

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: P636488

Luminaire Tested: GWS-SA3F-830-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636488
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-49)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3F-830-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19994.8 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

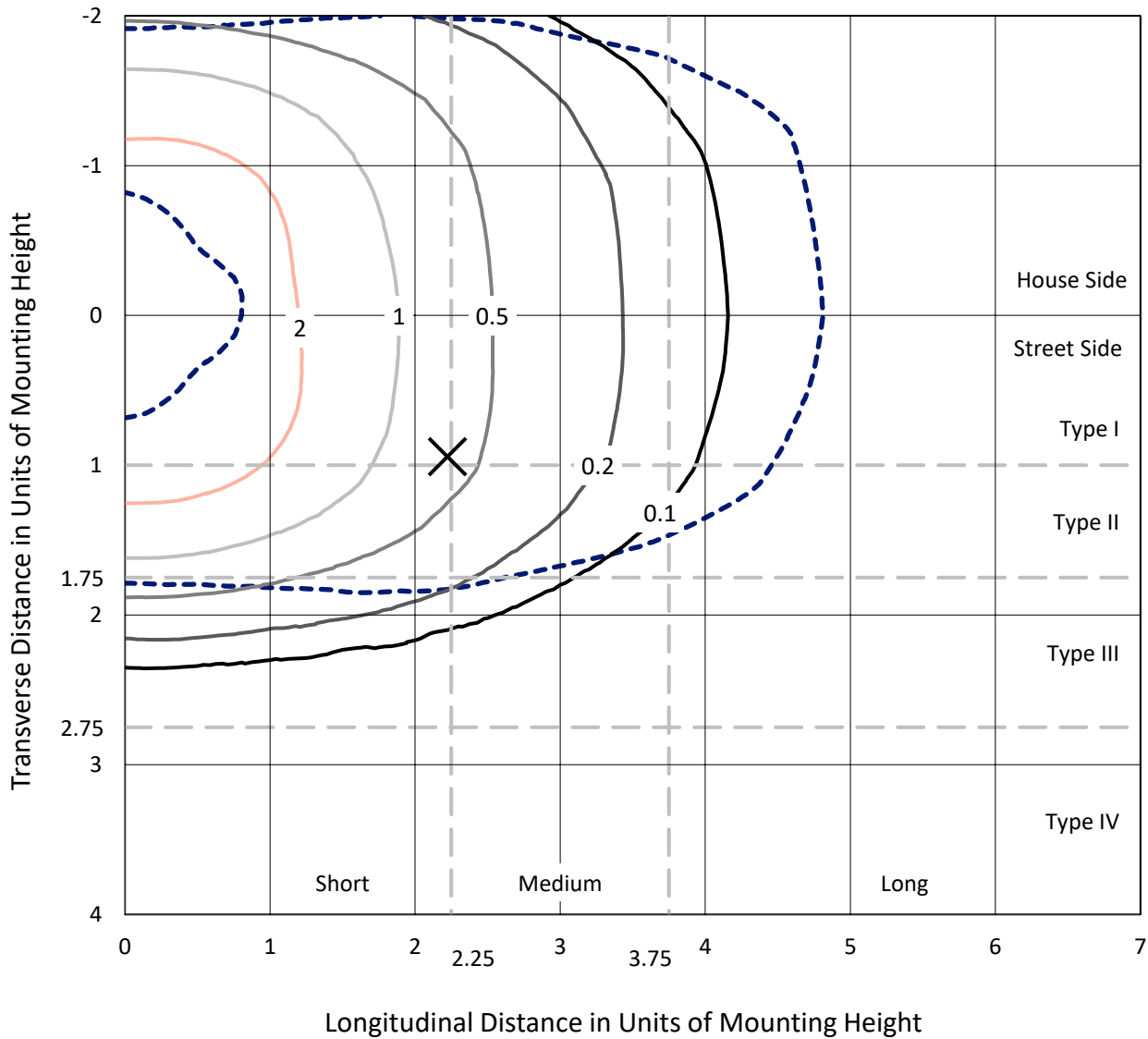
Input Watts (W): 183.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P636488
 CATALOG NUMBER: GWS-SA3F-830-U-RW-W

