

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: P438973

Luminaire Tested: **ISW-SA1F-830-U-T4FT**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438973  
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-SA1F-830-U-T4FT  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6202 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

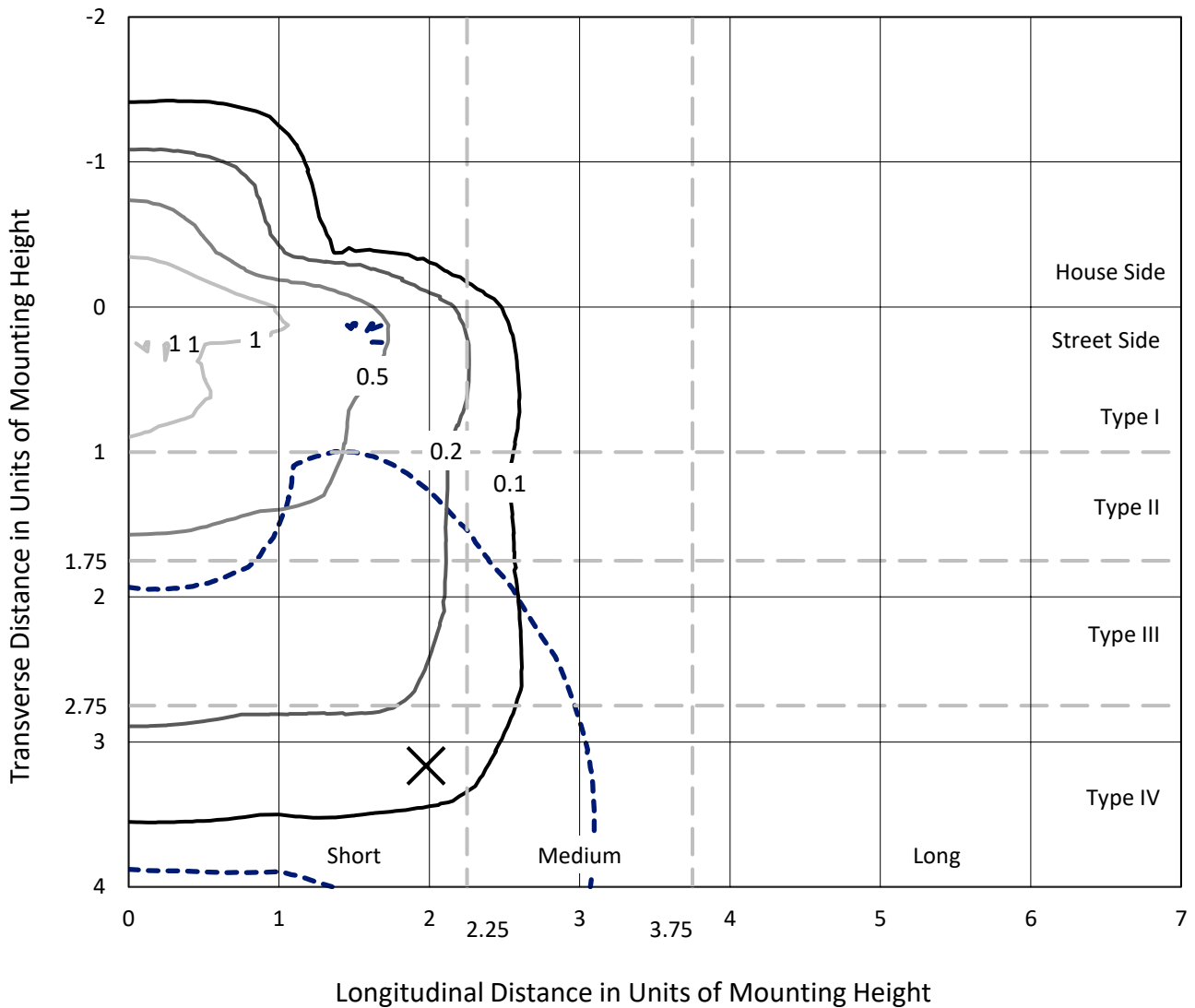
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

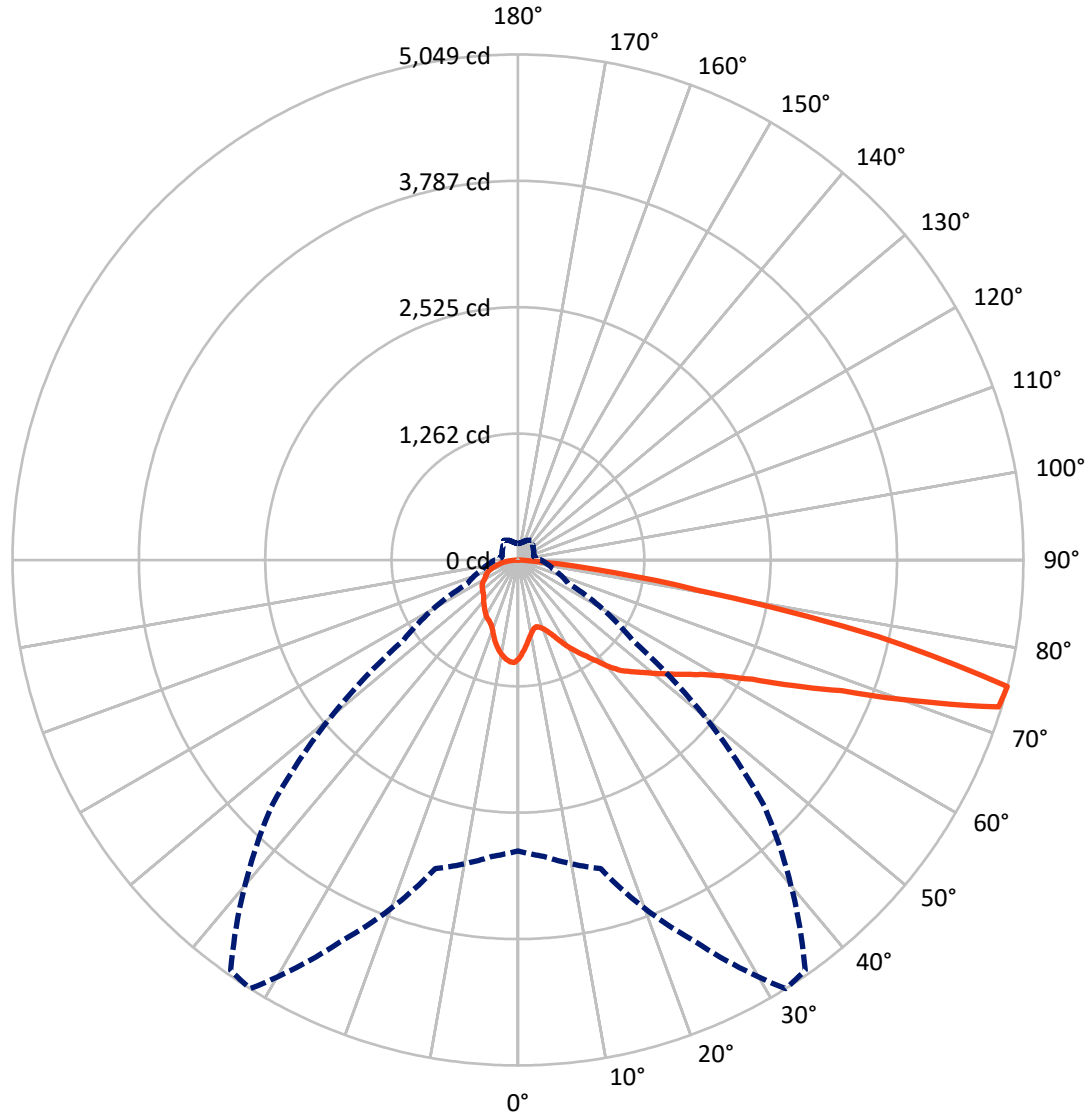
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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



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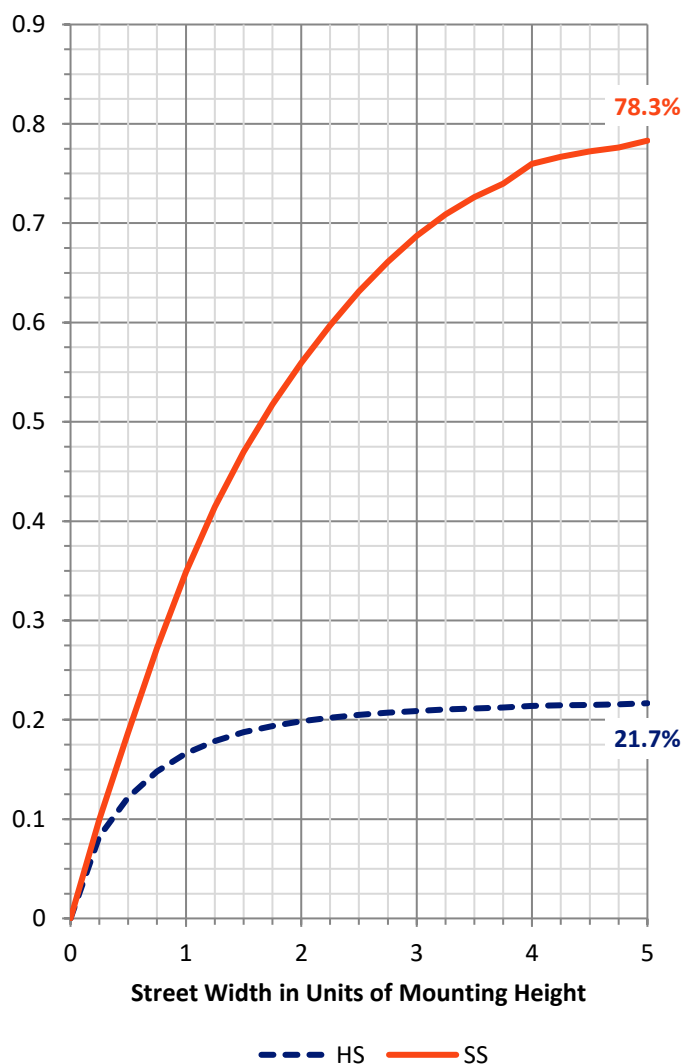
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1358.9	0.0	1358.9
	% Fixture	21.9	0.0	21.9
<b>Street Side</b>	Lumens	4843.1	0.0	4843.1
	% Fixture	78.1	0.0	78.1
<b>Total</b>	Lumens	6202.0	0.0	6202.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.6	1.4
10°-20°	245.1	4.0
20°-30°	405.5	6.5
30°-40°	604.5	9.7
40°-50°	860.7	13.9
50°-60°	1184.1	19.1
60°-70°	1492.2	24.1
70°-80°	1206.3	19.5
80°-90°	114.0	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°	6202.0	100.0
0°-180°	6202.0	100.0

