

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P630562

Luminaire Tested: GWS-SA1D-830-U-SLL-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P630562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1D-830-U-SLL-W
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4514.7 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

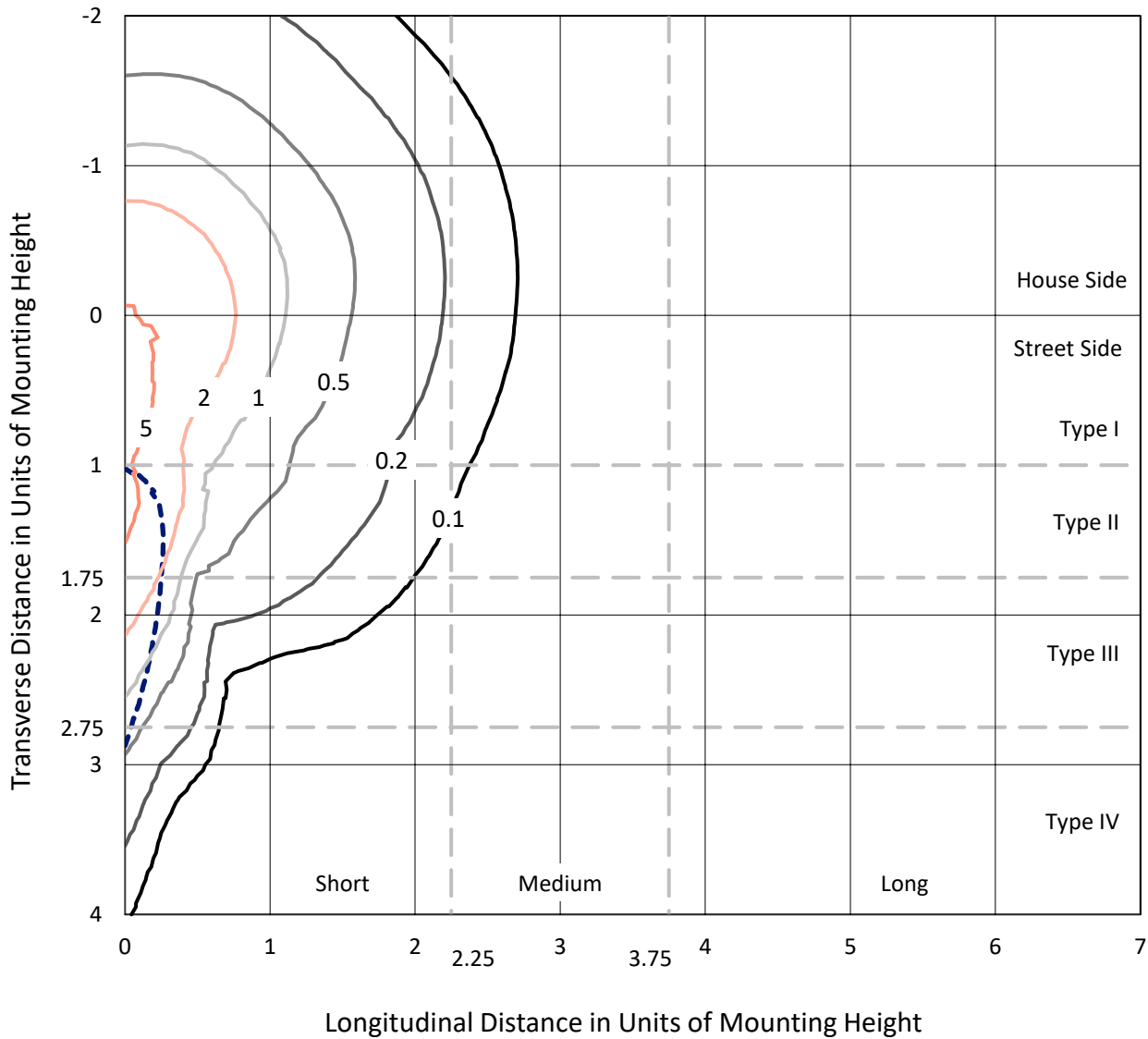
Input Watts (W): 44.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

