

## IESNA LM79: 2008 Photometric Test Report

Photometric Testing and Evaluation in Accordance with LM 79-2008

Report Prepared For

Amro-El-Adle

Product Manager

MaxLite

**Description of Sample:** 180W HO Flood Model ELLF180UW50.

**The Sample (s) was (were) tested in accordance with the following applied standards/regulations:**

IESNA LM79: 2008 Approved for Electrical and Photometric Measurements of Solid-State Lighting Products.

ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products.

ANSI C82.77:2002 Harmonic Emissions Limits – Related Power Quality Requirement for Light Equipment.

**CITL Test Number:** CITL0001564

**Sample Arrival Date:** 4/12/2016

**Date of Test:** 4/14/2016

**Report Issue Date:** 4/15/2016

**Report Prepared By:**



**Franklin Navarro**  
Lab Technician

**Report Approved By:**

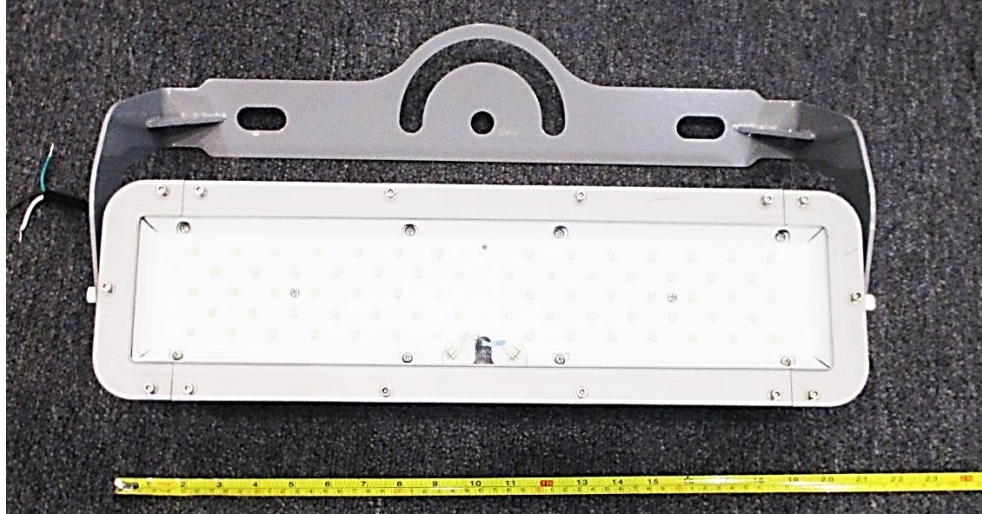


**Jun Xiang**  
Lab Manager

**Sample Number:** 1504

**Manufacturer:** MaxLite

**Notes:** Tested in intended orientation



**Equipment Used:**

Description	Model #	Serial #	Calibration Date	Calibration Due Date
Goniophotometer	GO-R5000	G116930CS1341112	03/03/16	09/03/16
EVERFINE AC POWER SUPPLY	DPS1060	G1174227A8341115	-	-
YOKOGAWA POWER ANALYZER	WT310	C2QJ09027V	10/24/15	10/24/16
DC POWER SUPPLY	WY12010	G115909TM5341117	-	-
EVERFINE AC POWER SUPPLY	DSP1005	G119890CJ7341122	-	-
DC POWER SUPPLY	WY305	G115986TA8341112	-	-
INTERGRATING SPHERE	2 METER	CITL 0018	12/08/15	06/07/16
YOKOGAWA POWER ANALYZER	WT310	C2QJ22012V	11/09/15	11/09/16
FLUKE DIGITAL THERMOMETER	51II	29390172WS	03/04/16	03/31/17
TEMPERATURE AND HUMIDITY LOGGER	UX100-023	10683270	03/22/16	03/31/17

**LM-79 Test Summary:**

Manufacture:	MaxLite
Fixture Model Number:	ELLF180UW50
Driver Model Number:	LG LLP180W3.75A48VICH
LED Model Number:	LH351B

