

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: P637511

Luminaire Tested: GWS-SA4C-830-U-T3R-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4C-830-U-T3R-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13519.6 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

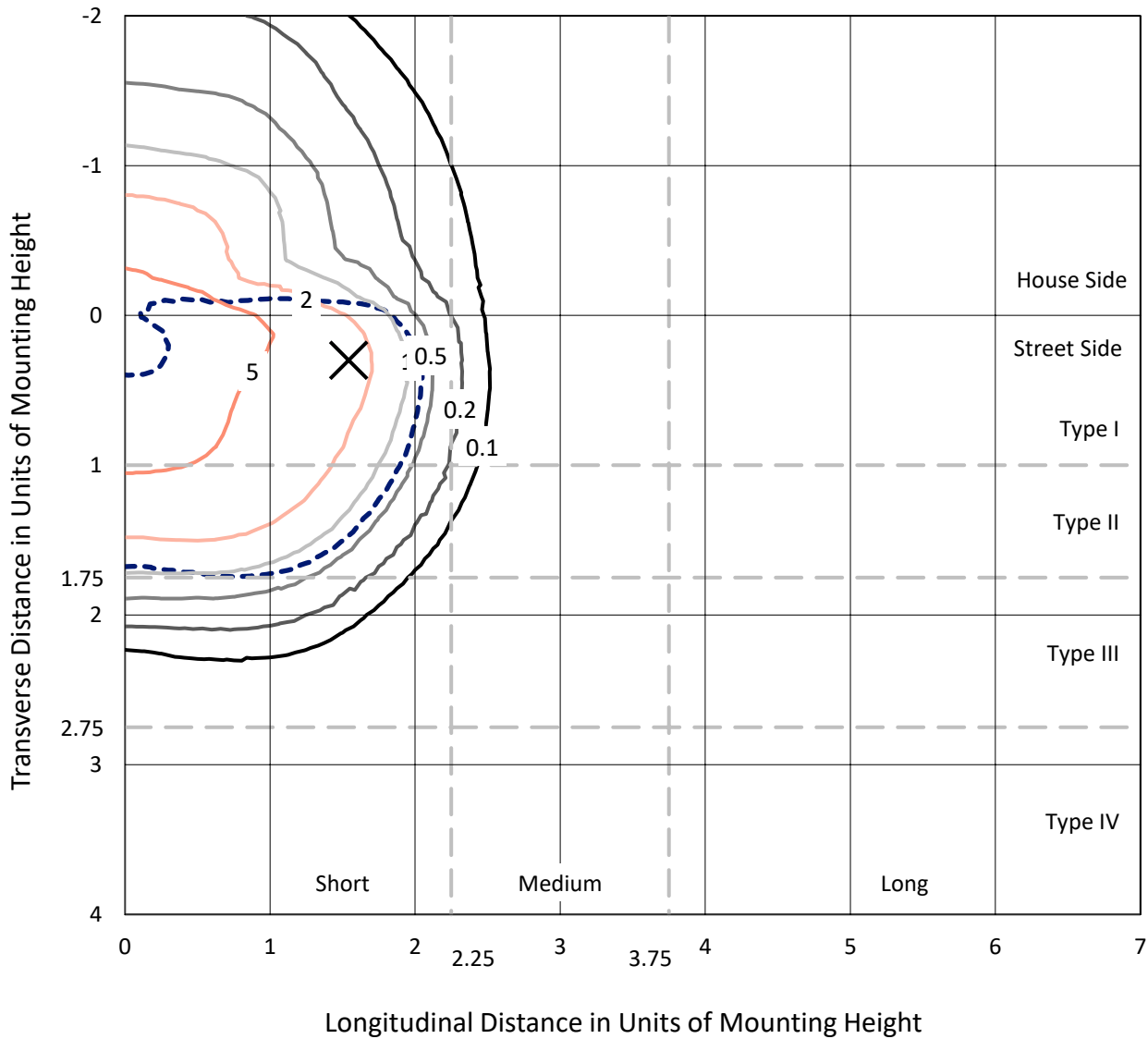
Input Watts (W): 128.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

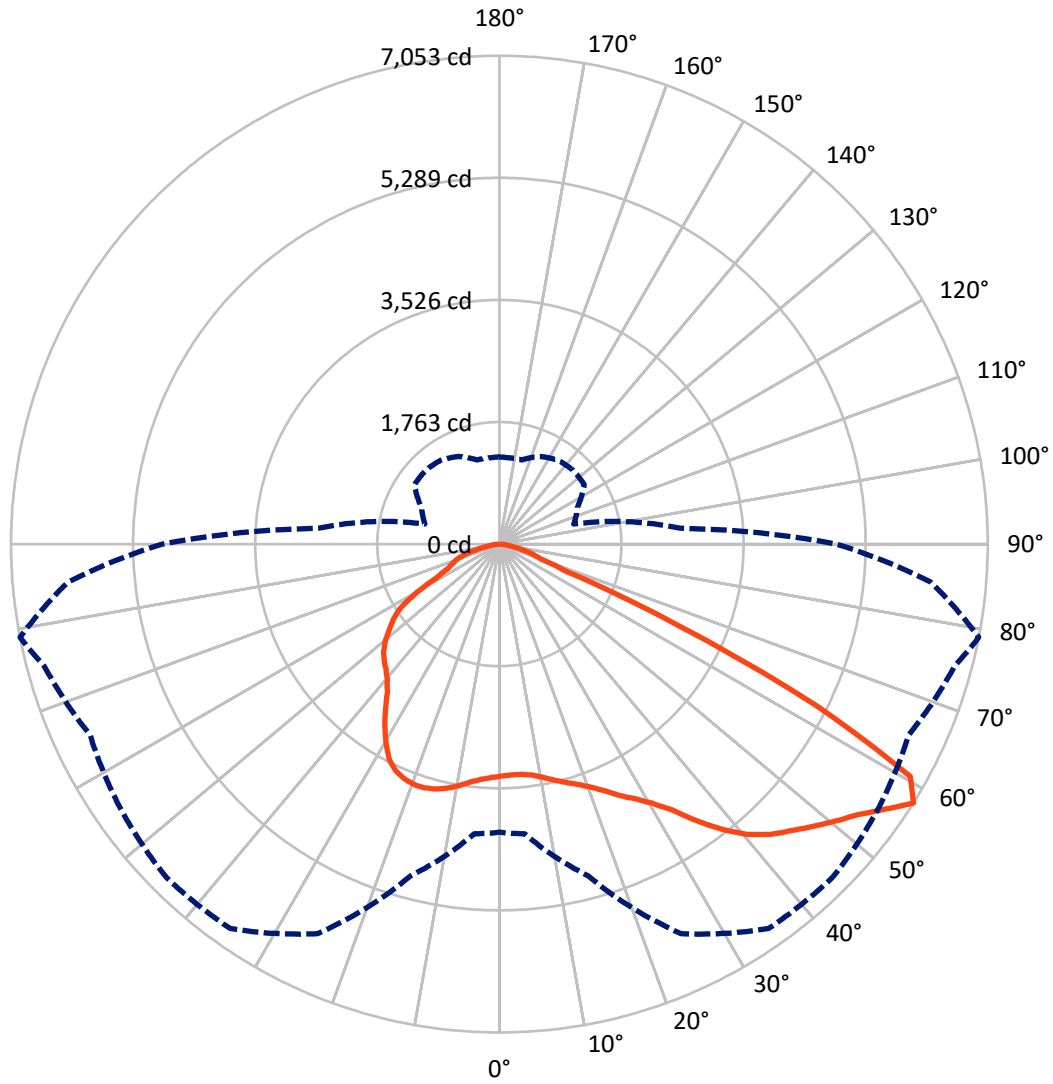
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.4 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4018.8	0.0	4018.8
	% Fixture	29.7	0.0	29.7
Street Side	Lumens	9500.8	0.0	9500.8
	% Fixture	70.3	0.0	70.3
Total	Lumens	13519.6	0.0	13519.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.3	2.3
10°-20°	862.3	6.4
20°-30°	1461.6	10.8
30°-40°	2237.2	16.5
40°-50°	2983.0	22.1
50°-60°	3445.2	25.5
60°-70°	1790.2	13.2
70°-80°	380.6	2.8
80°-90°	49.3	0.4
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°	13519.6	100.0
0°-180°	13519.6	100.0

Coefficient of Utilization



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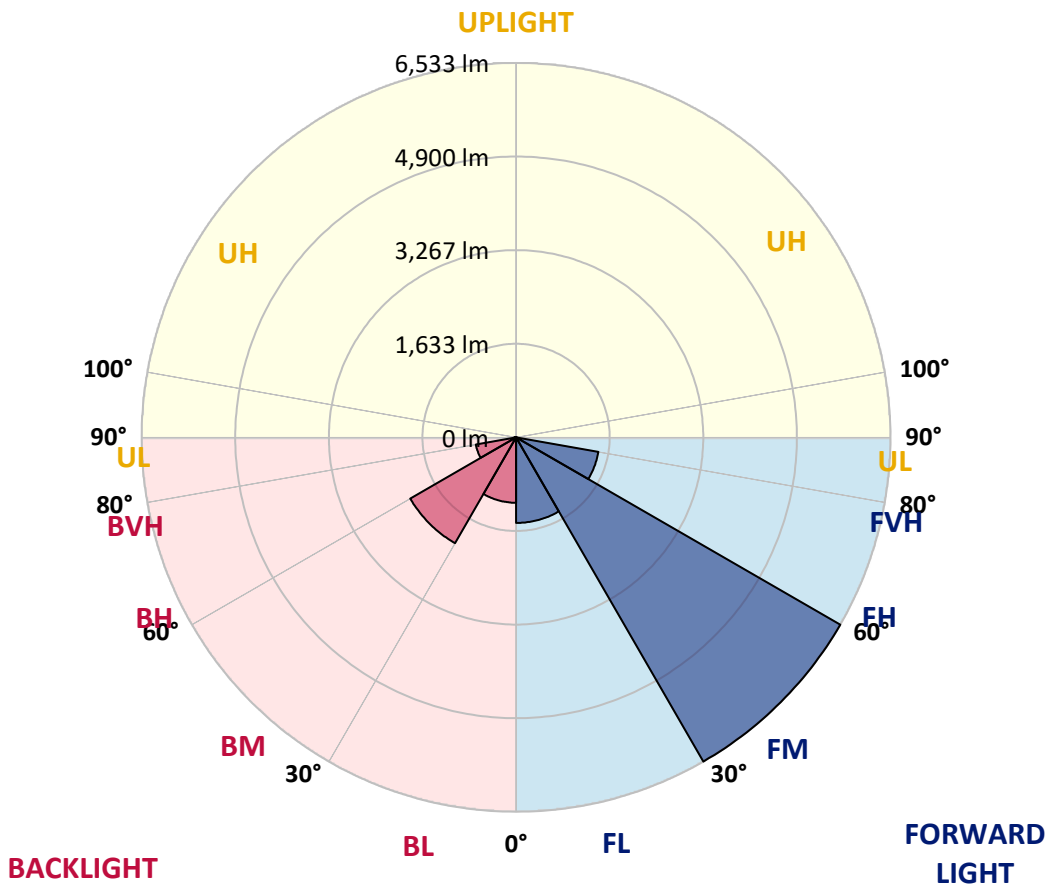
CATALOG NUMBER: GWS-SA4C-830-U-T3R-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1492.9	11.0			
FM (30°-60°)	6533.1	48.3			
FH (60°-80°)	1457.7	10.8			G1/1800
FVH (80°-90°)	17.2	0.1			G1/100
BL (0°-30°)	1141.3	8.4	B3/2500		
BM (30°-60°)	2132.3	15.8	B2/2500		
BH (60°-80°)	713.0	5.3	B2/1000		G2/1000
