

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: P643446

Luminaire Tested: GWS-SA6E-830-U-T3-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643446  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-24)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T3-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

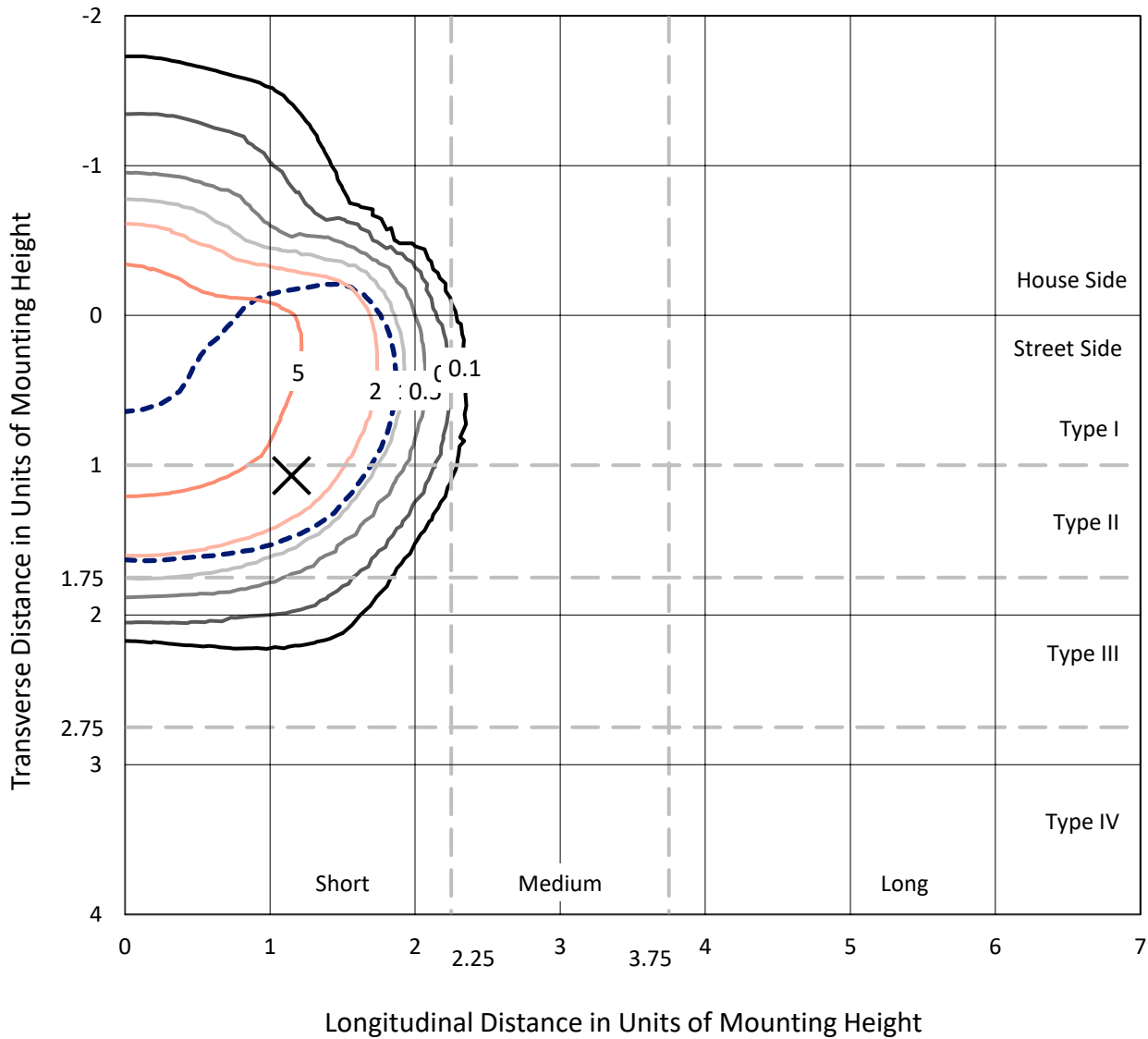
Lumens per Lamp: N/A  
Luminaire Lumens: 21959 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643446  
 CATALOG NUMBER: GWS-SA6E-830-U-T3-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

