

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: P643436

Luminaire Tested: GWS-SA6E-830-U-SLR-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P643436
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-41)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SAGE-830-U-SLR-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: (96) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33670.2 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

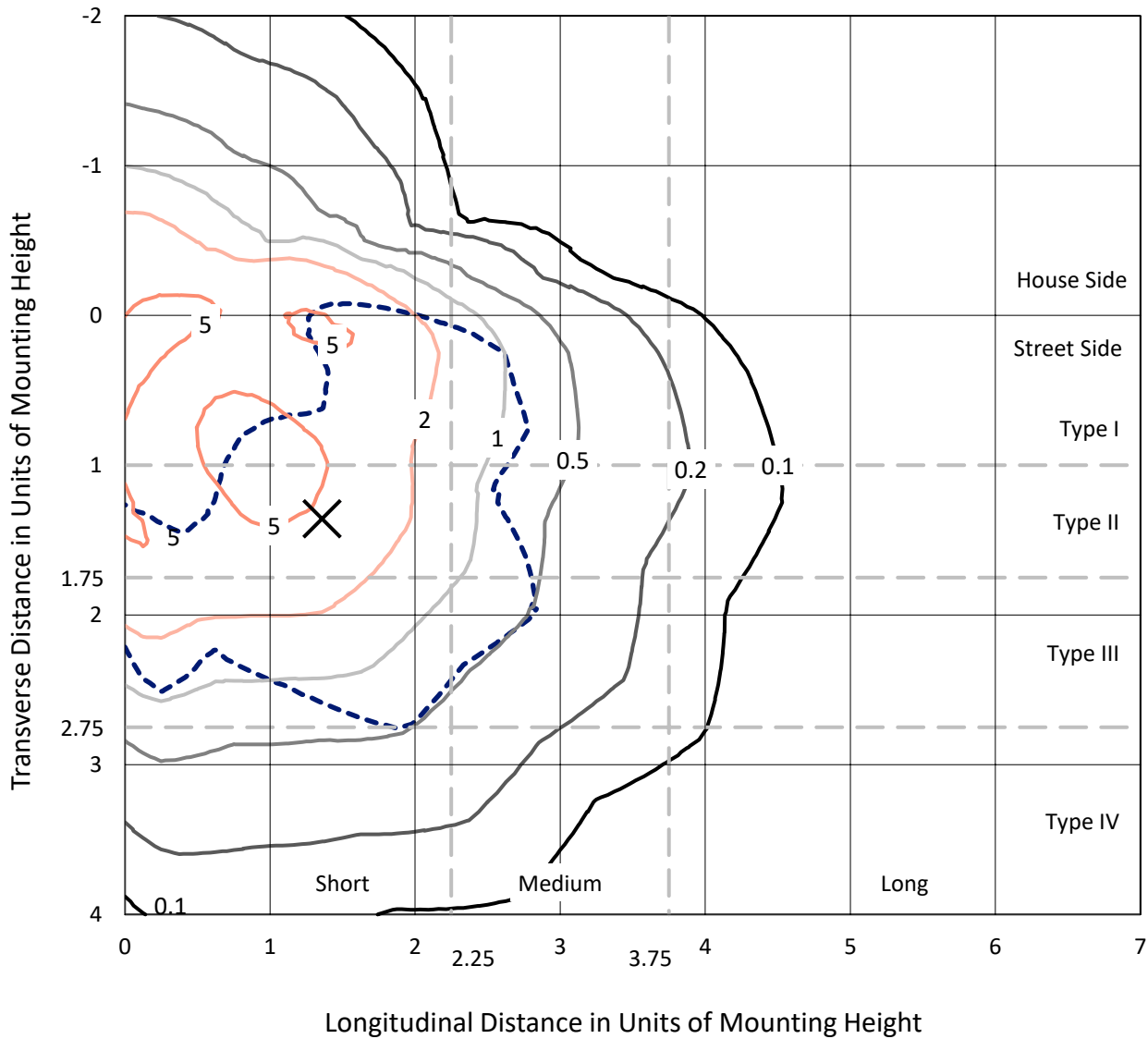
Input Watts (W): 323.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

