



Project: _____
 Location: _____
 Cat. #: _____
 Type: _____
 Quantity: _____

LED

PBL A 4 | LED Aisle High Bay

Features:

- High performance LED technology
- 0-10V dimming drivers standard
- Field replaceable LED boards and drivers
- A wide variety of lumen packages allows for flexibility in design and helps maximize energy savings
- Enhanced specular reflector designed to provide even vertical illumination on shelving and maximize lighting in the aiseways
- Opening in driver compartment grants easy access, allowing for simple installation and maintenance in the field



Applications:

- Suitable for most commercial, industrial and institutional applications
- Warehouse aisles
 - Corridors

Predicted L70 Lifetime:

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

Construction:

- Housing is precision brake formed from heavy gauge cold rolled steel with highly durable white finish
- LED tray is precision brake formed from highly reflective aluminum

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/>



Ambient Operating Temp.:

- -30°C to 40°C

Warranty:

- 5 year limited system warranty - see 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 A 4 MD UV 850 QC C6 OS

Series	Length	Output	Voltage	CRI/CCT	Hanging	Controls	Options
PBL A	4						
PBL A	4 4'	VL Very Low	UV 120-277	835 80 CRI/3500K	Blank None	Blank No Controls	Blank No Options
		LW Low	34 347V	840 80 CRI/4000K	QC 10' Quick Hang Cable Kit	ZOS Occupancy Sensor (On/Off)	EXT10 10-Year Extended Warranty ⁽⁴⁾
		MD Medium	48 480V	850 80 CRI/5000K	QC20 20' Quick Hang Cable Kit	ZOSD Occupancy Sensor (On/Off/Dim)	C6 6' Single Circuit Cord
		HI High				Z221BL Wattstopper Programmable Photo/ Motion Multi-Voltage Sensor (high/ low/off) ⁽¹⁾	C65W 6' Single Circuit Cord with Low Voltage Connections
						Z321BL Wattstopper Bluetooth-enabled Programmable Photo/Motion Multi- Voltage Sensor (high/low/off) ⁽¹⁾	C10 10' Single Circuit Cord
						ZPC Photocell	C105W 10' Single Circuit Cord with Low Voltage Connections
						ZFMS Douglas FMS Sensor with Dimming/ Occupancy/Daylight Harvesting with Network Capabilities ⁽²⁾	D6 6' Dual Circuit Cord
						ZENLO Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted One System ⁽³⁾	D10 10' Dual Circuit Cord
						ZENLC Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System ⁽³⁾	P(NEMA) Plug (Specify NEMA configuration)
						ZENLI Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System ⁽³⁾	WG Wire Guard
							WG(OS) Extended Wire Guard for End-Mounted Sensor
							SC Safety Cable
							F Fuse
							EM2 Emergency Pack ⁽⁵⁾
							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

Notes

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

Controls Accessories (order separately)



For Douglas Controls

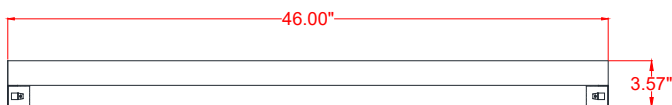
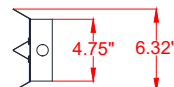
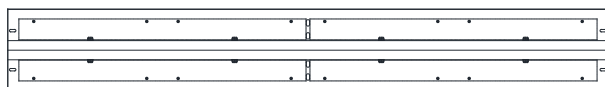
- BT-DMSW-U-A Bluetooth 1 Zone Dimmer
BT-4BTSW-U-A Bluetooth 4-Button Wall Station
BT-8BTSW-U-A Bluetooth 8-Button Wall Station



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)

Schematic:



Performance Chart:

Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW
PBL A 4 VL UV 835	11799	74	159.4	PBL A 4 VL UV 840	12126	74	163.9	PBL A 4 VL UV 850	12453	74	168.3
PBL A 4 LW UV 835	15683	103	152.3	PBL A 4 LW UV 840	16118	103	156.5	PBL A 4 LW UV 850	16553	103	160.7
PBL A 4 MD UV 835	19812	132	150.1	PBL A 4 MD UV 840	20362	132	154.3	PBL A 4 MD UV 850	20912	132	158.4
PBL A 4 HI UV 835	23406	161	145.4	PBL A 4 HI UV 840	24056	161	149.4	PBL A 4 HI UV 850	24706	161	153.5

Lumen Adjustment Factors: WG: 0.95

Photometric Data:

PBL A 4 HI UV 850

Test No.: LLIA001093-001

Luminaire Lumens: 24,706 lm

Luminaire Watts: 160.7 W

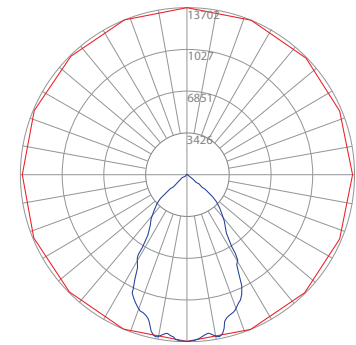
Efficacy: 153.7 LPW

Spacing Criterion (0-180): 1.30

Spacing Criterion (90-270): 1.02

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	67374	26644	20382
55	64768	18879	363
65	59161	562	41
75	46951	236	11
85	19562	60	4



