

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: P639955

Luminaire Tested: GWS-SA5C-830-U-SL2-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P639955  
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-SA5C-830-U-SL2-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (80) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

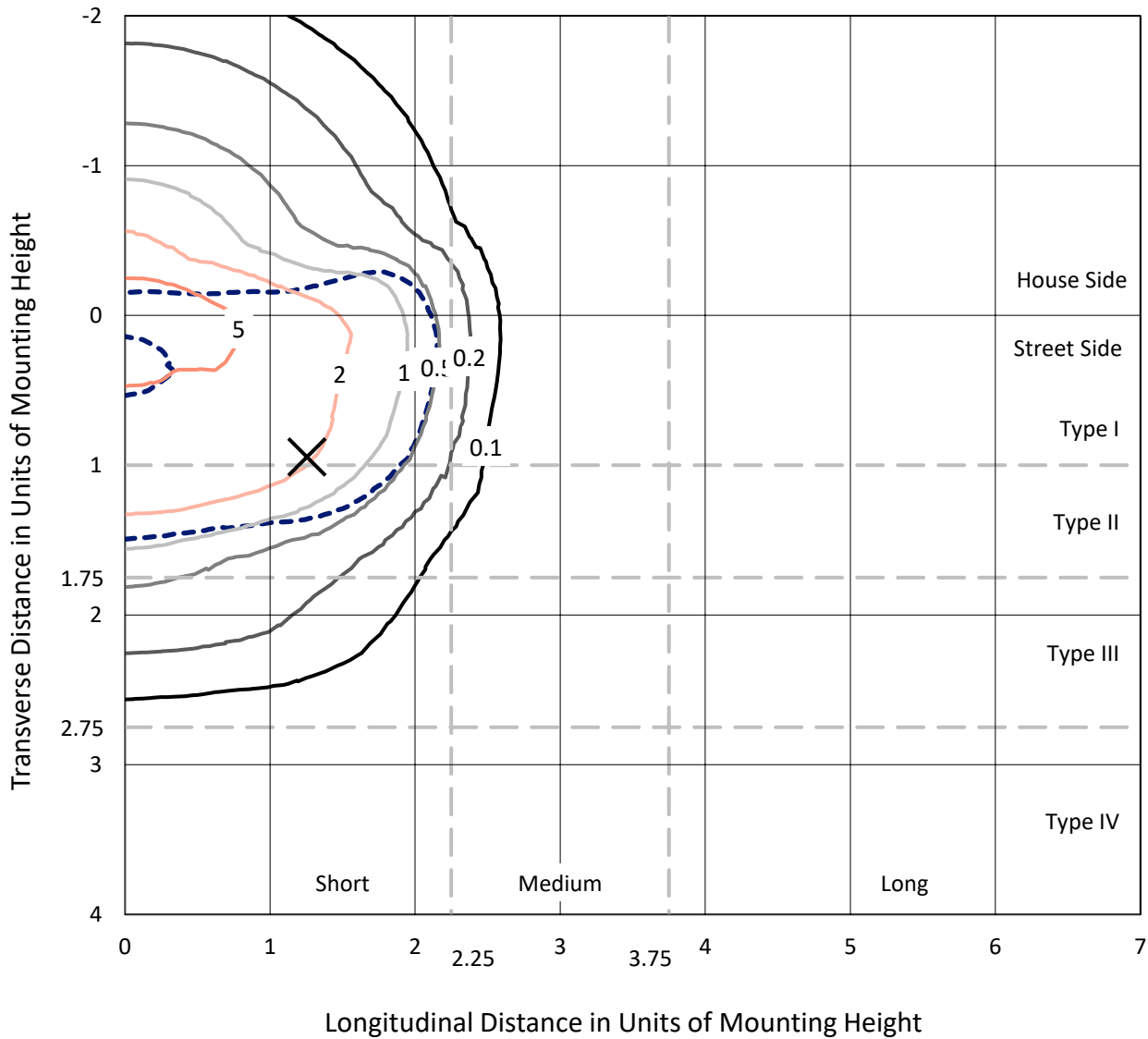
Lumens per Lamp: N/A  
Luminaire Lumens: 16111.4 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 157.5  
Input Voltage (V): 120  
Input Current (Ain): 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: P639955  
 CATALOG NUMBER: GWS-SA5C-830-U-SL2-W-GRSWH

