



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
4600 Silicon Dr
Durham, NC 27703-8475
United States

Catalog Number
RSWM-A-HT-2ME-9L-30K8-UL-xxxxx
Order Number
11683107
Test Number
11683107.03

Test Date

2017-03-23 - 2017-03-25

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

Summary of Results	Page 3
Integrating Sphere Results	Page 4
Distribution Results	
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 2-meter integrating sphere using the 4π 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



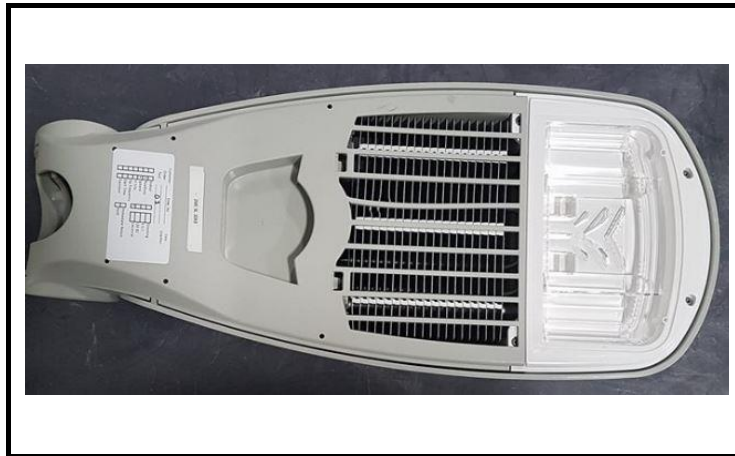
Luminaire Description: Formed BMC housing, clear acrylic lens, white inner reflector

Lamp: 24 white LEDs

Mounting: Pole/Arm

Ballast/Driver: LEA02609X0001

Luminaire



Luminaire Characteristics

Luminous Length: 5.50 in.
Luminous Width: 9.000 in.

Summary of Results

Integrating Sphere

Luminous Flux: 9469 Lumens
Efficacy: 104.3 lm/w
CCT: 3016 K
CRI (Ra): 82.1

Distribution

Roadway Classification: Type III, Short
Cutoff Classification: Semicutoff
BUG Rating: B2 U0 G2

Electrical Data at 276 VAC

Test Temperature: 24.7 °C
Voltage: 276.9 VAC
Current: 0.3526 A
Power: 91.37 W
Power Factor: 0.936
Frequency: 60 Hz
Current THD: 12.5 %



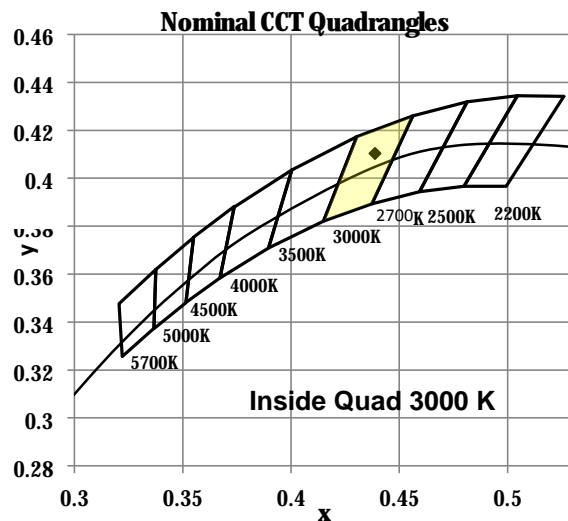
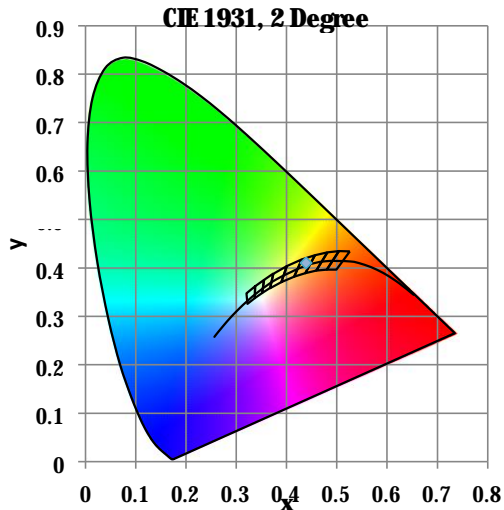
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
25.5 °C	120.0 VAC	0.7604 A	90.78 W	0.995	60 Hz	4.66 %

