

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: P639961

Luminaire Tested: GWS-SA5C-830-U-SL3-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P639961  
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-SA5C-830-U-SL3-W  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS  
Light Source: (80) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

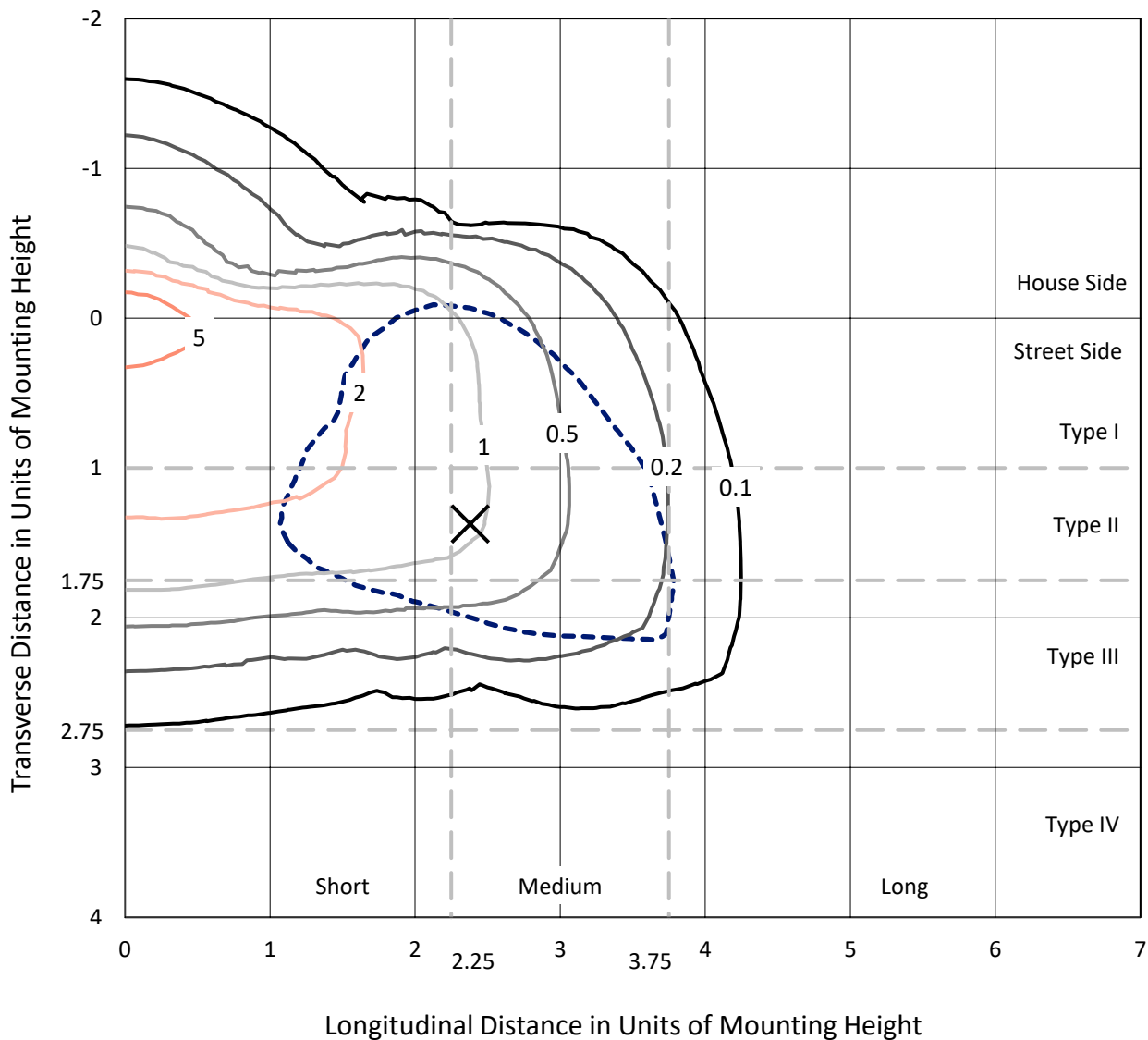
Lumens per Lamp: N/A  
Luminaire Lumens: 18534.6 lumens  
Efficiency: N/A  
Efficacy: 117.7 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 157.5  
Input Voltage (V): 120  
Input Current (Ain): 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



REPORT NUMBER: P639961  
 CATALOG NUMBER: GWS-SA5C-830-U-SL3-W

### Iso-Footcandle Lines of Horizontal Illumination

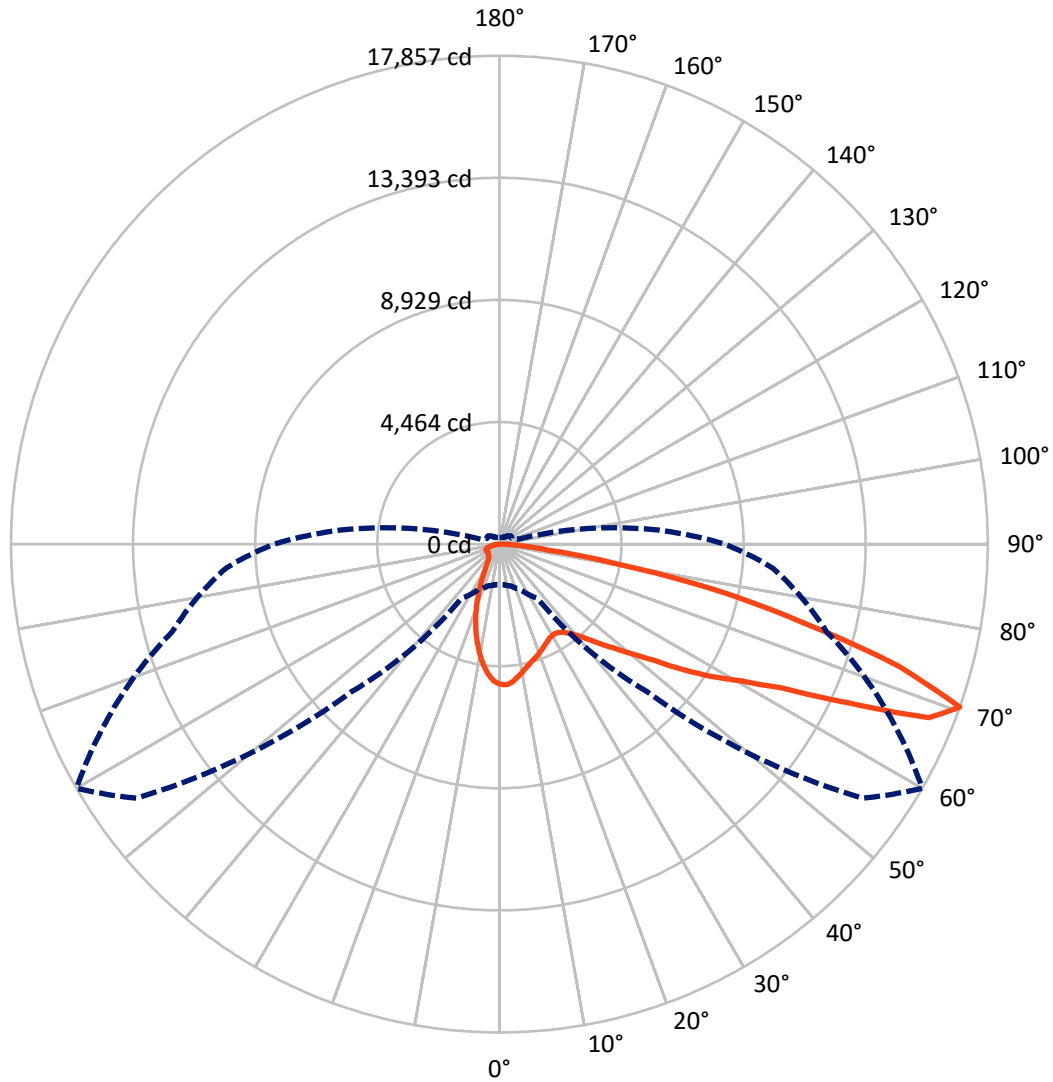
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 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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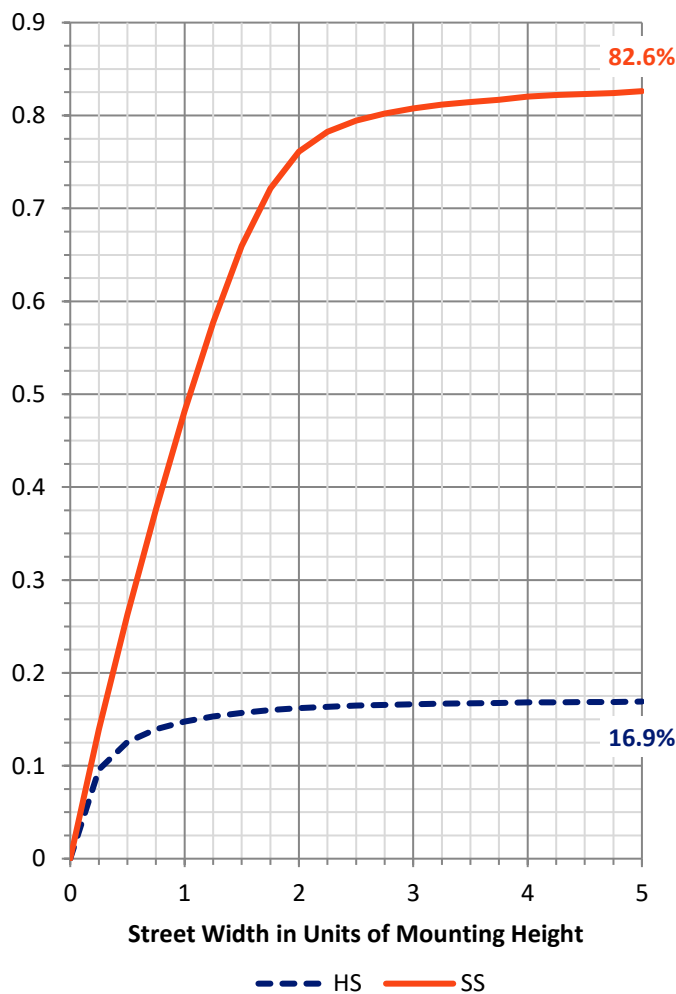
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3169.9	0.0	3169.9
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	15364.8	0.0	15364.8
