

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P472206

Luminaire Tested: **CCP-VA-6-850-U-T4W**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472206
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCP-VA-6-850-U-T4W
Description: INVUE CLEARCURVE POLE MOUNT Wave Stream LUMINAIRE WITH T4W
DISTRIBUTION LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9793.9 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

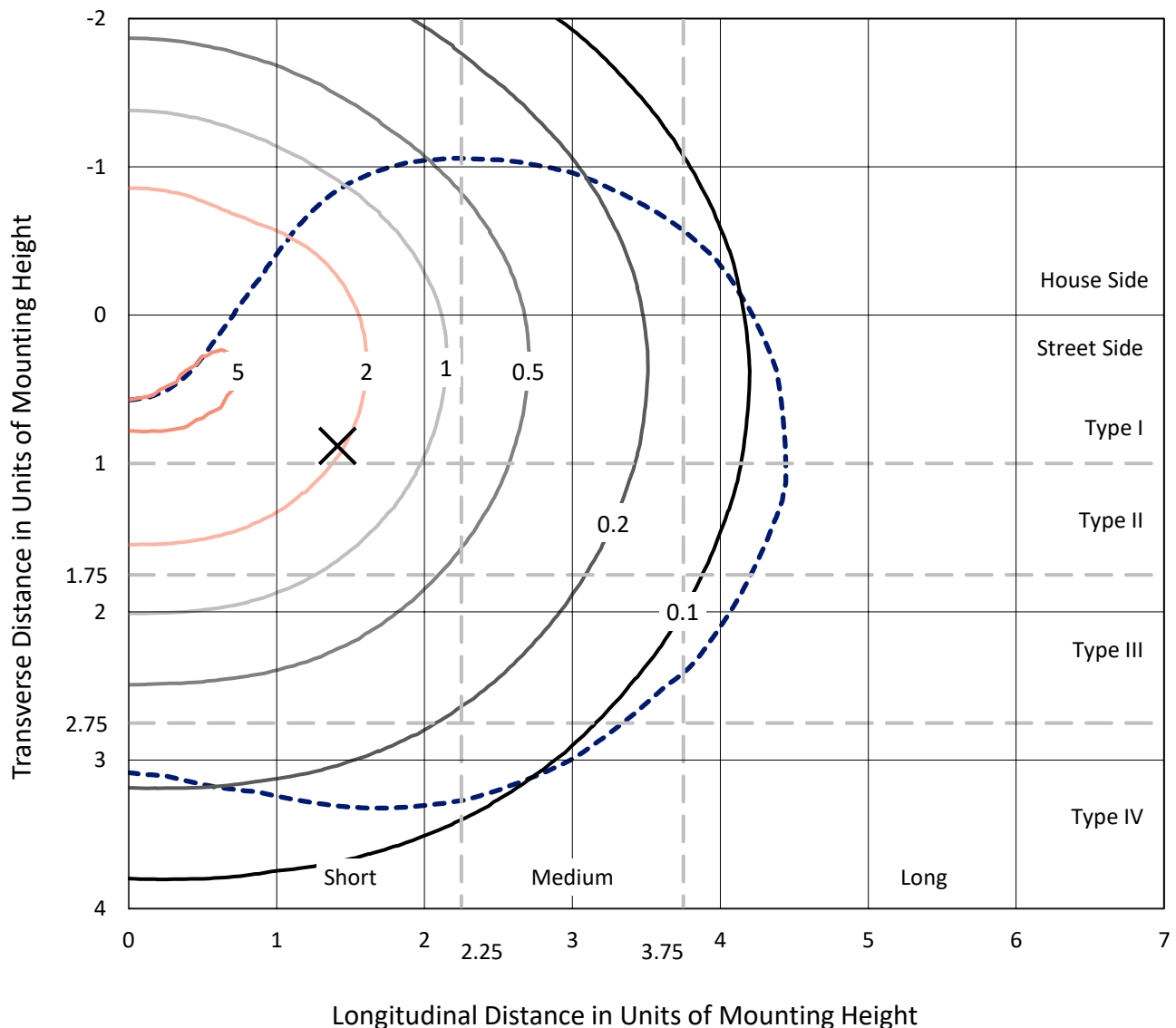
Input Watts (W): 101.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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CATALOG NUMBER: CCP-VA-6-850-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

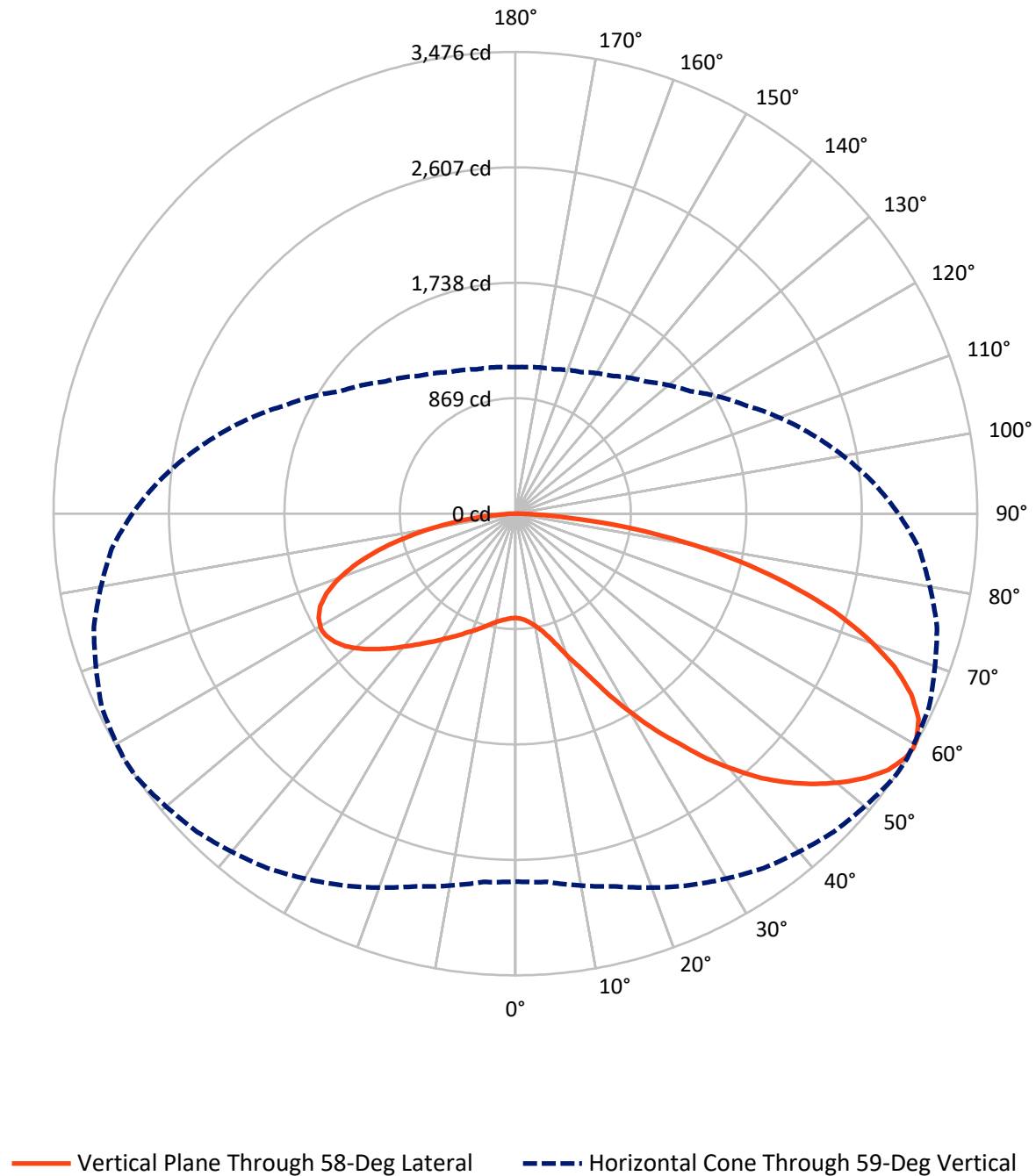
× Max cd
 --- 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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CATALOG NUMBER: CCP-VA-6-850-U-T4W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3492.9	0.0	3492.9
	% Fixture	35.7	0.0	35.7
Street Side	Lumens	6301.0	0.0	6301.0
	% Fixture	64.3	0.0	64.3
Total	Lumens	9793.9	0.0	9793.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.9	0.8
10°-20°	265.7	2.7
20°-30°	560.7	5.7
30°-40°	1031.9	10.5
40°-50°	1608.5	16.4
50°-60°	2113.5	21.6
60°-70°	2214.7	22.6
70°-80°	1535.5	15.7
80°-90°	385.6	3.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	9793.9	100.0
0°-180°	9793.9	100.0

