

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: P641438

Luminaire Tested: GWS-SA5F-830-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641438
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-SA5F-830-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34132.2 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B5 - U0 - G5

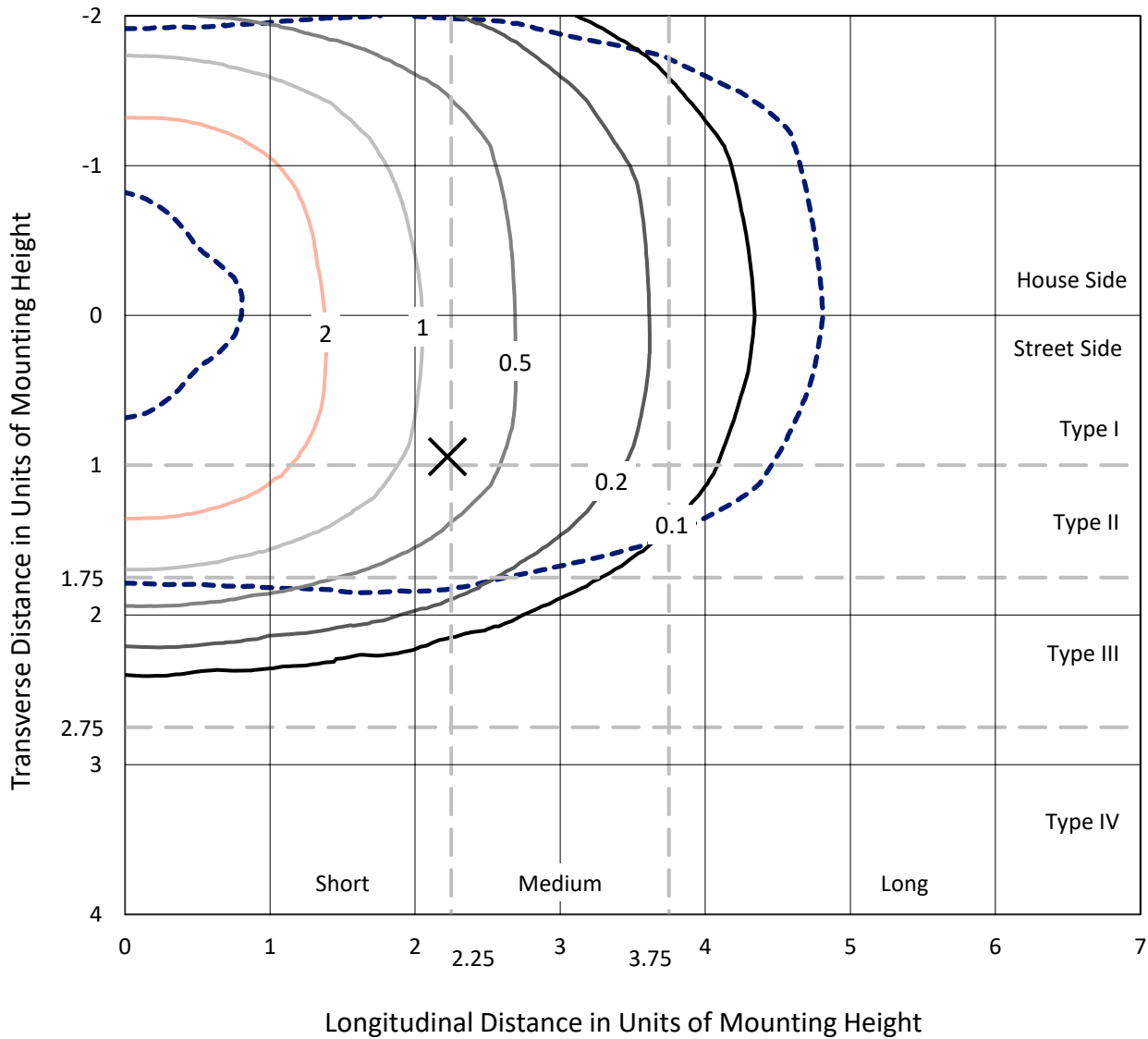
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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 CATALOG NUMBER: GWS-SA5F-830-U-RW-W

Iso-Footcandle Lines of Horizontal Illumination

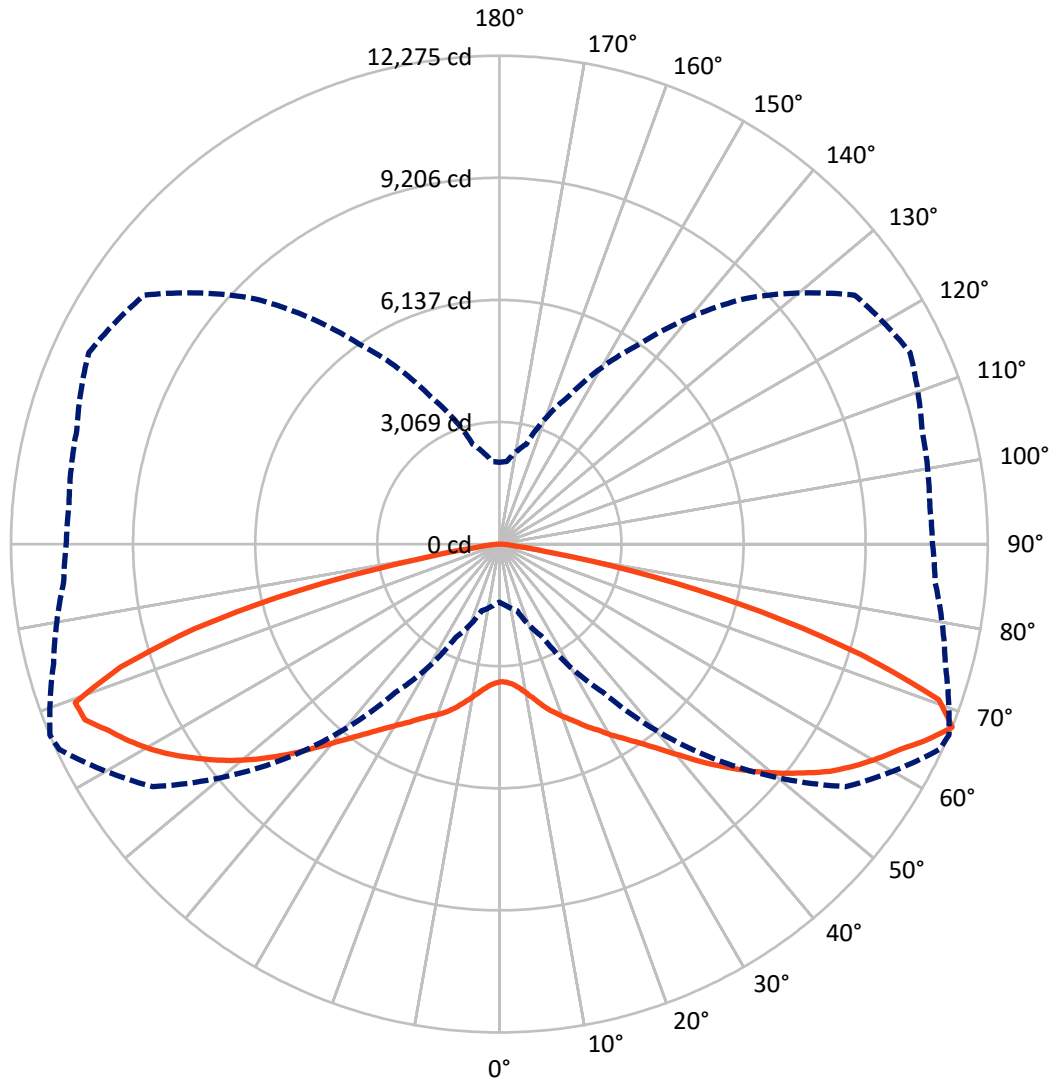
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.4 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	16877.7	0.0	16877.7
	% Fixture	49.4	0.0	49.4
Street Side	Lumens	17254.5	0.0	17254.5
	% Fixture	50.6	0.0	50.6
Total	Lumens	34132.2	0.0	34132.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.1	1.0
10°-20°	1145.6	3.4
20°-30°	2247.6	6.6
30°-40°	3829.1	11.2
40°-50°	6148.8	18.0
50°-60°	8354.9	24.5
60°-70°	7992.1	23.4
70°-80°	3799.7	11.1
80°-90°	275.4	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°	34132.2	100.0
0°-180°	34132.2	100.0

Coefficient of Utilization



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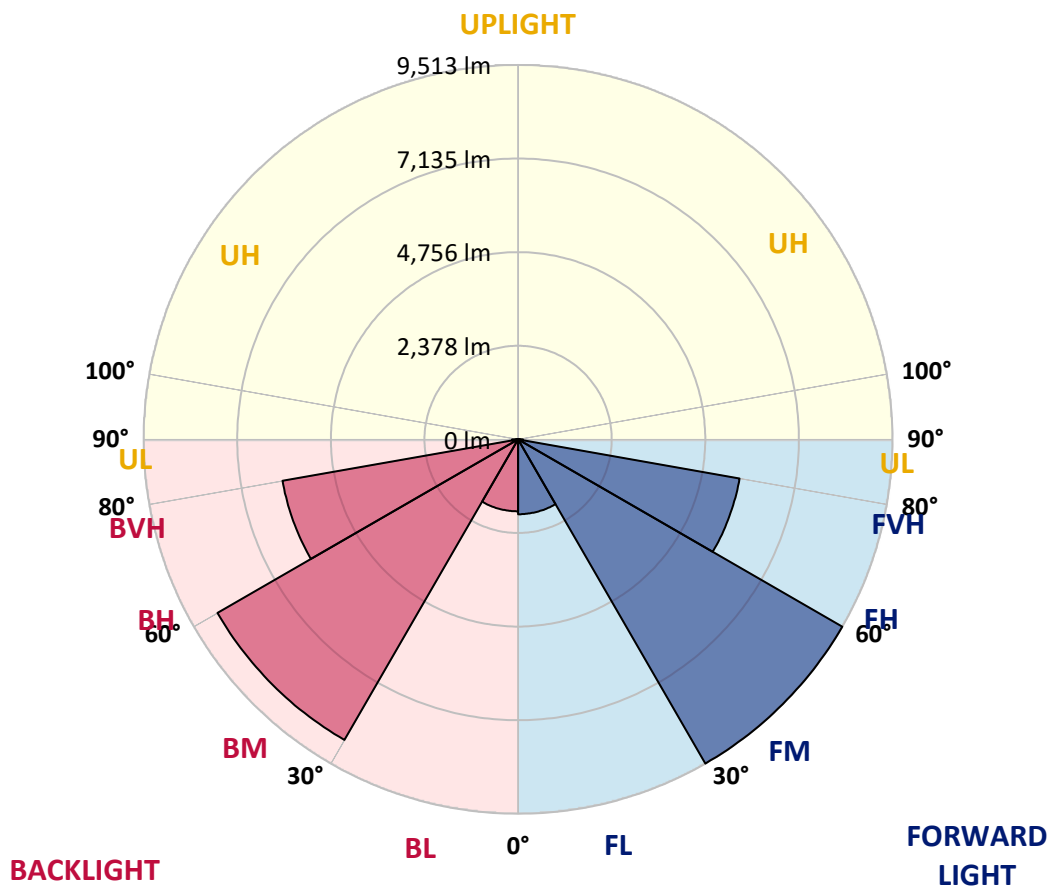
CATALOG NUMBER: GWS-SA5F-830-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1903.1	5.6			
FM (30°-60°)	9512.9	27.9			
FH (60°-80°)	5714.6	16.7			G3/7500
FVH (80°-90°)	123.8	0.4			G2/225
