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: P437598

Luminaire Tested: **ISC-SA1D-830-U-SLR-HSS**

Issue Date: 12/9/2020

Report Generated By 670245982

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P437598
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-23)
Test Lab:	INNOVATION CENTER
Issue Date:	12/9/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	ISC-SA1D-830-U-SLR-HSS
Description:	IMPACT ELITE LED CYLINDER LUMINAIRE
	(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3395 lumens
Efficiency:	N/A
Efficacy:	75.1 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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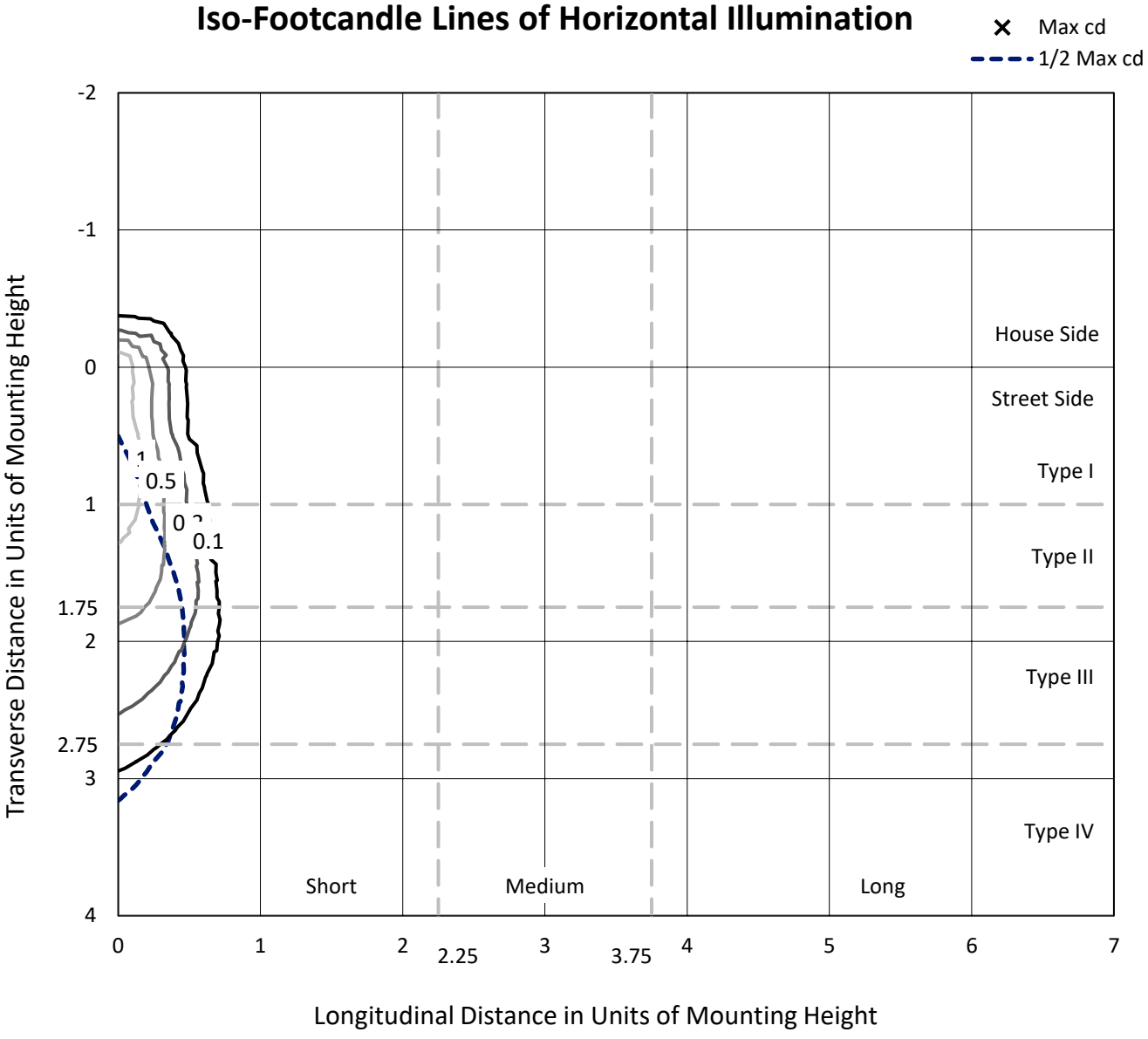
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
Type IV - Short - N/A

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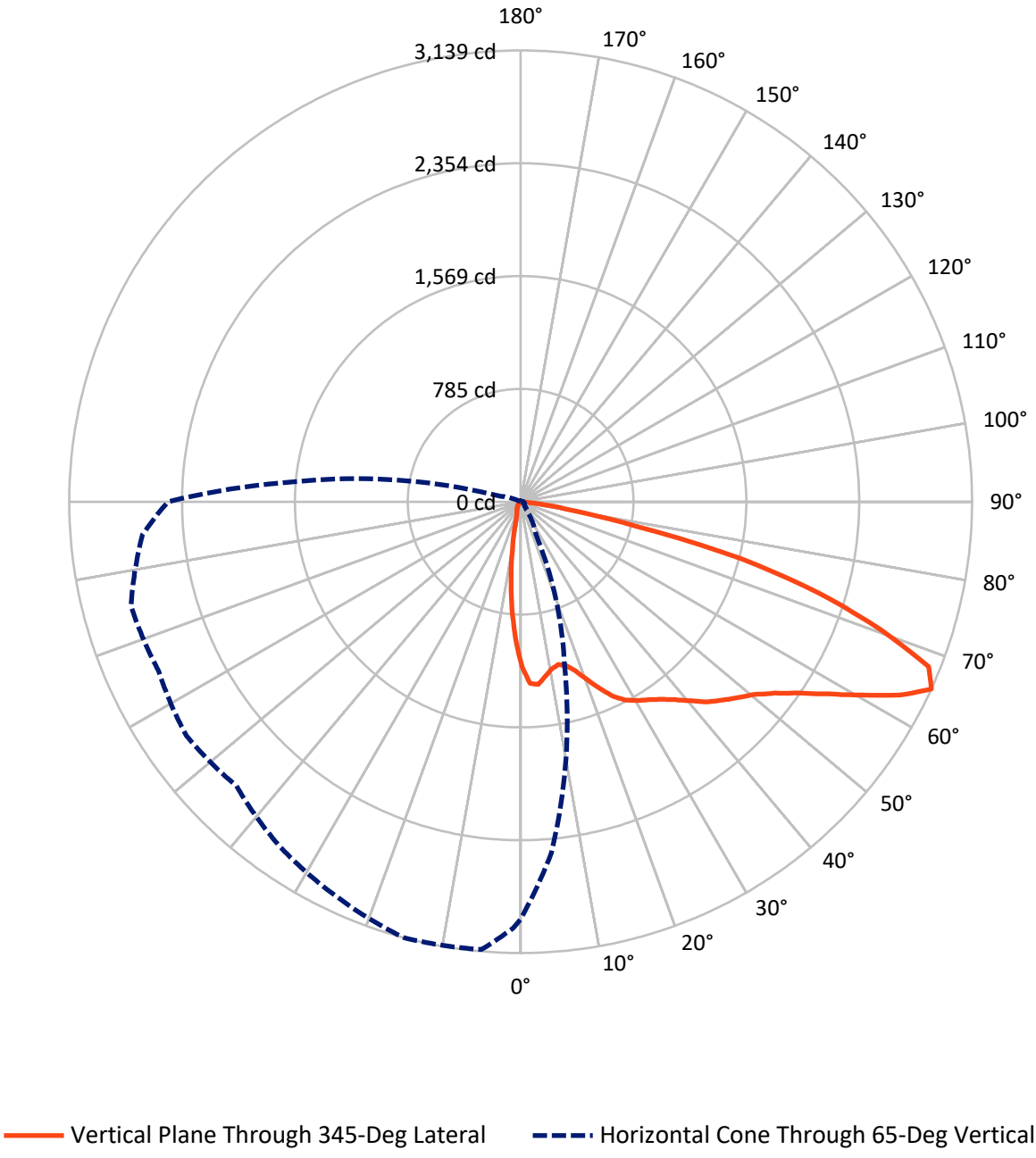
Luminous Intensity Polar Plot



