

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: P637991

Luminaire Tested: GWS-SA4D-830-U-SLR-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637991
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-41)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4D-830-U-SLR-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18419.7 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

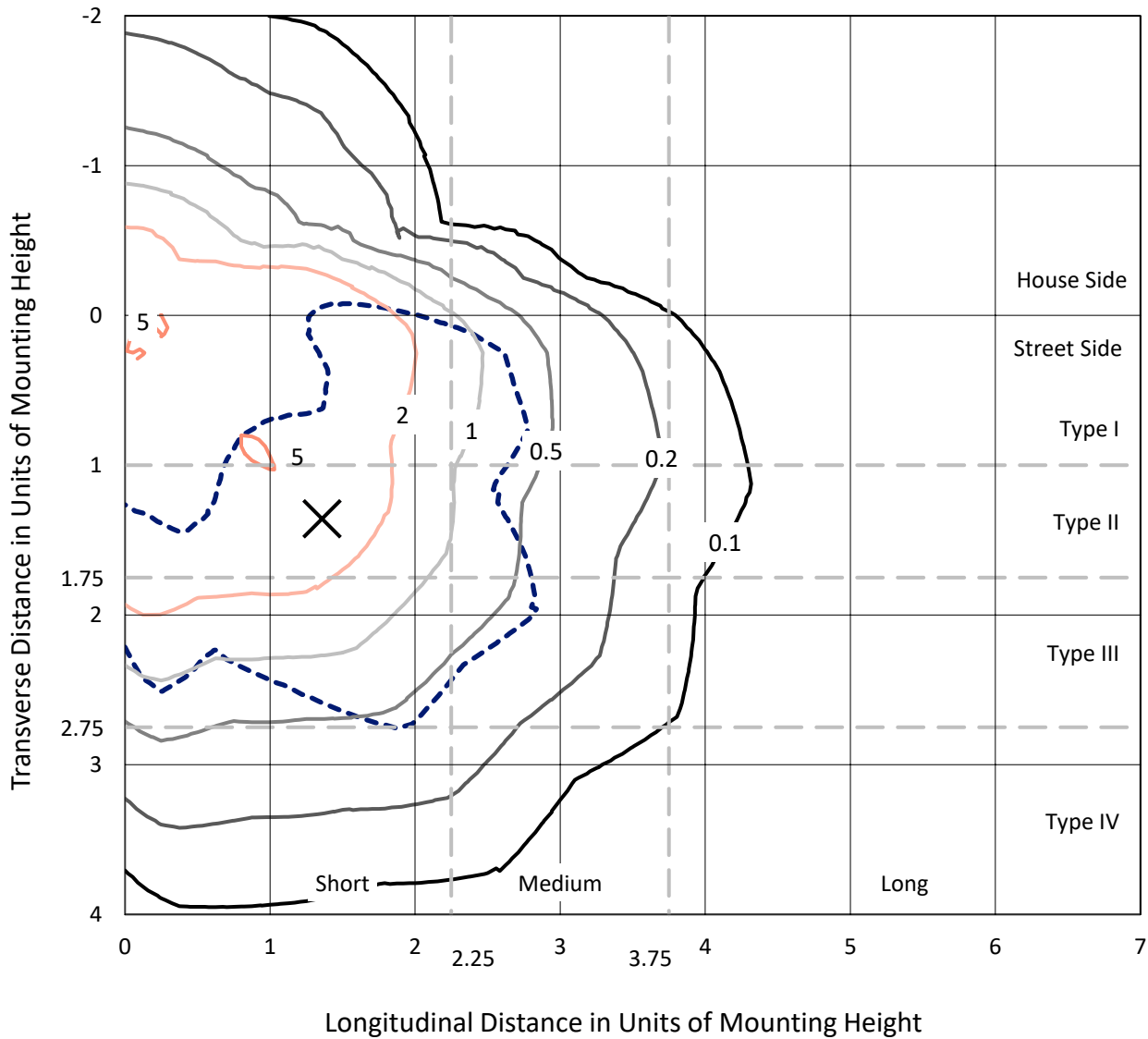
Input Watts (W): 162.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

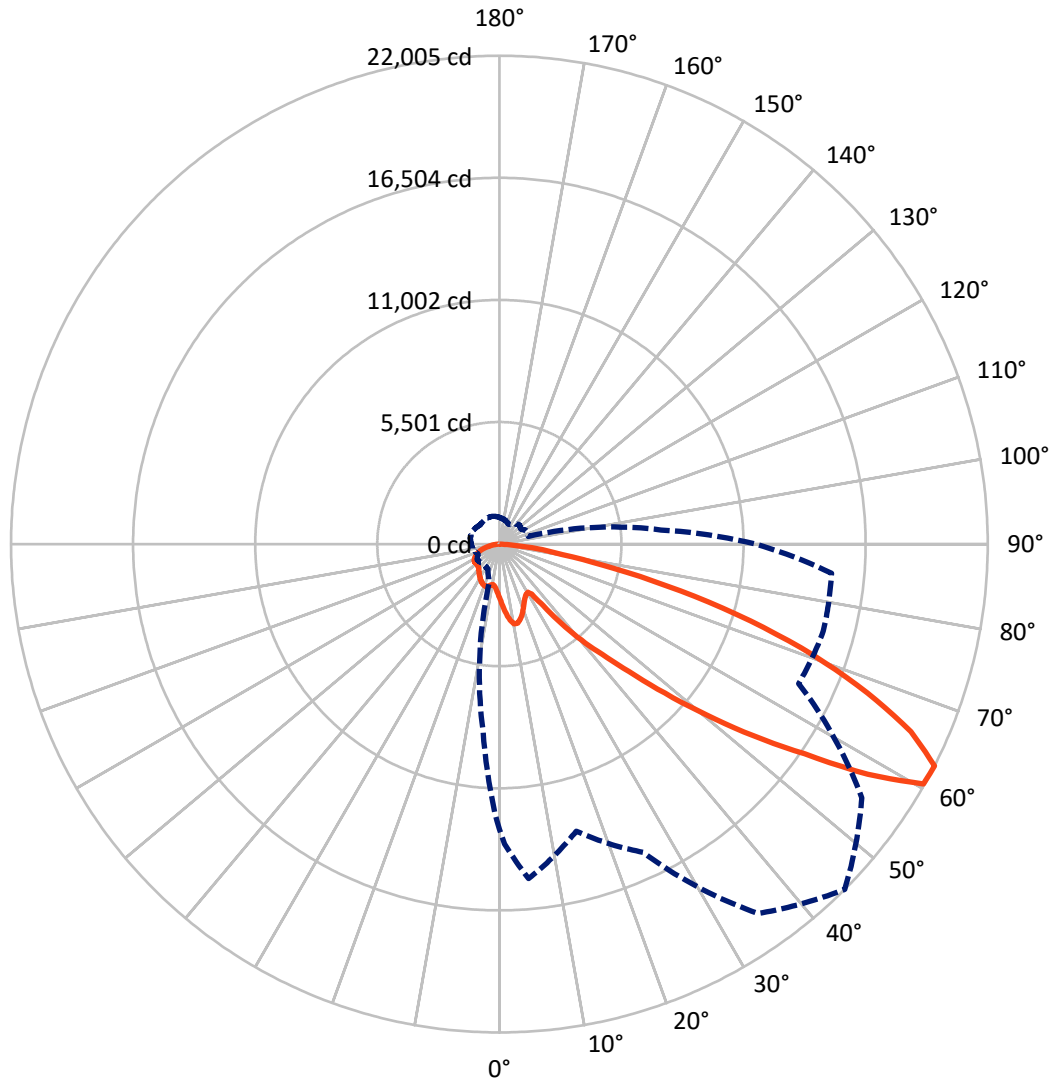
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4395.3	0.0	4395.3
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	14024.4	0.0	14024.4
	% Fixture	76.1	0.0	76.1
Total	Lumens	18419.7	0.0	18419.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.8	1.3
10°-20°	748.4	4.1
20°-30°	1162.5	6.3
30°-40°	1578.4	8.6
40°-50°	2501.6	13.6
50°-60°	4412.8	24.0
60°-70°	4909.9	26.7
70°-80°	2490.1	13.5
80°-90°	377.1	2.0
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°	18419.7	100.0
0°-180°	18419.7	100.0

Coefficient of Utilization



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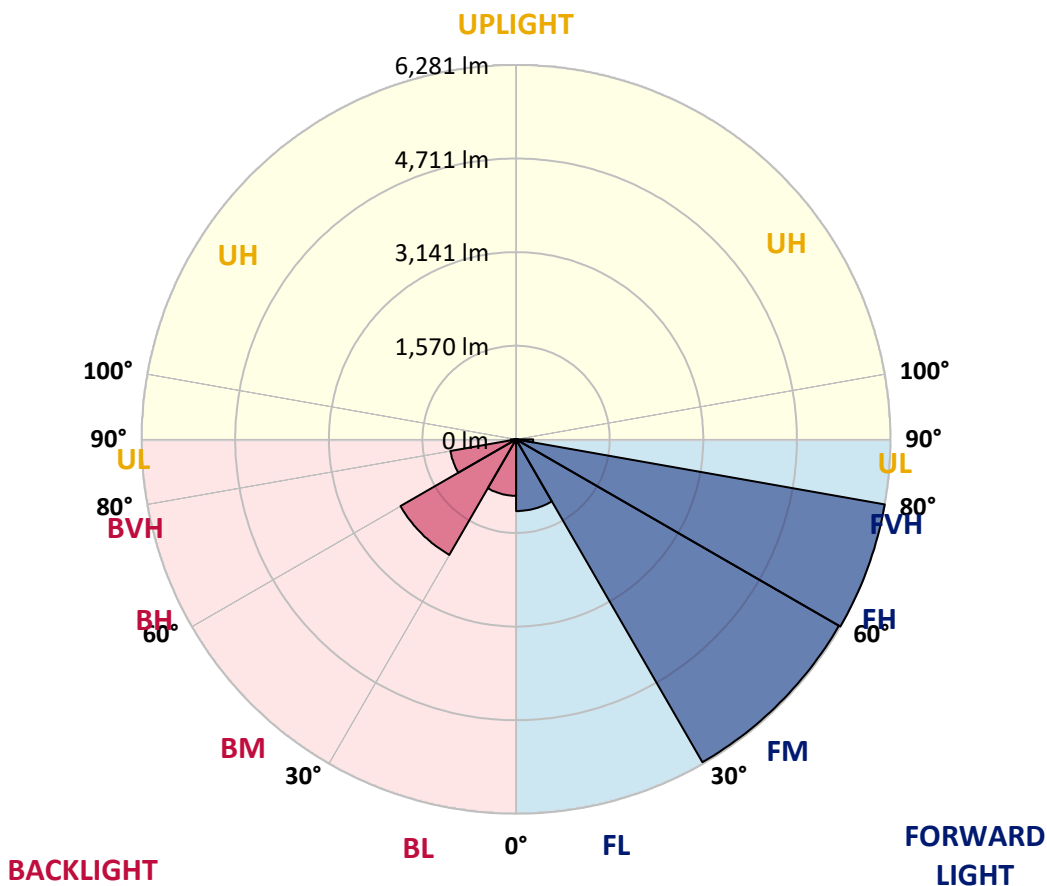
CATALOG NUMBER: GWS-SA4D-830-U-SLR-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1202.7	6.5			
FM (30°-60°)	6254.3	34.0			
FH (60°-80°)	6281.3	34.1			G3/7500
FVH (80°-90°)	286.2	1.6			G3/500
BL (0°-30°)	947.1	5.1	B2/1000		
BM (30°-60°)	2238.5	12.2	B2/2500		
BH (60°-80°)	1118.8	6.1	B3/2500		G3/2500
BVH (80°-90°)	90.9	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7
2.5°	2627.4	2626.0	2652.5	2692.9	2730.6	2747.3	2775.2	2772.4	2750.1	2720.8	2711.0
