

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: P643907

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

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643907  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-46)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGF-830-U-AFL-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

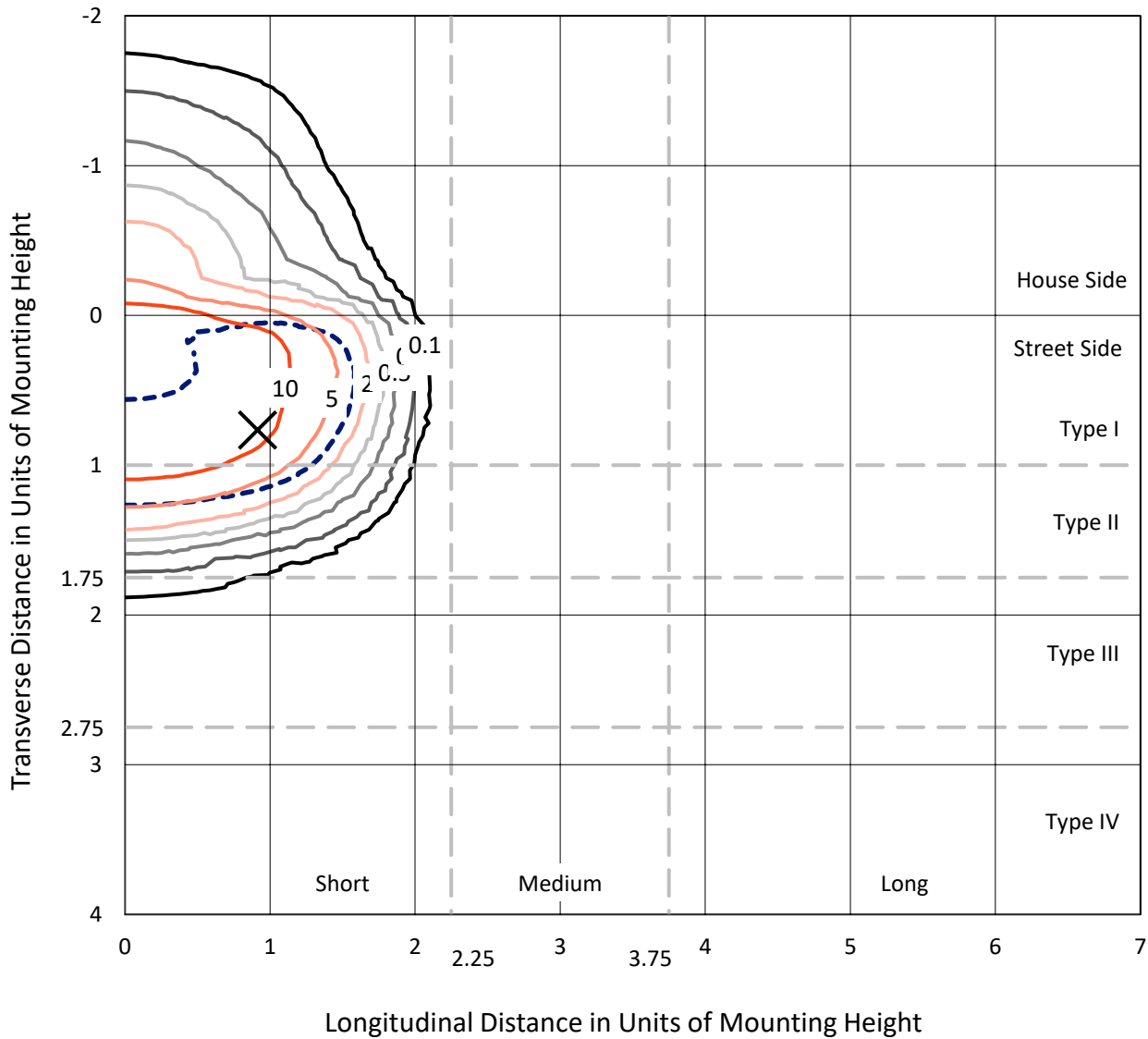
Lumens per Lamp: N/A  
Luminaire Lumens: 29776.9 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G1  
  
Input Watts (W): 372.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643907  
 CATALOG NUMBER: GWS-SA6F-830-U-AFL-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