BVH (80°-90°)	32.1	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5
2.5°	3197.9	3191.3	3193.5	3202.3	3235.5	3259.8	3285.3	3308.5	3330.6	3337.2	3342.7
5°	3084.1	3071.9	3075.2	3089.6	3128.3	3169.2	3214.5	3269.8	3322.8	3340.5	3363.7
7.5°	3003.4	3001.2	3006.7	3028.8	3069.7	3108.4	3167.0	3245.5	3337.2	3367.1	3408.0
10°	2896.1	2891.7	2913.8	2959.2	3026.6	3088.5	3158.1	3251.0	3379.2	3423.4	3486.4
12.5°	2811.0	2808.8	2832.0	2895.0	2981.3	3079.6	3175.8	3279.7	3435.6	3496.4	3573.8
15°	2860.8	2850.8	2851.9	2896.1	2973.5	3089.6	3220.0	3331.7	3492.0	3569.3	3668.8
17.5°	3005.6	2987.9	2974.6	2982.4	3026.6	3147.1	3287.5	3401.3	3557.2	3647.8	3769.4
20°	3205.7	3195.7	3159.2	3134.9	3144.9	3251.0	3393.6	3499.7	3642.3	3744.0	3874.4
22.5°	3474.3	3450.0	3400.2	3361.5	3331.7	3414.6	3546.1	3637.9	3760.6	3866.7	4002.7
25°	3807.0	3771.6	3693.1	3632.3	3568.2	3653.3	3770.5	3840.2	3923.1	4021.4	4150.8
27.5°	4146.4	4116.5	4029.2	3947.4	3867.8	3920.9	4060.1	4099.9	4091.1	4162.9	4273.5
30°	4507.8	4470.2	4387.3	4298.9	4196.1	4230.4	4355.3	4375.2	4281.2	4340.9	4416.1
32.5°	4889.2	4852.7	4780.9	4678.1	4562.0	4575.3	4609.5	4628.3	4538.8	4573.0	4630.5
35°	5277.2	5242.9	5170.0	5068.3	4983.1	4902.5	4816.2	4891.4	4839.4	4905.8	4901.3
37.5°	5632.0	5597.7	5552.4	5473.9	5328.0	5168.9	4969.9	5062.7	5143.4	5227.4	5213.1
40°	5871.9	5848.7	5859.7	5847.6	5659.7	5344.6	5045.0	5146.7	5366.7	5510.4	5502.7
42.5°	6078.6	6055.4	6119.5	6165.9	5944.8	5507.1	5081.5	5178.8	5509.3	5733.7	5722.7
