

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: P472168

Luminaire Tested: **CCP-VA-4-750-U-T4W**

Issue Date: 01/27/2021



Test Information

Test Method: LM-79-08
Report Number: P472168
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCP-VA-4-750-U-T4W
Description: INVUE CLEARCURVE POLE MOUNT Wave Stream LUMINAIRE WITH T4W
DISTRIBUTION LENS
Light Source: 5000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6331.7 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

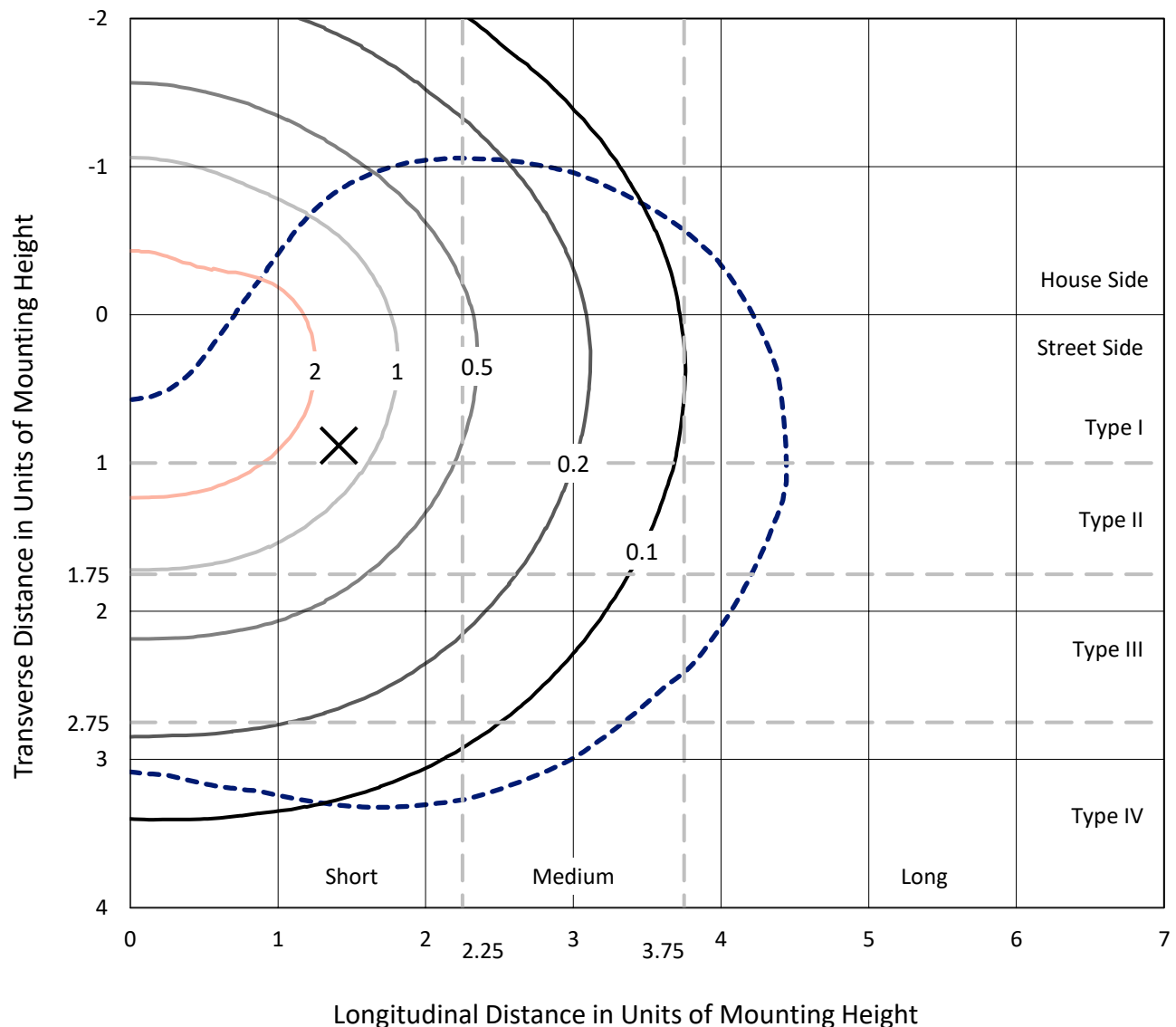
Input Watts (W): 57.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Iso-Footcandle Lines of Horizontal Illumination

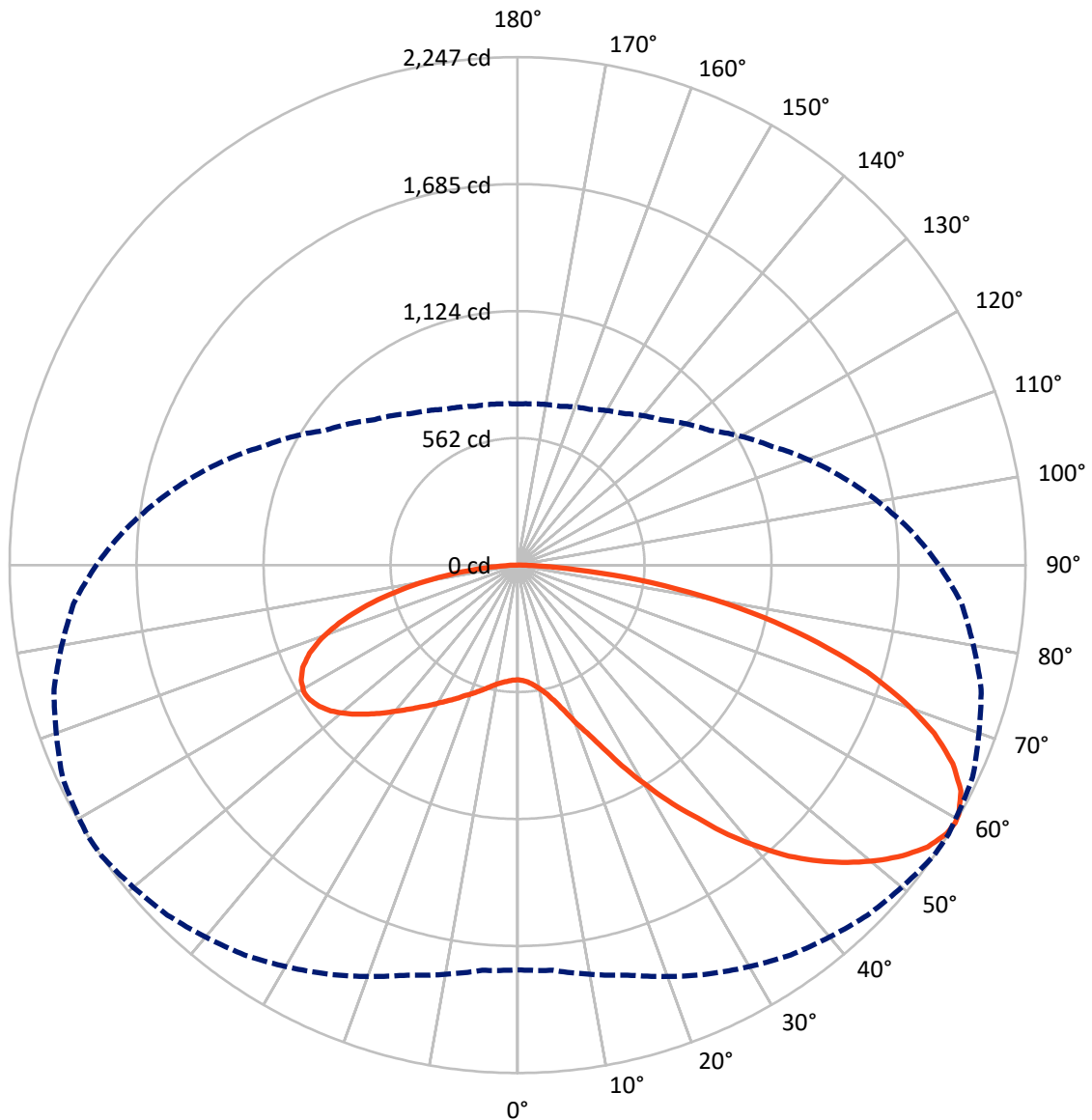
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 59-Deg Vertical

