

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: P438118

Luminaire Tested: **ISW-SA1A-830-U-T4FT**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438118  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-10)  
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-T4FT  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2195 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1

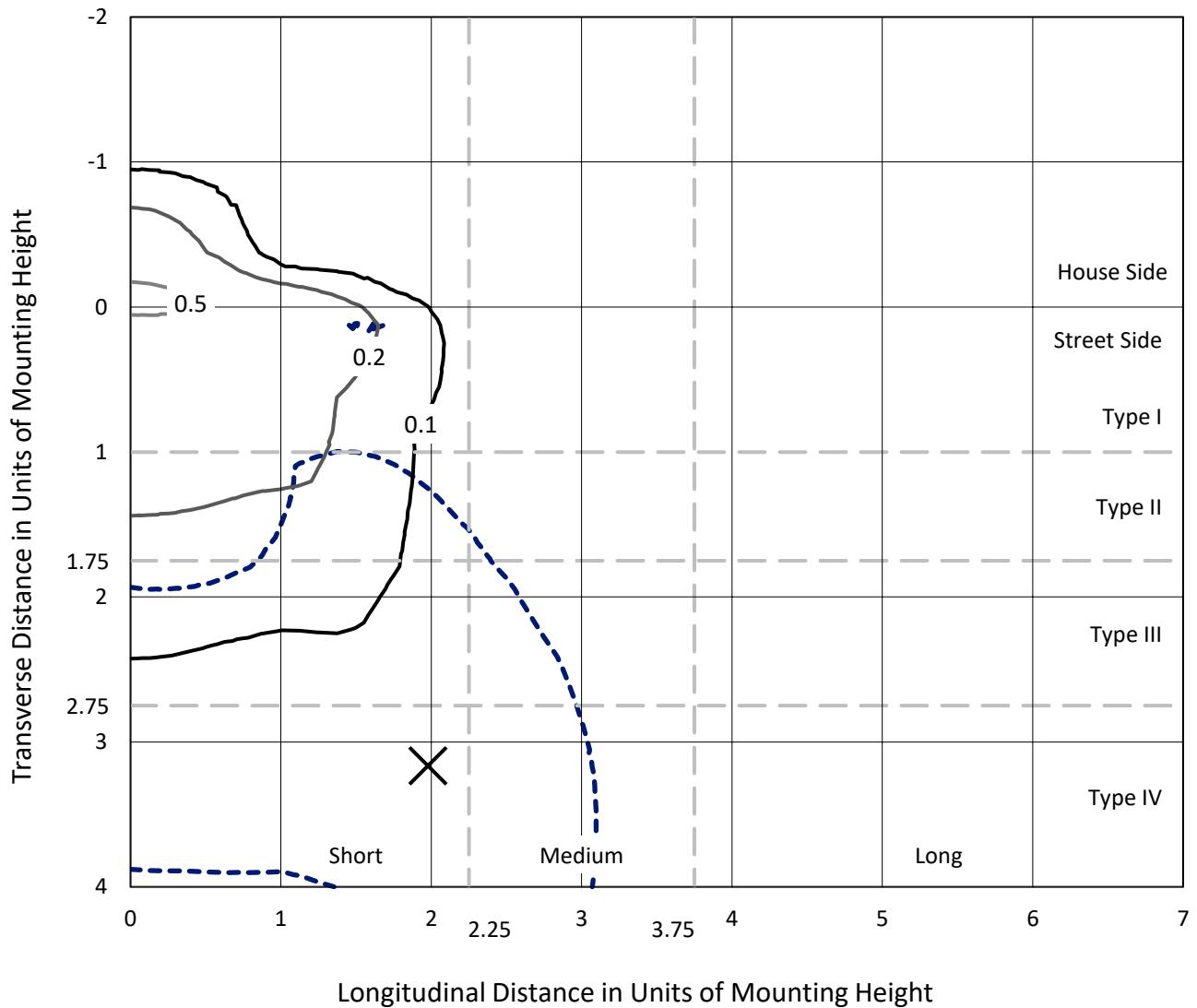
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P438118  
 CATALOG NUMBER: ISW-SA1A-830-U-T4FT

