# LIGHTOLIER

by (s) ignify

# **Downlighting**

LyteProfile 6"

P6R Round Downlight & Wall Wash







LyteProfile downlights and wall washers provide a perfect balance of functionality with glare control. The robust and versatile UniFrame frame-in kit makes changes and updates easy to manage and install. High optical efficiency reinforced with Accurender technology provides an optimum balance of performance and quality of light. Ideal for use in a variety of applications including open office, institutional, healthcare, and retail.

Standard luminaire: Complete luminaire = Frame + Engine + Trim + Accessories (optional)

Flex install luminaire: Complete luminaires = Engine (F) + Trim + Accessories (optional)

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Frame Standard example: 6RN

Series	Aperture R	Installation	Option	ıs		
6 Uniframe 6" Non-IC	R Round	N New construction (Non-IC)	— ЕМ6	Universal 120/277/347V Emergency, 6W Self-Test/Self- Diagnostic (not available for BAC) <sup>1</sup>	LC BAC	Chicago Plenum <sup>2</sup> Meets the requirements of the Buy American Act of 1933 (BAA)**
		R Remodeler (Non-IC)	_	Universal 120/277/347V		
		A AirSeal (IC)	-	Universal 120/277/347V		

# Engine/Trim

Standard example: P6RDL20935WCDZ10U

Series P6R	Style	Lumen	CRI/CCT	Beam	Reflector	Flange	Dimming / Options	Voltage	Options
P6R LyteProfile 6" round downlight	DL Downlight LW Lensed Wall Wash <sup>3</sup> SL Shower light <sup>4</sup> (non-conductive lens)	10 1000 lm 15 1500 lm 20 2000 lm <sup>5</sup> 25 2500 lm <sup>5</sup> 30 3000 lm <sup>5</sup> 35 3500 lm <sup>6</sup> 40 4000 lm <sup>6</sup> 45 4500 lm <sup>6</sup> 50 5000 lm <sup>6</sup>	927 90CRI/2700K 930 90CRI/3000K 935 90CRI/3500K 940 90CRI/4000K 9D2W 3000-1800K (dim to warm) <sup>7</sup> 96T 2700-6500K (tunable white) <sup>8</sup>	N Narrow M Medium W Wide <sup>3,4</sup>	'	- White (matte)  B Black (matte)  P Polished (matches aperture)  F Flangeless (requires CAGRFT)  - White (matte)  B Black (matte)  F Flangeless (requires CAGRFT)	Z10 0-10V 1% Z10D20 0-10V 1% (dim to Off) (up to 3500im) L1 Lutron LDE1 EcoSystem 1% RA Integral Interac RF sensor (up to	<b>U</b> 120/277V	None     R Retrofit <sup>11</sup> (not compatible with IEM6)     F Flex install (no frame required) <sup>13</sup> IEM6 Trim mounted EM test switch (for DL style only)
				WHAMF White (gloss antimicrobial) <sup>9</sup>	- White (gloss)  F Flangeless (requires CAGRET) <sup>9</sup>	Revserse Phase (up to 3000lm)			

Accessories (Not currently BAA-compliant - learn more on page 2)

SBA Interact Ready System Bridge Accessory with integral occupancy and daylight sensor (compatible with all 0-10V options, see SBA spec sheet) 12
CAEM6 Field installable Bodine BSL6 6W battery pack with self-test/self-diagnostic for use with new construction frames, 120-277V

CA6RFT Mud-in ring for use in 6" round flangeless trim installations (ordered with a flangeless (F) light engine).

CAEM6TSCP Remote switch cover plate. Order with EM6 frame for remote mounted test switch.

C6RVPWH IP65 rated vandal proof matte white accessory mounts onto flangeless light engines (F) and non-IC (N) frame only. T347-75VA 347:120V step-down transformer for non-IC (N) frame only (see page 2 for details)

7925 6" sloped ceiling adapter (refer to SCA spec sheet for slope options)

- Emergency (EM6) frame is compatible with reflector mounted test switch when light engine is ordered with IEM6 (not compatible w/347V).
- 2. Chicago Plenum (LC) is not available for Buy American Compliant (BAC) configs.
- 3. Lensed wall wash (LW) style only available with Wide (W) beam.
- $4. \ \ Shower light (SL) in only available with White (WH) reflector finish, and wide (W) beam. \\$
- 5. Not available with AirSeal (A) frame.
- 6. Not available with AirSeal (A) frame. Available with CL, CC, and CD reflector finishes only.
- Specify 9D2W with Z10U dimming only (up to 3000Im max). Not compatible with Z10D20 or 347V (3) options. Not available with wide (W) beam.
- 8. Specify 96T with Z10U or RAU dimming only (up to 2500lm max).

