

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: P438617

Luminaire Tested: **ISW-SA1D-830-U-SL2**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438617  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1D-830-U-SL2  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

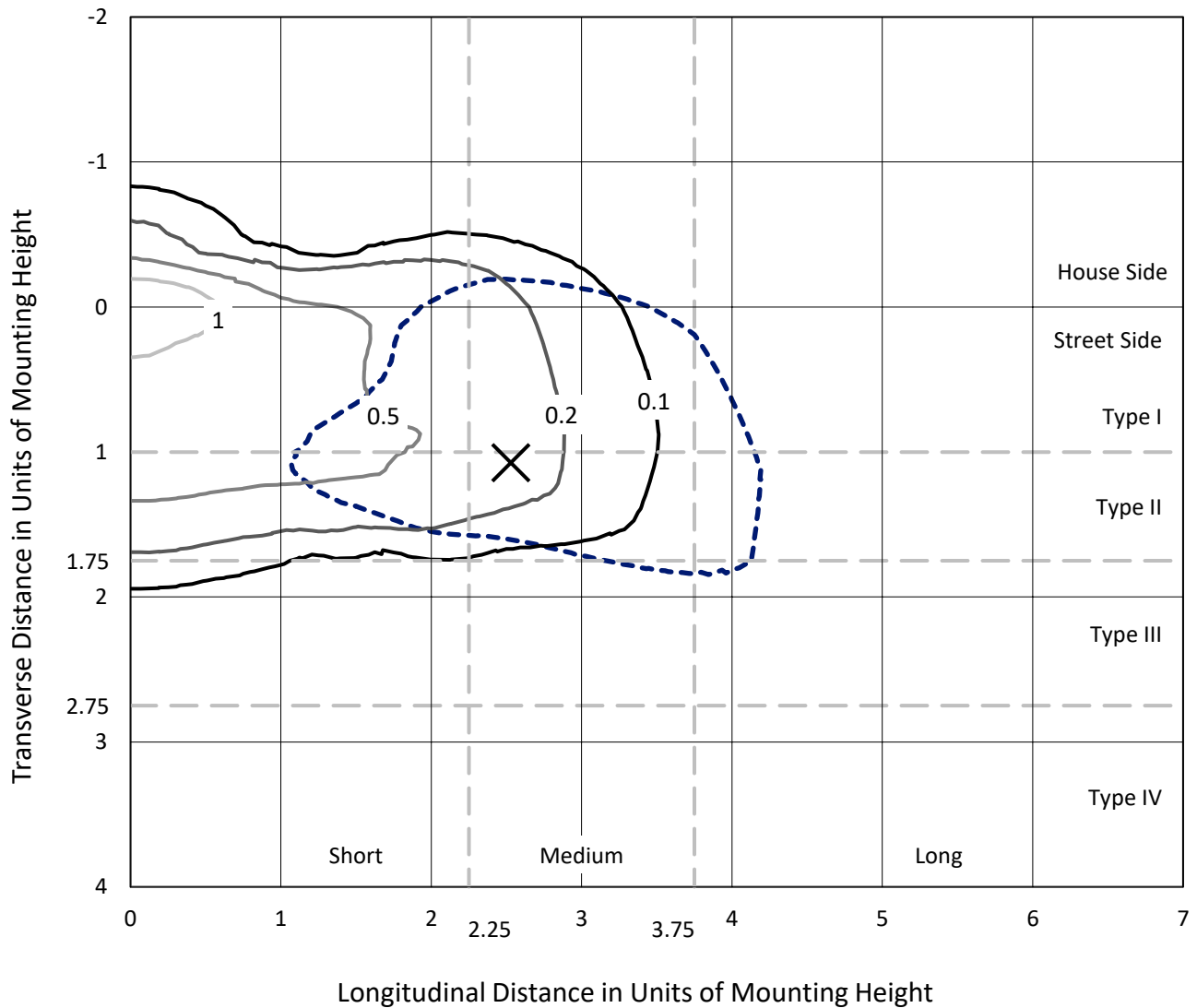
Lumens per Lamp: N/A  
Luminaire Lumens: 4487 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



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### Iso-Footcandle Lines of Horizontal Illumination

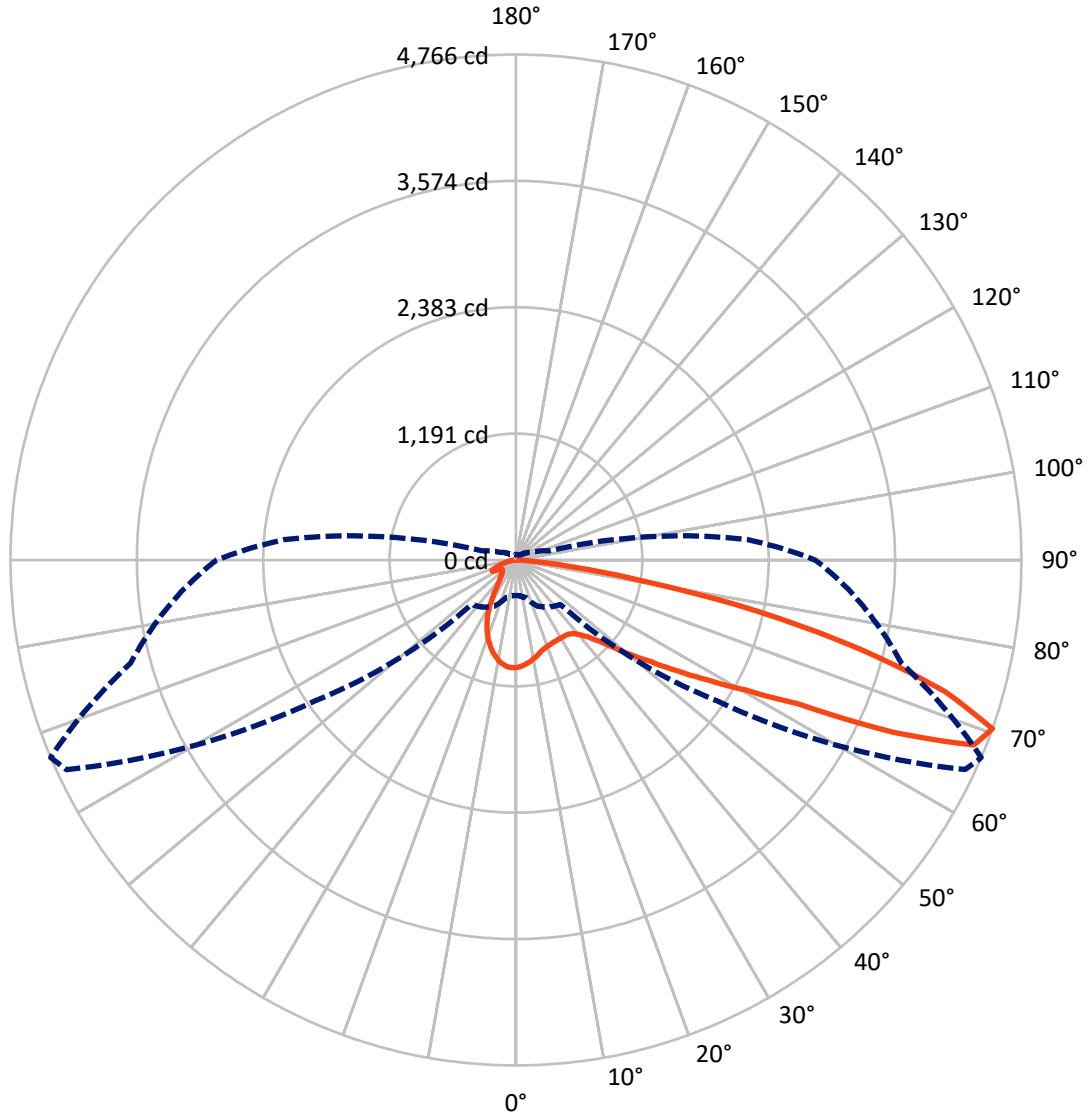
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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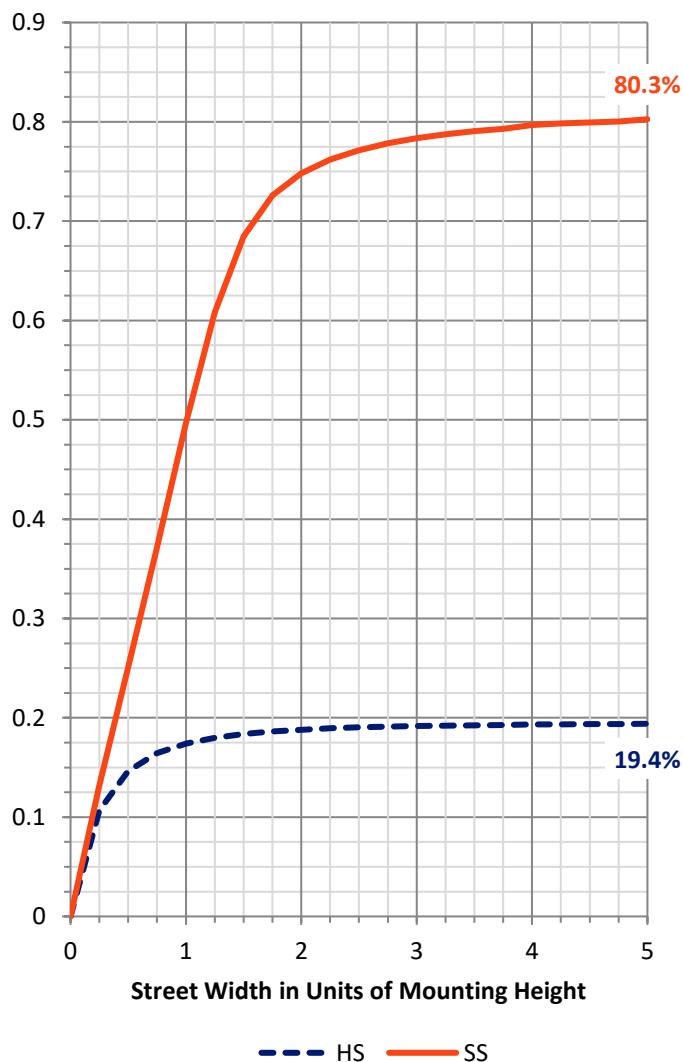
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	878.8	0.0	878.8
	% Fixture	19.6	0.0	19.6
<b>Street Side</b>	Lumens	3608.2	0.0	3608.2
	% Fixture	80.4	0.0	80.4
<b>Total</b>	Lumens	4487.0	0.0	4487.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.9	2.0
10°-20°	215.3	4.8
20°-30°	296.8	6.6
30°-40°	400.9	8.9
40°-50°	594.8	13.3
50°-60°	915.5	20.4
60°-70°	1132.0	25.2
70°-80°	758.3	16.9
80°-90°	84.5	1.9
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°	4487.0	100.0
