

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: P642460

Luminaire Tested: GWS-SA6C-830-U-T3R-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642460  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA6C-830-U-T3R-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

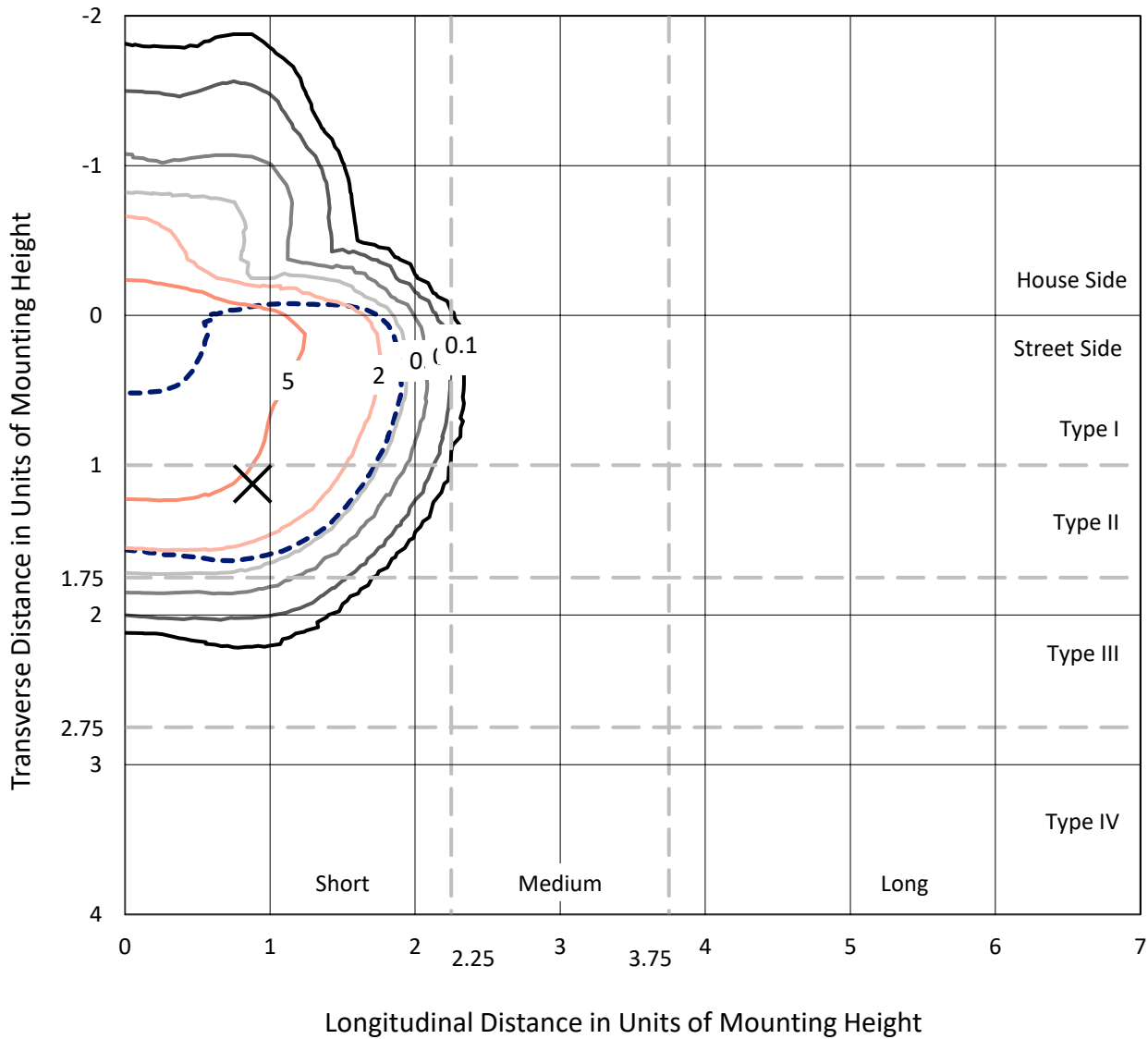
Lumens per Lamp: N/A  
Luminaire Lumens: 14147.2 lumens  
Efficiency: N/A  
Efficacy: 74.8 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G1  
  
Input Watts (W): 189.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
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



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### Iso-Footcandle Lines of Horizontal Illumination

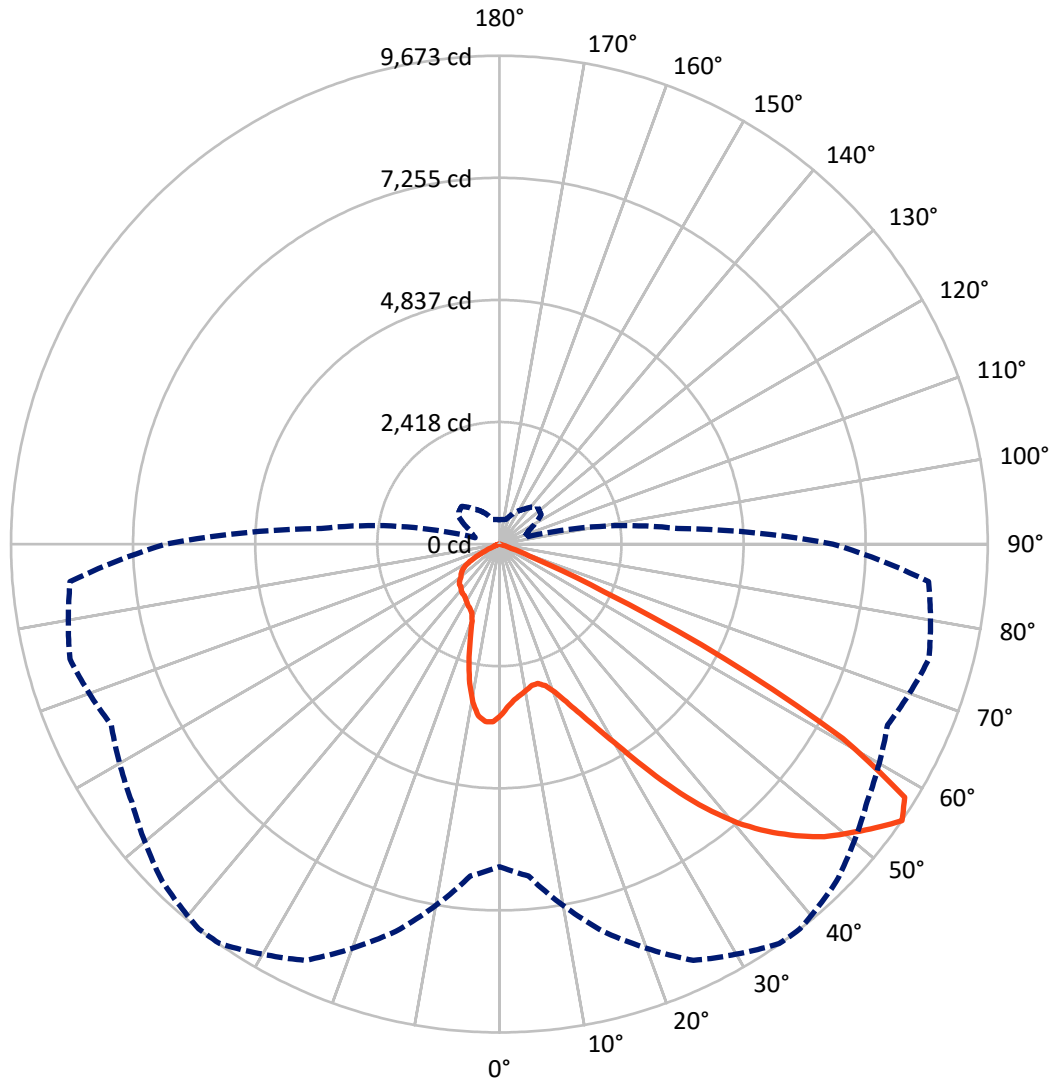
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 55-Deg Vertical

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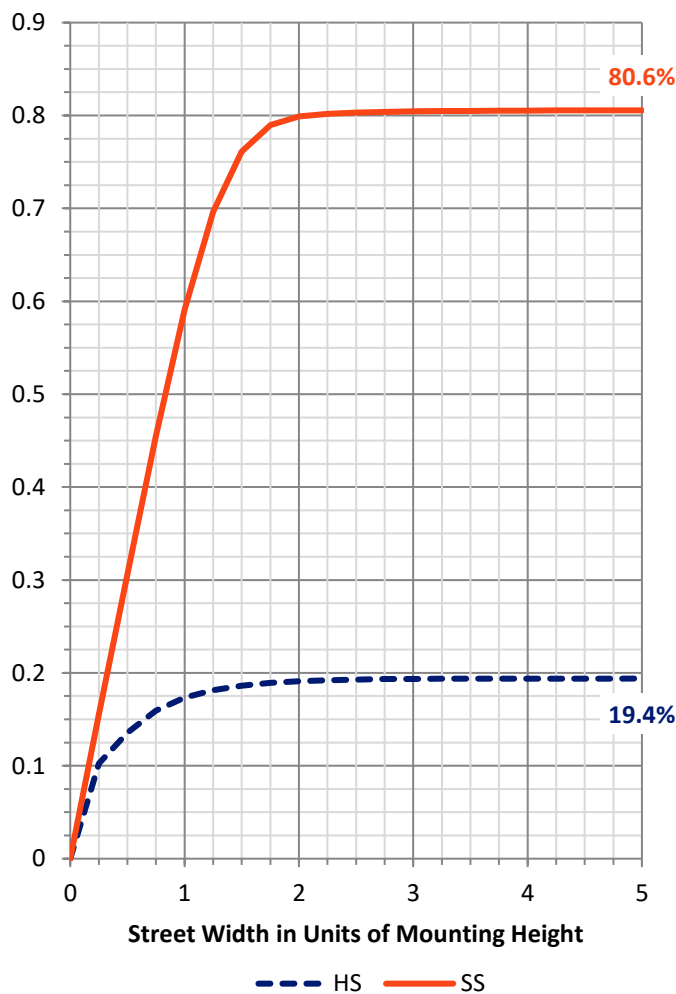
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2756.3	0.0	2756.3
	% Fixture	19.5	0.0	19.5
<b>Street Side</b>	Lumens	11390.9	0.0	11390.9
	% Fixture	80.5	0.0	80.5
<b>Total</b>	Lumens	14147.2	0.0	14147.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	313.7	2.2
10°-20°	844.5	6.0
20°-30°	1449.2	10.2
