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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

Daniel Carrejo
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United States

Catalog Number
UO-LED-4000K-WW-2-42-WHP-INC-MT

Order Number
13819078
Test Number
13819078.04

Test Date

2021-06-17 - 2021-06-18

Prepared By

William Escobar, Technician

Approved By

Yilmaz Yucelidag, Project Handler

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 3-meter integrating sphere using the 4π geometry method.

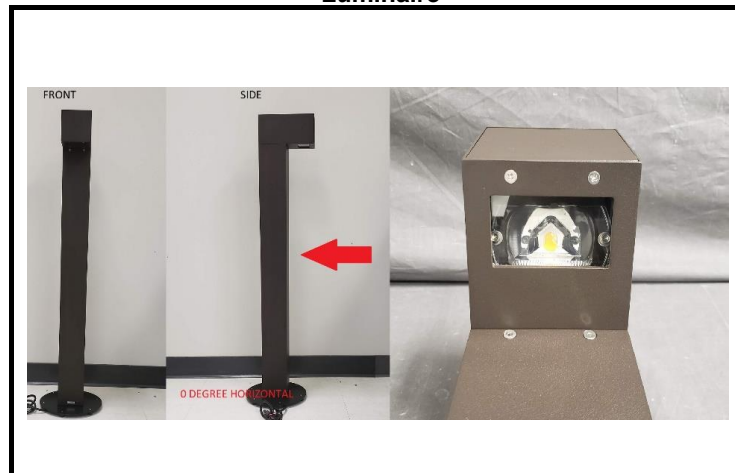
Absorption correction was employed for Sphere measurement

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
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Luminaire Description: Formed brown metal housing with clear glass lens
Lamp: 1 White LED with optic below
Mounting: Bollard
Ballast/Driver: ERP PTB30W-0700-42

Luminaire



Luminaire Characteristics

Luminous Length: 3.00 in.
Luminous Width: 1.000 in.
Luminous Height: 38.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 823.3 Lumens
Efficacy: 40.84 lm/w
CCT: 3979 K
CRI (Ra): 81.0

Distribution

Roadway Classification: Type II, Short
Cutoff Classification: Cutoff
BUG Rating: B0 U1 G0

Electrical Data at 120 VAC

Test Temperature: 25.3 °C
Voltage: 120.1 VAC
Current: 0.1696 A
Power: 20.16 W
Power Factor: 0.991
Frequency: 60 Hz
Current THD: 10.3 %



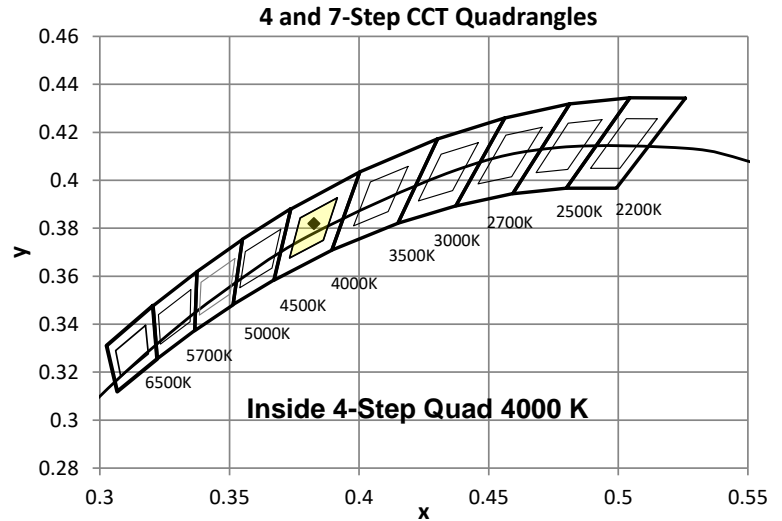
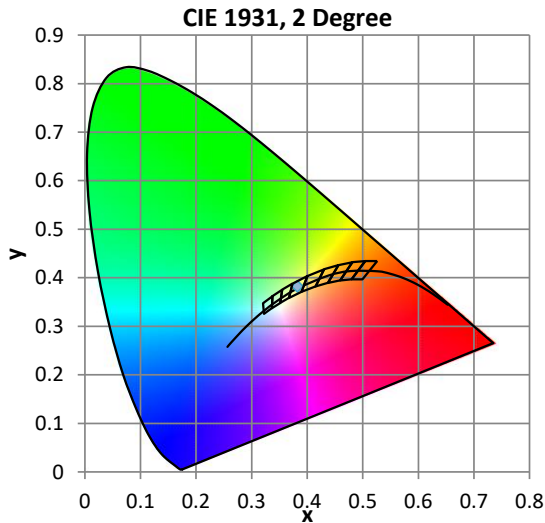
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.3 °C	120.1 VAC	0.1696 A	20.16 W	0.991	60 Hz	10.3 %

