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: McGRAW-EDISON

Report Number: P438622

Luminaire Tested: **ISW-SA1D-830-U-SLL-HSS**

Issue Date: 12/10/2020

Report Generated By 670245982

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P438622
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-21)
Test Lab:	INNOVATION CENTER
Issue Date:	12/10/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	ISW-SA1D-830-U-SLL-HSS
Description:	IMPACT ELITE LED WEDGE LUMINAIRE
	(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3397 lumens
Efficiency:	N/A
Efficacy:	75.2 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U0 - G1

Input Watts (W):	45.2
Input Voltage (V):	NR
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:	28.75 FT

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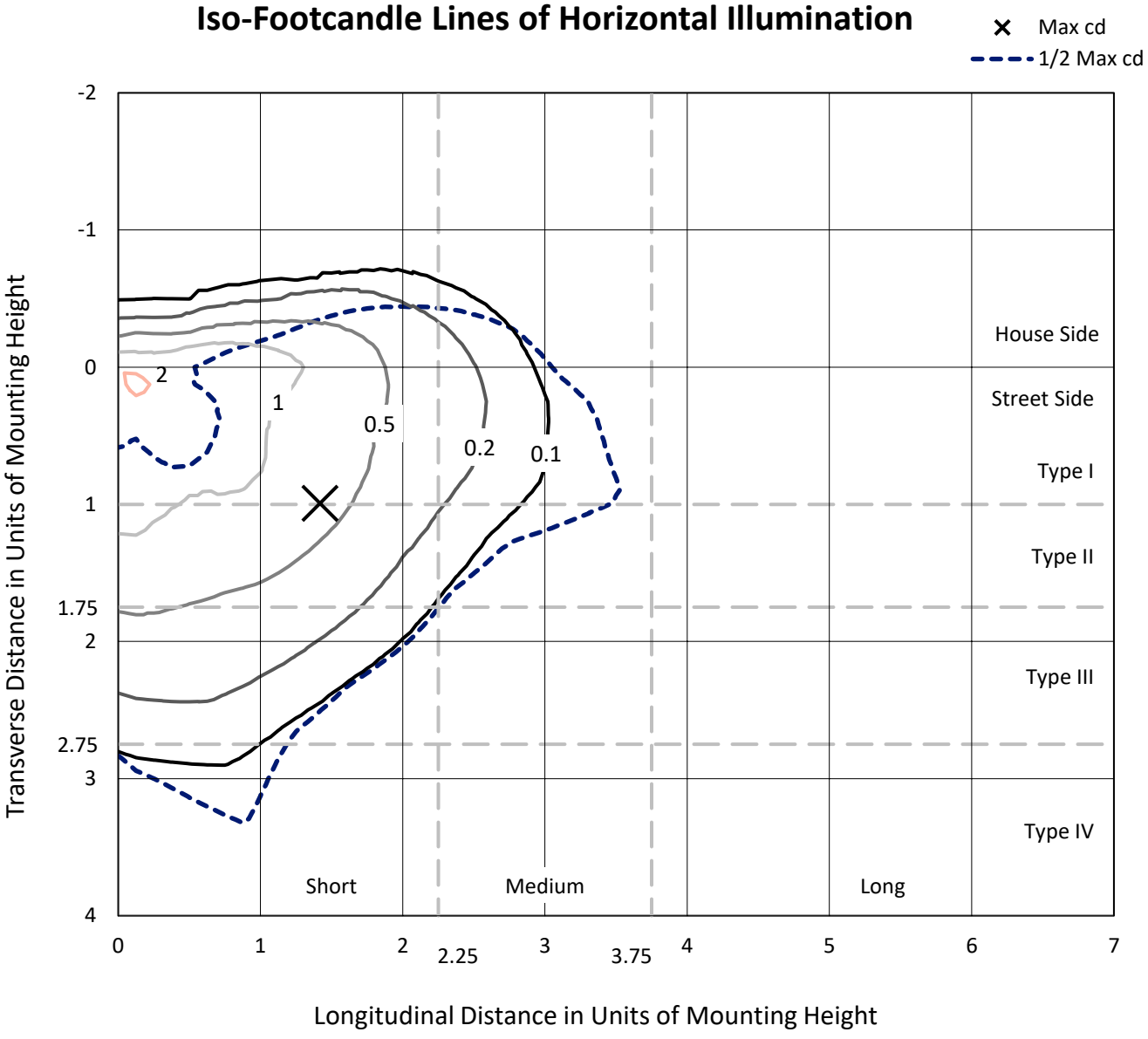
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
Type IV - Short - N/A

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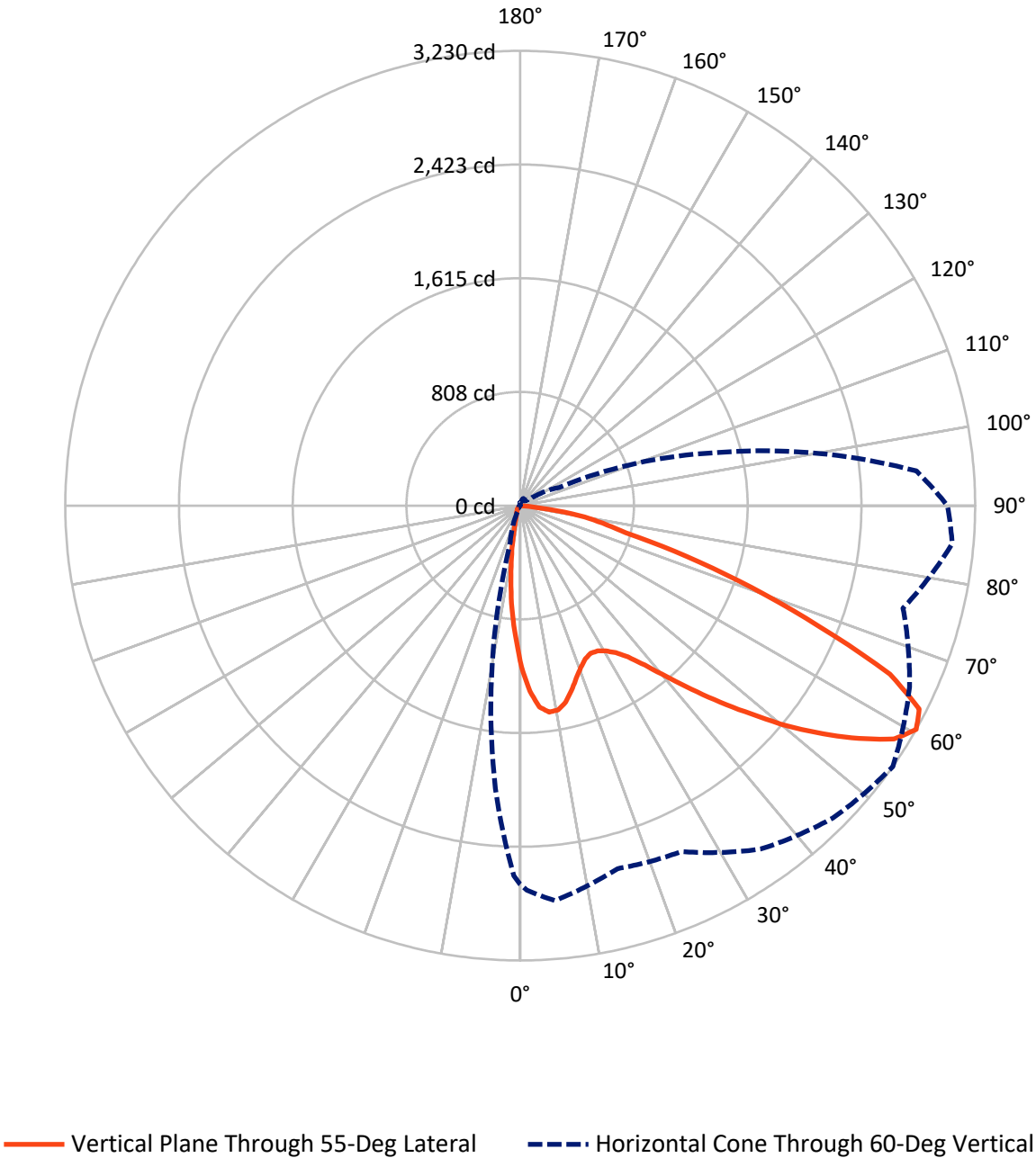
Luminous Intensity Polar Plot



