VII. B.

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Planning Commission Staff Report

Project Type: Site Development Section Plan

Meeting Date: January 23, 2017

From: Justin Wyse
Senior Planner

Location: Chesterfield Parkway W and Olive Blvd

Applicant: CRG Real Estate Solutions

Description: **Chesterfield Ridge Center, Parcel VII (875 Chesterfield Parkway W) SDSP**: A Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design for a 31.8 acre tract of land zoned "C-8" Planned Commercial District located on the northwest portion of the intersection of Chesterfield Parkway W and Olive Blvd.

PROPOSAL SUMMARY

CRG Real Estate Solutions has submitted a Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design for a 262,000 square foot research and office development at the intersection of Chesterfield Parkway W and Olive Blvd. The exterior building materials will be primarily comprised of curtain wall with high performance glass with a custom ceramic frit, and a base of natural gray stone veneer. Rooftop mechanical equipment will be screened with pre-finished metal panels, as shown on the elevations.

HISTORY OF SUBJECT SITE

In 1979, Chesterfield Village Inc. submitted five petitions covering a total of 197.8 acres in the northwest quadrant. Two general areas of "C-8" zoning were proposed, one along the north side of Highway 40 (including the subject site) and the other surrounding the existing Hilltown Center.

The 43.3 acres along Highway 40 would include 1,000,000 square feet of floor area being primarily offices, a hotel, theater, professional laboratories and schools.

In 1997, the City of Chesterfield approved two additional amendments to this "C8" Planned Commercial District to modify the permitted land uses and allow additional flexibility in the density requirements and the City of Chesterfield approved a Commercial-Industrial Design Development (CIDD) procedure in 2012 to permit additional shifting of density within the development. The City of Chesterfield approved Ordinance 2723 which modified building groups, building heights, and density requirements for the development. Finally, the City of Chesterfield amended the ordinance again to permit consolidation of building groups on the subject site and modify density allotments.

Figure 1: Chesterfield Ridge Center Boundary and Parcels

Figure 2: Subject Site

LAND USE AND ZONING OF SURROUNDING PROPERTIES

Direction	Land Use and Zoning
North	Monsanto campus – zoned "UC" Urban Core
South	Restaurant, office, post office – zoned "PC" Planned Commercial District
East	Hotel, Hilltown Center – zoned "C-8" Planned Commercial District
West	Chesterfield Village Townhomes – zoned "R-4" and "R-6A" with a PEU

COMPREHENSIVE PLAN ANALYSIS

The City of Chesterfield Comprehensive Land Use Map delineates the subject site within the "Urban Core" land use designation. The Comprehensive Plan states the following about the Urban Core:

> *The Urban Core was defined as the area known as Chesterfield Village, centered at the intersection of I-64/US 40 and Clarkson Road/Olive Boulevard and primarily served by the Chesterfield Parkway. Land uses for the Urban Core include a mixture of high density residential, retail, and office uses containing the highest density development in Chesterfield.*

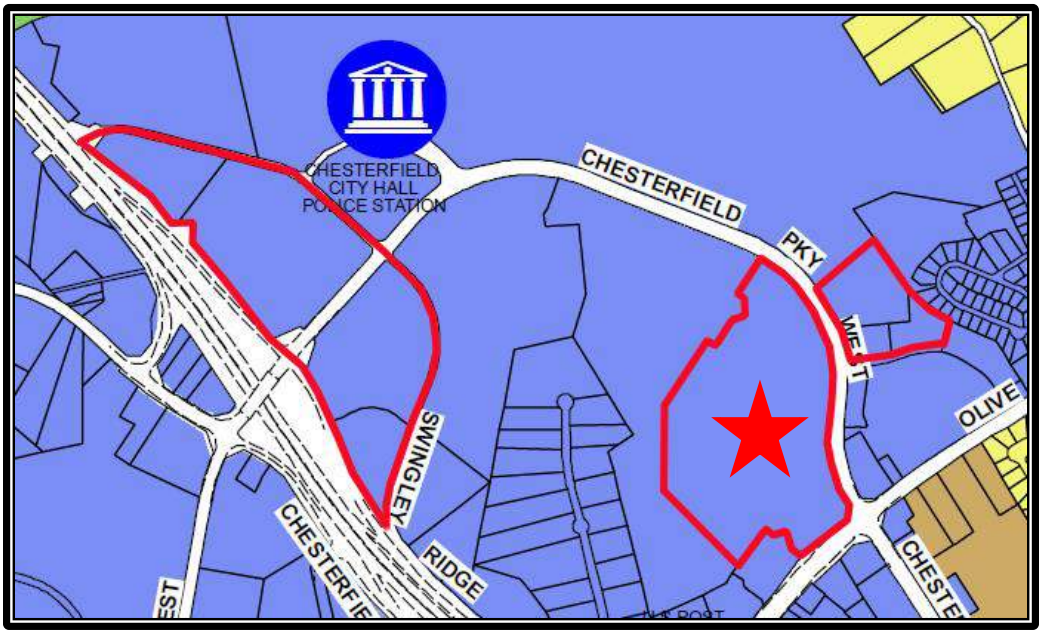


Figure 3: Future Land Use Plan

The following information from the Comprehensive Plan relates to the proposed change in zoning. Information in italics is taken from the Plan, with Staff provided narrative following in non-italicized font.

Plan Policy 1.8 Urban Core – The Urban Core should be developed to contain the highest density of mixed-use development in Chesterfield. It should serve as the physical and visual focus for the City and include both residential and commercial developments with parks, municipal services, and preservation of historic structures and areas, with cultural, entertainment and pedestrian amenities for its residents.

The submitted Site Development Section Plan includes information on the first phase of development for the subject site. The proposal creates a campus style development while also minimizing activities on the site in areas directly adjacent to residential properties. This results in the campus being oriented toward the intersection of Chesterfield Parkway and Olive Blvd.

5.1 Research and Development Business Parks and Corporate Campuses – Opportunities for research and development business parks and corporate campuses should be identified in the Urban Core as well as Chesterfield Valley. Business parks should provide a planned office/research/technology environment with common amenities, infrastructure, and management. Corporate campuses should provide a protected environment for the orderly growth and development of a business or industry in a park-like setting.

The proposal shows consolidation of Parcel VII into a single campus design, consistent with the governing ordinance for the site. A Site Development Concept Plan has been included with the proposal which shows for expansion of the site (please note, any future expansion would require submission of an Amended Site Development Section Plan).

STAFF ANALYSIS

Zoning

The subject site is currently zoned "C-8" Planned Commercial District under the terms and conditions of City of Chesterfield Ordinance Number 2916. This development, as shown on page 2, covers 75 acres of land in the northwest quadrant of I-64 / MO 340 (Olive Boulevard and Clarkson Road). The Planned District Ordinance allows for a maximum of 460,000 square feet of gross floor area to be constructed on Parcel VII if developed as a single research / laboratory and office use. The proposal includes development of an initial phase that would provide 262,000 square feet of development in a single building.

The submittal was reviewed against the requirements of City of Chesterfield Ordinance 2916 and all applicable requirements of the Unified Development Code and the proposed development adheres to the applicable requirements.

Traffic, Access, and Circulation

Other discussion at the Public Hearing generally focused on the impact of the change on the roadway system. Staff presented information at that time relaying that the proposed modification is not anticipated to have a greater impact on traffic over what is currently entitled on the site as the proposed use of the property for medical and scientific laboratory has a lower traffic generation rate than comparable office developments.

Access to the development is proposed to utilize the existing signalized intersection on Chesterfield Parkway and the existing right-in / right-out access on Olive Blvd. Each entrance is proposed to be controlled access with a guardhouse. Information has been provided to the City of Chesterfield, St. Louis County Department of Transportation, and Missouri Department of Transportation. The final location and design of the guardhouse has gone through a technical review of all agencies and no negative impacts to the adjacent roadway system are anticipated.

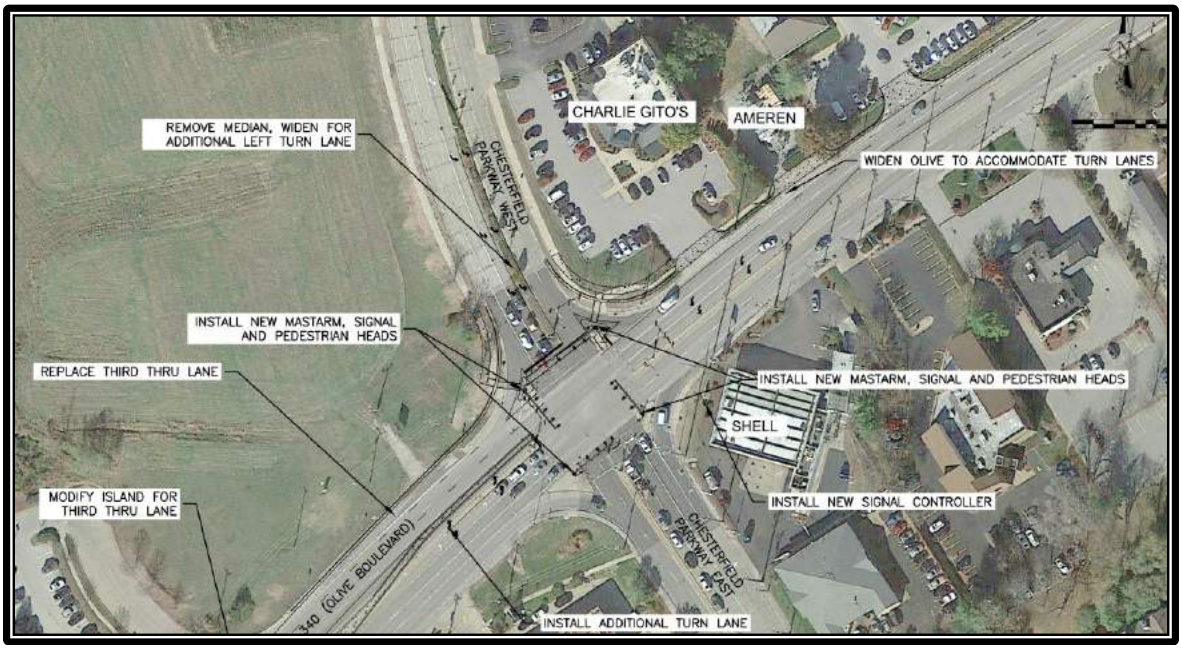
Chesterfield Parkway / Olive Blvd. Improvements

The Missouri Department of Transportation (MoDOT) is currently working on intersection improvements at the intersection of Chesterfield Parkway and Olive Blvd. MoDOT's plan is that they are scheduling the project for the Federal Fiscal year 2018. This would likely mean that the project would be bid out in September of 2017. The project will include the following

improvements (assume for these descriptions that Olive / Clarkson runs South-North, from the Post Office toward Hilltown, and that the Parkway runs East-West, from Gittos to Walgreens):

- An additional (third) lane will be added on Olive\Clarkson southbound between the Parkway and the Post Office.
- The aforementioned eastbound Chesterfield Parkway, left turn onto northbound Olive will be made a dual left turn.
- The northbound Olive\Clarkson left turn onto westbound Chesterfield Parkway will also be made dual lefts.
- The southbound Olive\Clarkson left turn onto eastbound Chesterfield Parkway will also be made a dual left.

With the project, three of the four approaches will be converted to dual lefts. The only approach that will remain a single left turn is the westbound approach from Chesterfield Parkway.



Chesterfield Parkway Improvements

The preliminary plans for Chesterfield Parkway West have been submitted to MoDOT by St. Louis County. The St. Louis County design team anticipates submitting the PSE (plans, schedule, and estimate) to MoDOT in the near future and letting the project mid-2017. This project is for the section of Chesterfield Parkway from I-64 to Olive Blvd. The scope involves:

- Patching concrete pavement, repairing joints, some full depth slab replacement.
- Overlaying the existing concrete pavement with 1" of an asphalt wedge course and 1 ½" of a Superpave Asphalt surface course.
- Damaged and deteriorated paved driveway approaches will be replaced, as needed.
- Damaged curbs will be replaced to restore proper drainage.
- Damaged sections of sidewalk will be replaced.
- New curb ramps will be added, where needed and damaged, existing curb ramps will be replaced. Curb ramps that are non-compliant with the Americans with Disabilities Act (ADA) will be removed and replaced where practicable and where there is sufficient right-of-way.
- Truncated domes will be installed in accordance with St. Louis County standards.
- Bus pads will be constructed at existing bus stops, where practicable.
- Pavement widening will be added northbound within existing right-of-way at Swingley Ridge Road to provide for dual left turn lanes.

Open Space

Phase I of the development will have 69.1% of the site devoid of any structures or paving. Future construction of Phase II of the development will also be required to retain minimum open space requirements of Ordinance 2916 on the site. Notably, the proposal maintains existing conditions and vegetation in areas that would maintain the buffer between the subject site and the adjacent multi-family residential development.

Landscaping & Screening

Proposed landscaping of the subject site includes numerous deciduous, evergreen and ornamental trees in addition to shrubs, flowers, and decorative grasses. Thirty foot landscape buffers are provided along both Olive Blvd. and Chesterfield Parkway. After completion of Phase 1 of the development, over 80% of the canopy will have been preserved; far exceeding the minimum 30% preservation requirement of the UDC.

The site includes a screen wall along the northern side of the site to screen a loading / trash / cooling tower on the rear. This area, as depicted in the sight line exhibits, is screened from the residential properties by retaining existing vegetation and grade changes. Rooftop mechanical equipment will be screened with a metal panel system.

Lighting

The proposed lighting for the development includes numerous utilitarian and architectural lighting fixtures.

The proposal includes several fixtures throughout the site to provide lighting in accordance with the UDC as well as architectural design for the building and site. The photometric plan verifies the light levels comply with the requirements of Article 4 of the UDC pertaining to light levels. Light cut sheets are provided for each proposed fixture.

The proposal includes addition of pole top luminaires for pedestrian lighting. These fixtures were specifically presented to the Architectural Review Board for their input before presentation to the Planning Commission. The Board noted they strongly believed the lights provided architectural benefit to the project.

Figure 4: Pedestrian Light Fixture

Architectural Elevations

The request is for a 3-story office building totaling 262,000 square feet. The proposed materials include fritted glass with a ceramic custom frit and a stone veneer on the base of the building.

The project was reviewed by the Architectural Review Board (ARB) on December 08, 2016. A motion was passed to forward the project to Planning Commission with a recommendation for approval by a vote of 5-0 with several recommendations. The recommendations and their resolution are provided below.

Provide a sight-line study to validate whether four-sided screening is required near the on grade mechanical equipment loading dock area to the northern end of the site near the neighboring properties – An exhibit has been provided to show the adequacy of the screen wall and the preserved vegetation in screening the area. See the included sight line exhibit.

Revise the north and west architectural elevations so that the materials are consistent to what was presented – The labeling on the elevations has been corrected.

Update the architectural rendering to match the Site Development Section Plan with the amount of landscaping and walkways – The rendering has been revised to accurately portray the landscaping in front of the building.

Provide details of the material for the retaining walls and railing around the perimeter of the site and clearly label the locations – A separate exhibit has been provided detailing the location and proposed retaining wall types.

DEPARTMENT INPUT

Staff has reviewed the Site Development Section Plan, Landscape Plan, Lighting Plan, Architect's Statement of Design and Architectural Elevations and has found the application to be in conformance with the site specific ordinance and all other applicable UDC requirements. Staff recommends approval of the proposal.

MOTION

The following options are provided to the Planning Commission for consideration relative to this application:

1) "I move to approve (or deny) the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design for Chesterfield Ridge Center, Parcel VIII (875 Chesterfield Parkway W).

2) "I move to approve the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design for Chesterfield Ridge Center, Parcel VIII (875 Chesterfield Parkway W) with the following conditions…" (Conditions may be added, eliminated, altered or modified)

cc: Aimee Nassif, Planning and Development Services Director

Attachments:
Site Development Section Plan
Landscape Plan
Tree Preservation Plan
Lighting Plan
Lighting Cut Sheets
Architect's Statement of Design
Architectural Elevations
Sight Line Exhibit
Retaining Wall Exhibit

Issue Date: 2016/11/22 - ARCHITECTURAL REVIEW BOARD RESUBMITTAL

Revisions:

PROJECT FIT - SITE AND LANDSCAPE
LIGHTING FIXTURE SCHEDULE
(CASH ALLOWANCE IS 'DISTRIBUTOR NET EXCLUSIVE OF ALL MARKUPS')

TYPE	LUMINAIRE SPECIFICATION	LUMINAIRE DESCRIPTION	LUMINAIRE CASH ALLOWANCE	LAMP CODE	MAX WATTS/ UNIT	VOLTS	NOTES	REV.
PA	BEGA 77176/K3/BLK+1105HR/BLK	Pedestrian scaled pathway luminaire with asymmetric distribution.	$2,000	Integral 3000K LED	75	Per Engineer		
PB	Gardco P21-A1-1-3-WW-90LA-350A-UNV-BLP + 301-6511-20-BLCK or Equal from Lithonia D Series	Single-head, parking and roadway luminaire with pole. Type III distribution.	$1,950	Integral 3000K LED	100	Per Engineer		
PC	Gardco P21-A1-1-4-WW-90LA-350A-UNV-BLP + 301-6511-20-BLCK or Equal from Lithonia D Series	Single-head, parking and roadway luminaire with pole. Type IV distribution.	$1,950	Integral 3000K LED	100	Per Engineer		
PD	Gardco (2)-P21-A1-1-3-WW-90LA-350A-UNV-BLP + 301-6511-20-BLCK or Equal from Lithonia D Series	Dual-head, parking and roadway luminaire with pole. Type III distribution.	$3,000	Integral 3000K LED	200	Per Engineer		

Issue Date: 2016/11/22 - ARCHITECTURAL REVIEW BOARD RESUBMITTAL

Revisions:

PROJECT FIT - SITE AND LANDSCAPE
LIGHTING FIXTURE SCHEDULE
(CASH ALLOWANCE IS 'DISTRIBUTOR NET EXCLUSIVE OF ALL MARKUPS')

TYPE	LUMINAIRE SPECIFICATION	LUMINAIRE DESCRIPTION	LUMINAIRE CASH ALLOWANCE	LAMP CODE	MAX WATTS/ UNIT	VOLTS	NOTES	REV.
PF	Gardco P21-A1-1-5M-WW-110LA-350A-UNV-BLP + 301-6511-20-BLCK or Equal from Lithonia D Series	Single-head, parking and roadway luminaire with pole. Type IV distribution.	$1,950	Integral 3000K LED	100	Per Engineer		
PG	BEGA 77175/K3/BLK+1105HR/BLK	Pedestrian scaled pathway luminaire with symmetric distribution.	$2,000	Integral 3000K LED	40	Per Engineer		
SA	Gardco 106L-16L-700-WW-G1-4-UNV-xx(F)	Wall mounted, LED area light for egress points	$490	Integral 3000K LED	75	Per Engineer		
SB	BEGA 99856/99615/99626/BLK	Pedestrian bollard with full cut-off optics	$1,550	Integral 3000K LED	30	Per Engineer		
SC	NOT USED AT THIS TIME							
SD	Color Kinetics 523-000059-09/120-000080-05/120-000103-10	Small profile accent floodlight.	$375	Integral 3000K LED	15	Per Engineer		
SF	NOT USED AT THIS TIME							

Issue Date: 2016/11/22 - ARCHITECTURAL REVIEW BOARD RESUBMITTAL

Revisions:

PROJECT FIT - SITE AND LANDSCAPE
LIGHTING FIXTURE SCHEDULE
(CASH ALLOWANCE IS 'DISTRIBUTOR NET EXCLUSIVE OF ALL MARKUPS')

TYPE	LUMINAIRE SPECIFICATION	LUMINAIRE DESCRIPTION	LUMINAIRE CASH ALLOWANCE	LAMP CODE	MAX WATTS/ UNIT	VOLTS	NOTES	REV.
SG	Gotham Lighting EVO-LW-30/35-6AR-LSS-MVOLT-EZ1	Exterior rated, soffit recess mounted asymmetric wallwash downlight	$425	Integral 3000K LED	30	120V		
SH	NOT USED AT THIS TIME							

RANDY BURKETT LIGHTING DESIGN

TYPE PA

Pole top luminaires with asymmetric wide spread light distribution

Housing/fitter: Die-cast and extruded aluminum construction. The fixture slip fits a 3“ O.D. pole top or tenon and is secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Clear acrylic diffuser and reflector made of pure anodized aluminum held in place by die-cast aluminum frame and stainless steel rods. Fully gasketed for weather tight operation using a molded silicone rubber gasket.

