

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: P636001

Luminaire Tested: GWS-SA3E-830-U-SL3-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P636001  
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-SA3E-830-U-SL3-W  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17117.3 lumens  
Efficiency: N/A  
Efficacy: 107.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 159.2  
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

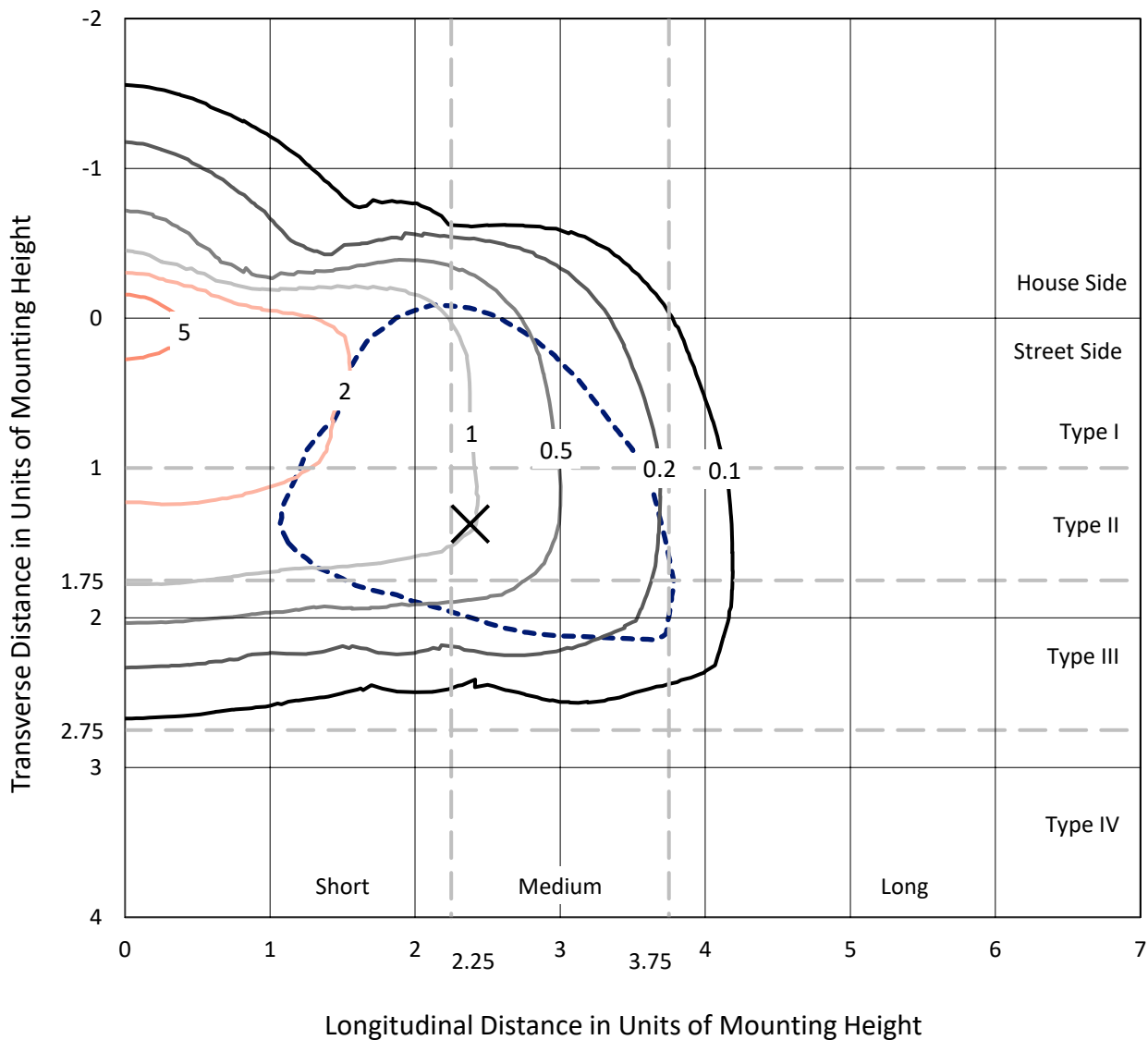


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### Iso-Footcandle Lines of Horizontal Illumination

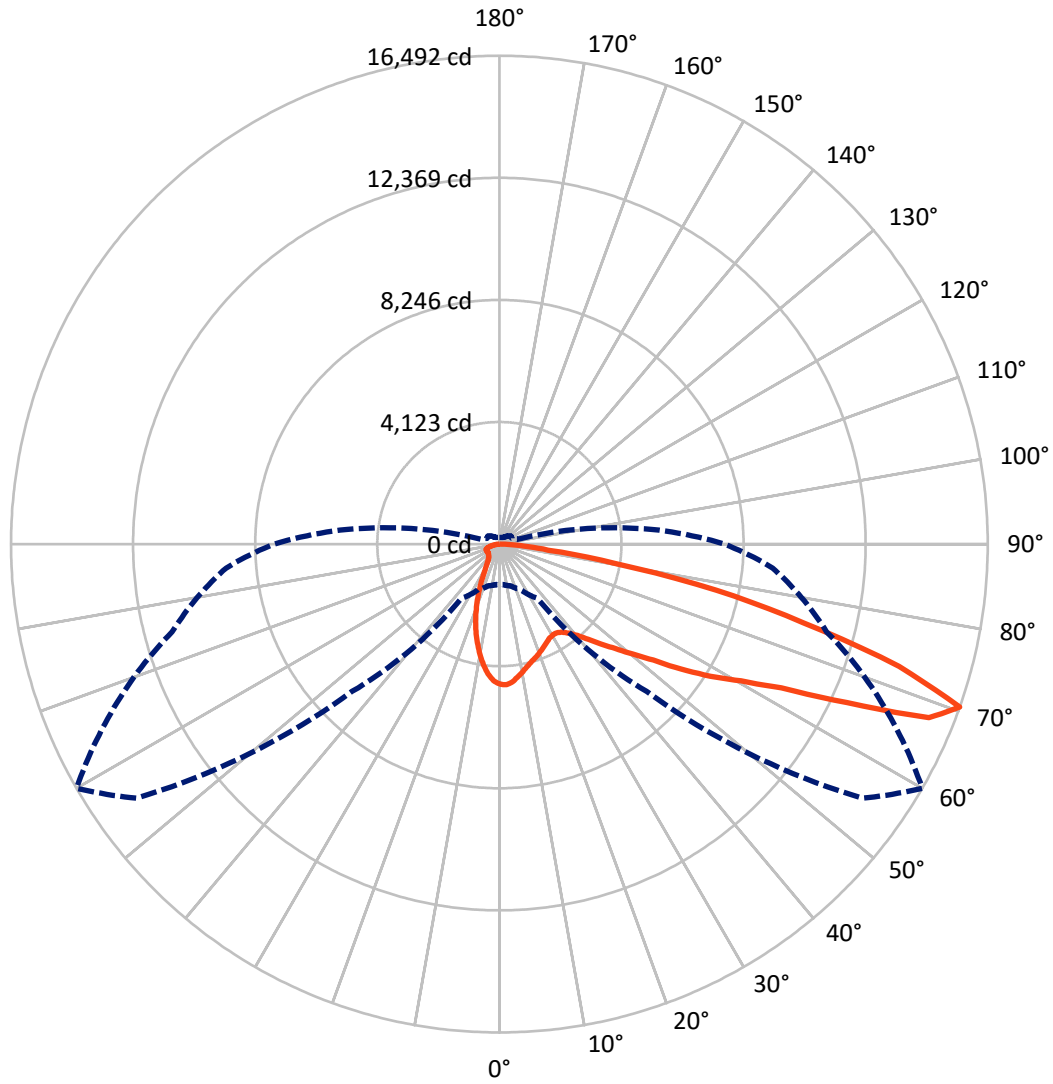
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2927.5	0.0	2927.5
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	14189.8	0.0	14189.8
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	17117.3	0.0	17117.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	408.3	2.4
10°-20°	914.7	5.3
20°-30°	1171.4	6.8
30°-40°	1539.5	9.0
40°-50°	2233.5	13.0
50°-60°	3484.8	20.4
60°-70°	4562.3	26.7
70°-80°	2522.8	14.7
80°-90°	280.0	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°	17117.3	100.0
0°-180°	17117.3	100.0

**Coefficient of Utilization**



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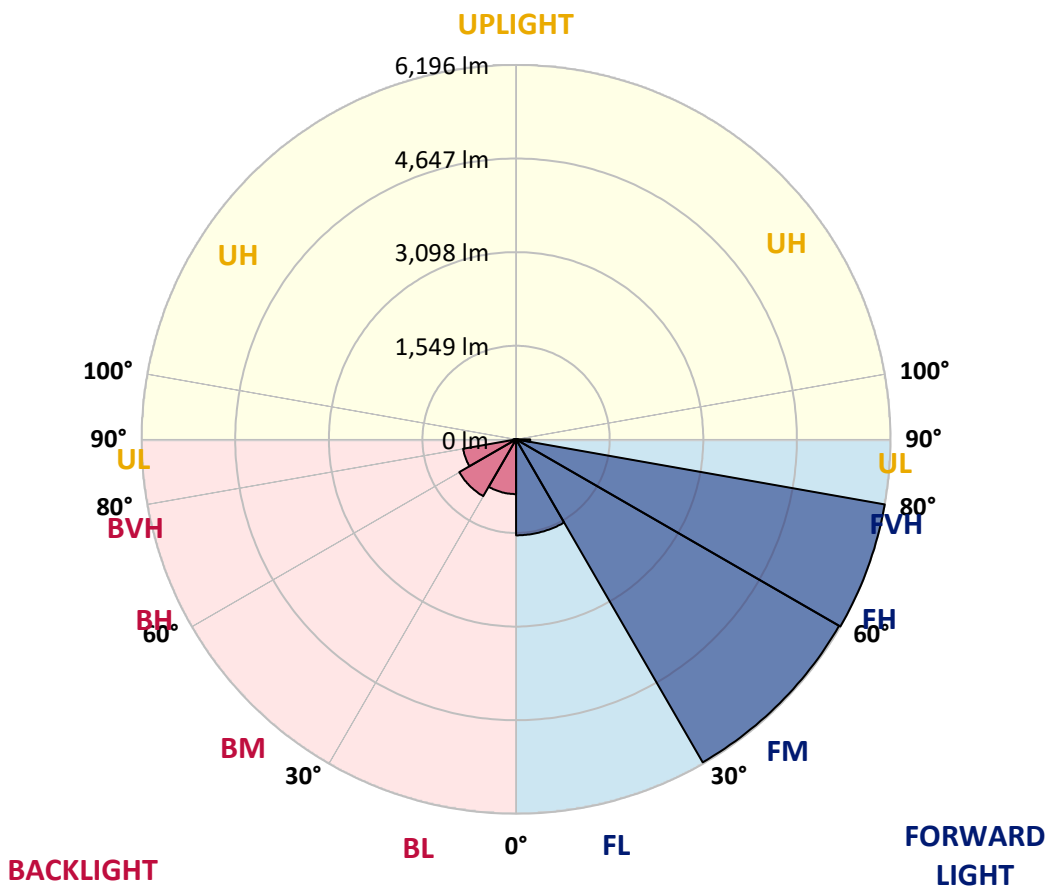
