

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: P643433

Luminaire Tested: GWS-SA6E-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643433  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-SLR-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

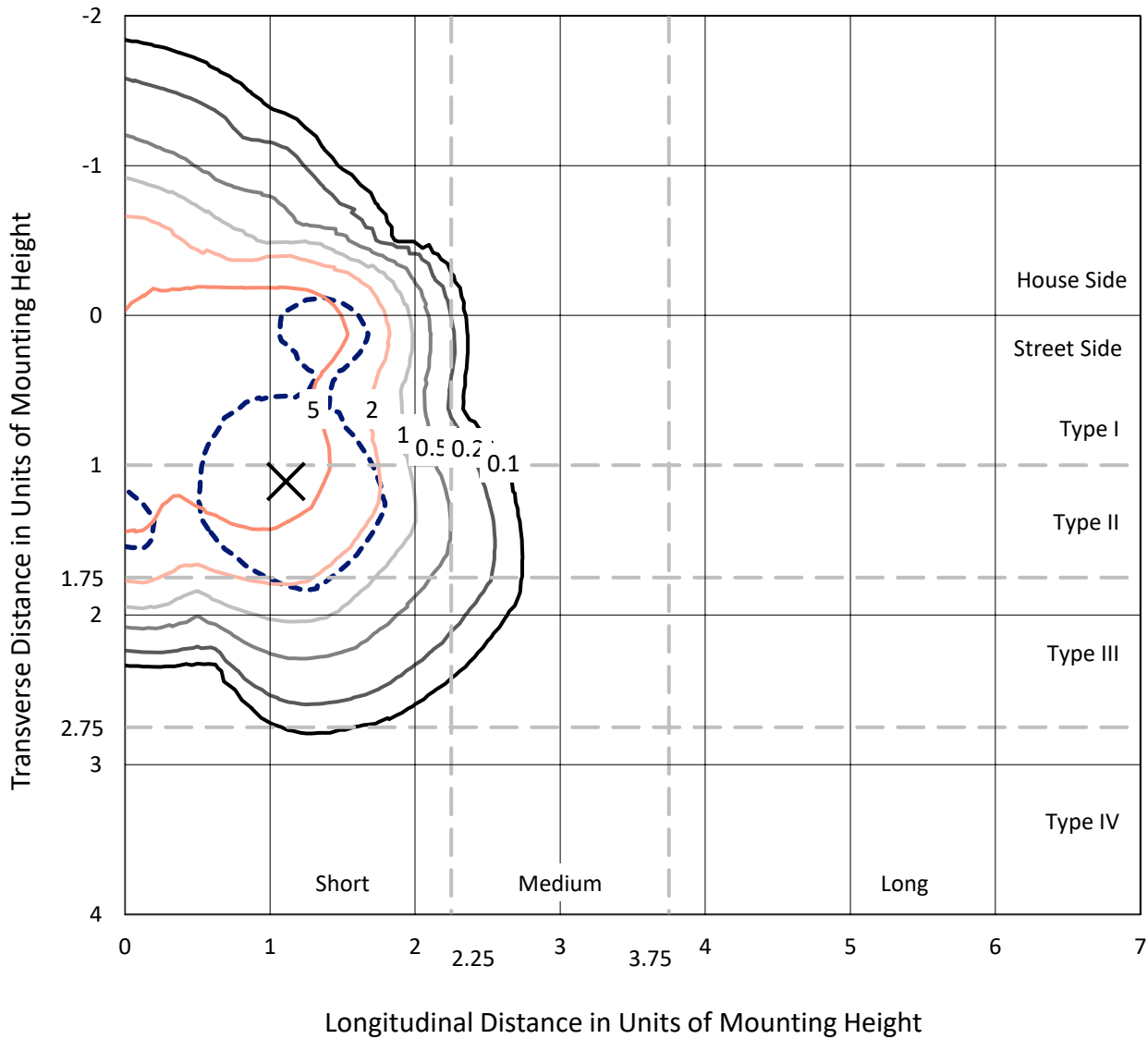
Lumens per Lamp: N/A  
Luminaire Lumens: 18971.3 lumens  
Efficiency: N/A  
Efficacy: 58.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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

