

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: P437593

Luminaire Tested: **ISC-SA1D-830-U-SL3**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437593  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-16)  
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-SL3  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4498 lumens  
Efficiency: N/A  
Efficacy: 99.5 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

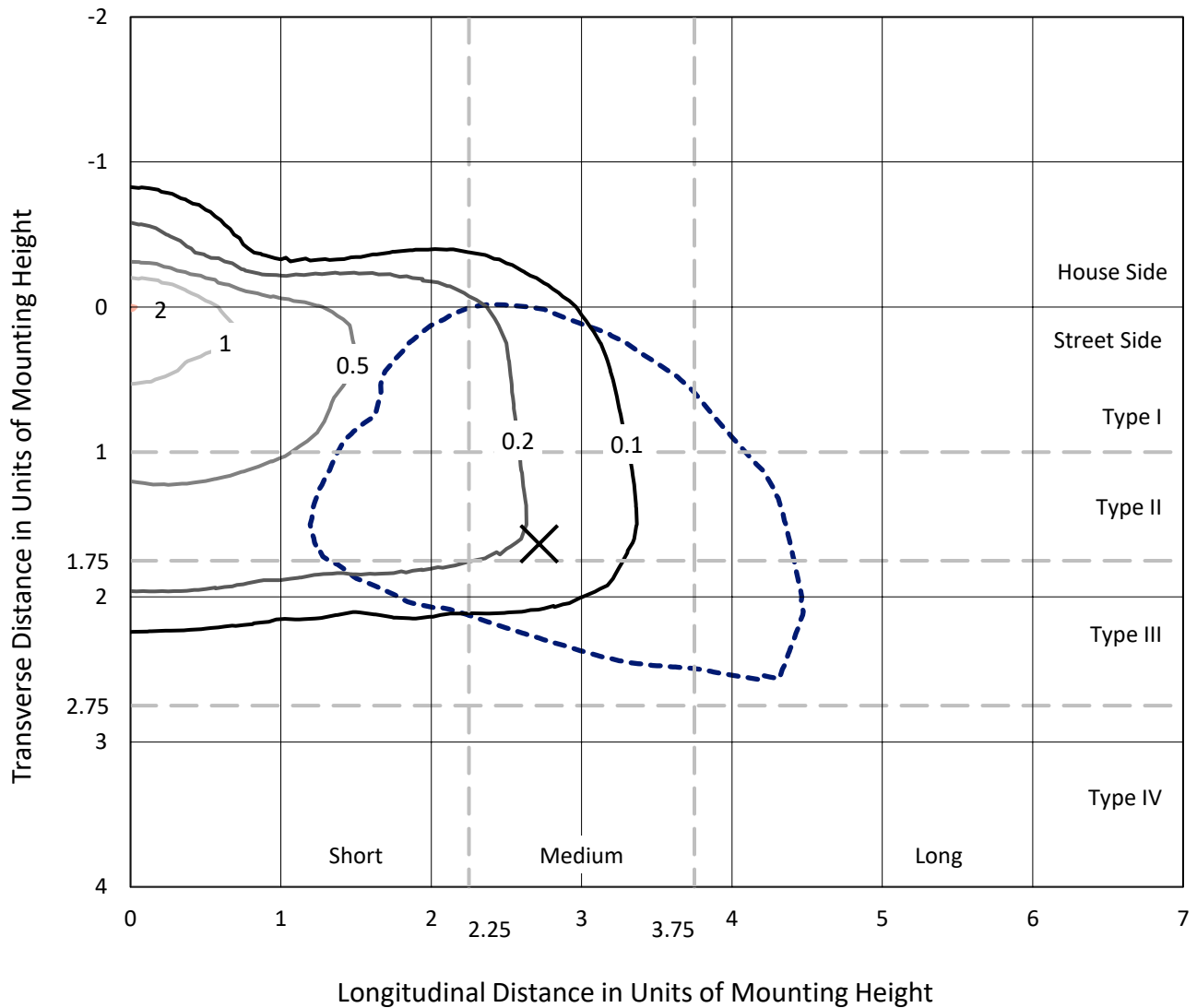
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

