

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: P640460

Luminaire Tested: GWS-SA5D-830-U-SLL-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P640460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-39)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5D-830-U-SLL-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18575.4 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

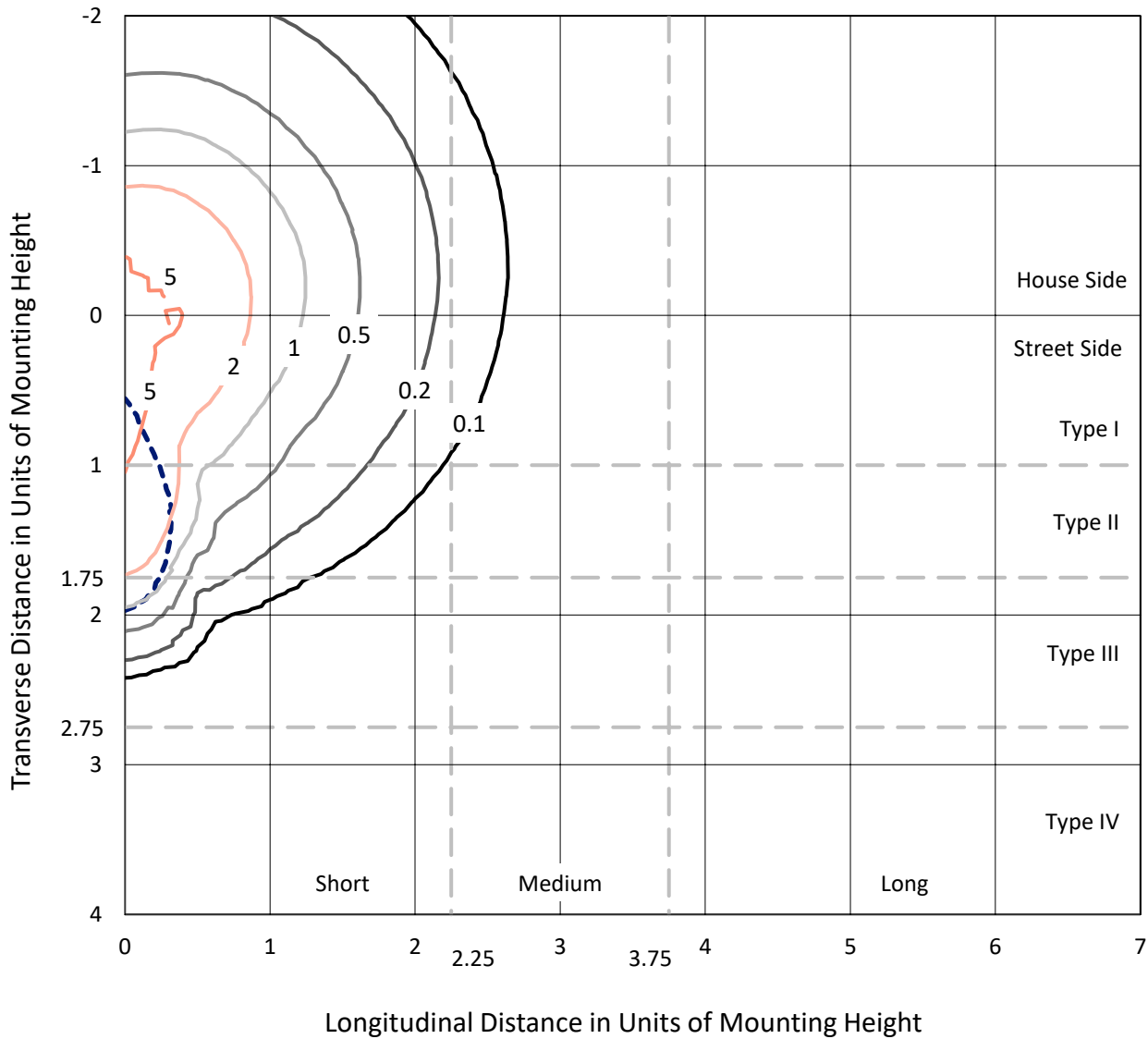
Input Watts (W): 204.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

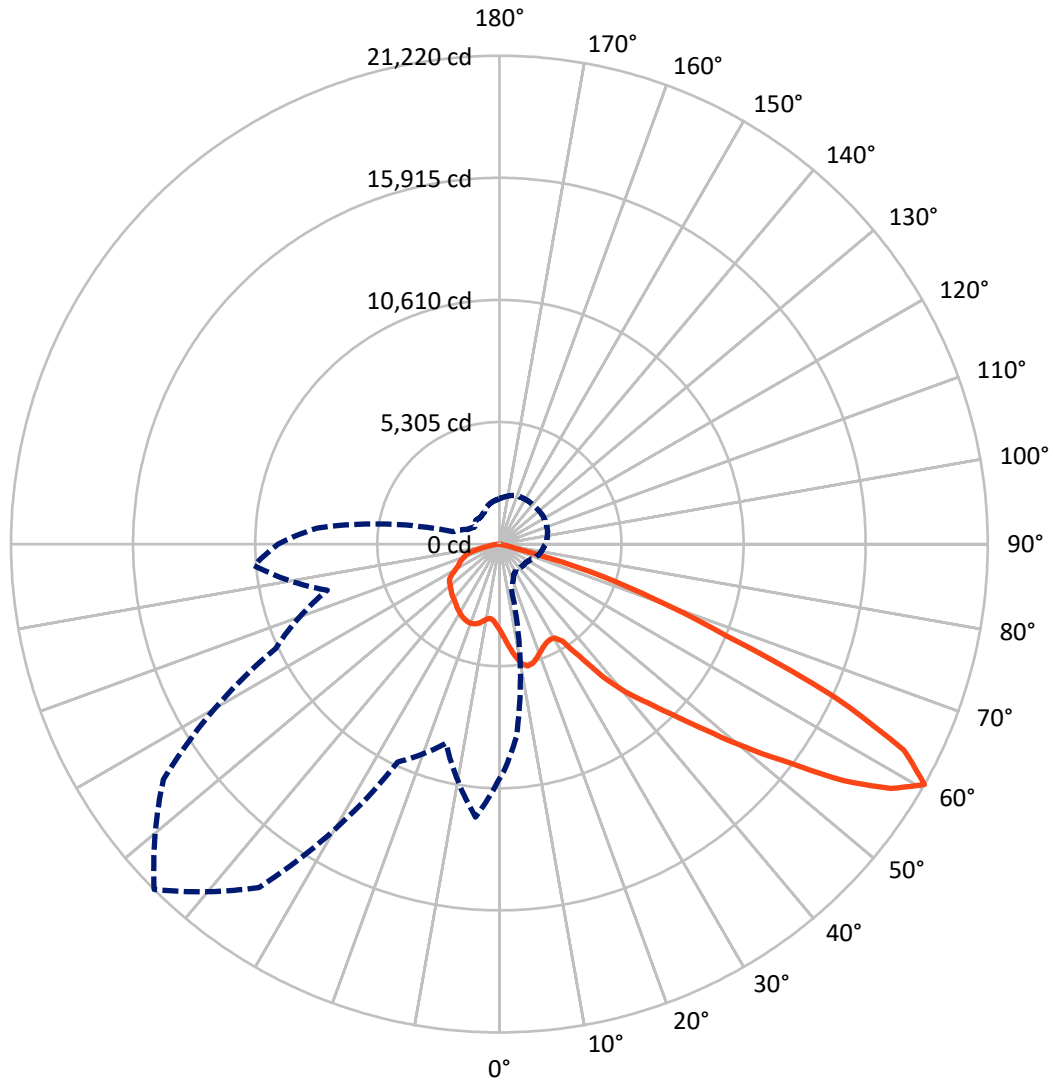
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6354.5	0.0	6354.5
	% Fixture	34.2	0.0	34.2
Street Side	Lumens	12220.9	0.0	12220.9
	% Fixture	65.8	0.0	65.8
Total	Lumens	18575.4	0.0	18575.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.0	2.0
10°-20°	1174.0	6.3
20°-30°	1912.0	10.3
30°-40°	2686.0	14.5
40°-50°	3675.5	19.8
50°-60°	4715.5	25.4
60°-70°	3175.2	17.1
70°-80°	793.8	4.3
80°-90°	77.4	0.4
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°	18575.4	100.0
0°-180°	18575.4	100.0

Coefficient of Utilization



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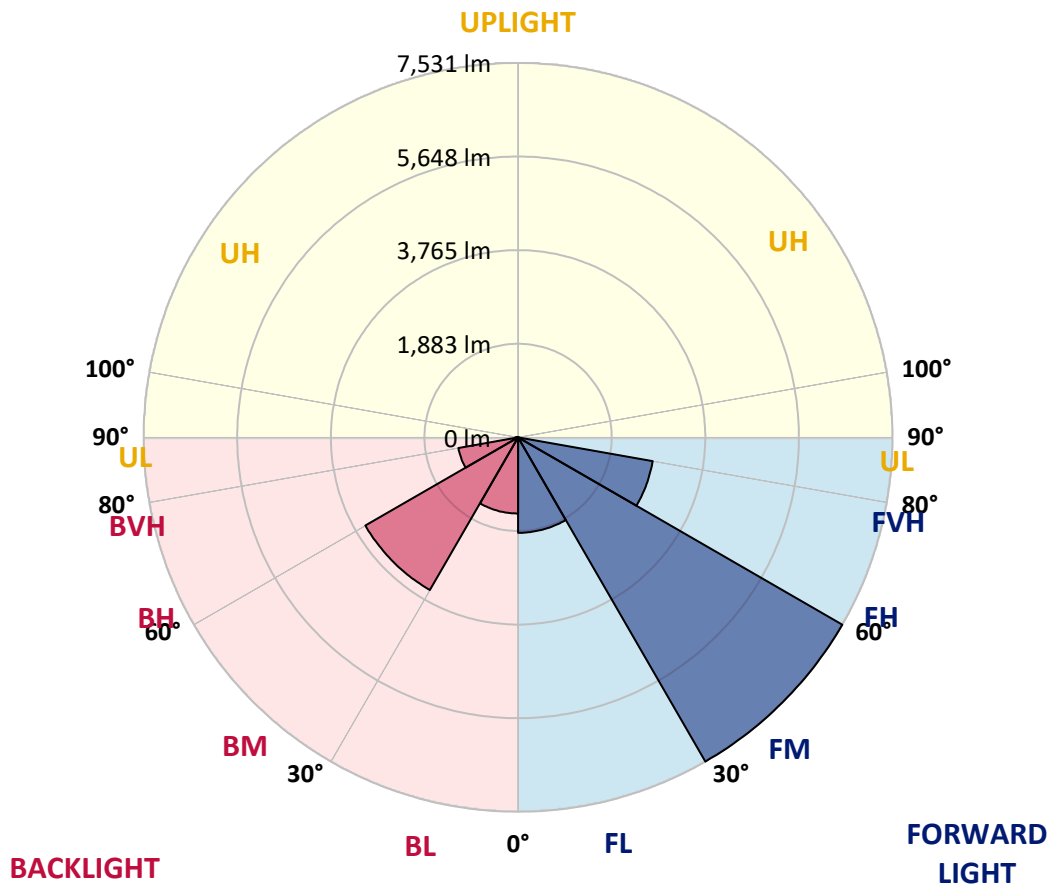
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1920.3	10.3			
FM (30°-60°)	7530.6	40.5			
FH (60°-80°)	2749.9	14.8			G2/5000
FVH (80°-90°)	20.1	0.1			G1/100
BL (0°-30°)	1531.8	8.2	B3/2500		
BM (30°-60°)	3546.3	19.1	B3/5000		
BH (60°-80°)	1219.1	6.6	B3/2500		G3/2500
BVH (80°-90°)	57.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5
2.5°	3963.7	3955.2	3946.6	3879.9	3862.8	3814.9	3780.7	3737.9	3676.3	3642.1	3613.0
