



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-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

Austin Duff, Technician

Approved By

Eric Gaudreau, Engineering Leader

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

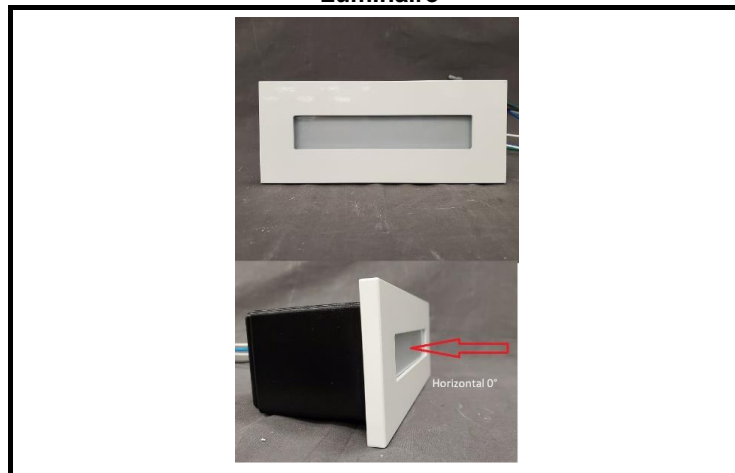
Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees

Test distance exceeds five times the greatest luminous opening of luminaire



Luminaire Description: 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 %



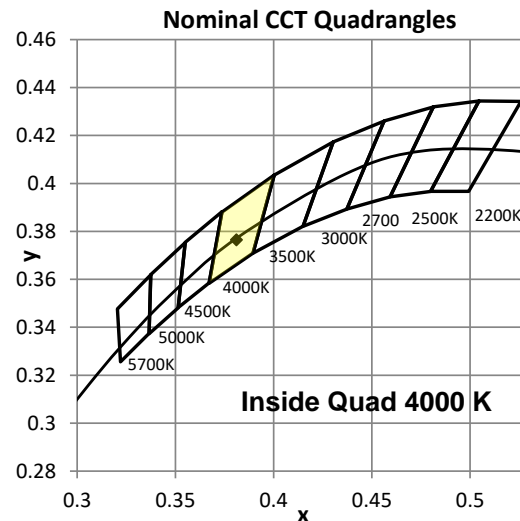
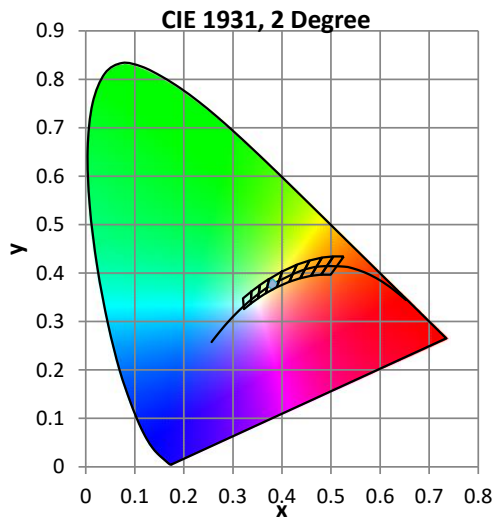
Color Quality - Integrating Sphere

