

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: P637490

Luminaire Tested: GWS-SA4C-830-U-SLL-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P637490  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-39)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA4C-830-U-SLL-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (64) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

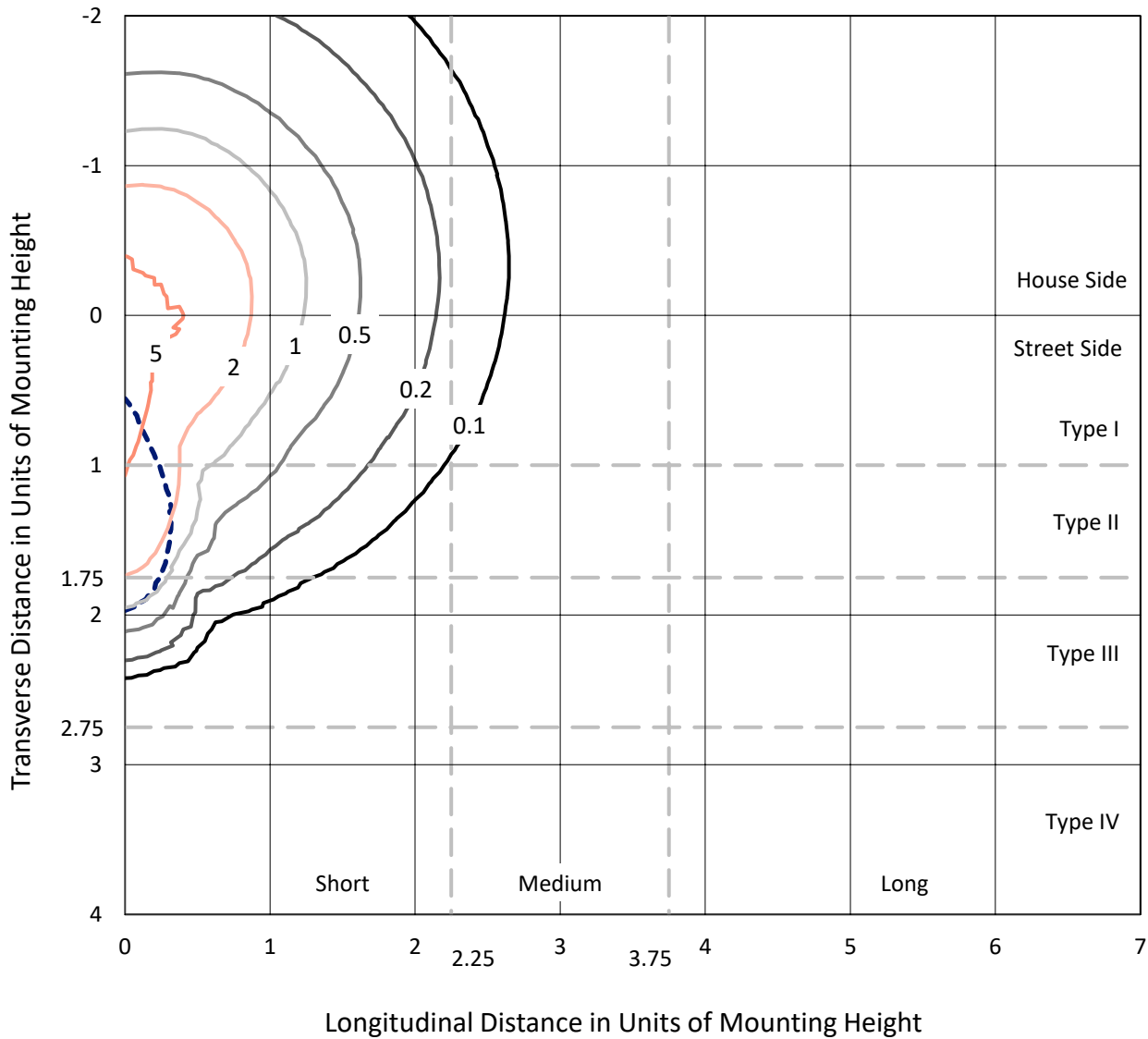
Lumens per Lamp: N/A  
Luminaire Lumens: 12002.9 lumens  
Efficiency: N/A  
Efficacy: 93.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 128.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
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