45°	6170.3	6163.7	6269.8	6416.9	6205.7	5679.5	5175.5	5245.1	5617.6	5905.1	5863.0
47.5°	6060.9	6084.1	6293.0	6541.8	6422.4	5884.0	5367.8	5385.5	5759.1	6090.8	5972.5
50°	5843.1	5894.0	6175.9	6545.1	6580.5	6115.1	5634.2	5590.0	5949.3	6288.6	6030.0
52.5°	5525.9	5579.0	6038.8	6519.7	6671.1	6382.6	5989.1	5926.1	6189.1	6486.5	6039.9
55°	4797.4	4869.3	5724.9	6462.2	6759.5	6625.8	6389.2	6261.0	6498.7	6758.4	6138.3
57.5°	4161.8	4199.4	4959.9	6206.8	6777.2	6804.8	6674.4	6521.9	6806.0	7052.5	6248.8
60°	3054.2	3063.1	3747.3	5135.7	6234.5	6700.9	6651.2	6424.6	6660.0	6817.0	5742.6
62.5°	1725.5	1726.6	2272.7	3427.8	4657.1	5461.8	5492.7	5292.7	5094.8	5141.2	3997.1
65°	647.8	708.6	1038.0	1684.6	2685.0	3224.5	3352.7	3399.1	3069.7	2865.2	2143.4
67.5°	433.3	447.7	605.8	866.6	1194.9	1379.5	1543.1	1547.6	1131.9	1009.2	844.5
70°	330.5	344.9	476.4	620.1	605.8	559.3	604.7	588.1	608.0	624.6	642.2
72.5°	246.5	260.9	369.2	437.7	363.7	358.1	405.7	451.0	493.0	510.7	538.3
75°	163.6	174.7	248.7	234.3	201.2	237.7	296.2	341.6	365.9	386.9	407.9
77.5°	103.9	111.6	132.6	107.2	111.6	139.3	172.4	213.3	236.6	257.6	268.6
80°	47.5	46.4	45.3	50.8	63.0	81.8	103.9	128.2	145.9	154.8	161.4
82.5°	18.8	21.0	23.2	27.6	34.3	44.2	58.6	75.2	89.5	91.7	97.3
85°	7.7	8.8	9.9	12.2	15.5	19.9	24.3	34.3	43.1	46.4	49.7
87.5°	0.0	0.0	0.0	0.0	1.1	2.2	3.3	5.5	9.9	11.1	12.2
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5	3350.5