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	18534.6	0.0	18534.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	442.1	2.4
10°-20°	990.4	5.3
20°-30°	1268.4	6.8
30°-40°	1666.9	9.0
40°-50°	2418.5	13.0
50°-60°	3773.4	20.4
60°-70°	4940.1	26.7
70°-80°	2731.7	14.7
80°-90°	303.2	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°	18534.6	100.0
0°-180°	18534.6	100.0

**Coefficient of Utilization**



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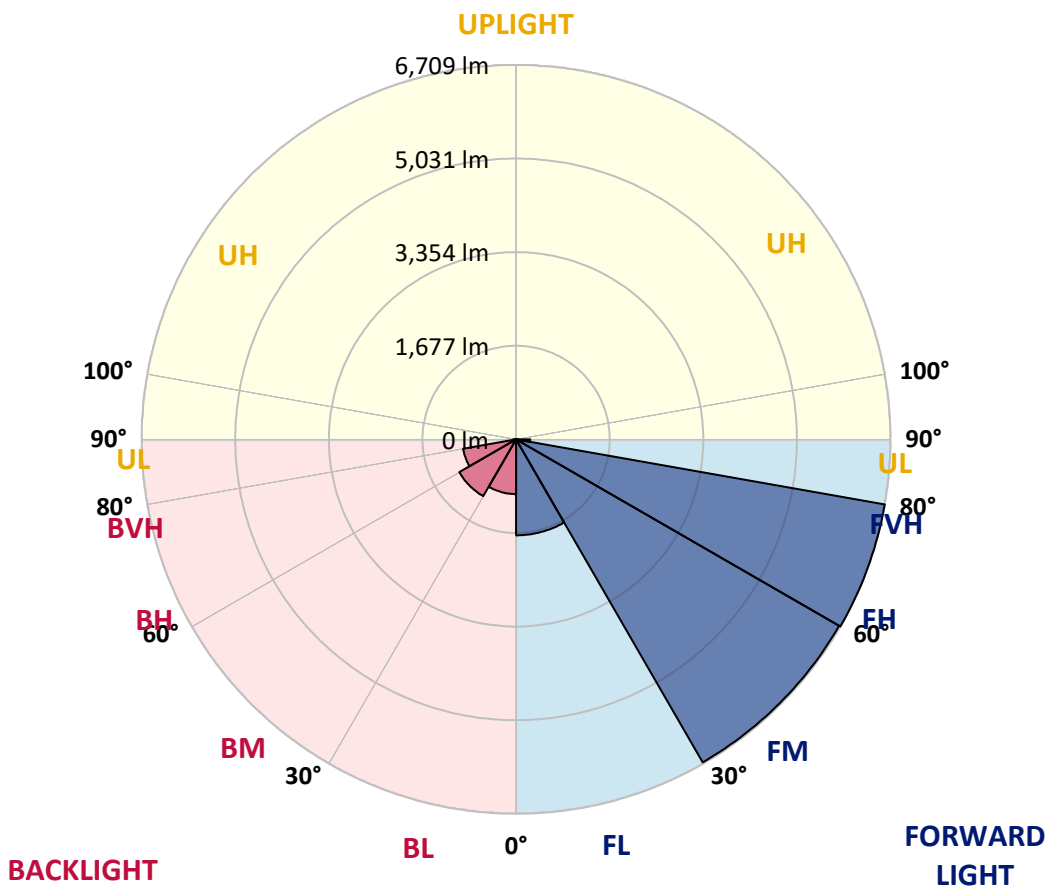
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1720.1	9.3			
FM (30°-60°)	6683.5	36.1			
FH (60°-80°)	6708.5	36.2			G3/7500
FVH (80°-90°)	252.6	1.4			G3/500
BL (0°-30°)	980.7	5.3	B2/1000		
BM (30°-60°)	1175.3	6.3	B2/2500		
BH (60°-80°)	963.3	5.2	B2/1000		G2/1000
BVH (80°-90°)	50.5	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°	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8
2.5°	5056.9	5062.3	5077.2	5098.9	5120.6	5131.5	5158.6	5150.5	5145.0	5134.2	5120.6
5°	4833.1	4844.0	4857.5	4899.6	4947.0	4985.0	5046.0	5052.8	5055.5	5061.0	5039.3
7.5°	4548.4	4551.1	4583.6	4639.2	4701.6	4766.7	4868.4	4896.9	4921.3	4948.4	4930.8