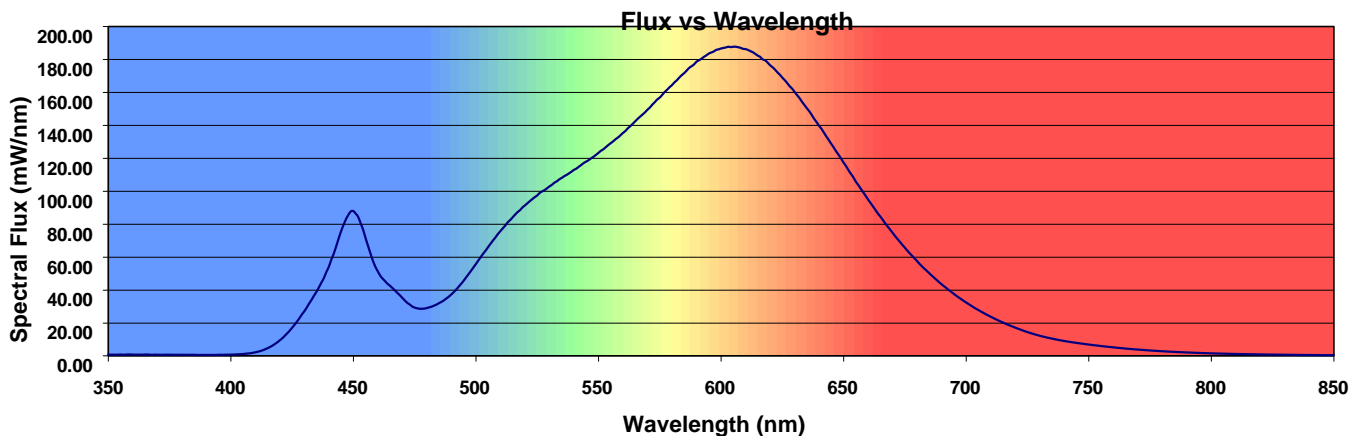
Summary of Results

Total Output:	9469 Lumens	Chromaticity (x):	0.4388
Efficacy:	104.3 lm/w	Chromaticity (y):	0.4102
CCT:	3016 K	Chromaticity (u'):	0.2491
CRI (Ra):	82.1	Chromaticity (v'):	0.5241
CRI (R9):	9.7	TM-30 R_f:	82.6
Peak Wavelength:	605.4 nm	TM-30 R_g:	97.0
Dominant Wavelength:	582 nm	Duv:	0.0021
S/P Ratio:	1.3		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82.1	80.2	88.1	95.4	81.4	79.6	84.7	85.4	61.8	9.7	72.3	80.0	66.4	81.7	97.1





