



# LED

# PBL G2 HD-4W | Premium LED Heavy Duty High Bay

#### Features:

- High performance LED technology
- 0-10V dimming drivers standard on all models - dimmable to <10% on all models, with most dimmable to 1%
- DALI drivers available based on configuration
- Field replaceable LED boards and drivers through Re-boardABILITY (more info on Page 3)
- Frosted diffusers available to help minimize glare and improve aesthetics
- A wide variety of lumen packages allows for flexibility in design and helps maximize energy savings
- Multiple controls options available
- The PBL G2's unibody design is surface mountable with easy access to the driver compartment from below
- Buy American Act compliant (All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details)

#### Applications:

Suitable for most commercial, industrial and institutional applications

- Gymnasiums
- Recreation Centers
- Manufacturing
- Warehouse
- Cold/Frozen Storage (cold temperature rules apply. Refer to warranty document at www.lumenfocus.com/support for details)

#### **Ambient Operating Temp.:**

- -30°C to 50°C for LW, MD, HI outputs
- -30°C to 40°C for VH output

#### Construction:

- Housing is precision brake formed from heavy duty 0.063" aluminum
- Pre-painted with a highly durable, highly reflective white finish

#### Certifications:

- UL 1598 listed for US and Canada, suitable for damp locations
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers) http://designlights.org/





#### **Predicted Lifetime:**

- L70: 169,000 hrs (calculated)
- L80: 104,000 hrs (calculated)
- L90: 47,000 hrs (reported)
- 86% lumen maintenance @ 72,000 hrs (based on LM-80, TM-21 and in-situ laboratory testina)

#### Warranty:

- 5 year limited system warranty -see <u>www.LumenFocus.com</u> for complete warranty terms and conditions
- 10 year warranty option available on specific models (Not available on all models. Certain conditions apply. Consult factory or sales representative for details)













#### Ordering Guide:

#### example: PBL G2 4W HI HE UV 850 HDW QC20 ZOSD C6

Series	Length	Output	Performance	Voltage	Shielding	CRI/CCT	Gauge	Hanging	Controls (1)	Options	Finish
PBL G2	4W						HDW				
PBL G2 Gen 2 Premium High Bay	<b>4W</b> 4'	LW Low MD Medium	Blank Standard  HE High Efficiency (Not available in	UV 120-277 <b>34</b> 347V	Blank No Lenses FR Frosted Acrylic Diffusers	835 80 CRI/3500K 840 80 CRI/4000K	HDW Heavy Duty 0.063" Aluminum Wide-Body Housing	Blank None QC 10' Quick Hang Cable Kit	Blank No Controls  ZOS Occupancy Sensor (On/Off)	Blank No Options  EXT10  10-Year Extended Warranty (3)	Blank White BK Matte Black
		<b>HI</b> High	VH model)	<b>48</b> 480V		<b>850</b> 80 CRI/5000K		QC20 20' Quick Hang	ZOSMHB Leviton Microwave 0-10V Multi-	C6 6' Single Circuit Cord	<b>SL</b> Metallic Silver
		<b>VH</b> Very High	Blank Standard					Cable Kit  PMS  Pendant Mount	Level Occupancy Sensor with Photocell  ZOSD	C65W 6' Single Circuit Cord with Low Voltage	
				ı		I		with Stabilizer  ST(x) 3/4" Stem	0-10V Dimming Occupancy Sensor with Daylight Harvesting <b>Z221B</b> xx <sup>(2)</sup>	Connections  C10  10' Single Circuit Cord	

#### **Notes**

(1) See 'Control Summary' on Page 4 for more details.

 $^{(2)}$ 'xx' = select lens type based on mounting height and coverage area. See 'Control Summary' on Page 4 for more details.

(3) Not available on all models. Certain conditions apply. Consult factory or sales representative for details.

