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: P324629

Luminaire Tested: **GLEON-SA5A-830-U-SLR-HSS**

Issue Date: 3/3/2020

Report Generated By E0585644

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P324629
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-28)
Test Lab:	INNOVATION CENTER
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	GLEON-SA5A-830-U-SLR-HSS
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	13719.9 lumens
Efficiency:	N/A
Efficacy:	84.7 lumens/watt
Luminous Opening:	Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification:	Type IV - Medium
BUG Rating:	B1 - U0 - G2

Input Watts (W):	162
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:	24 FT

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REPORT NUMBER: P324629
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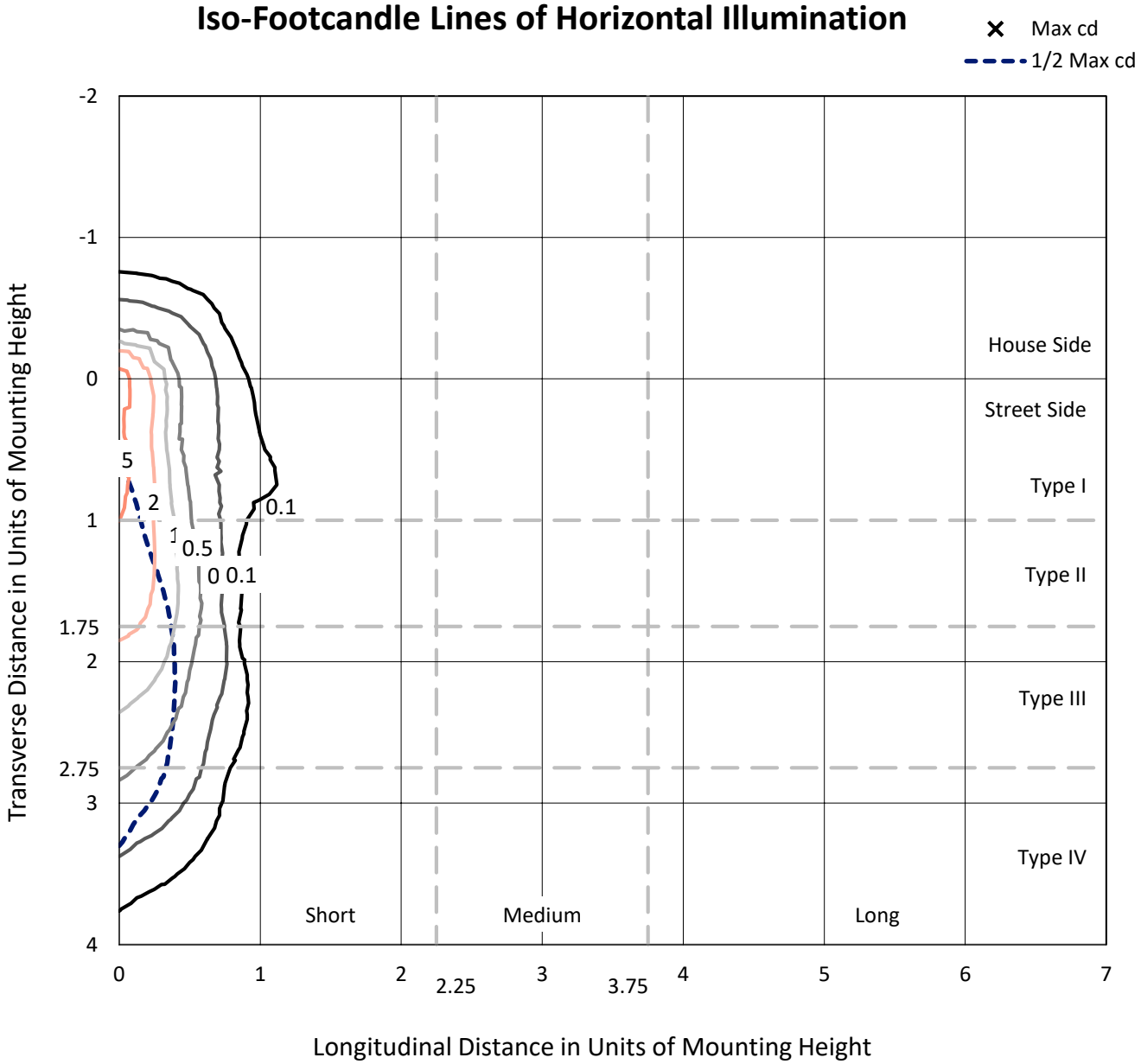
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
Type IV - Medium - N/A

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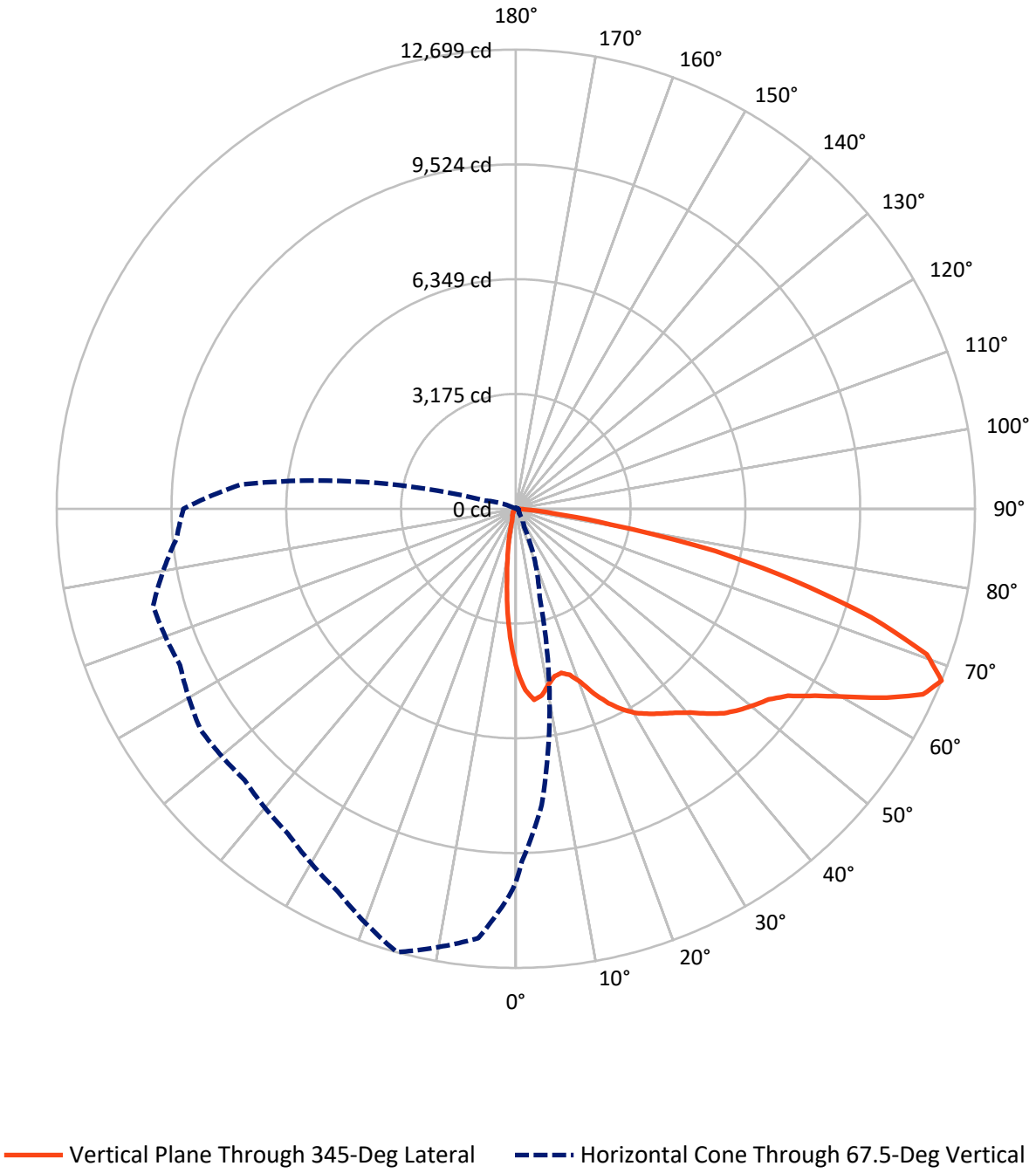
Luminous Intensity Polar Plot



