

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: P635010

Luminaire Tested: GWS-SA3C-830-U-SL3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635010  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-34)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3C-830-U-SL3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

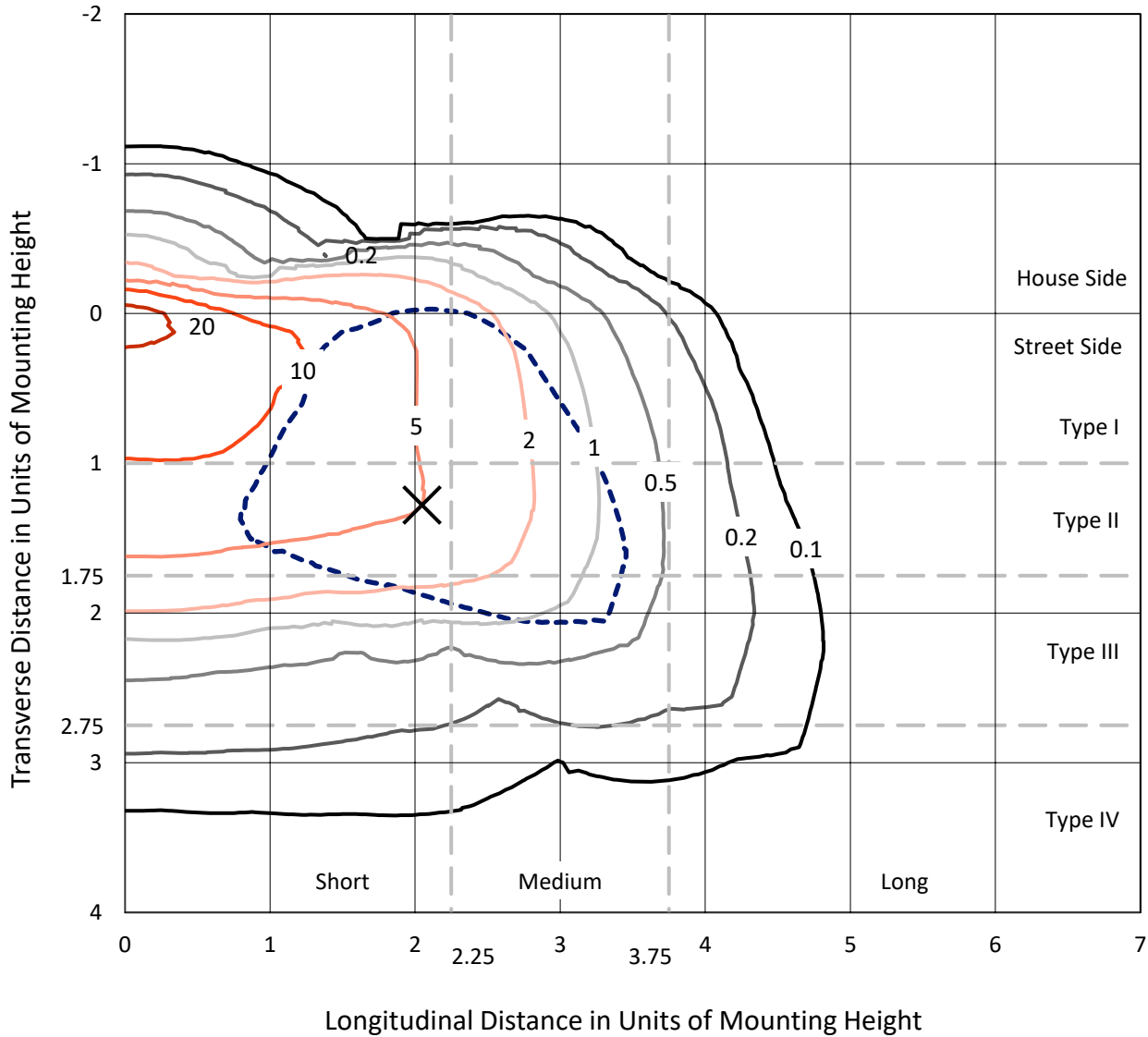
Lumens per Lamp: N/A  
Luminaire Lumens: 8975 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 93  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P635010  
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### Iso-Footcandle Lines of Horizontal Illumination

