

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: P641452

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

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5F-830-U-SLL-W
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31075.5 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

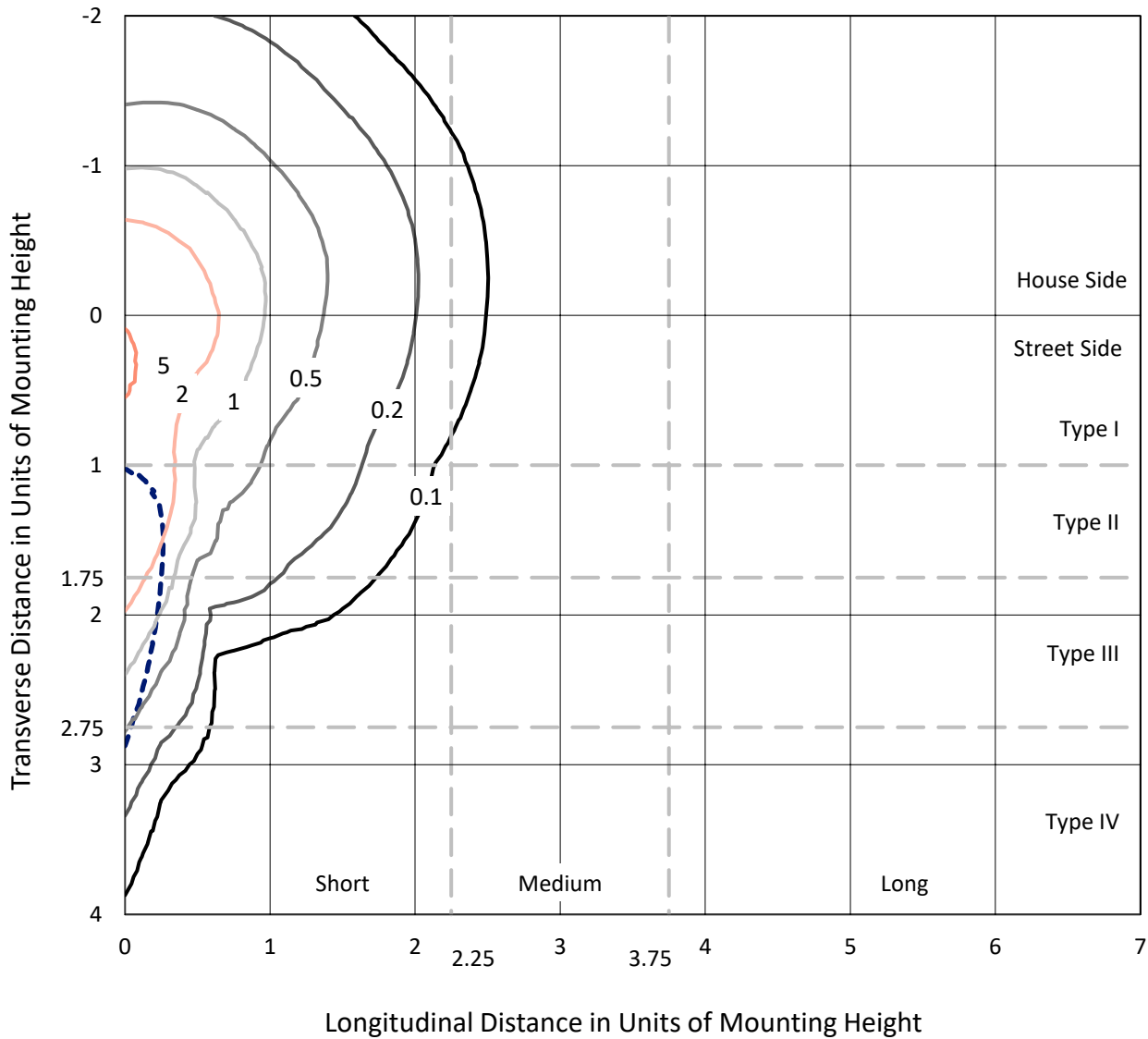
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