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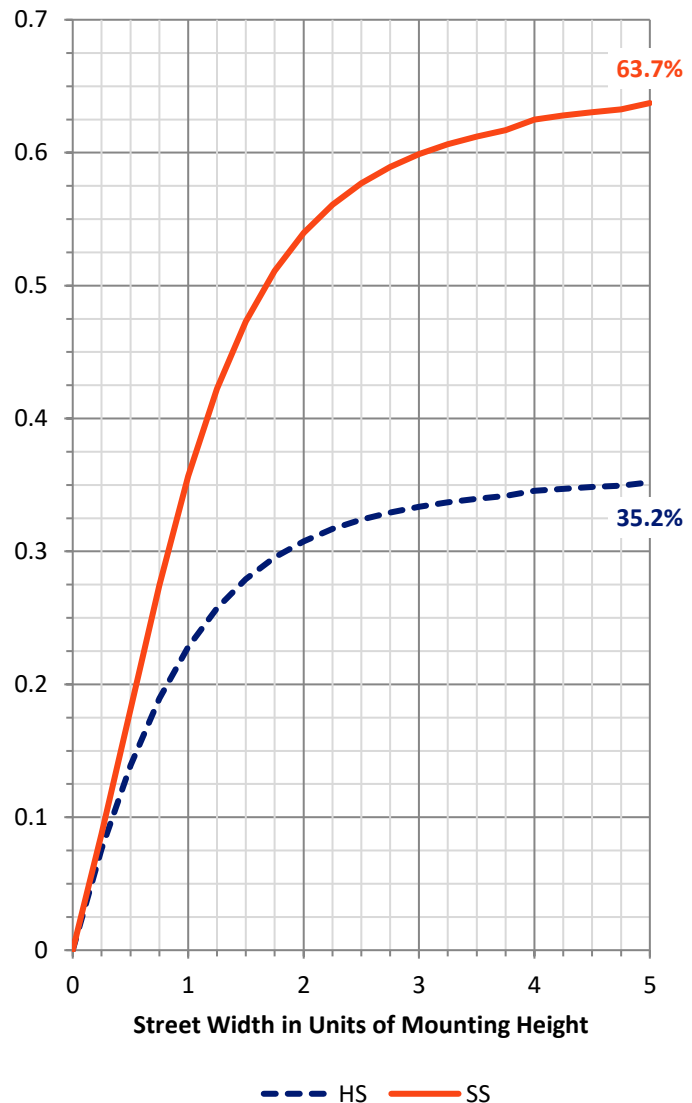
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2258.1	0.0	2258.1
	% Fixture	35.7	0.0	35.7
Street Side	Lumens	4073.6	0.0	4073.6
	% Fixture	64.3	0.0	64.3
Total	Lumens	6331.7	0.0	6331.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.4	0.8
10°-20°	171.8	2.7
20°-30°	362.5	5.7
30°-40°	667.1	10.5
40°-50°	1039.9	16.4
50°-60°	1366.4	21.6
60°-70°	1431.8	22.6
70°-80°	992.7	15.7
80°-90°	249.3	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°	6331.7	100.0
0°-180°	6331.7	100.0