10°	4233.7	4240.5	4264.9	4344.9	4452.1	4548.4	4685.3	4732.8	4784.3	4844.0	4819.6
12.5°	3976.1	3977.4	4016.8	4102.2	4218.8	4349.0	4519.9	4576.8	4644.6	4738.2	4716.5
15°	3771.3	3771.3	3807.9	3881.2	4015.4	4168.6	4372.1	4445.3	4537.5	4663.6	4625.7
17.5°	3608.6	3609.9	3633.0	3710.3	3829.6	3999.1	4240.5	4339.5	4441.2	4608.0	4551.1
20°	3523.1	3516.4	3520.4	3567.9	3669.6	3833.7	4109.0	4224.2	4361.2	4570.1	4483.3
22.5°	3519.1	3506.9	3489.2	3493.3	3553.0	3688.6	3967.9	4107.6	4279.8	4538.9	4414.1
25°	3588.2	3574.7	3543.5	3508.2	3502.8	3584.2	3835.0	3993.7	4195.8	4525.3	4347.7
27.5°	3704.9	3695.4	3654.7	3601.8	3546.2	3543.5	3734.7	3900.1	4134.7	4538.9	4300.2
30°	3859.5	3843.2	3817.4	3749.6	3665.5	3578.7	3695.4	3850.0	4094.1	4582.3	4279.8
32.5°	4034.4	4024.9	4000.5	3932.7	3843.2	3704.9	3726.6	3860.8	4094.1	4658.2	4283.9
35°	4220.2	4218.8	4218.8	4174.1	4075.1	3902.9	3850.0	3953.0	4156.4	4780.2	4327.3
37.5°	4400.5	4399.2	4442.6	4458.9	4346.3	4160.5	4060.2	4137.5	4293.4	4960.6	4434.4
40°	4547.0	4552.4	4647.3	4728.7	4666.3	4494.1	4353.1	4392.4	4515.8	5216.9	4621.6
42.5°	4694.8	4709.7	4852.1	4995.9	5020.3	4871.1	4728.7	4751.8	4834.5	5555.9	4900.9
45°	4856.2	4863.0	5062.3	5263.0	5381.0	5292.9	5176.2	5207.4	5226.4	5975.0	5317.3
