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: P438109

Luminaire Tested: **IST-SA1A-830-U-SLL-HSS**

Issue Date: 12/10/2020

Report Generated By 670245982

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P438109
	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:	IST-SA1A-830-U-SLL-HSS
Description:	IMPACT ELITE LED TRAPEZOID LUMINAIRE
	(1) 80 CRI, 3000K, 350mA 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:	1643 lumens
Efficiency:	N/A
Efficacy:	81.7 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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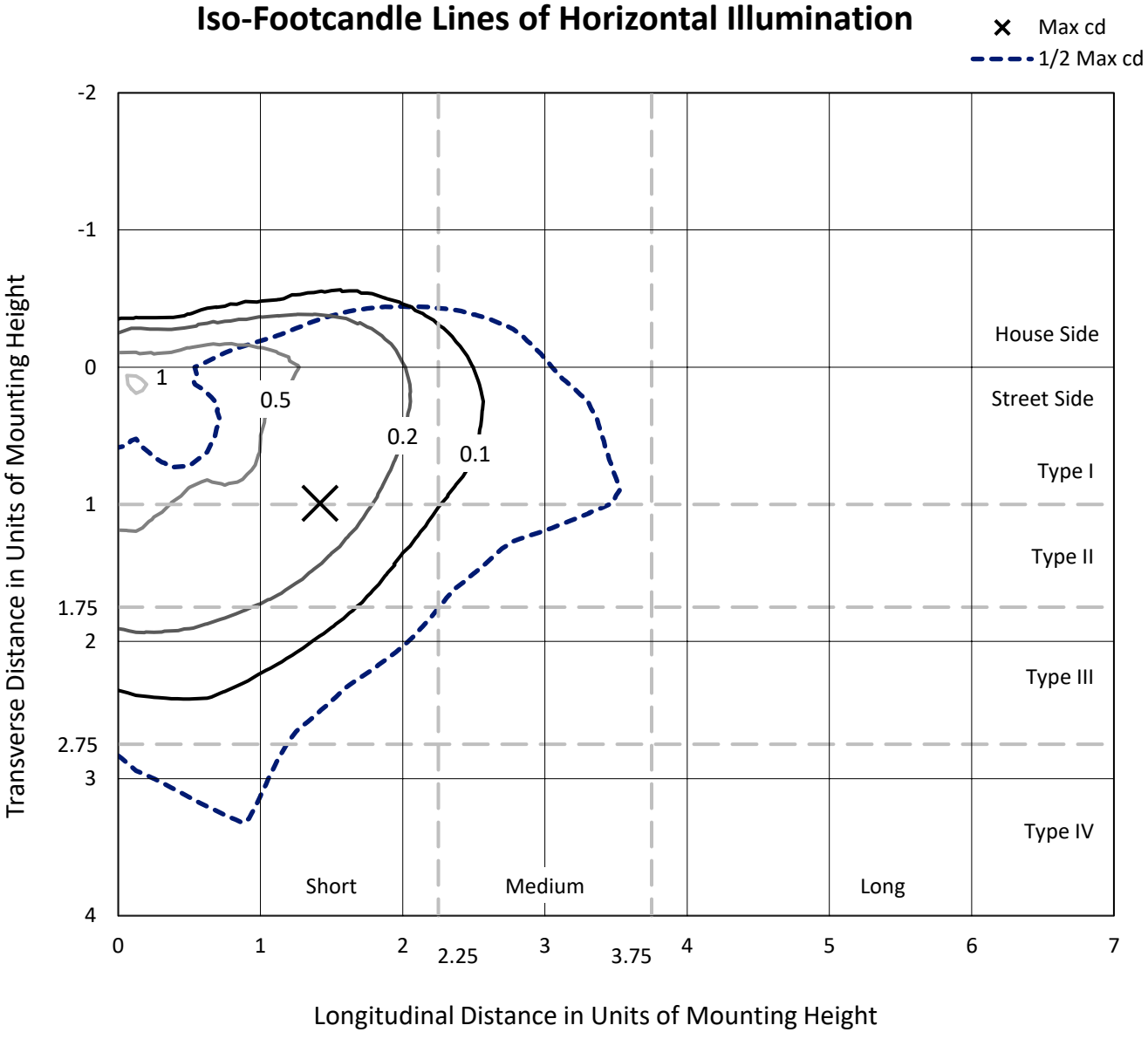
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
Type IV - Short - N/A

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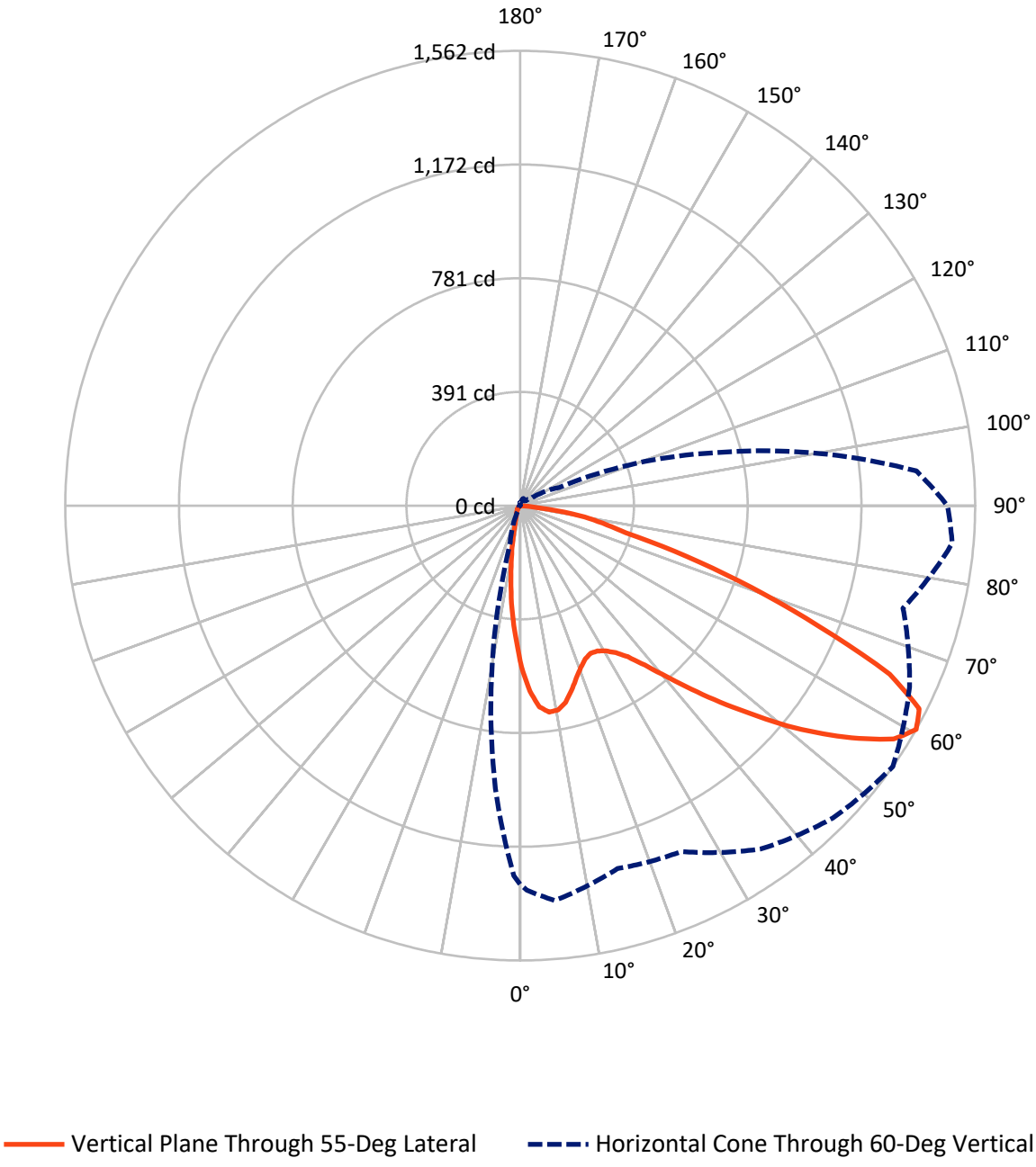
Luminous Intensity Polar Plot



