

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: P637492

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

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37)
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
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14452.6 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

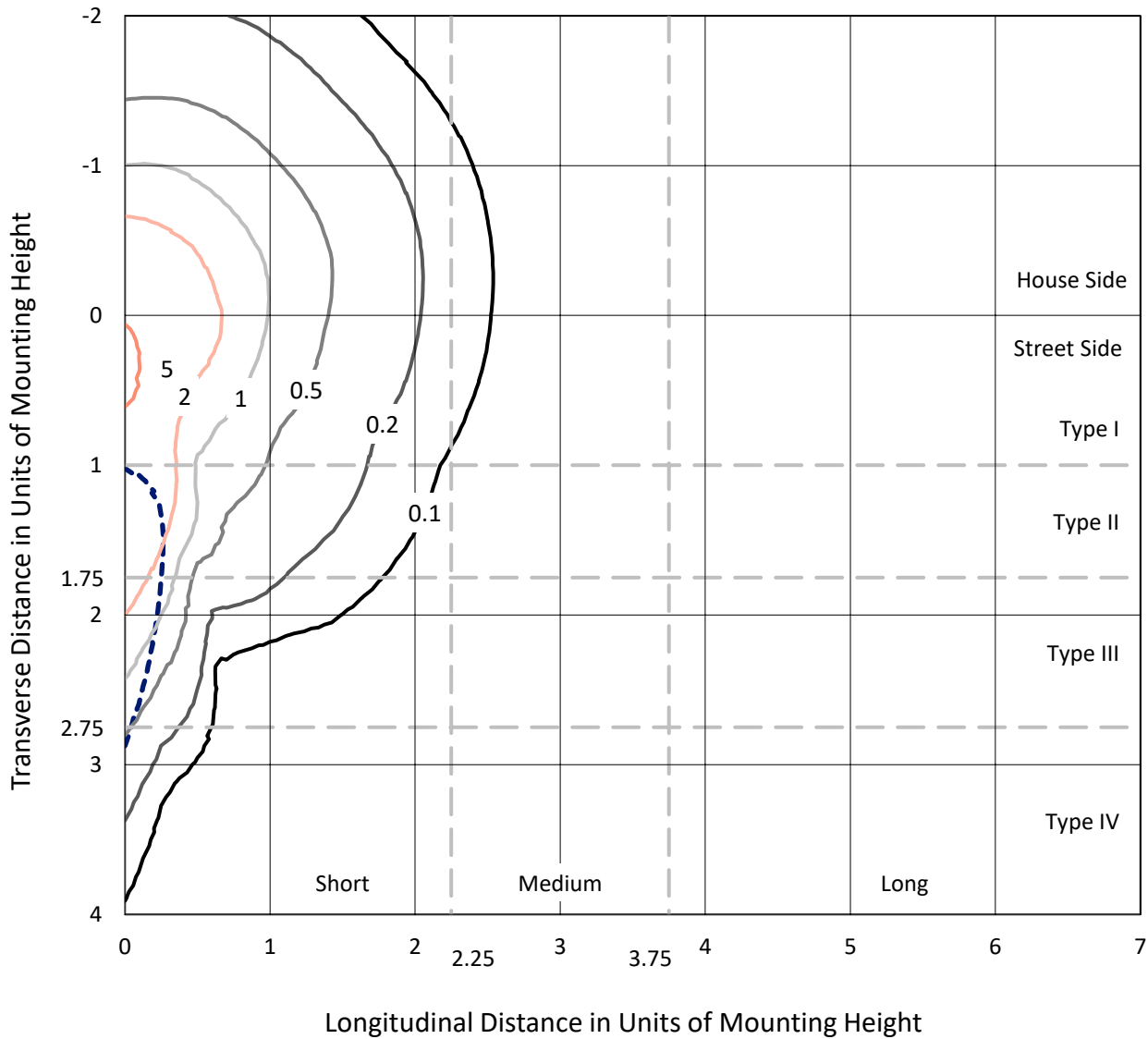
Input Watts (W): 128.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

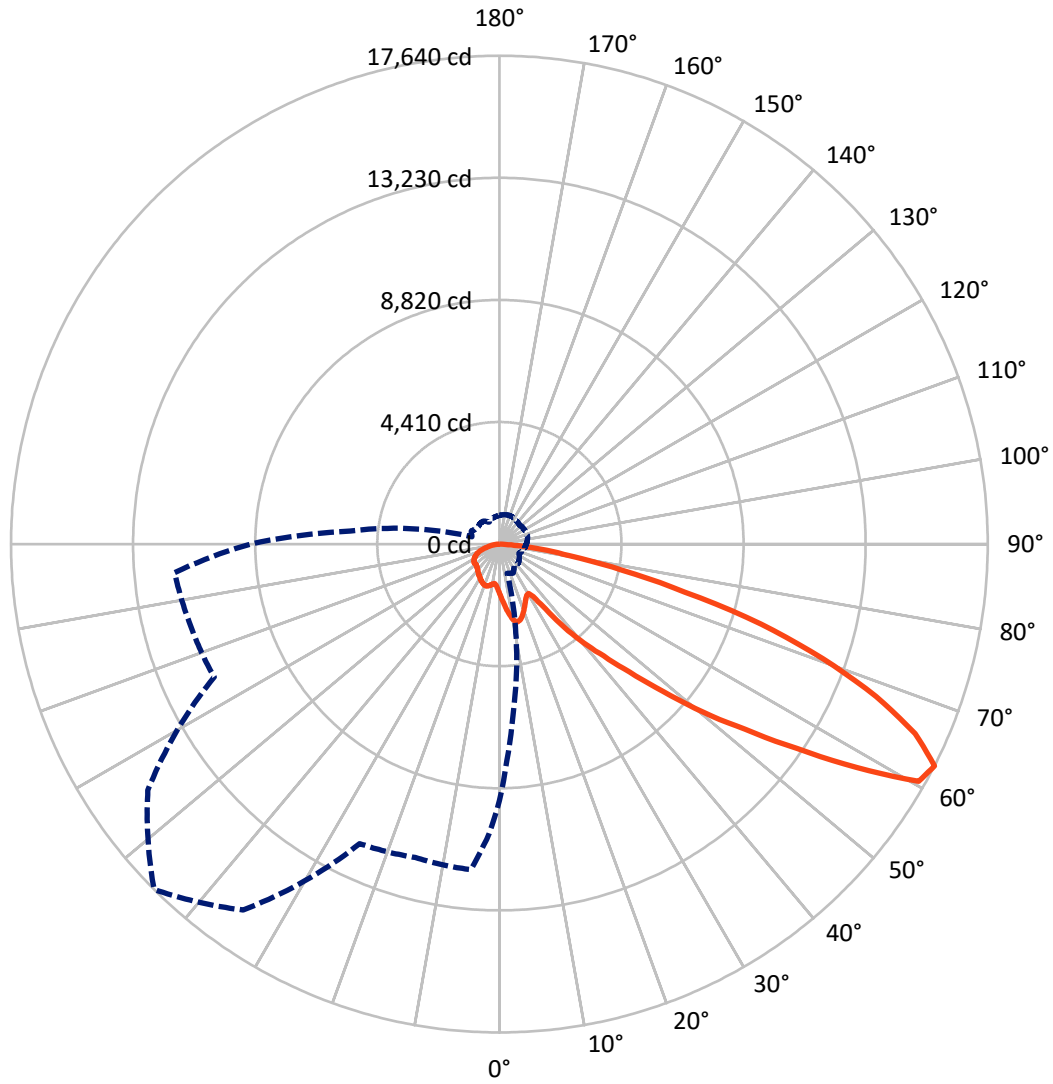
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3455.6	0.0	3455.6
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	10997.0	0.0	10997.0
	% Fixture	76.1	0.0	76.1
Total	Lumens	14452.6	0.0	14452.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.5	1.2
10°-20°	576.9	4.0
20°-30°	908.2	6.3
30°-40°	1244.9	8.6
40°-50°	1942.4	13.4
50°-60°	3349.1	23.2
60°-70°	3881.2	26.9
70°-80°	2048.7	14.2
80°-90°	323.6	2.2
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°	14452.6	100.0
0°-180°	14452.6	100.0

Coefficient of Utilization



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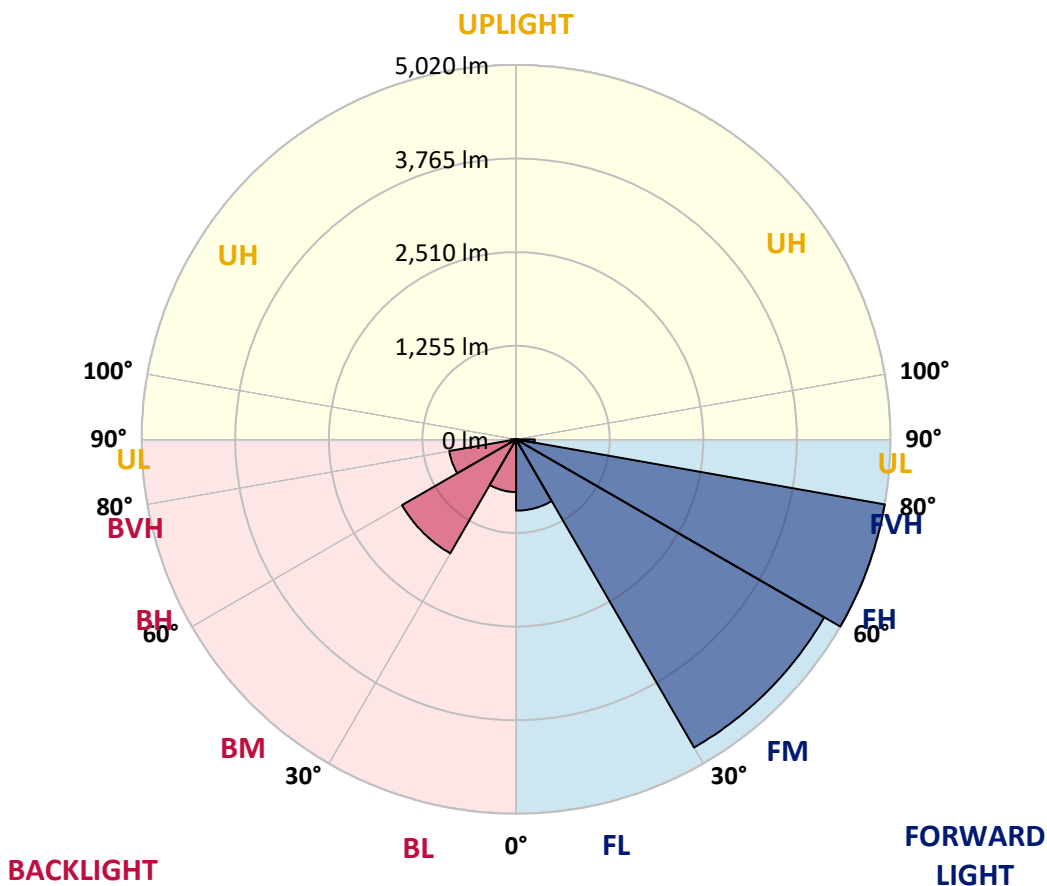
CATALOG NUMBER: GWS-SA4C-830-U-SLL-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	955.9	6.6			
FM (30°-60°)	4771.3	33.0			
FH (60°-80°)	5020.0	34.7			G3/7500
FVH (80°-90°)	249.8	1.7			G3/500
BL (0°-30°)	706.8	4.9	B2/1000		
BM (30°-60°)	1765.1	12.2	B2/2500		
BH (60°-80°)	909.9	6.3	B2/1000		G2/1000
BVH (80°-90°)	73.8	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9
2.5°	1957.8	1950.1	1939.0	1901.4	1878.2	1851.7	1824.0	1792.0	1755.5	1730.1	1704.7