Coefficient of Utilization



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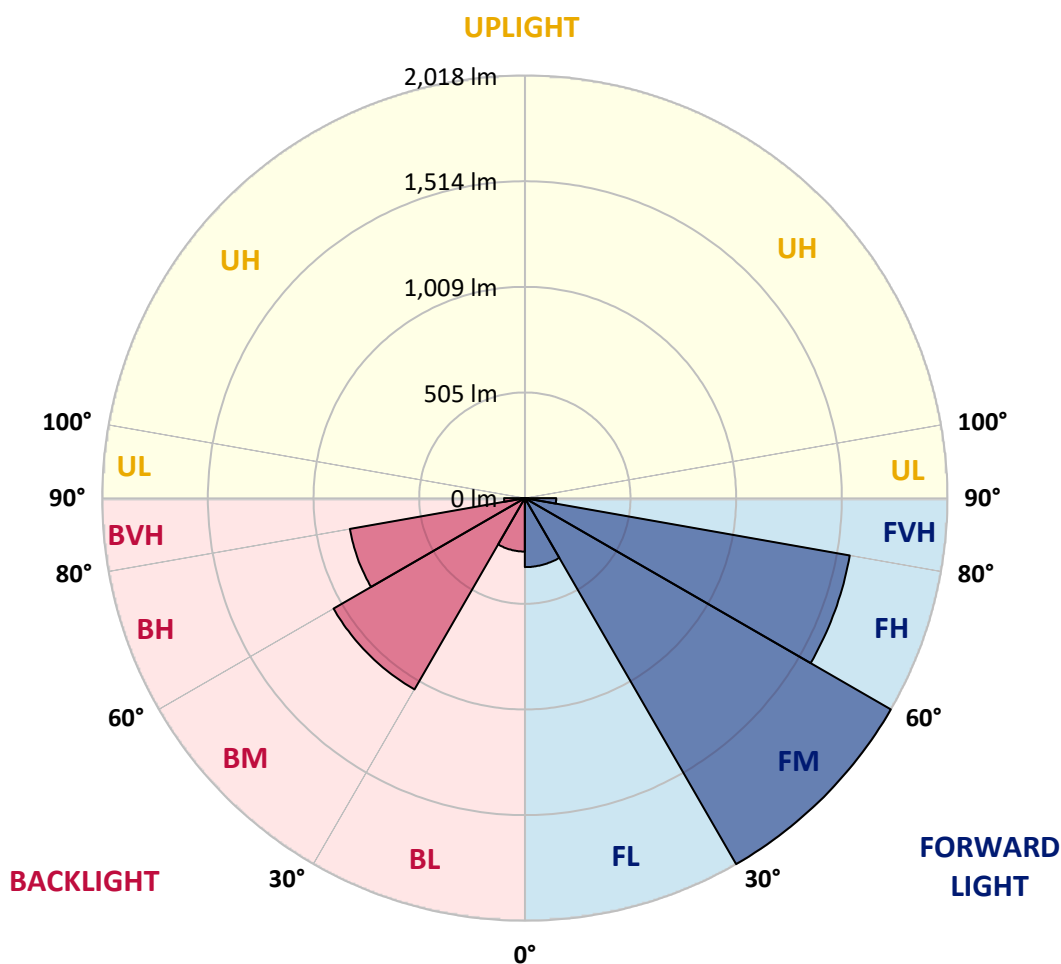
CATALOG NUMBER: CCP-VA-4-750-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	329.4	5.2			
FM	(30°-60°)	2018.4	31.9			
FH	(60°-80°)	1576.0	24.9			G1/1800
FVH	(80°-90°)	149.8	2.4			G2/225
BL	(0°-30°)	255.2	4.0	B1/500		
BM	(30°-60°)	1055.0	16.7	B2/2500		
BH	(60°-80°)	848.5	13.4	B2/1000		G2/1000
BVH	(80°-90°)	99.5	1.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6
2.5°	514.7	514.7	514.7	513.3	513.3	513.3	511.9	511.9	511.9	510.4	509.0
5°	526.1	526.1	524.7	526.1	524.7	523.3	521.8	521.8	521.8	520.4	519.0
7.5°	541.8	543.2	541.8	543.2	541.8	540.4	537.5	537.5	536.1	533.3	530.4
10°	566.0	566.0	566.0	564.6	563.2	561.8	560.3	558.9	557.5	553.2	548.9
12.5°	596.0	596.0	596.0	593.1	593.1	590.3	588.9	587.4	584.6	578.9	573.2
15°	633.1	631.6	635.9	635.9	634.5	634.5	630.2	627.4	624.5	615.9	603.1
17.5°	683.0	681.5	685.8	688.7	688.7	690.1	683.0	680.1	670.1	658.7	641.6
20°	750.0	747.1	751.4	754.3	751.4	754.3	747.1	748.5	734.3	714.3	687.2
22.5°	822.7	822.7	827.0	827.0	828.4	831.2	822.7	818.4	807.0	778.5	744.3
25°	912.5	919.6	919.6	919.6	925.3	926.8	918.2	911.1	895.4	856.9	809.9
27.5°	1022.3	1020.9	1019.5	1028.0	1028.0	1030.9	1025.2	1022.3	1003.8	956.7	885.4
30°	1139.2	1130.7	1136.4	1139.2	1144.9	1149.2	1143.5	1134.9	1112.1	1060.8	972.4
32.5°	1246.2	1251.9	1260.4	1263.3	1271.8	1273.2	1259.0	1259.0	1236.2	1170.6	1079.3
35°	1367.3	1367.3	1390.2	1400.1	1400.1	1408.7	1387.3	1375.9	1360.2	1291.8	1176.3
37.5°	1472.9	1475.7	1494.2	1517.1	1519.9	1532.7	1517.1	1512.8	1484.3	1414.4	1286.1
40°	1571.2	1574.1	1596.9	1624.0	1639.7	1659.6	1644.0	1636.8	1606.9	1527.0	1395.9
42.5°	1648.2	1653.9	1682.4	1722.4	1748.0	1772.3	1765.1	1760.9	1719.5	1635.4	1497.1
45°	1706.7	1716.7	1756.6	1803.6	1839.3	1874.9	1876.4	1867.8	1829.3	1735.2	1595.5
47.5°	1753.7	1765.1	1809.3	1869.2	1923.4	1967.6	1976.2	1966.2	1930.5	1832.2	1683.9
50°	1792.2	1797.9	1847.8	1924.8	1991.8	2047.5	2064.6	2056.0	2024.6	1913.4	1760.9
52.5°	1812.2	1820.8	1877.8	1966.2	2047.5	2114.5	2140.1	2135.9	2098.8	1987.6	1829.3
55°	1822.2	1830.7	1897.7	1999.0	2090.2	2168.6	2200.0	2201.4	2165.8	2054.6	1893.5
57.5°	1810.8	1822.2	1894.9	2007.5	2108.8	2192.9	2241.4	2239.9	2211.4	2105.9	1947.6
59°	1790.8	1799.4	1877.8	1996.1	2105.9	2190.0	2245.6	2247.1	2221.4	2123.0	1971.9
60°	1768.0	1778.0	1857.8	1981.9	2094.5	2180.1	2238.5	2241.4	2220.0	2127.3	1981.9
62.5°	1689.6	1702.4	1790.8	1923.4	2046.0	2127.3	2197.2	2201.4	2190.0	2115.9	1989.0
65°	1579.8	1591.2	1686.7	1827.9	1956.2	2040.3	2105.9	2115.9	2114.5	2064.6	1960.5
67.5°	1445.8	1447.2	1537.0	1691.0	1825.0	1907.7	1970.5	1987.6	2000.4	1967.6	1876.4
70°	1284.7	1283.2	1370.2	1522.8	1656.8	1743.8	1806.5	1817.9	1850.7	1825.0	1750.9
72.5°	1085.0	1102.1	1183.4	1311.7	1444.3	1541.3	1596.9	1618.3	1636.8	1642.5	1581.2
75°	896.8	915.4	979.5	1099.3	1213.4	1303.2	1363.1	1373.1	1407.3	1415.8	1358.8
77.5°	717.2	718.6	765.7	861.2	965.3	1039.4	1087.9	1113.6	1132.1	1149.2	1089.3
80°	503.3	510.4	543.2	611.7	692.9	771.4	811.3	828.4	841.2	852.6	832.7
82.5°	315.1	318.0	339.3	380.7	436.3	480.5	521.8	536.1	539.0	564.6	561.8
85°	149.7	151.1	165.4	185.4	209.6	245.2	260.9	260.9	280.9	299.4	299.4
87.5°	20.0	20.0	24.2	27.1	34.2	44.2	61.3	62.7	74.1	82.7	89.8
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-4-750-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6	507.6
2.5°	509.0	509.0	509.0	509.0	509.0	507.6	509.0	509.0	509.0	509.0	509.0
5°	519.0	517.6	516.1	514.7	514.7	513.3	513.3	513.3	513.3	513.3	513.3
7.5°	529.0	527.5	526.1	523.3	521.8	520.4	520.4	519.0	519.0	519.0	519.0
10°	546.1	544.7	539.0	534.7	531.8	530.4	529.0	527.5	526.1	526.1	526.1
12.5°	568.9	566.0	556.1	550.4	546.1	543.2	540.4	539.0	537.5	536.1	536.1
15°	597.4	590.3	577.5	568.9	563.2	558.9	554.6	551.8	550.4	548.9	548.9
17.5°	631.6	623.1	606.0	590.3	580.3	573.2	567.5	563.2	561.8	561.8	561.8
20°	674.4	660.1	635.9	614.5	598.8	588.9	580.3	576.0	574.6	573.2	571.7
22.5°	724.3	705.8	670.1	637.3	617.4	603.1	593.1	587.4	583.2	581.7	581.7
25°	781.3	754.3	707.2	667.3	640.2	620.2	607.4	600.3	593.1	590.3	590.3
27.5°	849.8	814.1	751.4	698.6	661.6	637.3	623.1	613.1	606.0	600.3	597.4
30°	923.9	884.0	799.9	732.9	685.8	658.7	641.6	630.2	620.2	610.2	608.8
32.5°	1018.0	961.0	858.3	771.4	714.3	680.1	660.1	645.9	633.1	623.1	620.2
35°	1113.6	1045.1	919.6	811.3	741.4	700.1	675.8	660.1	647.3	635.9	634.5
37.5°	1211.9	1139.2	986.7	858.3	772.8	722.9	692.9	675.8	660.1	648.7	647.3
40°	1314.6	1229.0	1055.1	906.8	805.6	745.7	711.5	690.1	673.0	663.0	661.6
42.5°	1411.5	1318.9	1129.2	963.8	844.1	769.9	730.0	707.2	685.8	675.8	674.4
45°	1504.2	1404.4	1203.4	1016.6	882.6	795.6	748.5	721.5	698.6	688.7	687.2
47.5°	1588.3	1488.5	1271.8	1073.6	922.5	824.1	768.5	735.7	710.1	700.1	700.1
50°	1663.9	1559.8	1338.8	1126.4	959.6	852.6	785.6	748.5	722.9	712.9	711.5
52.5°	1735.2	1622.6	1397.3	1172.0	995.2	878.3	802.7	758.5	731.4	720.0	718.6
55°	1792.2	1679.6	1445.8	1209.1	1019.5	895.4	814.1	764.2	734.3	724.3	722.9
57.5°	1842.1	1726.6	1480.0	1234.7	1035.1	905.4	819.8	764.2	732.9	721.5	720.0
59°	1863.5	1746.6	1491.4	1241.9	1038.0	906.8	818.4	760.0	727.2	715.8	712.9
60°	1874.9	1755.2	1495.7	1243.3	1036.6	904.0	817.0	755.7	721.5	708.6	708.6
62.5°	1886.3	1762.3	1490.0	1231.9	1020.9	888.3	802.7	738.6	700.1	685.8	685.8
65°	1862.1	1736.6	1457.2	1200.5	989.5	861.2	775.6	710.1	667.3	653.0	653.0
67.5°	1790.8	1673.9	1397.3	1142.1	938.2	814.1	731.4	664.4	624.5	608.8	604.5
70°	1669.6	1571.2	1303.2	1057.9	868.3	754.3	675.8	611.7	570.3	554.6	548.9
72.5°	1507.1	1410.1	1177.7	955.3	775.6	675.8	607.4	546.1	500.5	484.8	486.2
75°	1283.2	1214.8	1015.2	825.5	668.7	576.0	519.0	467.7	429.2	416.3	417.8
77.5°	1040.8	983.8	822.7	673.0	546.1	474.8	426.3	385.0	359.3	352.2	347.9
80°	797.0	741.4	617.4	501.9	414.9	365.0	332.2	303.7	283.7	273.8	276.6
82.5°	534.7	500.5	409.2	332.2	282.3	246.7	235.3	216.7	209.6	203.9	208.2
85°	288.0	258.1	213.9	178.2	155.4	145.4	148.3	146.9	141.2	139.7	144.0
87.5°	94.1	81.3	62.7	52.8	54.2	48.5	48.5	45.6	41.3	39.9	42.8
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: SP1-2005-785-14