### Iso-Footcandle Lines of Horizontal Illumination

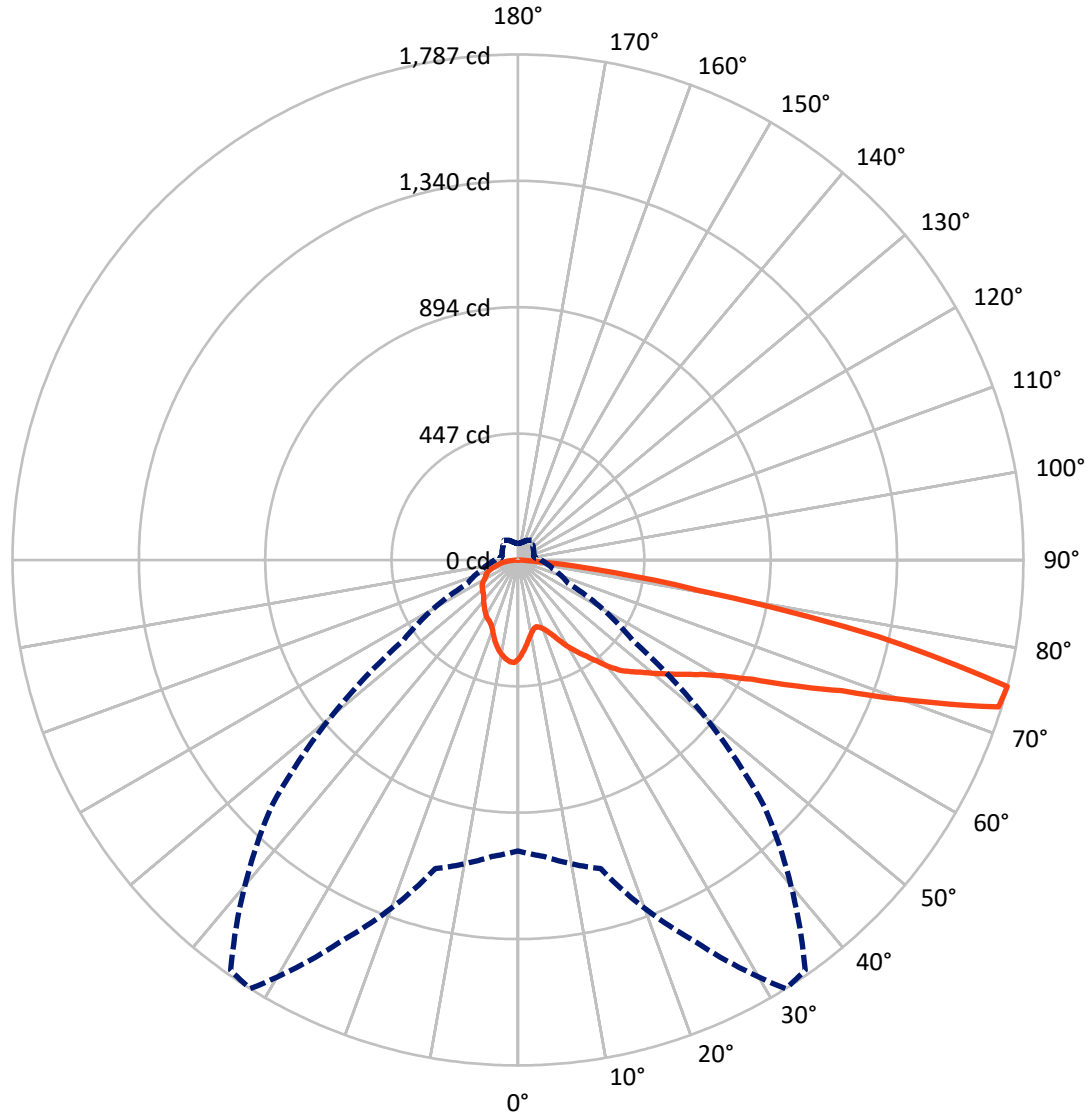
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type IV - Short - N/A

REPORT NUMBER: P438118  
CATALOG NUMBER: ISW-SA1A-830-U-T4FT

### Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P438118  
 CATALOG NUMBER: ISW-SA1A-830-U-T4FT

