The
FFHL™
Series

Sports and Flood Lights

FFHL™ generation 2

PacLights

Sports and Flood Light

KEY FEATURES

1500w Metal Halide equivalent; **RGBW** option

Mounting Options for sports and flood applications

10kV Surge Protection standard on all models

Compatible with **Zhaga Z10** lighting controls

Networked Lighting Control option

PROJECT: _____

DATE: _____

TYPE: _____

PREPARED BY: _____

TECHNICAL SPECIFICATIONS

COMPLIANCE

UL Listed
UL 1598, Suitable for Wet Locations

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

OPTICAL

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

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

Lumen Maintenance
L90 ≥ 36,000 hours

Color Rendering Index
>70

Beam
35° beam standard, optional 20°, 55° or 90° beam

Color Uniformity
PacLights' range of Correlated Color Temperature follows the guidelines of the American National Standard for Specications 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
Ingress Protection rating of IP65 for dust and water

Ambient Temperature
Suitable for up to 50° C (122° F) ambient, minimum starting -40 F°/-40° C

Housing
Die-cast aluminum housing; stainless steel external hardware; silicone gasket.

EPA
2.0 ft².

Mounting Methods
Yoke/Trunnion (standard); 2-3/8" Slipfitter (optional), Knuckle (optional).

Green Technology
Mercury and UV free, and RoHS compliant.

Lens
Polycarbonate.

ELECTRICAL

Driver(s)
Designed to last ≥50,000 hours when at allowable operating temperature
Input Voltage: 120-277v AC (-UV models) or 220-480v AC (-HV models), 50-60 Hz
0-10V dimming; Power Factor > 0.95; THD < 20%
DMX512 for RGBW models.

Surge Protector
Driver - L/N-PE: 10kV, L-N: 6kV; Secondary - 10kV.

Control Receptacle
ZHAGA Z10 twist-lock receptacle. Compatible with 0-10v dimming controls. (non-RGBW models)

Input Current

Models	Wattage	120v	208v	240v	277v	480v
FFHL/2-600	600w	5.5A	3.2A	2.8A	2.4A	1.4A
FFHL/2-700	700w	6.5A	3.7A	3.2A	2.8A	1.6A
FFHL/2-800	800w	7.4A	4.3A	3.7A	3.2A	1.8A

FFHL™ generation 2

PacLights

FFHL™ generation 2

FAMILY	MODEL	INPUT VOLTAGE	CCT	BEAM	MOUNTS	OTHER
FFHL/2	MODEL	VOLTAGE	CCT	BEAM	MOUNTS	OTHER

EXAMPLE
FFHL/2-800-UV-50-D3-TM
FFHL/2-600-HV-40-D9-KM-VS
FFHL/2-800-HV-RGBW-D3-SF

MODEL
* MUST SELECT ONE

CODE	LUMEN PACKAGE	WATTAGE
600	92,000	600w
700	105,000	700w
800	114,000	800w

INPUT VOLTAGE
* MUST SELECT ONE

CODE	INPUT VOLTAGE
UV	120-277v
HV	220-480v

CCT
* MUST SELECT ONE

CODE	CRI	CCT
50	> 70	5000K
40	> 70	4000K
RGBW	-	RGBW [1]

[1] RGBW is only available on FFHL/2-800-HV models

BEAM (see page 7)
* MUST SELECT ONE

CODE	PARTS SKU	BEAM	INSTALL
D2	AC-FHL2-LEN20	20°	FACTORY
D3	- STANDARD/INCLUDED -	35°	FACTORY
D6	AC-FHL2-LEN55	55°	FACTORY
D9	AC-FHL2-LEN90	90°	FACTORY

MOUNTS (see page 5 & 8)
* MUST SELECT ONE

CODE	PARTS SKU	TYPE	INSTALL
TM	- STANDARD/INCLUDED -	Trunnion/Yoke Bracket	FACTORY
KM	AC-FHL2-KM	Knuckle Bracket	FIELD
SF	AC-FHL2-SF	Slipfitter Bracket for standard 2-3/8" tenon	FIELD

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

Control (see page 6)