Iso-Footcandle Lines of Horizontal Illumination

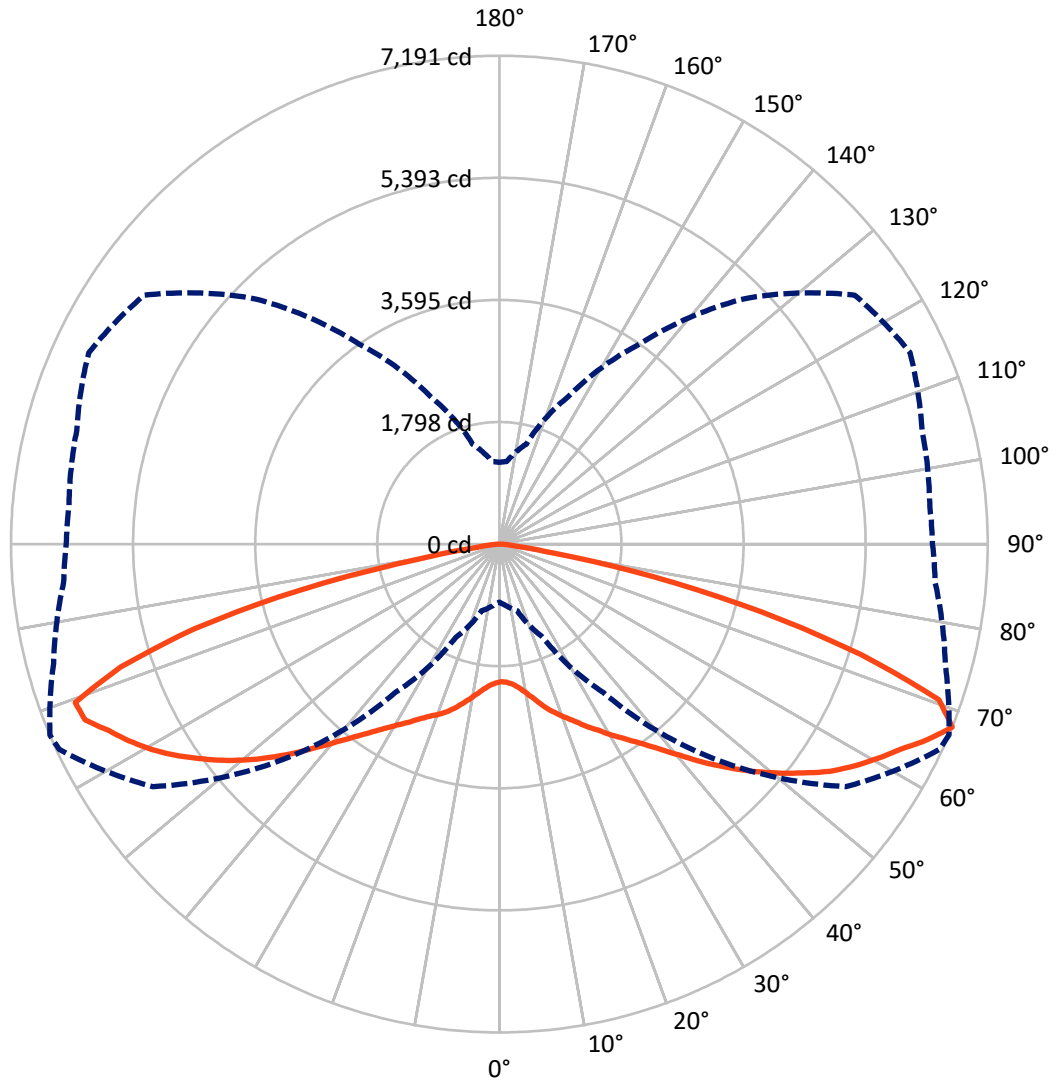
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9887.1	0.0	9887.1
	% Fixture	49.4	0.0	49.4
Street Side	Lumens	10107.7	0.0	10107.7
	% Fixture	50.6	0.0	50.6
Total	Lumens	19994.8	0.0	19994.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.6	1.0
10°-20°	671.1	3.4
20°-30°	1316.6	6.6
30°-40°	2243.1	11.2
40°-50°	3602.0	18.0
50°-60°	4894.4	24.5
60°-70°	4681.8	23.4
70°-80°	2225.9	11.1
80°-90°	161.3	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°	19994.8	100.0
0°-180°	19994.8	100.0