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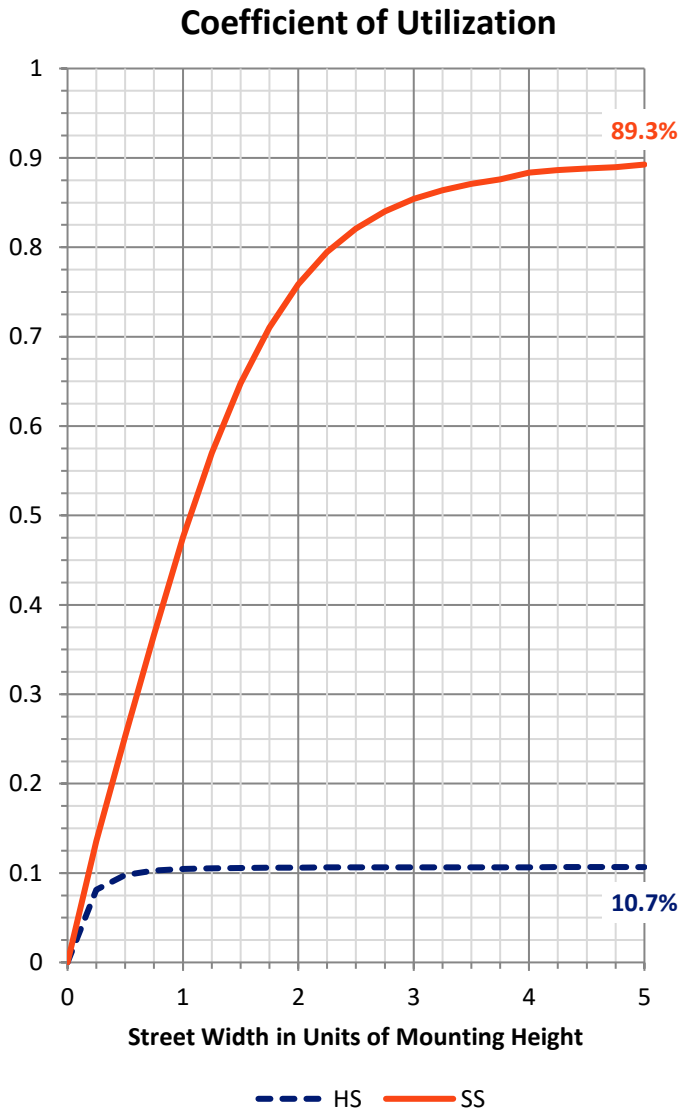
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	366.0	0.0	366.0
	% Fixture	10.8	0.0	10.8
Street Side	Lumens	3029.0	0.0	3029.0
	% Fixture	89.2	0.0	89.2
Total	Lumens	3395.0	0.0	3395.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	2.5
10°-20°	165.5	4.9
20°-30°	241.4	7.1
30°-40°	358.8	10.6
40°-50°	526.1	15.5
50°-60°	757.0	22.3
60°-70°	849.2	25.0
70°-80°	372.6	11.0
80°-90°	39.2	1.2
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°	3395.0	100.0
0°-180°	3395.0	100.0



