



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300



## Photometric Test Report

### Relevant Standards

IES LM-79-2008, ANSI C82.77-2002, CIE 13.3-1995  
CIE 15-2004, ANSI C78.377-2015, IES TM-30-2015

### Prepared For

#### **Cree, Inc**

Vasavi Mandavilli  
4600 Silicon Drive  
Durham, NC 27519  
United States

### Catalog Number

**RSWS-A-HT-3ME-3L-30K7-UL-xxxx**

Order Number

11644102

Test Number

11644102.08

Test Date

2017-03-02

Prepared By

Javier Caban, Technician

Approved By

Edward Bush, Project Handler

The results contained in this report pertain only to the tested sample.  
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.  
This report must not be used by the client to claim product certification, approval, or endorsement by  
NVLAP, NIST, or any agency of the Federal Government.



## Table of Contents

<b>Summary of Results</b>	Page 3
<b>Integrating Sphere Results</b>	Page 4
<b>Distribution Results</b>	
Test Conditions / Summary of Results / ISOPlot	Page 5
Maximum Plane and Cone Plot / Zonal Lumen Summary	Page 6
IES BUG Rating	Page 7

Laboratory results may not be representative of field performance  
Ballast factors have not been applied

Testing was performed in a 3-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 inner reflector  
**Lamp:** 24 white LEDs  
**Mounting:** Pole/Arm  
**Ballast/Driver:** LEA03060X0010

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 9.00 in.  
Luminous Width: 6.000 in.

**Summary of Results**

**Integrating Sphere**

Luminous Flux: 3406 Lumens  
Efficacy: 119.6 lm/w  
CCT: 2963 K  
CRI (Ra): 72.2

**Distribution**

Roadway Classification: Type III, Very Short  
Cutoff Classification: Semicutoff  
BUG Rating: B1 U0 G1

**Electrical Data at 277 VAC**

Test Temperature: 25.2 °C  
Voltage: 277.0 VAC  
Current: 0.1191 A  
Power: 28.95 W  
Power Factor: 0.875  
Frequency: 60 Hz  
Current THD: 14.6 %



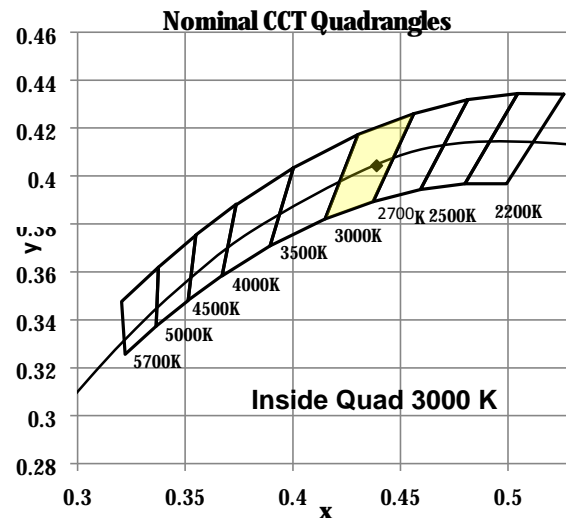
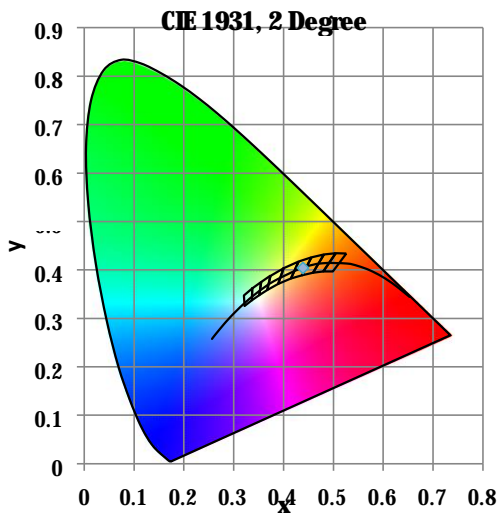
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
25.0 °C	120.0 VAC	0.2415 A	28.47 W	0.982	60 Hz	3.61 %

