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: P438110

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

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:	P438110
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-20)
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
Description:	IMPACT ELITE LED TRAPEZOID 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:	1954 lumens
Efficiency:	N/A
Efficacy:	97.2 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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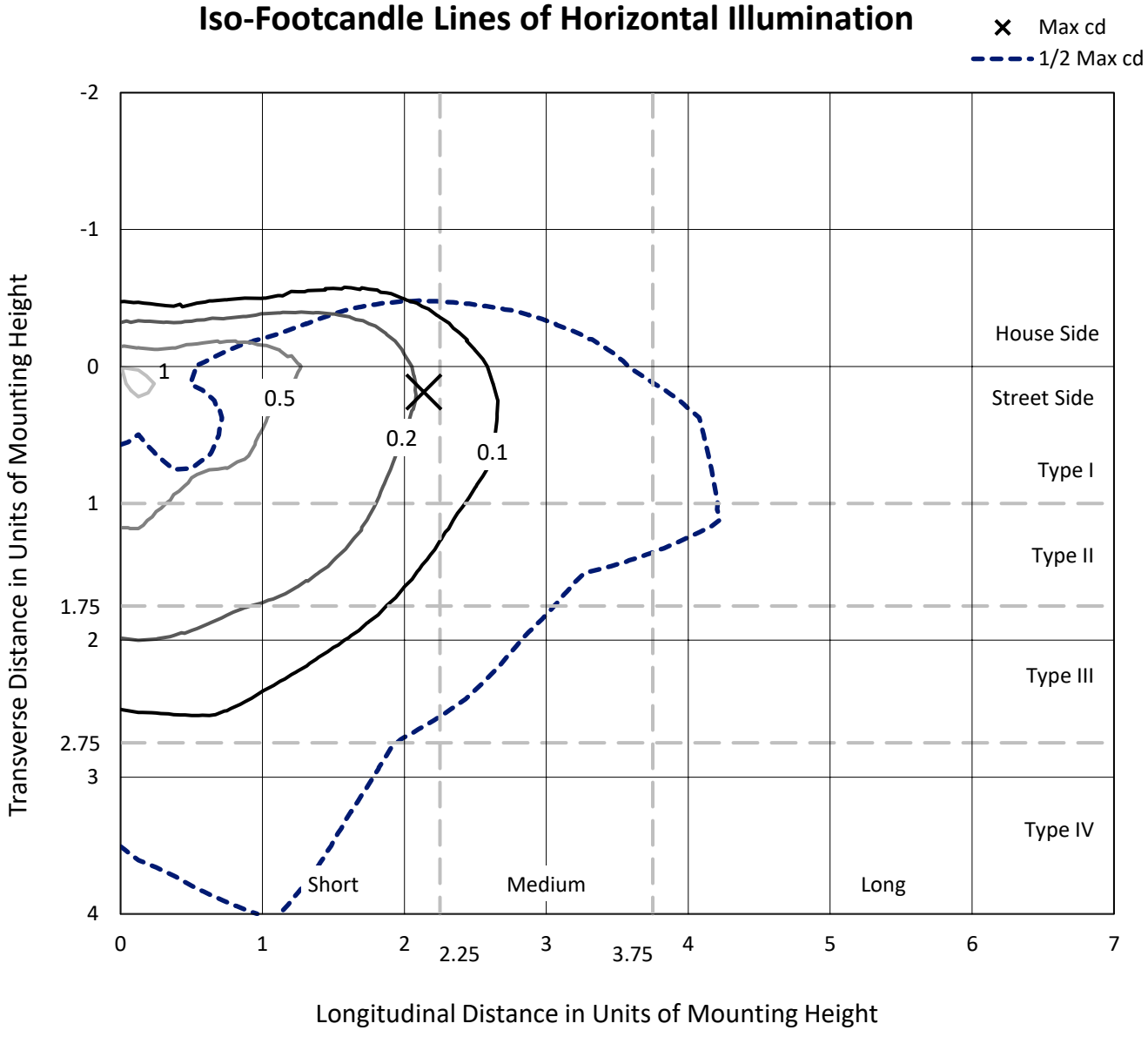
Iso-Footcandle Lines of Horizontal Illumination



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

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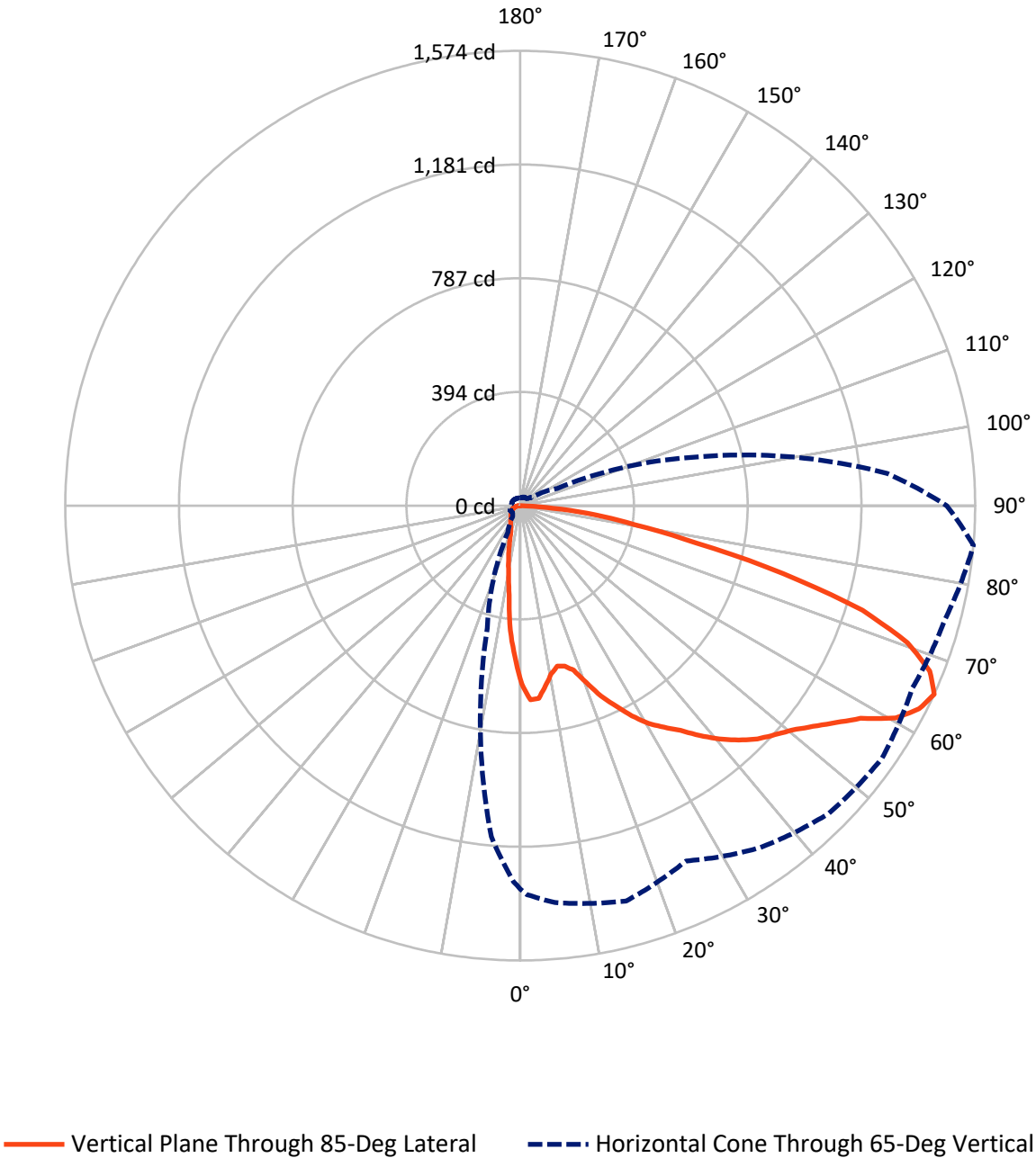
Luminous Intensity Polar Plot