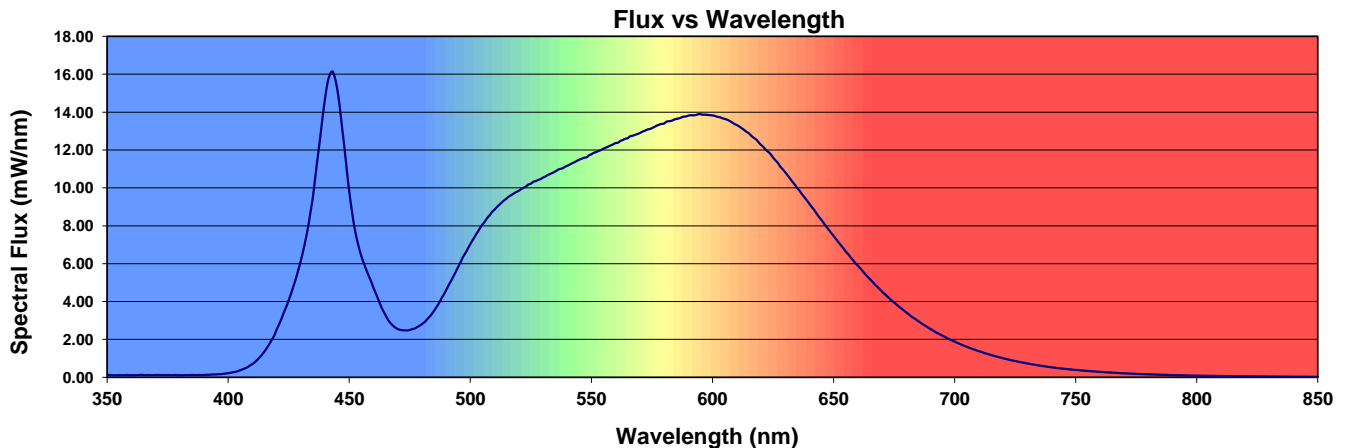
Summary of Results

Total Output:	823 Lumens	Chromaticity (x):	0.3826
Efficacy:	40.8 lm/w	Chromaticity (y):	0.3820
CCT:	3979 K	Chromaticity (u'):	0.2244
CRI (Ra):	81.0	Chromaticity (v'):	0.5042
CRI (R9):	7.8	TM-30 Rf:	82
Peak Wavelength:	443 nm	TM-30 Rg:	99
Dominant Wavelength:	578 nm	TM-30 Rcs,h1:	-11%
S/P Ratio:	1.61	Duv:	0.0018
M/P Ratio:	0.63	WELL Building Standard v2	



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
81.0	79.8	84.5	89.5	82.6	80.2	80.2	85.1	65.9	7.8	64.6	83.2	65.1	80.1	94.0	72.9





Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1697 A	20.19 W	0.991	60 Hz	10.2 %

