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: P437083

Luminaire Tested: **ISS-SA1A-830-U-SLL-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:	P437083
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-21)
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-HSS
Description:	IMPACT ELITE LED QUARTER SPHERE 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:	1647 lumens
Efficiency:	N/A
Efficacy:	81.9 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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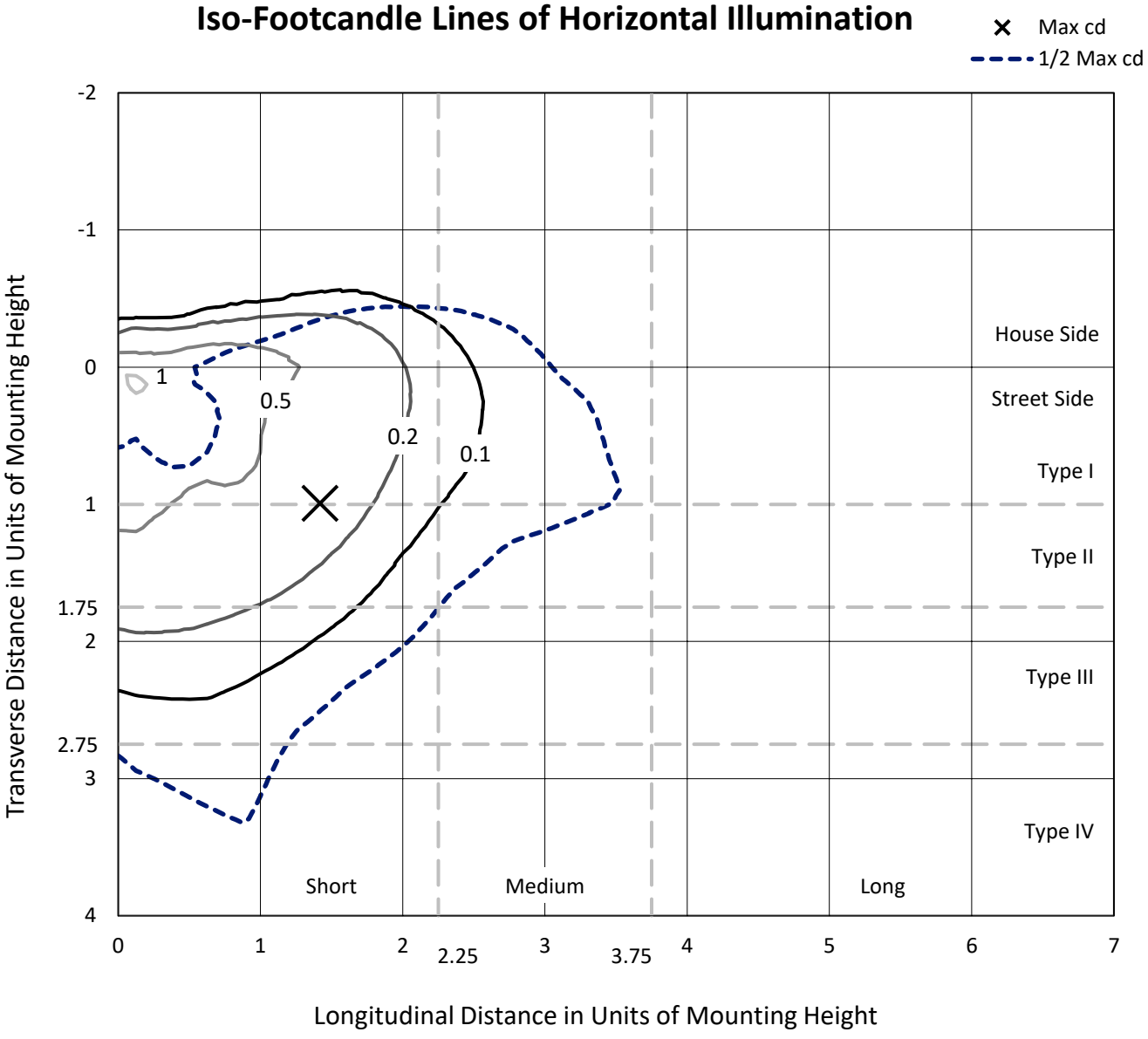
Iso-Footcandle Lines of Horizontal Illumination



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

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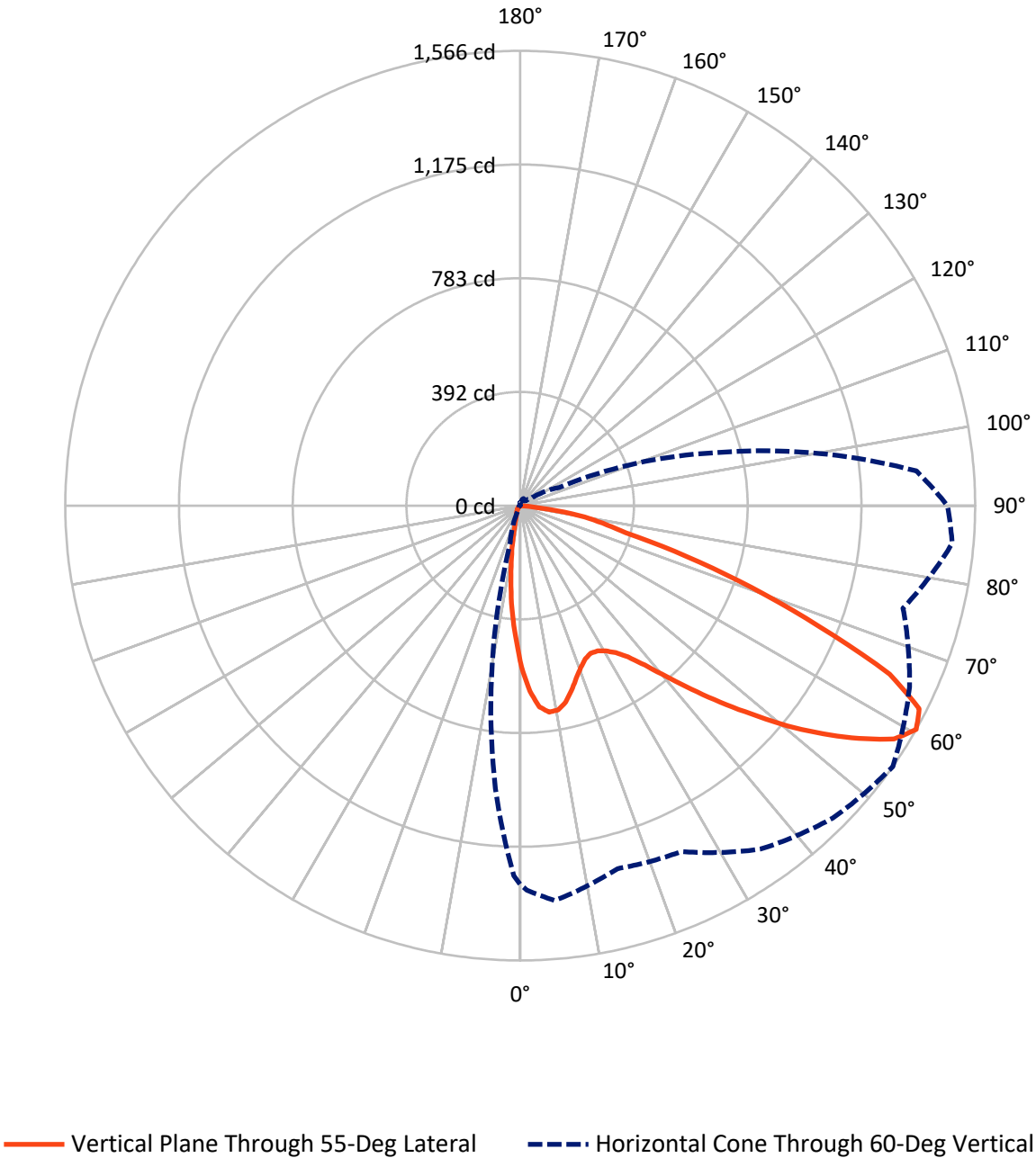
Luminous Intensity Polar Plot