5°	4211.8	4198.1	4151.9	4015.0	3926.1	3828.6	3748.2	3659.2	3565.1	3503.5	3455.6
7.5°	4446.1	4442.7	4364.0	4138.2	3994.5	3854.2	3744.8	3614.7	3479.6	3387.2	3325.6
10°	4663.4	4637.7	4543.7	4249.4	4061.2	3900.4	3782.4	3638.7	3481.3	3356.4	3274.3
12.5°	4855.0	4822.5	4692.5	4352.1	4119.4	3921.0	3792.6	3674.6	3570.3	3465.9	3371.8
15°	5012.4	4973.0	4841.3	4447.9	4170.7	3909.0	3729.4	3637.0	3672.9	3719.1	3614.7
17.5°	5159.5	5118.5	4957.6	4518.0	4186.1	3835.4	3573.7	3534.3	3715.7	3926.1	3878.2
20°	5282.7	5236.5	5050.0	4552.2	4158.7	3695.1	3371.8	3440.2	3679.7	3931.2	4008.2
22.5°	5416.1	5378.5	5154.4	4601.8	4124.5	3501.8	3202.5	3370.1	3618.2	3838.8	3955.2
25°	5630.0	5583.8	5316.9	4689.1	4107.4	3320.5	3081.0	3301.7	3532.6	3732.8	3823.4
27.5°	5939.6	5854.1	5539.3	4841.3	4126.2	3149.4	3004.0	3217.9	3433.4	3604.5	3678.0
30°	6276.6	6174.0	5785.6	4998.7	4153.6	3045.1	2963.0	3122.1	3281.1	3452.2	3532.6
32.5°	6675.2	6584.5	6049.1	5116.7	4095.4	2997.2	2932.2	3017.7	3144.3	3281.1	3347.9
35°	7150.8	6988.3	6336.5	5212.5	3907.3	2927.0	2904.8	2903.1	2969.8	3103.2	3178.5
37.5°	7662.3	7487.8	6690.6	5315.2	3614.7	2815.8	2839.8	2767.9	2829.5	2935.6	3021.1
40°	8081.4	7898.4	7048.1	5455.5	3248.6	2641.3	2696.1	2619.1	2656.7	2766.2	2862.0
42.5°	8492.0	8297.0	7381.7	5614.6	2894.5	2470.3	2497.6	2468.6	2480.5	2595.2	2728.6
45°	9030.9	8811.9	7792.3	5727.5	2576.3	2335.1	2309.5	2259.9	2323.1	2472.0	2614.0
47.5°	9930.7	9668.9	8464.6	5801.0	2345.4	2258.1	2140.1	2111.0	2189.7	2355.7	2502.8
50°	10982.8	10757.0	9538.9	5797.6	2172.6	2193.1	1975.9	1950.2	2080.2	2247.9	2403.6
52.5°	11845.0	11615.7	10457.6	5626.5	2030.6	2054.6	1880.1	1808.2	1986.1	2141.8	2297.5
