

**Note:** This product has been discontinued and replaced with the PBL V2 HD.



Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat. #: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Quantity: \_\_\_\_\_

**LED**

## PBL 4W HD | 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

### Applications:

Suitable for most commercial, industrial and institutional applications

- Gymnasiums
- Recreation Centers
- Manufacturing
- Warehouse
- Cold/Frozen Storage

### Ambient Operating Temp.:

- -30°C to 40°C

### Predicted L70 Lifetime:

- Up to 189,000 hrs (calculated)  
*(L70 information for specific configurations available upon request)*
- For BAA compliant configurations - up to 189,000 hrs (calculated)



**10** YEAR  
 EXTENDED  
 WARRANTY  
 AVAILABLE ON  
 CERTAIN MODELS

### 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



### Warranty:

- 5 year limited system warranty - see [www.LumenFocus.com](http://www.LumenFocus.com) 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 4W HI UV FR 850 HDW PMS ST(18") OS WG

Series	Length	Output	Performance	Voltage	Shielding	CRI/CCT	Gauge	Hanging	Controls	Options	Finish
PBL	4W						HDW				
PBL	4W 4'	LW Low	Blank Standard	UV 120-277	Blank No Lenses	835 80 CRI/3500K	HDW Heavy Duty 0.063" Aluminum Wide-Body Housing	Blank None	Blank No Controls	Blank No Options	Blank White
		MD Medium	HE High Efficiency (Not Available in VH or SH)	34 347V	FR Frosted Acrylic Diffusers	840 80 CRI/4000K	QC 10' Quick Hang Cable Kit	ZOS Occupancy Sensor (On/Off)	ZOSD Occupancy Sensor (On/Off/Dim)	EXT10 10-Year Extended Warranty <sup>(4)</sup>	BK Matte Black
		HI High		48 480V		850 80 CRI/5000K	QC20 20' Quick Hang Cable Kit	Z221BL_ Wattstopper Programmable Photo/ Motion Multi-Voltage Sensor (high/low/off) <sup>(1)</sup>	C6 6' Single Circuit Cord	C10 10' Single Circuit Cord	SL Metallic Silver
		VH Very High	Blank Standard				PMS Pendant Mount with Stabilizer	Z321BL_ Wattstopper Bluetooth- enabled Programmable Photo/Motion Multi- Voltage Sensor (high/low/off) <sup>(1)</sup>	C65W 6' Single Circuit Cord with Low Voltage Connections	C105W 10' Single Circuit Cord with Low Voltage Connections	
		SH Super High				ST(x) 3/4" Stem (Specify Length)	ZPC Photocell	ZFMS Douglas FMS Sensor with Dimming/Occupancy/ Daylight Harvesting with Nework Capabilities <sup>(2)</sup>	D6 6' Dual Circuit Cord		

Notes

- <sup>(1)</sup> " \_ " = lens type. See Page 6 for lens descriptions.
- <sup>(2)</sup> Max ceiling height for Douglas FMS sensor: 40 feet. See Page 5 for more details on advanced controls.
- <sup>(3)</sup> Max ceiling height for Enlighted Ruggedized sensor 50 feet. See Page 5 for more details on advanced controls.
- <sup>(4)</sup> Not available on all models. Certain conditions apply. Consult factory or sales representative for details.
- <sup>(5)</sup> EM2 - Up to 16W. 120-277V / 0°C-50°C ambient.

Controls Accessories (order separately)



For Douglas Controls

- BT-DMSW-U-A Bluetooth 1 Zone Dimmer
- BT-4BTSW-U-A Bluetooth 4-Button Wall Station
- BT-8BTSW-U-A Bluetooth 8-Button Wall Station



For Enlighted Controls

- WS-2-00 Enlighted Remote Control Wall Switch (for Enlighted Connected & IoT)
- WS-2-00-IL Enlighted Remote Control Wall Switch (for Enlighted One)

ZENLO  
Enlighted Ruggedized  
Sensor with Dimming/  
Occupancy/Daylight  
Harvesting and Enlighted  
One System<sup>(3)</sup>

