

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: P643453

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

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643453  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-15)  
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  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

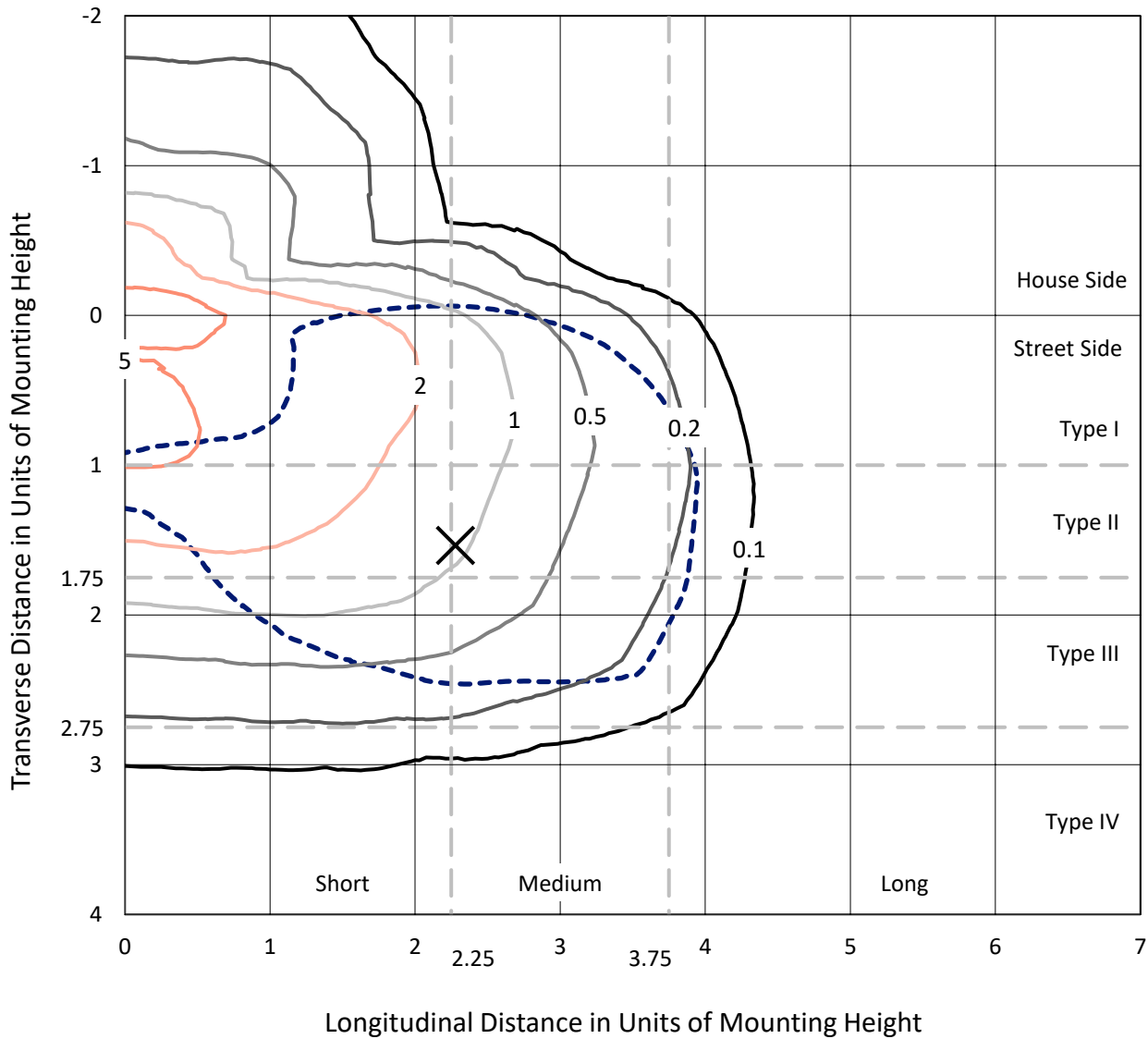
Lumens per Lamp: N/A  
Luminaire Lumens: 36150.6 lumens  
Efficiency: N/A  
Efficacy: 111.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G5  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): 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: P643453  
 CATALOG NUMBER: GWS-SA6E-830-U-T3R-W

