

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: P639455

Luminaire Tested: GWS-SA5B-830-U-AFL-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P639455  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-45)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA5B-830-U-AFL-W  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND  
AUTOMOTIVE FRONTLINE OPTICS  
Light Source: (80) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

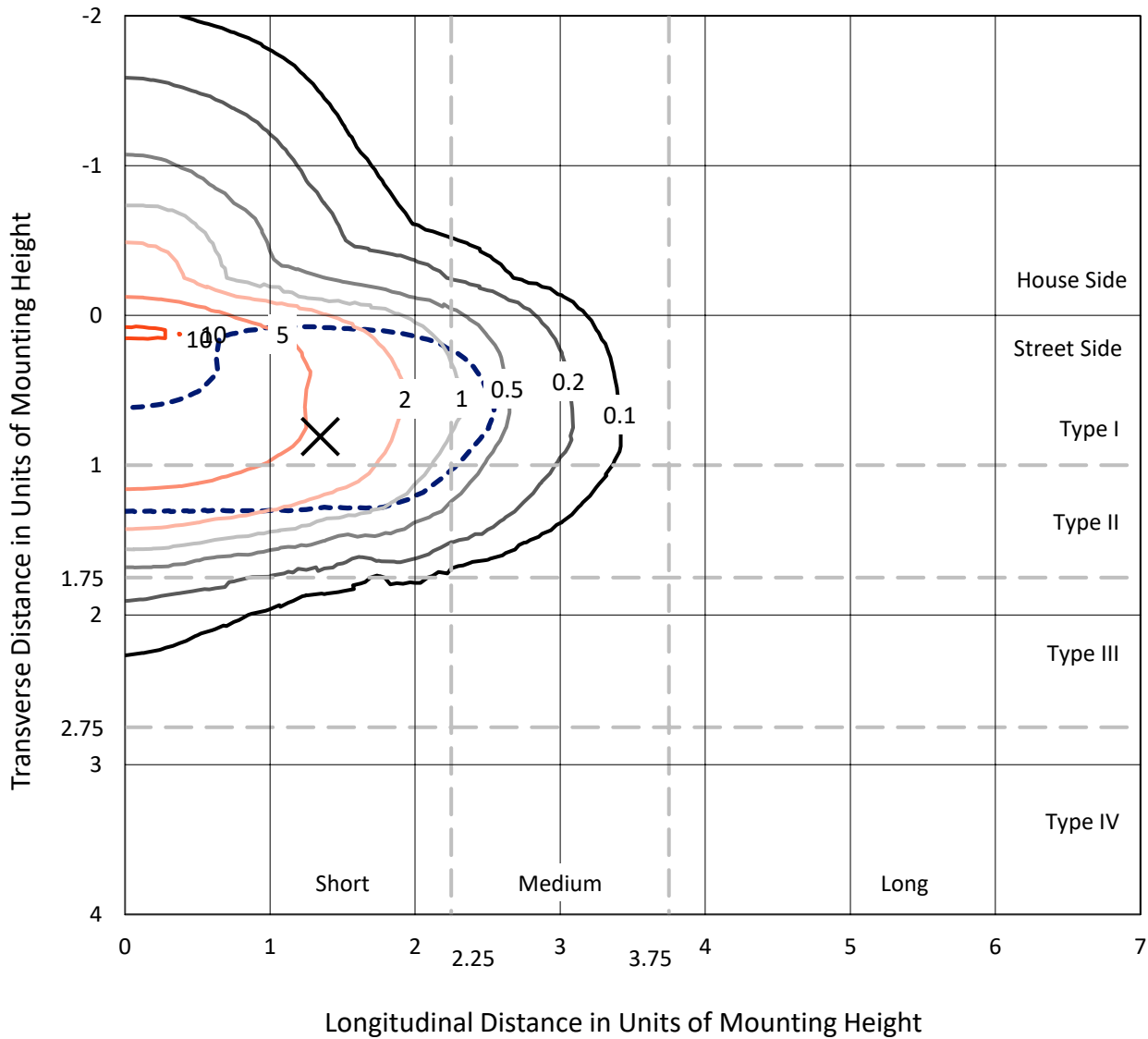
Lumens per Lamp: N/A  
Luminaire Lumens: 14363.4 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 115.7  
Input Voltage (V): 120  
Input Current (Ain): 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: P639455  
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### Iso-Footcandle Lines of Horizontal Illumination

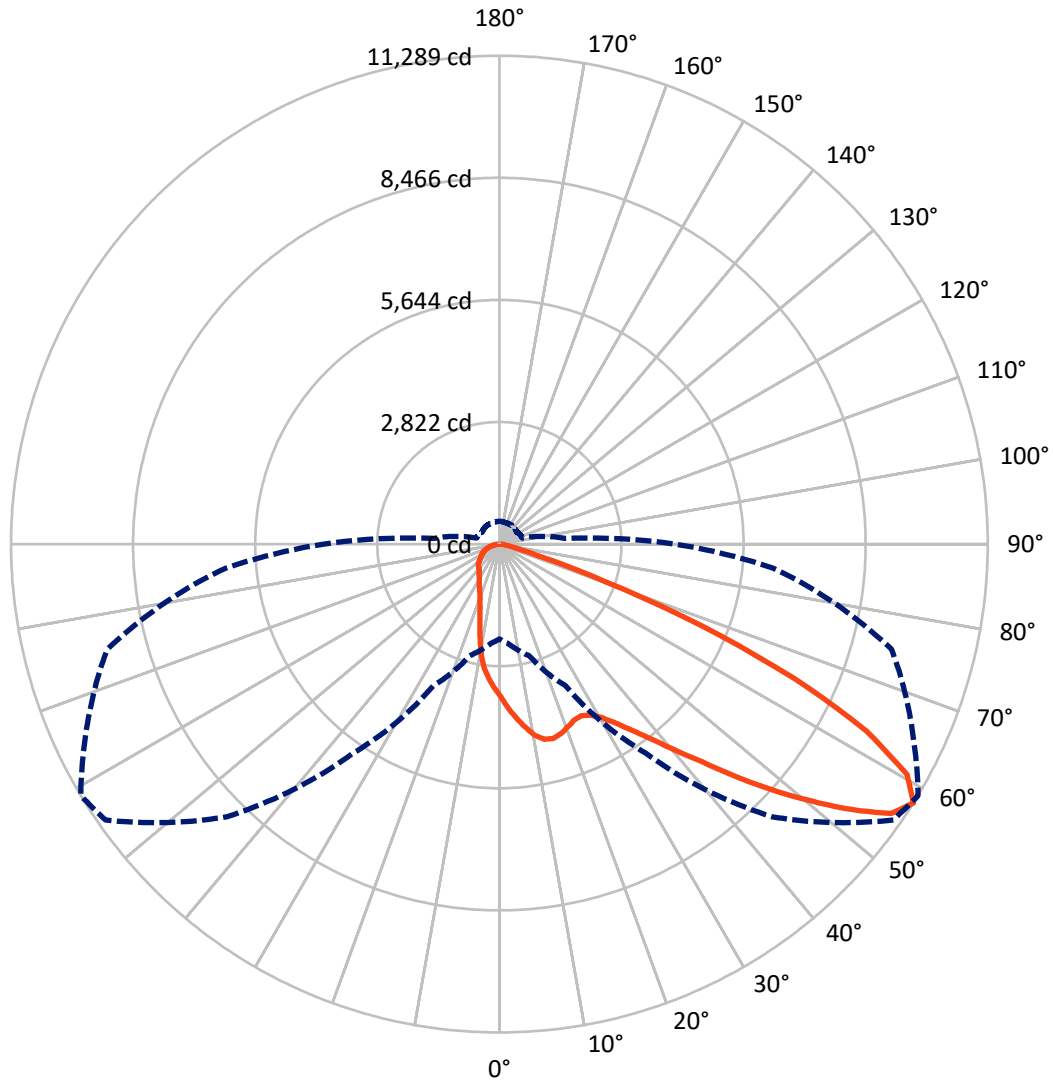
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.8 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2229.1	0.0	2229.1
	% Fixture	15.5	0.0	15.5
<b>Street Side</b>	Lumens	12134.3	0.0	12134.3
	% Fixture	84.5	0.0	84.5
<b>Total</b>	Lumens	14363.4	0.0	14363.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.4	2.3
10°-20°	829.6	5.8
20°-30°	1344.8	9.4
30°-40°	2163.3	15.1
40°-50°	3359.4	23.4
50°-60°	3618.5	25.2
60°-70°	2100.0	14.6
70°-80°	548.2	3.8
80°-90°	72.2	0.5
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°	14363.4	100.0
0°-180°	14363.4	100.0

**Coefficient of Utilization**



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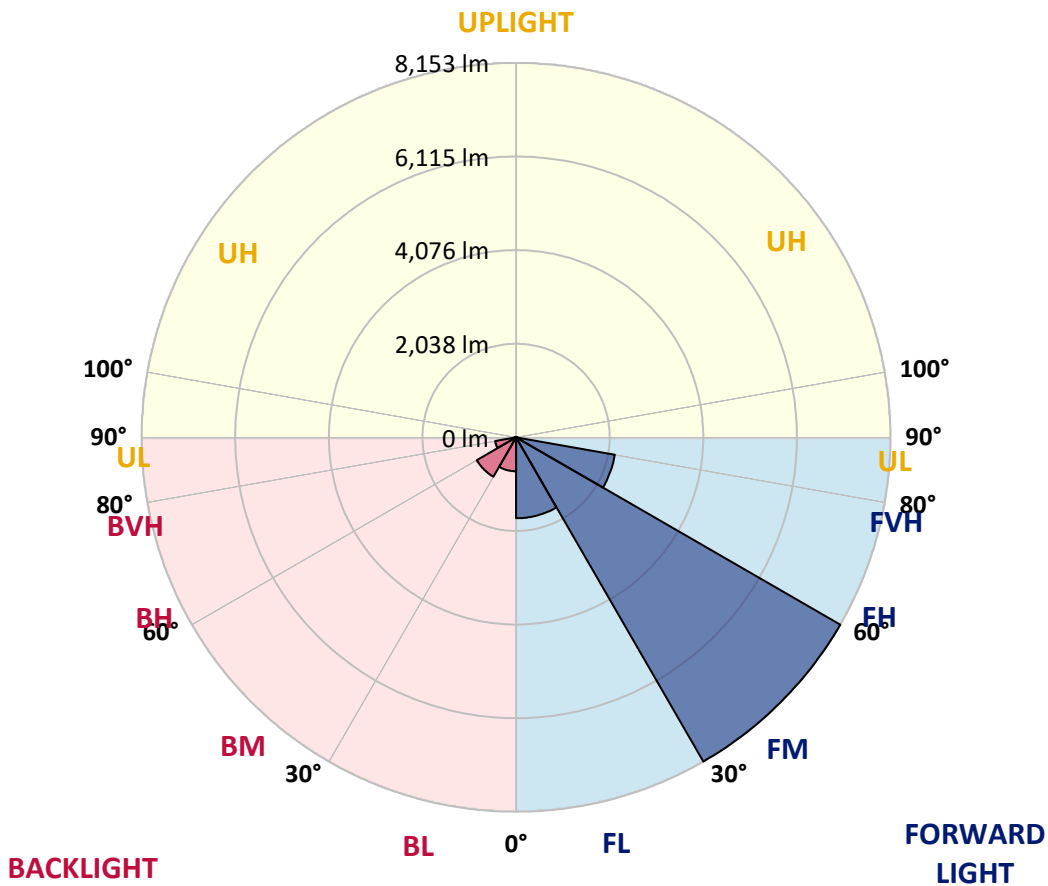
