

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: P438799

Luminaire Tested: **ISW-SA1E-830-U-T3-HSS**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1E-830-U-T3-HSS  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

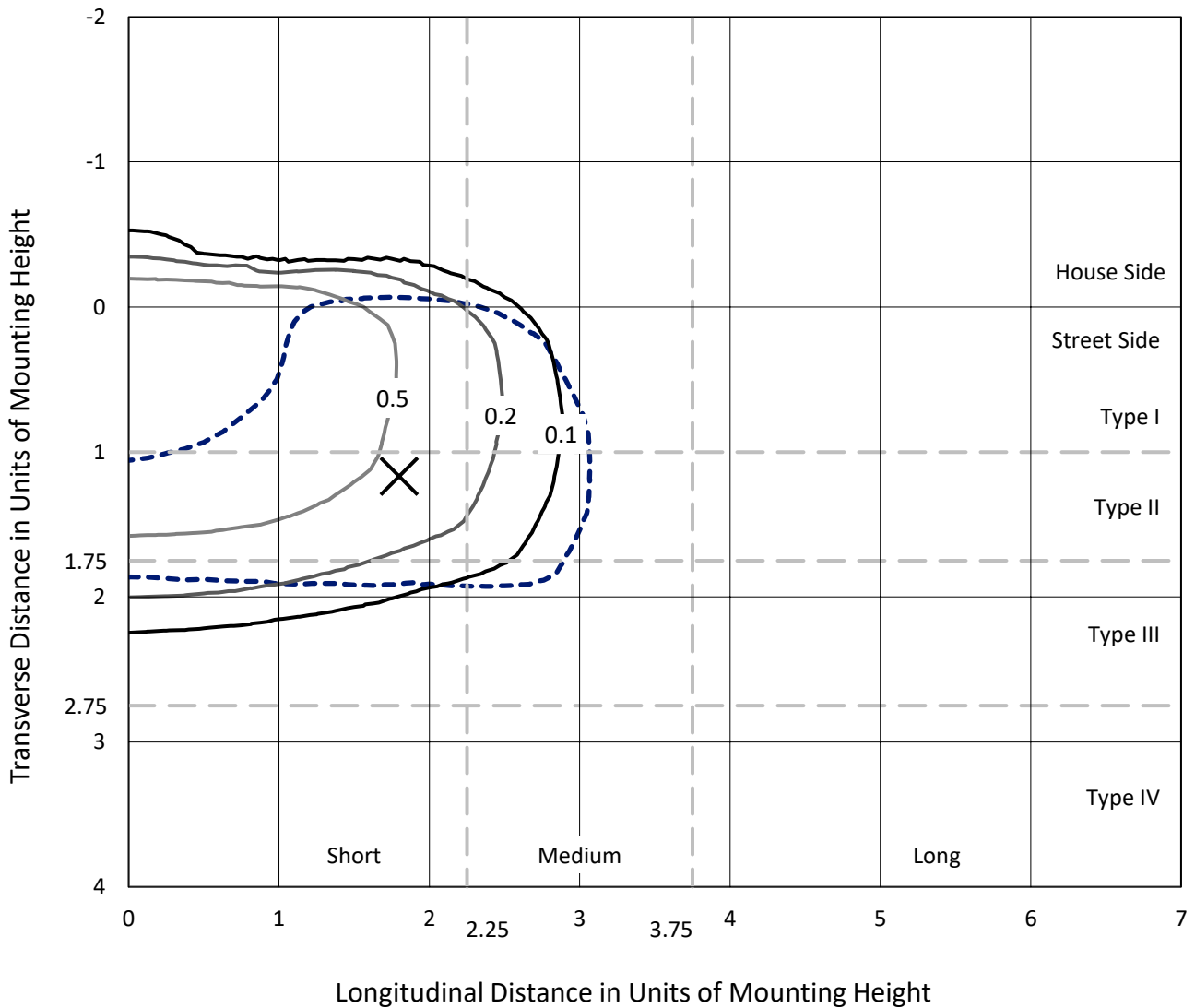
Lumens per Lamp: N/A  
Luminaire Lumens: 4011 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 58.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P438799  
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### Iso-Footcandle Lines of Horizontal Illumination

