

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: P629587

Luminaire Tested: GWS-SA1B-830-U-T2R-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P629587  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-11)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1B-830-U-T2R-W  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2903.1 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 25  
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

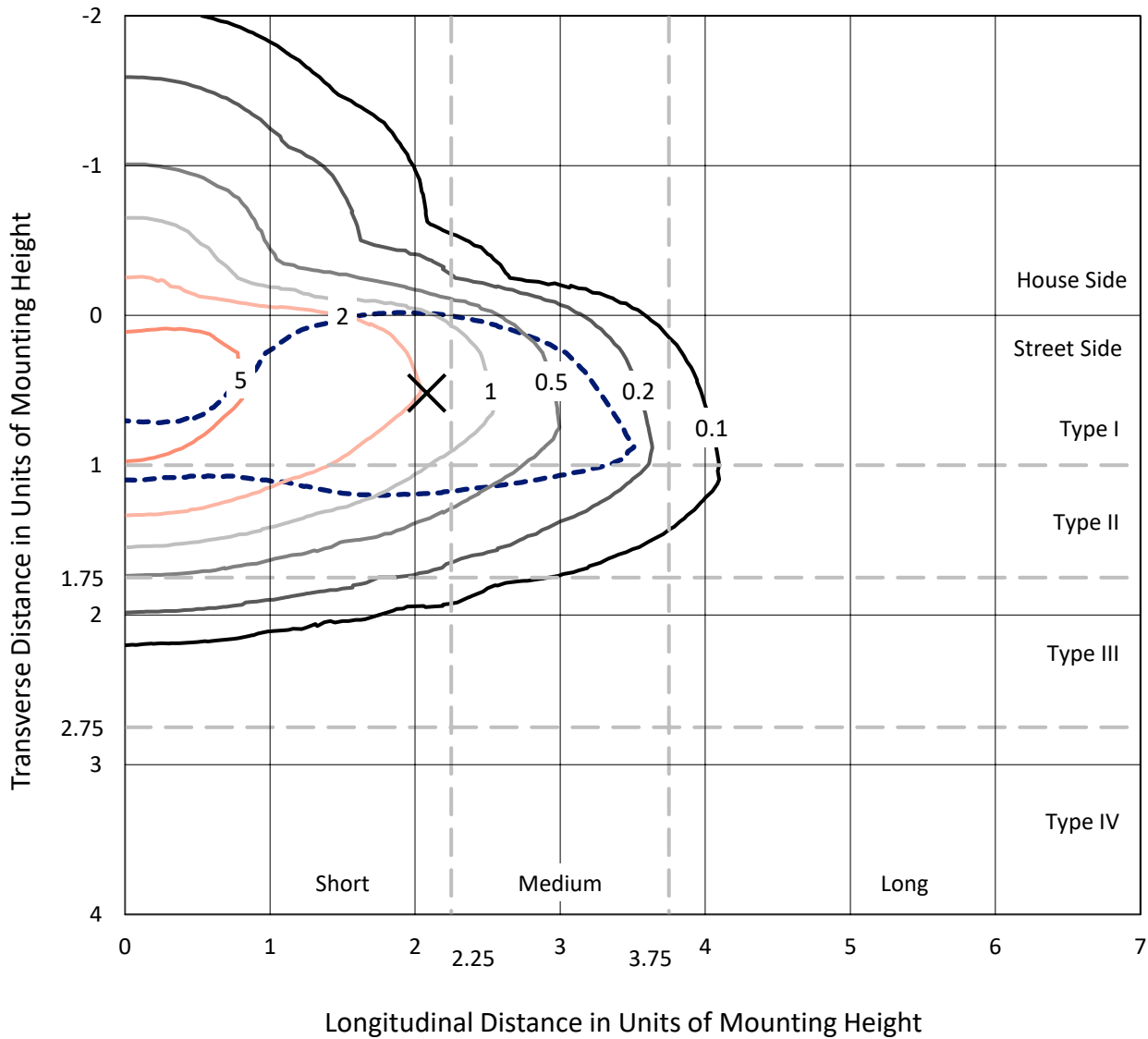


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### Iso-Footcandle Lines of Horizontal Illumination

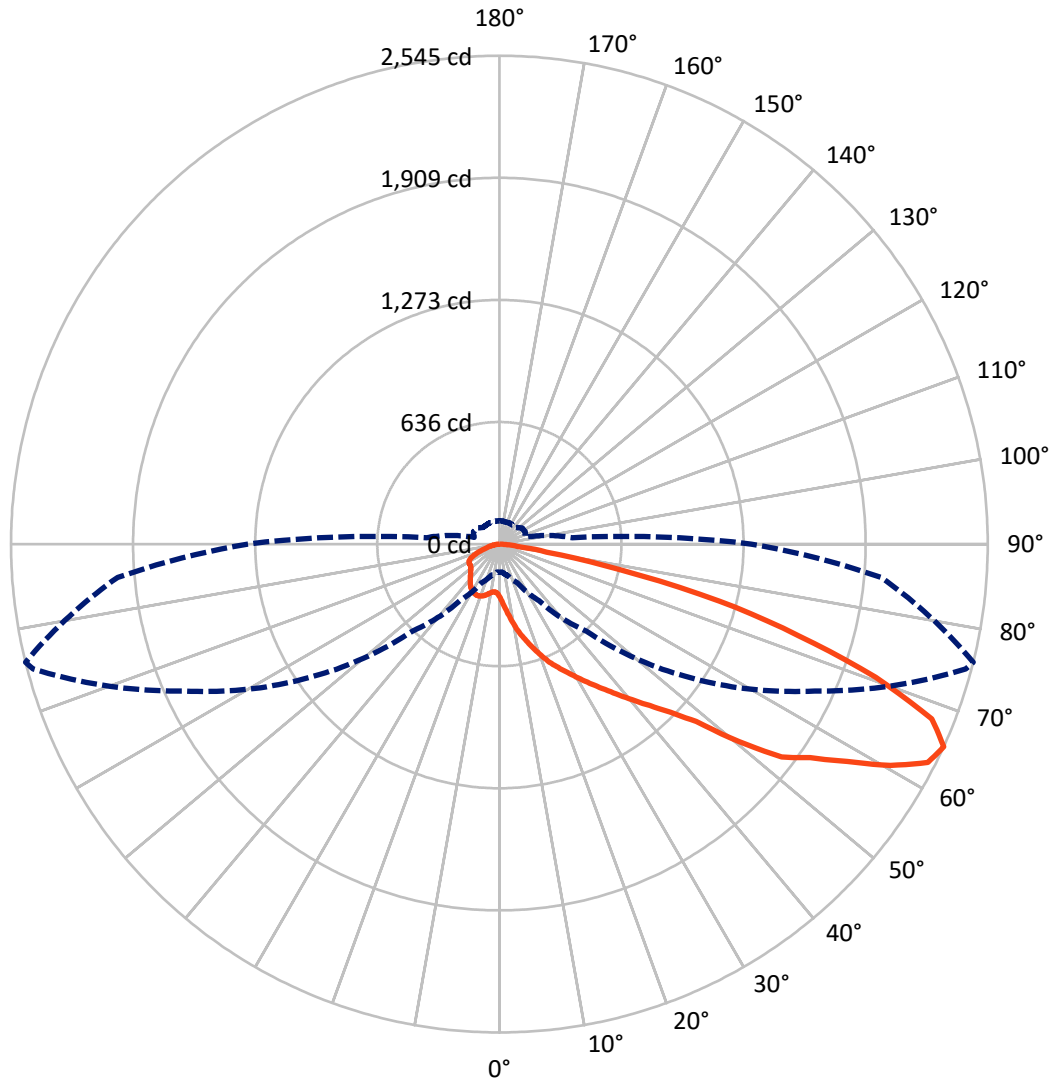
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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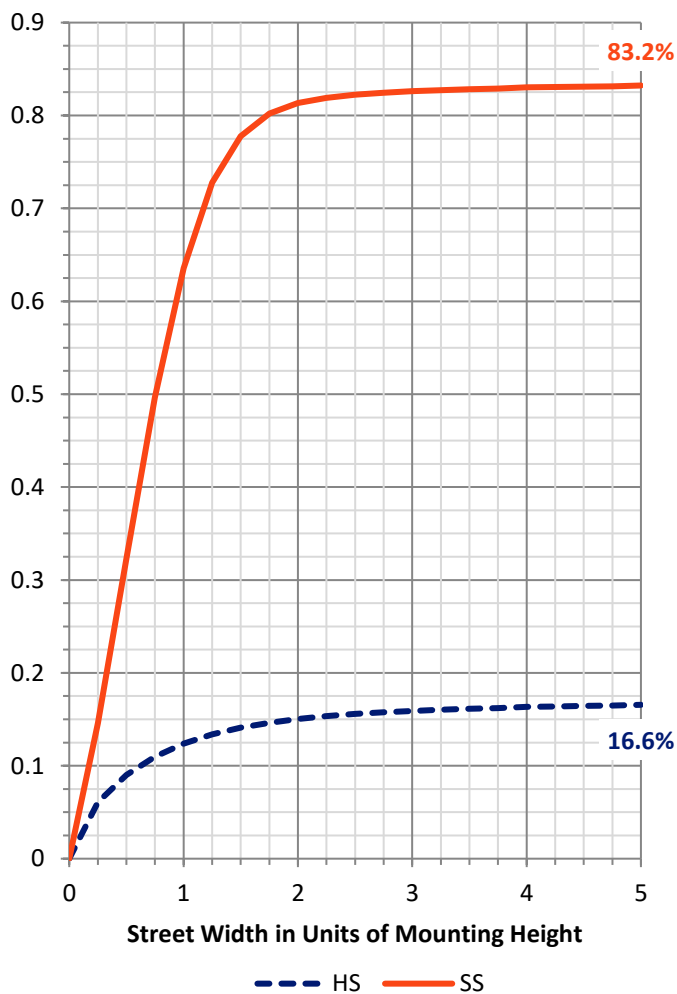
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	485.2	0.0	485.2
	% Fixture	16.7	0.0	16.7
<b>Street Side</b>	Lumens	2417.8	0.0	2417.8
	% Fixture	83.3	0.0	83.3
<b>Total</b>	Lumens	2903.1	0.0	2903.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.7	1.1
10°-20°	124.4	4.3
20°-30°	242.4	8.4
30°-40°	405.5	14.0
40°-50°	580.6	20.0
50°-60°	687.3	23.7
60°-70°	571.5	19.7
70°-80°	233.9	8.1
80°-90°	24.9	0.9