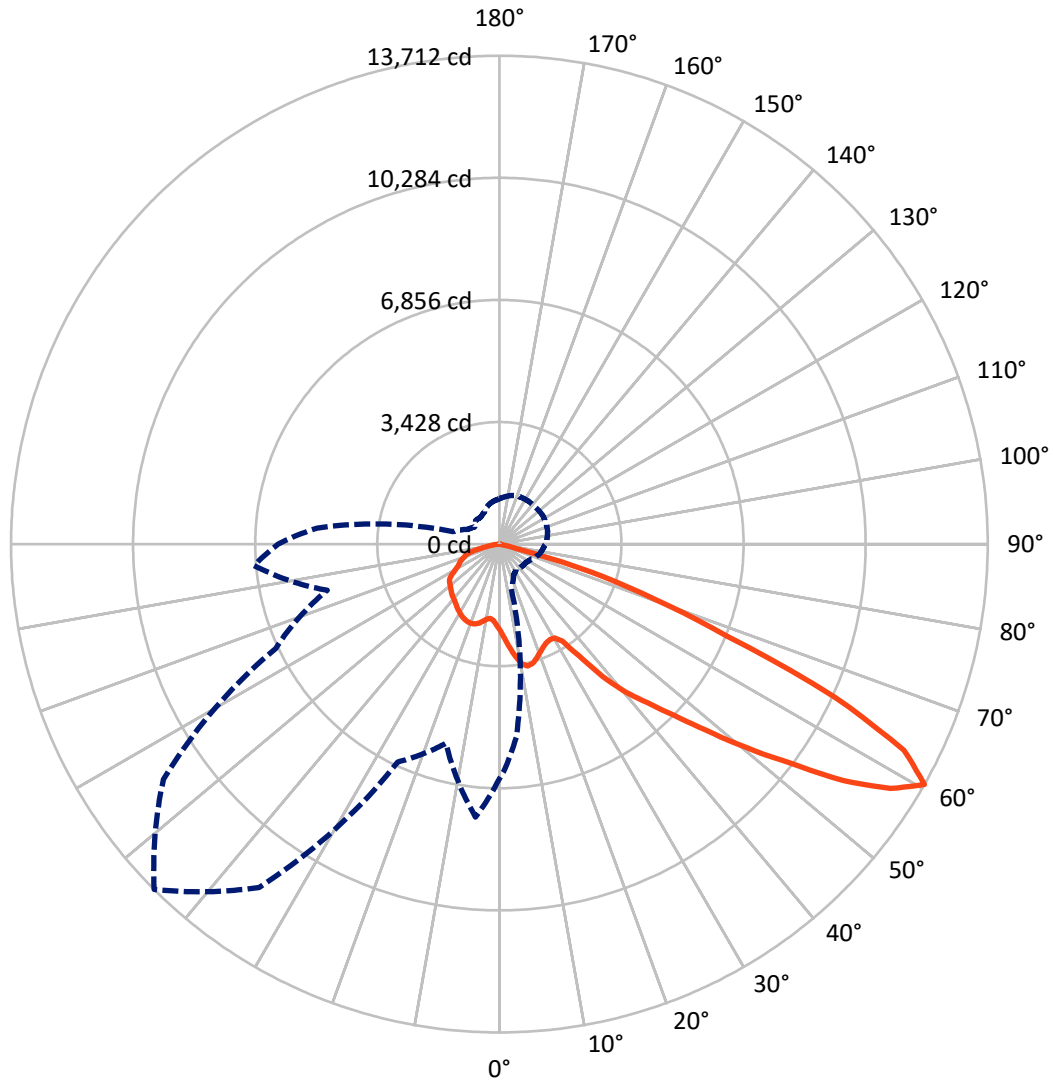
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral    - - - Horizontal Cone Through 60-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4106.1	0.0	4106.1
	% Fixture	34.2	0.0	34.2
<b>Street Side</b>	Lumens	7896.8	0.0	7896.8
	% Fixture	65.8	0.0	65.8
<b>Total</b>	Lumens	12002.9	0.0	12002.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	236.5	2.0
10°-20°	758.6	6.3
20°-30°	1235.5	10.3
30°-40°	1735.6	14.5
40°-50°	2375.0	19.8
50°-60°	3047.0	25.4
60°-70°	2051.7	17.1
70°-80°	512.9	4.3
80°-90°	50.0	0.4
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°	12002.9	100.0
0°-180°	12002.9	100.0

