

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: P638468

Luminaire Tested: GWS-SA4E-830-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638468
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-SA4E-830-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25025.8 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

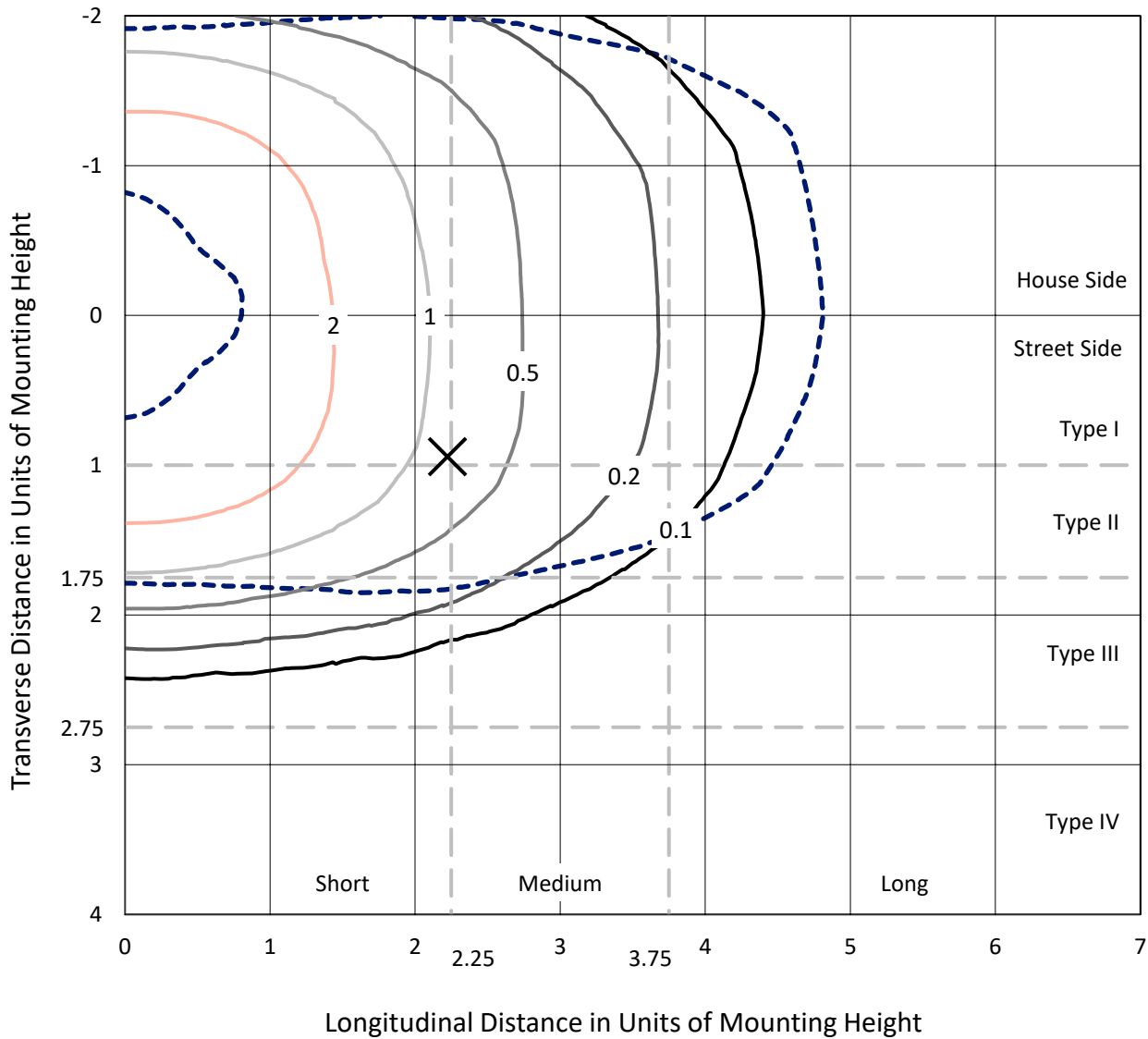
Input Watts (W): 202.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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 CATALOG NUMBER: GWS-SA4E-830-U-RW-W

Iso-Footcandle Lines of Horizontal Illumination

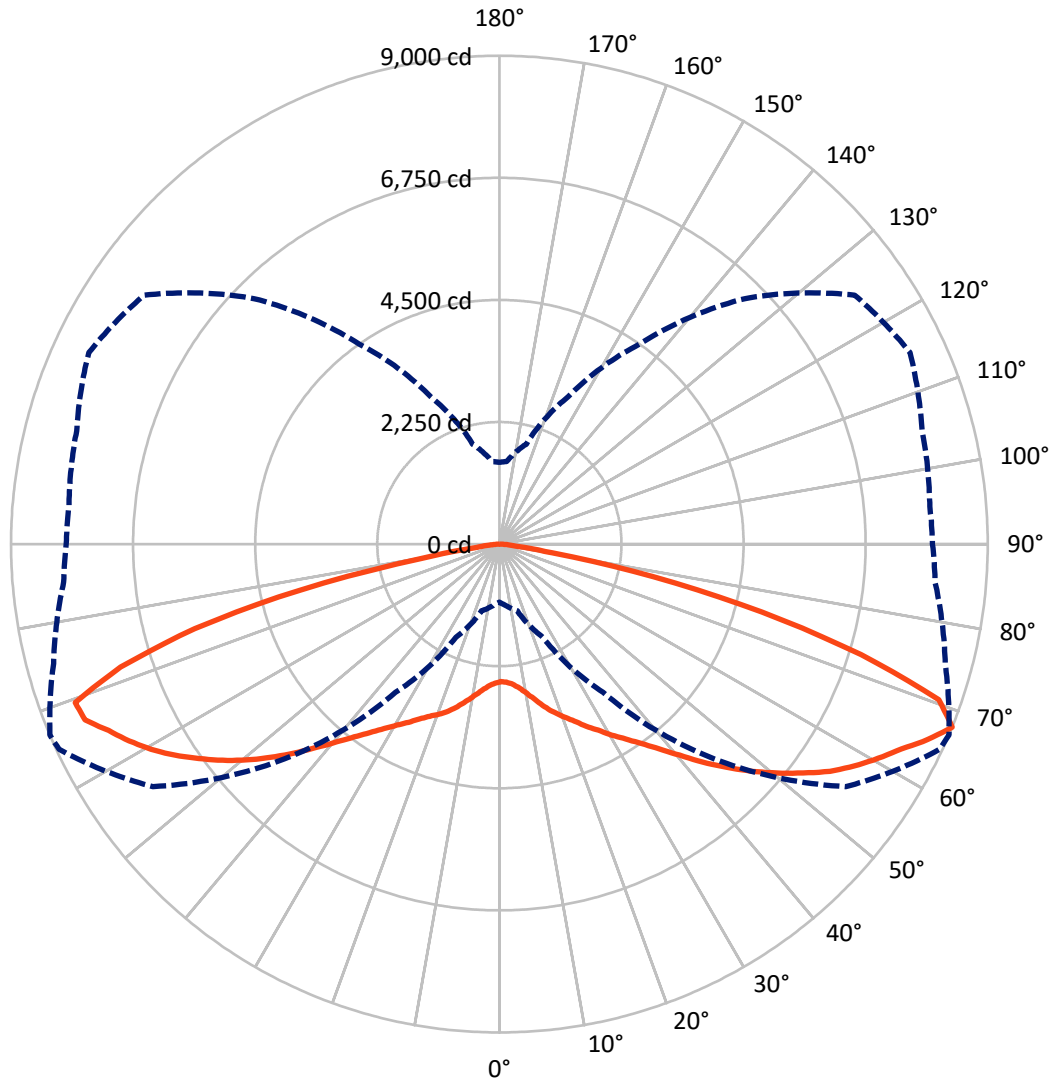
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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	12374.8	0.0	12374.8
	% Fixture	49.4	0.0	49.4
Street Side	Lumens	12651.0	0.0	12651.0
	% Fixture	50.6	0.0	50.6
Total	Lumens	25025.8	0.0	25025.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.6	1.0
10°-20°	839.9	3.4
20°-30°	1647.9	6.6
30°-40°	2807.5	11.2
40°-50°	4508.3	18.0
50°-60°	6125.9	24.5
60°-70°	5859.8	23.4
70°-80°	2786.0	11.1
80°-90°	201.9	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°	25025.8	100.0
0°-180°	25025.8	100.0

Coefficient of Utilization



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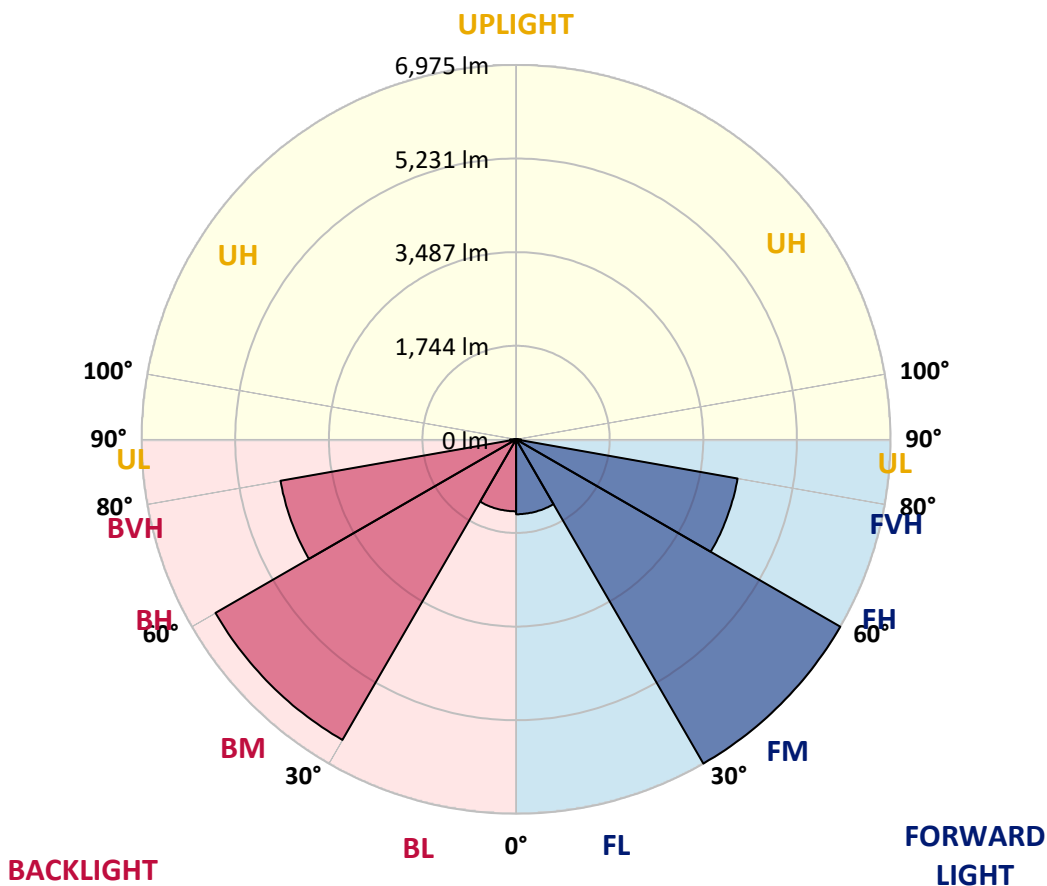
CATALOG NUMBER: GWS-SA4E-830-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1395.4	5.6			
FM (30°-60°)	6974.9	27.9			
FH (60°-80°)	4190.0	16.7			G2/5000
FVH (80°-90°)	90.7	0.4			G1/100
