Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P630581

Luminaire Tested: GWS-SA1D-830-U-T3R-W-GRSWH

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P630581
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA1D-830-U-T3R-W-GRSWH
Description:	GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source:	(16) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4223.2 lumens
Efficiency:	N/A
Efficacy:	95.3 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B1 - U0 - G1

Input Watts (W):	44.3
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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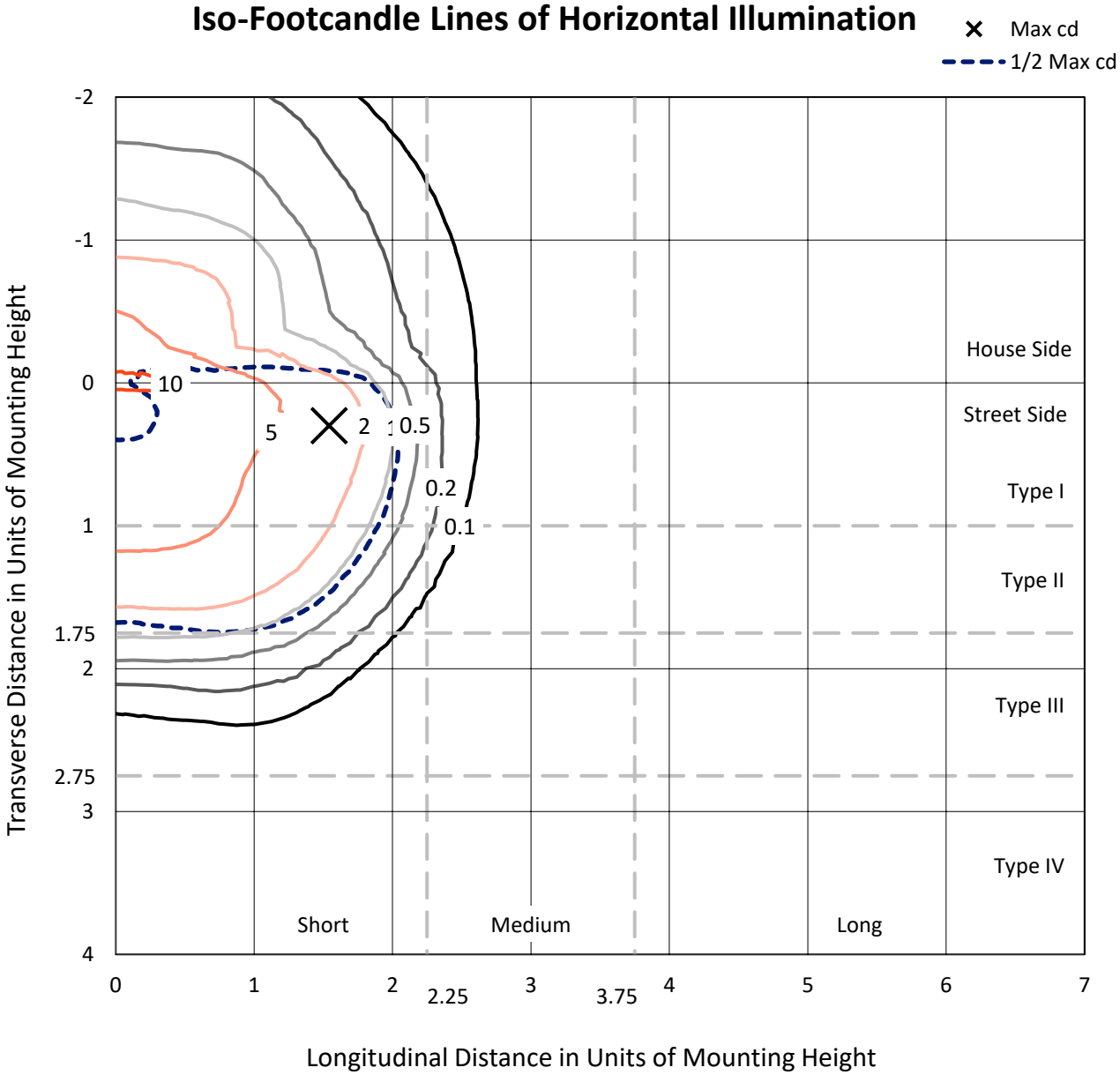
REPORT NUMBER: P630581
CATALOG NUMBER: GWS-SA1D-830-U-T3R-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination



Based on 10 foot mounting height. Maximum calculated value = 10.6 fc
Type II - Short - N/A

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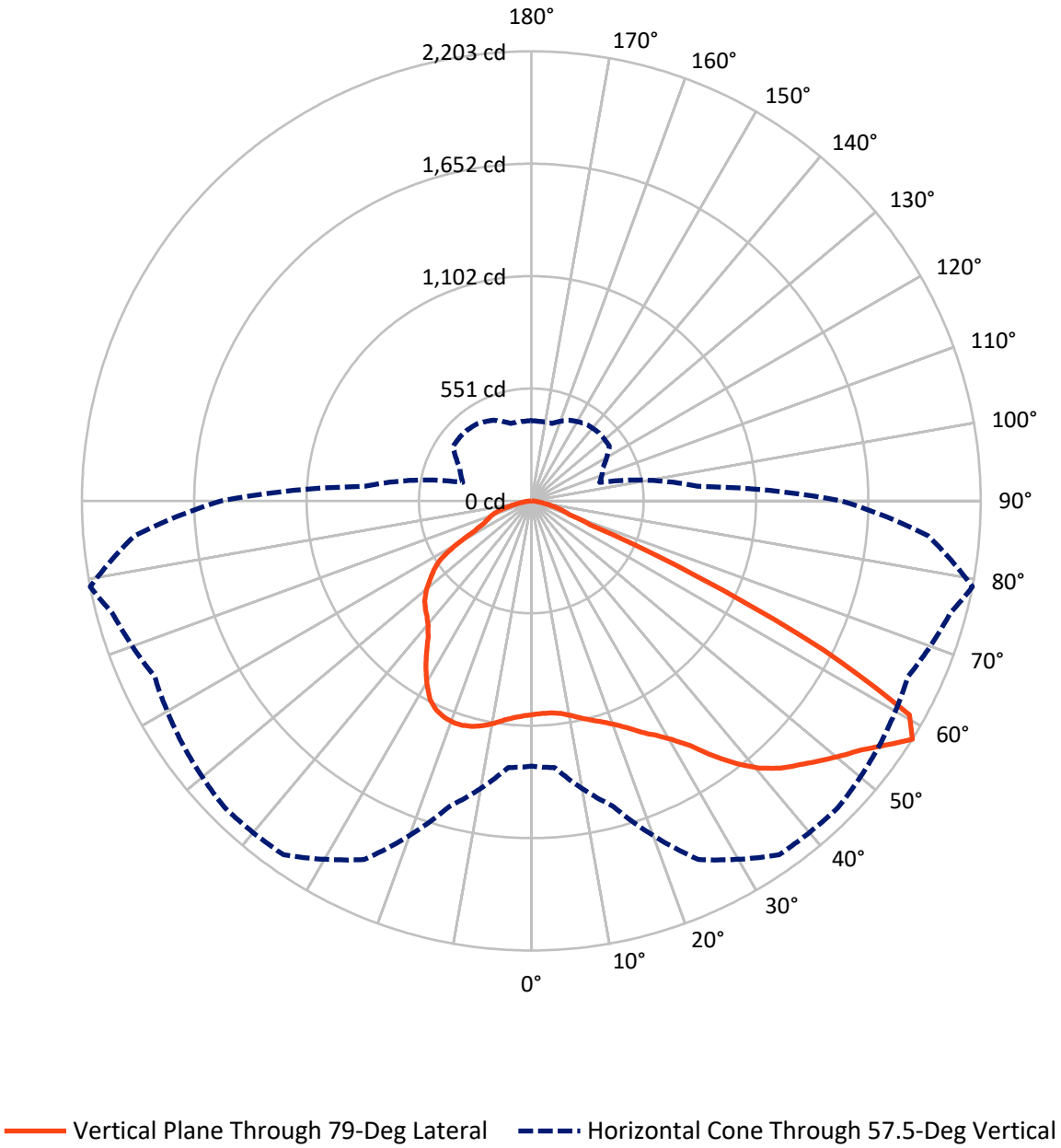
Luminous Intensity Polar Plot



