

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: P437602

Luminaire Tested: **ISC-SA1D-830-U-T3-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437602  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-9)  
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-T3-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 800mA 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: 3361 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

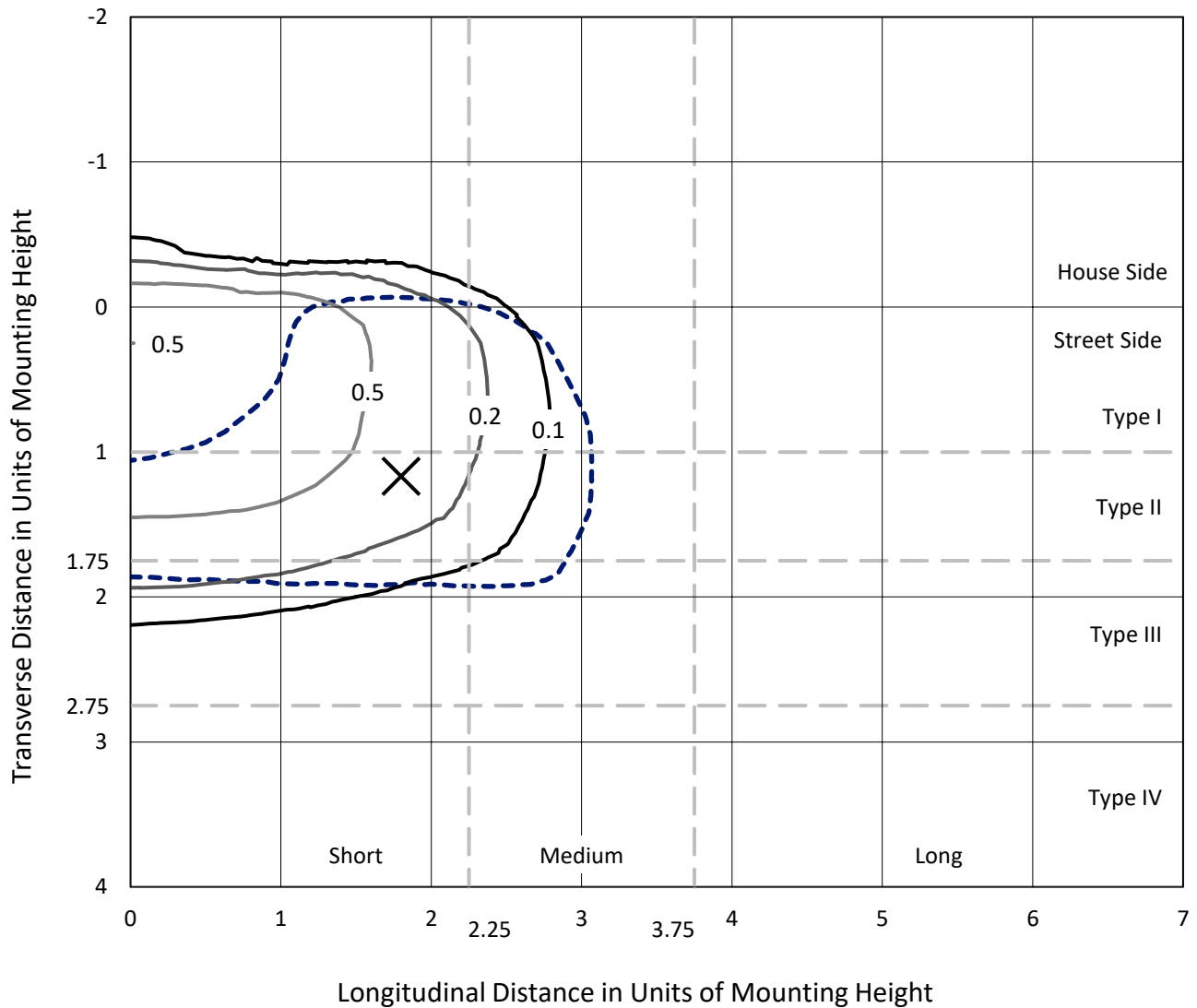
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

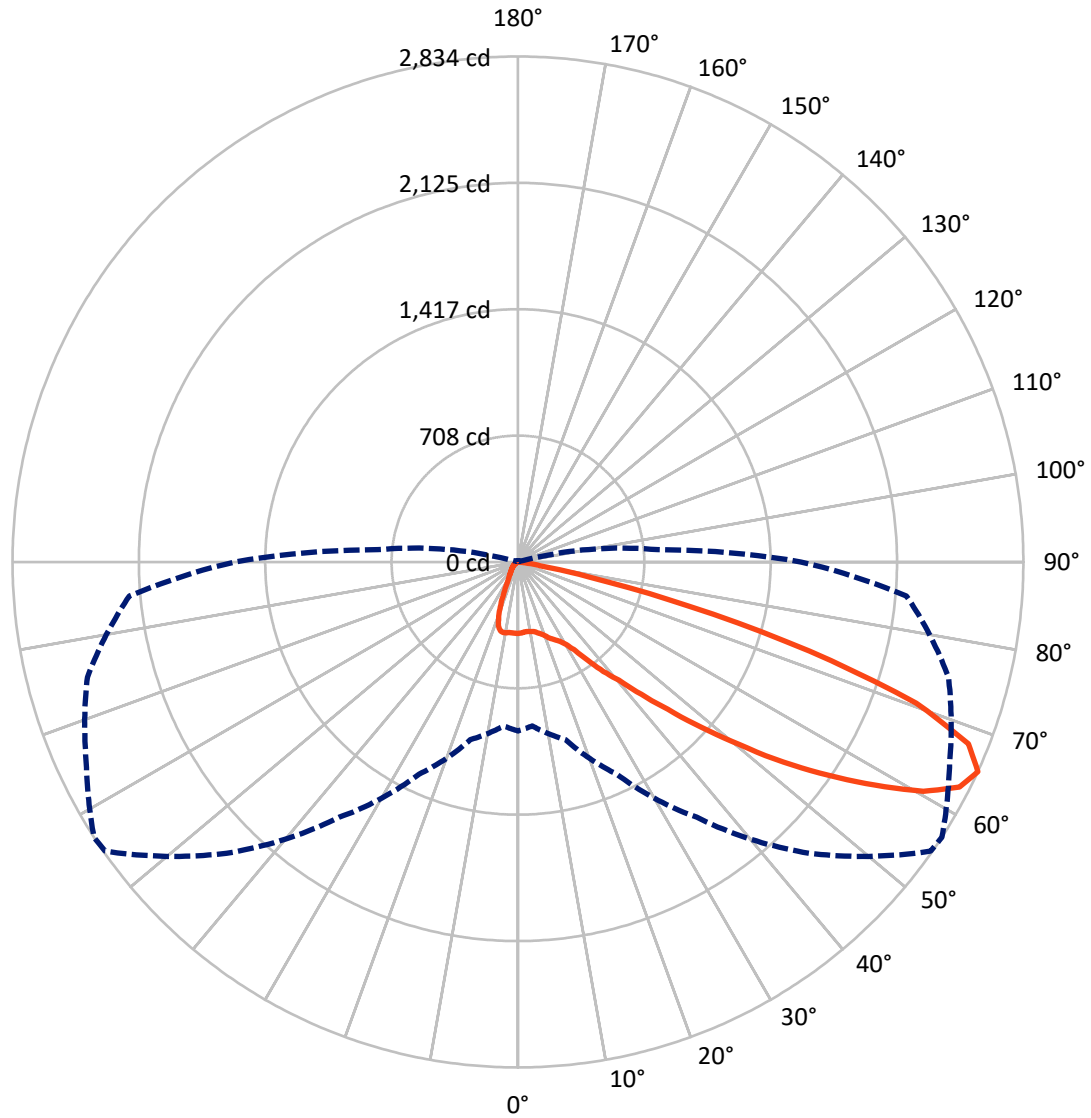
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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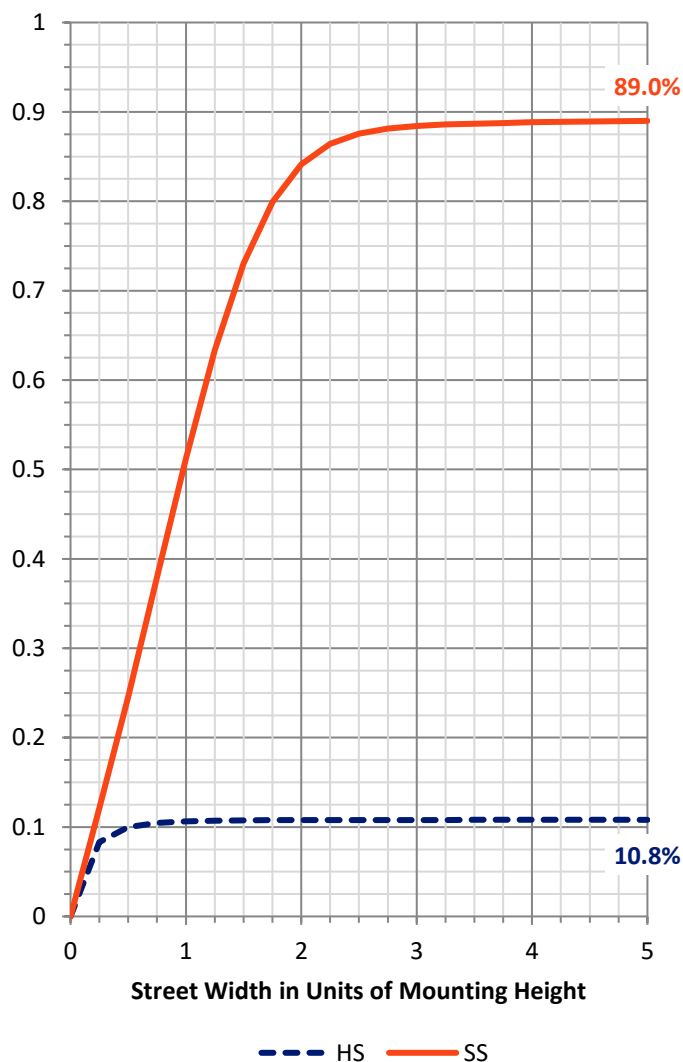
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	366.6	0.0	366.6
	% Fixture	10.9	0.0	10.9
<b>Street Side</b>	Lumens	2994.4	0.0	2994.4
	% Fixture	89.1	0.0	89.1
<b>Total</b>	Lumens	3361.0	0.0	3361.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.2	1.1
10°-20°	100.6	3.0
20°-30°	173.7	5.2
30°-40°	307.7	9.2
40°-50°	558.0	16.6
50°-60°	940.0	28.0
60°-70°	966.5	28.8
70°-80°	267.8	8.0