**Coefficient of Utilization**



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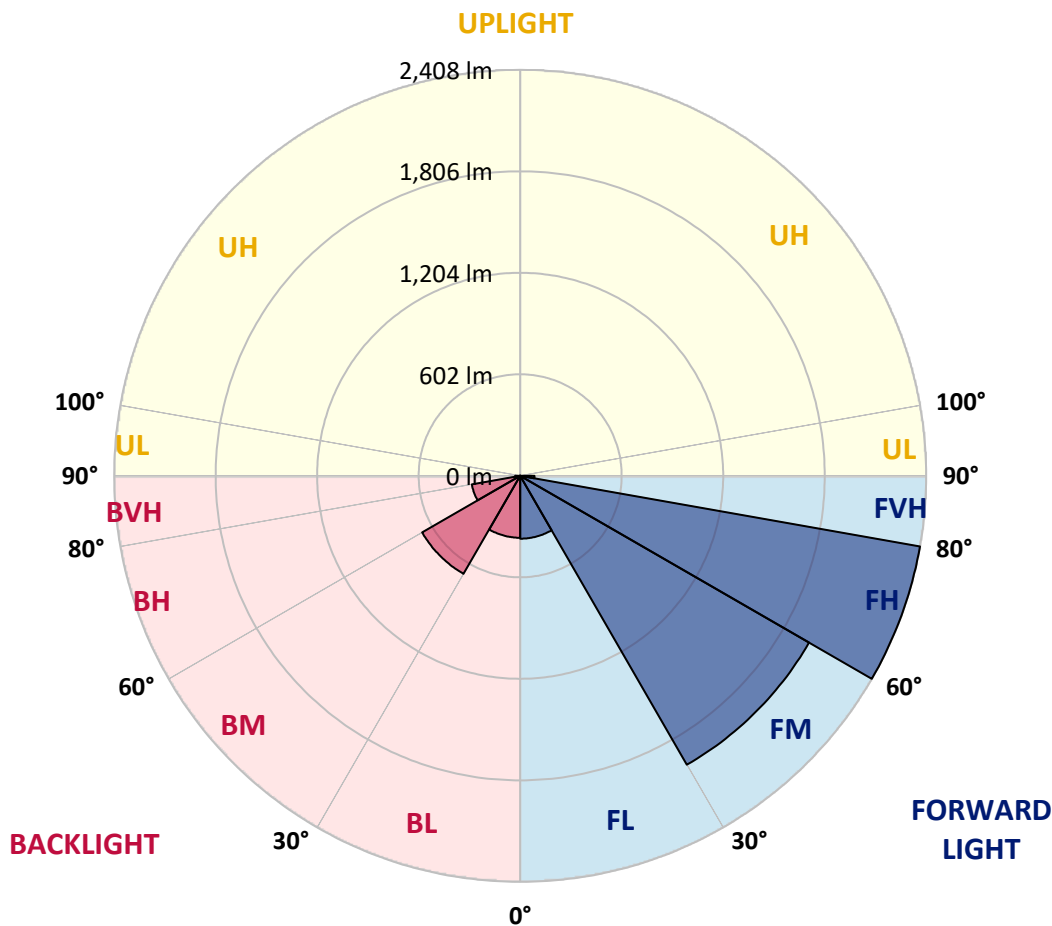
CATALOG NUMBER: ISW-SA1F-830-U-T4FT

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	372.9	6.0			
FM (30°-60°)	1978.0	31.9			
FH (60°-80°)	2407.5	38.8			G2/5000
FVH (80°-90°)	84.7	1.4			G1/100
BL (0°-30°)	367.3	5.9	B1/500		
BM (30°-60°)	671.2	10.8	B1/1000		
BH (60°-80°)	291.0	4.7	B1/500		G1/500
BVH (80°-90°)	29.3	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3
2.5°	901.6	908.4	910.7	915.2	924.2	919.7	930.9	944.5	962.5	971.5	989.5
5°	825.0	825.0	831.8	843.0	858.8	858.8	879.1	903.9	935.5	960.2	991.8
7.5°	757.4	757.4	764.1	777.7	793.4	804.7	829.5	867.8	910.7	958.0	998.6
10°	701.0	703.3	707.8	721.3	741.6	752.9	788.9	831.8	888.1	949.0	1005.3
12.5°	680.7	678.5	676.2	687.5	703.3	712.3	752.9	807.0	872.3	946.7	1018.9
15°	696.5	692.0	685.2	685.2	692.0	696.5	730.3	786.7	858.8	944.5	1034.6
17.5°	737.1	732.6	716.8	701.0	705.5	707.8	730.3	775.4	852.0	953.5	1057.2
20°	793.4	786.7	759.6	739.3	734.8	734.8	748.4	782.2	856.6	971.5	1086.5
22.5°	861.1	854.3	822.7	786.7	782.2	779.9	786.7	809.2	870.1	991.8	1131.6
25°	951.2	944.5	906.1	861.1	845.3	843.0	836.3	849.8	892.6	1018.9	1163.1
