

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: P630060

Luminaire Tested: GWS-SA1C-830-U-SL3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630060  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-34)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1C-830-U-SL3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

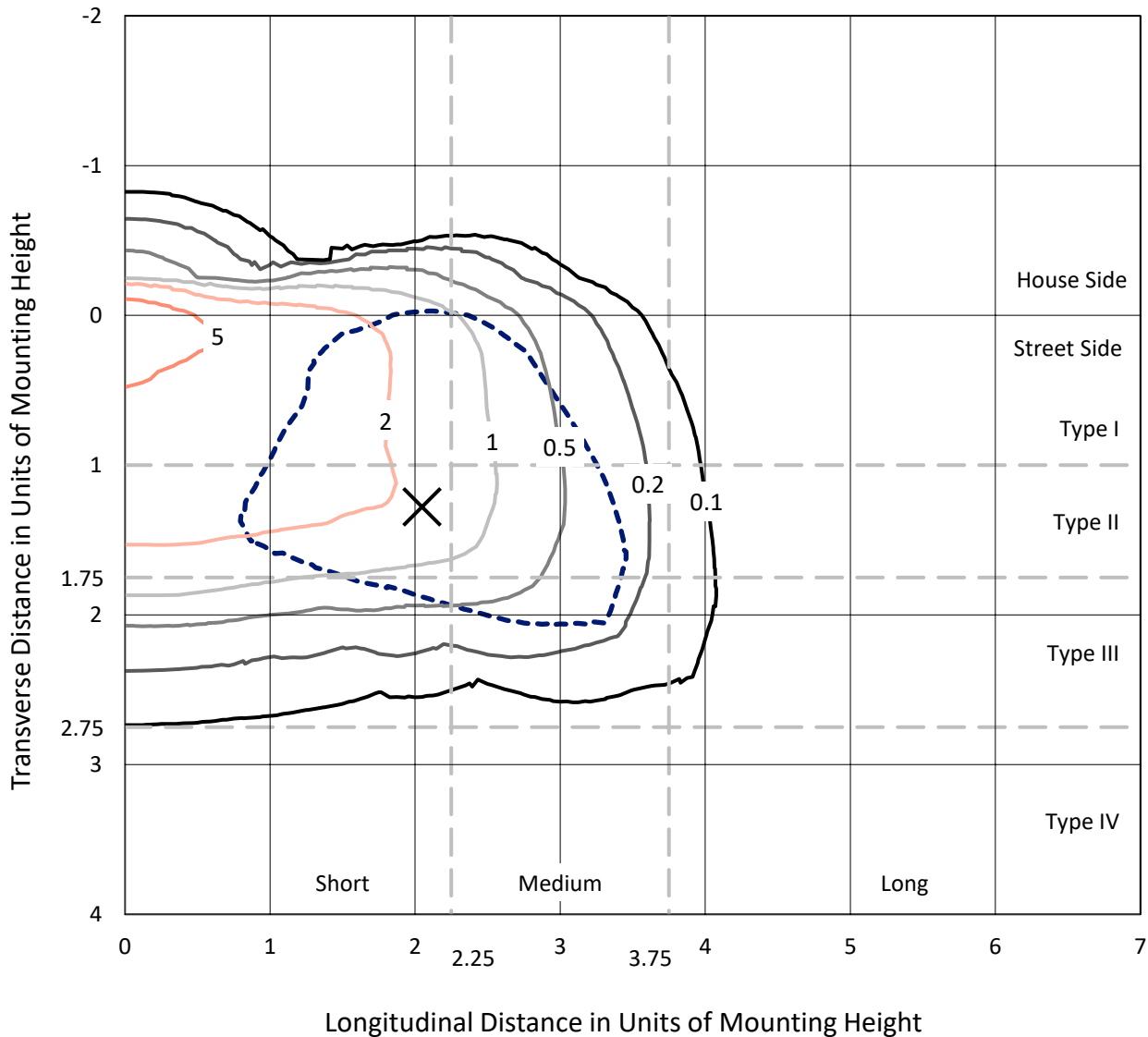
Lumens per Lamp: N/A  
Luminaire Lumens: 3092.5 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 34.1  
Input Voltage (V): 120  
Input Current (Ain): 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: P630060  
 CATALOG NUMBER: GWS-SA1C-830-U-SL3-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

