

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: P438277

Luminaire Tested: **ISW-SA1B-830-U-SL3**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438277  
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-SA1B-830-U-SL3  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

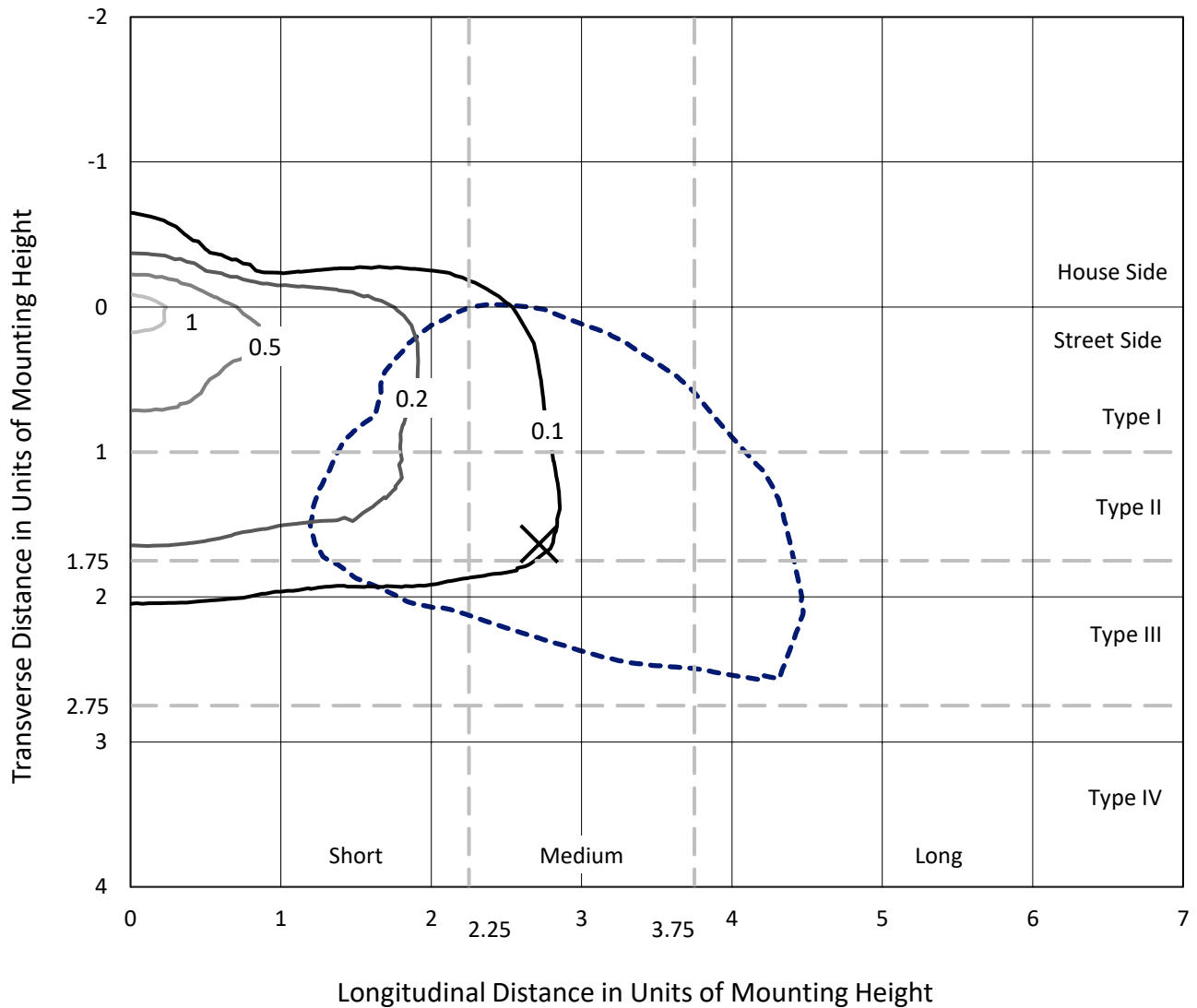
Lumens per Lamp: N/A  
Luminaire Lumens: 2699 lumens  
Efficiency: N/A  
Efficacy: 106.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): 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: P438277  
 CATALOG NUMBER: ISW-SA1B-830-U-SL3