27.5°	1048.2	1050.4	1005.3	944.5	928.7	921.9	903.9	901.6	919.7	1041.4	1217.2
30°	1138.3	1133.8	1086.5	1036.9	1014.3	1005.3	976.0	962.5	951.2	1075.2	1280.3
32.5°	1181.1	1187.9	1165.4	1118.0	1100.0	1084.2	1050.4	1027.9	1012.1	1127.0	1357.0
35°	1253.3	1255.5	1246.5	1217.2	1181.1	1169.9	1138.3	1122.5	1088.7	1190.2	1449.4
37.5°	1325.4	1332.2	1329.9	1311.9	1280.3	1269.1	1242.0	1235.2	1167.6	1269.1	1564.3
40°	1433.6	1422.3	1406.6	1413.3	1402.0	1395.3	1384.0	1361.5	1278.1	1354.7	1677.0
42.5°	1550.8	1530.5	1474.2	1492.2	1508.0	1514.8	1530.5	1505.7	1393.0	1483.2	1769.5
45°	1645.5	1629.7	1555.3	1559.8	1591.4	1613.9	1688.3	1674.8	1541.8	1623.0	1893.4
47.5°	1699.6	1686.1	1634.2	1656.8	1677.0	1708.6	1852.9	1841.6	1681.6	1774.0	2042.2
50°	1776.2	1753.7	1704.1	1744.7	1780.7	1805.5	2012.9	2008.4	1801.0	1929.5	2211.3
52.5°	1819.1	1796.5	1792.0	1848.4	1891.2	1925.0	2184.2	2170.7	1918.2	2085.0	2371.3
55°	1877.7	1882.2	1911.5	1954.3	2015.2	2071.5	2351.0	2283.4	2026.4	2238.3	2529.1
57.5°	2006.1	2001.6	2058.0	2078.3	2157.2	2229.3	2549.4	2402.9	2116.6	2348.8	2603.5
60°	2177.5	2186.5	2206.8	2258.6	2344.3	2454.7	2741.0	2526.8	2175.2	2427.7	2590.0
62.5°	2502.0	2450.2	2441.2	2454.7	2623.8	2752.3	2928.1	2637.3	2200.0	2429.9	2448.0
