

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: P632070

Luminaire Tested: GWS-SA2B-830-U-T4FT-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P632070  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2B-830-U-T4FT-W  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

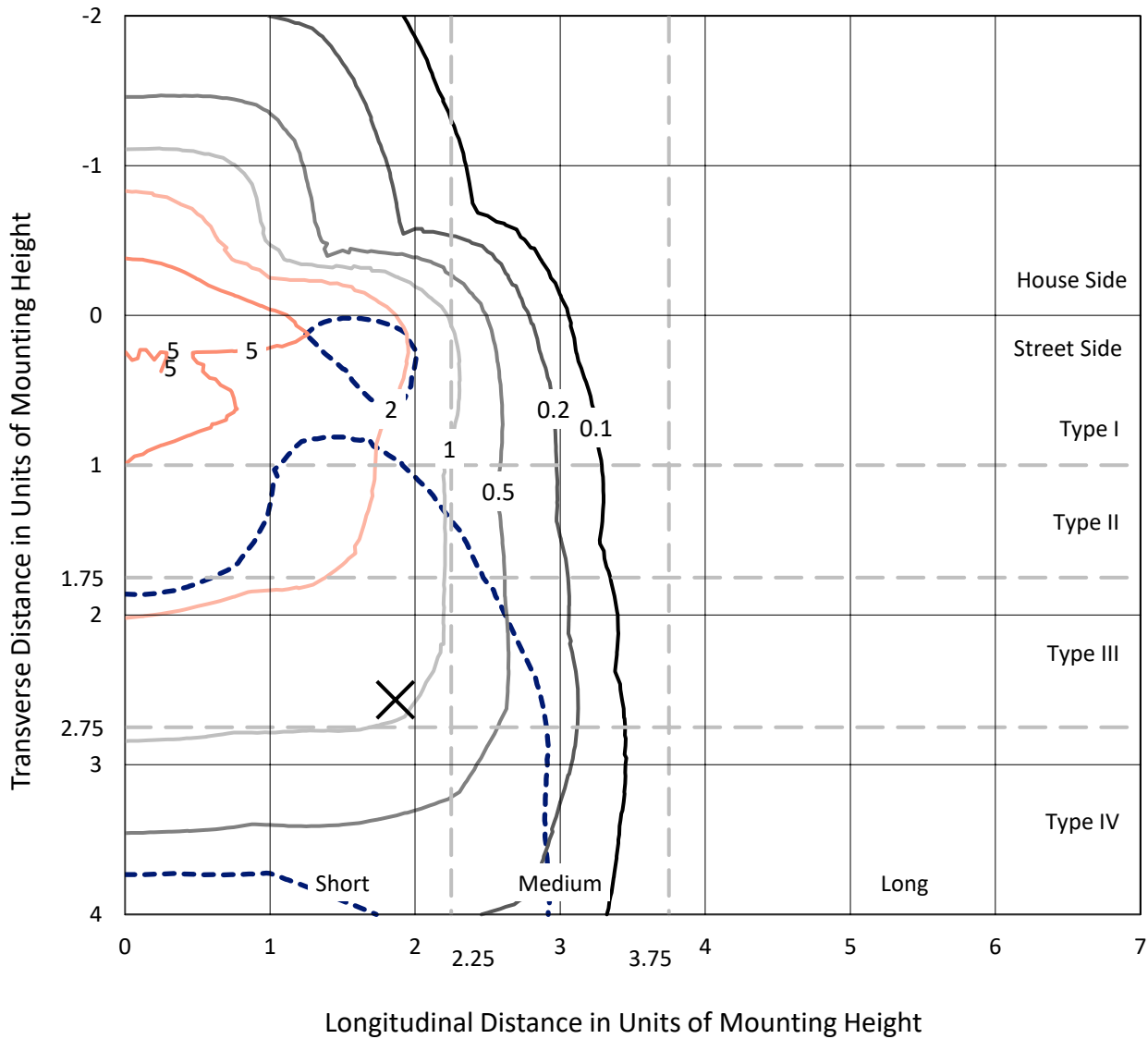
Lumens per Lamp: N/A  
Luminaire Lumens: 5295.4 lumens  
Efficiency: N/A  
Efficacy: 114.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 46.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P632070  
 CATALOG NUMBER: GWS-SA2B-830-U-T4FT-W

