

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: P636994

Luminaire Tested: GWS-SA4B-830-U-SLL-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636994
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-38)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4B-830-U-SLL-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6165.6 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

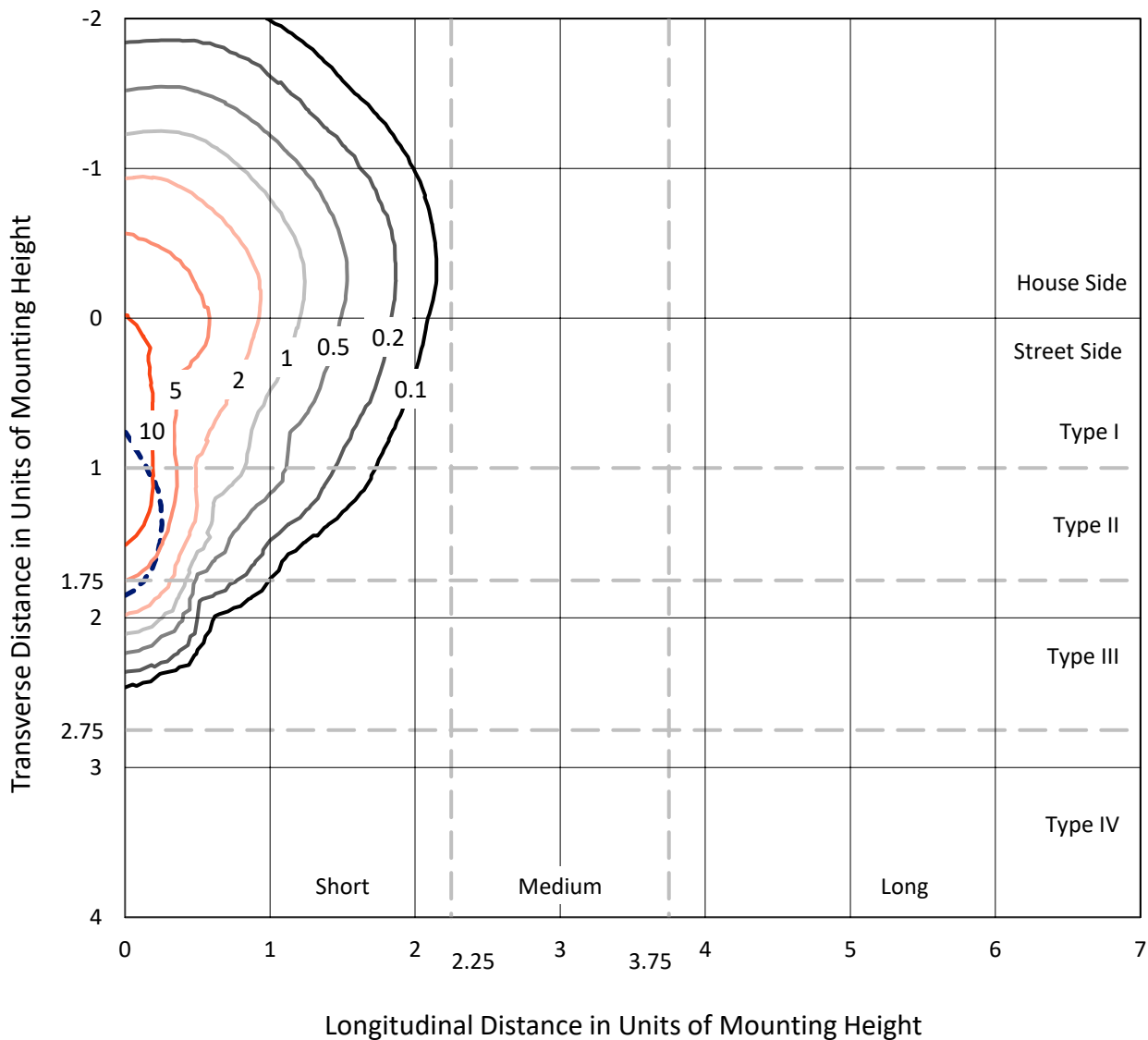
Input Watts (W): 94.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

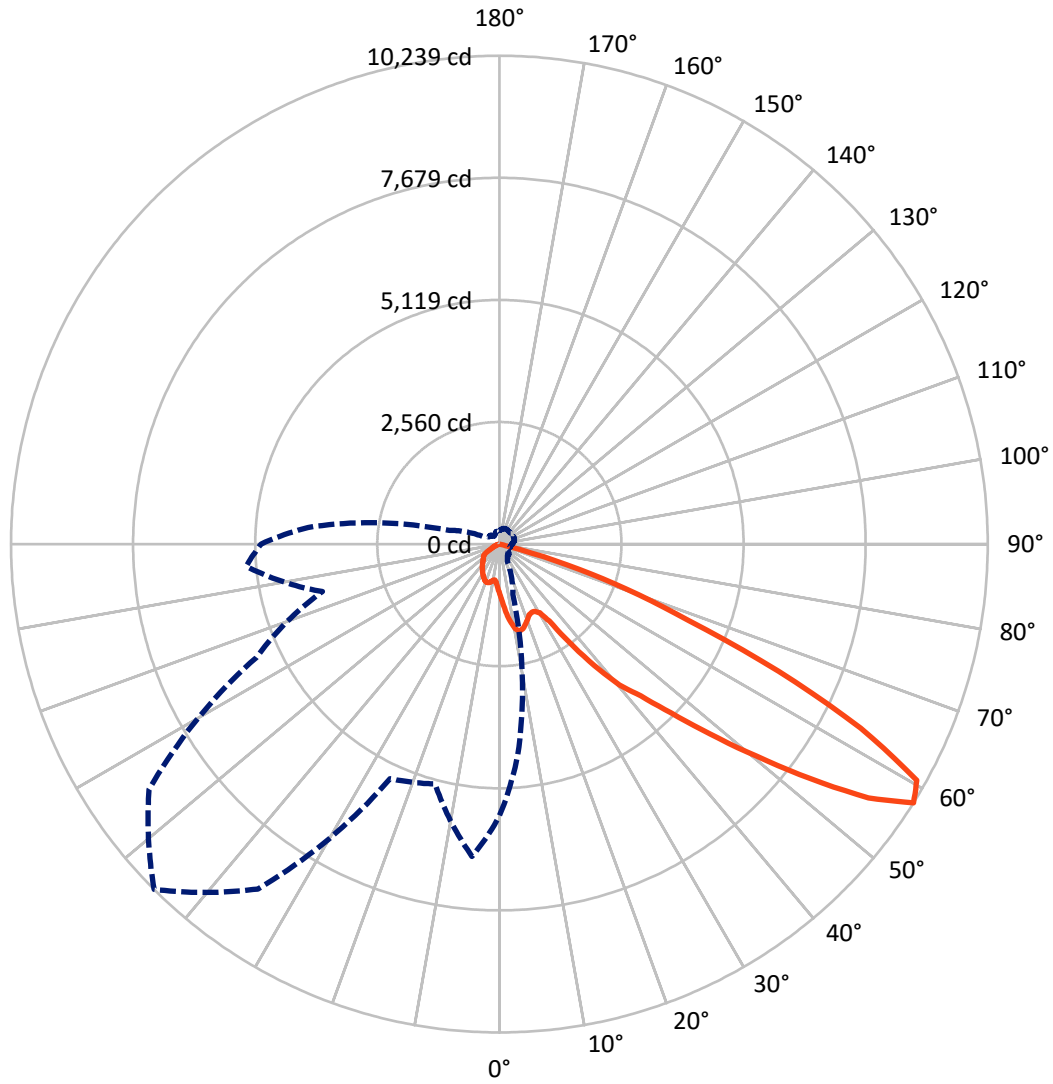
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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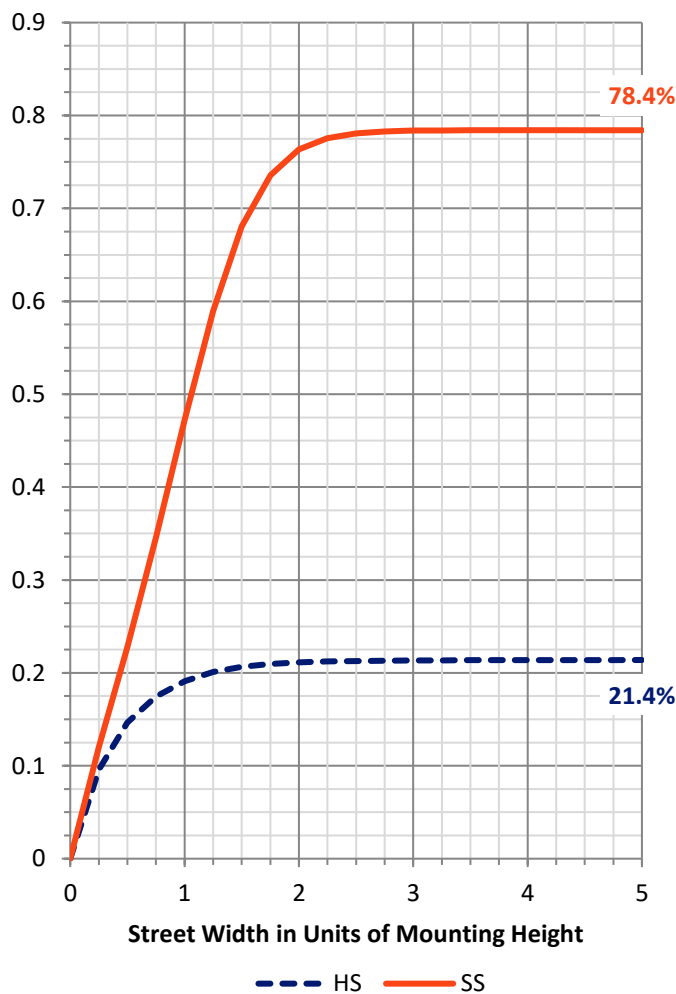
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1328.3	0.0	1328.3
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	4837.3	0.0	4837.3
	% Fixture	78.5	0.0	78.5
Total	Lumens	6165.6	0.0	6165.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	1.7
10°-20°	340.7	5.5
20°-30°	552.9	9.0
30°-40°	848.6	13.8
40°-50°	1355.3	22.0
50°-60°	1897.7	30.8
60°-70°	973.0	15.8
70°-80°	93.7	1.5
80°-90°	0.0	0.0
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°	6165.6	100.0
0°-180°	6165.6	100.0

Coefficient of Utilization



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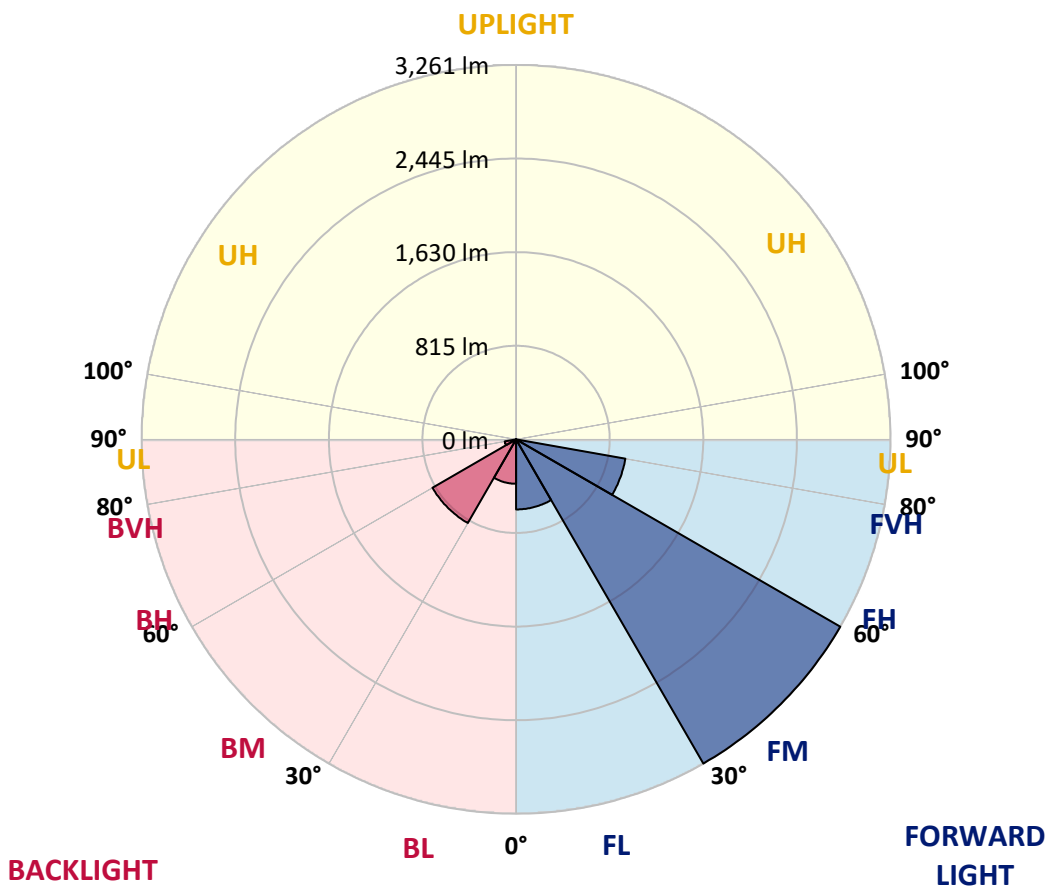
CATALOG NUMBER: GWS-SA4B-830-U-SLL-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	610.4	9.9			
FM (30°-60°)	3260.5	52.9			
FH (60°-80°)	966.4	15.7			G1/1800
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	386.8	6.3	B1/500		
BM (30°-60°)	841.2	13.6	B1/1000		