CATALOG NUMBER: GWS-SA3E-830-U-SL3-W

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1588.6	9.3			
FM (30°-60°)	6172.4	36.1			
FH (60°-80°)	6195.5	36.2			G3/7500
FVH (80°-90°)	233.3	1.4			G3/500
BL (0°-30°)	905.7	5.3	B2/1000		
BM (30°-60°)	1085.4	6.3	B2/2500		
BH (60°-80°)	889.6	5.2	B2/1000		G2/1000
BVH (80°-90°)	46.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6
2.5°	4670.2	4675.2	4689.0	4709.0	4729.1	4739.1	4764.1	4756.6	4751.6	4741.6	4729.1
5°	4463.6	4473.6	4486.1	4524.9	4568.8	4603.8	4660.2	4666.4	4668.9	4674.0	4653.9
7.5°	4200.6	4203.1	4233.1	4284.5	4342.1	4402.2	4496.1	4522.4	4545.0	4570.0	4553.7
10°	3910.0	3916.3	3938.8	4012.7	4111.6	4200.6	4327.0	4370.9	4418.5	4473.6	4451.0
12.5°	3672.0	3673.3	3709.6	3788.5	3896.2	4016.4	4174.3	4226.9	4289.5	4375.9	4355.8
15°	3482.9	3482.9	3516.7	3584.4	3708.4	3849.9	4037.7	4105.4	4190.5	4307.0	4271.9
17.5°	3332.6	3333.9	3355.2	3426.6	3536.8	3693.3	3916.3	4007.7	4101.6	4255.7	4203.1
20°	3253.7	3247.5	3251.2	3295.1	3389.0	3540.5	3794.8	3901.2	4027.7	4220.6	4140.4
22.5°	3250.0	3238.7	3222.4	3226.2	3281.3	3406.5	3664.5	3793.5	3952.6	4191.8	4076.6
25°	3313.9	3301.3	3272.5	3240.0	3235.0	3310.1	3541.8	3688.3	3874.9	4179.3	4015.2
27.5°	3421.6	3412.8	3375.2	3326.4	3275.0	3272.5	3449.1	3601.9	3818.6	4191.8	3971.4
