

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: P643928

Luminaire Tested: GWS-SA6F-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643928  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGF-830-U-SLR-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

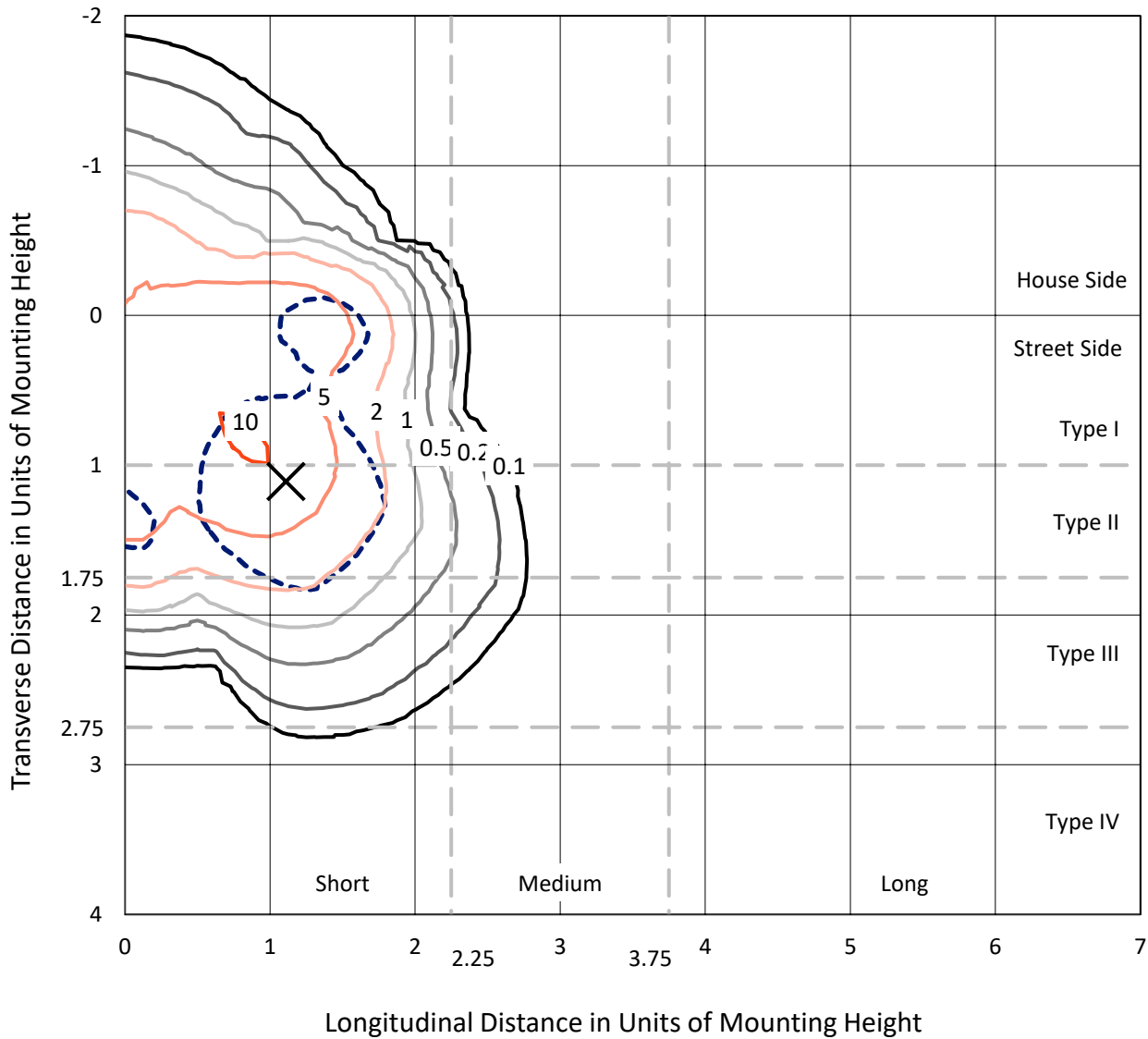
Lumens per Lamp: N/A  
Luminaire Lumens: 21092.7 lumens  
Efficiency: N/A  
Efficacy: 56.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 372.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
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

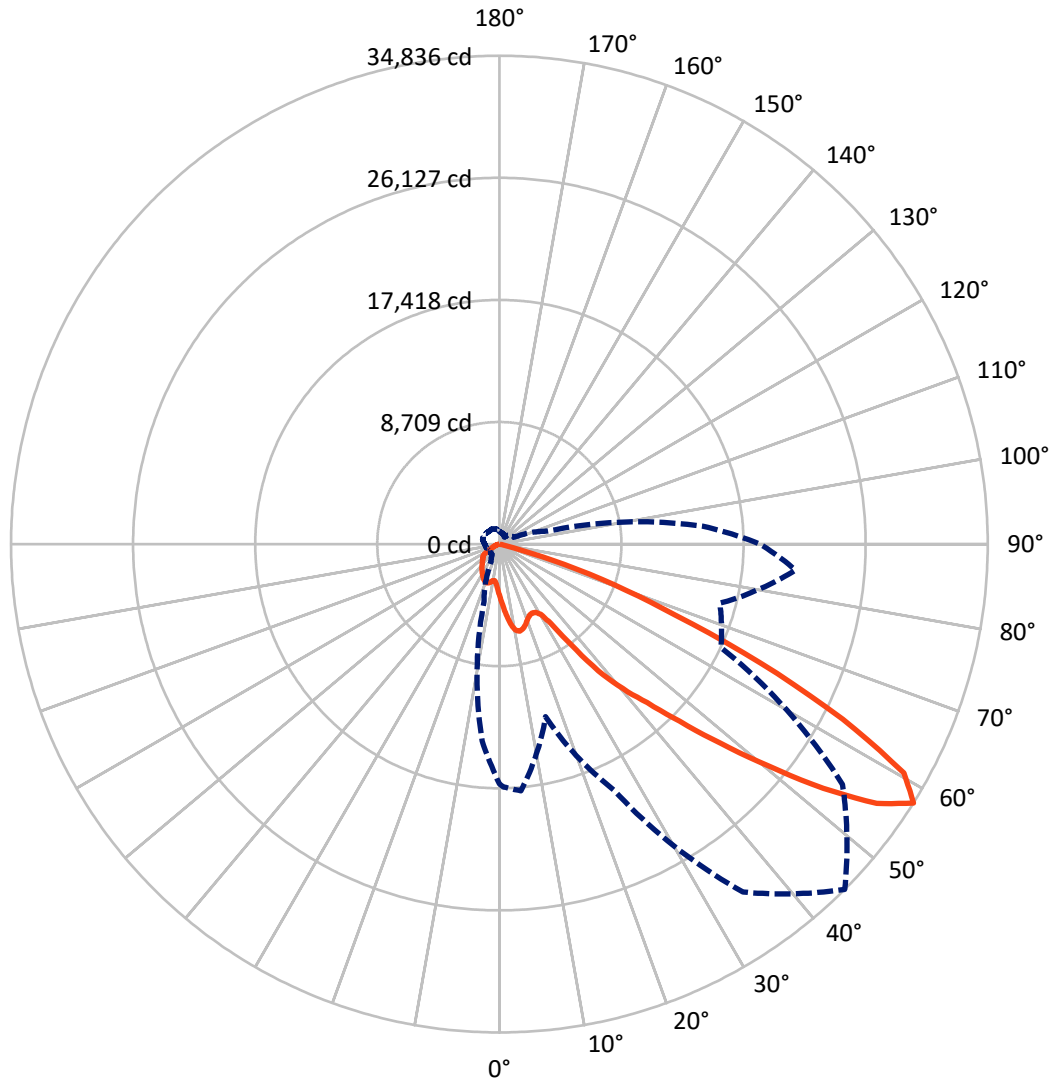
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4723.2	0.0	4723.2
	% Fixture	22.4	0.0	22.4
<b>Street Side</b>	Lumens	16369.5	0.0	16369.5
	% Fixture	77.6	0.0	77.6
<b>Total</b>	Lumens	21092.7	0.0	21092.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	364.7	1.7
10°-20°	1179.8	5.6
20°-30°	1916.5	9.1
30°-40°	2961.3	14.0
40°-50°	4748.5	22.5
50°-60°	6489.9	30.8
60°-70°	3143.2	14.9
70°-80°	287.8	1.4
80°-90°	0.8	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°	21092.7	100.0
0°-180°	21092.7	100.0

**Coefficient of Utilization**



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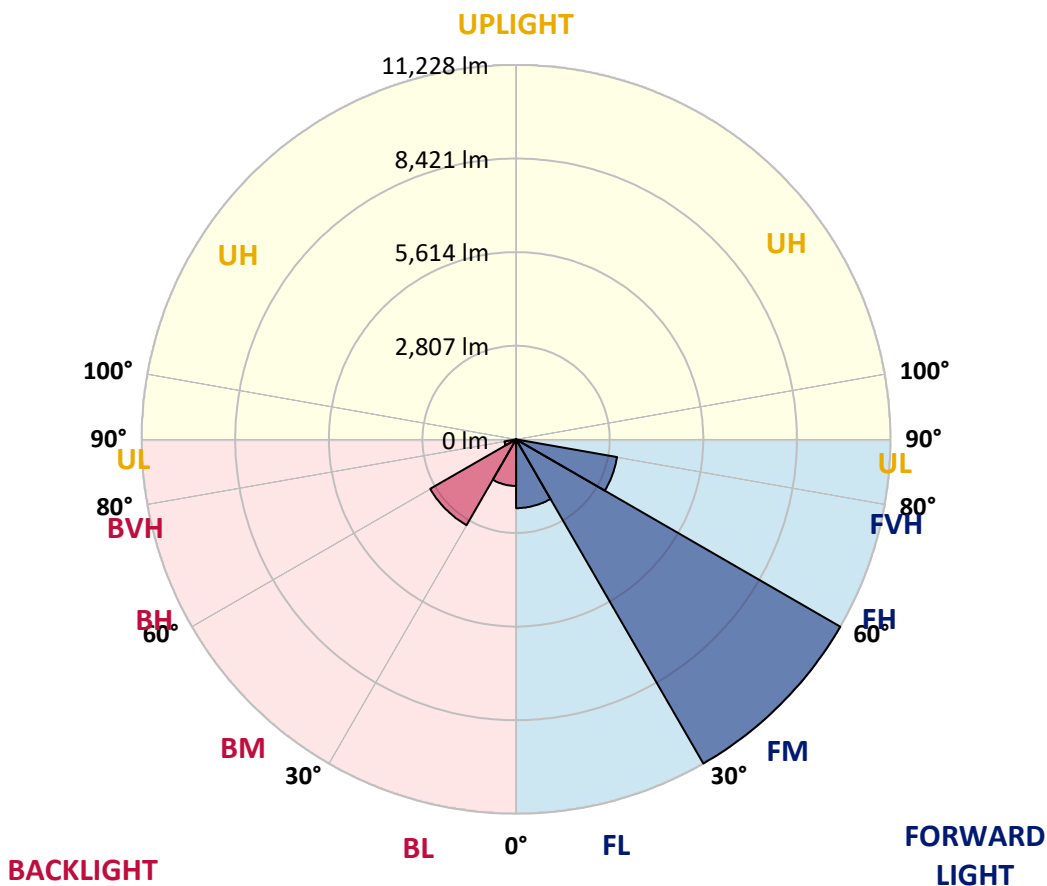
CATALOG NUMBER: GWS-SA6F-830-U-SLR-W-GRSBK

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2063.5	9.8			
FM (30°-60°)	11228.1	53.2			
FH (60°-80°)	3077.0	14.6			G2/5000
FVH (80°-90°)	0.8	0.0			G0/10
BL (0°-30°)	1397.5	6.6	B3/2500		
BM (30°-60°)	2971.6	14.1	B3/5000		
BH (60°-80°)	354.0	1.7	B1/500		G1/500
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: B3-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3
2.5°	4016.2	4041.7	4084.2	4174.9	4251.5	4302.5	4325.1	4319.5	4288.3	4265.6	4220.3