BL (0°-30°)	1829.1	5.4	B3/2500		
BM (30°-60°)	8819.9	25.8	B5		
BH (60°-80°)	6077.2	17.8	B5		G5
BVH (80°-90°)	151.6	0.4			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1
2.5°	3384.8	3389.5	3396.7	3410.9	3425.2	3446.6	3468.0	3465.6	3475.1	3482.2	3489.4
5°	3365.8	3370.5	3382.4	3401.4	3422.8	3458.5	3503.6	3522.6	3536.9	3563.0	3586.8
7.5°	3406.2	3415.7	3432.3	3458.5	3491.7	3536.9	3598.7	3632.0	3653.4	3700.9	3741.3
10°	3460.8	3472.7	3506.0	3555.9	3605.8	3674.8	3753.2	3803.1	3817.4	3879.2	3955.2
12.5°	3513.1	3527.4	3582.1	3672.4	3762.7	3855.4	3948.1	4009.9	4014.7	4097.9	4183.4
15°	3596.3	3608.2	3681.9	3798.4	3936.2	4064.6	4178.7	4221.5	4240.5	4299.9	4406.9
17.5°	3779.3	3793.6	3888.7	4014.7	4159.7	4295.1	4409.2	4444.9	4444.9	4494.8	4582.7
20°	3976.6	3990.9	4116.9	4278.5	4454.4	4592.3	4680.2	4646.9	4635.0	4649.3	4711.1
22.5°	4197.7	4223.8	4345.1	4532.8	4749.1	4917.9	4963.1	4863.2	4829.9	4796.7	4810.9
25°	4480.5	4511.4	4630.3	4829.9	5041.5	5219.8	5245.9	5091.4	5072.4	4955.9	4913.1
27.5°	4806.2	4829.9	4977.3	5174.6	5371.9	5521.6	5550.2	5360.0	5295.8	5134.2	5034.4
30°	5226.9	5248.3	5376.6	5571.6	5742.7	5847.3	5882.9	5621.5	5571.6	5324.4	5169.9
32.5°	5685.6	5695.2	5825.9	6013.7	6165.8	6265.6	6215.7	5911.5	5837.8	5559.7	5348.1
35°	6211.0	6211.0	6379.7	6531.8	6653.1	6681.6	6586.5	6239.5	6153.9	5852.0	5588.2
37.5°	6726.7	6741.0	6897.9	7078.5	7185.5	7180.7	7007.2	6626.9	6529.5	6201.4	5909.1
40°	7285.3	7316.2	7473.1	7675.1	7777.4	7763.1	7496.9	7073.8	6974.0	6586.5	6301.3