### Iso-Footcandle Lines of Horizontal Illumination

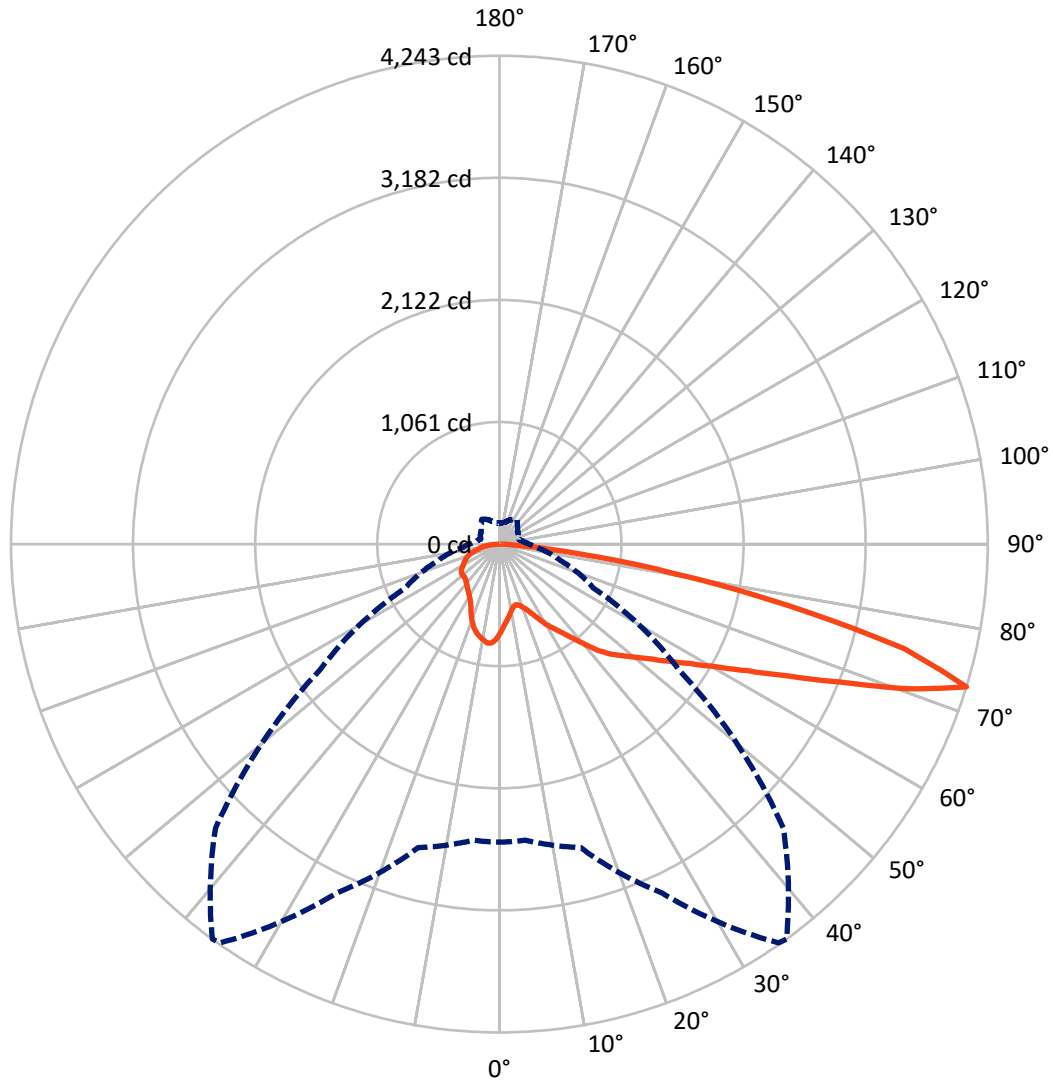
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1220.8	0.0	1220.8
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	4074.6	0.0	4074.6
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	5295.4	0.0	5295.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	1.4
10°-20°	204.4	3.9
20°-30°	338.5	6.4
30°-40°	506.9	9.6
40°-50°	739.5	14.0
50°-60°	1052.6	19.9
60°-70°	1329.9	25.1
70°-80°	947.7	17.9
80°-90°	103.5	2.0
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°	5295.4	100.0
0°-180°	5295.4	100.0

