

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: P631054

Luminaire Tested: GWS-SA1E-830-U-SLL-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631054
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-SA1E-830-U-SLL-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3227.8 lumens
Efficiency: N/A
Efficacy: 55.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G0

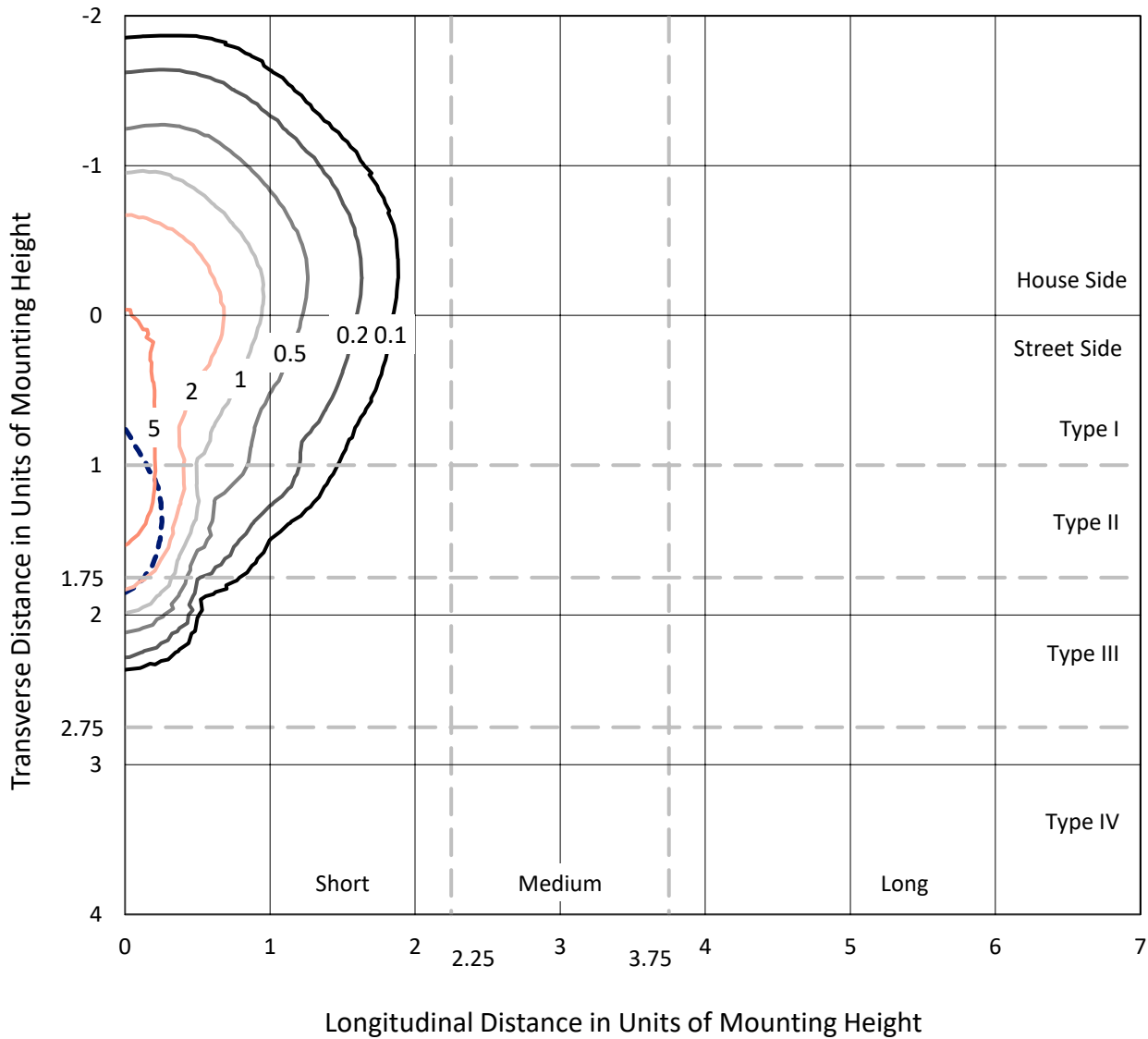
Input Watts (W): 58.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

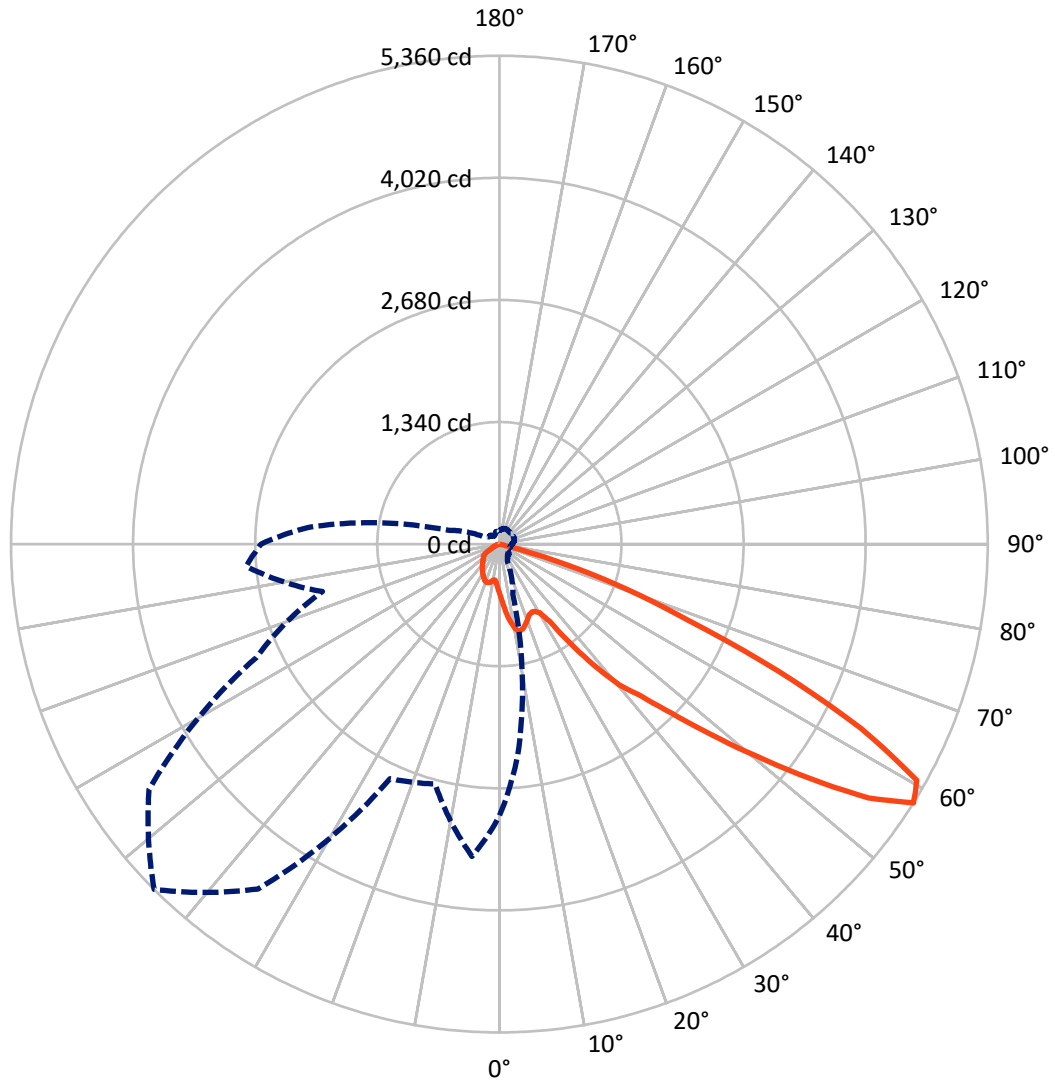
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.6 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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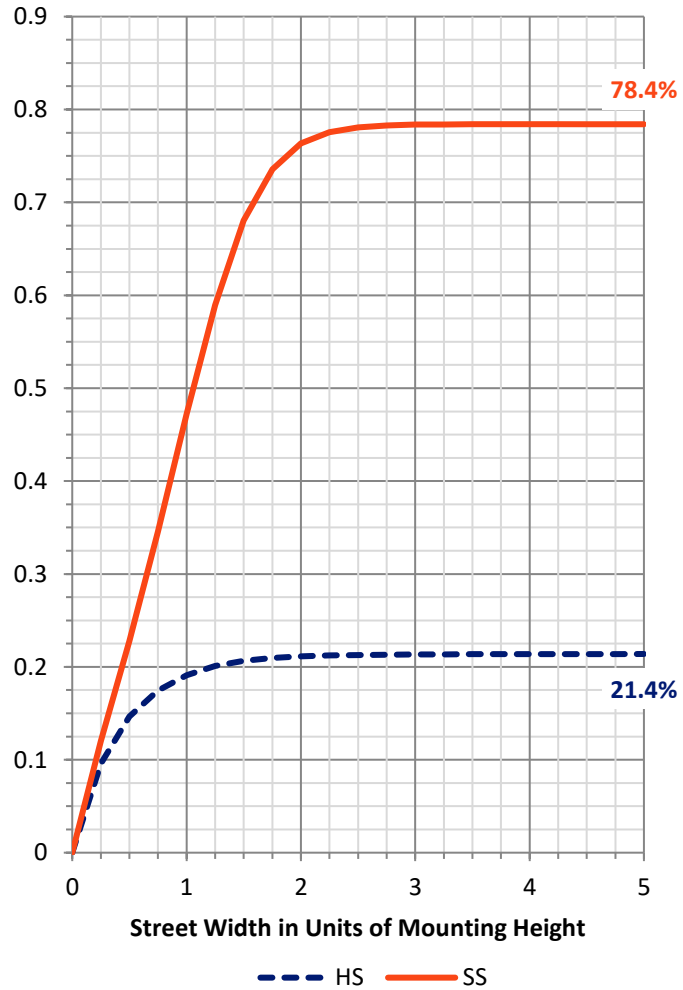
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	695.4	0.0	695.4
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	2532.4	0.0	2532.4
	% Fixture	78.5	0.0	78.5
Total	Lumens	3227.8	0.0	3227.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	1.7
10°-20°	178.4	5.5
20°-30°	289.5	9.0
30°-40°	444.3	13.8
40°-50°	709.5	22.0
50°-60°	993.5	30.8
60°-70°	509.4	15.8
70°-80°	49.0	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°	3227.8	100.0
0°-180°	3227.8	100.0

Coefficient of Utilization



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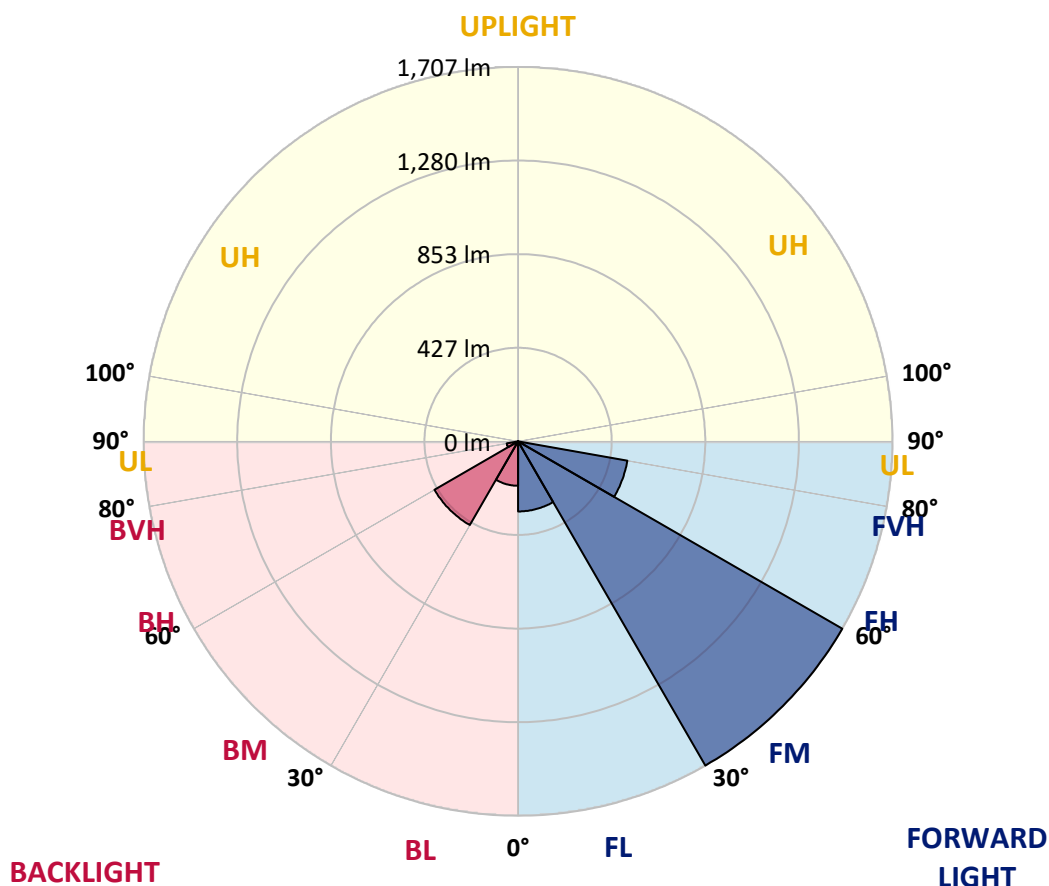
CATALOG NUMBER: GWS-SA1E-830-U-SLL-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	319.6	9.9			
FM (30°-60°)	1706.9	52.9			
FH (60°-80°)	505.9	15.7			G0/660
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	202.5	6.3	B1/500		
