

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: P637494

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

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-43)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4C-830-U-SLR-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT 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: 12064.8 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - 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

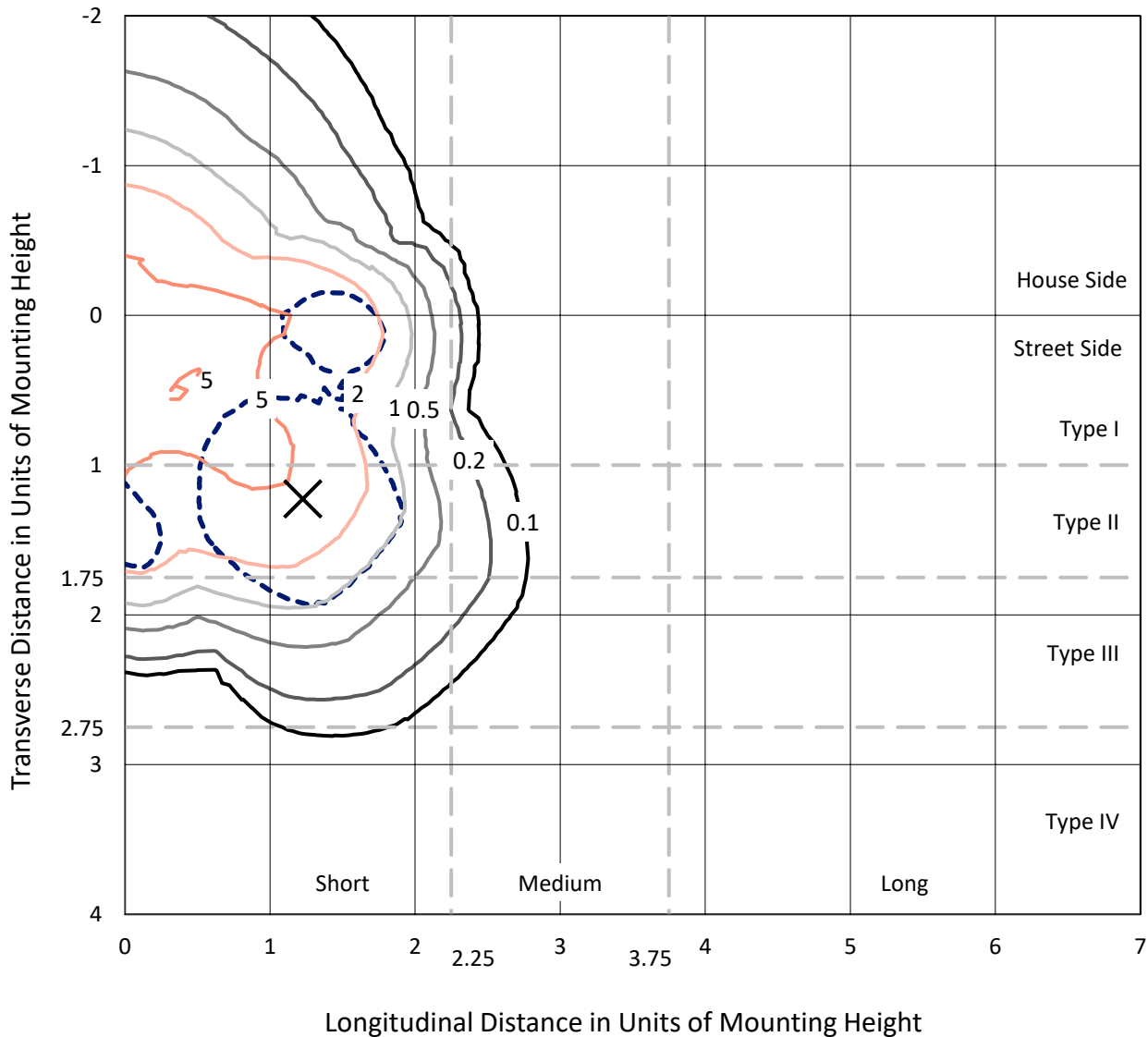


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Iso-Footcandle Lines of Horizontal Illumination

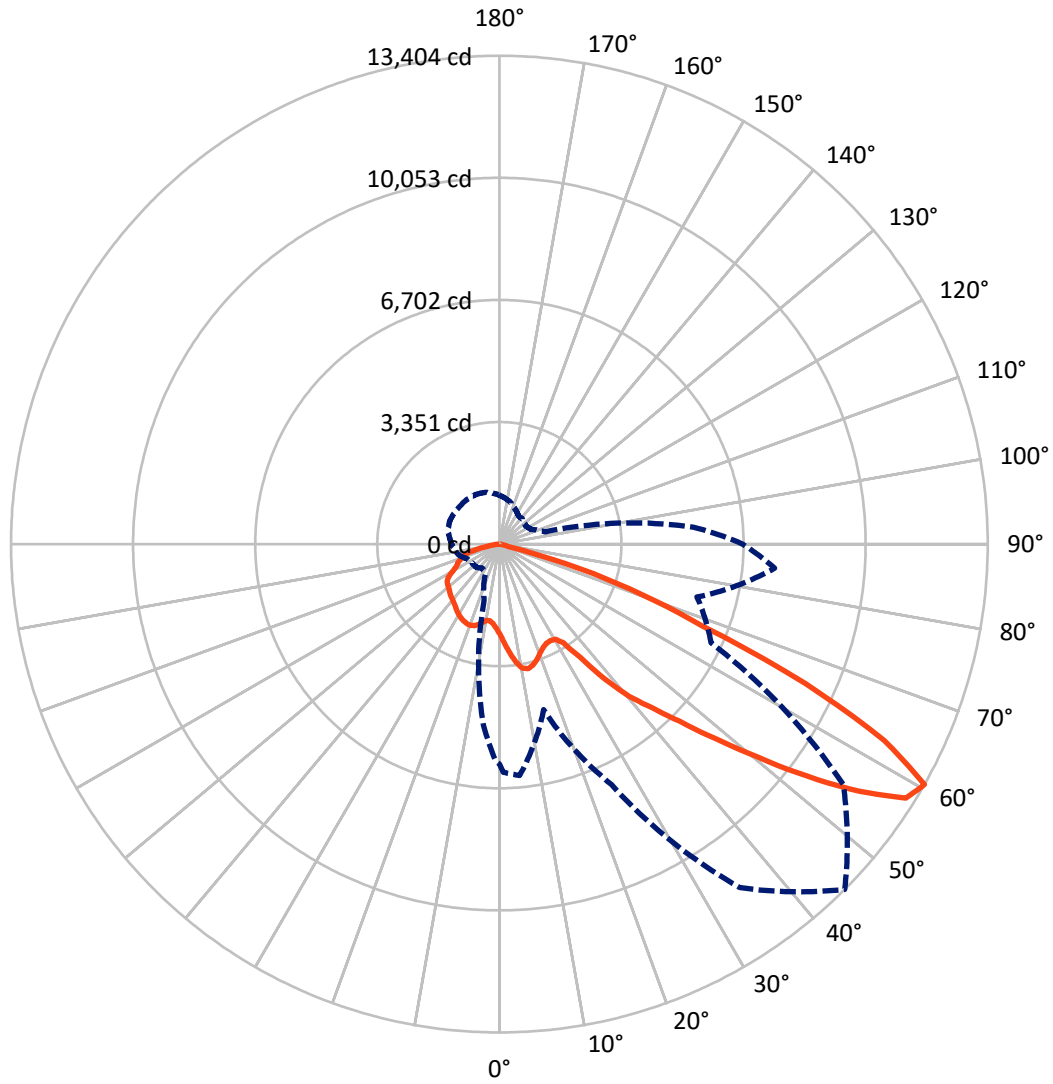
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4229.1	0.0	4229.1
	% Fixture	35.1	0.0	35.1
Street Side	Lumens	7835.7	0.0	7835.7
	% Fixture	64.9	0.0	64.9
Total	Lumens	12064.8	0.0	12064.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.8	2.0
10°-20°	764.1	6.3
20°-30°	1241.3	10.3
30°-40°	1750.5	14.5
40°-50°	2419.2	20.1
50°-60°	3114.2	25.8
60°-70°	1973.2	16.4
70°-80°	506.3	4.2
80°-90°	54.1	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°	12064.8	100.0
0°-180°	12064.8	100.0

Coefficient of Utilization



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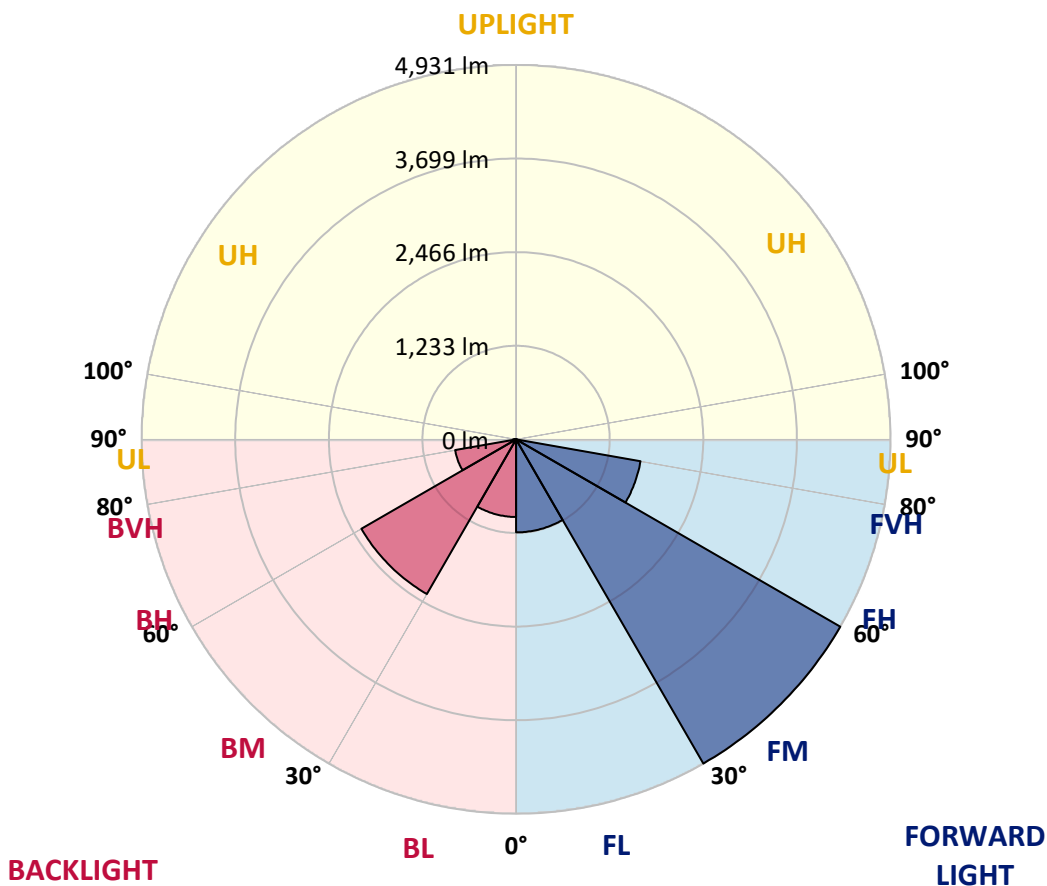
CATALOG NUMBER: GWS-SA4C-830-U-SLR-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1225.0	10.2			
FM (30°-60°)	4931.4	40.9			
FH (60°-80°)	1664.5	13.8			G1/1800
FVH (80°-90°)	14.7	0.1			G1/100
BL (0°-30°)	1022.2	8.5	B3/2500		
BM (30°-60°)	2352.5	19.5	B2/2500		
BH (60°-80°)	815.0	6.8	B2/1000		G2/1000
BVH (80°-90°)	39.4	0.3			G1/100
