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## Photometric Test Report

Relevant Standards  
IES LM-79-2008, IES LM-31-1995 (Withdrawn)  
ANSI C78.377-2011, ANSI C82.77-2002  
CIE 13.3-1995, CIE 15-2004, IES TM-30-15

Prepared For  
**Cree, Inc**  
4600 Silicon Driver  
Durham, NC 27703-8475  
United States\

**Catalog Number RSWS-A-HT-2LG-3L-30K7-UL-GY-N-xxxx**

Order Number  
11624878  
Test Number  
11624878.01

Test Date

2017-01-31

Prepared By

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Approved By

Edward Bush, Project Handler

The results contained in this report pertain only to the tested sample.  
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Laboratory results may not be representative of field performance  
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the  $4\pi$  geometry method.

Absorption correction was employed for Sphere measurement

Tested in 30 planes left side, 30 planes right side, left and right averaged

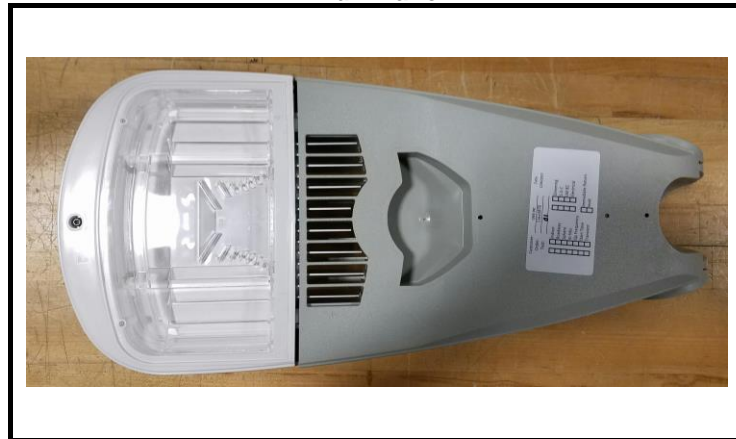
Vertical test increments are 2.5 degrees

Test distance exceeds five times the greatest luminous opening of luminaire



**Luminaire Description:** Formed BMC housing, clear acrylic lens, white plastic enclosure  
**Lamp:** 24 white LEDs  
**Mounting:** Pole/Arm  
**Ballast/Driver:** LEA03060X0010

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 5.00 in.  
Luminous Width: 8.500 in.

**Summary of Results**

**Integrating Sphere**

Luminous Flux: 3378 Lumens  
Efficacy: 118.5 lm/w  
CCT: 2941 K  
CRI (Ra): 71.8

**Distribution**

Roadway Classification:  
Cutoff Classification:  
BUG Rating:

Type II, Short  
Semicutoff  
B1 U0 G1

**Electrical Data at 277 VAC**

Test Temperature: 25.1 °C  
Voltage: 277.0 VAC  
Current: 0.1136 A  
Power: 29.04 W  
Power Factor: 0.922  
Frequency: 60 Hz  
Current THD: 14.1 %



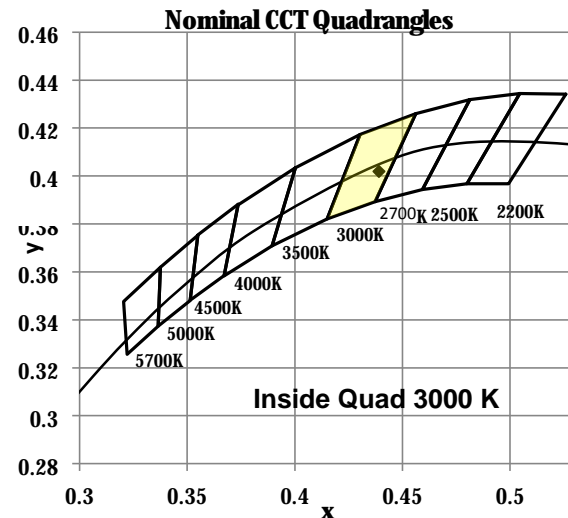
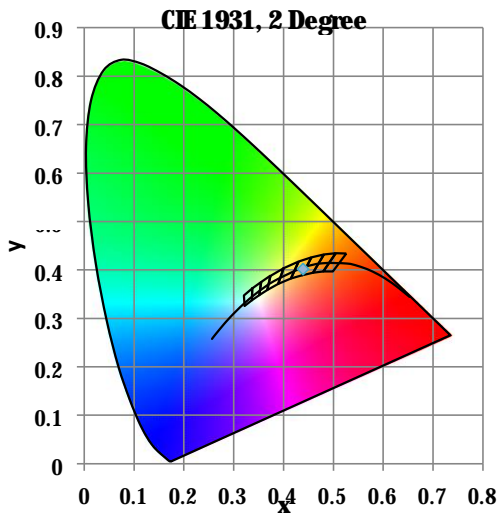
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
25.0 °C	120.0 VAC	0.2387 A	28.50 W	0.995	60 Hz	4.16 %