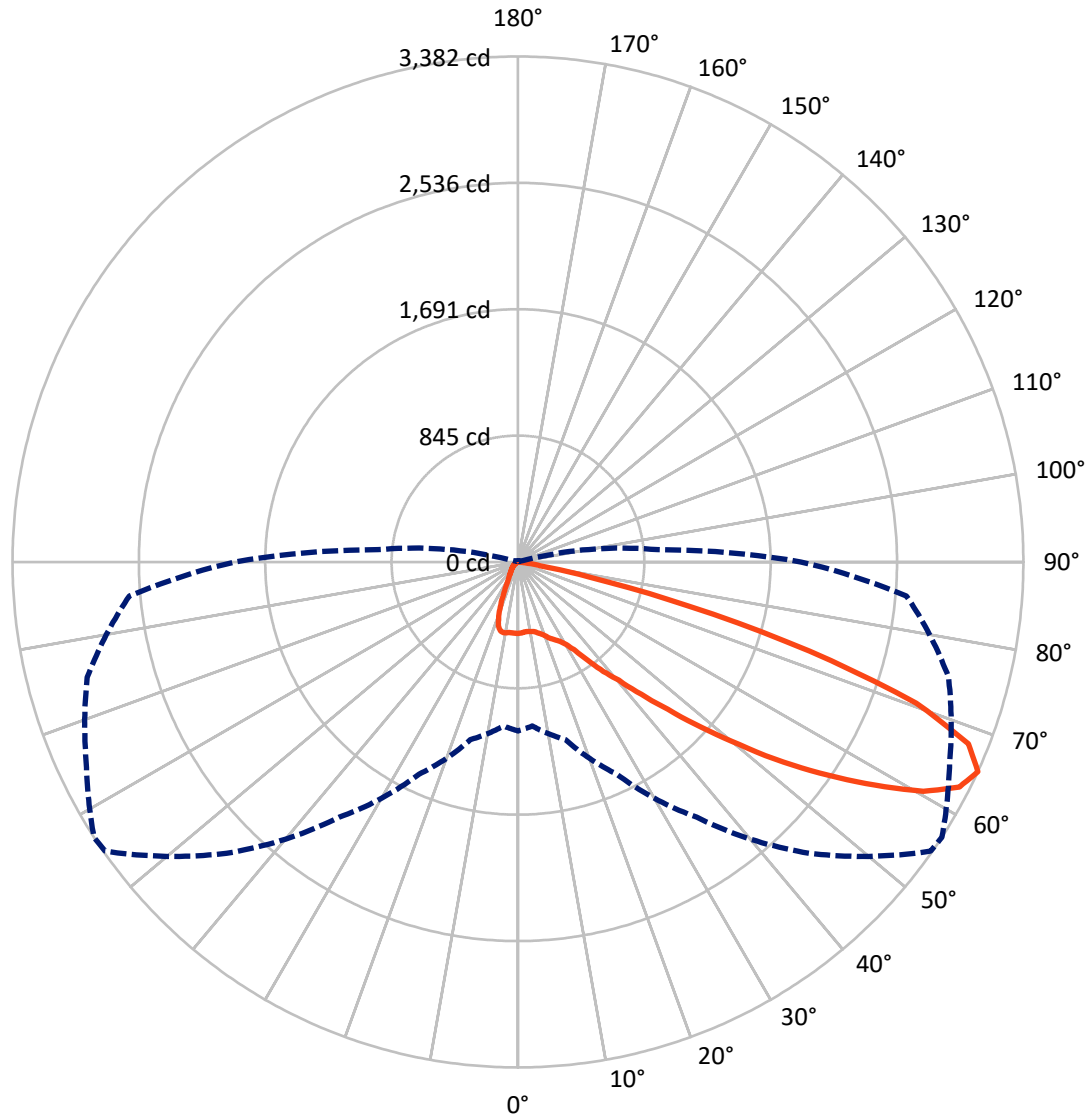
✕ Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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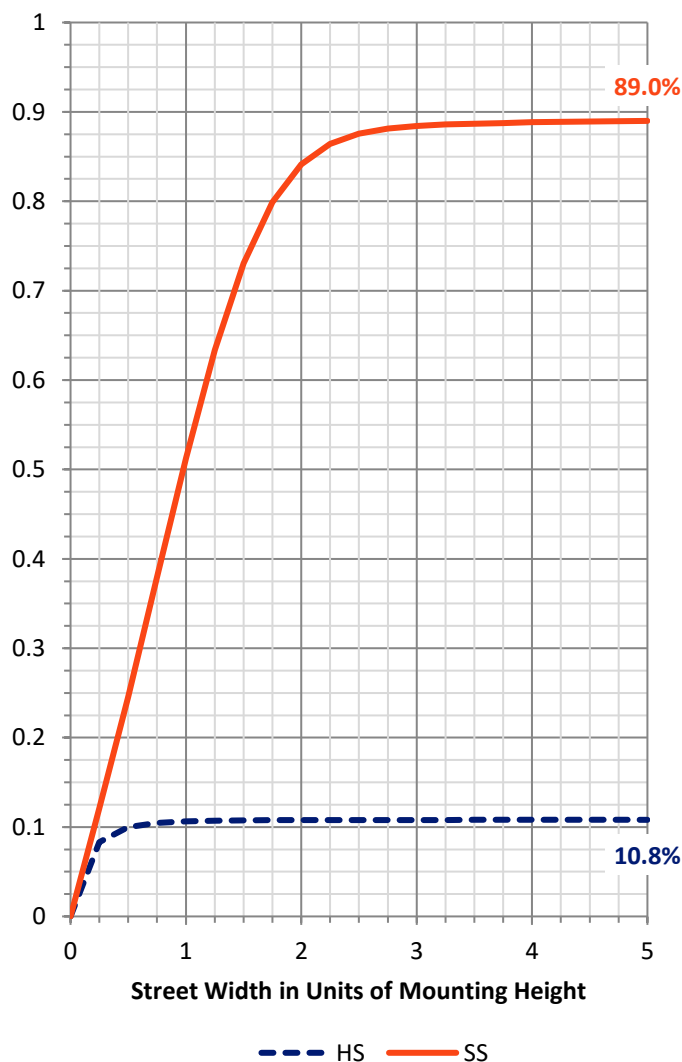
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	437.5	0.0	437.5
	% Fixture	10.9	0.0	10.9
<b>Street Side</b>	Lumens	3573.5	0.0	3573.5
	% Fixture	89.1	0.0	89.1
<b>Total</b>	Lumens	4011.0	0.0	4011.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.4	1.1
10°-20°	120.0	3.0
20°-30°	207.3	5.2
30°-40°	367.2	9.2
40°-50°	666.0	16.6
50°-60°	1121.8	28.0
60°-70°	1153.4	28.8
70°-80°	319.7	8.0
80°-90°	11.3	0.3
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°	4011.0	100.0
0°-180°	4011.0	100.0

