

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: P639950

Luminaire Tested: GWS-SA5C-830-U-AFL-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P639950  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-45)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA5C-830-U-AFL-W  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND  
AUTOMOTIVE FRONTLINE OPTICS  
Light Source: (80) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

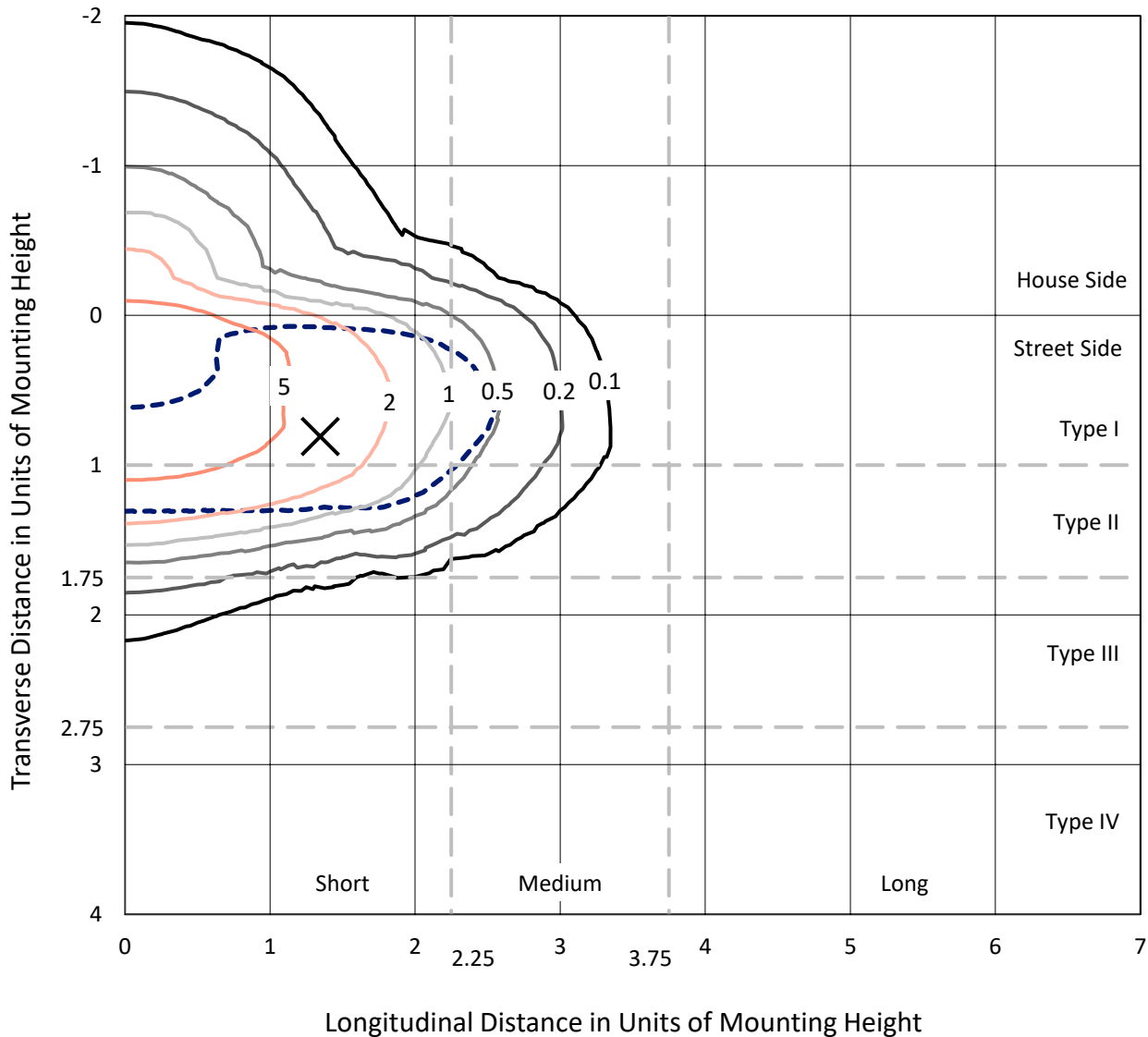
Lumens per Lamp: N/A  
Luminaire Lumens: 19262.8 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 157.5  
Input Voltage (V): 120  
Input Current (Ain): 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: P639950  
 CATALOG NUMBER: GWS-SA5C-830-U-AFL-W

