

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: P632563

Luminaire Tested: GWS-SA2C-830-U-T3R-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P632563  
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-SA2C-830-U-T3R-W  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

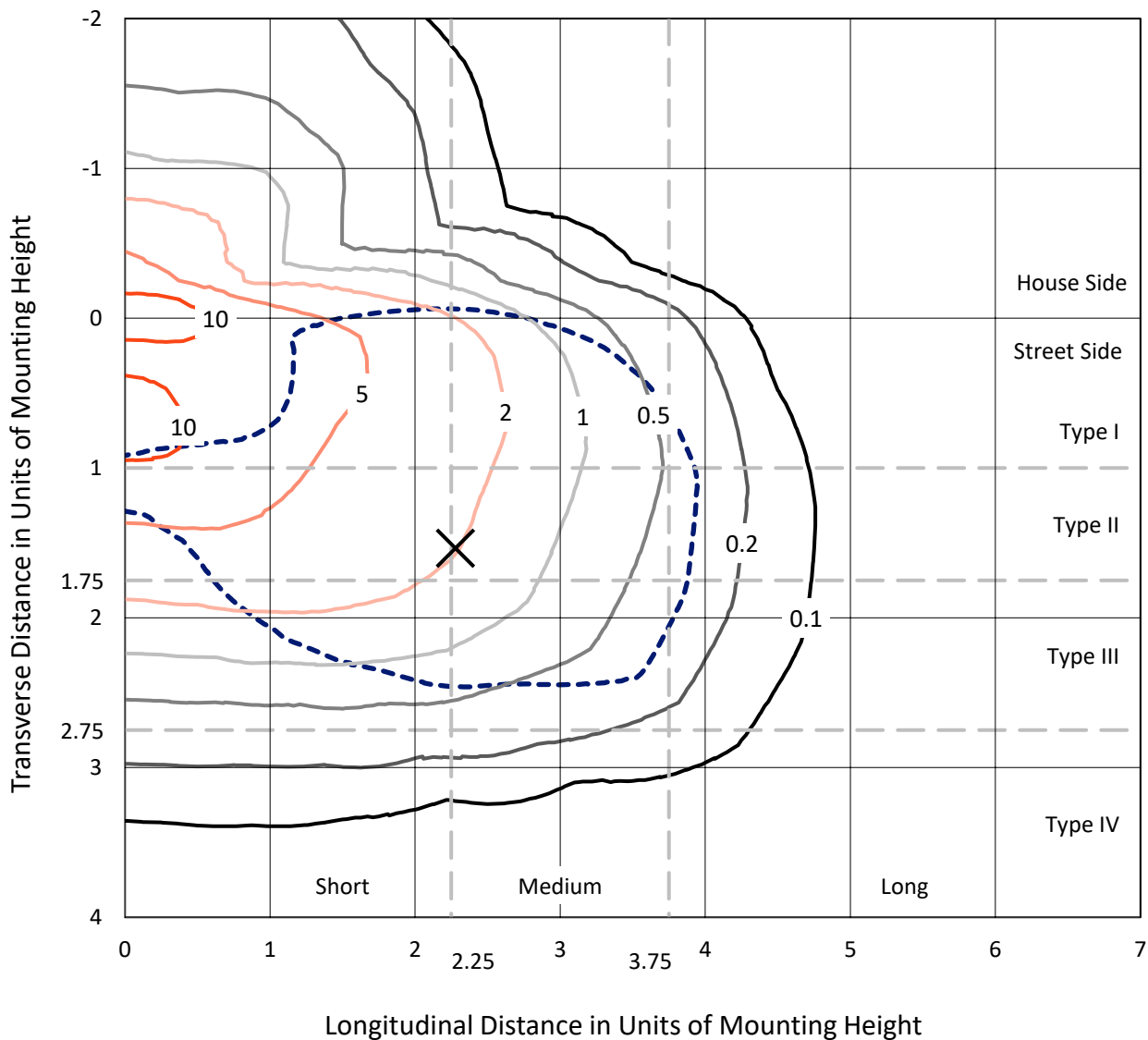
Lumens per Lamp: N/A  
Luminaire Lumens: 7474.3 lumens  
Efficiency: N/A  
Efficacy: 118.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 63.2  
Input Voltage (V): 120  
Input Current (Ain): 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: P632563  
 CATALOG NUMBER: GWS-SA2C-830-U-T3R-W

