

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: P438106

Luminaire Tested: **ISW-SA1A-830-U-SL3**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438106  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1A-830-U-SL3  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2153 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

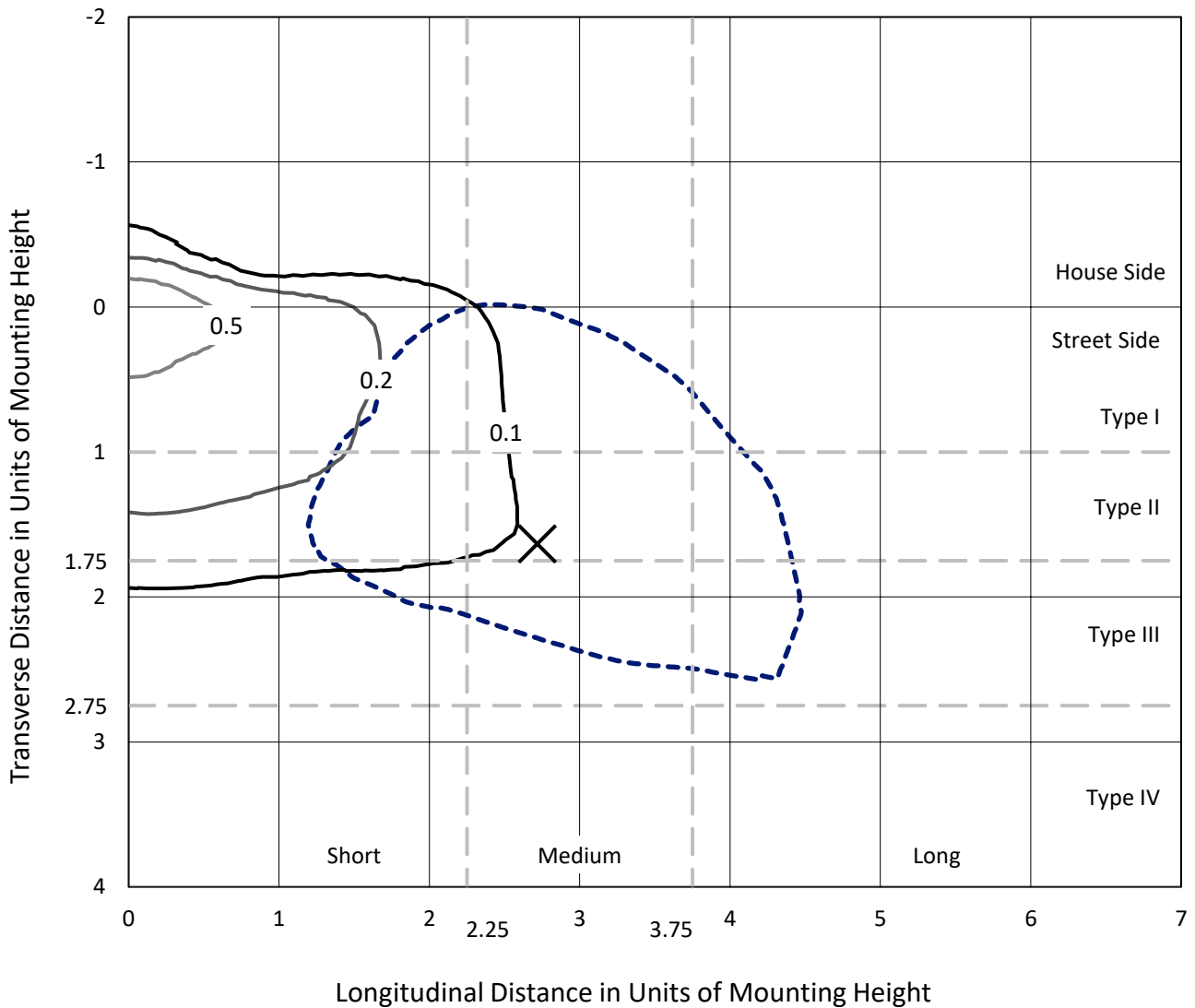
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

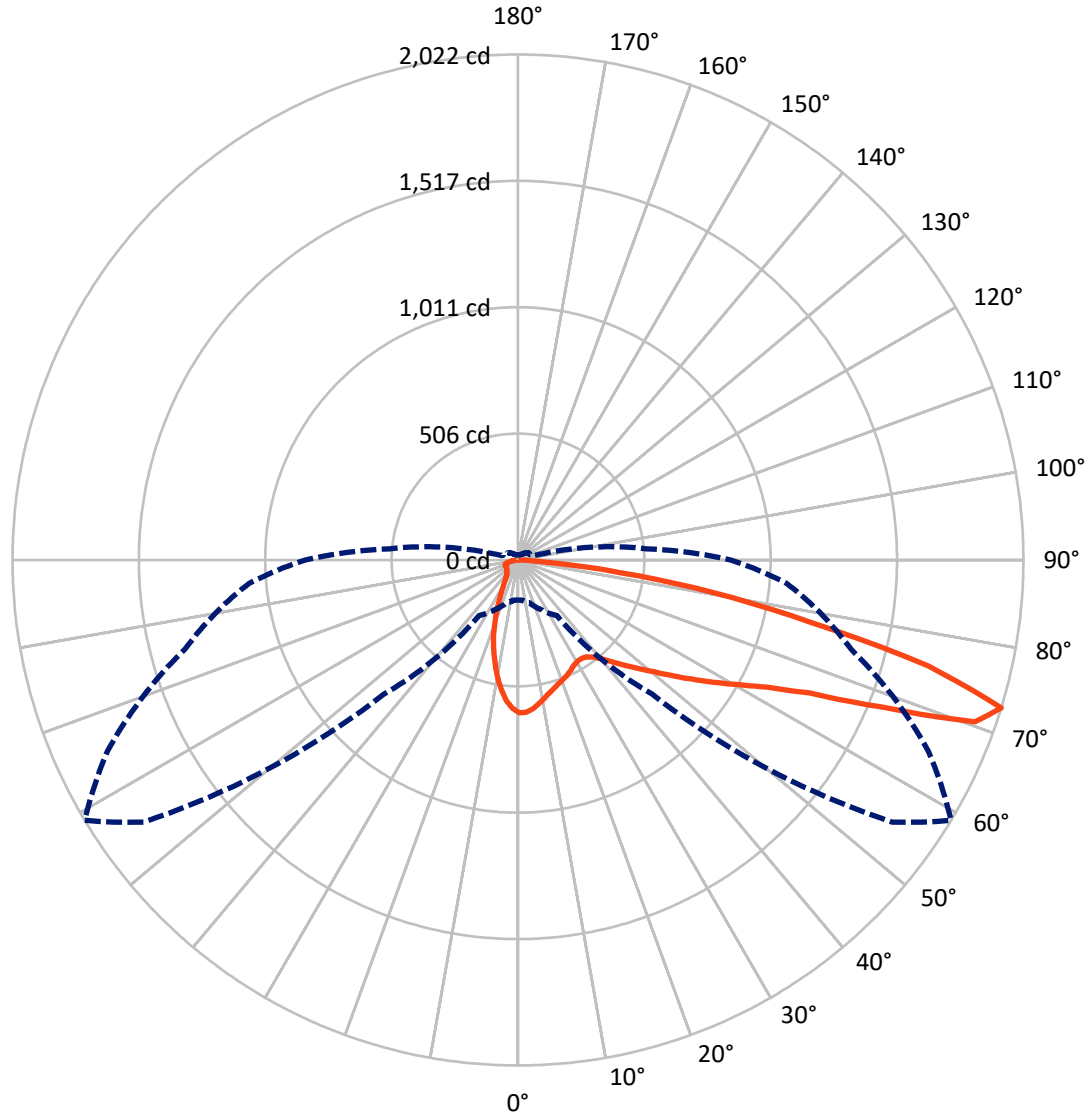
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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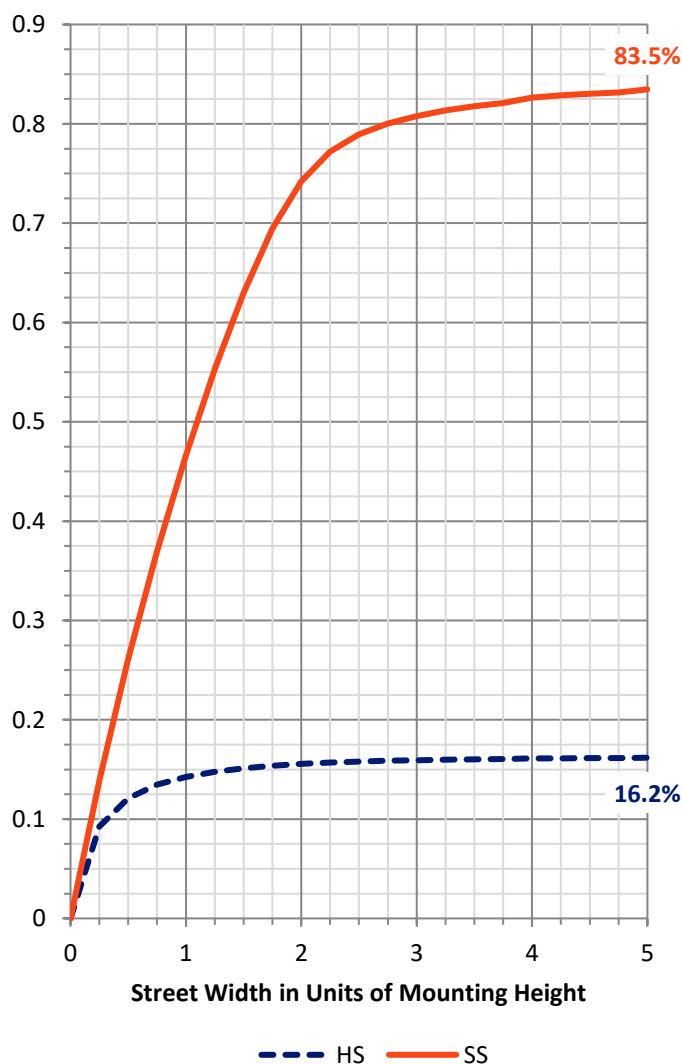
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	351.4	0.0	351.4
	% Fixture	16.3	0.0	16.3
<b>Street Side</b>	Lumens	1801.6	0.0	1801.6
	% Fixture	83.7	0.0	83.7
<b>Total</b>	Lumens	2153.0	0.0	2153.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.4	2.4
10°-20°	117.8	5.5
20°-30°	151.8	7.1
30°-40°	194.2	9.0
40°-50°	269.6	12.5
50°-60°	397.3	18.5
60°-70°	534.6	24.8
70°-80°	388.9	18.1
80°-90°	46.3	2.1
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°	2153.0	100.0
