

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: P635038

Luminaire Tested: GWS-SA3C-830-U-T3R-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635038  
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-SA3C-830-U-T3R-W  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

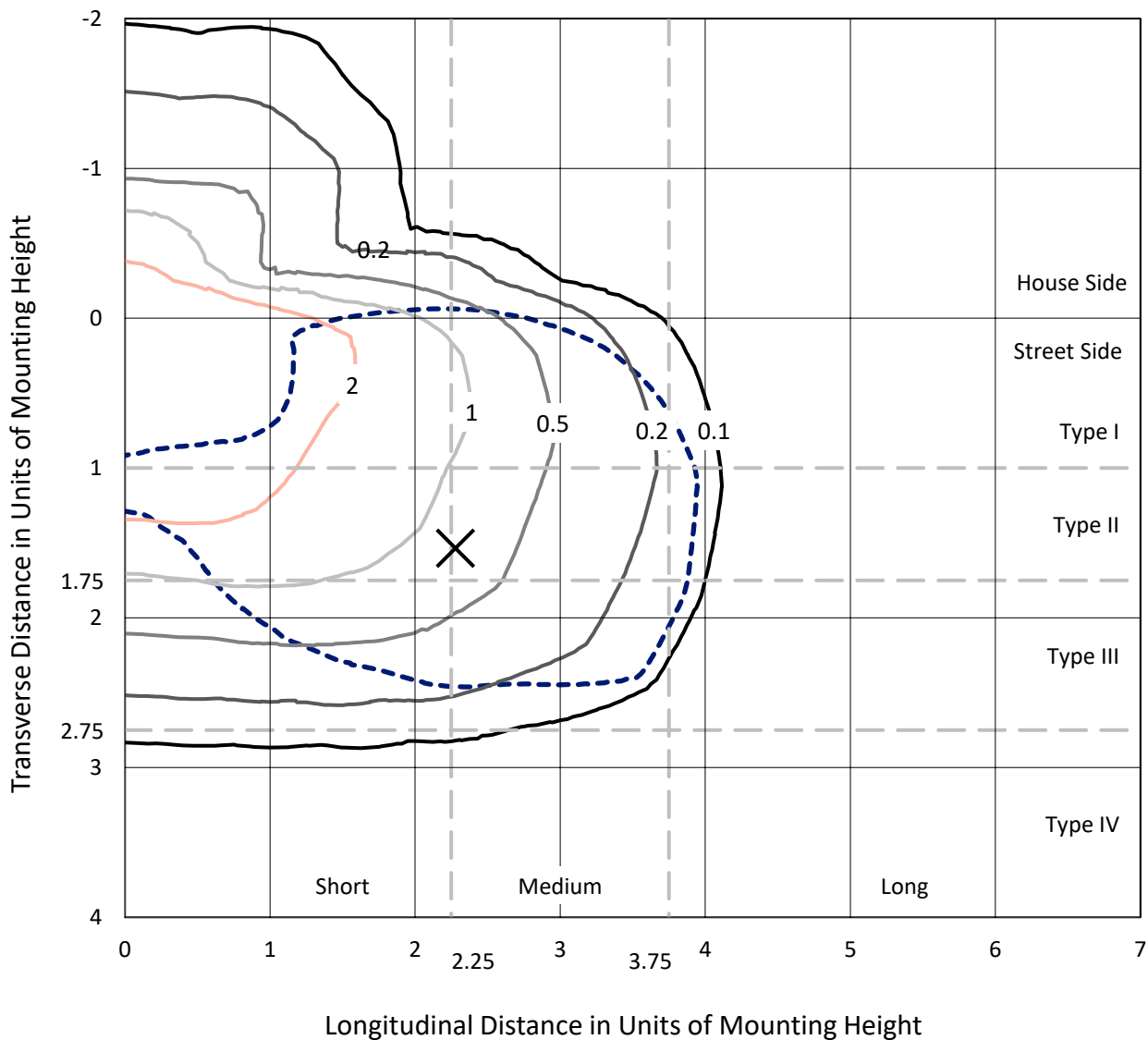
Lumens per Lamp: N/A  
Luminaire Lumens: 11265.2 lumens  
Efficiency: N/A  
Efficacy: 121.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 93  
Input Voltage (V): 120  
Input Current (Ain): 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: P635038  
 CATALOG NUMBER: GWS-SA3C-830-U-T3R-W