5°	2833.8	2839.3	2885.4	2974.6	3073.6	3115.5	3133.6	3126.6	3086.2	3034.6	2943.9
7.5°	3020.6	3030.4	3101.5	3235.4	3358.1	3413.9	3458.5	3450.2	3391.6	3295.4	3161.5
10°	3157.3	3168.4	3253.5	3411.1	3547.8	3596.6	3653.8	3656.5	3604.9	3475.3	3338.6
12.5°	3294.0	3305.1	3384.6	3528.2	3617.5	3618.9	3652.4	3670.5	3673.3	3613.3	3476.6
15°	3436.2	3446.0	3518.5	3599.4	3595.2	3517.1	3517.1	3552.0	3628.7	3671.9	3577.1
17.5°	3557.5	3570.1	3625.9	3599.4	3475.3	3334.4	3317.7	3362.3	3496.2	3662.1	3652.4
20°	3657.9	3667.7	3698.4	3522.7	3296.7	3112.7	3080.6	3132.2	3313.5	3602.2	3709.5
22.5°	3754.2	3759.7	3743.0	3422.3	3104.3	2893.7	2854.7	2909.1	3104.3	3496.2	3758.3
25°	3868.5	3862.9	3783.5	3317.7	2928.6	2720.8	2680.4	2741.7	2945.3	3355.3	3811.3
27.5°	4001.0	3980.1	3818.3	3204.7	2793.3	2592.5	2564.6	2630.1	2819.8	3225.6	3853.2
30°	4114.0	4073.5	3823.9	3104.3	2723.6	2538.1	2521.4	2582.7	2758.4	3137.8	3906.2
32.5°	4239.5	4183.7	3856.0	3077.8	2762.6	2669.2	2691.5	2695.7	2775.2	3112.7	3985.7
35°	4419.4	4346.9	3943.8	3154.5	3164.3	3321.9	3402.7	3294.0	3027.6	3168.4	4136.3
37.5°	4691.3	4599.3	4122.3	3486.4	3994.0	4346.9	4542.1	4293.9	3794.6	3379.0	4363.6
40°	5021.8	4904.7	4351.0	4100.0	4769.4	5334.2	5681.5	5317.5	4583.9	3904.8	4682.9
42.5°	5483.4	5360.7	4794.5	4702.5	5487.6	6328.5	6781.8	6239.3	5279.8	4583.9	5194.8
45°	6288.1	6169.6	5607.5	5306.3	6328.5	7553.0	8188.9	7434.4	5986.9	5265.9	6151.4
47.5°	7774.7	7635.2	6815.2	5975.7	7288.0	9142.8	10032.5	8933.6	6721.8	6046.8	7758.0
50°	9559.7	9425.9	8331.1	6767.8	8347.9	10842.7	12079.7	10694.9	7568.3	6996.5	9678.3
52.5°	11707.4	11682.3	10494.1	7769.1	9451.0	12655.7	14351.5	12645.9	8495.7	8275.3	11853.8
