

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: P630556

Luminaire Tested: GWS-SA1D-830-U-SL3-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630556  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-31)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1D-830-U-SL3-W  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

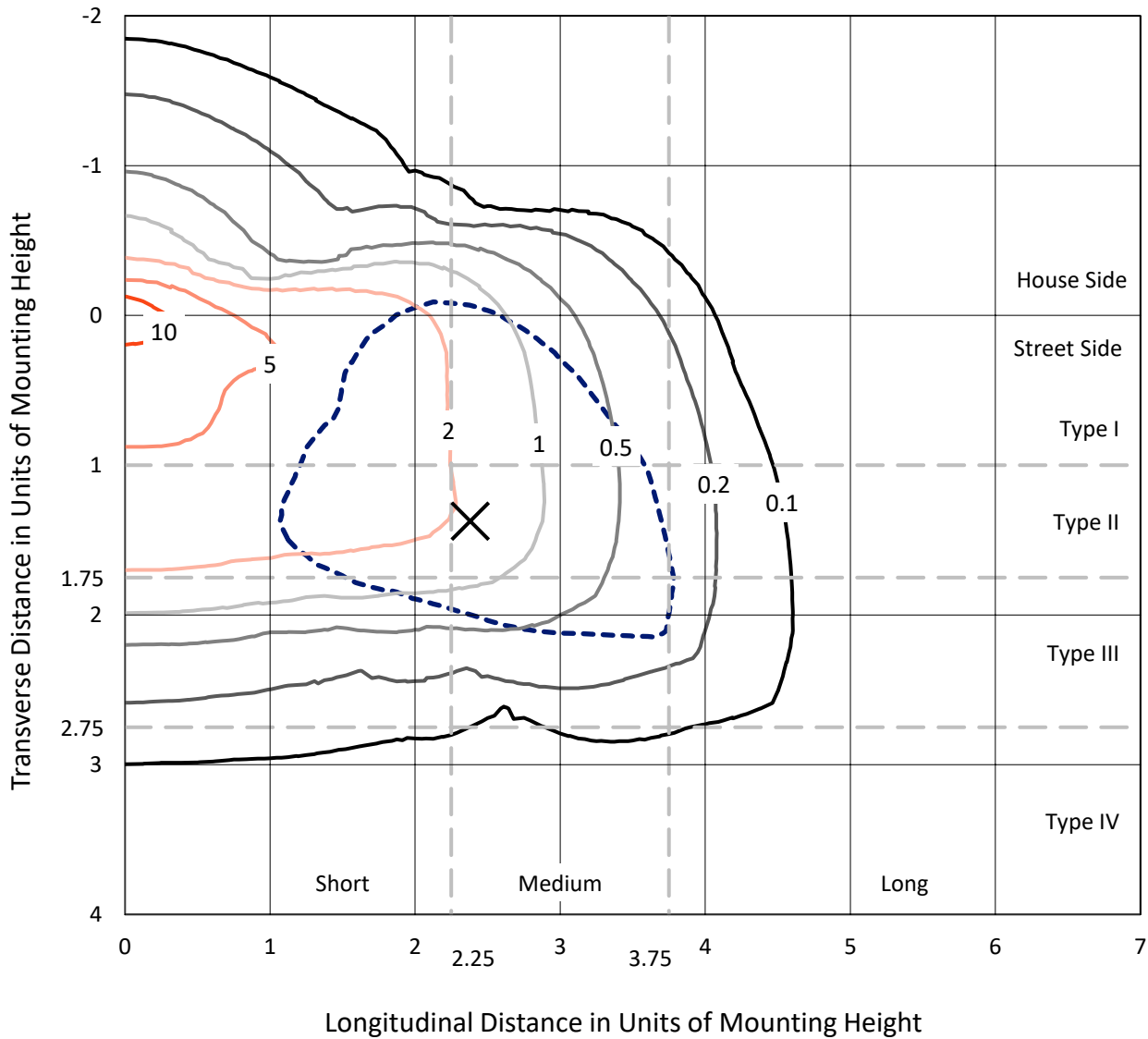
Lumens per Lamp: N/A  
Luminaire Lumens: 4719.8 lumens  
Efficiency: N/A  
Efficacy: 106.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 44.3  
Input Voltage (V): 120  
Input Current (Ain): 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



