

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: P472150

Luminaire Tested: **CCP-VA-4-730-U-T4W**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472150
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCP-VA-4-730-U-T4W
Description: INVUE CLEARCURVE POLE MOUNT Wave Stream LUMINAIRE WITH T4W
DISTRIBUTION LENS
Light Source: 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6139.3 lumens
Efficiency: N/A
Efficacy: 106.6 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

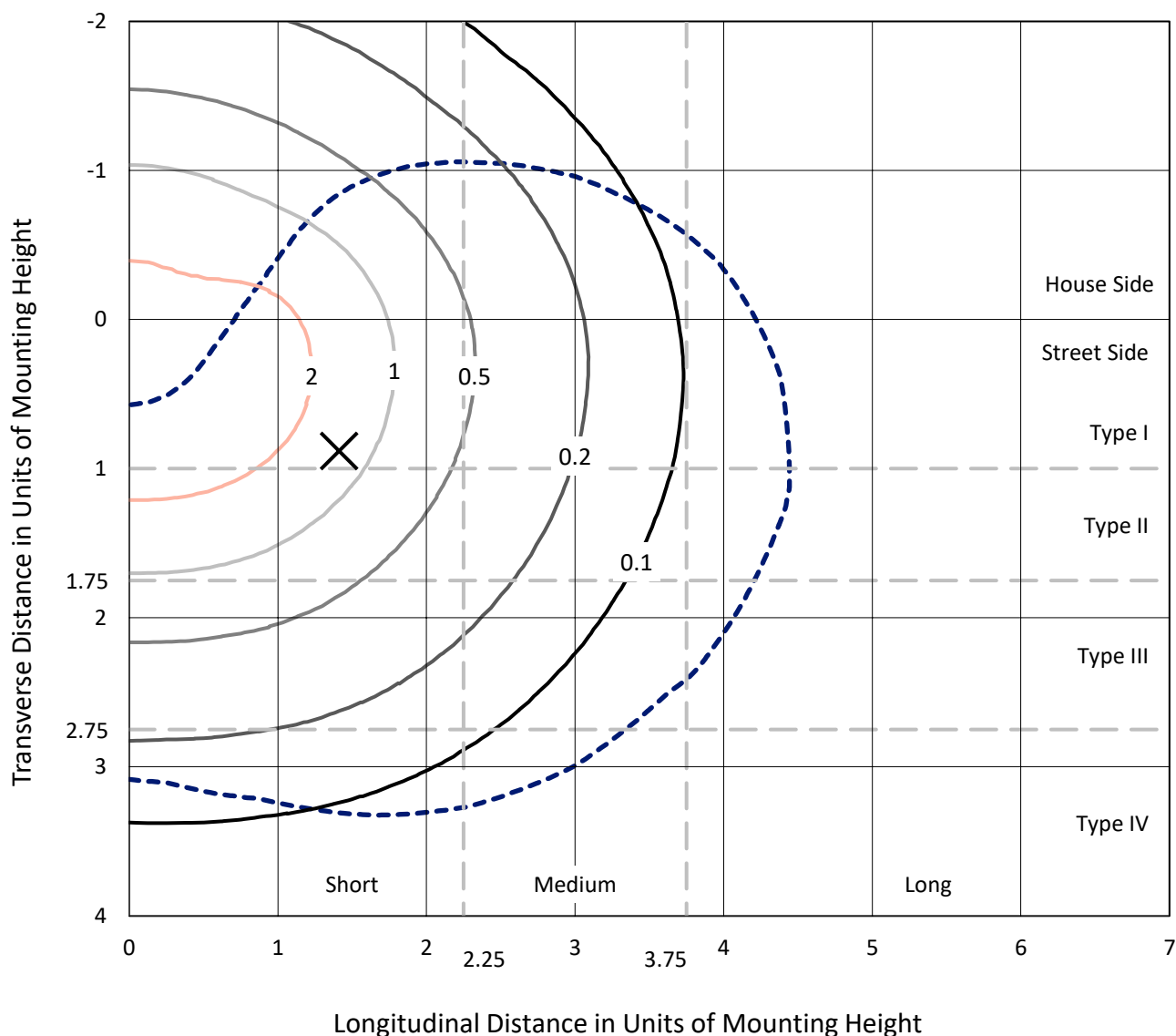
REPORT NUMBER: P472150

CATALOG NUMBER: CCP-VA-4-730-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

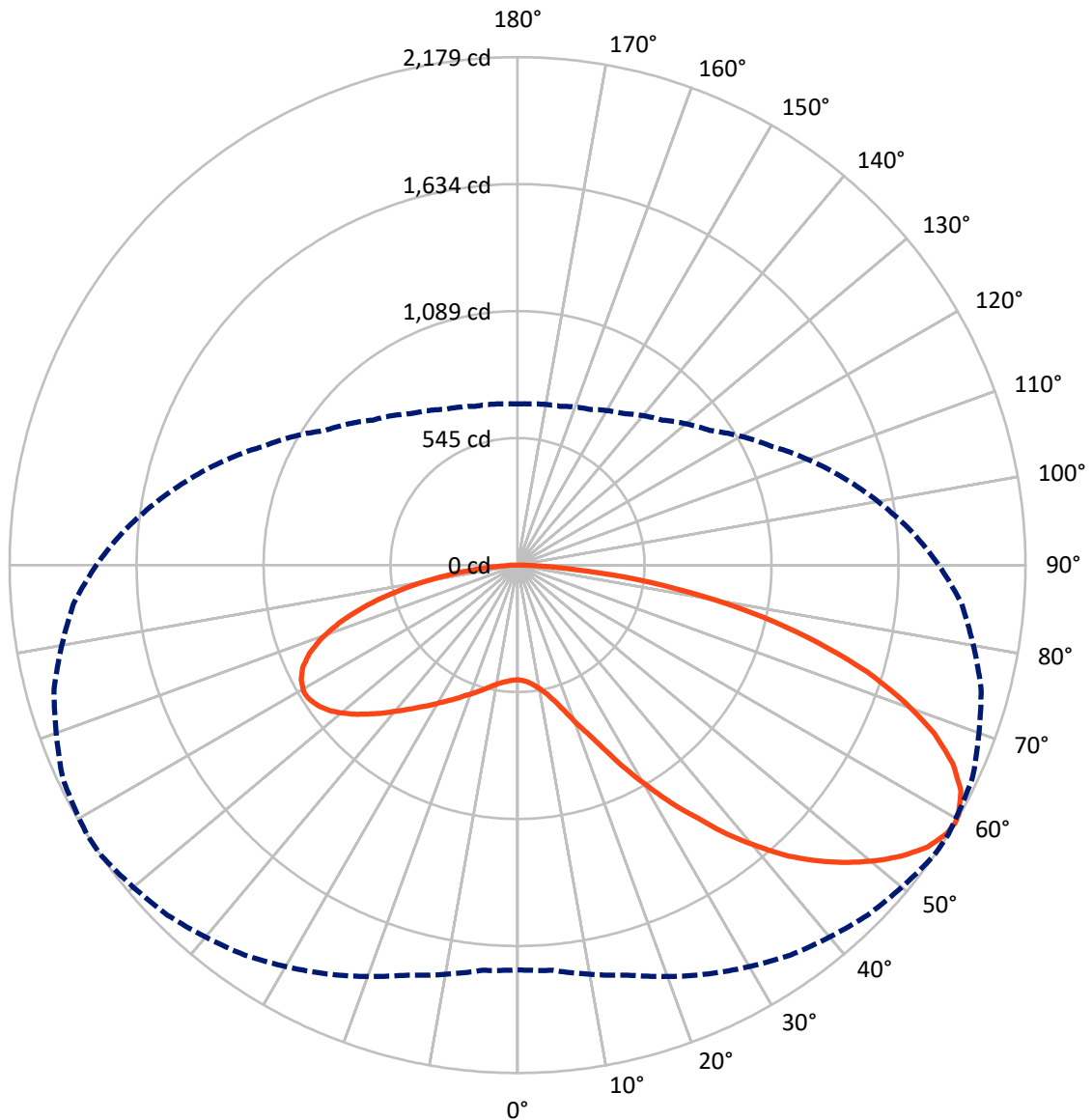


Based on 15 foot mounting height. Maximum calculated value = 3.3 fc

Type IV - Short - N/A

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CATALOG NUMBER: CCP-VA-4-730-U-T4W