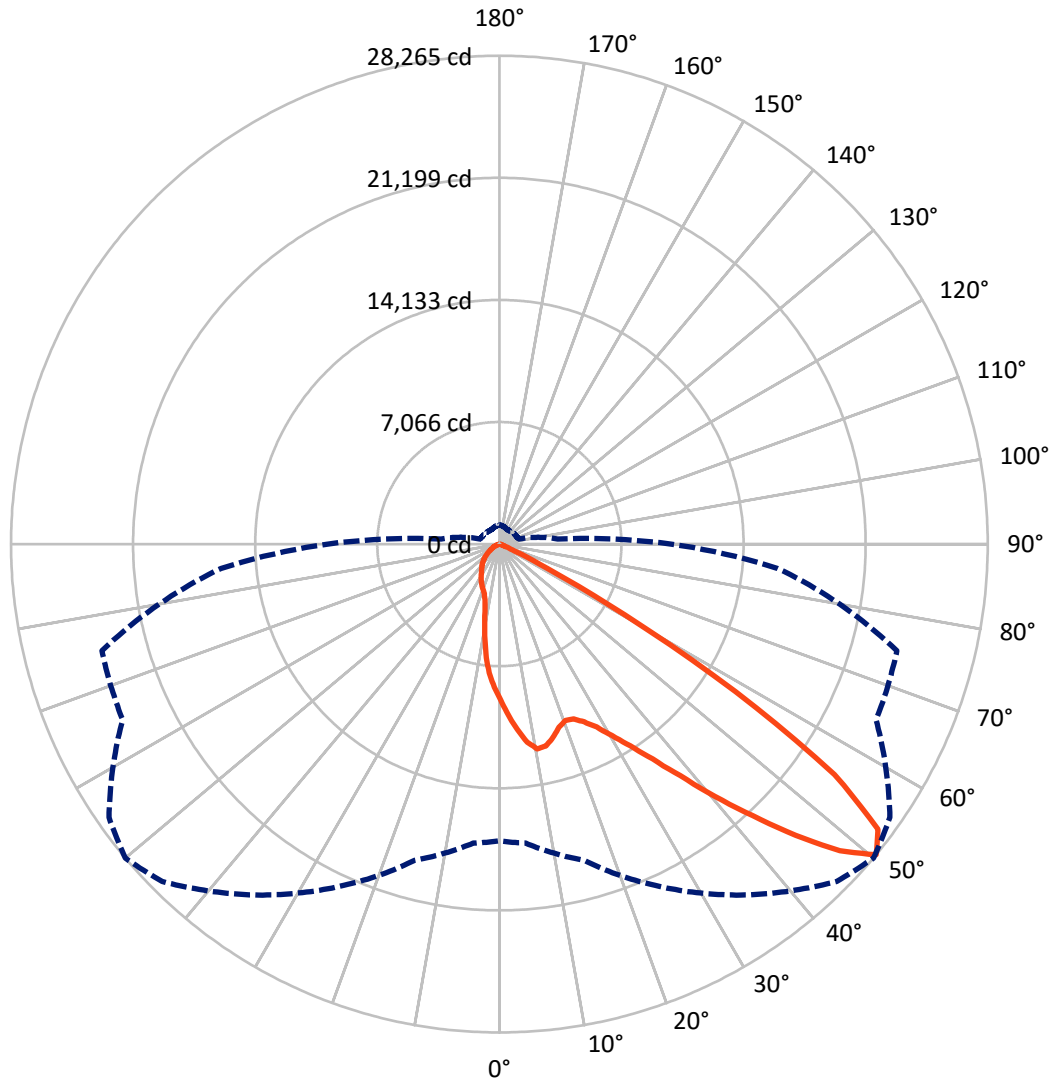
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 18.5 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 50-Deg Lateral    - - - Horizontal Cone Through 50-Deg Vertical



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3825.9	0.0	3825.9
	% Fixture	12.8	0.0	12.8
<b>Street Side</b>	Lumens	25951.0	0.0	25951.0
	% Fixture	87.2	0.0	87.2
<b>Total</b>	Lumens	29776.9	0.0	29776.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	836.8	2.8
10°-20°	2159.1	7.3
20°-30°	3563.4	12.0
30°-40°	5880.3	19.7
40°-50°	9304.0	31.2
50°-60°	7044.2	23.7
60°-70°	881.6	3.0
70°-80°	99.7	0.3
80°-90°	7.6	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°	29776.9	100.0
0°-180°	29776.9	100.0

