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Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-10-2014, IES LM-35-2002 (Withdrawn)
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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United States

Catalog Number
DE-LED-TR-X125-SP-9-C-PROTOTYPE(4000K)

Order Number
13583921
Test Number
13583921.04

Test Date

2021-02-04

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 4π geometry method.

Absorption correction was employed for Sphere measurement



Luminaire Description: White metal cylindrical housing and clear glass lens
Lamp: One (1) White LED
Mounting: Pendant
Ballast/Driver: One (1) ERP EBR020U-0700-30

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.50 in.

Summary of Results

Integrating Sphere

Luminous Flux: 1380 Lumens
Efficacy: 63.51 lm/w
CCT: 4149 K
CRI (Ra): 79.8

Distribution

Total Luminaire Output: 1394 Lumens
Luminaire Efficacy: 64.3 lm/w
Maximum Candela: 10431 Candela

Electrical Data at 120 VAC

Test Temperature: 25.5 °C
Voltage: 120.1 VAC
Current: 0.1836 A
Power: 21.73 W
Power Factor: 0.986
Frequency: 60 Hz
Current THD: 15.6 %



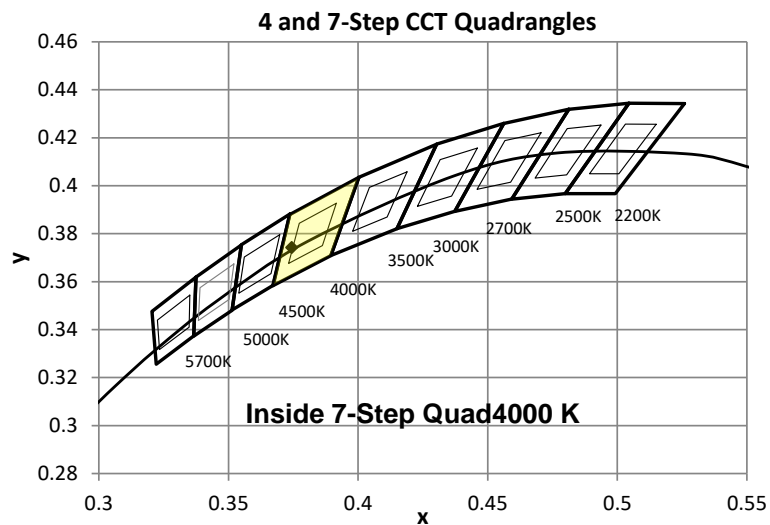
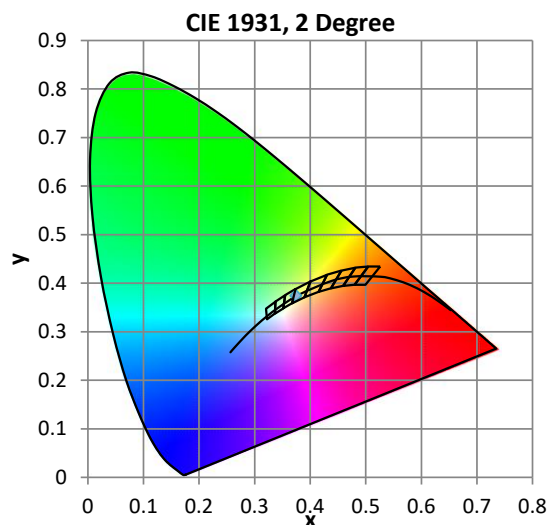
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.5 °C	120.1 VAC	0.1836 A	21.73 W	0.986	60 Hz	15.6 %