30°-40°	2403.6	17.0
40°-50°	3533.4	25.0
50°-60°	4128.9	29.2
60°-70°	1399.6	9.9
70°-80°	71.6	0.5
80°-90°	2.8	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°	14147.2	100.0
0°-180°	14147.2	100.0

**Coefficient of Utilization**



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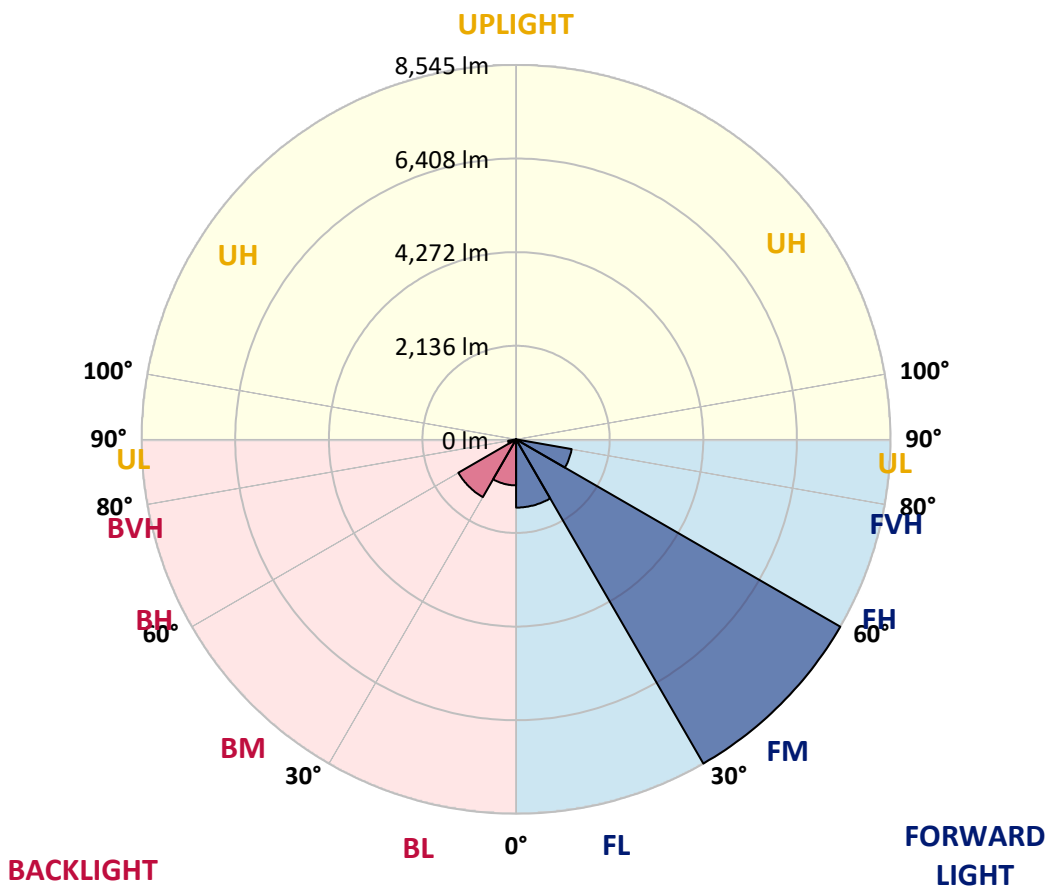
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1557.3	11.0			
FM (30°-60°)	8544.5	60.4			
FH (60°-80°)	1287.6	9.1			G1/1800
FVH (80°-90°)	1.5	0.0			G0/10
BL (0°-30°)	1050.1	7.4	B3/2500		
BM (30°-60°)	1521.4	10.8	B2/2500		
BH (60°-80°)	183.5	1.3	B1/500		G1/500
BVH (80°-90°)	1.3	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°	38°	45°	55°	65°	75°	85°
0°	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6
2.5°	3159.7	3153.3	3166.2	3192.1	3216.3	3224.4	3248.7	3282.6	3303.7	3353.8	3394.2
5°	3017.4	3014.2	3027.1	3049.8	3082.1	3093.4	3130.6	3187.2	3243.8	3331.2	3416.9
7.5°	2888.1	2886.5	2905.9	2956.0	3002.9	3017.4	3062.7	3132.3	3208.3	3342.5	3468.6
10°	2718.3	2719.9	2757.1	2828.3	2914.0	2943.1	3015.8	3116.1	3214.7	3387.8	3562.4
12.5°	2663.3	2666.5	2685.9	2740.9	2834.7	2871.9	2973.8	3125.8	3251.9	3452.4	3683.7
15°	2797.5	2797.5	2781.4	2787.8	2829.9	2863.8	2970.6	3158.1	3315.0	3530.1	3803.3