55°	12541.2	12282.9	10880.1	4911.5	1851.0	1833.9	1775.7	1644.0	1868.1	2035.7	2181.2
57.5°	12166.6	11858.7	10368.6	3734.5	1666.2	1558.5	1596.1	1498.6	1707.3	1917.7	2058.0
60°	10201.0	9923.8	8423.5	1987.8	1466.1	1301.9	1380.5	1395.9	1531.1	1775.7	1919.4
62.5°	7007.1	6805.2	5708.6	1206.1	1156.4	1045.2	1168.4	1279.6	1380.5	1587.5	1712.4
65°	3428.3	3368.4	2855.2	773.2	809.2	845.1	968.3	1103.4	1252.2	1433.6	1565.3
67.5°	944.3	951.2	865.6	603.9	638.1	737.3	834.8	942.6	1091.4	1259.1	1392.5
70°	415.7	422.5	436.2	465.3	530.3	621.0	721.9	833.1	970.0	1110.3	1238.6
72.5°	289.1	296.0	316.5	354.1	412.3	497.8	593.6	699.7	841.7	959.7	1065.8
75°	177.9	183.0	201.9	234.4	273.7	338.7	432.8	530.3	655.2	763.0	857.1
77.5°	94.1	90.7	102.6	124.9	159.1	193.3	256.6	318.2	407.1	494.4	573.1
80°	51.3	49.6	56.5	68.4	78.7	106.1	148.8	189.9	241.2	290.8	333.6
82.5°	22.2	20.5	22.2	29.1	35.9	51.3	75.3	104.4	133.4	167.6	195.0
85°	0.0	0.0	0.0	1.7	8.6	13.7	25.7	37.6	54.7	75.3	92.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	15.4
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°	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5
2.5°	3595.9	3553.2	3549.7	3515.5	3518.9	3520.6	3486.4	3472.7	3484.7	3498.4	3491.6
5°	3438.5	3394.1	3375.2	3342.7	3339.3	3323.9	3310.2	3293.1	3305.1	3317.1	3323.9
7.5°	3301.7	3272.6	3260.6	3252.1	3255.5	3248.6	3221.3	3205.9	3204.2	3209.3	3216.1
10°	3257.2	3233.2	3248.6	3272.6	3289.7	3301.7	3272.6	3246.9	3223.0	3212.7	3212.7
12.5°	3353.0	3322.2	3353.0	3378.7	3412.9	3421.4	3388.9	3361.6	3353.0	3363.3	3383.8
15°	3565.1	3493.3	3491.6	3507.0	3534.3	3548.0	3517.2	3503.5	3503.5	3568.5	3619.9
