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## 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**  
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Catalog Number  
**YK-D-LED-A4080-WHP-H-SD-010-MT-PROTOTYPE(Horizontal)**

Order Number  
13280109  
Test Number  
13280109.07A

Revised:  
2020-04-08  
Test Date

2020-03-19 - 2020-04-08

Prepared By

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Approved By

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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 plastic rectangular housing and white metal faceplate with clear glass lens  
**Lamp:** 24 White LEDs with diffuse plastic film  
**Mounting:** Recessed  
**Ballast/Driver:** ESS015W-0350-42

### Luminaire



### Luminaire Characteristics

Luminous Length: 0.00 in.  
5.750

### Summary of Results

#### Integrating Sphere

Luminous Flux: 343.1 Lumens  
Efficacy: 36.18 lm/w  
CCT: 3982 K  
CRI (Ra): 82.0

#### Distribution

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

#### Electrical Data at 120 VAC

Test Temperature: 24.2 °C  
Voltage: 120.1 VAC  
Current: 0.08143 A  
Power: 9.482 W  
Power Factor: 0.970  
Frequency: 60 Hz  
Current THD: 16.9 %



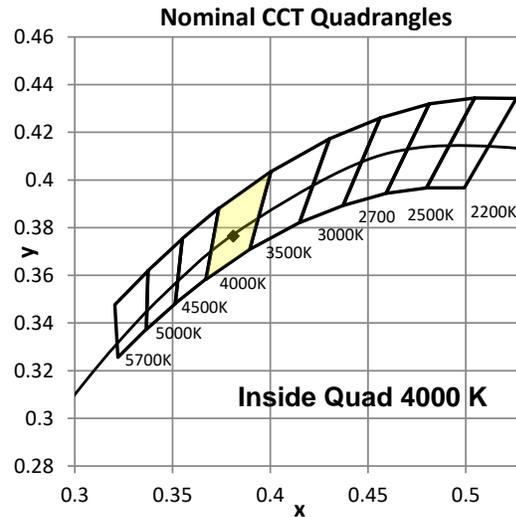
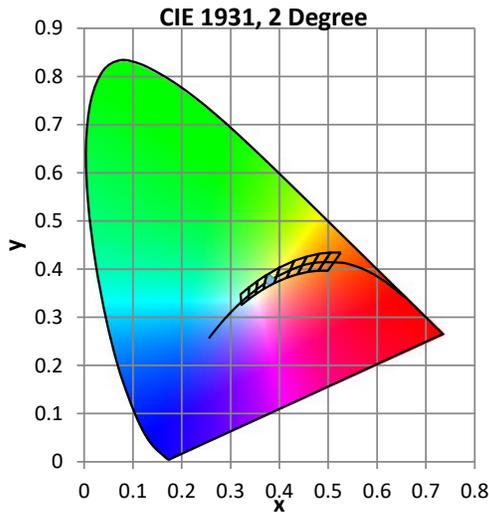
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.2 °C	120.1 VAC	0.08143 A	9.482 W	0.970	60 Hz	16.9 %