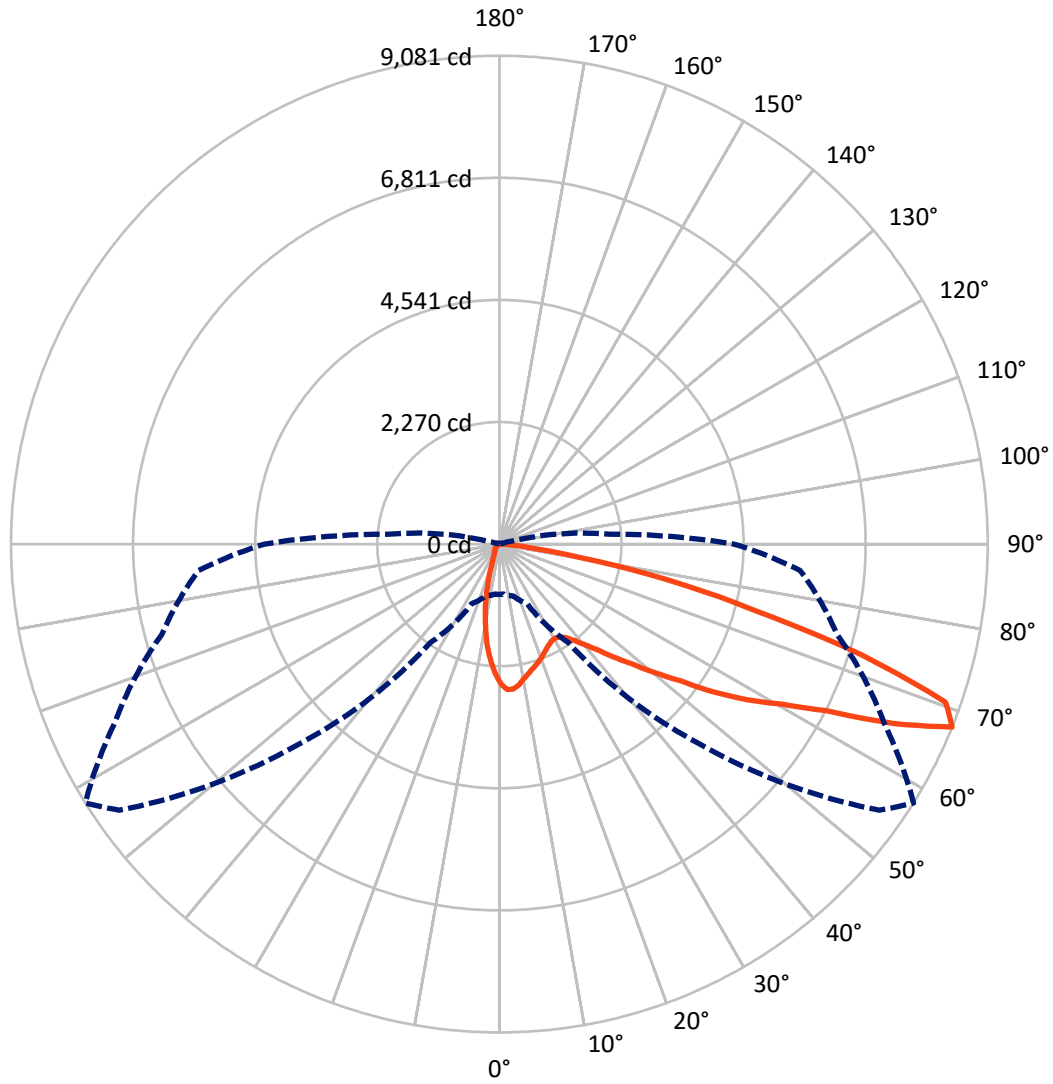
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 25.9 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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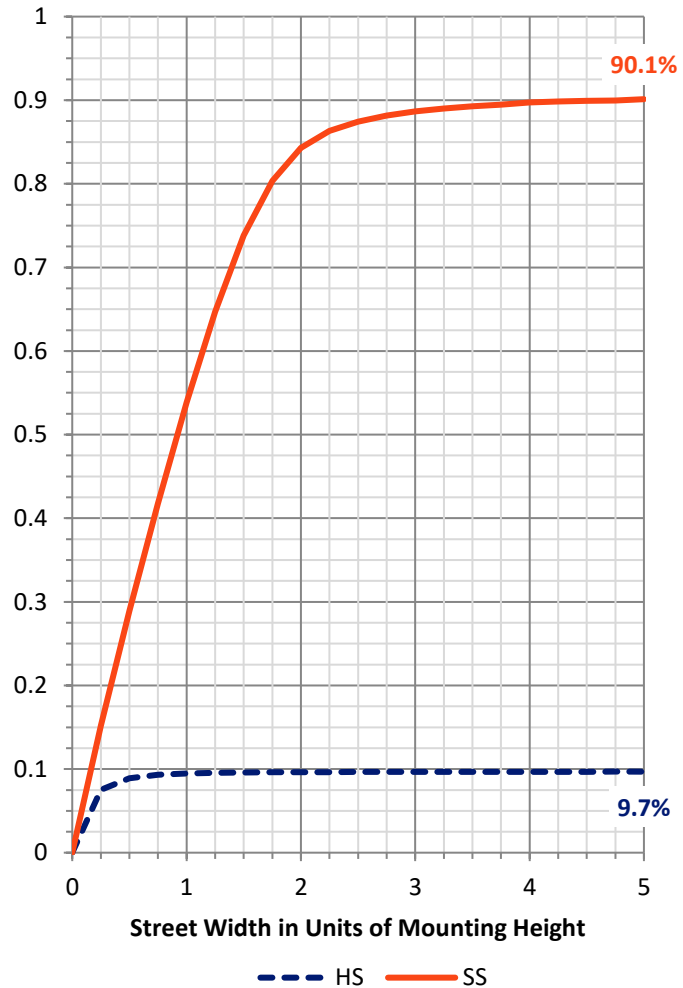
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	876.8	0.0	876.8
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	8098.2	0.0	8098.2
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	8975.0	0.0	8975.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.4	2.3
10°-20°	437.9	4.9
20°-30°	590.5	6.6
30°-40°	829.8	9.2
40°-50°	1281.6	14.3
50°-60°	2049.5	22.8
60°-70°	2426.7	27.0
70°-80°	1073.5	12.0
80°-90°	75.1	0.8
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°	8975.0	100.0
0°-180°	8975.0	100.0