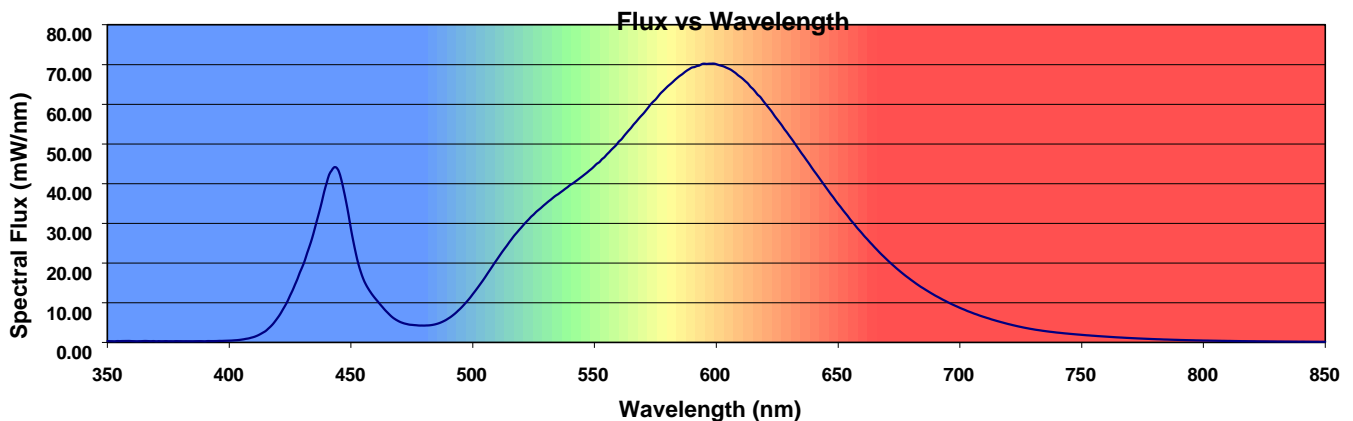
### Summary of Results

Total Output:	3378 Lumens	Chromaticity (x):	0.4392
Efficacy:	118.5 lm/w	Chromaticity (y):	0.4018
CCT:	2941 K	Chromaticity (u'):	0.2531
CRI (Ra):	71.8	Chromaticity (v'):	0.5208
CRI (R9):	-26.8	TM-30 R <sub>f</sub> :	68.0
Peak Wavelength:	598.1 nm	TM-30 R <sub>g</sub> :	97.7
Dominant Wavelength:	583.5 nm	Duv:	-0.0015
S/P Ratio:	1.156		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
71.8	69.1	80.4	90.6	69.8	67.8	72.8	78.0	46.4	-26.8	54.9	65.7	48.6	70.7	94.3