**Coefficient of Utilization**



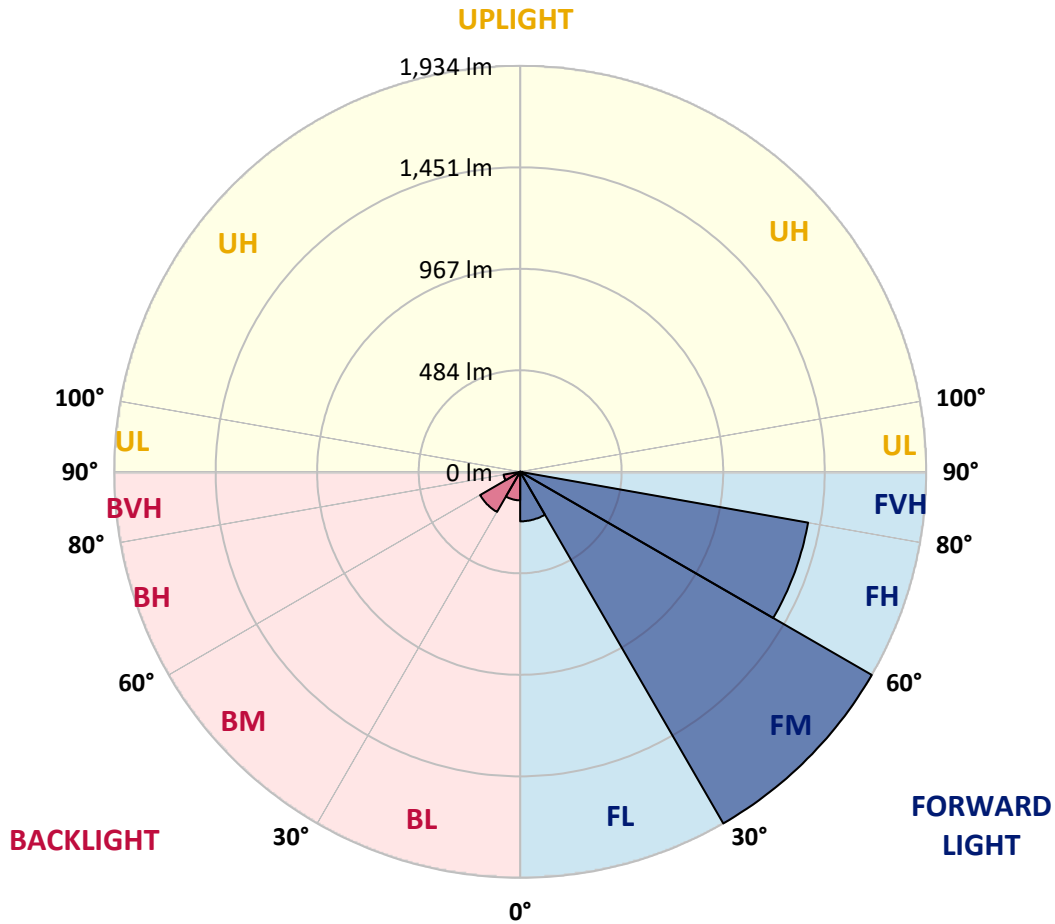
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	235.9	5.9			
FM (30°-60°)	1934.3	48.2			
FH (60°-80°)	1392.8	34.7			G1/1800
FVH (80°-90°)	10.5	0.3			G1/100
BL (0°-30°)	135.8	3.4	B1/500		
BM (30°-60°)	220.6	5.5	B1/1000		
BH (60°-80°)	80.2	2.0	B0/110		G0/110
BVH (80°-90°)	0.8	0.0			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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3
2.5°	463.6	463.6	467.5	469.4	469.4	471.4	473.3	475.3	475.3	475.3	479.2
5°	440.1	438.1	442.0	446.0	451.8	459.6	465.5	469.4	475.3	481.2	483.1
7.5°	418.6	418.6	422.5	428.4	440.1	451.8	463.6	469.4	479.2	490.9	494.9
10°	412.7	410.7	416.6	422.5	434.2	447.9	465.5	473.3	487.0	502.7	508.5
12.5°	408.8	408.8	410.7	420.5	432.3	449.9	471.4	477.3	498.8	516.4	530.1
15°	406.8	406.8	410.7	418.6	432.3	451.8	481.2	490.9	516.4	541.8	553.5
17.5°	422.5	420.5	418.6	422.5	436.2	457.7	496.8	506.6	537.9	569.2	582.9
20°	469.4	467.5	461.6	447.9	447.9	473.3	516.4	528.1	569.2	600.5	608.3
22.5°	557.4	563.3	541.8	506.6	481.2	492.9	541.8	555.5	602.4	635.7	635.7
25°	684.6	676.8	657.2	598.5	547.7	524.2	563.3	577.0	633.7	672.8	665.0
27.5°	817.6	819.5	792.2	725.7	643.5	580.9	586.8	602.4	667.0	712.0	694.4
30°	923.2	915.4	901.7	846.9	757.0	670.9	631.8	641.6	704.1	755.0	739.3
32.5°	1017.1	1013.2	995.6	948.6	868.4	776.5	706.1	708.1	757.0	819.5	800.0
35°	1101.2	1105.1	1097.3	1044.5	972.1	886.0	805.9	811.7	848.9	913.4	874.3
37.5°	1206.8	1206.8	1193.1	1144.2	1089.5	1003.4	927.1	929.1	948.6	1001.4	952.5