17.5°	3777.3	3659.2	3609.6	3601.1	3618.2	3623.3	3597.6	3585.7	3616.4	3743.0	3838.8
20°	3926.1	3782.4	3674.6	3654.1	3659.2	3660.9	3640.4	3631.8	3676.3	3830.3	3910.7
22.5°	3910.7	3804.6	3672.9	3647.2	3655.8	3652.4	3633.6	3630.1	3666.1	3799.5	3837.1
25°	3804.6	3722.5	3611.3	3594.2	3607.9	3606.2	3587.4	3578.8	3594.2	3683.2	3686.6
27.5°	3683.2	3611.3	3515.5	3510.4	3532.6	3544.6	3512.1	3486.4	3481.3	3541.2	3527.5
30°	3537.8	3484.7	3407.7	3411.2	3452.2	3459.1	3419.7	3382.1	3371.8	3404.3	3385.5
32.5°	3365.0	3347.9	3306.8	3315.4	3354.7	3368.4	3327.3	3288.0	3276.0	3286.3	3246.9
35°	3217.9	3211.0	3214.4	3229.8	3264.0	3274.3	3240.1	3209.3	3192.2	3156.3	3104.9
37.5°	3065.6	3084.4	3134.0	3163.1	3181.9	3178.5	3159.7	3137.4	3110.1	3043.4	2980.1
40°	2923.6	2971.5	3060.5	3093.0	3099.8	3101.5	3087.8	3069.0	3034.8	2945.8	2874.0
42.5°	2814.1	2867.2	2985.2	3034.8	3038.2	3041.6	3028.0	3012.6	2964.7	2846.6	2776.5
45°	2699.5	2769.6	2908.2	2968.1	2964.7	2963.0	2951.0	2944.1	2887.7	2750.8	2673.8
47.5°	2602.0	2684.1	2832.9	2884.3	2882.6	2880.8	2872.3	2872.3	2815.8	2667.0	2579.8
50°	2506.2	2600.3	2756.0	2798.7	2802.1	2798.7	2795.3	2800.4	2733.7	2574.6	2489.1
52.5°	2401.8	2507.9	2670.4	2709.8	2730.3	2738.9	2738.9	2726.9	2648.2	2482.2	2388.2
55°	2287.2	2388.2	2576.3	2629.4	2646.5	2661.9	2661.9	2637.9	2564.4	2396.7	2295.8
57.5°	2145.2	2234.2	2383.0	2436.1	2477.1	2487.4	2487.4	2448.0	2388.2	2227.3	2145.2
60°	1991.3	2068.3	2169.2	2225.6	2256.4	2235.9	2251.3	2241.0	2193.1	2044.3	1975.9
62.5°	1786.0	1864.7	1975.9	2034.0	2047.7	2027.2	2047.7	2046.0	1981.0	1847.6	1765.5
