

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: P634515

Luminaire Tested: GWS-SA3B-830-U-SL3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P634515  
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-SA3B-830-U-SL3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

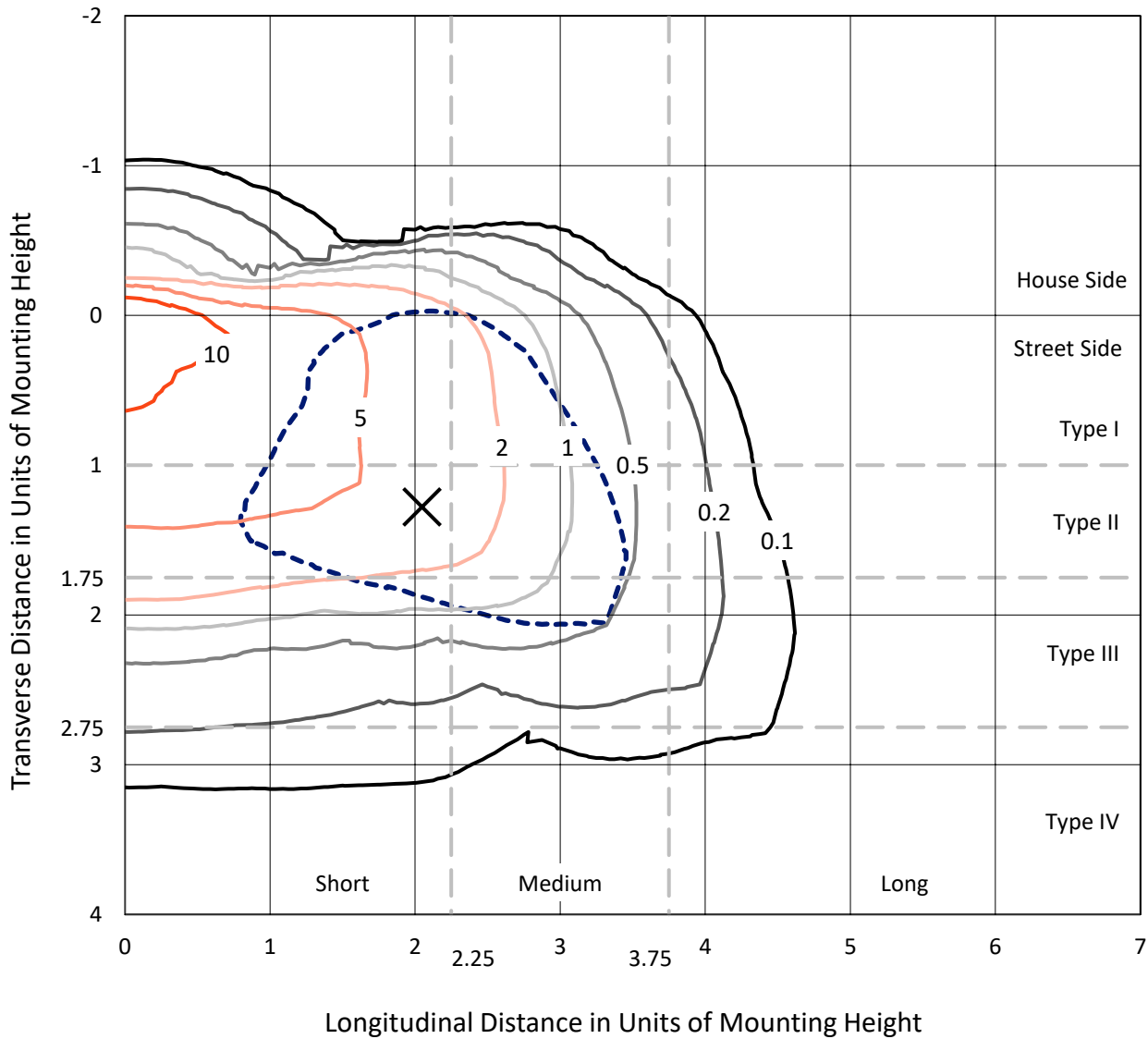
Lumens per Lamp: N/A  
Luminaire Lumens: 6692.2 lumens  
Efficiency: N/A  
Efficacy: 98.0 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 68.3  
Input Voltage (V): 120  
Input Current (Ain): 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



