

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: P323025

Luminaire Tested: **GLEON-SA1A-830-U-T4W-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P323025  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA1A-830-U-T4W-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2810 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

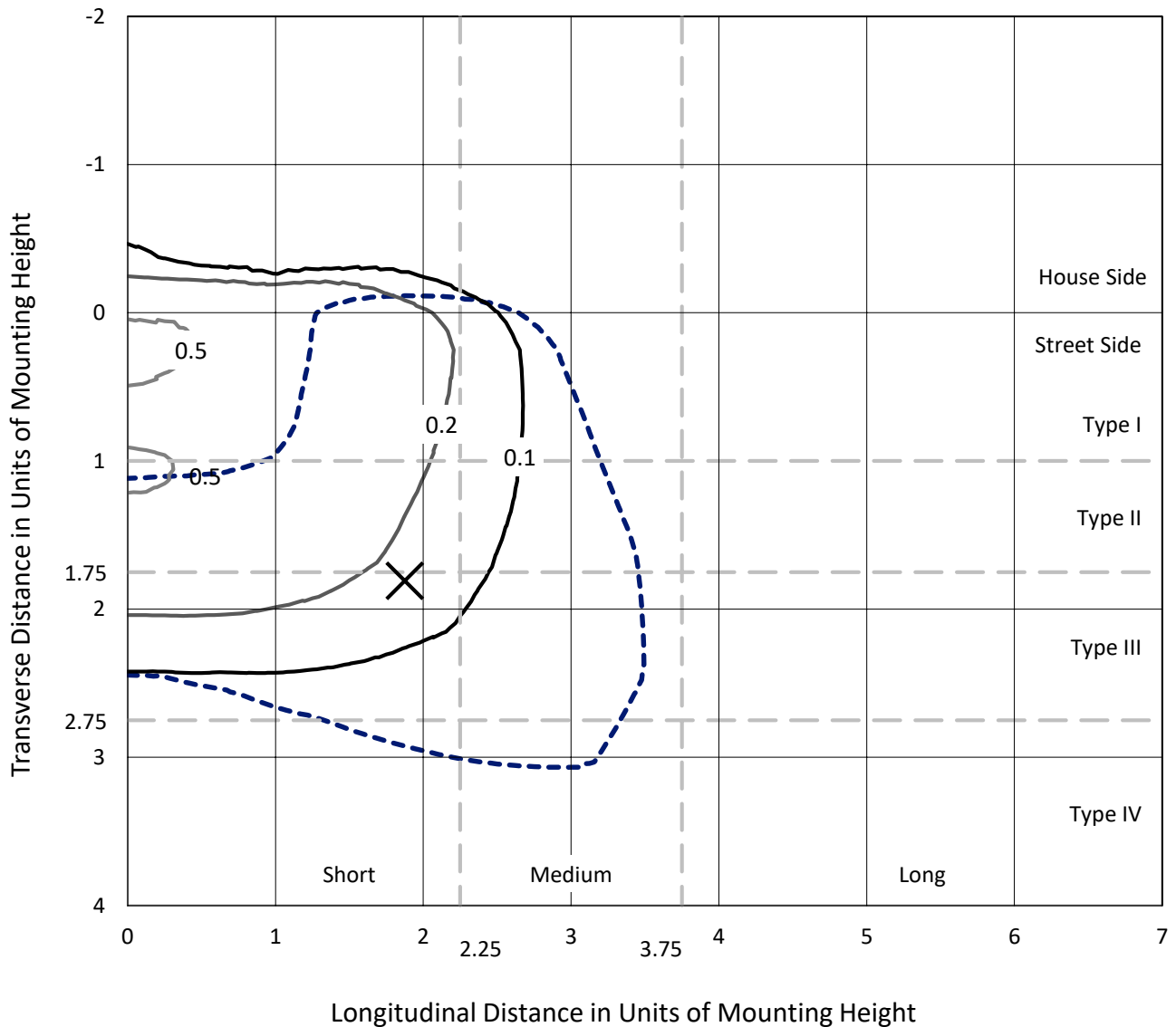
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P323025  
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### Iso-Footcandle Lines of Horizontal Illumination