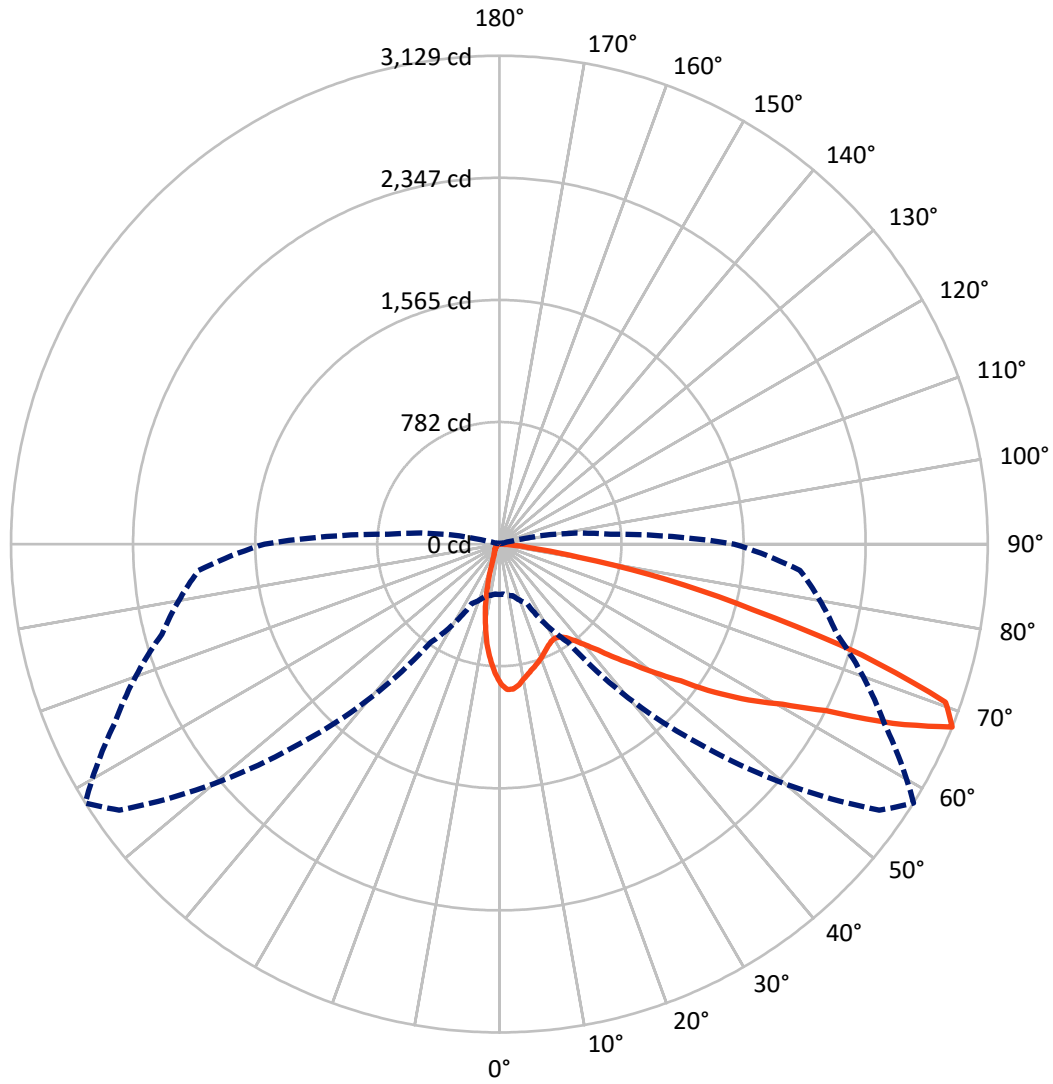
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.9 fc  
 Type III - Short - N/A