CODE	PARTS SKU	TYPE	FUNCTION	SENSOR	COMPATIBLE	INSTALL
PS	SE-HS-HD06VCRH7A	Standalone	ZHAGA Z10 twist lock plug & play Dimming & Daylight Harvesting Photocell	Daylight Sensor	All except RGBW models	FIELD
WBN	KEILTON-WPPA102-Z10-W	Bluetooth Wireless Networked	ZHAGA Z10 twist lock plug & play Keilton+autani ® Wireless Features	N/A	All except RGBW models	FIELD
SYW	SE-SY-DIM10-087-06-IP	IEEE 802.15.4 Wireless Networked	Synapse® Wireless [1] Features. Optional: Dynamic Behaviors [2] for Sports Lighting (special order, contact sales)	N/A	All except RGBW models	FACTORY

[1] Central Base Station (CBS) wireless site controller required, purchase separately, see Synapse® documents
[2] Dynamic Behaviors licenses required, purchase separately; not all features available; contact sales

Glare Sheild (see page 7)

CODE	PARTS SKU	TYPE	INSTALL
VS	AC-FHL2-VS	Visor / Glare Shield	FIELD

FFHL™ generation 2

PacLights

PERFORMANCE

Models	Lumen Package	Wattage	CCT	Lumen Output	LPW
FFHL/2-600	92,000	600w	4000K	92,441	154
			5000K	92,895	155
FFHL/2-700	105,000	700w	4000K	100,800	144
			5000K	101,500	145
FFHL/2-800	114,000	800w	4000K	114,012	142
			5000K	114,625	143

Delivered Lumens, 70 CRI
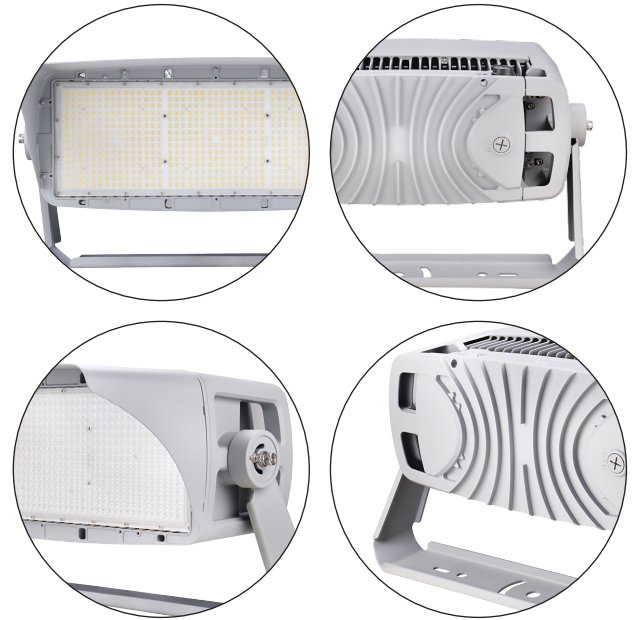
DLC CHART

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.designlights.org/qpl

DLC Primary use designation: Architectural Flood and Spot Luminaires

MODEL#	CLASS	DLC PRODUCT ID
FFHL/2-600-HV-40-Dxx-cdeSP	Premium	S-DQVD7K
FFHL/2-600-HV-50-Dxx-cdeSP	Premium	S-S1LM8Q
FFHL/2-600-UV-40-Dxx-cdeSP	Premium	S-X8HH1X
FFHL/2-600-UV-50-Dxx-cdeSP	Premium	S-KFYHFY
FFHL/2-800-HV-40-Dx-cdeSP	Premium	S-ZTWVP6
FFHL/2-800-HV-50-Dx-cdeSP	Premium	S-3TRDP2
FFHL/2-800-UV-40-Dx-cdeSP	Premium	S-L8H1D7
FFHL/2-800-UV-50-Dx-cdeSP	Premium	S-JFY76X