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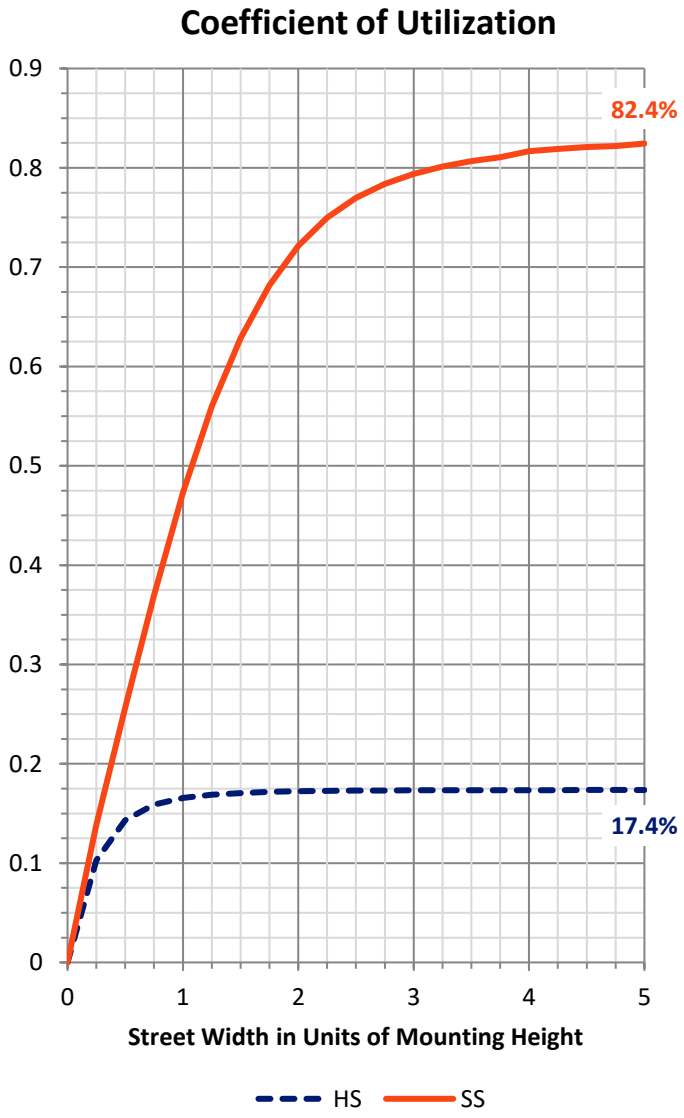
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	288.5	0.0	288.5
	% Fixture	17.5	0.0	17.5
Street Side	Lumens	1358.5	0.0	1358.5
	% Fixture	82.5	0.0	82.5
Total	Lumens	1647.0	0.0	1647.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	2.5
10°-20°	81.1	4.9
20°-30°	119.2	7.2
30°-40°	178.3	10.8
40°-50°	263.8	16.0
50°-60°	379.2	23.0
60°-70°	406.4	24.7
70°-80°	164.2	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°	1647.0	100.0
0°-180°	1647.0	100.0