BH (60°-80°)	100.3	1.6	B0/110		G0/110
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6
2.5°	1163.8	1161.4	1153.1	1125.1	1107.8	1080.6	1060.8	1035.3	1007.2	989.9	972.6
5°	1287.5	1280.9	1258.6	1194.3	1144.9	1091.3	1048.5	1001.5	951.2	918.2	887.7
7.5°	1406.2	1396.3	1366.6	1257.8	1182.8	1106.1	1045.2	976.7	905.9	856.4	818.5
10°	1522.4	1500.1	1453.2	1319.6	1218.2	1125.9	1054.2	975.9	892.7	830.0	788.0
12.5°	1618.0	1601.5	1537.2	1378.2	1247.9	1130.1	1041.9	969.3	913.3	871.2	832.5
15°	1700.4	1682.3	1621.3	1430.9	1273.5	1113.6	989.9	926.5	935.5	952.0	919.0
17.5°	1776.3	1757.3	1691.4	1474.6	1283.4	1073.2	917.4	886.9	937.2	999.0	986.6
20°	1854.6	1833.1	1752.4	1510.0	1280.1	1009.7	844.0	853.1	924.0	994.9	1001.5
22.5°	1946.1	1923.8	1829.8	1555.4	1277.6	933.9	780.6	823.4	899.3	959.4	971.0
25°	2067.2	2040.9	1937.8	1622.1	1284.2	864.6	735.2	794.6	857.2	911.6	918.2
27.5°	2227.1	2193.3	2062.3	1704.6	1298.2	810.2	715.5	755.0	803.6	852.3	858.0
30°	2435.7	2392.8	2204.9	1776.3	1291.6	772.3	702.3	715.5	744.3	783.9	784.7
32.5°	2679.6	2621.1	2364.8	1838.1	1234.7	744.3	684.1	675.1	681.7	712.2	717.9
35°	2966.5	2890.7	2541.2	1896.6	1130.9	689.9	651.2	620.7	618.2	633.0	647.0
37.5°	3295.4	3204.7	2763.7	1971.6	1008.1	633.0	602.5	572.0	558.8	566.3	587.7
40°	3598.7	3498.1	2996.2	2062.3	882.8	581.9	545.7	514.3	498.7	501.1	527.5
42.5°	3954.8	3850.9	3280.5	2181.0	778.9	547.3	486.3	454.2	433.6	445.1	475.6
45°	4495.5	4377.6	3695.1	2284.0	696.5	539.1	434.4	389.0	379.2	398.9	435.2
47.5°	5234.0	5089.8	4264.7	2346.7	626.4	546.5	398.1	336.3	338.8	361.0	397.3
50°	5966.8	5811.0	4923.3	2264.2	568.7	531.6	380.0	295.1	310.7	330.5	363.5