DLC LISTED PREMIUM™

STANDARD FEATURES

Secondary Surge Protector

SECONDARY SURGE PROTECTOR

Secondary 10kV surge protector can act as the second line of defense, in addtional to the LED driver's intergrated lightning arrester.
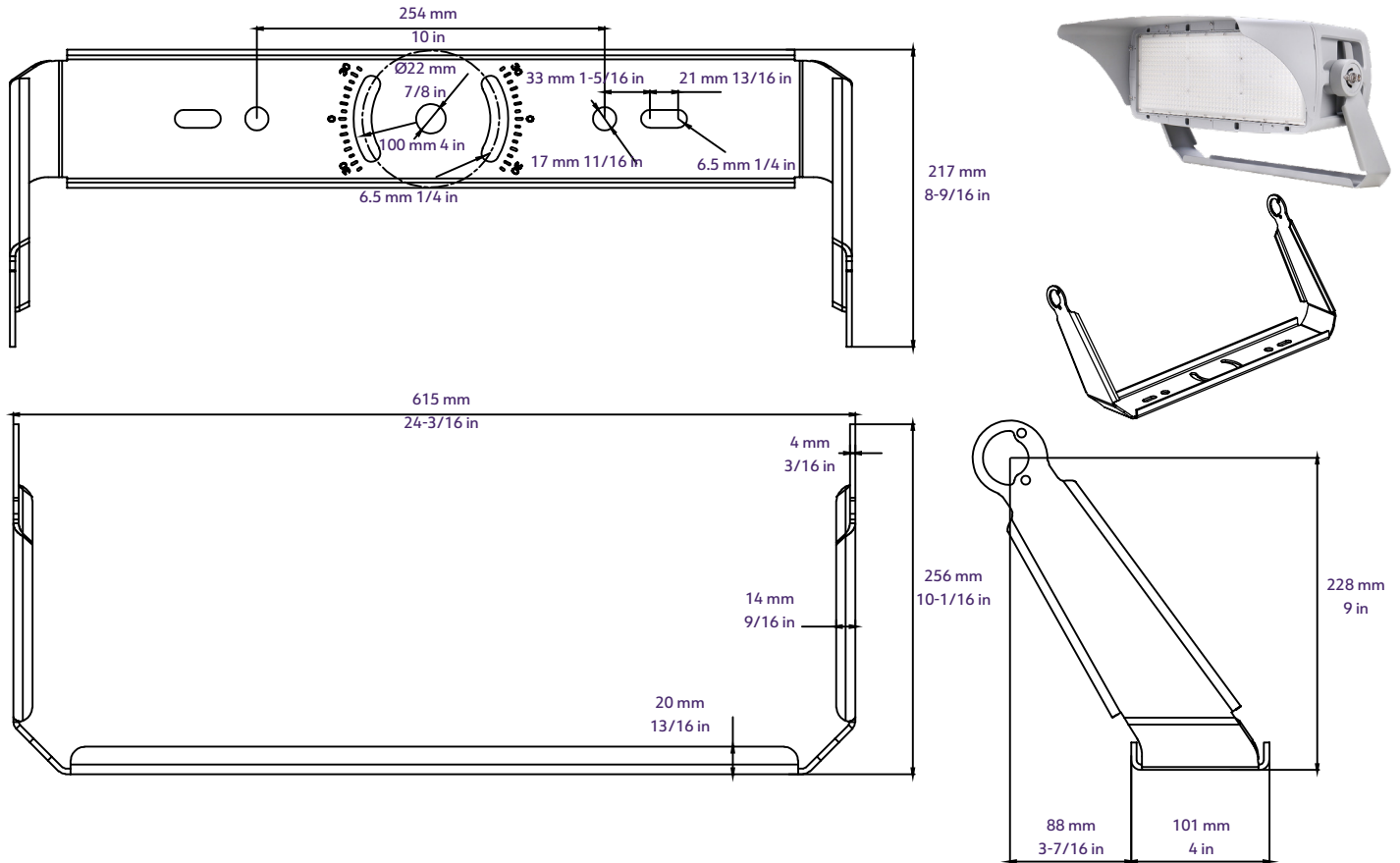
ZHAGA Z10 Controls Compatible