REPORT NUMBER: P634515  
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### Iso-Footcandle Lines of Horizontal Illumination

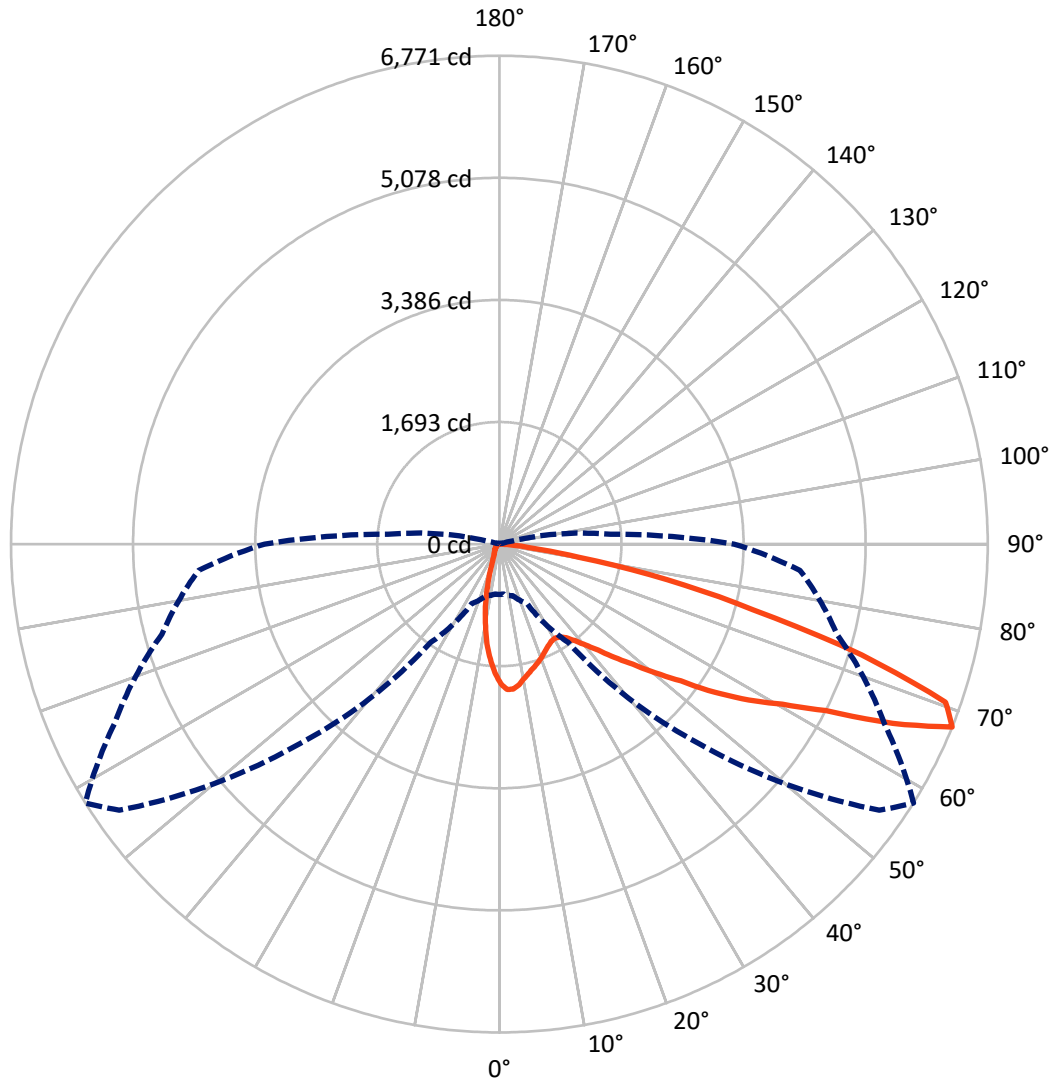
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 19.3 fc  
 Type III - Short - N/A