80°-90°	9.5	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°	3361.0	100.0
0°-180°	3361.0	100.0

**Coefficient of Utilization**



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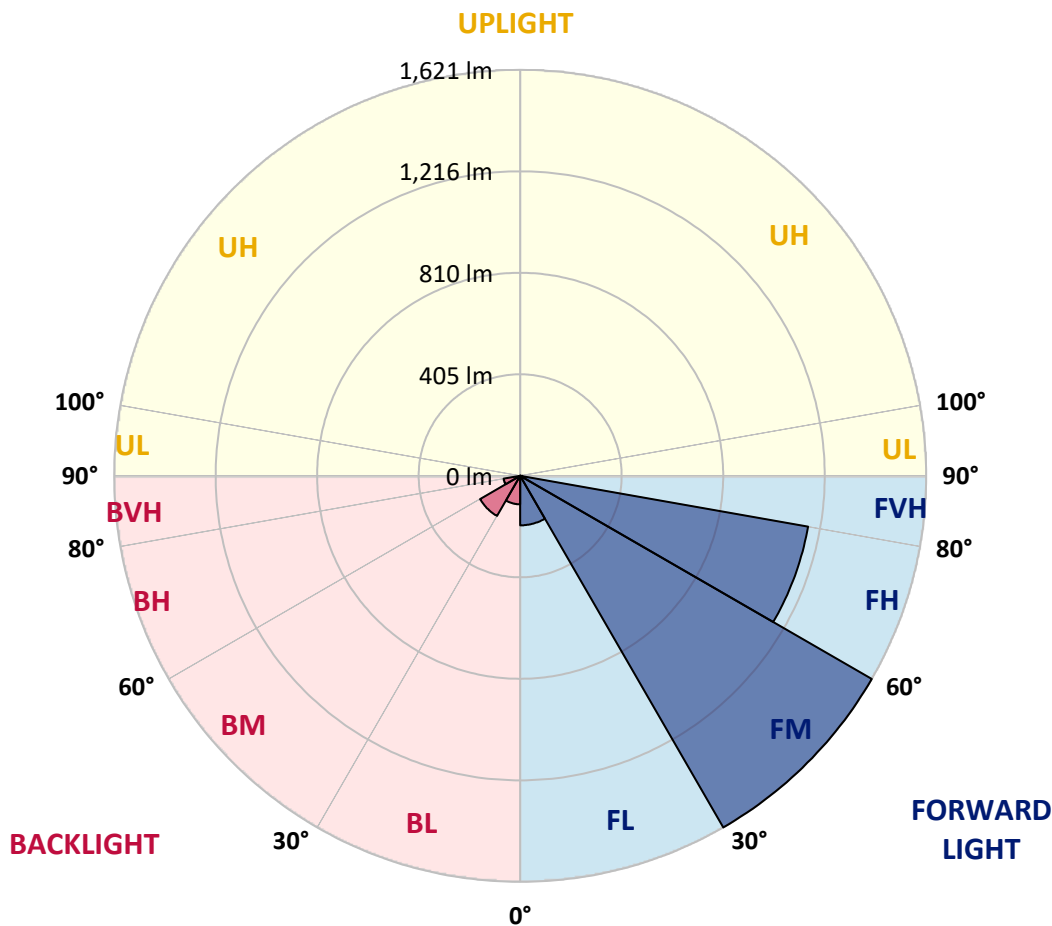
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	197.6	5.9			
FM (30°-60°)	1620.9	48.2			
FH (60°-80°)	1167.1	34.7			G1/1800
FVH (80°-90°)	8.8	0.3			G0/10
BL (0°-30°)	113.8	3.4	B1/500		
BM (30°-60°)	184.8	5.5	B0/220		
BH (60°-80°)	67.2	2.0	B0/110		G0/110
BVH (80°-90°)	0.7	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°	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9
2.5°	388.4	388.4	391.7	393.4	393.4	395.0	396.6	398.3	398.3	398.3	401.6
5°	368.8	367.1	370.4	373.7	378.6	385.2	390.1	393.4	398.3	403.2	404.8
7.5°	350.7	350.7	354.0	358.9	368.8	378.6	388.4	393.4	401.6	411.4	414.7
10°	345.8	344.2	349.1	354.0	363.9	375.3	390.1	396.6	408.1	421.2	426.1
12.5°	342.5	342.5	344.2	352.4	362.2	377.0	395.0	399.9	417.9	432.7	444.2
15°	340.9	340.9	344.2	350.7	362.2	378.6	403.2	411.4	432.7	454.0	463.8
17.5°	354.0	352.4	350.7	354.0	365.5	383.5	416.3	424.5	450.7	476.9	488.4
