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: P437084

Luminaire Tested: **ISS-SA1A-830-U-SLL**

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:	P437084
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-20)
Test Lab:	INNOVATION CENTER
Issue Date:	12/9/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	ISS-SA1A-830-U-SLL
Description:	IMPACT ELITE LED QUARTER SPHERE LUMINAIRE
	(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1944 lumens
Efficiency:	N/A
Efficacy:	96.7 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B0 - U0 - G1

Input Watts (W):	20.1
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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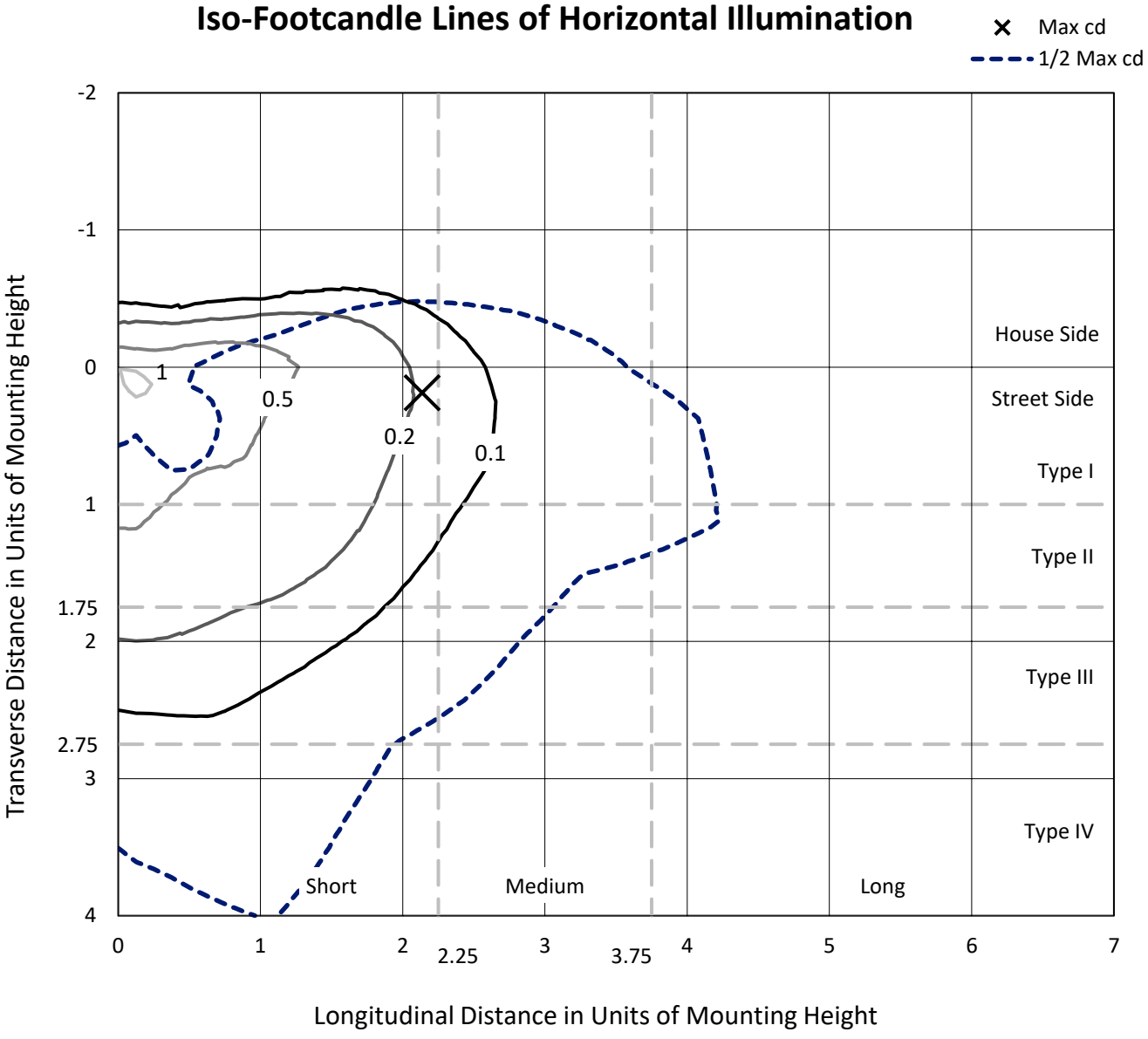
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
Type IV - Short - N/A

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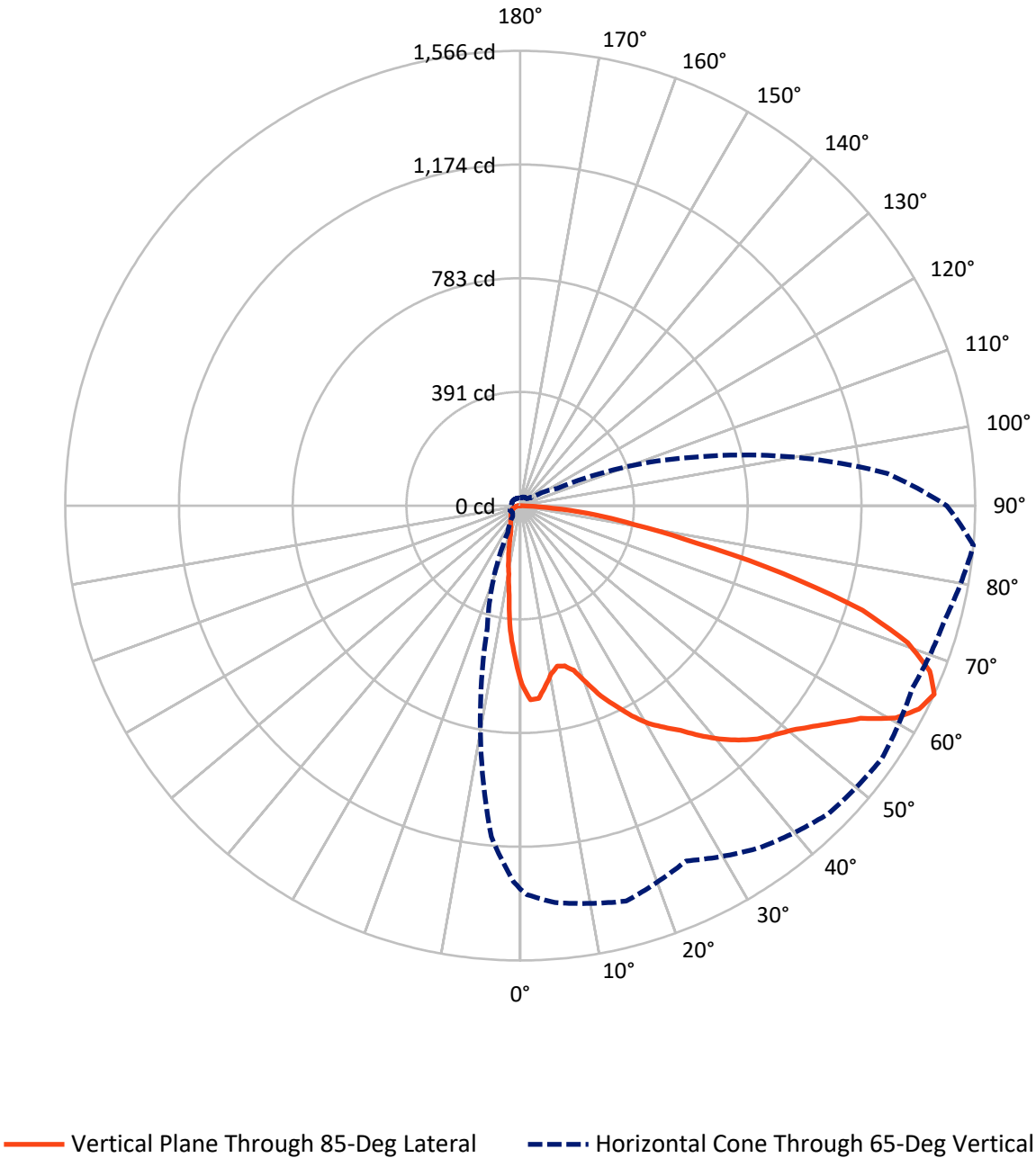
Luminous Intensity Polar Plot