CATALOG NUMBER: GWS-SA5B-830-U-AFL-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1762.3	12.3			
FM (30°-60°)	8152.8	56.8			
FH (60°-80°)	2184.6	15.2			G2/5000
FVH (80°-90°)	34.6	0.2			G1/100
BL (0°-30°)	739.5	5.1	B2/1000		
BM (30°-60°)	988.3	6.9	B1/1000		
BH (60°-80°)	463.6	3.2	B1/500		G1/500
BVH (80°-90°)	37.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9
2.5°	3999.2	3965.8	3989.0	3947.6	3930.4	3884.9	3826.2	3786.8	3726.1	3647.3	3578.5
5°	4396.5	4373.3	4378.3	4333.8	4294.4	4218.6	4098.2	4031.5	3928.4	3769.6	3622.0
7.5°	4384.4	4411.7	4426.9	4465.3	4476.4	4469.3	4361.1	4268.1	4154.9	3916.2	3693.8
10°	3930.4	3982.0	4028.5	4159.9	4319.7	4521.9	4547.2	4491.6	4377.3	4103.3	3779.7
12.5°	3435.9	3475.4	3516.8	3674.6	3919.3	4323.7	4597.8	4632.1	4586.6	4288.3	3876.8
15°	3193.3	3211.5	3250.9	3355.0	3550.2	3999.2	4509.8	4660.5	4742.4	4484.5	3986.0
17.5°	3183.1	3191.2	3210.4	3266.1	3401.6	3748.4	4351.0	4603.8	4864.7	4691.8	4113.4
20°	3392.5	3371.2	3359.1	3358.1	3424.8	3664.5	4197.3	4512.8	4922.3	4904.1	4249.9
22.5°	3682.7	3689.7	3663.4	3598.7	3590.6	3724.1	4120.5	4420.8	4939.5	5092.2	4376.3
25°	4094.2	4129.6	4051.7	3928.4	3867.7	3897.0	4168.0	4392.5	4937.5	5249.0	4455.2
27.5°	4574.5	4601.8	4522.9	4361.1	4235.8	4165.0	4309.6	4476.4	4954.7	5384.4	4502.7
30°	5121.5	5130.6	5022.4	4852.6	4669.6	4517.9	4545.2	4649.3	5042.7	5562.4	4558.3
32.5°	5789.9	5828.3	5664.5	5395.6	5139.7	4945.6	4861.7	4928.4	5232.8	5772.7	4644.3
35°	6638.3	6651.4	6443.1	6057.9	5695.9	5426.9	5251.0	5286.4	5522.0	6067.0	4773.7