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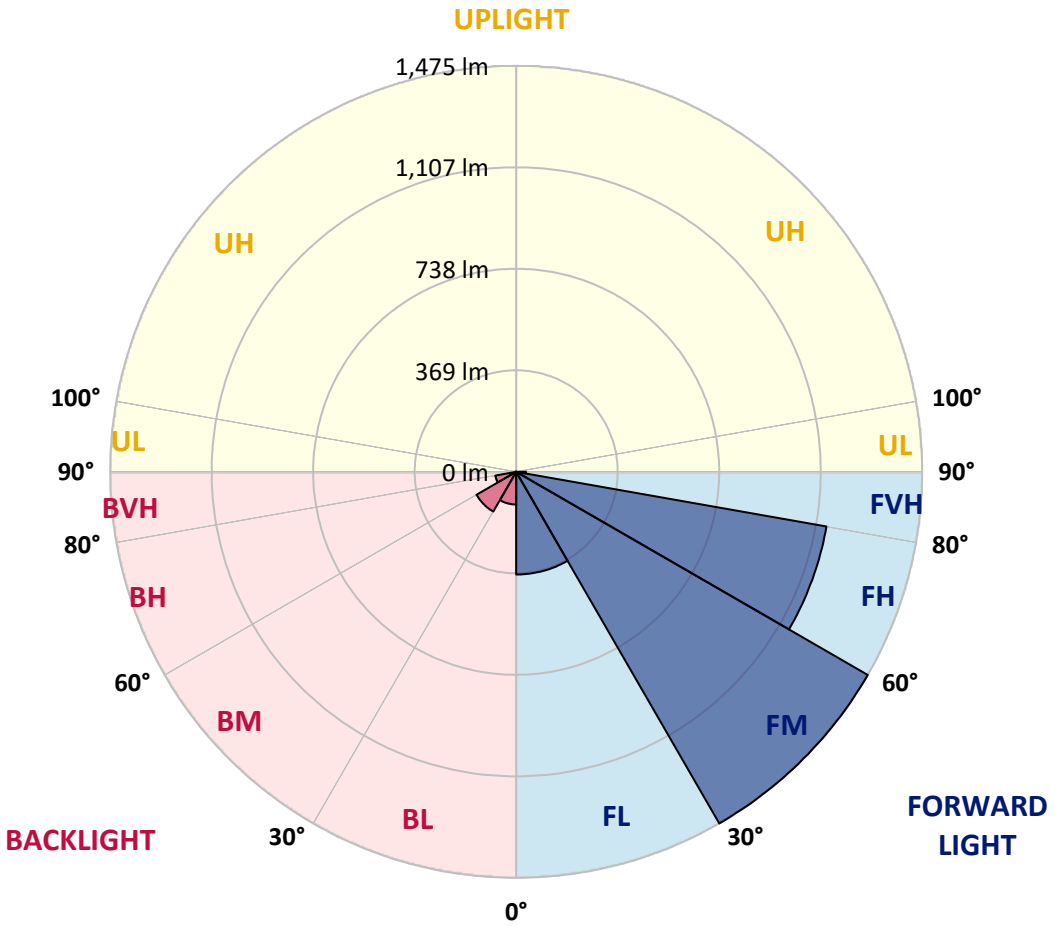
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	373.3	11.0			
FM	(30°-60°)	1475.4	43.5			
FH	(60°-80°)	1144.9	33.7			G1/1800
FVH	(80°-90°)	35.4	1.0			G1/100
BL	(0°-30°)	118.7	3.5	B1/500		
BM	(30°-60°)	166.6	4.9	B0/220		
BH	(60°-80°)	76.9	2.3	B0/110		G0/110
BVH	(80°-90°)	3.8	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°	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7
2.5°	1212.5	1212.5	1194.6	1152.2	1113.1	1065.9	1039.8	1015.3	989.3	971.3	943.6
5°	1155.5	1144.1	1118.0	1039.8	956.7	901.3	858.9	783.9	748.1	722.0	710.6
7.5°	1061.0	1054.5	1012.1	920.8	821.4	731.8	674.7	612.8	563.9	544.3	510.1
10°	995.8	989.3	935.5	811.6	695.9	630.7	585.1	541.1	493.8	446.6	410.7
12.5°	963.2	950.2	898.0	757.8	658.4	594.9	542.7	488.9	430.3	378.1	335.7
15°	971.3	950.2	891.5	748.1	630.7	552.5	485.7	407.4	348.8	286.8	247.7
17.5°	1028.4	1005.6	933.9	756.2	594.9	495.4	407.4	319.4	241.2	184.2	164.6
20°	1134.3	1109.9	1012.1	774.1	572.0	438.4	314.5	220.0	159.7	133.6	122.2
22.5°	1269.6	1237.0	1121.3	803.5	546.0	381.4	237.9	156.5	122.2	105.9	97.8
25°	1411.4	1378.8	1250.0	847.5	529.7	332.5	184.2	122.2	99.4	89.6	84.7
27.5°	1540.1	1499.4	1365.7	912.7	510.1	288.5	153.2	105.9	89.6	78.2	75.0
30°	1657.5	1610.2	1481.5	968.1	482.4	249.4	132.0	97.8	83.1	73.3	68.4
32.5°	1756.9	1719.4	1576.0	1007.2	459.6	228.2	117.3	86.4	71.7	63.6	60.3
35°	1875.9	1840.0	1667.2	1039.8	444.9	218.4	107.6	81.5	66.8	58.7	52.2
37.5°	2037.2	1985.0	1768.3	1069.1	428.6	210.2	99.4	76.6	63.6	53.8	48.9
40°	2182.2	2125.2	1885.6	1090.3	420.5	203.7	97.8	73.3	60.3	50.5	45.6
42.5°	2311.0	2258.8	1980.2	1098.5	414.0	192.3	96.2	71.7	60.3	48.9	42.4
45°	2392.5	2345.2	2092.6	1119.6	414.0	184.2	89.6	71.7	58.7	47.3	40.7
47.5°	2467.5	2421.8	2190.4	1142.5	407.4	177.6	81.5	78.2	58.7	45.6	37.5
50°	2576.7	2540.8	2314.3	1210.9	396.0	167.9	73.3	76.6	60.3	44.0	37.5
52.5°	2715.2	2698.9	2496.8	1303.8	379.7	149.9	65.2	71.7	60.3	42.4	35.9
55°	2868.4	2861.9	2687.5	1388.6	360.2	128.8	60.3	65.2	58.7	39.1	32.6
57.5°	2961.3	2961.3	2811.3	1435.8	343.9	102.7	53.8	53.8	57.0	35.9	29.3
60°	2995.5	2959.6	2796.7	1430.9	316.2	84.7	48.9	44.0	60.3	31.0	26.1
62.5°	2992.2	2914.0	2659.8	1352.7	278.7	78.2	42.4	37.5	44.0	27.7	22.8
65°	*2904.2*	*2809.7*	*2451.2*	*1178.3*	*251.0*	*78.2*	*35.9*	*31.0*	*29.3*	*24.4*	*17.9*
67.5°	2661.4	2604.4	2146.4	999.0	231.4	78.2	31.0	26.1	22.8	19.6	16.3
70°	2260.5	2185.5	1729.2	770.9	216.8	78.2	26.1	22.8	21.2	16.3	13.0
72.5°	1473.3	1430.9	1057.7	529.7	177.6	76.6	22.8	21.2	19.6	14.7	11.4
75°	801.8	741.5	581.8	189.1	127.1	55.4	19.6	17.9	14.7	13.0	9.8
77.5°	347.1	334.1	296.6	50.5	37.5	16.3	11.4	11.4	9.8	9.8	6.5
80°	45.6	34.2	39.1	14.7	13.0	8.1	6.5	4.9	4.9	4.9	3.3
82.5°	1.6	1.6	0.0	1.6	4.9	3.3	0.0	0.0	1.6	1.6	1.6
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