5°	2123.6	2111.5	2084.9	1995.4	1933.5	1866.1	1809.7	1745.6	1682.5	1639.4	1596.3
7.5°	2282.8	2267.3	2226.4	2089.4	1988.8	1891.5	1806.4	1713.5	1619.5	1555.4	1504.6
10°	2442.0	2410.0	2358.0	2178.9	2046.3	1933.5	1836.2	1722.3	1597.4	1510.1	1455.9
12.5°	2563.6	2533.8	2477.4	2260.7	2103.7	1962.2	1852.8	1747.8	1641.6	1548.8	1493.5
15°	2677.5	2638.8	2574.7	2337.0	2151.3	1961.1	1819.6	1727.9	1712.4	1689.2	1617.3
17.5°	2759.3	2723.9	2657.6	2398.9	2177.8	1926.9	1727.9	1673.7	1743.3	1814.1	1745.6
20°	2831.1	2790.2	2722.8	2442.0	2183.3	1850.6	1616.2	1617.3	1726.8	1824.0	1807.5
22.5°	2891.9	2846.6	2786.9	2490.7	2181.1	1744.5	1518.9	1585.3	1694.7	1771.0	1773.2
25°	2967.1	2929.5	2879.8	2562.5	2181.1	1636.1	1448.2	1546.6	1640.5	1704.7	1702.4
27.5°	3058.9	3033.4	2992.5	2672.0	2201.0	1545.5	1408.4	1496.8	1570.9	1626.2	1625.1
30°	3161.7	3138.5	3107.5	2788.0	2235.3	1478.0	1386.3	1434.9	1489.1	1533.3	1533.3
32.5°	3266.7	3257.9	3224.7	2880.9	2208.8	1457.0	1367.5	1373.0	1401.8	1438.2	1434.9
35°	3412.6	3403.8	3361.8	2952.7	2093.8	1427.2	1337.6	1310.0	1313.3	1336.5	1344.3
37.5°	3626.0	3612.7	3550.8	3036.8	1920.2	1352.0	1289.0	1243.7	1233.7	1243.7	1258.0
40°	3883.6	3863.7	3779.7	3150.6	1720.1	1250.3	1212.7	1175.1	1158.5	1161.9	1178.4
42.5°	4206.4	4164.4	4043.9	3271.1	1522.3	1160.8	1127.6	1104.4	1085.6	1083.4	1115.4
45°	4730.4	4615.4	4424.1	3378.4	1355.3	1113.2	1051.3	1034.7	1019.3	1028.1	1065.7
47.5°	5645.7	5433.5	5060.9	3470.1	1253.6	1114.3	990.5	972.8	971.7	989.4	1031.4
50°	6903.8	6597.5	6022.7	3532.0	1200.6	1127.6	954.0	925.3	946.3	964.0	1003.8
52.5°	8108.7	7641.1	6956.8	3530.9	1177.3	1129.8	964.0	881.1	946.3	950.7	988.3
