

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: P636007

Luminaire Tested: GWS-SA3E-830-U-SLL-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636007
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-SA3E-830-U-SLL-W
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16373.4 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

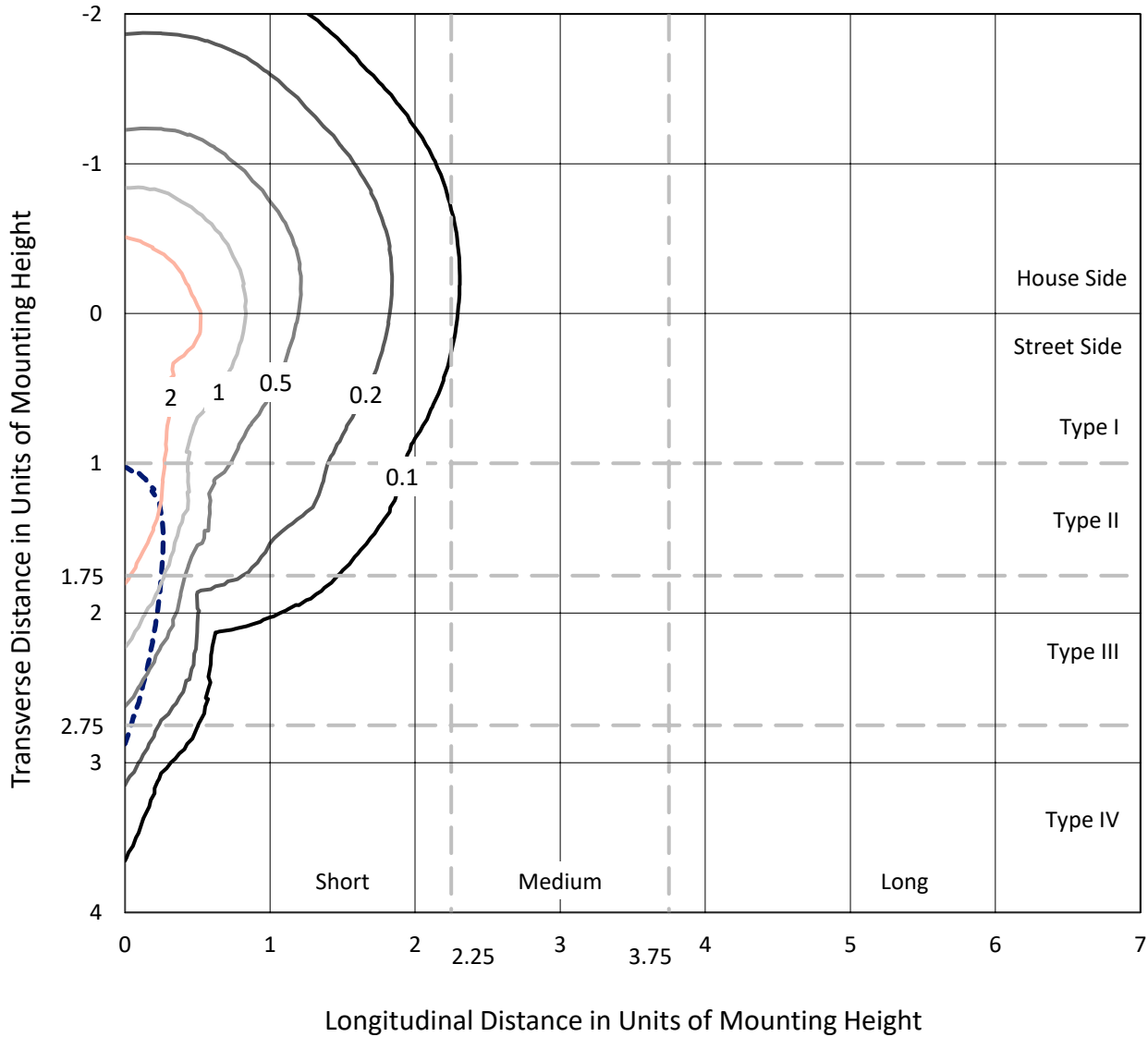
Input Watts (W): 159.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

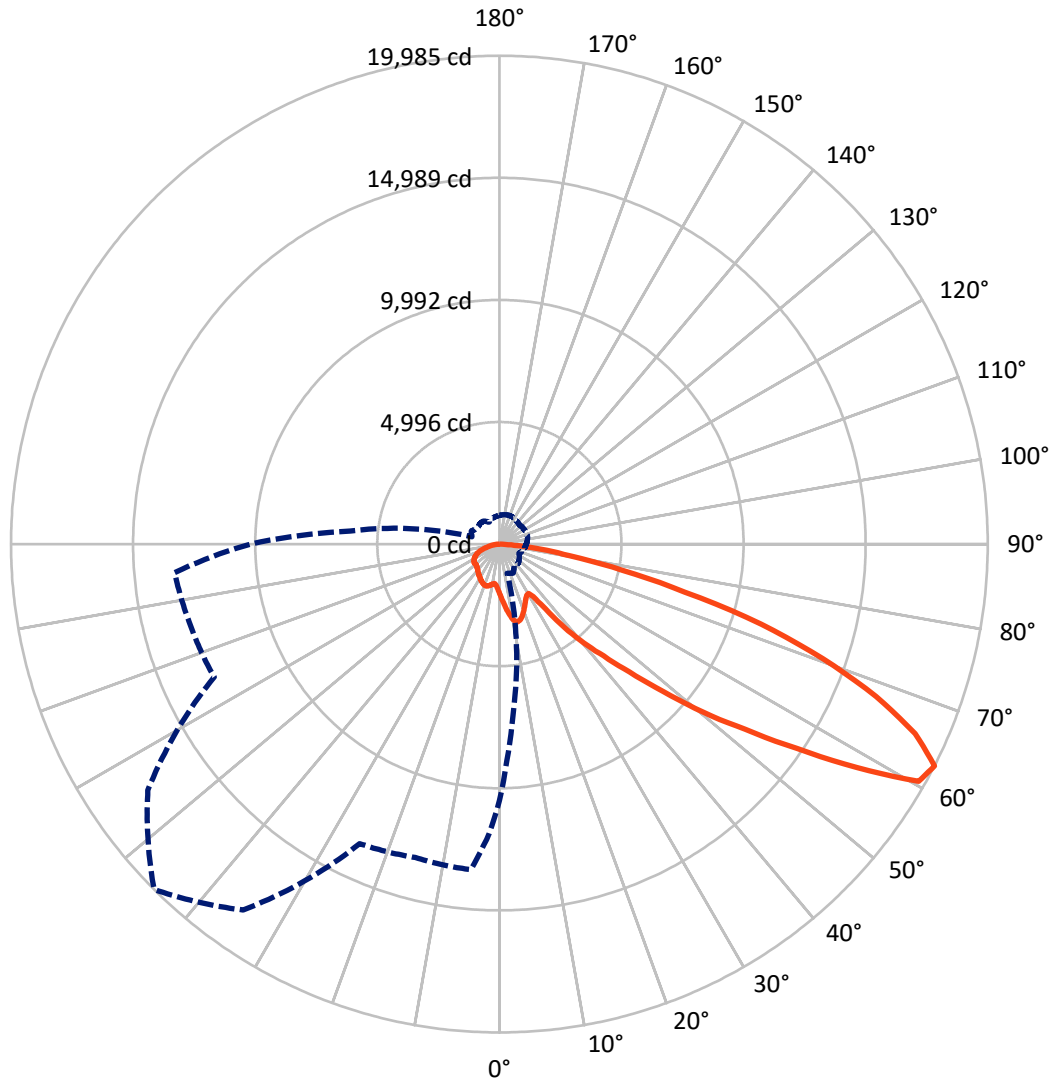
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 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	3914.9	0.0	3914.9
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	12458.5	0.0	12458.5
	% Fixture	76.1	0.0	76.1
Total	Lumens	16373.4	0.0	16373.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.1	1.2
10°-20°	653.6	4.0
20°-30°	1028.9	6.3
30°-40°	1410.3	8.6
40°-50°	2200.6	13.4
50°-60°	3794.2	23.2
60°-70°	4397.0	26.9
70°-80°	2321.0	14.2
80°-90°	366.6	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°	16373.4	100.0
0°-180°	16373.4	100.0

Coefficient of Utilization



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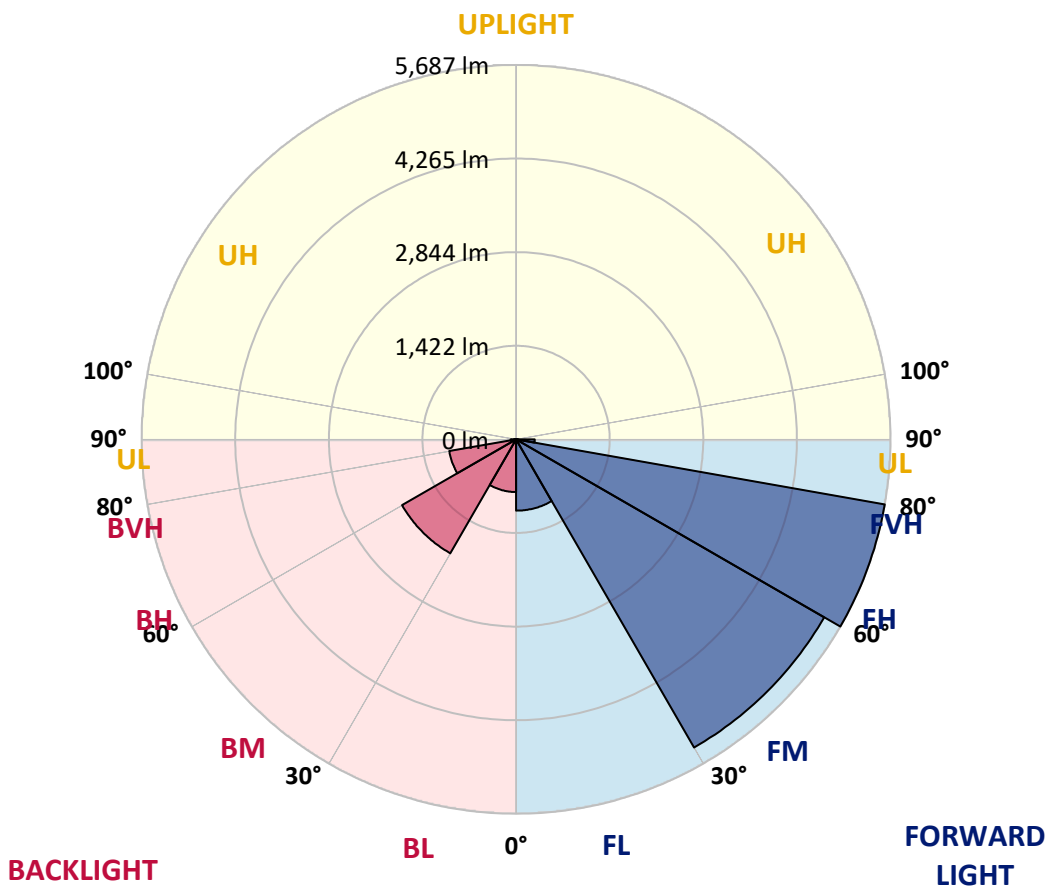
CATALOG NUMBER: GWS-SA3E-830-U-SLL-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1082.9	6.6			
FM (30°-60°)	5405.4	33.0			
FH (60°-80°)	5687.2	34.7			G3/7500
FVH (80°-90°)	283.0	1.7			G3/500
BL (0°-30°)	800.7	4.9	B2/1000		
BM (30°-60°)	1999.7	12.2	B2/2500		
BH (60°-80°)	1030.8	6.3	B3/2500		G3/2500
BVH (80°-90°)	83.6	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°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4