5°	4447.0	4447.0	4529.2	4736.1	4894.8	4994.0	5045.1	5013.9	4951.5	4852.3	4699.3
7.5°	4824.0	4838.2	4977.0	5271.8	5512.7	5654.4	5736.6	5719.6	5609.1	5419.2	5113.1
10°	5118.8	5135.8	5320.0	5679.9	5963.4	6107.9	6229.8	6241.1	6119.3	5867.0	5515.6
12.5°	5405.0	5422.0	5614.8	5960.5	6210.0	6269.5	6377.2	6419.7	6388.5	6210.0	5844.3
15°	5714.0	5753.6	5918.0	6175.9	6280.8	6210.0	6280.8	6357.3	6462.2	6445.2	6116.4
17.5°	6017.2	6045.6	6212.8	6303.5	6187.3	6003.1	6037.1	6127.8	6365.8	6598.3	6385.7
20°	6297.8	6337.5	6476.4	6357.3	6005.9	5719.6	5722.5	5841.5	6204.3	6691.8	6660.6
22.5°	6592.6	6652.1	6751.3	6416.9	5838.7	5495.7	5509.9	5617.6	6076.7	6779.7	6972.4
25°	6978.1	7034.7	7099.9	6564.2	5784.8	5385.2	5439.0	5538.2	6076.7	6929.9	7357.9
27.5°	7499.6	7539.2	7542.1	6839.2	5878.3	5402.2	5515.6	5628.9	6258.1	7230.3	7873.7
30°	8154.3	8216.6	8134.4	7267.2	6170.3	5628.9	5796.1	5937.9	6649.3	7737.6	8633.3
32.5°	8950.7	9038.6	8928.1	7902.0	6779.7	6411.2	6714.5	6796.7	7272.8	8471.7	9494.9
35°	9886.0	9959.7	9840.7	8780.7	8202.5	8270.5	8820.4	8715.5	8525.6	9375.9	10501.1
37.5°	10912.1	10980.1	10750.5	10112.8	10305.5	10600.3	11478.9	11119.0	10506.8	10540.8	11592.3
40°	11853.1	11926.7	11566.8	11561.1	11957.9	12496.4	13556.5	13060.5	12227.2	12065.6	12615.5
42.5°	12828.1	12879.1	12553.1	12332.1	13233.4	14341.6	15464.0	14795.1	13366.6	13190.8	13896.6
45°	14219.7	14327.4	13746.4	12711.8	14381.3	16464.5	18029.0	16722.4	14143.2	14001.5	15857.9
47.5°	16266.1	16345.4	15160.7	12949.9	15449.8	19108.9	21234.6	19222.2	14826.2	14503.1	18539.2
50°	17958.1	18012.0	16461.6	13210.7	16586.3	21960.2	24888.0	22186.9	15594.3	15333.6	21041.9
52.5°	19205.2	19409.3	18170.7	13746.4	18080.0	25313.2	28932.6	25698.6	16793.2	16937.8	23116.6