Distribution - Goniophotometer

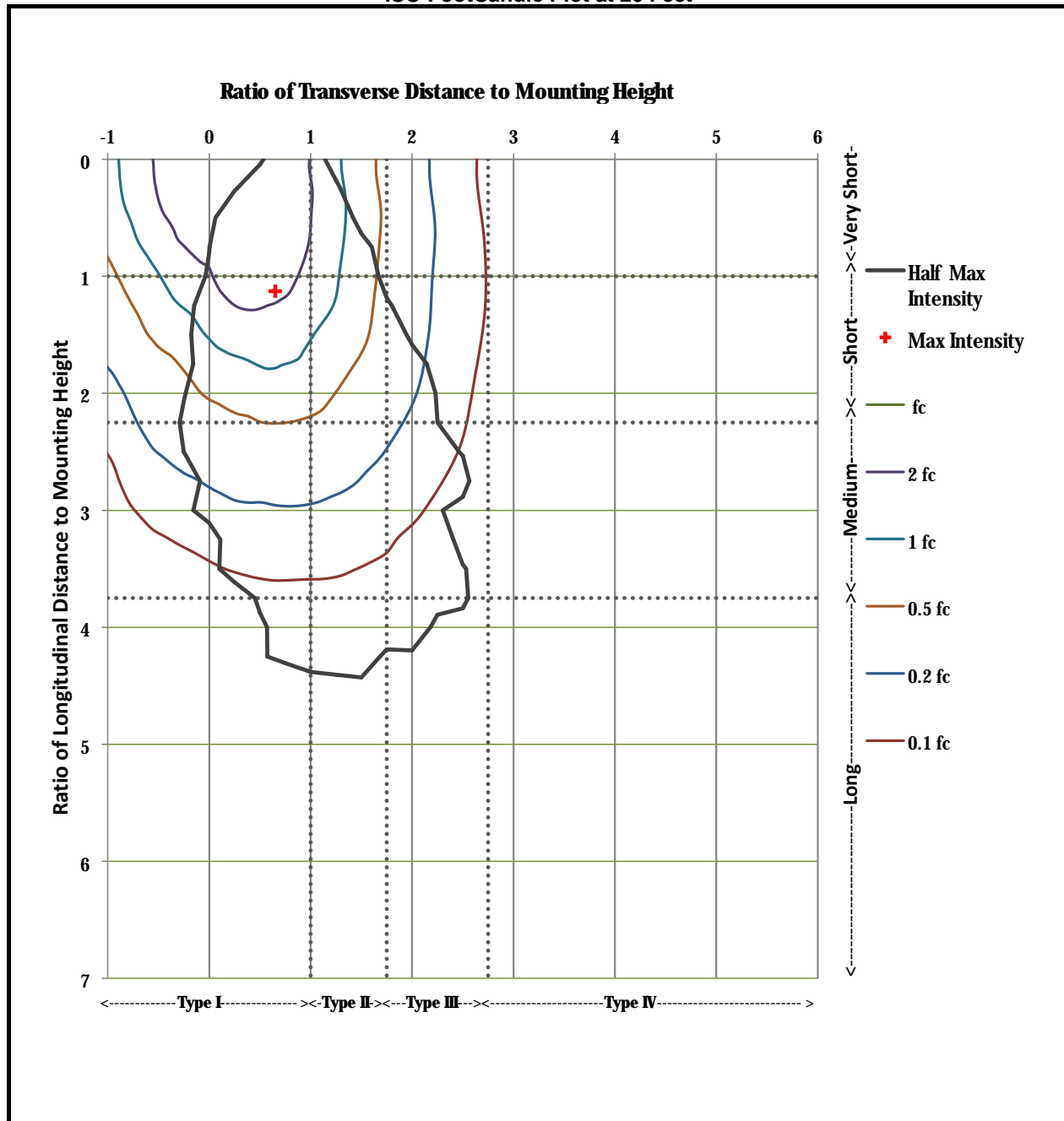
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power	Frequency	Current THD
25.7 °C	119.9 VAC	0.7618 A	90.91 W	0.995	60 Hz	4.87 %

Summary of Results

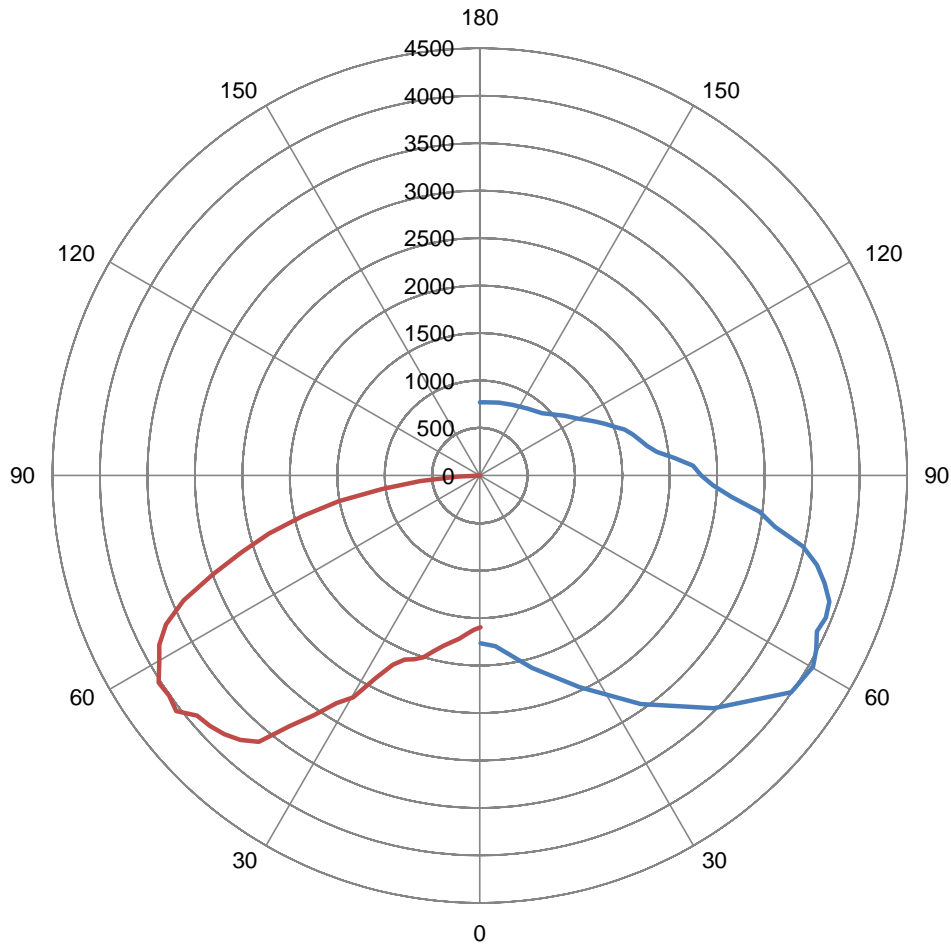
IES Roadway Classification:	Type III, Short	Total Lumen Output:	9472 Lumens
Cutoff Classification:	Semicutoff	Luminaire Efficacy:	104.2 lm/w
BUG Rating:	B2 U0 G2	Maximum Candela:	4046 Candela

