

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: P636505

Luminaire Tested: GWS-SA3F-830-U-SLR-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636505
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-44)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3F-830-U-SLR-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12054 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

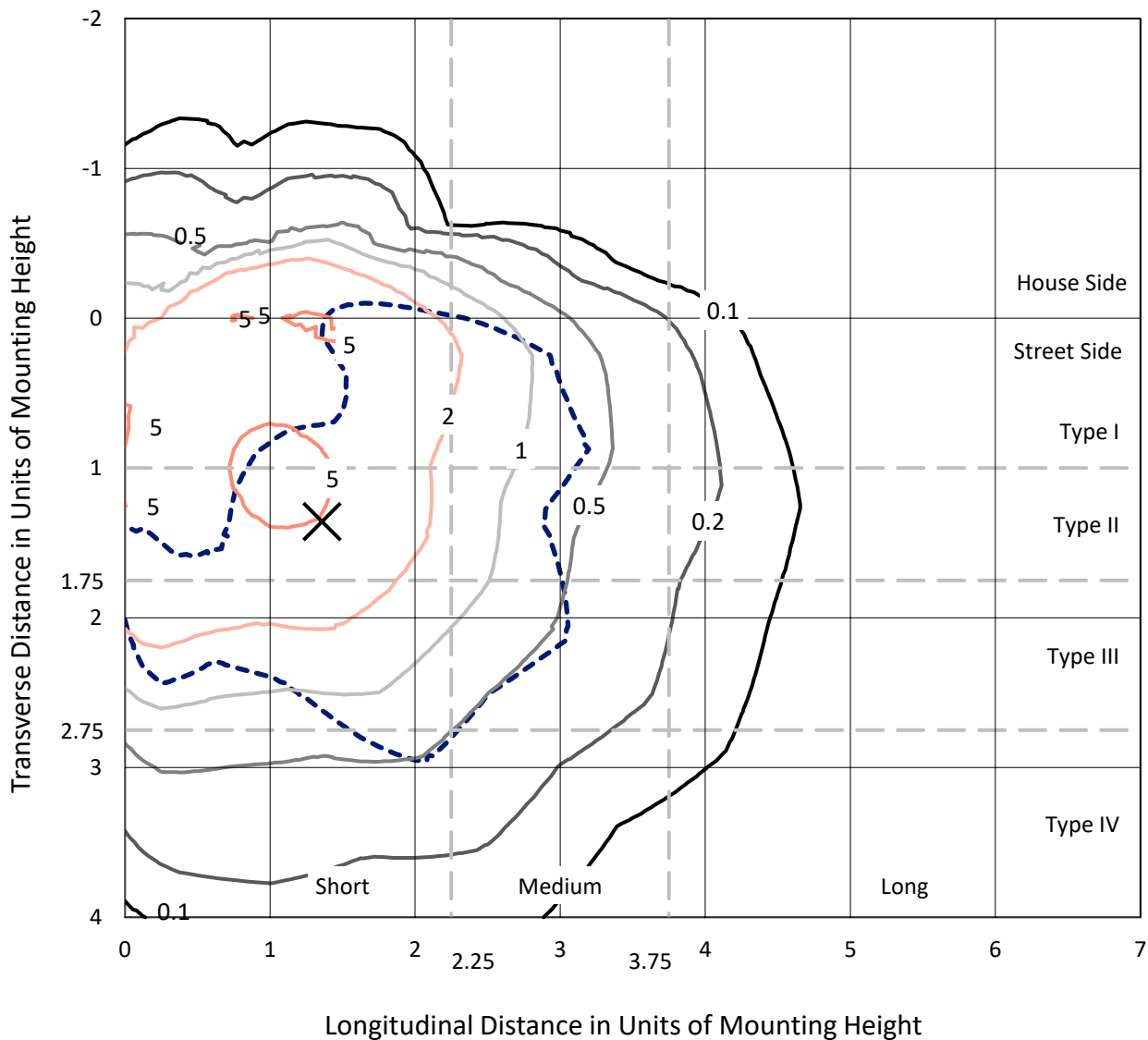
Input Watts (W): 183.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

