

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: P437594

Luminaire Tested: **ISC-SA1D-830-U-SL4-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437594  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISC-SA1D-830-U-SL4-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3723 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

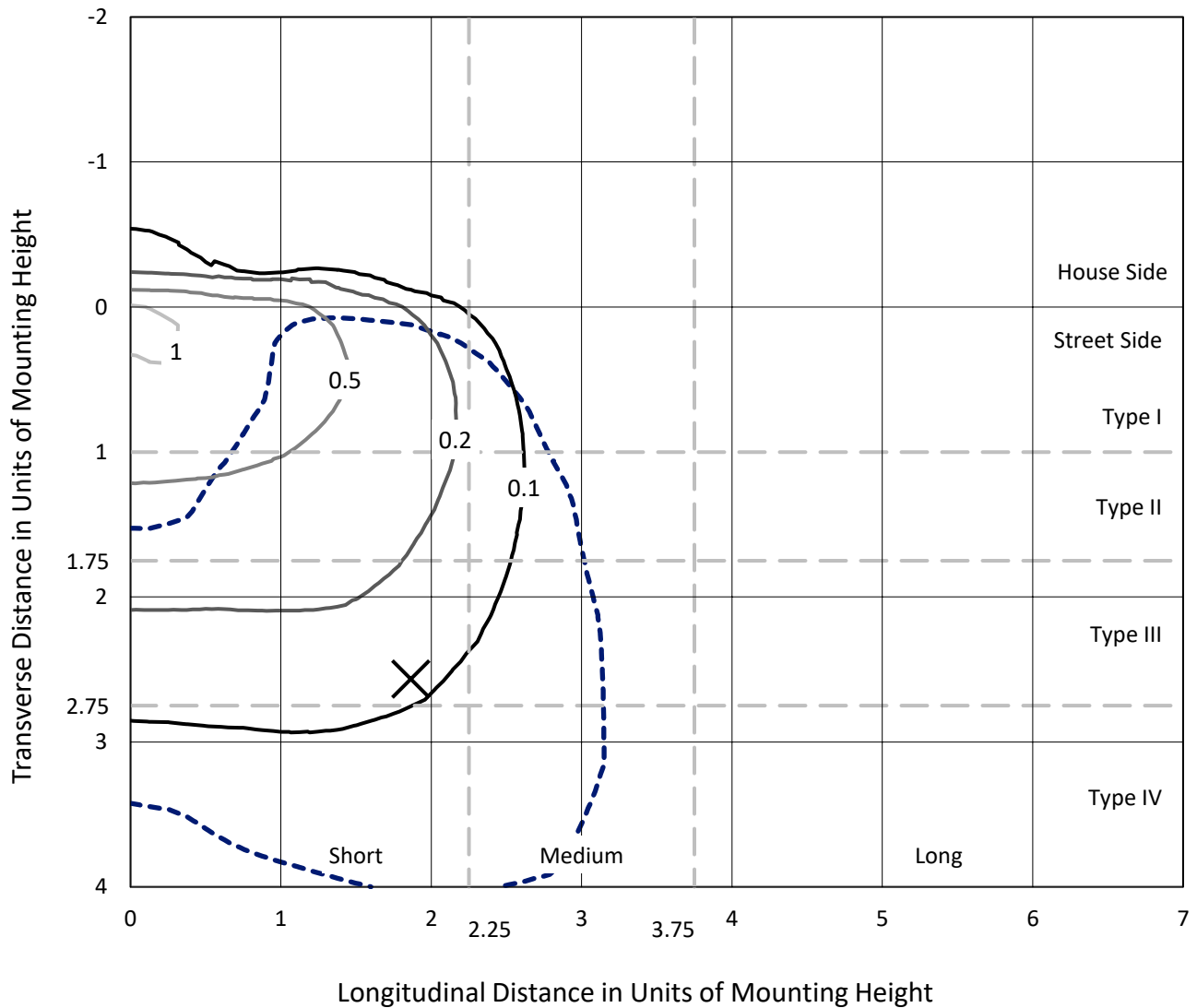
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

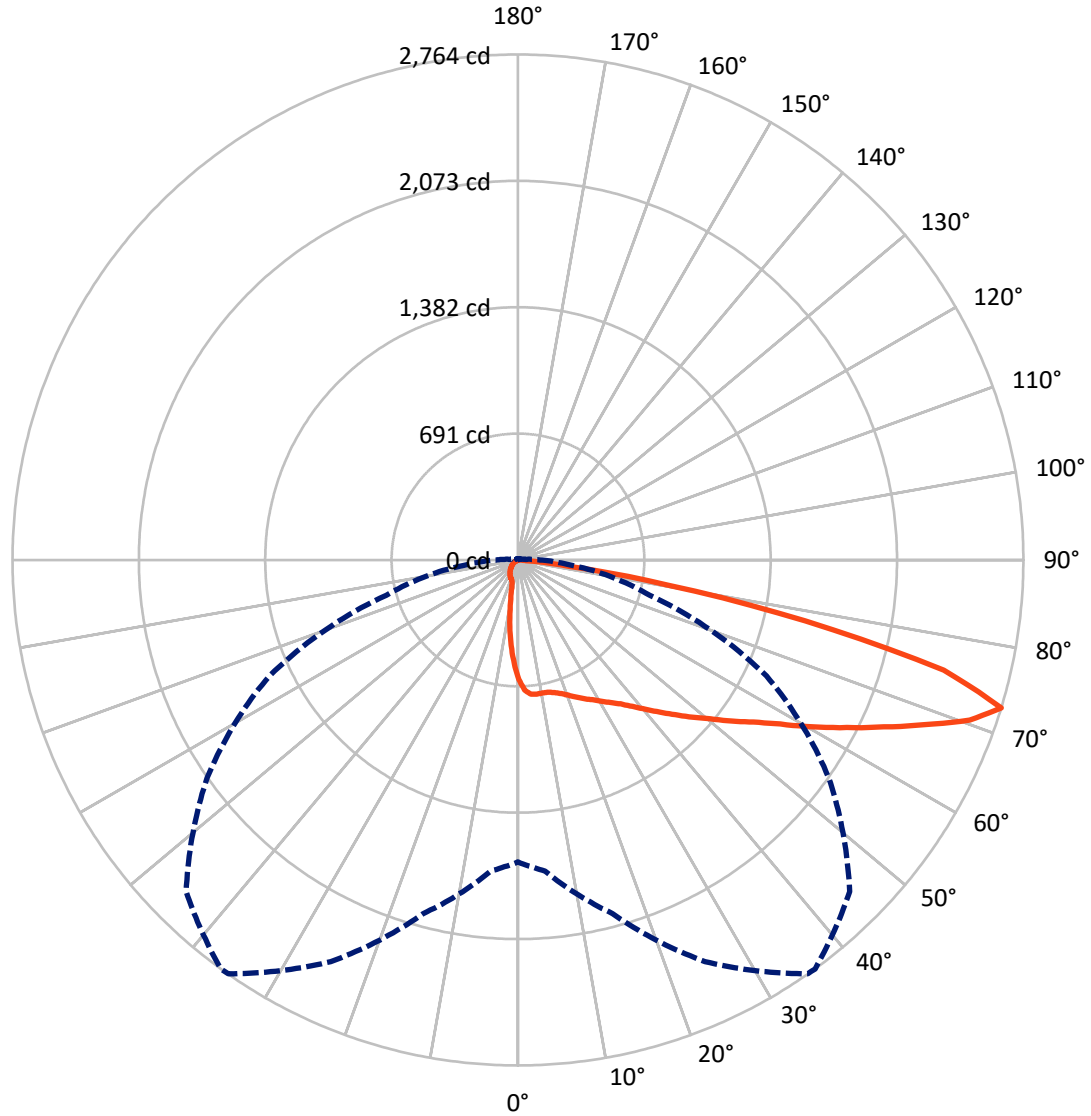
✕ Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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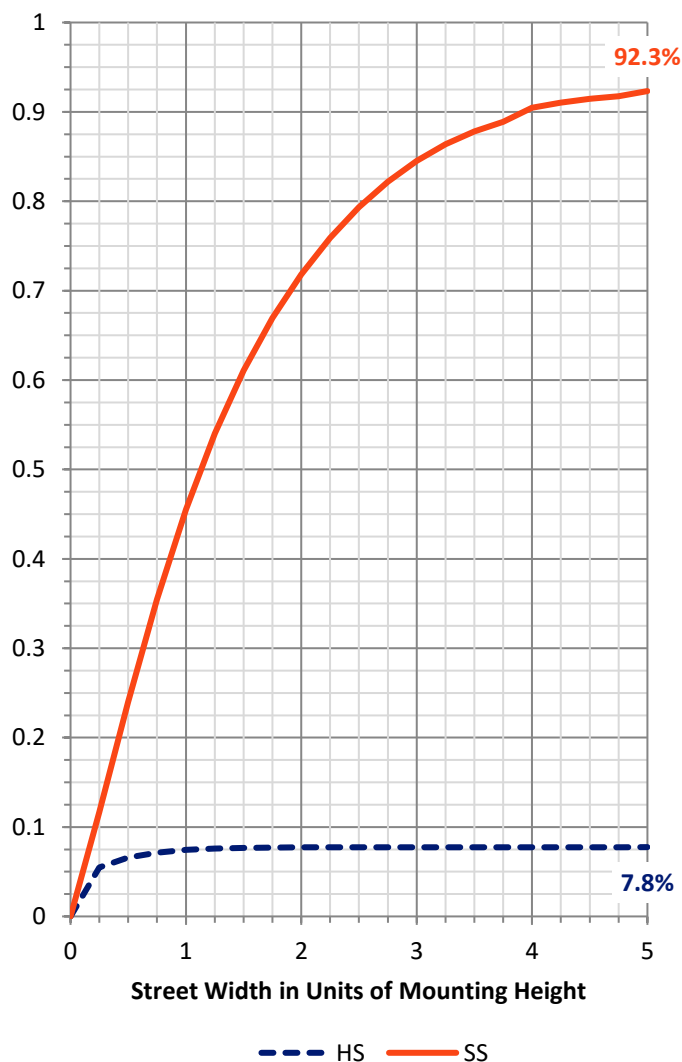
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	290.5	0.0	290.5
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	3432.5	0.0	3432.5
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	3723.0	0.0	3723.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.9	1.5
10°-20°	140.2	3.8
20°-30°	228.9	6.1
30°-40°	348.1	9.3
40°-50°	532.3	14.3
50°-60°	756.8	20.3
60°-70°	959.7	25.8
70°-80°	657.1	17.7
80°-90°	44.0	1.2
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°	3723.0	100.0
0°-180°	3723.0	100.0