Luminous Intensity Polar Plot



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

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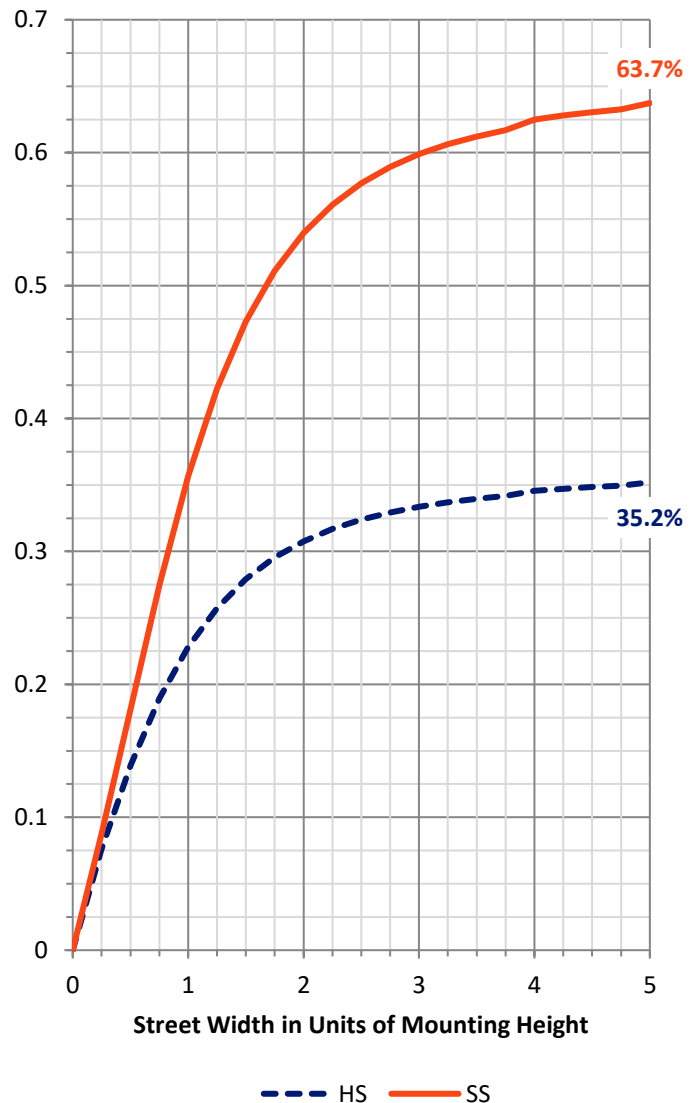
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2189.5	0.0	2189.5
	% Fixture	35.7	0.0	35.7
Street Side	Lumens	3949.8	0.0	3949.8
	% Fixture	64.3	0.0	64.3
Total	Lumens	6139.3	0.0	6139.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.8
10°-20°	166.5	2.7
20°-30°	351.5	5.7
30°-40°	646.9	10.5
40°-50°	1008.3	16.4
50°-60°	1324.9	21.6
60°-70°	1388.2	22.6
70°-80°	962.5	15.7
80°-90°	241.7	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°	6139.3	100.0
0°-180°	6139.3	100.0

Coefficient of Utilization



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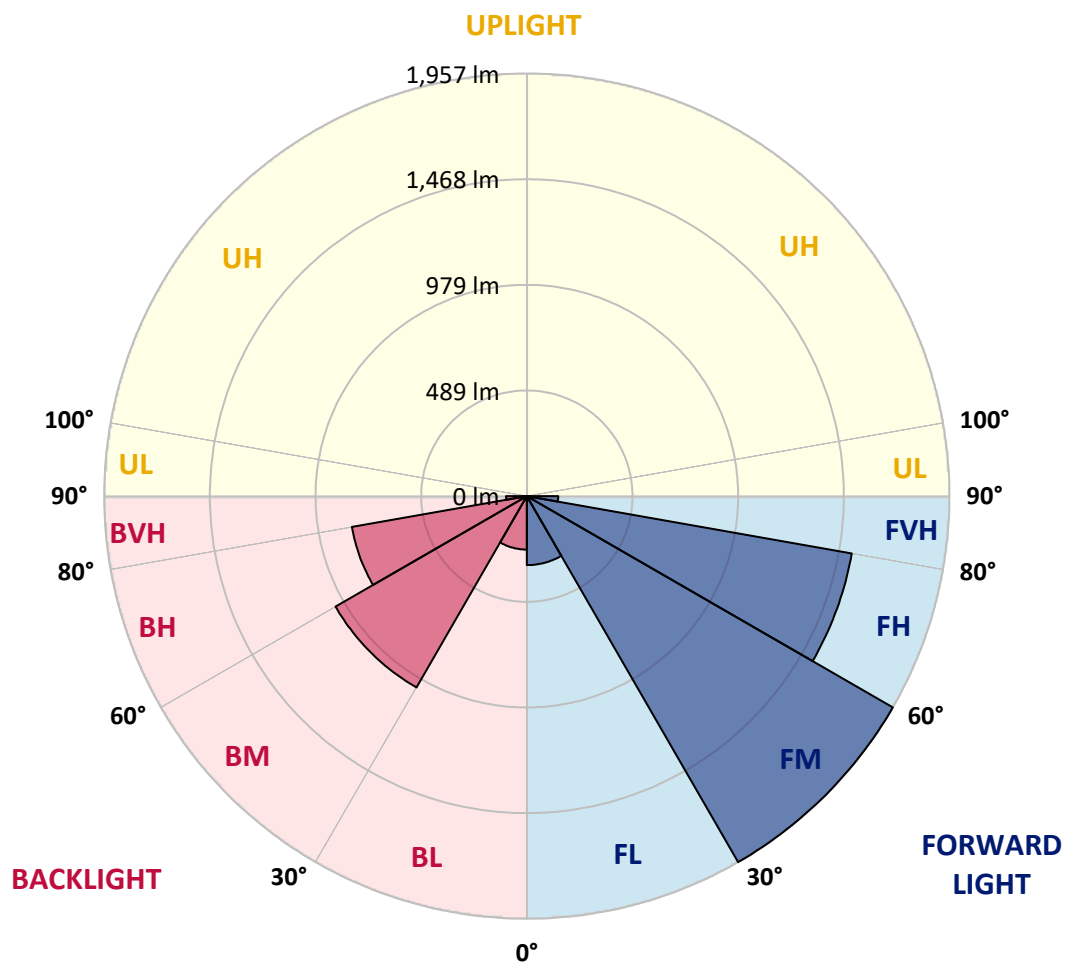
CATALOG NUMBER: CCP-VA-4-730-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	319.4	5.2			
FM	(30°-60°)	1957.1	31.9			
FH	(60°-80°)	1528.1	24.9			G1/1800
FVH	(80°-90°)	145.2	2.4			G2/225
BL	(0°-30°)	247.5	4.0	B1/500		
BM	(30°-60°)	1022.9	16.7	B2/2500		
BH	(60°-80°)	822.7	13.4	B2/1000		G2/1000
BVH	(80°-90°)	96.5	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