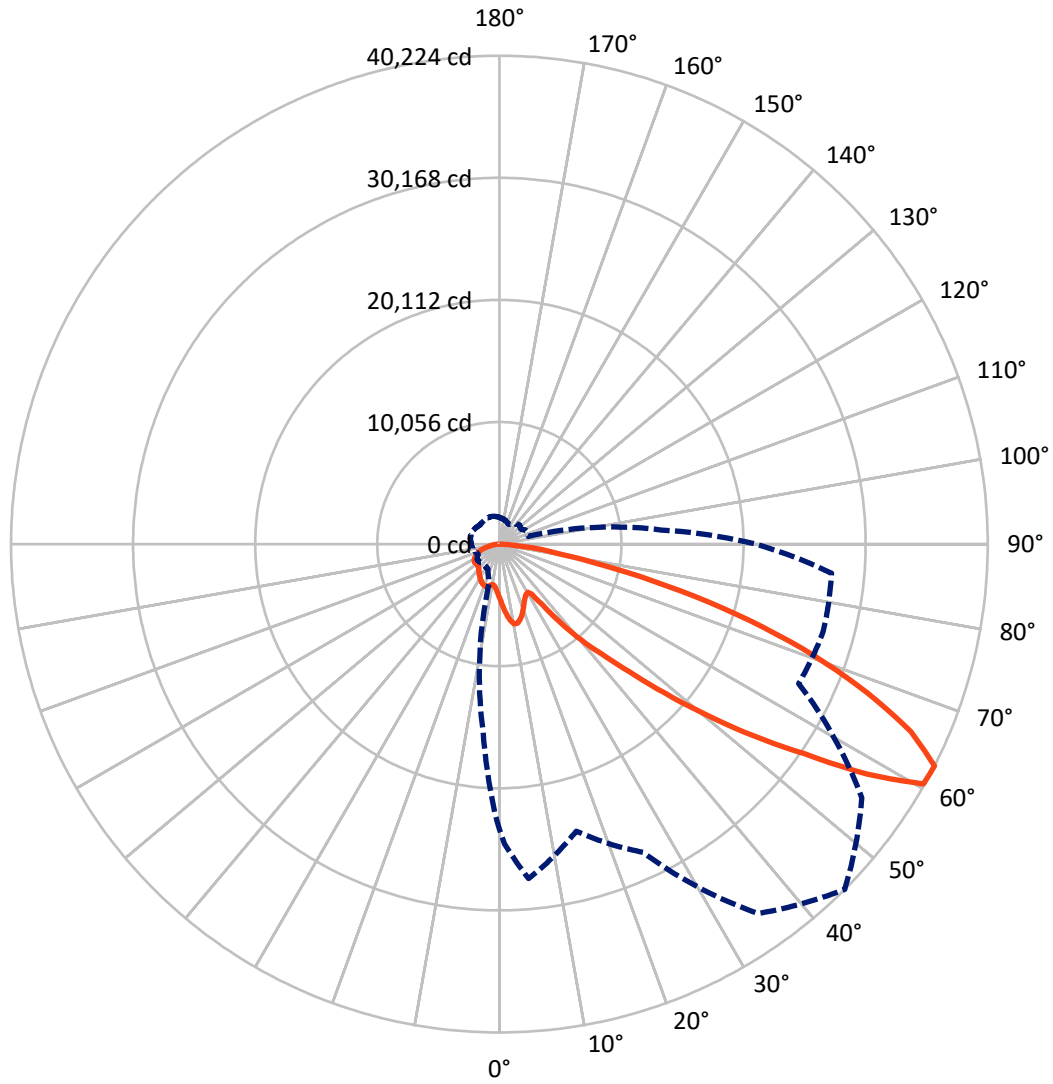
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.1 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8034.3	0.0	8034.3
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	25635.9	0.0	25635.9
	% Fixture	76.1	0.0	76.1
Total	Lumens	33670.2	0.0	33670.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	436.4	1.3
10°-20°	1368.1	4.1
20°-30°	2125.0	6.3
30°-40°	2885.2	8.6
40°-50°	4572.8	13.6
50°-60°	8066.4	24.0
60°-70°	8975.1	26.7
70°-80°	4551.8	13.5
80°-90°	689.2	2.0
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°	33670.2	100.0
0°-180°	33670.2	100.0