**Coefficient of Utilization**



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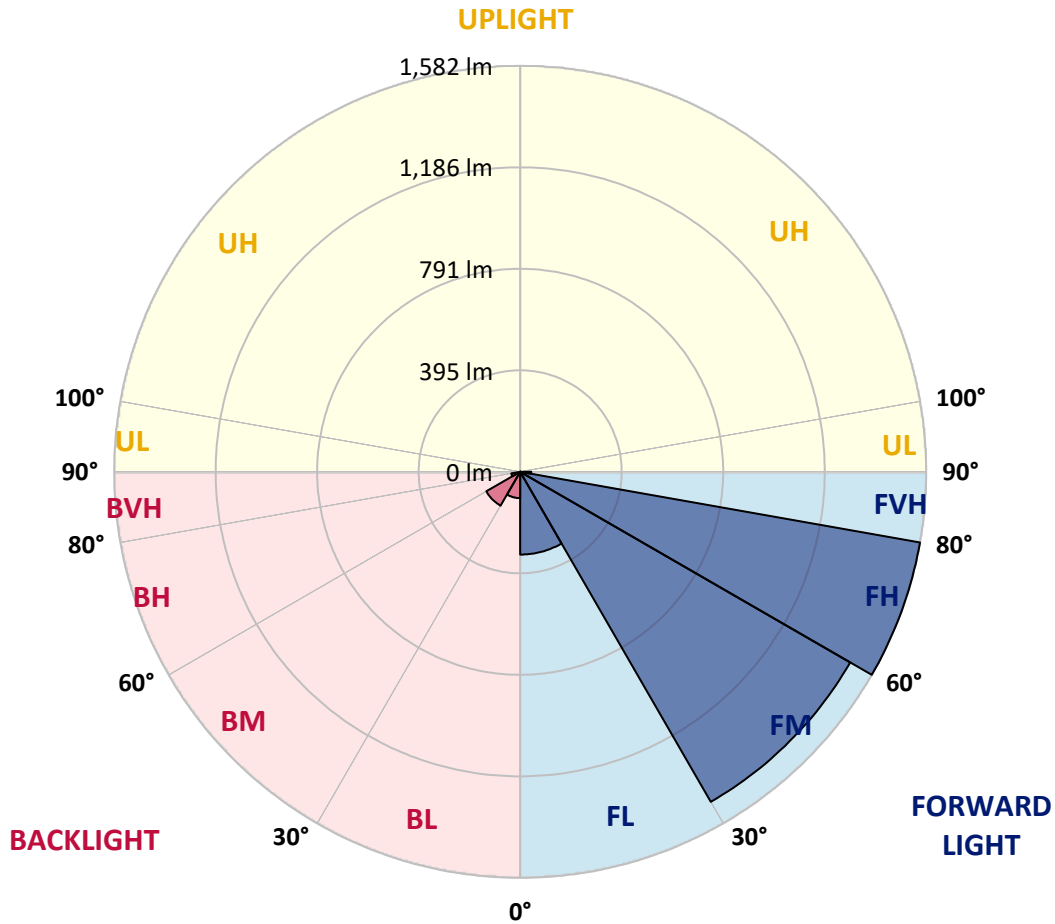
CATALOG NUMBER: ISC-SA1D-830-U-SL4-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	322.5	8.7			
FM (30°-60°)	1484.8	39.9			
FH (60°-80°)	1581.9	42.5			G1/1800
FVH (80°-90°)	43.4	1.2			G1/100
BL (0°-30°)	102.5	2.8	B0/110		
BM (30°-60°)	152.3	4.1	B0/220		
BH (60°-80°)	35.0	0.9	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: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8
2.5°	732.5	727.6	724.3	721.0	711.2	712.8	703.0	693.1	678.4	671.8	662.0
5°	750.5	748.9	747.2	742.3	734.1	737.4	727.6	717.7	696.4	676.8	655.5
7.5°	747.2	750.5	748.9	745.6	739.0	740.7	732.5	722.6	704.6	678.4	648.9
10°	740.7	742.3	742.3	740.7	739.0	739.0	732.5	724.3	707.9	684.9	647.3
12.5°	727.6	730.8	735.7	739.0	740.7	742.3	737.4	730.8	716.1	691.5	652.2
15°	722.6	725.9	735.7	745.6	750.5	752.1	747.2	739.0	725.9	704.6	660.4
17.5°	722.6	725.9	742.3	757.0	766.9	768.5	762.0	753.8	737.4	716.1	670.2
20°	732.5	735.7	755.4	781.6	786.5	789.8	780.0	768.5	750.5	729.2	681.7
22.5°	748.9	753.8	778.4	802.9	812.8	814.4	802.9	781.6	765.2	743.9	691.5