0°-180°	4487.0	100.0

**Coefficient of Utilization**



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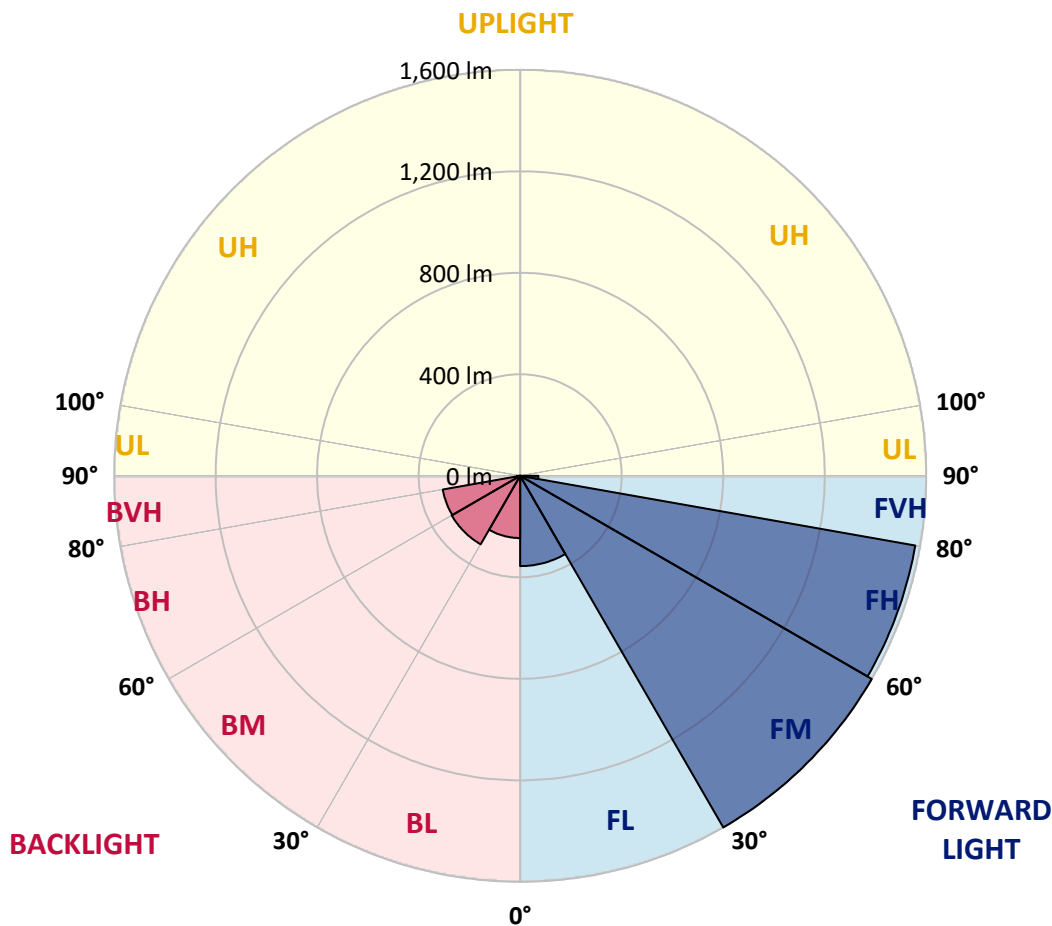
CATALOG NUMBER: ISW-SA1D-830-U-SL2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	355.9	7.9			
FM (30°-60°)	1599.7	35.7			
FH (60°-80°)	1580.7	35.2			G1/1800
FVH (80°-90°)	71.9	1.6			G1/100
BL (0°-30°)	245.2	5.5	B1/500		
BM (30°-60°)	311.5	6.9	B1/1000		
BH (60°-80°)	309.5	6.9	B1/500		G1/500
BVH (80°-90°)	12.6	0.3			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 III Medium





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CATALOG NUMBER: ISW-SA1D-830-U-SL2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2
2.5°	958.0	964.5	966.1	971.0	977.5	984.0	992.1	1001.8	1003.5	1008.3	1018.1
5°	893.0	896.3	899.5	909.3	920.6	941.8	962.9	982.4	985.6	1001.8	1019.7
7.5°	833.0	841.1	842.7	850.8	868.7	894.7	923.9	958.0	967.7	990.5	1018.1
10°	789.1	794.0	797.2	811.9	826.5	855.7	891.4	933.6	943.4	977.5	1016.4
12.5°	753.4	761.5	766.4	776.1	798.9	824.8	860.6	906.0	919.0	961.2	1010.0
15°	733.9	740.4	742.0	753.4	771.3	797.2	831.3	883.3	893.0	945.0	1010.0
17.5°	729.0	730.7	732.3	738.8	753.4	774.5	810.2	863.8	875.2	938.5	1010.0