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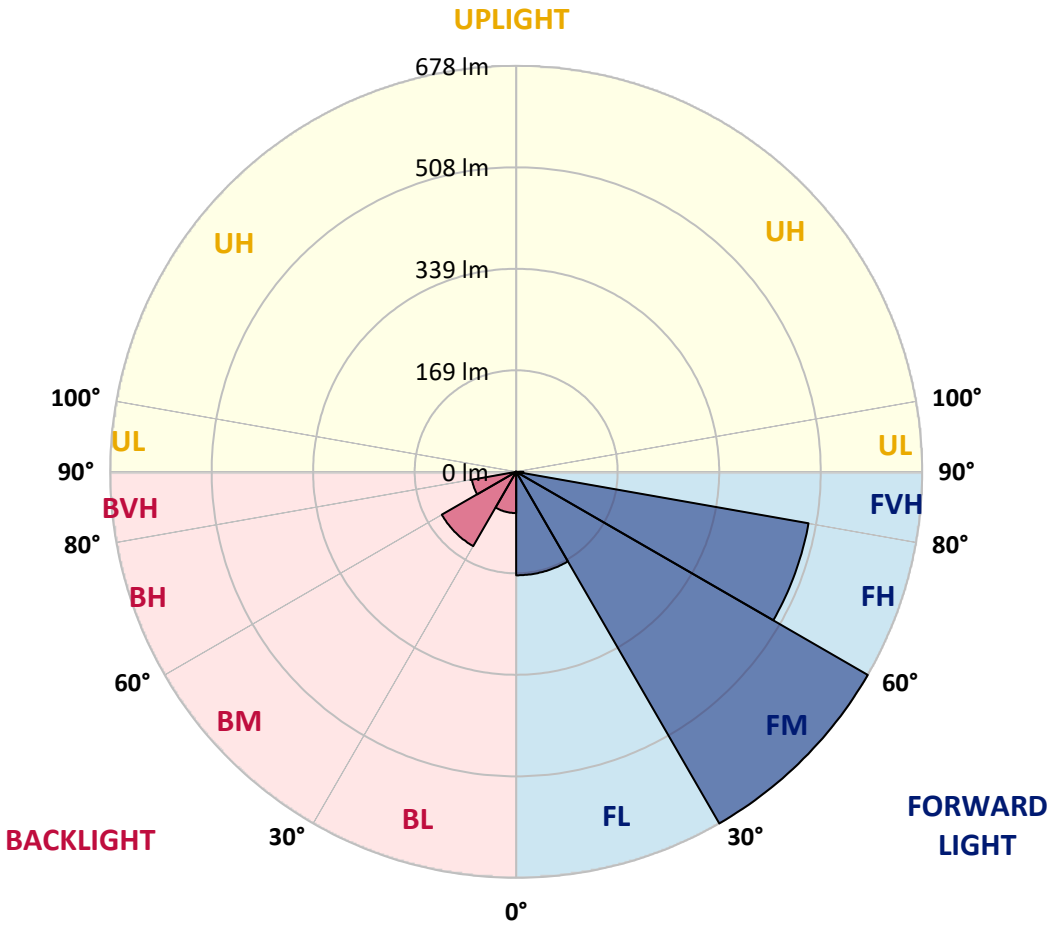
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	172.9	10.5			
FM	(30°-60°)	677.9	41.2			
FH	(60°-80°)	495.6	30.1			G0/660
FVH	(80°-90°)	12.1	0.7			G1/100
BL	(0°-30°)	68.9	4.2	B0/110		
BM	(30°-60°)	143.4	8.7	B0/220		
BH	(60°-80°)	75.0	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°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	597.1	597.1	601.8	616.1	632.0	640.0	648.7	640.0	638.4	625.7	616.1
5°	578.8	582.7	597.9	636.0	676.6	697.2	708.4	696.4	675.0	647.1	612.2
7.5°	537.4	542.2	559.7	621.7	677.4	718.7	738.6	717.9	681.3	630.4	579.6
10°	492.9	501.7	524.7	595.5	659.9	709.2	737.0	715.5	670.2	605.0	542.2
12.5°	463.5	469.9	500.9	571.6	640.8	684.5	699.6	694.8	653.5	593.1	527.1
15°	458.7	466.7	499.3	570.0	622.5	648.7	654.3	660.7	646.3	594.7	531.9
17.5°	479.4	488.1	524.7	582.0	605.8	605.8	611.4	624.1	637.6	610.6	560.5
20°	521.5	533.5	574.0	613.0	597.1	578.0	578.8	595.5	632.0	646.3	611.4
22.5°	578.0	593.9	643.2	661.5	606.6	562.9	558.9	573.2	632.8	682.9	681.3
25°	652.7	671.8	719.5	718.7	629.7	556.5	552.5	562.9	640.0	722.7	742.5
27.5°	720.3	736.2	783.9	764.0	652.7	564.5	555.7	566.8	645.6	752.1	797.4
30°	777.5	791.0	833.2	796.6	672.6	578.0	562.9	580.4	657.5	768.0	846.7
32.5°	821.3	841.1	880.1	822.0	696.4	595.5	579.6	603.4	677.4	788.7	889.6
35°	880.1	890.4	936.5	847.5	728.2	632.8	607.4	639.2	710.0	815.7	937.3
37.5°	931.0	958.0	988.2	873.7	767.2	678.9	651.1	696.4	754.5	846.7	993.0
40°	991.4	1022.4	1055.0	911.1	803.0	739.4	727.4	772.0	821.3	892.0	1047.8
42.5°	1047.0	1075.7	1097.9	954.8	846.7	807.7	816.5	863.4	889.6	938.9	1094.7
45°	1091.6	1117.0	1150.4	985.0	895.2	884.1	928.6	965.2	957.2	979.5	1136.9
47.5°	1137.7	1168.7	1182.2	1016.8	958.0	984.2	1063.7	1071.7	1028.0	1016.8	1173.4
50°	1169.5	1192.5	1201.3	1055.8	1035.1	1116.2	1179.8	1193.3	1105.1	1046.2	1221.1
52.5°	1208.4	1230.7	1241.0	1101.9	1117.8	1234.7	1308.6	1305.4	1179.8	1094.7	1268.1
55°	1277.6	1298.3	1308.6	1158.3	1176.6	1336.4	1418.3	1415.1	1268.8	1164.7	1338.0
57.5°	1326.9	1344.4	1361.1	1221.9	1249.8	1401.6	1493.0	1516.9	1376.2	1252.9	1414.3
60°	1304.6	1324.5	1365.0	1294.3	1314.2	1443.8	1521.7	1566.2	1478.7	1364.3	1493.0
62.5°	1241.8	1271.2	1313.4	1351.5	1364.3	1450.9	1481.9	1541.5	1533.6	1476.3	1528.8
65°	1162.3	1192.5	1233.1	1359.5	1353.1	1344.4	1362.7	1398.4	1454.1	1530.4	1511.3
67.5°	1019.2	1062.9	1113.8	1266.5	1176.6	1126.5	1131.3	1111.4	1223.5	1452.5	1422.3
70°	830.0	874.5	929.4	1074.1	907.1	841.1	857.8	845.1	933.4	1246.6	1218.8
72.5°	584.3	632.0	699.6	895.2	632.0	525.5	565.3	598.6	703.6	1000.1	895.2
75°	387.2	421.4	469.9	674.2	450.8	353.0	361.7	375.2	470.7	756.1	565.3
77.5°	200.3	234.5	256.0	360.9	279.1	278.3	271.9	289.4	294.2	454.0	295.0
80°	112.1	123.2	134.4	175.7	139.9	165.4	170.9	209.1	194.0	227.4	123.2
82.5°	54.9	69.2	75.5	108.1	89.8	66.0	32.6	68.4	115.3	123.2	57.2
85°	0.8	1.6	4.0	8.7	2.4	2.4	0.0	2.4	11.9	15.1	19.9
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°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	605.8	599.4	581.2	565.3	540.6	530.3	513.6	509.6	496.1	482.6	474.6
5°	594.7	576.4	539.0	502.5	469.1	438.1	415.0	395.9	374.5	365.7	371.3
7.5°	550.2	524.7	470.7	427.7	380.0	344.2	311.6	295.0	275.1	267.1	261.6
10°	513.6	482.6	420.6	364.1	318.8	291.0	271.1	247.3	224.2	205.9	203.5
12.5°	490.5	457.1	388.0	328.3	295.0	267.9	244.9	213.9	187.6	170.1	162.2
15°	489.7	448.4	377.6	314.8	275.9	241.7	212.3	177.3	150.3	128.0	120.0
17.5°	518.4	468.3	382.4	300.5	248.8	204.3	166.2	129.6	103.4	88.2	80.3
20°	568.4	513.6	391.1	286.2	222.6	166.2	116.9	88.2	70.8	63.6	60.4
22.5°	628.9	563.7	407.0	275.1	195.6	125.6	82.7	63.6	55.7	50.9	50.1
25°	702.0	627.3	429.3	267.1	170.9	97.0	64.4	52.5	47.7	44.5	42.9
27.5°	766.4	688.5	462.7	260.8	147.1	79.5	54.9	46.1	41.3	39.0	38.2
30°	814.1	738.6	500.9	246.5	128.0	69.2	51.7	43.7	38.2	35.0	34.2
32.5°	869.0	776.7	519.1	232.1	116.9	61.2	45.3	39.0	35.0	31.8	31.0
35°	929.4	830.0	537.4	221.0	109.7	54.9	41.3	34.2	29.4	26.2	25.4
37.5°	999.3	888.8	554.1	211.5	105.7	50.9	39.0	31.8	27.0	23.9	22.3
40°	1077.2	934.9	565.3	205.1	100.2	48.5	37.4	30.2	25.4	21.5	20.7
42.5°	1139.3	988.2	568.4	202.7	94.6	47.7	35.8	29.4	23.9	20.7	19.1
45°	1183.8	1035.1	579.6	200.3	90.6	44.5	35.0	28.6	22.3	19.1	17.5
47.5°	1216.4	1085.2	589.9	198.0	86.7	40.5	37.4	28.6	21.5	17.5	15.9
50°	1276.8	1144.0	609.8	191.6	81.1	36.6	37.4	27.8	20.7	16.7	15.1
52.5°	1342.0	1220.4	654.3	184.4	73.9	32.6	34.2	27.8	19.9	15.9	14.3
