

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: P636494

Luminaire Tested: GWS-SA3F-830-U-SL3-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P636494  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-33)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3F-830-U-SL3-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

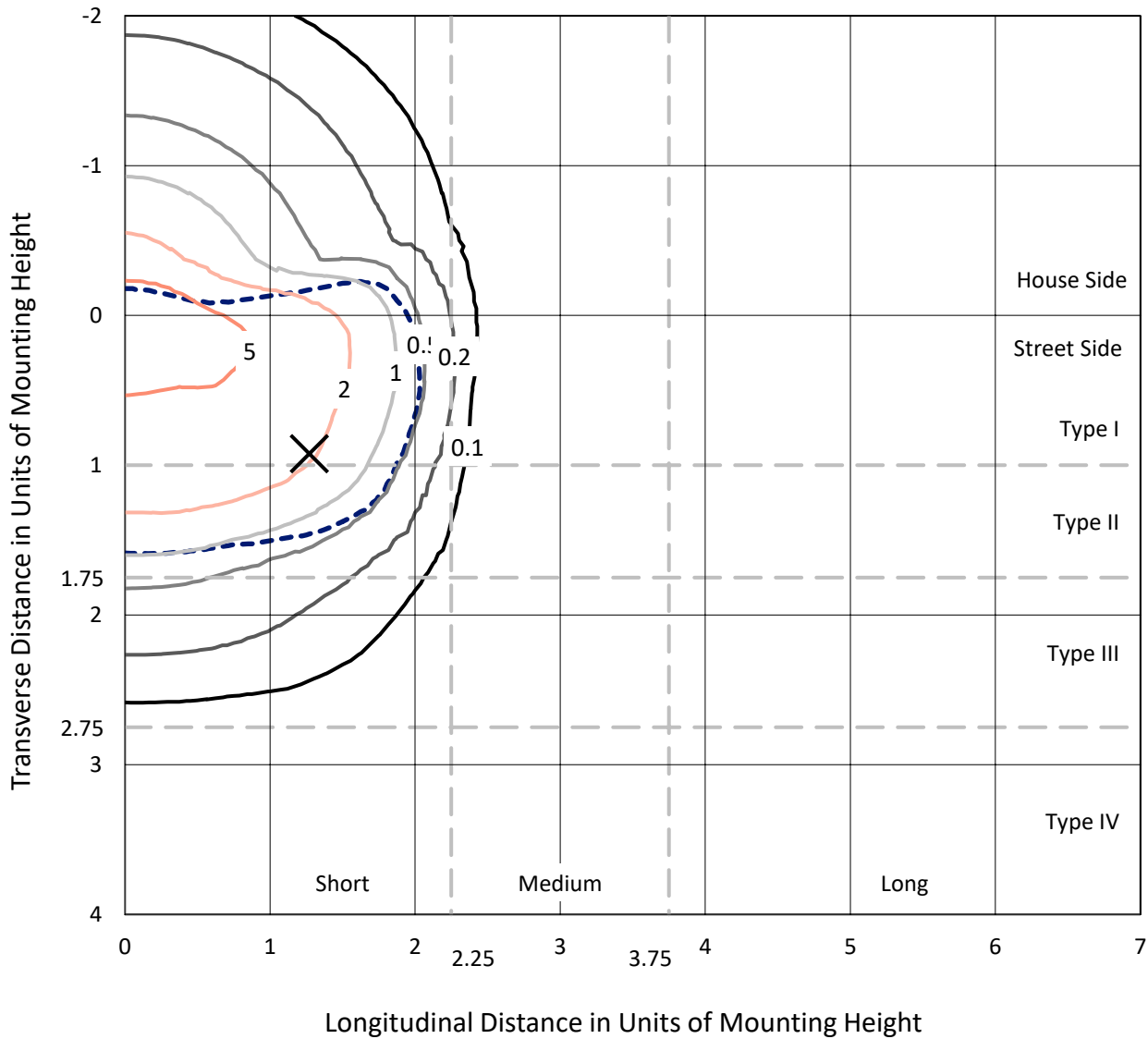
Lumens per Lamp: N/A  
Luminaire Lumens: 16266 lumens  
Efficiency: N/A  
Efficacy: 88.8 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 183.2  
Input Voltage (V): 120  
Input Current (Ain): 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: P636494  
 CATALOG NUMBER: GWS-SA3F-830-U-SL3-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

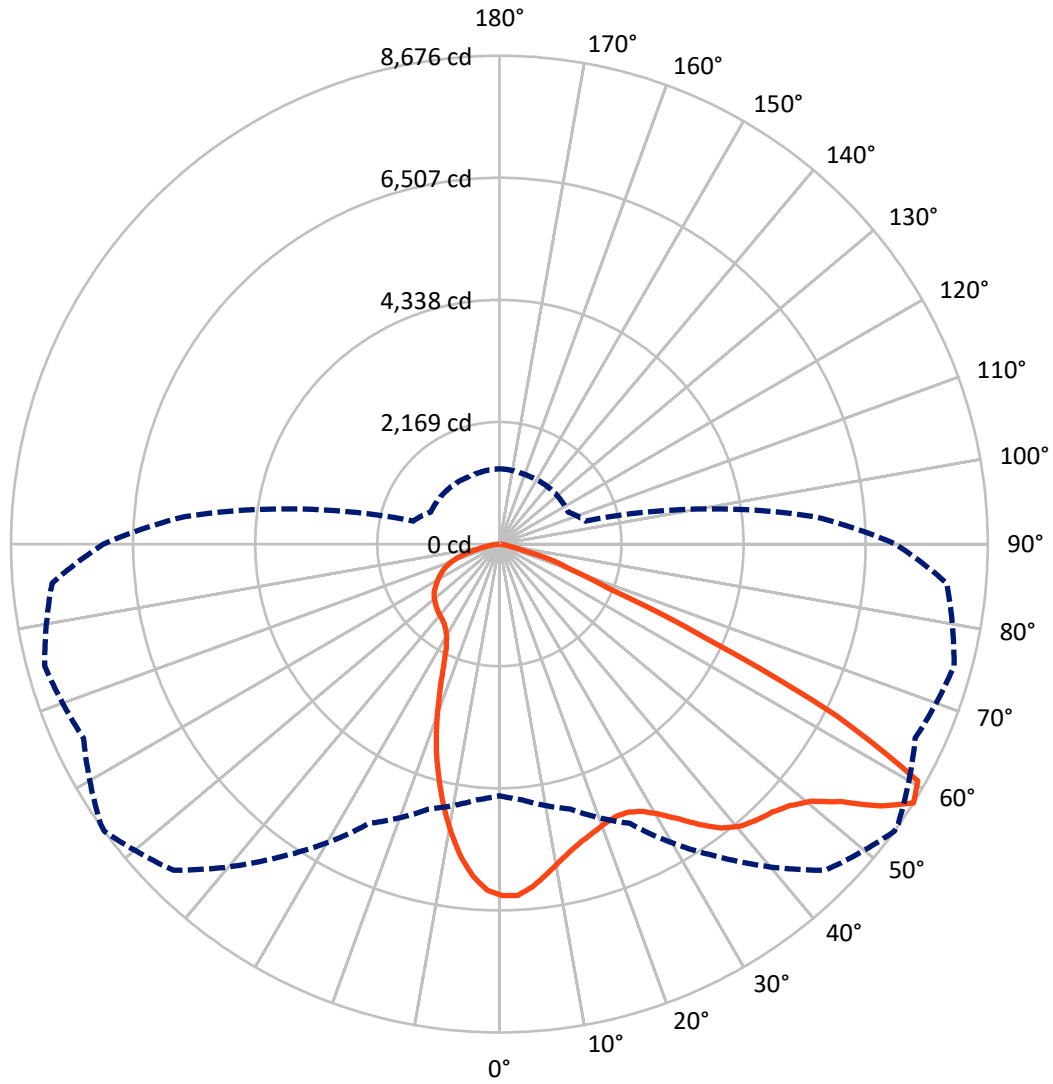
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4728.7	0.0	4728.7
	% Fixture	29.1	0.0	29.1
<b>Street Side</b>	Lumens	11537.3	0.0	11537.3
	% Fixture	70.9	0.0	70.9
<b>Total</b>	Lumens	16266.0	0.0	16266.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	548.9	3.4
10°-20°	1309.8	8.1
20°-30°	1812.5	11.1
30°-40°	2518.5	15.5
40°-50°	3326.2	20.4
50°-60°	3952.7	24.3
60°-70°	2189.9	13.5
70°-80°	545.3	3.4
80°-90°	62.0	0.4
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°	16266.0	100.0
0°-180°	16266.0	100.0

**Coefficient of Utilization**



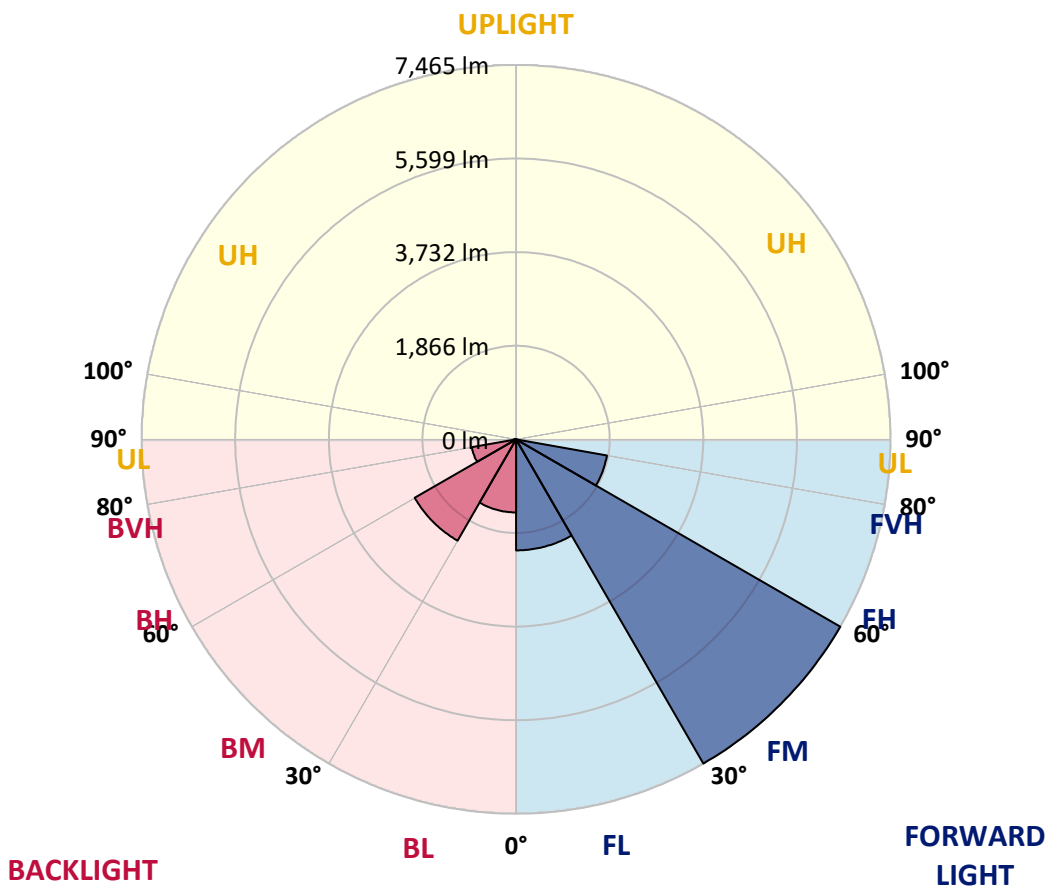
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2214.1	13.6			
FM (30°-60°)	7464.7	45.9			
FH (60°-80°)	1839.1	11.3			G2/5000