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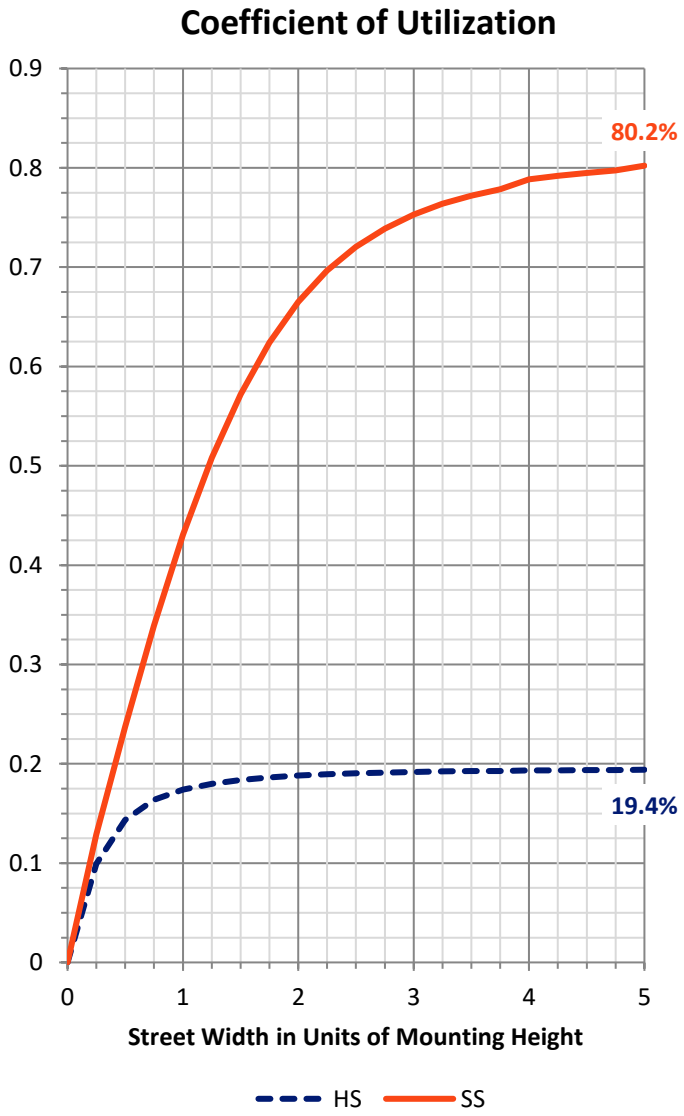
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	382.4	0.0	382.4
	% Fixture	19.6	0.0	19.6
Street Side	Lumens	1571.6	0.0	1571.6
	% Fixture	80.4	0.0	80.4
Total	Lumens	1954.0	0.0	1954.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.0	2.4
10°-20°	97.7	5.0
20°-30°	140.5	7.2
30°-40°	201.8	10.3
40°-50°	285.6	14.6
50°-60°	397.2	20.3
60°-70°	472.9	24.2
70°-80°	273.4	14.0
80°-90°	37.8	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°	1954.0	100.0
0°-180°	1954.0	100.0



