

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: P324336

Luminaire Tested: **GLEON-SA2D-830-U-SLL-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324336
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-27)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA2D-830-U-SLL-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9352 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

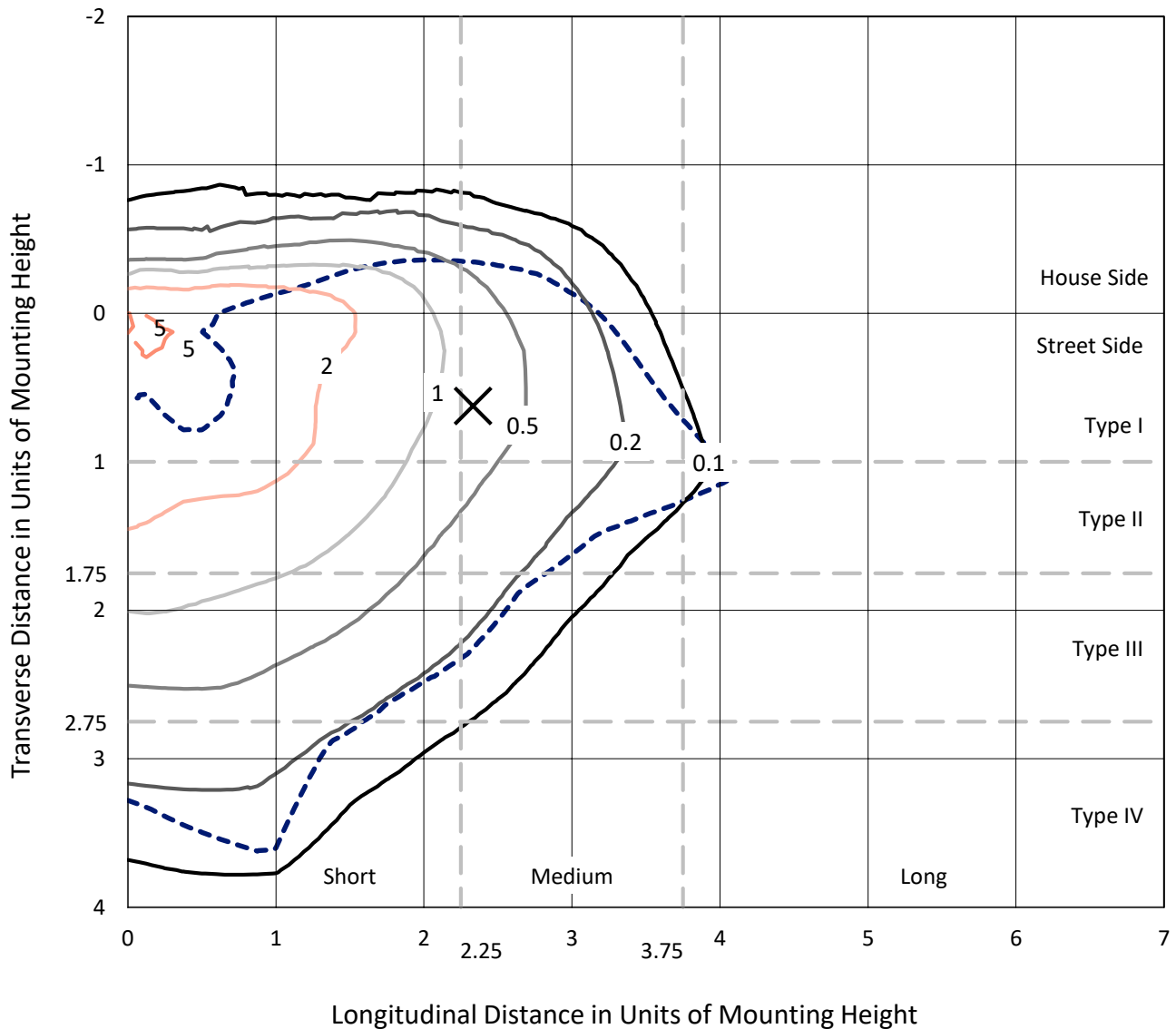
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