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°	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5
2.5°	2592.3	2610.0	2621.1	2642.1	2679.7	2700.7	2723.9	2698.5	2705.1	2701.8	2660.9
5°	2746.0	2767.0	2795.7	2857.6	2927.3	2966.0	3002.5	2996.9	2962.7	2905.2	2864.3
7.5°	2889.7	2914.0	2963.8	3064.4	3167.2	3226.9	3271.1	3242.3	3213.6	3123.0	3020.1
10°	3002.5	3016.8	3084.3	3219.1	3338.5	3406.0	3460.1	3453.5	3413.7	3312.0	3173.8
12.5°	3108.6	3118.5	3191.5	3326.4	3433.6	3463.4	3507.7	3522.0	3508.8	3432.5	3296.5
15°	3222.4	3241.2	3308.7	3411.5	3460.1	3429.2	3444.6	3484.4	3522.0	3522.0	3397.1
17.5°	3328.6	3345.2	3413.7	3457.9	3411.5	3329.7	3334.1	3384.9	3474.5	3568.5	3488.9
20°	3422.5	3438.0	3505.4	3463.4	3316.4	3197.0	3193.7	3255.6	3400.4	3598.3	3587.2
22.5°	3525.3	3547.5	3603.8	3467.9	3228.0	3076.5	3075.4	3139.5	3335.2	3628.2	3700.0
25°	3671.3	3705.5	3734.3	3506.6	3180.4	2998.0	3012.4	3073.2	3314.2	3676.8	3866.9
27.5°	3887.9	3915.6	3913.4	3587.2	3178.2	2966.0	2995.8	3066.6	3351.8	3763.0	4042.7
30°	4122.3	4136.7	4113.5	3700.0	3229.1	2985.9	3030.1	3114.1	3446.9	3905.6	4301.4
32.5°	4382.1	4399.8	4355.6	3869.1	3347.4	3132.9	3230.2	3271.1	3580.6	4111.2	4575.5
35°	4680.6	4714.8	4623.1	4092.4	3695.6	3669.1	3810.6	3757.5	3864.7	4354.4	4868.5
37.5°	4994.5	4995.6	4864.1	4423.0	4378.8	4424.1	4707.1	4541.3	4467.2	4625.3	5167.0
40°	5260.9	5254.3	5052.0	4868.5	4973.5	5153.7	5495.3	5241.0	5046.5	4989.0	5414.6
42.5°	5527.3	5503.0	5298.5	5151.5	5383.6	5754.0	6139.8	5828.0	5417.9	5319.5	5658.9
45°	5867.8	5860.1	5613.6	5264.2	5754.0	6426.1	6937.9	6432.7	5637.9	5511.9	6065.7
47.5°	6417.3	6379.7	5920.9	5255.4	6101.1	7321.5	7968.2	7194.4	5791.6	5516.3	6722.4