20°	738.8	738.8	738.8	735.5	746.9	763.1	798.9	847.6	863.8	932.0	1014.8
22.5°	761.5	763.1	758.3	750.2	745.3	756.7	787.5	842.7	857.3	930.4	1024.6
25°	794.0	795.6	792.4	781.0	758.3	756.7	782.6	837.8	850.8	928.8	1022.9
27.5°	837.8	847.6	837.8	824.8	795.6	769.6	787.5	834.6	849.2	928.8	1026.2
30°	899.5	906.0	901.2	880.1	842.7	797.2	794.0	837.8	849.2	927.1	1024.6
32.5°	961.2	962.9	967.7	953.1	907.7	837.8	811.9	841.1	850.8	925.5	1019.7
35°	1008.3	1018.1	1039.2	1040.8	987.2	896.3	849.2	854.1	857.3	930.4	1014.8
37.5°	1068.4	1071.7	1105.8	1131.7	1084.6	977.5	901.2	878.4	880.1	946.6	1022.9
40°	1123.6	1136.6	1183.7	1216.2	1199.9	1086.3	972.6	922.3	925.5	975.9	1042.4
42.5°	1206.4	1216.2	1264.9	1310.3	1315.2	1209.7	1071.7	997.0	988.8	1032.7	1084.6
45°	1279.5	1290.9	1352.6	1419.1	1441.9	1349.3	1195.1	1099.3	1086.3	1128.5	1162.6
47.5°	1381.8	1401.3	1450.0	1526.3	1602.6	1519.8	1352.6	1238.9	1227.5	1256.8	1266.5
50°	1479.2	1490.6	1531.2	1623.7	1758.5	1734.1	1545.8	1420.8	1402.9	1407.8	1430.5
52.5°	1493.8	1498.7	1540.9	1638.3	1891.6	1995.6	1782.8	1625.3	1592.9	1597.7	1625.3
55°	1383.4	1402.9	1433.7	1570.1	1901.4	2286.2	2115.7	1894.9	1844.5	1826.7	1849.4
57.5°	1154.5	1177.2	1221.0	1362.3	1789.3	2443.7	2661.3	2216.4	2138.4	2055.6	2083.2
