

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: P634527

Luminaire Tested: GWS-SA3B-830-U-T1-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P634527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-10)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3B-830-U-T1-W  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

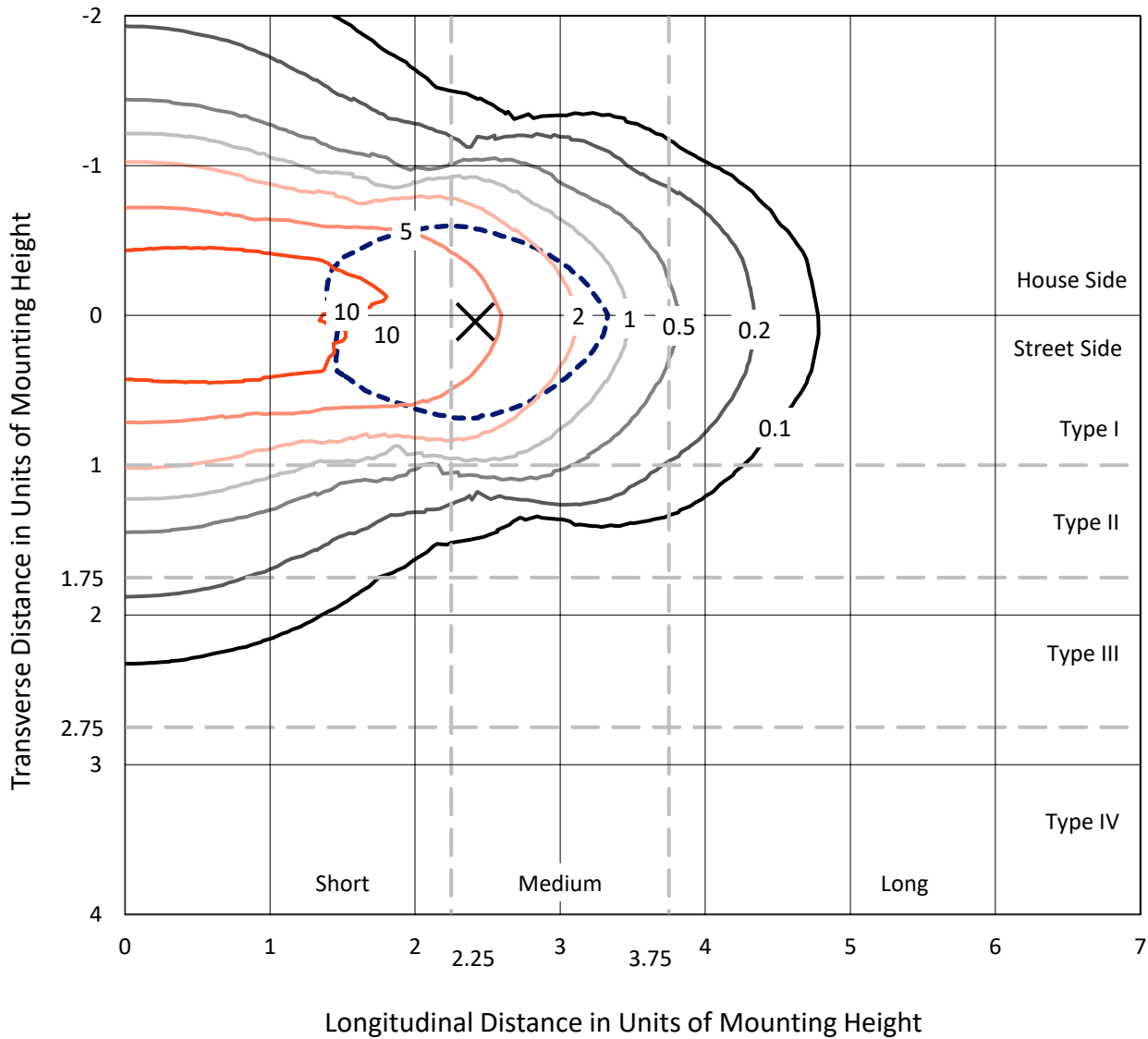
Lumens per Lamp: N/A  
Luminaire Lumens: 8247.7 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 68.3  
Input Voltage (V): 120  
Input Current (Ain): 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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 CATALOG NUMBER: GWS-SA3B-830-U-T1-W