55°	1404.0	1313.4	695.6	174.9	62.0	29.4	31.8	27.8	18.3	15.1	13.5
57.5°	1449.3	1375.4	717.9	163.0	49.3	26.2	26.2	26.2	15.9	12.7	11.9
60°	*1470.8*	*1369.0*	*707.6*	*147.9*	*39.8*	*23.1*	*21.5*	*27.0*	*14.3*	*11.1*	*10.3*
62.5°	1454.1	1303.0	662.2	132.0	35.0	19.9	17.5	23.9	12.7	9.5	8.7
65°	1402.4	1191.7	586.7	119.3	34.2	16.7	14.3	14.3	10.3	8.0	7.2
67.5°	1274.4	1045.4	496.9	107.3	35.0	14.3	11.9	11.1	8.7	6.4	5.6
70°	1059.8	840.3	376.0	101.8	35.0	11.9	10.3	8.7	6.4	5.6	4.8
72.5°	673.4	521.5	260.8	89.8	35.0	9.5	8.7	8.0	4.8	4.0	2.4
75°	399.1	317.2	122.4	69.2	29.4	8.0	6.4	4.8	2.4	1.6	1.6
77.5°	234.5	203.5	53.3	38.2	12.7	4.8	3.2	1.6	0.8	0.0	0.0
80°	96.2	83.5	19.9	11.1	5.6	2.4	0.8	0.0	0.0	0.0	0.0
82.5°	56.4	58.8	7.2	4.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0
85°	17.5	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°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	473.8	465.9	462.7	457.9	454.0	449.2	455.5	461.1	454.8	461.9	473.0
5°	365.7	353.8	369.7	359.3	364.9	358.6	349.8	351.4	353.0	349.8	358.6
7.5°	253.6	259.2	263.2	262.4	267.1	258.4	258.4	252.8	244.9	248.0	246.5
10°	192.4	181.3	185.2	184.4	193.2	181.3	173.3	164.6	163.8	165.4	163.8
12.5°	153.4	139.9	131.2	126.4	125.6	120.0	112.9	104.1	98.6	97.8	102.6
15°	115.3	104.9	97.0	89.8	89.0	77.9	68.4	62.0	56.4	57.2	60.4
17.5°	79.5	76.3	73.9	67.6	63.6	54.1	46.1	42.1	40.5	40.5	41.3
20°	58.0	56.4	54.9	52.5	48.5	41.3	36.6	35.0	34.2	34.2	35.0
22.5°	48.5	46.1	44.5	43.7	40.5	35.0	31.8	30.2	30.2	30.2	30.2
25°	41.3	39.8	39.0	37.4	35.0	30.2	27.8	27.0	26.2	26.2	27.0
27.5°	37.4	34.2	32.6	32.6	30.2	27.0	24.6	23.9	23.1	23.1	23.9
30°	33.4	31.0	29.4	27.8	26.2	23.1	21.5	20.7	20.7	20.7	20.7
32.5°	29.4	27.8	26.2	24.6	22.3	20.7	19.1	18.3	17.5	17.5	17.5
35°	23.9	22.3	22.3	21.5	19.1	17.5	15.9	15.1	14.3	15.1	15.1
37.5°	20.7	18.3	18.3	18.3	16.7	15.1	13.5	12.7	11.9	11.9	12.7
40°	19.1	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	8.0	8.0	8.0	8.0
45°	15.9	12.7	11.1	9.5	10.3	9.5	7.2	6.4	6.4	6.4	6.4
47.5°	14.3	11.1	9.5	7.2	7.2	7.2	5.6	4.8	4.8	4.8	4.8
50°	13.5	10.3	7.2	6.4	5.6	5.6	4.8	4.0	3.2	3.2	4.0
52.5°	12.7	9.5	6.4	4.8	4.0	4.0	3.2	3.2	2.4	2.4	2.4
55°	11.9	8.0	5.6	4.0	3.2	2.4	2.4	2.4	2.4	1.6	2.4
57.5°	10.3	7.2	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°	8.0	4.8	2.4	1.6	0.8	0.0	0.8	0.8	0.8	0.8	0.8
65°	6.4	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: P437083
CATALOG NUMBER: ISS-SA1A-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	472.2	477.0	494.5	510.4	527.9	547.0	562.9	585.9	593.1	597.1
5°	357.0	374.5	395.9	415.0	449.2	481.0	518.4	558.9	575.6	578.8
7.5°	257.6	269.5	292.6	330.7	361.7	409.4	457.9	512.0	537.4	537.4
10°	177.3	197.2	226.6	262.4	303.7	345.8	402.3	463.5	487.3	492.9
12.5°	112.9	135.2	174.9	213.9	261.6	302.9	359.3	428.5	455.5	463.5
15°	65.2	80.3	116.9	159.8	217.0	269.5	333.1	417.4	450.8	458.7
17.5°	43.7	49.3	69.2	106.5	170.1	240.1	325.2	429.3	469.9	479.4
20°	36.6	39.0	46.1	66.0	120.0	209.1	322.0	455.5	504.8	521.5
22.5°	31.8	34.2	39.0	48.5	85.9	176.5	319.6	493.7	560.5	578.0
25°	27.8	30.2	34.2	41.3	60.4	143.9	323.6	547.8	632.0	652.7
27.5°	24.6	27.0	31.0	35.8	48.5	111.3	324.4	598.6	698.8	720.3
30°	21.5	23.9	27.0	31.0	39.0	85.9	310.1	650.3	752.9	777.5
32.5°	19.1	20.7	23.9	27.0	32.6	66.8	280.6	690.1	797.4	821.3
35°	15.9	17.5	20.7	23.1	28.6	54.1	248.0	726.6	850.7	880.1
37.5°	13.5	15.1	17.5	20.7	25.4	42.1	215.4	758.4	902.3	931.0
40°	11.1	13.5	15.9	18.3	23.1	32.6	179.7	792.6	961.2	991.4
42.5°	9.5	11.1	13.5	16.7	19.9	26.2	147.9	814.1	1011.3	1047.0
45°	7.2	9.5	12.7	16.7	16.7	20.7	127.2	830.0	1047.0	1091.6
47.5°	5.6	8.0	11.1	15.9	15.1	17.5	116.9	857.8	1096.3	1137.7
50°	4.8	6.4	11.1	13.5	12.7	15.1	120.0	882.5	1133.7	1169.5
52.5°	4.0	5.6	9.5	10.3	11.1	13.5	126.4	927.8	1180.6	1208.4
55°	3.2	4.8	7.2	8.7	9.5	12.7	136.7	984.2	1241.8	1277.6
57.5°	2.4	4.0	5.6	7.2	8.7	11.9	143.9	1020.0	1299.1	1326.9
60°	*2.4*	*3.2*	*4.8*	*6.4*	*8.0*	*11.1*	*133.6*	*977.9*	*1274.4*	*1304.6*
62.5°	1.6	3.2	4.0	5.6	6.4	8.7	98.6	885.6	1200.5	1241.8
65°	0.8	2.4	3.2	4.0	4.8	6.4	56.4	774.3	1113.0	1162.3
67.5°	0.0	1.6	2.4	3.2	3.2	4.8	26.2	624.9	969.1	1019.2
70°	0.0	0.8	1.6	1.6	2.4	4.0	13.5	441.2	762.4	830.0
72.5°	0.8	0.8	1.6	1.6	1.6	3.2	8.7	267.1	512.8	584.3
75°	0.8	0.8	0.8	0.8	1.6	2.4	5.6	171.7	322.8	387.2
77.5°	0.8	1.6	0.8	0.8	0.8	1.6	3.2	95.4	176.5	200.3
80°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	8.7	83.5	112.1
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	42.9	54.9
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.