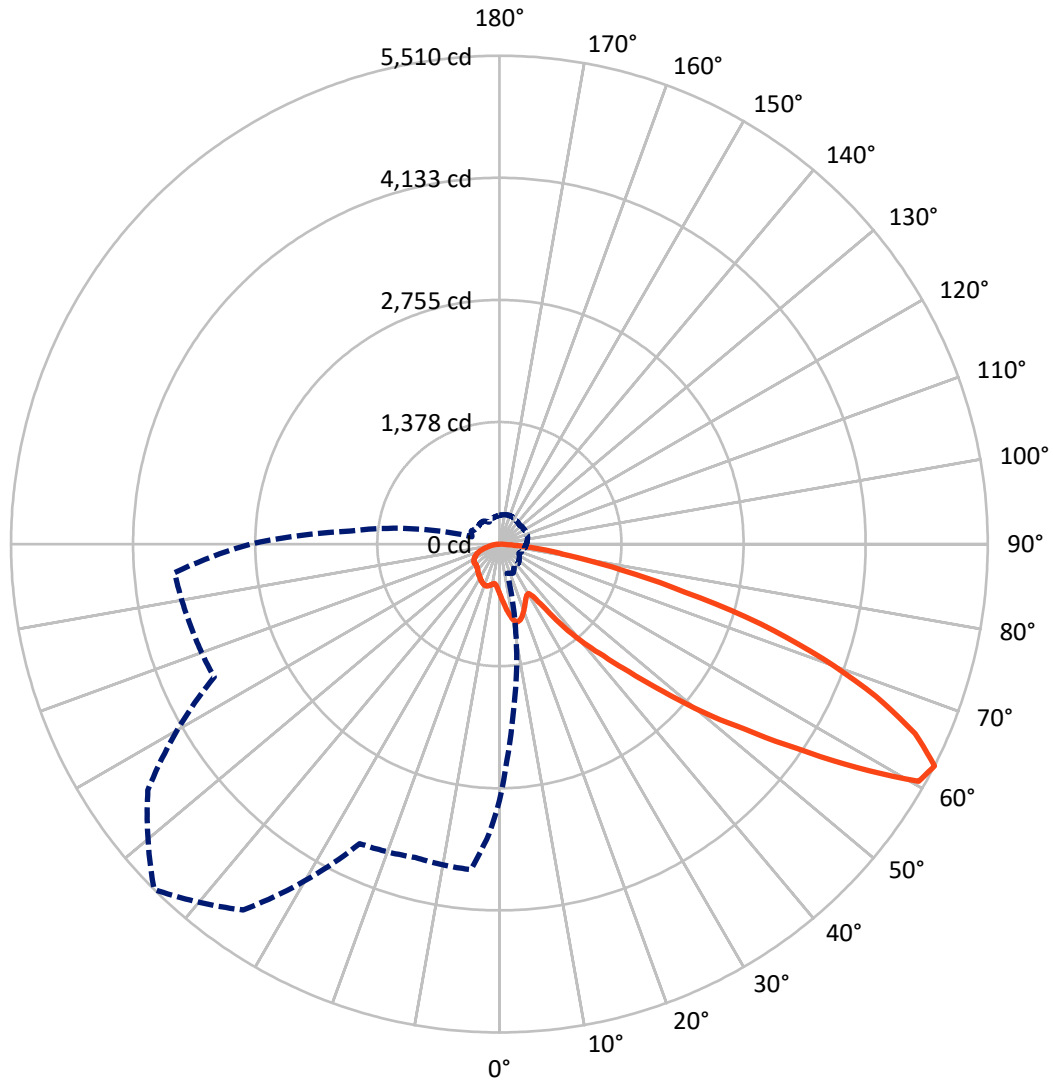
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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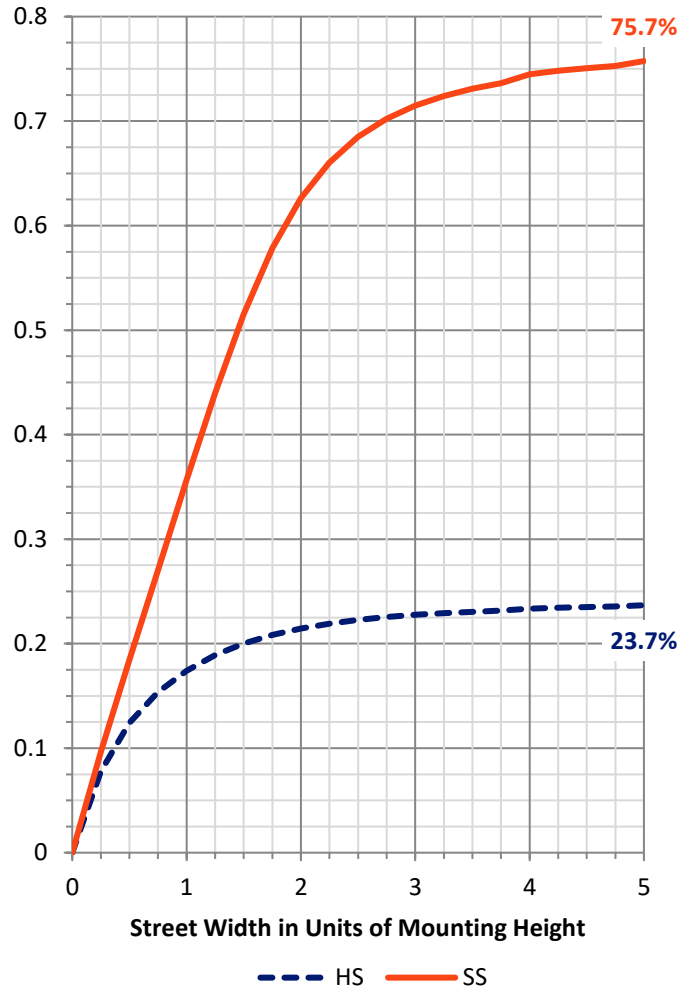
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1079.5	0.0	1079.5
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	3435.2	0.0	3435.2
	% Fixture	76.1	0.0	76.1
Total	Lumens	4514.7	0.0	4514.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	1.2
10°-20°	180.2	4.0
20°-30°	283.7	6.3
30°-40°	388.9	8.6
40°-50°	606.8	13.4
50°-60°	1046.2	23.2
60°-70°	1212.4	26.9
70°-80°	640.0	14.2
80°-90°	101.1	2.2
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°	4514.7	100.0
0°-180°	4514.7	100.0