### Iso-Footcandle Lines of Horizontal Illumination

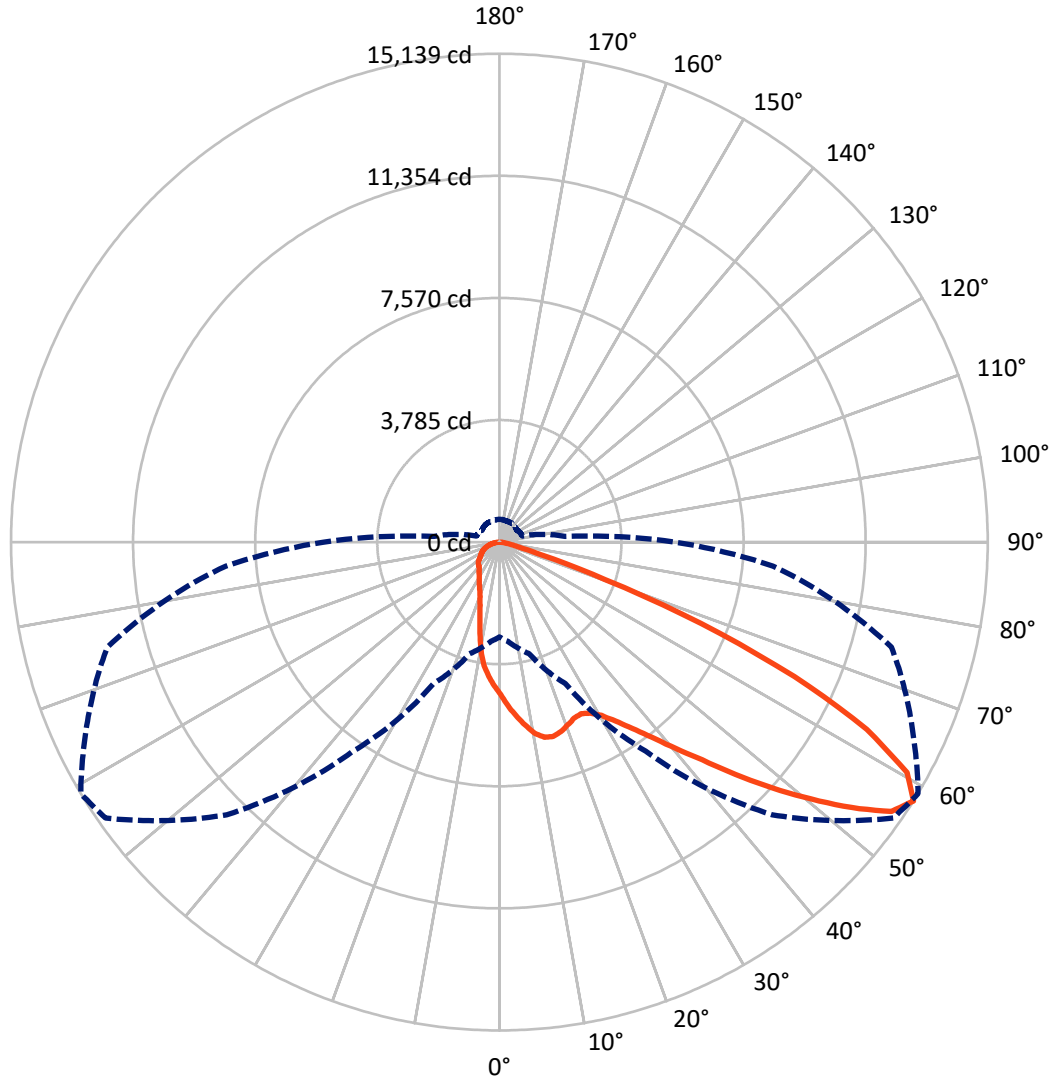
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2989.5	0.0	2989.5
	% Fixture	15.5	0.0	15.5
<b>Street Side</b>	Lumens	16273.3	0.0	16273.3
	% Fixture	84.5	0.0	84.5
<b>Total</b>	Lumens	19262.8	0.0	19262.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	439.1	2.3
10°-20°	1112.6	5.8
20°-30°	1803.5	9.4
30°-40°	2901.2	15.1
40°-50°	4505.3	23.4
50°-60°	4852.8	25.2
60°-70°	2816.4	14.6
70°-80°	735.2	3.8
80°-90°	96.9	0.5
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°	19262.8	100.0
0°-180°	19262.8	100.0