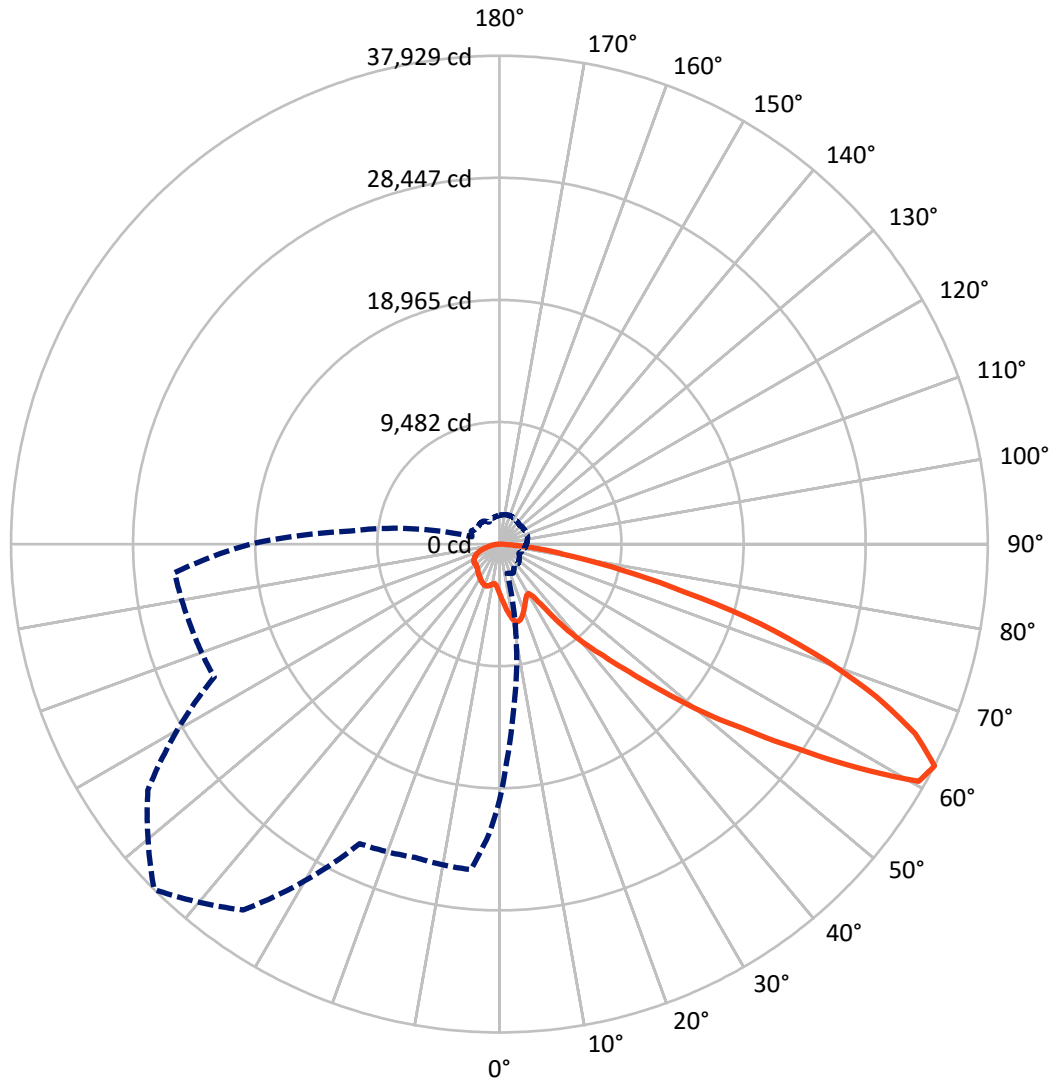
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7430.2	0.0	7430.2
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	23645.3	0.0	23645.3
	% Fixture	76.1	0.0	76.1
Total	Lumens	31075.5	0.0	31075.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.7	1.2
10°-20°	1240.5	4.0
20°-30°	1952.8	6.3
30°-40°	2676.7	8.6
40°-50°	4176.5	13.4
50°-60°	7201.1	23.2
60°-70°	8345.2	26.9
70°-80°	4405.0	14.2
80°-90°	695.8	2.2
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°	31075.5	100.0
0°-180°	31075.5	100.0