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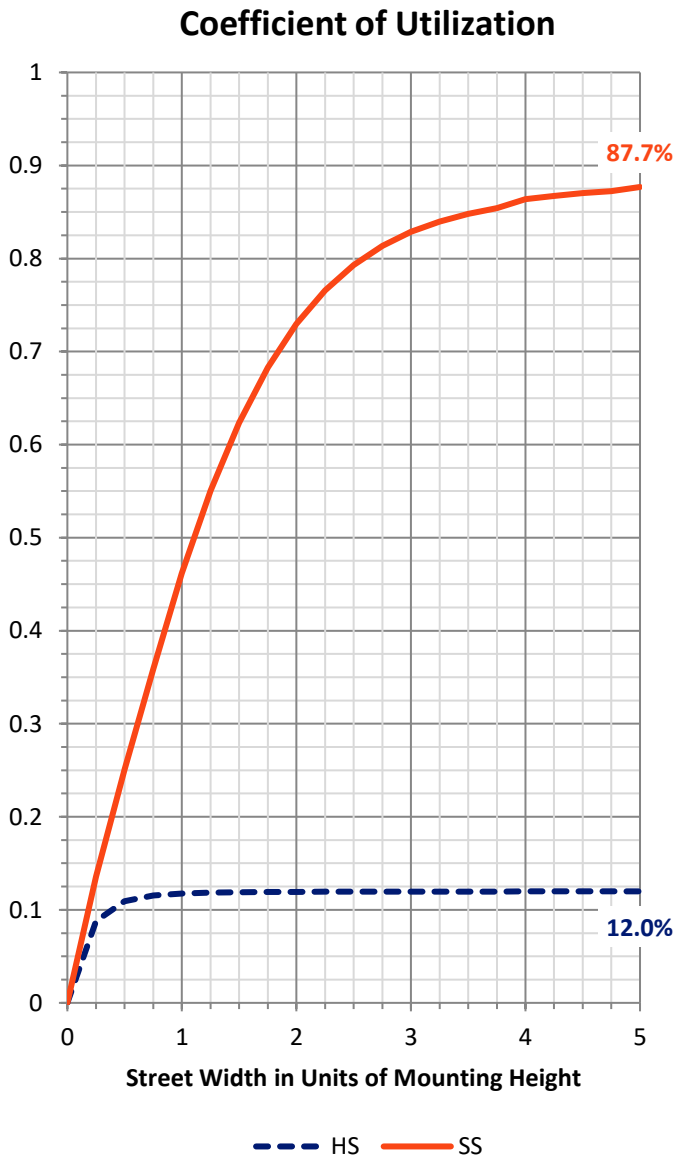
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1660.5	0.0	1660.5
	% Fixture	12.1	0.0	12.1
Street Side	Lumens	12059.4	0.0	12059.4
	% Fixture	87.9	0.0	87.9
Total	Lumens	13719.9	0.0	13719.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.0	2.5
10°-20°	682.8	5.0
20°-30°	969.5	7.1
30°-40°	1432.0	10.4
40°-50°	2065.3	15.1
50°-60°	2899.2	21.1
60°-70°	3379.7	24.6
70°-80°	1727.7	12.6
80°-90°	220.6	1.6
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°	13719.9	100.0
0°-180°	13719.9	100.0