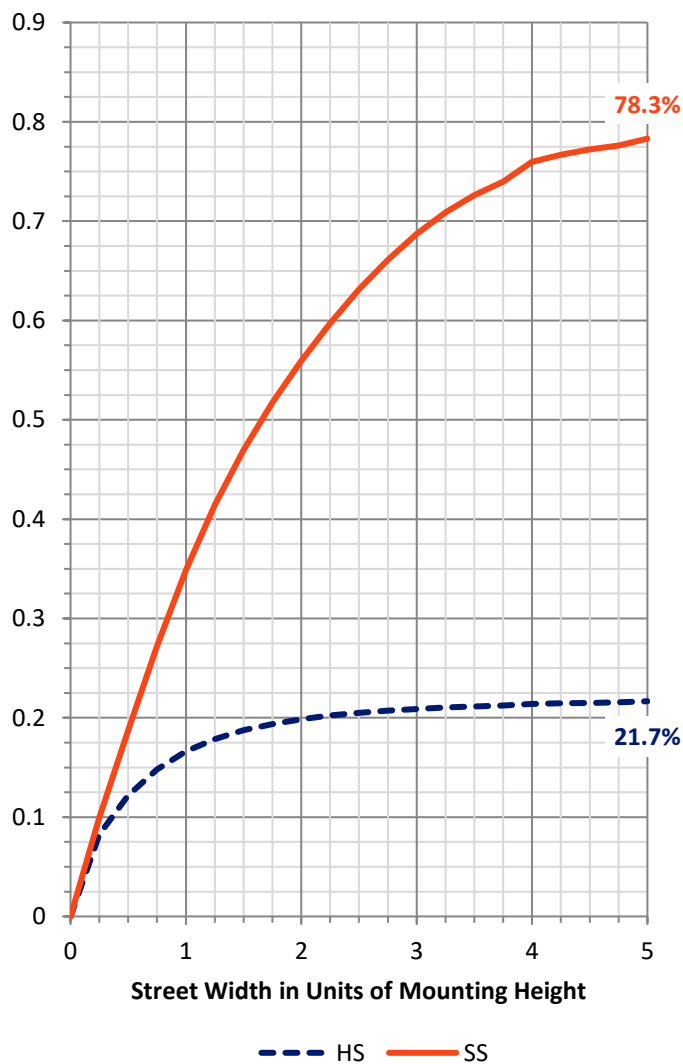
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	481.0	0.0	481.0
	% Fixture	21.9	0.0	21.9
<b>Street Side</b>	Lumens	1714.1	0.0	1714.1
	% Fixture	78.1	0.0	78.1
<b>Total</b>	Lumens	2195.0	0.0	2195.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.7	1.4
10°-20°	86.7	4.0
20°-30°	143.5	6.5
30°-40°	213.9	9.7
40°-50°	304.6	13.9
50°-60°	419.1	19.1
60°-70°	528.1	24.1
70°-80°	426.9	19.5
80°-90°	40.3	1.8
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°	2195.0	100.0
0°-180°	2195.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P438118

