

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: P635031

Luminaire Tested: GWS-SA3C-830-U-T3-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635031  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-24)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3C-830-U-T3-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

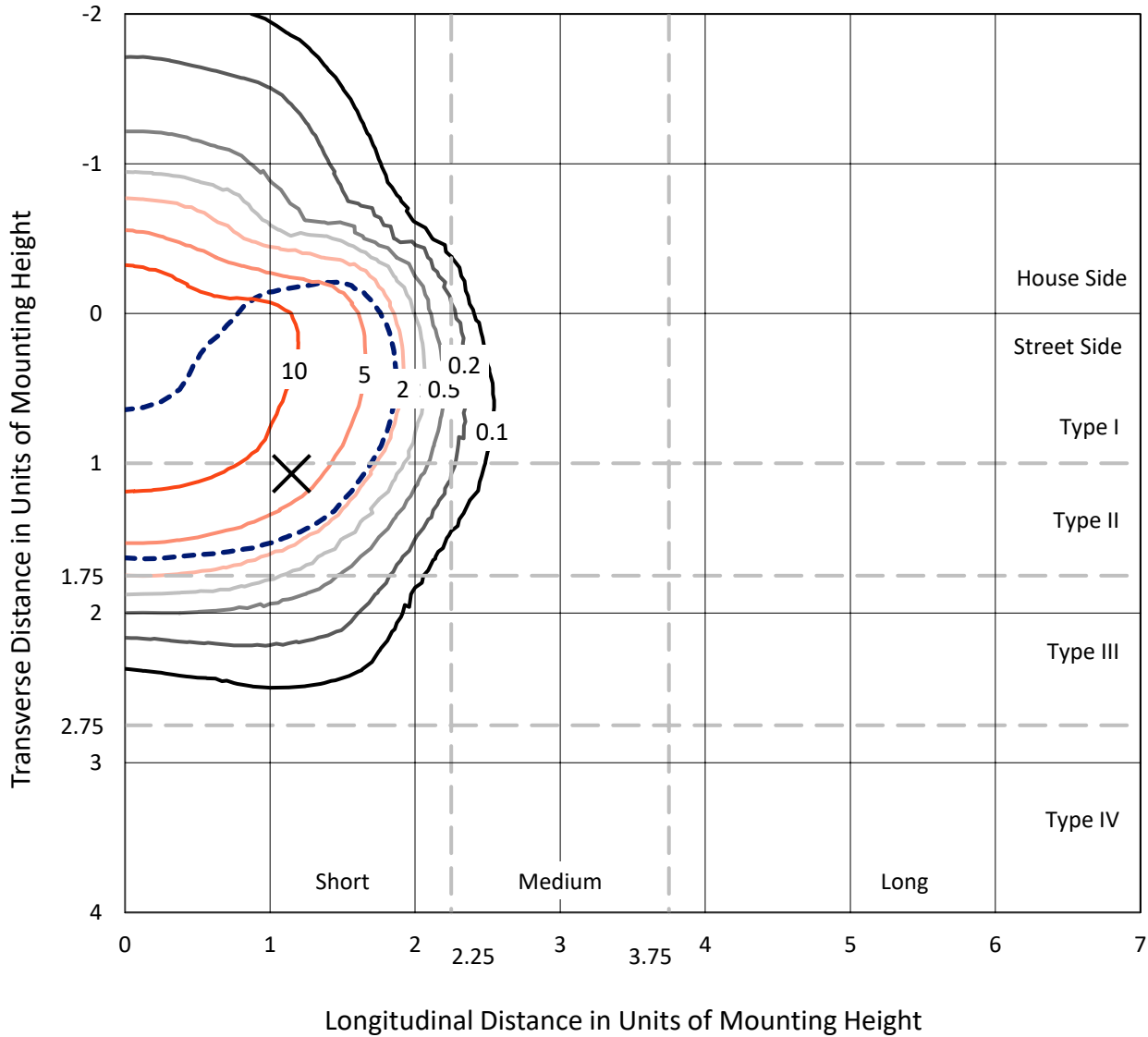
Lumens per Lamp: N/A  
Luminaire Lumens: 6842.9 lumens  
Efficiency: N/A  
Efficacy: 73.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G1  
  