**Coefficient of Utilization**



REPORT NUMBER: P639950

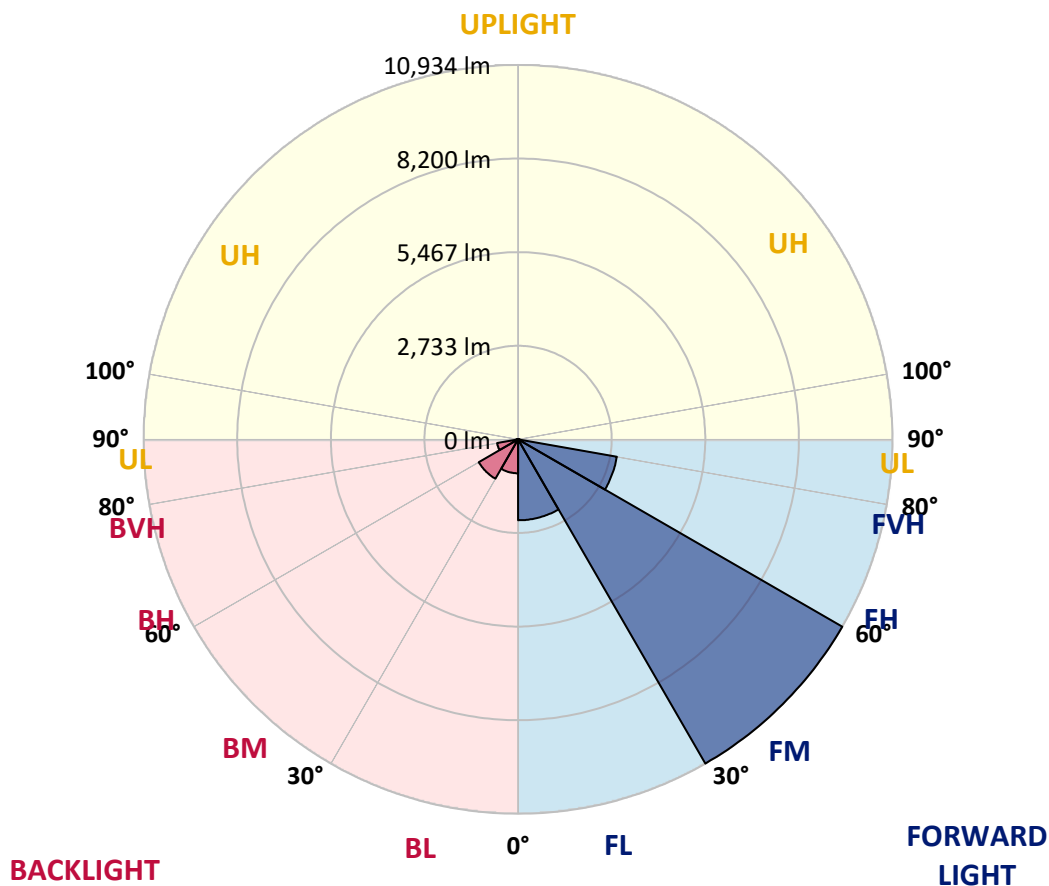
CATALOG NUMBER: GWS-SA5C-830-U-AFL-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2363.4	12.3			
FM (30°-60°)	10933.8	56.8			
FH (60°-80°)	2929.8	15.2			G2/5000
FVH (80°-90°)	46.4	0.2			G1/100
BL (0°-30°)	991.8	5.1	B2/1000		
BM (30°-60°)	1325.4	6.9	B2/2500		
BH (60°-80°)	621.8	3.2	B2/1000		G2/1000
BVH (80°-90°)	50.5	0.3			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6
2.5°	5363.3	5318.5	5349.7	5294.1	5271.1	5210.0	5131.4	5078.5	4997.1	4891.4	4799.1
5°	5896.2	5865.0	5871.8	5812.1	5759.2	5657.5	5496.2	5406.7	5268.3	5055.4	4857.5
7.5°	5879.9	5916.6	5936.9	5988.4	6003.3	5993.8	5848.7	5724.0	5572.1	5252.1	4953.7
10°	5271.1	5340.2	5402.6	5578.9	5793.2	6064.4	6098.3	6023.7	5870.4	5503.0	5069.0
12.5°	4607.9	4660.8	4716.4	4928.0	5256.1	5798.6	6166.1	6212.2	6151.2	5751.1	5199.2
15°	4282.5	4306.9	4359.8	4499.5	4761.2	5363.3	6048.1	6250.1	6360.0	6014.2	5345.6
17.5°	4268.9	4279.8	4305.5	4380.1	4561.8	5027.0	5835.2	6174.2	6524.1	6292.2	5516.5
20°	4549.6	4521.2	4504.9	4503.5	4593.0	4914.4	5629.1	6052.2	6601.4	6577.0	5699.6
22.5°	4938.8	4948.3	4913.1	4826.3	4815.4	4994.4	5526.0	5928.8	6624.4	6829.2	5869.1
25°	5490.7	5538.2	5433.8	5268.3	5187.0	5226.3	5589.7	5890.8	6621.7	7039.4	5974.9
27.5°	6134.9	6171.5	6065.7	5848.7	5680.6	5585.7	5779.6	6003.3	6644.8	7221.1	6038.6
30°	6868.5	6880.7	6735.6	6507.8	6262.4	6058.9	6095.6	6235.2	6762.7	7459.8	6113.2
32.5°	7764.9	7816.4	7596.7	7236.0	6892.9	6632.6	6520.0	6609.5	7017.7	7741.8	6228.5
35°	8902.6	8920.3	8640.9	8124.2	7638.8	7278.1	7042.1	7089.6	7405.5	8136.4	6402.0
37.5°	9975.3	9992.9	9695.9	9215.9	8521.6	8028.0	7686.2	7664.5	7901.8	8693.8	6685.4
40°	10656.0	10706.2	10573.3	10272.3	9609.1	8943.3	8479.5	8405.0	8552.8	9375.9	7080.1
42.5°	11022.2	11043.9	11041.2	11080.5	10685.9	10024.1	9374.5	9225.4	9324.4	10112.2	7478.8
45°	11024.9	11079.1	11224.2	11602.6	11620.2	11208.0	10505.5	10272.3	10181.4	10854.0	7895.1
47.5°	10531.3	10589.6	10988.3	11732.8	12282.0	12375.5	11860.2	11392.4	11010.0	11492.7	8236.8