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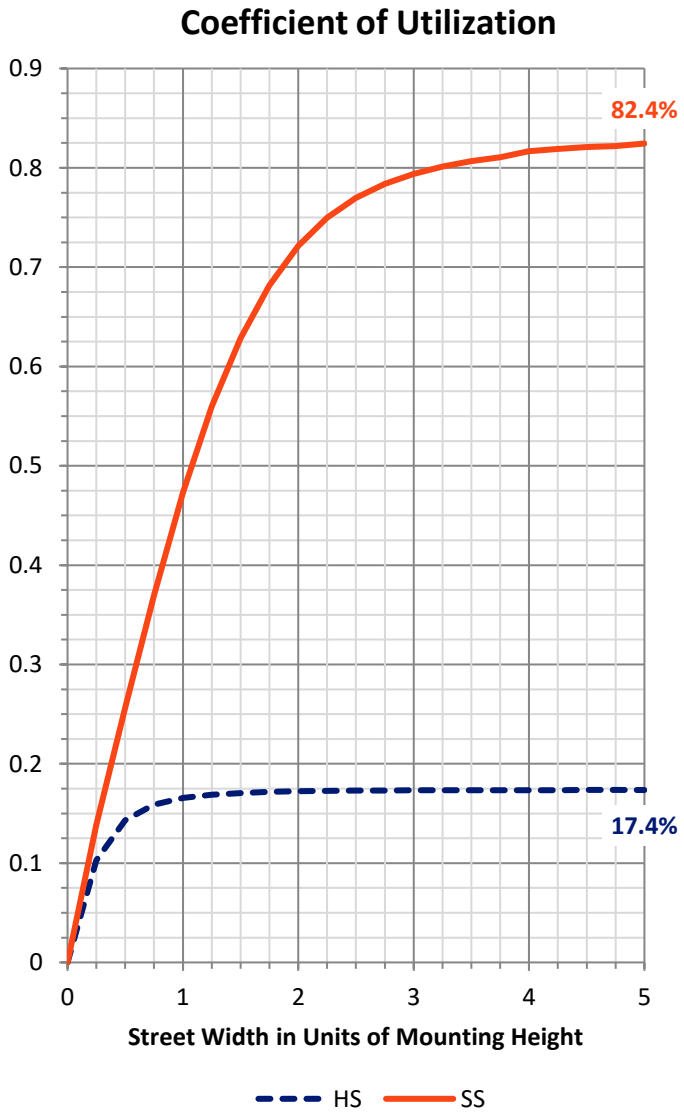
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	287.8	0.0	287.8
	% Fixture	17.5	0.0	17.5
Street Side	Lumens	1355.2	0.0	1355.2
	% Fixture	82.5	0.0	82.5
Total	Lumens	1643.0	0.0	1643.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	2.5
10°-20°	80.9	4.9
20°-30°	119.0	7.2
30°-40°	177.9	10.8
40°-50°	263.2	16.0
50°-60°	378.3	23.0
60°-70°	405.5	24.7
70°-80°	163.8	10.0
80°-90°	13.3	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°	1643.0	100.0
0°-180°	1643.0	100.0