0°-180°	2153.0	100.0

**Coefficient of Utilization**

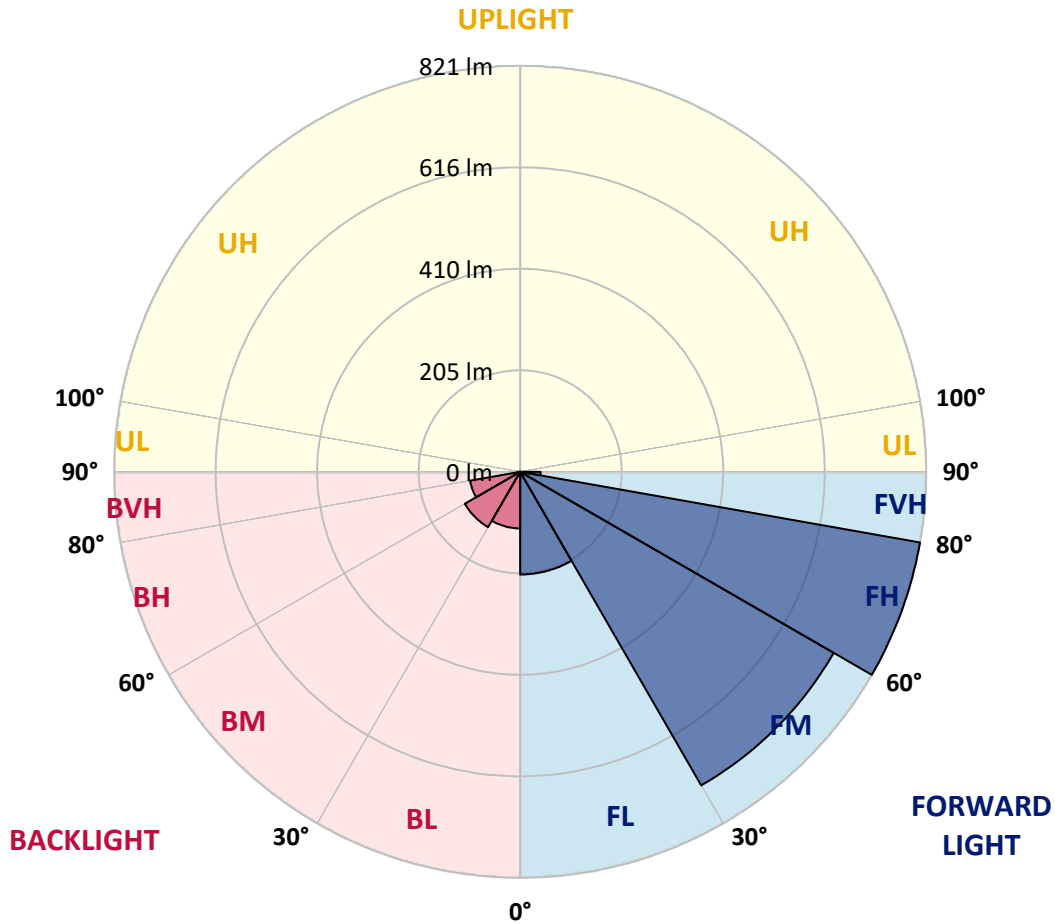


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	207.6	9.6			
FM (30°-60°)	731.9	34.0			
FH (60°-80°)	820.7	38.1			G1/1800
FVH (80°-90°)	41.3	1.9			G1/100
BL (0°-30°)	114.5	5.3	B1/500		
BM (30°-60°)	129.2	6.0	B0/220		
BH (60°-80°)	102.8	4.8	B0/110		G0/110
BVH (80°-90°)	5.0	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1
2.5°	607.9	607.9	610.3	611.8	609.5	611.8	611.1	610.3	611.1	611.1	609.5
5°	582.8	586.0	586.0	586.7	592.2	596.2	597.7	599.3	600.1	600.9	599.3
7.5°	552.2	553.8	555.4	562.4	565.6	574.2	579.7	582.8	586.0	587.5	582.8
10°	518.5	520.9	525.6	531.0	538.9	550.7	560.1	565.6	570.3	572.6	567.1
12.5°	490.3	491.0	495.7	504.4	513.8	530.3	542.0	548.3	554.6	559.3	553.0
15°	464.4	465.2	469.1	479.3	490.3	508.3	525.6	535.0	543.6	551.4	542.8
17.5°	444.0	446.3	447.9	456.5	469.9	489.5	512.2	521.6	535.0	546.7	535.8
20°	432.2	431.4	432.2	437.7	451.8	471.4	498.1	511.4	527.1	543.6	528.7
22.5°	425.2	426.7	425.9	428.3	436.9	456.5	483.2	502.0	520.1	541.2	522.4
25°	425.2	427.5	426.7	425.9	429.1	442.4	470.6	489.5	512.2	541.2	515.4