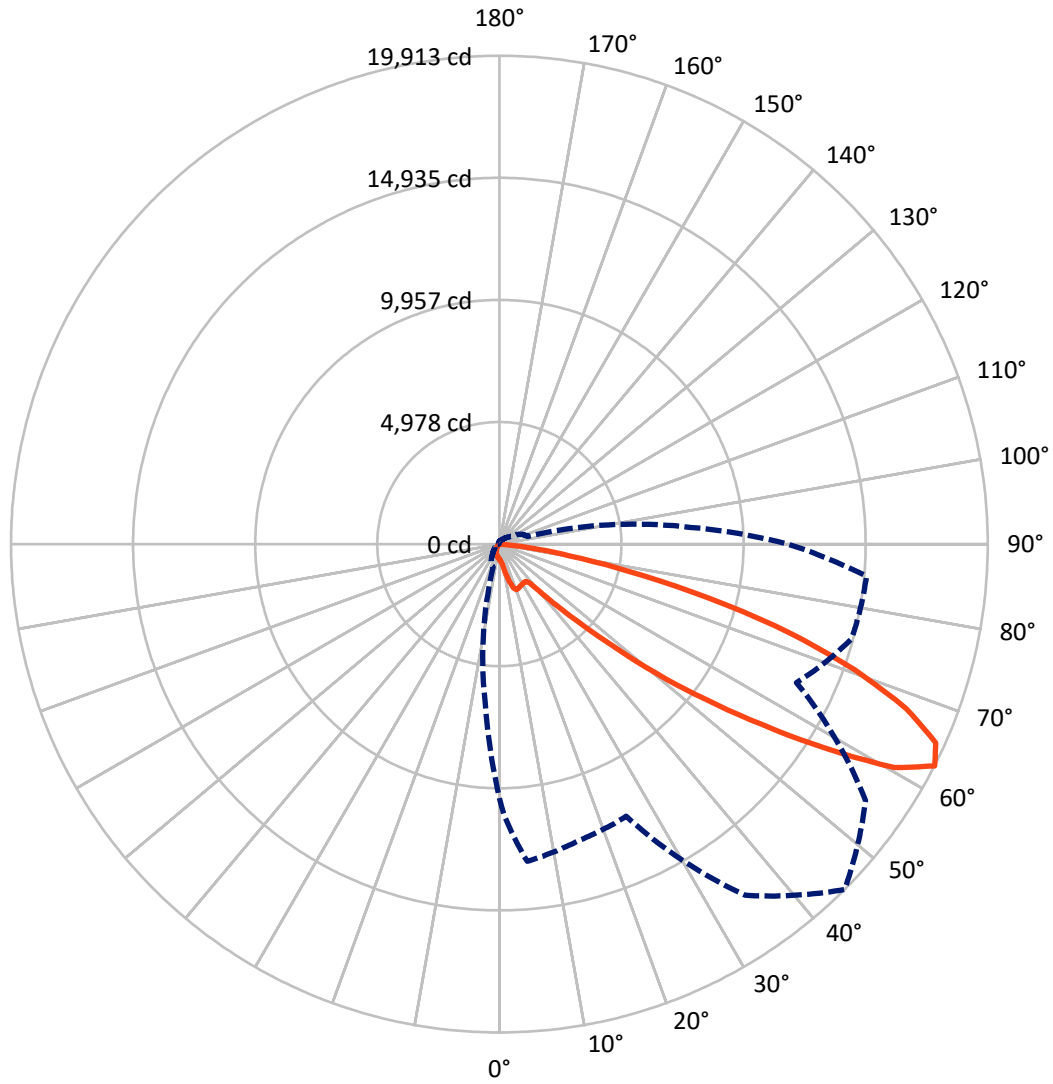
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1487.5	0.0	1487.5
	% Fixture	12.3	0.0	12.3
Street Side	Lumens	10566.6	0.0	10566.6
	% Fixture	87.7	0.0	87.7
Total	Lumens	12054.0	0.0	12054.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	0.5
10°-20°	210.2	1.7
20°-30°	456.8	3.8
30°-40°	749.8	6.2
40°-50°	1378.5	11.4
50°-60°	2960.3	24.6
60°-70°	3976.1	33.0
70°-80°	2070.4	17.2
80°-90°	196.3	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°	12054.0	100.0
0°-180°	12054.0	100.0

