

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: P634050

Luminaire Tested: GWS-SA2F-830-U-T4FT-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P634050  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2F-830-U-T4FT-W  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

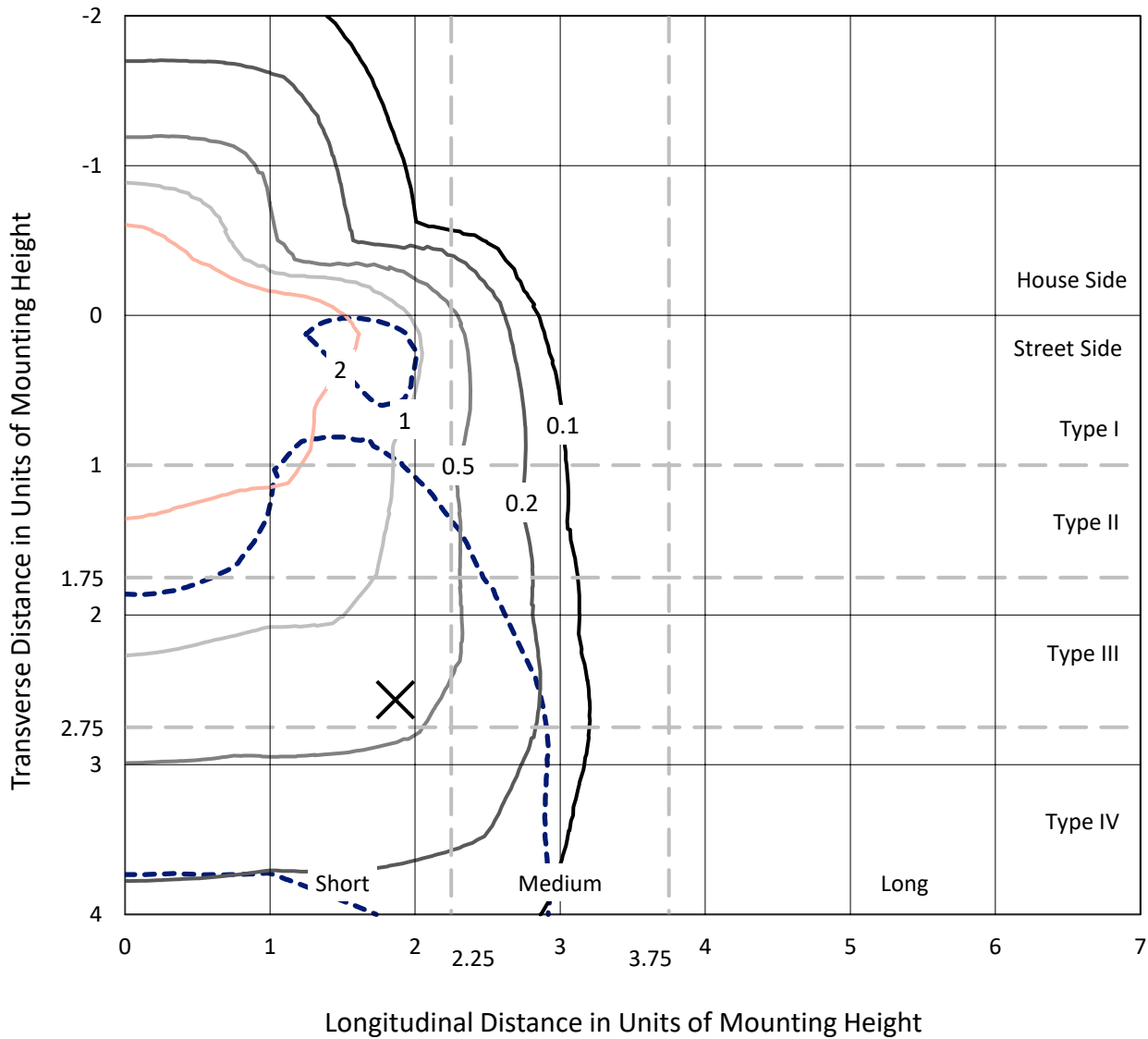
Lumens per Lamp: N/A  
Luminaire Lumens: 12447.8 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 124.5  
Input Voltage (V): 120  
Input Current (Ain): 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: P634050  
 CATALOG NUMBER: GWS-SA2F-830-U-T4FT-W

### Iso-Footcandle Lines of Horizontal Illumination

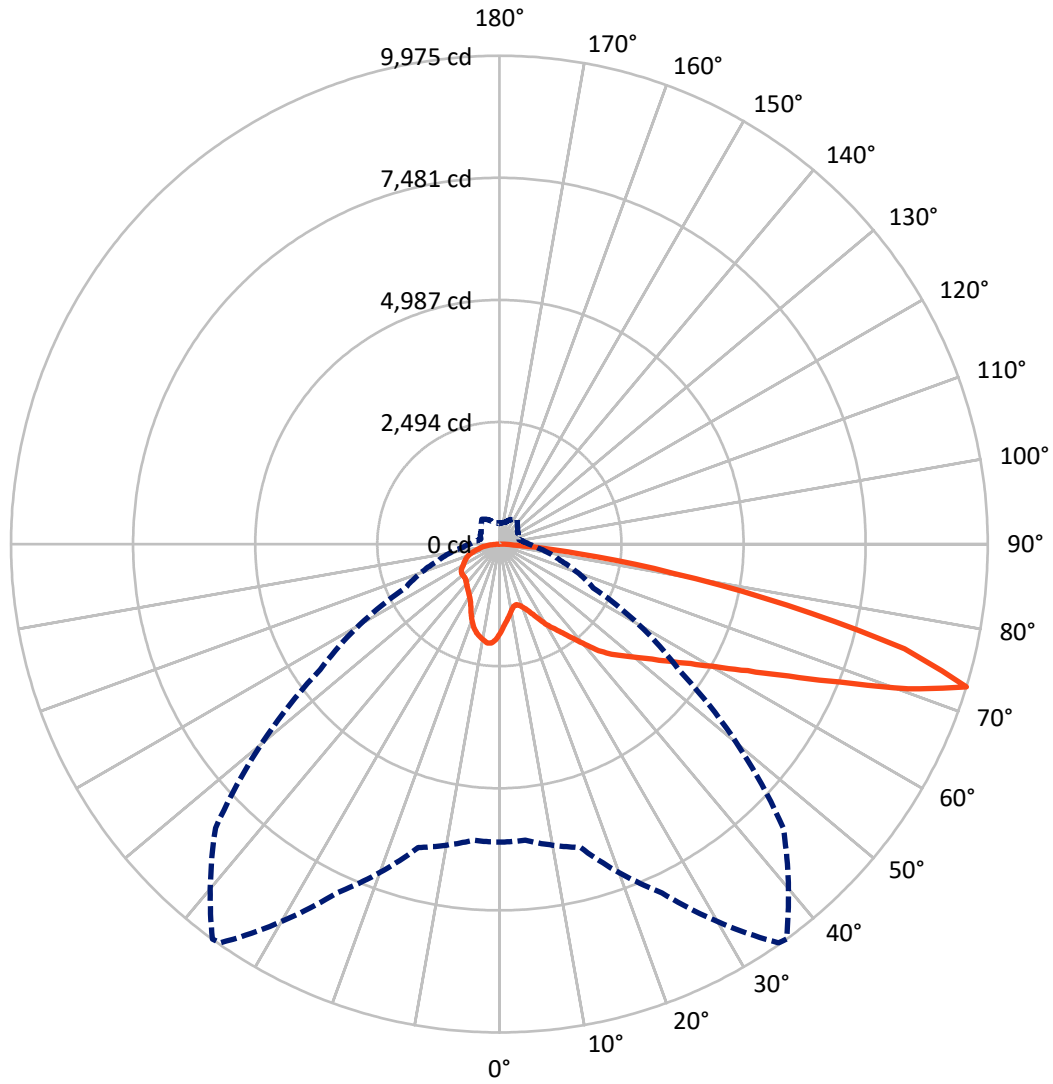
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical



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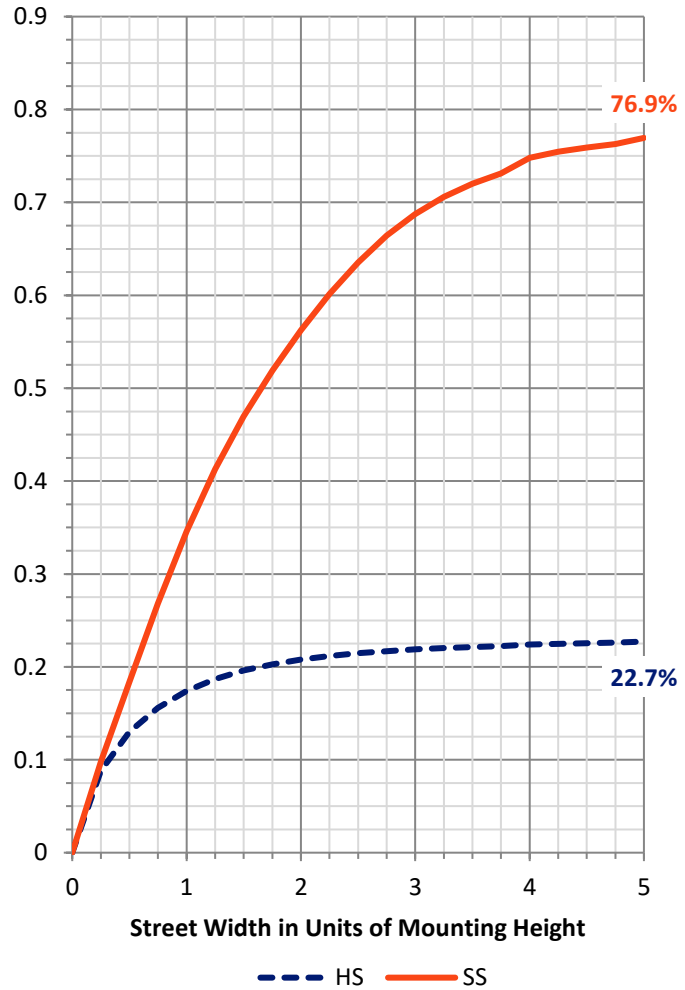
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2869.8	0.0	2869.8
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	9578.0	0.0	9578.0
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	12447.8	0.0	12447.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.3	1.4
10°-20°	480.5	3.9
20°-30°	795.7	6.4
30°-40°	1191.6	9.6
40°-50°	1738.4	14.0
50°-60°	2474.3	19.9
60°-70°	3126.1	25.1
70°-80°	2227.6	17.9
80°-90°	243.2	2.0