Coefficient of Utilization



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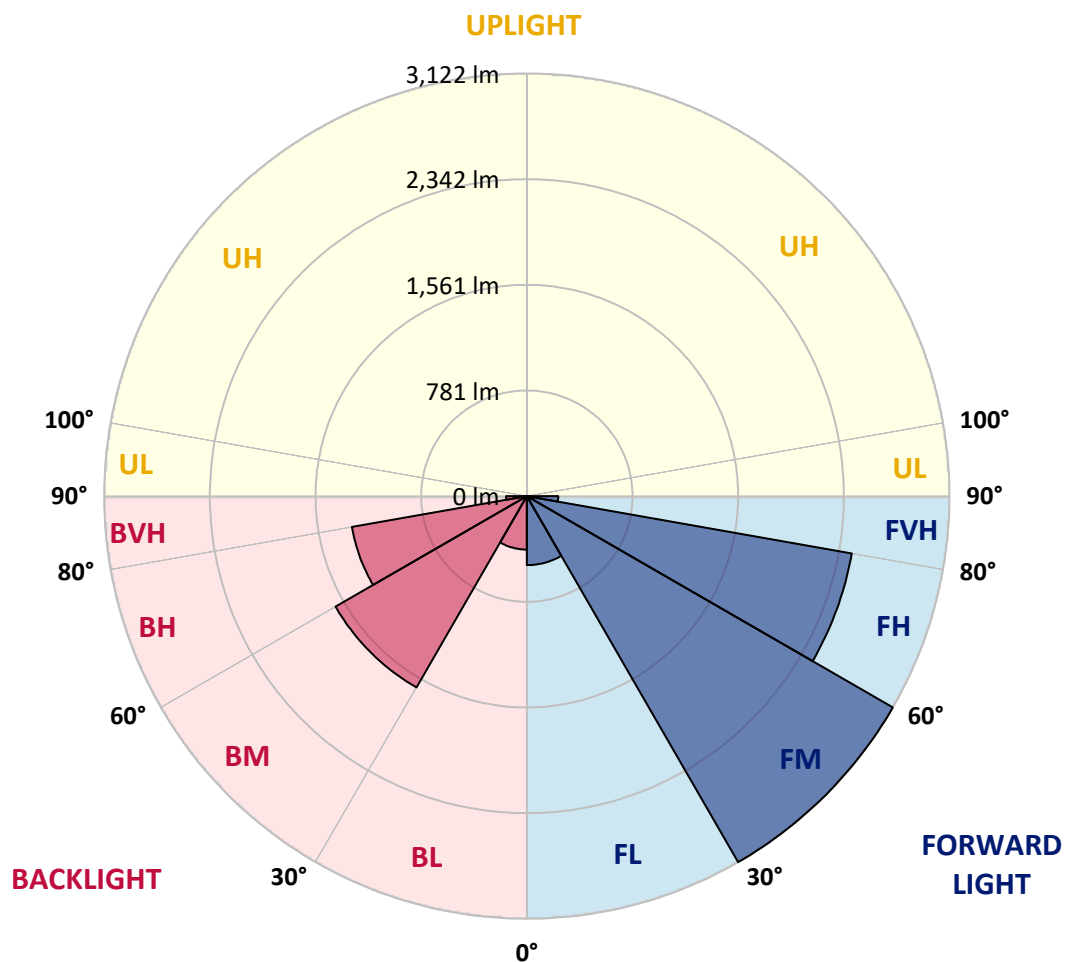
CATALOG NUMBER: CCP-VA-6-850-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	509.5	5.2			
FM	(30°-60°)	3122.1	31.9			
FH	(60°-80°)	2437.7	24.9			G2/5000
FVH	(80°-90°)	231.7	2.4			G3/500
BL	(0°-30°)	394.8	4.0	B1/500		
BM	(30°-60°)	1631.8	16.7	B2/2500		
BH	(60°-80°)	1312.4	13.4	B3/2500		G3/2500
BVH	(80°-90°)	153.9	1.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1
2.5°	796.2	796.2	796.2	794.0	794.0	794.0	791.8	791.8	791.8	789.5	787.3
5°	813.8	813.8	811.6	813.8	811.6	809.4	807.2	807.2	807.2	805.0	802.8
7.5°	838.1	840.3	838.1	840.3	838.1	835.9	831.4	831.4	829.2	824.8	820.4
10°	875.6	875.6	875.6	873.4	871.1	868.9	866.7	864.5	862.3	855.7	849.1
12.5°	921.9	921.9	921.9	917.5	917.5	913.0	910.8	908.6	904.2	895.4	886.6
15°	979.2	977.0	983.6	983.6	981.4	981.4	974.8	970.4	966.0	952.7	932.9
17.5°	1056.4	1054.2	1060.8	1065.2	1065.2	1067.4	1056.4	1052.0	1036.6	1018.9	992.4
20°	1160.1	1155.6	1162.3	1166.7	1162.3	1166.7	1155.6	1157.9	1135.8	1104.9	1063.0
22.5°	1272.5	1272.5	1279.2	1279.2	1281.4	1285.8	1272.5	1265.9	1248.3	1204.2	1151.2
25°	1411.5	1422.5	1422.5	1422.5	1431.3	1433.5	1420.3	1409.3	1385.0	1325.5	1252.7
27.5°	1581.3	1579.1	1576.9	1590.1	1590.1	1594.5	1585.7	1581.3	1552.6	1479.8	1369.6
30°	1762.1	1748.9	1757.7	1762.1	1771.0	1777.6	1768.8	1755.5	1720.2	1640.8	1504.1
32.5°	1927.5	1936.4	1949.6	1954.0	1967.2	1969.5	1947.4	1947.4	1912.1	1810.7	1669.5
35°	2115.0	2115.0	2150.3	2165.7	2165.7	2179.0	2145.9	2128.2	2104.0	1998.1	1819.5
37.5°	2278.2	2282.6	2311.3	2346.6	2351.0	2370.8	2346.6	2340.0	2295.9	2187.8	1989.3
40°	2430.4	2434.8	2470.1	2512.0	2536.2	2567.1	2542.9	2531.8	2485.5	2362.0	2159.1
42.5°	2549.5	2558.3	2602.4	2664.2	2703.9	2741.4	2730.3	2723.7	2659.8	2529.6	2315.7
45°	2639.9	2655.3	2717.1	2789.9	2845.0	2900.1	2902.3	2889.1	2829.6	2684.0	2467.9
47.5°	2712.7	2730.3	2798.7	2891.3	2975.1	3043.5	3056.7	3041.3	2986.2	2834.0	2604.6
50°	2772.2	2781.1	2858.2	2977.3	3081.0	3167.0	3193.5	3180.2	3131.7	2959.7	2723.7
52.5°	2803.1	2816.3	2904.6	3041.3	3167.0	3270.7	3310.4	3303.7	3246.4	3074.4	2829.6
55°	2818.5	2831.8	2935.4	3092.0	3233.2	3354.5	3403.0	3405.2	3350.1	3178.0	2928.8
57.5°	2800.9	2818.5	2931.0	3105.2	3261.8	3392.0	3466.9	3464.7	3420.6	3257.4	3012.6
59°	2770.0	2783.3	2904.6	3087.6	3257.4	3387.5	3473.6	3475.8	3436.1	3283.9	3050.1
60°	2734.7	2750.2	2873.7	3065.6	3239.8	3372.1	3462.5	3466.9	3433.9	3290.5	3065.6
62.5°	2613.4	2633.3	2770.0	2975.1	3164.8	3290.5	3398.6	3405.2	3387.5	3272.9	3076.6
65°	2443.6	2461.3	2609.0	2827.4	3025.9	3156.0	3257.4	3272.9	3270.7	3193.5	3032.5
67.5°	2236.3	2238.5	2377.5	2615.6	2823.0	2950.9	3047.9	3074.4	3094.2	3043.5	2902.3
70°	1987.1	1984.9	2119.4	2355.4	2562.7	2697.2	2794.3	2811.9	2862.7	2823.0	2708.3
72.5°	1678.3	1704.8	1830.5	2029.0	2234.1	2384.1	2470.1	2503.2	2531.8	2540.7	2445.8
75°	1387.2	1415.9	1515.1	1700.4	1876.8	2015.8	2108.4	2123.8	2176.8	2190.0	2101.8
77.5°	1109.3	1111.5	1184.3	1332.1	1493.1	1607.8	1682.7	1722.4	1751.1	1777.6	1685.0
80°	778.5	789.5	840.3	946.1	1071.8	1193.1	1254.9	1281.4	1301.2	1318.8	1288.0