**Coefficient of Utilization**



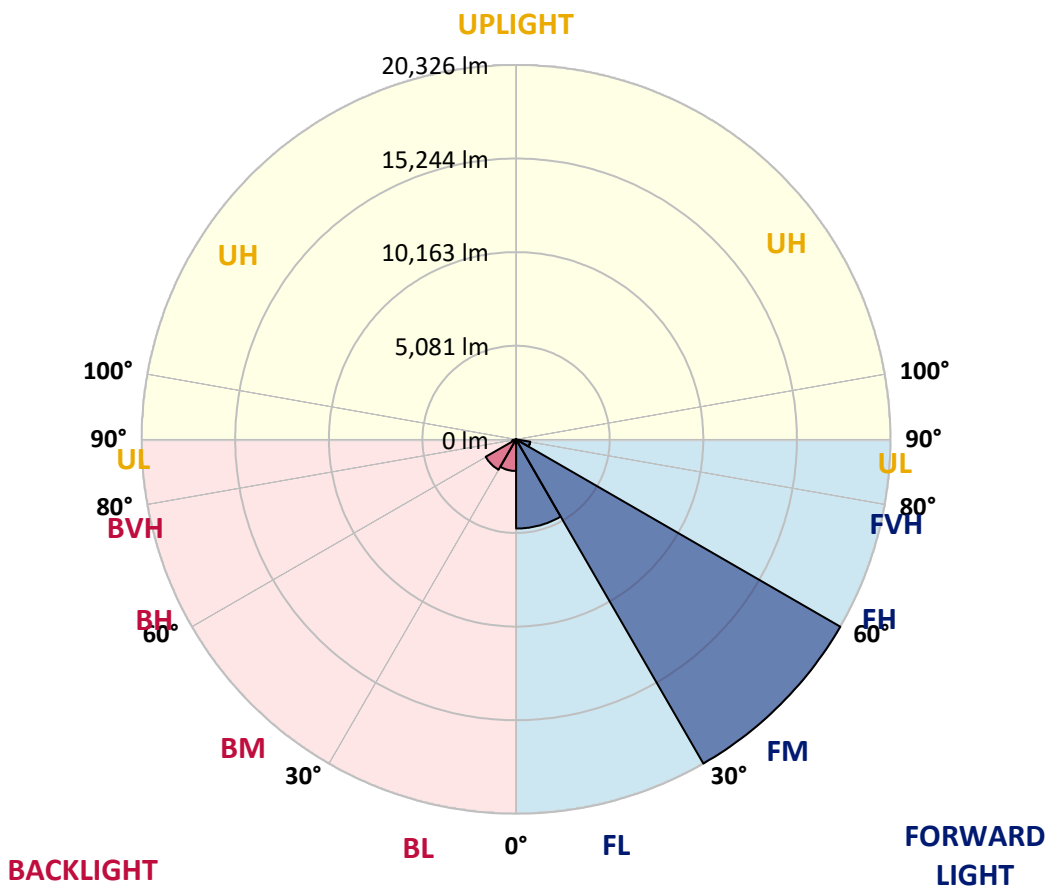
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4842.2	16.3			
FM (30°-60°)	20325.9	68.3			
FH (60°-80°)	779.5	2.6			G1/1800
FVH (80°-90°)	3.5	0.0			G0/10
BL (0°-30°)	1717.2	5.8	B3/2500		
BM (30°-60°)	1902.7	6.4	B2/2500		
BH (60°-80°)	201.9	0.7	B1/500		G1/500
BVH (80°-90°)	4.1	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-G1**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2
2.5°	10279.6	10361.8	10339.1	10231.4	10115.2	10033.0	9905.5	9865.8	9576.7	9375.5	9162.9
5°	11521.0	11546.5	11518.1	11387.8	11183.7	10988.1	10778.4	10656.5	10171.9	9735.4	9290.5
7.5°	11818.6	11787.4	11841.2	11906.4	11878.1	11793.1	11572.0	11438.8	10860.6	10149.2	9474.7
10°	10888.9	10818.1	11019.3	11356.6	11710.9	12110.5	12053.8	12065.1	11532.3	10670.7	9715.6
12.5°	9656.1	9627.7	9777.9	10169.1	10863.4	11770.4	11988.6	12354.2	12147.3	11234.7	9990.5
15°	9114.7	9128.9	9219.6	9466.2	9965.0	11093.0	11617.3	12277.7	12697.2	11781.7	10293.8
17.5°	9196.9	9248.0	9245.1	9327.3	9630.6	10534.7	11146.9	12036.8	13122.3	12410.9	10642.4
20°	9755.3	9806.3	9729.8	9667.4	9769.4	10393.0	10900.3	11793.1	13408.5	13045.8	11010.8
22.5°	10591.4	10650.9	10469.5	10290.9	10225.7	10625.4	10993.8	11693.9	13626.8	13626.8	11339.6
25°	11603.2	11685.4	11404.8	11087.3	10906.0	11115.7	11393.4	11917.8	13850.7	14148.3	11563.5
27.5°	12734.0	12736.8	12495.9	12138.8	11798.7	11824.2	11991.4	12422.2	14097.2	14709.4	11739.2
30°	14006.6	14015.1	13694.8	13266.8	12838.9	12722.7	12864.4	13190.3	14610.2	15415.1	11982.9
32.5°	15650.4	15690.1	15230.9	14601.7	14046.2	13828.0	13910.2	14253.1	15426.5	16299.4	12348.6
35°	17872.4	17914.9	17237.5	16407.1	15522.8	15194.1	15276.3	15622.0	16608.3	17555.0	12932.4