### Iso-Footcandle Lines of Horizontal Illumination

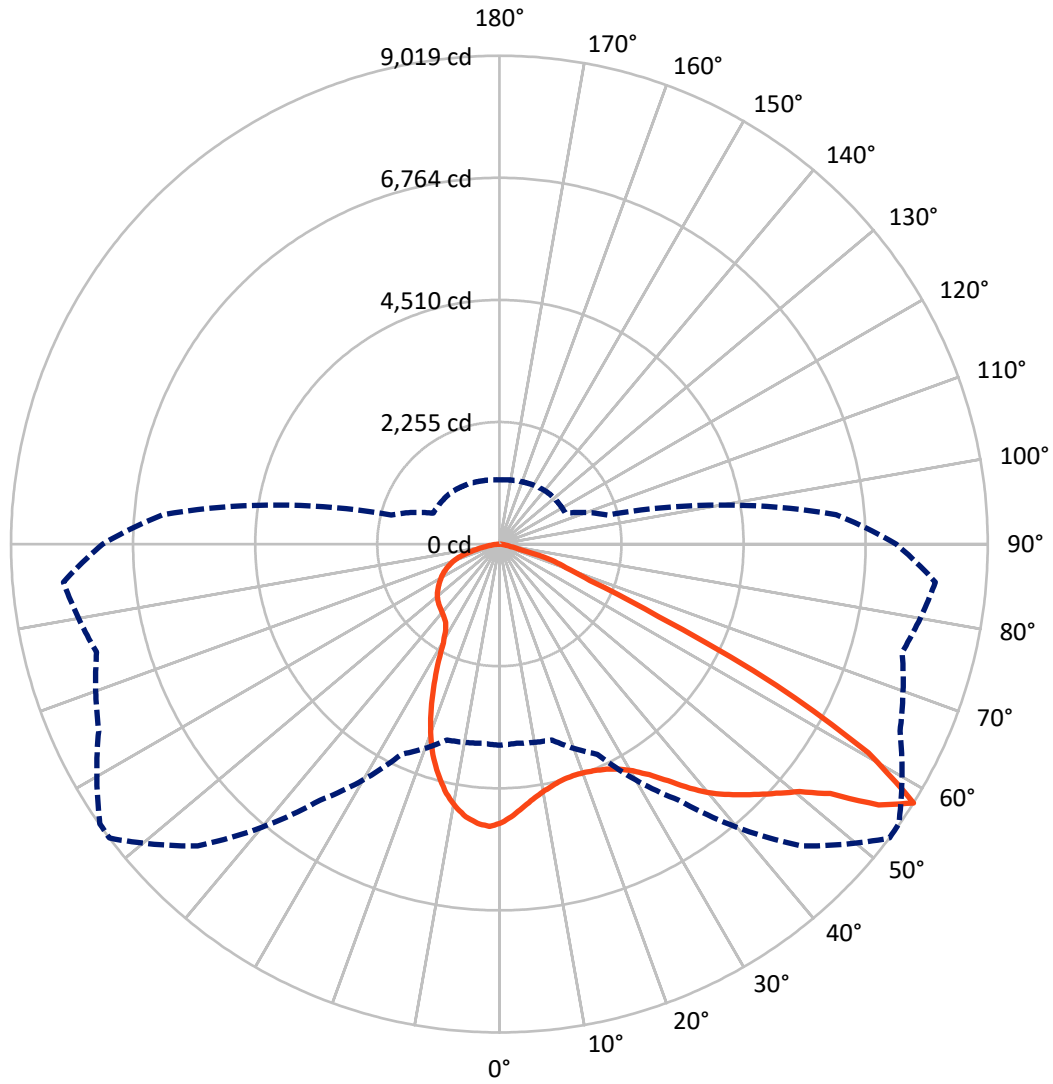
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 fc  
 Type II - Short - N/A

REPORT NUMBER: P639955  
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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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CATALOG NUMBER: GWS-SA5C-830-U-SL2-W-GRSWH

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5037.4	0.0	5037.4
	% Fixture	31.3	0.0	31.3
<b>Street Side</b>	Lumens	11074.0	0.0	11074.0
	% Fixture	68.7	0.0	68.7
<b>Total</b>	Lumens	16111.4	0.0	16111.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	465.2	2.9
10°-20°	1220.6	7.6
20°-30°	1798.4	11.2
30°-40°	2517.2	15.6
40°-50°	3309.1	20.5
50°-60°	3879.9	24.1
60°-70°	2285.7	14.2
70°-80°	568.6	3.5
80°-90°	66.7	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°	16111.4	100.0
0°-180°	16111.4	100.0

