

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: P641456

Luminaire Tested: GWS-SA5F-830-U-SLR-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641456
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-SA5F-830-U-SLR-W
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31394 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 310.3
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



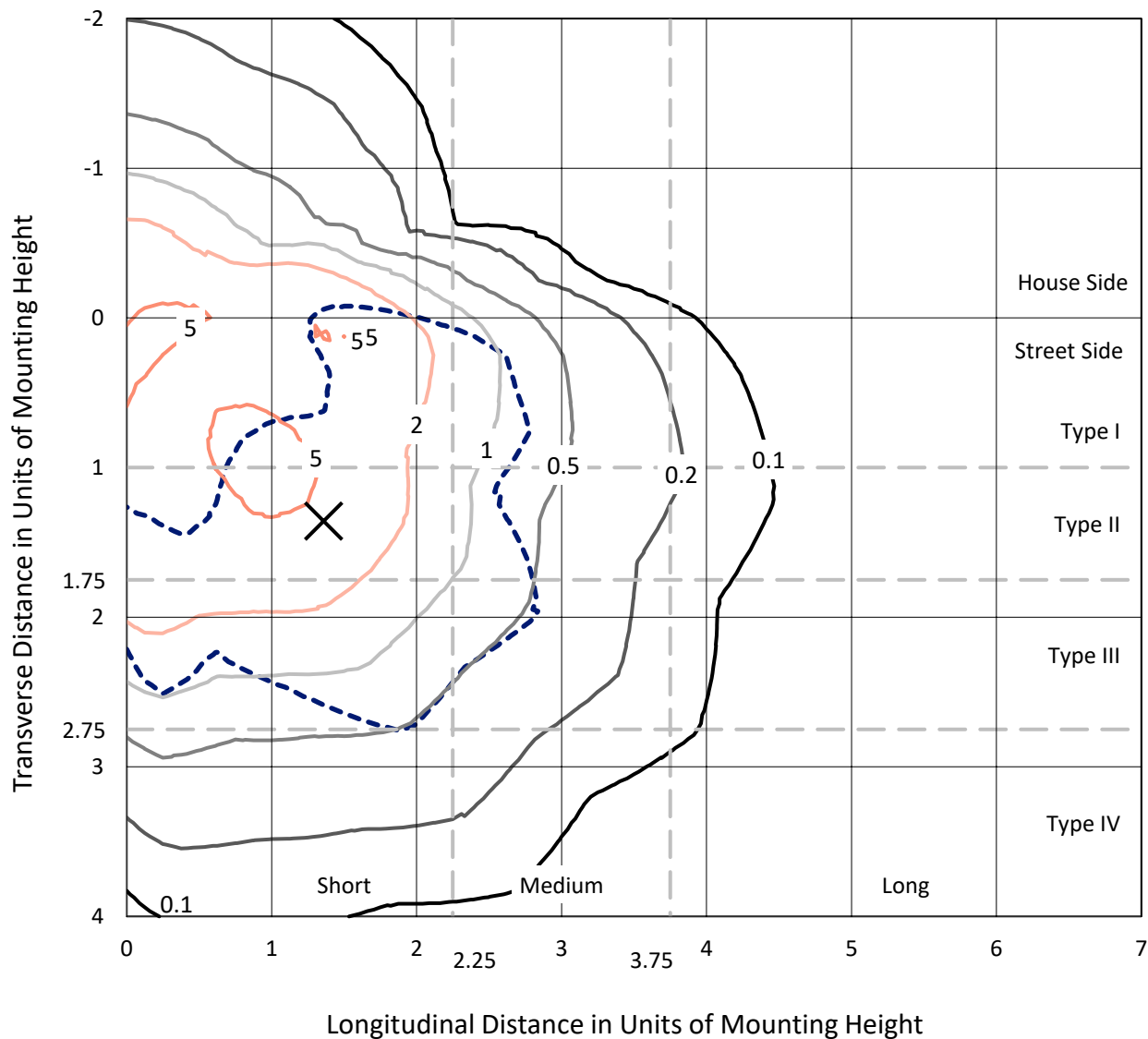
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

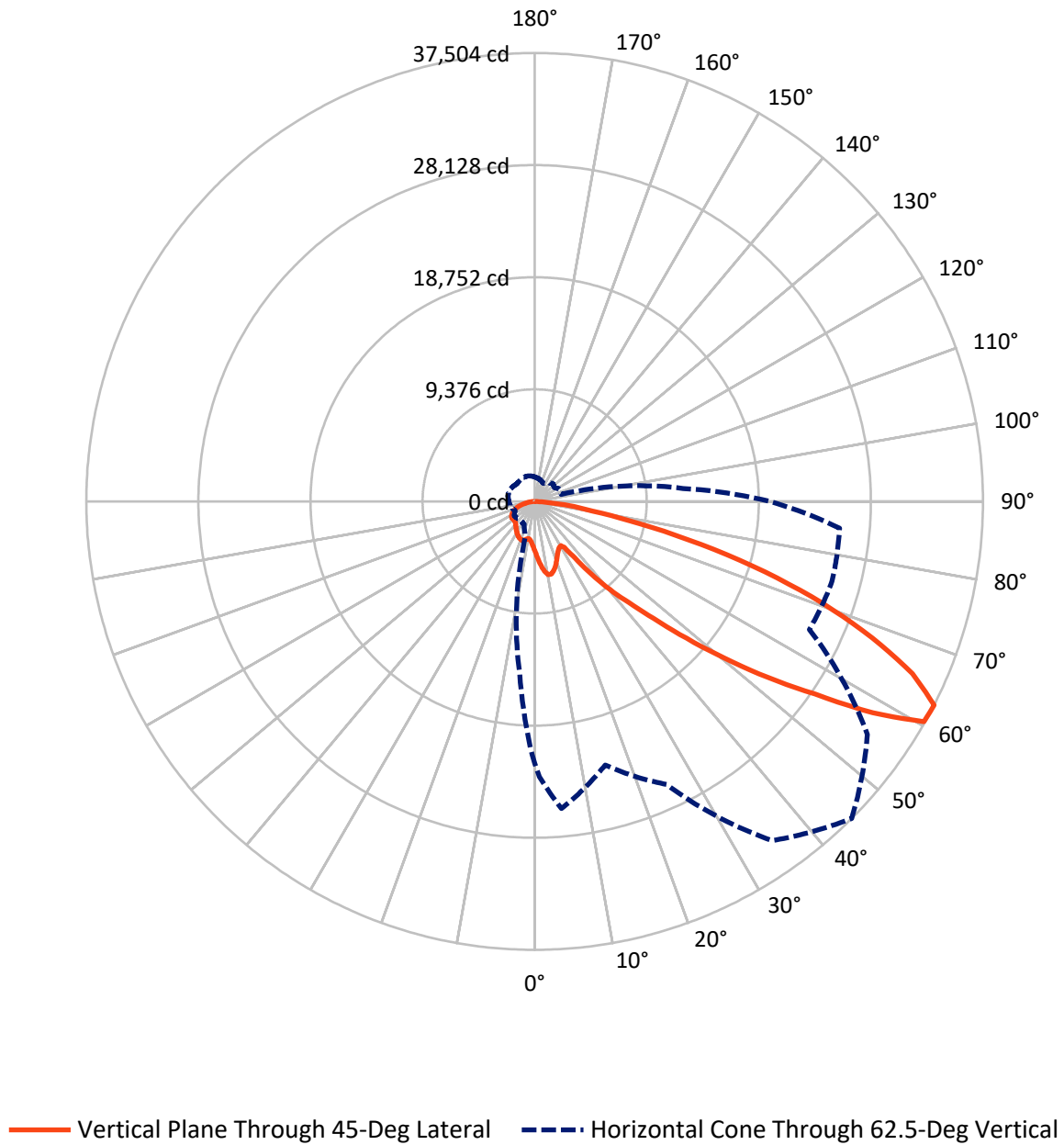


Based on 30 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7491.2	0.0	7491.2
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	23902.8	0.0	23902.8
	% Fixture	76.1	0.0	76.1
Total	Lumens	31394.0	0.0	31394.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.9	1.3
10°-20°	1275.6	4.1
20°-30°	1981.4	6.3
30°-40°	2690.2	8.6
40°-50°	4263.7	13.6
50°-60°	7521.1	24.0
60°-70°	8368.4	26.7
70°-80°	4244.1	13.5
80°-90°	642.6	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°	31394.0	100.0
0°-180°	31394.0	100.0

Coefficient of Utilization



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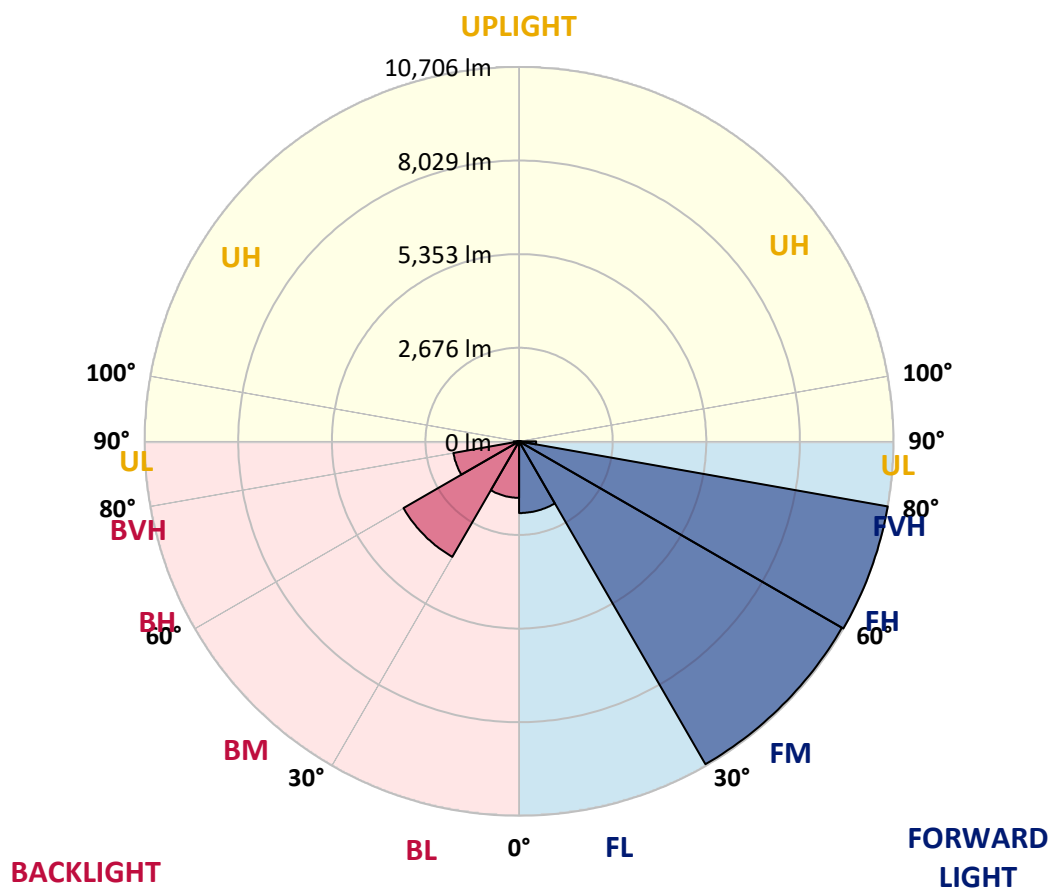
CATALOG NUMBER: GWS-SA5F-830-U-SLR-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2049.8	6.5			
FM	(30°-60°)	10659.6	34.0			
FH	(60°-80°)	10705.6	34.1			G4/12000
FVH	(80°-90°)	487.8	1.6			G3/500
BL	(0°-30°)	1614.2	5.1	B3/2500		
BM	(30°-60°)	3815.3	12.2	B3/5000		
BH	(60°-80°)	1906.9	6.1	B3/2500		G3/2500
BVH	(80°-90°)	154.9	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°	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6
2.5°	4478.0	4475.6	4520.8	4589.7	4653.9	4682.4	4729.9	4725.2	4687.2	4637.2	4620.6