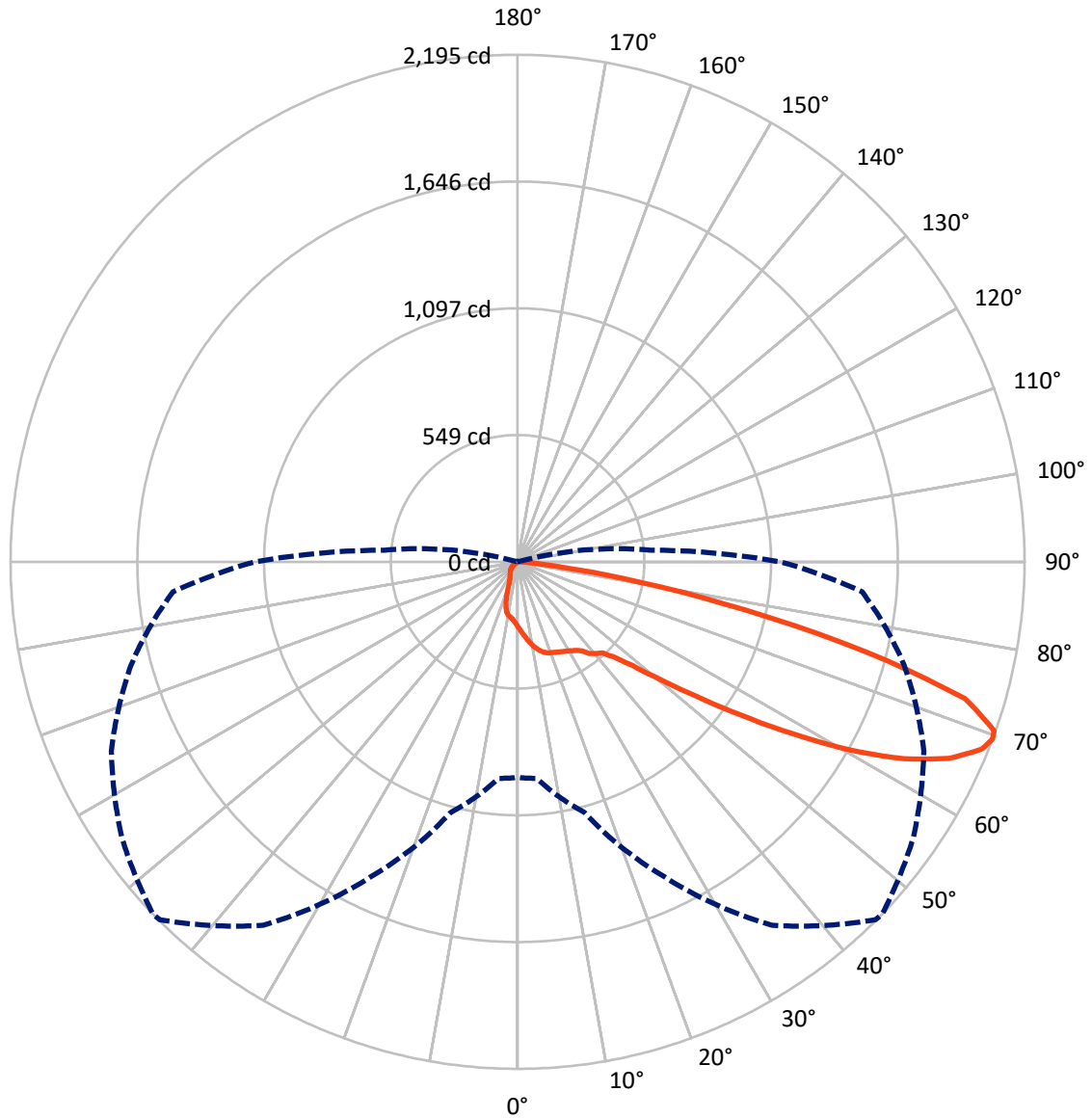
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	288.4	0.0	288.4
	% Fixture	10.3	0.0	10.3
<b>Street Side</b>	Lumens	2521.6	0.0	2521.6
	% Fixture	89.7	0.0	89.7
<b>Total</b>	Lumens	2810.0	0.0	2810.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.0	1.0
10°-20°	85.0	3.0
20°-30°	133.7	4.8
30°-40°	191.7	6.8
40°-50°	331.4	11.8
50°-60°	654.7	23.3
60°-70°	915.0	32.6
70°-80°	442.0	15.7
80°-90°	28.4	1.0
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°	2810.0	100.0
0°-180°	2810.0	100.0

