

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: P643424

Luminaire Tested: GWS-SA6E-830-U-SL3-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643424  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-33)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-SL3-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

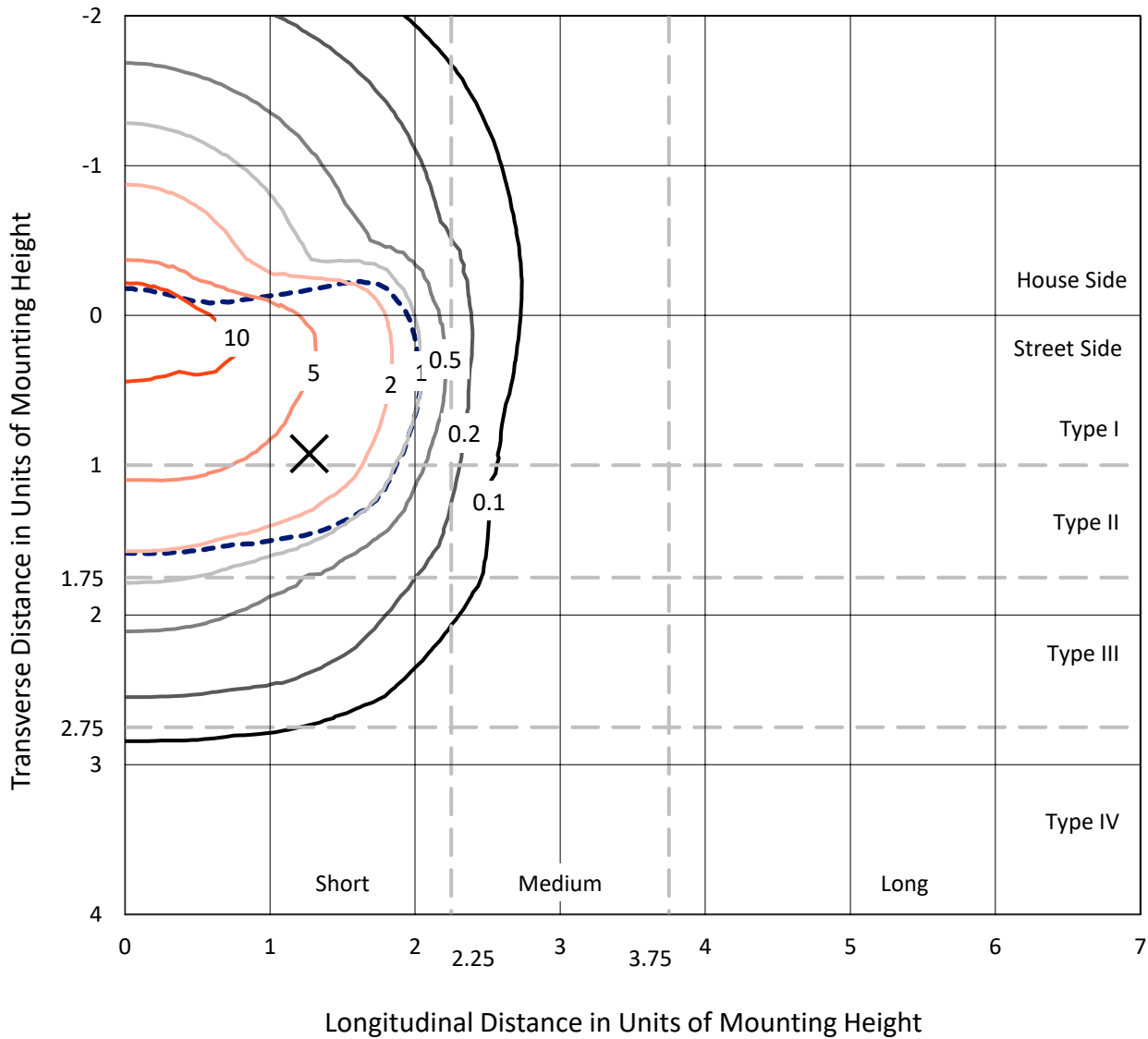
Lumens per Lamp: N/A  
Luminaire Lumens: 29780.1 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G3  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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



REPORT NUMBER: P643424  
 CATALOG NUMBER: GWS-SA6E-830-U-SL3-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