5°	4829.8	4839.3	4917.7	5069.8	5238.6	5309.9	5340.8	5328.9	5260.0	5172.0	5017.5
7.5°	5148.3	5164.9	5286.1	5514.3	5723.5	5818.5	5894.6	5880.3	5780.5	5616.5	5388.3
10°	5381.2	5400.2	5545.2	5813.8	6046.7	6129.9	6227.4	6232.1	6144.2	5923.1	5690.2
12.5°	5614.1	5633.1	5768.6	6013.4	6165.6	6167.9	6225.0	6255.9	6260.6	6158.4	5925.5
15°	5856.6	5873.2	5996.8	6134.7	6127.5	5994.4	5994.4	6053.8	6184.6	6258.3	6096.6
17.5°	6063.4	6084.7	6179.8	6134.7	5923.1	5683.1	5654.5	5730.6	5958.8	6241.6	6225.0
20°	6234.5	6251.1	6303.4	6003.9	5618.9	5305.1	5250.5	5338.4	5647.4	6139.4	6322.4
22.5°	6398.5	6408.0	6379.5	5832.8	5290.9	4932.0	4865.4	4958.1	5290.9	5958.8	6405.6
25°	6593.4	6583.9	6448.4	5654.5	4991.4	4637.2	4568.3	4672.9	5019.9	5718.7	6495.9
27.5°	6819.2	6783.5	6507.8	5462.0	4760.8	4418.6	4371.0	4482.7	4806.0	5497.7	6567.2
30°	7011.7	6942.8	6517.3	5290.9	4642.0	4325.9	4297.4	4401.9	4701.4	5347.9	6657.6
32.5°	7225.6	7130.6	6572.0	5245.7	4708.5	4549.3	4587.3	4594.5	4729.9	5305.1	6793.0
35°	7532.3	7408.7	6721.7	5376.4	5393.1	5661.7	5799.5	5614.1	5160.1	5400.2	7049.7
37.5°	7995.7	7838.9	7026.0	5942.1	6807.3	7408.7	7741.4	7318.3	6467.4	5759.1	7437.2
40°	8559.1	8359.4	7415.8	6988.0	8128.8	9091.5	9683.3	9062.9	7812.7	6655.2	7981.5
42.5°	9345.8	9136.6	8171.6	8014.8	9352.9	10786.2	11558.6	10634.0	8998.8	7812.7	8853.8
45°	10717.2	10515.2	9557.3	9043.9	10786.2	12873.0	13956.9	12671.0	10203.8	8975.0	10484.3
47.5°	13251.0	13013.3	11615.7	10184.8	12421.4	15582.7	17099.1	15226.1	11456.4	10306.0	13222.4
50°	16293.3	16065.2	14199.3	11534.9	14227.8	18480.0	20588.3	18228.1	12899.2	11924.7	16495.4
52.5°	19953.7	19910.9	17885.8	13241.5	16107.9	21569.9	24460.2	21553.3	14479.8	14104.3	20203.3
55°	23252.8	23671.1	22568.2	15844.1	18537.1	25451.4	28441.4	25180.4	16623.7	17707.6	24545.8
