

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: P324949

Luminaire Tested: **GLEON-SA5A-830-U-AFL-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324949  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA5A-830-U-AFL-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15151 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

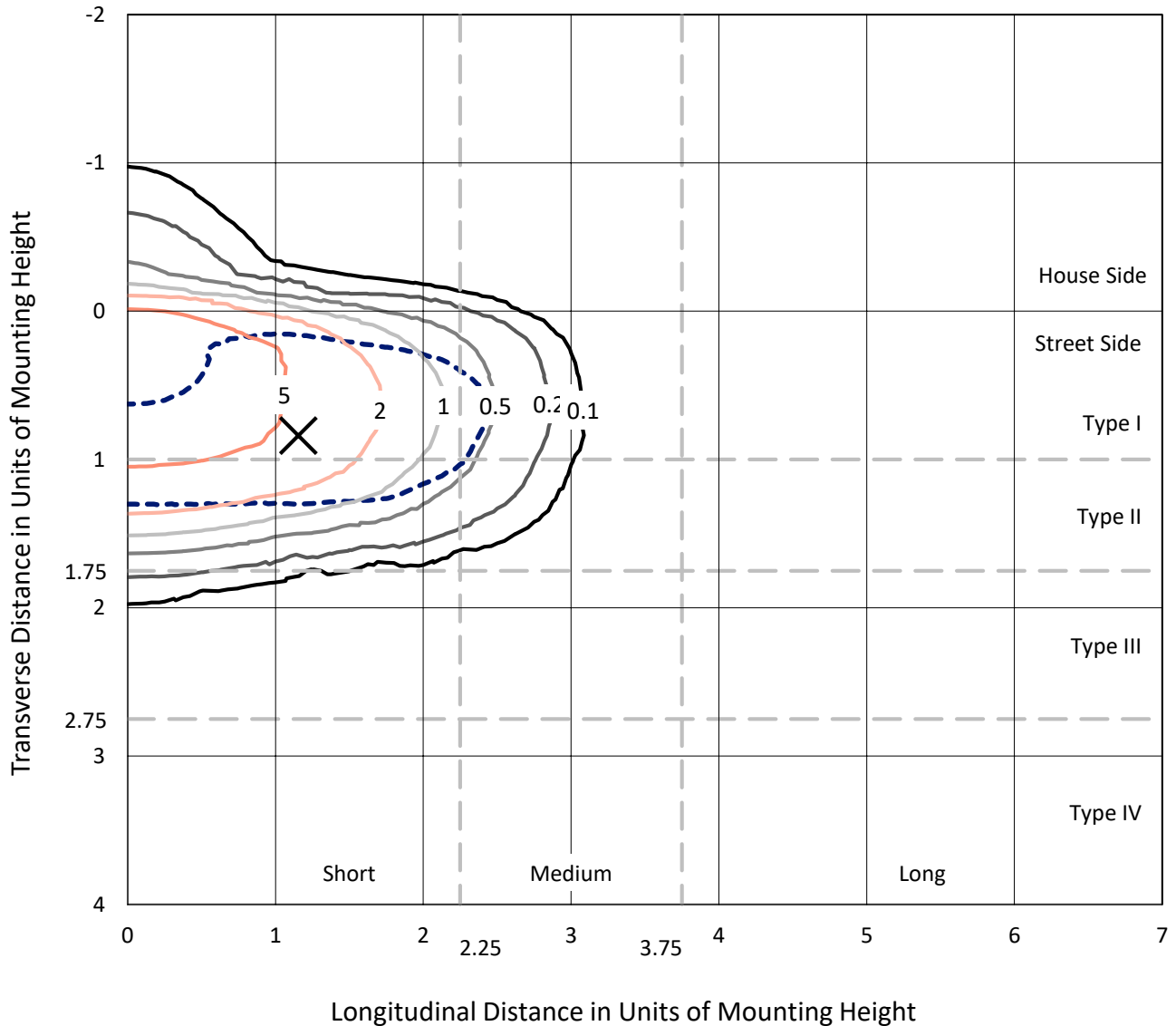
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P324949  
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### Iso-Footcandle Lines of Horizontal Illumination

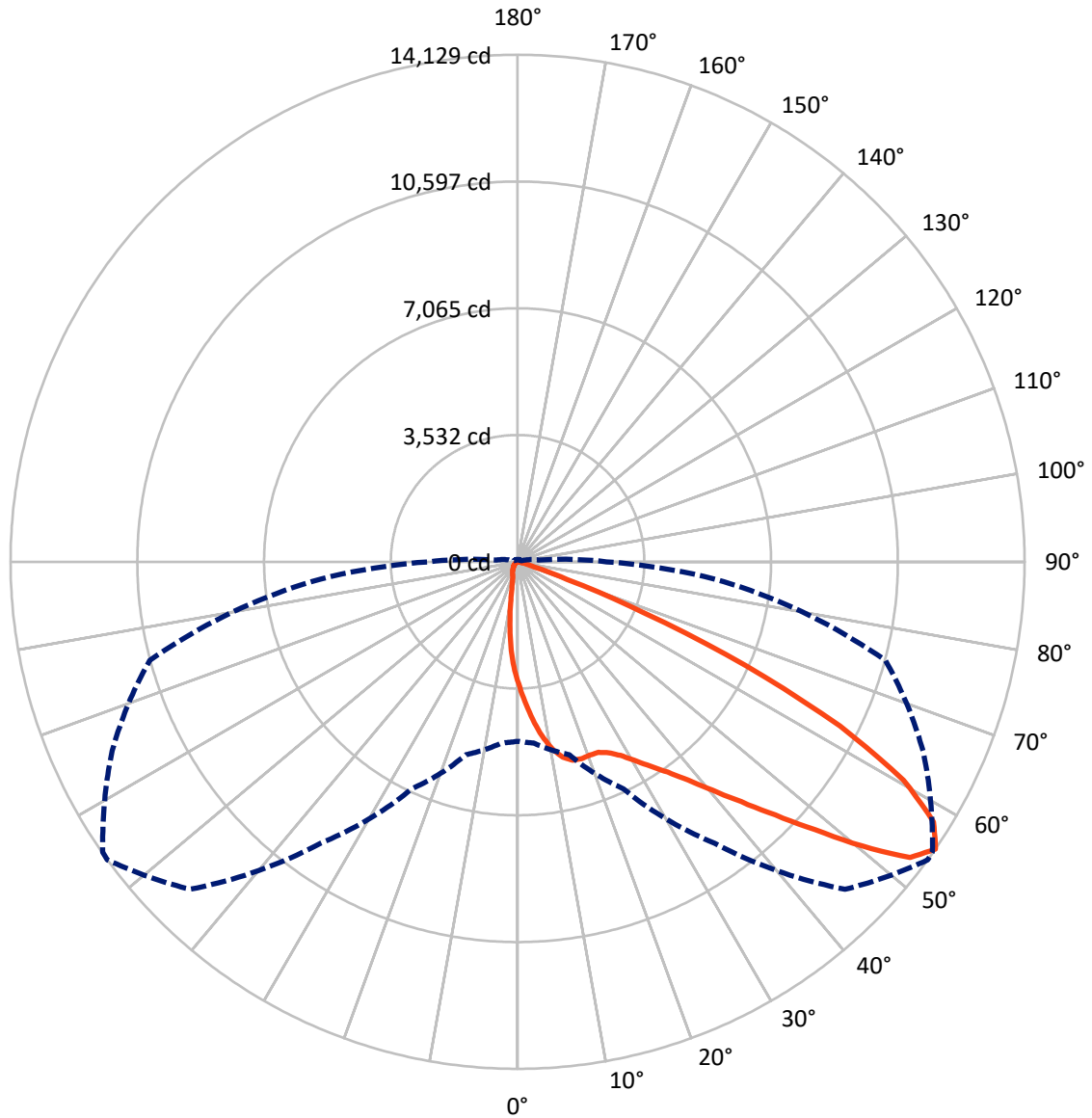
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 55-Deg Vertical

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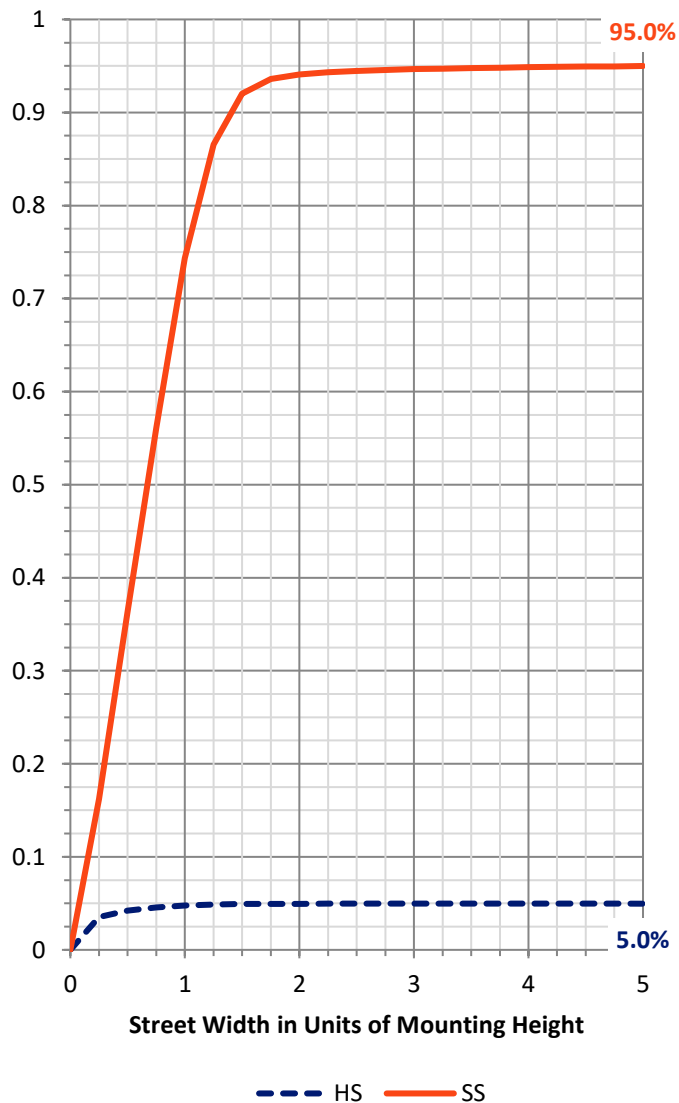
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	755.9	0.0	755.9
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	14395.1	0.0	14395.1
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	15151.0	0.0	15151.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.5	2.1
10°-20°	857.0	5.7
20°-30°	1463.1	9.7
30°-40°	2348.1	15.5
40°-50°	3752.3	24.8
50°-60°	4020.7	26.5
60°-70°	2064.3	13.6
70°-80°	312.7	2.1
80°-90°	20.4	0.1
