LIGHTOLIER
by signify

Downlighting

LyteProfile

P4R 4" Round Downlight & Wall Wash

LED

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. Ideal for use in a variety of applications including open office, institutional, healthcare, and retail.

Standard luminaire = Frame + Engine/Trim + Accessories (optional)

Buy American Act of 1933 (BAA)** Compliant luminaire* = Frame-BAC + Engine/Trim-BAC

* BAA compliance requires that BAC option be selected for each of frame and engine/trim.
  Frame and engine/trim will be ordered/shipped together (ex: 4RN-BAC-Z4RDL20835WOCDZ10U-BAC).
  Accessories (optional) are not currently BAA-compliant.

Frame

Standard example: 4RN | BAC example: 4RN-BAC

Series	Aperture	Installation	Options			
4	**R**					
4 Uniframe 4-inch Non-IC	R Round	N New construction (Non-IC)	–	Universal 120/277/347V[1]	**3**	347V (for non-0-10v configurations)
			LC	Chicago Plenum	RADIO	Integral Interact Pro RF sensor (120/277/347V) (enables wireless connected lighting control)[3]
			EM6	Emergency, 6W Self-Test/Self-Diagnostic (not available for BAC)[2]	BAC	Meets the requirements of the Buy American Act of 1933 (BAA)**
		R Remodeler (Non-IC)	–	Universal 120/277/347V[1]	**3**	347V (for non-Z10 configurations)
		A AirSeal (IC)	–	Universal 120/277/347V[1]	BAC	Meets the requirements of the Buy American Act of 1933 (BAA)**

Engine/Trim

Standard example: P4RDL20835CDZ10U | BAC example: P4RDL20835CDZ10U-BAC

Series	Style	Lumen	CRI/CCT	Reflector	Flange	Dimming		Voltage		Options
P4R										
P4R LyteProfile 4-inch Round downlight	DL Downlight	05 500 lm (0-10V only)	827 80 CRI / 2700K	CL Specular clear	– White (matte)	Z10 0-10V 1%		U 120/277V		– None
	LW Lensed Wall Wash	10 1000 lm	830 80 CRI / 3000K	CC Comfort clear	B Black (matte)			3 347V[5,6] (0-10v only)		R Retrofit (not compatible with IEM6)
	SL Shower light[4] (non-conductive lens)	15 1500 lm	835 80 CRI / 3500K	CD Comfort clear diffuse	P Polished (matches aperture)	L Lutron LDE1 EcoSystem (fade-to-black)		U 120/277/347V		IEM6 Trim mounted EM test switch[8]
		20 2000 lm	840 80 CRI / 4000K							BAC Meets the requirements of the Buy American Act of 1933 (BAA)**
		25 2500 lm	850 80 CRI / 5000K	WH White (matte)	– White (matte)	P Power over Ethernet (PoE)	E Ethernet 48 V DC			
				BK Black (matte)	B Black (matte)					
				WHAMF White (gloss antimicrobial)	– White (gloss)	Only compatible with 1000 (10) to 2500 (25) lumen configurations				

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)[7]
CAEM6	Field installable Bodine BSL6 6W battery pack with self-test/self-diagnostic for use with new construction frames, 120-277V
7920	4" sloped ceiling adapter (refer to SCA spec sheet for slope options)
AMS	ActiLume multi-sensor (optional accessory for PoE configurations)

1. Universal 120-347V is for 0-10v (Z10) dimming configurations only.
   For 347V non-Z10 dimming, order 347V (3) frame with (U) light engine/trim.
2. Emergency (EM6) frame is compatible with reflector mounted test switch when light engine is ordered with IEM6 option code (not compatible with 347V or Power over Ethernet configurations).
3. Interact Pro (RADIO) requires above ceiling access.
4. Shower light (SL) in only available with White (WH) reflector finish.
5. Specify standard UNV frame for use with 347V light engines
6. The 347V light engine voltage option is only available with Z10 dimming option. For other dimming protocols order UNV (U) light engine and 347V (3) frame.
7. Requires IRT9015 IR remote and Interact Pro App for commissioning.
8. IEM6 option available on DL style only.

** Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

IC INSULATION CONTACT   WET LOCATION   c UL us LISTED   RoHS COMPLIANT   ENERGY STAR   interact ready.

P4R LyteProfile 4"

Round Downlight & Lensed Wall Wash

Features

Optics

- Provides a 60° cutoff (physical and reflected)
- Wide beam distribution for general illumination
- Spun and anodized reflectors available in specular (clear), semi-specular (comfort clear and diffuse finishes. Also available in white and black painted finishes.

