Part Number:



# **ORDERING GUIDE:**

SERIES	WATTS	DRIVER	ССТ		LENS	WARRANTY
GH22 2' x 2' Grid Frame High Bay	90WLED	<b>UNIV</b> 120-277V	50	FRL	Frosted Acrylic Lens	BLANK 5 Year Warranty
	115WLED		40	PCL	Clear Polycarbonate Lens	10 YR <sup>7</sup> 10 Year Warranty
	135WLED		35	PFL	Frosted Polycarbonate Lens	
			30			
GH24 2' x 4' Grid Frame High Bay	90WLED					
	130WLED					
	180WLED					

	OPTIONS		
	Factory Installed		Ship With Accessories
WC <sup>6</sup>	Wire Cage	FLGK	Flange Kit
G1	Single Gasket	HC	(4) Hurricane Clips to further secure recessed
G21	Double Gasket		fixture to grid
G31	Triple Gasket	ACxY	Adjustable Y-Toggle aircraft cable set
EM5	5W LED Battery Backup		(x = 5' or 10')
EM5/HE	5W LED Battery Backup - CEC Title 20 Compliant	HRC-05	Microwave Sensor Programming Remote
EM7	7W LED Battery Backup	GHxx/SM <sup>8</sup>	Surface Mount Kit (XX=fixture size; 24 or 22)
EM7/HE	7W LED Battery Backup - CEC Title 20 Compliant		
EM10	10W LED Battery Backup		
EM10/HE	10W LED Battery Backup - CEC Title 20 Compliant		Basic Controls
EM10/HE/SD	10W LED Battery Backup - CEC Title 20 Compliant - Self Diagnostic	MWS	Microwave High Bay Bi-Level Dimming Sensor
EM12	12W LED Battery Backup	FSP-311/Lx <sup>2,5</sup>	Legrand FSP-311 120/277V Sensor (X =
EM20	20W LED Battery Backup - CEC Title 20 Compliant		- L3 = 20'MH - L7 = 40'MH
EM25 <sup>4</sup>	25W LED Battery Backup		
EM25/HE <sup>4</sup>	HE <sup>4</sup> 25W LED Battery Backup - CEC Title 20 Compliant		
EM25/HE/SD <sup>4</sup>	EM25/HE/SD <sup>4</sup> 25W LED Battery Backup - CEC Title 20 Compliant - Self Diagnostic		
GTD	Generator Transfer Device		
SD347	347V Step Down Transformer		
SD480	480V Step Down Transformer		
MC6/3W	6ft MC Cable Whip w/ 3 leads		
MC6/4W	6ft 4 Wire MC Cable Whip w/ 3 leads attached to power		
	& 1 lead for battery backup		
MC6/5W	6ft 4 Wire MC Cable Whip w/ 3 leads attached to power		
	& 2 lead attached to dimming		
MC6/6W	6ft 6 Wire MC Cable Whip w/ 3 leads for fixture power		
	& 2 leads for dimming & 1 battery backup		

<sup>1</sup>Does not make fixture wet location rated or dust tight <sup>3</sup>One needed per project <sup>5</sup>Not available with lens options <sup>7</sup> Consult Factory for more details <sup>2</sup>Requires bluetooth enabled device for programming (provided by others) <sup>4</sup>GH24 Only <sup>6</sup> Not available with the MWS option <sup>8</sup> Reduces Max Ambient; Consult factory GHSPEC0724

