

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: P634046

Luminaire Tested: GWS-SA2F-830-U-T3R-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P634046  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2F-830-U-T3R-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11298.5 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 124.5  
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

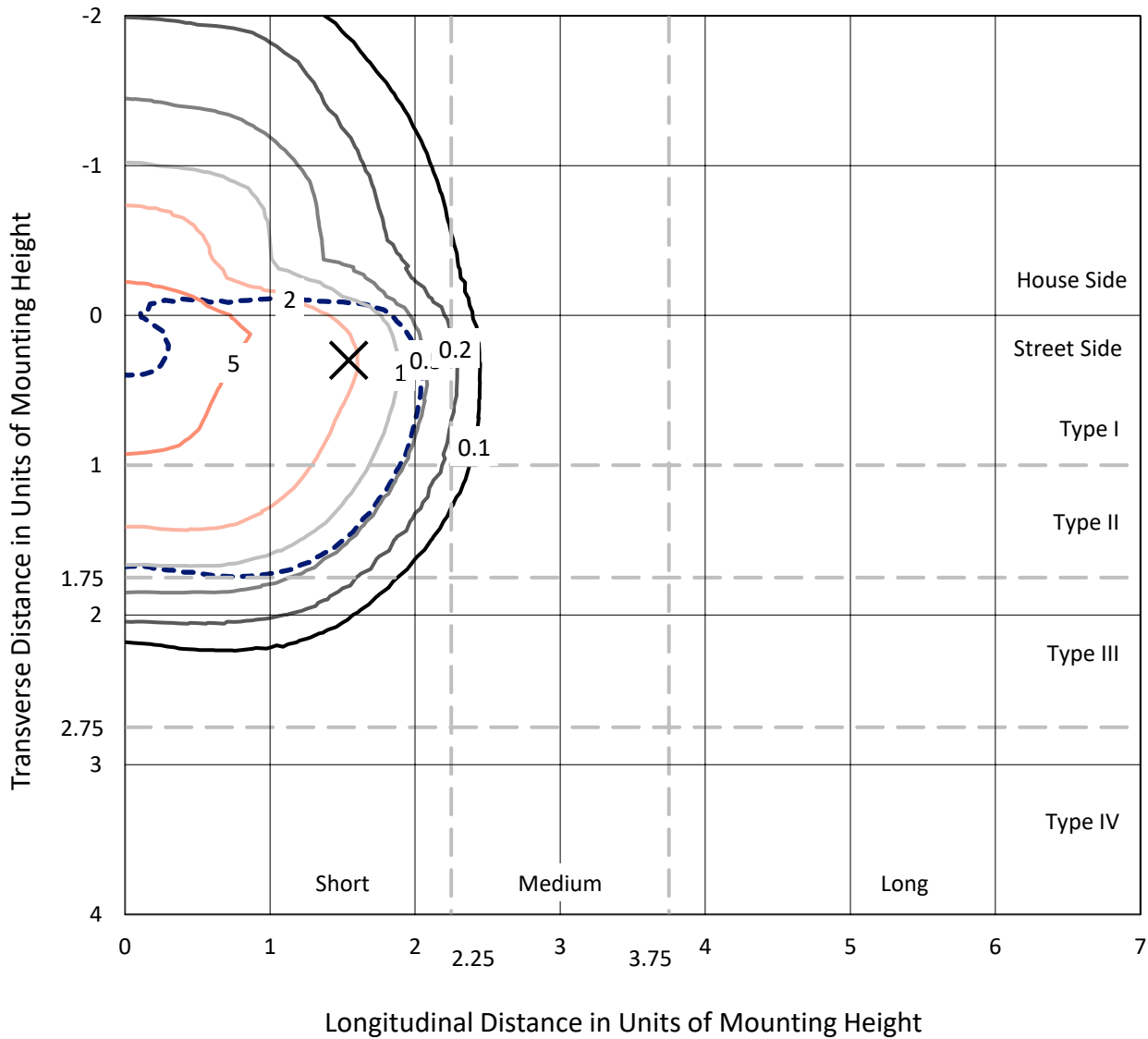


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### Iso-Footcandle Lines of Horizontal Illumination

