

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P323688

Luminaire Tested: **GLEON-SA4C-830-U-SL3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P323688  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA4C-830-U-SL3-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19369 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G4

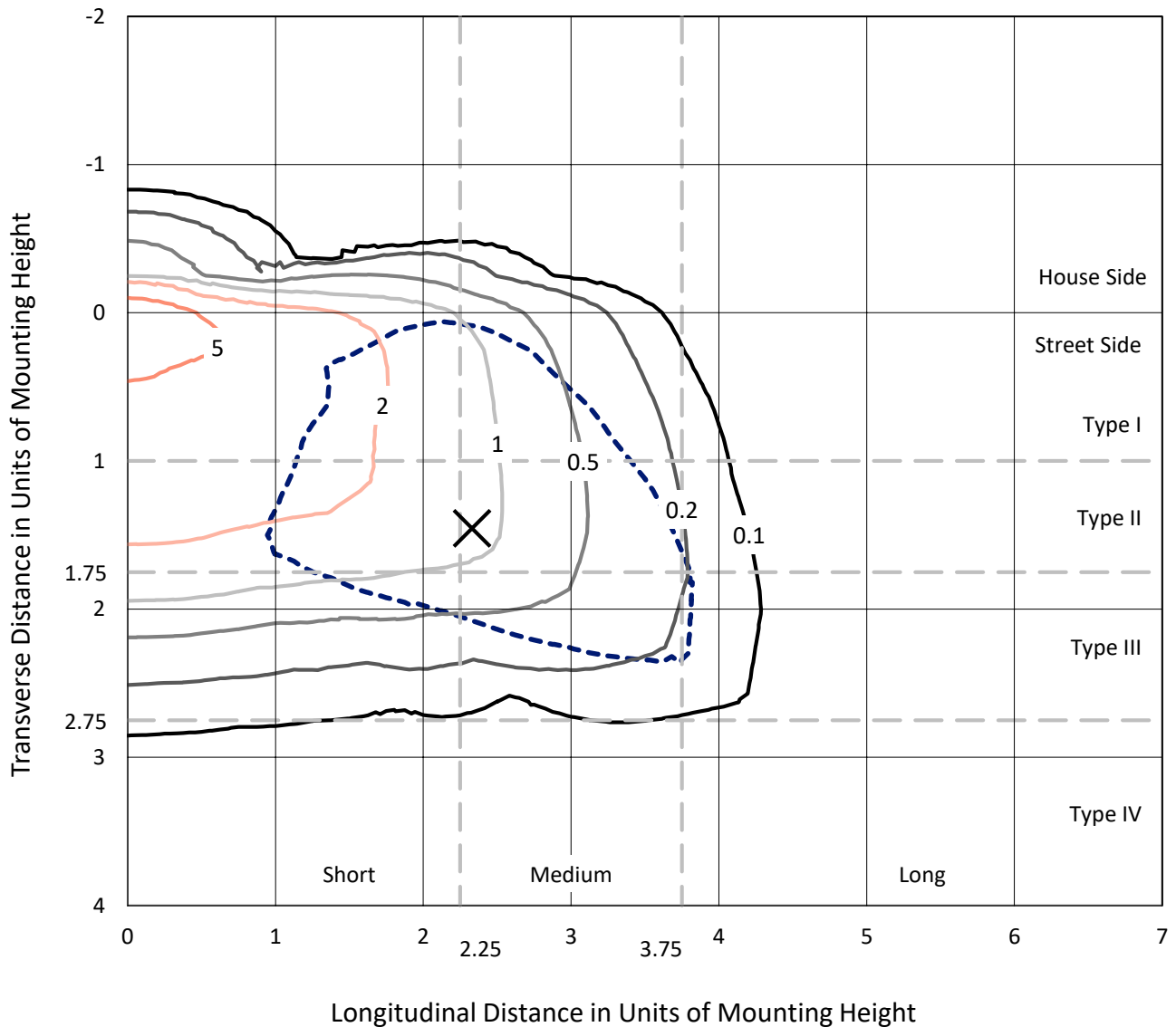
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P323688  
 CATALOG NUMBER: GLEON-SA4C-830-U-SL3-HSS

