

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: P643451

Luminaire Tested: GWS-SA6E-830-U-T3R-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T3R-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31177 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G3  
  
Input Watts (W): 323.8  
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

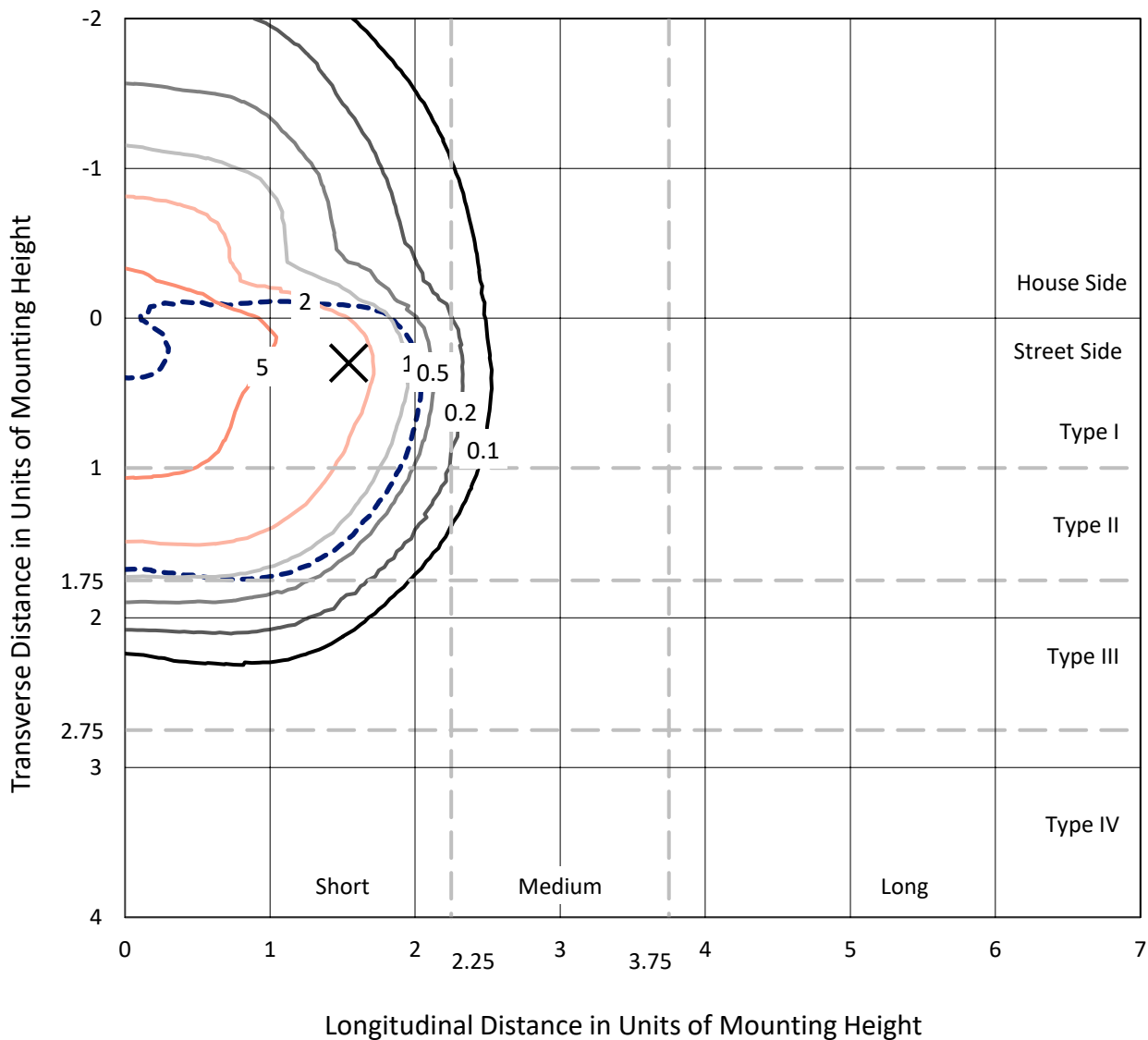


REPORT NUMBER: P643451

CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

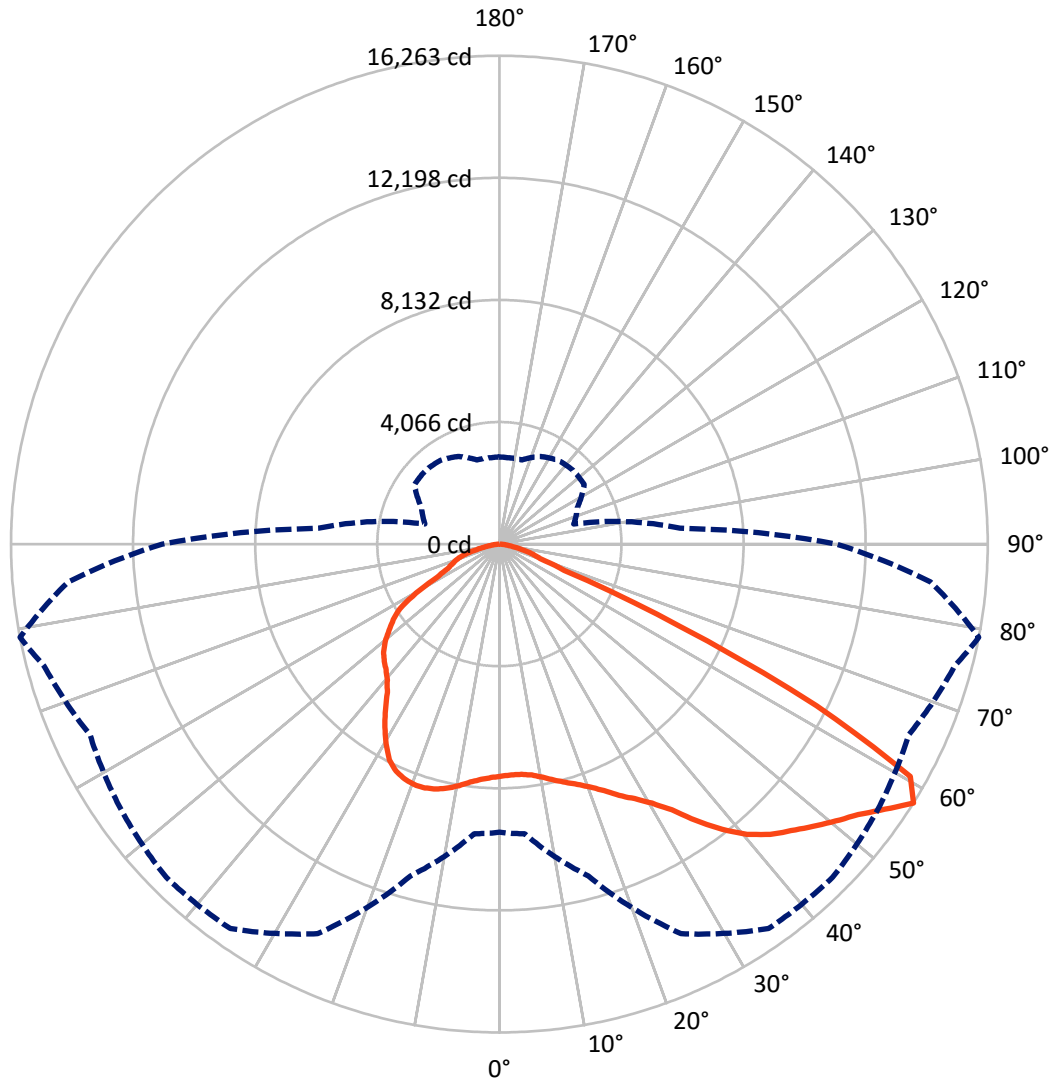
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.7 fc  
 Type II - Short - N/A

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CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

REPORT NUMBER: P643451

CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9267.5	0.0	9267.5
	% Fixture	29.7	0.0	29.7
<b>Street Side</b>	Lumens	21909.5	0.0	21909.5
	% Fixture	70.3	0.0	70.3
<b>Total</b>	Lumens	31177.0	0.0	31177.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	715.5	2.3
10°-20°	1988.5	6.4
20°-30°	3370.5	10.8
30°-40°	5159.0	16.5
40°-50°	6879.1	22.1
50°-60°	7944.8	25.5
60°-70°	4128.4	13.2
70°-80°	877.6	2.8
80°-90°	113.7	0.4
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°	31177.0	100.0
0°-180°	31177.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P643451