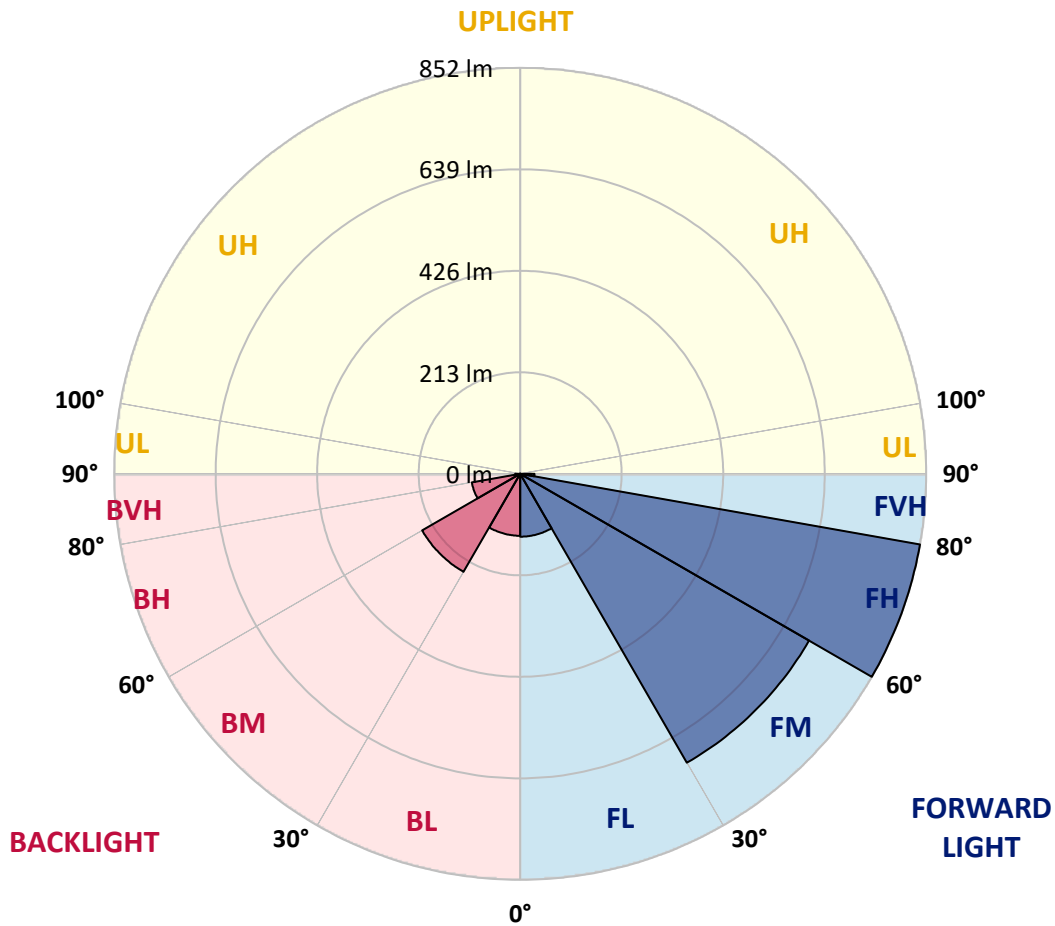
CATALOG NUMBER: ISW-SA1A-830-U-T4FT

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	132.0	6.0			
FM (30°-60°)	700.1	31.9			
FH (60°-80°)	852.1	38.8			G1/1800
FVH (80°-90°)	30.0	1.4			G1/100
BL (0°-30°)	130.0	5.9	B1/500		
BM (30°-60°)	237.6	10.8	B1/1000		
BH (60°-80°)	103.0	4.7	B0/110		G0/110
BVH (80°-90°)	10.4	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type IV Short





