

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: P472264

Luminaire Tested: **CCP-VA-4-727-U-T4FT**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472264
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCP-VA-4-727-U-T4FT
Description: INVUE CLEARCURVE POLE MOUNT Wave Stream LUMINAIRE WITH T4FT
DISTRIBUTION LENS
Light Source: 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5897.9 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 64.6
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

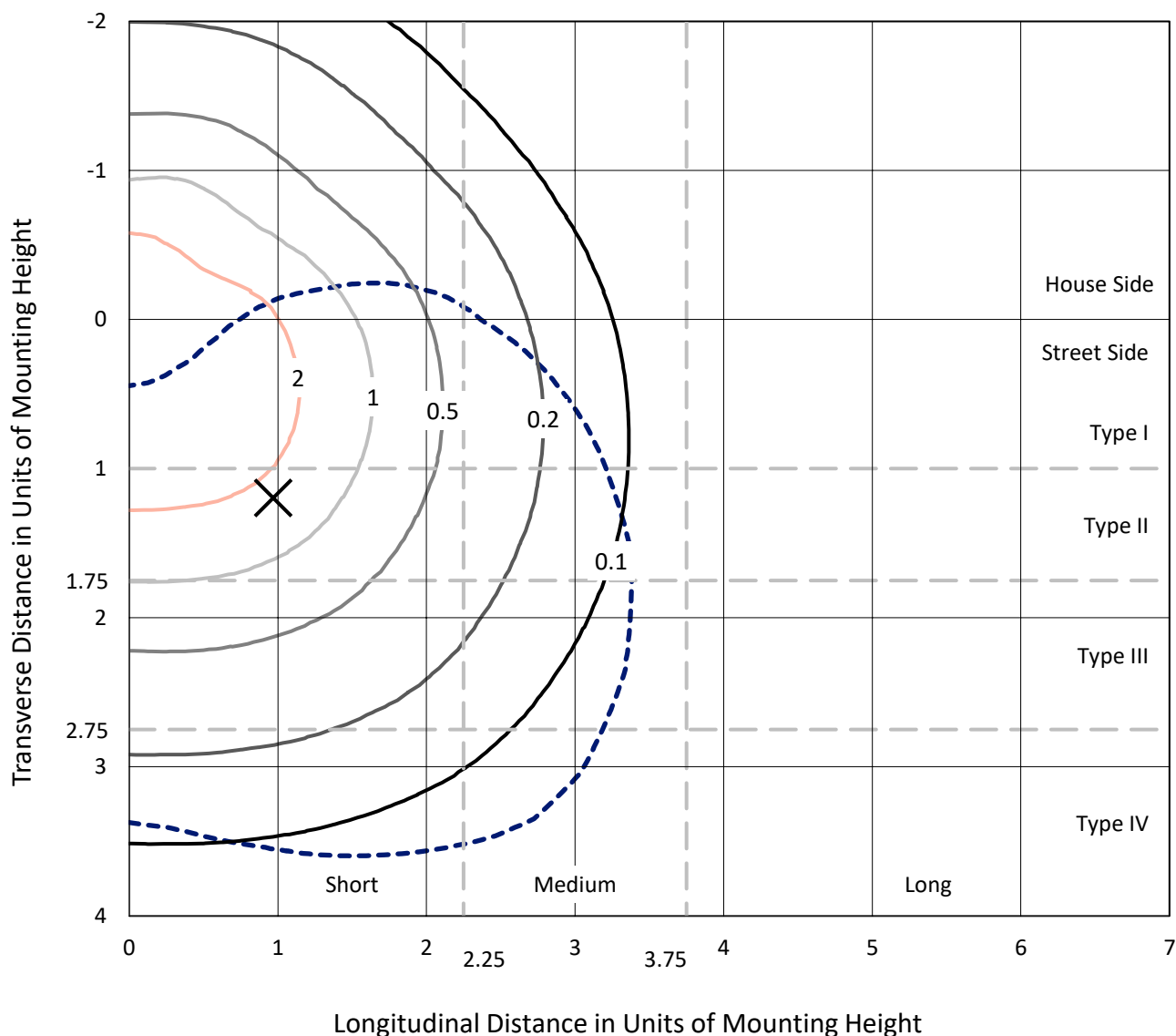
REPORT NUMBER: P472264

CATALOG NUMBER: CCP-VA-4-727-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

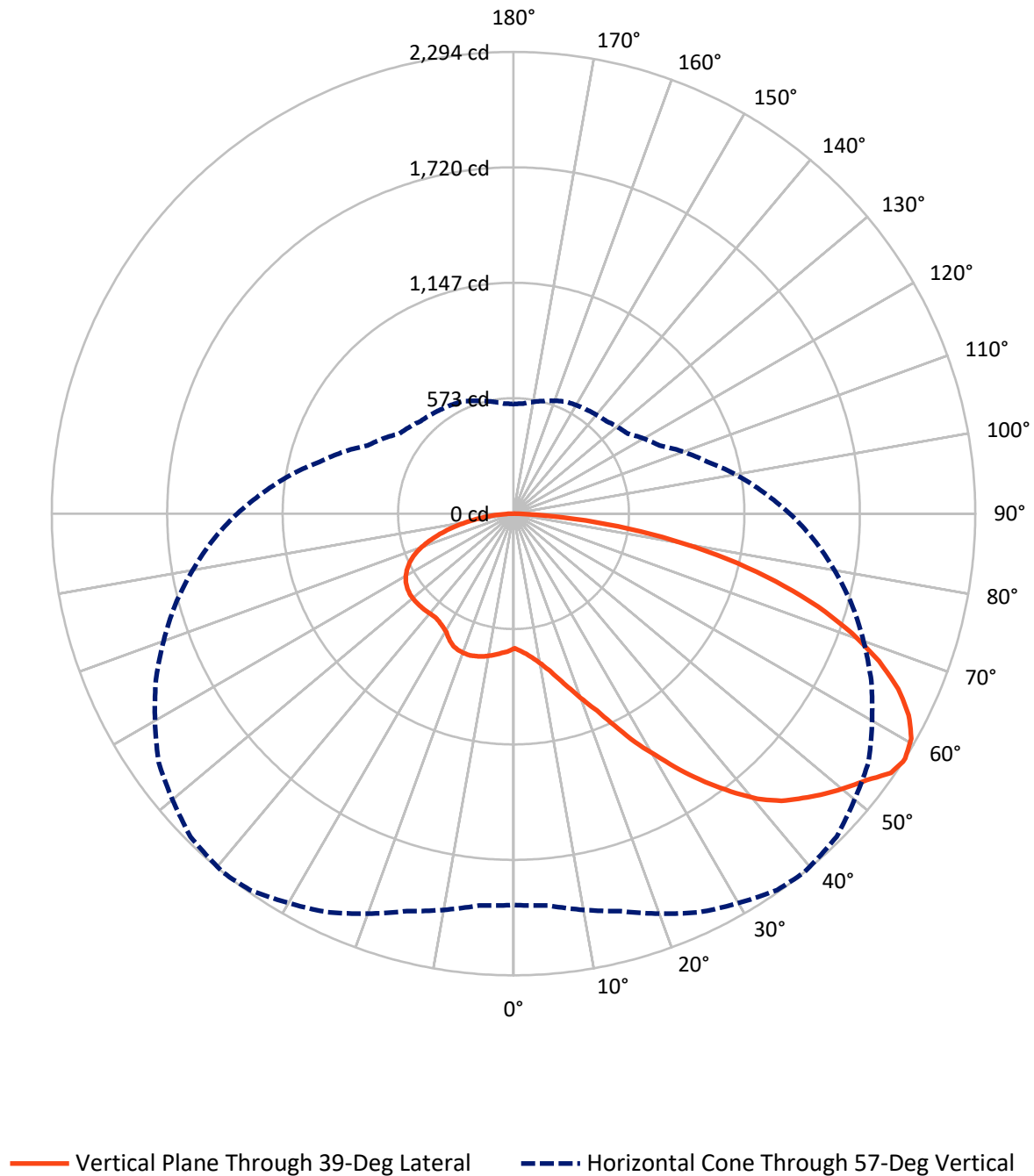


Based on 15 foot mounting height. Maximum calculated value = 4.1 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1809.7	0.0	1809.7
	% Fixture	30.7	0.0	30.7
Street Side	Lumens	4088.2	0.0	4088.2
	% Fixture	69.3	0.0	69.3
Total	Lumens	5897.9	0.0	5897.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.7	1.1
10°-20°	225.8	3.8
20°-30°	436.2	7.4
30°-40°	705.7	12.0
40°-50°	991.4	16.8
50°-60°	1224.7	20.8
60°-70°	1217.2	20.6
70°-80°	823.6	14.0
80°-90°	205.6	3.5
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°	5897.9	100.0
0°-180°	5897.9	100.0