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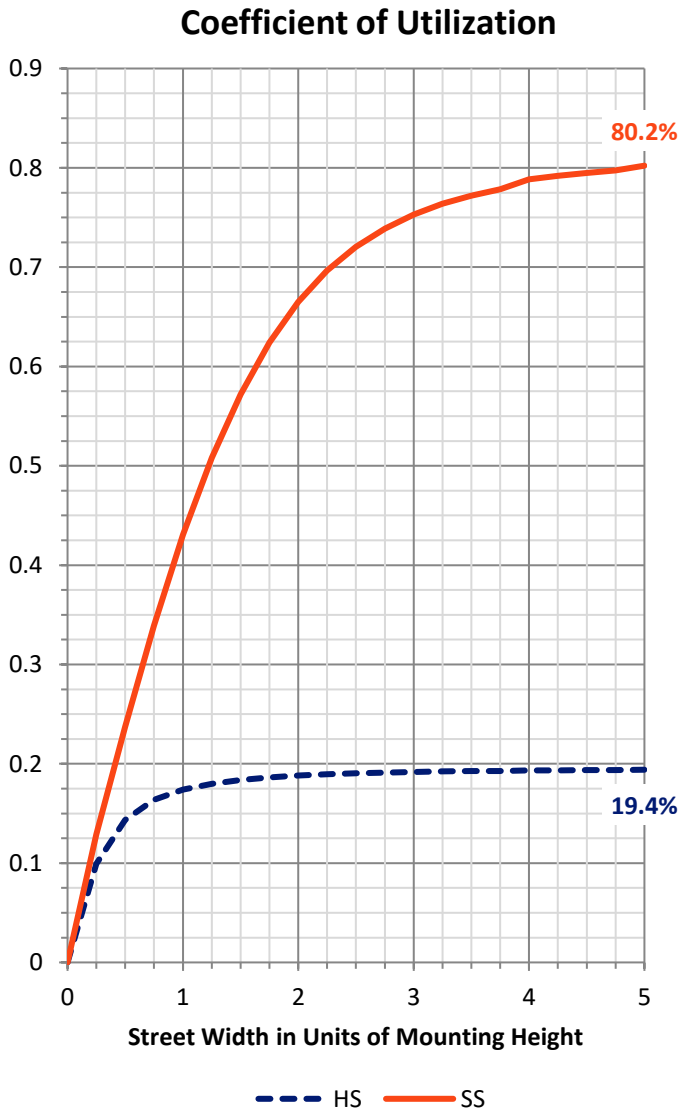
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	380.5	0.0	380.5
	% Fixture	19.6	0.0	19.6
Street Side	Lumens	1563.5	0.0	1563.5
	% Fixture	80.4	0.0	80.4
Total	Lumens	1944.0	0.0	1944.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	2.4
10°-20°	97.2	5.0
20°-30°	139.8	7.2
30°-40°	200.8	10.3
40°-50°	284.2	14.6
50°-60°	395.1	20.3
60°-70°	470.5	24.2
70°-80°	272.0	14.0
80°-90°	37.6	1.9
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°	1944.0	100.0
0°-180°	1944.0	100.0