Electrical: 44.2W LED luminaire, 46 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

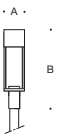
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 11 lbs.

Luminaire Lumens: 3230

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



	Lamp	A	B
77 176	44.2W LED	6 5/8	25 3/4

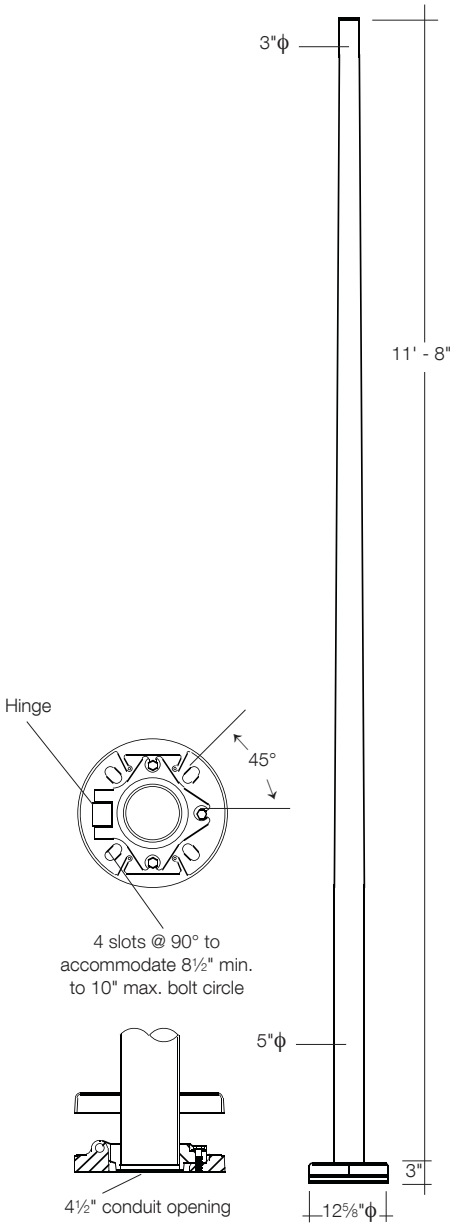
BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

RANDY BURKETT LIGHTING DESIGN

TYPE PA

Type:
Project:
Options:
Modified:
Luminaire:
Fixture EPA:
Optional Tenon: ❑ 2⅜"ϕ x 3½" H
GCO: ❑
GFI: ❑

Approval:



1108HR 3" - 5" Tapered round hinged pole

Shaft: Extruded from all new seamless 6063 aluminum alloy tubing, heat treated to a T-6 condition.

Anchor base: Round cast aluminum A356 alloy, heat treated to a T-6 condition. Anchor base and shaft continuously welded at the outside top and inside bottom of the anchor base casting. Pole base to be round hinged two piece casting. Hinge Pole shaft to be welded to upper base casting which is secured to lower base casting by three (3) stainless steel bolts. Bolts to be fastened to cast-in stainless threaded inserts in lower casting. Cast round two piece base cover supplied with pole.

Anchor bolts: Four (4) ¾" x 17" galvanized steel anchor bolts supplied with double nuts and flat washers. Maximum bolt projection 3½". For luminaires requiring threaded inserts and pole cap -specify: 1D (single); 2D (2@ 180°); 3D (3 @ 120°).

GCO or GFI: Standard GCO/GFI location is opposite the hinge. Height above base for ballast in luminaires is 18". For single luminaires with a pole base mounted (PBM) ballast the minimum height is 24" and 42" minimum for double PBM luminaires.

Weight: 50.0 lbs.

Disclaimer

BEGA-US warrants the specific anchor bolts and pole combination according to the product number(s) and description(s) indicated on this submittal sheet. Structural changes to the pole requested by the customer, including changes to pole length, may affect the compatibility of the anchor bolts and corresponding poles. BEGA-US is not responsible for the incompatibility of the anchor bolts and poles resulting from such structural changes without review by the BEGA-US engineering department. This includes, but is not limited to, any labor charges, charges for replacement materials and shipping.

Pole wind load rating:

MPH:	70	80	90	100	120
EPA:	15.5	11.5	8.7	6.8	4.4

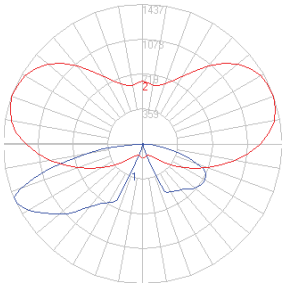
Note: Data above assumes grade level installation and a maximum luminaire weight of 50 lbs.

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 [P] 805·684·0533 [F] 805·684·6682

RANDY
BURKETT
LIGHTING
DESIGN

TYPE PA

BEGA



Photometric Filename: 77176.IES

TEST: NA
TEST LAB: BEGA
DATE: 03/11/2015
LUMINAIRE: 77 176
LAMP: 31W LED

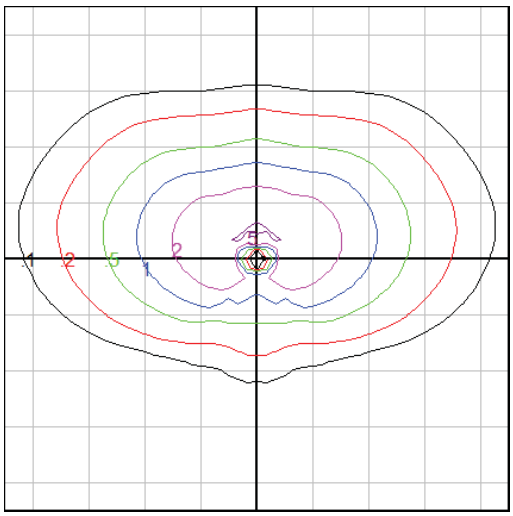
All results in accordance with IESNA LM-63-95

Characteristics

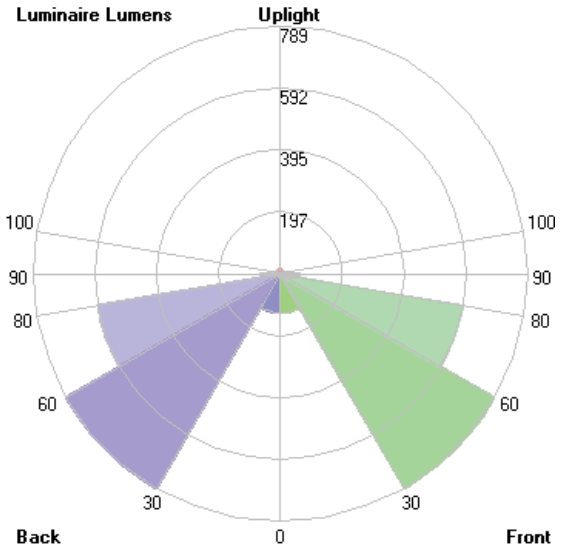
IES Classification	Type I
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3148
Downward Total Efficiency	N.A.
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	36
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Max. Cd.	1437.3 (160H, 65V)
Max. Cd. (<90 Vert.)	1437.3 (160H, 65V)
Max. Cd. (At 90 Deg. Vert.)	2.3 (0.1%Lum)
Max. Cd. (80 to <90 Deg. Vert.)	633.5 (20.1%Lum)
Cutoff Classification (deprecated)	N.A. (absolute)

Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	124.8	N.A.	4.0
FM (30-60)	789.1	N.A.	25.1
FH (60-80)	590.9	N.A.	18.8
FVH(80-90)	62.5	N.A.	2.0
BL (0-30)	124.8	N.A.	4.0
BM (30-60)	789.1	N.A.	25.1
BH (60-80)	590.9	N.A.	18.8
BVH(80-90)	62.5	N.A.	2.0
UL (90-100)	0.8	N.A.	0.0
UH (100-180)	12.9	N.A.	0.4
Total	3148.3	N.A.	100.0
BUG Rating	**B2-U2-G2**		



Mounting Height = 10 ft. Grid Spacing = 10 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

PHILIPS

GARDCO

Site & Area

PureForm

21" housing

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco PureForm luminaires combine LED performance excellence and advanced LED thermal management technology with a distinct purity of style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. PureForm is defined by its high performance, sleek low profile design and rugged construction.

Ordering guide

example: P21-APD-A1-1-5M-130LA-NW-120-NP-PCB

Prefix	Controls	Arm	Mounting	Optical System[8]	Wattage	Color Temp	Voltage	Finish	Options
P21– PureForm 21" fixture	**—** Standard luminaire **DIM** 0-10V Dimming **APD**[1] Automatic Profile Dimming **APD-MRO**[2] APD with Motion Response Override pole mounted sensor **APD-MRI**[3] APD with Motion Response Override luminaire mounted sensor **MRI**[3] Motion Response at 50% low, luminaire mount sensor **MR50**[2] Motion Response at 50% low, pole mounted sensor **Wireless Controls** (Remote wireless controller available. See p.2 for details) **LLC2**[1,4,5] #2 lens for 8' mounting heights **LLC3**[1,4,5] #3 lens for 9-20' mounting heights **LLC4**[1,4,5] #4 lens for 21-40' mounting heights	**A1**[6] Standard 9" Arm **A2**[6] Short 5" Arm **A3**[6] Decorative Arm **MA** Mast Arm Fitter (requires 2 3/8" O.D. Mast Arm)	**1** Standard **2** 2@180 **2@90** 2@90 **3** 3@90 **3@120** 3@120 **4** 4@90 **W** Wall Mount **WS**[7] Wall mount including surface conduit rear entry permitted	**Standard Optic Position** **2** Type 2 **3** Type 3 **4** Type 4 **5M** Type 5 Medium **5W** Type 5 Wide **BLC** Backlight Ctrl **2BL** Type 2 with backlight (less shield) **LCL**[9] LEED Corner Cutoff Optics **LCR**[9] LEED Corner Cutoff Optics **Optics Rotated Left (90°)**[10] **2-90** Type 2 **3-90** Type 3 **4-90** Type 4 **BLC-90** Backlight Ctrl **2BL-90** Type 2 with backlight (less shield) **Optic Rotated Right (270°)**[10] **2-270** Type 2 **3-270** Type 3 **4-270** Type 4 **BLC-270** Backlight Ctrl **2BL-270** Type 2 with backlight (less shield)	**350mA** **55LA** **70LA** **90LA** **530mA** **80LA** **105LA** **130LA** **640mA** **165LA**[11] **700mA** **110LA** **140LA** **180LA** **800mA** **200LA**[11]	**CW** Cool White 5,700K 70CRI (nominal) **NW** Neutral White 4,000K 70CRI (nominal) **WW** Warm White 3,000K 80CRI (nominal)	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V 50hz/60hz **HVU** 347-480V 50hz/60hz	**BRP** Bronze Paint **BLP** Black Paint **WP** White Paint **NP** Natural Paint **OC** Optional Color Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **SC** Special color Specify, must supply color chip. Requires factory quote.	**TL** Tool-Less entry and driver removal hardware **TB** Terminal Block **F**[12] Fusing **LF** In-Line/In-Pole Fusing **PC**[4,5,13] Receptacle with Photocell (Includes PCR5) **PCB**[4,5,13] Photocell Button **PCR5**[4,5,14,15] Photocell Receptacle only with 2 dimming connections **PCR7**[4,5,15,16] Photocell Receptacle only with 2 dimming and 2 auxiliary connections **EHHS** External Houseside Shield **PTF2** Pole Top Fitter for 2 3/8"- 3" Tenon **PTF3** Pole Top Fitter for 3"- 3 1/2" Tenon **PTF4** Pole Top Fitter for 3 1/2"- 4" Tenon **SPA1-2** Square Pole Adapter for use with A1 or A2 Arms **SPA3**[6] Square Pole Adapter for use with A3 Arms **DL**[17] Diffusing Lens **CLR**[17] Clear Glass Lens **POLY**[17] Polycarbonate Lens (1 year warranty on lens) **BD** Bird Deterrant Spike Kit – consist of 25 injection molded plastic bird deterrent spikes (field installed only).

1. Available 120–277V only (UNV, 120, 208, 240 & 277).
2. Available 120V or 277V only. MR50 and APD-MRO require one motion sensor per pole, ordered separately. See page 2 for Accessories.
3. Available 120V or 277V only. Wattages 180LA and 200LA require outboarded sensor enclosure mounted to the arm of the luminaire (A1 arm only).
4. Not available with A3 Arm Style.
5. LLC2/LLC3/LLC4 wireless controls not configurable with PC/PCB/PCR5/PCR7 Options. See pages 6-7 for more info.
6. Arm Styles mount to a round pole with no adapter. If mounting to a square pole, specify Square Pole Adapter option: SPA1-2 for A1/A2 arms, or SPA3 for A3 arms.
7. Available with A1 or A2 Arms only. Not available in P21-MR50, or P21-APD-MRO.
8. Luminaire door frame and optic assembly provided standard without glass lens. Specify CLR option for clear glass lens.
9. Available with 130LA or 200LA only.
10. See page 8–9 for information on optical rotation prior to ordering.
11. 200LA and 165LA not available in 347V or 480V.
12. Available with A1 arm or with MA mounting only. Provide specific input voltage.
13. Not configurable with 480V. Voltage must be specified.
14. Works with 3-pin or 5-pin NEMA photocell/dimming device.
15. If ordered with DIM, APD, MRI, MR50, APD-MRI, APD-MRO, dimming will not be connected to NEMA receptacle.
16. Works with 3-pin or 5-pin NEMA photocell/dimming device and auxiliary connections are not connected (for future use only).
17. Option reduces performance.

P21 PureForm LED area luminaire

21" housing

PureForm Accessories (order separately)

MS-A-120V

120V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

MS-A-277V

277V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

Note: Motion Sensors are ordered separately, with one (1) motion sensor required per pole location for MR50 or APD-MRO luminaires. See Luminaire Configuration Information on page 5 for more details. Area motion sensor color is Arctic White. MRI and APD-MRI luminaires include an integral motion sensor.

PureForm Wireless Controls Accessories (for wall or pole mount)[1,2,3,4]

LLCR2-(F)

Standalone wall or pole wireless controller with #2 Lens.

LLCR3-(F)

Standalone wall or pole wireless controller with #3 Lens.

LLCR4-(F)

Standalone wall or pole wireless controller with #4 Lens.

1. When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL=Coupling Internal Thread, 3/4" size)
2. 120-277V only.
3. Must specify finish (F=Specify matching finish)
4. Luminaire configuration must include 0-10V Dimming 'P21-DIM' option when Wireless Controls Accessories are specified

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 2				Type 2BL				Type 3			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,327	99	B1-U0-G1	54	5,981	111	B3-U0-G3	54	5,330	98	B1-U0-G1
70LA	64	350	4000K	69	7,350	107	B1-U0-G1	69	8,252	120	B3-U0-G3	69	7,354	107	B1-U0-G2
90LA	80	350	4000K	88	9,370	106	B1-U0-G2	89	10,521	119	B3-U0-G3	89	9,375	106	B1-U0-G2
80LA	48	530	4000K	78	7,656	98	B1-U0-G2	79	8,596	109	B3-U0-G3	79	7,660	97	B1-U0-G2
105LA	64	530	4000K	103	10,521	102	B1-U0-G2	103	11,814	114	B3-U0-G3	103	10,527	102	B1-U0-G2
130LA	80	530	4000K	127	13,490	106	B1-U0-G2	128	15,147	118	B4-U0-G4	128	13,498	105	B1-U0-G2
165LA	80	640	4000K	162	15,651	97	B2-U0-G2	162	17,425	107	B4-U0-G4	162	15,691	97	B1-U0-G2
110LA	48	700	4000K	108	9,735	90	B1-U0-G2	108	10,931	101	B3-U0-G3	108	9,740	90	B1-U0-G2
140LA	64	700	4000K	137	13,287	97	B2-U0-G2	138	14,918	108	B4-U0-G4	138	13,294	96	B1-U0-G2
180LA	80	700	4000K	176	16,723	95	B2-U0-G2	177	18,777	106	B4-U0-G4	177	16,732	94	B2-U0-G3
200LA	80	800	4000K	205	18,514	90	B2-U0-G2	206	20,788	101	B4-U0-G4	206	18,524	90	B2-U0-G3

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 4				Type 5M				Type 5W			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,279	98	B1-U0-G1	54	6,059	112	B2-U0-G0	53	6,506	122	B3-U0-G1
70LA	64	350	4000K	69	7,284	106	B1-U0-G2	69	8,360	122	B3-U0-G1	70	8,966	128	B3-U0-G2
90LA	80	350	4000K	88	9,286	105	B1-U0-G2	88	10,657	121	B3-U0-G1	86	11,437	133	B4-U0-G2
80LA	48	530	4000K	78	7,588	97	B1-U0-G2	79	8,708	111	B3-U0-G1	82	9,341	115	B3-U0-G2
105LA	64	530	4000K	103	10,428	101	B1-U0-G2	103	11,967	116	B3-U0-G1	108	12,839	119	B4-U0-G2
130LA	80	530	4000K	127	13,370	105	B1-U0-G2	128	15,344	120	B3-U0-G1	134	16,470	123	B4-U0-G2
165LA	80	640	4000K	162	15,389	90	B1-U0-G2	162	17,663	109	B4-U0-G1	164	19,319	118	B4-U0-G2
110LA	48	700	4000K	108	9,648	96	B1-U0-G2	108	11,073	102	B3-U0-G1	110	12,115	108	B4-U0-G2
140LA	64	700	4000K	137	13,168	94	B1-U0-G2	138	15,112	110	B4-U0-G1	146	16,272	110	B4-U0-G2
180LA	80	700	4000K	176	16,574	95	B2-U0-G2	177	19,021	108	B4-U0-G1	179	20,401	114	B5-U0-G3
200LA	80	800	4000K	206	18,349	89	B2-U0-G3	206	21,058	102	B4-U0-G2	206	22,079	106	B5-U0-G3

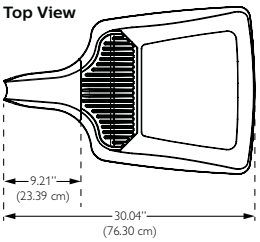
5. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
6. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

P21 PureForm LED area luminaire

21" housing

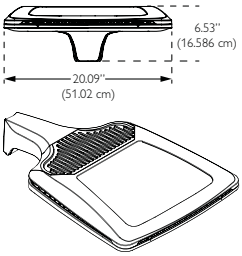
Dimensions – Standard Arm (A1)

Top View



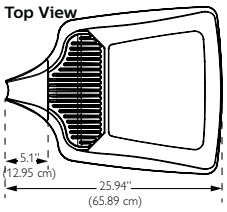
Side View

End View

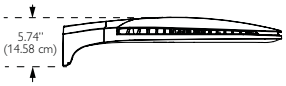


Dimensions – Short Arm (A2)

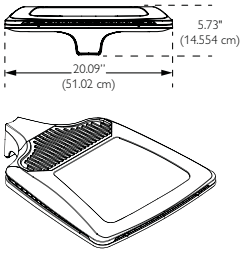
Top View



Side View

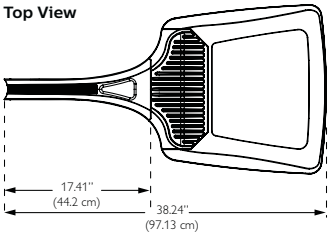


End View

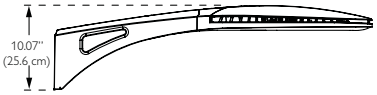


Dimensions – Decorative Arm (A3)

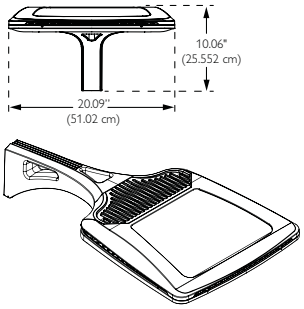
Top View



Side View

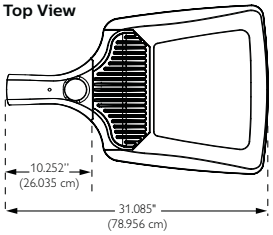


End View

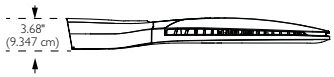


Dimensions – Mast Arm (MA)

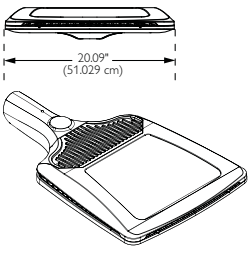
Top View



Side View

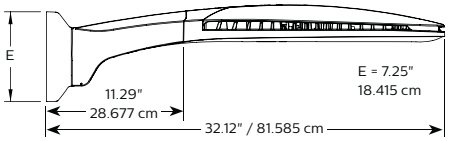


End View

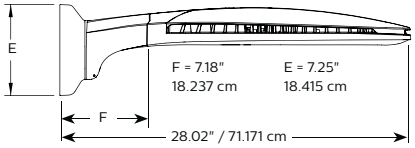


Dimensions – Wall Mount

With A1 Standard Arm



With A2 Short Arm



Single Luminaire Weight

Mounting	Approx.Weight
A1	38 lbs / 17.237 kg
A2	37 lbs / 16.783 kg
A3	41.5 lbs / 18.824 kg
MA	38 lbs / 17.237 kg
W or WS	39 lbs / 17.69 kg

Effective Projected Area (ft^2/m^2)

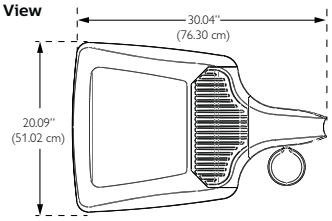
Mounting	Single	Twin @ 180	3/4
A1	0.35 / 0.033	0.70 / 0.066	1.25 / 0.117
A2	0.30 / 0.028	0.60 / 0.056	1.10 / 0.103
A3	0.50 / 0.047	1.0 / 0.093	1.70 / 0.158
MA	0.35 / 0.033	N/A	N/A

P21 PureForm LED area luminaire

21" housing

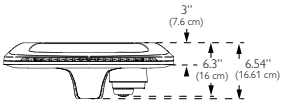
Dimensions – PureForm with wireless controls (luminaire mounted controller)

Top View



Side View

End View



Luminaire Configuration Information

P21

Philips Gardco PureForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

P21-DIM

Philips Gardco PureForm LED luminaire provided with 0 -10V dimming for connection to a control system provided by Philips or by others.