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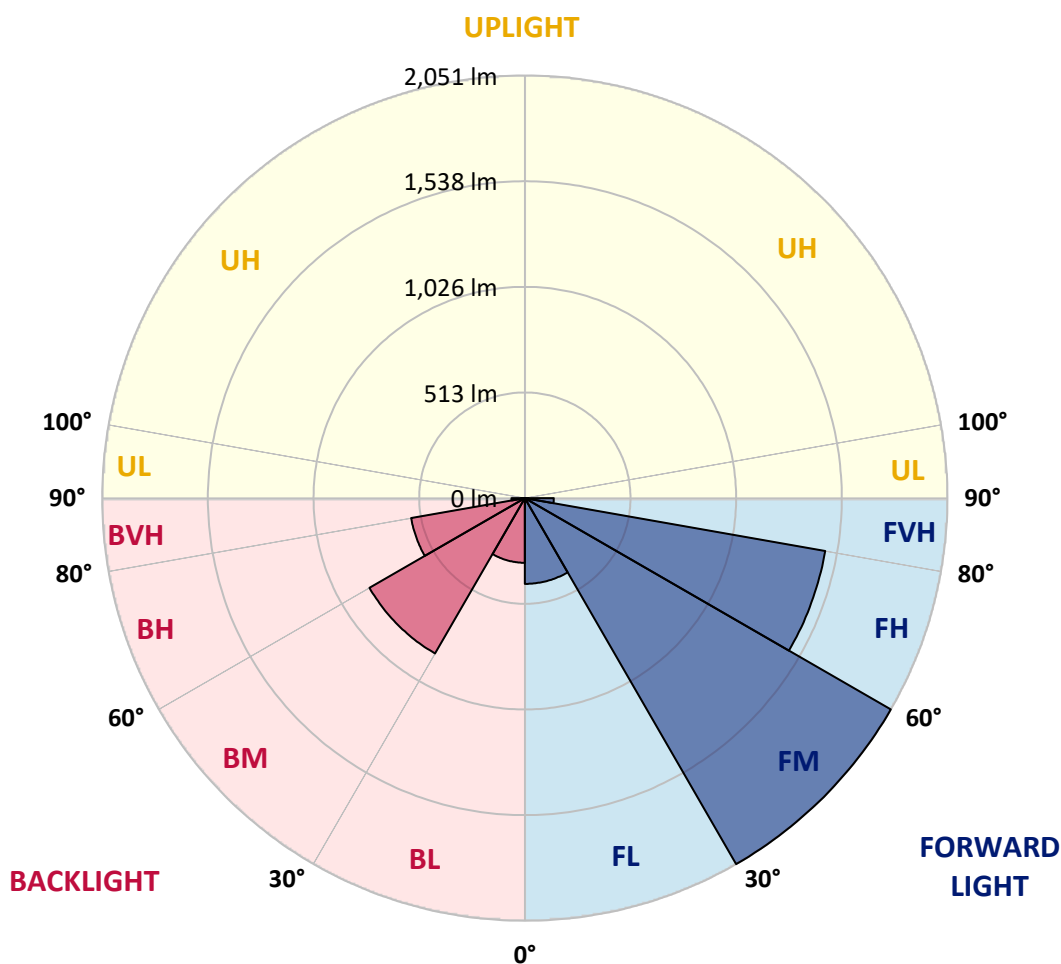
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	416.2	7.1			
FM	(30°-60°)	2051.0	34.8			
FH	(60°-80°)	1480.4	25.1			G1/1800
FVH	(80°-90°)	140.7	2.4			G2/225
BL	(0°-30°)	313.7	5.3	B1/500		
BM	(30°-60°)	870.7	14.8	B1/1000		
BH	(60°-80°)	560.4	9.5	B2/1000		G2/1000
BVH	(80°-90°)	64.9	1.1			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°	39°	45°	55°	65°	75°	85°
0°	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8
2.5°	688.7	687.8	686.9	686.9	685.1	683.3	682.4	680.5	681.4	683.3	684.2
5°	708.6	706.8	706.8	704.9	702.2	702.2	699.5	695.9	695.0	694.1	694.1
7.5°	739.3	736.6	737.5	734.8	732.1	728.4	723.9	719.4	717.6	711.3	705.8
10°	774.5	773.6	770.9	766.4	763.7	760.1	755.6	747.4	741.1	733.9	729.3
12.5°	816.1	814.3	815.2	811.6	807.1	800.7	793.5	785.4	773.6	760.1	751.0
15°	870.3	866.7	866.7	865.8	856.8	855.0	847.7	829.7	813.4	795.3	774.5
17.5°	936.3	935.4	931.8	928.2	922.8	916.4	909.2	889.3	864.9	836.9	808.9
20°	1006.8	1005.0	1007.7	1002.3	991.4	988.7	977.0	954.4	924.6	892.0	849.5
22.5°	1083.6	1085.4	1085.4	1083.6	1074.6	1063.7	1053.8	1024.0	989.6	949.9	900.2
25°	1176.7	1177.6	1183.0	1188.5	1183.0	1165.9	1152.3	1106.2	1060.1	1009.5	950.8
27.5°	1281.6	1275.2	1290.6	1300.5	1290.6	1286.1	1256.2	1205.6	1142.4	1079.1	1005.9
30°	1382.8	1382.8	1395.4	1409.9	1403.6	1392.7	1368.3	1303.2	1230.9	1150.5	1061.9
32.5°	1476.8	1487.6	1493.0	1526.5	1522.9	1517.4	1489.4	1403.6	1313.2	1221.9	1116.2
35°	1587.9	1584.3	1606.9	1627.7	1644.0	1636.7	1616.0	1529.2	1410.8	1296.9	1175.8
37.5°	1672.0	1679.2	1699.1	1736.2	1747.9	1751.5	1725.3	1635.8	1501.2	1377.4	1241.8
40°	1736.2	1741.6	1779.5	1826.5	1850.9	1863.6	1837.4	1728.9	1586.1	1441.5	1293.3
42.5°	1787.7	1791.3	1831.1	1897.9	1938.6	1951.3	1927.8	1813.0	1658.4	1493.0	1335.8
45°	1822.0	1828.3	1875.3	1944.0	2007.3	2016.3	2004.6	1887.1	1722.6	1541.8	1366.5
47.5°	1851.8	1859.1	1911.5	1998.2	2068.7	2080.5	2069.6	1952.2	1784.1	1586.1	1392.7
50°	1891.6	1899.7	1952.2	2048.9	2126.6	2140.1	2136.5	2020.8	1841.9	1635.8	1419.8
52.5°	1929.6	1935.9	1998.2	2105.8	2189.8	2198.9	2196.2	2085.0	1900.6	1689.2	1454.2
55°	1959.4	1966.6	2040.7	2173.6	2264.0	2273.9	2254.9	2134.7	1946.7	1728.0	1486.7
57°	1944.0	1954.0	2044.3	2185.3	2282.9	2293.8	2269.4	2152.8	1960.3	1738.9	1498.5
57.5°	1939.5	1946.7	2040.7	2184.4	2283.8	2293.8	2269.4	2151.9	1959.4	1738.0	1498.5
60°	1873.5	1890.7	1996.4	2151.9	2257.6	2270.3	2246.8	2115.7	1936.8	1712.7	1474.1
62.5°	1785.0	1808.5	1919.6	2075.1	2194.4	2203.4	2179.9	2055.2	1886.2	1659.3	1423.4
65°	1657.5	1693.7	1810.3	1960.3	2089.5	2100.4	2076.9	1954.0	1802.1	1578.0	1347.5
67.5°	1532.8	1554.5	1679.2	1822.0	1942.2	1958.5	1938.6	1829.2	1686.4	1469.5	1246.3
70°	1390.9	1406.3	1509.3	1649.4	1770.5	1784.1	1766.9	1664.8	1530.1	1334.9	1127.9
72.5°	1220.1	1236.4	1324.0	1453.3	1560.8	1582.5	1570.8	1465.0	1343.0	1174.0	996.0
75°	1027.6	1045.7	1124.3	1227.3	1332.2	1344.8	1331.3	1253.5	1143.3	990.5	835.1
77.5°	833.3	845.0	902.0	979.7	1061.0	1088.1	1084.5	1029.4	918.2	797.1	670.6
80°	623.6	625.4	655.2	719.4	784.5	804.4	808.9	759.2	686.0	594.7	502.5
82.5°	394.0	400.4	416.6	464.5	496.2	523.3	529.6	500.7	454.6	397.7	340.7
85°	183.5	178.0	190.7	207.0	252.2	252.2	260.3	244.9	231.4	212.4	176.2
87.5°	15.4	14.5	14.5	15.4	24.4	26.2	41.6	46.1	49.7	49.7	52.4
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-4-727-U-T4FT

