

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: P643448

Luminaire Tested: GWS-SA6E-830-U-T3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P643448  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-26)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SAGE-830-U-T3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

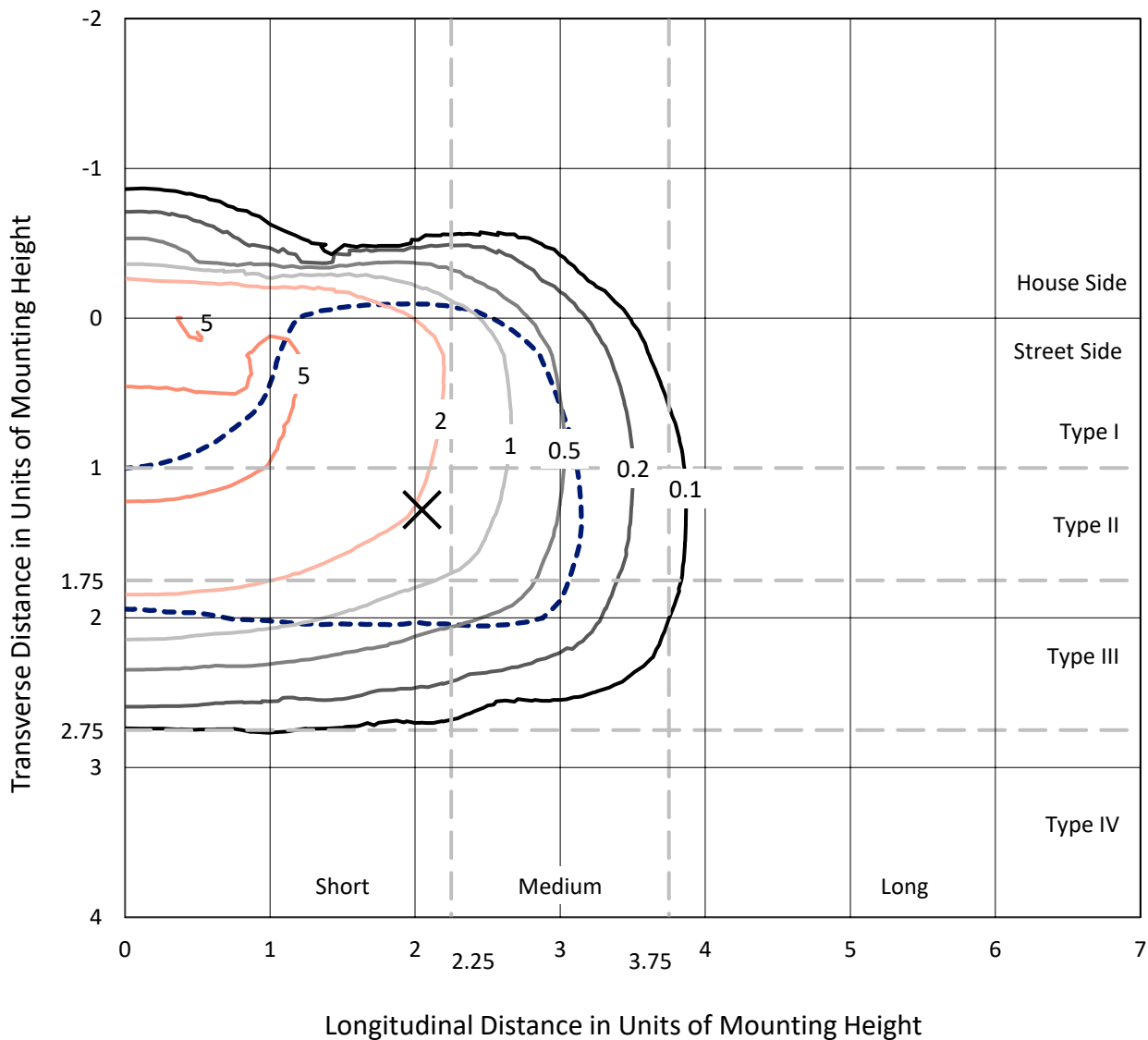
Lumens per Lamp: N/A  
Luminaire Lumens: 26106.6 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 323.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P643448  
 CATALOG NUMBER: GWS-SA6E-830-U-T3-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