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7
2.5°	956.7	937.1	922.4	922.4	942.0	930.6	943.6	935.5	958.3	969.7	966.4
5°	686.1	694.3	686.1	699.2	720.4	731.8	738.3	754.6	752.9	759.5	770.9
7.5°	497.1	497.1	500.3	497.1	516.6	537.8	549.2	544.3	541.1	534.6	546.0
10°	399.3	381.4	360.2	360.2	363.4	374.8	376.5	368.3	356.9	335.7	342.2
12.5°	312.9	299.9	286.8	259.1	257.5	251.0	249.4	226.5	208.6	202.1	202.1
15°	229.8	221.6	207.0	193.9	180.9	174.4	163.0	135.3	117.3	115.7	117.3
17.5°	153.2	148.3	143.4	143.4	138.5	127.1	115.7	97.8	89.6	86.4	88.0
20°	114.1	112.5	107.6	109.2	109.2	99.4	88.0	79.9	76.6	76.6	78.2
22.5°	94.5	92.9	88.0	88.0	88.0	83.1	75.0	70.1	68.4	68.4	68.4
25°	81.5	79.9	76.6	75.0	75.0	71.7	65.2	61.9	60.3	60.3	60.3
27.5°	73.3	71.7	68.4	65.2	65.2	61.9	58.7	53.8	53.8	53.8	53.8
30°	65.2	63.6	61.9	58.7	57.0	53.8	50.5	48.9	47.3	47.3	47.3
32.5°	58.7	57.0	55.4	53.8	50.5	47.3	44.0	42.4	40.7	40.7	40.7
35°	50.5	47.3	45.6	47.3	45.6	40.7	39.1	35.9	34.2	34.2	34.2
37.5°	45.6	42.4	39.1	37.5	37.5	37.5	34.2	31.0	29.3	27.7	29.3
40°	42.4	39.1	35.9	32.6	31.0	32.6	29.3	26.1	24.4	22.8	24.4
42.5°	39.1	35.9	31.0	27.7	24.4	27.7	24.4	21.2	19.6	17.9	19.6
45°	37.5	34.2	29.3	24.4	21.2	21.2	21.2	17.9	14.7	14.7	14.7
47.5°	35.9	32.6	26.1	21.2	17.9	16.3	16.3	13.0	11.4	9.8	9.8
50°	34.2	31.0	24.4	17.9	14.7	13.0	13.0	9.8	8.1	8.1	8.1
52.5°	32.6	29.3	22.8	16.3	13.0	9.8	8.1	6.5	6.5	4.9	4.9
55°	29.3	26.1	19.6	14.7	11.4	8.1	6.5	4.9	4.9	3.3	4.9
57.5°	27.7	24.4	17.9	13.0	9.8	6.5	4.9	3.3	3.3	3.3	3.3
60°	24.4	21.2	14.7	9.8	6.5	4.9	3.3	3.3	3.3	1.6	1.6
62.5°	19.6	17.9	13.0	8.1	4.9	3.3	1.6	1.6	1.6	1.6	1.6
65°	*17.9*	*16.3*	*11.4*	*6.5*	*3.3*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*
67.5°	14.7	13.0	8.1	4.9	1.6	1.6	0.0	1.6	1.6	0.0	0.0
70°	11.4	11.4	6.5	3.3	1.6	0.0	0.0	1.6	1.6	0.0	0.0
72.5°	9.8	9.8	6.5	1.6	0.0	0.0	0.0	1.6	1.6	1.6	0.0
75°	8.1	8.1	6.5	3.3	0.0	0.0	0.0	1.6	1.6	1.6	1.6
77.5°	6.5	4.9	3.3	1.6	0.0	0.0	0.0	1.6	1.6	1.6	1.6
80°	3.3	3.3	1.6	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	0.0	0.0	0.0	0.0	0.0	1.6	3.3	3.3	1.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.3	3.3	3.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.3	3.3	3.3	3.3
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°	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7
2.5°	974.6	1000.7	1030.0	1047.9	1087.0	1121.3	1162.0	1197.9	1240.2	1263.1	1271.2
5°	782.3	797.0	834.4	883.3	927.3	989.3	1061.0	1140.8	1227.2	1268.0	1297.3
7.5°	539.5	552.5	606.3	651.9	725.2	805.1	902.9	1012.1	1124.5	1181.6	1233.7
10°	352.0	370.0	415.6	479.1	572.0	669.8	769.2	883.3	1013.7	1080.5	1150.6
12.5°	203.7	224.9	280.3	363.4	454.7	559.0	661.7	787.2	932.2	1005.6	1077.3
15°	117.3	125.5	158.1	231.4	334.1	461.2	581.8	717.1	886.6	968.1	1052.8
17.5°	88.0	92.9	102.7	133.6	213.5	353.7	523.2	695.9	891.5	1000.7	1075.6
20°	78.2	81.5	86.4	97.8	135.3	251.0	451.4	681.2	938.7	1078.9	1170.2
22.5°	70.1	73.3	78.2	86.4	102.7	169.5	376.5	679.6	1017.0	1194.6	1297.3
25°	61.9	65.2	70.1	78.2	91.3	122.2	291.7	674.7	1114.8	1321.7	1450.5
27.5°	53.8	57.0	61.9	70.1	81.5	101.0	221.6	660.1	1232.1	1458.6	1595.5
30°	47.3	50.5	55.4	61.9	73.3	88.0	169.5	635.6	1333.1	1580.9	1693.3
32.5°	40.7	44.0	48.9	55.4	65.2	76.6	136.9	583.5	1411.4	1677.0	1773.2
35°	34.2	37.5	42.4	48.9	57.0	65.2	112.5	498.7	1491.2	1776.4	1869.3
37.5°	29.3	32.6	35.9	42.4	50.5	58.7	92.9	444.9	1549.9	1900.3	1991.6
40°	24.4	27.7	32.6	37.5	44.0	55.4	75.0	373.2	1608.6	2019.3	2104.0
42.5°	19.6	22.8	27.7	34.2	40.7	48.9	60.3	308.0	1667.2	2126.8	2206.7
45°	14.7	17.9	22.8	31.0	40.7	42.4	48.9	262.4	1681.9	2227.9	2296.3
47.5°	11.4	13.0	17.9	26.1	39.1	37.5	40.7	228.2	1709.6	2307.7	2384.3
50°	8.1	9.8	14.7	24.4	34.2	31.0	35.9	215.1	1748.7	2369.7	2410.4