BL (0°-30°)	1341.1	5.4	B3/2500		
BM (30°-60°)	6466.8	25.8	B4/8500		
BH (60°-80°)	4455.8	17.8	B4/5000		G4/5000
BVH (80°-90°)	111.1	0.4			G2/225
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0
2.5°	2481.7	2485.2	2490.4	2500.9	2511.3	2527.0	2542.7	2541.0	2547.9	2553.2	2558.4
5°	2467.8	2471.3	2480.0	2493.9	2509.6	2535.7	2568.9	2582.8	2593.3	2612.4	2629.9
7.5°	2497.4	2504.4	2516.6	2535.7	2560.1	2593.3	2638.6	2663.0	2678.7	2713.5	2743.1
10°	2537.5	2546.2	2570.6	2607.2	2643.8	2694.3	2751.8	2788.4	2798.9	2844.2	2900.0
12.5°	2575.8	2586.3	2626.4	2692.6	2758.8	2826.8	2894.8	2940.1	2943.6	3004.6	3067.3
15°	2636.8	2645.5	2699.6	2785.0	2886.0	2980.2	3063.8	3095.2	3109.1	3152.7	3231.1
17.5°	2771.0	2781.5	2851.2	2943.6	3049.9	3149.2	3232.9	3259.0	3259.0	3295.6	3360.1
20°	2915.7	2926.1	3018.5	3137.0	3266.0	3367.1	3431.5	3407.1	3398.4	3408.9	3454.2
22.5°	3077.7	3096.9	3185.8	3323.5	3482.1	3605.8	3638.9	3565.7	3541.3	3516.9	3527.4
25°	3285.1	3307.8	3394.9	3541.3	3696.4	3827.1	3846.3	3733.0	3719.1	3633.7	3602.3
27.5°	3523.9	3541.3	3649.4	3794.0	3938.7	4048.5	4069.4	3930.0	3882.9	3764.4	3691.2
30°	3832.4	3848.1	3942.2	4085.1	4210.6	4287.2	4313.4	4121.7	4085.1	3903.8	3790.5
32.5°	4168.7	4175.7	4271.6	4409.2	4520.8	4594.0	4557.4	4334.3	4280.3	4076.4	3921.3
35°	4553.9	4553.9	4677.6	4789.2	4878.0	4899.0	4829.2	4574.8	4512.1	4290.7	4097.3
37.5°	4932.1	4942.5	5057.5	5190.0	5268.4	5264.9	5137.7	4858.9	4787.4	4546.9	4332.6
40°	5341.6	5364.3	5479.3	5627.4	5702.4	5691.9	5496.7	5186.5	5113.3	4829.2	4620.1