40°	1298.8	1302.7	1300.7	1263.5	1210.7	1132.5	1040.6	1040.6	1046.4	1109.0	1083.6
42.5°	1423.9	1429.8	1427.8	1392.6	1351.6	1294.8	1216.6	1210.7	1206.8	1285.1	1257.7
45°	1584.3	1598.0	1603.9	1560.8	1523.7	1490.4	1429.8	1406.3	1416.1	1488.5	1467.0
47.5°	1736.9	1752.5	1779.9	1758.4	1740.8	1740.8	1658.6	1654.7	1639.1	1723.2	1664.5
50°	1881.6	1883.6	1922.7	1956.0	2008.8	1999.0	1944.2	1920.7	1897.3	1954.0	1848.4
52.5°	1963.8	1987.2	2038.1	2133.9	2249.3	2296.3	2239.6	2225.9	2178.9	2171.1	2026.4
55°	2040.1	2040.1	2120.3	2286.5	2482.1	2581.9	2534.9	2519.3	2425.4	2398.0	2210.2
57.5°	2065.5	2057.7	2165.2	2376.5	2669.9	2844.0	2853.7	2818.5	2687.5	2603.4	2398.0
60°	1938.3	1924.7	2038.1	2317.8	2720.7	3033.7	3139.3	3115.8	2914.4	2802.9	2595.5
62.5°	1572.6	1590.2	1734.9	2038.1	2540.8	3014.1	3329.0	3315.3	3082.6	2937.8	2673.8
65°	1130.5	1101.2	1230.3	1566.7	2085.0	2755.9	3372.1	3381.8	3186.2	2982.8	2609.2
67.5°	633.7	606.3	713.9	970.2	1482.6	2261.1	3196.0	3250.8	3111.9	2871.3	2331.5
70°	242.5	258.2	332.5	479.2	874.3	1560.8	2750.1	2828.3	2728.6	2396.0	1736.9
72.5°	86.1	97.8	136.9	213.2	404.9	841.1	1922.7	2040.1	2010.7	1664.5	993.6
75°	50.9	52.8	70.4	103.7	178.0	328.6	1085.6	1183.4	1136.4	823.5	410.7
77.5°	35.2	35.2	45.0	62.6	101.7	131.0	424.4	481.2	494.9	297.3	121.3
80°	21.5	23.5	31.3	41.1	58.7	60.6	131.0	154.5	144.7	105.6	43.0
82.5°	9.8	9.8	17.6	27.4	29.3	25.4	41.1	45.0	52.8	46.9	19.6
85°	0.0	0.0	5.9	9.8	7.8	5.9	13.7	13.7	17.6	21.5	9.8
87.5°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	3.9	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