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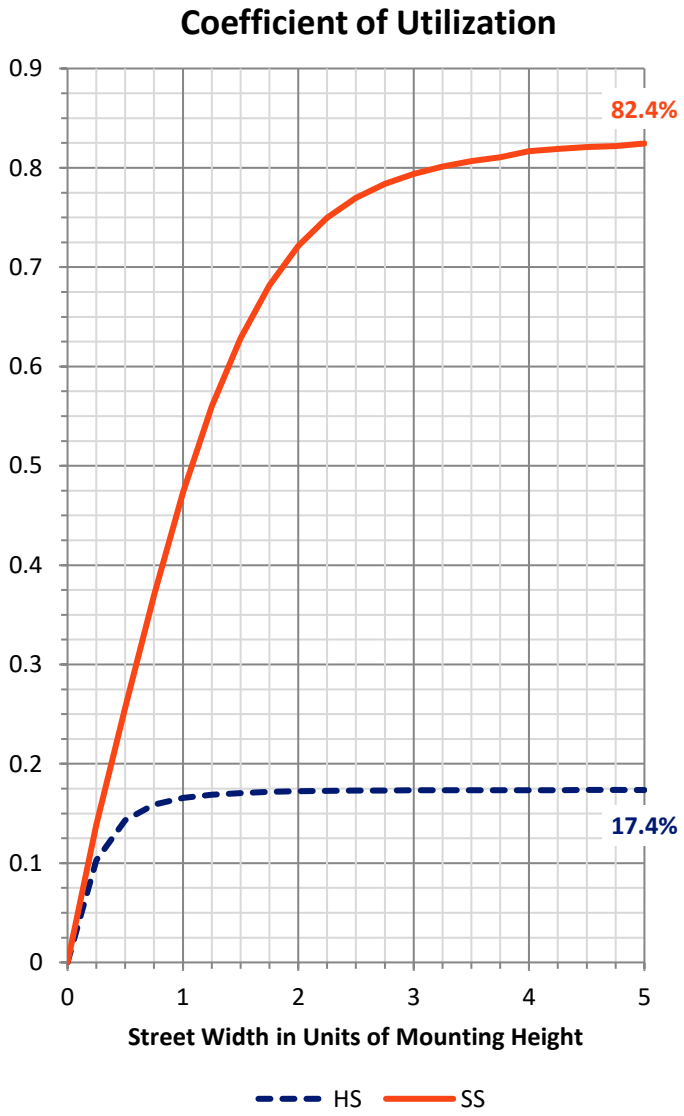
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	595.1	0.0	595.1
	% Fixture	17.5	0.0	17.5
Street Side	Lumens	2801.9	0.0	2801.9
	% Fixture	82.5	0.0	82.5
Total	Lumens	3397.0	0.0	3397.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.4	2.5
10°-20°	167.3	4.9
20°-30°	245.9	7.2
30°-40°	367.8	10.8
40°-50°	544.1	16.0
50°-60°	782.1	23.0
60°-70°	838.3	24.7
70°-80°	338.7	10.0
80°-90°	27.4	0.8
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°	3397.0	100.0
0°-180°	3397.0	100.0



