

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: P636513

Luminaire Tested: GWS-SA3F-830-U-T2R-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P636513  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-13)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3F-830-U-T2R-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

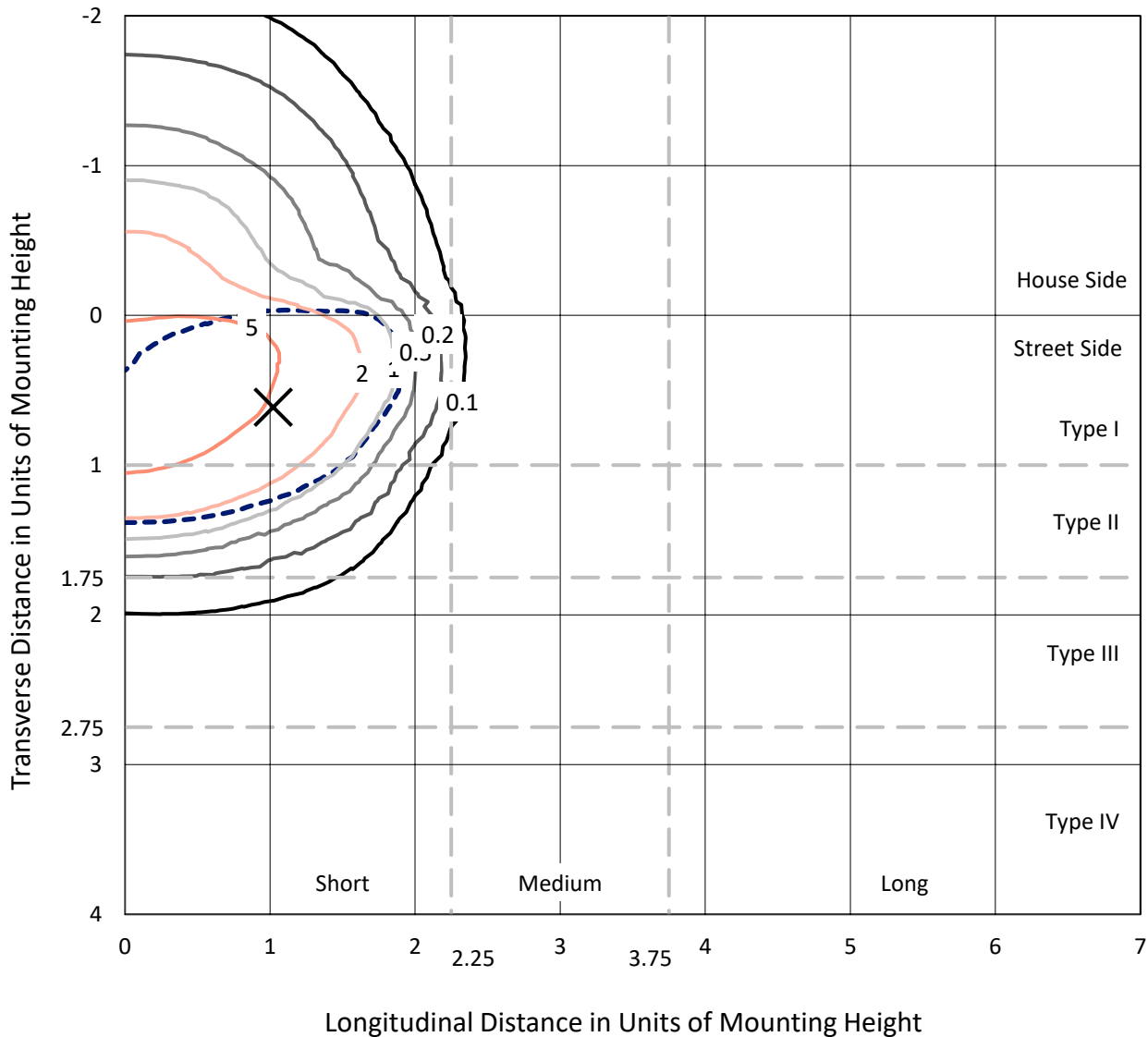
Lumens per Lamp: N/A  
Luminaire Lumens: 17094.5 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 183.2  
Input Voltage (V): 120  
Input Current (Ain): 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