**Coefficient of Utilization**



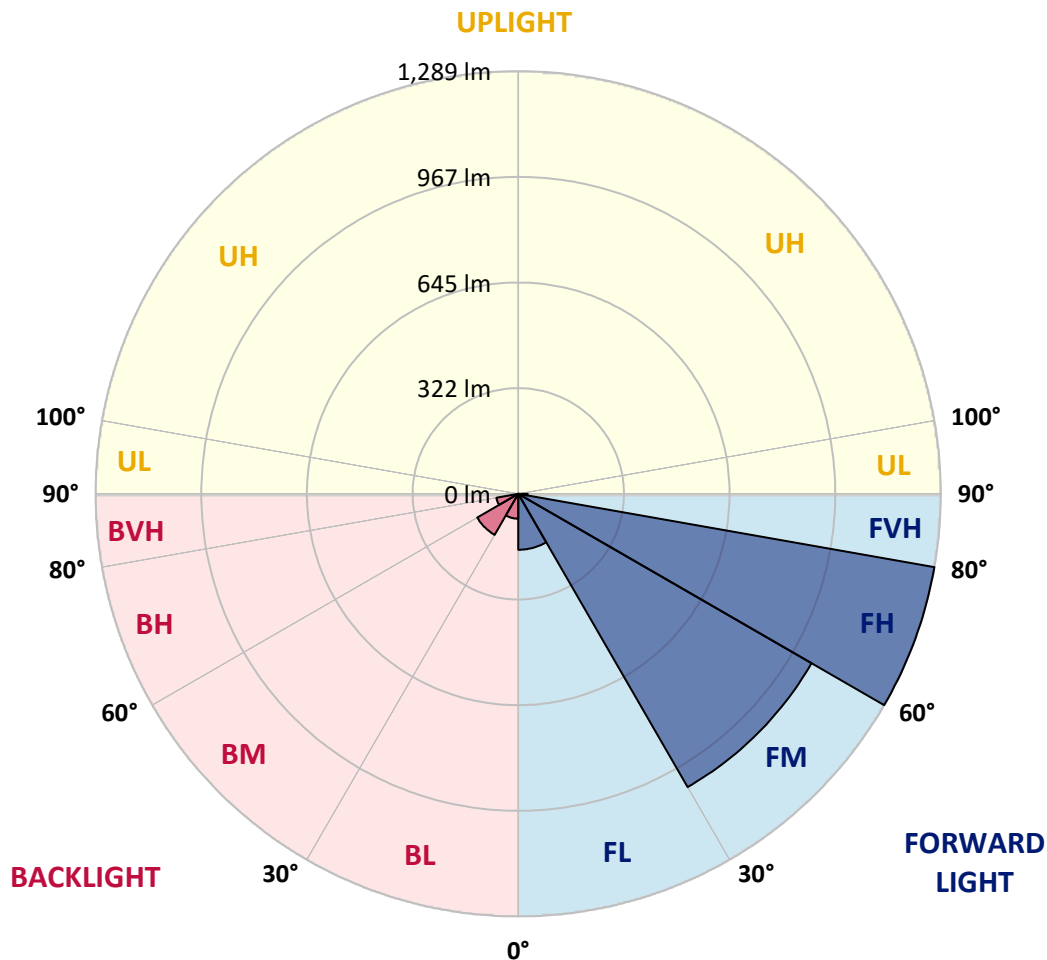
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	170.7	6.1			
FM (30°-60°)	1033.3	36.8			
FH (60°-80°)	1289.4	45.9			G1/1800
FVH (80°-90°)	28.2	1.0			G1/100
BL (0°-30°)	76.0	2.7	B0/110		
BM (30°-60°)	144.5	5.1	B0/220		
BH (60°-80°)	67.6	2.4	B0/110		G0/110
BVH (80°-90°)	0.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