P21-APD

Philips Gardco PureForm LED luminaire with Automatic Profile Dimming. Luminaire is provided with a programmable LED Driver, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the programmable LED Driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

P21-APD is available in 120V – 277V input only.

P21-APD Dimming Profile:

100%	2 hours	6 hours	100%
	50%	50%	

Power On **Mid Point** **Power Off**

The P21-APD offers many of the advantages of a sophisticated control system, including an average energy savings of at least 33% versus constant wattage, constant light output systems, without the need for a control system.

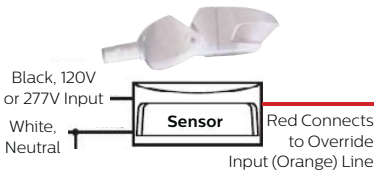
P21-MR50

Philips Gardco PureForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

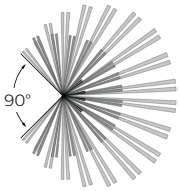
P21-MR50 is available in 120V–277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V.) One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:



270° Front Coverage

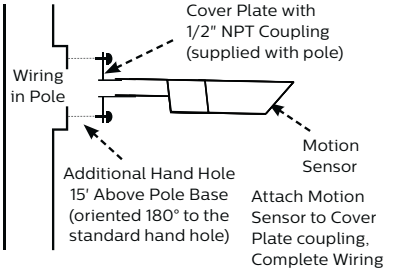
Distances are approximate.

H = height above ground

Height

Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole:



P21 PureForm LED area luminaire

21" housing

Specifications

Housing

The PureForm features a die cast aluminum housing, and mounts directly to a pole or wall. The low profile rounded form reduces the effective projected area of the luminaire significantly. PureForm luminaires supplied with A1, A2 and A3 arms are provided with arms firmly attached to the main luminaire housing body. As a result, the luminaires provide the functionality, strength and installation ease of an integral arm luminaire. Mast arm mount luminaires are provided with the mast arm mounting assembly firmly attached to the main luminaire housing body.

IP Rating

PureForm luminaires have a rating of IP66.

Vibration Resistance

PureForm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Electrical

Luminaires are equipped with an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. All motion sensors utilized consume 0.0 watts in the off state. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

LED Performance

Predicted Lumen Depreciation Data[1]

Ambient Temperature °C	Driver (mA)	Calculated L_{70} Hours[1,2]	L_{70} Per TM-21[2,3]	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 800mA	> 154,000 Hours	> 51,400 Hours	91%

1. 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.
2. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

LED Thermal Management

The Philips Gardco PureForm LED provides die cast aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

Wireless Controls

The wireless controls system includes: gateway, controller (with wireless radio, motion response, and photocell), and commissioning/training. This intelligent web-based system operates through a high density mesh (HDM) wireless technology. Wireless radios with motion response and photocell sensors are integrated with PureForm luminaires, and enable the fixtures to communicate via the ZigBee protocol. The gateway is a mini computer that connects to the internet, and is located in a secure location. The central database channels communication to and from the gateway, allowing data to be viewed or managed through the web-based graphical user interface (GUI). See pages 6-7 for details and technical information.

Optical Systems

The advanced LED optical systems provide IES Types 2, 3, 4 and 5 distributions, as well as a Backlight Control optic. Special LEED corner cutoff optics are also available, both as LCR (right) and LCL (left.) All optical systems feature unitized lens optic construction.

Types 2, 3, 4, BLC and LCR/LCL optical systems utilize an innovative redirecting reflector to complement the performance of the LED optic. The redirecting reflector system utilizes 95% specular reflective material to maximize reflected light forward. Reflector facets minimize aperture brightness when viewed from the rear of the luminaire.

PureForm luminaires are provided standard without a glass lens, for maximized performance. A glass lens is available as an option, resulting in reduced performance. All PureForm luminaires provide full cutoff performance.

Listings

All luminaires bear UL or CUL (where applicable) Wet Location labels.PureForm LED P21 luminaires (with the exception of 55LA at 277V) are DesignLights Consortium qualified.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

Warranty

Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer. See Warranty Information on www.sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

PHILIPS

GARDCO

Site & Area

PureForm

21" housing

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco PureForm luminaires combine LED performance excellence and advanced LED thermal management technology with a distinct purity of style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. PureForm is defined by its high performance, sleek low profile design and rugged construction.

Ordering guide

example: P21-APD-A1-1-5M-130LA-NW-120-NP-PCB

Prefix	Controls	Arm	Mounting	Optical System[8]	Wattage	Color Temp	Voltage	Finish	Options
P21- PureForm 21" fixture	**—** Standard luminaire **DIM** 0-10V Dimming **APD**[1] Automatic Profile Dimming **APD-MRO**[2] APD with Motion Response Override pole mounted sensor **APD-MRI**[3] APD with Motion Response Override luminaire mounted sensor **MRI**[3] Motion Response at 50% low, luminaire mount sensor **MR50**[2] Motion Response at 50% low, pole mounted sensor **Wireless Controls** (Remote wireless controller available. See p.2 for details) **LLC2**[1,4,5] #2 lens for 8' mounting heights **LLC3**[1,4,5] #3 lens for 9-20' mounting heights **LLC4**[1,4,5] #4 lens for 21-40' mounting heights	**A1**[6] Standard 9" Arm **A2**[6] Short 5" Arm **A3**[6] Decorative Arm **MA** Mast Arm Fitter (requires 2 3/8" O.D. Mast Arm)	**1** Standard **2** 2@180 **2@90** 2@90 **3** 3@90 **3@120** 3@120 **4** 4@90 **W** Wall Mount **WS**[7] Wall mount including surface conduit rear entry permitted	**Standard Optic Position** **2** Type 2 **3** Type 3 **4** Type 4 **5M** Type 5 Medium **5W** Type 5 Wide **BLC** Backlight Ctrl **2BL** Type 2 with backlight (less shield) **LCL**[9] LEED Corner Cutoff Optics **LCR**[9] LEED Corner Cutoff Optics **Optics Rotated Left (90°)**[10] **2-90** Type 2 **3-90** Type 3 **4-90** Type 4 **BLC-90** Backlight Ctrl **2BL-90** Type 2 with backlight (less shield) **Optic Rotated Right (270°)**[10] **2-270** Type 2 **3-270** Type 3 **4-270** Type 4 **BLC-270** Backlight Ctrl **2BL-270** Type 2 with backlight (less shield)	**350mA** **55LA** **70LA** **90LA** **530mA** **80LA** **105LA** **130LA** **640mA** **165LA**[11] **700mA** **110LA** **140LA** **180LA** **800mA** **200LA**[11]	**CW** Cool White 5,700K 70CRI (nominal) **NW** Neutral White 4,000K 70CRI (nominal) **WW** Warm White 3,000K 80CRI (nominal)	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V 50hz/60hz **HVU** 347-480V 50hz/60hz	**BRP** Bronze Paint **BLP** Black Paint **WP** White Paint **NP** Natural Paint **OC** Optional Color Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **SC** Special color Specify, must supply color chip. Requires factory quote.	**TL** Tool-Less entry and driver removal hardware **TB** Terminal Block **F**[12] Fusing **LF** In-Line/In-Pole Fusing **PC**[4,5,13] Receptacle with Photocell (Includes PCR5) **PCB**[4,5,13] Photocell Button **PCR5**[4,5,14,15] Photocell Receptacle only with 2 dimming connections **PCR7**[4,5,15,16] Photocell Receptacle only with 2 dimming and 2 auxiliary connections **EHHS** External Houseside Shield **PTF2** Pole Top Fitter for 2 3/8"- 3" Tenon **PTF3** Pole Top Fitter for 3"- 3 1/2" Tenon **PTF4** Pole Top Fitter for 3 1/2"-4" Tenon **SPA1-2** Square Pole Adapter for use with A1 or A2 Arms **SPA3**[6] Square Pole Adapter for use with A3 Arms **DL**[17] Diffusing Lens **CLR**[17] Clear Glass Lens **POLY**[17] Polycarbonate Lens (1 year warranty on lens) **BD** Bird Deterrant Spike Kit – consist of 25 injection molded plastic bird deterrent spikes (field installed only).

1. Available 120–277V only (UNV, 120, 208, 240 & 277).
2. Available 120V or 277V only. MR50 and APD-MRO require one motion sensor per pole, ordered separately. See page 2 for Accessories.
3. Available 120V or 277V only. Wattages 180LA and 200LA require outboarded sensor enclosure mounted to the arm of the luminaire (A1 arm only).
4. Not available with A3 Arm Style.
5. LLC2/LLC3/LLC4 wireless controls not configurable with PC/PCB/PCR5/PCR7 Options. See pages 6-7 for more info.
6. Arm Styles mount to a round pole with no adapter. If mounting to a square pole, specify Square Pole Adapter option: SPA1-2 for A1/A2 arms, or SPA3 for A3 arms.
7. Available with A1 or A2 Arms only. Not available in P21-MR50, or P21-APD-MRO.
8. Luminaire door frame and optic assembly provided standard without glass lens. Specify CLR option for clear glass lens.
9. Available with 130LA or 200LA only.
10. See page 8–9 for information on optical rotation prior to ordering.
11. 200LA and 165LA not available in 347V or 480V.
12. Available with A1 arm or with MA mounting only. Provide specific input voltage.
13. Not configurable with 480V. Voltage must be specified.
14. Works with 3-pin or 5-pin NEMA photocell/dimming device.
15. If ordered with DIM, APD, MRI, MR50, APD-MRI, APD-MRO, dimming will not be connected to NEMA receptacle.
16. Works with 3-pin or 5-pin NEMA photocell/dimming device and auxiliary connections are not connected (for future use only).
17. Option reduces performance.

P21 PureForm LED area luminaire

21" housing

PureForm Accessories (order separately)

MS-A-120V

120V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

MS-A-277V

277V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

Note: Motion Sensors are ordered separately, with one (1) motion sensor required per pole location for MR50 or APD-MRO luminaires. See Luminaire Configuration Information on page 5 for more details. Area motion sensor color is Arctic White. MRI and APD-MRI luminaires include an integral motion sensor.

PureForm Wireless Controls Accessories (for wall or pole mount)[1,2,3,4]

LLCR2-(F)

Standalone wall or pole wireless controller with #2 Lens.

LLCR3-(F)

Standalone wall or pole wireless controller with #3 Lens.

LLCR4-(F)

Standalone wall or pole wireless controller with #4 Lens.

1. When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL=Coupling Internal Thread, 3/4" size)
2. 120-277V only.
3. Must specify finish (F=Specify matching finish)
4. Luminaire configuration must include 0-10V Dimming 'P21-DIM' option when Wireless Controls Accessories are specified

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 2				Type 2BL				Type 3			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,327	99	B1-U0-G1	54	5,981	111	B3-U0-G3	54	5,330	98	B1-U0-G1
70LA	64	350	4000K	69	7,350	107	B1-U0-G1	69	8,252	120	B3-U0-G3	69	7,354	107	B1-U0-G2
90LA	80	350	4000K	88	9,370	106	B1-U0-G2	89	10,521	119	B3-U0-G3	89	9,375	106	B1-U0-G2
80LA	48	530	4000K	78	7,656	98	B1-U0-G2	79	8,596	109	B3-U0-G3	79	7,660	97	B1-U0-G2
105LA	64	530	4000K	103	10,521	102	B1-U0-G2	103	11,814	114	B3-U0-G3	103	10,527	102	B1-U0-G2
130LA	80	530	4000K	127	13,490	106	B1-U0-G2	128	15,147	118	B4-U0-G4	128	13,498	105	B1-U0-G2
165LA	80	640	4000K	162	15,651	97	B2-U0-G2	162	17,425	107	B4-U0-G4	162	15,691	97	B1-U0-G2
110LA	48	700	4000K	108	9,735	90	B1-U0-G2	108	10,931	101	B3-U0-G3	108	9,740	90	B1-U0-G2
140LA	64	700	4000K	137	13,287	97	B2-U0-G2	138	14,918	108	B4-U0-G4	138	13,294	96	B1-U0-G2
180LA	80	700	4000K	176	16,723	95	B2-U0-G2	177	18,777	106	B4-U0-G4	177	16,732	94	B2-U0-G3
200LA	80	800	4000K	205	18,514	90	B2-U0-G2	206	20,788	101	B4-U0-G4	206	18,524	90	B2-U0-G3

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 4				Type 5M				Type 5W			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,279	98	B1-U0-G1	54	6,059	112	B2-U0-G0	53	6,506	122	B3-U0-G1
70LA	64	350	4000K	69	7,284	106	B1-U0-G2	69	8,360	122	B3-U0-G1	70	8,966	128	B3-U0-G2
90LA	80	350	4000K	88	9,286	105	B1-U0-G2	88	10,657	121	B3-U0-G1	86	11,437	133	B4-U0-G2
80LA	48	530	4000K	78	7,588	97	B1-U0-G2	79	8,708	111	B3-U0-G1	82	9,341	115	B3-U0-G2
105LA	64	530	4000K	103	10,428	101	B1-U0-G2	103	11,967	116	B3-U0-G1	108	12,839	119	B4-U0-G2
130LA	80	530	4000K	127	13,370	105	B1-U0-G2	128	15,344	120	B3-U0-G1	134	16,470	123	B4-U0-G2
165LA	80	640	4000K	162	15,389	90	B1-U0-G2	162	17,663	109	B4-U0-G1	164	19,319	118	B4-U0-G2
110LA	48	700	4000K	108	9,648	96	B1-U0-G2	108	11,073	102	B3-U0-G1	110	12,115	108	B4-U0-G2
140LA	64	700	4000K	137	13,168	94	B1-U0-G2	138	15,112	110	B4-U0-G1	146	16,272	110	B4-U0-G2
180LA	80	700	4000K	176	16,574	95	B2-U0-G2	177	19,021	108	B4-U0-G1	179	20,401	114	B5-U0-G3
200LA	80	800	4000K	206	18,349	89	B2-U0-G3	206	21,058	102	B4-U0-G2	206	22,079	106	B5-U0-G3

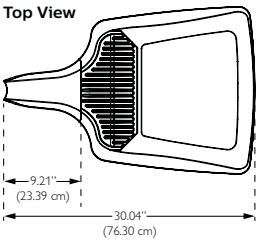
5. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
6. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

P21 PureForm LED area luminaire

21" housing

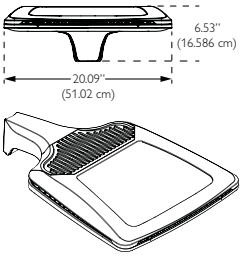
Dimensions – Standard Arm (A1)

Top View



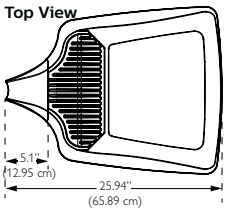
Side View

End View

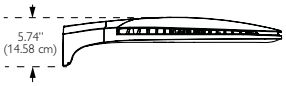


Dimensions – Short Arm (A2)

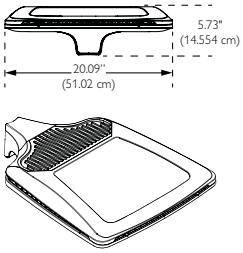
Top View



Side View

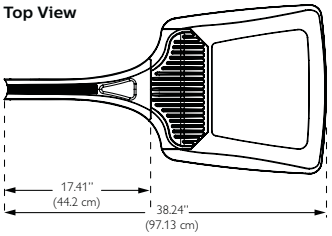


End View

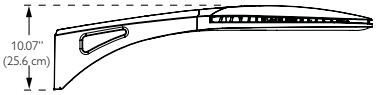


Dimensions – Decorative Arm (A3)

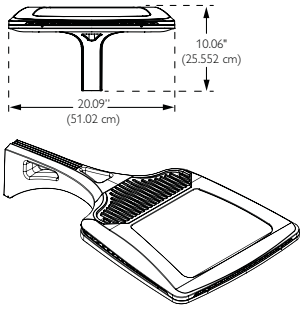
Top View



Side View

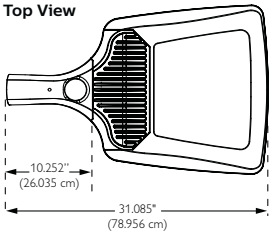


End View

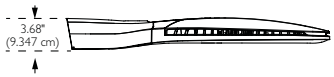


Dimensions – Mast Arm (MA)

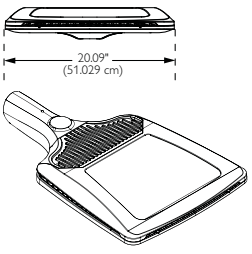
Top View



Side View

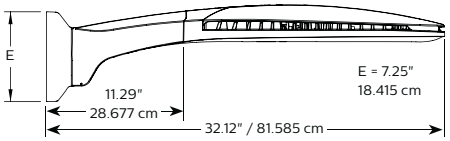


End View

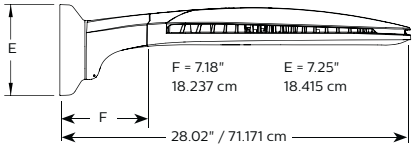


Dimensions – Wall Mount

With A1 Standard Arm



With A2 Short Arm



Single Luminaire Weight

Mounting	Approx.Weight
A1	38 lbs / 17.237 kg
A2	37 lbs / 16.783 kg
A3	41.5 lbs / 18.824 kg
MA	38 lbs / 17.237 kg
W or WS	39 lbs / 17.69 kg

Effective Projected Area (ft^2/m^2)

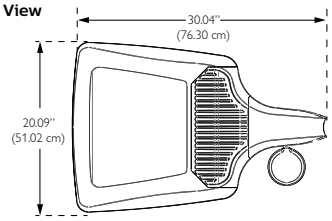
Mounting	Single	Twin @ 180	3/4
A1	0.35 / 0.033	0.70 / 0.066	1.25 / 0.117
A2	0.30 / 0.028	0.60 / 0.056	1.10 / 0.103
A3	0.50 / 0.047	1.0 / 0.093	1.70 / 0.158
MA	0.35 / 0.033	N/A	N/A

P21 PureForm LED area luminaire

21" housing

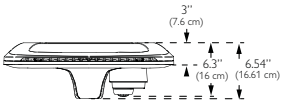
Dimensions – PureForm with wireless controls (luminaire mounted controller)

Top View



Side View

End View



Luminaire Configuration Information

P21

Philips Gardco PureForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

P21-DIM

Philips Gardco PureForm LED luminaire provided with 0 -10V dimming for connection to a control system provided by Philips or by others.