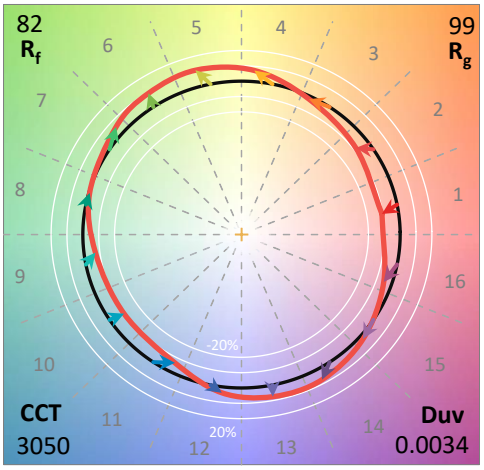
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

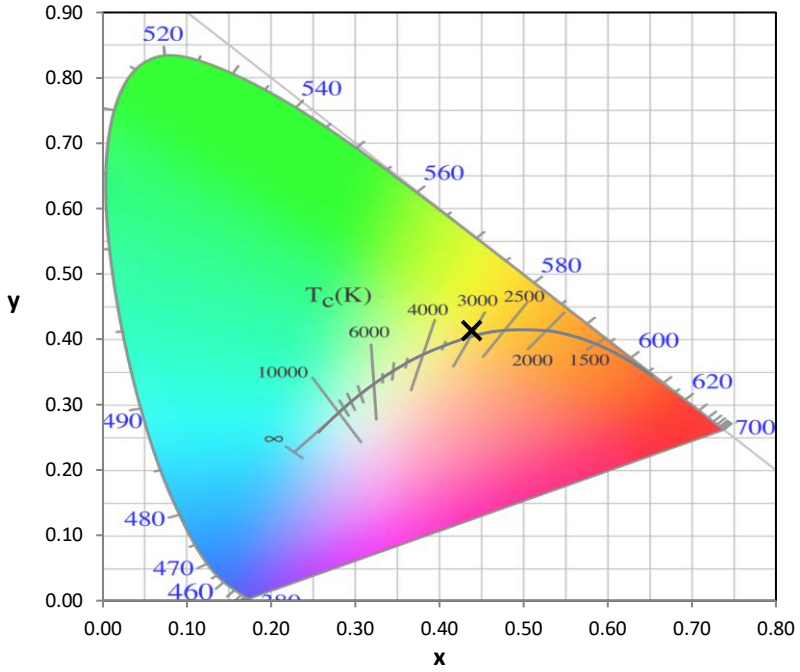
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

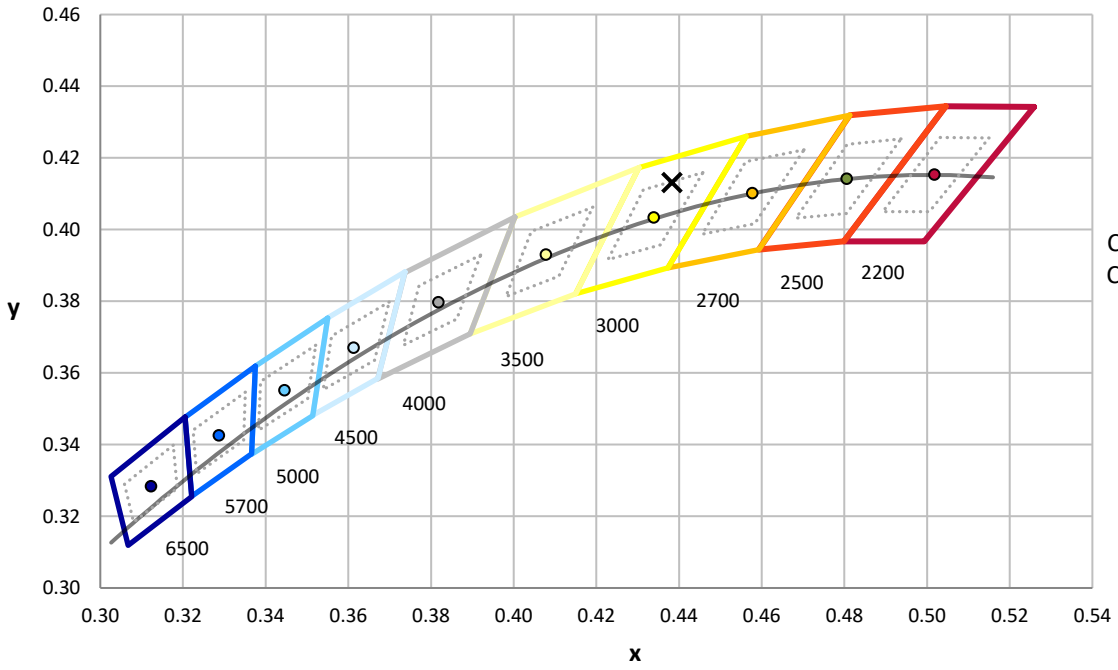
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