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°	2903.1	100.0
0°-180°	2903.1	100.0

**Coefficient of Utilization**



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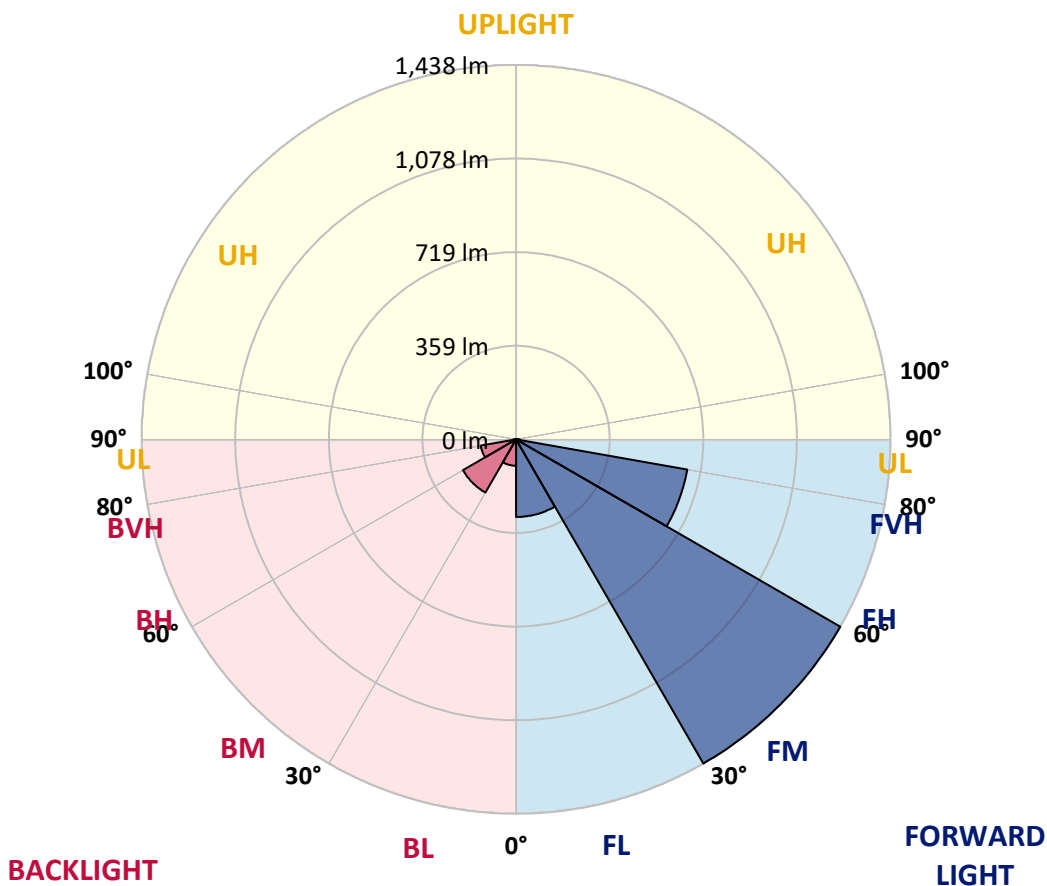
CATALOG NUMBER: GWS-SA1B-830-U-T2R-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	298.0	10.3			
FM (30°-60°)	1437.5	49.5			
FH (60°-80°)	667.5	23.0			G1/1800
FVH (80°-90°)	14.8	0.5			G1/100
BL (0°-30°)	101.5	3.5	B0/110		
BM (30°-60°)	235.8	8.1	B1/1000		
BH (60°-80°)	137.9	4.7	B1/500		G1/500
BVH (80°-90°)	10.0	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 II Short





REPORT NUMBER: P629587  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9
2.5°	385.3	386.8	382.1	380.4	369.4	354.5	342.1	323.3	305.9	303.3	287.8
5°	489.4	483.3	478.0	474.5	459.2	442.3	415.9	380.6	343.7	339.2	305.7
7.5°	551.3	550.2	543.7	541.7	529.8	512.9	485.7	441.9	388.2	380.8	330.0
10°	600.8	600.2	597.0	598.8	588.0	571.5	545.1	499.8	437.0	429.6	357.2
12.5°	644.1	645.1	644.5	651.3	645.7	632.9	605.5	555.7	485.7	477.8	390.2
15°	675.8	676.6	679.6	694.3	697.4	694.7	667.0	610.6	533.9	522.5	424.3
17.5°	684.7	686.4	693.7	717.4	733.9	744.9	724.3	666.6	581.3	568.8	459.0
20°	696.8	698.6	706.0	730.7	754.9	780.0	776.4	723.3	629.0	618.8	494.1