### Iso-Footcandle Lines of Horizontal Illumination

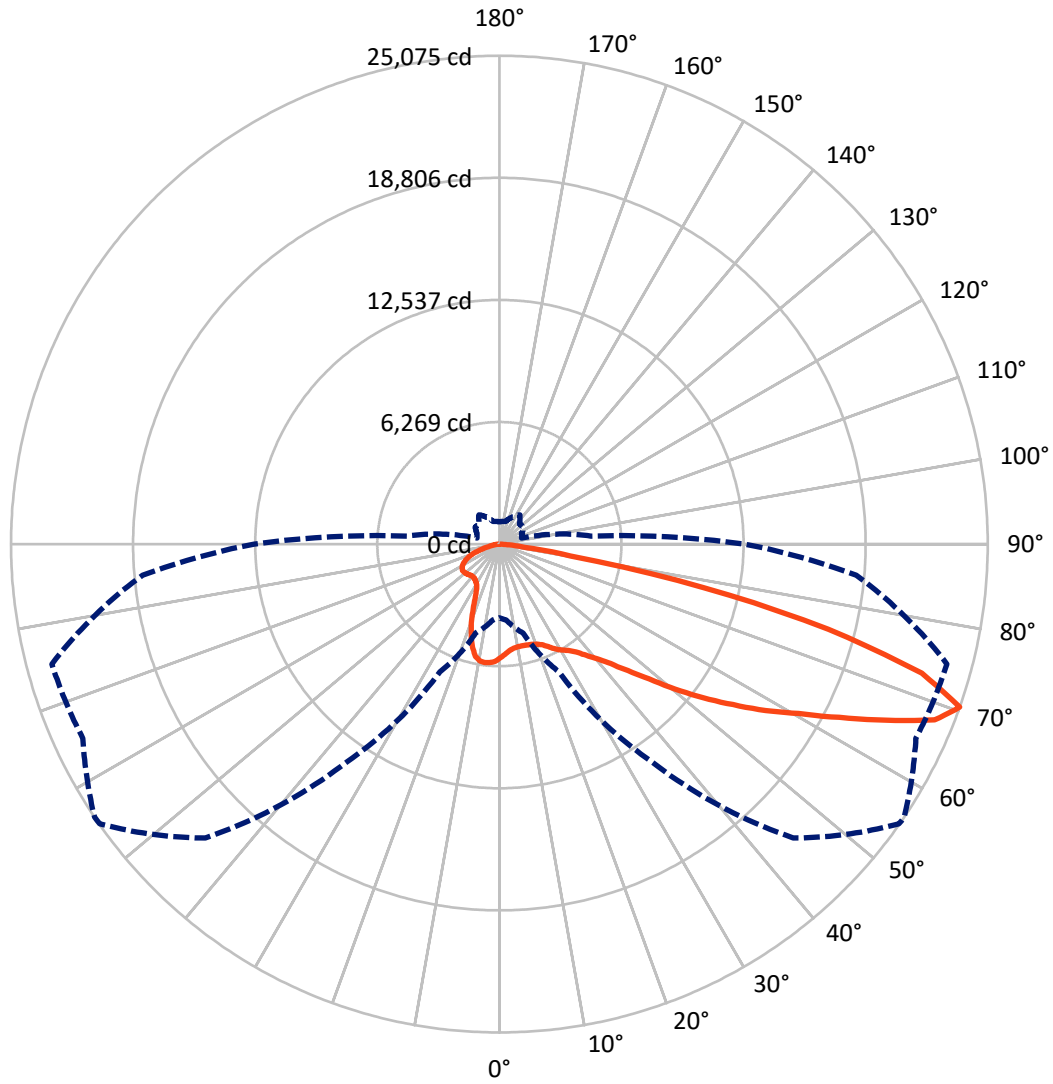
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.7 fc  
 Type III - Medium - N/A

REPORT NUMBER: P643453  
CATALOG NUMBER: GWS-SA6E-830-U-T3R-W

### Luminous Intensity Polar Plot



— Vertical Plane Through 56-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P643453

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

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6950.0	0.0	6950.0
	% Fixture	19.2	0.0	19.2
<b>Street Side</b>	Lumens	29200.6	0.0	29200.6
	% Fixture	80.8	0.0	80.8
<b>Total</b>	Lumens	36150.6	0.0	36150.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	540.0	1.5
10°-20°	1463.1	4.0
20°-30°	2418.9	6.7
30°-40°	3616.6	10.0
40°-50°	5382.0	14.9
50°-60°	7651.7	21.2
60°-70°	9476.9	26.2
70°-80°	5232.8	14.5
80°-90°	368.5	1.0
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°	36150.6	100.0
0°-180°	36150.6	100.0