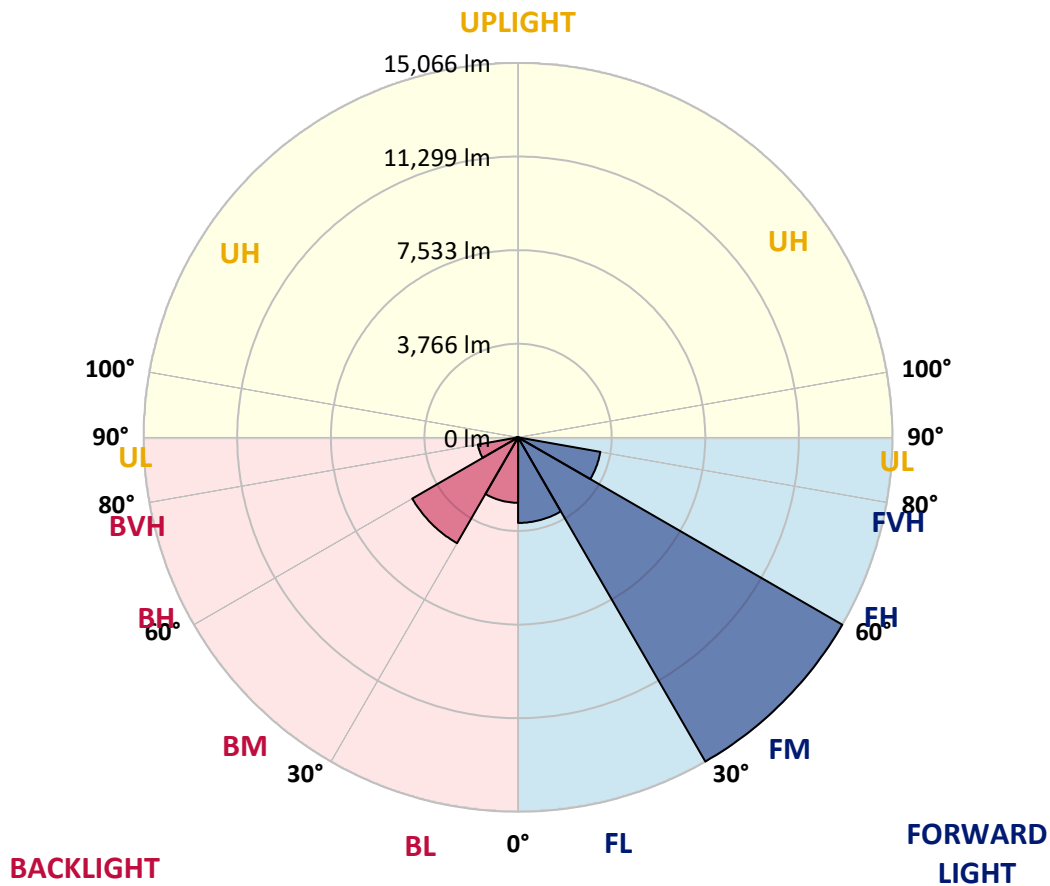
CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3442.6	11.0			
FM (30°-60°)	15065.6	48.3			
FH (60°-80°)	3361.7	10.8			G2/5000
FVH (80°-90°)	39.6	0.1			G1/100
BL (0°-30°)	2631.9	8.4	B4/5000		
BM (30°-60°)	4917.3	15.8	B3/5000		
BH (60°-80°)	1644.3	5.3	B3/2500		G3/2500
BVH (80°-90°)	74.0	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G3**