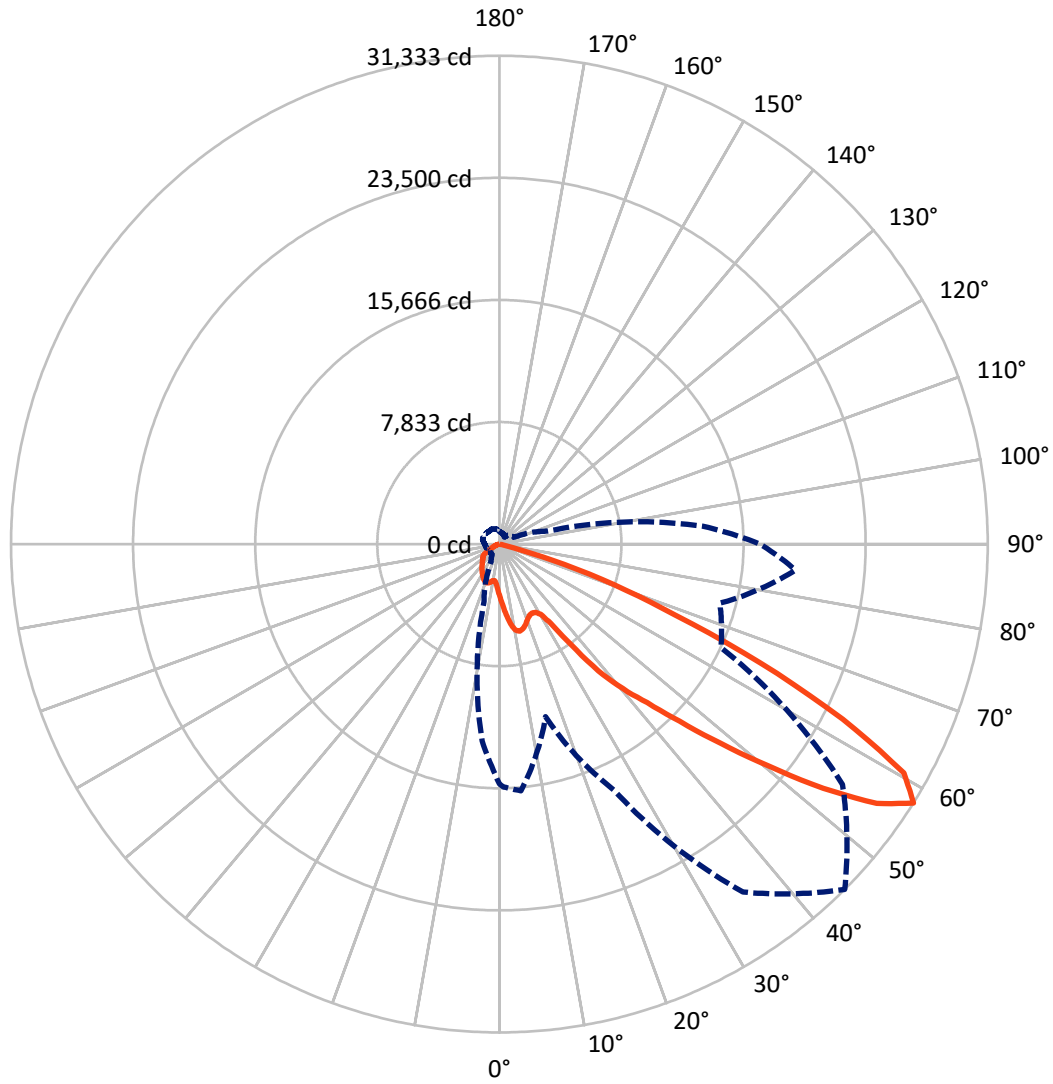
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4248.2	0.0	4248.2
	% Fixture	22.4	0.0	22.4
<b>Street Side</b>	Lumens	14723.1	0.0	14723.1
	% Fixture	77.6	0.0	77.6
<b>Total</b>	Lumens	18971.3	0.0	18971.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	328.0	1.7
10°-20°	1061.1	5.6
20°-30°	1723.8	9.1
30°-40°	2663.5	14.0
40°-50°	4270.9	22.5
50°-60°	5837.2	30.8
60°-70°	2827.1	14.9
70°-80°	258.9	1.4
80°-90°	0.7	0.0
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°	18971.3	100.0
0°-180°	18971.3	100.0