  Not compatible with Z10U or RAU dimming only (up to 2500lm max).
- Consult factory with ETO request for antimicrobial reflector finish (WHAMF) and black (B) flange for all styles, and flangeless (F) for LW style.
- Linear driver profile. See dimensional data following.
   Specify only with non-IC (N) frame, not for use with LC or EM6 options.
- 11. Retrofits select legacy Lightolier luminaires (see pages 2 for details).

  12. Requires IRT9015 IR remote and Interact Pro App for commissioning
- 12. Requires IRT9015 IR remote and Interact Pro App for commissioning (requires above ceiling access).
- 13. Flex install requires light engine & trim only (up to 4000lm only). Accessory frames available. Not compatible with standard frames and associated options. Not available with Interact (RA) dimming and IEM6 trim.











# Round Downlight & Lensed Wall Wash

# **Features**

# Optics

- · Provides a 60° cutoff (physical and reflected)
- Available in wide (85°), medium (65°), and narrow (55°) beam options.
- Spun and anodized reflectors available in specular (clear), semi-specular (comfort clear and diffuse finishes. Also available in white and black painted finishes.
- Consult factory for RAL finishes

# Quality of light

- · Color consistency: 2 SDCM
- · 90 CRI minimum (Accurender)

# Construction (New Construction)

- · Galvanized stamped steal for dry / plaster ceilings.
- Pre-installed telescoping mounting bars (13"-24")
- Frame accommodates C- channel, black iron, and 3/4" EMT for mounting distances greater than 24" between joists.
- Manufactured from 20 gage galvanized steel construction with rolled edge aperture to guide cutting tools for perfect hole cutting.

Max ceiling thickness is 2" (51 mm).

# Patented install Mounting frame

- Pre-installed mounting bars allow for fast and tool-less install into T-grid & hat channel ceilings
- Close-cut aperture design eliminates an undesired gap between ceiling material and reflector.
- Simple plug-and-play connection between frame and light engine from below the ceiling allows for:
- Easy upgrades
- · Technology changes
- · Repairs and troubleshooting

# Retrofit

 Easily updates legacy LyteProfile LED downlights to the latest technology. Includes light engine, trim, and driver mounted on cover plate that mounts to previous generations of LyteProfile LED luminaires. Order with R option code at end of light engine/trim catalog number.

# Dimming

- Advance 0-10v 1% (Z10) logarithmic curve is standard. Specify D2O for factory-set dimto-off function (consult factory for linear dimming curve).
- · Lutron LDE1 (L1) EcoSystem 1%
- Electronic low voltage (E) offers forward or reverse phase dimming
- Dim to Warm (D2W): changes CCT from 3000– 1800K gradually as it dims. Use with Z10U dimming only. Fixture-to-fixture consistency of ≤3SDCM at 2700K & 3000K, & ≤5SDCM at 1800K
- Tunable white (6T): 2700K to 6500K CCT.
   Use with Z10U or RAU dimming only. Fixture-to-fixture consistency of ≤3SDCM at 2700K, 5000K, & 6500K CCT.

# Light engine

Quick connect power pack allow for easy installation and replacement from below ceiling with no need for additional wiring. This allows for:

- Frame and ceiling installation to be performed while still finalizing details such as lumen packages, CCT and control type.
- Easy replacement of electronics at end of life with minimal wasted material and labor required.
- · Ease and upgradability of technology.
- · Lumen Maintenance: L80 at 60,000 hours.
- 347V light engines are Z10 dimming only and include dedicated 347V driver. For 347V non-Z10 dimming, order T347-75VA field-installed stepdown transformer accessory.

# **Emergency**

Bodine BSL6 6W battery pack with self-test/ diagnostic functionality. Factory or field mounted to frame.

- For trim with integral emergency test switch, order light engine with IEM6 option (ex: P6RDL20935WCDZ10UIEM6). DL style only.
- For remote ceiling mounted test switch, order standard light engine (ex: P6RDL20935WCDZ10U).
   Optional accessory ceiling mounting plate available (CAEM6TSCP) for remote mounted test switch.
- Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.
- · CEC Title 24 JA8 Certified.

# **Options and Accessories**

**Sloped ceilings:** Compatible with sloped ceiling adapters (see SCA spec sheet).

Flangeless mud-in ring: Use CA6RFT For use with flangless plaster installations.

**Field Installed Emergency:** Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

 CAEM6: Field install EM6 kit with Bodine BSL6 6W battery pack with self-test/self-diagnostic, mounts to new construction frames. Includes remote ceiling plate for test switch. To mount test switch to trim for new construction frame, order downlight light engine with IEM6 option code (e.g. P6RDL20935WCDZ10UIEM6).

**C6RVPWH:** includes machined aluminum ring painted white, gasketed for IP65 protection, and impact resistant polycarbonate lens (IK10). Locks in place with discrete setscrew (key included). Available also with antimicrobial finish (C6RVPWHAMF).

