

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: P643918

Luminaire Tested: GWS-SA6F-830-U-SL3-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643918  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-32)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGF-830-U-SL3-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

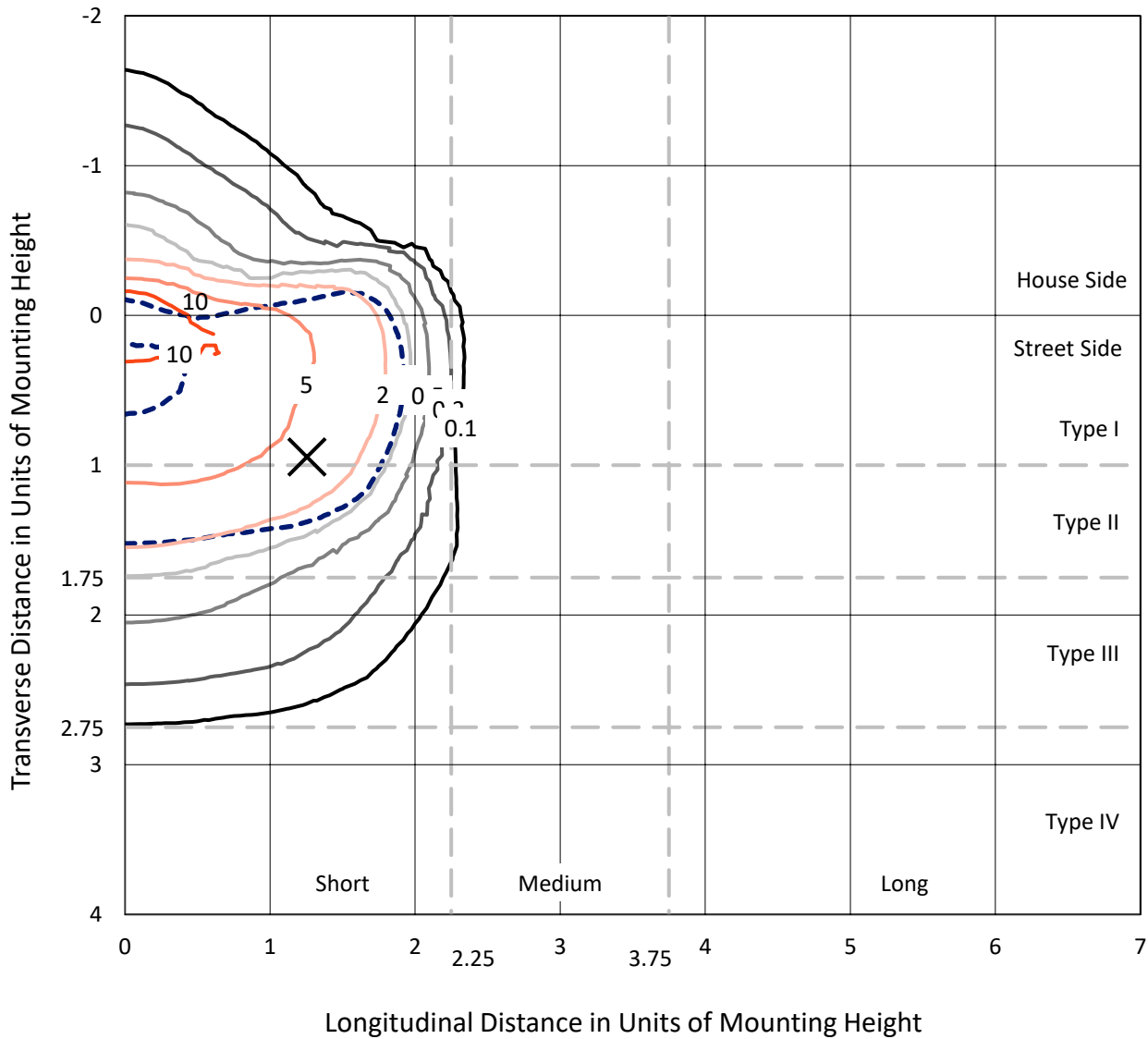
Lumens per Lamp: N/A  
Luminaire Lumens: 23124.9 lumens  
Efficiency: N/A  
Efficacy: 62.1 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 372.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643918  
 CATALOG NUMBER: GWS-SA6F-830-U-SL3-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

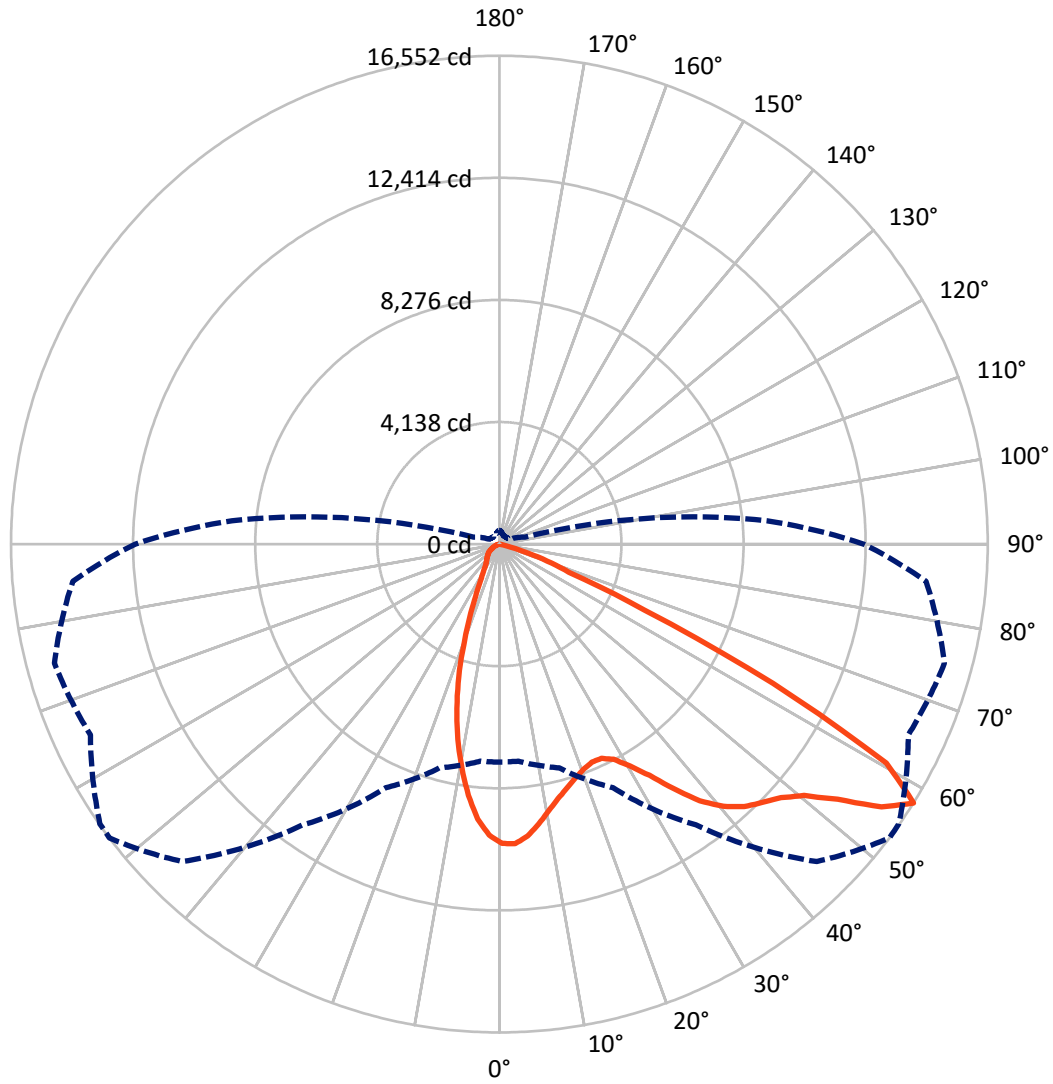
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 16.2 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3819.9	0.0	3819.9
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	19305.0	0.0	19305.0
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	23124.9	0.0	23124.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	867.9	3.8
10°-20°	1905.3	8.2
20°-30°	2482.2	10.7
30°-40°	3600.4	15.6
40°-50°	5195.1	22.5
50°-60°	6283.1	27.2
60°-70°	2560.7	11.1
70°-80°	230.1	1.0
80°-90°	0.0	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°	23124.9	100.0
0°-180°	23124.9	100.0

**Coefficient of Utilization**



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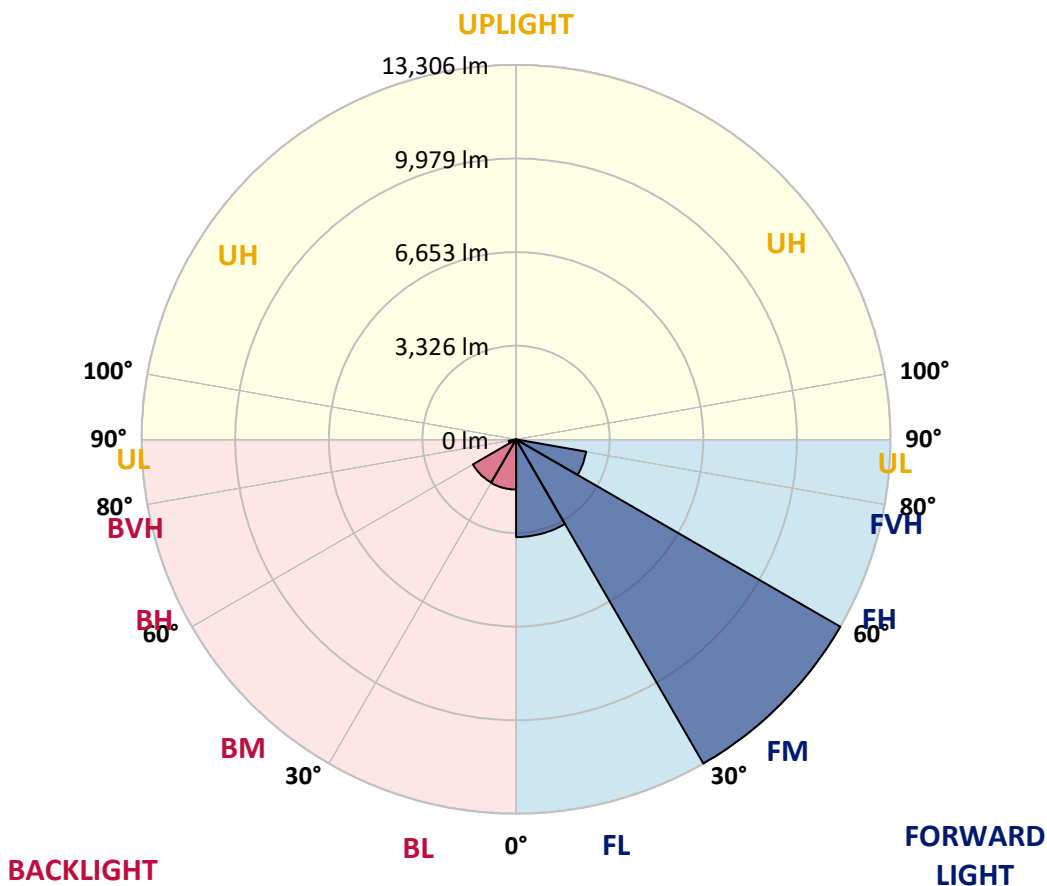