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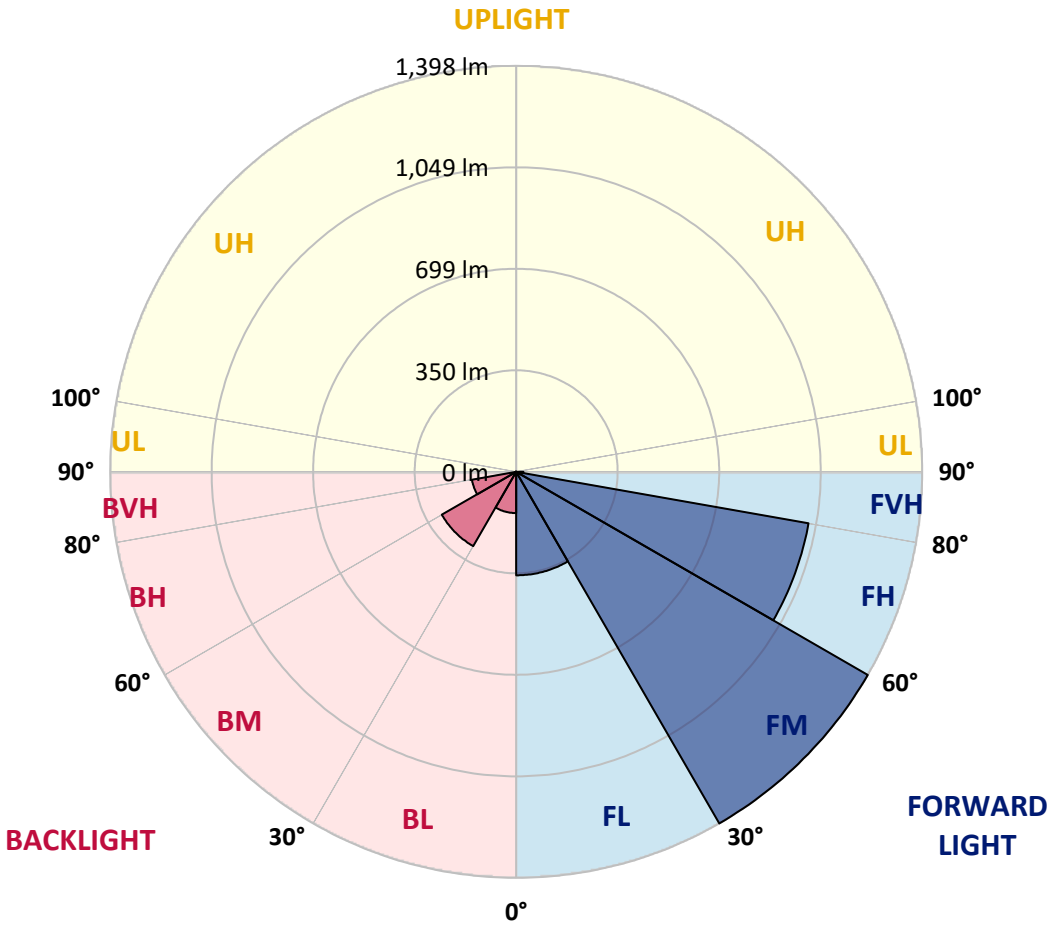
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	356.5	10.5			
FM	(30°-60°)	1398.3	41.2			
FH	(60°-80°)	1022.2	30.1			G1/1800
FVH	(80°-90°)	24.9	0.7			G1/100
BL	(0°-30°)	142.1	4.2	B1/500		
BM	(30°-60°)	295.7	8.7	B1/1000		
BH	(60°-80°)	154.8	4.6	B1/500		G1/500
BVH	(80°-90°)	2.5	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	*1146.2*	1146.2	1146.2	1146.2
2.5°	1231.5	1231.5	1241.3	1270.8	1303.6	1320.0	1338.0	*1320.0*	1316.7	1290.5	1270.8
5°	1193.7	1201.9	1233.1	1311.8	1395.4	1438.1	1461.0	*1436.4*	1392.2	1334.8	1262.6
7.5°	1108.5	1118.3	1154.4	1282.3	1397.1	1482.3	1523.3	*1480.7*	1405.3	1300.3	1195.4
10°	1016.6	1034.7	1082.2	1228.2	1361.0	1462.7	1520.1	*1475.8*	1382.3	1247.9	1118.3
12.5°	956.0	969.1	1033.0	1179.0	1321.6	1411.8	1443.0	*1433.1*	1347.9	1223.3	1087.2
15°	946.1	962.5	1029.8	1175.7	1283.9	1338.0	1349.5	*1362.6*	1333.1	1226.5	1097.0
17.5°	988.8	1006.8	1082.2	1200.3	1249.5	1249.5	1261.0	*1287.2*	1315.1	1259.3	1156.0
20°	1075.7	1100.3	1183.9	1264.3	1231.5	1192.1	1193.7	*1228.2*	1303.6	1333.1	1261.0
22.5°	1192.1	1224.9	1326.6	1364.3	1251.1	1160.9	1152.7	*1182.3*	1305.2	1408.5	1405.3
25°	1346.2	1385.6	1484.0	1482.3	1298.7	1147.8	1139.6	*1160.9*	1320.0	1490.5	1531.5
27.5°	1485.6	1518.4	1616.8	1575.8	1346.2	1164.2	1146.2	*1169.1*	1331.5	1551.2	1644.7
30°	1603.7	1631.6	1718.5	1643.0	1387.2	1192.1	1160.9	*1197.0*	1356.1	1584.0	1746.3
32.5°	1693.9	1734.9	1815.2	1695.5	1436.4	1228.2	1195.4	*1244.6*	1397.1	1626.6	1834.9
35°	1815.2	1836.5	1931.6	1748.0	1502.0	1305.2	1252.8	*1318.4*	1464.3	1682.4	1933.3
37.5°	1920.2	1975.9	2038.2	1802.1	1582.4	1400.4	1343.0	*1436.4*	1556.1	1746.3	2048.1
40°	2044.8	2108.7	2176.0	1879.2	1656.2	1525.0	1500.4	*1592.2*	1693.9	1839.8	2161.2
42.5°	2159.6	2218.6	2264.5	1969.3	1746.3	1666.0	1684.0	*1780.8*	1834.9	1936.6	2257.9
45°	2251.4	2303.9	2372.7	2031.7	1846.4	1823.4	1915.2	*1990.7*	1974.3	2020.2	2344.8
47.5°	2346.5	2410.4	2438.3	2097.2	1975.9	2030.0	2194.0	*2210.4*	2120.2	2097.2	2420.3
50°	2412.1	2459.6	2477.7	2177.6	2135.0	2302.2	2433.4	*2461.3*	2279.3	2157.9	2518.7
52.5°	2492.4	2538.3	2559.7	2272.7	2305.5	2546.5	2699.0	*2692.5*	2433.4	2257.9	2615.4
55°	2635.1	2677.7	2699.0	2389.1	2426.8	2756.4	2925.3	*2918.8*	2617.0	2402.2	2759.7
57.5°	2736.8	2772.8	2807.3	2520.3	2577.7	2890.9	3079.5	*3128.7*	2838.4	2584.3	2917.1
60°	*2690.8*	*2731.8*	*2815.5*	*2669.5*	*2710.5*	*2977.8*	*3138.5*	*3230.3*	*3049.9*	*2813.8*	*3079.5*
62.5°	2561.3	2622.0	2708.9	2787.6	2813.8	2992.6	3056.5	*3179.5*	3163.1	3045.0	3153.2
65°	2397.3	2459.6	2543.3	2804.0	2790.9	2772.8	2810.5	*2884.3*	2999.1	3156.5	3117.2
67.5°	2102.2	2192.4	2297.3	2612.1	2426.8	2323.5	2333.4	*2292.4*	2523.6	2995.8	2933.5
70°	1711.9	1803.7	1916.9	2215.3	1871.0	1734.9	1769.3	*1743.1*	1925.1	2571.1	2513.7
72.5°	1205.2	1303.6	1443.0	1846.4	1303.6	1083.9	1165.9	*1234.7*	1451.2	2062.8	1846.4
75°	798.6	869.1	969.1	1390.5	929.7	728.1	746.1	*774.0*	970.7	1559.4	1165.9
77.5°	413.2	483.7	528.0	744.4	575.6	573.9	560.8	*596.9*	606.7	936.3	608.3
80°	231.2	254.2	277.1	362.4	288.6	341.1	352.5	*431.3*	400.1	469.0	254.2
82.5°	113.1	142.7	155.8	223.0	185.3	136.1	67.2	*141.0*	237.8	254.2	118.1
85°	1.6	3.3	8.2	18.0	4.9	4.9	0.0	*4.9*	24.6	31.2	41.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2
2.5°	1249.5	1236.4	1198.7	1165.9	1115.0	1093.7	1059.3	1051.1	1023.2	995.3	978.9
5°	1226.5	1188.8	1111.8	1036.3	967.5	903.5	856.0	816.6	772.3	754.3	765.8
7.5°	1134.7	1082.2	970.7	882.2	783.8	710.0	642.8	608.3	567.4	551.0	539.5
10°	1059.3	995.3	867.4	751.0	657.5	600.2	559.2	510.0	462.4	424.7	419.8
12.5°	1011.7	942.9	800.2	677.2	608.3	552.6	505.0	441.1	387.0	350.9	334.5
15°	1010.1	924.8	778.9	649.3	569.0	498.5	437.8	365.7	309.9	264.0	247.6