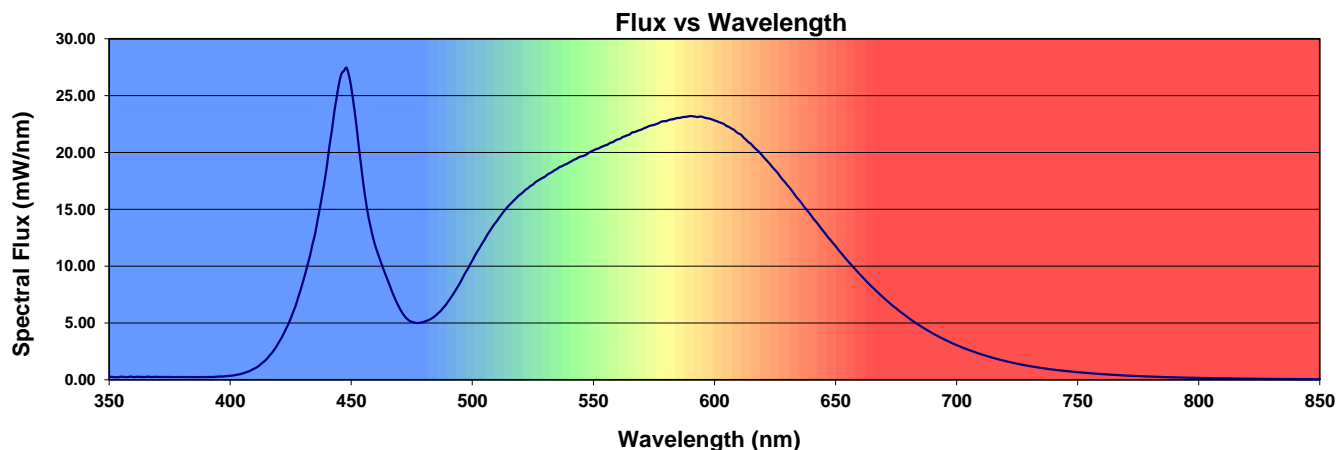
Summary of Results

Total Output:	1380 Lumens	Chromaticity (x):	0.3744
Efficacy:	63.5 lm/w	Chromaticity (y):	0.3743
CCT:	4149 K	Chromaticity (u'):	0.2221
CRI (Ra):	79.8	Chromaticity (v'):	0.4996
CRI (R9):	2.5	TM-30 Rf:	81
Peak Wavelength:	447 nm	TM-30 Rg:	98
Dominant Wavelength:	578 nm	TM-30 Rcs,h1:	-12%
S/P Ratio:	1.66	Duv:	0.0007



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.8	78.2	84.1	88.9	80.5	78.3	78.4	85.2	64.4	2.5	62.5	79.3	58.6	79.0	93.6	72.1





Distribution - Goniophotometer

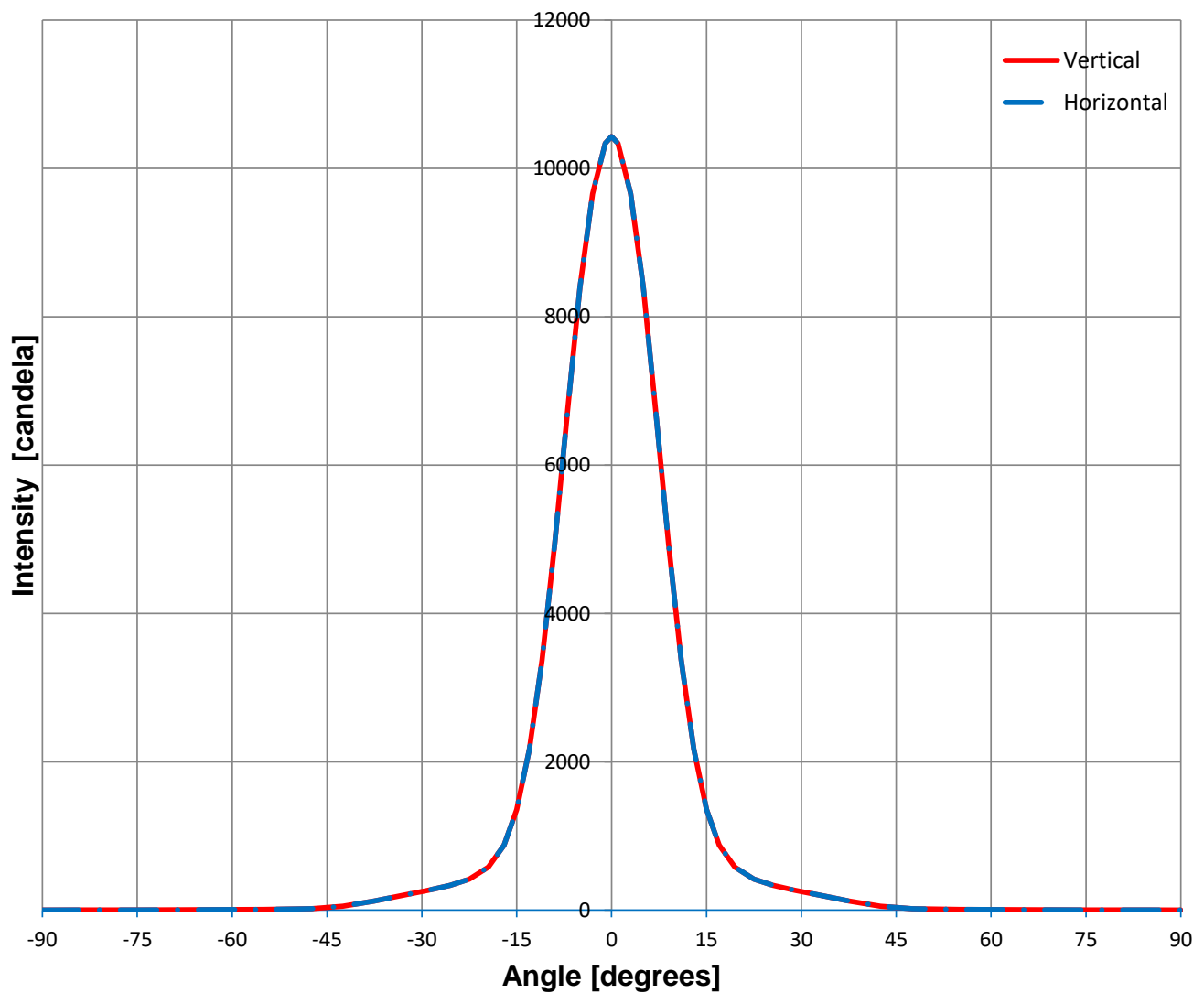
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.0 VAC	0.1834 A	21.70 W	0.986	60 Hz	15.6 %