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8	668.8
2.5°	682.4	681.4	678.7	678.7	680.5	683.3	684.2	685.1	686.0	686.9	686.9
5°	693.2	692.3	690.5	688.7	690.5	691.4	694.1	695.9	695.9	697.7	696.8
7.5°	703.1	704.0	702.2	701.3	701.3	703.1	706.8	709.5	711.3	712.2	714.0
10°	725.7	720.3	713.1	709.5	709.5	713.1	716.7	720.3	723.9	725.7	725.7
12.5°	745.6	739.3	725.7	720.3	719.4	723.0	727.5	733.0	735.7	738.4	738.4
15°	763.7	758.3	742.0	729.3	725.7	728.4	733.9	740.2	744.7	747.4	747.4
17.5°	798.0	781.8	760.1	739.3	732.1	733.0	739.3	745.6	751.0	752.8	751.9
20°	830.6	809.8	777.2	747.4	735.7	732.1	738.4	746.5	751.0	753.7	753.7
22.5°	867.6	845.0	794.4	755.6	733.9	728.4	733.9	741.1	746.5	748.3	750.1
25°	920.0	880.3	813.4	761.9	731.2	720.3	723.9	731.2	737.5	738.4	737.5
27.5°	967.0	921.9	838.7	768.2	724.8	704.9	701.3	706.8	716.7	723.0	724.8
30°	1007.7	966.1	864.9	773.6	713.1	679.6	675.1	676.9	683.3	700.4	701.3
32.5°	1068.3	1004.1	891.1	778.2	699.5	666.1	659.8	657.9	659.8	668.8	668.8
35°	1109.8	1046.6	917.3	786.3	689.6	655.2	648.9	646.2	644.4	635.4	632.6
37.5°	1164.1	1093.6	942.6	793.5	685.1	650.7	641.7	643.5	634.5	609.1	601.9
40°	1223.7	1136.0	967.9	800.7	686.9	651.6	643.5	642.6	627.2	592.0	584.7
42.5°	1252.6	1172.2	994.2	810.7	694.1	654.3	647.1	644.4	625.4	585.6	575.7
45°	1280.7	1198.4	1013.1	818.8	701.3	657.9	648.9	646.2	624.5	580.2	573.0
47.5°	1306.0	1214.7	1022.2	823.3	706.8	660.7	649.8	645.3	620.0	577.5	570.3
50°	1317.7	1223.7	1022.2	823.3	708.6	663.4	648.0	641.7	612.8	573.0	566.7
52.5°	1335.8	1229.1	1014.0	817.9	705.8	663.4	644.4	634.5	603.7	566.7	561.2
55°	1362.9	1239.1	1003.2	809.8	699.5	657.9	638.1	624.5	591.1	557.6	553.1
57°	1371.9	1242.7	996.0	799.8	692.3	650.7	630.8	613.7	579.3	548.6	544.1
57.5°	1370.1	1240.9	993.2	797.1	689.6	648.0	629.0	611.0	576.6	546.8	542.3
60°	1345.7	1223.7	976.1	780.0	675.1	633.5	612.8	592.9	557.6	531.4	527.8
62.5°	1306.0	1184.9	945.3	757.4	655.2	613.7	592.0	569.4	534.1	511.5	509.7
65°	1238.2	1119.8	901.1	724.8	629.9	587.5	564.0	539.6	508.8	488.9	483.5
67.5°	1125.2	1033.0	838.7	679.6	591.1	554.9	529.6	504.3	476.3	459.1	455.5
70°	1031.2	938.1	759.2	622.7	544.1	509.7	486.2	461.8	437.4	422.1	421.2
72.5°	911.9	822.4	659.8	552.2	484.4	451.0	432.9	411.2	392.2	378.7	378.7
75°	767.3	696.8	556.7	468.2	413.0	388.6	373.3	356.1	339.8	330.8	332.6
77.5°	610.0	556.7	454.6	378.7	338.0	321.7	307.3	297.3	287.4	279.3	280.2
80°	450.1	410.3	334.4	278.4	258.5	244.0	241.3	235.0	229.6	226.8	222.3
82.5°	308.2	272.9	222.3	190.7	176.2	171.7	172.6	172.6	173.5	173.5	171.7
85°	160.0	146.4	113.0	102.1	100.3	104.8	110.3	113.9	113.0	113.0	110.3
87.5°	46.1	41.6	36.2	32.5	34.3	37.1	32.5	31.6	30.7	29.8	29.8
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: SP1-2009-972-5-R2

Luminaire Tested: CCW-VA1-727-U-T4W

Test Date: 01/07/2021

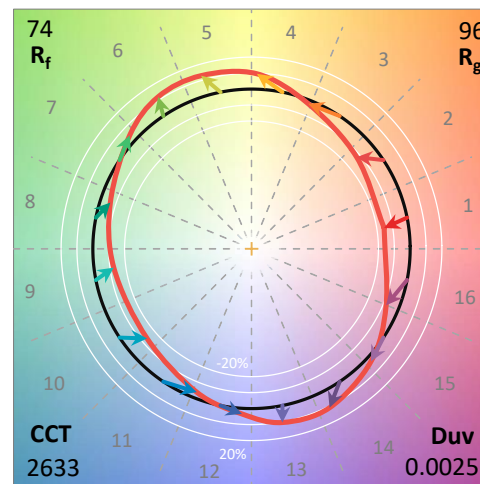
Test Information

Test Method: LM-79-08
 Report Number: SP1-2009-972-5-R2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 01/07/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: INVUE
 Catalog Number: **CCW-VA1-727-U-T4W**
 Description: INVUE WALL PACK WAVEGUIDE 2800LM 120V T4W (4 LED BOARDS).