47.5°	5012.1	5029.8	5287.4	5562.7	5786.5	5778.3	5713.2	5703.7	5707.8	6484.9	5809.5
50°	5225.0	5250.8	5553.2	5885.5	6213.6	6364.2	6383.2	6311.3	6281.4	7051.7	6422.5
52.5°	5629.2	5629.2	5900.4	6227.2	6667.9	7040.9	7168.3	7050.4	6955.4	7651.1	7073.4
55°	6135.0	6156.7	6372.3	6636.7	7195.5	7752.8	8184.1	8053.9	7785.4	8303.4	7755.5
57.5°	6360.1	6387.2	6729.0	7139.9	7885.7	8562.4	9160.4	9114.3	8722.4	8981.4	8463.4
60°	5953.3	6010.2	6480.8	7169.7	8510.9	9868.3	10290.1	10155.8	9595.8	9693.4	9231.0
62.5°	4966.0	5028.4	5550.5	6512.0	8424.1	11280.0	12070.6	11575.7	10686.1	10592.5	10253.5
65°	2963.1	2960.4	3588.2	4863.0	7354.1	11671.9	14888.6	13965.1	12370.3	11826.5	11305.8
67.5°	1883.6	1879.6	2011.1	2576.6	4894.2	10711.8	16700.4	16940.4	14658.1	12733.8	11392.6
70°	1486.3	1484.9	1579.9	1837.5	2420.6	7622.6	16195.9	17857.1	16039.9	12388.0	10031.1
72.5°	1083.5	1086.2	1232.7	1539.2	1867.3	3826.9	13114.8	15279.2	14753.0	10935.6	8143.4
75°	778.4	782.5	870.6	1178.4	1722.2	2092.5	8721.1	11488.9	11224.4	8765.8	5602.0
77.5°	495.0	500.4	577.7	825.9	1391.4	1689.7	5287.4	8110.8	7468.0	4938.9	1992.1
80°	302.4	320.0	385.1	615.7	1112.0	1268.0	2643.0	4273.1	3740.1	1354.7	669.9