**Coefficient of Utilization**



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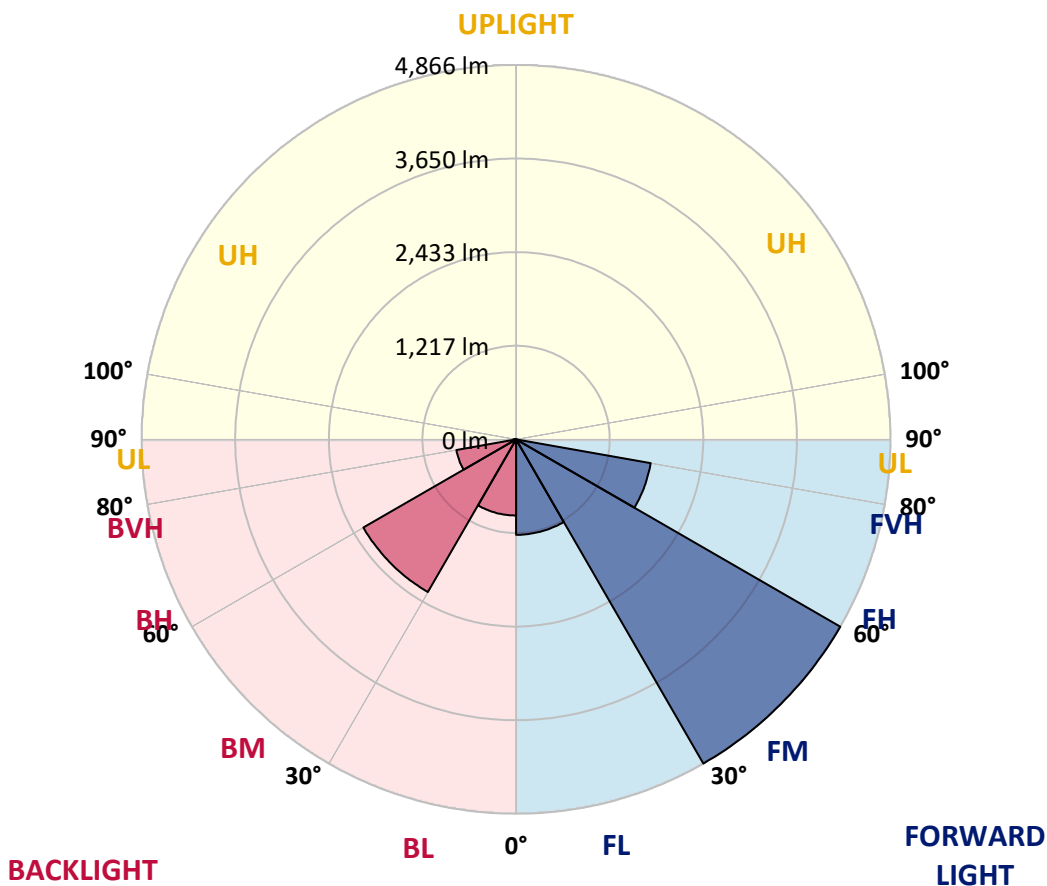
CATALOG NUMBER: GWS-SA4C-830-U-SLL-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1240.8	10.3			
FM (30°-60°)	4866.1	40.5			
FH (60°-80°)	1776.9	14.8			G1/1800
FVH (80°-90°)	13.0	0.1			G1/100
BL (0°-30°)	989.8	8.2	B2/1000		
BM (30°-60°)	2291.5	19.1	B2/2500		
BH (60°-80°)	787.7	6.6	B2/1000		G2/1000
BVH (80°-90°)	37.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9
2.5°	2561.2	2555.7	2550.2	2507.1	2496.0	2465.1	2443.0	2415.3	2375.5	2353.4	2334.6
5°	2721.5	2712.7	2682.8	2594.4	2536.9	2473.9	2422.0	2364.5	2303.7	2263.9	2232.9
7.5°	2873.0	2870.8	2819.9	2674.0	2581.1	2490.5	2419.8	2335.7	2248.4	2188.7	2148.9
10°	3013.4	2996.8	2936.0	2745.8	2624.3	2520.3	2444.1	2351.2	2249.5	2168.8	2115.8
12.5°	3137.2	3116.2	3032.2	2812.2	2661.8	2533.6	2450.7	2374.4	2307.0	2239.6	2178.8
15°	3238.9	3213.4	3128.3	2874.1	2695.0	2525.9	2409.8	2350.1	2373.3	2403.2	2335.7
17.5°	3333.9	3307.4	3203.5	2919.4	2704.9	2478.3	2309.2	2283.8	2401.0	2536.9	2506.0
20°	3413.5	3383.7	3263.2	2941.5	2687.3	2387.7	2178.8	2223.0	2377.7	2540.2	2590.0
22.5°	3499.7	3475.4	3330.6	2973.6	2665.2	2262.8	2069.3	2177.7	2338.0	2480.5	2555.7
25°	3637.9	3608.1	3435.6	3029.9	2654.1	2145.6	1990.9	2133.4	2282.7	2412.0	2470.6
27.5°	3838.0	3782.7	3579.3	3128.3	2666.3	2035.1	1941.1	2079.3	2218.6	2329.1	2376.6
30°	4055.8	3989.4	3738.5	3230.0	2683.9	1967.6	1914.6	2017.4	2120.2	2230.7	2282.7
32.5°	4313.3	4254.7	3908.7	3306.3	2646.4	1936.7	1894.7	1950.0	2031.8	2120.2	2163.3
35°	4620.6	4515.6	4094.5	3368.2	2524.8	1891.4	1877.0	1875.9	1919.0	2005.2	2053.9
37.5°	4951.2	4838.4	4323.3	3434.5	2335.7	1819.5	1835.0	1788.6	1828.4	1896.9	1952.2
40°	5222.0	5103.7	4554.3	3525.2	2099.2	1706.8	1742.1	1692.4	1716.7	1787.5	1849.4
42.5°	5487.3	5361.3	4769.9	3628.0	1870.4	1596.2	1613.9	1595.1	1602.9	1676.9	1763.1
45°	5835.5	5694.0	5035.2	3700.9	1664.8	1508.9	1492.3	1460.3	1501.2	1597.3	1689.1
47.5°	6416.9	6247.8	5469.6	3748.5	1515.5	1459.1	1382.9	1364.1	1414.9	1522.2	1617.2
50°	7096.8	6950.8	6163.8	3746.2	1403.9	1417.1	1276.8	1260.2	1344.2	1452.5	1553.1
52.5°	7653.9	7505.8	6757.4	3635.7	1312.1	1327.6	1214.9	1168.4	1283.4	1384.0	1484.6
55°	8103.8	7936.9	7030.4	3173.6	1196.1	1185.0	1147.4	1062.3	1207.1	1315.4	1409.4
57.5°	7861.7	7662.7	6699.9	2413.1	1076.7	1007.0	1031.4	968.3	1103.2	1239.2	1329.8
60°	6591.6	6412.5	5443.1	1284.5	947.3	841.2	892.1	902.0	989.3	1147.4	1240.3
62.5°	4527.8	4397.3	3688.8	779.3	747.3	675.4	755.0	826.8	892.1	1025.8	1106.5
65°	2215.3	2176.6	1844.9	499.6	522.9	546.1	625.7	713.0	809.2	926.3	1011.5
67.5°	610.2	614.6	559.3	390.2	412.3	476.4	539.4	609.1	705.3	813.6	899.8
70°	268.6	273.0	281.9	300.7	342.7	401.3	466.5	538.3	626.8	717.4	800.3
72.5°	186.8	191.2	204.5	228.8	266.4	321.7	383.6	452.1	543.9	620.1	688.7
75°	115.0	118.3	130.4	151.4	176.9	218.9	279.7	342.7	423.4	493.0	553.8
77.5°	60.8	58.6	66.3	80.7	102.8	124.9	165.8	205.6	263.1	319.5	370.3
