

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: P643913

Luminaire Tested: GWS-SA6F-830-U-RW-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643913  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-49)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGF-830-U-RW-W  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

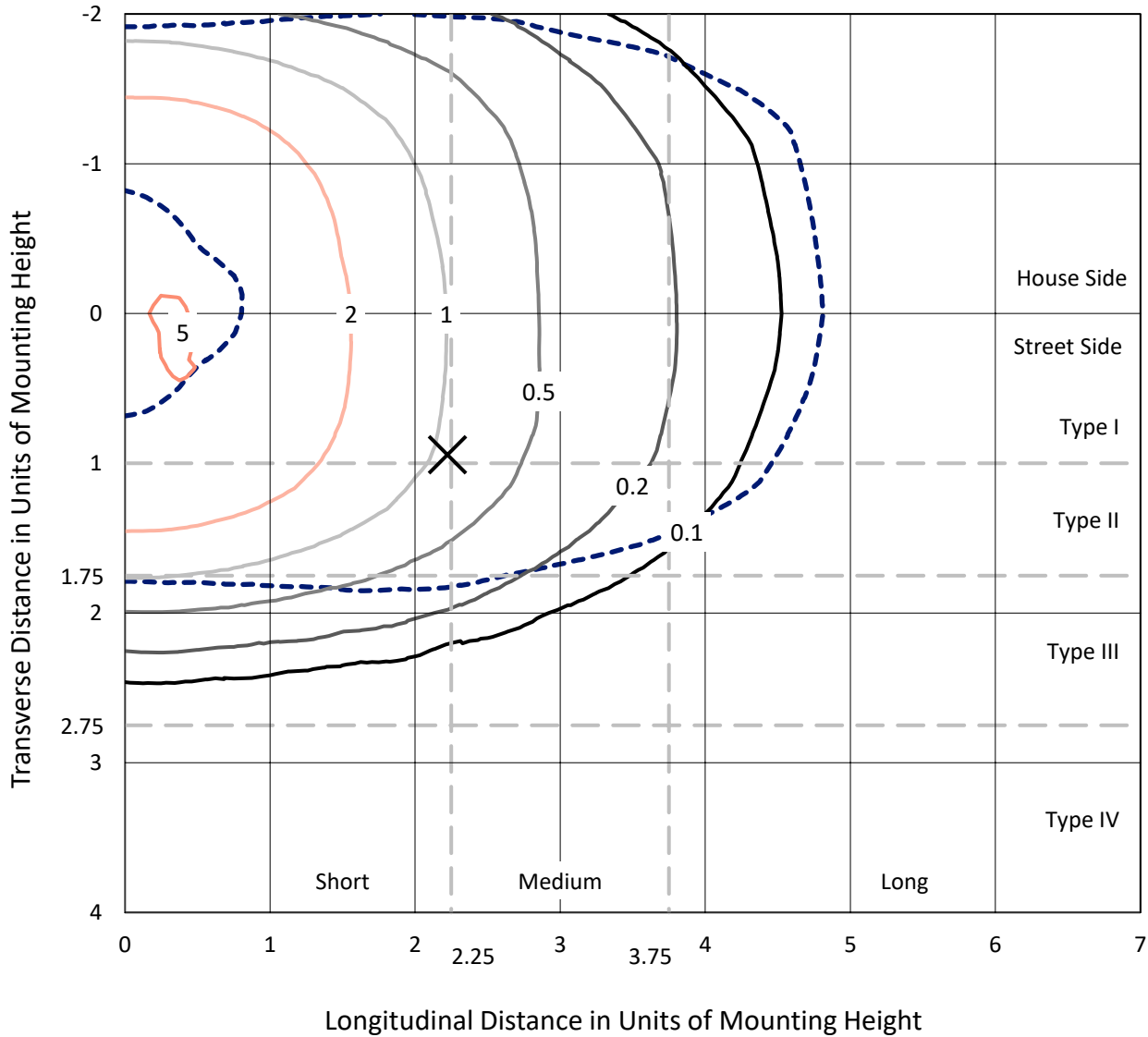
Lumens per Lamp: N/A  
Luminaire Lumens: 40700.2 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B5 - U0 - G5  
  
Input Watts (W): 372.6  
Input Voltage (V): 120  
Input Current (Ain): 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: P643913  
 CATALOG NUMBER: GWS-SA6F-830-U-RW-W

