Exhibit A.4

GARDCO by signify

Site & Area

PureForm

P20 small round area light with comfort optics

TYPE 'A'

Gardco PureForm LED area small round comfort P20 features a sleek, low profile design. Comfort optics are designed to enhance visual comfort by reducing glare and are ideally suited for pedestrian scale applications. Multiple optical distributions and color temperatures are available to allow you to customize your selection.

Project:
Location:
Cat.No:
Type:
Lumens: Qty:
Notes:

Ordering guide

example: P20-C-A01-840-T5S-AR1-UNV-BL50-L2-EHS-BZ

Prefix	Optic Technology	Configuration (nominal lumens)	Color Temperature	Distribution	Mounting	Voltage
P20 PureForm area small, 20" round	**C** Comfort	**A01** 2,000 lumens **A02** 4,000 lumens **A03** 6,000 lumens **A04** 8,000 lumens **A05** 10,000 lumens **A06**[1] 12,000 lumens **A07**[1] 14,000 lumens **A08**[1] 16,000 lumens	**830** 80CRI 3000K **840** 80CRI 4000K **750**[2] 70CRI 5000K	**T1S** Type 1 Short **T2S** Type 2 Short **T4S** Type 4 Short **4CD** Type 4 Concentrated Downlight **T5S** Type 5 Short	**AR1**[3] Arm mount (Standard) The following mounting kits must be ordered separately (See accessories) **RAM**[3] Retrofit arm mount kit **WAL** Wall mount	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V (50/60Hz) **HVU** 347-480V (50/60Hz)

Options

Dimming controls	Motion sensor lens	Electrical/Shielding	Emergency	Finish
(0-10V dimming driver standard) **DLEA**[4] Dimming Leads Externally Accessible (controls by others) **FAWS**[4,5] Field Adjustable Wattage Selector **BL50**[4,6] Bi-level set at 50% dimming **BL30**[4,7] Bi-level set at 30% dimming **SIWI**[4,8,10,11] SiteWise integral module **SRDR**[4,8,9,19] SR driver connected to Zhaga socket DynaDimmer: Automatic Profile Dimming **CS50**[4,9] Security 50% Dimming, 7 hours **CM50**[4,9] Median 50% Dimming, 8 hours **CS30**[4,9] Security 30% Dimming, 7 hours **CM30**[4,9] Median 30% Dimming, 8 hours	**L2**[6,14,19] PIR Sensor #2 lens **L3**[6,14,19] PIR Sensor #3 lens **MW**[7,15,18] Microwave HF Sensor	**PCB**[9,11] Photocontrol Button **TR7**[9,12] 7-pin Twist Lock Receptacle **TLP**[11,13] 7-pin Twist Lock Receptacle w/ 3-pin Photocell **SP2**[16] Increased 20kA **FS1**[11] Single Fuse (120, 277, 347VAC) **FS2**[11] Double Fuse (208, 240, 480VAC) The following option must be ordered separately (See accessories) **EHS** External house side shield	**EM**[4,5,9,17] Emergency battery pack	Textured **BK** Black **WH** White **BZ** Bronze **DG** Dark Gray **MG** Medium Gray Customer specified **RAL** Specify optional color or RAL (ex: RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

1. Only available with symmetrical optics (T1S and T5S)
2. Extended lead times apply. Contact factory for details.
3. Mounts to a 4-5" OD round pole with adapter included for square poles.
4. Not available with other dimming control options (mutually exclusive).
5. Not available with motion sensor.
6. BL50 must be specified with a motion sensor lens (L2 or L3).
7. BL30 must be specified with Microwave HF Sensor (MW).
8. Not available with photocontrols.
9. Not available in 347 or 480V.
10. Available only in 120 or 277V.
11. Must specify input voltage.
12. All 7 pins in NEMA receptacle are connected to SR driver.
13. Not available in 480V. Order photocell separately with TR7.
14. Not available with DLEA and FAWS dimming control options.
15. Not available with DLEA, SRDR, FAWS, CS50, CM50, CS30, and CM30 dimming control options.
16. Product ships standard with 10kA.
17. Only available with A01 and A03.
18. Only available in 120/277/347V.
19. When ordering SRDR with L2 or L3, controller to be used on socket must be SR compatible (See specifications for more details).

reddot winner 2021 lighting design

ida DARK SKY APPROVED 3000K only

DLC QPL LISTED PREMIUM

DLC QPL LISTED

c UL us

P20 PureForm LED small round

Area light with comfort optics

PureForm P20 Accessories (ordered separately, field installed)

Mounting Accessories

P20-RAM-G2-(F)	Retrofit Arm mount kit
P20-WS-G2-(F)	Wall mount with surface conduit rear entry permitted
P20-EHS-BK [20]	External House Side Shield, Black

(F) = Specify finish

20. External house side shield must be ordered with luminaire and ships separately. It cannot be added on to an existing luminiare not originally ordered with EHS shielding option.

LED Wattage and Lumen Values – 3000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-830-x	3000	21	2006	B1-U0-G1	95	1968	B1-U0-G1	93	2240	B1-U0-G1	106	2374	B1-U0-G1	112	2210	B1-U0-G1	104
P20-C-A02-830-x	3000	36	3576	B2-U0-G2	100	3508	B1-U0-G1	98	3993	B1-U0-G1	112	4231	B1-U0-G1	119	3939	B2-U0-G1	111
P20-C-A03-830-x	3000	52	5145	B2-U0-G2	99	5048	B2-U0-G2	97	5746	B2-U0-G2	111	6089	B2-U0-G2	117	5669	B3-U0-G2	109
P20-C-A04-830-x	3000	72	6977	B3-U0-G3	97	6844	B3-U0-G3	95	7792	B3-U0-G3	109	8256	B2-U0-G2	115	7687	B3-U0-G2	107
P20-C-A05-830-x	3000	90	8372	B3-U0-G3	93	8213	B3-U0-G3	91	9350	B3-U0-G3	104	9907	B3-U0-G3	110	9224	B3-U0-G2	102
P20-C-A06-830-x	3000	108	10727	B3-U0-G3	100										11818	B3-U0-G2	110
P20-C-A07-830-x	3000	133	12471	B3-U0-G3	93										13740	B4-U0-G3	103
P20-C-A08-830-x	3000	150	13866	B3-U0-G3	92										15277	B4-U0-G3	101

LED Wattage and Lumen Values – 4000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-840-x	4000	21	2143	B1-U0-G1	101	2102	B1-U0-G1	99	2393	B1-U0-G1	113	2535	B1-U0-G1	120	2361	B1-U0-G1	111
P20-C-A02-840-x	4000	36	3819	B2-U0-G2	107	3747	B1-U0-G1	105	4266	B2-U0-G2	120	4520	B1-U0-G1	127	4208	B2-U0-G1	118
P20-C-A03-840-x	4000	52	5496	B2-U0-G2	106	5392	B2-U0-G2	104	6138	B2-U0-G2	118	6504	B2-U0-G2	125	6055	B3-U0-G2	117
P20-C-A04-840-x	4000	72	7452	B3-U0-G3	104	7311	B3-U0-G3	102	8323	B3-U0-G3	116	8819	B3-U0-G3	123	8211	B3-U0-G2	114
P20-C-A05-840-x	4000	90	8943	B3-U0-G3	99	8773	B3-U0-G3	97	9988	B3-U0-G3	111	10583	B3-U0-G3	117	9853	B3-U0-G2	109
P20-C-A06-840-x	4000	108	11458	B3-U0-G3	106										12624	B4-U0-G3	117
P20-C-A07-840-x	4000	134	13321	B3-U0-G3	100										14677	B4-U0-G3	110
P20-C-A08-840-x	4000	151	14812	B3-U0-G3	99										16319	B4-U0-G3	109

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P20 PureForm LED small round

Area light with comfort optics

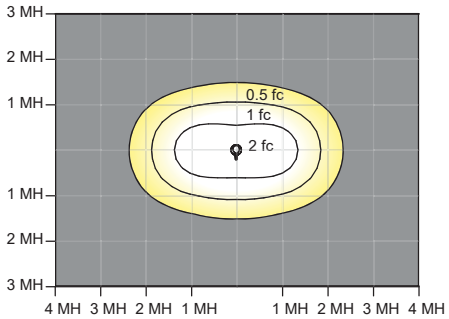
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

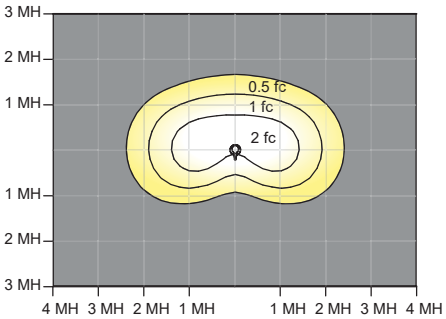
Ambient Temperature °C	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C (A01 to A05)	>100,000 hours	>72,000 hours	>90%
25°C (A06 to A08)	>100,000 hours	>60,000 hours	>84%

Optical Distributions

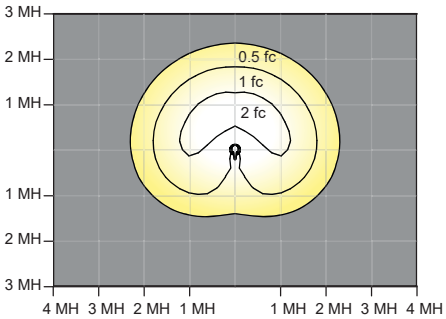
Based on configuration P20-C-A03-840 mounted at 15ft



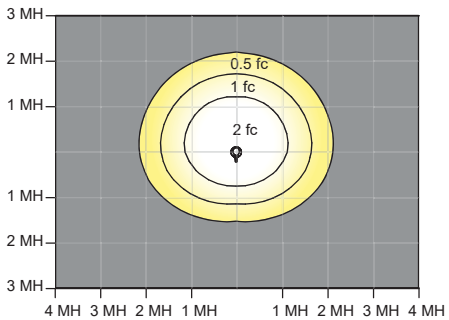
Comfort T1S



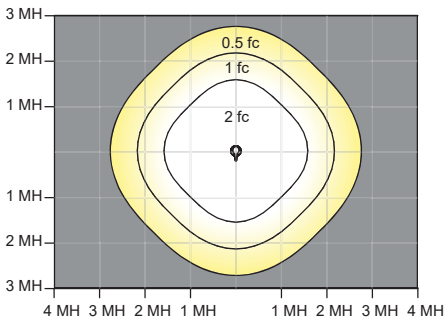
Comfort T2S



Comfort T4S



Comfort 4CD



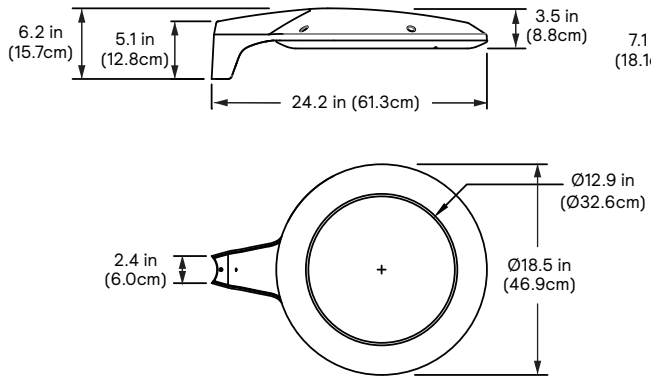
Comfort T5S

P20 PureForm LED small round

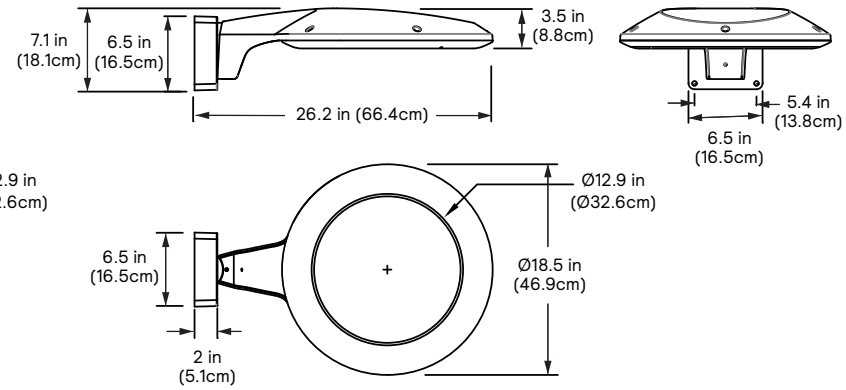
Area light with comfort optics

Dimensions

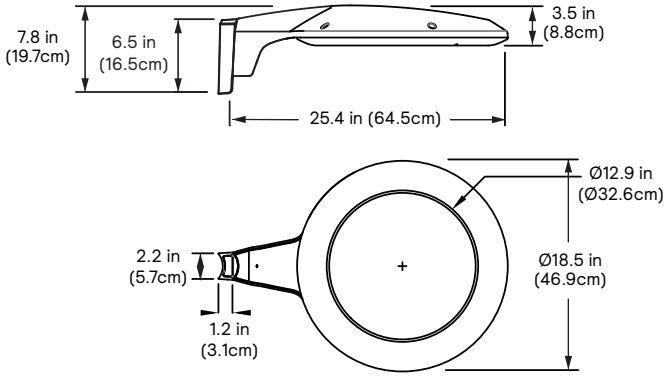
Standard Arm (AR1)



Wall Mount (WAL)

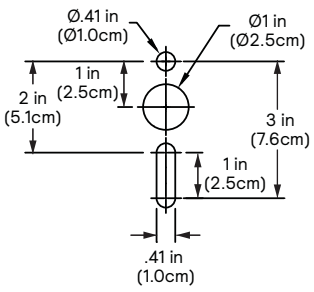


Retrofit Arm (RAM)