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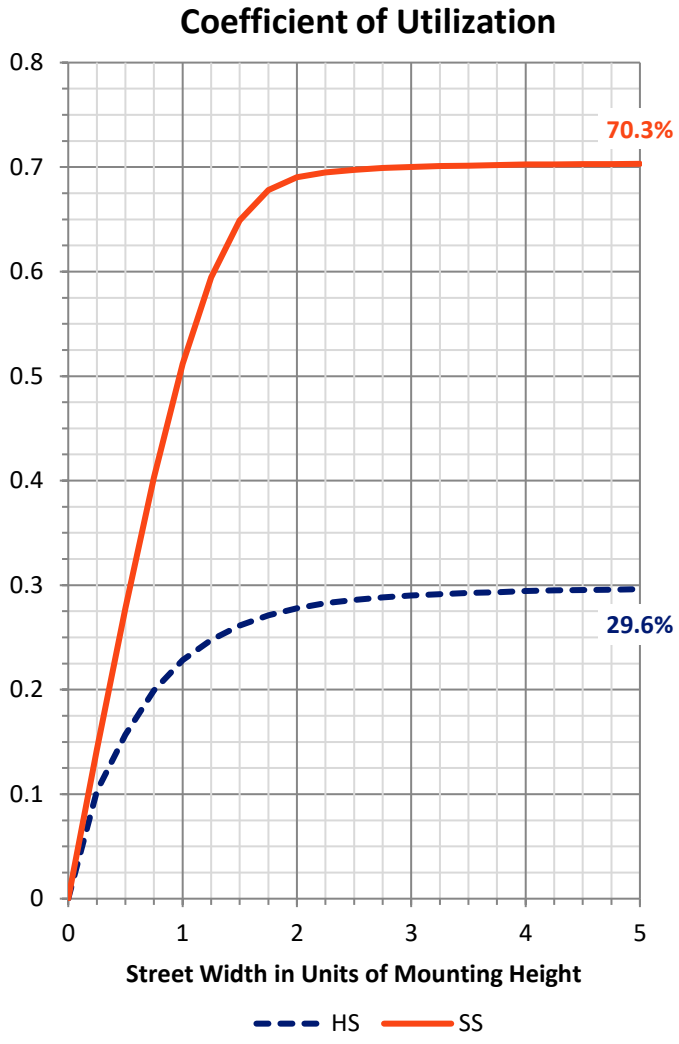
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1255.3	0.0	1255.3
	% Fixture	29.7	0.0	29.7
Street Side	Lumens	2967.8	0.0	2967.8
	% Fixture	70.3	0.0	70.3
Total	Lumens	4223.2	0.0	4223.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	2.3
10°-20°	269.4	6.4
20°-30°	456.6	10.8
30°-40°	698.8	16.5
40°-50°	931.8	22.1
50°-60°	1076.2	25.5
60°-70°	559.2	13.2
70°-80°	118.9	2.8
80°-90°	15.4	0.4
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°	4223.2	100.0
0°-180°	4223.2	100.0