### Iso-Footcandle Lines of Horizontal Illumination

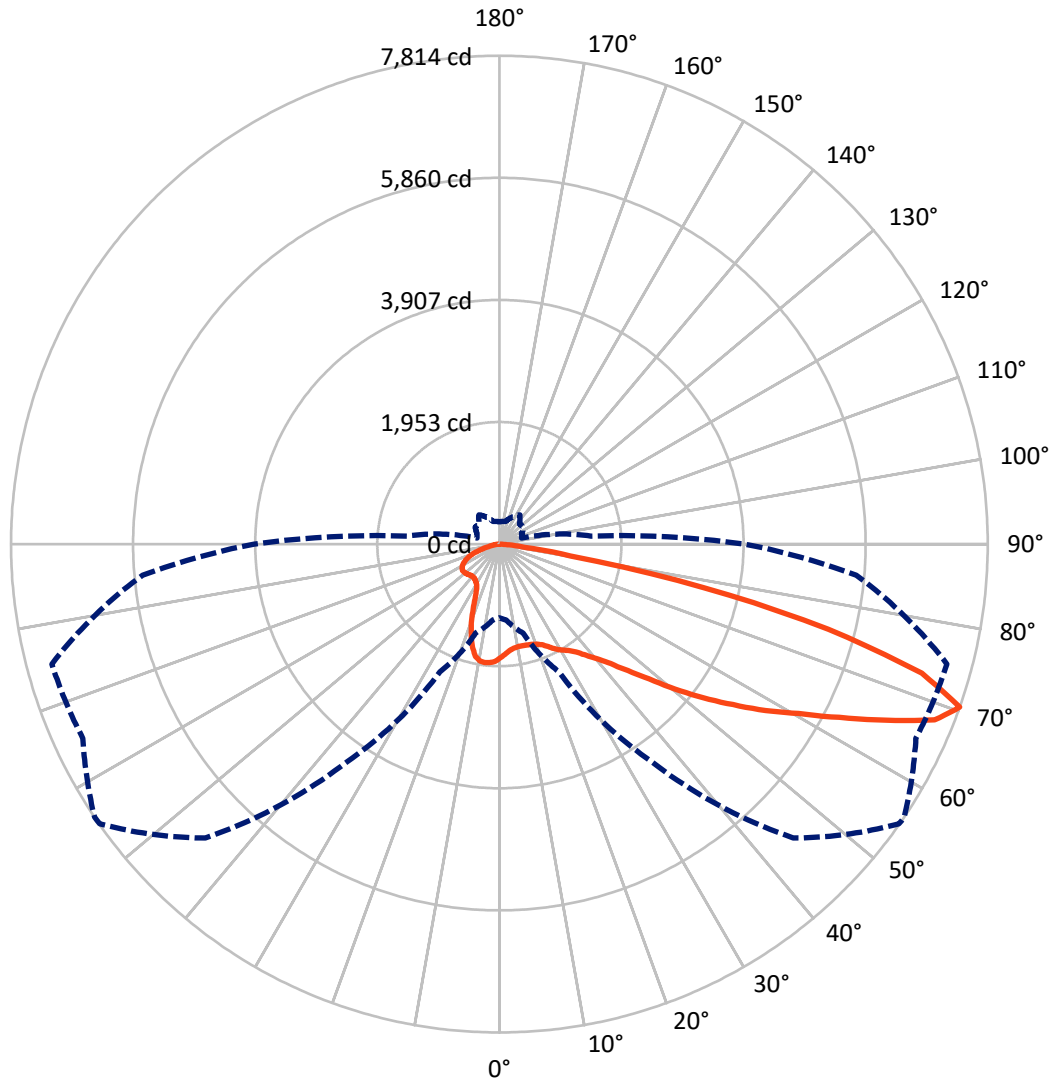
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc  
 Type III - Medium - N/A

REPORT NUMBER: P635038  
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### Luminous Intensity Polar Plot