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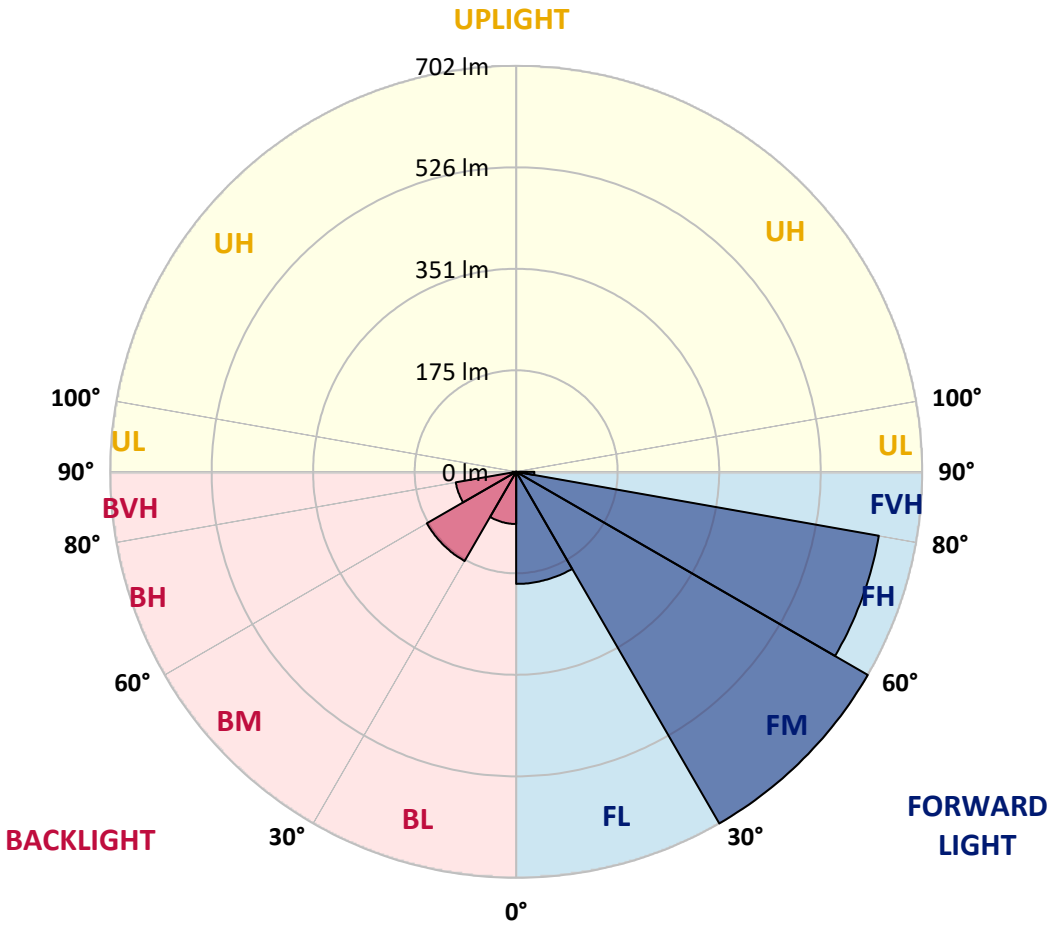
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	193.7	10.0			
FM	(30°-60°)	701.8	36.1			
FH	(60°-80°)	636.6	32.7			G0/660
FVH	(80°-90°)	31.5	1.6			G1/100
BL	(0°-30°)	90.1	4.6	B0/110		
BM	(30°-60°)	178.3	9.2	B0/220		
BH	(60°-80°)	105.9	5.4	B0/110		G0/110
BVH	(80°-90°)	6.1	0.3			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	*614.1*
2.5°	643.5	645.9	651.5	670.5	682.5	692.0	703.9	692.0	688.8	672.9	*669.7*
5°	620.5	626.0	641.9	677.7	707.1	738.1	754.0	740.4	722.2	694.4	*666.6*
7.5°	575.2	582.3	603.0	658.6	714.2	756.3	777.0	762.7	725.4	676.1	*626.0*
10°	529.1	540.2	564.9	634.8	693.6	740.4	772.2	757.1	711.8	647.5	*587.9*
12.5°	501.3	509.3	537.1	610.2	672.1	719.0	742.8	734.1	692.0	630.8	*567.3*
15°	495.0	502.9	530.7	601.4	656.2	691.2	696.8	699.1	683.2	636.4	*572.8*
17.5°	512.4	518.8	556.9	615.7	638.0	645.1	653.9	664.2	672.1	647.5	*595.9*
20°	554.5	567.3	600.6	645.1	633.2	616.5	621.3	634.0	664.2	680.1	*649.1*
22.5°	611.0	625.3	667.4	685.6	636.4	600.6	596.6	607.8	663.4	715.8	*712.6*
25°	673.7	693.6	738.9	739.7	649.9	589.5	581.6	591.9	661.8	747.6	*763.5*
27.5°	738.9	757.1	806.4	781.8	676.1	590.3	580.8	591.1	665.8	781.8	*819.9*
30°	787.3	811.2	854.1	821.5	692.8	600.6	586.3	599.8	674.5	799.2	*869.9*
32.5°	836.6	851.7	897.0	844.5	711.1	616.5	598.2	618.9	696.8	815.9	*909.7*
35°	880.3	900.1	946.2	858.0	738.1	643.5	619.7	646.7	728.5	839.8	*950.2*
37.5°	935.9	955.0	997.1	877.1	760.3	677.7	657.8	692.8	767.5	861.2	*1004.2*
40°	985.1	1015.3	1047.1	900.9	785.7	727.7	715.0	762.7	819.9	890.6	*1056.7*
42.5°	1033.6	1059.0	1094.0	927.9	818.3	788.9	794.5	844.5	883.5	935.1	*1103.5*
45°	1068.6	1098.0	1128.9	949.4	860.4	854.9	892.2	934.3	948.6	982.0	*1145.6*
47.5°	1102.7	1125.8	1153.6	970.8	911.3	928.7	993.9	1026.5	1012.2	1024.1	*1179.0*
50°	1148.0	1172.6	1180.6	1005.0	975.6	1022.5	1093.2	1114.6	1073.3	1057.4	*1214.0*
52.5°	1213.2	1225.1	1221.1	1045.5	1036.8	1120.2	1178.2	1210.8	1136.9	1089.2	*1262.4*
55°	1300.6	1321.2	1295.8	1111.5	1099.6	1214.0	1281.5	1297.4	1207.6	1128.9	*1318.0*
57.5°	1384.0	1402.2	1394.3	1191.7	1181.4	1295.0	1360.1	1375.2	1276.7	1202.8	*1381.6*
60°	1415.0	1420.5	1449.1	1276.7	1263.2	1364.1	1438.0	1440.4	1359.3	1291.8	*1484.9*
62.5°	1381.6	1403.8	1431.6	1356.2	1312.5	1423.7	1489.6	1504.7	1438.0	1399.9	*1541.3*
65°	*1319.6*	*1339.5*	*1372.1*	*1409.4*	*1349.8*	*1438.0*	*1500.0*	*1519.0*	*1488.8*	*1513.5*	*1565.9*
67.5°	1248.1	1272.7	1295.0	1418.1	1345.0	1356.2	1407.8	1419.7	1461.8	1563.5	*1520.6*
70°	1156.0	1183.8	1202.8	1384.0	1231.4	1121.0	1157.5	1190.1	1254.5	1474.5	*1415.0*
72.5°	957.3	1001.8	1049.5	1229.1	996.3	870.7	899.3	920.8	966.9	1259.2	*1232.2*
75°	673.7	706.3	765.1	989.9	765.1	616.5	661.0	661.0	719.0	1034.4	*935.9*
77.5°	402.8	403.6	460.8	651.5	465.6	415.5	440.9	452.9	470.3	732.5	*621.3*
80°	228.0	231.2	250.3	421.1	275.7	283.6	313.8	345.6	319.4	454.4	*399.6*
82.5°	106.5	93.7	99.3	198.6	156.5	185.1	189.9	204.2	205.8	290.8	*262.2*
85°	8.7	7.2	9.5	35.8	27.8	25.4	18.3	35.0	54.8	127.1	*112.8*
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°	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1
2.5°	659.4	651.5	634.0	620.5	607.8	583.9	574.4	560.9	553.7	541.0	544.2
5°	645.9	627.6	587.9	560.9	525.9	497.3	479.9	464.0	457.6	444.1	439.3
7.5°	596.6	580.8	530.7	486.2	443.3	409.2	376.6	352.7	341.6	329.7	328.9
10°	554.5	528.3	471.1	418.7	369.4	337.7	313.8	294.0	276.5	261.4	252.6
12.5°	530.7	498.1	434.6	371.0	336.9	314.6	288.4	263.8	243.9	226.4	216.1
15°	530.7	492.6	417.1	355.1	321.0	287.6	257.4	232.0	205.8	185.1	178.8
17.5°	555.3	508.5	421.1	344.8	296.3	259.0	220.9	187.5	162.1	143.8	137.4
20°	603.8	547.4	430.6	332.9	272.5	220.9	174.8	139.0	116.0	107.3	105.7
22.5°	660.2	594.3	444.9	321.8	247.9	180.3	131.1	105.7	95.3	92.2	92.2
25°	722.2	646.7	463.2	309.8	222.5	143.0	100.1	88.2	84.2	82.6	82.6
27.5°	780.2	703.9	495.8	305.1	198.6	116.0	87.4	78.7	76.3	74.7	75.5
30°	836.6	754.8	529.1	295.5	172.4	100.9	78.7	72.3	69.1	68.3	69.1
32.5°	885.0	798.4	552.2	281.2	154.1	90.6	73.1	66.7	63.6	62.8	63.6
35°	940.7	841.3	575.2	270.9	144.6	84.2	69.1	62.8	59.6	58.0	58.0
37.5°	1005.8	893.0	592.7	255.8	138.2	77.9	65.9	59.6	55.6	54.0	54.0
40°	1093.2	955.8	607.0	243.9	131.1	74.7	62.0	56.4	52.4	50.8	50.1
42.5°	1153.6	1010.6	618.9	236.0	123.9	73.1	59.6	54.8	50.1	47.7	46.9
45°	1194.9	1059.0	626.8	232.0	117.6	69.1	58.0	53.2	47.7	44.5	44.5
47.5°	1234.6	1098.8	627.6	226.4	112.8	64.4	60.4	50.8	45.3	42.1	42.1
50°	1279.1	1148.8	642.7	220.9	107.3	58.8	59.6	50.1	43.7	40.5	39.7
52.5°	1323.6	1217.1	672.1	212.9	99.3	54.0	56.4	50.8	42.1	38.9	38.1
55°	1403.0	1302.1	708.7	201.0	89.0	49.3	52.4	50.1	39.7	36.5	35.8
57.5°	1454.7	1381.6	737.3	188.3	73.9	46.1	46.1	48.5	37.3	34.2	33.4
60°	1484.1	1396.7	742.8	173.2	60.4	41.3	39.7	49.3	35.0	31.0	31.0
62.5°	1483.3	1345.0	715.0	158.9	52.4	38.1	35.8	42.9	32.6	29.4	28.6
65°	*1468.2*	*1268.8*	*652.3*	*140.6*	*49.3*	*35.0*	*31.8*	*32.6*	*30.2*	*27.0*	*26.2*
67.5°	1403.0	1136.9	552.2	122.3	47.7	31.8	29.4	27.8	26.2	23.8	23.0
70°	1244.9	988.3	430.6	113.6	46.9	27.8	25.4	23.8	22.2	20.7	20.7