Coefficient of Utilization



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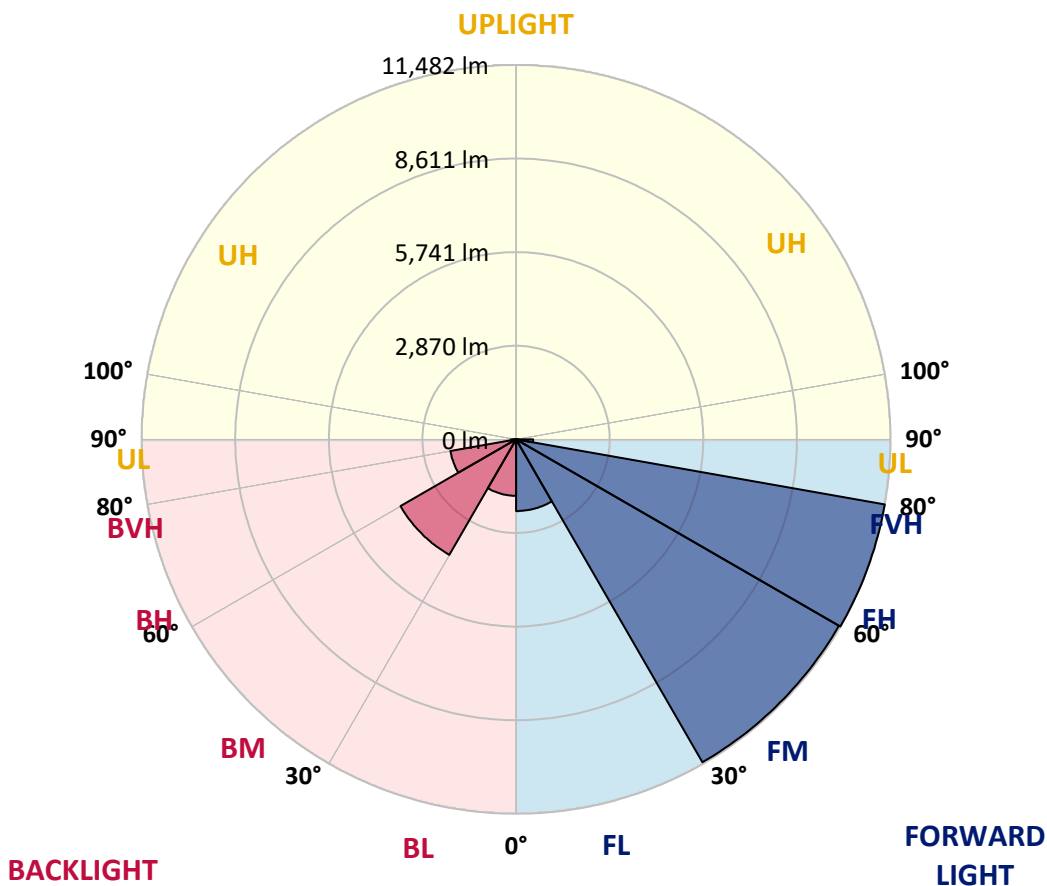
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2198.4	6.5			
FM (30°-60°)	11432.5	34.0			
FH (60°-80°)	11481.8	34.1			G4/12000
FVH (80°-90°)	523.2	1.6			G4/750
BL (0°-30°)	1731.2	5.1	B3/2500		
BM (30°-60°)	4091.9	12.2	B3/5000		
BH (60°-80°)	2045.1	6.1	B3/2500		G3/2500
BVH (80°-90°)	166.1	0.5			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7
2.5°	4802.7	4800.1	4848.6	4922.5	4991.3	5021.9	5072.9	5067.8	5027.0	4973.5	4955.6
5°	5179.9	5190.1	5274.3	5437.4	5618.4	5694.9	5728.0	5715.3	5641.3	5547.0	5381.3
7.5°	5521.5	5539.4	5669.4	5914.1	6138.4	6240.4	6322.0	6306.7	6199.6	6023.7	5779.0
10°	5771.4	5791.8	5947.3	6235.3	6485.1	6574.4	6678.9	6684.0	6589.6	6352.6	6102.8
12.5°	6021.2	6041.6	6186.9	6449.4	6612.6	6615.1	6676.3	6709.5	6714.6	6604.9	6355.1
15°	6281.2	6299.0	6431.6	6579.4	6571.8	6429.0	6429.0	6492.8	6633.0	6712.0	6538.7
17.5°	6503.0	6525.9	6627.9	6579.4	6352.6	6095.1	6064.5	6146.1	6390.8	6694.2	6676.3
20°	6686.5	6704.4	6760.4	6439.2	6026.3	5689.8	5631.2	5725.5	6056.9	6584.5	6780.8
22.5°	6862.4	6872.6	6842.0	6255.7	5674.5	5289.6	5218.2	5317.6	5674.5	6390.8	6870.1
25°	7071.4	7061.2	6915.9	6064.5	5353.3	4973.5	4899.5	5011.7	5383.9	6133.3	6966.9
27.5°	7313.6	7275.4	6979.7	5858.0	5106.0	4738.9	4688.0	4807.8	5154.5	5896.3	7043.4
30°	7520.1	7446.2	6989.9	5674.5	4978.6	4639.5	4608.9	4721.1	5042.3	5735.7	7140.3
32.5°	7749.5	7647.6	7048.5	5626.1	5049.9	4879.1	4919.9	4927.6	5072.9	5689.8	7285.6
35°	8078.4	7945.8	7209.1	5766.3	5784.1	6072.2	6220.0	6021.2	5534.3	5791.8	7560.9
37.5°	8575.5	8407.2	7535.4	6373.0	7300.9	7945.8	8302.7	7848.9	6936.3	6176.7	7976.4
40°	9179.6	8965.5	7953.5	7494.6	8718.2	9750.6	10385.4	9720.0	8379.2	7137.7	8560.2
42.5°	10023.4	9799.1	8764.1	8595.9	10031.0	11568.2	12396.7	11405.1	9651.2	8379.2	9495.7
45°	11494.3	11277.6	10250.3	9699.7	11568.2	13806.4	14968.8	13589.7	10943.7	9625.7	11244.5
47.5°	14211.7	13956.8	12457.9	10923.3	13322.0	16712.5	18338.8	16330.1	12287.1	11053.3	14181.1
50°	17474.7	17229.9	15228.8	12371.2	15259.4	19819.9	22081.0	19549.7	13834.4	12789.3	17691.4