### Iso-Footcandle Lines of Horizontal Illumination

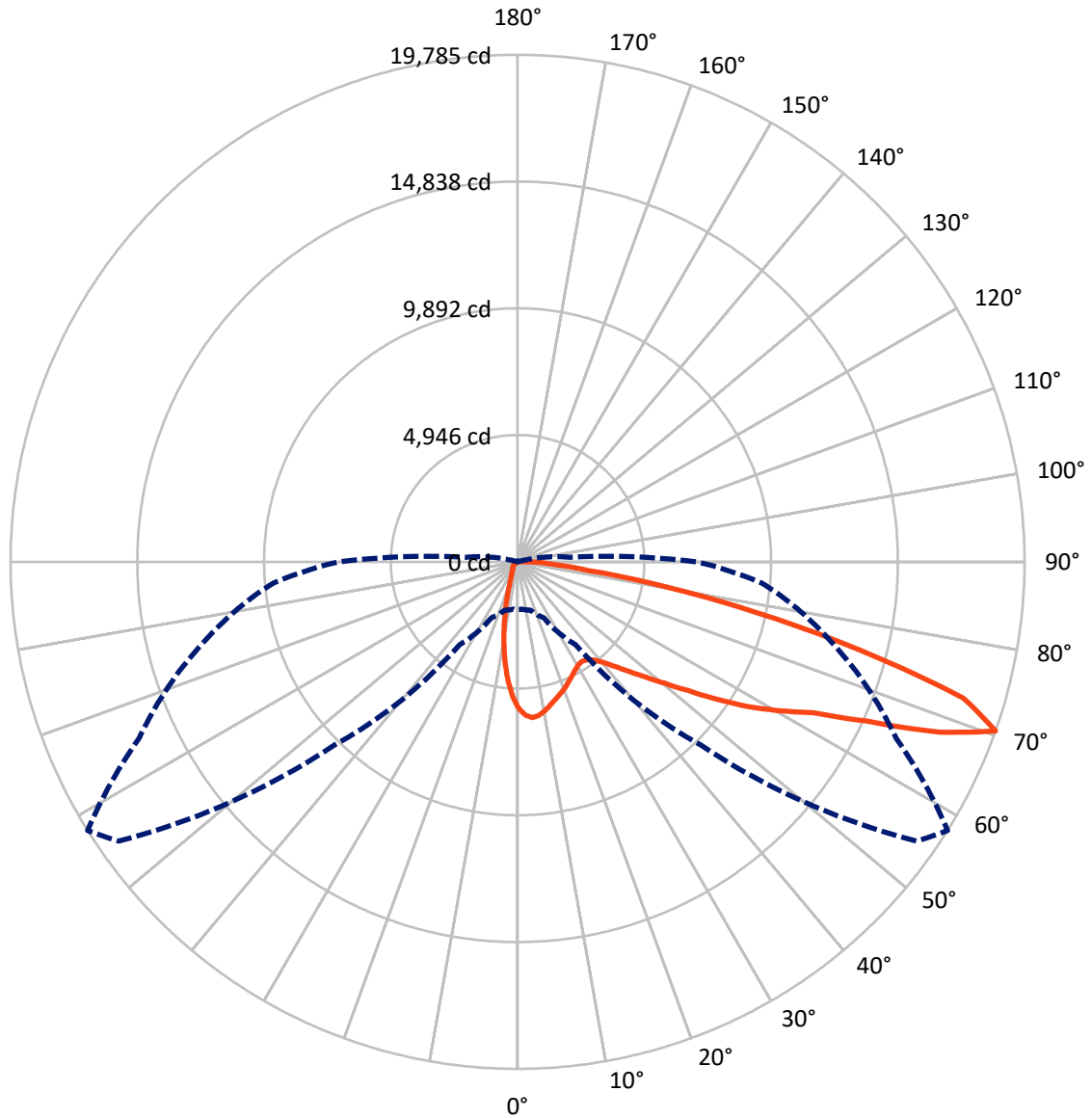
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.3 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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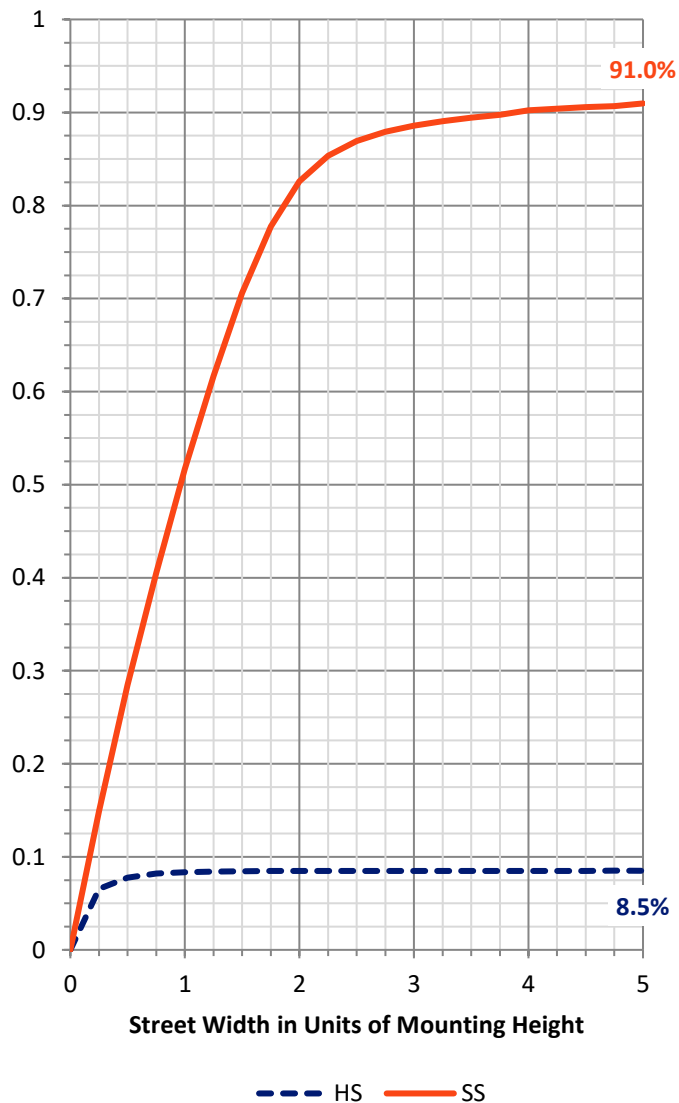
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1657.6	0.0	1657.6
	% Fixture	8.6	0.0	8.6
<b>Street Side</b>	Lumens	17711.4	0.0	17711.4
	% Fixture	91.4	0.0	91.4
<b>Total</b>	Lumens	19369.0	0.0	19369.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	467.9	2.4
10°-20°	982.0	5.1
20°-30°	1290.9	6.7
30°-40°	1709.7	8.8
40°-50°	2555.5	13.2
50°-60°	4093.8	21.1
60°-70°	5160.1	26.6
70°-80°	2783.4	14.4
80°-90°	325.8	1.7
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°	19369.0	100.0
0°-180°	19369.0	100.0