57.5°	25030.6	26154.9	27849.6	21154.0	22069.1	30091.0	33354.4	29608.5	20307.8	23706.7	28572.2
60°	23856.5	25130.5	28201.4	25151.9	25572.6	33808.4	37409.3	33330.6	23925.4	27871.0	28344.0
62.5°	21902.7	23046.0	25777.0	22817.8	26114.5	34626.0	37504.4	33979.5	25363.4	25758.0	25603.5
65°	19585.3	20738.1	23630.7	19918.0	24391.3	32684.1	34737.7	32070.9	22779.8	23271.8	23328.8
67.5°	16507.3	17572.1	20517.0	17709.9	22233.1	29834.3	30490.3	29351.8	20978.1	21762.5	20942.5
70°	12333.5	13293.7	15894.0	14391.9	18741.5	26121.6	25591.6	25760.3	18955.4	19735.0	17493.6
72.5°	8428.3	9150.9	11380.4	11309.1	14351.4	20911.6	20172.4	21772.0	15832.2	16866.2	13336.5
75°	5894.6	6457.9	8226.3	8934.6	10848.0	15499.5	14365.7	16295.7	12364.4	13840.4	9730.8
77.5°	3617.6	3990.7	5195.8	6619.5	6978.4	10607.9	8922.7	12262.2	8682.6	10094.5	6491.2
80°	1808.8	1989.4	2524.2	4161.9	4627.7	6251.1	4927.2	7118.7	5875.6	6251.1	3591.4
82.5°	546.7	603.7	739.2	1580.6	2398.2	3598.6	2911.6	4135.7	3208.8	2930.7	1414.2
85°	145.0	164.0	204.4	468.2	841.4	1290.6	984.0	2003.7	1537.8	1081.5	532.4
87.5°	11.9	11.9	9.5	9.5	4.8	0.0	0.0	142.6	287.6	164.0	92.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6
2.5°	4537.4	4527.9	4430.5	4359.2	4276.0	4195.1	4112.0	4038.3	3955.1	3871.9	3848.1
5°	4903.4	4836.9	4630.1	4456.6	4285.5	4135.7	4005.0	3869.5	3760.2	3653.2	3612.8
7.5°	5226.7	5110.2	4810.8	4546.9	4309.2	4123.8	3931.3	3734.0	3579.5	3427.4	3389.4
10°	5519.1	5364.6	4986.6	4653.9	4390.0	4178.5	3952.7	3688.9	3465.5	3280.1	3230.1
12.5°	5735.3	5566.6	5138.8	4756.1	4456.6	4218.9	3995.5	3762.6	3527.3	3287.2	3232.5
15°	5906.5	5730.6	5264.7	4834.5	4459.0	4152.4	3936.1	3855.3	3781.6	3546.3	3446.4
17.5°	6044.3	5858.9	5374.1	4882.1	4394.8	3950.3	3762.6	3881.4	4069.2	3921.8	3734.0