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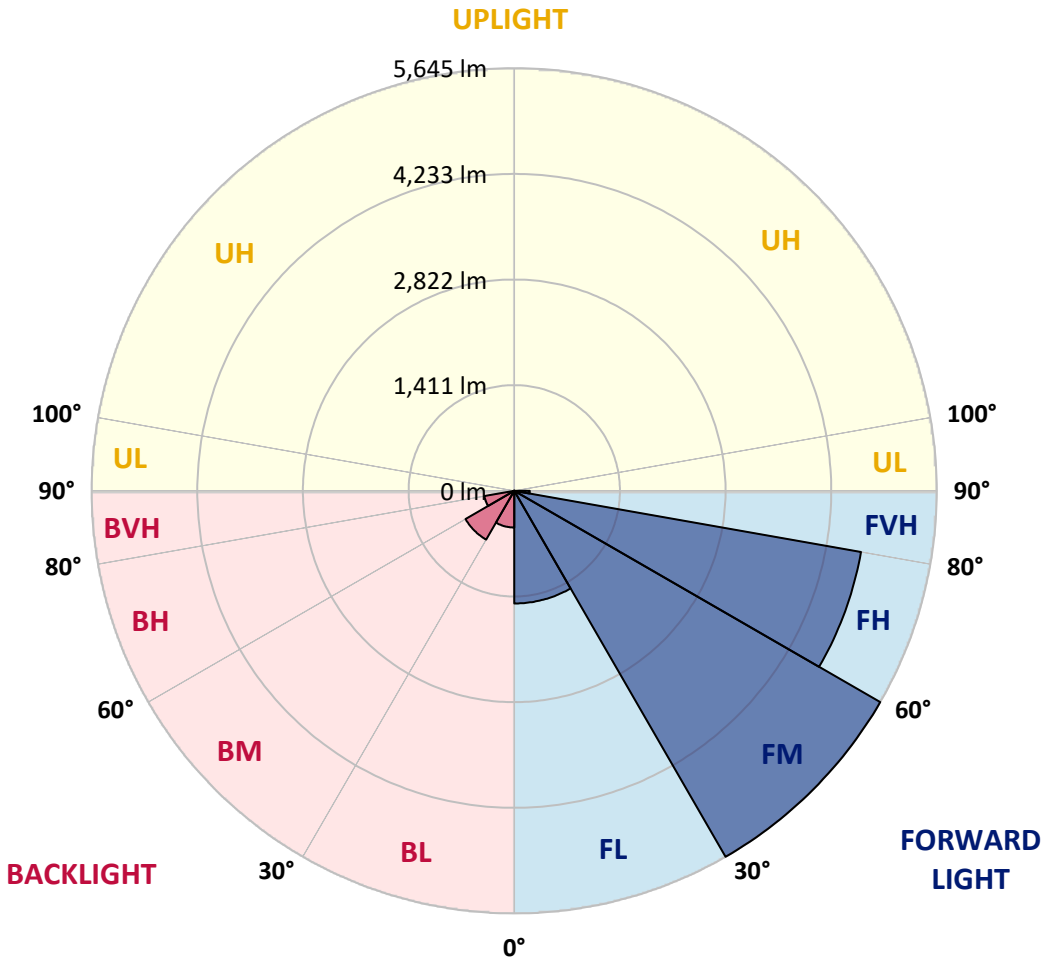
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1504.8	11.0			
FM	(30°-60°)	5644.6	41.1			
FH	(60°-80°)	4702.7	34.3			G2/5000
FVH	(80°-90°)	207.2	1.5			G2/225
BL	(0°-30°)	490.5	3.6	B1/500		
BM	(30°-60°)	751.9	5.5	B1/1000		
BH	(60°-80°)	404.7	2.9	B1/500		G1/500
BVH	(80°-90°)	13.4	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
Type IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3
2.5°	4893.7	4856.0	4814.4	4678.6	4552.5	4408.2	4290.5	4208.6	4105.9	3972.7	3938.9
5°	4858.6	4818.3	4687.7	4385.4	4120.9	3863.5	3615.2	3469.6	3288.9	3105.6	3060.1
7.5°	4505.7	4463.4	4274.9	3860.9	3504.7	3132.9	2810.5	2611.0	2406.9	2239.2	2150.1
10°	4138.4	4092.3	3880.4	3377.9	2939.2	2603.2	2366.6	2176.1	1983.1	1803.7	1660.7
12.5°	3885.6	3825.1	3595.0	3025.7	2643.5	2415.3	2194.3	1966.2	1704.9	1512.5	1355.2
15°	3779.6	3710.7	3467.6	2889.8	2538.8	2271.0	1983.1	1702.9	1396.8	1176.5	1032.2
17.5°	3861.5	3771.8	3511.2	2880.7	2407.5	2042.9	1678.9	1350.0	1017.9	794.9	692.2
20°	4139.7	4022.1	3691.2	2878.1	2248.3	1771.8	1310.4	938.6	670.8	539.5	485.5
22.5°	4577.8	4422.5	3949.9	2898.9	2083.8	1487.2	946.4	637.6	503.7	435.5	403.6
25°	5106.9	4926.9	4322.4	2972.4	1939.5	1210.3	687.7	503.7	425.1	375.0	348.4
27.5°	5610.0	5463.7	4793.0	3078.3	1827.7	986.7	558.3	427.0	363.3	330.2	308.7
30°	6112.4	5928.5	5275.9	3204.4	1693.2	835.2	490.7	389.3	325.6	290.5	276.9
32.5°	6477.7	6325.0	5654.2	3295.4	1549.6	736.4	438.7	356.2	304.2	268.4	248.3
35°	6907.3	6734.4	5978.5	3315.5	1457.3	674.0	394.5	320.4	263.9	232.0	210.6
37.5°	7371.4	7156.3	6352.9	3271.4	1385.1	643.5	361.4	304.2	246.3	213.8	191.1
40°	7884.9	7641.8	6712.3	3207.7	1314.3	633.1	336.0	291.8	232.7	199.5	176.1
42.5°	8425.7	8139.1	7023.7	3140.7	1269.4	597.3	333.4	279.5	222.3	186.5	163.1
45°	8880.0	8589.5	7343.5	3118.6	1237.6	558.3	344.5	271.0	215.1	176.1	153.4
47.5°	9242.1	8967.1	7671.1	3168.0	1219.4	522.6	313.9	282.1	211.2	167.0	144.9
50°	9674.3	9363.0	8132.6	3315.5	1192.7	486.8	284.0	323.0	211.2	161.2	137.8
52.5°	10216.4	9908.3	8647.3	3544.3	1139.4	437.4	255.4	323.7	213.2	153.4	128.7
55°	10898.2	10674.6	9382.5	3795.2	1054.3	364.6	221.0	278.2	205.4	139.1	120.2
57.5°	11552.1	11369.5	10052.6	3966.8	940.5	284.7	192.4	224.2	187.8	122.2	107.2
59°	11730.8	11531.3	10298.3	3974.6	855.4	248.3	178.1	185.2	183.9	114.4	99.4
60°	11730.8	11519.0	10369.1	3933.0	793.6	228.1	169.0	165.1	191.7	109.2	94.9
62.5°	11518.3	11220.6	10139.0	3651.6	647.4	194.3	147.5	136.5	172.2	98.1	83.8
65°	11076.3	10642.8	9355.2	3142.7	577.2	178.1	127.4	111.8	119.6	86.4	73.4
67.5°	*10339.2*	*9751.7*	*8224.9*	*2538.8*	*549.2*	*173.5*	*109.8*	*94.9*	*90.3*	*74.1*	*64.3*
70°	9041.2	8389.3	6852.7	1996.1	525.2	171.6	92.3	79.9	72.8	62.4	54.6
72.5°	6580.4	5900.5	4865.1	1560.6	510.9	175.5	74.1	66.9	59.8	48.7	42.2
75°	3764.0	3318.8	2734.5	1030.9	435.5	167.7	57.2	55.9	42.9	35.1	29.2
77.5°	1944.7	1885.6	1638.6	395.8	208.6	73.4	37.7	32.5	25.3	21.4	17.5
80°	839.1	830.0	718.2	114.4	55.2	40.9	21.4	13.6	11.7	9.1	7.1
82.5°	289.9	289.9	255.4	38.3	24.7	20.1	2.6	0.0	0.0	0.0	0.0
85°	58.5	65.6	46.1	0.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3
2.5°	3897.9	3819.3	3814.1	3764.7	3702.9	3675.0	3658.7	3687.3	3722.4	3726.3	3779.0
5°	3025.7	2943.1	2977.6	2889.8	2907.4	2889.8	2861.2	2866.4	2882.0	2833.3	2893.7
7.5°	2124.8	2062.4	2102.0	2078.6	2109.8	2122.2	2104.6	2078.6	2001.9	1992.8	2045.5
10°	1601.6	1530.7	1488.5	1444.3	1454.0	1474.2	1467.7	1448.8	1400.1	1402.7	1453.4
12.5°	1287.0	1207.7	1123.8	1015.3	988.6	1003.6	988.6	977.6	930.8	934.7	979.5
15°	976.3	911.3	823.5	736.4	689.0	693.5	651.9	622.7	593.4	558.3	585.6
17.5°	659.1	619.4	593.4	567.4	510.9	497.9	445.2	388.7	366.6	350.3	362.0
20°	466.7	445.2	434.8	433.5	401.0	384.8	333.4	298.3	287.3	284.0	291.2
22.5°	390.0	374.4	359.4	351.0	334.7	315.9	276.9	259.3	251.5	247.6	252.8
25°	339.3	327.6	312.0	297.7	291.2	271.0	243.1	230.1	224.9	221.0	223.6
27.5°	301.6	291.2	273.0	263.9	258.7	241.1	217.1	206.7	202.1	200.8	200.2
30°	271.7	261.9	245.0	234.6	225.5	209.9	195.6	185.2	180.7	179.4	178.1
32.5°	241.8	234.0	222.9	212.5	202.8	188.5	176.1	167.7	160.5	159.2	158.6
35°	204.1	196.3	190.4	189.8	180.7	167.0	157.9	146.9	141.0	139.1	139.7
37.5°	181.3	170.9	157.9	162.5	159.9	150.1	137.8	126.7	120.9	119.6	119.6
40°	167.0	156.0	141.0	133.2	141.0	139.1	119.6	108.5	102.7	102.0	100.7
42.5°	153.4	142.3	125.4	112.4	116.3	122.2	103.3	92.9	87.1	85.8	83.8
45°	143.6	131.9	113.1	98.1	90.3	102.7	88.4	75.4	72.1	69.5	68.2
47.5°	134.5	123.5	102.0	85.1	72.1	74.1	70.8	61.7	57.8	55.2	54.6
50°	126.7	115.0	92.3	72.8	59.8	54.6	57.2	48.7	45.5	42.9	41.6
52.5°	117.6	106.6	81.9	63.0	50.0	42.9	43.5	38.3	35.1	33.1	32.5
55°	110.5	99.4	73.4	55.2	44.2	35.1	31.2	29.9	27.9	26.6	26.0
57.5°	100.7	90.3	65.0	46.8	37.7	28.6	24.0	24.0	23.4	22.1	21.4
59°	94.9	85.8	59.8	42.2	34.4	24.7	21.4	22.1	21.4	20.1	19.5
60°	90.3	81.9	55.9	39.0	32.5	22.7	19.5	20.8	20.1	18.8	18.2
62.5°	79.9	74.1	48.1	32.5	28.6	18.2	16.2	17.5	17.5	16.9	16.2
65°	70.2	63.7	40.9	27.3	26.6	15.6	13.0	15.6	16.2	14.9	13.6
67.5°	*61.1*	*54.6*	*35.7*	*22.1*	*24.7*	*12.3*	*9.7*	*13.0*	*17.5*	*13.6*	*12.3*
70°	52.0	45.5	27.9	17.5	26.0	8.4	7.8	11.7	20.8	14.9	11.7
72.5°	40.3	35.1	19.5	13.0	27.9	5.8	5.8	9.7	23.4	16.2	11.0
75°	27.9	22.7	11.7	7.8	22.7	3.9	3.9	9.1	22.1	14.9	10.4
77.5°	16.2	12.3	3.9	0.6	11.7	0.0	0.6	6.5	15.6	9.1	4.5
80°	5.8	2.6	0.0	0.0	7.1	0.0	0.0	0.0	1.3	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