**Coefficient of Utilization**



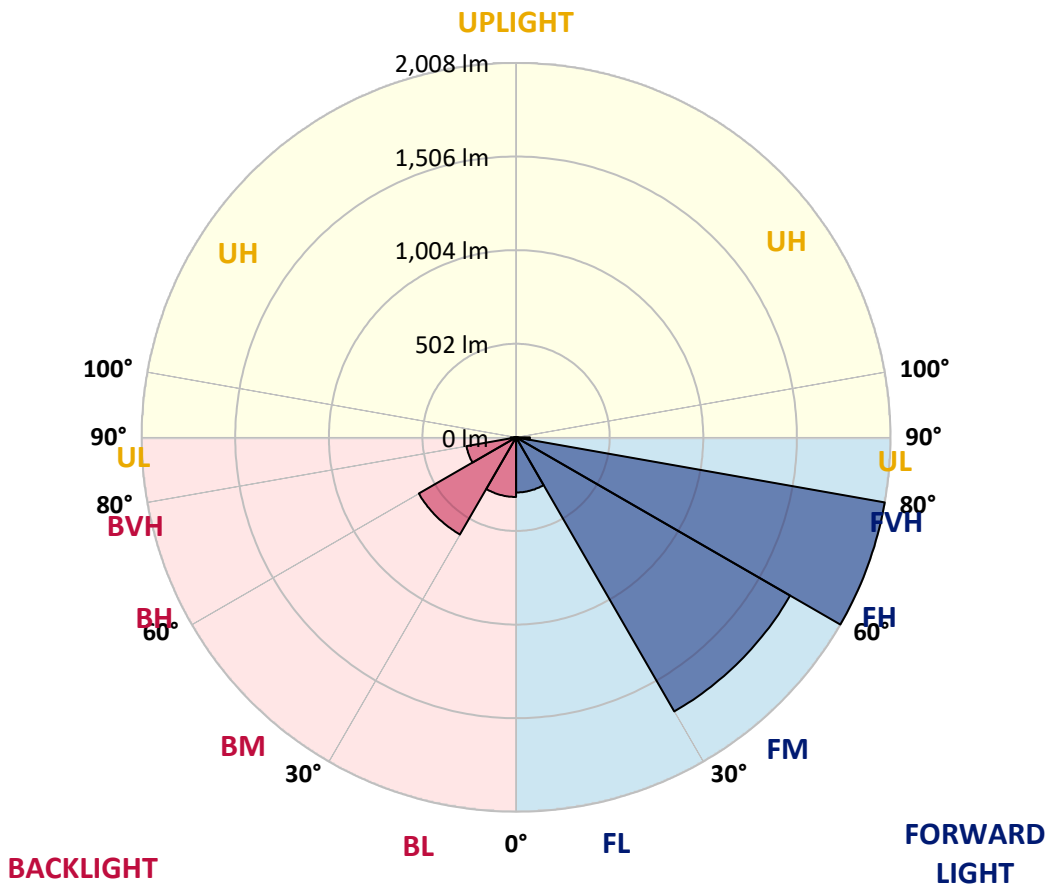
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	295.6	5.6			
FM (30°-60°)	1697.0	32.0			
FH (60°-80°)	2007.7	37.9			G2/5000
FVH (80°-90°)	74.3	1.4			G1/100
BL (0°-30°)	319.7	6.0	B1/500		
BM (30°-60°)	602.0	11.4	B1/1000		
BH (60°-80°)	269.9	5.1	B1/500		G1/500
BVH (80°-90°)	29.2	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0
2.5°	707.0	705.8	703.5	710.6	717.6	716.8	726.7	736.1	746.3	756.9	771.1
5°	650.4	649.6	647.7	658.3	668.9	668.5	684.6	699.9	720.8	743.6	771.9
7.5°	593.8	591.9	594.6	608.0	622.9	624.5	646.5	671.6	701.9	736.1	776.2
10°	543.9	543.5	544.7	559.6	582.0	583.6	611.9	646.9	687.0	732.6	786.0
12.5°	530.9	530.2	527.0	534.5	551.4	553.7	584.8	627.6	676.8	734.5	799.4
15°	552.2	550.2	539.2	535.7	543.9	545.9	572.2	616.2	670.9	738.1	816.3
17.5°	588.7	587.5	566.7	552.2	557.7	559.2	578.9	614.3	669.3	745.1	837.1
20°	642.2	637.1	604.4	582.4	582.4	584.8	596.6	622.9	671.3	753.8	860.7
22.5°	712.9	702.7	656.7	626.8	619.0	622.1	627.2	644.5	679.5	768.3	890.2
25°	792.3	782.9	728.2	686.2	675.2	676.4	672.0	675.2	697.6	788.4	926.7
27.5°	876.8	870.5	812.3	758.9	741.6	741.6	726.3	718.8	722.7	811.2	967.6
30°	952.3	943.6	894.5	835.9	813.1	813.1	784.0	767.9	758.5	839.1	1022.2
32.5°	991.9	986.8	954.2	909.4	881.5	877.2	852.0	833.2	811.2	880.3	1096.1
35°	1043.8	1042.6	1023.0	988.0	952.6	946.4	929.1	914.1	876.0	931.8	1194.3
37.5°	1109.1	1107.1	1104.0	1083.1	1040.7	1039.5	1024.2	1006.1	956.6	1006.1	1313.4
40°	1182.2	1178.6	1174.7	1174.3	1148.8	1144.4	1143.3	1122.8	1053.6	1095.7	1437.6
42.5°	1282.8	1270.6	1233.6	1250.1	1269.0	1265.1	1280.0	1249.4	1174.7	1202.2	1555.1
45°	1406.6	1376.7	1303.6	1308.3	1355.9	1363.7	1415.6	1408.1	1307.9	1325.2	1678.9
47.5°	1480.8	1454.9	1386.9	1383.0	1442.3	1452.2	1564.9	1579.1	1451.4	1473.4	1831.8
50°	1541.8	1523.7	1467.9	1473.4	1536.3	1546.1	1713.1	1743.4	1586.6	1625.1	2009.4
52.5°	1615.2	1589.3	1546.1	1572.0	1649.0	1660.8	1877.8	1910.4	1708.4	1791.7	2193.4