### Iso-Footcandle Lines of Horizontal Illumination

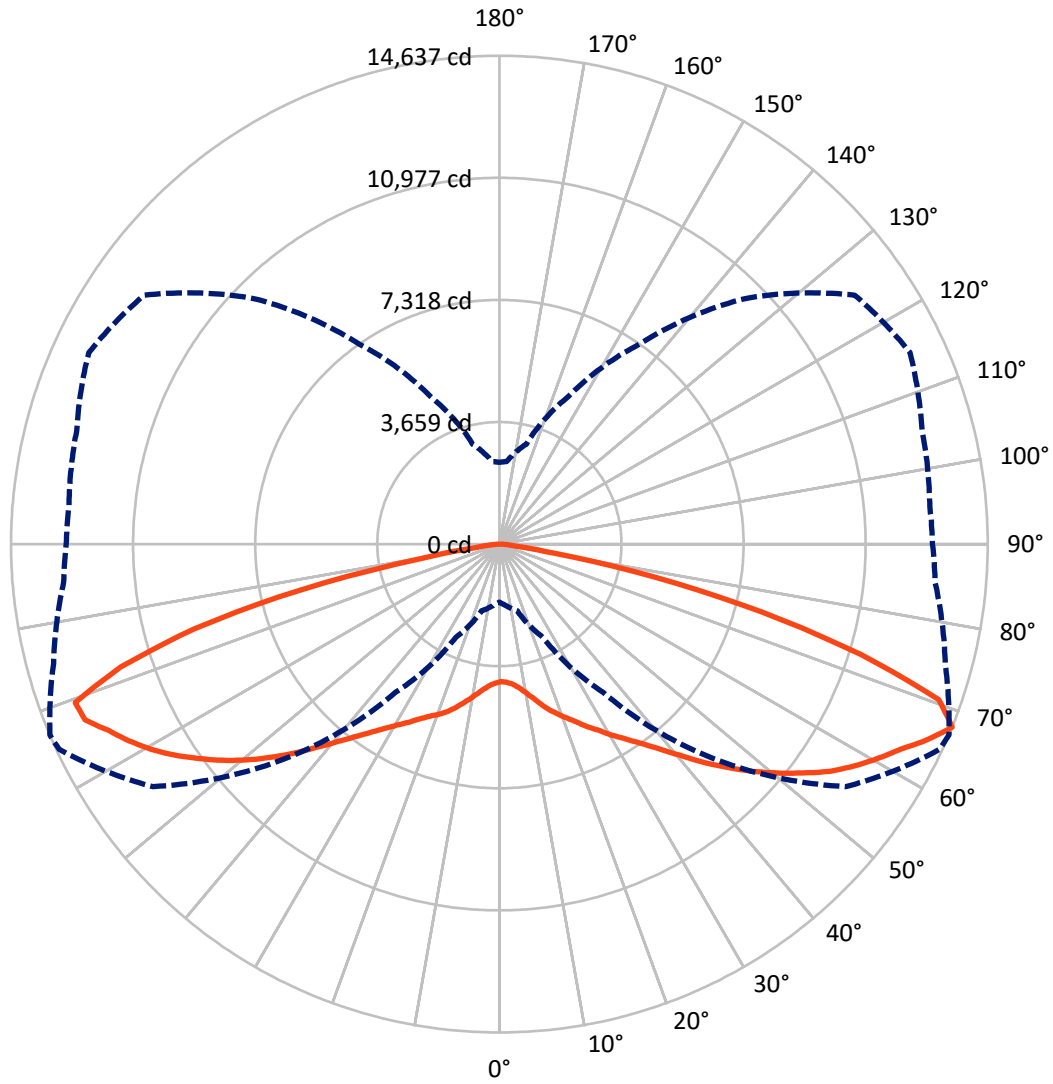
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.3 fc  
 Type III - Short - N/A

REPORT NUMBER: P643913  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	20125.5	0.0	20125.5
	% Fixture	49.4	0.0	49.4
<b>Street Side</b>	Lumens	20574.7	0.0	20574.7
	% Fixture	50.6	0.0	50.6
<b>Total</b>	Lumens	40700.2	0.0	40700.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	404.3	1.0
10°-20°	1366.0	3.4
20°-30°	2680.1	6.6
30°-40°	4566.0	11.2
40°-50°	7332.0	18.0
50°-60°	9962.7	24.5
60°-70°	9530.0	23.4
70°-80°	4530.9	11.1
80°-90°	328.3	0.8
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°	40700.2	100.0
0°-180°	40700.2	100.0