### Distribution - Goniophotometer

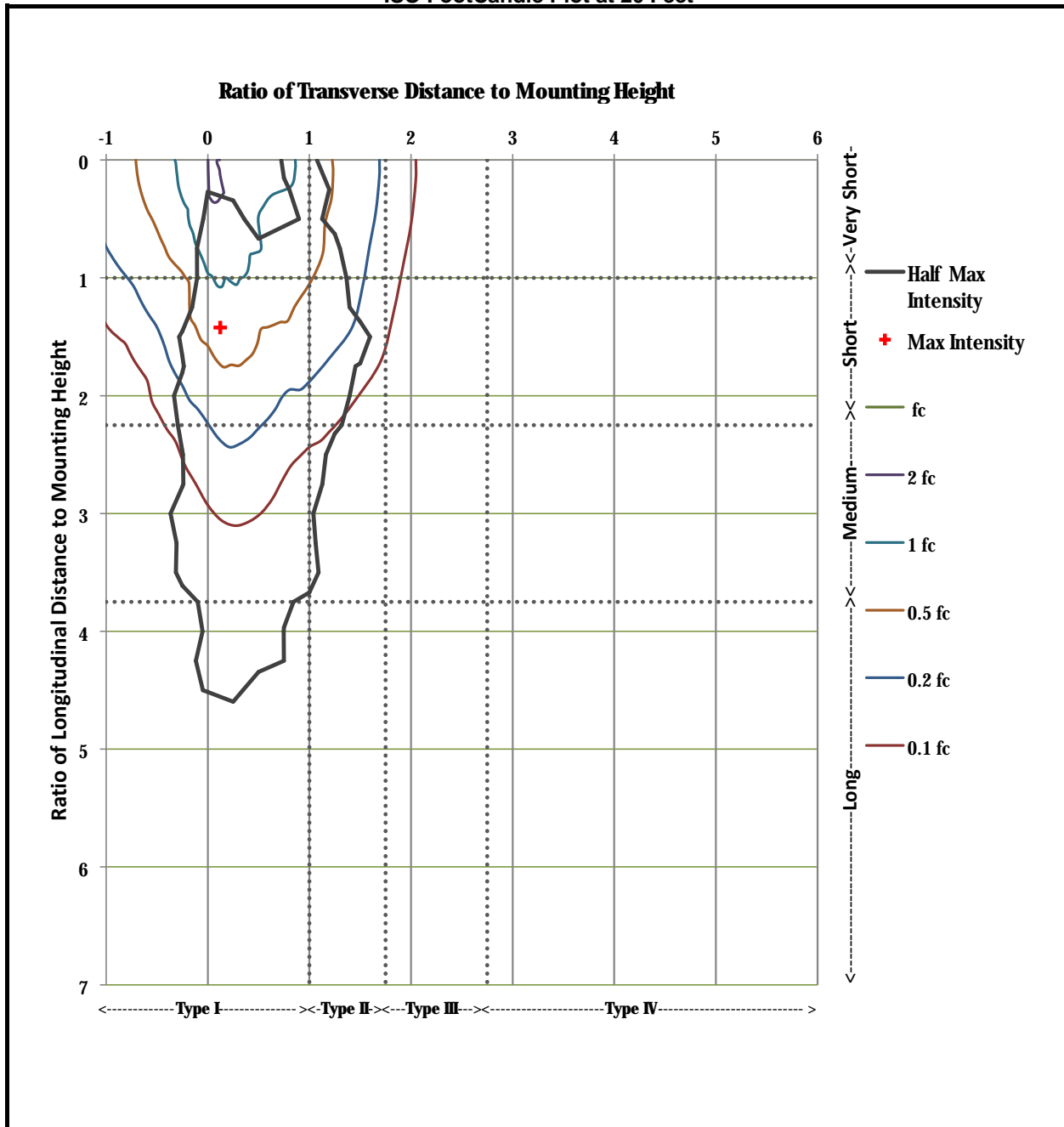
#### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
24.0 °C	120.0 VAC	0.2395 A	28.61 W	0.996	60 Hz	3.48 %

#### Summary of Results

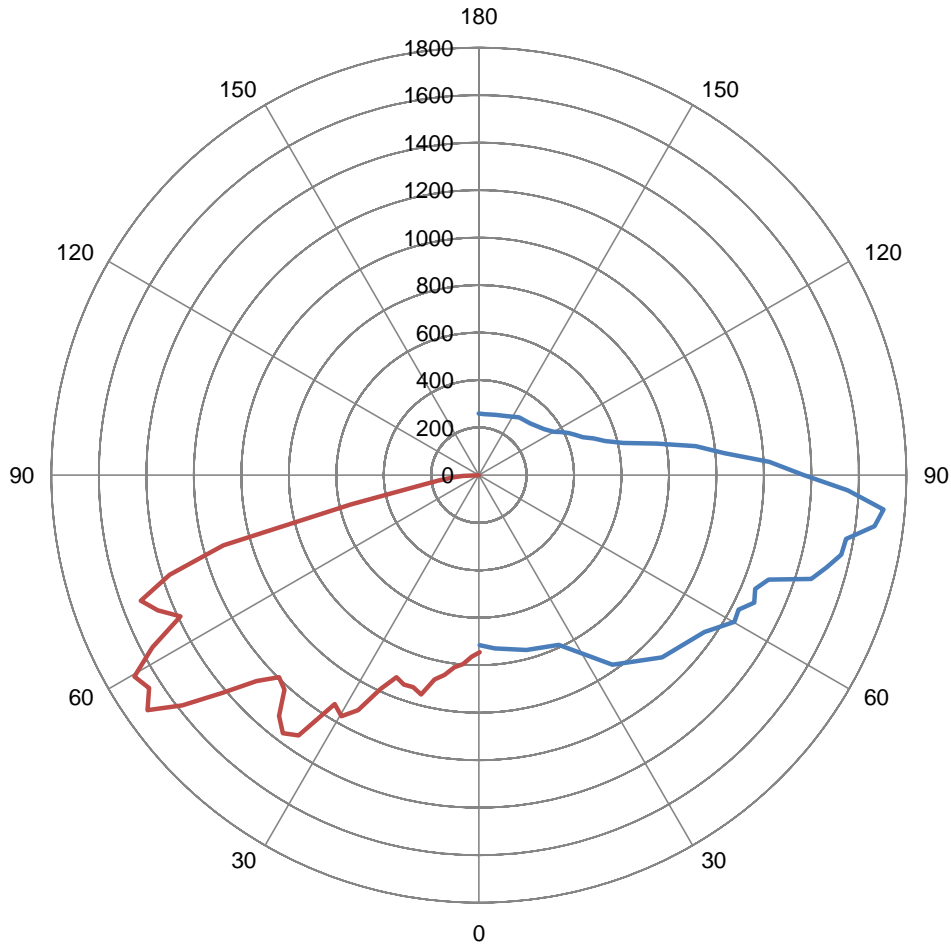
IES Roadway Classification:	Type II, Short	Total Lumen Output:	3293 Lumens
Cutoff Classification:	Semicutoff	Luminaire Efficacy:	115.1 lm/w
BUG Rating:	B1 U0 G1	Maximum Candela:	1710 Candela

