

Catalog Number: _____ Type: _____

Project: _____

Comments: _____ Date: _____

LED Flood Series FL2



Knuckle Mount



Yoke Mount

The LED Flood Series is a family of energy efficient solutions for replacing high wattage outdoor flood luminaires. Their small footprint provide an easy means to conceal the luminaire and deliver superior illumination for highlighting or accentuating key landscape contours, outdoor signs, statues, and many other important outdoor features. Their IP65 rating and UL listing for wet applications, are designed for weathering outdoor elements. The LED Flood Series are rated for over a 50,000 hour rated life and are backed by a 5-year warranty. Applications include; schools, parks, building facades, security, signage and parking lots.

¹ IP65 Rated fixtures are rated for use outdoors where exposed directly to water from rain or irrigation.

Performance Specifications

CRI _____	70	Min. Start Temp. _____	-40°F (-40°C)
Rated Life _____	50,000 hour life	Max. Operating Temp. _____	104°F (40°C)
Watt _____	28W, 48W	Power Factor _____	>98%
Lumens _____	3307, 5542	THD _____	<20%
Lumens per Watt (LPW) _____	118, 115	Warranty _____	5-Year Limited
Input Line Voltage _____	100-277V	Control _____	FL2 Dimmable (0-10V)
Input Line Frequency _____	50/60 Hz	Weight _____	3 lbs.

Energy Savings

System	System Wattage	Replacement LED	Wattage	Energy Savings
150W Metal Halide	180W	FL2/CL28BZ50/XX/LED	28W	84%

Construction

- Die-cast aluminum housing
- Clear polycarbonate lens
- Textured architectural bronze powdercoat finish
- UL listed for wet locations
- IP65 rated

Accessories

- Photocell 110-277V - 10114
- Post Top Fitter Flood - For Knuckle Mounts Only - 99811
- Heavy Duty Ground Stake - For Knuckle Mounts only - 99813
- NEMA type 6 distribution

Accessories include hardware.

Installation

- Adjustable knuckle with 1/2" NPS Threads
- Yoke mount and knuckle mount options
- Removable 1/2" threaded plugs with O-rings for photocell

Electrical

- 120V-277V input range
- 50/60 Hz input frequency
- 0-10V dimming
- Electrical snap-in connectors to simplify wiring and installation
- Voltage sensing 100-277V dimmable driver



Ordering Information

Watt	Product #	Product Code	Volts	Color Temp.	CRI	Lumens	Useful Life*	Dimmable	Mounting Type	Fixture Size L x H	Wattage Equivalent
28 Watt	99877	FL2/CL28BZ50/KN/LED	100-277V	5000K	70	3307	50,000	Yes	Knuckle	5.0" x 3.5"	150W Metal Halide
28 Watt	99878	FL2/CL28BZ50/YK/LED	100-277V	5000K	70	3307	50,000	Yes	Yoke	8.9" x 8.8"	150W Metal Halide
48 Watt	99879	FL2/CL48BZ50/KN/LED	100-277V	5000K	70	5562	50,000	Yes	Knuckle	9.3" x 7.2"	175W Metal Halide
48 Watt	99880	FL2/CL48BZ50/YK/LED	100-277V	5000K	70	5562	50,000	Yes	Yoke	8.9" x 8.8"	175W Metal Halide

* Useful Life is defined as the point in time at which the lamp will maintain at least 70% of its initial lumens. The lamp will continue to burn past this point, but at decreased light levels.

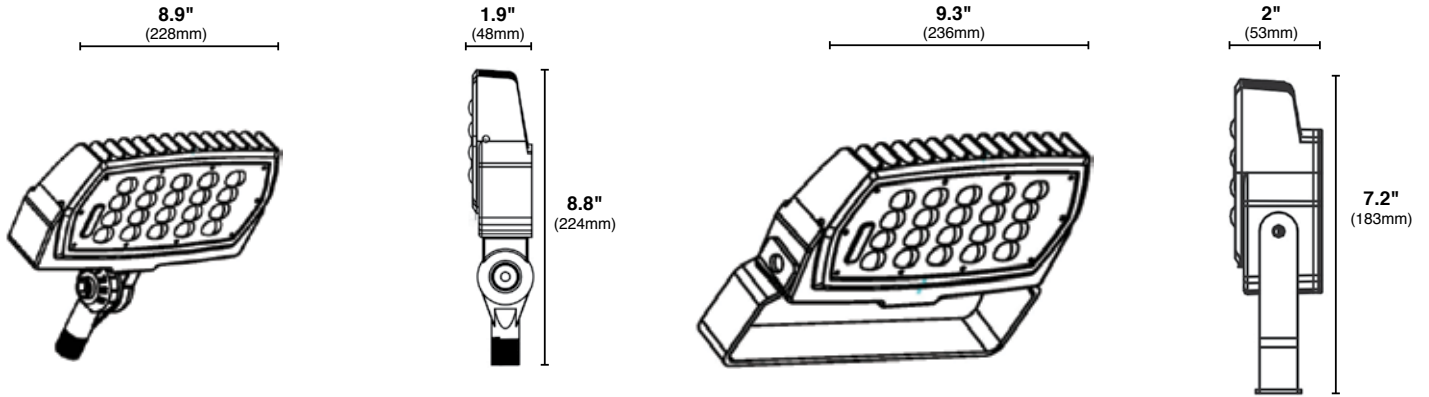
Warranty – Commercial / Industrial: This product is warranted for 5 years from the date of purchase.