82.5°	487.4	491.8	524.9	588.9	674.9	743.2	807.2	829.2	833.7	873.4	868.9
85°	231.6	233.8	255.8	286.7	324.2	379.3	403.6	403.6	434.5	463.1	463.1
87.5°	30.9	30.9	37.5	41.9	52.9	68.4	94.8	97.0	114.7	127.9	138.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: CCP-VA-6-850-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1	785.1
2.5°	787.3	787.3	787.3	787.3	787.3	785.1	787.3	787.3	787.3	787.3	787.3
5°	802.8	800.6	798.4	796.2	796.2	794.0	794.0	794.0	794.0	794.0	794.0
7.5°	818.2	816.0	813.8	809.4	807.2	805.0	805.0	802.8	802.8	802.8	802.8
10°	844.7	842.5	833.7	827.0	822.6	820.4	818.2	816.0	813.8	813.8	813.8
12.5°	880.0	875.6	860.1	851.3	844.7	840.3	835.9	833.7	831.4	829.2	829.2
15°	924.1	913.0	893.2	880.0	871.1	864.5	857.9	853.5	851.3	849.1	849.1
17.5°	977.0	963.8	937.3	913.0	897.6	886.6	877.8	871.1	868.9	868.9	868.9
20°	1043.2	1021.1	983.6	950.5	926.3	910.8	897.6	891.0	888.8	886.6	884.4
22.5°	1120.4	1091.7	1036.6	985.8	955.0	932.9	917.5	908.6	902.0	899.8	899.8
25°	1208.6	1166.7	1093.9	1032.1	990.2	959.4	939.5	928.5	917.5	913.0	913.0
27.5°	1314.4	1259.3	1162.3	1080.7	1023.3	985.8	963.8	948.3	937.3	928.5	924.1
30°	1429.1	1367.4	1237.2	1133.6	1060.8	1018.9	992.4	974.8	959.4	943.9	941.7
32.5°	1574.7	1486.5	1327.7	1193.1	1104.9	1052.0	1021.1	999.1	979.2	963.8	959.4
35°	1722.4	1616.6	1422.5	1254.9	1146.8	1082.9	1045.4	1021.1	1001.3	983.6	981.4
37.5°	1874.6	1762.1	1526.2	1327.7	1195.3	1118.2	1071.8	1045.4	1021.1	1003.5	1001.3
40°	2033.4	1901.1	1632.0	1402.7	1246.1	1153.4	1100.5	1067.4	1041.0	1025.5	1023.3
42.5°	2183.4	2040.0	1746.7	1490.9	1305.6	1190.9	1129.2	1093.9	1060.8	1045.4	1043.2
45°	2326.7	2172.4	1861.4	1572.5	1365.2	1230.6	1157.9	1115.9	1080.7	1065.2	1063.0
47.5°	2456.9	2302.5	1967.2	1660.7	1426.9	1274.7	1188.7	1138.0	1098.3	1082.9	1082.9
50°	2573.7	2412.7	2070.9	1742.3	1484.3	1318.8	1215.2	1157.9	1118.2	1102.7	1100.5
52.5°	2684.0	2509.8	2161.3	1812.9	1539.4	1358.5	1241.7	1173.3	1131.4	1113.7	1111.5
55°	2772.2	2598.0	2236.3	1870.2	1576.9	1385.0	1259.3	1182.1	1135.8	1120.4	1118.2
57.5°	2849.4	2670.8	2289.2	1909.9	1601.1	1400.4	1268.1	1182.1	1133.6	1115.9	1113.7
59°	2882.5	2701.7	2306.9	1920.9	1605.6	1402.7	1265.9	1175.5	1124.8	1107.1	1102.7
60°	2900.1	2714.9	2313.5	1923.1	1603.3	1398.2	1263.7	1168.9	1115.9	1096.1	1096.1
62.5°	2917.8	2725.9	2304.7	1905.5	1579.1	1374.0	1241.7	1142.4	1082.9	1060.8	1060.8
65°	2880.3	2686.2	2254.0	1857.0	1530.6	1332.1	1199.8	1098.3	1032.1	1010.1	1010.1
67.5°	2770.0	2589.2	2161.3	1766.6	1451.2	1259.3	1131.4	1027.7	966.0	941.7	935.1
70°	2582.6	2430.4	2015.8	1636.4	1343.1	1166.7	1045.4	946.1	882.2	857.9	849.1
72.5°	2331.1	2181.2	1821.7	1477.6	1199.8	1045.4	939.5	844.7	774.1	749.8	752.1
75°	1984.9	1879.0	1570.3	1276.9	1034.3	891.0	802.8	723.4	663.8	644.0	646.2
77.5°	1610.0	1521.7	1272.5	1041.0	844.7	734.4	659.4	595.5	555.8	544.7	538.1
80°	1232.8	1146.8	955.0	776.3	641.8	564.6	513.9	469.8	438.9	423.4	427.9
82.5°	827.0	774.1	633.0	513.9	436.7	381.5	363.9	335.2	324.2	315.4	322.0
85°	445.5	399.2	330.8	275.7	240.4	225.0	229.4	227.2	218.3	216.1	222.7
87.5°	145.6	125.7	97.0	81.6	83.8	75.0	75.0	70.6	64.0	61.8	66.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