17.5°	3057.9	3048.2	3007.7	2952.8	2938.2	2949.5	3035.2	3227.7	3403.9	3620.6	3939.2
20°	3410.4	3413.6	3334.4	3219.6	3127.4	3125.8	3177.5	3350.6	3531.7	3729.0	4086.3
22.5°	3837.3	3824.4	3719.3	3562.4	3402.3	3389.4	3410.4	3538.1	3716.0	3900.4	4267.4
25°	4332.1	4325.7	4176.9	3966.7	3754.8	3724.1	3724.1	3850.2	3979.6	4144.5	4484.1
27.5°	4849.6	4849.6	4705.7	4463.1	4181.7	4126.8	4118.7	4267.4	4353.1	4385.5	4666.9
30°	5381.6	5375.1	5232.8	4983.8	4683.0	4626.4	4603.8	4713.8	4775.2	4678.2	4894.9
32.5°	5921.7	5933.0	5789.1	5557.9	5289.4	5252.2	5182.7	5182.7	5232.8	5097.0	5253.9
35°	6502.2	6499.0	6385.8	6228.9	5999.3	5957.3	5842.5	5663.0	5739.0	5679.1	5750.3
37.5°	7014.8	7039.1	6984.1	6867.7	6681.7	6639.7	6450.5	6125.5	6183.7	6277.5	6340.5
40°	7535.5	7554.9	7609.9	7572.7	7338.3	7260.6	6924.3	6390.6	6455.3	6777.1	6958.2
42.5°	8046.5	8056.2	8167.8	8229.3	7915.5	7779.7	7283.3	6552.4	6620.3	7168.5	7485.4
45°	8371.6	8392.6	8576.9	8764.5	8424.9	8239.0	7595.4	6759.3	6788.4	7440.1	7875.1
47.5°	8358.6	8407.1	8753.2	9094.4	8863.1	8662.6	7970.5	7090.8	7042.3	7695.6	8132.2
50°	8098.3	8156.5	8652.9	9194.6	9178.5	8992.5	8387.7	7571.1	7419.1	7922.0	8164.6
52.5°	7558.2	7726.3	8476.7	9207.6	9432.4	9338.6	8903.6	8217.9	7928.5	8247.0	8216.3