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°	15151.0	100.0
0°-180°	15151.0	100.0

**Coefficient of Utilization**

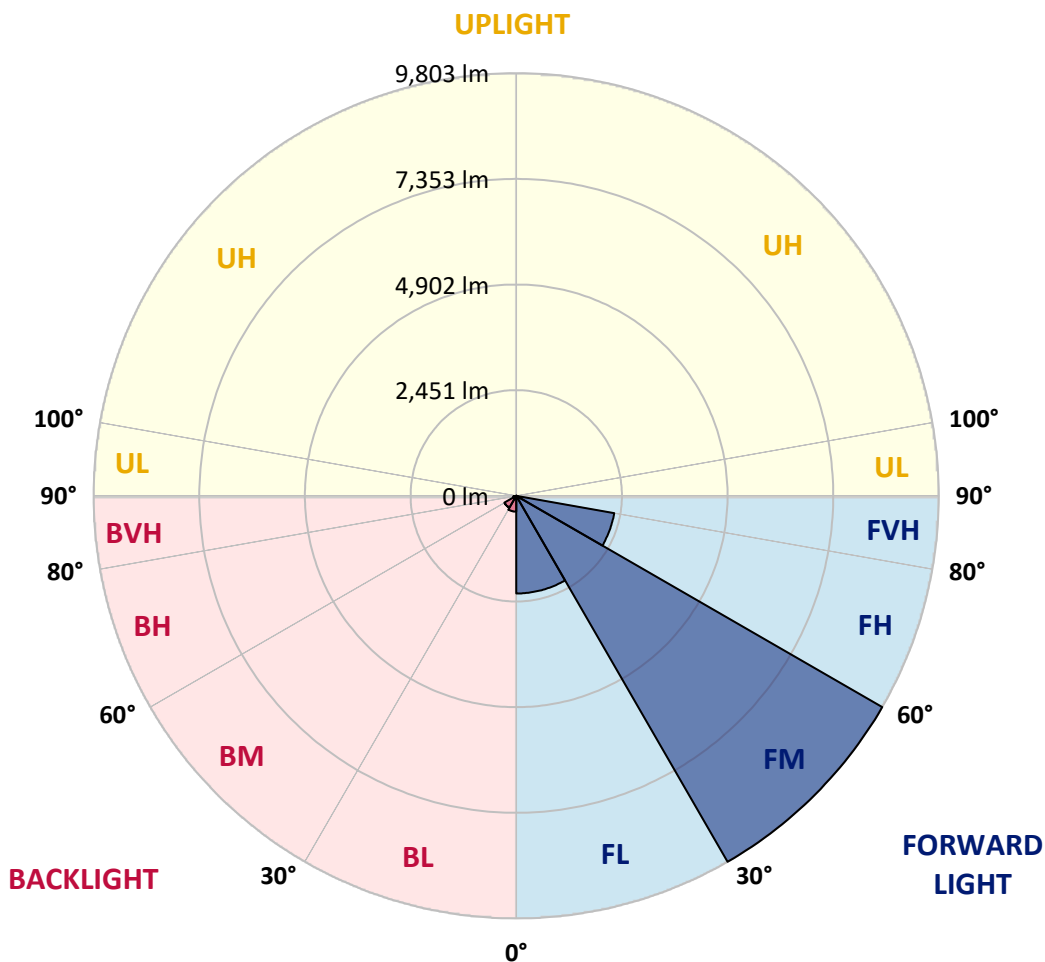


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2264.8	14.9			
FM (30°-60°)	9803.4	64.7			
FH (60°-80°)	2307.4	15.2			G2/5000
FVH (80°-90°)	19.5	0.1			G1/100
BL (0°-30°)	367.8	2.4	B1/500		
BM (30°-60°)	317.7	2.1	B1/1000		
BH (60°-80°)	69.7	0.5	B0/110		G0/110
BVH (80°-90°)	0.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2
2.5°	4258.2	4194.7	4196.7	4167.9	4062.6	3980.1	3894.4	3874.1	3740.7	3600.6	3465.8
5°	4994.3	4947.8	4936.7	4881.1	4734.5	4579.5	4413.3	4374.7	4113.6	3827.0	3545.0
7.5°	5372.5	5373.1	5364.0	5343.7	5252.1	5101.6	4898.8	4858.2	4502.9	4073.0	3627.5
10°	5262.6	5287.4	5338.5	5405.9	5475.9	5456.9	5304.4	5267.8	4881.8	4333.4	3719.1
12.5°	5006.1	5009.3	5066.3	5176.8	5378.4	5585.1	5587.7	5575.3	5243.6	4605.6	3819.8
15°	4878.5	4890.9	4911.9	4983.2	5174.2	5505.3	5742.2	5759.8	5575.3	4894.8	3927.1
17.5°	4962.2	4979.9	4962.2	4970.7	5081.3	5379.0	5769.0	5814.1	5865.2	5180.8	4028.5
20°	5189.3	5205.6	5174.2	5139.6	5161.1	5342.4	5750.0	5810.9	6092.2	5434.6	4113.6
22.5°	5495.5	5502.0	5454.3	5397.3	5381.6	5466.7	5765.7	5828.5	6274.1	5664.3	4167.3