**Coefficient of Utilization**



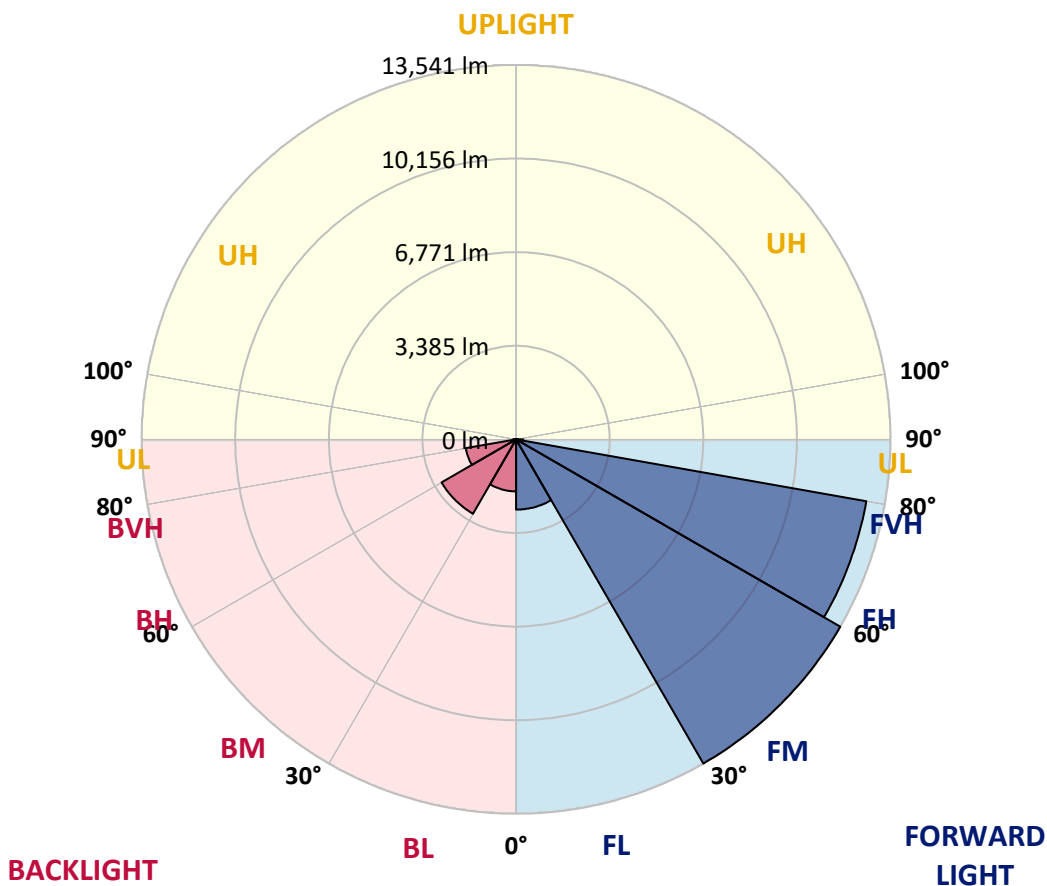
REPORT NUMBER: P643453

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

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2540.6	7.0			
FM (30°-60°)	13541.5	37.5			
FH (60°-80°)	12862.4	35.6			G5
FVH (80°-90°)	256.1	0.7			G3/500
BL (0°-30°)	1881.4	5.2	B3/2500		
BM (30°-60°)	3108.9	8.6	B3/5000		
BH (60°-80°)	1847.3	5.1	B3/2500		G3/2500
BVH (80°-90°)	112.4	0.3			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**  
 Type III Medium