65°	2831.1	2810.9	2741.0	2774.8	3020.5	3137.7	3169.3	2709.4	2150.4	2290.2	2132.4
67.5°	3171.5	3169.3	3094.9	3191.8	3487.1	3624.6	3437.5	2695.9	1988.1	1963.3	1638.7
70°	3520.9	3536.7	3536.7	3811.7	4215.2	4251.2	3737.3	2567.4	1665.8	1390.8	958.0
72.5°	3674.2	3683.2	3764.3	4375.2	5019.9	5031.1	3908.6	2179.7	1136.1	741.6	482.4
75°	2905.5	2973.2	3191.8	4212.9	5049.2	5004.1	3482.6	1395.3	554.5	369.7	268.2
77.5°	1140.6	1165.4	1609.4	2682.4	3678.7	3723.8	2254.1	556.8	281.8	234.4	193.9
80°	322.3	338.1	570.3	1066.2	1816.8	2008.4	897.1	241.2	189.3	171.3	139.8
82.5°	115.0	130.7	211.9	408.0	775.4	818.2	243.4	119.5	121.7	110.5	85.7
85°	15.8	13.5	29.3	74.4	171.3	144.3	40.6	31.6	49.6	51.8	36.1
87.5°	0.0	0.0	0.0	2.3	2.3	2.3	0.0	0.0	0.0	2.3	2.3
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3	987.3
2.5°	994.1	998.6	1007.6	1012.1	1016.6	1025.6	1023.4	1027.9	1027.9	1025.6	1030.1
5°	1003.1	1014.3	1025.6	1030.1	1032.4	1032.4	1021.1	1014.3	1012.1	1009.8	1012.1
7.5°	1012.1	1027.9	1039.1	1036.9	1027.9	1012.1	998.6	987.3	976.0	971.5	976.0
10°	1027.9	1043.6	1050.4	1034.6	1009.8	985.0	964.8	949.0	930.9	928.7	930.9
12.5°	1041.4	1061.7	1061.7	1025.6	991.8	958.0	926.4	901.6	879.1	872.3	872.3