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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3
2.5°	3792.6	3880.4	3959.0	4078.0	4219.0	4381.5	4521.3	4671.4	4812.5	4871.0	4911.3
5°	2906.1	3014.6	3141.4	3316.2	3548.9	3835.5	4104.0	4407.5	4733.8	4897.0	5050.3
7.5°	2054.6	2165.1	2322.4	2508.3	2789.7	3131.0	3481.9	3901.2	4343.2	4601.2	4855.4
10°	1477.4	1613.3	1760.1	2014.3	2300.3	2624.0	2985.4	3453.3	3946.0	4232.0	4538.2
12.5°	1005.5	1160.2	1382.5	1667.2	2003.2	2320.4	2634.4	3080.9	3652.9	3936.3	4264.5
15°	603.2	689.0	924.3	1253.8	1665.9	2061.1	2404.9	2852.8	3462.4	3809.5	4150.8
17.5°	371.8	411.4	539.5	809.9	1242.8	1742.6	2213.8	2775.4	3489.7	3912.2	4277.5
20°	296.4	312.0	352.9	478.4	823.5	1391.6	1998.7	2759.8	3712.7	4232.7	4624.6
22.5°	257.4	272.3	299.6	347.7	518.0	1041.9	1794.6	2774.1	4032.5	4713.0	5170.6
25°	226.8	239.8	265.8	305.5	379.6	733.8	1576.2	2837.8	4449.1	5309.0	5795.2
27.5°	202.8	213.8	237.9	274.3	325.6	512.2	1328.6	2915.2	4943.1	5918.7	6398.4
30°	180.7	190.4	211.9	245.7	282.7	393.9	1056.9	2967.8	5437.7	6398.4	6829.3
32.5°	161.8	169.0	188.5	217.1	245.7	313.9	803.4	2959.4	5805.0	6797.5	7139.4
35°	142.3	149.5	166.4	191.1	213.8	259.3	631.8	2801.4	6124.8	7211.5	7494.3
37.5°	120.9	130.0	146.2	168.3	183.9	228.1	510.9	2611.0	6449.1	7684.7	7890.1
40°	102.7	111.8	126.1	150.1	159.9	216.4	392.6	2378.9	6813.7	8213.8	8324.3
42.5°	85.1	93.6	108.5	129.3	150.8	186.5	290.5	2113.7	7164.1	8666.2	8720.1
45°	68.9	77.3	92.9	113.7	161.2	154.7	224.9	1829.7	7446.8	9042.5	9060.1
47.5°	54.6	62.4	78.6	107.2	150.1	123.5	160.5	1606.8	7684.1	9336.3	9290.2
50°	42.2	48.7	65.6	122.8	131.3	102.0	121.5	1532.7	7896.6	9518.3	9398.7
52.5°	33.1	39.0	53.9	115.0	102.0	84.5	102.0	1602.2	8187.8	9669.1	9459.8
55°	26.6	32.5	42.2	65.6	69.5	71.5	87.1	1667.2	8690.2	10022.7	9820.6
57.5°	22.1	27.9	34.4	46.1	52.6	60.4	77.3	1674.3	9282.4	10610.3	10419.2
59°	20.1	25.3	31.2	40.9	46.1	55.2	72.8	1635.4	9491.0	10824.1	10728.6
60°	18.8	24.0	29.2	37.7	42.9	52.0	70.2	1598.3	9500.1	10816.3	10860.5
62.5°	16.2	21.4	26.0	31.8	36.4	44.2	63.0	1461.2	9115.3	10462.1	10781.2
65°	14.3	18.8	23.4	27.3	31.2	39.6	57.2	1210.9	8458.2	9890.8	10238.5
67.5°	*13.0*	*16.2*	*21.4*	*24.0*	*27.9*	*35.1*	*50.7*	*863.2*	*7637.3*	*9192.0*	*9417.6*
70°	11.7	15.6	19.5	22.1	25.3	30.5	43.5	495.9	6449.1	8169.0	8329.5
72.5°	11.0	14.9	17.5	20.8	22.7	27.3	39.6	233.3	4722.1	6544.0	6963.2
75°	9.7	13.6	16.2	19.5	21.4	24.7	33.8	111.8	3140.7	4735.8	5212.2
77.5°	5.8	11.0	14.9	17.5	18.8	21.4	27.9	64.3	2004.5	3277.9	3860.9
80°	0.0	3.9	11.0	14.9	16.2	18.2	21.4	50.7	1072.5	1872.6	2247.6
82.5°	0.0	0.0	7.8	11.7	11.0	12.3	16.2	31.8	483.6	1223.9	1379.3
85°	0.0	0.0	2.6	9.1	7.8	5.8	11.0	11.0	105.9	619.4	772.8
87.5°	0.0	0.0	0.0	0.6	3.9	2.6	4.5	1.3	0.6	46.1	187.2
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: P324629
CATALOG NUMBER: GLEON-SA5A-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	4469.3	4469.3	4469.3	4469.3	4469.3	4469.3	*4469.3*	4469.3	4469.3	4469.3
2.5°	5052.3	5100.4	5181.6	5220.0	5201.1	5121.2	*5025.6*	4928.2	4871.0	4893.7
5°	5363.0	5610.6	5753.6	5801.1	5721.8	5542.4	*5307.7*	4998.3	4888.5	4858.6
7.5°	5363.0	5829.0	6124.1	6176.1	5999.3	5647.7	*5207.6*	4724.7	4564.2	4505.7
10°	5174.5	5808.9	6220.3	6302.9	6055.9	5530.0	*4940.5*	4389.3	4198.9	4138.4
12.5°	4961.9	5645.1	6078.6	6192.4	5989.6	5413.0	*4755.3*	4162.5	3938.2	3885.6
15°	4831.3	5443.6	5802.4	5884.9	5799.1	5344.8	*4711.1*	4094.2	3830.3	3779.6
17.5°	4878.1	5287.6	5416.9	5465.0	5522.9	5320.7	*4831.3*	4243.7	3909.6	3861.5
20°	5054.2	5123.1	5056.2	5116.6	5272.6	5344.1	*5117.9*	4605.1	4204.1	4139.7
22.5°	5353.2	5038.0	4850.2	4874.2	5064.0	5421.5	*5556.0*	5121.2	4658.4	4577.8
25°	5701.6	5106.9	4735.8	4714.3	4909.3	5523.5	*5956.4*	5682.8	5195.9	5106.9
27.5°	6139.7	5261.6	4712.4	4690.9	4855.4	5619.1	*6289.2*	6237.9	5762.1	5610.0
30°	6477.7	5413.7	4781.9	4732.5	4909.3	5685.4	*6556.4*	6709.1	6213.2	6112.4
32.5°	6720.1	5593.1	4895.0	4823.5	5061.4	5799.8	*6762.4*	7140.7	6630.4	6477.7
35°	6904.7	5788.1	5077.6	4960.0	5270.7	5973.3	*6955.4*	7600.2	7074.4	6907.3
37.5°	7077.6	6061.7	5363.0	5222.6	5598.9	6252.8	*7159.5*	8121.5	7571.0	7371.4
40°	7318.8	6371.8	5803.0	5678.2	6150.8	6633.7	*7414.3*	8664.9	8135.8	7884.9
42.5°	7559.9	6704.5	6253.5	6287.3	6839.1	7096.5	*7743.2*	9239.5	8693.5	8425.7
45°	7780.3	7047.7	6895.0	7051.0	7478.0	7604.1	*8070.2*	9571.6	9138.7	8880.0
47.5°	7976.6	7476.7	7532.6	7948.0	8204.7	8063.7	*8314.5*	9858.3	9470.2	9242.1
50°	8204.7	8031.8	8373.0	8960.6	9041.2	8479.6	*8536.8*	10197.5	9857.6	9674.3
52.5°	8454.3	8616.8	9303.8	9821.9	9795.9	8931.4	*8760.4*	10577.8	10388.6	10216.4
55°	8737.7	9089.3	10123.4	10627.8	10605.7	9435.8	*9130.9*	11047.7	11054.2	10898.2
57.5°	9158.2	9496.2	10679.8	11279.8	11316.8	10018.1	*9758.8*	11574.2	11656.1	11552.1
59°	9459.8	9760.1	10900.2	11552.1	11702.9	10468.6	*10217.7*	11879.7	11825.7	11730.8
60°	9683.4	9927.8	11009.4	11694.4	11927.1	10774.1	*10556.3*	12059.1	11845.9	11730.8
62.5°	10236.5	10293.1	11206.3	11855.6	12185.2	11452.7	*11509.2*	12364.6	11706.1	11518.3
65°	10494.6	10523.8	11203.7	11567.0	11935.6	11981.1	*12373.7*	12373.7	11364.9	11076.3
67.5°	*10386.7*	*10245.6*	*10648.0*	*10610.3*	*10978.2*	*11667.1*	*12698.7*	*11920.0*	*10712.3*	*10339.2*
70°	9509.2	8966.5	8787.7	8804.0	9085.4	10148.1	*12055.2*	10584.9	9477.4	9041.2
72.5°	7912.2	6610.3	6169.0	6672.7	6746.1	7799.1	*10273.6*	7971.4	6989.2	6580.4
75°	6364.0	4659.7	3942.1	4473.8	4598.6	5707.5	*7947.3*	4964.5	4082.5	3764.0
77.5°	4572.0	3344.8	2828.7	2791.7	2952.9	3619.7	*5639.2*	2498.5	2083.8	1944.7
80°	2597.3	2201.5	2370.5	2236.6	2317.8	2263.2	*2679.2*	1095.9	897.6	839.1
82.5°	1567.8	1301.3	1409.2	1173.2	1484.6	1292.8	*1032.2*	351.0	304.8	289.9
85°	1019.8	711.1	370.5	248.3	511.5	826.1	*230.7*	95.5	73.4	58.5
87.5°	351.6	181.3	18.2	7.8	54.6	154.0	*8.4*	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.