REPORT NUMBER: P630556  
 CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

### Iso-Footcandle Lines of Horizontal Illumination

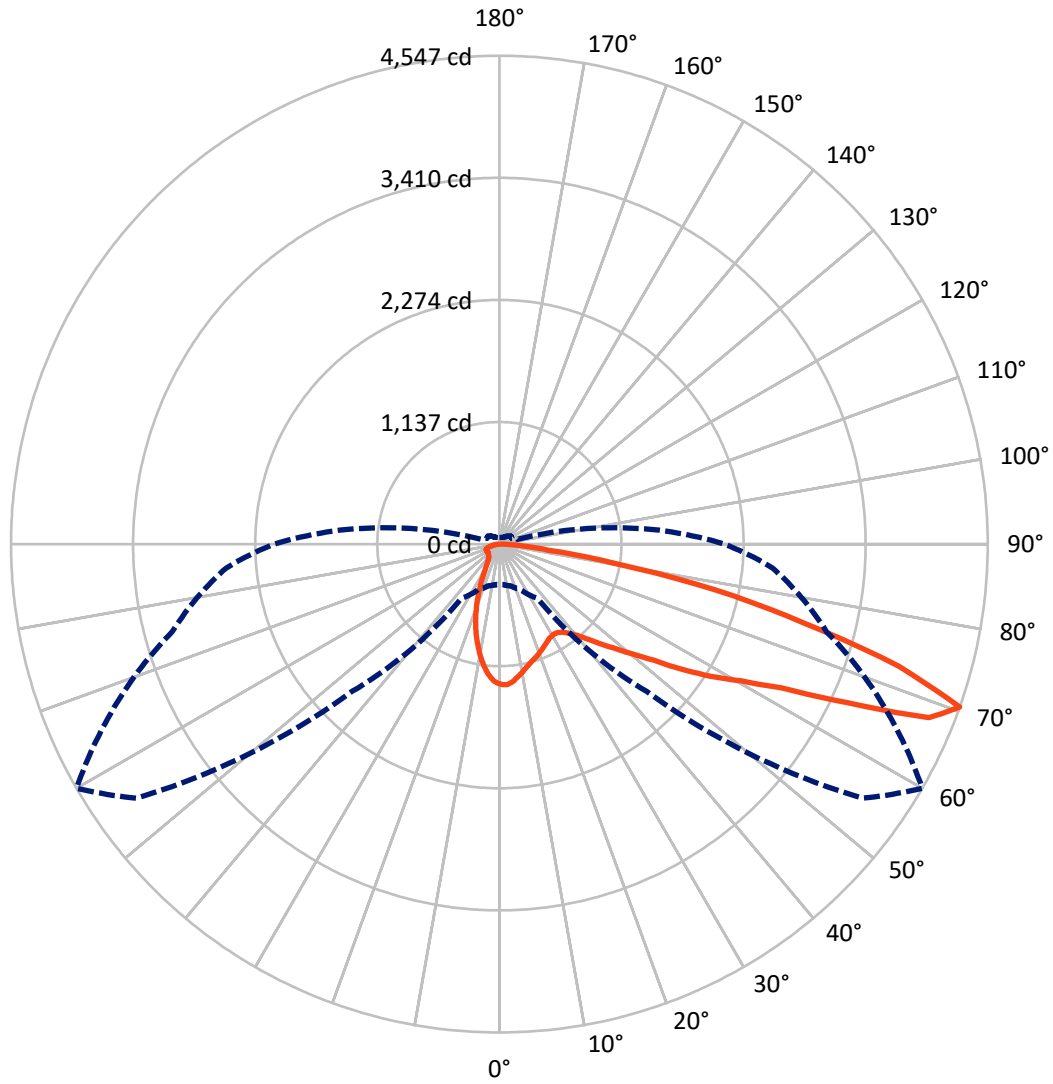
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.1 fc  
 Type III - Medium - N/A

