

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: P629072

Luminaire Tested: GWS-SA1A-830-U-SL3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P629072  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-34)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1A-830-U-SL3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

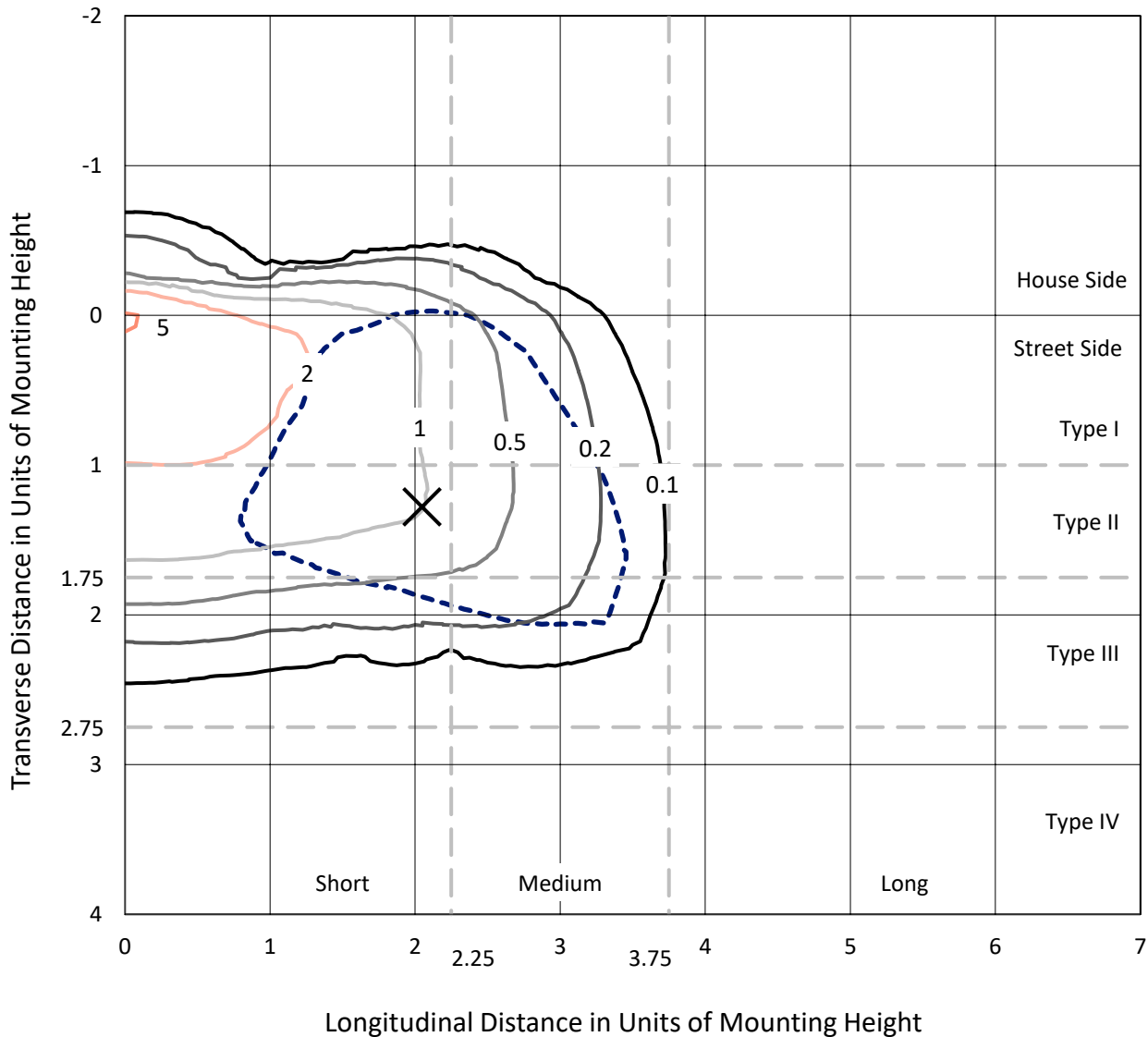
Lumens per Lamp: N/A  
Luminaire Lumens: 1829.7 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 19.7  
Input Voltage (V): 120  
Input Current (Ain): 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: P629072  
 CATALOG NUMBER: GWS-SA1A-830-U-SL3-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

