



UL LLC  
1075 W Lambert Rd Suite B  
Brea, CA 92821

## 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IES LM-79-2008, IES LM-31-1995 (Withdrawn)  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  
**B-K LIGHTING INC**

Chris McCarthy  
40429 Brickyard Dr  
Madera, CA 93636-9515  
United States

Catalog Number  
**AR-LS-11-LED-4000K**

Order Number  
11609579  
Test Number  
11609579.03

Test Date

2017-01-23 - 2017-01-24

Prepared By

Austin Duff, Technician

Approved By

Eric Gaudreau, Senior Engineering Associate

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 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

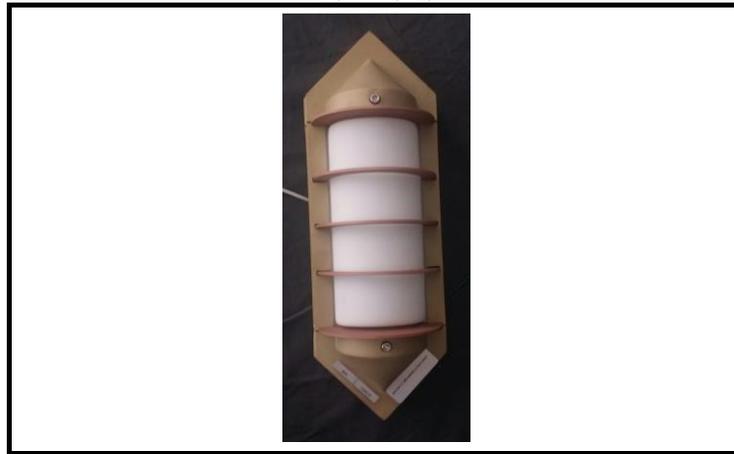
Vertical test increments are 2.5 degrees

Test distance exceeds five times the greatest luminous opening of luminaire



**Luminaire Description:** Formed aluminum housing, five (5) louvers, and white plastic diffuse lens  
**Lamp:** Eight (8) white LEDs  
**Mounting:** Surface – Wall  
**Ballast/Driver:** FX95100

Luminaire



**Luminaire Characteristics**

Luminous Length: 2.00 in.  
Luminous Width: 3.750 in.  
Luminous Height: 9.00 in.

**Summary of Results**

**Integrating Sphere**

Luminous Flux: 78 Lumens  
Efficacy: 18.9 lm/w  
CCT: 3695 K  
CRI (Ra): 96.5

**Distribution**

Roadway Classification: Type II, Very Short  
Cutoff Classification: Noncutoff  
BUG Rating: B0 U2 G0

**Electrical Data at 120 VAC**

Test Temperature: 25.2 °C  
Voltage: 120.1 VAC  
Current: 0.03749 A  
Power: 4.152 W  
Power Factor: 0.923  
Frequency: 60 Hz  
Current THD: 34.6 %



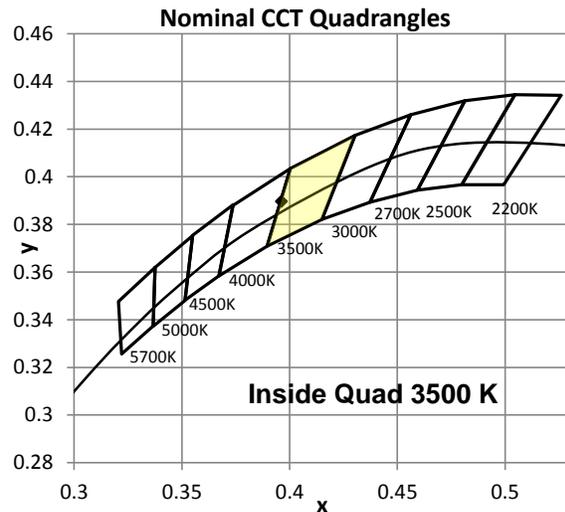
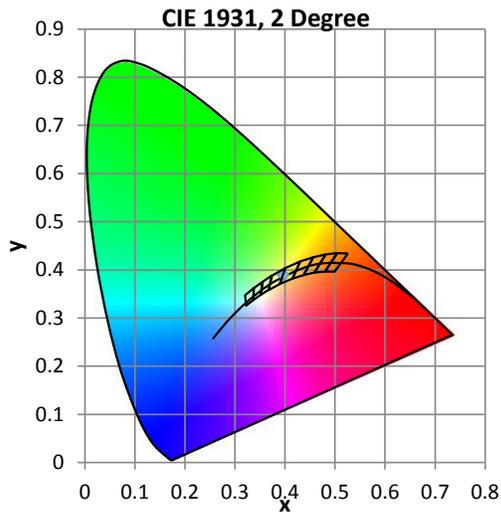
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.1 VAC	0.03749 A	4.152 W	0.923	60 Hz	34.6 %