### Iso-Footcandle Lines of Horizontal Illumination

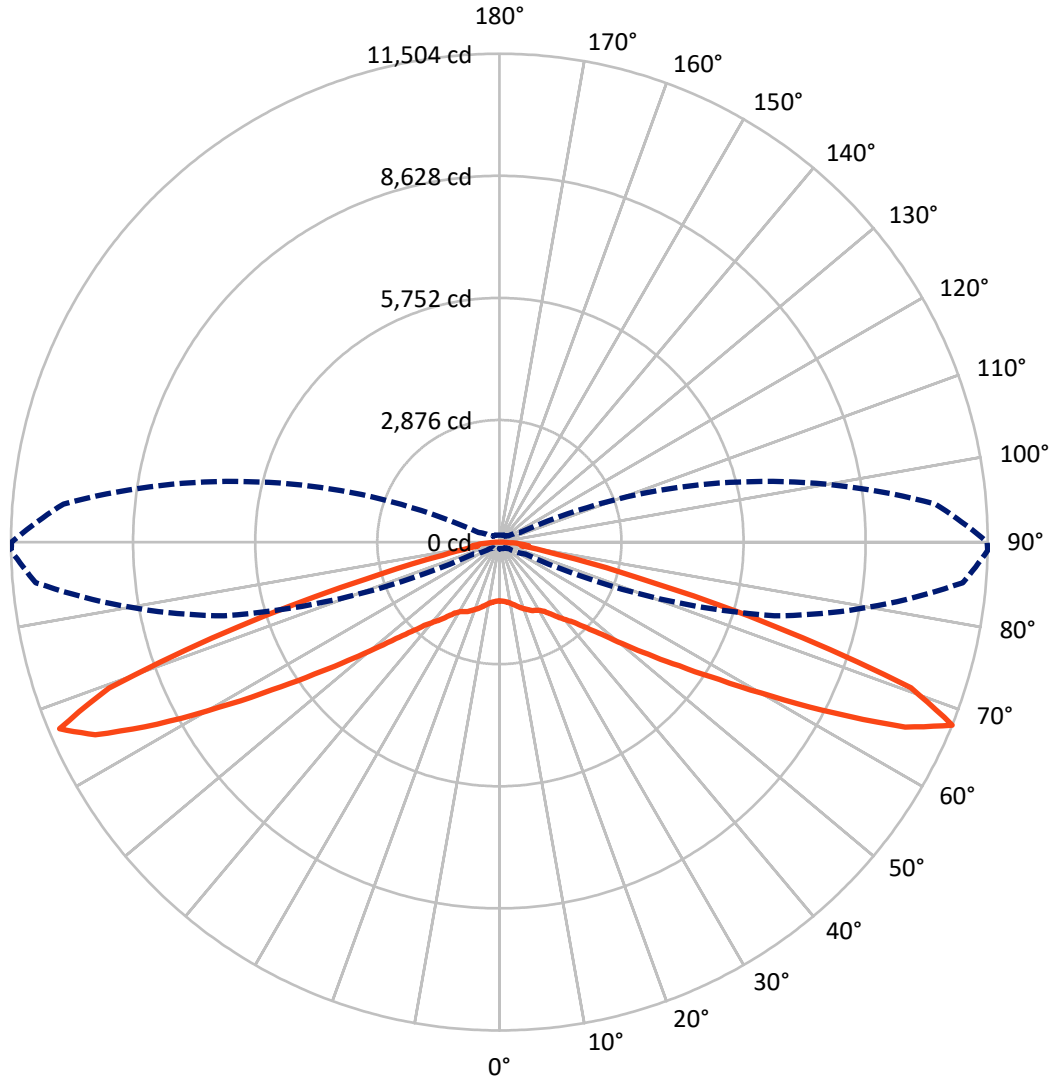
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.1 fc  
 Type I - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4087.7	0.0	4087.7
	% Fixture	49.6	0.0	49.6
<b>Street Side</b>	Lumens	4160.0	0.0	4160.0
	% Fixture	50.4	0.0	50.4
<b>Total</b>	Lumens	8247.7	0.0	8247.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.9	1.7
10°-20°	452.1	5.5
20°-30°	764.3	9.3
30°-40°	1048.9	12.7
40°-50°	1337.6	16.2
50°-60°	1678.3	20.3
60°-70°	2024.1	24.5
70°-80°	732.3	8.9
80°-90°	71.2	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°	8247.7	100.0
0°-180°	8247.7	100.0