17.5°	1069.1	965.8	788.7	619.8	513.2	421.4	342.7	267.3	213.2	182.0	165.6
20°	1172.4	1059.3	806.8	590.3	459.1	342.7	241.0	182.0	145.9	131.2	124.6
22.5°	1297.0	1162.6	839.6	567.4	403.4	259.1	170.5	131.2	114.8	104.9	103.3
25°	1447.9	1293.8	885.5	551.0	352.5	200.1	132.8	108.2	98.4	91.8	88.5
27.5°	1580.7	1420.0	954.3	537.8	303.4	164.0	113.1	95.1	85.3	80.3	78.7
30°	1679.1	1523.3	1033.0	508.3	264.0	142.7	106.6	90.2	78.7	72.1	70.5
32.5°	1792.3	1602.0	1070.8	478.8	241.0	126.3	93.5	80.3	72.1	65.6	64.0
35°	1916.9	1711.9	1108.5	455.9	226.3	113.1	85.3	70.5	60.7	54.1	52.5
37.5°	2061.2	1833.2	1142.9	436.2	218.1	104.9	80.3	65.6	55.8	49.2	45.9
40°	2221.9	1928.4	1165.9	423.1	206.6	100.0	77.1	62.3	52.5	44.3	42.6
42.5°	2349.8	2038.2	1172.4	418.1	195.1	98.4	73.8	60.7	49.2	42.6	39.4
45°	2441.6	2135.0	1195.4	413.2	186.9	91.8	72.1	59.0	45.9	39.4	36.1
47.5°	2508.8	2238.3	1216.7	408.3	178.7	83.6	77.1	59.0	44.3	36.1	32.8
50°	2633.4	2359.6	1257.7	395.2	167.3	75.4	77.1	57.4	42.6	34.4	31.2
52.5°	2767.9	2517.0	1349.5	380.4	152.5	67.2	70.5	57.4	41.0	32.8	29.5
55°	2895.8	2708.9	1434.8	360.7	127.9	60.7	65.6	57.4	37.7	31.2	27.9
57.5°	2989.3	2836.8	1480.7	336.1	101.7	54.1	54.1	54.1	32.8	26.2	24.6
60°	*3033.5*	*2823.7*	*1459.4*	*305.0*	*82.0*	*47.6*	*44.3*	*55.8*	*29.5*	*23.0*	*21.3*
62.5°	2999.1	2687.6	1365.9	272.2	72.1	41.0	36.1	49.2	26.2	19.7	18.0
65°	2892.5	2458.0	1210.1	246.0	70.5	34.4	29.5	29.5	21.3	16.4	14.8
67.5°	2628.5	2156.3	1024.8	221.4	72.1	29.5	24.6	23.0	18.0	13.1	11.5
70°	2185.8	1733.2	775.6	209.9	72.1	24.6	21.3	18.0	13.1	11.5	9.8
72.5°	1388.9	1075.7	537.8	185.3	72.1	19.7	18.0	16.4	9.8	8.2	4.9
75°	823.2	654.3	252.5	142.7	60.7	16.4	13.1	9.8	4.9	3.3	3.3
77.5°	483.7	419.8	109.9	78.7	26.2	9.8	6.6	3.3	1.6	0.0	0.0
80°	198.4	172.2	41.0	23.0	11.5	4.9	1.6	0.0	0.0	0.0	0.0
82.5°	116.4	121.3	14.8	9.8	3.3	0.0	0.0	0.0	0.0	0.0	0.0
85°	36.1	55.8	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2
2.5°	977.3	960.9	954.3	944.5	936.3	926.5	939.6	951.1	937.9	952.7	975.7
5°	754.3	729.7	762.5	741.2	752.6	739.5	721.5	724.8	728.1	721.5	739.5
7.5°	523.1	534.6	542.8	541.1	551.0	532.9	532.9	521.4	505.0	511.6	508.3
10°	396.8	373.9	382.1	380.4	398.5	373.9	357.5	339.4	337.8	341.1	337.8
12.5°	316.5	288.6	270.6	260.7	259.1	247.6	232.8	214.8	203.3	201.7	211.5
15°	237.8	216.4	200.1	185.3	183.7	160.7	141.0	127.9	116.4	118.1	124.6
17.5°	164.0	157.4	152.5	139.4	131.2	111.5	95.1	86.9	83.6	83.6	85.3
20°	119.7	116.4	113.1	108.2	100.0	85.3	75.4	72.1	70.5	70.5	72.1
22.5°	100.0	95.1	91.8	90.2	83.6	72.1	65.6	62.3	62.3	62.3	62.3
25°	85.3	82.0	80.3	77.1	72.1	62.3	57.4	55.8	54.1	54.1	55.8
27.5°	77.1	70.5	67.2	67.2	62.3	55.8	50.8	49.2	47.6	47.6	49.2
30°	68.9	64.0	60.7	57.4	54.1	47.6	44.3	42.6	42.6	42.6	42.6
32.5°	60.7	57.4	54.1	50.8	45.9	42.6	39.4	37.7	36.1	36.1	36.1
35°	49.2	45.9	45.9	44.3	39.4	36.1	32.8	31.2	29.5	31.2	31.2
37.5°	42.6	37.7	37.7	37.7	34.4	31.2	27.9	26.2	24.6	24.6	26.2
40°	39.4	32.8	31.2	31.2	31.2	26.2	23.0	21.3	19.7	19.7	21.3
42.5°	34.4	29.5	26.2	24.6	26.2	23.0	18.0	16.4	16.4	16.4	16.4
45°	32.8	26.2	23.0	19.7	21.3	19.7	14.8	13.1	13.1	13.1	13.1
47.5°	29.5	23.0	19.7	14.8	14.8	14.8	11.5	9.8	9.8	9.8	9.8
50°	27.9	21.3	14.8	13.1	11.5	11.5	9.8	8.2	6.6	6.6	8.2
52.5°	26.2	19.7	13.1	9.8	8.2	8.2	6.6	6.6	4.9	4.9	4.9
55°	24.6	16.4	11.5	8.2	6.6	4.9	4.9	4.9	4.9	3.3	4.9
57.5°	21.3	14.8	8.2	6.6	3.3	3.3	3.3	3.3	3.3	3.3	3.3
60°	*19.7*	*11.5*	*6.6*	*3.3*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*
62.5°	16.4	9.8	4.9	3.3	1.6	0.0	1.6	1.6	1.6	1.6	1.6
65°	13.1	8.2	3.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	9.8	6.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	8.2	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	4.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

