

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: P635502

Luminaire Tested: GWS-SA3D-830-U-SL2-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635502  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-27)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3D-830-U-SL2-W  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13737.7 lumens  
Efficiency: N/A  
Efficacy: 113.7 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

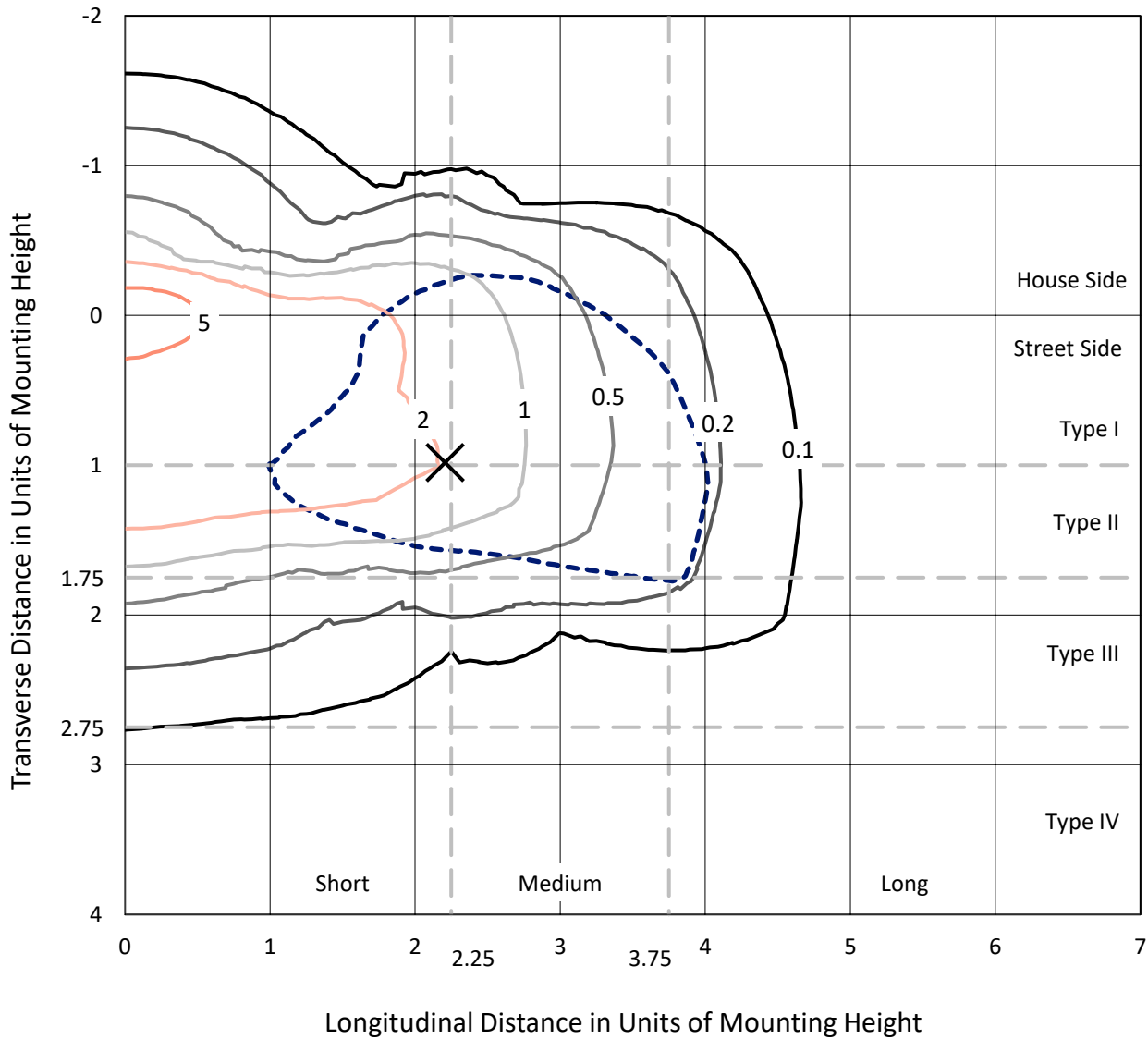
Input Watts (W): 120.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

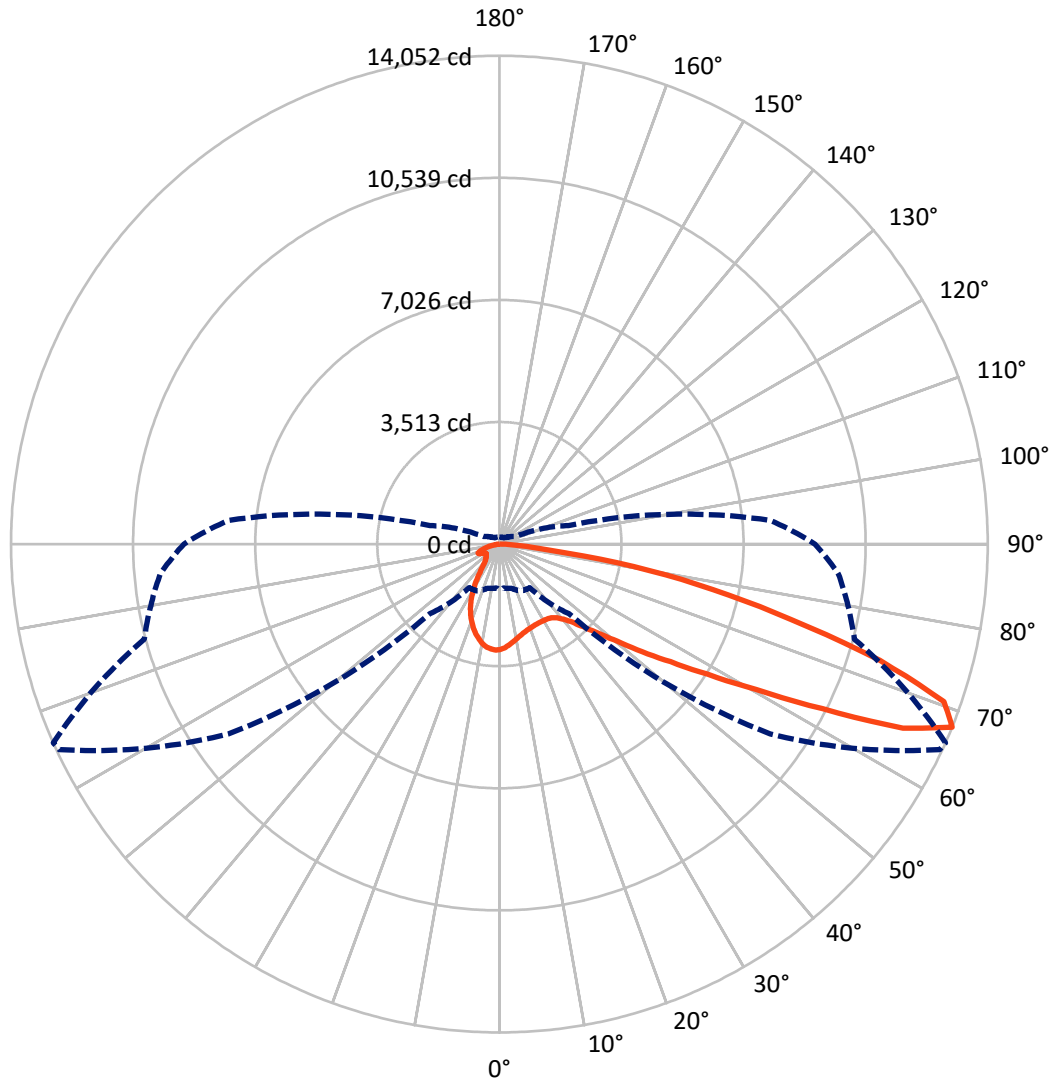
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.6 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2787.7	0.0	2787.7
	% Fixture	20.3	0.0	20.3
<b>Street Side</b>	Lumens	10950.0	0.0	10950.0
	% Fixture	79.7	0.0	79.7
<b>Total</b>	Lumens	13737.7	0.0	13737.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	266.4	1.9
10°-20°	654.8	4.8
20°-30°	900.0	6.6
30°-40°	1230.4	9.0
40°-50°	1864.4	13.6
50°-60°	2898.3	21.1
60°-70°	3528.6	25.7
70°-80°	2149.4	15.6
80°-90°	245.5	1.8
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°	13737.7	100.0
0°-180°	13737.7	100.0

**Coefficient of Utilization**



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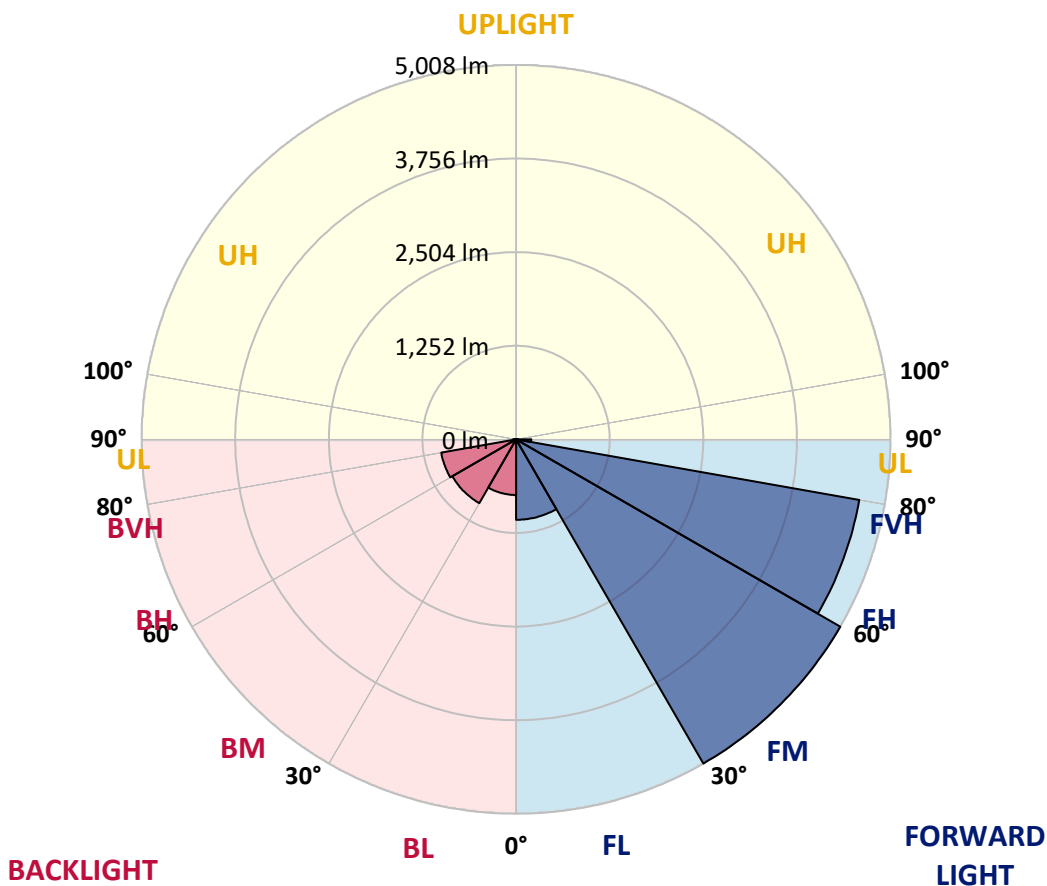
CATALOG NUMBER: GWS-SA3D-830-U-SL2-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1076.4	7.8			
FM (30°-60°)	5007.9	36.5			
FH (60°-80°)	4661.5	33.9			G2/5000
FVH (80°-90°)	204.1	1.5			G2/225