** Check the latest update at www.DesignLights.org for listed product catalog numbers. Not all versions are listed.



LED Flood Series FL2

Dimensions

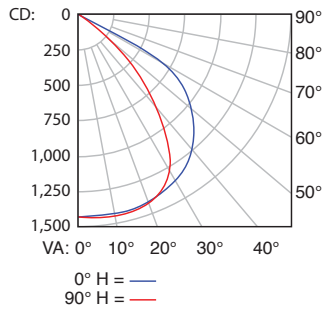


Photometrics

Polar Candela Distribution Plot

99877 FL2/CL28BZ50/KN/LED

99878 FL2/CL28BZ50/YK/LED



LUMENS PER ZONE

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	137.0	4.1%	90-100	0.1	0%
10-20	405.1	12.3%	100-110	0.2	0%
20-30	643.3	19.5%	110-120	0.2	0%
30-40	785.8	23.8%	120-130	0.3	0%
40-50	714.2	21.6%	130-140	0.5	0%
50-60	474.0	14.3%	140-150	0.6	0%
60-70	122.8	3.7%	150-160	0.6	0%
70-80	16.9	0.5%	160-170	0.4	0%
80-90	4.2	0.1%	170-180	0.1	0%

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1,185.5	35.8%	35.9%
0-40	1,971.3	59.6%	59.6%
0-60	3,159.5	95.5%	95.6%
60-90	143.9	4.4%	4.4%
70-100	21.2	0.6%	0.6%
90-120	0.5	0%	0%
0-90	3,303.4	99.9%	99.9%
90-180	3.0	0.1%	0.1%
0-180	3,306.4	100%	100%

LCS TABLE BUG RATING	B1 - U1 - G0	
FORWARD LIGHT	LUMENS	LUMENS%
LOW (0-30)	590.0	17.8%
MEDIUM (30-60)	990.9	30%
HIGH (60-80)	79.6	2.4%
VERY HIGH (80-90)	2.3	0.1%
BACK LIGHT		
LOW (0-30)	595.4	18%
MEDIUM (30-60)	983.6	29.7%
HIGH (60-80)	60.1	1.8%
VERY HIGH (80-90)	2.0	0.1%
UPLIGHT		
LOW (80-90)	0.1	0%
HIGH (100-180)	3.0	0.1%
TRAPPED LIGHT:	0.1	0%

FLOOD SUMMARY

	EFFICIENCY	LUMENS	HORIZONTAL SPREAD	VERTICAL SPREAD
FIELD (10%)	97.8%	3,234.8	115.6	129.5
BEAM (50%):	83.9%	2,775.2	86.2	109.5
TOTAL:	99.9%	3,303.1		