REPORT NUMBER: P636513  
 CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

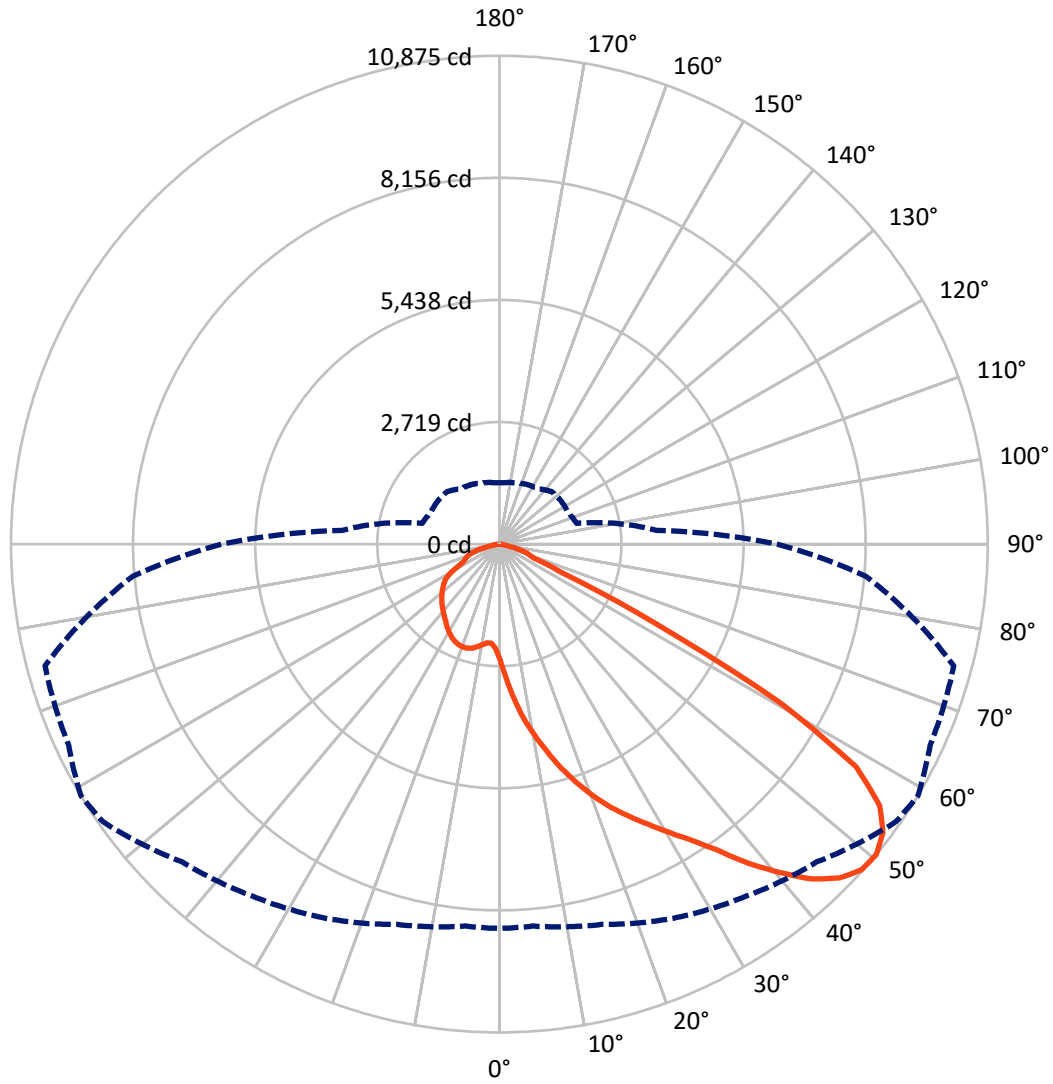
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 fc  
 Type II - Short - N/A

REPORT NUMBER: P636513  
CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 50-Deg Vertical

REPORT NUMBER: P636513

CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3932.1	0.0	3932.1
	% Fixture	23.0	0.0	23.0
<b>Street Side</b>	Lumens	13162.4	0.0	13162.4
	% Fixture	77.0	0.0	77.0
<b>Total</b>	Lumens	17094.5	0.0	17094.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.5	1.7
10°-20°	1054.7	6.2
20°-30°	1997.2	11.7
30°-40°	3312.1	19.4
40°-50°	4524.4	26.5
50°-60°	4107.0	24.0
60°-70°	1367.7	8.0
70°-80°	398.9	2.3
80°-90°	41.9	0.2
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°	17094.5	100.0
0°-180°	17094.5	100.0

