



LED Linear Highbay





PROJECT: _____

DATE: _____

TYPE: _____

PREPARED BY: _____



LED Linear Highbay



KEY FEATURES

- Field-selectable Color (CCT) standard on all models
- Compact design for easy deployment
- Low glare, optional Aisle optics
- Optional Bi-level motion and Networked lighting controls
- Emergency backup option

TECHNICAL SPECIFICATIONS

COMPLIANCE

UL Listed
UL 1598, Suitable for Damp Location

IESNA LM79 & LM-80 Testing
Paclights LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

DLC Qualification
Selected models of this product are on the Design Lights Consortium (DLC) Qualified Products List and are eligible for rebates from DLC Member Utilities. To view our DLC qualified products, please consult the DLC Qualified Products List at www.design-lights.org/qpl

LED CHARACTERISTICS

LEDS
Long-life, high-efficacy, surface-mount LEDs

Lifespan
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

Color Rendering Index
>82

Correlated Color Temperature
4000K and 5000K CCT selectable with a dip switch

Color Uniformity
PacLights' range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017

OTHER

5-Year Limited Warranty**
The PacLights 5-year, limited warranty covers light output, driver performance and paint finish.

**PacLights's warranty is subject to all terms and conditions found at paclights.com/warranty

CONSTRUCTION

IP Rating
IP20 rated

Ambient Temperature
Suitable for up to 50° C (122° F) ambient temperature when fixture is suspended at least 18" from ceiling

Housing
Durable cold rolled steel housing provides strength and uniformity. Luminaire is pre-painted to enhanced smooth finish.

Mounting Methods
Comes standard with v-hook and chains. Accessories available for aircraft cable mounting (up to 120" or 196"), surface mounting, or conduit/pendant mounting.

Green Technology
Mercury and UV free, and RoHS compliant.

Lens
Frosted, Polycarbonate

ELECTRICAL

Drivers
Input Voltage: 120-277v AC (optional 480v), 50-60 Hz; 0-10V dimming (dim-to-off)
Power Factor > 0.95; THD < 20% ; Surge protected L/N-GND:6 kV, L-N:6 kV

Control Receptacle
12v DC receptacle compatible with selected motion, daylight and network controls.

Wattage / Input Voltage / Input Current
Wattage selectable with a dip switch on selected models

Models	Wattage	120v	208v	240v	277v	480v (optional)
FLHE-11LM	78w	0.72A	0.42A	0.36A	0.31A	0.18A
FLHE-14LM	92w	0.85A	0.49A	0.43A	0.37A	0.21A
FLHE-17LM	115w	1.06A	0.61A	0.53A	0.46A	0.27A
FLHE-20LM	135w	1.25A	0.72A	0.63A	0.54A	0.31A
FLHE-23LM	155w	1.44A	0.83A	0.72A	0.62A	0.36A
FLHE-28LM	185w	1.71A	0.99A	0.86A	0.74A	0.43A
FLHE-30LM	200w	1.85A	1.07A	0.93A	0.80A	0.46A
FLHE-34LM	230w	2.13A	1.23A	1.06A	0.92A	0.53A
FLHE-40LM	270w	2.50A	1.44A	1.25A	1.08A	0.63A
FLHE-54LM	360w	3.33A	1.92A	1.67A	1.44A	0.83A
FLHE-60LM	400w	3.70A	2.14A	1.85A	1.60A	0.93A

ORDERING INFORMATION

FLHE™

FAMILY	MODEL	CCT	CONTROL	EMERGENCY BACKUP	MOUNTS	OTHER
FLHE	MODEL	CCT	CONTROL	EMERGENCY	MOUNTS	OTHER

EXAMPLE

FLHE-30/28/23LM-8CT
 FLHE-30LM-8CT-MCP-SM-6FTAC-PL7_15P
 FLHE-60LM-8CT-EM9000-ACS-WG

MODEL

* MUST SELECT ONE

CODE	LUMEN PACKAGE	WATTAGE	CODE	LUMEN SELECTABLE	WATT. SELECTABLE
11LM	11,000	78w	20/17/14LM	20,000	135w
14LM	14,000	92w		17,000	115w
17LM	17,000	115w		14,000	92w
20LM	20,000	135w	30/28/23LM	30,000	200w
23LM	23,000	155w		28,000	185w
28LM	28,000	185w		23,000	155w
30LM	30,000	200w	40/34LM	40,000	270w
34LM	34,000	230w		34,000	230w
40LM	40,000	270w	60/54LM	60,000	400w
54LM	54,000	360w		54,000	360w
60LM	60,000	400w			