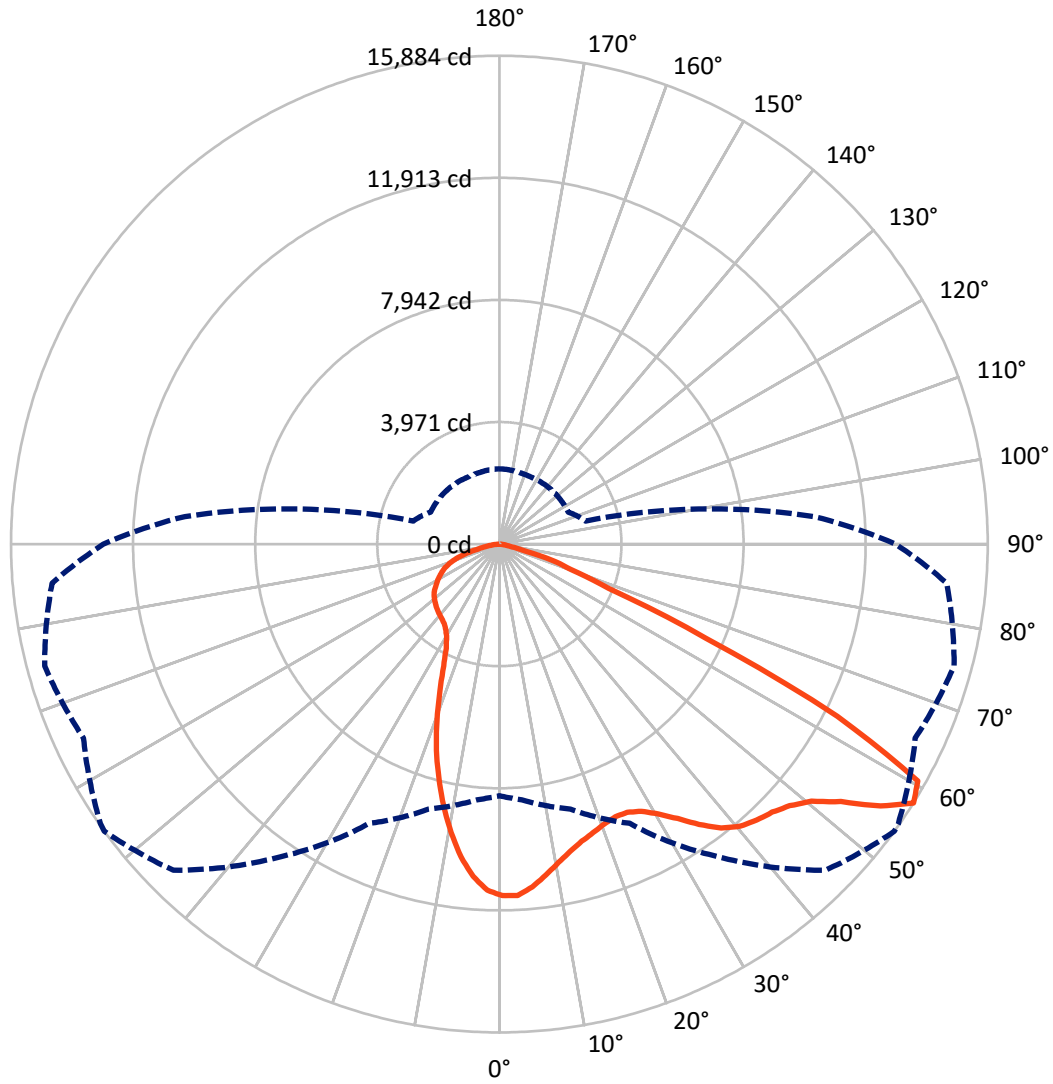
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 18.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8657.4	0.0	8657.4
	% Fixture	29.1	0.0	29.1
<b>Street Side</b>	Lumens	21122.7	0.0	21122.7
	% Fixture	70.9	0.0	70.9
<b>Total</b>	Lumens	29780.1	0.0	29780.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1005.0	3.4
10°-20°	2398.0	8.1
20°-30°	3318.5	11.1
30°-40°	4611.0	15.5
40°-50°	6089.7	20.4
50°-60°	7236.8	24.3
60°-70°	4009.3	13.5
70°-80°	998.4	3.4
80°-90°	113.5	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°	29780.1	100.0
0°-180°	29780.1	100.0