Input Watts (W): 93  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P635031  
 CATALOG NUMBER: GWS-SA3C-830-U-T3-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

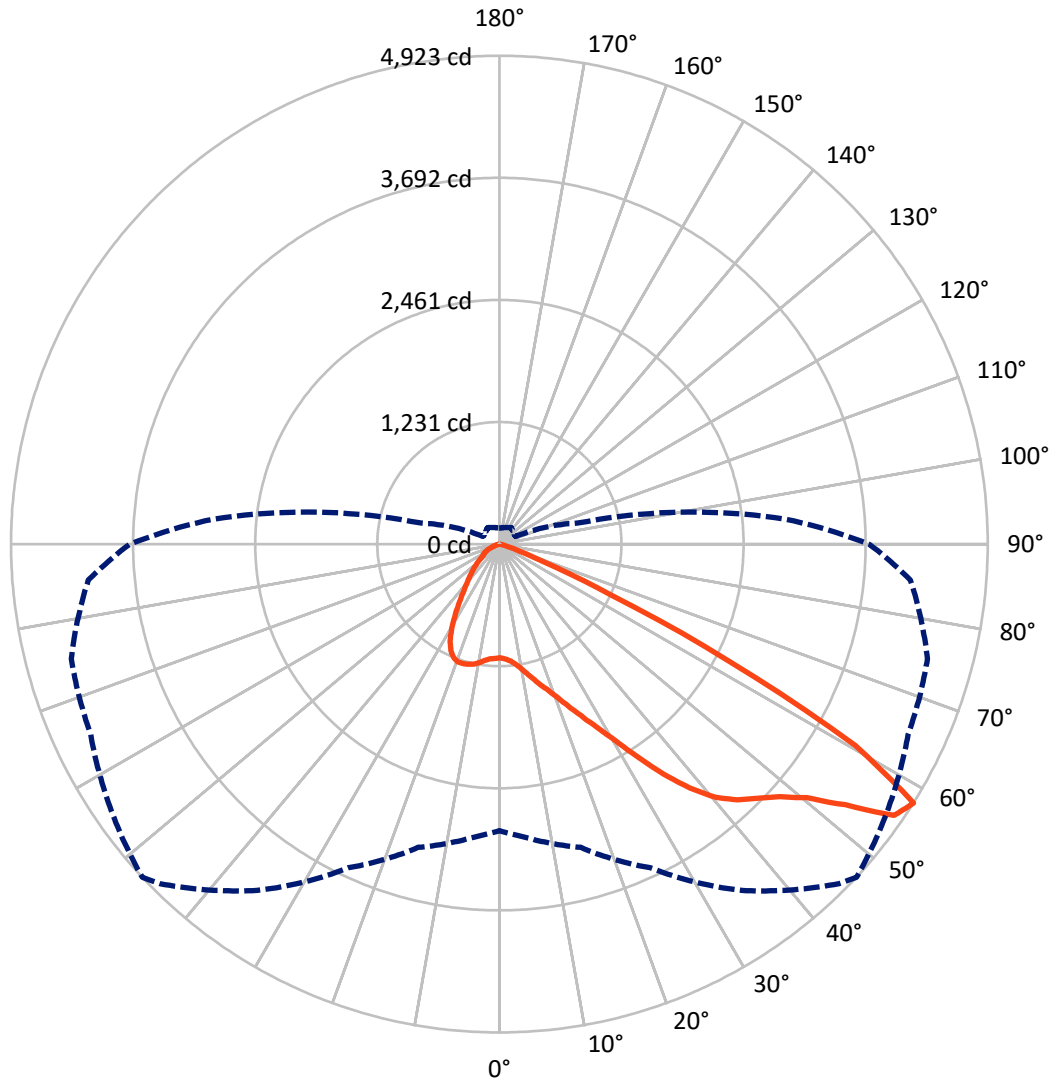
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.2 fc  
 Type II - Short - N/A