REPORT NUMBER: P472150

CATALOG NUMBER: CCP-VA-4-730-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2
2.5°	499.1	499.1	499.1	497.7	497.7	497.7	496.3	496.3	496.3	494.9	493.5
5°	510.1	510.1	508.7	510.1	508.7	507.4	506.0	506.0	506.0	504.6	503.2
7.5°	525.3	526.7	525.3	526.7	525.3	524.0	521.2	521.2	519.8	517.0	514.3
10°	548.8	548.8	548.8	547.5	546.1	544.7	543.3	541.9	540.5	536.4	532.2
12.5°	577.9	577.9	577.9	575.1	575.1	572.3	571.0	569.6	566.8	561.3	555.7
15°	613.8	612.4	616.6	616.6	615.2	615.2	611.0	608.3	605.5	597.2	584.8
17.5°	662.2	660.8	665.0	667.7	667.7	669.1	662.2	659.4	649.8	638.7	622.1
20°	727.2	724.4	728.6	731.3	728.6	731.3	724.4	725.8	712.0	692.6	666.3
22.5°	797.7	797.7	801.8	801.8	803.2	806.0	797.7	793.5	782.5	754.8	721.6
25°	884.8	891.7	891.7	891.7	897.2	898.6	890.3	883.4	868.2	830.9	785.2
27.5°	991.2	989.8	988.5	996.8	996.8	999.5	994.0	991.2	973.3	927.6	858.5
30°	1104.6	1096.3	1101.8	1104.6	1110.1	1114.3	1108.7	1100.4	1078.3	1028.6	942.8
32.5°	1208.3	1213.8	1222.1	1224.9	1233.2	1234.5	1220.7	1220.7	1198.6	1135.0	1046.5
35°	1325.8	1325.8	1347.9	1357.6	1357.6	1365.9	1345.1	1334.1	1318.9	1252.5	1140.5
37.5°	1428.1	1430.8	1448.8	1470.9	1473.7	1486.1	1470.9	1466.8	1439.1	1371.4	1247.0
40°	1523.5	1526.2	1548.4	1574.6	1589.8	1609.2	1594.0	1587.1	1558.0	1480.6	1353.4
42.5°	1598.1	1603.7	1631.3	1670.0	1694.9	1718.4	1711.5	1707.3	1667.2	1585.7	1451.6
45°	1654.8	1664.5	1703.2	1748.8	1783.4	1817.9	1819.3	1811.0	1773.7	1682.5	1547.0
47.5°	1700.4	1711.5	1754.3	1812.4	1864.9	1907.8	1916.1	1906.4	1871.9	1776.5	1632.7
50°	1737.8	1743.3	1791.7	1866.3	1931.3	1985.2	2001.8	1993.5	1963.1	1855.3	1707.3
52.5°	1757.1	1765.4	1820.7	1906.4	1985.2	2050.2	2075.1	2070.9	2035.0	1927.1	1773.7
55°	1766.8	1775.1	1840.1	1938.2	2026.7	2102.7	2133.1	2134.5	2100.0	1992.1	1835.9
57.5°	1755.7	1766.8	1837.3	1946.5	2044.7	2126.2	2173.2	2171.8	2144.2	2041.9	1888.4
59°	1736.4	1744.7	1820.7	1935.4	2041.9	2123.5	2177.4	2178.8	2153.9	2058.5	1911.9
60°	1714.3	1723.9	1801.3	1921.6	2030.8	2113.8	2170.5	2173.2	2152.5	2062.6	1921.6
62.5°	1638.2	1650.7	1736.4	1864.9	1983.8	2062.6	2130.4	2134.5	2123.5	2051.6	1928.5
65°	1531.8	1542.8	1635.5	1772.3	1896.7	1978.3	2041.9	2051.6	2050.2	2001.8	1900.9
67.5°	1401.8	1403.2	1490.3	1639.6	1769.5	1849.7	1910.6	1927.1	1939.6	1907.8	1819.3
70°	1245.6	1244.2	1328.5	1476.5	1606.4	1690.7	1751.6	1762.6	1794.4	1769.5	1697.7
72.5°	1052.1	1068.6	1147.4	1271.9	1400.4	1494.4	1548.4	1569.1	1587.1	1592.6	1533.1
75°	869.6	887.5	949.8	1065.9	1176.5	1263.6	1321.6	1331.3	1364.5	1372.8	1317.5
77.5°	695.4	696.8	742.4	835.0	935.9	1007.8	1054.8	1079.7	1097.7	1114.3	1056.2
80°	488.0	494.9	526.7	593.1	671.9	747.9	786.6	803.2	815.7	826.7	807.4
82.5°	305.5	308.3	329.0	369.1	423.0	465.9	506.0	519.8	522.6	547.5	544.7
85°	145.2	146.5	160.4	179.7	203.2	237.8	253.0	253.0	272.3	290.3	290.3
87.5°	19.4	19.4	23.5	26.3	33.2	42.9	59.4	60.8	71.9	80.2	87.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P472150

CATALOG NUMBER: CCP-VA-4-730-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2	492.2
2.5°	493.5	493.5	493.5	493.5	493.5	492.2	493.5	493.5	493.5	493.5	493.5
5°	503.2	501.8	500.5	499.1	499.1	497.7	497.7	497.7	497.7	497.7	497.7
7.5°	512.9	511.5	510.1	507.4	506.0	504.6	504.6	503.2	503.2	503.2	503.2
10°	529.5	528.1	522.6	518.4	515.7	514.3	512.9	511.5	510.1	510.1	510.1
12.5°	551.6	548.8	539.2	533.6	529.5	526.7	524.0	522.6	521.2	519.8	519.8
15°	579.3	572.3	559.9	551.6	546.1	541.9	537.8	535.0	533.6	532.2	532.2
17.5°	612.4	604.1	587.5	572.3	562.7	555.7	550.2	546.1	544.7	544.7	544.7
20°	653.9	640.1	616.6	595.8	580.6	571.0	562.7	558.5	557.1	555.7	554.4
22.5°	702.3	684.3	649.8	618.0	598.6	584.8	575.1	569.6	565.4	564.0	564.0
25°	757.6	731.3	685.7	647.0	620.7	601.4	588.9	582.0	575.1	572.3	572.3
27.5°	823.9	789.4	728.6	677.4	641.5	618.0	604.1	594.5	587.5	582.0	579.3
30°	895.8	857.1	775.6	710.6	665.0	638.7	622.1	611.0	601.4	591.7	590.3
32.5°	987.1	931.8	832.2	747.9	692.6	659.4	640.1	626.3	613.8	604.1	601.4
35°	1079.7	1013.3	891.7	786.6	718.9	678.8	655.3	640.1	627.6	616.6	615.2
37.5°	1175.1	1104.6	956.7	832.2	749.3	700.9	671.9	655.3	640.1	629.0	627.6
40°	1274.6	1191.7	1023.0	879.2	781.1	723.0	689.8	669.1	652.5	642.8	641.5
42.5°	1368.6	1278.8	1094.9	934.5	818.4	746.5	707.8	685.7	665.0	655.3	653.9
45°	1458.5	1361.7	1166.8	985.7	855.7	771.4	725.8	699.5	677.4	667.7	666.3
47.5°	1540.1	1443.3	1233.2	1041.0	894.5	799.1	745.1	713.3	688.5	678.8	678.8
50°	1613.3	1512.4	1298.1	1092.1	930.4	826.7	761.7	725.8	700.9	691.2	689.8
52.5°	1682.5	1573.2	1354.8	1136.4	965.0	851.6	778.3	735.5	709.2	698.1	696.8
55°	1737.8	1628.5	1401.8	1172.3	988.5	868.2	789.4	741.0	712.0	702.3	700.9
57.5°	1786.1	1674.2	1435.0	1197.2	1003.7	877.9	794.9	741.0	710.6	699.5	698.1
59°	1806.9	1693.5	1446.1	1204.1	1006.4	879.2	793.5	736.9	705.1	694.0	691.2
60°	1817.9	1701.8	1450.2	1205.5	1005.0	876.5	792.1	732.7	699.5	687.1	687.1
62.5°	1829.0	1708.7	1444.7	1194.4	989.8	861.3	778.3	716.1	678.8	665.0	665.0
65°	1805.5	1683.8	1412.9	1164.0	959.4	835.0	752.1	688.5	647.0	633.2	633.2
67.5°	1736.4	1623.0	1354.8	1107.4	909.7	789.4	709.2	644.2	605.5	590.3	586.2
70°	1618.9	1523.5	1263.6	1025.8	841.9	731.3	655.3	593.1	553.0	537.8	532.2
72.5°	1461.3	1367.3	1141.9	926.2	752.1	655.3	588.9	529.5	485.2	470.0	471.4
75°	1244.2	1177.9	984.3	800.4	648.4	558.5	503.2	453.4	416.1	403.7	405.1
77.5°	1009.2	953.9	797.7	652.5	529.5	460.4	413.4	373.3	348.4	341.5	337.3
80°	772.8	718.9	598.6	486.6	402.3	353.9	322.1	294.5	275.1	265.4	268.2
82.5°	518.4	485.2	396.8	322.1	273.7	239.2	228.1	210.1	203.2	197.7	201.8
85°	279.3	250.2	207.4	172.8	150.7	141.0	143.8	142.4	136.9	135.5	139.6
87.5°	91.2	78.8	60.8	51.2	52.5	47.0	47.0	44.2	40.1	38.7	41.5
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: SP1-2005-785-12