2.5°	3372.6	3358.2	3382.5	3399.1	3414.6	3398.0	3392.5	3378.1	3375.9	3375.9	3383.6
5°	3403.5	3393.6	3419.0	3429.0	3427.8	3391.4	3369.3	3340.5	3326.2	3326.2	3328.4
7.5°	3458.8	3453.3	3467.6	3452.2	3416.8	3342.7	3269.8	3209.0	3168.1	3147.1	3153.7
10°	3550.5	3543.9	3531.8	3474.3	3372.6	3218.9	3069.7	2959.2	2892.8	2855.2	2857.5
12.5°	3640.1	3629.0	3585.9	3458.8	3249.9	3005.6	2809.9	2686.1	2613.2	2569.0	2559.0
15°	3738.5	3709.7	3616.9	3379.2	3049.8	2744.7	2540.2	2406.5	2328.0	2301.4	2300.3
17.5°	3832.4	3781.6	3613.6	3237.7	2809.9	2471.7	2266.1	2183.2	2169.9	2182.1	2185.4
20°	3927.5	3845.7	3577.1	3042.1	2524.7	2199.7	2093.6	2127.9	2177.6	2210.8	2218.5
22.5°	4025.9	3898.7	3494.2	2790.0	2224.1	2016.3	2060.5	2135.6	2197.5	2241.8	2246.2
25°	4136.4	3948.5	3370.4	2481.6	1983.1	1965.4	2052.7	2132.3	2198.6	2249.5	2258.3
27.5°	4199.4	3949.6	3196.8	2164.4	1872.5	1945.5	2033.9	2109.1	2175.4	2230.7	2240.6
30°	4261.3	3919.8	2921.6	1906.8	1840.5	1922.3	2001.9	2071.5	2134.5	2188.7	2200.9
32.5°	4348.6	3892.1	2604.3	1758.7	1821.7	1900.2	1965.4	2027.3	2075.9	2100.3	2106.9
35°	4457.0	3856.7	2267.2	1694.6	1809.5	1882.5	1940.0	1973.1	1910.1	1896.9	1911.2
37.5°	4608.4	3823.6	1931.1	1666.9	1801.8	1875.9	1926.7	1841.6	1764.2	1733.3	1744.3
40°	4772.0	3804.8	1703.4	1644.8	1805.1	1882.5	1871.4	1745.4	1633.8	1568.6	1566.4
42.5°	4911.3	3776.0	1557.5	1630.5	1814.0	1907.9	1796.3	1660.3	1494.5	1455.8	1456.9
45°	5005.3	3703.1	1480.1	1615.0	1821.7	1913.4	1760.9	1543.1	1424.9	1400.5	1399.4