55°	9137.9	8291.1	7208.9	3168.3	1144.2	1121.0	1002.7	846.8	934.1	950.7	980.6
57.5°	9956.0	8704.6	7190.1	2559.2	1244.8	1072.3	1025.9	839.1	898.8	952.9	987.2
60°	9865.3	8515.5	6726.9	1570.9	1234.8	986.1	1022.6	853.4	839.1	923.1	979.5
62.5°	9262.9	7837.9	5929.8	1090.0	1159.7	936.3	968.4	878.9	783.8	880.0	941.9
65°	8419.4	6963.4	4941.5	835.7	960.7	938.6	876.6	861.2	735.1	811.4	877.8
67.5°	7303.9	5879.0	3901.3	662.2	669.9	812.5	795.9	765.0	689.8	750.6	810.3
70°	5490.9	4290.4	2684.1	532.8	507.4	678.8	715.2	687.6	645.6	663.3	726.3
72.5°	3869.2	2801.3	1470.3	422.3	391.3	521.8	621.3	616.9	570.4	583.7	645.6
75°	2875.4	1982.1	918.7	333.9	318.4	373.7	520.7	533.9	495.3	510.7	558.3
77.5°	1913.6	1283.5	510.7	247.6	247.6	273.1	388.0	449.9	421.2	433.3	466.5
80°	1055.7	653.3	255.4	162.5	166.9	187.9	283.0	323.9	325.0	354.9	363.7
82.5°	333.9	207.8	113.9	95.1	89.5	107.2	182.4	232.2	216.7	276.4	254.3
85°	76.3	48.6	21.0	21.0	23.2	35.4	69.6	123.8	158.1	190.1	138.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	48.6	71.9	64.1
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°	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9
2.5°	1689.2	1667.1	1660.4	1641.6	1639.4	1621.7	1615.1	1615.1	1622.9	1622.9	1630.6
5°	1578.6	1551.0	1535.5	1513.4	1507.9	1494.6	1485.8	1486.9	1496.8	1503.5	1516.7
7.5°	1481.3	1462.6	1451.5	1441.6	1439.3	1437.1	1427.2	1426.1	1429.4	1439.3	1449.3
10°	1440.4	1427.2	1430.5	1438.2	1450.4	1457.0	1448.2	1443.8	1440.4	1447.1	1455.9
12.5°	1480.2	1467.0	1473.6	1486.9	1503.5	1510.1	1506.8	1505.7	1509.0	1534.4	1553.2
15°	1567.6	1542.2	1533.3	1538.8	1552.1	1558.7	1555.4	1559.8	1580.8	1647.2	1694.7
