

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: P638971

Luminaire Tested: GWS-SA4F-830-U-SL3-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638971
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-31)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4F-830-U-SL3-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26483.3 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G4

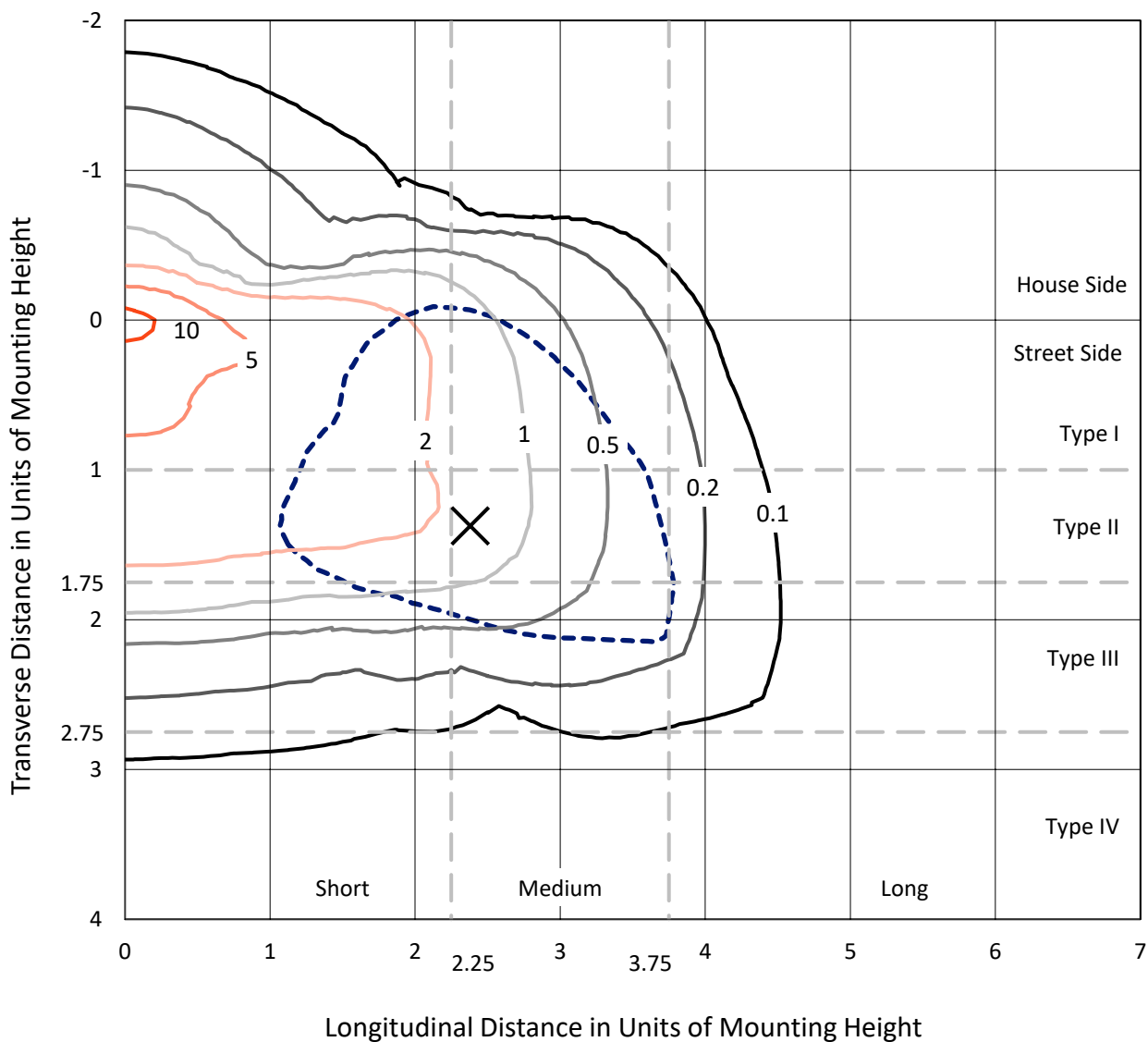
Input Watts (W): 225.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P638971
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Iso-Footcandle Lines of Horizontal Illumination