### Iso-Footcandle Lines of Horizontal Illumination

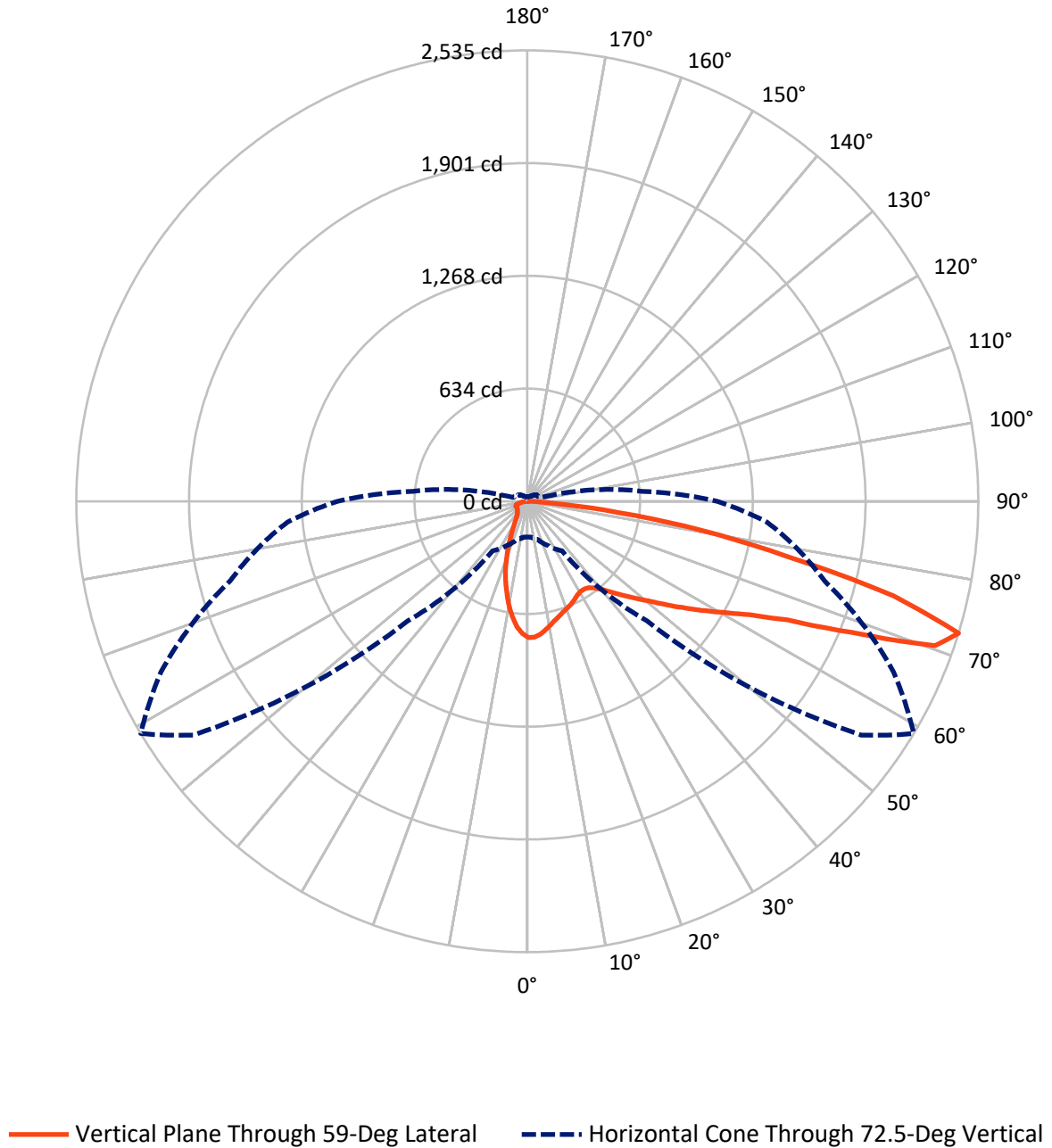
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type III - Medium - N/A