BL (0°-30°)	744.7	5.4	B2/1000		
BM (30°-60°)	985.1	7.2	B1/1000		
BH (60°-80°)	1016.4	7.4	B3/2500		G3/2500
BVH (80°-90°)	41.4	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-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6
2.5°	2843.2	2853.2	2847.2	2885.3	2887.3	2935.4	2962.5	2985.5	2987.5	3017.6	3037.6
5°	2648.8	2654.8	2654.8	2690.9	2714.9	2779.1	2841.2	2907.4	2912.4	2984.5	3039.7
7.5°	2491.5	2497.5	2493.5	2541.6	2572.6	2643.8	2723.0	2824.2	2834.2	2950.5	3046.7
10°	2368.2	2366.2	2376.2	2420.3	2460.4	2545.6	2633.8	2749.0	2764.0	2911.4	3054.7
12.5°	2284.0	2286.0	2292.0	2338.1	2381.2	2465.4	2556.6	2681.9	2697.9	2866.3	3050.7
15°	2243.9	2239.9	2244.9	2287.0	2328.1	2402.3	2496.5	2625.7	2641.8	2826.2	3051.7
17.5°	2234.9	2231.9	2230.9	2260.9	2292.0	2361.2	2451.4	2582.7	2599.7	2800.1	3057.7
20°	2263.0	2258.9	2247.9	2260.9	2274.0	2332.1	2419.3	2551.6	2570.6	2783.1	3069.7
22.5°	2340.1	2333.1	2316.1	2300.0	2283.0	2318.1	2399.2	2528.5	2547.6	2772.1	3081.7
25°	2457.4	2451.4	2433.3	2397.2	2335.1	2329.1	2395.2	2518.5	2537.6	2764.0	3086.8
27.5°	2618.7	2609.7	2591.7	2539.6	2438.3	2370.2	2410.3	2517.5	2535.5	2755.0	3081.7
30°	2810.1	2804.1	2794.1	2731.0	2595.7	2457.4	2444.3	2525.5	2539.6	2750.0	3071.7
32.5°	3004.6	2998.6	3006.6	2976.5	2810.1	2601.7	2518.5	2547.6	2557.6	2749.0	3062.7
35°	3175.9	3183.0	3241.1	3246.1	3082.7	2797.1	2635.8	2598.7	2600.7	2769.1	3066.7
37.5°	3355.3	3382.4	3458.6	3523.7	3387.4	3055.7	2810.1	2694.9	2692.9	2820.2	3091.8
40°	3592.9	3604.9	3702.1	3824.4	3739.2	3410.5	3057.7	2852.2	2838.2	2924.4	3158.9