50°	9036.9	9183.3	9942.7	11259.5	12412.2	13311.2	13152.6	12517.9	11746.3	11986.3	8451.1
52.5°	7739.1	7733.7	8201.5	9922.4	11868.4	13723.5	14402.9	13676.0	12474.5	12299.6	8505.3
55°	5667.0	5698.2	6176.9	7588.6	10417.4	13324.8	15090.4	14741.9	13309.9	12466.4	8483.6
57.5°	2938.6	3093.2	3584.1	4842.5	7915.4	11952.4	14907.3	15139.2	14158.8	12584.4	8512.1
60°	1484.9	1455.1	1631.4	2312.1	4586.2	9335.2	13779.1	14518.1	14312.0	12676.6	8529.7
62.5°	991.3	983.2	934.3	1071.3	1874.1	5528.7	11746.3	12782.4	13247.5	12459.6	8304.6
65°	858.4	842.1	752.6	747.2	909.9	2293.1	8609.7	10048.5	10948.9	11495.4	7766.2
67.5°	773.0	748.6	657.7	612.9	653.6	1007.6	4852.0	6739.7	8084.9	9721.7	6586.5
70°	690.2	678.0	587.2	522.1	518.0	614.3	1787.3	3478.3	4947.0	6632.6	4815.4
72.5°	618.4	596.7	519.4	457.0	425.8	435.3	775.7	1339.8	2560.3	4137.4	2880.3
75°	535.6	519.4	451.6	389.2	351.2	318.7	473.3	619.7	1167.6	1966.3	1360.1
77.5°	413.6	402.8	356.6	309.2	287.5	237.3	287.5	390.5	539.7	828.6	707.9
80°	240.0	246.8	265.8	241.4	211.5	169.5	187.1	225.1	324.1	448.9	401.4
82.5°	120.7	128.8	172.2	139.7	126.1	99.0	111.2	132.9	169.5	248.2	157.3
85°	9.5	9.5	31.2	35.3	43.4	35.3	44.8	54.2	77.3	99.0	52.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	4.1	6.8	12.2	23.1	14.9
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: P639950  
 CATALOG NUMBER: GWS-SA5C-830-U-AFL-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6	4728.6
2.5°	4736.8	4667.6	4584.9	4517.1	4412.7	4357.1	4286.6	4199.8	4164.5	4148.2	4138.7
5°	4746.3	4624.2	4447.9	4285.2	4104.8	3962.5	3803.8	3638.3	3543.4	3520.4	3504.1
7.5°	4781.5	4610.7	4329.9	4061.4	3726.5	3416.0	3113.5	2813.9	2660.6	2602.3	2596.9
10°	4830.3	4605.2	4210.6	3764.5	3199.0	2708.1	2354.1	2119.5	2020.6	1988.0	1977.2
12.5°	4891.4	4601.2	4053.3	3352.2	2590.1	2126.3	1924.3	1886.3	1899.9	1897.1	1897.1
15°	4968.7	4606.6	3863.5	2885.7	2095.1	1845.6	1849.7	1894.4	1936.5	1943.3	1943.3
17.5°	5052.7	4601.2	3588.2	2417.9	1798.2	1779.2	1841.5	1903.9	1941.9	1947.3	1947.3
20°	5143.6	4575.4	3241.0	1977.2	1668.0	1737.1	1804.9	1853.8	1876.8	1882.2	1882.2