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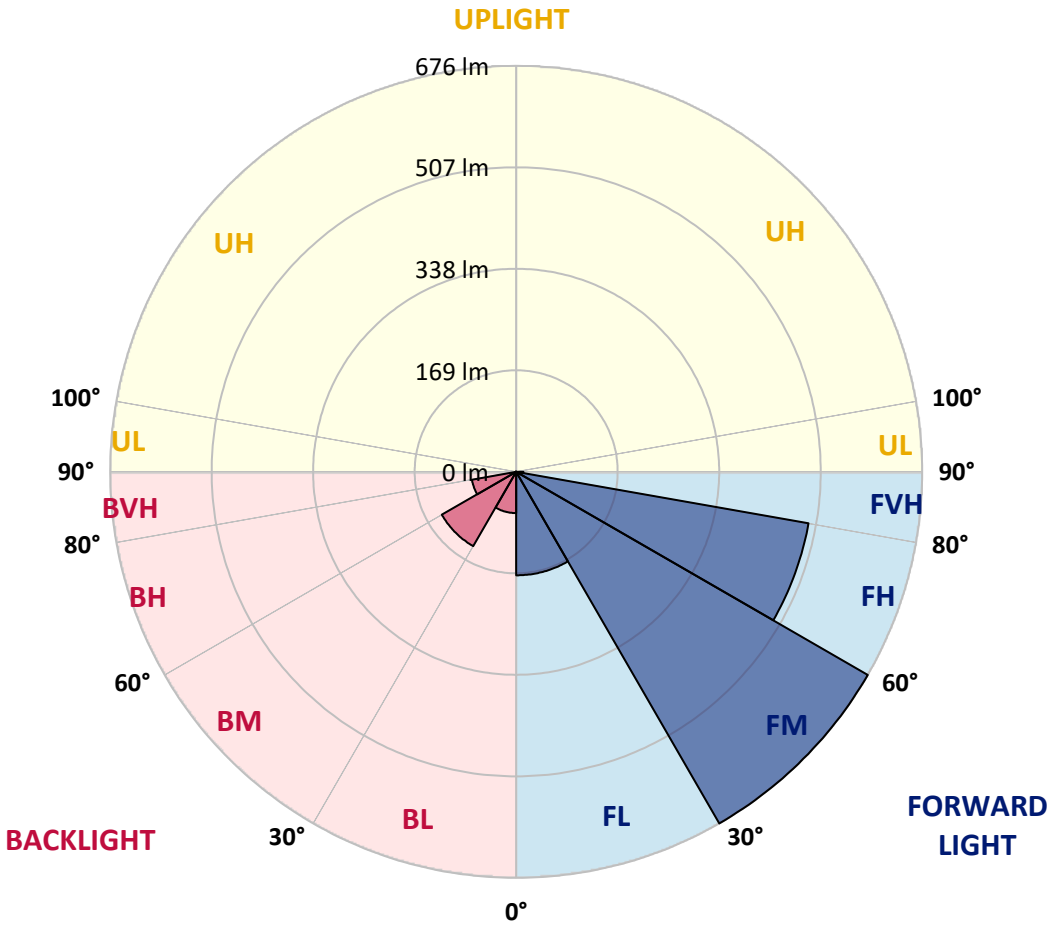
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	172.4	10.5			
FM	(30°-60°)	676.3	41.2			
FH	(60°-80°)	494.4	30.1			G0/660
FVH	(80°-90°)	12.1	0.7			G1/100
BL	(0°-30°)	68.8	4.2	B0/110		
BM	(30°-60°)	143.0	8.7	B0/220		
BH	(60°-80°)	74.9	4.6	B0/110		G0/110
BVH	(80°-90°)	1.2	0.1			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°	554.4	554.4	554.4	554.4	554.4	554.4	554.4	*554.4*	554.4	554.4	554.4
2.5°	595.6	595.6	600.4	614.6	630.5	638.4	647.2	*638.4*	636.8	624.2	614.6
5°	577.4	581.3	596.4	634.5	674.9	695.5	706.6	*694.7*	673.3	645.6	610.7
7.5°	536.1	540.9	558.3	620.2	675.7	717.0	736.8	*716.2*	679.7	628.9	578.2
10°	491.7	500.4	523.4	594.0	658.3	707.4	735.2	*713.8*	668.6	603.5	540.9
12.5°	462.4	468.7	499.6	570.2	639.2	682.8	697.9	*693.2*	651.9	591.6	525.8
15°	457.6	465.5	498.1	568.6	621.0	647.2	652.7	*659.1*	644.8	593.2	530.6
17.5°	478.2	487.0	523.4	580.5	604.3	604.3	609.9	*622.6*	636.1	609.1	559.1
20°	520.3	532.2	572.6	611.5	595.6	576.6	577.4	*594.0*	630.5	644.8	609.9
22.5°	576.6	592.4	641.6	659.8	605.1	561.5	557.5	*571.8*	631.3	681.3	679.7
25°	651.1	670.2	717.7	717.0	628.1	555.2	551.2	*561.5*	638.4	720.9	740.7
27.5°	718.5	734.4	782.0	762.2	651.1	563.1	554.4	*565.5*	644.0	750.3	795.5
30°	775.6	789.1	831.2	794.7	671.0	576.6	561.5	*579.0*	655.9	766.1	844.6
32.5°	819.3	839.1	877.9	820.1	694.7	594.0	578.2	*602.0*	675.7	786.7	887.5
35°	877.9	888.3	934.3	845.4	726.5	631.3	605.9	*637.6*	708.2	813.7	935.0
37.5°	928.7	955.7	985.8	871.6	765.3	677.3	649.5	*694.7*	752.6	844.6	990.6
40°	989.0	1019.9	1052.4	908.9	801.0	737.6	725.7	*770.1*	819.3	889.8	1045.3
42.5°	1044.5	1073.0	1095.3	952.5	844.6	805.8	814.5	*861.3*	887.5	936.6	1092.1
45°	1088.9	1114.3	1147.6	982.6	893.0	881.9	926.3	*962.8*	954.9	977.1	1134.1
47.5°	1134.9	1165.8	1179.3	1014.4	955.7	981.8	1061.2	*1069.1*	1025.5	1014.4	1170.6
50°	1166.6	1189.6	1198.4	1053.2	1032.6	1113.5	1176.9	*1190.4*	1102.4	1043.7	1218.2
52.5°	1205.5	1227.7	1238.0	1099.2	1115.1	1231.7	1305.4	*1302.2*	1176.9	1092.1	1265.0
55°	1274.5	1295.1	1305.4	1155.5	1173.8	1333.2	1414.9	*1411.7*	1265.8	1161.9	1334.8
57.5°	1323.7	1341.1	1357.8	1219.0	1246.7	1398.2	1489.4	*1513.2*	1372.8	1249.9	1410.9
60°	*1301.5*	*1321.3*	*1361.7*	*1291.1*	*1311.0*	*1440.2*	*1518.0*	*1562.4*	*1475.1*	*1360.9*	*1489.4*
62.5°	1238.8	1268.1	1310.2	1348.2	1360.9	1447.4	1478.3	*1537.8*	1529.9	1472.8	1525.1
65°	1159.5	1189.6	1230.1	1356.2	1349.8	1341.1	1359.4	*1395.0*	1450.6	1526.7	1507.7
67.5°	1016.7	1060.4	1111.1	1263.4	1173.8	1123.8	1128.6	*1108.7*	1220.6	1449.0	1418.8
70°	828.0	872.4	927.1	1071.5	904.9	839.1	855.7	*843.1*	931.1	1243.6	1215.8
72.5°	582.9	630.5	697.9	893.0	630.5	524.2	563.9	*597.2*	701.9	997.7	893.0
75°	386.2	420.3	468.7	672.5	449.7	352.1	360.9	*374.3*	469.5	754.2	563.9
77.5°	199.9	234.0	255.4	360.1	278.4	277.6	271.2	*288.7*	293.4	452.9	294.2
80°	111.8	122.9	134.0	175.3	139.6	165.0	170.5	*208.6*	193.5	226.8	122.9
82.5°	54.7	69.0	75.3	107.9	89.6	65.8	32.5	*68.2*	115.0	122.9	57.1
85°	0.8	1.6	4.0	8.7	2.4	2.4	0.0	*2.4*	11.9	15.1	19.8
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°	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4
2.5°	604.3	598.0	579.7	563.9	539.3	529.0	512.3	508.4	494.9	481.4	473.5
5°	593.2	575.0	537.7	501.2	467.9	437.0	414.0	395.0	373.5	364.8	370.4
7.5°	548.8	523.4	469.5	426.7	379.1	343.4	310.9	294.2	274.4	266.5	260.9
10°	512.3	481.4	419.5	363.2	318.0	290.3	270.4	246.7	223.7	205.4	203.0
12.5°	489.3	456.0	387.0	327.5	294.2	267.3	244.3	213.3	187.2	169.7	161.8
15°	488.5	447.3	376.7	314.1	275.2	241.1	211.8	176.9	149.9	127.7	119.8
17.5°	517.1	467.1	381.5	299.8	248.2	203.8	165.8	129.3	103.1	88.0	80.1
20°	567.1	512.3	390.2	285.5	222.1	165.8	116.6	88.0	70.6	63.4	60.3
22.5°	627.3	562.3	406.1	274.4	195.1	125.3	82.5	63.4	55.5	50.8	50.0
25°	700.3	625.7	428.3	266.5	170.5	96.8	64.2	52.3	47.6	44.4	42.8
27.5°	764.5	686.8	461.6	260.1	146.7	79.3	54.7	46.0	41.2	38.9	38.1
30°	812.1	736.8	499.6	245.9	127.7	69.0	51.6	43.6	38.1	34.9	34.1
32.5°	866.8	774.8	517.9	231.6	116.6	61.1	45.2	38.9	34.9	31.7	30.9
35°	927.1	828.0	536.1	220.5	109.4	54.7	41.2	34.1	29.3	26.2	25.4
37.5°	996.9	886.7	552.8	211.0	105.5	50.8	38.9	31.7	27.0	23.8	22.2
40°	1074.6	932.7	563.9	204.6	99.9	48.4	37.3	30.1	25.4	21.4	20.6
42.5°	1136.5	985.8	567.1	202.2	94.4	47.6	35.7	29.3	23.8	20.6	19.0
45°	1180.9	1032.6	578.2	199.9	90.4	44.4	34.9	28.6	22.2	19.0	17.4
47.5°	1213.4	1082.6	588.5	197.5	86.4	40.4	37.3	28.6	21.4	17.4	15.9
50°	1273.7	1141.3	608.3	191.1	80.9	36.5	37.3	27.8	20.6	16.7	15.1
52.5°	1338.7	1217.4	652.7	184.0	73.8	32.5	34.1	27.8	19.8	15.9	14.3
55°	1400.6	1310.2	694.0	174.5	61.9	29.3	31.7	27.8	18.2	15.1	13.5
57.5°	1445.8	1372.0	716.2	162.6	49.2	26.2	26.2	26.2	15.9	12.7	11.9