17.5°	1675.9	1614.0	1578.6	1568.7	1574.2	1579.7	1579.7	1590.8	1627.3	1724.6	1784.3
20°	1734.5	1653.8	1594.1	1569.8	1572.0	1577.5	1577.5	1593.0	1633.9	1737.8	1776.5
22.5°	1719.0	1645.0	1572.0	1545.5	1546.6	1551.0	1551.0	1564.3	1600.7	1692.5	1710.2
25°	1658.2	1593.0	1521.1	1497.9	1500.1	1507.9	1505.7	1513.4	1541.0	1616.2	1626.2
27.5°	1585.3	1527.8	1457.0	1439.3	1449.3	1464.8	1451.5	1452.6	1478.0	1541.0	1542.2
30°	1506.8	1459.2	1396.2	1383.0	1401.8	1409.5	1397.3	1397.3	1422.8	1465.9	1464.8
32.5°	1421.7	1391.8	1346.5	1332.1	1353.1	1365.3	1349.8	1352.0	1371.9	1400.6	1389.6
35°	1342.1	1326.6	1305.6	1295.6	1308.9	1319.9	1310.0	1314.4	1333.2	1341.0	1325.5
37.5°	1265.8	1263.6	1265.8	1265.8	1269.1	1272.4	1265.8	1276.8	1293.4	1283.5	1265.8
40°	1199.5	1208.3	1229.3	1223.8	1220.5	1223.8	1219.3	1238.1	1254.7	1237.0	1216.0
42.5°	1144.2	1160.8	1192.8	1192.8	1186.2	1188.4	1186.2	1209.4	1221.6	1197.2	1174.0
45°	1096.6	1121.0	1161.9	1167.4	1156.3	1156.3	1160.8	1189.5	1193.9	1160.8	1136.4
47.5°	1063.5	1093.3	1139.8	1149.7	1133.1	1132.0	1144.2	1175.1	1175.1	1136.4	1108.8
50°	1040.3	1073.4	1128.7	1142.0	1125.4	1121.0	1140.9	1170.7	1164.1	1117.6	1090.0
52.5°	1024.8	1059.1	1127.6	1146.4	1135.3	1130.9	1150.8	1171.8	1155.2	1105.5	1076.7
55°	1014.8	1052.4	1130.9	1146.4	1134.2	1126.5	1146.4	1165.2	1156.3	1098.9	1071.2
57.5°	1020.4	1057.9	1126.5	1134.2	1119.9	1106.6	1129.8	1156.3	1153.0	1101.1	1073.4
60°	1011.5	1045.8	1102.2	1104.4	1080.1	1059.1	1093.3	1133.1	1133.1	1093.3	1069.0
62.5°	970.6	1004.9	1054.6	1056.8	1029.2	1006.0	1045.8	1093.3	1092.2	1060.2	1034.7
65°	903.2	935.2	991.6	997.1	969.5	945.2	986.1	1030.3	1033.6	1004.9	982.8