CCT

* MUST SELECT ONE

CODE	CRI	CCT SELECTABLE
8CT	> 82	4000K/5000K

CONTROL

* LEAVE BLANK, or SELECT ONE

CODE	TYPE	PARTS SKU	SENSOR	MOUNT	INSTALL
MCP	Standalone	SE-BC-ANT64T	PIR & Daylight Threshold	Plug&Play	FIELD
MCW		SE-BC-ANT54T	Microwave & Daylight Threshold	Plug&Play	FIELD
MCD		SE-BC-ANT54TVAL	Microwave & Daylight Harvesting	Plug&Play	FIELD
WBN	Bluetooth Networked	KEILTON-WPPA102-AUX	N/A	Plug&Play	FIELD
WBP		KEILTON-EFS106-AUX	PIR & Daylight	Plug&Play	FIELD

EMERGENCY BATTERY BACKUP

* LEAVE BLANK, or SELECT ONE

CODE	INPUT VOLTAGE	PARTS SKU	WATT	EMERGENCY LUMEN	COMPATIBLE	EMERGENCY RUNTIME	INSTALL
EM4500	120-277v	EMC-30	30w	4,500 Lumen	78w to 200w FLHE models	> 90 mins	FACTORY
	480v	EMC-30-H					
EM6000	120-277v	EMC-40	40w	6,000 Lumen	78w to 270w FLHE models		
	480v	EMC-40-H					
EM9000	120-277v	EMC-60	60w	9,000 Lumen	All FLHE models		
	480v	EMC-60-H					

ORDERING INFORMATION continued

MOUNTS

* LEAVE BLANK (v-hook and chains included), or SELECT ONE

CODE	PARTS SKU	TYPE	INSTALL
ACS	AC-LHB-ACS	Aircraft Cable Kit, adjustable up to 120"	FIELD
ACL	AC-LHB-ACL	Aircraft Cable Kit, adjustable up to 196"	
SM	AC-LHE-SFM	Surface Mount Kit	
PM	AC-LHE-PEM	Pendant/Conduit Mount Kit, 3/4" NPT	

OTHER

* LEAVE BLANK, or SELECT ONE or MORE (connect with "-")

Wire Guard

CODE	PARTS SKU	COMPATIBLE	INSTALL
WG	AC-LHE-WG13IN	FLHE-11LM	FIELD
	AC-LHE-WG17IN	FLHE-14LM,17LM,20LM or FLHE-20/17/14LM	
	AC-LHE-WG23IN	FLHE-23LM,28LM,30LM or FLHE-30/28/23LM	
	AC-LHE-WG31IN	FLHE-34LM,40LM or FLHE-40/30LM	
	AC-LHE-WG44IN	FLHE-54LM,60LM or FLHE-60/54LM	

Aisle Optics

CODE	PARTS SKU	COMPATIBLE	INSTALL
AL	AC-LHE-AL1114	FLHE-11LM	FACTORY
	AC-LHE-AL1720	FLHE-14LM,17LM,20LM or FLHE-20/17/14LM	
	AC-LHE-AL2330	FLHE-23LM,28LM,30LM or FLHE-30/28/23LM	
	AC-LHE-AL3440	FLHE-34LM,40LM or FLHE-40/30LM	
	AC-LHE-AL5460	FLHE-54LM,60LM or FLHE-60/54LM	

480v Input Upgrade

CODE	PARTS SKU	COMPATIBLE	INSTALL
HV	TK-KTAT-250-480-277-SF	78w to 200w FLHE models	FACTORY
	TK-KTAT-375-480-277-SF	230w / 270w FLHE models	
	(2) TK-KTAT-250-480-277-SF	360w / 400w FLHE models	

Cord

* can be ordered in multiple of 6', such as 12FTAC, 18FTAC, etc.