65°	1638.9	1715.8	1825.3	1900.6	1922.8	1917.7	1931.4	1910.9	1830.5	1703.9	1625.2
67.5°	1464.4	1546.5	1673.1	1756.9	1803.1	1808.2	1827.0	1784.3	1702.2	1563.6	1464.4
70°	1298.4	1368.6	1466.1	1544.8	1609.8	1642.3	1645.7	1584.1	1481.5	1366.9	1295.0
72.5°	1123.9	1195.8	1313.8	1399.4	1481.5	1519.1	1519.1	1443.8	1332.6	1206.1	1129.1
75°	911.8	978.5	1086.3	1178.7	1272.8	1320.7	1319.0	1254.0	1130.8	1011.0	930.6
77.5°	617.6	667.2	735.6	805.7	819.4	857.1	875.9	793.8	725.3	660.3	588.5
80°	359.2	390.0	427.7	467.0	475.6	487.6	456.8	426.0	390.0	347.3	314.8
82.5°	210.4	230.9	249.8	280.6	285.7	289.1	261.7	248.1	219.0	193.3	172.8
85°	102.6	109.5	126.6	142.0	135.1	131.7	119.7	106.1	94.1	83.8	73.6
87.5°	20.5	20.5	30.8	29.1	23.9	20.5	12.0	15.4	3.4	3.4	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°	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5
2.5°	3513.8	3542.9	3578.8	3626.7	3681.5	3739.6	3796.1	3838.8	3881.6	3944.9	3934.6
5°	3334.2	3383.8	3440.2	3513.8	3602.8	3703.7	3816.6	3929.5	4051.0	4153.6	4198.1
7.5°	3229.8	3284.6	3351.3	3447.1	3561.7	3684.9	3844.0	4027.0	4223.7	4358.9	4442.7
10°	3229.8	3300.0	3387.2	3479.6	3580.5	3707.1	3903.8	4133.1	4386.3	4564.2	4661.7
12.5°	3416.3	3486.4	3505.3	3501.8	3558.3	3698.6	3951.7	4244.3	4547.1	4735.3	4855.0
15°	3707.1	3731.1	3589.1	3459.1	3467.6	3637.0	3974.0	4333.2	4685.6	4911.5	5041.5
17.5°	3902.1	3838.8	3585.7	3358.1	3310.2	3532.6	3974.0	4418.8	4832.8	5087.7	5209.1
20°	3917.5	3760.1	3498.4	3260.6	3137.4	3394.1	3946.6	4483.8	4974.8	5257.0	5387.0
22.5°	3782.4	3626.7	3406.0	3176.8	2995.5	3226.4	3902.1	4533.4	5096.2	5416.1	5576.9
25°	3628.4	3498.4	3311.9	3091.3	2897.9	3057.0	3861.1	4617.2	5265.6	5631.7	5794.2