**Coefficient of Utilization**



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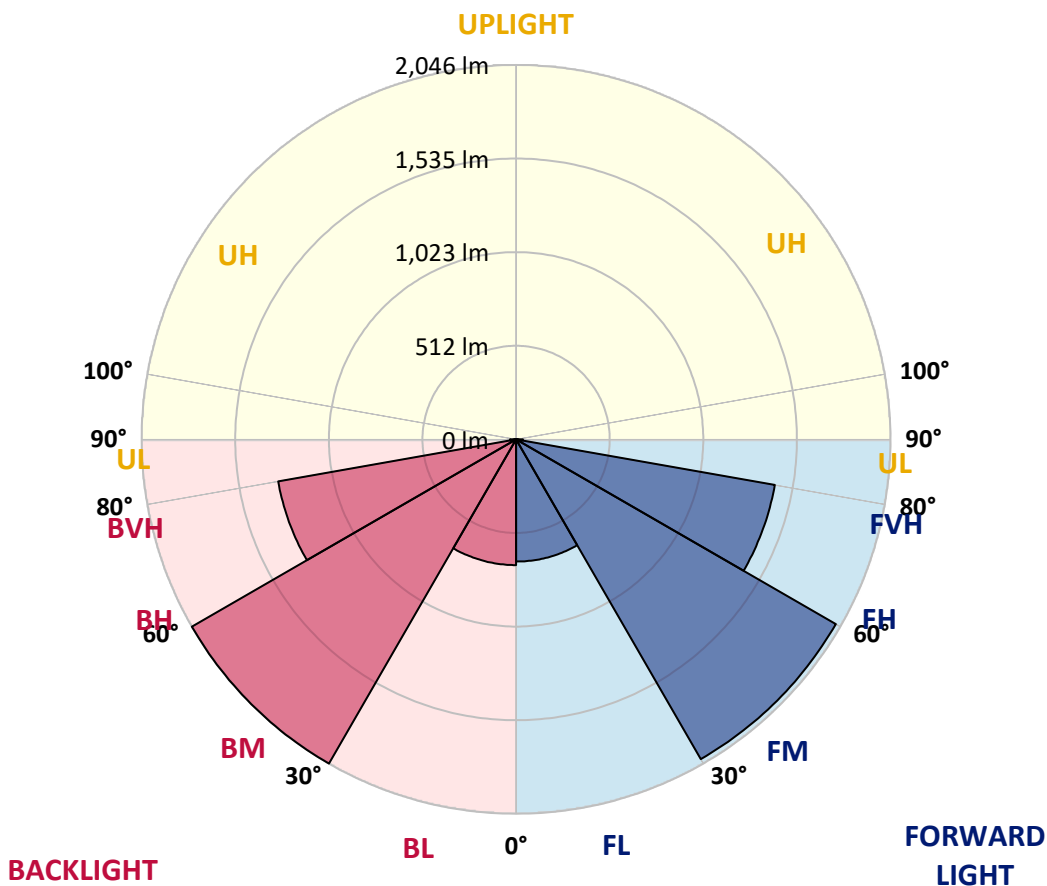
CATALOG NUMBER: GWS-SA3B-830-U-T1-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	668.0	8.1			
FM (30°-60°)	2018.4	24.5			
FH (60°-80°)	1436.0	17.4			G1/1800
FVH (80°-90°)	37.6	0.5			G1/100
BL (0°-30°)	687.3	8.3	B2/1000		
BM (30°-60°)	2046.4	24.8	B2/2500		
BH (60°-80°)	1320.3	16.0	B3/2500		G3/2500
BVH (80°-90°)	33.6	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89°	
0°	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3
2.5°	1388.5	1387.3	1384.3	1393.2	1391.4	1392.0	1395.6	1393.2	1389.0	1381.9	1392.0	1392.0
5°	1427.6	1427.0	1420.4	1425.8	1419.9	1415.7	1415.1	1409.2	1404.4	1396.7	1407.4	1407.4
7.5°	1465.5	1464.9	1459.5	1469.0	1464.3	1459.5	1454.2	1442.4	1431.1	1419.9	1431.7	1431.7
10°	1494.5	1493.9	1492.7	1506.3	1507.5	1509.3	1506.9	1486.8	1467.2	1453.6	1465.5	1465.5
12.5°	1511.1	1512.8	1515.8	1540.7	1553.1	1565.0	1567.9	1551.4	1518.8	1499.2	1513.4	1513.4
15°	1499.8	1503.4	1518.2	1563.2	1597.6	1624.2	1635.5	1621.8	1579.8	1547.2	1563.2	1563.2
17.5°	1445.9	1448.9	1477.9	1546.6	1622.4	1684.0	1702.4	1694.1	1647.3	1607.6	1623.0	1623.0
20°	1371.3	1377.8	1409.2	1505.1	1618.3	1725.5	1774.7	1771.7	1720.8	1659.8	1678.1	1678.1
22.5°	1303.8	1311.5	1344.6	1450.7	1590.4	1736.2	1847.5	1855.2	1787.7	1711.9	1726.7	1726.7
25°	1227.9	1235.0	1277.7	1386.1	1542.5	1727.9	1909.7	1944.7	1863.5	1771.7	1785.3	1785.3
27.5°	1150.3	1155.7	1197.7	1313.2	1479.7	1712.5	1958.9	2043.0	1938.2	1813.2	1822.6	1822.6
30°	1082.2	1089.3	1127.8	1240.4	1411.0	1681.7	1999.2	2147.8	2024.0	1860.0	1867.7	1867.7
32.5°	1016.5	1022.4	1064.4	1168.7	1338.1	1634.3	2035.3	2271.1	2151.4	1947.0	1947.0	1947.0
35°	933.5	944.2	991.6	1100.0	1269.4	1571.5	2061.4	2414.4	2325.5	2075.6	2076.2	2076.2
37.5°	857.1	863.0	912.8	1022.4	1197.1	1500.4	2063.7	2563.1	2545.9	2239.1	2240.2	2240.2
40°	770.0	777.7	831.1	939.5	1114.2	1425.8	2041.2	2701.7	2776.9	2407.3	2400.8	2400.8
42.5°	681.8	693.0	744.0	850.0	1024.8	1334.6	1981.4	2833.8	3070.1	2602.2	2586.2	2586.2
45°	596.5	603.6	654.5	754.6	922.3	1225.6	1885.4	2960.5	3418.4	2898.3	2875.2	2875.2
47.5°	500.5	503.5	556.2	652.2	816.3	1104.1	1748.0	3073.7	3801.1	3290.5	3250.8	3250.8