42.5°	5718.1	5754.7	5888.9	6040.5	6122.4	6115.4	5911.5	5563.0	5491.5	5170.8	4961.7
45°	6017.8	6056.2	6223.5	6434.3	6565.1	6552.9	6347.2	5953.3	5866.2	5529.8	5299.8
47.5°	6281.0	6321.1	6507.5	6730.6	6938.0	6958.9	6770.7	6347.2	6254.8	5915.0	5655.3
50°	6483.1	6502.3	6711.4	6955.4	7195.9	7312.7	7148.9	6742.8	6631.3	6294.9	6002.1
52.5°	6467.5	6493.6	6751.5	7082.7	7405.1	7596.8	7483.5	7115.8	7007.7	6641.7	6355.9
55°	6148.5	6174.7	6481.4	6964.1	7521.8	7804.2	7792.0	7471.3	7392.9	6995.5	6723.6
57.5°	5683.2	5740.7	6045.7	6566.8	7368.5	7969.7	8018.5	7795.5	7713.5	7342.3	7087.9
60°	4850.2	4926.8	5278.9	5955.1	6877.0	7914.0	8260.8	8069.1	8018.5	7664.7	7417.3
62.5°	3523.9	3579.7	4048.5	4935.6	6148.5	7516.6	8464.7	8351.4	8313.1	7954.0	7715.3
65°	2110.5	2237.7	2614.2	3490.8	4960.0	6767.2	8353.1	8720.9	8680.8	8252.1	7969.7
67.5°	1068.3	1125.8	1274.0	1892.7	3335.7	5599.6	7793.7	8950.9	8999.7	8506.5	8060.4
70°	662.3	677.9	719.8	934.1	1666.1	3679.0	6373.3	8351.4	8590.2	8466.4	7825.1
72.5°	531.5	535.0	542.0	582.1	799.9	1720.1	4029.3	6540.7	6971.1	7907.0	7488.7
75°	440.9	442.7	444.4	456.6	498.4	702.3	1960.6	4494.6	4998.3	6720.2	6943.2
77.5°	353.8	345.1	352.0	357.3	367.7	392.1	676.2	2398.1	2908.7	4411.0	5369.5
80°	230.0	226.6	240.5	245.7	256.2	271.9	360.8	813.9	988.2	1605.1	1707.9
82.5°	123.7	116.8	146.4	141.2	146.4	158.6	212.6	298.0	334.6	484.5	409.6
85°	38.3	38.3	40.1	47.1	57.5	55.8	92.4	146.4	162.1	207.4	153.4
87.5°	7.0	7.0	7.0	7.0	7.0	8.7	19.2	29.6	40.1	71.5	54.0