2.5°	2218.0	2209.2	2196.7	2154.1	2127.8	2097.8	2066.5	2030.2	1988.8	1960.0	1931.2
5°	2405.9	2392.1	2362.0	2260.6	2190.5	2114.1	2050.2	1977.6	1906.2	1857.3	1808.5
7.5°	2586.2	2568.7	2522.3	2367.0	2253.1	2142.9	2046.4	1941.2	1834.8	1762.1	1704.5
10°	2766.6	2730.2	2671.4	2468.5	2318.2	2190.5	2080.2	1951.3	1809.7	1710.8	1649.4
12.5°	2904.3	2870.5	2806.6	2561.2	2383.3	2223.0	2099.0	1980.1	1859.8	1754.6	1692.0
15°	3033.3	2989.5	2916.9	2647.6	2437.2	2221.8	2061.5	1957.5	1940.0	1913.7	1832.3
17.5°	3126.0	3085.9	3010.8	2717.7	2467.2	2182.9	1957.5	1896.1	1975.0	2055.2	1977.6
20°	3207.4	3161.1	3084.7	2766.6	2473.5	2096.5	1831.0	1832.3	1956.3	2066.5	2047.7
22.5°	3276.3	3224.9	3157.3	2821.7	2471.0	1976.3	1720.8	1796.0	1919.9	2006.4	2008.9
25°	3361.5	3318.9	3262.5	2903.1	2471.0	1853.6	1640.7	1752.1	1858.6	1931.2	1928.7
27.5°	3465.4	3436.6	3390.3	3027.1	2493.5	1750.9	1595.6	1695.8	1779.7	1842.3	1841.0
30°	3581.9	3555.6	3520.5	3158.6	2532.4	1674.5	1570.5	1625.6	1687.0	1737.1	1737.1
32.5°	3700.9	3690.8	3653.3	3263.8	2502.3	1650.7	1549.2	1555.5	1588.1	1629.4	1625.6
35°	3866.2	3856.2	3808.6	3345.2	2372.1	1616.9	1515.4	1484.1	1487.9	1514.2	1522.9
37.5°	4107.9	4092.9	4022.7	3440.4	2175.4	1531.7	1460.3	1409.0	1397.7	1409.0	1425.2
40°	4399.7	4377.2	4282.0	3569.4	1948.7	1416.5	1373.9	1331.3	1312.5	1316.3	1335.1
42.5°	4765.4	4717.8	4581.3	3705.9	1724.6	1315.0	1277.5	1251.2	1229.9	1227.4	1263.7
45°	5359.1	5228.8	5012.1	3827.4	1535.5	1261.2	1191.0	1172.3	1154.7	1164.7	1207.3
47.5°	6396.0	6155.6	5733.5	3931.3	1420.2	1262.4	1122.2	1102.1	1100.9	1120.9	1168.5
50°	7821.3	7474.4	6823.1	4001.4	1360.1	1277.5	1080.8	1048.3	1072.1	1092.1	1137.2