52.5°	21400.4	21354.5	19182.6	14201.5	17275.8	23133.9	26233.7	23116.0	15529.6	15126.9	21668.1
55°	24938.7	25387.3	24204.5	16992.9	19881.1	27296.7	30503.6	27006.1	17829.0	18991.4	26325.4
57.5°	26845.5	28051.2	29868.8	22687.8	23669.2	32272.7	35772.7	31755.2	21780.2	25425.6	30643.8
60°	25586.2	26952.5	30246.1	26975.5	27426.7	36259.6	40121.6	35747.2	25660.1	29891.8	30399.0
62.5°	23490.7	24716.9	27645.9	24472.2	28007.9	37136.5	40223.6	36443.2	27202.4	27625.5	27459.8
65°	21005.3	22241.6	25344.0	21362.2	26159.7	35053.9	37256.4	34396.2	24431.4	24959.1	25020.3
67.5°	17704.1	18846.1	22004.6	18994.0	23845.1	31997.4	32701.0	31479.9	22499.1	23340.3	22460.9
70°	13227.7	14257.6	17046.4	15435.3	20100.3	28015.6	27447.1	27628.1	20329.8	21165.9	18762.0
72.5°	9039.4	9814.4	12205.5	12129.0	15392.0	22427.7	21634.9	23350.5	16980.1	18089.0	14303.5
75°	6322.0	6926.1	8822.7	9582.4	11634.5	16623.2	15407.3	17477.2	13260.9	14843.9	10436.4
77.5°	3879.9	4280.1	5572.5	7099.5	7484.4	11377.0	9569.6	13151.3	9312.2	10826.4	6961.8
80°	1939.9	2133.7	2707.2	4463.6	4963.3	6704.4	5284.5	7634.8	6301.6	6704.4	3851.8
82.5°	586.3	647.5	792.8	1695.2	2572.1	3859.5	3122.8	4435.6	3441.4	3143.1	1516.8
85°	155.5	175.9	219.2	502.2	902.4	1384.2	1055.4	2149.0	1649.3	1159.9	571.0
87.5°	12.7	12.7	10.2	10.2	5.1	0.0	0.0	153.0	308.5	175.9	99.4
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°	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7
2.5°	4866.4	4856.2	4751.7	4675.2	4586.0	4499.3	4410.1	4331.1	4241.8	4152.6	4127.1
5°	5259.0	5187.6	4965.8	4779.7	4596.2	4435.6	4295.4	4150.1	4032.8	3918.1	3874.8
7.5°	5605.7	5480.7	5159.6	4876.6	4621.7	4422.8	4216.4	4004.8	3839.1	3675.9	3635.1
10°	5919.2	5753.5	5348.2	4991.3	4708.3	4481.5	4239.3	3956.3	3716.7	3517.9	3464.3
12.5°	6151.2	5970.2	5511.3	5100.9	4779.7	4524.8	4285.2	4035.4	3783.0	3525.5	3466.9
15°	6334.7	6146.1	5646.4	5185.0	4782.3	4453.4	4221.5	4134.8	4055.8	3803.4	3696.3
17.5°	6482.6	6283.7	5763.7	5236.0	4713.4	4236.7	4035.4	4162.8	4364.2	4206.2	4004.8
20°	6617.7	6416.3	5852.9	5271.7	4560.5	3938.5	3826.3	4096.5	4399.9	4394.8	4213.8
22.5°	6765.5	6569.3	5982.9	5292.1	4346.4	3635.1	3701.4	3999.7	4246.9	4320.9	4208.7