REPORT NUMBER: P635031  
CATALOG NUMBER: GWS-SA3C-830-U-T3-W-GRSBK

### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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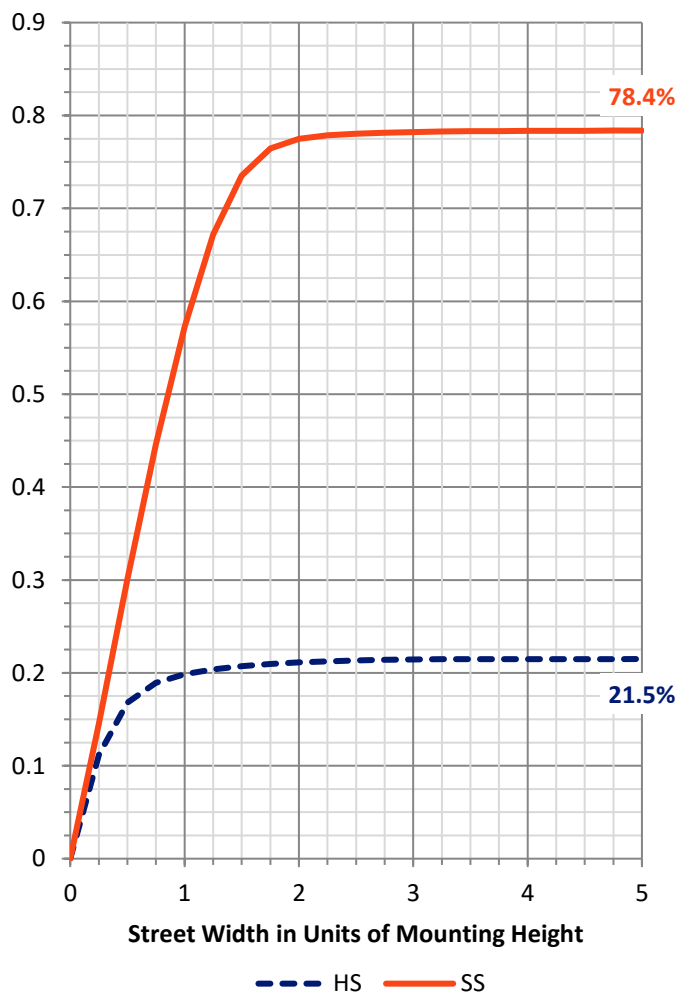
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1484.6	0.0	1484.6
	% Fixture	21.7	0.0	21.7
<b>Street Side</b>	Lumens	5358.3	0.0	5358.3
	% Fixture	78.3	0.0	78.3
<b>Total</b>	Lumens	6842.9	0.0	6842.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.0	1.7
10°-20°	384.5	5.6
20°-30°	714.0	10.4
30°-40°	1143.0	16.7
40°-50°	1670.8	24.4
50°-60°	2062.0	30.1
60°-70°	689.0	10.1
70°-80°	64.2	0.9
80°-90°	1.3	0.0
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°	6842.9	100.0
0°-180°	6842.9	100.0