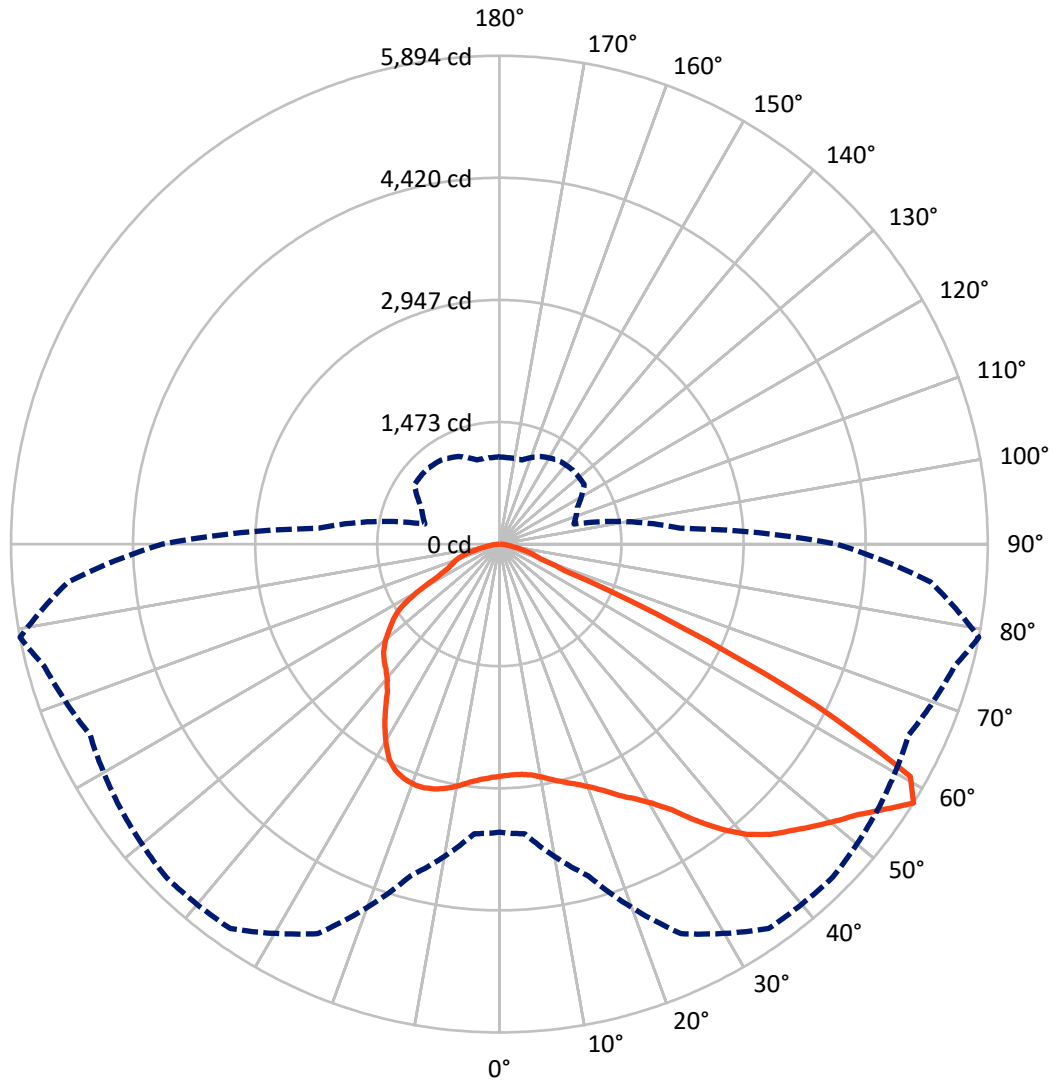
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.1 fc  
 Type II - Short - N/A