72.5°	1012.2	770.6	328.9	108.8	47.7	25.4	21.5	20.7	19.1	18.3	17.5
75°	700.7	569.6	238.3	96.1	46.1	21.5	18.3	16.7	15.9	14.3	14.3
77.5°	450.5	372.6	158.1	77.1	37.3	17.5	13.5	12.7	11.9	11.1	11.1
80°	296.3	253.4	92.2	54.8	23.0	11.9	9.5	9.5	8.7	7.2	7.2
82.5°	188.3	191.5	47.7	25.4	13.5	7.2	5.6	4.8	4.8	3.2	3.2
85°	41.3	72.3	21.5	10.3	4.8	0.8	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°	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1
2.5°	533.1	526.7	524.4	524.4	514.0	514.8	514.8	521.2	520.4	525.9	523.6
5°	433.8	427.4	427.4	429.0	430.6	423.5	425.8	419.5	431.4	422.7	416.3
7.5°	320.2	319.4	324.9	337.7	335.3	332.9	328.1	316.2	309.8	316.2	313.0
10°	245.5	247.9	246.3	251.8	252.6	251.8	243.9	241.5	238.3	241.5	245.5
12.5°	205.8	196.2	185.9	185.1	191.5	191.5	190.7	191.5	193.9	193.9	197.0
15°	171.6	165.3	151.7	145.4	150.2	147.0	147.8	151.0	153.3	156.5	154.9
17.5°	136.6	131.1	124.7	120.8	123.1	120.8	120.0	119.2	119.2	118.4	121.6
20°	104.1	103.3	105.7	104.1	104.9	103.3	100.9	97.7	95.3	96.9	98.5
22.5°	90.6	91.4	93.0	94.5	94.5	93.0	89.0	85.8	85.0	85.0	85.8
25°	83.4	83.4	85.8	86.6	87.4	85.0	80.2	77.9	77.9	77.9	77.9
27.5°	75.5	77.1	78.7	80.2	81.0	78.7	74.7	72.3	72.3	71.5	70.7
30°	69.9	70.7	72.3	73.1	73.9	71.5	69.1	66.7	66.7	66.7	65.9
32.5°	63.6	65.9	66.7	67.5	68.3	66.7	64.4	62.8	62.0	61.2	59.6
35°	58.8	59.6	62.0	62.0	62.8	62.0	60.4	58.8	56.4	55.6	55.6
37.5°	54.0	54.0	55.6	57.2	58.8	58.0	55.6	53.2	52.4	52.4	52.4
40°	50.8	50.1	50.8	53.2	54.8	54.8	51.6	50.1	50.1	49.3	49.3
42.5°	46.9	46.9	46.9	49.3	52.4	50.8	47.7	47.7	47.7	46.9	46.9
45°	44.5	43.7	44.5	44.5	48.5	46.1	45.3	44.5	45.3	44.5	45.3
47.5°	41.3	41.3	41.3	42.1	44.5	42.9	42.1	42.1	42.9	42.9	42.9
50°	38.9	38.9	38.9	39.7	40.5	40.5	40.5	40.5	40.5	41.3	41.3
52.5°	37.3	36.5	37.3	37.3	38.1	38.9	38.1	38.9	38.9	38.9	39.7
55°	35.8	35.0	35.8	35.8	37.3	36.5	36.5	37.3	37.3	38.1	38.9
57.5°	33.4	32.6	34.2	34.2	35.8	35.8	35.0	35.8	35.8	36.5	36.5
60°	31.0	31.0	31.8	31.8	33.4	34.2	34.2	34.2	34.2	34.2	34.2
62.5°	28.6	28.6	29.4	30.2	31.8	31.8	32.6	32.6	32.6	32.6	31.8
65°	*26.2*	*27.0*	*27.8*	*27.8*	*29.4*	*30.2*	*30.2*	*30.2*	*30.2*	*30.2*	*30.2*
67.5°	23.0	24.6	25.4	26.2	27.8	27.8	28.6	28.6	27.8	27.8	27.8
70°	20.7	21.5	22.2	23.0	25.4	25.4	26.2	26.2	25.4	25.4	26.2
72.5°	17.5	18.3	19.1	20.7	23.0	23.0	23.8	23.8	23.0	23.0	23.0
75°	15.1	15.1	15.9	17.5	20.7	20.7	20.7	21.5	20.7	20.7	19.9
77.5°	11.1	11.9	12.7	15.1	17.5	18.3	18.3	18.3	17.5	17.5	16.7
80°	7.2	7.9	9.5	11.1	13.5	14.3	15.1	15.1	14.3	14.3	13.5
82.5°	3.2	4.8	5.6	7.2	8.7	11.1	11.1	11.9	11.1	10.3	10.3
85°	0.0	0.0	0.8	2.4	4.0	6.4	7.2	7.9	7.2	6.4	6.4
87.5°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.8	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: P437084
CATALOG NUMBER: ISS-SA1A-830-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1	614.1
2.5°	532.3	541.0	554.5	562.5	580.8	597.4	614.9	638.0	642.7	643.5
5°	422.7	433.0	458.4	468.7	502.1	529.1	568.8	607.8	618.1	620.5
7.5°	322.6	330.5	358.3	378.2	414.7	452.9	503.7	549.8	572.8	575.2
10°	251.8	273.3	294.7	324.1	355.9	393.3	446.5	505.3	530.7	529.1
12.5°	212.1	234.4	260.6	290.0	322.6	355.9	404.4	469.5	495.0	501.3
15°	170.0	197.0	225.6	255.8	294.0	326.5	382.9	455.2	486.2	495.0
17.5°	131.9	153.3	181.1	220.1	257.4	303.5	375.0	468.7	503.7	512.4
20°	104.1	120.0	139.8	177.2	224.8	282.0	371.0	494.2	541.8	554.5
22.5°	89.0	95.3	109.6	142.2	192.3	259.0	368.6	529.9	589.5	611.0
25°	79.4	83.4	91.4	112.0	159.7	239.1	372.6	574.4	656.2	673.7
27.5°	72.3	75.5	79.4	94.5	138.2	221.7	379.8	624.5	713.4	738.9
30°	65.9	68.3	73.9	84.2	120.8	204.2	382.1	673.7	764.3	787.3
32.5°	61.2	64.4	69.1	77.9	110.4	192.3	375.8	711.1	811.2	836.6
35°	56.4	60.4	65.1	72.3	101.7	181.9	361.5	742.0	855.6	880.3
37.5°	54.0	56.4	61.2	66.7	95.3	171.6	348.8	773.0	901.7	935.9
40°	50.8	53.2	58.0	62.8	87.4	160.5	340.0	812.7	954.2	985.1
42.5°	48.5	51.6	55.6	61.2	81.0	148.6	331.3	844.5	1001.0	1033.6
45°	46.9	50.1	54.0	61.2	75.5	139.0	321.8	872.3	1036.8	1068.6
47.5°	44.5	48.5	54.0	58.8	73.1	132.7	321.8	905.7	1069.4	1102.7
50°	43.7	47.7	56.4	57.2	71.5	130.3	335.3	943.8	1116.2	1148.0
52.5°	42.9	46.9	56.4	54.0	69.9	131.9	355.9	1013.0	1176.6	1213.2
55°	40.5	46.1	54.0	50.1	65.9	133.5	379.0	1103.5	1266.4	1300.6
57.5°	38.9	45.3	50.8	46.1	60.4	131.1	409.9	1184.6	1360.1	1384.0
60°	36.5	44.5	44.5	42.9	54.0	123.9	444.9	1236.2	1395.9	1415.0
62.5°	35.0	43.7	39.7	39.7	49.3	112.8	456.8	1223.5	1360.9	1381.6
65°	*32.6*	*38.1*	*35.8*	*36.5*	*45.3*	*100.1*	*436.2*	*1144.0*	*1295.0*	*1319.6*
67.5°	30.2	32.6	31.8	33.4	43.7	87.4	380.6	1049.5	1210.0	1248.1
70°	27.0	28.6	28.6	30.2	41.3	78.7	317.8	927.9	1099.6	1156.0
72.5°	24.6	25.4	25.4	27.8	38.9	73.9	251.1	787.3	922.4	957.3
75°	20.7	22.2	22.2	23.8	35.0	62.8	171.6	576.8	645.1	673.7
77.5°	18.3	18.3	19.1	19.9	27.8	42.1	100.9	355.1	387.7	402.8
80°	14.3	15.1	14.3	14.3	17.5	27.8	54.8	208.2	236.0	228.0
82.5°	10.3	10.3	8.7	8.7	10.3	15.1	23.8	108.0	110.4	106.5
85°	5.6	4.0	3.2	3.2	3.2	3.2	3.2	23.0	11.1	8.7
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	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.

