

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: P635995

Luminaire Tested: GWS-SA3E-830-U-SL2-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-29)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3E-830-U-SL2-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

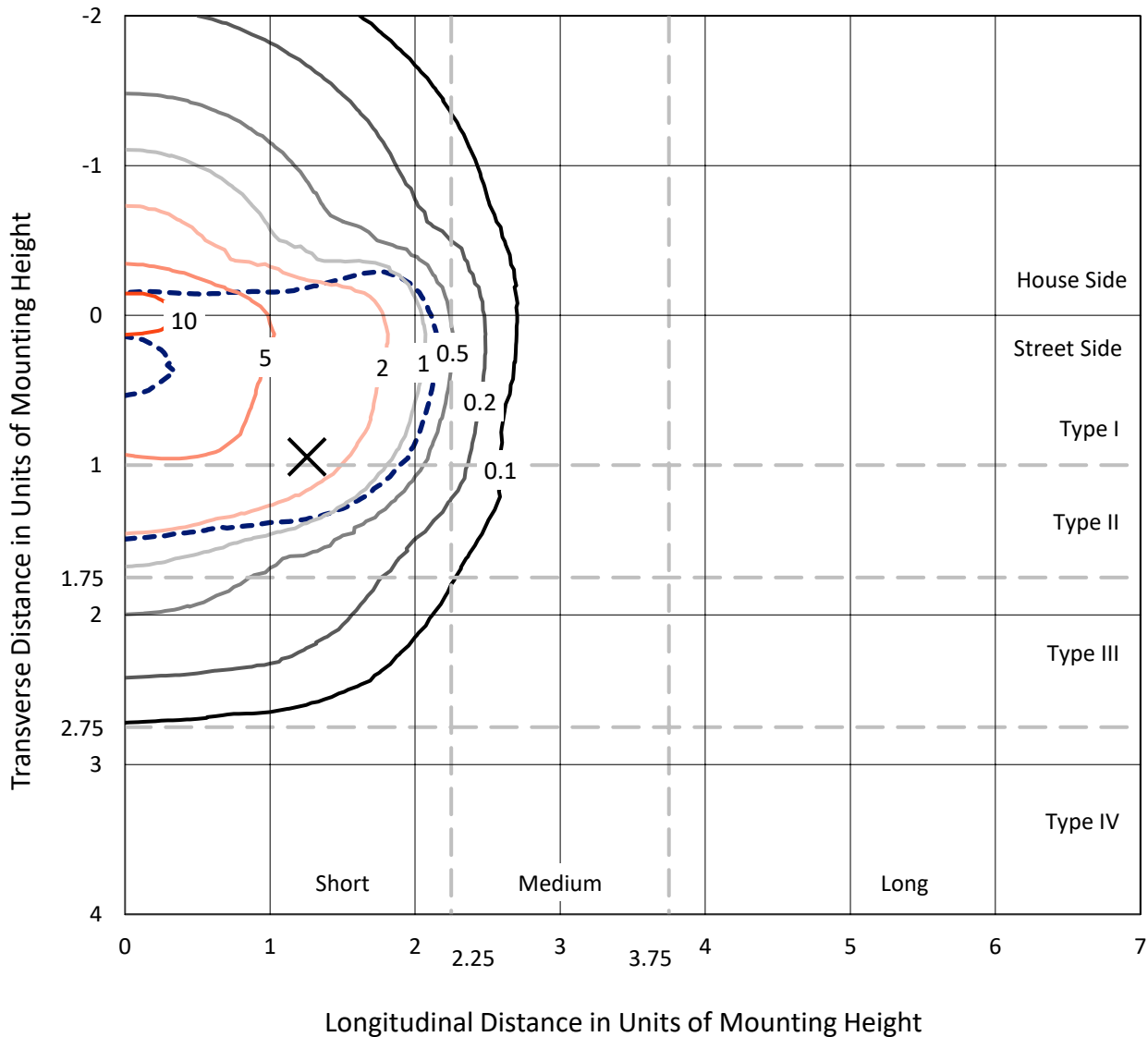
Lumens per Lamp: N/A  
Luminaire Lumens: 14879.3 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 159.2  
Input Voltage (V): 120  
Input Current (Ain): 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: P635995  
 CATALOG NUMBER: GWS-SA3E-830-U-SL2-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

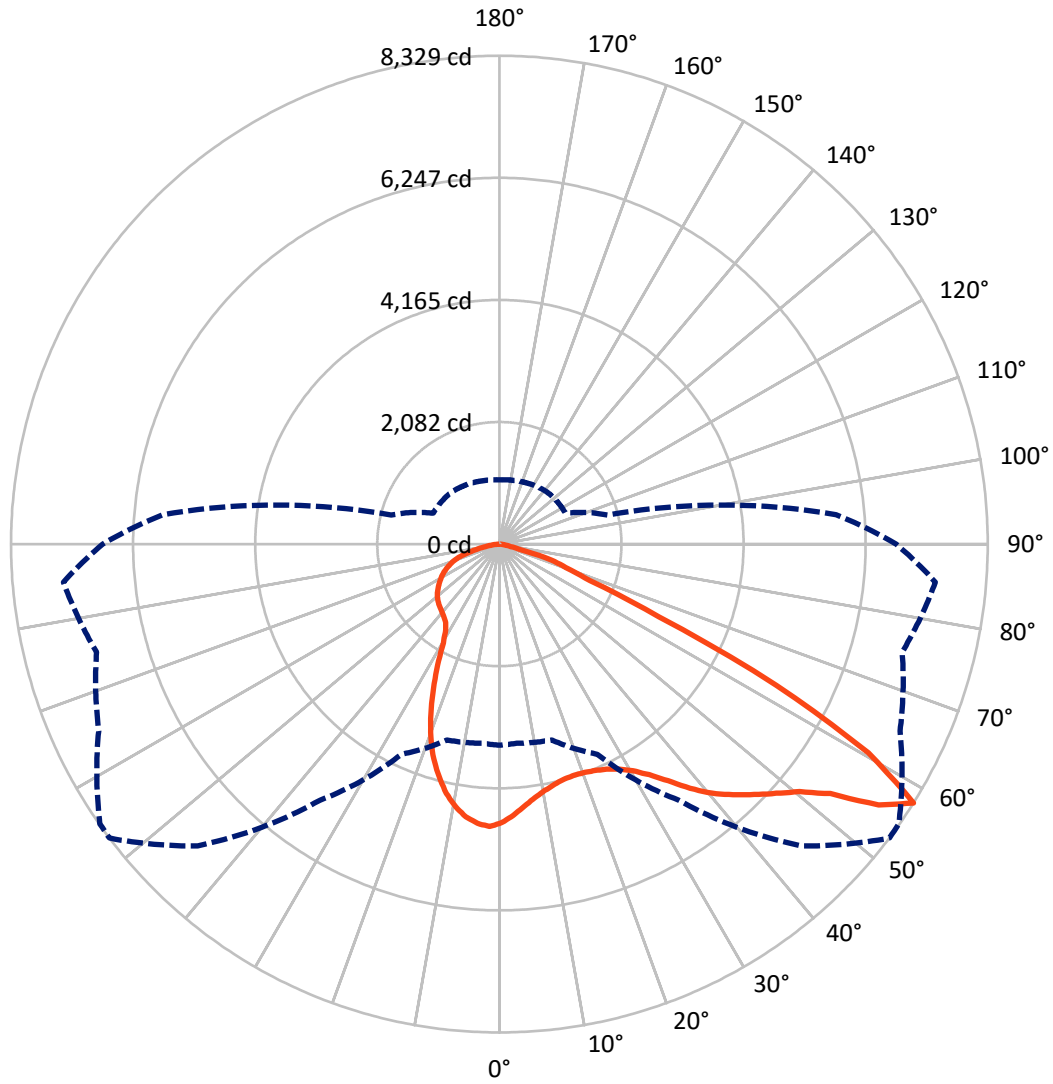
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4652.2	0.0	4652.2
	% Fixture	31.3	0.0	31.3
<b>Street Side</b>	Lumens	10227.1	0.0	10227.1
	% Fixture	68.7	0.0	68.7
<b>Total</b>	Lumens	14879.3	0.0	14879.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	429.7	2.9
10°-20°	1127.2	7.6
20°-30°	1660.8	11.2
30°-40°	2324.7	15.6
40°-50°	3056.0	20.5
50°-60°	3583.2	24.1
60°-70°	2110.9	14.2
70°-80°	525.1	3.5
80°-90°	61.6	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°	14879.3	100.0
0°-180°	14879.3	100.0

**Coefficient of Utilization**



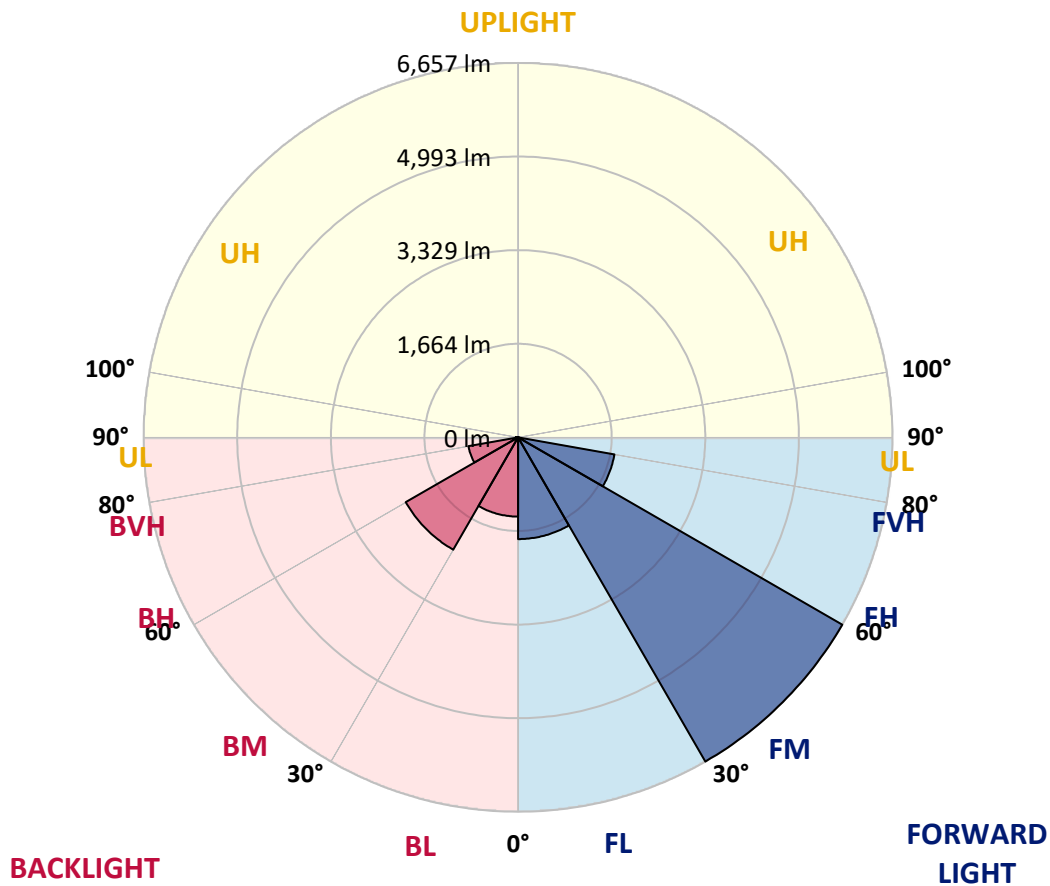
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1809.0	12.2			
FM (30°-60°)	6657.1	44.7			
FH (60°-80°)	1740.3	11.7			G1/1800
FVH (80°-90°)	20.6	0.1			G1/100
BL (0°-30°)	1408.7	9.5	B3/2500		
BM (30°-60°)	2306.8	15.5	B2/2500		