FVH (80°-90°)	19.4	0.1			G1/100
BL (0°-30°)	1457.2	9.0	B3/2500		
BM (30°-60°)	2332.8	14.3	B2/2500		
BH (60°-80°)	896.1	5.5	B2/1000		G2/1000
BVH (80°-90°)	42.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9
2.5°	6127.9	6140.5	6148.8	6178.1	6203.1	6225.4	6249.1	6249.1	6247.7	6243.5	6235.1
5°	5885.6	5899.6	5919.1	5959.4	6013.7	6052.7	6116.8	6122.4	6150.2	6161.3	6155.8
7.5°	5604.4	5608.6	5633.6	5686.5	5772.9	5842.5	5934.4	5945.5	6012.4	6051.3	6044.4
10°	5296.7	5282.7	5327.3	5405.3	5518.1	5635.0	5753.4	5763.1	5870.3	5944.1	5938.6
12.5°	5015.4	5016.8	5061.4	5156.0	5296.7	5441.5	5600.2	5622.5	5754.8	5849.4	5839.7
15°	4780.1	4785.7	4840.0	4947.2	5107.3	5280.0	5477.7	5498.6	5665.7	5791.0	5763.1
17.5°	4592.1	4597.7	4645.0	4767.6	4938.8	5147.7	5388.6	5409.5	5616.9	5765.9	5708.8
20°	4462.6	4459.8	4505.8	4622.7	4799.6	5026.5	5310.6	5341.2	5601.6	5775.7	5672.6
22.5°	4409.7	4408.3	4441.7	4537.8	4703.5	4933.3	5263.2	5305.0	5618.3	5818.8	5650.3
25°	4436.2	4430.6	4459.8	4530.8	4663.1	4897.0	5277.2	5321.7	5689.3	5907.9	5654.5
27.5°	4518.3	4511.4	4536.4	4600.5	4700.7	4934.6	5374.6	5426.2	5839.7	6070.8	5710.2
30°	4643.6	4639.5	4664.5	4725.8	4813.5	5060.0	5561.2	5619.7	6072.2	6324.3	5831.3
32.5°	4789.8	4782.9	4827.4	4898.4	5000.1	5288.3	5811.9	5888.4	6347.9	6650.1	6034.6
35°	4954.1	4948.6	5009.8	5112.9	5259.1	5605.8	6115.4	6198.9	6629.2	7019.1	6304.8
37.5°	5114.3	5114.3	5232.6	5385.8	5569.6	5951.1	6400.8	6453.7	6824.1	7346.3	6594.4
40°	5256.3	5264.6	5442.9	5672.6	5906.5	6263.0	6588.8	6633.4	6910.5	7571.8	6846.4