**Coefficient of Utilization**



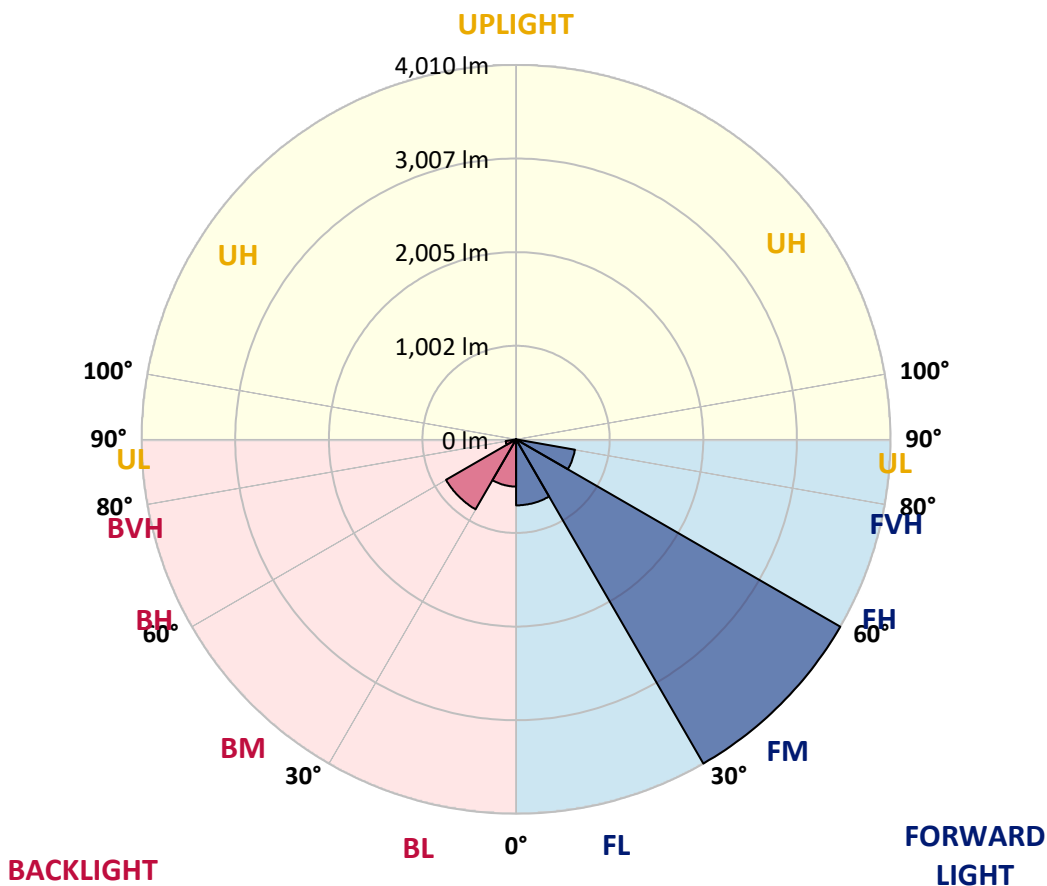
REPORT NUMBER: P635031

CATALOG NUMBER: GWS-SA3C-830-U-T3-W-GRSBK

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	707.2	10.3			
FM (30°-60°)	4009.9	58.6			
FH (60°-80°)	640.4	9.4			G0/660
FVH (80°-90°)	0.9	0.0			G0/10
BL (0°-30°)	505.3	7.4	B2/1000		
BM (30°-60°)	865.9	12.7	B1/1000		
BH (60°-80°)	112.9	1.6	B1/500		G1/500
BVH (80°-90°)	0.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G1**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5
2.5°	1157.4	1156.6	1155.8	1160.6	1159.0	1158.2	1159.8	1159.8	1159.8	1155.0	1145.5
5°	1185.2	1185.2	1184.4	1189.2	1185.2	1182.8	1183.6	1183.6	1180.5	1171.7	1159.8
7.5°	1228.9	1227.3	1225.7	1230.5	1226.5	1225.7	1227.3	1222.6	1217.0	1202.7	1186.0
10°	1291.7	1291.7	1289.3	1294.1	1290.9	1289.3	1289.3	1286.1	1275.8	1253.5	1228.9
12.5°	1378.3	1374.3	1368.7	1364.8	1363.2	1362.4	1363.2	1358.4	1347.3	1318.7	1284.5
15°	1472.8	1469.6	1460.9	1454.5	1445.8	1444.2	1449.0	1445.0	1433.9	1394.9	1346.5
17.5°	1592.0	1595.9	1573.7	1560.2	1534.8	1533.2	1534.8	1541.1	1533.2	1483.1	1412.4
20°	1693.6	1696.8	1680.1	1670.6	1647.6	1637.2	1640.4	1650.7	1642.0	1583.2	1484.7
22.5°	1802.5	1806.4	1789.0	1769.1	1758.8	1758.8	1770.7	1785.0	1773.1	1696.0	1567.3
25°	1932.7	1935.9	1921.6	1895.4	1877.1	1900.2	1917.7	1955.8	1935.9	1831.1	1665.0
27.5°	2082.1	2082.9	2062.2	2035.2	2025.7	2068.6	2086.1	2144.9	2136.9	1982.8	1768.3
30°	2241.8	2242.6	2237.8	2219.5	2210.8	2267.2	2291.0	2376.0	2370.5	2171.1	1908.9
32.5°	2407.8	2407.8	2416.5	2414.9	2425.3	2517.4	2555.5	2652.5	2646.9	2401.4	2083.7