### Iso-Footcandle Lines of Horizontal Illumination

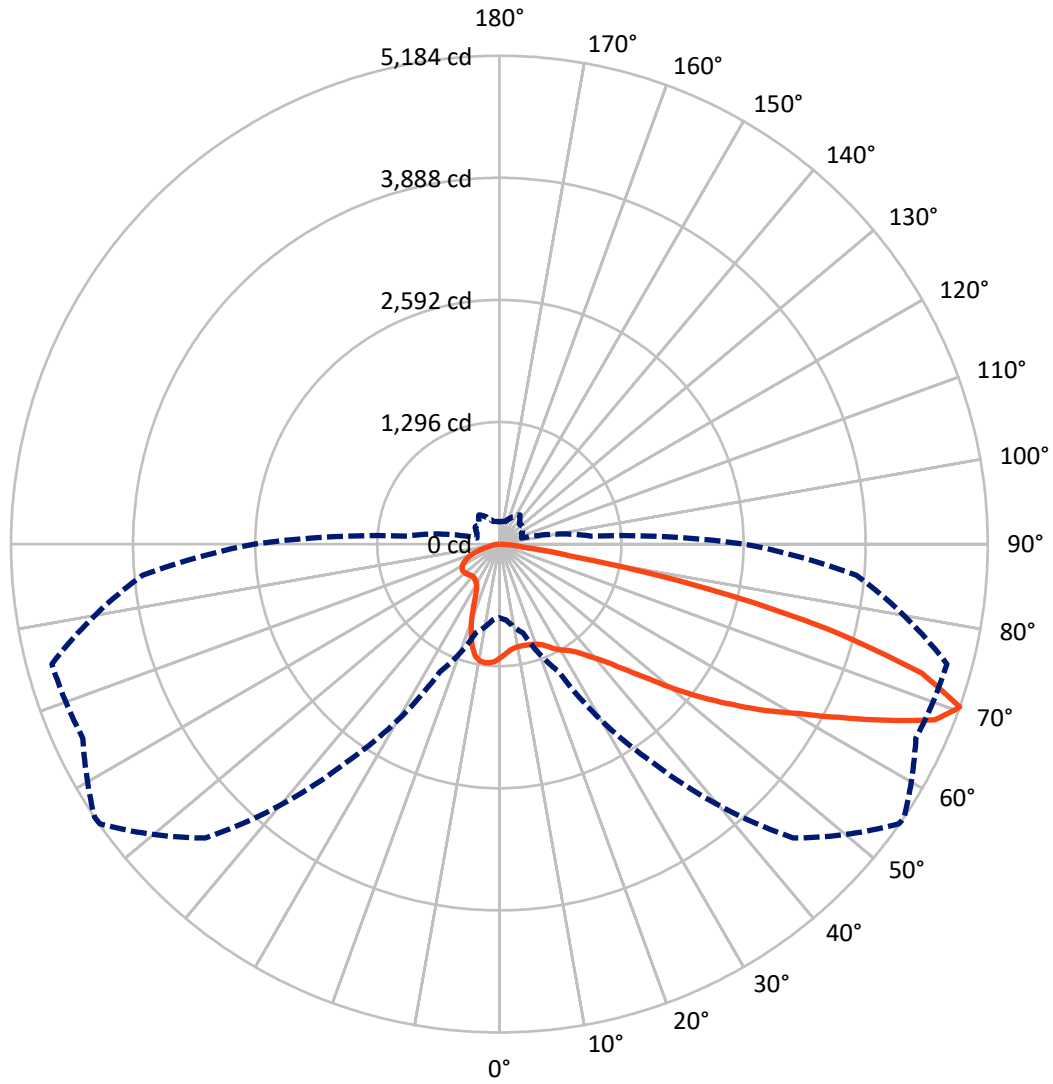
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 fc  
 Type III - Medium - N/A