52.5°	6.5	8.1	11.4	21.2	27.7	27.7	32.6	228.2	1799.3	2443.0	2477.2
55°	4.9	6.5	9.8	14.7	21.2	24.4	31.0	246.1	1897.0	2571.8	2565.2
57.5°	3.3	4.9	8.1	11.4	16.3	21.2	29.3	273.8	1996.5	2716.8	2723.3
60°	3.3	4.9	6.5	9.8	14.7	17.9	26.1	277.1	1980.2	2738.0	2834.2
62.5°	1.6	3.3	6.5	8.1	11.4	14.7	22.8	233.1	1823.7	2635.3	2775.5
65°	*1.6*	*3.3*	*4.9*	*8.1*	*9.8*	*13.0*	*17.9*	*148.3*	*1587.4*	*2452.8*	*2638.6*
67.5°	1.6	3.3	4.9	6.5	8.1	11.4	14.7	76.6	1346.2	2263.7	2443.0
70°	1.6	3.3	4.9	6.5	8.1	9.8	13.0	37.5	1020.2	1908.4	2139.9
72.5°	1.6	3.3	4.9	6.5	6.5	8.1	11.4	26.1	655.2	1434.2	1657.5
75°	1.6	3.3	3.3	4.9	6.5	8.1	9.8	17.9	423.7	964.8	1256.5
77.5°	1.6	3.3	3.3	4.9	6.5	8.1	11.4	16.3	309.7	661.7	868.7
80°	1.6	3.3	3.3	4.9	6.5	6.5	8.1	11.4	166.2	438.4	552.5
82.5°	3.3	3.3	4.9	4.9	4.9	6.5	8.1	8.1	86.4	280.3	373.2
85°	3.3	3.3	4.9	4.9	6.5	6.5	6.5	8.1	37.5	117.3	185.8
87.5°	3.3	4.9	4.9	4.9	6.5	6.5	6.5	6.5	4.9	6.5	6.5
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: P437598
CATALOG NUMBER: ISC-SA1D-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	*1145.7*	1145.7	1145.7	1145.7
2.5°	1295.7	1316.8	1326.6	1318.5	1312.0	1292.4	*1264.7*	1237.0	1214.2	1212.5
5°	1364.1	1409.7	1445.6	1427.7	1403.2	1346.2	*1276.1*	1197.9	1168.5	1155.5
7.5°	1349.4	1448.9	1509.2	1492.9	1444.0	1336.4	*1227.2*	1124.5	1077.3	1061.0
10°	1282.6	1416.3	1496.1	1491.2	1445.6	1318.5	*1183.2*	1059.3	1008.8	995.8
12.5°	1220.7	1352.7	1429.3	1432.6	1416.3	1298.9	*1162.0*	1030.0	969.7	963.2
15°	1188.1	1300.5	1346.2	1356.0	1362.5	1297.3	*1181.6*	1049.6	986.0	971.3
17.5°	1194.6	1248.4	1259.8	1251.7	1295.7	1298.9	*1237.0*	1118.0	1046.3	1028.4
20°	1233.7	1214.2	1176.7	1184.8	1233.7	1305.4	*1320.1*	1238.6	1157.1	1134.3
22.5°	1308.7	1212.5	1137.6	1131.1	1194.6	1316.8	*1409.7*	1367.4	1282.6	1269.6
25°	1419.5	1237.0	1121.3	1108.2	1163.6	1328.3	*1501.0*	1502.6	1435.8	1411.4
27.5°	1527.1	1276.1	1119.6	1106.6	1163.6	1342.9	*1562.9*	1636.3	1566.2	1540.1
30°	1589.0	1321.7	1145.7	1121.3	1184.8	1356.0	*1603.7*	1742.2	1680.3	1657.5
32.5°	1646.1	1370.6	1173.4	1144.1	1225.6	1391.8	*1641.2*	1838.4	1784.6	1756.9
35°	1693.3	1427.7	1225.6	1179.9	1285.9	1444.0	*1686.8*	1944.3	1910.1	1875.9
37.5°	1739.0	1484.7	1298.9	1272.8	1386.9	1518.9	*1747.1*	2055.1	2071.4	2037.2
40°	1804.1	1549.9	1424.4	1403.2	1535.2	1633.0	*1820.4*	2166.0	2219.7	2182.2
42.5°	1866.1	1633.0	1551.5	1571.1	1714.5	1765.0	*1903.6*	2267.0	2327.3	2311.0
45°	1923.1	1735.7	1735.7	1783.0	1908.4	1910.1	*1967.1*	2337.1	2400.6	2392.5
47.5°	1998.1	1862.8	1926.4	2056.8	2123.6	2035.6	*2035.6*	2403.9	2490.3	2467.5
50°	2071.4	2032.3	2179.0	2298.0	2356.6	2187.1	*2105.6*	2493.5	2596.2	2576.7
52.5°	2151.3	2196.9	2415.3	2532.6	2566.9	2359.9	*2211.6*	2583.2	2715.2	2715.2
55°	2280.0	2337.1	2664.7	2762.4	2811.3	2503.3	*2346.9*	2710.3	2860.2	2868.4
57.5°	2412.0	2472.3	2804.8	2928.7	2992.2	2715.2	*2521.2*	2879.8	2962.9	2961.3
60°	2550.6	2614.1	2914.0	3036.2	3129.1	2931.9	*2728.2*	3034.6	3011.8	2995.5
62.5°	2721.7	2721.7	2954.8	3011.8	3124.2	3068.8	*2961.3*	3122.6	3029.7	2992.2
65°	*2804.8*	*2778.7*	*2837.4*	*2795.0*	*2923.8*	*3029.7*	*3138.9*	*3125.9*	*2966.2*	*2904.2*
67.5°	2760.8	2602.7	2501.7	2438.1	2465.8	2648.4	*3060.7*	2971.1	2708.7	2661.4
70°	2459.3	2081.2	1986.7	1885.6	1831.9	2020.9	*2645.1*	2623.9	2304.5	2260.5
72.5°	2004.6	1502.6	1274.5	1377.1	1325.0	1538.5	*2167.6*	1851.4	1512.4	1473.3
75°	1664.0	1118.0	831.2	832.8	841.0	1010.5	*1584.1*	1100.1	831.2	801.8
77.5°	1204.4	787.2	671.5	601.4	607.9	645.4	*824.7*	469.4	383.0	347.1
80°	735.0	487.3	542.7	482.4	466.1	358.5	*355.3*	68.4	45.6	45.6
82.5°	400.9	309.7	288.5	104.3	161.3	195.6	*161.3*	3.3	1.6	1.6
85°	203.7	123.9	58.7	17.9	21.2	17.9	*3.3*	0.0	0.0	0.0
87.5°	6.5	4.9	4.9	3.3	3.3	1.6	*1.6*	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

