

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: P643450

Luminaire Tested: GWS-SA6E-830-U-T3R-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643450  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T3R-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

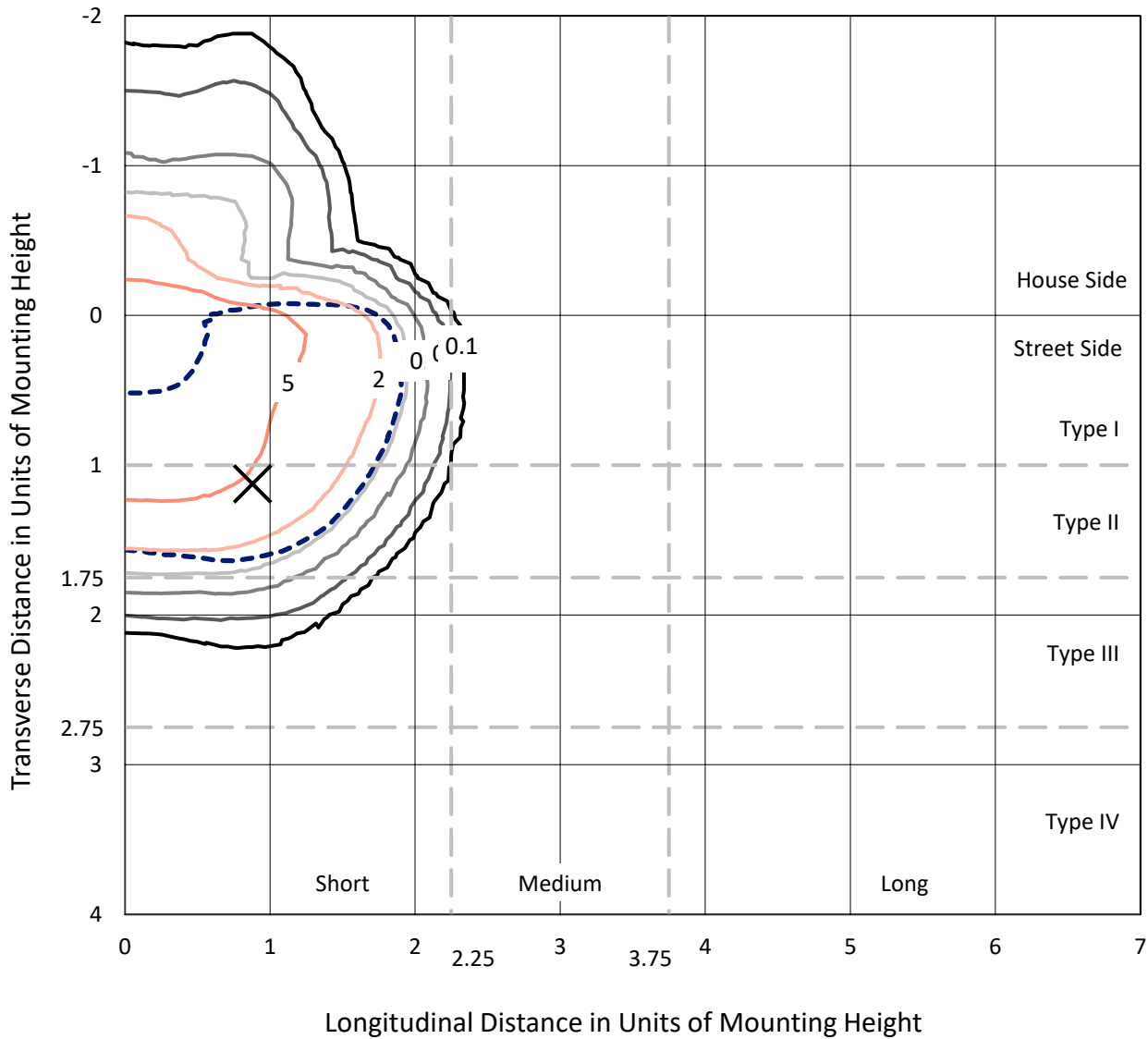
Lumens per Lamp: N/A  
Luminaire Lumens: 22303.2 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643450  
 CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

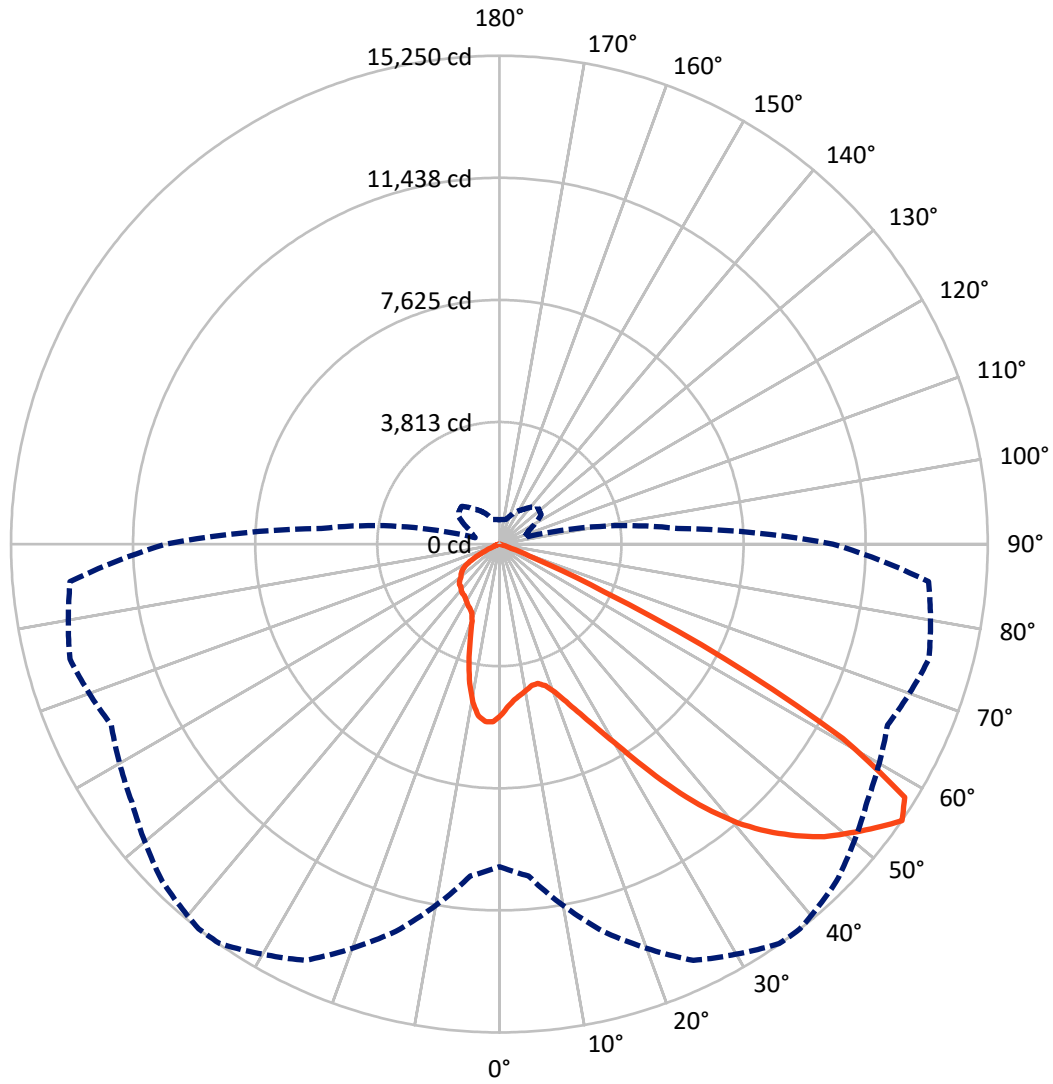
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 55-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4345.3	0.0	4345.3
	% Fixture	19.5	0.0	19.5
<b>Street Side</b>	Lumens	17957.8	0.0	17957.8
	% Fixture	80.5	0.0	80.5
<b>Total</b>	Lumens	22303.2	0.0	22303.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	494.5	2.2
10°-20°	1331.4	6.0
20°-30°	2284.7	10.2
30°-40°	3789.3	17.0
40°-50°	5570.4	25.0
50°-60°	6509.2	29.2
60°-70°	2206.4	9.9
70°-80°	112.8	0.5
80°-90°	4.4	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°	22303.2	100.0
0°-180°	22303.2	100.0

**Coefficient of Utilization**



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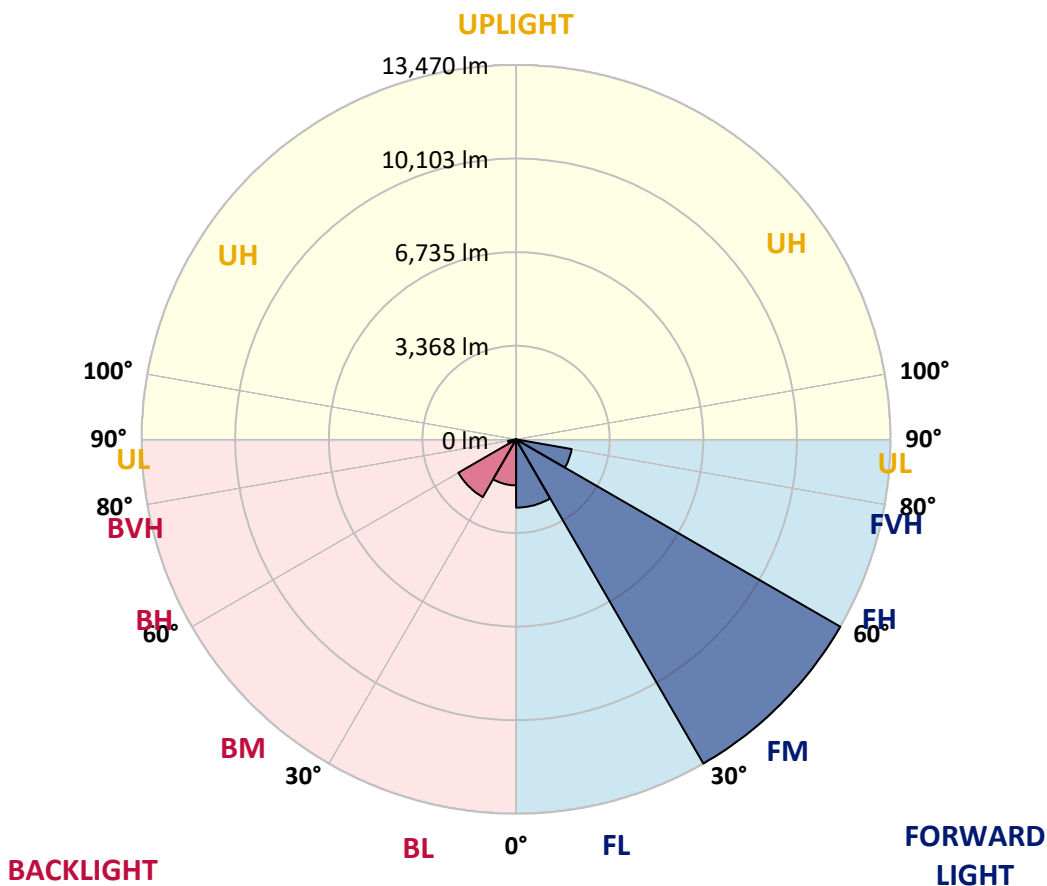
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2455.0	11.0			
FM (30°-60°)	13470.5	60.4			
FH (60°-80°)	2029.9	9.1			G2/5000
FVH (80°-90°)	2.3	0.0			G0/10
BL (0°-30°)	1655.5	7.4	B3/2500		
BM (30°-60°)	2398.5	10.8	B2/2500		
BH (60°-80°)	289.3	1.3	B1/500		G1/500