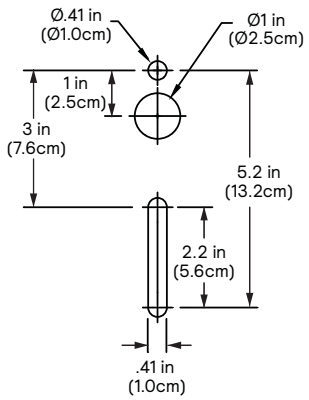


Drill Patterns

Standard Arm (AR1)

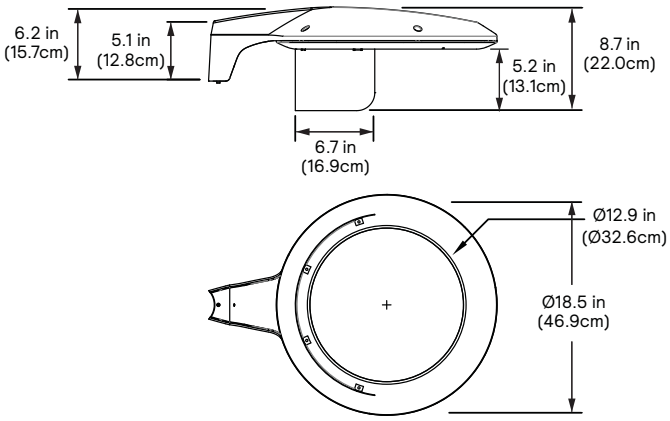


Retrofit Arm (RAM)



Weight: 18 Lbs (8.0 kg)
EPA: .26ft² (.02m²)

With External House Shield option (EHS)



P20 PureForm LED small round

Area light with comfort optics

Specifications

Housing

One-piece cast aluminum housing with integral arm and die cast light engine frame. Luminaire housing rated to IP66, tested in accordance toSection 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated to Level 2 (3.8G) over 100,000 cycles conforming to standards set forth by ANSI C136.31-2018. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light guide technology provides low-glare, uniform illumination. Composed of LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine ensures contact with housing to provide efficient heat path through conduction and convection to ambient air. Light engine is RoHS compliant. Standard color temperatures: 3000K +/- 175K, 4000K+/- 275K. Minimum CRI of 80. Also available in 5000K (70 CRI) with extended lead times.

Energy saving benefits

System efficacy up to 127 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

The advanced LED comfort optical system provides IES type II short, type IV short, type V short. Additional optics include a type 1 and a type 4 concentration down light for pedestrian applications. Composed of high performance UV-stabilized optical grade lens with laminated micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

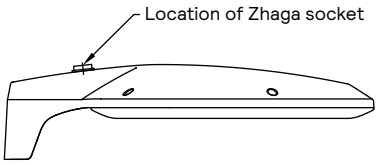
Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are wall mounting accessories.

Control options

0-10V dimming (DLEA): Order this option if you want access to 0-10V dimming leads supplied through the arm of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

SiteWise (SIWI): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at philips.com/sitewise.

Sensor Ready Zhaga Socket Connector (SRDR): Product equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance mounted on top of the luminaire arm. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program.



Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic diming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

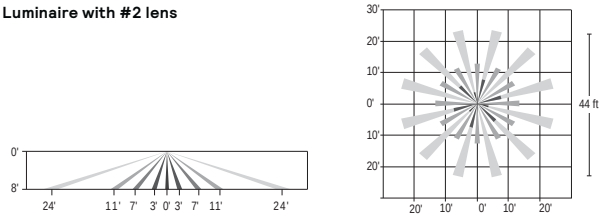
Note: Typical value accuracy +/- 5%

Motion response options

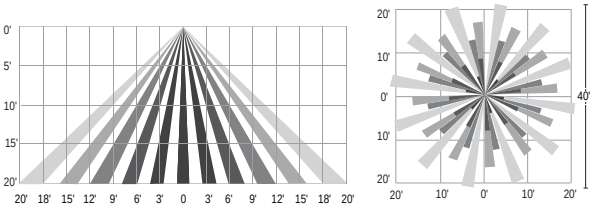
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (L2/L3): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 is designed for mounting heights 8' to 15'. Lens #3 is designed for higher mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

Luminaire with #2 lens



Luminaire with #3 lens



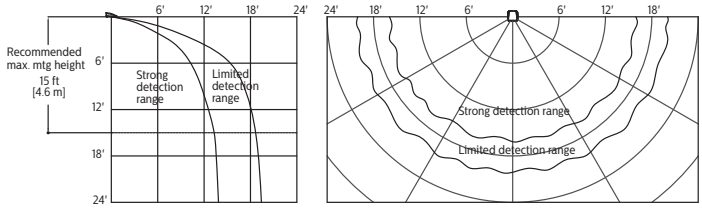
P20 PureForm LED small round

Area light with comfort optics

Specifications (cont'd)

Bi-Level Infrared Motion Response (BL50): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL50 is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output (100%). Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

Bi-Level Microwave HF Motion Response (BL30-MW): High frequency (5.8GHz +/- 75MHz microwave ISM wave band with <0.5 mW transmitting power) motion sensor is mounted integral to the luminaire. This bi-level motion sensor is designed to detect motion through the light engine so it can be used inside the luminaire without any protruded components. Sensor allows energy savings and meeting code requirements without compromising comfort and aesthetics. The product comes with factory pre-programmed standard settings including a dimming level of 30%, hold time of 3 minutes with no stand-by period. This means that in operations, the sensor will keep the luminaire at 30% of total lumen output and when motion is detected, the luminaire returns to 100% output. It will remain on full power for 3 minutes default prior to dimming back to low when no motion is observed. Other dimming levels, holding times, and stand-by periods are possible. Please contact factory technical support for details.



Emergency Battery Backup (EM): Emergency battery pack included integral to the luminaire, allowing for a consistent look between emergency and non-emergency luminaires. EM is suitable for use in ambient temperature conditions from 0°C (32°F) to 40°C (104°F) available on A01 and A02 only. The system is designed to have a secondary driver with relay to immediately detect AC power loss to power luminaire for a minimum of 90 minutes from the time power is lost. Available with 120-277V, or 'UNV' only.

Electrical

Twist-Lock Receptacle (TR7/TLP): Twist-Lock Receptacle with 7 pins enabling dimming with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire arm. When specifying receptacle with twist-lock photoelectric cell, voltage must be specified. When ordering 7-pin Twist-lock receptacle (TR7), all 7 pins are wired to respective pins with the Sensor Ready (SR) driver, and photocell or shorting cap is not included. When ordering a twist-lock receptacle with a photocell (TLP), the receptacle used is a 7-pin receptacle, but pins 6 and 7 are not connected (no SR driver). 0-10V dimming leads (pins 4 and 5) are connected if not ordered with any other dimming option.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. All drivers are 0-10V dimming to 10% power standard, except when using Sensor Ready (SR) drivers, which uses DALI protocol (options CS50/CM50/CS30/CM30, SRDR, and TR7). Drivers are RoHS and FCC Title 47 CFR Part 15 compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P20 comfort configurations are qualified under Standard DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DG), and medium gray (MG). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty.
See signify.com/warranties for complete details and exclusions.

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

GARDCO by signify

Site & Area

PureForm

P20 small round area light with comfort optics

TYPE 'A1'

Gardco PureForm LED area small round comfort P20 features a sleek, low profile design. Comfort optics are designed to enhance visual comfort by reducing glare and are ideally suited for pedestrian scale applications. Multiple optical distributions and color temperatures are available to allow you to customize your selection.

Project:
Location:
Cat.No:
Type:
Lumens: Qty:
Notes:

Ordering guide

example: P20-C-A01-840-T5S-AR1-UNV-BL50-L2-EHS-BZ

Prefix	Optic Technology	Configuration (nominal lumens)	Color Temperature	Distribution	Mounting	Voltage
P20 PureForm area small, 20" round	**C** Comfort	**A01** 2,000 lumens **A02** 4,000 lumens **A03** 6,000 lumens **A04** 8,000 lumens **A05** 10,000 lumens **A06**[1] 12,000 lumens **A07**[1] 14,000 lumens **A08**[1] 16,000 lumens	**830** 80CRI 3000K **840** 80CRI 4000K **750**[2] 70CRI 5000K	**T1S** Type 1 Short **T2S** Type 2 Short **T4S** Type 4 Short **4CD** Type 4 Concentrated Downlight **T5S** Type 5 Short	**AR1**[3] Arm mount (Standard) The following mounting kits must be ordered separately (See accessories) **RAM**[3] Retrofit arm mount kit **WAL** Wall mount	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V (50/60Hz) **HVU** 347-480V (50/60Hz)

Options

Dimming controls	Motion sensor lens	Electrical/Shielding	Emergency	Finish
(0-10V dimming driver standard) **DLEA**[4] Dimming Leads Externally Accessible (controls by others) **FAWS**[4,5] Field Adjustable Wattage Selector **BL50**[4,6] Bi-level set at 50% dimming **BL30**[4,7] Bi-level set at 30% dimming **SIWI**[4,8,10,11] SiteWise integral module **SRDR**[4,8,9,19] SR driver connected to Zhaga socket DynaDimmer: Automatic Profile Dimming **CS50**[4,9] Security 50% Dimming, 7 hours **CM50**[4,9] Median 50% Dimming, 8 hours **CS30**[4,9] Security 30% Dimming, 7 hours **CM30**[4,9] Median 30% Dimming, 8 hours	**L2**[6,14,19] PIR Sensor #2 lens **L3**[6,14,19] PIR Sensor #3 lens **MW**[7,15,18] Microwave HF Sensor	**PCB**[9,11] Photocontrol Button **TR7**[9,12] 7-pin Twist Lock Receptacle **TLP**[11,13] 7-pin Twist Lock Receptacle w/ 3-pin Photocell **SP2**[16] Increased 20kA **FS1**[11] Single Fuse (120, 277, 347VAC) **FS2**[11] Double Fuse (208, 240, 480VAC) The following option must be ordered separately (See accessories) **EHS** External house side shield	**EM**[4,5,9,17] Emergency battery pack	Textured **BK** Black **WH** White **BZ** Bronze **DG** Dark Gray **MG** Medium Gray Customer specified **RAL** Specify optional color or RAL (ex: RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

1. Only available with symmetrical optics (T1S and T5S)
2. Extended lead times apply. Contact factory for details.
3. Mounts to a 4-5" OD round pole with adapter included for square poles.
4. Not available with other dimming control options (mutually exclusive).
5. Not available with motion sensor.
6. BL50 must be specified with a motion sensor lens (L2 or L3).
7. BL30 must be specified with Microwave HF Sensor (MW).
8. Not available with photocontrols.
9. Not available in 347 or 480V.
10. Available only in 120 or 277V.
11. Must specify input voltage.
12. All 7 pins in NEMA receptacle are connected to SR driver.
13. Not available in 480V. Order photocell separately with TR7.
14. Not available with DLEA and FAWS dimming control options.
15. Not available with DLEA, SRDR, FAWS, CS50, CM50, CS30, and CM30 dimming control options.
16. Product ships standard with 10kA.
17. Only available with A01 and A03.
18. Only available in 120/277/347V.
19. When ordering SRDR with L2 or L3, controller to be used on socket must be SR compatible (See specifications for more details).

reddot winner 2021 lighting design

ida DARK SKY APPROVED 3000K only

DLC DLC PREMIUM

DLC DLC LISTED

c UL us

P20 PureForm LED small round

Area light with comfort optics

PureForm P20 Accessories (ordered separately, field installed)

Mounting Accessories

P20-RAM-G2-(F)	Retrofit Arm mount kit
P20-WS-G2-(F)	Wall mount with surface conduit rear entry permitted
P20-EHS-BK [20]	External House Side Shield, Black

(F) = Specify finish

20. External house side shield must be ordered with luminaire and ships separately. It cannot be added on to an existing luminiare not originally ordered with EHS shielding option.