22.5°	752.5	751.1	747.8	759.6	777.0	808.2	817.4	777.8	678.4	668.6	532.9
25°	859.8	857.2	836.4	825.6	819.8	838.8	855.1	827.4	726.6	711.9	569.0
27.5°	978.2	976.8	950.3	924.5	889.4	881.3	890.9	870.7	773.3	758.4	600.4
30°	1090.3	1086.0	1058.2	1026.0	979.0	943.9	929.8	913.1	824.5	809.0	637.2
32.5°	1190.5	1185.0	1152.3	1116.6	1067.4	1026.0	983.9	958.2	882.5	864.5	674.7
35°	1272.7	1267.2	1233.7	1195.8	1141.7	1111.1	1053.5	1007.2	941.5	923.3	719.0
37.5°	1336.4	1331.3	1296.4	1259.0	1211.9	1187.6	1137.6	1062.3	1009.4	990.5	766.0
40°	1372.1	1368.4	1340.5	1310.9	1271.3	1250.3	1227.8	1131.9	1085.6	1066.6	821.3
42.5°	1382.9	1380.5	1360.9	1345.6	1318.8	1302.9	1315.8	1213.7	1166.8	1150.3	883.5
45°	1355.8	1355.8	1350.1	1357.8	1359.1	1358.8	1404.0	1306.2	1266.6	1248.4	971.3
47.5°	1286.4	1290.9	1299.3	1337.4	1377.6	1411.3	1507.0	1429.5	1395.0	1380.1	1095.6
50°	1159.5	1171.7	1200.3	1274.8	1360.3	1446.0	1604.6	1611.7	1644.6	1618.3	1278.4
52.5°	973.5	971.7	1044.5	1150.7	1281.1	1447.4	1658.3	1772.5	1860.9	1842.8	1414.4
55°	773.7	770.7	838.6	985.0	1159.7	1392.7	1690.5	1846.2	1980.9	1964.6	1536.6
57.5°	592.5	588.6	649.0	781.1	988.2	1276.6	1684.4	1934.0	2146.0	2137.7	1702.7
60°	407.8	403.1	459.6	575.1	785.3	1099.0	1616.6	1979.1	2339.3	2342.2	1880.5