25°	776.7	788.2	811.1	837.3	839.0	840.6	822.6	801.3	781.6	760.3	703.0
27.5°	816.0	825.9	845.5	875.0	865.2	865.2	850.5	822.6	802.9	783.3	722.6
30°	866.8	873.4	896.3	907.8	894.7	896.3	878.3	852.1	835.7	816.0	752.1
32.5°	914.4	919.3	943.9	945.5	930.7	929.1	916.0	884.9	871.8	865.2	793.1
35°	958.6	965.2	984.8	983.2	968.4	966.8	960.2	932.4	932.4	938.9	853.7
37.5°	991.4	1007.8	1032.3	1025.8	1016.0	1016.0	1011.0	989.7	1006.1	1030.7	934.0
40°	1034.0	1043.8	1076.6	1071.7	1073.3	1073.3	1074.9	1061.8	1091.3	1132.3	1027.4
42.5°	1056.9	1076.6	1115.9	1122.5	1137.2	1137.2	1150.3	1147.0	1202.8	1255.2	1135.6
45°	1093.0	1114.3	1156.9	1181.5	1199.5	1207.7	1230.6	1248.6	1327.3	1392.8	1250.3
47.5°	1138.8	1156.9	1192.9	1238.8	1271.6	1284.7	1330.6	1360.1	1464.9	1532.1	1358.4
50°	1201.1	1204.4	1230.6	1299.4	1356.8	1365.0	1437.1	1486.2	1604.2	1666.5	1435.4
52.5°	1268.3	1261.7	1276.5	1369.9	1450.2	1464.9	1546.9	1622.2	1740.2	1753.3	1466.6
55°	1320.7	1320.7	1332.2	1446.9	1555.1	1563.3	1678.0	1758.3	1864.8	1804.1	1486.2
57.5°	1387.9	1381.4	1399.4	1525.6	1686.2	1692.7	1825.4	1887.7	1933.6	1836.9	1483.0
60°	1437.1	1445.3	1473.1	1627.2	1822.2	1851.7	1963.1	1982.7	2005.7	1848.4	1473.1