Quality of light

- Consult factory for RAL finishes
- Color consistency: 3 SDCM
- 80 CRI minimum

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 1.5" (38 mm).**
> **Including PoE frame 4.88" (124 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

Dimming

- Advance 0-10V 1% dimming
- Lutron Hi-lume EcoSystem H Series 1% dimming
- EldoLED ECOdrive Dali 1% dimming
- EldoLED SOLOdrive 0-10V 0.1% dimming
- EldoLED DMX POWERdrive

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 0-10v dimming only and include dedicated 347V driver for use with universal 120/277/347V (U) frames. For 347V and non-0-10v dimming, order (U) light engine and 347V (3) frame (includes step down transformer).

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: P4RDL20835CDZ10UIEM6). DL or SL styles only.
- For remote ceiling mounted test switch, order standard light engine (ex: P4RDL20835CDZ10U). 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.

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.

Power over Ethernet

Powered via Philips PoE lighting controller: complies with FCC rules per Title 47 part 15 (Class A) for EMI / RFI (conducted & radiated). PoE lighting controller accessible from below ceiling.

Options and Accessories

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

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 light engine with IEM6 option code (e.g. P4RDL20835CDZ10UIEM6).

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.

ENERGY STAR® exceptions

- 500lm configurations
- Black finishes
- PoE drivers

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.

Finishes

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

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

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

Black
Specular finish that provides the lowest aperture brightness possible and reduces source identification in a ceiling significantly (black is only available with a black flange).

interact

Interact Pro scalable system		
Foundation	**Advanced**	**Enterprise**
Dimming, grouping, and zoning		
✓	✓	✓
Bluetooth and ZigBee enabled		

	Foundation	Advanced	Enterprise
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

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
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16

Interact Pro scalable system architecture

Interact IOT platform

BACNet

BMS system

Building connectivity bridge (BCB)

IT infrastructure

Interact Pro Enterprise

Wireless gateway

Wireless gateway

Interact Pro Advanced

Interact Pro App

Commissioning remote

Smart LED lamp

External battery powered sensor

Wireless luminaires with integrated sensor

Wireless wall switch

Plug load control module

0-10V control module

Phase dimming module

Interact Pro Foundation

P4R LyteProfile 4"

Round Downlight & Lensed Wall Wash

Wireless Controls Options

Interact Pro scalable sensor
(System Bridge Accessory with –CS option):

- CS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro 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 onsite to identify and group devices together.
- Compatible with:
  - UID8451/10 wireless dimmer switch
  - SWS200 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
  - Battery powered IP65 presence sensor OCC sensor IA CM IP65 WH
  - Battery powered IP65 presence & daylight sensor OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit: www.interact-lighting.com/ interactproscalablesystem.

Interact Pro Enterprise
(System Bridge Accessory with –SB option):

- 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 UID8451/10 wireless dimmer switch, SWS200 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) 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.
- SB option in addition to occupancy and daylight 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: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.

Emergency Options (ER100)
(System Bridge Accessory with –ER100 option):

- 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

Radio only sensor (RADIO):

- Integral 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.

Wired Controls Options

Interact Office Wired (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- PoE lighting controller is accessible from below.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.

- Optional integral emergency controller and battery pack provides 600lm nominal output.
- Test switch and indicator light mounted on side of chassis on one end.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of 20C to 30C (-4F to 86F) ambient, and 45-85% relative humidity.
- For more information on Interact Office Wired, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.