20°	6170.3	5982.5	5457.3	4915.3	4252.2	3672.2	3567.7	3819.6	4102.4	4097.7	3928.9
22.5°	6308.2	6125.2	5578.5	4934.3	4052.5	3389.4	3451.2	3729.3	3959.8	4028.8	3924.2
25°	6484.1	6322.4	5747.2	4977.1	3826.7	3194.5	3365.6	3612.8	3805.3	3822.0	3760.2
27.5°	6688.5	6567.2	5999.2	5077.0	3608.1	3094.7	3265.8	3448.8	3624.7	3631.8	3558.2
30°	6911.9	6831.1	6232.1	5160.1	3444.1	3063.8	3137.4	3284.8	3396.5	3415.5	3351.4
32.5°	7197.1	7125.8	6438.9	5105.5	3346.6	3056.6	3018.6	3094.7	3187.4	3187.4	3137.4
35°	7589.3	7489.5	6657.6	4896.3	3227.8	3028.1	2892.6	2914.0	2954.4	2961.6	2933.0
37.5°	8145.5	7981.5	6878.6	4482.7	3032.9	2925.9	2747.6	2721.5	2735.8	2754.8	2747.6
40°	8834.8	8566.2	7201.9	3986.0	2799.9	2728.6	2597.9	2548.0	2536.1	2574.1	2588.4
42.5°	9702.3	9291.1	7548.9	3522.5	2588.4	2502.8	2422.0	2379.2	2360.2	2424.4	2462.4
45°	11088.0	10410.6	7881.6	3063.8	2469.6	2310.3	2255.6	2224.7	2234.2	2310.3	2357.8
47.5°	13481.5	12119.6	8197.8	2773.8	2460.0	2172.4	2105.9	2113.0	2139.2	2220.0	2277.0
50°	16509.6	14408.5	8409.3	2652.6	2488.6	2089.3	2001.3	2039.3	2079.7	2158.2	2224.7
52.5°	19592.4	16540.5	8157.4	2586.0	2486.2	2091.6	1903.9	2017.9	2037.0	2115.4	2186.7
55°	21712.6	16778.2	7047.4	2483.8	2448.2	2186.7	1827.8	2008.4	2020.3	2091.6	2155.8
57.5°	22520.7	15965.3	5374.1	2512.3	2334.1	2260.4	1794.5	1941.9	2027.5	2089.3	2155.8
60°	21543.8	14432.3	3265.8	2586.0	2151.1	2255.6	1815.9	1820.7	1968.0	2072.6	2139.2
62.5°	19701.7	12464.2	2293.7	2376.9	2017.9	2129.7	1865.8	1678.1	1863.5	1989.4	2048.8
65°	17591.1	10149.2	1749.4	2046.5	1953.8	1934.8	1882.5	1552.1	1720.8	1844.4	1896.7
67.5°	15392.5	7888.8	1421.4	1525.9	1766.0	1749.4	1720.8	1440.4	1552.1	1640.0	1699.5
70°	12623.5	5519.1	1200.3	1145.6	1514.1	1568.7	1504.5	1300.1	1335.8	1426.1	1473.6