Luminaire Tested: WIS-VA-3-750-U-T4FT

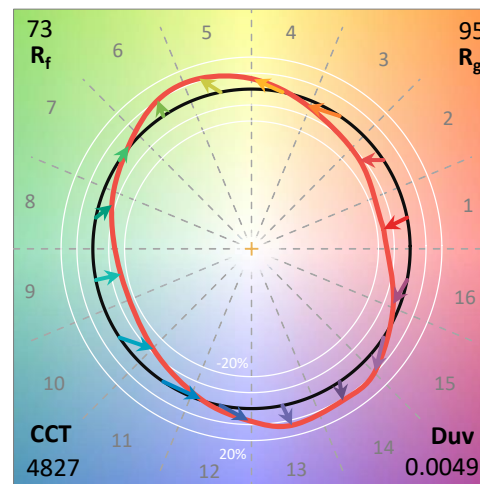
Test Date: 08/05/2020

Test Information

Test Method: LM-79-08
 Report Number: SP1-2005-785-14
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 08/05/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: INVUE
 Catalog Number: **WIS-VA-3-750-U-T4FT**
 Description: INVUE WALL PACK VA

Spectral Parameters

CCT (K):	4827	CRI (Ra):	71.9		
CIE u':	0.2099	R1:	69.3	R9:	-21.8
CIE v':	0.4927	R2:	75.8	R10:	42.2
Duv:	0.0049	R3:	80.2	R11:	68.6
CIE x:	0.3514	R4:	72.7	R12:	37.9
CIE y:	0.3666	R5:	69.2	R13:	69.8
CIE z:	0.2820	R6:	66.3	R14:	88.8
Peak Wavelength (nm):	449	R7:	82.3		
Dominant Wavelength (nm):	570	R8:	59.5		
Purity:	15.5				
Rf:	73.4				
Rg:	95.5				



Test Conditions

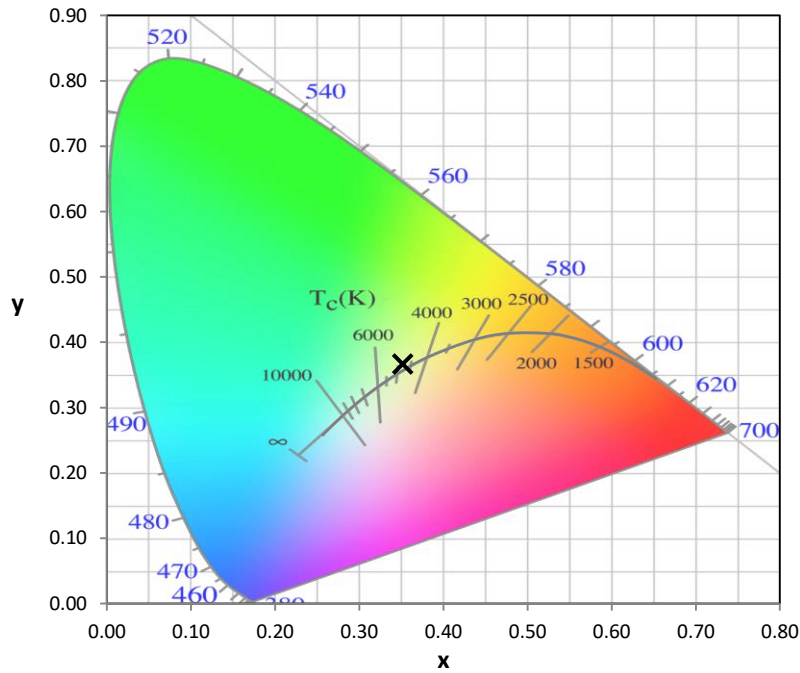
Stabilization Time: 76M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.1/45%
 Sphere Temperature (°C): 24.5

REPORT NUMBER: SP1-2005-785-14

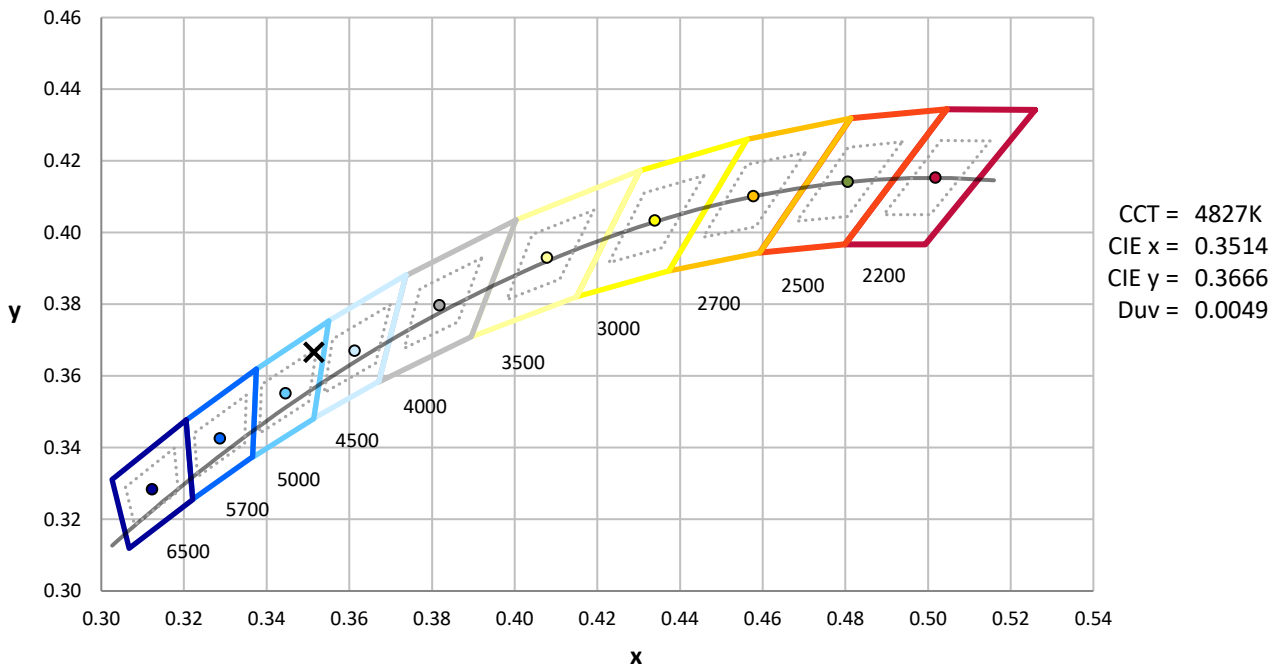
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2020	12/3/2020
AC Power Source	IN0063	12/3/2020	12/3/2020
DC Power Source	IN0208	12/3/2020	12/3/2020
Sphere Thermometer	IN0085	12/3/2020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

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CIE 1931 Chromaticity Diagram



