

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: P643440

Luminaire Tested: GWS-SA6E-830-U-T2-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643440  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-22)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T2-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

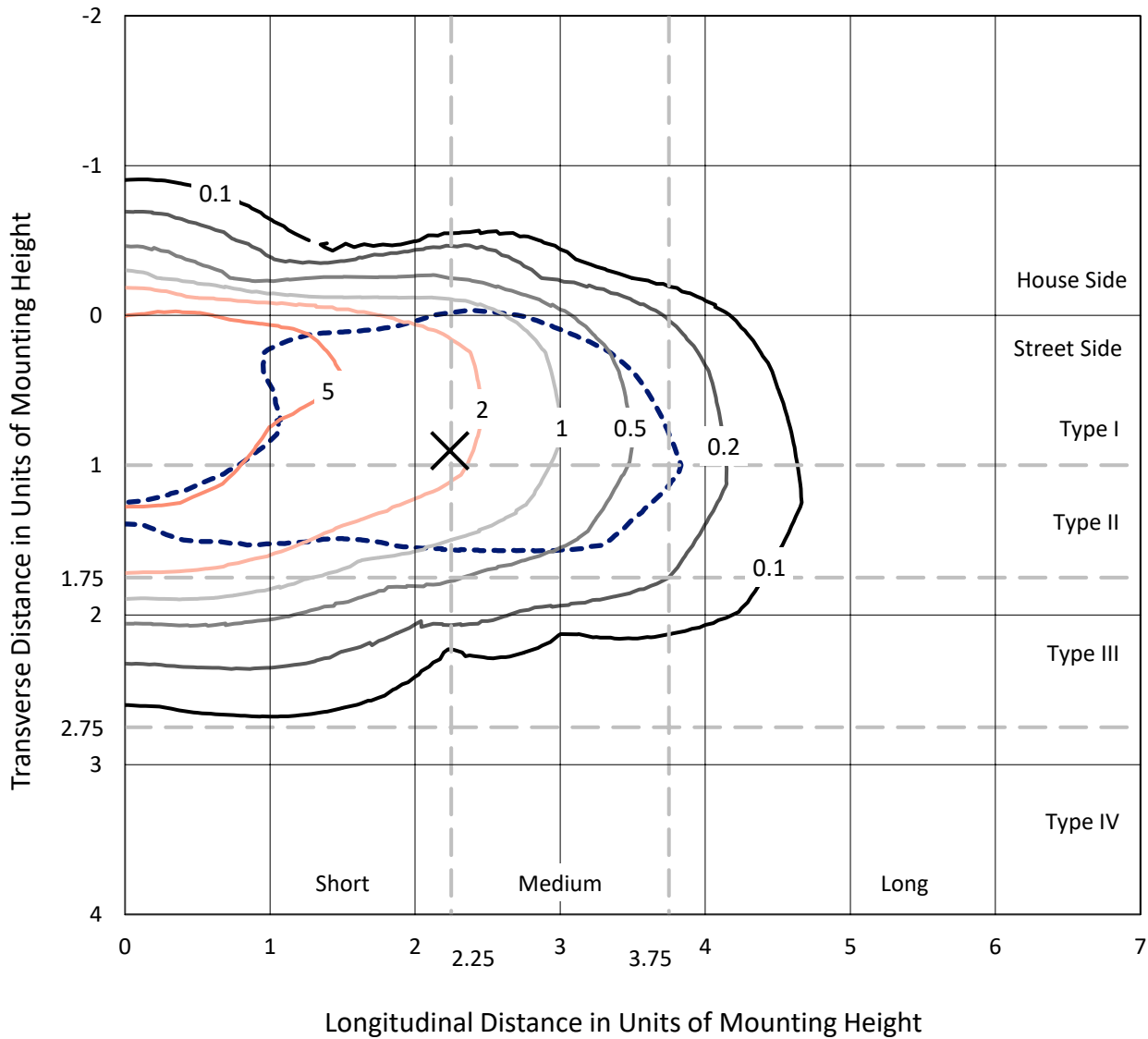
Lumens per Lamp: N/A  
Luminaire Lumens: 26636.9 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643440  
 CATALOG NUMBER: GWS-SA6E-830-U-T2-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

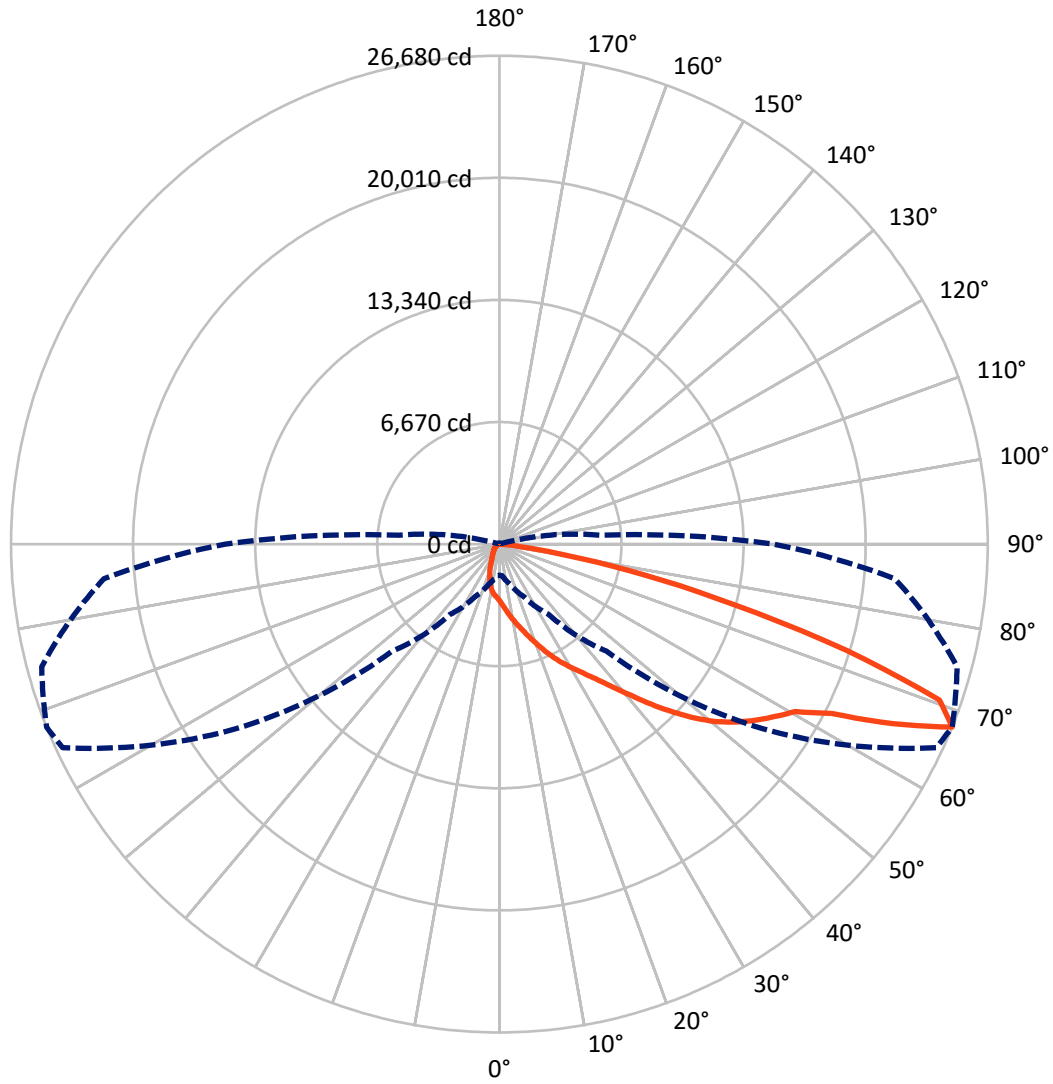
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8 fc  
 Type II - Short - N/A

REPORT NUMBER: P643440  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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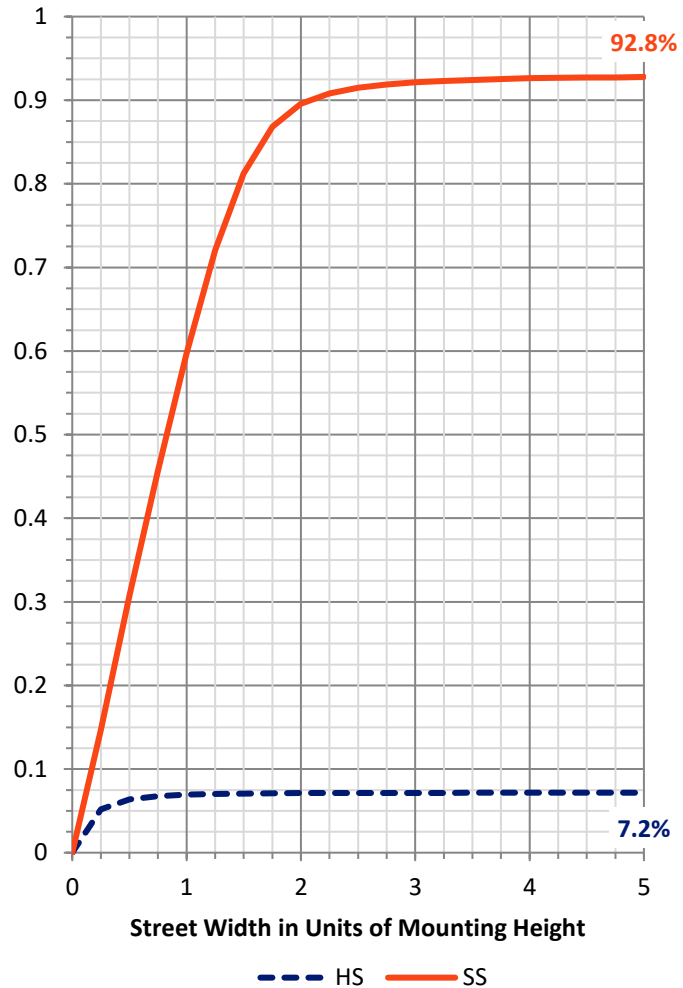
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1923.5	0.0	1923.5
	% Fixture	7.2	0.0	7.2
<b>Street Side</b>	Lumens	24713.4	0.0	24713.4
	% Fixture	92.8	0.0	92.8
<b>Total</b>	Lumens	26636.9	0.0	26636.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	302.3	1.1
10°-20°	868.2	3.3
20°-30°	1492.0	5.6
30°-40°	2594.0	9.7
40°-50°	4526.3	17.0
50°-60°	6826.9	25.6