**Coefficient of Utilization**



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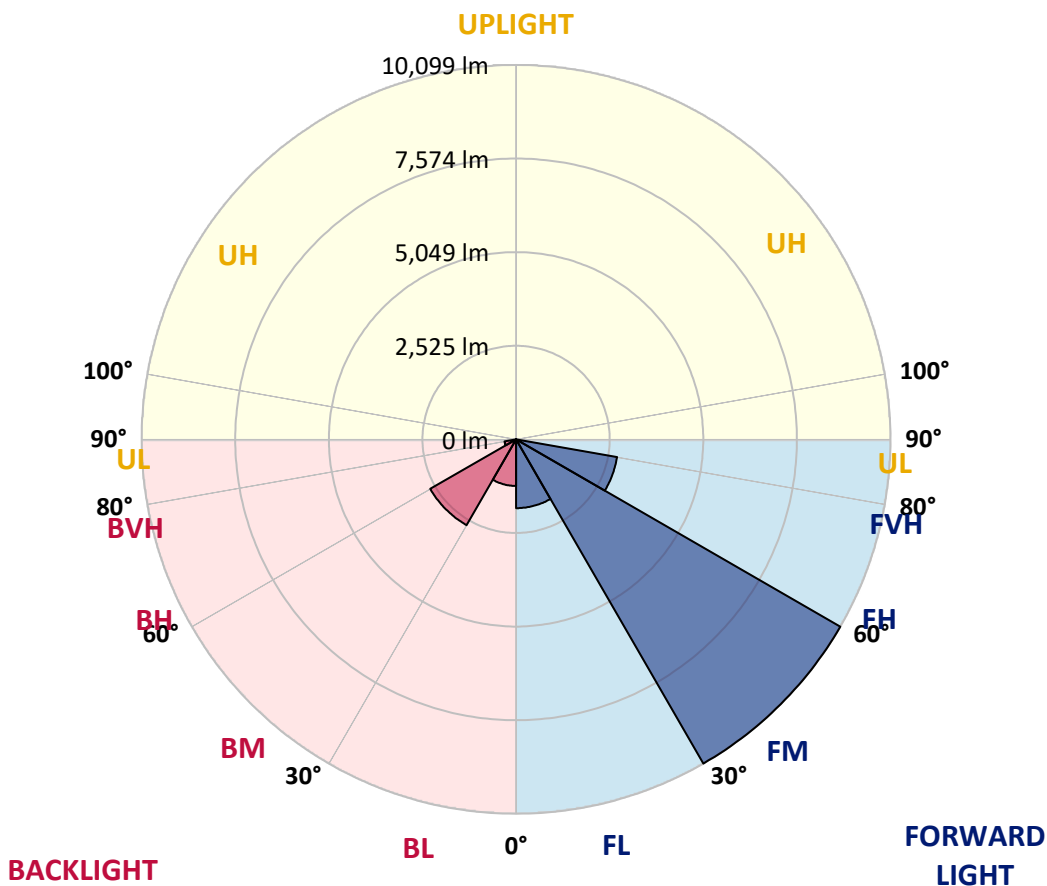
CATALOG NUMBER: GWS-SA6E-830-U-SLR-W-GRSBK