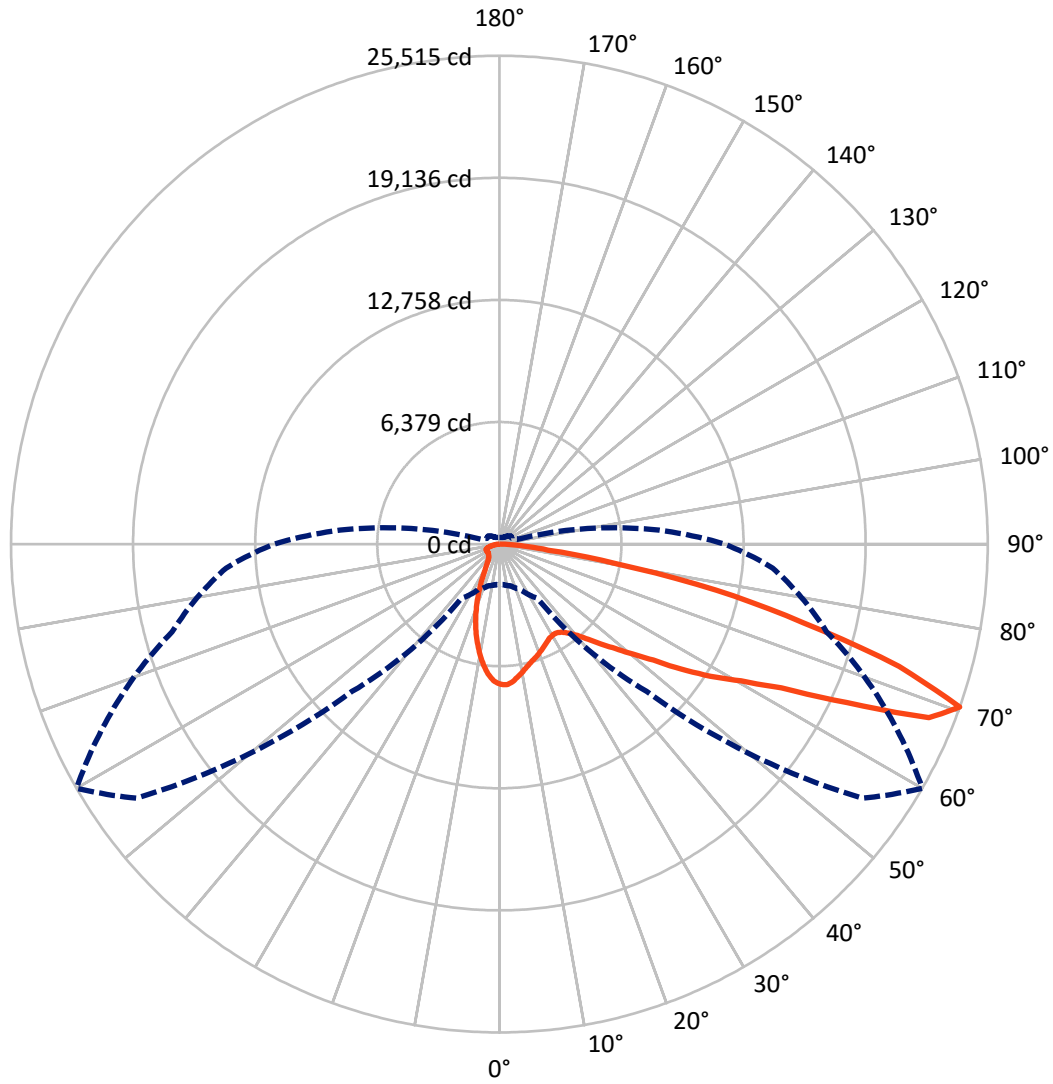
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.7 fc
 Type III - Medium - N/A

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CATALOG NUMBER: GWS-SA4F-830-U-SL3-W

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P638971

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4529.3	0.0	4529.3
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	21954.0	0.0	21954.0
	% Fixture	82.9	0.0	82.9
Total	Lumens	26483.3	0.0	26483.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	631.7	2.4
10°-20°	1415.1	5.3
20°-30°	1812.3	6.8
30°-40°	2381.8	9.0
40°-50°	3455.6	13.0
50°-60°	5391.6	20.4
60°-70°	7058.7	26.7
70°-80°	3903.2	14.7
80°-90°	433.2	1.6
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°	26483.3	100.0
0°-180°	26483.3	100.0