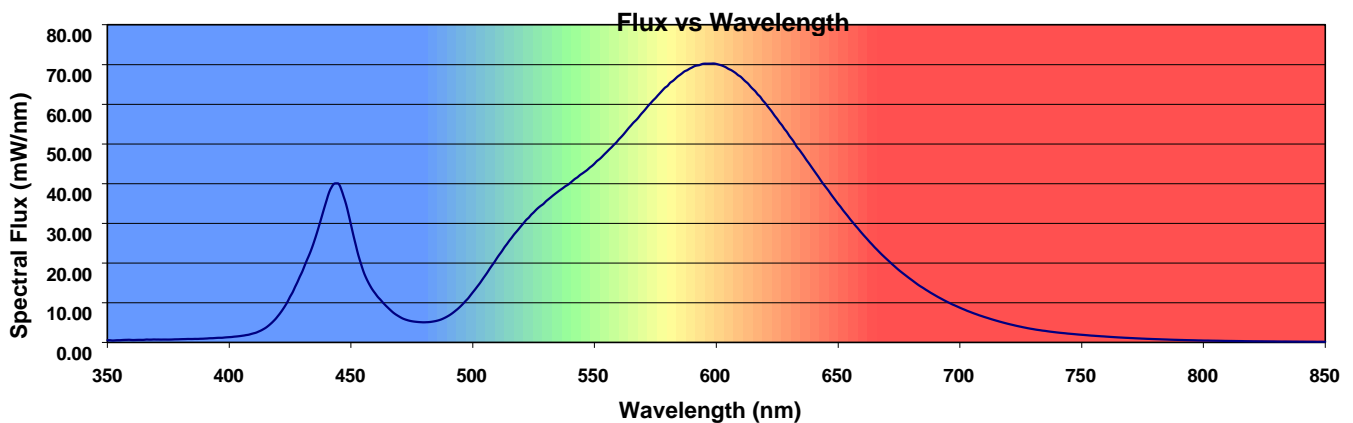
### Summary of Results

Total Output:	3406 Lumens	Chromaticity (x):	0.4390
Efficacy:	119.6 lm/w	Chromaticity (y):	0.4042
CCT:	2963 K	Chromaticity (u'):	0.2519
CRI (Ra):	72.2	Chromaticity (v'):	0.5217
CRI (R9):	-26.4	TM-30 R <sub>f</sub> :	69.4
Peak Wavelength:	598.2 nm	TM-30 R <sub>g</sub> :	97.0
Dominant Wavelength:	583.1 nm	Duv:	-0.0004
S/P Ratio:	1.168		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
72.2	69.2	80.6	90.9	70.1	68.0	73.2	78.5	46.8	-26.4	55.3	65.7	49.1	70.9	94.5