60°	*1467.2*	*1365.7*	*705.8*	*147.5*	*39.7*	*23.0*	*21.4*	*27.0*	*14.3*	*11.1*	*10.3*
62.5°	1450.6	1299.9	660.6	131.7	34.9	19.8	17.4	23.8	12.7	9.5	8.7
65°	1399.0	1188.8	585.3	119.0	34.1	16.7	14.3	14.3	10.3	7.9	7.1
67.5°	1271.3	1042.9	495.7	107.1	34.9	14.3	11.9	11.1	8.7	6.3	5.6
70°	1057.2	838.3	375.1	101.5	34.9	11.9	10.3	8.7	6.3	5.6	4.8
72.5°	671.7	520.3	260.1	89.6	34.9	9.5	8.7	7.9	4.8	4.0	2.4
75°	398.1	316.4	122.1	69.0	29.3	7.9	6.3	4.8	2.4	1.6	1.6
77.5°	234.0	203.0	53.1	38.1	12.7	4.8	3.2	1.6	0.8	0.0	0.0
80°	96.0	83.3	19.8	11.1	5.6	2.4	0.8	0.0	0.0	0.0	0.0
82.5°	56.3	58.7	7.1	4.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0
85°	17.4	27.0	0.0	0.8	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°	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4
2.5°	472.7	464.7	461.6	456.8	452.9	448.1	454.4	460.0	453.6	460.8	471.9
5°	364.8	352.9	368.8	358.5	364.0	357.7	349.0	350.5	352.1	349.0	357.7
7.5°	253.0	258.5	262.5	261.7	266.5	257.8	257.8	252.2	244.3	247.4	245.9
10°	191.9	180.8	184.8	184.0	192.7	180.8	172.9	164.2	163.4	165.0	163.4
12.5°	153.1	139.6	130.9	126.1	125.3	119.8	112.6	103.9	98.3	97.5	102.3
15°	115.0	104.7	96.8	89.6	88.8	77.7	68.2	61.9	56.3	57.1	60.3
17.5°	79.3	76.1	73.8	67.4	63.4	53.9	46.0	42.0	40.4	40.4	41.2
20°	57.9	56.3	54.7	52.3	48.4	41.2	36.5	34.9	34.1	34.1	34.9
22.5°	48.4	46.0	44.4	43.6	40.4	34.9	31.7	30.1	30.1	30.1	30.1
25°	41.2	39.7	38.9	37.3	34.9	30.1	27.8	27.0	26.2	26.2	27.0
27.5°	37.3	34.1	32.5	32.5	30.1	27.0	24.6	23.8	23.0	23.0	23.8
30°	33.3	30.9	29.3	27.8	26.2	23.0	21.4	20.6	20.6	20.6	20.6
32.5°	29.3	27.8	26.2	24.6	22.2	20.6	19.0	18.2	17.4	17.4	17.4
35°	23.8	22.2	22.2	21.4	19.0	17.4	15.9	15.1	14.3	15.1	15.1
37.5°	20.6	18.2	18.2	18.2	16.7	15.1	13.5	12.7	11.9	11.9	12.7
40°	19.0	15.9	15.1	15.1	15.1	12.7	11.1	10.3	9.5	9.5	10.3
42.5°	16.7	14.3	12.7	11.9	12.7	11.1	8.7	7.9	7.9	7.9	7.9
45°	15.9	12.7	11.1	9.5	10.3	9.5	7.1	6.3	6.3	6.3	6.3
47.5°	14.3	11.1	9.5	7.1	7.1	7.1	5.6	4.8	4.8	4.8	4.8
50°	13.5	10.3	7.1	6.3	5.6	5.6	4.8	4.0	3.2	3.2	4.0
52.5°	12.7	9.5	6.3	4.8	4.0	4.0	3.2	3.2	2.4	2.4	2.4
55°	11.9	7.9	5.6	4.0	3.2	2.4	2.4	2.4	2.4	1.6	2.4
57.5°	10.3	7.1	4.0	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6
60°	*9.5*	*5.6*	*3.2*	*1.6*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
62.5°	7.9	4.8	2.4	1.6	0.8	0.0	0.8	0.8	0.8	0.8	0.8
65°	6.3	4.0	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	4.8	3.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	4.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.8	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: P438109
CATALOG NUMBER: IST-SA1A-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4	554.4
2.5°	471.1	475.9	493.3	509.2	526.6	545.6	561.5	584.5	591.6	595.6
5°	356.1	373.5	395.0	414.0	448.1	479.8	517.1	557.5	574.2	577.4
7.5°	257.0	268.9	291.9	329.9	360.9	408.4	456.8	510.7	536.1	536.1
10°	176.9	196.7	226.0	261.7	303.0	345.0	401.3	462.4	486.2	491.7
12.5°	112.6	134.8	174.5	213.3	260.9	302.2	358.5	427.5	454.4	462.4
15°	65.0	80.1	116.6	159.4	216.5	268.9	332.3	416.4	449.7	457.6
17.5°	43.6	49.2	69.0	106.3	169.7	239.5	324.4	428.3	468.7	478.2
20°	36.5	38.9	46.0	65.8	119.8	208.6	321.2	454.4	503.6	520.3
22.5°	31.7	34.1	38.9	48.4	85.7	176.1	318.8	492.5	559.1	576.6
25°	27.8	30.1	34.1	41.2	60.3	143.5	322.8	546.4	630.5	651.1
27.5°	24.6	27.0	30.9	35.7	48.4	111.0	323.6	597.2	697.1	718.5
30°	21.4	23.8	27.0	30.9	38.9	85.7	309.3	648.7	751.1	775.6
32.5°	19.0	20.6	23.8	27.0	32.5	66.6	280.0	688.4	795.5	819.3
35°	15.9	17.4	20.6	23.0	28.6	53.9	247.4	724.9	848.6	877.9
37.5°	13.5	15.1	17.4	20.6	25.4	42.0	214.9	756.6	900.2	928.7
40°	11.1	13.5	15.9	18.2	23.0	32.5	179.2	790.7	958.8	989.0
42.5°	9.5	11.1	13.5	16.7	19.8	26.2	147.5	812.1	1008.8	1044.5
45°	7.1	9.5	12.7	16.7	16.7	20.6	126.9	828.0	1044.5	1088.9
47.5°	5.6	7.9	11.1	15.9	15.1	17.4	116.6	855.7	1093.7	1134.9
50°	4.8	6.3	11.1	13.5	12.7	15.1	119.8	880.3	1130.9	1166.6
52.5°	4.0	5.6	9.5	10.3	11.1	13.5	126.1	925.5	1177.7	1205.5
55°	3.2	4.8	7.1	8.7	9.5	12.7	136.4	981.8	1238.8	1274.5
57.5°	2.4	4.0	5.6	7.1	8.7	11.9	143.5	1017.5	1295.9	1323.7
60°	*2.4*	*3.2*	*4.8*	*6.3*	*7.9*	*11.1*	*133.2*	*975.5*	*1271.3*	*1301.5*
62.5°	1.6	3.2	4.0	5.6	6.3	8.7	98.3	883.5	1197.6	1238.8
65°	0.8	2.4	3.2	4.0	4.8	6.3	56.3	772.5	1110.3	1159.5
67.5°	0.0	1.6	2.4	3.2	3.2	4.8	26.2	623.4	966.8	1016.7
70°	0.0	0.8	1.6	1.6	2.4	4.0	13.5	440.2	760.6	828.0
72.5°	0.8	0.8	1.6	1.6	1.6	3.2	8.7	266.5	511.5	582.9
75°	0.8	0.8	0.8	0.8	1.6	2.4	5.6	171.3	322.0	386.2
77.5°	0.8	1.6	0.8	0.8	0.8	1.6	3.2	95.2	176.1	199.9
80°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	8.7	83.3	111.8
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	42.8	54.7
85°	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.8
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.