REPORT NUMBER: P634046  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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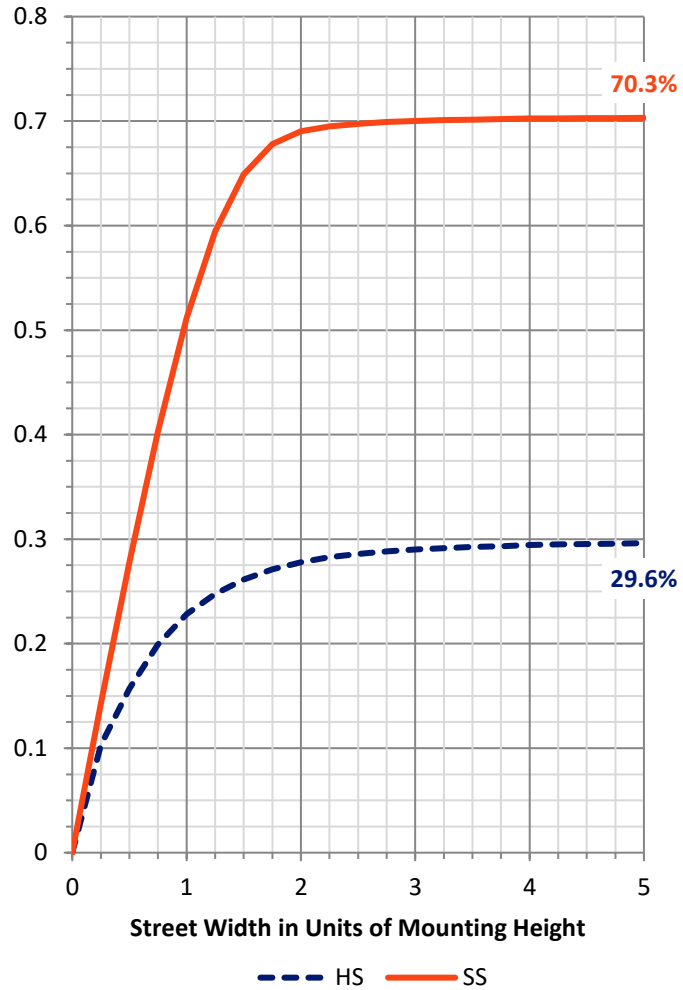
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3358.5	0.0	3358.5
	% Fixture	29.7	0.0	29.7
<b>Street Side</b>	Lumens	7940.0	0.0	7940.0
	% Fixture	70.3	0.0	70.3
<b>Total</b>	Lumens	11298.5	0.0	11298.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	259.3	2.3
10°-20°	720.6	6.4
20°-30°	1221.5	10.8
30°-40°	1869.6	16.5
40°-50°	2493.0	22.1
50°-60°	2879.2	25.5
60°-70°	1496.1	13.2
70°-80°	318.0	2.8
80°-90°	41.2	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°	11298.5	100.0
0°-180°	11298.5	100.0

**Coefficient of Utilization**



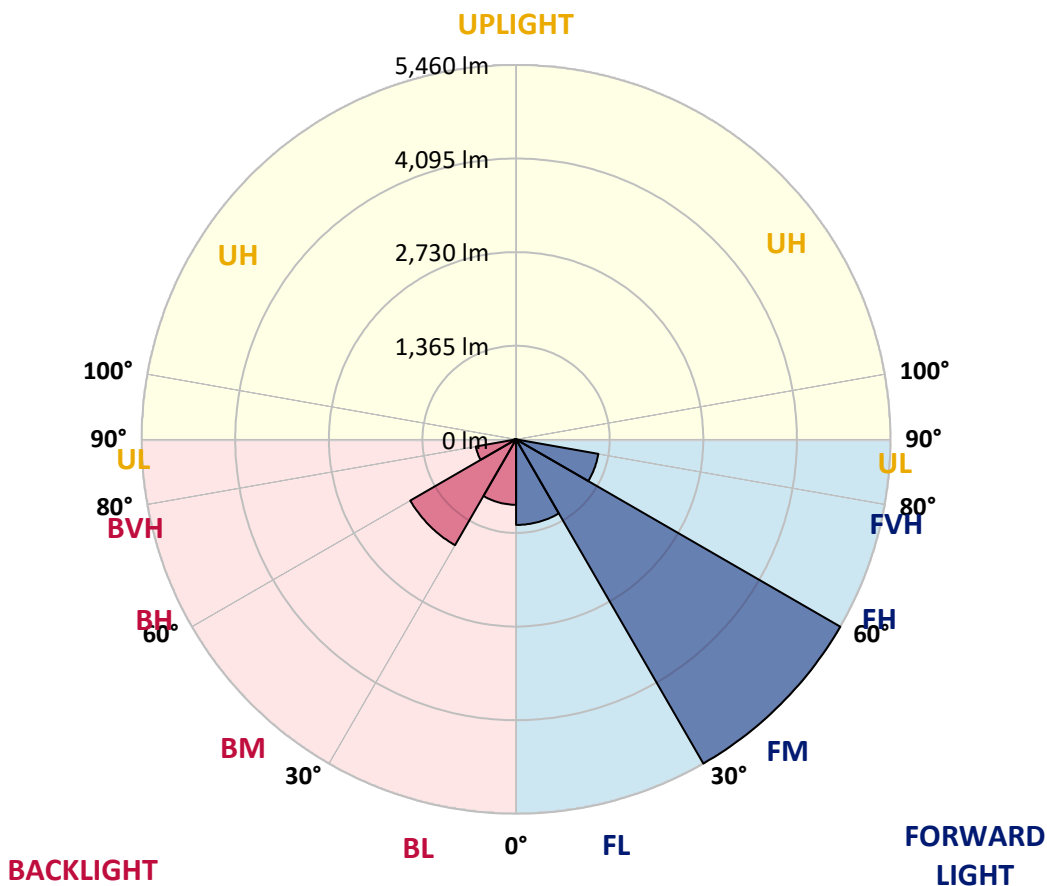
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1247.6	11.0			
FM (30°-60°)	5459.7	48.3			
FH (60°-80°)	1218.3	10.8			G1/1800
FVH (80°-90°)	14.4	0.1			G1/100
BL (0°-30°)	953.8	8.4	B2/1000		
BM (30°-60°)	1782.0	15.8	B2/2500		
BH (60°-80°)	595.9	5.3	B2/1000		G2/1000
BVH (80°-90°)	26.8	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type II Short





