

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: P636483

Luminaire Tested: GWS-SA3F-830-U-AFL-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P636483  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-47)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3F-830-U-AFL-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

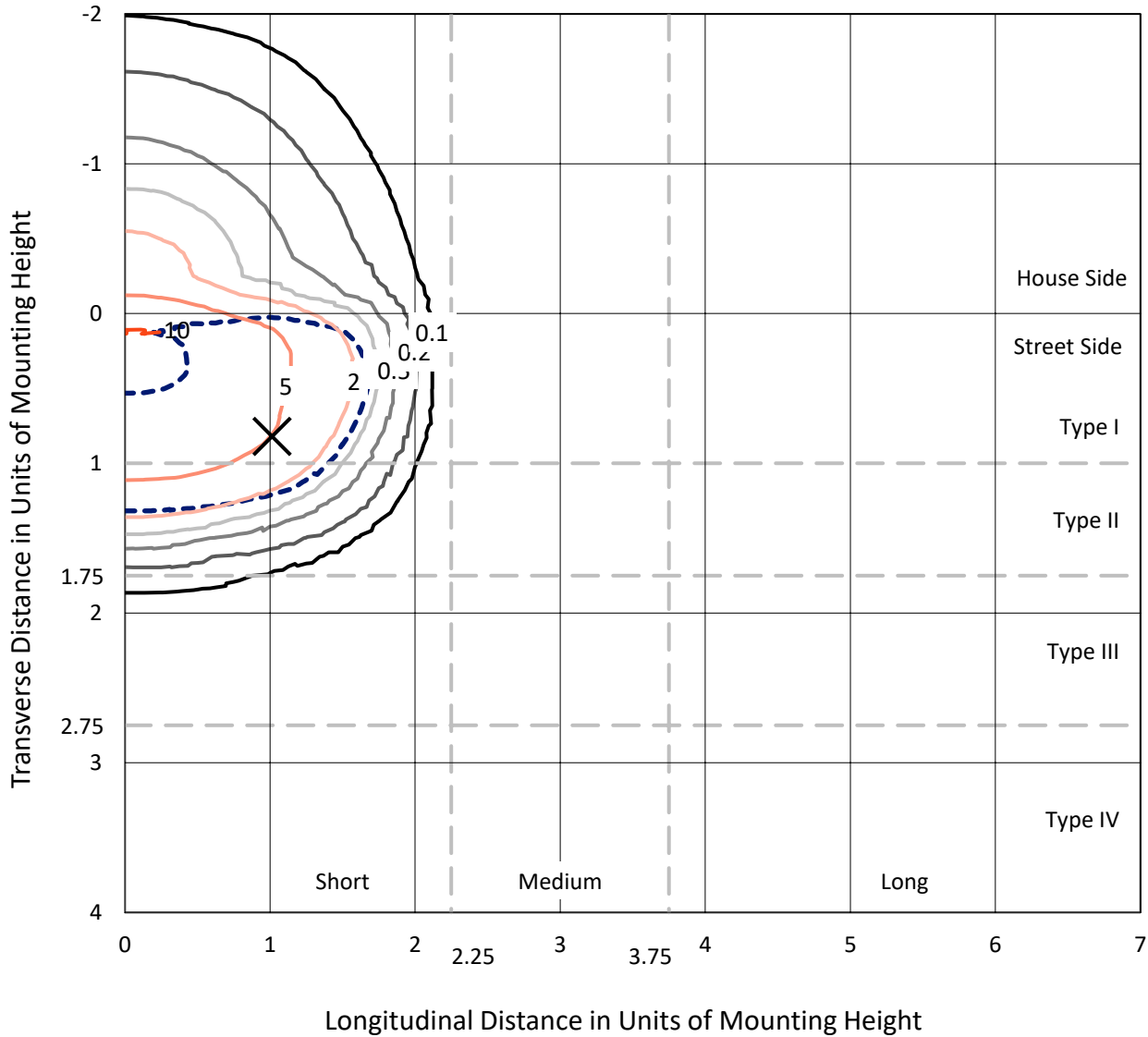
Lumens per Lamp: N/A  
Luminaire Lumens: 17620.8 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G1  
  