REPORT NUMBER: P630556  
CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P630556

CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

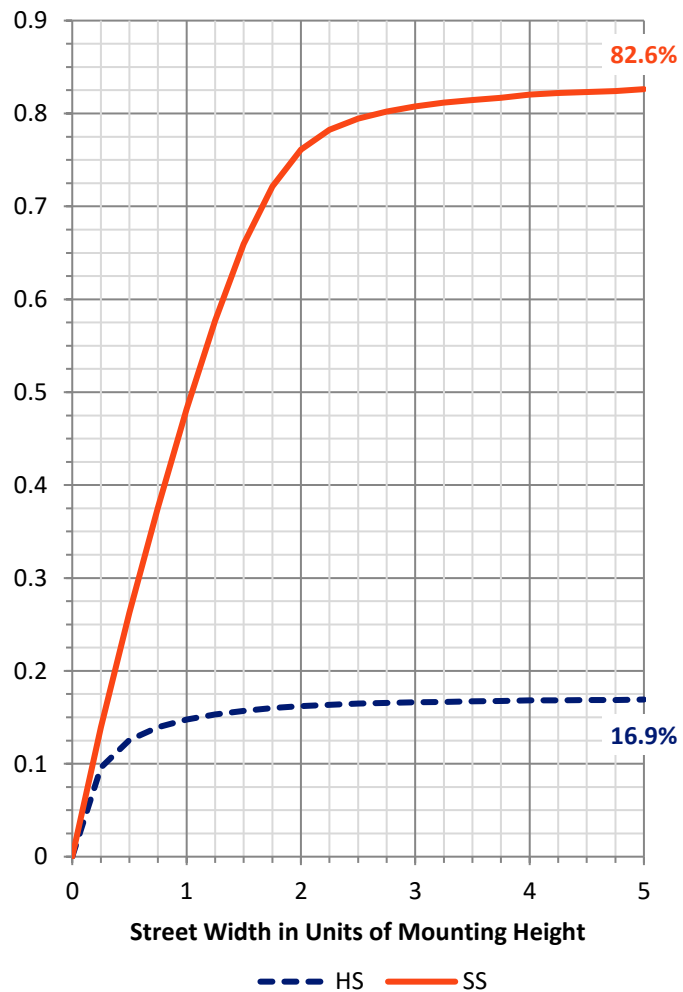
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	807.2	0.0	807.2
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	3912.6	0.0	3912.6
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	4719.8	0.0	4719.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.6	2.4
10°-20°	252.2	5.3
20°-30°	323.0	6.8
30°-40°	424.5	9.0
40°-50°	615.9	13.0
50°-60°	960.9	20.4
60°-70°	1258.0	26.7
70°-80°	695.6	14.7
80°-90°	77.2	1.6
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°	4719.8	100.0
0°-180°	4719.8	100.0

