

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: P630092

Luminaire Tested: GWS-SA1C-830-U-T4W-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630092  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-52)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1C-830-U-T4W-W  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

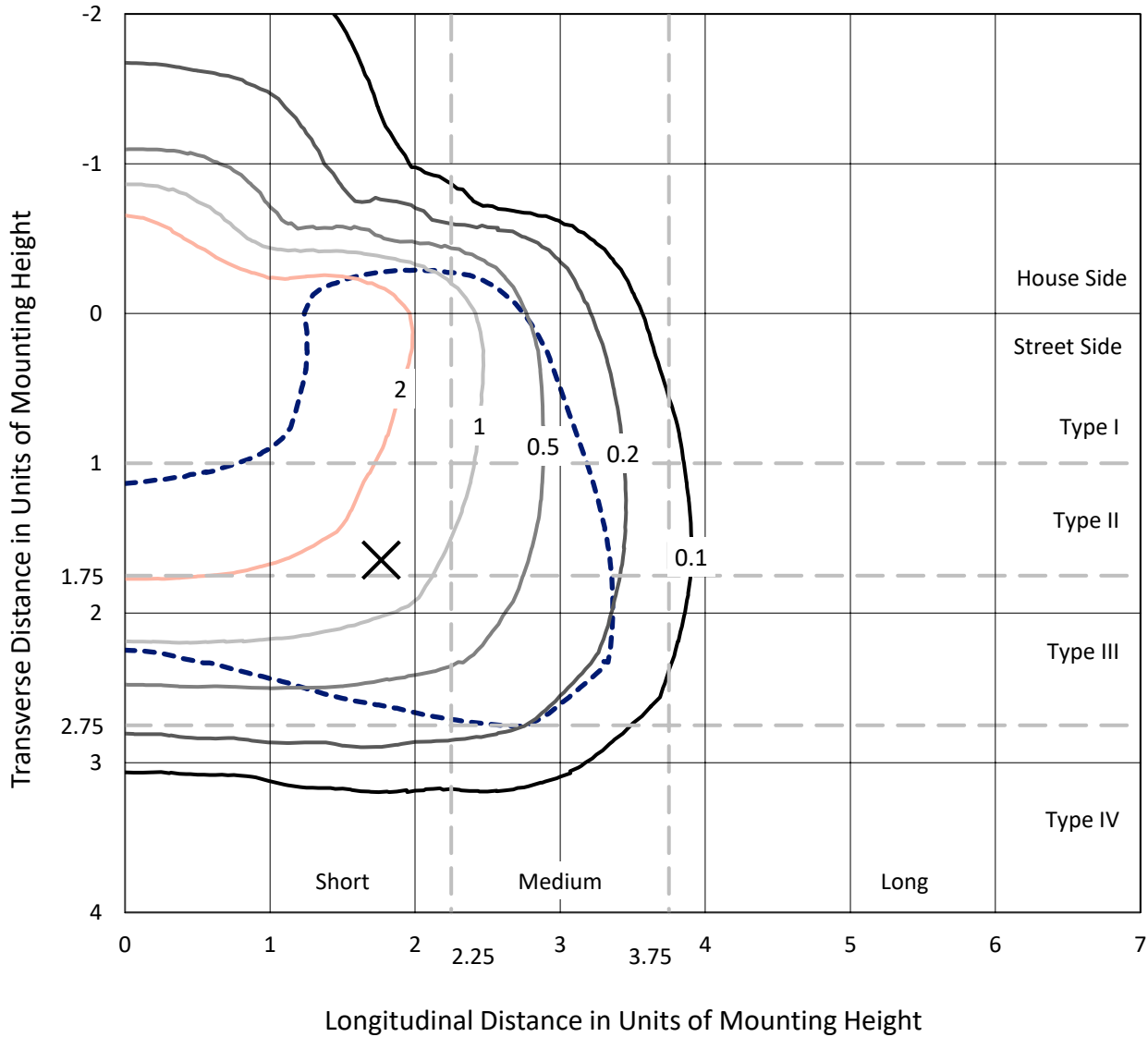
Lumens per Lamp: N/A  
Luminaire Lumens: 3785.6 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34.1  
Input Voltage (V): 120  
Input Current (Ain): 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: P630092  
 CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