50°	6954.5	6908.1	6287.9	5254.3	6459.3	8250.1	9184.2	8119.7	5948.5	5542.8	7390.1
52.5°	7497.3	7497.3	6890.4	5379.2	6835.1	9287.1	10589.3	9272.7	6216.1	5889.9	8211.4
55°	7820.1	7906.3	7568.0	5590.4	7275.1	10507.5	11978.9	10517.4	6629.5	6516.7	8969.8
57.5°	7410.0	7571.4	7522.7	5443.3	7534.9	11404.0	13157.3	11461.5	6834.0	6590.8	8855.9
60°	6038.1	6262.5	6374.1	4700.5	7278.4	11507.9	13403.8	11523.4	6411.7	5612.5	7585.7
62.5°	4014.0	4198.6	4368.8	3358.4	6301.2	10352.7	11855.1	10356.0	5354.9	4188.6	5255.4
65°	1968.8	2105.9	2289.4	1985.4	4922.7	8650.3	9242.8	8368.4	3873.6	2344.7	2680.8
67.5°	515.1	553.8	579.3	770.5	3526.4	6215.0	6028.1	6121.0	2488.4	766.1	700.9
70°	267.5	269.7	268.6	318.4	2383.4	3949.8	4154.4	3843.7	1736.7	320.6	276.4
72.5°	191.2	192.4	189.0	214.5	1150.8	2262.9	2344.7	2319.3	909.8	190.1	189.0
75°	124.9	126.0	123.8	126.0	173.6	257.6	237.7	249.8	151.4	120.5	120.5
77.5°	74.1	75.2	74.1	76.3	74.1	74.1	68.5	68.5	65.2	65.2	66.3
80°	49.7	49.7	48.6	50.9	46.4	46.4	44.2	43.1	39.8	38.7	38.7
82.5°	29.8	31.0	29.8	29.8	27.6	27.6	25.4	24.3	21.0	21.0	19.9
85°	15.5	15.5	14.4	14.4	12.2	11.1	8.8	8.8	6.6	5.5	5.5
87.5°	2.2	2.2	1.1	1.1	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°	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5
2.5°	2649.8	2627.7	2594.5	2562.5	2532.6	2501.7	2466.3	2429.8	2398.9	2366.8	2350.2
5°	2810.1	2764.8	2678.6	2602.3	2533.7	2477.4	2416.6	2364.6	2316.0	2276.2	2256.3
7.5°	2954.9	2884.2	2753.7	2633.2	2540.4	2463.0	2379.0	2301.6	2236.4	2187.7	2168.9
10°	3088.7	3004.7	2833.3	2680.8	2572.4	2486.2	2383.4	2278.4	2192.1	2128.0	2112.6
12.5°	3197.0	3100.8	2896.3	2719.5	2591.2	2498.4	2407.7	2317.1	2231.9	2149.0	2135.8
