMENS
0-60	1369.3
0-90	1375.2
90-180	0.0
0-180	1375.2

**LUMINANCE DATA IN CANDELA/SQ. METER**

Angle in Vertical	Average - 0°
45°	19982
55°	1447
65°	541
75°	244
85°	89

**COEFFICIENTS OF UTILIZATION** Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	103	102	100	100	98	97	96	95	94			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86			
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78			
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65			
6	83	73	66	61	81	72	65	61	70	64	60	69	64	60	67	63	59			
7	78	67	60	56	76	66	60	55	65	59	55	64	59	55	63	58	54			
8	73	62	56	51	72	62	55	51	61	55	50	59	54	50	58	54	50			
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46			
10	65	54	47	43	64	54	47	43	53	47	43	52	47	43	51	46	43			

P8216-EB P8105-28/35K Test No. 1910.6073



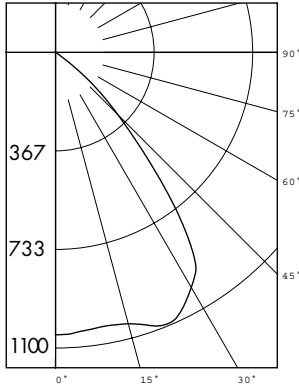


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**P8216/P8104/P8105/P8106**

**Recessed**

**P8216-EB P8106-28/35K**  
 LED Light Engine: 3500K, 80+ CRI  
 System Wattage: 29.8W  
 Fixture Delivered Lumens: 1598  
 Fixture Efficacy: 53.6  
 Spacing Criteria: 1.3



**CANDELA DISTRIBUTION**

DEG	CANDELA
0	1003
5	996
15	998
25	1020
35	822
45	314
55	25
65	5
75	2
85	0
90	0

Test No. 1912.6072

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

**ZONAL LUMEN SUMMARY**

ZONE	LUMENS
0-60	1590.1
0-90	1597.6
90-180	0
0-180	1597.6

**LUMINANCE DATA IN CANDELA/ SQ. METER**

Angle in Vertical	Average - 0°
45°	22934
55°	1376
65°	538
75°	272
85°	75

**COEFFICIENTS OF UTILIZATION** Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%			70%			50%			30%			10%				
	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30		
1	113	110	107	105	110	108	105	103	103	101	100	100	98	97	96	95	94
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71
5	88	79	72	67	86	78	72	67	76	70	66	74	69	66	73	68	65
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60
7	78	67	61	56	76	67	60	56	65	59	55	64	59	55	63	58	55
8	73	63	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43

P8216-EB P8106-28/35K

Test No. 1912.6072