REPORT NUMBER: P630060  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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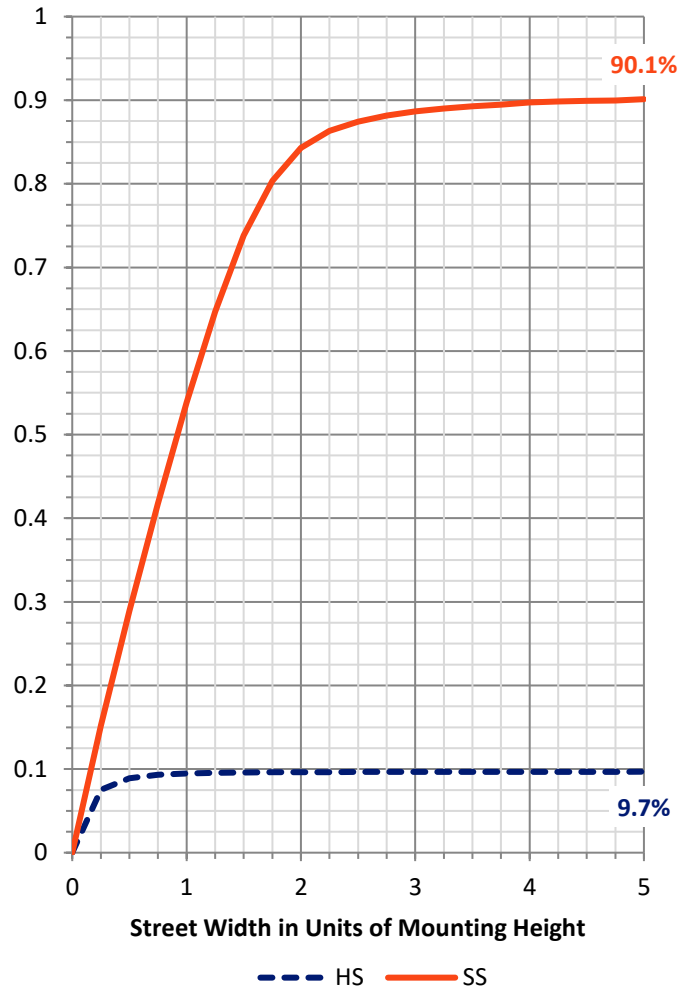
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	302.1	0.0	302.1
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	2790.4	0.0	2790.4
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	3092.5	0.0	3092.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.5	2.3
10°-20°	150.9	4.9
20°-30°	203.5	6.6
30°-40°	285.9	9.2
40°-50°	441.6	14.3
50°-60°	706.2	22.8
60°-70°	836.2	27.0
70°-80°	369.9	12.0
80°-90°	25.9	0.8
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°	3092.5	100.0
0°-180°	3092.5	100.0