BH (60°-80°)	895.7	6.0	B2/1000		G2/1000
BVH (80°-90°)	41.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	53°	55°	65°	75°	85°
0°	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4
2.5°	4478.4	4490.9	4493.4	4532.2	4534.7	4591.1	4628.6	4621.1	4659.9	4707.5	4745.1
5°	4264.2	4265.5	4278.0	4324.3	4349.4	4423.3	4485.9	4485.9	4561.0	4658.7	4742.6
7.5°	4087.6	4086.4	4097.6	4149.0	4190.3	4279.2	4364.4	4374.4	4479.6	4622.4	4758.9
10°	3923.6	3932.3	3944.9	4007.5	4060.1	4170.3	4271.7	4288.0	4420.7	4597.3	4781.4
12.5°	3818.4	3819.6	3838.4	3908.5	3976.2	4093.9	4200.3	4220.4	4373.2	4573.5	4797.7
15°	3750.7	3752.0	3772.0	3849.7	3928.6	4047.5	4156.5	4179.0	4345.6	4569.8	4829.0
17.5°	3720.7	3719.4	3738.2	3815.9	3902.3	4026.3	4142.7	4170.3	4358.1	4598.6	4884.1
20°	3720.7	3721.9	3732.0	3802.1	3889.8	4021.3	4156.5	4190.3	4407.0	4663.7	4969.3
22.5°	3773.3	3778.3	3783.3	3830.9	3899.8	4028.8	4192.8	4237.9	4512.2	4772.7	5080.7
25°	3876.0	3877.2	3882.2	3921.1	3952.4	4050.1	4252.9	4320.6	4676.2	4931.7	5221.0
27.5°	4013.7	4031.3	4036.3	4061.3	4061.3	4102.7	4346.9	4444.5	4897.9	5160.9	5400.1
30°	4206.6	4212.9	4221.6	4249.2	4219.1	4201.6	4484.6	4609.8	5154.6	5437.6	5615.5
32.5°	4375.7	4389.4	4437.0	4482.1	4428.3	4373.2	4687.5	4835.3	5401.3	5725.7	5844.7
35°	4519.7	4553.5	4644.9	4745.1	4707.5	4652.4	4956.7	5110.8	5604.2	5932.3	6047.5
37.5°	4693.8	4720.1	4845.3	5008.1	5041.9	5015.6	5284.9	5395.1	5739.5	5984.9	6157.7
40°	4870.3	4910.4	5072.0	5297.4	5426.4	5445.2	5587.9	5661.8	5785.8	5882.2	6136.4
