

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: P639470

Luminaire Tested: GWS-SA5B-830-U-SLL-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P639470
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-SA5B-830-U-SLL-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10979 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

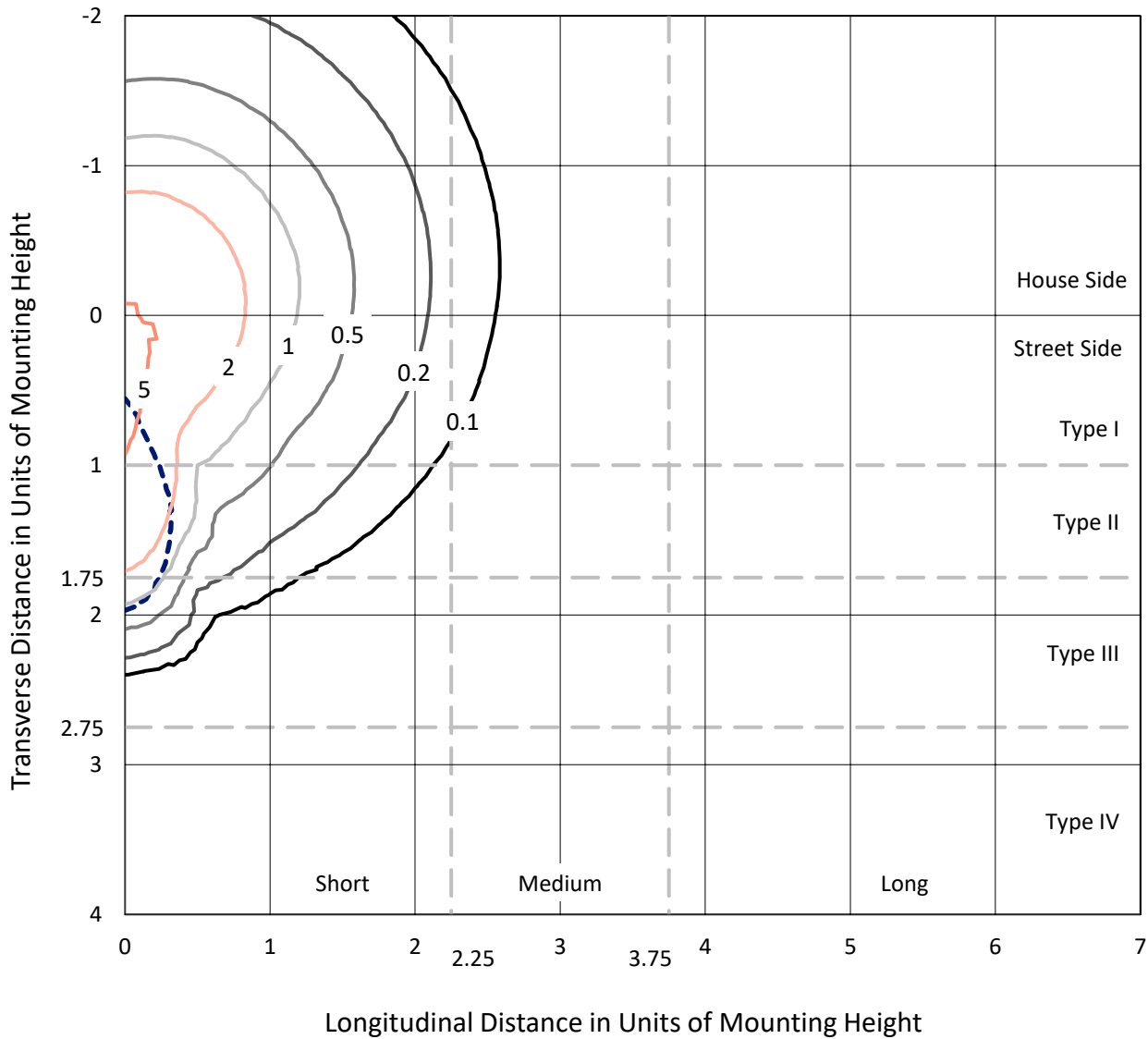
Input Watts (W): 115.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

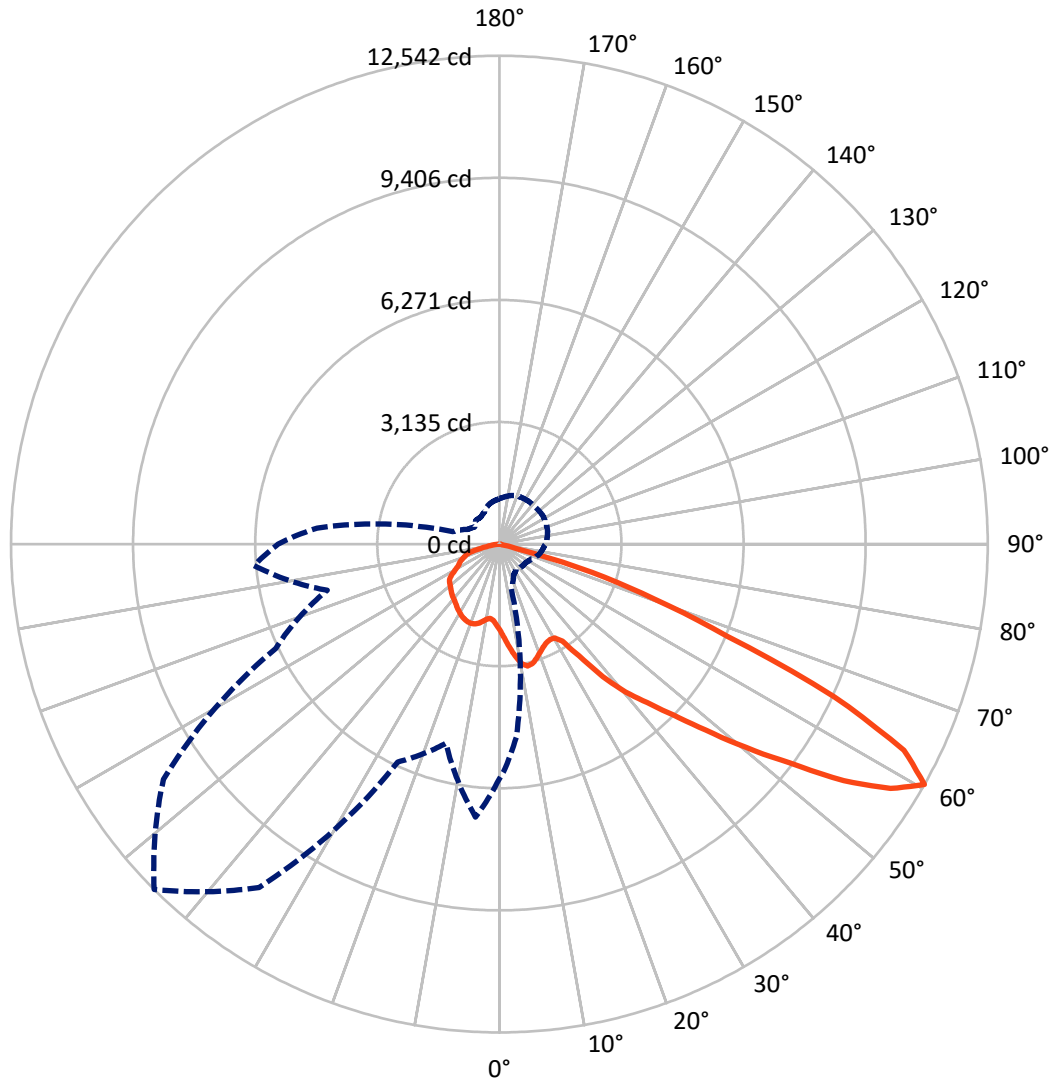
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.7 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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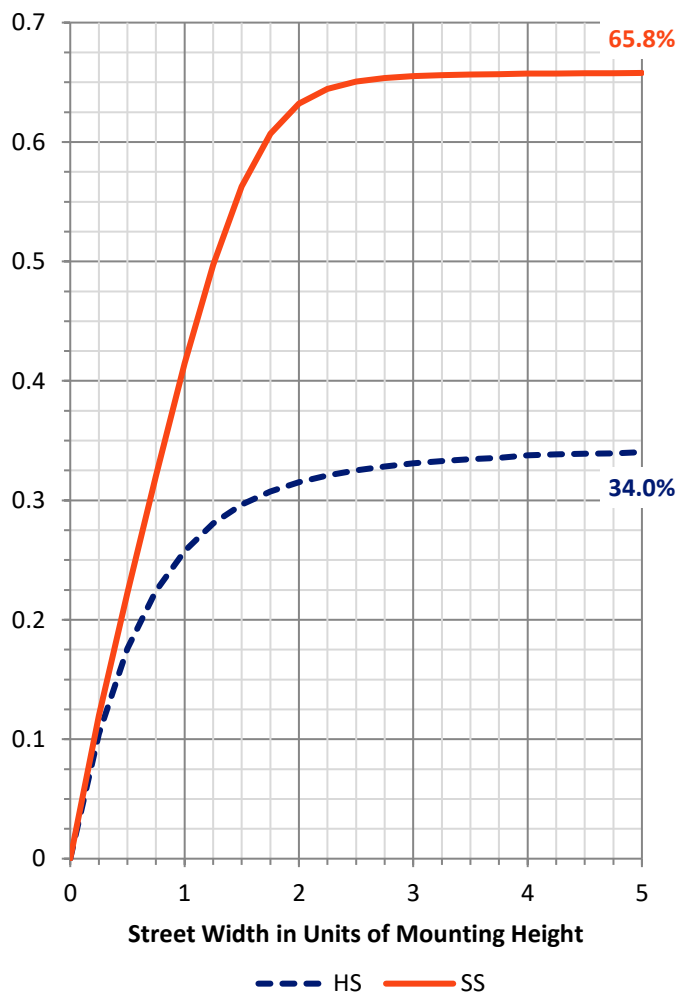
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3755.8	0.0	3755.8
	% Fixture	34.2	0.0	34.2
Street Side	Lumens	7223.2	0.0	7223.2
	% Fixture	65.8	0.0	65.8
Total	Lumens	10979.0	0.0	10979.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.3	2.0
10°-20°	693.9	6.3
20°-30°	1130.1	10.3
30°-40°	1587.6	14.5
40°-50°	2172.4	19.8
50°-60°	2787.1	25.4
60°-70°	1876.7	17.1
70°-80°	469.2	4.3
80°-90°	45.7	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°	10979.0	100.0
0°-180°	10979.0	100.0

Coefficient of Utilization



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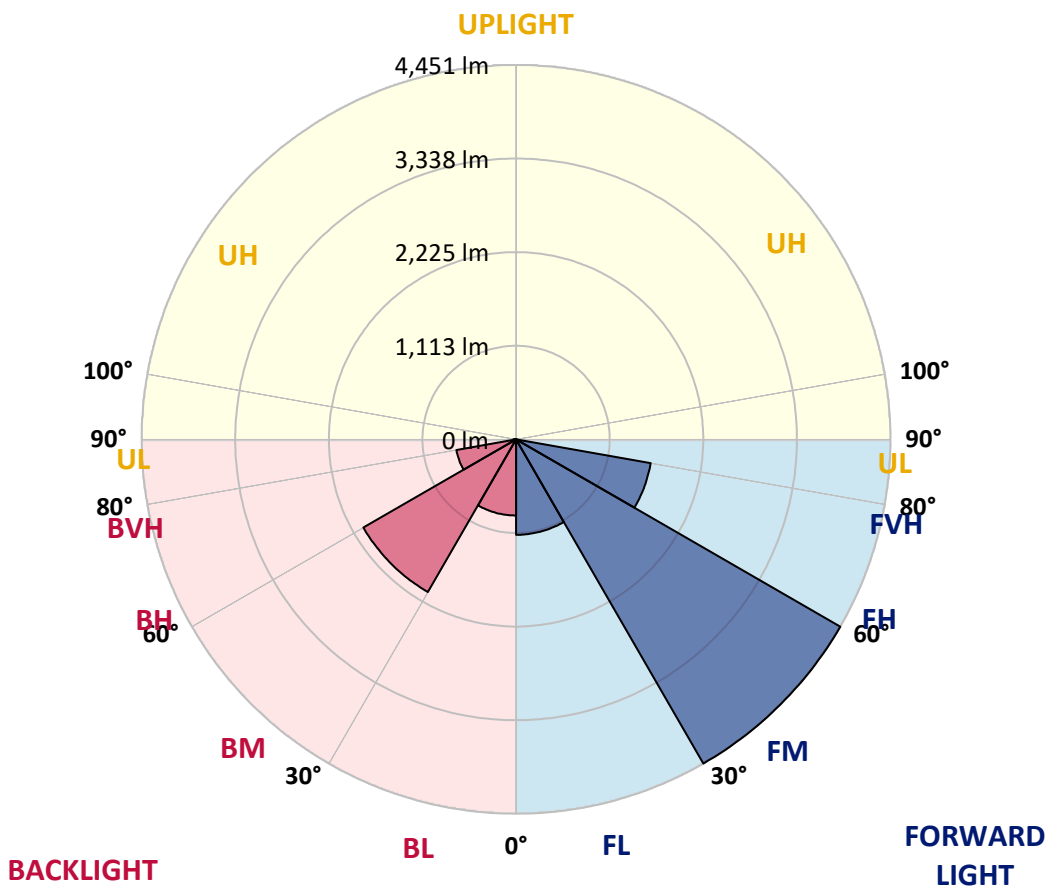
CATALOG NUMBER: GWS-SA5B-830-U-SLL-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1135.0	10.3			
FM (30°-60°)	4451.0	40.5			
FH (60°-80°)	1625.3	14.8			G1/1800
FVH (80°-90°)	11.9	0.1			G1/100
BL (0°-30°)	905.4	8.2	B2/1000		
BM (30°-60°)	2096.0	19.1	B2/2500		
BH (60°-80°)	720.5	6.6	B2/1000		G2/1000