25°	6954.2	6780.8	6163.9	5338.0	4104.2	3426.1	3609.6	3874.8	4081.2	4099.1	4032.8
27.5°	7173.4	7043.4	6434.1	5445.1	3869.7	3319.0	3502.6	3698.9	3887.5	3895.2	3816.1
30°	7413.0	7326.4	6684.0	5534.3	3693.8	3285.9	3364.9	3523.0	3642.8	3663.2	3594.4
32.5°	7718.9	7642.5	6905.7	5475.7	3589.3	3278.3	3237.5	3319.0	3418.5	3418.5	3364.9
35°	8139.6	8032.5	7140.3	5251.3	3461.8	3247.7	3102.4	3125.3	3168.6	3176.3	3145.7
37.5°	8736.1	8560.2	7377.3	4807.8	3252.8	3138.0	2946.9	2918.8	2934.1	2954.5	2946.9
40°	9475.3	9187.3	7724.0	4275.0	3002.9	2926.5	2786.3	2732.7	2720.0	2760.8	2776.1
42.5°	10405.8	9964.8	8096.2	3777.9	2776.1	2684.3	2597.6	2551.7	2531.3	2600.2	2641.0
45°	11892.0	11165.4	8453.1	3285.9	2648.6	2477.8	2419.2	2386.0	2396.2	2477.8	2528.8
47.5°	14459.0	12998.3	8792.1	2974.9	2638.4	2330.0	2258.6	2266.2	2294.3	2380.9	2442.1
50°	17706.6	15453.2	9019.0	2844.9	2669.0	2240.7	2146.4	2187.2	2230.5	2314.7	2386.0
52.5°	21012.9	17739.8	8748.8	2773.5	2666.4	2243.3	2041.9	2164.3	2184.7	2268.8	2345.3
55°	23286.8	17994.7	7558.3	2663.9	2625.7	2345.3	1960.3	2154.1	2166.8	2243.3	2312.1
57.5°	24153.5	17122.9	5763.7	2694.5	2503.3	2424.3	1924.6	2082.7	2174.5	2240.7	2312.1
60°	23105.8	15478.7	3502.6	2773.5	2307.0	2419.2	1947.6	1952.7	2110.7	2222.9	2294.3
62.5°	21130.2	13367.9	2460.0	2549.2	2164.3	2284.1	2001.1	1799.7	1998.6	2133.7	2197.4
65°	18866.5	10885.0	1876.2	2194.8	2095.4	2075.0	2019.0	1664.6	1845.6	1978.2	2034.3
67.5°	16508.5	8460.7	1524.4	1636.6	1894.0	1876.2	1845.6	1544.8	1664.6	1758.9	1822.7
70°	13538.7	5919.2	1287.3	1228.7	1623.8	1682.5	1613.6	1394.4	1432.6	1529.5	1580.5
72.5°	9903.6	3688.7	1057.9	1014.6	1305.2	1470.9	1435.2	1228.7	1246.6	1338.3	1379.1
75°	7122.4	2110.7	848.9	836.1	996.7	1259.3	1187.9	1057.9	1078.3	1147.1	1175.2
77.5°	4527.4	1175.2	655.1	673.0	713.8	940.6	1014.6	905.0	905.0	945.7	968.7
80°	2424.3	673.0	479.2	486.9	499.6	718.9	800.4	701.0	701.0	673.0	701.0
82.5°	989.1	387.5	328.8	305.9	333.9	492.0	560.8	446.1	466.5	420.6	430.8
85°	326.3	193.7	163.1	160.6	158.0	216.7	270.2	221.8	265.1	168.2	175.9
87.5°	43.3	35.7	20.4	15.3	17.8	7.6	15.3	17.8	17.8	12.7	12.7
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°	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7