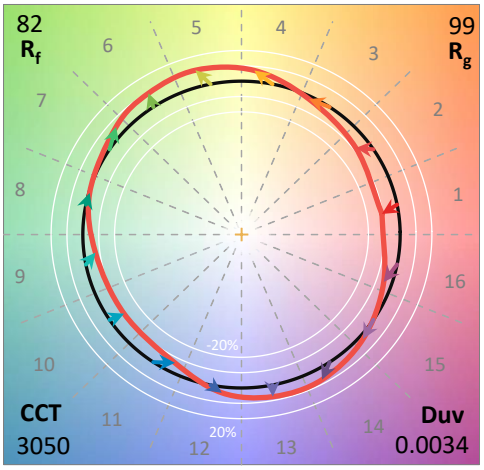
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

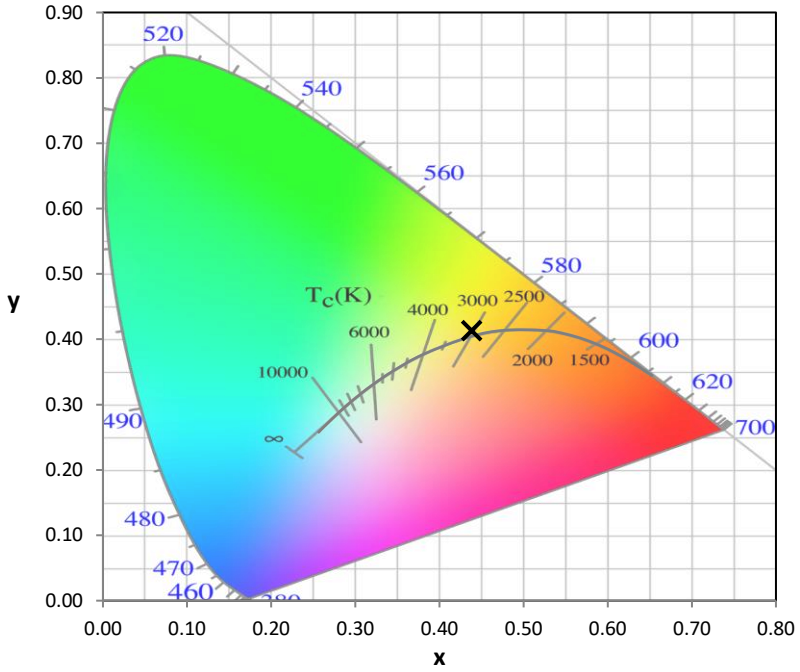
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

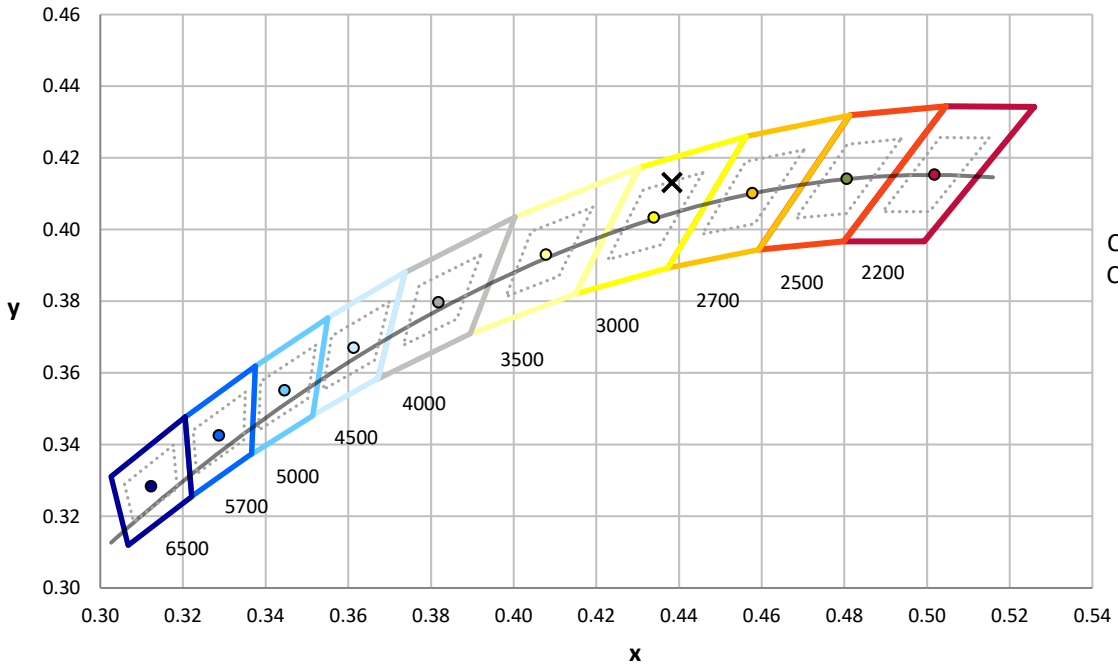
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