Coefficient of Utilization



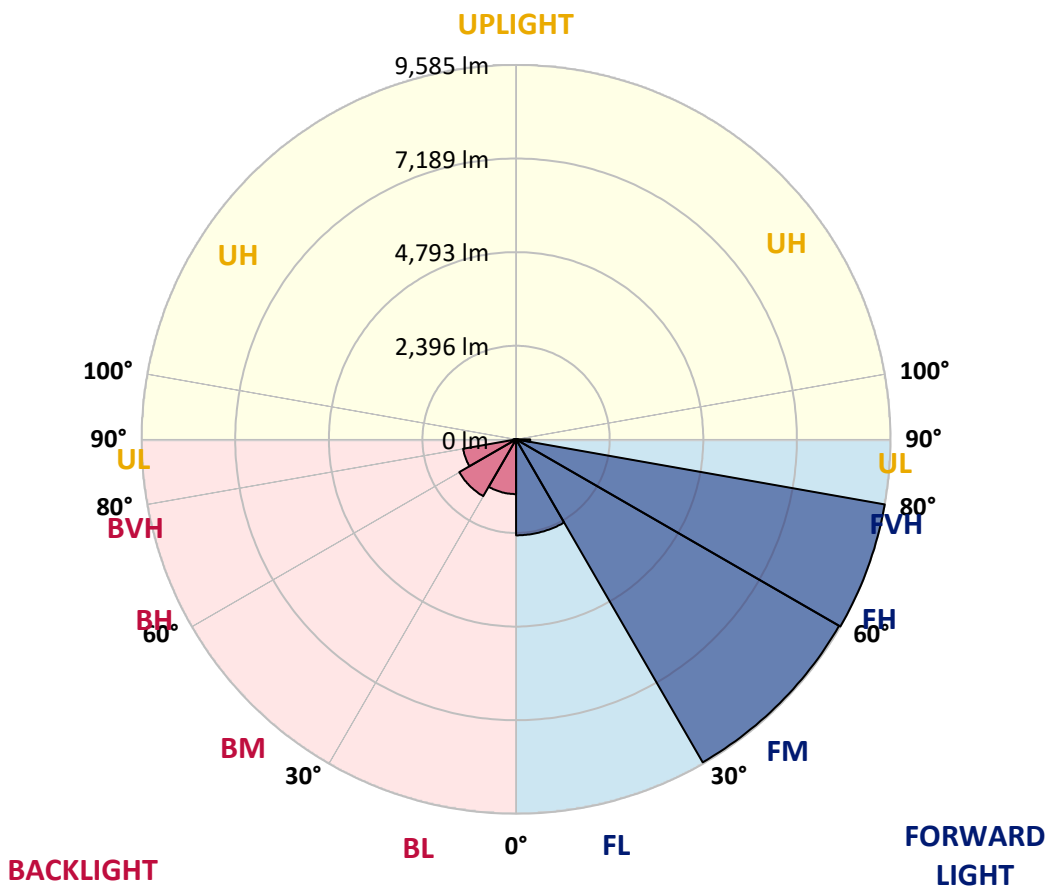
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2457.8	9.3			
FM (30°-60°)	9549.8	36.1			
FH (60°-80°)	9585.5	36.2			G4/12000
FVH (80°-90°)	360.9	1.4			G3/500
BL (0°-30°)	1401.3	5.3	B3/2500		
BM (30°-60°)	1679.3	6.3	B2/2500		
BH (60°-80°)	1376.4	5.2	B3/2500		G3/2500
BVH (80°-90°)	72.2	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-G4
 Type III Medium