REPORT NUMBER: P634515  
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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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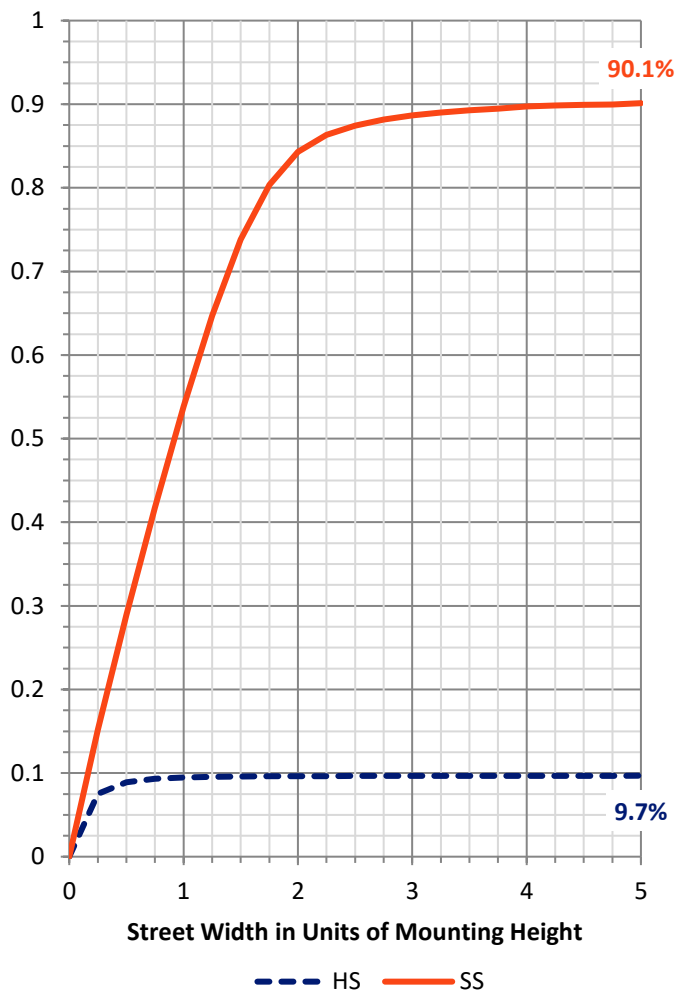
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	653.8	0.0	653.8
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	6038.4	0.0	6038.4
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	6692.2	0.0	6692.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.9	2.3
10°-20°	326.5	4.9
20°-30°	440.3	6.6
30°-40°	618.8	9.2
40°-50°	955.6	14.3
50°-60°	1528.2	22.8
60°-70°	1809.5	27.0
70°-80°	800.5	12.0
80°-90°	56.0	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°	6692.2	100.0
0°-180°	6692.2	100.0