42.5°	7798.8	7848.7	8031.7	8238.5	8350.2	8340.7	8062.6	7587.2	7489.7	7052.4	6767.2
45°	8207.6	8259.9	8488.1	8775.7	8953.9	8937.3	8656.8	8119.6	8000.8	7542.0	7228.3
47.5°	8566.5	8621.2	8875.5	9179.8	9462.6	9491.1	9234.4	8656.8	8530.8	8067.3	7713.2
50°	8842.2	8868.4	9153.6	9486.4	9814.4	9973.7	9750.2	9196.4	9044.3	8585.5	8186.2
52.5°	8820.8	8856.5	9208.3	9659.9	10099.6	10361.1	10206.6	9705.1	9557.7	9058.5	8668.7
55°	8385.9	8421.5	8839.9	9498.3	10258.9	10644.0	10627.3	10190.0	10083.0	9541.1	9170.2
57.5°	7751.2	7829.7	8245.6	8956.3	10049.7	10869.8	10936.3	10632.1	10520.4	10014.1	9667.0
60°	6615.0	6719.6	7199.8	8122.0	9379.4	10793.7	11266.7	11005.2	10936.3	10453.8	10116.3
62.5°	4806.2	4882.2	5521.6	6731.5	8385.9	10251.8	11544.8	11390.3	11338.0	10848.4	10522.7
65°	2878.5	3052.0	3565.4	4761.0	6764.8	9229.7	11392.7	11894.2	11839.6	11254.8	10869.8
67.5°	1457.1	1535.5	1737.5	2581.4	4549.5	7637.1	10629.7	12208.0	12274.5	11601.9	10993.4
70°	903.2	924.6	981.7	1274.0	2272.4	5017.7	8692.5	11390.3	11716.0	11547.2	10672.5
72.5°	725.0	729.7	739.2	793.9	1091.0	2346.0	5495.5	8920.7	9507.8	10784.2	10213.7
75°	601.4	603.7	606.1	622.8	679.8	957.9	2674.1	6130.1	6817.1	9165.5	9469.7
77.5°	482.5	470.6	480.1	487.3	501.5	534.8	922.3	3270.7	3967.1	6016.0	7323.4
80°	313.8	309.0	328.0	335.1	349.4	370.8	492.0	1110.0	1347.7	2189.2	2329.4
82.5°	168.8	159.3	199.7	192.5	199.7	216.3	290.0	406.5	456.4	660.8	558.6
85°	52.3	52.3	54.7	64.2	78.4	76.1	126.0	199.7	221.1	282.9	209.2
87.5°	9.5	9.5	9.5	9.5	9.5	11.9	26.1	40.4	54.7	97.5	73.7