37.5°	20066.0	20122.7	19436.9	18663.1	17450.1	16905.9	16991.0	17319.7	18382.5	19289.5	13867.7
40°	21582.3	21658.9	21446.3	20924.8	19799.6	19085.4	19187.4	19306.5	20335.3	21364.1	15080.7
42.5°	22381.6	22489.3	22580.0	22846.4	22254.0	21656.0	21483.1	21491.6	22322.1	23478.4	16341.9
45°	22429.8	22534.6	22999.4	24028.2	24478.9	24354.2	24039.6	23827.0	23838.3	24887.0	17129.8
47.5°	20871.0	21066.5	21936.6	23951.7	25646.6	26681.0	26522.3	26017.8	24476.0	24980.5	17044.8
50°	17178.0	17370.7	18952.2	21851.6	24796.3	27610.6	28265.3	27588.0	24059.4	23815.7	16169.0
52.5°	12476.1	12495.9	13521.9	16908.8	21349.9	25896.0	27437.8	27372.6	23424.6	22404.2	14973.0
55°	5926.3	5855.4	7008.9	9542.7	14766.1	20944.6	23543.6	24280.5	22523.3	21383.9	14046.2
57.5°	1726.0	1760.0	2273.0	3724.1	7385.9	13385.9	16123.7	17495.4	18487.4	17580.5	10894.6
60°	773.7	776.6	864.4	1133.7	2460.1	6226.7	8335.3	10033.0	11053.3	10242.8	5404.8
62.5°	561.2	564.0	598.0	640.5	836.1	2108.6	3126.1	4166.3	4242.8	2777.5	1368.9
65°	467.6	467.6	473.3	473.3	501.7	753.9	949.5	1224.4	1031.6	765.2	535.7
67.5°	376.9	379.8	385.4	385.4	376.9	376.9	408.1	447.8	479.0	592.3	493.1
70°	294.8	291.9	291.9	294.8	286.3	243.7	263.6	300.4	328.8	462.0	428.0
72.5°	229.6	232.4	229.6	218.2	198.4	144.5	155.9	195.6	209.7	289.1	289.1
75°	172.9	175.7	164.4	124.7	82.2	45.3	59.5	96.4	121.9	141.7	104.9
77.5°	22.7	22.7	17.0	17.0	14.2	17.0	17.0	22.7	34.0	34.0	25.5
80°	2.8	2.8	2.8	5.7	8.5	11.3	11.3	11.3	11.3	14.2	14.2
82.5°	2.8	2.8	2.8	2.8	8.5	8.5	11.3	11.3	11.3	11.3	11.3
85°	0.0	0.0	0.0	2.8	5.7	8.5	8.5	11.3	11.3	11.3	11.3
87.5°	0.0	0.0	0.0	2.8	5.7	8.5	8.5	8.5	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