THIS IS A REVISION OF SP1-2009-972-5. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU.

Spectral Parameters

CCT (K):	2633	CRI (Ra):	71.4		
CIE u':	0.2649	R1:	68.2	R9:	-24.9
CIE v':	0.5323	R2:	80.7	R10:	55.3
Duv:	0.0025	R3:	92.2	R11:	62.2
CIE x:	0.4700	R4:	68.1	R12:	43.3
CIE y:	0.4198	R5:	65.7	R13:	70.0
CIE z:	0.1102	R6:	72.5	R14:	95.1
Peak Wavelength (nm):	598	R7:	79.0		
Dominant Wavelength (nm):	583	R8:	45.2		
Purity:	67.6				
Rf:	73.7				
Rg:	95.9				



Test Conditions

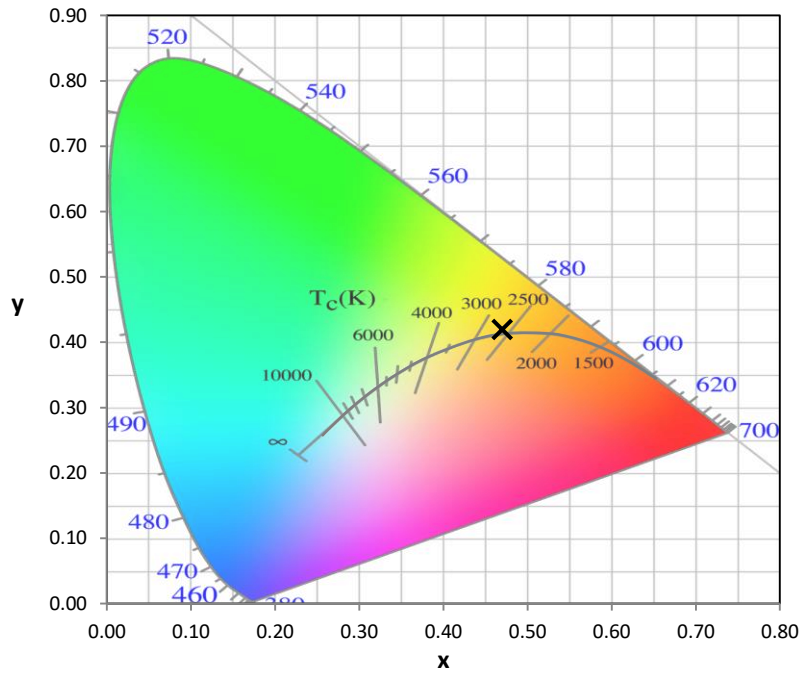
Stabilization Time: 74M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.2/26%
 Sphere Temperature (°C): 25.6

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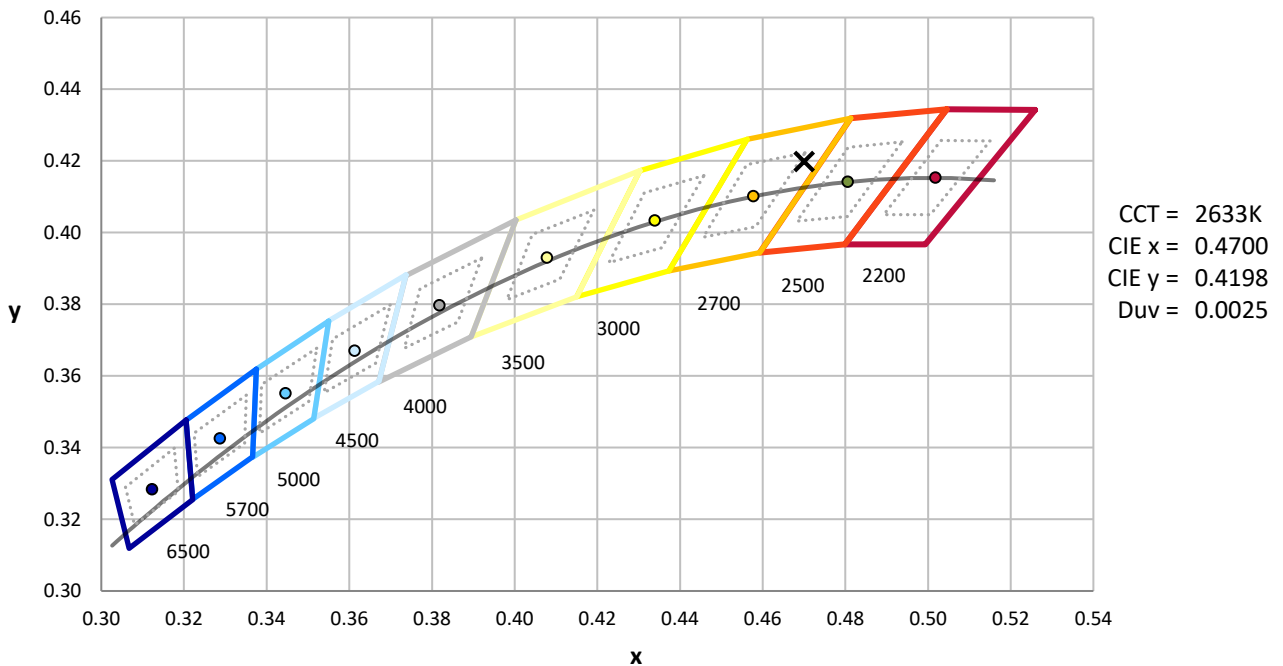
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020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

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CIE 1931 Chromaticity Diagram



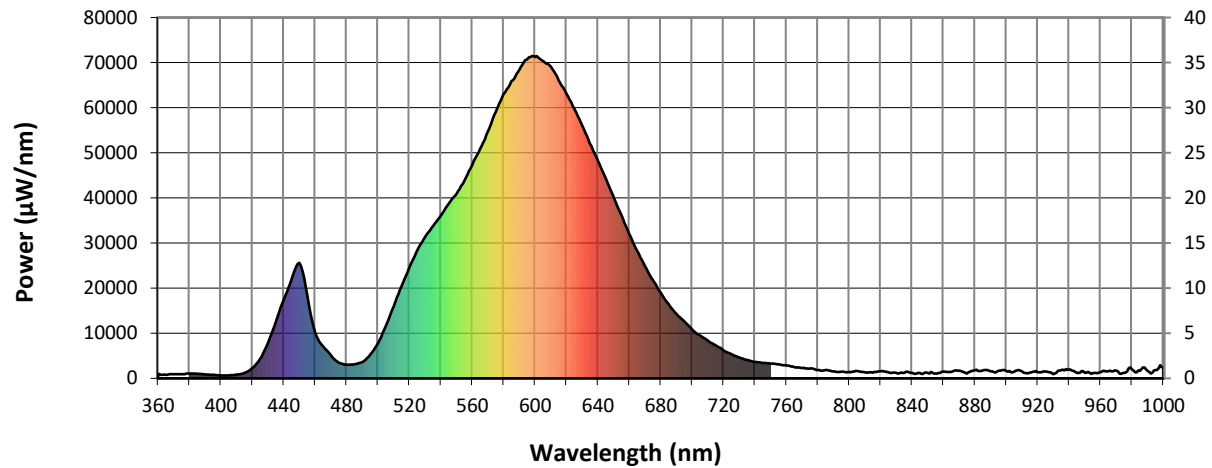
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 7-step quadrangle

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Photopic Flux vs. Wavelength