### Iso-Footcandle Lines of Horizontal Illumination

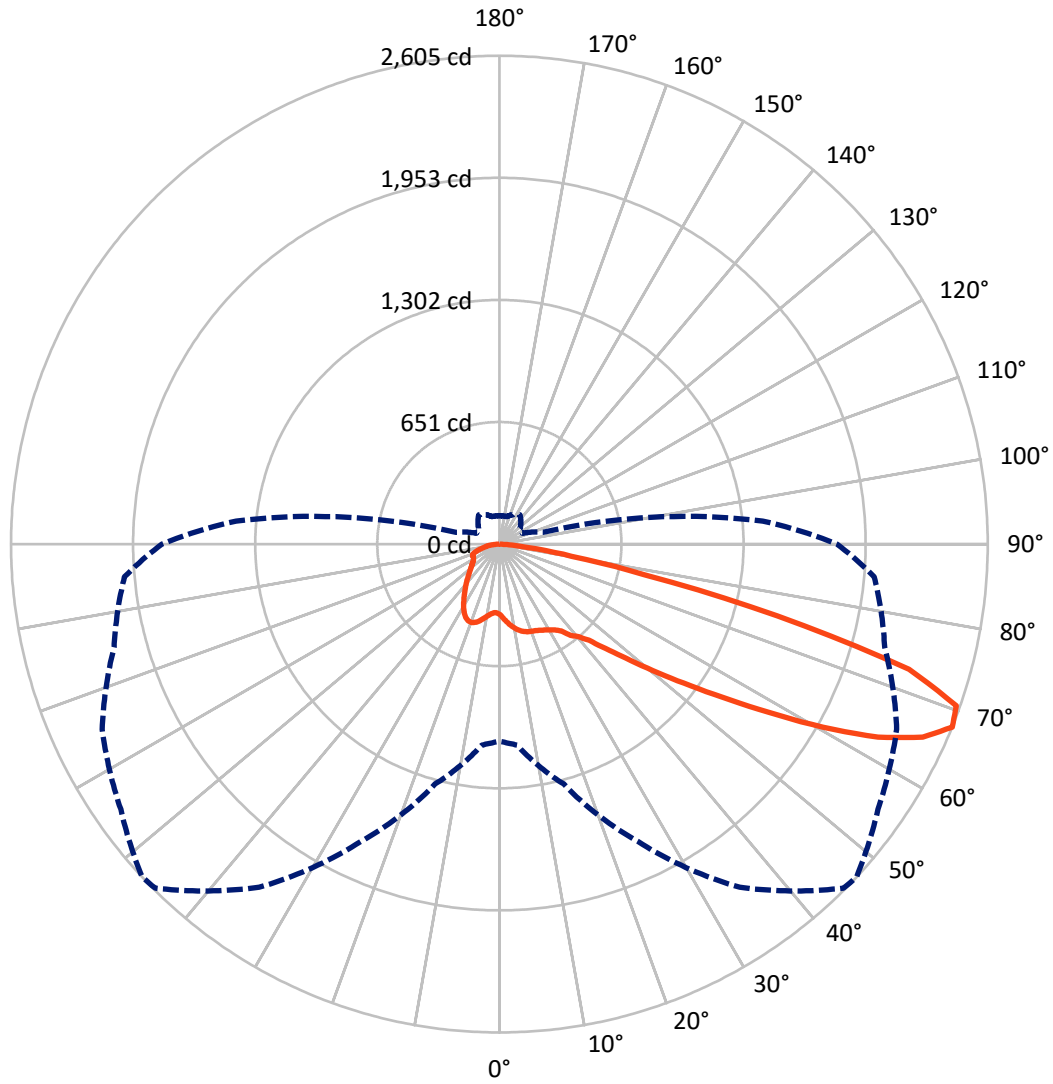
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc  
 Type III - Short - N/A