BM (30°-60°)	440.4	13.6	B1/1000		
BH (60°-80°)	52.5	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-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5
2.5°	609.3	608.0	603.7	589.0	580.0	565.7	555.4	542.0	527.3	518.2	509.2
5°	674.0	670.6	658.9	625.3	599.4	571.3	548.9	524.3	498.0	480.7	464.7
7.5°	736.2	731.0	715.4	658.5	619.2	579.1	547.2	511.3	474.2	448.3	428.5
10°	797.0	785.4	760.8	690.8	637.8	589.4	551.9	510.9	467.3	434.5	412.5
12.5°	847.1	838.4	804.8	721.5	653.3	591.6	545.4	507.5	478.1	456.1	435.8
15°	890.2	880.7	848.8	749.1	666.7	583.0	518.2	485.0	489.8	498.4	481.1
17.5°	929.9	920.0	885.5	772.0	671.9	561.8	480.3	464.3	490.6	523.0	516.5
20°	970.9	959.7	917.4	790.5	670.1	528.6	441.9	446.6	483.7	520.8	524.3
22.5°	1018.8	1007.1	958.0	814.3	668.8	488.9	408.6	431.1	470.8	502.3	508.3
25°	1082.2	1068.4	1014.5	849.2	672.3	452.7	384.9	416.0	448.8	477.3	480.7
27.5°	1165.9	1148.3	1079.6	892.4	679.6	424.2	374.6	395.3	420.7	446.2	449.2
30°	1275.1	1252.7	1154.3	929.9	676.2	404.3	367.6	374.6	389.7	410.4	410.8
32.5°	1402.8	1372.2	1238.0	962.3	646.4	389.7	358.2	353.4	356.9	372.8	375.8
35°	1553.0	1513.3	1330.3	992.9	592.0	361.2	340.9	324.9	323.6	331.4	338.7
37.5°	1725.2	1677.7	1446.9	1032.2	527.7	331.4	315.4	299.5	292.6	296.4	307.7
40°	1884.0	1831.3	1568.5	1079.6	462.1	304.6	285.7	269.3	261.1	262.4	276.2
42.5°	2070.4	2016.0	1717.4	1141.8	407.8	286.5	254.6	237.8	227.0	233.0	249.0
45°	2353.5	2291.8	1934.5	1195.7	364.6	282.2	227.4	203.7	198.5	208.9	227.8
47.5°	2740.1	2664.6	2232.6	1228.5	327.9	286.1	208.4	176.1	177.4	189.0	208.0