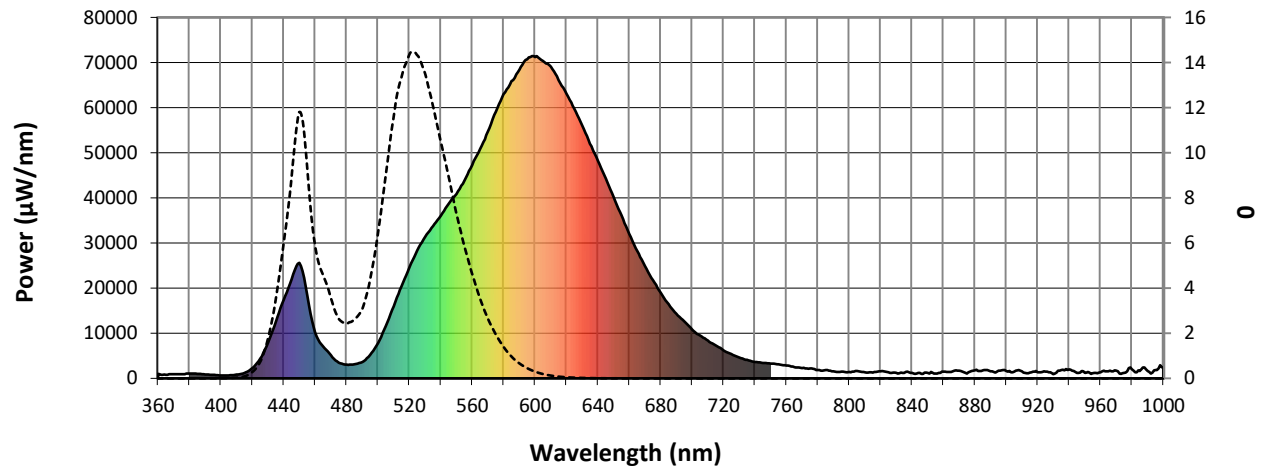


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	966	0.0	490	3640	0.5	620	63073	16.4	750	3295	0.0	880	1803	0.0
365	794	0.0	495	5192	0.9	625	59792	13.2	755	3114	0.0	885	1797	0.0
370	935	0.0	500	7840	1.7	630	56063	10.1	760	2847	0.0	890	1591	0.0
375	931	0.0	505	11599	3.2	635	52032	7.8	765	2506	0.0	895	1718	0.0
380	1056	0.0	510	15994	5.5	640	48264	5.8	770	2285	0.0	900	1639	0.0
385	1001	0.0	515	20346	8.4	645	44264	4.3	775	2191	0.0	905	1498	0.0
390	852	0.0	520	24602	11.9	650	40222	2.9	780	1863	0.0	910	1569	0.0
395	771	0.0	525	28286	15.2	655	36091	2.1	785	1873	0.0	915	1283	0.0
400	629	0.0	530	31386	18.5	660	32014	1.3	790	1543	0.0	920	1373	0.0
405	667	0.0	535	33741	20.9	665	28211	0.9	795	1518	0.0	925	1526	0.0
410	824	0.0	540	36044	23.5	670	24919	0.5	800	1404	0.0	930	935	0.0
415	1205	0.0	545	38758	25.8	675	21764	0.4	805	1617	0.0	935	1850	0.0
420	2280	0.0	550	40897	27.8	680	19037	0.2	810	1343	0.0	940	1955	0.0
425	4386	0.0	555	43819	29.9	685	16446	0.1	815	1285	0.0	945	1197	0.0
430	7895	0.1	560	47248	32.1	690	14327	0.1	820	1598	0.0	950	1189	0.0
435	12665	0.1	565	50864	33.8	695	12638	0.1	825	1358	0.0	955	1167	0.0
440	17413	0.3	570	54680	35.6	700	10844	0.0	830	1194	0.0	960	1356	0.0
445	21978	0.5	575	59071	36.8	705	9492	0.0	835	1234	0.0	965	1539	0.0
450	25593	0.7	580	62970	37.4	710	8348	0.0	840	1195	0.0	970	1712	0.0
455	18297	0.6	585	65878	36.6	715	7315	0.0	845	1224	0.0	975	1187	0.0
460	10209	0.4	590	68465	35.4	720	6206	0.0	850	1200	0.0	980	1998	0.0
465	7110	0.4	595	70746	33.5	725	5363	0.0	855	1054	0.0	985	1619	0.0
470	5078	0.3	600	71225	30.7	730	4596	0.0	860	1510	0.0	990	1600	0.0
475	3503	0.3	605	70367	27.3	735	4084	0.0	865	1426	0.0	995	1850	0.0
480	3025	0.3	610	69086	23.7	740	3634	0.0	870	1698	0.0	1000	2351	0.0
485	3149	0.4	615	66138	20.0	745	3415	0.0	875	1098	0.0			

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Scotopic Flux vs. Wavelength