52.5°	9186.4	8656.6	7881.4	4000.2	1333.8	1280.0	1092.1	998.2	1072.1	1077.1	1119.7
55°	10352.4	9393.1	8166.9	3589.4	1296.2	1269.9	1135.9	959.3	1058.3	1077.1	1110.9
57.5°	11279.2	9861.5	8145.7	2899.3	1410.2	1214.8	1162.2	950.6	1018.2	1079.6	1118.4
60°	11176.5	9647.3	7620.9	1779.7	1398.9	1117.1	1158.5	966.9	950.6	1045.8	1109.6
62.5°	10493.9	8879.6	6717.9	1234.9	1313.8	1060.8	1097.1	995.7	888.0	996.9	1067.1
65°	9538.3	7888.9	5598.3	946.8	1088.3	1063.3	993.2	975.6	832.9	919.3	994.4
67.5°	8274.7	6660.3	4419.7	750.2	759.0	920.5	901.7	866.7	781.5	850.4	918.0
70°	6220.7	4860.6	3040.8	603.7	574.9	769.0	810.3	779.0	731.4	751.4	822.8
72.5°	4383.4	3173.6	1665.7	478.4	443.4	591.1	703.9	698.8	646.2	661.3	731.4
75°	3257.5	2245.6	1040.8	378.2	360.7	423.3	589.9	604.9	561.1	578.6	632.5
77.5°	2167.9	1454.0	578.6	280.5	280.5	309.3	439.6	509.7	477.2	490.9	528.5
80°	1196.0	740.2	289.3	184.1	189.1	212.9	320.6	367.0	368.2	402.0	412.0
82.5°	378.2	235.5	129.0	107.7	101.4	121.5	206.6	263.0	245.5	313.1	288.1
85°	86.4	55.1	23.8	23.8	26.3	40.1	78.9	140.3	179.1	215.4	156.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	55.1	81.4	72.6
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°	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4
2.5°	1913.7	1888.6	1881.1	1859.8	1857.3	1837.3	1829.8	1829.8	1838.5	1838.5	1847.3
5°	1788.4	1757.1	1739.6	1714.5	1708.3	1693.3	1683.2	1684.5	1695.8	1703.3	1718.3
7.5°	1678.2	1656.9	1644.4	1633.1	1630.6	1628.1	1616.9	1615.6	1619.4	1630.6	1641.9
10°	1631.9	1616.9	1620.6	1629.4	1643.2	1650.7	1640.7	1635.6	1631.9	1639.4	1649.4
12.5°	1677.0	1661.9	1669.5	1684.5	1703.3	1710.8	1707.0	1705.8	1709.5	1738.3	1759.6