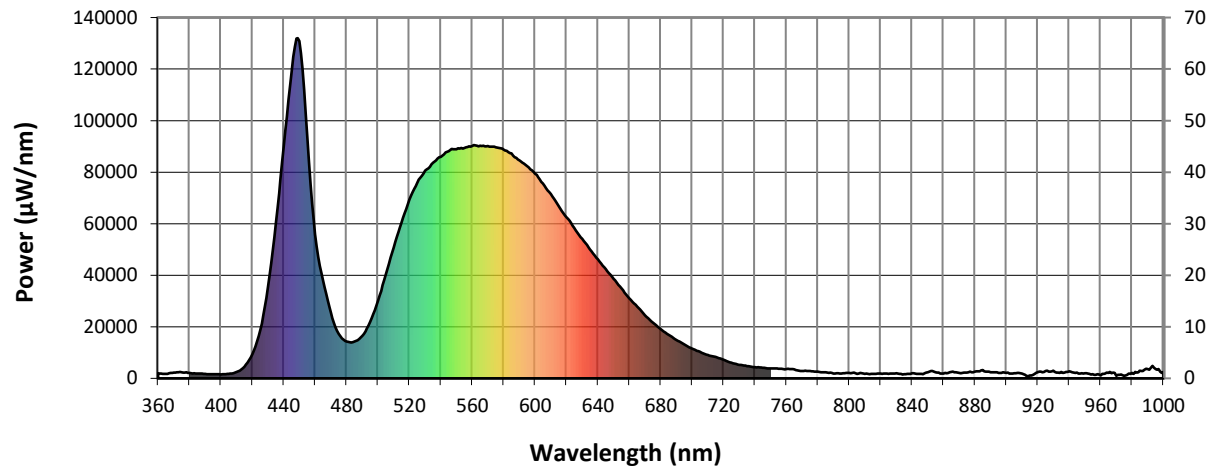
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

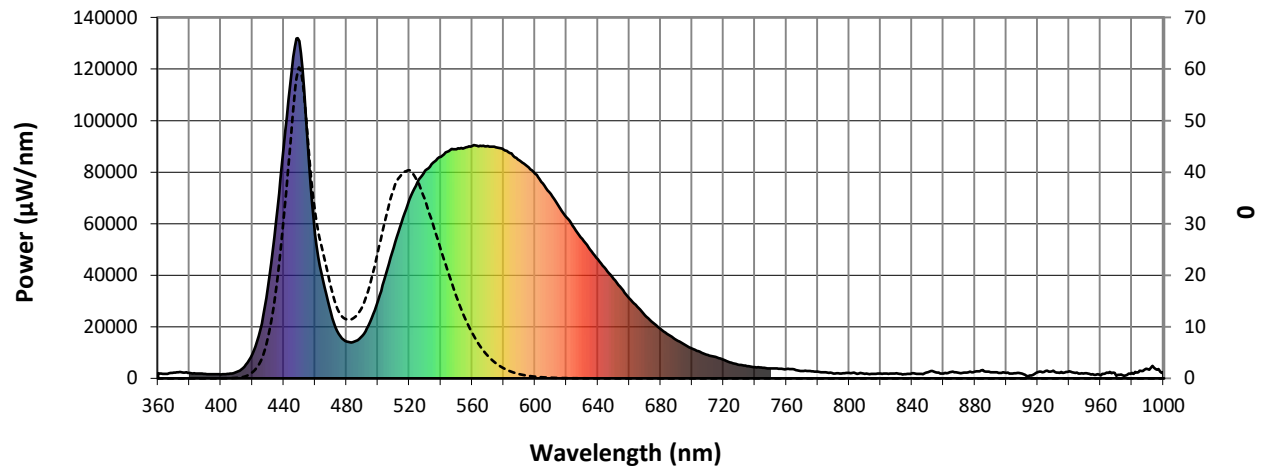


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1985	0.0	490	16458	2.3	620	62489	16.3	750	3802	0.0	880	2610	0.0
365	1737	0.0	495	21822	4.0	625	58342	12.9	755	3726	0.0	885	3198	0.0
370	2230	0.0	500	30190	6.7	630	54093	9.8	760	3551	0.0	890	2344	0.0
375	2417	0.0	505	40240	11.3	635	50017	7.5	765	3478	0.0	895	2065	0.0
380	2073	0.0	510	50723	17.4	640	46168	5.5	770	2870	0.0	900	2086	0.0
385	1818	0.0	515	60354	25.0	645	42289	4.1	775	2849	0.0	905	2015	0.0
390	1702	0.0	520	69347	33.6	650	38677	2.8	780	2557	0.0	910	1906	0.0
395	1616	0.0	525	75782	40.7	655	34859	2.0	785	2358	0.0	915	1066	0.0
400	1538	0.0	530	80522	47.4	660	31071	1.3	790	1904	0.0	920	2314	0.0
405	1762	0.0	535	83661	51.9	665	27799	0.9	795	1898	0.0	925	2800	0.0
410	2474	0.0	540	85958	56.0	670	24479	0.5	800	2078	0.0	930	2989	0.0
415	4579	0.0	545	88127	58.7	675	21634	0.4	805	1794	0.0	935	2432	0.0
420	9371	0.0	550	88916	60.4	680	19064	0.2	810	1740	0.0	940	2700	0.0
425	18740	0.1	555	89386	61.1	685	16871	0.1	815	1749	0.0	945	2221	0.0
430	35535	0.3	560	90186	61.3	690	14949	0.1	820	1812	0.0	950	1939	0.0
435	60640	0.7	565	90252	60.0	695	13176	0.1	825	1762	0.0	955	1662	0.0
440	89794	1.4	570	90096	58.6	700	11528	0.0	830	1938	0.0	960	1160	0.0
445	119062	2.5	575	89633	55.8	705	10259	0.0	835	1600	0.0	965	2156	0.0
450	130840	3.4	580	88807	52.8	710	9033	0.0	840	1981	0.0	970	1013	0.0
455	93342	3.1	585	87308	48.5	715	8270	0.0	845	1710	0.0	975	1026	0.0
460	55922	2.3	590	84508	43.7	720	7190	0.0	850	2403	0.0	980	2080	0.0
465	38014	2.0	595	82278	39.0	725	6040	0.0	855	2425	0.0	985	3033	0.0
470	25327	1.6	600	79370	34.2	730	5276	0.0	860	1905	0.0	990	3613	0.0
475	17206	1.4	605	75623	29.3	735	4767	0.0	865	2475	0.0	995	3626	0.0
480	14285	1.4	610	71534	24.6	740	4290	0.0	870	2170	0.0	1000	2453	0.0
485	14253	1.7	615	66936	20.2	745	4137	0.0	875	2261	0.0			

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Scotopic Flux vs. Wavelength