#### ISO FootCandle Plot at 20 Feet





**Maximum Plane and Cone Plots of Candela**



Vertical Plane Through

85 ° Lateral

Lateral Cone Through

55 ° Vertical

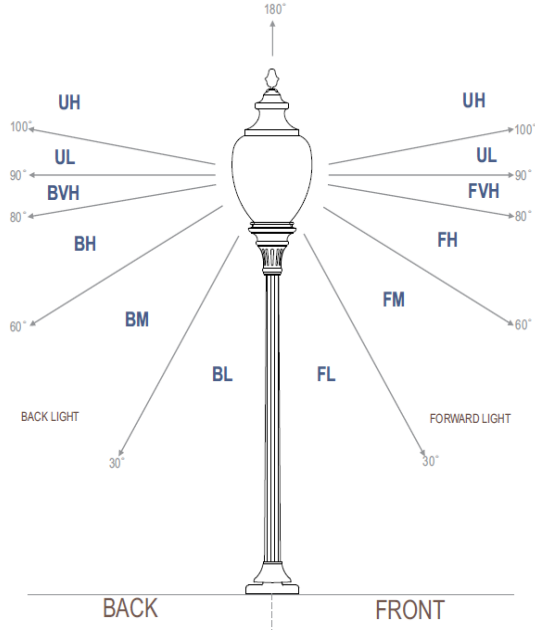
Maximum Intensity (Candlepower): 1710 Candela

**Zonal Lumen Summary**

Zone	Lumens	% of	Zone	Lumens	% of	Zone	Lumens	% of
0-5	19.1	0.6%	60-65	314.1	9.5%	120-125	0.0	0.0%
5-10	52.6	1.6%	65-70	271.3	8.2%	125-130	0.0	0.0%
10-15	84.6	2.6%	70-75	225.3	6.8%	130-135	0.0	0.0%
15-20	113.0	3.4%	75-80	139.8	4.2%	135-140	0.0	0.0%
20-25	136.2	4.1%	80-85	65.1	2.0%	140-145	0.0	0.0%
25-30	172.6	5.2%	85-90	17.9	0.5%	145-150	0.0	0.0%
30-35	207.9	6.3%	90-95	0.0	0.0%	150-155	0.0	0.0%
35-40	239.0	7.3%	95-100	0.0	0.0%	155-160	0.0	0.0%
40-45	269.0	8.2%	100-105	0.0	0.0%	160-165	0.0	0.0%
45-50	297.1	9.0%	105-110	0.0	0.0%	165-170	0.0	0.0%
50-55	330.3	10.0%	110-115	0.0	0.0%	170-175	0.0	0.0%
55-60	338.1	10.3%	115-120	0.0	0.0%	175-180	0.0	0.0%



**IES "BUG" Rating**  
 (Back Light, Uplight, Glare)  
 Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	341.1	10.4%
FM	(30-60)	1171.2	35.6%
FH	(60-80)	661.8	20.1%
FVH	(80-90)	52.4	1.6%
BL	(0-30)	237.1	7.2%
BM	(30-60)	510.2	15.5%
BH	(60-80)	288.8	8.8%
BVH	(80-90)	30.6	0.9%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		3293.2	100.0%
<b>BUG Rating</b>		<b>B1 U0 G1</b>	