CAEM6TSCP: Ceiling cover plate for remote mounted EM6 test switch. 1/2" (25mm) hole, 4 3/8" (109mm) x 2 3/4" (69mm) rectangular. Includes two mounting screws. Required for lensed wall wash (LW) and shower light (SL) styles.

T347-75VA: Field installable 347:120V 75VA step-down transformer, attaches to knock out on frame junction box, for use with non-IC (N) or remodel (R) frames.

# **ENERGY STAR® exceptions**

- Black finishes

# **Labels and Listings**

- cULus listed for wet locations
- CCEA (frames with \*LC suffix)
- ENERGY STAR® certified
- RoHS certified

# Warranty



5 year limited warranty Visit Signify.com/warranties for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

# Round Downlight & Lensed Wall Wash

# interact

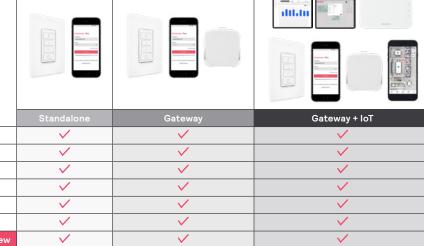
Integration with 0-10V and phase dimming fixtures

Dimming, grouping, and zoning

Bluetooth and ZigBee enabled

Motion sensing and daylight harvesting

Code compliance



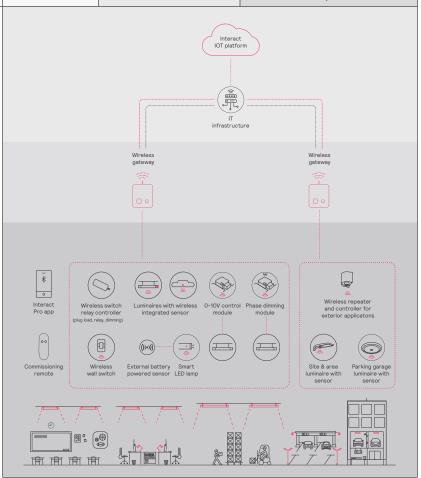
Granular dimming and dwell time		<b>~</b>	<b>✓</b>	<b>✓</b>
Correlated color temperature (CCT) tuning by switch	New	<b>~</b>	<b>✓</b>	<b>~</b>
Support for sensor-based Tunable White luminaires	New	<b>~</b>	<b>✓</b>	<b>~</b>
Energy reporting and monitoring		<b>✓</b>	<b>~</b>	
Scheduling			<b>✓</b>	<b>~</b>
Demand response			<b>✓</b>	<b>~</b>
BMS integration (BACnet)				<b>~</b>
Floor plan visualization				<b>~</b>
IoT sensors for wellness				<b>~</b>
IoT Apps for productivity				<b>~</b>

# Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
Luminaires with integrated sensors	150
Smart TLEDS	150
· Zones + groups	64
Total number of ZGP devices (sensors and switches)	50
Sensors	30
• Switches	50

Group level	
Recommended number of lights	40 (maximum 150)
Number of ZGP devices	5
Number of scenes	16



# Round Downlight & Lensed Wall Wash

# Wireless controls options

# Interact

- SWZCS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the standalone mode (similar to SpaceWise) when configured without a gateway or in a cloud connected mode if a compatible gateway is used.
- Interact includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & BlueTooth connectivity.
   The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote on-site to identify and group devices together.

# Compatible with:

- SWS200 & UID8465 wireless scene switch
- Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
- Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
- LCN3110: battery powered IP65 presence sensor, OCC sensor IA CM IP65W
- LCN3120: battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

# Radio only sensor (RA or RADIO)

- Integral RA or RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.
- Interact includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity.
   The App provides flexibility to choose between a gateway or non-gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely, identify and group devices together onsite.
- Compatible with SWS200 and UID8465 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

# Sensor bundle (IAOSB or SB)

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSORIA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available. Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- IAOSB or SB option in addition to occupancy and daylights sensing supports advanced IoT capabilities, such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: interact-lighting.com/interactproscalablesystem

# **Emergency Options (ER100)**

- Power Sensing (factory default) –
  Recommended UL924 option requires unswitched
  power sense line, absence of voltage on the
  normal circuit triggers luminaire to 100% output.
- Power Interruption Detection (field option) –
  Detects AC power interruption >30ms triggers
  90 minute emergency mode with luminaire at
  100% output.

# Interact supported sensor option codes across Genlyte product lines

	Evokit	Day-Brite	Ledalite	Lightolier
ZigBee + Bluetooth + Sensing	SWZCS	SWZCS	CS	SBA accessory (external)
ZigBee + Bluetooth	RADIO	RADIO	RA	RA
ZigBee + Bluetooth + Sensing + Environmental data	IAOSB	IAOSB	SB	SB
ZigBee + Highbay + Sensing	-	SWZCSH	-	-

# Round Downlight & Lensed Wall Wash



# AccuRender Technology (CRI 90+)

The right light brings colors to life. Our new AccuRender technology helps ensure colors are rendered more accurately and consistently, while doing so as efficiently as CRI 80 products.