42.5°	3824.4	3853.4	4008.8	4149.1	4121.0	3810.3	3369.4	3087.8	3062.7	3108.8	3297.2
45°	4119.0	4147.1	4321.5	4501.8	4553.0	4262.3	3768.2	3422.5	3397.4	3386.4	3550.8
47.5°	4413.7	4442.7	4599.1	4859.6	5039.0	4827.6	4287.4	3864.5	3823.4	3780.3	3933.6
50°	4612.1	4646.2	4795.5	5108.2	5529.1	5533.1	4902.7	4443.7	4391.6	4323.5	4472.8
52.5°	4605.1	4627.1	4769.4	5130.2	5881.9	6343.9	5726.5	5181.3	5139.2	4990.9	5121.2
55°	4243.3	4276.4	4419.7	4870.7	5920.0	7112.6	6937.2	6051.2	5976.1	5710.5	5853.8
57.5°	3516.7	3544.8	3689.1	4245.3	5582.2	7506.4	8474.5	7159.7	7056.4	6494.2	6659.6
60°	2654.8	2620.7	2688.9	3175.9	4774.4	7516.4	9831.5	8663.0	8490.6	7332.0	7470.3
62.5°	1992.4	1958.3	1973.3	2110.6	3237.1	6909.1	10605.2	10719.5	10434.8	8278.1	8251.1
65°	1574.4	1555.4	1598.5	1692.7	1887.1	5261.5	10611.2	12943.3	12763.9	9374.5	9051.8
67.5°	1282.8	1270.8	1314.9	1489.3	1530.3	2827.2	9514.8	13981.6	14051.7	10575.1	9794.4
70°	1033.3	1015.2	1084.4	1313.9	1423.1	1710.7	6815.9	13452.4	13565.7	11290.7	9585.0
72.5°	713.6	714.6	749.6	1064.3	1374.0	1477.2	3855.4	11201.5	11447.0	10642.3	8426.4
75°	481.1	485.1	495.1	702.5	1265.8	1433.1	2054.5	8480.6	8653.9	8796.2	6965.2
77.5°	290.6	292.6	315.7	424.9	872.9	1337.9	1392.0	6147.4	6283.7	5798.7	4317.4
80°	168.4	175.4	196.4	284.6	589.3	1005.2	1077.4	3769.2	3923.6	2577.6	1372.0
82.5°	74.2	79.2	107.2	165.4	343.8	854.9	840.8	1489.3	1467.2	718.6	476.0
85°	13.0	16.0	23.1	52.1	126.3	451.0	652.4	657.4	618.4	272.6	197.4
87.5°	0.0	0.0	0.0	0.0	0.0	3.0	98.2	176.4	175.4	77.2	68.1