BVH (80°-90°)	33.9	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°	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3
2.5°	2342.8	2337.7	2332.6	2293.2	2283.1	2254.8	2234.6	2209.3	2172.9	2152.7	2135.5
5°	2489.4	2481.3	2454.0	2373.1	2320.5	2262.9	2215.4	2162.8	2107.2	2070.8	2042.5
7.5°	2627.9	2625.9	2579.4	2445.9	2361.0	2278.0	2213.3	2136.5	2056.6	2002.0	1965.6
10°	2756.3	2741.1	2685.5	2511.6	2400.4	2305.3	2235.6	2150.6	2057.6	1983.8	1935.3
12.5°	2869.6	2850.3	2773.5	2572.3	2434.8	2317.5	2241.6	2171.9	2110.2	2048.5	1992.9
15°	2962.6	2939.3	2861.5	2628.9	2465.1	2310.4	2204.2	2149.6	2170.9	2198.2	2136.5
17.5°	3049.5	3025.3	2930.2	2670.4	2474.2	2266.9	2112.2	2089.0	2196.1	2320.5	2292.2
20°	3122.3	3095.0	2984.8	2690.6	2458.0	2184.0	1992.9	2033.4	2174.9	2323.5	2369.0
22.5°	3201.2	3179.0	3046.5	2719.9	2437.8	2069.8	1892.8	1991.9	2138.5	2268.9	2337.7
25°	3327.6	3300.3	3142.6	2771.5	2427.7	1962.6	1821.0	1951.5	2088.0	2206.3	2259.8
27.5°	3510.6	3460.0	3274.0	2861.5	2438.8	1861.5	1775.5	1901.9	2029.3	2130.4	2173.9
30°	3709.8	3649.1	3419.6	2954.5	2455.0	1799.8	1751.3	1845.3	1939.3	2040.4	2088.0
32.5°	3945.4	3891.8	3575.3	3024.3	2420.6	1771.5	1733.1	1783.6	1858.4	1939.3	1978.8
35°	4226.5	4130.4	3745.2	3080.9	2309.4	1730.0	1716.9	1715.9	1755.3	1834.2	1878.7
37.5°	4528.8	4425.7	3954.5	3141.5	2136.5	1664.3	1678.5	1636.0	1672.4	1735.1	1785.6
40°	4776.5	4668.3	4165.8	3224.5	1920.1	1561.2	1593.5	1548.0	1570.3	1635.0	1691.6
42.5°	5019.2	4903.9	4363.0	3318.5	1710.8	1460.1	1476.2	1459.0	1466.1	1533.9	1612.7
45°	5337.7	5208.3	4605.6	3385.2	1522.7	1380.2	1365.0	1335.7	1373.1	1461.1	1545.0
47.5°	5869.5	5714.8	5003.0	3428.7	1386.2	1334.7	1264.9	1247.7	1294.2	1392.3	1479.3