INVUE

Report Number: SP1-2005-785-19

Luminaire Tested: WIS-VA-3-850-U-T4FT

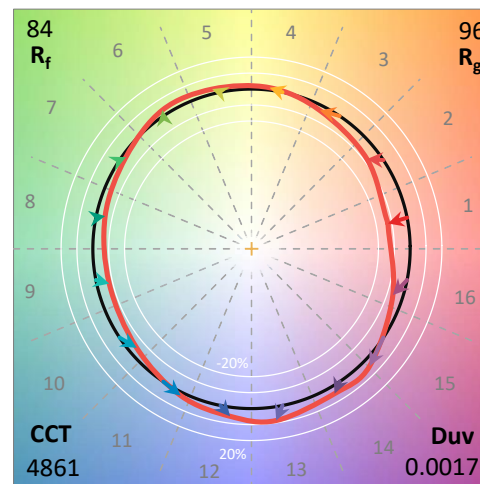
Test Date: 09/04/2020

Test Information

Test Method: LM-79-08
 Report Number: SP1-2005-785-19
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 09/04/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: INVUE
 Catalog Number: **WIS-VA-3-850-U-T4FT**
 Description: INVUE WALL PACK VA

Spectral Parameters

CCT (K):	4861	CRI (Ra):	83.0		
CIE u':	0.2117	R1:	80.6	R9:	4.8
CIE v':	0.4887	R2:	88.5	R10:	73.3
Duv:	0.0017	R3:	94.3	R11:	81.6
CIE x:	0.3495	R4:	82.2	R12:	62.1
CIE y:	0.3586	R5:	81.5	R13:	82.7
CIE z:	0.2920	R6:	84.0	R14:	97.2
Peak Wavelength (nm):	451	R7:	86.9		
Dominant Wavelength (nm):	572	R8:	65.9		
Purity:	12.5				
Rf:	84.2				
Rg:	96.2				



Test Conditions

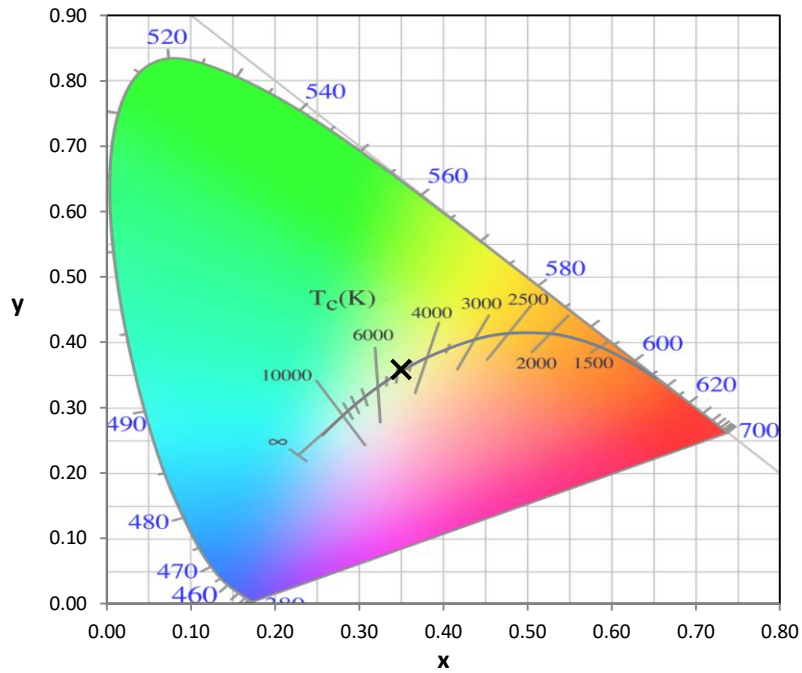
Stabilization Time: 114M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.1/47%
 Sphere Temperature (°C): 24.3

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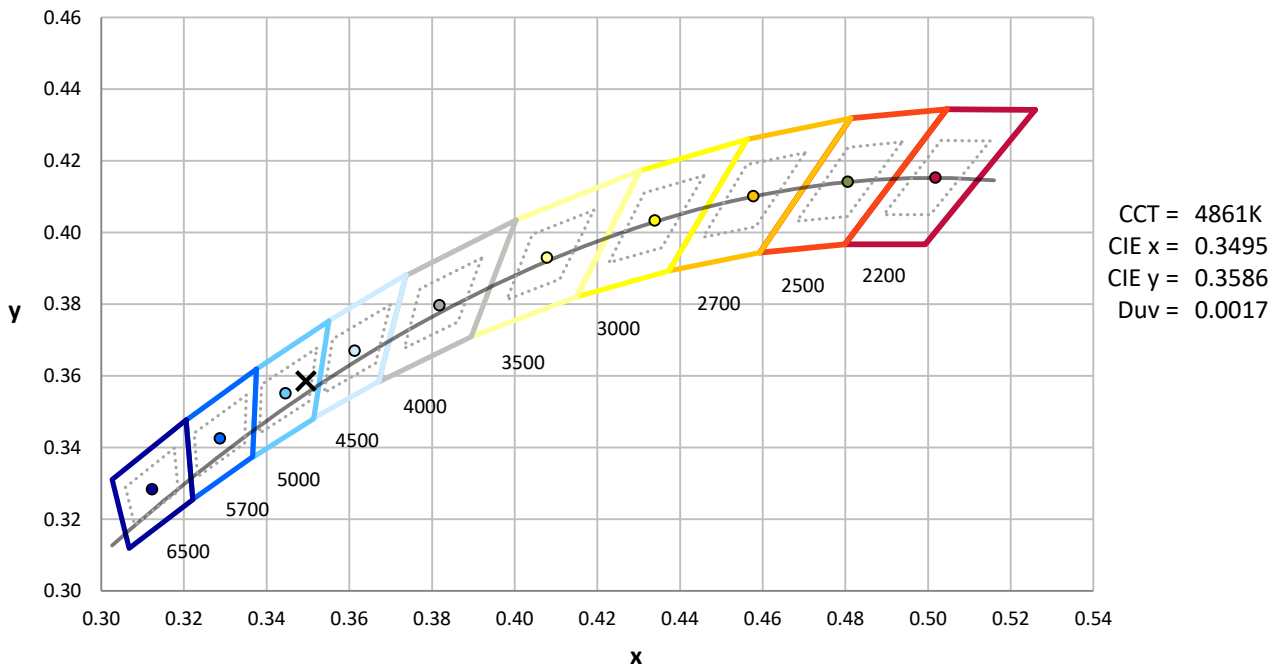
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2020	12/3/2020
AC Power Source	IN0063	12/3/2020	12/3/2020
DC Power Source	IN0208	12/3/2020	12/3/2020
Sphere Thermometer	IN0085	12/3/2020	12/3/2020
Room Thermometer	IN0046	12/3/2020	12/3/2020

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CIE 1931 Chromaticity Diagram



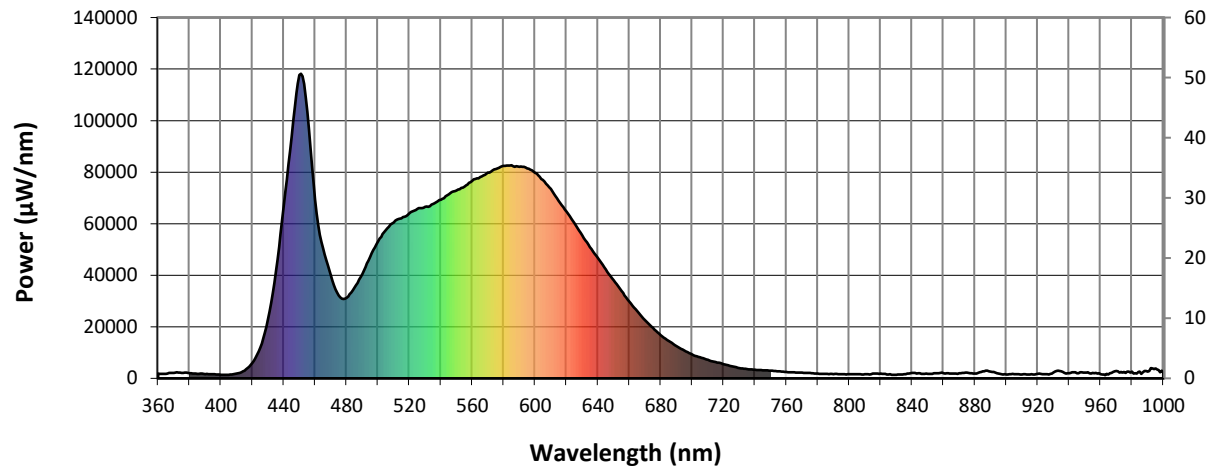
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

