

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: P438974

Luminaire Tested: **ISW-SA1F-830-U-T4W-HSS**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438974  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1F-830-U-T4W-HSS  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

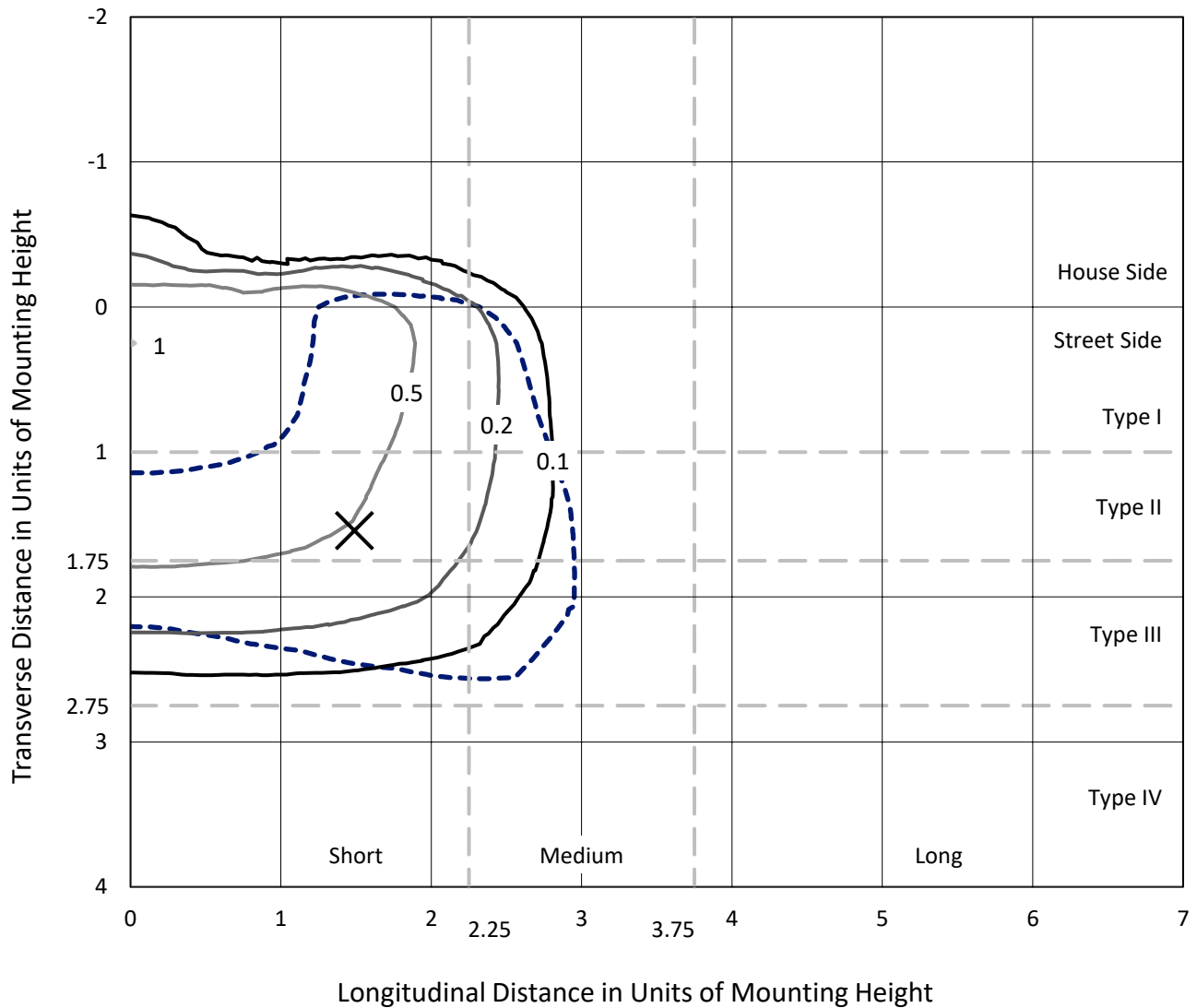
Lumens per Lamp: N/A  
Luminaire Lumens: 4516 lumens  
Efficiency: N/A  
Efficacy: 68.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P438974  
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### Iso-Footcandle Lines of Horizontal Illumination

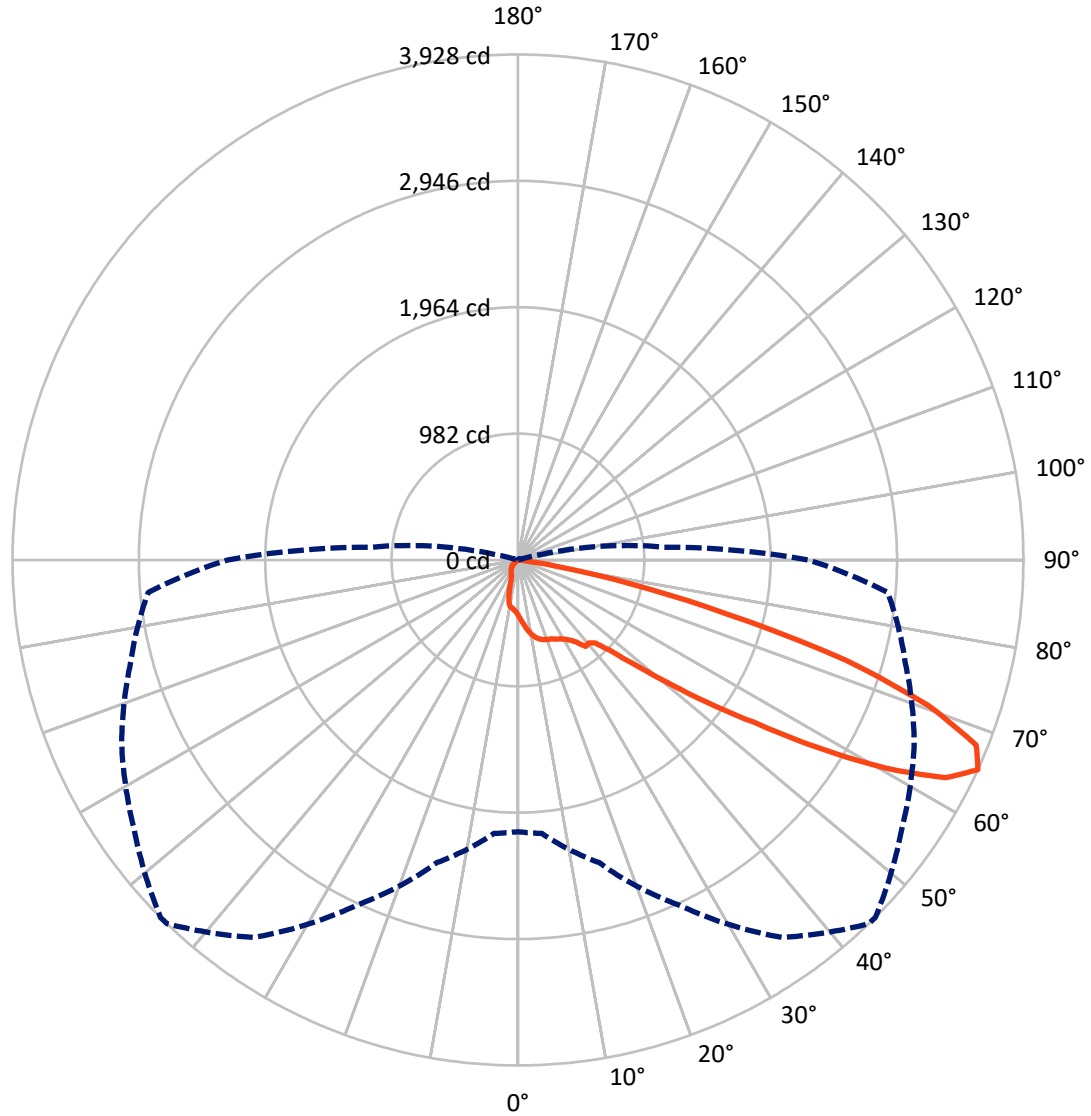
✕ Max cd  
 - - - 1/2 Max cd



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 44-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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CATALOG NUMBER: ISW-SA1F-830-U-T4W-HSS

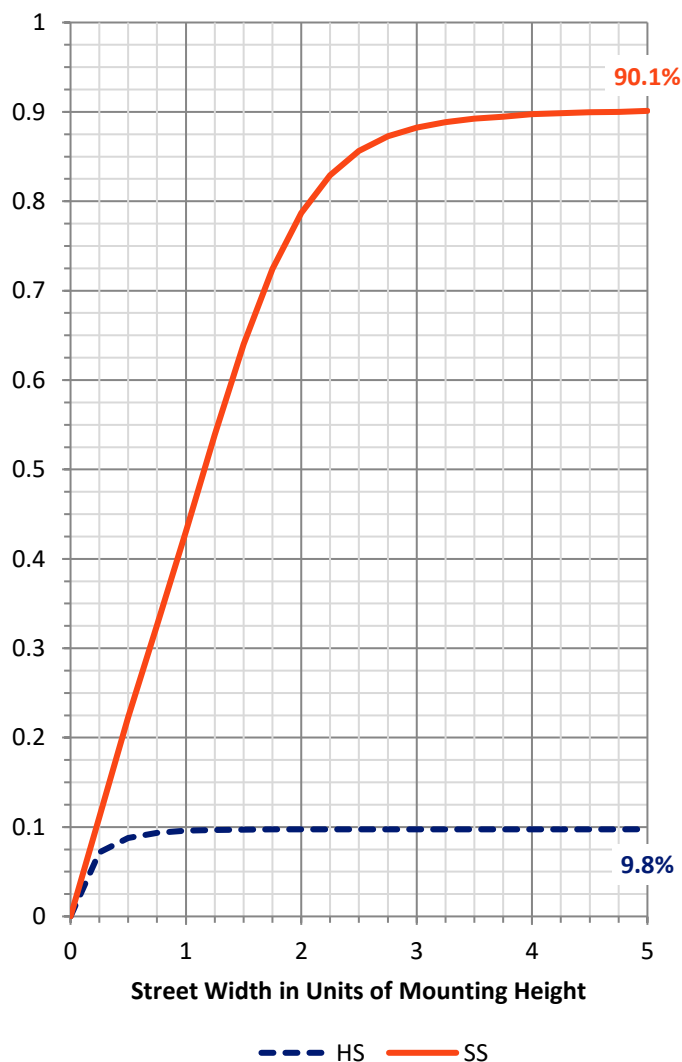
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	444.2	0.0	444.2
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	4071.8	0.0	4071.8
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	4516.0	0.0	4516.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	1.0