Standard CRI 80

Good color rendering and high efficacy



Standard CRI 90

Better color rendering and low efficacy



Best color rendering, color preference and high efficacy

Achieve color balance

Best in class color consistency:

· Promote aesthetic harmony

in your space with ≤ 2 SDCM

# **Enjoy design flexibility**

### Full range of products and options:

- Available soon in across Lightolier portfolio for application flexibility
- Multiple color temperatures (CCTs) and lumen packages offered

# **Promote savings**

# High efficacy, with no penalty:

- Energy efficacy compares well to conventional 80 CRI
- Up to 25% more energy savings vs competitor 90 CRI¹
- · Helps meet Title 24 requirements

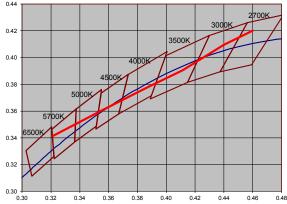
# Show your true colors

### High color rendering:

- True to life colors to help energize your environment and render better flesh tones critical for healthcare hospitality and retail applications.
- R<sub>a</sub> up to 94 CRI
   R<sub>f</sub> up to 92 TM-30
   R<sub>g</sub> up to 67 CRI
   R<sub>f,m</sub> up to 91 TM-30
   G<sub>a</sub> up to 99 CRI
   R<sub>g</sub> up to 100 TM-30

G<sub>a</sub> up to 99 CRI R<sub>9</sub> up to 100 TM-30 C<sub>9</sub> up to 94 CRI R<sub>cs,h1</sub> up to -5% TM-30

# Tunable white binning chart



### Dim-to-Warm: CCT vs Dimmed level 3200 3000 2800 2600 2400 2200 2000 1800 1600 2% 30% 50% 75% 100% Dimming level

# Round Downlight & Lensed Wall Wash

# **Electrical - Static White**

Input frequency of 50/60Hz, Power Factor @ Max Load >0.9

Product	Input Volts (V)	Input Freq. (Hz)	Input Current (A)	LED Drive Current (A)	Input Power (W)	LED Power (W)	THD Factor @ Max Load
	120V	0.081A	0.23A	9.8W	8.0W	<10%	>0.9
P6RDL10_Z10U/3	277V	0.036A	0.23A	10.0W	8.0W	<20%	>0.9
	347V	0.033A	0.23A	11.4W	8.0W	<30%	>0.9
	120V	0.121A	0.35A	14.5W	12.1W	<10%	>0.9
P6RDL15_Z10U/3	277V	0.053A	0.35A	14.6W	12.1W	<10%	>0.9
	347V	0.048A	0.35A	16.6W	12.1W	<25%	>0.9
	120V	0.154A	0.45A	18.4W	15.6W	<10%	>0.9
P6RDL20_Z10U/3	277V	0.067A	0.45A	18.5W	15.6W	<10%	>0.9
	347V	0.059A	0.45A	20.5W	15.6W	<20%	>0.9
	120V	0.195A	0.58A	23.4W	19.9W	<10%	>0.9
P6RDL25_Z10U/3	277V	0.085A	0.58A	23.5W	19.9W	<10%	>0.9
	347V	0.072A	0.58A	24.9W	19.9W	<20%	>0.9
	120V	0.236A	0.70A	28.3W	24.2W	<10%	>0.9
P6RDL30_Z10U/3	277V	0.102A	0.70A	28.2W	24.2W	<10%	>0.9
	347V	0.079A	0.65A	27.4W	22.5W	<15%	>0.9
	120V	0.285A	0.85A	34.2W	29.4W	<10%	>0.9
P6RDL35_Z10U/3	277V	0.123A	0.85A	34.2W	29.4W	<10%	>0.9
	347V	0.101A	0.85A	35.0W	29.4W	<10%	>0.9
	120V	0.296A	0.88A	35.5W	30.5W	<10%	>0.9
P6RDL40_Z10U/3	277V	0.128A	0.88A	35.5W	30.5W	<10%	>0.9
	347V	0.105A	0.88A	36.4W	30.5W	<10%	>0.9
	120V	0.307A	0.92A	36.8W	31.7W	<10%	>0.9
P6RDL45_Z10U/3	277V	0.133A	0.92A	36.8W	31.7W	<10%	>0.9
	347V	0.109A	0.92A	37.7W	31.7W	<10%	>0.9
	120V	0.342A	1.02A	41.0W	35.3W	<10%	>0.9
P6RDL50_Z10U/3	277V	0.148A	1.02A	41.0W	35.3W	<10%	>0.9
	347V	0.120A	1.02A	41.5W	35.3W	<10%	>0.9