### Distribution - Goniophotometer

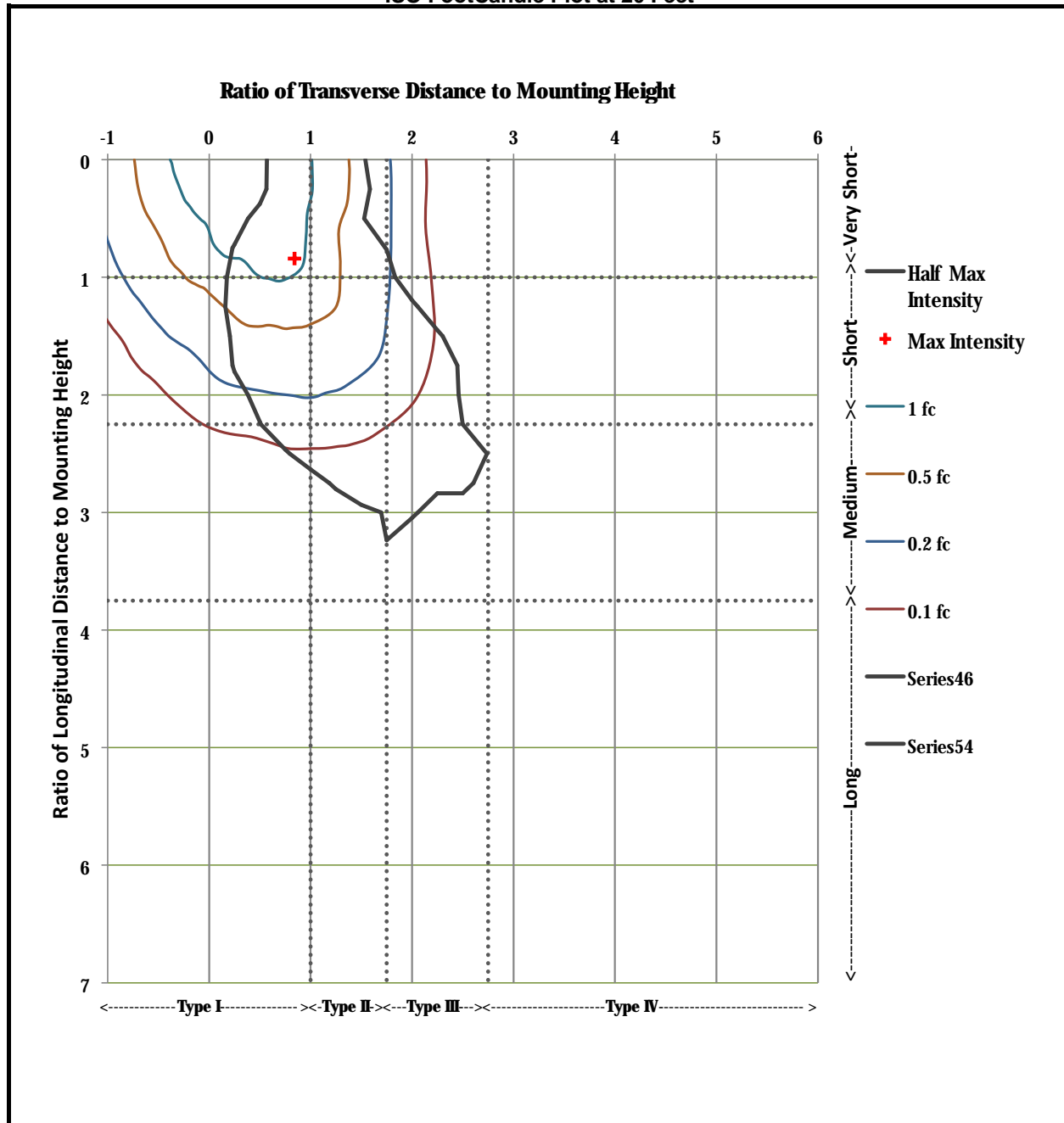
#### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
25.5 °C	120.0 VAC	0.2388 A	28.51 W	0.995	60 Hz	3.74 %

#### Summary of Results

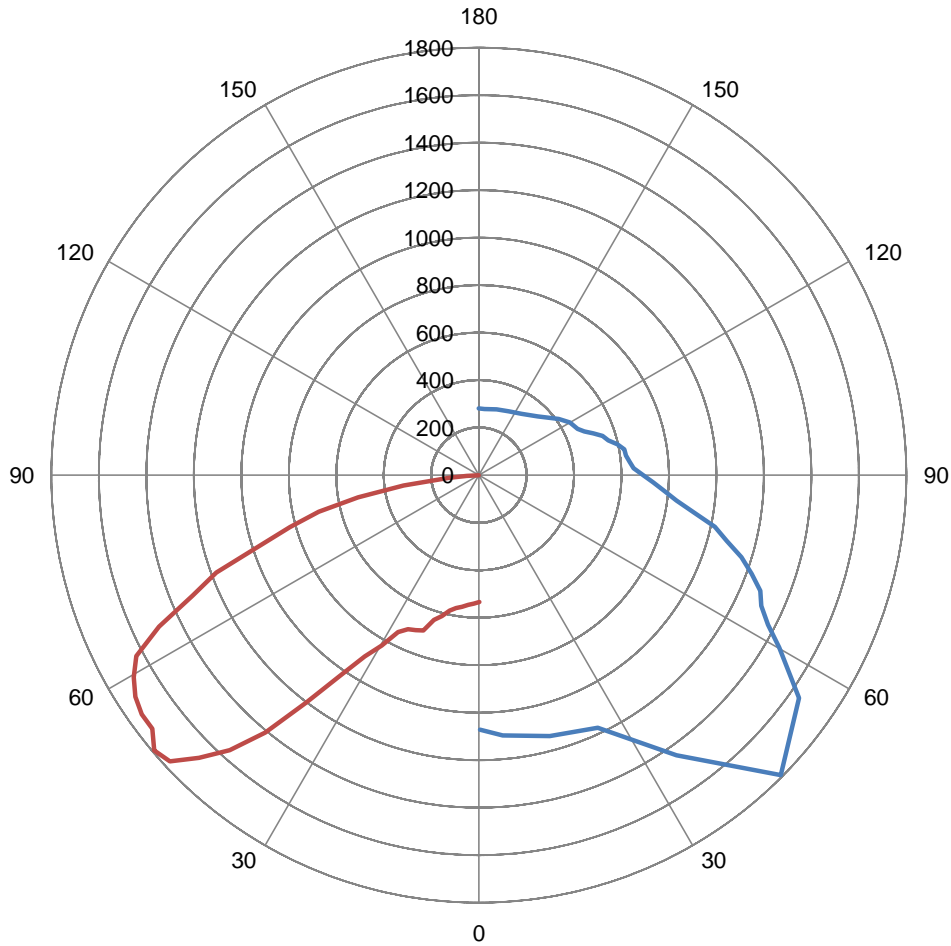
IES Roadway Classification:	Type III, Very Short	Total Lumen Output:	3399 Lumens
Cutoff Classification:	Semicutoff	Luminaire Efficacy:	119.2 lm/w
BUG Rating:	B1 U0 G1	Maximum Candela:	1793 Candela