50°	3123.7	3042.2	2577.4	1185.4	297.7	278.3	198.9	154.5	162.7	173.0	190.3
52.5°	3387.4	3281.2	2745.3	1060.7	270.1	249.0	198.1	134.2	149.7	153.2	167.9
55°	3397.7	3267.0	2659.4	836.3	232.6	210.1	189.0	117.4	135.5	136.8	149.3
57.5°	2978.3	2860.1	2324.1	574.3	206.7	154.0	150.6	102.7	111.3	122.1	129.9
60°	2265.9	2165.3	1738.1	263.2	157.1	98.0	103.1	88.5	83.3	99.2	107.0
62.5°	1387.7	1323.4	1042.5	116.5	100.1	52.2	62.6	70.3	62.6	68.6	75.1
65°	551.0	522.6	395.7	49.6	41.0	26.3	28.5	41.0	44.0	48.3	54.4
67.5°	95.8	90.6	66.5	22.0	16.8	16.0	13.8	19.0	26.8	29.8	34.5
70°	12.5	12.1	10.8	9.1	8.6	7.8	6.0	12.1	18.1	19.0	22.0
72.5°	3.0	2.6	2.6	2.2	2.6	0.9	0.9	6.5	12.9	13.4	15.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	8.2	9.1	10.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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°	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5
2.5°	501.8	493.2	490.2	485.9	480.3	482.0	474.2	471.6	475.5	480.7	479.4
5°	456.1	446.6	440.1	430.2	428.5	424.6	422.0	418.6	422.9	428.9	430.2
7.5°	419.9	411.7	405.2	402.2	400.0	398.3	393.1	390.5	390.5	393.1	395.3
10°	404.3	398.3	397.0	397.9	401.3	400.9	396.1	392.7	388.4	386.2	388.8
12.5°	425.9	416.0	414.3	414.7	419.0	418.6	413.4	409.1	408.2	409.1	417.3
15°	462.6	447.5	436.3	434.1	436.3	435.4	431.5	428.9	430.2	442.7	456.5
17.5°	495.4	472.1	451.8	444.0	443.6	442.3	438.4	437.6	444.0	467.3	487.6
20°	504.9	482.0	453.1	443.2	441.0	439.7	435.4	436.7	444.9	472.9	490.2
22.5°	492.4	470.3	440.1	430.2	428.5	428.1	423.7	425.5	432.4	457.0	471.2