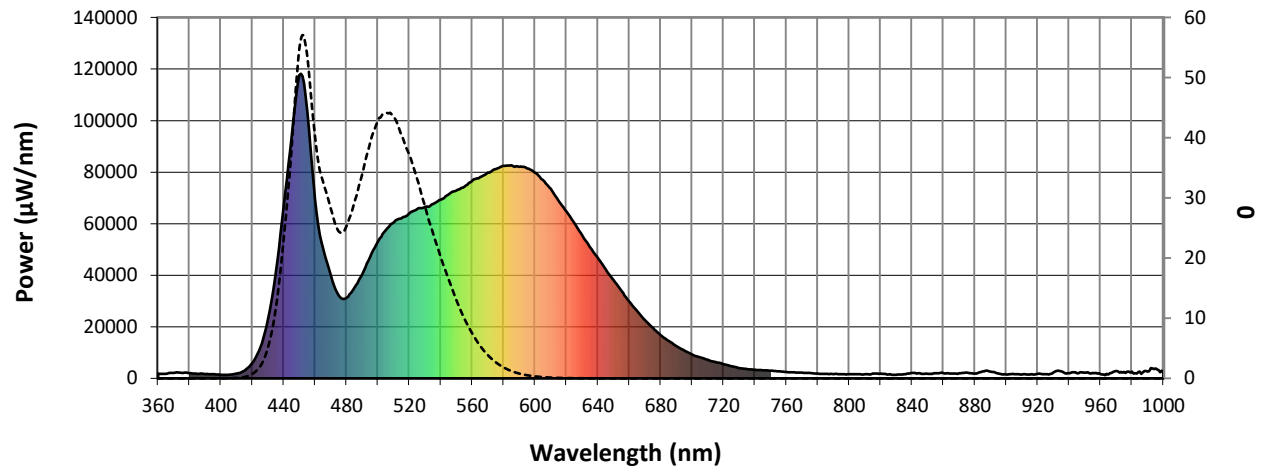


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1906	0.0	490	40491	5.8	620	64664	16.8	750	2971	0.0	880	1858	0.0
365	1759	0.0	495	47079	8.5	625	60381	13.3	755	2690	0.0	885	2764	0.0
370	2126	0.0	500	53082	11.7	630	55496	10.0	760	2509	0.0	890	2640	0.0
375	2177	0.0	505	57523	16.1	635	50919	7.7	765	2369	0.0	895	1901	0.0
380	2019	0.0	510	60448	20.8	640	46664	5.6	770	2245	0.0	900	1469	0.0
385	1761	0.0	515	62070	25.7	645	42219	4.1	775	2066	0.0	905	1570	0.0
390	1678	0.0	520	64089	31.1	650	38080	2.8	780	1825	0.0	910	1535	0.0
395	1623	0.0	525	65620	35.2	655	33941	1.9	785	1788	0.0	915	1555	0.0
400	1370	0.0	530	66569	39.2	660	29746	1.2	790	1673	0.0	920	1735	0.0
405	1392	0.0	535	67658	42.0	665	26069	0.8	795	1619	0.0	925	1657	0.0
410	1850	0.0	540	69290	45.1	670	22577	0.5	800	1623	0.0	930	2191	0.0
415	3042	0.0	545	71398	47.5	675	19574	0.3	805	1636	0.0	935	2723	0.0
420	5981	0.0	550	72885	49.5	680	16809	0.2	810	1572	0.0	940	2021	0.0
425	11951	0.1	555	74383	50.8	685	14514	0.1	815	1897	0.0	945	2000	0.0
430	22948	0.2	560	76586	52.0	690	12556	0.1	820	1843	0.0	950	2253	0.0
435	41653	0.5	565	78157	52.0	695	10840	0.0	825	1524	0.0	955	2081	0.0
440	66672	1.0	570	79792	51.9	700	9276	0.0	830	1409	0.0	960	1660	0.0
445	93771	2.0	575	81193	50.5	705	8180	0.0	835	1565	0.0	965	1543	0.0
450	117673	3.1	580	82419	49.0	710	7176	0.0	840	2101	0.0	970	2855	0.0
455	103475	3.5	585	82687	45.9	715	6338	0.0	845	1941	0.0	975	2442	0.0
460	69370	2.8	590	82076	42.4	720	5500	0.0	850	1751	0.0	980	2605	0.0
465	50527	2.6	595	81503	38.6	725	4714	0.0	855	1997	0.0	985	2589	0.0
470	39761	2.5	600	79756	34.4	730	4031	0.0	860	1954	0.0	990	2640	0.0
475	32129	2.5	605	76933	29.8	735	3633	0.0	865	1875	0.0	995	3795	0.0
480	31331	3.0	610	73443	25.2	740	3315	0.0	870	2004	0.0	1000	2221	0.0
485	35183	4.2	615	68862	20.8	745	3104	0.0	875	2299	0.0			

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Scotopic Flux vs. Wavelength