LED Wattage and Lumen Values – 3000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-830-x	3000	21	2006	B1-U0-G1	95	1968	B1-U0-G1	93	2240	B1-U0-G1	106	2374	B1-U0-G1	112	2210	B1-U0-G1	104
P20-C-A02-830-x	3000	36	3576	B2-U0-G2	100	3508	B1-U0-G1	98	3993	B1-U0-G1	112	4231	B1-U0-G1	119	3939	B2-U0-G1	111
P20-C-A03-830-x	3000	52	5145	B2-U0-G2	99	5048	B2-U0-G2	97	5746	B2-U0-G2	111	6089	B2-U0-G2	117	5669	B3-U0-G2	109
P20-C-A04-830-x	3000	72	6977	B3-U0-G3	97	6844	B3-U0-G3	95	7792	B3-U0-G3	109	8256	B2-U0-G2	115	7687	B3-U0-G2	107
P20-C-A05-830-x	3000	90	8372	B3-U0-G3	93	8213	B3-U0-G3	91	9350	B3-U0-G3	104	9907	B3-U0-G3	110	9224	B3-U0-G2	102
P20-C-A06-830-x	3000	108	10727	B3-U0-G3	100										11818	B3-U0-G2	110
P20-C-A07-830-x	3000	133	12471	B3-U0-G3	93										13740	B4-U0-G3	103
P20-C-A08-830-x	3000	150	13866	B3-U0-G3	92										15277	B4-U0-G3	101

LED Wattage and Lumen Values – 4000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-840-x	4000	21	2143	B1-U0-G1	101	2102	B1-U0-G1	99	2393	B1-U0-G1	113	2535	B1-U0-G1	120	2361	B1-U0-G1	111
P20-C-A02-840-x	4000	36	3819	B2-U0-G2	107	3747	B1-U0-G1	105	4266	B2-U0-G2	120	4520	B1-U0-G1	127	4208	B2-U0-G1	118
P20-C-A03-840-x	4000	52	5496	B2-U0-G2	106	5392	B2-U0-G2	104	6138	B2-U0-G2	118	6504	B2-U0-G2	125	6055	B3-U0-G2	117
P20-C-A04-840-x	4000	72	7452	B3-U0-G3	104	7311	B3-U0-G3	102	8323	B3-U0-G3	116	8819	B3-U0-G3	123	8211	B3-U0-G2	114
P20-C-A05-840-x	4000	90	8943	B3-U0-G3	99	8773	B3-U0-G3	97	9988	B3-U0-G3	111	10583	B3-U0-G3	117	9853	B3-U0-G2	109
P20-C-A06-840-x	4000	108	11458	B3-U0-G3	106										12624	B4-U0-G3	117
P20-C-A07-840-x	4000	134	13321	B3-U0-G3	100										14677	B4-U0-G3	110
P20-C-A08-840-x	4000	151	14812	B3-U0-G3	99										16319	B4-U0-G3	109

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P20 PureForm LED small round

Area light with comfort optics

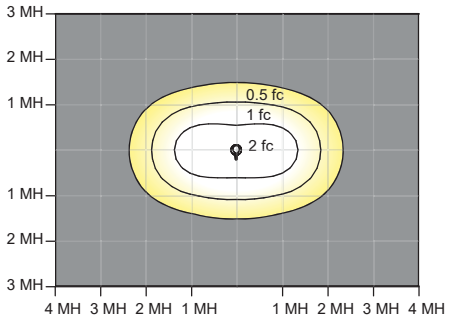
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

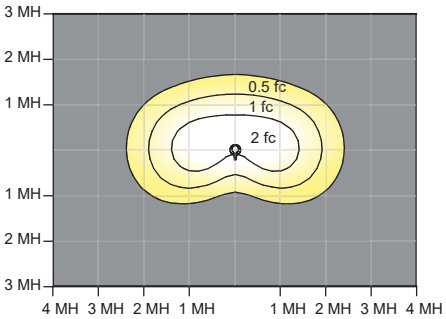
Ambient Temperature °C	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C (A01 to A05)	>100,000 hours	>72,000 hours	>90%
25°C (A06 to A08)	>100,000 hours	>60,000 hours	>84%

Optical Distributions

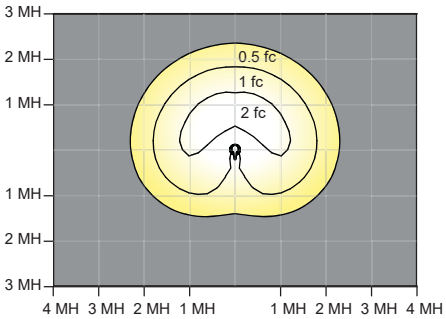
Based on configuration P20-C-A03-840 mounted at 15ft



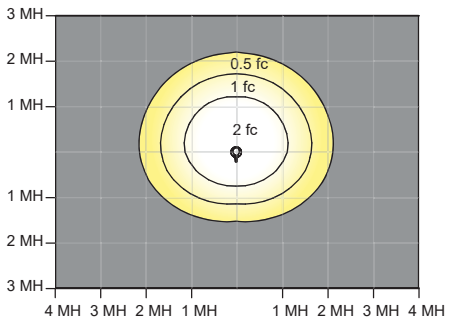
Comfort T1S



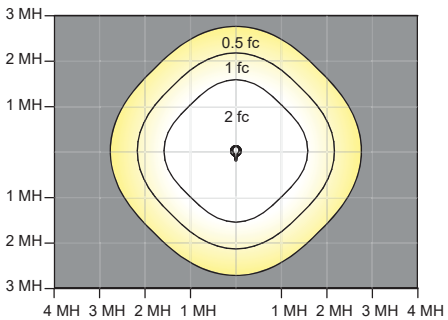
Comfort T2S



Comfort T4S



Comfort 4CD



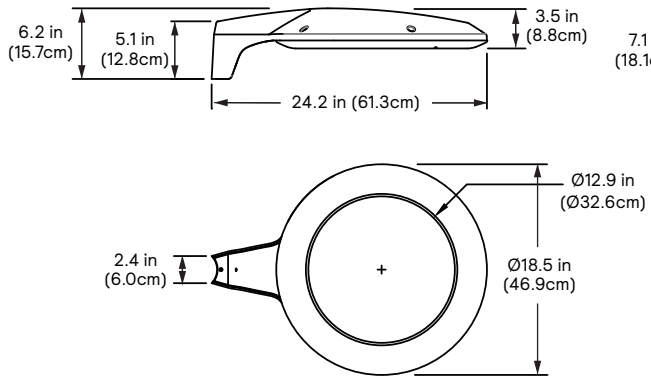
Comfort T5S

P20 PureForm LED small round

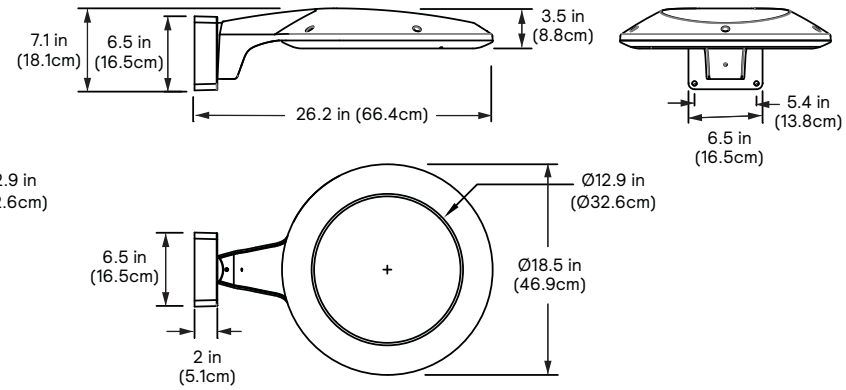
Area light with comfort optics

Dimensions

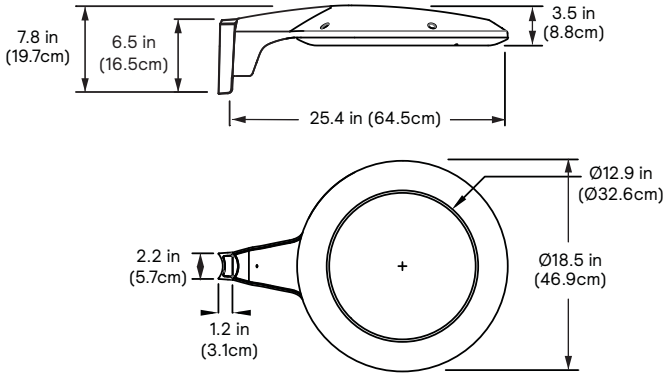
Standard Arm (AR1)



Wall Mount (WAL)

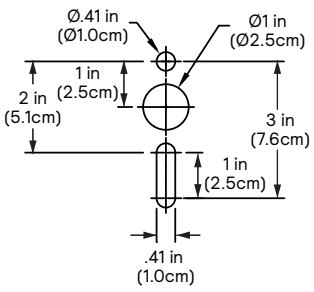


Retrofit Arm (RAM)

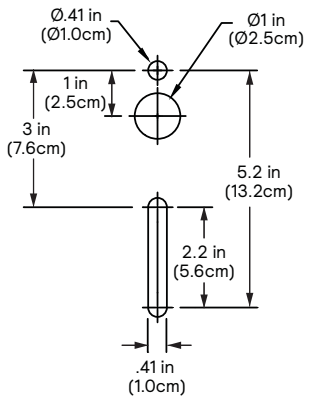


Drill Patterns

Standard Arm (AR1)

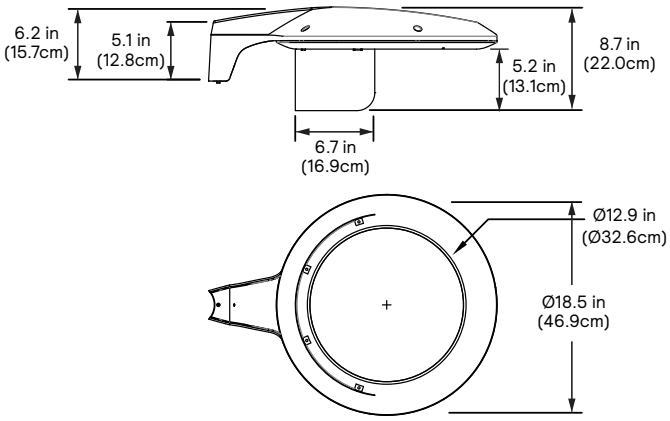


Retrofit Arm (RAM)



Weight: 18 Lbs (8.0 kg)
EPA: .26ft² (.02m²)

With External House Shield option (EHS)



P20 PureForm LED small round

Area light with comfort optics

Specifications

Housing

One-piece cast aluminum housing with integral arm and die cast light engine frame. Luminaire housing rated to IP66, tested in accordance toSection 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated to Level 2 (3.8G) over 100,000 cycles conforming to standards set forth by ANSI C136.31-2018. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light guide technology provides low-glare, uniform illumination. Composed of LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine ensures contact with housing to provide efficient heat path through conduction and convection to ambient air. Light engine is RoHS compliant. Standard color temperatures: 3000K +/- 175K, 4000K+/- 275K. Minimum CRI of 80. Also available in 5000K (70 CRI) with extended lead times.

Energy saving benefits

System efficacy up to 127 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

The advanced LED comfort optical system provides IES type II short, type IV short, type V short. Additional optics include a type 1 and a type 4 concentration down light for pedestrian applications. Composed of high performance UV-stabilized optical grade lens with laminated micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

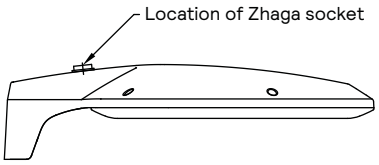
Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are wall mounting accessories.

Control options

0-10V dimming (DLEA): Order this option if you want access to 0-10V dimming leads supplied through the arm of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

SiteWise (SIWI): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at philips.com/sitewise.

Sensor Ready Zhaga Socket Connector (SRDR): Product equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance mounted on top of the luminaire arm. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program.



Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic diming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

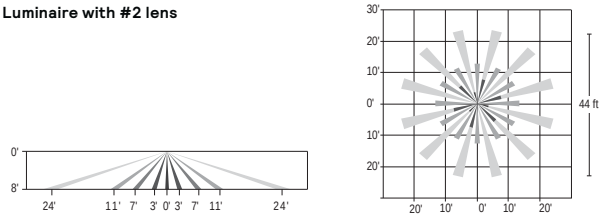
Note: Typical value accuracy +/- 5%

Motion response options

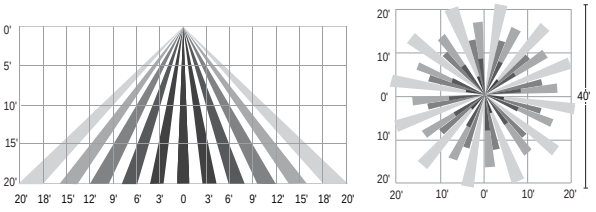
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (L2/L3): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 is designed for mounting heights 8' to 15'. Lens #3 is designed for higher mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

Luminaire with #2 lens



Luminaire with #3 lens



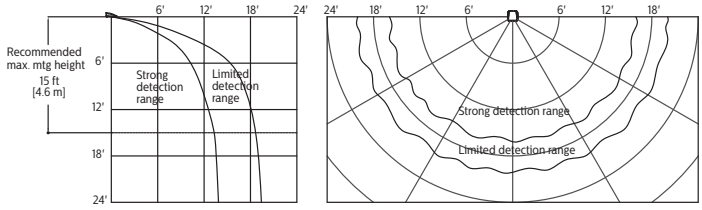
P20 PureForm LED small round

Area light with comfort optics

Specifications (cont'd)

Bi-Level Infrared Motion Response (BL50): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL50 is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output (100%). Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

Bi-Level Microwave HF Motion Response (BL30-MW): High frequency (5.8GHz +/- 75MHz microwave ISM wave band with <0.5 mW transmitting power) motion sensor is mounted integral to the luminaire. This bi-level motion sensor is designed to detect motion through the light engine so it can be used inside the luminaire without any protruded components. Sensor allows energy savings and meeting code requirements without compromising comfort and aesthetics. The product comes with factory pre-programmed standard settings including a dimming level of 30%, hold time of 3 minutes with no stand-by period. This means that in operations, the sensor will keep the luminaire at 30% of total lumen output and when motion is detected, the luminaire returns to 100% output. It will remain on full power for 3 minutes default prior to dimming back to low when no motion is observed. Other dimming levels, holding times, and stand-by periods are possible. Please contact factory technical support for details.



Emergency Battery Backup (EM): Emergency battery pack included integral to the luminaire, allowing for a consistent look between emergency and non-emergency luminaires. EM is suitable for use in ambient temperature conditions from 0°C (32°F) to 40°C (104°F) available on A01 and A02 only. The system is designed to have a secondary driver with relay to immediately detect AC power loss to power luminaire for a minimum of 90 minutes from the time power is lost. Available with 120-277V, or 'UNV' only.