REPORT NUMBER: P438277  
CATALOG NUMBER: ISW-SA1B-830-U-SL3

### Luminous Intensity Polar Plot



REPORT NUMBER: P438277

CATALOG NUMBER: ISW-SA1B-830-U-SL3

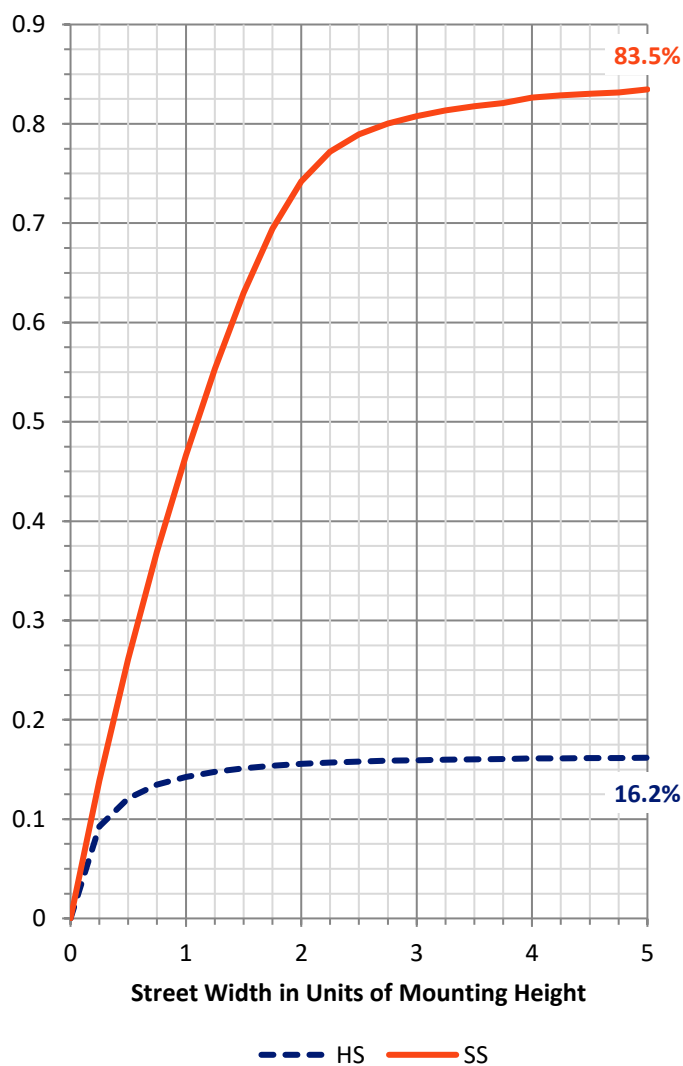
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	440.6	0.0	440.6
	% Fixture	16.3	0.0	16.3
<b>Street Side</b>	Lumens	2258.5	0.0	2258.5
	% Fixture	83.7	0.0	83.7
<b>Total</b>	Lumens	2699.0	0.0	2699.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.7	2.4
10°-20°	147.7	5.5
20°-30°	190.3	7.1
30°-40°	243.5	9.0
40°-50°	337.9	12.5
50°-60°	498.1	18.5
60°-70°	670.2	24.8
70°-80°	487.5	18.1
80°-90°	58.0	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°	2699.0	100.0
0°-180°	2699.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P438277