Summary of Results

Total Lumen Output:	1394.4 Lumens	Maximum Candela:	10430.8 Candela
Luminaire Efficacy:	64.3 Lumens/Watt	Maximum Angle:	0 H 0 V
Field Lumens:	990.9 Lumens	Field Angle :	32.6 H X 32.6 V
Beam Lumens:	551.5 Lumens	Beam Angle :	17.4 H X 17.4 V
Spill Light Lumens:	403.5 Lumens	IESNA Type:	3 H X 3 V

Maximum Candlepower Plot





Candela Tabulation

Lateral Angle (Degrees)

	0	1	3	5	7	9	11	13	15	17	19.5
85.0	2	2	2	2	2	2	2	2	2	2	2
75.0	3	3	3	3	3	3	3	3	3	3	3
65.0	4	4	4	4	4	4	4	4	4	4	4
55.0	7	7	7	7	7	7	7	7	7	7	6
47.5	17	17	17	16	16	15	14	14	13	12	11
42.5	52	52	51	49	47	44	40	36	32	28	23
37.5	123	123	122	119	114	109	102	94	85	76	63
33.0	199	199	197	194	188	181	172	162	150	137	119
29.0	268	267	265	261	254	246	236	224	210	195	174
25.5	334	334	331	324	316	305	292	278	262	245	221
22.5	416	415	410	398	384	366	347	327	307	286	260
19.5	577	575	560	531	498	461	424	390	359	331	298
17.0	876	871	837	771	688	603	528	466	415	374	331
15.0	1355	1346	1275	1137	974	810	669	557	475	415	359
13.0	2165	2148	2013	1751	1449	1144	882	693	557	466	390
11.0	3371	3341	3111	2679	2158	1649	1215	882	669	528	424
9.0	4947	4901	4547	3905	3120	2330	1649	1144	810	603	461
7.0	6719	6656	6170	5302	4212	3120	2158	1449	974	688	498
5.0	8391	8312	7727	6660	5302	3905	2679	1751	1137	771	531
3.0	9658	9566	8921	7727	6170	4547	3111	2013	1275	837	560
1.0	10340	10232	9566	8312	6656	4901	3341	2148	1346	871	575
0.0	10431	10340	9658	8391	6719	4947	3371	2165	1355	876	577
-1.0	10340	10232	9566	8312	6656	4901	3341	2148	1346	871	575
-3.0	9658	9566	8921	7727	6170	4547	3111	2013	1275	837	560
-5.0	8391	8312	7727	6660	5302	3905	2679	1751	1137	771	531
-7.0	6719	6656	6170	5302	4212	3120	2158	1449	974	688	498
-9.0	4947	4901	4547	3905	3120	2330	1649	1144	810	603	461
-11.0	3371	3341	3111	2679	2158	1649	1215	882	669	528	424
-13.0	2165	2148	2013	1751	1449	1144	882	693	557	466	390
-15.0	1355	1346	1275	1137	974	810	669	557	475	415	359
-17.0	876	871	837	771	688	603	528	466	415	374	331
-19.5	577	575	560	531	498	461	424	390	359	331	298
-22.5	416	415	410	398	384	366	347	327	307	286	260
-25.5	334	334	331	324	316	305	292	278	262	245	221
-29.0	268	267	265	261	254	246	236	224	210	195	174
-33.0	199	199	197	194	188	181	172	162	150	137	119
-37.5	123	123	122	119	114	109	102	94	85	76	63
-42.5	52	52	51	49	47	44	40	36	32	28	23
-47.5	17	17	17	16	16	15	14	14	13	12	11
-55.0	7	7	7	7	7	7	7	7	7	7	6
-65.0	4	4	4	4	4	4	4	4	4	4	4
-75.0	3	3	3	3	3	3	3	3	3	3	3
-85.0	2	2	2	2	2	2	2	2	2	2	2