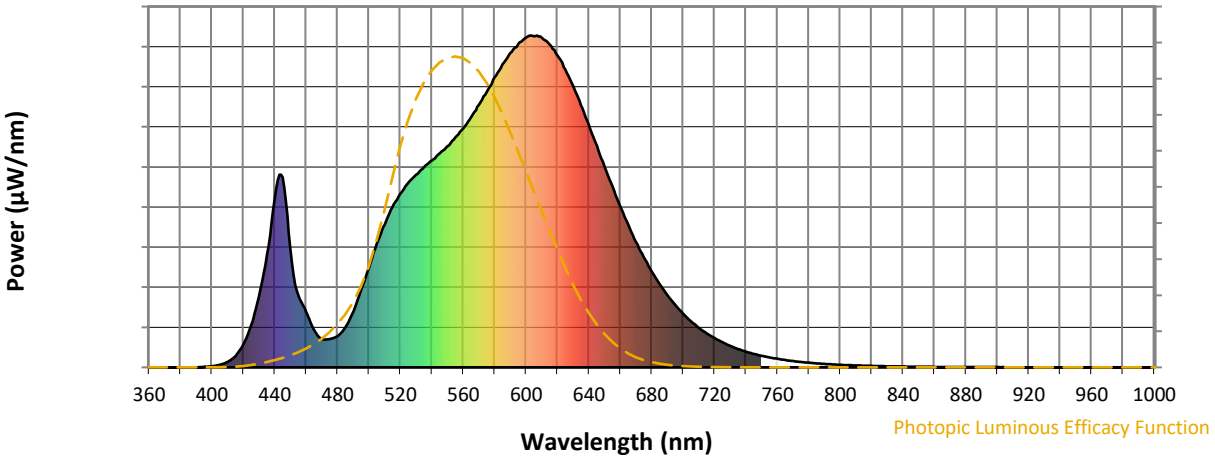


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

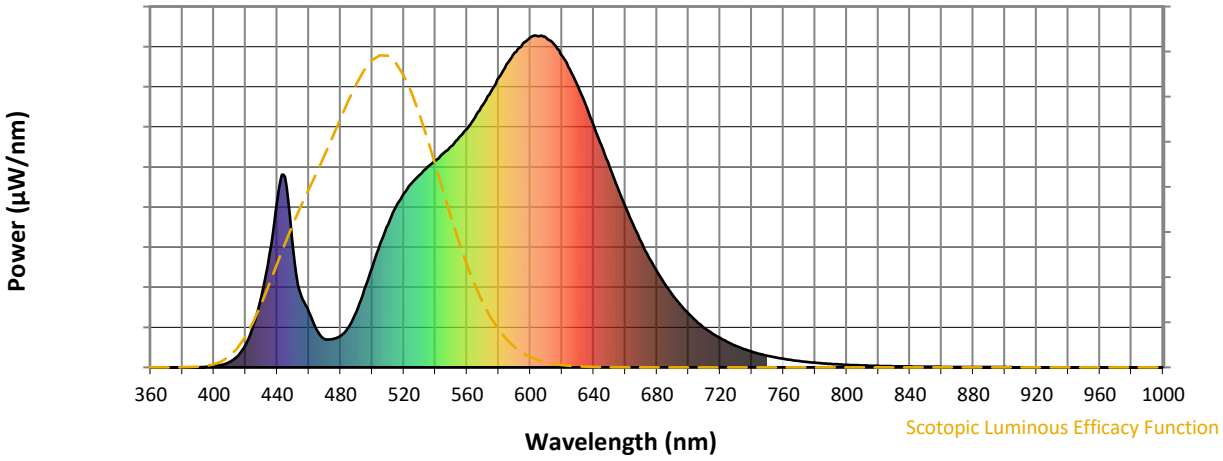


Photopic Lumens: NR

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

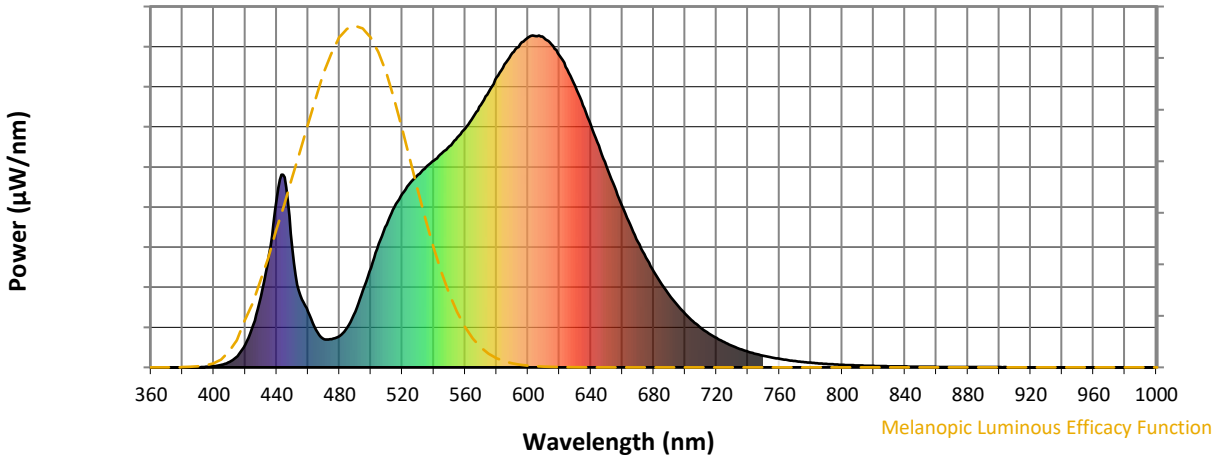


Scotopic Lumens: NR **S/P: 1.27**

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			

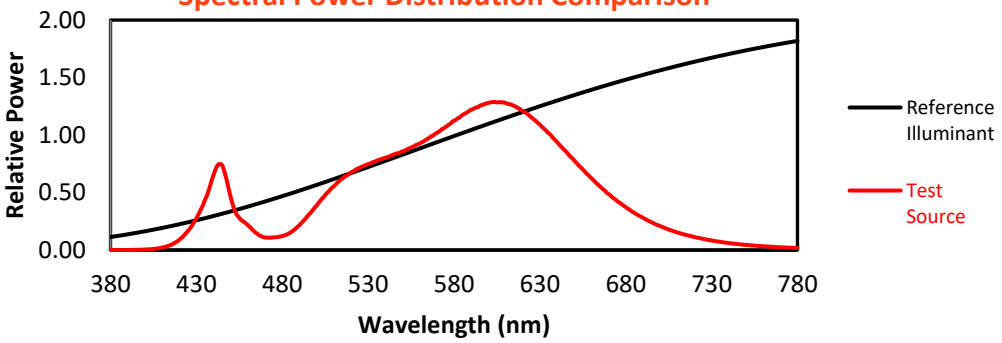
REPORT NUMBER: SP1-2408-195-9

TM-30-18

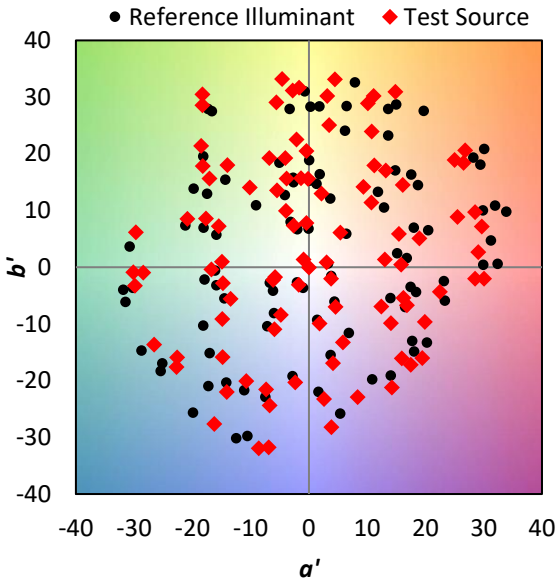