**Coefficient of Utilization**



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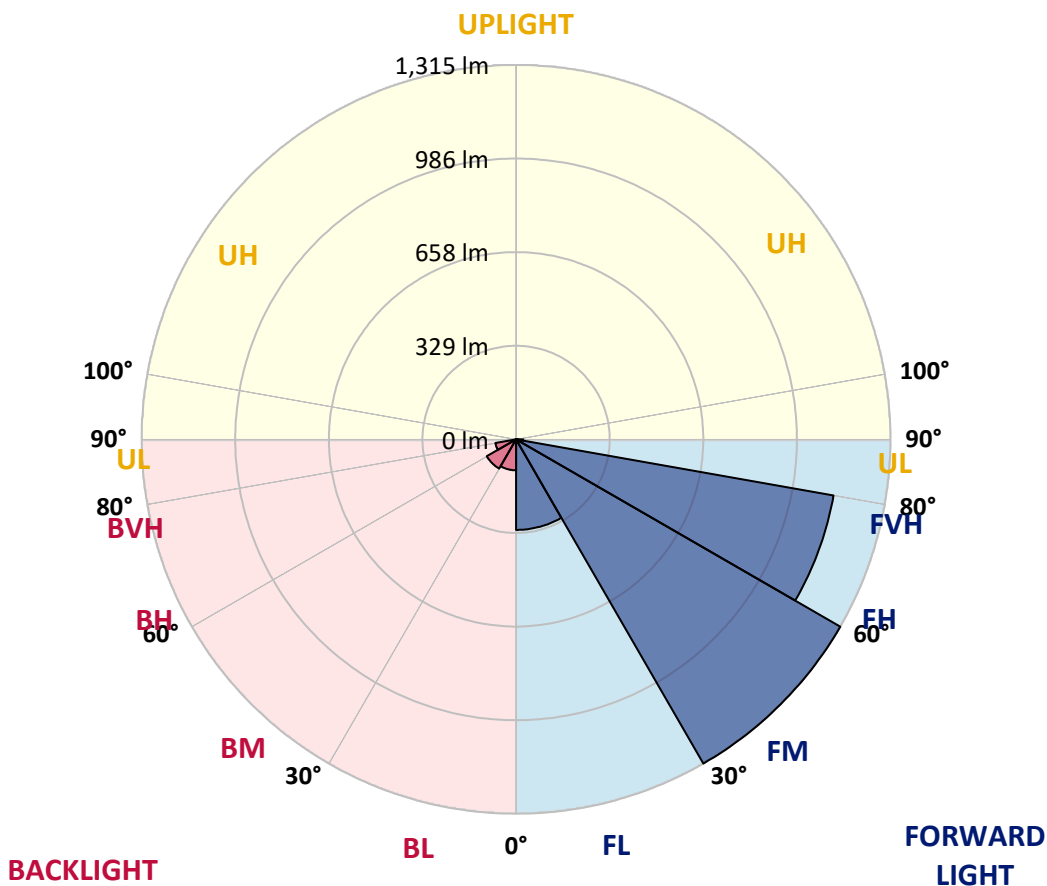
CATALOG NUMBER: GWS-SA1C-830-U-SL3-W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	318.1	10.3			
FM (30°-60°)	1315.2	42.5			
FH (60°-80°)	1132.3	36.6			G1/1800
FVH (80°-90°)	24.8	0.8			G1/100
BL (0°-30°)	108.7	3.5	B0/110		
BM (30°-60°)	118.5	3.8	B0/220		
BH (60°-80°)	73.8	2.4	B0/110		G0/110
BVH (80°-90°)	1.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