80°	33.2	32.1	36.5	44.2	50.8	68.5	96.2	122.7	155.9	187.9	215.6
82.5°	14.4	13.3	14.4	18.8	23.2	33.2	48.6	67.4	86.2	108.3	126.0
85°	0.0	0.0	0.0	1.1	5.5	8.8	16.6	24.3	35.4	48.6	59.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	9.9
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°	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9
2.5°	2323.6	2295.9	2293.7	2271.6	2273.8	2274.9	2252.8	2244.0	2251.7	2260.6	2256.2
5°	2221.9	2193.1	2181.0	2160.0	2157.8	2147.8	2139.0	2127.9	2135.7	2143.4	2147.8
7.5°	2133.4	2114.7	2106.9	2101.4	2103.6	2099.2	2081.5	2071.5	2070.4	2073.8	2078.2
10°	2104.7	2089.2	2099.2	2114.7	2125.7	2133.4	2114.7	2098.1	2082.6	2076.0	2076.0
12.5°	2166.6	2146.7	2166.6	2183.2	2205.3	2210.8	2189.8	2172.1	2166.6	2173.2	2186.5
15°	2303.7	2257.3	2256.2	2266.1	2283.8	2292.6	2272.7	2263.9	2263.9	2305.9	2339.1
17.5°	2440.8	2364.5	2332.4	2326.9	2338.0	2341.3	2324.7	2316.9	2336.8	2418.6	2480.5
20°	2536.9	2444.1	2374.4	2361.2	2364.5	2365.6	2352.3	2346.8	2375.5	2475.0	2527.0
22.5°	2527.0	2458.4	2373.3	2356.7	2362.3	2360.1	2347.9	2345.7	2368.9	2455.1	2479.4
25°	2458.4	2405.4	2333.5	2322.5	2331.3	2330.2	2318.1	2312.5	2322.5	2380.0	2382.2
27.5°	2380.0	2333.5	2271.6	2268.3	2282.7	2290.4	2269.4	2252.8	2249.5	2288.2	2279.4
30°	2286.0	2251.7	2202.0	2204.2	2230.7	2235.1	2209.7	2185.4	2178.8	2199.8	2187.6
32.5°	2174.3	2163.3	2136.8	2142.3	2167.7	2176.6	2150.0	2124.6	2116.9	2123.5	2098.1
35°	2079.3	2074.9	2077.1	2087.0	2109.1	2115.8	2093.7	2073.8	2062.7	2039.5	2006.3
37.5°	1980.9	1993.1	2025.1	2043.9	2056.1	2053.9	2041.7	2027.3	2009.6	1966.5	1925.6
40°	1889.2	1920.1	1977.6	1998.6	2003.0	2004.1	1995.3	1983.1	1961.0	1903.5	1857.1
42.5°	1818.4	1852.7	1928.9	1961.0	1963.2	1965.4	1956.6	1946.6	1915.7	1839.4	1794.1
45°	1744.3	1789.7	1879.2	1917.9	1915.7	1914.6	1906.8	1902.4	1865.9	1777.5	1727.8
47.5°	1681.3	1734.4	1830.6	1863.7	1862.6	1861.5	1856.0	1856.0	1819.5	1723.3	1667.0
50°	1619.4	1680.2	1780.8	1808.5	1810.7	1808.5	1806.2	1809.6	1766.5	1663.6	1608.4
52.5°	1552.0	1620.5	1725.6	1751.0	1764.2	1769.8	1769.8	1762.0	1711.2	1604.0	1543.2
55°	1477.9	1543.2	1664.8	1699.0	1710.1	1720.0	1720.0	1704.5	1657.0	1548.7	1483.5
57.5°	1386.2	1443.7	1539.8	1574.1	1600.6	1607.3	1607.3	1581.8	1543.2	1439.2	1386.2
60°	1286.7	1336.4	1401.7	1438.1	1458.0	1444.8	1454.7	1448.1	1417.1	1321.0	1276.8
62.5°	1154.1	1204.9	1276.8	1314.3	1323.2	1309.9	1323.2	1322.1	1280.1	1193.8	1140.8
65°	1059.0	1108.7	1179.5	1228.1	1242.5	1239.2	1248.0	1234.7	1182.8	1101.0	1050.1
67.5°	946.2	999.3	1081.1	1135.3	1165.1	1168.4	1180.6	1152.9	1099.9	1010.3	946.2
70°	839.0	884.3	947.3	998.2	1040.2	1061.2	1063.4	1023.6	957.3	883.2	836.8
72.5°	726.3	772.7	849.0	904.2	957.3	981.6	981.6	933.0	861.1	779.3	729.6
75°	589.2	632.3	701.9	761.6	822.4	853.4	852.3	810.3	730.7	653.3	601.3
77.5°	399.1	431.1	475.3	520.7	529.5	553.8	566.0	512.9	468.7	426.7	380.3
80°	232.1	252.0	276.4	301.8	307.3	315.0	295.1	275.2	252.0	224.4	203.4
82.5°	136.0	149.2	161.4	181.3	184.6	186.8	169.1	160.3	141.5	124.9	111.6