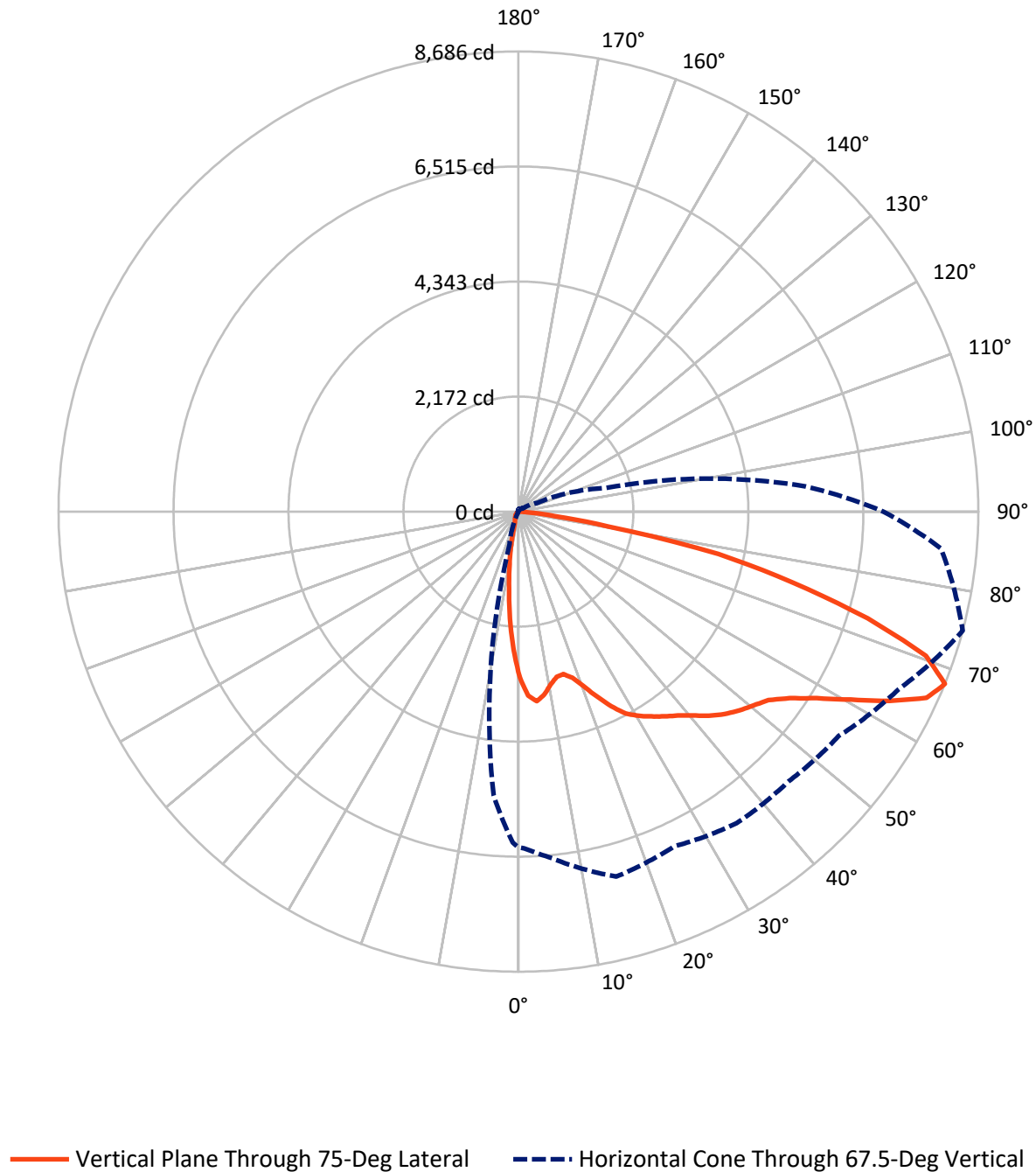
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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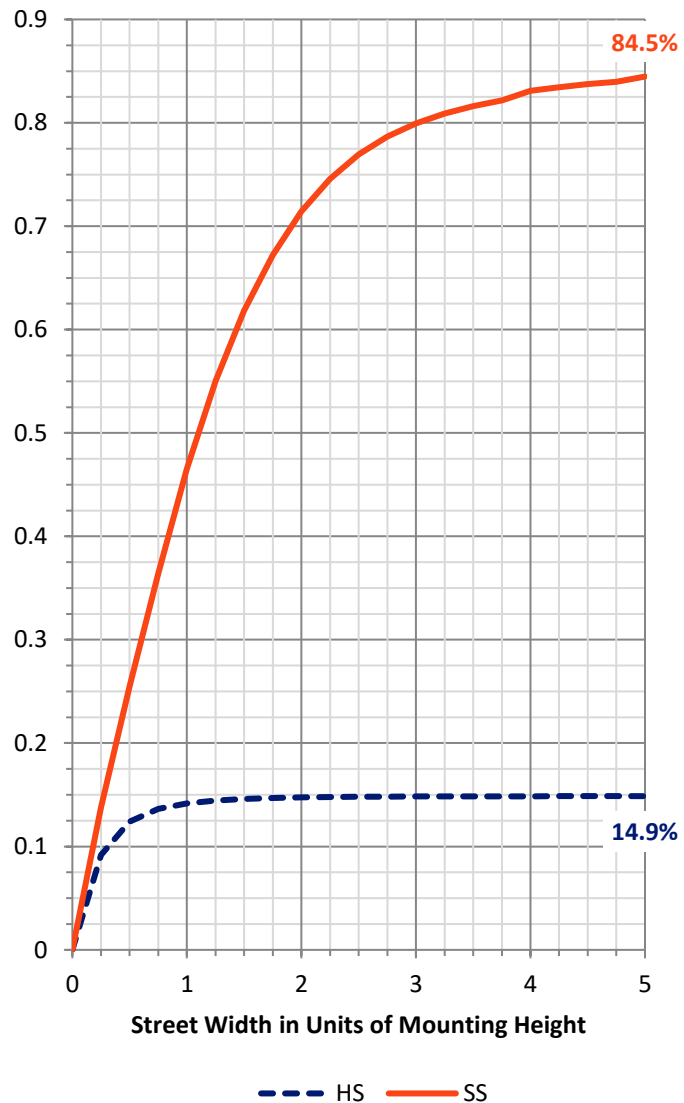
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1403.4	0.0	1403.4
	% Fixture	15.0	0.0	15.0
Street Side	Lumens	7948.6	0.0	7948.6
	% Fixture	85.0	0.0	85.0
Total	Lumens	9352.0	0.0	9352.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.0	2.5
10°-20°	468.6	5.0
20°-30°	662.9	7.1
30°-40°	974.7	10.4
40°-50°	1401.0	15.0
50°-60°	1972.2	21.1
60°-70°	2303.4	24.6
70°-80°	1175.1	12.6
80°-90°	156.1	1.7
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°	9352.0	100.0
0°-180°	9352.0	100.0