30°	3564.3	3549.3	3525.5	3462.9	3385.2	3305.1	3412.8	3555.6	3781.0	4231.9	3952.6
32.5°	3725.9	3717.1	3694.6	3632.0	3549.3	3421.6	3441.6	3565.6	3781.0	4302.0	3956.3
35°	3897.5	3896.2	3896.2	3854.9	3763.5	3604.4	3555.6	3650.7	3838.6	4414.7	3996.4
37.5°	4064.0	4062.8	4102.9	4117.9	4013.9	3842.4	3749.7	3821.1	3965.1	4581.3	4095.3
40°	4199.3	4204.3	4292.0	4367.1	4309.5	4150.5	4020.2	4056.5	4170.5	4818.0	4268.2
42.5°	4335.8	4349.6	4481.1	4613.8	4636.4	4498.6	4367.1	4388.4	4464.8	5131.1	4526.2
45°	4484.8	4491.1	4675.2	4860.6	4969.5	4888.1	4780.4	4809.2	4826.8	5518.1	4910.7
47.5°	4628.9	4645.2	4883.1	5137.3	5344.0	5336.5	5276.4	5267.6	5271.4	5989.0	5365.3
50°	4825.5	4849.3	5128.6	5435.4	5738.5	5877.5	5895.0	5828.7	5801.1	6512.5	5931.4
52.5°	5198.7	5198.7	5449.2	5751.0	6158.1	6502.5	6620.2	6511.2	6423.6	7066.0	6532.5
55°	5665.9	5685.9	5885.0	6129.2	6645.2	7160.0	7558.2	7438.0	7190.0	7668.4	7162.5
57.5°	5873.8	5898.8	6214.4	6593.9	7282.7	7907.7	8460.0	8417.4	8055.4	8294.6	7816.2
60°	5498.0	5550.6	5985.2	6621.4	7860.1	9113.7	9503.2	9379.2	8862.0	8952.2	8525.1
62.5°	4586.3	4643.9	5126.1	6014.0	7779.9	10417.5	11147.6	10690.5	9868.9	9782.5	9469.4
65°	2736.5	2734.0	3313.9	4491.1	6791.8	10779.4	13750.1	12897.2	11424.4	10922.2	10441.3