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0	2534.0
2.5°	2568.9	2553.2	2561.9	2567.1	2565.4	2561.9	2544.5	2541.0	2532.3	2518.3	2514.8
5°	2645.5	2628.1	2629.9	2624.6	2607.2	2584.5	2546.2	2527.0	2511.3	2493.9	2492.2
7.5°	2765.8	2746.6	2741.4	2717.0	2668.2	2615.9	2554.9	2520.1	2493.9	2471.3	2467.8
10°	2919.2	2900.0	2882.6	2825.0	2744.9	2675.2	2595.0	2544.5	2506.1	2478.2	2473.0
12.5°	3089.9	3074.3	3030.7	2947.0	2851.2	2769.3	2687.4	2624.6	2568.9	2527.0	2521.8
15°	3279.9	3245.1	3178.8	3070.8	2980.2	2913.9	2814.6	2729.2	2640.3	2584.5	2572.3
17.5°	3412.4	3382.7	3304.3	3199.7	3128.3	3070.8	2954.0	2832.0	2711.8	2629.9	2612.4
20°	3506.5	3475.1	3386.2	3309.5	3286.9	3238.1	3102.1	2961.0	2821.6	2720.5	2697.8
22.5°	3574.4	3541.3	3450.7	3412.4	3443.7	3435.0	3302.6	3142.2	2976.7	2856.4	2828.5
25°	3638.9	3607.6	3527.4	3541.3	3625.0	3651.1	3508.2	3321.7	3133.5	2992.4	2959.2
27.5°	3699.9	3659.8	3623.2	3699.9	3818.4	3867.2	3715.6	3504.7	3300.8	3156.2	3130.0
30°	3794.0	3747.0	3741.7	3853.3	4041.5	4083.3	3916.0	3705.1	3503.0	3356.6	3323.5
32.5°	3912.5	3869.0	3872.5	4039.8	4257.6	4292.5	4149.6	3952.6	3750.5	3604.1	3558.8
35°	4072.9	4018.9	4048.5	4254.1	4473.7	4538.2	4423.2	4259.4	4062.4	3912.5	3862.0
37.5°	4294.2	4215.8	4276.8	4492.9	4714.2	4810.1	4721.2	4599.2	4404.0	4252.4	4205.3
40°	4576.5	4512.1	4536.5	4775.2	5003.5	5118.5	5062.8	4942.5	4749.1	4590.5	4536.5
42.5°	4911.2	4846.7	4838.0	5092.4	5320.7	5495.0	5441.0	5331.2	5130.7	4949.5	4897.2