52.5°	6470.4	6267.6	5243.9	2026.0	516.0	475.6	378.3	256.3	286.0	292.6	320.6
55°	6490.2	6240.4	5079.9	1597.4	444.3	401.4	361.0	224.2	258.8	261.3	285.2
57.5°	5689.0	5463.2	4439.4	1097.1	394.8	294.3	287.7	196.2	212.7	233.3	248.1
60°	4328.2	4136.1	3320.1	502.8	300.0	187.1	197.0	169.0	159.1	189.6	204.4
62.5°	2650.8	2528.0	1991.4	222.5	191.2	99.7	119.5	134.4	119.5	131.1	143.4
65°	1052.6	998.2	755.8	94.8	78.3	50.3	54.4	78.3	84.1	92.3	103.9
67.5°	183.0	173.1	126.9	42.0	32.1	30.5	26.4	36.3	51.1	56.9	65.9
70°	23.9	23.1	20.6	17.3	16.5	14.8	11.5	23.1	34.6	36.3	42.0
72.5°	5.8	4.9	4.9	4.1	4.9	1.6	1.6	12.4	24.7	25.6	29.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	15.7	17.3	20.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6
2.5°	958.6	942.1	936.4	928.1	917.4	920.7	905.9	900.9	908.3	918.2	915.7
5°	871.2	853.1	840.7	821.8	818.5	811.1	806.1	799.5	807.8	819.3	821.8
7.5°	802.0	786.3	774.0	768.2	764.1	760.8	750.9	745.9	745.9	750.9	755.0
10°	772.3	760.8	758.3	760.0	766.6	765.7	756.7	750.1	741.8	737.7	742.7
12.5°	813.5	794.6	791.3	792.1	800.4	799.5	789.6	781.4	779.7	781.4	797.1
15°	883.6	854.8	833.3	829.2	833.3	831.7	824.3	819.3	821.8	845.7	872.1
17.5°	946.2	901.7	863.0	848.2	847.3	844.9	837.4	835.8	848.2	892.7	931.4
20°	964.4	920.7	865.5	846.5	842.4	839.9	831.7	834.1	849.8	903.4	936.4
22.5°	940.5	898.4	840.7	821.8	818.5	817.7	809.4	812.7	825.9	872.9	900.1
25°	895.1	859.7	799.5	783.0	783.0	781.4	774.0	775.6	783.9	825.1	851.5
27.5°	839.9	806.1	755.8	739.4	741.8	744.3	735.2	732.8	739.4	778.1	793.8
30°	776.4	752.5	713.0	698.1	697.3	707.2	694.8	691.5	700.6	731.1	734.4