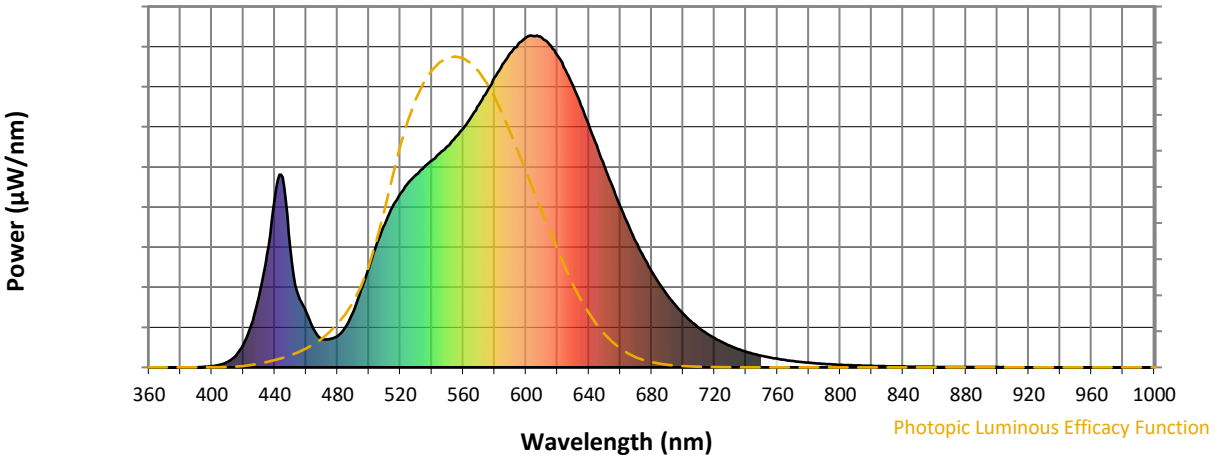


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

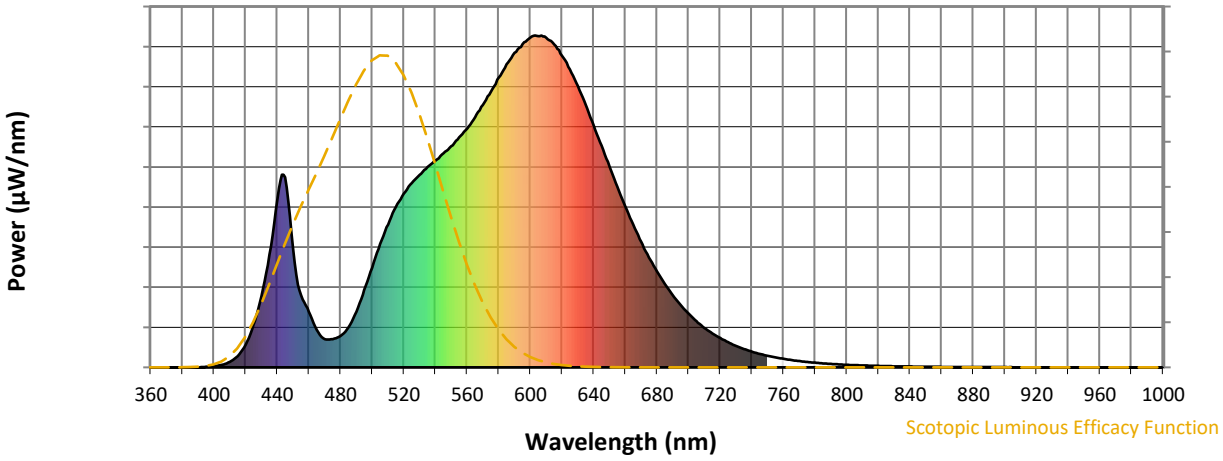


Photopic Lumens: NR

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

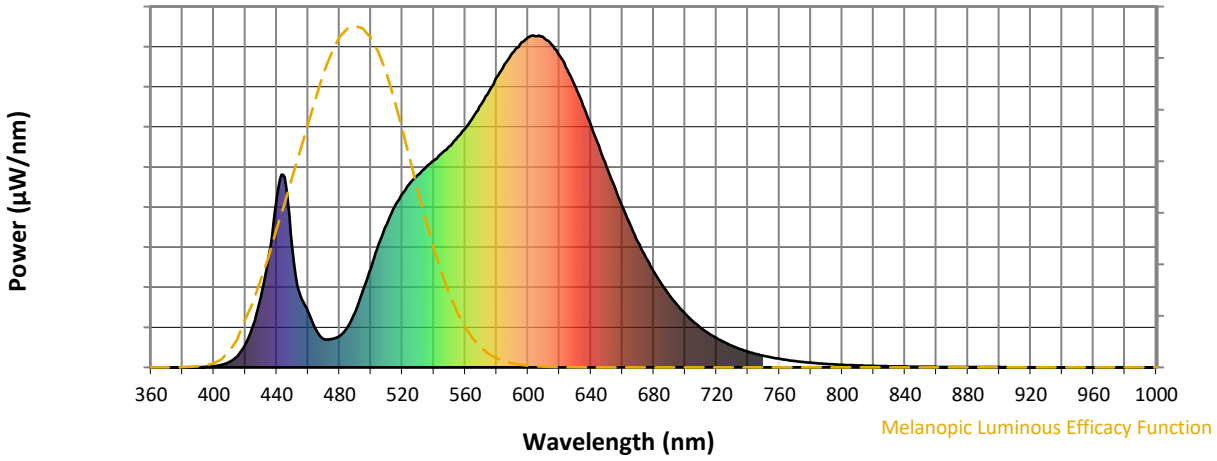


Scotopic Lumens: NR **S/P: 1.27**

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			

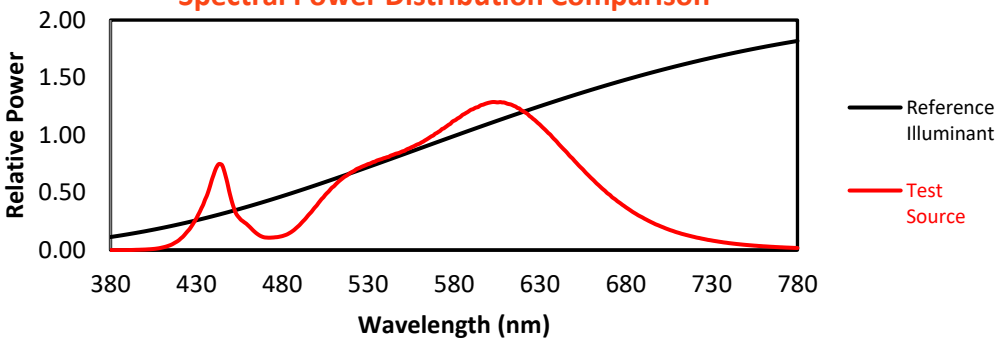
REPORT NUMBER: SP1-2408-195-9

TM-30-18

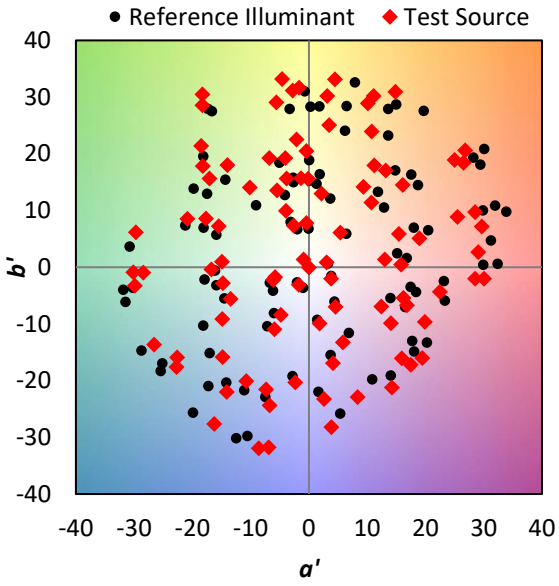