BVH (80°-90°)	2.1	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°	38°	45°	55°	65°	75°	85°
0°	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5
2.5°	4981.4	4971.2	4991.6	5032.4	5070.6	5083.3	5121.6	5175.1	5208.3	5287.3	5351.0
5°	4757.0	4751.9	4772.3	4808.0	4859.0	4876.9	4935.5	5024.7	5113.9	5251.6	5386.7
7.5°	4553.1	4550.5	4581.1	4660.2	4734.1	4757.0	4828.4	4938.0	5057.9	5269.4	5468.3
10°	4285.4	4288.0	4346.6	4458.8	4593.9	4639.8	4754.5	4912.5	5068.1	5340.8	5616.2
12.5°	4198.7	4203.8	4234.4	4321.1	4469.0	4527.6	4688.2	4927.8	5126.7	5442.8	5807.4
15°	4410.3	4410.3	4384.8	4395.0	4461.3	4514.8	4683.1	4978.8	5226.1	5565.2	5996.0
17.5°	4820.8	4805.5	4741.7	4655.1	4632.1	4650.0	4785.1	5088.4	5366.3	5707.9	6210.1
20°	5376.5	5381.6	5256.7	5075.7	4930.4	4927.8	5009.4	5282.2	5567.7	5878.7	6442.1
22.5°	6049.5	6029.1	5863.4	5616.2	5363.8	5343.4	5376.5	5577.9	5858.3	6149.0	6727.7
25°	6829.6	6819.4	6584.9	6253.5	5919.5	5871.1	5871.1	6069.9	6273.9	6533.9	7069.3
27.5°	7645.4	7645.4	7418.5	7036.1	6592.5	6505.9	6493.1	6727.7	6862.8	6913.8	7357.3
30°	8484.1	8473.9	8249.6	7857.0	7382.8	7293.6	7257.9	7431.3	7528.1	7375.2	7716.8
32.5°	9335.6	9353.5	9126.6	8762.0	8338.8	8280.2	8170.6	8170.6	8249.6	8035.5	8282.7
35°	10250.8	10245.7	10067.3	9820.0	9458.0	9391.7	9210.7	8927.7	9047.5	8953.2	9065.4
37.5°	11059.0	11097.2	11010.5	10827.0	10533.8	10467.5	10169.2	9656.8	9748.6	9896.5	9995.9
40°	11879.8	11910.4	11997.1	11938.5	11568.8	11446.5	10916.2	10074.9	10176.9	10684.2	10969.7