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: P635502  
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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6	3035.6
2.5°	3050.7	3023.6	3047.7	3050.7	3045.7	3041.7	3011.6	2985.5	2982.5	2954.5	2954.5
5°	3061.7	3036.6	3048.7	3025.6	2989.5	2952.5	2888.3	2844.2	2824.2	2788.1	2788.1
7.5°	3076.7	3050.7	3036.6	2979.5	2895.3	2814.2	2710.9	2624.7	2589.7	2538.6	2536.5
10°	3090.8	3057.7	3009.6	2898.3	2764.0	2634.8	2484.4	2362.2	2279.0	2217.9	2217.9
12.5°	3089.8	3046.7	2951.5	2787.1	2601.7	2414.3	2213.8	2029.4	1919.2	1824.0	1818.0
15°	3087.8	3028.6	2877.3	2657.8	2412.3	2152.7	1880.1	1639.6	1476.2	1383.0	1375.0
17.5°	3085.8	3005.6	2794.1	2510.5	2181.8	1828.0	1468.2	1207.6	1071.3	1014.2	1016.2
20°	3085.8	2979.5	2704.9	2341.1	1916.2	1439.1	1077.4	887.9	853.9	856.9	859.9
22.5°	3076.7	2947.4	2605.7	2156.7	1620.5	1058.3	794.7	730.6	748.6	776.7	780.7
25°	3055.7	2894.3	2490.4	1952.3	1268.8	770.7	648.4	636.4	669.5	704.5	714.6
27.5°	3022.6	2833.2	2361.2	1712.7	934.0	619.4	570.2	569.2	595.3	621.4	630.4
30°	2987.5	2765.0	2224.9	1446.2	676.5	539.2	520.1	520.1	533.2	549.2	547.2
32.5°	2946.4	2695.9	2078.5	1168.6	551.2	494.1	488.1	485.1	487.1	493.1	493.1
35°	2911.4	2634.8	1928.2	874.9	494.1	469.0	463.0	456.0	453.0	449.0	451.0
37.5°	2898.3	2586.7	1772.9	659.4	466.0	451.0	441.0	430.9	423.9	421.9	420.9
40°	2919.4	2566.6	1617.5	543.2	446.0	431.9	420.9	407.9	401.9	401.9	401.9
42.5°	3001.6	2581.6	1459.2	491.1	431.9	415.9	399.9	387.8	385.8	387.8	388.9