#### ISO FootCandle Plot at 20 Feet





**Maximum Plane and Cone Plots of Candela**



Vertical Plane Through

45 ° Lateral

Lateral Cone Through

50 ° Vertical

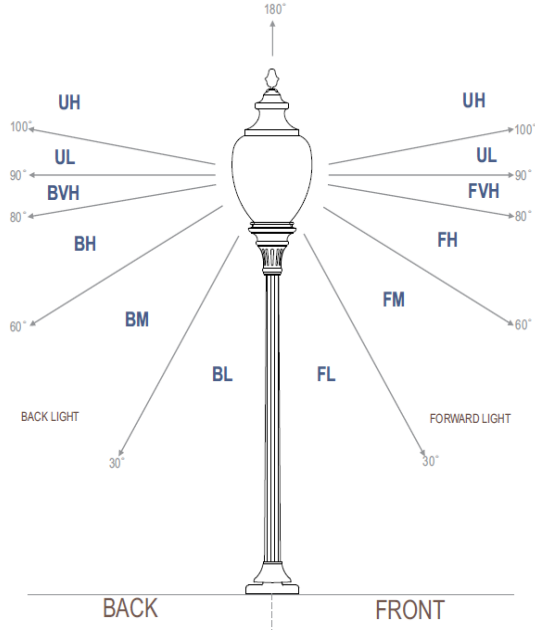
**Maximum Intensity (Candlepower):** 1793 Candela

**Zonal Lumen Summary**

Zone	Lumens	% of	Zone	Lumens	% of	Zone	Lumens	% of
0-5	13.5	0.4%	60-65	329.3	9.7%	120-125	0.0	0.0%
5-10	38.6	1.1%	65-70	286.4	8.4%	125-130	0.0	0.0%
10-15	65.3	1.9%	70-75	224.8	6.6%	130-135	0.0	0.0%
15-20	93.7	2.8%	75-80	158.0	4.6%	135-140	0.0	0.0%
20-25	124.1	3.7%	80-85	76.4	2.2%	140-145	0.0	0.0%
25-30	158.4	4.7%	85-90	16.9	0.5%	145-150	0.0	0.0%
30-35	203.7	6.0%	90-95	0.0	0.0%	150-155	0.0	0.0%
35-40	259.0	7.6%	95-100	0.0	0.0%	155-160	0.0	0.0%
40-45	306.1	9.0%	100-105	0.0	0.0%	160-165	0.0	0.0%
45-50	340.0	10.0%	105-110	0.0	0.0%	165-170	0.0	0.0%
50-55	355.3	10.5%	110-115	0.0	0.0%	170-175	0.0	0.0%
55-60	349.2	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)	280.9	8.3%
FM	(30-60)	1339.6	39.4%
FH	(60-80)	762.3	22.4%
FVH	(80-90)	65.7	1.9%
BL	(0-30)	212.7	6.3%
BM	(30-60)	473.7	13.9%
BH	(60-80)	236.2	6.9%
BVH	(80-90)	27.6	0.8%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		3398.7	100.0%
<b>BUG Rating</b>		<b>B1 U0 G1</b>	