Coefficient of Utilization



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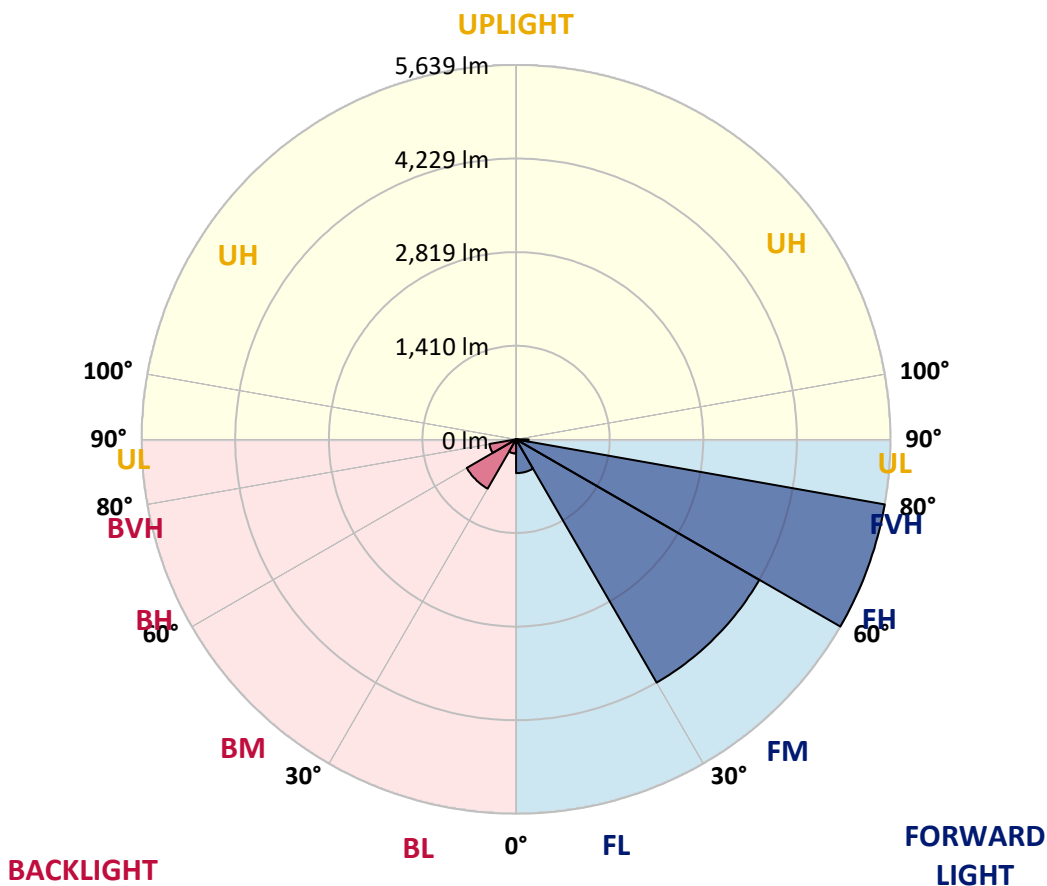
CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	509.2	4.2			
FM (30°-60°)	4230.8	35.1			
FH (60°-80°)	5639.0	46.8			G3/7500
FVH (80°-90°)	187.6	1.6			G2/225
BL (0°-30°)	213.4	1.8	B1/500		
BM (30°-60°)	857.8	7.1	B1/1000		
BH (60°-80°)	407.6	3.4	B1/500		G1/500
BVH (80°-90°)	8.8	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6
2.5°	639.1	641.9	644.7	654.4	661.4	666.9	668.3	664.1	654.4	644.7	630.7
5°	619.6	622.4	632.1	658.6	685.0	705.9	712.9	708.7	685.0	654.4	622.4
7.5°	618.2	623.8	647.4	703.1	760.2	803.4	814.5	804.8	760.2	699.0	633.5
10°	668.3	678.1	712.9	813.1	917.6	994.1	1024.8	983.0	912.0	800.6	693.4
12.5°	799.2	815.9	882.7	1028.9	1190.5	1292.1	1333.9	1282.4	1171.0	1009.5	839.6
15°	1005.3	1030.3	1130.6	1349.2	1539.9	1630.4	1644.4	1615.1	1485.6	1307.4	1079.1
17.5°	1296.3	1332.5	1488.4	1711.2	1849.0	1881.1	1876.9	1846.3	1751.6	1629.0	1413.2
20°	1644.4	1687.5	1840.7	2024.5	2038.4	2000.8	1979.9	1961.8	1929.8	1908.9	1740.4
22.5°	1995.2	2048.1	2208.3	2254.2	2128.9	2020.3	1968.8	1982.7	2030.0	2133.1	2064.8
25°	2344.7	2394.8	2545.2	2421.3	2170.7	1989.7	1924.2	1957.6	2070.4	2293.2	2380.9
27.5°	2752.7	2790.3	2879.4	2535.5	2177.6	1964.6	1900.6	1952.1	2089.9	2393.4	2727.6
30°	3177.3	3199.6	3156.4	2566.1	2154.0	1927.0	1876.9	1952.1	2123.3	2460.3	2988.0
32.5°	3489.2	3493.4	3352.8	2568.9	2141.4	1896.4	1854.6	1943.7	2155.4	2516.0	3240.0
35°	3810.9	3790.0	3540.7	2610.6	2174.8	1907.5	1871.3	1967.4	2205.5	2581.4	3461.4
37.5°	4136.7	4099.1	3751.0	2678.9	2261.2	2028.6	2006.4	2088.5	2286.2	2671.9	3705.0
40°	4470.8	4419.3	3969.6	2781.9	2453.3	2440.8	2517.4	2507.6	2507.6	2787.5	3955.7
42.5°	4878.8	4818.9	4292.6	3072.9	2901.6	3181.5	3390.4	3260.9	3021.4	3053.4	4281.5
45°	5417.6	5366.1	4852.3	3629.8	3604.8	4248.0	4529.3	4273.1	3677.2	3667.4	4825.9
47.5°	6279.5	6269.7	5744.8	4275.9	4465.3	5605.6	6148.6	5655.7	4424.9	4317.7	5856.2
50°	7490.8	7461.6	6857.3	5033.3	5488.6	7287.5	8256.6	7435.1	5328.5	5076.5	7236.0
52.5°	8855.3	8886.0	8415.3	5860.4	6576.1	9158.9	10508.0	9473.5	6310.1	6041.4	8972.3
55°	10140.5	10315.9	10192.0	6828.1	7638.4	11225.1	12980.8	11709.6	7525.6	7304.2	10918.8
57.5°	11145.7	11640.0	12508.8	8234.3	8887.3	13642.2	15741.9	14133.7	8944.4	9355.2	13568.4
60°	11201.4	11855.8	13873.3	11176.4	10494.1	15715.4	18498.7	16502.1	11175.0	12837.4	15644.4
62.5°	10361.8	11063.6	12985.0	12513.0	12244.3	17479.5	19913.3	18228.6	13369.3	14877.2	15029.0
65°	9401.1	10109.8	11993.7	10996.7	12041.0	17404.3	19554.1	18269.0	13568.4	13490.4	13927.6
67.5°	7948.9	8585.2	10290.8	9733.9	11098.4	16564.7	17894.4	17117.5	12500.5	12617.4	12812.4
70°	5801.9	6414.5	7997.6	8025.5	9692.1	15051.3	15375.7	15268.5	11511.9	11635.8	11078.9
72.5°	4191.0	4707.5	6073.4	6581.6	7737.3	12621.6	12397.4	12811.0	9877.3	10363.2	8898.5
75°	3013.0	3400.1	4455.5	5725.3	6133.3	9373.3	8874.8	9921.9	7925.2	8923.5	6690.2
77.5°	1222.5	1358.9	1753.0	3856.8	4030.8	6305.9	5432.9	7206.8	5650.1	5863.2	3242.8
80°	50.1	55.7	72.4	1991.1	2763.8	3547.7	2907.2	3852.6	3731.5	2361.4	765.8
82.5°	5.6	5.6	12.5	573.6	1209.9	1957.6	1370.1	2219.4	1889.4	1001.1	348.1
85°	1.4	1.4	2.8	65.4	284.0	313.3	185.2	680.9	878.6	409.3	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	12.5	13.9	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°	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6
2.5°	630.7	623.8	615.4	607.1	602.9	591.7	587.6	584.8	582.0	583.4	583.4
5°	609.8	594.5	576.4	558.3	548.6	537.4	531.9	529.1	530.5	536.1	536.1
7.5°	607.1	577.8	538.8	515.2	504.0	495.7	490.1	487.3	488.7	495.7	498.5