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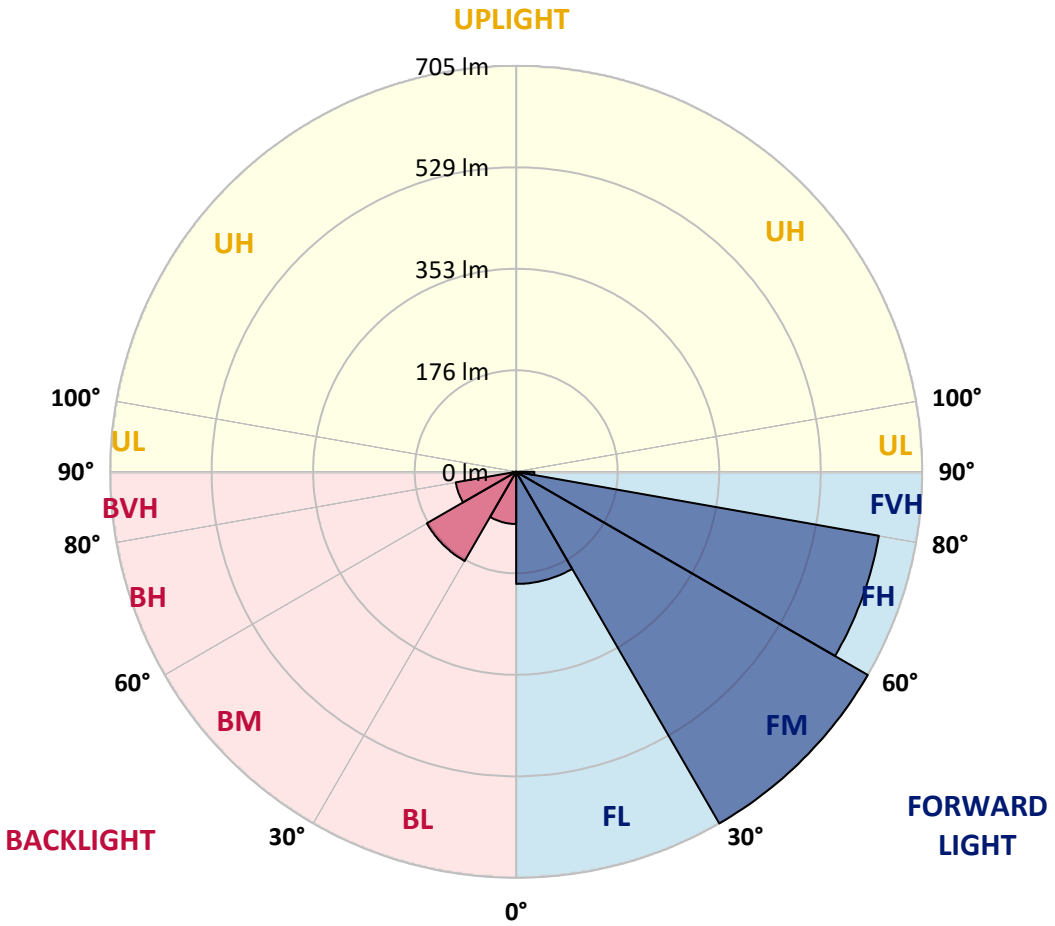
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	194.7	10.0			
FM	(30°-60°)	705.4	36.1			
FH	(60°-80°)	639.8	32.7			G0/660
FVH	(80°-90°)	31.6	1.6			G1/100
BL	(0°-30°)	90.6	4.6	B0/110		
BM	(30°-60°)	179.2	9.2	B0/220		
BH	(60°-80°)	106.5	5.4	B0/110		G0/110
BVH	(80°-90°)	6.2	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°	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	*617.3*
2.5°	646.8	649.2	654.8	674.0	686.0	695.5	707.5	695.5	692.4	676.4	*673.2*
5°	623.7	629.3	645.2	681.2	710.7	741.9	757.8	744.3	725.9	697.9	*670.0*
7.5°	578.2	585.3	606.1	662.0	717.9	760.2	781.0	766.6	729.1	679.6	*629.3*
10°	531.8	543.0	567.8	638.1	697.1	744.3	776.2	761.0	715.5	650.8	*590.9*
12.5°	503.9	511.9	539.8	613.3	675.6	722.7	746.7	737.9	695.5	634.1	*570.2*
15°	497.5	505.5	533.4	604.5	659.6	694.7	700.3	702.7	686.8	639.6	*575.8*
17.5°	515.1	521.5	559.8	618.9	641.2	648.4	657.2	667.6	675.6	650.8	*598.9*
20°	557.4	570.2	603.7	648.4	636.5	619.7	624.5	637.3	667.6	683.6	*652.4*
22.5°	614.1	628.5	670.8	689.2	639.6	603.7	599.7	610.9	666.8	719.5	*716.3*
25°	677.2	697.1	742.7	743.5	653.2	592.5	584.5	594.9	665.2	751.4	*767.4*
27.5°	742.7	761.0	810.5	785.8	679.6	593.3	583.7	594.1	669.2	785.8	*824.1*
30°	791.4	815.3	858.5	825.7	696.3	603.7	589.3	602.9	678.0	803.4	*874.4*
32.5°	840.9	856.1	901.6	848.9	714.7	619.7	601.3	622.1	700.3	820.1	*914.4*
35°	884.8	904.8	951.1	862.4	741.9	646.8	622.9	650.0	732.3	844.1	*955.1*
37.5°	940.7	959.9	1002.2	881.6	764.2	681.2	661.2	696.3	771.4	865.6	*1009.4*
40°	990.2	1020.6	1052.5	905.6	789.8	731.5	718.7	766.6	824.1	895.2	*1062.1*
42.5°	1038.9	1064.5	1099.6	932.7	822.5	793.0	798.6	848.9	888.0	939.9	*1109.2*
45°	1074.1	1103.6	1134.8	954.3	864.8	859.3	896.8	939.1	953.5	987.0	*1151.5*
47.5°	1108.4	1131.6	1159.5	975.8	915.9	933.5	999.0	1031.7	1017.4	1029.3	*1185.1*
50°	1153.9	1178.7	1186.7	1010.2	980.6	1027.7	1098.8	1120.4	1078.9	1062.9	*1220.2*
52.5°	1219.4	1231.4	1227.4	1050.9	1042.1	1126.0	1184.3	1217.0	1142.7	1094.8	*1268.9*
55°	1307.2	1328.0	1302.5	1117.2	1105.2	1220.2	1288.1	1304.0	1213.8	1134.8	*1324.8*
57.5°	1391.1	1409.5	1401.5	1197.8	1187.5	1301.7	1367.1	1382.3	1283.3	1209.0	*1388.7*
60°	1422.2	1427.8	1456.6	1283.3	1269.7	1371.1	1445.4	1447.8	1366.3	1298.5	*1492.5*
62.5°	1388.7	1411.1	1439.0	1363.1	1319.2	1431.0	1497.3	1512.5	1445.4	1407.1	*1549.2*
65°	*1326.4*	*1346.4*	*1379.1*	*1416.6*	*1356.8*	*1445.4*	*1507.7*	*1526.8*	*1496.5*	*1521.3*	*1574.0*
67.5°	1254.5	1279.3	1301.7	1425.4	1352.0	1363.1	1415.0	1427.0	1469.4	1571.6	*1528.4*
70°	1161.9	1189.9	1209.0	1391.1	1237.8	1126.8	1163.5	1196.2	1260.9	1482.1	*1422.2*
72.5°	962.3	1007.0	1054.9	1235.4	1001.4	875.2	904.0	925.5	971.8	1265.7	*1238.6*
75°	677.2	709.9	769.0	995.0	769.0	619.7	664.4	664.4	722.7	1039.7	*940.7*
77.5°	404.9	405.7	463.2	654.8	468.0	417.6	443.2	455.2	472.7	736.3	*624.5*
80°	229.2	232.4	251.5	423.2	277.1	285.1	315.4	347.4	321.0	456.8	*401.7*
82.5°	107.0	94.2	99.8	199.6	157.3	186.1	190.9	205.2	206.8	292.3	*263.5*
85°	8.8	7.2	9.6	35.9	27.9	25.6	18.4	35.1	55.1	127.8	*113.4*
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°	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3
2.5°	662.8	654.8	637.3	623.7	610.9	586.9	577.4	563.8	556.6	543.8	547.0
5°	649.2	630.9	590.9	563.8	528.6	499.9	482.3	466.4	460.0	446.4	441.6