67.5°	1739.6	1735.8	1857.3	2379.6	4519.9	9892.7	15423.3	15645.0	13537.2	11760.0	10521.4
70°	1372.6	1371.4	1459.0	1697.0	2235.5	7039.7	14957.4	16491.6	14813.4	11440.7	9264.0
72.5°	1000.7	1003.2	1138.4	1421.5	1724.6	3534.3	12112.0	14110.8	13624.9	10099.4	7520.7
75°	718.9	722.6	804.0	1088.3	1590.5	1932.5	8054.2	10610.3	10366.1	8095.5	5173.7
77.5°	457.1	462.1	533.5	762.7	1285.0	1560.5	4883.1	7490.6	6897.0	4561.2	1839.8
80°	279.3	295.6	355.7	568.6	1027.0	1171.0	2440.9	3946.3	3454.1	1251.1	618.7
82.5°	144.0	156.6	214.2	351.9	707.6	1028.2	1381.4	1658.2	1069.5	523.5	329.4
85°	45.1	52.6	75.1	142.8	336.9	637.5	914.3	824.1	490.9	246.7	152.8
87.5°	11.3	11.3	12.5	12.5	13.8	28.8	176.6	186.6	130.2	77.6	62.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P636001  
 CATALOG NUMBER: GWS-SA3E-830-U-SL3-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6	4736.6
2.5°	4704.0	4674.0	4661.4	4660.2	4628.9	4583.8	4553.7	4532.4	4519.9	4517.4	4517.4
5°	4620.1	4581.3	4529.9	4491.1	4407.2	4322.0	4250.6	4210.6	4164.2	4158.0	4156.7
7.5°	4508.6	4452.3	4354.6	4245.6	4099.1	3957.6	3837.4	3755.9	3674.5	3659.5	3654.5
10°	4388.4	4312.0	4145.4	3953.8	3734.7	3523.0	3338.9	3194.9	3099.7	3032.1	3019.5
12.5°	4269.4	4168.0	3923.8	3638.2	3337.6	3048.3	2771.6	2536.1	2365.8	2266.8	2249.3