REPORT NUMBER: P323025

CATALOG NUMBER: GLEON-SA1A-830-U-T4W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6
2.5°	312.8	312.4	310.5	309.7	305.3	302.6	301.6	298.3	293.5	288.8	283.5
5°	348.3	348.2	344.8	341.5	333.1	325.2	323.7	316.1	305.4	295.4	285.4
7.5°	384.7	383.0	379.6	373.3	361.0	348.3	347.2	336.4	321.2	306.7	292.4
10°	415.5	414.5	410.0	400.4	386.0	371.7	370.2	356.9	339.8	322.0	303.7
12.5°	439.5	438.7	432.8	420.8	405.5	390.6	388.7	376.8	358.5	338.6	317.0
15°	454.1	453.7	446.5	433.7	418.7	405.8	404.1	393.7	376.7	355.9	331.5
17.5°	457.6	457.7	450.2	437.3	424.9	415.7	414.4	406.5	392.2	371.5	346.0
20°	449.9	451.5	444.8	433.6	426.0	421.1	420.0	415.3	403.3	383.8	357.6
22.5°	439.1	439.9	435.3	427.8	424.6	425.6	425.0	422.4	412.2	394.3	369.0
25°	432.5	432.5	429.8	423.4	425.6	431.2	431.4	430.8	422.8	407.2	383.0
27.5°	432.3	431.5	428.3	423.6	429.4	438.1	438.6	442.2	437.1	422.9	400.4
30°	442.8	441.9	435.2	429.0	436.4	445.7	447.0	454.8	452.3	439.9	419.8
32.5°	467.5	464.2	449.3	439.1	444.7	455.9	457.6	470.0	473.9	460.9	438.5
35°	501.2	490.8	469.3	458.4	458.9	470.6	472.2	490.4	502.1	480.1	453.0
37.5°	547.7	542.5	507.6	478.4	480.8	498.5	503.2	522.9	519.6	490.6	469.4
40°	649.7	641.6	604.5	534.5	501.7	521.2	522.7	533.2	533.5	514.5	503.7
42.5°	788.5	785.2	746.1	636.4	542.9	536.4	539.0	556.8	576.7	564.8	564.3
45°	942.3	940.6	899.1	771.5	626.3	586.0	589.3	613.2	651.2	653.9	670.6
47.5°	1066.0	1065.2	1041.4	922.4	754.0	670.2	671.3	696.6	763.5	796.6	823.3
50°	1178.8	1182.6	1163.8	1085.6	927.9	802.1	799.6	816.5	924.0	978.1	1011.3
52.5°	1335.6	1341.0	1288.1	1237.9	1110.4	965.7	963.8	981.4	1116.9	1157.4	1163.4
55°	1474.0	1464.8	1423.0	1408.5	1332.9	1167.8	1167.3	1182.9	1303.4	1320.7	1331.6
57.5°	1535.2	1531.6	1551.8	1585.0	1566.0	1406.7	1405.5	1393.7	1470.3	1472.2	1505.8
60°	1573.8	1578.1	1639.9	1742.3	1789.6	1663.7	1656.1	1583.8	1629.8	1625.7	1661.6
62.5°	1544.8	1553.3	1664.5	1835.2	1956.9	1888.1	1877.3	1758.0	1766.0	1751.9	1785.4
65°	1390.9	1404.2	1586.4	1817.6	2039.9	2063.5	2052.5	1911.7	1874.2	1851.0	1832.4
67.5°	1129.4	1137.3	1327.5	1665.2	2002.5	2168.1	2165.9	2046.5	1955.8	1834.2	1690.1
69°	933.3	941.1	1124.2	1504.7	1920.1	2190.5	2194.8	2089.7	1940.3	1732.5	1497.5
70°	790.5	798.8	969.4	1367.2	1824.6	2180.1	2187.9	2085.6	1895.8	1614.7	1328.4
72.5°	414.6	421.7	596.8	941.9	1487.5	2001.8	2025.4	1909.3	1607.0	1172.7	785.5
75°	130.3	134.4	233.1	492.4	1018.4	1556.5	1561.9	1497.7	1141.1	645.1	327.1
77.5°	49.7	48.5	77.6	181.4	514.9	980.1	1013.2	936.0	598.8	228.1	75.5
80°	26.7	26.9	40.3	75.1	220.3	503.7	531.6	453.6	212.8	71.1	17.4
82.5°	11.6	12.1	22.7	39.8	101.2	185.8	199.7	166.3	81.3	47.8	6.5
