



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

## Photometric Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014, CIE 13.3-1995  
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2018

Prepared For  
**B-K LIGHTING INC**

DANIEL CARREJO  
40429 BRICKYARD DR.  
MADERA, CA 93636-9515  
UNITED STATES

Catalog Number  
**YK-I-A4080-WHP-SD-B1-010-MT-PROTOTYPE(4000K w/ Steps)**

Order Number

13280094

Test Number

13280094.04A

Revised:

2020-04-30

Test Date

2020-04-27 - 2020-04-30

Prepared By

Austin Duff, Technician

Approved By

Eric Gaudreau, Engineering Leader

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

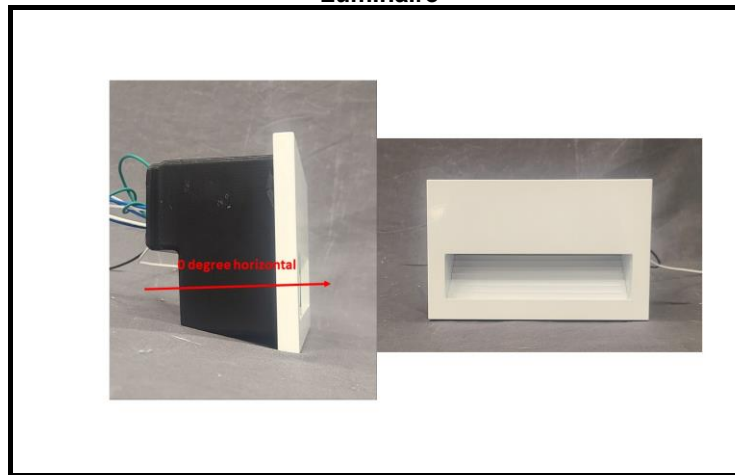
Tested in 30 planes left side, 30 planes right side, left and right averaged  
Vertical test increments are 2.5 degrees

Test distance exceeds five times the greatest luminous opening of luminaire



**Luminaire Description:** Black rectangular plastic housing with white metal step reflector, clear glass lens, and diffuse plastic film  
**Lamp:** 24 White LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** ERP ESS015W-0440-25

#### Luminaire



#### Luminaire Characteristics

Luminous Length: 0.00 in.  
6.750

#### Summary of Results

##### Integrating Sphere

Luminous Flux: 415.3 Lumens  
Efficacy: 34.76 lm/w  
CCT: 4115 K  
CRI (Ra): 81.4

##### Distribution

Roadway Classification: Type III, Very Short  
Cutoff Classification: Noncutoff  
BUG Rating: B0 U3 G1

##### Electrical Data at 120 VAC

Test Temperature: 25.8 °C  
Voltage: 120.1 VAC  
Current: 0.1009 A  
Power: 11.95 W  
Power Factor: 0.986  
Frequency: 60 Hz  
Current THD: 12.9 %



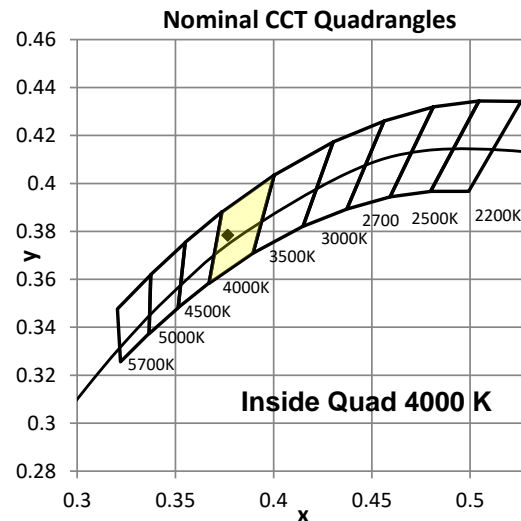
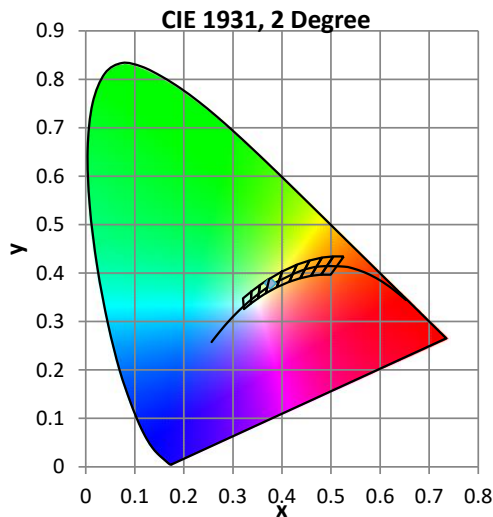
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.8 °C	120.1 VAC	0.1009 A	11.95 W	0.986	60 Hz	12.9 %