42.5°	12685.4	12700.7	12876.6	12973.5	12478.9	12264.8	11482.1	10329.9	10436.9	11301.1	11800.8
45°	13197.8	13231.0	13521.6	13817.3	13282.0	12988.8	11974.2	10656.2	10702.1	11729.4	12415.2
47.5°	13177.4	13253.9	13799.5	14337.4	13972.8	13656.7	12565.6	11178.8	11102.3	12132.2	12820.5
50°	12767.0	12858.8	13641.4	14495.4	14470.0	14176.8	13223.3	11935.9	11696.3	12489.1	12871.5
52.5°	11915.5	12180.7	13363.5	14515.8	14870.2	14722.3	14036.6	12955.7	12499.3	13001.5	12953.1
55°	10074.9	10401.2	12519.7	14342.5	15232.2	15250.0	14890.6	14018.7	13371.2	13883.6	13455.3
57.5°	7648.0	7908.0	9636.4	12767.0	14633.1	14926.3	15222.0	14579.6	13909.1	14485.2	13572.6
60°	4609.2	4910.0	6034.2	9368.8	11818.7	12318.3	13478.3	13353.4	12545.2	12792.5	11130.3
62.5°	1868.7	2026.7	2786.4	5162.4	7438.9	7905.4	9017.0	9205.6	9006.8	8754.4	6750.6
65°	683.2	747.0	1116.6	2133.8	3421.2	3592.0	4178.3	4512.3	4787.6	4076.4	2511.1
67.5°	423.2	464.0	726.6	1096.2	1244.1	1157.4	1177.8	1404.7	1340.9	828.5	448.7
70°	313.6	346.7	568.5	759.7	502.2	387.5	262.6	280.4	252.4	221.8	219.2
72.5°	216.7	247.3	425.7	448.7	193.7	137.7	96.9	135.1	153.0	150.4	155.5
75°	142.8	165.7	267.7	175.9	48.4	38.2	33.1	71.4	91.8	91.8	94.3
77.5°	84.1	96.9	94.3	35.7	10.2	10.2	7.6	12.7	20.4	22.9	28.0
80°	10.2	7.6	5.1	5.1	5.1	5.1	5.1	5.1	7.6	7.6	7.6
82.5°	2.5	2.5	2.5	5.1	5.1	5.1	5.1	5.1	5.1	7.6	7.6
85°	0.0	0.0	2.5	2.5	5.1	5.1	5.1	5.1	5.1	7.6	7.6
87.5°	0.0	0.0	2.5	2.5	5.1	5.1	5.1	5.1	5.1	7.6	7.6