25°	468.6	450.1	418.6	409.9	409.9	409.1	405.2	406.1	410.4	431.9	445.8
27.5°	439.7	422.0	395.7	387.1	388.4	389.7	384.9	383.6	387.1	407.3	415.5
30°	406.5	394.0	373.3	365.5	365.1	370.2	363.8	362.0	366.8	382.8	384.5
32.5°	374.1	368.1	353.4	347.4	347.8	348.7	345.2	345.2	349.5	358.2	357.7
35°	342.6	338.7	336.1	331.8	331.4	329.7	329.7	330.5	335.3	338.3	332.7
37.5°	312.4	316.3	319.3	315.0	311.6	311.6	311.6	315.4	319.7	318.5	309.0
40°	285.7	293.9	303.4	298.6	290.4	290.0	291.7	298.2	304.6	296.9	288.2
42.5°	262.8	273.1	286.5	283.9	274.9	273.6	274.9	283.1	288.2	278.3	268.8
45°	240.4	253.3	269.3	269.3	259.3	258.0	258.5	269.3	272.3	260.6	248.6
47.5°	221.4	235.6	252.4	252.4	244.2	241.6	243.8	255.0	257.2	240.8	229.6
50°	203.2	218.8	237.3	236.0	230.4	228.3	232.2	244.2	241.6	223.5	211.9
52.5°	180.4	196.8	222.2	223.5	220.5	220.9	225.7	233.4	226.1	204.1	194.2
55°	159.7	176.5	201.9	208.9	208.9	208.4	210.6	216.6	210.6	184.3	172.2
57.5°	137.2	151.5	172.6	174.3	175.6	170.9	173.9	182.1	179.1	156.6	149.7
60°	112.6	124.7	136.8	138.1	132.5	122.5	128.2	137.7	139.8	123.0	115.2
62.5°	79.8	91.5	105.7	105.7	100.1	90.2	97.5	105.7	102.7	85.4	80.7
65°	59.5	70.3	81.1	85.9	81.1	74.2	79.8	85.9	81.1	66.9	60.0
67.5°	38.4	45.7	52.2	56.1	57.0	56.1	58.7	57.0	51.3	41.9	38.0
70°	23.3	27.2	30.6	34.1	36.7	38.0	39.3	35.4	29.8	24.6	23.3
72.5°	16.8	20.3	23.3	25.9	28.9	29.8	29.8	27.2	22.0	17.3	16.0
75°	11.7	14.7	17.3	19.0	21.6	22.4	22.4	20.3	16.4	12.5	11.2
77.5°	0.4	3.0	3.0	2.6	3.5	4.3	4.3	5.2	4.7	3.5	3.0
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°	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5