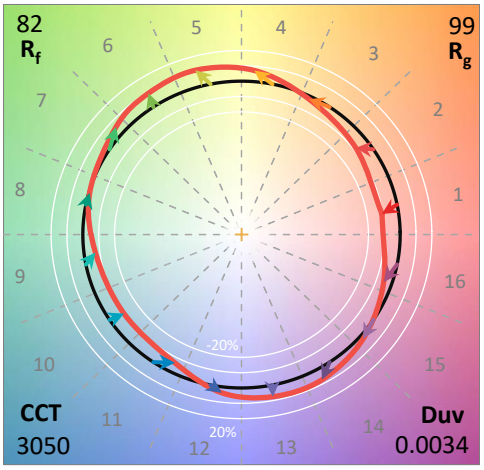
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

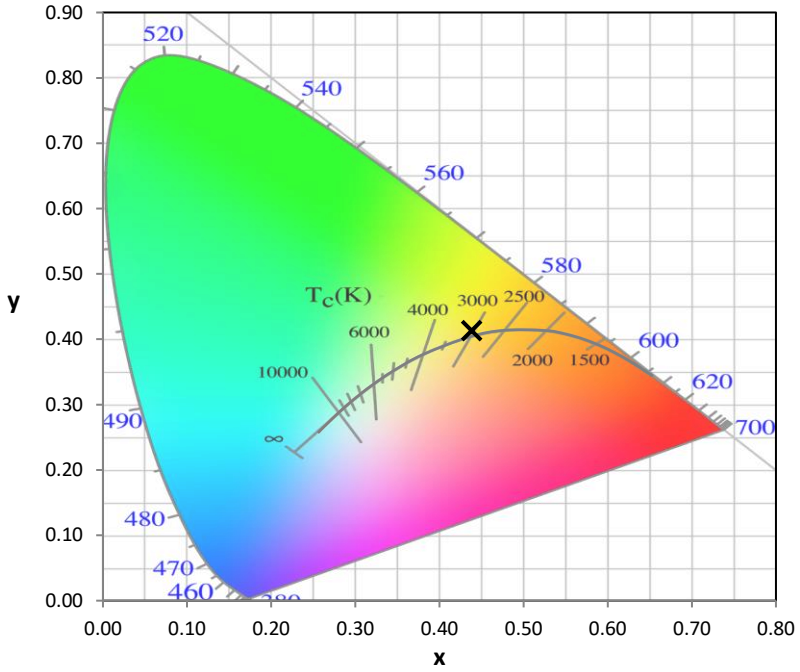
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

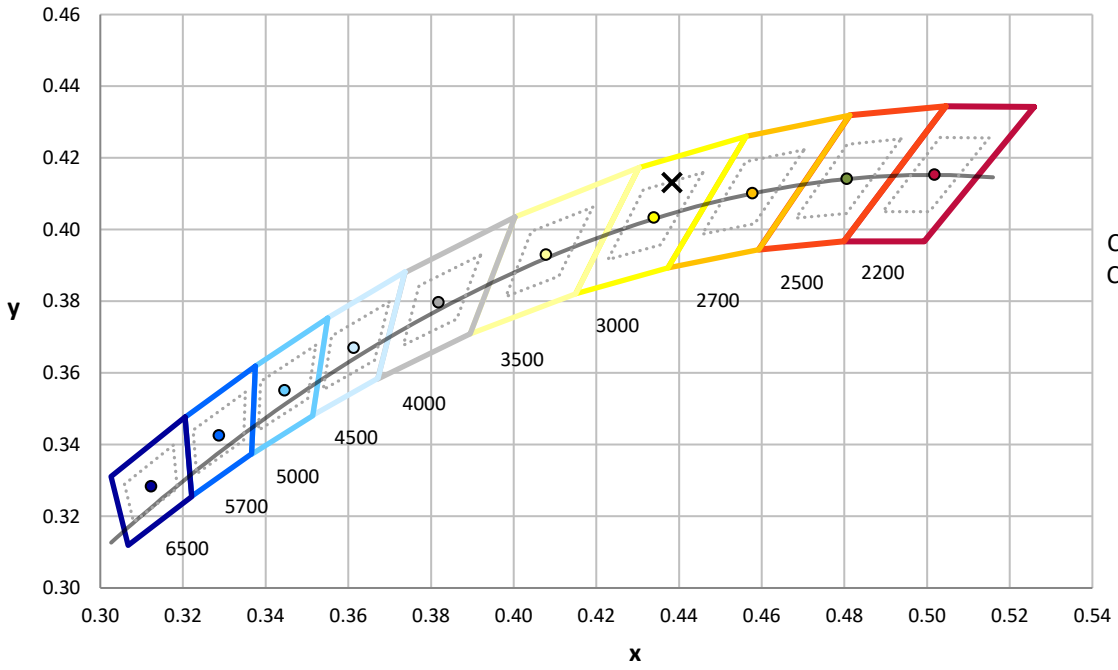
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