**Coefficient of Utilization**

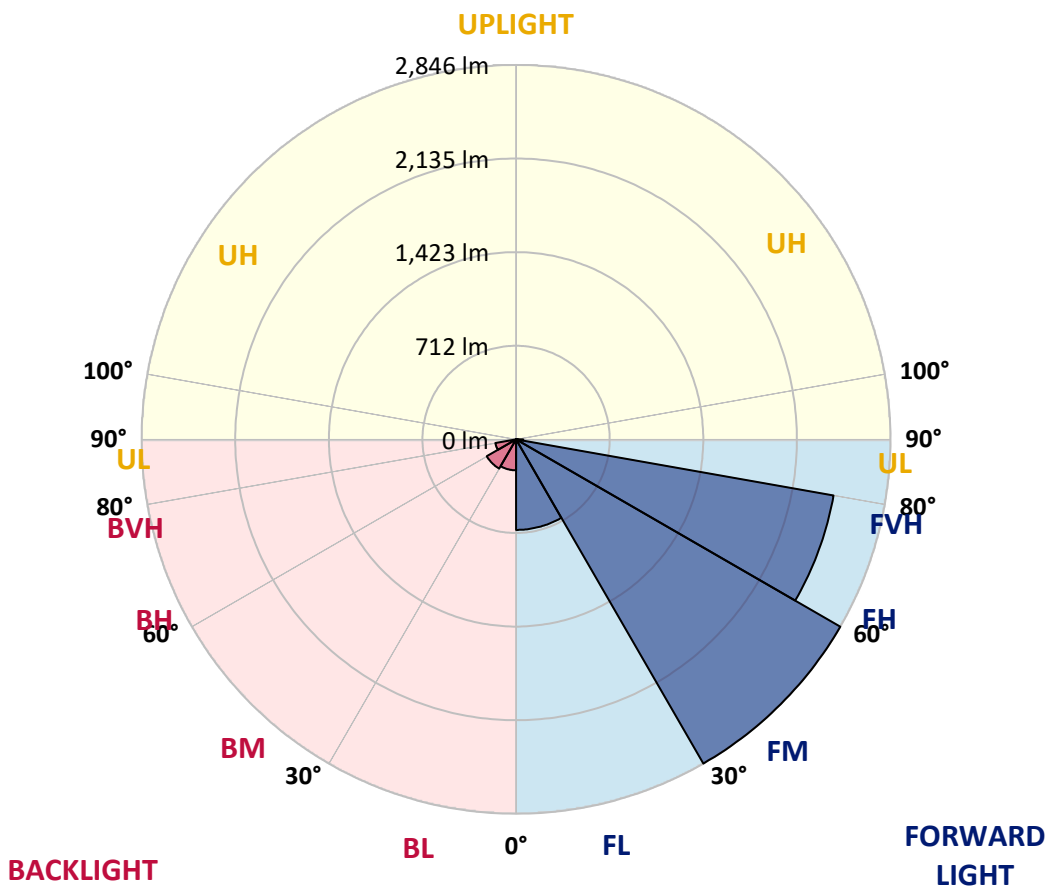


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	688.5	10.3			
FM (30°-60°)	2846.1	42.5			
FH (60°-80°)	2450.3	36.6			G2/5000
FVH (80°-90°)	53.6	0.8			G1/100
BL (0°-30°)	235.3	3.5	B1/500		
BM (30°-60°)	256.5	3.8	B1/1000		
BH (60°-80°)	159.6	2.4	B1/500		G1/500
BVH (80°-90°)	2.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type III Short