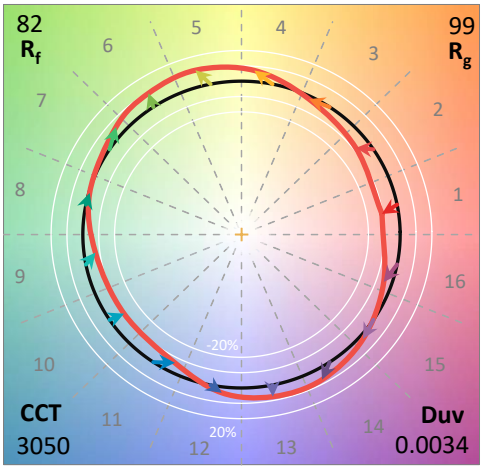
Test Information

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

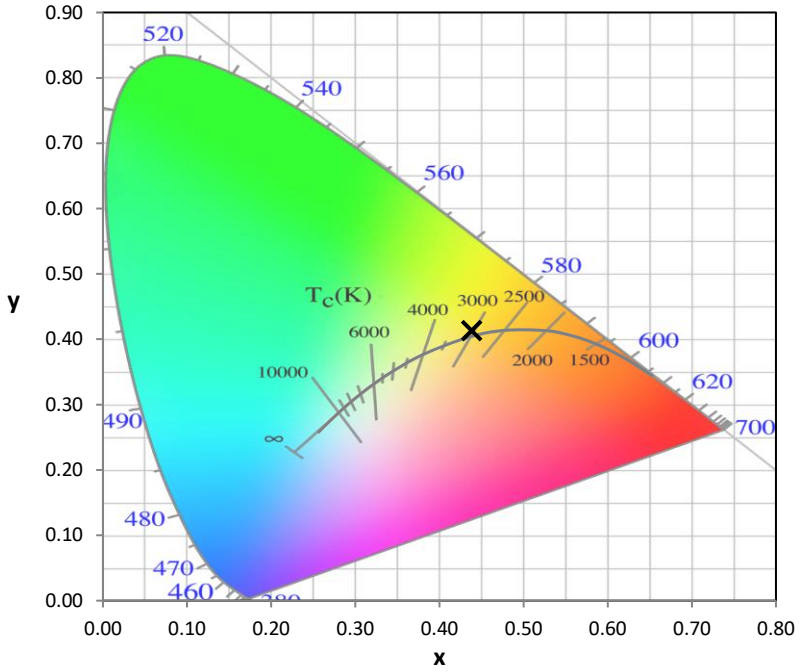
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

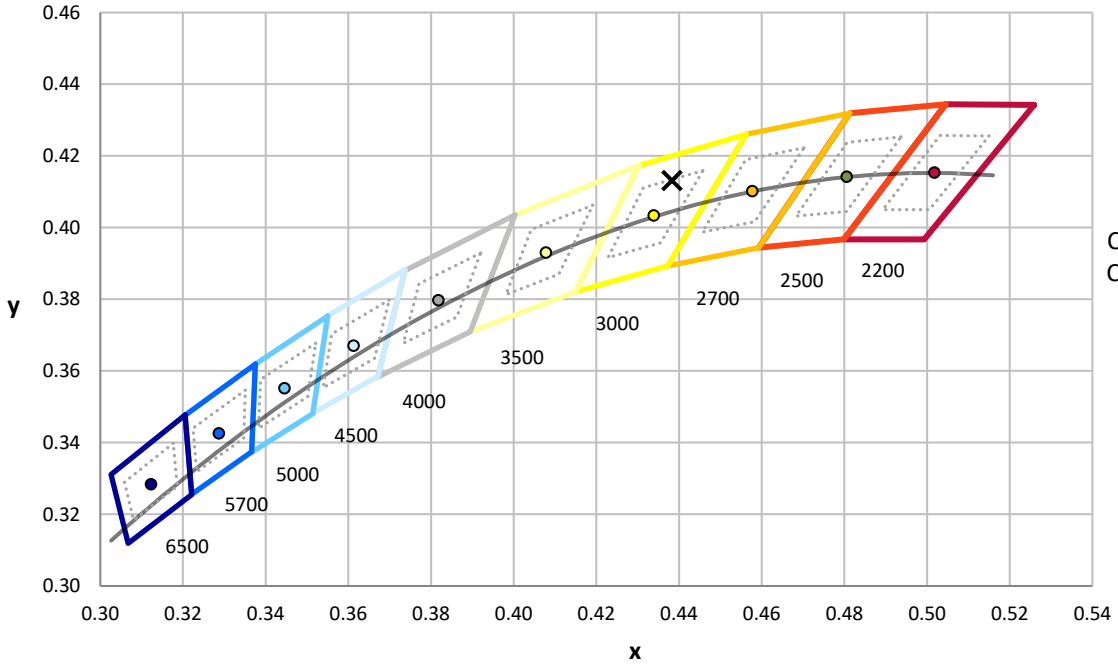
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