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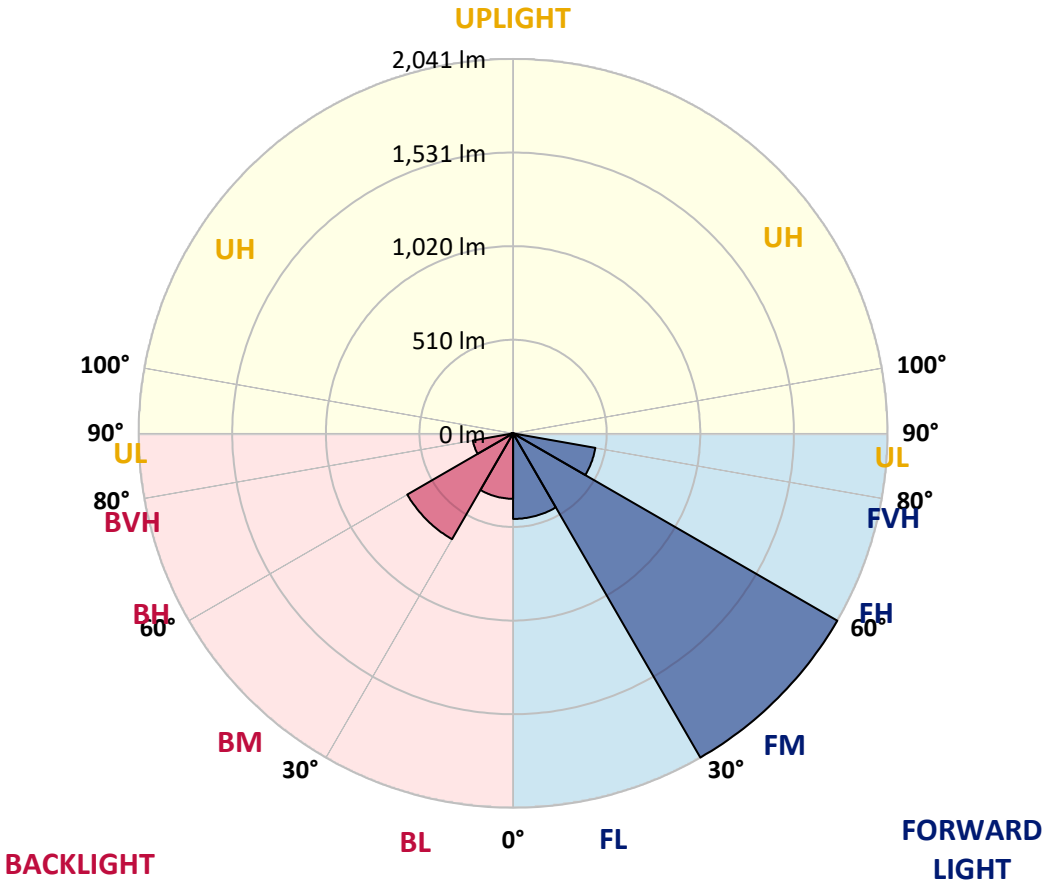
REPORT NUMBER: P630581
CATALOG NUMBER: GWS-SA1D-830-U-T3R-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	466.3	11.0			
FM	(30°-60°)	2040.8	48.3			
FH	(60°-80°)	455.4	10.8			G0/660
FVH	(80°-90°)	5.4	0.1			G0/10
BL	(0°-30°)	356.5	8.4	B1/500		
BM	(30°-60°)	666.1	15.8	B1/1000		
BH	(60°-80°)	222.7	5.3	B1/500		G1/500
BVH	(80°-90°)	10.0	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
Type II Short



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Scaled Data Report

REPORT NUMBER: P630581
CATALOG NUMBER: GWS-SA1D-830-U-T3R-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	*1046.6*	1046.6
2.5°	999.0	996.9	997.6	1000.3	1010.7	1018.3	1026.2	1033.5	1040.4	*1042.5*	1044.2
5°	963.4	959.6	960.6	965.1	977.2	990.0	1004.1	1021.4	1038.0	*1043.5*	1050.8
7.5°	938.2	937.5	939.2	946.1	958.9	971.0	989.3	1013.8	1042.5	*1051.8*	1064.6
10°	904.7	903.3	910.2	924.4	945.4	964.8	986.5	1015.5	1055.6	*1069.4*	1089.1
12.5°	878.1	877.4	884.7	904.3	931.3	962.0	992.0	1024.5	1073.2	*1092.2*	1116.4
15°	893.6	890.5	890.9	904.7	928.9	965.1	1005.9	1040.7	1090.8	*1115.0*	1146.1
17.5°	938.9	933.3	929.2	931.6	945.4	983.1	1026.9	1062.5	1111.2	*1139.5*	1177.5
20°	1001.4	998.3	986.9	979.3	982.4	1015.5	1060.1	1093.2	1137.8	*1169.5*	1210.3
22.5°	1085.3	1077.7	1062.1	1050.1	1040.7	1066.6	1107.7	1136.4	1174.7	*1207.9*	1250.3
25°	1189.2	1178.2	1153.6	1134.7	1114.6	1141.2	1177.8	1199.6	1225.5	*1256.2*	1296.6
27.5°	1295.2	1285.9	1258.6	1233.1	1208.2	1224.8	1268.3	1280.7	1278.0	*1300.4*	1334.9
30°	1408.1	1396.4	1370.5	1342.9	1310.8	1321.5	1360.5	1366.7	1337.3	*1356.0*	1379.5
32.5°	1527.3	1515.9	1493.4	1461.3	1425.1	1429.2	1439.9	1445.8	1417.8	*1428.5*	1446.5
35°	1648.5	1637.8	1615.0	1583.2	1556.6	1531.4	1504.5	1528.0	1511.7	*1532.4*	1531.1
37.5°	1759.3	1748.6	1734.4	1709.9	1664.3	1614.6	1552.5	1581.5	1606.7	*1632.9*	1628.4
40°	1834.2	1827.0	1830.4	1826.6	1767.9	1669.5	1576.0	1607.7	1676.4	*1721.3*	1718.9
42.5°	1898.8	1891.6	1911.6	1926.1	1857.0	1720.3	1587.3	1617.7	1721.0	*1791.1*	1787.6
45°	1927.5	1925.4	1958.5	2004.5	1938.5	1774.2	1616.7	1638.5	1754.8	*1844.6*	1831.5
47.5°	1893.3	1900.5	1965.8	2043.5	2006.2	1838.0	1676.8	1682.3	1799.0	*1902.6*	1865.7
50°	1825.3	1841.1	1929.2	2044.5	2055.6	1910.2	1760.0	1746.2	1858.4	*1964.4*	1883.6
52.5°	1726.2	1742.7	1886.4	2036.6	2083.9	1993.8	1870.8	1851.2	1933.3	*2026.2*	1886.7
55°	1498.6	1521.0	1788.3	2018.6	2111.5	2069.7	1995.8	1955.8	2030.0	*2111.2*	1917.5
57.5°	*1300.1*	*1311.8*	*1549.4*	*1938.9*	*2117.0*	*2125.7*	*2084.9*	*2037.3*	*2126.0*	*2203.0*	*1952.0*
60°	954.1	956.8	1170.6	1604.3	1947.5	2093.2	2077.7	2006.9	2080.4	*2129.5*	1793.8
62.5°	539.0	539.4	709.9	1070.8	1454.8	1706.1	1715.8	1653.3	1591.5	*1606.0*	1248.6
65°	202.3	221.3	324.2	526.2	838.7	1007.2	1047.3	1061.8	958.9	*895.0*	669.5
67.5°	135.4	139.8	189.2	270.7	373.3	430.9	482.0	483.4	353.6	*315.3*	263.8
70°	103.2	107.7	148.8	193.7	189.2	174.7	188.9	183.7	189.9	*195.1*	200.6
72.5°	77.0	81.5	115.3	136.7	113.6	111.9	126.7	140.9	154.0	*159.5*	168.2
75°	51.1	54.6	77.7	73.2	62.8	74.2	92.5	106.7	114.3	*120.9*	127.4
77.5°	32.5	34.9	41.4	33.5	34.9	43.5	53.9	66.6	73.9	*80.5*	83.9
80°	14.8	14.5	14.2	15.9	19.7	25.6	32.5	40.1	45.6	*48.3*	50.4
82.5°	5.9	6.6	7.3	8.6	10.7	13.8	18.3	23.5	28.0	*28.7*	30.4
85°	2.4	2.8	3.1	3.8	4.8	6.2	7.6	10.7	13.5	*14.5*	15.5
87.5°	0.0	0.0	0.0	0.0	0.3	0.7	1.0	1.7	3.1	*3.5*	3.8
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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Scaled Data Report