2.5°	482.0	497.5	501.8	517.8	532.1	546.3	563.6	573.9	589.4	600.2	606.3
5°	434.5	447.5	463.0	486.7	511.3	538.5	571.3	599.8	635.6	661.9	670.6
7.5°	400.0	416.8	435.0	464.7	498.4	534.6	580.8	627.4	682.2	718.0	740.9
10°	393.5	410.8	435.0	464.3	499.7	541.1	597.6	658.1	726.7	770.2	796.1
12.5°	424.6	443.2	453.5	466.9	493.6	539.8	612.3	689.1	769.8	817.3	844.9
15°	470.3	486.7	469.9	453.1	470.3	526.0	620.5	715.0	807.8	862.6	891.1
17.5°	501.8	503.1	466.5	430.6	435.4	501.0	623.5	740.9	848.4	905.7	935.5
20°	498.8	488.5	451.4	411.7	397.0	468.6	620.1	763.8	889.3	949.3	978.7
22.5°	475.5	463.4	431.9	393.1	364.6	430.2	614.0	784.5	926.9	995.1	1022.7
25°	447.5	434.5	408.6	374.6	343.9	393.1	609.3	813.0	974.4	1054.6	1076.2
27.5°	414.7	403.5	381.5	356.9	335.3	365.1	608.0	850.5	1031.7	1127.1	1142.2
30°	382.8	372.4	355.1	340.9	331.8	348.7	603.7	890.6	1100.4	1210.4	1226.8
32.5°	352.1	341.8	331.0	328.8	329.2	342.6	589.0	930.3	1181.9	1331.2	1343.3
35°	325.8	313.7	309.4	314.6	324.1	332.3	547.6	963.1	1269.5	1462.8	1472.7
37.5°	300.8	288.7	288.2	300.8	311.1	316.3	498.8	995.5	1387.7	1596.6	1609.1
40°	277.9	265.8	270.1	285.2	293.4	296.0	439.7	1044.7	1512.9	1737.7	1730.8
42.5°	258.5	246.0	248.6	268.0	275.3	282.2	385.3	1085.7	1633.3	1871.5	1869.3
45°	239.5	230.0	228.3	249.4	255.9	283.5	345.6	1117.2	1788.2	2041.9	2045.4
47.5°	220.9	213.6	214.0	223.1	239.1	290.0	312.0	1137.9	2013.0	2312.0	2252.1
50°	204.1	198.5	203.2	192.9	228.3	281.8	283.1	1133.6	2264.1	2570.9	2450.6
52.5°	185.5	184.3	186.4	161.4	211.0	248.6	255.9	1076.2	2381.9	2747.9	2679.3