REPORT NUMBER: P630060

CATALOG NUMBER: GWS-SA1C-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0
2.5°	938.3	939.9	942.1	944.8	944.3	941.8	938.8	932.0	927.6	913.9	897.2
5°	908.2	907.9	913.4	918.6	927.9	932.8	939.6	933.4	931.2	914.7	887.6
7.5°	849.3	852.3	858.6	866.8	880.3	894.8	911.2	909.3	915.8	904.9	871.2
10°	791.6	789.9	799.8	812.1	832.6	851.2	875.1	874.8	892.0	890.9	852.6
12.5°	740.9	740.7	748.3	762.3	786.4	812.4	844.7	845.5	866.8	875.6	836.7
15°	698.2	698.8	706.2	720.7	745.6	777.3	814.8	821.7	845.8	863.6	821.1
17.5°	667.9	668.1	672.5	685.1	709.5	743.4	788.6	797.9	828.8	854.5	808.5
20°	653.9	652.8	653.6	659.9	678.8	709.7	761.7	773.8	813.2	848.2	797.0
22.5°	655.8	654.2	650.3	649.5	658.0	681.5	733.3	748.1	796.2	844.4	786.6
25°	672.8	669.2	663.7	655.5	652.3	664.0	708.4	723.7	780.3	844.7	778.7
27.5°	698.8	695.0	688.1	677.2	664.3	659.4	691.4	705.9	769.1	851.0	774.9
30°	731.9	728.9	722.3	709.2	691.9	671.7	687.8	699.9	763.7	863.8	776.5
32.5°	771.0	768.9	763.4	751.3	731.6	700.7	699.9	709.2	768.0	882.4	782.8
35°	808.8	809.6	809.9	803.3	782.3	744.8	733.0	736.3	786.1	910.4	797.0
37.5°	849.6	847.7	857.5	862.2	841.9	802.0	784.2	784.5	820.6	951.7	823.9
40°	880.5	881.1	902.4	921.6	913.1	874.5	849.0	848.8	873.7	1008.3	867.1
42.5°	909.5	913.1	944.6	977.4	989.2	955.0	936.6	929.8	948.1	1085.0	932.0
45°	940.5	945.7	989.7	1036.5	1067.5	1047.2	1032.7	1035.4	1037.6	1174.2	1019.3
47.5°	976.6	979.9	1034.4	1100.3	1158.1	1152.9	1153.7	1150.4	1149.3	1286.7	1134.8
50°	1020.4	1028.1	1090.7	1169.6	1248.4	1282.9	1294.4	1295.7	1278.0	1409.3	1254.4
52.5°	1113.5	1122.8	1176.4	1245.4	1346.9	1419.5	1466.3	1457.0	1429.6	1528.1	1385.5
55°	1223.2	1230.3	1282.1	1353.5	1467.4	1569.2	1680.3	1676.5	1609.4	1653.2	1493.4
57.5°	1233.6	1241.6	1321.7	1431.2	1622.0	1754.2	1871.1	1883.4	1785.1	1741.9	1589.7
60°	1116.7	1132.9	1242.4	1389.6	1681.1	2003.0	2080.2	2082.7	1914.1	1831.9	1707.4
62.5°	895.0	902.7	1013.0	1205.1	1590.0	2148.1	2399.6	2347.6	2079.7	1971.3	1893.8
65°	469.1	500.3	596.4	809.1	1289.4	2097.4	2783.9	2769.7	2377.4	2170.8	2038.9
67.5°	321.9	321.6	344.3	421.8	768.9	1805.9	2972.5	3129.1	2721.8	2239.2	1933.8
70°	245.0	245.8	266.0	316.4	398.2	1202.1	2765.6	3033.3	2785.8	2033.1	1564.0
72.5°	162.6	164.2	197.9	255.6	318.1	589.3	2149.2	2427.0	2344.1	1633.0	1100.9
75°	97.2	98.5	122.6	185.8	282.7	329.8	1365.5	1677.8	1613.5	1125.5	590.1
77.5°	40.0	41.1	63.0	115.8	206.9	256.2	755.2	1097.9	966.5	447.5	161.2
80°	16.7	17.2	30.4	81.0	149.2	160.7	349.8	515.9	396.1	96.3	49.3
82.5°	6.0	6.3	11.2	44.6	92.8	121.0	176.5	203.9	111.7	31.5	26.5
85°	0.3	0.3	2.7	15.1	35.3	34.2	101.0	97.7	37.0	13.1	15.9
87.5°	0.0	0.0	0.3	0.3	0.5	1.4	9.6	17.0	7.9	3.3	6.8
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: P630060  
 CATALOG NUMBER: GWS-SA1C-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0	892.0