Summary

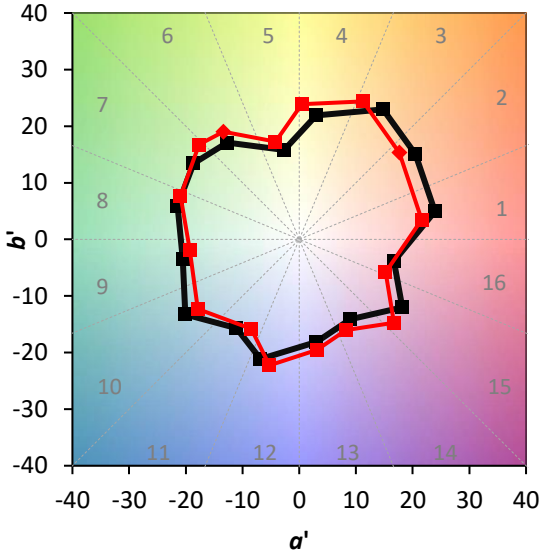
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

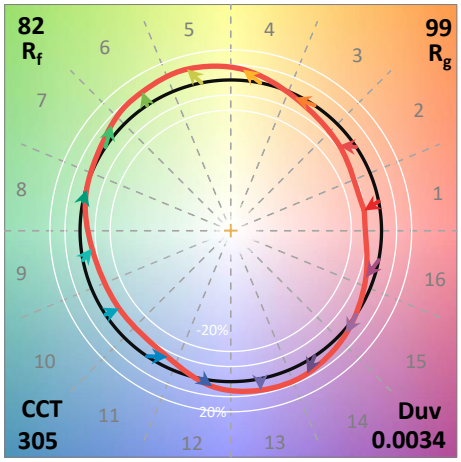
Spectral Power Distribution Comparison

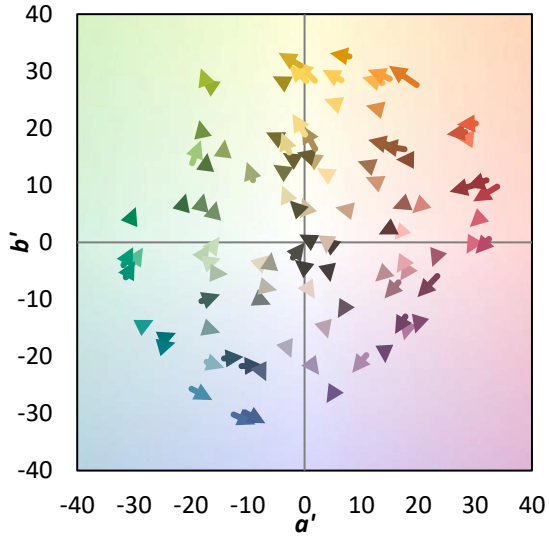


Color Vector Graphics







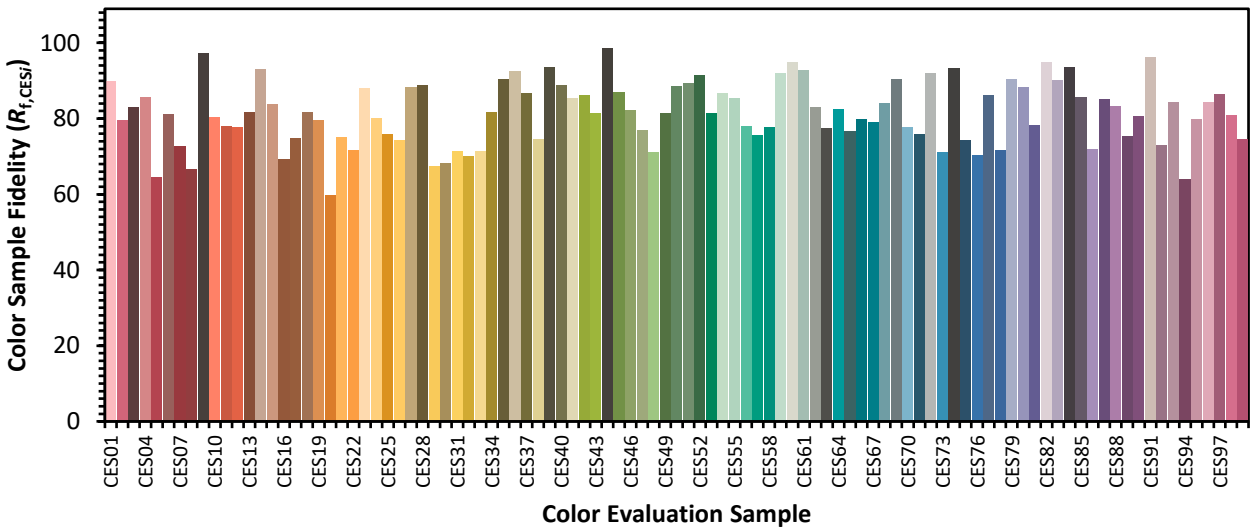


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

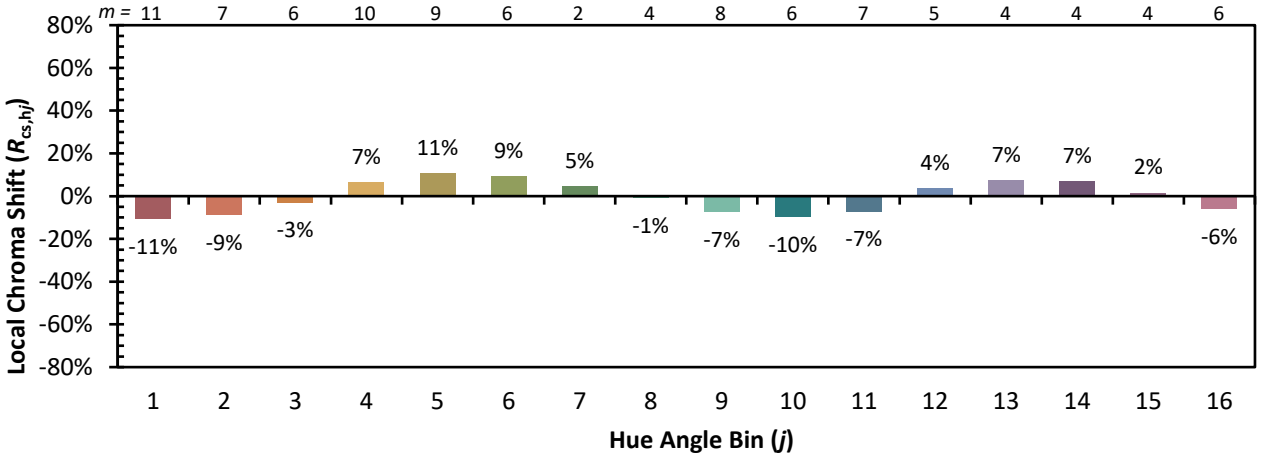
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