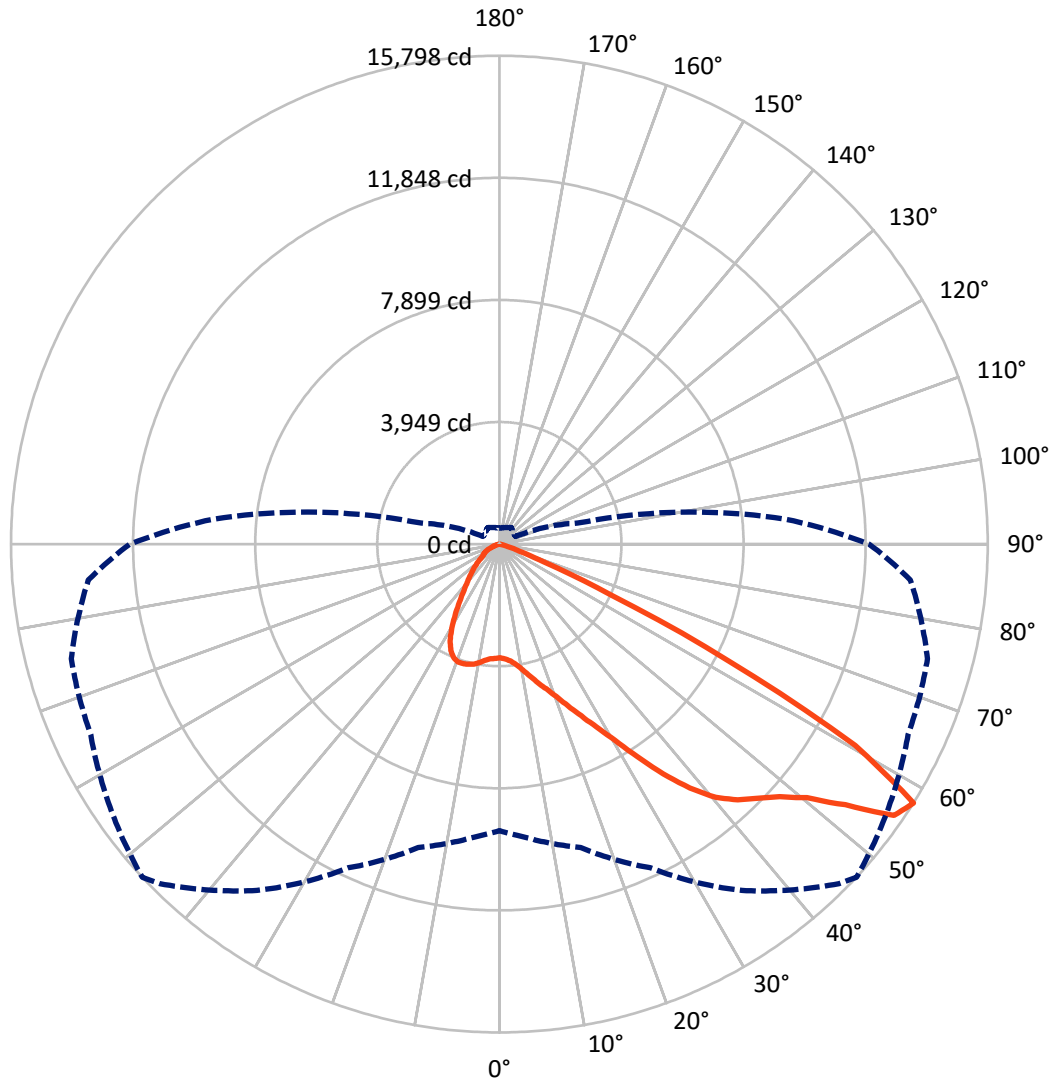
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4764.0	0.0	4764.0
	% Fixture	21.7	0.0	21.7
<b>Street Side</b>	Lumens	17195.0	0.0	17195.0
	% Fixture	78.3	0.0	78.3
<b>Total</b>	Lumens	21959.0	0.0	21959.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	365.7	1.7
10°-20°	1234.0	5.6
20°-30°	2291.3	10.4
30°-40°	3667.9	16.7
40°-50°	5361.6	24.4
50°-60°	6617.2	30.1
60°-70°	2211.1	10.1
70°-80°	206.0	0.9
80°-90°	4.3	0.0
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°	21959.0	100.0
0°-180°	21959.0	100.0