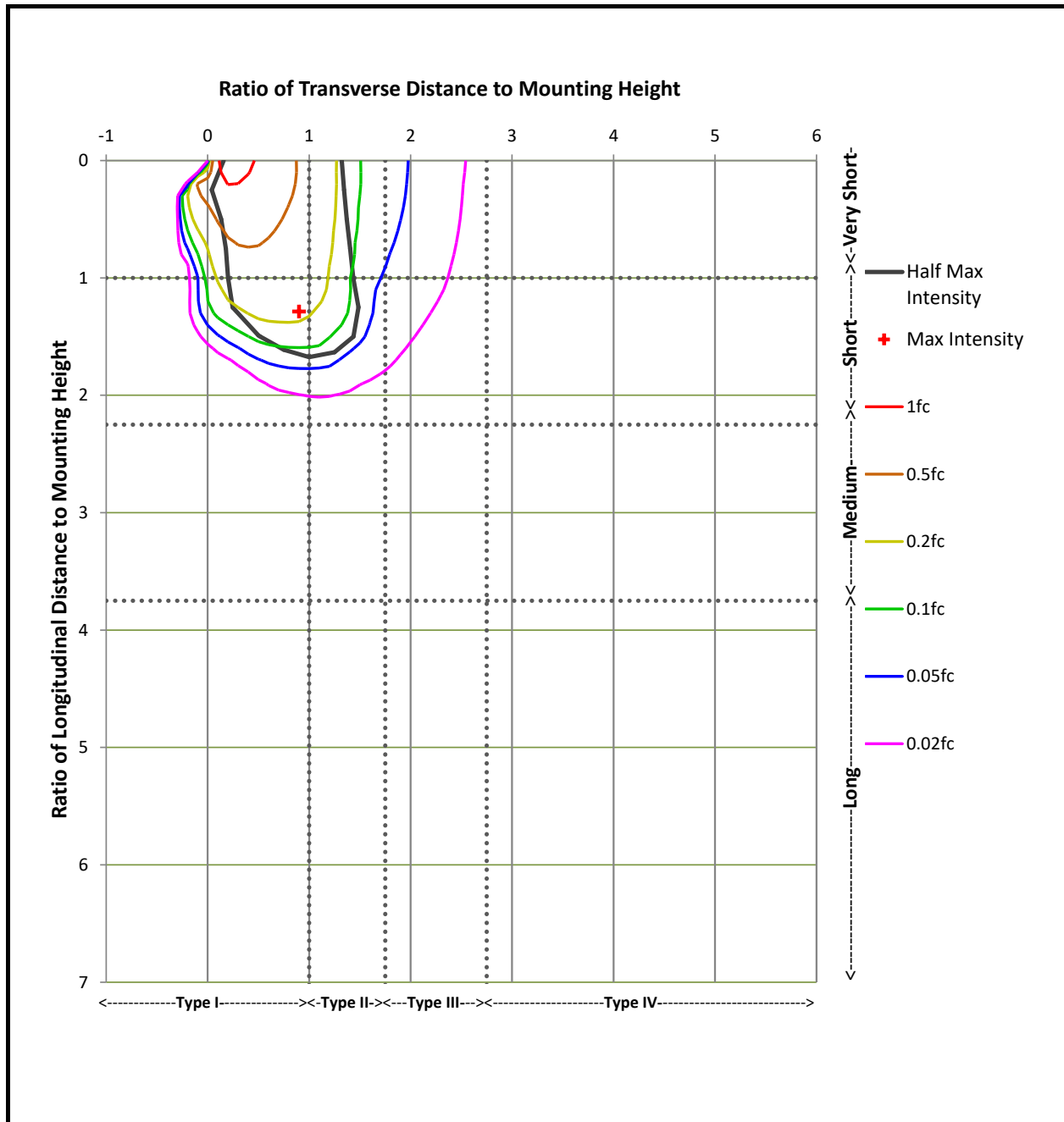
Summary of Results

IES Roadway Classification:
Cutoff Classification
BUG Rating:

Type II, Short
Cutoff
B0 U1 G0

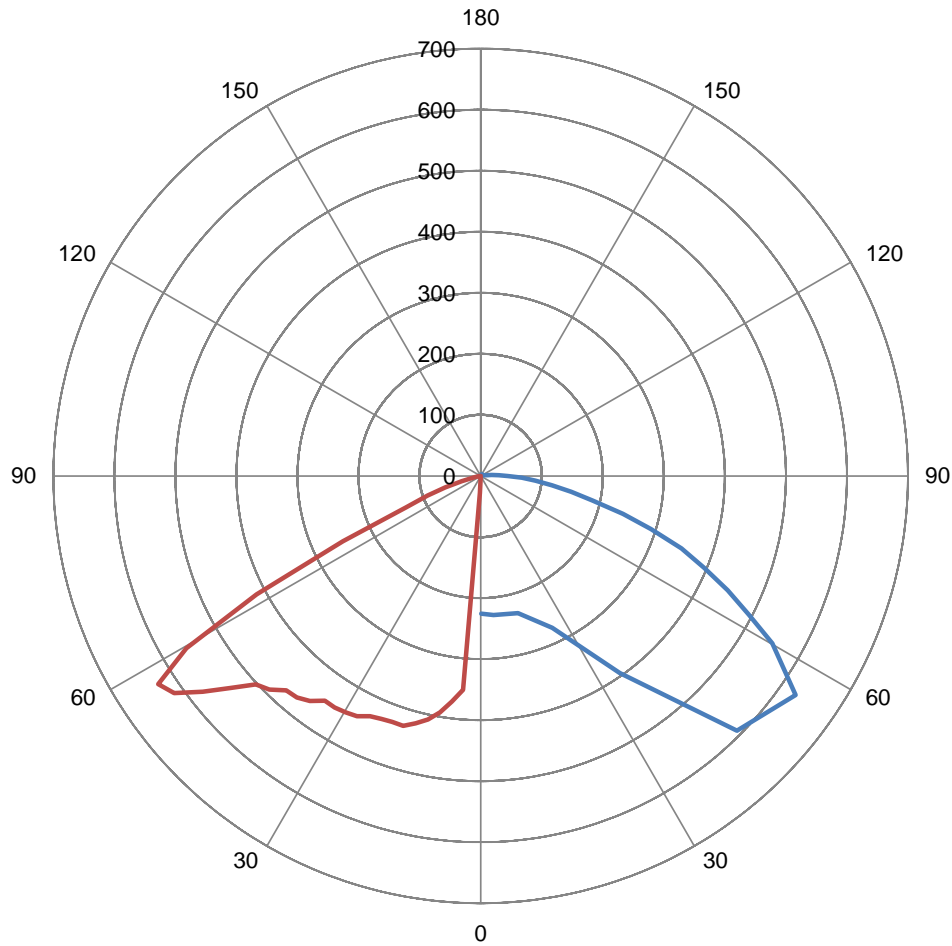
Total Lumen Output: 805 Lumens
Luminaire Efficacy: 39.9 lm/w
Maximum Candela: 629 Candela