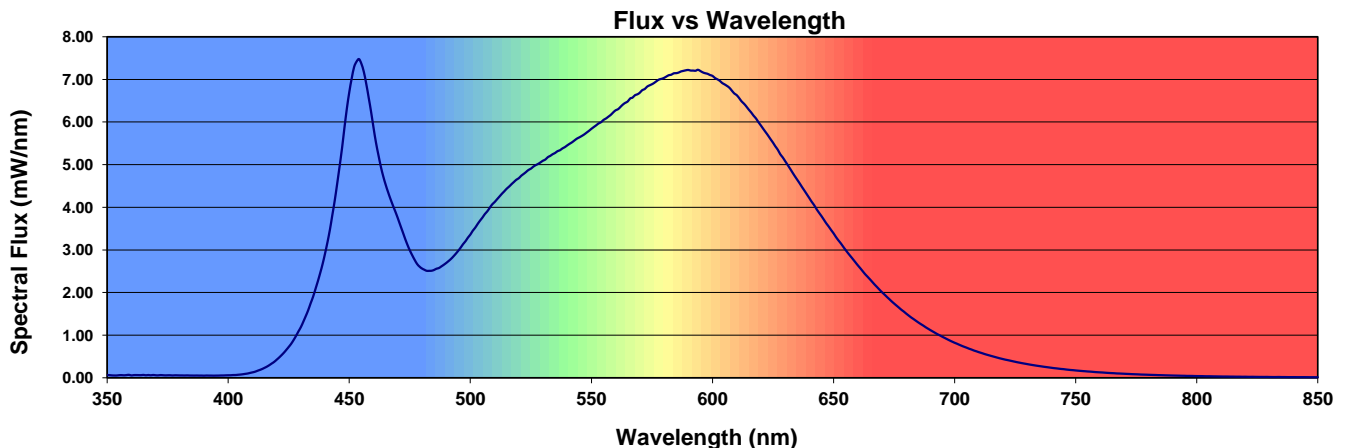
### Summary of Results

<b>Total Output:</b>	415 Lumens	<b>Chromaticity (x):</b>	0.3766
<b>Efficacy:</b>	34.8 lm/w	<b>Chromaticity (y):</b>	0.3784
<b>CCT:</b>	4115 K	<b>Chromaticity (u'):</b>	0.2219
<b>CRI (Ra):</b>	81.4	<b>Chromaticity (v'):</b>	0.5018
<b>CRI (R9):</b>	-1.2	<b>TM-30 Rf:</b>	82.8
<b>Peak Wavelength:</b>	454 nm	<b>TM-30 Rg:</b>	92.9
<b>Dominant Wavelength:</b>	578 nm	<b>Duv:</b>	0.0015
<b>S/P Ratio:</b>	1.72		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
81.4	79.0	89.1	95.4	78.3	79.0	84.6	84.6	60.8	-1.2	73.9	76.3	60.1	81.7	97.8	72.2