Coefficient of Utilization



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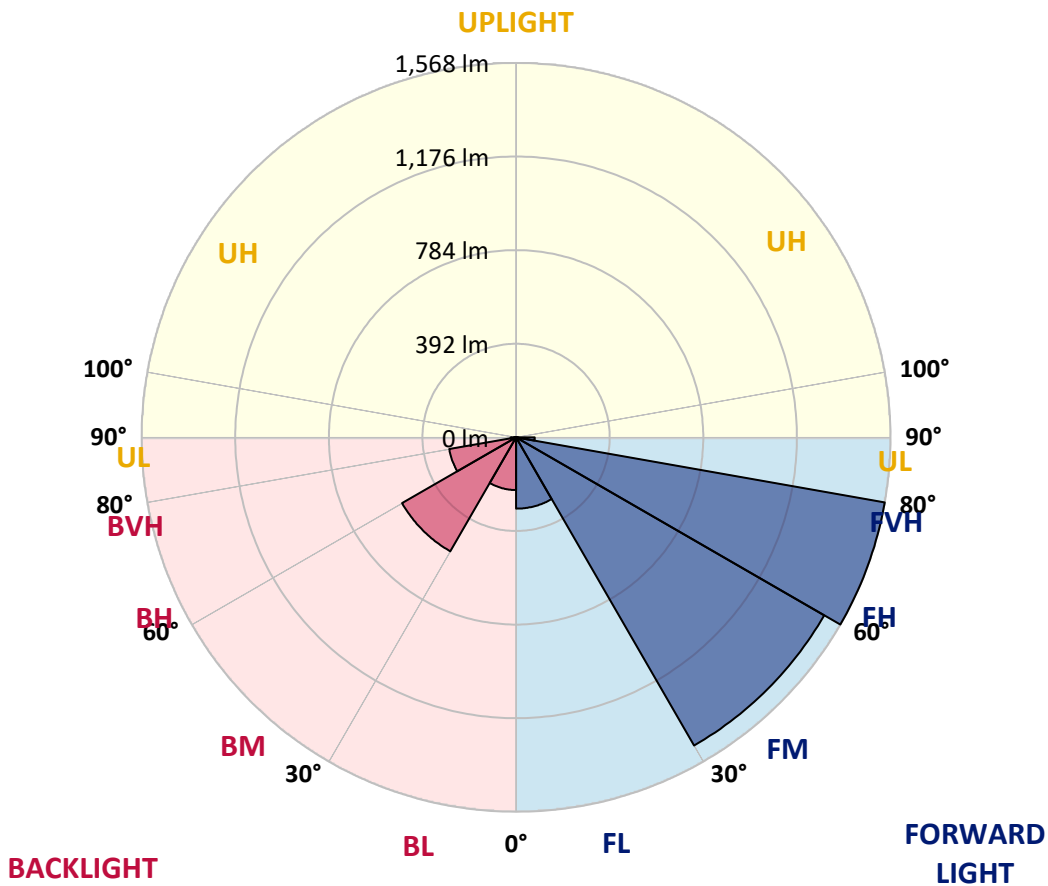
CATALOG NUMBER: GWS-SA1D-830-U-SLL-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	298.6	6.6			
FM (30°-60°)	1490.5	33.0			
FH (60°-80°)	1568.1	34.7			G1/1800
FVH (80°-90°)	78.0	1.7			G1/100
BL (0°-30°)	220.8	4.9	B1/500		
BM (30°-60°)	551.4	12.2	B1/1000		
BH (60°-80°)	284.2	6.3	B1/500		G1/500
BVH (80°-90°)	23.1	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9
2.5°	611.6	609.2	605.7	594.0	586.7	578.4	569.8	559.8	548.4	540.4	532.5
5°	663.4	659.6	651.3	623.3	604.0	582.9	565.3	545.3	525.6	512.1	498.7
7.5°	713.1	708.3	695.5	652.7	621.3	590.9	564.3	535.3	505.9	485.9	470.0
10°	762.8	752.8	736.6	680.6	639.2	604.0	573.6	538.0	499.0	471.7	454.8
12.5°	800.8	791.5	773.9	706.2	657.2	613.0	578.8	546.0	512.8	483.8	466.5
15°	836.4	824.3	804.3	730.0	672.0	612.6	568.4	539.8	534.9	527.7	505.2
17.5°	861.9	850.9	830.2	749.4	680.3	601.9	539.8	522.8	544.6	566.7	545.3
20°	884.4	871.6	850.6	762.8	682.0	578.1	504.9	505.2	539.4	569.8	564.6
22.5°	903.4	889.2	870.6	778.0	681.3	544.9	474.5	495.2	529.4	553.2	553.9
25°	926.9	915.1	899.6	800.5	681.3	511.1	452.4	483.1	512.5	532.5	531.8
27.5°	955.5	947.6	934.8	834.7	687.6	482.8	440.0	467.6	490.7	508.0	507.6
30°	987.6	980.4	970.7	870.9	698.3	461.7	433.0	448.2	465.2	479.0	479.0
32.5°	1020.5	1017.7	1007.3	899.9	690.0	455.1	427.2	428.9	437.9	449.3	448.2
35°	1066.0	1063.3	1050.2	922.4	654.1	445.8	417.9	409.2	410.3	417.5	419.9
37.5°	1132.7	1128.5	1109.2	948.6	599.8	422.3	402.7	388.5	385.4	388.5	393.0
40°	1213.1	1206.9	1180.7	984.2	537.3	390.6	378.8	367.1	361.9	362.9	368.1
42.5°	1314.0	1300.9	1263.2	1021.8	475.5	362.6	352.2	345.0	339.1	338.4	348.4
45°	1477.7	1441.8	1382.0	1055.3	423.4	347.7	328.4	323.2	318.4	321.2	332.9
47.5°	1763.6	1697.3	1580.9	1084.0	391.6	348.1	309.4	303.9	303.5	309.1	322.2
50°	2156.6	2060.9	1881.4	1103.3	375.0	352.2	298.0	289.0	295.6	301.1	313.6
52.5°	2533.0	2386.9	2173.2	1103.0	367.8	352.9	301.1	275.2	295.6	297.0	308.7
55°	2854.5	2590.0	2251.9	989.7	357.4	350.2	313.2	264.5	291.8	297.0	306.3
57.5°	3110.1	2719.1	2246.0	799.4	388.8	335.0	320.5	262.1	280.8	297.7	308.4
60°	3081.7	2660.1	2101.3	490.7	385.7	308.0	319.4	266.6	262.1	288.4	306.0
62.5°	2893.5	2448.4	1852.4	340.5	362.3	292.5	302.5	274.5	244.8	274.9	294.2
65°	2630.0	2175.2	1543.6	261.1	300.1	293.2	273.8	269.0	229.6	253.5	274.2
67.5°	2281.6	1836.5	1218.7	206.9	209.3	253.8	248.6	239.0	215.5	234.5	253.1
70°	1715.3	1340.2	838.5	166.4	158.5	212.0	223.4	214.8	201.7	207.2	226.9
72.5°	1208.7	875.1	459.3	131.9	122.2	163.0	194.1	192.7	178.2	182.3	201.7
75°	898.2	619.2	287.0	104.3	99.5	116.7	162.7	166.8	154.7	159.5	174.4
77.5°	597.8	400.9	159.5	77.4	77.4	85.3	121.2	140.5	131.6	135.4	145.7
80°	329.8	204.1	79.8	50.8	52.1	58.7	88.4	101.2	101.5	110.9	113.6
82.5°	104.3	64.9	35.6	29.7	28.0	33.5	57.0	72.5	67.7	86.3	79.4
85°	23.8	15.2	6.6	6.6	7.3	11.1	21.8	38.7	49.4	59.4	43.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	15.2	22.4	20.0
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°	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9
2.5°	527.7	520.8	518.7	512.8	512.1	506.6	504.5	504.5	506.9	506.9	509.4
5°	493.1	484.5	479.7	472.8	471.0	466.9	464.1	464.5	467.6	469.7	473.8
7.5°	462.7	456.9	453.4	450.3	449.6	448.9	445.8	445.5	446.5	449.6	452.7
10°	450.0	445.8	446.9	449.3	453.1	455.1	452.4	451.0	450.0	452.0	454.8
12.5°	462.4	458.3	460.3	464.5	469.7	471.7	470.7	470.3	471.4	479.3	485.2
15°	489.7	481.7	479.0	480.7	484.8	486.9	485.9	487.3	493.8	514.5	529.4
17.5°	523.5	504.2	493.1	490.0	491.8	493.5	493.5	496.9	508.3	538.7	557.4
20°	541.8	516.6	498.0	490.4	491.1	492.8	492.8	497.6	510.4	542.9	554.9
22.5°	537.0	513.9	491.1	482.8	483.1	484.5	484.5	488.6	500.0	528.7	534.2
25°	518.0	497.6	475.2	467.9	468.6	471.0	470.3	472.8	481.4	504.9	508.0
27.5°	495.2	477.2	455.1	449.6	452.7	457.6	453.4	453.8	461.7	481.4	481.7
30°	470.7	455.8	436.2	432.0	437.9	440.3	436.5	436.5	444.4	457.9	457.6
32.5°	444.1	434.8	420.6	416.1	422.7	426.5	421.6	422.3	428.6	437.5	434.1
35°	419.2	414.4	407.8	404.7	408.9	412.3	409.2	410.6	416.5	418.9	414.1
37.5°	395.4	394.7	395.4	395.4	396.4	397.5	395.4	398.9	404.0	400.9	395.4
40°	374.7	377.4	384.0	382.3	381.2	382.3	380.9	386.8	392.0	386.4	379.9
42.5°	357.4	362.6	372.6	372.6	370.5	371.2	370.5	377.8	381.6	374.0	366.7
45°	342.6	350.2	362.9	364.7	361.2	361.2	362.6	371.6	373.0	362.6	355.0
47.5°	332.2	341.5	356.0	359.1	354.0	353.6	357.4	367.1	367.1	355.0	346.4
50°	325.0	335.3	352.6	356.7	351.5	350.2	356.4	365.7	363.6	349.1	340.5
52.5°	320.1	330.8	352.2	358.1	354.7	353.3	359.5	366.1	360.9	345.3	336.4
55°	317.0	328.8	353.3	358.1	354.3	351.9	358.1	364.0	361.2	343.3	334.6
57.5°	318.7	330.5	351.9	354.3	349.8	345.7	352.9	361.2	360.2	343.9	335.3
60°	316.0	326.7	344.3	345.0	337.4	330.8	341.5	354.0	354.0	341.5	333.9
62.5°	303.2	313.9	329.4	330.1	321.5	314.3	326.7	341.5	341.2	331.2	323.2
65°	282.1	292.2	309.8	311.5	302.9	295.3	308.0	321.8	322.9	313.9	307.0
67.5°	259.0	268.0	281.1	288.0	280.8	272.8	284.6	297.7	297.3	286.6	279.4
70°	231.4	239.7	251.7	257.6	253.1	245.5	256.2	263.1	260.0	254.9	250.0
72.5°	204.1	212.0	223.4	223.4	218.6	211.3	214.5	226.9	230.7	226.9	223.8
75°	175.4	182.3	190.3	192.0	181.3	168.2	182.7	193.4	197.9	196.1	192.3
77.5°	146.1	151.3	163.0	159.9	139.9	133.0	144.7	160.6	163.7	162.7	157.5
80°	112.6	115.7	128.1	121.9	106.4	101.9	107.1	119.5	120.2	116.7	110.2