**Coefficient of Utilization**

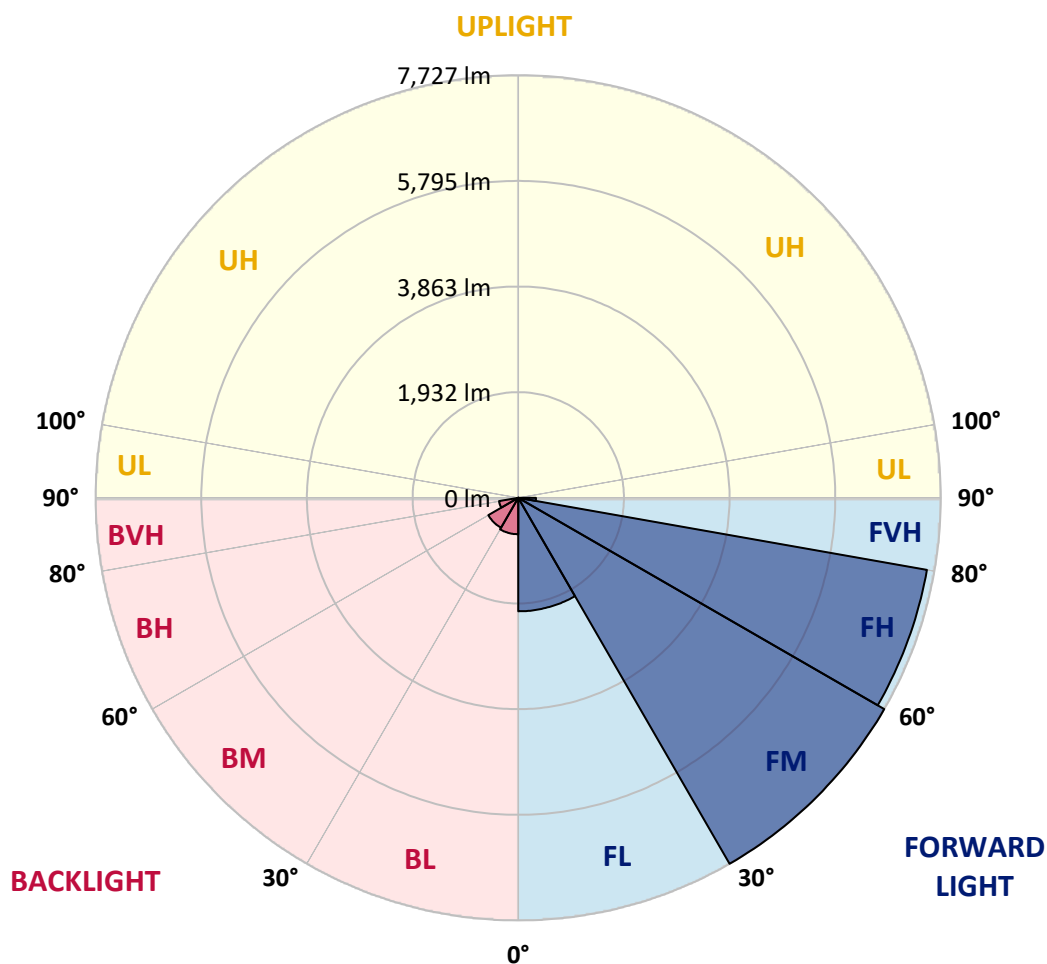


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2074.8	10.7			
FM (30°-60°)	7726.6	39.9			
FH (60°-80°)	7587.0	39.2			G4/12000
FVH (80°-90°)	323.0	1.7			G3/500
BL (0°-30°)	665.9	3.4	B2/1000		
BM (30°-60°)	632.3	3.3	B1/1000		
BH (60°-80°)	356.5	1.8	B1/500		G1/500
BVH (80°-90°)	2.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**  
 Type III Medium