45°	3151.9	2639.8	1294.8	465.0	419.9	399.9	380.8	371.8	371.8	373.8	373.8
47.5°	3420.5	2792.1	1132.5	449.0	407.9	386.8	366.8	357.8	356.8	358.8	358.8
50°	3885.5	3066.7	986.2	438.0	398.9	376.8	356.8	344.8	341.7	340.7	340.7
52.5°	4471.8	3542.8	893.0	429.9	387.8	365.8	345.8	329.7	323.7	320.7	320.7
55°	5180.3	4177.1	893.0	423.9	373.8	352.8	329.7	313.7	304.7	300.7	300.7
57.5°	5983.1	4915.8	1047.3	418.9	362.8	337.7	312.7	296.6	286.6	280.6	280.6
60°	6799.9	5696.5	1429.1	411.9	352.8	318.7	293.6	278.6	265.6	258.6	257.6
62.5°	7646.7	6556.3	1932.2	415.9	345.8	300.7	273.6	256.6	245.5	238.5	237.5
65°	8422.4	7375.1	2372.2	447.0	346.8	284.6	250.5	235.5	226.5	217.5	216.5
67.5°	9080.9	7827.1	2063.5	510.1	367.8	265.6	227.5	212.5	204.4	198.4	197.4
70°	8619.9	7137.6	1170.6	549.2	396.9	245.5	201.4	191.4	183.4	179.4	178.4
72.5°	7371.1	6043.2	782.7	485.1	361.8	219.5	177.4	169.4	163.4	158.3	157.3
75°	5971.1	4792.5	598.3	397.9	281.6	178.4	152.3	146.3	140.3	135.3	134.3
77.5°	3532.7	2769.1	441.0	314.7	198.4	139.3	126.3	121.3	115.3	111.2	110.2
80°	1127.5	962.1	279.6	216.5	131.3	107.2	97.2	93.2	87.2	82.2	81.2
82.5°	429.9	371.8	148.3	110.2	87.2	73.2	65.1	61.1	57.1	52.1	51.1
85°	190.4	178.4	82.2	59.1	47.1	36.1	32.1	30.1	25.1	21.0	20.0
87.5°	67.1	67.1	35.1	17.0	10.0	5.0	3.0	1.0	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**

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			

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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)