Luminaire Tested: WIS-VA-3-730-U-T4FT

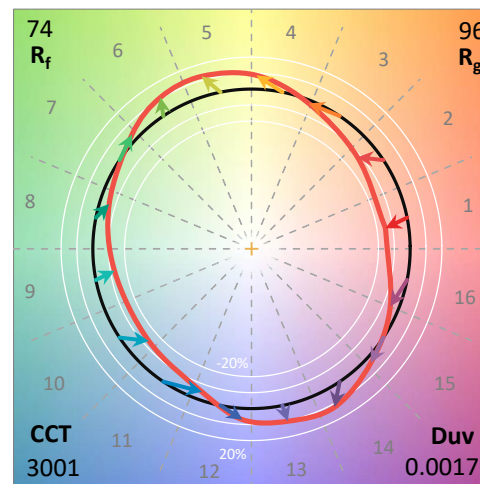
Test Date: 08/05/2020

Test Information

Test Method: LM-79-08
 Report Number: SP1-2005-785-12
 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-3-730-U-T4FT**
 Description: INVUE WALL PACK VA

Spectral Parameters

CCT (K):	3001	CRI (Ra):	72.2		
CIE u':	0.2499	R1:	69.4	R9:	-20.6
CIE v':	0.5237	R2:	79.9	R10:	52.6
Duv:	0.0017	R3:	88.8	R11:	64.3
CIE x:	0.4392	R4:	70.1	R12:	42.4
CIE y:	0.4092	R5:	67.3	R13:	70.8
CIE z:	0.1516	R6:	71.0	R14:	93.2
Peak Wavelength (nm):	596	R7:	80.7		
Dominant Wavelength (nm):	582	R8:	50.1		
Purity:	54.8				
Rf:	74				
Rg:	96.3				



Test Conditions

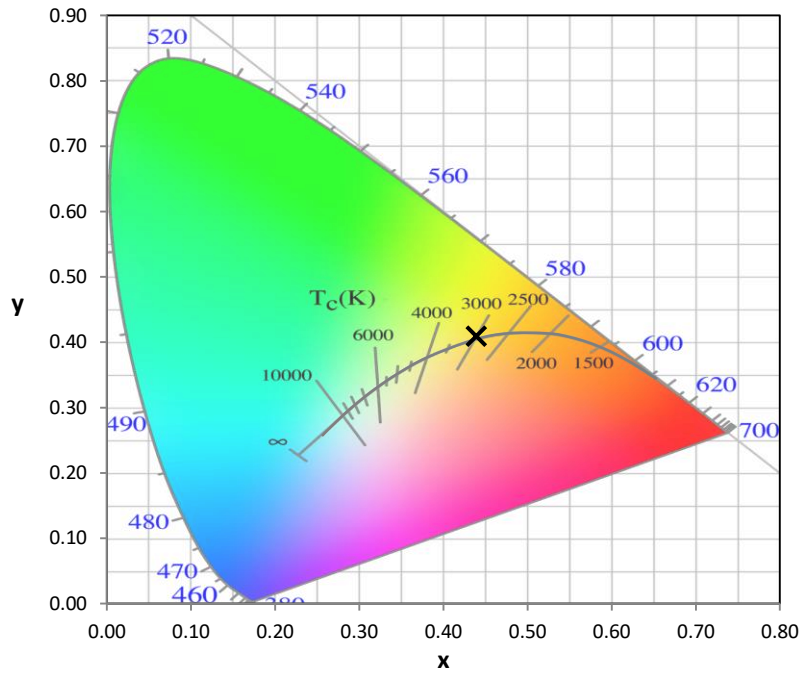
Stabilization Time: 224M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.1/45%
 Sphere Temperature (°C): 24.5

REPORT NUMBER: SP1-2005-785-12

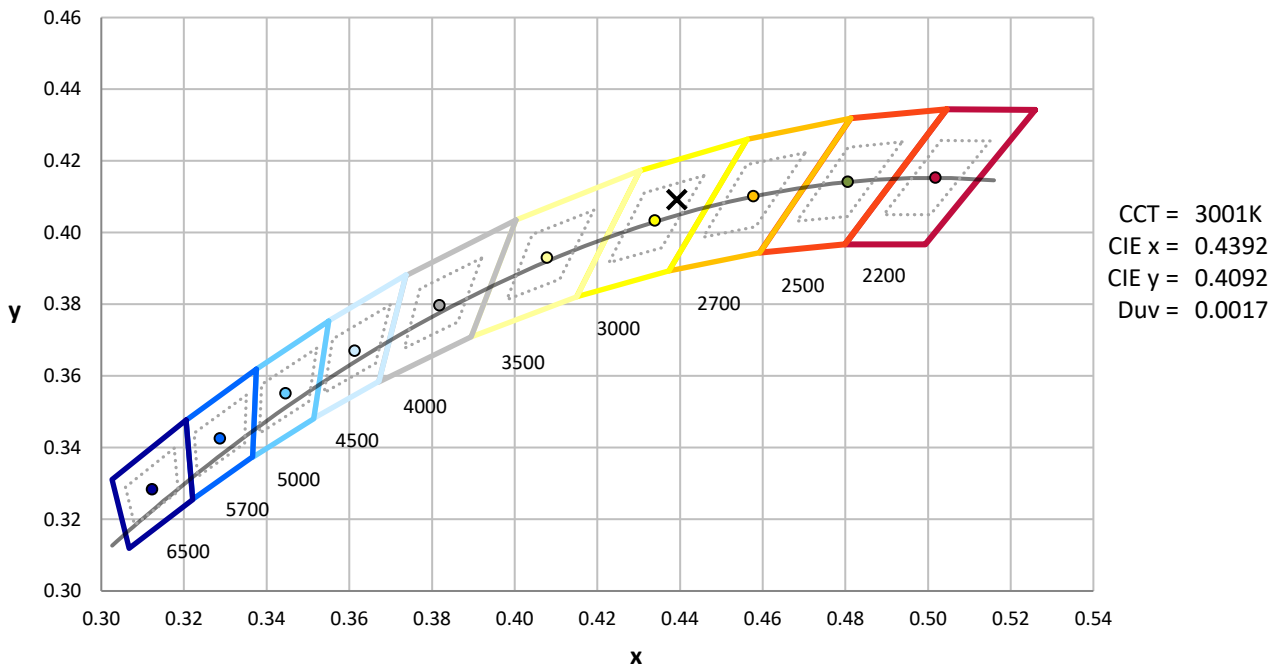
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2020	12/3/2020
AC Power Source	IN0063	12/3/2020	12/3/2020
DC Power Source	IN0208	12/3/2020	12/3/2020
Sphere Thermometer	IN0085	12/3/2020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

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CIE 1931 Chromaticity Diagram