LED SYSTEMS INFO <sup>1</sup>	300	00К	350	00К	400	00К	500	0К	Ambient		
Part Numbers	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Temp Range	Watts <sup>2</sup>	Replaces
GH22-90WLED-UNIV-XX	13,143	149	13,381	151	13,620	154	13,859	157	-40°F-125°F	88W	250W MH
GH22-90WLED-UNIV-XX-FRL	11,740	132	11,953	135	12,166	137	12,352	139	-40ºF-125ºF	89W	250W MH
GH22-115WLED-UNIV-XX	16,155	143	16,448	145	16,741	148	17,036	150	-40°F-120°F	113W	400W MH
GH22-115WLED-UNIV-XX-FRL	14,260	127	14,519	129	14,778	131	15,037	134	-40°F-120°F	113W	400W MH
GH22-135WLED-UNIV-XX	19,670	145	19,773	146	19,876	146	19,980	147	-40ºF-115ºF	136W	400W MH
GH22-135WLED-UNIV-XX-FRL	17,450	128	17,542	129	17,568	130	17,660	130	-40°F-115°F	136W	400W MH
GH24-90WLED-UNIV-XX	12,657	146	13,003	150	13,637	154	13,991	158	-40°F-122°F	88W	3T5HO
GH24-90WLED-UNIV-XX-FRL	11,520	133	11,624	134	11,993	136	12,100	137	-40ºF-122ºF	89W	3T5HO
GH24-130WLED-UNIV-XX	19,283	146	19,786	150	20,289	154	20,793	158	-40ºF-122ºF	132W	400W MH
GH24-130WLED-UNIV-XX-FRL	17,387	132	17,841	135	18,294	139	18,749	142	-40°F-122°F	132W	400W MH
GH24-180WLED-UNIV-XX	24,852	141	25,091	142	25,330	144	25,570	145	-40°F-122°F	176W	6T5HO
GH24-180WLED-UNIV-XX-FRL	22,530	128	22,747	130	23,081	131	23,300	132	-40°F-122°F	176W	6T5HO

<sup>2</sup>Electrical data at 2<sup>5</sup>C (77F). Actual wattage may differ by +/-10%

<sup>3</sup>Listed as High-Bay

\*Please refer to the DLC Qualified Products List at www. Designlights.org/QPL to confirm specific product qualifications.

## **SPECIFICATIONS**

#### CONSTRUCTION

Lightweight aluminum body for rigidity, durability and ease of installation. Designed to achieve maximum performance and improved aesthetics. Toolless hinged driver door access for ease of maintenance and installation. Access plate installed on top of fixture for easy hardwire power connections. Optional factory installed power flex conduit whip (WHIP) available to reduce electrical installation time.

#### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000 hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (100%–10%) with optional 347-480 Vac step down transformer. Optional emergency battery backups and generator transfer device available to meet critical life safety lighting requirements.

#### MOUNTING

Recessed mounted into standard 15/16" T-Grid Ceiling. Optional Flange Kit (FLGK) for recessed drywall mounting.

#### WARRANTY

5 Year Warranty; 10 Year Warranty Optional. (Terms and Conditions apply)

#### OPTICS

Standard without lens. Optional Frosted Acrylic (FRL), Clear Polycarbonate (PCL) and Frosted Polycarbonate (PFL) lenses available for added LED protection and glare reduction. Polycarbonate lens option required for racquetball court installations. Optional 11 ga. Wire Cage for added protection.

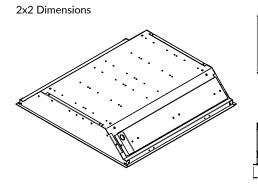
#### CONTROLS

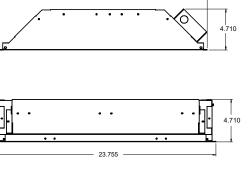
Factory installed Basic integral occupancy sensor option available. Microwave (MWS) sensor is installed behind the lens and allows for bi-level dimming operation.

#### CERTIFICATIONS

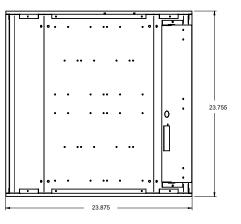
ETL listed to US and Canadian safety standards. Suitable for damp locations. American Recovery and Reinvestment Act Funding Compliant. Non-IC Rated. IK10 Impact Rating (Primary Iens). DLC (DesignLights Consortium) Premium Qualified, with some Standard Qualified configurations. Please refer to the DLC Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