10°	653.0	601.5	531.9	491.5	479.0	470.6	465.0	460.9	458.1	463.7	465.0
12.5°	751.9	680.9	565.3	488.7	466.4	455.3	451.1	442.8	438.6	441.4	442.8
15°	956.5	834.0	632.1	499.9	455.3	442.8	435.8	428.8	421.9	420.5	421.9
17.5°	1223.9	1048.4	733.8	526.3	446.9	431.6	421.9	412.1	402.4	401.0	399.6
20°	1555.3	1311.6	875.8	568.1	440.0	421.9	408.0	394.0	381.5	377.3	377.3
22.5°	1857.4	1629.0	1058.2	619.6	430.2	408.0	391.2	374.5	360.6	353.7	352.3
25°	2226.4	1966.0	1276.8	679.5	416.3	389.9	371.8	355.0	341.1	332.8	330.0
27.5°	2598.1	2321.0	1524.6	757.4	399.6	371.8	355.0	339.7	324.4	314.7	311.9
30°	2958.7	2703.9	1803.1	854.9	387.1	353.7	339.7	324.4	310.5	295.2	291.0
32.5°	3345.8	3095.2	2115.0	963.5	377.3	341.1	325.8	311.9	293.8	279.9	272.9
35°	3719.0	3499.0	2458.9	1069.3	367.6	330.0	313.3	299.4	279.9	264.5	254.8
37.5°	4094.9	3909.7	2818.1	1133.4	353.7	314.7	299.4	288.2	265.9	247.8	236.7
40°	4493.1	4334.4	3206.6	1106.9	341.1	298.0	289.6	277.1	252.0	231.1	217.2
42.5°	4930.3	4739.5	3602.0	1005.3	330.0	284.0	275.7	263.2	239.5	214.4	196.3
45°	5480.3	5183.7	3926.4	852.1	335.6	270.1	253.4	250.6	228.3	196.3	174.0
47.5°	6425.7	5866.0	4178.4	753.3	373.1	254.8	235.3	242.3	218.6	178.2	153.2
50°	7872.3	6996.5	4413.7	746.3	430.2	247.8	218.6	236.7	208.9	160.1	135.1
52.5°	9250.7	8145.2	4564.1	807.6	480.4	265.9	201.9	229.7	201.9	147.6	122.5
55°	10569.3	8808.0	4295.4	852.1	527.7	320.2	189.4	218.6	193.5	140.6	118.3
57.5°	11990.9	9103.2	3382.0	942.6	561.1	366.2	192.1	201.9	182.4	136.4	117.0
60°	12415.5	8725.8	2041.2	1061.0	543.0	380.1	213.0	179.6	167.1	128.1	112.8
62.5°	11755.6	7830.6	1204.4	966.3	527.7	359.2	243.7	165.7	151.8	117.0	104.4
65°	10768.4	6615.0	785.3	815.9	559.7	320.2	259.0	158.7	137.8	105.8	91.9
67.5°	9640.6	5328.5	550.0	481.8	516.6	288.2	218.6	157.3	123.9	89.1	75.2
70°	8120.2	3990.5	387.1	318.8	430.2	256.2	169.9	153.2	108.6	72.4	58.5
72.5°	6273.9	2497.9	288.2	206.1	306.3	208.9	135.1	129.5	87.7	59.9	44.6
75°	4626.8	1424.4	203.3	149.0	201.9	158.7	100.2	91.9	75.2	57.1	40.4
77.5°	2415.7	712.9	126.7	114.2	115.6	98.9	72.4	66.8	69.6	57.1	37.6
80°	463.7	142.0	76.6	83.5	62.7	62.7	52.9	55.7	61.3	45.9	32.0
82.5°	193.5	30.6	41.8	47.3	39.0	43.2	43.2	44.6	43.2	33.4	23.7
85°	0.0	0.0	18.1	19.5	26.5	26.5	22.3	22.3	22.3	19.5	13.9
87.5°	0.0	0.0	0.0	0.0	1.4	4.2	8.4	9.7	11.1	8.4	5.6
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°	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6
2.5°	582.0	579.2	583.4	586.2	589.0	589.0	586.2	583.4	579.2	583.4	579.2
5°	537.4	541.6	548.6	551.4	554.2	548.6	545.8	537.4	530.5	531.9	529.1
7.5°	502.6	506.8	515.2	520.7	520.7	518.0	509.6	501.2	490.1	490.1	488.7
10°	470.6	476.2	485.9	492.9	495.7	492.9	484.5	473.4	463.7	463.7	459.5
12.5°	444.2	451.1	462.3	472.0	474.8	472.0	463.7	452.5	441.4	441.4	438.6
15°	421.9	430.2	442.8	453.9	458.1	453.9	444.2	430.2	419.1	420.5	416.3
17.5°	401.0	408.0	424.7	437.2	441.4	437.2	424.7	406.6	395.4	398.2	395.4
20°	377.3	385.7	402.4	416.3	420.5	416.3	402.4	382.9	371.8	371.8	373.1
22.5°	352.3	360.6	377.3	387.1	392.6	388.5	374.5	356.4	345.3	345.3	346.7
25°	330.0	334.2	346.7	356.4	357.8	353.7	342.5	328.6	320.2	324.4	325.8
27.5°	309.1	309.1	314.7	320.2	318.8	314.7	310.5	299.4	298.0	302.1	306.3
30°	286.8	279.9	277.1	272.9	271.5	270.1	274.3	274.3	277.1	282.6	286.8
32.5°	267.3	253.4	240.9	228.3	221.4	227.0	238.1	247.8	257.6	265.9	270.1
35°	245.1	222.8	201.9	185.2	174.0	182.4	200.5	218.6	235.3	246.4	253.4
37.5°	222.8	190.8	165.7	144.8	136.4	143.4	162.9	188.0	213.0	227.0	236.7
40°	199.1	158.7	129.5	112.8	104.4	111.4	130.9	155.9	189.4	207.5	220.0