REPORT NUMBER: P634046

CATALOG NUMBER: GWS-SA2F-830-U-T3R-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2672.5	2667.0	2668.9	2676.2	2704.0	2724.3	2745.5	2764.9	2783.4	2788.9	2793.6
5°	2577.4	2567.2	2570.0	2582.0	2614.3	2648.5	2686.4	2732.6	2776.9	2791.7	2811.1
7.5°	2510.0	2508.1	2512.7	2531.2	2565.4	2597.7	2646.7	2712.3	2788.9	2813.9	2848.1
10°	2420.3	2416.7	2435.1	2473.0	2529.4	2581.1	2639.3	2716.9	2824.0	2861.0	2913.7
12.5°	2349.2	2347.4	2366.8	2419.4	2491.5	2573.7	2654.1	2740.9	2871.2	2922.0	2986.6
15°	2390.8	2382.5	2383.4	2420.3	2485.0	2582.0	2691.0	2784.3	2918.3	2982.9	3066.1
17.5°	2511.8	2497.0	2485.9	2492.4	2529.4	2630.1	2747.4	2842.5	2972.8	3048.5	3150.1
20°	2679.0	2670.7	2640.2	2619.9	2628.2	2716.9	2836.1	2924.7	3043.9	3128.9	3237.9
22.5°	2903.5	2883.2	2841.6	2809.3	2784.3	2853.6	2963.5	3040.2	3142.8	3231.4	3345.1
25°	3181.6	3152.0	3086.4	3035.6	2982.0	3053.1	3151.1	3209.3	3278.6	3360.8	3468.9
27.5°	3465.2	3440.2	3367.2	3298.9	3232.4	3276.7	3393.1	3426.4	3419.0	3479.0	3571.4
30°	3767.2	3735.8	3666.6	3592.6	3506.7	3535.4	3639.8	3656.4	3577.9	3627.8	3690.6
32.5°	4086.0	4055.5	3995.4	3909.5	3812.5	3823.6	3852.2	3867.9	3793.1	3821.7	3869.8
35°	4410.2	4381.6	4320.6	4235.6	4164.5	4097.0	4025.0	4087.8	4044.4	4099.8	4096.1
37.5°	4706.7	4678.1	4640.2	4574.6	4452.7	4319.7	4153.4	4231.0	4298.4	4368.6	4356.6
40°	4907.2	4887.8	4897.0	4886.9	4729.8	4466.6	4216.2	4301.2	4485.0	4605.1	4598.7
42.5°	5080.0	5060.6	5114.1	5152.9	4968.2	4602.4	4246.7	4328.0	4604.2	4791.7	4782.5
45°	5156.6	5151.1	5239.8	5362.6	5186.2	4746.5	4325.2	4383.4	4694.7	4934.9	4899.8
47.5°	5065.2	5084.6	5259.2	5467.0	5367.3	4917.4	4486.0	4500.7	4813.0	5090.1	4991.3
50°	4883.2	4925.7	5161.3	5469.8	5499.4	5110.4	4708.6	4671.6	4971.9	5255.5	5039.3
52.5°	4618.1	4662.4	5046.7	5448.6	5575.1	5334.0	5005.1	4952.5	5172.3	5420.8	5047.6
55°	4009.3	4069.3	4784.3	5400.5	5649.0	5537.2	5339.5	5232.4	5431.0	5648.1	5129.8
57.5°	3478.1	3509.5	4145.1	5187.1	5663.8	5686.9	5577.9	5450.4	5687.8	5893.8	5222.2
60°	2552.5	2559.8	3131.7	4292.0	5210.2	5600.1	5558.5	5369.1	5565.9	5697.1	4799.1
62.5°	1442.0	1443.0	1899.3	2864.7	3892.0	4564.5	4590.3	4423.1	4257.8	4296.6	3340.5
65°	541.3	592.2	867.4	1407.9	2243.9	2694.7	2801.9	2840.7	2565.4	2394.5	1791.2
67.5°	362.1	374.1	506.2	724.3	998.6	1152.9	1289.6	1293.3	946.0	843.4	705.8
70°	276.2	288.2	398.2	518.3	506.2	467.4	505.3	491.5	508.1	521.9	536.7
72.5°	206.0	218.0	308.5	365.8	303.9	299.3	339.0	376.9	412.0	426.8	449.9
75°	136.7	146.0	207.9	195.8	168.1	198.6	247.6	285.5	305.8	323.3	340.9
77.5°	86.8	93.3	110.9	89.6	93.3	116.4	144.1	178.3	197.7	215.2	224.5
80°	39.7	38.8	37.9	42.5	52.7	68.4	86.8	107.2	121.9	129.3	134.9
82.5°	15.7	17.6	19.4	23.1	28.6	37.0	49.0	62.8	74.8	76.7	81.3
85°	6.5	7.4	8.3	10.2	12.9	16.6	20.3	28.6	36.0	38.8	41.6
87.5°	0.0	0.0	0.0	0.0	0.9	1.8	2.8	4.6	8.3	9.2	10.2
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: P634046