Coefficient of Utilization



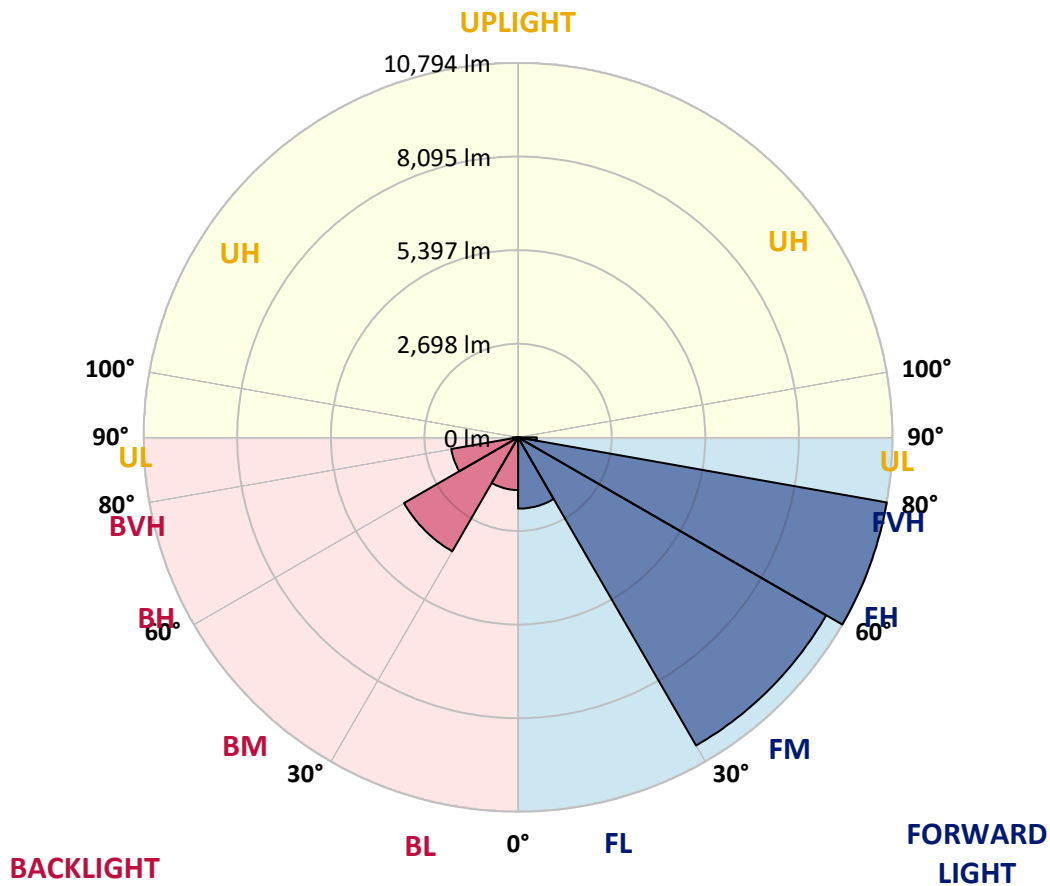
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2055.3	6.6			
FM (30°-60°)	10259.1	33.0			
FH (60°-80°)	10793.8	34.7			G4/12000
FVH (80°-90°)	537.1	1.7			G4/750
BL (0°-30°)	1519.7	4.9	B3/2500		
BM (30°-60°)	3795.3	12.2	B3/5000		
BH (60°-80°)	1956.4	6.3	B3/2500		G3/2500
BVH (80°-90°)	158.8	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°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5
2.5°	4209.6	4193.0	4169.2	4088.4	4038.5	3981.4	3922.0	3853.1	3774.6	3720.0	3665.3
5°	4566.2	4540.0	4483.0	4290.4	4157.3	4012.3	3891.1	3753.2	3617.8	3525.1	3432.4
7.5°	4908.5	4875.2	4787.2	4492.5	4276.2	4067.0	3884.0	3684.3	3482.3	3344.4	3235.1
10°	5250.7	5181.8	5070.1	4685.0	4399.8	4157.3	3948.2	3703.3	3434.7	3246.9	3130.5
12.5°	5512.2	5448.0	5326.8	4860.9	4523.4	4219.1	3983.8	3758.0	3529.8	3330.1	3211.3
15°	5757.0	5673.8	5536.0	5024.9	4625.6	4216.8	3912.5	3715.2	3681.9	3632.0	3477.5
17.5°	5932.9	5856.9	5714.3	5158.0	4682.6	4143.1	3715.2	3598.7	3748.5	3900.6	3753.2
20°	6087.4	5999.5	5854.5	5250.7	4694.5	3979.1	3475.1	3477.5	3712.8	3922.0	3886.4
22.5°	6218.2	6120.7	5992.4	5355.3	4689.8	3750.9	3266.0	3408.6	3643.9	3807.9	3812.7
25°	6379.8	6299.0	6192.0	5509.8	4689.8	3517.9	3113.8	3325.4	3527.4	3665.3	3660.5
27.5°	6577.1	6522.4	6434.5	5745.2	4732.6	3323.0	3028.3	3218.4	3377.7	3496.5	3494.2
30°	6798.2	6748.2	6681.7	5994.7	4806.2	3178.0	2980.7	3085.3	3201.8	3296.9	3296.9
32.5°	7024.0	7004.9	6933.6	6194.4	4749.2	3132.9	2940.3	2952.2	3014.0	3092.4	3085.3
35°	7337.7	7318.7	7228.4	6348.9	4502.0	3068.7	2876.1	2816.7	2823.8	2873.8	2890.4
37.5°	7796.5	7768.0	7634.8	6529.6	4128.8	2907.0	2771.6	2674.1	2652.7	2674.1	2705.0
40°	8350.3	8307.5	8126.9	6774.4	3698.6	2688.4	2607.5	2526.7	2491.1	2498.2	2533.9
42.5°	9044.4	8954.1	8695.0	7033.5	3273.1	2495.8	2424.5	2374.6	2334.2	2329.4	2398.4
45°	10171.1	9923.9	9512.7	7264.0	2914.2	2393.6	2260.5	2224.8	2191.6	2210.6	2291.4
47.5°	12139.2	11682.8	10881.8	7461.3	2695.5	2396.0	2129.8	2091.7	2089.4	2127.4	2217.7
50°	14844.2	14185.8	12949.8	7594.4	2581.4	2424.5	2051.3	1989.5	2034.7	2072.7	2158.3
52.5°	17435.1	16429.7	14958.3	7592.1	2531.5	2429.3	2072.7	1894.5	2034.7	2044.2	2125.0
55°	19648.1	17827.3	15500.3	6812.4	2460.2	2410.3	2155.9	1820.8	2008.5	2044.2	2108.4