**Coefficient of Utilization**

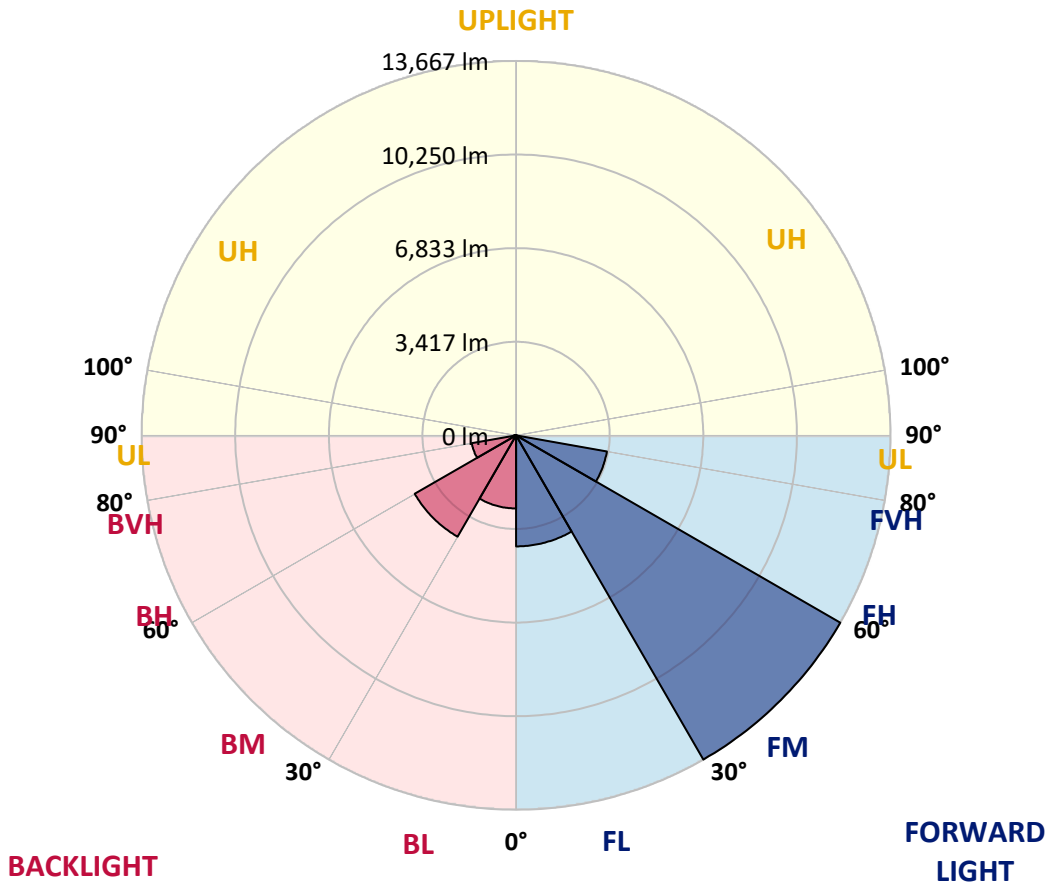


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4053.6	13.6			
FM (30°-60°)	13666.6	45.9			
FH (60°-80°)	3367.0	11.3			G2/5000
FVH (80°-90°)	35.5	0.1			G1/100
BL (0°-30°)	2667.9	9.0	B4/5000		
BM (30°-60°)	4270.9	14.3	B3/5000		
BH (60°-80°)	1640.6	5.5	B3/2500		G3/2500
BVH (80°-90°)	78.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G3**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3
2.5°	11219.1	11242.1	11257.4	11310.9	11356.8	11397.6	11440.9	11440.9	11438.4	11430.7	11415.4
5°	10775.6	10801.0	10836.7	10910.7	11010.1	11081.5	11198.7	11208.9	11259.9	11280.3	11270.1
7.5°	10260.6	10268.3	10314.1	10411.0	10569.1	10696.5	10864.8	10885.2	11007.5	11078.9	11066.2
10°	9697.2	9671.7	9753.3	9896.1	10102.6	10316.7	10533.4	10551.2	10747.5	10882.6	10872.4
12.5°	9182.3	9184.8	9266.4	9439.8	9697.2	9962.4	10253.0	10293.8	10535.9	10709.3	10691.4
15°	8751.5	8761.7	8861.1	9057.4	9350.5	9666.6	10028.6	10066.9	10372.8	10602.2	10551.2
17.5°	8407.3	8417.5	8504.2	8728.5	9042.1	9424.5	9865.5	9903.7	10283.6	10556.3	10451.8
20°	8170.3	8165.2	8249.3	8463.4	8787.2	9202.7	9722.7	9778.8	10255.5	10574.2	10385.5
22.5°	8073.4	8070.8	8132.0	8307.9	8611.3	9031.9	9636.1	9712.5	10286.1	10653.2	10344.7
25°	8121.8	8111.6	8165.2	8295.2	8537.3	8965.6	9661.5	9743.1	10416.1	10816.3	10352.4
27.5°	8272.2	8259.5	8305.4	8422.6	8606.2	9034.4	9840.0	9934.3	10691.4	11114.6	10454.4
30°	8501.7	8494.0	8539.9	8652.1	8812.7	9263.9	10181.6	10288.7	11117.2	11578.6	10676.1
32.5°	8769.3	8756.6	8838.1	8968.2	9154.3	9681.9	10640.4	10780.7	11621.9	12175.1	11048.3
35°	9070.1	9059.9	9172.1	9360.7	9628.4	10263.2	11196.2	11349.1	12136.8	12850.6	11542.9