50°	6491.4	6357.9	5638.0	3426.7	1284.1	1296.3	1167.8	1152.7	1229.5	1328.6	1420.6
52.5°	7001.0	6865.5	6181.0	3325.6	1200.2	1214.4	1111.2	1068.8	1173.9	1265.9	1357.9
55°	7412.5	7259.8	6430.7	2902.9	1094.0	1083.9	1049.5	971.7	1104.1	1203.2	1289.2
57.5°	7191.1	7009.1	6128.4	2207.3	984.8	921.1	943.4	885.7	1009.1	1133.5	1216.4
60°	6029.3	5865.5	4978.7	1174.9	866.5	769.5	816.0	825.1	905.0	1049.5	1134.5
62.5°	4141.5	4022.2	3374.1	712.8	683.5	617.8	690.6	756.3	816.0	938.3	1012.1
65°	2026.3	1990.9	1687.6	457.0	478.3	499.5	572.3	652.2	740.1	847.3	925.2
67.5°	558.1	562.2	511.6	356.9	377.1	435.8	493.4	557.1	645.1	744.2	823.0
70°	245.7	249.7	257.8	275.0	313.4	367.0	426.7	492.4	573.3	656.2	732.0
72.5°	170.9	174.9	187.1	209.3	243.7	294.2	350.9	413.5	497.5	567.2	629.9
75°	105.2	108.2	119.3	138.5	161.8	200.2	255.8	313.4	387.3	451.0	506.6
77.5°	55.6	53.6	60.7	73.8	94.0	114.3	151.7	188.1	240.6	292.2	338.7
80°	30.3	29.3	33.4	40.4	46.5	62.7	88.0	112.2	142.6	171.9	197.2
82.5°	13.1	12.1	13.1	17.2	21.2	30.3	44.5	61.7	78.9	99.1	115.3
85°	0.0	0.0	0.0	1.0	5.1	8.1	15.2	22.2	32.4	44.5	54.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3
2.5°	2125.4	2100.1	2098.1	2077.8	2079.9	2080.9	2060.7	2052.6	2059.6	2067.7	2063.7
5°	2032.3	2006.1	1994.9	1975.7	1973.7	1964.6	1956.5	1946.4	1953.5	1960.6	1964.6
7.5°	1951.5	1934.3	1927.2	1922.1	1924.2	1920.1	1903.9	1894.8	1893.8	1896.9	1900.9
10°	1925.2	1911.0	1920.1	1934.3	1944.4	1951.5	1934.3	1919.1	1904.9	1898.9	1898.9
12.5°	1981.8	1963.6	1981.8	1997.0	2017.2	2022.2	2003.0	1986.8	1981.8	1987.9	2000.0
15°	2107.2	2064.7	2063.7	2072.8	2089.0	2097.1	2078.9	2070.8	2070.8	2109.2	2139.5
17.5°	2232.5	2162.8	2133.5	2128.4	2138.5	2141.5	2126.4	2119.3	2137.5	2212.3	2268.9