57.5°	21407.0	18716.3	15459.9	5502.7	2676.5	2305.7	2205.8	1804.1	1932.5	2049.0	2122.6
60°	21212.1	18309.8	14463.9	3377.7	2655.1	2120.3	2198.7	1835.0	1804.1	1984.8	2106.0
62.5°	19916.7	16852.8	12750.1	2343.7	2493.4	2013.3	2082.2	1889.7	1685.3	1892.1	2025.2
65°	18103.1	14972.6	10625.1	1797.0	2065.6	2018.1	1884.9	1851.7	1580.7	1744.7	1887.3
67.5°	15704.7	12640.8	8388.3	1423.8	1440.4	1747.1	1711.4	1644.9	1483.2	1614.0	1742.3
70°	11806.4	9225.0	5771.3	1145.7	1091.0	1459.5	1537.9	1478.5	1388.2	1426.2	1561.7
72.5°	8319.4	6023.3	3161.4	908.0	841.4	1121.9	1335.9	1326.4	1226.5	1255.0	1388.2
75°	6182.5	4261.9	1975.3	717.8	684.6	803.4	1119.6	1148.1	1064.9	1098.2	1200.4
77.5°	4114.5	2759.7	1098.2	532.4	532.4	587.1	834.3	967.4	905.6	931.8	1003.1
80°	2270.0	1404.8	549.1	349.4	358.9	404.1	608.5	696.5	698.8	763.0	782.0
82.5°	717.8	446.9	244.8	204.4	192.5	230.6	392.2	499.2	465.9	594.2	546.7
85°	164.0	104.6	45.2	45.2	49.9	76.1	149.7	266.2	339.9	408.8	297.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	104.6	154.5	137.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5
2.5°	3632.0	3584.5	3570.2	3529.8	3525.1	3487.0	3472.8	3472.8	3489.4	3489.4	3506.0
5°	3394.3	3334.9	3301.6	3254.1	3242.2	3213.7	3194.7	3197.0	3218.4	3232.7	3261.2
7.5°	3185.1	3144.7	3121.0	3099.6	3094.8	3090.1	3068.7	3066.3	3073.4	3094.8	3116.2
10°	3097.2	3068.7	3075.8	3092.4	3118.6	3132.9	3113.8	3104.3	3097.2	3111.5	3130.5
12.5°	3182.8	3154.2	3168.5	3197.0	3232.7	3246.9	3239.8	3237.4	3244.6	3299.2	3339.7
15°	3370.6	3315.9	3296.9	3308.8	3337.3	3351.5	3344.4	3353.9	3399.1	3541.7	3643.9
17.5°	3603.5	3470.4	3394.3	3372.9	3384.8	3396.7	3396.7	3420.5	3498.9	3708.1	3836.4
20°	3729.5	3556.0	3427.6	3375.3	3380.1	3391.9	3391.9	3425.2	3513.2	3736.6	3819.8
22.5°	3696.2	3536.9	3380.1	3323.0	3325.4	3334.9	3334.9	3363.4	3441.9	3639.2	3677.2
25°	3565.5	3425.2	3270.7	3220.8	3225.6	3242.2	3237.4	3254.1	3313.5	3475.1	3496.5
27.5°	3408.6	3285.0	3132.9	3094.8	3116.2	3149.5	3121.0	3123.3	3178.0	3313.5	3315.9
30°	3239.8	3137.6	3002.1	2973.6	3014.0	3030.6	3004.5	3004.5	3059.2	3151.9	3149.5
32.5°	3056.8	2992.6	2895.2	2864.3	2909.4	2935.6	2902.3	2907.0	2949.8	3011.6	2987.9
35°	2885.6	2852.4	2807.2	2785.8	2814.3	2838.1	2816.7	2826.2	2866.6	2883.3	2850.0
37.5°	2721.6	2716.9	2721.6	2721.6	2728.8	2735.9	2721.6	2745.4	2781.1	2759.7	2721.6