15°	3293.2	3179.3	2943.9	2743.8	2584.6	2466.3	2390.0	2379.0	2379.0	2285.0	2258.5
17.5°	3376.1	3251.2	2982.6	2754.8	2542.6	2371.2	2324.8	2421.0	2529.3	2461.9	2402.2
20°	3471.2	3319.7	3014.6	2754.8	2465.2	2250.7	2246.3	2409.9	2570.2	2571.3	2508.3
22.5°	3567.4	3399.3	3052.2	2744.9	2359.1	2111.4	2193.3	2365.7	2508.3	2569.1	2526.0
25°	3723.2	3509.9	3111.9	2737.1	2235.3	2016.4	2145.7	2307.1	2427.6	2491.7	2464.1
27.5°	3921.1	3655.8	3202.5	2749.3	2112.6	1960.0	2094.9	2230.8	2340.3	2396.7	2376.8
30°	4142.2	3823.8	3299.8	2770.3	2024.1	1931.3	2034.1	2143.5	2240.8	2297.2	2288.3
32.5°	4424.1	4006.2	3383.8	2741.6	1974.4	1916.9	1969.9	2048.4	2142.4	2177.8	2185.5
35°	4761.3	4207.4	3448.0	2628.8	1929.0	1901.4	1900.3	1948.9	2015.3	2071.7	2077.2
37.5°	5071.9	4442.9	3518.7	2435.4	1847.2	1862.7	1818.5	1847.2	1912.5	1968.8	1991.0
40°	5379.2	4681.7	3617.1	2188.8	1740.0	1776.5	1724.5	1744.4	1796.4	1870.5	1905.8
42.5°	5677.7	4897.2	3721.0	1936.8	1632.8	1656.0	1617.3	1637.2	1691.4	1784.2	1824.0
45°	6002.7	5189.1	3801.7	1699.1	1539.9	1530.0	1499.0	1527.8	1609.6	1711.3	1758.8
47.5°	6617.3	5649.0	3854.8	1541.0	1490.2	1418.3	1382.9	1444.8	1537.7	1640.5	1698.0
50°	7368.0	6314.4	3839.3	1440.4	1447.1	1303.3	1291.2	1373.0	1472.5	1579.7	1642.7
52.5°	7962.7	6967.8	3663.5	1344.3	1363.0	1230.4	1195.0	1314.4	1409.5	1518.9	1584.1
55°	8417.0	7187.8	3124.1	1230.4	1226.0	1177.3	1103.3	1253.6	1346.5	1448.2	1518.9
57.5°	8046.7	6698.0	2316.0	1073.4	1046.9	1072.3	1000.5	1150.8	1269.1	1369.7	1432.7
60°	6678.1	5340.5	1290.1	950.7	875.5	937.4	926.4	1042.5	1185.1	1291.2	1345.4
62.5°	4533.5	3556.3	765.0	751.7	709.7	798.1	856.7	933.0	1073.4	1159.6	1210.5
65°	2259.6	1727.8	508.5	562.7	568.2	656.6	767.2	851.2	968.4	1056.8	1107.7