Input Watts (W): 183.2  
Input Voltage (V): 120  
Input Current (Ain): 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: P636483  
 CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

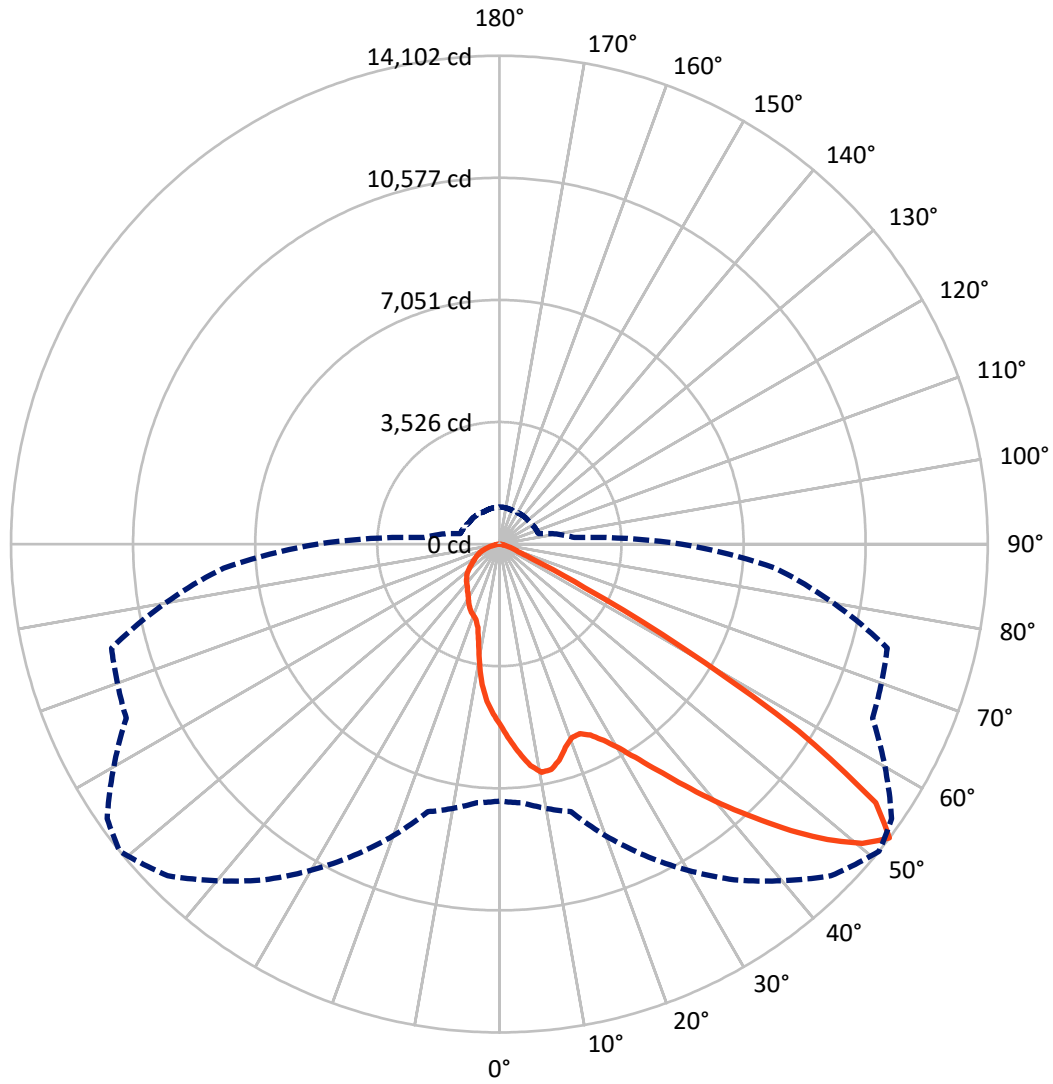
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.3 fc  
 Type II - Short - N/A

REPORT NUMBER: P636483  
CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

### Luminous Intensity Polar Plot



— Vertical Plane Through 51-Deg Lateral    - - - Horizontal Cone Through 52.5-Deg Vertical