REPORT NUMBER: P634515

CATALOG NUMBER: GWS-SA3B-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3
2.5°	2030.4	2034.0	2038.7	2044.7	2043.5	2038.1	2031.6	2016.8	2007.3	1977.7	1941.6
5°	1965.3	1964.7	1976.5	1987.8	2007.9	2018.6	2033.4	2019.8	2015.0	1979.5	1920.9
7.5°	1837.9	1844.5	1858.1	1875.9	1904.9	1936.3	1971.8	1967.7	1981.9	1958.2	1885.3
10°	1713.0	1709.4	1730.7	1757.4	1801.8	1842.1	1893.6	1893.0	1930.3	1928.0	1845.1
12.5°	1603.4	1602.8	1619.4	1649.6	1701.7	1758.0	1827.9	1829.7	1875.9	1894.8	1810.7
15°	1511.0	1512.2	1528.2	1559.6	1613.5	1682.2	1763.3	1778.1	1830.2	1868.7	1776.9
17.5°	1445.2	1445.8	1455.3	1482.6	1535.3	1608.7	1706.5	1726.6	1793.5	1849.2	1749.7
20°	1415.0	1412.7	1414.4	1428.1	1468.9	1535.9	1648.4	1674.5	1759.8	1835.6	1724.8
22.5°	1419.2	1415.6	1407.3	1405.6	1423.9	1474.9	1586.8	1618.8	1723.0	1827.3	1702.3
25°	1455.9	1448.2	1436.4	1418.6	1411.5	1436.9	1532.9	1566.1	1688.7	1827.9	1685.1
27.5°	1512.2	1503.9	1489.1	1465.4	1437.5	1426.9	1496.2	1527.6	1664.4	1841.5	1676.8
30°	1583.8	1577.3	1563.1	1534.7	1497.4	1453.5	1488.5	1514.5	1652.6	1869.3	1680.4
32.5°	1668.5	1663.8	1652.0	1625.9	1583.2	1516.3	1514.5	1534.7	1662.0	1909.6	1694.0
35°	1750.3	1752.1	1752.7	1738.4	1692.8	1611.7	1586.2	1593.3	1701.1	1970.0	1724.8
37.5°	1838.5	1834.4	1855.7	1865.8	1822.0	1735.5	1697.0	1697.6	1775.8	2059.5	1782.9
40°	1905.5	1906.7	1952.9	1994.3	1976.0	1892.4	1837.4	1836.8	1890.7	2182.1	1876.4
42.5°	1968.3	1976.0	2044.1	2115.1	2140.6	2066.6	2026.9	2012.1	2051.8	2347.9	2016.8
45°	2035.2	2046.4	2141.8	2243.1	2310.0	2266.2	2234.8	2240.7	2245.5	2541.0	2205.8
47.5°	2113.4	2120.5	2238.3	2381.1	2506.1	2494.8	2496.6	2489.5	2487.1	2784.5	2455.7
50°	2208.1	2224.7	2360.4	2530.9	2701.5	2776.2	2801.0	2804.0	2765.5	3049.8	2714.6
52.5°	2409.5	2429.7	2545.8	2695.0	2914.8	3071.7	3173.0	3152.9	3093.6	3306.9	2998.3
55°	2647.0	2662.4	2774.4	2929.0	3175.4	3395.7	3636.2	3627.9	3482.8	3577.6	3231.7
57.5°	2669.5	2686.7	2860.3	3097.2	3510.0	3796.1	4049.0	4075.7	3863.1	3769.5	3440.1
60°	2416.6	2451.6	2688.5	3007.2	3638.0	4334.5	4501.6	4506.9	4142.0	3964.3	3694.8
62.5°	1936.9	1953.4	2192.1	2607.9	3440.7	4648.5	5192.8	5080.3	4500.4	4265.8	4098.2
65°	1015.2	1082.7	1290.6	1750.9	2790.4	4538.9	6024.4	5993.6	5144.8	4697.6	4412.1
67.5°	696.6	696.0	745.1	912.8	1663.8	3908.1	6432.5	6771.3	5889.9	4845.7	4184.7
70°	530.1	531.9	575.7	684.7	861.8	2601.4	5984.7	6564.0	6028.6	4399.7	3384.5
72.5°	351.8	355.4	428.2	553.2	688.3	1275.2	4650.8	5252.0	5072.6	3533.7	2382.3
75°	210.3	213.2	265.4	402.2	611.9	713.7	2955.0	3630.9	3491.7	2435.6	1277.0
77.5°	86.5	88.8	136.2	250.5	447.8	554.4	1634.2	2375.8	2091.5	968.4	348.9
80°	36.1	37.3	65.7	175.3	322.8	347.7	757.0	1116.5	857.1	208.5	106.6