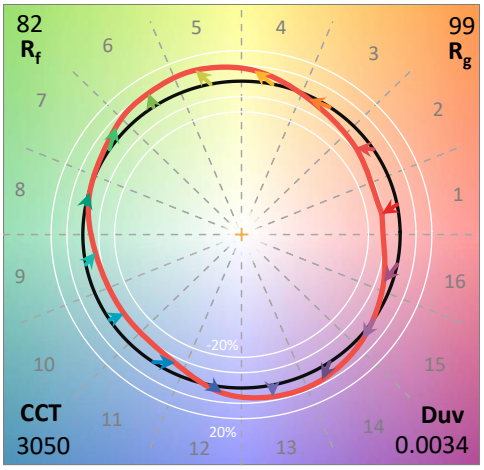
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

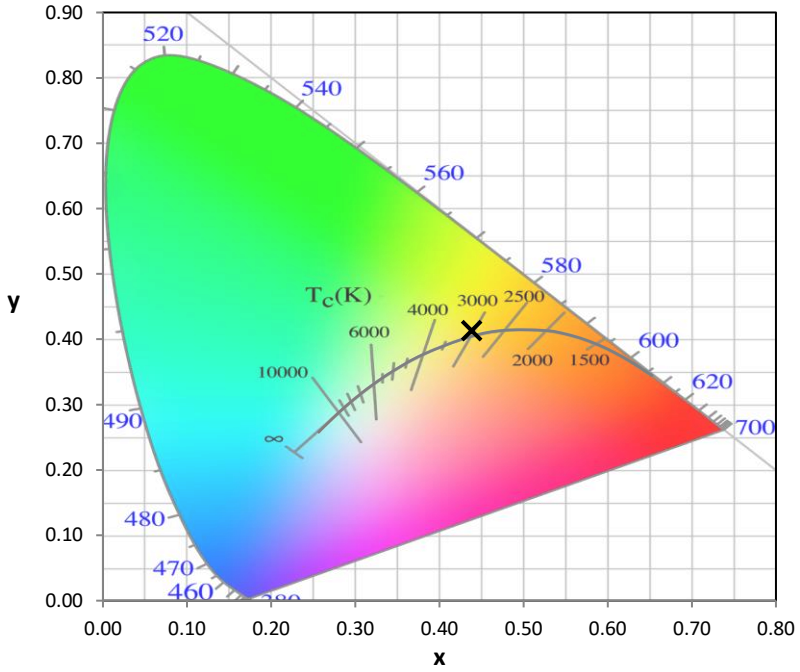
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

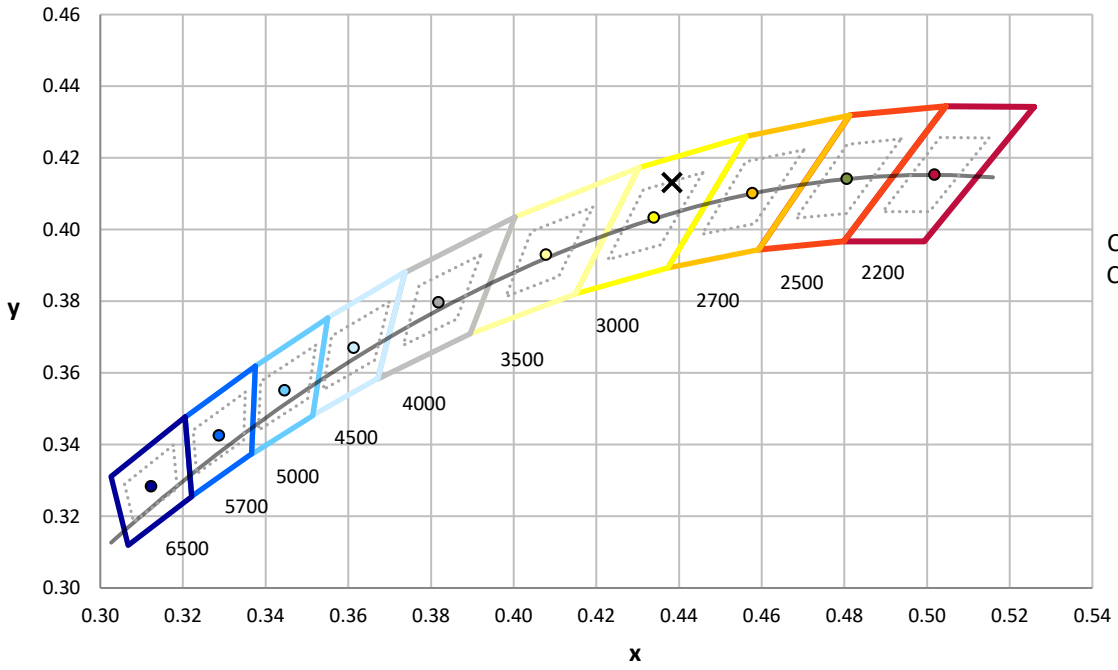
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