2.5°	886.3	871.8	855.9	841.1	817.6	803.6	786.4	778.7	767.8	765.0	766.7
5°	868.2	843.3	805.3	770.8	726.2	690.3	654.2	638.8	619.1	606.0	600.5
7.5°	842.8	810.2	750.8	688.1	626.8	561.4	511.6	478.7	448.9	432.5	429.2
10°	817.0	774.6	689.5	599.7	504.7	426.4	359.1	309.3	268.8	250.4	236.2
12.5°	790.5	737.6	627.1	509.9	399.6	292.9	209.7	161.2	132.2	120.7	122.6
15°	766.1	702.1	565.2	420.1	281.4	176.8	115.8	97.7	90.9	88.7	88.4
17.5°	742.8	668.4	503.6	332.8	185.6	108.4	88.7	84.3	82.4	81.3	81.3
20°	721.8	636.1	443.4	250.7	119.9	85.9	80.2	78.0	76.4	75.5	75.5
22.5°	702.1	604.9	384.6	177.4	88.4	77.2	73.6	71.4	69.5	68.4	68.4
25°	684.3	576.7	328.5	122.1	76.1	70.6	66.8	64.3	61.0	59.1	59.1
27.5°	671.4	551.5	274.5	89.0	68.7	63.5	59.1	55.8	52.3	50.1	49.5
30°	663.7	530.2	220.1	73.1	61.9	56.7	51.7	47.6	43.5	41.3	41.1
32.5°	659.4	510.5	170.2	63.8	56.1	50.1	44.6	40.2	36.1	33.7	33.4
35°	661.0	495.1	127.5	57.5	50.6	44.3	38.3	33.9	30.4	28.2	27.6
37.5°	675.2	488.3	95.8	52.6	46.0	39.4	33.1	29.0	25.7	24.1	23.8
40°	702.9	489.7	75.3	48.7	42.2	34.5	28.5	24.6	22.2	20.8	20.5
42.5°	745.9	501.2	62.1	45.4	38.0	30.1	24.6	21.6	19.2	17.8	17.5
45°	809.9	525.0	54.2	41.6	33.7	26.0	21.3	18.6	16.4	14.8	14.5
47.5°	902.7	566.3	49.0	38.0	29.8	22.4	18.3	15.6	13.7	12.3	12.0
50°	1001.5	615.8	44.6	34.5	26.5	19.4	15.6	12.9	11.2	9.9	9.6
52.5°	1106.9	669.2	41.3	31.2	23.5	16.7	13.1	10.7	9.0	7.7	7.4
55°	1208.2	722.9	37.5	29.0	20.0	14.2	10.9	8.8	7.1	6.0	6.0
57.5°	1306.7	772.1	33.4	25.5	16.4	12.0	9.0	7.1	5.7	4.9	4.7
60°	1424.4	840.3	28.7	21.6	13.7	10.1	7.4	5.7	4.7	3.8	3.8
62.5°	1599.3	911.2	24.6	18.1	11.5	8.5	6.0	4.7	3.8	3.3	3.0
65°	1656.5	872.9	20.8	14.8	9.3	6.8	4.9	4.1	3.3	3.0	2.7
67.5°	1503.8	715.5	17.2	12.0	7.7	5.7	4.4	3.6	3.0	2.7	2.5
70°	1173.4	507.7	13.4	9.0	6.3	4.7	3.8	3.3	2.7	2.5	2.5
72.5°	798.1	300.3	10.7	6.8	5.2	4.1	3.3	3.0	2.7	2.5	2.2
75°	393.0	106.7	8.2	5.2	4.1	3.6	3.0	2.7	2.5	2.2	2.2
77.5°	105.9	29.6	6.3	4.1	3.3	2.7	2.7	2.7	2.5	1.9	1.9
80°	35.9	12.3	4.7	3.0	2.7	2.2	1.9	2.5	2.2	1.9	1.6
82.5°	19.7	6.0	3.3	2.5	1.9	1.6	1.6	1.6	1.6	1.4	1.4
85°	12.6	3.3	2.2	1.9	1.9	1.4	1.1	1.1	0.8	0.8	0.8
87.5°	5.7	1.9	1.9	1.6	1.6	1.4	0.8	0.5	0.3	0.3	0.3
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

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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

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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

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**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			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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			

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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)