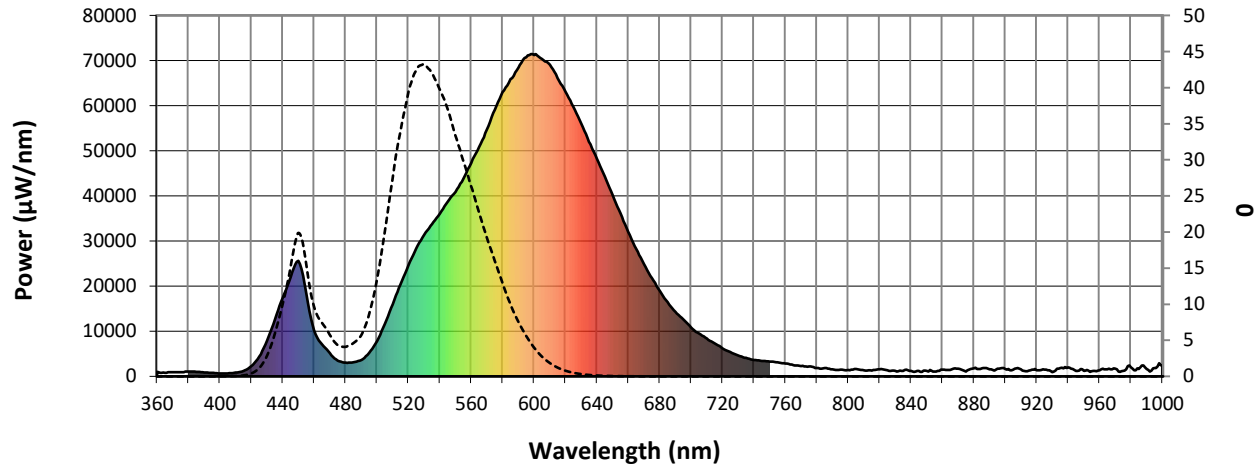
Scotopic Lumens: 1078.8

S/P: 0.33

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	966	0.0	490	3640	5.6	620	63073	0.8	750	3295	0.0	880	1803	0.0
365	794	0.0	495	5192	8.4	625	59792	0.5	755	3114	0.0	885	1797	0.0
370	935	0.0	500	7840	13.1	630	56063	0.3	760	2847	0.0	890	1591	0.0
375	931	0.0	505	11599	19.7	635	52032	0.2	765	2506	0.0	895	1718	0.0
380	1056	0.0	510	15994	27.1	640	48264	0.1	770	2285	0.0	900	1639	0.0
385	1001	0.0	515	20346	33.7	645	44264	0.1	775	2191	0.0	905	1498	0.0
390	852	0.0	520	24602	39.1	650	40222	0.0	780	1863	0.0	910	1569	0.0
395	771	0.0	525	28286	42.3	655	36091	0.0	785	1873	0.0	915	1283	0.0
400	629	0.0	530	31386	43.3	660	32014	0.0	790	1543	0.0	920	1373	0.0
405	667	0.0	535	33741	42.0	665	28211	0.0	795	1518	0.0	925	1526	0.0
410	824	0.0	540	36044	39.8	670	24919	0.0	800	1404	0.0	930	935	0.0
415	1205	0.1	545	38758	37.2	675	21764	0.0	805	1617	0.0	935	1850	0.0
420	2280	0.4	550	40897	33.4	680	19037	0.0	810	1343	0.0	940	1955	0.0
425	4386	1.1	555	43819	29.9	685	16446	0.0	815	1285	0.0	945	1197	0.0
430	7895	2.7	560	47248	26.4	690	14327	0.0	820	1598	0.0	950	1189	0.0
435	12665	5.7	565	50864	22.8	695	12638	0.0	825	1358	0.0	955	1167	0.0
440	17413	9.7	570	54680	19.3	700	10844	0.0	830	1194	0.0	960	1356	0.0
445	21978	14.7	575	59071	16.1	705	9492	0.0	835	1234	0.0	965	1539	0.0
450	25593	19.8	580	62970	13.0	710	8348	0.0	840	1195	0.0	970	1712	0.0
455	18297	16.0	585	65878	10.1	715	7315	0.0	845	1224	0.0	975	1187	0.0
460	10209	9.9	590	68465	7.6	720	6206	0.0	850	1200	0.0	980	1998	0.0
465	7110	7.5	595	70746	5.6	725	5363	0.0	855	1054	0.0	985	1619	0.0
470	5078	5.8	600	71225	4.0	730	4596	0.0	860	1510	0.0	990	1600	0.0
475	3503	4.4	605	70367	2.8	735	4084	0.0	865	1426	0.0	995	1850	0.0
480	3025	4.1	610	69086	1.9	740	3634	0.0	870	1698	0.0	1000	2351	0.0
485	3149	4.6	615	66138	1.2	745	3415	0.0	875	1098	0.0			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 3272.6

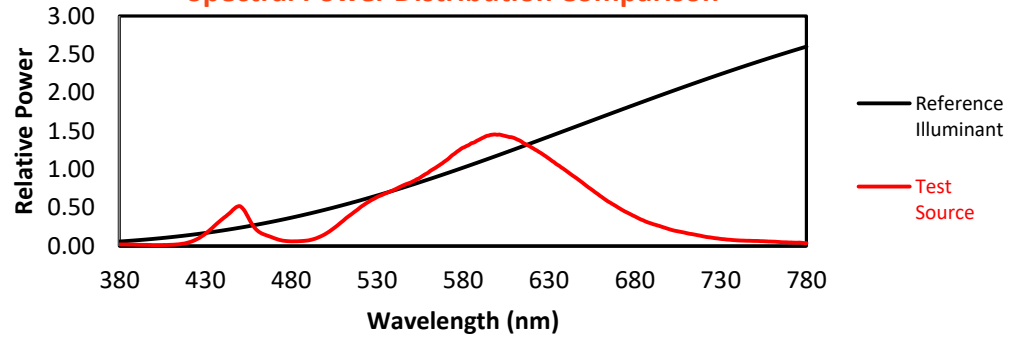
S/P: 1.01

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	966	0.0	490	3640	3.0	620	63073	0.0	750	3295	0.0	880	1803	0.0
365	794	0.0	495	5192	4.3	625	59792	0.0	755	3114	0.0	885	1797	0.0
370	935	0.0	500	7840	6.3	630	56063	0.0	760	2847	0.0	890	1591	0.0
375	931	0.0	505	11599	8.9	635	52032	0.0	765	2506	0.0	895	1718	0.0
380	1056	0.0	510	15994	11.5	640	48264	0.0	770	2285	0.0	900	1639	0.0
385	1001	0.0	515	20346	13.3	645	44264	0.0	775	2191	0.0	905	1498	0.0
390	852	0.0	520	24602	14.3	650	40222	0.0	780	1863	0.0	910	1569	0.0
395	771	0.0	525	28286	14.3	655	36091	0.0	785	1873	0.0	915	1283	0.0
400	629	0.0	530	31386	13.6	660	32014	0.0	790	1543	0.0	920	1373	0.0
405	667	0.0	535	33741	12.1	665	28211	0.0	795	1518	0.0	925	1526	0.0
410	824	0.0	540	36044	10.5	670	24919	0.0	800	1404	0.0	930	935	0.0
415	1205	0.1	545	38758	9.0	675	21764	0.0	805	1617	0.0	935	1850	0.0
420	2280	0.3	550	40897	7.3	680	19037	0.0	810	1343	0.0	940	1955	0.0
425	4386	0.7	555	43819	5.9	685	16446	0.0	815	1285	0.0	945	1197	0.0
430	7895	1.7	560	47248	4.7	690	14327	0.0	820	1598	0.0	950	1189	0.0
435	12665	3.4	565	50864	3.6	695	12638	0.0	825	1358	0.0	955	1167	0.0
440	17413	5.8	570	54680	2.7	700	10844	0.0	830	1194	0.0	960	1356	0.0
445	21978	8.7	575	59071	2.0	705	9492	0.0	835	1234	0.0	965	1539	0.0
450	25593	11.8	580	62970	1.4	710	8348	0.0	840	1195	0.0	970	1712	0.0
455	18297	9.6	585	65878	1.0	715	7315	0.0	845	1224	0.0	975	1187	0.0
460	10209	6.0	590	68465	0.7	720	6206	0.0	850	1200	0.0	980	1998	0.0
465	7110	4.6	595	70746	0.5	725	5363	0.0	855	1054	0.0	985	1619	0.0
470	5078	3.6	600	71225	0.3	730	4596	0.0	860	1510	0.0	990	1600	0.0
475	3503	2.7	605	70367	0.2	735	4084	0.0	865	1426	0.0	995	1850	0.0
480	3025	2.4	610	69086	0.1	740	3634	0.0	870	1698	0.0	1000	2351	0.0
485	3149	2.6	615	66138	0.1	745	3415	0.0	875	1098	0.0			