CATALOG NUMBER: GWS-SA6F-830-U-SL3-W-GRSBK

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3472.6	15.0			
FM (30°-60°)	13305.6	57.5			
FH (60°-80°)	2526.8	10.9			G2/5000
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	1782.8	7.7	B3/2500		
BM (30°-60°)	1773.0	7.7	B2/2500		
BH (60°-80°)	264.1	1.1	B1/500		G1/500
BVH (80°-90°)	0.0	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°	53°	55°	65°	75°	85°
0°	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9
2.5°	10002.2	10024.9	10064.5	10115.6	10149.6	10166.6	10166.6	10214.8	10183.6	10158.1	10129.7
5°	9574.2	9596.9	9650.7	9732.9	9815.1	9874.6	9942.7	9993.7	10013.5	10013.5	9965.3
7.5°	8970.5	9001.7	9035.7	9149.1	9327.6	9460.8	9577.0	9650.7	9758.4	9792.4	9724.4
10°	8321.5	8352.6	8429.2	8585.0	8789.1	8987.5	9185.9	9279.4	9463.7	9560.0	9483.5
12.5°	7771.6	7785.8	7887.8	8074.9	8335.6	8607.7	8848.6	8945.0	9205.8	9350.3	9259.6
15°	7318.1	7326.6	7428.7	7635.6	7936.0	8270.4	8573.7	8672.9	8993.2	9211.4	9075.4
17.5°	6975.2	6978.0	7065.9	7289.8	7604.4	7975.7	8335.6	8457.5	8871.3	9134.9	8930.8
20°	6802.3	6793.8	6856.1	7051.7	7349.3	7720.6	8145.7	8295.9	8803.3	9123.6	8820.3
22.5°	6805.1	6785.3	6810.8	6949.7	7201.9	7550.5	8026.7	8196.7	8809.0	9171.7	8726.8
25°	6966.7	6938.3	6944.0	7017.7	7196.2	7513.7	8043.7	8225.1	8922.3	9333.3	8692.7
27.5°	7238.8	7207.6	7207.6	7244.4	7340.8	7629.9	8256.3	8463.2	9225.6	9647.9	8763.6