Electrical

Twist-Lock Receptacle (TR7/TLP): Twist-Lock Receptacle with 7 pins enabling dimming with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire arm. When specifying receptacle with twist-lock photoelectric cell, voltage must be specified. When ordering 7-pin Twist-lock receptacle (TR7), all 7 pins are wired to respective pins with the Sensor Ready (SR) driver, and photocell or shorting cap is not included. When ordering a twist-lock receptacle with a photocell (TLP), the receptacle used is a 7-pin receptacle, but pins 6 and 7 are not connected (no SR driver). 0-10V dimming leads (pins 4 and 5) are connected if not ordered with any other dimming option.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. All drivers are 0-10V dimming to 10% power standard, except when using Sensor Ready (SR) drivers, which uses DALI protocol (options CS50/CM50/CS30/CM30, SRDR, and TR7). Drivers are RoHS and FCC Title 47 CFR Part 15 compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P20 comfort configurations are qualified under Standard DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DG), and medium gray (MG). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty.
See signify.com/warranties for complete details and exclusions.

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

GARDCO by signify

Site & Area

PureForm

P20 small round area light with comfort optics

TYPE 'A2'

Gardco PureForm LED area small round comfort P20 features a sleek, low profile design. Comfort optics are designed to enhance visual comfort by reducing glare and are ideally suited for pedestrian scale applications. Multiple optical distributions and color temperatures are available to allow you to customize your selection.

Project:
Location:
Cat.No:
Type:
Lumens: Qty:
Notes:

Ordering guide

example: P20-C-A01-840-T5S-AR1-UNV-BL50-L2-EHS-BZ

Prefix	Optic Technology	Configuration (nominal lumens)	Color Temperature	Distribution	Mounting	Voltage
P20 PureForm area small, 20" round	**C** Comfort	**A01** 2,000 lumens **A02** 4,000 lumens **A03** 6,000 lumens **A04** 8,000 lumens **A05** 10,000 lumens **A06**[1] 12,000 lumens **A07**[1] 14,000 lumens **A08**[1] 16,000 lumens	**830** 80CRI 3000K **840** 80CRI 4000K **750**[2] 70CRI 5000K	**T1S** Type 1 Short **T2S** Type 2 Short **T4S** Type 4 Short **4CD** Type 4 Concentrated Downlight **T5S** Type 5 Short	**AR1**[3] Arm mount (Standard) The following mounting kits must be ordered separately (See accessories) **RAM**[3] Retrofit arm mount kit **WAL** Wall mount	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V (50/60Hz) **HVU** 347-480V (50/60Hz)

Options

Dimming controls	Motion sensor lens	Electrical/Shielding	Emergency	Finish
(0-10V dimming driver standard) **DLEA**[4] Dimming Leads Externally Accessible (controls by others) **FAWS**[4,5] Field Adjustable Wattage Selector **BL50**[4,6] Bi-level set at 50% dimming **BL30**[4,7] Bi-level set at 30% dimming **SIWI**[4,8,10,11] SiteWise integral module **SRDR**[4,8,9,19] SR driver connected to Zhaga socket DynaDimmer: Automatic Profile Dimming **CS50**[4,9] Security 50% Dimming, 7 hours **CM50**[4,9] Median 50% Dimming, 8 hours **CS30**[4,9] Security 30% Dimming, 7 hours **CM30**[4,9] Median 30% Dimming, 8 hours	**L2**[6,14,19] PIR Sensor #2 lens **L3**[6,14,19] PIR Sensor #3 lens **MW**[7,15,18] Microwave HF Sensor	**PCB**[9,11] Photocontrol Button **TR7**[9,12] 7-pin Twist Lock Receptacle **TLP**[11,13] 7-pin Twist Lock Receptacle w/ 3-pin Photocell **SP2**[16] Increased 20kA **FS1**[11] Single Fuse (120, 277, 347VAC) **FS2**[11] Double Fuse (208, 240, 480VAC) The following option must be ordered separately (See accessories) **EHS** External house side shield	**EM**[4,5,9,17] Emergency battery pack	Textured **BK** Black **WH** White **BZ** Bronze **DG** Dark Gray **MG** Medium Gray Customer specified **RAL** Specify optional color or RAL (ex: RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

1. Only available with symmetrical optics (T1S and T5S)
2. Extended lead times apply. Contact factory for details.
3. Mounts to a 4-5" OD round pole with adapter included for square poles.
4. Not available with other dimming control options (mutually exclusive).
5. Not available with motion sensor.
6. BL50 must be specified with a motion sensor lens (L2 or L3).
7. BL30 must be specified with Microwave HF Sensor (MW).
8. Not available with photocontrols.
9. Not available in 347 or 480V.
10. Available only in 120 or 277V.
11. Must specify input voltage.
12. All 7 pins in NEMA receptacle are connected to SR driver.
13. Not available in 480V. Order photocell separately with TR7.
14. Not available with DLEA and FAWS dimming control options.
15. Not available with DLEA, SRDR, FAWS, CS50, CM50, CS30, and CM30 dimming control options.
16. Product ships standard with 10kA.
17. Only available with A01 and A03.
18. Only available in 120/277/347V.
19. When ordering SRDR with L2 or L3, controller to be used on socket must be SR compatible (See specifications for more details).

3000K only

P20 PureForm LED small round

Area light with comfort optics

PureForm P20 Accessories (ordered separately, field installed)

Mounting Accessories

P20-RAM-G2-(F)	Retrofit Arm mount kit
P20-WS-G2-(F)	Wall mount with surface conduit rear entry permitted
P20-EHS-BK [20]	External House Side Shield, Black

(F) = Specify finish

20. External house side shield must be ordered with luminaire and ships separately. It cannot be added on to an existing luminiare not originally ordered with EHS shielding option.

LED Wattage and Lumen Values – 3000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-830-x	3000	21	2006	B1-U0-G1	95	1968	B1-U0-G1	93	2240	B1-U0-G1	106	2374	B1-U0-G1	112	2210	B1-U0-G1	104
P20-C-A02-830-x	3000	36	3576	B2-U0-G2	100	3508	B1-U0-G1	98	3993	B1-U0-G1	112	4231	B1-U0-G1	119	3939	B2-U0-G1	111
P20-C-A03-830-x	3000	52	5145	B2-U0-G2	99	5048	B2-U0-G2	97	5746	B2-U0-G2	111	6089	B2-U0-G2	117	5669	B3-U0-G2	109
P20-C-A04-830-x	3000	72	6977	B3-U0-G3	97	6844	B3-U0-G3	95	7792	B3-U0-G3	109	8256	B2-U0-G2	115	7687	B3-U0-G2	107
P20-C-A05-830-x	3000	90	8372	B3-U0-G3	93	8213	B3-U0-G3	91	9350	B3-U0-G3	104	9907	B3-U0-G3	110	9224	B3-U0-G2	102
P20-C-A06-830-x	3000	108	10727	B3-U0-G3	100										11818	B3-U0-G2	110
P20-C-A07-830-x	3000	133	12471	B3-U0-G3	93										13740	B4-U0-G3	103
P20-C-A08-830-x	3000	150	13866	B3-U0-G3	92										15277	B4-U0-G3	101

LED Wattage and Lumen Values – 4000K

			T1S			T2S			T4S			4CD			T5S		
Ordering Code	Color Temp.	Average System Watts	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P20-C-A01-840-x	4000	21	2143	B1-U0-G1	101	2102	B1-U0-G1	99	2393	B1-U0-G1	113	2535	B1-U0-G1	120	2361	B1-U0-G1	111
P20-C-A02-840-x	4000	36	3819	B2-U0-G2	107	3747	B1-U0-G1	105	4266	B2-U0-G2	120	4520	B1-U0-G1	127	4208	B2-U0-G1	118
P20-C-A03-840-x	4000	52	5496	B2-U0-G2	106	5392	B2-U0-G2	104	6138	B2-U0-G2	118	6504	B2-U0-G2	125	6055	B3-U0-G2	117
P20-C-A04-840-x	4000	72	7452	B3-U0-G3	104	7311	B3-U0-G3	102	8323	B3-U0-G3	116	8819	B3-U0-G3	123	8211	B3-U0-G2	114
P20-C-A05-840-x	4000	90	8943	B3-U0-G3	99	8773	B3-U0-G3	97	9988	B3-U0-G3	111	10583	B3-U0-G3	117	9853	B3-U0-G2	109
P20-C-A06-840-x	4000	108	11458	B3-U0-G3	106										12624	B4-U0-G3	117
P20-C-A07-840-x	4000	134	13321	B3-U0-G3	100										14677	B4-U0-G3	110
P20-C-A08-840-x	4000	151	14812	B3-U0-G3	99										16319	B4-U0-G3	109

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P20 PureForm LED small round

Area light with comfort optics

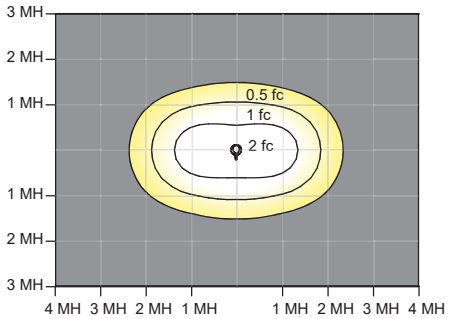
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

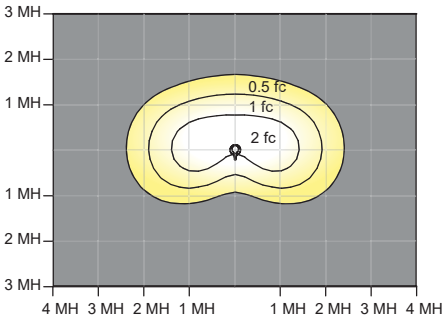
Ambient Temperature °C	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C (A01 to A05)	>100,000 hours	>72,000 hours	>90%
25°C (A06 to A08)	>100,000 hours	>60,000 hours	>84%

Optical Distributions

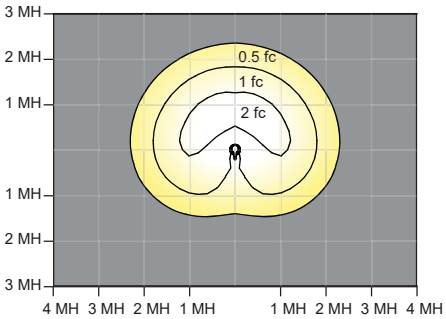
Based on configuration P20-C-A03-840 mounted at 15ft



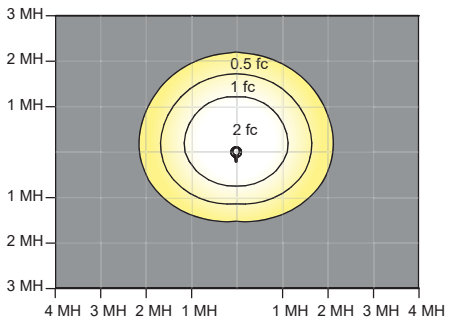
Comfort T1S



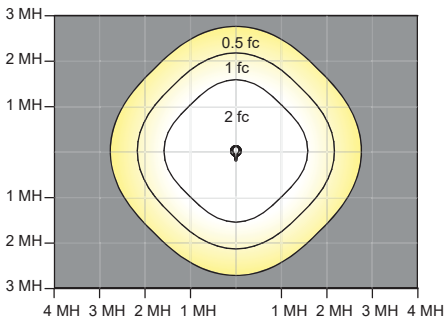
Comfort T2S



Comfort T4S



Comfort 4CD



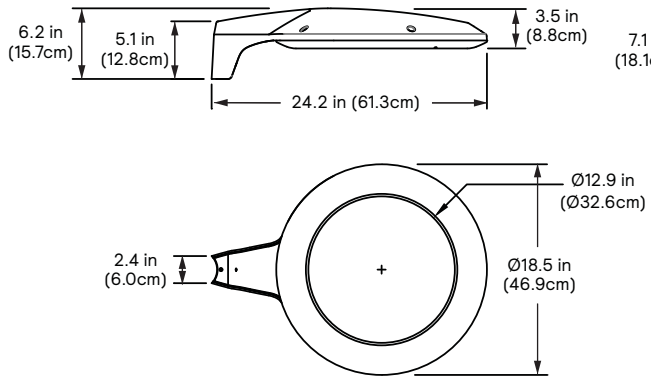
Comfort T5S

P20 PureForm LED small round

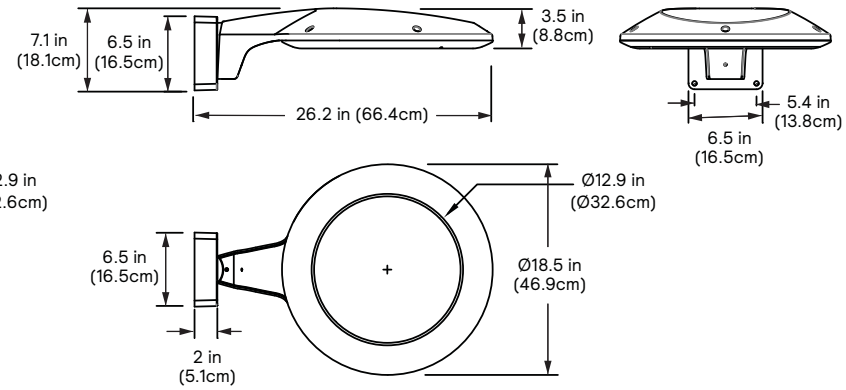
Area light with comfort optics

Dimensions

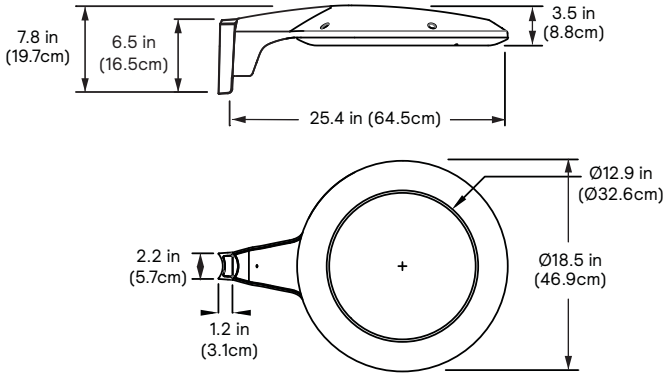
Standard Arm (AR1)