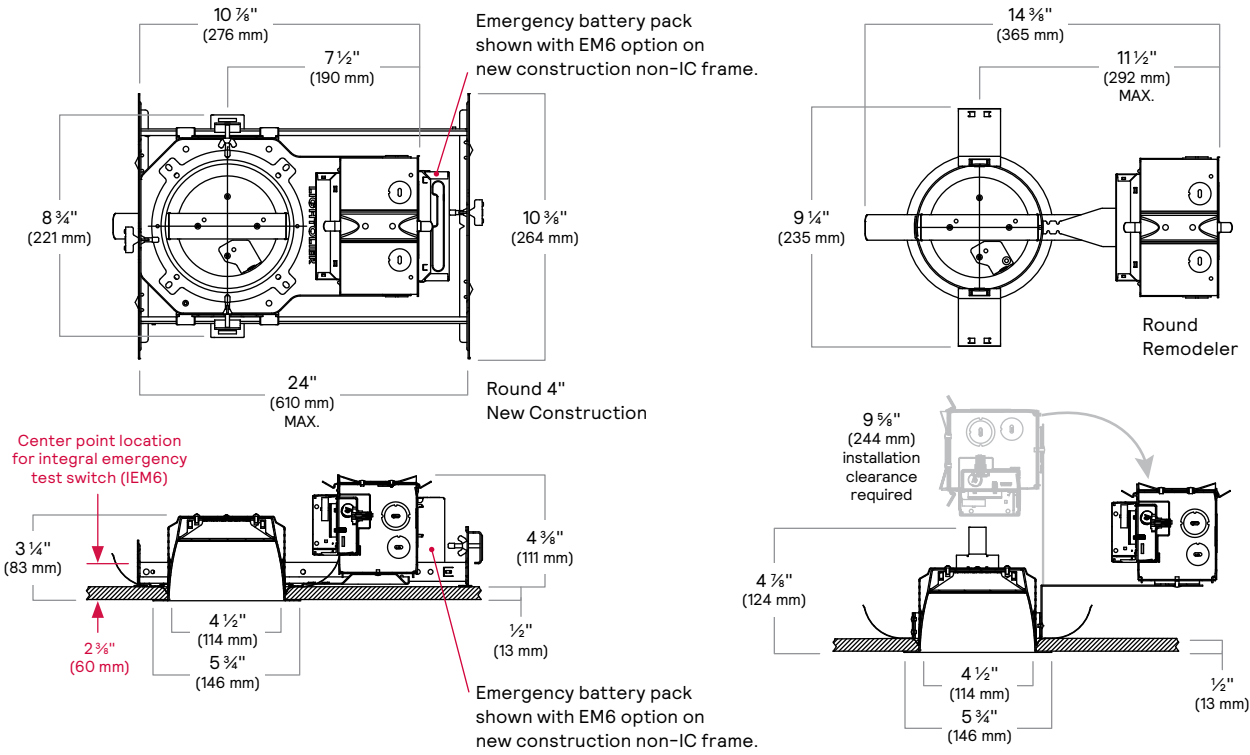### Interact Office Wired (PoE), Static White:

- 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 Zigbee Green Power wall dimmer and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on wayfinding, room/desk reservation and offers open APIs
- Requires compatible Interact Office Gateway and internet connectivity for commissioning.
- For more information on Interact Office Wireless, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.
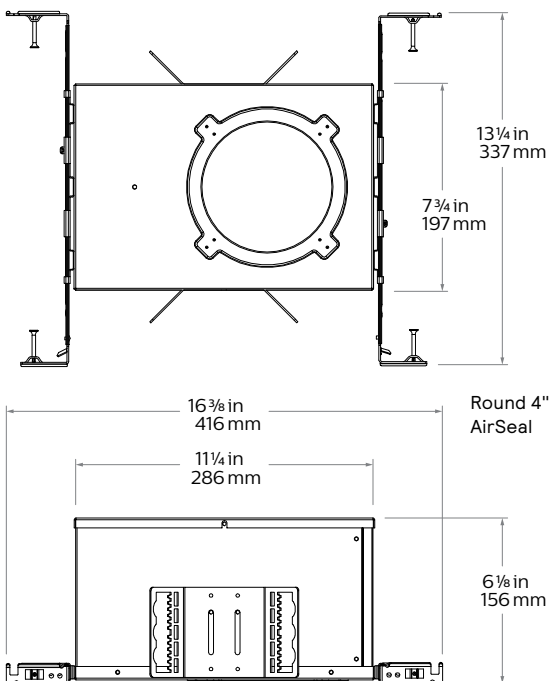
P4R LyteProfile 4"

Round Downlight & Lensed Wall Wash

Dimensions

10 ⅞" (276 mm)
7 ½" (190 mm)
8 ¾" (221 mm)
10 ⅜" (264 mm)
24" (610 mm) MAX.

Emergency battery pack shown with EM6 option on new construction non-IC frame.

Round 4" New Construction

14 ⅜" (365 mm)
11 ½" (292 mm) MAX.
9 ¼" (235 mm)

Round Remodeler

Center point location for integral emergency test switch (IEM6)
3 ¼" (83 mm)
2 ⅜" (60 mm)
4 ½" (114 mm)
5 ¾" (146 mm)
4 ⅜" (111 mm)
½" (13 mm)

Emergency battery pack shown with EM6 option on new construction non-IC frame.