15°	1775.9	1747.1	1737.1	1743.4	1758.4	1765.9	1762.1	1767.1	1790.9	1866.1	1919.9
17.5°	1898.6	1828.5	1788.4	1777.2	1783.4	1789.7	1789.7	1802.2	1843.5	1953.8	2021.4
20°	1965.0	1873.6	1806.0	1778.4	1780.9	1787.2	1787.2	1804.7	1851.1	1968.8	2012.6
22.5°	1947.5	1863.6	1780.9	1750.9	1752.1	1757.1	1757.1	1772.2	1813.5	1917.4	1937.5
25°	1878.6	1804.7	1723.3	1697.0	1699.5	1708.3	1705.8	1714.5	1745.9	1831.0	1842.3
27.5°	1796.0	1730.8	1650.7	1630.6	1641.9	1659.4	1644.4	1645.7	1674.5	1745.9	1747.1
30°	1707.0	1653.2	1581.8	1566.8	1588.1	1596.8	1583.0	1583.0	1611.8	1660.7	1659.4
32.5°	1610.6	1576.8	1525.4	1509.2	1532.9	1546.7	1529.2	1531.7	1554.2	1586.8	1574.3
35°	1520.4	1502.9	1479.1	1467.8	1482.9	1495.4	1484.1	1489.1	1510.4	1519.2	1501.6
37.5°	1434.0	1431.5	1434.0	1434.0	1437.8	1441.5	1434.0	1446.5	1465.3	1454.0	1434.0
40°	1358.9	1368.9	1392.7	1386.4	1382.7	1386.4	1381.4	1402.7	1421.5	1401.4	1377.6
42.5°	1296.2	1315.0	1351.3	1351.3	1343.8	1346.3	1343.8	1370.1	1383.9	1356.4	1330.1
45°	1242.4	1269.9	1316.3	1322.5	1310.0	1310.0	1315.0	1347.6	1352.6	1315.0	1287.5
47.5°	1204.8	1238.6	1291.2	1302.5	1283.7	1282.5	1296.2	1331.3	1331.3	1287.5	1256.2
50°	1178.5	1216.1	1278.7	1293.7	1275.0	1269.9	1292.5	1326.3	1318.8	1266.2	1234.9
52.5°	1161.0	1199.8	1277.5	1298.7	1286.2	1281.2	1303.8	1327.6	1308.8	1252.4	1219.8
55°	1149.7	1192.3	1281.2	1298.7	1285.0	1276.2	1298.7	1320.0	1310.0	1244.9	1213.6
57.5°	1156.0	1198.6	1276.2	1285.0	1268.7	1253.7	1280.0	1310.0	1306.3	1247.4	1216.1
60°	1146.0	1184.8	1248.7	1251.2	1223.6	1199.8	1238.6	1283.7	1283.7	1238.6	1211.1