ISO FootCandle Plot at 20 Feet





Maximum Plane and Cone Plots of Candela



Vertical Plane Through

55 ° Lateral

Lateral Cone Through

57.5 ° Vertical

Maximum Intensity (Candlepower):

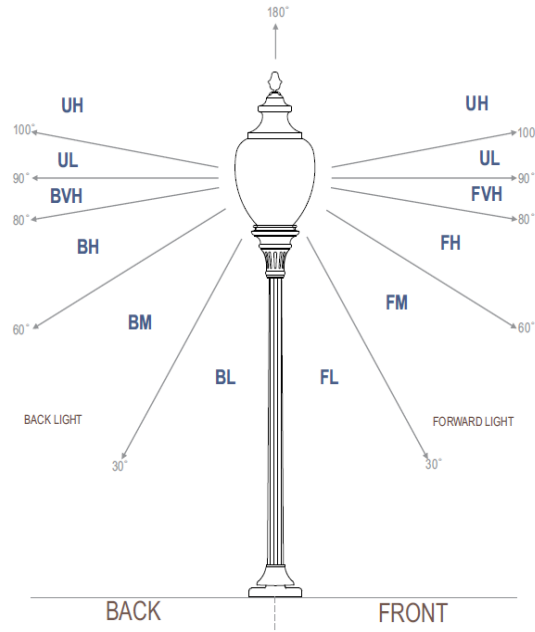
629 Candela

Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.9	0.4%	60-65	54.8	6.8%	120-125	0.0	0.0%
5-10	16.1	2.0%	65-70	33.1	4.1%	125-130	0.0	0.0%
10-15	31.1	3.9%	70-75	17.6	2.2%	130-135	0.0	0.0%
15-20	42.5	5.3%	75-80	4.9	0.6%	135-140	0.0	0.0%
20-25	51.3	6.4%	80-85	0.8	0.1%	140-145	0.0	0.0%
25-30	60.1	7.5%	85-90	0.2	0.0%	145-150	0.0	0.0%
30-35	67.5	8.4%	90-95	0.0	0.0%	150-155	0.0	0.0%
35-40	74.3	9.2%	95-100	0.0	0.0%	155-160	0.0	0.0%
40-45	82.0	10.2%	100-105	0.0	0.0%	160-165	0.0	0.0%
45-50	91.1	11.3%	105-110	0.0	0.0%	165-170	0.0	0.0%
50-55	94.5	11.7%	110-115	0.0	0.0%	170-175	0.0	0.0%
55-60	80.4	10.0%	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)	176.5	21.9%
FM	(30-60)	475.2	59.0%
FH	(60-80)	108.5	13.5%
FVH	(80-90)	0.8	0.1%
BL	(0-30)	27.6	3.4%
BM	(30-60)	14.7	1.8%
BH	(60-80)	1.8	0.2%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		805.3	100.0%
BUG Rating	B0 U1 G0		