ISO FootCandle Plot at 20 Feet





Maximum Plane and Cone Plots of Candela



Vertical Plane Through

60 ° Lateral

Lateral Cone Through

52.5 ° Vertical

Maximum Intensity (Candlepower):

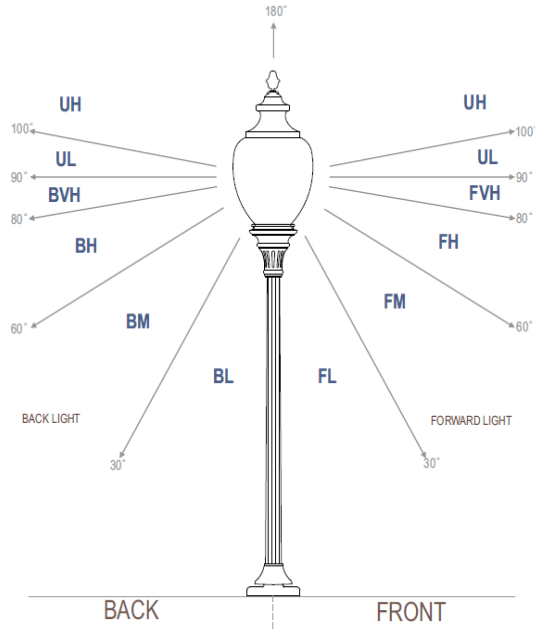
4046 Candela

Zonal Lumen Summary

Zone	Lumens	% of	Zone	Lumens	% of	Zone	Lumens	% of
0-5	40.9	0.4%	60-65	874.0	9.2%	120-125	0.0	0.0%
5-10	117.1	1.2%	65-70	801.1	8.5%	125-130	0.0	0.0%
10-15	199.1	2.1%	70-75	673.4	7.1%	130-135	0.0	0.0%
15-20	288.0	3.0%	75-80	492.3	5.2%	135-140	0.0	0.0%
20-25	375.8	4.0%	80-85	264.9	2.8%	140-145	0.0	0.0%
25-30	474.0	5.0%	85-90	65.4	0.7%	145-150	0.0	0.0%
30-35	598.6	6.3%	90-95	0.0	0.0%	150-155	0.0	0.0%
35-40	719.8	7.6%	95-100	0.0	0.0%	155-160	0.0	0.0%
40-45	810.7	8.6%	100-105	0.0	0.0%	160-165	0.0	0.0%
45-50	869.6	9.2%	105-110	0.0	0.0%	165-170	0.0	0.0%
50-55	903.1	9.5%	110-115	0.0	0.0%	170-175	0.0	0.0%
55-60	904.5	9.5%	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)	855.7	9.0%
FM	(30-60)	3400.1	35.9%
FH	(60-80)	2033.2	21.5%
FVH	(80-90)	221.5	2.3%
BL	(0-30)	639.2	6.7%
BM	(30-60)	1406.3	14.8%
BH	(60-80)	807.6	8.5%
BVH	(80-90)	108.8	1.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		9472.4	100.0%
BUG Rating	B2 U0 G2		