(4) 120-277V / 0°C-55°C ambient. To estimate lumen output in emergency mode, multiply EM wattage by the Lumens per Watt of the luminaire it is installed in.

ex. PBL G2 4W HI UV 850 HDW EM14  $\rightarrow$  168.9 LPW x 14W = 2,365 lm

#### Accessories (order separately)

WG(PBL4W) Wire Guard

WGE(PBL4W) Extended Wire Guard for use with end-mounted sensor

### Controls Accessories (order separately)

Accessory Code	Description	Control Compatibility	Additional Info
ZLSOR	Wireless IR Configuration Tool	ZOSMHB	pg. 4
FSIR-100	Wireless IR Configuration Tool	Z221Bxx	pg. 4
KTSL-WS1-B-SG/G2	5-Button Bluetooth Wireless Wall Switch (battery powered)	ZSLHB	pg. 5
KTSL-TK1-USB	USB Time Keeper	ZSLHB	pg. 5
ZBT-S1AWH	Single Rocker ZigBee Wireless Wall Switch (self powered)	ZESMC	pg. 5
ZBT-S2AWH	Dual Rocker ZigBee Wireless Wall Switch (self powered)	ZESMC	pg. 5
WP1013	3-Button Bluetooth Wireless Wall Switch (battery powered)	ZLTSxx, ZLTC	pg. 6
WP1025	5-Button Bluetooth Wireless Wall Switch (battery powered)	ZLTSxx, ZLTC	pg. 6
WP1018	8-Button Bluetooth Wireless Wall Switch (battery powered)	ZLTSxx, ZLTC	pg. 6
WP1018A	8-Button Bluetooth Wireless Wall Switch (battery powered)	ZLTSxx, ZLTC	pg. 6
WP10135S	3-Button Bluetooth Wireless Wall Switch (line voltage)	ZLTSxx, ZLTC	pg. 6
WP1017S	7-Button Bluetooth Wireless Wall Switch (line voltage)	ZLTSxx, ZLTC	pg. 6
IWS102	Bluetooth Wireless Wall Switch w/ PIR Sensor (line voltage)	ZLTC	pg. 6

#### Z221Bxx (2)

(Specify Length)

Wattstopper Programmable 0-10V Multi-Level Occupancy Sensor with Photocell, Task Tunina

#### Z321Bxx (2)

Wattstopper Bluetooth-enabled Programmable 0-10V Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning

#### ZOFD1

Leviton Bluetooth-enabled Programmable 0-10V Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning, Grouping

#### **ZOFDU**

Leviton Bluetooth-enabled Programmable 0-10V Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning, Grouping, Scheduling

#### **ZSLHB**

Keystone SmartLoop Bluetoothenabled Programmable 0-10V Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning, Grouping, Scheduling

#### **ZESMC**

Philips EasySense Bluetooth-enabled Programmable DALI Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning, Grouping, Scheduling

#### ZLTSxx<sup>(2)</sup>

LiteTrace Bluetooth-enabled Programmable 0-10V Dimming Occupancy Sensor with Daylight Harvesting, Task Tuning, Grouping, Scheduling, and Advanced Networking & IoT Capabilities

#### **ZLTC**

LiteTrace Bluetooth-enabled Programmable 0-10V fixture controller with Task Tuning, Grouping, Scheduling, and Advanced Networking & IoT Capabilities

10' Single Circuit Cord

#### C105W

10' Single Circuit Cord with Low Voltage Connections

#### D<sub>6</sub>

6' Dual Circuit Cord

#### D10

10' Dual Circuit Cord

#### P(NEMA)

Plug (Specify NEMA configuration)