27.5°	433.0	433.8	432.2	429.9	429.9	434.6	459.7	476.9	508.3	540.5	511.4
30°	440.1	441.6	441.6	440.1	437.7	435.3	451.8	469.9	504.4	545.2	508.3
32.5°	449.5	451.0	454.2	455.7	452.6	445.5	454.2	469.1	505.2	555.4	509.1
35°	461.2	462.8	467.5	475.4	473.0	461.2	462.8	476.1	511.4	566.3	512.2
37.5°	470.6	473.0	483.2	496.5	497.3	484.8	484.0	493.4	523.2	583.6	523.2
40°	480.1	483.2	498.1	520.1	524.8	517.7	513.0	520.1	544.4	608.7	541.2
42.5°	492.6	495.7	515.4	542.8	554.6	551.4	548.3	558.5	576.5	642.4	569.5
45°	505.9	512.2	537.3	567.9	589.1	591.4	594.6	600.9	615.0	689.5	609.5
47.5°	530.3	535.8	564.8	596.2	623.6	636.2	641.7	649.5	658.1	732.6	658.1
50°	563.2	574.2	600.1	630.7	662.8	687.1	701.3	701.3	710.7	784.4	711.5
52.5°	612.6	622.8	638.5	667.5	706.0	744.4	764.0	767.2	764.0	833.8	765.6
55°	654.2	664.4	679.3	700.5	749.1	808.7	842.5	840.1	829.1	886.4	818.9
57.5°	700.5	708.3	721.7	738.9	793.0	875.4	924.8	922.5	902.1	939.7	877.0
60°	720.1	731.1	755.4	790.7	861.3	960.9	1019.0	1011.9	966.4	997.0	928.7
62.5°	661.3	681.7	731.1	802.5	940.5	1103.7	1142.1	1119.4	1057.4	1059.7	998.6