P21-APD

Philips Gardco PureForm LED luminaire with Automatic Profile Dimming. Luminaire is provided with a programmable LED Driver, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the programmable LED Driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

P21-APD is available in 120V – 277V input only.

P21-APD Dimming Profile:

100%	2 hours	6 hours	100%
	50%	50%	

Power On **Mid Point** **Power Off**

The P21-APD offers many of the advantages of a sophisticated control system, including an average energy savings of at least 33% versus constant wattage, constant light output systems, without the need for a control system.

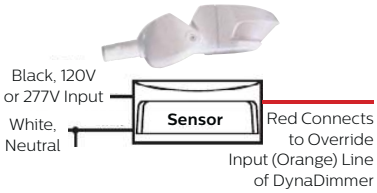
P21-MR50

Philips Gardco PureForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

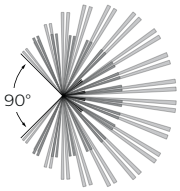
P21-MR50 is available in 120V–277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V.) One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:

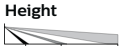


270° Front Coverage

Distances are approximate.

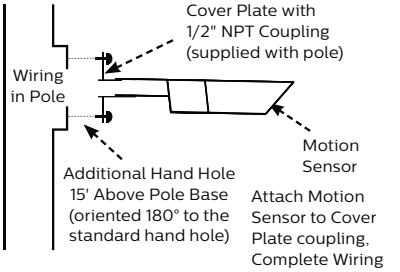
H = height above ground

Height



Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole:



P21 PureForm LED area luminaire

21" housing

Specifications

Housing

The PureForm features a die cast aluminum housing, and mounts directly to a pole or wall. The low profile rounded form reduces the effective projected area of the luminaire significantly. PureForm luminaires supplied with A1, A2 and A3 arms are provided with arms firmly attached to the main luminaire housing body. As a result, the luminaires provide the functionality, strength and installation ease of an integral arm luminaire. Mast arm mount luminaires are provided with the mast arm mounting assembly firmly attached to the main luminaire housing body.

IP Rating

PureForm luminaires have a rating of IP66.

Vibration Resistance

PureForm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Electrical

Luminaires are equipped with an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. All motion sensors utilized consume 0.0 watts in the off state. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

LED Performance

Predicted Lumen Depreciation Data[1]

Ambient Temperature °C	Driver (mA)	Calculated L_{70} Hours[1,2]	L_{70} Per TM-21[2,3]	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 800mA	> 154,000 Hours	> 51,400 Hours	91%

1. 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.
2. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

LED Thermal Management

The Philips Gardco PureForm LED provides die cast aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

Wireless Controls

The wireless controls system includes: gateway, controller (with wireless radio, motion response, and photocell), and commissioning/training. This intelligent web-based system operates through a high density mesh (HDM) wireless technology. Wireless radios with motion response and photocell sensors are integrated with PureForm luminaires, and enable the fixtures to communicate via the ZigBee protocol. The gateway is a mini computer that connects to the internet, and is located in a secure location. The central database channels communication to and from the gateway, allowing data to be viewed or managed through the web-based graphical user interface (GUI). See pages 6-7 for details and technical information.

Optical Systems

The advanced LED optical systems provide IES Types 2, 3, 4 and 5 distributions, as well as a Backlight Control optic. Special LEED corner cutoff optics are also available, both as LCR (right) and LCL (left.) All optical systems feature unitized lens optic construction.

Types 2, 3, 4, BLC and LCR/LCL optical systems utilize an innovative redirecting reflector to complement the performance of the LED optic. The redirecting reflector system utilizes 95% specular reflective material to maximize reflected light forward. Reflector facets minimize aperture brightness when viewed from the rear of the luminaire.

PureForm luminaires are provided standard without a glass lens, for maximized performance. A glass lens is available as an option, resulting in reduced performance. All PureForm luminaires provide full cutoff performance.

Listings

All luminaires bear UL or CUL (where applicable) Wet Location labels.PureForm LED P21 luminaires (with the exception of 55LA at 277V) are DesignLights Consortium qualified.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

Warranty

Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer. See Warranty Information on www.sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

PHILIPS

GARDCO

Site & Area

PureForm

21" housing

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco PureForm luminaires combine LED performance excellence and advanced LED thermal management technology with a distinct purity of style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. PureForm is defined by its high performance, sleek low profile design and rugged construction.

Ordering guide

example: P21-APD-A1-1-5M-130LA-NW-120-NP-PCB

Prefix	Controls	Arm	Mounting	Optical System[8]	Wattage	Color Temp	Voltage	Finish	Options
P21– PureForm 21" fixture	**—** Standard luminaire **DIM** 0-10V Dimming **APD**[1] Automatic Profile Dimming **APD-MRO**[2] APD with Motion Response Override pole mounted sensor **APD-MRI**[3] APD with Motion Response Override luminaire mounted sensor **MRI**[3] Motion Response at 50% low, luminaire mount sensor **MR50**[2] Motion Response at 50% low, pole mounted sensor **Wireless Controls** (Remote wireless controller available. See p.2 for details) **LLC2**[1,4,5] #2 lens for 8' mounting heights **LLC3**[1,4,5] #3 lens for 9-20' mounting heights **LLC4**[1,4,5] #4 lens for 21-40' mounting heights	**A1**[6] Standard 9" Arm **A2**[6] Short 5" Arm **A3**[6] Decorative Arm **MA** Mast Arm Fitter (requires 2 3/8" O.D. Mast Arm)	**1** Standard **2** 2@180 **2@90** 2@90 **3** 3@90 **3@120** 3@120 **4** 4@90 **W** Wall Mount **WS**[7] Wall mount including surface conduit rear entry permitted	**Standard Optic Position** **2** Type 2 **3** Type 3 **4** Type 4 **5M** Type 5 Medium **5W** Type 5 Wide **BLC** Backlight Ctrl **2BL** Type 2 with backlight (less shield) **LCL**[9] LEED Corner Cutoff Optics **LCR**[9] LEED Corner Cutoff Optics **Optics Rotated Left (90°)**[10] **2-90** Type 2 **3-90** Type 3 **4-90** Type 4 **BLC-90** Backlight Ctrl **2BL-90** Type 2 with backlight (less shield) **Optic Rotated Right (270°)**[10] **2-270** Type 2 **3-270** Type 3 **4-270** Type 4 **BLC-270** Backlight Ctrl **2BL-270** Type 2 with backlight (less shield)	**350mA** **55LA** **70LA** **90LA** **530mA** **80LA** **105LA** **130LA** **640mA** **165LA**[11] **700mA** **110LA** **140LA** **180LA** **800mA** **200LA**[11]	**CW** Cool White 5,700K 70CRI (nominal) **NW** Neutral White 4,000K 70CRI (nominal) **WW** Warm White 3,000K 80CRI (nominal)	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V 50hz/60hz **HVU** 347-480V 50hz/60hz	**BRP** Bronze Paint **BLP** Black Paint **WP** White Paint **NP** Natural Paint **OC** Optional Color Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **SC** Special color Specify, must supply color chip. Requires factory quote.	**TL** Tool-Less entry and driver removal hardware **TB** Terminal Block **F**[12] Fusing **LF** In-Line/In-Pole Fusing **PC**[4,5,13] Receptacle with Photocell (Includes PCR5) **PCB**[4,5,13] Photocell Button **PCR5**[4,5,14,15] Photocell Receptacle only with 2 dimming connections **PCR7**[4,5,15,16] Photocell Receptacle only with 2 dimming and 2 auxiliary connections **EHHS** External Houseside Shield **PTF2** Pole Top Fitter for 2 3/8"- 3" Tenon **PTF3** Pole Top Fitter for 3"- 3 1/2" Tenon **PTF4** Pole Top Fitter for 3 1/2"-4" Tenon **SPA1-2** Square Pole Adapter for use with A1 or A2 Arms **SPA3**[6] Square Pole Adapter for use with A3 Arms **DL**[17] Diffusing Lens **CLR**[17] Clear Glass Lens **POLY**[17] Polycarbonate Lens (1 year warranty on lens) **BD** Bird Deterrant Spike Kit – consist of 25 injection molded plastic bird deterrent spikes (field installed only).

1. Available 120–277V only (UNV, 120, 208, 240 & 277).
2. Available 120V or 277V only. MR50 and APD-MRO require one motion sensor per pole, ordered separately. See page 2 for Accessories.
3. Available 120V or 277V only. Wattages 180LA and 200LA require outboarded sensor enclosure mounted to the arm of the luminaire (A1 arm only).
4. Not available with A3 Arm Style.
5. LLC2/LLC3/LLC4 wireless controls not configurable with PC/PCB/PCR5/PCR7 Options. See pages 6-7 for more info.
6. Arm Styles mount to a round pole with no adapter. If mounting to a square pole, specify Square Pole Adapter option: SPA1-2 for A1/A2 arms, or SPA3 for A3 arms.
7. Available with A1 or A2 Arms only. Not available in P21-MR50, or P21-APD-MRO.
8. Luminaire door frame and optic assembly provided standard without glass lens. Specify CLR option for clear glass lens.
9. Available with 130LA or 200LA only.
10. See page 8–9 for information on optical rotation prior to ordering.
11. 200LA and 165LA not available in 347V or 480V.
12. Available with A1 arm or with MA mounting only. Provide specific input voltage.
13. Not configurable with 480V. Voltage must be specified.
14. Works with 3-pin or 5-pin NEMA photocell/dimming device.
15. If ordered with DIM, APD, MRI, MR50, APD-MRI, APD-MRO, dimming will not be connected to NEMA receptacle.
16. Works with 3-pin or 5-pin NEMA photocell/dimming device and auxiliary connections are not connected (for future use only).
17. Option reduces performance.

P21 PureForm LED area luminaire

21" housing

PureForm Accessories (order separately)

MS-A-120V

120V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

MS-A-277V

277V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

Note: Motion Sensors are ordered separately, with one (1) motion sensor required per pole location for MR50 or APD-MRO luminaires. See Luminaire Configuration Information on page 5 for more details. Area motion sensor color is Arctic White. MRI and APD-MRI luminaires include an integral motion sensor.

PureForm Wireless Controls Accessories (for wall or pole mount)[1,2,3,4]

LLCR2-(F)

Standalone wall or pole wireless controller with #2 Lens.

LLCR3-(F)

Standalone wall or pole wireless controller with #3 Lens.

LLCR4-(F)

Standalone wall or pole wireless controller with #4 Lens.

1. When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL=Coupling Internal Thread, 3/4" size)
2. 120-277V only.
3. Must specify finish (F=Specify matching finish)
4. Luminaire configuration must include 0-10V Dimming 'P21-DIM' option when Wireless Controls Accessories are specified

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 2				Type 2BL				Type 3			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,327	99	B1-U0-G1	54	5,981	111	B3-U0-G3	54	5,330	98	B1-U0-G1
70LA	64	350	4000K	69	7,350	107	B1-U0-G1	69	8,252	120	B3-U0-G3	69	7,354	107	B1-U0-G2
90LA	80	350	4000K	88	9,370	106	B1-U0-G2	89	10,521	119	B3-U0-G3	89	9,375	106	B1-U0-G2
80LA	48	530	4000K	78	7,656	98	B1-U0-G2	79	8,596	109	B3-U0-G3	79	7,660	97	B1-U0-G2
105LA	64	530	4000K	103	10,521	102	B1-U0-G2	103	11,814	114	B3-U0-G3	103	10,527	102	B1-U0-G2
130LA	80	530	4000K	127	13,490	106	B1-U0-G2	128	15,147	118	B4-U0-G4	128	13,498	105	B1-U0-G2
165LA	80	640	4000K	162	15,651	97	B2-U0-G2	162	17,425	107	B4-U0-G4	162	15,691	97	B1-U0-G2
110LA	48	700	4000K	108	9,735	90	B1-U0-G2	108	10,931	101	B3-U0-G3	108	9,740	90	B1-U0-G2
140LA	64	700	4000K	137	13,287	97	B2-U0-G2	138	14,918	108	B4-U0-G4	138	13,294	96	B1-U0-G2
180LA	80	700	4000K	176	16,723	95	B2-U0-G2	177	18,777	106	B4-U0-G4	177	16,732	94	B2-U0-G3
200LA	80	800	4000K	205	18,514	90	B2-U0-G2	206	20,788	101	B4-U0-G4	206	18,524	90	B2-U0-G3

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 4				Type 5M				Type 5W			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,279	98	B1-U0-G1	54	6,059	112	B2-U0-G0	53	6,506	122	B3-U0-G1
70LA	64	350	4000K	69	7,284	106	B1-U0-G2	69	8,360	122	B3-U0-G1	70	8,966	128	B3-U0-G2
90LA	80	350	4000K	88	9,286	105	B1-U0-G2	88	10,657	121	B3-U0-G1	86	11,437	133	B4-U0-G2
80LA	48	530	4000K	78	7,588	97	B1-U0-G2	79	8,708	111	B3-U0-G1	82	9,341	115	B3-U0-G2
105LA	64	530	4000K	103	10,428	101	B1-U0-G2	103	11,967	116	B3-U0-G1	108	12,839	119	B4-U0-G2
130LA	80	530	4000K	127	13,370	105	B1-U0-G2	128	15,344	120	B3-U0-G1	134	16,470	123	B4-U0-G2
165LA	80	640	4000K	162	15,389	90	B1-U0-G2	162	17,663	109	B4-U0-G1	164	19,319	118	B4-U0-G2
110LA	48	700	4000K	108	9,648	96	B1-U0-G2	108	11,073	102	B3-U0-G1	110	12,115	108	B4-U0-G2
140LA	64	700	4000K	137	13,168	94	B1-U0-G2	138	15,112	110	B4-U0-G1	146	16,272	110	B4-U0-G2
180LA	80	700	4000K	176	16,574	95	B2-U0-G2	177	19,021	108	B4-U0-G1	179	20,401	114	B5-U0-G3
200LA	80	800	4000K	206	18,349	89	B2-U0-G3	206	21,058	102	B4-U0-G2	206	22,079	106	B5-U0-G3

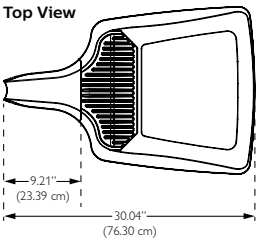
5. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
6. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

P21 PureForm LED area luminaire

21" housing

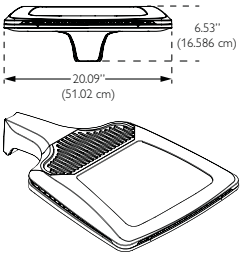
Dimensions – Standard Arm (A1)

Top View



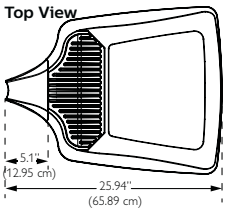
Side View

End View

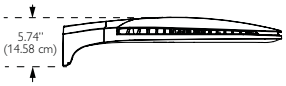


Dimensions – Short Arm (A2)

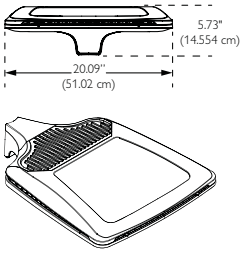
Top View



Side View

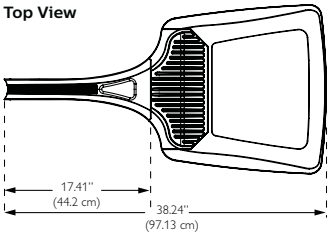


End View

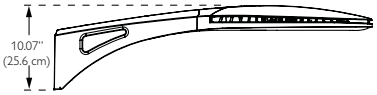


Dimensions – Decorative Arm (A3)

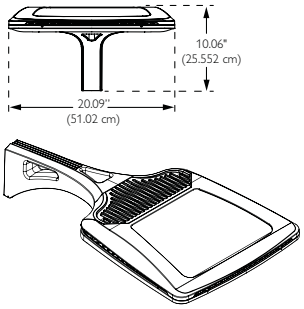
Top View



Side View

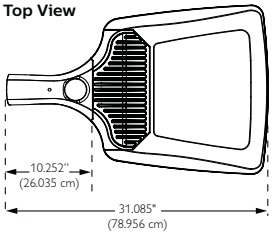


End View

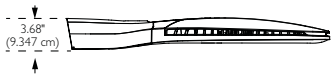


Dimensions – Mast Arm (MA)

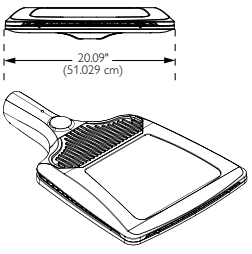
Top View



Side View

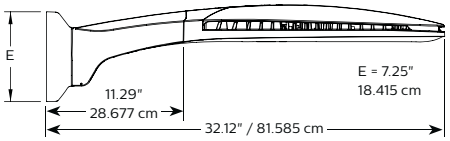


End View

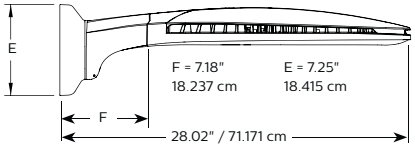


Dimensions – Wall Mount

With A1 Standard Arm



With A2 Short Arm



Single Luminaire Weight

Mounting	Approx.Weight
A1	38 lbs / 17.237 kg
A2	37 lbs / 16.783 kg
A3	41.5 lbs / 18.824 kg
MA	38 lbs / 17.237 kg
W or WS	39 lbs / 17.69 kg

Effective Projected Area (ft^2/m^2)

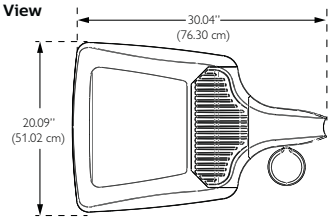
Mounting	Single	Twin @ 180	3/4
A1	0.35 / 0.033	0.70 / 0.066	1.25 / 0.117
A2	0.30 / 0.028	0.60 / 0.056	1.10 / 0.103
A3	0.50 / 0.047	1.0 / 0.093	1.70 / 0.158
MA	0.35 / 0.033	N/A	N/A

P21 PureForm LED area luminaire

21" housing

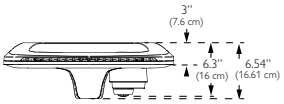
Dimensions – PureForm with wireless controls (luminaire mounted controller)

Top View



Side View

End View



Luminaire Configuration Information

P21

Philips Gardco PureForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

P21-DIM

Philips Gardco PureForm LED luminaire provided with 0 -10V dimming for connection to a control system provided by Philips or by others.

P21-APD

Philips Gardco PureForm LED luminaire with Automatic Profile Dimming. Luminaire is provided with a programmable LED Driver, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the programmable LED Driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

P21-APD is available in 120V – 277V input only.

P21-APD Dimming Profile:

100%	2 hours	6 hours	100%
	50%	50%	

Power On **Mid Point** **Power Off**

The P21-APD offers many of the advantages of a sophisticated control system, including an average energy savings of at least 33% versus constant wattage, constant light output systems, without the need for a control system.

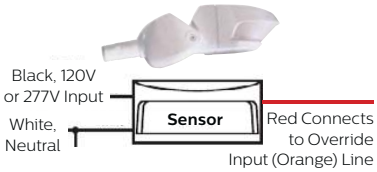
P21-MR50

Philips Gardco PureForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

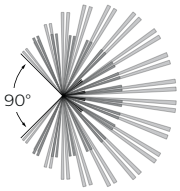
P21-MR50 is available in 120V–277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V.) One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:



270° Front Coverage

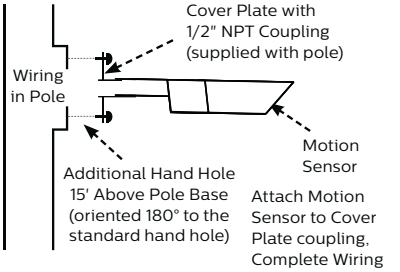
Distances are approximate.

H = height above ground

Height

Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole:



P21 PureForm LED area luminaire

21" housing

Specifications

Housing

The PureForm features a die cast aluminum housing, and mounts directly to a pole or wall. The low profile rounded form reduces the effective projected area of the luminaire significantly. PureForm luminaires supplied with A1, A2 and A3 arms are provided with arms firmly attached to the main luminaire housing body. As a result, the luminaires provide the functionality, strength and installation ease of an integral arm luminaire. Mast arm mount luminaires are provided with the mast arm mounting assembly firmly attached to the main luminaire housing body.