Summary

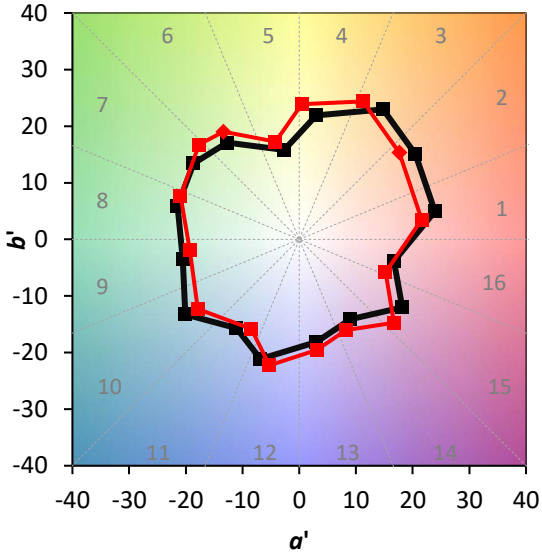
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

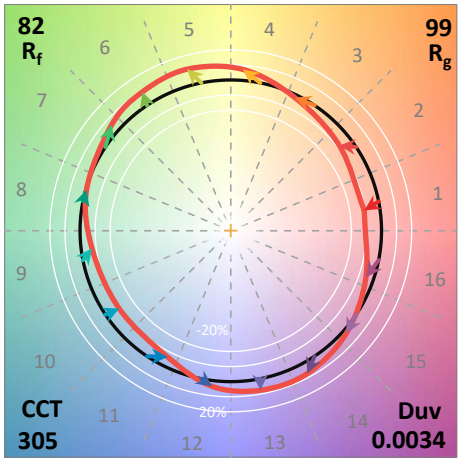
Spectral Power Distribution Comparison

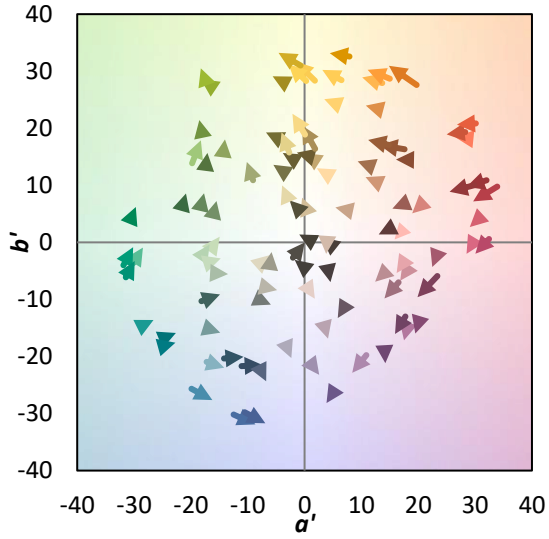


Color Vector Graphics







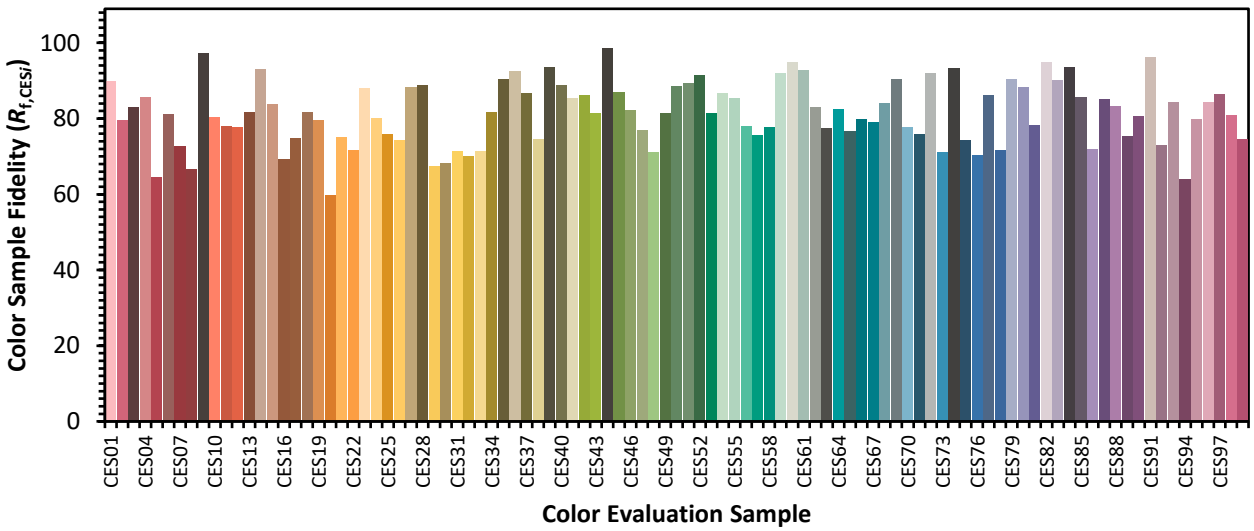


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

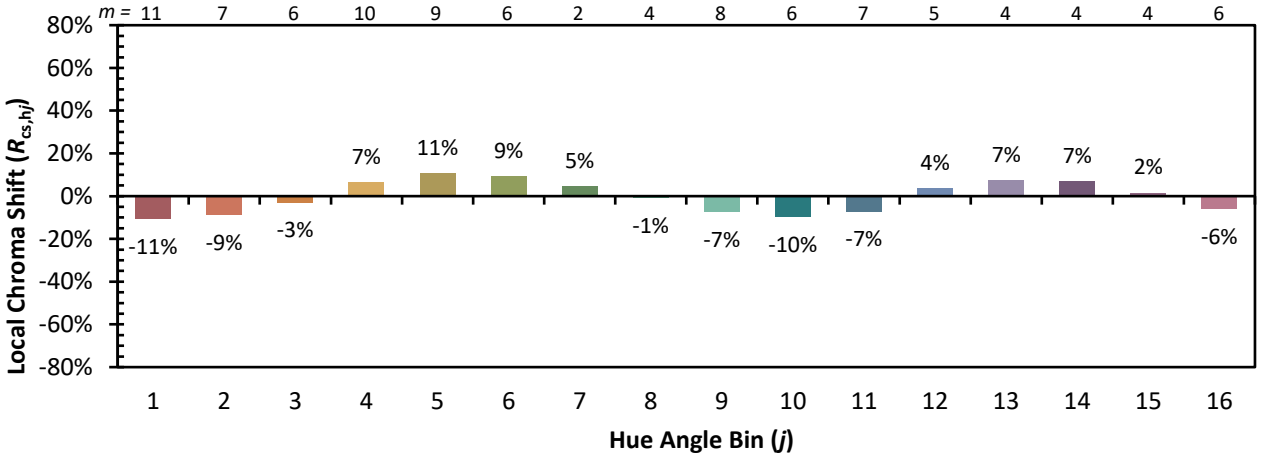
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