Vertical Angle (Degrees)



Candela Tabulation

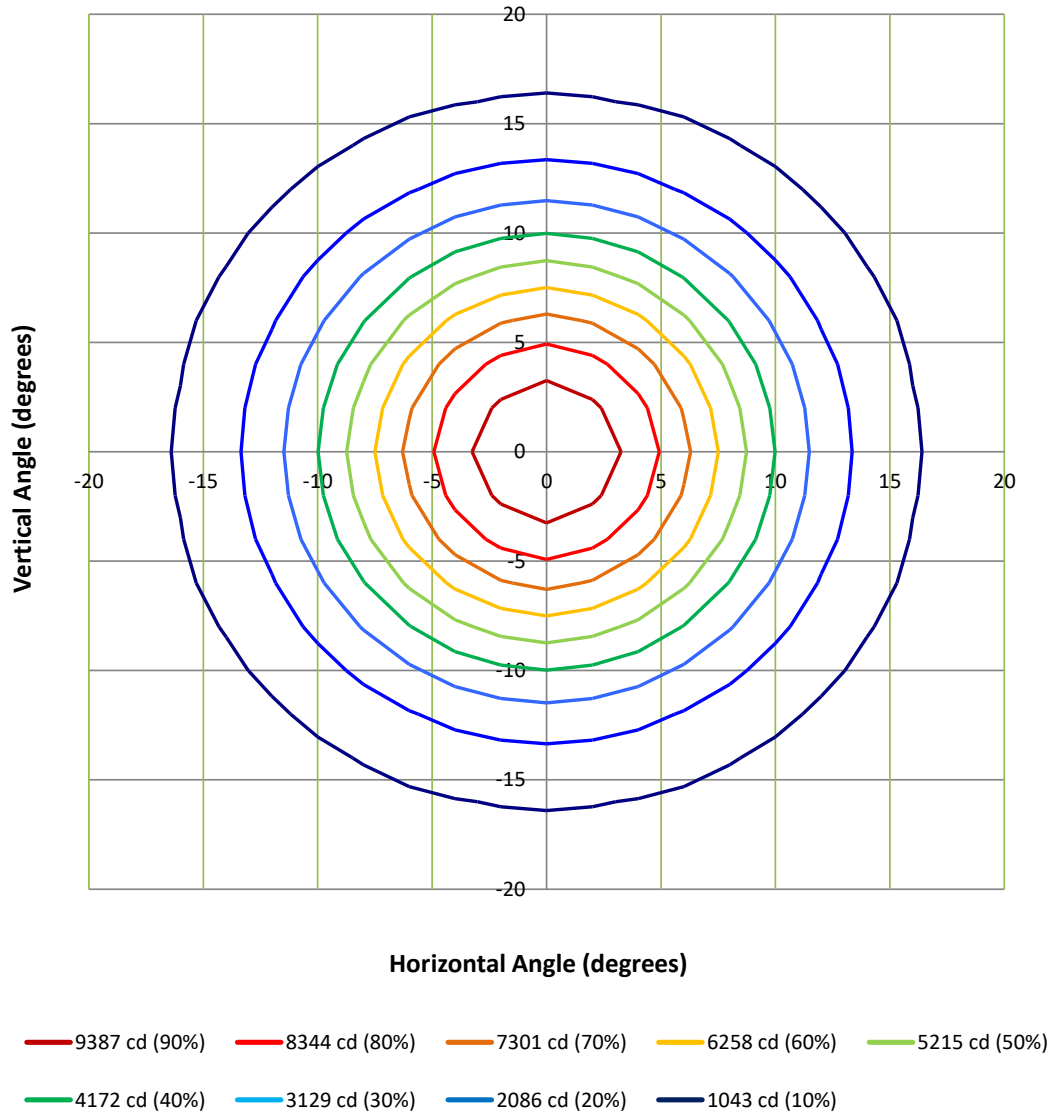
Lateral Angle (Degrees)