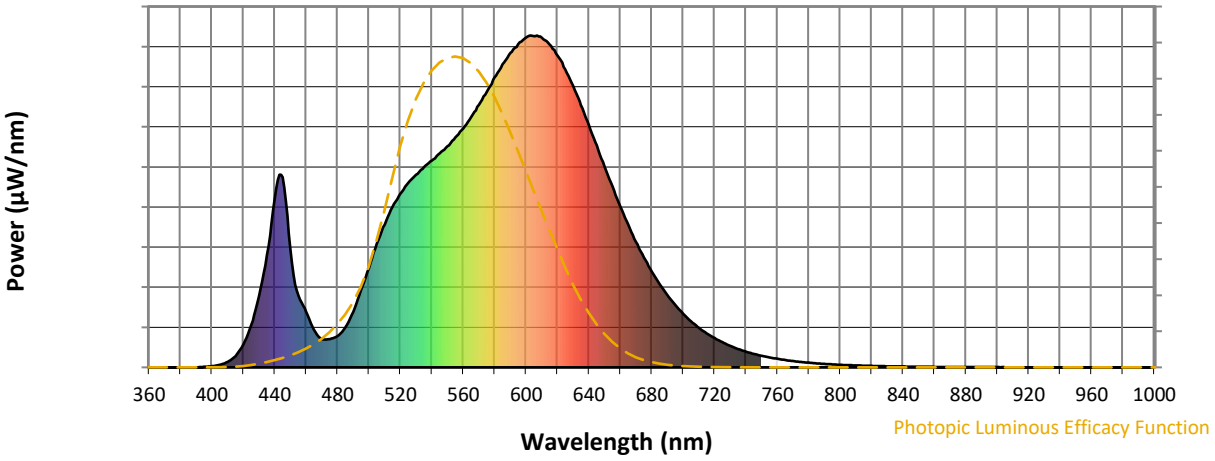


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

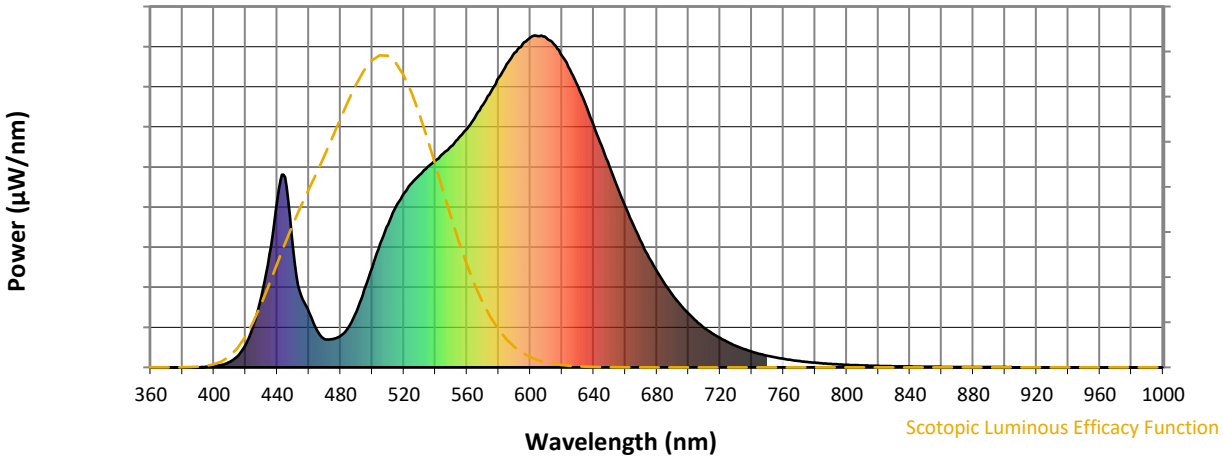


Photopic Lumens: NR

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

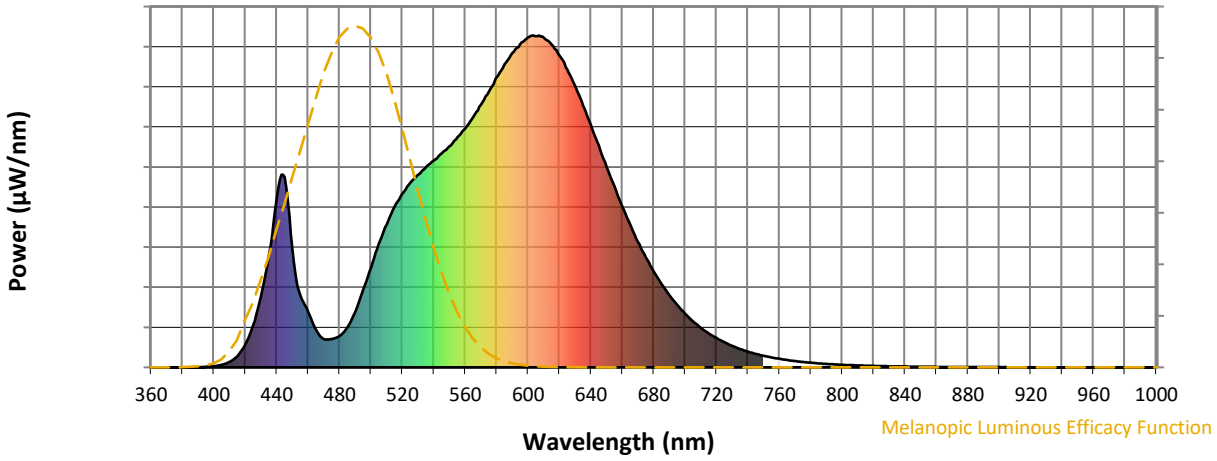


Scotopic Lumens: NR **S/P: 1.27**

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			

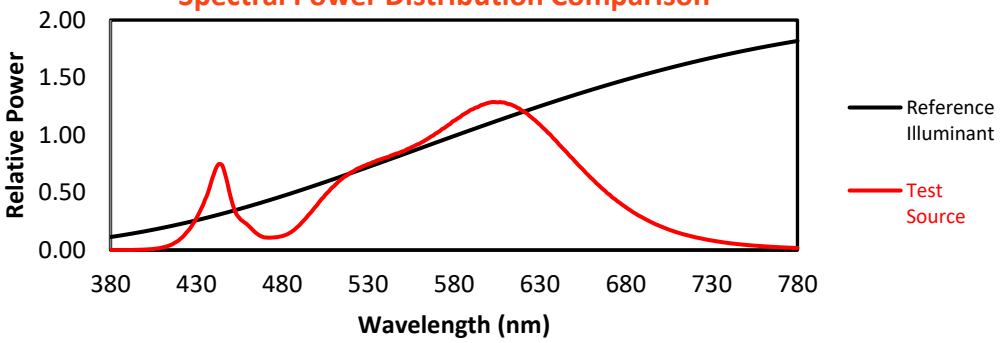
REPORT NUMBER: SP1-2408-195-9

TM-30-18

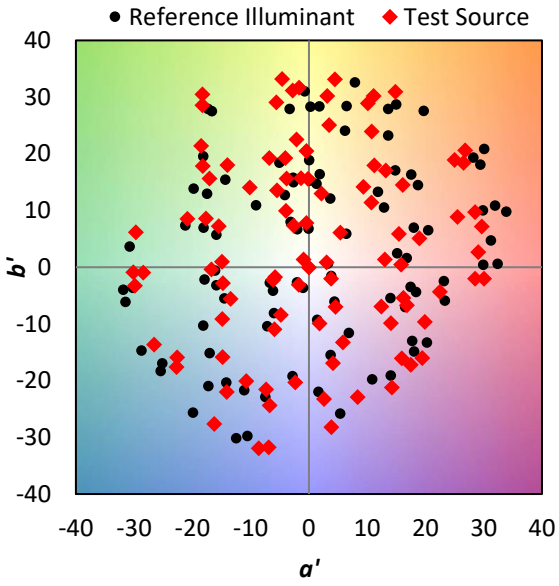
Summary

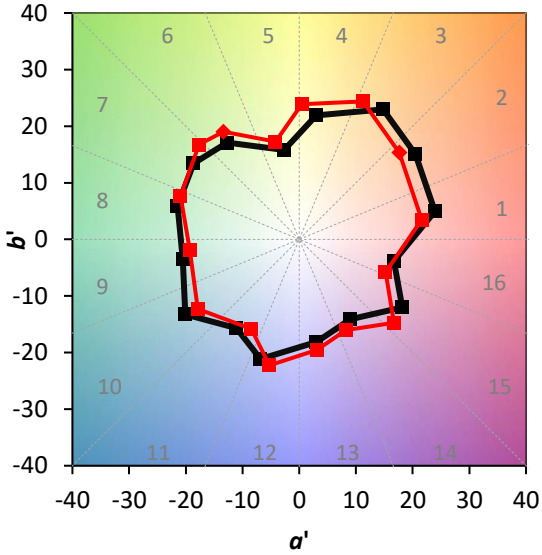
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

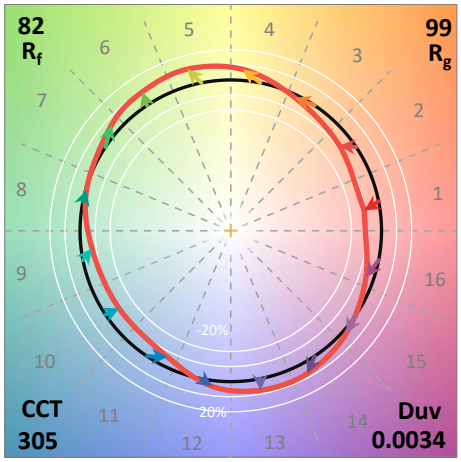
Spectral Power Distribution Comparison

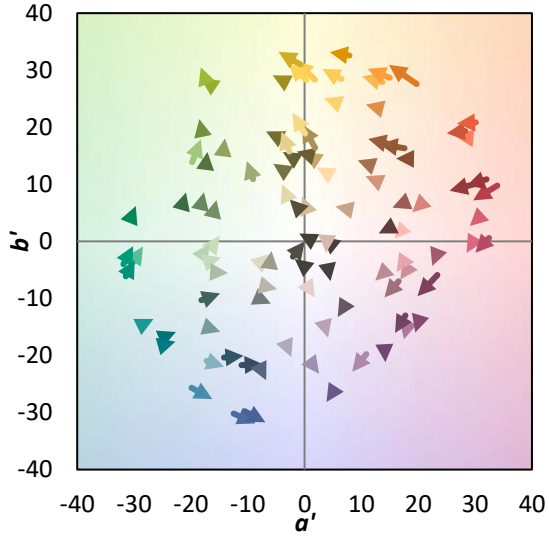


Color Vector Graphics







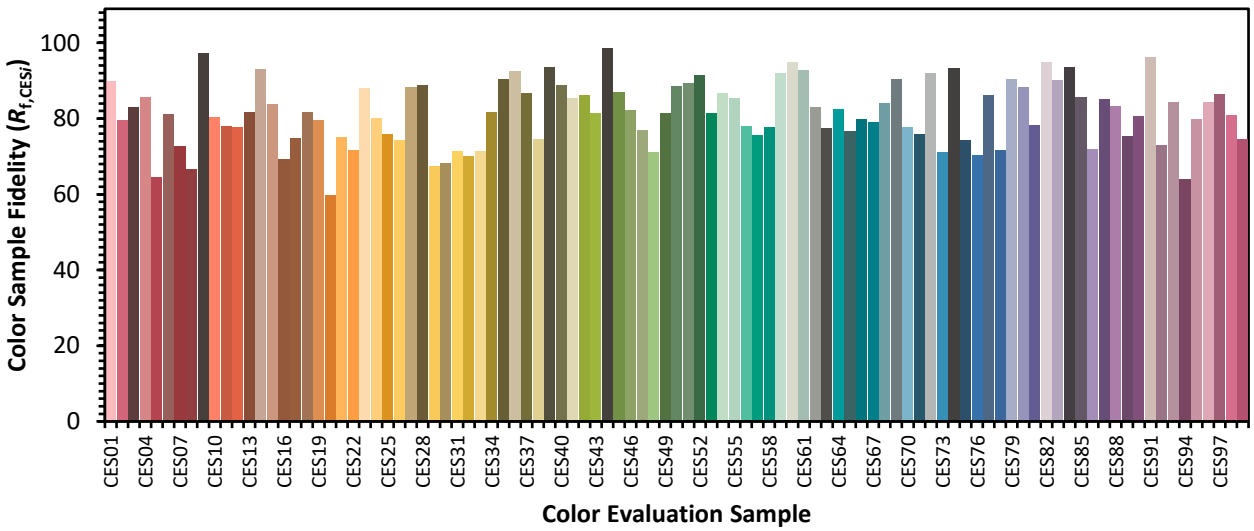


REPORT NUMBER: SP1-2408-195-9

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
CES25 = 72	CES50 = 89	CES75 = 74	