25°	5832.5	5838.3	5778.8	5713.4	5676.1	5710.8	5894.6	5941.7	6434.4	5883.5	4198.0
27.5°	6199.5	6204.8	6130.2	6049.7	6006.5	6007.8	6107.3	6157.6	6605.2	6133.4	4222.9
30°	6587.5	6584.9	6516.2	6404.3	6349.4	6348.0	6413.5	6464.5	6852.5	6454.0	4256.9
32.5°	7023.3	7018.1	6920.6	6781.9	6719.7	6728.9	6787.1	6816.5	7159.4	6795.6	4317.7
35°	7597.1	7582.1	7434.8	7262.8	7148.3	7145.0	7194.1	7217.6	7550.7	7209.1	4419.2
37.5°	8341.7	8328.0	8128.4	7878.5	7717.5	7657.3	7715.5	7745.6	8108.8	7739.8	4582.1
40°	9075.8	9062.1	8943.7	8714.7	8466.7	8322.1	8367.9	8399.9	8805.6	8383.6	4787.5
42.5°	9582.3	9594.0	9635.3	9654.2	9422.0	9118.4	9139.3	9172.7	9537.8	9071.9	5022.4
45°	9715.7	9741.3	9974.2	10431.6	10518.6	10281.7	10062.5	10080.8	10281.7	9760.2	5257.3
47.5°	9314.7	9361.8	9811.3	10661.9	11398.6	11566.1	11151.3	11127.1	10995.6	10317.1	5424.2
50°	8403.2	8446.4	9028.7	10287.0	11665.6	12792.3	12456.0	12384.6	11621.7	10650.1	5483.1
52.5°	7084.1	7136.5	7609.5	9106.6	11162.4	13339.3	13691.3	13631.8	12081.1	10676.3	5492.9
55°	5002.8	5066.3	5566.8	6979.5	9567.9	12904.2	14129.0	14111.4	12462.5	10606.9	5513.8
57.5°	2811.5	2857.3	3397.1	4474.1	7007.6	11239.6	13671.7	13788.8	12692.8	10486.5	5545.2