85°	66.3	70.7	81.8	91.7	87.3	85.1	77.4	68.5	60.8	54.2	47.5
87.5°	13.3	13.3	19.9	18.8	15.5	13.3	7.7	9.9	2.2	2.2	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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9
2.5°	2270.5	2289.3	2312.5	2343.5	2378.9	2416.4	2452.9	2480.5	2508.2	2549.1	2542.5
5°	2154.5	2186.5	2223.0	2270.5	2328.0	2393.2	2466.2	2539.1	2617.6	2683.9	2712.7
7.5°	2087.0	2122.4	2165.5	2227.4	2301.5	2381.1	2483.9	2602.1	2729.3	2816.6	2870.8
10°	2087.0	2132.3	2188.7	2248.4	2313.6	2395.4	2522.6	2670.7	2834.3	2949.2	3012.3
12.5°	2207.5	2252.8	2265.0	2262.8	2299.3	2389.9	2553.5	2742.5	2938.2	3059.8	3137.2
15°	2395.4	2410.9	2319.2	2235.1	2240.7	2350.1	2567.9	2800.0	3027.7	3173.6	3257.7
17.5°	2521.5	2480.5	2316.9	2169.9	2139.0	2282.7	2567.9	2855.3	3122.8	3287.5	3366.0
20°	2531.4	2429.7	2260.6	2106.9	2027.3	2193.1	2550.2	2897.3	3214.5	3396.9	3480.9
22.5°	2444.1	2343.5	2200.9	2052.8	1935.6	2084.8	2521.5	2929.3	3293.0	3499.7	3603.7
25°	2344.6	2260.6	2140.1	1997.5	1872.6	1975.4	2494.9	2983.5	3402.5	3639.0	3744.0
27.5°	2247.3	2176.6	2067.1	1951.1	1837.2	1880.3	2478.3	3063.1	3532.9	3836.9	3927.5
30°	2152.2	2088.1	1988.6	1906.8	1818.4	1818.4	2464.0	3154.9	3705.3	4059.1	4149.7
32.5°	2056.1	1995.3	1914.6	1863.7	1807.4	1794.1	2424.2	3241.1	3883.3	4302.3	4395.1
35°	1966.5	1905.7	1843.8	1822.8	1801.8	1775.3	2325.8	3308.5	4056.9	4586.4	4666.0
37.5°	1882.5	1823.9	1777.5	1772.0	1774.2	1724.4	2171.0	3364.9	4273.5	4877.1	4919.1
40°	1809.6	1744.3	1707.9	1706.8	1717.8	1642.6	1975.4	3445.6	4521.1	5123.6	5105.9
42.5°	1744.3	1675.8	1631.6	1641.5	1634.9	1560.8	1784.1	3519.6	4736.7	5354.6	5319.3
45°	1680.2	1613.9	1552.0	1566.4	1558.6	1510.0	1621.6	3573.8	4975.5	5632.1	5636.5
47.5°	1618.3	1553.1	1491.2	1473.5	1472.4	1494.5	1496.7	3591.5	5364.6	6078.7	5978.1
50°	1560.8	1495.6	1431.5	1371.8	1395.0	1463.6	1403.9	3578.2	5947.1	6571.7	6290.9
52.5°	1501.2	1439.2	1368.5	1261.3	1322.1	1389.5	1321.0	3530.7	6303.1	7007.2	6839.2
55°	1432.6	1374.0	1277.9	1147.4	1221.5	1235.9	1235.9	3070.8	6454.5	7438.3	7542.2
57.5°	1340.9	1263.5	1110.9	1005.9	1072.3	1017.0	1145.2	2148.9	6204.7	7302.4	7705.8
60°	1237.0	1154.1	992.7	917.5	937.4	840.1	976.1	1347.5	5142.4	6213.5	6912.2
62.5°	1099.9	1023.6	889.9	831.3	790.4	685.4	785.9	852.3	3525.2	4614.0	5090.4
65°	1008.1	924.1	804.7	727.4	643.4	551.6	521.8	559.3	1895.8	2582.2	2903.9
67.5°	899.8	816.9	704.1	606.9	539.4	473.1	421.2	407.9	650.0	860.0	930.8
70°	797.0	717.4	623.5	532.8	465.4	400.2	349.3	312.8	300.7	298.5	294.0
72.5°	692.0	617.9	539.4	455.4	381.4	321.7	276.4	234.3	216.7	211.1	205.6
75°	567.1	508.5	430.0	339.4	279.7	224.4	189.0	161.4	145.9	140.4	133.8
77.5°	364.8	338.3	269.7	218.9	169.1	133.8	115.0	97.3	87.3	85.1	79.6
80°	194.6	181.3	149.2	126.0	100.6	81.8	71.9	61.9	56.4	54.2	52.0
82.5°	108.3	98.4	82.9	73.0	58.6	49.7	44.2	39.8	36.5	35.4	34.3
85°	48.6	42.0	33.2	31.0	27.6	25.4	24.3	22.1	21.0	19.9	18.8
87.5°	2.2	4.4	5.5	4.4	4.4	6.6	7.7	7.7	6.6	6.6	5.5
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: P637490