67.5°	655.5	537.3	386.9	430.0	489.7	560.5	648.9	748.4	862.3	967.3	1027.0
70°	283.0	286.3	307.3	358.2	416.8	489.7	578.2	675.4	771.6	852.3	897.6
72.5°	200.1	207.8	231.0	283.0	338.3	407.9	496.4	590.3	660.0	741.8	789.3
75°	128.2	133.8	152.6	192.4	233.3	300.7	384.7	470.9	542.8	601.4	646.7
77.5°	70.8	71.9	87.3	110.5	138.2	181.3	243.2	310.6	363.7	396.9	437.8
80°	40.9	40.9	48.6	63.0	79.6	106.1	140.4	173.6	205.6	226.6	246.5
82.5°	22.1	22.1	25.4	34.3	43.1	58.6	78.5	95.1	115.0	126.0	139.3
85°	6.6	6.6	8.8	12.2	15.5	22.1	31.0	39.8	48.6	56.4	64.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
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°	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5
2.5°	2346.9	2331.4	2322.6	2311.5	2314.9	2304.9	2299.4	2302.7	2282.8	2302.7	2322.6
5°	2248.5	2226.4	2208.7	2194.4	2187.7	2174.5	2166.7	2166.7	2154.6	2174.5	2198.8
7.5°	2162.3	2144.6	2135.8	2126.9	2117.0	2104.8	2091.5	2087.1	2079.4	2100.4	2121.4
10°	2104.8	2107.0	2112.6	2124.7	2122.5	2114.8	2094.9	2083.8	2083.8	2108.1	2140.2
12.5°	2131.3	2154.6	2167.8	2189.9	2194.4	2187.7	2167.8	2159.0	2181.1	2217.6	2270.6
15°	2234.2	2249.6	2260.7	2278.4	2277.3	2271.7	2256.3	2262.9	2335.9	2406.6	2454.1
17.5°	2345.8	2328.1	2325.9	2337.0	2340.3	2333.6	2324.8	2354.7	2475.1	2541.5	2565.8
20°	2426.5	2365.7	2352.4	2356.9	2365.7	2362.4	2362.4	2411.0	2535.9	2566.9	2535.9
22.5°	2450.8	2364.6	2344.7	2345.8	2358.0	2359.1	2364.6	2415.5	2488.4	2489.5	2442.0
25°	2412.1	2329.2	2314.9	2317.1	2331.4	2330.3	2332.5	2361.3	2393.3	2380.1	2344.7
27.5°	2339.2	2267.3	2262.9	2275.1	2293.9	2283.9	2277.3	2285.0	2300.5	2283.9	2252.9