20°	393.4	391.7	386.8	375.3	375.3	396.6	432.7	442.5	476.9	503.2	509.7
22.5°	467.1	472.0	454.0	424.5	403.2	413.0	454.0	465.5	504.8	532.7	532.7
25°	573.6	567.1	550.7	501.5	458.9	439.2	472.0	483.5	531.0	563.8	557.3
27.5°	685.1	686.7	663.8	608.1	539.2	486.8	491.7	504.8	558.9	596.6	581.8
30°	773.6	767.0	755.6	709.7	634.3	562.2	529.4	537.6	590.0	632.6	619.5
32.5°	852.3	849.0	834.2	794.9	727.7	650.7	591.7	593.3	634.3	686.7	670.3
35°	922.7	926.0	919.5	875.2	814.6	742.5	675.3	680.2	711.3	765.4	732.6
37.5°	1011.3	1011.3	999.8	958.8	912.9	840.8	776.9	778.5	794.9	839.2	798.2
40°	1088.3	1091.6	1089.9	1058.8	1014.5	949.0	871.9	871.9	876.9	929.3	908.0
42.5°	1193.2	1198.1	1196.5	1167.0	1132.5	1085.0	1019.4	1014.5	1011.3	1076.8	1053.9
45°	1327.6	1339.0	1344.0	1307.9	1276.8	1248.9	1198.1	1178.4	1186.6	1247.3	1229.2
47.5°	1455.4	1468.5	1491.5	1473.4	1458.7	1458.7	1389.9	1386.6	1373.5	1443.9	1394.8
50°	1576.7	1578.3	1611.1	1639.0	1683.2	1675.0	1629.1	1609.5	1589.8	1637.3	1548.8
52.5°	1645.5	1665.2	1707.8	1788.1	1884.8	1924.2	1876.6	1865.2	1825.8	1819.3	1698.0
55°	1709.5	1709.5	1776.7	1916.0	2079.9	2163.5	2124.1	2111.0	2032.3	2009.4	1852.0