55°	6390.6	6597.6	7941.4	9097.6	9662.0	9673.3	9445.3	8892.3	8481.5	8806.5	8534.9
57.5°	4851.2	5016.1	6112.5	8098.3	9282.0	9467.9	9655.5	9248.0	8822.7	9188.2	8609.3
60°	2923.7	3114.5	3827.6	5942.7	7496.7	7813.7	8549.4	8470.2	7957.6	8114.4	7060.1
62.5°	1185.3	1285.6	1767.5	3274.6	4718.6	5014.5	5719.6	5839.2	5713.1	5553.0	4282.0
65°	433.4	473.8	708.3	1353.5	2170.1	2278.4	2650.4	2862.2	3036.9	2585.7	1592.8
67.5°	268.4	294.3	460.9	695.3	789.1	734.1	747.1	891.0	850.6	525.5	284.6
70°	198.9	219.9	360.6	481.9	318.6	245.8	166.6	177.9	160.1	140.7	139.1
72.5°	137.5	156.9	270.1	284.6	122.9	87.3	61.4	85.7	97.0	95.4	98.6
75°	90.6	105.1	169.8	111.6	30.7	24.3	21.0	45.3	58.2	58.2	59.8
77.5°	53.4	61.4	59.8	22.6	6.5	6.5	4.9	8.1	12.9	14.6	17.8
80°	6.5	4.9	3.2	3.2	3.2	3.2	3.2	3.2	4.9	4.9	4.9
82.5°	1.6	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	4.9	4.9
85°	0.0	0.0	1.6	1.6	3.2	3.2	3.2	3.2	3.2	4.9	4.9
87.5°	0.0	0.0	1.6	1.6	3.2	3.2	3.2	3.2	3.2	4.9	4.9
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-SA6C-830-U-T3R-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6	3392.6
2.5°	3424.9	3413.6	3460.5	3494.5	3522.0	3534.9	3517.1	3515.5	3515.5	3479.9	3470.2
5°	3465.4	3470.2	3536.5	3565.6	3570.5	3554.3	3513.9	3486.4	3470.2	3433.0	3412.0