**Coefficient of Utilization**



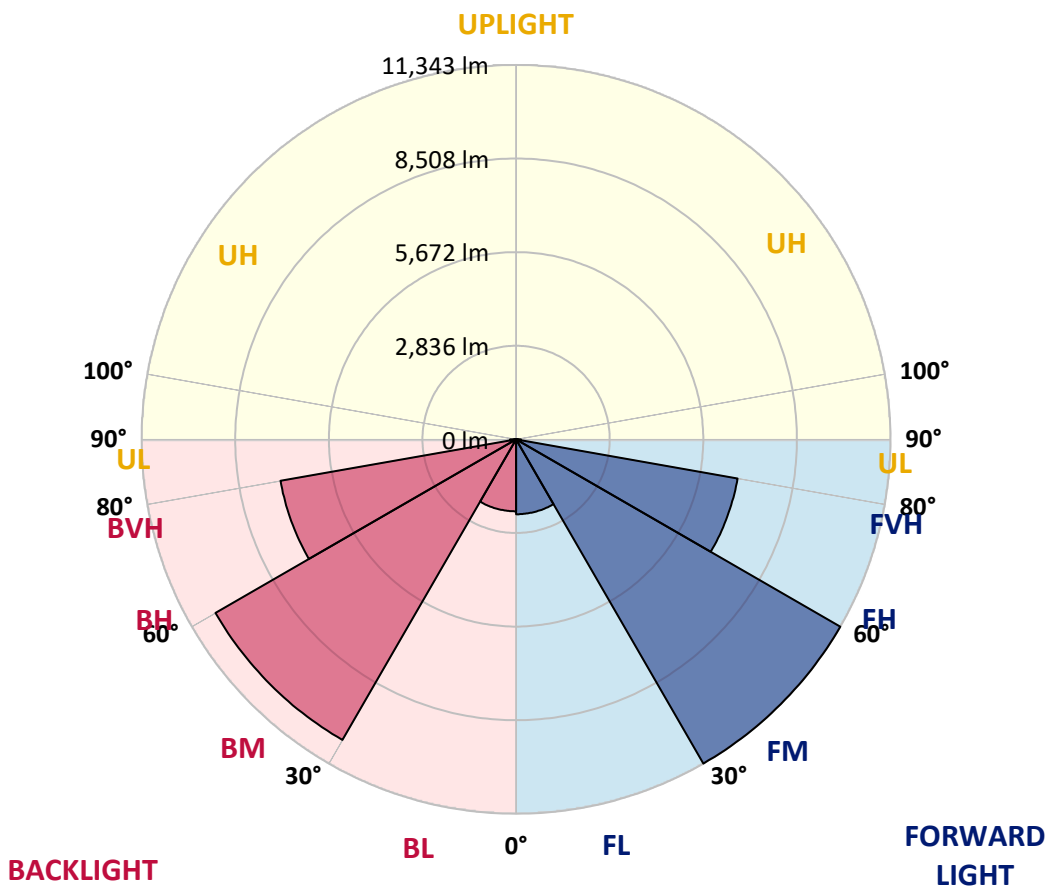
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2269.3	5.6			
FM (30°-60°)	11343.5	27.9			
FH (60°-80°)	6814.3	16.7			G3/7500
FVH (80°-90°)	147.6	0.4			G2/225
BL (0°-30°)	2181.0	5.4	B3/2500		
BM (30°-60°)	10517.1	25.8	B5		
BH (60°-80°)	7246.6	17.8	B5		G5
BVH (80°-90°)	180.8	0.4			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type III Short