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1856.0	9.8			
FM (30°-60°)	10098.8	53.2			
FH (60°-80°)	2767.5	14.6			G2/5000
FVH (80°-90°)	0.7	0.0			G0/10
BL (0°-30°)	1257.0	6.6	B3/2500		
BM (30°-60°)	2672.8	14.1	B3/5000		
BH (60°-80°)	318.4	1.7	B1/500		G1/500
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4
2.5°	3612.3	3635.2	3673.5	3755.0	3823.9	3869.8	3890.1	3885.0	3857.0	3836.6	3795.8
5°	3999.8	3999.8	4073.7	4259.8	4402.5	4491.8	4537.7	4509.6	4453.5	4364.3	4226.6
7.5°	4338.8	4351.6	4476.5	4741.6	4958.3	5085.7	5159.7	5144.4	5045.0	4874.2	4598.8
10°	4603.9	4619.2	4784.9	5108.7	5363.6	5493.6	5603.2	5613.4	5503.8	5276.9	4960.8
12.5°	4861.4	4876.7	5050.1	5361.1	5585.4	5638.9	5735.8	5774.0	5746.0	5585.4	5256.5
15°	5139.3	5175.0	5322.8	5554.8	5649.1	5585.4	5649.1	5718.0	5812.3	5797.0	5501.3
17.5°	5412.0	5437.5	5587.9	5669.5	5565.0	5399.3	5429.9	5511.5	5725.6	5934.6	5743.4
20°	5664.4	5700.1	5825.0	5718.0	5401.8	5144.4	5146.9	5254.0	5580.3	6018.8	5990.7
22.5°	5929.5	5983.1	6072.3	5771.5	5251.4	4943.0	4955.7	5052.6	5465.6	6097.8	6271.1
25°	6276.2	6327.2	6385.9	5904.0	5203.0	4843.6	4892.0	4981.2	5465.6	6232.9	6617.8
27.5°	6745.3	6781.0	6783.5	6151.3	5287.1	4858.9	4960.8	5062.8	5628.7	6503.1	7081.8
30°	7334.2	7390.3	7316.3	6536.3	5549.7	5062.8	5213.2	5340.7	5980.5	6959.4	7765.0
32.5°	8050.5	8129.5	8030.1	7107.3	6097.8	5766.4	6039.2	6113.1	6541.4	7619.7	8540.0
35°	8891.8	8958.0	8851.0	7897.6	7377.5	7438.7	7933.2	7838.9	7668.1	8432.9	9444.9
37.5°	9814.6	9875.8	9669.3	9095.7	9269.0	9534.2	10324.4	10000.7	9450.0	9480.6	10426.4
40°	10660.9	10727.2	10403.5	10398.4	10755.3	11239.6	12193.0	11746.9	10997.4	10852.1	11346.7
42.5°	11537.9	11583.8	11290.6	11091.8	11902.4	12899.2	13908.7	13307.0	12022.2	11864.2	12498.9
45°	12789.6	12886.4	12363.8	11433.4	12934.9	14808.6	16215.7	15040.5	12720.7	12593.3	14263.0
47.5°	14630.1	14701.5	13635.9	11647.5	13895.9	17187.0	19098.9	17289.0	13335.1	13044.5	16674.6
50°	16152.0	16200.4	14806.0	11882.0	14918.2	19751.5	22384.9	19955.5	14025.9	13791.4	18925.6
52.5°	17273.7	17457.2	16343.2	12363.8	16261.6	22767.3	26022.7	23114.0	15104.3	15234.3	20791.6
55°	17505.7	17755.5	17393.5	12659.5	17444.5	25839.1	29382.6	25941.1	16180.0	16327.9	21418.7
57.5°	15384.7	15583.5	15884.3	11466.5	17416.4	27246.3	31332.7	26879.2	15690.6	14642.9	19070.9
60°	11525.1	11662.8	12208.3	8764.3	16016.9	26002.3	29813.4	25283.4	13720.0	11173.3	14530.7
62.5°	6834.5	6895.7	7586.5	5677.2	13294.3	22392.5	24725.1	21816.4	10841.9	7515.2	8899.4
65°	2623.2	2597.7	3125.4	2801.6	9776.3	17837.1	18390.2	16631.3	7438.7	3444.0	3393.0
67.5°	405.3	387.5	522.6	828.5	7051.2	12361.3	12134.4	11986.5	4660.0	803.0	701.0
70°	91.8	91.8	112.2	244.7	4308.2	7262.8	7772.6	7410.6	2982.6	170.8	91.8