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

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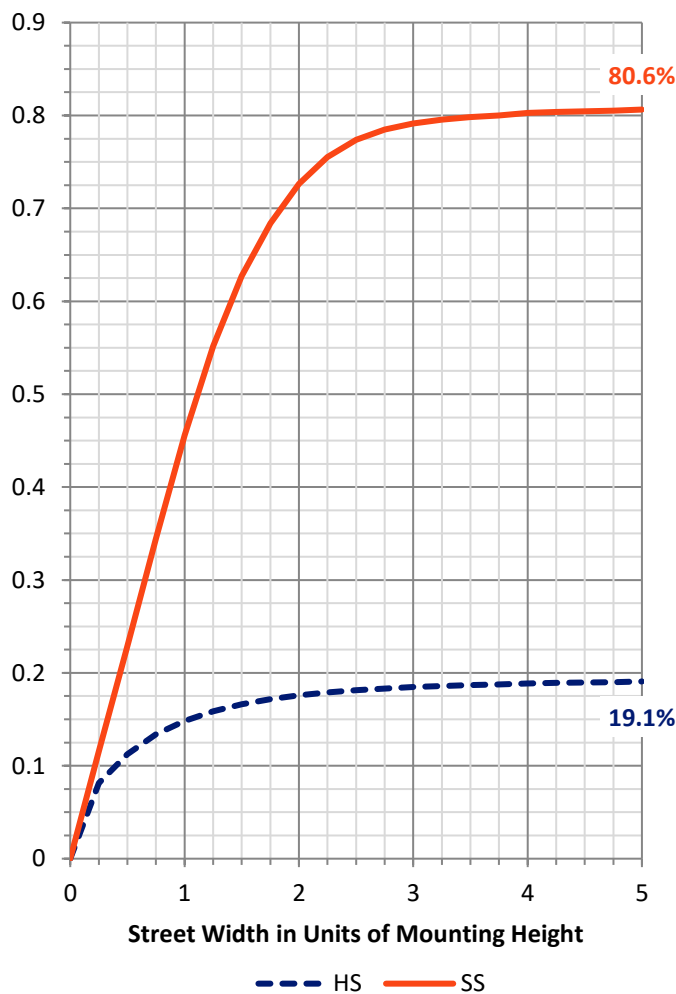
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2165.8	0.0	2165.8
	% Fixture	19.2	0.0	19.2
<b>Street Side</b>	Lumens	9099.5	0.0	9099.5
	% Fixture	80.8	0.0	80.8
<b>Total</b>	Lumens	11265.2	0.0	11265.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.3	1.5
10°-20°	455.9	4.0
20°-30°	753.8	6.7
30°-40°	1127.0	10.0
40°-50°	1677.1	14.9
50°-60°	2384.4	21.2
60°-70°	2953.2	26.2
70°-80°	1630.6	14.5
80°-90°	114.8	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°	11265.2	100.0
0°-180°	11265.2	100.0