— Vert. Plane
— Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	4879.30	19.70
0-30	10104.35	40.90
0-40	15438.54	62.50
0-60	22895.02	92.70
0-80	24619.19	99.60
0-90	24705.52	100.00
90-120	0.17	0.00
90-130	0.17	0.00
90-150	0.17	0.00
90-180	0.17	0.00
0-180	24705.70	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	111	108	104	101	109	105	102	100	101	99	97	97	95	94
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57
6	77	65	58	52	75	64	57	52	63	56	51	61	55	51
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42
9	63	51	44	39	62	51	43	39	49	43	38	48	43	38
10	60	47	40	36	58	47	40	35	46	40	35	45	39	35

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

LUMENFOCUS Re-boardABILITY

The PBL A 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.](#)

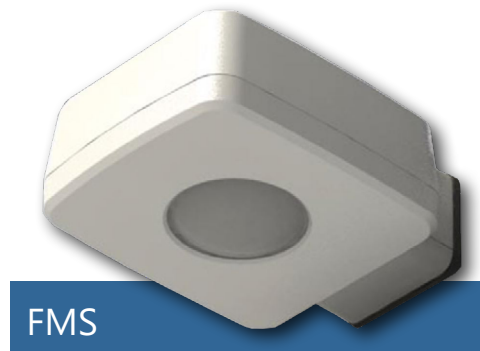
Note: Exact time varies depending on the model.



Douglas Lighting Controls, Inc.: Cloud-based controls

The PBL A 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.



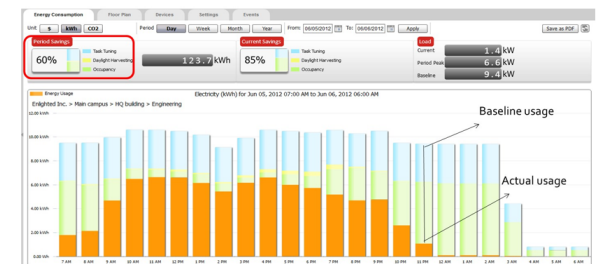
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
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:

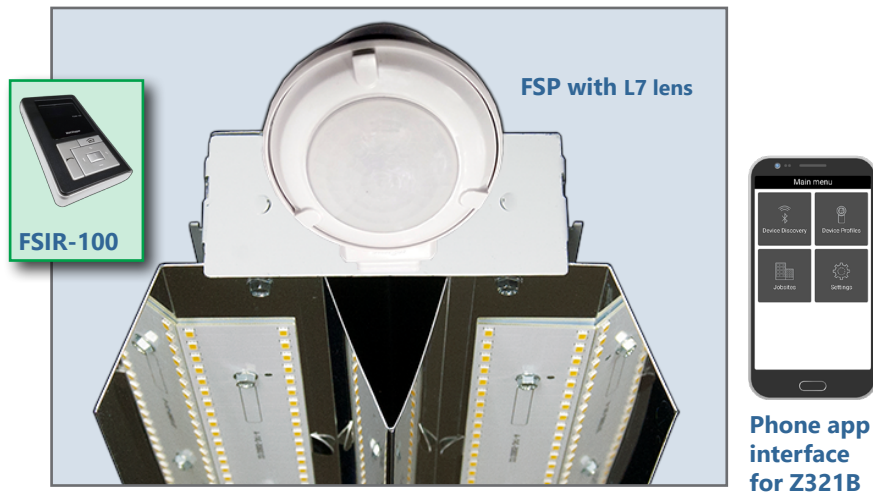
www.lumenfocus.com/controls-overview

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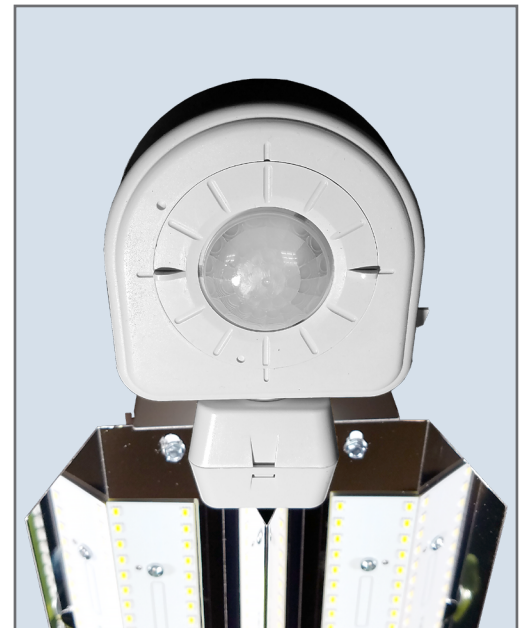


Other controls available:



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



On/Off Occupancy Sensors (ZOS)

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

Other Options:



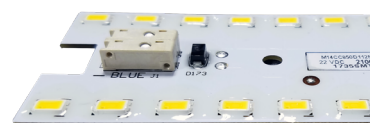
Cords are available in single circuit or dual circuit, 6' or 10'. Standard plug is optional, as are other NEMA configurations if specified.



Safety cables affix directly to the luminaire and provide a sturdy cable hanging alternative.



Hanging 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.



Conformal coating

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