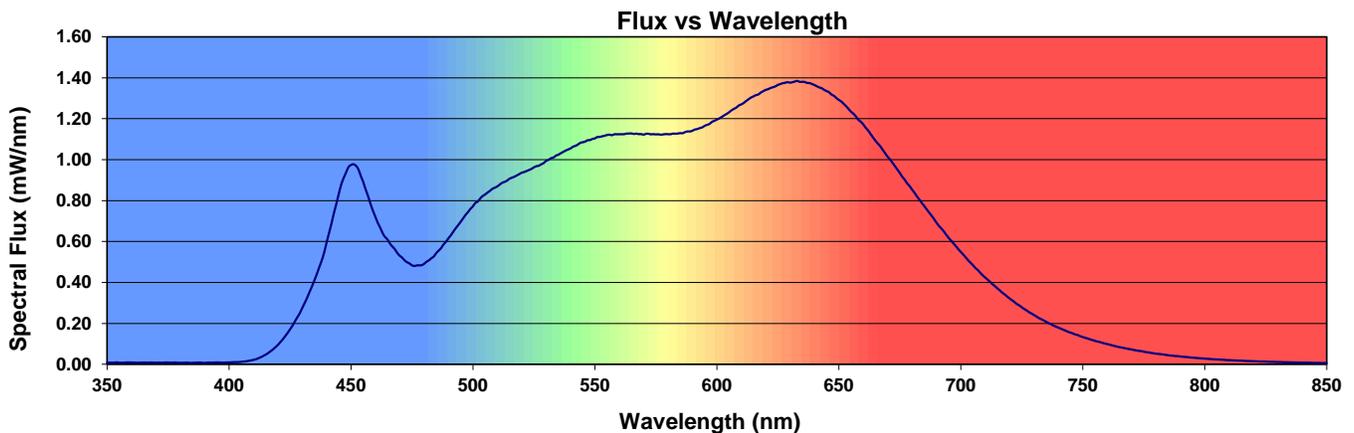
### Summary of Results

<b>Total Output:</b>	78 Lumens	<b>Chromaticity (x):</b>	0.3963
<b>Efficacy:</b>	18.9 lm/w	<b>Chromaticity (y):</b>	0.3896
<b>CCT:</b>	3695 K	<b>Chromaticity (u'):</b>	0.2303
<b>CRI (Ra):</b>	96.5	<b>Chromaticity (v'):</b>	0.5095
<b>CRI (R9):</b>	90.4	<b>TM-30 R<sub>f</sub>:</b>	94.3
<b>Peak Wavelength:</b>	633.1 nm	<b>TM-30 R<sub>g</sub>:</b>	100.7
<b>Dominant Wavelength:</b>	579.4 nm	<b>Duv:</b>	0.0011
<b>S/P Ratio:</b>	1.701		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
96.5	97.5	96.6	94.2	97.6	96.4	94.6	98.3	97.0	90.4	91.0	97.0	81.8	97.1	96.2