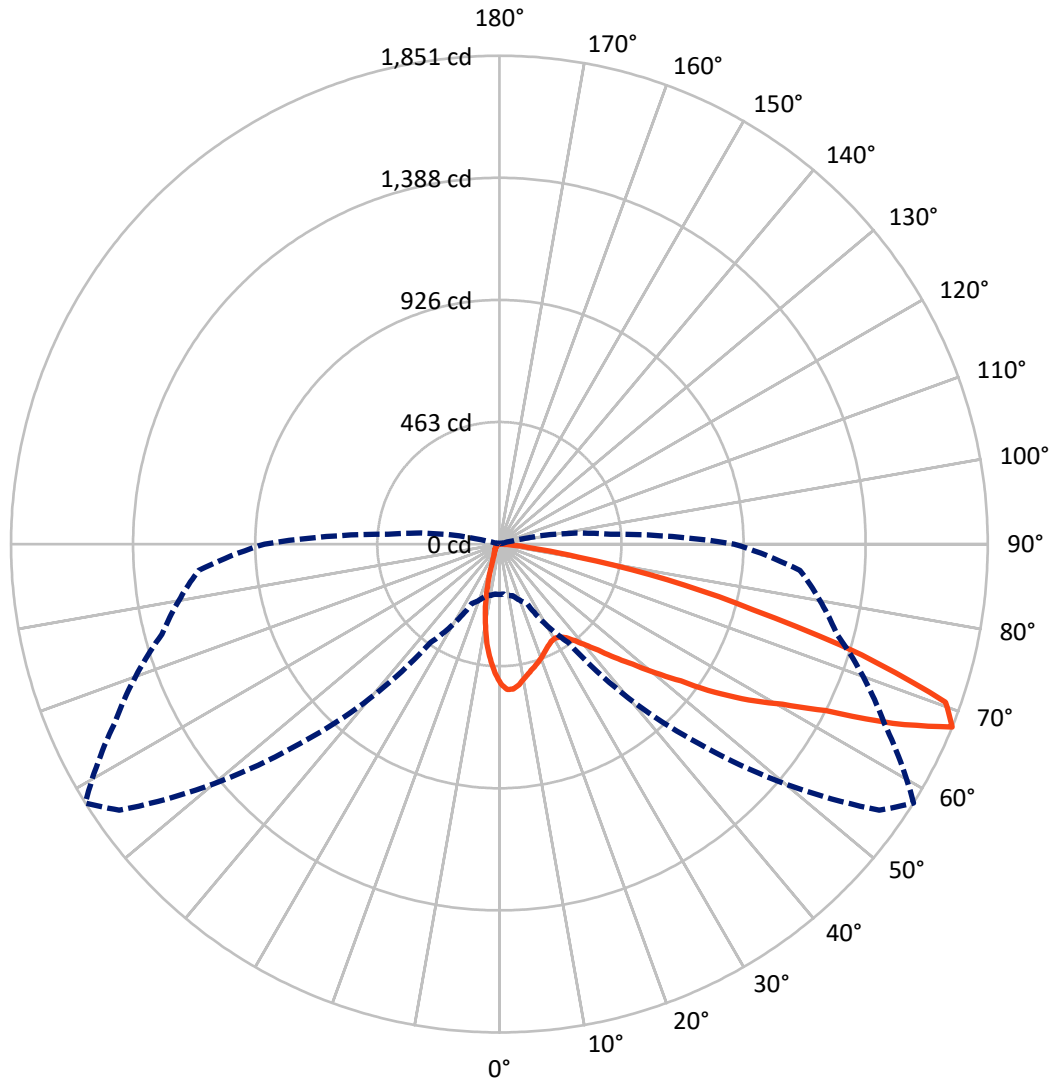
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 fc  
 Type III - Short - N/A