37.5°	7438.1	7451.3	7229.8	6871.9	6354.2	5986.1	5731.3	5715.1	5892.1	6482.6	4985.0
40°	7945.7	7983.1	7884.0	7659.6	7165.1	6668.6	6322.8	6267.2	6377.4	6991.2	5279.3
42.5°	8218.7	8234.9	8232.9	8262.2	7968.0	7474.5	6990.2	6878.9	6952.8	7540.2	5576.6
45°	8220.8	8261.2	8369.4	8651.5	8664.7	8357.3	7833.5	7659.6	7591.8	8093.4	5887.0
47.5°	7852.7	7896.2	8193.5	8748.6	9158.1	9227.9	8843.6	8494.8	8209.6	8569.6	6141.8
50°	6738.4	6847.6	7413.9	8395.7	9255.2	9925.6	9807.3	9334.1	8758.7	8937.7	6301.6
52.5°	5770.7	5766.7	6115.5	7398.7	8849.7	10233.0	10739.6	10197.6	9301.7	9171.3	6342.0
55°	4225.7	4248.9	4605.9	5658.5	7767.8	9935.7	11252.2	10992.4	9924.6	9295.6	6325.8
57.5°	2191.2	2306.5	2672.5	3610.9	5902.2	8912.4	11115.7	11288.6	10557.6	9383.6	6347.1
60°	1107.2	1085.0	1216.4	1724.0	3419.8	6960.9	10274.4	10825.5	10671.8	9452.4	6360.2
62.5°	739.2	733.1	696.7	798.8	1397.4	4122.5	8758.7	9531.2	9878.1	9290.6	6192.4
65°	640.1	627.9	561.2	557.2	678.5	1709.9	6419.9	7492.7	8164.1	8571.6	5790.9
67.5°	576.4	558.2	490.4	457.0	487.4	751.3	3617.9	5025.5	6028.6	7249.0	4911.2
70°	514.7	505.6	437.8	389.3	386.3	458.1	1332.7	2593.6	3688.7	4945.6	3590.6
72.5°	461.1	444.9	387.3	340.8	317.5	324.6	578.4	999.0	1909.1	3085.1	2147.7
75°	399.4	387.3	336.7	290.2	261.9	237.6	352.9	462.1	870.6	1466.2	1014.2
77.5°	308.4	300.3	265.9	230.5	214.4	177.0	214.4	291.2	402.4	617.8	527.8
80°	179.0	184.0	198.2	180.0	157.7	126.4	139.5	167.9	241.7	334.7	299.3
82.5°	90.0	96.1	128.4	104.1	94.0	73.8	82.9	99.1	126.4	185.0	117.3