**Electrical Measurement:**

Input Voltage:	120VAC	277VAC
Input Current:	1.547A	0.6888A
Input Frequency:	60 HZ	60 Hz
Input Power:	183.7W	181.55W
Power Factor:	0.9900	0.9514
Total Harmonic Distortion:	13.236 ATHD	20.684 ATHD

**Lumen Output:**

Lumens:	19205.2Lm
Efficacy:	104.55Lm/W
Color Rendering Index *(CRI)	Ra: 77.8 R <sub>g</sub> : 0.0
Correlated Color Temperature (K):	5155K
Chromaticity Coordinate x:	0.3411
Chromaticity Coordinate y:	0.3507
Ambient Temperature (°C):	25°C
Stabilization Time (Hours):	45 Mins
Total Operation Time (Hours):	1 Hrs.
u/u':	0.2091
V':	0.4836
Duv:	1.17e-03
Max Candela:	6,629.5 at Horizontal: 225°, Vertical: 5°
Zonal Lumens in the 0°-60° Zone	16,212.5lm – 84.4%
Zonal Lumens in the 60°-90° Zone	2,968.4lm – 15.5%
Zonal Lumens in the 0°-90° Zone	19,180.9lm – 99.9%
Zonal Lumens in the 90°-120° Zone	3.8lm – 0.0%
Zonal Lumens in the 90°-180° Zone	23.5lm – 0.1%

**Test Methods:**

**Photometric Measurements – Goniophotometer:**

An Everfine Type C Rotating Mirror Goniophotometer was used to measure candelas (intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 60 minutes and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measure using the listed equipment.

**Spectral Measurements – Integrating Sphere**

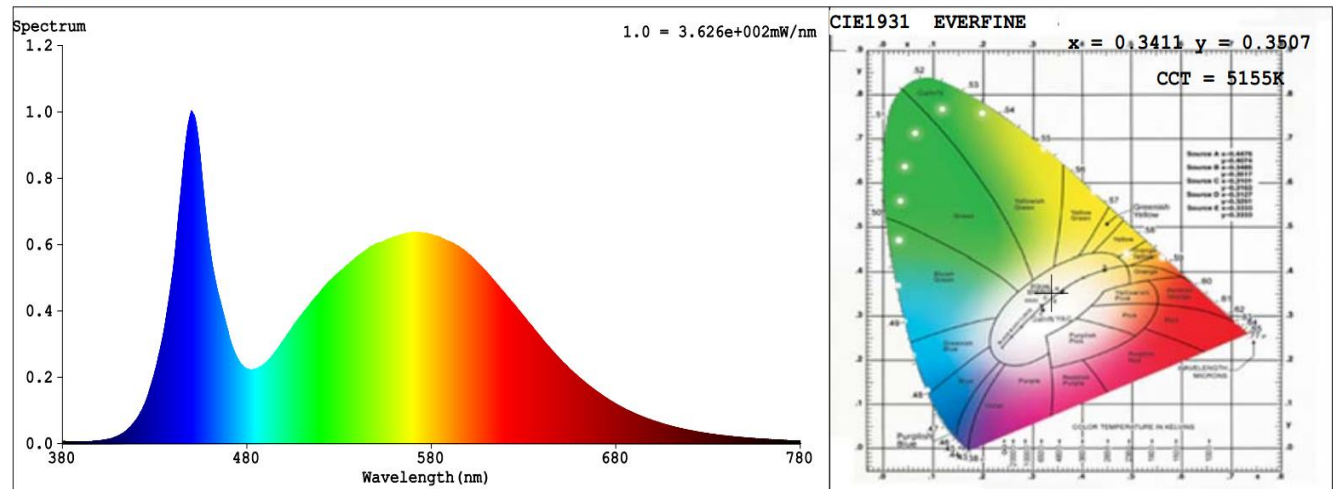
A sensing Spectrometer HASS-2000, in conjunction with Everfine 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature (CCT) and the color rendering index (CRI) for each sample. Test Geometry Configuration 4 π.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30 min and longer if necessary for the sample to achieve stabilization

Electrical measurements are measured using the listed equipment.