REPORT NUMBER: P630581
CATALOG NUMBER: GWS-SA1D-830-U-T3R-W-GRSWH

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6	1046.6
2.5°	1053.5	1049.0	1056.6	1061.8	1066.6	1061.5	1059.7	1055.2	1054.5	1054.5	1057.0
5°	1063.2	1060.1	1068.0	1071.1	1070.8	1059.4	1052.5	1043.5	1039.0	1039.0	1039.7
7.5°	1080.4	1078.7	1083.2	1078.4	1067.3	1044.2	1021.4	1002.4	989.6	983.1	985.1
10°	1109.1	1107.0	1103.2	1085.3	1053.5	1005.5	958.9	924.4	903.7	891.9	892.6
12.5°	1137.1	1133.6	1120.2	1080.4	1015.2	938.9	877.8	839.1	816.3	802.5	799.4
15°	1167.8	1158.8	1129.8	1055.6	952.7	857.4	793.5	751.7	727.2	718.9	718.6
17.5°	1197.2	1181.3	1128.8	1011.4	877.8	772.1	707.9	682.0	677.8	681.6	682.7
20°	1226.9	1201.3	1117.4	950.3	788.7	687.1	654.0	664.7	680.2	690.6	693.0
22.5°	1257.6	1217.9	1091.5	871.5	694.7	629.8	643.6	667.1	686.5	700.3	701.7
25°	1292.1	1233.4	1052.8	775.2	619.5	613.9	641.2	666.1	686.8	702.7	705.4
27.5°	1311.8	1233.8	998.6	676.1	584.9	607.7	635.4	658.8	679.6	696.8	699.9
30°	1331.1	1224.4	912.6	595.6	574.9	600.5	625.3	647.1	666.8	683.7	687.5
32.5°	1358.4	1215.8	813.5	549.4	569.1	593.6	613.9	633.3	648.5	656.1	658.1
35°	1392.3	1204.8	708.2	529.3	565.3	588.0	606.0	616.4	596.7	592.5	597.0
37.5°	1439.6	1194.4	603.2	520.7	562.8	586.0	601.9	575.3	551.1	541.4	544.9
40°	1490.7	1188.5	532.1	513.8	563.9	588.0	584.6	545.2	510.4	490.0	489.3
42.5°	1534.2	1179.5	486.5	509.3	566.6	596.0	561.1	518.6	466.8	454.8	455.1
45°	1563.5	1156.8	462.4	504.5	569.1	597.7	550.1	482.0	445.1	437.5	437.2
47.5°	1575.6	1115.3	446.8	496.9	568.7	583.6	527.6	466.8	429.9	427.8	429.2
50°	1567.7	1047.3	430.9	482.0	560.4	568.7	501.7	453.4	419.5	430.9	439.2
52.5°	1538.3	959.2	411.9	461.7	545.6	551.8	488.6	445.1	411.9	427.1	433.7
55°	1530.7	887.8	387.8	435.1	523.5	521.7	474.8	440.9	406.8	400.9	401.9
57.5°	*1520.7*	*818.0*	*347.7*	*387.4*	*467.5*	*470.3*	*461.7*	*436.1*	*393.3*	*391.6*	*393.3*
60°	1321.1	627.1	310.1	334.3	384.0	398.8	446.8	427.1	371.5	364.3	363.9
62.5°	862.9	379.8	275.9	291.4	312.8	330.1	407.5	401.2	347.7	343.2	346.3
65°	464.1	270.7	251.0	260.4	272.1	285.2	337.7	357.4	314.2	298.3	298.7
67.5°	237.2	230.3	232.4	238.9	247.9	254.5	272.4	289.7	268.0	254.5	254.1
70°	203.0	208.6	211.7	215.5	221.3	220.3	222.0	225.1	223.4	216.8	216.5
72.5°	173.0	181.6	182.3	183.0	185.1	180.2	177.1	172.0	172.3	173.3	173.7
75°	131.6	139.8	141.9	140.9	143.0	136.7	132.6	127.4	121.2	120.2	120.9
77.5°	85.6	92.2	95.3	94.6	95.6	90.8	88.7	83.2	76.0	73.2	73.2
80°	51.8	55.6	58.0	58.7	59.7	56.3	52.8	48.0	44.9	41.8	41.8
82.5°	31.4	33.8	35.6	35.6	36.6	32.8	30.0	26.6	25.2	22.4	22.4
85°	15.9	17.6	18.3	18.0	17.3	14.2	13.1	11.4	10.7	9.3	9.3
87.5°	3.8	4.8	4.8	3.5	3.5	1.7	1.0	0.3	0.0	0.0	0.0
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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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

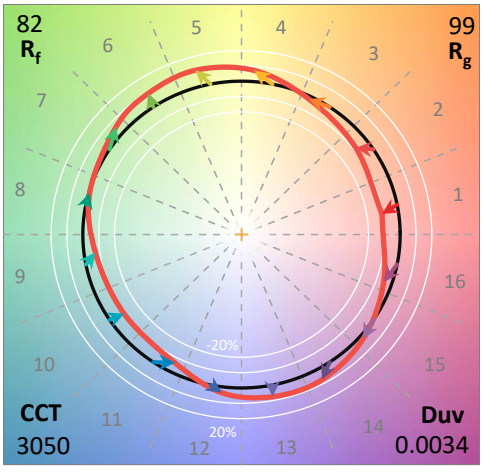
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2408-195-9
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/07/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**GALN-SB1A-830-U-5WQ**
Description:	GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K):	3050	CRI (Ra):	81.0		
CIE u':	0.2476	R1:	79.6	R9:	7.1
CIE v':	0.5251	R2:	85.6	R10:	67.0
Duv:	0.0034	R3:	92.0	R11:	82.7
CIE x:	0.4383	R4:	82.6	R12:	63.2
CIE y:	0.4131	R5:	78.9	R13:	80.3
CIE z:	0.1487	R6:	81.7	R14:	95.0
Peak Wavelength (nm):	603	R7:	85.2	R15:	71.7
Dominant Wavelength (nm):	581	R8:	62.0		
Purity:	55.55201				