62.5°	1099.6	1138.4	1194.8	1197.3	1166.0	1139.7	1184.8	1238.6	1237.4	1201.1	1172.3
65°	1023.2	1059.5	1123.4	1129.7	1098.4	1070.8	1117.1	1167.2	1171.0	1138.4	1113.4
67.5°	939.3	971.9	1019.5	1044.5	1018.2	989.4	1032.0	1079.6	1078.3	1039.5	1013.2
70°	839.1	869.2	913.0	934.3	918.0	890.5	929.3	954.3	943.1	924.3	906.7
72.5°	740.2	769.0	810.3	810.3	792.8	766.5	777.7	822.8	836.6	822.8	811.6
75°	636.2	661.3	690.1	696.3	657.5	609.9	662.5	701.3	717.6	711.4	697.6
77.5°	529.8	548.6	591.1	579.9	507.2	482.2	524.8	582.4	593.6	589.9	571.1
80°	408.3	419.6	464.6	442.1	385.7	369.5	388.2	433.3	435.8	423.3	399.5
82.5°	274.3	289.3	319.4	275.5	274.3	259.2	244.2	249.2	271.8	269.3	253.0
85°	140.3	147.8	176.6	165.3	141.5	122.7	116.5	124.0	111.5	101.4	87.7
87.5°	58.9	63.9	87.7	48.8	15.0	0.0	0.0	7.5	11.3	16.3	17.5
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°	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4
2.5°	1867.3	1881.1	1914.9	1957.5	1998.8	2041.4	2087.8	2116.6	2151.6	2196.7	2198.0
5°	1737.1	1768.4	1817.2	1882.4	1950.0	2027.6	2117.8	2193.0	2283.1	2354.5	2383.3
7.5°	1656.9	1702.0	1763.4	1846.0	1935.0	2031.4	2149.1	2275.6	2423.4	2518.6	2574.9
10°	1664.4	1733.3	1794.7	1864.8	1945.0	2048.9	2200.5	2368.3	2549.9	2675.1	2745.3
12.5°	1798.5	1871.1	1859.8	1856.1	1909.9	2036.4	2241.8	2462.2	2683.9	2809.1	2893.1
15°	1967.5	1995.1	1888.6	1808.5	1841.0	1991.3	2264.4	2546.1	2795.4	2948.2	3030.8
17.5°	2053.9	1998.8	1869.8	1749.6	1740.8	1922.4	2275.6	2631.3	2920.6	3073.4	3161.1
20°	2013.9	1933.7	1824.8	1710.8	1648.2	1828.5	2269.4	2698.9	3034.6	3204.9	3276.3
22.5°	1927.5	1857.3	1772.2	1663.2	1573.0	1725.8	2253.1	2766.6	3136.0	3307.6	3370.2