Type II Short





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CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4
2.5°	7374.6	7359.3	7364.4	7384.8	7461.3	7517.4	7576.0	7629.5	7680.5	7695.8	7708.5
5°	7112.0	7084.0	7091.7	7124.8	7214.0	7308.3	7412.8	7540.3	7662.7	7703.4	7757.0
7.5°	6926.0	6920.9	6933.6	6984.6	7078.9	7168.1	7303.2	7484.2	7695.8	7764.6	7858.9
10°	6678.7	6668.5	6719.5	6824.0	6979.5	7122.2	7282.8	7497.0	7792.7	7894.6	8039.9
12.5°	6482.4	6477.3	6530.8	6676.1	6875.0	7101.8	7323.6	7563.2	7922.7	8062.9	8241.3
15°	6597.1	6574.2	6576.7	6678.7	6857.1	7124.8	7425.6	7683.0	8052.7	8231.1	8460.5
17.5°	6931.1	6890.3	6859.7	6877.5	6979.5	7257.3	7581.1	7843.6	8203.1	8412.1	8692.5
20°	7392.4	7369.5	7285.4	7229.3	7252.2	7497.0	7825.8	8070.5	8399.3	8633.9	8934.7
22.5°	8011.9	7955.8	7841.1	7751.9	7683.0	7874.2	8177.6	8389.2	8672.1	8916.8	9230.4
25°	8779.2	8697.6	8516.6	8376.4	8228.6	8424.8	8695.0	8855.6	9046.8	9273.7	9571.9
27.5°	9561.7	9492.9	9291.5	9102.9	8919.4	9041.7	9362.9	9454.7	9434.3	9600.0	9854.9
30°	10395.3	10308.6	10117.5	9913.5	9676.5	9755.5	10043.5	10089.4	9872.7	10010.4	10183.7
32.5°	11274.8	11190.6	11024.9	10787.9	10520.2	10550.8	10629.8	10673.2	10466.7	10545.7	10678.3
35°	12169.5	12090.5	11922.2	11687.7	11491.4	11305.3	11106.5	11279.9	11160.0	11313.0	11302.8
37.5°	12987.8	12908.7	12804.2	12623.2	12286.8	11919.7	11460.8	11675.0	11861.1	12054.8	12021.6
40°	13540.9	13487.4	13512.9	13484.8	13051.5	12325.0	11634.2	11868.7	12376.0	12707.4	12689.5
42.5°	14017.6	13964.1	14111.9	14219.0	13709.2	12699.7	11718.3	11942.6	12704.8	13222.3	13196.8
45°	14229.2	14213.9	14458.6	14797.6	14310.8	13097.4	11935.0	12095.6	12954.6	13617.4	13520.5
47.5°	13976.8	14030.4	14512.1	15085.7	14810.4	13569.0	12378.5	12419.3	13280.9	14045.6	13772.9
50°	13474.6	13591.9	14241.9	15093.3	15174.9	14101.7	12992.9	12890.9	13719.4	14501.9	13905.4
52.5°	12743.0	12865.4	13925.8	15034.7	15383.9	14718.6	13811.1	13665.8	14272.5	14958.2	13928.4
55°	11063.2	11228.9	13201.9	14902.2	15587.9	15279.4	14733.9	14438.2	14986.3	15585.3	14155.3
57.5°	9597.4	9684.1	11437.9	14313.3	15628.7	15692.4	15391.6	15039.8	15694.9	16263.4	14410.2
60°	7043.2	7063.6	8641.5	11843.2	14377.0	15452.8	15338.1	14815.5	15358.4	15720.4	13242.7
62.5°	3979.2	3981.7	5241.0	7904.8	10739.4	12595.2	12666.6	12205.2	11748.9	11856.0	9217.6
65°	1493.8	1634.0	2393.6	3884.9	6191.8	7435.8	7731.5	7838.5	7078.9	6607.3	4942.7
67.5°	999.3	1032.4	1396.9	1998.5	2755.6	3181.3	3558.6	3568.8	2610.3	2327.3	1947.5
70°	762.2	795.3	1098.7	1430.1	1396.9	1289.9	1394.4	1356.1	1402.0	1440.3	1481.0
72.5°	568.5	601.6	851.4	1009.5	838.7	825.9	935.5	1040.0	1136.9	1177.7	1241.4
75°	377.3	402.8	573.6	540.4	463.9	548.1	683.2	787.7	843.8	892.2	940.6
77.5°	239.6	257.5	305.9	247.3	257.5	321.2	397.7	492.0	545.5	593.9	619.4
80°	109.6	107.1	104.5	117.3	145.3	188.6	239.6	295.7	336.5	356.9	372.2
82.5°	43.3	48.4	53.5	63.7	79.0	102.0	135.1	173.3	206.5	211.6	224.3
85°	17.8	20.4	22.9	28.0	35.7	45.9	56.1	79.0	99.4	107.1	114.7
87.5°	0.0	0.0	0.0	0.0	2.5	5.1	7.6	12.7	22.9	25.5	28.0
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: P643451