**Coefficient of Utilization**



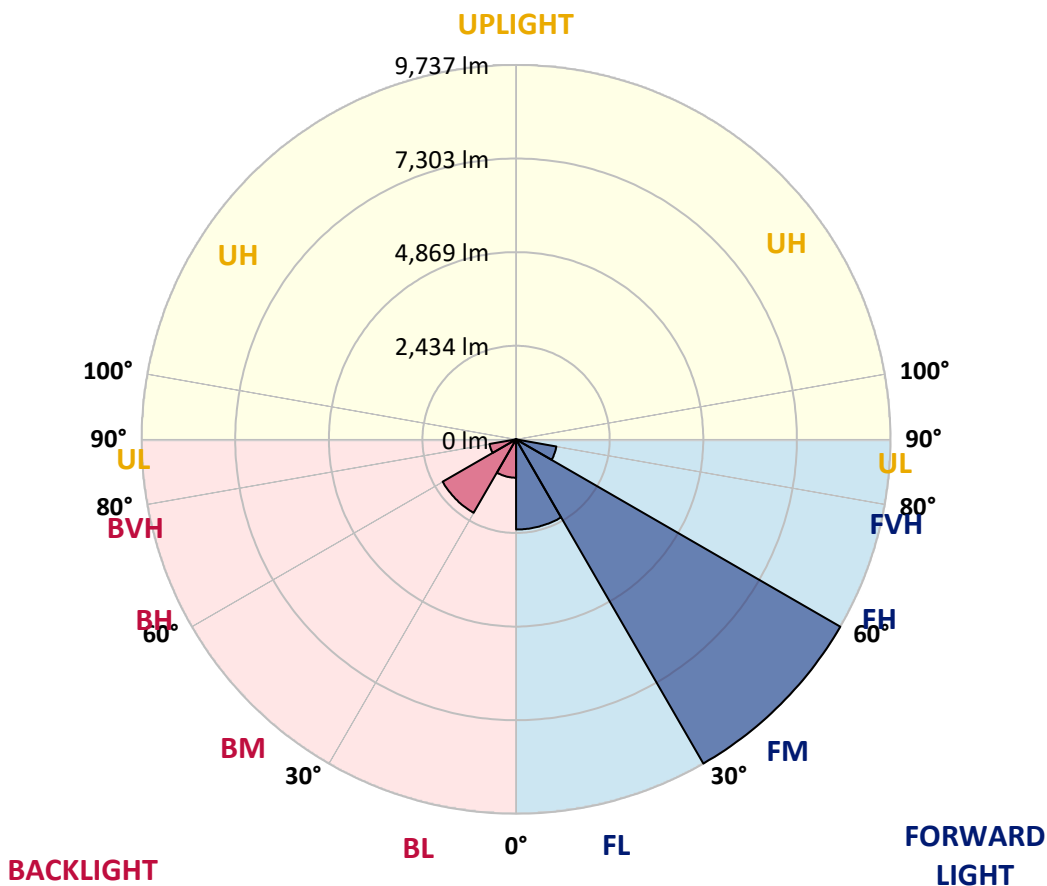
REPORT NUMBER: P636513

CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2344.1	13.7			
FM (30°-60°)	9737.2	57.0			
FH (60°-80°)	1064.7	6.2			G1/1800
FVH (80°-90°)	16.4	0.1			G1/100
BL (0°-30°)	998.4	5.8	B2/1000		
BM (30°-60°)	2206.3	12.9	B2/2500		
BH (60°-80°)	701.8	4.1	B2/1000		G2/1000
BVH (80°-90°)	25.5	0.1			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