**Coefficient of Utilization**



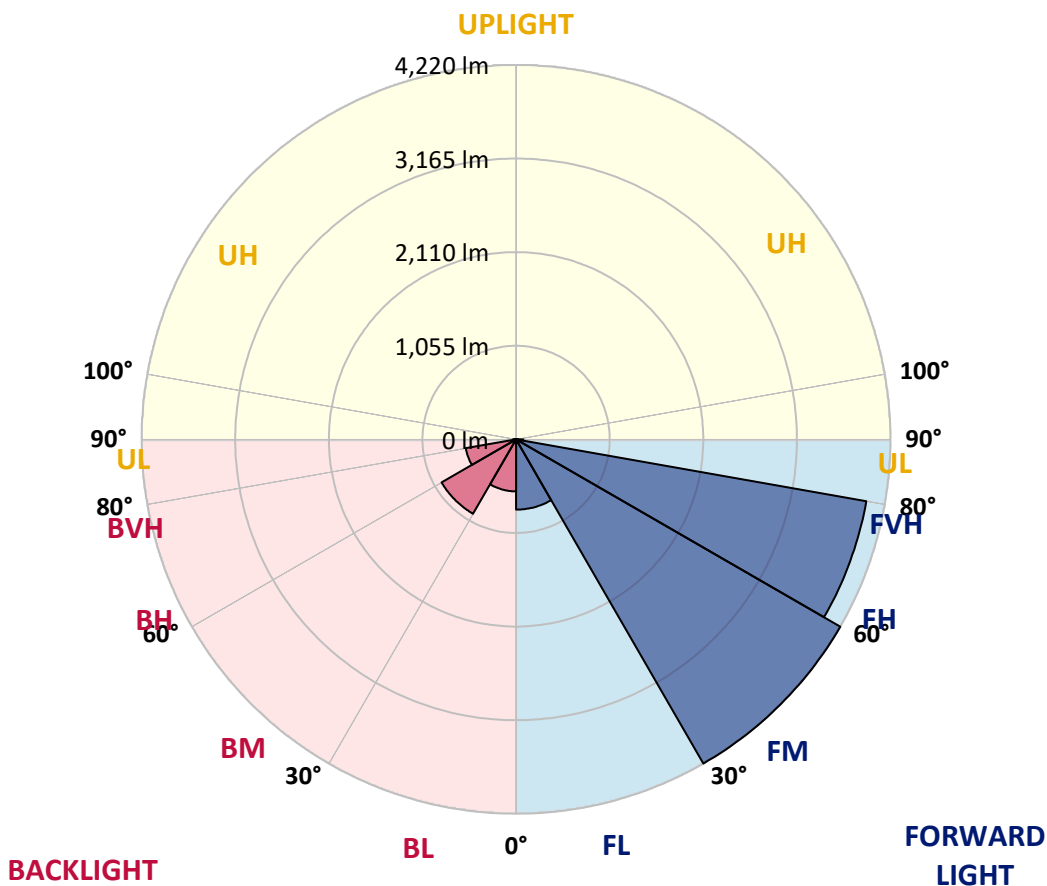
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	791.7	7.0			
FM (30°-60°)	4219.8	37.5			
FH (60°-80°)	4008.2	35.6			G2/5000
FVH (80°-90°)	79.8	0.7			G1/100
BL (0°-30°)	586.3	5.2	B2/1000		
BM (30°-60°)	968.8	8.6	B1/1000		
BH (60°-80°)	575.6	5.1	B2/1000		G2/1000
BVH (80°-90°)	35.0	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4
2.5°	1701.6	1692.1	1703.2	1708.7	1723.0	1743.7	1762.0	1762.8	1772.3	1795.3	1817.6
5°	1624.5	1619.8	1623.0	1639.6	1654.7	1680.9	1708.7	1711.1	1738.1	1783.4	1827.9
7.5°	1565.0	1558.6	1570.5	1592.0	1611.0	1640.4	1677.0	1680.2	1718.3	1786.6	1854.9
10°	1479.2	1474.4	1496.6	1525.2	1566.6	1615.0	1663.5	1667.4	1717.5	1807.3	1902.6
12.5°	1441.8	1441.8	1451.4	1478.4	1523.7	1588.0	1661.1	1667.4	1730.2	1839.0	1963.8
15°	1499.8	1503.8	1495.9	1494.3	1512.5	1573.7	1664.3	1673.8	1754.0	1871.6	2024.1
17.5°	1616.6	1620.6	1599.9	1567.3	1549.1	1587.2	1676.2	1686.5	1779.5	1907.3	2089.3
20°	1780.2	1785.0	1739.7	1689.7	1626.9	1626.1	1699.2	1708.7	1812.0	1946.3	2158.4
22.5°	1971.7	1974.9	1917.7	1838.2	1742.1	1698.4	1738.9	1748.5	1854.1	2000.3	2233.1
25°	2193.3	2202.9	2133.8	2018.6	1888.3	1797.7	1804.9	1816.0	1929.6	2072.6	2321.2
27.5°	2430.1	2442.0	2362.5	2235.4	2055.9	1907.3	1889.9	1899.4	2009.8	2117.1	2368.1
30°	2672.4	2681.1	2601.7	2456.3	2236.2	2031.3	1961.4	1966.9	2044.8	2138.5	2415.8
32.5°	2941.7	2934.5	2858.2	2690.6	2444.4	2179.8	2028.1	2026.5	2083.7	2181.4	2484.1
35°	3194.3	3204.6	3123.6	2938.5	2673.1	2363.3	2128.2	2121.8	2166.3	2251.3	2580.2
37.5°	3500.1	3496.9	3400.0	3199.8	2902.7	2538.9	2268.8	2257.7	2273.6	2360.2	2714.5
40°	3718.6	3740.8	3678.1	3491.4	3171.2	2755.0	2433.2	2408.6	2412.6	2494.4	2894.0
42.5°	3897.3	3918.0	3924.3	3805.2	3478.7	3021.9	2638.2	2613.6	2616.0	2731.9	3114.8
45°	4034.7	4062.6	4152.3	4117.4	3825.0	3330.1	2915.4	2890.0	2891.6	3020.3	3381.8
47.5°	4091.1	4121.3	4303.3	4386.7	4192.8	3698.7	3260.2	3222.9	3228.4	3370.6	3686.8
50°	4072.9	4113.4	4359.7	4594.0	4501.1	4073.7	3672.5	3646.3	3624.8	3831.4	4018.1
52.5°	3915.6	3960.1	4354.1	4725.9	4752.9	4428.0	4098.3	4083.2	4078.4	4320.7	4388.3
55°	3452.5	3527.1	4162.6	4760.8	4949.9	4761.6	4559.8	4534.4	4559.0	4845.0	4762.4
57.5°	3195.9	3251.5	3787.7	4721.9	5111.2	5079.4	5020.6	5023.0	5050.8	5414.6	5216.0
60°	3049.7	3114.8	3579.6	4615.5	5266.1	5465.5	5502.8	5502.8	5552.8	6028.7	5676.8
62.5°	2855.9	2921.8	3384.9	4410.5	5409.1	5919.9	6108.9	6106.5	6126.4	6687.2	6127.2
65°	2462.6	2523.8	2994.1	4087.2	5479.0	6420.3	6797.7	6790.5	6750.8	7273.5	6425.1
67.5°	1788.2	1846.2	2293.4	3472.3	5227.1	6823.9	7507.1	7510.2	7272.7	7642.9	6441.0
70°	1178.9	1218.6	1474.4	2255.3	4250.8	6649.9	7804.2	7813.7	7352.9	7412.5	5732.4
72.5°	735.6	763.4	920.7	1344.9	2511.9	5263.7	7041.5	7067.8	6615.0	6514.1	4710.0
75°	488.6	507.6	612.5	784.1	1162.2	2848.7	5352.7	5436.9	5301.8	5106.4	3281.7
77.5°	293.9	309.8	390.0	498.1	514.8	1113.0	3124.4	3342.0	3361.1	2666.0	1374.3
80°	134.3	152.5	215.3	284.4	274.1	387.7	1101.8	1152.7	1360.0	846.8	433.7