REPORT NUMBER: P438118  
 CATALOG NUMBER: ISW-SA1A-830-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4
2.5°	319.1	321.5	322.3	323.9	327.1	325.5	329.5	334.3	340.6	343.8	350.2
5°	292.0	292.0	294.4	298.4	303.9	303.9	311.1	319.9	331.1	339.8	351.0
7.5°	268.0	268.0	270.4	275.2	280.8	284.8	293.6	307.1	322.3	339.1	353.4
10°	248.1	248.9	250.5	255.3	262.5	266.5	279.2	294.4	314.3	335.9	355.8
12.5°	240.9	240.1	239.3	243.3	248.9	252.1	266.5	285.6	308.7	335.1	360.6
15°	246.5	244.9	242.5	242.5	244.9	246.5	258.5	278.4	303.9	334.3	366.2
17.5°	260.9	259.3	253.7	248.1	249.7	250.5	258.5	274.4	301.6	337.5	374.2
20°	280.8	278.4	268.8	261.7	260.1	260.1	264.9	276.8	303.2	343.8	384.5
22.5°	304.7	302.4	291.2	278.4	276.8	276.0	278.4	286.4	307.9	351.0	400.5
25°	336.7	334.3	320.7	304.7	299.2	298.4	296.0	300.8	315.9	360.6	411.6
27.5°	371.0	371.8	355.8	334.3	328.7	326.3	319.9	319.1	325.5	368.6	430.8
30°	402.9	401.3	384.5	367.0	359.0	355.8	345.4	340.6	336.7	380.5	453.1
32.5°	418.0	420.4	412.4	395.7	389.3	383.7	371.8	363.8	358.2	398.9	480.3
35°	443.6	444.4	441.2	430.8	418.0	414.0	402.9	397.3	385.3	421.2	513.0
37.5°	469.1	471.5	470.7	464.3	453.1	449.1	439.6	437.2	413.2	449.1	553.6
40°	507.4	503.4	497.8	500.2	496.2	493.8	489.8	481.9	452.3	479.5	593.5
42.5°	548.9	541.7	521.7	528.1	533.7	536.1	541.7	532.9	493.0	524.9	626.2
45°	582.4	576.8	550.5	552.1	563.2	571.2	597.5	592.7	545.7	574.4	670.1
47.5°	601.5	596.7	578.4	586.4	593.5	604.7	655.8	651.8	595.1	627.8	722.8
50°	628.6	620.7	603.1	617.5	630.2	639.0	712.4	710.8	637.4	682.9	782.6
52.5°	643.8	635.8	634.2	654.2	669.3	681.3	773.0	768.2	678.9	737.9	839.3
55°	664.5	666.1	676.5	691.7	713.2	733.1	832.1	808.1	717.2	792.2	895.1
57.5°	710.0	708.4	728.4	735.5	763.5	789.0	902.3	850.4	749.1	831.3	921.4
60°	770.6	773.8	781.0	799.4	829.7	868.8	970.1	894.3	769.8	859.2	916.6
62.5°	885.5	867.2	864.0	868.8	928.6	974.1	1036.3	933.4	778.6	860.0	866.4
65°	1002.0	994.8	970.1	982.1	1069.0	1110.5	1121.7	958.9	761.1	810.5	754.7
67.5°	1122.5	1121.7	1095.3	1129.6	1234.1	1282.8	1216.6	954.1	703.6	694.9	580.0
70°	1246.1	1251.7	1251.7	1349.0	1491.8	1504.6	1322.7	908.7	589.5	492.2	339.1
72.5°	1300.4	1303.6	1332.3	1548.5	1776.6	1780.6	1383.3	771.4	402.1	262.5	170.7
75°	1028.3	1052.3	1129.6	1491.0	1787.0	1771.0	1232.5	493.8	196.3	130.8	94.9
77.5°	403.7	412.4	569.6	949.3	1302.0	1317.9	797.8	197.0	99.7	83.0	68.6
80°	114.1	119.7	201.8	377.3	643.0	710.8	317.5	85.4	67.0	60.6	49.5
82.5°	40.7	46.3	75.0	144.4	274.4	289.6	86.2	42.3	43.1	39.1	30.3
85°	5.6	4.8	10.4	26.3	60.6	51.1	14.4	11.2	17.6	18.3	12.8
87.5°	0.0	0.0	0.0	0.8	0.8	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