55°	1656.5	1645.9	1646.7	1686.4	1783.1	1799.2	2050.3	2044.8	1820.0	1934.4	2331.7
57.5°	1751.6	1747.7	1783.8	1798.8	1939.5	1960.3	2222.8	2175.7	1921.4	2044.8	2398.1
60°	1919.4	1909.6	1941.1	1963.8	2132.8	2162.3	2415.4	2303.8	1990.2	2126.9	2375.7
62.5°	2155.2	2143.1	2144.2	2180.4	2391.8	2422.9	2629.6	2410.7	2011.4	2139.5	2233.8
65°	2448.4	2430.7	2410.7	2459.8	2735.7	2761.6	2862.6	2488.5	1960.7	2018.5	1937.5
67.5°	2757.7	2743.2	2719.6	2822.6	3181.0	3196.7	3124.0	2481.8	1800.0	1694.6	1359.0
70°	2775.8	2779.3	2890.9	3263.5	3762.2	3766.2	3371.2	2347.4	1457.7	1098.4	677.1
72.5°	2589.5	2583.6	2729.0	3344.1	4229.9	4243.3	3487.9	1901.8	900.8	547.8	317.5
75°	2103.4	2113.6	2266.5	2925.9	3625.5	3637.3	2843.4	1121.2	428.0	268.0	203.2
77.5°	905.5	962.5	1263.9	2061.3	2596.6	2560.0	1465.5	454.3	228.3	191.0	155.6
80°	261.3	283.7	450.4	980.2	1555.9	1528.4	580.1	170.2	159.2	143.4	111.6
82.5°	84.5	93.5	165.1	390.3	697.2	696.4	220.1	100.6	104.1	97.5	71.9
85°	23.6	27.1	50.7	118.3	215.8	211.4	63.7	47.6	55.4	56.2	35.8
87.5°	0.0	0.0	0.4	0.8	0.8	0.8	1.6	7.1	16.1	20.4	14.5
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-SA2B-830-U-T4FT-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0	775.0
2.5°	779.7	778.5	794.7	807.2	819.0	826.9	829.2	830.8	834.0	835.5	834.0
5°	785.2	791.1	817.8	837.5	853.2	862.6	863.0	862.3	864.6	862.6	861.5
7.5°	797.0	808.4	842.2	863.0	873.3	873.6	864.2	853.2	847.7	843.0	841.4
10°	812.7	829.6	866.6	880.3	877.2	862.6	841.8	824.5	814.7	807.6	806.1
12.5°	834.3	853.2	888.2	887.8	868.1	842.2	817.8	797.0	782.9	774.6	771.9
15°	854.8	878.8	903.9	885.4	854.4	823.0	791.5	763.6	744.7	731.8	729.4
17.5°	879.9	905.5	915.3	878.0	837.1	796.6	754.6	718.0	692.5	677.1	676.0
20°	909.0	931.8	920.8	865.0	814.7	761.6	704.7	663.8	636.3	621.3	622.5
22.5°	942.8	959.3	922.4	847.3	783.7	712.1	648.5	609.2	590.7	582.8	583.2
25°	979.0	989.6	919.6	823.3	736.1	651.6	590.7	572.6	571.0	569.1	569.9
27.5°	1021.8	1019.5	911.4	789.5	672.0	581.3	550.2	554.9	561.2	560.4	561.2
30°	1079.2	1056.8	900.8	742.8	595.8	522.3	526.2	539.6	547.8	548.6	551.0