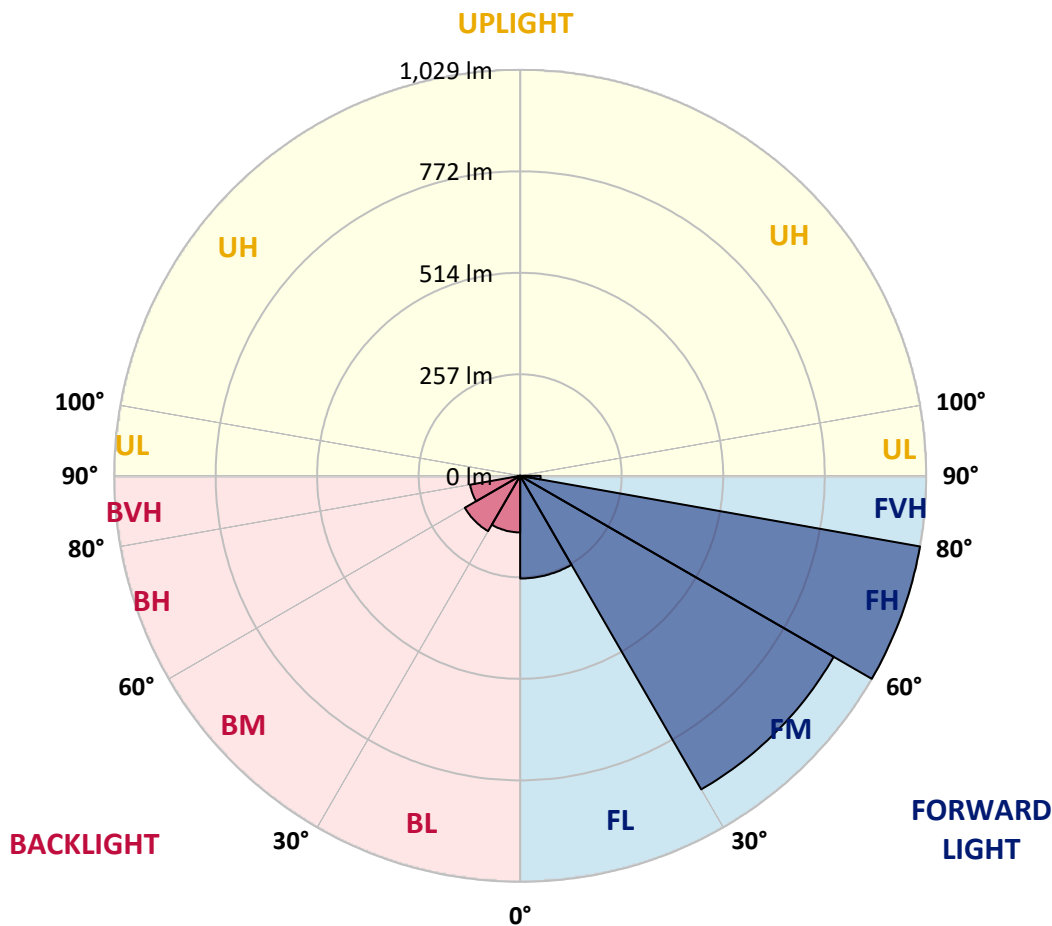
CATALOG NUMBER: ISW-SA1B-830-U-SL3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	260.3	9.6			
FM	(30°-60°)	917.6	34.0			
FH	(60°-80°)	1028.9	38.1			G1/1800
FVH	(80°-90°)	51.7	1.9			G1/100
BL	(0°-30°)	143.5	5.3	B1/500		
BM	(30°-60°)	162.0	6.0	B0/220		
BH	(60°-80°)	128.9	4.8	B1/500		G1/500
BVH	(80°-90°)	6.2	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