60°	1248.4	1260.8	1540.2	2227.2	4102.5	8589.7	12362.4	12560.0	12495.2	10325.6	5598.2
62.5°	692.3	681.8	681.8	925.8	1783.0	5317.5	10080.8	10407.3	11651.8	10135.2	5600.8
65°	542.4	532.6	504.5	508.4	679.2	2360.1	6980.8	7561.1	10050.1	9577.0	5412.4
67.5°	460.0	451.5	423.3	412.2	422.0	778.6	3835.5	4438.1	7625.9	8126.4	4688.1
70°	388.7	382.8	368.4	354.6	329.8	384.7	1467.6	1877.2	4699.2	5405.9	3200.2
72.5°	312.8	310.1	315.4	303.6	273.5	256.5	501.9	607.8	2110.8	2412.4	1318.4
75°	269.6	268.3	270.9	259.1	225.1	178.6	255.2	278.7	595.4	590.2	267.0
77.5°	175.4	177.3	224.4	219.2	193.7	119.1	132.2	142.6	180.6	135.4	81.1
80°	111.9	110.6	113.8	181.9	174.0	90.9	66.1	69.4	87.0	66.7	39.3
82.5°	68.0	66.7	74.6	85.1	87.7	63.5	40.6	41.2	54.3	43.2	20.9
85°	5.9	7.9	45.1	41.9	30.1	19.6	19.6	20.9	28.8	25.5	11.8
87.5°	0.0	0.0	7.9	11.8	6.5	7.2	7.2	7.9	11.1	11.1	5.9
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: P324949

CATALOG NUMBER: GLEON-SA5A-830-U-AFL-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2	3393.2
2.5°	3395.8	3327.8	3190.4	3058.2	2946.3	2838.4	2715.4	2593.7	2536.7	2513.8	2490.3
5°	3401.7	3261.7	2978.4	2693.1	2397.4	2131.1	1904.0	1671.1	1554.6	1503.6	1480.0