60°-70°	6845.6	25.7
70°-80°	3020.2	11.3
80°-90°	161.3	0.6
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°	26636.9	100.0
0°-180°	26636.9	100.0

**Coefficient of Utilization**



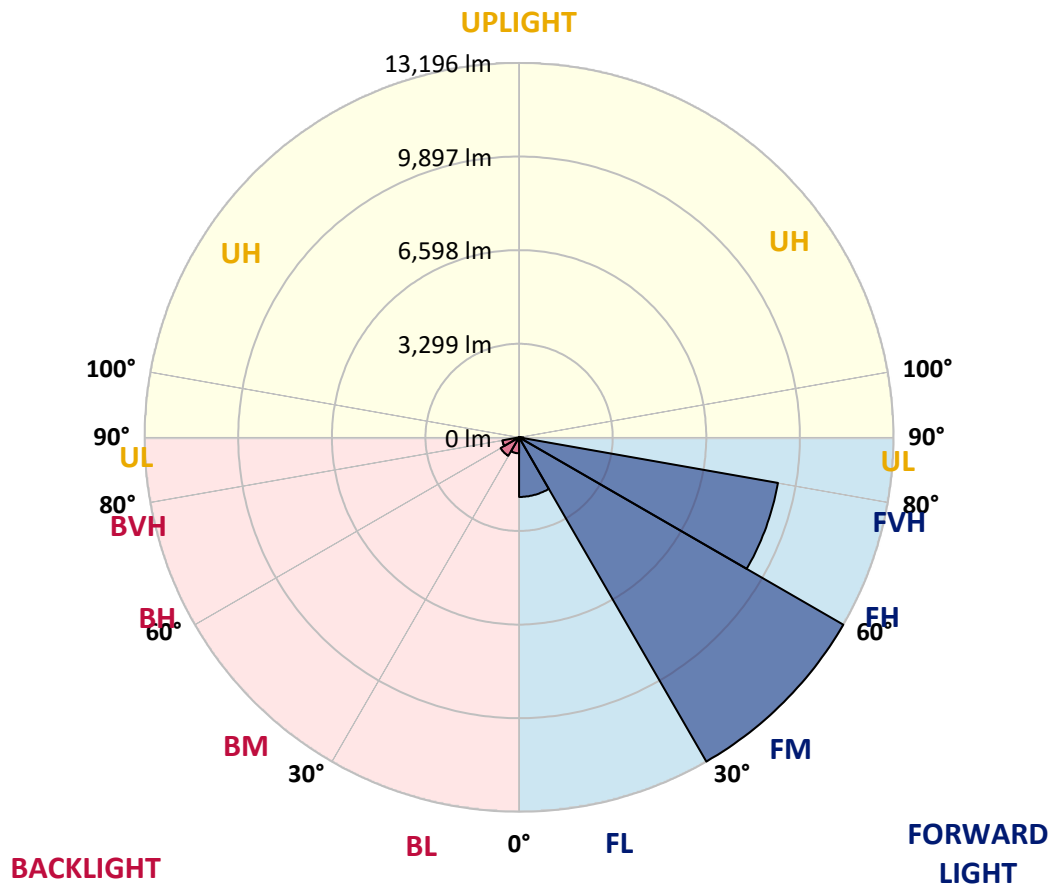
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2099.8	7.9			
FM (30°-60°)	13195.9	49.5			
FH (60°-80°)	9265.5	34.8			G4/12000
FVH (80°-90°)	152.2	0.6			G2/225
BL (0°-30°)	562.7	2.1	B2/1000		
BM (30°-60°)	751.4	2.8	B1/1000		
BH (60°-80°)	600.3	2.3	B2/1000		G2/1000
BVH (80°-90°)	9.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9
2.5°	3609.7	3632.6	3609.7	3614.8	3548.5	3517.9	3451.7	3359.9	3336.9	3278.3	3189.1
5°	4050.7	4071.1	4048.2	4043.1	3966.6	3910.5	3800.9	3642.8	3597.0	3482.2	3306.3
7.5°	4290.3	4303.1	4310.7	4323.5	4295.4	4249.6	4150.1	3953.8	3905.4	3719.3	3472.0
10°	4315.8	4326.0	4364.3	4440.8	4496.8	4524.9	4468.8	4287.8	4211.3	4030.3	3676.0
12.5°	4244.5	4259.8	4320.9	4448.4	4603.9	4746.7	4782.3	4624.3	4555.5	4323.5	3915.6
15°	4150.1	4162.9	4247.0	4420.4	4654.9	4917.5	5065.3	4996.5	4920.0	4677.8	4180.7
17.5°	4004.8	4022.7	4139.9	4374.5	4677.8	5052.6	5371.2	5394.2	5340.6	5078.1	4473.9
20°	3923.3	3936.0	4040.5	4282.7	4662.5	5152.0	5656.7	5873.4	5814.8	5539.5	4810.4
