

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: P643455

Luminaire Tested: GWS-SA6E-830-U-T4FT-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643455  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T4FT-W  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

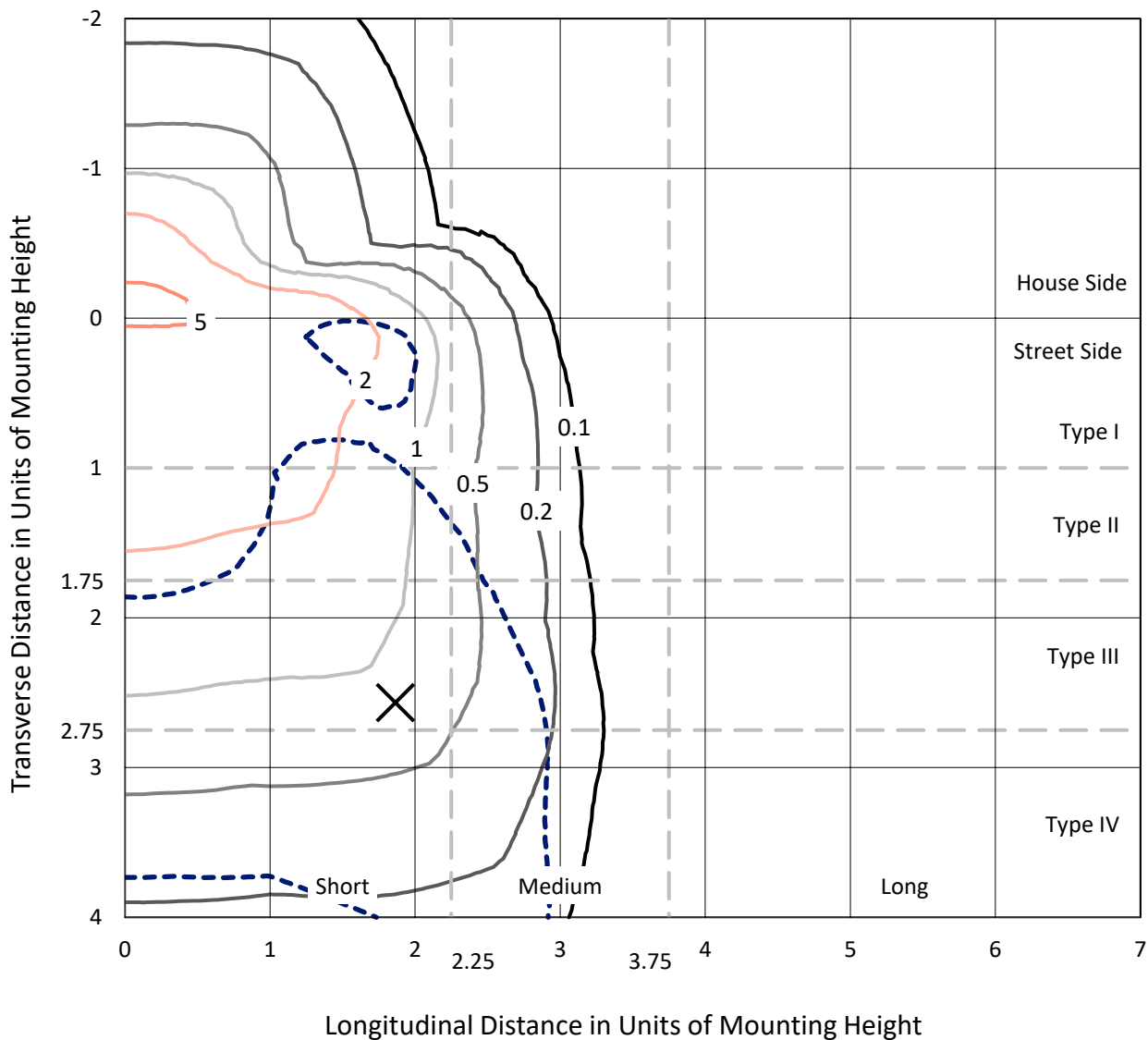
Lumens per Lamp: N/A  
Luminaire Lumens: 34348.3 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G5  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643455  
 CATALOG NUMBER: GWS-SA6E-830-U-T4FT-W

### Iso-Footcandle Lines of Horizontal Illumination

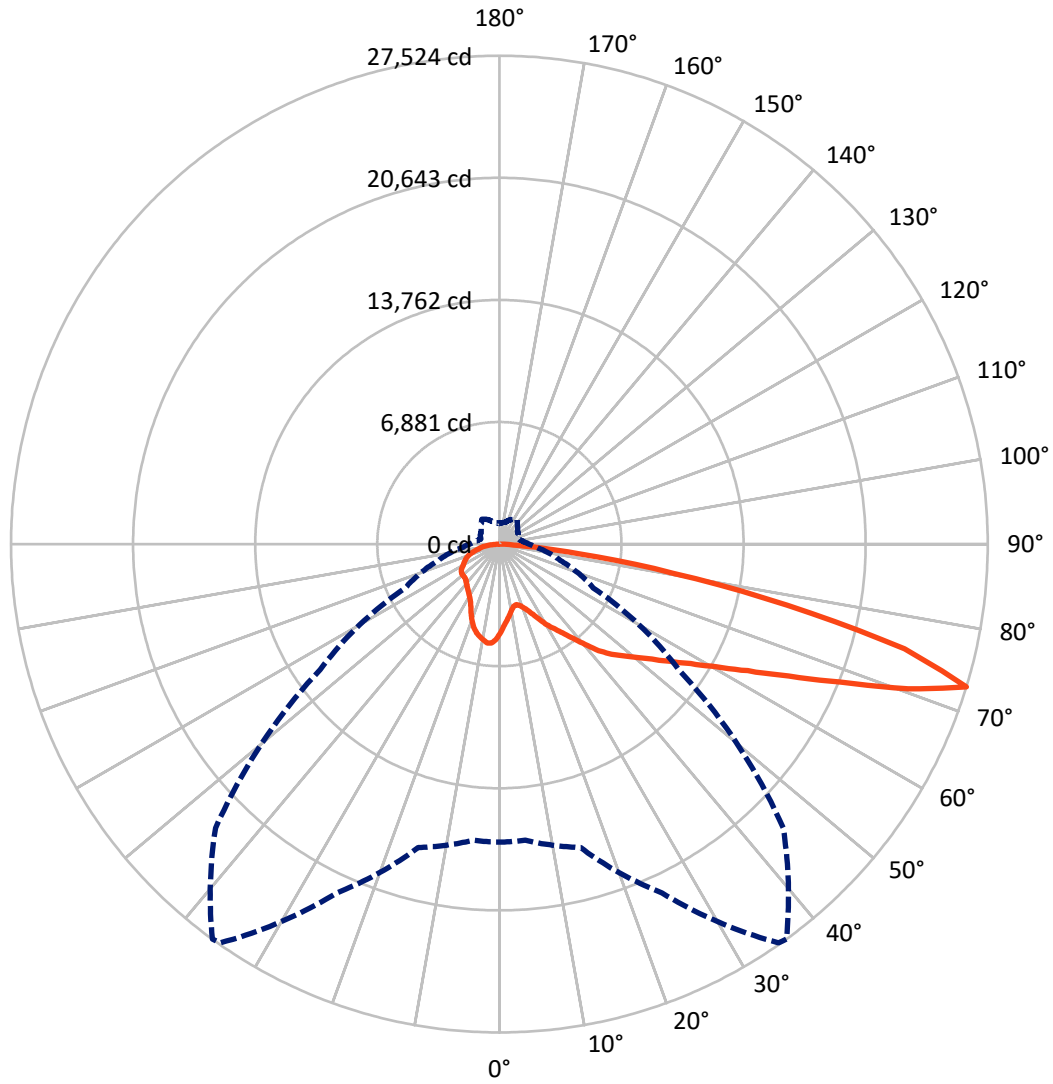
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7918.8	0.0	7918.8
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	26429.5	0.0	26429.5
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	34348.3	0.0	34348.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	469.9	1.4
10°-20°	1325.7	3.9
20°-30°	2195.6	6.4
30°-40°	3288.1	9.6
40°-50°	4797.1	14.0
50°-60°	6827.7	19.9
60°-70°	8626.3	25.1
70°-80°	6146.9	17.9
80°-90°	671.0	2.0
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°	34348.3	100.0
0°-180°	34348.3	100.0

**Coefficient of Utilization**



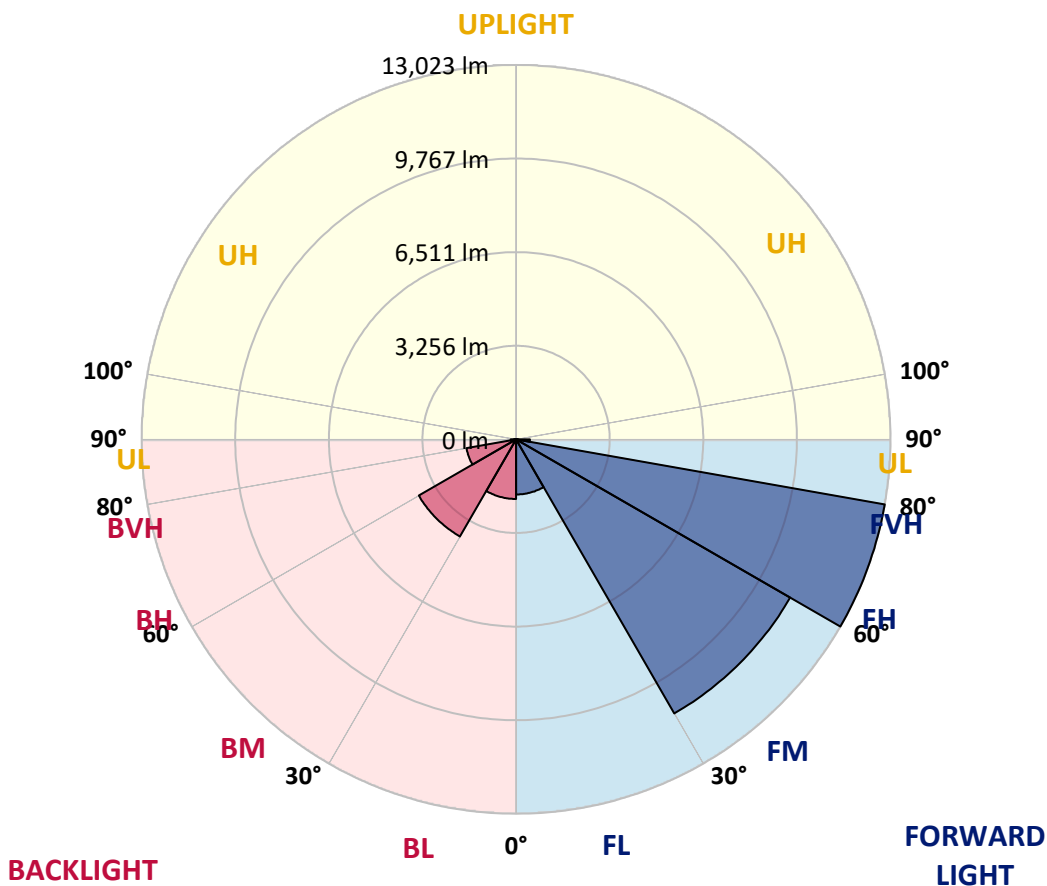
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1917.6	5.6			