Coefficient of Utilization



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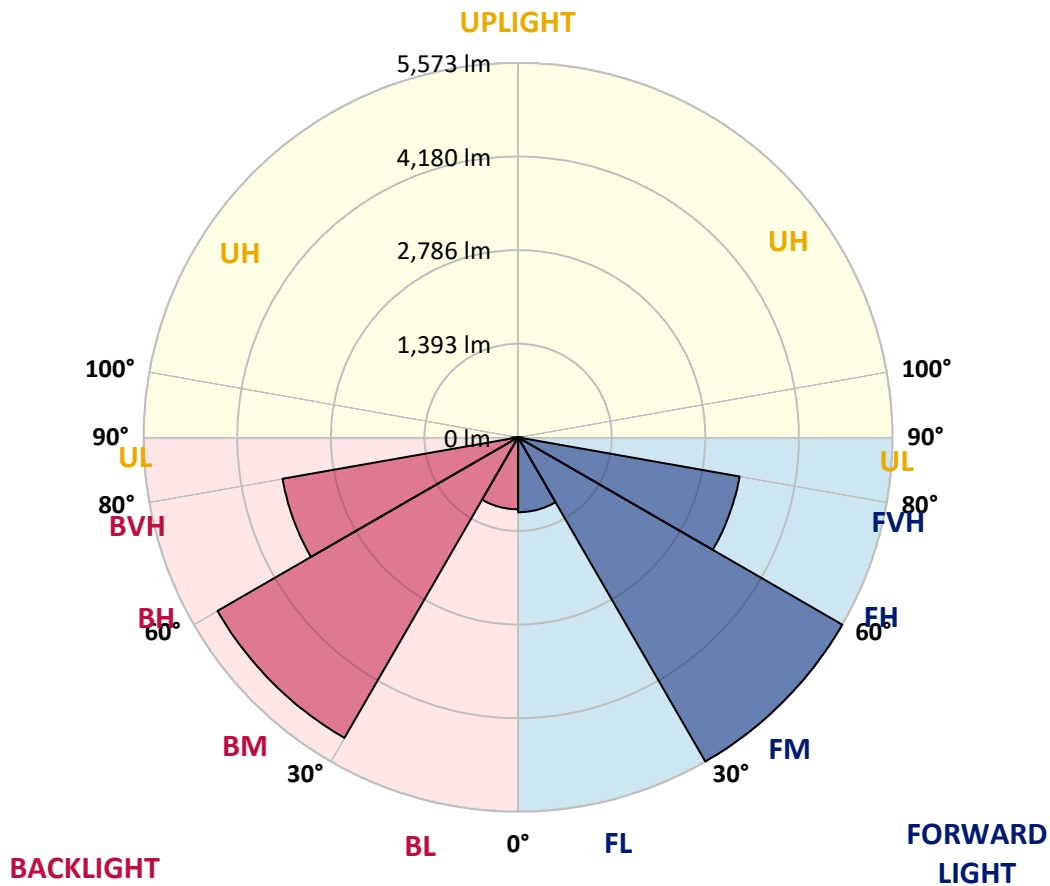
CATALOG NUMBER: GWS-SA3F-830-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1114.9	5.6			
FM (30°-60°)	5572.7	27.9			
FH (60°-80°)	3347.7	16.7			G2/5000
FVH (80°-90°)	72.5	0.4			G1/100
BL (0°-30°)	1071.5	5.4	B3/2500		
BM (30°-60°)	5166.8	25.8	B4/8500		
BH (60°-80°)	3560.0	17.8	B4/5000		G4/5000
BVH (80°-90°)	88.8	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short