55°	166.6	166.1	148.9	129.0	176.5	198.5	219.2	898.0	2378.1	2841.9	2925.2
57.5°	144.1	140.7	113.1	105.3	137.2	138.1	199.8	588.2	2107.5	2616.7	2789.3
60°	109.2	106.6	82.9	85.4	95.8	88.5	159.2	293.0	1575.0	2038.5	2233.1
62.5°	75.5	72.1	61.7	66.0	61.7	50.5	97.5	145.0	954.1	1287.2	1463.7
65°	55.2	51.3	42.3	36.2	28.9	28.9	37.1	55.7	369.4	547.2	659.8
67.5°	34.1	32.4	25.0	18.1	17.7	19.0	19.4	27.6	59.5	94.9	116.1
70°	22.0	20.3	16.8	11.7	10.8	11.2	11.7	12.9	15.1	16.4	19.8
72.5°	15.1	14.2	12.1	6.5	5.2	5.6	6.0	6.0	7.3	6.9	8.2
75°	10.8	9.9	8.6	3.0	1.7	2.2	2.6	2.2	2.6	1.7	2.2
77.5°	3.0	3.0	2.2	0.4	0.0	0.4	0.9	0.9	0.4	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5
2.5°	621.8	631.7	635.6	630.0	634.8	627.0	624.0	612.3	611.5	609.3
5°	705.5	728.0	741.3	749.5	740.0	729.7	714.2	687.4	679.2	674.0
7.5°	787.9	822.9	845.8	856.6	854.0	832.8	804.8	759.9	743.9	736.2
10°	859.6	902.3	929.9	943.3	937.7	919.1	879.0	822.9	801.7	797.0
12.5°	909.6	948.9	967.9	979.5	980.0	972.6	934.7	878.1	853.1	847.1
15°	941.1	958.0	958.4	965.3	977.4	993.8	976.1	926.0	899.3	890.2
17.5°	961.0	942.4	923.4	925.2	945.0	988.6	1006.7	968.3	939.8	929.9
20°	975.2	916.5	881.1	881.6	901.9	967.9	1027.9	1009.3	980.0	970.9
22.5°	984.3	893.7	843.2	841.9	863.5	943.3	1047.3	1058.1	1029.2	1018.8
25°	1002.8	882.9	820.3	827.6	846.6	935.5	1073.6	1122.8	1096.0	1082.2
27.5°	1036.1	893.7	818.1	835.0	856.6	958.4	1119.3	1209.1	1181.5	1165.9
30°	1093.4	934.2	851.4	874.7	900.6	1018.4	1196.1	1329.5	1289.8	1275.1
32.5°	1185.8	1018.4	954.1	1004.1	1029.2	1116.8	1311.4	1464.5	1432.2	1402.8
35°	1313.1	1210.4	1203.1	1319.6	1313.5	1303.2	1452.9	1630.3	1581.5	1553.0