72.5°	43.3	43.3	53.5	104.5	1560.1	2992.8	3487.4	3433.8	968.7	56.1	33.1
75°	15.3	17.8	17.8	22.9	94.3	155.5	356.9	254.9	61.2	0.0	0.0
77.5°	5.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	2.5	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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4
2.5°	3706.6	3688.8	3622.5	3533.3	3446.6	3370.1	3291.1	3196.8	3127.9	3048.9	3023.4
5°	4119.6	4007.4	3826.4	3637.8	3464.4	3316.6	3173.8	3020.9	2908.7	2796.5	2758.3
7.5°	4468.8	4303.1	4010.0	3727.0	3489.9	3280.9	3074.4	2865.3	2702.2	2569.6	2528.8
10°	4782.4	4591.2	4198.6	3849.4	3551.1	3308.9	3059.1	2796.5	2584.9	2426.9	2388.6
12.5°	5052.6	4830.8	4359.2	3941.1	3576.6	3298.7	3056.5	2847.5	2656.3	2475.3	2426.9
15°	5279.5	5034.8	4494.3	4002.3	3538.3	3171.3	2959.7	2926.5	2911.2	2712.4	2618.1
17.5°	5501.3	5225.9	4603.9	4030.4	3431.3	2946.9	2794.0	2944.4	3105.0	2975.0	2855.2
20°	5733.2	5419.7	4716.1	4035.5	3252.8	2694.5	2669.1	2906.1	3110.1	3069.3	2957.1
22.5°	6006.0	5661.9	4856.3	4032.9	3028.5	2480.4	2577.3	2832.2	2997.9	2995.4	2906.1
25°	6401.1	5967.8	5045.0	4048.2	2783.8	2314.7	2475.3	2707.3	2842.4	2837.3	2763.4
27.5°	6824.3	6332.3	5289.7	4086.4	2574.7	2217.8	2355.5	2536.5	2653.8	2648.7	2584.9
30°	7418.3	6752.9	5524.2	4089.0	2424.3	2166.9	2222.9	2347.9	2460.0	2447.3	2398.8
32.5°	8139.7	7227.1	5720.5	3943.7	2330.0	2118.4	2085.3	2149.0	2235.7	2217.8	2205.1
35°	9011.6	7790.5	5888.8	3625.0	2184.7	2021.5	1932.3	1945.1	2006.3	2016.5	2011.4
37.5°	10005.8	8460.9	6097.8	3204.4	1988.4	1881.3	1761.5	1751.3	1787.0	1820.2	1845.7
40°	10987.2	9215.5	6380.8	2778.7	1810.0	1702.9	1588.2	1562.7	1578.0	1636.6	1690.1
42.5°	12091.1	10089.9	6686.7	2414.1	1687.6	1506.6	1397.0	1348.5	1391.9	1486.2	1549.9
45°	13681.8	11316.1	6984.9	2123.5	1636.6	1333.3	1185.4	1180.3	1228.7	1351.1	1422.5
47.5°	15914.9	12901.7	7181.2	1896.6	1634.1	1198.1	1022.2	1052.8	1108.9	1228.7	1310.3
50°	18092.0	14887.6	6964.5	1723.3	1580.5	1108.9	899.9	961.1	1017.1	1121.7	1205.8
52.5°	19404.8	15955.7	6120.7	1560.1	1414.8	1068.1	780.1	887.1	897.3	991.7	1080.9
55°	19267.2	15264.9	4688.1	1307.8	1170.1	1009.5	655.2	800.5	805.6	876.9	953.4
57.5°	16723.0	13105.7	3219.7	1060.5	879.5	833.6	540.4	675.5	724.0	767.3	823.4
60°	12463.2	9562.2	1435.2	861.6	558.3	563.4	461.4	509.8	583.8	634.8	683.2
62.5°	7344.4	5501.3	583.8	517.5	308.5	354.3	372.2	372.2	418.1	456.3	486.9
65°	2776.1	1924.7	237.1	260.0	160.6	165.7	219.2	270.2	305.9	339.0	379.8
67.5°	486.9	336.5	122.4	96.9	94.3	84.1	112.2	175.9	196.3	221.8	239.6
70°	81.6	68.8	51.0	48.4	43.3	45.9	73.9	124.9	137.7	145.3	153.0
72.5°	22.9	20.4	15.3	12.7	10.2	12.7	45.9	96.9	102.0	107.1	114.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	17.8	68.8	73.9	76.5	84.1