IP Rating

PureForm luminaires have a rating of IP66.

Vibration Resistance

PureForm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Electrical

Luminaires are equipped with an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. All motion sensors utilized consume 0.0 watts in the off state. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

LED Performance

Predicted Lumen Depreciation Data[1]

Ambient Temperature °C	Driver (mA)	Calculated L_{70} Hours[1,2]	L_{70} Per TM-21[2,3]	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 800mA	> 154,000 Hours	> 51,400 Hours	91%

1. 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.
2. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

LED Thermal Management

The Philips Gardco PureForm LED provides die cast aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

Wireless Controls

The wireless controls system includes: gateway, controller (with wireless radio, motion response, and photocell), and commissioning/training. This intelligent web-based system operates through a high density mesh (HDM) wireless technology. Wireless radios with motion response and photocell sensors are integrated with PureForm luminaires, and enable the fixtures to communicate via the ZigBee protocol. The gateway is a mini computer that connects to the internet, and is located in a secure location. The central database channels communication to and from the gateway, allowing data to be viewed or managed through the web-based graphical user interface (GUI). See pages 6-7 for details and technical information.

Optical Systems

The advanced LED optical systems provide IES Types 2, 3, 4 and 5 distributions, as well as a Backlight Control optic. Special LEED corner cutoff optics are also available, both as LCR (right) and LCL (left.) All optical systems feature unitized lens optic construction.

Types 2, 3, 4, BLC and LCR/LCL optical systems utilize an innovative redirecting reflector to complement the performance of the LED optic. The redirecting reflector system utilizes 95% specular reflective material to maximize reflected light forward. Reflector facets minimize aperture brightness when viewed from the rear of the luminaire.

PureForm luminaires are provided standard without a glass lens, for maximized performance. A glass lens is available as an option, resulting in reduced performance. All PureForm luminaires provide full cutoff performance.

Listings

All luminaires bear UL or CUL (where applicable) Wet Location labels.PureForm LED P21 luminaires (with the exception of 55LA at 277V) are DesignLights Consortium qualified.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

Warranty

Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer. See Warranty Information on www.sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

PHILIPS

GARDCO

Site & Area

PureForm

21" housing

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco PureForm luminaires combine LED performance excellence and advanced LED thermal management technology with a distinct purity of style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. PureForm is defined by its high performance, sleek low profile design and rugged construction.

Ordering guide

example: P21-APD-A1-1-5M-130LA-NW-120-NP-PCB

Prefix	Controls	Arm	Mounting	Optical System[8]	Wattage	Color Temp	Voltage	Finish	Options
P21- PureForm 21" fixture	**—** Standard luminaire **DIM** 0-10V Dimming **APD**[1] Automatic Profile Dimming **APD-MRO**[2] APD with Motion Response Override pole mounted sensor **APD-MRI**[3] APD with Motion Response Override luminaire mounted sensor **MRI**[3] Motion Response at 50% low, luminaire mount sensor **MR50**[2] Motion Response at 50% low, pole mounted sensor **Wireless Controls** (Remote wireless controller available. See p.2 for details) **LLC2**[1,4,5] #2 lens for 8' mounting heights **LLC3**[1,4,5] #3 lens for 9-20' mounting heights **LLC4**[1,4,5] #4 lens for 21-40' mounting heights	**A1**[6] Standard 9" Arm **A2**[6] Short 5" Arm **A3**[6] Decorative Arm **MA** Mast Arm Fitter (requires 2 3/8" O.D. Mast Arm)	**1** Standard **2** 2@180 **2@90** 2@90 **3** 3@90 **3@120** 3@120 **4** 4@90 **W** Wall Mount **WS**[7] Wall mount including surface conduit rear entry permitted	**Standard Optic Position** **2** Type 2 **3** Type 3 **4** Type 4 **5M** Type 5 Medium **5W** Type 5 Wide **BLC** Backlight Ctrl **2BL** Type 2 with backlight (less shield) **LCL**[9] LEED Corner Cutoff Optics **LCR**[9] LEED Corner Cutoff Optics **Optics Rotated Left (90°)**[10] **2-90** Type 2 **3-90** Type 3 **4-90** Type 4 **BLC-90** Backlight Ctrl **2BL-90** Type 2 with backlight (less shield) **Optic Rotated Right (270°)**[10] **2-270** Type 2 **3-270** Type 3 **4-270** Type 4 **BLC-270** Backlight Ctrl **2BL-270** Type 2 with backlight (less shield)	**350mA** **55LA** **70LA** **90LA** **530mA** **80LA** **105LA** **130LA** **640mA** **165LA**[11] **700mA** **110LA** **140LA** **180LA** **800mA** **200LA**[11]	**CW** Cool White 5,700K 70CRI (nominal) **NW** Neutral White 4,000K 70CRI (nominal) **WW** Warm White 3,000K 80CRI (nominal)	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V 50hz/60hz **HVU** 347-480V 50hz/60hz	**BRP** Bronze Paint **BLP** Black Paint **WP** White Paint **NP** Natural Paint **OC** Optional Color Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **SC** Special color Specify, must supply color chip. Requires factory quote.	**TL** Tool-Less entry and driver removal hardware **TB** Terminal Block **F**[12] Fusing **LF** In-Line/In-Pole Fusing **PC**[4,5,13] Receptacle with Photocell (Includes PCR5) **PCB**[4,5,13] Photocell Button **PCR5**[4,5,14,15] Photocell Receptacle only with 2 dimming connections **PCR7**[4,5,15,16] Photocell Receptacle only with 2 dimming and 2 auxiliary connections **EHHS** External Houseside Shield **PTF2** Pole Top Fitter for 2 3/8"- 3" Tenon **PTF3** Pole Top Fitter for 3"- 3 1/2" Tenon **PTF4** Pole Top Fitter for 3 1/2"- 4" Tenon **SPA1-2** Square Pole Adapter for use with A1 or A2 Arms **SPA3**[6] Square Pole Adapter for use with A3 Arms **DL**[17] Diffusing Lens **CLR**[17] Clear Glass Lens **POLY**[17] Polycarbonate Lens (1 year warranty on lens) **BD** Bird Deterrant Spike Kit – consist of 25 injection molded plastic bird deterrent spikes (field installed only).

1. Available 120–277V only (UNV, 120, 208, 240 & 277).
2. Available 120V or 277V only. MR50 and APD-MRO require one motion sensor per pole, ordered separately. See page 2 for Accessories.
3. Available 120V or 277V only. Wattages 180LA and 200LA require outboarded sensor enclosure mounted to the arm of the luminaire (A1 arm only).
4. Not available with A3 Arm Style.
5. LLC2/LLC3/LLC4 wireless controls not configurable with PC/PCB/PCR5/PCR7 Options. See pages 6-7 for more info.
6. Arm Styles mount to a round pole with no adapter. If mounting to a square pole, specify Square Pole Adapter option: SPA1-2 for A1/A2 arms, or SPA3 for A3 arms.
7. Available with A1 or A2 Arms only. Not available in P21-MR50, or P21-APD-MRO.
8. Luminaire door frame and optic assembly provided standard without glass lens. Specify CLR option for clear glass lens.
9. Available with 130LA or 200LA only.
10. See page 8–9 for information on optical rotation prior to ordering.
11. 200LA and 165LA not available in 347V or 480V.
12. Available with A1 arm or with MA mounting only. Provide specific input voltage.
13. Not configurable with 480V. Voltage must be specified.
14. Works with 3-pin or 5-pin NEMA photocell/dimming device.
15. If ordered with DIM, APD, MRI, MR50, APD-MRI, APD-MRO, dimming will not be connected to NEMA receptacle.
16. Works with 3-pin or 5-pin NEMA photocell/dimming device and auxiliary connections are not connected (for future use only).
17. Option reduces performance.

P21 PureForm LED area luminaire

21" housing

PureForm Accessories (order separately)

MS-A-120V

120V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

MS-A-277V

277V Input Area Motion Sensor

For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

Note: Motion Sensors are ordered separately, with one (1) motion sensor required per pole location for MR50 or APD-MRO luminaires. See Luminaire Configuration Information on page 5 for more details. Area motion sensor color is Arctic White. MRI and APD-MRI luminaires include an integral motion sensor.

PureForm Wireless Controls Accessories (for wall or pole mount)[1,2,3,4]

LLCR2-(F)

Standalone wall or pole wireless controller with #2 Lens.

LLCR3-(F)

Standalone wall or pole wireless controller with #3 Lens.

LLCR4-(F)

Standalone wall or pole wireless controller with #4 Lens.

1. When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL=Coupling Internal Thread, 3/4" size)
2. 120-277V only.
3. Must specify finish (F=Specify matching finish)
4. Luminaire configuration must include 0-10V Dimming 'P21-DIM' option when Wireless Controls Accessories are specified

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 2				Type 2BL				Type 3			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,327	99	B1-U0-G1	54	5,981	111	B3-U0-G3	54	5,330	98	B1-U0-G1
70LA	64	350	4000K	69	7,350	107	B1-U0-G1	69	8,252	120	B3-U0-G3	69	7,354	107	B1-U0-G2
90LA	80	350	4000K	88	9,370	106	B1-U0-G2	89	10,521	119	B3-U0-G3	89	9,375	106	B1-U0-G2
80LA	48	530	4000K	78	7,656	98	B1-U0-G2	79	8,596	109	B3-U0-G3	79	7,660	97	B1-U0-G2
105LA	64	530	4000K	103	10,521	102	B1-U0-G2	103	11,814	114	B3-U0-G3	103	10,527	102	B1-U0-G2
130LA	80	530	4000K	127	13,490	106	B1-U0-G2	128	15,147	118	B4-U0-G4	128	13,498	105	B1-U0-G2
165LA	80	640	4000K	162	15,651	97	B2-U0-G2	162	17,425	107	B4-U0-G4	162	15,691	97	B1-U0-G2
110LA	48	700	4000K	108	9,735	90	B1-U0-G2	108	10,931	101	B3-U0-G3	108	9,740	90	B1-U0-G2
140LA	64	700	4000K	137	13,287	97	B2-U0-G2	138	14,918	108	B4-U0-G4	138	13,294	96	B1-U0-G2
180LA	80	700	4000K	176	16,723	95	B2-U0-G2	177	18,777	106	B4-U0-G4	177	16,732	94	B2-U0-G3
200LA	80	800	4000K	205	18,514	90	B2-U0-G2	206	20,788	101	B4-U0-G4	206	18,524	90	B2-U0-G3

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Type 4				Type 5M				Type 5W			
				Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating	Average System Watts[5]	Lumen Output[5,6]	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	5,279	98	B1-U0-G1	54	6,059	112	B2-U0-G0	53	6,506	122	B3-U0-G1
70LA	64	350	4000K	69	7,284	106	B1-U0-G2	69	8,360	122	B3-U0-G1	70	8,966	128	B3-U0-G2
90LA	80	350	4000K	88	9,286	105	B1-U0-G2	88	10,657	121	B3-U0-G1	86	11,437	133	B4-U0-G2
80LA	48	530	4000K	78	7,588	97	B1-U0-G2	79	8,708	111	B3-U0-G1	82	9,341	115	B3-U0-G2
105LA	64	530	4000K	103	10,428	101	B1-U0-G2	103	11,967	116	B3-U0-G1	108	12,839	119	B4-U0-G2
130LA	80	530	4000K	127	13,370	105	B1-U0-G2	128	15,344	120	B3-U0-G1	134	16,470	123	B4-U0-G2
165LA	80	640	4000K	162	15,389	90	B1-U0-G2	162	17,663	109	B4-U0-G1	164	19,319	118	B4-U0-G2
110LA	48	700	4000K	108	9,648	96	B1-U0-G2	108	11,073	102	B3-U0-G1	110	12,115	108	B4-U0-G2
140LA	64	700	4000K	137	13,168	94	B1-U0-G2	138	15,112	110	B4-U0-G1	146	16,272	110	B4-U0-G2
180LA	80	700	4000K	176	16,574	95	B2-U0-G2	177	19,021	108	B4-U0-G1	179	20,401	114	B5-U0-G3
200LA	80	800	4000K	206	18,349	89	B2-U0-G3	206	21,058	102	B4-U0-G2	206	22,079	106	B5-U0-G3

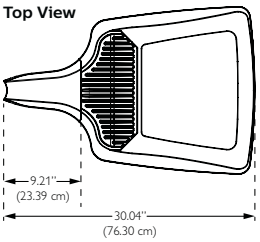
5. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
6. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

P21 PureForm LED area luminaire

21" housing

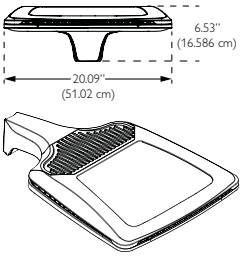
Dimensions – Standard Arm (A1)

Top View



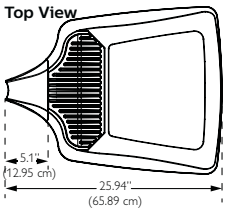
Side View

End View

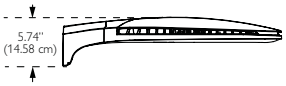


Dimensions – Short Arm (A2)

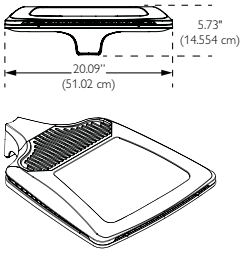
Top View



Side View

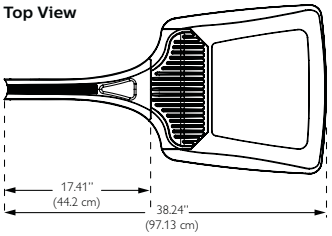


End View

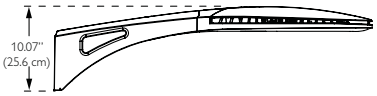


Dimensions – Decorative Arm (A3)

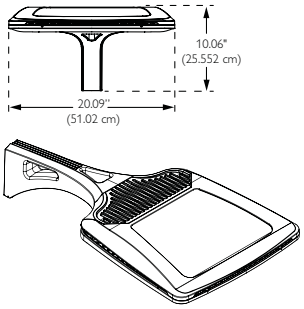
Top View



Side View

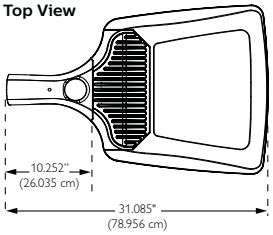


End View

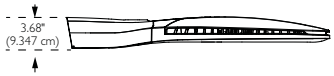


Dimensions – Mast Arm (MA)

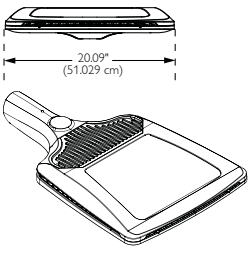
Top View



Side View

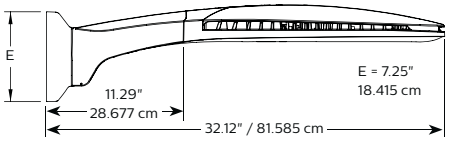


End View

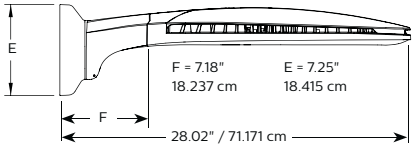


Dimensions – Wall Mount

With A1 Standard Arm



With A2 Short Arm



Single Luminaire Weight

Mounting	Approx.Weight
A1	38 lbs / 17.237 kg
A2	37 lbs / 16.783 kg
A3	41.5 lbs / 18.824 kg
MA	38 lbs / 17.237 kg
W or WS	39 lbs / 17.69 kg

Effective Projected Area (ft^2/m^2)

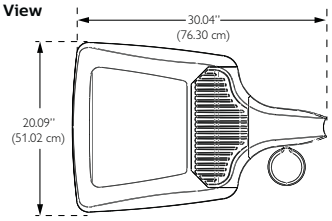
Mounting	Single	Twin @ 180	3/4
A1	0.35 / 0.033	0.70 / 0.066	1.25 / 0.117
A2	0.30 / 0.028	0.60 / 0.056	1.10 / 0.103
A3	0.50 / 0.047	1.0 / 0.093	1.70 / 0.158
MA	0.35 / 0.033	N/A	N/A

P21 PureForm LED area luminaire

21" housing

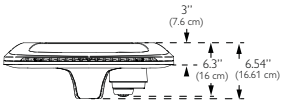
Dimensions – PureForm with wireless controls (luminaire mounted controller)

Top View



Side View

End View



Luminaire Configuration Information

P21

Philips Gardco PureForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

P21-DIM

Philips Gardco PureForm LED luminaire provided with 0 -10V dimming for connection to a control system provided by Philips or by others.

P21-APD

Philips Gardco PureForm LED luminaire with Automatic Profile Dimming. Luminaire is provided with a programmable LED Driver, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the programmable LED Driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

P21-APD is available in 120V – 277V input only.

P21-APD Dimming Profile:

100%	2 hours	6 hours	100%
	50%	50%	

Power On **Mid Point** **Power Off**

The P21-APD offers many of the advantages of a sophisticated control system, including an average energy savings of at least 33% versus constant wattage, constant light output systems, without the need for a control system.

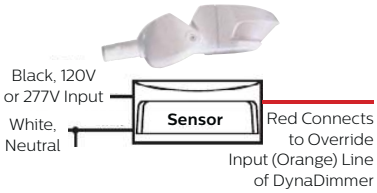
P21-MR50

Philips Gardco PureForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

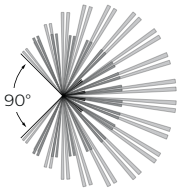
P21-MR50 is available in 120V–277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V.) One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:

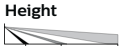


270° Front Coverage

Distances are approximate.

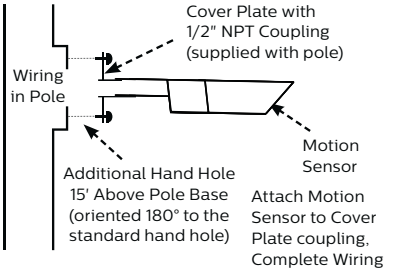
H = height above ground

Height



Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole:



P21 PureForm LED area luminaire

21" housing

Specifications

Housing

The PureForm features a die cast aluminum housing, and mounts directly to a pole or wall. The low profile rounded form reduces the effective projected area of the luminaire significantly. PureForm luminaires supplied with A1, A2 and A3 arms are provided with arms firmly attached to the main luminaire housing body. As a result, the luminaires provide the functionality, strength and installation ease of an integral arm luminaire. Mast arm mount luminaires are provided with the mast arm mounting assembly firmly attached to the main luminaire housing body.

IP Rating

PureForm luminaires have a rating of IP66.

Vibration Resistance

PureForm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Electrical

Luminaires are equipped with an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. All motion sensors utilized consume 0.0 watts in the off state. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

LED Performance

Predicted Lumen Depreciation Data[1]

Ambient Temperature °C	Driver (mA)	Calculated L_{70} Hours[1,2]	L_{70} Per TM-21[2,3]	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 800mA	> 154,000 Hours	> 51,400 Hours	91%

1. 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.
2. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

LED Thermal Management

The Philips Gardco PureForm LED provides die cast aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

Wireless Controls

The wireless controls system includes: gateway, controller (with wireless radio, motion response, and photocell), and commissioning/training. This intelligent web-based system operates through a high density mesh (HDM) wireless technology. Wireless radios with motion response and photocell sensors are integrated with PureForm luminaires, and enable the fixtures to communicate via the ZigBee protocol. The gateway is a mini computer that connects to the internet, and is located in a secure location. The central database channels communication to and from the gateway, allowing data to be viewed or managed through the web-based graphical user interface (GUI). See pages 6-7 for details and technical information.

Optical Systems

The advanced LED optical systems provide IES Types 2, 3, 4 and 5 distributions, as well as a Backlight Control optic. Special LEED corner cutoff optics are also available, both as LCR (right) and LCL (left.) All optical systems feature unitized lens optic construction.

Types 2, 3, 4, BLC and LCR/LCL optical systems utilize an innovative redirecting reflector to complement the performance of the LED optic. The redirecting reflector system utilizes 95% specular reflective material to maximize reflected light forward. Reflector facets minimize aperture brightness when viewed from the rear of the luminaire.

PureForm luminaires are provided standard without a glass lens, for maximized performance. A glass lens is available as an option, resulting in reduced performance. All PureForm luminaires provide full cutoff performance.