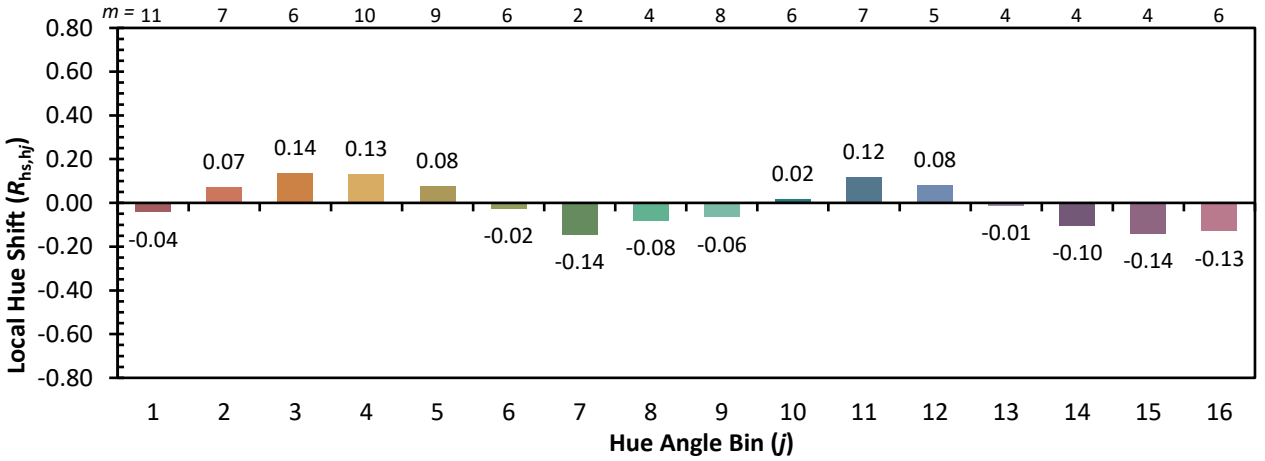


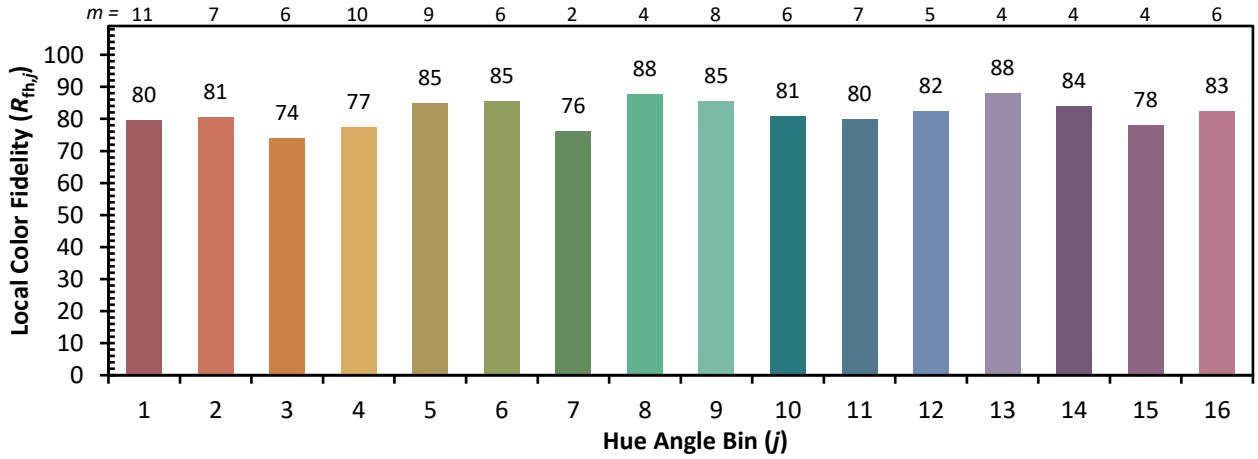
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



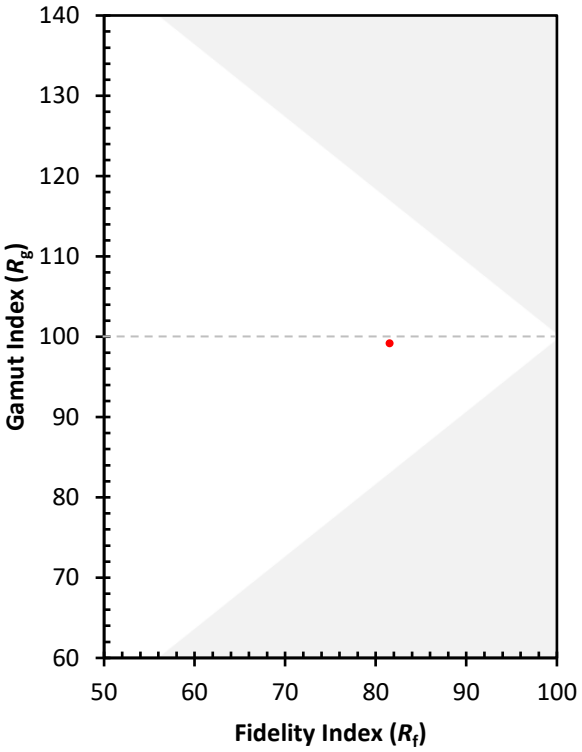


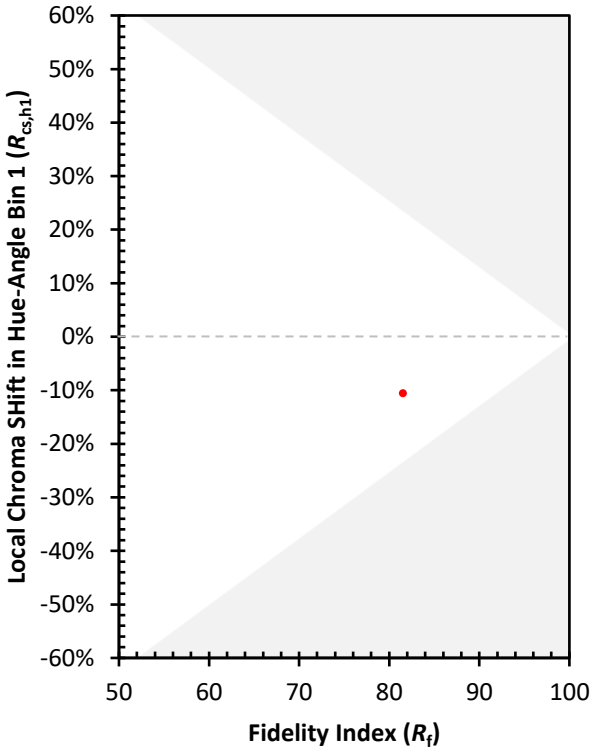


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)