

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: P630573

Luminaire Tested: GWS-SA1D-830-U-T2R-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630573  
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-SA1D-830-U-T2R-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

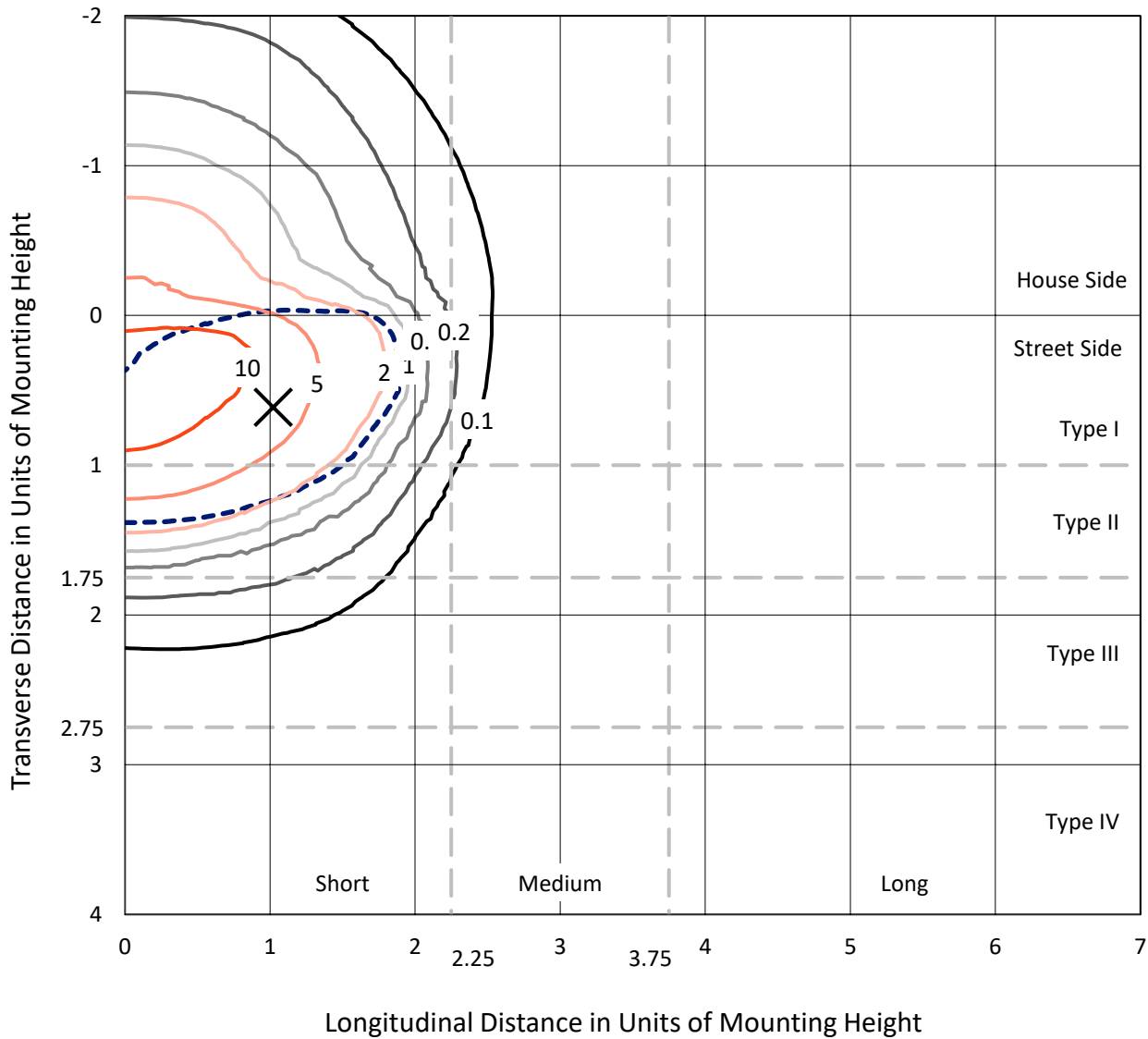
Lumens per Lamp: N/A  
Luminaire Lumens: 4239.4 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 44.3  
Input Voltage (V): 120  
Input Current (Ain): 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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 CATALOG NUMBER: GWS-SA1D-830-U-T2R-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

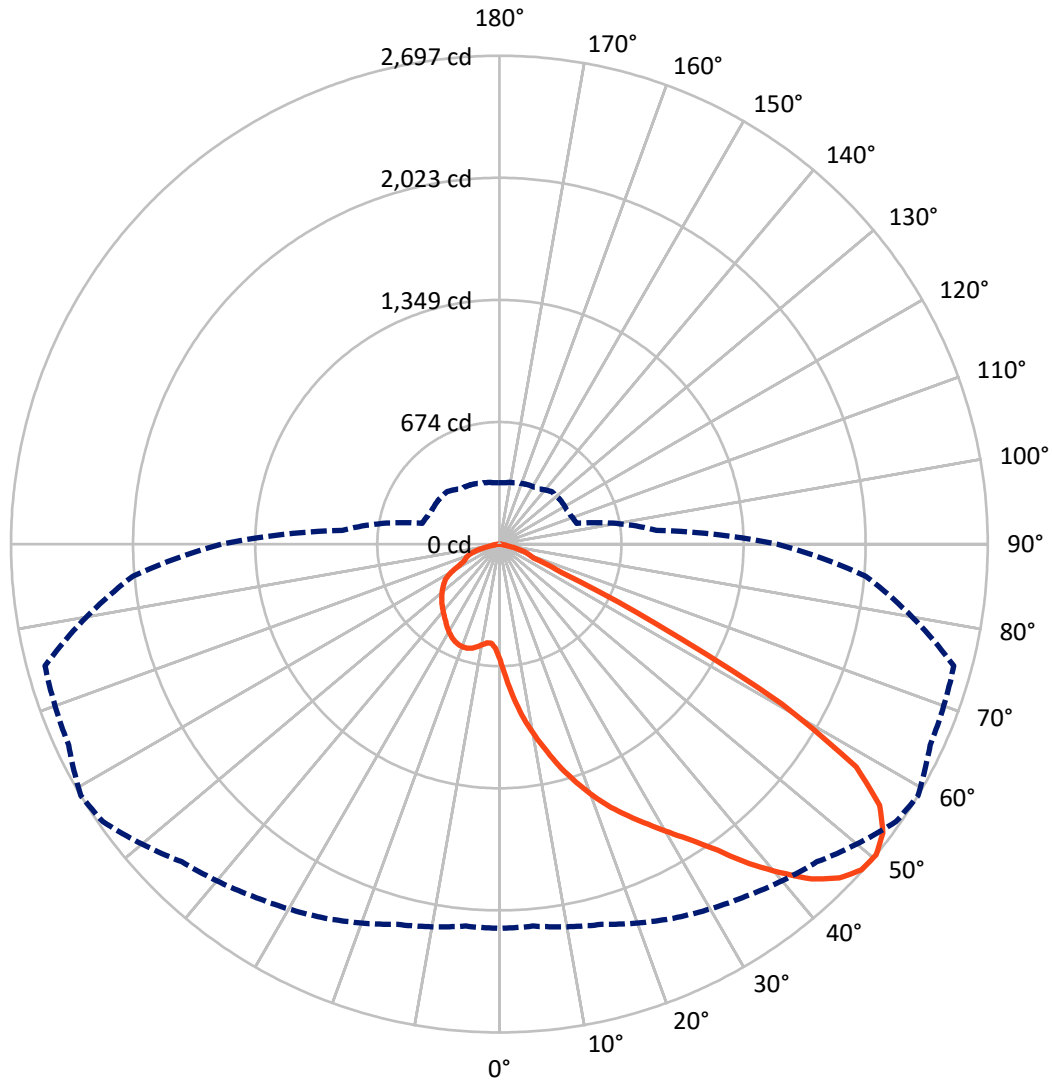
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



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

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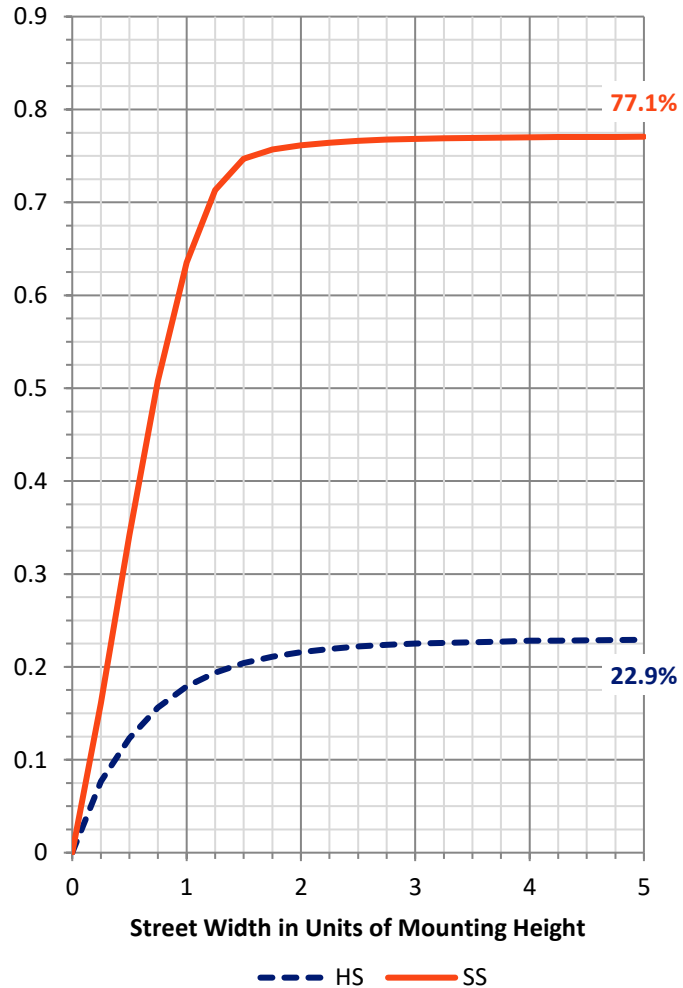
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	975.1	0.0	975.1
	% Fixture	23.0	0.0	23.0
<b>Street Side</b>	Lumens	3264.3	0.0	3264.3
	% Fixture	77.0	0.0	77.0
<b>Total</b>	Lumens	4239.4	0.0	4239.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.1	1.7