37.5°	1488.3	1519.4	1573.7	1689.4	1685.5	1606.5	1638.9	1786.9	1761.9	1725.2
40°	1707.1	1773.1	1865.4	2031.1	1979.3	1880.1	1867.2	1947.4	1927.1	1884.0
42.5°	1836.1	1950.0	2126.1	2274.9	2233.5	2060.0	2045.4	2161.9	2117.4	2070.4
45°	1896.1	2094.1	2439.3	2640.9	2515.3	2179.6	2174.0	2441.5	2416.5	2353.5
47.5°	1923.7	2239.5	2806.1	3111.2	2876.5	2284.4	2264.1	2847.1	2814.3	2740.1
50°	1954.3	2440.2	3248.0	3656.2	3312.7	2403.1	2417.8	3225.1	3211.3	3123.7
52.5°	2021.6	2652.5	3792.1	4279.3	3841.7	2589.1	2681.4	3581.5	3488.3	3387.4
55°	2122.6	2883.8	4358.3	4915.8	4381.6	2838.9	2966.6	3771.0	3509.5	3397.7
57.5°	2010.8	2941.6	4693.5	5360.2	4621.1	2839.8	2725.4	3442.6	3086.6	2978.3
60°	1595.7	2736.6	4564.5	5264.0	4417.0	2521.8	2086.8	2687.9	2338.4	2265.9
62.5°	1078.8	2295.2	4018.2	4451.9	3780.5	1983.7	1356.2	1748.1	1447.7	1387.7
65°	591.2	1712.2	3246.7	3367.9	2958.9	1385.6	697.8	758.6	577.8	551.0
67.5°	163.1	1191.8	2388.8	2234.4	2076.0	902.3	180.4	135.5	96.7	95.8
70°	41.0	788.4	1431.3	1475.3	1273.0	577.8	34.5	16.4	12.9	12.5
72.5°	17.3	339.2	679.2	780.6	651.6	267.5	12.5	4.7	3.9	3.0
75°	2.2	27.2	57.8	87.6	60.0	28.9	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

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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			

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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

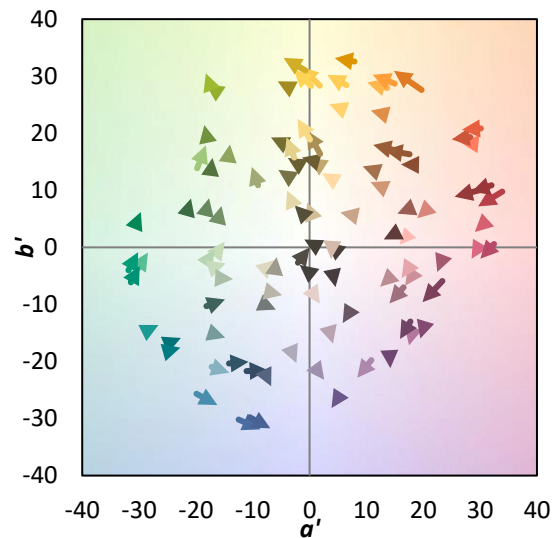
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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