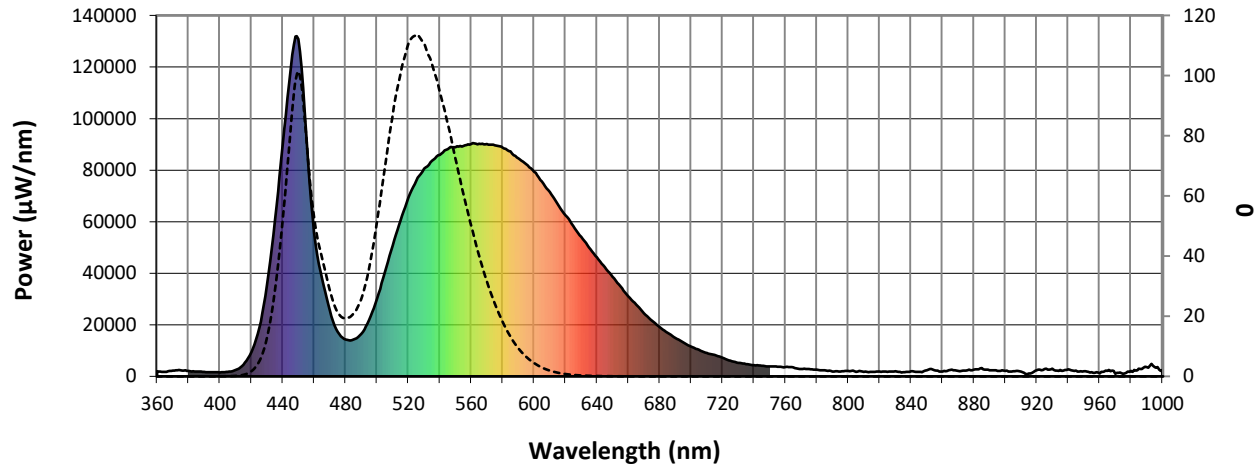
Scotopic Lumens: 3673.5

S/P: 0.67

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	1985	0.0	490	16458	25.3	620	62489	0.8	750	3802	0.0	880	2610	0.0
365	1737	0.0	495	21822	35.3	625	58342	0.5	755	3726	0.0	885	3198	0.0
370	2230	0.0	500	30190	50.5	630	54093	0.3	760	3551	0.0	890	2344	0.0
375	2417	0.0	505	40240	68.4	635	50017	0.2	765	3478	0.0	895	2065	0.0
380	2073	0.0	510	50723	86.0	640	46168	0.1	770	2870	0.0	900	2086	0.0
385	1818	0.0	515	60354	100.0	645	42289	0.1	775	2849	0.0	905	2015	0.0
390	1702	0.0	520	69347	110.2	650	38677	0.0	780	2557	0.0	910	1906	0.0
395	1616	0.0	525	75782	113.4	655	34859	0.0	785	2358	0.0	915	1066	0.0
400	1538	0.0	530	80522	111.0	660	31071	0.0	790	1904	0.0	920	2314	0.0
405	1762	0.1	535	83661	104.2	665	27799	0.0	795	1898	0.0	925	2800	0.0
410	2474	0.1	540	85958	95.0	670	24479	0.0	800	2078	0.0	930	2989	0.0
415	4579	0.5	545	88127	84.5	675	21634	0.0	805	1794	0.0	935	2432	0.0
420	9371	1.5	550	88916	72.7	680	19064	0.0	810	1740	0.0	940	2700	0.0
425	18740	4.6	555	89386	61.1	685	16871	0.0	815	1749	0.0	945	2221	0.0
430	35535	12.1	560	90186	50.4	690	14949	0.0	820	1812	0.0	950	1939	0.0
435	60640	27.1	565	90252	40.5	695	13176	0.0	825	1762	0.0	955	1662	0.0
440	89794	50.2	570	90096	31.8	700	11528	0.0	830	1938	0.0	960	1160	0.0
445	119062	79.7	575	89633	24.4	705	10259	0.0	835	1600	0.0	965	2156	0.0
450	130840	101.4	580	88807	18.3	710	9033	0.0	840	1981	0.0	970	1013	0.0
455	93342	81.6	585	87308	13.3	715	8270	0.0	845	1710	0.0	975	1026	0.0
460	55922	54.0	590	84508	9.4	720	7190	0.0	850	2403	0.0	980	2080	0.0
465	38014	40.1	595	82278	6.6	725	6040	0.0	855	2425	0.0	985	3033	0.0
470	25327	29.2	600	79370	4.5	730	5276	0.0	860	1905	0.0	990	3613	0.0
475	17206	21.5	605	75623	3.0	735	4767	0.0	865	2475	0.0	995	3626	0.0
480	14285	19.3	610	71534	1.9	740	4290	0.0	870	2170	0.0	1000	2453	0.0
485	14253	20.7	615	66936	1.2	745	4137	0.0	875	2261	0.0			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 9344

S/P: 1.71

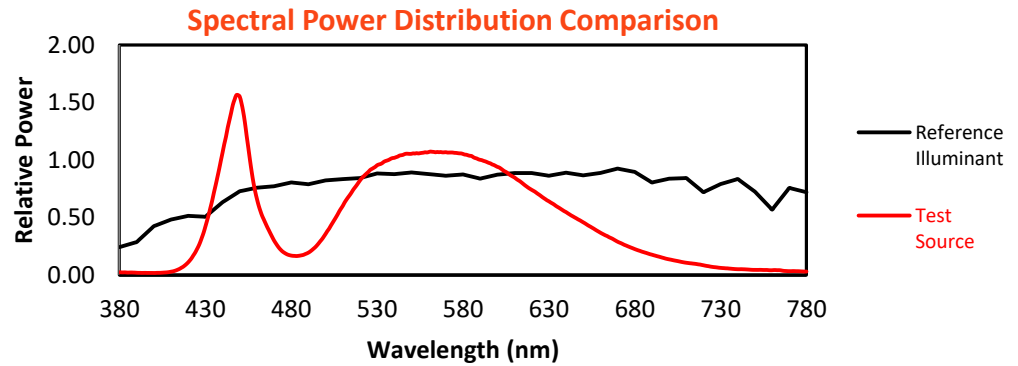
λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1985	0.0	490	16458	13.7	620	62489	0.0	750	3802	0.0	880	2610	0.0
365	1737	0.0	495	21822	18.0	625	58342	0.0	755	3726	0.0	885	3198	0.0
370	2230	0.0	500	30190	24.3	630	54093	0.0	760	3551	0.0	890	2344	0.0
375	2417	0.0	505	40240	30.9	635	50017	0.0	765	3478	0.0	895	2065	0.0
380	2073	0.0	510	50723	36.4	640	46168	0.0	770	2870	0.0	900	2086	0.0
385	1818	0.0	515	60354	39.4	645	42289	0.0	775	2849	0.0	905	2015	0.0
390	1702	0.0	520	69347	40.4	650	38677	0.0	780	2557	0.0	910	1906	0.0
395	1616	0.0	525	75782	38.4	655	34859	0.0	785	2358	0.0	915	1066	0.0
400	1538	0.0	530	80522	34.8	660	31071	0.0	790	1904	0.0	920	2314	0.0
405	1762	0.0	535	83661	30.1	665	27799	0.0	795	1898	0.0	925	2800	0.0
410	2474	0.1	540	85958	25.2	670	24479	0.0	800	2078	0.0	930	2989	0.0
415	4579	0.3	545	88127	20.5	675	21634	0.0	805	1794	0.0	935	2432	0.0
420	9371	1.1	550	88916	16.0	680	19064	0.0	810	1740	0.0	940	2700	0.0
425	18740	2.9	555	89386	12.1	685	16871	0.0	815	1749	0.0	945	2221	0.0
430	35535	7.5	560	90186	8.9	690	14949	0.0	820	1812	0.0	950	1939	0.0
435	60640	16.2	565	90252	6.3	695	13176	0.0	825	1762	0.0	955	1662	0.0
440	89794	30.0	570	90096	4.4	700	11528	0.0	830	1938	0.0	960	1160	0.0
445	119062	47.0	575	89633	3.0	705	10259	0.0	835	1600	0.0	965	2156	0.0
450	130840	60.3	580	88807	2.0	710	9033	0.0	840	1981	0.0	970	1013	0.0
455	93342	48.9	585	87308	1.3	715	8270	0.0	845	1710	0.0	975	1026	0.0
460	55922	32.9	590	84508	0.8	720	7190	0.0	850	2403	0.0	980	2080	0.0
465	38014	24.8	595	82278	0.5	725	6040	0.0	855	2425	0.0	985	3033	0.0
470	25327	18.1	600	79370	0.3	730	5276	0.0	860	1905	0.0	990	3613	0.0
475	17206	13.1	605	75623	0.2	735	4767	0.0	865	2475	0.0	995	3626	0.0
480	14285	11.5	610	71534	0.1	740	4290	0.0	870	2170	0.0	1000	2453	0.0
485	14253	11.7	615	66936	0.1	745	4137	0.0	875	2261	0.0			