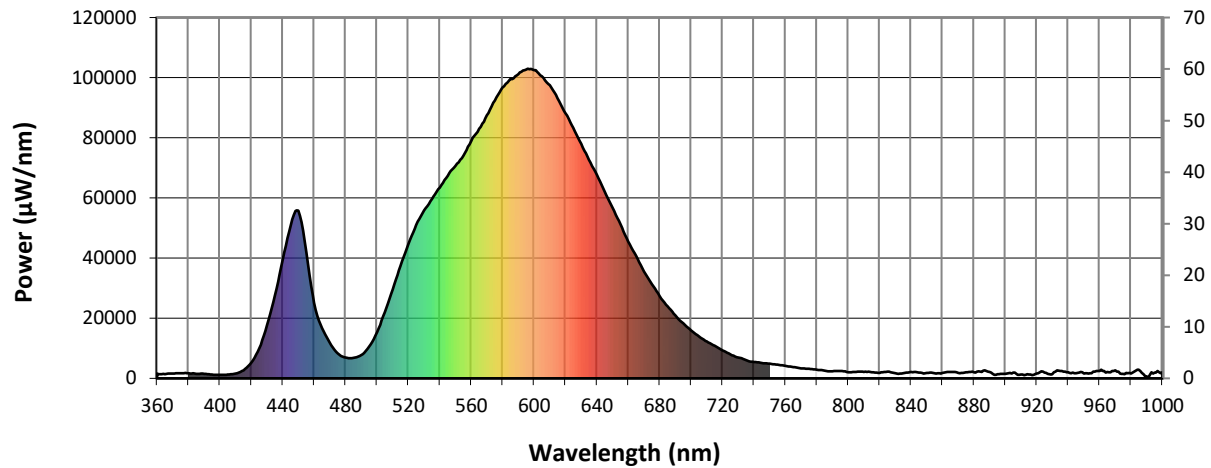
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

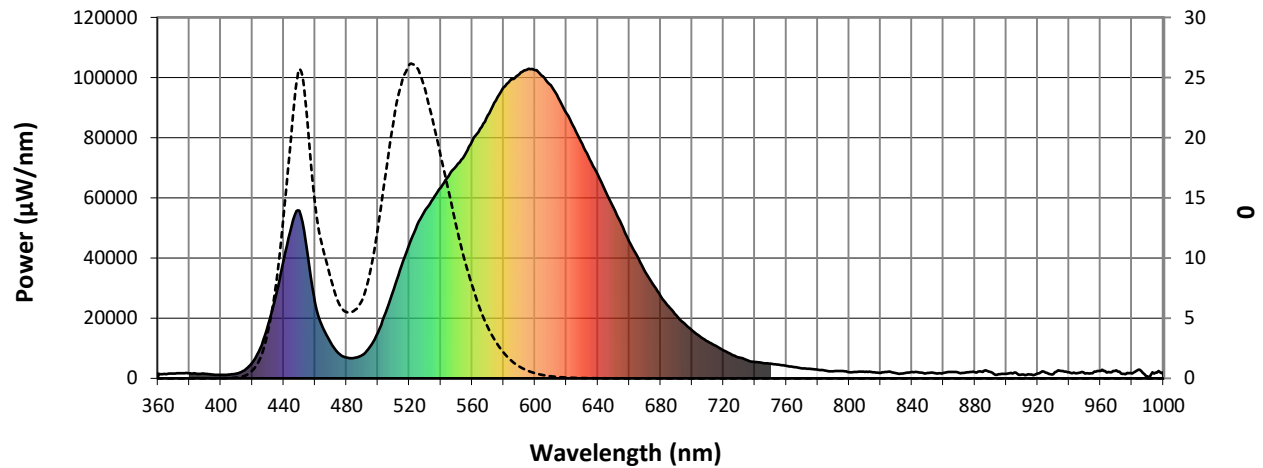


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1553	0.0	490	7749	1.1	620	88163	22.9	750	4860	0.0	880	2002	0.0
365	1406	0.0	495	10521	1.9	625	83314	18.4	755	4547	0.0	885	2104	0.0
370	1630	0.0	500	15321	3.4	630	77966	14.1	760	4124	0.0	890	2082	0.0
375	1742	0.0	505	21975	6.1	635	72701	10.9	765	3778	0.0	895	1426	0.0
380	1686	0.0	510	29537	10.1	640	67637	8.1	770	3332	0.0	900	1502	0.0
385	1515	0.0	515	37333	15.5	645	61939	6.0	775	3155	0.0	905	1884	0.0
390	1465	0.0	520	44726	21.7	650	56749	4.1	780	2911	0.0	910	1328	0.0
395	1253	0.0	525	50925	27.3	655	51182	2.9	785	2558	0.0	915	1305	0.0
400	1156	0.0	530	55854	32.9	660	45414	1.9	790	2396	0.0	920	1589	0.0
405	1281	0.0	535	59711	37.0	665	40629	1.3	795	2466	0.0	925	1880	0.0
410	1647	0.0	540	63474	41.4	670	35574	0.8	800	2065	0.0	930	1434	0.0
415	2712	0.0	545	67390	44.9	675	31317	0.5	805	2152	0.0	935	2480	0.0
420	5263	0.0	550	70613	48.0	680	27395	0.3	810	2113	0.0	940	2024	0.0
425	10012	0.1	555	74075	50.6	685	23908	0.2	815	2020	0.0	945	1700	0.0
430	17664	0.1	560	78808	53.6	690	20957	0.1	820	1840	0.0	950	1629	0.0
435	27706	0.3	565	82958	55.2	695	18267	0.1	825	2206	0.0	955	1698	0.0
440	39387	0.6	570	87513	56.9	700	15989	0.0	830	1704	0.0	960	2493	0.0
445	50727	1.1	575	92415	57.5	705	13948	0.0	835	1701	0.0	965	2158	0.0
450	55755	1.4	580	96716	57.5	710	12200	0.0	840	2126	0.0	970	2710	0.0
455	41884	1.4	585	99644	55.4	715	10850	0.0	845	1886	0.0	975	1447	0.0
460	25150	1.0	590	101206	52.3	720	9311	0.0	850	1845	0.0	980	1552	0.0
465	16745	0.9	595	102695	48.7	725	7967	0.0	855	1705	0.0	985	2874	0.0
470	11761	0.7	600	102511	44.2	730	6933	0.0	860	1822	0.0	990	607	0.0
475	8317	0.7	605	100509	38.9	735	6045	0.0	865	2103	0.0	995	1946	0.0
480	6887	0.7	610	97458	33.5	740	5451	0.0	870	1773	0.0	1000	2027	0.0
485	6810	0.8	615	93084	28.1	745	5138	0.0	875	1989	0.0			

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Scotopic Flux vs. Wavelength