CATALOG NUMBER: GWS-SA4C-830-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9	2420.9
2.5°	2583.4	2616.5	2619.8	2630.9	2616.5	2613.2	2590.0	2576.7	2564.6	2561.2
5°	2784.5	2850.9	2877.4	2896.2	2878.5	2869.7	2818.8	2765.7	2735.9	2721.5
7.5°	2991.3	3090.7	3142.7	3165.9	3168.1	3128.3	3041.0	2941.5	2891.8	2873.0
10°	3175.9	3298.6	3367.1	3411.3	3395.8	3347.2	3227.8	3092.9	3029.9	3013.4
12.5°	3312.9	3430.1	3483.2	3511.9	3510.8	3484.3	3371.5	3225.6	3153.7	3137.2
15°	3401.4	3471.0	3474.3	3480.9	3499.7	3535.1	3476.5	3341.7	3262.1	3238.9
17.5°	3471.0	3443.4	3391.4	3373.7	3415.7	3514.1	3549.5	3440.0	3353.8	3333.9
20°	3515.2	3375.9	3284.2	3249.9	3298.6	3458.8	3593.7	3528.5	3438.9	3413.5
22.5°	3549.5	3312.9	3164.8	3141.6	3192.4	3399.1	3639.0	3633.5	3535.1	3499.7
25°	3603.7	3270.9	3080.8	3064.2	3111.7	3370.4	3699.8	3776.1	3688.8	3637.9
27.5°	3688.8	3266.5	3037.7	3032.2	3097.4	3395.8	3787.1	3985.0	3875.6	3838.0
30°	3807.0	3308.5	3047.6	3058.7	3138.3	3487.6	3923.1	4223.8	4114.4	4055.8
32.5°	3977.3	3421.3	3199.1	3246.6	3305.2	3634.6	4122.1	4482.5	4399.5	4313.3
35°	4201.7	3730.8	3646.8	3849.1	3793.8	3956.3	4362.0	4796.4	4695.8	4620.6
37.5°	4501.2	4365.3	4442.7	4721.2	4587.5	4564.3	4654.9	5081.6	5026.3	4951.2
40°	4921.3	4948.9	5091.5	5457.4	5264.0	5114.8	5014.2	5296.0	5314.8	5222.0
42.5°	5199.9	5327.0	5670.8	6086.4	5820.0	5463.0	5314.8	5570.2	5571.3	5487.3
45°	5303.8	5636.5	6355.0	6833.7	6388.2	5661.9	5480.6	5942.7	5931.7	5835.5
47.5°	5266.2	5897.4	7065.8	7797.6	7117.8	5803.4	5457.4	6473.3	6562.8	6416.9
50°	5187.7	6159.4	7896.0	8978.2	8013.1	5953.8	5422.1	7061.4	7209.5	7096.8
52.5°	5267.3	6451.2	8877.6	10198.6	9136.2	6193.6	5660.8	7816.4	7789.9	7653.9
55°	5519.3	6796.1	10070.3	11731.8	10369.9	6599.3	6274.3	8536.0	8266.3	8103.8
57.5°	5507.2	7042.6	11116.0	12944.4	11443.2	6932.1	6487.7	8612.3	8067.3	7861.7
60°	4998.7	6929.8	11514.0	13711.6	11767.1	6748.6	5785.7	7692.6	6807.1	6591.6
62.5°	3730.8	6149.4	10742.4	12751.0	10850.7	5828.8	4350.9	5521.5	4891.5	4527.8
65°	2386.6	4810.8	9031.2	10330.1	8943.9	4458.1	2591.1	2960.3	2319.2	2215.3
67.5°	1015.9	3395.8	7020.5	6904.4	6691.1	2888.4	1000.4	833.5	621.2	610.2
70°	336.0	2310.3	4327.7	4605.2	3996.1	1989.7	330.5	279.7	278.6	268.6
72.5°	220.0	1240.3	2436.3	2712.7	2571.2	1145.2	200.1	186.8	191.2	186.8
75°	131.5	269.7	410.1	532.8	410.1	192.3	120.5	118.3	120.5	115.0
77.5°	77.4	75.2	73.0	73.0	71.9	66.3	60.8	58.6	59.7	60.8
80°	49.7	47.5	45.3	44.2	38.7	36.5	34.3	32.1	32.1	33.2
82.5°	32.1	29.8	27.6	24.3	19.9	16.6	15.5	13.3	13.3	14.4
85°	16.6	13.3	9.9	7.7	4.4	2.2	0.0	0.0	0.0	0.0
87.5°	3.3	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