72.5°	9234.1	3439.3	986.4	946.0	1216.9	1371.4	1338.2	1145.6	1162.3	1247.8	1285.9
75°	6640.9	1968.0	791.5	779.6	929.3	1174.2	1107.6	986.4	1005.4	1069.6	1095.7
77.5°	4221.3	1095.7	610.9	627.5	665.5	877.1	946.0	843.8	843.8	881.8	903.2
80°	2260.4	627.5	446.8	454.0	465.9	670.3	746.3	653.6	653.6	627.5	653.6
82.5°	922.2	361.3	306.6	285.2	311.4	458.7	522.9	415.9	435.0	392.2	401.7
85°	304.2	180.6	152.1	149.7	147.4	202.0	251.9	206.8	247.2	156.9	164.0
87.5°	40.4	33.3	19.0	14.3	16.6	7.1	14.3	16.6	16.6	11.9	11.9
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°	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6
2.5°	3831.5	3812.5	3743.5	3760.2	3748.3	3729.3	3748.3	3712.6	3741.2	3750.7	3810.1
5°	3581.9	3536.8	3470.2	3436.9	3429.8	3410.8	3413.2	3396.5	3401.3	3441.7	3508.2
7.5°	3358.5	3315.7	3263.4	3239.7	3218.3	3196.9	3194.5	3192.1	3211.1	3246.8	3311.0
10°	3196.9	3173.1	3151.7	3161.2	3151.7	3142.2	3125.6	3125.6	3156.5	3220.6	3299.1
12.5°	3196.9	3192.1	3196.9	3225.4	3223.0	3225.4	3204.0	3215.9	3301.5	3410.8	3522.5
15°	3368.0	3330.0	3330.0	3344.2	3339.5	3339.5	3339.5	3389.4	3584.3	3753.1	3871.9
17.5°	3577.2	3465.5	3417.9	3410.8	3408.4	3408.4	3417.9	3524.9	3829.1	4007.4	4076.3
20°	3722.2	3510.6	3432.2	3401.3	3403.7	3408.4	3436.9	3584.3	3919.4	4009.8	3993.1
22.5°	3748.3	3475.0	3379.9	3334.7	3341.9	3346.6	3389.4	3546.3	3795.8	3810.1	3776.8
25°	3627.1	3375.1	3272.9	3237.3	3246.8	3244.4	3282.4	3396.5	3574.8	3570.0	3551.0
27.5°	3446.4	3215.9	3139.8	3116.1	3132.7	3113.7	3125.6	3213.5	3351.4	3346.6	3339.5
30°	3261.0	3061.4	2992.5	2980.6	3002.0	2973.4	2975.8	3049.5	3144.6	3139.8	3137.4
32.5°	3075.6	2906.9	2845.1	2845.1	2866.5	2835.6	2840.3	2904.5	2968.7	2949.7	2949.7