67.5°	829.1	857.9	899.9	922.0	898.8	873.3	910.9	952.9	951.8	917.6	894.3
70°	740.7	767.2	805.9	824.7	810.3	786.0	820.3	842.4	832.4	815.8	800.4
72.5°	653.3	678.8	715.2	715.2	699.8	676.6	686.5	726.3	738.5	726.3	716.4
75°	561.6	583.7	609.1	614.6	580.4	538.4	584.8	619.1	633.4	627.9	615.8
77.5°	467.6	484.2	521.8	511.8	447.7	425.6	463.2	514.1	524.0	520.7	504.1
80°	360.4	370.3	410.1	390.2	340.5	326.1	342.7	382.5	384.7	373.7	352.6
82.5°	242.1	255.4	281.9	243.2	242.1	228.8	215.6	220.0	239.9	237.7	223.3
85°	123.8	130.4	155.9	145.9	124.9	108.3	102.8	109.4	98.4	89.5	77.4
87.5°	52.0	56.4	77.4	43.1	13.3	0.0	0.0	6.6	9.9	14.4	15.5
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°	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9
2.5°	1648.3	1660.4	1690.3	1727.9	1764.4	1801.9	1842.8	1868.3	1899.2	1939.0	1940.1
5°	1533.3	1560.9	1604.1	1661.5	1721.2	1789.8	1869.4	1935.7	2015.3	2078.3	2103.7
7.5°	1462.6	1502.4	1556.5	1629.5	1708.0	1793.1	1897.0	2008.7	2139.1	2223.1	2272.9
10°	1469.2	1530.0	1584.2	1646.1	1716.8	1808.6	1942.3	2090.5	2250.8	2361.3	2423.2
12.5°	1587.5	1651.6	1641.6	1638.3	1685.9	1797.5	1978.8	2173.4	2369.1	2479.6	2553.7
15°	1736.7	1761.0	1667.1	1596.3	1625.1	1757.7	1998.7	2247.5	2467.4	2602.3	2675.3
17.5°	1813.0	1764.4	1650.5	1544.4	1536.6	1696.9	2008.7	2322.6	2578.0	2712.9	2790.2
20°	1777.6	1706.9	1610.7	1510.1	1454.8	1614.0	2003.1	2382.3	2678.6	2828.9	2891.9
22.5°	1701.3	1639.4	1564.3	1468.1	1388.5	1523.4	1988.8	2442.0	2768.1	2919.6	2974.9
25°	1618.4	1572.0	1510.1	1426.1	1350.9	1443.8	1978.8	2521.6	2870.9	3015.8	3051.1
27.5°	1535.5	1501.2	1450.4	1385.2	1342.1	1388.5	1982.1	2625.5	3003.6	3140.7	3126.3