**Coefficient of Utilization**



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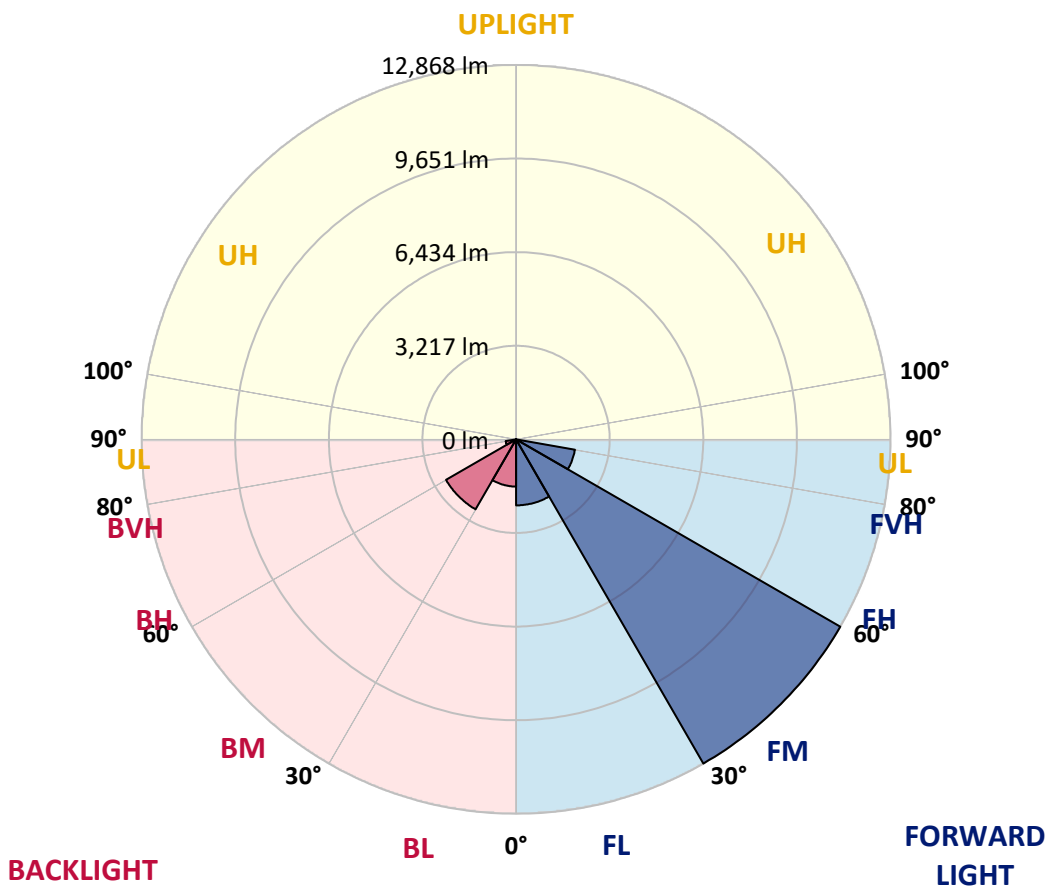
CATALOG NUMBER: GWS-SA6E-830-U-T3-W-GRSBK