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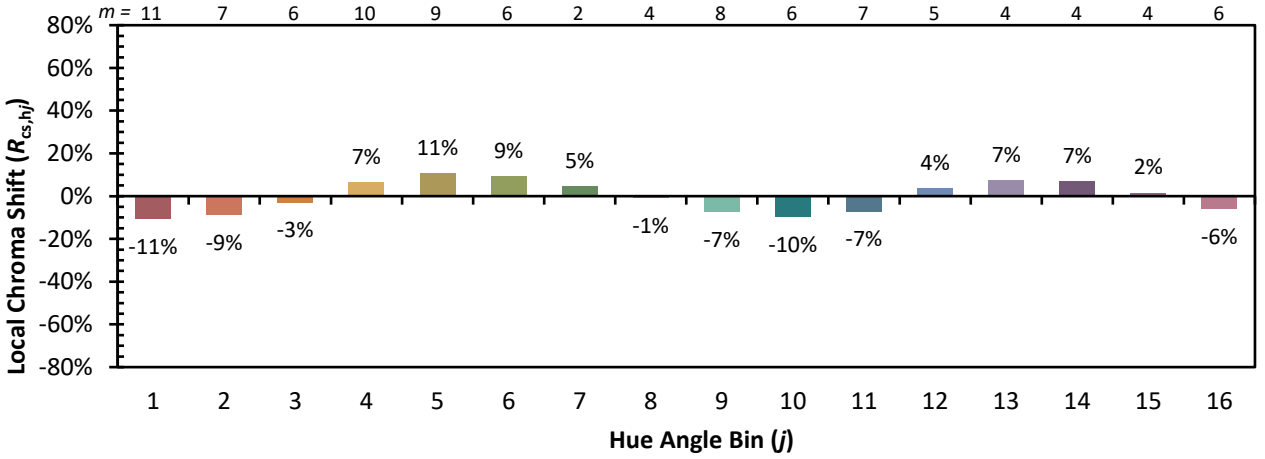
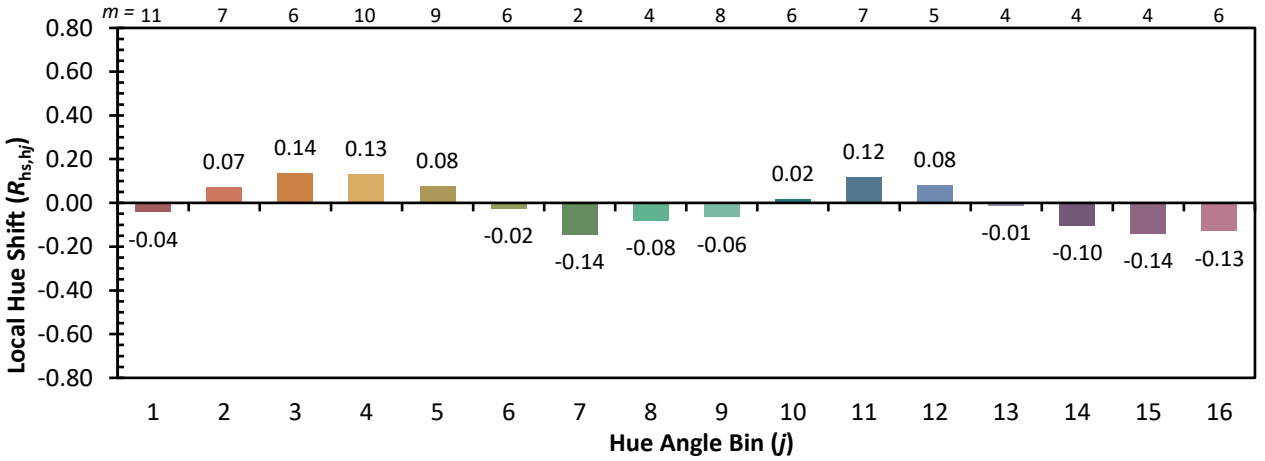
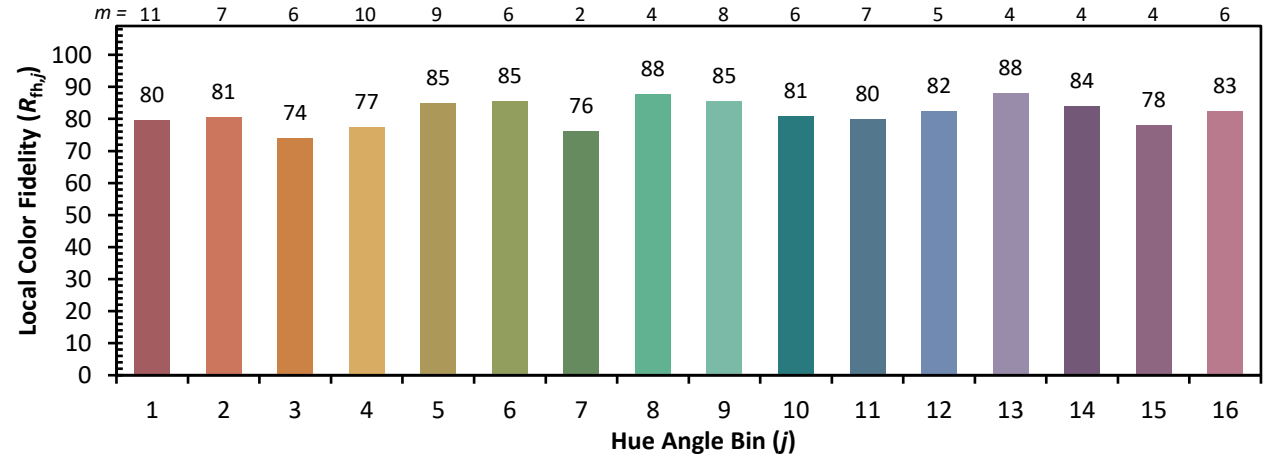
Color Rendition by Hue-Angle Bin







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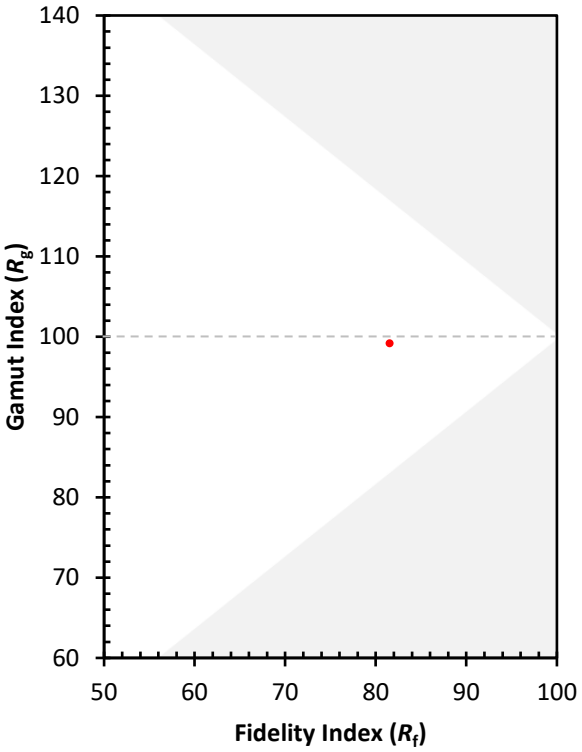
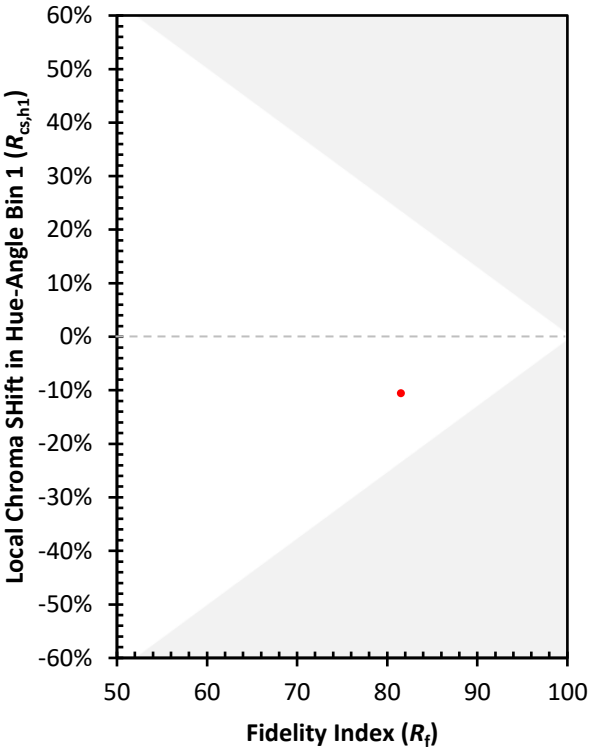
Measure Comparisons





(END OF REPORT)