**Coefficient of Utilization**



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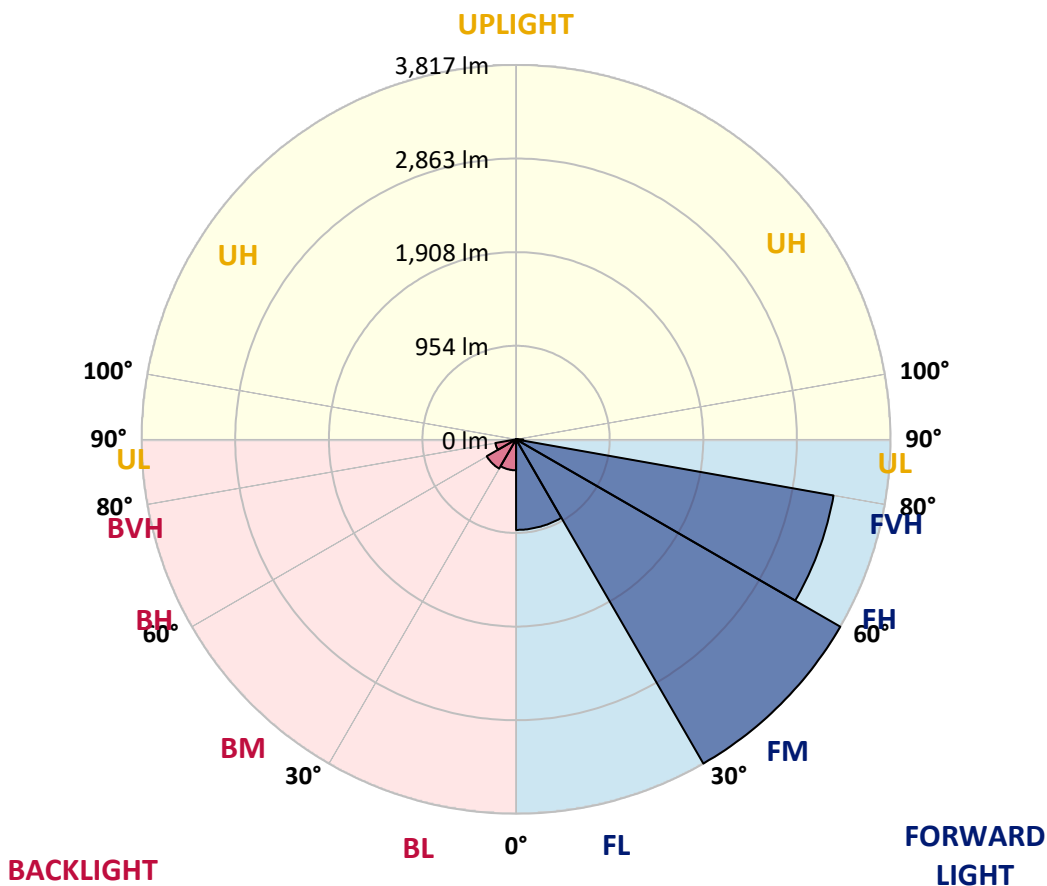
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	923.3	10.3			
FM (30°-60°)	3816.9	42.5			
FH (60°-80°)	3286.2	36.6			G2/5000
FVH (80°-90°)	71.9	0.8			G1/100
BL (0°-30°)	315.5	3.5	B1/500		
BM (30°-60°)	344.0	3.8	B1/1000		
BH (60°-80°)	214.0	2.4	B1/500		G1/500
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: B1-U0-G2**