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	20.4	25.5	20.4
80°	0.0	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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4
2.5°	3008.1	2957.1	2929.1	2913.8	2913.8	2893.4	2870.4	2862.8	2895.9	2895.9	2952.0
5°	2709.8	2669.1	2623.2	2595.1	2551.8	2559.4	2533.9	2531.4	2564.5	2579.8	2638.5
7.5°	2503.4	2452.4	2424.3	2406.5	2383.5	2373.3	2350.4	2342.8	2360.6	2386.1	2442.2
10°	2365.7	2358.0	2355.5	2368.2	2368.2	2355.5	2335.1	2322.4	2327.5	2375.9	2439.6
12.5°	2401.4	2416.7	2421.8	2442.2	2452.4	2442.2	2426.9	2432.0	2465.1	2554.3	2648.7
15°	2556.9	2544.1	2539.0	2549.2	2556.9	2546.7	2541.6	2579.8	2694.5	2822.0	2929.1
17.5°	2722.6	2641.0	2605.3	2605.3	2610.4	2605.3	2610.4	2684.4	2870.4	2997.9	3076.9
20°	2806.7	2656.3	2600.2	2587.5	2597.7	2600.2	2618.1	2702.2	2906.1	2995.4	3013.2
22.5°	2781.2	2592.6	2528.8	2518.7	2528.8	2539.0	2556.9	2628.3	2819.5	2865.3	2857.7
25°	2653.8	2467.7	2416.7	2416.7	2439.6	2437.1	2444.7	2495.7	2653.8	2681.8	2669.1
27.5°	2493.2	2317.3	2273.9	2299.4	2319.8	2314.7	2317.3	2360.6	2477.9	2485.5	2472.8
30°	2330.0	2177.1	2136.3	2166.9	2194.9	2189.8	2192.3	2235.7	2309.6	2302.0	2284.1
32.5°	2164.3	2052.1	2021.5	2039.4	2082.7	2077.6	2087.8	2133.7	2161.8	2128.6	2108.2
35°	2011.4	1952.7	1929.8	1940.0	1973.1	1980.8	1998.6	2029.2	2029.2	1988.4	1952.7
37.5°	1868.6	1860.9	1845.7	1832.9	1863.5	1886.4	1911.9	1947.6	1896.6	1838.0	1804.9
40°	1736.0	1769.2	1748.8	1715.6	1733.5	1766.6	1817.6	1845.7	1784.5	1725.8	1669.8
42.5°	1613.7	1669.8	1662.1	1621.3	1636.6	1667.2	1725.8	1748.8	1677.4	1611.1	1557.6
45°	1496.4	1575.4	1580.5	1529.5	1544.8	1575.4	1644.3	1651.9	1560.1	1488.8	1450.5
47.5°	1394.4	1481.1	1483.7	1445.4	1450.5	1493.9	1557.6	1560.1	1455.6	1389.3	1340.9
50°	1297.6	1397.0	1404.6	1371.5	1376.6	1427.6	1481.1	1470.9	1358.7	1289.9	1246.6
52.5°	1180.3	1315.4	1333.3	1318.0	1338.4	1379.1	1412.3	1376.6	1246.6	1177.8	1139.5
55°	1052.8	1228.7	1267.0	1256.8	1279.7	1312.9	1320.5	1297.6	1134.4	1065.6	1029.9
57.5°	905.0	1012.0	1078.3	1057.9	1075.8	1108.9	1131.9	1114.0	991.7	938.1	907.5
60°	749.5	820.9	836.2	803.0	787.7	846.3	899.9	876.9	772.4	739.3	703.6
62.5°	548.1	629.7	639.9	596.5	578.7	642.4	688.3	665.4	550.6	514.9	486.9
65°	438.5	514.9	535.3	494.6	484.4	532.8	560.8	504.8	423.2	384.9	354.3
67.5°	288.1	349.2	402.8	400.2	379.8	395.1	374.7	328.9	270.2	249.8	229.4
70°	178.4	214.1	247.3	260.0	257.5	252.4	224.3	191.2	173.3	165.7	155.5
72.5°	137.7	173.3	198.8	206.5	209.0	201.4	178.4	147.9	130.0	119.8	112.2
75°	102.0	130.0	150.4	160.6	165.7	160.6	137.7	117.3	99.4	91.8	84.1
77.5°	35.7	43.3	53.5	58.6	56.1	53.5	48.4	48.4	38.2	35.7	30.6
80°	0.0	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