REPORT NUMBER: P323688

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5
2.5°	6195.9	6180.6	6174.9	6165.3	6128.2	6092.0	6020.3	6000.2	5955.1	5848.0	5734.4
5°	6200.7	6199.9	6216.8	6212.8	6199.9	6183.0	6131.5	6104.9	6028.4	5875.3	5667.5
7.5°	5901.9	5917.2	5955.1	5985.7	6021.1	6067.0	6073.5	6047.7	5984.9	5819.8	5544.3
10°	5500.8	5525.0	5578.2	5638.6	5731.2	5823.0	5905.1	5901.9	5880.2	5717.5	5396.1
12.5°	5098.9	5127.1	5188.3	5277.7	5409.0	5558.8	5705.4	5725.5	5761.8	5625.7	5259.2
15°	4747.0	4771.1	4831.6	4941.1	5103.8	5305.1	5520.2	5557.2	5650.6	5554.0	5144.8
17.5°	4448.2	4463.5	4507.8	4629.4	4817.9	5061.9	5341.4	5413.9	5553.2	5497.6	5045.8
20°	4239.6	4242.0	4271.0	4356.4	4544.8	4817.9	5156.1	5260.0	5450.1	5449.3	4943.5
22.5°	4136.5	4128.4	4134.1	4183.2	4321.7	4585.1	4970.9	5094.1	5357.5	5408.2	4839.6
25°	4117.2	4110.7	4094.6	4101.1	4184.8	4381.3	4784.0	4926.6	5276.1	5383.2	4749.4
27.5°	4177.6	4184.0	4156.6	4127.6	4134.1	4249.3	4618.1	4783.2	5210.1	5383.2	4685.8
30°	4299.2	4302.4	4282.3	4244.4	4193.7	4212.2	4503.0	4668.1	5177.1	5420.3	4645.5
32.5°	4433.7	4451.4	4449.0	4418.4	4345.9	4271.0	4475.6	4626.2	5174.6	5502.4	4641.5
35°	4600.4	4620.5	4654.4	4647.9	4572.2	4449.0	4569.0	4687.4	5222.2	5637.8	4685.0
37.5°	4777.6	4808.2	4880.7	4915.3	4866.2	4726.9	4778.4	4863.0	5349.4	5856.8	4795.3
40°	4949.1	4983.8	5115.9	5252.0	5214.9	5071.6	5095.7	5163.4	5575.7	6171.7	5004.7
42.5°	5117.5	5169.0	5363.1	5587.0	5631.3	5516.9	5529.8	5583.8	5911.6	6605.0	5347.0
45°	5318.8	5376.8	5664.3	5940.6	6059.0	6009.0	6063.8	6099.2	6350.5	7177.7	5808.5
47.5°	5614.4	5681.2	6034.0	6348.9	6556.7	6588.9	6699.3	6722.6	6905.4	7844.5	6410.1
50°	6191.1	6209.6	6528.5	6814.4	7114.0	7307.3	7433.0	7450.7	7577.1	8573.4	7161.6
52.5°	6916.7	6928.8	7109.2	7300.9	7641.6	8036.2	8330.2	8355.1	8381.7	9283.8	7903.3
55°	7637.5	7635.9	7755.1	7867.9	8257.7	8831.1	9469.0	9484.3	9293.4	9957.9	8470.3
57.5°	8087.8	8131.2	8312.5	8457.4	9001.9	9737.2	10622.3	10678.7	10251.0	10457.2	9030.9
60°	7944.4	7965.3	8367.2	8903.6	9928.9	11025.0	11789.3	11803.8	10971.1	10955.8	9739.6
62.5°	6768.5	6779.8	7411.2	8517.0	10398.4	12695.4	13197.2	12961.2	11799.0	11647.6	10587.7
65°	4639.1	4712.4	5239.9	6606.6	9535.9	13743.2	15376.6	14985.9	13061.1	12644.7	11354.4
67.5°	2731.9	2716.6	2977.5	3984.3	7003.7	13047.4	18133.4	17745.2	14782.2	13312.3	11129.7
70°	1866.1	1855.6	1955.5	2412.2	3953.7	10121.4	19000.8	19784.5	16302.0	12862.9	9578.5
72.5°	1332.1	1337.8	1485.1	1874.1	2482.2	5897.1	16339.8	18194.6	15826.0	11213.5	7280.8
75°	904.5	919.8	1130.8	1537.5	2176.2	3000.1	11595.2	13831.0	12887.1	8149.8	4184.8
77.5°	486.5	503.4	752.2	1238.7	1967.6	2084.4	7458.7	9518.9	8095.0	3663.7	1212.9
80°	203.0	212.6	352.0	900.4	1700.2	1830.7	4388.6	5772.3	3449.5	722.4	270.6
82.5°	87.8	92.6	146.6	537.2	1270.9	1545.5	2323.6	2777.0	1045.4	158.7	136.1