Type III Short





REPORT NUMBER: P635010

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8
2.5°	2723.1	2727.8	2734.2	2742.1	2740.5	2733.4	2724.6	2704.8	2692.1	2652.4	2603.9
5°	2635.7	2634.9	2650.8	2665.9	2692.9	2707.2	2727.0	2708.8	2702.4	2654.7	2576.1
7.5°	2464.9	2473.6	2491.9	2515.7	2554.7	2596.8	2644.4	2638.9	2657.9	2626.1	2528.4
10°	2297.3	2292.5	2321.1	2356.9	2416.4	2470.5	2539.6	2538.8	2588.8	2585.6	2474.4
12.5°	2150.3	2149.5	2171.8	2212.3	2282.2	2357.7	2451.4	2453.8	2515.7	2541.1	2428.4
15°	2026.4	2028.0	2049.4	2091.5	2163.8	2256.0	2364.8	2384.7	2454.6	2506.2	2383.1
17.5°	1938.2	1939.0	1951.7	1988.3	2059.0	2157.5	2288.5	2315.6	2405.3	2480.0	2346.5
20°	1897.7	1894.5	1896.9	1915.2	1970.0	2059.8	2210.7	2245.6	2360.0	2461.7	2313.2
22.5°	1903.3	1898.5	1887.4	1885.0	1909.6	1978.0	2128.1	2171.0	2310.8	2450.6	2283.0
25°	1952.5	1942.2	1926.3	1902.5	1893.0	1927.1	2055.8	2100.3	2264.7	2451.4	2259.9
27.5°	2028.0	2016.9	1997.0	1965.2	1927.9	1913.6	2006.5	2048.6	2232.1	2469.7	2248.8
30°	2124.1	2115.4	2096.3	2058.2	2008.1	1949.4	1996.2	2031.2	2216.3	2507.0	2253.6
32.5°	2237.7	2231.4	2215.5	2180.5	2123.3	2033.6	2031.2	2058.2	2229.0	2561.0	2271.9
35°	2347.3	2349.7	2350.5	2331.4	2270.3	2161.4	2127.3	2136.8	2281.4	2642.0	2313.2
37.5°	2465.7	2460.1	2488.7	2502.2	2443.4	2327.5	2275.8	2276.6	2381.5	2762.0	2391.0
40°	2555.4	2557.0	2619.0	2674.6	2650.0	2538.0	2464.1	2463.3	2535.6	2926.4	2516.5
42.5°	2639.7	2650.0	2741.3	2836.7	2870.8	2771.5	2718.3	2698.4	2751.7	3148.8	2704.8
45°	2729.4	2744.5	2872.4	3008.2	3098.0	3039.2	2997.1	3005.1	3011.4	3407.8	2958.2
47.5°	2834.3	2843.8	3001.9	3193.3	3360.9	3345.8	3348.2	3338.7	3335.5	3734.3	3293.4
50°	2961.4	2983.6	3165.5	3394.3	3623.1	3723.2	3756.5	3760.5	3708.9	4090.1	3640.5
52.5°	3231.4	3258.5	3414.1	3614.3	3909.0	4119.5	4255.4	4228.4	4148.9	4434.9	4021.0
55°	3550.0	3570.6	3720.8	3928.1	4258.6	4554.1	4876.6	4865.4	4670.8	4797.9	4334.0
57.5°	3580.2	3603.2	3836.0	4153.7	4707.4	5091.0	5430.2	5466.0	5180.8	5055.3	4613.6
60°	3241.0	3287.8	3605.6	4033.0	4878.9	5813.1	6037.1	6044.3	5554.9	5316.6	4955.2
62.5°	2597.5	2619.8	2939.9	3497.6	4614.4	6234.1	6964.1	6813.2	6035.5	5721.0	5496.2
65°	1361.5	1452.1	1730.9	2348.1	3742.2	6087.2	8079.4	8038.1	6899.8	6300.0	5917.2
67.5°	934.2	933.4	999.3	1224.1	2231.4	5241.2	8626.7	9081.1	7899.1	6498.6	5612.1
70°	711.0	713.3	772.1	918.3	1155.8	3488.8	8026.2	8803.1	8085.0	5900.5	4539.0
72.5°	471.8	476.6	574.3	741.9	923.0	1710.3	6237.3	7043.6	6802.9	4739.1	3194.9
75°	282.0	286.0	355.9	539.4	820.6	957.2	3963.0	4869.4	4682.7	3266.4	1712.6
77.5°	116.0	119.2	182.7	336.0	600.5	743.5	2191.6	3186.2	2804.9	1298.8	467.9
80°	48.5	50.0	88.2	235.1	432.9	466.3	1015.2	1497.4	1149.4	279.6	143.0