30°	1453.7	1423.9	1388.5	1359.7	1341.0	1375.2	1973.3	2736.1	3149.5	3276.7	3191.5
32.5°	1376.3	1348.7	1326.6	1331.0	1342.1	1380.8	1928.0	2836.7	3283.3	3391.6	3262.3
35°	1310.0	1281.3	1281.3	1296.7	1337.6	1362.0	1810.8	2915.2	3431.4	3539.8	3362.9
37.5°	1248.1	1222.7	1239.2	1264.7	1303.4	1311.1	1660.4	2991.4	3647.0	3748.7	3518.8
40°	1193.9	1168.5	1198.3	1230.4	1250.3	1247.0	1507.9	3097.6	3901.3	4006.3	3725.5
42.5°	1150.8	1127.6	1154.1	1195.0	1198.3	1201.7	1396.2	3199.3	4196.4	4330.2	4081.4
45°	1115.4	1098.9	1112.1	1153.0	1153.0	1203.9	1326.6	3284.4	4640.8	4877.4	4734.8
47.5°	1087.8	1077.8	1084.5	1097.7	1119.9	1243.7	1282.4	3349.6	5450.0	5914.3	5770.6
50°	1072.3	1062.4	1071.2	1043.6	1109.9	1263.6	1268.0	3399.4	6516.8	7244.2	7066.3
52.5°	1059.1	1055.7	1061.3	997.1	1132.0	1250.3	1256.9	3333.0	7232.1	8553.1	8728.9
55°	1054.6	1056.8	1030.3	962.9	1158.5	1206.1	1223.8	2858.8	7426.6	9681.8	10772.9
57.5°	1056.8	1050.2	982.8	966.2	1159.7	1117.6	1271.3	2039.6	7143.6	10172.7	12772.8
60°	1049.1	1015.9	925.3	996.0	1108.8	1013.7	1237.0	1329.9	6397.4	9795.7	12888.8
62.5°	1014.8	966.2	875.5	1012.6	1018.2	951.8	1123.2	1024.8	5402.5	8988.7	11770.1
65°	965.1	899.9	833.5	978.4	926.4	923.1	844.6	821.4	4344.6	8028.0	10708.8
67.5°	883.3	818.1	802.6	899.9	833.5	818.1	678.8	681.0	3466.8	7004.4	9642.0
70°	790.4	725.2	737.4	813.6	741.8	679.9	549.4	567.1	2629.9	5835.9	8203.8
72.5°	729.6	642.3	643.4	716.4	652.2	550.5	452.1	467.6	1669.3	4398.7	6522.4
75°	615.8	566.0	541.7	580.4	553.8	428.9	380.3	377.0	989.4	3152.8	4884.0
77.5°	514.1	475.4	463.2	478.7	413.5	317.3	306.2	300.7	560.5	2019.7	3200.4
80°	372.5	362.6	361.5	369.2	318.4	233.3	233.3	234.4	301.8	1096.6	1804.2