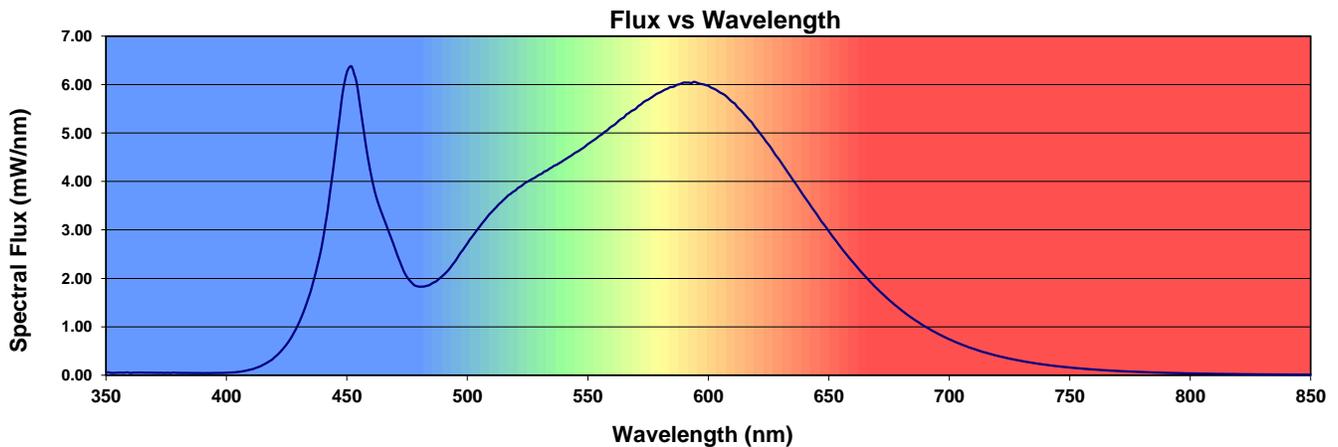
### Summary of Results

<b>Total Output:</b>	343 Lumens	<b>Chromaticity (x):</b>	0.3810
<b>Efficacy:</b>	36.2 lm/w	<b>Chromaticity (y):</b>	0.3765
<b>CCT:</b>	3982 K	<b>Chromaticity (u'):</b>	0.2255
<b>CRI (Ra):</b>	82.0	<b>Chromaticity (v'):</b>	0.5016
<b>CRI (R9):</b>	3.3	<b>TM-30 Rf:</b>	83.3
<b>Peak Wavelength:</b>	452 nm	<b>TM-30 Rg:</b>	94.9
<b>Dominant Wavelength:</b>	579 nm	<b>Duv:</b>	-0.0003
<b>S/P Ratio:</b>	1.68		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.0	80.0	89.0	94.9	80.1	80.2	84.4	84.9	62.2	3.3	73.6	78.4	62.1	82.2	97.4	73.8





## Distribution - Goniophotometer

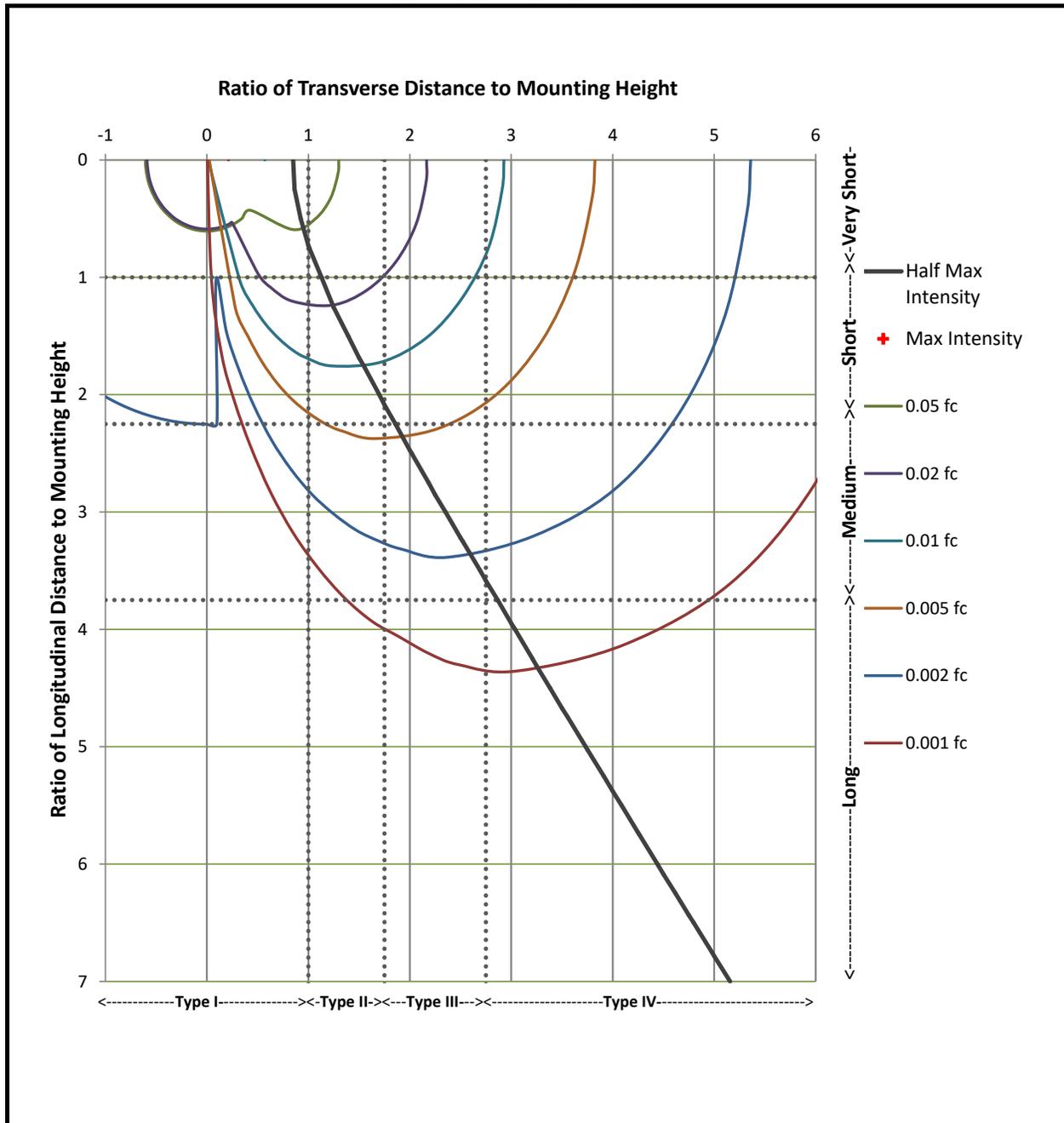
### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.08159 A	9.495 W	0.969	60 Hz	17.0 %