82.5°	75.6	79.8	88.1	76.0	75.6	71.5	67.3	68.7	74.9	74.2	69.8
85°	38.7	40.7	48.7	45.6	39.0	33.8	32.1	34.2	30.7	28.0	24.2
87.5°	16.2	17.6	24.2	13.5	4.1	0.0	0.0	2.1	3.1	4.5	4.8
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°	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9
2.5°	514.9	518.7	528.0	539.8	551.1	562.9	575.7	583.6	593.3	605.7	606.1
5°	479.0	487.6	501.1	519.0	537.7	559.1	584.0	604.7	629.5	649.2	657.2
7.5°	456.9	469.3	486.2	509.0	533.5	560.1	592.6	627.5	668.2	694.5	710.0
10°	458.9	477.9	494.9	514.2	536.3	565.0	606.7	653.0	703.1	737.6	757.0
12.5°	495.9	515.9	512.8	511.8	526.6	561.5	618.1	678.9	740.0	774.6	797.7
15°	542.5	550.1	520.8	498.7	507.6	549.1	624.4	702.1	770.8	812.9	835.7
17.5°	566.3	551.1	515.6	482.4	480.0	530.1	627.5	725.5	805.3	847.4	871.6
20°	555.3	533.2	503.1	471.7	454.5	504.2	625.7	744.2	836.7	883.7	903.4
22.5°	531.5	512.1	488.6	458.6	433.7	475.9	621.3	762.8	864.7	912.0	929.3
25°	505.6	491.1	471.7	445.5	422.0	451.0	618.1	787.7	896.8	942.1	953.1
27.5°	479.7	469.0	453.1	432.7	419.2	433.7	619.2	820.2	938.3	981.1	976.6
30°	454.1	444.8	433.7	424.8	418.9	429.6	616.4	854.7	983.8	1023.6	997.0
32.5°	429.9	421.3	414.4	415.8	419.2	431.3	602.3	886.1	1025.6	1059.5	1019.1
35°	409.2	400.2	400.2	405.1	417.9	425.4	565.7	910.6	1071.9	1105.8	1050.5
37.5°	389.9	381.9	387.1	395.1	407.1	409.6	518.7	934.5	1139.2	1171.0	1099.2
40°	373.0	365.0	374.3	384.4	390.6	389.5	471.0	967.6	1218.7	1251.5	1163.8
42.5°	359.5	352.2	360.5	373.3	374.3	375.4	436.2	999.4	1310.9	1352.7	1275.0
45°	348.4	343.3	347.4	360.2	360.2	376.1	414.4	1026.0	1449.7	1523.6	1479.1
47.5°	339.8	336.7	338.8	342.9	349.8	388.5	400.6	1046.4	1702.5	1847.5	1802.6
50°	335.0	331.9	334.6	326.0	346.7	394.7	396.1	1061.9	2035.7	2263.0	2207.4
52.5°	330.8	329.8	331.5	311.5	353.6	390.6	392.6	1041.2	2259.2	2671.8	2726.7
55°	329.4	330.1	321.8	300.8	361.9	376.8	382.3	893.0	2319.9	3024.4	3365.3
57.5°	330.1	328.1	307.0	301.8	362.3	349.1	397.1	637.1	2231.5	3177.7	3990.0
60°	327.7	317.4	289.0	311.1	346.4	316.7	386.4	415.4	1998.4	3060.0	4026.2
62.5°	317.0	301.8	273.5	316.3	318.0	297.3	350.9	320.1	1687.6	2807.9	3676.7
65°	301.5	281.1	260.4	305.6	289.4	288.4	263.8	256.6	1357.2	2507.8	3345.2
67.5°	275.9	255.5	250.7	281.1	260.4	255.5	212.0	212.7	1083.0	2188.0	3012.0
70°	246.9	226.5	230.3	254.2	231.7	212.4	171.6	177.2	821.5	1823.0	2562.7
72.5°	227.9	200.6	201.0	223.8	203.7	172.0	141.2	146.1	521.4	1374.1	2037.5
75°	192.3	176.8	169.2	181.3	173.0	134.0	118.8	117.8	309.1	984.9	1525.7
77.5°	160.6	148.5	144.7	149.5	129.2	99.1	95.7	93.9	175.1	630.9	999.7
80°	116.4	113.3	112.9	115.3	99.5	72.9	72.9	73.2	94.3	342.6	563.6
82.5°	73.9	80.8	71.5	79.4	67.7	51.8	48.3	54.9	54.2	146.1	237.6
85°	30.7	42.1	39.4	41.8	32.1	28.3	30.4	32.8	31.4	56.3	92.5
87.5°	5.9	6.9	7.6	7.3	7.3	9.0	10.0	12.1	12.1	16.2	28.0
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°	358°	360°
0°	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9	562.9
2.5°	619.2	629.2	627.1	631.6	625.7	627.8	616.1	613.0	610.9	611.6
5°	682.7	703.1	706.9	714.5	709.3	709.3	688.6	673.1	667.5	663.4
7.5°	747.3	776.6	796.0	798.1	795.3	789.8	759.7	731.8	721.7	713.1
10°	804.6	839.8	861.6	872.0	866.8	858.1	820.9	782.5	770.4	762.8
12.5°	848.5	879.6	894.1	901.0	900.3	897.2	866.8	825.3	812.6	800.8
15°	876.8	892.3	886.8	886.5	891.3	903.7	894.4	861.9	847.1	836.4
17.5°	895.1	880.2	855.7	844.3	854.7	884.0	905.5	887.2	873.7	861.9
20°	901.7	848.8	813.3	792.2	804.3	846.8	899.6	905.5	894.1	884.4
22.5°	894.1	810.5	762.1	737.3	749.0	799.8	882.3	920.3	912.7	903.4
25°	875.4	770.4	712.4	690.0	702.7	754.5	851.6	934.1	934.5	926.9
27.5°	852.3	733.5	677.5	656.5	668.9	717.3	821.5	946.2	958.3	955.5
30°	828.8	711.4	661.0	646.1	655.4	698.3	790.8	958.6	982.8	987.6
32.5°	818.1	722.1	700.0	706.5	694.5	709.3	779.8	976.3	1012.5	1020.5
35°	832.2	817.1	873.0	898.9	856.1	799.8	793.9	1002.8	1054.3	1066.0
37.5°	901.0	1020.5	1104.0	1195.2	1120.9	997.0	864.0	1048.1	1114.0	1132.7
40°	1050.5	1198.0	1348.9	1466.6	1354.4	1187.6	997.3	1115.4	1196.2	1213.1
42.5°	1191.4	1364.4	1572.3	1724.6	1578.9	1343.3	1141.0	1228.7	1304.7	1314.0
45°	1329.5	1527.7	1842.7	2054.4	1856.5	1491.5	1287.7	1420.0	1477.3	1477.7
47.5°	1491.5	1711.8	2181.8	2483.3	2225.0	1655.5	1425.5	1722.9	1802.6	1763.6
50°	1685.2	1894.8	2530.9	2982.3	2674.2	1857.2	1600.6	2092.0	2200.8	2156.6
52.5°	1944.6	2096.5	2915.6	3468.9	3163.9	2086.8	1854.4	2579.6	2615.5	2533.0
55°	2309.6	2387.6	3409.5	4069.7	3710.6	2369.7	2225.7	3191.5	3091.1	2854.5
57.5°	3140.8	2848.3	4043.5	4755.2	4329.1	2883.5	3039.3	3866.3	3508.9	3110.1
60°	3836.3	3407.7	4630.2	5435.5	4859.2	3449.9	3803.1	3983.7	3493.4	3081.7
62.5°	3601.8	3550.3	4841.9	5510.4	5040.1	3728.5	3661.2	3687.8	3265.5	2893.5
65°	3160.1	3275.1	4653.0	5155.1	4839.5	3478.9	3311.7	3414.3	3004.7	2630.0
67.5°	2899.4	2984.0	4317.0	4586.3	4474.8	3208.8	3039.9	2965.7	2600.0	2281.6
70°	2632.8	2702.9	3845.3	3872.5	3906.0	2759.9	2485.7	2264.7	1938.0	1715.3
72.5°	2275.0	2278.8	3248.9	3090.7	3154.3	2159.7	2000.8	1693.2	1410.7	1208.7
75°	1908.6	1804.4	2571.7	2160.4	2287.8	1680.0	1661.4	1276.0	1064.0	898.2
77.5°	1455.2	1333.3	1878.6	1420.7	1606.8	1118.9	1249.1	865.4	748.7	597.8
80°	976.9	901.0	1038.1	801.9	1051.2	771.1	814.6	490.4	425.1	329.8
82.5°	515.2	440.0	641.6	475.5	634.0	423.7	305.6	151.6	129.2	104.3
85°	199.6	231.0	314.6	169.2	245.9	151.3	88.4	37.6	31.4	23.8
87.5°	38.7	59.7	32.8	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