42.5°	175.4	130.9	104.4	87.7	83.5	87.7	103.0	128.1	164.3	186.6	203.3
45°	151.8	108.6	83.5	71.0	66.8	71.0	83.5	104.4	140.6	165.7	185.2
47.5°	130.9	91.9	69.6	58.5	55.7	59.9	69.6	87.7	118.3	143.4	165.7
50°	114.2	80.8	59.9	50.1	47.3	51.5	59.9	73.8	100.2	122.5	146.2
52.5°	103.0	75.2	52.9	43.2	41.8	44.6	51.5	62.7	84.9	104.4	126.7
55°	100.2	75.2	48.7	39.0	37.6	40.4	45.9	54.3	73.8	90.5	110.0
57.5°	103.0	80.8	45.9	33.4	32.0	34.8	40.4	47.3	64.0	78.0	96.1
60°	103.0	82.1	40.4	26.5	25.1	27.8	33.4	41.8	57.1	68.2	83.5
62.5°	93.3	75.2	33.4	20.9	18.1	20.9	27.8	34.8	50.1	61.3	73.8
65°	80.8	64.0	27.8	15.3	12.5	15.3	22.3	29.2	43.2	52.9	66.8
67.5°	65.4	48.7	20.9	11.1	8.4	11.1	16.7	23.7	36.2	45.9	59.9
70°	48.7	34.8	16.7	9.7	8.4	9.7	15.3	22.3	32.0	41.8	55.7
72.5°	36.2	23.7	13.9	9.7	7.0	9.7	13.9	20.9	30.6	40.4	52.9
75°	30.6	19.5	12.5	8.4	7.0	8.4	12.5	19.5	27.8	37.6	50.1
77.5°	29.2	18.1	11.1	7.0	5.6	7.0	11.1	16.7	25.1	34.8	48.7
80°	25.1	15.3	9.7	5.6	4.2	5.6	9.7	13.9	19.5	26.5	37.6
82.5°	19.5	12.5	7.0	2.8	1.4	2.8	7.0	8.4	12.5	15.3	22.3
85°	12.5	7.0	2.8	0.0	0.0	0.0	2.8	5.6	5.6	7.0	11.1
87.5°	5.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	4.2
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°	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6	626.6
2.5°	587.6	589.0	591.7	595.9	605.7	614.0	622.4	633.5	639.1	639.1
5°	531.9	533.3	534.7	540.2	554.2	565.3	583.4	605.7	616.8	619.6
7.5°	488.7	491.5	494.3	498.5	512.4	527.7	551.4	593.1	614.0	618.2
10°	463.7	467.8	473.4	481.8	494.3	511.0	551.4	626.6	661.4	668.3
12.5°	444.2	451.1	456.7	466.4	481.8	508.2	589.0	721.2	782.5	799.2
15°	424.7	433.0	441.4	451.1	467.8	518.0	661.4	891.1	992.7	1005.3
17.5°	405.2	414.9	426.1	437.2	458.1	541.6	775.5	1126.4	1268.4	1296.3
20°	382.9	395.4	410.7	424.7	448.3	579.2	934.3	1406.3	1584.5	1644.4
22.5°	359.2	374.5	392.6	410.7	437.2	625.2	1126.4	1707.0	1956.2	1995.2
25°	339.7	355.0	371.8	389.9	419.1	680.9	1358.9	2080.2	2307.1	2344.7
27.5°	321.6	336.9	352.3	369.0	401.0	753.3	1638.8	2477.0	2713.7	2752.7
30°	302.1	320.2	335.6	352.3	384.3	842.4	1961.8	2917.0	3141.1	3177.3
32.5°	285.4	303.5	318.8	335.6	371.8	939.8	2301.5	3306.8	3489.2	3489.2
35°	271.5	291.0	302.1	324.4	362.0	1002.5	2623.2	3678.6	3816.4	3810.9
37.5°	256.2	279.9	288.2	303.5	349.5	1009.5	2925.3	4071.2	4172.9	4136.7
40°	240.9	265.9	278.5	286.8	335.6	952.4	3256.7	4431.8	4518.2	4470.8
42.5°	227.0	246.4	264.5	274.3	327.2	852.1	3522.6	4817.5	4920.6	4878.8
45°	213.0	229.7	240.9	259.0	332.8	782.5	3751.0	5267.2	5448.2	5417.6
47.5°	199.1	213.0	220.0	247.8	370.4	750.5	3890.2	5963.4	6304.5	6279.5
50°	183.8	200.5	200.5	245.1	426.1	761.6	4011.3	6971.5	7499.2	7490.8
52.5°	168.5	186.6	183.8	265.9	469.2	813.1	4149.2	7861.2	8778.7	8855.3
55°	153.2	169.9	172.7	307.7	494.3	857.7	3615.9	8235.7	9871.7	10140.5
57.5°	136.4	146.2	179.6	339.7	485.9	987.2	2477.0	8304.0	10569.3	11145.7
60°	118.3	126.7	203.3	332.8	459.5	912.0	1559.4	7691.3	10470.4	11201.4
62.5°	103.0	117.0	214.4	293.8	467.8	790.9	994.1	6555.2	9527.8	10361.8
65°	90.5	112.8	194.9	265.9	473.4	536.1	671.1	5332.7	8607.5	9401.1
67.5°	80.8	125.3	160.1	236.7	406.6	377.3	460.9	4143.6	7237.4	7948.9
70°	73.8	128.1	130.9	203.3	314.7	242.3	303.5	2788.9	4988.8	5801.9
72.5°	66.8	94.7	98.9	162.9	203.3	147.6	196.3	1595.6	3636.8	4191.0
75°	64.0	64.0	68.2	105.8	112.8	107.2	126.7	952.4	2607.9	3013.0
77.5°	59.9	48.7	43.2	68.2	61.3	76.6	75.2	423.3	1130.6	1222.5
80°	47.3	34.8	29.2	43.2	41.8	51.5	44.6	34.8	51.5	50.1
82.5°	29.2	22.3	20.9	26.5	23.7	26.5	20.9	5.6	5.6	5.6
85°	13.9	12.5	11.1	11.1	12.5	11.1	8.4	2.8	1.4	1.4
87.5°	7.0	7.0	5.6	4.2	5.6	5.6	4.2	1.4	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