REPORT NUMBER: P632563  
CATALOG NUMBER: GWS-SA2C-830-U-T3R-W

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P632563

CATALOG NUMBER: GWS-SA2C-830-U-T3R-W

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1437.0	0.0	1437.0
	% Fixture	19.2	0.0	19.2
<b>Street Side</b>	Lumens	6037.4	0.0	6037.4
	% Fixture	80.8	0.0	80.8
<b>Total</b>	Lumens	7474.3	0.0	7474.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.6	1.5
10°-20°	302.5	4.0
20°-30°	500.1	6.7
30°-40°	747.8	10.0
40°-50°	1112.8	14.9
50°-60°	1582.0	21.2
60°-70°	1959.4	26.2
70°-80°	1081.9	14.5
80°-90°	76.2	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°	7474.3	100.0
0°-180°	7474.3	100.0

**Coefficient of Utilization**



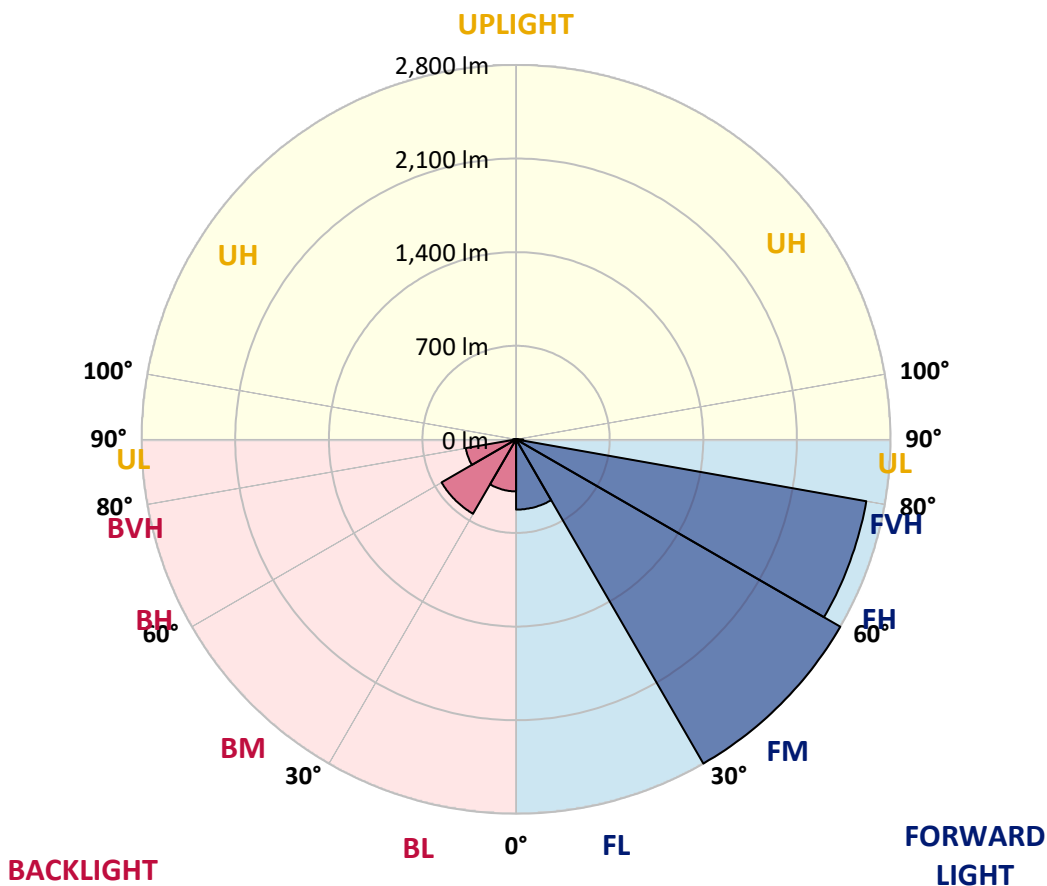
REPORT NUMBER: P632563

CATALOG NUMBER: GWS-SA2C-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°)	525.3	7.0			
FM (30°-60°)	2799.8	37.5			
FH (60°-80°)	2659.4	35.6			G2/5000
FVH (80°-90°)	53.0	0.7			G1/100
BL (0°-30°)	389.0	5.2	B1/500		
BM (30°-60°)	642.8	8.6	B1/1000		
BH (60°-80°)	381.9	5.1	B1/500		G1/500
BVH (80°-90°)	23.2	0.3			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 III Medium