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.

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
 Rf: 81.5
 Rg: 99.2

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



Test Conditions

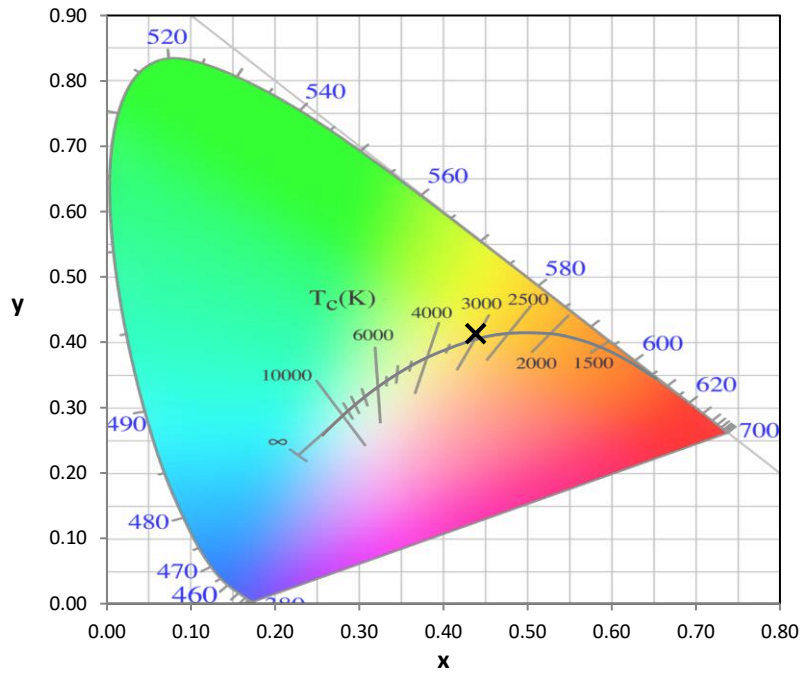
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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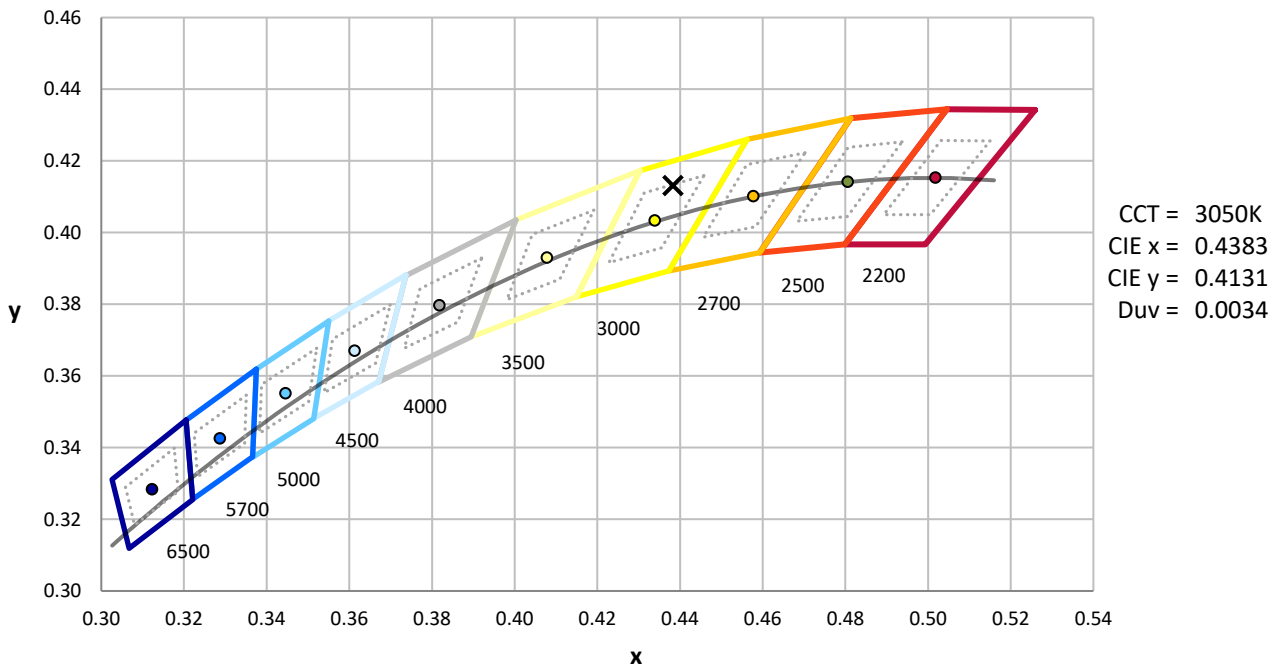
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