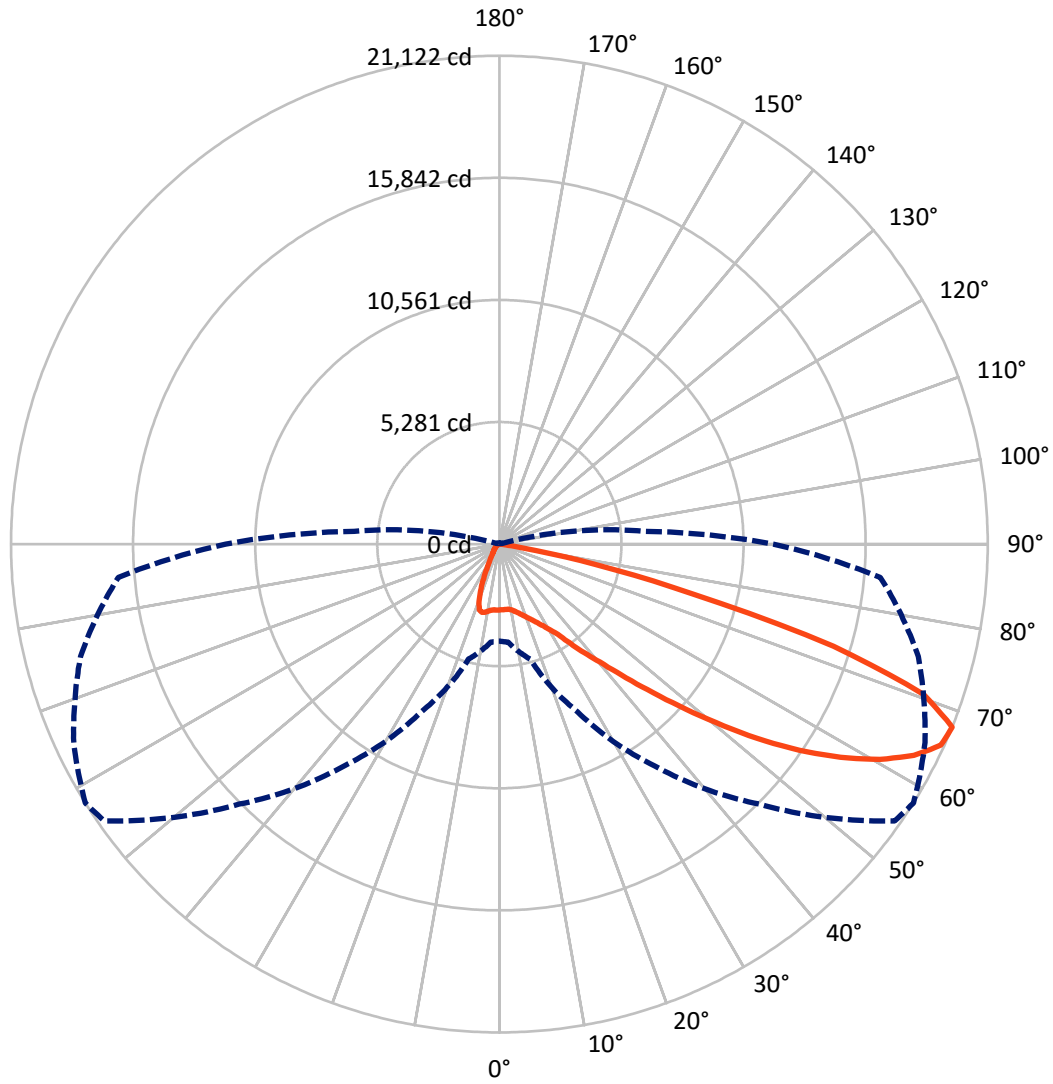
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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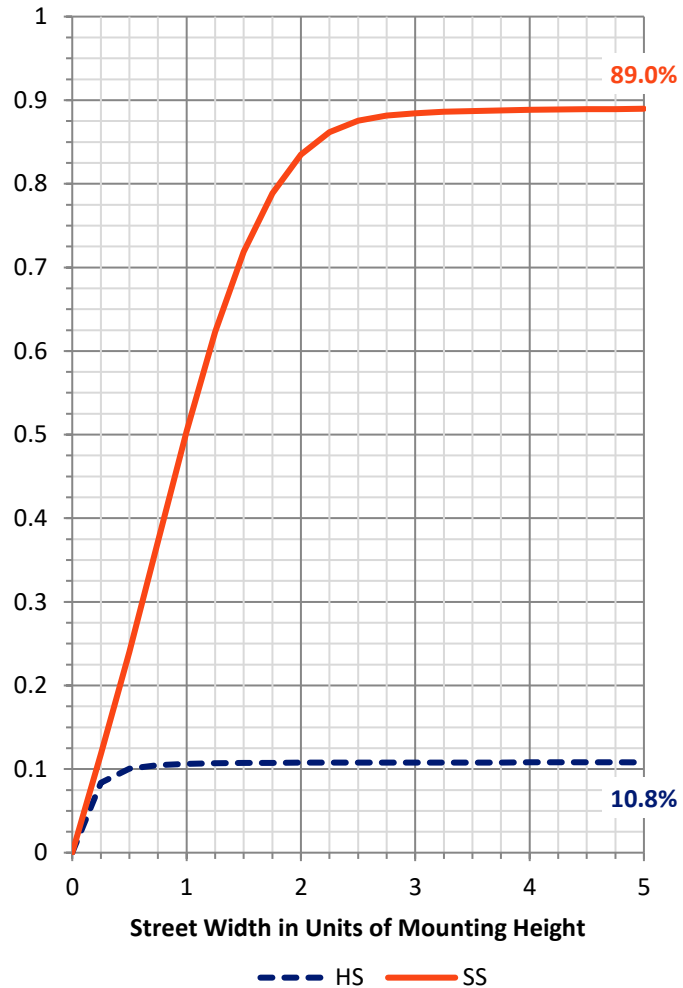
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2848.1	0.0	2848.1
	% Fixture	10.9	0.0	10.9
<b>Street Side</b>	Lumens	23258.4	0.0	23258.4
	% Fixture	89.1	0.0	89.1
<b>Total</b>	Lumens	26106.6	0.0	26106.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	267.2	1.0
10°-20°	750.3	2.9
20°-30°	1309.7	5.0
30°-40°	2339.0	9.0
40°-50°	4275.2	16.4
50°-60°	7110.2	27.2
60°-70°	7722.9	29.6
70°-80°	2267.5	8.7
80°-90°	64.6	0.2
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°	26106.6	100.0
0°-180°	26106.6	100.0