7.5°	599.7	583.7	533.4	488.7	445.6	411.3	378.5	354.6	343.4	331.4	330.6
10°	557.4	531.0	473.5	420.8	371.3	339.4	315.4	295.5	277.9	262.7	253.9
12.5°	533.4	500.7	436.8	372.9	338.6	316.2	289.9	265.1	245.2	227.6	217.2
15°	533.4	495.1	419.2	357.0	322.6	289.1	258.7	233.2	206.8	186.1	179.7
17.5°	558.2	511.1	423.2	346.6	297.9	260.3	222.0	188.5	162.9	144.5	138.2
20°	606.9	550.2	432.8	334.6	273.9	222.0	175.7	139.7	116.6	107.8	106.2
22.5°	663.6	597.3	447.2	323.4	249.2	181.3	131.8	106.2	95.8	92.6	92.6
25°	725.9	650.0	465.6	311.4	223.6	143.7	100.6	88.6	84.6	83.1	83.1
27.5°	784.2	707.5	498.3	306.6	199.6	116.6	87.8	79.1	76.7	75.1	75.9
30°	840.9	758.6	531.8	297.1	173.3	101.4	79.1	72.7	69.5	68.7	69.5
32.5°	889.6	802.6	555.0	282.7	154.9	91.0	73.5	67.1	63.9	63.1	63.9
35°	945.5	845.7	578.2	272.3	145.3	84.6	69.5	63.1	59.9	58.3	58.3
37.5°	1011.0	897.6	595.7	257.1	138.9	78.3	66.3	59.9	55.9	54.3	54.3
40°	1098.8	960.7	610.1	245.2	131.8	75.1	62.3	56.7	52.7	51.1	50.3
42.5°	1159.5	1015.8	622.1	237.2	124.6	73.5	59.9	55.1	50.3	47.9	47.1
45°	1201.0	1064.5	630.1	233.2	118.2	69.5	58.3	53.5	47.9	44.7	44.7
47.5°	1241.0	1104.4	630.9	227.6	113.4	64.7	60.7	51.1	45.5	42.3	42.3
50°	1285.7	1154.7	646.0	222.0	107.8	59.1	59.9	50.3	43.9	40.7	39.9
52.5°	1330.4	1223.4	675.6	214.0	99.8	54.3	56.7	51.1	42.3	39.1	38.3
55°	1410.3	1308.8	712.3	202.0	89.4	49.5	52.7	50.3	39.9	36.7	35.9
57.5°	1462.2	1388.7	741.1	189.3	74.3	46.3	46.3	48.7	37.5	34.3	33.5
60°	1491.7	1403.9	746.7	174.1	60.7	41.5	39.9	49.5	35.1	31.1	31.1
62.5°	1490.9	1352.0	718.7	159.7	52.7	38.3	35.9	43.1	32.7	29.5	28.7
65°	*1475.7*	*1275.3*	*655.6*	*141.3*	*49.5*	*35.1*	*31.9*	*32.7*	*30.3*	*27.2*	*26.4*
67.5°	1410.3	1142.7	555.0	123.0	47.9	31.9	29.5	27.9	26.4	24.0	23.2
70°	1251.3	993.4	432.8	114.2	47.1	27.9	25.6	24.0	22.4	20.8	20.8
72.5°	1017.4	774.6	330.6	109.4	47.9	25.6	21.6	20.8	19.2	18.4	17.6
75°	704.3	572.6	239.6	96.6	46.3	21.6	18.4	16.8	16.0	14.4	14.4
77.5°	452.8	374.5	158.9	77.5	37.5	17.6	13.6	12.8	12.0	11.2	11.2
80°	297.9	254.7	92.6	55.1	23.2	12.0	9.6	9.6	8.8	7.2	7.2
82.5°	189.3	192.5	47.9	25.6	13.6	7.2	5.6	4.8	4.8	3.2	3.2
85°	41.5	72.7	21.6	10.4	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°	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3
2.5°	535.8	529.4	527.1	527.1	516.7	517.5	517.5	523.9	523.1	528.6	526.3
5°	436.0	429.6	429.6	431.2	432.8	425.6	428.0	421.6	433.6	424.8	418.4
7.5°	321.8	321.0	326.6	339.4	337.0	334.6	329.8	317.8	311.4	317.8	314.6
10°	246.8	249.2	247.6	253.1	253.9	253.1	245.2	242.8	239.6	242.8	246.8
12.5°	206.8	197.2	186.9	186.1	192.5	192.5	191.7	192.5	194.8	194.8	198.0
15°	172.5	166.1	152.5	146.1	150.9	147.7	148.5	151.7	154.1	157.3	155.7
17.5°	137.4	131.8	125.4	121.4	123.8	121.4	120.6	119.8	119.8	119.0	122.2
20°	104.6	103.8	106.2	104.6	105.4	103.8	101.4	98.2	95.8	97.4	99.0
22.5°	91.0	91.8	93.4	95.0	95.0	93.4	89.4	86.2	85.4	85.4	86.2
25°	83.8	83.8	86.2	87.0	87.8	85.4	80.7	78.3	78.3	78.3	78.3
27.5°	75.9	77.5	79.1	80.7	81.5	79.1	75.1	72.7	72.7	71.9	71.1
30°	70.3	71.1	72.7	73.5	74.3	71.9	69.5	67.1	67.1	67.1	66.3
32.5°	63.9	66.3	67.1	67.9	68.7	67.1	64.7	63.1	62.3	61.5	59.9
35°	59.1	59.9	62.3	62.3	63.1	62.3	60.7	59.1	56.7	55.9	55.9
37.5°	54.3	54.3	55.9	57.5	59.1	58.3	55.9	53.5	52.7	52.7	52.7
40°	51.1	50.3	51.1	53.5	55.1	55.1	51.9	50.3	50.3	49.5	49.5
42.5°	47.1	47.1	47.1	49.5	52.7	51.1	47.9	47.9	47.9	47.1	47.1