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**

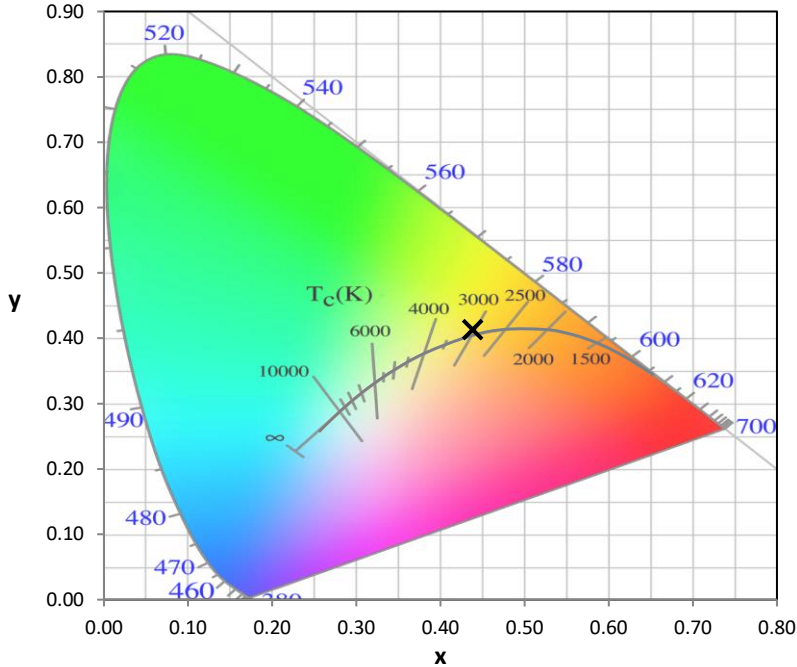
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

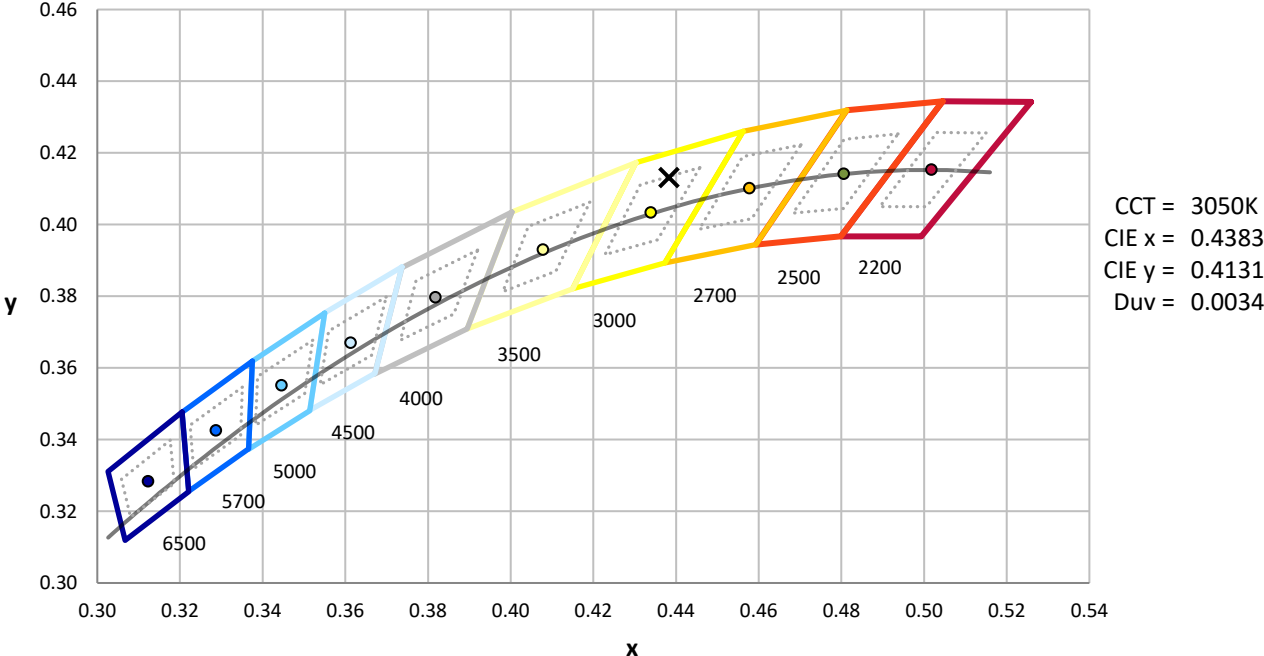
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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