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 CATALOG NUMBER: ISW-SA1E-830-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3	477.3
2.5°	479.2	481.2	479.2	477.3	477.3	475.3	475.3	475.3	475.3	475.3	475.3
5°	483.1	485.1	483.1	479.2	475.3	471.4	467.5	467.5	467.5	467.5	471.4
7.5°	494.9	494.9	490.9	483.1	473.3	469.4	461.6	459.6	455.7	453.8	455.7
10°	512.5	512.5	504.6	492.9	477.3	461.6	447.9	428.4	416.6	408.8	406.8
12.5°	530.1	528.1	518.3	502.7	477.3	442.0	397.1	348.2	318.8	297.3	293.4
15°	553.5	551.6	535.9	508.5	465.5	391.2	303.2	236.7	201.5	185.8	183.9
17.5°	579.0	575.0	553.5	512.5	428.4	295.3	199.5	154.5	140.8	136.9	136.9
20°	606.3	600.5	567.2	506.6	354.0	201.5	138.9	129.1	127.1	125.2	125.2
22.5°	627.9	618.1	577.0	477.3	264.1	138.9	123.2	121.3	119.3	117.4	117.4
25°	651.3	635.7	584.8	412.7	174.1	119.3	115.4	113.4	109.5	107.6	107.6
27.5°	678.7	655.2	596.6	324.7	121.3	107.6	103.7	101.7	95.8	91.9	91.9
30°	713.9	684.6	602.4	236.7	101.7	93.9	90.0	86.1	78.2	74.3	74.3
32.5°	770.6	745.2	590.7	158.4	91.9	84.1	78.2	70.4	62.6	58.7	56.7
35°	843.0	807.8	549.6	111.5	82.1	74.3	64.5	54.8	48.9	46.9	46.9
37.5°	923.2	876.3	487.0	90.0	74.3	64.5	54.8	45.0	39.1	37.2	37.2
40°	1036.7	964.3	401.0	78.2	64.5	54.8	45.0	37.2	33.3	31.3	31.3
42.5°	1185.3	1075.8	303.2	72.4	58.7	46.9	37.2	31.3	27.4	25.4	25.4
45°	1351.6	1193.1	221.0	64.5	50.9	39.1	29.3	25.4	21.5	19.6	19.6
47.5°	1517.8	1277.2	152.6	58.7	43.0	33.3	25.4	19.6	15.6	15.6	13.7
50°	1662.6	1322.2	109.5	50.9	39.1	27.4	19.6	15.6	13.7	11.7	11.7
52.5°	1789.7	1341.8	84.1	45.0	33.3	23.5	15.6	13.7	11.7	11.7	11.7
55°	1897.3	1326.1	66.5	39.1	29.3	19.6	13.7	11.7	9.8	9.8	9.8
57.5°	2002.9	1279.2	52.8	33.3	23.5	13.7	11.7	9.8	7.8	7.8	7.8
60°	2057.7	1218.6	43.0	27.4	19.6	11.7	9.8	7.8	7.8	5.9	5.9
62.5°	2020.5	1095.3	35.2	23.5	13.7	9.8	7.8	5.9	5.9	3.9	3.9
65°	1895.3	938.9	27.4	17.6	9.8	7.8	5.9	5.9	3.9	2.0	2.0
67.5°	1598.0	735.4	21.5	13.7	7.8	5.9	3.9	3.9	2.0	0.0	0.0
70°	1142.3	485.1	17.6	9.8	5.9	5.9	3.9	2.0	0.0	0.0	0.0
72.5°	659.2	234.7	13.7	5.9	3.9	3.9	2.0	2.0	0.0	0.0	0.0
75°	246.4	82.1	11.7	5.9	3.9	2.0	2.0	2.0	0.0	0.0	0.0
77.5°	82.1	33.3	9.8	7.8	5.9	2.0	2.0	0.0	0.0	0.0	0.0
80°	25.4	15.6	3.9	3.9	3.9	3.9	2.0	0.0	0.0	0.0	0.0
82.5°	13.7	7.8	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
85°	5.9	3.9	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	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