10°-20°	131.5	2.9
20°-30°	210.4	4.7
30°-40°	312.5	6.9
40°-50°	569.7	12.6
50°-60°	1194.6	26.5
60°-70°	1520.4	33.7
70°-80°	510.3	11.3
80°-90°	22.9	0.5
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°	4516.0	100.0
0°-180°	4516.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P438974

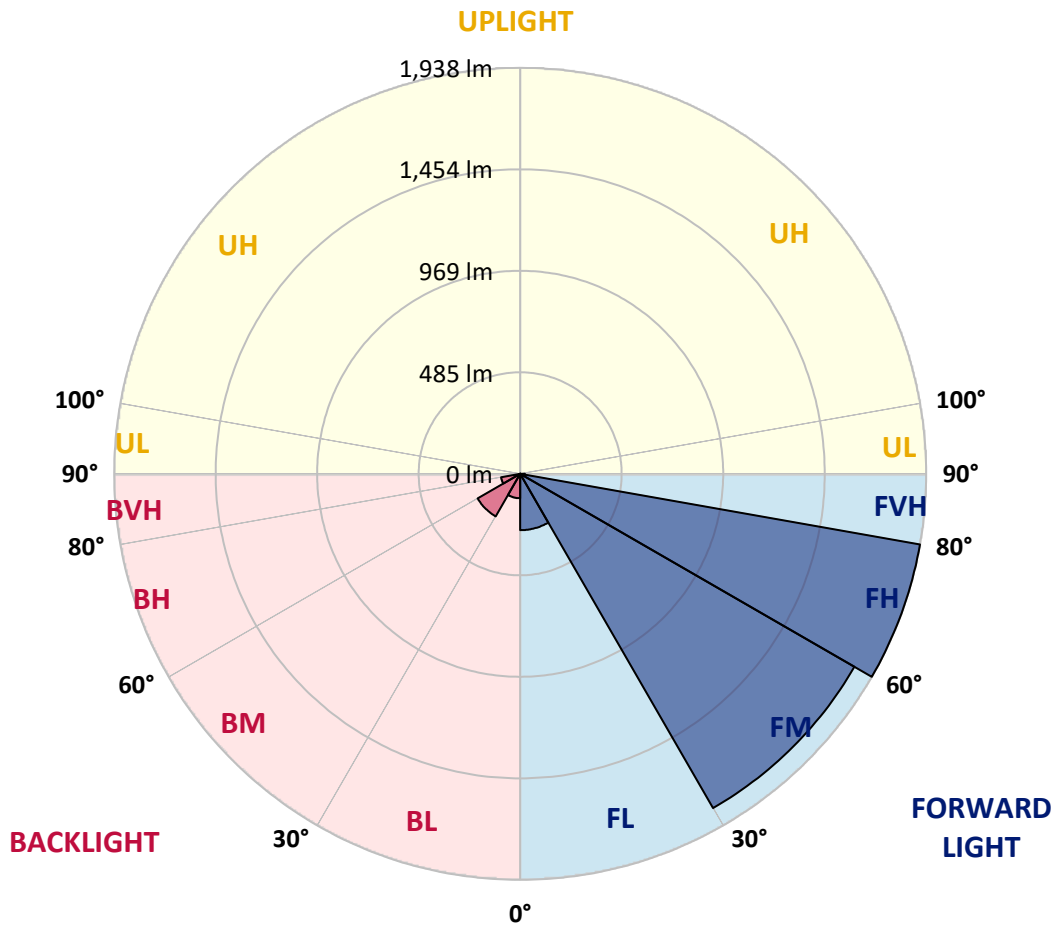
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	268.9	6.0			
FM (30°-60°)	1842.5	40.8			
FH (60°-80°)	1938.1	42.9			G2/5000
FVH (80°-90°)	22.2	0.5			G1/100
BL (0°-30°)	116.6	2.6	B1/500		
BM (30°-60°)	234.4	5.2	B1/1000		
BH (60°-80°)	92.6	2.1	B0/110		G0/110
BVH (80°-90°)	0.6	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-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2
2.5°	484.8	486.9	478.2	480.4	476.0	467.3	465.1	458.6	449.8	443.3	436.7
5°	548.1	545.9	541.5	532.8	521.9	508.8	504.4	491.3	476.0	458.6	445.5
7.5°	600.5	600.5	593.9	585.2	567.7	550.3	545.9	528.4	506.6	482.6	458.6
10°	646.3	644.2	637.6	626.7	604.9	589.6	583.0	561.2	535.0	508.8	480.4
12.5°	681.3	681.3	672.6	657.3	633.2	618.0	613.6	593.9	567.7	537.2	497.9
15°	700.9	698.8	692.2	672.6	655.1	637.6	635.4	618.0	596.1	563.4	521.9