45°	44.7	43.9	44.7	44.7	48.7	46.3	45.5	44.7	45.5	44.7	45.5
47.5°	41.5	41.5	41.5	42.3	44.7	43.1	42.3	42.3	43.1	43.1	43.1
50°	39.1	39.1	39.1	39.9	40.7	40.7	40.7	40.7	40.7	41.5	41.5
52.5°	37.5	36.7	37.5	37.5	38.3	39.1	38.3	39.1	39.1	39.1	39.9
55°	35.9	35.1	35.9	35.9	37.5	36.7	36.7	37.5	37.5	38.3	39.1
57.5°	33.5	32.7	34.3	34.3	35.9	35.9	35.1	35.9	35.9	36.7	36.7
60°	31.1	31.1	31.9	31.9	33.5	34.3	34.3	34.3	34.3	34.3	34.3
62.5°	28.7	28.7	29.5	30.3	31.9	31.9	32.7	32.7	32.7	32.7	31.9
65°	*26.4*	*27.2*	*27.9*	*27.9*	*29.5*	*30.3*	*30.3*	*30.3*	*30.3*	*30.3*	*30.3*
67.5°	23.2	24.8	25.6	26.4	27.9	27.9	28.7	28.7	27.9	27.9	27.9
70°	20.8	21.6	22.4	23.2	25.6	25.6	26.4	26.4	25.6	25.6	26.4
72.5°	17.6	18.4	19.2	20.8	23.2	23.2	24.0	24.0	23.2	23.2	23.2
75°	15.2	15.2	16.0	17.6	20.8	20.8	20.8	21.6	20.8	20.8	20.0
77.5°	11.2	12.0	12.8	15.2	17.6	18.4	18.4	18.4	17.6	17.6	16.8
80°	7.2	8.0	9.6	11.2	13.6	14.4	15.2	15.2	14.4	14.4	13.6
82.5°	3.2	4.8	5.6	7.2	8.8	11.2	11.2	12.0	11.2	10.4	10.4
85°	0.0	0.0	0.8	2.4	4.0	6.4	7.2	8.0	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: P438110
CATALOG NUMBER: IST-SA1A-830-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3	617.3
2.5°	535.0	543.8	557.4	565.4	583.7	600.5	618.1	641.2	646.0	646.8
5°	424.8	435.2	460.8	471.2	504.7	531.8	571.8	610.9	621.3	623.7
7.5°	324.2	332.2	360.2	380.1	416.8	455.2	506.3	552.6	575.8	578.2
10°	253.1	274.7	296.3	325.8	357.8	395.3	448.8	507.9	533.4	531.8
12.5°	213.2	235.6	261.9	291.5	324.2	357.8	406.5	471.9	497.5	503.9
15°	170.9	198.0	226.8	257.1	295.5	328.2	384.9	457.6	488.7	497.5
17.5°	132.6	154.1	182.1	221.2	258.7	305.1	376.9	471.2	506.3	515.1
20°	104.6	120.6	140.5	178.1	226.0	283.5	372.9	496.7	544.6	557.4
22.5°	89.4	95.8	110.2	142.9	193.3	260.3	370.5	532.6	592.5	614.1
25°	79.9	83.8	91.8	112.6	160.5	240.4	374.5	577.4	659.6	677.2
27.5°	72.7	75.9	79.9	95.0	138.9	222.8	381.7	627.7	717.1	742.7
30°	66.3	68.7	74.3	84.6	121.4	205.2	384.1	677.2	768.2	791.4
32.5°	61.5	64.7	69.5	78.3	111.0	193.3	377.7	714.7	815.3	840.9
35°	56.7	60.7	65.5	72.7	102.2	182.9	363.3	745.9	860.0	884.8
37.5°	54.3	56.7	61.5	67.1	95.8	172.5	350.6	777.0	906.4	940.7
40°	51.1	53.5	58.3	63.1	87.8	161.3	341.8	816.9	959.1	990.2
42.5°	48.7	51.9	55.9	61.5	81.5	149.3	333.0	848.9	1006.2	1038.9
45°	47.1	50.3	54.3	61.5	75.9	139.7	323.4	876.8	1042.1	1074.1
47.5°	44.7	48.7	54.3	59.1	73.5	133.4	323.4	910.4	1074.9	1108.4
50°	43.9	47.9	56.7	57.5	71.9	131.0	337.0	948.7	1122.0	1153.9
52.5°	43.1	47.1	56.7	54.3	70.3	132.6	357.8	1018.2	1182.7	1219.4
55°	40.7	46.3	54.3	50.3	66.3	134.2	380.9	1109.2	1272.9	1307.2
57.5°	39.1	45.5	51.1	46.3	60.7	131.8	412.1	1190.7	1367.1	1391.1
60°	36.7	44.7	44.7	43.1	54.3	124.6	447.2	1242.6	1403.1	1422.2
62.5°	35.1	43.9	39.9	39.9	49.5	113.4	459.2	1229.8	1367.9	1388.7
65°	*32.7*	*38.3*	*35.9*	*36.7*	*45.5*	*100.6*	*438.4*	*1149.9*	*1301.7*	*1326.4*
67.5°	30.3	32.7	31.9	33.5	43.9	87.8	382.5	1054.9	1216.2	1254.5
70°	27.2	28.7	28.7	30.3	41.5	79.1	319.4	932.7	1105.2	1161.9
72.5°	24.8	25.6	25.6	27.9	39.1	74.3	252.3	791.4	927.1	962.3
75°	20.8	22.4	22.4	24.0	35.1	63.1	172.5	579.8	648.4	677.2
77.5°	18.4	18.4	19.2	20.0	27.9	42.3	101.4	357.0	389.7	404.9
80°	14.4	15.2	14.4	14.4	17.6	27.9	55.1	209.2	237.2	229.2
82.5°	10.4	10.4	8.8	8.8	10.4	15.2	24.0	108.6	111.0	107.0
85°	5.6	4.0	3.2	3.2	3.2	3.2	3.2	23.2	11.2	8.8
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