85°	16.9	17.7	60.4	284.3	811.0	872.2	1506.1	1476.3	469.5	68.5	99.1
87.5°	0.0	0.0	14.5	89.4	238.4	475.2	919.0	907.7	159.5	33.0	37.0
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: P323688  
 CATALOG NUMBER: GLEON-SA4C-830-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5	5721.5
2.5°	5676.4	5620.8	5504.1	5359.9	5249.6	5127.9	5031.3	4908.9	4855.7	4858.1	4829.1
5°	5549.2	5434.8	5176.3	4850.1	4598.8	4339.5	4116.4	3894.1	3762.8	3720.1	3679.8
7.5°	5367.1	5185.9	4773.6	4271.0	3845.8	3430.2	3068.5	2750.4	2549.1	2450.8	2414.6
10°	5161.8	4907.3	4310.5	3648.4	3041.2	2479.0	2010.3	1602.7	1440.0	1329.7	1301.5
12.5°	4981.4	4636.6	3857.8	3009.8	2288.9	1610.8	1163.8	910.1	799.8	756.3	749.0
15°	4811.4	4383.8	3422.1	2431.5	1585.0	991.4	740.2	654.0	628.2	621.0	621.0
17.5°	4651.1	4142.9	2996.1	1862.1	1048.6	695.1	612.9	593.6	585.5	584.7	585.5
20°	4483.6	3902.1	2577.3	1364.3	732.1	588.7	566.2	555.7	553.3	553.3	553.3
22.5°	4323.3	3661.3	2169.7	974.5	587.1	537.2	525.9	518.7	516.3	515.5	513.8
25°	4169.5	3432.6	1771.9	688.6	515.5	492.1	482.4	472.8	465.5	461.5	459.1
27.5°	4043.1	3228.8	1401.4	552.5	465.5	445.4	433.3	418.8	401.1	393.0	389.8
30°	3942.4	3042.8	1080.0	466.3	418.8	398.7	380.1	355.2	329.4	315.7	314.9
32.5°	3863.5	2860.0	819.9	412.4	376.9	352.0	325.4	294.0	264.2	248.9	248.1
35°	3824.8	2698.9	626.6	372.9	339.9	308.5	275.4	240.8	211.8	197.3	195.7
37.5°	3850.6	2562.8	488.9	339.9	308.5	272.2	233.6	197.3	171.5	158.7	157.9
40°	3944.8	2475.8	397.1	311.7	281.9	237.6	195.7	161.9	140.1	129.7	128.9
42.5°	4145.4	2443.6	339.1	288.3	256.1	205.4	162.7	133.7	113.6	106.3	104.7
45°	4480.4	2491.1	299.6	265.8	229.5	174.8	134.5	109.5	91.8	86.2	85.4
47.5°	4926.6	2615.9	271.4	244.0	205.4	147.4	111.9	88.6	74.9	69.3	68.5
50°	5501.6	2814.0	248.1	222.3	182.8	124.8	92.6	70.1	58.0	54.0	54.0
52.5°	6127.4	3050.0	227.1	202.2	160.3	103.9	74.9	54.0	45.9	41.1	41.1
55°	6644.5	3256.2	204.6	186.9	132.9	86.2	57.2	41.1	33.8	31.4	31.4
57.5°	7160.7	3476.1	178.8	160.3	106.3	70.1	43.5	30.6	25.0	23.4	23.4
60°	7830.0	3745.1	153.8	130.5	83.8	53.2	32.2	21.7	18.5	17.7	17.7
62.5°	8566.2	3902.9	131.3	104.7	65.2	39.5	23.4	14.5	13.7	13.7	12.9
65°	9016.4	3679.8	110.3	83.8	50.7	29.8	15.3	10.5	12.1	11.3	9.7
67.5°	8442.1	2880.9	90.2	65.2	39.5	22.6	9.7	7.2	12.9	10.5	8.1
70°	6990.0	2016.7	70.1	45.9	31.4	19.3	6.4	4.8	13.7	10.5	6.4
72.5°	5231.0	1349.8	55.6	30.6	23.4	16.9	5.6	2.4	12.1	8.9	5.6
75°	2858.3	543.6	44.3	19.3	14.5	12.1	4.0	1.6	8.1	6.4	4.0
77.5°	752.2	143.4	32.2	12.9	8.1	4.8	2.4	0.8	4.0	3.2	1.6
80°	191.7	55.6	20.9	8.9	5.6	2.4	0.0	0.0	0.8	0.0	0.0
82.5°	102.3	23.4	12.9	6.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0
85°	77.3	15.3	7.2	4.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	29.8	4.8	2.4	0.0	0.0	0.0	0.0	0.0	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		