REPORT NUMBER: P438277  
 CATALOG NUMBER: ISW-SA1B-830-U-SL3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0
2.5°	762.1	762.1	765.0	767.0	764.1	767.0	766.0	765.0	766.0	766.0	764.1
5°	730.6	734.6	734.6	735.5	742.4	747.3	749.3	751.3	752.3	753.2	751.3
7.5°	692.3	694.2	696.2	705.1	709.0	719.8	726.7	730.6	734.6	736.5	730.6
10°	650.0	652.9	658.8	665.7	675.6	690.3	702.1	709.0	714.9	717.8	711.0
12.5°	614.6	615.6	621.5	632.3	644.1	664.7	679.5	687.4	695.2	701.1	693.3
15°	582.1	583.1	588.0	600.8	614.6	637.2	658.8	670.6	681.5	691.3	680.5
17.5°	556.6	559.5	561.5	572.3	589.0	613.6	642.1	653.9	670.6	685.4	671.6
20°	541.8	540.8	541.8	548.7	566.4	591.0	624.4	641.1	660.8	681.5	662.8
22.5°	533.0	534.9	534.0	536.9	547.7	572.3	605.7	629.3	652.0	678.5	654.9
25°	533.0	535.9	534.9	534.0	537.9	554.6	590.0	613.6	642.1	678.5	646.1
27.5°	542.8	543.8	541.8	538.9	538.9	544.8	576.2	597.9	637.2	677.5	641.1
30°	551.7	553.6	553.6	551.7	548.7	545.8	566.4	589.0	632.3	683.4	637.2
32.5°	563.5	565.4	569.4	571.3	567.4	558.5	569.4	588.0	633.3	696.2	638.2
35°	578.2	580.2	586.1	595.9	593.0	578.2	580.2	596.9	641.1	710.0	642.1
37.5°	590.0	593.0	605.7	622.5	623.4	607.7	606.7	618.5	655.9	731.6	655.9
40°	601.8	605.7	624.4	652.0	657.9	649.0	643.1	652.0	682.4	763.1	678.5
42.5°	617.5	621.5	646.1	680.5	695.2	691.3	687.4	700.1	722.8	805.4	713.9
45°	634.3	642.1	673.6	711.9	738.5	741.4	745.4	753.2	770.9	864.4	764.1
47.5°	664.7	671.6	708.0	747.3	781.8	797.5	804.4	814.2	825.0	918.4	825.0
50°	706.0	719.8	752.3	790.6	830.9	861.4	879.1	879.1	890.9	983.3	891.9
52.5°	768.0	780.8	800.4	836.8	885.0	933.2	957.8	961.7	957.8	1045.3	959.7
55°	820.1	832.9	851.6	878.1	939.1	1013.8	1056.1	1053.2	1039.4	1111.2	1026.6
57.5°	878.1	888.0	904.7	926.3	994.2	1097.4	1159.4	1156.4	1130.8	1178.0	1099.4
60°	902.7	916.5	947.0	991.2	1079.7	1204.6	1277.4	1268.5	1211.5	1249.8	1164.3
62.5°	829.0	854.5	916.5	1006.0	1179.0	1383.6	1431.7	1403.2	1325.5	1328.5	1251.8
65°	662.8	649.0	743.4	891.9	1186.9	1604.8	1667.7	1605.8	1468.1	1428.8	1351.1
67.5°	378.6	384.5	429.7	590.0	977.4	1695.3	2076.8	1967.7	1691.3	1585.1	1471.1
70°	256.7	262.6	282.2	350.1	561.5	1515.3	2410.2	2431.8	2036.5	1723.8	1475.0
72.5°	200.6	201.6	222.2	275.3	340.2	951.9	2291.2	2535.1	2272.5	1728.7	1353.1
75°	153.4	154.4	173.1	235.0	305.8	461.2	1744.4	2126.0	2131.9	1590.1	1105.3
77.5°	97.4	102.3	123.9	187.8	287.1	305.8	1111.2	1497.6	1537.0	1178.0	578.2
80°	47.2	49.2	62.0	120.0	252.7	270.4	661.8	996.1	863.4	459.2	176.0
82.5°	19.7	20.7	29.5	52.1	161.3	229.1	331.4	512.3	333.4	124.9	57.0
85°	3.9	4.9	6.9	12.8	52.1	112.1	135.7	132.8	80.6	38.4	21.6
87.5°	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P438277  
 CATALOG NUMBER: ISW-SA1B-830-U-SL3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0	766.0
2.5°	763.1	763.1	755.2	749.3	742.4	737.5	732.6	726.7	725.7	728.7	731.6
5°	747.3	743.4	730.6	718.8	705.1	689.3	679.5	666.7	659.8	662.8	660.8
7.5°	726.7	720.8	697.2	677.5	650.0	625.4	608.7	590.0	577.2	572.3	569.4
10°	705.1	693.3	661.8	626.4	590.0	553.6	523.1	493.6	478.9	477.9	462.2
12.5°	684.4	668.7	624.4	573.3	523.1	474.0	428.7	396.3	356.0	344.2	348.1
15°	667.7	646.1	584.1	519.2	454.3	392.4	333.4	285.2	249.8	237.0	232.1
17.5°	652.0	621.5	546.7	469.1	387.4	309.8	238.0	201.6	180.0	172.1	172.1
20°	634.3	598.9	506.4	413.0	313.7	230.1	176.0	158.3	151.4	150.5	149.5
22.5°	620.5	576.2	465.1	354.0	244.9	175.0	145.5	137.7	137.7	138.7	138.7
25°	603.8	550.7	420.9	291.1	188.8	140.6	128.8	125.9	128.8	131.8	131.8
27.5°	592.0	528.1	380.6	232.1	146.5	121.9	116.0	117.0	121.0	124.9	124.9
30°	582.1	506.4	338.3	182.9	121.9	108.2	107.2	109.2	113.1	117.0	116.0
32.5°	572.3	489.7	292.1	144.6	105.2	99.3	98.3	101.3	104.2	105.2	107.2
35°	568.4	475.9	245.8	119.0	95.4	92.4	92.4	93.4	94.4	95.4	95.4
37.5°	571.3	465.1	204.5	101.3	89.5	88.5	87.5	86.5	86.5	86.5	87.5
40°	583.1	461.2	169.1	91.5	84.6	84.6	82.6	79.7	78.7	79.7	78.7
42.5°	606.7	469.1	139.6	85.6	80.6	79.7	76.7	74.7	73.8	73.8	72.8
45°	644.1	482.8	120.0	81.6	77.7	74.7	71.8	69.8	68.8	69.8	69.8
47.5°	693.3	508.4	106.2	77.7	74.7	69.8	65.9	64.9	64.9	66.9	66.9
50°	752.3	542.8	98.3	75.7	71.8	65.9	62.0	61.0	62.0	63.9	64.9
52.5°	815.2	586.1	96.4	74.7	68.8	62.0	59.0	58.0	59.0	61.0	62.0
55°	878.1	633.3	101.3	74.7	65.9	59.0	57.0	54.1	55.1	57.0	58.0
57.5°	945.0	684.4	116.0	72.8	63.9	57.0	54.1	51.1	51.1	53.1	53.1
60°	1016.8	742.4	143.6	72.8	62.0	55.1	50.2	47.2	47.2	47.2	48.2
62.5°	1096.4	812.2	176.0	73.8	62.9	53.1	46.2	42.3	42.3	43.3	42.3
65°	1214.4	916.5	184.9	74.7	64.9	51.1	43.3	39.3	38.4	38.4	38.4
67.5°	1287.2	928.3	143.6	72.8	67.9	51.1	40.3	35.4	34.4	33.4	33.4
70°	1234.1	815.2	102.3	69.8	67.9	51.1	38.4	32.5	30.5	28.5	28.5
72.5°	1067.9	647.0	83.6	65.9	62.9	48.2	35.4	29.5	26.6	24.6	24.6
75°	855.5	459.2	70.8	61.0	53.1	38.4	29.5	24.6	22.6	21.6	21.6
77.5°	416.9	226.2	55.1	53.1	42.3	28.5	23.6	20.7	19.7	17.7	17.7
80°	121.9	83.6	41.3	42.3	26.6	19.7	17.7	16.7	15.7	13.8	14.8
82.5°	56.1	47.2	29.5	26.6	16.7	11.8	11.8	10.8	9.8	8.9	8.9
85°	22.6	23.6	15.7	12.8	7.9	5.9	4.9	4.9	3.9	3.9	3.9
87.5°	2.0	3.0	3.0	2.0	2.0	1.0	0.0	0.0	0.0	1.0	1.0
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