65°	528.7	517.7	593.0	711.5	946.8	1280.2	1330.4	1280.9	1171.1	1139.8	1077.8
67.5°	302.0	306.7	342.8	470.6	779.7	1352.3	1656.7	1569.6	1349.2	1264.5	1173.5
70°	204.7	209.4	225.1	279.3	447.9	1208.8	1922.6	1939.9	1624.5	1375.1	1176.6
72.5°	160.0	160.8	177.3	219.6	271.4	759.3	1827.7	2022.2	1812.8	1379.0	1079.4
75°	122.4	123.2	138.1	187.5	244.0	367.9	1391.5	1695.9	1700.6	1268.4	881.7
77.5°	77.7	81.6	98.8	149.8	229.0	244.0	886.4	1194.7	1226.0	939.7	461.2
80°	37.7	39.2	49.4	95.7	201.6	215.7	527.9	794.6	688.7	366.3	140.4
82.5°	15.7	16.5	23.5	41.6	128.6	182.8	264.3	408.7	265.9	99.6	45.5
85°	3.1	3.9	5.5	10.2	41.6	89.4	108.2	105.9	64.3	30.6	17.3
87.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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 CATALOG NUMBER: ISW-SA1A-830-U-SL3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1	611.1
2.5°	608.7	608.7	602.4	597.7	592.2	588.3	584.4	579.7	578.9	581.3	583.6
5°	596.2	593.0	582.8	573.4	562.4	549.9	542.0	531.8	526.3	528.7	527.1
7.5°	579.7	575.0	556.1	540.5	518.5	498.9	485.6	470.6	460.5	456.5	454.2
10°	562.4	553.0	527.9	499.7	470.6	441.6	417.3	393.8	382.0	381.2	368.7