40°	2579.0	2598.0	2643.2	2631.3	2624.2	2631.3	2621.8	2662.2	2697.9	2659.8	2614.7
42.5°	2460.2	2495.8	2564.8	2564.8	2550.5	2555.2	2550.5	2600.4	2626.6	2574.3	2524.3
45°	2358.0	2410.3	2498.2	2510.1	2486.3	2486.3	2495.8	2557.6	2567.1	2495.8	2443.5
47.5°	2286.7	2350.8	2450.7	2472.1	2436.4	2434.0	2460.2	2526.7	2526.7	2443.5	2384.1
50°	2236.7	2308.0	2426.9	2455.4	2419.8	2410.3	2453.0	2517.2	2503.0	2403.1	2343.7
52.5°	2203.5	2277.1	2424.5	2464.9	2441.2	2431.6	2474.4	2519.6	2483.9	2377.0	2315.2
55°	2182.1	2262.9	2431.6	2464.9	2438.8	2422.1	2464.9	2505.3	2486.3	2362.7	2303.3
57.5°	2193.9	2274.8	2422.1	2438.8	2407.9	2379.4	2429.3	2486.3	2479.2	2367.5	2308.0
60°	2174.9	2248.6	2369.8	2374.6	2322.3	2277.1	2350.8	2436.4	2436.4	2350.8	2298.5
62.5°	2087.0	2160.7	2267.6	2272.4	2213.0	2163.0	2248.6	2350.8	2348.5	2279.5	2224.8
65°	1942.0	2010.9	2132.1	2144.0	2084.6	2032.3	2120.3	2215.3	2222.5	2160.7	2113.1
67.5°	1782.7	1844.5	1934.9	1982.4	1932.5	1877.8	1958.6	2049.0	2046.6	1972.9	1923.0
70°	1592.6	1649.6	1732.8	1773.2	1742.3	1690.0	1763.7	1811.3	1789.9	1754.2	1720.9
72.5°	1404.8	1459.5	1537.9	1537.9	1504.6	1454.7	1476.1	1561.7	1587.8	1561.7	1540.3
75°	1207.5	1255.0	1309.7	1321.6	1247.9	1157.6	1257.4	1331.1	1362.0	1350.1	1324.0
77.5°	1005.5	1041.1	1121.9	1100.5	962.7	915.1	996.0	1105.3	1126.7	1119.6	1083.9
80°	774.9	796.3	881.9	839.1	732.1	701.2	736.9	822.4	827.2	803.4	758.3
82.5°	520.6	549.1	606.1	522.9	520.6	492.0	463.5	473.0	515.8	511.0	480.1
85°	266.2	280.5	335.2	313.8	268.6	232.9	221.1	235.3	211.6	192.5	166.4
87.5°	111.7	121.2	166.4	92.7	28.5	0.0	0.0	14.3	21.4	30.9	33.3
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°	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5
2.5°	3544.1	3570.2	3634.4	3715.2	3793.7	3874.5	3962.4	4017.1	4083.6	4169.2	4171.6
5°	3296.9	3356.3	3449.0	3572.6	3701.0	3848.3	4019.5	4162.1	4333.2	4468.7	4523.4
7.5°	3144.7	3230.3	3346.8	3503.7	3672.4	3855.5	4078.9	4319.0	4599.4	4780.1	4887.1
10°	3159.0	3289.7	3406.2	3539.3	3691.4	3888.7	4176.3	4494.9	4839.5	5077.2	5210.3
12.5°	3413.3	3551.2	3529.8	3522.7	3624.9	3865.0	4254.8	4673.1	5093.9	5331.6	5490.8
15°	3734.2	3786.5	3584.5	3432.4	3494.2	3779.4	4297.6	4832.4	5305.4	5595.4	5752.3
17.5°	3898.2	3793.7	3548.8	3320.6	3304.0	3648.7	4319.0	4994.0	5543.1	5833.1	5999.5