10°-20°	261.6	6.2
20°-30°	495.3	11.7
30°-40°	821.4	19.4
40°-50°	1122.1	26.5
50°-60°	1018.5	24.0
60°-70°	339.2	8.0
70°-80°	98.9	2.3
80°-90°	10.4	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°	4239.4	100.0
0°-180°	4239.4	100.0

**Coefficient of Utilization**



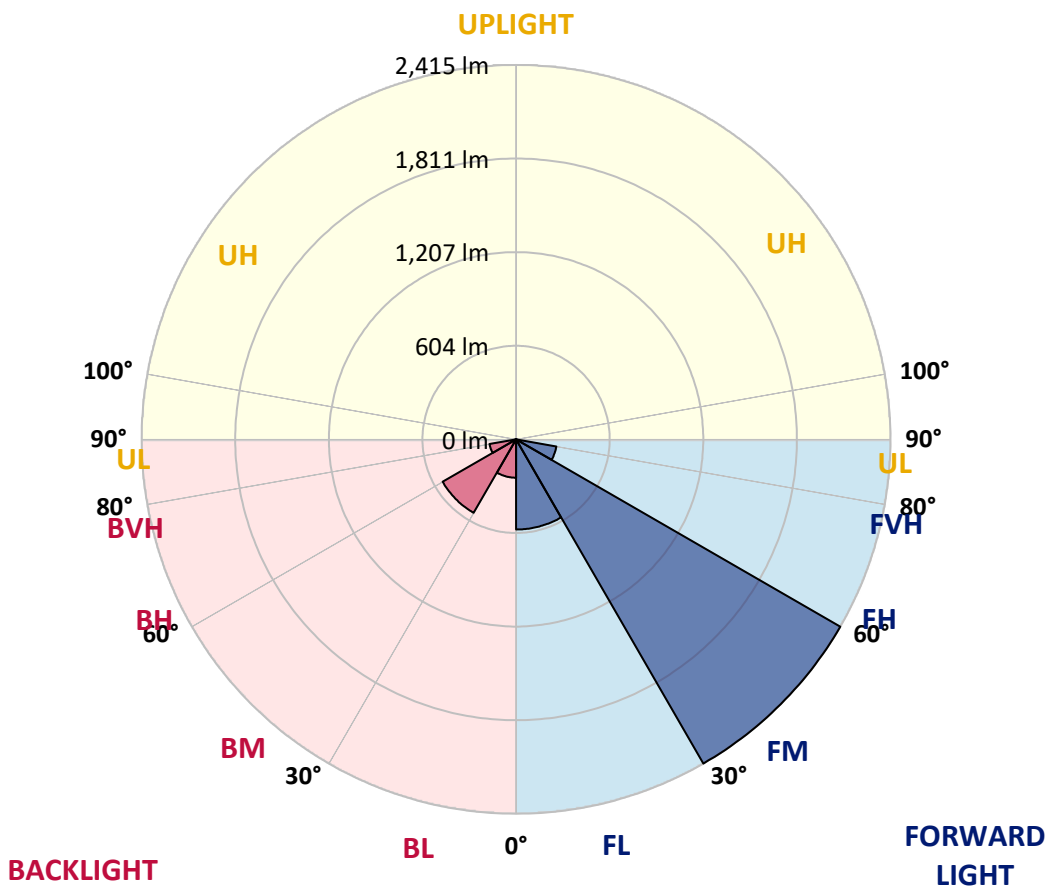
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	581.3	13.7			
FM (30°-60°)	2414.8	57.0			
FH (60°-80°)	264.1	6.2			G0/660
FVH (80°-90°)	4.1	0.1			G0/10
BL (0°-30°)	247.6	5.8	B1/500		
BM (30°-60°)	547.2	12.9	B1/1000		
BH (60°-80°)	174.0	4.1	B1/500		G1/500
BVH (80°-90°)	6.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3
2.5°	832.2	838.4	828.8	829.5	805.3	794.2	763.2	744.9	732.8	698.9	668.2
5°	1000.1	992.8	985.2	980.7	959.7	930.0	891.3	860.5	832.2	765.9	702.0
7.5°	1103.0	1099.2	1094.0	1091.2	1070.5	1039.4	1000.7	974.5	933.4	843.6	743.1
10°	1190.3	1185.8	1182.7	1184.8	1167.9	1147.9	1105.7	1075.7	1029.4	925.8	792.9
12.5°	1258.0	1260.4	1261.5	1272.5	1265.3	1253.2	1209.7	1177.9	1126.4	1012.5	851.2
15°	1311.5	1310.8	1322.9	1344.0	1355.7	1348.1	1313.3	1286.7	1223.8	1097.8	914.1
17.5°	1324.0	1324.7	1343.6	1380.6	1418.9	1437.6	1417.9	1386.1	1324.0	1182.0	979.3