REPORT NUMBER: P643453

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

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3
2.5°	5460.5	5429.9	5465.6	5483.5	5529.4	5595.6	5654.3	5656.8	5687.4	5761.3	5832.7
5°	5213.2	5197.9	5208.1	5261.7	5310.1	5394.2	5483.5	5491.1	5577.8	5723.1	5865.9
7.5°	5022.0	5001.7	5039.9	5108.7	5169.9	5264.2	5381.5	5391.7	5514.1	5733.3	5952.5
10°	4746.7	4731.4	4802.8	4894.6	5027.1	5182.7	5338.2	5350.9	5511.5	5799.6	6105.5
12.5°	4626.9	4626.9	4657.5	4744.2	4889.5	5096.0	5330.5	5350.9	5552.3	5901.5	6301.8
15°	4813.0	4825.8	4800.3	4795.2	4853.8	5050.1	5340.7	5371.3	5628.8	6006.1	6495.5
17.5°	5187.8	5200.5	5134.2	5029.7	4971.1	5093.4	5378.9	5412.1	5710.3	6120.8	6704.6
20°	5712.9	5728.2	5582.9	5422.3	5220.9	5218.3	5452.9	5483.5	5814.9	6245.7	6926.3
22.5°	6327.3	6337.5	6153.9	5899.0	5590.5	5450.3	5580.3	5610.9	5950.0	6419.0	7166.0
25°	7038.5	7069.1	6847.3	6477.7	6059.6	5769.0	5791.9	5827.6	6192.2	6651.0	7448.9
27.5°	7798.2	7836.4	7581.5	7173.6	6597.5	6120.8	6064.7	6095.3	6449.6	6793.8	7599.4
30°	8575.7	8603.8	8348.8	7882.3	7176.2	6518.5	6294.1	6312.0	6561.8	6862.6	7752.3
32.5°	9439.9	9417.0	9172.2	8634.4	7844.1	6995.2	6508.3	6503.2	6686.7	7000.3	7971.5
35°	10250.6	10283.7	10023.7	9429.7	8578.3	7584.1	6829.5	6809.1	6951.8	7224.6	8280.0
37.5°	11232.1	11221.9	10910.8	10268.4	9315.0	8147.4	7280.7	7245.0	7296.0	7573.9	8710.8
40°	11933.1	12004.5	11803.1	11204.0	10176.7	8840.8	7808.4	7729.4	7742.1	8004.7	9287.0
42.5°	12506.7	12573.0	12593.4	12211.0	11163.2	9697.4	8466.1	8387.1	8394.7	8766.9	9995.7
45°	12947.7	13036.9	13325.0	13212.8	12274.7	10686.5	9355.8	9274.2	9279.3	9692.3	10852.2
47.5°	13128.7	13225.6	13809.4	14077.0	13455.0	11869.4	10462.2	10342.4	10360.2	10816.5	11831.1
50°	13070.1	13200.1	13990.4	14742.4	14444.1	13072.6	11785.2	11701.1	11632.3	12295.1	12894.2
52.5°	12565.3	12708.1	13972.5	15165.6	15252.2	14209.6	13151.6	13103.2	13087.9	13865.4	14082.1
55°	11079.1	11318.7	13358.1	15277.7	15884.5	15280.3	14632.8	14551.2	14630.2	15548.0	15282.8
57.5°	10255.7	10434.1	12154.9	15152.8	16402.0	16300.0	16111.3	16119.0	16208.2	17375.8	16738.5
60°	9786.6	9995.7	11487.0	14811.2	16899.1	17538.9	17658.7	17658.7	17819.3	19346.4	18217.0
62.5°	9164.6	9376.2	10862.4	14153.5	17357.9	18997.1	19603.8	19596.2	19659.9	21459.7	19662.5
65°	7902.7	8099.0	9608.2	13116.0	17582.3	20603.1	21814.0	21791.1	21663.6	23341.1	20618.4
67.5°	5738.4	5924.5	7359.7	11142.8	16774.2	21898.2	24090.5	24100.7	23338.5	24526.5	20669.4
70°	3783.1	3910.6	4731.4	7237.4	13641.1	21339.9	25044.0	25074.6	23596.0	23787.2	18395.5
72.5°	2360.6	2449.8	2954.6	4315.9	8060.8	16891.4	22596.7	22680.8	21227.7	20904.0	15114.6
75°	1567.8	1629.0	1965.5	2516.1	3729.6	9141.7	17176.9	17447.2	17013.8	16386.7	10531.0
77.5°	943.2	994.2	1251.7	1598.4	1651.9	3571.5	10026.3	10724.7	10785.9	8555.3	4410.2
80°	430.8	489.5	690.9	912.6	879.5	1244.0	3535.8	3699.0	4364.3	2717.5	1391.9
82.5°	254.9	280.4	458.9	453.8	374.7	604.2	1272.1	1305.2	1108.9	994.2	594.0
85°	102.0	119.8	193.7	170.8	137.7	196.3	479.3	502.2	481.8	433.4	219.2
87.5°	0.0	0.0	0.0	0.0	2.5	5.1	43.3	45.9	66.3	119.8	66.3