82.5°	79.4	87.4	143.0	141.4	116.8	188.3	396.4	406.7	345.6	309.8	185.1
85°	31.8	37.3	60.4	53.2	42.9	61.2	149.3	156.5	150.1	135.0	68.3
87.5°	0.0	0.0	0.0	0.0	0.8	1.6	13.5	14.3	20.7	37.3	20.7
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: P635038  
 CATALOG NUMBER: GWS-SA3C-830-U-T3R-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4	1818.4
2.5°	1831.9	1827.1	1850.9	1869.2	1877.2	1885.1	1878.0	1875.6	1875.6	1859.7	1851.7
5°	1851.7	1854.1	1886.7	1901.8	1901.8	1895.4	1876.4	1862.9	1858.1	1837.4	1831.9
7.5°	1889.1	1899.4	1929.6	1928.8	1906.6	1871.6	1823.9	1787.4	1754.0	1739.7	1731.0
10°	1950.2	1963.8	1984.4	1951.0	1889.1	1796.9	1696.0	1616.6	1568.9	1530.8	1530.8
12.5°	2020.2	2032.9	2028.9	1951.8	1823.9	1651.6	1506.2	1414.8	1348.1	1313.1	1313.1
15°	2090.1	2100.4	2057.5	1915.3	1688.1	1458.5	1299.6	1190.0	1132.0	1099.4	1099.4
17.5°	2160.8	2160.0	2069.4	1831.1	1510.9	1244.8	1089.1	1004.1	984.3	978.7	977.9
20°	2229.1	2210.8	2054.3	1690.5	1305.2	1029.5	931.0	936.6	966.0	978.7	980.3
22.5°	2306.1	2260.9	2009.8	1510.9	1071.6	880.2	886.5	932.6	975.5	994.6	997.0
25°	2384.8	2303.8	1935.2	1300.4	876.2	825.4	874.6	926.3	974.7	999.4	1001.7
27.5°	2416.6	2303.8	1808.0	1056.5	772.2	802.3	856.4	906.4	957.2	985.8	991.4
30°	2442.8	2283.9	1630.1	836.5	729.3	780.1	827.0	873.0	923.1	958.0	964.4
32.5°	2479.3	2266.4	1414.8	703.0	709.4	758.6	791.2	830.1	875.4	898.5	896.1
35°	2522.2	2239.4	1155.1	639.5	692.7	740.4	763.4	786.5	765.8	765.0	767.4
37.5°	2583.4	2215.6	928.7	610.9	681.6	727.7	746.7	697.5	668.9	657.0	652.2
40°	2671.6	2206.0	732.4	594.2	680.0	726.9	713.4	637.1	598.2	556.9	556.1
42.5°	2782.8	2198.9	605.3	586.3	685.6	745.1	667.3	597.4	517.2	498.9	497.3
45°	2925.8	2187.8	541.8	584.7	699.1	759.4	662.5	542.6	487.8	479.8	479.8
47.5°	3098.2	2170.3	513.2	584.7	714.2	753.1	648.2	530.7	474.3	483.0	488.6
50°	3296.0	2148.1	498.1	583.1	729.3	753.1	618.0	528.3	471.1	516.4	534.6
52.5°	3507.3	2122.6	487.8	576.7	739.6	753.9	619.6	536.2	474.3	524.3	539.4
55°	3740.8	2118.7	473.5	563.2	742.8	733.2	623.6	553.7	479.0	475.0	475.8
57.5°	4035.5	2166.3	463.1	543.4	730.1	691.1	631.5	566.4	473.5	474.3	479.8
60°	4343.8	2256.1	471.9	524.3	703.8	651.4	637.1	560.1	446.5	433.7	435.3
62.5°	4605.9	2324.4	479.0	515.6	665.7	616.5	631.5	545.8	431.4	428.2	435.3
65°	4715.5	2268.0	461.5	497.3	610.1	573.6	619.6	527.5	418.6	406.7	407.5
67.5°	4594.0	2003.5	427.4	456.8	547.3	518.7	600.6	503.6	401.2	386.9	383.7
70°	3924.3	1472.0	368.6	392.4	471.1	454.4	571.2	472.7	373.4	363.0	355.9
72.5°	3162.5	1042.2	305.8	312.2	369.4	382.9	520.3	433.7	341.6	312.2	301.9
75°	2201.3	654.6	255.0	248.6	266.9	292.3	405.9	359.9	294.7	263.7	254.2
77.5°	946.9	336.0	199.4	196.2	177.9	202.6	311.4	300.3	247.1	211.3	205.7
80°	317.0	194.6	143.8	138.2	118.4	142.2	219.3	239.9	193.8	156.5	147.0
82.5°	158.9	112.8	91.4	82.6	79.4	89.8	129.5	149.3	134.3	108.0	91.4
85°	77.9	64.3	50.0	49.3	41.3	38.9	54.0	63.6	60.4	44.5	42.1
87.5°	28.6	25.4	15.9	12.7	7.9	5.6	3.2	3.2	2.4	2.4	2.4
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		