7.5°	3409.6	3196.3	2738.3	2259.3	1783.0	1421.8	1106.4	903.6	815.9	802.2	768.2
10°	3410.9	3117.1	2459.5	1780.4	1195.4	857.1	659.5	554.8	516.2	509.7	498.6
12.5°	3413.5	3023.5	2150.0	1318.4	796.9	573.2	477.0	442.3	431.8	431.2	431.2
15°	3421.4	2925.4	1828.8	950.0	572.5	454.1	418.8	405.0	401.1	403.1	402.4
17.5°	3421.4	2809.6	1513.4	708.0	462.6	408.3	388.7	379.5	378.2	380.2	380.8
20°	3396.5	2668.9	1224.2	550.9	410.2	378.8	361.2	352.7	349.4	350.7	351.4
22.5°	3336.9	2496.2	988.7	456.0	375.6	352.0	333.0	320.0	314.7	315.4	315.4
25°	3244.0	2291.4	773.4	394.5	347.4	323.2	301.0	285.9	282.7	282.0	283.3
27.5°	3125.0	2065.0	615.7	347.4	314.1	291.2	268.9	256.5	253.9	254.5	255.2
30°	3007.8	1830.1	485.5	307.5	276.8	255.2	238.2	232.3	232.3	234.2	234.9
32.5°	2900.5	1604.4	384.1	272.8	243.4	223.8	214.0	213.3	216.6	217.9	218.5
35°	2808.3	1395.6	318.0	246.0	217.2	200.2	196.9	199.6	203.5	206.1	206.8
37.5°	2742.8	1209.2	278.1	223.8	196.9	183.2	182.6	187.8	193.0	198.9	200.2
40°	2715.4	1051.5	250.6	204.1	180.6	170.1	168.2	175.4	185.2	193.7	195.0
42.5°	2692.5	922.6	227.0	185.2	167.5	152.5	151.8	161.0	172.7	181.2	183.2
45°	2672.8	819.2	205.5	164.9	150.5	130.9	132.8	144.6	153.8	162.9	164.9