REPORT NUMBER: P630092  
CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P630092

CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

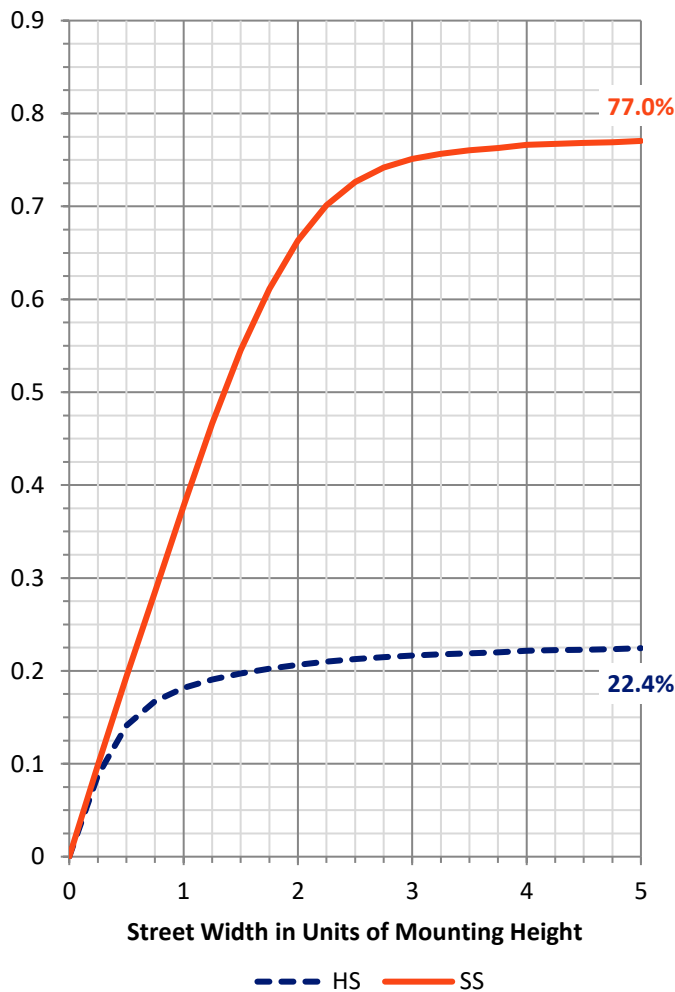
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	862.8	0.0	862.8
	% Fixture	22.8	0.0	22.8
<b>Street Side</b>	Lumens	2922.8	0.0	2922.8
	% Fixture	77.2	0.0	77.2
<b>Total</b>	Lumens	3785.6	0.0	3785.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.4	1.0
10°-20°	127.8	3.4
20°-30°	217.2	5.7
30°-40°	318.2	8.4
40°-50°	484.8	12.8
50°-60°	867.3	22.9
60°-70°	1157.4	30.6
70°-80°	523.4	13.8
80°-90°	51.3	1.4
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°	3785.6	100.0
0°-180°	3785.6	100.0