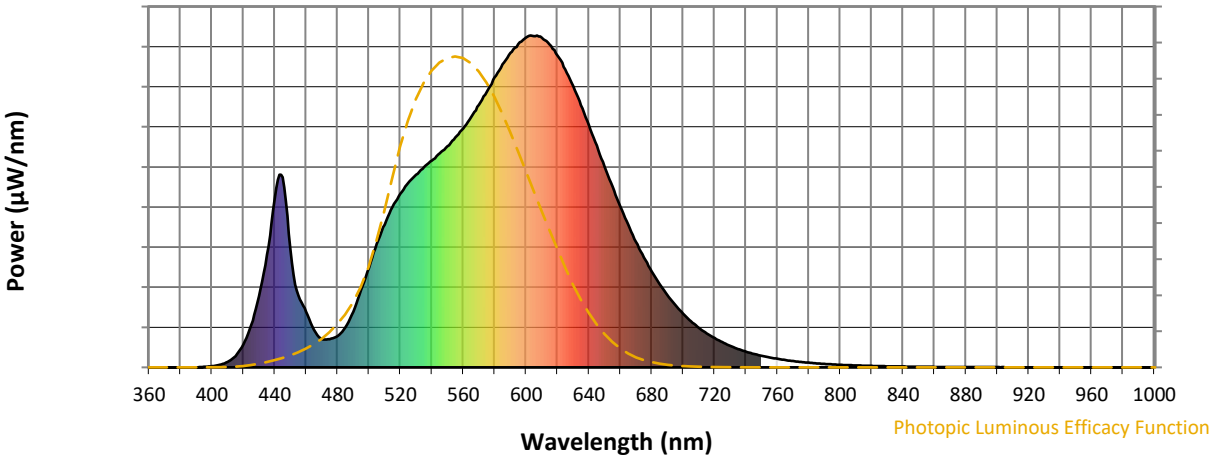


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

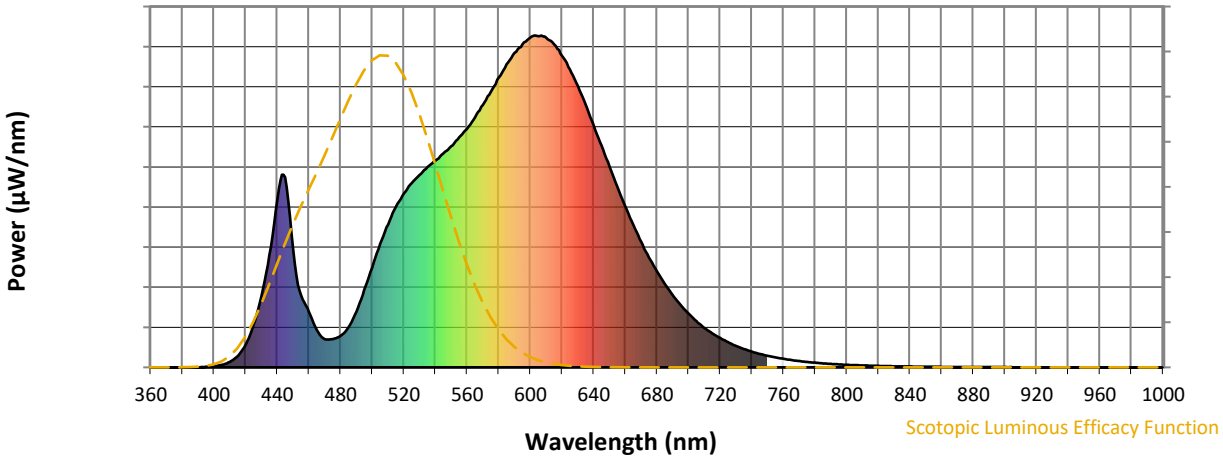


Photopic Lumens: NR

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

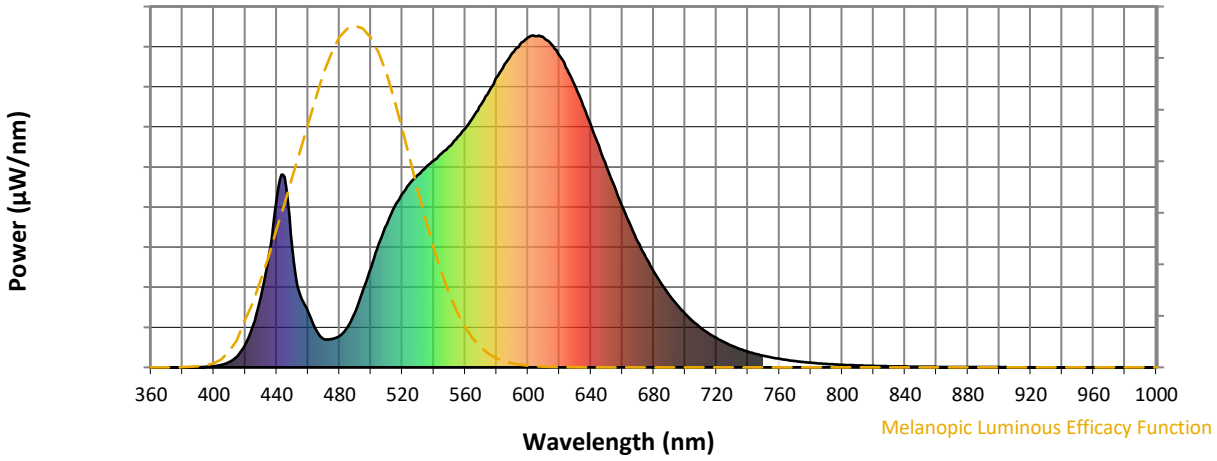


Scotopic Lumens: NR **S/P: 1.27**

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			

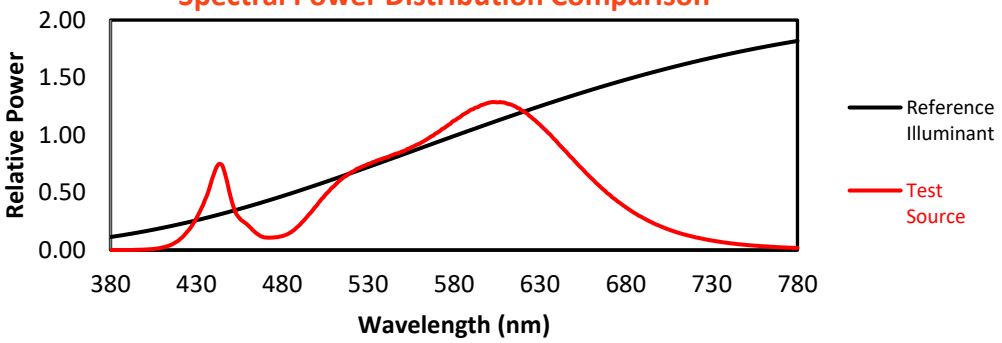
REPORT NUMBER: SP1-2408-195-9

TM-30-18

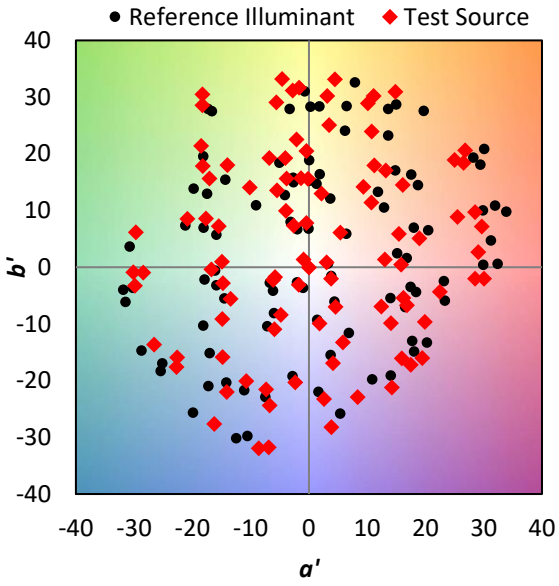
Summary

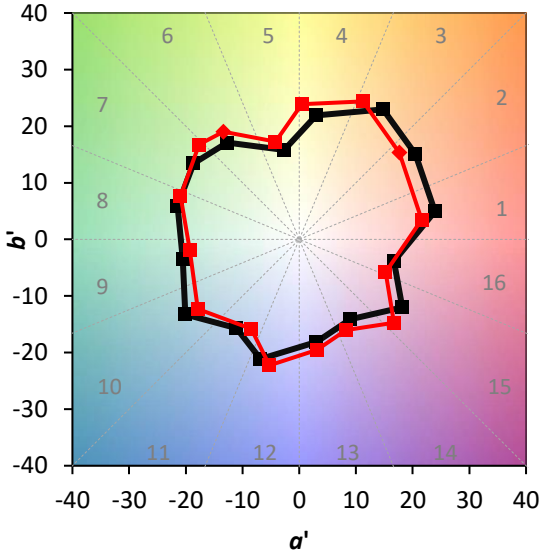