# Electrical - Dim-to-Warm (9D2W)

Input frequency of 50/60Hz, Power Factor @ Max Load >0.9

	Input Volts	Input Freq.	Input Current	LED Drive Current	Input Power	LED Power	THD Factor @
Product	(V)	(Hz)	(A)	(A)	(W)	(W)	Max Load
P6RDL109D2W_Z10U	120V	0.122A	0.325	14.6W	11.7W	<10%	>0.9
P6RDL109D2W_Z10U	277V	0.056A	0.325	15.6W	11.7W	<20%	>0.9
P6RDL159D2W_Z10U	120V	0.164A	0.460	19.7W	16.6W	<10%	>0.9
P6RDL159D2W_Z10U	277V	0.076A	0.460	21.0W	16.6W	<20%	>0.9
P6RDL209D2W_Z10U	120V	0.212A	0.600	25.4W	21.6W	<10%	>0.9
P6RDL209D2W_Z10U	277V	0.094A	0.600	26.0W	21.6W	<10%	>0.9
P6RDL259D2W_Z10U	120V	0.256A	0.725	30.7W	26.1W	<15%	>0.9
P6RDL259D2W_Z10U	277V	0.111A	0.725	30.7W	26.1W	<25%	>0.8
P6RDL309D2W_Z10U	120V	0.300A	0.850	36.0W	30.6W	<15%	>0.9
P6RDL309D2W_Z10U	277V	0.130A	0.850	36.0W	30.6W	<25%	>0.8

# Electrical - Tunable White (96T)

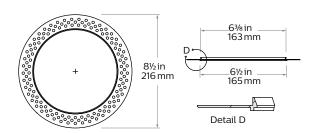
Input frequency of 50/60Hz, Power Factor @ Max Load >0.9

	Input Volts	Input Freq.	Input Current	LED Drive Current	Input Power	LED Power	THD Factor @
Product	(V)	(Hz)	(A)	(A)	(W)	(W)	Max Load
P6RDL1096T_Z10U	120V	0.080A	0.220	9.5W	7.9W	<15%	>0.9
P6RDL1096T_Z10U	277V	0.037A	0.220	10.2W	7.9W	<15%	>0.8
P6RDL1596T_Z10U	120V	0.119A	0.332	14.2W	12.0W	<15%	>0.9
P6RDL1596T_Z10U	277V	0.055A	0.332	15.1W	12.0W	<15%	>0.8
P6RDL2096T_Z10U	120V	0.158A	0.447	18.9W	16.1W	<15%	>0.9
P6RDL2096T_Z10U	277V	0.073A	0.447	20.1W	16.1W	<15%	>0.9
P6RDL2596T_Z10U	120V	0.200A	0.566	24.0W	20.4W	<15%	>0.9
P6RDL2596T_Z10U	277V	0.091A	0.566	25.2W	20.4W	<15%	>0.9
P6RDL3096T_Z10U	120V	0.241A	0.692	29.0W	24.9W	<15%	>0.9
P6RDL3096T_Z10U	277V	0.110A	0.692	30.4W	24.9W	<10%	>0.9

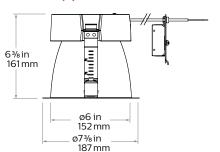
# Round Downlight & Lensed Wall Wash

### **New construction** 17 %" 12 %" (314 mm) (448 mm) 81/4" 12 1/4" (209 mm) (311 mm) MAX. Emergency battery pack shown with EM6 option on new construction non-IC frame. 10 ½" 10 %" 101/8" (267 mm) (257 mm) Remodeler 24" (610 mm) Round **New Construction** 9 5/8" (244 mm) installation clearance required Emergency battery EM6 option on new construction non-IC frame. 4 3/8" (111 mm) 1/2" (13 mm) D Ε 6" 1/2" (152 mm) (13 mm) 71/4" (184 mm) Downlight/Showerlight \* Center point location Lensed for integral emergency test switch (IEM6) 1000-3500lm 4000-5000lm Wall Wash 7¼" (184mm) 7¼" (184mm) 7¼" (184mm) 6" (152mm) В 6" (152mm) 6" (152mm) С 4½" (116mm) 63/4" (160mm) 41/8" (102mm) 25%" (65mm) - Lower end of LW lens is 3/16" (5mm) above flange. D 2 %" (60mm) 2 %" (60mm) Ε 3¾" (85mm) 33/8" (85mm) N/A F 5" (127mm) 6 3/8" (160mm) 4 %" (124mm)

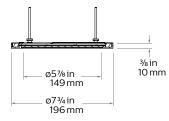
# Flangeless mud-in ring (CA6RFT) accessory