82.5°	13.0	13.6	24.3	96.5	200.8	261.8	382.0	441.3	241.7	68.1	57.5
85°	0.6	0.6	5.9	32.6	76.4	74.0	218.6	211.5	80.0	28.4	34.4
87.5°	0.0	0.0	0.6	0.6	1.2	3.0	20.7	36.7	17.2	7.1	14.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: GWS-SA3B-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3
2.5°	1917.9	1886.5	1852.2	1820.2	1769.2	1739.0	1701.7	1685.1	1661.4	1655.5	1659.1
5°	1878.8	1824.9	1742.6	1668.0	1571.4	1493.8	1415.6	1382.5	1339.8	1311.4	1299.5
7.5°	1823.7	1753.2	1624.7	1489.1	1356.4	1214.8	1107.0	1036.0	971.4	935.9	928.7
10°	1768.1	1676.2	1492.0	1297.8	1092.2	922.8	777.1	669.3	581.7	542.0	511.2
12.5°	1710.6	1596.3	1357.0	1103.5	864.8	633.8	453.7	348.9	286.1	261.2	265.4
15°	1657.9	1519.3	1223.1	909.2	608.9	382.6	250.5	211.5	196.6	191.9	191.3
17.5°	1607.5	1446.4	1089.9	720.3	401.6	234.6	191.9	182.4	178.3	175.9	175.9
20°	1561.9	1376.5	959.5	542.6	259.4	186.0	173.5	168.8	165.3	163.5	163.5
22.5°	1519.3	1309.0	832.2	383.8	191.3	167.0	159.3	154.6	150.4	148.1	148.1
25°	1480.8	1248.0	710.8	264.2	164.7	152.8	144.5	139.2	132.1	127.9	127.9
27.5°	1452.9	1193.5	594.1	192.5	148.7	137.4	127.9	120.8	113.1	108.4	107.2
30°	1436.4	1147.3	476.2	158.1	133.9	122.6	111.9	103.1	94.2	89.4	88.8
32.5°	1426.9	1104.7	368.4	138.0	121.4	108.4	96.5	87.1	78.2	72.9	72.3
35°	1430.4	1071.5	276.0	124.4	109.6	96.0	82.9	73.4	65.7	61.0	59.8
37.5°	1461.2	1056.7	207.3	113.7	99.5	85.3	71.7	62.8	55.7	52.1	51.5
40°	1521.1	1059.6	162.9	105.4	91.2	74.6	61.6	53.3	48.0	45.0	44.4
42.5°	1614.1	1084.5	134.5	98.3	82.3	65.2	53.3	46.8	41.5	38.5	37.9
45°	1752.7	1136.1	117.3	90.0	72.9	56.3	46.2	40.3	35.5	32.0	31.4
47.5°	1953.4	1225.5	106.0	82.3	64.6	48.6	39.7	33.8	29.6	26.7	26.1
50°	2167.3	1332.7	96.5	74.6	57.5	42.1	33.8	27.8	24.3	21.3	20.7
52.5°	2395.3	1448.2	89.4	67.5	50.9	36.1	28.4	23.1	19.5	16.6	16.0
55°	2614.5	1564.3	81.1	62.8	43.2	30.8	23.7	19.0	15.4	13.0	13.0
57.5°	2827.7	1670.9	72.3	55.1	35.5	26.1	19.5	15.4	12.4	10.7	10.1
60°	3082.4	1818.4	62.2	46.8	29.6	21.9	16.0	12.4	10.1	8.3	8.3
62.5°	3460.9	1971.8	53.3	39.1	24.9	18.4	13.0	10.1	8.3	7.1	6.5
65°	3584.7	1888.9	45.0	32.0	20.1	14.8	10.7	8.9	7.1	6.5	5.9
67.5°	3254.2	1548.3	37.3	26.1	16.6	12.4	9.5	7.7	6.5	5.9	5.3
70°	2539.2	1098.7	29.0	19.5	13.6	10.1	8.3	7.1	5.9	5.3	5.3
72.5°	1727.2	649.8	23.1	14.8	11.3	8.9	7.1	6.5	5.9	5.3	4.7
75°	850.6	231.0	17.8	11.3	8.9	7.7	6.5	5.9	5.3	4.7	4.7
77.5°	229.2	64.0	13.6	8.9	7.1	5.9	5.9	5.9	5.3	4.1	4.1
80°	77.6	26.7	10.1	6.5	5.9	4.7	4.1	5.3	4.7	4.1	3.6
82.5°	42.6	13.0	7.1	5.3	4.1	3.6	3.6	3.6	3.6	3.0	3.0
85°	27.2	7.1	4.7	4.1	4.1	3.0	2.4	2.4	1.8	1.8	1.8
87.5°	12.4	4.1	4.1	3.6	3.6	3.0	1.8	1.2	0.6	0.6	0.6
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**

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)