Coefficient of Utilization



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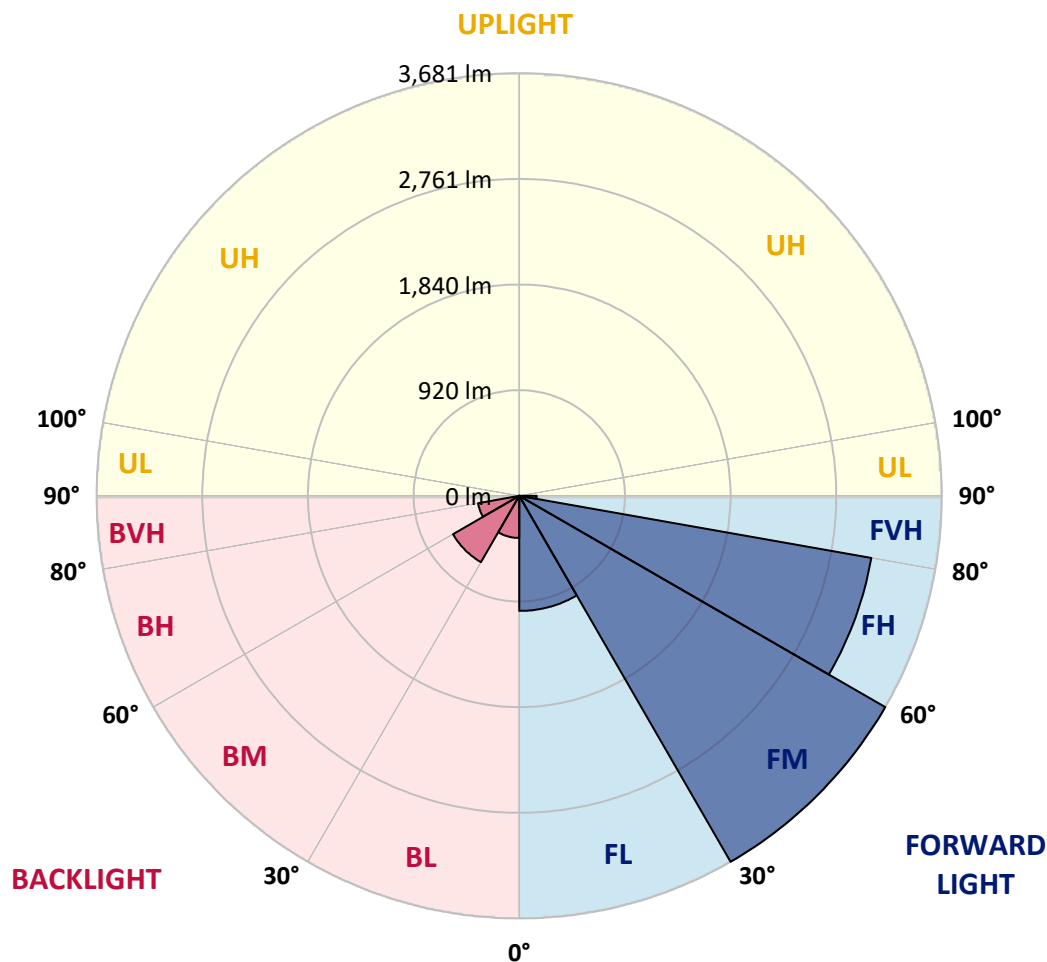
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1002.5	10.7			
FM	(30°-60°)	3680.8	39.4			
FH	(60°-80°)	3113.9	33.3			G2/5000
FVH	(80°-90°)	151.4	1.6			G2/225
BL	(0°-30°)	367.0	3.9	B1/500		
BM	(30°-60°)	667.1	7.1	B1/1000		
BH	(60°-80°)	364.5	3.9	B1/500		G1/500
BVH	(80°-90°)	4.7	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4
2.5°	3401.0	3406.3	3433.8	3497.6	3567.2	3572.5	3619.4	3571.1	3554.8	3476.8	3396.2
5°	3426.7	3447.1	3541.5	3728.9	3891.4	3943.7	3980.9	3886.1	3786.5	3596.0	3392.6
7.5°	3219.8	3253.9	3402.4	3754.1	4044.7	4173.2	4197.6	4049.2	3805.1	3491.4	3185.7
10°	2954.9	2993.9	3172.9	3605.3	4004.4	4224.6	4258.3	4063.8	3712.9	3322.2	2962.0
12.5°	2740.5	2786.1	2969.1	3437.8	3865.8	4109.4	4175.9	4014.6	3633.2	3202.1	2809.2
15°	2641.7	2694.0	2886.2	3329.7	3712.0	3903.9	3958.8	3889.2	3588.9	3183.1	2773.7
17.5°	2698.4	2755.1	2953.6	3339.0	3567.6	3649.6	3693.9	3722.2	3588.9	3297.8	2877.4
20°	2931.0	2992.1	3202.1	3433.4	3448.0	3417.4	3464.8	3564.5	3630.5	3515.8	3126.4
22.5°	3252.6	3324.4	3561.4	3595.1	3389.5	3273.9	3280.1	3436.5	3706.3	3792.2	3471.9
25°	3644.7	3732.4	3973.4	3836.1	3413.9	3188.4	3186.2	3331.0	3780.3	4069.1	3856.9
27.5°	4034.1	4130.7	4342.4	4130.2	3514.4	3172.9	3168.4	3299.1	3852.5	4315.4	4277.3
30°	4360.6	4454.5	4637.0	4343.3	3623.0	3209.2	3187.9	3333.2	3895.4	4475.3	4583.9
32.5°	4626.4	4701.7	4849.2	4490.0	3739.1	3279.6	3233.6	3424.5	3968.5	4610.5	4865.6
35°	4918.8	4998.1	5057.0	4629.5	3869.3	3381.1	3315.1	3569.4	4081.1	4747.8	5174.4
37.5°	5252.4	5331.2	5324.2	4757.1	4034.5	3549.0	3506.9	3798.9	4256.1	4883.8	5519.1
40°	5578.9	5659.5	5601.9	4896.7	4228.6	3825.9	3794.9	4143.5	4490.4	5057.9	5923.1
42.5°	5884.6	5971.8	5848.7	5028.7	4459.8	4175.0	4228.1	4587.4	4783.7	5272.3	6271.3
45°	6130.9	6219.9	6055.6	5157.1	4703.5	4598.5	4758.4	5079.2	5136.3	5453.5	6506.6
47.5°	6309.9	6394.0	6199.1	5285.6	5015.4	5116.4	5395.0	5594.8	5454.9	5610.8	6673.6
50°	6424.2	6489.7	6241.2	5446.4	5424.7	5720.7	6058.2	6155.7	5754.8	5752.6	6876.5
52.5°	6496.8	6526.5	6272.2	5614.3	5851.8	6378.5	6707.7	6738.3	6063.6	5908.5	7149.8
55°	6747.1	6771.0	6491.9	5817.7	6204.9	6954.9	7295.1	7266.8	6413.1	6213.7	7472.3
57.5°	7174.2	7199.4	6946.0	6110.1	6490.6	7311.1	7720.9	7771.8	6822.9	6642.6	7817.9
60°	7388.6	7435.6	7345.2	6480.4	6767.5	7538.8	8011.1	8173.6	7335.0	7207.9	8152.8
62.5°	7194.1	7262.4	7393.5	6891.1	7042.6	7664.2	8101.4	8317.6	7859.5	7866.6	8359.3
65°	6806.0	6860.5	7082.9	7116.2	7202.1	7648.7	7878.1	8116.5	8180.7	8471.8	8348.2
67.5°	6337.3	6357.7	6546.4	7133.9	6970.8	7182.6	7207.4	7383.7	7926.9	8686.2	8012.8
70°	5662.6	5673.7	5838.5	6540.7	5990.5	6037.0	6000.2	6036.1	6814.9	8163.9	7166.2
72.5°	4557.3	4585.2	4819.6	5431.8	4364.1	4229.9	4518.8	4502.8	5248.4	6897.3	5322.4
75°	3355.4	3403.7	3757.7	4375.2	3063.0	2770.6	2981.5	3037.8	3731.1	5335.2	3328.4
77.5°	2349.3	2385.2	2728.1	3216.3	2216.8	1981.2	1905.0	1971.9	2462.7	3859.6	1676.8
80°	1353.4	1366.7	1585.6	1857.1	1493.8	1709.2	1548.3	1594.4	1475.7	1717.1	721.2
82.5°	885.6	887.8	973.3	1105.3	930.3	1081.0	800.1	1022.9	907.7	689.8	234.8
85°	478.5	481.1	564.4	784.6	526.7	297.7	175.0	359.3	561.3	158.2	64.2
87.5°	52.7	48.3	170.1	285.3	146.2	27.0	9.3	40.3	89.9	10.2	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°	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4
2.5°	3355.0	3318.2	3226.5	3129.5	3051.5	2978.4	2904.9	2814.9	2745.4	2731.2	2708.2
5°	3283.2	3166.7	2974.4	2781.3	2625.8	2429.5	2305.0	2208.0	2113.2	2107.4	2088.4
7.5°	3032.4	2879.2	2608.5	2341.3	2122.5	1935.5	1746.8	1620.6	1521.3	1486.3	1465.5
10°	2791.4	2619.1	2281.1	1976.3	1780.9	1615.7	1482.8	1350.8	1231.1	1148.7	1111.5
12.5°	2623.1	2432.6	2060.0	1797.3	1657.3	1500.5	1338.3	1173.5	1035.8	936.5	875.8
15°	2558.0	2354.6	1986.0	1726.4	1553.7	1355.2	1147.9	959.6	806.7	716.8	662.3
17.5°	2635.5	2398.9	1980.3	1640.0	1398.6	1151.8	922.8	700.4	556.4	488.2	453.2
20°	2832.2	2539.8	1978.1	1534.2	1214.3	910.8	625.1	460.7	373.5	335.4	319.0
22.5°	3110.4	2719.7	1995.8	1429.6	1022.5	650.8	431.5	338.5	293.7	273.3	264.0
25°	3468.4	2972.2	2045.8	1334.8	842.2	485.5	336.2	283.5	252.1	236.1	229.5
27.5°	3849.8	3262.8	2123.8	1252.4	695.5	387.2	288.0	242.8	220.2	209.1	202.9
30°	4164.3	3599.5	2202.7	1160.7	589.2	337.6	263.6	221.5	195.4	188.3	182.5
32.5°	4439.5	3854.2	2258.5	1077.9	519.7	299.9	238.3	198.0	180.3	166.6	160.4
35°	4724.3	4066.4	2256.7	1019.8	471.8	271.6	217.1	177.2	155.9	140.0	135.1
37.5°	5032.7	4306.1	2218.2	970.2	451.0	249.0	205.1	166.1	144.9	128.9	122.7
40°	5393.7	4557.7	2178.8	923.7	445.2	230.8	196.7	157.3	134.7	119.2	113.0
42.5°	5745.5	4784.6	2144.2	889.1	420.4	230.4	189.2	150.6	126.7	111.6	104.6
45°	6026.8	4995.9	2137.5	868.3	394.3	238.3	185.2	146.2	120.5	105.4	98.8
47.5°	6260.7	5225.4	2180.1	853.7	369.5	217.5	194.9	143.1	114.7	100.1	92.6
50°	6538.9	5507.1	2280.2	829.8	343.3	195.8	223.3	144.0	109.9	94.8	86.8
52.5°	6927.0	5897.0	2427.3	789.5	307.5	175.9	219.7	144.9	104.6	89.0	81.1
55°	7362.0	6383.9	2585.4	722.6	257.4	149.7	188.3	138.7	94.4	82.8	75.3
57.5°	7819.2	6825.5	2679.4	642.8	204.7	129.4	150.6	126.3	83.3	74.4	69.6
60°	7891.0	6993.4	2636.4	544.9	162.6	112.5	111.6	128.5	74.4	65.6	62.0
62.5°	7712.5	6782.6	2428.6	457.6	136.0	98.8	91.7	112.1	67.3	58.5	54.9
65°	7369.1	6212.4	2091.9	412.4	126.3	84.6	76.2	78.9	58.9	50.9	47.8
67.5°	6891.5	5451.3	1717.6	386.8	124.9	72.7	65.1	59.8	50.9	44.3	41.6
70°	5915.1	4541.4	1370.2	372.6	121.4	61.1	54.9	48.7	42.5	37.7	35.4
72.5°	4353.5	3218.1	1065.9	357.1	122.3	48.7	47.8	40.3	34.1	29.2	28.4
75°	2515.4	1838.5	699.1	289.3	116.5	37.7	39.9	28.4	23.9	20.4	20.4
77.5°	1340.6	1121.3	266.3	120.5	42.5	23.9	22.6	16.8	15.1	12.4	12.0
80°	584.3	493.5	80.2	33.7	23.5	12.8	8.4	7.5	6.6	5.3	4.9
82.5°	206.9	178.5	26.1	16.4	10.2	0.0	0.0	0.0	0.0	0.0	0.0
85°	47.0	33.7	0.0	4.0	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°	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4
2.5°	2661.2	2651.4	2593.9	2596.1	2606.3	2620.9	2586.3	2602.3	2645.2	2686.4	2702.0
5°	2057.8	2060.0	2025.0	2046.7	2066.2	2079.5	2023.7	2024.6	2058.7	2105.2	2129.6
7.5°	1450.0	1446.4	1448.2	1500.1	1536.8	1510.2	1531.1	1458.9	1463.3	1496.5	1471.7
10°	1077.9	1029.1	1001.7	1040.6	1081.0	1066.3	1030.5	1007.0	1023.4	1060.1	1057.5
12.5°	847.0	777.0	735.8	707.9	741.2	713.7	712.8	692.4	670.3	674.3	733.2
15°	637.1	586.1	537.4	492.6	491.7	482.4	435.0	381.9	377.4	380.1	410.7
17.5°	438.1	420.9	400.9	362.4	352.2	313.2	267.1	245.9	235.2	240.1	250.3
20°	307.9	301.3	303.5	282.6	268.0	230.8	203.8	195.4	193.6	198.5	203.3
22.5°	255.2	243.2	241.9	232.6	218.0	190.9	176.3	171.4	169.2	173.7	177.2
25°	223.3	211.3	206.4	200.7	185.2	166.6	157.7	153.3	151.1	153.7	155.9
27.5°	196.7	185.6	181.2	177.2	162.1	148.9	141.8	137.8	136.0	136.9	139.1
30°	176.8	167.0	161.3	156.4	143.5	134.2	128.0	124.0	122.3	122.3	124.5
32.5°	155.9	150.6	145.3	139.1	127.1	120.9	114.7	110.3	108.5	109.0	110.8
35°	129.8	128.0	129.4	123.6	113.4	108.1	101.9	97.0	95.7	96.1	97.9
37.5°	115.2	107.2	112.1	109.0	103.2	96.1	88.2	83.7	81.5	82.8	83.7
40°	105.9	96.1	92.6	95.7	94.8	83.3	76.2	71.8	70.0	70.4	71.3
42.5°	97.9	86.4	78.4	78.0	83.3	72.7	65.1	61.1	58.9	58.9	59.8
45°	90.4	78.0	68.2	60.7	70.0	61.6	54.5	50.9	48.3	48.3	48.7
47.5°	84.6	70.9	59.4	49.6	52.7	50.5	44.7	41.2	38.5	38.5	39.0
50°	79.3	63.8	51.4	41.6	39.4	41.6	36.3	32.3	30.6	30.1	31.0
52.5°	73.5	56.7	43.9	35.4	31.0	31.5	28.4	25.7	23.5	23.5	24.4
55°	67.8	50.9	38.1	30.1	25.7	23.5	22.6	20.8	19.0	19.0	19.9
57.5°	62.0	44.7	32.3	24.8	20.4	18.6	18.6	17.3	15.9	15.9	16.8
60°	56.7	38.5	26.6	20.4	15.9	15.5	15.9	14.6	13.7	13.7	14.6
62.5°	50.5	32.8	21.7	16.8	12.8	12.4	13.7	12.8	12.0	12.0	12.8
65°	43.0	27.9	17.3	12.8	9.7	9.7	11.5	10.6	9.7	9.7	10.6
67.5°	36.3	23.5	13.3	9.3	7.1	7.5	9.7	8.9	8.4	8.4	9.3
70°	30.1	18.2	9.3	5.8	4.0	5.8	7.5	7.5	7.5	7.5	8.4
72.5°	22.6	12.4	5.3	2.2	1.8	4.0	6.2	7.1	6.6	6.6	8.0
75°	14.6	7.1	1.8	0.0	0.0	2.2	4.9	5.8	5.8	5.3	6.6
77.5°	8.4	2.2	0.0	0.0	0.0	0.0	3.1	2.7	2.2	1.8	3.1
80°	2.2	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