REPORT NUMBER: P632563

CATALOG NUMBER: GWS-SA2C-830-U-T3R-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5
2.5°	1129.0	1122.7	1130.0	1133.7	1143.2	1156.9	1169.0	1169.6	1175.9	1191.2	1205.9
5°	1077.9	1074.7	1076.8	1087.9	1097.9	1115.3	1133.7	1135.3	1153.2	1183.3	1212.8
7.5°	1038.3	1034.1	1042.0	1056.3	1068.9	1088.4	1112.6	1114.8	1140.1	1185.4	1230.7
10°	981.4	978.2	993.0	1012.0	1039.4	1071.5	1103.7	1106.3	1139.5	1199.1	1262.3
12.5°	956.6	956.6	963.0	980.9	1010.9	1053.6	1102.1	1106.3	1148.0	1220.2	1302.9
15°	995.1	997.7	992.5	991.4	1003.5	1044.1	1104.2	1110.5	1163.8	1241.8	1343.0
17.5°	1072.6	1075.2	1061.5	1039.9	1027.8	1053.1	1112.1	1119.0	1180.6	1265.5	1386.2
20°	1181.2	1184.3	1154.3	1121.1	1079.4	1078.9	1127.4	1133.7	1202.3	1291.3	1432.1
22.5°	1308.2	1310.3	1272.4	1219.6	1155.9	1126.9	1153.8	1160.1	1230.2	1327.2	1481.6
25°	1455.2	1461.6	1415.7	1339.3	1252.8	1192.8	1197.5	1204.9	1280.3	1375.1	1540.1
27.5°	1612.3	1620.2	1567.5	1483.2	1364.1	1265.5	1253.9	1260.2	1333.5	1404.6	1571.2
30°	1773.1	1778.9	1726.2	1629.7	1483.7	1347.7	1301.3	1305.0	1356.7	1418.9	1602.8
32.5°	1951.7	1947.0	1896.4	1785.2	1621.8	1446.3	1345.6	1344.6	1382.5	1447.3	1648.2
35°	2119.4	2126.2	2072.4	1949.6	1773.6	1568.0	1412.0	1407.8	1437.3	1493.7	1711.9
37.5°	2322.3	2320.2	2255.9	2123.0	1925.9	1684.5	1505.3	1497.9	1508.5	1565.9	1801.0
40°	2467.2	2482.0	2440.3	2316.5	2104.1	1827.9	1614.4	1598.1	1600.7	1655.0	1920.1
42.5°	2585.8	2599.5	2603.7	2524.7	2308.0	2005.0	1750.4	1734.1	1735.6	1812.6	2066.6
45°	2677.0	2695.4	2755.0	2731.8	2537.8	2209.5	1934.4	1917.5	1918.5	2003.9	2243.7
47.5°	2714.4	2734.4	2855.1	2910.5	2781.9	2454.0	2163.1	2138.3	2142.0	2236.4	2446.1
50°	2702.3	2729.2	2892.6	3048.1	2986.4	2702.8	2436.7	2419.3	2405.0	2542.1	2665.9
52.5°	2597.9	2627.5	2888.9	3135.5	3153.5	2937.9	2719.2	2709.1	2706.0	2866.7	2911.5
55°	2290.7	2340.2	2761.9	3158.7	3284.2	3159.3	3025.4	3008.5	3024.9	3214.6	3159.8
57.5°	2120.4	2157.3	2513.1	3132.9	3391.2	3370.1	3331.1	3332.7	3351.1	3592.5	3460.8
60°	2023.4	2066.6	2375.0	3062.3	3494.0	3626.3	3651.0	3651.0	3684.2	3999.9	3766.5
62.5°	1894.8	1938.6	2245.9	2926.3	3588.8	3927.7	4053.2	4051.6	4064.8	4436.9	4065.3
65°	1633.9	1674.5	1986.5	2711.8	3635.2	4259.8	4510.2	4505.4	4479.1	4825.9	4263.0
67.5°	1186.4	1224.9	1521.7	2303.8	3468.1	4527.5	4980.8	4982.9	4825.3	5071.0	4273.5
70°	782.2	808.5	978.2	1496.4	2820.4	4412.1	5178.0	5184.3	4878.6	4918.1	3803.3
72.5°	488.1	506.5	610.9	892.3	1666.6	3492.4	4672.0	4689.4	4388.9	4322.0	3125.0
75°	324.1	336.8	406.4	520.2	771.1	1890.1	3551.4	3607.3	3517.7	3388.0	2177.3
77.5°	195.0	205.6	258.8	330.5	341.5	738.4	2073.0	2217.4	2230.0	1768.9	911.8
80°	89.1	101.2	142.8	188.7	181.8	257.2	731.0	764.8	902.3	561.9	287.8
82.5°	52.7	58.0	94.9	93.8	77.5	124.9	263.0	269.9	229.3	205.6	122.8
85°	21.1	24.8	40.1	35.3	28.5	40.6	99.1	103.8	99.6	89.6	45.3