CONTROLS COMPATIBLE

Pre-installed with Zhaga Z10 twist-lock receptacle. Compatible with Zhaga 0-10v twist-lock dimming controls.
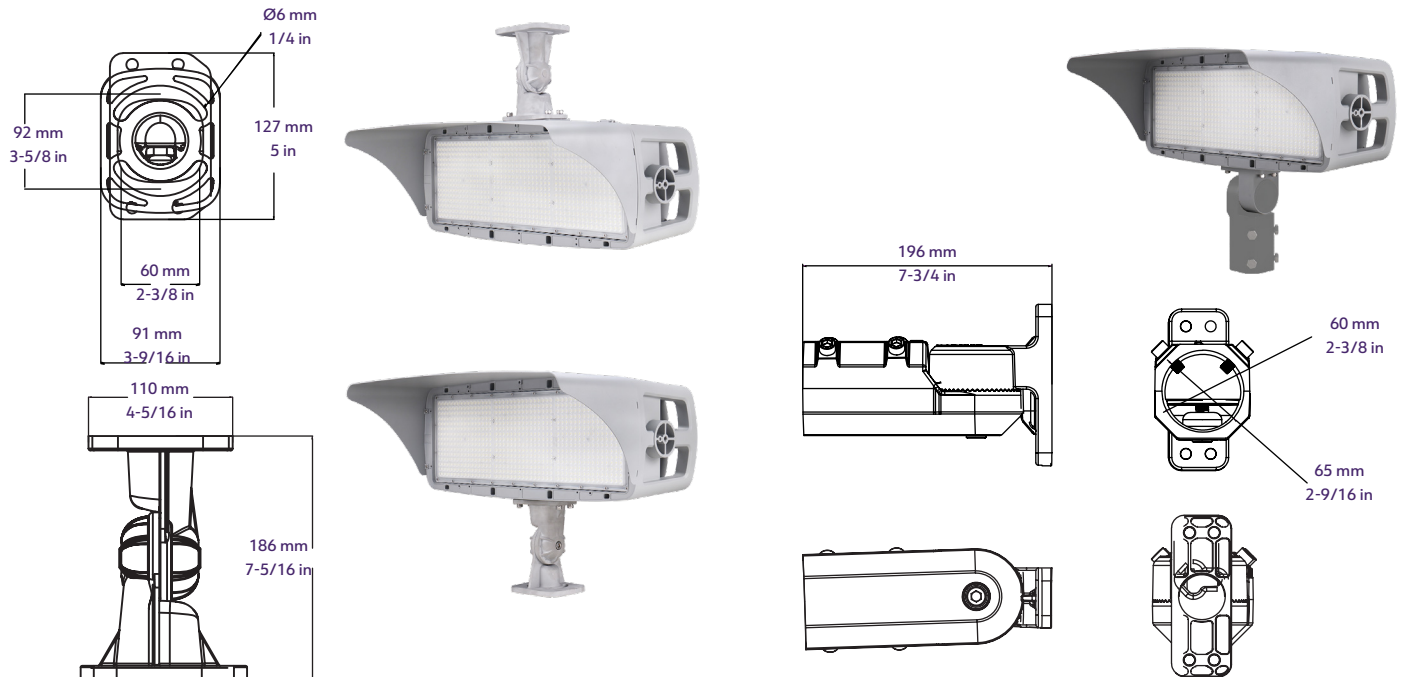
not available on RGBW models

FFHL™ generation 2

MOUNTING Options

Yoke/Trunnion (standard/included: -TM)

- 254 mm / 10 in
- Ø22 mm / 7/8 in
- 33 mm 1-5/16 in
- 21 mm 13/16 in
- 100 mm 4 in
- 17 mm 11/16 in
- 6.5 mm 1/4 in
- 6.5 mm 1/4 in
- 217 mm / 8-9/16 in
- 615 mm / 24-3/16 in
- 4 mm / 3/16 in
- 14 mm / 9/16 in
- 256 mm / 10-1/16 in
- 20 mm / 13/16 in
- 228 mm / 9 in
- 88 mm / 3-7/16 in
- 101 mm / 4 in

Knuckle (option: -KM)

- Ø6 mm / 1/4 in
- 92 mm / 3-5/8 in
- 127 mm / 5 in
- 60 mm / 2-3/8 in
- 91 mm / 3-9/16 in
- 110 mm / 4-5/16 in
- 186 mm / 7-5/16 in

Slipfitter (option: -SF)

- 196 mm / 7-3/4 in
- 60 mm / 2-3/8 in
- 65 mm / 2-9/16 in

CONTROL Options

Standalone Zhaga Z10 Plug & Play Photocell Sensor (option: -PS)

The SE-HS-HD06VCRH7A sensor features two operational modes: On/Off and Daylight Harvesting.

In On/Off mode, the light automatically turns on when the ambient brightness falls below a preset level and turns off when it exceeds this level by tenfold.