55°	13643.0	13888.5	13241.4	9296.2	10876.2	14933.0	16687.4	14774.0	9753.6	10389.5	14401.7
57.5°	14686.2	15345.8	16340.1	12411.6	12948.5	17655.2	19569.9	17372.1	11915.2	13909.4	16764.1
60°	13997.2	14744.7	16546.5	14757.3	15004.1	19836.3	21949.0	19556.0	14037.7	16352.7	16630.2
62.5°	12850.9	13521.7	15124.0	13387.8	15322.1	20316.0	22004.8	19936.7	14881.4	15112.9	15022.2
65°	11491.2	12167.6	13864.8	11686.4	14311.0	19176.6	20381.5	18816.8	13365.5	13654.2	13687.6
67.5°	9685.2	10310.0	12037.9	10390.9	13044.7	17504.6	17889.5	17221.5	12308.4	12768.6	12287.5
70°	7236.4	7799.8	9325.4	8444.1	10996.1	15326.3	15015.3	15114.3	11121.6	11579.1	10264.0
72.5°	4945.1	5369.1	6677.2	6635.3	8420.4	12269.4	11835.7	12774.2	9289.2	9895.8	7824.9
75°	3458.5	3789.0	4826.6	5242.2	6364.8	9094.0	8428.7	9561.1	7254.5	8120.5	5709.3
77.5°	2122.5	2341.5	3048.5	3883.9	4094.4	6223.9	5235.2	7194.6	5094.3	5922.7	3808.6
80°	1061.3	1167.2	1481.0	2441.9	2715.2	3667.7	2890.9	4176.7	3447.4	3667.7	2107.2
82.5°	320.7	354.2	433.7	927.4	1407.1	2111.4	1708.3	2426.5	1882.7	1719.5	829.8
85°	85.1	96.2	119.9	274.7	493.7	757.2	577.3	1175.6	902.3	634.5	312.4
87.5°	7.0	7.0	5.6	5.6	2.8	0.0	0.0	83.7	168.7	96.2	54.4
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°	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7
2.5°	2662.2	2656.6	2599.5	2557.6	2508.8	2461.4	2412.6	2369.4	2320.6	2271.7	2257.8
5°	2877.0	2837.9	2716.6	2614.8	2514.4	2426.5	2349.8	2270.3	2206.2	2143.4	2119.7
7.5°	3066.6	2998.3	2822.6	2667.8	2528.3	2419.6	2306.6	2190.9	2100.2	2011.0	1988.6
10°	3238.2	3147.5	2925.8	2730.6	2575.8	2451.6	2319.2	2164.4	2033.3	1924.5	1895.2
12.5°	3365.1	3266.1	3015.0	2790.5	2614.8	2475.4	2344.3	2207.6	2069.5	1928.7	1896.6