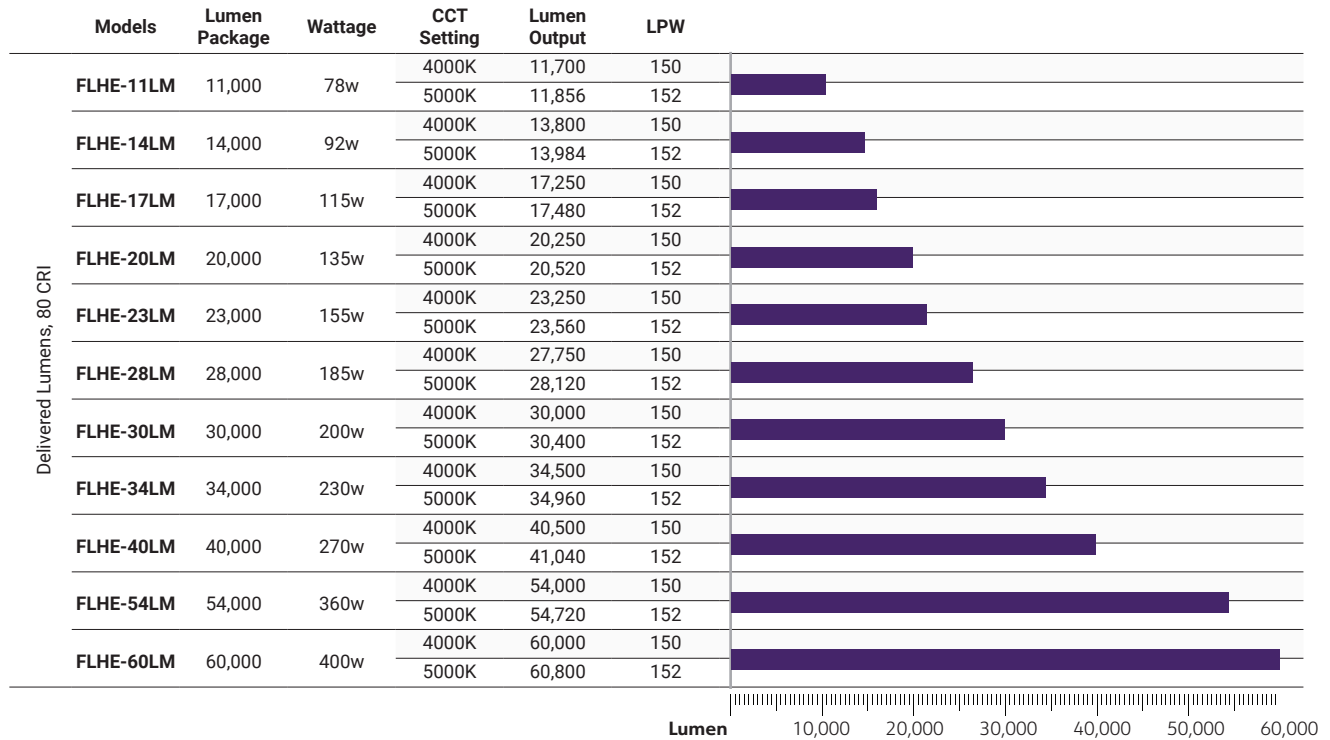
CODE	PARTS SKU	TYPE	COMPATIBLE	INSTALL
6FTAC	OS-GL-ES-183-SJT-W-72	6' cord, 3-wires (L/N/G)	Standard Models	FACTORY
6FTAD	OS-GL-ES-185-SJT-W-72	6' cord, 5-wires (L/N/G and 0-10v dimming)		
6FTACS	OS-GL-ES-184-SJT-W-72	6' cord, 4-wires (L/N/G and Switch)	Emergency Backup Models	
6FTADS	OS-GL-ES-186-SJT-W-72	6' cord, 6-wires (L/N/G, Switch and 0-10v dimming)		