In Daylight Harvesting mode, the LED dims as ambient light increases if the brightness is below the preset lux level. Conversely, if the ambient brightness surpasses this threshold, the light turns off.

Users can set the ambient level using a SE-HS-HD05R remote device, which can either specify a particular lux level or learn the current ambient brightness to establish it as the target lux level.

SE-HS-HD06VCRH7A

SE-HS-HD06VCRH7A Daylight Sensor Specification

IP Rating	IP65
On/Off mode	2 Lux / 10 Lux
Daylight Harvesting mode	30/50/80/120/200/250/300/350/400 Lux
Commissioning Device	SE-HS-HD05R
Dimming	0-10v dimming
Connection	Zhaga Z10
Input Voltage	12v DC

Networked Lighting Control - Bluetooth Mesh - Zhaga Z10 Plug & Play (option: -WBN)

Keilton+autani 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.

KEILTON-WPPA102-Z10-W

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

Networked Lighting Control - IEEE 802.15.4 Mesh - Factory Installed (option: -SYW)

Synapse SimplySnap Network Lighting Controls (NLC) offer Luminaire Level Lighting Control (LLLC) based on IEEE 802.15.4 Mesh Networking of Luminaires. Individual addressability enables luminaires to be communicated with each other within the network. Luminaires can be grouped and controlled by using a web app via the connected Central Base Station (CBS). Scheduling, scene and sensors can be added for automation among the lights within the zone/group.

The **SE-SY-DIM10-087-06-IP** is an intelligent SimplySnap wireless lighting controller designed for 0-10v dimming applications. Each device provides intelligent On/Off switching, dimming, external sensor input of lighting fixtures.

The **Central Base Station (CBS)** site controller serves as the heart of the SimplySnap solution. This network edge appliance provides quick browser-based access and local control of smaller systems with hundreds of devices. Each SimplySnap system includes a variety of Synapse-enabled devices that communicate with each other and the CBS to form a local mesh network. The CBS monitors, controls, and automates critical devices to save energy across different types of systems. For managing larger sites or multiple locations, optional SimplySnap cloud applications are available to consolidate multiple site controllers into a single user interface for integrated management across installations with thousands of devices.

DYNAMIC BEHAVIORS is optional separately purchased/licensed feature enables SimplySnap users to produce stunning lighting effects such as Paparazzi, Sparkle, Random etc.
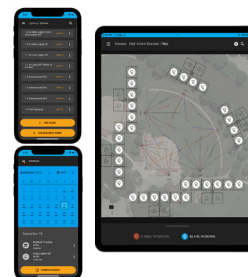
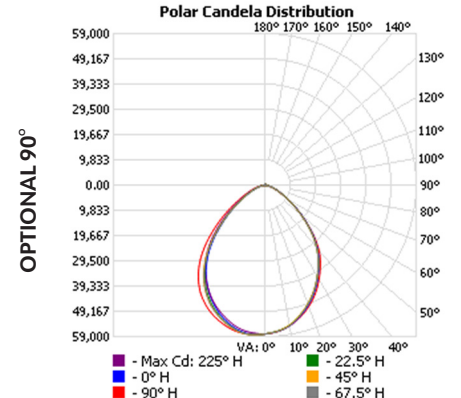# Factory installed, may requires LED driver(s) upgrade, not all features available, contact sales.
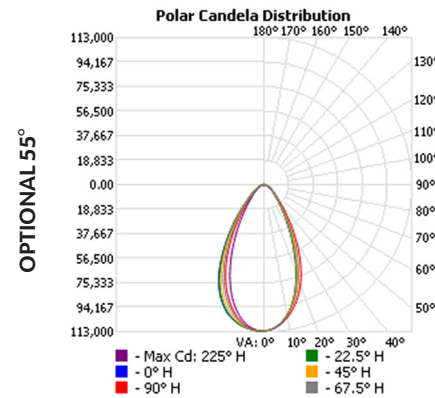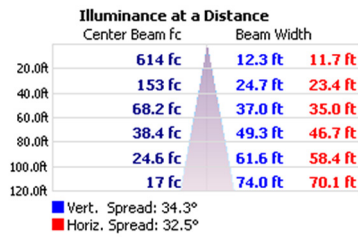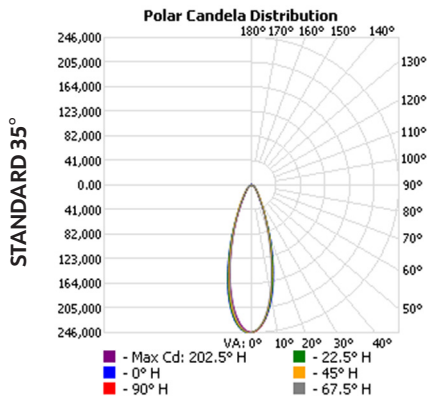
SE-SY-DIM10-087-06-IP   **Central Base Station (CBS)**