22.5°	3992.1	4002.3	4071.1	4259.8	4611.5	5208.1	5921.9	6352.7	6319.5	6034.0	5164.7
25°	4354.1	4387.2	4346.4	4379.6	4634.5	5238.7	6136.0	6831.9	6839.6	6551.5	5531.8
27.5°	5088.3	5044.9	4948.0	4782.3	4812.9	5320.2	6319.5	7283.1	7349.4	7056.3	5858.1
30°	5835.2	5809.7	5751.1	5493.6	5279.4	5501.2	6475.0	7744.5	7849.1	7553.4	6148.7
32.5°	6673.9	6699.4	6594.8	6286.4	5921.9	5868.3	6635.6	8183.0	8379.3	8116.7	6490.3
35°	7675.7	7683.4	7476.9	7135.3	6722.3	6475.0	6923.7	8667.4	9029.4	8835.6	6946.6
37.5°	8652.1	8698.0	8585.8	8047.9	7680.8	7229.6	7400.4	9289.4	9799.2	9722.7	7520.2
40°	9516.3	9587.6	9551.9	9031.9	8550.1	8170.3	8139.7	10018.5	10729.7	10816.4	8277.3
42.5°	10204.5	10250.4	10278.5	9908.8	9483.1	9269.0	9052.3	10864.8	11828.4	12182.7	9205.3
45°	10931.1	10946.4	11005.0	10755.2	10383.0	10400.8	10130.6	11892.1	12985.8	13697.0	10270.8
47.5°	11856.4	11907.4	11879.4	11616.8	11280.3	11481.7	11244.6	12950.1	14127.8	15313.2	11361.9
50°	12983.2	13036.7	13011.2	12705.3	12330.6	12414.7	12266.9	13977.4	15229.1	16837.6	12269.4
52.5°	13564.4	13607.8	13923.9	14061.5	13865.2	13329.9	13138.7	15106.7	16159.5	18091.9	13103.0
55°	13284.0	13314.6	14002.9	14584.1	15303.0	14767.7	14015.6	15978.5	16980.4	19070.8	13722.5
57.5°	12121.6	12287.3	13222.8	14206.8	15718.5	16187.6	15438.1	16926.9	17770.6	19751.4	14331.7