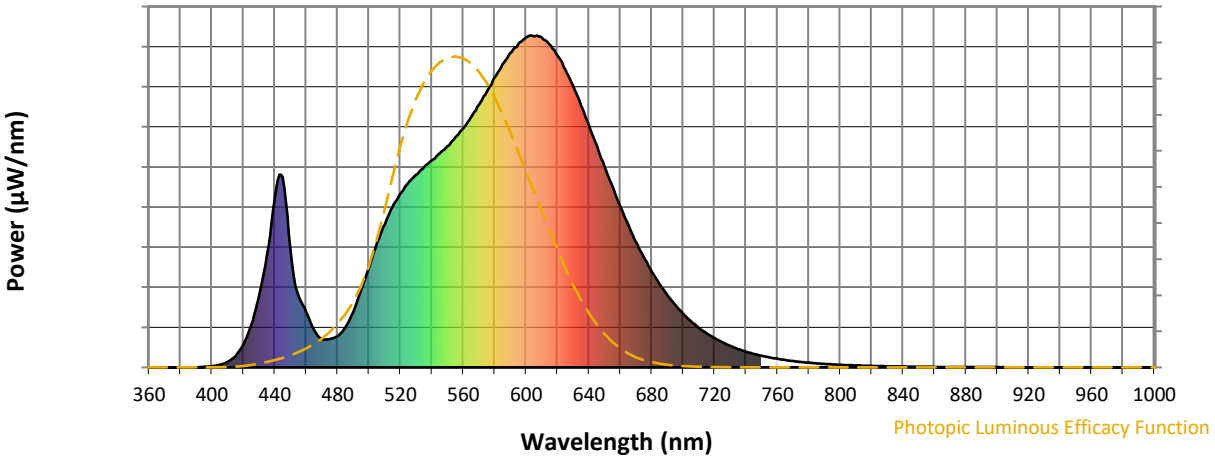


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

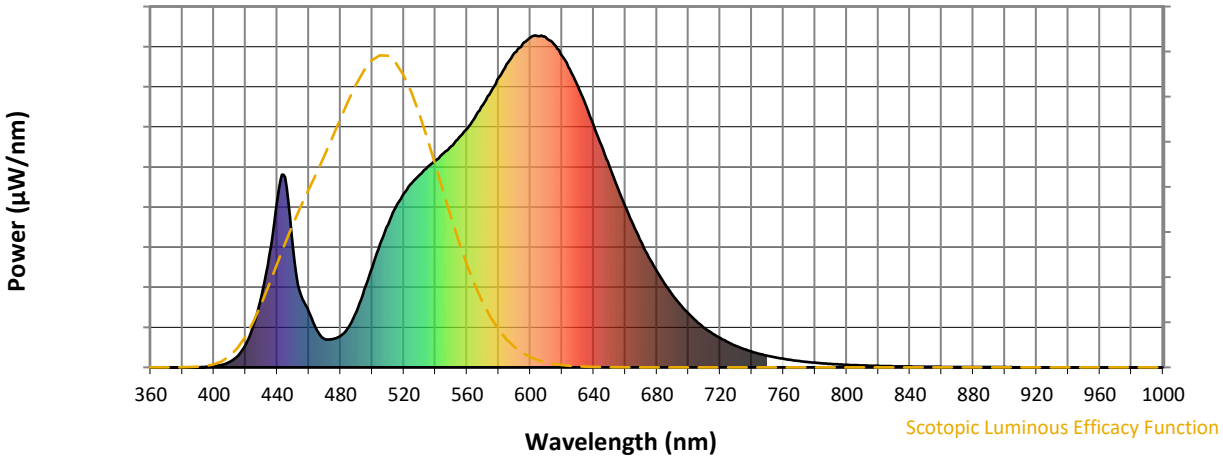


Photopic Lumens: NR

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

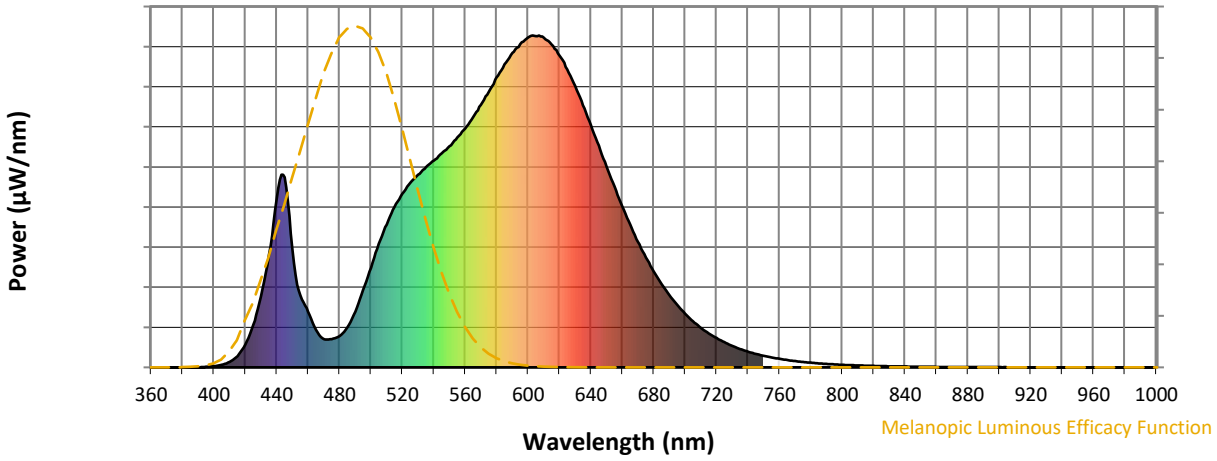


Scotopic Lumens: NR **S/P: 1.27**

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			

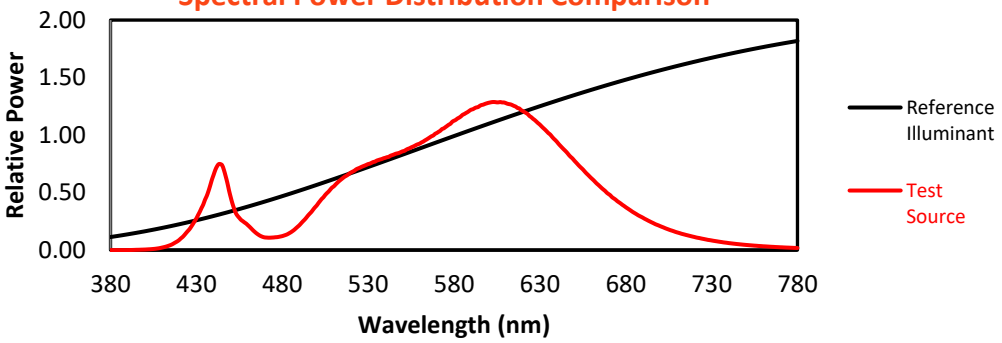
REPORT NUMBER: SP1-2408-195-9

TM-30-18

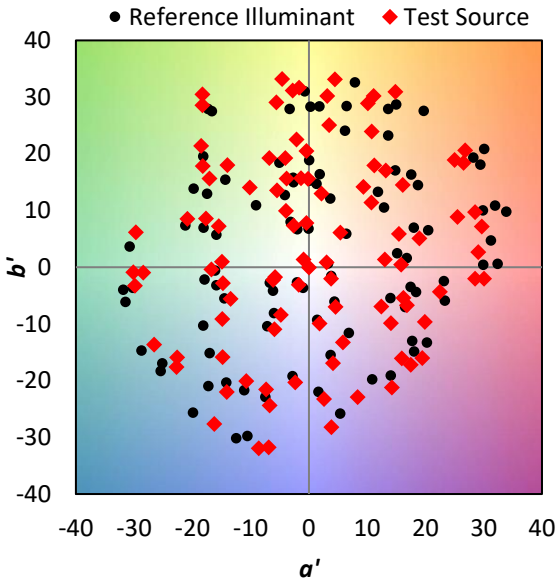