55°	19463.2	19740.9	19338.5	14075.1	19395.1	28728.5	32668.2	28841.9	17989.3	18153.7	23813.8
57.5°	17105.0	17326.1	17660.5	12748.7	19364.0	30293.0	34836.4	29884.9	17445.1	16280.2	21203.4
60°	12813.9	12966.9	13573.5	9744.3	17807.9	28909.9	33147.2	28110.6	15254.2	12422.8	16155.5
62.5°	7598.8	7666.8	8434.9	6312.0	14780.9	24896.5	27489.9	24256.0	12054.3	8355.5	9894.6
65°	2916.5	2888.2	3474.9	3114.9	10869.6	19831.6	20446.7	18491.0	8270.5	3829.1	3772.5
67.5°	450.7	430.8	581.0	921.1	7839.7	13743.5	13491.3	13326.9	5181.1	892.8	779.4
70°	102.0	102.0	124.7	272.1	4790.0	8074.9	8641.8	8239.3	3316.1	189.9	102.0
72.5°	48.2	48.2	59.5	116.2	1734.6	3327.5	3877.3	3817.8	1077.0	62.4	36.8
75°	17.0	19.8	19.8	25.5	104.9	172.9	396.8	283.4	68.0	0.0	0.0
77.5°	5.7	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	2.8	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°	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3
2.5°	4121.1	4101.2	4027.5	3928.3	3832.0	3746.9	3659.1	3554.2	3477.7	3389.8	3361.5
5°	4580.2	4455.5	4254.3	4044.6	3851.8	3687.4	3528.7	3358.6	3233.9	3109.2	3066.7
7.5°	4968.5	4784.3	4458.4	4143.8	3880.2	3647.7	3418.2	3185.8	3004.4	2857.0	2811.6
10°	5317.2	5104.6	4668.1	4279.8	3948.2	3678.9	3401.2	3109.2	2874.0	2698.3	2655.7
12.5°	5617.6	5371.0	4846.7	4381.8	3976.5	3667.6	3398.3	3165.9	2953.3	2752.1	2698.3
15°	5869.8	5597.7	4996.9	4449.9	3934.0	3525.9	3290.6	3253.8	3236.8	3015.7	2910.8
17.5°	6116.4	5810.3	5118.8	4481.0	3815.0	3276.5	3106.4	3273.6	3452.2	3307.6	3174.4
20°	6374.3	6025.7	5243.5	4486.7	3616.6	2995.9	2967.5	3231.1	3457.8	3412.5	3287.8
22.5°	6677.6	6295.0	5399.3	4483.9	3367.2	2757.8	2865.5	3148.9	3333.1	3330.3	3231.1
25°	7116.9	6635.1	5609.1	4500.9	3095.1	2573.5	2752.1	3010.0	3160.2	3154.6	3072.4