REPORT NUMBER: P438118  
 CATALOG NUMBER: ISW-SA1A-830-U-T4FT

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4	349.4
2.5°	351.8	353.4	356.6	358.2	359.8	363.0	362.2	363.8	363.8	363.0	364.6
5°	355.0	359.0	363.0	364.6	365.4	365.4	361.4	359.0	358.2	357.4	358.2
7.5°	358.2	363.8	367.8	367.0	363.8	358.2	353.4	349.4	345.4	343.8	345.4
10°	363.8	369.4	371.8	366.2	357.4	348.6	341.4	335.9	329.5	328.7	329.5
12.5°	368.6	375.7	375.7	363.0	351.0	339.1	327.9	319.1	311.1	308.7	308.7
15°	376.5	382.1	376.5	359.0	342.2	327.1	311.1	300.0	290.4	286.4	287.2
17.5°	385.3	389.3	375.0	352.6	332.7	312.7	292.0	276.8	269.6	265.7	266.5
20°	395.7	396.5	375.0	344.6	318.3	292.0	269.6	258.5	253.7	251.3	252.1
22.5°	409.3	406.1	372.6	334.3	300.0	271.2	250.5	247.3	247.3	247.3	249.7
25°	423.6	414.8	368.6	320.7	276.0	246.5	238.5	242.5	245.7	245.7	247.3
27.5°	438.0	423.6	360.6	300.8	248.1	229.0	232.2	238.5	241.7	241.7	243.3
30°	455.5	434.0	351.0	273.6	221.8	217.0	225.0	232.9	237.7	237.7	239.3
32.5°	477.9	442.8	336.7	245.7	204.2	206.6	215.4	224.2	229.8	231.4	232.2
35°	502.6	454.7	316.7	214.6	192.3	198.6	205.8	213.8	218.6	220.2	220.2
37.5°	528.1	466.7	290.4	188.3	181.9	190.7	197.8	201.8	205.0	205.0	205.0
40°	553.6	473.1	256.1	167.5	171.5	184.3	190.7	189.1	188.3	185.9	186.7
42.5°	580.0	477.9	219.4	152.4	161.1	177.1	181.9	177.9	171.5	167.5	168.3
45°	608.7	485.0	189.1	141.2	150.8	170.7	175.5	167.5	159.6	153.2	151.6
47.5°	641.4	497.0	161.9	130.8	144.4	166.7	171.5	160.4	150.0	141.2	139.6
50°	686.1	515.4	141.2	123.7	140.4	164.3	168.3	154.0	142.0	130.8	130.0
52.5°	731.6	528.9	126.8	117.3	135.6	159.6	164.3	149.2	134.8	122.9	121.3
55°	765.1	527.3	114.1	110.9	129.2	153.2	160.4	143.6	125.2	114.1	112.5
57.5°	779.4	494.6	103.7	105.3	122.1	145.2	154.0	134.8	118.1	108.5	107.7
60°	754.7	442.0	96.5	98.9	114.1	134.8	142.0	128.4	113.3	104.5	103.7
62.5°	711.6	382.9	90.9	94.1	106.1	125.2	134.8	120.5	106.9	100.5	99.7
65°	609.5	318.3	85.4	88.6	98.9	115.7	128.4	115.7	102.1	95.7	94.9
67.5°	460.3	229.0	79.8	83.0	92.5	108.5	122.9	109.3	94.9	90.1	90.1
70°	274.4	140.4	72.6	77.4	84.6	99.7	114.1	100.5	86.2	84.6	83.0
72.5°	134.0	89.3	66.2	70.2	75.8	88.6	101.3	89.3	75.0	71.0	70.2
75°	80.6	64.6	57.4	62.2	66.2	74.2	85.4	76.6	65.4	59.0	58.2
77.5°	58.2	48.7	48.7	53.5	53.5	61.4	73.4	65.4	55.0	51.1	50.3
80°	41.5	36.7	39.9	43.1	41.5	51.9	62.2	55.0	44.7	41.5	40.7
82.5°	27.1	25.5	30.3	29.5	29.5	39.9	51.1	41.5	32.7	27.1	25.5
85°	11.2	12.8	17.6	16.8	16.8	22.3	26.3	21.5	15.2	12.0	12.0
87.5°	0.0	0.8	2.4	1.6	1.6	2.4	0.8	0.8	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

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

**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

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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 ( $R_{f,i}$ )**

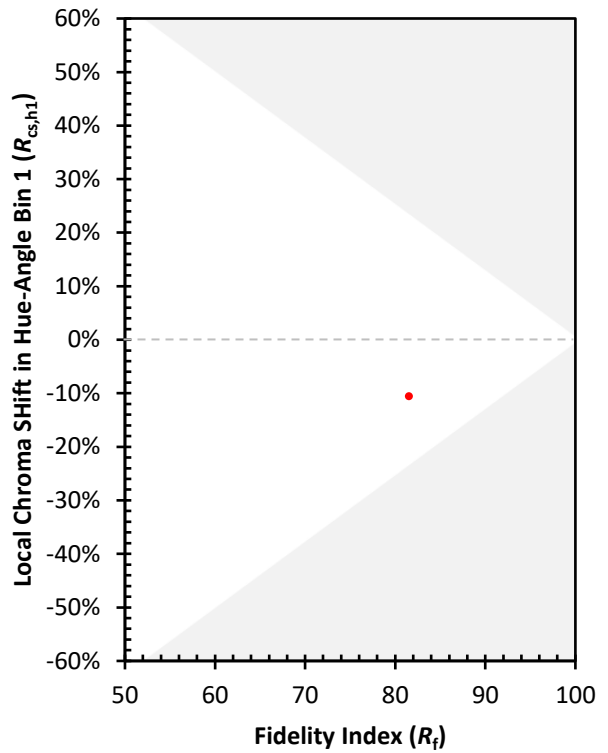
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)