FM (30°-60°)	11007.8	32.0			
FH (60°-80°)	13022.6	37.9			G5
FVH (80°-90°)	481.6	1.4			G3/500
BL (0°-30°)	2073.7	6.0	B3/2500		
BM (30°-60°)	3905.1	11.4	B3/5000		
BH (60°-80°)	1750.6	5.1	B3/2500		G3/2500
BVH (80°-90°)	189.4	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0
2.5°	4586.0	4578.4	4563.1	4609.0	4654.8	4649.7	4713.5	4774.7	4840.9	4909.8	5001.5
5°	4218.9	4213.8	4201.1	4269.9	4338.7	4336.2	4440.7	4540.1	4675.2	4823.1	5006.6
7.5°	3851.8	3839.1	3856.9	3943.6	4040.5	4050.7	4193.4	4356.6	4552.9	4774.7	5034.7
10°	3528.1	3525.5	3533.2	3630.1	3775.4	3785.6	3969.1	4196.0	4456.0	4751.7	5098.4
12.5°	3444.0	3438.9	3418.5	3466.9	3576.5	3591.8	3793.2	4071.1	4389.7	4764.5	5185.1
15°	3581.6	3568.9	3497.5	3474.6	3528.1	3540.8	3711.6	3997.1	4351.5	4787.4	5294.7
17.5°	3818.7	3811.1	3676.0	3581.6	3617.3	3627.5	3755.0	3984.4	4341.3	4833.3	5429.8
20°	4165.4	4132.3	3920.7	3777.9	3777.9	3793.2	3869.7	4040.5	4354.0	4889.4	5582.8
22.5°	4624.3	4558.0	4259.7	4066.0	4015.0	4035.4	4068.5	4180.7	4407.6	4983.7	5773.9
25°	5139.2	5078.0	4723.7	4450.9	4379.5	4387.2	4359.1	4379.5	4524.8	5113.7	6011.0
27.5°	5687.3	5646.5	5269.2	4922.5	4810.3	4810.3	4710.9	4662.5	4688.0	5261.6	6276.1
30°	6176.7	6120.6	5802.0	5422.2	5274.3	5274.3	5085.7	4981.1	4920.0	5442.5	6630.5
32.5°	6434.2	6401.0	6189.5	5898.9	5717.9	5689.8	5526.7	5404.3	5261.6	5710.2	7109.7