# **LINE DRAWINGS**

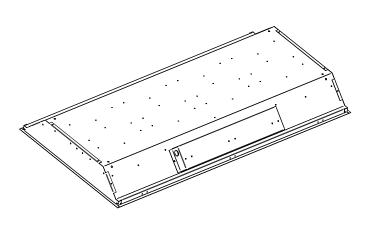


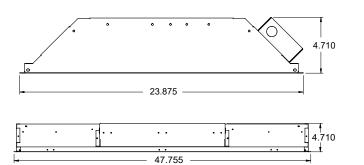


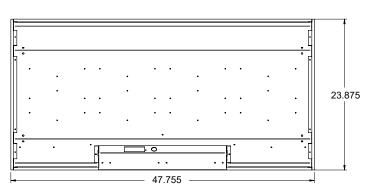
23.875



2x4 Dimensions



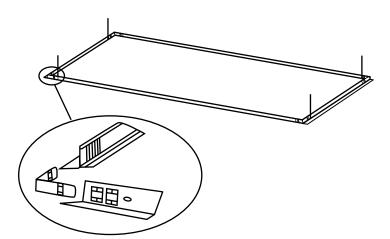




Flange Kit

#### Dimensions:

2x2 - Ceiling opening is 24.25" x 24.25" 2x4 - Ceiling opening is 24.25" x 48.25"



MWUSBD Standard Settings

Detection area: 100%

• Stand-by Period: Infinity

Stand-by dim level: 30%

• Daylight Sensor: Disabled

• Hold time: 5 min

## BASIC

#### **CONTROLS OPTIONS**

#### **MWS**

The integral microwave occupancy sensor activates switching of luminaire light levels. The Microwave occupancy sensor is discretely installed behind the polycarbonate lens and is available for universal (120-277V) only. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (10% maximum drive current) is activated when target zone is absent of motion activity for ~3 minutes. Detection Area: 100%, Standby Time: Disabled, Daylight Sensor: Disabled. See coverage diagram for detection cone. Consult Factory for alternate settings.

Occupancy detector with tri-level dimming control suitable for indoor use.

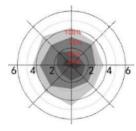
1-10V dimming control method

#### MWS Standard Settings

- Detection area: 100%
- Hold time: 8s
- Stand-by Period: Os
- Stand-by dim level: 10%
- Daylight Sensor: Disabled

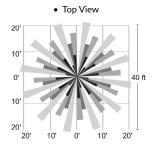
#### **COVERAGE PATTERNS MWS**

Ceiling Mounted Height: 3m Sensitivity: 100%/75%/50%/25%



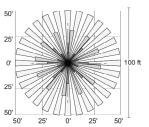
Normal Moving (Speed: 1m/s)

#### SYNS/L3 and FSP-311/Ly



#### SYNS/L7 and FSP-311/Ly

• Top View



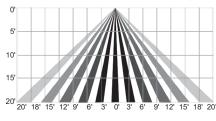
• Side View

Normal Moving (Speed: 1m/s)

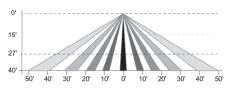
\* Only 100% detection sensitivity is workable when installed at 6m mounting height. Able to detect motion signal.

Ceiling Mounted Height: 6m

Sensitivity: 100%



Side View



#### **FSP-311/Ly**

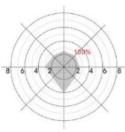
Optional Bluetooth Programmable PIR sensor allows for Continuous Dimming, Motion and/ or daylight harvesting, Fully adjustable high/low dimmed light levels, and Adjustable time delay/ cutoff delay. The sensor is programmed via a free iOS® or Android® Sensor Configuration App (compatible device provided by others). Available in 10'-20' or 20'-40' mounting lenses. See coverage patterns below, L7=20'-40', L3=20'-40'.

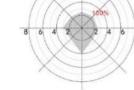
- Default Settings:
- High Mode: 100% Output
- Low Mode: 10% Output
- Time Delay: 5 mins
- Cutoff: 1 hr
- Sensitivity: High
- Photocell: Disabled
- Continuous Dimming: Disabled

Ceiling Mounted Height: 3m Sensitivity: 100%/75%/50%/25%

Slow Moving (Speed: 0.3 m/s)

Ceiling Mounted Height: 6m Sensitivity: 100%





Slow Moving (Speed: 0.3 m/s)



# PHOTOMETRIC DATA

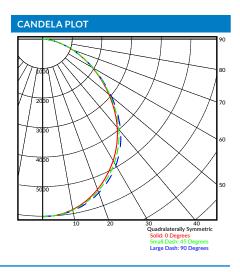
LUMINAIRE DATA	
Part Number	GH22-90WLED-UNIV-50-FRL
Description	2'x2' Grid High Bay with frosted acrylic lens, 12,000 lumens
Fixture Lumens (Im)	12,352 lm
Wattage (W)	89 W
Efficacy (Im/W)	157 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.23, 90° = 1.19