20°	2320.5	2235.6	2171.9	2159.7	2162.8	2163.8	2151.7	2146.6	2172.9	2263.9	2311.4
22.5°	2311.4	2248.7	2170.9	2155.7	2160.8	2158.7	2147.6	2145.6	2166.8	2245.7	2267.9
25°	2248.7	2200.2	2134.5	2124.4	2132.4	2131.4	2120.3	2115.3	2124.4	2176.9	2179.0
27.5°	2176.9	2134.5	2077.8	2074.8	2088.0	2095.0	2075.8	2060.7	2057.6	2093.0	2084.9
30°	2091.0	2059.6	2014.1	2016.2	2040.4	2044.5	2021.2	1999.0	1992.9	2012.1	2001.0
32.5°	1988.9	1978.8	1954.5	1959.5	1982.8	1990.9	1966.6	1943.4	1936.3	1942.4	1919.1
35°	1901.9	1897.9	1899.9	1909.0	1929.2	1935.3	1915.1	1896.9	1886.7	1865.5	1835.2
37.5°	1811.9	1823.0	1852.4	1869.6	1880.7	1878.7	1867.5	1854.4	1838.2	1798.8	1761.4
40°	1728.0	1756.3	1808.9	1828.1	1832.1	1833.2	1825.1	1813.9	1793.7	1741.1	1698.7
42.5°	1663.3	1694.6	1764.4	1793.7	1795.7	1797.8	1789.7	1780.6	1752.3	1682.5	1641.0
45°	1595.5	1637.0	1718.9	1754.3	1752.3	1751.3	1744.2	1740.1	1706.8	1625.9	1580.4
47.5°	1537.9	1586.4	1674.4	1704.7	1703.7	1702.7	1697.7	1697.7	1664.3	1576.3	1524.8
50°	1481.3	1536.9	1628.9	1654.2	1656.2	1654.2	1652.2	1655.2	1615.8	1521.7	1471.2
52.5°	1419.6	1482.3	1578.4	1601.6	1613.7	1618.8	1618.8	1611.7	1565.2	1467.1	1411.5
55°	1351.9	1411.5	1522.7	1554.1	1564.2	1573.3	1573.3	1559.1	1515.7	1416.6	1356.9
57.5°	1267.9	1320.5	1408.5	1439.8	1464.1	1470.2	1470.2	1446.9	1411.5	1316.5	1267.9
60°	1176.9	1222.4	1282.1	1315.5	1333.7	1321.5	1330.6	1324.6	1296.3	1208.3	1167.8
62.5°	1055.6	1102.1	1167.8	1202.2	1210.3	1198.2	1210.3	1209.3	1170.9	1092.0	1043.5
65°	968.7	1014.2	1078.9	1123.4	1136.5	1133.5	1141.6	1129.4	1081.9	1007.1	960.6
67.5°	865.5	914.1	988.9	1038.4	1065.7	1068.8	1079.9	1054.6	1006.1	924.2	865.5