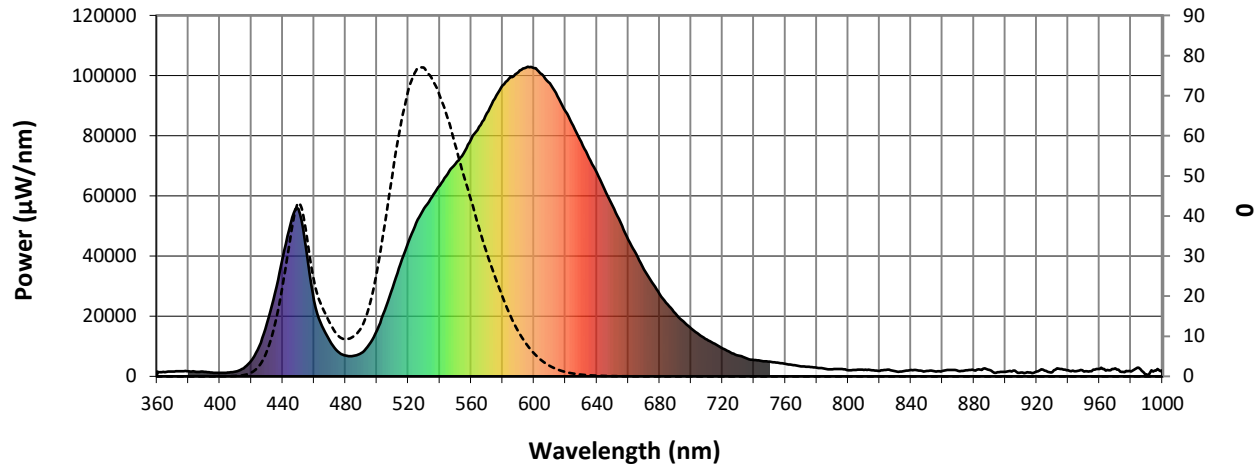
Scotopic Lumens: 2088.6

S/P: 0.41

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	1553	0.0	490	7749	11.9	620	88163	1.1	750	4860	0.0	880	2002	0.0
365	1406	0.0	495	10521	17.0	625	83314	0.7	755	4547	0.0	885	2104	0.0
370	1630	0.0	500	15321	25.6	630	77966	0.4	760	4124	0.0	890	2082	0.0
375	1742	0.0	505	21975	37.4	635	72701	0.3	765	3778	0.0	895	1426	0.0
380	1686	0.0	510	29537	50.1	640	67637	0.2	770	3332	0.0	900	1502	0.0
385	1515	0.0	515	37333	61.9	645	61939	0.1	775	3155	0.0	905	1884	0.0
390	1465	0.0	520	44726	71.1	650	56749	0.1	780	2911	0.0	910	1328	0.0
395	1253	0.0	525	50925	76.2	655	51182	0.0	785	2558	0.0	915	1305	0.0
400	1156	0.0	530	55854	77.0	660	45414	0.0	790	2396	0.0	920	1589	0.0
405	1281	0.0	535	59711	74.4	665	40629	0.0	795	2466	0.0	925	1880	0.0
410	1647	0.1	540	63474	70.1	670	35574	0.0	800	2065	0.0	930	1434	0.0
415	2712	0.3	545	67390	64.6	675	31317	0.0	805	2152	0.0	935	2480	0.0
420	5263	0.9	550	70613	57.7	680	27395	0.0	810	2113	0.0	940	2024	0.0
425	10012	2.4	555	74075	50.6	685	23908	0.0	815	2020	0.0	945	1700	0.0
430	17664	6.0	560	78808	44.1	690	20957	0.0	820	1840	0.0	950	1629	0.0
435	27706	12.4	565	82958	37.2	695	18267	0.0	825	2206	0.0	955	1698	0.0
440	39387	22.0	570	87513	30.9	700	15989	0.0	830	1704	0.0	960	2493	0.0
445	50727	34.0	575	92415	25.2	705	13948	0.0	835	1701	0.0	965	2158	0.0
450	55755	43.2	580	96716	19.9	710	12200	0.0	840	2126	0.0	970	2710	0.0
455	41884	36.6	585	99644	15.2	715	10850	0.0	845	1886	0.0	975	1447	0.0
460	25150	24.3	590	101206	11.3	720	9311	0.0	850	1845	0.0	980	1552	0.0
465	16745	17.7	595	102695	8.2	725	7967	0.0	855	1705	0.0	985	2874	0.0
470	11761	13.5	600	102511	5.8	730	6933	0.0	860	1822	0.0	990	607	0.0
475	8317	10.4	605	100509	4.0	735	6045	0.0	865	2103	0.0	995	1946	0.0
480	6887	9.3	610	97458	2.6	740	5451	0.0	870	1773	0.0	1000	2027	0.0
485	6810	9.9	615	93084	1.7	745	5138	0.0	875	1989	0.0			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 5988.3

S/P: 1.17

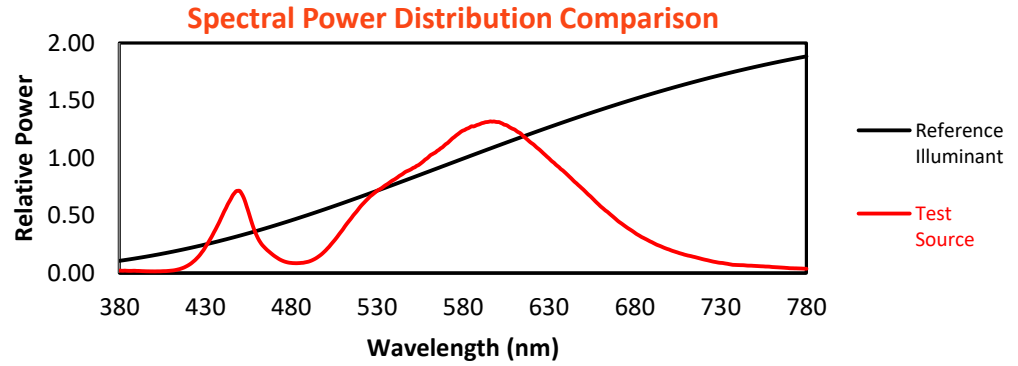
λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1553	0.0	490	7749	6.4	620	88163	0.1	750	4860	0.0	880	2002	0.0
365	1406	0.0	495	10521	8.7	625	83314	0.0	755	4547	0.0	885	2104	0.0
370	1630	0.0	500	15321	12.3	630	77966	0.0	760	4124	0.0	890	2082	0.0
375	1742	0.0	505	21975	16.9	635	72701	0.0	765	3778	0.0	895	1426	0.0
380	1686	0.0	510	29537	21.2	640	67637	0.0	770	3332	0.0	900	1502	0.0
385	1515	0.0	515	37333	24.4	645	61939	0.0	775	3155	0.0	905	1884	0.0
390	1465	0.0	520	44726	26.0	650	56749	0.0	780	2911	0.0	910	1328	0.0
395	1253	0.0	525	50925	25.8	655	51182	0.0	785	2558	0.0	915	1305	0.0
400	1156	0.0	530	55854	24.1	660	45414	0.0	790	2396	0.0	920	1589	0.0
405	1281	0.0	535	59711	21.5	665	40629	0.0	795	2466	0.0	925	1880	0.0
410	1647	0.1	540	63474	18.6	670	35574	0.0	800	2065	0.0	930	1434	0.0
415	2712	0.2	545	67390	15.7	675	31317	0.0	805	2152	0.0	935	2480	0.0
420	5263	0.6	550	70613	12.7	680	27395	0.0	810	2113	0.0	940	2024	0.0
425	10012	1.6	555	74075	10.0	685	23908	0.0	815	2020	0.0	945	1700	0.0
430	17664	3.7	560	78808	7.8	690	20957	0.0	820	1840	0.0	950	1629	0.0
435	27706	7.4	565	82958	5.8	695	18267	0.0	825	2206	0.0	955	1698	0.0
440	39387	13.2	570	87513	4.3	700	15989	0.0	830	1704	0.0	960	2493	0.0
445	50727	20.0	575	92415	3.1	705	13948	0.0	835	1701	0.0	965	2158	0.0
450	55755	25.7	580	96716	2.2	710	12200	0.0	840	2126	0.0	970	2710	0.0
455	41884	21.9	585	99644	1.5	715	10850	0.0	845	1886	0.0	975	1447	0.0
460	25150	14.8	590	101206	1.0	720	9311	0.0	850	1845	0.0	980	1552	0.0
465	16745	10.9	595	102695	0.7	725	7967	0.0	855	1705	0.0	985	2874	0.0
470	11761	8.4	600	102511	0.4	730	6933	0.0	860	1822	0.0	990	607	0.0
475	8317	6.4	605	100509	0.3	735	6045	0.0	865	2103	0.0	995	1946	0.0
480	6887	5.5	610	97458	0.2	740	5451	0.0	870	1773	0.0	1000	2027	0.0
485	6810	5.6	615	93084	0.1	745	5138	0.0	875	1989	0.0			