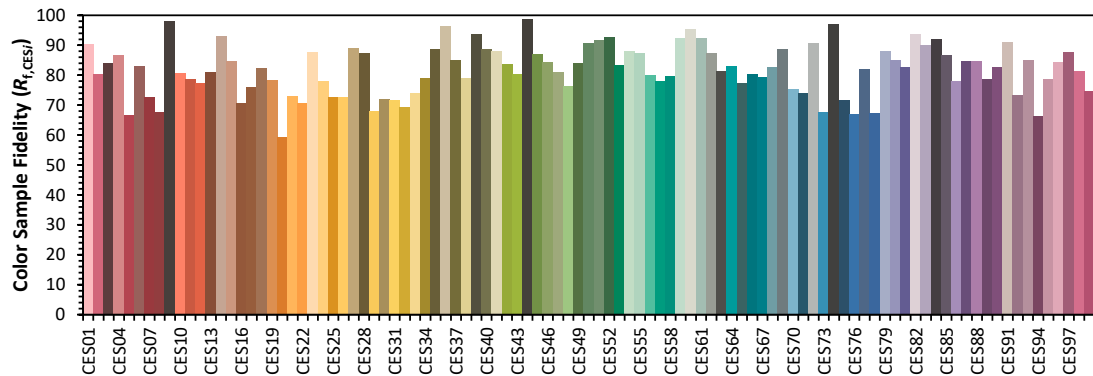
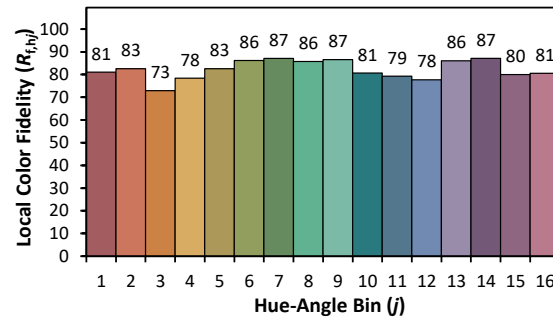
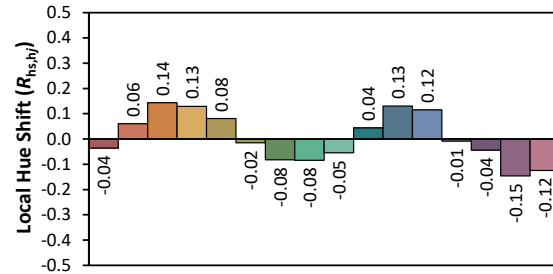
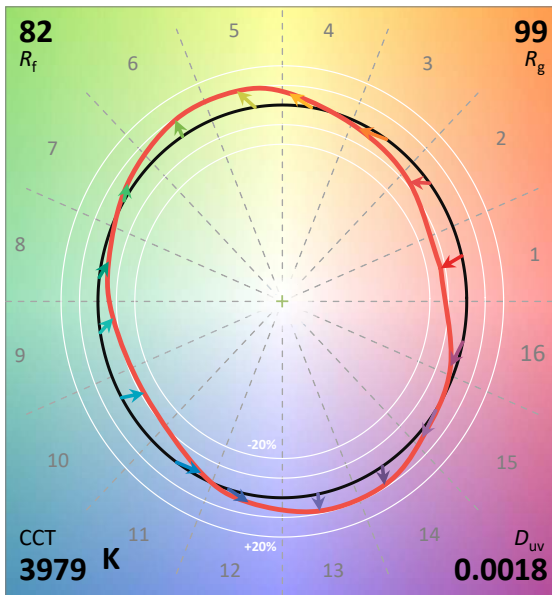
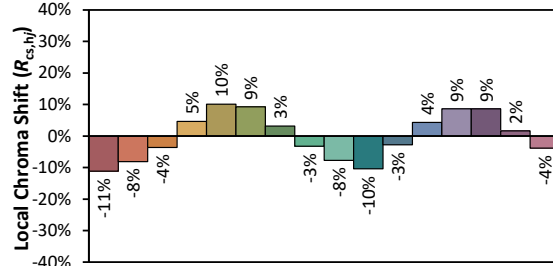
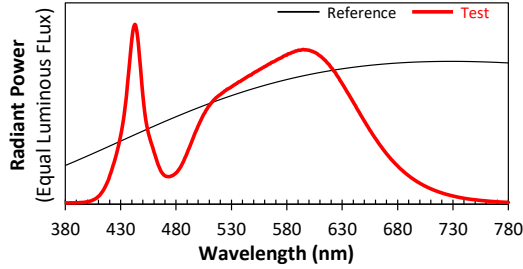
ANSI/IES TM-30-18 Color Rendition Report

Date: 2021-06-18

Manufacturer: B-K Lighting INC

Model:

UO-LED-4000K-WW-2-42-WHP-INC-MT



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3826
y 0.3820
u' 0.2244
v' 0.5042

CIE 13.3-1995
(CRI)
R_a 81
R₉ 8

Colors are for visual orientation purposes only. Created with the IES TM-30-18 Calculator Version 2.00.