62.5°	244.9	242.3	283.3	372.9	564.9	879.0	1458.0	1951.7	2493.2	2506.1	1994.8
65°	147.8	145.9	170.0	222.5	358.4	641.5	1213.5	1811.9	2515.4	2545.0	1997.5
67.5°	107.6	107.8	114.7	135.5	209.0	414.3	910.7	1561.3	2399.5	2430.1	1871.5
70°	93.5	93.9	97.6	102.3	126.3	237.2	592.1	1232.5	2056.8	2080.5	1569.7
72.5°	83.1	83.1	85.5	88.0	98.8	144.5	317.2	861.5	1623.4	1629.7	1198.0
75°	73.1	72.5	73.7	74.9	85.7	101.0	154.3	600.2	1199.0	1184.3	774.3
77.5°	58.2	57.6	57.8	59.0	68.8	72.2	78.2	374.9	675.8	637.8	342.1
80°	41.4	41.0	43.3	46.3	50.8	44.3	49.0	181.4	268.0	249.4	132.7
82.5°	24.7	25.5	29.0	31.4	35.1	27.8	31.6	60.6	94.9	92.5	53.9
85°	3.5	3.7	10.4	12.0	15.1	10.8	16.7	27.3	38.0	40.6	19.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.9	10.8	11.0	4.7
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: P629587  
 CATALOG NUMBER: GWS-SA1B-830-U-T2R-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9
2.5°	279.8	270.2	256.5	245.1	235.5	227.8	221.2	216.3	214.9	212.9	212.9
5°	290.0	272.7	248.2	230.8	220.8	214.9	210.8	208.8	207.8	206.5	205.9
7.5°	304.1	279.8	246.7	229.2	221.4	217.8	215.1	213.9	213.1	211.8	211.8
10°	323.5	290.4	251.2	234.9	228.8	225.1	222.1	220.0	218.2	216.3	215.9
12.5°	344.5	304.3	259.4	242.7	236.1	231.6	227.4	224.3	222.1	219.8	219.2