REPORT NUMBER: P636488
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6
2.5°	1982.8	1985.6	1989.8	1998.1	2006.5	2019.0	2031.5	2030.2	2035.7	2039.9	2044.1
5°	1971.7	1974.5	1981.4	1992.6	2005.1	2026.0	2052.4	2063.6	2071.9	2087.2	2101.2
7.5°	1995.3	2000.9	2010.7	2026.0	2045.5	2071.9	2108.1	2127.6	2140.2	2168.0	2191.7
10°	2027.4	2034.3	2053.8	2083.1	2112.3	2152.7	2198.6	2227.9	2236.2	2272.4	2317.0
12.5°	2058.0	2066.4	2098.4	2151.3	2204.2	2258.5	2312.8	2349.0	2351.8	2400.5	2450.7
15°	2106.7	2113.7	2156.9	2225.1	2305.9	2381.0	2447.9	2472.9	2484.1	2518.9	2581.6
17.5°	2214.0	2222.3	2278.0	2351.8	2436.7	2516.1	2582.9	2603.8	2603.8	2633.1	2684.6
20°	2329.5	2337.9	2411.7	2506.4	2609.4	2690.2	2741.7	2722.2	2715.2	2723.6	2759.8
22.5°	2459.0	2474.3	2545.4	2655.4	2782.1	2880.9	2907.4	2848.9	2829.4	2809.9	2818.3
25°	2624.7	2642.8	2712.4	2829.4	2953.3	3057.8	3073.1	2982.6	2971.4	2903.2	2878.1
27.5°	2815.5	2829.4	2915.7	3031.3	3146.9	3234.6	3251.3	3139.9	3102.3	3007.6	2949.2
30°	3061.9	3074.5	3149.7	3263.8	3364.1	3425.4	3446.3	3293.1	3263.8	3119.0	3028.5
32.5°	3330.7	3336.2	3412.8	3522.8	3611.9	3670.4	3641.2	3463.0	3419.8	3256.9	3133.0
35°	3638.4	3638.4	3737.3	3826.4	3897.4	3914.1	3858.4	3655.1	3605.0	3428.1	3273.6
37.5°	3940.6	3948.9	4040.8	4146.6	4209.3	4206.5	4104.9	3882.1	3825.0	3632.8	3461.6
40°	4267.8	4285.9	4377.8	4496.1	4556.0	4547.7	4391.7	4143.9	4085.4	3858.4	3691.3
42.5°	4568.5	4597.8	4705.0	4826.1	4891.6	4886.0	4723.1	4444.6	4387.5	4131.3	3964.2
45°	4808.0	4838.7	4972.3	5140.8	5245.3	5235.5	5071.2	4756.5	4686.9	4418.2	4234.4
47.5°	5018.3	5050.3	5199.3	5377.5	5543.2	5560.0	5409.6	5071.2	4997.4	4725.9	4518.4
50°	5179.8	5195.1	5362.2	5557.2	5749.3	5842.6	5711.7	5387.3	5298.2	5029.4	4795.5
52.5°	5167.3	5188.2	5394.3	5658.8	5916.4	6069.6	5979.1	5685.3	5598.9	5306.5	5078.2
55°	4912.5	4933.4	5178.4	5564.1	6009.7	6235.3	6225.5	5969.3	5906.7	5589.2	5372.0
57.5°	4540.7	4586.6	4830.3	5246.7	5887.2	6367.6	6406.5	6228.3	6162.9	5866.3	5663.0
60°	3875.1	3936.4	4217.7	4757.9	5494.5	6323.0	6600.1	6446.9	6406.5	6123.9	5926.2
62.5°	2815.5	2860.0	3234.6	3943.3	4912.5	6005.5	6763.0	6672.5	6641.9	6355.0	6164.3
65°	1686.2	1787.9	2088.6	2789.0	3962.8	5406.8	6673.9	6967.7	6935.7	6593.1	6367.6
67.5°	853.6	899.5	1017.9	1512.2	2665.1	4473.9	6226.9	7151.5	7190.5	6796.4	6440.0
70°	529.1	541.7	575.1	746.3	1331.2	2939.4	5092.1	6672.5	6863.3	6764.4	6252.0
72.5°	424.7	427.5	433.0	465.1	639.1	1374.3	3219.3	5225.8	5569.7	6317.4	5983.2
75°	352.3	353.7	355.1	364.8	398.2	561.1	1566.5	3591.1	3993.5	5369.2	5547.4
77.5°	282.7	275.7	281.3	285.4	293.8	313.3	540.3	1916.0	2324.0	3524.2	4290.1
80°	183.8	181.0	192.2	196.3	204.7	217.2	288.2	650.3	789.5	1282.4	1364.6
82.5°	98.9	93.3	117.0	112.8	117.0	126.7	169.9	238.1	267.3	387.1	327.2
85°	30.6	30.6	32.0	37.6	46.0	44.6	73.8	117.0	129.5	165.7	122.5
87.5°	5.6	5.6	5.6	5.6	5.6	7.0	15.3	23.7	32.0	57.1	43.2
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-SA3F-830-U-RW-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6	2024.6