30°	2256.3	2195.5	2197.7	2220.9	2240.8	2224.2	2207.6	2212.0	2213.2	2195.5	2160.1
32.5°	2168.9	2123.6	2131.3	2155.7	2178.9	2161.2	2143.5	2141.3	2120.3	2099.3	2065.0
35°	2081.6	2063.9	2073.9	2093.8	2113.7	2099.3	2088.2	2081.6	2036.3	2005.3	1976.6
37.5°	2002.0	2015.3	2033.0	2045.1	2051.8	2050.6	2044.0	2028.5	1968.8	1932.4	1894.8
40°	1931.3	1972.2	1991.0	1996.5	2006.4	2004.2	2003.1	1981.0	1902.5	1863.8	1820.7
42.5°	1867.1	1924.6	1956.7	1962.2	1967.7	1968.8	1965.5	1933.5	1843.9	1798.6	1757.7
45°	1805.2	1880.4	1921.3	1915.8	1923.5	1923.5	1926.8	1884.8	1786.4	1740.0	1696.9
47.5°	1751.1	1839.5	1877.1	1870.5	1874.9	1878.2	1881.5	1832.9	1723.4	1679.2	1635.0
50°	1701.3	1795.3	1827.3	1829.6	1829.6	1837.3	1836.2	1788.7	1670.4	1622.8	1578.6
52.5°	1648.3	1750.0	1784.2	1798.6	1803.0	1806.3	1790.9	1735.6	1616.2	1558.7	1517.8
55°	1586.3	1703.5	1734.5	1753.3	1762.1	1759.9	1738.9	1682.5	1560.9	1503.4	1457.0
57.5°	1492.4	1604.0	1648.3	1657.1	1671.5	1662.6	1638.3	1590.8	1472.5	1415.0	1367.5
60°	1389.6	1470.3	1505.7	1513.4	1502.3	1505.7	1502.3	1457.0	1354.2	1308.9	1260.2
62.5°	1254.7	1326.6	1364.1	1374.1	1355.3	1367.5	1363.0	1306.7	1203.9	1156.3	1113.2
65°	1153.0	1231.5	1275.7	1281.2	1275.7	1281.2	1265.8	1197.2	1099.9	1051.3	1007.1
67.5°	1073.4	1154.1	1200.5	1216.0	1210.5	1209.4	1185.1	1105.5	1004.9	951.8	895.4
70°	936.3	1007.1	1066.8	1104.4	1104.4	1083.4	1036.9	962.9	882.2	836.8	792.6
72.5°	829.1	918.6	977.2	1015.9	1023.7	1011.5	946.3	867.8	774.9	729.6	683.2
75°	683.2	770.5	833.5	884.4	894.3	881.1	805.9	728.5	642.3	598.1	551.6
77.5°	456.6	508.5	559.4	605.8	595.8	604.7	553.8	495.3	442.2	409.0	388.0
80°	257.6	291.8	307.3	332.7	332.7	332.7	299.6	271.9	242.1	223.3	202.3