Listings

All luminaires bear UL or CUL (where applicable) Wet Location labels.PureForm LED P21 luminaires (with the exception of 55LA at 277V) are DesignLights Consortium qualified.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

Warranty

Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer. See Warranty Information on www.sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

RANDY
BURKETT
LIGHTING
DESIGN

TYPE PG

Pole top luminaires with symmetrical light distribution

Housing/fitter: Die-cast and extruded aluminum construction. The fixture slip fits a 3“ O.D. pole top or tenon and is secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Clear acrylic diffuser and reflector made of pure anodized aluminum held in place by die-cast aluminum frame and stainless steel rods. Fully gasketed for weather tight operation using a molded silicone rubber gasket.

Electrical: 31.0W LED luminaire, 36.0 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

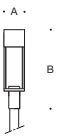
CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 11.0 lbs.

Effective Projection Area (EPA): 1.1 ft²

Luminaire Lumens: 3435

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



Pole-top luminaires · **symmetrical**

	Lamp	A	B
77 175	44.2 W LED	6 5/8	25 3/4

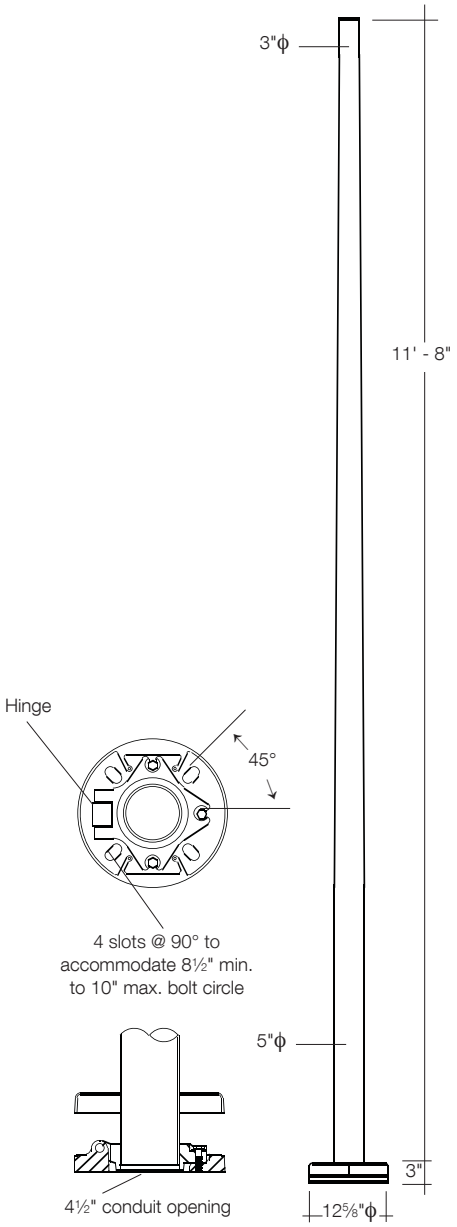
BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

RANDY
BURKETT
LIGHTING
DESIGN

TYPE PG

Type:
Project:
Options:
Modified:
Luminaire:
Fixture EPA:
Optional Tenon: ❑ 2⅜"ϕ x 3½" H
GCO: ❑
GFI: ❑

Approval:



1108HR 3" - 5" Tapered round hinged pole

Shaft: Extruded from all new seamless 6063 aluminum alloy tubing, heat treated to a T-6 condition.

Anchor base: Round cast aluminum A356 alloy, heat treated to a T-6 condition. Anchor base and shaft continuously welded at the outside top and inside bottom of the anchor base casting. Pole base to be round hinged two piece casting. Hinge Pole shaft to be welded to upper base casting which is secured to lower base casting by three (3) stainless steel bolts. Bolts to be fastened to cast-in stainless threaded inserts in lower casting. Cast round two piece base cover supplied with pole.

Anchor bolts: Four (4) ¾" x 17" galvanized steel anchor bolts supplied with double nuts and flat washers. Maximum bolt projection 3½". For luminaires requiring threaded inserts and pole cap -specify: 1D (single); 2D (2@ 180°); 3D (3 @ 120°).

GCO or GFI: Standard GCO/GFI location is opposite the hinge. Height above base for ballast in luminaires is 18". For single luminaires with a pole base mounted (PBM) ballast the minimum height is 24" and 42" minimum for double PBM luminaires.

Weight: 50.0 lbs.

Disclaimer

BEGA-US warrants the specific anchor bolts and pole combination according to the product number(s) and description(s) indicated on this submittal sheet. Structural changes to the pole requested by the customer, including changes to pole length, may affect the compatibility of the anchor bolts and corresponding poles. BEGA-US is not responsible for the incompatibility of the anchor bolts and poles resulting from such structural changes without review by the BEGA-US engineering department. This includes, but is not limited to, any labor charges, charges for replacement materials and shipping.

Pole wind load rating:

MPH:	70	80	90	100	120
EPA:	15.5	11.5	8.7	6.8	4.4

Note: Data above assumes grade level installation and a maximum luminaire weight of 50 lbs.

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 [P] 805·684·0533 [F] 805·684·6682

RANDY
BURKETT
LIGHTING
DESIGN

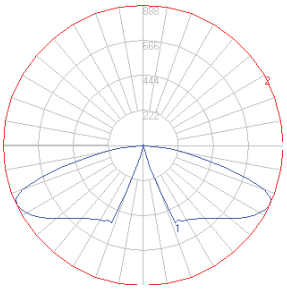
TYPE PG

BEGA

Photometric Filename: 77175.IES

TEST: NA
TEST LAB: BEGA
DATE: 11/03/2015
LUMINAIRE: 77 175
LAMP: 31W LED

All results in accordance with IESNA LM-63-95

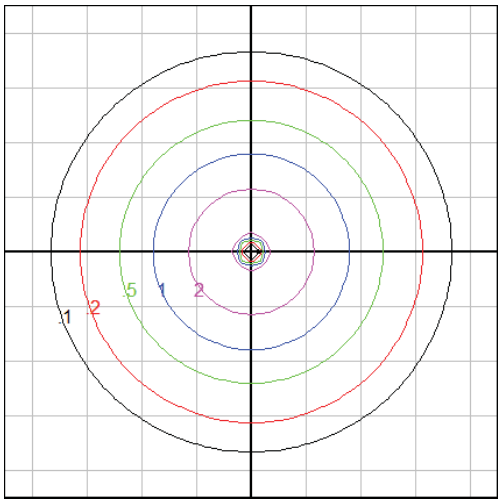


Characteristics

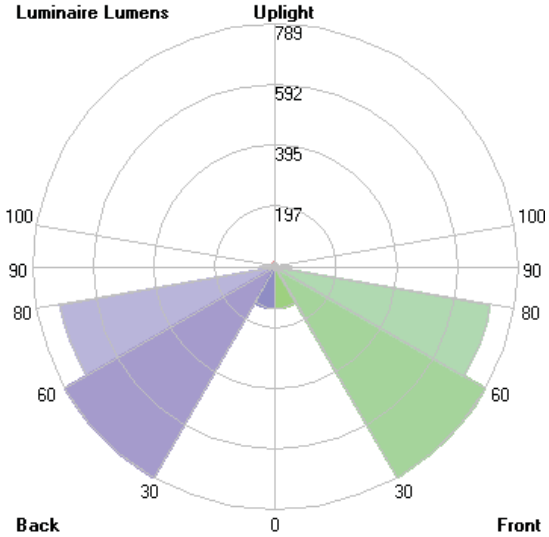
IES Classification	Type V
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3383
Downward Total Efficiency	N.A.
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	36
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Max. Cd.	887.6 (0H, 65V)
Max. Cd. (<90 Vert.)	887.6 (0H, 65V)
Max. Cd. (At 90 Deg. Vert.)	2.3 (0.1%Lum)
Max. Cd. (80 to <90 Deg. Vert.)	254.9 (7.5%Lum)
Cutoff Classification (deprecated)	N.A. (absolute)

Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	135.2	N.A.	4.0
FM (30-60)	789.5	N.A.	23.3
FH (60-80)	708.9	N.A.	21.0
FVH(80-90)	51.6	N.A.	1.5
BL (0-30)	135.2	N.A.	4.0
BM (30-60)	789.5	N.A.	23.3
BH (60-80)	708.9	N.A.	21.0
BVH(80-90)	51.6	N.A.	1.5
UL (90-100)	1.4	N.A.	0.0
UH (100-180)	11.1	N.A.	0.3
Total	3382.9	N.A.	100.0
BUG Rating	**B2-U2-G1**		



Mounting Height = 10 ft. Grid Spacing = 10 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

PHILIPS

GARDCO

Wall Mount

LED wall sconce 106L

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco 106 LED wall sconces feature a low-profile design that provides wide flexibility in high performance exterior wall illumination. Full cutoff performance, usable illumination patterns, and powerful wattages combine into a compact and architecturally pleasing design. 106L sconces are available in Type 2, 3, and 4 distributions, and provide output of up to 9500 lumens. Energy saving control options increase energy savings and offer California Title 24 compliance. Emergency Battery Backup option available for path of egress.

Ordering guide

example: 106L-32L-700-NW-G1-3-120-IMRI2-BZ

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage	Options: Controls	Options: Electrical	Finish
106L									
106L 106L LED Wall Sconce	**16L** 16 LEDs (1 module)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA **1200** 1200mA	**CW-G1** Cool White 5700K, 70 CRI Generation 1 **NW-G1** Neutral White 4000K, 70 CRI Generation 1 **WW-G1** Warm White 3000K, 70 CRI Generation 1	**2** Type 2 **3** Type 3 **4** Type 4	**EBPC** Emergency Battery Pack Cold Weather[3,4,12] Leave blank to omitt an emergency option	**UNV** 120-277V **HVU** 347-480V **120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V	**DD** 0-10V Dimming Driver[5,6] **DCC** Dual Circuit Control[7,8] **DynaDimmer:** Automatic Profile Dimming **CS50** Safety 50% Dimming (7 hours)[7,9,10] **CM50** Median 50% Dimming (8 hours)[7,9,10] **CE50** Economy 50% Dimming (9 hours)[7,9,10] **DA50** All Night 50% Dimming[7,9,10] **Photoelectric Systems** **PCB** Photocontrol Button[5,10,11,12] **Infrared Motion Response Systems** **IMRI2** Integral with #2 lens[4,12,13] **IMRI3** Integral with #4 lens[4,12,13] **Wireless Controls** **LLC2** Integral module with #2 lens[5,7,9,14] **LLC3** Integral module with #3 lens[5,7,9,14]	**Fusing** **F1** Single (120, 277, 347VAC)[12] **F2** Double (208, 240, 480VAC)[12] **F3** Canadian Double Pull (208, 240, 480VAC)[12]	**Textured** **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray **Customer specified** **RAL** Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **CC** Custom color (Must supply color chip for required factory quote)
	32L 32 LEDs (2 module)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA[2]							

1. 650mA only available with Emergency Battery Pack Cold Rated (EBPC) option
2. 32L rated for 30˚C at 1000mA
3. Available for use with 16L and 32L in 530mA or 650mA only. Rated for -20˚C to 35˚ C.
4. Available in 120 or 277V only.
5. Not available with Dual Circuit Control (DCC) option.
6. 16L not available with Dimming Driver (DD) in following configurations: 530, 700 and 1200mA in 347 and 480V.
7. Not available with Dimming Driver (DD) option.
8. Available in 32L with 530mA. Consult technical support center for use with photocell and CS/CM/CE/DA.
9. Available in 120-277V (UNV) only.
10. Not available with LLC and DCC.
11. Not available with 480V.
12. Must specifiy input voltage.
13. Not available with DD, DCC or LLC.
14. LLC2/3 Not available with PCB, IMRI, CS/CM/CE/DA. Ships with WS accessory attached to wireless module. Not for use with LLCR accessory.

106L Wall sconce LED

Wall Mount

Luminaire Accessories (order separately)

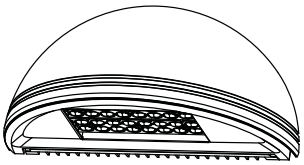
Mounting Accessories
Wall Mount
WS Wall Mounted Box for Surface Conduit

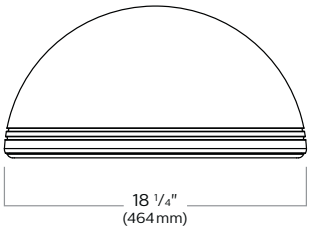
Controls Accessories
Wireless controls remote mount module
LLCR2-(F) #2 lens - specify finish in place of (F)
LLCR3-(F) #3 lens - specify finish in place of (F)

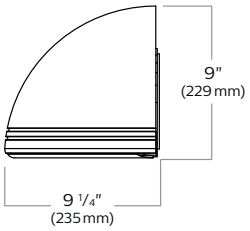
Wireless controls remote controller accessory

Wireless controls system offers a remote radio/sensor module that allows connectivity to Wireless system gateway. Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers. See page 4 for Wireless Controls details.

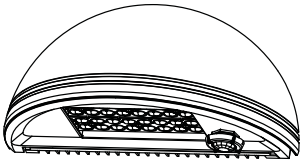
Dimensions

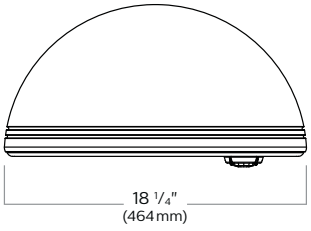


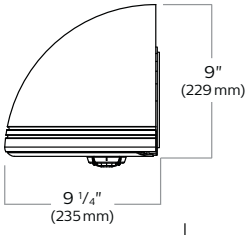




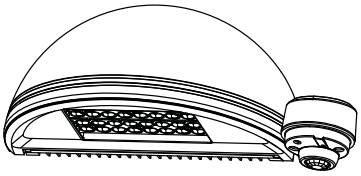
Motion Response

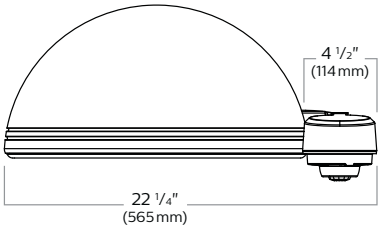


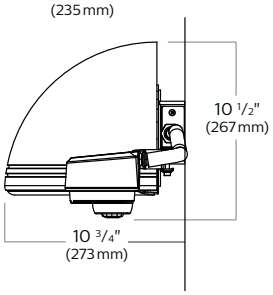


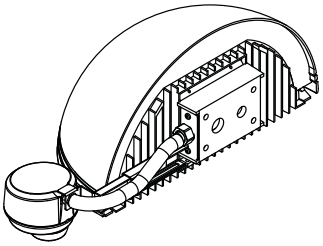


Wireless Controls









Luminaire Weights	
LED Wall Sconce 106L	**Weight**
Luminaire	13.5 lbs
Luminaire - EBPC (EM battery pack)	17.0 lbs
Luminaire - Integrated Wireless Controls	16.3 lbs

106L Wall sconce LED

Wall Mount

LED Wattage and Lumen Values

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Average System Watts[1]	Type 2			Type 3			Type 4		
					Lumen Output[1,2]	BUG Rating	Efficacy (LPW)	Lumen Output[1,2]	BUG Rating	Efficacy (LPW)	Lumen Output[1,2]	BUG Rating	Efficacy (LPW)
106L-16L-530-NW-G1	16	530	4000K	28	2944	B1-U0-G0	106	2687	B1-U0-G1	97	2747	B1-U0-G1	99
106L-16L-700-NW-G1	16	700	4000K	37	3789	B1-U0-G1	103	3458	B1-U0-G1	94	3535	B1-U0-G1	96
106L-16L-1000-NW-G1	16	1000	4000K	55	5050	B1-U0-G1	92	4609	B1-U0-G1	84	4712	B1-U0-G1	86
106L-16L-1200-NW-G1	16	1200	4000K	65	5744	B2-U0-G1	89	5242	B1-U0-G2	81	5359	B1-U0-G2	83
106L-32L-530-NW-G1	32	530	4000K	52	5698	B2-U0-G1	110	5200	B1-U0-G2	100	5316	B1-U0-G2	102
106L-32L-700-NW-G1	32	700	4000K	70	7242	B2-U0-G1	103	6609	B1-U0-G2	94	6757	B1-U0-G2	96
106L-32L-1000-NW-G1	32	1000	4000K	107	9797	B2-U0-G1	92	8941	B2-U0-G2	84	9140	B2-U0-G2	86

LED Wattage and Lumen Values (Emergency Mode)[3]

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Ave. System Watts (charging mode)	Type 2	Type 3	Type 4
106L-16L-NW-EBPC	16	N/A	4000K	14	1345	1228	1255
106L-32L-NW-EBPC	32	N/A	4000K	14	1754	1600	1636

1. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
2. Lumen values based on photometric tests performed in compliance with IESNA LM-79.
3. For emergency EBPC option, publish values are based on initial lumens.

Luminaire options

DD: 0-10V dimming driver with leads supplied through back of luminaire (for secondary dimming controls by others).

Dynadimmer Automatic Profile Dimming: Automatic dimming profiles (CS50/CM50/CE50) offer safety, median, or economy settings, for shorter or longer duration. Dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. 50% dimming is standard. DA50 offers 50% instantaneous dimming all night (during all dark hours). 75% and 25% dimming is also available if different light levels are required (contact Technical Support for details).

Profile	Dimming		
	Schedule	Duration	Level
Economy	9 PM - 6 AM	9 hours	50%
Median	10 PM - 6 AM	8 hours	50%
Safety	11 PM - 6 AM	7 hours	50%
Reactive 50	all night	dynamic	50%

IMRI2, IMRI3: Infrared Motion Response Integral (IMRI). IMRI module is mounted integral to the luminaire door and is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges (see charts for approximate detection patterns). Motion response for option IMRI is set/operates in the following fashion: The motion sensor is set to a constant 25%. When motion is detected by the PIR sensor, the luminaire returns to 100% light output. Dimming on low is factory set to 25% with 5 minute 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 75%, to 25% of the normal constant wattage reducing the light level. IMRI can also be specified with automatic profile dimming for the added benefit of a combined dimming profile with sensor detection, where the PIR sensor will override the dimming profile when occupancy is detected. Passive infrared (PIR) motion sensor, WattStopper FSP-211, equipped with lens choice specified. Available in 120V or 277V input only. Motion sensor off state power is 0.0 watts. The FSP-211 can also be reprogrammed with WattStopper's FS1R-100 remote programming tool accessory.

DCC: Dual Circuit Control permits separate switching of 32L models only, where a quantity of (2) 16 LED modules are controlled independently by use of two sets of leads, one for each module.

Wireless Controls: Controller radio/sensor module attached to luminaire via WS accessory (included with LLC2 and LLC3 option) and includes radio, photocell and motion sensor. Also available with remote pod accessory where pod is mounted separate from luminaire to pole or wall (see accessories and Wireless Controls information page 4).

F1: Fusing Single (for 120, 277 or 347VAC)

F2: Fusing Double (for 208, 240 or 480VAC)

F3: Fusing Canadian Double Pull (for 208, 240 or 480VAC)

EBPC: Emergency battery pack is cold weather rated down to -20C (-4F) and integral to the luminaire , allowing for a consistent look between emergency and non-emergency sconces. A separate surface mount accessory box is not required. Dual light engines (32L) are wired in parallel, both operating in emergency mode to meet various redundancy lamp requirements. Also available with single light engine (16L). Secondary driver with relay immediately detects AC power loss and powers luminaire for a minimum of 90 minutes from the time power is lost.

106L Wall sconce LED

Wall Mount

Specifications

Housing

Main body cast housing and back plate made of a low copper die cast Aluminum alloy for a high resistance to corrosion, 0.100" (2.5mm) minimum thickness. Hinged door allows access to driver and LED compartment.

Mounting

Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Mounting plate is located in the center of the luminaire width and 3.5" above the luminaire bottom (lens down position). Luminaire ships fully assembled, ready to install.

Light Engine

Composed of 4 main components: Heat Sink / LED Module / Optical System / Driver. Electrical components are RoHS compliant. IP66 sealed light engines. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sink

Integral door/heat sink design made of low copper die cast Aluminum alloy for a high resistance to corrosion.

LED Module

Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000K nominal (+/- 275K), CRI 70 Min. Available in other color temperatures including Cool White, 5700K and Warm White, 3000K.

Hardware

All exposed screws shall be stainless and/or corrosion resistant and captive.