25°	1833.5	1780.9	1710.8	1615.6	1530.4	1635.6	2241.8	2856.7	3252.5	3416.6	3456.6
27.5°	1739.6	1700.8	1643.2	1569.3	1520.4	1573.0	2245.6	2974.5	3402.8	3558.1	3541.8
30°	1646.9	1613.1	1573.0	1540.5	1519.2	1558.0	2235.5	3099.7	3568.1	3712.1	3615.7
32.5°	1559.2	1527.9	1502.9	1507.9	1520.4	1564.3	2184.2	3213.7	3719.6	3842.4	3695.9
35°	1484.1	1451.5	1451.5	1469.1	1515.4	1543.0	2051.4	3302.6	3887.5	4010.2	3809.8
37.5°	1414.0	1385.2	1403.9	1432.8	1476.6	1485.4	1881.1	3389.0	4131.7	4246.9	3986.4
40°	1352.6	1323.8	1357.6	1393.9	1416.5	1412.7	1708.3	3509.2	4419.7	4538.7	4220.6
42.5°	1303.8	1277.5	1307.5	1353.9	1357.6	1361.4	1581.8	3624.5	4754.1	4905.7	4623.9
45°	1263.7	1244.9	1259.9	1306.3	1306.3	1363.9	1502.9	3720.9	5257.6	5525.6	5364.1
47.5°	1232.4	1221.1	1228.6	1243.6	1268.7	1409.0	1452.8	3794.8	6174.4	6700.4	6537.6
50°	1214.8	1203.6	1213.6	1182.3	1257.4	1431.5	1436.5	3851.2	7382.9	8207.0	8005.4
52.5°	1199.8	1196.0	1202.3	1129.7	1282.5	1416.5	1424.0	3776.0	8193.2	9689.9	9889.0
55°	1194.8	1197.3	1167.2	1090.8	1312.5	1366.4	1386.4	3238.7	8413.7	10968.6	12204.7
57.5°	1197.3	1189.8	1113.4	1094.6	1313.8	1266.2	1440.3	2310.7	8093.1	11524.7	14470.3
60°	1188.5	1151.0	1048.3	1128.4	1256.2	1148.5	1401.4	1506.6	7247.7	11097.6	14601.8
62.5°	1149.7	1094.6	991.9	1147.2	1153.5	1078.3	1272.4	1161.0	6120.5	10183.3	13334.4
65°	1093.4	1019.5	944.3	1108.4	1049.5	1045.8	956.8	930.5	4922.0	9095.0	12132.1
67.5°	1000.7	926.8	909.2	1019.5	944.3	926.8	769.0	771.5	3927.5	7935.3	10923.5
70°	895.5	821.6	835.4	921.8	840.4	770.2	622.4	642.5	2979.5	6611.5	9294.1
72.5°	826.6	727.6	728.9	811.6	738.9	623.7	512.2	529.8	1891.1	4983.3	7389.2