**Coefficient of Utilization**



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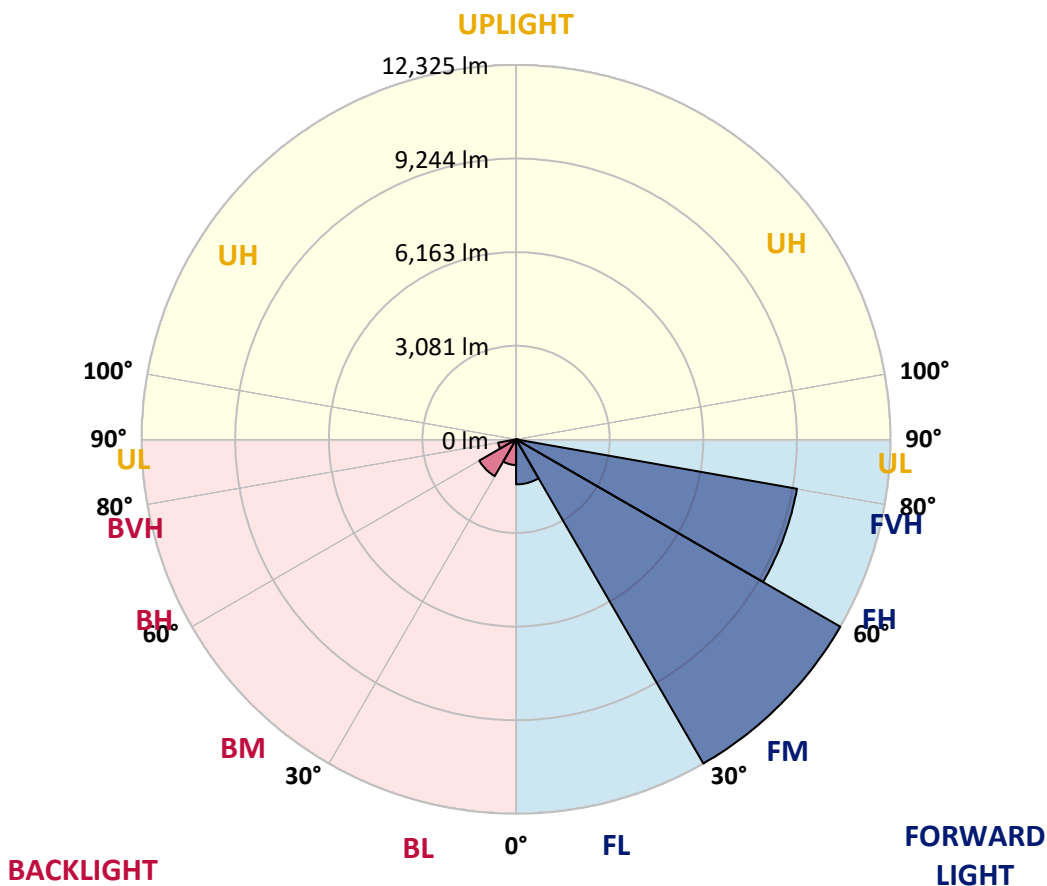
CATALOG NUMBER: GWS-SA6E-830-U-T3-W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1482.4	5.7			
FM (30°-60°)	12325.5	47.2			
FH (60°-80°)	9389.1	36.0			G4/12000
FVH (80°-90°)	61.4	0.2			G1/100
BL (0°-30°)	844.8	3.2	B2/1000		
BM (30°-60°)	1398.9	5.4	B2/2500		
BH (60°-80°)	601.2	2.3	B2/1000		G2/1000
BVH (80°-90°)	3.2	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8
2.5°	2791.3	2786.2	2786.2	2806.6	2809.2	2819.3	2842.3	2844.8	2857.6	2852.5	2834.6
5°	2646.0	2648.6	2663.9	2699.5	2730.1	2768.4	2824.4	2837.2	2865.2	2880.5	2870.3
7.5°	2510.9	2513.5	2536.4	2592.5	2651.1	2727.6	2819.3	2844.8	2900.9	2941.7	2944.3
10°	2459.9	2457.4	2480.3	2544.0	2620.5	2727.6	2860.1	2893.3	2977.4	3048.8	3061.5
12.5°	2475.2	2472.7	2495.6	2554.2	2638.4	2773.5	2931.5	2977.4	3084.5	3194.1	3217.0
15°	2536.4	2533.8	2549.1	2597.6	2689.3	2829.5	3023.3	3092.1	3227.2	3359.8	3395.5
17.5°	2719.9	2707.2	2691.9	2697.0	2750.5	2895.8	3140.5	3224.7	3392.9	3551.0	3581.5
20°	3046.2	3013.1	2972.3	2918.8	2893.3	2992.7	3275.6	3372.5	3576.4	3757.4	3762.5
22.5°	3538.2	3525.5	3431.1	3275.6	3166.0	3168.6	3433.7	3545.9	3795.7	3994.5	3966.5
25°	4223.9	4216.3	4071.0	3816.1	3530.6	3433.7	3635.1	3749.8	4055.7	4267.3	4178.0
27.5°	5075.3	5021.8	4851.0	4506.9	4081.2	3777.8	3890.0	3992.0	4331.0	4529.8	4361.6
30°	5817.1	5819.7	5659.1	5299.7	4820.4	4295.3	4201.0	4290.2	4583.4	4792.4	4588.5
32.5°	6530.9	6553.8	6377.9	6054.2	5529.1	4970.8	4647.1	4662.4	4907.1	5134.0	4886.7
35°	7193.7	7211.5	7089.2	6813.8	6324.4	5676.9	5269.1	5261.4	5394.0	5626.0	5302.2
37.5°	7935.5	7953.3	7833.5	7586.2	7127.4	6485.0	5975.2	5965.0	6018.5	6207.2	5837.5