20°	1334.0	1335.4	1355.0	1397.2	1453.1	1505.3	1508.4	1485.6	1432.1	1273.2	1045.6
22.5°	1397.2	1400.3	1405.5	1432.1	1482.5	1548.4	1584.7	1579.8	1535.0	1368.9	1117.1
25°	1563.3	1553.9	1528.7	1521.1	1540.5	1594.0	1655.8	1665.1	1643.0	1474.2	1194.1
27.5°	1768.4	1758.4	1721.1	1681.7	1639.9	1658.6	1724.5	1752.5	1752.9	1590.2	1271.5
30°	1954.5	1946.6	1916.2	1859.9	1787.7	1760.8	1809.5	1847.1	1869.6	1724.2	1359.5
32.5°	2113.7	2106.5	2065.4	2019.4	1949.0	1894.8	1912.4	1948.7	2001.1	1897.5	1469.0
35°	2247.7	2240.4	2201.1	2154.8	2089.5	2057.1	2050.9	2075.7	2143.8	2078.5	1594.7
37.5°	2356.5	2349.2	2308.1	2264.6	2214.9	2217.0	2226.3	2238.4	2277.4	2272.2	1729.0
40°	2426.9	2419.3	2390.0	2358.9	2327.5	2352.3	2398.6	2384.1	2404.8	2428.7	1852.7
42.5°	2458.3	2448.7	2431.8	2424.9	2415.2	2453.9	2543.0	2528.4	2503.6	2532.9	1944.5
45°	2426.9	2418.6	2418.3	2439.4	2461.8	2511.5	2642.7	2631.0	2568.2	2583.4	1999.4
47.5°	2330.6	2323.3	2343.0	2398.3	2453.5	2526.0	2687.3	2689.4	2614.1	2604.4	2035.0
50°	2122.3	2117.5	2174.5	2279.1	2374.4	2480.8	2673.1	2697.0	2625.1	2597.9	2030.5
52.5°	1699.0	1721.4	1845.4	2020.1	2205.2	2401.4	2620.6	2651.7	2572.0	2554.7	2006.3