ZENLC  
Enlighted Ruggedized  
Sensor with Dimming/  
Occupancy/Daylight  
Harvesting and Enlighted  
Connected System<sup>(3)</sup>

ZENLI  
Enlighted Ruggedized  
Sensor with Dimming/  
Occupancy/Daylight  
Harvesting and Enlighted  
IoT System<sup>(3)</sup>

WG  
Wire Guard

WGE  
Extended Wire Guard  
for End-Mounted  
Sensor

SC  
Safety Cable

F  
Fuse

EM2  
Emergency Pack<sup>(5)</sup>

SDT(480V)  
480V to 277V Step  
Down Transformer

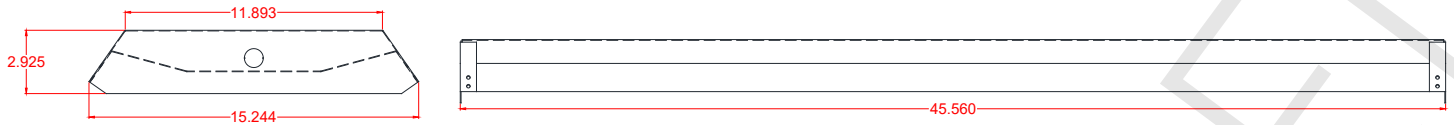
CC  
Conformal Coating

LVL  
0-10V Dimming Leads  
for Easy Field Access

BAA  
Buy American Act  
Compliant



Schematic:



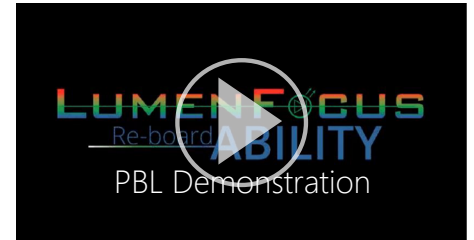
Performance Chart:

Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW
PBL 4W LW HE UV 835	27935	172	162.4	PBL 4W LW HE UV 840	28710	172	166.9	PBL 4W LW HE UV 850	29485	172	171.4
PBL 4W MD HE UV 835	34279	214	160.2	PBL 4W MD HE UV 840	35230	214	164.6	PBL 4W MD HE UV 850	36181	214	169.1
PBL 4W HI HE UV 835	38321	246	155.8	PBL 4W HI HE UV 840	39384	246	160.1	PBL 4W HI HE UV 850	40447	246	164.4
PBL 4W LW UV 835	29538	189	156.3	PBL 4W LW UV 840	30358	189	160.6	PBL 4W LW UV 850	31178	189	165.1
PBL 4W MD UV 835	34628	226	153.2	PBL 4W MD UV 840	35589	226	157.4	PBL 4W MD UV 850	36550	226	161.7
PBL 4W HI UV 835	38979	261	149.3	PBL 4W HI UV 840	40061	261	153.4	PBL 4W HI UV 850	41143	261	157.6
PBL 4W VH UV 835	50727	337	150.5	PBL 4W VH UV 840	52135	337	154.7	PBL 4W VH UV 850	53543	337	158.9
PBL 4W SH UV 835	64345	390	165.1	PBL 4W SH UV 840	66472	390	170.6	PBL 4W SH UV 850	68267	390	175.2

Lumen Adjustment Factors: FR lens: 0.93  
 WG: 0.90  
 FR w/ WG: 0.85

LUMENFOCUS  
 Re-boardABILITY

The PBL 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.](#)



[Click here for a video demonstration of the re-boarding process on a PBL.](#)  
 Note: Exact time varies depending on the model.