REPORT NUMBER: P629072  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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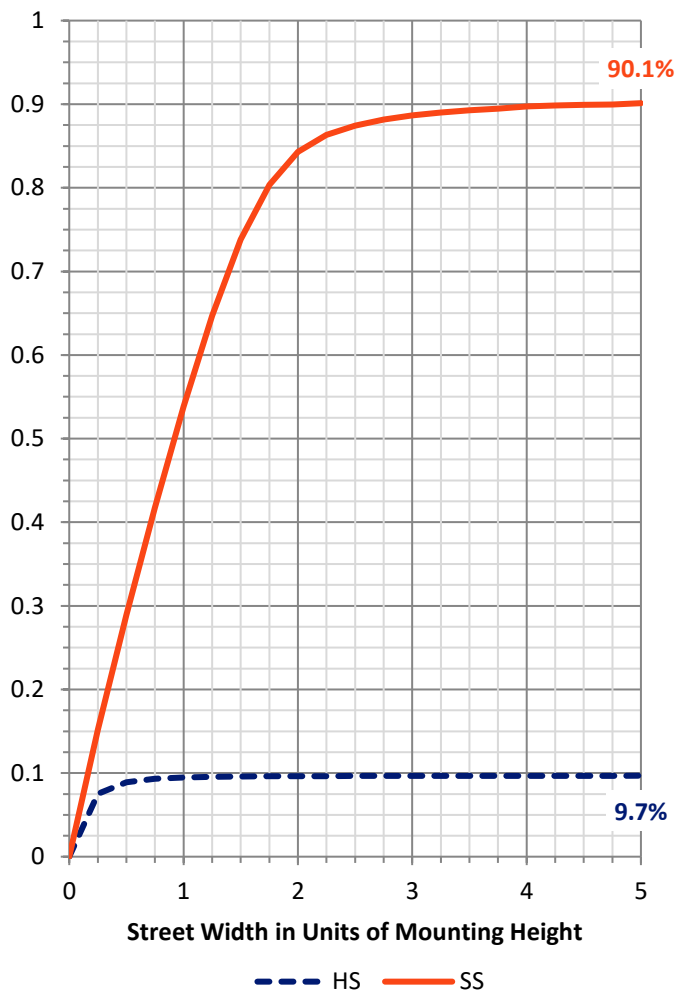
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	178.7	0.0	178.7
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	1651.0	0.0	1651.0
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	1829.7	0.0	1829.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.9	2.3
10°-20°	89.3	4.9
20°-30°	120.4	6.6
30°-40°	169.2	9.2
40°-50°	261.3	14.3
50°-60°	417.8	22.8
60°-70°	494.7	27.0
70°-80°	218.9	12.0
80°-90°	15.3	0.8
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°	1829.7	100.0
0°-180°	1829.7	100.0