82.5°	236.6	258.7	228.8	254.3	216.7	165.8	154.8	175.8	173.6	467.6	760.6
85°	98.4	134.9	126.0	133.8	102.8	90.6	97.3	105.0	100.6	180.2	296.3
87.5°	18.8	22.1	24.3	23.2	23.2	28.7	32.1	38.7	38.7	52.0	89.5
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: P637492

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

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9	1801.9
2.5°	1982.1	2014.2	2007.6	2021.9	2003.1	2009.8	1972.2	1962.2	1955.6	1957.8
5°	2185.5	2250.8	2262.9	2287.2	2270.7	2270.7	2204.3	2154.6	2136.9	2123.6
7.5°	2392.3	2486.2	2548.1	2554.8	2545.9	2528.2	2432.1	2342.5	2310.5	2282.8
10°	2575.8	2688.5	2758.2	2791.3	2774.8	2747.1	2627.7	2505.0	2466.3	2442.0
12.5°	2716.2	2815.7	2862.1	2884.2	2882.0	2872.0	2774.8	2642.1	2601.2	2563.6
15°	2806.8	2856.6	2838.9	2837.8	2853.3	2893.1	2863.2	2759.3	2711.8	2677.5
17.5°	2865.4	2817.9	2739.4	2702.9	2736.1	2830.0	2898.6	2840.0	2796.9	2759.3
20°	2886.4	2717.3	2603.4	2536.0	2574.7	2710.6	2879.8	2898.6	2862.1	2831.1
22.5°	2862.1	2594.6	2439.8	2360.2	2397.8	2560.3	2824.5	2946.1	2921.8	2891.9
25°	2802.4	2466.3	2280.6	2208.8	2249.7	2415.5	2726.1	2990.3	2991.4	2967.1
27.5°	2728.3	2348.0	2169.0	2101.5	2141.3	2296.1	2629.9	3029.0	3067.7	3058.9
30°	2653.2	2277.3	2115.9	2068.4	2098.2	2235.3	2531.6	3068.8	3146.2	3161.7
32.5°	2618.9	2311.6	2240.8	2261.8	2223.1	2270.7	2496.2	3125.2	3241.3	3266.7
35°	2664.2	2615.6	2794.7	2877.6	2740.5	2560.3	2541.5	3210.3	3375.0	3412.6
37.5°	2884.2	3266.7	3534.2	3826.1	3588.4	3191.5	2765.9	3355.1	3566.3	3626.0
40°	3362.9	3834.9	4318.0	4695.0	4335.7	3801.8	3192.6	3570.7	3829.4	3883.6