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°	12447.8	100.0
0°-180°	12447.8	100.0

**Coefficient of Utilization**



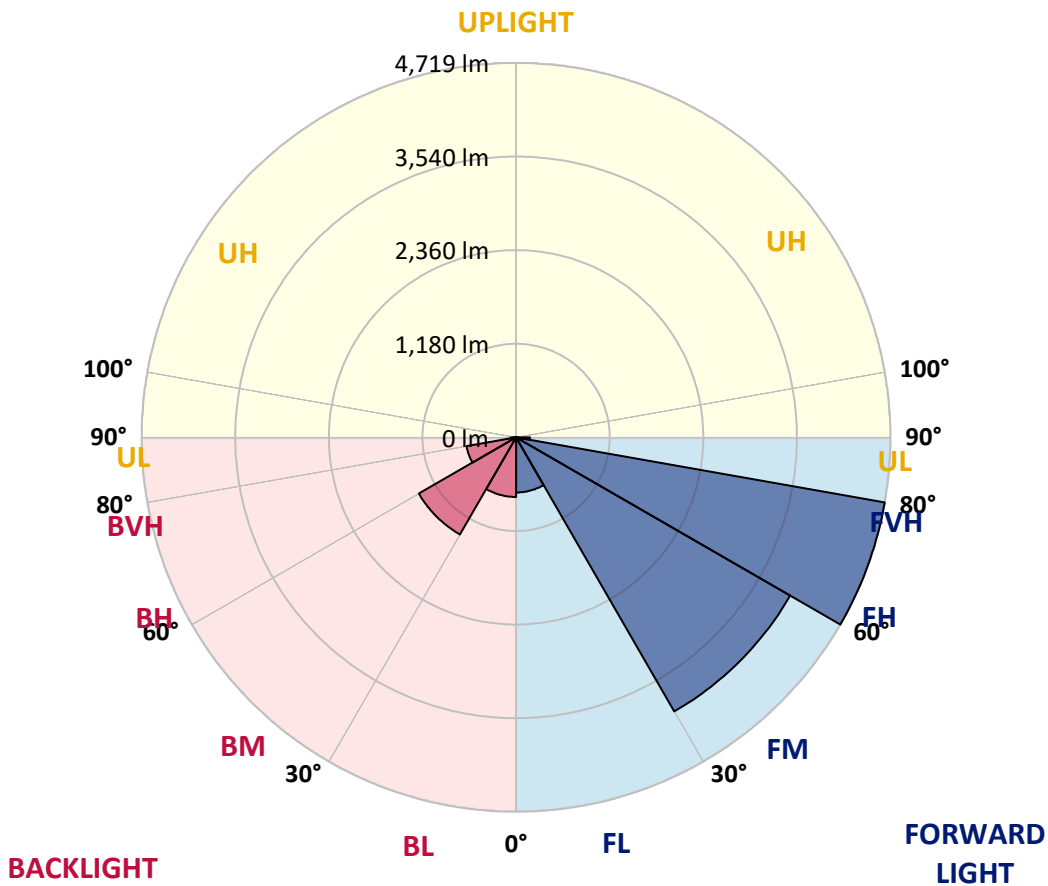
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	694.9	5.6			
FM (30°-60°)	3989.2	32.0			
FH (60°-80°)	4719.4	37.9			G2/5000
FVH (80°-90°)	174.5	1.4			G2/225
BL (0°-30°)	751.5	6.0	B2/1000		
BM (30°-60°)	1415.2	11.4	B2/2500		
BH (60°-80°)	634.4	5.1	B2/1000		G2/1000
BVH (80°-90°)	68.6	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8
2.5°	1662.0	1659.2	1653.7	1670.3	1686.9	1685.1	1708.2	1730.3	1754.4	1779.3	1812.6
5°	1528.9	1527.1	1522.5	1547.4	1572.4	1571.4	1609.3	1645.3	1694.3	1747.9	1814.4
7.5°	1395.9	1391.3	1397.8	1429.2	1464.3	1468.0	1519.7	1578.8	1650.0	1730.3	1824.6
10°	1278.6	1277.7	1280.4	1315.5	1368.2	1371.9	1438.4	1520.6	1614.9	1722.0	1847.7
12.5°	1248.1	1246.2	1238.9	1256.4	1296.1	1301.7	1374.7	1475.4	1590.8	1726.6	1879.1
15°	1298.0	1293.4	1267.5	1259.2	1278.6	1283.2	1345.1	1448.6	1577.0	1735.0	1918.8
17.5°	1383.9	1381.1	1332.2	1298.0	1310.9	1314.6	1360.8	1443.9	1573.3	1751.6	1967.8
20°	1509.5	1497.5	1420.8	1369.1	1369.1	1374.7	1402.4	1464.3	1577.9	1771.9	2023.2
22.5°	1675.8	1651.8	1543.7	1473.5	1455.0	1462.4	1474.4	1515.1	1597.3	1806.1	2092.5