CATALOG NUMBER: GWS-SA2F-830-U-T3R-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2818.5	2806.5	2826.8	2840.7	2853.6	2839.8	2835.1	2823.1	2821.3	2821.3	2827.7
5°	2844.4	2836.1	2857.3	2865.6	2864.7	2834.2	2815.7	2791.7	2779.7	2779.7	2781.6
7.5°	2890.6	2885.9	2898.0	2885.0	2855.5	2793.6	2732.6	2681.8	2647.6	2630.1	2635.6
10°	2967.2	2961.7	2951.5	2903.5	2818.5	2690.1	2565.4	2473.0	2417.6	2386.2	2388.0
12.5°	3042.1	3032.8	2996.8	2890.6	2716.0	2511.8	2348.3	2244.8	2183.9	2146.9	2138.6
15°	3124.3	3100.3	3022.7	2824.0	2548.8	2293.8	2122.9	2011.1	1945.5	1923.3	1922.4
17.5°	3202.8	3160.3	3019.9	2705.8	2348.3	2065.6	1893.8	1824.5	1813.4	1823.6	1826.3
20°	3282.3	3213.9	2989.4	2542.3	2110.0	1838.4	1749.7	1778.3	1819.9	1847.6	1854.1
22.5°	3364.5	3258.2	2920.1	2331.7	1858.7	1685.0	1722.0	1784.8	1836.5	1873.5	1877.2
25°	3456.8	3299.8	2816.7	2073.9	1657.3	1642.5	1715.5	1782.0	1837.4	1879.9	1887.3
27.5°	3509.5	3300.7	2671.6	1808.8	1564.9	1625.9	1699.8	1762.6	1818.0	1864.2	1872.5
30°	3561.2	3275.8	2441.6	1593.6	1538.1	1606.5	1673.0	1731.2	1783.9	1829.1	1839.3
32.5°	3634.2	3252.7	2176.5	1469.8	1522.4	1588.0	1642.5	1694.2	1734.9	1755.2	1760.8
35°	3724.8	3223.1	1894.7	1416.2	1512.3	1573.2	1621.3	1649.0	1596.3	1585.2	1597.2
37.5°	3851.3	3195.4	1613.9	1393.1	1505.8	1567.7	1610.2	1539.0	1474.4	1448.5	1457.8
40°	3988.0	3179.7	1423.6	1374.6	1508.6	1573.2	1564.0	1458.7	1365.4	1310.9	1309.0
42.5°	4104.4	3155.7	1301.6	1362.6	1516.0	1594.5	1501.2	1387.5	1249.0	1216.6	1217.6
45°	4183.0	3094.7	1237.0	1349.7	1522.4	1599.1	1471.6	1289.6	1190.8	1170.5	1169.5
47.5°	4215.3	2983.9	1195.4	1329.3	1521.5	1561.2	1411.6	1249.0	1150.1	1144.6	1148.3
50°	4194.0	2801.9	1152.9	1289.6	1499.3	1521.5	1342.3	1212.9	1122.4	1152.9	1175.1
52.5°	4115.5	2566.3	1102.1	1235.1	1459.6	1476.2	1307.2	1190.8	1102.1	1142.7	1160.3
55°	4095.2	2375.1	1037.4	1164.0	1400.5	1395.9	1270.2	1179.7	1088.2	1072.5	1075.3
57.5°	4068.4	2188.5	930.3	1036.5	1250.8	1258.2	1235.1	1166.8	1052.2	1047.6	1052.2
60°	3534.4	1677.6	829.6	894.2	1027.3	1067.0	1195.4	1142.7	994.0	974.6	973.7
62.5°	2308.6	1016.2	738.1	779.7	837.0	883.2	1090.1	1073.5	930.3	918.3	926.6
65°	1241.6	724.3	671.6	696.5	728.0	763.1	903.5	956.1	840.7	798.2	799.1
67.5°	634.6	616.2	621.7	639.3	663.3	680.8	728.9	775.1	716.9	680.8	679.9
70°	543.2	558.0	566.3	576.4	592.2	589.4	594.0	602.3	597.7	580.1	579.2
72.5°	462.8	485.9	487.8	489.6	495.2	482.2	473.9	460.1	461.0	463.7	464.7
75°	352.0	374.1	379.7	376.9	382.5	365.8	354.7	340.9	324.3	321.5	323.3
77.5°	229.1	246.7	255.0	253.1	255.9	243.0	237.4	222.6	203.2	195.8	195.8
80°	138.6	148.7	155.2	157.0	159.8	150.6	141.3	128.4	120.1	111.8	111.8
82.5°	84.1	90.5	95.2	95.2	97.9	87.8	80.4	71.1	67.4	60.0	60.0
85°	42.5	47.1	49.0	48.0	46.2	37.9	35.1	30.5	28.6	24.9	24.9
87.5°	10.2	12.9	12.9	9.2	9.2	4.6	2.8	0.9	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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