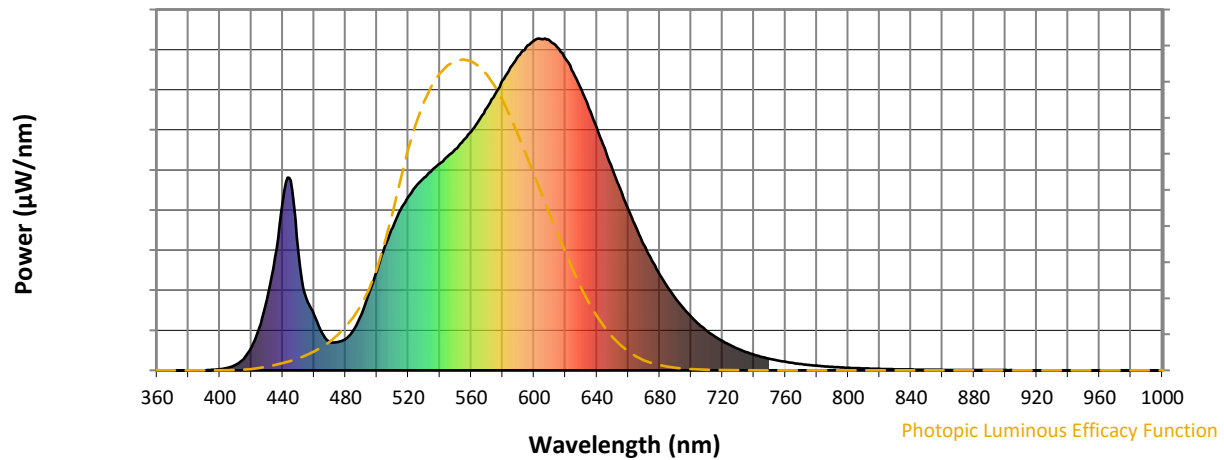
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