42.5°	5413.6	5420.6	5628.1	5928.8	6207.3	6515.0	6703.0	6725.3	6927.2	7684.6	7024.6
45°	5538.9	5548.7	5806.3	6127.9	6469.1	6704.4	6793.5	6813.0	6950.8	7745.9	7154.1
47.5°	5604.4	5618.3	5913.5	6288.1	6645.9	6874.2	6942.5	6950.8	7048.3	7853.1	7310.1
50°	5593.2	5621.1	5953.9	6367.4	6776.8	7045.5	7182.0	7195.9	7247.4	8010.4	7492.5
52.5°	5692.1	5704.6	6040.2	6462.1	6963.4	7361.6	7598.3	7617.8	7594.1	8128.8	7601.1
55°	5527.8	5587.7	5933.0	6448.2	7247.4	7850.3	8215.1	8205.4	7908.8	8261.1	7782.1
57.5°	4471.0	4558.7	4874.8	5473.5	6779.6	8192.8	8676.0	8652.3	8152.5	8362.7	7978.4
60°	3095.3	3109.2	3394.7	3819.3	5232.6	7237.7	8540.9	8592.5	8197.0	8234.6	7615.0
62.5°	2475.7	2471.5	2498.0	2509.1	3327.8	5087.8	6742.0	6929.9	6810.2	6416.2	5396.9
65°	2113.7	2129.0	2206.9	2166.6	2172.1	2865.5	4028.2	4054.7	3971.1	3829.1	2854.4
67.5°	1654.2	1680.6	1818.5	1975.8	1925.7	1844.9	2090.0	2077.5	1637.5	1267.1	1047.1
70°	1035.9	1052.6	1200.2	1551.1	1676.4	1514.9	1343.7	1338.1	877.2	721.3	790.9
72.5°	604.3	607.1	648.9	864.7	1112.5	1035.9	988.6	952.4	563.9	575.1	630.8
75°	332.8	332.8	331.4	373.2	438.6	388.5	375.9	366.2	377.3	427.5	469.2
77.5°	69.6	71.0	75.2	98.9	128.1	155.9	196.3	197.7	246.5	285.4	318.9
80°	32.0	33.4	41.8	52.9	68.2	90.5	119.7	121.1	149.0	179.6	201.9
82.5°	16.7	18.1	22.3	27.8	36.2	47.3	66.8	66.8	89.1	105.8	119.7
85°	5.6	5.6	8.4	11.1	15.3	19.5	26.5	26.5	39.0	51.5	59.9
87.5°	0.0	0.0	0.0	0.0	1.4	2.8	5.6	5.6	7.0	8.4	13.9
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: P636494