82.5°	145.9	168.0	174.7	195.7	201.2	202.3	180.2	162.5	143.7	133.8	119.4
85°	67.4	79.6	80.7	92.9	97.3	106.1	96.2	84.0	73.0	68.5	59.7
87.5°	2.2	6.6	8.8	16.6	22.1	25.4	27.6	27.6	23.2	21.0	17.7
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: P637494

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

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5	2478.5
2.5°	2346.9	2373.4	2404.4	2426.5	2466.3	2499.5	2533.7	2571.3	2599.0	2592.3
5°	2228.6	2272.8	2329.2	2381.2	2455.2	2530.4	2613.3	2698.5	2748.2	2746.0
7.5°	2162.3	2225.3	2293.9	2363.5	2450.8	2559.2	2686.3	2818.9	2886.4	2889.7
10°	2197.7	2265.1	2311.5	2370.1	2461.9	2597.9	2750.4	2909.6	2987.0	3002.5
12.5°	2309.3	2303.8	2300.5	2342.5	2453.0	2625.5	2812.3	3002.5	3089.8	3108.6
15°	2415.5	2301.6	2233.0	2261.8	2413.2	2643.2	2873.1	3104.2	3202.5	3222.4
17.5°	2435.4	2262.9	2135.8	2155.7	2350.2	2648.7	2931.7	3203.7	3309.8	3328.6
20°	2380.1	2213.2	2065.0	2037.4	2270.6	2634.3	2968.2	3286.6	3402.6	3422.5
22.5°	2310.4	2168.9	2012.0	1940.1	2173.4	2620.0	3009.1	3373.9	3507.7	3525.3
25°	2237.5	2112.6	1962.2	1852.8	2062.8	2611.1	3077.6	3488.9	3650.3	3671.3
27.5°	2160.1	2044.0	1919.1	1810.8	1961.1	2622.2	3174.9	3674.6	3858.1	3887.9
30°	2077.2	1975.5	1891.5	1796.4	1891.5	2632.1	3282.1	3864.7	4080.3	4122.3
32.5°	1991.0	1912.5	1862.7	1803.0	1848.3	2608.9	3376.1	4078.1	4345.6	4382.1
35°	1904.7	1848.3	1826.2	1815.2	1790.9	2523.8	3452.4	4293.6	4648.5	4680.6
37.5°	1824.0	1782.0	1775.4	1787.5	1702.4	2384.5	3540.8	4567.8	4945.9	4994.5
40°	1748.9	1710.2	1709.1	1706.8	1605.1	2194.4	3660.2	4846.4	5238.8	5260.9
42.5°	1679.2	1630.6	1639.4	1612.9	1525.5	1988.7	3773.0	5084.1	5511.9	5527.3