50°	415.2	419.4	460.8	543.2	686.5	960.2	1576.8	3140.0	4288.6	3825.4	3756.7	3756.7
52.5°	335.9	340.0	373.2	438.9	567.5	796.1	1364.8	3124.6	4783.2	4489.4	4389.3	4389.3
55°	271.3	274.3	296.8	348.3	446.6	633.2	1114.2	2986.6	5332.3	5356.6	5141.0	5141.0
57.5°	229.2	230.4	245.8	277.2	348.9	488.1	860.1	2660.8	5908.0	6463.1	6108.9	6108.9
60°	205.0	205.5	212.7	232.2	275.4	372.6	630.3	2141.9	6504.5	7847.4	7361.7	7361.7
62.5°	189.6	189.6	195.5	206.7	228.6	286.7	463.2	1538.3	6932.8	9353.7	8871.0	8871.0
65°	174.7	174.7	178.9	188.4	200.2	234.0	347.7	992.2	7143.1	10613.0	10505.8	10505.8
67.5°	155.8	156.4	159.3	169.4	180.1	195.5	263.6	671.1	6706.5	10961.3	11503.9	11503.9
70°	138.0	138.6	142.8	149.3	158.2	168.8	206.1	462.6	4881.5	9129.2	10286.1	10286.1
72.5°	118.5	120.8	123.8	130.9	136.2	143.9	168.2	299.7	2840.3	5872.5	6799.5	6799.5
75°	97.1	100.1	103.7	110.8	114.3	117.3	138.6	213.8	1366.5	2975.9	3388.8	3388.8
77.5°	75.2	78.2	82.3	88.9	91.2	94.8	106.0	154.6	654.5	1319.2	1422.2	1422.2
80°	50.3	51.5	55.1	62.8	66.9	69.3	78.2	105.4	284.3	529.6	524.8	524.8
82.5°	30.8	31.4	32.6	37.3	39.1	41.5	50.9	64.6	135.6	601.8	690.1	690.1
85°	11.3	10.7	10.1	13.0	15.4	17.8	23.7	32.6	59.2	413.5	462.6	462.6
87.5°	0.0	0.0	0.0	0.6	1.2	1.2	2.4	4.7	14.2	154.6	106.0	106.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P634527  
 CATALOG NUMBER: GWS-SA3B-830-U-T1-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3	1384.3
2.5°	1389.0	1382.5	1390.8	1396.7	1409.8	1414.5	1415.7	1411.6	1411.6	1404.4	1405.6
5°	1405.0	1400.9	1414.5	1424.6	1443.5	1450.7	1455.4	1452.4	1454.2	1449.5	1450.7
7.5°	1429.3	1425.8	1449.5	1469.0	1488.6	1496.9	1501.0	1498.6	1499.2	1493.3	1495.1
10°	1463.1	1464.3	1492.7	1518.2	1544.2	1552.5	1554.3	1547.2	1541.3	1530.6	1531.2
12.5°	1509.3	1515.2	1555.5	1583.9	1610.6	1622.4	1609.4	1583.3	1559.1	1540.7	1538.3
15°	1559.6	1570.3	1628.4	1664.5	1693.5	1687.6	1649.1	1590.4	1542.5	1515.2	1509.9
17.5°	1620.1	1636.1	1708.9	1752.2	1777.0	1739.1	1658.6	1570.9	1504.0	1467.2	1460.1
20°	1676.9	1702.4	1794.2	1850.5	1853.4	1768.1	1654.4	1531.2	1447.1	1402.1	1392.6
22.5°	1729.1	1761.6	1883.7	1955.3	1916.8	1781.2	1628.9	1474.9	1378.4	1325.7	1317.4
25°	1785.9	1832.1	1987.9	2054.8	1980.2	1775.8	1575.6	1405.0	1295.5	1241.6	1235.6