15°	3465.5	3362.3	3089.0	2836.5	2616.2	2436.3	2309.4	2262.0	2218.8	2080.7	2022.1
17.5°	3546.4	3437.6	3153.1	2864.4	2578.5	2317.8	2207.6	2277.3	2387.5	2301.0	2190.9
20°	3620.3	3510.1	3201.9	2884.0	2494.9	2154.6	2093.2	2241.1	2407.0	2404.2	2305.2
22.5°	3701.2	3593.8	3273.0	2895.1	2377.7	1988.6	2024.9	2188.1	2323.3	2363.8	2302.4
25°	3804.4	3709.5	3372.1	2920.2	2245.2	1874.3	1974.7	2119.7	2232.7	2242.5	2206.2
27.5°	3924.3	3853.2	3519.9	2978.8	2116.9	1815.7	1916.1	2023.5	2126.7	2130.9	2087.7
30°	4055.4	4008.0	3656.5	3027.6	2020.7	1797.6	1840.8	1927.3	1992.8	2004.0	1966.3
32.5°	4222.7	4180.9	3777.9	2995.5	1963.5	1793.4	1771.1	1815.7	1870.1	1870.1	1840.8
35°	4452.8	4394.3	3906.2	2872.8	1893.8	1776.7	1697.2	1709.7	1733.4	1737.6	1720.9
37.5°	4779.2	4682.9	4035.9	2630.1	1779.5	1716.7	1612.1	1596.8	1605.1	1616.3	1612.1
40°	5183.6	5026.0	4225.5	2338.7	1642.8	1601.0	1524.3	1495.0	1488.0	1510.3	1518.7
42.5°	5692.6	5451.3	4429.1	2066.7	1518.7	1468.5	1421.1	1396.0	1384.8	1422.5	1444.8
45°	6505.6	6108.2	4624.4	1797.6	1449.0	1355.5	1323.4	1305.3	1310.9	1355.5	1383.4
47.5°	7910.0	7110.9	4809.9	1627.5	1443.4	1274.6	1235.6	1239.8	1255.1	1302.5	1336.0
50°	9686.6	8453.8	4934.0	1556.3	1460.1	1225.8	1174.2	1196.5	1220.2	1266.3	1305.3
52.5°	11495.4	9704.8	4786.1	1517.3	1458.7	1227.2	1117.0	1184.0	1195.1	1241.2	1283.0
55°	12739.3	9844.2	4134.9	1457.3	1436.4	1283.0	1072.4	1178.4	1185.4	1227.2	1264.9
57.5°	13213.5	9367.3	3153.1	1474.1	1369.5	1326.2	1052.9	1139.4	1189.6	1225.8	1264.9
60°	12640.3	8467.8	1916.1	1517.3	1262.1	1323.4	1065.4	1068.2	1154.7	1216.1	1255.1
62.5°	11559.5	7313.1	1345.8	1394.6	1184.0	1249.5	1094.7	984.6	1093.3	1167.2	1202.1