75°	697.6	641.2	613.7	657.5	627.5	485.9	430.8	427.1	1120.9	3571.9	5533.1
77.5°	582.4	538.5	524.8	542.3	468.4	359.4	346.9	340.7	635.0	2288.1	3625.7
80°	422.1	410.8	409.5	418.3	360.7	264.3	264.3	265.5	341.9	1242.4	2043.9
82.5°	268.0	293.1	259.2	288.1	245.5	187.9	175.3	199.1	196.6	529.8	861.7
85°	111.5	152.8	142.8	151.5	116.5	102.7	110.2	119.0	114.0	204.1	335.6
87.5°	21.3	25.0	27.6	26.3	26.3	32.6	36.3	43.8	43.8	58.9	101.4
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: P636007
 CATALOG NUMBER: GWS-SA3E-830-U-SLL-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4	2041.4
2.5°	2245.6	2281.9	2274.4	2290.7	2269.4	2276.9	2234.3	2223.0	2215.5	2218.0
5°	2476.0	2549.9	2563.7	2591.2	2572.4	2572.4	2497.3	2440.9	2420.9	2405.9
7.5°	2710.2	2816.7	2886.8	2894.3	2884.3	2864.3	2755.3	2653.9	2617.5	2586.2
10°	2918.1	3045.9	3124.8	3162.3	3143.5	3112.2	2977.0	2838.0	2794.1	2766.6
12.5°	3077.2	3189.9	3242.5	3267.5	3265.0	3253.8	3143.5	2993.3	2946.9	2904.3
15°	3179.9	3236.2	3216.2	3214.9	3232.5	3277.5	3243.7	3126.0	3072.2	3033.3
17.5°	3246.2	3192.4	3103.5	3062.1	3099.7	3206.2	3283.8	3217.4	3168.6	3126.0
20°	3270.0	3078.4	2949.4	2873.0	2916.9	3070.9	3262.5	3283.8	3242.5	3207.4
22.5°	3242.5	2939.4	2764.1	2673.9	2716.5	2900.6	3199.9	3337.7	3310.1	3276.3
25°	3174.9	2794.1	2583.7	2502.3	2548.6	2736.5	3088.4	3387.8	3389.0	3361.5
27.5°	3090.9	2660.1	2457.2	2380.8	2425.9	2601.3	2979.5	3431.6	3475.4	3465.4
30°	3005.8	2580.0	2397.1	2343.3	2377.1	2532.4	2868.0	3476.7	3564.4	3581.9
32.5°	2967.0	2618.8	2538.6	2562.4	2518.6	2572.4	2827.9	3540.6	3672.1	3700.9
35°	3018.3	2963.2	3166.1	3260.0	3104.7	2900.6	2879.3	3637.0	3823.6	3866.2