17.5°	700.9	703.1	692.2	681.3	666.0	650.7	648.5	635.4	613.6	585.2	541.5
20°	692.2	692.2	683.5	674.7	666.0	659.4	657.3	648.5	631.1	607.0	563.4
22.5°	681.3	679.1	676.9	670.4	668.2	666.0	668.2	663.8	652.9	626.7	585.2
25°	679.1	676.9	672.6	668.2	670.4	681.3	681.3	683.5	672.6	650.7	611.4
27.5°	687.8	687.8	681.3	674.7	679.1	694.4	694.4	700.9	694.4	679.1	639.8
30°	725.0	716.2	705.3	692.2	696.6	714.0	716.2	729.3	729.3	718.4	685.7
32.5°	775.2	766.4	738.1	720.6	720.6	742.4	742.4	764.3	783.9	762.1	711.9
35°	814.5	810.1	777.4	755.5	762.1	781.7	788.3	823.2	840.7	786.1	725.0
37.5°	945.5	939.0	875.6	794.8	799.2	853.8	858.2	873.4	858.2	797.0	751.2
40°	1120.2	1124.6	1059.0	925.8	823.2	847.2	847.2	873.4	882.2	845.1	814.5
42.5°	1384.4	1358.2	1292.7	1111.5	930.2	882.2	884.4	921.5	967.3	945.5	949.9
45°	1613.7	1594.0	1524.2	1349.5	1102.7	997.9	989.2	1037.2	1126.7	1146.4	1196.6
47.5°	1816.8	1797.1	1766.5	1602.8	1360.4	1201.0	1168.2	1216.3	1371.3	1473.9	1508.9
50°	2061.3	2065.7	1995.8	1901.9	1642.1	1473.9	1465.2	1467.4	1711.9	1797.1	1847.3
52.5°	2371.4	2364.8	2242.6	2192.3	2032.9	1832.0	1781.8	1812.4	2054.8	2115.9	2198.9