**Coefficient of Utilization**



REPORT NUMBER: P639955

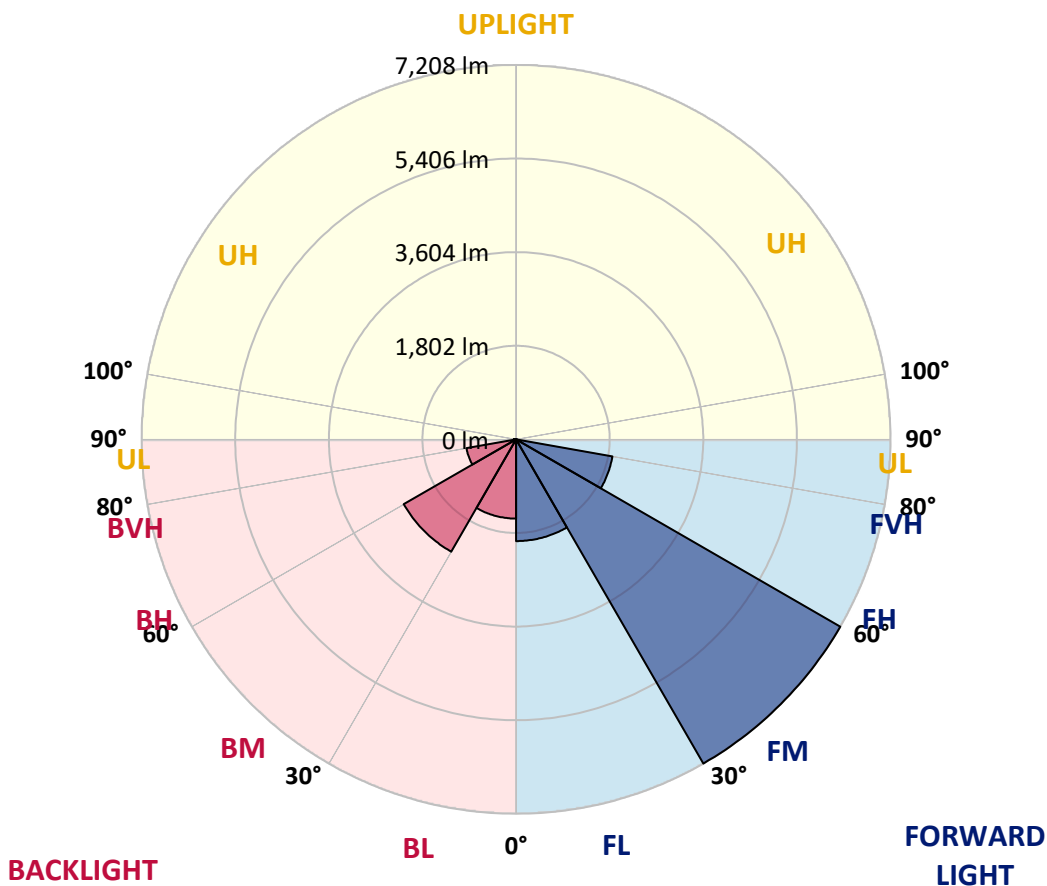
CATALOG NUMBER: GWS-SA5C-830-U-SL2-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1958.8	12.2			
FM (30°-60°)	7208.4	44.7			
FH (60°-80°)	1884.4	11.7			G2/5000
FVH (80°-90°)	22.3	0.1			G1/100
BL (0°-30°)	1525.4	9.5	B3/2500		
BM (30°-60°)	2497.8	15.5	B2/2500		
BH (60°-80°)	969.9	6.0	B2/1000		G2/1000
BVH (80°-90°)	44.4	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