82.5°	156.0	169.5	231.9	381.1	766.2	1113.4	1495.8	1795.5	1158.1	566.8	356.7
85°	48.8	57.0	81.4	154.6	364.8	690.3	990.0	892.3	531.6	267.2	165.4
87.5°	12.2	12.2	13.6	13.6	14.9	31.2	191.2	202.1	141.0	84.1	67.8
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: P639961  
 CATALOG NUMBER: GWS-SA5C-830-U-SL3-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8	5128.8
2.5°	5093.5	5061.0	5047.4	5046.0	5012.1	4963.3	4930.8	4907.7	4894.2	4891.4	4891.4
5°	5002.6	4960.6	4905.0	4863.0	4772.1	4679.9	4602.6	4559.2	4509.0	4502.2	4500.9
7.5°	4882.0	4820.9	4715.2	4597.2	4438.5	4285.3	4155.1	4066.9	3978.8	3962.5	3957.1
10°	4751.8	4669.0	4488.7	4281.2	4043.9	3814.7	3615.4	3459.4	3356.3	3283.1	3269.6
12.5°	4622.9	4513.1	4248.7	3939.5	3614.0	3300.7	3001.0	2746.1	2561.7	2454.5	2435.6
15°	4502.2	4349.0	3986.9	3592.3	3169.2	2740.7	2316.2	1985.3	1726.3	1634.1	1612.4
17.5°	4392.4	4201.2	3733.3	3232.9	2705.4	2145.3	1662.6	1368.3	1216.4	1170.3	1159.5
20°	4282.6	4049.3	3475.7	2854.6	2213.2	1585.3	1215.1	1076.7	1019.8	1002.2	996.7
22.5°	4164.6	3882.5	3195.0	2481.7	1715.5	1186.6	994.0	933.0	915.4	916.7	915.4
25°	4046.6	3713.0	2900.7	2076.2	1277.4	962.8	867.9	844.8	848.9	861.1	863.8