Plug

CODE	PARTS SKU	TYPE	Voltage	COMPATIBLE	INSTALL
P5_15P	PLUG-5-15P	5-15P Plug	120v	Standard Models	FACTORY
PL7_15P	PLUG-L7-15P	L7-15P Twist Lock Plug	277v	Standard Models	
PL8_20P	PLUG-L8-20P	L8-20P Twist Lock Plug	480v	480v ("HV") Models	

must also select "3-wires cord" option

PERFORMANCE



DLC CHART

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DLC Primary use designation: High-Bay Luminaires for Commercial and Industrial Buildings



MODEL#	CLASS	DLC PRODUCT ID
FLHE-11LM-8CT-x-y	Premium	S-8IFDGB
FLHE-14LM-8CT-x-y	Premium	S-ROJA3Q
FLHE-17LM-8CT-x-y	Premium	S-7IA2U0
FLHE-20LM-8CT-x-y	Premium	S-2ATIC1
FLHE-23LM-8CT-x-y	Premium	S-3WPYF5

MODEL#	CLASS	DLC PRODUCT ID
FLHE-28LM-8CT-x-y	Premium	S-JCA4YX
FLHE-30LM-8CT-x-y	Premium	S-LOWAMR
FLHE-34LM-8CT-x-y	Premium	S-QVU8IW
FLHE-40LM-8CT-x-y	Premium	S-R4TQ2Y
FLHE-54LM-8CT-x-y	Premium	S-F6ZYRP

MODEL#	CLASS	DLC PRODUCT ID
FLHE-20/17/14LM-8CT-x-y	Premium	S-6F3Y08
FLHE-30/28/23LM-8CT-x-y	Premium	S-KC2MVF
FLHE-40/34LM-8CT-x-y	Premium	S-F30X9Z

STANDARD FEATURES

Field Selectable Color (CCT)



Select the desired output light color temperature by sliding the respective CCT Selection Switch left and right to 4000K (Neutral white) or 5000K (Daylight). It can be adjusted before, during and after installation. It offers flexibility on site and reduce complexity of models on preparing installation.

Compact Size for Easy and Fast Deployment

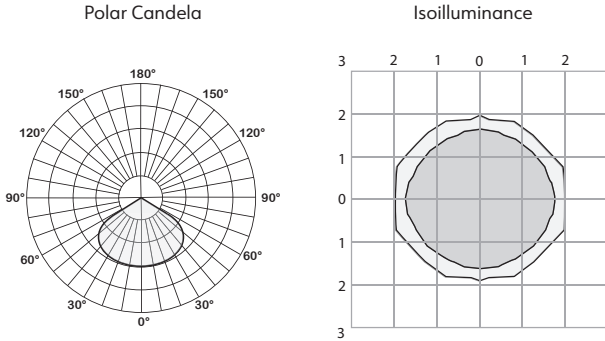
The compact size of the FLHE models accelerates the installation process significantly, even though they deliver the same lumen performance as full-sized linear high bay lights. This smaller design greatly reduces the time and labor costs associated with large-scale deployments, making it an efficient and cost-effective lighting solution for extensive areas.

PHOTOMETRIC Options

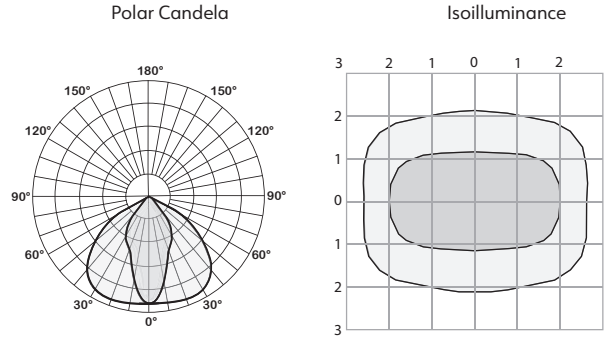
FLHE comes in Standard light distribution, and offers optional optics for Aisle light distribution. While the standard optic provides a low glare illumination over a large area, the aisle optic's rectangular distribution provides higher light level on shelves and aisles while maintaining the low glare output.