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



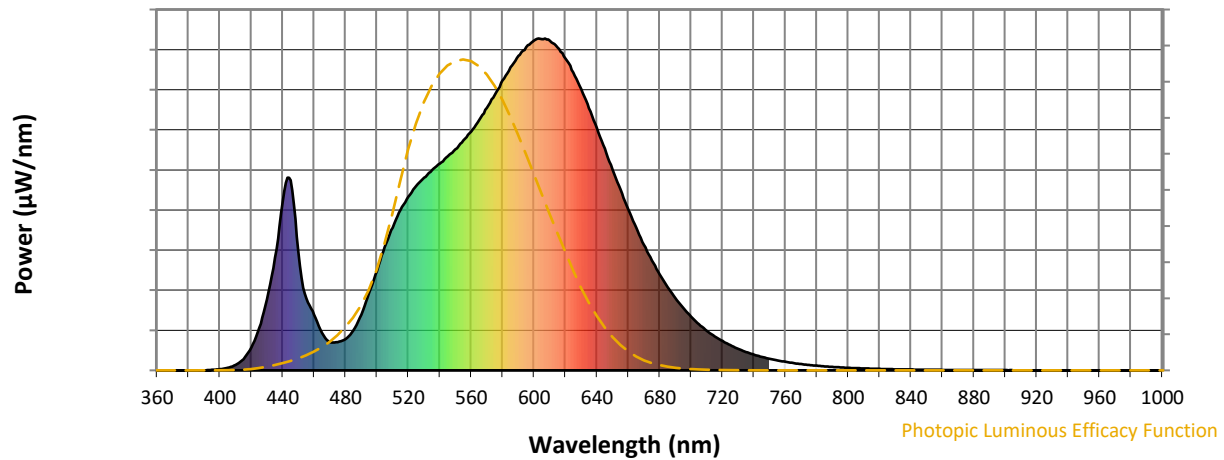
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