55°	2591.9	2585.4	2526.4	2517.7	2465.3	2229.5	2216.4	2214.2	2432.5	2458.7	2557.0
57.5°	2720.8	2731.7	2773.2	2884.5	2928.2	2757.9	2720.8	2648.7	2771.0	2764.4	2871.4
60°	2742.6	2760.1	2878.0	3133.5	3378.0	3286.3	3236.1	3048.3	3081.1	3026.5	3092.0
62.5°	2565.7	2616.0	2825.6	3185.9	3605.1	3727.4	3685.9	3395.5	3319.1	3205.5	3122.6
65°	2111.5	2133.4	2434.7	2958.8	3581.1	3928.3	3928.3	3642.3	3397.7	3118.2	2884.5
67.5°	1458.6	1469.6	1836.4	2386.7	3214.3	3841.0	3873.7	3637.9	3260.1	2775.4	2351.7
70°	827.6	888.7	1111.5	1668.3	2533.0	3382.4	3417.3	3310.3	2729.5	2057.0	1541.6
72.5°	345.0	384.3	541.5	971.7	1722.9	2664.0	2725.1	2624.7	2039.5	1255.6	729.3
75°	107.0	111.4	179.1	423.6	941.1	1672.6	1775.3	1770.9	1218.5	587.4	297.0
77.5°	59.0	61.1	85.2	172.5	412.7	893.1	956.4	904.0	602.7	253.3	91.7
80°	28.4	30.6	45.9	83.0	181.2	334.1	393.0	364.7	209.6	120.1	30.6
82.5°	8.7	10.9	21.8	37.1	72.1	78.6	78.6	139.8	107.0	78.6	15.3
85°	0.0	0.0	6.6	13.1	13.1	13.1	13.1	30.6	50.2	48.0	6.6
87.5°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	4.4	2.2
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-SA1F-830-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2	430.2