OPTIC Options

STANDARD 35°

Polar Candela Distribution

246,000
205,000
164,000
123,000
82,000
41,000
0.00
41,000
82,000
123,000
164,000
205,000
246,000

180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50°

VA: 0° 10° 20° 30° 40°

- Max Cd: 202.5° H
- 0° H
- 90° H
- 22.5° H
- 45° H
- 67.5° H

Illuminance at a Distance

	Center Beam fc	Beam Width	
20.0ft	614 fc	12.3 ft	11.7 ft
40.0ft	153 fc	24.7 ft	23.4 ft
60.0ft	68.2 fc	37.0 ft	35.0 ft
80.0ft	38.4 fc	49.3 ft	46.7 ft
100.0ft	24.6 fc	61.6 ft	58.4 ft
120.0ft	17 fc	74.0 ft	70.1 ft

- Vert. Spread: 34.3°
- Horiz. Spread: 32.5°

OPTIONAL 20°

Polar Candela Distribution

442,000
368,333
294,667
221,000
147,333
73,667
0.00
73,667
147,333
221,000
294,667
368,333
442,000

180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50°

VA: 0° 10° 20° 30° 40°

- Max Cd: 247.5° H
- 0° H
- 90° H
- 22.5° H
- 45° H
- 67.5° H

Illuminance at a Distance

	Center Beam fc	Beam Width	
20.0ft	1096 fc	7.5 ft	7.8 ft
40.0ft	274 fc	15.1 ft	15.5 ft
60.0ft	122 fc	22.6 ft	23.3 ft
80.0ft	68.5 fc	30.1 ft	31.0 ft
100.0ft	43.8 fc	37.6 ft	38.8 ft
120.0ft	30.4 fc	45.2 ft	46.5 ft

- Vert. Spread: 21.3°
- Horiz. Spread: 21.9°

OPTIONAL 55°

Polar Candela Distribution

113,000
94,167
75,333
56,500
37,667
18,833
0.00
18,833
37,667
56,500
75,333
94,167
113,000

180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50°

VA: 0° 10° 20° 30° 40°

- Max Cd: 225° H
- 0° H
- 90° H
- 22.5° H
- 45° H
- 67.5° H

Illuminance at a Distance

	Center Beam fc	Beam Width	
20.0ft	281 fc	21.6 ft	21.6 ft
40.0ft	70.2 fc	43.2 ft	43.2 ft
60.0ft	31.2 fc	64.7 ft	64.9 ft
80.0ft	17.5 fc	86.3 ft	86.5 ft
100.0ft	11.2 fc	107.9 ft	108.1 ft
120.0ft	7.8 fc	129.5 ft	129.7 ft

- Vert. Spread: 56.7°
- Horiz. Spread: 56.8°

OPTIONAL 90°

Polar Candela Distribution

59,000
49,167
39,333
29,500
19,667
9,833
0.00
9,833
19,667
29,500
39,333
49,167
59,000

180° 170° 160° 150° 140° 130° 120° 110° 100° 90° 80° 70° 60° 50°

VA: 0° 10° 20° 30° 40°

- Max Cd: 225° H
- 0° H
- 90° H
- 22.5° H
- 45° H
- 67.5° H

Illuminance at a Distance

	Center Beam fc	Beam Width	
20.0ft	145 fc	37.2 ft	39.4 ft
40.0ft	36.2 fc	74.4 ft	78.8 ft
60.0ft	16.1 fc	111.5 ft	118.3 ft
80.0ft	9.05 fc	148.7 ft	157.7 ft
100.0ft	5.79 fc	185.9 ft	197.1 ft
120.0ft	4.02 fc	223.1 ft	236.5 ft

- Vert. Spread: 85.8°
- Horiz. Spread: 89.2°

GLARE SHIELD Option

Visor

For residential, tourist and conservation areas, facilities must be able to install lighting systems that avoid unwanted illumination onto adjacent properties.