27.5°	7587.4	7040.4	5881.2	4543.4	2862.6	2465.8	2618.9	2820.1	2950.5	2944.8	2874.0
30°	8247.8	7508.1	6141.9	4546.2	2695.4	2409.2	2471.5	2610.4	2735.1	2720.9	2667.1
32.5°	9049.9	8035.2	6360.2	4384.7	2590.6	2355.3	2318.5	2389.3	2485.7	2465.8	2451.7
35°	10019.3	8661.6	6547.2	4030.4	2429.0	2247.6	2148.4	2162.6	2230.6	2241.9	2236.3
37.5°	11124.6	9407.1	6779.7	3562.7	2210.8	2091.7	1958.5	1947.2	1986.8	2023.7	2052.0
40°	12215.8	10246.0	7094.3	3089.4	2012.4	1893.3	1765.8	1737.4	1754.4	1819.6	1879.1
42.5°	13443.1	11218.2	7434.4	2684.1	1876.3	1675.1	1553.2	1499.3	1547.5	1652.4	1723.3
45°	15211.7	12581.5	7766.0	2361.0	1819.6	1482.3	1318.0	1312.3	1366.1	1502.2	1581.5
47.5°	17694.6	14344.4	7984.2	2108.7	1816.8	1332.1	1136.6	1170.6	1232.9	1366.1	1456.8
50°	20115.0	16552.3	7743.3	1916.0	1757.3	1232.9	1000.5	1068.5	1130.9	1247.1	1340.6
52.5°	21574.7	17739.9	6805.2	1734.6	1573.0	1187.6	867.3	986.3	997.7	1102.5	1201.7
55°	21421.7	16971.8	5212.3	1454.0	1300.9	1122.4	728.4	890.0	895.6	975.0	1060.0
57.5°	18593.0	14571.2	3579.7	1179.1	977.8	926.8	600.9	751.1	804.9	853.1	915.5
60°	13856.9	10631.5	1595.7	958.0	620.7	626.4	513.0	566.9	649.1	705.7	759.6
62.5°	8165.6	6116.4	649.1	575.4	343.0	394.0	413.8	413.8	464.8	507.3	541.4
65°	3086.6	2139.9	263.6	289.1	178.6	184.2	243.8	300.4	340.1	377.0	422.3
67.5°	541.4	374.1	136.0	107.7	104.9	93.5	124.7	195.6	218.2	246.6	266.4
70°	90.7	76.5	56.7	53.9	48.2	51.0	82.2	138.9	153.1	161.6	170.1
72.5°	25.5	22.7	17.0	14.2	11.3	14.2	51.0	107.7	113.4	119.0	127.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	19.8	76.5	82.2	85.0	93.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	22.7	28.3	22.7
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°	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3