65°	10321.2	5954.8	1026.4	1200.7	1146.3	1135.2	1104.5	910.7	1009.7	1082.2	1112.9
67.5°	9031.2	4628.6	833.9	895.3	1036.2	1026.4	1009.7	845.1	910.7	962.2	997.1
70°	7406.5	3238.2	704.3	672.2	888.3	920.4	882.8	762.8	783.7	836.7	864.6
72.5°	5417.9	2017.9	578.7	555.0	714.0	804.7	785.1	672.2	681.9	732.1	754.5
75°	3896.4	1154.7	464.4	457.4	545.3	688.9	649.9	578.7	589.9	627.6	642.9
77.5°	2476.7	642.9	358.4	368.2	390.5	514.6	555.0	495.1	495.1	517.4	529.9
80°	1326.2	368.2	262.2	266.4	273.3	393.3	437.9	383.5	383.5	368.2	383.5
82.5°	541.1	212.0	179.9	167.3	182.7	269.2	306.8	244.0	255.2	230.1	235.7
85°	178.5	106.0	89.3	87.9	86.5	118.5	147.8	121.3	145.0	92.0	96.2
87.5°	23.7	19.5	11.2	8.4	9.8	4.2	8.4	9.8	9.8	7.0	7.0
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°	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7
2.5°	2248.0	2236.9	2196.4	2206.2	2199.2	2188.1	2199.2	2178.3	2195.0	2200.6	2235.5
5°	2101.6	2075.1	2036.1	2016.5	2012.4	2001.2	2002.6	1992.8	1995.6	2019.3	2058.4
7.5°	1970.5	1945.4	1914.7	1900.8	1888.2	1875.7	1874.3	1872.9	1884.1	1905.0	1942.6
10°	1875.7	1861.7	1849.2	1854.8	1849.2	1843.6	1833.9	1833.9	1852.0	1889.6	1935.7
12.5°	1875.7	1872.9	1875.7	1892.4	1891.0	1892.4	1879.9	1886.8	1937.0	2001.2	2066.7
15°	1976.1	1953.8	1953.8	1962.2	1959.4	1959.4	1959.4	1988.6	2103.0	2202.0	2271.7
17.5°	2098.8	2033.3	2005.4	2001.2	1999.8	1999.8	2005.4	2068.1	2246.6	2351.2	2391.7
20°	2183.9	2059.8	2013.8	1995.6	1997.0	1999.8	2016.5	2103.0	2299.6	2352.6	2342.9
22.5°	2199.2	2038.9	1983.1	1956.6	1960.8	1963.5	1988.6	2080.7	2227.1	2235.5	2216.0
25°	2128.1	1980.3	1920.3	1899.4	1905.0	1903.6	1925.9	1992.8	2097.4	2094.6	2083.5