REPORT NUMBER: P636483

CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

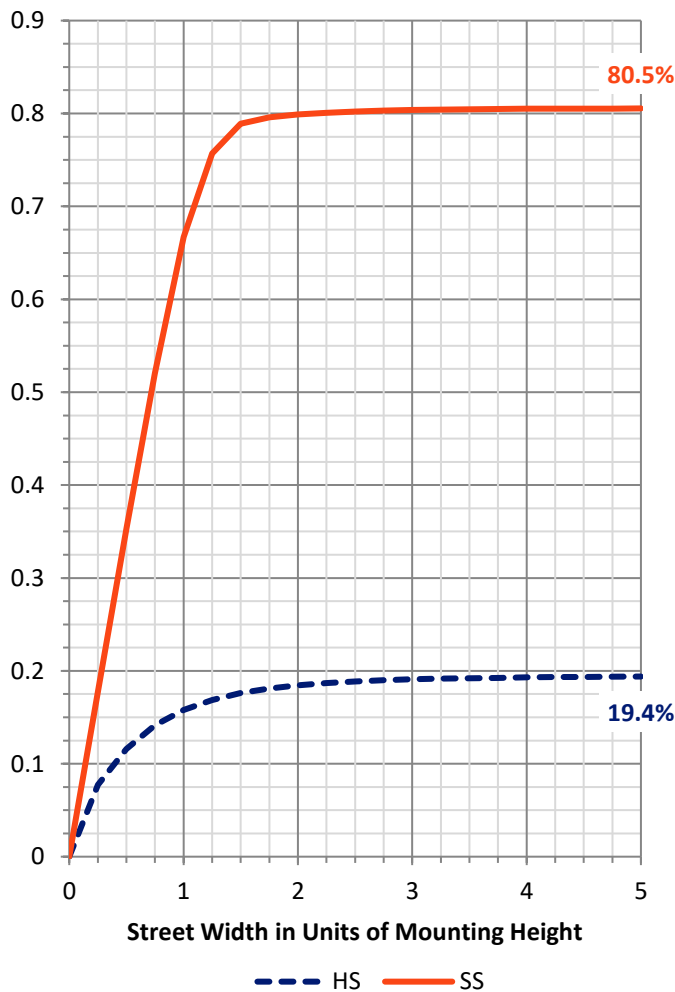
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3433.3	0.0	3433.3
	% Fixture	19.5	0.0	19.5
<b>Street Side</b>	Lumens	14187.5	0.0	14187.5
	% Fixture	80.5	0.0	80.5
<b>Total</b>	Lumens	17620.8	0.0	17620.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	489.6	2.8
10°-20°	1272.1	7.2
20°-30°	2068.4	11.7
30°-40°	3277.9	18.6
40°-50°	4943.8	28.1
50°-60°	4276.8	24.3
60°-70°	969.6	5.5
70°-80°	285.9	1.6
80°-90°	36.8	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°	17620.8	100.0
0°-180°	17620.8	100.0