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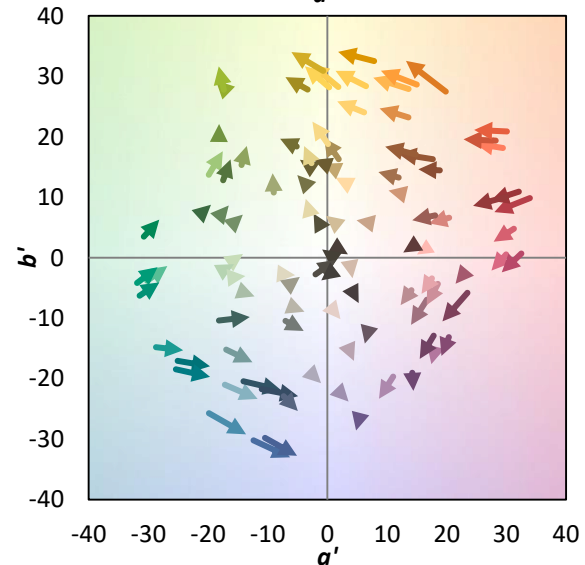
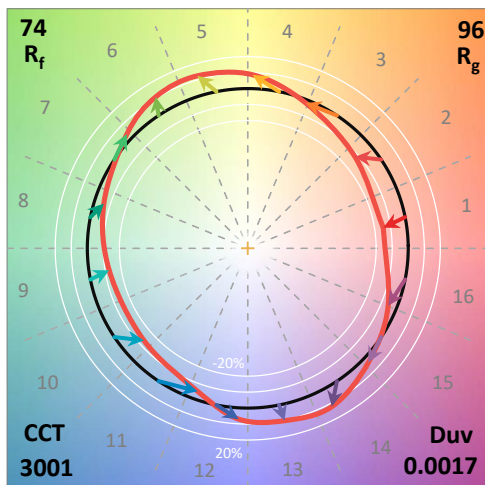
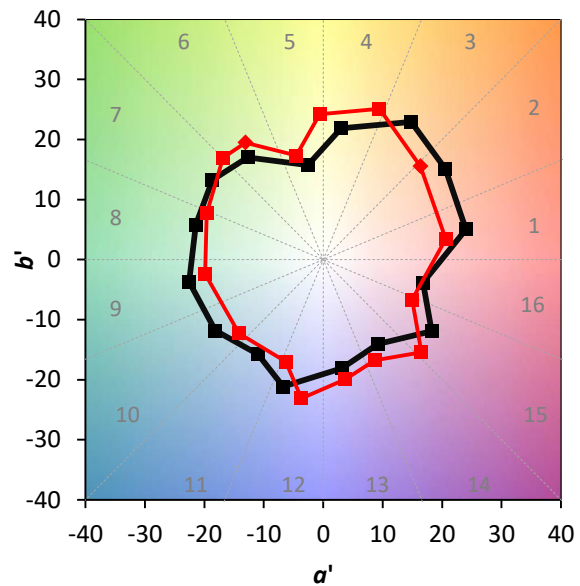
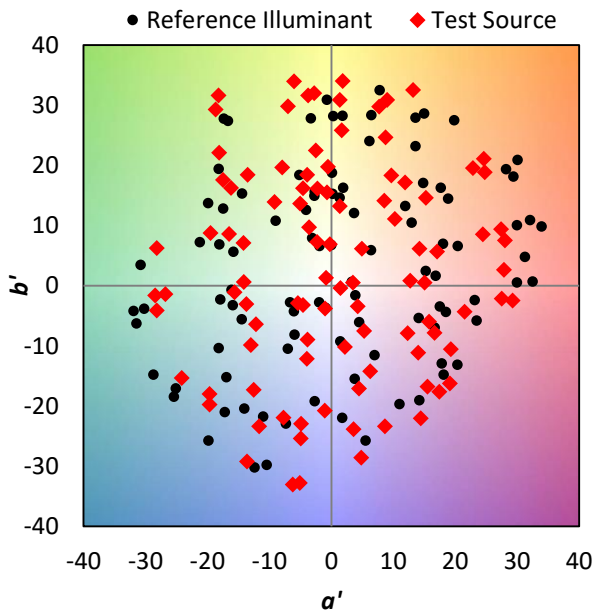
TM-30-18