30°	7590.2	7559.0	7547.7	7584.5	7663.9	7930.3	8729.6	8945.0	9744.3	10163.7	8990.3
32.5°	7992.7	7955.8	7975.7	8026.7	8103.2	8471.7	9339.0	9625.2	10393.3	10858.1	9398.5
35°	8417.8	8386.6	8477.3	8587.9	8706.9	9222.8	10180.7	10430.2	11189.7	11722.6	10022.0
37.5°	8823.1	8809.0	8998.8	9231.3	9477.8	10124.1	11036.7	11229.4	11872.8	12663.6	10784.4
40°	9228.4	9225.6	9551.5	9959.7	10353.6	11022.5	11685.7	11844.5	12289.5	13394.8	11515.7
42.5°	9681.9	9681.9	10132.6	10676.7	11201.1	11782.1	12161.9	12232.8	12476.5	13817.1	12065.5
45°	10115.6	10141.1	10662.6	11294.6	11915.3	12374.5	12490.7	12496.4	12553.0	14066.5	12521.9
47.5°	10458.5	10481.2	11104.7	11833.1	12502.0	12825.1	12842.1	12816.6	12754.3	14304.6	12873.3
50°	10736.3	10770.3	11422.2	12193.1	12904.5	13258.8	13389.2	13363.6	13204.9	14559.7	13119.9
52.5°	10872.3	10920.5	11532.7	12371.6	13352.3	14001.4	14364.1	14423.7	13879.5	14701.4	13355.1
55°	9783.9	9854.8	10418.8	11566.7	13601.7	15149.2	15718.9	15707.6	14610.7	15123.7	13927.7
57.5°	7389.0	7383.3	7851.0	9106.6	11617.7	15214.4	16552.2	16529.5	15293.8	15614.1	14514.4
60°	5030.9	4996.8	5121.5	5728.1	8123.1	12394.3	15064.2	15370.3	14809.1	14423.7	12323.5
62.5°	4140.9	4109.7	4070.0	3902.8	4665.2	7720.6	10407.5	10872.3	10798.6	10024.9	7729.1
65°	3389.8	3415.3	3525.8	3455.0	3245.3	3959.5	5402.1	5677.1	5189.6	4367.6	2701.1
67.5°	2499.8	2511.2	2655.7	3029.8	2916.5	2635.9	2542.4	2587.7	1516.3	697.2	450.7