#### SC Safety Cable

#### F Fuse

#### EM6

6.5W Emergency Pack <sup>(4)</sup>

#### EM10

10W Emergency Pack <sup>(4)</sup>

#### **EM14**

14W Emergency Pack <sup>(4)</sup>

#### EM20

20W Emergency Pack <sup>(4)</sup>

#### SDT(480V)

480V to 277V Step Down Transformer

#### CC Conformal Coating

0-10V Dimming Leads

#### for Easy Field Access BAA

Buy American Act Compliant



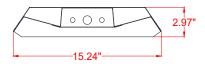


#### Performance Chart:

Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW
PBL G2 4W LW HE UV 835	31232	181	172.8	PBL G2 4W LW HE UV 840	32352	181	179.0	PBL G2 4W LW HE UV 850	32352	181	179.0
PBL G2 4W MD HE UV 835	35088	205	170.9	PBL G2 4W MD HE UV 840	36346	205	177.0	PBL G2 4W MD HE UV 850	36346	205	177.0
PBL G2 4W HI HE UV 835	38922	235	166.0	PBL G2 4W HI HE UV 840	40317	235	171.9	PBL G2 4W HI HE UV 850	40317	235	171.9
PBL G2 4W LW UV 835	31480	187	168.0	PBL G2 4W LW UV 840	32609	187	174.0	PBL G2 4W LW UV 850	32609	187	174.0
PBL G2 4W MD UV 835	35346	215	164.3	PBL G2 4W MD UV 840	36613	215	170.2	PBL G2 4W MD UV 850	36613	215	170.2
PBL G2 4W HI UV 835	39908	245	163.1	PBL G2 4W HI UV 840	41339	245	168.9	PBL G2 4W HI UV 850	41339	245	168.9
PBL G2 4W VH UV 835	51939	320	162.5	PBL G2 4W VH UV 840	53801	320	168.4	PBL G2 4W VH UV 850	53801	320	168.4
PBL G2 4W LW HE UV FR 835	29361	181	162.5	PBL G2 4W LW HE UV FR 840	30413	181	168.3	PBL G2 4W LW HE UV FR 850	30413	181	168.3
PBL G2 4W MD HE UV FR 835	32986	205	160.7	PBL G2 4W MD HE UV FR 840	34168	205	166.4	PBL G2 4W MD HE UV FR 850	34168	205	166.4
PBL G2 4W HI HE UV FR 835	36590	235	156.0	PBL G2 4W HI HE UV FR 840	37902	235	161.6	PBL G2 4W HI HE UV FR 850	37902	235	161.6
PBL G2 4W LW UV FR 835	29594	187	157.9	PBL G2 4W LW UV FR 840	30655	187	163.6	PBL G2 4W LW UV FR 850	30655	187	163.6
PBL G2 4W MD UV FR 835	33228	215	154.5	PBL G2 4W MD UV FR 840	34419	215	160.0	PBL G2 4W MD UV FR 850	34419	215	160.0
PBL G2 4W HI UV FR 835	37643	245	154.0	PBL G2 4W HI UV FR 840	38992	245	159.5	PBL G2 4W HI UV FR 850	38992	245	159.5
PBL G2 4W VH UV FR 835	48897	320	153.0	PBL G2 4W VH UV FR 840	50649	320	158.5	PBL G2 4W VH UV FR 850	50649	320	158.5

Lumen Adjustment Factors: WG: 0.95

#### Schematic:







The PBL G2 HD features field replaceable boards and drivers. This allows you to upgrade to more efficient technology in the future. Or, in the rare event of a failure, you can rapidly replace defective components. Re-boardABILITY helps to ensure you won't get stuck with an obsolete light fixture. Learn more about Re-boardABILITY here.





<u>Click here for a video demonstration of the re-boarding process on a PBL.</u>

Note: Exact time varies depending on the model







#### **Controls Summary:**

Control Code	Occupancy	Daylight	Tech	Voltage	Dim	Max Mounting Ht.	Networking	Scheduling	BMS Integration	User Interface	Add. Info
zos	On/Off	N/A	PIR	120-347V, 480V	N/A	20', 40', Aisle Mask (all included)	N/A	×	×	On Device	-
ZOSMHB	On/Low/Off	Hold Off	Microwave	120/277V	0-10V	50'	N/A	Х	Х	On Device, IR Remote*	pg. 4
ZOSD	On/Low/Off	Daylight Harvesting	PIR	120-277V, 347V	0-10V	20', 40', Aisle Mask (all included)	N/A	X	X	On Device	-
Z221Bxx	High/Low/Off	High/Low/ Off	PIR	120-347V, 480V	0-10V	L2   L3   L7 8'   20'   40' (select one)	N/A	Х	X	IR Remote*	pg. 4
Z321Bxx	High/Low/Off	Daylight Harvesting	PIR	120-347V, 480V	0-10V	L2   L3   L7 8'   20'   40' (select one)	N/A	X	X	iOS / Android App	pg. 4
ZOFD1	High/Low/Off	Daylight Harvesting	PIR	120-277V	0-10V	20', 40', Aisle Mask (all included)	Bluetooth Mesh	X	X	iOS / Android App	pg. 4
ZOFDU	High/Low/Off	Daylight Harvesting	PIR	120-277V, 347V, 480V	0-10V	20', 40', Aisle Mask (all included)	Bluetooth Mesh	✓	Х	iOS / Android App	pg. 4
ZSLHB	High/Low/Off	Daylight Harvesting	PIR	120-277V	0-10V	40'	Bluetooth Mesh	✓	Х	iOS / Android App, Wireless Wall Switch*	pg. 5
ZESMC	High/Low/Off	Daylight Harvesting	PIR	DALI-2 (120-277V)	DALI	52'	ZigBee 2.4GHz Mesh	✓	X	iOS / Android App, Wireless Wall Switch*	pg. 5
ZLTSxx	High/Low/Off	Daylight Harvesting	PIR	120-277V	0-10V	MBL1   HBL1   HBL2 20'   40'   50' (select one)	Bluetooth LE Mesh	✓	✓	iOS / Android App, Wireless Wall Switch*, Autani Web Interface*	pg. 6
ZLTC	N/A	N/A	N/A	12VDC	0-10V	N/A	Bluetooth LE Mesh	✓	✓	iOS / Android App, Wireless Wall Switch*, Autani Web Interface*	pg. 6