15°	4158.0	4016.4	3682.1	3317.6	2926.9	2531.1	2139.1	1833.5	1594.3	1509.1	1489.1
17.5°	4056.5	3879.9	3447.9	2985.7	2498.5	1981.3	1535.4	1263.7	1123.4	1080.8	1070.8
20°	3955.1	3739.7	3209.9	2636.3	2043.9	1464.1	1122.2	994.4	941.8	925.5	920.5
22.5°	3846.1	3585.6	2950.7	2291.9	1584.3	1095.9	918.0	861.7	845.4	846.6	845.4
25°	3737.2	3429.1	2678.9	1917.4	1179.8	889.2	801.5	780.2	784.0	795.3	797.8
27.5°	3647.0	3290.1	2412.1	1506.6	921.8	765.2	723.9	722.6	736.4	751.4	753.9
30°	3581.9	3166.1	2149.1	1158.5	759.0	680.1	663.8	671.3	687.6	698.8	702.6
32.5°	3535.5	3059.6	1868.6	910.5	665.0	619.9	612.4	619.9	630.0	641.2	643.7
35°	3519.2	2982.0	1593.1	742.7	601.2	576.1	571.1	574.9	579.9	586.1	588.6
37.5°	3555.6	2943.1	1305.0	646.2	562.3	547.3	539.8	537.3	538.5	541.0	542.3
40°	3663.3	2960.7	1069.5	589.9	537.3	523.5	511.0	506.0	504.7	507.2	506.0
42.5°	3848.6	3034.6	899.2	557.3	517.2	497.2	483.4	478.4	478.4	484.7	484.7
45°	4120.4	3179.8	776.5	533.5	499.7	474.7	459.6	457.1	462.1	472.2	473.4
47.5°	4518.7	3392.8	702.6	516.0	483.4	454.6	439.6	438.3	448.4	464.6	465.9
50°	4990.8	3699.6	662.5	503.5	472.2	438.3	423.3	424.6	435.8	453.4	457.1
52.5°	5559.4	4117.9	665.0	498.5	465.9	428.3	413.3	410.8	422.1	439.6	443.3
55°	6146.8	4626.4	713.9	499.7	457.1	423.3	403.3	394.5	404.5	417.0	418.3