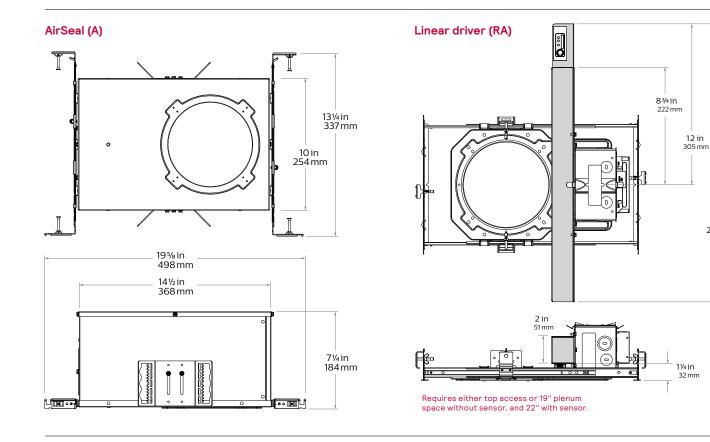
# Retrofit (R) with round trim



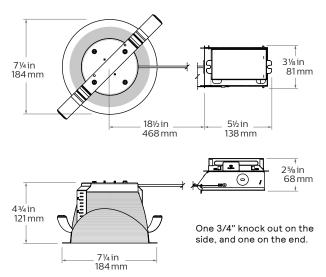
# Vandal Proof (VP) accessory



# Round Downlight & Lensed Wall Wash

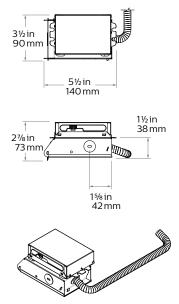


# Flex Install (F)



# LCEM6 Flex install (F) engine only

20¾ in 527 mm



# Round Downlight & Lensed Wall Wash

# Reflectors



Specular clear (CL): Most specular and most efficient finish, delivers maximum photometric performance but can produce a mirror image effect of the interior space.



Comfort clear (CC): Semi-specular finish that softens the light at the source of the reflector and creates a subtle, even luminance from the reflector cone.



Comfort clear diffuse (CD): Slightly diffuse clear finish, which eliminates iridescence and reduces the mirror image effect inherent with a specular finish.



Vandal proof (VP): Provides an elegant solution for vandal resistant needs. One piece machined aluminum ring with impact resistant clear lens. Flangeless (F) flange must be ordered. Provides the luminaire with an IK10 impact and IP65 rating.



White (-): (matte) Brightest aperture when illuminated and provides the smoothest transition to most ceilings when off (white is only available with a white flange).



**Black (BK):** Painted matte finish that provides the lowest aperture brightness possible and reduces source identification in a ceiling significantly.



Shower light (SL): Wet location rated shower light applicable in any installation requiring dead front trims, interior or exterior non-corrosive applications, or where a diffused lens at the ceiling is required (non-conductive).

# **Flanges**



White (-): (matte) Provides the smoothest transition to ceilings when off.



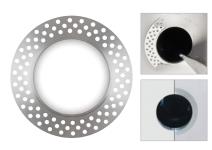
**Black (BK):** Painted matte finish that provides the lowest aperture brightness possible.



**Polished (P):** (matches aperture) Produces a continuous look throughout the reflector (aperture matching).



Flangeless (F): (flush-mount) Creates a flush, virtually seamless transition from aperture to ceiling.



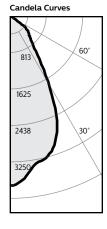
Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

# Round Downlight & Lensed Wall Wash

# **Adjustment Factors**

Finish	CRI/CCT	Lumens	
CL =100%	90CRI 4000K = 106%	5000lm = 167%	2500lm = 83%
CC = 86%	90CRI 3500K = 104%	4500lm = 150%	2000lm = 67%
CD = 91%	90CRI 3000K = 100%	4000lm = 133%	1500lm = 50%
WH = 90%	90CRI 2700K = 96%	3500lm = 117%	1000lm = 33%
BK = 54%		3000lm = 100%	

# Downlight, Narrow beam, 29W LED, 90 CRI, 3000 K



			Angle	Mean CP	Lms
Repor			0	3015	
P6RDL	.30930N	CLZ10U.ies	5	2903	
		20001	10	2670	268
	t Lms:	2992 lms	15	2585	
	ng Crit.:	0.92	20	2369	722
	Angle:	58°	25	1942	
	Natts <sup>2</sup> :		30	1357	871
Effica	cy:	103.9 lm/w	35	854	
CCT3:		3000K	40	597	554
CRI:		90 min	45	489	
			50	399	378
Zanal I		percentages	55	213	
Lonari	umens a	percentages	60	32	188
Zone	Lumens	%Luminaire	65	5	
			70	3	8
0-30	186	62.2%	75	2	
0-40	2415		80	1	2
0-60	2982	99.7%	85	0	
0-90	2992	100.0%	90	0	0
				1	1

# Single unit data

foot-candles	Beam dia. (ft)*
121	4.6'
84	5.5'
62	6.4'
47	7.4'
37	8.3'
	121 84 62 47

\*Beam diameter is where foot-candles drop to 50% of maximum.