70°	767.4	808.9	866.5	913.0	951.5	970.7	972.7	936.3	875.6	807.9	765.4
72.5°	664.3	706.8	776.5	827.1	875.6	897.9	897.9	853.4	787.7	712.8	667.3
75°	538.9	578.4	642.1	696.7	752.3	780.6	779.6	741.1	668.3	597.6	550.0
77.5°	365.0	394.3	434.8	476.2	484.3	506.6	517.7	469.2	428.7	390.3	347.8
80°	212.3	230.5	252.8	276.0	281.1	288.2	270.0	251.8	230.5	205.3	186.0
82.5°	124.4	136.5	147.6	165.8	168.9	170.9	154.7	146.6	129.4	114.3	102.1
85°	60.7	64.7	74.8	83.9	79.9	77.9	70.8	62.7	55.6	49.5	43.5
87.5°	12.1	12.1	18.2	17.2	14.2	12.1	7.1	9.1	2.0	2.0	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°	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3
2.5°	2076.8	2094.0	2115.3	2143.6	2175.9	2210.3	2243.7	2268.9	2294.2	2331.6	2325.6
5°	1970.7	2000.0	2033.4	2076.8	2129.4	2189.1	2255.8	2322.5	2394.3	2455.0	2481.3
7.5°	1909.0	1941.3	1980.8	2037.4	2105.1	2177.9	2272.0	2380.2	2496.4	2576.3	2625.9
10°	1909.0	1950.4	2002.0	2056.6	2116.3	2191.1	2307.4	2442.9	2592.5	2697.7	2755.3
12.5°	2019.2	2060.7	2071.8	2069.8	2103.1	2186.0	2335.7	2508.6	2687.6	2798.8	2869.6
15°	2191.1	2205.2	2121.3	2044.5	2049.5	2149.6	2348.8	2561.2	2769.5	2902.9	2979.8
17.5°	2306.4	2268.9	2119.3	1984.8	1956.5	2088.0	2348.8	2611.7	2856.4	3007.1	3078.9
20°	2315.5	2222.4	2067.7	1927.2	1854.4	2006.1	2332.6	2650.1	2940.3	3107.2	3184.0
22.5°	2235.6	2143.6	2013.1	1877.6	1770.5	1907.0	2306.4	2679.5	3012.1	3201.2	3296.2
25°	2144.6	2067.7	1957.5	1827.1	1712.8	1806.9	2282.1	2729.0	3112.2	3328.6	3424.7
27.5°	2055.6	1990.9	1890.8	1784.6	1680.5	1719.9	2266.9	2801.8	3231.5	3509.6	3592.5
30°	1968.6	1910.0	1819.0	1744.2	1663.3	1663.3	2253.8	2885.7	3389.3	3712.8	3795.7