35°	6770.7	6763.0	6635.6	6408.7	6179.3	6138.5	6026.3	5929.4	5682.2	6044.2	7747.0
37.5°	7193.8	7181.1	7160.7	7025.6	6750.3	6742.6	6643.2	6526.0	6204.8	6526.0	8519.4
40°	7668.0	7645.1	7619.6	7617.0	7451.3	7423.3	7415.6	7283.1	6834.4	7107.2	9325.0
42.5°	8320.6	8241.6	8001.9	8109.0	8231.4	8205.9	8302.8	8103.9	7619.6	7798.0	10087.2
45°	9123.6	8929.9	8455.7	8486.3	8794.7	8845.7	9182.2	9133.8	8483.7	8595.9	10890.2
47.5°	9605.4	9437.1	8996.1	8970.6	9355.6	9419.3	10150.9	10242.7	9414.2	9557.0	11881.8
50°	10000.5	9883.3	9521.3	9557.0	9964.8	10028.6	11112.0	11308.3	10291.1	10541.0	13034.1
52.5°	10477.2	10309.0	10028.6	10196.8	10696.5	10772.9	12180.1	12391.7	11081.4	11621.8	14227.1
55°	10744.9	10676.1	10681.2	10938.6	11565.7	11670.2	13299.2	13263.5	11805.4	12547.2	15124.4
57.5°	11361.8	11336.3	11570.8	11667.7	12580.3	12715.4	14418.3	14112.4	12463.1	13263.5	15555.2
60°	12450.3	12386.6	12590.5	12738.4	13834.5	14025.7	15667.4	14943.4	12909.2	13796.3	15409.9
62.5°	13979.8	13900.8	13908.4	14143.0	15514.4	15715.8	17056.7	15636.8	13046.8	13877.9	14489.7
65°	15881.5	15766.8	15636.8	15955.5	17745.0	17913.2	18568.4	16141.6	12718.0	13092.7	12567.6
67.5°	17887.8	17793.4	17640.5	18308.4	20633.2	20735.2	20263.6	16098.2	11675.3	10992.2	8815.1