82.5°	17.5	18.3	32.6	129.5	269.3	351.1	512.4	591.8	324.1	91.4	77.1
85°	0.8	0.8	7.9	43.7	102.5	99.3	293.1	283.6	107.2	38.1	46.1
87.5°	0.0	0.0	0.8	0.8	1.6	4.0	27.8	49.3	23.0	9.5	19.9
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-SA3C-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8	2588.8
2.5°	2572.1	2530.0	2484.0	2441.1	2372.7	2332.2	2282.2	2259.9	2228.2	2220.2	2225.0
5°	2519.7	2447.4	2337.0	2236.9	2107.4	2003.4	1898.5	1854.0	1796.8	1758.7	1742.8
7.5°	2445.8	2351.3	2178.9	1997.0	1819.1	1629.2	1484.7	1389.3	1302.7	1255.1	1245.6
10°	2371.2	2248.0	2001.0	1740.4	1464.8	1237.6	1042.2	897.6	780.1	726.8	685.5
12.5°	2294.1	2140.8	1819.9	1479.9	1159.8	850.0	608.5	467.9	383.7	350.3	355.9
15°	2223.4	2037.5	1640.3	1219.3	816.6	513.2	336.0	283.6	263.7	257.4	256.6
17.5°	2155.9	1939.8	1461.6	965.9	538.6	314.6	257.4	244.7	239.1	235.9	235.9
20°	2094.7	1846.1	1286.9	727.6	347.9	249.4	232.7	226.4	221.6	219.2	219.2
22.5°	2037.5	1755.5	1116.1	514.7	256.6	224.0	213.7	207.3	201.8	198.6	198.6
25°	1985.9	1673.7	953.2	354.3	220.8	204.9	193.8	186.7	177.1	171.6	171.6
27.5°	1948.6	1600.6	796.7	258.2	199.4	184.3	171.6	162.0	151.7	145.4	143.8
30°	1926.3	1538.7	638.7	212.1	179.5	164.4	150.1	138.2	126.3	119.9	119.2
32.5°	1913.6	1481.5	494.1	185.1	162.8	145.4	129.5	116.8	104.9	97.7	96.9
35°	1918.4	1437.0	370.2	166.8	147.0	128.7	111.2	98.5	88.2	81.8	80.2
37.5°	1959.7	1417.1	278.0	152.5	133.5	114.4	96.1	84.2	74.7	69.9	69.1
40°	2039.9	1421.1	218.4	141.4	122.3	100.1	82.6	71.5	64.3	60.4	59.6
42.5°	2164.6	1454.5	180.3	131.9	110.4	87.4	71.5	62.8	55.6	51.6	50.8
45°	2350.5	1523.6	157.3	120.7	97.7	75.5	62.0	54.0	47.7	42.9	42.1
47.5°	2619.8	1643.5	142.2	110.4	86.6	65.1	53.2	45.3	39.7	35.7	35.0
50°	2906.6	1787.3	129.5	100.1	77.1	56.4	45.3	37.3	32.6	28.6	27.8
52.5°	3212.4	1942.2	119.9	90.6	68.3	48.5	38.1	31.0	26.2	22.2	21.4
55°	3506.3	2097.9	108.8	84.2	58.0	41.3	31.8	25.4	20.7	17.5	17.5
57.5°	3792.3	2240.9	96.9	73.9	47.7	35.0	26.2	20.7	16.7	14.3	13.5
60°	4133.8	2438.7	83.4	62.8	39.7	29.4	21.4	16.7	13.5	11.1	11.1
62.5°	4641.4	2644.4	71.5	52.4	33.4	24.6	17.5	13.5	11.1	9.5	8.7
65°	4807.5	2533.2	60.4	42.9	27.0	19.9	14.3	11.9	9.5	8.7	7.9
67.5°	4364.2	2076.5	50.0	35.0	22.2	16.7	12.7	10.3	8.7	7.9	7.1
70°	3405.4	1473.5	38.9	26.2	18.3	13.5	11.1	9.5	7.9	7.1	7.1
72.5°	2316.3	871.4	31.0	19.9	15.1	11.9	9.5	8.7	7.9	7.1	6.4
75°	1140.7	309.8	23.8	15.1	11.9	10.3	8.7	7.9	7.1	6.4	6.4
77.5°	307.4	85.8	18.3	11.9	9.5	7.9	7.9	7.9	7.1	5.6	5.6
80°	104.1	35.7	13.5	8.7	7.9	6.4	5.6	7.1	6.4	5.6	4.8
82.5°	57.2	17.5	9.5	7.1	5.6	4.8	4.8	4.8	4.8	4.0	4.0
85°	36.5	9.5	6.4	5.6	5.6	4.0	3.2	3.2	2.4	2.4	2.4
87.5°	16.7	5.6	5.6	4.8	4.8	4.0	2.4	1.6	0.8	0.8	0.8
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