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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CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5	5348.5
2.5°	5399.5	5381.6	5455.5	5509.1	5552.4	5572.8	5544.8	5542.2	5542.2	5486.1	5470.8
5°	5463.2	5470.8	5575.4	5621.3	5628.9	5603.4	5539.7	5496.3	5470.8	5412.2	5379.1
7.5°	5585.6	5611.1	5710.5	5702.8	5634.0	5516.7	5348.5	5218.5	5134.3	5042.6	4986.5
10°	5761.5	5809.9	5871.1	5764.0	5544.8	5246.5	4899.8	4652.5	4504.7	4400.1	4336.4
12.5°	5975.6	6024.0	6003.7	5751.3	5294.9	4762.1	4316.0	3959.1	3788.3	3694.0	3627.7
15°	6192.3	6222.9	6090.3	5598.3	4853.9	4137.6	3640.4	3286.1	3077.0	3000.6	2944.5
17.5°	6414.1	6406.4	6105.6	5297.5	4265.0	3433.9	2944.5	2702.3	2643.6	2630.9	2625.8
20°	6646.1	6577.3	6044.4	4866.7	3556.3	2738.0	2460.1	2475.4	2582.5	2633.4	2643.6
22.5°	6911.2	6737.9	5891.5	4282.9	2832.3	2281.6	2309.7	2460.1	2605.4	2674.2	2684.4
25°	7194.2	6885.7	5636.6	3533.4	2233.2	2098.1	2263.8	2437.2	2592.7	2676.8	2687.0
27.5°	7380.3	6921.4	5218.5	2778.8	1917.1	2026.7	2202.6	2368.3	2528.9	2620.7	2633.4
30°	7581.7	6906.1	4650.0	2141.4	1810.0	1965.5	2118.5	2268.9	2416.8	2518.7	2528.9
32.5°	7877.4	6895.9	3956.5	1738.6	1766.7	1917.1	2029.3	2154.2	2256.2	2314.8	2307.1
35°	8264.9	6883.2	3148.4	1567.8	1741.2	1878.9	1968.1	2026.7	1914.5	1878.9	1886.5
37.5°	8762.0	6913.8	2467.7	1496.5	1733.5	1868.7	1945.1	1776.9	1603.5	1537.2	1527.0
40°	9312.7	6992.8	1881.4	1468.4	1759.0	1894.1	1858.5	1580.6	1366.4	1236.4	1208.4
42.5°	9865.9	7079.5	1488.8	1458.2	1802.4	1965.5	1715.7	1437.8	1116.6	1042.7	1032.5