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2269.4	10.3			
FM (30°-60°)	12867.8	58.6			
FH (60°-80°)	2054.9	9.4			G2/5000
FVH (80°-90°)	2.9	0.0			G0/10
BL (0°-30°)	1621.6	7.4	B3/2500		
BM (30°-60°)	2778.8	12.7	B3/5000		
BH (60°-80°)	362.2	1.6	B1/500		G1/500
BVH (80°-90°)	1.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0
2.5°	3714.2	3711.6	3709.1	3724.4	3719.3	3716.7	3721.8	3721.8	3721.8	3706.6	3676.0
5°	3803.4	3803.4	3800.9	3816.2	3803.4	3795.8	3798.3	3798.3	3788.1	3760.1	3721.8
7.5°	3943.6	3938.5	3933.4	3948.7	3936.0	3933.4	3938.5	3923.2	3905.4	3859.5	3806.0
10°	4145.0	4145.0	4137.4	4152.7	4142.5	4137.4	4137.4	4127.2	4094.0	4022.7	3943.6
12.5°	4422.9	4410.1	4392.3	4379.5	4374.4	4371.9	4374.4	4359.1	4323.5	4231.7	4122.1
15°	4726.2	4716.0	4688.0	4667.6	4639.6	4634.5	4649.8	4637.0	4601.3	4476.4	4320.9
17.5°	5108.6	5121.4	5050.0	5006.6	4925.1	4920.0	4925.1	4945.5	4920.0	4759.4	4532.5
20°	5434.9	5445.1	5391.6	5361.0	5287.1	5253.9	5264.1	5297.3	5269.2	5080.6	4764.5
22.5°	5784.2	5796.9	5740.8	5677.1	5643.9	5643.9	5682.2	5728.1	5689.8	5442.6	5029.6
25°	6202.2	6212.4	6166.5	6082.4	6023.8	6097.7	6153.8	6276.2	6212.4	5875.9	5343.1
27.5°	6681.5	6684.0	6617.7	6531.1	6500.5	6638.1	6694.2	6882.9	6857.4	6362.8	5674.5
30°	7193.9	7196.4	7181.1	7122.5	7094.5	7275.4	7351.9	7624.7	7606.8	6967.0	6125.8
32.5°	7726.7	7726.7	7754.7	7749.6	7782.7	8078.4	8200.8	8511.8	8494.0	7706.3	6686.6
35°	8262.0	8264.5	8313.0	8435.3	8573.0	8965.6	9126.2	9503.5	9462.7	8590.8	7402.9
37.5°	8871.2	8845.8	8912.0	9095.6	9401.5	9855.2	10008.2	10367.6	10321.7	9495.8	8338.5
40°	9605.4	9559.5	9559.5	9773.7	10120.4	10642.9	10773.0	10951.4	10795.9	10227.4	9256.2
42.5°	10416.1	10372.7	10316.7	10505.3	10795.9	11203.8	11310.8	11262.4	11134.9	10918.3	10301.4
45°	11236.9	11170.6	11208.9	11323.6	11491.8	11685.6	11726.4	11502.0	11443.4	11504.6	11165.5
47.5°	11861.5	11815.6	11909.9	12070.5	12208.2	12236.2	12208.2	11897.2	11892.1	12108.7	11764.6
50°	12070.5	12075.6	12335.6	12687.4	12909.2	12932.1	12893.9	12537.0	12488.6	12552.3	12088.4
52.5°	12090.9	12111.3	12491.1	13161.6	13765.7	14041.0	14010.5	13625.5	13151.4	13082.5	12577.8
55°	11598.9	11718.7	12249.0	13227.8	14512.7	15392.1	15494.1	14757.4	14053.8	13995.2	13630.6
57.5°	9271.5	9516.2	10156.1	11550.5	13679.1	15532.3	15797.5	15267.2	14586.6	14336.8	13347.7
60°	5542.0	5845.3	6459.7	8170.2	10411.0	12766.4	13222.8	13296.7	12983.1	12261.7	10240.2
62.5°	2378.4	2352.9	3110.0	4420.3	6192.0	8114.1	8320.6	8641.8	8914.6	8160.0	6215.0
65°	815.7	887.1	1233.8	1993.5	3099.8	3767.7	3951.3	4239.3	4626.8	3818.7	2276.4
67.5°	504.7	535.3	711.2	1177.7	1672.3	1646.8	1565.2	1519.3	1478.5	1012.0	624.6
70°	367.1	392.6	499.6	810.6	1124.2	790.3	685.7	555.7	616.9	568.5	443.6
72.5°	247.3	267.7	344.1	492.0	576.1	384.9	356.9	405.3	489.4	466.5	362.0
75°	147.9	160.6	196.3	239.6	234.5	198.8	201.4	285.5	374.7	349.2	257.5
77.5°	102.0	107.1	130.0	155.5	114.7	61.2	56.1	79.0	127.5	127.5	86.7
80°	25.5	33.1	33.1	20.4	17.8	15.3	15.3	22.9	35.7	25.5	12.7
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	5.1	5.1	5.1