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

Scaled Data Report

REPORT NUMBER: P438622
CATALOG NUMBER: ISW-SA1D-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2	1146.2
2.5°	974.0	983.9	1019.9	1052.7	1088.8	1128.2	1160.9	1208.5	1223.3	1231.5
5°	736.2	772.3	816.6	856.0	926.5	992.1	1069.1	1152.7	1187.2	1193.7
7.5°	531.3	555.9	603.4	682.1	746.1	844.5	944.5	1056.0	1108.5	1108.5
10°	365.7	406.7	467.3	541.1	626.4	713.3	829.7	956.0	1005.2	1016.6
12.5°	232.8	278.8	360.7	441.1	539.5	624.7	741.2	883.8	939.6	956.0
15°	134.5	165.6	241.0	329.6	447.7	555.9	687.1	860.9	929.7	946.1
17.5°	90.2	101.7	142.7	219.7	350.9	495.2	670.7	885.5	969.1	988.8
20°	75.4	80.3	95.1	136.1	247.6	431.3	664.1	939.6	1041.2	1075.7
22.5°	65.6	70.5	80.3	100.0	177.1	364.0	659.2	1018.3	1156.0	1192.1
25°	57.4	62.3	70.5	85.3	124.6	296.8	667.4	1129.8	1303.6	1346.2
27.5°	50.8	55.8	64.0	73.8	100.0	229.6	669.0	1234.7	1441.3	1485.6
30°	44.3	49.2	55.8	64.0	80.3	177.1	639.5	1341.3	1552.8	1603.7
32.5°	39.4	42.6	49.2	55.8	67.2	137.7	578.8	1423.3	1644.7	1693.9
35°	32.8	36.1	42.6	47.6	59.0	111.5	511.6	1498.7	1754.5	1815.2
37.5°	27.9	31.2	36.1	42.6	52.5	86.9	444.4	1564.3	1861.1	1920.2
40°	23.0	27.9	32.8	37.7	47.6	67.2	370.6	1634.8	1982.5	2044.8
42.5°	19.7	23.0	27.9	34.4	41.0	54.1	305.0	1679.1	2085.8	2159.6
45°	14.8	19.7	26.2	34.4	34.4	42.6	262.4	1711.9	2159.6	2251.4
47.5°	11.5	16.4	23.0	32.8	31.2	36.1	241.0	1769.3	2261.2	2346.5
50°	9.8	13.1	23.0	27.9	26.2	31.2	247.6	1820.1	2338.3	2412.1
52.5°	8.2	11.5	19.7	21.3	23.0	27.9	260.7	1913.6	2435.0	2492.4
55°	6.6	9.8	14.8	18.0	19.7	26.2	282.0	2030.0	2561.3	2635.1
57.5°	4.9	8.2	11.5	14.8	18.0	24.6	296.8	2103.8	2679.4	2736.8
60°	*4.9*	*6.6*	*9.8*	*13.1*	*16.4*	*23.0*	*275.5*	*2016.9*	*2628.5*	*2690.8*
62.5°	3.3	6.6	8.2	11.5	13.1	18.0	203.3	1826.7	2476.0	2561.3
65°	1.6	4.9	6.6	8.2	9.8	13.1	116.4	1597.1	2295.7	2397.3
67.5°	0.0	3.3	4.9	6.6	6.6	9.8	54.1	1288.8	1998.9	2102.2
70°	0.0	1.6	3.3	3.3	4.9	8.2	27.9	910.1	1572.5	1711.9
72.5°	1.6	1.6	3.3	3.3	3.3	6.6	18.0	551.0	1057.6	1205.2
75°	1.6	1.6	1.6	1.6	3.3	4.9	11.5	354.2	665.7	798.6
77.5°	1.6	3.3	1.6	1.6	1.6	3.3	6.6	196.8	364.0	413.2
80°	1.6	1.6	1.6	1.6	1.6	3.3	3.3	18.0	172.2	231.2
82.5°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	88.5	113.1
85°	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.6	1.6
87.5°	0.0	0.0	0.0	1.6	1.6	1.6	0.0	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

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

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

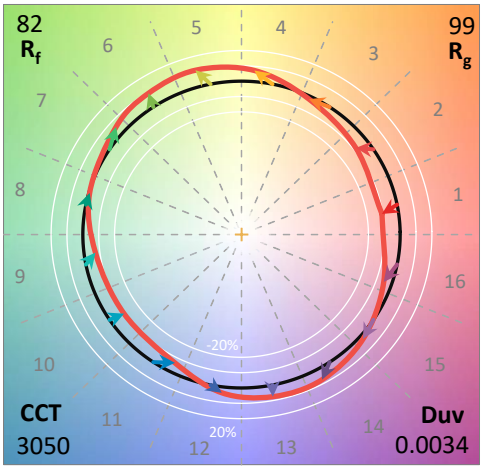
Test Information

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

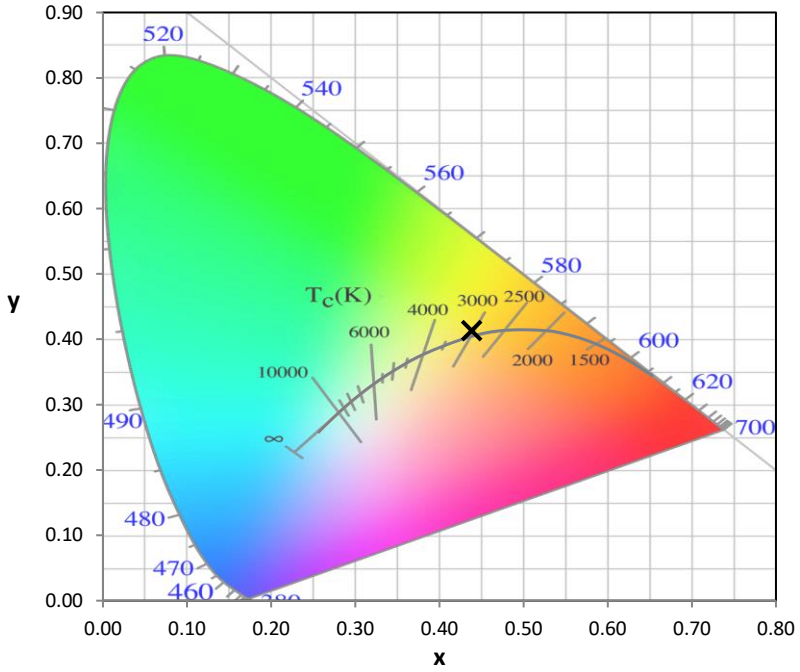
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

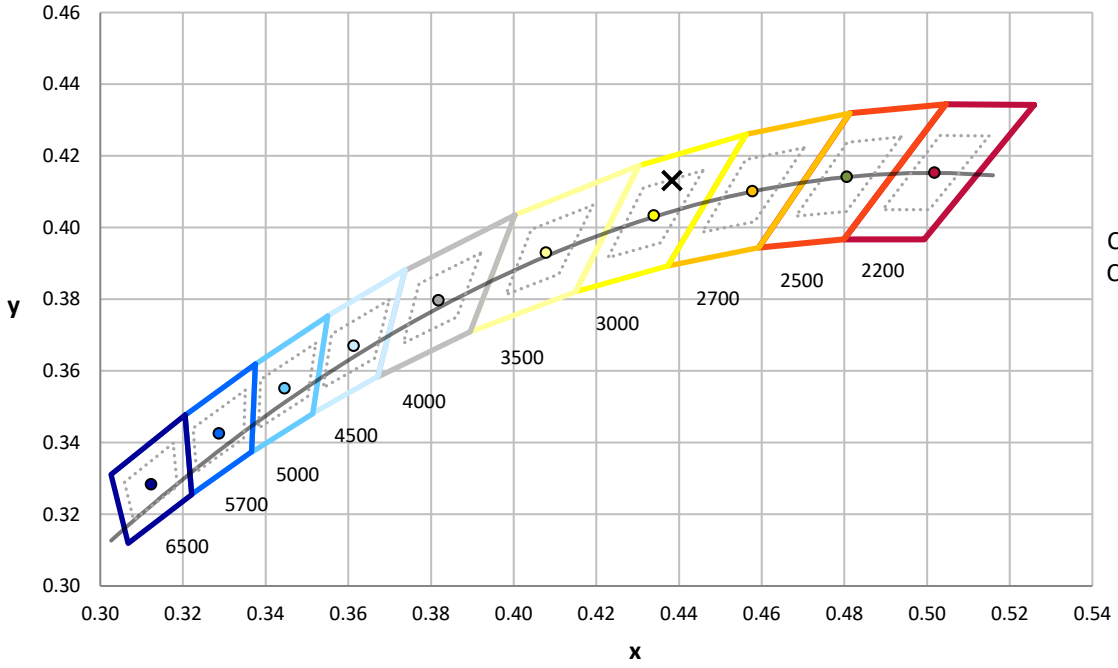
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