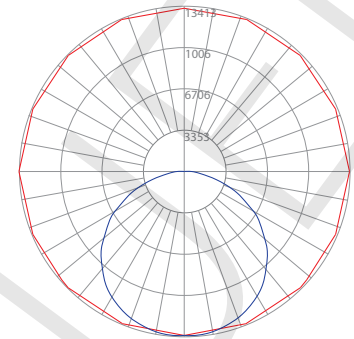


Photometric Data:

**PBL 4W HI UV 835**

Test No.: LLIA000621-005  
 Luminaire Lumens: 38,970 lm  
 Luminaire Watts: 304.8W  
 Efficacy: 127.9 LPW  
 Spacing Criterion (0-180): 1.32  
 Spacing Criterion (90-270): 1.28

Luminance Data (cd/sq.m)			
Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	29902	29118	29079
55	29470	28697	28730
65	27975	27414	25197
75	23601	17693	19047
85	12723	7585	8557



— Vert. Plane  
 — Horiz. Cone

**Zonal Lumen Summary**

Zone	Lumens	%Fixt
0-20	4871.84	12.50
0-30	10408.51	26.70
0-40	17189.85	44.10
0-60	31004.31	79.60
0-80	38509.13	98.80
0-90	38969.80	100.00
90-120	0.00	0.00
90-130	0.00	0.00
90-150	0.00	0.00
90-180	0.00	0.00
0-180	38969.80	100.00

**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	95	92	94	91	89		
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74		
3	90	80	71	65	88	78	70	64	75	69	63	72	67	62		
4	82	70	62	55	80	69	61	54	67	59	54	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	40	35		
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26		

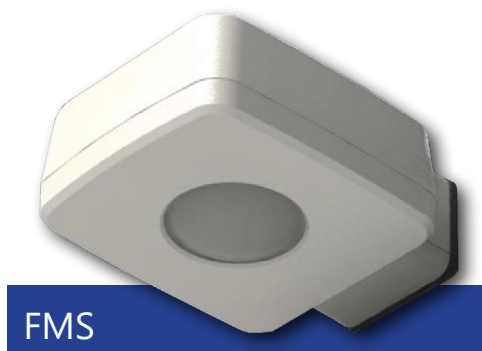
Tested in accordance with IES standards utilizing absolute photometry per LM-79-08



## Douglas Lighting Controls, Inc.: Cloud-based controls

The PBL HD can be equipped with the Douglas FMS sensor, which is designed for high bay applications.

With a max sensor height up to 40 feet, the FMS is ideal for applications like warehouses and manufacturing facilities. It can be installed for on/off control or bi-level light functionality. The daylight sensor provides additional savings by dimming the lights to work with the amount of natural available daylight.



- Configuration from the floor via smartphone app
- Bluetooth mesh network is created between devices for control over a group of Douglas sensors
- Occupancy and daylight sensing
- IP65-rated
- 0-10V dimming
- 150 feet clear line of site, 50 feet through standard walls (distances may vary based on location and environment)

## CheckLight® Energy Management System

Douglas controls can be integrated with the CheckLight® Energy Management system. This system can help you uncover energy conversion opportunities, create conservation strategies, analyze lighting load inefficiencies, and make configuration changes from anywhere with Douglas' user-friendly interface. You can get measurements, reports, and control your system from a web-based application.

- CheckLight® has the capability to look at different facilities within a portfolio and use data benchmarks to compare building performances.
- Find energy conservation opportunities
  - Create energy saving strategies
  - Analyze load inefficiencies
  - Optimize energy management

## Enlighted: All-in-one sensors, upgradeable systems

Enlighted's IP65-rated Ruggedized Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. Max installation height is 50 feet.

Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.

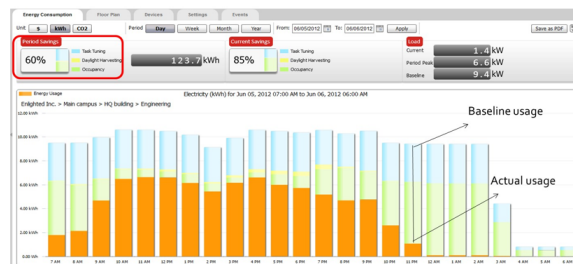
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
Where & Space Applications			✓
Location & Occupancy APIs & Beacons			✓
Future App & API Ready			✓

**Note:** Additional equipment required for ZENLC and ZENLI

## Real-time data analytics

Enlighted's control units compile data in real-time, which can be viewed via the Energy Manager. The Energy Manager is part of the Enlighted Connected and Enlighted IoT configurations.