35°	2574.6	2575.4	2590.5	2628.6	2671.5	2793.9	2843.9	2961.5	2948.8	2677.1	2306.9
37.5°	2764.5	2756.5	2777.2	2834.4	2929.7	3071.1	3118.8	3230.8	3216.5	2959.1	2598.4
40°	2993.3	2979.0	2979.0	3045.7	3153.7	3316.6	3357.1	3412.7	3364.2	3187.1	2884.4
42.5°	3245.9	3232.4	3214.9	3273.7	3364.2	3491.3	3524.7	3509.6	3469.9	3402.4	3210.1
45°	3501.7	3481.0	3492.9	3528.7	3581.1	3641.5	3654.2	3584.3	3566.0	3585.1	3479.4
47.5°	3696.3	3682.0	3711.4	3761.4	3804.3	3813.1	3804.3	3707.4	3705.8	3773.3	3666.1
50°	3761.4	3763.0	3844.0	3953.7	4022.8	4029.9	4018.0	3906.8	3891.7	3911.6	3767.0
52.5°	3767.8	3774.1	3892.5	4101.4	4289.7	4375.5	4366.0	4246.0	4098.3	4076.8	3919.5
55°	3614.5	3651.8	3817.0	4122.1	4522.5	4796.5	4828.3	4598.7	4379.5	4361.2	4247.6
57.5°	2889.2	2965.5	3164.8	3599.4	4262.7	4840.2	4922.8	4757.6	4545.5	4467.6	4159.4
60°	1727.0	1821.5	2013.0	2546.0	3244.3	3978.3	4120.5	4143.5	4045.8	3821.0	3191.1
62.5°	741.2	733.2	969.2	1377.5	1929.6	2528.5	2592.9	2693.0	2778.0	2542.8	1936.7
65°	254.2	276.4	384.5	621.2	966.0	1174.1	1231.3	1321.1	1441.8	1190.0	709.4
67.5°	157.3	166.8	221.6	367.0	521.1	513.2	487.8	473.5	460.7	315.4	194.6
70°	114.4	122.3	155.7	252.6	350.3	246.3	213.7	173.2	192.2	177.1	138.2
72.5°	77.1	83.4	107.2	153.3	179.5	120.0	111.2	126.3	152.5	145.4	112.8
75°	46.1	50.0	61.2	74.7	73.1	62.0	62.8	89.0	116.8	108.8	80.2
77.5°	31.8	33.4	40.5	48.5	35.7	19.1	17.5	24.6	39.7	39.7	27.0
80°	7.9	10.3	10.3	6.4	5.6	4.8	4.8	7.1	11.1	7.9	4.0
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.6
85°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6
87.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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