37.5°	3267.5	3700.9	4003.9	4334.6	4065.3	3615.7	3133.5	3801.1	4040.3	4107.9
40°	3809.8	4344.6	4891.9	5319.0	4911.9	4307.0	3617.0	4045.3	4338.3	4399.7
42.5°	4320.8	4948.3	5702.2	6254.5	5726.0	4871.9	4138.0	4456.1	4731.6	4765.4
45°	4821.8	5540.7	6682.8	7450.6	6732.9	5409.1	4670.2	5149.9	5357.8	5359.1
47.5°	5409.1	6208.2	7912.7	9006.1	8069.3	6004.0	5169.9	6248.3	6537.6	6396.0
50°	6111.7	6872.0	9178.9	10815.8	9698.6	6735.4	5804.9	7587.1	7981.6	7821.3
52.5°	7052.3	7603.4	10574.1	12580.4	11474.6	7568.3	6725.4	9355.5	9485.7	9186.4
55°	8376.1	8659.1	12365.0	14759.6	13457.1	8594.0	8071.8	11574.7	11210.3	10352.4
57.5°	11390.6	10329.9	14664.4	17245.6	15700.2	10457.6	11022.4	14022.0	12725.7	11279.2
60°	13913.0	12358.8	16792.3	19712.9	17622.6	12511.5	13792.8	14447.8	12669.4	11176.5
62.5°	13062.6	12876.0	17560.0	19984.7	18278.9	13522.2	13278.0	13374.5	11842.8	10493.9
65°	11460.8	11877.8	16874.9	18695.9	17551.2	12616.8	12010.6	12382.6	10897.2	9538.3
67.5°	10515.2	10822.1	15656.3	16633.2	16228.7	11637.4	11024.9	10755.7	9429.4	8274.7
70°	9548.4	9802.6	13945.6	14044.5	14166.0	10009.2	9014.8	8213.3	7028.5	6220.7
72.5°	8250.9	8264.6	11782.6	11209.0	11439.5	7832.6	7256.4	6140.6	5116.1	4383.4
75°	6922.1	6543.8	9326.7	7835.1	8297.2	6093.0	6025.3	4627.6	3858.7	3257.5
77.5°	5277.6	4835.5	6813.1	5152.4	5827.5	4057.8	4530.0	3138.5	2715.2	2167.9
80°	3543.1	3267.5	3764.7	2908.1	3812.3	2796.6	2954.4	1778.4	1541.7	1196.0
82.5°	1868.6	1595.6	2327.0	1724.6	2299.4	1536.7	1108.4	549.8	468.4	378.2
85°	723.9	837.9	1140.9	613.7	891.7	548.6	320.6	136.5	114.0	86.4
87.5°	140.3	216.7	119.0	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)