CATALOG NUMBER: GWS-SA3F-830-U-SL3-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9	6244.9
2.5°	6217.0	6173.9	6175.3	6183.6	6157.2	6116.8	6090.3	6056.9	6036.0	6031.9	6047.2
5°	6127.9	6077.8	6043.0	6006.8	5931.6	5842.5	5772.9	5715.8	5678.2	5664.3	5647.5
7.5°	6005.4	5940.0	5852.2	5750.6	5614.1	5455.4	5344.0	5239.6	5167.2	5146.3	5136.5
10°	5882.9	5788.2	5632.2	5442.9	5215.9	5001.5	4799.6	4645.0	4522.5	4452.9	4475.2
12.5°	5756.2	5639.2	5395.5	5104.5	4788.4	4465.4	4200.9	3944.7	3746.9	3648.1	3618.8
15°	5644.8	5486.0	5146.3	4752.2	4331.7	3925.2	3542.3	3157.9	2907.3	2770.9	2733.3
17.5°	5550.1	5344.0	4883.1	4393.0	3890.3	3311.1	2840.5	2484.0	2312.8	2237.6	2232.0
20°	5456.8	5204.8	4622.7	4005.9	3380.7	2731.9	2311.4	2144.3	2083.0	2056.6	2055.2
22.5°	5373.2	5058.6	4348.4	3618.8	2873.9	2296.1	2064.9	1992.5	1975.8	1975.8	1973.0
25°	5302.2	4912.4	4067.2	3208.1	2415.8	2044.0	1936.8	1906.2	1913.1	1925.7	1927.1
27.5°	5273.0	4798.2	3795.7	2786.2	2099.7	1897.8	1849.1	1844.9	1864.4	1883.9	1886.7
30°	5303.6	4720.2	3517.2	2382.4	1910.4	1808.7	1786.4	1794.8	1818.5	1838.0	1838.0
32.5°	5398.3	4681.2	3233.1	2087.2	1800.4	1746.1	1739.1	1747.5	1765.6	1776.7	1778.1
35°	5558.4	4696.5	2939.3	1888.1	1729.4	1700.1	1698.7	1704.3	1711.3	1718.2	1719.6
37.5°	5760.3	4764.8	2624.7	1772.5	1683.4	1666.7	1663.9	1662.5	1663.9	1663.9	1665.3
40°	5958.1	4867.8	2343.4	1704.3	1651.4	1637.5	1630.5	1620.7	1619.4	1616.6	1615.2
42.5°	6104.3	4947.2	2119.2	1655.6	1622.1	1605.4	1597.1	1581.8	1580.4	1579.0	1577.6