Standard Optic

Aisle Optics (option: -AL)



Standard: 90°x 90° designed for typical applications.

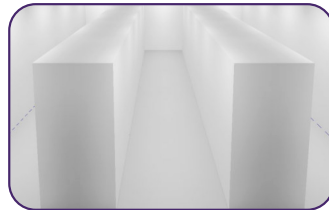


Aisle (option: -AL): 100° x 40° designed for long and narrow aisle.

Standard vs. Aisle Optics
in warehouse aisles application



Standard Optics



Aisle Optics

AISLE OPTICS *

OPTION	PARTS SKU	compatible with FLHE Model
-AL	AC-LHE-AL1114	FLHE-11LM
	AC-LHE-AL1720	FLHE-20LM / FLHE-17LM / FLHE-14LM
	AC-LHE-AL2330	FLHE-30LM / FLHE-28LM / FLHE-23LM
	AC-LHE-AL3440	FLHE-40LM / FLHE-34LM
	AC-LHE-AL5460	FLHE-60LM / FLHE-54LM

* FACTORY INSTALLED, FIELD INSTALLABLE

EMERGENCY BACKUP Option

WIREGUARD Option

Emergency Battery Backup (option: -EM)

Wire Guard (option: -WG)



When there is a power outage, the emergency backup driver and battery will power the FLHE to an brightness up to 9,000 lumen for at least 90 mins *

Optional wireguards can be attached to FLHE High Bays to provide extra protection from physical damage.

EMERGENCY BACKUP *

OPTION	PARTS SKU	Input Voltage	Emergency Lumen
-EM4500	EMC-30	120-277v	4,500
	EMC-30-H	480v	
-EM6000	EMC-40	120-277v	6,000
	EMC-40-H	480v	
-EM9000	EMC-60	120-277v	9,000
	EMC-60-H	480v	

* FACTORY INSTALLED

FLHE-11LM to FLHE-30LM compatible with all EMC models;
FLHE-34LM & FLHE-40LM models only compatible with EMC-40 or EMC-60;
FLHE-54LM & FLHE-60LM models only compatible with EMC-60.

WIRE GUARD *

OPTION	PARTS SKU	compatible with FLHE Model
-WG	AC-LHE-WG13IN	FLHE-11LM
	AC-LHE-WG17IN	FLHE-20LM / FLHE-17LM / FLHE-14LM
	AC-LHE-WG23IN	FLHE-30LM / FLHE-28LM / FLHE-23LM
	AC-LHE-WG31IN	FLHE-40LM / FLHE-34LM
	AC-LHE-WG44IN	FLHE-60LM / FLHE-54LM

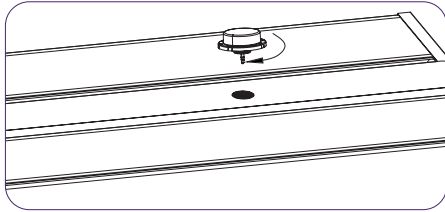
* FIELD INSTALLED

CONTROL Options

CONTROLS READY



All FLHE models come equipped with an AUX (auxiliary) receptacle, which allows for the easy, twist-on installation of control devices in the field. This feature is designed to simplify the process of adding or modifying controls on these lighting fixtures.



CONTROL OPTIONS *

OPTION	PARTS SKU	TYPE	SENSOR
-MCP	SE-BC-ANT64T	Standalone	PIR & Daylight
-MCW	SE-BC-ANT54T	Standalone	Microwave & Daylight
-MCD	SE-BC-ANT54TVAL	Standalone	Microwave & Daylight
-WBN	KEILTON-WPPA102-AUX	Networked	N/A
-WBP	KEILTON-EFS106-AUX	Networked	Microwave & Daylight

* FIELD INSTALLED

Standalone Sensor Controls (option: -MCP/-MCW/-MCD)

Passive Infrared Bi-level Motion & Daylight Control (option: -MCP)



A PIR (Passive Infrared) sensor is capable of detecting variations in infrared radiation, which depend on the temperature and surface properties of objects in its field of view. This sensor has a 3-step dimming function, which is ideal for areas needing gradual light adjustments before a complete shutdown. Additionally, if the daylight function is activated, the sensor can turn off the light based on a preset level of ambient light. The settings for these functions can be fine-tuned using an optional wireless commissioning device.