57.5°	1730.8	1724.2	1814.4	1991.4	2237.2	2383.1	2391.3	2361.8	2252.0	2181.5	2009.4
60°	1624.2	1612.8	1707.8	1942.2	2279.8	2542.1	2630.6	2610.9	2442.1	2348.7	2174.9
62.5°	1317.7	1332.5	1453.8	1707.8	2129.0	2525.7	2789.5	2778.1	2583.0	2461.8	2240.5
65°	947.3	922.7	1030.9	1312.8	1747.2	2309.3	2825.6	2833.8	2669.9	2499.4	2186.4
67.5°	531.0	508.1	598.2	812.9	1242.3	1894.7	2678.1	2724.0	2607.6	2406.0	1953.7
70°	203.2	216.3	278.6	401.6	732.6	1307.9	2304.4	2370.0	2286.4	2007.8	1455.4
72.5°	72.1	81.9	114.7	178.6	339.3	704.8	1611.1	1709.5	1684.9	1394.8	832.6
75°	42.6	44.3	59.0	86.9	149.1	275.3	909.6	991.6	952.2	690.0	344.2
77.5°	29.5	29.5	37.7	52.4	85.2	109.8	355.7	403.2	414.7	249.1	101.6
80°	18.0	19.7	26.2	34.4	49.2	50.8	109.8	129.5	121.3	88.5	36.1
82.5°	8.2	8.2	14.8	22.9	24.6	21.3	34.4	37.7	44.3	39.3	16.4
85°	0.0	0.0	4.9	8.2	6.6	4.9	11.5	11.5	14.8	18.0	8.2
87.5°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	3.3	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-T3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9
2.5°	401.6	403.2	401.6	399.9	399.9	398.3	398.3	398.3	398.3	398.3	398.3
5°	404.8	406.5	404.8	401.6	398.3	395.0	391.7	391.7	391.7	391.7	395.0