57.5°	6793.0	5200.0	835.4	497.2	445.9	418.3	394.5	374.5	380.7	388.2	392.0
60°	7521.9	5875.0	1097.1	502.2	440.8	407.0	377.0	350.7	349.4	354.4	355.7
62.5°	8496.3	6793.0	1391.4	511.0	452.1	393.3	350.7	323.1	318.1	320.6	321.9
65°	9241.5	7231.4	1298.7	503.5	475.9	383.2	325.6	296.8	286.8	284.3	284.3
67.5°	8938.4	6651.5	904.2	483.4	487.2	384.5	305.6	269.3	256.7	250.5	249.2
70°	7605.8	5402.9	628.7	463.4	474.7	382.0	284.3	246.7	230.4	221.7	220.4
72.5°	6009.0	4125.4	508.5	423.3	430.8	344.4	253.0	221.7	207.9	196.6	196.6
75°	3867.4	2517.3	424.6	377.0	351.9	268.0	219.2	197.9	184.1	172.8	172.8
77.5°	1301.2	934.3	329.4	319.4	263.0	201.6	184.1	170.3	159.1	149.0	147.8
80°	528.5	443.3	241.7	241.7	184.1	154.0	144.0	137.8	130.2	117.7	117.7
82.5°	306.8	269.3	169.1	146.5	122.7	106.5	100.2	93.9	93.9	85.2	85.2
85°	147.8	149.0	101.4	90.2	70.1	61.4	58.9	55.1	53.9	48.8	47.6
87.5°	80.2	81.4	51.3	40.1	27.6	23.8	20.0	18.8	17.5	16.3	16.3
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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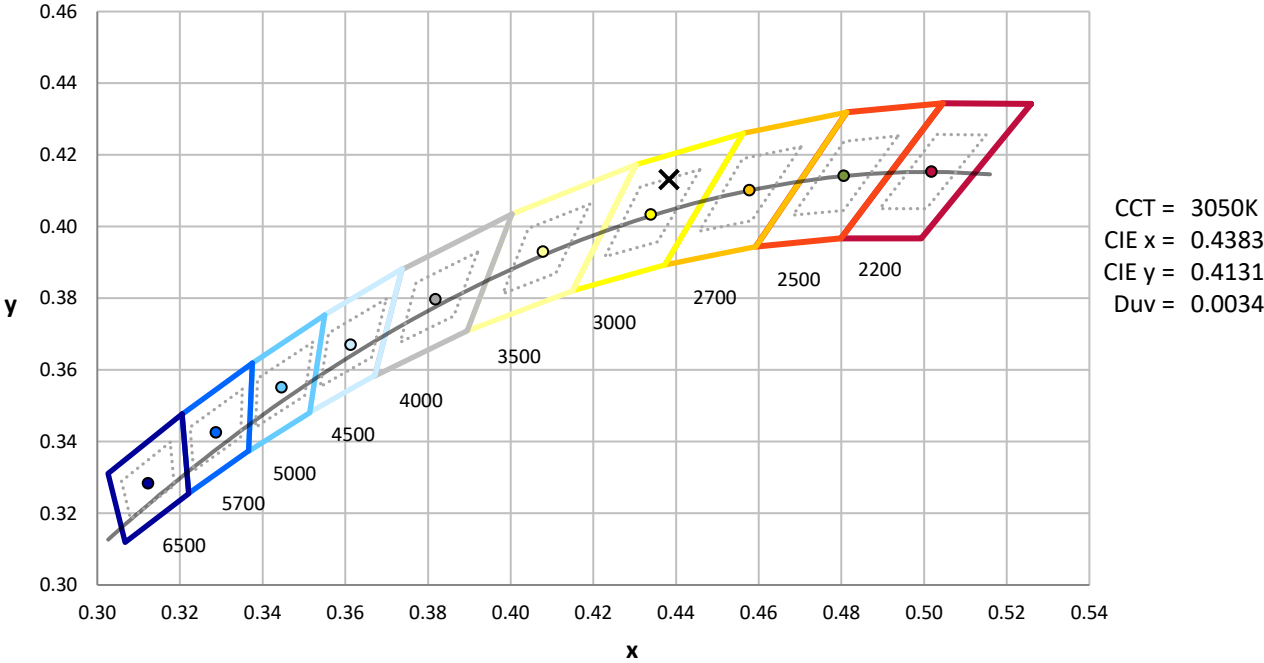
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

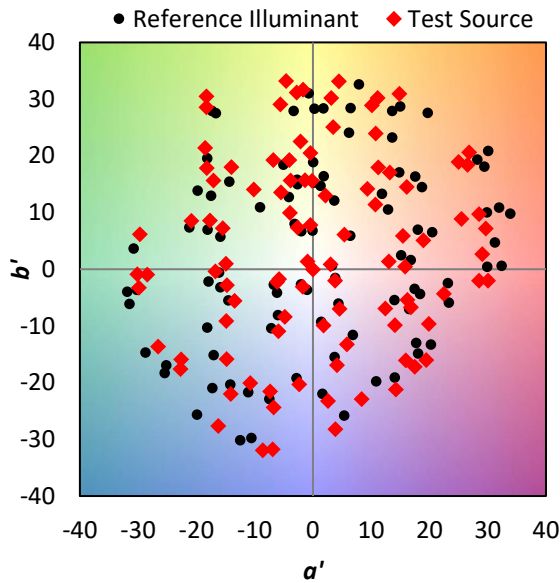
$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
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)