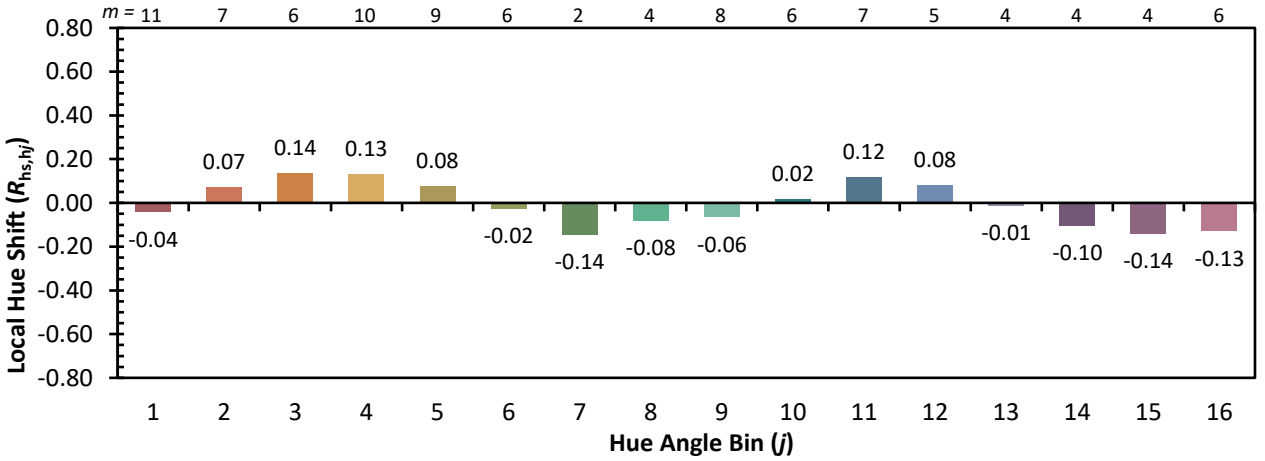


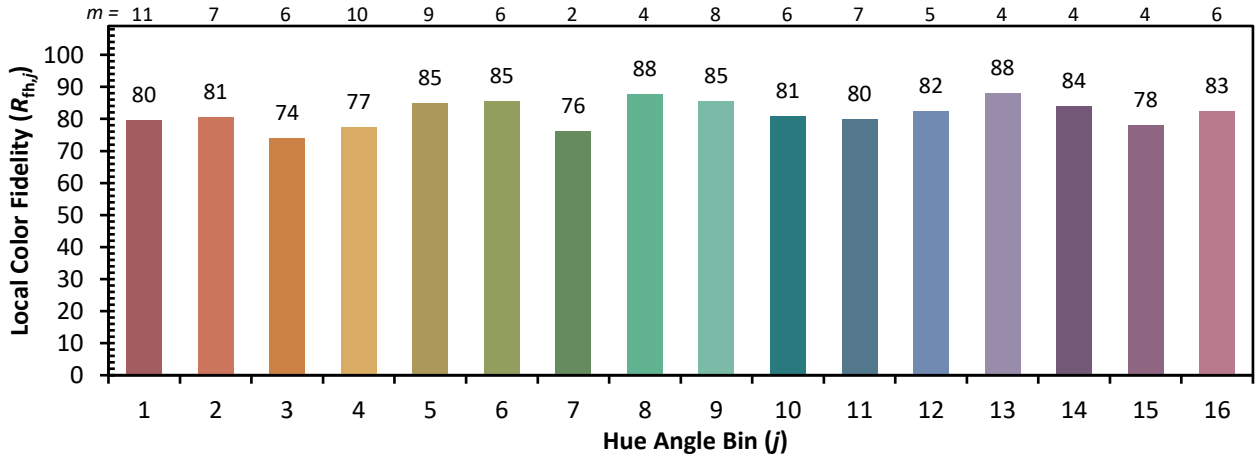
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin







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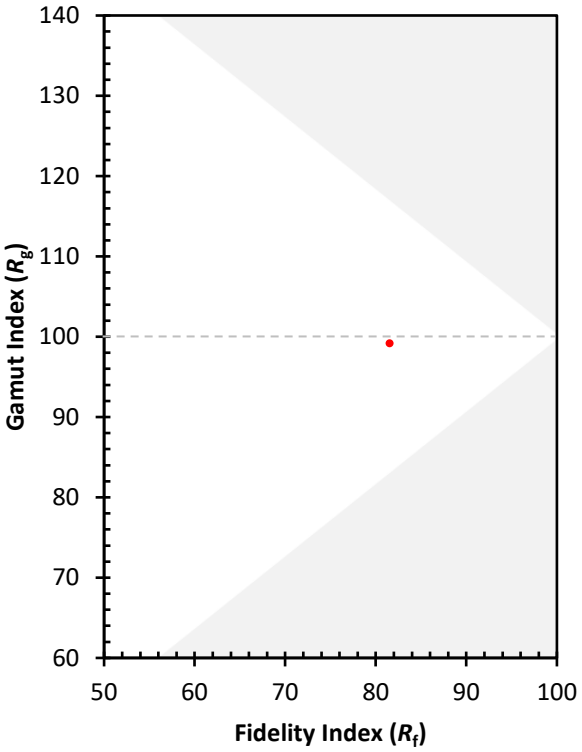
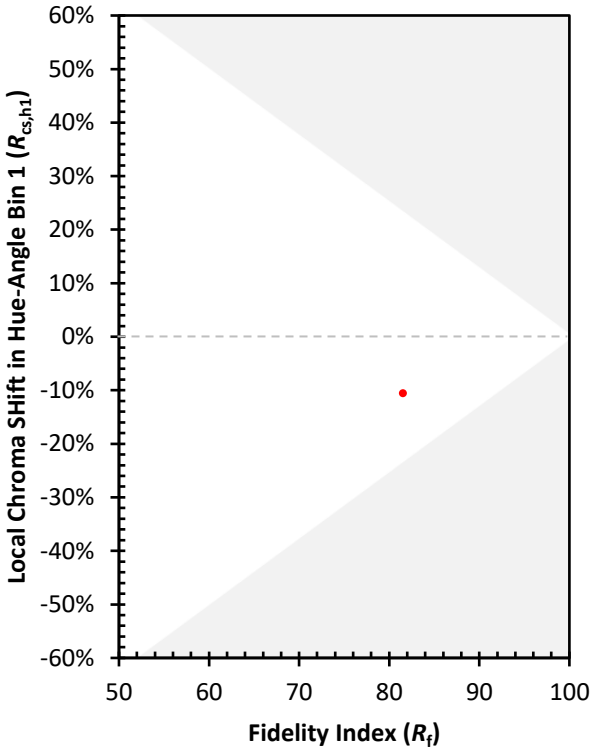
Measure Comparisons





(END OF REPORT)