27.5°	2022.1	1886.8	1842.2	1828.3	1838.0	1826.9	1833.9	1885.5	1966.3	1963.5	1959.4
30°	1913.3	1796.2	1755.8	1748.8	1761.3	1744.6	1746.0	1789.2	1845.0	1842.2	1840.8
32.5°	1804.6	1705.6	1669.3	1669.3	1681.8	1663.7	1666.5	1704.2	1741.8	1730.7	1730.7
35°	1701.4	1631.6	1602.4	1596.8	1606.5	1594.0	1599.6	1634.4	1648.4	1633.0	1623.3
37.5°	1610.7	1580.0	1550.8	1531.2	1532.6	1534.0	1550.8	1577.3	1568.9	1546.6	1534.0
40°	1527.0	1527.0	1499.2	1462.9	1458.7	1468.5	1496.4	1525.7	1501.9	1476.8	1461.5
42.5°	1467.1	1479.6	1453.1	1416.9	1408.5	1425.2	1455.9	1476.8	1449.0	1421.1	1400.1
45°	1411.3	1442.0	1423.8	1383.4	1372.3	1391.8	1430.8	1439.2	1401.5	1375.0	1359.7
47.5°	1372.3	1414.1	1401.5	1362.5	1345.8	1373.6	1414.1	1412.7	1365.3	1337.4	1324.8
50°	1344.4	1397.4	1396.0	1362.5	1344.4	1379.2	1415.5	1397.4	1345.8	1316.5	1303.9
52.5°	1322.0	1396.0	1405.7	1386.2	1373.6	1404.3	1426.6	1391.8	1331.8	1301.1	1291.4
55°	1312.3	1401.5	1408.5	1390.4	1379.2	1407.1	1426.6	1402.9	1331.8	1303.9	1295.5
57.5°	1315.1	1394.6	1396.0	1370.9	1351.3	1386.2	1416.9	1409.9	1347.1	1315.1	1305.3
60°	1298.3	1356.9	1359.7	1320.7	1298.3	1340.2	1394.6	1390.4	1340.2	1306.7	1288.6
62.5°	1242.6	1294.2	1295.5	1259.3	1227.2	1287.2	1347.1	1345.8	1299.7	1266.3	1245.3
65°	1149.1	1203.5	1217.5	1182.6	1157.5	1221.6	1284.4	1281.6	1235.6	1204.9	1184.0
67.5°	1033.4	1091.9	1118.4	1094.7	1085.0	1143.5	1202.1	1200.7	1163.1	1133.8	1115.7
70°	892.5	941.3	986.0	986.0	979.0	1045.9	1108.7	1103.1	1068.2	1045.9	1032.0
72.5°	775.4	813.0	827.0	840.9	861.8	931.6	984.6	988.7	963.6	952.5	963.6
75°	659.6	683.3	695.9	684.7	721.0	793.5	863.2	870.2	843.7	825.6	829.8
77.5°	542.5	569.0	581.5	556.4	553.6	645.7	730.8	746.1	723.8	695.9	704.3