**Coefficient of Utilization**



REPORT NUMBER: P630092

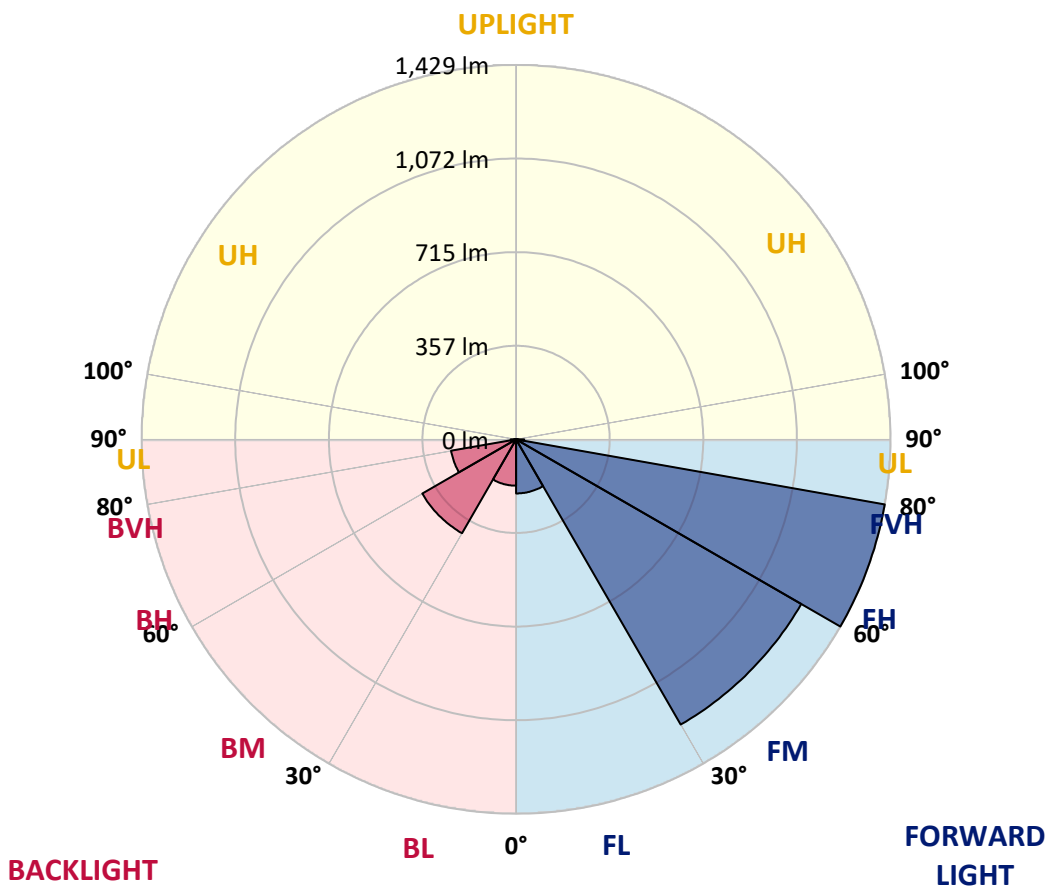
CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	206.5	5.5			
FM (30°-60°)	1256.9	33.2			
FH (60°-80°)	1429.0	37.7			G1/1800
FVH (80°-90°)	30.5	0.8			G1/100
BL (0°-30°)	176.9	4.7	B1/500		
BM (30°-60°)	413.4	10.9	B1/1000		
BH (60°-80°)	251.7	6.6	B1/500		G1/500
BVH (80°-90°)	20.8	0.5			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 Short