<sup>\*</sup> Sold Separately

# **Programmable Dimming Sensors:**

#### **ZOSMHB Sensor Option**

- Provides occupancy detection and multi-level control with adjustable time-outs
- Tri-level dimming control
- Comes pre-installed on the end cap
- Suitable for cold storage locations
- Built-in photocell reads brightness values. Sensor does not switch luminaire on if there is suffcient ambient light
- Control parameters selected manually via DIP switches, or using the optional ZLSOR remote (sold separately) - adjustable parameters include sensitivity, hold time, lux level, stand-by light level, stand-by hold time
- Maximum mounting height of 50 feet, with adjustable coverage radius up to 30 feet





#### Z221B, Z321B Sensor Options

- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the end cap
- Rated for cold locations
- Parameters for Bluetooth-enabled Z321B adjustable via phone app - iOS or Android
- Parameters for Z221B adjustable via wireless configuration tool (FSIR-100 - sold separately)
- Three lenses available, tailored for the ideal detection area and mounting height:
  - L2: 360° lens, maximum coverage 48' diameter from **8' height**
  - L3: 360° lens, maximum coverage
     40' diameter from 20' height
  - L7: 360° lens, maximum coverage 100' diameter from **40' height**

#### **ZOFDx Sensor Option**

- Leviton Smart IP66 passive infrared (PIR) sensors
- Features mesh grouping (16 devices per group), occupancy sensing, daylight harvesting, scheduling (for ZOSFDU only), single-level switching
- Comes pre-installed on the end cap
- Rated for cold locations
- Configurable through the Leviton Smart Sensor App using a smartphone or other Bluetooth-enabled iOS or Android device



The ZOFD option includes four sensor lenses that can easily be installed or swapped out in the field. From left: the **high bay lens (20'-40' mounting)**, the high bay lens with aisleway mask, the **low bay lens (8'-20' mounting)**, and the low bay lens with aisleway mask.





#### **Keystone SmartLoop** Wireless Control System

The SmartLoop wireless lighting control system by Keystone is a Bluetooth mesh lighting control system that allows you to set up and manage your lighting ecosystem quickly and easily. It's powerful enough to run a space with multiple lighting zones, but simple enough to program in minutes with your smartphone – perfect for warehouses, offices, schools, and auditoriums, whether new construction or retrofit.

- Wireless Bluetooth 2.4 GHz mesh network
- Supports up to 100 devices on a single region, with unlimited regions
- Independent per-fixture control: Occupancy, Daylight Harvesting, Task Tuning, Grouping, Scene Setting, Scheduling
- Commissioned via SmartLoop mobile app for iPhone and Android



- External Line Voltage High Bay Sensor, Side-Mount
- 120-277VAC Input
- PIR + Daylight Harvesting
- IP40 Rated
- 0-10V DC dimmable
- Up to 40' mounting height. 40' radius at 40' height.