45°	6214.3	5014.0	1932.6	1608.2	1591.5	1576.2	1558.1	1544.2	1546.9	1549.7	1549.7
47.5°	6338.2	5072.5	1796.2	1563.7	1553.9	1538.6	1516.3	1506.6	1516.3	1526.1	1526.1
50°	6488.6	5154.6	1684.8	1519.1	1514.9	1496.8	1477.3	1473.2	1484.3	1498.2	1498.2
52.5°	6598.6	5225.7	1605.4	1474.5	1474.5	1450.9	1434.2	1432.8	1445.3	1459.2	1460.6
55°	6804.6	5391.3	1577.6	1423.0	1417.5	1399.4	1386.8	1377.1	1392.4	1404.9	1404.9
57.5°	7037.2	5611.3	1584.5	1349.2	1342.3	1336.7	1327.0	1315.8	1320.0	1333.9	1335.3
60°	6544.3	5185.3	1508.0	1275.4	1271.3	1268.5	1255.9	1236.4	1242.0	1253.2	1254.5
62.5°	4571.2	3446.2	1219.7	1183.5	1197.5	1196.1	1179.4	1157.1	1158.5	1173.8	1173.8
65°	2372.6	1864.4	1070.8	1100.0	1120.9	1112.5	1084.7	1065.2	1062.4	1081.9	1077.7
67.5°	1023.4	1017.8	974.7	1012.3	1034.5	1016.4	987.2	955.2	958.0	964.9	959.4
70°	824.3	849.4	867.5	907.8	925.9	892.5	860.5	842.4	827.1	825.7	815.9
72.5°	658.6	693.4	733.8	775.6	781.1	747.7	707.3	690.6	667.0	665.6	655.8
75°	495.7	524.9	557.0	590.4	590.4	558.3	531.9	523.5	495.7	487.3	479.0
77.5°	338.4	356.5	381.5	389.9	398.2	385.7	359.2	345.3	313.3	304.9	293.8
80°	213.0	225.6	240.9	246.5	254.8	239.5	218.6	203.3	181.0	174.0	168.5
82.5°	128.1	136.5	146.2	149.0	155.9	144.8	125.3	114.2	101.6	96.1	91.9
85°	65.4	69.6	75.2	76.6	75.2	64.1	57.1	51.5	43.2	41.8	39.0
87.5°	16.7	19.5	20.9	19.5	18.1	13.9	9.7	7.0	2.8	2.8	1.4
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**

$\lambda$ (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)