### Summary of Results

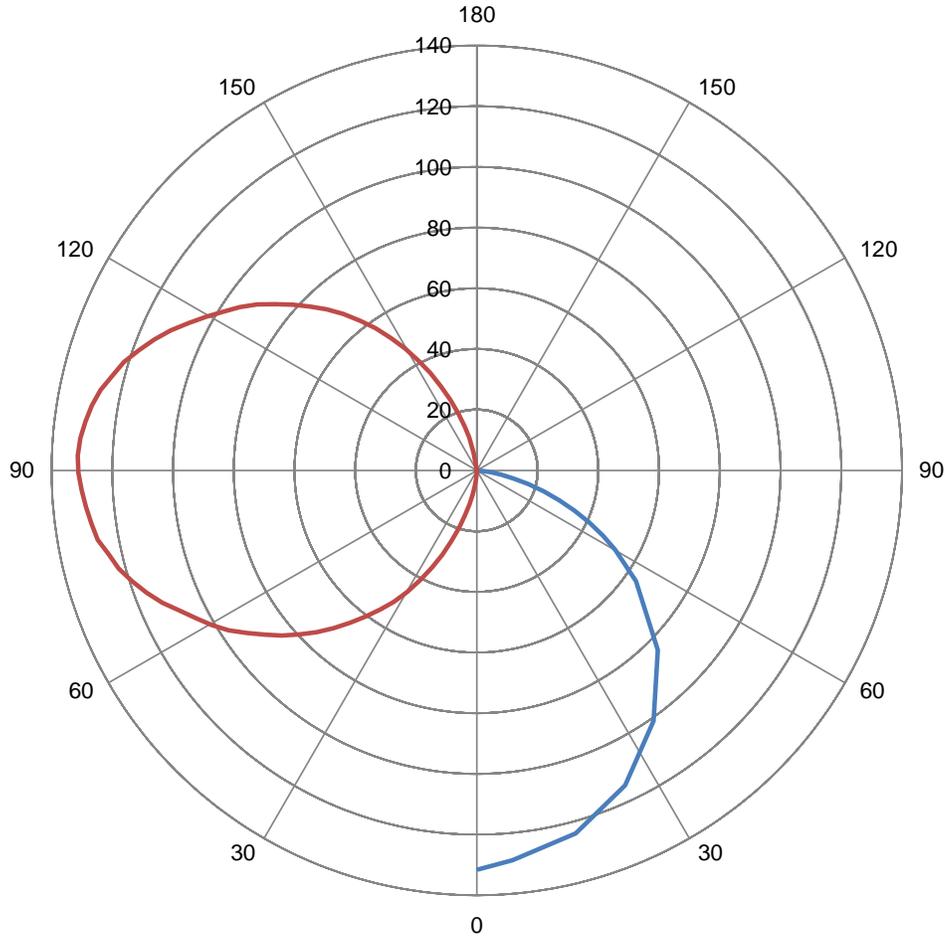
<b>IES Roadway Classification:</b>	Type II, Very Short	<b>Total Lumen Output:</b>	331 Lumens
<b>Cutoff Classification</b>	Noncutoff	<b>Luminaire Efficacy:</b>	34.8 lm/w
<b>BUG Rating:</b>	B0 U3 G1	<b>Maximum Candela:</b>	131 Candela