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 %

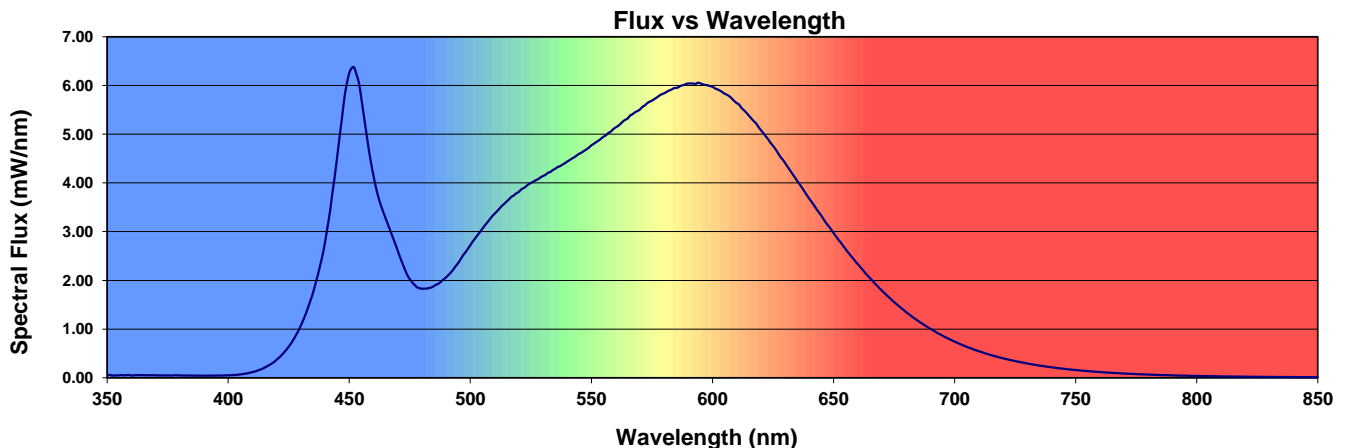
Summary of Results

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

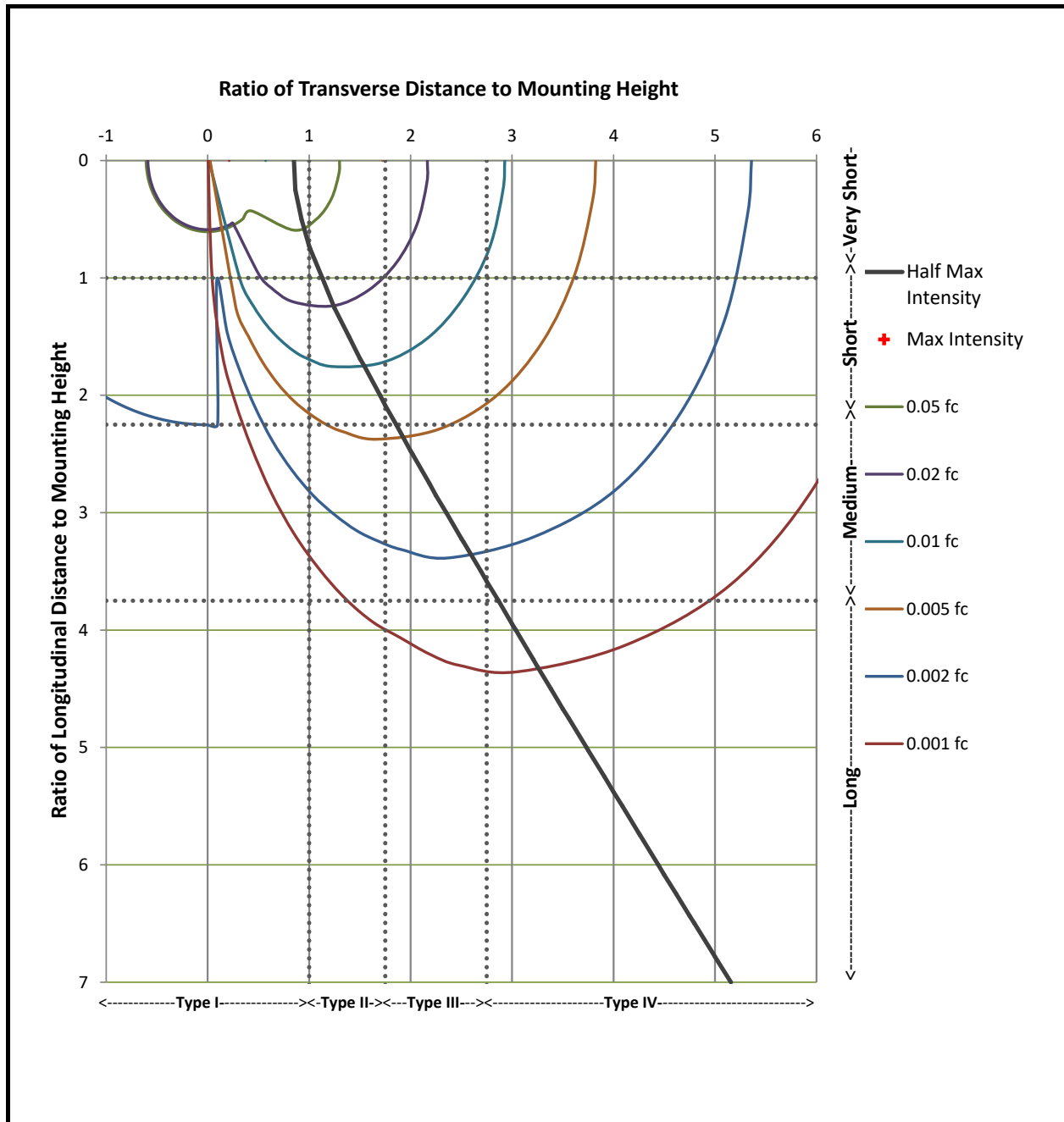
Distribution Test Conditions

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

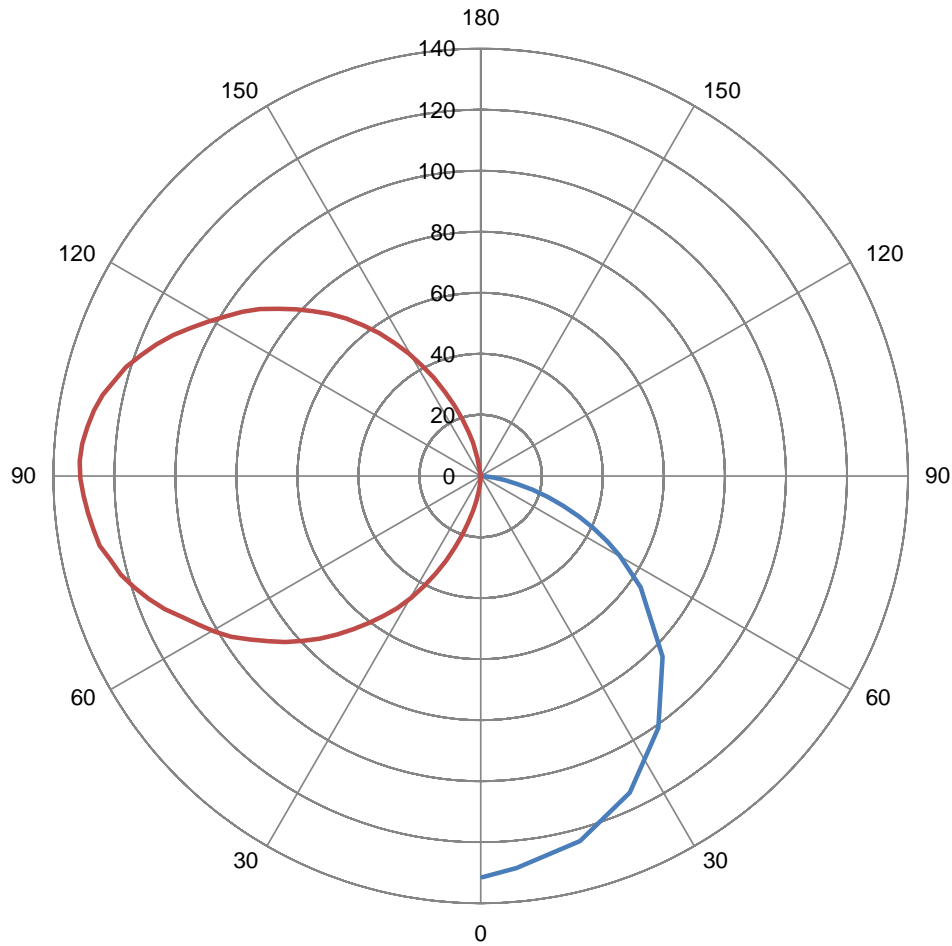