REPORT NUMBER: P636513

CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9
2.5°	3355.8	3380.8	3341.9	3344.6	3247.2	3202.6	3077.3	3003.5	2954.8	2818.3	2694.4
5°	4032.5	4003.3	3972.6	3954.5	3869.6	3749.8	3593.9	3470.0	3355.8	3088.4	2830.8
7.5°	4447.5	4432.1	4411.2	4400.1	4316.6	4191.2	4035.3	3929.5	3763.8	3401.7	2996.5
10°	4799.7	4781.6	4769.1	4777.5	4709.2	4628.5	4458.6	4337.4	4150.9	3733.1	3197.0
12.5°	5072.7	5082.4	5086.6	5131.1	5101.9	5053.2	4877.7	4749.6	4542.1	4082.6	3432.4
15°	5288.5	5285.7	5334.4	5419.4	5466.7	5436.1	5295.4	5188.2	4934.8	4426.6	3685.8
17.5°	5338.6	5341.4	5418.0	5567.0	5721.5	5796.7	5717.4	5589.3	5338.6	4766.3	3949.0
20°	5379.0	5384.6	5463.9	5633.8	5859.4	6069.6	6082.2	5990.3	5774.4	5133.9	4216.3
22.5°	5633.8	5646.3	5667.2	5774.4	5977.7	6243.7	6389.9	6370.4	6189.4	5519.6	4504.5
25°	6303.6	6266.0	6164.3	6133.7	6211.7	6427.5	6676.7	6714.3	6625.2	5944.3	4815.1
27.5°	7130.7	7090.3	6939.9	6781.2	6612.7	6687.9	6953.8	7066.6	7068.0	6412.2	5127.0
30°	7881.2	7849.2	7726.6	7499.7	7208.7	7100.0	7296.4	7448.2	7538.7	6952.5	5482.0
32.5°	8523.1	8493.9	8328.2	8143.0	7858.9	7640.3	7711.3	7857.5	8069.2	7651.5	5923.4
35°	9063.4	9034.1	8875.4	8688.8	8425.7	8294.8	8269.7	8370.0	8644.3	8381.1	6430.3
37.5°	9502.0	9472.8	9307.1	9131.6	8931.1	8939.5	8977.1	9025.8	9183.1	9162.3	6971.9
40°	9786.1	9755.4	9637.1	9511.8	9385.0	9485.3	9671.9	9613.4	9696.9	9793.0	7470.4
42.5°	9912.8	9873.8	9805.6	9777.7	9738.7	9894.7	10253.9	10195.4	10095.2	10213.5	7840.8
45°	9786.1	9752.6	9751.3	9836.2	9926.7	10127.2	10656.3	10609.0	10355.6	10416.8	8062.2
47.5°	9397.6	9368.3	9447.7	9670.5	9893.3	10185.7	10836.0	10844.3	10540.8	10501.8	8205.6
50°	8557.9	8538.4	8768.2	9190.1	9574.4	10003.3	10778.9	10875.0	10585.3	10475.3	8187.5
52.5°	6850.8	6941.3	7441.2	8145.8	8892.1	9683.0	10567.2	10692.5	10370.9	10301.3	8090.1
55°	4689.7	4731.5	5231.4	6260.4	7444.0	8989.6	10081.3	10274.8	10117.5	10272.0	8191.7
57.5°	2428.4	2461.8	2855.9	3769.3	5049.0	7104.2	8732.0	9366.9	9606.4	10419.6	8507.8
60°	997.0	1024.8	1187.8	1629.2	2546.8	4136.9	6284.1	7225.4	7787.9	9515.9	7555.4
62.5°	724.1	738.0	816.0	971.9	1334.0	2027.4	3556.3	3903.0	4298.5	5963.8	4797.0
65°	609.9	625.2	687.9	782.6	973.3	1243.4	1519.2	1527.5	1683.5	2429.8	1778.1
67.5°	511.0	524.9	580.6	661.4	786.7	882.8	816.0	817.4	814.6	881.4	852.2
70°	398.2	409.4	465.1	551.4	616.9	566.7	637.7	706.0	676.7	703.2	743.6
72.5°	291.0	303.6	352.3	417.7	401.0	403.8	516.6	586.2	569.5	598.7	636.3
75°	210.3	218.6	243.7	208.9	220.0	266.0	363.4	401.0	417.7	442.8	476.2
77.5°	68.2	68.2	76.6	96.1	119.7	147.6	185.2	200.5	225.6	253.4	277.1
80°	34.8	36.2	43.2	52.9	66.8	84.9	108.6	115.6	128.1	143.4	153.2
82.5°	16.7	18.1	20.9	26.5	34.8	44.6	59.9	66.8	75.2	84.9	91.9
85°	4.2	4.2	5.6	8.4	11.1	16.7	22.3	26.5	33.4	40.4	44.6
87.5°	0.0	0.0	0.0	0.0	0.0	1.4	4.2	5.6	7.0	8.4	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