**Coefficient of Utilization**



REPORT NUMBER: P636483

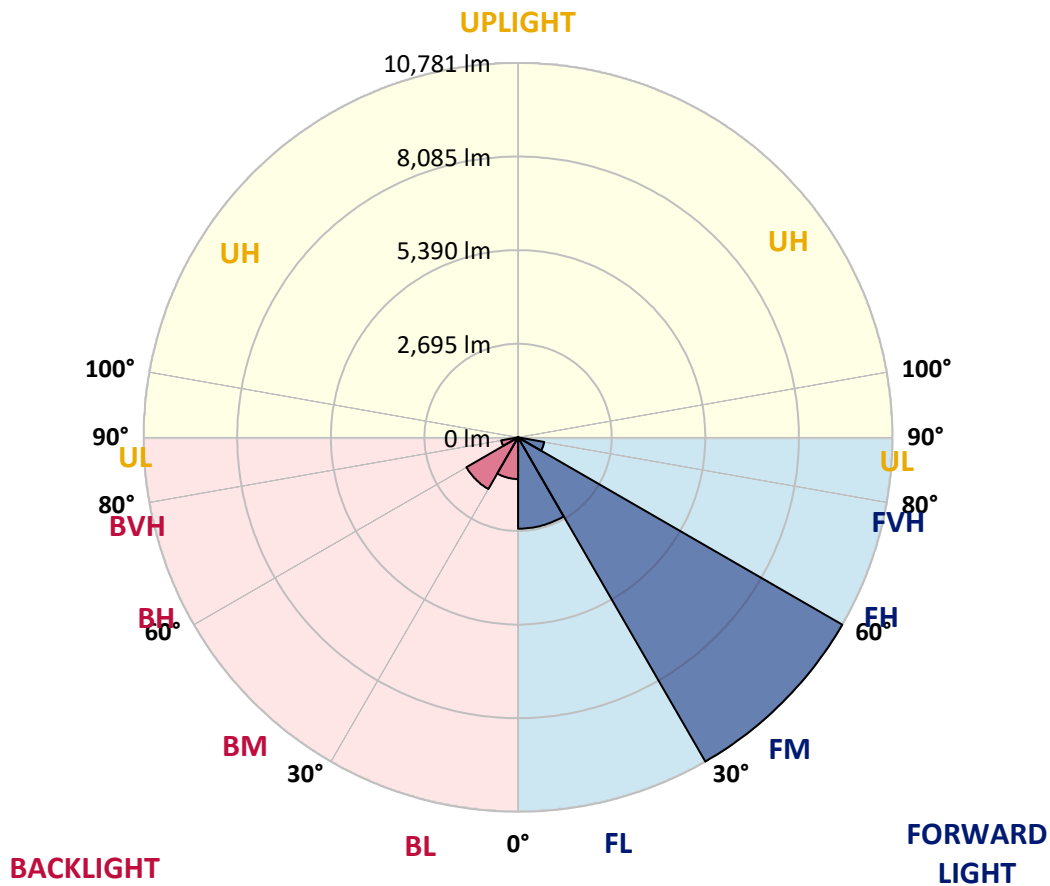
CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2629.9	14.9			
FM (30°-60°)	10780.7	61.2			
FH (60°-80°)	763.0	4.3			G1/1800
FVH (80°-90°)	13.9	0.1			G1/100
BL (0°-30°)	1200.1	6.8	B3/2500		
BM (30°-60°)	1717.8	9.7	B2/2500		
BH (60°-80°)	492.4	2.8	B1/500		G1/500
BVH (80°-90°)	22.9	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type II Short