62.5°	1505.9	1504.3	1558.3	1740.2	1999.1	2018.8	2095.8	2063.0	2061.4	1868.0	1460.0
65°	1563.3	1576.4	1658.3	1876.2	2187.6	2200.7	2226.9	2184.3	2138.4	1889.3	1345.3
67.5°	1651.7	1678.0	1781.2	2054.8	2389.1	2403.9	2426.8	2333.4	2159.7	1738.6	1120.8
70°	1751.7	1786.1	1953.2	2292.4	2605.4	2621.8	2626.7	2348.2	1956.5	1365.0	760.3
72.5°	1651.7	1707.5	2002.4	2423.5	2762.7	2764.4	2566.1	2074.5	1499.3	745.6	268.7
75°	1063.5	1133.9	1658.3	2149.9	2379.3	2405.5	2012.2	1450.2	699.7	167.1	75.4
77.5°	360.5	385.1	814.4	1356.8	1596.0	1605.9	1324.0	734.1	221.2	67.2	41.0
80°	208.1	206.5	285.1	593.2	796.4	827.5	666.9	293.3	103.2	34.4	27.9
82.5°	49.2	50.8	149.1	216.3	316.3	285.1	140.9	177.0	47.5	19.7	24.6
85°	0.0	0.0	24.6	52.4	37.7	44.2	13.1	54.1	8.2	8.2	16.4
87.5°	0.0	0.0	0.0	0.0	1.6	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



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 CATALOG NUMBER: ISC-SA1D-830-U-SL4-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8
2.5°	652.2	644.0	627.6	614.5	596.5	581.7	567.0	560.4	548.9	545.7	547.3
5°	642.3	629.2	598.1	567.0	532.6	499.8	465.4	445.7	437.5	422.8	419.5