REPORT NUMBER: P636513

CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9	2589.9
2.5°	2638.7	2560.7	2460.4	2375.5	2297.5	2237.7	2186.1	2161.1	2137.4	2120.7	2126.3
5°	2711.1	2577.4	2390.8	2261.3	2182.0	2141.6	2113.7	2099.8	2097.0	2085.9	2081.7
7.5°	2816.9	2626.1	2376.9	2246.0	2193.1	2172.2	2156.9	2148.5	2152.7	2141.6	2137.4
10°	2947.8	2706.9	2411.7	2296.1	2250.2	2234.9	2218.2	2207.0	2201.4	2184.7	2182.0
12.5°	3110.7	2807.2	2474.4	2360.2	2314.2	2287.8	2265.5	2246.0	2233.5	2212.6	2207.0
15°	3286.2	2918.6	2548.2	2422.8	2368.5	2329.6	2293.3	2264.1	2241.8	2214.0	2209.8
17.5°	3476.9	3035.5	2609.4	2466.0	2396.4	2344.9	2292.0	2248.8	2218.2	2182.0	2177.8
20°	3676.0	3153.9	2655.4	2486.9	2397.8	2328.2	2257.1	2200.1	2161.1	2124.9	2122.1
22.5°	3882.1	3262.5	2683.2	2481.3	2375.5	2289.2	2204.2	2140.2	2094.2	2051.1	2048.3
25°	4089.6	3366.9	2690.2	2459.0	2330.9	2230.7	2145.7	2070.6	2019.0	1970.3	1964.7
27.5°	4299.9	3454.6	2673.5	2414.5	2271.1	2162.5	2077.5	2003.7	1950.8	1902.1	1893.7
30°	4524.0	3529.8	2637.3	2356.0	2201.4	2090.1	2006.5	1950.8	1900.7	1851.9	1843.6
32.5°	4763.5	3595.3	2585.8	2285.0	2120.7	2017.6	1956.4	1906.2	1856.1	1813.0	1804.6
35°	5049.0	3638.4	2509.2	2193.1	2045.5	1964.7	1923.0	1864.5	1803.2	1755.9	1751.7
37.5°	5344.2	3671.9	2417.3	2105.4	1980.0	1934.1	1899.3	1819.9	1743.3	1686.2	1679.3
40°	5629.6	3699.7	2303.1	2023.2	1920.2	1911.8	1864.5	1765.6	1633.3	1569.3	1563.7
42.5°	5895.6	3708.1	2183.3	1935.5	1865.9	1861.7	1808.8	1655.6	1554.0	1513.6	1508.0
45°	6078.0	3701.1	2059.4	1853.3	1811.6	1789.3	1733.6	1576.2	1513.6	1477.4	1470.4
47.5°	6213.1	3664.9	1920.2	1767.0	1750.3	1719.7	1599.9	1526.1	1467.6	1431.4	1424.5
50°	6189.4	3514.5	1779.5	1683.5	1676.5	1650.0	1502.4	1463.5	1411.9	1372.9	1367.4
52.5°	6066.9	3229.1	1636.1	1591.6	1605.5	1554.0	1432.8	1388.3	1343.7	1299.1	1289.4
55°	6097.5	3023.0	1527.5	1502.4	1527.5	1410.5	1354.8	1307.5	1265.7	1222.6	1214.2
57.5°	6231.2	2819.7	1411.9	1406.4	1432.8	1300.5	1254.6	1194.7	1134.8	1100.0	1100.0
60°	5232.8	2055.2	1208.6	1222.6	1282.4	1211.4	1171.0	1109.8	1044.3	1013.7	1013.7
62.5°	3094.0	1289.4	1002.6	987.2	1024.8	1069.4	1091.7	1041.5	963.6	923.2	924.6
65°	1363.2	938.5	884.2	871.7	860.5	891.2	952.4	956.6	874.5	827.1	828.5
67.5°	839.6	849.4	827.1	817.4	807.6	802.0	796.5	799.3	777.0	733.8	732.4
70°	757.5	783.9	768.6	760.3	747.7	738.0	704.6	650.3	612.7	601.5	614.1
72.5°	651.7	687.9	679.5	675.3	660.0	636.3	591.8	538.9	494.3	466.5	472.0
75°	491.5	520.8	524.9	526.3	509.6	487.4	441.4	396.8	357.9	328.6	335.6
77.5°	282.7	299.4	303.6	307.7	295.2	286.8	256.2	224.2	203.3	172.7	181.0
80°	157.3	164.3	164.3	165.7	158.7	149.0	128.1	110.0	100.3	86.3	87.7
82.5°	94.7	97.5	98.9	100.3	96.1	86.3	71.0	58.5	52.9	46.0	44.6
85°	46.0	48.7	48.7	50.1	43.2	37.6	29.2	22.3	19.5	13.9	15.3
87.5°	11.1	12.5	12.5	11.1	9.7	7.0	4.2	1.4	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**

$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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)