## Distribution - Goniophotometer

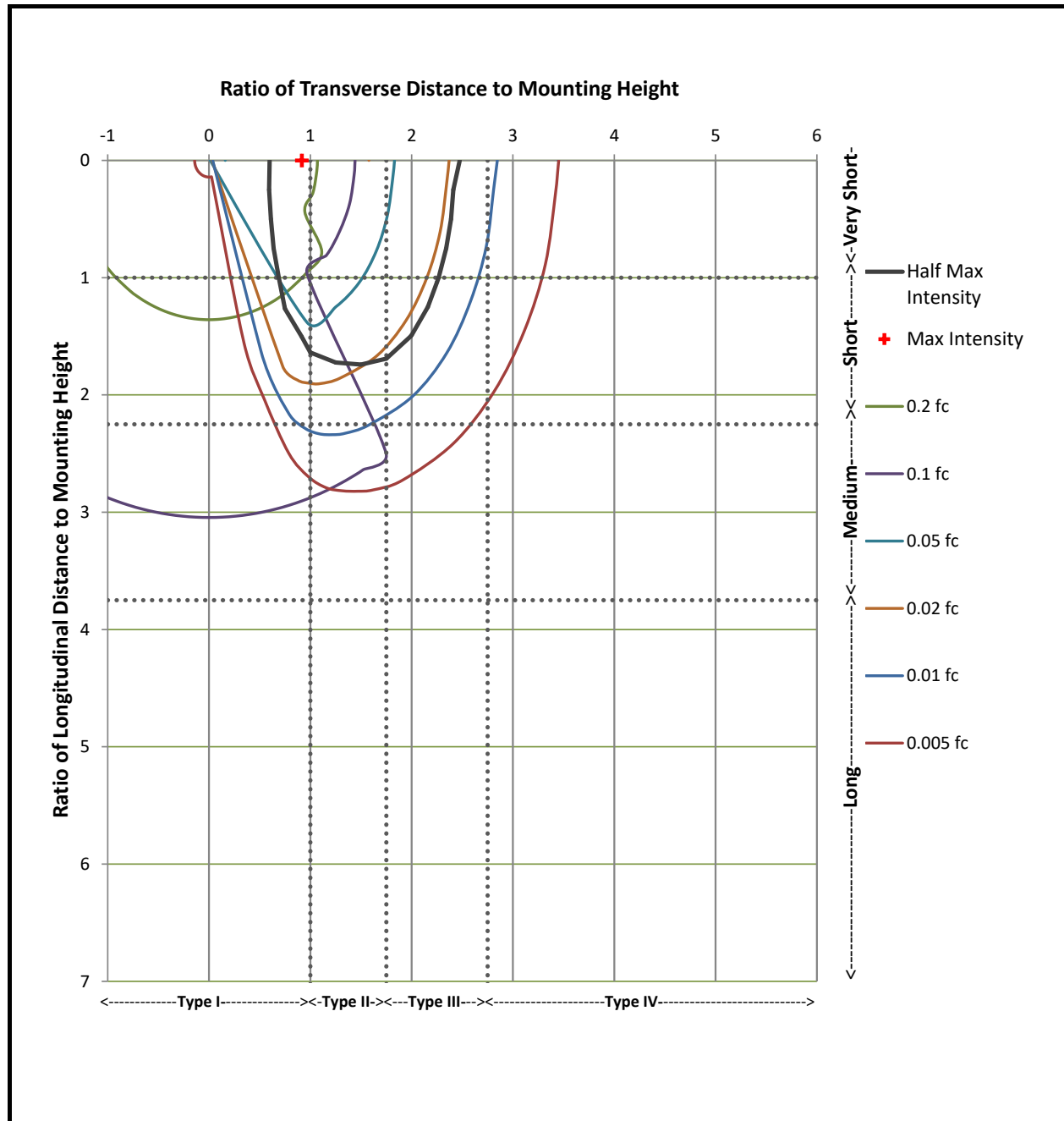
### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.1 VAC	0.1009 A	11.94 W	0.986	60 Hz	13.0 %

### Summary of Results

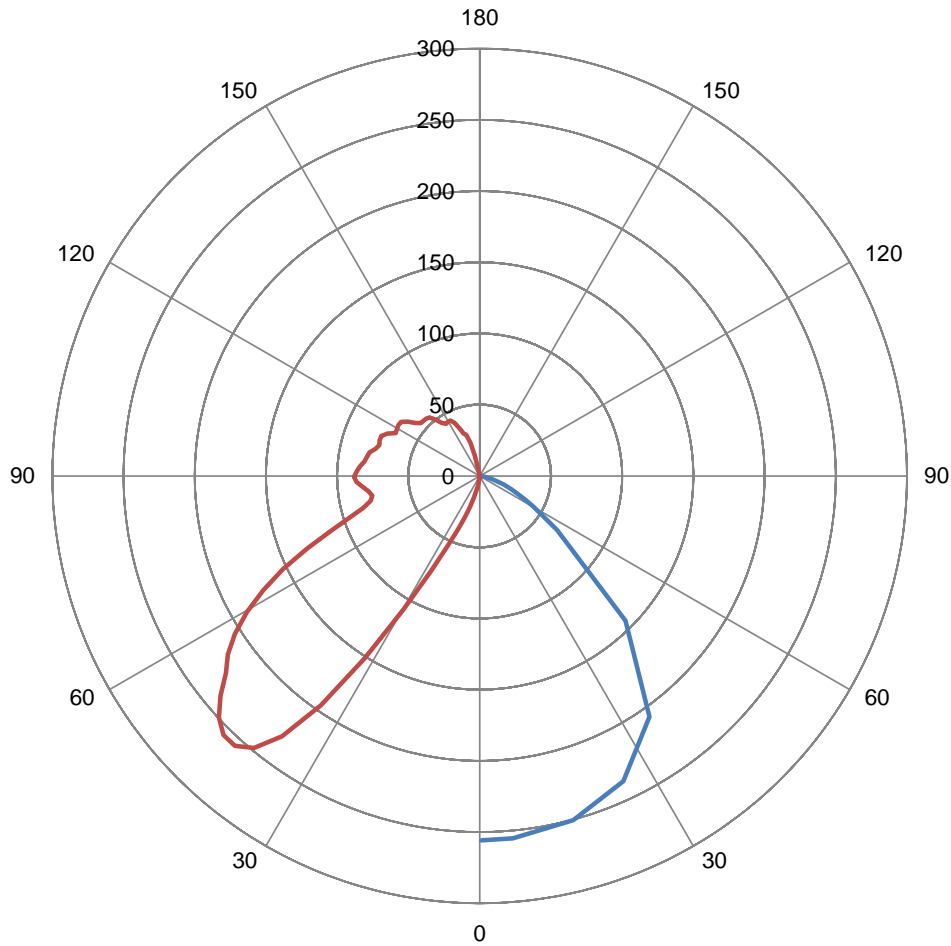
IES Roadway Classification:	Type III, Very Short	Total Lumen Output:	395 Lumens
Cutoff Classification:	Noncutoff	Luminaire Efficacy:	33.1 lm/w
BUG Rating:	B0 U3 G1	Maximum Candela:	256 Candela