70°	18005.0	18028.0	18751.9	21168.6	24403.5	24429.0	21867.1	15226.4	9455.0	7125.0	4392.3
72.5°	16796.7	16758.5	17701.7	21691.2	27437.1	27523.7	22624.2	12335.6	5842.8	3553.6	2059.8
75°	13643.3	13709.6	14701.3	18978.8	23516.4	23592.9	18443.5	7272.9	2776.1	1738.6	1317.9
77.5°	5873.4	6243.0	8198.2	13370.6	16842.6	16605.5	9506.0	2946.9	1481.1	1238.9	1009.5
80°	1695.2	1840.5	2921.4	6357.7	10092.3	9913.8	3762.6	1103.8	1032.4	930.5	724.0
82.5°	548.1	606.7	1070.7	2531.4	4522.3	4517.2	1427.6	652.6	675.5	632.2	466.5
85°	153.0	175.9	328.8	767.3	1399.5	1371.5	413.0	308.5	359.4	364.5	232.0
87.5°	0.0	0.0	2.5	5.1	5.1	5.1	10.2	45.9	104.5	132.6	94.3
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: P643455  
 CATALOG NUMBER: GWS-SA6E-830-U-T4FT-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0	5027.0
2.5°	5057.6	5050.0	5154.5	5236.1	5312.5	5363.5	5378.8	5389.0	5409.4	5419.6	5409.4
5°	5093.3	5131.5	5304.9	5432.4	5534.3	5595.5	5598.0	5593.0	5608.2	5595.5	5587.9
7.5°	5169.8	5243.7	5462.9	5598.0	5664.3	5666.9	5605.7	5534.3	5498.6	5468.0	5457.8
10°	5271.8	5381.4	5621.0	5710.2	5689.8	5595.5	5460.4	5348.2	5284.5	5238.6	5228.4
12.5°	5412.0	5534.3	5761.2	5758.6	5631.2	5462.9	5304.9	5169.8	5078.0	5024.5	5006.6
15°	5544.5	5700.0	5863.2	5743.4	5542.0	5338.0	5134.1	4953.1	4830.7	4746.6	4731.3
17.5°	5707.7	5873.4	5937.1	5694.9	5429.8	5167.2	4894.5	4657.4	4491.7	4392.3	4384.6