2.5°	432.4	430.2	421.4	412.7	408.3	404.0	399.6	395.2	395.2	397.4	395.2
5°	436.7	430.2	417.1	404.0	395.2	388.7	379.9	377.8	375.6	377.8	377.8
7.5°	447.6	438.9	419.3	399.6	386.5	375.6	369.0	366.8	362.5	362.5	362.5
10°	465.1	449.8	423.6	401.8	384.3	369.0	349.4	327.5	314.4	305.7	299.2
12.5°	482.6	465.1	430.2	404.0	384.3	340.6	292.6	251.1	229.3	218.4	216.2
15°	502.2	480.4	443.3	412.7	360.3	279.5	214.0	179.1	170.3	170.3	168.1
17.5°	517.5	497.9	454.2	414.9	316.6	209.6	161.6	150.7	152.9	157.2	157.2
20°	541.5	517.5	469.5	395.2	244.6	157.2	141.9	144.1	146.3	148.5	150.7
22.5°	563.4	537.2	486.9	351.6	179.1	135.4	135.4	137.6	139.8	141.9	144.1
25°	589.6	565.6	504.4	288.2	137.6	124.5	126.6	131.0	133.2	135.4	135.4
27.5°	620.1	593.9	504.4	227.1	120.1	115.7	115.7	120.1	122.3	126.6	126.6
30°	661.6	633.2	491.3	168.1	111.4	107.0	104.8	109.2	111.4	115.7	115.7
32.5°	687.8	670.4	462.9	126.6	102.6	98.3	96.1	96.1	98.3	102.6	102.6
35°	714.0	705.3	419.3	109.2	96.1	91.7	87.3	83.0	83.0	83.0	83.0
37.5°	755.5	768.6	355.9	100.4	91.7	85.2	78.6	72.1	67.7	65.5	63.3
40°	840.7	851.6	292.6	93.9	85.2	78.6	67.7	59.0	52.4	48.0	48.0
42.5°	973.9	965.2	222.7	89.5	78.6	69.9	56.8	48.0	39.3	34.9	34.9