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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4	3137.4
2.5°	2764.4	2816.7	2890.2	2968.2	3088.3	3183.5	3277.0	3357.2	3388.2	3401.0
5°	2188.1	2264.7	2372.3	2510.6	2727.2	2922.1	3119.7	3318.6	3405.0	3426.7
7.5°	1570.0	1668.0	1804.8	1978.1	2231.9	2484.4	2760.4	3052.4	3186.2	3219.8
10°	1162.0	1281.6	1438.5	1621.0	1863.3	2122.9	2423.7	2757.3	2910.2	2954.9
12.5°	824.5	986.2	1196.1	1418.1	1628.1	1859.8	2164.1	2531.8	2692.2	2740.5
15°	484.2	640.6	889.1	1186.4	1455.3	1690.1	1999.3	2416.2	2593.0	2641.7
17.5°	277.8	355.7	543.6	875.0	1240.0	1565.2	1947.5	2445.0	2653.2	2698.4
20°	212.2	237.0	313.2	563.5	988.4	1442.5	1947.5	2608.0	2864.5	2931.0
22.5°	185.6	203.8	234.8	336.2	727.4	1310.9	1970.1	2843.7	3179.1	3252.6
25°	164.8	181.2	207.8	253.0	496.2	1154.5	2023.7	3133.0	3549.4	3644.7
27.5°	147.5	163.0	187.0	221.5	339.3	965.8	2095.9	3472.4	3957.9	4034.1
30°	132.0	146.6	168.3	192.7	261.8	751.8	2157.5	3792.2	4278.6	4360.6
32.5°	117.4	130.7	150.2	168.3	214.4	556.0	2164.1	4045.6	4544.9	4626.4
35°	103.7	115.6	133.3	147.5	177.6	439.0	2060.9	4265.4	4811.1	4918.8
37.5°	90.4	101.9	117.4	128.0	156.4	358.0	1903.2	4510.3	5152.7	5252.4
40°	78.0	88.2	104.1	111.2	148.0	275.1	1731.7	4767.3	5487.6	5578.9
42.5°	66.5	76.2	91.7	105.4	129.8	205.6	1546.6	5008.3	5788.9	5884.6
45°	55.4	65.6	81.1	111.6	107.7	153.7	1348.5	5168.2	6026.8	6130.9
47.5°	44.7	56.3	77.5	106.3	85.9	113.0	1191.7	5319.7	6207.1	6309.9
50°	35.9	47.4	87.3	94.8	70.4	86.4	1126.1	5455.3	6325.4	6424.2
52.5°	29.2	39.9	82.4	72.7	58.9	71.3	1161.6	5675.0	6434.8	6496.8
55°	24.4	31.5	49.6	50.5	50.1	60.7	1205.4	5990.5	6717.9	6747.1
57.5°	21.3	25.3	34.6	39.0	42.1	54.0	1206.3	6443.2	7156.0	7174.2
60°	18.2	22.2	28.8	31.5	36.3	48.3	1162.5	6601.4	7328.4	7388.6
62.5°	15.9	19.5	23.9	26.1	30.6	43.4	1059.7	6372.3	7091.8	7194.1
65°	14.2	17.7	19.9	22.2	27.0	39.0	890.5	5914.3	6699.3	6806.0
67.5°	12.4	15.5	17.7	19.9	24.4	34.6	655.7	5382.2	6248.7	6337.3
70°	11.1	13.7	15.9	17.7	21.3	29.2	397.8	4567.0	5625.9	5662.6
72.5°	10.6	12.4	14.6	15.9	18.6	25.7	201.6	3356.3	4497.5	4557.3
75°	9.3	11.1	13.3	14.2	16.4	22.2	82.0	2204.4	3259.3	3355.4
77.5°	7.5	10.2	12.0	12.8	14.2	18.2	41.6	1408.8	2287.3	2349.3
80°	2.7	7.5	10.2	10.6	12.0	13.3	27.5	771.3	1326.8	1353.4
82.5°	0.0	4.9	8.0	7.5	8.4	10.2	17.7	366.8	875.8	885.6
85°	0.0	2.2	6.2	4.9	3.5	7.1	6.2	80.2	459.4	478.5
87.5°	0.0	0.0	0.4	2.2	1.8	2.7	0.9	0.4	41.6	52.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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.