40°	8725.7	8758.8	8626.3	8417.3	7978.8	7435.8	6796.0	6704.2	6650.7	6872.5	6530.9
42.5°	9526.1	9577.1	9531.2	9322.2	8947.5	8498.8	7861.5	7718.8	7604.1	7881.9	7520.0
45°	10520.3	10581.5	10561.1	10400.5	10109.9	9745.4	9143.8	8978.1	8924.5	9182.0	8751.2
47.5°	11476.2	11542.5	11616.4	11580.7	11374.3	11206.0	10538.1	10443.8	10428.5	10703.8	10036.0
50°	12187.4	12248.6	12531.6	12735.5	12875.7	12840.0	12261.4	12121.2	12098.2	12274.1	11392.1
52.5°	12697.3	12755.9	13145.9	13783.2	14298.1	14578.5	13994.8	13964.2	13839.3	13778.1	12661.6
55°	13092.4	13174.0	13584.4	14547.9	15585.4	16207.4	15842.9	15733.3	15412.1	15060.3	13839.3
57.5°	13171.4	13204.5	13783.2	15083.3	16584.7	17591.6	17591.6	17400.4	16781.0	16294.1	15200.5
60°	12462.7	12564.7	13347.3	15039.9	17013.0	18496.6	19042.1	18909.5	18073.4	17474.3	16510.8
62.5°	10889.9	11004.6	11958.0	14002.4	16584.7	18682.6	20140.7	20120.4	19177.2	18450.7	17596.7
65°	8351.0	8435.1	9266.1	11713.3	14774.8	17966.3	20925.9	20982.0	20049.0	19095.6	17971.4
67.5°	4195.9	4254.5	5151.8	8001.7	11710.7	15904.1	20872.4	21122.2	20314.1	18754.0	16541.4
70°	1465.8	1524.4	1947.5	3433.7	7127.4	12144.1	19067.6	19475.4	18756.6	16008.6	12202.7
72.5°	502.2	530.2	808.1	1274.6	2773.5	7198.8	14499.5	15113.8	13826.5	10747.2	7012.7
75°	285.5	303.3	433.4	690.8	1162.4	2368.2	8226.1	8603.3	8060.4	5857.9	2885.6
77.5°	193.7	209.0	270.2	392.6	642.4	762.2	3354.7	4223.9	3683.5	1911.9	736.7
80°	114.7	124.9	165.7	232.0	328.8	295.7	718.9	955.9	1231.2	571.0	221.8
82.5°	53.5	61.2	107.1	152.9	165.7	124.9	211.6	257.5	346.7	280.4	91.8
85°	0.0	0.0	35.7	63.7	61.2	35.7	58.6	63.7	94.3	140.2	35.7
87.5°	0.0	0.0	0.0	0.0	0.0	2.5	5.1	7.6	15.3	28.0	15.3
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: P643448