PacLights engineered optical systems include visor that control light and distribute it on the task at hand to limit light trespass. This allows facilities to install luminaires and poles where they are needed for maximum effectiveness.

The visor of the FFHL can be installed on either side of the fixture, depending on specific requirements.
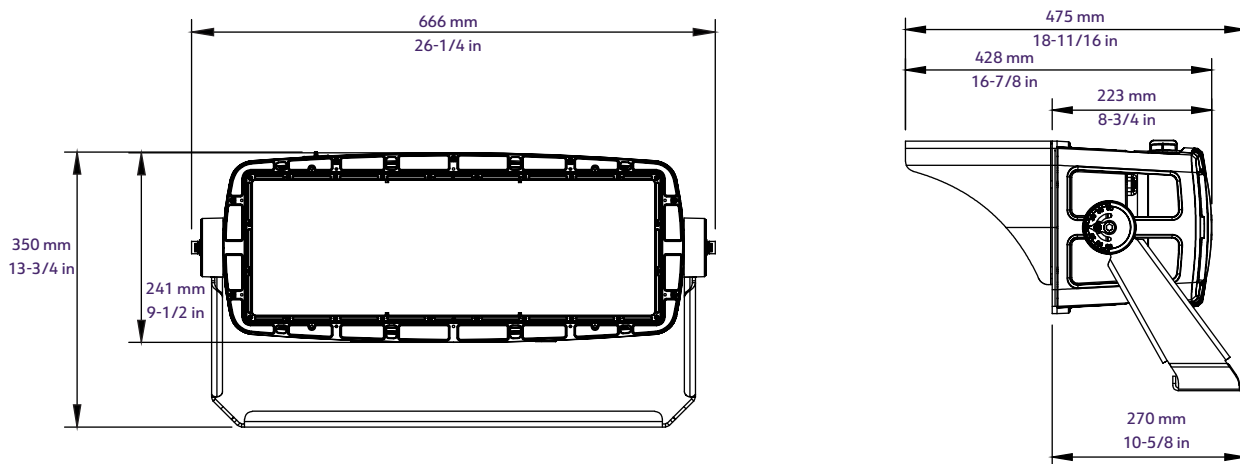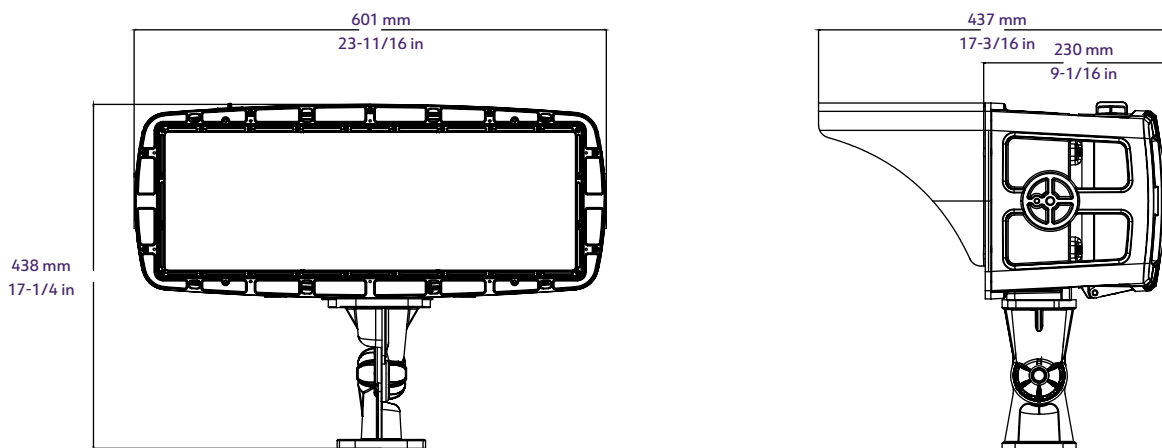
586 mm
23-1/16 in