25°	1862.4	1840.3	1711.9	1613.0	1587.1	1589.9	1579.7	1587.1	1639.8	1853.2	2178.4
27.5°	2061.1	2046.3	1909.6	1783.9	1743.3	1743.3	1707.2	1689.7	1698.9	1906.8	2274.5
30°	2238.4	2218.1	2102.6	1965.0	1911.4	1911.4	1843.0	1805.2	1783.0	1972.4	2402.9
32.5°	2331.7	2319.7	2243.1	2137.7	2072.1	2062.0	2002.9	1958.5	1906.8	2069.4	2576.6
35°	2453.7	2450.9	2404.7	2322.5	2239.4	2224.6	2183.9	2148.8	2059.2	2190.4	2807.5
37.5°	2607.0	2602.4	2595.0	2546.1	2446.3	2443.5	2407.5	2365.0	2248.6	2365.0	3087.4
40°	2778.9	2770.6	2761.3	2760.4	2700.4	2690.2	2687.4	2639.4	2476.8	2575.6	3379.4
42.5°	3015.4	2986.7	2899.9	2938.7	2983.0	2973.8	3008.9	2936.9	2761.3	2826.0	3655.6
45°	3306.4	3236.2	3064.3	3075.4	3187.2	3205.7	3327.6	3310.1	3074.5	3115.2	3946.6
47.5°	3481.0	3420.0	3260.2	3251.0	3390.5	3413.5	3678.7	3711.9	3411.7	3463.4	4306.0
50°	3624.2	3581.7	3450.5	3463.4	3611.2	3634.3	4027.0	4098.1	3729.5	3820.0	4723.5
52.5°	3796.9	3736.0	3634.3	3695.3	3876.4	3904.1	4414.1	4490.7	4015.9	4211.7	5155.9
55°	3893.9	3869.0	3870.8	3964.2	4191.4	4229.3	4819.6	4806.7	4278.3	4547.1	5481.1
57.5°	4117.5	4108.3	4193.3	4228.4	4559.1	4608.1	5225.2	5114.3	4516.6	4806.7	5637.2
60°	4512.0	4488.9	4562.8	4616.4	5013.6	5082.9	5677.9	5415.5	4678.3	4999.8	5584.5
62.5°	5066.3	5037.6	5040.4	5125.4	5622.4	5695.4	6181.3	5666.8	4728.2	5029.3	5251.0