22.5°	5197.8	4502.2	2864.0	1673.4	1585.3	1670.7	1715.4	1765.6	1768.3	1724.9	1723.6
25°	5189.7	4365.2	2434.2	1478.1	1497.1	1571.7	1628.6	1593.4	1550.0	1525.6	1521.5
27.5°	5138.2	4159.1	1996.1	1330.3	1392.7	1476.8	1459.1	1429.3	1418.5	1391.3	1388.6
30°	5073.1	3905.5	1602.9	1215.0	1284.2	1361.5	1334.4	1331.7	1320.8	1291.0	1291.0
32.5°	5010.7	3643.8	1305.9	1129.6	1215.0	1220.5	1258.4	1261.1	1255.7	1204.2	1198.8
35°	4993.1	3382.1	1105.2	1061.8	1147.2	1144.5	1198.8	1197.4	1103.8	1032.0	1030.6
37.5°	5046.0	3116.3	985.9	1006.2	1053.7	1088.9	1132.3	1053.7	1022.5	979.1	976.4
40°	5158.5	2870.8	924.8	973.7	994.0	1045.5	977.7	983.2	975.0	942.5	938.4
42.5°	5307.7	2662.0	890.9	962.8	960.1	973.7	899.1	920.8	933.0	908.6	904.5
45°	5451.4	2480.3	873.3	922.1	935.7	857.0	842.1	862.5	881.4	872.0	867.9
47.5°	5557.2	2323.0	863.8	866.5	904.5	817.7	793.3	802.8	825.8	829.9	828.6
50°	5589.7	2188.7	853.0	820.4	812.3	778.4	759.4	756.7	783.8	802.8	805.5
52.5°	5527.4	2069.4	824.5	779.7	740.4	745.8	739.1	725.5	752.6	778.4	781.1
55°	5435.1	2001.6	779.7	740.4	694.3	716.0	718.7	706.5	724.1	741.8	741.8
57.5°	5441.9	2040.9	736.3	703.8	653.6	682.1	697.0	691.6	691.6	705.2	706.5
60°	5486.7	2097.8	707.9	657.7	612.9	642.8	676.7	671.3	659.1	676.7	676.7
62.5°	5357.9	2021.9	688.9	612.9	569.6	604.8	645.5	642.8	629.2	657.7	660.4
65°	4978.1	1818.5	667.2	557.3	526.2	566.8	602.1	611.6	599.4	637.4	644.1
67.5°	4172.6	1529.7	625.2	504.5	482.8	520.7	554.6	568.2	558.7	603.5	608.9
70°	3110.8	1238.1	558.7	446.1	429.9	463.8	495.0	500.4	501.7	554.6	560.1
72.5°	1983.9	962.8	470.6	381.1	368.9	394.6	417.7	439.4	448.9	499.0	497.7
75°	1106.6	716.0	378.3	322.7	301.0	321.4	348.5	374.3	401.4	474.6	482.8
77.5°	637.4	503.1	299.7	259.0	233.2	254.9	278.0	314.6	396.0	459.7	451.6
80°	359.4	326.8	226.5	189.9	173.6	189.9	207.5	276.6	311.9	339.0	343.1
82.5°	168.2	183.1	154.6	116.6	116.6	127.5	143.7	214.3	236.0	192.6	168.2
85°	61.0	82.7	75.9	59.7	52.9	51.5	89.5	122.0	75.9	67.8	58.3
87.5°	16.3	23.1	21.7	14.9	8.1	6.8	0.0	0.0	0.0	0.0	0.0
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