**Coefficient of Utilization**



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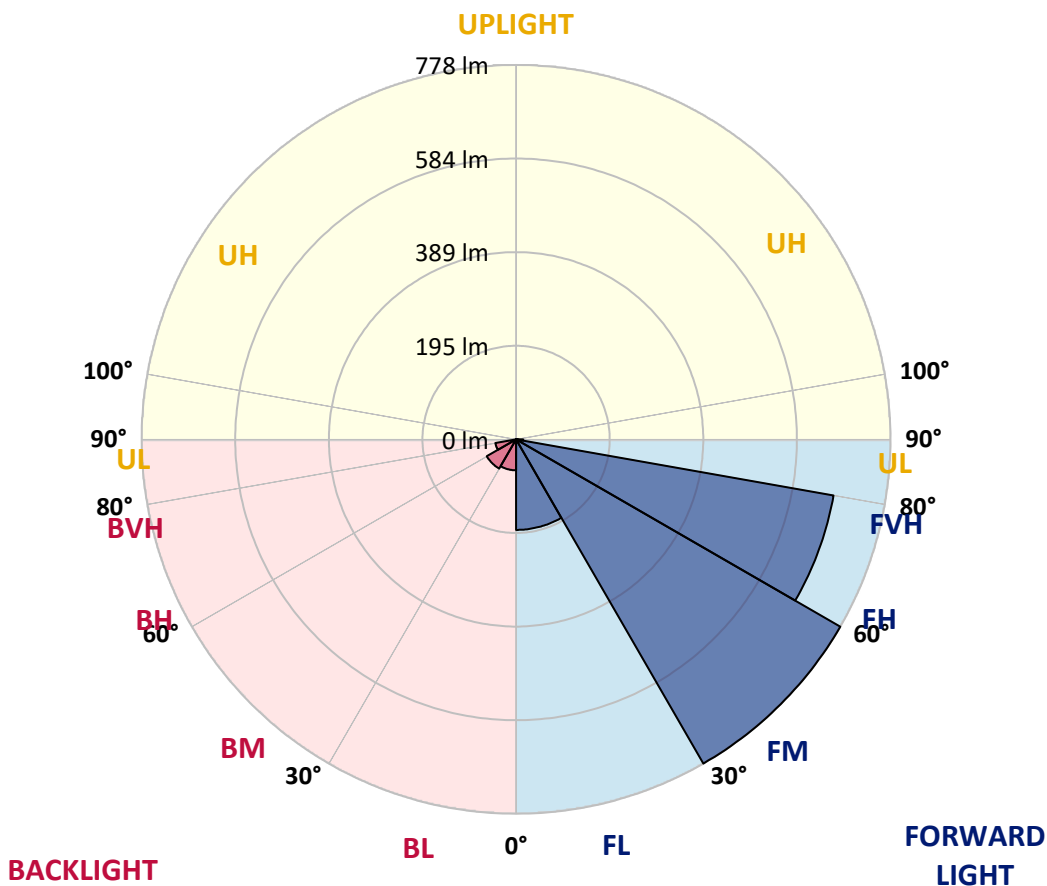
CATALOG NUMBER: GWS-SA1A-830-U-SL3-W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	188.2	10.3			
FM (30°-60°)	778.1	42.5			
FH (60°-80°)	669.9	36.6			G1/1800
FVH (80°-90°)	14.6	0.8			G1/100
BL (0°-30°)	64.3	3.5	B0/110		
BM (30°-60°)	70.1	3.8	B0/220		
BH (60°-80°)	43.6	2.4	B0/110		G0/110
BVH (80°-90°)	0.7	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 III Short