15°	1063.9	1079.7	1063.9	1014.3	967.0	924.2	879.1	847.5	820.5	809.2	811.5
17.5°	1088.7	1100.0	1059.4	996.3	940.0	883.6	825.0	782.2	761.9	750.6	752.9
20°	1118.0	1120.3	1059.4	973.8	899.4	825.0	761.9	730.3	716.8	710.0	712.3
22.5°	1156.4	1147.3	1052.7	944.5	847.5	766.4	707.8	698.8	698.8	698.8	705.5
25°	1196.9	1172.1	1041.4	906.1	779.9	696.5	674.0	685.2	694.3	694.3	698.8
27.5°	1237.5	1196.9	1018.9	849.8	701.0	646.9	655.9	674.0	683.0	683.0	687.5
30°	1287.1	1226.2	991.8	773.2	626.6	613.1	635.7	658.2	671.7	671.7	676.2
32.5°	1350.2	1251.0	951.2	694.3	577.0	583.8	608.6	633.4	649.2	653.7	655.9
35°	1420.1	1284.8	894.9	606.4	543.2	561.3	581.6	604.1	617.6	622.1	622.1
37.5°	1492.2	1318.6	820.5	532.0	513.9	538.7	559.0	570.3	579.3	579.3	579.3
40°	1564.3	1336.7	723.6	473.4	484.6	520.7	538.7	534.2	532.0	525.2	527.5
42.5°	1638.7	1350.2	619.9	430.5	455.3	500.4	513.9	502.7	484.6	473.4	475.6
45°	1719.9	1370.5	534.2	399.0	426.0	482.4	495.9	473.4	450.8	432.8	428.3
47.5°	1812.3	1404.3	457.6	369.7	408.0	471.1	484.6	453.1	423.8	399.0	394.5
50°	1938.5	1456.1	399.0	349.4	396.7	464.3	475.6	435.0	401.2	369.7	367.4
52.5°	2067.0	1494.5	358.4	331.4	383.2	450.8	464.3	421.5	380.9	347.1	342.6
55°	2161.7	1490.0	322.3	313.3	365.2	432.8	453.1	405.7	353.9	322.3	317.8