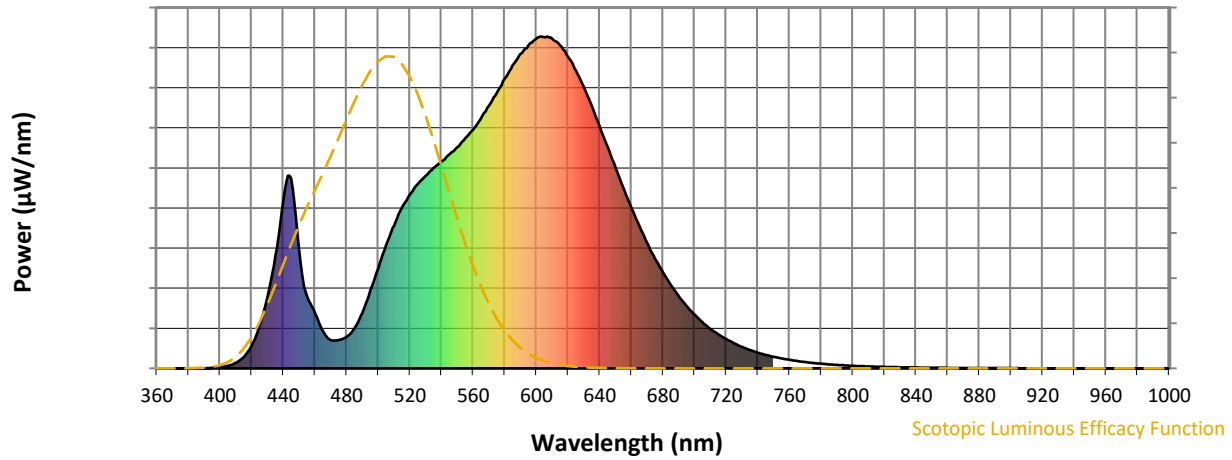


Photopic Lumens: NR

λ (nm)	Power 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



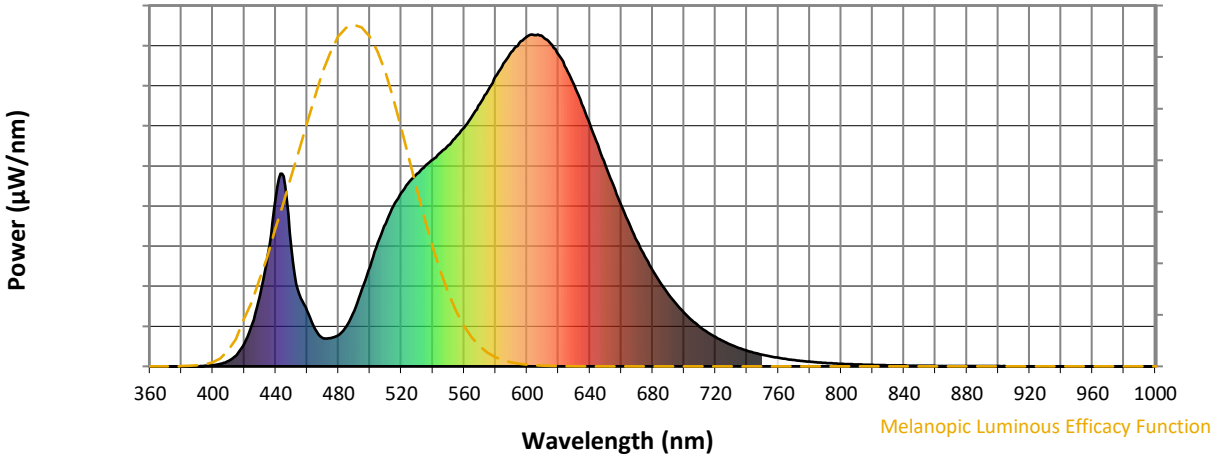
Scotopic Lumens: NR

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

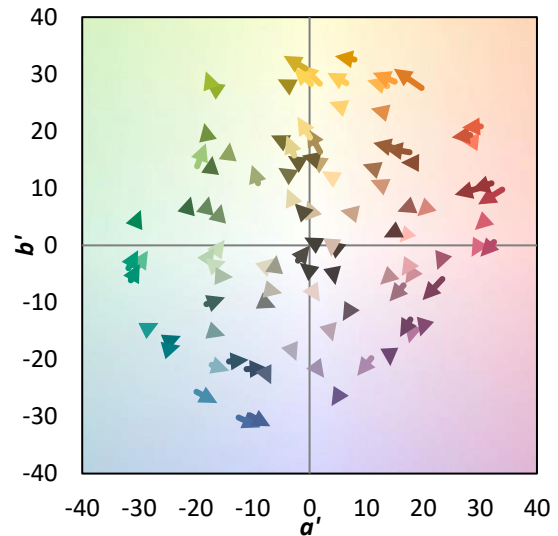
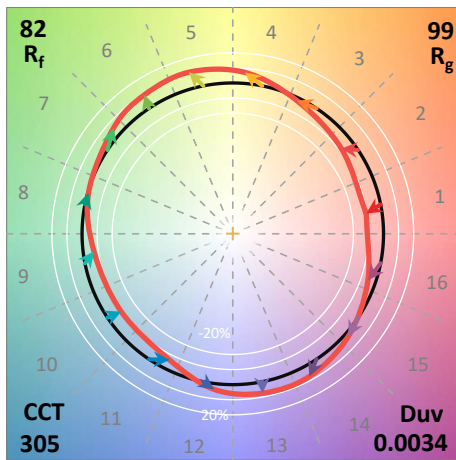
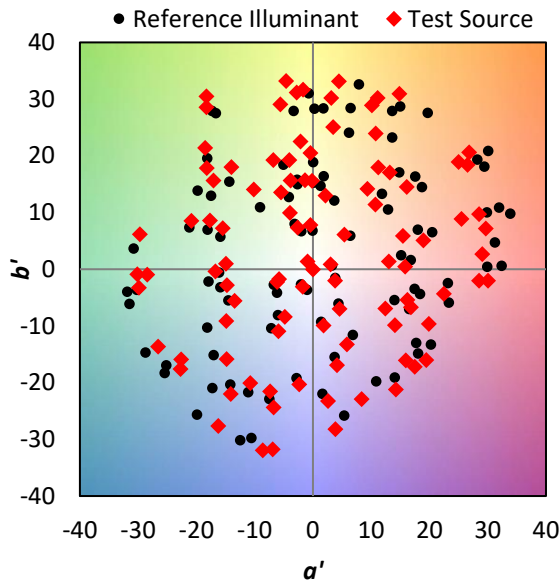
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	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			