70°	1476.7	1485.2	1618.4	2120.0	2366.6	2023.7	1717.6	1692.1	600.9	187.1	204.1
72.5°	836.1	819.1	844.6	1009.0	1289.6	1074.2	884.3	804.9	181.4	104.9	104.9
75°	396.8	385.5	331.6	311.8	283.4	181.4	113.4	96.4	45.3	42.5	42.5
77.5°	2.8	8.5	5.7	8.5	8.5	5.7	2.8	2.8	8.5	8.5	11.3
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P643918  
 CATALOG NUMBER: GWS-SA6F-830-U-SL3-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9	10143.9
2.5°	10078.7	9993.7	9973.8	9968.2	9888.8	9803.8	9715.9	9681.9	9630.9	9599.7	9625.2
5°	9888.8	9766.9	9659.2	9560.0	9384.3	9191.6	9024.4	8916.7	8814.6	8746.6	8763.6
7.5°	9619.6	9460.8	9214.3	8962.0	8638.9	8349.8	8026.7	7828.3	7644.1	7542.0	7590.2
10°	9333.3	9123.6	8729.6	8301.6	7794.3	7340.8	6878.8	6501.8	6283.6	6076.7	6099.4
12.5°	9052.7	8774.9	8185.4	7536.4	6895.8	6226.9	5529.7	5008.2	4651.1	4393.1	4353.5
15°	8791.9	8434.8	7655.4	6799.4	5926.5	5036.5	4146.6	3401.1	2987.3	2732.2	2715.2
17.5°	8559.5	8117.4	7105.5	6028.5	4934.5	3795.1	2771.9	2213.6	1975.5	1865.0	1853.6
20°	8335.6	7797.1	6544.4	5246.3	3851.8	2664.2	1913.1	1655.2	1578.7	1533.3	1539.0
22.5°	8120.2	7448.5	5954.8	4379.0	2888.1	1870.6	1482.3	1383.1	1374.6	1380.3	1383.1
25°	7938.8	7128.2	5348.3	3542.9	2060.5	1425.6	1238.6	1210.2	1235.7	1272.6	1278.3
27.5°	7845.3	6867.5	4755.9	2701.1	1490.8	1159.2	1074.2	1085.5	1130.9	1170.6	1176.2
30°	7870.8	6671.9	4143.7	1958.5	1147.9	977.8	949.5	972.2	1017.5	1054.4	1060.0