Option: -MCP
SKU: SE-BC-ANT64T



Option: -MCW
SKU: SE-BC-ANT54T



Option: -MCD
SKU: SE-BC-ANT54TVAL



Optional
wireless commissioning
remote device
SKU: SE-BC-RC-100

Microwave Bi-level Motion & Daylight Control (option: -MCW)



Microwave occupancy control sensors are designed to detect motion through materials such as plastic, glass, and thin non-metallic substances. They are equipped with a 3-step dimming function that is ideal for areas where gradual changes in lighting are preferred before a complete shutdown. If the daylight sensor feature is activated, it can turn off the light based on predetermined levels of ambient light. The settings for these functions can be adjusted using an optional wireless commissioning device.

Motion and Daylight Harvesting Control (option: -MCD)



In addition to all the features offered by a microwave bi-level occupancy control, daylight harvesting control further reduces the use of electric lighting in building interiors when natural daylight is available. This function adjusts the artificial lighting levels based on the amount of natural light entering the space, enhancing energy efficiency and providing a more sustainable lighting solution.

-MCP / -MCW / -MCD Controls Specification *default setting

Sensitivity	20%/50%/75%/100%*
Hold Time (before dim)	10s/1min/5min*/10min/15min/20min/30min/60min
Daylight Threshold	10/30/50/100/300/500 Lux, or Disable*
Stand-by Time(before turn off)	1min/30min/60min*, or Never
Stand-by Dimming Level	10%/30%/50%
Detection Height	up to 40ft
Detection Radius	up to 50ft

Networked Lighting Controls (option: -WBP/-WBN)



Network Lighting Controls (NLC) offer Luminaire Level Lighting Control (LLLC) based on Bluetooth-enabled Mesh Networking of Luminaires. Individual addressability enables luminaires to be communicated with each other within the zone/network. Luminaires can be grouped, trim and controlled by using the smart device app or connected wall switches. Scheduling, scene and sensors can be added for automation among the lights within the zone/group.

- **(-WBP)** Wireless bluetooth networked control with PIR occupancy and daylight harvesting sensor
- **(-WBN)** Wireless bluetooth networked control (node only)



Option: -WBN
SKU: KEILTON-WPPA102-AUX



Option: -WBP
SKU: KEILTON-EFS106-AUX

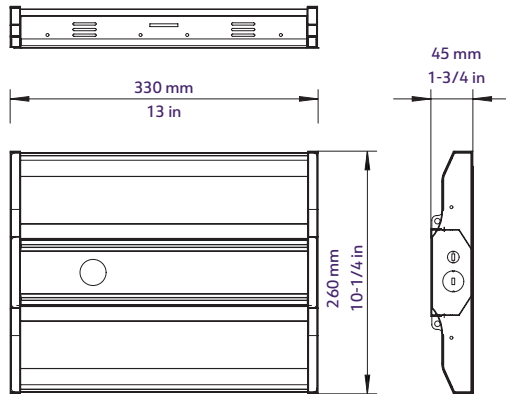


FREE iOS/Android APP will be used to commissioning or customize settings of networked controls.