Summary

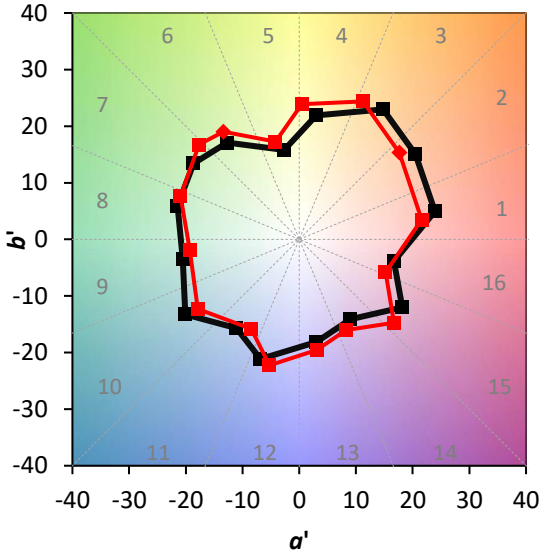
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

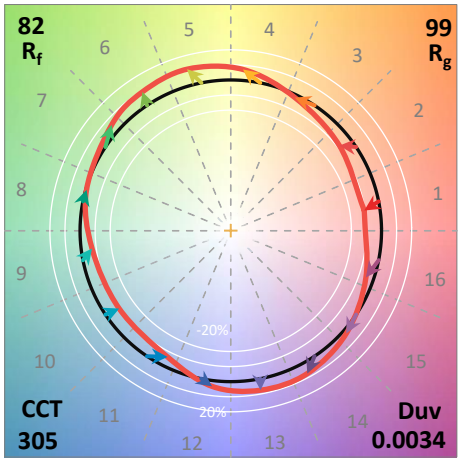
Spectral Power Distribution Comparison

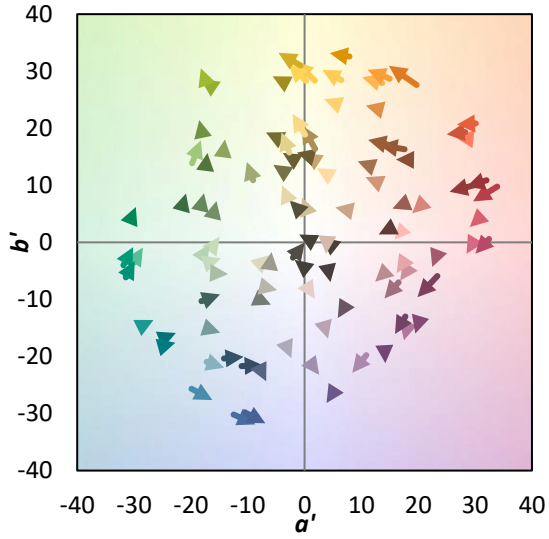


Color Vector Graphics









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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
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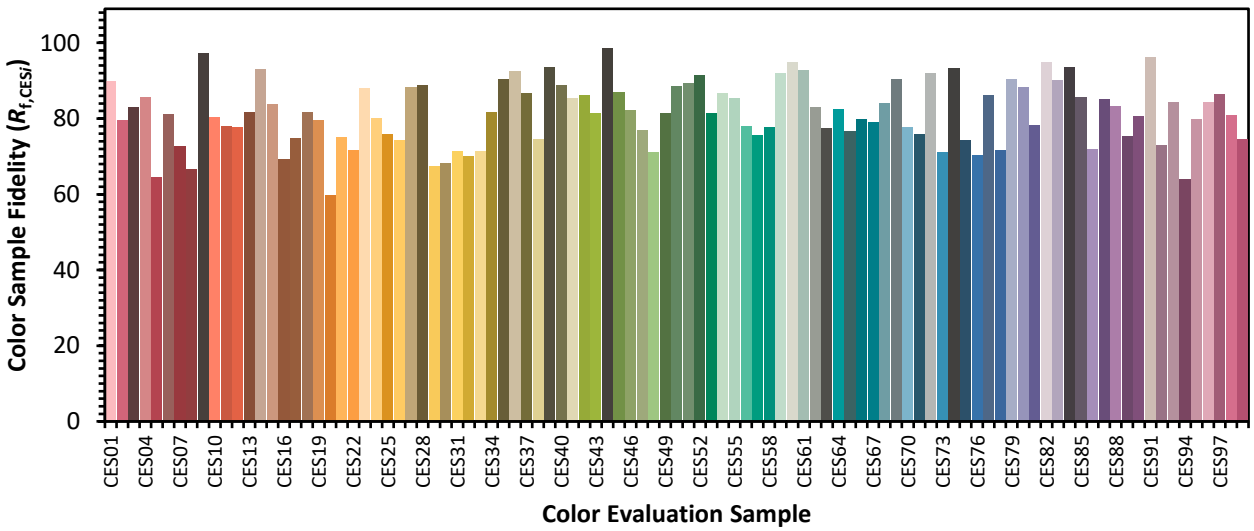