ZONAL LUMEN SUMMARY			
Zone	Lumens (Im)	% Fixture	
0° - 40°	5,971	50%	
0° - 60°	9,975	83%	
0° - 90°	12,352	100%	
90° - 180°	0	0%	
0° - 180°	12,352	100%	

# CANDELA PLOT

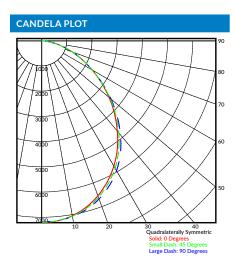
LUMINAIRE DATA	
Part Number	GH22-115WLED-UNIV-50-FRL
Description	2'x2' Grid High Bay with frosted acrylic lens, 15,000 lumens
Fixture Lumens (Im)	15,037 lm
Wattage (W)	113 W
Efficacy (Im/W)	150 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.18, 90° = 1.22

ZONAL LUMEN SUMMARY			
Zone	Lumens (Im)	% Fixture	
0° - 40°	7,359	50%	
0° - 60°	12,270	83%	
0° - 90°	15,037	100%	
90° - 180°	0	0%	
0° - 180°	15,037	100%	



LUMINAIRE DATA	
Part Number	GH22-135WLED-UNIV-50-FRL
Description	2'x2' Grid High Bay with frosted acrylic lens, 18,000 lumens
Fixture Lumens (Im)	18,340 lm
Wattage (W)	136 W
Efficacy (Im/W)	153 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.19, 90° = 1.23

ZONAL LUMEN SUMMARY			
Zone	Lumens (Im)	% Fixture	
0° - 40°	8,847	50%	
0° - 60°	14,703	83%	
0° - 90°	18,340	100%	
90° - 180°	0	0%	
0° - 180°	18,340	100%	

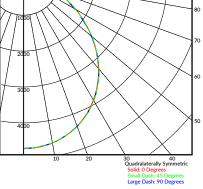


# **PHOTOMETRIC DATA**

LUMINAIRE DATA	
Part Number	GH24-90WLED-UNIV-50-FRL
Description	2'x4' Grid High Bay with frosted acrylic lens, 12,000 lumens
Fixture Lumens (Im)	12,681 lm
Wattage (W)	89 W
Efficacy (Im/W)	143 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.23, 90° = 1.23

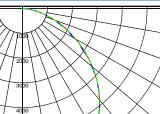
ZONAL LUMEN SUMMARY			
Zone	Lumens (Im)	% Fixture	
0° - 40°	5,885	49%	
0° - 60°	9,963	82%	
0° - 90°	12,681	100%	
90° - 180°	0	0%	
0° - 180°	12,681	100%	

# CANDELA PLOT



LUMINAIRE DATA	
Part Number	GH24-130WLED-UNIV-50-FRL
Description	2'x4' Grid High Bay with frosted acrylic lens, 18,000 lumens
Fixture Lumens (Im)	18,749 lm
Wattage (W)	132 W
Efficacy (lm/W)	142 lm/W
Mounting	Recessed
Spacing Criteria	0° = 1.23, 90° = 1.23

ZONAL LUME		
Zone	Lumens (Im)	% Fixture
0° - 40°	8,718	49%
0° - 60°	14,743	82%
0° - 90°	18,749	100%
90° - 180°	0	0%
0° - 180°	18,749	100%



CANDELA PLOT

	80
2000	70
3000	60
5000	$\times$
6000	50
10 20	30 40 Quadralaterally Symmetric Solid: 0 Degrees Small Dash: 45 Degrees Large Dash: 90 Degrees

LUMINAIRE DATA		
Part Number	GH24-180WLED-UNIV-50-FRL	
Description	2'x4' Grid High Bay with frosted acrylic lens, 24,000 lumens	
Fixture Lumens (Im)	24,350 lm	
Wattage (W)	176 W	
Efficacy (Im/W)	138 lm/W	
Mounting	Recessed	
Spacing Criteria	0° = 1.23, 90° = 1.24	

ZONAL LUMEN SUMMARY				
Zone	Lumens (Im)	% Fixture		
0° - 40°	11,420	49%		
0° - 60°	19,257	83%		
0° - 90°	24,350	100%		
90° - 180°	0	0%		
0° - 180°	24,350	100%		