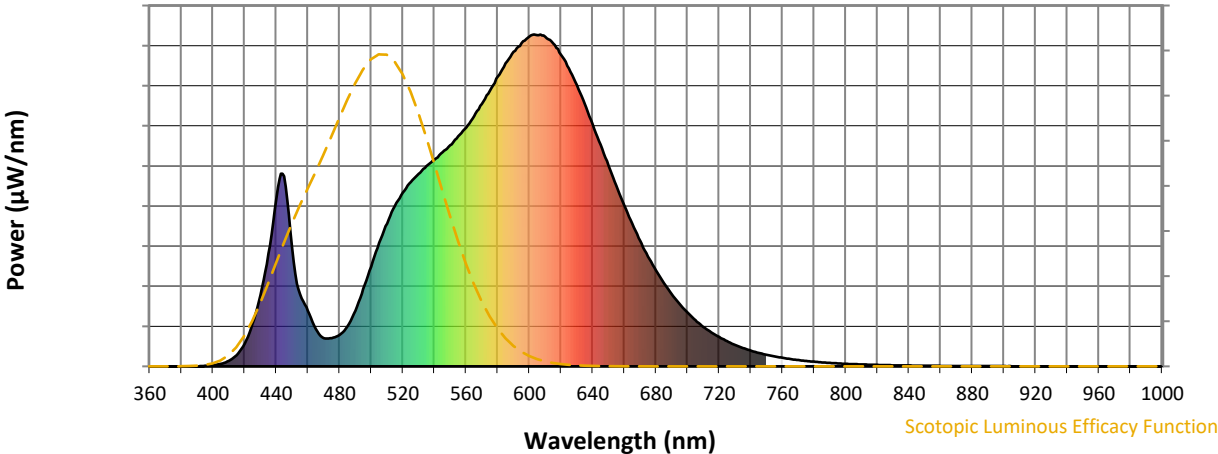


Photopic Lumens: NR

λ (nm)	Power 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

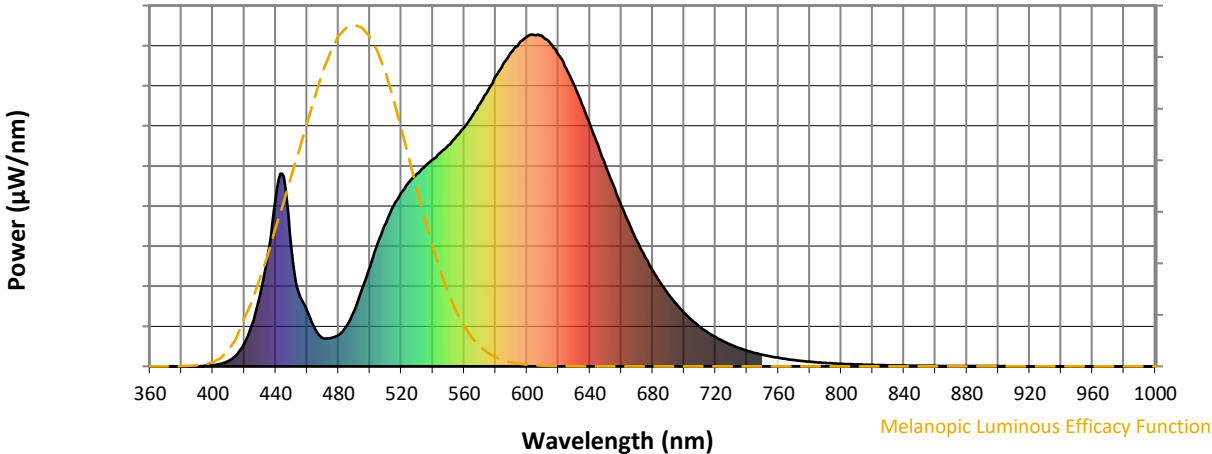


Scotopic Lumens: NR S/P: 1.27

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			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

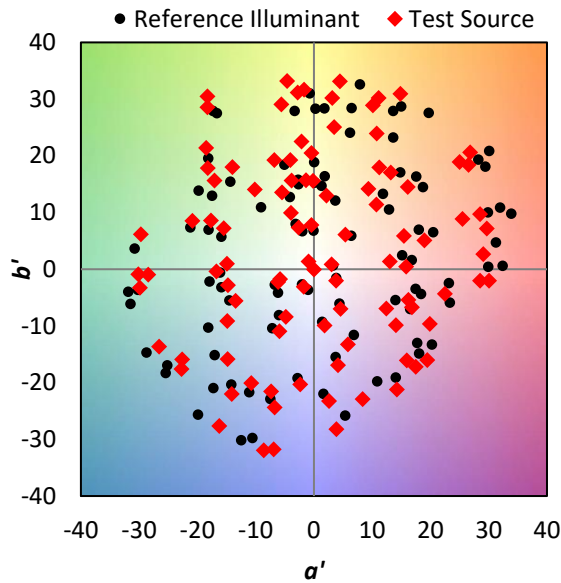
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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