2.5°	2052.4	2039.9	2046.9	2051.0	2049.6	2046.9	2032.9	2030.2	2023.2	2012.1	2009.3
5°	2113.7	2099.8	2101.2	2097.0	2083.1	2065.0	2034.3	2019.0	2006.5	1992.6	1991.2
7.5°	2209.8	2194.5	2190.3	2170.8	2131.8	2090.0	2041.3	2013.4	1992.6	1974.5	1971.7
10°	2332.3	2317.0	2303.1	2257.1	2193.1	2137.4	2073.3	2032.9	2002.3	1980.0	1975.9
12.5°	2468.8	2456.2	2421.4	2354.6	2278.0	2212.6	2147.1	2097.0	2052.4	2019.0	2014.8
15°	2620.5	2592.7	2539.8	2453.5	2381.0	2328.1	2248.8	2180.5	2109.5	2065.0	2055.2
17.5°	2726.4	2702.7	2640.0	2556.5	2499.4	2453.5	2360.2	2262.7	2166.6	2101.2	2087.2
20°	2801.6	2776.5	2705.5	2644.2	2626.1	2587.1	2478.5	2365.7	2254.3	2173.6	2155.5
22.5°	2855.9	2829.4	2757.0	2726.4	2751.4	2744.5	2638.6	2510.5	2378.3	2282.2	2259.9
25°	2907.4	2882.3	2818.3	2829.4	2896.2	2917.1	2803.0	2654.0	2503.6	2390.8	2364.3
27.5°	2956.1	2924.1	2894.9	2956.1	3050.8	3089.8	2968.6	2800.2	2637.3	2521.7	2500.8
30°	3031.3	2993.7	2989.5	3078.7	3229.0	3262.5	3128.8	2960.3	2798.8	2681.8	2655.4
32.5°	3126.0	3091.2	3094.0	3227.6	3401.7	3429.5	3315.4	3158.0	2996.5	2879.5	2843.3
35°	3254.1	3210.9	3234.6	3398.9	3574.4	3625.9	3534.0	3403.1	3245.7	3126.0	3085.6
37.5°	3430.9	3368.3	3417.0	3589.7	3766.5	3843.1	3772.1	3674.6	3518.7	3397.5	3359.9
40°	3656.5	3605.0	3624.5	3815.2	3997.7	4089.6	4045.0	3948.9	3794.4	3667.6	3624.5
42.5°	3923.9	3872.3	3865.4	4068.7	4251.1	4390.3	4347.1	4259.4	4099.3	3954.5	3912.7
45°	4185.6	4138.3	4148.0	4355.5	4560.2	4712.0	4668.8	4565.8	4391.7	4224.6	4191.2
47.5°	4458.5	4419.6	4427.9	4647.9	4873.5	5025.3	4971.0	4845.6	4642.3	4464.1	4423.7
50°	4738.4	4693.9	4706.4	4937.5	5181.2	5324.6	5241.1	5055.9	4831.7	4657.7	4622.8
52.5°	5016.9	4964.0	4996.0	5214.6	5466.7	5580.8	5426.3	5202.1	4984.9	4812.2	4773.2
55°	5337.2	5281.5	5246.7	5480.6	5729.8	5777.2	5565.5	5303.7	5046.1	4849.8	4826.1
57.5°	5629.6	5582.2	5516.8	5750.7	5934.5	5899.7	5672.7	5275.9	4897.2	4645.1	4611.7
60°	5891.3	5851.0	5793.9	5993.0	6076.5	5998.6	5586.4	4945.9	4529.6	4266.4	4251.1
62.5°	6132.2	6089.1	6036.2	6206.0	6194.9	6013.9	5193.7	4439.0	3882.1	3599.4	3574.4
65°	6323.0	6284.0	6268.7	6402.4	6384.3	5714.5	4582.5	3609.2	2836.4	2517.5	2507.8
67.5°	6377.3	6362.0	6444.1	6671.1	6388.4	5113.0	3593.8	2393.6	1523.3	1221.2	1203.1
70°	6174.0	6172.6	6407.9	6732.4	5809.2	3905.8	2120.7	1079.1	765.8	679.5	668.4
72.5°	5909.4	5905.3	6091.9	5807.8	4308.2	2137.4	892.5	577.9	479.0	455.3	455.3
75°	5475.0	5463.9	5604.5	4418.2	2422.8	804.8	473.4	396.8	376.0	371.8	371.8
77.5°	4462.7	4369.4	4148.0	2730.5	845.2	395.4	313.3	311.9	299.4	298.0	298.0
80°	1467.6	1467.6	1705.7	1041.5	373.2	243.7	221.4	232.5	220.0	211.6	210.3
82.5°	239.5	330.0	469.2	298.0	201.9	151.8	136.5	144.8	151.8	121.1	121.1
85°	94.7	123.9	181.0	139.2	93.3	61.3	65.4	72.4	64.1	55.7	54.3
87.5°	36.2	44.6	64.1	33.4	19.5	11.1	7.0	7.0	5.6	5.6	5.6
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

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /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 [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /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)