200 mm
7-7/8 in
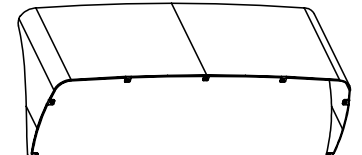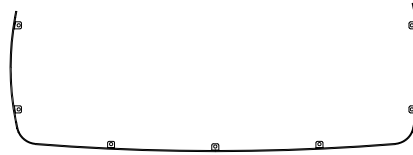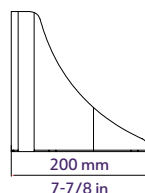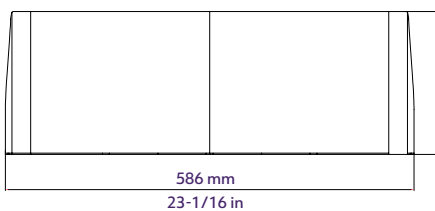
DIMENSIONS

Weight: 50 lbs
EPA: 2.0

FINISHES	
all models	gray

Yoke/Trunnion (standard/included: -TM)

666 mm / 26-1/4 in
350 mm / 13-3/4 in
241 mm / 9-1/2 in
475 mm / 18-11/16 in
428 mm / 16-7/8 in
223 mm / 8-3/4 in
270 mm / 10-5/8 in

Knuckle (option: -KM)

601 mm / 23-11/16 in
438 mm / 17-1/4 in
437 mm / 17-3/16 in
230 mm / 9-1/16 in

Slipfitter (option: -SF)

601 mm / 23-11/16 in
241 mm / 9-1/2 in
462 mm / 18-3/16 in
437 mm / 17-3/16 in
223 mm / 8-3/4 in
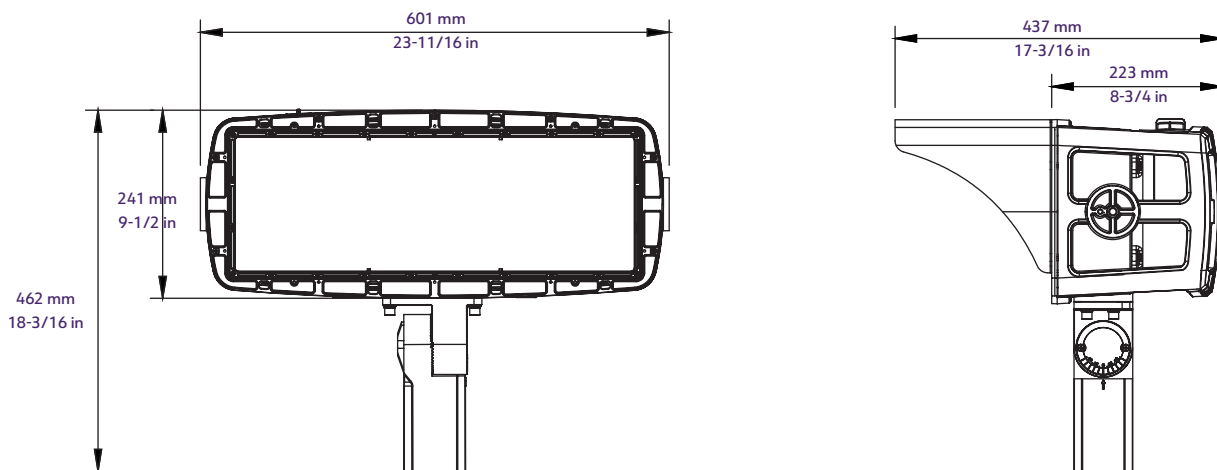
NETWORKED CONTROLS
MADE EASY

Keilton+autani 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 +autani

DLC LISTED

A Cost-Effective Decentralized Architecture

Direct Mobile Device Provisioning

Best-In-Class Scale, Performance & Reliability
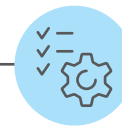
INSTALL — **COMMISSION** — **CONTROL**

**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

Bluetooth®

Security Capabilities Verified **GOLD** UL

SUPPORTS T24 COMPLIANCE

NETWORKED CONTROLS for
FFHL series

PacLights

NETWORKED NODES

SKU		DESCRIPTION	FUNCTION	CONTROL ORDER CODE
KEILTON-WPPA102-Z10-W		KEILTON WPPA102-Z10-W DC AUX BLUETOOTH MESH NODE (OUTDOOR, LONG RANGE)	Enable network controlled - on & off, dim, trim, zone, group, scene & schedule, etc.	**-WBN**