REPORT NUMBER: P638971
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3
2.5°	7225.6	7233.3	7254.6	7285.6	7316.6	7332.1	7370.9	7359.3	7351.5	7336.0	7316.6
5°	6905.9	6921.4	6940.7	7000.8	7068.6	7122.9	7210.1	7219.8	7223.6	7231.4	7200.4
7.5°	6498.9	6502.8	6549.3	6628.8	6717.9	6810.9	6956.2	6996.9	7031.8	7070.6	7045.4
10°	6049.4	6059.1	6094.0	6208.3	6361.4	6498.9	6694.7	6762.5	6836.1	6921.4	6886.5
12.5°	5681.3	5683.2	5739.4	5861.5	6028.1	6214.1	6458.3	6539.6	6636.5	6770.2	6739.2
15°	5388.7	5388.7	5441.0	5545.6	5737.4	5956.4	6247.1	6351.7	6483.4	6663.7	6609.4
17.5°	5156.1	5158.1	5191.0	5301.5	5472.0	5714.2	6059.1	6200.5	6345.9	6584.2	6502.8
20°	5034.1	5024.4	5030.2	5098.0	5243.3	5477.8	5871.1	6035.8	6231.6	6530.0	6405.9
22.5°	5028.3	5010.8	4985.6	4991.4	5076.7	5270.5	5669.6	5869.2	6115.3	6485.4	6307.1
25°	5127.1	5107.7	5063.1	5012.8	5005.0	5121.3	5479.7	5706.4	5995.2	6466.0	6212.2
27.5°	5293.7	5280.2	5222.0	5146.5	5067.0	5063.1	5336.3	5572.7	5908.0	6485.4	6144.4
30°	5514.6	5491.4	5454.5	5357.7	5237.5	5113.5	5280.2	5501.0	5849.8	6547.4	6115.3
32.5°	5764.6	5751.0	5716.1	5619.2	5491.4	5293.7	5324.7	5516.5	5849.8	6655.9	6121.1
35°	6030.0	6028.1	6028.1	5964.2	5822.7	5576.6	5501.0	5648.3	5939.0	6830.3	6183.1
37.5°	6287.7	6285.8	6347.8	6371.1	6210.2	5944.8	5801.4	5911.8	6134.7	7088.0	6336.2
40°	6497.0	6504.8	6640.4	6756.7	6667.5	6421.4	6219.9	6276.1	6452.4	7454.2	6603.6
42.5°	6708.2	6729.5	6933.0	7138.4	7173.3	6960.1	6756.7	6789.6	6907.8	7938.6	7002.7
45°	6938.8	6948.5	7233.3	7520.1	7688.7	7562.7	7396.1	7440.7	7467.8	8537.4	7597.6
47.5°	7161.6	7186.8	7555.0	7948.3	8268.0	8256.4	8163.4	8149.8	8155.7	9265.9	8301.0
50°	7465.8	7502.7	7934.8	8409.5	8878.4	9093.5	9120.6	9017.9	8975.3	10075.9	9176.8
52.5°	8043.3	8043.3	8430.8	8897.8	9527.5	10060.4	10242.5	10074.0	9938.3	10932.3	10106.9
55°	8766.0	8797.0	9105.1	9483.0	10281.3	11077.7	11693.8	11507.8	11124.2	11864.4	11081.5
57.5°	9087.7	9126.4	9614.7	10201.8	11267.6	12234.5	13089.0	13023.1	12463.1	12833.2	12093.0
60°	8506.4	8587.8	9260.1	10244.5	12160.8	14100.4	14703.0	14511.2	13711.0	13850.5	13189.7
62.5°	7095.8	7184.9	7930.9	9304.7	12036.8	16117.5	17247.2	16540.0	15268.8	15135.1	14650.7
65°	4233.8	4229.9	5127.1	6948.5	10508.0	16677.5	21273.7	19954.1	17675.4	16898.4	16154.4
67.5°	2691.4	2685.6	2873.6	3681.6	6993.1	15305.7	23862.4	24205.4	20944.3	18194.7	16278.4
70°	2123.7	2121.7	2257.4	2625.5	3458.7	10891.6	23141.6	25515.3	22918.8	17700.6	14333.0
72.5°	1548.2	1552.1	1761.3	2199.3	2668.2	5468.1	18739.2	21831.7	21079.9	15625.4	11635.7
75°	1112.2	1118.0	1244.0	1683.8	2460.8	2989.8	12461.2	16415.9	16038.1	12525.1	8004.5
77.5°	707.2	715.0	825.4	1180.0	1988.1	2414.3	7555.0	11589.2	10670.8	7057.0	2846.4
80°	432.1	457.3	550.3	879.7	1588.9	1811.7	3776.5	6105.6	5344.1	1935.7	957.2
82.5°	222.8	242.2	331.3	544.5	1094.8	1590.8	2137.3	2565.5	1654.8	809.9	509.6
85°	69.8	81.4	116.3	220.9	521.2	986.3	1414.5	1275.0	759.6	381.7	236.4
87.5°	17.4	17.4	19.4	19.4	21.3	44.6	273.2	288.7	201.5	120.1	96.9