2.5°	4109.3	4088.9	4015.0	4032.8	4020.1	3999.7	4020.1	3981.8	4012.4	4022.6	4086.3
5°	3841.6	3793.2	3721.8	3686.1	3678.5	3658.1	3660.6	3642.8	3647.9	3691.2	3762.6
7.5°	3602.0	3556.1	3500.0	3474.5	3451.6	3428.7	3426.1	3423.6	3444.0	3482.2	3551.0
10°	3428.7	3403.2	3380.2	3390.4	3380.2	3370.0	3352.2	3352.2	3385.3	3454.1	3538.3
12.5°	3428.7	3423.6	3428.7	3459.2	3456.7	3459.2	3436.3	3449.0	3540.8	3658.1	3777.9
15°	3612.2	3571.4	3571.4	3586.7	3581.6	3581.6	3581.6	3635.1	3844.2	4025.2	4152.6
17.5°	3836.5	3716.7	3665.7	3658.1	3655.5	3655.5	3665.7	3780.4	4106.7	4297.9	4371.9
20°	3992.0	3765.1	3681.0	3647.9	3650.4	3655.5	3686.1	3844.2	4203.6	4300.5	4282.6
22.5°	4020.1	3726.9	3624.9	3576.5	3584.2	3589.3	3635.1	3803.4	4071.1	4086.3	4050.7
25°	3890.1	3619.8	3510.2	3472.0	3482.2	3479.6	3520.4	3642.8	3834.0	3828.9	3808.5
27.5°	3696.3	3449.0	3367.5	3342.0	3359.8	3339.4	3352.2	3446.5	3594.4	3589.3	3581.6
30°	3497.5	3283.4	3209.4	3196.7	3219.6	3189.0	3191.6	3270.6	3372.6	3367.5	3364.9
32.5°	3298.6	3117.7	3051.4	3051.4	3074.3	3041.2	3046.3	3115.1	3183.9	3163.5	3163.5
35°	3110.0	2982.5	2929.0	2918.8	2936.7	2913.7	2923.9	2987.6	3013.1	2985.1	2967.3
37.5°	2944.3	2888.2	2834.7	2799.0	2801.6	2804.1	2834.7	2883.1	2867.8	2827.0	2804.1
40°	2791.4	2791.4	2740.4	2674.1	2666.4	2684.3	2735.3	2788.8	2745.5	2699.6	2671.5
42.5°	2681.7	2704.7	2656.3	2590.0	2574.7	2605.3	2661.4	2699.6	2648.6	2597.6	2559.4
45°	2579.8	2635.9	2602.7	2528.8	2508.4	2544.1	2615.5	2630.8	2561.9	2513.5	2485.5
47.5°	2508.4	2584.9	2561.9	2490.6	2460.0	2510.9	2584.9	2582.3	2495.7	2444.7	2421.7
50°	2457.4	2554.3	2551.7	2490.6	2457.4	2521.1	2587.4	2554.3	2460.0	2406.4	2383.5
52.5°	2416.6	2551.7	2569.6	2533.9	2510.9	2567.0	2607.8	2544.1	2434.5	2378.4	2360.5
55°	2398.8	2561.9	2574.7	2541.5	2521.1	2572.1	2607.8	2564.5	2434.5	2383.5	2368.2
57.5°	2403.9	2549.2	2551.7	2505.8	2470.2	2533.9	2590.0	2577.2	2462.5	2403.9	2386.0
60°	2373.3	2480.4	2485.5	2414.1	2373.3	2449.8	2549.2	2541.5	2449.8	2388.6	2355.4
62.5°	2271.3	2365.6	2368.2	2301.9	2243.3	2352.9	2462.5	2460.0	2375.8	2314.7	2276.4
65°	2100.5	2199.9	2225.4	2161.7	2115.8	2233.1	2347.8	2342.7	2258.6	2202.5	2164.3