# Multiple unit data - RCR 2

Spacing on center	Initial center bean foot-candles	n Watts per sq.ft.
5'	134.0	1.28
6'	88.0	0.84
7'	63.0	0.60
8'	53.0	0.50
9'	42.0	0.40

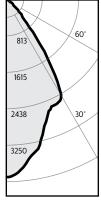
38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

### Coefficients of utilization

Cei	ling		80	)%		70	)%	50	)%	30	)%	0%
Wa	II	70	50	30	10	50	10	50	10	50	10	0
RC	RCR Zonal cavity method - Effective floor reflects						ectar	ce = :	20%			
	0	119	119	119	119	116	116	111	111	106	106	100
0	1	113	110	107	105	108	103	104	100	100	97	92
Ĕ	2	107	101	97	93	100	92	96	90	93	88	85
20	3	101	94	88	84	92	83	90	82	87	81	78
ΞΞ	4	95	87	81	76	85	76	83	75	81	74	71
e S	5	90	80	74	69	79	69	78	68	76	68	66
Room Cavity Ratio	6	85	75	68	64	74	63	72	63	71	63	61
O	7	80	70	63	59	69	59	68	58	67	58	56
8	8	76	65	59	54	65	54	64	54	63	54	52
	9	72	61	55	51	61	51	60	50	59	50	49
	10	68	58	52	47	57	47	56	47	56	47	45

# Downlight, Medium beam, 29W LED, 90 CRI, 3000 K

# Candela Curves



			Angle	Mean CP	Lms
Report <sup>1</sup>	ı:		0	3161	
P6RDL3	30930N	ICLZ10U.ies	5	3048	
			10	2789	282
Output		3118 lms	15	2498	
Spacing		0.9	20	2178	698
Beam A		66°	25	2065	
Input W		28.8W	30	1942	955
Efficacy	y:	108.3 lm/w	35	1298	
CCT3:		3000K	40	650	799
CRI:		90 min	45	349	
			50	224	288
Zonal lu	mone &	percentages	55	93	
	illelis α	percentages	60	13	90
Zone L	umens	%Luminaire	65	4	
			70	2	5
0-30	1935		75	1	
0-40	2734		80	1	2
0-60	3112		85	0	
0-90	3118	100.0%	90	0	0
				'	

# Single unit data

•	Initial center beam foot-candles	Beam dia. (ft)*
5'	126	4.5'
6'	88	5.4'
7'	65	6.3'
8'	49	7.2'
9'	39	8.1'

\*Beam diameter is where foot-candles drop to 50% of maximum.

# Multiple unit data - RCR 2

Spacing on center	Initial center bean foot-candles	n Watts per sq.ft.
5'	140.0	1.28
6'	92.0	0.84
7'	66.0	0.60
8'	55.0	0.50
9'	44.0	0.40

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

# Coefficients of utilization

Ce	iling		80	)%		/(	1%	50	)%	30	)%	0%
Wa	II	70	50	30	10	50	10	50	10	50	10	0
RC	R	Zon	al cav	ity m	ethoc	i – Eff	ectiv	e floo	r refl	ectan	ce = :	20%
	0	119	119	119	119	116	116	111	111	106	106	100
0	1	113	110	107	105	108	103	104	100	100	97	92
Ξį	2	107	101	97	93	100	92	96	90	93	88	85
æ	3	101	94	88	84	92	83	90	82	87	81	78
Ŧ	4	95	87	81	76	85	76	83	75	81	74	71
á	5	90	80	74	69	79	69	78	68	76	68	66
ō	6	85	75	68	64	74	63	72	63	71	63	61
Room Cavity Ratio	7	80	70	63	59	69	59	68	58	67	58	56
8	8	76	65	59	54	65	54	64	54	63	54	52
	9	72	61	55	51	61	51	60	50	59	50	49
	10	68	58	52	47	57	47	56	47	56	47	45

- 1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- 2. Wattage: controlled to within 5%
- 3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# Round Downlight & Lensed Wall Wash

# **Adjustment Factors**

Finish	CRI/CCT	Lumens	
CL =100%	90CRI 4000K = 106%	5000lm = 167%	2500lm = 83%
CC = 86%	90CRI 3500K = 104%	4500lm = 150%	2000lm = 67%
CD = 91%	90CRI 3000K = 100%	4000lm = 133%	1500lm = 50%
WH = 90%	90CRI 2700K = 96%	3500lm = 117%	1000lm = 33%
BK = 54%		3000lm = 100%	