80°	391.9	426.7	447.7	430.9	425.3	465.8	582.9	599.7	578.7	556.4	569.0
82.5°	239.9	259.4	265.0	281.7	316.6	333.3	375.1	430.9	415.6	396.1	430.9
85°	94.8	113.0	125.5	142.2	166.0	196.6	231.5	276.1	251.0	242.7	285.9
87.5°	5.6	1.4	0.0	2.8	23.7	46.0	99.0	136.7	114.4	122.7	147.8
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: P637991
 CATALOG NUMBER: GWS-SA4D-830-U-SLR-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7	2444.7
2.5°	2263.4	2299.6	2348.4	2388.9	2440.5	2489.3	2539.5	2589.7	2616.2	2627.4
5°	2103.0	2169.9	2248.0	2334.5	2434.9	2540.9	2648.3	2758.4	2828.2	2833.8
7.5°	2006.8	2103.0	2210.4	2319.2	2443.3	2589.7	2759.8	2930.0	3001.1	3020.6
10°	2037.5	2144.8	2229.9	2331.7	2468.4	2651.1	2851.9	3051.3	3133.6	3157.3
12.5°	2160.2	2181.1	2207.6	2301.0	2468.4	2704.1	2946.7	3183.8	3271.6	3294.0
15°	2262.0	2161.6	2114.2	2213.2	2434.9	2750.1	3047.1	3309.3	3415.3	3436.2
17.5°	2270.3	2097.4	1994.2	2083.5	2376.3	2782.2	3143.3	3448.8	3538.0	3557.5
20°	2185.3	2029.1	1895.2	1949.6	2296.8	2796.1	3213.1	3550.6	3638.4	3657.9
22.5°	2089.1	1973.3	1828.3	1825.5	2200.6	2811.4	3296.7	3646.8	3741.6	3754.2
25°	1998.4	1896.6	1773.9	1734.8	2089.1	2840.7	3409.7	3791.8	3864.3	3868.5
27.5°	1892.4	1814.3	1730.7	1693.0	1991.4	2896.5	3577.1	3964.7	4008.0	4001.0
30°	1796.2	1737.6	1700.0	1688.8	1930.1	2938.3	3736.0	4134.9	4137.7	4114.0
32.5°	1694.4	1672.1	1672.1	1708.3	1879.9	2928.6	3865.7	4300.8	4274.3	4239.5
35°	1603.7	1607.9	1637.2	1722.3	1796.2	2831.0	3989.8	4508.6	4469.6	4419.4
37.5°	1517.3	1549.4	1591.2	1673.5	1686.0	2685.9	4134.9	4802.9	4754.1	4691.3
40°	1443.4	1492.2	1541.0	1581.4	1568.9	2479.5	4337.1	5148.7	5094.3	5021.8