47.5°	2632.3	734.1	181.9	143.3	124.3	111.9	115.8	126.3	133.5	147.2	149.2
50°	2559.6	664.8	157.7	117.1	101.4	96.8	102.7	109.9	119.1	130.9	132.2
52.5°	2510.6	612.4	136.7	98.1	83.8	85.1	90.9	93.6	98.8	103.4	102.1
55°	2482.4	583.6	119.7	85.1	71.3	75.2	76.6	73.3	70.7	66.1	64.1
57.5°	2479.2	557.5	106.7	73.9	62.8	64.8	60.2	49.1	39.9	34.7	33.4
60°	2473.9	525.4	96.2	62.2	55.6	53.0	43.2	26.8	19.0	17.7	17.7
62.5°	2417.0	475.7	88.3	52.3	47.1	39.9	24.9	12.4	10.5	11.1	11.1
65°	2235.8	406.3	80.5	42.5	37.3	28.8	12.4	7.2	3.9	4.6	4.6
67.5°	1900.8	323.9	72.0	32.7	28.1	18.3	7.2	3.3	0.0	0.0	0.0
70°	1272.6	200.9	60.9	22.9	18.3	11.1	5.2	0.7	0.0	0.0	0.0
72.5°	488.1	108.6	49.1	13.7	11.8	7.9	3.3	0.0	0.0	0.0	0.0
75°	109.9	71.3	34.0	9.8	8.5	5.2	1.3	0.0	0.0	0.0	0.0
77.5°	41.9	51.7	19.6	6.5	5.9	3.3	0.0	0.0	0.0	0.0	0.0
80°	20.3	30.8	9.2	3.9	3.3	1.3	0.0	0.0	0.0	0.0	0.0
82.5°	10.5	11.8	3.9	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.9	5.9	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.3	2.0	0.7	0.7	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



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 $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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)