REPORT NUMBER: P643907

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

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2	9021.2
2.5°	9035.4	8871.0	8672.6	8536.6	8343.8	8216.3	8034.9	7913.0	7808.2	7726.0	7771.3
5°	9038.2	8777.5	8372.2	8026.4	7649.5	7303.7	6932.4	6640.5	6376.9	6257.9	6323.1
7.5°	9094.9	8720.8	8100.1	7485.1	6762.4	6048.2	5379.3	4835.1	4565.9	4438.3	4478.0
10°	9205.4	8695.3	7796.8	6776.5	5603.2	4628.2	3979.2	3610.8	3460.5	3381.2	3395.4
12.5°	9307.5	8678.3	7402.9	5844.1	4421.3	3590.9	3253.6	3202.6	3233.8	3236.6	3233.8
15°	9446.3	8647.1	6915.4	4886.1	3537.1	3103.4	3111.9	3185.6	3259.3	3282.0	3276.3
17.5°	9593.7	8598.9	6286.2	3967.9	3001.4	2961.7	3060.9	3160.1	3233.8	3245.1	3248.0
20°	9746.8	8499.7	5569.2	3239.5	2752.0	2854.0	2964.6	3038.2	3092.1	3109.1	3114.8
22.5°	9817.6	8290.0	4741.6	2718.0	2584.8	2720.8	2803.0	2899.4	2916.4	2854.0	2865.4
25°	9780.8	7935.7	3933.9	2366.5	2417.6	2553.6	2675.5	2627.3	2556.4	2511.1	2525.3
27.5°	9664.6	7465.2	3143.1	2108.6	2239.0	2411.9	2426.1	2372.2	2360.9	2324.0	2335.4
30°	9539.9	6923.9	2528.1	1901.7	2057.6	2239.0	2196.5	2216.3	2219.2	2176.7	2190.8
32.5°	9463.4	6357.1	2012.3	1762.9	1941.4	1975.4	2060.5	2100.1	2103.0	2003.8	2020.8
35°	9488.9	5798.7	1703.3	1649.5	1833.7	1825.2	1944.3	1966.9	1802.5	1666.5	1680.7
37.5°	9695.8	5282.9	1527.6	1561.6	1646.7	1711.8	1802.5	1652.3	1615.5	1553.1	1561.6
40°	10081.2	4843.6	1422.8	1507.8	1519.1	1624.0	1485.1	1505.0	1507.8	1468.1	1476.6
42.5°	10531.8	4478.0	1360.4	1476.6	1448.3	1465.3	1326.4	1366.1	1408.6	1391.6	1394.4
45°	10758.6	4120.9	1306.6	1368.9	1377.4	1215.9	1184.7	1227.2	1281.1	1289.6	1292.4
47.5°	10557.3	3780.8	1249.9	1213.0	1269.7	1108.2	1071.3	1085.5	1147.8	1181.9	1187.5
50°	9942.3	3389.7	1164.9	1074.2	1043.0	994.8	960.8	963.6	1034.5	1094.0	1105.3
52.5°	9077.9	2981.6	1026.0	909.8	838.9	875.8	884.3	867.3	932.4	992.0	1003.3
55°	8239.0	2471.4	813.4	739.7	674.5	753.9	776.6	753.9	773.7	813.4	816.2
57.5°	5801.6	1397.3	623.5	612.2	558.3	646.2	683.0	649.0	615.0	640.5	646.2
60°	2689.6	731.2	479.0	479.0	464.8	555.5	617.9	569.7	504.5	515.8	524.3
62.5°	841.8	462.0	351.4	331.6	379.8	473.3	524.3	476.1	399.6	399.6	411.0
65°	476.1	396.8	277.8	255.1	308.9	379.8	411.0	359.9	291.9	286.3	286.3
67.5°	442.1	376.9	246.6	206.9	218.2	243.7	255.1	221.1	201.2	198.4	201.2
70°	365.6	314.6	198.4	141.7	133.2	130.4	136.0	127.5	121.9	124.7	133.2
72.5°	226.7	189.9	124.7	85.0	73.7	70.9	70.9	70.9	68.0	68.0	68.0
75°	82.2	70.9	56.7	42.5	36.8	34.0	34.0	36.8	34.0	31.2	28.3
77.5°	25.5	22.7	22.7	22.7	19.8	17.0	14.2	14.2	11.3	8.5	8.5
80°	14.2	14.2	14.2	14.2	11.3	11.3	8.5	5.7	2.8	2.8	0.0
82.5°	14.2	14.2	14.2	11.3	11.3	11.3	8.5	5.7	2.8	0.0	0.0
85°	11.3	11.3	11.3	11.3	11.3	11.3	8.5	5.7	2.8	0.0	0.0
87.5°	11.3	11.3	11.3	11.3	11.3	11.3	8.5	5.7	2.8	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

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)