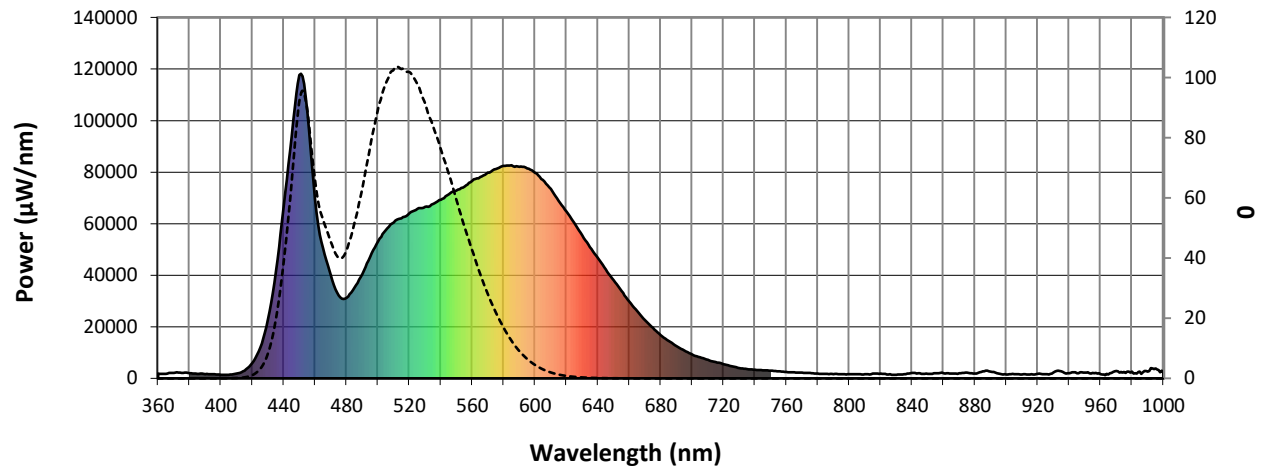
Scotopic Lumens: 4096.7

S/P: 0.81

λ (nm)	Power ($\mu\text{W/nm}$)	Lumens (Φ/nm)	λ (nm)	Power ($\mu\text{W/nm}$)	Lumens (Φ/nm)	λ (nm)	Power ($\mu\text{W/nm}$)	Lumens (Φ/nm)	λ (nm)	Power ($\mu\text{W/nm}$)	Lumens (Φ/nm)	λ (nm)	Power ($\mu\text{W/nm}$)	Lumens (Φ/nm)
360	1906	0.0	490	40491	62.4	620	64664	0.8	750	2971	0.0	880	1858	0.0
365	1759	0.0	495	47079	76.1	625	60381	0.5	755	2690	0.0	885	2764	0.0
370	2126	0.0	500	53082	88.8	630	55496	0.3	760	2509	0.0	890	2640	0.0
375	2177	0.0	505	57523	97.8	635	50919	0.2	765	2369	0.0	895	1901	0.0
380	2019	0.0	510	60448	102.5	640	46664	0.1	770	2245	0.0	900	1469	0.0
385	1761	0.0	515	62070	102.9	645	42219	0.1	775	2066	0.0	905	1570	0.0
390	1678	0.0	520	64089	101.9	650	38080	0.0	780	1825	0.0	910	1535	0.0
395	1623	0.0	525	65620	98.2	655	33941	0.0	785	1788	0.0	915	1555	0.0
400	1370	0.0	530	66569	91.8	660	29746	0.0	790	1673	0.0	920	1735	0.0
405	1392	0.0	535	67658	84.3	665	26069	0.0	795	1619	0.0	925	1657	0.0
410	1850	0.1	540	69290	76.6	670	22577	0.0	800	1623	0.0	930	2191	0.0
415	3042	0.3	545	71398	68.5	675	19574	0.0	805	1636	0.0	935	2723	0.0
420	5981	1.0	550	72885	59.6	680	16809	0.0	810	1572	0.0	940	2021	0.0
425	11951	2.9	555	74383	50.8	685	14514	0.0	815	1897	0.0	945	2000	0.0
430	22948	7.8	560	76586	42.8	690	12556	0.0	820	1843	0.0	950	2253	0.0
435	41653	18.6	565	78157	35.1	695	10840	0.0	825	1524	0.0	955	2081	0.0
440	66672	37.3	570	79792	28.2	700	9276	0.0	830	1409	0.0	960	1660	0.0
445	93771	62.8	575	81193	22.1	705	8180	0.0	835	1565	0.0	965	1543	0.0
450	117673	91.2	580	82419	17.0	710	7176	0.0	840	2101	0.0	970	2855	0.0
455	103475	90.4	585	82687	12.6	715	6338	0.0	845	1941	0.0	975	2442	0.0
460	69370	67.0	590	82076	9.1	720	5500	0.0	850	1751	0.0	980	2605	0.0
465	50527	53.4	595	81503	6.5	725	4714	0.0	855	1997	0.0	985	2589	0.0
470	39761	45.8	600	79756	4.5	730	4031	0.0	860	1954	0.0	990	2640	0.0
475	32129	40.2	605	76933	3.0	735	3633	0.0	865	1875	0.0	995	3795	0.0
480	31331	42.3	610	73443	2.0	740	3315	0.0	870	2004	0.0	1000	2221	0.0
485	35183	51.0	615	68862	1.3	745	3104	0.0	875	2299	0.0			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: 9800.7
S/P: 1.93

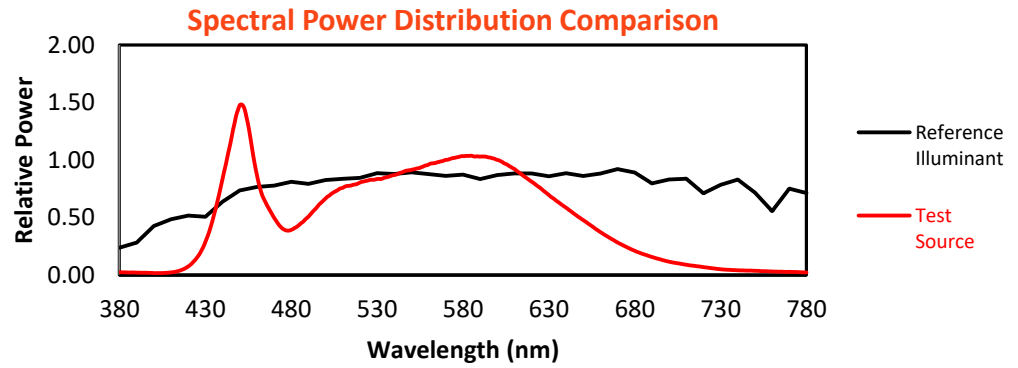
λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1906	0.0	490	40491	33.7	620	64664	0.1	750	2971	0.0	880	1858	0.0
365	1759	0.0	495	47079	38.9	625	60381	0.0	755	2690	0.0	885	2764	0.0
370	2126	0.0	500	53082	42.7	630	55496	0.0	760	2509	0.0	890	2640	0.0
375	2177	0.0	505	57523	44.1	635	50919	0.0	765	2369	0.0	895	1901	0.0
380	2019	0.0	510	60448	43.4	640	46664	0.0	770	2245	0.0	900	1469	0.0
385	1761	0.0	515	62070	40.6	645	42219	0.0	775	2066	0.0	905	1570	0.0
390	1678	0.0	520	64089	37.3	650	38080	0.0	780	1825	0.0	910	1535	0.0
395	1623	0.0	525	65620	33.3	655	33941	0.0	785	1788	0.0	915	1555	0.0
400	1370	0.0	530	66569	28.8	660	29746	0.0	790	1673	0.0	920	1735	0.0
405	1392	0.0	535	67658	24.4	665	26069	0.0	795	1619	0.0	925	1657	0.0
410	1850	0.1	540	69290	20.3	670	22577	0.0	800	1623	0.0	930	2191	0.0
415	3042	0.2	545	71398	16.6	675	19574	0.0	805	1636	0.0	935	2723	0.0
420	5981	0.7	550	72885	13.1	680	16809	0.0	810	1572	0.0	940	2021	0.0
425	11951	1.9	555	74383	10.0	685	14514	0.0	815	1897	0.0	945	2000	0.0
430	22948	4.8	560	76586	7.6	690	12556	0.0	820	1843	0.0	950	2253	0.0
435	41653	11.1	565	78157	5.5	695	10840	0.0	825	1524	0.0	955	2081	0.0
440	66672	22.3	570	79792	3.9	700	9276	0.0	830	1409	0.0	960	1660	0.0
445	93771	37.0	575	81193	2.7	705	8180	0.0	835	1565	0.0	965	1543	0.0
450	117673	54.2	580	82419	1.8	710	7176	0.0	840	2101	0.0	970	2855	0.0
455	103475	54.2	585	82687	1.2	715	6338	0.0	845	1941	0.0	975	2442	0.0
460	69370	40.9	590	82076	0.8	720	5500	0.0	850	1751	0.0	980	2605	0.0
465	50527	33.0	595	81503	0.5	725	4714	0.0	855	1997	0.0	985	2589	0.0
470	39761	28.5	600	79756	0.3	730	4031	0.0	860	1954	0.0	990	2640	0.0
475	32129	24.5	605	76933	0.2	735	3633	0.0	865	1875	0.0	995	3795	0.0
480	31331	25.2	610	73443	0.1	740	3315	0.0	870	2004	0.0	1000	2221	0.0
485	35183	29.0	615	68862	0.1	745	3104	0.0	875	2299	0.0			