7.5°	414.7	414.7	411.4	404.8	396.6	393.4	386.8	385.2	381.9	380.2	381.9
10°	429.4	429.4	422.9	413.0	399.9	386.8	375.3	358.9	349.1	342.5	340.9
12.5°	444.2	442.5	434.3	421.2	399.9	370.4	332.7	291.7	267.2	249.1	245.8
15°	463.8	462.2	449.1	426.1	390.1	327.8	254.0	198.3	168.8	155.7	154.1
17.5°	485.1	481.9	463.8	429.4	358.9	247.5	167.2	129.5	118.0	114.7	114.7
20°	508.1	503.2	475.3	424.5	296.7	168.8	116.4	108.2	106.5	104.9	104.9
22.5°	526.1	517.9	483.5	399.9	221.3	116.4	103.3	101.6	100.0	98.3	98.3
25°	545.8	532.7	490.1	345.8	145.9	100.0	96.7	95.1	91.8	90.1	90.1
27.5°	568.7	549.1	499.9	272.1	101.6	90.1	86.9	85.2	80.3	77.0	77.0
30°	598.2	573.6	504.8	198.3	85.2	78.7	75.4	72.1	65.6	62.3	62.3
32.5°	645.8	624.5	495.0	132.8	77.0	70.5	65.6	59.0	52.4	49.2	47.5
35°	706.4	676.9	460.6	93.4	68.8	62.3	54.1	45.9	41.0	39.3	39.3
37.5°	773.6	734.3	408.1	75.4	62.3	54.1	45.9	37.7	32.8	31.1	31.1
40°	868.7	808.0	336.0	65.6	54.1	45.9	37.7	31.1	27.9	26.2	26.2
42.5°	993.2	901.4	254.0	60.6	49.2	39.3	31.1	26.2	22.9	21.3	21.3
45°	1132.5	999.8	185.2	54.1	42.6	32.8	24.6	21.3	18.0	16.4	16.4
47.5°	1271.8	1070.3	127.8	49.2	36.1	27.9	21.3	16.4	13.1	13.1	11.5