REPORT NUMBER: SP1-2408-195-9

**Photopic Flux vs. Wavelength**

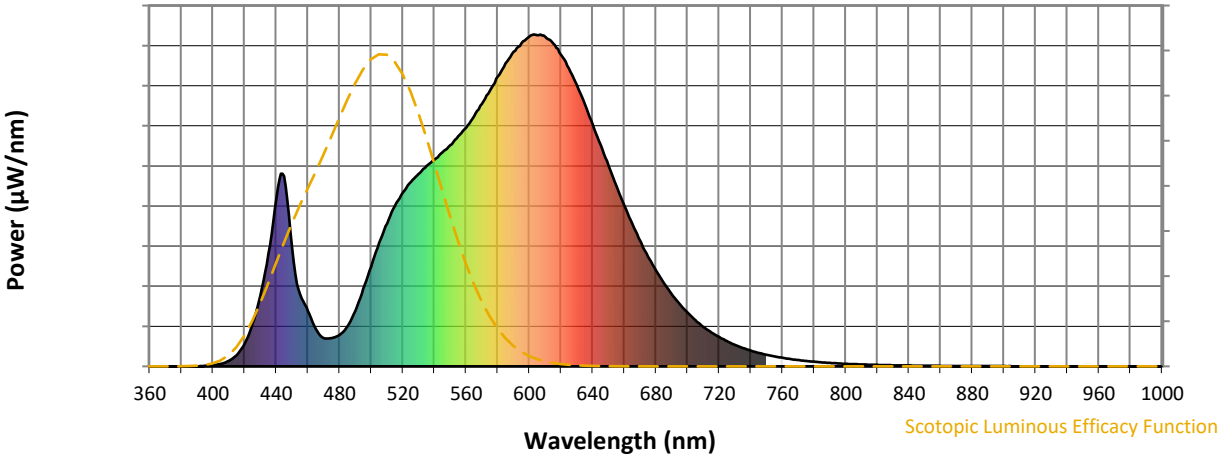


**Photopic Lumens: NR**

$\lambda$ (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)