42.5°	5050.7	5119.5	5341.2	5604.2	5833.4	5876.0	5843.4	5874.7	5770.8	5740.7	6037.5
45°	5271.1	5352.5	5603.0	5938.6	6240.4	6306.8	6093.9	6065.1	5768.3	5686.9	5976.1
47.5°	5531.6	5613.0	5852.2	6242.9	6628.6	6677.5	6350.6	6298.0	5855.9	5769.5	6058.8
50°	5762.0	5818.4	6032.5	6469.6	6990.5	7019.3	6633.6	6569.8	6073.8	5998.7	6316.8
52.5°	5527.8	5521.5	5747.0	6285.5	7178.4	7525.3	7069.4	7008.1	6494.6	6379.4	6716.3
55°	4690.0	4618.6	4820.2	5350.0	6653.7	7974.9	7850.9	7728.2	7055.7	6762.6	7090.7
57.5°	3428.9	3408.9	3457.7	3954.9	5329.9	7278.6	8329.3	8318.0	7540.3	7113.3	7463.9
60°	2681.3	2651.2	2521.0	2534.7	3633.0	5685.6	7228.5	7560.4	7840.9	7323.7	7724.4
62.5°	2380.7	2358.1	2290.5	2103.9	2164.0	3812.1	5298.6	5603.0	6851.5	6468.3	6634.9
65°	1971.2	1964.9	2021.3	2013.8	1813.4	2105.2	2990.6	3297.4	4308.0	4361.9	4308.0
67.5°	1432.7	1421.4	1564.2	1845.9	1745.8	1589.2	1666.9	1773.3	2209.1	1983.7	1785.8
70°	931.7	915.5	998.1	1333.7	1562.9	1385.1	1201.0	1183.5	1214.8	755.2	816.5
72.5°	624.9	606.1	604.9	733.9	944.3	933.0	930.5	921.7	822.8	596.1	661.2
75°	348.1	333.1	329.4	316.8	338.1	344.4	366.9	379.5	410.8	452.1	500.9
77.5°	58.9	57.6	72.6	92.7	127.7	164.1	202.9	214.1	264.2	313.1	344.4
80°	32.6	33.8	43.8	53.9	71.4	97.7	125.2	132.7	162.8	189.1	214.1
82.5°	17.5	17.5	22.5	28.8	38.8	51.3	67.6	73.9	93.9	110.2	127.7
85°	6.3	6.3	8.8	11.3	16.3	21.3	26.3	30.1	41.3	56.4	63.9
87.5°	0.0	0.0	0.0	0.0	1.3	2.5	5.0	5.0	6.3	11.3	16.3