45°	5238.8	5179.5	5191.7	5451.4	5707.6	5897.6	5843.5	5714.6	5496.7	5287.6	5245.8
47.5°	5580.4	5531.6	5542.0	5817.4	6099.7	6289.7	6221.7	6064.9	5810.4	5587.4	5536.8
50°	5930.7	5874.9	5890.6	6179.9	6484.9	6664.4	6559.8	6328.0	6047.4	5829.6	5786.0
52.5°	6279.2	6213.0	6253.1	6526.7	6842.2	6985.1	6791.6	6511.0	6239.2	6023.0	5974.2
55°	6680.1	6610.4	6566.8	6859.6	7171.5	7230.8	6965.9	6638.2	6315.8	6070.1	6040.5
57.5°	7046.1	6986.8	6904.9	7197.7	7427.7	7384.2	7100.1	6603.4	6129.4	5813.9	5772.1
60°	7373.7	7323.2	7251.7	7500.9	7605.5	7507.9	6992.0	6190.4	5669.3	5339.9	5320.7
62.5°	7675.2	7621.2	7555.0	7767.6	7753.6	7527.1	6500.6	5556.0	4858.9	4505.1	4473.7
65°	7914.0	7865.2	7846.0	8013.3	7990.6	7152.4	5735.5	4517.3	3550.0	3150.9	3138.7
67.5°	7981.9	7962.8	8065.6	8349.7	7995.9	6399.5	4498.1	2995.8	1906.6	1528.4	1505.8
70°	7727.5	7725.7	8020.3	8426.3	7270.9	4888.5	2654.3	1350.7	958.5	850.5	836.5
72.5°	7396.4	7391.1	7624.7	7269.1	5392.2	2675.2	1117.1	723.3	599.5	569.9	569.9
75°	6852.6	6838.7	7014.7	5529.8	3032.4	1007.3	592.5	496.7	470.6	465.3	465.3
77.5°	5585.6	5468.8	5191.7	3417.6	1057.9	494.9	392.1	390.4	374.7	373.0	373.0
80°	1836.9	1836.9	2134.9	1303.6	467.1	305.0	277.1	291.0	275.4	264.9	263.2
82.5°	299.8	413.0	587.3	373.0	252.7	190.0	170.8	181.2	190.0	151.6	151.6
85°	118.5	155.1	226.6	174.3	116.8	76.7	81.9	90.6	80.2	69.7	68.0
87.5°	45.3	55.8	80.2	41.8	24.4	13.9	8.7	8.7	7.0	7.0	7.0
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

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)