REPORT NUMBER: P639955

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	53°	55°	65°	75°	85°
0°	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8
2.5°	4849.2	4862.7	4865.5	4907.5	4910.2	4971.2	5011.9	5003.8	5045.8	5097.3	5138.0
5°	4617.3	4618.7	4632.2	4682.4	4709.5	4789.5	4857.3	4857.3	4938.7	5044.5	5135.3
7.5°	4426.1	4424.7	4437.0	4492.6	4537.3	4633.6	4725.8	4736.6	4850.5	5005.1	5152.9
10°	4248.5	4258.0	4271.5	4339.3	4396.3	4515.6	4625.4	4643.1	4786.8	4978.0	5177.4
12.5°	4134.6	4135.9	4156.3	4232.2	4305.4	4432.9	4548.1	4569.8	4735.3	4952.2	5195.0
15°	4061.3	4062.7	4084.4	4168.5	4253.9	4382.7	4500.7	4525.1	4705.4	4948.2	5228.9
17.5°	4028.8	4027.4	4047.8	4131.8	4225.4	4359.7	4485.8	4515.6	4719.0	4979.4	5288.5
20°	4028.8	4030.1	4041.0	4116.9	4211.9	4354.2	4500.7	4537.3	4771.9	5049.9	5380.8
22.5°	4085.7	4091.2	4096.6	4148.1	4222.7	4362.4	4540.0	4588.8	4885.8	5167.9	5501.4
25°	4196.9	4198.3	4203.7	4245.8	4279.7	4385.4	4605.1	4678.3	5063.4	5340.1	5653.3
27.5°	4346.1	4365.1	4370.5	4397.6	4397.6	4442.4	4706.8	4812.6	5303.5	5588.2	5847.2
30°	4554.9	4561.7	4571.2	4601.0	4568.5	4549.5	4856.0	4991.6	5581.4	5887.9	6080.5
32.5°	4738.0	4752.9	4804.4	4853.3	4794.9	4735.3	5075.6	5235.7	5848.6	6199.8	6328.6
35°	4893.9	4930.6	5029.5	5138.0	5097.3	5037.7	5367.2	5534.0	6068.3	6423.5	6548.3
37.5°	5082.4	5110.9	5246.5	5422.8	5459.4	5430.9	5722.5	5841.8	6214.7	6480.5	6667.6
40°	5273.6	5317.0	5492.0	5736.0	5875.7	5896.0	6050.6	6130.6	6264.9	6369.3	6644.6
42.5°	5468.9	5543.5	5783.5	6068.3	6316.4	6362.5	6327.3	6361.2	6248.6	6216.1	6537.5
45°	5707.6	5795.7	6066.9	6430.3	6757.1	6829.0	6598.5	6567.3	6245.9	6157.8	6471.0
47.5°	5989.6	6077.8	6336.8	6759.8	7177.5	7230.4	6876.5	6819.5	6340.8	6247.3	6560.5
50°	6239.1	6300.1	6532.0	7005.3	7569.4	7600.6	7182.9	7113.8	6576.8	6495.4	6839.9
52.5°	5985.5	5978.8	6222.9	6806.0	7772.8	8148.4	7654.8	7588.4	7032.4	6907.7	7272.4
55°	5078.4	5001.1	5219.4	5793.0	7204.6	8635.2	8501.0	8368.1	7639.9	7322.6	7677.9
57.5°	3712.8	3691.1	3744.0	4282.4	5771.3	7881.3	9019.0	9006.8	8164.7	7702.3	8082.0
60°	2903.3	2870.7	2729.7	2744.6	3933.9	6156.4	7827.0	8186.4	8490.1	7930.1	8364.0
62.5°	2577.8	2553.4	2480.2	2278.1	2343.2	4127.8	5737.4	6066.9	7418.9	7003.9	7184.3
65°	2134.4	2127.6	2188.6	2180.5	1963.5	2279.5	3238.2	3570.4	4664.8	4723.1	4664.8
67.5°	1551.3	1539.1	1693.7	1998.8	1890.3	1720.8	1804.9	1920.1	2392.0	2148.0	1933.7
70°	1008.9	991.3	1080.8	1444.2	1692.3	1499.8	1300.4	1281.5	1315.4	817.7	884.1
72.5°	676.7	656.3	655.0	794.6	1022.5	1010.2	1007.5	998.0	890.9	645.5	716.0
75°	377.0	360.7	356.6	343.1	366.1	372.9	397.3	410.9	444.8	489.5	542.4
77.5°	63.7	62.4	78.7	100.3	138.3	177.6	219.7	231.9	286.1	339.0	372.9
80°	35.3	36.6	47.5	58.3	77.3	105.8	135.6	143.7	176.3	204.8	231.9
82.5°	19.0	19.0	24.4	31.2	42.0	55.6	73.2	80.0	101.7	119.3	138.3
85°	6.8	6.8	9.5	12.2	17.6	23.1	28.5	32.5	44.7	61.0	69.2
87.5°	0.0	0.0	0.0	0.0	1.4	2.7	5.4	5.4	6.8	12.2	17.6
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: P639955