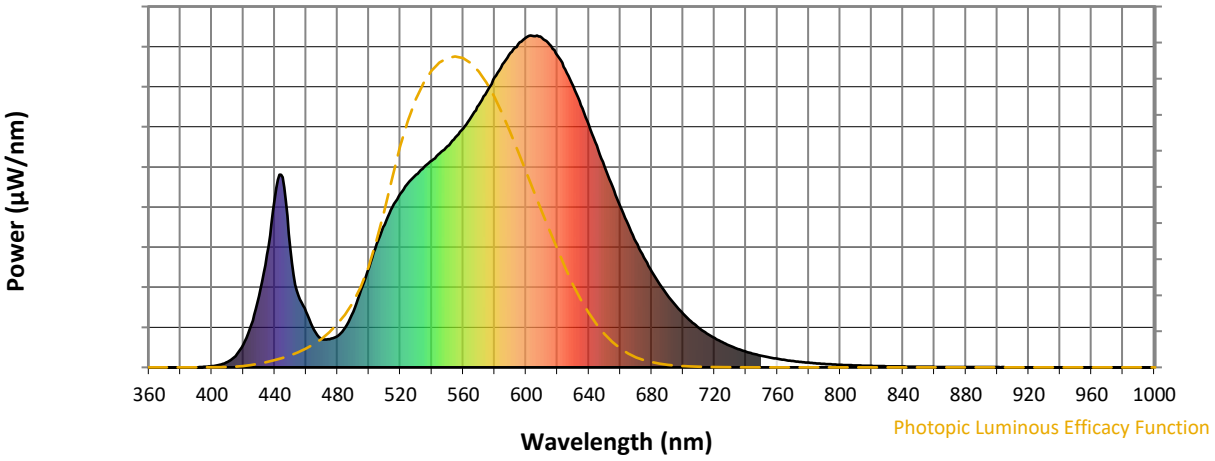


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

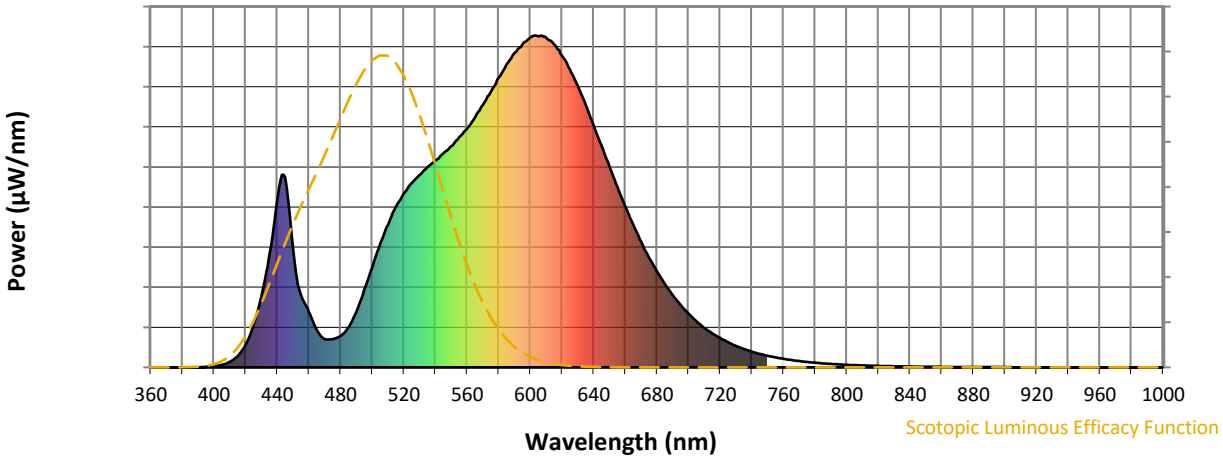


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength

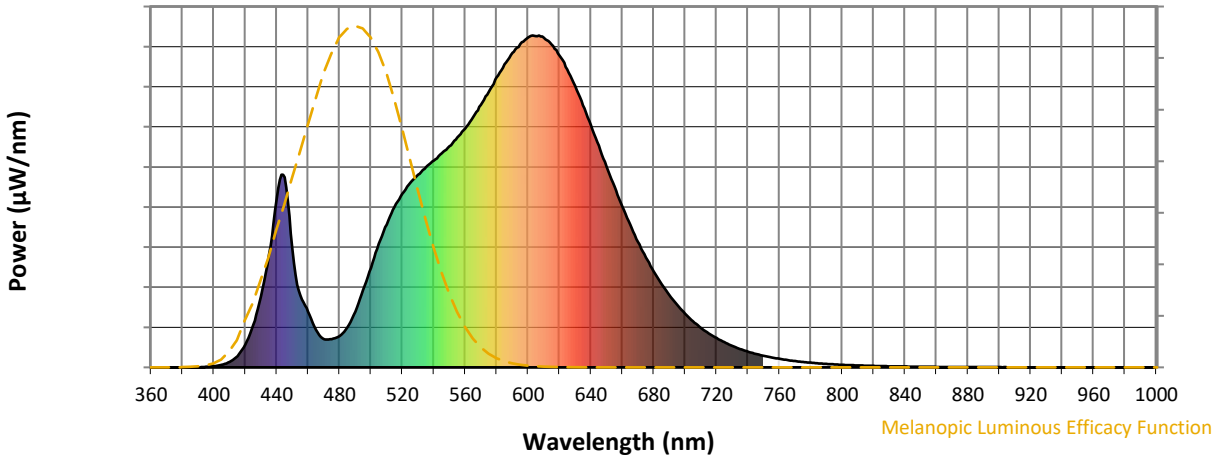


Scotopic Lumens: NR **S/P: 1.27**

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			

REPORT NUMBER: SP1-2408-195-9

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			

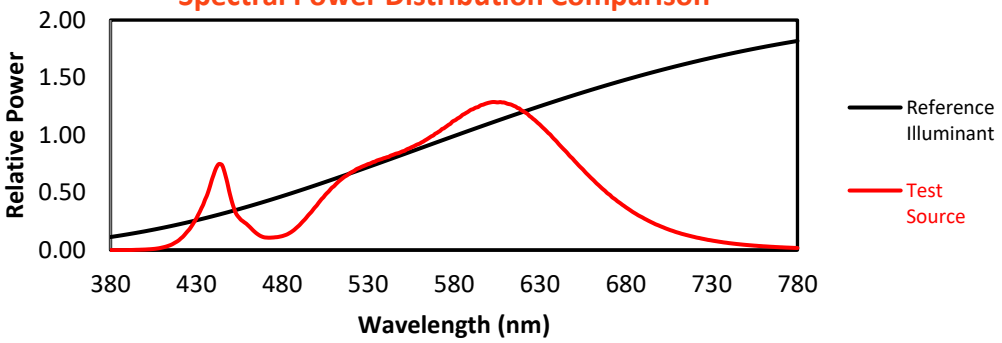
REPORT NUMBER: SP1-2408-195-9