REPORT NUMBER: P629072  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8
2.5°	555.1	556.1	557.4	559.0	558.7	557.2	555.5	551.4	548.8	540.7	530.8
5°	537.3	537.2	540.4	543.5	549.0	551.9	555.9	552.2	550.9	541.2	525.2
7.5°	502.5	504.3	508.0	512.9	520.8	529.4	539.1	538.0	541.9	535.4	515.5
10°	468.3	467.4	473.2	480.5	492.6	503.6	517.7	517.6	527.8	527.1	504.5
12.5°	438.4	438.2	442.8	451.0	465.3	480.6	499.8	500.2	512.9	518.1	495.1
15°	413.1	413.4	417.8	426.4	441.1	459.9	482.1	486.2	500.4	510.9	485.8
17.5°	395.1	395.3	397.9	405.3	419.8	439.8	466.6	472.1	490.4	505.6	478.4
20°	386.9	386.2	386.7	390.4	401.6	419.9	450.7	457.8	481.1	501.9	471.6
22.5°	388.0	387.0	384.8	384.3	389.3	403.2	433.8	442.6	471.1	499.6	465.4
25°	398.1	395.9	392.7	387.9	385.9	392.9	419.1	428.2	461.7	499.8	460.7
27.5°	413.4	411.2	407.1	400.6	393.0	390.1	409.1	417.7	455.1	503.5	458.5
30°	433.0	431.3	427.4	419.6	409.4	397.4	407.0	414.1	451.8	511.1	459.4
32.5°	456.2	454.9	451.7	444.5	432.9	414.6	414.1	419.6	454.4	522.1	463.2
35°	478.5	479.0	479.2	475.3	462.8	440.6	433.7	435.6	465.1	538.6	471.6
37.5°	502.7	501.5	507.4	510.1	498.1	474.5	464.0	464.1	485.5	563.1	487.4
40°	521.0	521.3	533.9	545.3	540.2	517.4	502.3	502.2	516.9	596.6	513.0
42.5°	538.1	540.2	558.9	578.3	585.3	565.0	554.2	550.1	561.0	641.9	551.4
45°	556.4	559.5	585.6	613.3	631.6	619.6	611.0	612.6	613.9	694.7	603.1
47.5°	577.8	579.8	612.0	651.0	685.2	682.1	682.6	680.6	680.0	761.3	671.4
50°	603.7	608.3	645.3	692.0	738.6	759.0	765.8	766.6	756.1	833.8	742.2
52.5°	658.8	664.3	696.0	736.8	796.9	839.8	867.5	862.0	845.8	904.1	819.8
55°	723.7	727.9	758.5	800.8	868.2	928.4	994.2	991.9	952.2	978.1	883.6
57.5°	729.9	734.6	782.0	846.8	959.7	1037.9	1107.0	1114.3	1056.2	1030.6	940.6
60°	660.7	670.3	735.1	822.2	994.7	1185.1	1230.8	1232.2	1132.5	1083.9	1010.2
62.5°	529.6	534.1	599.4	713.0	940.7	1270.9	1419.8	1389.0	1230.4	1166.3	1120.5
65°	277.6	296.0	352.9	478.7	762.9	1241.0	1647.1	1638.7	1406.6	1284.4	1206.3
67.5°	190.4	190.3	203.7	249.6	454.9	1068.5	1758.7	1851.3	1610.4	1324.9	1144.1
70°	144.9	145.4	157.4	187.2	235.6	711.3	1636.3	1794.6	1648.3	1202.9	925.3
72.5°	96.2	97.2	117.1	151.3	188.2	348.7	1271.6	1435.9	1386.9	966.2	651.3
75°	57.5	58.3	72.6	110.0	167.3	195.1	807.9	992.7	954.7	665.9	349.1
77.5°	23.6	24.3	37.2	68.5	122.4	151.6	446.8	649.6	571.8	264.8	95.4
80°	9.9	10.2	18.0	47.9	88.3	95.1	207.0	305.3	234.3	57.0	29.1
82.5°	3.6	3.7	6.6	26.4	54.9	71.6	104.5	120.6	66.1	18.6	15.7
85°	0.2	0.2	1.6	8.9	20.9	20.2	59.8	57.8	21.9	7.8	9.4
87.5°	0.0	0.0	0.2	0.2	0.3	0.8	5.7	10.0	4.7	1.9	4.0