2.5°	3344.5	3287.8	3256.6	3239.6	3239.6	3216.9	3191.4	3182.9	3219.8	3219.8	3282.1
5°	3012.9	2967.5	2916.5	2885.3	2837.1	2845.6	2817.3	2814.5	2851.3	2868.3	2933.5
7.5°	2783.3	2726.6	2695.4	2675.6	2650.1	2638.7	2613.2	2604.7	2624.6	2652.9	2715.3
10°	2630.2	2621.7	2618.9	2633.1	2633.1	2618.9	2596.2	2582.1	2587.7	2641.6	2712.4
12.5°	2669.9	2686.9	2692.6	2715.3	2726.6	2715.3	2698.3	2703.9	2740.8	2840.0	2944.8
15°	2842.8	2828.6	2823.0	2834.3	2842.8	2831.5	2825.8	2868.3	2995.9	3137.6	3256.6
17.5°	3027.0	2936.3	2896.7	2896.7	2902.3	2896.7	2902.3	2984.5	3191.4	3333.1	3421.0
20°	3120.6	2953.3	2891.0	2876.8	2888.2	2891.0	2910.8	3004.4	3231.1	3330.3	3350.1
22.5°	3092.2	2882.5	2811.6	2800.3	2811.6	2823.0	2842.8	2922.2	3134.7	3185.8	3177.3
25°	2950.5	2743.6	2686.9	2686.9	2712.4	2709.6	2718.1	2774.8	2950.5	2981.7	2967.5
27.5°	2771.9	2576.4	2528.2	2556.5	2579.2	2573.5	2576.4	2624.6	2754.9	2763.4	2749.3
30°	2590.6	2420.5	2375.1	2409.2	2440.3	2434.7	2437.5	2485.7	2567.9	2559.4	2539.5
32.5°	2406.3	2281.6	2247.6	2267.4	2315.6	2310.0	2321.3	2372.3	2403.5	2366.6	2344.0
35°	2236.3	2171.1	2145.6	2156.9	2193.8	2202.3	2222.1	2256.1	2256.1	2210.8	2171.1
37.5°	2077.5	2069.0	2052.0	2037.9	2071.9	2097.4	2125.7	2165.4	2108.7	2043.5	2006.7
40°	1930.2	1967.0	1944.3	1907.5	1927.3	1964.2	2020.9	2052.0	1984.0	1918.8	1856.5
42.5°	1794.1	1856.5	1848.0	1802.6	1819.6	1853.6	1918.8	1944.3	1865.0	1791.3	1731.8
45°	1663.7	1751.6	1757.3	1700.6	1717.6	1751.6	1828.1	1836.6	1734.6	1655.2	1612.7
47.5°	1550.4	1646.7	1649.6	1607.0	1612.7	1660.9	1731.8	1734.6	1618.4	1544.7	1490.8
50°	1442.7	1553.2	1561.7	1524.9	1530.5	1587.2	1646.7	1635.4	1510.7	1434.2	1386.0
52.5°	1312.3	1462.5	1482.3	1465.3	1488.0	1533.4	1570.2	1530.5	1386.0	1309.4	1266.9
55°	1170.6	1366.1	1408.6	1397.3	1422.8	1459.7	1468.2	1442.7	1261.3	1184.7	1145.1