**Coefficient of Utilization**



REPORT NUMBER: P630556

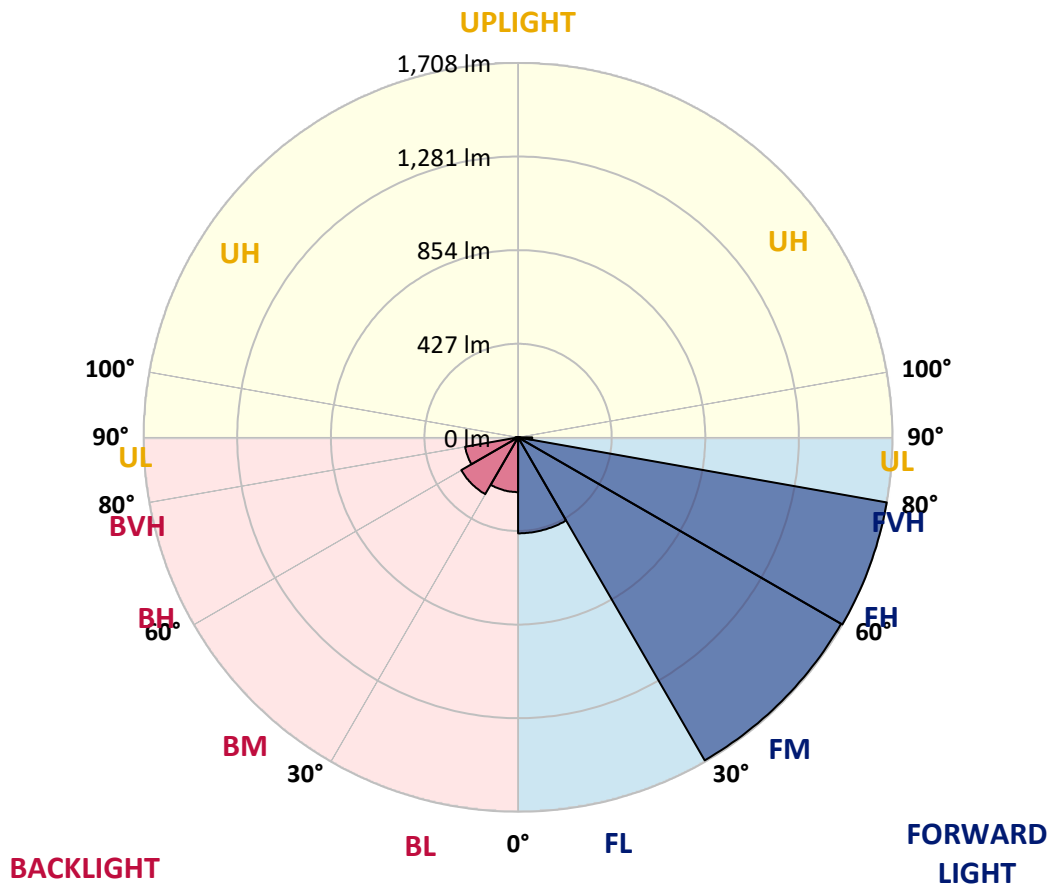
CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	438.0	9.3			
FM (30°-60°)	1701.9	36.1			
FH (60°-80°)	1708.3	36.2			G1/1800
FVH (80°-90°)	64.3	1.4			G1/100
BL (0°-30°)	249.7	5.3	B1/500		
BM (30°-60°)	299.3	6.3	B1/1000		
BH (60°-80°)	245.3	5.2	B1/500		G1/500
BVH (80°-90°)	12.9	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-G1**