**LUMINAIRE PHOTOMETRIC TEST REPORT:**

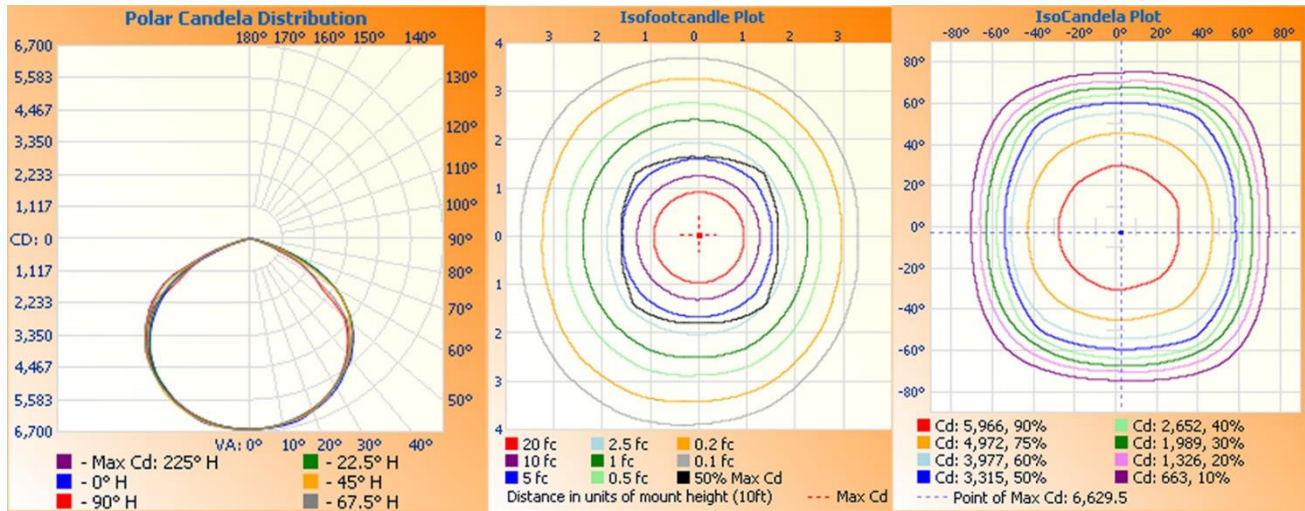
**Spectrum**



Spectral Distribution

CIE1931 Chromaticity Diagram

**CANDELA PLOT DIAGRAM:**



**ZONAL FLUX DIAGRAM:**

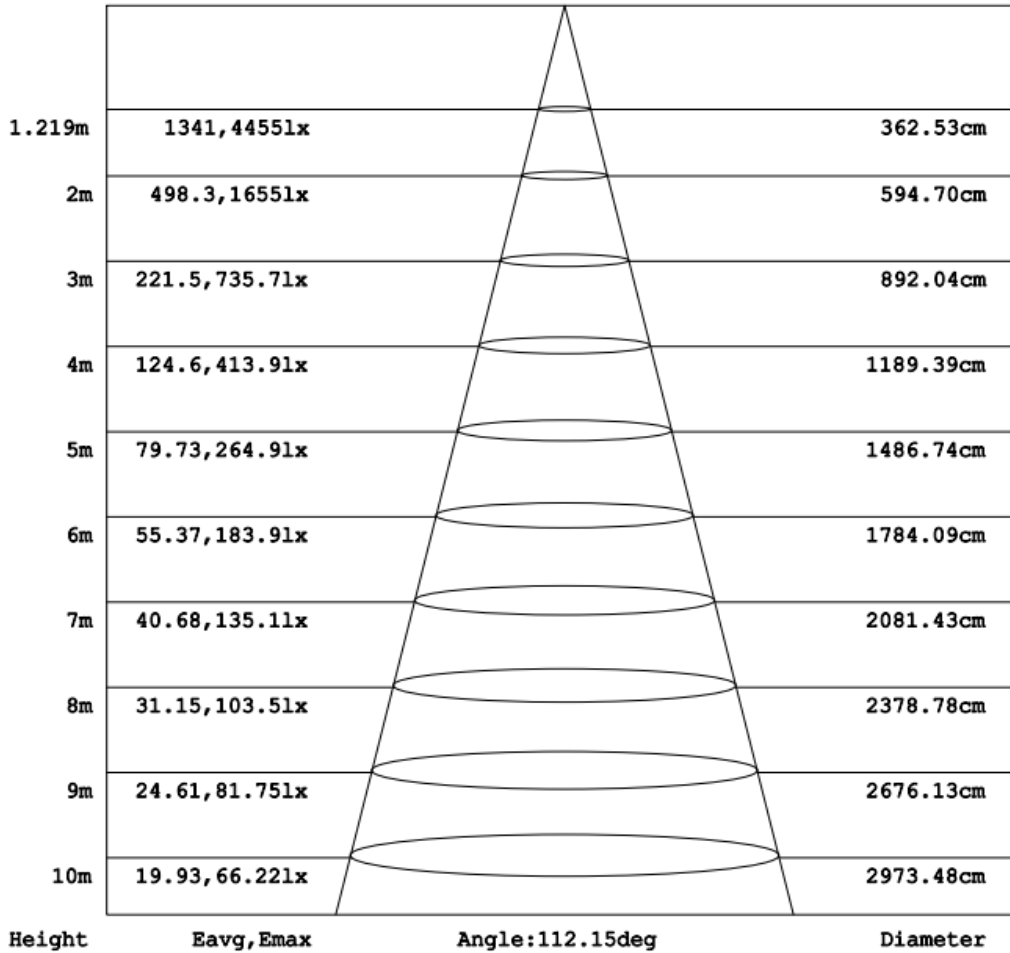
Illuminance at a Distance				Zonal Lumen Summary			Lumens Per Zone					
	Center Beam fc	Beam Width		Zone	Lumens	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
8.3R	96.0 fc	28.5 ft	24.7 ft	0-30	5,303.9	27.6%	0-10	628.6	3.3%	90-100	0.9	0%
16.7R	23.7 fc	57.3 ft	49.8 ft	0-40	8,864.1	46.2%	10-20	1,829.4	9.5%	100-110	0.5	0%
25.0R	10.6 fc	85.8 ft	74.5 ft	0-60	16,212.5	84.4%	20-30	2,845.9	14.8%	110-120	2.4	0%
33.3R	5.97 fc	114.3 ft	99.3 ft	60-90	2,968.4	15.5%	30-40	3,560.1	18.5%	120-130	3.8	0%
41.7R	3.80 fc	143.1 ft	124.3 ft	70-100	732.5	3.8%	40-50	3,857.6	20.1%	130-140	4.3	0%
50.0R	2.65 fc	171.6 ft	149.0 ft	90-120	3.8	0%	50-60	3,490.8	18.2%	140-150	4.2	0%
				0-90	19,180.9	99.9%	60-70	2,236.8	11.6%	150-160	3.7	0%
				90-180	23.5	0.1%	70-80	654.3	3.4%	160-170	2.7	0%
				0-180	19,204.4	100%	80-90	77.3	0.4%	170-180	1.0	0%

**Flood Summary**

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98.2%	18,865.3	144.8	149.7
Beam (50%):	83.2%	15,970.4	112.3	119.5
<b>Total:</b>	<b>100%</b>	<b>19,198.6</b>		

**AAI DIAGRAM:**

Flux out: 15429 lm



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

\*\*\*End of Report\*\*\*