Rf:	81.5
Rg:	99.2



Test Conditions

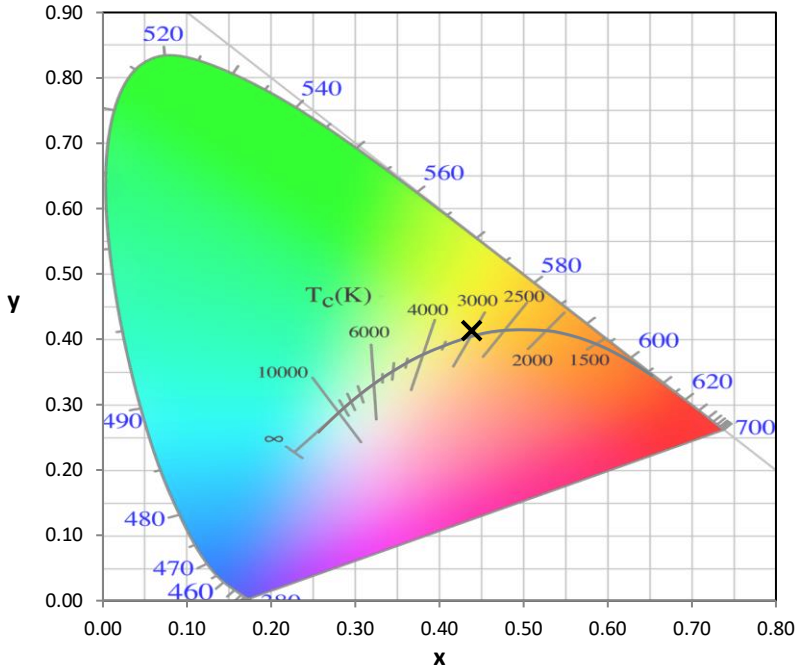
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

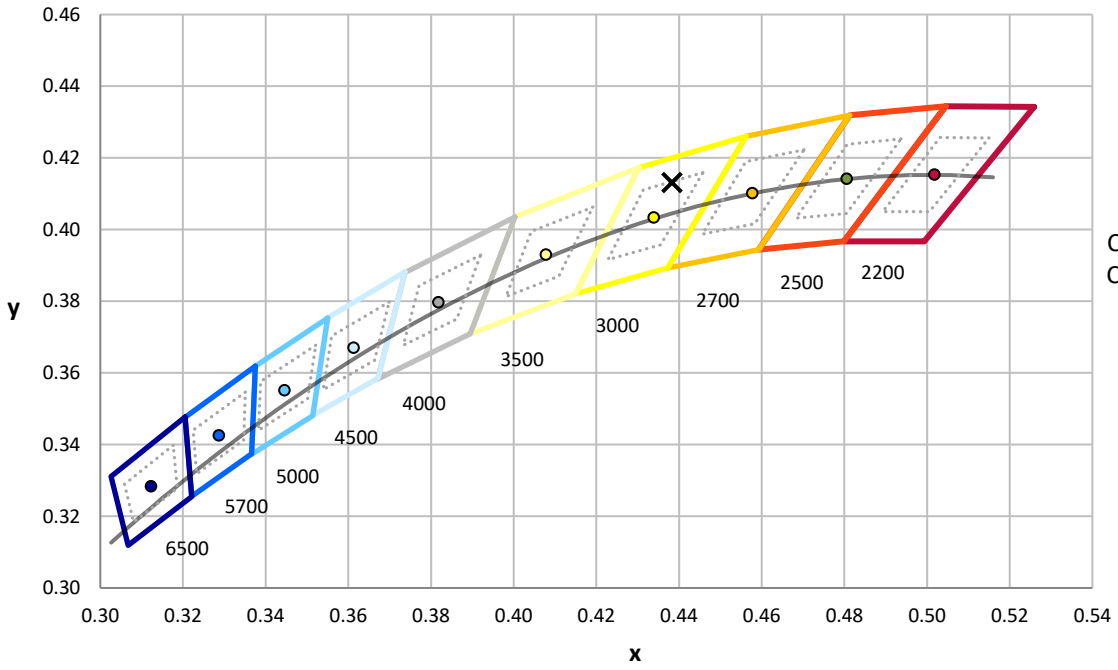
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