20°	3822.2	3670.1	3463.3	3246.9	3128.1	3470.4	4307.1	5122.4	5759.4	6082.7	6218.2
22.5°	3658.2	3525.1	3363.4	3156.6	2985.5	3275.5	4276.2	5250.7	5951.9	6277.6	6396.4
25°	3479.9	3380.1	3246.9	3066.3	2904.7	3104.3	4254.8	5421.9	6173.0	6484.4	6560.5
27.5°	3301.6	3227.9	3118.6	2978.4	2885.6	2985.5	4261.9	5645.3	6458.2	6753.0	6722.1
30°	3125.7	3061.5	2985.5	2923.7	2883.3	2957.0	4242.9	5883.0	6772.0	7045.4	6862.3
32.5°	2959.3	2899.9	2852.4	2861.9	2885.6	2968.8	4145.4	6099.3	7059.6	7292.6	7014.5
35°	2816.7	2754.9	2754.9	2788.2	2876.1	2928.4	3893.5	6268.1	7378.1	7611.1	7230.8
37.5°	2683.6	2628.9	2664.6	2719.3	2802.5	2819.1	3570.2	6432.1	7841.6	8060.3	7565.9
40°	2567.1	2512.5	2576.6	2645.6	2688.4	2681.2	3242.2	6660.3	8388.3	8614.2	8010.4
42.5°	2474.4	2424.5	2481.6	2569.5	2576.6	2583.8	3002.1	6879.0	9023.0	9310.6	8775.8
45°	2398.4	2362.7	2391.2	2479.2	2479.2	2588.5	2852.4	7062.0	9978.5	10487.2	10180.6
47.5°	2338.9	2317.6	2331.8	2360.3	2407.9	2674.1	2757.3	7202.2	11718.5	12716.8	12407.8
50°	2305.7	2284.3	2303.3	2243.9	2386.5	2716.9	2726.4	7309.2	14012.3	15576.3	15193.6
52.5°	2277.1	2270.0	2281.9	2144.0	2434.0	2688.4	2702.6	7166.6	15550.2	18390.7	18768.6
55°	2267.6	2272.4	2215.3	2070.3	2491.1	2593.3	2631.3	6146.9	15968.5	20817.6	23163.6
57.5°	2272.4	2258.1	2113.1	2077.5	2493.4	2403.1	2733.5	4385.5	15360.0	21872.9	27463.6
60°	2255.8	2184.4	1989.5	2141.7	2384.1	2179.7	2659.8	2859.5	13755.6	21062.4	27713.2
62.5°	2182.1	2077.5	1882.6	2177.3	2189.2	2046.6	2415.0	2203.5	11616.3	19327.2	25307.7
65°	2075.1	1934.9	1792.2	2103.6	1991.9	1984.8	1816.0	1766.1	9341.5	17261.6	23025.8
67.5°	1899.2	1759.0	1725.7	1934.9	1792.2	1759.0	1459.5	1464.2	7454.2	15060.5	20732.0
70°	1699.5	1559.3	1585.4	1749.5	1595.0	1461.8	1181.4	1219.4	5654.8	12548.1	17639.5
72.5°	1568.8	1381.0	1383.4	1540.3	1402.4	1183.7	972.2	1005.5	3589.2	9458.0	14024.2
75°	1324.0	1217.0	1164.7	1247.9	1190.9	922.3	817.7	810.5	2127.4	6779.1	10501.5
77.5°	1105.3	1022.1	996.0	1029.2	889.0	682.2	658.4	646.5	1205.1	4342.7	6881.3
80°	801.0	779.6	777.3	793.9	684.6	501.5	501.5	503.9	648.9	2358.0	3879.2
82.5°	508.7	556.2	492.0	546.7	465.9	356.5	332.8	377.9	373.2	1005.5	1635.4
85°	211.6	290.0	271.0	287.6	221.1	194.9	209.2	225.8	216.3	387.4	637.0
87.5°	40.4	47.5	52.3	49.9	49.9	61.8	68.9	83.2	83.2	111.7	192.5
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: P641452