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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

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

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

**Test Information**

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

**Spectral Parameters**

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

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



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

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

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**CIE 1931 Chromaticity Diagram**



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

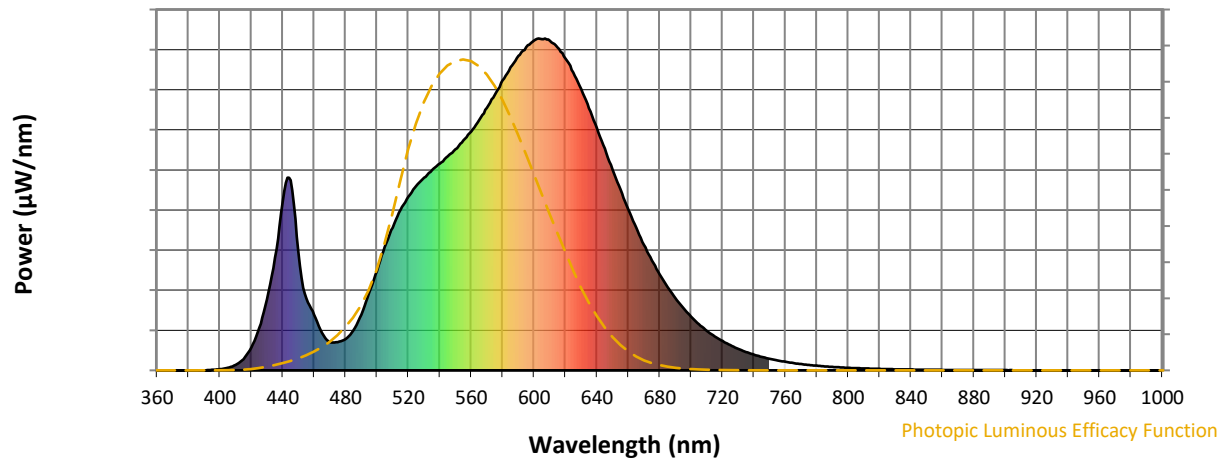


CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

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

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

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

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

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

**Summary**

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



**Color Vector Graphics**





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

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)