32.5°	714.6	703.1	675.1	663.5	664.3	666.0	659.4	659.4	667.6	684.1	683.3
35°	654.5	647.0	642.1	633.9	633.0	629.7	629.7	631.4	640.4	646.2	635.5
37.5°	596.8	604.2	609.9	601.7	595.1	595.1	595.1	602.5	610.8	608.3	590.2
40°	545.7	561.3	579.5	570.4	554.7	553.9	557.2	569.6	581.9	567.1	550.6
42.5°	502.0	521.8	547.3	542.4	525.0	522.6	525.0	540.7	550.6	531.6	513.5
45°	459.1	483.8	514.3	514.3	495.4	492.9	493.7	514.3	520.1	497.8	474.8
47.5°	422.8	450.0	482.2	482.2	466.5	461.6	465.7	487.1	491.3	459.9	438.5
50°	388.2	417.9	453.3	450.9	440.2	436.0	443.4	466.5	461.6	427.0	404.7
52.5°	344.5	375.9	424.5	427.0	421.2	422.0	431.1	445.9	431.9	389.9	370.9
55°	305.0	337.1	385.8	398.9	398.9	398.1	402.2	413.8	402.2	352.0	328.9
57.5°	262.1	289.3	329.7	333.0	335.5	326.4	332.2	347.8	342.1	299.2	286.0
60°	215.1	238.2	261.3	263.8	253.0	234.1	244.8	262.9	267.1	234.9	220.1
62.5°	152.5	174.7	201.9	201.9	191.2	172.3	186.3	201.9	196.2	163.2	154.1
65°	113.7	134.4	155.0	164.0	155.0	141.8	152.5	164.0	155.0	127.8	114.6
67.5°	73.4	87.4	99.7	107.2	108.8	107.2	112.1	108.8	98.1	80.0	72.5
70°	44.5	51.9	58.5	65.1	70.1	72.5	75.0	67.6	56.9	47.0	44.5
72.5°	32.1	38.7	44.5	49.5	55.2	56.9	56.9	51.9	42.0	33.0	30.5
75°	22.3	28.0	33.0	36.3	41.2	42.9	42.9	38.7	31.3	23.9	21.4
77.5°	0.8	5.8	5.8	4.9	6.6	8.2	8.2	9.9	9.1	6.6	5.8
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6
2.5°	920.7	950.4	958.6	989.1	1016.3	1043.5	1076.5	1096.3	1125.9	1146.5	1158.1
5°	830.0	854.8	884.4	929.8	976.7	1028.7	1091.3	1145.7	1214.1	1264.4	1280.9
7.5°	764.1	796.2	830.8	887.7	952.0	1021.3	1109.4	1198.5	1303.1	1371.6	1415.2