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

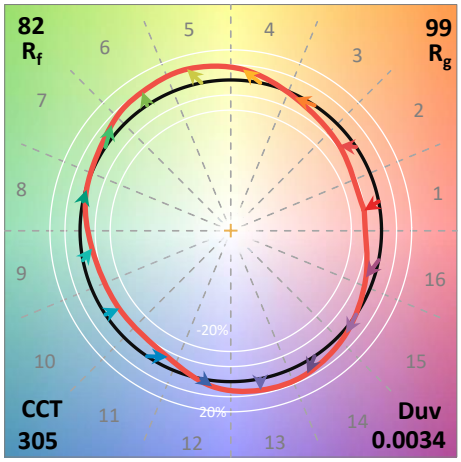
Spectral Power Distribution Comparison

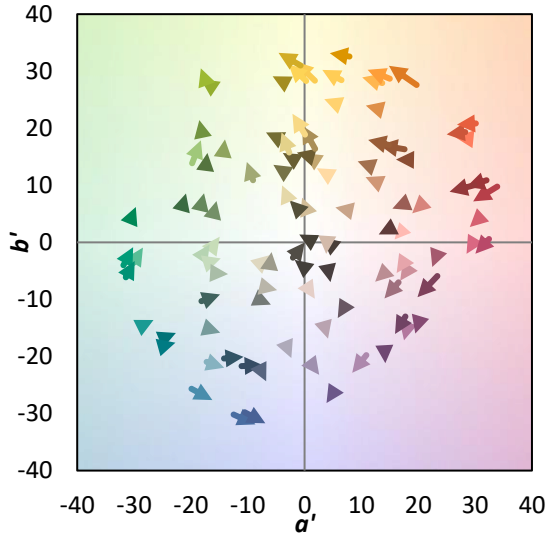


Color Vector Graphics







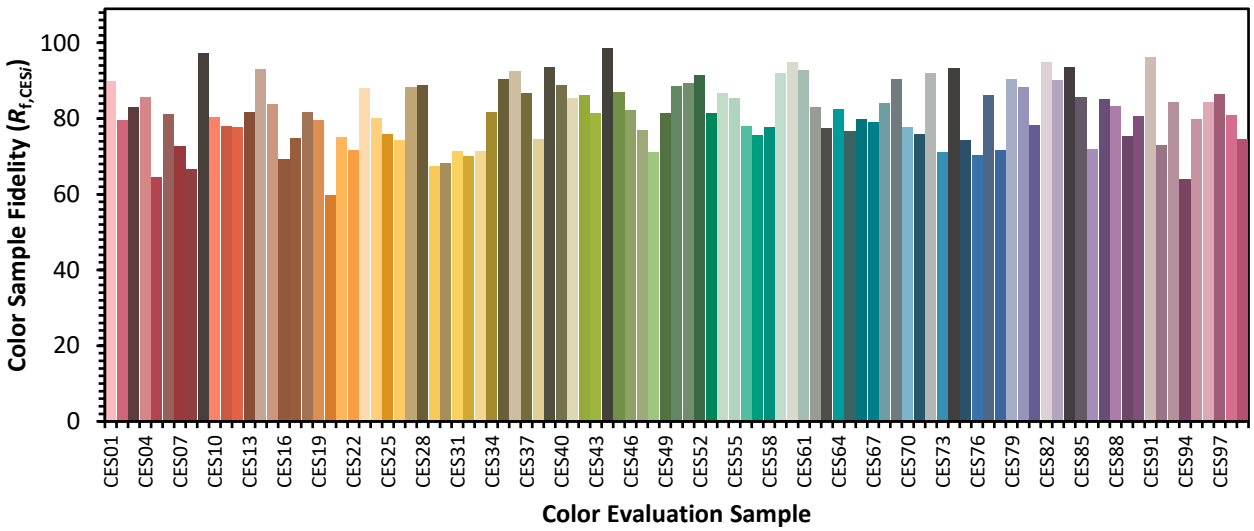


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

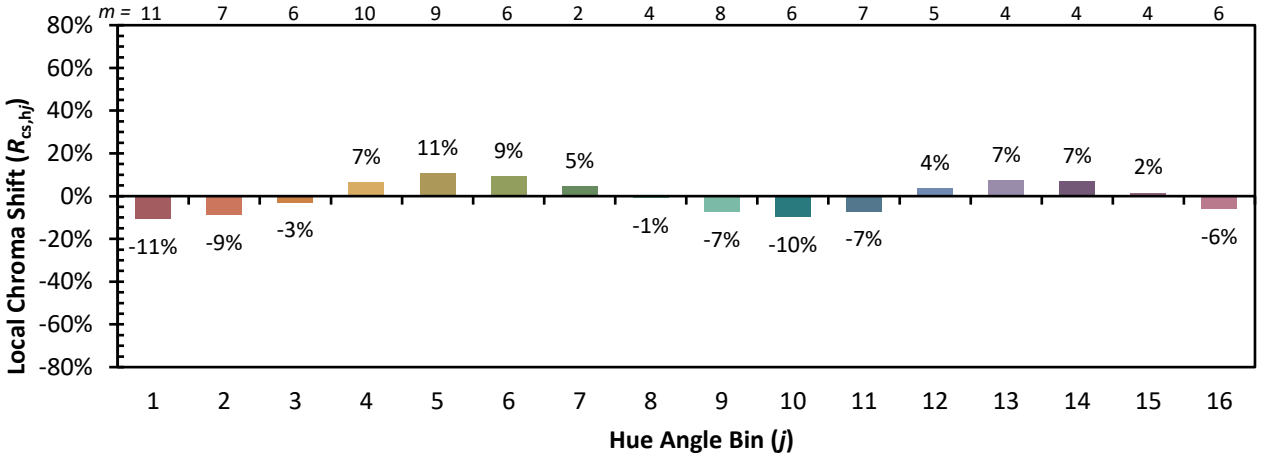
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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
CES25 = 72	CES50 = 89	CES75 = 74	