57.5°	1006.2	1125.2	1198.9	1176.2	1196.1	1232.9	1258.4	1238.6	1102.5	1043.0	1009.0
60°	833.3	912.6	929.7	892.8	875.8	941.0	1000.5	975.0	858.8	821.9	782.3
62.5°	609.4	700.1	711.4	663.2	643.4	714.2	765.3	739.8	612.2	572.5	541.4
65°	487.5	572.5	595.2	549.9	538.5	592.4	623.5	561.2	470.5	428.0	394.0
67.5°	320.3	388.3	447.8	445.0	422.3	439.3	416.6	365.6	300.4	277.8	255.1
70°	198.4	238.1	274.9	289.1	286.3	280.6	249.4	212.6	192.7	184.2	172.9
72.5°	153.1	192.7	221.1	229.6	232.4	223.9	198.4	164.4	144.5	133.2	124.7
75°	113.4	144.5	167.2	178.6	184.2	178.6	153.1	130.4	110.5	102.0	93.5
77.5°	39.7	48.2	59.5	65.2	62.4	59.5	53.9	53.9	42.5	39.7	34.0
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



REPORT NUMBER: P643928

CATALOG NUMBER: GWS-SA6F-830-U-SLR-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3	3707.3
2.5°	3353.0	3404.0	3497.5	3582.6	3673.3	3766.8	3868.8	3973.7	4021.9	4016.2
5°	3032.7	3143.2	3296.3	3463.5	3650.6	3851.8	4075.7	4305.3	4404.5	4447.0
7.5°	2831.5	2987.4	3188.6	3401.2	3647.7	3934.0	4271.3	4631.3	4775.8	4824.0
10°	2857.0	3038.4	3205.6	3412.5	3676.1	4047.4	4466.9	4894.8	5064.9	5118.8
12.5°	3063.9	3103.6	3148.9	3319.0	3650.6	4132.4	4645.4	5155.6	5351.2	5405.0
15°	3250.9	3066.7	2981.7	3137.6	3559.9	4191.9	4826.8	5436.2	5651.6	5714.0
17.5°	3259.4	2981.7	2791.8	2913.7	3412.5	4217.4	5005.4	5722.5	5957.7	6017.2
20°	3154.6	2888.2	2644.4	2647.2	3211.3	4211.8	5152.8	5980.4	6244.0	6297.8
22.5°	3001.5	2777.6	2525.4	2437.5	2995.9	4200.4	5314.3	6255.3	6541.6	6592.6
25°	2831.5	2635.9	2412.0	2278.8	2780.5	4211.8	5541.1	6615.3	6929.9	6978.1
27.5°	2647.2	2480.0	2324.1	2216.4	2599.1	4254.3	5813.2	7074.4	7448.5	7499.6
30°	2454.5	2329.8	2267.4	2202.3	2485.7	4265.6	6107.9	7610.1	8083.4	8154.3