10°	751.7	784.7	830.8	886.9	954.5	1033.6	1141.6	1257.0	1388.0	1471.3	1520.7
12.5°	811.1	846.5	866.3	891.8	942.9	1031.1	1169.6	1316.3	1470.5	1561.1	1613.9
15°	898.4	929.8	897.6	865.5	898.4	1004.8	1185.3	1365.8	1543.0	1647.7	1702.1
17.5°	958.6	961.1	891.0	822.6	831.7	957.0	1191.0	1415.2	1620.5	1730.1	1787.0
20°	952.8	933.1	862.2	786.3	758.3	895.1	1184.5	1458.9	1698.8	1813.4	1869.4
22.5°	908.3	885.2	825.1	750.9	696.5	821.8	1172.9	1498.5	1770.5	1900.7	1953.5
25°	854.8	830.0	780.6	715.5	656.9	750.9	1163.8	1552.9	1861.2	2014.5	2055.7
27.5°	792.1	770.7	728.6	681.7	640.4	697.3	1161.4	1624.6	1970.8	2153.0	2181.8
30°	731.1	711.3	678.4	651.2	633.9	666.0	1153.1	1701.3	2101.8	2312.0	2343.4
32.5°	672.6	652.8	632.2	628.1	628.9	654.5	1125.1	1777.1	2257.6	2542.8	2565.9
35°	622.3	599.2	591.0	600.9	619.0	634.7	1046.0	1839.7	2425.0	2794.2	2813.2
37.5°	574.5	551.4	550.6	574.5	594.3	604.2	952.8	1901.6	2650.8	3049.7	3073.6
40°	530.8	507.7	516.0	544.8	560.5	565.4	839.9	1995.5	2889.8	3319.3	3306.1
42.5°	493.7	469.8	474.8	511.9	525.9	539.1	736.1	2073.8	3119.8	3574.8	3570.7
45°	457.5	439.3	436.0	476.4	488.8	541.5	660.2	2134.0	3415.7	3900.4	3907.0
47.5°	422.0	408.0	408.8	426.1	456.6	553.9	595.9	2173.6	3845.1	4416.4	4301.8
50°	389.9	379.2	388.2	368.4	436.0	538.2	540.7	2165.3	4324.9	4910.9	4680.9
52.5°	354.4	352.0	356.1	308.3	403.1	474.8	488.8	2055.7	4549.9	5248.8	5117.8
55°	318.2	317.3	284.4	246.5	337.1	379.2	418.7	1715.3	4542.5	5428.5	5587.6
57.5°	275.3	268.7	216.0	201.1	262.1	263.8	381.6	1123.5	4025.7	4998.3	5328.0
60°	208.5	203.6	158.3	163.2	183.0	169.0	304.1	559.7	3008.5	3893.8	4265.5