27.5°	3477.9	3368.4	3199.0	3019.4	2843.2	2909.9	3835.4	4740.4	5467.4	5937.9	6078.2
30°	3330.8	3231.5	3077.6	2951.0	2814.1	2814.1	3813.2	4882.4	5734.3	6281.7	6422.0
32.5°	3181.9	3087.8	2963.0	2884.3	2797.0	2776.5	3751.6	5015.8	6009.7	6658.1	6801.8
35°	3043.4	2949.3	2853.5	2821.0	2788.5	2747.4	3599.3	5120.2	6278.3	7097.7	7220.9
37.5°	2913.3	2822.7	2750.8	2742.3	2745.7	2668.7	3359.8	5207.4	6613.6	7547.7	7612.7
40°	2800.4	2699.5	2643.1	2641.3	2658.4	2542.1	3057.0	5332.3	6996.8	7929.2	7901.8
42.5°	2699.5	2593.4	2525.0	2540.4	2530.1	2415.5	2761.1	5446.9	7330.4	8286.7	8231.9
45°	2600.3	2497.6	2401.8	2424.1	2412.1	2336.8	2509.6	5530.7	7699.9	8716.1	8722.9
47.5°	2504.5	2403.6	2307.8	2280.4	2278.7	2312.9	2316.3	5558.1	8302.1	9407.2	9251.5
50°	2415.5	2314.6	2215.4	2123.0	2158.9	2265.0	2172.6	5537.6	9203.6	10170.2	9735.7
52.5°	2323.1	2227.3	2117.9	1951.9	2046.0	2150.4	2044.3	5464.0	9754.5	10844.2	10584.2
55°	2217.1	2126.4	1977.6	1775.7	1890.3	1912.6	1912.6	4752.4	9988.9	11511.4	11672.2
57.5°	2075.1	1955.3	1719.3	1556.7	1659.4	1573.9	1772.3	3325.6	9602.2	11301.0	11925.4
60°	1914.3	1786.0	1536.2	1419.9	1450.7	1300.1	1510.6	2085.4	7958.2	9615.9	10697.1
62.5°	1702.2	1584.1	1377.1	1286.5	1223.2	1060.6	1216.3	1319.0	5455.5	7140.5	7877.8
65°	1560.2	1430.2	1245.4	1125.6	995.6	853.6	807.5	865.6	2933.9	3996.2	4494.0
67.5°	1392.5	1264.2	1089.7	939.2	834.8	732.2	651.8	631.3	1005.9	1330.9	1440.4
70°	1233.4	1110.3	964.8	824.6	720.2	619.3	540.6	484.1	465.3	461.9	455.0
72.5°	1070.9	956.3	834.8	704.8	590.2	497.8	427.7	362.7	335.3	326.7	318.2
75°	877.6	786.9	665.5	525.2	432.8	347.3	292.5	249.8	225.8	217.3	207.0