32.5°	2264.6	2196.6	2199.4	2210.8	2378.0	4186.3	6377.2	8205.3	8837.4	8950.7
35°	2088.9	2069.0	2125.7	2182.4	2222.1	3982.2	6612.4	8908.2	9769.8	9886.0
37.5°	1938.7	1955.7	2026.5	2083.2	2052.0	3693.1	6924.2	9786.8	10812.9	10912.1
40°	1794.1	1836.6	1918.8	1944.3	1921.7	3355.8	7298.3	10634.3	11717.0	11853.1
42.5°	1660.9	1692.1	1808.3	1814.0	1884.8	3012.9	7658.3	11547.0	12757.2	12828.1
45°	1553.2	1547.5	1666.6	1703.4	1933.0	2633.1	8009.7	12762.9	14117.7	14219.7
47.5°	1448.3	1442.7	1471.0	1638.2	1952.8	2281.6	8358.4	14542.8	16090.3	16266.1
50°	1349.1	1357.6	1269.8	1607.0	1845.1	2012.4	8517.1	16189.5	17884.5	17958.1
52.5°	1261.3	1230.1	1077.0	1505.0	1615.6	1757.3	8066.4	16937.8	18995.5	19205.2
55°	1136.6	963.7	887.1	1221.6	1275.4	1533.4	6606.8	16504.1	19091.9	19463.2
57.5°	972.2	756.8	753.9	901.3	901.3	1422.8	4231.6	14100.7	16453.1	17105.0
60°	748.3	586.7	623.5	626.4	578.2	1037.4	2375.1	10214.8	12164.8	12813.9
62.5°	532.8	447.8	470.5	374.1	331.6	518.7	1139.4	5881.2	7508.1	7598.8
65°	357.1	303.3	246.6	206.9	204.1	221.1	470.5	2125.7	2584.9	2916.5
67.5°	235.2	184.2	130.4	130.4	147.4	147.4	178.6	351.5	493.2	450.7
70°	153.1	127.5	82.2	79.4	96.4	96.4	90.7	96.4	102.0	102.0
72.5°	113.4	96.4	48.2	42.5	53.9	56.7	51.0	48.2	48.2	48.2
75°	85.0	68.0	28.3	19.8	25.5	34.0	28.3	19.8	19.8	17.0
77.5°	34.0	25.5	11.3	8.5	14.2	19.8	17.0	8.5	5.7	5.7
80°	2.8	5.7	5.7	5.7	8.5	11.3	14.2	5.7	2.8	2.8
82.5°	0.0	2.8	2.8	2.8	5.7	8.5	11.3	5.7	2.8	2.8
85°	0.0	0.0	0.0	0.0	5.7	8.5	5.7	2.8	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	2.8	8.5	5.7	2.8	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**



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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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)