35°	2899.8	2780.9	2731.0	2721.5	2738.1	2716.7	2726.3	2785.7	2809.4	2783.3	2766.7
37.5°	2745.3	2693.0	2643.1	2609.8	2612.2	2614.5	2643.1	2688.2	2674.0	2635.9	2614.5
40°	2602.7	2602.7	2555.1	2493.3	2486.2	2502.8	2550.4	2600.3	2559.9	2517.1	2490.9
42.5°	2500.5	2521.8	2476.7	2414.9	2400.6	2429.1	2481.4	2517.1	2469.6	2422.0	2386.4
45°	2405.4	2457.7	2426.8	2357.8	2338.8	2372.1	2438.7	2452.9	2388.7	2343.6	2317.4
47.5°	2338.8	2410.1	2388.7	2322.2	2293.7	2341.2	2410.1	2407.8	2326.9	2279.4	2258.0
50°	2291.3	2381.6	2379.2	2322.2	2291.3	2350.7	2412.5	2381.6	2293.7	2243.8	2222.4
52.5°	2253.3	2379.2	2395.9	2362.6	2341.2	2393.5	2431.5	2372.1	2269.9	2217.6	2201.0
55°	2236.6	2388.7	2400.6	2369.7	2350.7	2398.2	2431.5	2391.1	2269.9	2222.4	2208.1
57.5°	2241.4	2376.9	2379.2	2336.4	2303.2	2362.6	2414.9	2403.0	2296.0	2241.4	2224.7
60°	2212.9	2312.7	2317.4	2250.9	2212.9	2284.2	2376.9	2369.7	2284.2	2227.1	2196.2
62.5°	2117.8	2205.7	2208.1	2146.3	2091.6	2193.8	2296.0	2293.7	2215.2	2158.2	2122.5
65°	1958.5	2051.2	2075.0	2015.6	1972.8	2082.1	2189.1	2184.3	2105.9	2053.6	2017.9
67.5°	1761.2	1861.1	1906.2	1865.8	1849.2	1949.0	2048.8	2046.5	1982.3	1932.4	1901.5
70°	1521.2	1604.4	1680.4	1680.4	1668.6	1782.6	1889.6	1880.1	1820.7	1782.6	1758.9
72.5°	1321.5	1385.7	1409.5	1433.2	1468.9	1587.7	1678.1	1685.2	1642.4	1623.4	1642.4
75°	1124.3	1164.7	1186.1	1167.0	1228.8	1352.4	1471.3	1483.2	1438.0	1407.1	1414.2
77.5°	924.6	969.8	991.1	948.4	943.6	1100.5	1245.5	1271.6	1233.6	1186.1	1200.3
80°	667.9	727.3	763.0	734.4	724.9	793.9	993.5	1022.0	986.4	948.4	969.8
82.5°	408.8	442.1	451.6	480.1	539.5	568.1	639.4	734.4	708.3	675.0	734.4
85°	161.6	192.5	213.9	242.4	282.8	335.1	394.6	470.6	427.8	413.6	487.3
87.5°	9.5	2.4	0.0	4.8	40.4	78.4	168.8	232.9	194.9	209.2	251.9