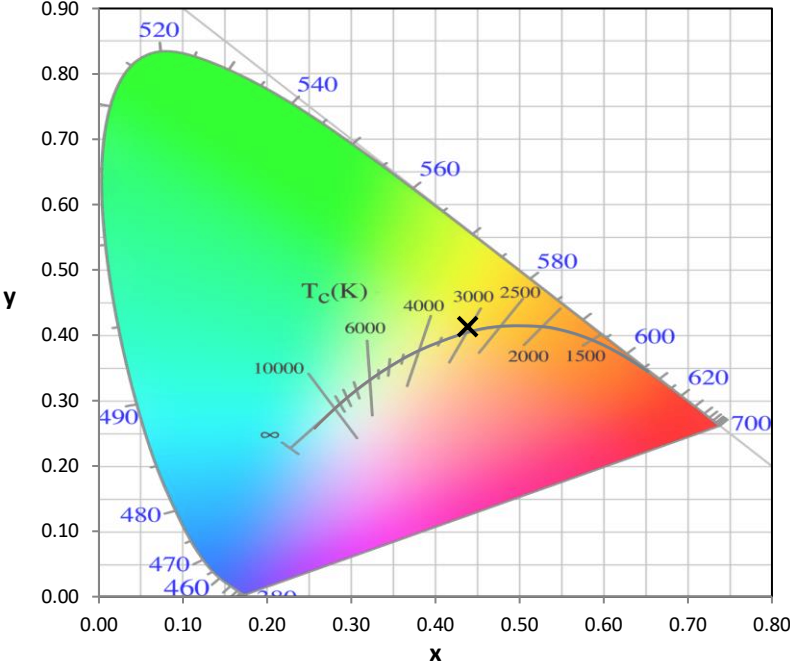
**Test Conditions**  
 Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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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



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**

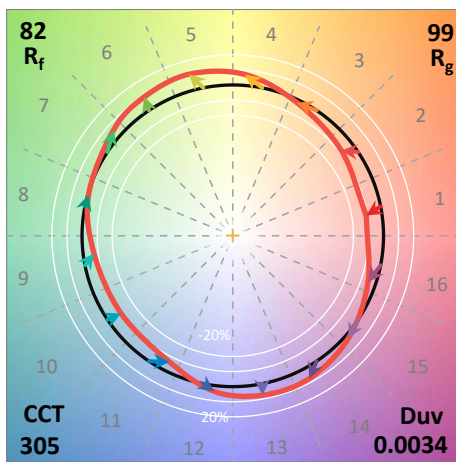
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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