REPORT NUMBER: P636483

CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	51°	55°	65°	75°	85°
0°	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6
2.5°	5846.7	5880.1	5828.6	5809.1	5777.1	5721.4	5657.4	5639.3	5501.4	5410.9	5309.2
5°	6434.3	6452.4	6410.6	6368.9	6289.5	6190.6	6066.7	6040.3	5789.6	5582.2	5366.3
7.5°	6565.2	6558.2	6594.4	6618.1	6608.4	6569.4	6459.4	6407.9	6108.5	5779.9	5461.0
10°	6047.2	6008.2	6141.9	6300.6	6491.4	6711.4	6698.9	6694.7	6434.3	6045.8	5582.2
12.5°	5360.8	5341.3	5449.9	5649.0	6009.6	6497.0	6679.4	6821.4	6728.1	6299.3	5717.2
15°	4968.1	4961.1	5034.9	5178.4	5465.2	6080.6	6470.5	6751.8	6980.1	6570.8	5860.6
17.5°	4897.1	4901.3	4926.3	5008.5	5214.6	5721.4	6172.5	6565.2	7176.5	6868.7	6040.3
20°	5104.6	5132.4	5089.2	5101.8	5213.2	5591.9	5969.3	6377.2	7301.8	7168.1	6233.8
22.5°	5565.5	5555.7	5461.0	5405.3	5406.7	5671.3	5947.0	6289.5	7383.9	7459.1	6409.3
25°	6087.6	6076.5	5963.7	5839.8	5761.8	5887.1	6107.1	6382.8	7457.7	7725.1	6549.9
27.5°	6704.4	6669.6	6544.3	6385.6	6212.9	6267.2	6416.2	6634.8	7571.9	7986.8	6643.2
30°	7301.8	7342.2	7162.5	6974.6	6792.2	6758.7	6845.1	7042.8	7804.4	8293.2	6754.6
32.5°	8094.1	8080.1	7881.0	7636.0	7375.6	7350.5	7418.7	7599.8	8222.2	8716.5	6924.4
35°	9053.4	9056.2	8773.6	8442.2	8071.8	8005.0	8119.1	8294.6	8844.6	9290.1	7193.2
37.5°	10050.4	10046.2	9799.8	9423.8	8918.4	8823.7	8954.6	9085.5	9622.9	10071.3	7610.9
40°	10749.4	10777.2	10661.7	10463.9	9985.0	9753.8	9869.4	9959.9	10469.5	10990.3	8160.9
42.5°	11146.2	11188.0	11213.1	11331.4	11079.4	10832.9	10791.2	10838.5	11225.6	11843.8	8677.5
45°	11231.2	11286.9	11469.3	11907.9	12005.3	11935.7	11799.3	11685.1	11789.5	12449.5	9015.8
47.5°	10856.6	10954.1	11343.9	12111.2	12680.7	12899.3	12747.5	12573.4	12115.3	12605.5	8981.0
50°	9372.3	9486.5	10365.1	11696.2	12776.7	13573.2	13587.1	13329.5	12076.3	12155.7	8543.8
52.5°	7420.1	7498.1	8000.8	9915.3	11834.1	13545.3	14102.3	13826.6	11888.4	11593.2	7996.6
55°	4434.8	4560.1	5029.4	6541.5	9219.1	12005.3	13191.7	13325.3	11796.5	11121.2	7623.4
57.5°	1496.8	1558.1	2006.5	2889.2	5433.2	8790.3	10192.4	10735.5	10709.0	10399.9	6895.2
60°	712.9	726.8	817.3	1095.8	2174.9	4593.6	6033.3	6659.9	7230.8	7287.9	4290.0
62.5°	543.0	551.4	597.3	657.2	874.4	1935.4	2765.3	3244.3	3465.7	2974.2	1562.3
65°	453.9	460.9	495.7	533.3	594.6	838.2	1061.0	1223.9	1102.8	859.1	744.9
67.5°	378.7	384.3	410.8	451.1	492.9	561.1	589.0	605.7	634.9	712.9	685.1
70°	296.6	302.2	330.0	364.8	405.2	421.9	448.4	465.1	523.5	623.8	621.0
72.5°	228.4	235.3	250.6	272.9	306.3	323.0	352.3	371.8	405.2	486.0	519.4
75°	167.1	171.3	185.2	192.2	196.3	192.2	221.4	243.7	288.2	318.9	327.2
77.5°	68.2	76.6	73.8	73.8	87.7	105.8	121.1	135.1	165.7	183.8	185.2
80°	27.8	30.6	36.2	40.4	48.7	62.7	72.4	78.0	91.9	103.0	111.4
82.5°	16.7	18.1	20.9	22.3	27.8	36.2	41.8	45.9	57.1	68.2	72.4
85°	8.4	8.4	9.7	11.1	13.9	16.7	19.5	22.3	29.2	36.2	40.4
87.5°	1.4	1.4	1.4	2.8	4.2	5.6	7.0	8.4	9.7	11.1	13.9
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: P636483