20°	5896.3	6044.2	5972.8	5610.8	5284.5	4940.4	4570.7	4305.6	4127.2	4030.3	4037.9
22.5°	6115.5	6222.6	5983.0	5496.1	5083.1	4619.2	4206.2	3951.3	3831.5	3780.5	3783.0
25°	6350.1	6418.9	5965.1	5340.6	4774.7	4226.6	3831.5	3714.2	3704.0	3691.2	3696.3
27.5°	6627.9	6612.6	5911.6	5121.3	4359.1	3770.3	3568.9	3599.5	3640.3	3635.2	3640.3
30°	7000.1	6854.8	5842.8	4818.0	3864.6	3387.9	3413.4	3500.1	3553.6	3558.7	3574.0
32.5°	7425.8	7122.5	5733.2	4405.0	3393.0	3173.8	3268.1	3372.6	3436.3	3449.1	3469.5
35°	7933.1	7428.4	5539.4	3890.1	3053.9	3046.3	3133.0	3204.3	3273.2	3278.3	3278.3
37.5°	8516.9	7734.3	5231.0	3321.6	2844.9	2936.7	3018.3	3033.6	3051.4	3036.1	3043.7
40°	9052.2	8030.0	4792.5	2804.1	2674.1	2839.8	2908.6	2857.7	2801.6	2763.3	2771.0
42.5°	9500.9	8231.4	4211.3	2442.1	2500.8	2753.1	2806.7	2702.2	2592.5	2521.2	2531.4
45°	10005.6	8417.5	3528.1	2197.4	2352.9	2692.0	2727.6	2592.5	2452.3	2345.3	2330.0
47.5°	10701.6	8797.3	2921.4	2026.6	2248.4	2658.8	2717.4	2533.9	2350.4	2189.8	2171.9
50°	11560.6	9335.2	2414.1	1914.5	2200.0	2641.0	2714.9	2470.2	2250.9	2062.3	2049.6
52.5°	12498.7	9860.3	2039.4	1827.8	2151.5	2587.4	2702.2	2398.8	2146.4	1942.5	1927.2
55°	13123.3	10066.8	1787.0	1746.2	2072.5	2503.3	2651.2	2330.0	1988.4	1802.3	1779.3
57.5°	13306.8	9801.7	1611.1	1672.3	1970.5	2386.1	2554.3	2184.7	1891.5	1743.7	1725.8