60°	9738.0	9730.4	11071.3	12837.9	14907.9	16577.6	17446.9	18209.1	18563.5	20274.0	15147.5
62.5°	5381.4	5429.8	7214.3	9541.7	12654.4	15568.1	18953.5	20424.4	20370.9	21186.6	16424.7
65°	2679.2	2776.1	3744.8	5465.5	8420.1	12865.9	19213.5	23804.7	23651.7	23335.6	19063.1
67.5°	1700.3	1738.6	2273.9	3176.3	4680.4	8269.7	17594.8	26325.8	26680.2	25884.8	21681.2
70°	1101.3	1165.0	1580.5	2171.9	2824.5	4262.3	12888.9	24691.8	25505.0	25604.4	20049.7
72.5°	599.1	645.0	1009.5	1549.9	2039.4	2131.2	7239.8	18530.3	19838.1	21719.4	15685.4
75°	341.6	374.7	553.2	1052.8	1496.4	1297.6	3209.5	12404.5	13238.1	15522.2	11239.5
77.5°	206.5	234.5	311.0	512.4	938.1	866.7	1213.4	7550.8	8081.0	9261.3	5898.9
80°	94.3	112.2	196.3	283.0	512.4	410.4	464.0	3520.5	3635.2	3800.9	1952.7
82.5°	43.3	51.0	89.2	168.2	290.6	237.1	178.4	813.2	1144.6	1083.4	497.1
85°	5.1	5.1	33.1	68.8	81.6	61.2	73.9	183.5	232.0	326.3	142.8
87.5°	0.0	0.0	2.5	2.5	5.1	7.6	15.3	22.9	33.1	53.5	35.7
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-SA6E-830-U-T2-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9	3099.9
2.5°	3148.3	3076.9	3013.2	2918.9	2855.1	2783.8	2735.3	2676.7	2653.7	2635.9	2610.4
5°	3219.7	3105.0	2949.5	2776.1	2633.3	2498.2	2373.3	2291.8	2220.4	2210.2	2174.5