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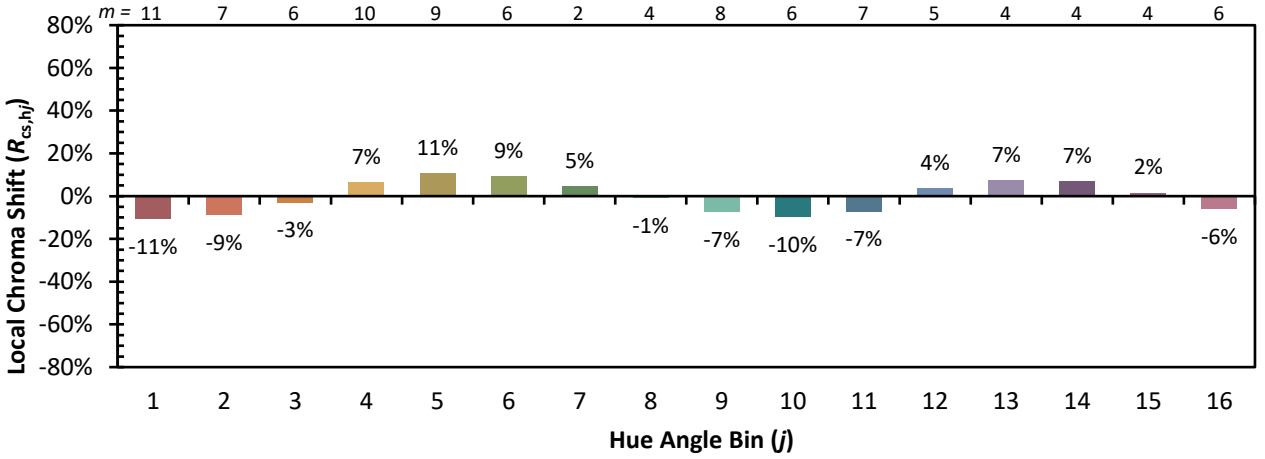
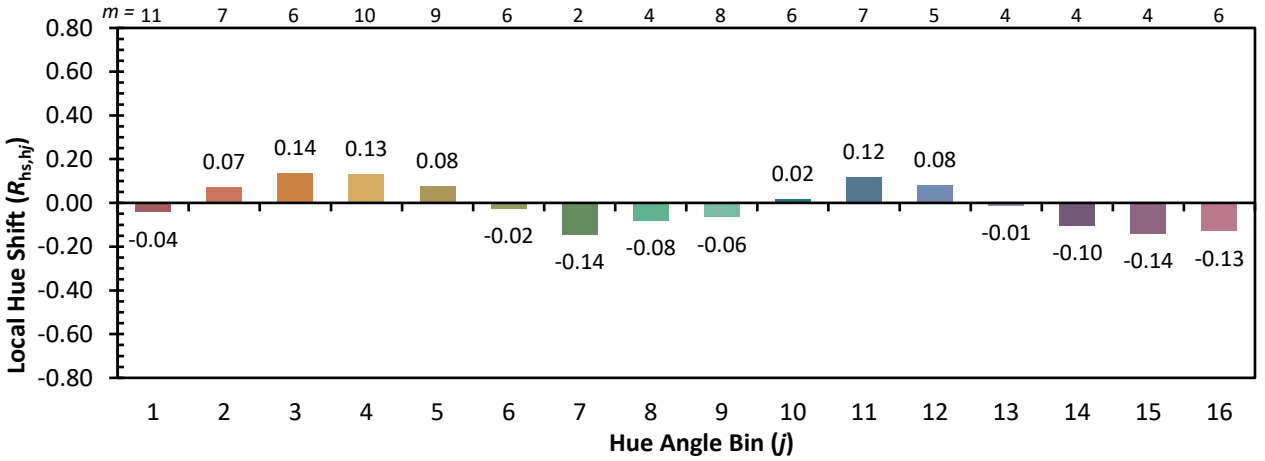
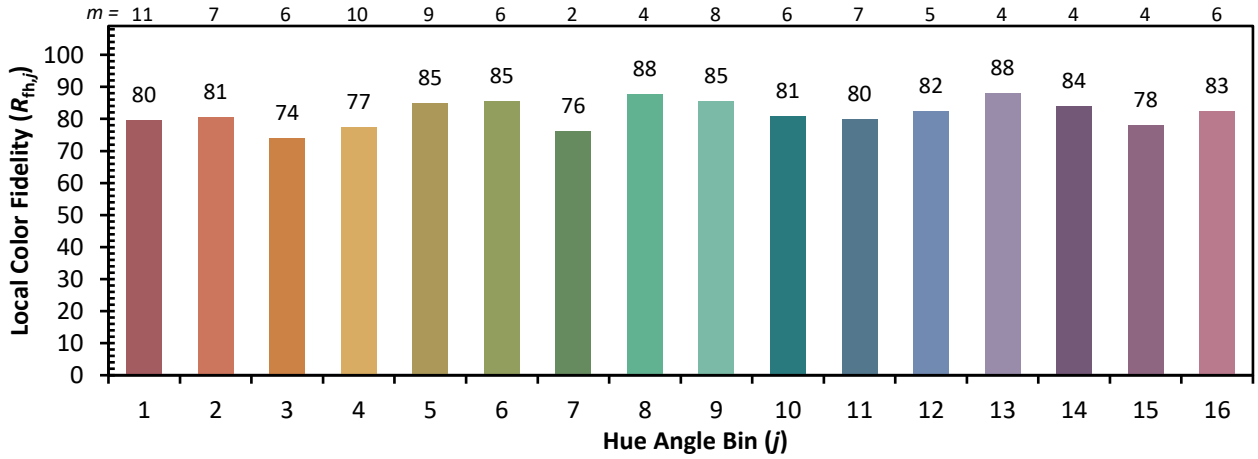
Color Rendition by Hue-Angle Bin







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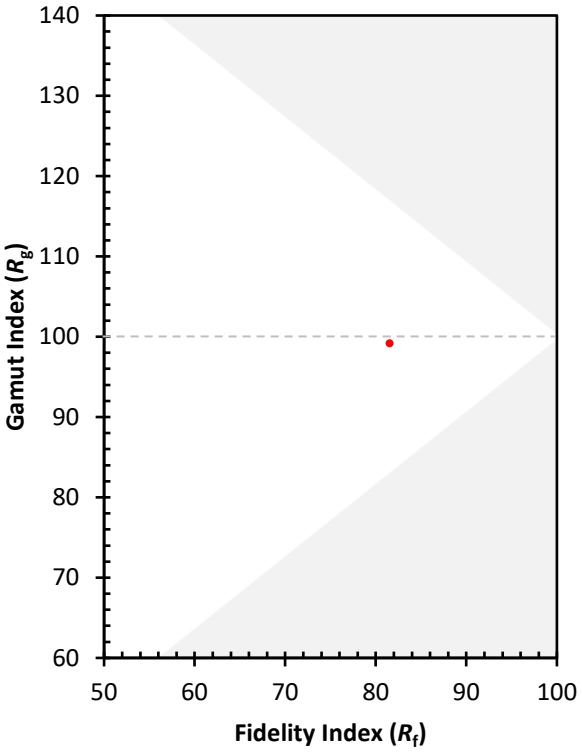
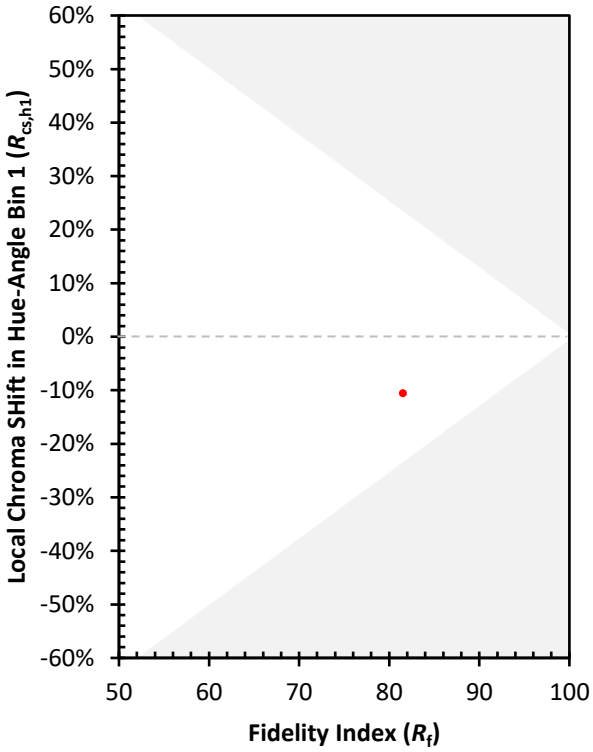
Measure Comparisons





(END OF REPORT)