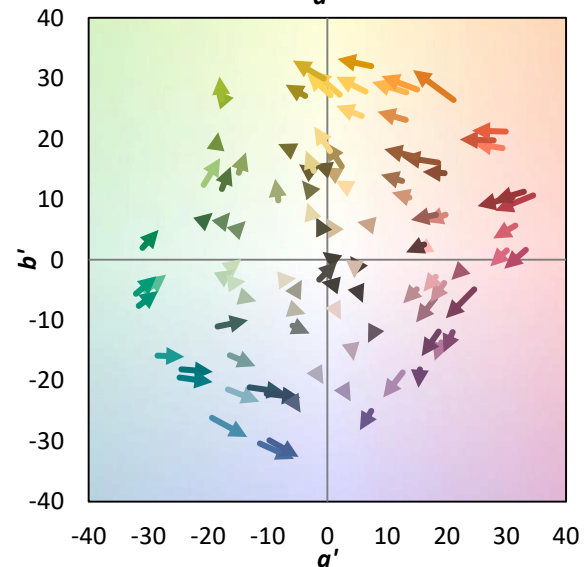
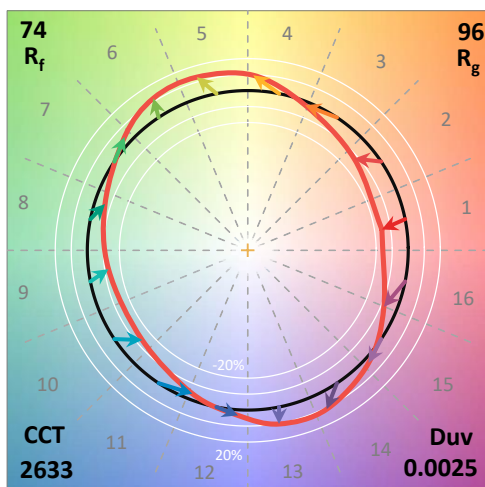
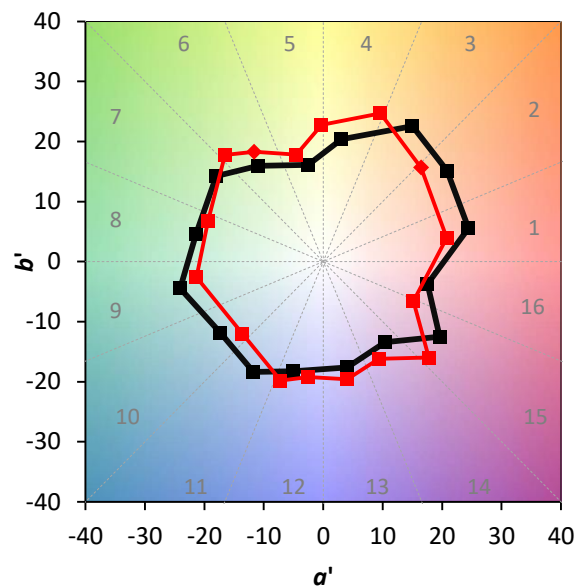
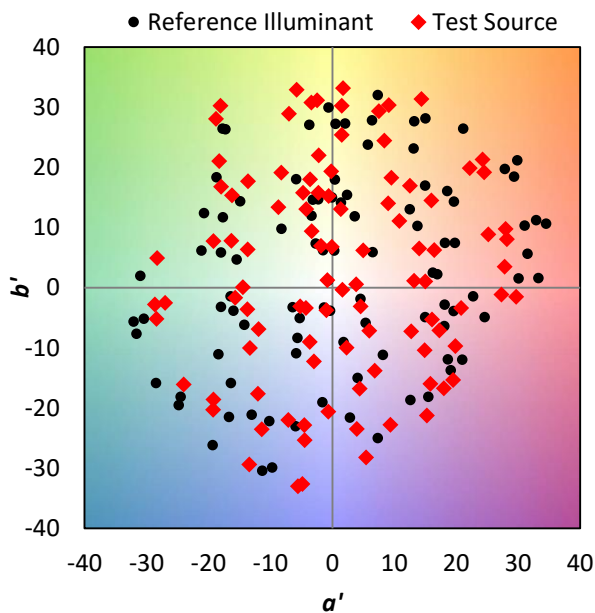
Summary

$R_f = 73.7$
 $R_g = 95.9$
 CIE $R_a = 71.4$
 $R_g = -24.9$

Spectral Power Distribution Comparison

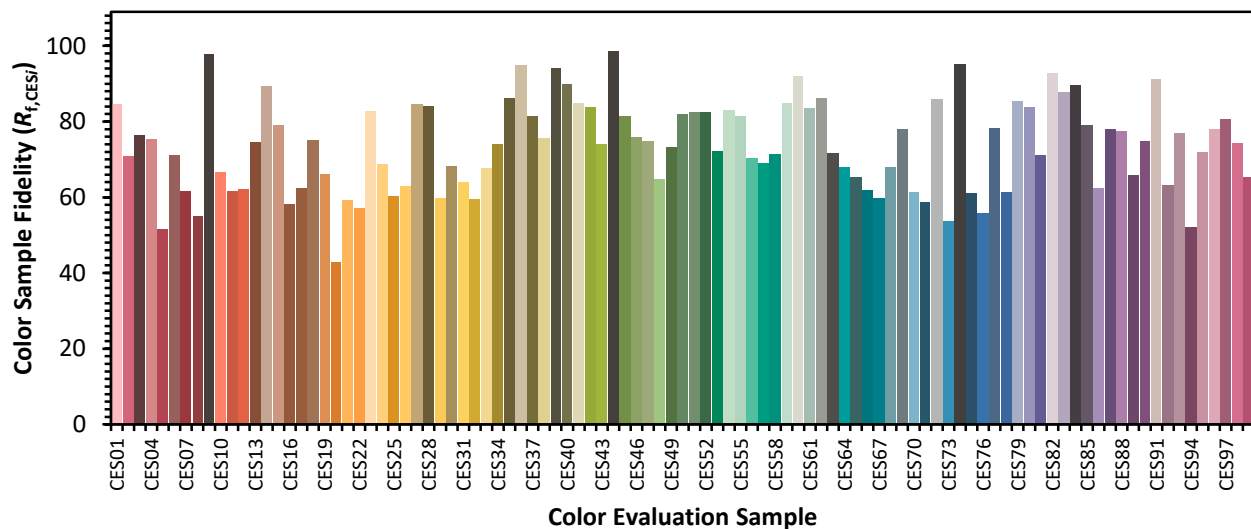


Color Vector Graphics

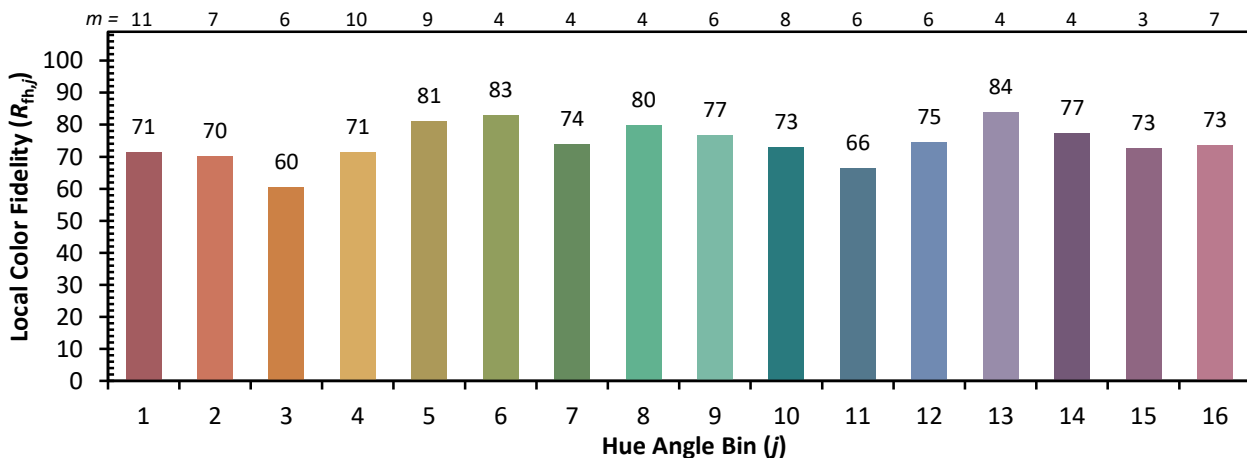
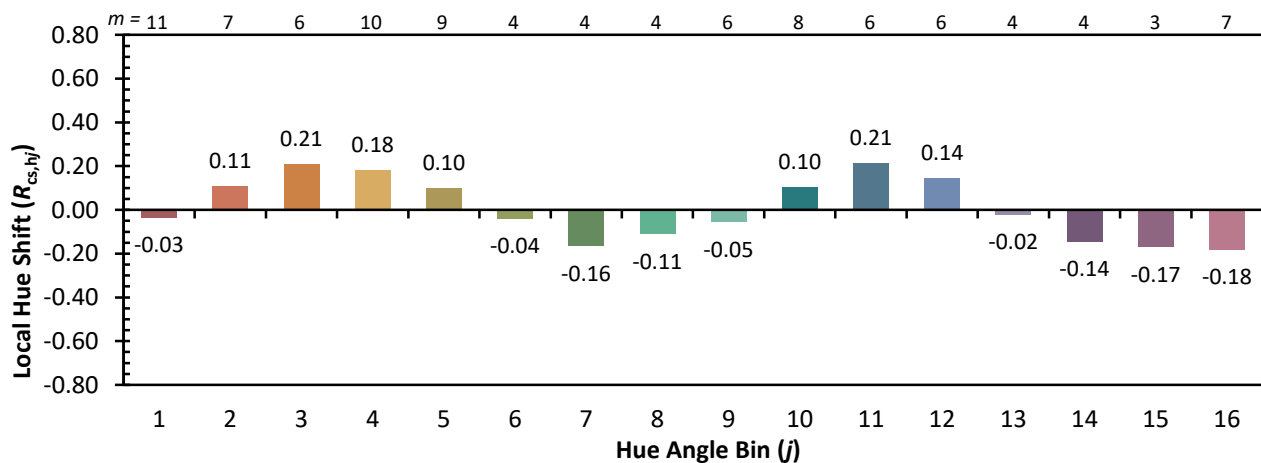
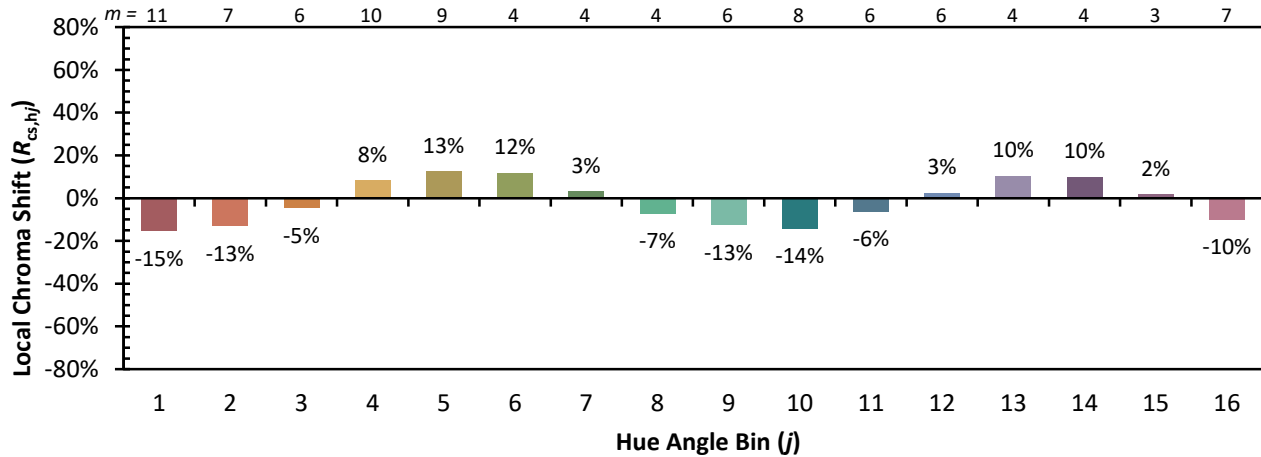