67.5°	1888.9	1996.0	2044.4	2001.1	1983.3	2090.3	2197.4	2194.8	2126.0	2072.5	2039.3
70°	1631.5	1720.7	1802.3	1802.3	1789.5	1911.9	2026.6	2016.4	1952.7	1911.9	1886.4
72.5°	1417.3	1486.2	1511.7	1537.2	1575.4	1702.9	1799.7	1807.4	1761.5	1741.1	1761.5
75°	1205.8	1249.1	1272.0	1251.7	1317.9	1450.5	1577.9	1590.7	1542.3	1509.1	1516.8
77.5°	991.6	1040.1	1063.0	1017.1	1012.0	1180.3	1335.8	1363.8	1323.0	1272.0	1287.3
80°	716.3	780.1	818.3	787.7	777.5	851.4	1065.6	1096.1	1057.9	1017.1	1040.1
82.5°	438.5	474.1	484.3	514.9	578.7	609.3	685.7	787.7	759.7	724.0	787.7
85°	173.3	206.5	229.4	260.0	303.4	359.4	423.2	504.7	458.9	443.6	522.6
87.5°	10.2	2.5	0.0	5.1	43.3	84.1	181.0	249.8	209.0	224.3	270.2
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: P643436
 CATALOG NUMBER: GWS-SA6E-830-U-SLR-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7	4468.7
2.5°	4137.3	4203.6	4292.8	4366.8	4461.1	4550.3	4642.1	4733.8	4782.3	4802.7
5°	3844.2	3966.5	4109.3	4267.3	4450.9	4644.6	4840.9	5042.3	5169.7	5179.9
7.5°	3668.3	3844.2	4040.5	4239.3	4466.2	4733.8	5044.8	5355.8	5485.8	5521.5
10°	3724.4	3920.6	4076.1	4262.2	4512.1	4846.0	5213.1	5577.6	5728.0	5771.4
12.5°	3948.7	3986.9	4035.4	4206.2	4512.1	4942.9	5386.4	5819.8	5980.4	6021.2
15°	4134.8	3951.2	3864.6	4045.6	4450.9	5027.0	5570.0	6049.2	6243.0	6281.2
17.5°	4150.1	3834.0	3645.3	3808.5	4343.8	5085.6	5745.9	6304.1	6467.3	6503.0
20°	3994.6	3709.1	3464.3	3563.8	4198.5	5111.1	5873.3	6490.2	6650.8	6686.5
22.5°	3818.7	3607.1	3342.0	3336.9	4022.6	5139.2	6026.3	6666.1	6839.5	6862.4
25°	3653.0	3466.9	3242.6	3171.2	3818.7	5192.7	6232.8	6931.2	7063.8	7071.4
27.5°	3459.2	3316.5	3163.5	3094.7	3640.2	5294.7	6538.7	7247.3	7326.4	7313.6
30°	3283.4	3176.3	3107.5	3087.1	3528.1	5371.1	6829.3	7558.3	7563.4	7520.1
32.5°	3097.3	3056.5	3056.5	3122.8	3436.3	5353.3	7066.3	7861.7	7813.3	7749.5
35°	2931.6	2939.2	2992.7	3148.2	3283.4	5174.8	7293.2	8241.5	8170.1	8078.4
37.5°	2773.5	2832.1	2908.6	3059.0	3082.0	4909.7	7558.3	8779.4	8690.2	8575.5
40°	2638.4	2727.6	2816.9	2890.8	2867.8	4532.5	7928.0	9411.6	9312.2	9179.6
42.5°	2531.3	2618.0	2717.4	2725.1	2732.7	4139.9	8320.5	10186.5	10168.7	10023.4
45°	2462.5	2518.6	2612.9	2600.2	2725.1	3706.5	8682.5	11369.4	11603.9	11494.3