65°	5755.5	5713.9	5666.8	5782.2	6430.8	6491.7	6729.2	5849.7	4609.0	4744.8	4554.5
67.5°	6482.5	6448.3	6392.9	6634.9	7477.5	7514.4	7343.5	5834.0	4231.1	3983.6	3194.6
70°	6525.0	6533.3	6795.7	7671.5	8843.8	8853.1	7924.6	5518.0	3426.5	2582.1	1591.8
72.5°	6087.1	6073.3	6415.1	7860.9	9943.2	9974.6	8199.0	4470.4	2117.4	1287.8	746.5
75°	4944.3	4968.4	5327.7	6877.9	8522.3	8550.0	6683.9	2635.7	1006.1	630.1	477.6
77.5°	2128.5	2262.5	2971.0	4845.5	6103.7	6017.8	3445.0	1067.9	536.7	449.0	365.8
80°	614.3	667.0	1058.7	2304.0	3657.4	3592.8	1363.6	400.0	374.2	337.2	262.4
82.5°	198.6	219.9	388.0	917.4	1638.9	1637.0	517.3	236.5	244.8	229.1	169.1
85°	55.4	63.7	119.2	278.1	507.2	497.0	149.7	111.8	130.3	132.1	84.1
87.5°	0.0	0.0	0.9	1.8	1.8	1.8	3.7	16.6	37.9	48.0	34.2
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: P634050  
 CATALOG NUMBER: GWS-SA2F-830-U-T4FT-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8	1821.8
2.5°	1832.9	1830.1	1868.0	1897.5	1925.3	1943.7	1949.3	1953.0	1960.4	1964.1	1960.4
5°	1845.8	1859.7	1922.5	1968.7	2005.6	2027.8	2028.7	2026.9	2032.4	2027.8	2025.0
7.5°	1873.5	1900.3	1979.8	2028.7	2052.7	2053.7	2031.5	2005.6	1992.7	1981.6	1977.9
10°	1910.5	1950.2	2037.0	2069.4	2062.0	2027.8	1978.8	1938.2	1915.1	1898.5	1894.8