27.5°	1825.0	1883.1	2092.8	2156.7	2032.3	1745.6	1506.9	1328.6	1219.6	1168.7	1160.4
30°	1870.0	1944.1	2208.3	2267.5	2064.3	1701.2	1433.5	1257.5	1149.1	1094.1	1088.1
32.5°	1951.8	2044.8	2351.6	2384.8	2074.4	1646.1	1363.0	1188.8	1075.7	1020.6	1012.3
35°	2083.3	2192.3	2553.0	2515.7	2066.7	1585.7	1296.1	1108.3	1000.5	948.9	940.6
37.5°	2249.1	2384.8	2777.5	2633.6	2045.4	1519.4	1216.7	1040.7	932.9	880.8	876.1
40°	2403.7	2570.8	3029.3	2735.4	2002.1	1437.6	1140.3	970.3	860.1	805.0	794.3
42.5°	2597.4	2819.6	3320.7	2823.7	1931.0	1339.9	1054.4	883.2	768.9	719.1	706.1
45°	2891.8	3167.9	3659.5	2908.4	1825.0	1219.6	946.6	777.2	668.8	617.8	607.7
47.5°	3259.1	3603.2	4026.8	2958.8	1663.9	1092.9	824.5	665.2	556.8	499.3	494.6
50°	3775.0	4236.5	4420.7	2949.9	1483.8	942.4	687.1	531.9	441.3	399.8	393.3
52.5°	4403.5	5031.4	4846.6	2843.3	1292.5	771.2	535.5	417.6	350.1	320.5	315.1
55°	5191.9	5983.3	5295.0	2614.6	1050.8	590.6	420.6	329.3	283.1	265.4	263.0
57.5°	6168.1	7215.9	5726.8	2229.6	790.2	450.8	324.0	271.9	250.0	239.3	238.7
60°	7456.4	8524.4	6101.7	1732.6	565.7	344.7	267.7	242.9	225.7	218.6	218.0
62.5°	8988.2	9712.7	6335.1	1180.0	425.3	274.8	235.8	220.4	210.3	206.1	205.5
65°	10562.7	10463.8	6223.8	773.0	322.8	233.4	211.5	203.2	194.3	190.1	190.1
67.5°	11492.7	10305.0	5369.0	536.7	255.9	205.0	190.7	183.0	168.2	164.7	164.7
70°	10179.4	8350.3	3519.1	392.7	207.3	179.5	165.9	155.2	149.3	145.7	145.1
72.5°	6732.6	5433.6	1871.2	272.5	173.0	152.8	140.4	136.2	129.1	125.6	125.0
75°	3350.9	2853.9	959.0	196.7	143.9	122.6	117.3	115.5	109.6	104.8	103.7
77.5°	1396.7	1270.6	447.2	142.8	109.6	98.9	94.2	94.2	87.7	82.3	80.0
80°	526.6	469.1	211.5	97.7	81.2	73.5	70.5	68.1	62.8	56.3	52.7
82.5°	704.3	460.3	103.7	61.0	53.3	47.4	43.2	41.5	38.5	35.5	33.2
85°	456.1	327.0	46.8	31.4	26.7	20.1	17.8	16.6	14.8	13.0	11.8
87.5°	93.0	109.6	14.2	5.9	3.6	1.8	1.8	0.6	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

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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**

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			

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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)