60°	850.8	875.2	902.8	1040.8	1505.2	2468.1	3203.6	2606.1	2490.8	2284.6	2299.2
62.5°	652.7	652.7	677.1	733.9	1006.7	2291.1	3521.8	3265.3	2982.8	2563.9	2546.0
65°	527.7	534.2	558.6	612.1	636.5	1627.0	3648.5	4223.3	3922.9	2898.3	2805.8
67.5°	436.8	438.4	466.0	550.4	556.9	894.7	3309.1	4726.6	4655.2	3317.3	3081.8
70°	334.5	336.1	368.6	479.0	542.3	592.7	2315.4	4674.7	4765.6	3762.2	3141.9
72.5°	222.4	232.2	271.2	380.0	540.7	558.6	1256.8	4088.5	4220.0	3935.9	2940.6
75°	138.0	139.6	180.2	263.0	496.9	556.9	738.8	3185.7	3348.1	3265.3	2550.9
77.5°	84.4	87.7	107.2	172.1	384.8	558.6	526.1	2192.0	2326.8	2143.3	1503.6
80°	52.0	52.0	61.7	103.9	250.1	500.1	453.0	1274.6	1261.6	792.4	427.0
82.5°	19.5	21.1	32.5	56.8	126.7	388.1	397.8	576.4	531.0	233.8	152.6
85°	3.2	3.2	6.5	17.9	34.1	160.7	220.8	203.0	170.5	71.4	63.3
87.5°	0.0	0.0	0.0	1.6	1.6	3.2	4.9	4.9	4.9	4.9	6.5
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°	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2	1013.2
2.5°	1018.1	1021.3	1019.7	1014.8	1010.0	1006.7	998.6	993.7	995.3	995.3	997.0
5°	1021.3	1026.2	1018.1	1008.3	990.5	971.0	953.1	943.4	930.4	935.3	932.0