DIMENSIONS

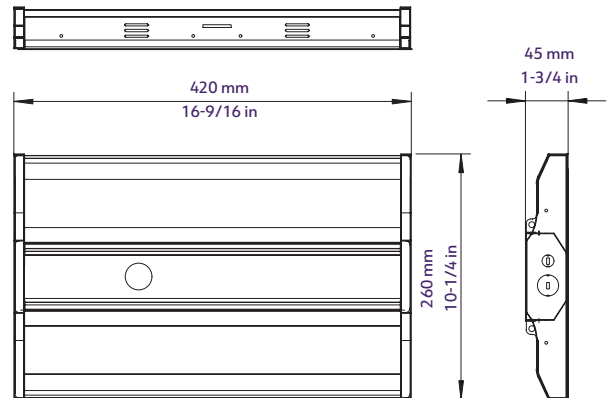
FLHE-11LM

weight 4.2 lbs



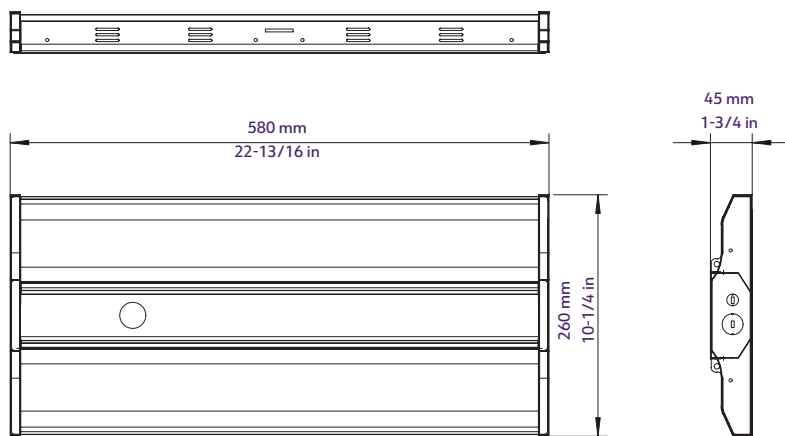
FLHE-14LM, FLHE-17LM, FLHE-20LM, FLHE-20/17/14LM