85°	7.1	7.1	23.3	26.3	32.4	26.3	33.4	40.4	57.6	73.8	39.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.1	9.1	17.2	11.1
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-SA5B-830-U-AFL-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9	3525.9
2.5°	3532.0	3480.4	3418.7	3368.2	3290.3	3248.9	3196.3	3131.6	3105.3	3093.1	3086.1
5°	3539.1	3448.1	3316.6	3195.3	3060.8	2954.6	2836.3	2713.0	2642.2	2625.0	2612.8
7.5°	3565.4	3438.0	3228.6	3028.4	2778.7	2547.1	2321.6	2098.2	1983.9	1940.4	1936.4
10°	3601.8	3433.9	3139.7	2807.0	2385.3	2019.3	1755.4	1580.4	1506.6	1482.4	1474.3
12.5°	3647.3	3430.9	3022.4	2499.6	1931.3	1585.5	1434.8	1406.5	1416.6	1414.6	1414.6
15°	3704.9	3434.9	2880.8	2151.8	1562.2	1376.2	1379.2	1412.6	1443.9	1449.0	1449.0
17.5°	3767.6	3430.9	2675.5	1802.9	1340.8	1326.6	1373.2	1419.7	1448.0	1452.0	1452.0
20°	3835.3	3411.7	2416.7	1474.3	1243.7	1295.3	1345.9	1382.3	1399.5	1403.5	1403.5
22.5°	3875.8	3357.1	2135.6	1247.8	1182.1	1245.8	1279.1	1316.5	1318.6	1286.2	1285.2
25°	3869.7	3254.9	1815.0	1102.2	1116.3	1171.9	1214.4	1188.1	1155.8	1137.6	1134.5
27.5°	3831.3	3101.2	1488.4	992.0	1038.5	1101.2	1088.0	1065.8	1057.7	1037.5	1035.4
30°	3782.8	2912.2	1195.2	906.0	957.6	1015.2	995.0	993.0	984.9	962.6	962.6
32.5°	3736.2	2717.0	973.8	842.3	906.0	910.0	938.4	940.4	936.3	897.9	893.9
35°	3723.1	2521.8	824.1	791.7	855.4	853.4	893.9	892.9	823.1	769.5	768.5
37.5°	3762.5	2323.7	735.1	750.3	785.7	812.0	844.3	785.7	762.4	730.1	728.0
40°	3846.5	2140.6	689.6	726.0	741.2	779.6	729.0	733.1	727.0	702.8	699.7