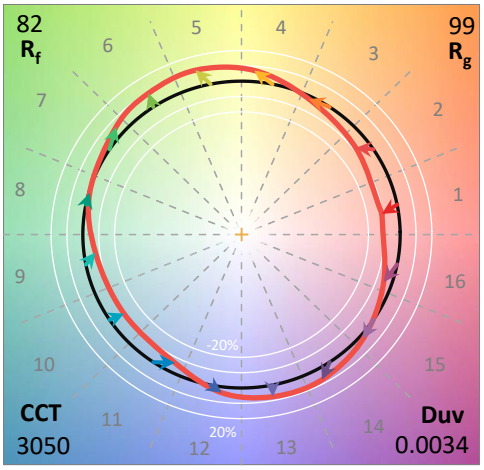
Test Information

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

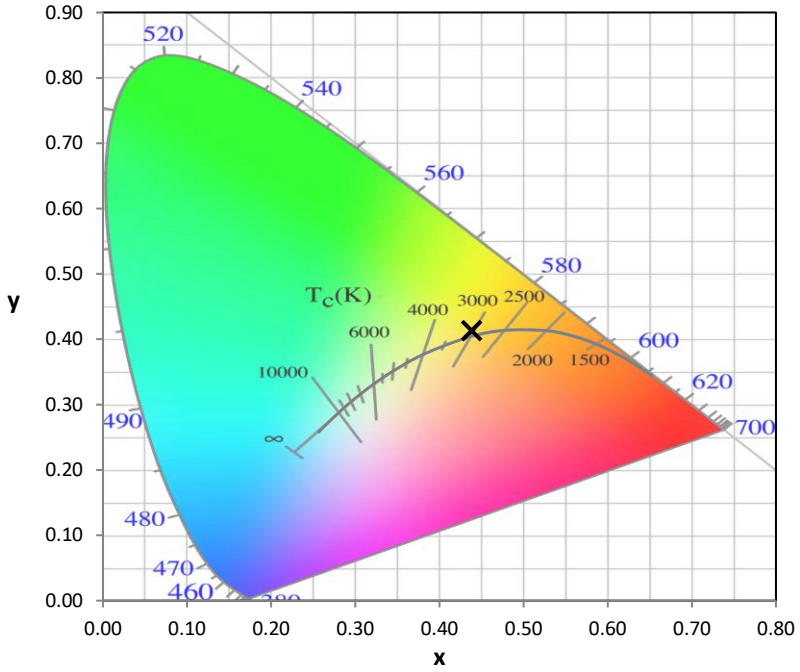
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

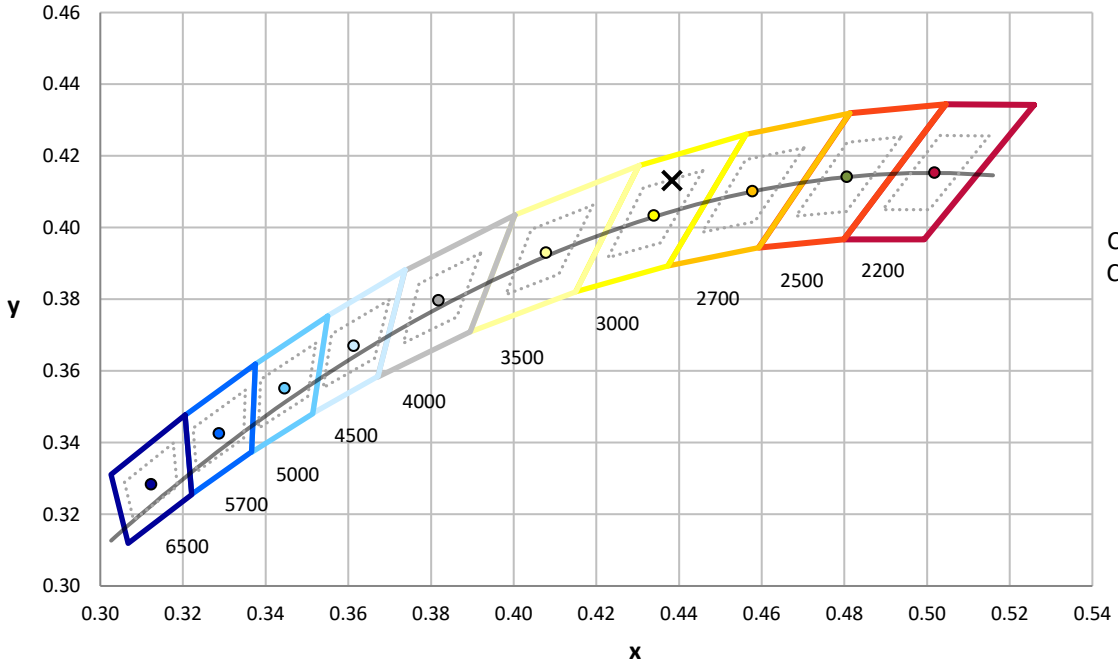
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