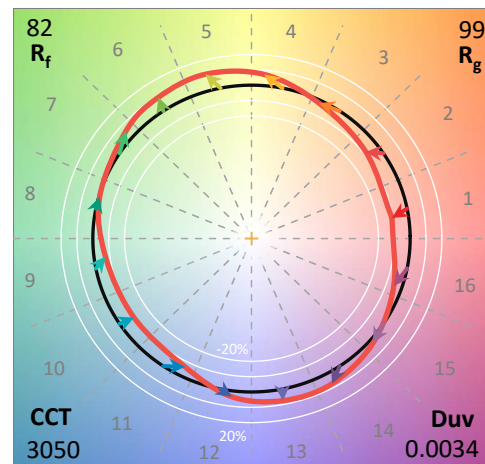
Test Information

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
 CIE u' : 0.2476
 CIE v' : 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

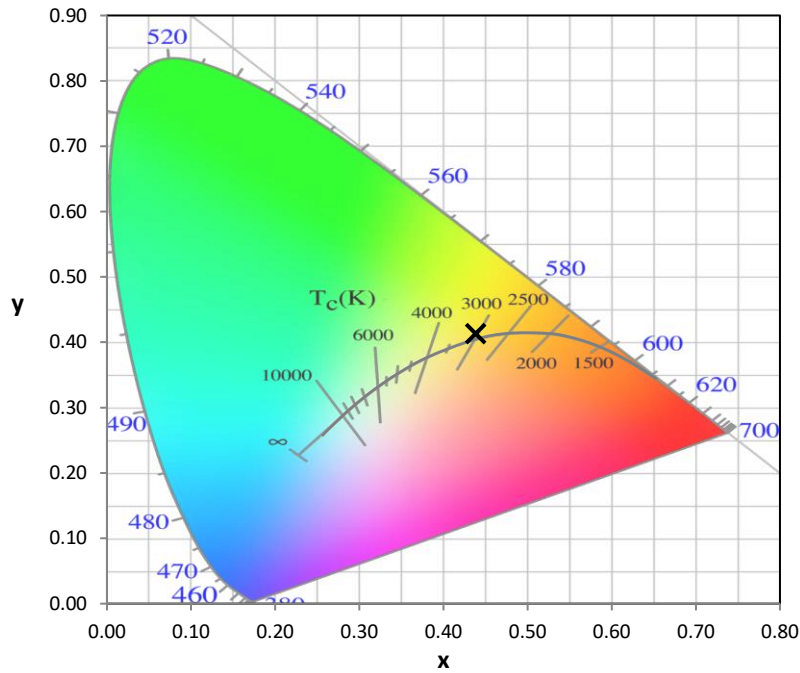
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

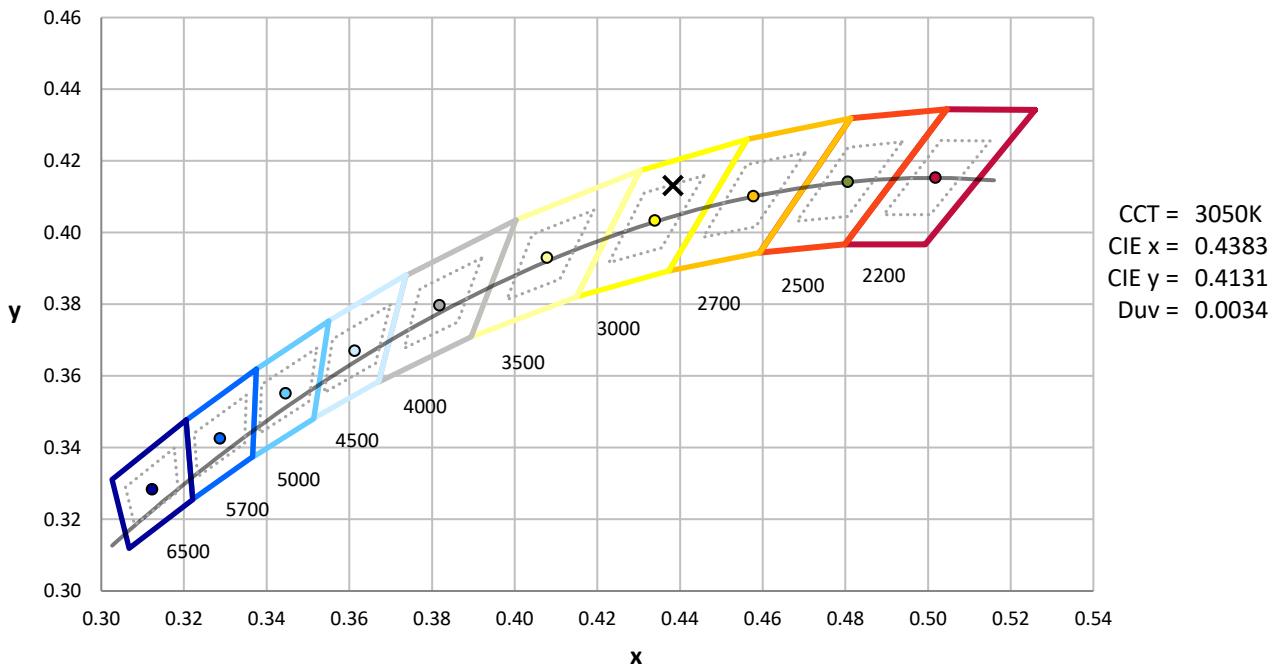
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