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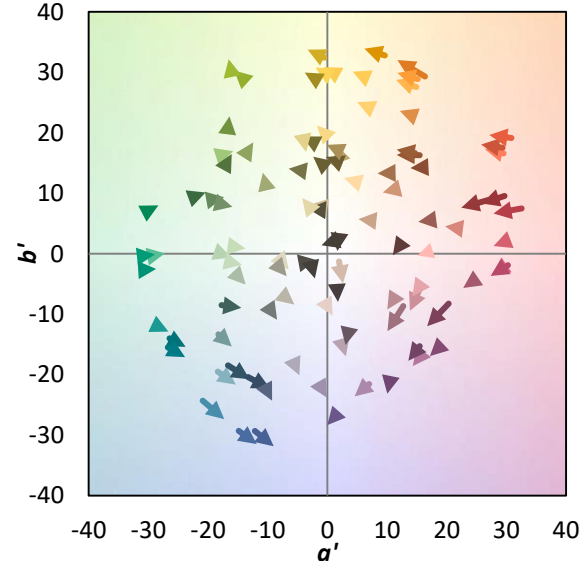
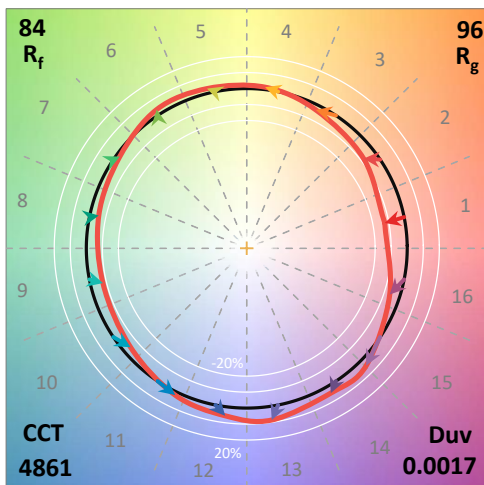
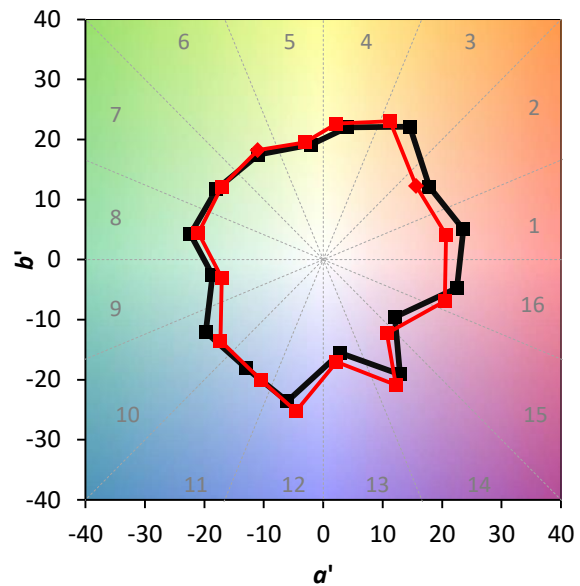
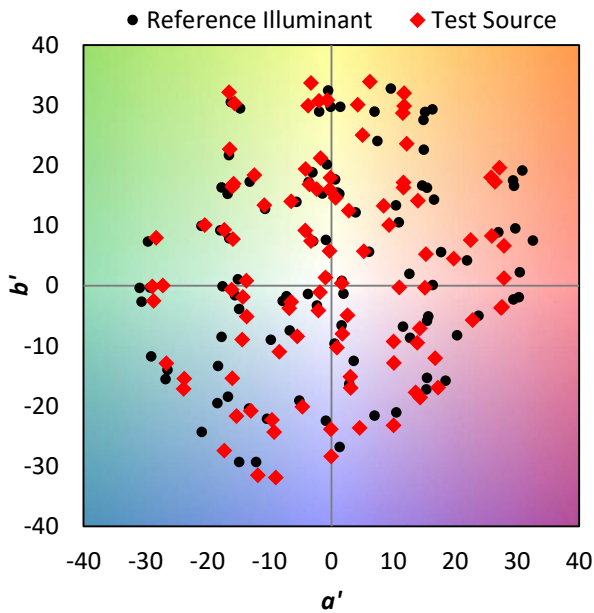
TM-30-18