### ISO FootCandle Plot at 20 Feet





### Maximum Plane and Cone Plots of Candela



Vertical Plane Through

0 ° Lateral

Lateral Cone Through

42.5 ° Vertical

Maximum Intensity (Candlepower):

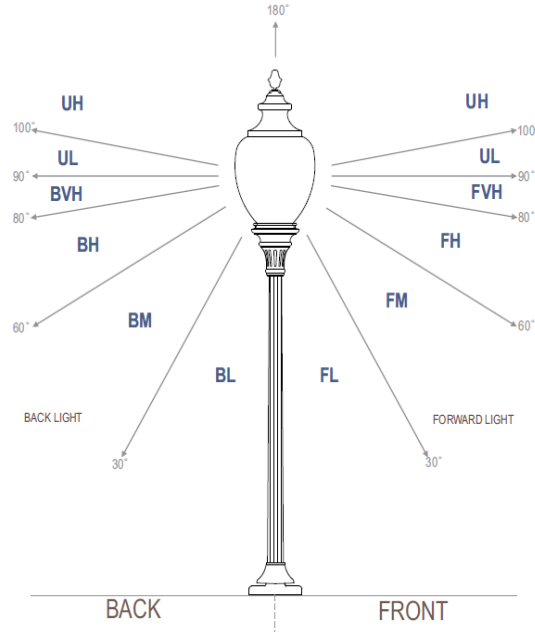
256 Candela

### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.0	0.0%	60-65	29.4	7.4%	120-125	9.9	2.5%
5-10	0.1	0.0%	65-70	24.8	6.3%	125-130	8.8	2.2%
10-15	0.4	0.1%	70-75	19.2	4.9%	130-135	7.7	1.9%
15-20	1.0	0.3%	75-80	14.9	3.8%	135-140	6.7	1.7%
20-25	2.3	0.6%	80-85	13.5	3.4%	140-145	5.5	1.4%
25-30	4.9	1.2%	85-90	14.4	3.6%	145-150	4.5	1.1%
30-35	10.1	2.5%	90-95	14.4	3.6%	150-155	3.4	0.9%
35-40	17.6	4.5%	95-100	13.6	3.4%	155-160	2.2	0.6%
40-45	24.5	6.2%	100-105	12.9	3.3%	160-165	1.2	0.3%
45-50	29.2	7.4%	105-110	12.3	3.1%	165-170	0.4	0.1%
50-55	31.5	8.0%	110-115	11.6	2.9%	170-175	0.1	0.0%
55-60	31.6	8.0%	115-120	10.7	2.7%	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)	8.7	2.2%
FM	(30-60)	144.4	36.6%
FH	(60-80)	88.3	22.3%
FVH	(80-90)	27.9	7.1%
BL	(0-30)	0.0	0.0%
BM	(30-60)	0.0	0.0%
BH	(60-80)	0.0	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	28.0	7.1%
UH	(100-180)	97.7	24.7%
Total		395.1	100.0%
<b>BUG Rating</b>	<b>B0 U3 G1</b>		