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-SA3E-830-U-SL2-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4	4751.4
2.5°	4776.4	4742.6	4788.9	4810.2	4817.7	4822.7	4790.2	4767.6	4760.1	4736.3	4722.6
5°	4793.9	4771.4	4815.2	4815.2	4783.9	4751.4	4685.0	4638.7	4606.1	4567.3	4561.0
7.5°	4824.0	4807.7	4831.5	4782.7	4703.8	4616.1	4500.9	4410.7	4338.1	4290.5	4291.8
10°	4864.1	4844.0	4825.3	4716.3	4572.3	4410.7	4234.1	4102.7	3982.4	3927.3	3897.3
12.5°	4890.4	4861.6	4782.7	4602.3	4390.7	4174.0	3924.8	3729.5	3555.4	3476.5	3470.2
15°	4922.9	4870.3	4712.5	4454.6	4160.3	3864.7	3544.1	3272.4	3036.9	2914.2	2907.9
17.5°	4965.5	4879.1	4628.6	4285.5	3917.3	3481.5	3078.2	2736.4	2485.9	2390.7	2407.0
20°	5025.6	4889.1	4533.5	4097.6	3615.5	3045.7	2543.5	2229.2	2132.7	2126.5	2113.9
22.5°	5093.3	4895.4	4428.3	3887.3	3249.8	2581.1	2101.4	1967.4	1966.2	1997.5	2005.0
25°	5169.6	4900.4	4309.3	3641.8	2854.1	2117.7	1858.5	1818.4	1849.7	1908.6	1916.1
27.5°	5267.3	4910.4	4165.3	3372.5	2433.3	1829.7	1724.5	1714.4	1752.0	1807.1	1804.6
30°	5411.3	4946.7	4012.5	3063.2	2001.2	1693.2	1643.1	1644.3	1659.3	1685.6	1689.4
32.5°	5557.9	5003.1	3863.5	2715.1	1753.3	1615.5	1593.0	1590.5	1590.5	1601.7	1604.2
35°	5696.9	5067.0	3701.9	2351.9	1633.0	1570.4	1555.4	1547.9	1544.1	1541.6	1537.9
37.5°	5774.5	5098.3	3544.1	1993.7	1569.2	1540.4	1525.3	1515.3	1501.6	1491.5	1489.0
40°	5740.7	5061.9	3361.3	1725.7	1530.4	1511.6	1494.0	1480.3	1461.5	1452.7	1447.7
42.5°	5628.0	4949.2	3162.1	1599.2	1499.0	1480.3	1459.0	1436.4	1423.9	1416.4	1415.1