CATALOG NUMBER: GWS-SA3F-830-U-AFL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6	5246.6
2.5°	5249.4	5174.2	5086.5	5016.8	4936.1	4876.2	4791.3	4738.4	4688.2	4646.5	4615.8
5°	5254.9	5128.2	4945.8	4784.3	4617.2	4458.5	4295.6	4163.3	4044.9	3946.1	3937.7
7.5°	5287.0	5104.6	4819.1	4536.5	4210.6	3896.0	3581.3	3325.1	3130.1	3028.5	3007.6
10°	5341.3	5101.8	4689.6	4238.5	3682.9	3176.1	2802.9	2608.0	2495.2	2454.8	2440.9
12.5°	5398.4	5094.8	4523.9	3818.0	3046.6	2602.4	2397.7	2374.1	2394.9	2397.7	2396.3
15°	5468.0	5090.6	4315.1	3325.1	2581.5	2336.5	2350.4	2400.5	2449.2	2460.4	2460.4
17.5°	5552.9	5080.9	4031.0	2843.3	2290.5	2284.9	2358.7	2425.6	2471.5	2479.9	2479.9
20°	5642.0	5055.8	3681.5	2450.6	2172.2	2252.9	2332.3	2383.8	2415.8	2427.0	2428.4
22.5°	5703.3	4989.0	3279.1	2159.6	2098.4	2191.6	2248.7	2301.6	2301.6	2273.8	2265.4
25°	5715.8	4845.6	2843.3	1960.5	2010.6	2097.0	2155.4	2124.8	2067.7	2045.4	2044.1
27.5°	5669.9	4636.7	2413.0	1818.5	1904.8	1991.1	1981.4	1936.8	1911.8	1889.5	1897.9
30°	5614.2	4386.1	2039.9	1701.5	1782.3	1867.2	1833.8	1818.5	1800.4	1775.3	1780.9
32.5°	5576.6	4106.2	1753.0	1611.0	1700.1	1714.1	1737.7	1736.3	1719.6	1672.3	1669.5
35°	5587.7	3823.6	1560.9	1537.2	1631.9	1626.3	1670.9	1662.5	1547.0	1481.5	1477.3
37.5°	5676.8	3552.0	1448.1	1478.7	1523.3	1558.1	1597.1	1496.8	1456.5	1414.7	1417.5
40°	5846.7	3300.0	1386.8	1446.7	1457.9	1509.4	1418.9	1417.5	1399.4	1361.8	1360.4
42.5°	6038.9	3087.0	1345.1	1431.4	1416.1	1425.8	1329.7	1340.9	1339.5	1315.8	1308.9
45°	6155.8	2890.6	1311.6	1374.3	1378.5	1281.0	1251.8	1264.3	1271.3	1258.7	1257.3
47.5°	6034.7	2665.1	1276.8	1286.6	1322.8	1215.6	1179.4	1180.8	1193.3	1194.7	1189.1
50°	5694.9	2413.0	1235.1	1211.4	1187.7	1147.3	1113.9	1107.0	1119.5	1132.0	1136.2
52.5°	5256.3	2172.2	1165.4	1129.2	1073.5	1073.5	1058.2	1036.0	1052.7	1069.4	1074.9
55°	4934.7	1993.9	1066.6	1026.2	964.9	985.8	983.0	963.5	985.8	998.4	1002.5
57.5°	4276.1	1602.7	938.5	926.0	874.4	899.5	905.1	880.0	868.9	871.6	875.8
60°	2538.4	1034.6	846.6	845.2	799.2	828.5	845.2	820.1	786.7	790.9	796.5
62.5°	1139.0	790.9	731.0	725.4	724.1	761.6	779.7	756.1	708.7	712.9	718.5
65°	717.1	683.7	634.9	634.9	657.2	689.2	703.2	683.7	629.4	622.4	628.0
67.5°	665.6	636.3	586.2	576.5	587.6	614.1	615.4	577.8	545.8	540.3	540.3
70°	597.3	575.1	526.3	506.8	502.7	501.3	497.1	487.3	466.5	460.9	463.7
72.5°	494.3	479.0	448.4	427.5	416.3	414.9	398.2	389.9	371.8	369.0	367.6
75°	327.2	331.4	331.4	328.6	318.9	314.7	296.6	288.2	267.3	259.0	257.6
77.5°	193.5	197.7	203.3	204.7	203.3	203.3	186.6	176.8	155.9	144.8	142.0
80°	118.4	121.1	123.9	128.1	122.5	118.4	103.0	93.3	83.5	76.6	75.2
82.5°	76.6	79.4	80.8	83.5	80.8	75.2	62.7	57.1	50.1	44.6	43.2
85°	43.2	44.6	47.3	47.3	43.2	39.0	32.0	27.8	23.7	20.9	20.9
87.5°	15.3	15.3	15.3	16.7	13.9	12.5	8.4	5.6	4.2	4.2	4.2
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**

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			

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)