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: P641456

CATALOG NUMBER: GWS-SA5F-830-U-SLR-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6	4166.6
2.5°	3857.6	3919.4	4002.6	4071.6	4159.5	4242.7	4328.3	4413.8	4459.0	4478.0
5°	3584.3	3698.4	3831.5	3978.9	4150.0	4330.6	4513.6	4701.4	4820.3	4829.8
7.5°	3420.3	3584.3	3767.3	3952.7	4164.2	4413.8	4703.8	4993.8	5115.0	5148.3
10°	3472.6	3655.6	3800.6	3974.1	4207.0	4518.4	4860.7	5200.6	5340.8	5381.2
12.5°	3681.7	3717.4	3762.6	3921.8	4207.0	4608.7	5022.3	5426.4	5576.1	5614.1
15°	3855.3	3684.1	3603.3	3772.1	4150.0	4687.2	5193.4	5640.3	5820.9	5856.6
17.5°	3869.5	3574.8	3398.9	3551.0	4050.2	4741.8	5357.4	5878.0	6030.1	6063.4
20°	3724.5	3458.3	3230.1	3322.8	3914.7	4765.6	5476.3	6051.5	6201.2	6234.5
22.5°	3560.5	3363.2	3116.1	3111.3	3750.7	4791.7	5618.9	6215.5	6377.1	6398.5
25°	3406.0	3232.5	3023.4	2956.8	3560.5	4841.7	5811.4	6462.7	6586.3	6593.4
27.5°	3225.4	3092.3	2949.7	2885.5	3394.1	4936.7	6096.6	6757.4	6831.1	6819.2
30°	3061.4	2961.6	2897.4	2878.4	3289.6	5008.0	6367.6	7047.4	7052.1	7011.7
32.5°	2887.9	2849.8	2849.8	2911.6	3204.0	4991.4	6588.6	7330.2	7285.1	7225.6
35°	2733.4	2740.5	2790.4	2935.4	3061.4	4825.0	6800.2	7684.4	7617.8	7532.3
37.5°	2586.0	2640.7	2712.0	2852.2	2873.6	4577.8	7047.4	8185.9	8102.7	7995.7
40°	2460.0	2543.2	2626.4	2695.4	2674.0	4226.0	7392.0	8775.3	8682.6	8559.1
42.5°	2360.2	2441.0	2533.7	2540.9	2548.0	3860.0	7758.1	9497.9	9481.3	9345.8
45°	2296.0	2348.3	2436.3	2424.4	2540.9	3455.9	8095.6	10600.8	10819.4	10717.2
47.5°	2253.3	2293.7	2303.2	2353.1	2602.7	3094.7	8530.5	12759.0	13367.4	13251.0
50°	2229.5	2269.9	2162.9	2357.8	2612.2	2861.7	9131.9	15468.6	16447.8	16293.3
52.5°	2227.1	2217.6	2056.0	2407.8	2559.9	2719.1	9445.6	17446.1	19618.6	19953.7