45°	1617.3	1553.2	1563.1	1530.0	1488.0	1773.2	3872.5	5364.8	5857.9	5867.8
47.5°	1557.6	1489.1	1461.4	1459.2	1481.3	1574.2	3969.7	5905.4	6399.6	6417.3
50°	1502.3	1428.3	1349.8	1398.4	1440.4	1425.0	4091.3	6484.7	6958.9	6954.5
52.5°	1449.3	1352.0	1240.3	1334.3	1334.3	1314.4	4057.1	6836.2	7421.0	7497.3
55°	1388.5	1229.3	1126.5	1227.1	1178.4	1214.9	3450.2	6951.2	7711.8	7820.1
57.5°	1268.0	1077.8	988.3	1042.5	969.5	1126.5	2478.5	6380.8	7217.6	7410.0
60°	1151.9	966.2	907.6	897.6	802.6	918.6	1606.2	4995.6	5940.8	6038.1
62.5°	1015.9	870.0	820.3	744.0	645.6	668.8	972.8	3287.7	3991.9	4014.0
65°	913.1	788.2	693.1	602.5	528.4	485.3	574.8	1585.2	1995.4	1968.8
67.5°	783.8	675.4	584.8	519.6	458.8	404.6	382.5	470.9	532.8	515.1
70°	697.6	593.6	506.3	444.4	388.0	333.9	295.2	277.5	271.9	267.5
72.5°	601.4	510.7	420.1	360.4	307.3	257.6	222.2	201.2	195.7	191.2
75°	479.8	394.7	311.7	255.4	208.9	173.6	150.3	132.7	129.3	124.9
77.5°	317.3	253.2	185.7	151.4	123.8	105.0	89.5	78.5	76.3	74.1
80°	174.7	145.9	113.9	91.8	74.1	64.1	58.6	52.0	50.9	49.7
82.5°	103.9	87.3	65.2	52.0	43.1	38.7	35.4	32.1	31.0	29.8
85°	52.0	40.9	28.7	24.3	22.1	19.9	19.9	16.6	15.5	15.5
87.5°	13.3	11.1	6.6	5.5	5.5	5.5	4.4	3.3	3.3	2.2
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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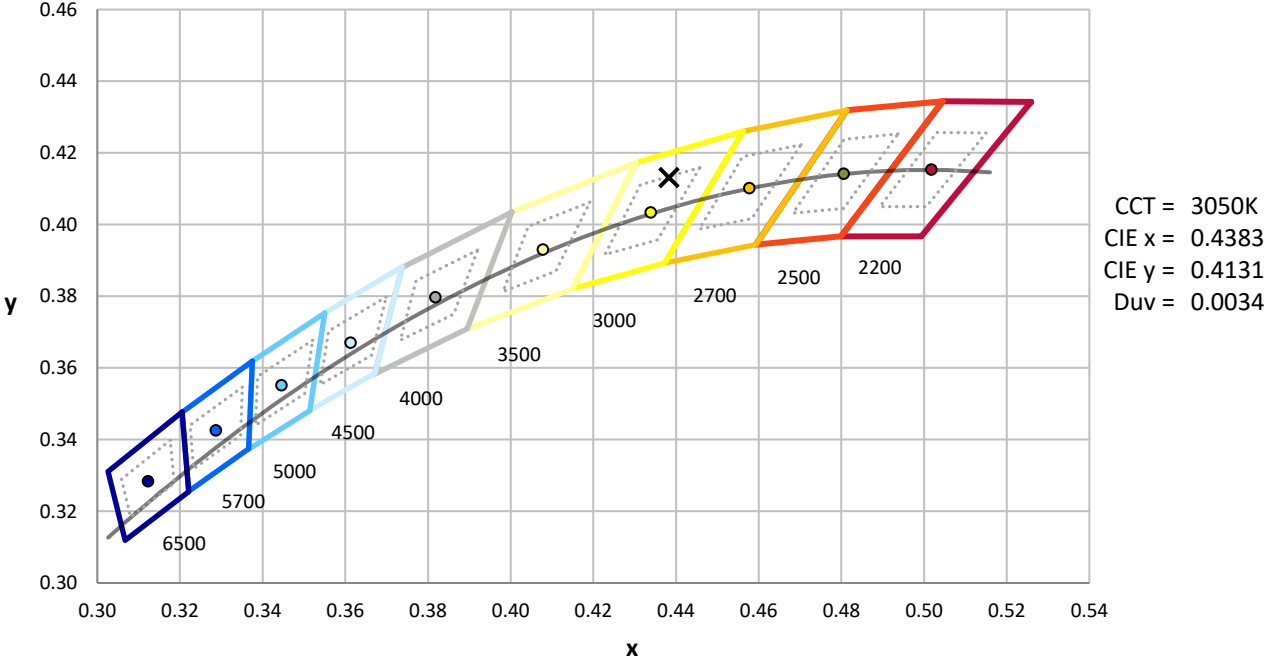
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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

REPORT NUMBER: SP1-2408-195-9

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

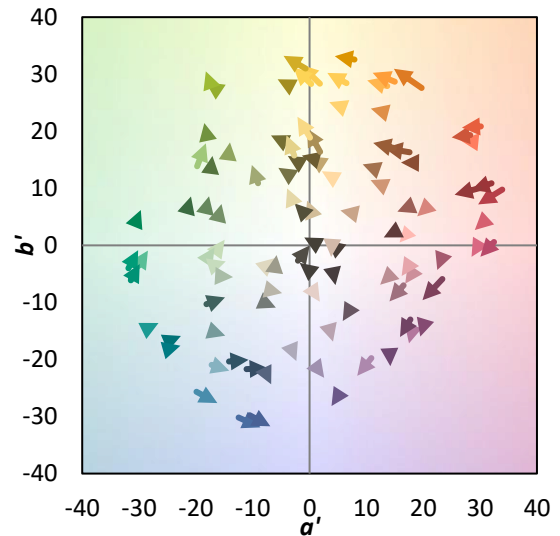
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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