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: P643453  
 CATALOG NUMBER: GWS-SA6E-830-U-T3R-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3	5835.3
2.5°	5878.6	5863.3	5939.8	5998.4	6023.9	6049.4	6026.5	6018.8	6018.8	5967.8	5942.3
5°	5942.3	5950.0	6054.5	6102.9	6102.9	6082.5	6021.4	5978.0	5962.7	5896.4	5878.6
7.5°	6062.1	6095.3	6192.2	6189.6	6118.2	6006.1	5853.1	5735.8	5628.8	5582.9	5554.8
10°	6258.4	6301.8	6368.1	6261.0	6062.1	5766.4	5442.7	5187.8	5034.8	4912.4	4912.4
12.5°	6482.8	6523.6	6510.8	6263.5	5853.1	5299.9	4833.4	4540.2	4326.1	4213.9	4213.9
15°	6707.1	6740.3	6602.6	6146.3	5417.2	4680.4	4170.6	3818.8	3632.7	3528.2	3528.2
17.5°	6934.0	6931.4	6640.8	5876.1	4848.7	3994.7	3495.0	3222.3	3158.5	3140.7	3138.1
20°	7153.2	7094.6	6592.4	5424.8	4188.4	3303.8	2987.7	3005.6	3099.9	3140.7	3145.8
22.5°	7400.5	7255.2	6449.6	4848.7	3439.0	2824.6	2845.0	2992.8	3130.5	3191.7	3199.3
25°	7652.9	7392.9	6210.0	4173.1	2811.8	2648.7	2806.7	2972.4	3127.9	3207.0	3214.6
27.5°	7754.9	7392.9	5802.1	3390.5	2477.9	2574.8	2748.1	2908.7	3071.9	3163.6	3181.5
30°	7839.0	7329.1	5231.1	2684.4	2340.2	2503.4	2653.8	2801.6	2962.2	3074.4	3094.8
32.5°	7956.2	7273.0	4540.2	2256.1	2276.5	2434.5	2539.1	2664.0	2809.3	2883.2	2875.6
35°	8093.9	7186.4	3706.6	2052.2	2223.0	2375.9	2449.8	2523.8	2457.5	2454.9	2462.6
37.5°	8290.2	7109.9	2980.1	1960.4	2187.3	2335.1	2396.3	2238.3	2146.5	2108.2	2092.9
40°	8573.2	7079.3	2350.4	1906.8	2182.2	2332.6	2289.2	2044.5	1919.6	1787.0	1784.5
42.5°	8930.1	7056.4	1942.5	1881.4	2200.0	2391.2	2141.4	1917.0	1659.6	1600.9	1595.8
45°	9388.9	7020.7	1738.6	1876.3	2243.4	2437.1	2126.1	1741.1	1565.2	1539.8	1539.8
47.5°	9942.1	6964.6	1646.8	1876.3	2291.8	2416.7	2080.2	1702.9	1521.9	1550.0	1567.8
50°	10576.9	6893.2	1598.4	1871.2	2340.2	2416.7	1983.3	1695.3	1511.7	1657.0	1715.7
52.5°	11255.0	6811.6	1565.2	1850.8	2373.4	2419.3	1988.4	1720.8	1521.9	1682.5	1730.9
55°	12004.5	6798.9	1519.4	1807.4	2383.6	2353.0	2001.2	1776.8	1537.2	1524.5	1527.0
57.5°	12950.3	6951.8	1486.2	1743.7	2342.8	2217.9	2026.7	1817.6	1519.4	1521.9	1539.8
60°	13939.4	7239.9	1514.3	1682.5	2258.6	2090.4	2044.5	1797.2	1432.7	1391.9	1397.0
62.5°	14780.6	7459.1	1537.2	1654.5	2136.3	1978.2	2026.7	1751.3	1384.2	1374.1	1397.0
65°	15132.4	7278.1	1481.1	1595.8	1957.8	1840.6	1988.4	1692.7	1343.5	1305.2	1307.8
67.5°	14742.4	6429.2	1371.5	1465.8	1756.4	1664.7	1927.2	1616.2	1287.4	1241.5	1231.3
70°	12593.4	4723.8	1182.9	1259.3	1511.7	1458.2	1832.9	1516.8	1198.2	1165.0	1142.1
72.5°	10148.6	3344.6	981.5	1001.9	1185.4	1228.7	1669.8	1391.9	1096.2	1001.9	968.7
75°	7064.0	2100.6	818.3	797.9	856.6	938.1	1302.7	1154.8	945.8	846.4	815.8
77.5°	3038.7	1078.3	639.9	629.7	571.0	650.1	999.3	963.6	792.8	678.1	660.3
80°	1017.2	624.6	461.4	443.6	379.8	456.3	703.6	769.9	622.0	502.2	471.6
82.5°	509.9	362.0	293.2	265.1	254.9	288.1	415.5	479.3	430.8	346.7	293.2
85°	249.8	206.5	160.6	158.1	132.6	124.9	173.3	203.9	193.7	142.8	135.1
87.5°	91.8	81.6	51.0	40.8	25.5	17.8	10.2	10.2	7.6	7.6	7.6
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**

$\lambda$ (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

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)