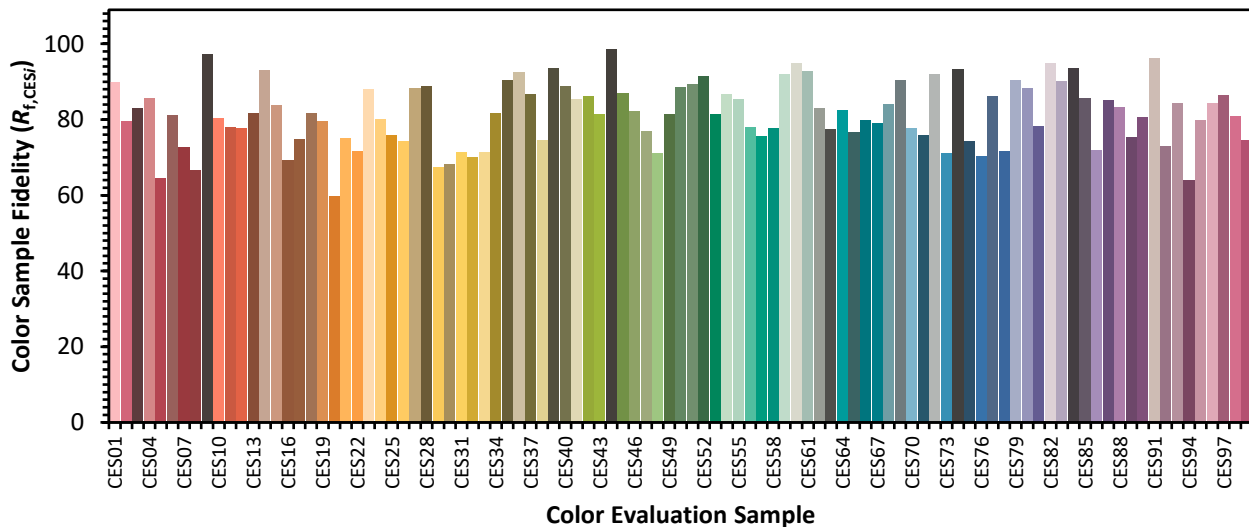


**Color Vector Graphics**

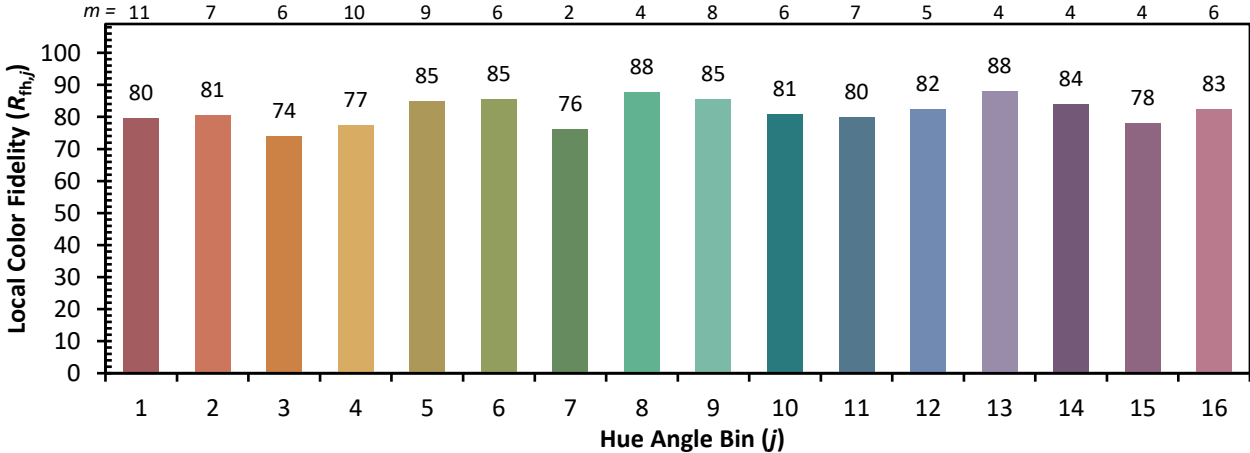


Individual Sample Fidelity Index ( $R_{f,i}$ )

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)