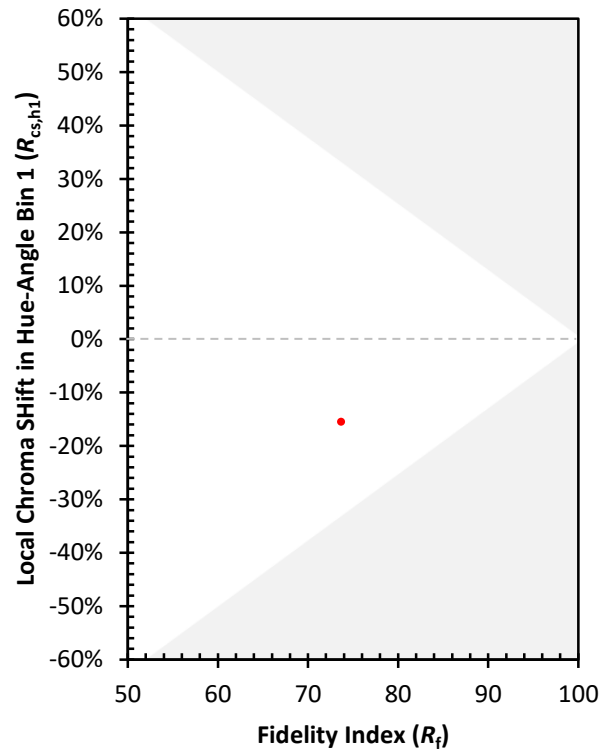
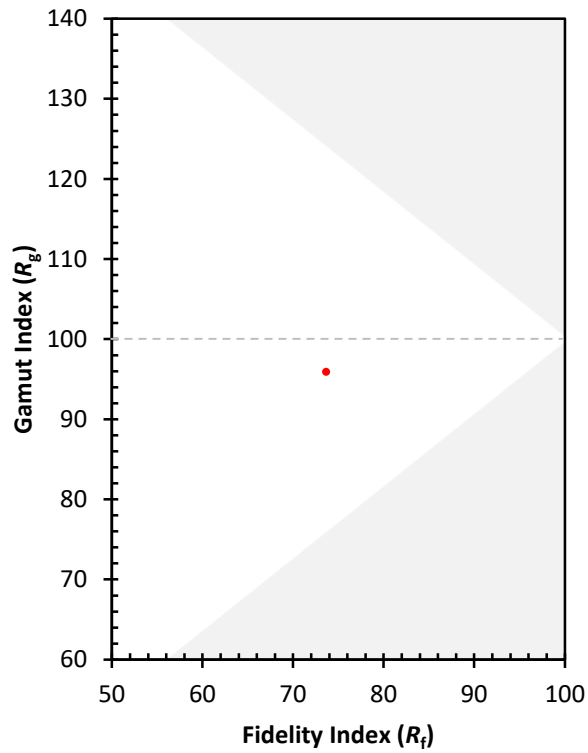
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 63	CES51 = 82	CES76 = 56
CES02 = 63	CES27 = 85	CES52 = 82	CES77 = 78
CES03 = 31	CES28 = 84	CES53 = 72	CES78 = 61
CES04 = 71	CES29 = 60	CES54 = 83	CES79 = 86
CES05 = 50	CES30 = 68	CES55 = 81	CES80 = 84
CES06 = 52	CES31 = 64	CES56 = 70	CES81 = 71
CES07 = 42	CES32 = 60	CES57 = 69	CES82 = 93
CES08 = 41	CES33 = 68	CES58 = 71	CES83 = 88
CES09 = 29	CES34 = 74	CES59 = 85	CES84 = 90
CES10 = 77	CES35 = 86	CES60 = 92	CES85 = 79
CES11 = 60	CES36 = 95	CES61 = 83	CES86 = 62
CES12 = 66	CES37 = 81	CES62 = 86	CES87 = 78
CES13 = 44	CES38 = 76	CES63 = 72	CES88 = 77
CES14 = 74	CES39 = 94	CES64 = 68	CES89 = 66
CES15 = 72	CES40 = 90	CES65 = 65	CES90 = 75
CES16 = 48	CES41 = 85	CES66 = 62	CES91 = 91
CES17 = 51	CES42 = 84	CES67 = 60	CES92 = 63
CES18 = 57	CES43 = 74	CES68 = 68	CES93 = 77
CES19 = 73	CES44 = 99	CES69 = 78	CES94 = 52
CES20 = 67	CES45 = 81	CES70 = 61	CES95 = 72
CES21 = 88	CES46 = 76	CES71 = 59	CES96 = 78
CES22 = 80	CES47 = 75	CES72 = 86	CES97 = 81
CES23 = 92	CES48 = 65	CES73 = 54	CES98 = 74
CES24 = 92	CES49 = 73	CES74 = 95	CES99 = 65
CES25 = 73	CES50 = 82	CES75 = 61	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)