47.5°	5043.9	3570.4	1430.4	1590.7	1820.6	1868.1	1689.1	1494.5	1376.2	1369.6	1374.0
50°	5018.5	3352.7	1379.5	1543.1	1794.1	1820.6	1606.1	1451.4	1343.1	1379.5	1406.1
52.5°	4924.6	3070.8	1318.7	1477.9	1746.5	1766.4	1564.1	1424.9	1318.7	1367.4	1388.4
55°	4900.2	2842.0	1241.4	1392.8	1675.8	1670.3	1519.9	1411.6	1302.2	1283.4	1286.7
57.5°	4868.2	2618.7	1113.1	1240.3	1496.7	1505.6	1477.9	1396.1	1259.1	1253.5	1259.1
60°	4229.3	2007.4	992.6	1070.0	1229.2	1276.7	1430.4	1367.4	1189.4	1166.2	1165.1
62.5°	2762.4	1215.9	883.2	933.0	1001.5	1056.8	1304.4	1284.5	1113.1	1098.8	1108.7
65°	1485.7	866.6	803.6	833.5	871.1	913.1	1081.1	1144.1	1005.9	955.1	956.2
67.5°	759.4	737.3	743.9	764.9	793.7	814.7	872.2	927.4	857.8	814.7	813.6
70°	650.0	667.7	677.6	689.8	708.6	705.2	710.8	720.7	715.2	694.2	693.1
72.5°	553.8	581.4	583.7	585.9	592.5	577.0	567.1	550.5	551.6	554.9	556.0
75°	421.2	447.7	454.3	451.0	457.6	437.7	424.5	407.9	388.0	384.7	386.9
77.5°	274.1	295.1	305.1	302.9	306.2	290.7	284.1	266.4	243.2	234.3	234.3
80°	165.8	178.0	185.7	187.9	191.2	180.2	169.1	153.7	143.7	133.8	133.8
82.5°	100.6	108.3	113.9	113.9	117.2	105.0	96.2	85.1	80.7	71.9	71.9
85°	50.8	56.4	58.6	57.5	55.3	45.3	42.0	36.5	34.3	29.8	29.8
87.5°	12.2	15.5	15.5	11.1	11.1	5.5	3.3	1.1	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



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

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)