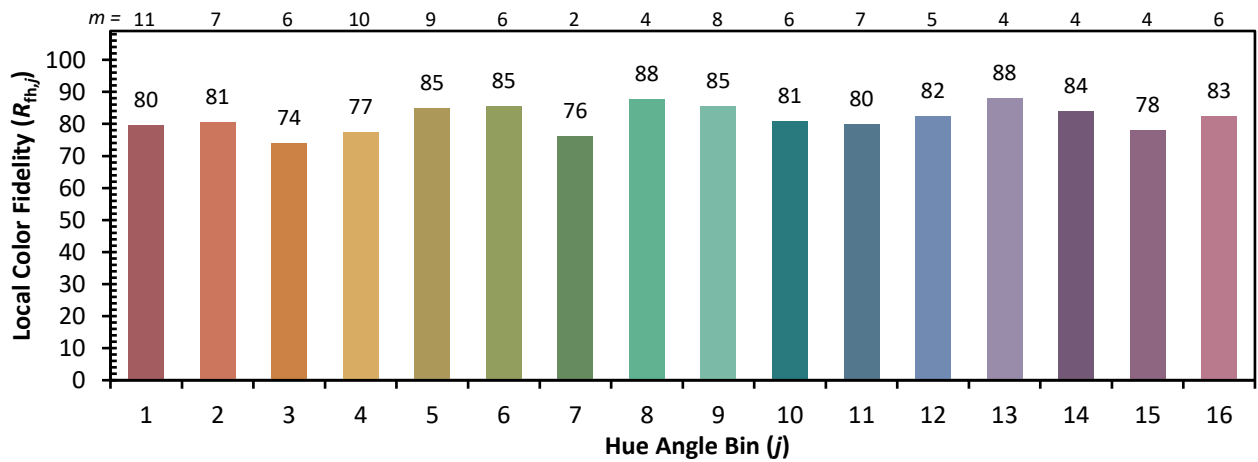
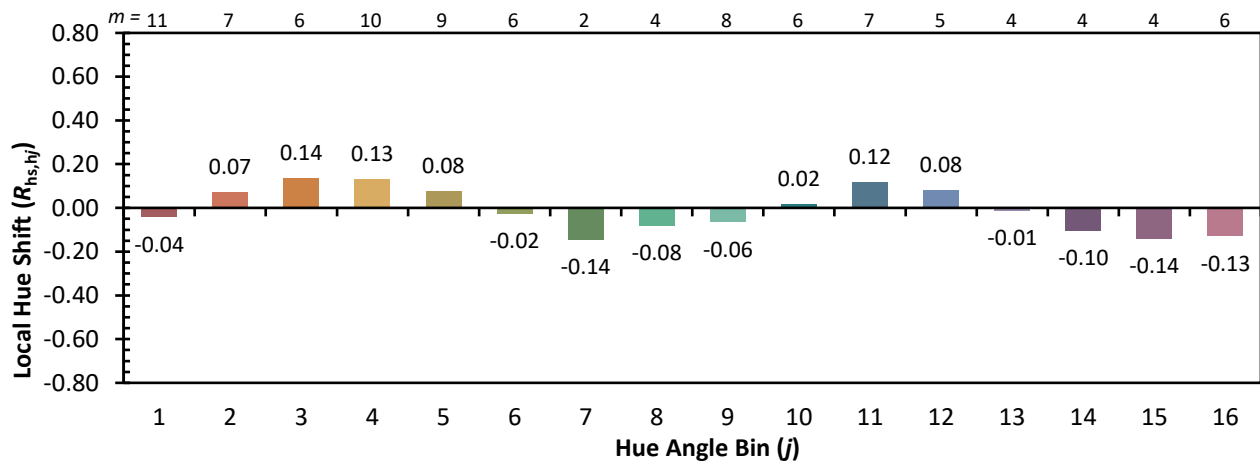
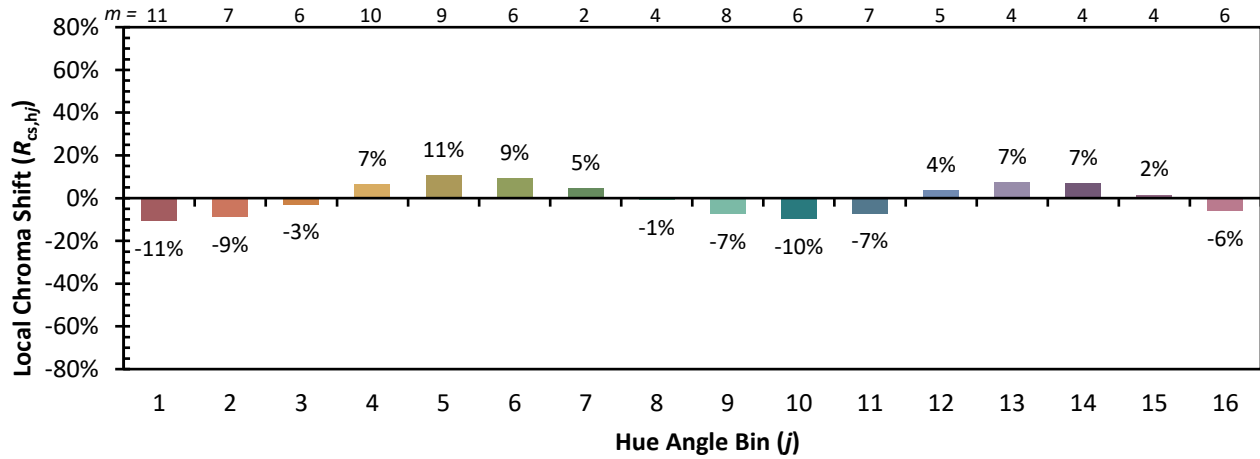


Individual Sample Fidelity Index ($R_{f,i}$)

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)