62.5°	144.2	137.7	117.9	126.1	117.9	96.4	186.3	276.9	1822.4	2458.7	2795.9
65°	105.5	98.1	80.8	69.2	55.2	55.2	70.9	106.3	705.6	1045.2	1260.3
67.5°	65.1	61.8	47.8	34.6	33.8	36.3	37.1	52.8	113.7	181.3	221.7
70°	42.0	38.7	32.1	22.3	20.6	21.4	22.3	24.7	28.8	31.3	37.9
72.5°	28.8	27.2	23.1	12.4	9.9	10.7	11.5	11.5	14.0	13.2	15.7
75°	20.6	19.0	16.5	5.8	3.3	4.1	4.9	4.1	4.9	3.3	4.1
77.5°	5.8	5.8	4.1	0.8	0.0	0.8	1.6	1.6	0.8	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	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	0.0



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CATALOG NUMBER: GWS-SA4B-830-U-SLL-W-GRSBK

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6	1047.6
2.5°	1187.7	1206.7	1214.1	1203.4	1212.5	1197.6	1191.9	1169.6	1168.0	1163.8
5°	1347.7	1390.5	1416.1	1431.7	1413.6	1393.8	1364.1	1313.0	1297.4	1287.5
7.5°	1505.1	1571.9	1615.5	1636.1	1631.2	1590.8	1537.2	1451.5	1421.0	1406.2
10°	1641.9	1723.5	1776.3	1801.8	1791.1	1755.7	1679.0	1571.9	1531.5	1522.4
12.5°	1737.5	1812.5	1848.8	1871.1	1871.9	1857.9	1785.3	1677.4	1629.6	1618.0
15°	1797.7	1829.8	1830.7	1843.9	1866.9	1898.3	1864.5	1768.8	1717.7	1700.4
17.5°	1835.6	1800.2	1763.9	1767.2	1805.1	1888.4	1923.0	1849.6	1795.2	1776.3
20°	1862.8	1750.7	1683.1	1684.0	1722.7	1848.8	1963.4	1927.9	1871.9	1854.6
22.5°	1880.1	1707.0	1610.6	1608.1	1649.3	1801.8	2000.5	2021.1	1965.8	1946.1
25°	1915.6	1686.4	1566.9	1580.9	1617.2	1787.0	2050.7	2144.7	2093.6	2067.2
27.5°	1979.0	1707.0	1562.8	1594.9	1636.1	1830.7	2138.1	2309.6	2256.8	2227.1
30°	2088.7	1784.5	1626.3	1670.8	1720.2	1945.2	2284.8	2539.5	2463.7	2435.7
32.5°	2265.0	1945.2	1822.4	1918.0	1965.8	2133.2	2504.9	2797.5	2735.7	2679.6