45°	5509.0	4812.7	2921.7	1525.3	1469.0	1446.4	1421.4	1396.4	1382.6	1378.8	1377.6
47.5°	5505.3	4745.1	2666.2	1466.5	1432.7	1410.1	1378.8	1353.8	1338.7	1333.7	1328.7
50°	5670.6	4814.0	2378.2	1415.1	1395.1	1371.3	1336.2	1308.7	1289.9	1283.6	1282.4
52.5°	6013.7	5073.2	2120.2	1363.8	1345.0	1317.5	1288.7	1261.1	1238.6	1227.3	1226.0
55°	6384.4	5402.6	1959.9	1311.2	1286.1	1262.4	1236.1	1206.0	1181.0	1163.4	1160.9
57.5°	6767.6	5762.0	1911.1	1244.8	1226.0	1209.8	1178.4	1145.9	1117.1	1100.8	1097.0
60°	7083.2	6071.3	2002.5	1174.7	1164.7	1143.4	1114.6	1083.3	1063.2	1050.7	1048.2
62.5°	5929.8	4943.0	1616.8	1098.3	1098.3	1075.8	1043.2	1020.7	1006.9	998.1	995.6
65°	3763.3	3060.7	1103.3	1021.9	1020.7	990.6	963.0	948.0	941.8	928.0	925.5
67.5°	1639.3	1398.9	943.0	944.3	939.3	906.7	879.1	867.9	855.3	840.3	839.1
70°	850.3	866.6	844.1	857.9	849.1	810.3	784.0	766.4	740.1	725.1	726.4
72.5°	686.3	703.8	728.9	750.1	731.4	700.1	658.7	637.4	603.6	587.3	588.6
75°	523.5	542.3	566.1	588.6	573.6	534.7	508.4	487.2	448.3	429.6	433.3
77.5°	360.7	370.7	399.5	398.2	393.2	382.0	343.1	318.1	278.0	255.5	258.0
80°	224.2	230.4	244.2	250.5	248.0	232.9	201.6	182.8	159.0	145.3	146.5
82.5°	135.3	139.0	151.5	152.8	151.5	140.3	116.5	102.7	87.7	80.1	80.1
85°	68.9	71.4	78.9	78.9	71.4	60.1	53.9	47.6	38.8	35.1	35.1
87.5°	18.8	18.8	23.8	20.0	16.3	15.0	7.5	6.3	2.5	1.3	1.3
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 $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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)