7.5°	3543.0	3559.2	3622.2	3617.4	3573.7	3499.3	3392.6	3310.1	3256.8	3198.6	3163.0
10°	3654.6	3685.3	3724.1	3656.2	3517.1	3327.9	3108.0	2951.1	2857.4	2791.1	2750.6
12.5°	3790.4	3821.1	3808.2	3648.1	3358.6	3020.7	2737.7	2511.3	2403.0	2343.1	2301.1
15°	3927.9	3947.3	3863.2	3551.1	3078.9	2624.5	2309.2	2084.4	1951.8	1903.3	1867.7
17.5°	4068.5	4063.7	3872.9	3360.3	2705.4	2178.2	1867.7	1714.1	1676.9	1668.8	1665.6
20°	4215.7	4172.0	3834.1	3087.0	2255.8	1736.7	1560.5	1570.2	1638.1	1670.4	1676.9
22.5°	4383.9	4273.9	3737.0	2716.7	1796.6	1447.3	1465.1	1560.5	1652.6	1696.3	1702.8
25°	4563.4	4367.7	3575.3	2241.3	1416.6	1330.8	1436.0	1545.9	1644.6	1697.9	1704.4
27.5°	4681.4	4390.3	3310.1	1762.6	1216.0	1285.6	1397.1	1502.3	1604.1	1662.3	1670.4
30°	4809.2	4380.6	2949.5	1358.3	1148.1	1246.8	1343.8	1439.2	1533.0	1597.7	1604.1
32.5°	4996.7	4374.2	2509.7	1102.8	1120.6	1216.0	1287.2	1366.4	1431.1	1468.3	1463.4
35°	5242.5	4366.1	1997.1	994.5	1104.5	1191.8	1248.4	1285.6	1214.4	1191.8	1196.6
37.5°	5557.9	4385.5	1565.3	949.2	1099.6	1185.3	1233.8	1127.1	1017.1	975.1	968.6
40°	5907.1	4435.6	1193.4	931.4	1115.8	1201.5	1178.8	1002.6	866.7	784.3	766.5
42.5°	6258.0	4490.6	944.4	925.0	1143.3	1246.8	1088.3	912.0	708.3	661.4	654.9