CATALOG NUMBER: GWS-SA6E-830-U-T3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8	2844.8
2.5°	2855.0	2837.2	2857.6	2847.4	2857.6	2855.0	2834.6	2821.9	2821.9	2799.0	2791.3
5°	2890.7	2872.9	2878.0	2855.0	2849.9	2837.2	2811.7	2801.5	2801.5	2778.6	2770.9
7.5°	2969.7	2941.7	2936.6	2890.7	2870.3	2834.6	2788.8	2770.9	2768.4	2745.4	2737.8
10°	3094.7	3061.5	3038.6	2979.9	2921.3	2849.9	2753.1	2671.5	2625.6	2564.4	2559.3
12.5°	3247.6	3206.8	3171.1	3081.9	2985.0	2824.4	2538.9	2240.7	2057.2	1911.9	1922.1
15°	3418.4	3380.2	3324.1	3189.0	2990.1	2572.1	1975.6	1516.7	1292.4	1172.6	1167.5
17.5°	3604.5	3548.4	3456.6	3273.1	2829.5	1965.4	1284.8	907.5	790.2	749.4	739.3
20°	3777.8	3709.0	3594.3	3290.9	2365.6	1330.7	803.0	703.6	683.2	670.4	670.4
22.5°	3961.4	3874.7	3703.9	3153.3	1758.9	851.4	683.2	660.2	644.9	627.1	624.5
25°	4147.4	4035.3	3803.3	2793.9	1152.2	670.4	639.8	614.3	586.3	558.3	550.6
27.5°	4305.5	4160.2	3879.8	2258.5	739.3	604.1	583.8	540.4	502.2	471.6	466.5
30°	4494.1	4308.0	3912.9	1651.8	581.2	532.8	502.2	456.3	410.4	379.8	369.6
32.5°	4746.5	4542.6	3861.9	1075.7	514.9	469.0	420.6	367.1	321.2	288.1	283.0
35°	5139.1	4896.9	3627.4	685.7	466.5	405.3	346.7	290.6	252.4	226.9	221.8
37.5°	5618.3	5394.0	3242.5	514.9	418.1	351.8	283.0	229.4	201.4	183.5	178.4
40°	6329.5	6016.0	2765.8	451.2	369.6	298.2	232.0	188.6	168.2	152.9	147.9
42.5°	7252.3	6750.1	2217.8	410.4	323.7	249.8	188.6	155.5	137.7	127.5	124.9
45°	8330.6	7466.4	1639.1	369.6	280.4	206.5	155.5	127.5	114.7	107.1	104.5
47.5°	9434.4	8093.5	1131.8	326.3	239.6	170.8	130.0	109.6	99.4	89.2	86.7
50°	10612.1	8623.7	772.4	283.0	203.9	140.2	112.2	99.4	86.7	79.0	76.5
52.5°	11476.2	8820.0	537.9	244.7	173.3	119.8	99.4	89.2	79.0	68.8	66.3
55°	12274.1	8814.9	407.9	206.5	147.9	104.5	89.2	79.0	68.8	61.2	58.6
57.5°	13069.4	8746.1	321.2	175.9	127.5	94.3	79.0	68.8	63.7	53.5	51.0
60°	13584.4	8486.1	249.8	147.9	109.6	81.6	68.8	61.2	53.5	45.9	43.3
62.5°	13857.1	8124.1	191.2	117.3	89.2	71.4	61.2	53.5	45.9	38.2	35.7
65°	13487.5	7481.7	150.4	91.8	68.8	61.2	51.0	43.3	35.7	28.0	25.5
67.5°	11848.4	6309.1	117.3	73.9	53.5	45.9	43.3	35.7	25.5	20.4	17.8
70°	8373.9	4320.8	91.8	56.1	40.8	35.7	33.1	28.0	20.4	15.3	12.7
72.5°	4596.1	2179.5	66.3	40.8	30.6	28.0	25.5	22.9	17.8	12.7	12.7
75°	1769.1	599.0	48.4	28.0	20.4	20.4	17.8	17.8	15.3	10.2	10.2
77.5°	461.4	178.4	30.6	17.8	12.7	12.7	12.7	10.2	10.2	7.6	7.6
80°	147.9	58.6	17.8	12.7	10.2	7.6	7.6	5.1	7.6	5.1	5.1
82.5°	48.4	20.4	10.2	10.2	7.6	5.1	5.1	2.5	2.5	0.0	0.0
85°	17.8	10.2	7.6	5.1	5.1	5.1	2.5	0.0	0.0	0.0	0.0
87.5°	10.2	5.1	5.1	5.1	5.1	2.5	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

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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			

REPORT NUMBER: SP1-2408-195-9

**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**

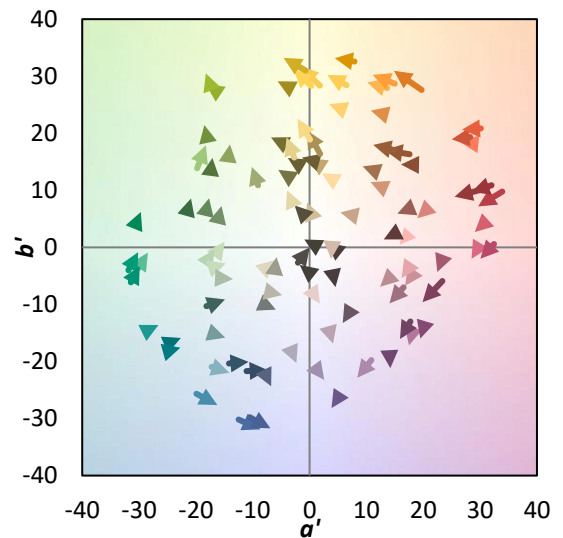
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)