TM-30-18

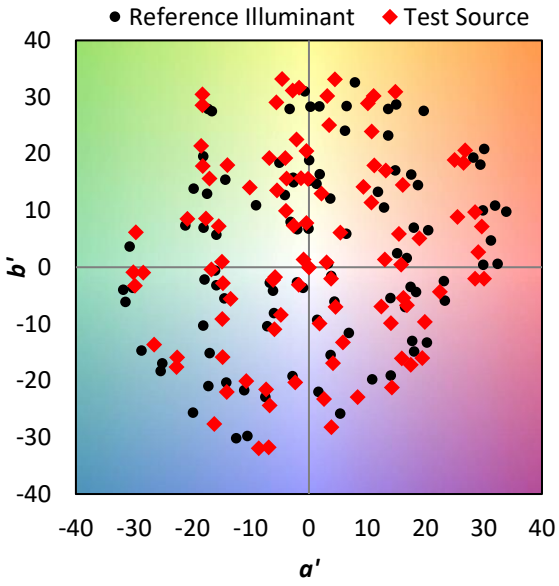
Summary

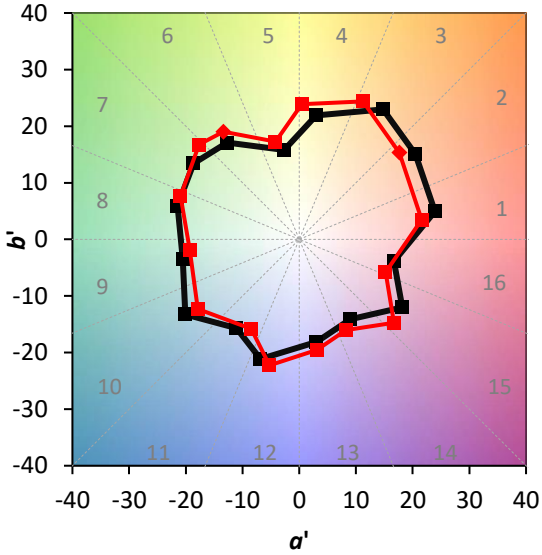
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

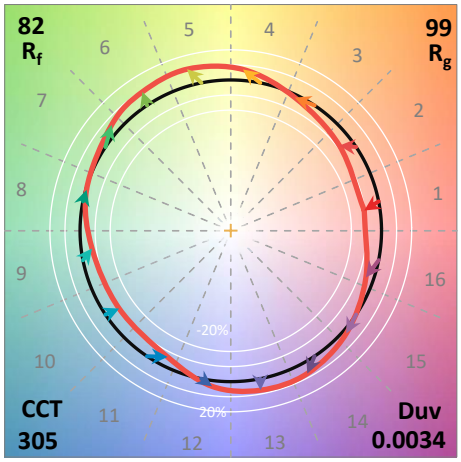
Spectral Power Distribution Comparison

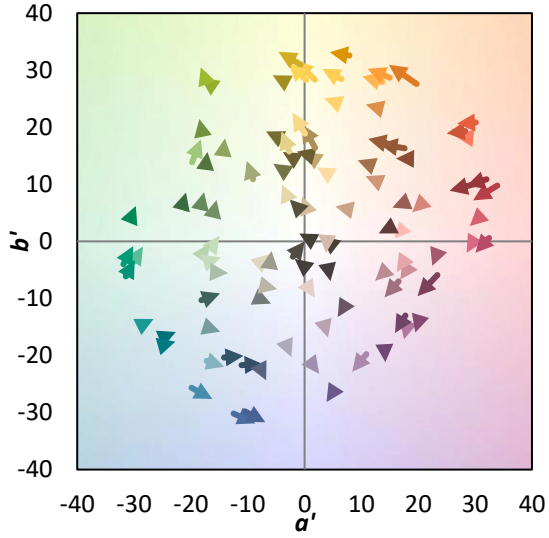


Color Vector Graphics









REPORT NUMBER: SP1-2408-195-9

TM-30-18

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
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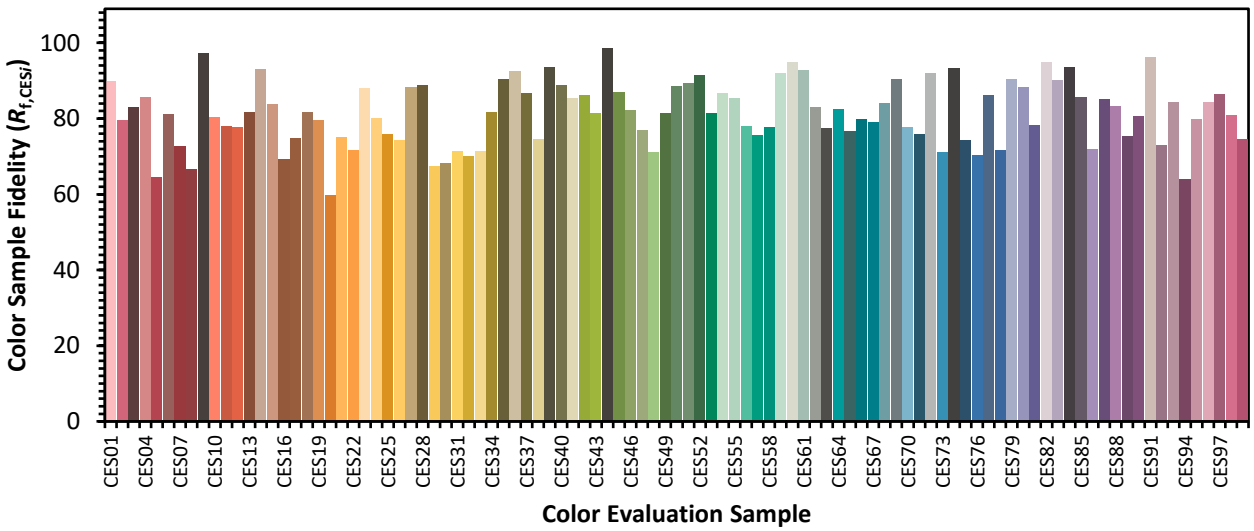