Wall Mount (WAL)

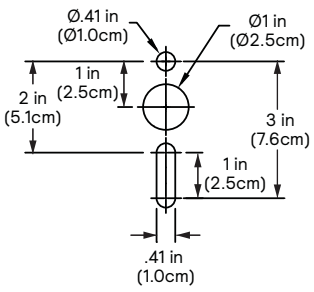


Retrofit Arm (RAM)

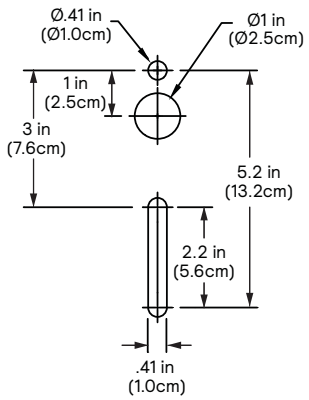


Drill Patterns

Standard Arm (AR1)

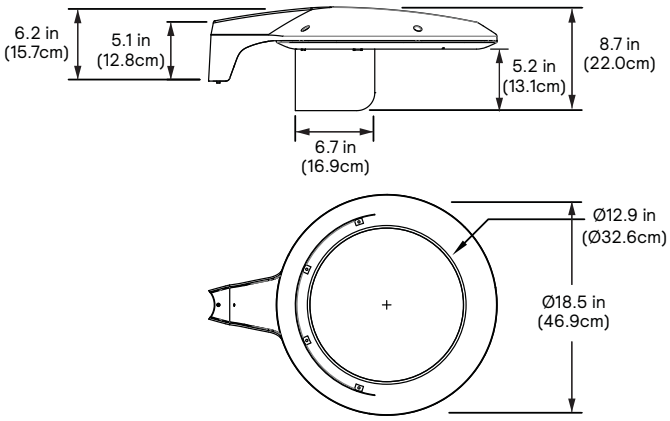


Retrofit Arm (RAM)



Weight: 18 Lbs (8.0 kg)
EPA: .26ft² (.02m²)

With External House Shield option (EHS)



P20 PureForm LED small round

Area light with comfort optics

Specifications

Housing

One-piece cast aluminum housing with integral arm and die cast light engine frame. Luminaire housing rated to IP66, tested in accordance toSection 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated to Level 2 (3.8G) over 100,000 cycles conforming to standards set forth by ANSI C136.31-2018. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light guide technology provides low-glare, uniform illumination. Composed of LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine ensures contact with housing to provide efficient heat path through conduction and convection to ambient air. Light engine is RoHS compliant. Standard color temperatures: 3000K +/- 175K, 4000K+/- 275K. Minimum CRI of 80. Also available in 5000K (70 CRI) with extended lead times.

Energy saving benefits

System efficacy up to 127 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

The advanced LED comfort optical system provides IES type II short, type IV short, type V short. Additional optics include a type 1 and a type 4 concentration down light for pedestrian applications. Composed of high performance UV-stabilized optical grade lens with laminated micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

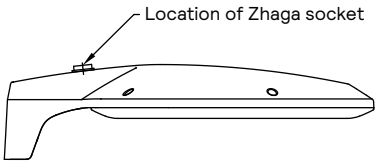
Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are wall mounting accessories.

Control options

0-10V dimming (DLEA): Order this option if you want access to 0-10V dimming leads supplied through the arm of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

SiteWise (SIWI): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at philips.com/sitewise.

Sensor Ready Zhaga Socket Connector (SRDR): Product equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance mounted on top of the luminaire arm. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program.



Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic diming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

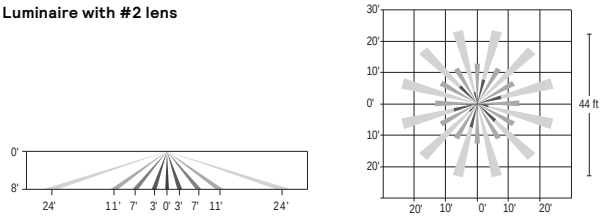
Note: Typical value accuracy +/- 5%

Motion response options

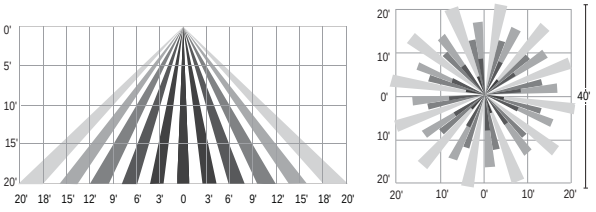
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (L2/L3): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 is designed for mounting heights 8' to 15'. Lens #3 is designed for higher mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

Luminaire with #2 lens



Luminaire with #3 lens



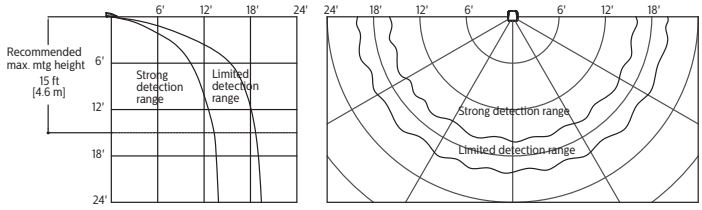
P20 PureForm LED small round

Area light with comfort optics

Specifications (cont'd)

Bi-Level Infrared Motion Response (BL50): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL50 is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output (100%). Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

Bi-Level Microwave HF Motion Response (BL30-MW): High frequency (5.8GHz +/- 75MHz microwave ISM wave band with <0.5 mW transmitting power) motion sensor is mounted integral to the luminaire. This bi-level motion sensor is designed to detect motion through the light engine so it can be used inside the luminaire without any protruded components. Sensor allows energy savings and meeting code requirements without compromising comfort and aesthetics. The product comes with factory pre-programmed standard settings including a dimming level of 30%, hold time of 3 minutes with no stand-by period. This means that in operations, the sensor will keep the luminaire at 30% of total lumen output and when motion is detected, the luminaire returns to 100% output. It will remain on full power for 3 minutes default prior to dimming back to low when no motion is observed. Other dimming levels, holding times, and stand-by periods are possible. Please contact factory technical support for details.



Emergency Battery Backup (EM): Emergency battery pack included integral to the luminaire, allowing for a consistent look between emergency and non-emergency luminaires. EM is suitable for use in ambient temperature conditions from 0°C (32°F) to 40°C (104°F) available on A01 and A02 only. The system is designed to have a secondary driver with relay to immediately detect AC power loss to power luminaire for a minimum of 90 minutes from the time power is lost. Available with 120-277V, or 'UNV' only.

Electrical

Twist-Lock Receptacle (TR7/TLP): Twist-Lock Receptacle with 7 pins enabling dimming with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire arm. When specifying receptacle with twist-lock photoelectric cell, voltage must be specified. When ordering 7-pin Twist-lock receptacle (TR7), all 7 pins are wired to respective pins with the Sensor Ready (SR) driver, and photocell or shorting cap is not included. When ordering a twist-lock receptacle with a photocell (TLP), the receptacle used is a 7-pin receptacle, but pins 6 and 7 are not connected (no SR driver). 0-10V dimming leads (pins 4 and 5) are connected if not ordered with any other dimming option.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. All drivers are 0-10V dimming to 10% power standard, except when using Sensor Ready (SR) drivers, which uses DALI protocol (options CS50/CM50/CS30/CM30, SRDR, and TR7). Drivers are RoHS and FCC Title 47 CFR Part 15 compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P20 comfort configurations are qualified under Standard DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DG), and medium gray (MG). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty.
See signify.com/warranties for complete details and exclusions.

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

G4.6.7

JUNO

6" SLOPE CEILING LED - 900 LUMENS IC NEW CONSTRUCTION HOUSING

STANDARD SLOPE:
2/12 TO 6/12 PITCH (9° TO 27°)

IC926LED (G4 09LM) LENSED TRIMS

Project:

Fixture Type:

Location:

Contact/Phone:

PRODUCT DESCRIPTION

Dedicated LED, Air-Loc® sealed slope ceiling new construction housing with integral light engine • IC rated construction housing can be completely covered with insulation • Fully sealed housing stops infiltration and exfiltration of air, reducing heating and air cooling costs without the use of additional gaskets • LED housing is designed to provide 50,000 hours of life and is compatible with standard Juno trims • 5 year limited warranty on LED components.

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury
- Comparable light output to 26W compact fluorescent

PRODUCT SPECIFICATIONS

LED Light Engine Extruded heat sink and cast aluminum slider plate integrated directly with housing provides superior thermal management to ensure the long life of the LED • Replaceable light engine mounts directly to slider plate and incorporates the latest generation, high lumen output LED array • LEDs are binned within a 3-step MacAdam Ellipse exceeding ENERGY STAR® requirements for superior fixture to fixture color uniformity • 2700K, 3000K, 3500K, or 4000K color temperatures available • 90 CRI minimum.

Optical System Computer-optimized internal reflector with specular finish coupled with a high transmission diffusing lens conceals the LEDs and produces uniform aperture luminance • Adjustable slider plate to position LEDs/reflector perpendicular to floor • Plate includes 1/4" adjustment indicators for consistent alignment.

Aesthetic Trim Selections Compatible with a selection of existing Juno trims • Trims are wet location approved for covered ceiling applications.

LED Driver Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) drivers that accommodate input voltages from 120-277 volts AC at 50-60Hz • Power factor > 0.9 at 120V input • 120 volt only driver dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage wall box dimmers • Universal voltage drivers are dimmable with the use of most 0-10V wall dimmers • For a list of compatible dimmers, see JUNOICLED-DIM • Mounted inside housing on a removable J-box cover for ease of maintenance.

Life Rated for 50,000 hours at 70% lumen maintenance.

Labels UL listed for U.S. and Canada through-branch wiring, wet locations (covered ceilings) • Union made • UL and cUL listed.

Testing All reports are based on published industry procedures; field performance may differ from laboratory performance.

Specifications subject to change without notice.

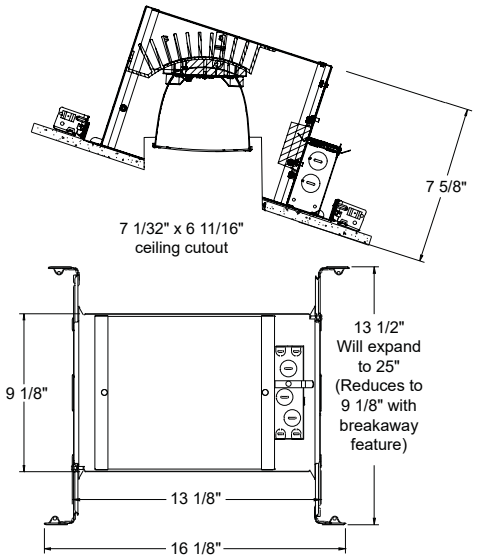
HOUSING FEATURES

Housing Designed for use in IC (insulated ceiling) or non-IC construction • .032" aluminum housing sealed for Air-Loc compliance • Access door for junction box accessibility • Inner skirt is vertically adjustable to accommodate up to a 1" ceiling thickness.

Junction Box Pre-wired junction box provided with (5) ½" and (1) ¾" knockouts, (4) non-metallic sheathed cable connectors and ground wire, UL and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with pryout slots • Push-in electrical connectors supplied as standard for fast, secure installation.

TYPE 'B'

DIMENSIONS



Mounting Frame 22-gauge die-formed galvanized steel mounting frame • Rough-in section (junction box, mounting frame, housing and bar hangers) fully assembled for ease of installation.

Real Nail® 3 Bar Hangers Telescoping Real Nail® 3 system permits quick placement of housing anywhere within 24" O.C. joists or suspended ceilings • Includes removable nail for repositioning of fixture in wood joist construction • Integral T-bar mounting feature for suspended ceilings • Design covered under US Patent D552,969.

G4.6.7

6" SLOPE CEILING LED - 900 LUMENS IC NEW CONSTRUCTION HOUSING

STANDARD SLOPE: 2/12 TO 6/12 PITCH (9° TO 27°)

IC926LED (G4 09LM) LENSED TRIMS

ELECTRICAL DATA

Dedicated 120V Only Driver Option (120 FRPC)

	120V
Input Power	15.7W (+/-5%)
Input Current - Max	0.13A
Frequency	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (residential)
Minimum starting temp	-25°C

ELECTRICAL DATA

Universal Voltage

	MVOLT EZ10 and MVOLT EZ1		MVOLT ZT10 and MVOLT ZT1	
	120V	277V	120V	277V
Input Power	14.5W (+/-5%)	15.3W (+/-5%)	14.5W (+/-5%)	15.3W (+/-5%)
Input Current	0.12A	0.06A	0.12A	0.06A
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)
Minimum starting temp	-20°C	-20°C	-20°C	-20°C

ORDERING INFORMATION

Housing and trim can be ordered together or separate, but will always ship separately.

Example: IC926LED G4 09LM 27K 90CRI 120 FRPC

Series		Generation		Lumens		Color Temperature		CRI		Voltage/Driver	
IC926LED	6" LED Slope Ceiling New Construction IC Hsg	**G4**	Generation 4	**09LM**	900 Nominal Lumens	**27K**	2700K	**90CRI**	90+ CRI	**120 FRPC**	120V Forward/Reverse Phase Cut, 5% dim
						30K	3000K			**MVOLT ZT10**	Multi-Volt (120-277), 0-10V, 10% dim
						35K	3500K			**MVOLT ZT1**	Multi-Volt (120-277), 0-10V, 1% dim
						40K	4000K			**MVOLT EZ10**	Multi-Volt (120-277), eldoLED 0-10V, 10% dim
										MVOLT EZ1	Multi-Volt (120-277), eldoLED 0-10V, 1% dim

A+ Capable options indicated by this color background

Trim/Description

6330 BWH 6" Lensed Baffle with Regressed Frosted Dome Lens Trim - Black Baffle, White Trim Ring

6330 WWH 6" Lensed Baffle with Regressed Frosted Dome Lens Trim - White Baffle, White Trim Ring

UL Listed for use in wet location.