## Distribution - Goniophotometer

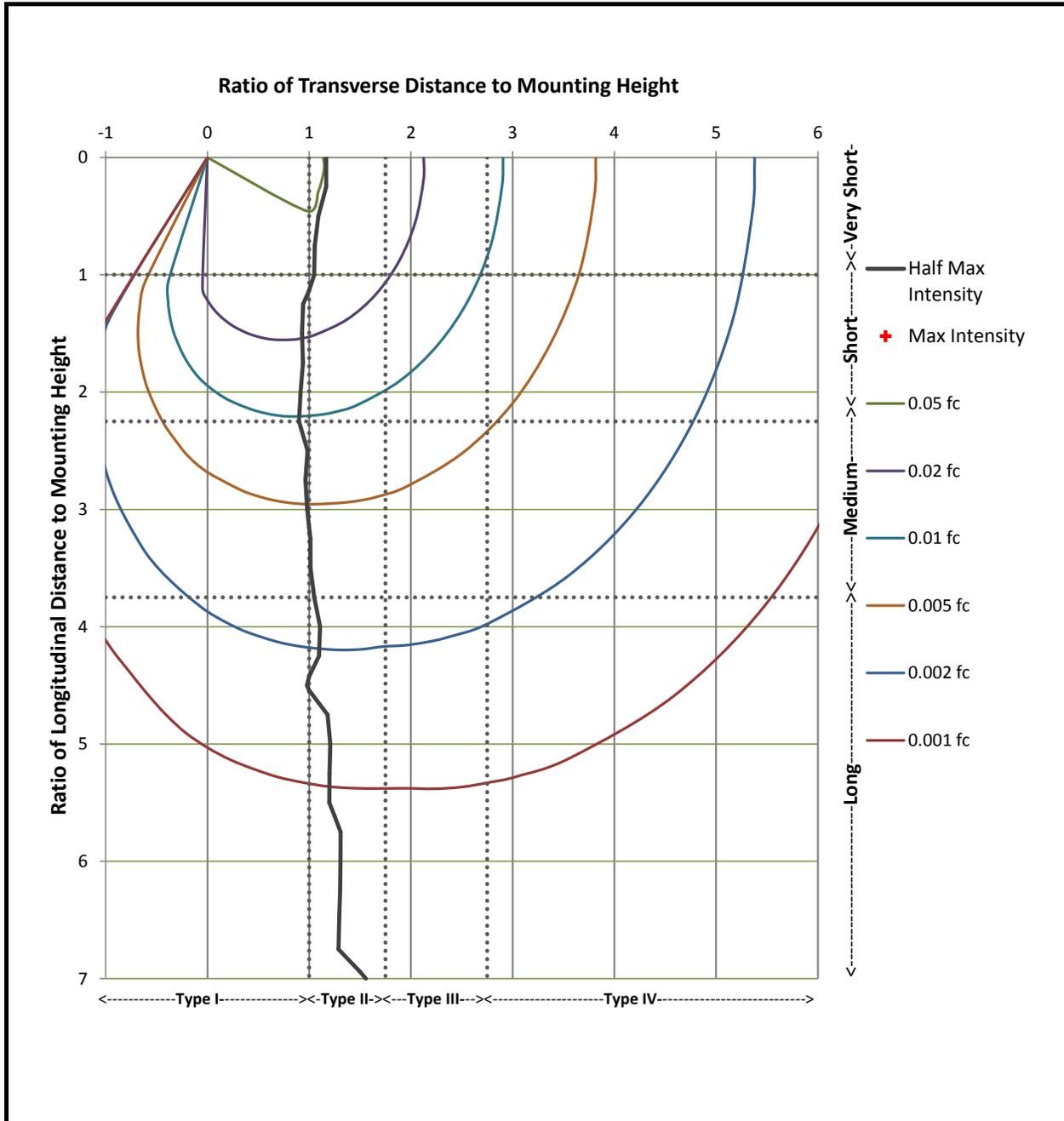
### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.1 VAC	0.03698 A	4.136 W	0.931	60 Hz	34.6 %

### Summary of Results

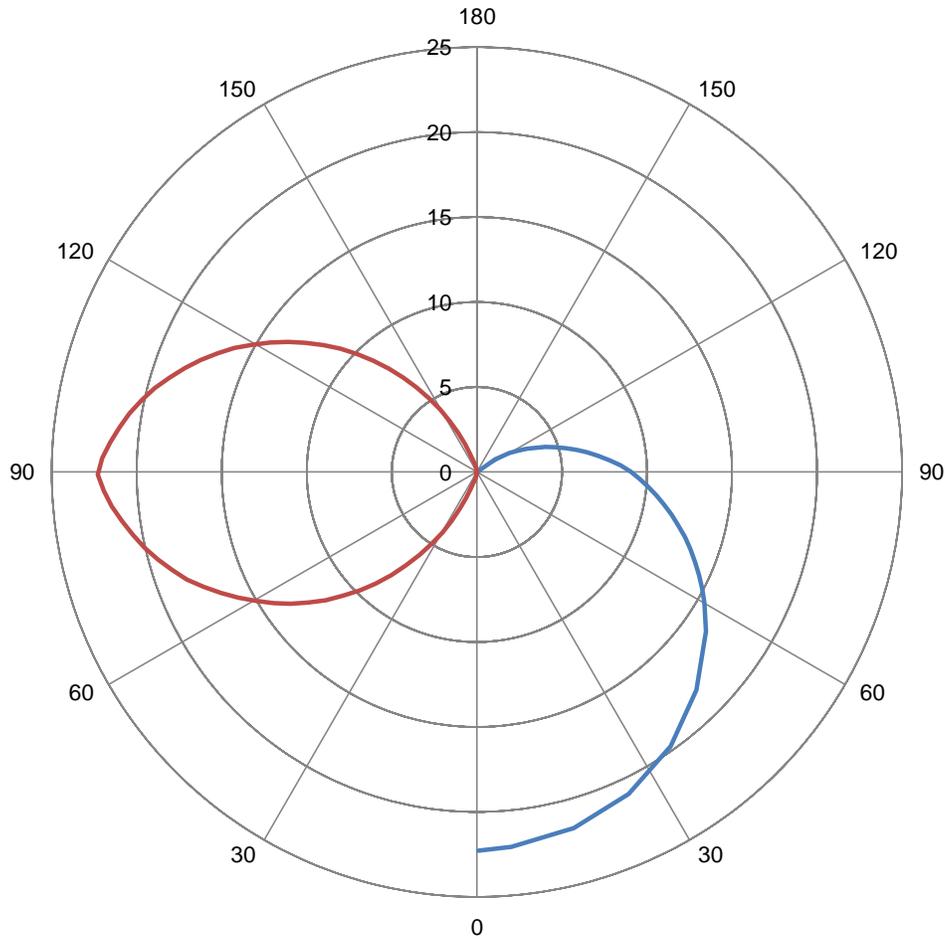
<b>IES Roadway Classification:</b>	Type II, Very Short	<b>Total Lumen Output:</b>	75 Lumens
<b>Cutoff Classification</b>	Noncutoff	<b>Luminaire Efficacy:</b>	18.2 lm/w
<b>BUG Rating:</b>	B0 U2 G0	<b>Maximum Candela:</b>	22 Candela