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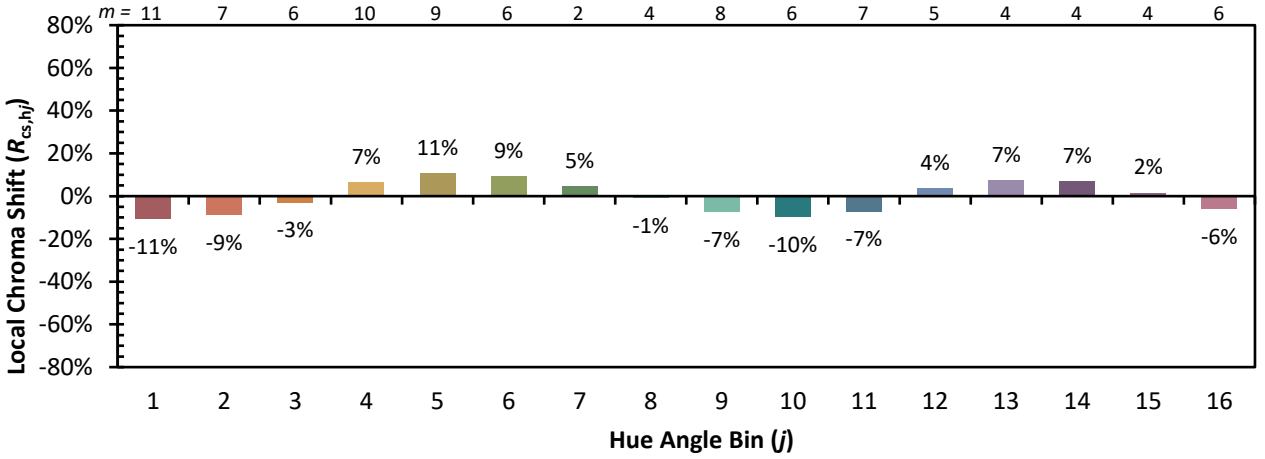
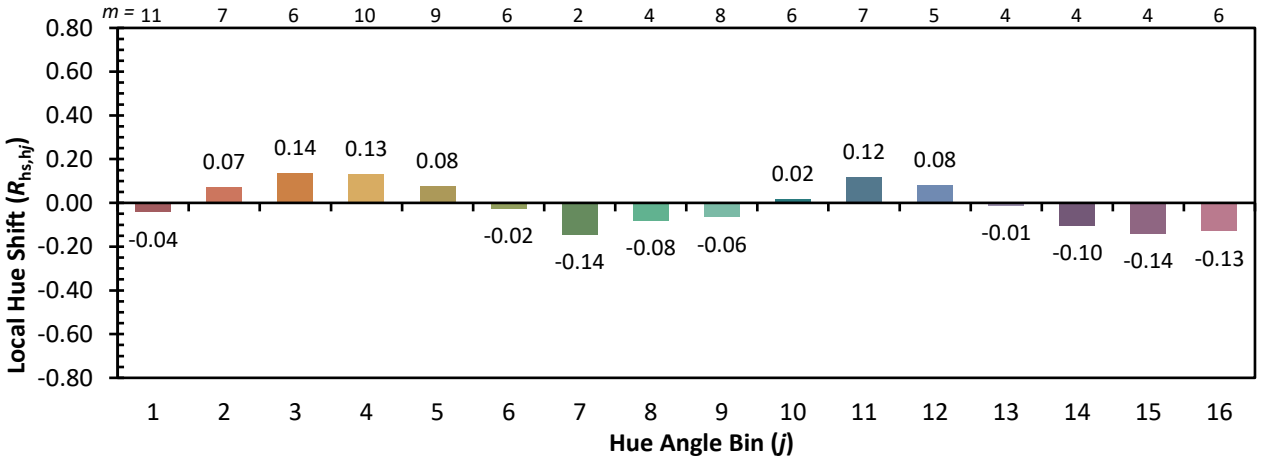
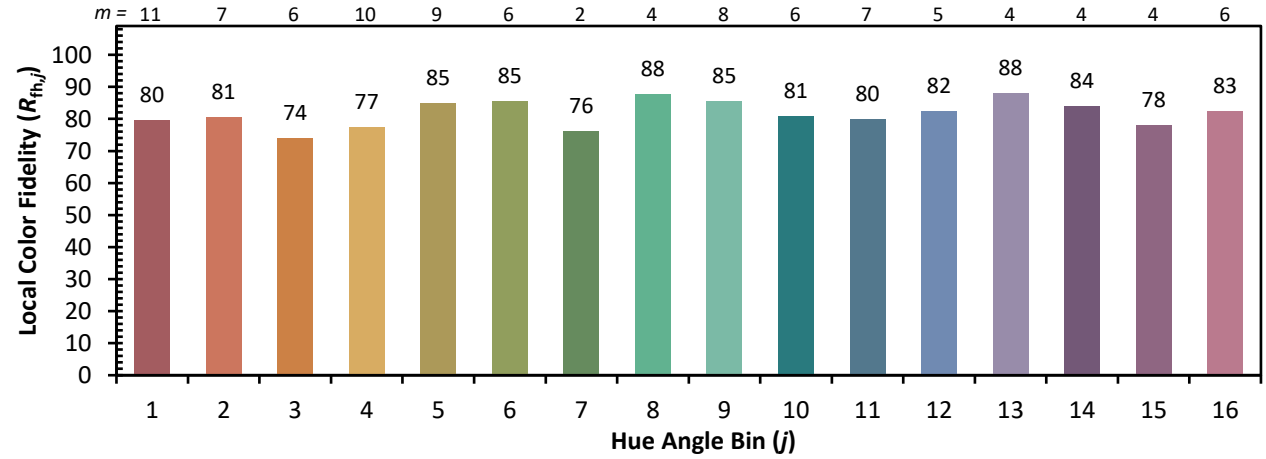
Color Rendition by Hue-Angle Bin







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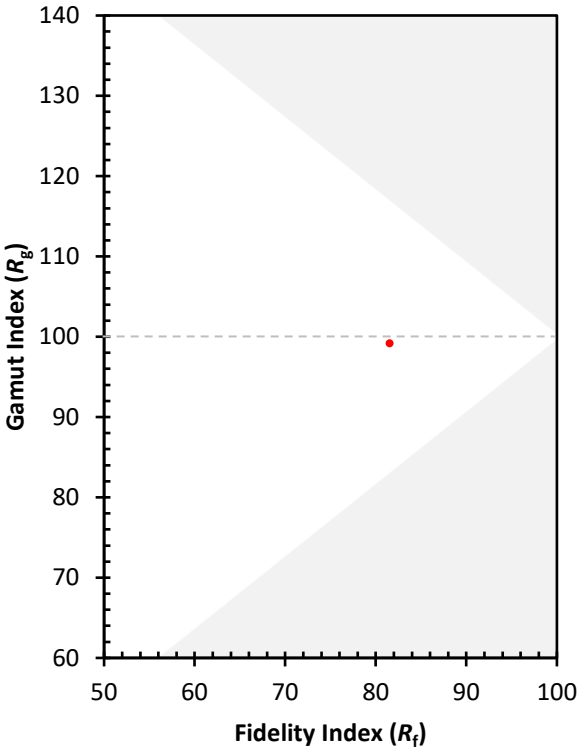
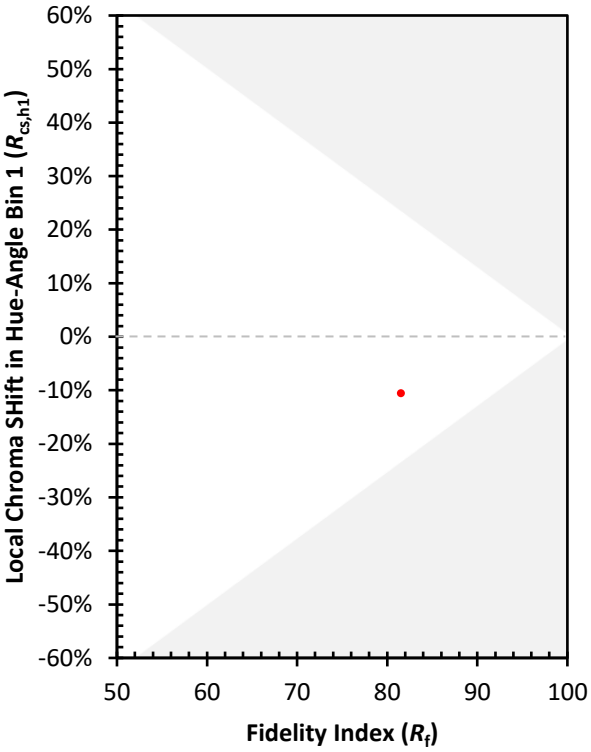
Measure Comparisons





(END OF REPORT)