85°	2.5	2.8	10.9	21.6	41.2	52.2	54.7	53.9	51.8	37.2	2.5
87.5°	0.0	0.0	4.9	7.8	10.4	11.9	10.4	13.6	28.6	25.0	1.3
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: P323025  
 CATALOG NUMBER: GLEON-SA1A-830-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6	281.6
2.5°	281.8	279.4	275.4	270.9	267.7	264.4	261.8	260.6	259.3	258.4	259.5
5°	281.3	276.7	268.8	261.1	255.6	251.1	247.4	246.0	244.5	243.5	243.3
7.5°	285.9	279.4	267.3	256.1	247.6	241.5	236.5	234.4	232.7	231.9	231.2
10°	294.7	286.4	270.2	255.6	244.5	234.3	223.4	215.1	209.7	207.2	206.3
12.5°	306.2	295.8	275.8	258.4	242.3	222.5	199.6	179.8	167.1	162.8	160.3
15°	319.6	306.7	283.0	261.9	234.1	198.0	159.2	133.3	121.5	119.1	116.5
17.5°	332.5	318.3	291.7	262.6	216.2	158.2	116.6	99.1	94.5	96.0	96.4
20°	343.9	329.8	300.3	256.8	183.7	118.7	90.2	85.9	87.6	90.6	91.2
22.5°	355.3	340.8	308.2	241.5	142.0	90.1	81.3	82.3	84.1	87.1	87.6
25°	369.3	354.3	315.5	213.4	106.6	76.7	77.2	78.8	80.5	83.3	83.5
27.5°	385.4	371.3	320.4	176.9	79.1	70.5	72.2	74.6	76.3	78.9	79.4
30°	406.7	393.7	322.0	139.1	66.3	65.0	65.7	68.6	71.1	73.5	73.9
32.5°	426.7	415.8	316.7	105.0	61.4	59.8	59.8	61.5	64.4	66.7	67.2
35°	445.2	438.1	299.9	76.8	57.7	55.1	53.8	53.8	55.6	57.4	58.0
37.5°	469.6	469.3	272.6	61.3	54.1	51.1	48.4	46.2	45.6	46.0	46.2
40°	511.3	511.7	237.0	54.9	51.1	47.0	42.8	39.0	35.4	34.3	34.1
42.5°	576.5	570.6	199.7	51.9	48.5	42.8	36.5	31.4	25.8	24.1	24.0
45°	680.1	644.9	160.2	49.1	45.7	38.1	30.2	23.2	18.7	17.4	17.4
47.5°	831.0	742.5	124.1	46.1	42.0	32.7	22.8	16.7	13.7	13.0	13.2
50°	986.9	838.2	95.1	42.3	37.5	27.0	16.9	12.1	10.4	10.4	10.5
52.5°	1125.3	908.3	74.2	38.2	32.0	21.2	12.8	9.5	8.7	8.6	8.7
55°	1254.8	953.5	56.8	33.5	25.4	15.8	9.7	7.8	7.2	7.0	6.9
57.5°	1379.7	975.9	42.6	27.0	18.4	11.5	7.8	6.6	6.1	5.7	5.5
60°	1462.8	957.7	29.2	19.9	12.8	8.3	6.5	5.7	5.0	4.6	4.5
62.5°	1509.7	908.0	18.8	14.4	9.1	6.2	5.1	4.7	3.8	3.4	3.4
65°	1490.8	826.1	13.2	10.3	6.6	4.6	3.8	3.8	2.8	2.2	2.1
67.5°	1321.1	697.9	10.0	7.6	4.7	3.4	2.9	3.3	1.7	1.1	1.1
69°	1136.6	578.4	8.6	6.3	4.0	2.8	2.5	3.0	1.2	0.8	0.7
70°	987.9	498.9	7.8	5.5	3.3	2.4	2.2	2.9	1.2	0.7	0.5
72.5°	591.0	278.3	5.9	4.0	2.1	1.8	1.8	3.3	1.2	0.7	0.5
75°	238.9	98.0	4.3	2.8	1.6	1.6	2.2	4.2	1.1	0.5	0.4
77.5°	54.1	21.5	2.5	1.7	1.1	1.6	2.6	3.3	0.7	0.3	0.0
80°	13.2	5.3	1.6	1.1	0.7	1.2	2.0	1.8	0.1	0.0	0.0
82.5°	4.3	1.8	0.7	0.5	0.1	0.4	0.9	0.5	0.0	0.0	0.0
85°	1.8	1.1	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
87.5°	1.2	0.4	0.0	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



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**

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)