15°	367.8	318.6	268.2	250.2	242.1	235.9	230.8	226.1	223.1	219.8	219.4
17.5°	390.6	333.1	275.5	255.3	244.9	237.4	230.0	223.9	220.0	216.3	215.3
20°	418.0	347.6	280.6	256.7	244.3	234.3	225.5	217.8	213.5	209.2	208.6
22.5°	443.1	361.0	283.1	254.7	239.6	227.8	217.6	209.2	204.5	200.2	199.4
25°	467.4	372.9	282.1	249.8	232.5	218.8	208.2	199.8	195.3	190.8	189.6
27.5°	490.8	380.8	278.0	242.3	223.5	208.8	198.6	191.0	187.2	183.3	181.6
30°	513.9	388.2	271.6	232.5	212.1	198.4	190.0	184.7	180.8	176.7	175.5
32.5°	537.2	393.5	262.1	221.0	200.4	189.2	184.1	180.2	176.1	172.1	170.8
35°	560.6	395.7	250.4	208.0	190.6	183.3	181.4	176.9	171.4	166.5	164.9
37.5°	588.6	397.8	235.9	195.1	182.1	180.4	180.0	173.3	166.7	160.0	158.2
40°	622.3	400.4	221.0	183.5	175.1	179.4	177.8	168.6	155.5	149.0	146.9
42.5°	663.5	405.3	205.5	172.9	170.0	175.5	173.7	157.2	148.4	144.7	143.7
45°	724.1	423.3	190.0	164.5	166.1	170.0	167.2	150.4	146.9	144.5	143.3
47.5°	832.1	450.8	176.5	158.2	163.1	165.1	154.1	148.6	145.9	142.7	141.2
50°	944.3	462.9	165.7	154.3	159.6	160.6	146.9	146.1	144.3	140.8	139.4
52.5°	1020.3	461.2	159.2	152.9	156.7	152.9	143.7	143.5	142.3	138.2	136.5
55°	1106.0	464.1	156.3	153.3	155.5	139.8	139.6	140.2	139.6	135.1	134.3