50°	1393.1	1108.0	91.8	42.6	32.8	22.9	16.4	13.1	11.5	9.8	9.8
52.5°	1499.7	1124.3	70.5	37.7	27.9	19.7	13.1	11.5	9.8	9.8	9.8
55°	1589.8	1111.2	55.7	32.8	24.6	16.4	11.5	9.8	8.2	8.2	8.2
57.5°	1678.3	1071.9	44.3	27.9	19.7	11.5	9.8	8.2	6.6	6.6	6.6
60°	1724.2	1021.1	36.1	22.9	16.4	9.8	8.2	6.6	6.6	4.9	4.9
62.5°	1693.1	917.8	29.5	19.7	11.5	8.2	6.6	4.9	4.9	3.3	3.3
65°	1588.2	786.7	22.9	14.8	8.2	6.6	4.9	4.9	3.3	1.6	1.6
67.5°	1339.0	616.3	18.0	11.5	6.6	4.9	3.3	3.3	1.6	0.0	0.0
70°	957.2	406.5	14.8	8.2	4.9	4.9	3.3	1.6	0.0	0.0	0.0
72.5°	552.3	196.7	11.5	4.9	3.3	3.3	1.6	1.6	0.0	0.0	0.0
75°	206.5	68.8	9.8	4.9	3.3	1.6	1.6	1.6	0.0	0.0	0.0
77.5°	68.8	27.9	8.2	6.6	4.9	1.6	1.6	0.0	0.0	0.0	0.0
80°	21.3	13.1	3.3	3.3	3.3	3.3	1.6	0.0	0.0	0.0	0.0
82.5°	11.5	6.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
85°	4.9	3.3	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	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  
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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**



CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

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)