# Downlight, Wide beam, 29W LED, 90 CRI, 3000 K

# 450 60° 900 30°

am, 2011 LLD, 30 OM, 0000 K									
Zonal lumens 8	percentages	Angle	Mean CP	Lms					
Zone Lumen:	%Luminaire	0	1720						
0-30 1464 0-40 2422 0-60 3088 0-90 3098	7 78.4% 3 99.8%	5 10 15 20 25 30 35	1695 1710 1770 1750 1725 1752 1611	162 498 804					
		40 45	1114 646	963					
Report <sup>1</sup> : P6RDL30930V	VCLZ10U.ies	50 55	379 139	520					
Output Lms:	30951ms	60 65	17 4	141					
Input Watts <sup>2</sup> : Efficacy:	28.3W 109.4 lm/w	70 75	3 1	6					
CCT <sup>3</sup> :	3000K 90min	80 85	1 0	2					
Beam Angle: Spacing Crit.:	84° 1.42	90	0	0					

# Single unit data

	Initial center beam foot-candles	Beam dia. (ft)*
5'	69	7.1'
6'	48	8.5'
7'	35	9.9'
8'	27	11.4'
9'	21	12.8'
* D		

<sup>\*</sup>Beam diameter is where foot-candles drop to 50% of maximum.

### Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	watts per sq.ft.
5'	137.0	1.25
6'	90.0	0.82
7'	64.0	0.59
8'	53.0	0.49
9'	43.0	0.39

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

### Coefficients of utilization

iling		80	)%		70	)%	50	)%	30	)%	0%
II	70	50	30	10	50	10	50	10	50	10	0
RCR Zonal cavity method - Effective floor reflectance =								ice = :	20%		
0	119	119	119	119	116	116	111	111	106	106	100
1	113	109	107	104	107	102	103	99	99	96	92
2	106	100	95	92	98	90	95	88	92	87	83
3	99	92	86	81	90	80	87	79	85	78	75
4	93	84	77	72	83	72	80	71	78	70	68
5	87	77	70	65	76	65	74	64	72	64	61
6	81	71	64	59	70	58	68	58	67	58	56
7	76	65	58	53	65	53	63	53	62	52	51
8	72	60	53	49	60	48	59	48	57	48	46
9	67	56	49	44	55	44	54	44	53	44	42
10	63	52	45	41	52	41	51	41	50	40	39
	0 1 2 3 4 5 6 7 8	R Zon 0 119 1 113 2 106 3 99 4 93 5 87 6 81 7 76 8 72 9 67	III 70 50  R Zonal cav 0 119 119 1 113 109 2 106 100 3 99 92 4 93 84 5 8 7 77 6 81 71 7 76 65 8 72 60 9 67 56		1	III 70 50 30 10 50  R Zonal cavity method - Eff 0 119 119 119 119 110 1 113 109 107 104 107 2 106 100 95 92 98 3 99 92 86 81 90 4 93 84 77 728 5 87 77 70 65 76 6 81 71 64 59 70 7 76 65 58 53 65 8 72 60 53 49 60 9 67 56 49 44 55					

# Lensed Wall Wash, Wide beam, 29W LED, 90 CRI, 3000 K

# Room side Wall side



Output Lms: 2517lms Input Watts²: 29.4 W Efficacy: 85.6 lm/w CCT³: 3000 K CRI: 90 min

### **Multiple unit data** Footcandles on wall

	2' from wall 3' on ctr.		
1	57	47	57
3 a y	87	79	87
.⊑ 3	73	71	73
ნ 4	54	54	54
<u>≒</u> 5	38	39	38
ပိ 6	28	28	28
E 7	21	22	21
£ 8	16	17	16
ည် 9	13	13	13
Distance from ceiling in feet 7 0 6 8 2 9 5 7 5	11	11	11
:E 12	9	9	9
_			

### **Multiple unit data** Footcandles on wall

	3' from wall 3' on ctr.		
<sub>1</sub> 1	25	24	25
0 2	49	48	49
- 3	55	55	55
Distance from ceiling in feet 7 0 6 8 2 9 9 7 7 8 5 7	50	51	50
<u>≒</u> 5	41	42	41
ပ္ 6	32	33	32
E 7	26	26	26
۽ 8 1	20	21	20
ပို့ 9	16	17	16
10 <del>ق</del>	14	14	14
<u>≅</u> 12	11	12	11
14	10	10	10

# Multiple unit data Footcandles on wall

- 1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- 2. Wattage: controlled to within 5%
- $3. Correlated\ Color\ Temperature:\ within\ specs\ as\ defined\ in\ ANSI\_NEMA\_ANSLG\ C78.377-2008:\ Specifications\ for\ the\ Chromaticity\ of\ Solid\ State\ Lighting\ Products.$



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