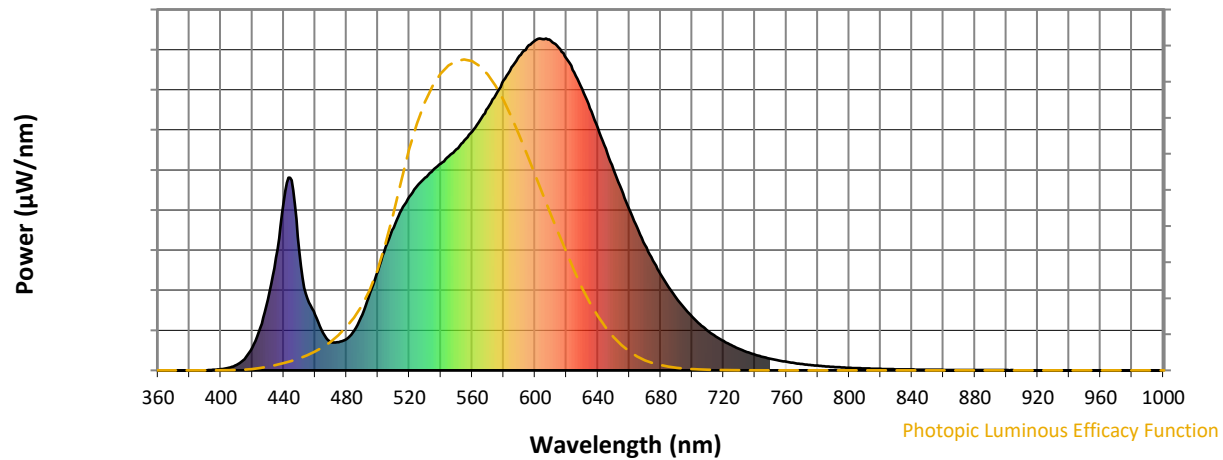
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

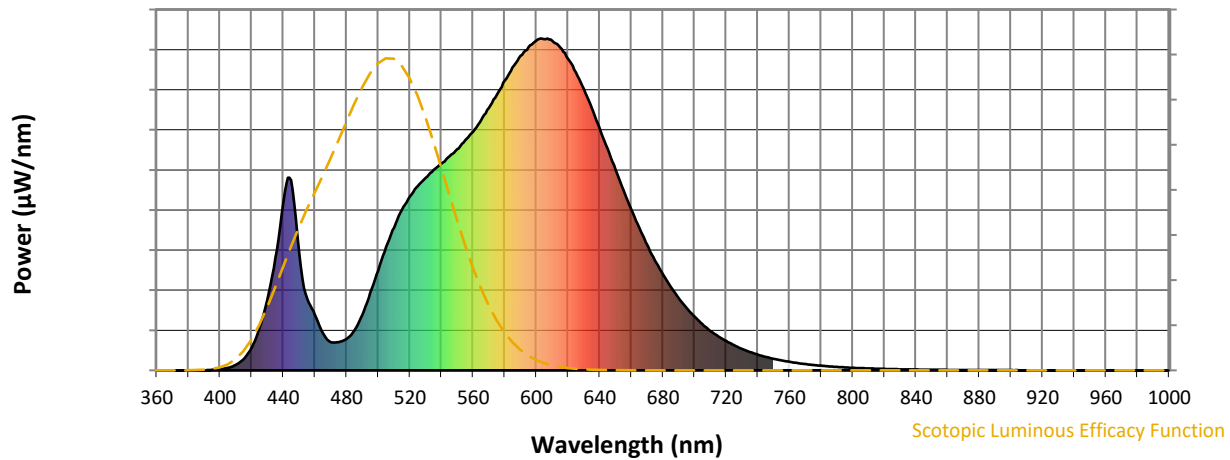


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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



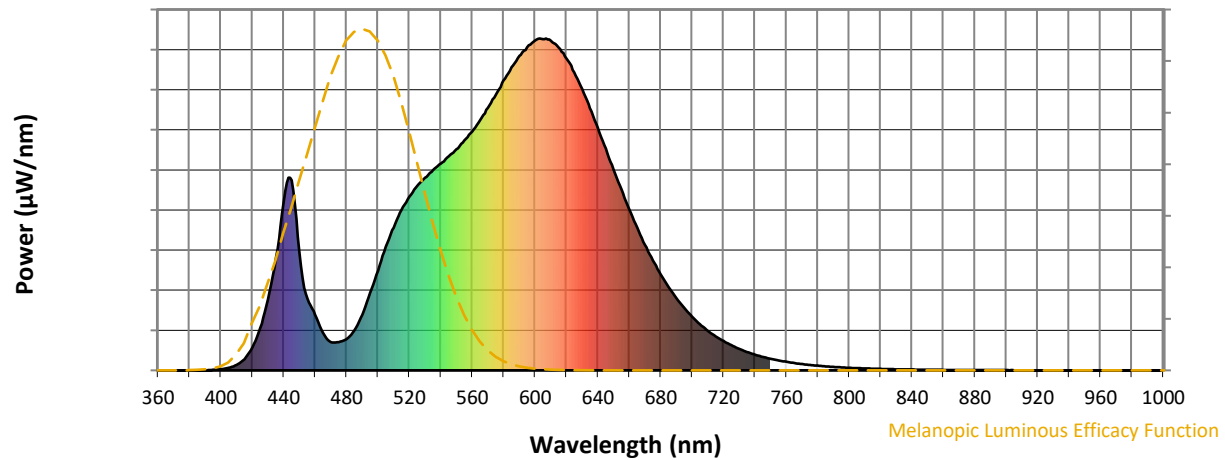
Scotopic Lumens: NR

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			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 2.32

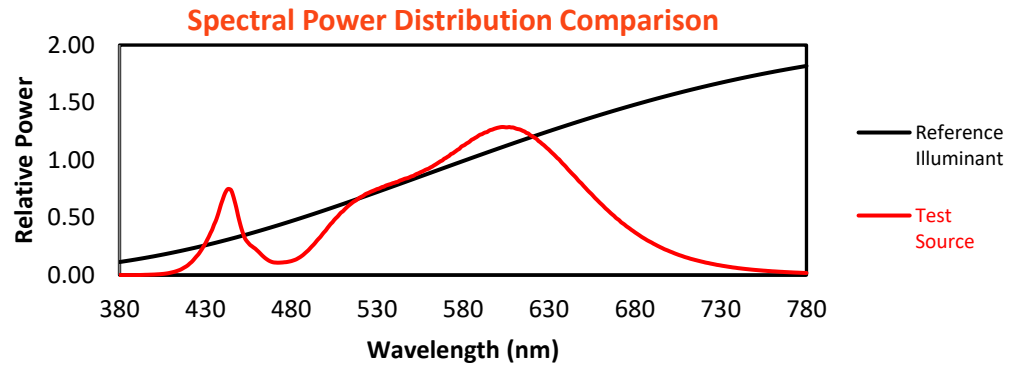
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	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