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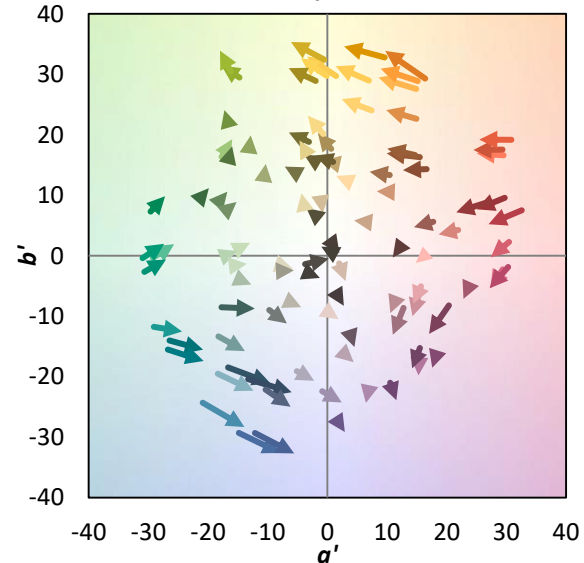
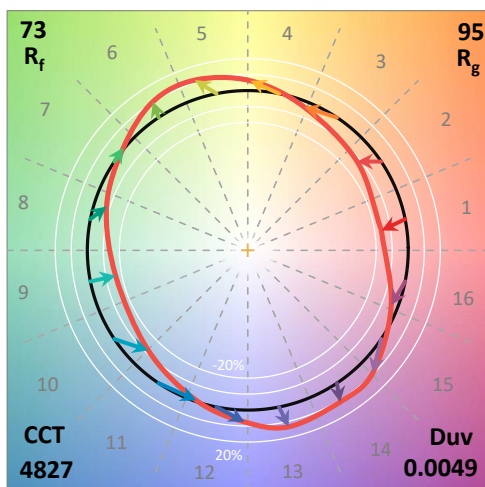
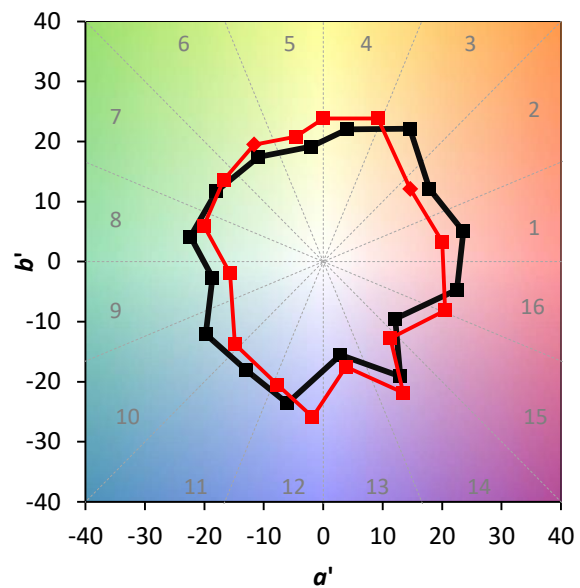
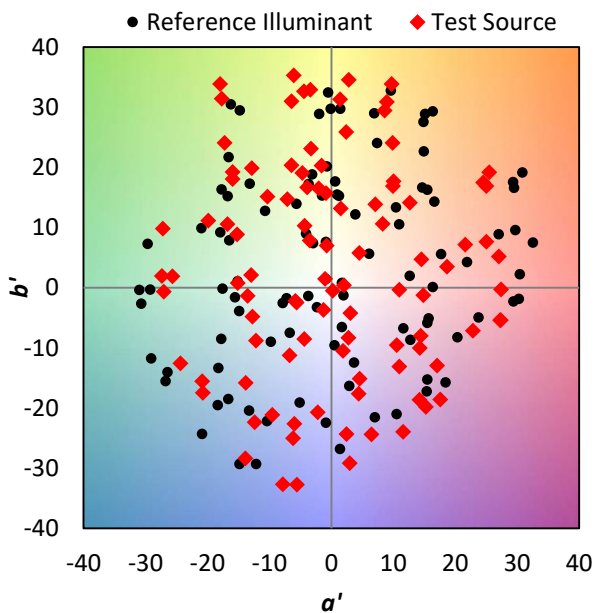
TM-30-18