Vertical Angle (Degrees)

	22.5	25.5	29	33	37.5	42.5	47.5	55	65	75	85
85.0	2	2	2	2	2	2	1	1	1	1	0
75.0	3	3	3	3	3	2	2	2	2	2	1
65.0	4	4	4	4	3	3	3	3	2	2	1
55.0	6	6	6	5	5	4	4	3	3	2	1
47.5	10	9	8	7	6	6	5	4	3	2	1
42.5	18	15	12	10	8	7	6	4	3	2	2
37.5	48	34	22	15	10	8	6	5	3	3	2
33.0	96	73	48	27	15	10	7	5	4	3	2
29.0	147	117	83	48	22	12	8	6	4	3	2
25.5	191	158	117	73	34	15	9	6	4	3	2
22.5	226	191	147	96	48	18	10	6	4	3	2
19.5	260	221	174	119	63	23	11	6	4	3	2
17.0	286	245	195	137	76	28	12	7	4	3	2
15.0	307	262	210	150	85	32	13	7	4	3	2
13.0	327	278	224	162	94	36	14	7	4	3	2
11.0	347	292	236	172	102	40	14	7	4	3	2
9.0	366	305	246	181	109	44	15	7	4	3	2
7.0	384	316	254	188	114	47	16	7	4	3	2
5.0	398	324	261	194	119	49	16	7	4	3	2
3.0	410	331	265	197	122	51	17	7	4	3	2
1.0	415	334	267	199	123	52	17	7	4	3	2
0.0	416	334	268	199	123	52	17	7	4	3	2
-1.0	415	334	267	199	123	52	17	7	4	3	2
-3.0	410	331	265	197	122	51	17	7	4	3	2
-5.0	398	324	261	194	119	49	16	7	4	3	2
-7.0	384	316	254	188	114	47	16	7	4	3	2
-9.0	366	305	246	181	109	44	15	7	4	3	2
-11.0	347	292	236	172	102	40	14	7	4	3	2
-13.0	327	278	224	162	94	36	14	7	4	3	2
-15.0	307	262	210	150	85	32	13	7	4	3	2
-17.0	286	245	195	137	76	28	12	7	4	3	2
-19.5	260	221	174	119	63	23	11	6	4	3	2
-22.5	226	191	147	96	48	18	10	6	4	3	2
-25.5	191	158	117	73	34	15	9	6	4	3	2
-29.0	147	117	83	48	22	12	8	6	4	3	2
-33.0	96	73	48	27	15	10	7	5	4	3	2
-37.5	48	34	22	15	10	8	6	5	3	3	2
-42.5	18	15	12	10	8	7	6	4	3	2	2
-47.5	10	9	8	7	6	6	5	4	3	2	1
-55.0	6	6	6	5	5	4	4	3	3	2	1
-65.0	4	4	4	4	3	3	3	3	2	2	1
-75.0	3	3	3	3	3	2	2	2	2	2	1
-85.0	2	2	2	2	2	2	1	1	1	1	0



Isocandela Diagram (Percent of Maximum Intensity)