32.5°	1880.7	1825.1	1751.3	1704.7	1653.2	1641.0	2217.4	2964.6	3552.1	3935.3	4020.2
35°	1798.8	1743.2	1686.5	1667.3	1648.1	1623.9	2127.4	3026.3	3710.8	4195.1	4267.9
37.5°	1721.9	1668.3	1625.9	1620.8	1622.8	1577.3	1985.8	3077.8	3909.0	4461.1	4499.5
40°	1655.2	1595.5	1562.2	1561.2	1571.3	1502.5	1806.9	3151.7	4135.5	4686.5	4670.4
42.5°	1595.5	1532.9	1492.4	1501.5	1495.4	1427.7	1631.9	3219.4	4332.6	4897.9	4865.5
45°	1536.9	1476.2	1419.6	1432.8	1425.7	1381.2	1483.3	3268.9	4551.0	5151.6	5155.7
47.5°	1480.3	1420.6	1364.0	1347.8	1346.8	1367.0	1369.1	3285.1	4907.0	5560.1	5468.1
50°	1427.7	1368.0	1309.4	1254.8	1276.0	1338.7	1284.1	3273.0	5439.8	6011.1	5754.3
52.5°	1373.1	1316.5	1251.8	1153.7	1209.3	1271.0	1208.3	3229.5	5765.4	6409.5	6255.8
55°	1310.4	1256.8	1168.9	1049.5	1117.3	1130.4	1130.4	2808.9	5903.9	6803.8	6898.9
57.5°	1226.5	1155.7	1016.2	920.1	980.8	930.2	1047.5	1965.6	5675.4	6679.4	7048.5
60°	1131.4	1055.6	908.0	839.2	857.4	768.4	892.8	1232.6	4703.7	5683.5	6322.5
62.5°	1006.1	936.3	813.9	760.4	722.9	626.9	718.9	779.6	3224.5	4220.4	4656.2
65°	922.1	845.3	736.1	665.3	588.5	504.5	477.2	511.6	1734.1	2362.0	2656.2
67.5°	823.0	747.2	644.1	555.1	493.4	432.8	385.2	373.1	594.5	786.6	851.4
70°	729.0	656.2	570.3	487.4	425.7	366.0	319.5	286.1	275.0	273.0	269.0
72.5°	633.0	565.2	493.4	416.6	348.8	294.2	252.8	214.4	198.2	193.1	188.1
75°	518.7	465.1	393.3	310.4	255.8	205.3	172.9	147.6	133.5	128.4	122.3
77.5°	333.7	309.4	246.7	200.2	154.7	122.3	105.2	89.0	79.9	77.9	72.8
80°	178.0	165.8	136.5	115.3	92.0	74.8	65.7	56.6	51.6	49.5	47.5
82.5°	99.1	90.0	75.8	66.7	53.6	45.5	40.4	36.4	33.4	32.4	31.3
85°	44.5	38.4	30.3	28.3	25.3	23.3	22.2	20.2	19.2	18.2	17.2