37.5°	9363.3	9363.3	9580.0	9860.4	10196.9	10895.4	11718.8	11815.6	12493.7	13449.7	12073.1
40°	9623.3	9638.6	9964.9	10385.5	10813.8	11466.4	12062.9	12144.5	12651.8	13862.7	12534.5
42.5°	9911.4	9924.1	10304.0	10854.6	11364.4	11927.8	12272.0	12312.7	12682.4	14069.2	12860.8
45°	10140.8	10158.6	10630.3	11219.1	11843.7	12274.5	12437.6	12473.3	12725.7	14181.3	13097.9
47.5°	10260.6	10286.1	10826.5	11512.3	12167.4	12585.5	12710.4	12725.7	12904.2	14377.6	13383.4
50°	10240.2	10291.2	10900.5	11657.6	12407.1	12899.1	13148.9	13174.4	13268.7	14665.7	13717.4
52.5°	10421.2	10444.2	11058.5	11830.9	12748.7	13477.7	13911.1	13946.8	13903.5	14882.4	13916.2
55°	10120.4	10230.0	10862.2	11805.4	13268.7	14372.5	15040.4	15022.6	14479.6	15124.5	14247.6
57.5°	8185.5	8346.1	8924.8	10021.0	12412.2	14999.6	15884.2	15840.9	14925.7	15310.6	14607.0
60°	5666.9	5692.4	6215.0	6992.5	9580.0	13250.9	15636.9	15731.2	15007.3	15076.1	13941.7
62.5°	4532.5	4524.9	4573.3	4593.7	6092.6	9314.9	12343.3	12687.5	12468.2	11746.8	9880.8
65°	3869.7	3897.8	4040.5	3966.6	3976.8	5246.3	7374.9	7423.3	7270.4	7010.4	5225.9
67.5°	3028.5	3076.9	3329.3	3617.3	3525.6	3377.7	3826.4	3803.4	2997.9	2319.8	1917.0
70°	1896.6	1927.2	2197.4	2839.8	3069.3	2773.6	2460.0	2449.8	1606.0	1320.5	1448.0
72.5°	1106.4	1111.5	1187.9	1583.1	2036.8	1896.6	1809.9	1743.7	1032.4	1052.8	1154.8
75°	609.3	609.3	606.7	683.2	803.0	711.2	688.3	670.4	690.8	782.6	859.1
77.5°	127.5	130.0	137.7	181.0	234.5	285.5	359.4	362.0	451.2	522.6	583.8
80°	58.6	61.2	76.5	96.9	124.9	165.7	219.2	221.8	272.8	328.8	369.6
82.5°	30.6	33.1	40.8	51.0	66.3	86.7	122.4	122.4	163.2	193.7	219.2
85°	10.2	10.2	15.3	20.4	28.0	35.7	48.4	48.4	71.4	94.3	109.6
87.5°	0.0	0.0	0.0	0.0	2.5	5.1	10.2	10.2	12.7	15.3	25.5
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: P643424