55°	1163.0	1173.4	1297.4	1552.6	1846.1	2229.4	2500.1	2548.1	2509.1	2547.4	2031.5
57.5°	602.2	610.5	708.3	934.8	1252.1	1761.8	2165.5	2323.0	2382.4	2584.0	2109.9
60°	247.3	254.2	294.6	404.0	631.6	1026.0	1558.4	1791.9	1931.4	2359.9	1873.7
62.5°	179.6	183.0	202.4	241.0	330.8	502.8	882.0	967.9	1066.0	1479.0	1189.6
65°	151.3	155.0	170.6	194.1	241.4	308.4	376.7	378.8	417.5	602.6	441.0
67.5°	126.7	130.2	144.0	164.0	195.1	218.9	202.4	202.7	202.0	218.6	211.3
70°	98.8	101.5	115.3	136.7	153.0	140.5	158.2	175.1	167.8	174.4	184.4
72.5°	72.2	75.3	87.4	103.6	99.5	100.1	128.1	145.4	141.2	148.5	157.8
75°	52.1	54.2	60.4	51.8	54.6	66.0	90.1	99.5	103.6	109.8	118.1
77.5°	16.9	16.9	19.0	23.8	29.7	36.6	45.9	49.7	55.9	62.8	68.7
80°	8.6	9.0	10.7	13.1	16.6	21.1	26.9	28.7	31.8	35.6	38.0
82.5°	4.1	4.5	5.2	6.6	8.6	11.1	14.8	16.6	18.6	21.1	22.8
85°	1.0	1.0	1.4	2.1	2.8	4.1	5.5	6.6	8.3	10.0	11.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.4	1.7	2.1	2.8
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-SA1D-830-U-T2R-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3	642.3
2.5°	654.4	635.0	610.2	589.1	569.8	554.9	542.2	535.9	530.1	525.9	527.3
5°	672.3	639.2	592.9	560.8	541.1	531.1	524.2	520.7	520.1	517.3	516.3