77.5°	564.5	523.5	417.4	338.7	261.7	207.0	177.9	150.5	135.1	131.7	123.2
80°	301.1	280.6	230.9	195.0	155.7	126.6	111.2	95.8	87.2	83.8	80.4
82.5°	167.6	152.3	128.3	112.9	90.7	77.0	68.4	61.6	56.5	54.7	53.0
85°	75.3	65.0	51.3	47.9	42.8	39.3	37.6	34.2	32.5	30.8	29.1
87.5°	3.4	6.8	8.6	6.8	6.8	10.3	12.0	12.0	10.3	10.3	8.6
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: P640460

CATALOG NUMBER: GWS-SA5D-830-U-SLL-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5	3746.5
2.5°	3997.9	4049.3	4054.4	4071.5	4049.3	4044.1	4008.2	3987.7	3968.9	3963.7
5°	4309.3	4411.9	4453.0	4482.1	4454.7	4441.0	4362.3	4280.2	4234.0	4211.8
7.5°	4629.2	4783.2	4863.6	4899.5	4902.9	4841.3	4706.2	4552.2	4475.2	4446.1
10°	4914.9	5104.8	5210.8	5279.3	5255.3	5180.0	4995.3	4786.6	4689.1	4663.4
12.5°	5127.0	5308.3	5390.5	5434.9	5433.2	5392.2	5217.7	4991.9	4880.7	4855.0
15°	5263.9	5371.6	5376.8	5387.0	5416.1	5470.9	5380.2	5171.5	5048.3	5012.4
17.5°	5371.6	5328.9	5248.5	5221.1	5286.1	5438.4	5493.1	5323.7	5190.3	5159.5
20°	5440.1	5224.5	5082.5	5029.5	5104.8	5352.8	5561.5	5460.6	5322.0	5282.7
22.5°	5493.1	5127.0	4897.8	4861.8	4940.5	5260.4	5631.7	5623.1	5470.9	5416.1
25°	5576.9	5062.0	4767.8	4742.1	4815.7	5216.0	5725.8	5843.8	5708.6	5630.0
27.5°	5708.6	5055.2	4701.0	4692.5	4793.4	5255.3	5860.9	6167.1	5997.8	5939.6
30°	5891.7	5120.2	4716.4	4733.5	4856.7	5397.3	6071.3	6536.6	6367.3	6276.6
32.5°	6155.1	5294.7	4950.8	5024.4	5115.0	5624.8	6379.2	6936.9	6808.6	6675.2
35°	6502.4	5773.7	5643.6	5956.7	5871.2	6122.6	6750.5	7422.8	7267.1	7150.8
37.5°	6966.0	6755.6	6875.4	7306.5	7099.5	7063.5	7203.8	7864.1	7778.6	7662.3