32.5°	8052.2	6572.7	3517.3	1425.6	943.8	853.1	841.8	858.8	898.5	926.8	929.6
35°	8412.2	6595.4	2922.1	1091.2	810.6	759.6	756.8	768.1	787.9	807.8	810.6
37.5°	8942.2	6779.6	2335.4	907.0	734.1	697.2	685.9	685.9	700.1	708.6	714.2
40°	9511.9	7057.4	1870.6	802.1	680.2	640.5	617.9	609.4	620.7	632.0	634.9
42.5°	9982.3	7335.1	1519.2	728.4	637.7	583.9	555.5	549.9	564.0	583.9	589.5
45°	10342.3	7550.5	1266.9	668.9	589.5	530.0	498.8	498.8	524.3	558.4	564.0
47.5°	10671.1	7723.4	1079.9	615.0	544.2	481.8	450.7	456.3	498.8	544.2	552.7
50°	10895.0	7862.3	941.0	566.9	507.3	442.1	413.8	425.1	476.2	530.0	538.5
52.5°	11135.9	8032.4	850.3	524.3	473.3	411.0	385.5	394.0	450.7	510.2	521.5
55°	11802.0	8602.0	847.5	467.7	413.8	368.5	357.1	360.0	416.6	484.7	498.8
57.5°	12346.1	9103.7	904.1	394.0	345.8	323.1	317.4	320.3	371.3	447.8	464.8
60°	10214.8	7074.4	748.3	325.9	289.1	283.4	274.9	280.6	328.8	396.8	411.0
62.5°	6045.5	4044.5	357.1	249.4	246.6	240.9	232.4	243.7	289.1	348.6	357.1
65°	2066.2	1198.9	226.7	204.1	209.7	201.2	192.7	204.1	243.7	277.8	280.6
67.5°	396.8	317.4	181.4	170.1	172.9	155.9	153.1	164.4	187.1	192.7	189.9
70°	206.9	184.2	138.9	138.9	133.2	110.5	110.5	121.9	121.9	113.4	110.5
72.5°	107.7	102.0	90.7	102.0	85.0	68.0	68.0	73.7	68.0	56.7	56.7
75°	42.5	42.5	39.7	51.0	36.8	31.2	28.3	34.0	25.5	19.8	19.8
77.5°	11.3	11.3	11.3	14.2	8.5	8.5	5.7	5.7	2.8	0.0	0.0
80°	0.0	2.8	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)