42.5°	3957.7	1984.9	664.3	717.9	715.9	726.0	670.4	686.6	695.7	677.5	674.4
45°	4064.9	1849.4	651.2	687.6	697.7	639.1	627.9	643.1	657.3	650.2	647.1
47.5°	4143.7	1732.1	644.1	646.1	674.4	609.7	591.5	598.6	615.8	618.8	617.8
50°	4168.0	1632.0	636.0	611.8	605.7	580.4	566.3	564.2	584.5	598.6	600.6
52.5°	4121.5	1543.0	614.8	581.4	552.1	556.1	551.1	541.0	561.2	580.4	582.4
55°	4052.7	1492.5	581.4	552.1	517.7	533.9	535.9	526.8	540.0	553.1	553.1
57.5°	4057.8	1521.8	549.1	524.8	487.4	508.6	519.7	515.7	515.7	525.8	526.8
60°	4091.2	1564.3	527.8	490.4	457.0	479.3	504.6	500.5	491.4	504.6	504.6
62.5°	3995.1	1507.6	513.7	457.0	424.7	451.0	481.3	479.3	469.2	490.4	492.4
65°	3712.0	1356.0	497.5	415.6	392.3	422.7	449.0	456.0	446.9	475.2	480.3
67.5°	3111.4	1140.6	466.1	376.2	360.0	388.3	413.6	423.7	416.6	450.0	454.0
70°	2319.6	923.2	416.6	332.7	320.5	345.8	369.1	373.1	374.1	413.6	417.6
72.5°	1479.3	717.9	350.9	284.1	275.0	294.2	311.4	327.6	334.7	372.1	371.1
75°	825.1	533.9	282.1	240.7	224.5	239.6	259.9	279.1	299.3	353.9	360.0
77.5°	475.2	375.1	223.5	193.1	173.9	190.1	207.3	234.6	295.3	342.8	336.7
80°	268.0	243.7	168.9	141.6	129.4	141.6	154.7	206.3	232.6	252.8	255.8
82.5°	125.4	136.5	115.3	87.0	87.0	95.0	107.2	159.8	175.9	143.6	125.4
85°	45.5	61.7	56.6	44.5	39.4	38.4	66.7	91.0	56.6	50.6	43.5
87.5°	12.1	17.2	16.2	11.1	6.1	5.1	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**

$\lambda$ (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			

**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)