45°	1205.4	1107.1	163.8	83.0	74.2	63.3	48.0	37.1	28.4	26.2	26.2
47.5°	1489.2	1270.9	124.5	78.6	67.7	54.6	37.1	28.4	21.8	19.7	19.7
50°	1794.9	1439.0	102.6	72.1	61.1	45.9	30.6	19.7	15.3	15.3	15.3
52.5°	2083.2	1552.5	85.2	65.5	52.4	37.1	21.8	15.3	13.1	13.1	13.1
55°	2351.7	1622.4	69.9	56.8	43.7	28.4	17.5	13.1	10.9	8.7	8.7
57.5°	2535.2	1611.5	56.8	45.9	32.8	19.7	13.1	10.9	8.7	6.6	6.6
60°	2598.5	1515.4	43.7	37.1	24.0	15.3	10.9	8.7	6.6	4.4	4.4
62.5°	2509.0	1325.4	34.9	28.4	17.5	13.1	8.7	6.6	4.4	2.2	2.2
65°	2257.8	1139.8	26.2	19.7	13.1	8.7	6.6	4.4	2.2	0.0	0.0
67.5°	1797.1	884.4	21.8	13.1	8.7	6.6	4.4	2.2	0.0	0.0	0.0
70°	1124.6	554.6	17.5	8.7	6.6	4.4	2.2	0.0	0.0	0.0	0.0
72.5°	545.9	273.0	13.1	6.6	4.4	2.2	2.2	0.0	0.0	0.0	0.0
75°	203.1	89.5	10.9	6.6	2.2	2.2	0.0	0.0	0.0	0.0	0.0
77.5°	65.5	30.6	8.7	6.6	4.4	2.2	0.0	0.0	0.0	0.0	0.0
80°	24.0	13.1	4.4	2.2	2.2	2.2	0.0	0.0	0.0	0.0	0.0
82.5°	10.9	6.6	2.2	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0
85°	4.4	4.4	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.2	2.2	2.2	0.0	0.0	0.0	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			

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)