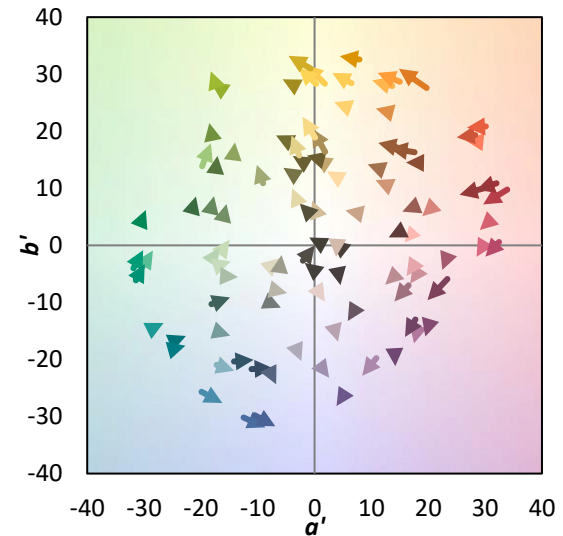
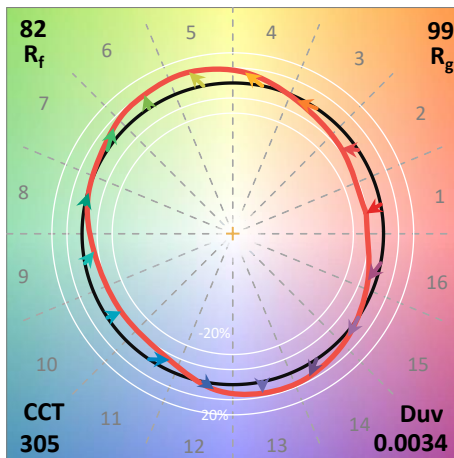
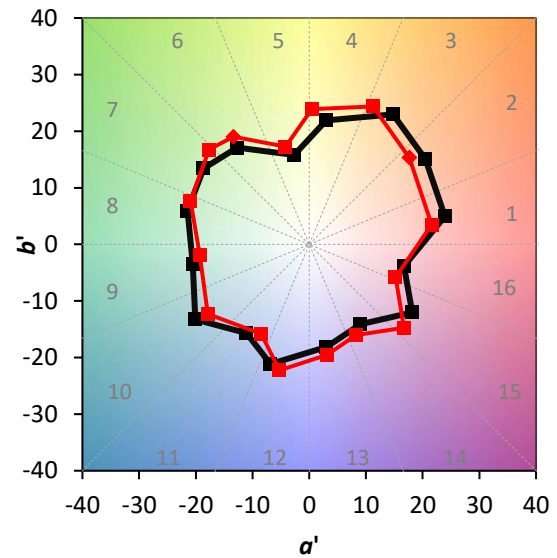
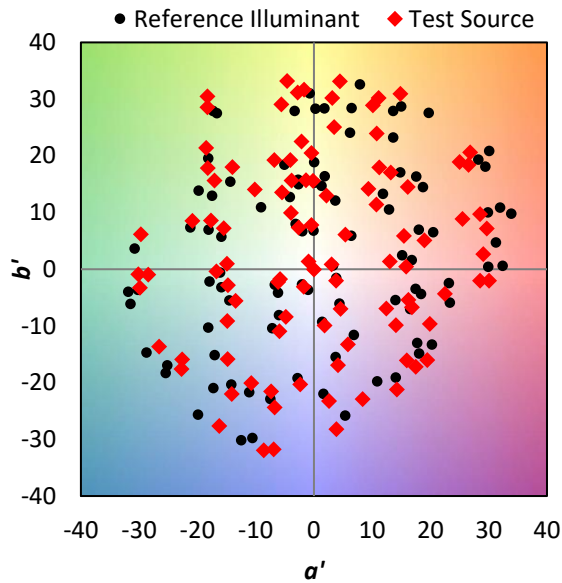
TM-30-18