7.5°	630.9	611.2	567.0	516.2	457.2	409.7	362.1	329.4	299.9	288.4	283.5
10°	626.0	601.4	539.1	462.1	381.8	304.8	245.8	203.2	177.0	167.1	163.9
12.5°	626.0	596.5	512.9	409.7	303.1	214.7	160.6	136.0	127.8	126.2	124.5
15°	632.5	594.8	488.3	353.9	229.4	149.1	122.9	119.6	118.0	118.0	119.6
17.5°	635.8	591.5	462.1	299.9	168.8	119.6	114.7	114.7	114.7	114.7	114.7
20°	644.0	589.9	432.6	242.5	127.8	111.4	109.8	109.8	109.8	109.8	111.4
22.5°	645.6	589.9	396.5	186.8	113.1	106.5	104.9	104.9	104.9	106.5	106.5
25°	655.5	586.6	362.1	142.6	106.5	100.0	100.0	98.3	100.0	100.0	100.0
27.5°	668.6	588.3	319.5	118.0	100.0	95.0	93.4	93.4	93.4	93.4	93.4
30°	683.3	591.5	275.3	104.9	93.4	90.1	88.5	86.8	86.8	86.8	86.8
32.5°	711.2	594.8	227.8	95.0	86.8	83.6	81.9	80.3	80.3	80.3	80.3
35°	753.8	612.8	186.8	88.5	80.3	77.0	75.4	73.7	73.7	73.7	72.1
37.5°	811.1	640.7	147.5	81.9	73.7	70.5	68.8	67.2	65.5	65.5	65.5
40°	879.9	670.2	122.9	73.7	67.2	63.9	62.3	60.6	59.0	57.4	57.4
42.5°	961.9	706.3	98.3	67.2	60.6	57.4	55.7	54.1	50.8	49.2	50.8
45°	1053.6	740.7	83.6	62.3	55.7	52.4	50.8	47.5	44.2	42.6	42.6
47.5°	1133.9	748.9	73.7	55.7	50.8	47.5	45.9	41.0	37.7	34.4	34.4
50°	1188.0	734.1	65.5	50.8	45.9	44.2	41.0	34.4	29.5	27.9	26.2