Trim Size: 7 5/8" O.D.

Note: In Canada when insulation is present, Type IC fixtures must be used.

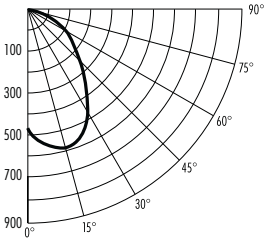
PHOTOMETRIC REPORT

Test Report #: PT06120505R

Catalog No: IC926LED G4 09LM 35K 90CRI 120 with 6330 WWH Trim

Luminaire Spacing Criterion: 1.36

Luminaire LPW: 49



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	488
5	550
10	584
15	599
20	586
25	546
30	485
35	419
40	338
45	266
50	205
55	154
60	115
65	85
70	60
75	40
80	23
85	8
90	0

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60' x 60' room)

Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	51	41	33
5.0'	32	26	21
6.0'	23	18	15
7.0'	18	15	12
8.0'	14	12	10
9.0'	11	9	7
10.0'	8	7	5

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	312	N/A	40.8
0-40°	458	N/A	59.8
0-60°	665	N/A	86.8
0-90°	765	N/A	100.0

INITIAL FOOTCANDLES (One Unit, 15.5W , 55.6° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	37.4	4.2'
6	16.6	6.3'
8	9.4	8.4'
10	6.0	10.5'

LUMINANCE (Average cd/m²)

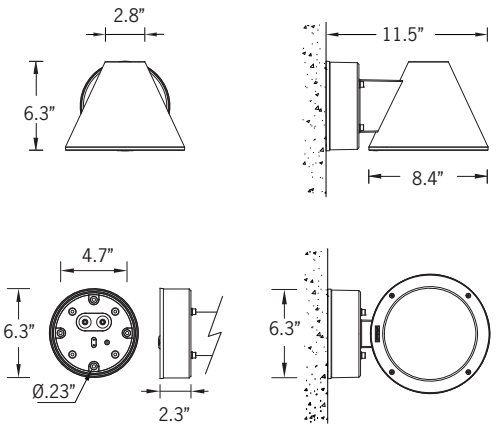
Degrees	Average Luminance
45	24592
55	17480
65	13159
75	9987
85	6291

UCI-30121

Cinati Type V Surface

TYPE 'C'

21w COB 1597 Lumens
IP65 • Suitable For Wet Locations
IK08 • Impact Resistant (Vandal Resistant)
Weight 7.3 lbs



Mounting Detail

Construction

Aluminum
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded “fit for purpose” long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B2 - U0 - G0

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C.
This process ensures that Ligman products can withstand harsh environments.
Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Cone-shaped wall-mounted downlight fixtures. Simple clean form hiding multiple high-performance glare free optic choices.

A cone shaped wall wash luminaire. Suitable for outdoor up, or down light applications. This luminaire is provided with precision optics and high powered LEDs, to provide narrow, medium, wide and very wide distributions. The vandal resistant tempered glass is available in clear or lightly frosted versions.

This product is suitable for commercial, as well as residential applications and with the selection of optics available can provide an excellent lighting solution. Integral electronic driver. Fixture is mounted over a 3” octagonal junction box.
For Type I,II, III & IV, please see UCI-30131

Additional Options (Consult Factory For Pricing)

SCDT
Surface Conduit Decorative Trim

UCI-30121

Cinati Type V Surface

LIGMAN LIGHTING USA

PROJECT		DATE	
QUANTITY		TYPE		NOTE	

ORDERING EXAMPLE || UCI - 30121 - 21w - M - W30 - 02 - 120/277v - Options

UCI-30121					
	LAMP	BEAM	LED COLOR	FINISH COLOR	VOLTAGE
	21w COB 1597 Lumens	N - Narrow 9˚ M - Medium 16˚ W - Wide 36˚ VW - Very Wide 70˚	W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	120/277v Other - Specify

ADDITIONAL OPTIONS

NAT - Natatorium Rated
DIM - 0-10v Dimming
SCDT - Surface Conduit Decorative Trim
F - Frosted Lens

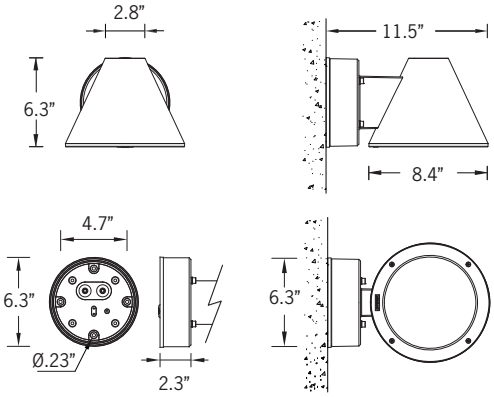
Intertek

UCI-30131

Cinati Type I, II, III & IV Surface

TYPE 'D'

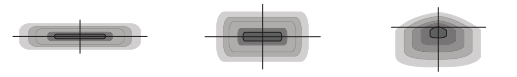
18w LED 2100 Lumens | 30w LED 3499 Lumens
IP65 • Suitable For Wet Locations
IK08 • Impact Resistant (Vandal Resistant)
Weight 8 lbs



Mounting Detail

microVOS TECHNOLOGY

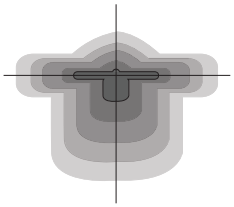
Ligman’s micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



Type I | Type II | Type III

Type IV | Type V

The variable optic system allows for the designer to create hybrid distributions for precise lighting requirements.



HYBRID
TYPE I & TYPE IV

Construction

Aluminum
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded “fit for purpose” long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B0 - U0 - G0

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C.
This process ensures that Ligman products can withstand harsh environments.
Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Cone-shaped wall-mounted downlight fixtures. Simple clean form hiding multiple high-performance glare free optic choices.

A cone shaped wall wash luminaire. Suitable for outdoor up, or down light applications. This luminaire is provided with precision optics and high powered LEDs, to provide narrow, medium, wide and very wide distributions. The vandal resistant tempered glass is available in clear or lightly frosted versions.

This product is suitable for commercial, as well as residential applications and with the selection of optics available can provide an excellent lighting solution. Integral electronic driver. Fixture is mounted over a 3” octagonal junction box.
For Type I,II, III & IV, please see UCI-30131

Additional Options (Consult Factory For Pricing)

SCDT
Surface Conduit Decorative Trim

UCI-30131

Cinati Type I, II, III & IV Surface

microVOS TECHNOLOGY

LIGMAN LIGHTING USA

PROJECT		DATE	
QUANTITY		TYPE		NOTE	

ORDERING EXAMPLE || UCI - 30131 - 18w - T2 - W30 - 02 - 120/277v - Options

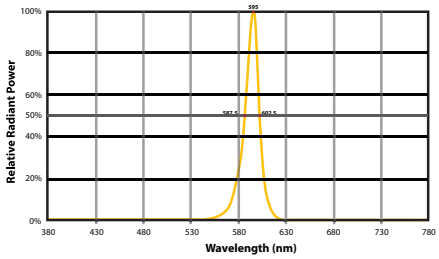
UCI-30131	LAMP	BEAM	LED COLOR	FINISH COLOR	VOLTAGE
	18w LED	T1 - Type I Distribution	W27 - 2700K	01 - BLACK RAL 9011	120/277v
	2100 Lumens	T2 - Type II Distribution	W30 - 3000K	02 - DARK GREY RAL 7043	Other - Specify
		T3 - Type III Distribution	W35 - 3500K	03 - WHITE RAL 9003	
	30w LED	T4 - Type IV Distribution	W40 - 4000K	04 - METALLIC SILVER RAL 9006	
	3499 Lumens			05 - MATTE SILVER RAL 9006	
				06 - LIGMAN BRONZE	
				07 - CUSTOM RAL	

ADDITIONAL OPTIONS

NAT - Natatorium Rated
DIM - 0-10v Dimming
SCDT - Surface Conduit Decorative Trim
F - Frosted Lens
AMB - Turtle Friendly Amber LED

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT

AMB Spectral Diagram



Narrow-Spectrum Amber LEDs
Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

Intertek

BionicPro3™ | Recessed Linear

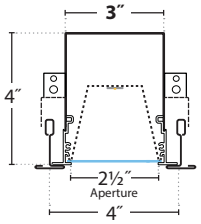
PRUDENTIAL LTG.

PRULITE.COM 213.746.0360

Type:

Job:

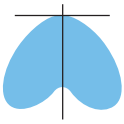
TYPE 'F'



Technical Questions

CLICK HERE

What distinguishes BionicPro? 2″ - 3″ - 4″ - 5″ luminaires with a seamless lens for clean lines of light and no light leaks, anywhere. Fantastic optical performance via our TruBeam™ technology delivering the industry's best batwing with remarkably soft, even illumination and low glare (UGR <19), a vastly improved Ceiling Wash, two wall washes to fit your design intent, our Perimeter Fill to wash corridors with light from one side, all with just a lens change.



BPRO3-REC-FLSH-LED35-MO-BTW

2747	Delivered Lumens
23	Watts
121	lm/w
1.84	Spacing Criteria

UPTO 121 LM/W

(CLICK HERE)

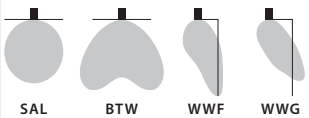
		LO	MO	SO	HO
BTW	Lm/Ft	470	685	950	1200
SAL	Lm/Ft	435	640	885	1115
WWF	Lm/Ft	475	700	975	1225
WWG	Lm/Ft	475	700	975	1225
	W/Ft	4	6	8	10.5

LUMEN CHART AT 3500K-80 CRI

TechZone4 | 5 YEAR LED WARRANTY | IC RATED | LED Details | Made in the USA

Lumen output may vary +/– 5%
Light Loss Factor (LLF) for CCTs other than 3500K:
4000K +2%, 3000K -5%, 2700K -20%
90 CRI -15% (3K, 3500K, 4K & 5K)
See LED Details PDF for more info

SERIES	LENS POS.	LED COLOR	OUTPUT	NOMINAL LENGTH	TRIM COLOR	DISTRIBUTION	MOUNTING	CIRCUITING	VOLTAGE	CEILING SYSTEMS	DRIVERS	OPTIONS & CONTROL SENSORS
BPro3-REC	FLSH							SC				
BionicPro3	**FLSH** Flush Lens	LED27 2700K (90CRI) **LED3** 3000K LED35 3500K LED4 4000K LED3-90 90CRI LED35-90 90CRI LED4-90 90CRI LED5-90 90CRI	**LO** Low MO Medium SO Standard HO High (Non-IC rated, consult factory for EMHE) PROG Programmable Light Output (Specify desired lm/ft or w/ft) **NOTE:** Consult factory for **High Output (HO)**	2´ 3´ **4´** 5´ 6´ 7´ 8´ R___ (Row Length, ⅛″ increments) **NOTE:** Individual fixtures are NOT intended for row mounting	**TMW** Textured Matte White (Standard) YGW Gloss White Y__ Premium Color CC Custom Color	**SAL** Satin Lens BTW Batwing WWF Flat Wall Wash WWG Focal Glow Wall Wash	LP Light Pocket WTW Wall to Wall (See page 5 for details)	SC Single Circuit	UNV (120-277) NA with EMHE Emergency 120 277 347 (Emergency battery requires a Step Down transformer and remote box)	X1 T-Bar 15⁄16″ X1M T-Bar 9⁄16″ X1T 15⁄16″ T-Bar Tegular X2 Dimensional T-Bar Armstrong Interlude® X3 Hard Ceiling (Flange Trim) X6 Slot Grid X7 Mud-Over Flange X9 Finished Extruded Side (Wood, metal pan or other ceiling systems)	ND Non-Dimming DM01 0-10v, 1% Dimming (Standard) LDE5 Lutron 5-Series EcoSystem LED LDE1 Lutron Hi-lume 1% EcoSystem LED (Soft fade on, fade-to-black dimming) ECO 1% 0-10v, EldoLED (Logarithmic dimming std) ECDA 1% DALI, EldoLED (Logarithmic dimming std) SOLO 0.1% 0-10v, EldoLED (Dim-to-dark, Logarithmic dimming std) SODA 0.1% DALI, EldoLED (Dim-to-dark, Logarithmic dimming std) STEP Signify Advance Step Dimming	EMHE† Emergency Battery (900 Delivered lumens, CA Title 20 compliant, Fixtures 4´ or longer) ETS-DR† Iota ETS-DR Emergency Transfer Switch † Non-IC rated with ALL drivers, NA with UNV voltage, Adds 1⅞″ height, see page 4 IDSM Insulation Detector Side Mount (for plenums <6″ where fixtures are non-IC rated) CP Chicago Plenum OMB Overhead Mounting Bracket (X3, X7 and X9 optional installation — 2x per fixture) **SENSORS:** 205 WattStopper PIR **205-ON/OFF** **205-STEP:** Dim to 50% **205-DM:** Dim to 1% ENL Enlighted SU-5E-IOT LUX Phillips DL LVOC Lutron Vive (Occ & RF) LVRF Lutron Vive (RF Only) NXSMP Hubbell (Occ) NLT Acuity N-Light **CORNERS:** C2-60 Lit 60° C2-90 Lit 90° C2-120 Lit 120° C2-135 Lit 135° C3T Lit 90° 3-Way: **T** C3Y Lit 120° 3-Way: **Y** C4T Lit 90° 4-Way: **+** C4X Lit 45°-135° 4-Way: **X** C8I Lit 90° Wall to Ceiling: **INSIDE** C8O Lit 90° Wall to Ceiling: **OUTSIDE** LRT Linear to Recessed Transition