55°	2231.9	2113.0	2001.3	2422.0	2455.3	2666.8	8395.0	18396.8	22544.5	23252.8
57.5°	2189.1	1998.9	2032.2	2365.0	2258.0	2807.1	6206.0	18057.0	23713.9	25030.6
60°	2108.3	1889.6	2089.3	2210.5	2056.0	2567.0	4273.6	16540.5	22501.7	23856.5
62.5°	1991.8	1813.5	2082.1	2010.8	1982.3	2101.1	2937.8	14418.0	20578.8	21902.7
65°	1861.1	1751.7	1970.4	1818.3	1834.9	1616.3	2077.4	12022.1	18282.8	19585.3
67.5°	1720.8	1713.7	1806.4	1618.6	1549.7	1281.1	1514.1	9635.8	15333.1	16507.3
70°	1561.6	1613.9	1642.4	1438.0	1257.4	1005.4	1124.3	6738.4	11311.4	12333.5
72.5°	1402.3	1407.1	1447.5	1250.2	941.2	805.8	843.8	4081.1	7684.4	8428.3
75°	1240.7	1195.6	1233.6	1017.3	701.2	660.8	651.3	2521.8	5307.5	5894.6
77.5°	1067.2	1017.3	967.4	765.3	563.3	511.0	499.1	1414.2	3256.3	3617.6
80°	867.6	801.0	722.6	560.9	411.2	366.0	363.7	689.3	1623.4	1808.8
82.5°	675.0	549.1	527.7	349.4	254.3	223.4	237.7	263.8	489.6	546.7
85°	473.0	399.3	280.5	140.2	114.1	92.7	90.3	78.4	130.7	145.0
87.5°	263.8	173.5	90.3	16.6	19.0	21.4	16.6	11.9	11.9	11.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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
 R_f: 81.5
 R_g: 99.2

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



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

REPORT NUMBER: SP1-2408-195-9

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 ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /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 $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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 $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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

TM-30-18

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)