Optical System

The advanced LED optical systems provide IES Types 2, 3, 4. Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark sky compliant with 0% uplight and U0 per IESNA TM-15.

Driver

High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Surge Protection

Each luminaire is provided as standard with surge protector (Philips designed SP1) tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/5kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA.

Wiring (supplied by others)

Splices must be made in the junction box.

Finish

Five standard colors offered in textured black, white, bronze, dark gray and medium gray. Color in accordance with the AAMA 2604 standard. Application of polyester powder coat paint 2.5 mils minimum. The thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. RAL and custom color matching available.

LED Products Manufacturing Standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with EC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

LED Useful Life

Luminaire Useful Life accounts for LED lumen maintenance. Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, LED LM-80/TM-21, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C.

Certifications and Compliance

cULus Listed for Canada and USA suitable for wet locations when mounted downward facing. cULus Listed for Canada and USA suitable for damp locations when inverted upward facing when mounted in covered ceiling application. Emergency Battery Pack option is tested and listed to UL924 and CSA C22.2 No. 141-10 DesignLights Consortium qualified on models as listed on DLC QPL. Luminaire is rated for operation in ambient temperature of -40°C (-40°F) up to +40°C (+104°F).

Limited Warranty

5-year limited warranty. See philips.com/warranties for details and restrictions. Visit our eCatalog or contact your local sales representative for more information.

LED Performance

Predicted lumen depreciation data[1]				
Ambient Temperature (°C)	Driver mA	Calculated L_{70} hours[1,2]	L_{70} per TM-21[2,3]	Lumen Maintenance % @ 60,000 hours
25°C	up to 1200 mA	>100,000	>60,000	88%

1. 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.
2. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

RANDY
BURKETT
LIGHTING
DESIGN

TYPE SB

BEGA LED system bollard - luminaire head with shielded light - 360°

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Enclosure: Housing constructed of die-cast aluminum. Die-castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy. Glass diffuser, inside white. Fully gasketed for weather tight operation using molded silicone gasket.

Installation: BEGA LED system bollards are designed for easy attachment to system bollard tubes using an interlocking stainless steel mechanism and stainless steel set screw threaded into stainless steel insert. An accompanying bollard tube must be selected for proper installation, see below chart for compatible tube options.

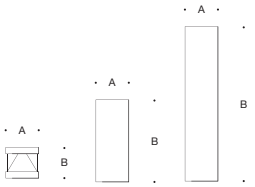
Electrical: 24.3W LED luminaire, 28.6 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (>80 CRI); add suffix K4 to order.
Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 10.2 lbs

Luminaire Lumens: 1671



Bollard heads · **shielded with reflector · 180°**

	Lamp	A	B
99 856	24.3 W LED	7 1/2	7 1/4

Bollard tubes for luminaire heights **19 3/4 · 21 3/4**

		A	B	Anch. unit
99 615		7 1/2	14 1/2	**79 817**

Bollard tubes for luminaire heights **31 1/2 · 39 1/4**

	Integrated components	Door	A	B	Anch. unit
99 622	—	✔	7 1/2	32	**79 818**
99 644	1 LED floodlight 19.3 W	✔	7 1/2	32	**79 818**
99 626	GFCI outlet	✔	7 1/2	32	**79 818**
99 658	Passive infrared motion sensor	✔	7 1/2	32	**79 818**
99 635	Emergency lighting battery 10 W	✔	7 1/2	32	**79 818**

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

RANDY
BURKETT
LIGHTING
DESIGN

TYPE SD

PHILIPS
COLOR KINETICS

eW Burst Compact Powercore

LED Luminaire

Date: _____
Type: _____
Firm Name: _____
Project: _____

eW Burst Compact Powercore

4000 K, 23° Spread Lens, Black Housing, UL/cUL/CE, Landscape

Compact landscape LED spotlight with solid white light

eW Burst Compact Powercore is a high-output, exterior LED spotlight designed for accent and site lighting. Landscape version delivers high-quality white light in a warm 2700 K and a neutral 4000 K to support a range of uplighting, floodlighting, and decorative lighting applications.

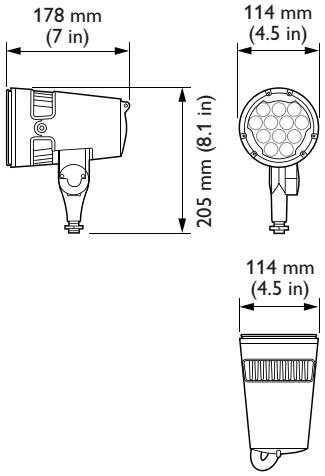
eW Burst Compact Powercore

Compact landscape LED spotlight with solid white light

- Integrates patented Powercore technology—Powercore rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage, eliminating the need for an external power supply. Contractor-friendly installation dramatically simplifies installation and lowers total system cost.
- Support for a wide range of landscape applications—Landscape fixtures feature a 0.5 in NPT threaded post for mounting to standard junction boxes and third-party mounting accessories such as stanchion mounts, posts, and stakes for use in softscape and hardscape applications.
- Exchangeable optics and accessories—Available 14°, 23°, 41°, and asymmetric 10° x 41° spread lenses project a soft-edge beam to support a wide range of lighting applications. Native 8° beam angle offers extended light projection. Available glare shields block spill light, while honeycomb louvers limit the spread of light for a more focused and intense beam.
- Versatile light positioning—Fixtures can tilt through a full 180°. Architectural fixtures can also rotate through a full 360° for precise aiming. Locking screws accept standard hex wrenches to secure fixtures firmly in position.
- Universal power input range—Accepts a universal power input range of 100 to 277 VAC, allowing the installation of multiple units in a continuous run.
- Dimming capability—Patented DIMand technology offers smooth dimming capability with selected commercially available reverse-phase ELV-type dimmers.
- Outdoor rated—With a rugged, die-cast aluminium housing fully sealed for maximum fixture life and IP66-rated for outdoor applications, eW Burst Compact Powercore is ideal for use in damp or wet locations.
- Outdoor rated—With a rugged, die-cast aluminum housing fully sealed for maximum fixture life and IP66-rated for outdoor applications, eW Burst Compact Powercore is ideal for use in damp or wet locations.

For detailed product information, please refer to the eW Burst Compact Powercore Product Guide at www.philipscolorkinetics.com/ls/essentialwhite/ewburstcompactpc/

Dimensions



Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Date: _____
Type: _____
Firm Name: _____
Project: _____

eW Burst Compact Powercore
4000 K, 23° Spread Lens, Black Housing, UL/cUL/CE, Landscape

Output

Color Temperature*	4000 K
Beam Angle	23°
Lumens†	674
Efficacy (lm/W)	44.6
CRI	81

Electrical

Input Voltage	100–277 VAC, auto-switching, 50/60 Hz
Power Consumption *(Maximum at full output, steady state)*	15 W
Power Factor	0.99 @ 120 VAC

Control

Dimmer‡

Compatible with selected commercially available reverse-phase ELV-type dimmers

Lumen Maintenance

Threshold§	Ambient Temperature	Reported¶	Calculated¶
L_{70}	25° C	90,000	
	50° C	50,000	
L_{50}	25° C	120,000	
	50° C	90,000	

Physical

Dimensions *(Height x Width x Depth)*	205 x 114 x 178 mm (8.06 x 4.5 x 7.0 in)
Weight	2 kg (4.4 lb)
Housing Material	Die-cast aluminium, powder-coated finish
Lens	Tempered glass
Fixture Connections	152 mm (6 in) flying leads
Temperature Ranges	-40° – 50° C (-40° – 122° F) Operating -20° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) Storage
Humidity	0 – 95%, non-condensing
Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/

Certification and Safety

Approbation	UL/cUL, FCC Class A, CE, C-Tick, CQC, SAA
Environment	Dry/Damp/Wet Location, IP66

* Correlated color temperature (CCT) complies with ANSI C78.377-2008 for the chromaticity of solid state lighting products.

† Lumen output measurements comply with IES LM-79-08 testing procedures.

‡ Refer to www.philipscolorkinetics.com/support/appnotes/ for more information.

§ Lxx = xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B10, or the median value where 90% of the LED population is better than the reported or calculated lumen maintenance measurement.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

RANDY BURKETT LIGHTING DESIGN

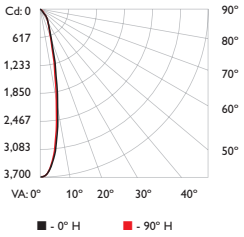
TYPE SD

eW Burst Compact Powercore Photometrics 4000 K, 23° spread lens

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

Beam Angle	23°
LED	4000 K
Lumens	674
Efficacy (lm/W)	44.6

Polar Candela Distribution



Candela Table

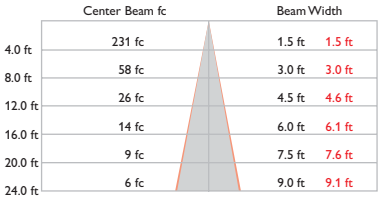
	0.0	45.0	90.0	135.0	180.0
0	3689	3689	3689	3689	3689
5	3161	3185	3190	3183	3185
15	984	986	968	924	902
25	163	159	152	138	130
35	47	47	48	45	45
45	19	21	22	22	24
55	7	9	10	12	12
65	2	3	4	5	6
75	0	1	1	2	2
85	0	0	0	1	1
90	0	0	0	0	1

Zonal Lumen

Zonal Lumen Summary

ZONE	LUMENS	%FIXT
0- 30	612	90.9
0- 40	642	95.3
0- 60	668	99.2
0- 90	674	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	674	100.0

Illuminance at Distance



18.5 m (60.7 ft)
1 fc maximum distance

Vert. Spread: 21.3°
Horiz. Spread: 21.5°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RC	80				70				50			30			10		0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	112	111	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96
2	111	107	104	101	109	105	103	100	102	100	98	99	98	96	97	95	94	93
3	107	102	99	96	105	101	98	95	99	96	94	96	94	92	94	92	91	89
4	104	98	94	91	102	97	93	91	95	92	90	93	91	89	92	89	88	86
5	101	95	90	87	99	94	90	87	92	89	86	91	88	86	89	87	85	84
6	98	91	87	84	96	91	87	84	89	86	83	88	85	83	87	84	82	81
7	95	88	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79
8	92	86	82	79	91	85	81	79	84	81	78	84	80	78	83	80	78	77
9	90	83	79	77	89	83	79	76	82	79	76	81	78	76	81	78	76	75
10	88	81	77	75	87	81	77	74	80	77	74	80	76	74	79	76	74	73

For lux multiply fc by 10.7

Fixture and Accessories

Use Item Number when ordering in North America.

Fixture	Item Number	Philips 12NC
eW Burst Compact Powercore *4000 K, Black Housing, UL/cUL/CE, Landscape*	523-000059-09	910503701925
Fixture only. Values in this specification sheet represent both the fixture and spread lens combined. Spread lens available below in Associated Part.		
Associated Part		
23° Spread lens	120-000080-05	910503701416
Trim Ring or Glare Shield required for mounting. Must be ordered separately.		
Accessories		
Trim Ring, Black	120-000103-09	910503701823
45° Glare Shield, Black	120-000103-10	910503701824
Full Height Glare Shield, Black	120-000103-11	910503701825
Honeycomb Louver, Black	120-000104-01	910503701419

DAS-000032-144 R01 16 Jun 2016

Philips Color Kinetics
www.philips.com/colorkinetics

gotham®

Luminaire Type:
Catalog Number (autopopulated):

Gotham Architectural Downlighting
LED Downlights

6" Evo®
Lensed Wallwash

Solid-State Lighting

FEATURES

OPTICAL SYSTEM
- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Proprietary mixing chamber delivers a uniform distribution of light to the wall
- Top-down flash characteristic
- For optimal uniformity, the recommended luminaire spacing is 3' from the wall and 3' centers

MECHANICAL SYSTEM
- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- Tested according to LM-79 and LM-80 standards
- Overload and short circuit protected
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional

LISTINGS
- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY
- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25° C.

ORDERING INFORMATION

A+ Capable options indicated by this color background.

EXAMPLE: EVO LW 35/10 6AR LSS MVOLT EZ1

Series	Type	Color temperature	Nominal lumen values		Aperture/Trim color	Finish	Voltage
EVO	**LW**	**27/** 2700 K **30/** 3000 K **35/** 3500 K **40/** 4000 K	**10** 1000 lumens **15** 1500 lumens **20** 2000 lumens **25** 2500 lumens	**30** 3000 lumens **35** 3500 lumens **40** 4000 lumens **45** 4500 lumens	**6AR** Clear **6PR** Pewter **6WTR** Wheat **6GR** Gold **6WR**[1] White **6BR**[1] Black	**LSS** Semi-specular **LD** Matte diffuse **LS** Specular	**MVOLT**[2] **120** **277** **347**

Driver[3]	
EZ10	eldoLED 0-10V ECOdrive. Linear dimming to 10% min.
EZ1	eldoLED 0-10V ECOdrive. Linear dimming to 1% min.
EZB	eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.
EDAB	eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.
EDXB	eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual.
EXA1	XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet.
EXAB	XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet.
ECOS2[4,5]	Lutron® Hi-Lume® 2-wire forward-phase driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 3000.
ECOS3[4,5]	Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%. Minimum lumen 1000/Maximum lumen 4500.

Options			
SF	Single fuse. Specify 120V or 277V.	**BGTD**	Bodine generator transfer device. Specify 120V or 277V.
TRW[6]	White painted flange	**CRI90**	High CRI (90+)
TRBL[7]	Black painted flange	**CP**[10]	Chicago plenum. Specify 120V or 277V.
EL[8]	Emergency battery pack with integral test switch	**RRL__**	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
ELR[8]	Emergency battery pack with remote test switch		
NPS80EZ[5]	nLight® dimming pack controls 0-10V eldoLED drivers.		
NPS80EZER[5,9]	nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.		

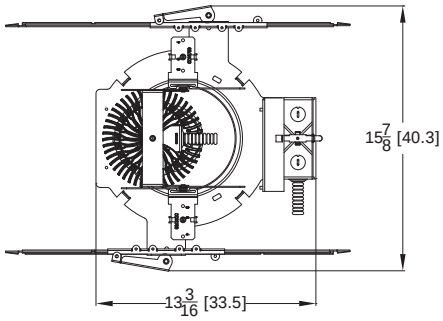
ACCESSORIES order as separate catalog numbers (shipped separately)	
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC.

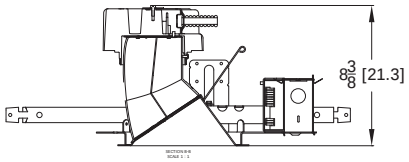
6" EVO
Lensed Wallwash
Solid-State Lighting

gotham®

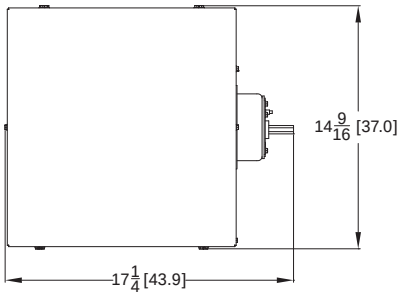
DIMENSIONAL DATA

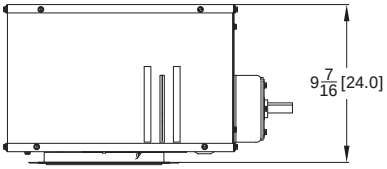
All dimensions are inches (centimeters) unless otherwise noted.

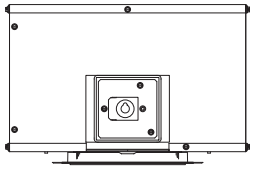




DIMENSIONS FOR CHICAGO PLENUM







ELECTRICAL

WATTAGE CONSUMPTION MATRIX			
LUMENS	**LM ACTUAL**	**WATTAGE**	**LUMENS per WATT**
1000	741	11.9	62.3
1500	1090	18.6	58.6
2000	1508	24.5	61.6
2500	1926	30.3	63.6
3000	2247	37.9	59.3
3500	2403	40.5	59.3
4000	2959	48.1	61.5
4500	3457	51.3	67.4

nLight® Control Accessories:
Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

WallPod stations	**Model number**	**Occupancy sensors**	**Model number**
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model number**	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
On/Off & Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model number**
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

NOTES

ORDERING NOTES

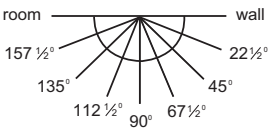
1. Not available with finishes.
2. Not available with EL or ELR options.
3. Refer to TECH-240 for compatible dimmers.
4. Not available with nLight® and XPoint options.
5. Specify voltage. ECOS2 not available in 277V.
6. Not available with white reflector.
7. Not available with black reflector.
8. For dimensional changes, refer to TECH-140. Not available with 347V.
9. For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
10. ELR not available. CP & ECOS2 - 3000 lumen max. CP & ECOS3 - 4000 lumen max. CP, ECOS2/ECOS3 & EL - 2000 lumen max.

gotham®

6" EVO
Lensed Wallwash
Solid-State Lighting

PHOTOMETRY

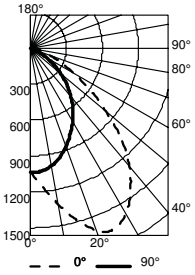
TECHNICAL INFORMATION
Footcandle values are initial and tables are based on minimum of six units. For fixture-to-wall distance other than those shown, use maximum of one-to-one spacing (distance between fixtures not more than distance to wall) for best results.



Candlepower Data | Footcandle values

EVO LW 35/25 4AR LS

INPUT WATTS: 30.31, DELIVERED LUMENS: 2022.3, LM/W = 66.72, TEST NO. ISF 31499P34



CP Summary

	0°	90
0°	1035	1035
5°	1161	1031
15°	1482	944
25°	1660	786
35°	1454	618
45°	1072	428
55°	602	231
65°	272	77
75°	112	7
85°	13	1
90	0	1

Coefficients of Utilization

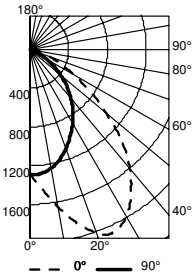
RCR	pf 20% pc 80% pw	70%	50%	30%	pf 20% pc 70% pw	50%	30%	10%	pf 20% pc 50% pw	50%	30%	10%
0		119	119	119		116	116	116		111	111	111
1		111	107	104		105	102	99		101	98	96
2		103	96	90		94	89	85		91	86	83
3		95	86	79		85	78	73		82	76	72
4		88	78	70		76	69	64		74	68	63
5		82	70	63		69	62	56		67	61	56
6		76	64	56		63	56	50		61	55	50
7		71	59	51		58	50	45		56	50	45
8		66	54	46		53	46	41		52	45	41
9		62	50	42		49	42	37		48	42	37
10		58	46	39		46	39	34		45	38	34

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	773	38.2	38.2
0° - 40°	1212	59.9	59.9
0° - 60°	1842	91.1	91.1
0° - 90°	2017	99.7	99.7
90° - 120°	2	0.1	0.1
90° - 130°	3	0.2	0.2
90° - 150°	5	0.2	0.2
90° - 180°	6	0.3	0.3
0° - 180°	2022	100.0	100.0

EVO LW 35/35 4AR LS

INPUT WATTS: 40.45, DELIVERED LUMENS: 2523.1, LM/W = 62.37, TEST NO. ISF 31499P40



CP Summary

	0°	90
0°	1292	1292
5°	1449	1286
15°	1849	1178
25°	2072	981
35°	1814	771
45°	1338	533
55°	751	289
65°	339	96
75°	140	8
85°	17	2
90	0	2

Coefficients of Utilization

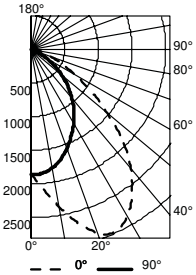
RCR	pf 20% pc 80% pw	70%	50%	30%	pf 20% pc 70% pw	50%	30%	10%	pf 20% pc 50% pw	50%	30%	10%
0		119	119	119		116	116	116		111	111	111
1		111	107	104		105	102	99		101	98	96
2		103	96	90		94	89	85		91	86	83
3		95	86	79		85	78	73		82	76	72
4		88	78	70		76	69	64		74	68	63
5		82	70	63		69	62	56		67	61	56
6		76	64	56		63	56	50		61	55	50
7		71	59	51		58	50	45		56	50	45
8		66	54	46		53	46	41		52	45	41
9		62	50	42		49	42	37		48	42	37
10		58	46	39		46	39	34		45	38	34

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	964	38.2	38.2
0° - 40°	1512	59.9	59.9
0° - 60°	2298	91.1	91.1
0° - 90°	2516	99.7	99.7
90° - 120°	3	0.1	0.1
90° - 130°	4	0.2	0.2
90° - 150°	6	0.2	0.2
90° - 180°	7	0.3	0.3
0° - 180°	2523	100.0	100.0

EVO LW 35/45 4AR LS

INPUT WATTS: 51.27, DELIVERED LUMENS: 3629.8, LM/W = 70.79, TEST NO. ISF 31499P46



CP Summary

	0°	90
0°	1858	1858
5°	2085	1850
15°	2661	1695
25°	2980	1411
35°	2610	1109
45°	1925	767
55°	1080	415
65°	488	138
75°	201	12
85°	24	2
90	0	2

Coefficients of Utilization

RCR	pf 20% pc 80% pw	70%	50%	30%	pf 20% pc 70% pw	50%	30%	10%	pf 20% pc 50% pw	50%	30%	10%
0		119	119	119		116	116	116		111	111	111
1		111	107	104		105	102	99		101	98	96
2		103	96	90		94	89	85		91	86	83
3		95	86	79		85	78	73		82	76	72
4		88	78	70		76	69	64		74	68	63
5		82	70	63		69	62	56		67	61	56
6		76	64	56		63	56	50		61	55	50
7		71	59	51		58	50	45		56	50	45
8		66	54	46		53	46	41		52	45	41
9		62	50	42		49	42	37		48	42	37
10		58	46	39		46	39	34		45	38	34

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1387	38.2	38.2
0° - 40°	2175	59.9	59.9
0° - 60°	3307	91.1	91.1
0° - 90°	3620	99.7	99.7
90° - 120°	4	0.1	0.1
90° - 130°	6	0.2	0.2
90° - 150°	8	0.2	0.2
90° - 180°	10	0.3	0.3
0° - 180°	3630	100.0	100.0

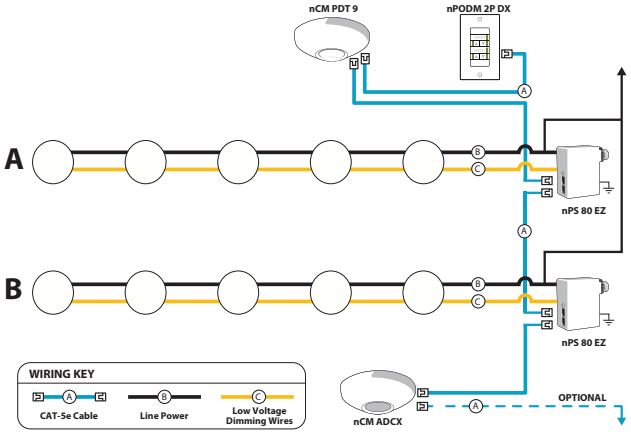
gotham®

Choose Wall Controls.
nLIGHT offers multiple styles of wall controls – each with varying features and user experience.