CATALOG NUMBER: GWS-SA6E-830-U-T3R-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4	7726.4
2.5°	7777.4	7744.2	7800.3	7838.5	7874.2	7836.0	7823.2	7790.1	7785.0	7785.0	7802.9
5°	7848.7	7825.8	7884.4	7907.4	7904.8	7820.7	7769.7	7703.4	7670.3	7670.3	7675.4
7.5°	7976.2	7963.4	7996.6	7960.9	7879.3	7708.5	7540.3	7400.1	7305.8	7257.3	7272.6
10°	8187.8	8172.5	8144.4	8011.9	7777.4	7423.0	7078.9	6824.0	6671.0	6584.4	6589.5
12.5°	8394.3	8368.8	8269.3	7976.2	7494.4	6931.1	6479.9	6194.4	6026.1	5924.2	5901.2
15°	8621.1	8554.8	8340.7	7792.7	7033.0	6329.5	5857.9	5549.4	5368.4	5307.3	5304.7
17.5°	8837.8	8720.5	8333.1	7466.4	6479.9	5699.8	5225.7	5034.5	5003.9	5032.0	5039.6
20°	9057.0	8868.4	8249.0	7015.2	5822.2	5072.7	4828.0	4907.1	5021.8	5098.2	5116.1
22.5°	9283.9	8990.7	8057.8	6434.0	5128.8	4649.6	4751.6	4924.9	5067.6	5169.6	5179.8
25°	9538.8	9105.5	7772.3	5722.8	4573.1	4532.3	4733.7	4917.3	5070.2	5187.5	5207.9
27.5°	9684.1	9108.0	7372.1	4991.2	4318.2	4486.5	4690.4	4863.7	5016.7	5144.1	5167.1
30°	9826.9	9039.2	6737.3	4397.2	4244.3	4432.9	4616.5	4777.1	4922.3	5047.3	5075.3
32.5°	10028.2	8975.4	6005.7	4055.6	4200.9	4381.9	4532.3	4675.1	4787.2	4843.3	4858.6
35°	10278.1	8893.9	5228.2	3907.8	4172.9	4341.2	4473.7	4550.2	4404.9	4374.3	4407.4
37.5°	10627.3	8817.4	4453.3	3844.1	4155.1	4325.9	4443.1	4246.8	4068.4	3997.0	4022.5
40°	11004.5	8774.1	3928.2	3793.1	4162.7	4341.2	4315.7	4025.1	3767.6	3617.2	3612.1
42.5°	11325.7	8707.8	3591.7	3760.0	4183.1	4399.8	4142.3	3828.8	3446.4	3357.2	3359.7
45°	11542.4	8539.6	3413.3	3724.3	4200.9	4412.5	4060.7	3558.6	3285.8	3229.7	3227.2
47.5°	11631.6	8233.7	3298.6	3668.2	4198.4	4308.0	3895.1	3446.4	3173.7	3158.4	3168.6
50°	11573.0	7731.5	3181.3	3558.6	4137.2	4198.4	3703.9	3347.0	3097.2	3181.3	3242.5
52.5°	11356.3	7081.5	3041.1	3408.2	4027.6	4073.5	3607.0	3285.8	3041.1	3153.3	3201.7
55°	11300.2	6553.8	2862.7	3211.9	3864.5	3851.7	3505.0	3255.2	3002.9	2959.5	2967.2
57.5°	11226.3	6038.9	2567.0	2860.1	3451.5	3471.9	3408.2	3219.5	2903.4	2890.7	2903.4
60°	9752.9	4629.2	2289.1	2467.5	2834.6	2944.2	3298.6	3153.3	2742.9	2689.3	2686.8
62.5°	6370.2	2804.0	2036.7	2151.5	2309.5	2437.0	3008.0	2962.1	2567.0	2533.8	2556.8
65°	3426.0	1998.5	1853.2	1922.0	2008.7	2105.6	2493.0	2638.3	2319.7	2202.4	2205.0
67.5°	1751.2	1700.3	1715.6	1764.0	1830.3	1878.7	2011.3	2138.7	1978.1	1878.7	1876.2
70°	1498.9	1539.7	1562.6	1590.7	1634.0	1626.3	1639.1	1662.0	1649.3	1600.8	1598.3
72.5°	1277.1	1340.8	1345.9	1351.0	1366.3	1330.6	1307.7	1269.5	1272.0	1279.7	1282.2
75°	971.2	1032.4	1047.7	1040.0	1055.3	1009.5	978.9	940.6	894.7	887.1	892.2
77.5°	632.2	680.6	703.6	698.5	706.1	670.4	655.1	614.3	560.8	540.4	540.4
80°	382.4	410.4	428.3	433.4	441.0	415.5	390.0	354.3	331.4	308.4	308.4
82.5°	232.0	249.8	262.6	262.6	270.2	242.2	221.8	196.3	186.1	165.7	165.7
85°	117.3	130.0	135.1	132.6	127.5	104.5	96.9	84.1	79.0	68.8	68.8
87.5°	28.0	35.7	35.7	25.5	25.5	12.7	7.6	2.5	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

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)