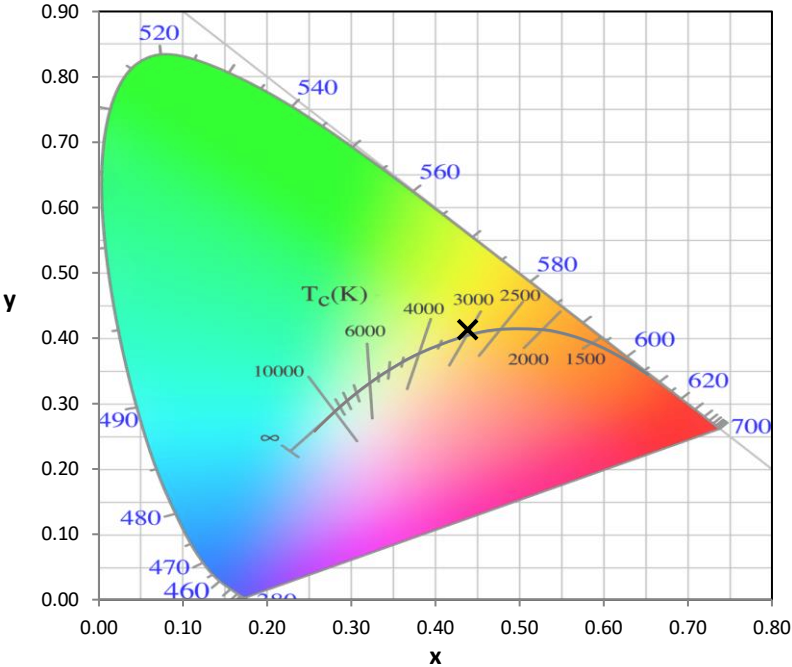
**Test Conditions**  
 Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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

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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**

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)