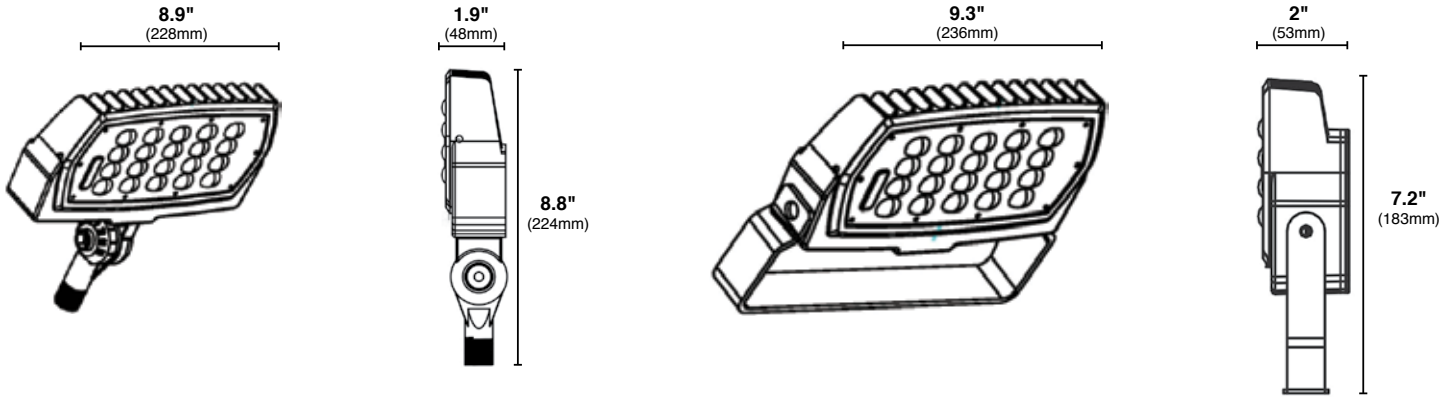
ILLUMINANCE AT A DISTANCE

HEIGHT(FT)	CENTER BEAM		BEAM SPREAD(FT)		FIELD SPREAD(FT)	
	FOOTCANDLE	HORIZONTAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
2.00	358.72 FC		3.7	5.7	6.4	8.5
4.00	89.68 FC		7.5	11.3	12.7	17.0
6.00	39.86 FC		11.2	17.0	19.1	25.4
8.00	22.42 FC		15.0	22.6	25.4	33.9
10.00	14.35 FC		18.7	28.3	31.8	42.4

BEAM ANGLE	FIELD ANGLE
86.2°	109.5°
	115.6°
	129.5°

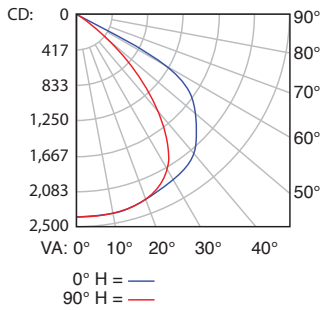
LED Flood Series FL2

Dimensions



Photometrics

99879 FL2/CL48BZ50/KN/LED
99880 FL2/CL48BZ50/YK/LED



LUMENS PER ZONE					
ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	228.1	4.1%	90-100	0.1	0%
10-20	673.8	12.1%	100-110	0.3	0%
20-30	1,065.7	19.2%	110-120	0.4	0%
30-40	1,301.1	23.4%	120-130	0.6	0%
40-50	1,206.7	21.7%	130-140	0.8	0%
50-60	823.7	14.8%	140-150	1.0	0%
60-70	217.9	3.9%	150-160	1.0	0%
70-80	31.0	0.6%	160-170	0.7	0%
80-90	8.4	0.2%	170-180	0.2	0%

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1,967.7	35.4%	35.4%
0-40	3,268.8	58.8%	58.8%
0-60	5,299.2	95.3%	95.3%
60-90	257.3	4.6%	4.6%
70-100	39.5	0.7%	0.7%
90-120	0.8	0%	0%
0-90	5,556.5	99.9%	99.9%
90-180	5.1	0.1%	0.1%
0-180	5,561.6	100%	100%

LCS TABLE BUG RATING	B1 - U1 - G0	
	LUMENS	LUMENS%
FORWARD LIGHT		
LOW (0-30)	983.5	17.7%
MEDIUM (30-60)	1,688.6	30.4%
HIGH (60-80)	145.0	4.3%
VERY HIGH (80-90)	4.5	0.1%
BACK LIGHT		
LOW (0-30)	984.2	17.7%
MEDIUM (30-60)	1,643.7	29.6%
HIGH (60-80)	103.9	1.9%
VERY HIGH (80-90)	3.9	0.1%
UPLIGHT		
LOW (80-90)	0.1	0%
HIGH (100-180)	5.0	0.1%
TRAPPED LIGHT:	0.000	0%

FLOOD SUMMARY	EFFICIENCY LUMENS HORIZONTAL SPREAD VERTICAL SPREAD			
	FIELD (10%):	97.8%	5,439.0	115.4
BEAM (50%):	84%	4,669.5	86.4	113.9
TOTAL:	99.9%	5,556.0		

ILLUMINANCE AT A DISTANCE	CENTER BEAM		BEAM SPREAD(FT)		FIELD SPREAD(FT)	
	HEIGHT(FT)	FOOTCANDLE	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
2.00	597.49 FC	3.8	6.1	6.3	8.7	
4.00	149.37 FC	7.5	12.3	12.7	17.5	
6.00	66.39 FC	11.3	18.4	19.0	26.2	
8.00	37.34 FC	15.0	24.6	25.3	34.9	
10.00	23.90 FC	18.8	30.7	31.6	43.7	
		BEAM ANGLE		FIELD ANGLE		
		86.4°	113.9°	115.4°	130.8°	