12.5°	546.0	533.4	498.1	457.3	417.3	378.1	342.0	316.1	284.0	274.5	277.7
15°	532.6	515.4	465.9	414.2	362.4	313.0	265.9	227.5	199.2	189.0	185.1
17.5°	520.1	495.7	436.1	374.2	309.1	247.1	189.8	160.8	143.5	137.3	137.3
20°	505.9	477.7	404.0	329.5	250.2	183.6	140.4	126.3	120.8	120.0	119.2
22.5°	495.0	459.7	371.0	282.4	195.3	139.6	116.1	109.8	109.8	110.6	110.6
25°	481.6	439.3	335.7	232.2	150.6	112.2	102.8	100.4	102.8	105.1	105.1
27.5°	472.2	421.2	303.6	185.1	116.9	97.3	92.6	93.3	96.5	99.6	99.6
30°	464.4	404.0	269.8	145.9	97.3	86.3	85.5	87.1	90.2	93.3	92.6
32.5°	456.5	390.6	233.0	115.3	83.9	79.2	78.4	80.8	83.1	83.9	85.5
35°	453.4	379.7	196.1	94.9	76.1	73.7	73.7	74.5	75.3	76.1	76.1
37.5°	455.7	371.0	163.2	80.8	71.4	70.6	69.8	69.0	69.0	69.0	69.8
40°	465.2	367.9	134.9	73.0	67.5	67.5	65.9	63.5	62.8	63.5	62.8
42.5°	484.0	374.2	111.4	68.2	64.3	63.5	61.2	59.6	58.8	58.8	58.0
45°	513.8	385.1	95.7	65.1	62.0	59.6	57.3	55.7	54.9	55.7	55.7
47.5°	553.0	405.5	84.7	62.0	59.6	55.7	52.6	51.8	51.8	53.3	53.3
50°	600.1	433.0	78.4	60.4	57.3	52.6	49.4	48.6	49.4	51.0	51.8
52.5°	650.3	467.5	76.9	59.6	54.9	49.4	47.1	46.3	47.1	48.6	49.4