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

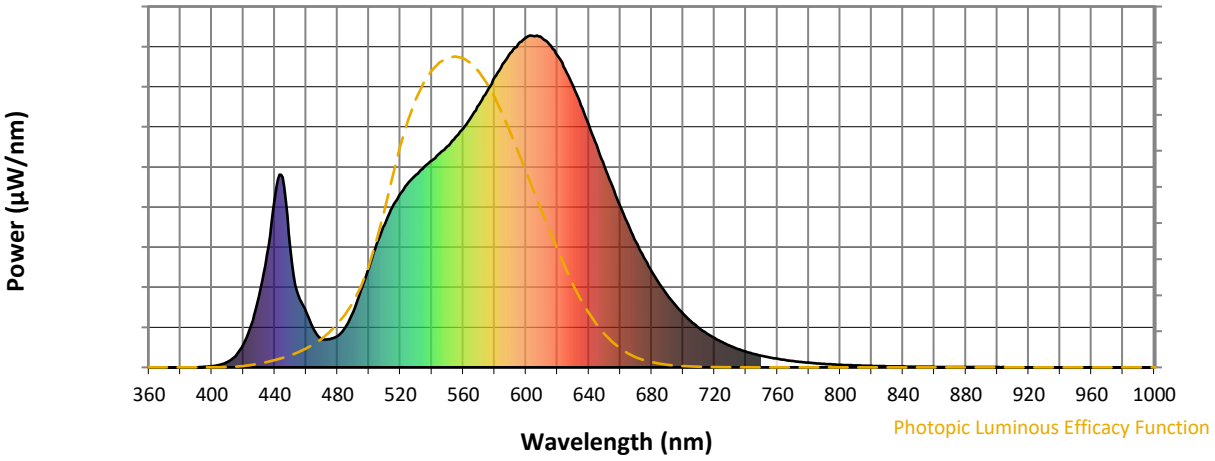


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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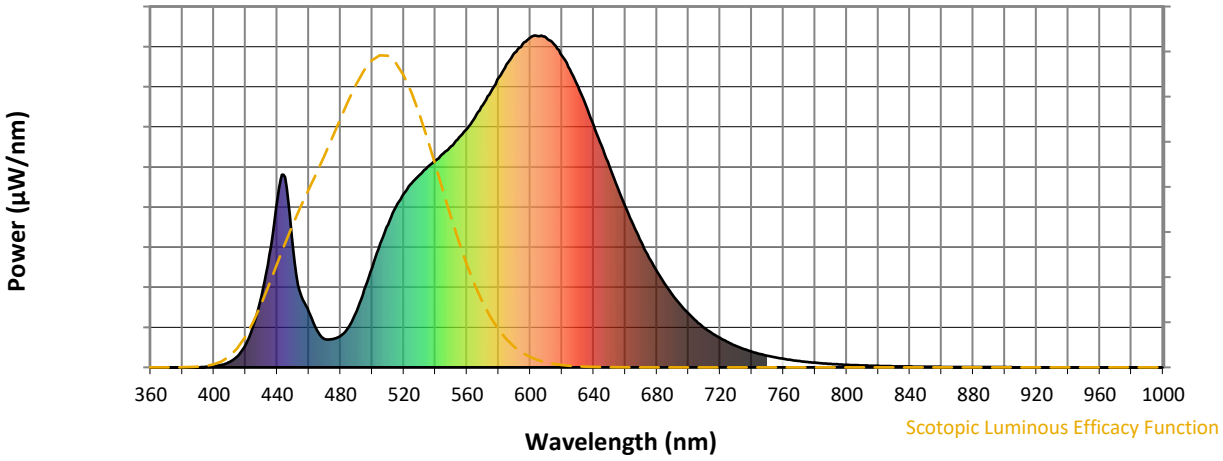
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.27**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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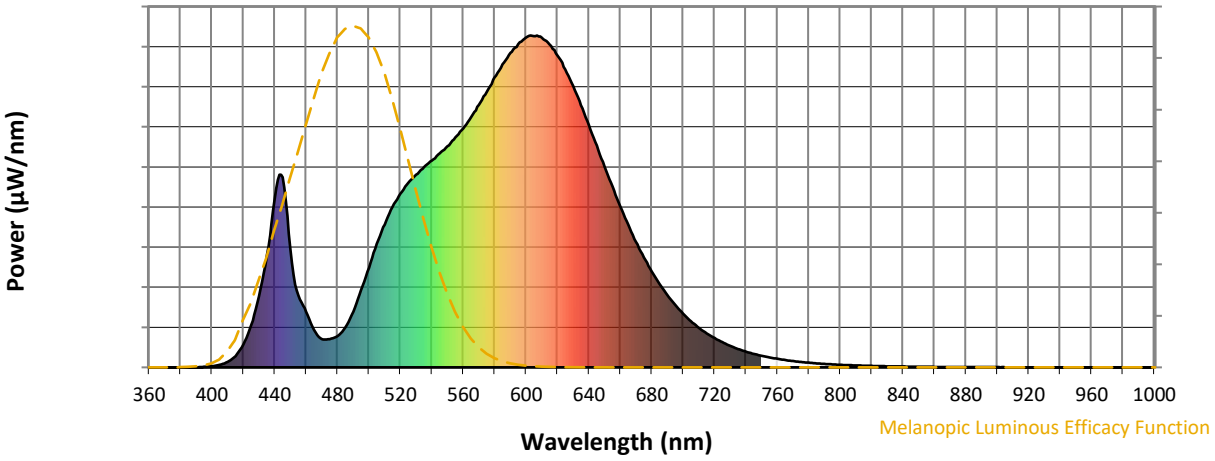
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.32**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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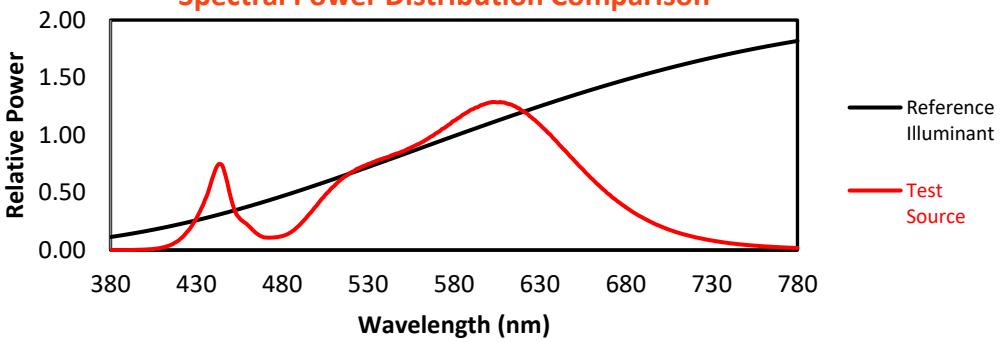
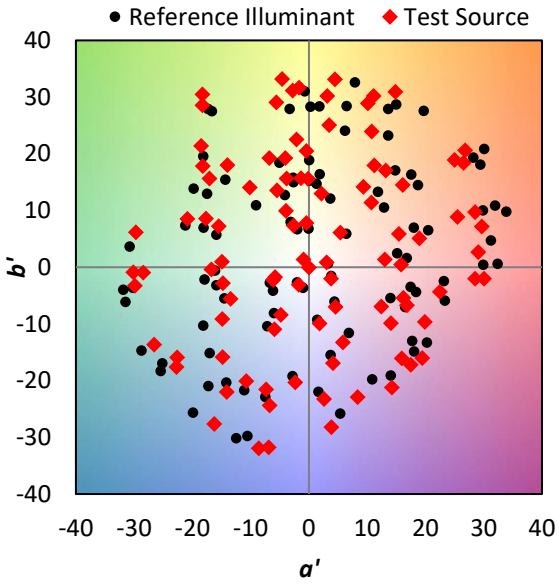
Summary

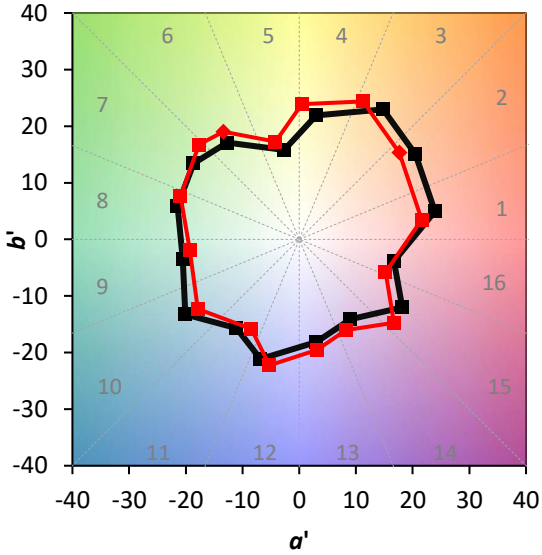
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