57.5°	2202.3	1397.5	293.0	297.5	344.9	410.2	435.0	380.9	333.6	306.6	304.3
60°	2132.4	1248.8	272.7	279.5	322.3	380.9	401.2	362.9	320.1	295.3	293.0
62.5°	2010.7	1082.0	257.0	266.0	299.8	353.9	380.9	340.4	302.0	284.0	281.8
65°	1722.1	899.4	241.2	250.2	279.5	326.8	362.9	326.8	288.5	270.5	268.2
67.5°	1300.6	646.9	225.4	234.4	261.5	306.6	347.1	308.8	268.2	254.7	254.7
70°	775.4	396.7	205.1	218.6	238.9	281.8	322.3	284.0	243.4	238.9	234.4
72.5°	378.7	252.5	187.1	198.4	214.1	250.2	286.3	252.5	211.9	200.6	198.4
75°	227.7	182.6	162.3	175.8	187.1	209.6	241.2	216.4	184.8	166.8	164.5
77.5°	164.5	137.5	137.5	151.0	151.0	173.6	207.4	184.8	155.5	144.3	142.0
80°	117.2	103.7	112.7	121.7	117.2	146.5	175.8	155.5	126.2	117.2	115.0
82.5°	76.6	72.1	85.7	83.4	83.4	112.7	144.3	117.2	92.4	76.6	72.1
85°	31.6	36.1	49.6	47.3	47.3	63.1	74.4	60.9	42.8	33.8	33.8
87.5°	0.0	2.3	6.8	4.5	4.5	6.8	2.3	2.3	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

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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**

$\lambda$ (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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**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)