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

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**

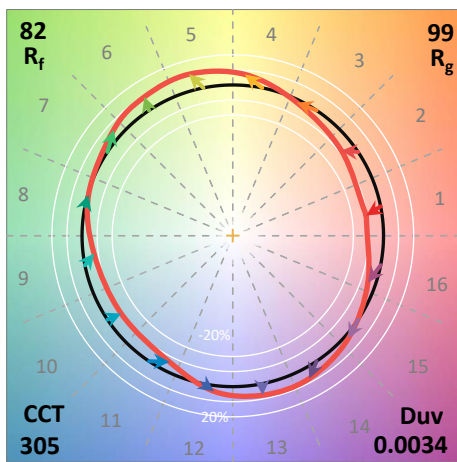
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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



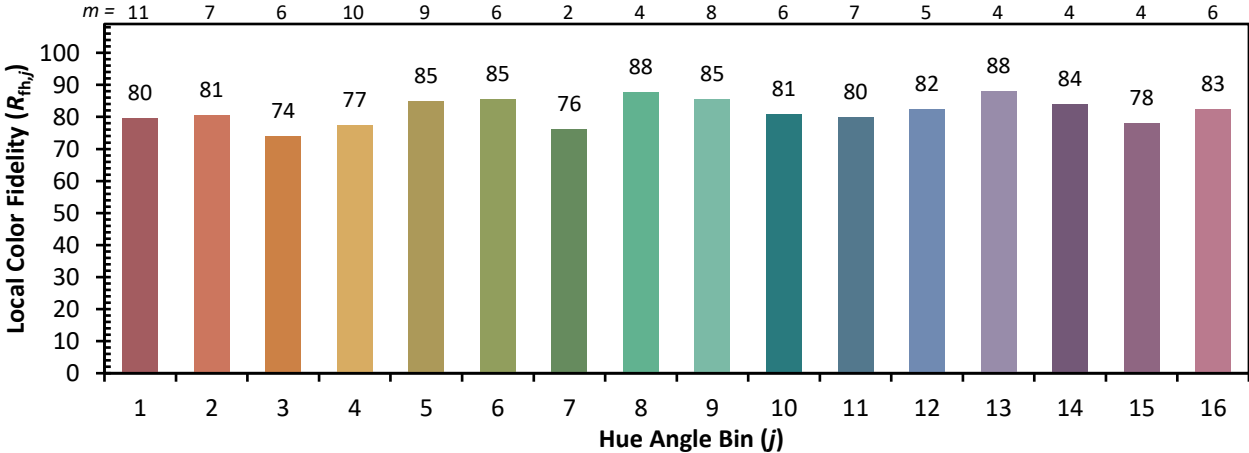


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)