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-SA5F-830-U-RW-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1	3456.1
2.5°	3503.6	3482.2	3494.1	3501.2	3498.9	3494.1	3470.3	3465.6	3453.7	3434.7	3429.9
5°	3608.2	3584.4	3586.8	3579.7	3555.9	3525.0	3472.7	3446.6	3425.2	3401.4	3399.0
7.5°	3772.2	3746.1	3738.9	3705.7	3639.1	3567.8	3484.6	3437.1	3401.4	3370.5	3365.8
10°	3981.4	3955.2	3931.5	3853.0	3743.7	3648.6	3539.3	3470.3	3418.0	3380.0	3372.9
12.5°	4214.3	4192.9	4133.5	4019.4	3888.7	3777.0	3665.2	3579.7	3503.6	3446.6	3439.4
15°	4473.4	4425.9	4335.5	4188.2	4064.6	3974.2	3838.8	3722.3	3601.1	3525.0	3508.4
17.5°	4654.1	4613.6	4506.7	4364.1	4266.6	4188.2	4028.9	3862.5	3698.5	3586.8	3563.0
20°	4782.4	4739.6	4618.4	4513.8	4482.9	4416.4	4231.0	4038.4	3848.3	3710.4	3679.5
22.5°	4875.1	4829.9	4706.3	4654.1	4696.8	4685.0	4504.3	4285.6	4059.8	3895.8	3857.8
25°	4963.1	4920.3	4810.9	4829.9	4944.0	4979.7	4784.8	4530.5	4273.7	4081.2	4036.0
27.5°	5046.3	4991.6	4941.7	5046.3	5207.9	5274.4	5067.6	4780.0	4501.9	4304.6	4269.0
30°	5174.6	5110.4	5103.3	5255.4	5512.1	5569.2	5341.0	5053.4	4777.7	4578.0	4532.8
32.5°	5336.2	5276.8	5281.6	5509.8	5806.9	5854.4	5659.5	5390.9	5115.2	4915.5	4853.7
35°	5554.9	5481.2	5521.6	5802.1	6101.6	6189.6	6032.7	5809.2	5540.7	5336.2	5267.3
37.5°	5856.8	5749.8	5833.0	6127.8	6429.6	6560.4	6439.1	6272.8	6006.5	5799.7	5735.6
40°	6241.9	6153.9	6187.2	6512.8	6824.2	6981.1	6905.0	6741.0	6477.2	6260.9	6187.2
42.5°	6698.2	6610.3	6598.4	6945.4	7256.8	7494.5	7420.8	7271.1	6997.7	6750.5	6679.2