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			

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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			

REPORT NUMBER: SP1-2408-195-9

**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**



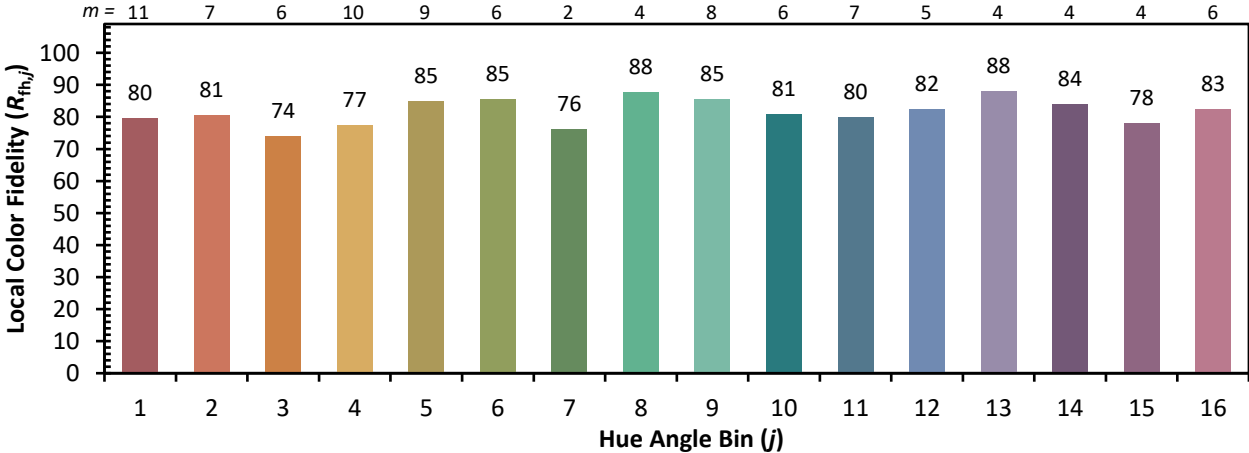


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)