52.5°	1194.6	694.8	57.4	45.9	42.6	39.3	34.4	29.5	24.6	21.3	21.3
55°	1188.0	629.2	50.8	42.6	37.7	34.4	29.5	22.9	18.0	16.4	14.7
57.5°	1166.7	560.4	45.9	37.7	34.4	29.5	22.9	18.0	13.1	11.5	9.8
60°	1127.4	476.8	41.0	34.4	29.5	24.6	18.0	13.1	8.2	6.6	6.6
62.5°	1053.6	385.1	36.0	29.5	24.6	19.7	14.7	8.2	4.9	3.3	3.3
65°	907.8	288.4	31.1	24.6	19.7	16.4	9.8	4.9	1.6	0.0	0.0
67.5°	706.3	195.0	24.6	19.7	16.4	13.1	8.2	1.6	0.0	0.0	0.0
70°	416.2	103.2	19.7	14.7	13.1	9.8	4.9	1.6	0.0	0.0	0.0
72.5°	119.6	41.0	14.7	11.5	9.8	6.6	3.3	1.6	0.0	0.0	0.0
75°	49.2	24.6	9.8	8.2	8.2	4.9	1.6	1.6	0.0	0.0	0.0
77.5°	32.8	18.0	6.6	4.9	4.9	3.3	1.6	0.0	0.0	0.0	0.0
80°	26.2	9.8	3.3	3.3	3.3	1.6	1.6	0.0	0.0	0.0	0.0
82.5°	22.9	6.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
85°	11.5	3.3	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.6	1.6	1.6	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

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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**

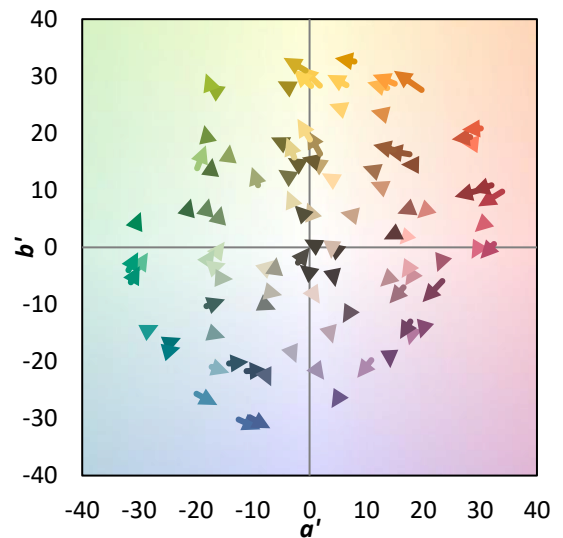
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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