45°	6518.4	4480.9	816.6	913.6	1167.5	1272.6	1064.0	782.7	632.3	611.3	612.9
47.5°	6649.4	4374.2	747.1	887.8	1177.2	1246.8	1004.2	729.3	580.5	603.2	622.6
50°	6579.8	4097.6	682.4	837.6	1156.2	1212.8	908.8	688.9	554.7	648.4	692.1
52.5°	6495.8	3758.1	611.3	760.0	1106.1	1165.9	871.6	677.6	538.5	625.8	658.1
55°	6607.3	3543.0	494.8	640.4	1007.4	1055.9	842.5	675.9	501.3	486.7	481.9
57.5°	6450.5	3114.5	354.1	460.9	773.0	836.0	821.5	664.6	444.7	443.1	449.5
60°	4985.4	1900.1	242.6	292.7	473.8	533.6	745.5	635.5	383.2	352.5	354.1
62.5°	2833.1	808.5	166.6	181.1	242.6	287.8	569.2	577.3	354.1	336.3	354.1
65°	986.4	289.5	129.4	121.3	134.2	153.6	326.6	446.3	321.8	291.1	294.3
67.5°	203.8	143.9	114.8	100.3	100.3	100.3	166.6	278.1	265.2	231.2	234.5
70°	129.4	122.9	100.3	85.7	82.5	76.0	95.4	153.6	182.7	168.2	169.8
72.5°	95.4	93.8	79.2	69.5	61.4	55.0	59.8	76.0	93.8	97.0	98.6
75°	58.2	59.8	51.7	43.7	38.8	34.0	35.6	35.6	35.6	32.3	35.6
77.5°	17.8	19.4	16.2	12.9	11.3	11.3	11.3	9.7	8.1	4.9	4.9
80°	4.9	4.9	4.9	4.9	4.9	3.2	3.2	1.6	1.6	0.0	0.0
82.5°	4.9	4.9	4.9	4.9	3.2	3.2	1.6	1.6	0.0	0.0	0.0
85°	4.9	4.9	4.9	4.9	3.2	3.2	1.6	1.6	0.0	0.0	0.0
87.5°	4.9	4.9	4.9	4.9	3.2	3.2	1.6	1.6	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



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)