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**

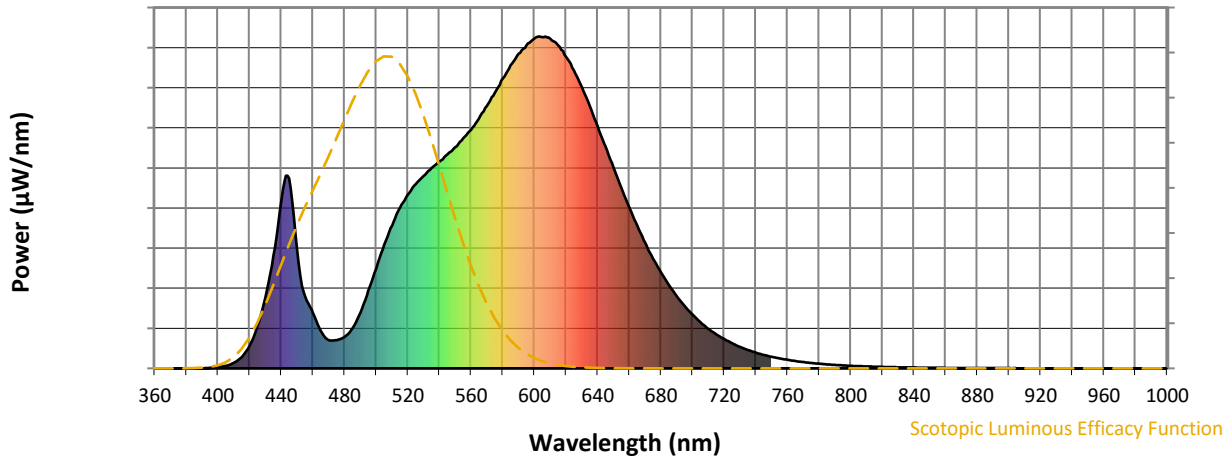


**Photopic Lumens: NR**

$\lambda$ (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**

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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

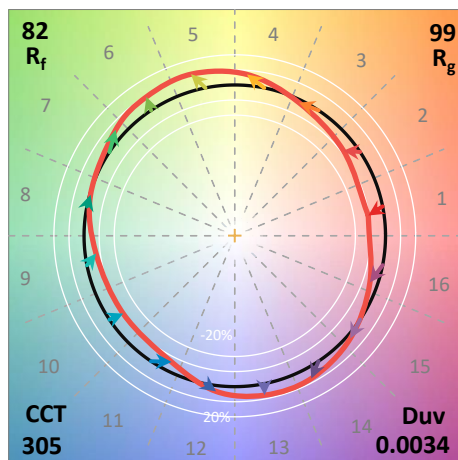
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)