REPORT NUMBER: P643913  
 CATALOG NUMBER: GWS-SA6F-830-U-RW-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1
2.5°	4036.1	4041.8	4050.3	4067.3	4084.3	4109.8	4135.3	4132.5	4143.8	4152.3	4160.8
5°	4013.4	4019.1	4033.3	4055.9	4081.4	4124.0	4177.8	4200.5	4217.5	4248.7	4277.0
7.5°	4061.6	4072.9	4092.8	4124.0	4163.6	4217.5	4291.2	4330.9	4356.4	4413.1	4461.2
10°	4126.8	4141.0	4180.6	4240.2	4299.7	4381.9	4475.4	4534.9	4551.9	4625.6	4716.3
12.5°	4189.1	4206.2	4271.3	4379.0	4486.8	4597.3	4707.8	4781.5	4787.2	4886.4	4988.4
15°	4288.3	4302.5	4390.4	4529.3	4693.7	4846.7	4982.8	5033.8	5056.5	5127.3	5254.9
17.5°	4506.6	4523.6	4637.0	4787.2	4960.1	5121.6	5257.7	5300.2	5300.2	5359.7	5464.6
20°	4741.8	4758.8	4909.1	5101.8	5311.5	5475.9	5580.8	5541.1	5527.0	5544.0	5617.7
22.5°	5005.4	5036.6	5181.2	5405.1	5663.0	5864.2	5918.1	5799.0	5759.4	5719.7	5736.7
25°	5342.7	5379.6	5521.3	5759.4	6011.6	6224.2	6255.4	6071.1	6048.5	5909.6	5858.6
27.5°	5731.0	5759.4	5935.1	6170.3	6405.6	6584.2	6618.2	6391.4	6314.9	6122.2	6003.1
30°	6232.7	6258.2	6411.3	6643.7	6847.8	6972.5	7015.0	6703.2	6643.7	6348.9	6164.7
32.5°	6779.7	6791.1	6947.0	7170.9	7352.3	7471.3	7411.8	7049.0	6961.1	6629.5	6377.3
35°	7406.1	7406.1	7607.4	7788.8	7933.3	7967.3	7853.9	7440.1	7338.1	6978.1	6663.5
37.5°	8021.2	8038.2	8225.2	8440.6	8568.2	8562.5	8355.6	7902.1	7785.9	7394.8	7046.2
40°	8687.2	8724.1	8911.1	9152.1	9273.9	9256.9	8939.5	8435.0	8315.9	7853.9	7513.8
42.5°	9299.5	9359.0	9577.2	9823.8	9957.0	9945.7	9614.1	9047.2	8931.0	8409.5	8069.3
45°	9787.0	9849.3	10121.4	10464.4	10676.9	10657.1	10322.6	9682.1	9540.4	8993.3	8619.2
47.5°	10214.9	10280.1	10583.4	10946.2	11283.5	11317.5	11011.4	10322.6	10172.4	9619.7	9197.4
50°	10543.7	10574.9	10915.0	11311.8	11703.0	11892.9	11626.4	10966.0	10784.6	10237.6	9761.4
52.5°	10518.2	10560.7	10980.2	11518.7	12043.1	12354.9	12170.6	11572.6	11396.9	10801.6	10336.8
55°	9999.5	10042.0	10540.9	11326.0	12233.0	12692.1	12672.3	12150.8	12023.2	11377.0	10934.9
57.5°	9242.8	9336.3	9832.3	10679.8	11983.6	12961.4	13040.8	12678.0	12544.8	11941.1	11527.2
60°	7888.0	8012.7	8585.2	9684.9	11184.3	12870.7	13434.7	13123.0	13040.8	12465.4	12062.9
62.5°	5731.0	5821.7	6584.2	8026.8	9999.5	12224.5	13766.4	13582.1	13519.8	12935.9	12547.6
65°	3432.4	3639.3	4251.5	5677.2	8066.5	11005.7	13585.0	14183.0	14117.8	13420.6	12961.4
67.5°	1737.4	1831.0	2071.9	3078.1	5424.9	9106.7	12675.1	14557.1	14636.5	13834.4	13108.8
70°	1077.0	1102.6	1170.6	1519.2	2709.6	5983.3	10365.2	13582.1	13970.4	13769.2	12726.2
72.5°	864.5	870.1	881.5	946.7	1301.0	2797.5	6553.0	10637.3	11337.3	12859.4	12179.1
75°	717.1	719.9	722.8	742.6	810.6	1142.2	3188.6	7309.7	8128.9	10929.2	11292.0
77.5°	575.4	561.2	572.5	581.0	598.0	637.7	1099.7	3900.0	4730.5	7173.7	8732.6
80°	374.1	368.5	391.1	399.6	416.6	442.2	586.7	1323.6	1607.1	2610.4	2777.6
82.5°	201.2	189.9	238.1	229.6	238.1	257.9	345.8	484.7	544.2	787.9	666.1
85°	62.4	62.4	65.2	76.5	93.5	90.7	150.2	238.1	263.6	337.3	249.4
87.5°	11.3	11.3	11.3	11.3	11.3	14.2	31.2	48.2	65.2	116.2	87.9
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: P643913  