Summary

$R_f = 74$
 $R_g = 96.3$
 CIE $R_a = 72.2$
 $R_g = -20.6$

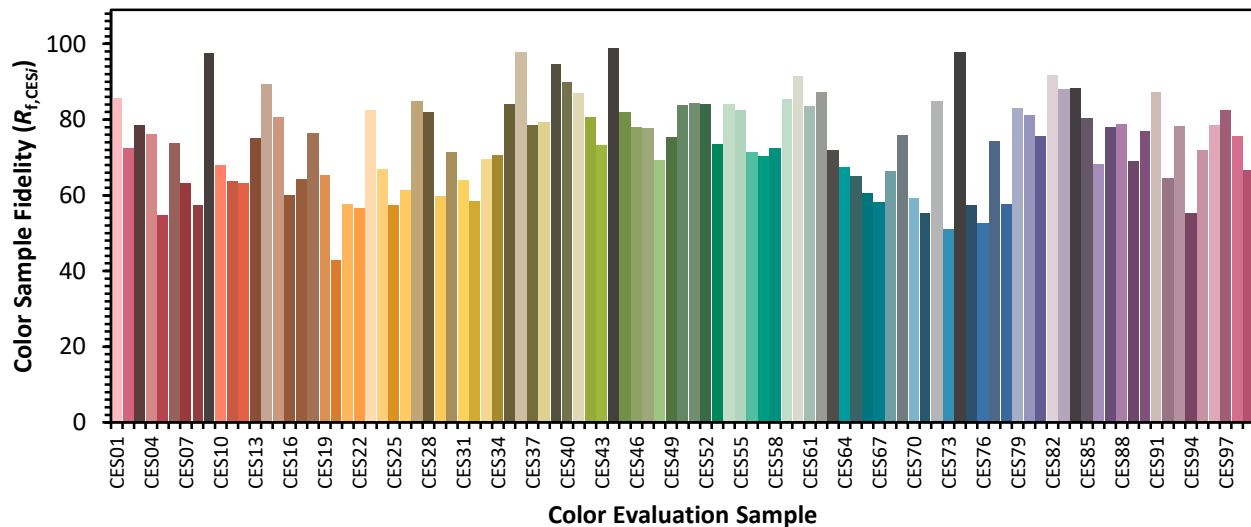


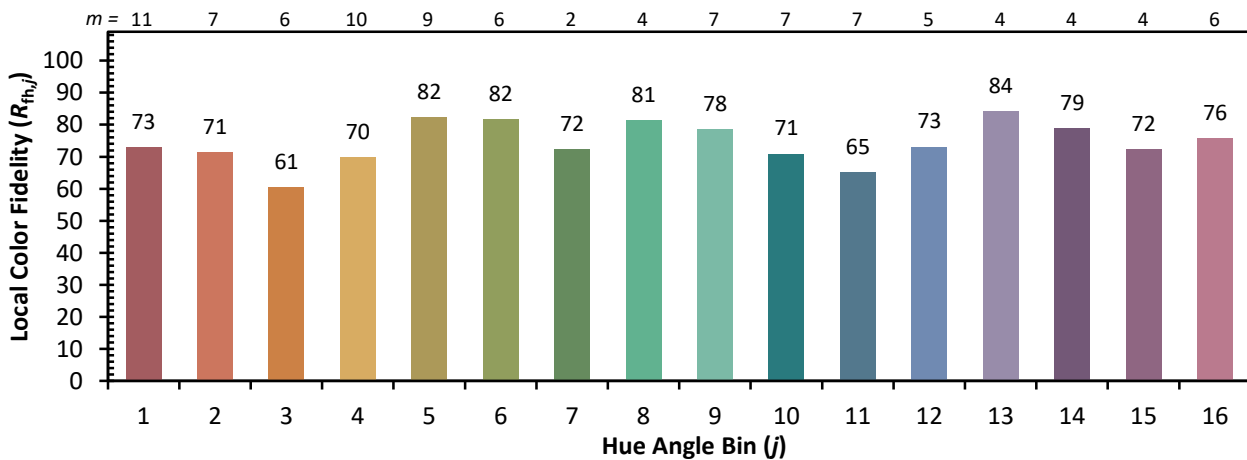
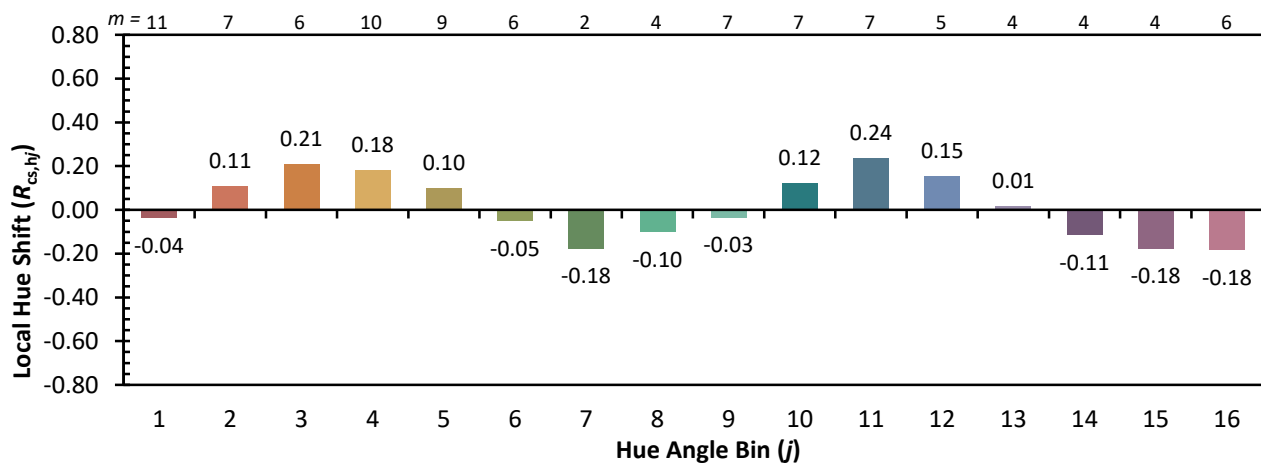
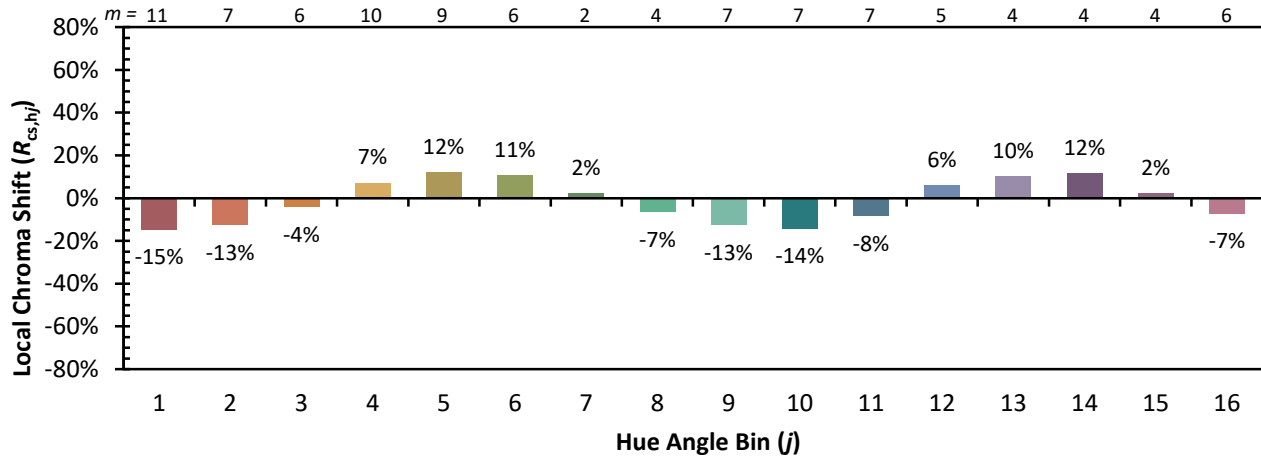
Color Vector Graphics

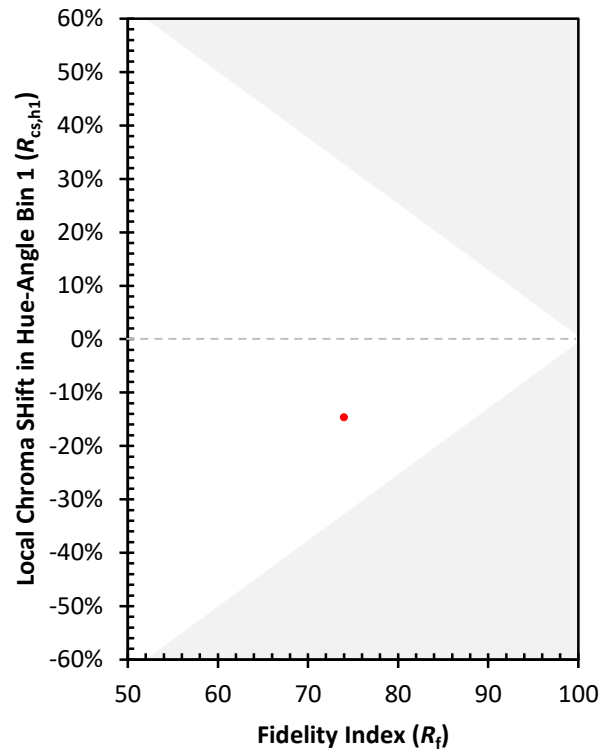
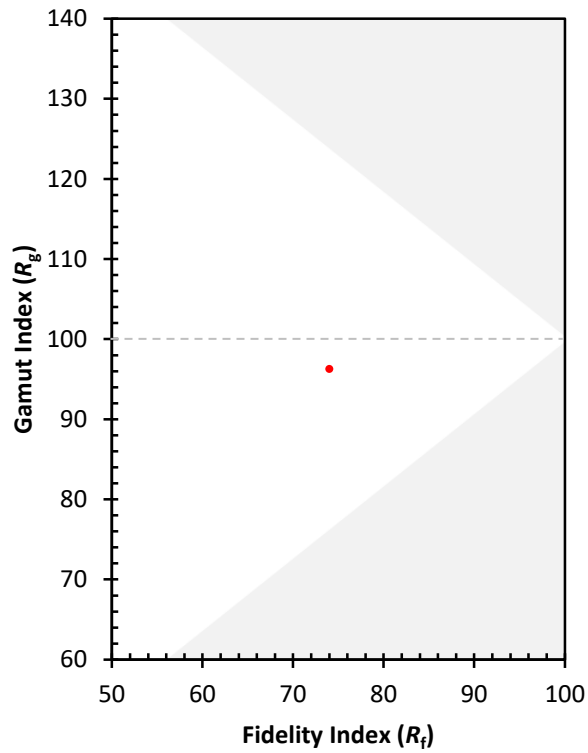


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 61	CES51 = 84	CES76 = 53
CES02 = 62	CES27 = 85	CES52 = 84	CES77 = 74
CES03 = 31	CES28 = 82	CES53 = 74	CES78 = 58
CES04 = 71	CES29 = 60	CES54 = 84	CES79 = 83
CES05 = 49	CES30 = 71	CES55 = 82	CES80 = 81
CES06 = 51	CES31 = 64	CES56 = 71	CES81 = 76
CES07 = 42	CES32 = 58	CES57 = 70	CES82 = 92
CES08 = 40	CES33 = 70	CES58 = 72	CES83 = 88
CES09 = 29	CES34 = 71	CES59 = 85	CES84 = 88
CES10 = 76	CES35 = 84	CES60 = 91	CES85 = 80
CES11 = 59	CES36 = 98	CES61 = 83	CES86 = 68
CES12 = 65	CES37 = 79	CES62 = 87	CES87 = 78
CES13 = 43	CES38 = 79	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 67	CES89 = 69
CES15 = 71	CES40 = 90	CES65 = 65	CES90 = 77
CES16 = 47	CES41 = 87	CES66 = 61	CES91 = 87
CES17 = 50	CES42 = 81	CES67 = 58	CES92 = 65
CES18 = 56	CES43 = 73	CES68 = 66	CES93 = 78
CES19 = 73	CES44 = 99	CES69 = 76	CES94 = 55
CES20 = 66	CES45 = 82	CES70 = 59	CES95 = 72
CES21 = 87	CES46 = 78	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 78	CES72 = 85	CES97 = 82
CES23 = 92	CES48 = 69	CES73 = 51	CES98 = 75
CES24 = 91	CES49 = 75	CES74 = 98	CES99 = 67
CES25 = 73	CES50 = 84	CES75 = 57	



Color Rendition by Hue-Angle Bin


Measure Comparisons


(END OF REPORT)