12.5°	1961.3	2005.6	2087.9	2086.9	2040.7	1979.8	1922.5	1873.5	1840.3	1820.9	1814.4
15°	2009.3	2065.7	2124.8	2081.4	2008.4	1934.5	1860.6	1795.0	1750.7	1720.2	1714.6
17.5°	2068.5	2128.5	2151.6	2063.8	1967.8	1872.6	1773.8	1687.8	1627.8	1591.8	1589.0
20°	2136.8	2190.4	2164.5	2033.3	1915.1	1790.4	1656.4	1560.3	1495.7	1460.6	1463.3
22.5°	2216.3	2255.1	2168.2	1991.8	1842.1	1674.0	1524.3	1431.9	1388.5	1370.0	1371.0
25°	2301.3	2326.2	2161.8	1935.4	1730.3	1531.7	1388.5	1346.0	1342.3	1337.7	1339.6
27.5°	2402.0	2396.4	2142.4	1856.0	1579.7	1366.3	1293.4	1304.4	1319.2	1317.4	1319.2
30°	2536.8	2484.2	2117.4	1746.0	1400.5	1227.8	1237.0	1268.4	1287.8	1289.7	1295.2
32.5°	2691.1	2581.2	2077.7	1596.4	1229.6	1150.2	1184.3	1222.2	1245.3	1249.9	1257.3
35°	2875.0	2692.0	2007.5	1409.8	1106.7	1104.0	1135.4	1161.3	1186.2	1188.0	1188.0
37.5°	3086.5	2802.9	1895.7	1203.7	1031.0	1064.3	1093.8	1099.4	1105.8	1100.3	1103.1
40°	3280.5	2910.1	1736.8	1016.2	969.1	1029.1	1054.1	1035.6	1015.3	1001.4	1004.2
42.5°	3443.1	2983.0	1526.2	885.0	906.3	997.7	1017.1	979.3	939.5	913.7	917.4
45°	3626.0	3050.5	1278.6	796.3	852.7	975.6	988.5	939.5	888.7	849.9	844.4
47.5°	3878.2	3188.1	1058.7	734.4	814.8	963.6	984.8	918.3	851.8	793.6	787.1
50°	4189.6	3383.1	874.9	693.8	797.3	957.1	983.9	895.2	815.7	747.4	742.8