 CATALOG NUMBER: GWS-SA6F-830-U-RW-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1	4121.1
2.5°	4177.8	4152.3	4166.5	4175.0	4172.1	4166.5	4138.1	4132.5	4118.3	4095.6	4089.9
5°	4302.5	4274.2	4277.0	4268.5	4240.2	4203.3	4141.0	4109.8	4084.3	4055.9	4053.1
7.5°	4498.1	4466.9	4458.4	4418.7	4339.4	4254.3	4155.1	4098.4	4055.9	4019.1	4013.4
10°	4747.5	4716.3	4688.0	4594.5	4464.1	4350.7	4220.3	4138.1	4075.8	4030.4	4021.9
12.5°	5025.3	4999.8	4928.9	4792.9	4637.0	4503.8	4370.5	4268.5	4177.8	4109.8	4101.3
15°	5334.2	5277.5	5169.8	4994.1	4846.7	4739.0	4577.4	4438.6	4294.0	4203.3	4183.5
17.5°	5549.6	5501.4	5373.9	5203.8	5087.6	4994.1	4804.2	4605.8	4410.2	4277.0	4248.7
20°	5702.7	5651.7	5507.1	5382.4	5345.6	5266.2	5045.1	4815.5	4588.8	4424.4	4387.5
22.5°	5813.2	5759.4	5612.0	5549.6	5600.6	5586.5	5371.1	5110.3	4841.0	4645.5	4600.1
25°	5918.1	5867.1	5736.7	5759.4	5895.4	5937.9	5705.5	5402.2	5096.1	4866.6	4812.7
27.5°	6017.3	5952.1	5892.6	6017.3	6210.0	6289.4	6042.8	5699.8	5368.2	5133.0	5090.5
30°	6170.3	6093.8	6085.3	6266.7	6572.8	6640.8	6368.7	6025.8	5697.0	5458.9	5405.1
32.5°	6363.1	6292.2	6297.9	6570.0	6924.3	6981.0	6748.6	6428.3	6099.5	5861.4	5787.7
35°	6623.8	6536.0	6584.2	6918.6	7275.7	7380.6	7193.5	6927.1	6606.8	6363.1	6280.9
37.5°	6983.8	6856.3	6955.5	7306.9	7666.9	7822.8	7678.2	7479.8	7162.4	6915.8	6839.2
40°	7443.0	7338.1	7377.8	7766.1	8137.4	8324.4	8233.7	8038.2	7723.6	7465.6	7377.8
42.5°	7987.2	7882.3	7868.1	8281.9	8653.2	8936.7	8848.8	8670.2	8344.3	8049.5	7964.5
45°	8520.0	8423.6	8443.5	8865.8	9282.4	9591.4	9503.5	9293.8	8939.5	8599.4	8531.3
47.5°	9075.5	8996.2	9013.2	9461.0	9920.2	10229.1	10118.6	9863.5	9449.7	9086.9	9004.7
50°	9645.2	9554.5	9580.1	10050.5	10546.6	10838.5	10668.4	10291.5	9835.1	9480.8	9410.0
52.5°	10212.1	10104.4	10169.6	10614.6	11127.6	11360.0	11045.4	10589.1	10146.9	9795.5	9716.1
55°	10864.0	10750.6	10679.8	11155.9	11663.3	11759.7	11328.8	10796.0	10271.6	9872.0	9823.8
57.5°	11459.2	11362.8	11229.6	11705.8	12079.9	12009.1	11547.1	10739.3	9968.4	9455.3	9387.3
60°	11992.1	11909.9	11793.7	12199.0	12369.0	12210.3	11371.3	10067.6	9220.1	8684.4	8653.2
62.5°	12482.4	12394.5	12286.8	12632.6	12610.0	12241.5	10572.1	9035.9	7902.1	7326.8	7275.7
65°	12870.7	12791.4	12760.2	13032.3	12995.4	11632.1	9327.8	7346.6	5773.5	5124.5	5104.6
67.5°	12981.3	12950.1	13117.3	13579.3	13003.9	10407.7	7315.4	4872.2	3100.8	2485.7	2448.9
70°	12567.4	12564.6	13043.6	13704.0	11824.8	7950.3	4316.7	2196.6	1558.9	1383.2	1360.5
72.5°	12028.9	12020.4	12400.2	11822.0	8769.4	4350.7	1816.8	1176.2	975.0	926.8	926.8
75°	11144.6	11121.9	11408.2	8993.3	4931.7	1638.2	963.7	807.8	765.3	756.8	756.8
77.5°	9084.0	8894.1	8443.5	5558.1	1720.4	805.0	637.7	634.9	609.4	606.5	606.5
80°	2987.4	2987.4	3472.1	2120.1	759.6	496.0	450.7	473.3	447.8	430.8	428.0
82.5°	487.5	671.7	955.2	606.5	411.0	308.9	277.8	294.8	308.9	246.6	246.6
85°	192.7	252.3	368.5	283.4	189.9	124.7	133.2	147.4	130.4	113.4	110.5
87.5°	73.7	90.7	130.4	68.0	39.7	22.7	14.2	14.2	11.3	11.3	11.3
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

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

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)