55°	700.5	505.2	80.8	59.6	52.6	47.1	45.5	43.1	43.9	45.5	46.3
57.5°	753.8	546.0	92.6	58.0	51.0	45.5	43.1	40.8	40.8	42.4	42.4
60°	811.1	592.2	114.5	58.0	49.4	43.9	40.0	37.7	37.7	37.7	38.4
62.5°	874.6	647.9	140.4	58.8	50.2	42.4	36.9	33.7	33.7	34.5	33.7
65°	968.8	731.1	147.5	59.6	51.8	40.8	34.5	31.4	30.6	30.6	30.6
67.5°	1026.8	740.5	114.5	58.0	54.1	40.8	32.2	28.2	27.5	26.7	26.7
70°	984.4	650.3	81.6	55.7	54.1	40.8	30.6	25.9	24.3	22.7	22.7
72.5°	851.9	516.1	66.7	52.6	50.2	38.4	28.2	23.5	21.2	19.6	19.6
75°	682.4	366.3	56.5	48.6	42.4	30.6	23.5	19.6	18.0	17.3	17.3
77.5°	332.6	180.4	43.9	42.4	33.7	22.7	18.8	16.5	15.7	14.1	14.1
80°	97.3	66.7	32.9	33.7	21.2	15.7	14.1	13.3	12.6	11.0	11.8
82.5°	44.7	37.7	23.5	21.2	13.3	9.4	9.4	8.6	7.8	7.1	7.1
85°	18.0	18.8	12.6	10.2	6.3	4.7	3.9	3.9	3.1	3.1	3.1
87.5°	1.6	2.4	2.4	1.6	1.6	0.8	0.0	0.0	0.0	0.8	0.8
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**

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**

$\lambda$ (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			

**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)