45°	10276.3	7064.2	1287.4	1440.4	1840.6	2006.3	1677.5	1233.9	996.8	963.6	966.2
47.5°	10482.8	6895.9	1177.8	1399.6	1855.9	1965.5	1583.1	1149.7	915.2	950.9	981.5
50°	10373.2	6460.0	1075.8	1320.5	1822.8	1912.0	1432.7	1086.0	874.4	1022.3	1091.1
52.5°	10240.6	5924.6	963.6	1198.2	1743.7	1838.1	1374.1	1068.2	848.9	986.6	1037.6
55°	10416.5	5585.6	780.1	1009.5	1588.2	1664.7	1328.2	1065.6	790.3	767.3	759.7
57.5°	10169.2	4910.0	558.3	726.6	1218.6	1318.0	1295.1	1047.8	701.1	698.5	708.7
60°	7859.6	2995.5	382.4	461.4	747.0	841.3	1175.2	1001.9	604.2	555.8	558.3
62.5°	4466.4	1274.7	262.6	285.5	382.4	453.8	897.4	910.1	558.3	530.3	558.3
65°	1555.1	456.3	203.9	191.2	211.6	242.2	515.0	703.6	507.3	458.9	464.0
67.5°	321.2	226.9	181.0	158.1	158.1	158.1	262.6	438.5	418.1	364.6	369.7
70°	203.9	193.7	158.1	135.1	130.0	119.8	150.4	242.2	288.1	265.1	267.7
72.5°	150.4	147.9	124.9	109.6	96.9	86.7	94.3	119.8	147.9	153.0	155.5
75°	91.8	94.3	81.6	68.8	61.2	53.5	56.1	56.1	56.1	51.0	56.1
77.5°	28.0	30.6	25.5	20.4	17.8	17.8	17.8	15.3	12.7	7.6	7.6
80°	7.6	7.6	7.6	7.6	7.6	5.1	5.1	2.5	2.5	0.0	0.0
82.5°	7.6	7.6	7.6	7.6	5.1	5.1	2.5	2.5	0.0	0.0	0.0
85°	7.6	7.6	7.6	7.6	5.1	5.1	2.5	2.5	0.0	0.0	0.0
87.5°	7.6	7.6	7.6	7.6	5.1	5.1	2.5	2.5	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

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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**

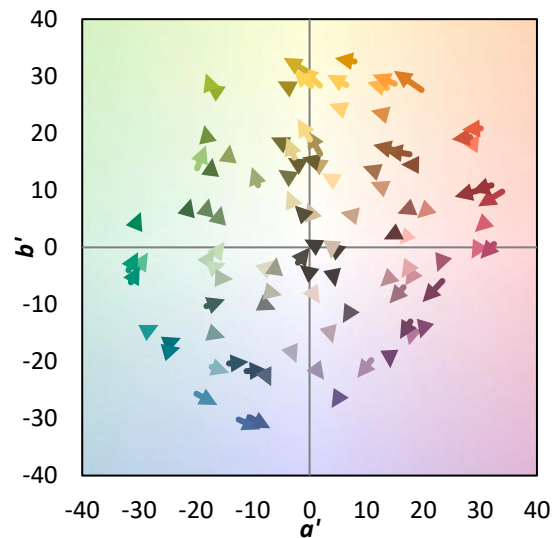
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)