CATALOG NUMBER: GWS-SA5C-830-U-SL2-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8	5144.8
2.5°	5171.9	5135.3	5185.5	5208.5	5216.7	5222.1	5186.8	5162.4	5154.3	5128.5	5113.6
5°	5190.9	5166.5	5214.0	5214.0	5180.1	5144.8	5072.9	5022.8	4987.5	4945.5	4938.7
7.5°	5223.5	5205.8	5231.6	5178.7	5093.3	4998.4	4873.6	4776.0	4697.3	4645.8	4647.1
10°	5266.8	5245.2	5224.8	5106.8	4950.9	4776.0	4584.8	4442.4	4312.2	4252.5	4220.0
12.5°	5295.3	5264.1	5178.7	4983.4	4754.3	4519.7	4249.8	4038.3	3849.8	3764.4	3757.6
15°	5330.6	5273.6	5102.8	4823.4	4504.8	4184.7	3837.6	3543.3	3288.4	3155.5	3148.7
17.5°	5376.7	5283.1	5011.9	4640.4	4241.7	3769.8	3333.1	2962.9	2691.7	2588.7	2606.3
20°	5441.8	5294.0	4908.9	4437.0	3914.9	3297.9	2754.1	2413.7	2309.3	2302.6	2289.0
22.5°	5515.0	5300.7	4794.9	4209.1	3518.9	2794.8	2275.4	2130.3	2129.0	2162.9	2171.0
25°	5597.7	5306.2	4666.1	3943.4	3090.4	2293.1	2012.4	1969.0	2002.9	2066.6	2074.7
27.5°	5703.5	5317.0	4510.2	3651.8	2634.8	1981.2	1867.3	1856.4	1897.1	1956.8	1954.0
30°	5859.4	5356.3	4344.7	3316.9	2166.9	1833.4	1779.1	1780.5	1796.7	1825.2	1829.3
32.5°	6018.1	5417.4	4183.4	2939.9	1898.5	1749.3	1724.9	1722.2	1722.2	1734.4	1737.1
35°	6168.6	5486.5	4008.4	2546.6	1768.3	1700.5	1684.2	1676.1	1672.0	1669.3	1665.2
37.5°	6252.7	5520.4	3837.6	2158.8	1699.1	1667.9	1651.7	1640.8	1625.9	1615.0	1612.3
40°	6216.1	5481.1	3639.6	1868.6	1657.1	1636.7	1617.8	1602.8	1582.5	1573.0	1567.6
42.5°	6094.0	5359.1	3424.0	1731.7	1623.2	1602.8	1579.8	1555.4	1541.8	1533.7	1532.3
45°	5965.2	5211.3	3163.6	1651.7	1590.6	1566.2	1539.1	1512.0	1497.1	1493.0	1491.6
47.5°	5961.1	5138.0	2887.0	1587.9	1551.3	1526.9	1493.0	1465.9	1449.6	1444.2	1438.8
50°	6140.1	5212.6	2575.1	1532.3	1510.6	1484.9	1446.9	1417.1	1396.7	1389.9	1388.6
52.5°	6511.7	5493.3	2295.8	1476.7	1456.4	1426.6	1395.4	1365.5	1341.1	1328.9	1327.6
55°	6913.1	5849.9	2122.2	1419.8	1392.7	1366.9	1338.4	1305.9	1278.7	1259.8	1257.0
57.5°	7328.0	6239.1	2069.3	1347.9	1327.6	1309.9	1276.0	1240.8	1209.6	1192.0	1187.9
60°	7669.7	6574.1	2168.3	1272.0	1261.1	1238.1	1206.9	1173.0	1151.3	1137.7	1135.0
62.5°	6420.8	5352.3	1750.6	1189.2	1189.2	1164.8	1129.6	1105.2	1090.3	1080.8	1078.0
65°	4074.9	3314.2	1194.7	1106.5	1105.2	1072.6	1042.8	1026.5	1019.7	1004.8	1002.1
67.5°	1775.1	1514.7	1021.1	1022.5	1017.0	981.8	951.9	939.7	926.2	909.9	908.5
70°	920.7	938.4	914.0	928.9	919.4	877.4	848.9	829.9	801.4	785.1	786.5
72.5°	743.1	762.1	789.2	812.3	791.9	758.0	713.3	690.2	653.6	636.0	637.3
75°	566.8	587.2	612.9	637.3	621.1	579.0	550.6	527.5	485.5	465.1	469.2
77.5°	390.5	401.4	432.6	431.2	425.8	413.6	371.6	344.4	301.0	276.6	279.3
80°	242.7	249.5	264.4	271.2	268.5	252.2	218.3	198.0	172.2	157.3	158.7
82.5°	146.5	150.5	164.1	165.4	164.1	151.9	126.1	111.2	94.9	86.8	86.8
85°	74.6	77.3	85.4	85.4	77.3	65.1	58.3	51.5	42.0	38.0	38.0
87.5°	20.3	20.3	25.8	21.7	17.6	16.3	8.1	6.8	2.7	1.4	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

REPORT NUMBER: SP1-2408-195-9

**CIE 1931 Chromaticity Diagram**



**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

**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**

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			

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)