Type III Medium





REPORT NUMBER: P630556

CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1287.7	1289.1	1292.9	1298.4	1304.0	1306.7	1313.6	1311.6	1310.2	1307.4	1304.0
5°	1230.7	1233.5	1237.0	1247.7	1259.8	1269.4	1285.0	1286.7	1287.4	1288.8	1283.2
7.5°	1158.2	1158.9	1167.2	1181.4	1197.3	1213.8	1239.7	1247.0	1253.2	1260.1	1255.6
10°	1078.1	1079.8	1086.1	1106.4	1133.7	1158.2	1193.1	1205.2	1218.3	1233.5	1227.3
12.5°	1012.5	1012.8	1022.9	1044.6	1074.3	1107.5	1151.0	1165.5	1182.7	1206.6	1201.1
15°	960.4	960.4	969.7	988.3	1022.5	1061.5	1113.3	1132.0	1155.5	1187.6	1177.9
17.5°	918.9	919.3	925.1	944.8	975.2	1018.4	1079.8	1105.0	1130.9	1173.4	1158.9
20°	897.2	895.4	896.5	908.6	934.5	976.2	1046.3	1075.7	1110.6	1163.8	1141.7
22.5°	896.1	893.0	888.5	889.6	904.8	939.3	1010.4	1046.0	1089.9	1155.8	1124.0
25°	913.7	910.3	902.3	893.4	892.0	912.7	976.6	1017.0	1068.4	1152.4	1107.1
27.5°	943.4	941.0	930.7	917.2	903.0	902.3	951.0	993.2	1052.9	1155.8	1095.0
30°	982.8	978.7	972.1	954.8	933.4	911.3	941.0	980.4	1042.5	1166.9	1089.9
32.5°	1027.4	1024.9	1018.7	1001.5	978.7	943.4	949.0	983.1	1042.5	1186.2	1090.9
35°	1074.7	1074.3	1074.3	1062.9	1037.7	993.9	980.4	1006.6	1058.4	1217.3	1101.9
37.5°	1120.6	1120.2	1131.3	1135.4	1106.8	1059.5	1033.9	1053.6	1093.3	1263.2	1129.2
40°	1157.9	1159.3	1183.4	1204.2	1188.3	1144.4	1108.5	1118.5	1149.9	1328.5	1176.9
42.5°	1195.5	1199.3	1235.6	1272.2	1278.4	1240.4	1204.2	1210.0	1231.1	1414.8	1248.0
45°	1236.6	1238.3	1289.1	1340.2	1370.3	1347.8	1318.1	1326.1	1330.9	1521.5	1354.0
47.5°	1276.3	1280.8	1346.4	1416.5	1473.5	1471.4	1454.9	1452.4	1453.5	1651.4	1479.4
50°	1330.5	1337.1	1414.1	1498.7	1582.3	1620.6	1625.5	1607.2	1599.6	1795.7	1635.5
52.5°	1433.5	1433.5	1502.5	1585.7	1698.0	1792.9	1825.4	1795.4	1771.2	1948.3	1801.2
55°	1562.3	1567.8	1622.7	1690.0	1832.3	1974.2	2084.1	2050.9	1982.5	2114.4	1974.9
57.5°	1619.6	1626.5	1713.5	1818.2	2008.1	2180.4	2332.7	2320.9	2221.1	2287.1	2155.2
60°	1516.0	1530.5	1650.3	1825.7	2167.3	2513.0	2620.3	2586.2	2443.5	2468.4	2350.6
62.5°	1264.6	1280.5	1413.4	1658.3	2145.2	2872.4	3073.8	2947.7	2721.2	2697.4	2611.0
65°	754.5	753.9	913.7	1238.3	1872.7	2972.2	3791.4	3556.2	3150.1	3011.6	2879.0
67.5°	479.7	478.6	512.1	656.1	1246.3	2727.7	4252.7	4313.8	3732.6	3242.6	2901.1
70°	378.5	378.1	402.3	467.9	616.4	1941.1	4124.2	4547.3	4084.5	3154.6	2554.4
72.5°	275.9	276.6	313.9	391.9	475.5	974.5	3339.7	3890.8	3756.8	2784.7	2073.7
75°	198.2	199.3	221.7	300.1	438.6	532.8	2220.8	2925.6	2858.3	2232.2	1426.5
77.5°	126.0	127.4	147.1	210.3	354.3	430.3	1346.4	2065.4	1901.7	1257.7	507.3
80°	77.0	81.5	98.1	156.8	283.2	322.9	673.0	1088.1	952.4	345.0	170.6
82.5°	39.7	43.2	59.1	97.0	195.1	283.5	380.9	457.2	294.9	144.3	90.8
85°	12.4	14.5	20.7	39.4	92.9	175.8	252.1	227.2	135.4	68.0	42.1
87.5°	3.1	3.1	3.5	3.5	3.8	7.9	48.7	51.5	35.9	21.4	17.3