7.5°	698.6	651.3	589.5	557.0	543.9	538.7	534.9	532.8	533.9	531.1	530.1
10°	731.0	671.3	598.1	569.4	558.0	554.2	550.1	547.3	546.0	541.8	541.1
12.5°	771.4	696.2	613.6	585.3	573.9	567.4	561.8	557.0	553.9	548.7	547.3
15°	815.0	723.8	631.9	600.9	587.4	577.7	568.7	561.5	556.0	549.1	548.0
17.5°	862.3	752.8	647.1	611.6	594.3	581.5	568.4	557.7	550.1	541.1	540.1
20°	911.7	782.2	658.5	616.7	594.6	577.4	559.8	545.6	535.9	527.0	526.3
22.5°	962.8	809.1	665.4	615.4	589.1	567.7	546.6	530.8	519.4	508.7	508.0
25°	1014.2	835.0	667.2	609.8	578.1	553.2	532.1	513.5	500.7	488.6	487.2
27.5°	1066.4	856.7	663.0	598.8	563.2	536.3	515.2	496.9	483.8	471.7	469.6
30°	1122.0	875.4	654.0	584.3	546.0	518.3	497.6	483.8	471.4	459.3	457.2
32.5°	1181.3	891.6	641.3	566.7	525.9	500.4	485.2	472.7	460.3	449.6	447.5
35°	1252.1	902.3	622.3	543.9	507.3	487.2	476.9	462.4	447.2	435.5	434.4
37.5°	1325.3	910.6	599.5	522.1	491.0	479.7	471.0	451.3	432.3	418.2	416.5
40°	1396.1	917.5	571.2	501.8	476.2	474.1	462.4	437.9	405.1	389.2	387.8
42.5°	1462.1	919.6	541.5	480.0	462.7	461.7	448.6	410.6	385.4	375.4	374.0
45°	1507.3	917.9	510.7	459.6	449.3	443.7	429.9	390.9	375.4	366.4	364.7
47.5°	1540.8	908.9	476.2	438.2	434.1	426.5	396.8	378.5	364.0	355.0	353.3