Summary

$R_f = 73.4$
 $R_g = 95.5$
 CIE $R_a = 71.9$
 $R_g = -21.8$

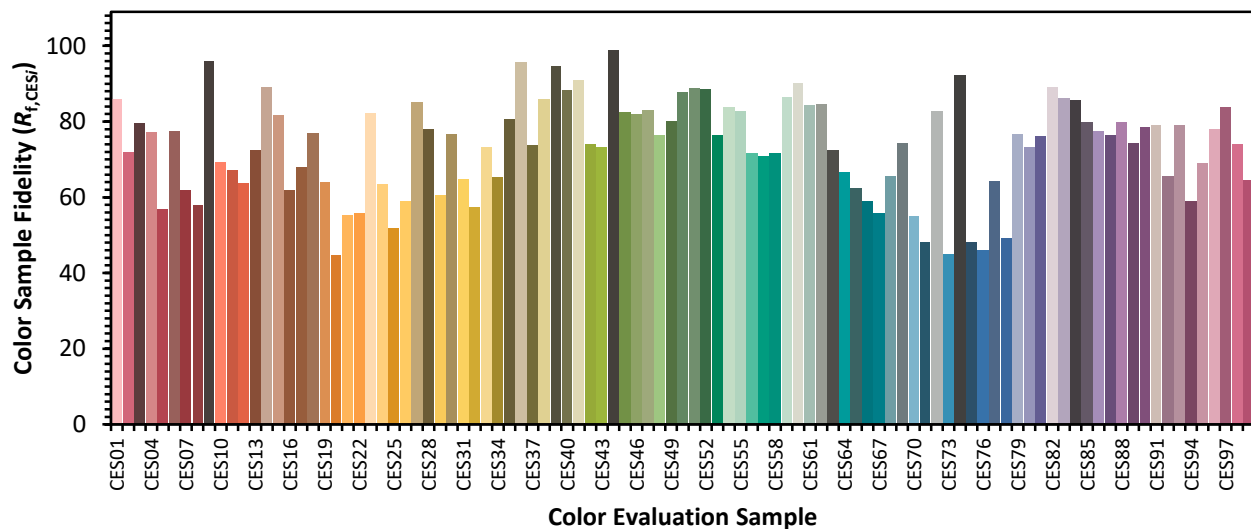


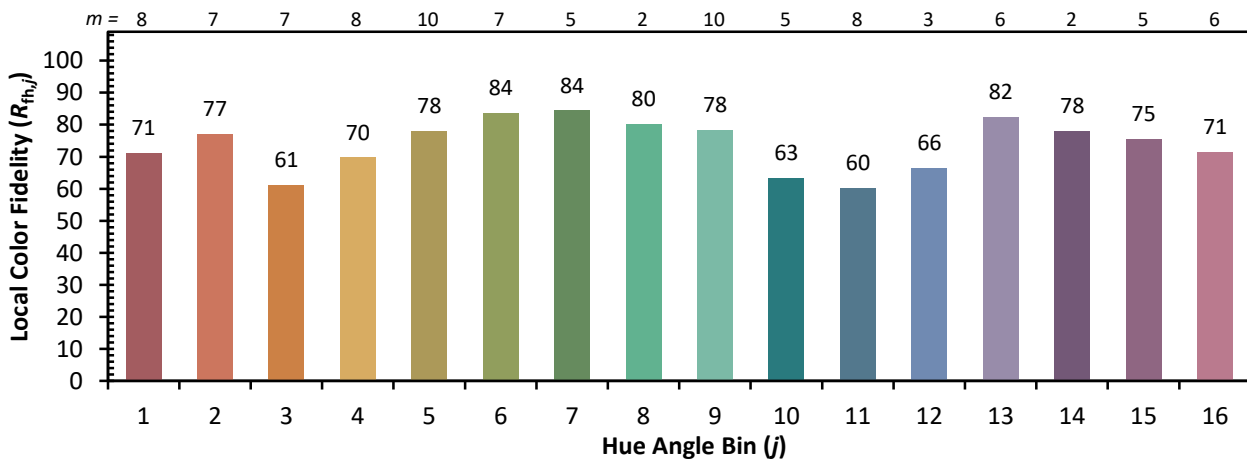
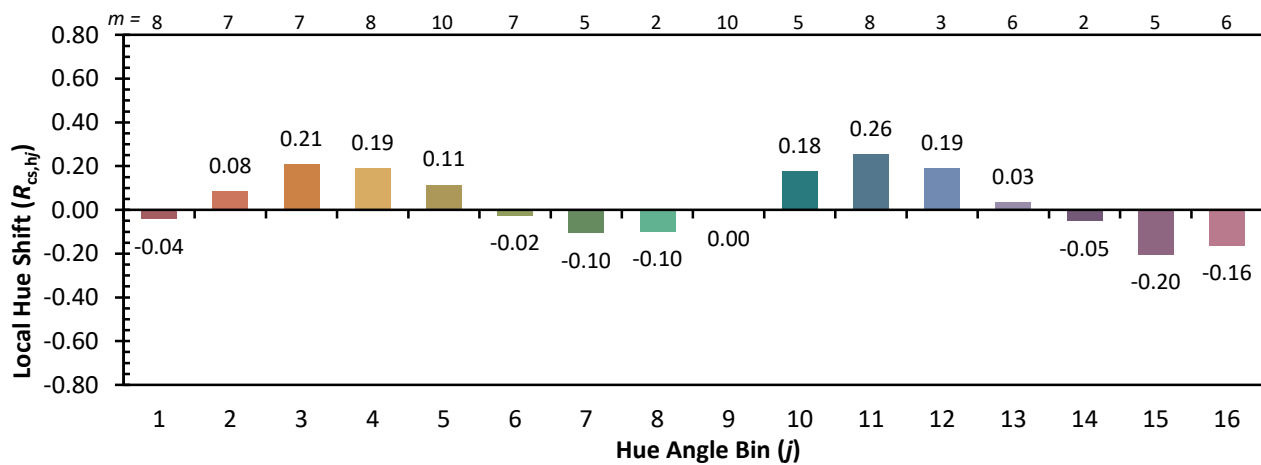
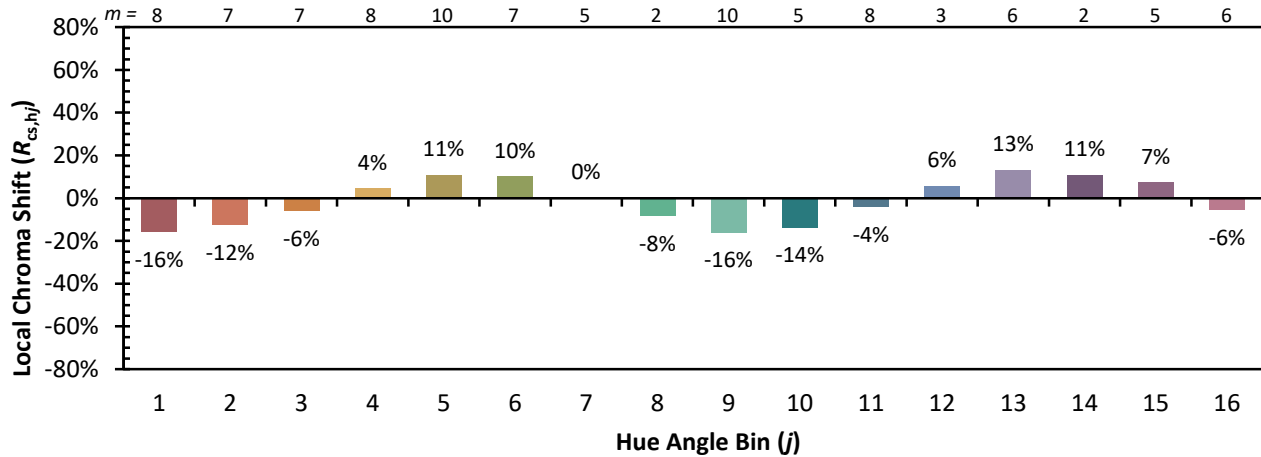
Color Vector Graphics

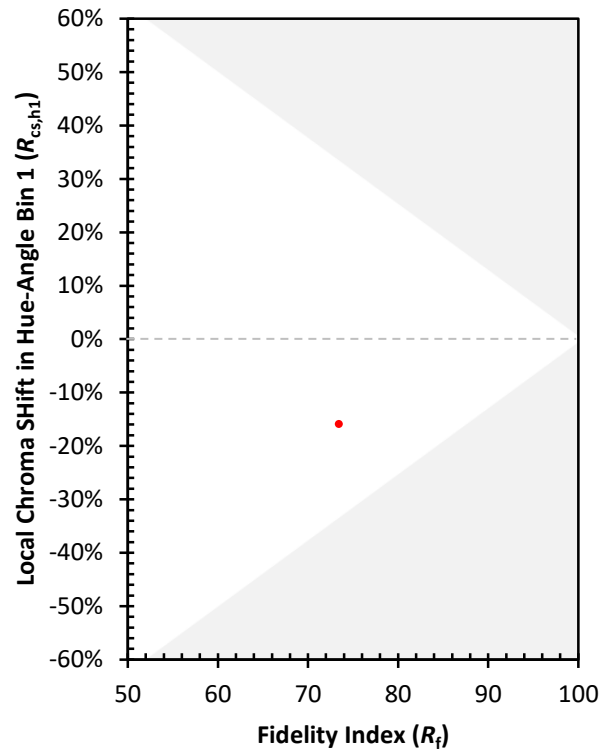
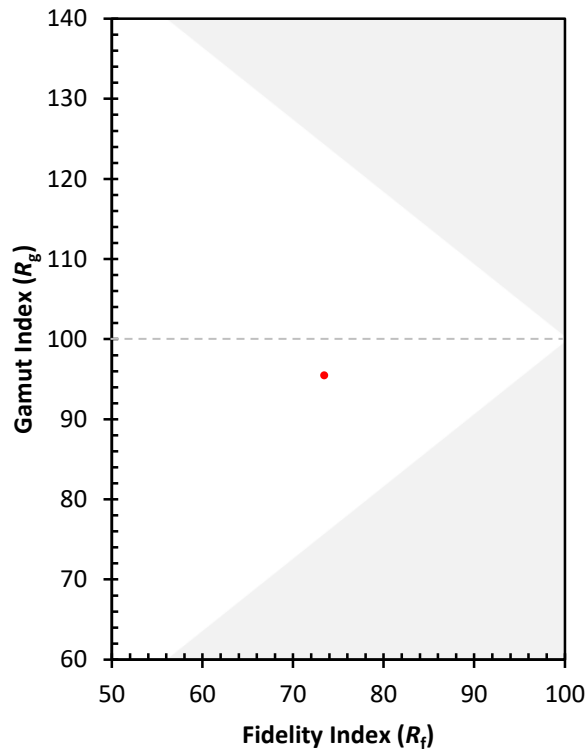


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 59	CES51 = 89	CES76 = 46
CES02 = 60	CES27 = 85	CES52 = 88	CES77 = 64
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 61	CES54 = 84	CES79 = 77
CES05 = 46	CES30 = 77	CES55 = 83	CES80 = 73
CES06 = 50	CES31 = 65	CES56 = 72	CES81 = 76
CES07 = 39	CES32 = 57	CES57 = 71	CES82 = 89
CES08 = 38	CES33 = 73	CES58 = 72	CES83 = 86
CES09 = 29	CES34 = 65	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 80
CES11 = 56	CES36 = 96	CES61 = 84	CES86 = 77
CES12 = 61	CES37 = 74	CES62 = 85	CES87 = 76
CES13 = 41	CES38 = 86	CES63 = 72	CES88 = 80
CES14 = 74	CES39 = 95	CES64 = 67	CES89 = 74
CES15 = 70	CES40 = 88	CES65 = 62	CES90 = 79
CES16 = 46	CES41 = 91	CES66 = 59	CES91 = 79
CES17 = 49	CES42 = 74	CES67 = 56	CES92 = 65
CES18 = 55	CES43 = 73	CES68 = 65	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 59
CES20 = 64	CES45 = 82	CES70 = 55	CES95 = 69
CES21 = 85	CES46 = 82	CES71 = 48	CES96 = 78
CES22 = 77	CES47 = 83	CES72 = 83	CES97 = 84
CES23 = 91	CES48 = 76	CES73 = 45	CES98 = 74
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 64
CES25 = 71	CES50 = 88	CES75 = 48	



Color Rendition by Hue-Angle Bin


Measure Comparisons


(END OF REPORT)