32.5°	1144.8	1098.1	883.9	679.1	523.1	489.3	503.8	519.9	529.8	531.7	534.9
35°	1223.0	1145.2	854.0	599.7	470.8	469.6	483.0	494.0	504.6	505.4	505.4
37.5°	1313.0	1192.4	806.4	512.1	438.6	452.7	465.3	467.7	470.4	468.1	469.2
40°	1395.6	1238.0	738.8	432.3	412.3	437.8	448.4	440.6	431.9	426.0	427.2
42.5°	1464.7	1269.0	649.2	376.5	385.5	424.4	432.7	416.6	399.7	388.7	390.3
45°	1542.5	1297.7	543.9	338.8	362.7	415.0	420.5	399.7	378.1	361.6	359.2
47.5°	1649.8	1356.3	450.4	312.4	346.6	409.9	418.9	390.6	362.4	337.6	334.8
50°	1782.3	1439.2	372.2	295.1	339.2	407.2	418.6	380.8	347.0	317.9	316.0
52.5°	1926.9	1520.1	314.4	281.8	331.7	398.9	416.6	369.8	330.9	299.5	297.1
55°	2023.2	1552.0	275.5	269.2	319.5	385.9	408.7	359.2	306.5	277.9	274.3
57.5°	2051.5	1511.1	248.4	257.8	303.8	367.9	393.8	336.8	291.6	268.8	266.1
60°	2002.8	1408.1	231.5	248.4	286.5	344.7	367.9	323.8	279.8	259.4	257.4
62.5°	1865.2	1249.4	218.5	238.6	268.8	320.3	351.3	308.1	266.9	250.7	248.0
65°	1588.5	1024.6	207.9	228.3	251.9	297.1	333.3	292.4	252.7	240.5	237.4
67.5°	1111.0	719.6	196.5	216.2	235.0	274.7	314.4	277.9	238.2	229.1	226.0
70°	543.1	381.6	182.7	202.0	216.9	251.9	295.5	260.2	218.9	213.8	209.5
72.5°	258.6	213.4	166.6	182.7	192.2	221.7	264.1	234.6	196.1	185.1	177.6
75°	173.3	151.7	145.4	160.0	162.3	185.9	226.4	202.4	172.9	160.3	154.1
77.5°	131.3	115.9	122.2	135.2	130.5	152.9	186.3	180.4	156.0	144.6	141.5
80°	92.4	84.5	97.1	104.9	101.4	130.1	167.8	154.5	128.5	115.9	113.6
82.5°	58.2	56.6	71.5	72.7	73.9	103.0	137.9	121.4	99.8	82.1	76.2
85°	29.1	32.2	42.8	42.8	42.4	53.1	78.6	68.4	53.8	42.8	41.7
87.5°	9.8	13.8	18.5	14.9	11.4	9.0	10.2	12.6	13.4	13.0	13.0
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**

$\lambda$ (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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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.32**

$\lambda$ (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			

**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)