IES Roadway Classification:	Type II, Very Short	Total Lumen Output:	331 Lumens
Cutoff Classification:	Noncutoff	Luminaire Efficacy:	34.8 lm/w
BUG Rating:	B0 U3 G1	Maximum Candela:	131 Candela

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):

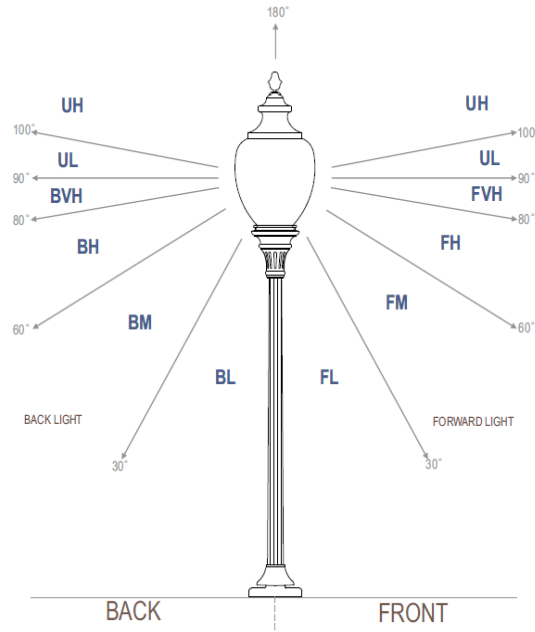
131 Candela

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%
BUG Rating	B0 U3 G1		