- Real-time measurements and verification of energy savings
- Space analytics - data can be compiled into motion trails and heat maps
- Analyze traffic density and congestion in a space



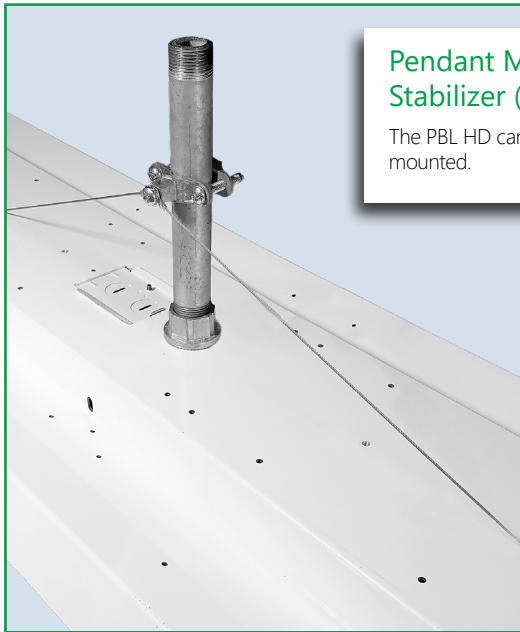
Learn more about our available advanced controls options here:  
[www.lumenfocus.com/controls-overview](http://www.lumenfocus.com/controls-overview)

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## Hanging Options Available:

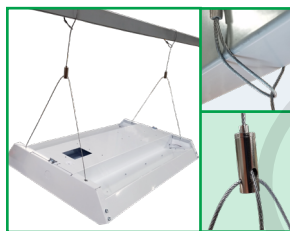
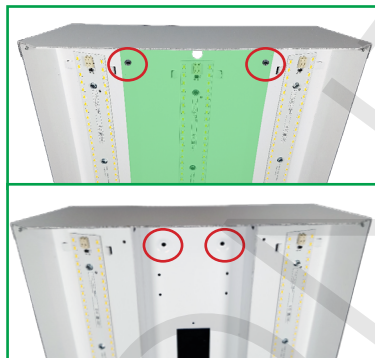


### Pendant Mount with Stabilizer (PMS)

The PBL HD can be pendant mounted.

## Surface Mount

The PBL HD 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).



## Cable Mount (QC, QC20)

The QC hanging kit from ALP comes in 10' or 20'. Cables are pre-looped for easy installation and designed for easy fixture height adjustment. QCs come boxed with each fixture. A mechanically fastened safety cable (SC) is also optional.

## Wireguard and shielding

Add an optional wireguard for added stability and protection - ideal for gymnasiums or other areas where the luminaire may be struck. Optional frosted acrylic diffuser lenses minimize glare and improve aesthetics.

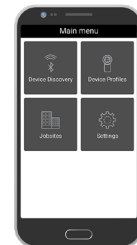


## Other controls available:



## Dimming Sensors (Z221B/Z321B)

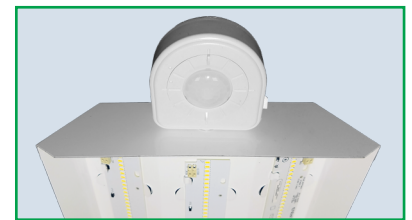
- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the end cap
- Rated for cold locations
- Parameters for Bluetooth-enabled Z321B adjustable via phone app - iOS or Android
- Parameters for Z221B adjustable via wireless configuration 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



### Phone app interface for Z321B

## On/Off Occupancy Sensors (ZOS)

An occupancy sensor controls individual fixtures on or off based on occupancy in detection zone. Sensor used: Leviton OSFHU-ITW (pictured), or equivalent.



## Other Options:



**Cords** are available in single circuit or dual circuit, 6' or 10'. Standard plug is optional, as are other NEMA configurations if specified.

**Conformal coating** Grants LED boards added protection from moisture and corrosion in more hazardous environments.