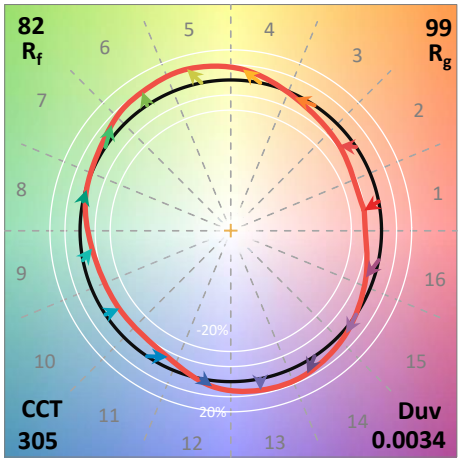
Spectral Power Distribution Comparison

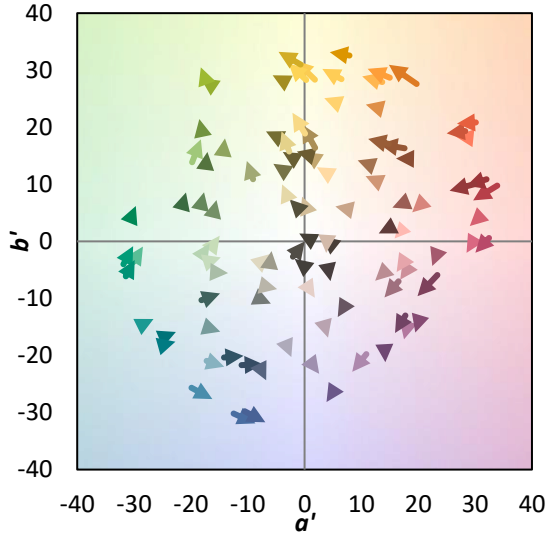


Color Vector Graphics









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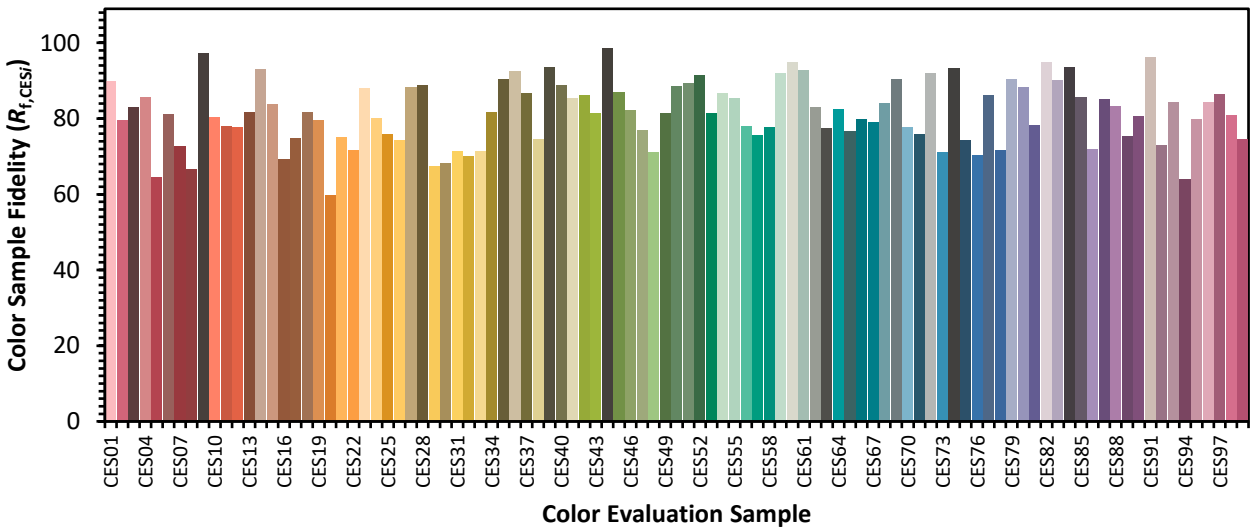
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