87.5°	2.0	4.0	5.1	4.0	4.0	6.1	7.1	7.1	6.1	6.1	5.1
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: P639470

CATALOG NUMBER: GWS-SA5B-830-U-SLL-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3	2214.3
2.5°	2363.0	2393.3	2396.3	2406.5	2393.3	2390.3	2369.0	2356.9	2345.8	2342.8
5°	2547.0	2607.7	2631.9	2649.1	2633.0	2624.9	2578.3	2529.8	2502.5	2489.4
7.5°	2736.1	2827.1	2874.6	2895.8	2897.9	2861.5	2781.6	2690.6	2645.1	2627.9
10°	2904.9	3017.2	3079.9	3120.3	3106.2	3061.7	2952.5	2829.1	2771.5	2756.3
12.5°	3030.3	3137.5	3186.0	3212.3	3211.3	3187.0	3083.9	2950.4	2884.7	2869.6
15°	3111.2	3174.9	3177.9	3184.0	3201.2	3233.6	3180.0	3056.6	2983.8	2962.6
17.5°	3174.9	3149.6	3102.1	3085.9	3124.4	3214.3	3246.7	3146.6	3067.7	3049.5
20°	3215.4	3088.0	3004.0	2972.7	3017.2	3163.8	3287.1	3227.5	3145.6	3122.3
22.5°	3246.7	3030.3	2894.8	2873.6	2920.1	3109.2	3328.6	3323.5	3233.6	3201.2
25°	3296.2	2991.9	2818.0	2802.8	2846.3	3082.9	3384.2	3454.0	3374.1	3327.6
27.5°	3374.1	2987.9	2778.6	2773.5	2833.2	3106.2	3464.1	3645.1	3545.0	3510.6
30°	3482.3	3026.3	2787.7	2797.8	2870.6	3190.1	3588.5	3863.5	3763.4	3709.8
32.5°	3638.0	3129.4	2926.2	2969.7	3023.2	3324.6	3770.5	4100.1	4024.2	3945.4
35°	3843.3	3412.5	3335.7	3520.7	3470.2	3618.8	3989.9	4387.2	4295.2	4226.5
37.5°	4117.3	3992.9	4063.7	4318.5	4196.1	4174.9	4257.8	4648.1	4597.6	4528.8
40°	4501.5	4526.8	4657.2	4991.9	4814.9	4678.4	4586.4	4844.3	4861.5	4776.5
42.5°	4756.3	4872.6	5187.0	5567.2	5323.5	4996.9	4861.5	5095.0	5096.0	5019.2
45°	4851.3	5155.7	5812.9	6250.7	5843.2	5178.9	5013.1	5435.8	5425.7	5337.7
47.5°	4817.0	5394.3	6463.1	7132.4	6510.6	5308.4	4991.9	5921.1	6003.0	5869.5
50°	4745.2	5633.9	7222.4	8212.3	7329.6	5445.9	4959.5	6459.0	6594.5	6491.4