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

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5	3874.5
2.5°	4261.9	4330.9	4316.6	4347.5	4307.1	4321.3	4240.5	4219.1	4204.9	4209.6
5°	4699.3	4839.5	4865.7	4918.0	4882.3	4882.3	4739.7	4632.7	4594.7	4566.2
7.5°	5143.8	5345.8	5478.9	5493.2	5474.2	5436.1	5229.3	5036.8	4967.9	4908.5
10°	5538.4	5780.8	5930.6	6001.9	5966.2	5906.8	5650.1	5386.2	5303.0	5250.7
12.5°	5840.2	6054.2	6154.0	6201.5	6196.8	6175.4	5966.2	5681.0	5593.0	5512.2
15°	6035.1	6142.1	6104.1	6101.7	6135.0	6220.5	6156.4	5932.9	5830.7	5757.0
17.5°	6161.1	6058.9	5890.1	5811.7	5883.0	6085.1	6232.4	6106.5	6013.8	5932.9
20°	6206.3	5842.6	5597.8	5452.8	5536.0	5828.3	6192.0	6232.4	6154.0	6087.4
22.5°	6154.0	5578.8	5246.0	5074.8	5155.7	5505.1	6073.2	6334.6	6282.3	6218.2
25°	6025.6	5303.0	4903.7	4749.2	4837.1	5193.7	5861.6	6429.7	6432.1	6379.8
27.5°	5866.4	5048.7	4663.6	4518.6	4604.2	4937.0	5654.8	6512.9	6596.1	6577.1
30°	5704.7	4896.6	4549.5	4447.3	4511.5	4806.2	5443.3	6598.5	6764.9	6798.2
32.5°	5631.1	4970.3	4818.1	4863.3	4780.1	4882.3	5367.2	6719.7	6969.3	7024.0
35°	5728.5	5623.9	6009.0	6187.3	5892.5	5505.1	5464.7	6902.7	7256.9	7337.7
37.5°	6201.5	7024.0	7599.2	8226.7	7715.7	6862.3	5947.2	7214.1	7668.1	7796.5
40°	7230.8	8245.7	9284.5	10095.0	9322.5	8174.4	6864.7	7677.6	8233.8	8350.3
42.5°	8200.6	9391.4	10822.4	11870.6	10867.5	9246.4	7853.5	8457.3	8980.2	9044.4
45°	9151.4	10515.7	12683.5	14140.6	12778.6	10266.2	8863.7	9774.1	10168.7	10171.1
47.5°	10266.2	11782.7	15017.7	17092.8	15314.9	11395.2	9812.2	11858.7	12407.8	12139.2
50°	11599.6	13042.5	17420.9	20527.6	18407.3	12783.4	11017.3	14399.7	15148.5	14844.2
52.5°	13384.8	14430.6	20068.8	23876.7	21777.9	14364.1	12764.4	17756.0	18003.2	17435.1
55°	15897.2	16434.4	23467.9	28012.7	25540.6	16310.8	15319.6	21968.0	21276.3	19648.1
57.5°	21618.6	19605.3	27832.0	32731.0	29797.8	19847.8	20919.8	26612.6	24152.5	21407.0
60°	26405.8	23456.0	31870.5	37413.6	33446.4	23746.0	26177.6	27420.8	24045.5	21212.1
62.5°	24791.9	24437.7	33327.6	37929.4	34692.0	25664.2	25200.7	25383.7	22476.7	19916.7
65°	21751.7	22543.2	32027.4	35483.5	33310.9	23945.7	22795.2	23501.2	20682.1	18103.1
67.5°	19957.1	20539.5	29714.6	31568.6	30800.9	22086.9	20924.5	20413.5	17896.3	15704.7
70°	18122.1	18604.6	26467.6	26655.4	26886.0	18996.8	17109.5	15588.2	13339.6	11806.4
72.5°	15659.5	15685.7	22362.6	21273.9	21711.3	14865.6	13772.2	11654.3	9709.9	8319.4
75°	13137.5	12419.7	17701.3	14870.4	15747.5	11564.0	11435.6	8782.9	7323.5	6182.5
77.5°	10016.6	9177.5	12930.8	9778.9	11060.1	7701.4	8597.5	5956.7	5153.3	4114.5
80°	6724.5	6201.5	7145.2	5519.3	7235.5	5307.8	5607.3	3375.3	2926.1	2270.0
82.5°	3546.4	3028.3	4416.4	3273.1	4364.1	2916.5	2103.6	1043.5	889.0	717.8
85°	1373.9	1590.2	2165.4	1164.7	1692.4	1041.1	608.5	259.1	216.3	164.0
87.5°	266.2	411.2	225.8	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			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