27.5°	3949.0	3562.5	2611.8	1631.4	998.1	828.6	783.8	782.5	797.4	813.7	816.4
30°	3878.4	3428.2	2327.1	1254.4	821.8	736.4	718.7	726.9	744.5	756.7	760.8
32.5°	3828.3	3312.9	2023.3	985.9	720.1	671.3	663.1	671.3	682.1	694.3	697.0
35°	3810.6	3228.9	1725.0	804.2	650.9	623.8	618.4	622.4	627.9	634.7	637.4
37.5°	3850.0	3186.8	1413.1	699.7	608.9	592.6	584.5	581.8	583.1	585.8	587.2
40°	3966.6	3205.8	1158.1	638.7	581.8	566.8	553.3	547.9	546.5	549.2	547.9
42.5°	4167.3	3285.8	973.7	603.5	560.1	538.4	523.5	518.0	518.0	524.8	524.8
45°	4461.6	3443.1	840.8	577.7	541.1	514.0	497.7	495.0	500.4	511.2	512.6
47.5°	4892.8	3673.7	760.8	558.7	523.5	492.3	476.0	474.6	485.5	503.1	504.5
50°	5404.1	4005.9	717.4	545.2	511.2	474.6	458.4	459.7	471.9	490.9	495.0
52.5°	6019.7	4458.9	720.1	539.7	504.5	463.8	447.5	444.8	457.0	476.0	480.1
55°	6655.7	5009.4	773.0	541.1	495.0	458.4	436.7	427.2	438.0	451.6	452.9
57.5°	7355.5	5630.5	904.5	538.4	482.8	452.9	427.2	405.5	412.3	420.4	424.5
60°	8144.7	6361.5	1187.9	543.8	477.3	440.7	408.2	379.7	378.4	383.8	385.1
62.5°	9199.8	7355.5	1506.6	553.3	489.6	425.8	379.7	349.9	344.4	347.2	348.5