57.5°	1221.7	472.9	154.9	154.7	154.7	133.5	135.7	136.5	135.3	133.3	132.7
60°	1332.9	473.5	152.3	156.3	154.1	129.6	131.2	132.0	130.6	130.2	130.0
62.5°	1374.8	444.1	146.3	155.1	151.6	125.3	126.5	126.9	125.5	126.5	126.3
65°	1312.5	381.7	136.5	149.2	144.1	121.4	120.6	121.6	119.2	121.8	122.0
67.5°	1165.4	303.3	121.6	138.0	133.5	117.1	115.5	115.5	111.4	115.5	115.3
70°	939.6	214.3	99.8	120.0	121.8	112.0	111.2	106.5	100.0	106.1	105.5
72.5°	712.3	153.9	78.6	94.9	104.9	104.9	105.1	97.1	89.6	92.5	90.0
75°	451.2	108.4	62.9	72.7	82.2	92.0	96.7	82.0	75.3	74.1	72.9
77.5°	203.3	71.2	49.0	55.7	58.4	72.7	88.4	70.6	61.4	58.8	58.0
80°	85.1	44.3	34.9	39.4	35.9	61.0	78.0	54.9	45.1	41.4	38.8
82.5°	37.3	26.3	22.2	21.2	22.5	45.3	58.2	36.5	28.2	38.2	38.6
85°	15.7	13.9	11.4	10.4	9.2	17.3	27.3	14.3	17.6	10.0	8.2
87.5°	3.7	4.1	3.1	2.0	1.2	0.2	0.0	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  
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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 <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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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

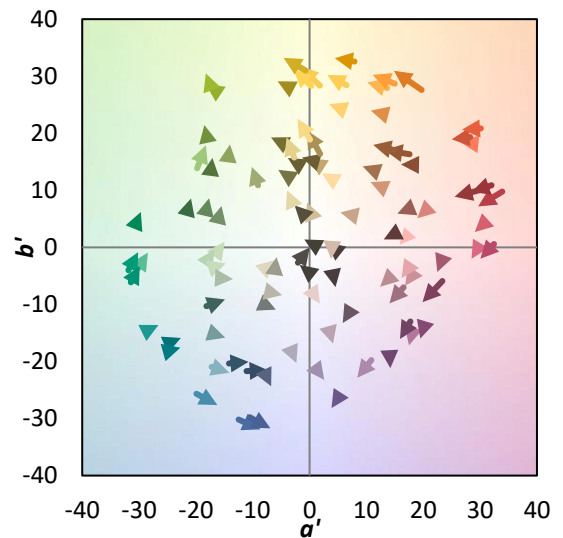
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)