40°	7616.1	7658.9	7879.5	8445.8	8146.4	7915.5	7759.8	8196.0	8225.1	8081.4
42.5°	8047.2	8243.9	8776.0	9419.2	9006.9	8454.3	8225.1	8620.3	8622.0	8492.0
45°	8208.0	8722.9	9834.9	10575.6	9886.2	8762.3	8481.7	9196.8	9179.7	9030.9
47.5°	8149.8	9126.7	10934.9	12067.4	11015.3	8981.2	8445.8	10017.9	10156.5	9930.7
50°	8028.4	9532.1	12219.6	13894.4	12401.0	9213.9	8391.0	10928.0	11157.3	10982.8
52.5°	8151.5	9983.7	13738.7	15783.0	14139.0	9585.1	8760.6	12096.4	12055.4	11845.0
55°	8541.6	10517.5	15584.6	18155.8	16048.2	10213.0	9710.0	13210.1	12792.7	12541.2
57.5°	8522.8	10899.0	17202.9	20032.4	17709.3	10727.9	10040.2	13328.2	12484.8	12166.6
60°	7735.8	10724.5	17818.8	21219.7	18210.5	10443.9	8953.9	11904.8	10534.6	10201.0
62.5°	5773.7	9516.7	16624.7	19733.1	16792.4	9020.6	6733.4	8545.0	7569.9	7007.1
65°	3693.4	7445.0	13976.5	15986.6	13841.4	6899.3	4009.9	4581.3	3589.1	3428.3
67.5°	1572.1	5255.3	10864.7	10685.1	10354.9	4470.1	1548.2	1289.9	961.4	944.3
70°	520.1	3575.4	6697.4	7126.8	6184.2	3079.3	511.5	432.8	431.1	415.7
72.5°	340.4	1919.4	3770.4	4198.1	3979.1	1772.3	309.6	289.1	296.0	289.1
75°	203.6	417.4	634.7	824.6	634.7	297.7	186.5	183.0	186.5	177.9
77.5°	119.7	116.3	112.9	112.9	111.2	102.6	94.1	90.7	92.4	94.1
80°	77.0	73.6	70.1	68.4	59.9	56.5	53.0	49.6	49.6	51.3
82.5°	49.6	46.2	42.8	37.6	30.8	25.7	23.9	20.5	20.5	22.2
85°	25.7	20.5	15.4	12.0	6.8	3.4	0.0	0.0	0.0	0.0
87.5°	5.1	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

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



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

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)