weight 5 lbs



FLHE-23LM, FLHE-28LM, FLHE-30LM, FLHE-30/28/23LM

weight 6.2 lbs

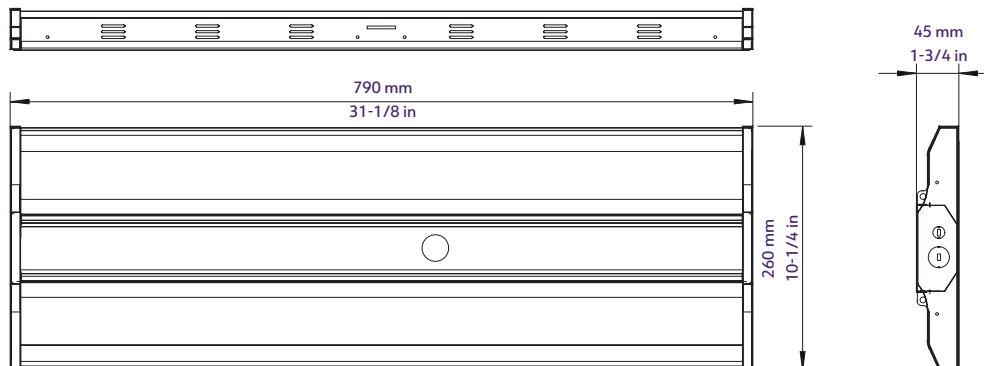


FINISHES

all models white

FLHE-34LM, FLHE-40LM, FLHE-40/34LM

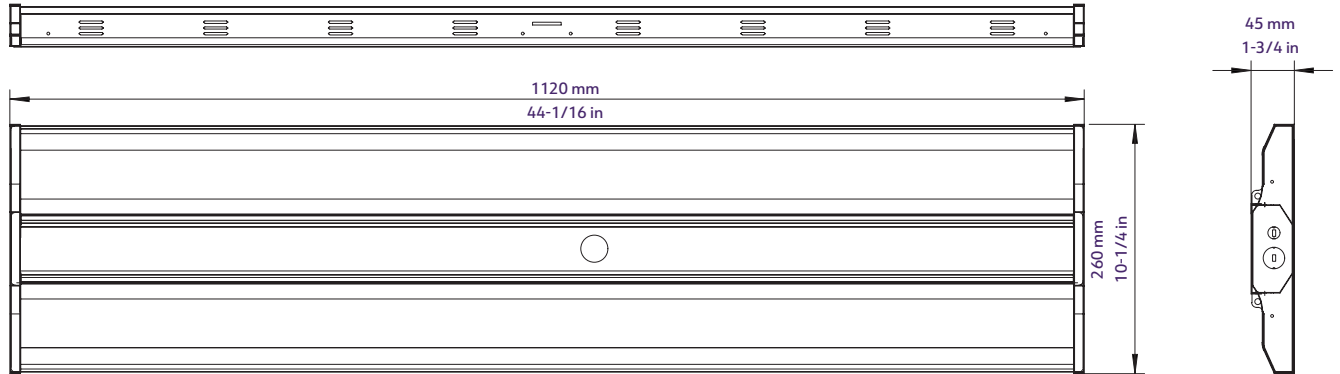
weight 8 lbs



DIMENSIONS continued

FLHE-54LM, FLHE-60LM, FLHE-60/54LM

weight 11 lbs



NETWORKED CONTROLS MADE EASY

Keilton Networked Controls, a DLC® Qualified Networked Lighting Controls Product, make it easy for facilities to save energy, improve occupancy comfort and achieve code compliance by adding Luminaire Level Lighting Controls (LLLC) to indoor and outdoor applications. It allows for easy field installation of sensors and network nodes with selected PacLights controls ready fixtures. Using the Keilton app, nodes can be commissioned without the need for a gateway or internet access.

Keilton®



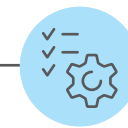
A Cost-Effective Decentralized Architecture

Direct Mobile Device Provisioning

Best-In-Class Scale, Performance & Reliability



INSTALL



COMMISSION



CONTROL



LEARN MORE, VISIT
www.paclights.com/NLC



FEATURES

- Luminaire Level Lighting Control (LLLC)
- Bluetooth-enabled Mesh Networking of Luminaires and Devices
- Individual Addressability, address individual or multiple luminaires
- High-end and Low-end Trim
- Zoning & Grouping
 - ◊ Add and control up to 100 devices per zone
 - ◊ Add unlimited zones to scale for bigger installation
 - ◊ Create unlimited groups (combination of sensor or network nodes) within a zone
 - ◊ Link and control the whole group or zone
- Scene control
 - ◊ Create and link scenes to individual lights or groups within a zone
 - ◊ Select scene with App or wall switch
- Time Scheduling for individual lights, groups or scenes
- Sensors integrated with BLE, occupancy and daylight sensing
- Multi-level Dimming, Daylight Harvesting and Occupancy controls
- Manual/Automatic ON/OFF and Automatic partial ON/OFF control capability
- Control with wireless wall switch or smart device
- Secure commissioning with Keilton App
- Up to 100 ft node-to-node and 50 ft node-to-device
- Demand Response option (works with OpenADR gateways)
- Controlled 120v 20A Receptacle available
- Other control features to meet code compliance




Keilton and its logo is a trademark of Litetrace; **PacLights** and its logo is a trademark of PacLights, LLC
DLC and its logo is a trademark of DesignLights Consortium.
Keilton is the qualified system name listed on the DLC Networked Lighting Controls QPL.




NETWORKED CONTROLS for FLHE series



NETWORKED NODES ONLY

SKU	DESCRIPTION	FUNCTION	CONTROL ORDER CODE
KEILTON-WPPA102-AUX	 KEILTON WPPA102-AUX DC AUX BLUETOOTH MESH NODE	Enable network controlled - on & off, dim, trim, zone, group, scene & schedule, etc.	-WBN

NETWORKED NODES WITH SENSOR

SKU	DESCRIPTION	FUNCTION	CONTROL ORDER CODE
KEILTON-EFS106-AUX	 KEILTON EFS106-AUX DC AUX BLUETOOTH MESH NODE W/ PIR DLH SENSOR	Enable network controlled - on & off, dim, trim, zone, group, scene & schedule, etc. And, PIR occupancy & daylight (harvesting) sensing.	-WBP

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 DLC and its logo is a trademark of DesignLights Consortium.
 Keilton is the qualified system name listed on the DLC Networked Lighting Controls QPL.