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

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

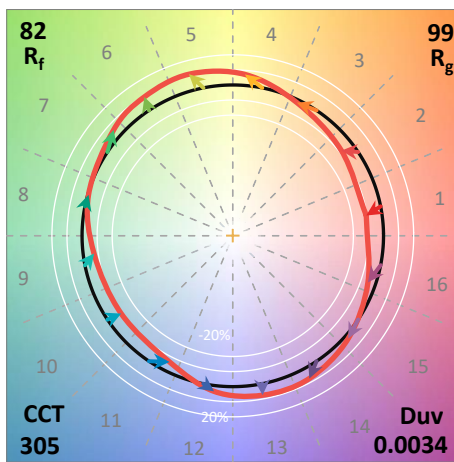
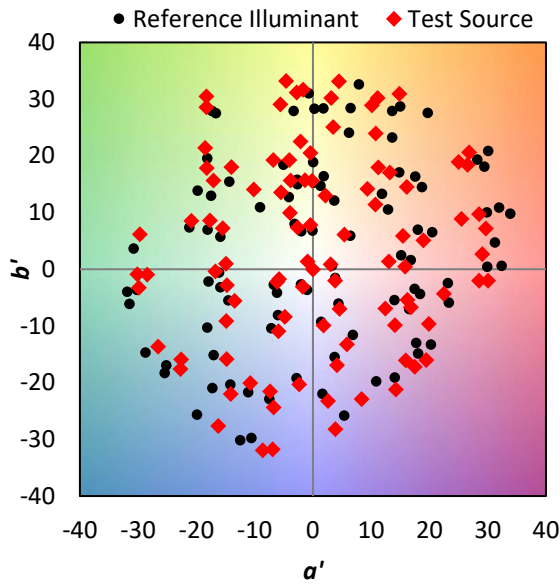
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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

Summary

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



Color Vector Graphics



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

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)