45°	7145.1	7064.3	7080.9	7435.1	7784.5	8043.6	7969.9	7794.0	7496.9	7211.6	7154.6
47.5°	7611.0	7544.4	7558.7	7934.2	8319.3	8578.4	8485.7	8271.8	7924.7	7620.5	7551.5
50°	8088.7	8012.7	8034.1	8428.6	8844.6	9089.4	8946.8	8630.7	8248.0	7950.9	7891.5
52.5°	8564.1	8473.8	8528.5	8901.7	9331.9	9526.8	9262.9	8880.3	8509.5	8214.7	8148.2
55°	9110.8	9015.7	8956.3	9355.6	9781.1	9861.9	9500.6	9053.8	8614.0	8278.9	8238.5
57.5°	9610.0	9529.2	9417.4	9816.8	10130.5	10071.1	9683.7	9006.2	8359.7	7929.5	7872.4
60°	10056.8	9987.9	9890.5	10230.4	10373.0	10239.9	9536.3	8442.9	7732.2	7283.0	7256.8
62.5°	10468.1	10394.4	10304.0	10594.0	10575.0	10266.0	8866.0	7577.7	6626.9	6144.4	6101.6
65°	10793.7	10727.1	10701.0	10929.2	10898.3	9755.0	7822.5	6161.0	4841.8	4297.5	4280.9
67.5°	10886.4	10860.3	11000.5	11387.9	10905.4	8728.1	6134.9	4086.0	2600.4	2084.6	2053.7
70°	10539.4	10537.0	10938.7	11492.5	9916.6	6667.3	3620.1	1842.1	1307.3	1159.9	1140.9
72.5°	10087.7	10080.6	10399.1	9914.2	7354.3	3648.6	1523.6	986.4	817.7	777.3	777.3
75°	9346.1	9327.1	9567.2	7542.0	4135.9	1373.9	808.2	677.4	641.8	634.6	634.6
77.5°	7618.1	7458.8	7080.9	4661.2	1442.8	675.1	534.8	532.4	511.0	508.7	508.7
80°	2505.3	2505.3	2911.8	1778.0	637.0	416.0	377.9	396.9	375.6	361.3	358.9
82.5°	408.8	563.3	801.0	508.7	344.7	259.1	232.9	247.2	259.1	206.8	206.8
85°	161.6	211.5	309.0	237.7	159.3	104.6	111.7	123.6	109.3	95.1	92.7
87.5°	61.8	76.1	109.3	57.0	33.3	19.0	11.9	11.9	9.5	9.5	9.5
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)