Summary

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

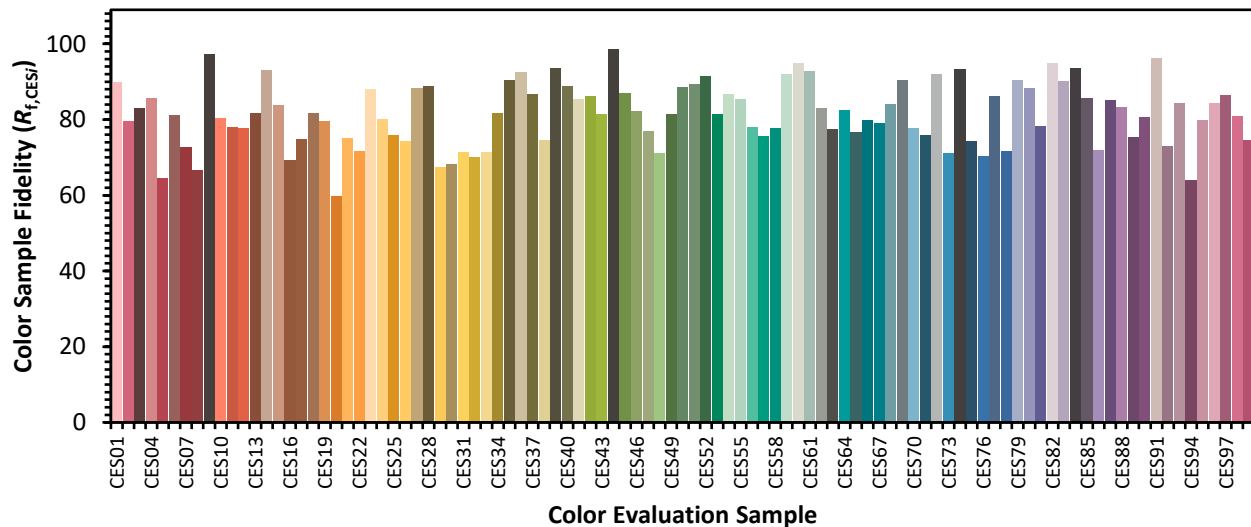


Color Vector Graphics

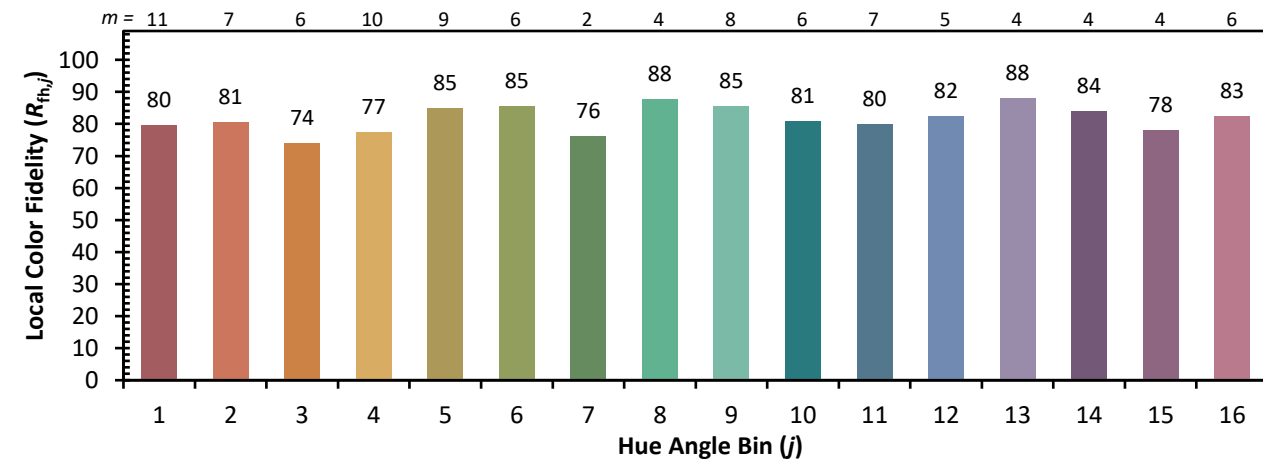
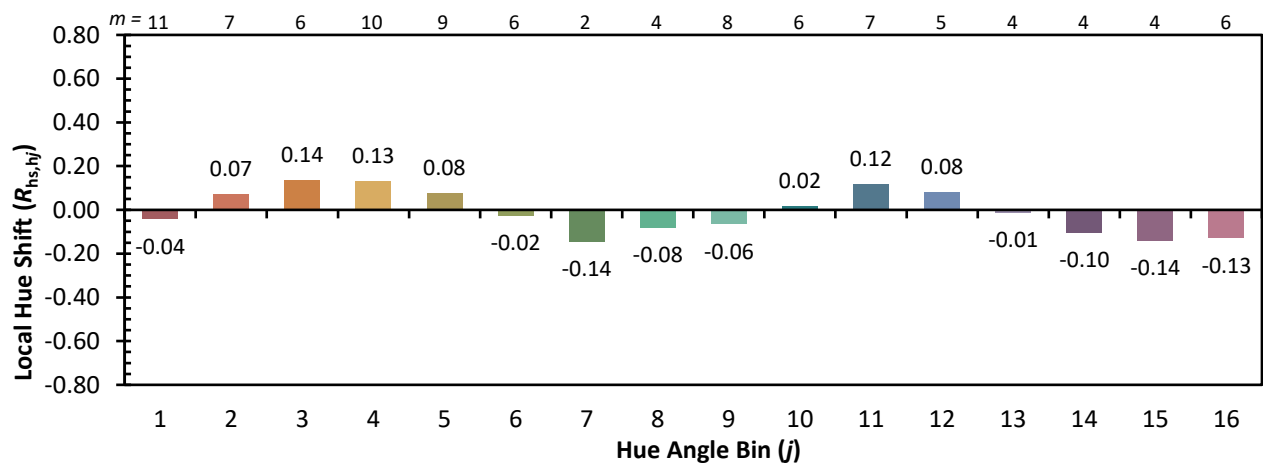
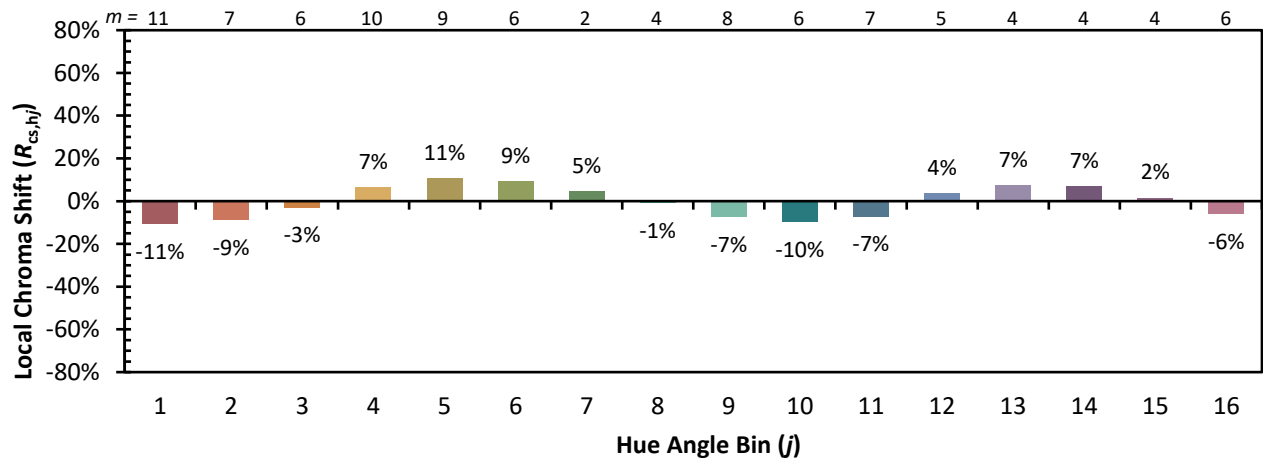


Individual Sample Fidelity Index ($R_{f,i}$)

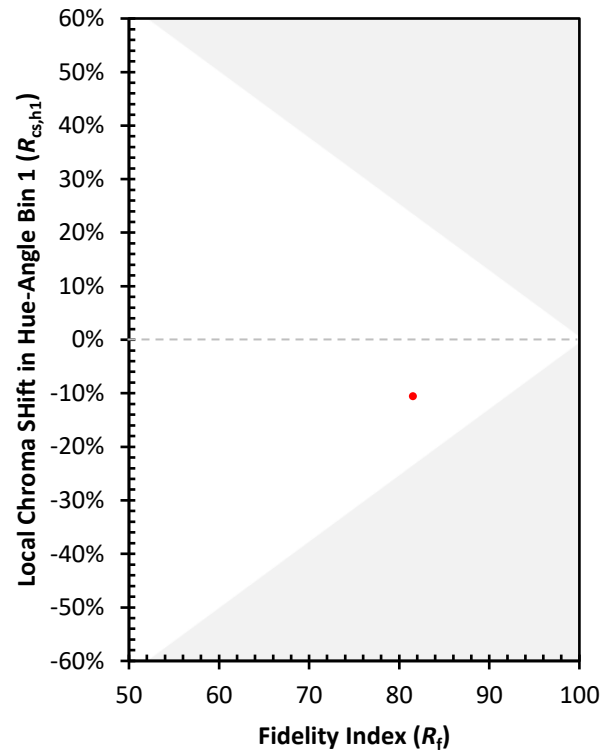
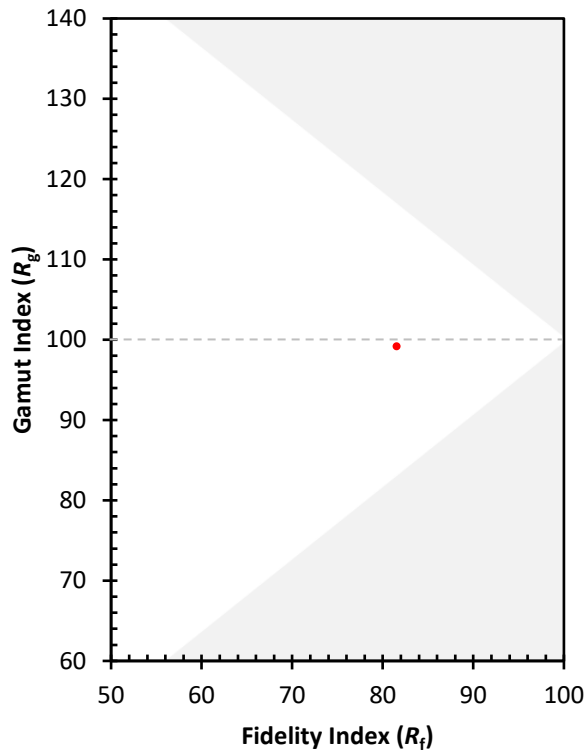
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)