87.5°	0.0	0.0	0.0	0.0	0.5	1.1	9.0	9.5	13.7	24.8	13.7
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: P632563  
 CATALOG NUMBER: GWS-SA2C-830-U-T3R-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5
2.5°	1215.4	1212.3	1228.1	1240.2	1245.5	1250.7	1246.0	1244.4	1244.4	1233.9	1228.6
5°	1228.6	1230.2	1251.8	1261.8	1261.8	1257.6	1244.9	1236.0	1232.8	1219.1	1215.4
7.5°	1253.4	1260.2	1280.3	1279.7	1265.0	1241.8	1210.2	1185.9	1163.8	1154.3	1148.5
10°	1294.0	1302.9	1316.6	1294.5	1253.4	1192.2	1125.3	1072.6	1041.0	1015.7	1015.7
12.5°	1340.3	1348.8	1346.1	1295.0	1210.2	1095.8	999.3	938.7	894.4	871.2	871.2
15°	1386.7	1393.6	1365.1	1270.8	1120.0	967.7	862.3	789.6	751.1	729.5	729.5
17.5°	1433.6	1433.1	1373.0	1214.9	1002.5	825.9	722.6	666.2	653.0	649.4	648.8
20°	1479.0	1466.8	1363.0	1121.6	866.0	683.1	617.7	621.4	640.9	649.4	650.4
22.5°	1530.1	1500.0	1333.5	1002.5	711.0	584.0	588.2	618.8	647.2	659.9	661.5
25°	1582.3	1528.5	1283.9	862.8	581.4	547.6	580.3	614.6	646.7	663.1	664.6
27.5°	1603.4	1528.5	1199.6	701.0	512.3	532.3	568.2	601.4	635.1	654.1	657.8
30°	1620.7	1515.3	1081.6	555.0	483.9	517.6	548.7	579.3	612.5	635.6	639.9
32.5°	1645.0	1503.7	938.7	466.5	470.7	503.4	525.0	550.8	580.8	596.1	594.5
35°	1673.5	1485.8	766.4	424.3	459.6	491.2	506.5	521.8	508.1	507.6	509.2
37.5°	1714.0	1470.0	616.1	405.3	452.2	482.8	495.4	462.8	443.8	435.9	432.7
40°	1772.5	1463.7	486.0	394.2	451.2	482.3	473.3	422.7	396.9	369.5	369.0
42.5°	1846.3	1458.9	401.6	389.0	454.9	494.4	442.7	396.4	343.1	331.0	329.9
45°	1941.2	1451.6	359.5	387.9	463.8	503.9	439.6	360.0	323.6	318.4	318.4
47.5°	2055.6	1440.0	340.5	387.9	473.8	499.7	430.1	352.1	314.7	320.5	324.1
50°	2186.8	1425.2	330.5	386.9	483.9	499.7	410.1	350.5	312.6	342.6	354.7
52.5°	2327.0	1408.3	323.6	382.7	490.7	500.2	411.1	355.8	314.7	347.9	357.9
55°	2482.0	1405.7	314.1	373.7	492.8	486.5	413.8	367.4	317.8	315.2	315.7
57.5°	2677.5	1437.3	307.3	360.5	484.4	458.6	419.0	375.8	314.1	314.7	318.4
60°	2882.0	1496.9	313.1	347.9	467.0	432.2	422.7	371.6	296.2	287.8	288.8
62.5°	3056.0	1542.2	317.8	342.1	441.7	409.0	419.0	362.1	286.2	284.1	288.8
65°	3128.7	1504.8	306.2	329.9	404.8	380.5	411.1	350.0	277.8	269.9	270.4
67.5°	3048.1	1329.3	283.6	303.1	363.2	344.2	398.5	334.2	266.2	256.7	254.6
70°	2603.7	976.7	244.6	260.4	312.6	301.5	379.0	313.6	247.7	240.9	236.1
72.5°	2098.3	691.5	202.9	207.1	245.1	254.0	345.2	287.8	226.6	207.1	200.3
75°	1460.5	434.3	169.2	165.0	177.1	194.0	269.3	238.8	195.5	175.0	168.7
77.5°	628.3	223.0	132.3	130.2	118.1	134.4	206.6	199.2	163.9	140.2	136.5
80°	210.3	129.1	95.4	91.7	78.5	94.3	145.5	159.2	128.6	103.8	97.5
82.5°	105.4	74.8	60.6	54.8	52.7	59.6	85.9	99.1	89.1	71.7	60.6
85°	51.7	42.7	33.2	32.7	27.4	25.8	35.8	42.2	40.1	29.5	27.9
87.5°	19.0	16.9	10.5	8.4	5.3	3.7	2.1	2.1	1.6	1.6	1.6
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**