#### **SmartLoop Accessories**

- Bluetooth Wireless Wall Switch: KTSL-WS1-B-SG/G2
  - Battery Powered: 2x CR2032
  - 5 Button: Power Toggle, Dimming, Automatic Sensor/Preset Level Operation, Scene Activation



- USB Time Keeper: KTSL-TK1-USB
  - Relays time to system components after a power loss
  - Powered by standard USB charging port
  - Internal CR1220 battery backup



#### Philips EasySense Wireless Control System

EasySense MC Sensors are the ideal solution for per-luminaire control of new LED luminaires. It combines occupancy and daylight sensing in one package. The result is a cost-effective and easy-to-install solution ideal for energy savings. Commissioning and configuration during and after installation is quick and easy using the Philips MasterConnect app. This app works via Bluetooth Low Energy (BLE) technology and is available for free in the App Store and the Google Play Store.



- Occupancy sensing, daylight harvesting, and task tuning in one device
- up to 52' mounting height. 26' radius at 52' height.
- Groups/networks up to 120 lights
- Enables auto-off/manual-on and auto-off/partial-on application
- Independent per-fixture control: Occupancy, Daylight Harvesting, Task Tuning
- Occupancy Sharing
- Scene Setting
- Advanced grouping to select Zigbee wireless wall switches
- Simple room level energy reporting with CSV file saved on the phone
- ZigBee 2.4 GHz Wireless Mesh Network
- Works with Advance Xitanium SR 120-277V drivers or other D4i certified LED drivers

#### Room Controllers

- Illumra ZBT-S1AWH (Single Rocker) or ZBT-S2AWH (Dual Rocker) wireless Zigbee wall switch
  - Self-Powered
  - Up to 120 sensors can be grouped to a single switch
  - Functions: On/Off, Dim-Up/Dim-Down,
     Scene 1, Scene 2 (Scenes: Dual Rocker Only)
  - Range: 30-100' (typical)





**ZBT-S1AWH** 

**ZBT-S2AWH** 





#### LiteTrace | Keilton+autani: Wireless networked controls, upgradeable systems

LiteTrace makes your existing building smarter by integrating the Keilton lighting controls platform with Autani's proven energy management, reporting, and control platform. Keilton+autani systems are flexible, adaptable, and resilient, providing solutions designed to scale up without having to change hardware.

Scalable product tiers allow implementing a solution aligned to your current needs, with robust upgrade pathways to expand capabilities as requirements

Capabilities	Keilton +autani (ZLTSx)	Energy Center by Autani *	Autani Insights *
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting	✓	✓	✓
Energy Reporting & Optimization	✓	✓	✓
Overrides & Automated Demand Response	✓	✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management & System Integration		✓	✓
Building Optimization Application			✓
Location & Occupancy APIs & Beaconing			✓
Future App & API Ready			✓

<sup>\*</sup> additional hardware and software required.



An easy and affordable stand-alone (gateway-free) Keilton Afficasy and anormatic stand control solution room-based Bluetooth lighting control solution + **autani** controllable via mobile app (iOS & Android).





A networked control solution which offers additional functionality such as advanced scheduling, reporting, metering, and building management integration.





The most advanced offering, providing valuable data insights into a single building or a portfolio of buildings. This allows for asset tracking, campus-wide wayfinding, 3D facility monitoring and more.



# **ZLTSxx**

- External Line Voltage High Bay Sensor, Side-Mount
- 120-277VAC Input
- PIR + Daylight Harvesting
- 50-ft max mounting height (with HBL3 lens)
- IP40 Rated
- 0-10V DC dimmable
- Bluetooth-enabled
- Replaceable lens options
  - MBL1: Mid Bay Lens
    - 360° coverage
    - 8' 20' mounting height
    - up to 50' diameter @ 20' height
  - HBL1: High Bay Lens
    - 360° coverage
    - 20' 40' mounting height
    - up to 64' diameter @ 40' height
  - HBL3: High Bay Lens
    - 360° coverage
    - 20' 50' mounting height
    - up to 100' diameter @ 50' height



- Wireless 0-10V fixture controller
- Integral Bluetooth module
- 12VDC Input

## Room Controllers



#### **Battery Powered**

- 3-, 5-, and 8-button configurations
- Bluetooth Enabled
- 1 x CR2032 battery (WP1013, WP1025, WP1018)
- 2 x AAA batteries (WP1018A)
- Approx. 3 year battery life (batteries not included)