85°	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	5.1	5.1	5.1
87.5°	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	5.1
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°	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0
2.5°	3693.8	3663.2	3683.6	3678.5	3693.8	3698.9	3676.0	3670.9	3673.4	3642.8	3632.6
5°	3729.5	3693.8	3704.0	3693.8	3711.6	3726.9	3719.3	3729.5	3742.2	3719.3	3709.1
7.5°	3806.0	3770.3	3767.7	3752.4	3777.9	3788.1	3785.6	3813.6	3839.1	3823.8	3808.5
10°	3938.5	3890.1	3885.0	3872.2	3879.9	3887.5	3859.5	3864.6	3887.5	3869.7	3862.1
12.5°	4101.7	4043.0	4030.3	3999.7	3999.7	3961.5	3900.3	3887.5	3905.4	3892.6	3879.9
15°	4277.6	4198.5	4178.2	4124.6	4073.6	4002.3	3938.5	3923.2	3936.0	3920.7	3910.5
17.5°	4473.9	4384.6	4318.4	4224.0	4111.9	4027.8	3956.4	3923.2	3902.8	3872.2	3869.7
20°	4667.6	4550.3	4438.2	4287.8	4139.9	4012.5	3895.2	3808.5	3734.6	3688.7	3670.9
22.5°	4891.9	4718.6	4537.6	4326.0	4114.4	3920.7	3714.2	3566.3	3438.9	3395.5	3375.2
25°	5131.6	4907.2	4637.0	4361.7	4027.8	3716.7	3436.3	3217.1	3048.9	2992.8	2969.8
27.5°	5396.7	5088.2	4739.0	4354.0	3849.3	3426.1	3054.0	2781.2	2615.5	2564.5	2582.3
30°	5733.2	5322.7	4866.4	4275.0	3581.6	3018.3	2582.3	2352.9	2228.0	2179.6	2182.1
32.5°	6181.8	5659.2	5052.5	4106.8	3237.5	2554.3	2171.9	2003.7	1919.6	1855.8	1850.7
35°	6824.2	6171.6	5225.9	3836.6	2819.4	2141.3	1863.5	1730.9	1613.6	1539.7	1552.5
37.5°	7594.1	6816.6	5320.2	3472.0	2350.4	1820.1	1631.5	1496.4	1363.8	1254.2	1267.0
40°	8506.7	7660.4	5312.6	2992.8	1922.1	1600.9	1437.8	1279.7	1114.0	1014.6	1024.8
42.5°	9523.8	8458.3	5146.9	2485.5	1593.3	1422.5	1251.7	1052.8	892.2	831.0	833.6
45°	10405.9	9105.8	4856.2	1960.3	1340.9	1249.1	1057.9	854.0	782.6	739.3	736.7
47.5°	11058.5	9579.9	4440.7	1542.3	1136.9	1091.1	869.3	764.8	708.7	673.0	667.9
50°	11423.0	9745.6	3981.9	1208.3	961.1	925.4	777.5	693.4	655.1	632.2	627.1
52.5°	11912.5	9944.5	3653.0	953.4	805.6	757.1	716.3	645.0	619.5	601.6	594.0
55°	12687.4	10329.4	3367.5	757.1	670.4	660.2	675.5	616.9	601.6	573.6	563.4
57.5°	11958.3	9279.1	2615.5	586.3	565.9	604.2	652.6	588.9	550.6	525.1	514.9
60°	8414.9	6169.1	1315.4	471.6	504.7	565.9	614.4	532.8	494.5	499.6	494.5
62.5°	4639.6	3087.1	591.4	395.1	438.5	499.6	525.1	461.4	435.9	479.3	486.9
65°	1516.8	1050.3	341.6	305.9	346.7	407.9	453.8	438.5	433.4	484.3	499.6
67.5°	466.5	346.7	232.0	219.2	239.6	300.8	382.4	474.2	509.8	525.1	532.8
70°	349.2	272.8	198.8	186.1	196.3	229.4	323.7	395.1	372.2	374.7	369.6
72.5°	280.4	216.7	170.8	163.1	163.1	158.1	170.8	214.1	242.2	254.9	254.9
75°	196.3	153.0	130.0	119.8	94.3	76.5	68.8	68.8	61.2	58.6	56.1
77.5°	66.3	56.1	51.0	40.8	28.0	22.9	20.4	17.8	12.7	7.6	5.1
80°	10.2	7.6	5.1	5.1	5.1	2.5	2.5	2.5	0.0	0.0	0.0
82.5°	5.1	5.1	5.1	5.1	5.1	2.5	2.5	0.0	0.0	0.0	0.0
85°	5.1	5.1	5.1	5.1	5.1	2.5	2.5	0.0	0.0	0.0	0.0
87.5°	5.1	5.1	5.1	5.1	2.5	2.5	2.5	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	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**



Point lies inside the ANSI 3000K 4-step quadrangle

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**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)