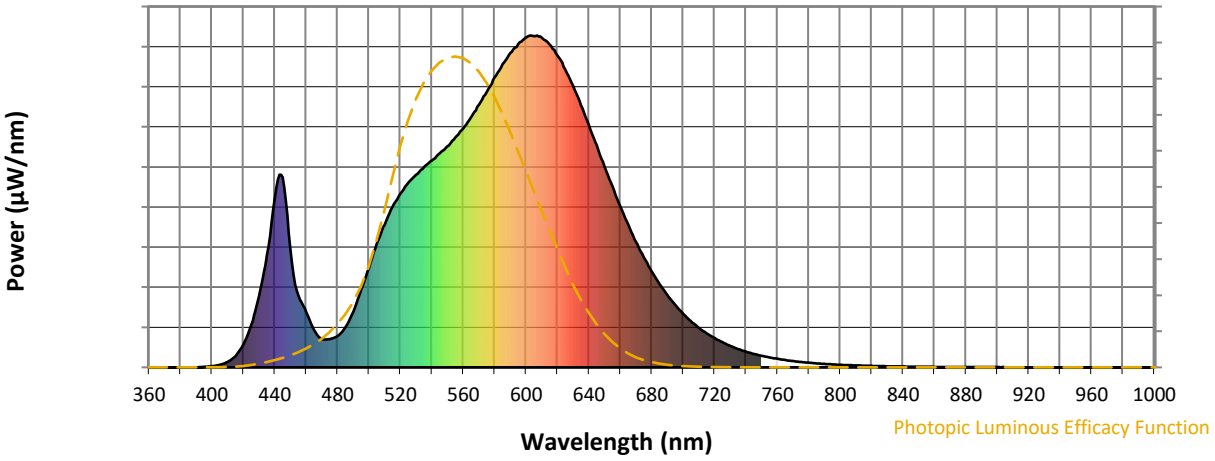


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

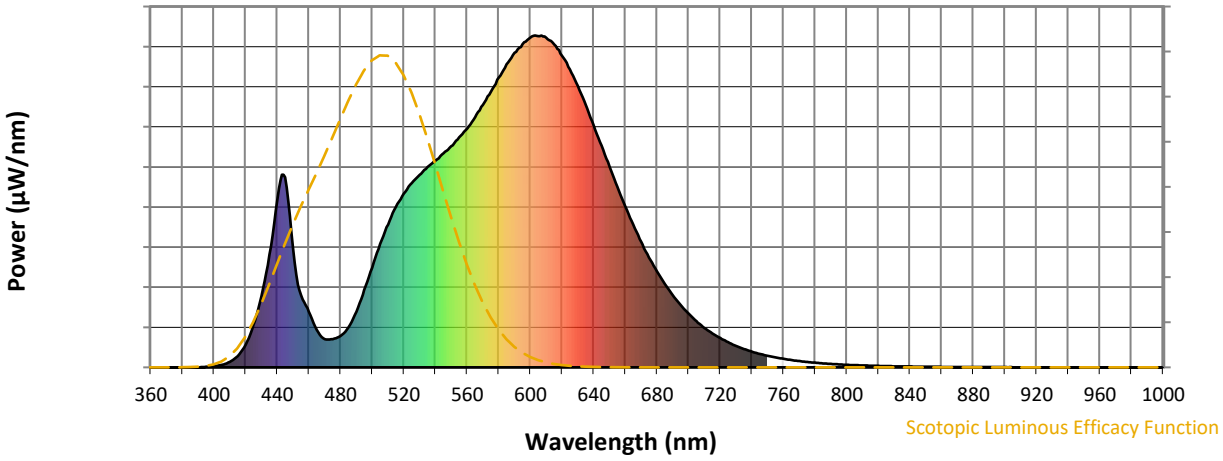


Photopic Lumens: NR

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

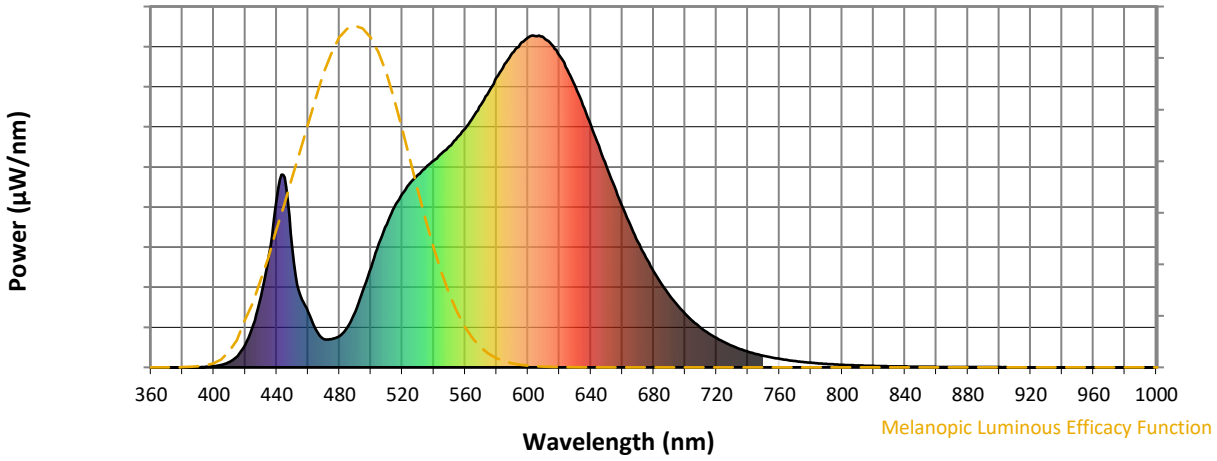


Scotopic Lumens: NR **S/P: 1.27**

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			

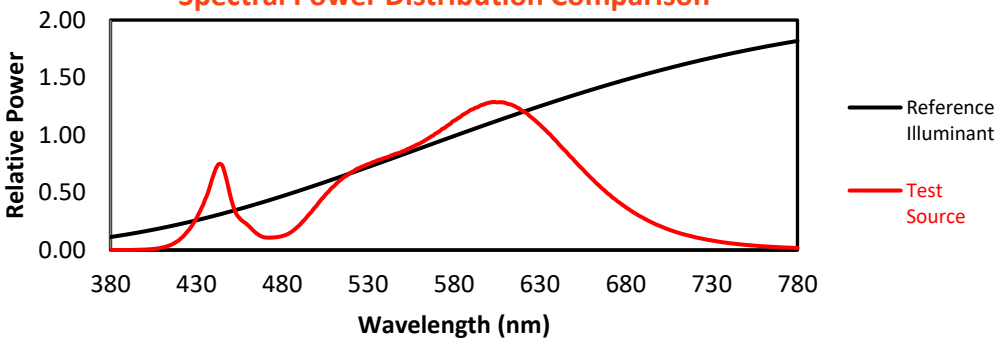
REPORT NUMBER: SP1-2408-195-9

TM-30-18

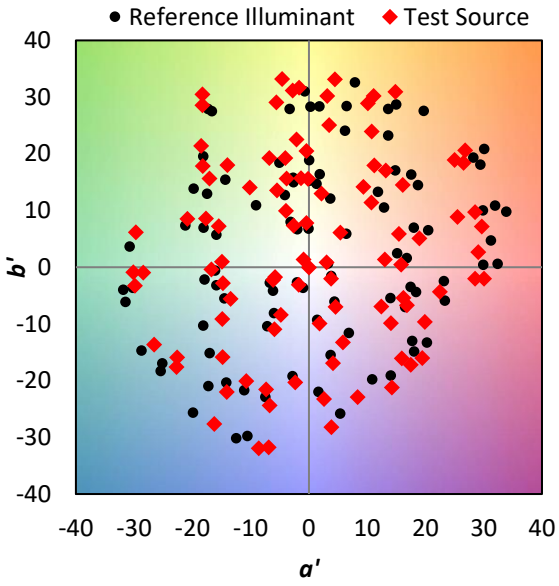
Summary

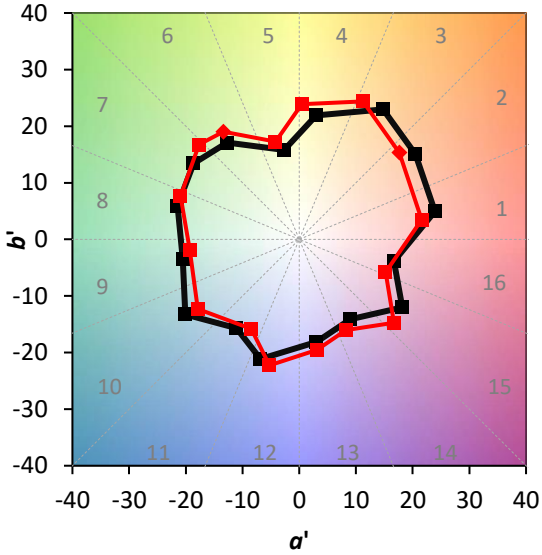
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