### ISO FootCandle Plot at 8 Feet





**Maximum Plane and Cone Plots of Candela**



Vertical Plane Through

0 ° Lateral

Lateral Cone Through

90 ° Vertical

**Maximum Intensity (Candlepower):**

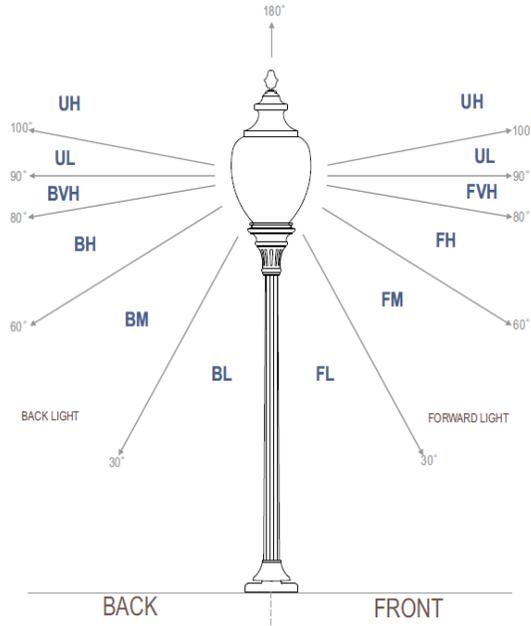
22 Candela

**Zonal Lumen Summary**

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.0	0.0%	60-65	3.4	4.6%	120-125	2.9	3.9%
5-10	0.0	0.0%	65-70	3.9	5.2%	125-130	2.4	3.2%
10-15	0.0	0.0%	70-75	4.3	5.7%	130-135	1.9	2.6%
15-20	0.1	0.1%	75-80	4.7	6.2%	135-140	1.5	1.9%
20-25	0.2	0.2%	80-85	5.0	6.6%	140-145	1.0	1.4%
25-30	0.4	0.5%	85-90	5.2	6.9%	145-150	0.7	0.9%
30-35	0.7	0.9%	90-95	5.2	6.9%	150-155	0.4	0.5%
35-40	1.1	1.4%	95-100	5.0	6.6%	155-160	0.2	0.2%
40-45	1.5	2.0%	100-105	4.7	6.2%	160-165	0.0	0.1%
45-50	1.9	2.6%	105-110	4.3	5.7%	165-170	0.0	0.0%
50-55	2.4	3.2%	110-115	3.9	5.1%	170-175	0.0	0.0%
55-60	2.9	3.9%	115-120	3.4	4.5%	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)	0.6	0.8%
FM	(30-60)	9.4	12.5%
FH	(60-80)	14.6	19.4%
FVH	(80-90)	9.2	12.2%
BL	(0-30)	0.1	0.1%
BM	(30-60)	1.1	1.5%
BH	(60-80)	1.7	2.3%
BVH	(80-90)	1.1	1.4%
UL	(90-100)	10.2	13.6%
UH	(100-180)	27.4	36.3%
Total		75.3	100.0%
<b>BUG Rating</b>	<b>B0 U2 G0</b>		