REPORT NUMBER: P630092  
 CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3
2.5°	400.2	401.6	401.3	399.1	397.7	395.3	395.5	391.7	385.9	382.1	377.7
5°	435.5	437.7	434.9	431.4	425.9	418.0	417.2	408.4	397.4	389.8	381.8
7.5°	466.1	467.5	464.2	458.2	450.3	439.6	437.7	427.3	413.6	401.6	390.1
10°	490.0	491.6	487.2	479.3	468.9	458.2	456.8	446.2	431.7	417.4	402.9
12.5°	510.2	510.8	506.1	495.4	484.2	473.3	471.9	462.0	448.6	434.1	418.2
15°	522.0	522.3	516.5	504.7	494.1	484.5	483.7	475.2	462.9	449.2	432.2
17.5°	521.2	521.7	517.6	507.2	497.9	492.2	491.3	485.9	476.3	464.0	447.0
20°	511.0	511.6	508.8	502.0	497.1	495.4	495.7	494.1	488.3	478.2	460.9
22.5°	503.1	503.9	501.5	496.5	496.0	499.8	500.6	501.5	498.7	489.7	473.0
25°	506.9	508.3	504.5	497.6	498.7	507.2	508.8	511.6	509.4	501.7	487.2
27.5°	533.5	534.3	524.5	510.5	507.2	516.2	518.7	523.1	521.4	514.3	503.1
30°	595.1	594.5	573.4	539.2	525.5	529.1	531.0	537.3	537.9	533.2	522.5
32.5°	681.8	679.1	646.5	592.1	552.4	543.6	545.8	554.3	560.6	555.7	541.1
35°	773.5	771.1	735.2	671.4	601.9	571.5	569.1	575.6	585.2	571.5	550.7
37.5°	860.9	857.0	820.3	741.5	663.0	620.5	617.0	610.4	604.7	578.4	562.5
40°	957.8	953.4	921.3	832.1	730.3	658.0	649.0	623.0	617.8	601.1	593.2
42.5°	1061.2	1061.2	1034.7	946.8	811.6	711.7	699.9	660.8	666.2	655.3	646.0
45°	1164.7	1167.7	1146.6	1062.3	920.3	813.0	794.1	738.5	751.6	746.7	742.1
47.5°	1252.8	1258.6	1254.5	1180.3	1053.3	936.1	907.4	849.6	877.8	889.6	902.7
50°	1347.8	1354.1	1350.0	1320.7	1209.0	1085.3	1059.6	999.9	1048.4	1083.7	1126.6
52.5°	1488.8	1497.8	1463.6	1452.4	1398.2	1254.7	1231.7	1163.9	1251.7	1310.3	1406.1
55°	1607.8	1607.6	1595.5	1621.3	1601.3	1461.9	1436.5	1374.9	1487.1	1549.3	1689.4
57.5°	1663.1	1669.7	1711.0	1783.8	1823.8	1715.1	1690.8	1627.8	1739.8	1772.1	1923.4
60°	1691.6	1699.8	1779.7	1923.7	2031.3	1991.6	1982.0	1901.8	1964.8	1960.9	2120.8
62.5°	1651.6	1668.1	1796.4	1987.8	2179.4	2269.4	2266.4	2145.2	2156.1	2118.6	2243.2
65°	1468.2	1486.0	1687.5	1955.7	2264.0	2480.7	2481.6	2365.5	2303.1	2195.2	2222.6
67.5°	1050.0	1075.5	1324.5	1749.9	2234.1	2594.9	2604.5	2465.4	2337.6	2127.4	2006.9
70°	572.4	591.0	786.1	1272.0	1965.3	2567.5	2585.3	2417.2	2185.4	1840.2	1544.9
72.5°	260.0	266.1	365.7	698.0	1342.6	2210.0	2284.5	2157.2	1794.8	1359.3	982.4
75°	119.1	121.8	159.3	333.9	701.5	1478.9	1531.2	1606.7	1249.0	858.4	512.1
77.5°	74.7	75.5	90.6	152.7	349.8	738.2	793.2	956.7	731.4	424.8	214.1
80°	44.1	44.9	56.4	82.7	164.2	337.8	390.1	378.3	343.8	183.4	97.4
82.5°	22.2	23.0	32.6	47.1	89.5	134.4	158.2	159.0	128.1	99.4	55.0
85°	7.9	8.2	10.7	18.6	38.0	44.3	49.5	60.5	62.7	57.8	26.6
87.5°	0.0	0.0	0.3	0.5	1.1	4.4	4.7	8.8	18.3	20.5	10.7