Summary

$R_f = 84.2$
 $R_g = 96.2$
 CIE $R_a = 83.0$
 $R_9 = 4.8$

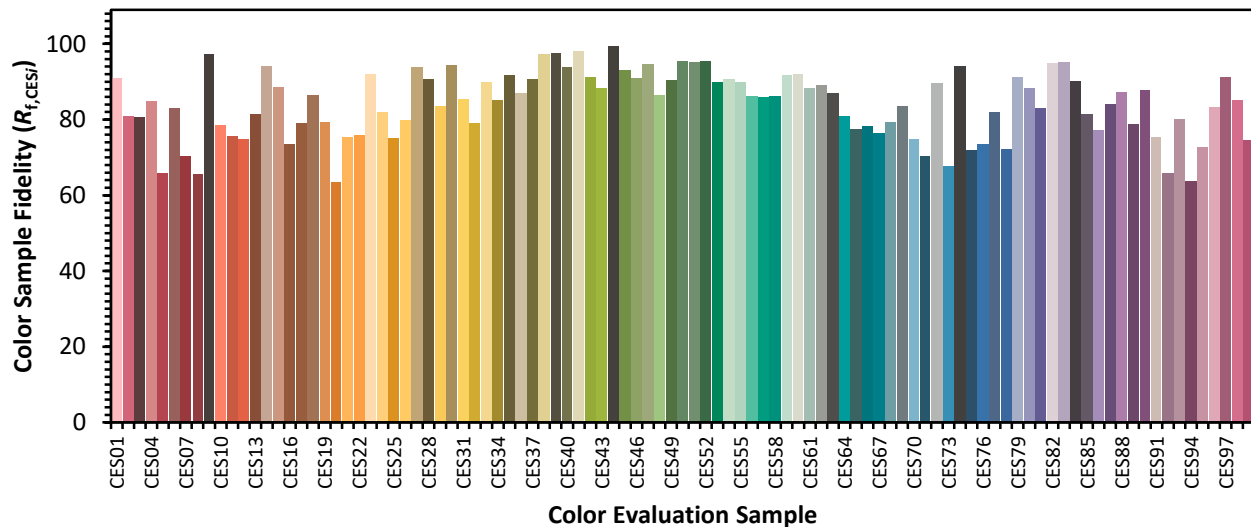


Color Vector Graphics

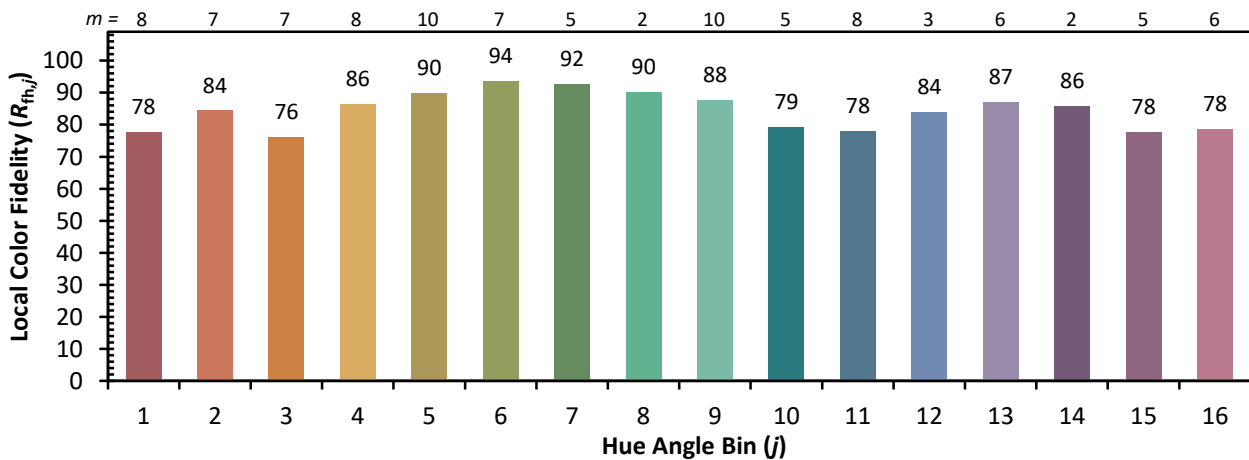
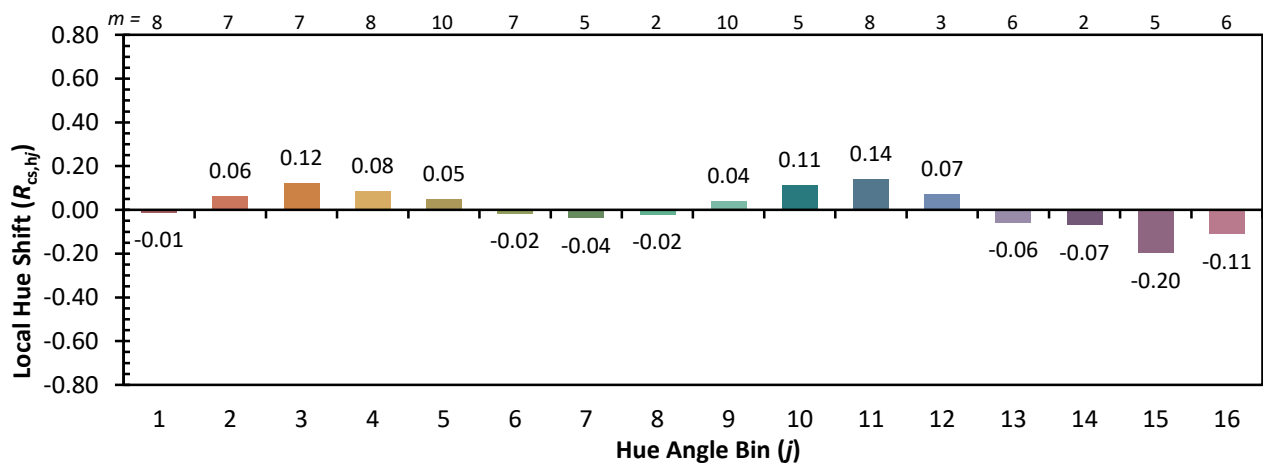
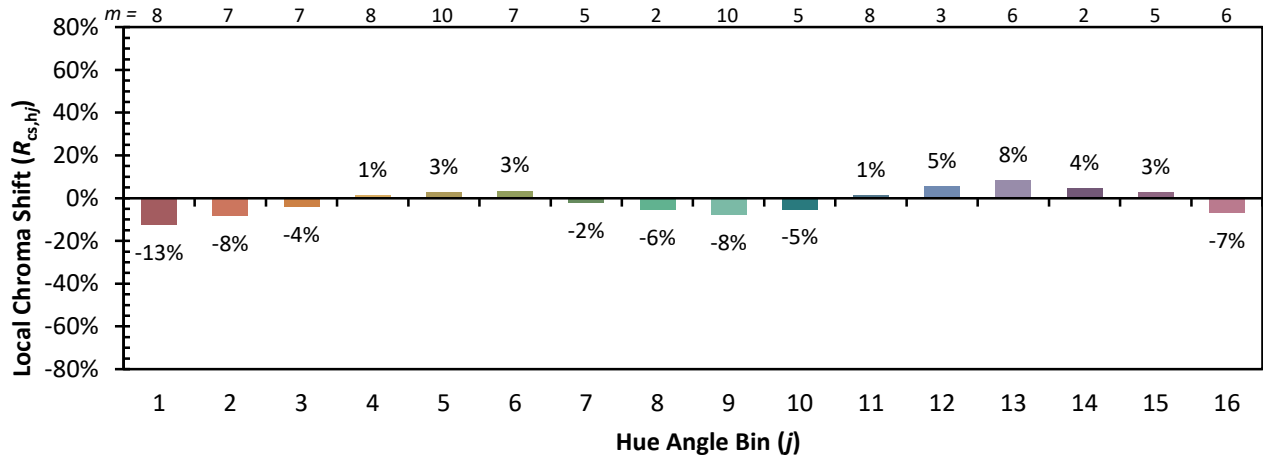


Individual Sample Fidelity Index ($R_{f,i}$)

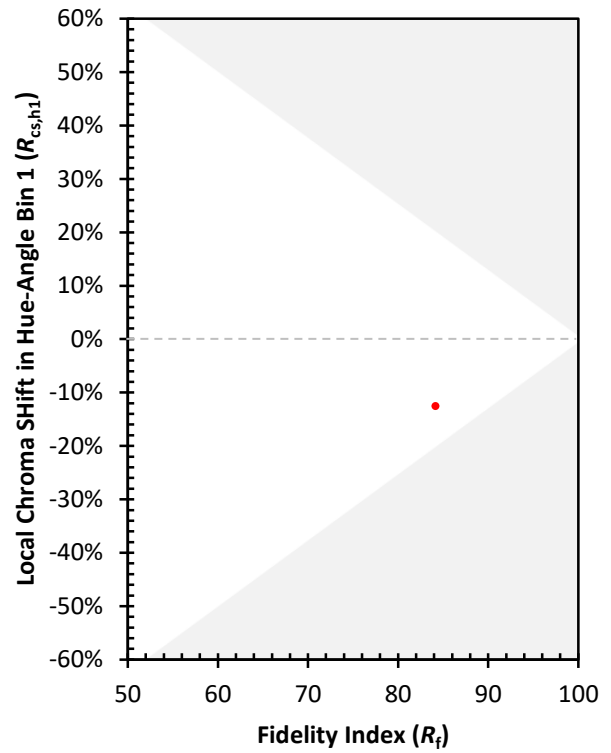
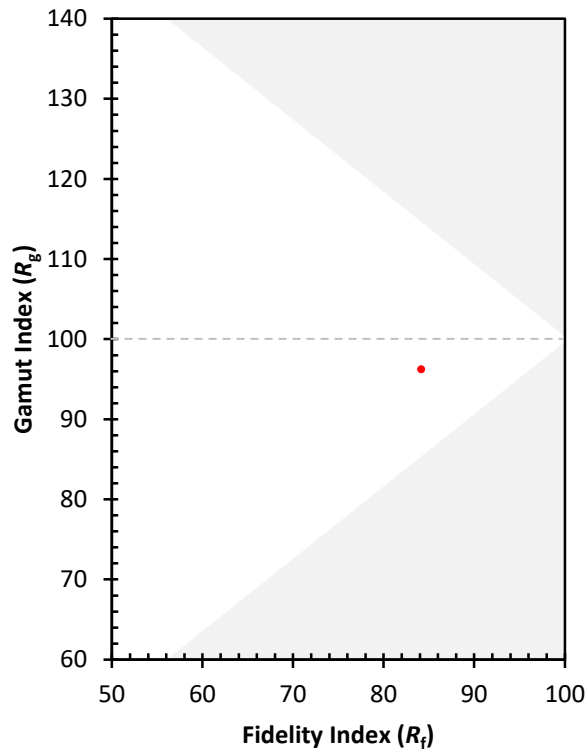
CES01 = 85	CES26 = 80	CES51 = 95	CES76 = 74
CES02 = 60	CES27 = 94	CES52 = 95	CES77 = 82
CES03 = 30	CES28 = 91	CES53 = 90	CES78 = 72
CES04 = 69	CES29 = 84	CES54 = 91	CES79 = 91
CES05 = 47	CES30 = 94	CES55 = 90	CES80 = 88
CES06 = 50	CES31 = 85	CES56 = 86	CES81 = 83
CES07 = 40	CES32 = 79	CES57 = 86	CES82 = 95
CES08 = 39	CES33 = 90	CES58 = 86	CES83 = 95
CES09 = 29	CES34 = 85	CES59 = 92	CES84 = 90
CES10 = 73	CES35 = 92	CES60 = 92	CES85 = 81
CES11 = 56	CES36 = 87	CES61 = 88	CES86 = 77
CES12 = 62	CES37 = 91	CES62 = 89	CES87 = 84
CES13 = 42	CES38 = 97	CES63 = 87	CES88 = 87
CES14 = 74	CES39 = 97	CES64 = 81	CES89 = 79
CES15 = 71	CES40 = 94	CES65 = 78	CES90 = 88
CES16 = 46	CES41 = 98	CES66 = 78	CES91 = 75
CES17 = 49	CES42 = 91	CES67 = 77	CES92 = 66
CES18 = 55	CES43 = 88	CES68 = 79	CES93 = 80
CES19 = 71	CES44 = 99	CES69 = 84	CES94 = 64
CES20 = 64	CES45 = 93	CES70 = 75	CES95 = 73
CES21 = 85	CES46 = 91	CES71 = 70	CES96 = 83
CES22 = 77	CES47 = 95	CES72 = 90	CES97 = 91
CES23 = 91	CES48 = 86	CES73 = 68	CES98 = 85
CES24 = 90	CES49 = 90	CES74 = 94	CES99 = 75
CES25 = 71	CES50 = 95	CES75 = 72	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)