35°	2508.2	2312.0	2298.0	2520.6	2509.0	2489.2	2775.3	3114.0	3020.9	2966.5
37.5°	2842.9	2902.2	3006.1	3227.0	3219.5	3068.7	3130.5	3413.2	3365.4	3295.4
40°	3260.7	3386.9	3563.2	3879.8	3780.9	3591.3	3566.5	3719.9	3681.1	3598.7
42.5°	3507.2	3724.8	4061.1	4345.5	4266.3	3935.0	3907.0	4129.5	4044.6	3954.8
45°	3621.8	4000.1	4659.5	5044.4	4804.6	4163.3	4152.6	4663.6	4615.8	4495.5
47.5°	3674.5	4277.9	5360.1	5942.9	5494.5	4363.6	4324.9	5438.4	5375.8	5234.0
50°	3733.0	4661.2	6204.2	6983.9	6327.8	4590.3	4618.3	6160.5	6134.1	5966.8
52.5°	3861.6	5066.7	7243.5	8174.1	7338.3	4945.5	5121.9	6841.3	6663.3	6470.4
55°	4054.5	5508.5	8325.0	9389.9	8369.5	5422.8	5666.7	7203.2	6703.7	6490.2
57.5°	3841.0	5618.9	8965.4	10238.9	8826.9	5424.4	5206.0	6575.9	5895.9	5689.0
60°	3048.1	5227.4	8719.0	10055.1	8437.1	4816.9	3986.1	5134.3	4466.6	4328.2
62.5°	2060.6	4384.2	7675.5	8503.8	7221.3	3789.1	2590.6	3339.1	2765.4	2650.8
65°	1129.2	3270.6	6201.7	6433.3	5651.9	2646.7	1332.8	1449.0	1103.7	1052.6
67.5°	311.6	2276.6	4563.1	4268.0	3965.5	1723.5	344.5	258.8	184.6	183.0
70°	78.3	1505.9	2734.1	2818.1	2431.5	1103.7	65.9	31.3	24.7	23.9
72.5°	33.0	647.9	1297.4	1491.1	1244.6	511.0	23.9	9.1	7.4	5.8
75°	4.1	51.9	110.5	167.3	114.6	55.2	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	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

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Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$



Color Vector Graphics



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

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)