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: P629072  
 CATALOG NUMBER: GWS-SA1A-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8	527.8
2.5°	524.4	515.8	506.4	497.7	483.7	475.5	465.3	460.7	454.2	452.6	453.6
5°	513.7	498.9	476.4	456.0	429.6	408.4	387.0	378.0	366.3	358.5	355.3
7.5°	498.6	479.4	444.2	407.1	370.8	332.1	302.7	283.2	265.6	255.9	253.9
10°	483.4	458.3	407.9	354.8	298.6	252.3	212.5	183.0	159.0	148.2	139.8
12.5°	467.7	436.4	371.0	301.7	236.4	173.3	124.0	95.4	78.2	71.4	72.6
15°	453.3	415.4	334.4	248.6	166.5	104.6	68.5	57.8	53.8	52.5	52.3
17.5°	439.5	395.5	298.0	196.9	109.8	64.1	52.5	49.9	48.7	48.1	48.1
20°	427.0	376.4	262.3	148.3	70.9	50.9	47.4	46.2	45.2	44.7	44.7
22.5°	415.4	357.9	227.5	104.9	52.3	45.7	43.6	42.3	41.1	40.5	40.5
25°	404.9	341.2	194.3	72.2	45.0	41.8	39.5	38.1	36.1	35.0	35.0
27.5°	397.2	326.3	162.4	52.6	40.6	37.6	35.0	33.0	30.9	29.6	29.3
30°	392.7	313.7	130.2	43.2	36.6	33.5	30.6	28.2	25.7	24.5	24.3
32.5°	390.1	302.0	100.7	37.7	33.2	29.6	26.4	23.8	21.4	19.9	19.8
35°	391.1	293.0	75.5	34.0	30.0	26.2	22.7	20.1	18.0	16.7	16.4
37.5°	399.5	288.9	56.7	31.1	27.2	23.3	19.6	17.2	15.2	14.3	14.1
40°	415.9	289.7	44.5	28.8	24.9	20.4	16.8	14.6	13.1	12.3	12.1
42.5°	441.3	296.5	36.8	26.9	22.5	17.8	14.6	12.8	11.3	10.5	10.4
45°	479.2	310.6	32.1	24.6	19.9	15.4	12.6	11.0	9.7	8.7	8.6
47.5°	534.1	335.1	29.0	22.5	17.7	13.3	10.9	9.2	8.1	7.3	7.1
50°	592.5	364.4	26.4	20.4	15.7	11.5	9.2	7.6	6.6	5.8	5.7
52.5°	654.9	395.9	24.5	18.5	13.9	9.9	7.8	6.3	5.3	4.5	4.4
55°	714.8	427.7	22.2	17.2	11.8	8.4	6.5	5.2	4.2	3.6	3.6
57.5°	773.1	456.8	19.8	15.1	9.7	7.1	5.3	4.2	3.4	2.9	2.8
60°	842.7	497.2	17.0	12.8	8.1	6.0	4.4	3.4	2.8	2.3	2.3
62.5°	946.2	539.1	14.6	10.7	6.8	5.0	3.6	2.8	2.3	1.9	1.8
65°	980.1	516.4	12.3	8.7	5.5	4.0	2.9	2.4	1.9	1.8	1.6
67.5°	889.7	423.3	10.2	7.1	4.5	3.4	2.6	2.1	1.8	1.6	1.5
70°	694.2	300.4	7.9	5.3	3.7	2.8	2.3	1.9	1.6	1.5	1.5
72.5°	472.2	177.7	6.3	4.0	3.1	2.4	1.9	1.8	1.6	1.5	1.3
75°	232.5	63.2	4.9	3.1	2.4	2.1	1.8	1.6	1.5	1.3	1.3
77.5°	62.7	17.5	3.7	2.4	1.9	1.6	1.6	1.6	1.5	1.1	1.1
80°	21.2	7.3	2.8	1.8	1.6	1.3	1.1	1.5	1.3	1.1	1.0
82.5°	11.7	3.6	1.9	1.5	1.1	1.0	1.0	1.0	1.0	0.8	0.8
85°	7.4	1.9	1.3	1.1	1.1	0.8	0.6	0.6	0.5	0.5	0.5
87.5°	3.4	1.1	1.1	1.0	1.0	0.8	0.5	0.3	0.2	0.2	0.2
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



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**

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			

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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)