52.5°	4529.5	3573.4	739.1	662.4	779.7	937.7	979.3	869.3	777.9	704.0	698.4
55°	4755.9	3648.2	647.6	632.8	751.1	907.2	960.8	844.4	720.6	653.1	644.8
57.5°	4822.4	3552.1	583.9	606.0	714.1	864.7	925.7	791.7	685.5	631.9	625.4
60°	4707.8	3310.1	544.1	583.9	673.5	810.2	864.7	761.2	657.8	609.7	605.1
62.5°	4384.5	2936.9	513.6	560.8	631.9	752.9	825.9	724.3	627.3	589.4	582.9
65°	3734.1	2408.4	488.7	536.7	592.2	698.4	783.4	687.3	594.0	565.4	558.0
67.5°	2611.7	1691.5	461.9	508.1	552.4	645.8	739.1	653.1	559.8	538.6	531.2
70°	1276.7	897.0	429.6	474.8	510.0	592.2	694.7	611.6	514.6	502.6	492.4
72.5°	607.9	501.6	391.7	429.6	451.8	521.0	620.8	551.5	461.0	435.1	417.6
75°	407.4	356.6	341.8	376.0	381.5	437.0	532.1	475.8	406.5	376.9	362.1
77.5°	308.6	272.5	287.3	317.8	306.7	359.4	437.9	424.0	366.8	340.0	332.6
80°	217.1	198.6	228.2	246.7	238.3	305.8	394.5	363.1	302.1	272.5	267.0
82.5°	136.7	133.0	168.1	170.9	173.7	242.0	324.3	285.5	234.7	193.1	179.2
85°	68.4	75.8	100.7	100.7	99.8	124.7	184.8	160.7	126.6	100.7	97.9
87.5°	23.1	32.3	43.4	35.1	26.8	21.2	24.0	29.6	31.4	30.5	30.5
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

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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			

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)