### ISO FootCandle Plot at 20 Feet





**Maximum Plane and Cone Plots of Candela**



Vertical Plane Through

0 ° Lateral

Lateral Cone Through

92.5 ° Vertical

**Maximum Intensity (Candlepower):**

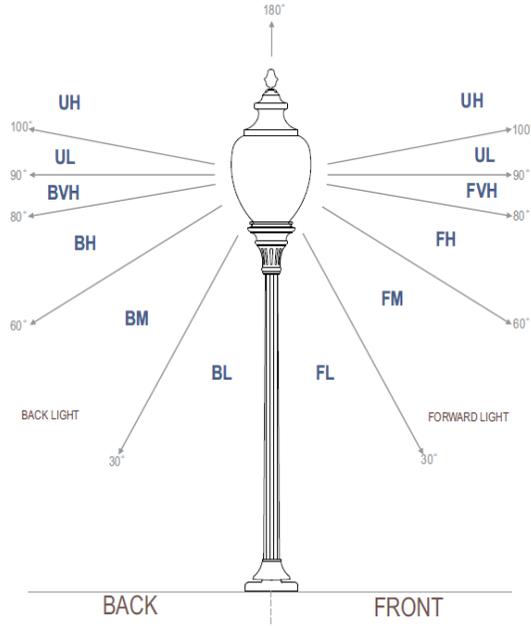
131 Candela

**Zonal Lumen Summary**

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.0	0.0%	60-65	14.8	4.5%	120-125	12.9	3.9%
5-10	0.1	0.0%	65-70	16.5	5.0%	125-130	11.0	3.3%
10-15	0.4	0.1%	70-75	18.0	5.4%	130-135	9.2	2.8%
15-20	1.0	0.3%	75-80	19.2	5.8%	135-140	7.4	2.2%
20-25	1.8	0.5%	80-85	20.0	6.1%	140-145	5.7	1.7%
25-30	2.9	0.9%	85-90	20.5	6.2%	145-150	4.1	1.2%
30-35	4.2	1.3%	90-95	20.5	6.2%	150-155	2.7	0.8%
35-40	5.8	1.7%	95-100	20.2	6.1%	155-160	1.6	0.5%
40-45	7.4	2.2%	100-105	19.3	5.8%	160-165	0.8	0.2%
45-50	9.2	2.8%	105-110	18.0	5.4%	165-170	0.3	0.1%
50-55	11.1	3.4%	110-115	16.4	5.0%	170-175	0.0	0.0%
55-60	12.9	3.9%	115-120	14.7	4.4%	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)	6.2	1.9%
FM	(30-60)	50.5	15.3%
FH	(60-80)	68.4	20.7%
FVH	(80-90)	40.5	12.2%
BL	(0-30)	0.1	0.0%
BM	(30-60)	0.2	0.1%
BH	(60-80)	0.1	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	40.7	12.3%
UH	(100-180)	124.1	37.5%
Total		330.7	100.0%
<b>BUG Rating</b>		<b>B0 U3 G1</b>	