52.5°	4818.0	5900.9	8120.3	9328.6	8356.9	5665.3	5177.9	7149.6	7125.3	7001.0
55°	5048.5	6216.4	9211.3	10731.0	9485.3	6036.4	5739.1	7807.9	7561.1	7412.5
57.5°	5037.4	6441.8	10167.8	11840.2	10467.1	6340.7	5934.2	7877.6	7379.1	7191.1
60°	4572.3	6338.7	10531.8	12541.9	10763.3	6172.9	5292.2	7036.4	6226.5	6029.3
62.5°	3412.5	5624.8	9826.0	11663.2	9925.1	5331.6	3979.8	5050.5	4474.2	4141.5
65°	2183.0	4400.4	8260.8	9448.9	8181.0	4077.8	2370.1	2707.8	2121.3	2026.3
67.5°	929.2	3106.2	6421.6	6315.4	6120.3	2642.1	915.1	762.4	568.2	558.1
70°	307.4	2113.2	3958.5	4212.3	3655.2	1820.0	302.3	255.8	254.8	245.7
72.5°	201.2	1134.5	2228.5	2481.3	2351.9	1047.5	183.0	170.9	174.9	170.9
75°	120.3	246.7	375.1	487.4	375.1	175.9	110.2	108.2	110.2	105.2
77.5°	70.8	68.8	66.7	66.7	65.7	60.7	55.6	53.6	54.6	55.6
80°	45.5	43.5	41.5	40.4	35.4	33.4	31.3	29.3	29.3	30.3
82.5°	29.3	27.3	25.3	22.2	18.2	15.2	14.2	12.1	12.1	13.1
85°	15.2	12.1	9.1	7.1	4.0	2.0	0.0	0.0	0.0	0.0
87.5°	3.0	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

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



CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

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

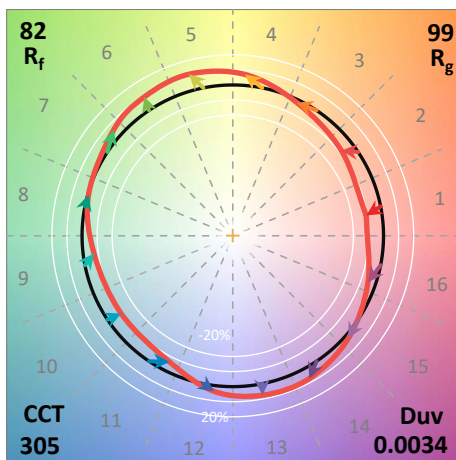
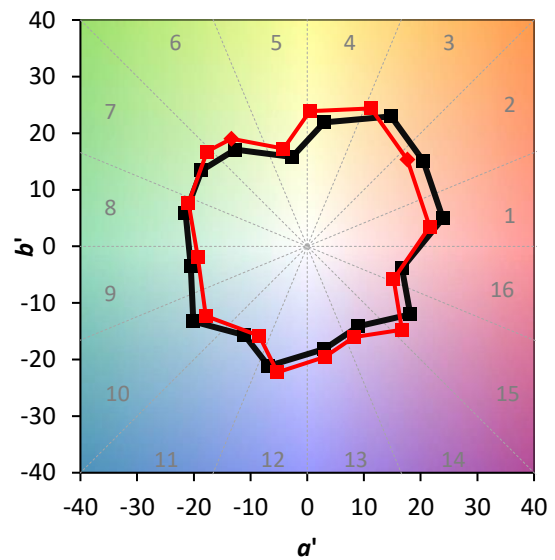
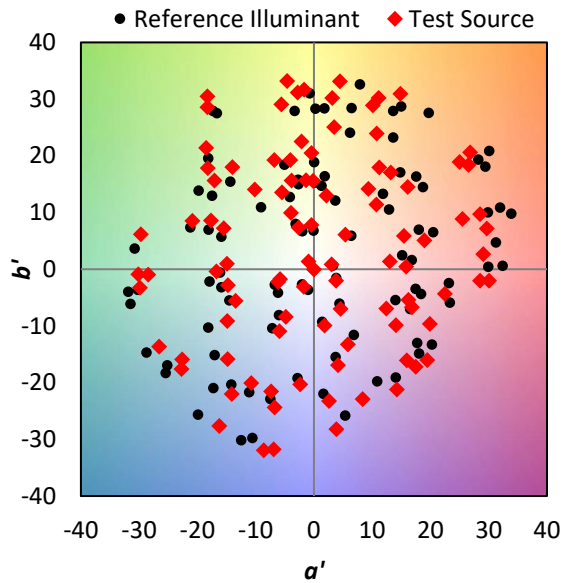
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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

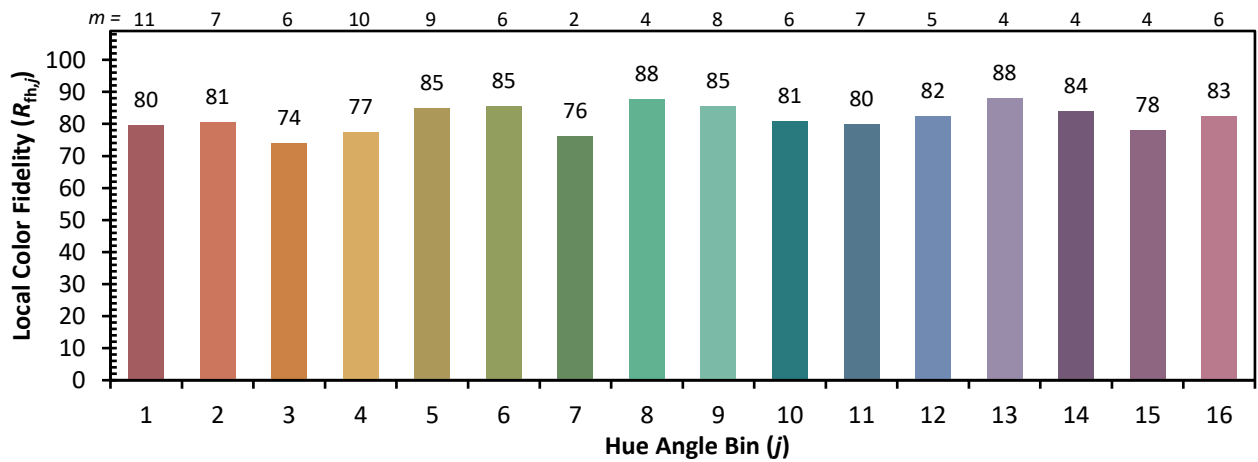
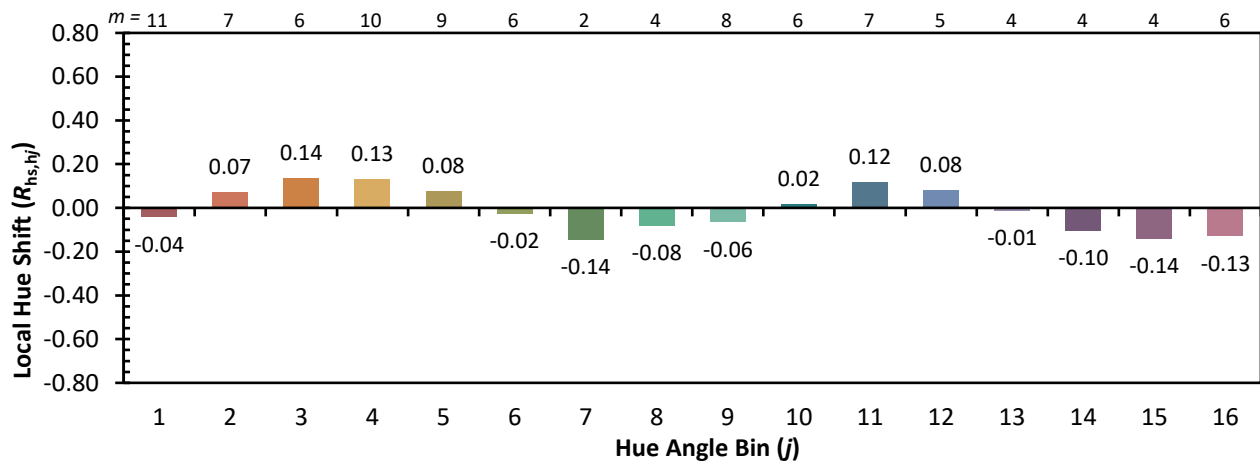
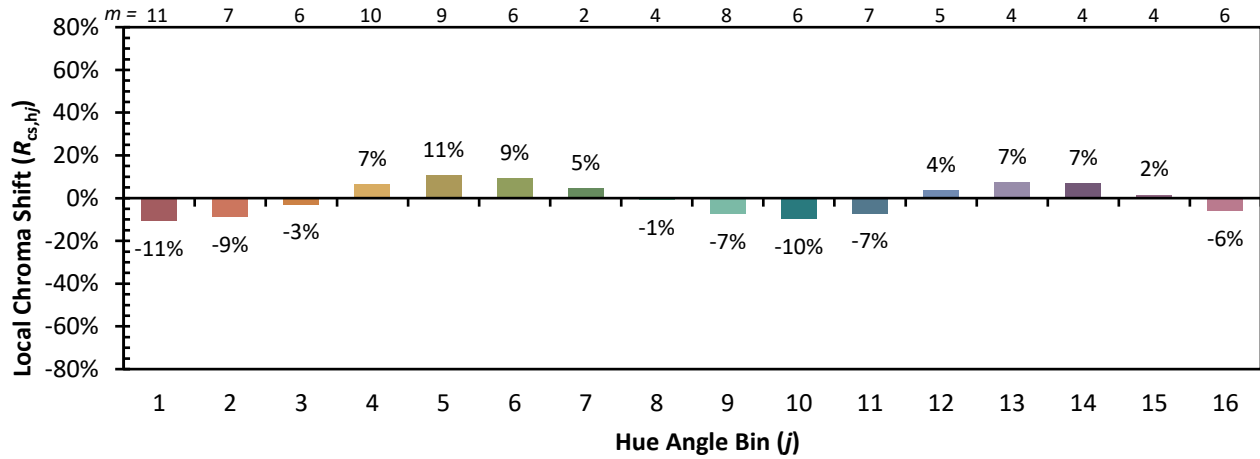


Individual Sample Fidelity Index ($R_{f,i}$)

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)