47.5°	2416.6	2460.0	2470.2	2523.7	2791.4	3319.0	9149.0	13684.0	14336.6	14211.7
50°	2391.1	2434.5	2319.8	2528.8	2801.6	3069.2	9794.0	16590.1	17640.4	17474.7
52.5°	2388.6	2378.4	2205.0	2582.3	2745.5	2916.3	10130.5	18711.0	21041.0	21400.4
55°	2393.7	2266.2	2146.4	2597.6	2633.3	2860.2	9003.7	19730.7	24179.0	24938.7
57.5°	2347.8	2143.9	2179.6	2536.4	2421.7	3010.6	6655.9	19366.2	25433.2	26845.5
60°	2261.1	2026.6	2240.7	2370.7	2205.0	2753.1	4583.4	17739.8	24133.1	25586.2
62.5°	2136.2	1945.0	2233.1	2156.6	2126.0	2253.5	3150.8	15463.4	22070.9	23490.7
65°	1996.0	1878.8	2113.3	1950.1	1968.0	1733.4	2228.0	12893.8	19608.3	21005.3
67.5°	1845.6	1838.0	1937.4	1736.0	1662.1	1374.0	1623.8	10334.4	16444.8	17704.1
70°	1674.8	1730.9	1761.5	1542.3	1348.5	1078.3	1205.8	7226.9	12131.6	13227.7
72.5°	1504.0	1509.1	1552.5	1340.9	1009.5	864.2	905.0	4377.0	8241.5	9039.4
75°	1330.7	1282.2	1323.0	1091.1	752.0	708.7	698.5	2704.7	5692.3	6322.0
77.5°	1144.6	1091.1	1037.5	820.8	604.2	548.1	535.3	1516.8	3492.4	3879.9
80°	930.5	859.1	775.0	601.6	441.0	392.6	390.0	739.3	1741.1	1939.9
82.5°	724.0	588.9	565.9	374.7	272.8	239.6	254.9	283.0	525.1	586.3
85°	507.3	428.3	300.8	150.4	122.4	99.4	96.9	84.1	140.2	155.5
87.5°	283.0	186.1	96.9	17.8	20.4	22.9	17.8	12.7	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u': 0.2476
 CIE v': 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 Rf: 81.5
 Rg: 99.2

CRI (Ra):	81.0		
R1:	79.6	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

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

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

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

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

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

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

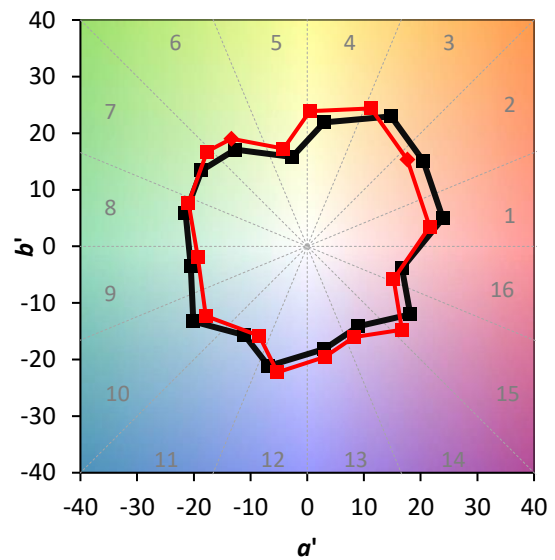
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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

Summary

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



Color Vector Graphics



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

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)