7.5°	1026.2	1029.4	1014.8	985.6	954.7	922.3	891.4	863.8	842.7	833.0	839.5
10°	1022.9	1027.8	1000.2	956.4	909.3	857.3	810.2	764.8	735.5	716.1	720.9
12.5°	1021.3	1016.4	979.1	914.2	849.2	777.8	706.3	651.1	602.4	582.9	586.2
15°	1014.8	1011.6	953.1	870.3	781.0	680.3	586.2	514.7	456.3	436.8	443.3
17.5°	1018.1	1008.3	922.3	816.7	695.0	571.5	456.3	386.4	357.2	350.7	349.1
20°	1014.8	997.0	891.4	758.3	604.0	443.3	339.4	302.0	302.0	311.8	313.4
22.5°	1018.1	987.2	857.3	691.7	500.1	332.9	264.7	254.9	269.5	290.6	290.6
25°	1018.1	975.9	820.0	617.0	391.3	253.3	225.7	225.7	245.2	264.7	263.0
27.5°	1011.6	953.1	777.8	537.5	290.6	209.5	198.1	203.0	216.0	232.2	230.6
30°	995.3	930.4	725.8	444.9	220.8	185.1	183.5	185.1	191.6	201.3	199.7
32.5°	980.7	904.4	675.5	345.9	186.7	172.1	170.5	172.1	173.7	177.0	177.0
35°	971.0	881.7	615.4	266.3	168.9	164.0	160.7	160.7	157.5	159.1	159.1
37.5°	959.6	860.6	553.7	207.8	159.1	155.9	152.6	147.8	147.8	144.5	144.5
40°	959.6	844.3	490.4	175.4	152.6	151.0	144.5	138.0	134.8	134.8	134.8
42.5°	985.6	844.3	431.9	160.7	146.1	144.5	136.4	129.9	126.7	126.7	126.7
45°	1029.4	854.1	371.8	151.0	141.3	138.0	128.3	121.8	118.5	118.5	116.9
47.5°	1105.8	894.7	318.2	146.1	136.4	131.5	120.2	113.7	110.4	110.4	110.4