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-SA4F-830-U-SL3-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3	7328.3
2.5°	7277.9	7231.4	7212.0	7210.1	7161.6	7091.9	7045.4	7012.4	6993.1	6989.2	6989.2
5°	7148.1	7088.0	7008.6	6948.5	6818.7	6686.9	6576.5	6514.5	6442.8	6433.1	6431.1
7.5°	6975.6	6888.4	6737.3	6568.7	6342.0	6123.0	5937.0	5811.1	5685.1	5661.9	5654.1
10°	6789.6	6671.4	6413.7	6117.2	5778.1	5450.7	5165.8	4943.0	4795.7	4691.1	4671.7
12.5°	6605.5	6448.6	6070.7	5628.9	5163.9	4716.3	4288.1	3923.8	3660.3	3507.2	3480.1
15°	6433.1	6214.1	5696.8	5132.9	4528.3	3916.0	3309.5	2836.8	2466.7	2334.9	2303.9
17.5°	6276.1	6002.9	5334.4	4619.4	3865.7	3065.4	2375.6	1955.1	1738.1	1672.2	1656.7
20°	6119.2	5785.9	4966.3	4078.8	3162.3	2265.1	1736.2	1538.5	1457.1	1431.9	1424.2
22.5°	5950.6	5547.6	4565.2	3545.9	2451.2	1695.5	1420.3	1333.1	1307.9	1309.9	1307.9
25°	5782.0	5305.3	4144.7	2966.6	1825.3	1375.7	1240.1	1207.2	1213.0	1230.4	1234.3
27.5°	5642.5	5090.3	3732.0	2331.0	1426.1	1183.9	1120.0	1118.0	1139.4	1162.6	1166.5
30°	5541.7	4898.4	3325.0	1792.3	1174.2	1052.2	1027.0	1038.6	1063.8	1081.2	1087.0
32.5°	5470.0	4733.7	2891.0	1408.7	1028.9	959.1	947.5	959.1	974.6	992.1	996.0
35°	5444.9	4613.6	2464.7	1149.0	930.1	891.3	883.6	889.4	897.1	906.8	910.7
37.5°	5501.0	4553.5	2019.1	999.8	870.0	846.8	835.1	831.3	833.2	837.1	839.0
40°	5667.7	4580.7	1654.8	912.6	831.3	809.9	790.6	782.8	780.9	784.8	782.8
42.5°	5954.5	4695.0	1391.2	862.3	800.3	769.3	747.9	740.2	740.2	749.9	749.9
45°	6374.9	4919.7	1201.4	825.4	773.1	734.4	711.1	707.2	715.0	730.5	732.4
47.5°	6991.1	5249.2	1087.0	798.3	747.9	703.4	680.1	678.2	693.7	718.9	720.8
50°	7721.6	5723.9	1025.0	778.9	730.5	678.2	654.9	656.9	674.3	701.4	707.2
52.5°	8601.3	6371.1	1028.9	771.2	720.8	662.7	639.4	635.6	653.0	680.1	685.9
55°	9510.1	7157.8	1104.5	773.1	707.2	654.9	623.9	610.4	625.9	645.2	647.2
57.5°	10509.9	8045.2	1292.4	769.3	689.8	647.2	610.4	579.4	589.1	600.7	606.5
60°	11637.7	9089.6	1697.4	777.0	682.1	629.7	583.2	542.5	540.6	548.4	550.3
62.5°	13145.2	10509.9	2152.8	790.6	699.5	608.4	542.5	499.9	492.2	496.0	498.0
65°	14298.1	11188.1	2009.4	778.9	736.3	592.9	503.8	459.2	443.7	439.9	439.9
67.5°	13829.2	10291.0	1399.0	747.9	753.8	594.9	472.8	416.6	397.2	387.5	385.6
70°	11767.5	8359.1	972.7	716.9	734.4	591.0	439.9	381.7	356.5	343.0	341.0
72.5°	9296.9	6382.7	786.7	654.9	666.6	532.9	391.4	343.0	321.7	304.2	304.2
75°	5983.5	3894.7	656.9	583.2	544.5	414.7	339.1	306.2	284.8	267.4	267.4
77.5°	2013.2	1445.5	509.6	494.1	406.9	312.0	284.8	263.5	246.1	230.6	228.6
80°	817.7	685.9	374.0	374.0	284.8	238.3	222.8	213.1	201.5	182.1	182.1
82.5°	474.7	416.6	261.6	226.7	189.9	164.7	155.0	145.3	145.3	131.8	131.8
85°	228.6	230.6	157.0	139.5	108.5	94.9	91.1	85.3	83.3	75.6	73.6
87.5°	124.0	125.9	79.4	62.0	42.6	36.8	31.0	29.1	27.1	25.2	25.2
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			

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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)