Push-Button WallPod
Traditional tactile buttons and LED user feedback

Touch WallPod
Contemporary capacitive touch style buttons with audible clicker for user feedback

Graphic WallPod
Full color touch screen provides a sophisticated look and feel



EXAMPLE
Group Fixture Control*
*Application diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

SECTION KEY

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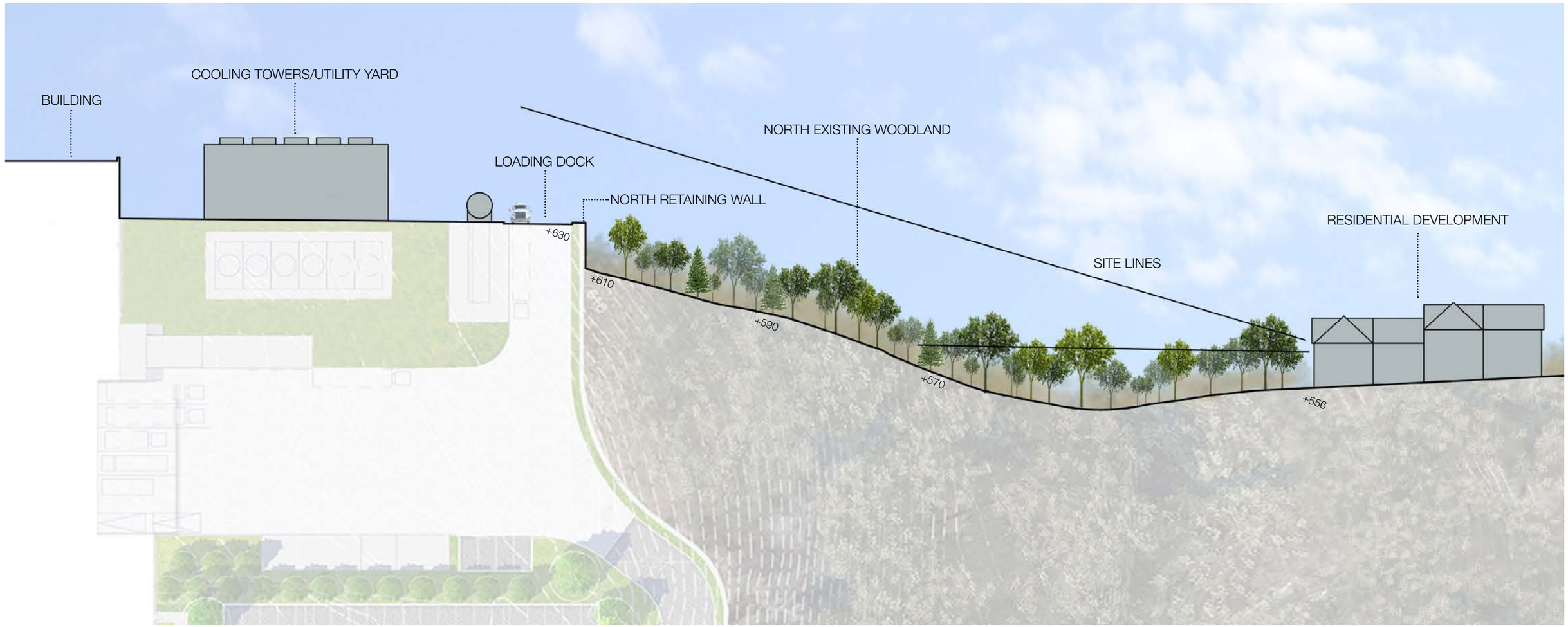
SITE SECTION - SITE LINE STUDY

PROJECT FIT - ARB RESUBMITTAL

DECEMBER 22, 2016

SECTION KEY



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RETAINING WALL & FENCE PLAN

PROJECT FIT - ARB RESUBMITTAL

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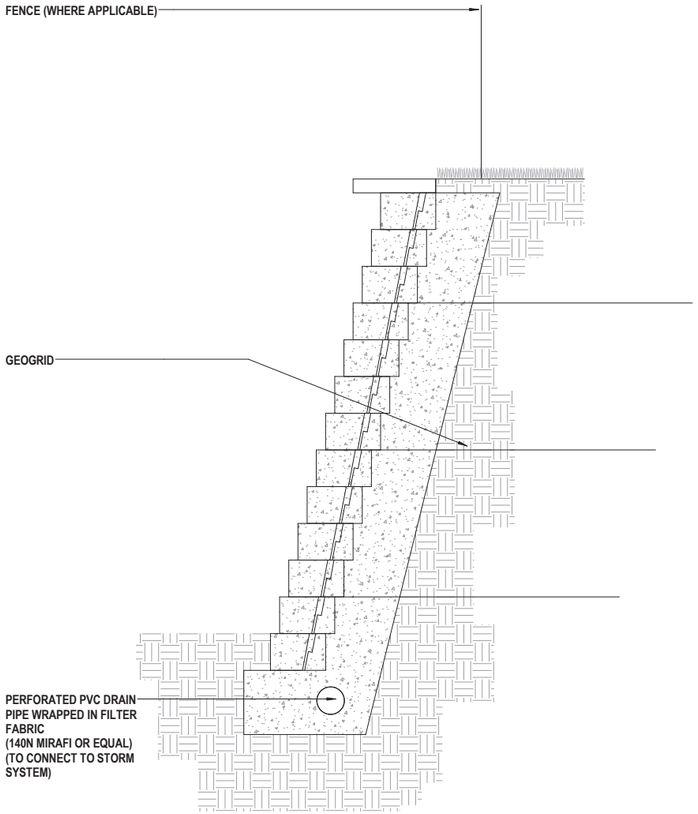
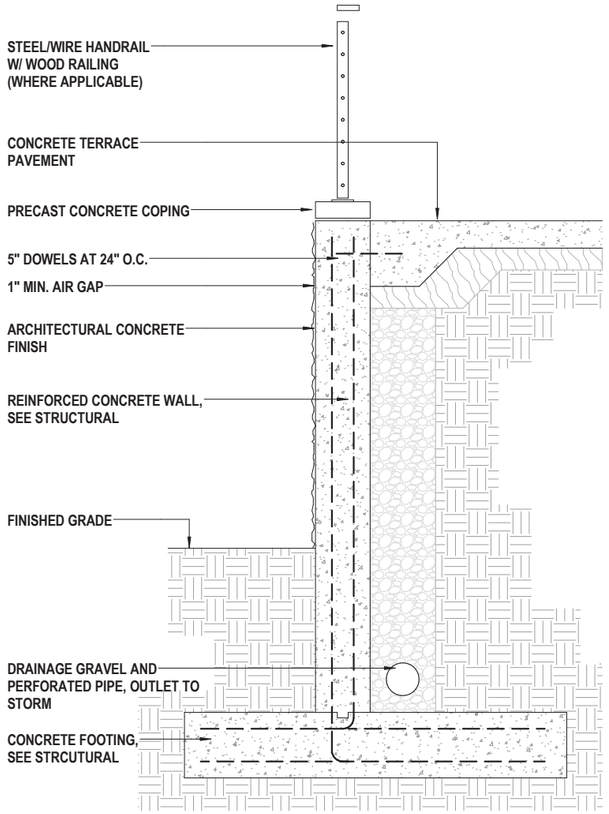


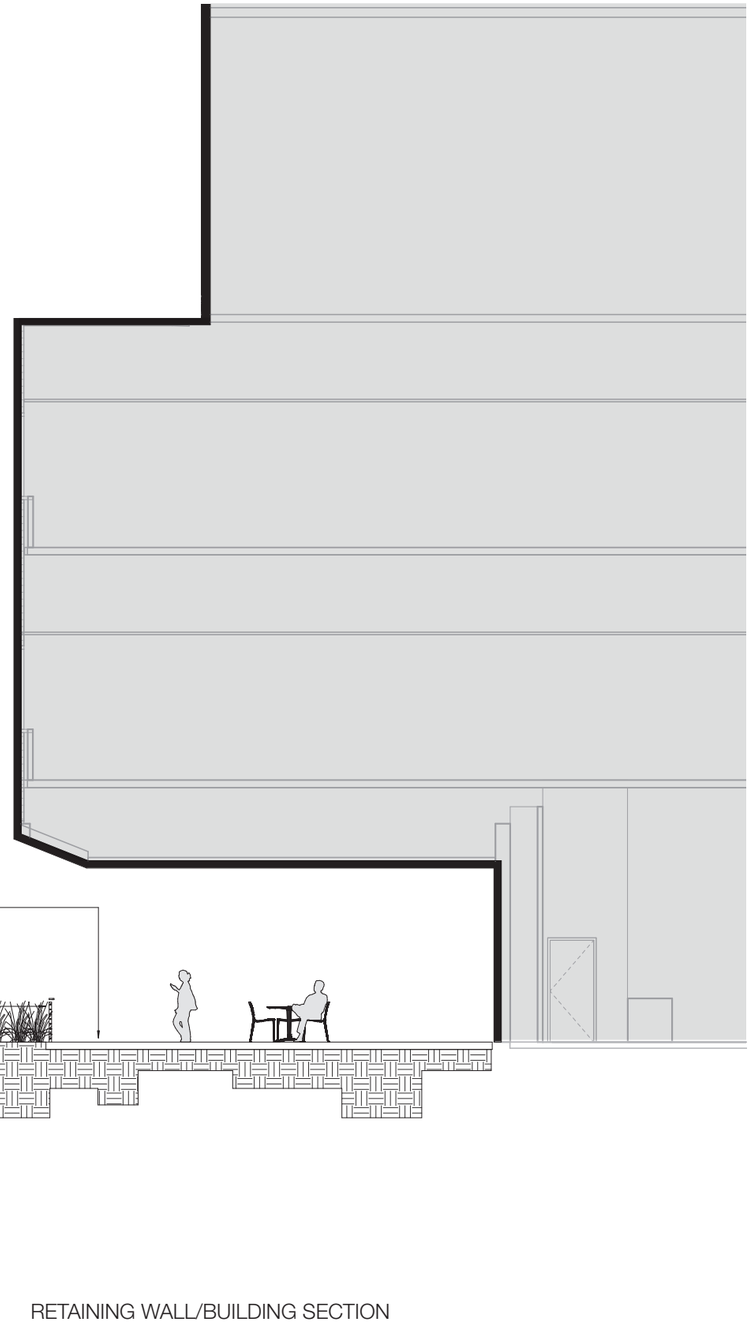
MODULAR RETAINING WALL: NTS



ARCHITECTURAL RETAINING WALL: NTS

GABION RETAINING WALL: NTS

SECURITY FENCE



RETAINING WALL/BUILDING SECTION

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DRY STACKED GABION WALL AT RGA

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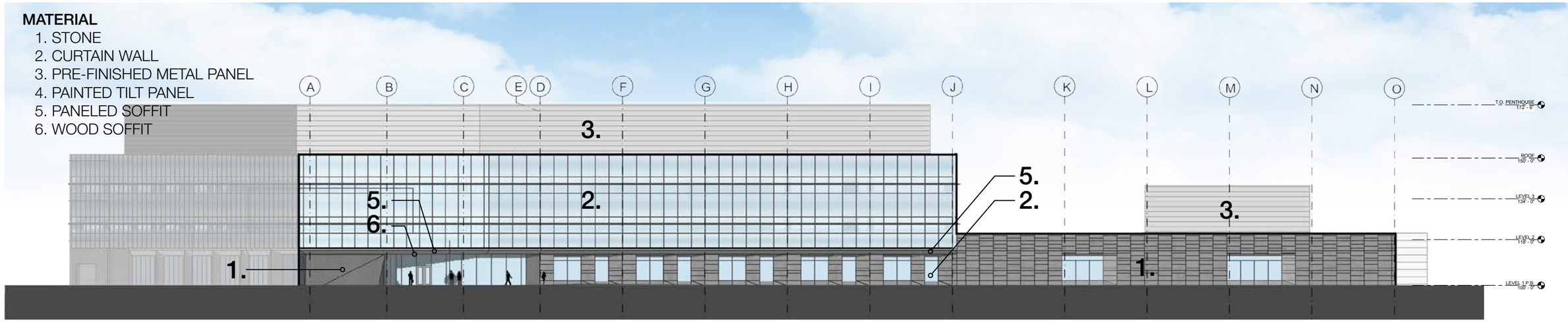
BUILDING RENDERING

PROJECT FIT - ARB RESUBMITTAL

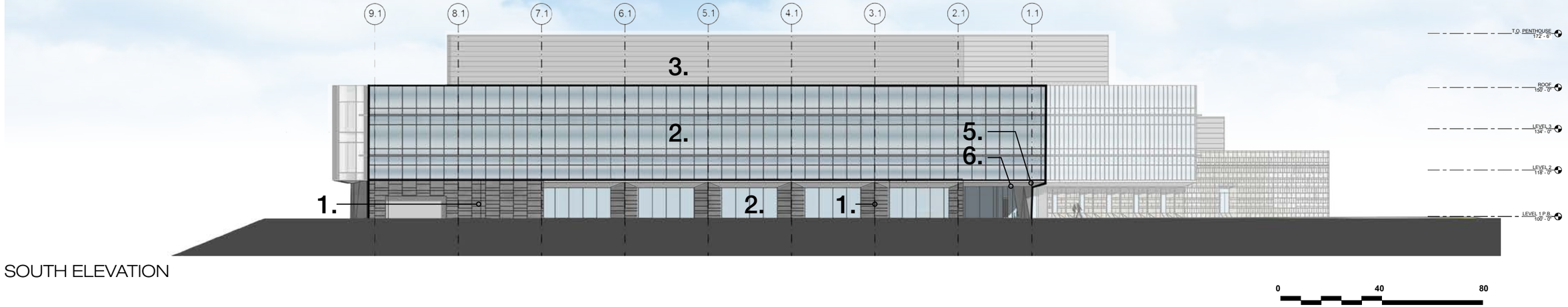
DECEMBER 22, 2016

MATERIAL

1. STONE
2. CURTAIN WALL
3. PRE-FINISHED METAL PANEL
4. PAINTED TILT PANEL
5. PANELED SOFFIT
6. WOOD SOFFIT



EAST ELEVATION



SOUTH ELEVATION

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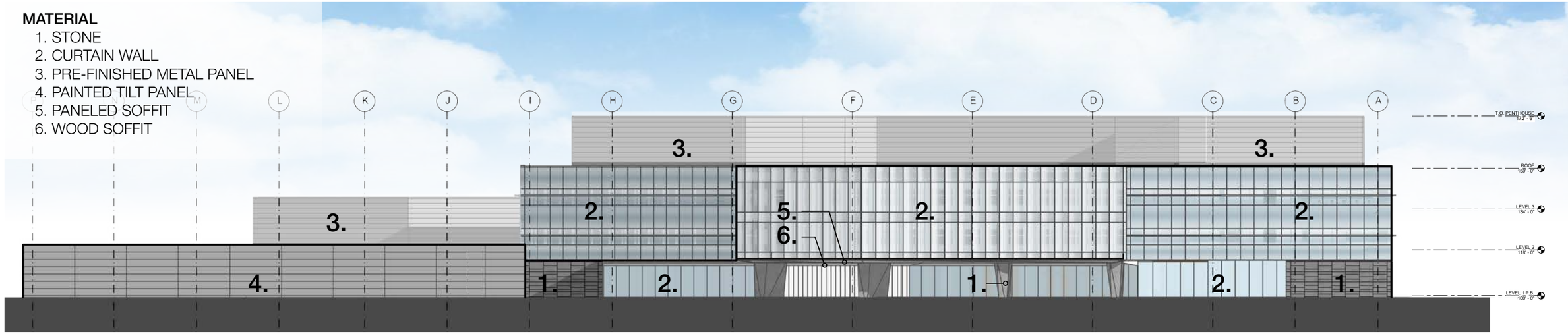
BUILDING ELEVATIONS

PROJECT FIT - ARB RESUBMITTAL

DECEMBER 22, 2016

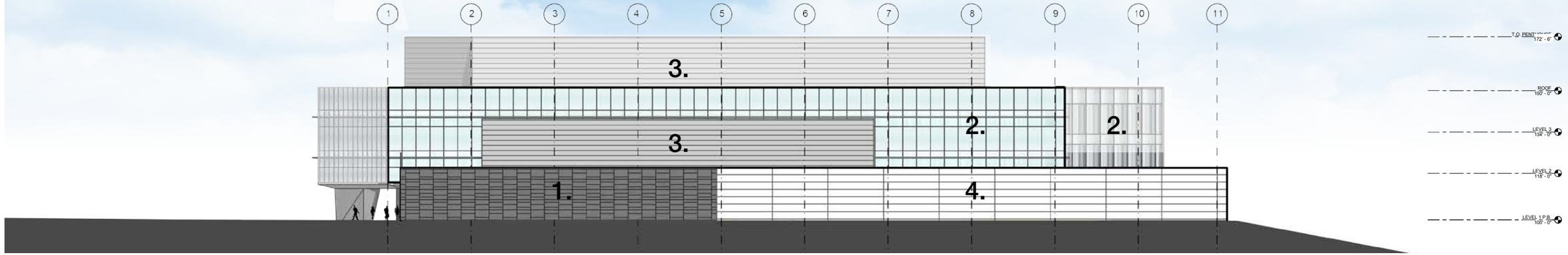
MATERIAL

1. STONE
2. CURTAIN WALL
3. PRE-FINISHED METAL PANEL
4. PAINTED TILT PANEL
5. PANELED SOFFIT
6. WOOD SOFFIT



WEST ELEVATION

0 40 80



NORTH ELEVATION

0 40 80

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