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: P630556  
 CATALOG NUMBER: GWS-SA1D-830-U-SL3-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1297.1	1288.8	1285.3	1285.0	1276.3	1263.9	1255.6	1249.7	1246.3	1245.6	1245.6
5°	1273.9	1263.2	1249.1	1238.3	1215.2	1191.7	1172.0	1161.0	1148.2	1146.5	1146.1
7.5°	1243.2	1227.6	1200.7	1170.7	1130.3	1091.2	1058.1	1035.6	1013.2	1009.0	1007.7
10°	1210.0	1189.0	1143.0	1090.2	1029.8	971.4	920.6	880.9	854.7	836.0	832.6
12.5°	1177.2	1149.3	1081.9	1003.2	920.3	840.5	764.2	699.3	652.3	625.0	620.2
15°	1146.5	1107.5	1015.3	914.8	807.0	697.9	589.8	505.6	439.6	416.1	410.6
17.5°	1118.5	1069.8	950.7	823.3	688.9	546.3	423.4	348.4	309.8	298.0	295.3
20°	1090.5	1031.1	885.1	726.9	563.6	403.7	309.4	274.2	259.7	255.2	253.8
22.5°	1060.5	988.7	813.6	631.9	436.8	302.2	253.1	237.6	233.1	233.4	233.1
25°	1030.5	945.5	738.7	528.7	325.3	245.2	221.0	215.1	216.2	219.3	220.0
27.5°	1005.6	907.2	665.1	415.4	254.2	211.0	199.6	199.3	203.1	207.2	207.9
30°	987.6	873.0	592.6	319.4	209.3	187.5	183.0	185.1	189.6	192.7	193.7
32.5°	974.9	843.6	515.2	251.1	183.4	170.9	168.9	170.9	173.7	176.8	177.5
35°	970.4	822.2	439.3	204.8	165.8	158.9	157.5	158.5	159.9	161.6	162.3
37.5°	980.4	811.5	359.8	178.2	155.1	150.9	148.8	148.1	148.5	149.2	149.5
40°	1010.1	816.4	294.9	162.6	148.1	144.3	140.9	139.5	139.2	139.9	139.5
42.5°	1061.2	836.7	247.9	153.7	142.6	137.1	133.3	131.9	131.9	133.6	133.6
45°	1136.1	876.8	214.1	147.1	137.8	130.9	126.7	126.0	127.4	130.2	130.5
47.5°	1245.9	935.5	193.7	142.3	133.3	125.4	121.2	120.9	123.6	128.1	128.5
50°	1376.1	1020.1	182.7	138.8	130.2	120.9	116.7	117.1	120.2	125.0	126.0
52.5°	1532.9	1135.4	183.4	137.4	128.5	118.1	114.0	113.3	116.4	121.2	122.2
55°	1694.9	1275.6	196.8	137.8	126.0	116.7	111.2	108.8	111.5	115.0	115.3
57.5°	1873.1	1433.8	230.3	137.1	122.9	115.3	108.8	103.3	105.0	107.1	108.1
60°	2074.0	1619.9	302.5	138.5	121.6	112.2	103.9	96.7	96.3	97.7	98.1
62.5°	2342.7	1873.1	383.7	140.9	124.7	108.4	96.7	89.1	87.7	88.4	88.7
65°	2548.2	1993.9	358.1	138.8	131.2	105.7	89.8	81.8	79.1	78.4	78.4
67.5°	2464.6	1834.0	249.3	133.3	134.3	106.0	84.3	74.2	70.8	69.1	68.7
70°	2097.2	1489.7	173.4	127.8	130.9	105.3	78.4	68.0	63.5	61.1	60.8
72.5°	1656.9	1137.5	140.2	116.7	118.8	95.0	69.8	61.1	57.3	54.2	54.2
75°	1066.4	694.1	117.1	103.9	97.0	73.9	60.4	54.6	50.8	47.7	47.7
77.5°	358.8	257.6	90.8	88.1	72.5	55.6	50.8	47.0	43.9	41.1	40.7
80°	145.7	122.2	66.6	66.6	50.8	42.5	39.7	38.0	35.9	32.5	32.5
82.5°	84.6	74.2	46.6	40.4	33.8	29.4	27.6	25.9	25.9	23.5	23.5
85°	40.7	41.1	28.0	24.9	19.3	16.9	16.2	15.2	14.8	13.5	13.1
87.5°	22.1	22.4	14.2	11.1	7.6	6.6	5.5	5.2	4.8	4.5	4.5
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



CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

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)