42.5°	1384.8	1432.2	1486.6	1490.8	1495.0	2264.8	4551.9	5572.7	5562.9	5483.4
45°	1347.1	1377.8	1429.4	1422.5	1490.8	2027.7	4749.9	6219.8	6348.1	6288.1
47.5°	1322.0	1345.8	1351.3	1380.6	1527.0	1815.7	5005.1	7486.0	7843.0	7774.7
50°	1308.1	1331.8	1269.1	1383.4	1532.6	1679.1	5357.9	9075.8	9650.4	9559.7
52.5°	1306.7	1301.1	1206.3	1412.7	1501.9	1595.4	5542.0	10236.1	11510.7	11707.4
55°	1309.5	1239.8	1174.2	1421.1	1440.6	1564.7	4925.6	10793.9	13227.4	13643.0
57.5°	1284.4	1172.8	1192.4	1387.6	1324.8	1647.0	3641.2	10594.5	13913.6	14686.2
60°	1237.0	1108.7	1225.8	1296.9	1206.3	1506.1	2507.4	9704.8	13202.3	13997.2
62.5°	1168.6	1064.1	1221.6	1179.8	1163.1	1232.8	1723.7	8459.4	12074.1	12850.9
65°	1091.9	1027.8	1156.1	1066.8	1076.6	948.3	1218.8	7053.7	10727.0	11491.2
67.5°	1009.7	1005.5	1059.9	949.7	909.3	751.7	888.3	5653.6	8996.3	9685.2
70°	916.2	946.9	963.6	843.7	737.7	589.9	659.6	3953.6	6636.7	7236.4
72.5°	822.8	825.6	849.3	733.5	552.2	472.8	495.1	2394.5	4508.6	4945.1
75°	728.0	701.5	723.8	596.9	411.4	387.7	382.1	1479.6	3114.1	3458.5
77.5°	626.2	596.9	567.6	449.0	330.5	299.8	292.9	829.8	1910.6	2122.5
80°	509.0	470.0	423.9	329.1	241.3	214.8	213.4	404.4	952.5	1061.3
82.5°	396.1	322.1	309.6	205.0	149.2	131.1	139.5	154.8	287.3	320.7
85°	277.5	234.3	164.6	82.3	66.9	54.4	53.0	46.0	76.7	85.1
87.5°	154.8	101.8	53.0	9.8	11.2	12.6	9.8	7.0	7.0	7.0
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

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

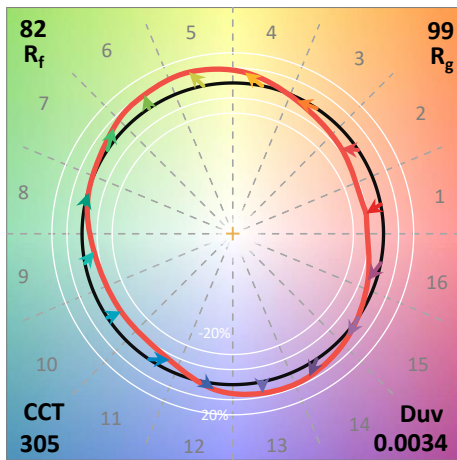
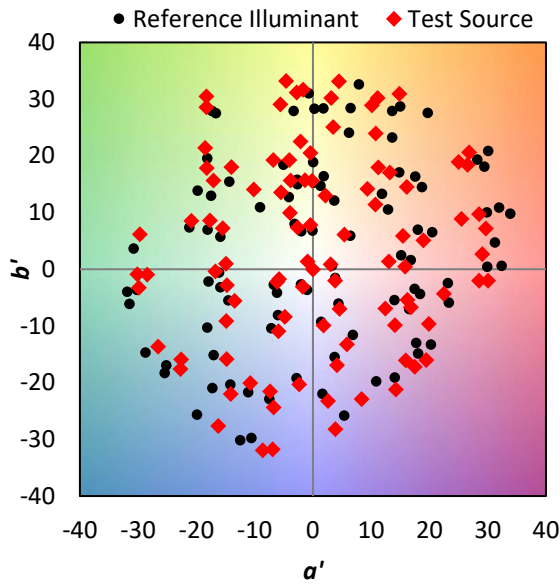
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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