50°	1234.0	975.9	274.4	141.3	131.5	123.4	113.7	107.2	103.9	103.9	102.3
52.5°	1411.0	1097.6	253.3	138.0	125.0	115.3	107.2	100.7	97.4	95.8	95.8
55°	1623.7	1281.1	250.1	136.4	118.5	108.8	100.7	94.2	90.9	89.3	89.3
57.5°	1855.9	1482.5	272.8	133.1	112.0	100.7	94.2	87.7	84.4	82.8	82.8
60°	2080.0	1703.3	345.9	129.9	107.2	94.2	86.1	81.2	77.9	76.3	76.3
62.5°	2339.8	1935.5	506.6	131.5	103.9	87.7	79.6	74.7	73.1	71.4	71.4
65°	2625.6	2201.8	647.9	144.5	105.5	81.2	73.1	69.8	66.6	64.9	64.9
67.5°	2878.9	2373.9	540.7	167.2	115.3	76.3	64.9	63.3	60.1	58.5	60.1
70°	2822.0	2192.0	332.9	168.9	116.9	73.1	58.5	55.2	52.0	52.0	52.0
72.5°	2573.6	1933.8	232.2	146.1	103.9	64.9	50.3	47.1	45.5	45.5	45.5
75°	2166.0	1594.5	185.1	118.5	81.2	53.6	42.2	40.6	39.0	37.3	37.3
77.5°	1185.3	867.1	138.0	90.9	60.1	40.6	35.7	32.5	30.9	30.9	30.9
80°	347.5	297.1	86.1	64.9	39.0	29.2	27.6	24.4	22.7	22.7	22.7
82.5°	146.1	123.4	52.0	35.7	26.0	19.5	17.9	16.2	14.6	13.0	14.6
85°	56.8	60.1	32.5	21.1	14.6	9.7	8.1	6.5	6.5	4.9	6.5
87.5°	6.5	8.1	6.5	4.9	3.2	1.6	1.6	1.6	1.6	1.6	1.6
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 $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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)