65°	10006.6	7830.1	1406.3	545.2	515.3	415.0	352.6	321.4	310.5	307.8	307.8
67.5°	9678.5	7202.2	979.1	523.5	527.5	416.3	330.9	291.6	278.0	271.2	269.9
70°	8235.6	5850.2	680.8	501.8	514.0	413.6	307.8	267.2	249.5	240.0	238.7
72.5°	6506.6	4467.0	550.6	458.4	466.5	372.9	273.9	240.0	225.1	212.9	212.9
75°	4187.6	2725.8	459.7	408.2	381.1	290.2	237.3	214.3	199.3	187.1	187.1
77.5°	1409.0	1011.6	356.7	345.8	284.8	218.3	199.3	184.4	172.2	161.4	160.0
80°	572.3	480.1	261.7	261.7	199.3	166.8	156.0	149.2	141.0	127.5	127.5
82.5°	332.2	291.6	183.1	158.7	132.9	115.3	108.5	101.7	101.7	92.2	92.2
85°	160.0	161.4	109.8	97.6	75.9	66.4	63.7	59.7	58.3	52.9	51.5
87.5°	86.8	88.1	55.6	43.4	29.8	25.8	21.7	20.3	19.0	17.6	17.6
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**

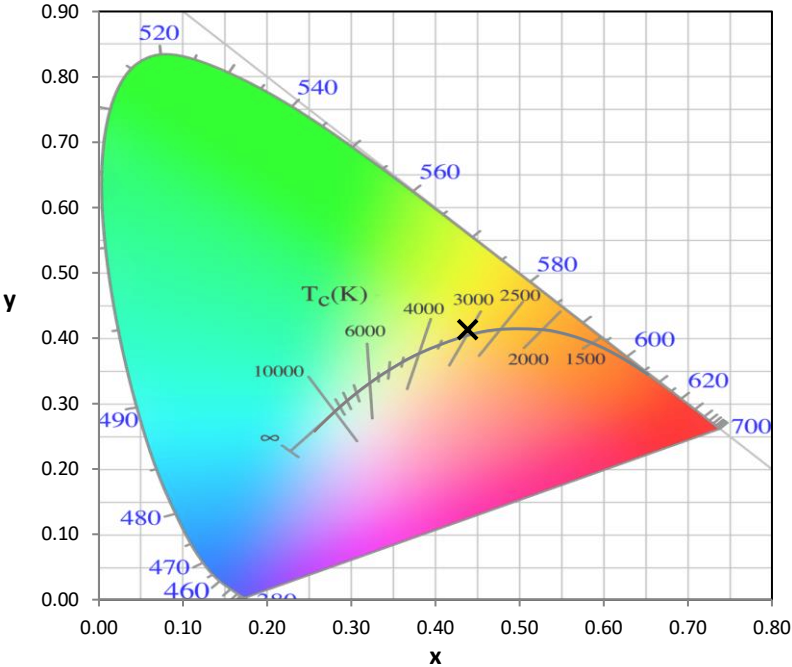
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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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**

$\lambda$ (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

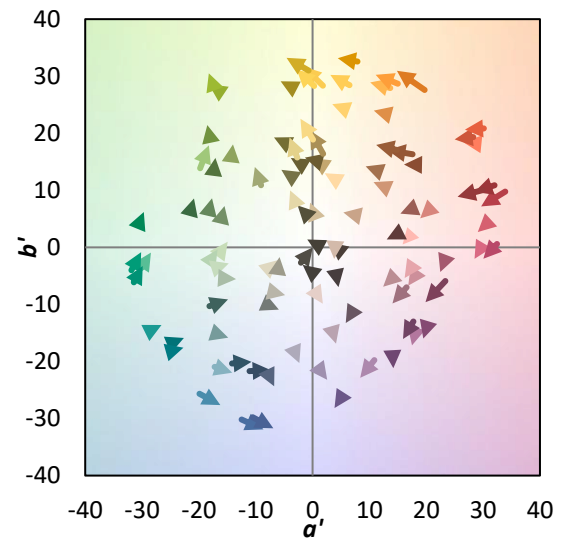
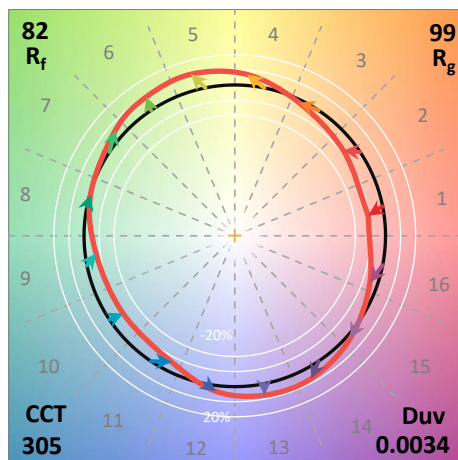
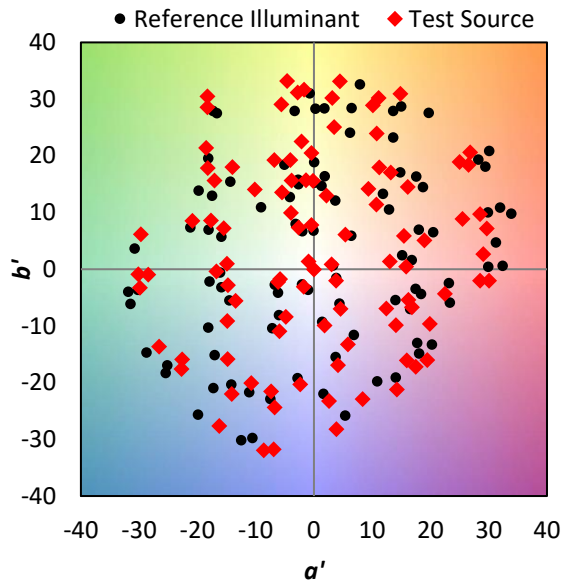
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)