7.5°	3336.9	3166.1	2903.6	2620.6	2378.4	2154.1	1978.2	1835.4	1764.1	1741.1	1700.3
10°	3492.4	3257.9	2834.7	2401.4	2052.1	1784.5	1585.6	1425.0	1312.9	1272.1	1241.5
12.5°	3665.8	3342.0	2725.1	2131.2	1733.5	1427.6	1175.2	1004.4	933.0	907.5	884.6
15°	3864.6	3421.1	2551.8	1860.9	1422.5	1050.3	871.8	797.9	767.3	759.7	752.0
17.5°	4055.8	3472.0	2345.3	1580.5	1093.6	815.8	731.6	703.6	695.9	688.3	683.2
20°	4272.5	3507.7	2103.1	1315.4	848.9	690.8	650.1	629.7	614.4	599.1	596.5
22.5°	4494.3	3507.7	1840.5	1055.4	711.2	619.5	573.6	535.3	507.3	492.0	486.9
25°	4705.9	3459.3	1580.5	843.8	627.1	550.6	492.0	448.7	410.4	392.6	387.5
27.5°	4856.3	3334.4	1353.6	713.8	568.5	489.5	418.1	369.6	339.0	321.2	318.7
30°	4950.6	3148.3	1144.6	637.3	517.5	425.7	354.3	313.6	290.6	277.9	272.8
32.5°	5022.0	2918.9	958.5	583.8	469.1	369.6	308.5	275.3	254.9	244.7	242.2
35°	5164.7	2702.2	820.9	535.3	418.1	323.8	270.2	244.7	229.4	216.7	214.1
37.5°	5363.6	2521.2	711.2	492.0	369.6	288.1	244.7	221.8	209.0	196.3	193.7
40°	5656.7	2406.5	629.7	448.7	326.3	260.0	224.3	203.9	186.1	173.3	170.8
42.5°	6107.9	2352.9	576.1	405.3	288.1	234.5	206.5	181.0	163.2	150.4	147.9
45°	6645.8	2381.0	530.2	362.0	262.6	216.7	183.5	158.1	140.2	127.5	124.9