Summary

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

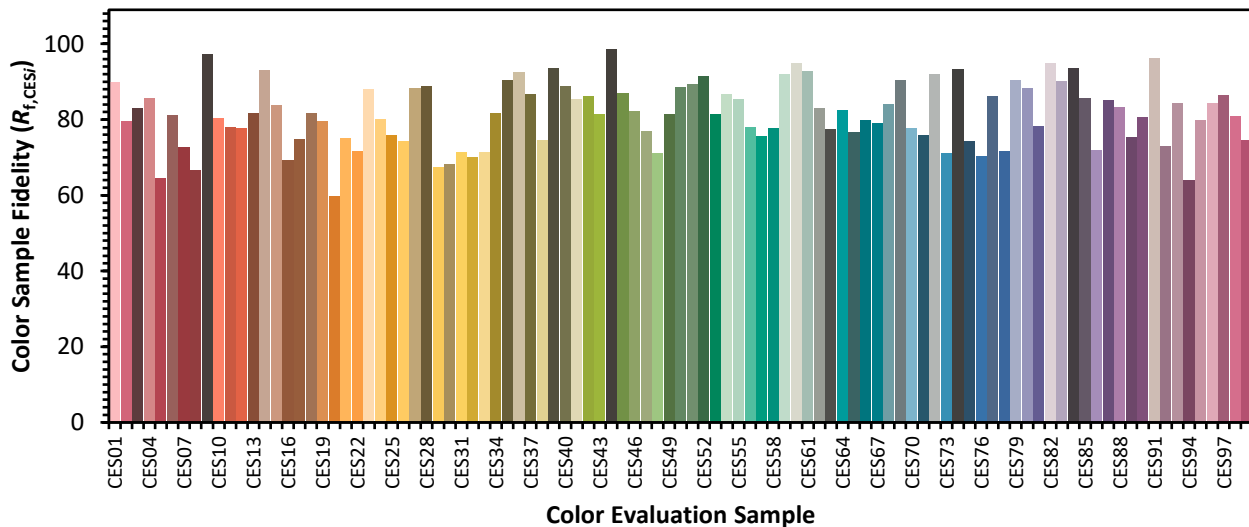


Color Vector Graphics

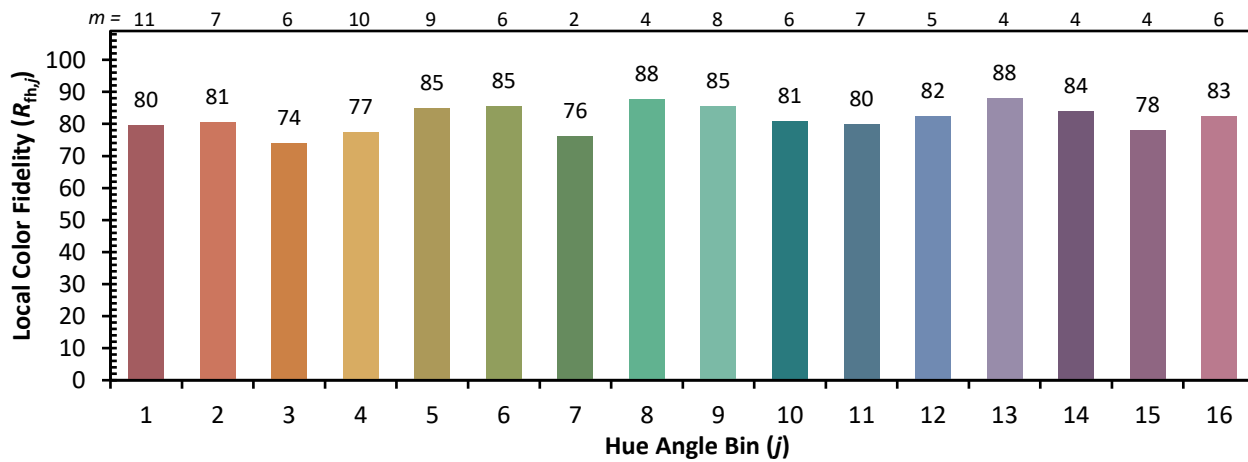
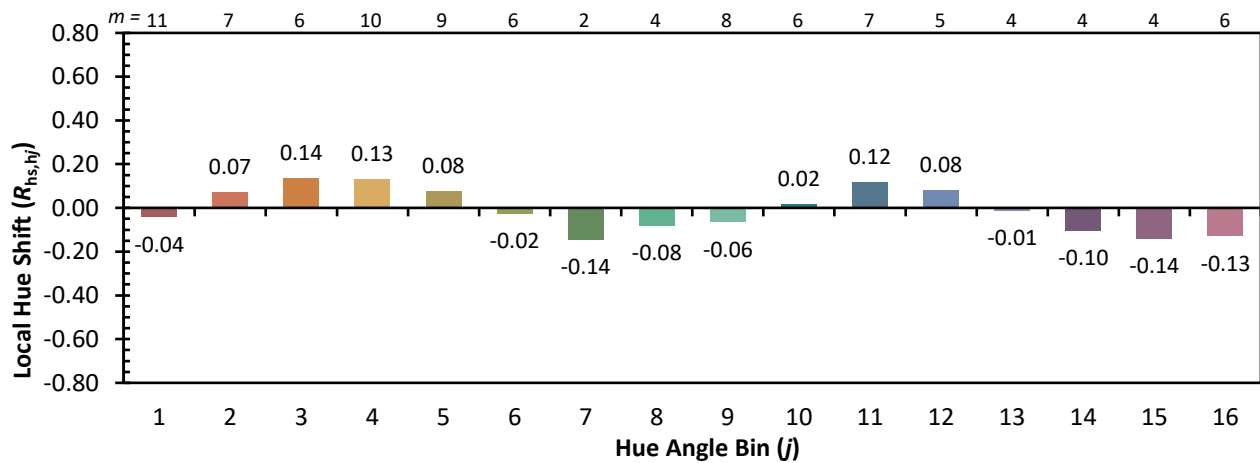
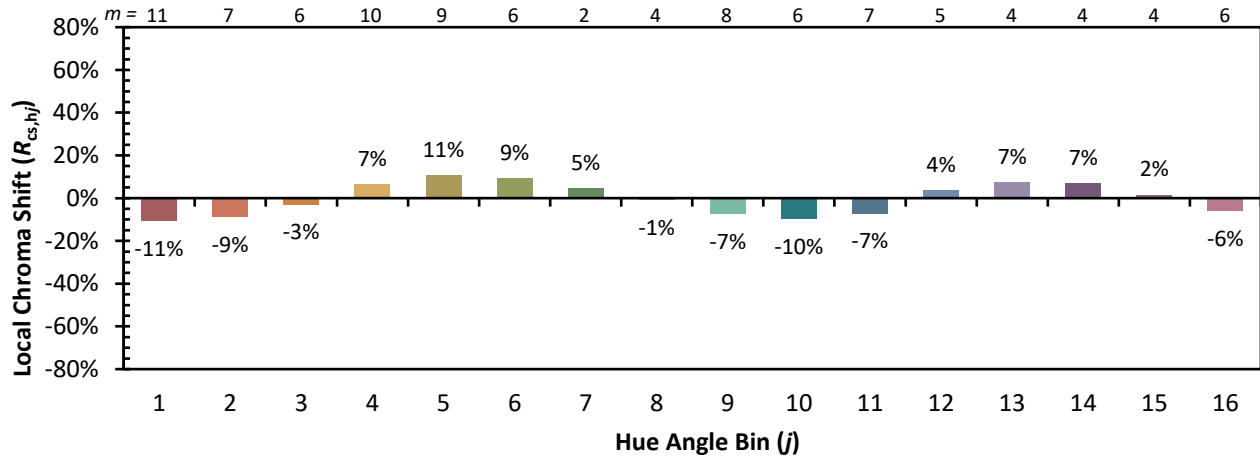


Individual Sample Fidelity Index ($R_{f,i}$)

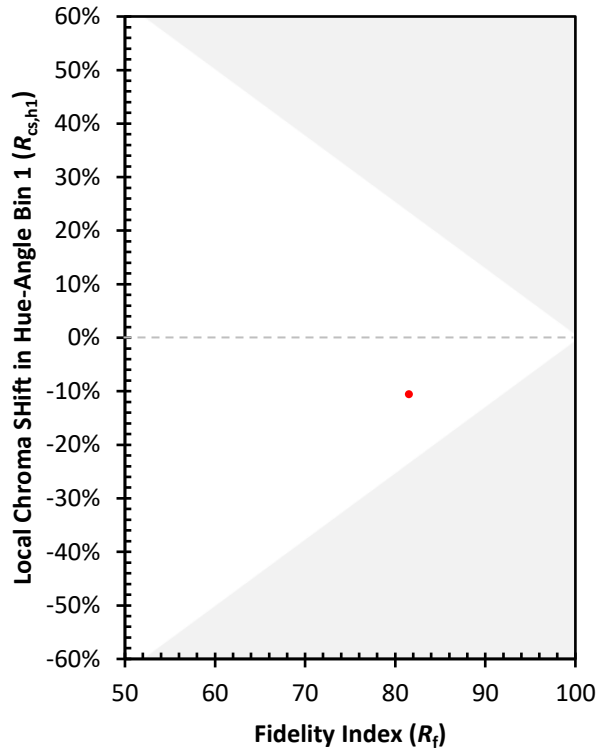
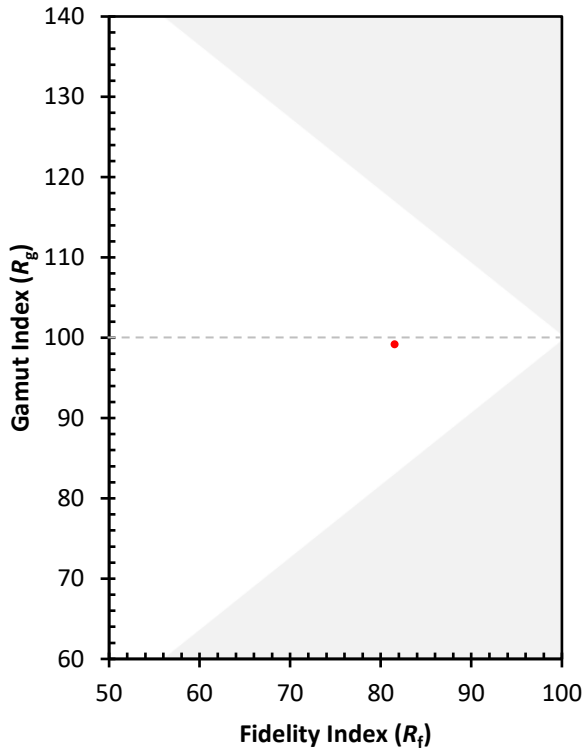
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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