9 ⅝" (244 mm) installation clearance required
4 ⅞" (124 mm)
4 ½" (114 mm)
5 ¾" (146 mm)
½" (13 mm)

AirSeal (A)

13 ¼ in 337 mm
7 ¾ in 197 mm
16 ⅜ in 416 mm
11 ¼ in 286 mm
6 ⅛ in 156 mm

Round 4" AirSeal

Electrical

Product	Input Volts	Input Frequency	Input Current (A)	Input Power (W)
P4*05*Z10U/3	120	50/60Hz	0.06	7
	277		0.029	7
P4*10*Z10U/3	120	50/60Hz	0.122	11
	277		0.038	10
P4*15*Z10U/3	120	50/60Hz	0.13	15
	277		0.063	16
P4*20*Z10U/3	120	50/60Hz	0.175	21
	277		0.078	21
P4*25*Z10U/3	120	50/60Hz	0.22	26
	277		0.099	27
P4*10*LU	120	50/60Hz	0.094	10
	277		0.047	10
P4*15*LU	120	50/60Hz	0.134	15
	277		0.07	15
P4*20*LU	120	50/60Hz	0.176	21
	277		0.086	21
P4*25*LU	120	50/60Hz	0.23	27
	277		0.106	28

P4R LyteProfile 4"

Round Downlight & Lensed Wall Wash

P4RDL20835CLZ10U • 20W LED, 80 CRI, 3500K

Candela Curves
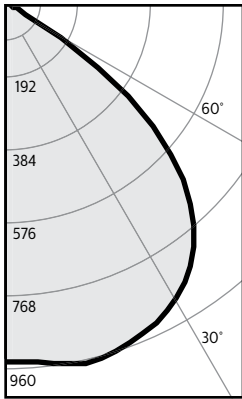
Angle	Mean CP	Lumens
0	937	
5	940	90
10	956	
15	960	271
20	941	
25	921	424
30	886	
35	836	520
40	759	
45	652	495
50	498	
55	289	250
60	54	
65	20	24
70	12	
75	6	7
80	3	
85	1	1
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	37	7.0'
6'	26	8.4'
7'	19	9.8'
8'	15	11.2'
9'	12	12.6'

* 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'	90.3	0.87
6'	59.3	0.57
7'	42.3	0.41
8'	35.3	0.34
9'	28.2	0.27

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

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	112	108	105	103	106	101	102	98	98	95	90
2	104	98	93	88	96	87	93	85	90	84	80
3	97	88	82	77	87	76	84	75	82	74	71
4	90	80	73	67	79	67	76	66	74	65	62
5	83	72	65	59	71	59	69	58	68	58	55
6	77	66	58	53	65	52	63	52	62	52	49
7	72	60	53	47	59	47	58	47	57	46	44
8	67	55	48	42	55	42	53	42	52	42	40
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	46	35	46	35	45	35	33

Room Cavity Ratio (left axis label)

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	785	37.7%
0-40	1306	62.7%
0-60	2050	98.5%
0-90	2082	100.0%

CRI and CCT adjustment factors
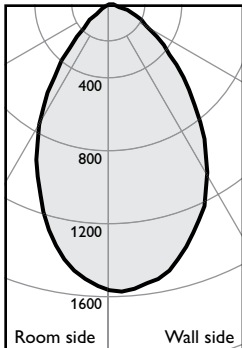
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 1550GFR

Output lumens:	2082 lms	Efficacy:	105.7 lm/w
Spacing Criterion:	1.4	CCT[3]:	3500K
Beam Angle:	99°	CRI:	80 min
Input Watts[2]:	19.7W		

P4RLW20835CLZ10U • 20W LED, 80 CRI, 3500K

Candela Curve

Room side | Wall side

Report[1]: 1559GFR

Efficacy:	104.6 lm/w
Output lumens:	2060 lms
Input watts[2]:	19.7 W
CRI:	80 min
CCT[3]:	3500K

Multiple unit data
Footcandles on wall

Distance from ceiling in feet	2' from wall	3' on ctr.	
1	38	25	38
2	64	51	64
3	59	54	59
4	47	45	47
5	36	36	36
6	28	28	28
7	23	23	23
8	19	19	19
9	16	16	16
10	14	14	14
12	11	11	11
14	10	10	10

Multiple unit data
Footcandles on wall

Distance from ceiling in feet	3' from wall	3' on ctr.	
1	14	12	14
2	30	29	30
3	39	38	39
4	40	39	40
5	36	36	36
6	32	31	32
7	27	27	27
8	23	23	23
9	20	20	20
10	17	17	17
12	14	14	14
14	12	12	12

Multiple unit data
Footcandles on wall

Distance from ceiling in feet	3' from wall	4' on ctr.	
1	12	9	9
2	25	20	20
3	32	28	28
4	31	30	30
5	28	27	27
6	24	24	24
7	21	21	21
8	18	18	18
9	16	15	15
10	14	14	14
12	11	11	11
14	10	10	10

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.