42.5°	3813.9	4367.8	5033.3	5520.8	5054.3	4300.3	3652.5	3933.3	4176.5	4206.4
45°	4256.1	4890.7	5898.9	6576.5	5943.1	4774.6	4122.4	4545.8	4729.3	4730.4
47.5°	4774.6	5479.9	6984.5	7949.5	7122.6	5299.7	4563.4	5515.3	5770.6	5645.7
50°	5394.8	6065.8	8102.1	9547.0	8560.9	5945.3	5123.9	6697.0	7045.3	6903.8
52.5°	6225.0	6711.4	9333.6	11104.6	10128.5	6680.4	5936.5	8258.0	8372.9	8108.7
55°	7393.5	7643.3	10914.4	13028.1	11878.4	7585.8	7124.8	10216.9	9895.2	9137.9
57.5°	10054.4	9118.0	12944.1	15222.5	13858.4	9230.8	9729.4	12377.0	11232.8	9956.0
60°	12280.8	10908.9	14822.3	17400.3	15555.3	11043.8	12174.7	12752.9	11183.1	9865.3
62.5°	11530.2	11365.5	15500.0	17640.2	16134.5	11935.9	11720.3	11805.5	10453.5	9262.9
65°	10116.3	10484.4	14895.3	16502.7	15492.3	11136.7	10601.6	10929.9	9618.8	8419.4
67.5°	9281.6	9552.5	13819.7	14681.9	14324.9	10272.2	9731.6	9493.9	8323.2	7303.9
70°	8428.2	8652.6	12309.6	12396.9	12504.1	8835.0	7957.3	7249.8	6204.0	5490.9
72.5°	7282.9	7295.1	10400.4	9894.1	10097.5	6913.7	6405.2	5420.2	4515.9	3869.2
75°	6110.0	5776.2	8232.5	6915.9	7323.8	5378.2	5318.5	4084.8	3406.0	2875.4
77.5°	4658.5	4268.3	6013.8	4548.0	5143.8	3581.8	3998.5	2770.3	2396.7	1913.6
80°	3127.4	2884.2	3323.1	2566.9	3365.1	2468.5	2607.8	1569.8	1360.9	1055.7
82.5°	1649.4	1408.4	2054.0	1522.3	2029.7	1356.4	978.4	485.3	413.5	333.9
85°	639.0	739.6	1007.1	541.7	787.1	484.2	283.0	120.5	100.6	76.3
87.5°	123.8	191.2	105.0	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

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

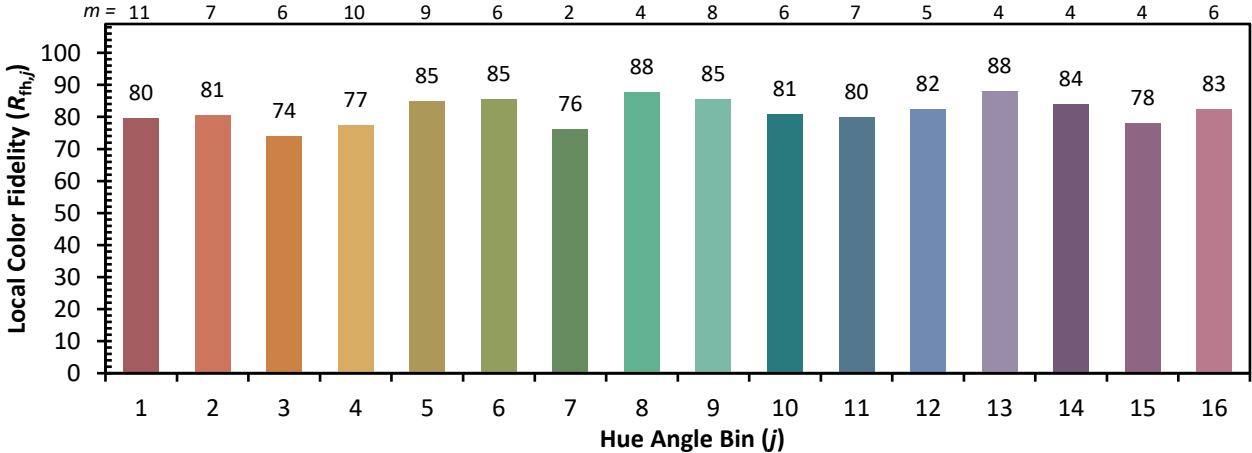


Individual Sample Fidelity Index ($R_{f,i}$)

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)