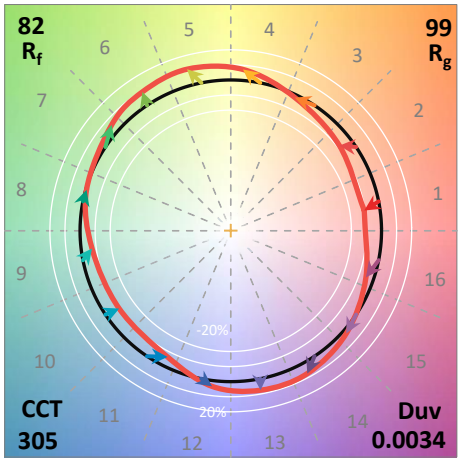
Spectral Power Distribution Comparison

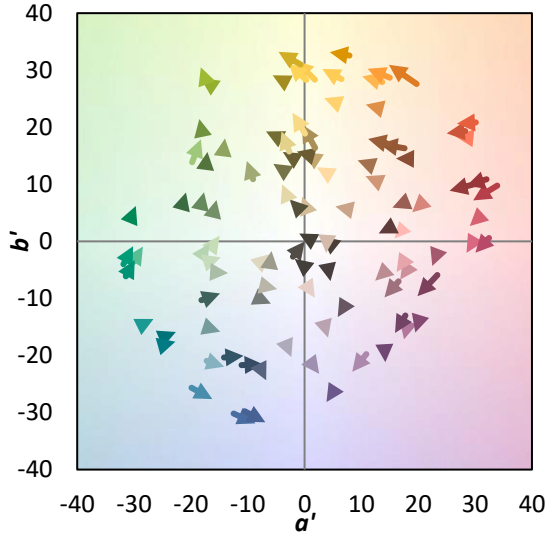


Color Vector Graphics







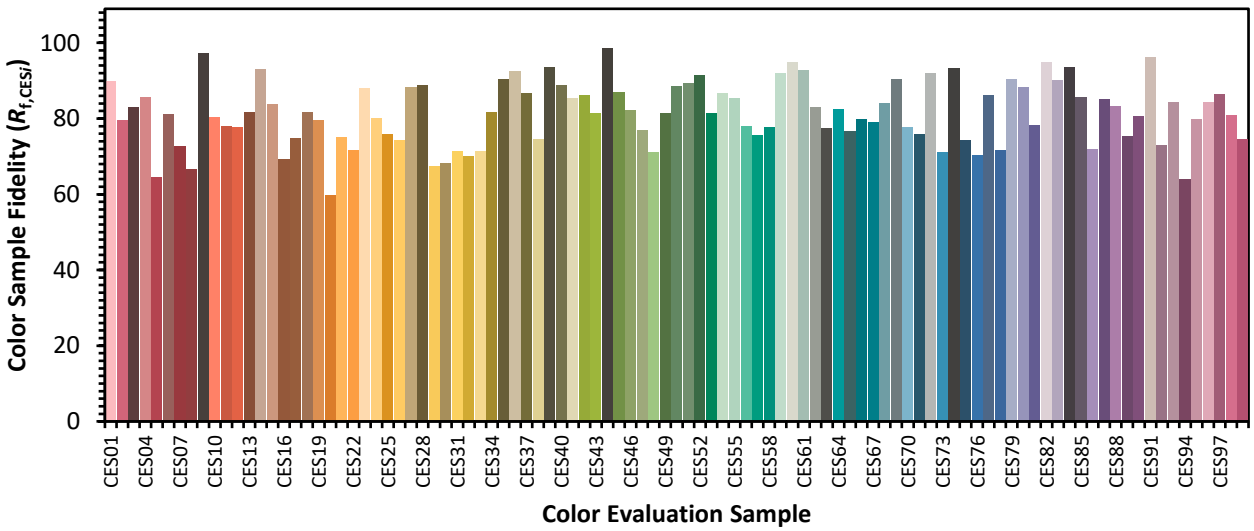


REPORT NUMBER: SP1-2408-195-9

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

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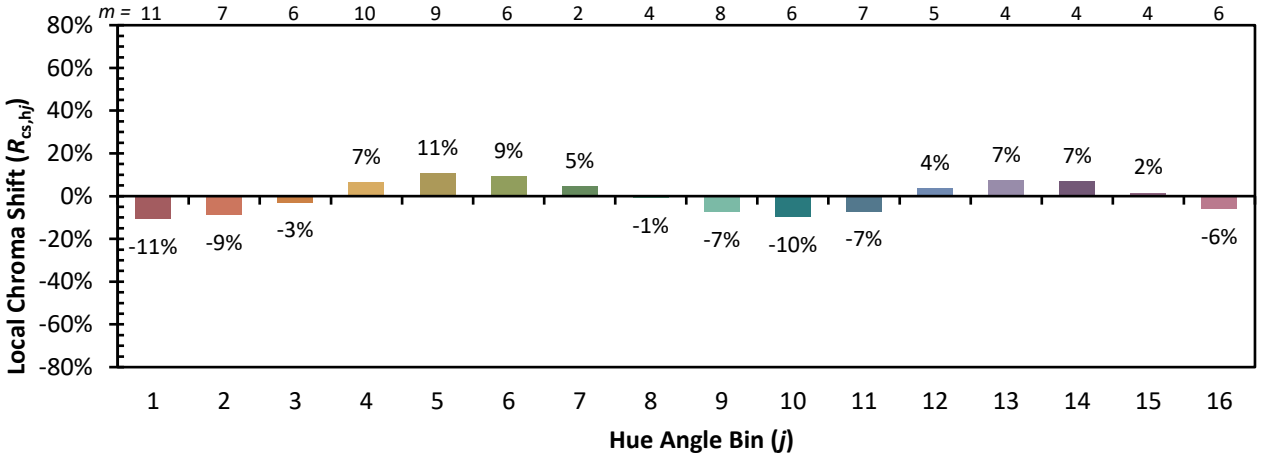
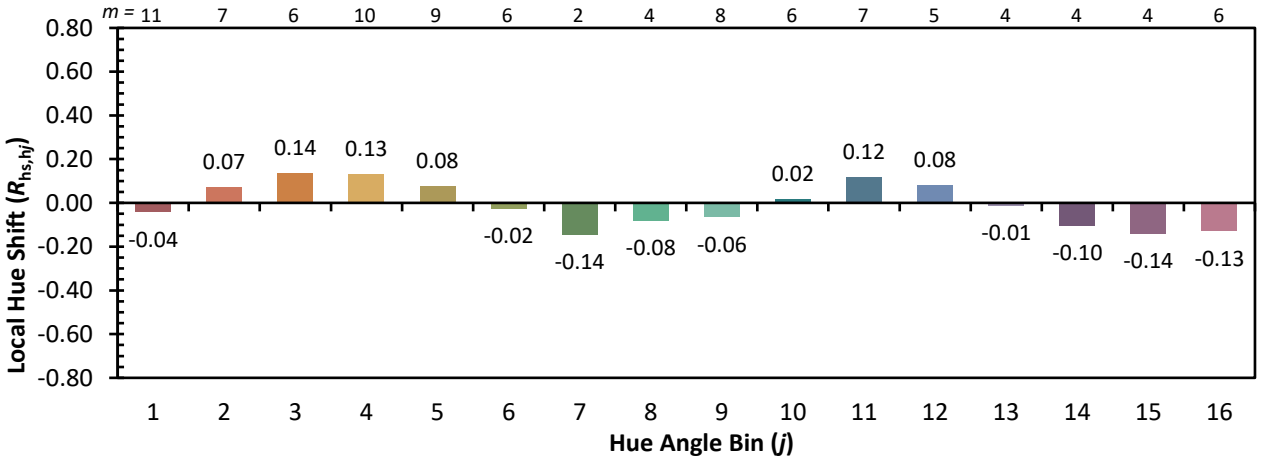
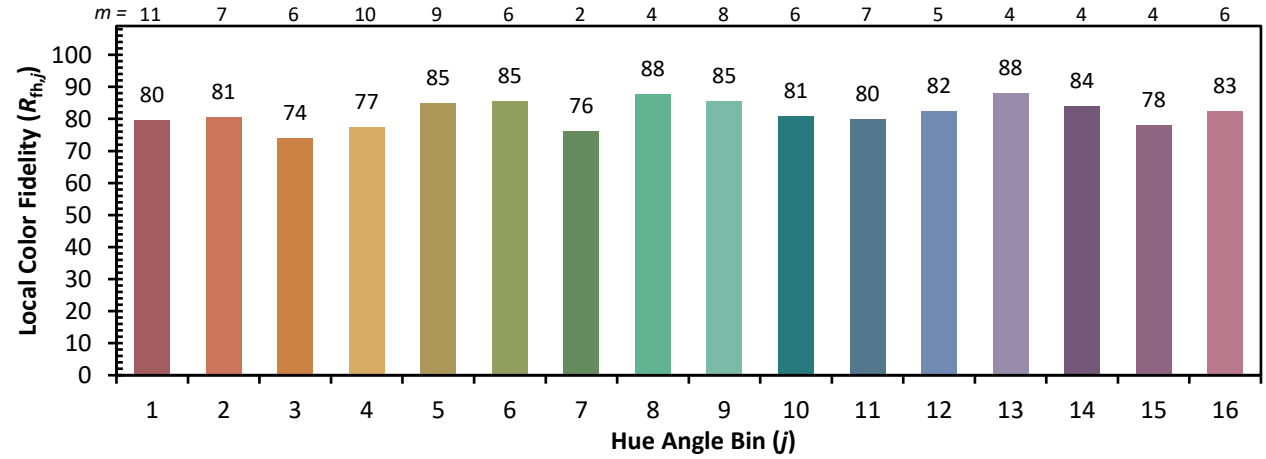
Color Rendition by Hue-Angle Bin







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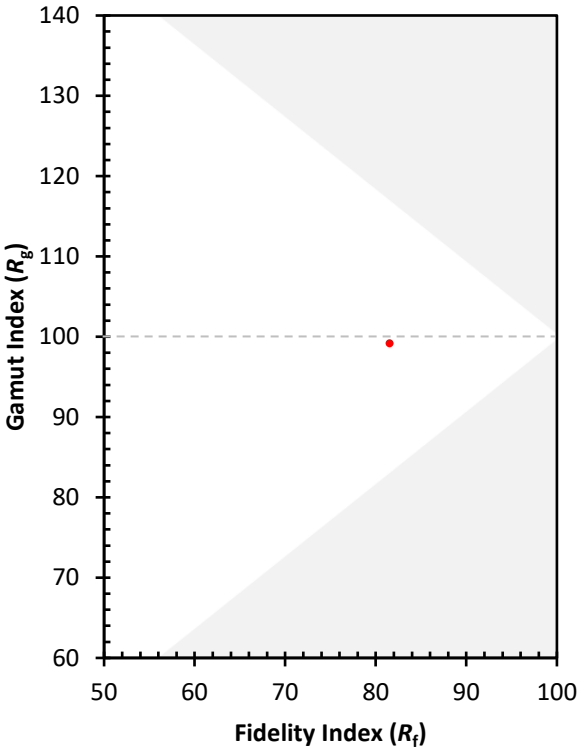
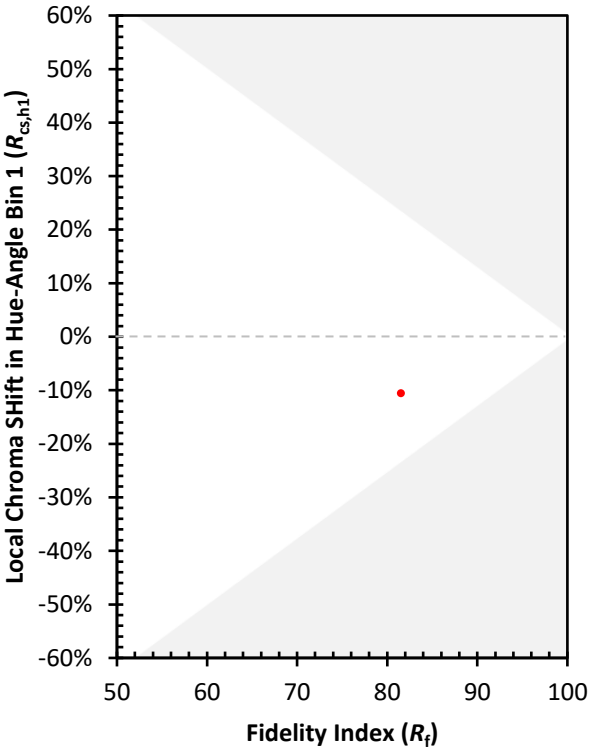
Measure Comparisons





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