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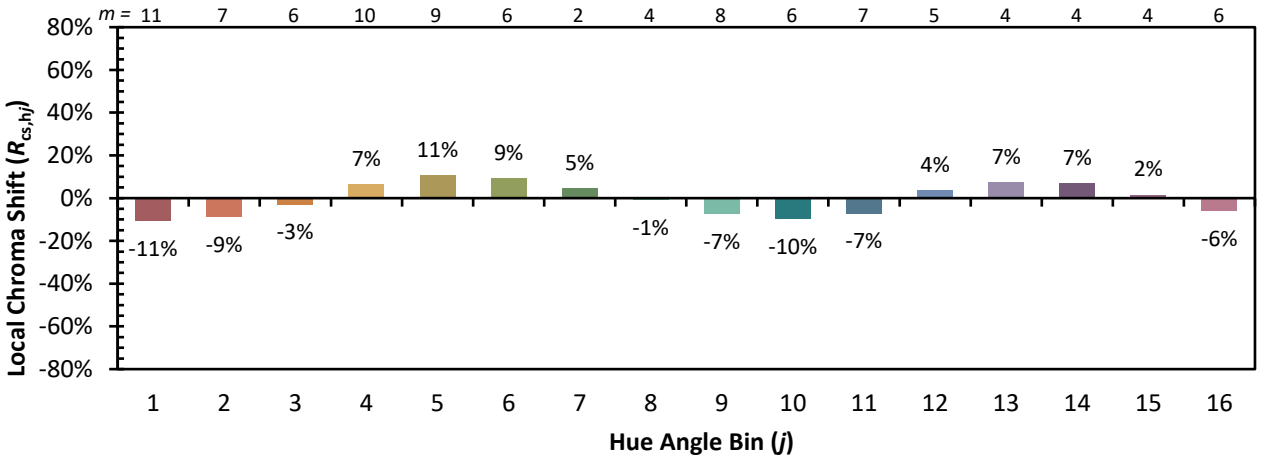
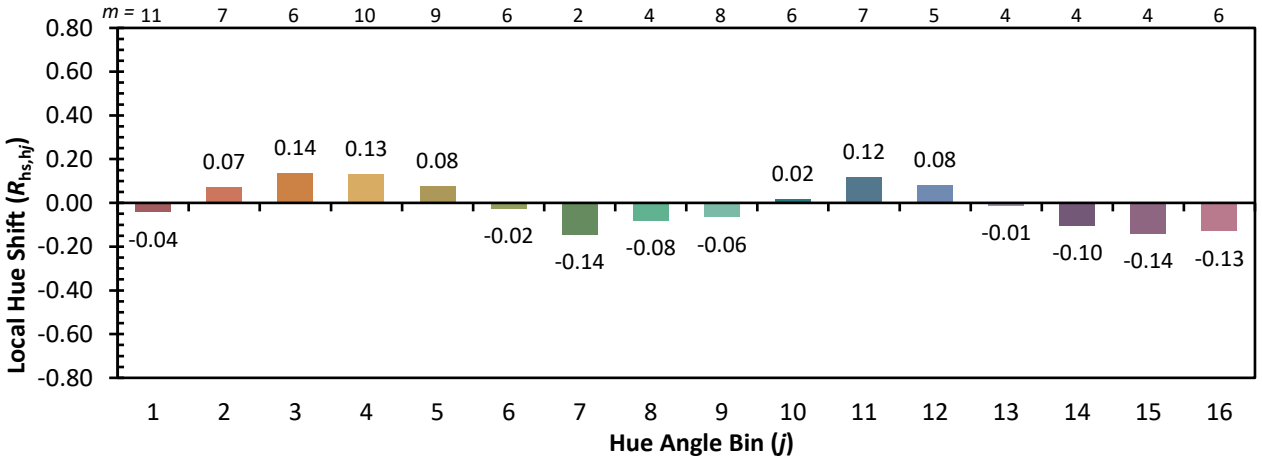
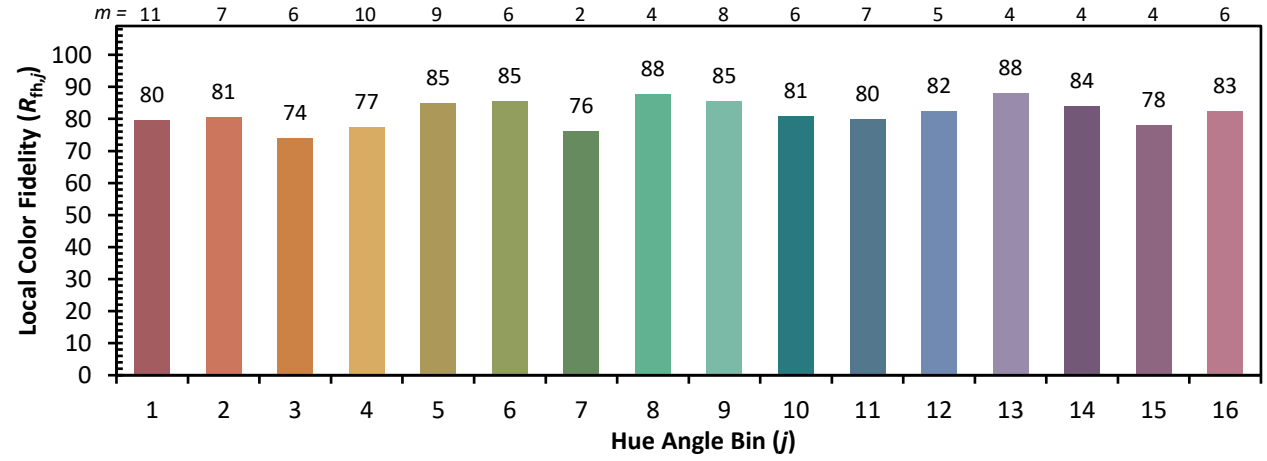
Color Rendition by Hue-Angle Bin







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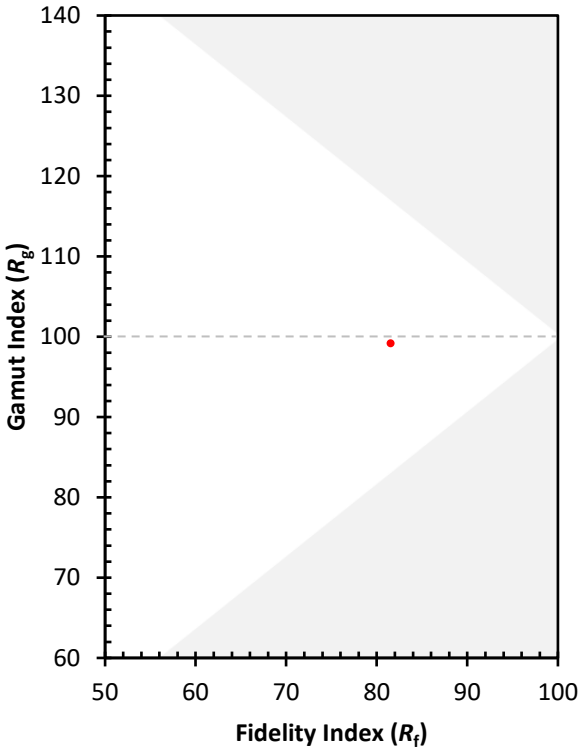
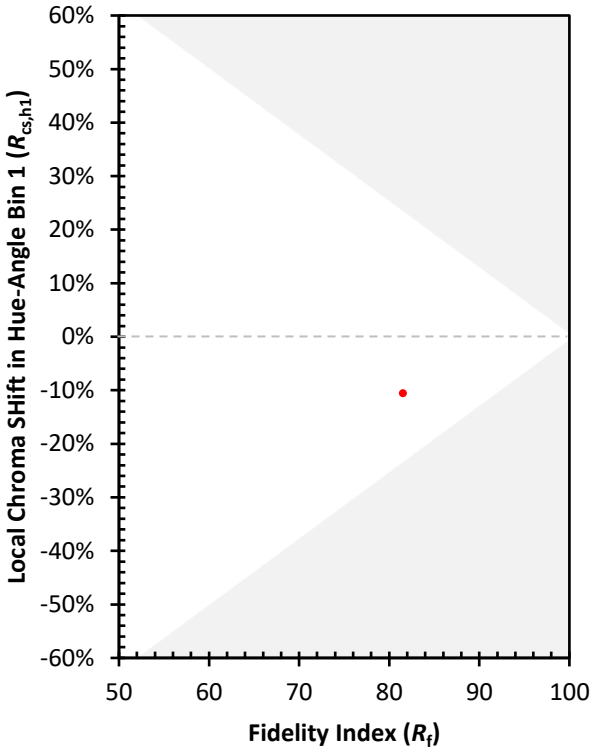
Measure Comparisons





(END OF REPORT)