CATALOG NUMBER: GWS-SA6E-830-U-SL3-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3	11433.3
2.5°	11382.3	11303.2	11305.8	11321.1	11272.7	11198.7	11150.3	11089.1	11050.9	11043.2	11071.3
5°	11219.1	11127.4	11063.6	10997.3	10859.7	10696.5	10569.1	10464.6	10395.7	10370.2	10339.6
7.5°	10994.8	10875.0	10714.4	10528.3	10278.5	9987.8	9783.9	9592.7	9460.2	9421.9	9404.1
10°	10770.5	10597.1	10311.6	9964.9	9549.4	9156.8	8787.2	8504.2	8279.9	8152.4	8193.2
12.5°	10538.5	10324.3	9878.2	9345.4	8766.8	8175.4	7691.0	7221.9	6860.0	6679.0	6625.4
15°	10334.5	10043.9	9421.9	8700.5	7930.6	7186.3	6485.2	5781.6	5322.8	5073.0	5004.1
17.5°	10161.2	9783.9	8940.1	8042.8	7122.5	6062.0	5200.4	4547.8	4234.3	4096.6	4086.4
20°	9990.4	9529.0	8463.4	7334.1	6189.5	5001.6	4231.7	3925.8	3813.6	3765.2	3762.7
22.5°	9837.4	9261.3	7961.2	6625.4	5261.6	4203.7	3780.5	3647.9	3617.3	3617.3	3612.2
25°	9707.4	8993.7	7446.3	5873.4	4422.9	3742.3	3546.0	3489.9	3502.6	3525.6	3528.1
27.5°	9653.9	8784.6	6949.2	5101.0	3844.2	3474.6	3385.4	3377.7	3413.4	3449.1	3454.2
30°	9710.0	8641.9	6439.3	4361.7	3497.5	3311.4	3270.7	3285.9	3329.3	3365.0	3365.0
32.5°	9883.3	8570.5	5919.3	3821.3	3296.1	3196.7	3184.0	3199.3	3232.4	3252.8	3255.4
35°	10176.5	8598.5	5381.4	3456.7	3166.1	3112.6	3110.0	3120.2	3133.0	3145.7	3148.3
37.5°	10546.1	8723.4	4805.3	3245.2	3082.0	3051.4	3046.3	3043.8	3046.3	3046.3	3048.9
40°	10908.1	8912.1	4290.3	3120.2	3023.4	2997.9	2985.1	2967.3	2964.7	2959.6	2957.1
42.5°	11175.8	9057.4	3879.9	3031.0	2969.8	2939.3	2924.0	2895.9	2893.4	2890.8	2888.3
45°	11377.2	9179.7	3538.3	2944.4	2913.8	2885.7	2852.6	2827.1	2832.2	2837.3	2837.3
47.5°	11604.1	9286.8	3288.5	2862.8	2844.9	2816.9	2776.1	2758.3	2776.1	2793.9	2793.9
50°	11879.4	9437.2	3084.6	2781.2	2773.6	2740.4	2704.7	2697.1	2717.5	2743.0	2743.0
52.5°	12080.8	9567.2	2939.3	2699.6	2699.6	2656.3	2625.7	2623.1	2646.1	2671.6	2674.1
55°	12458.0	9870.6	2888.3	2605.3	2595.1	2562.0	2539.0	2521.2	2549.2	2572.2	2572.2
57.5°	12883.8	10273.4	2901.0	2470.2	2457.4	2447.3	2429.4	2409.0	2416.7	2442.2	2444.7
60°	11981.3	9493.3	2760.8	2335.1	2327.4	2322.3	2299.4	2263.7	2273.9	2294.3	2296.8
62.5°	8369.1	6309.3	2233.1	2166.8	2192.3	2189.8	2159.2	2118.4	2121.0	2149.0	2149.0
65°	4343.9	3413.4	1960.4	2013.9	2052.1	2036.8	1985.8	1950.2	1945.1	1980.7	1973.1
67.5°	1873.7	1863.5	1784.5	1853.3	1894.1	1860.9	1807.4	1748.8	1753.9	1766.6	1756.4
70°	1509.1	1555.0	1588.2	1662.1	1695.2	1634.1	1575.4	1542.3	1514.2	1511.7	1493.8
72.5°	1205.8	1269.5	1343.4	1419.9	1430.1	1368.9	1295.0	1264.4	1221.1	1218.5	1200.7
75°	907.5	961.1	1019.7	1080.9	1080.9	1022.2	973.8	958.5	907.5	892.2	876.9
77.5°	619.5	652.6	698.5	713.8	729.1	706.1	657.7	632.2	573.6	558.3	537.9
80°	390.0	413.0	441.0	451.2	466.5	438.5	400.2	372.2	331.4	318.7	308.5
82.5°	234.5	249.8	267.7	272.8	285.5	265.1	229.4	209.0	186.1	175.9	168.2
85°	119.8	127.5	137.7	140.2	137.7	117.3	104.5	94.3	79.0	76.5	71.4
87.5°	30.6	35.7	38.2	35.7	33.1	25.5	17.8	12.7	5.1	5.1	2.5
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

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**

$\lambda$ (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**

$\lambda$ (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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**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)