47.5°	7222.0	2480.4	492.0	321.2	237.1	198.8	163.2	135.1	119.8	107.1	104.5
50°	7823.6	2643.5	458.9	283.0	216.7	178.4	140.2	117.3	102.0	91.8	89.2
52.5°	8346.2	2865.3	425.7	254.9	198.8	158.1	122.4	102.0	86.7	76.5	73.9
55°	8845.8	3074.4	400.2	229.4	178.4	137.7	107.1	86.7	73.9	63.7	61.2
57.5°	9388.8	3296.1	369.6	206.5	160.6	122.4	94.3	73.9	63.7	53.5	51.0
60°	10179.1	3625.0	323.8	188.6	140.2	107.1	81.6	66.3	56.1	43.3	40.8
62.5°	11318.6	4224.1	272.8	163.2	119.8	91.8	68.8	56.1	45.9	35.7	30.6
65°	13449.7	5243.8	224.3	135.1	96.9	76.5	58.6	45.9	35.7	25.5	22.9
67.5°	14984.3	5508.9	181.0	109.6	79.0	58.6	48.4	35.7	25.5	17.8	15.3
70°	13100.5	3956.4	140.2	89.2	66.3	45.9	38.2	28.0	17.8	12.7	10.2
72.5°	9870.6	2584.9	104.5	68.8	51.0	38.2	28.0	22.9	15.3	10.2	7.6
75°	6956.8	1493.8	76.5	51.0	35.7	28.0	22.9	17.8	12.7	7.6	7.6
77.5°	3566.4	616.9	53.5	35.7	25.5	17.8	15.3	10.2	10.2	7.6	5.1
80°	1083.4	203.9	30.6	22.9	17.8	12.7	7.6	7.6	7.6	5.1	2.5
82.5°	247.3	66.3	17.8	17.8	12.7	10.2	7.6	2.5	2.5	0.0	0.0
85°	63.7	20.4	15.3	12.7	12.7	10.2	5.1	2.5	0.0	0.0	0.0
87.5°	22.9	12.7	12.7	12.7	10.2	7.6	5.1	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

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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)