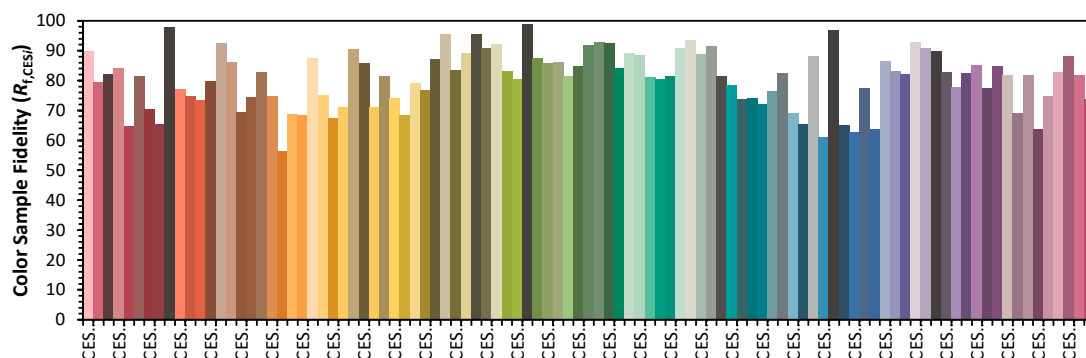
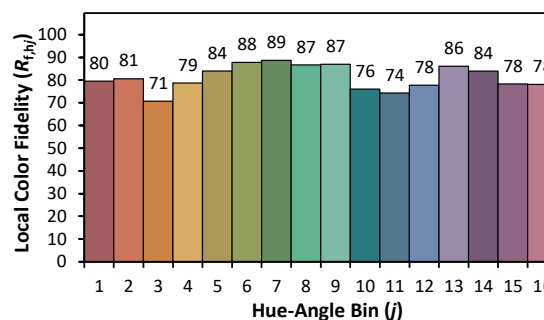
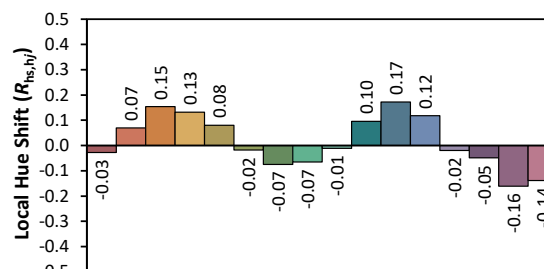
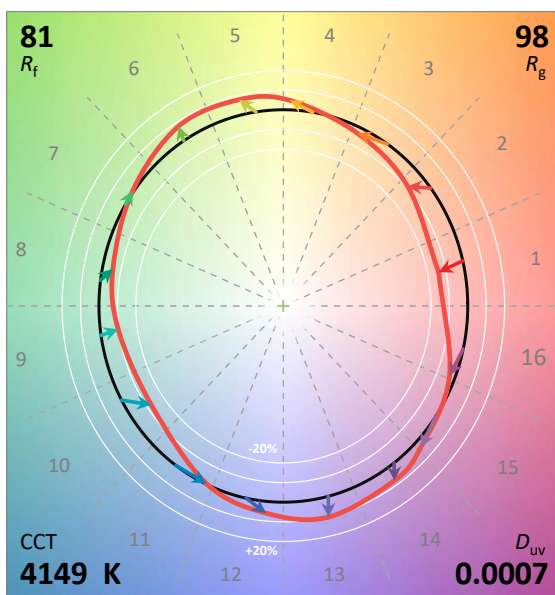
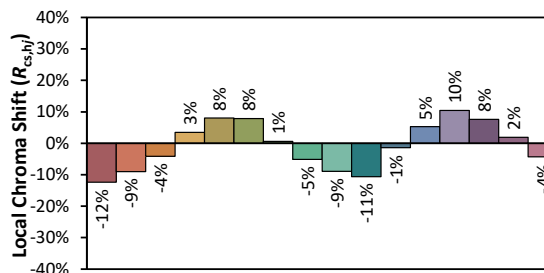
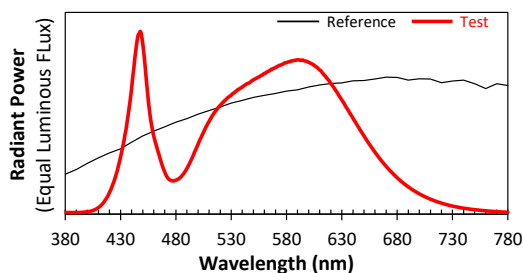
ANSI/IES TM-30-18 Color Rendition Report

Source: Test Number: 13583921.04

Manufacturer: B-K Lighting INC

Date: 2021-02-04

Model: DE-LED-TR-X125-SP-9-C-PROTOTYPE



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

x 0.3744

y 0.3743

u' 0.2221

v' 0.4996

CIE 13.3-1995
(CRI)

R_a 80

R_g 3

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