60°	12990.7	9133.8	1501.5	1611.1	1858.4	2235.7	2386.1	2100.5	1815.0	1682.5	1669.7
62.5°	12098.5	8103.9	1417.4	1547.4	1743.7	2077.6	2279.0	1998.6	1730.9	1626.4	1608.5
65°	10303.9	6645.8	1348.5	1481.1	1634.0	1927.2	2161.7	1896.6	1639.1	1560.1	1539.7
67.5°	7206.6	4667.6	1274.6	1402.1	1524.4	1781.9	2039.4	1802.3	1544.8	1486.2	1465.8
70°	3523.0	2475.3	1185.4	1310.3	1407.2	1634.0	1917.0	1687.6	1419.9	1386.8	1358.7
72.5°	1677.4	1384.2	1080.9	1185.4	1246.6	1437.8	1713.1	1521.9	1272.1	1200.7	1152.2
75°	1124.2	984.0	943.2	1037.5	1052.8	1205.8	1468.3	1312.8	1121.6	1040.1	999.3
77.5°	851.4	752.0	792.8	876.9	846.3	991.6	1208.3	1170.1	1012.0	938.1	917.7
80°	599.1	548.1	629.7	680.6	657.7	843.8	1088.5	1001.8	833.6	752.0	736.7
82.5°	377.3	367.1	464.0	471.6	479.3	667.9	894.8	787.7	647.5	532.8	494.5
85°	188.6	209.0	277.9	277.9	275.3	344.1	509.8	443.6	349.2	277.9	270.2
87.5°	63.7	89.2	119.8	96.9	73.9	58.6	66.3	81.6	86.7	84.1	84.1
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		



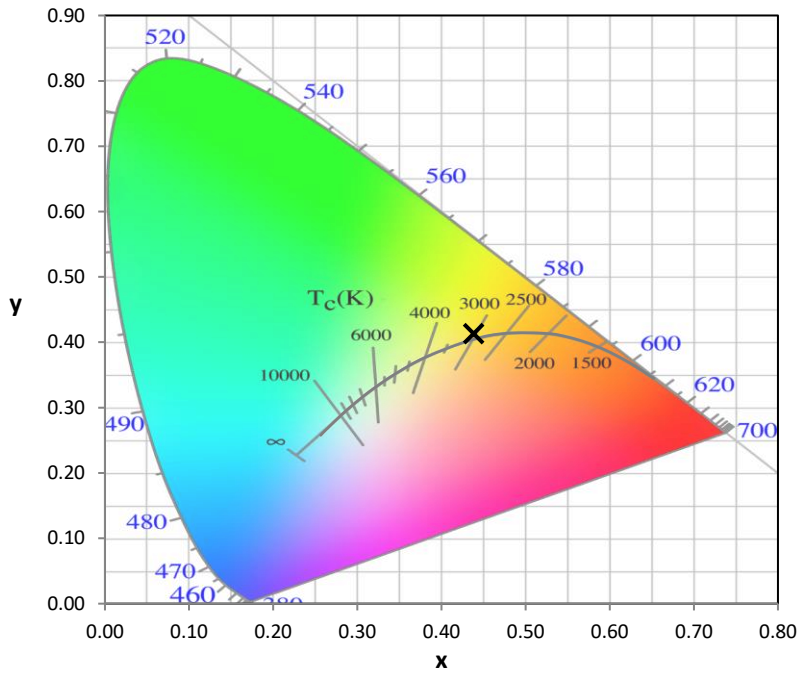
**Test Conditions**  
 Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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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**

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)