#### Line Voltage

- 3-, 7-button configurations, and Occ/Vac Sensor Switch
- · Line voltage powered: 120-277V
- Bluetooth Enabled





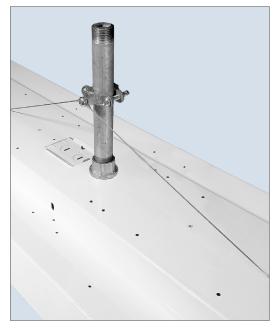
# Mounting:



#### Surface Mount

The PBL G2 is designed to be easily mounted to any sturdy surface. Simply remove the hex head screws holding the driver cover (top picture, in green) to access the bottom of the housing below. The housing can be mounted to the surface from the four holes in each corner of the channel (bottom picture, circled).





**Pendant Mount** The PBL G2 HD can be pendant mounted with optional 3/4" hub with stabilizer. Stem also available as an option.

# Other Options:



**Shielding** Frosted acrylic diffuser lenses minimize glare and improve aesthetics.



Conformal coating
Grants LED boards added

protection from moisture and corrosion in more hazardous environments.



Cords are available in single

circuit or dual circuit, 6' or 10'.

Standard plug is optional, as

if specified.

are other NEMA configurations

#### Finish

In addition to the standard white finish, the PBL G2 is also available in matte black (BK) and metallic silver (SL).









#### Photometric Data:

#### **PBL G2 4W HI UV 835**

**Test No.:** LLIA001249-018 Luminaire Lumens: 39,908 lm Luminaire Watts: 244.7W Efficacy: 163.1 LPW

Spacing Criterion (0-180): 1.30 Spacing Criterion (90-270): 1.28

#### Luminance Data (cd/sq.m)

Average Angle In Áverage Average Degrees 0-Deg 45-Deg 90-Deg 30593 30291 30442 45 55 65 75 85 29761 27711 23282 29618 29966 28055 28978 19846 25736 7965 11896 8772

#### Coefficients Of Utilization - Zonal Cavity Method **Effective Floor Cavity Reflectance 0.20**

RC		80				70				50			30	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40
7	65	51	42	36	63	50	42	36	49	41	35	47	40	35
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08

# - Vert. Plane - Horiz. Cone

Zonal Lumen Summary										
Zone	Lumens	%Fixt								
0-20	4981.0	12.5								
0-30	10638.8	26.7								
0-40	17560.3	44.0								
0-60	31554.8	79.1								
0-80	39430.4	98.8								
0-90	39903.4	100.0								
90-120	4.9	0.0								
90-130	4.9	0.0								
90-150	4.9	0.0								
90-180	4.9	0.0								
0-180	39908.3	100.0								

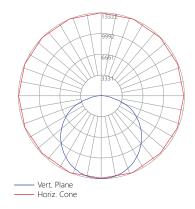
#### **PBL G2 4W HI UV FR 835**

Luminance Data (cd/sq.m) Angle In Average Average Average Test No.: LLIA001249-017 45-Deg Degrees 0-Deg 90-Deg Luminaire Lumens: 37,642 lm 26412 28093 29255 Luminaire Watts: 244.5W 55 23080 26980 29045 Efficacy: 154.0 LPW 65 75 85 18768 25886 29166 Spacing Criterion (0-180): 1.26 25596 14113 24202 Spacing Criterion (90-270): 1.28 19679 9293 18117

#### Coefficients Of Utilization - Zonal Cavity Method **Effective Floor Cavity Reflectance 0.20**

RC		80				70				50			30	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106
1	109	104	99	95	106	101	98	94	97	94	91	93	91	88
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08



Zonal Lumen Summary										
Zone	Lumens	%Fixt								
0-20	4849.4	12.9								
0-30	10293.6	27.3								
0-40	16834.1	44.7								
0-60	29545.3	78.5								
0-80	36824.6	97.8								
0-90	37618.5	99.9								
90-120	24.0	0.1								
90-130	24.0	0.1								
90-150	24.0	0.1								
90-180	24.0	0.1								
0-180	37642.5	100.0								