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: P630092  
 CATALOG NUMBER: GWS-SA1C-830-U-T4W-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3
2.5°	376.4	372.3	370.9	369.5	367.3	366.5	364.9	363.2	363.2	361.6	360.8
5°	378.3	372.8	369.3	367.6	366.2	367.1	367.1	367.6	369.5	368.4	369.0
7.5°	385.1	378.8	373.9	372.5	372.5	375.8	378.0	380.7	384.3	384.9	384.9
10°	397.2	389.8	384.6	383.8	385.1	389.8	393.1	396.3	400.7	401.0	401.6
12.5°	410.3	402.9	397.7	398.8	400.2	406.2	409.8	412.5	416.9	416.9	416.6
15°	424.0	415.8	411.4	413.6	417.7	424.5	425.1	425.4	427.6	427.0	426.7
17.5°	438.2	429.5	426.2	429.5	433.8	437.1	434.4	430.6	429.7	428.6	428.1
20°	452.2	443.2	441.8	444.3	445.6	442.9	434.4	427.3	424.0	422.4	421.8
22.5°	464.2	456.6	455.7	455.7	448.9	439.3	426.7	417.2	412.8	410.6	410.0
25°	478.5	471.3	470.0	462.6	445.1	427.6	410.6	401.8	398.3	397.2	397.4
27.5°	495.2	490.2	485.9	464.8	434.1	406.8	387.6	383.8	382.4	383.8	384.6
30°	515.7	510.8	500.9	462.0	416.6	379.7	361.3	361.0	365.1	368.7	369.3
32.5°	532.4	530.2	514.0	453.3	392.0	349.8	334.2	335.3	342.7	347.6	348.4
35°	545.5	549.1	525.0	438.8	362.7	321.6	309.3	309.9	314.0	320.8	321.1
37.5°	564.1	576.2	534.9	416.6	329.0	297.3	286.0	281.9	281.4	283.3	283.8
40°	601.6	619.7	542.0	384.3	296.4	275.4	262.8	254.8	248.0	242.8	241.1
42.5°	658.3	679.1	546.1	345.2	267.4	253.7	239.5	229.4	217.3	206.4	202.6
45°	762.3	769.2	546.1	303.6	241.7	233.5	219.3	207.2	191.9	179.0	176.3
47.5°	928.7	906.8	546.6	263.3	219.0	215.7	203.4	189.7	172.7	162.0	160.4
50°	1179.5	1102.6	557.8	229.9	200.1	200.6	191.6	176.6	161.2	153.3	151.9
52.5°	1463.6	1343.7	588.0	205.3	184.2	188.3	183.4	168.9	155.2	148.4	147.0
55°	1730.7	1565.4	613.7	187.8	170.8	177.9	177.6	164.2	151.9	145.1	144.3
57.5°	1957.9	1717.3	609.9	173.5	159.3	168.3	172.4	161.2	149.7	144.0	143.2
60°	2099.2	1797.8	555.4	160.4	150.5	161.5	169.4	160.4	150.8	149.5	149.7
62.5°	2160.5	1783.0	450.8	150.5	144.8	158.2	172.7	166.1	160.9	164.2	166.1
65°	2065.2	1656.0	331.8	143.2	139.3	159.0	180.4	175.2	160.9	163.1	164.0
67.5°	1800.8	1409.7	239.8	135.8	132.5	161.5	191.3	173.8	151.6	151.6	150.0
70°	1297.7	1013.9	174.1	128.4	125.6	157.9	191.9	164.5	141.0	140.1	136.0
72.5°	780.9	598.1	135.8	120.2	115.2	140.1	179.8	153.6	130.6	123.7	118.8
75°	405.7	299.7	113.9	111.1	98.8	118.8	164.5	136.6	111.7	105.7	102.9
77.5°	173.8	140.1	97.7	99.1	82.1	99.9	132.8	118.2	99.1	91.4	89.0
80°	85.7	79.7	77.2	79.4	65.7	77.2	114.4	103.5	84.0	75.3	71.7
82.5°	49.0	46.5	55.6	56.4	46.8	64.6	96.6	87.6	69.5	59.9	54.2
85°	22.7	24.4	33.7	33.9	29.0	44.3	63.2	49.3	37.0	30.7	29.3
87.5°	9.0	10.7	14.8	14.5	8.5	8.2	5.5	3.0	2.5	2.2	1.9
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)