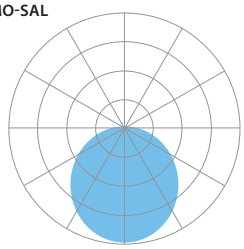
BionicPro3™ | Recessed Linear

PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

DISTRIBUTIONS:

SATIN LENS

Medium Output:
BPRO3-REC-FLSH-LED35-MO-SAL
2566 Delivered Lumens
23 Watts
113 lm/w
3500 CCT
1.24 Spacing Criteria
Test
#104013131LAX-002F

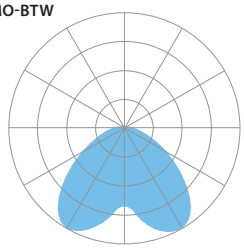

940

Zonal Lumen Summary:
0-90 = 100%

Vertical Angle	0°	25°	45°	65°	90°
0°	940	940	940	940	940
5°	933	934	930	936	938
15°	890	891	890	897	899
25°	808	810	812	823	826
35°	702	704	708	720	724
45°	580	581	585	596	602
55°	448	449	453	460	466
65°	310	311	314	319	325
75°	174	174	177	180	185
85°	45	45	48	50	52
90°	0	0	0	0	0

BATWING

Medium Output:
BPRO3-REC-FLSH-LED35-MO-BTW
2747 Delivered Lumens
23 Watts
121 lm/w
3500 CCT
1.84 Spacing Criteria
Test
#104013131LAX-002F

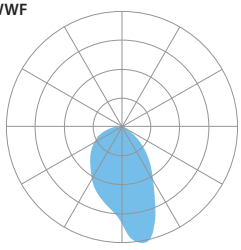

690

Zonal Lumen Summary:
0-90 = 100%

Vertical Angle	0°	25°	45°	65°	90°
0°	690	690	690	690	690
5°	734	727	705	690	684
15°	971	932	819	688	630
25°	1096	1058	910	667	541
35°	1029	1018	903	609	447
45°	796	820	787	512	365
55°	540	566	587	393	295
65°	337	352	371	273	226
75°	178	184	192	162	148
85°	49	50	54	53	53
90°	0	0	0	0	0

FLAT WALL WASH

Standard Output:
BPRO3-FLSH-LED35-LO-4-WWF
1923 Delivered Lumens
15.40 Watts
125 lm/w
3500 CCT
Test
104361023LAX-003B

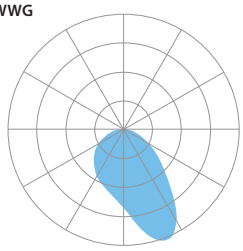

1224

Zonal Lumen Summary:
0-90 = 100%

	Vertical Angle	0°	25°	45°	65°	90°
WALL SIDE	90°	0	0	0	0	0
	85°	20	20	24	26	26
	75°	69	72	88	92	88
	65°	134	141	178	191	174
	55°	227	244	309	363	323
	45°	371	398	490	613	500
	35°	577	612	748	862	636
	25°	890	936	1056	994	732
	15°	1224	1221	1154	977	797
	5°	994	982	934	883	831
	0°	834	834	834	834	1714
ROOM SIDE	5°	742	747	758	788	831
	15°	649	654	666	705	797
	25°	538	551	580	625	732
	35°	422	432	463	525	636
	45°	329	336	353	399	500
	55°	243	245	250	264	323
	65°	169	165	159	155	174
	75°	97	95	87	81	88
	85°	24	26	24	24	26
	90°	0	0	0	0	0
	Vertical Angle	180°	202.5°	225°	247.5°	270°

FOCAL GLOW WALL WASH

Low Output:
BPRO3-FLSH-LED35-LO-4-WWG
1901 Delivered Lumens
15 Watts
126 lm/w
3500 CCT
Test
104464711LAX-007


1059

Zonal Lumen Summary:
0-90 = 100%

	Vertical Angle	0°	25°	45°	65°	90°
WALL SIDE	90°	0	0	0	0	0
	85°	22	22	27	29	30
	75°	75	80	103	104	95
	65°	155	169	226	211	162
	55°	284	312	423	374	249
	45°	494	546	678	555	359
	35°	827	868	885	691	475
	25°	1059	1039	940	767	584
	15°	992	971	893	788	669
	5°	818	815	786	754	715
	0°	720	720	720	720	720
ROOM SIDE	5°	626	635	647	677	715
	15°	523	528	540	582	669
	25°	466	470	474	496	584
	35°	408	409	411	417	475
	45°	351	348	341	335	359
	55°	285	281	263	244	249
	65°	210	203	180	159	162
	75°	121	120	101	90	95
	85°	33	35	30	28	30
	90°	0	0	0	0	0
	Vertical Angle	180°	202.5°	225°	247.5°	270°

BionicPro3™ | Recessed Linear

PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

LUMEN MAINTENANCE

L70 — 200,000+ Hours
L90 — 100,000+ Hours (LO, MO & SO)
L90 — 60,000+ Hours (HO)

LED SYSTEM LED modules and drivers are field replaceable.

PROG (OPTIONAL) Programmable light output. Specify desired lumens or watts per linear foot.

BINNING Standard binning (all Prudential LED boards) includes testing at the chip level and board integration to provide consistent color temperature within a 3-step MacAdams ellipse, with +/- 5% lumen output range and +/- .004 Duv.

LABELS ETL damp labeled and I.B.E.W. manufactured.
IC-rated except with EMHE emergency or Lutron drivers at SO.

ELECTRICAL Must specify LED dimming controls. LED fixtures have constant current driver(s) with less than 20% THD when loaded to a minimum of 60%. Drivers sink a maximum of 6mA per driver. DM01 LED drivers are 0-10V dimmable and are compatible with most 0-10V wall slide dimmers and direct 0-10V analog signal dimmers. Max driver size 1.65˝ w x 1.25˝ h.

CONSTRUCTION

Housing: Extruded aluminum trim and side wall >25% PC recycled, 100% recyclable.

20-gauge steel top housing >20% PC recycled, 100% recyclable.

Lens: Acrylic, 100% recyclable.

Weight: 4 lbs / ft.

MOUNTING Recessed into drywall or t-bar ceilings.

WARRANTY Single-source, 5 year limited warranty covers standard components and construction.

BionicPro3™ | Recessed Linear

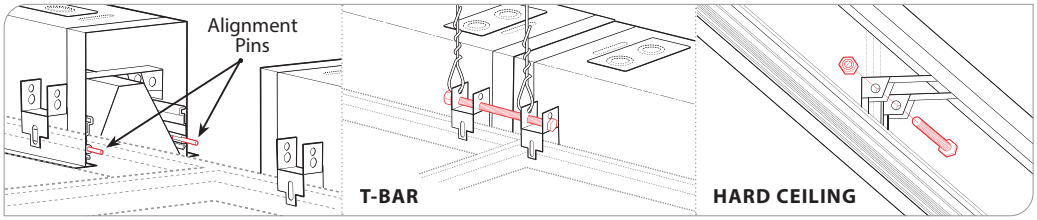
PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

YSW – Seashell White (Matte)
YCH – Champagne (Metallic)
YSL – Silver (Metallic)
YPE – Pewter (Matte)
YRG – Rain Grey (Gloss)
YSTM – Storm Grey (Matte)
YBK – Black (Matte)
YBB – Black (Semi Gloss)
YSKM – Sky (Matte)
YMB – Military Blue (Matte)
YIB – Interstate Blue (Matte)
YSAM – Sapphire (Matte)
YFGM – Forest Green (Matte)
YBR – Bronze (Matte)
YBY – Boysenberry (Matte)
YSRM – Sunset Red (Matte)
YOR – Orange (Matte)
YDAM – Daffodil (Matte)

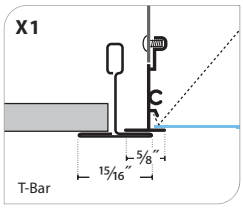
Choose from one of our Premium Colors with no set-up fee.

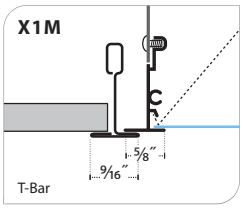
For paint chip samples, please email:
info@prulite.com

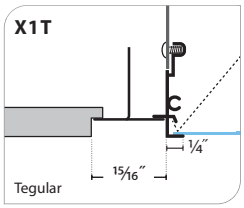
ADJOINING DETAILS

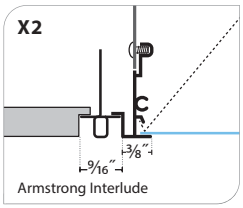


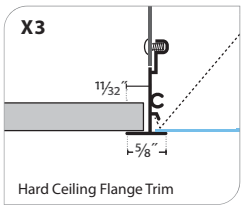
CEILING SYSTEMS

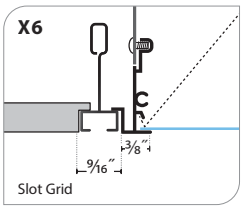


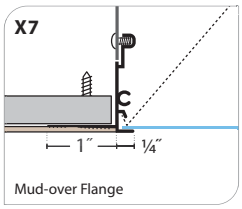


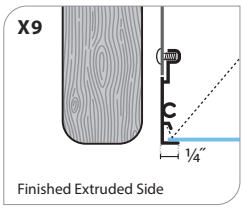






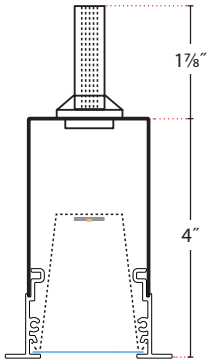




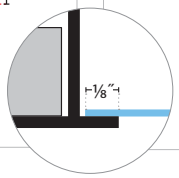


INSULATION DETECTOR
FOR NON-IC RATED FIXTURES

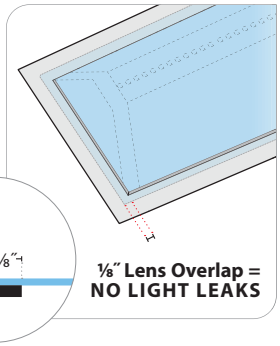
FOR **ALL** EMERGENCY



Request **Insulation Detector Side Mount (IDSM)** if plenum less than 6″

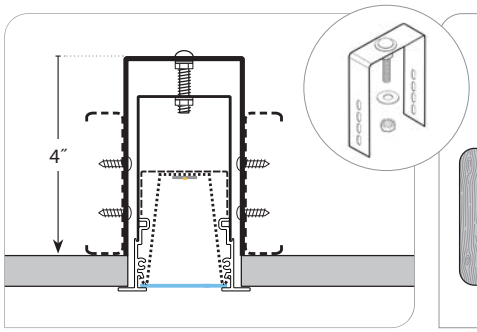


CAST ALUMINUM END CAPS

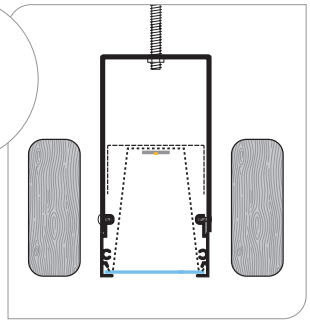


1/8″ Lens Overlap = NO LIGHT LEAKS

OVERHEAD MOUNTING BRACKETS (OMB)



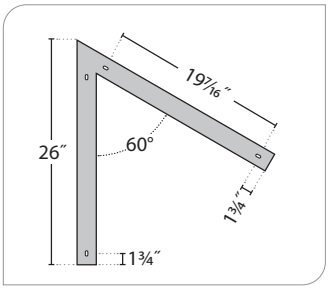
X9 MOUNTING



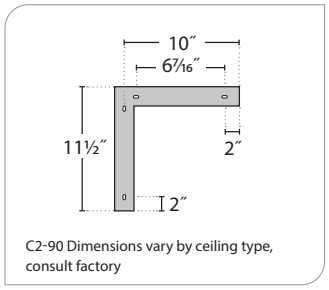
BionicPro3™ | Recessed Linear

Corners

C2-60:

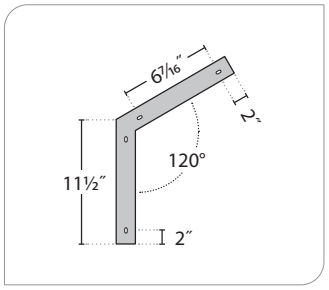


C2-90:

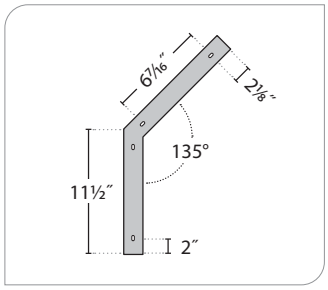


C2-90 Dimensions vary by ceiling type, consult factory

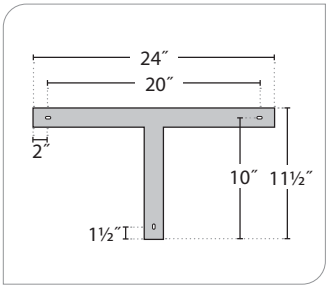
C2-120:



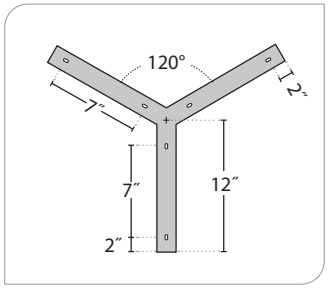
C2-135:



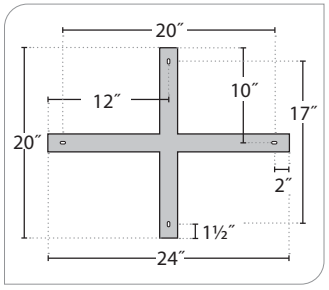
C3T:



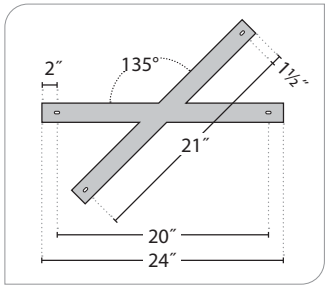
C3Y:



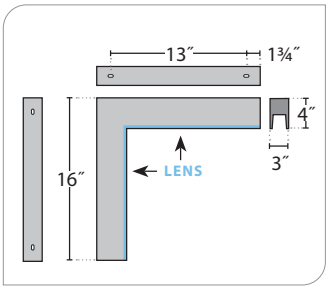
C4T:



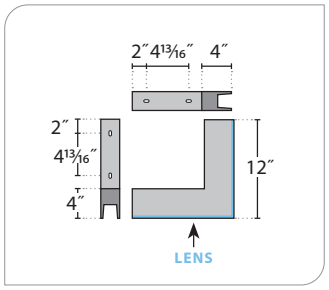
C4X:



C8I:

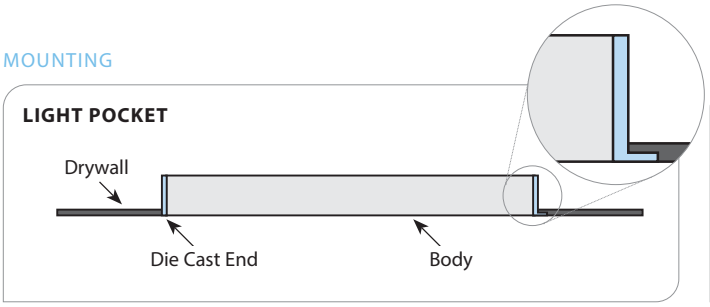


C8O:

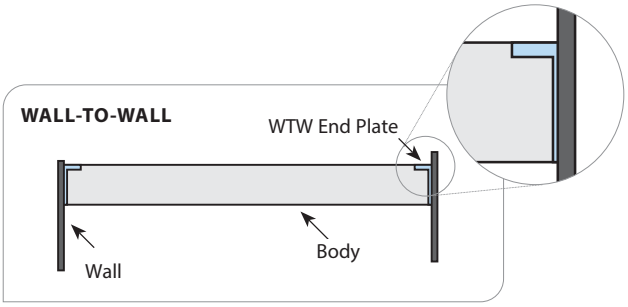


MOUNTING

LIGHT POCKET



WALL-TO-WALL

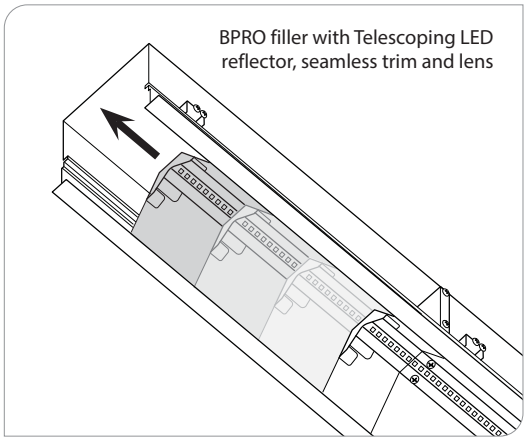


SENSOR PLATE

BionicPro3™ | Recessed Linear

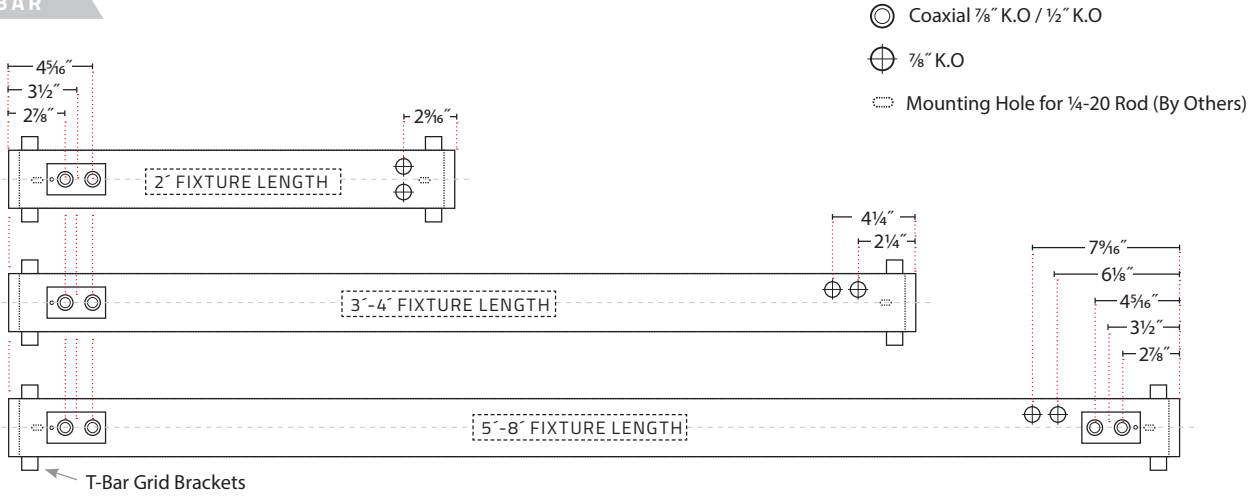
PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

TELESCOPING FILLER

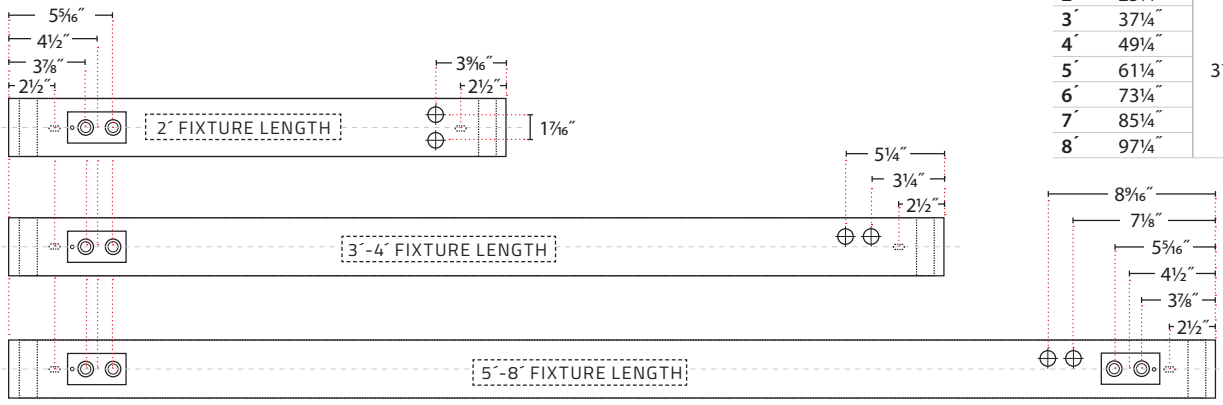


MOUNTING LOCATIONS

T-BAR



HARD CEILING



ROUGH-IN DIMENSIONS:

LENGTH (NOMINAL + 1¼″)		WIDTH
2′	25¼″	3¼″
3′	37¼″	
4′	49¼″	
5′	61¼″	
6′	73¼″	
7′	85¼″	
8′	97¼″	

BionicPro3™ | Recessed Linear

PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

BionicPro3 Batwing Vs. Top 3" Competitor (Satin Lens)

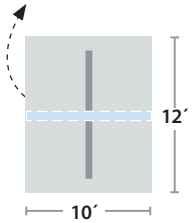
SINGLE OFFICE

BionicPro3

36 43 46 44 39 39 44 47 43 37

Top Competitor

22 28 36 44 52 52 44 36 28 22



	BionicPro3	Competitor
LPW	118	111
SPACING CRITERIA	**1.8**	**1.3**
MAX/MIN	1.8	2.6
W/SQ. FT.	.38	.43
FC AVERAGE	26	30

9´ ceiling .85 llf BionicPro3— 5.7w/ft Competitor—6.5w/ft Footcandles at 30˝ working plane

OPEN OFFICE

BionicPro3

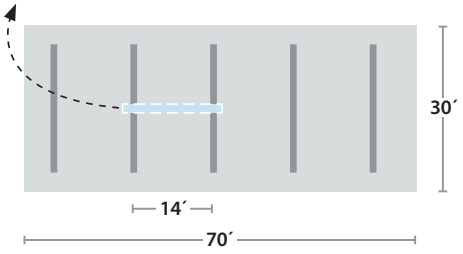
39 43 47 47 44 39 36 35 36 40 44 47 47 43 39

14´

Top Competitor

74 68 58 47 38 32 28 27 28 32 38 47 58 68 74

14´



	BionicPro3	Competitor
LPW	118	111
SPACING CRITERIA	**1.85**	**1.3**
MAX/MIN	2.2	4.4
MAX/MIN BETWEEN ROWS	1.3	2.8
W/SQ. FT.	.37	.41
FC AVERAGE	35	37

9´ ceiling .85 llf BionicPro3— 5.7w/ft Competitor—6.5w/ft Footcandles at 30˝ working plane

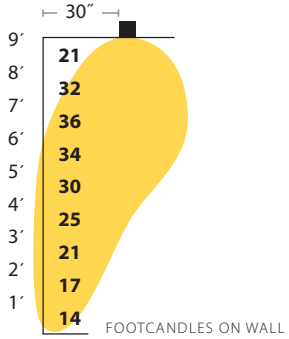
BionicPro3™ | Recessed Linear

PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

Smooth, flat wall washing (WWF)

Our patent-pending Trubeam™ optics redirect light in an ideal flat wall wash for smooth, even illumantion.

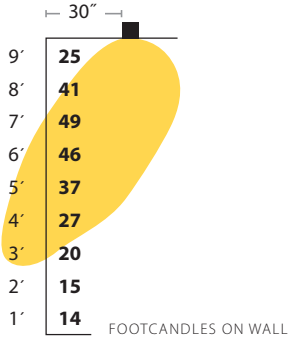
	Watts/ Ft.	Ceiling Height	Average Illuminance	Max/Min	Max/Min Ratio
Medium Output - 625 lumens/ft	6	9'	18	33/12	2.7



Focal glow wall washing (WWG)

Pique interest by giving works of art 'pop' — more light at eye level

	Watts/ Ft.	Ceiling Height	Average Illuminance	Max/Min	Max/Min Ratio
Medium Output - 625 lumens/ft	6	9'	18	33/12	2.7



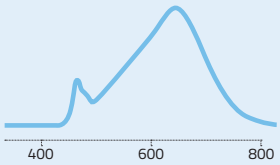
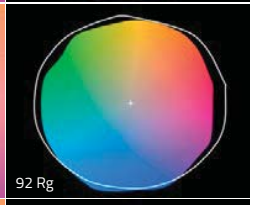
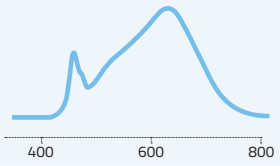
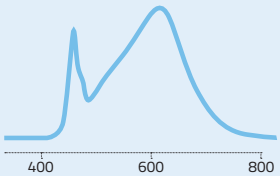
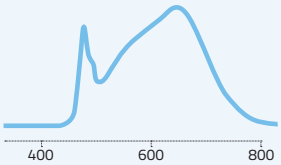
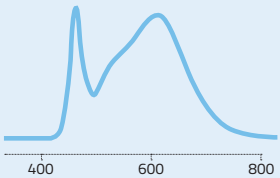
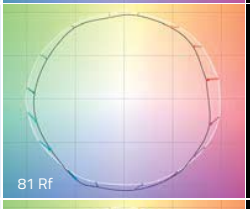
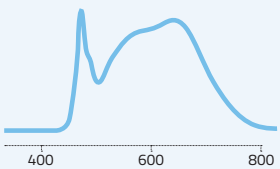
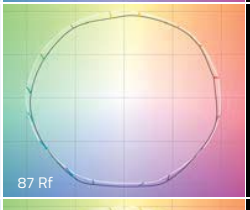
BionicPro to Bionic/P23-43 Optics Crossing Matrix

	Satin	Batwing	Flat Wall Wash	Focal Glow Wall Wash
BionicPro	SAL	BTW	WWF	WWG
Bio2 / P23 = BionicPro3	SAL	MBW	MWW/D1W	—
Bionic4 / P43 = BionicPro4	SAL	ABW/D1X	—	AWL/D1W

BionicPro3™ | Recessed Linear

PRUDENTIAL LTG.
PRULITE.COM 213.746.0360

LM79 & TM30 DATA:

	MEASURED CCT	MEASURED LUMENS	CRI	R9	DuV	SPD	TM30 — COLOR VECTOR	TM30 — COLOR DISTORTION
LED27	2680	80%	93	58	0.001			
LED3	3042	95%	82	6	0.001			
LED3-90	3016	85%	93	61	0.000			
LED35	3482	100%	82	3	0.002			
LED35-90	3417	85%	93	67	0.000			
LED4	3952	102%	82	4	0.003			
LED4-90	3882	85%	92	67	0.003			
LED5-90	4889	85%	94	84	0.002