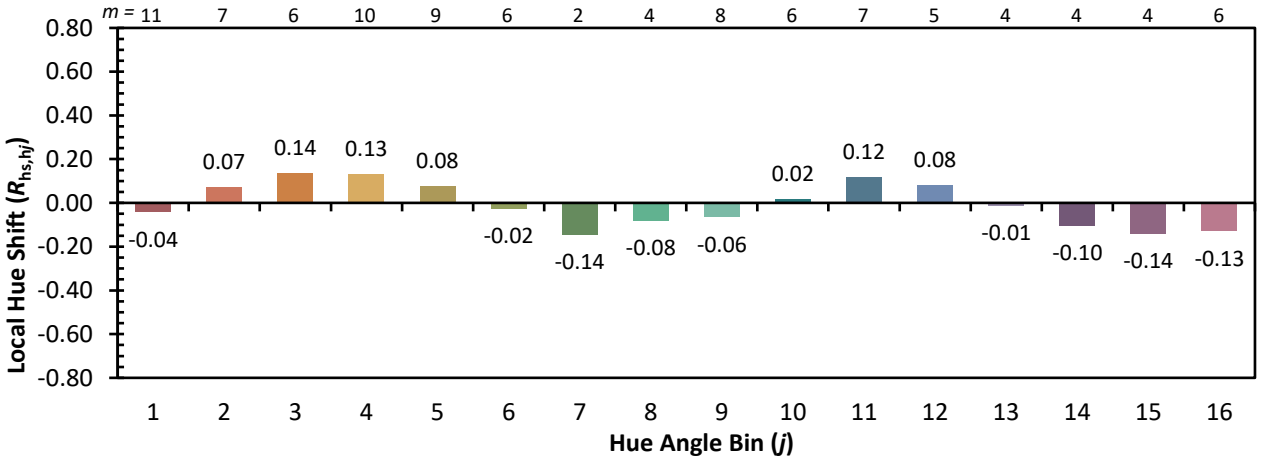


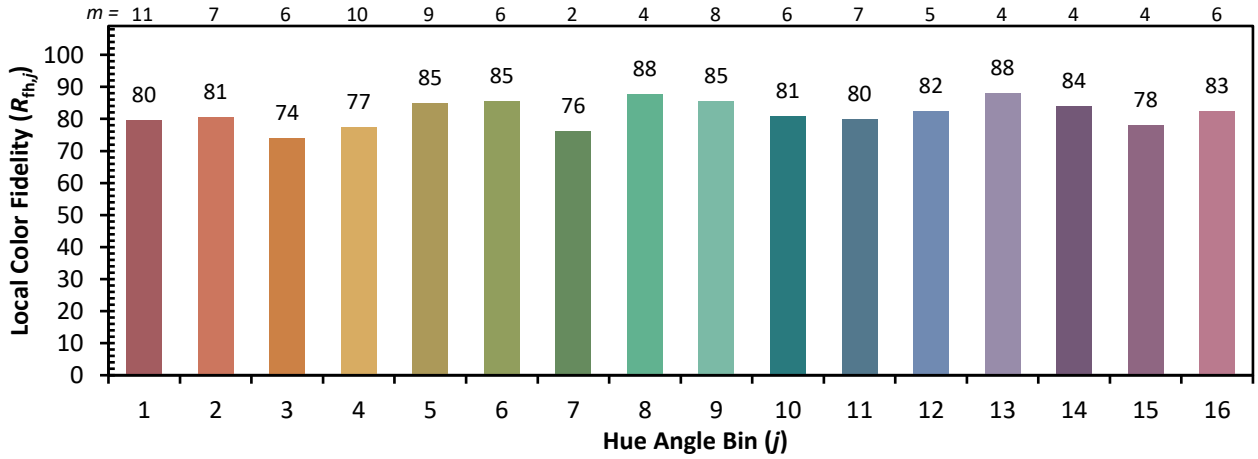
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin







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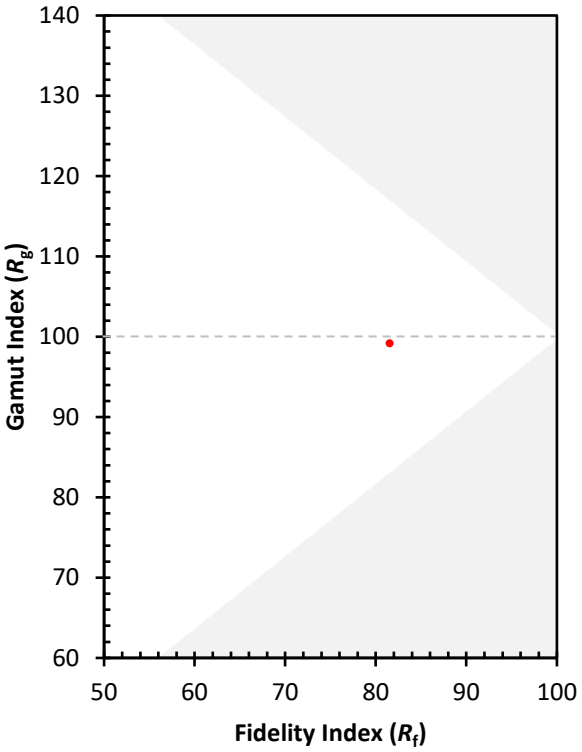
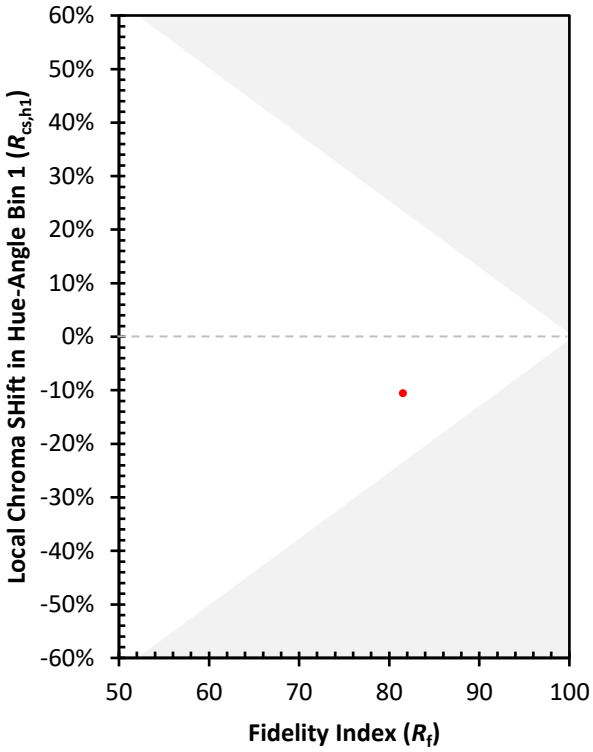
Measure Comparisons





(END OF REPORT)