REPORT NUMBER: P643433

CATALOG NUMBER: GWS-SA6E-830-U-SLR-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4	3334.4
2.5°	3015.8	3061.6	3145.8	3222.2	3303.8	3387.9	3479.7	3574.0	3617.4	3612.3
5°	2727.7	2827.1	2964.8	3115.2	3283.4	3464.4	3665.8	3872.3	3961.5	3999.8
7.5°	2546.7	2686.9	2867.9	3059.1	3280.9	3538.3	3841.7	4165.5	4295.5	4338.8
10°	2569.6	2732.8	2883.2	3069.3	3306.4	3640.3	4017.6	4402.5	4555.5	4603.9
12.5°	2755.7	2791.4	2832.2	2985.2	3283.4	3716.8	4178.2	4637.1	4813.0	4861.4
15°	2924.0	2758.3	2681.8	2822.0	3201.8	3770.3	4341.4	4889.4	5083.2	5139.3
17.5°	2931.6	2681.8	2511.0	2620.6	3069.3	3793.3	4502.0	5146.9	5358.5	5412.0
20°	2837.3	2597.7	2378.4	2381.0	2888.3	3788.2	4634.5	5378.9	5616.0	5664.4
22.5°	2699.6	2498.3	2271.4	2192.3	2694.5	3778.0	4779.8	5626.2	5883.7	5929.5
25°	2546.7	2370.8	2169.4	2049.6	2500.8	3788.2	4983.8	5949.9	6232.9	6276.2
27.5°	2381.0	2230.6	2090.4	1993.5	2337.7	3826.4	5228.5	6362.9	6699.4	6745.3
30°	2207.6	2095.5	2039.4	1980.8	2235.7	3836.6	5493.6	6844.7	7270.4	7334.2
32.5°	2036.8	1975.7	1978.2	1988.4	2138.8	3765.2	5735.8	7380.1	7948.5	8050.5
35°	1878.8	1860.9	1911.9	1962.9	1998.6	3581.7	5947.4	8012.3	8787.2	8891.8
37.5°	1743.7	1759.0	1822.7	1873.7	1845.7	3321.7	6227.8	8802.5	9725.4	9814.6
40°	1613.7	1651.9	1725.8	1748.8	1728.4	3018.3	6564.3	9564.8	10538.6	10660.9
42.5°	1493.9	1521.9	1626.4	1631.5	1695.2	2709.8	6888.1	10385.6	11474.1	11537.9
45°	1397.0	1391.9	1499.0	1532.1	1738.6	2368.2	7204.2	11479.2	12697.8	12789.6
47.5°	1302.7	1297.6	1323.1	1473.5	1756.4	2052.1	7517.7	13080.2	14472.1	14630.1
50°	1213.4	1221.1	1142.1	1445.4	1659.6	1810.0	7660.5	14561.3	16085.7	16152.0
52.5°	1134.4	1106.4	968.7	1353.6	1453.1	1580.5	7255.1	15234.3	17085.0	17273.7
55°	1022.2	866.7	797.9	1098.7	1147.2	1379.1	5942.3	14844.2	17171.7	17505.7
57.5°	874.4	680.6	678.1	810.7	810.7	1279.7	3806.0	12682.5	14798.4	15384.7
60°	673.0	527.7	560.8	563.4	520.0	933.0	2136.3	9187.5	10941.4	11525.1
62.5°	479.3	402.8	423.2	336.5	298.3	466.5	1024.8	5289.7	6752.9	6834.5
65°	321.2	272.8	221.8	186.1	183.5	198.8	423.2	1911.9	2324.9	2623.2
67.5°	211.6	165.7	117.3	117.3	132.6	132.6	160.6	316.1	443.6	405.3
70°	137.7	114.7	73.9	71.4	86.7	86.7	81.6	86.7	91.8	91.8
72.5°	102.0	86.7	43.3	38.2	48.4	51.0	45.9	43.3	43.3	43.3
75°	76.5	61.2	25.5	17.8	22.9	30.6	25.5	17.8	17.8	15.3
77.5°	30.6	22.9	10.2	7.6	12.7	17.8	15.3	7.6	5.1	5.1
80°	2.5	5.1	5.1	5.1	7.6	10.2	12.7	5.1	2.5	2.5
82.5°	0.0	2.5	2.5	2.5	5.1	7.6	10.2	5.1	2.5	2.5
85°	0.0	0.0	0.0	0.0	5.1	7.6	5.1	2.5	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	2.5	7.6	5.1	2.5	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**

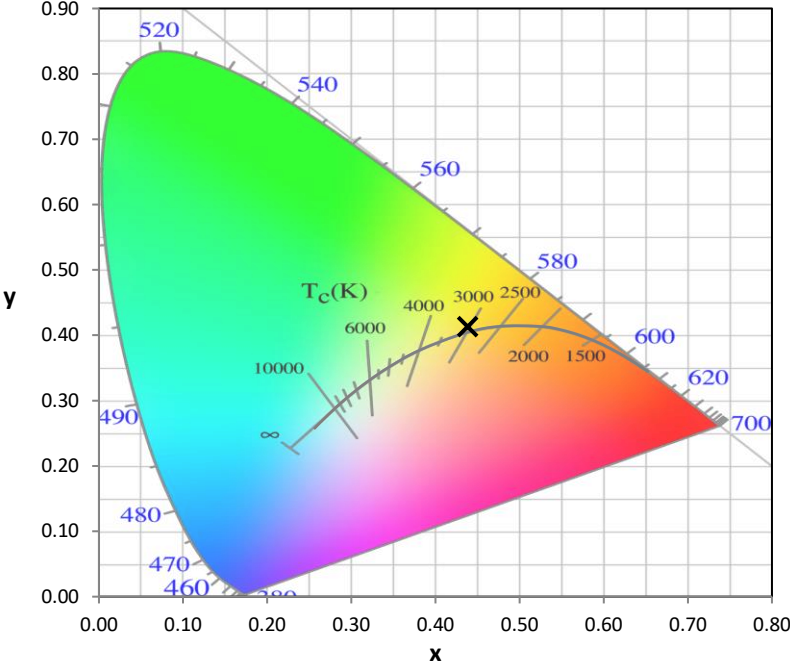
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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