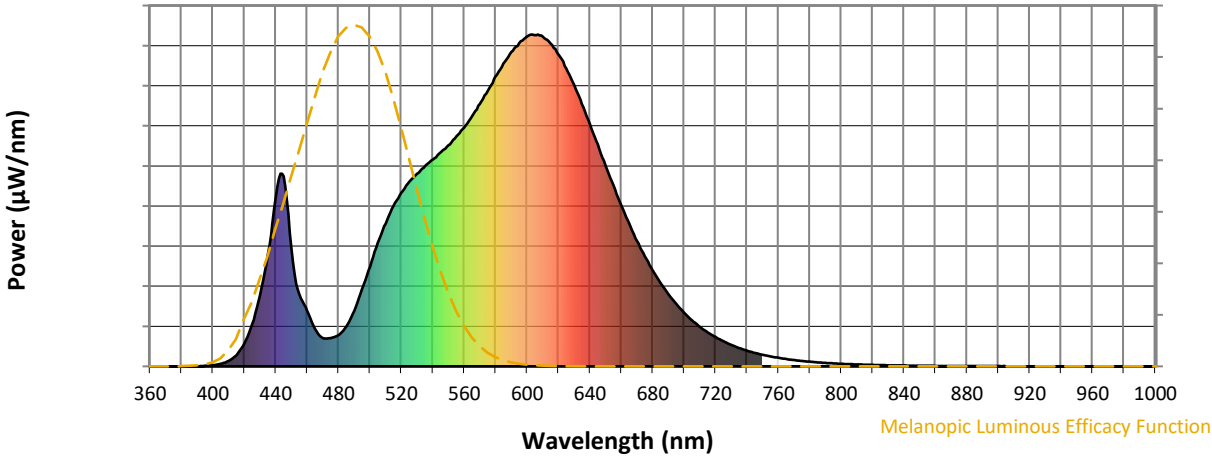
**Scotopic Lumens: NR**

**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

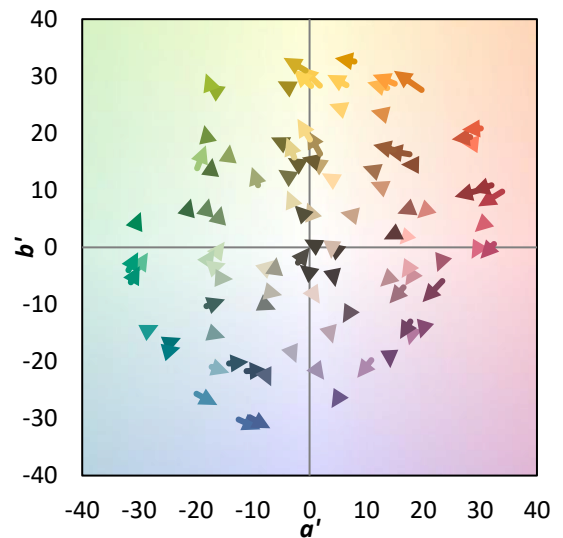
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)