50°	1535.0	871.6	441.3	417.5	415.8	409.2	372.6	362.9	350.2	340.5	339.1
52.5°	1504.6	800.8	405.8	394.7	398.2	385.4	355.3	344.3	333.2	322.2	319.8
55°	1512.2	749.7	378.8	372.6	378.8	349.8	336.0	324.3	313.9	303.2	301.1
57.5°	1545.3	699.3	350.2	348.8	355.3	322.5	311.1	296.3	281.4	272.8	272.8
60°	1297.7	509.7	299.7	303.2	318.0	300.4	290.4	275.2	259.0	251.4	251.4
62.5°	767.3	319.8	248.6	244.8	254.2	265.2	270.7	258.3	239.0	228.9	229.3
65°	338.1	232.7	219.3	216.2	213.4	221.0	236.2	237.2	216.9	205.1	205.5
67.5°	208.2	210.6	205.1	202.7	200.3	198.9	197.5	198.2	192.7	182.0	181.6
70°	187.9	194.4	190.6	188.5	185.4	183.0	174.7	161.3	151.9	149.2	152.3
72.5°	161.6	170.6	168.5	167.5	163.7	157.8	146.8	133.6	122.6	115.7	117.1
75°	121.9	129.2	130.2	130.5	126.4	120.9	109.5	98.4	88.7	81.5	83.2
77.5°	70.1	74.2	75.3	76.3	73.2	71.1	63.5	55.6	50.4	42.8	44.9
80°	39.0	40.7	40.7	41.1	39.4	36.9	31.8	27.3	24.9	21.4	21.8
82.5°	23.5	24.2	24.5	24.9	23.8	21.4	17.6	14.5	13.1	11.4	11.1
85°	11.4	12.1	12.1	12.4	10.7	9.3	7.3	5.5	4.8	3.5	3.8
87.5°	2.8	3.1	3.1	2.8	2.4	1.7	1.0	0.3	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



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)