REPORT NUMBER: SP1-2408-195-9

**Photopic Flux vs. Wavelength**

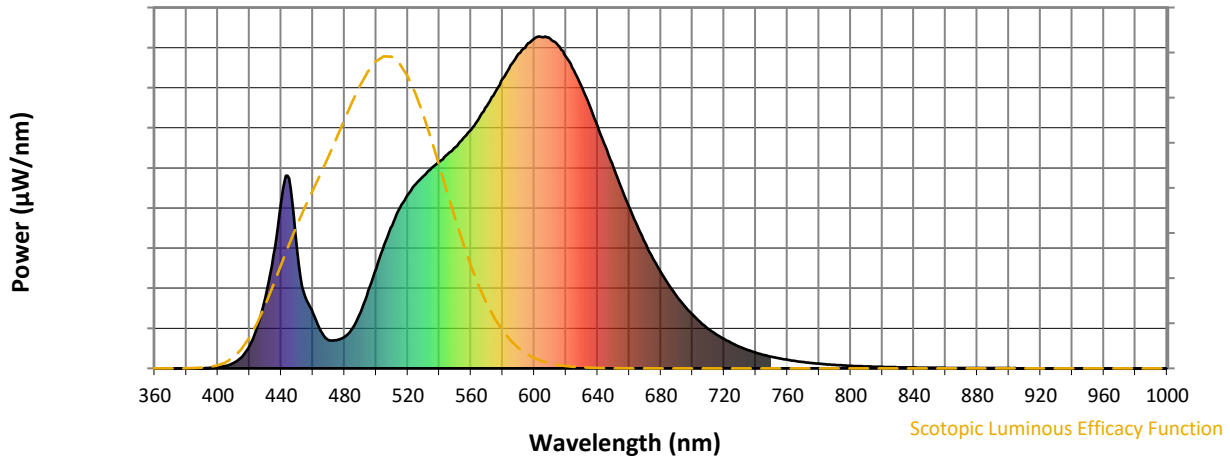


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**

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

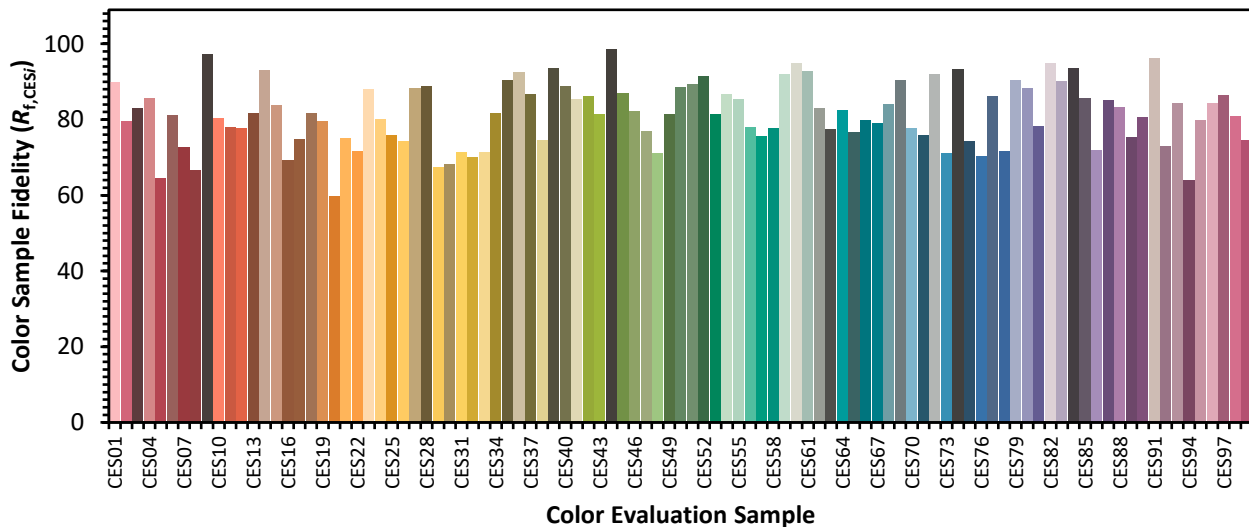


**Color Vector Graphics**



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)