REPORT NUMBER: P635031

CATALOG NUMBER: GWS-SA3C-830-U-T3-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5	1145.5
2.5°	1151.1	1141.5	1147.9	1146.3	1151.1	1152.7	1145.5	1143.9	1144.7	1135.2	1132.0
5°	1162.2	1151.1	1154.2	1151.1	1156.6	1161.4	1159.0	1162.2	1166.2	1159.0	1155.8
7.5°	1186.0	1174.9	1174.1	1169.3	1177.3	1180.5	1179.7	1188.4	1196.3	1191.6	1186.8
10°	1227.3	1212.2	1210.6	1206.7	1209.1	1211.4	1202.7	1204.3	1211.4	1205.9	1203.5
12.5°	1278.2	1259.9	1255.9	1246.4	1246.4	1234.5	1215.4	1211.4	1217.0	1213.0	1209.1
15°	1333.0	1308.4	1302.0	1285.3	1269.4	1247.2	1227.3	1222.6	1226.5	1221.8	1218.6
17.5°	1394.2	1366.3	1345.7	1316.3	1281.3	1255.1	1232.9	1222.6	1216.2	1206.7	1205.9
20°	1454.5	1418.0	1383.0	1336.2	1290.1	1250.4	1213.8	1186.8	1163.8	1149.5	1143.9
22.5°	1524.4	1470.4	1414.0	1348.1	1282.1	1221.8	1157.4	1111.4	1071.6	1058.1	1051.8
25°	1599.1	1529.2	1445.0	1359.2	1255.1	1158.2	1070.8	1002.5	950.1	932.6	925.5
27.5°	1681.7	1585.6	1476.8	1356.8	1199.5	1067.7	951.7	866.7	815.0	799.2	804.7
30°	1786.6	1658.7	1516.5	1332.2	1116.1	940.6	804.7	733.2	694.3	679.2	680.0
32.5°	1926.4	1763.5	1574.5	1279.8	1008.9	796.0	676.8	624.4	598.2	578.3	576.7
35°	2126.6	1923.2	1628.5	1195.6	878.6	667.3	580.7	539.4	502.8	479.8	483.8
37.5°	2366.5	2124.2	1657.9	1082.0	732.4	567.2	508.4	466.3	425.0	390.8	394.8
40°	2650.9	2387.1	1655.5	932.6	599.0	498.9	448.0	398.8	347.1	316.2	319.3
42.5°	2967.8	2635.8	1603.9	774.5	496.5	443.3	390.0	328.1	278.0	259.0	259.8
45°	3242.7	2837.6	1513.3	610.9	417.8	389.3	329.7	266.1	243.9	230.4	229.6
47.5°	3446.1	2985.3	1383.8	480.6	354.3	340.0	270.9	238.3	220.8	209.7	208.1
50°	3559.7	3036.9	1240.8	376.5	299.5	288.4	242.3	216.1	204.2	197.0	195.4
52.5°	3712.2	3098.9	1138.4	297.1	251.0	235.9	223.2	201.0	193.0	187.5	185.1
55°	3953.7	3218.9	1049.4	235.9	208.9	205.7	210.5	192.2	187.5	178.7	175.6
57.5°	3726.5	2891.6	815.0	182.7	176.4	188.3	203.4	183.5	171.6	163.6	160.5
60°	2622.3	1922.4	409.9	147.0	157.3	176.4	191.4	166.0	154.1	155.7	154.1
62.5°	1445.8	962.0	184.3	123.1	136.6	155.7	163.6	143.8	135.8	149.3	151.7
65°	472.7	327.3	106.4	95.3	108.0	127.1	141.4	136.6	135.0	150.9	155.7
67.5°	145.4	108.0	72.3	68.3	74.7	93.7	119.2	147.8	158.9	163.6	166.0
70°	108.8	85.0	62.0	58.0	61.2	71.5	100.9	123.1	116.0	116.8	115.2
72.5°	87.4	67.5	53.2	50.8	50.8	49.3	53.2	66.7	75.5	79.4	79.4
75°	61.2	47.7	40.5	37.3	29.4	23.8	21.4	21.4	19.1	18.3	17.5
77.5°	20.7	17.5	15.9	12.7	8.7	7.1	6.4	5.6	4.0	2.4	1.6
80°	3.2	2.4	1.6	1.6	1.6	0.8	0.8	0.8	0.0	0.0	0.0
82.5°	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.0	0.0	0.0	0.0
85°	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.0	0.0	0.0	0.0
87.5°	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.0	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

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)