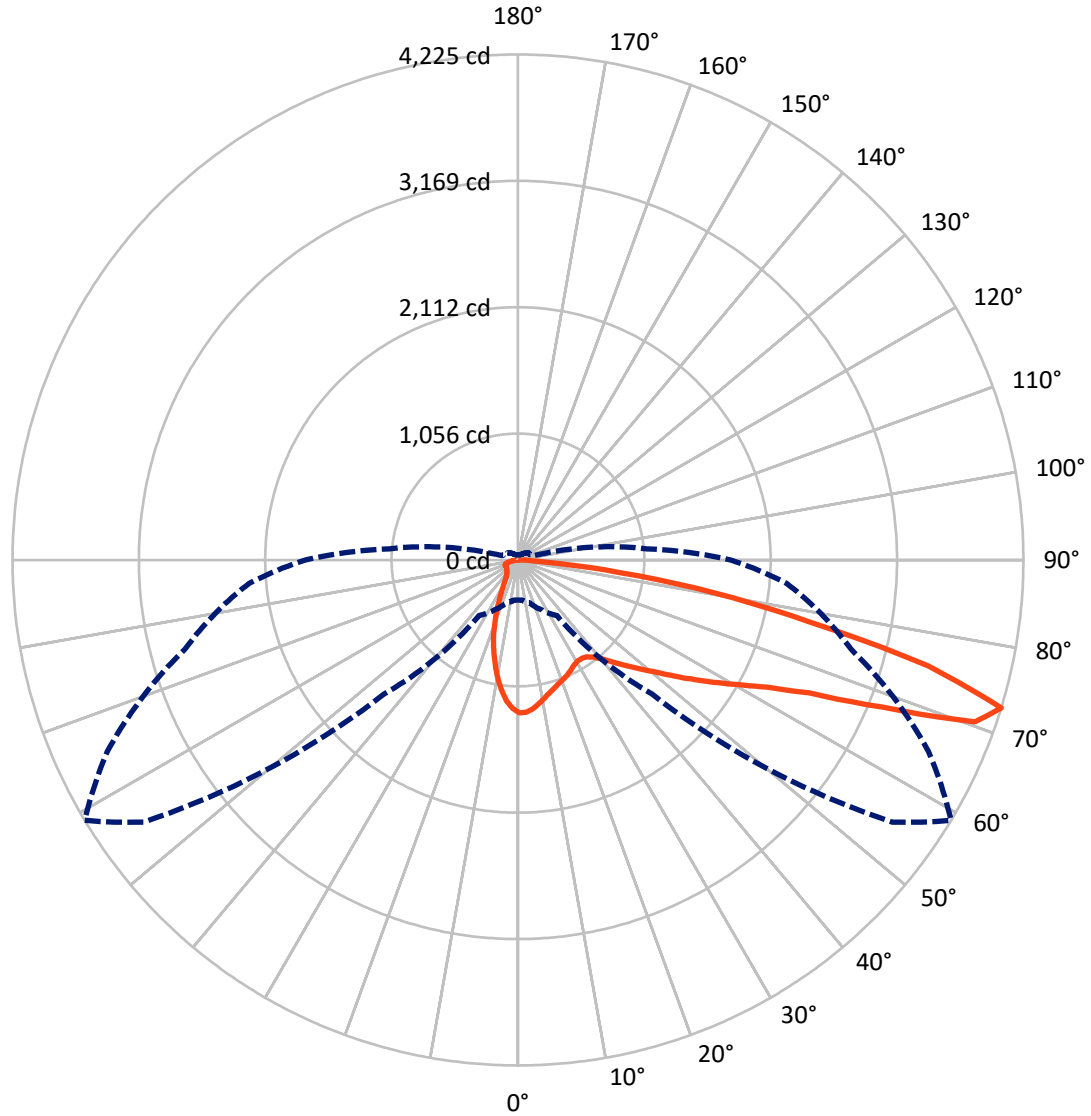
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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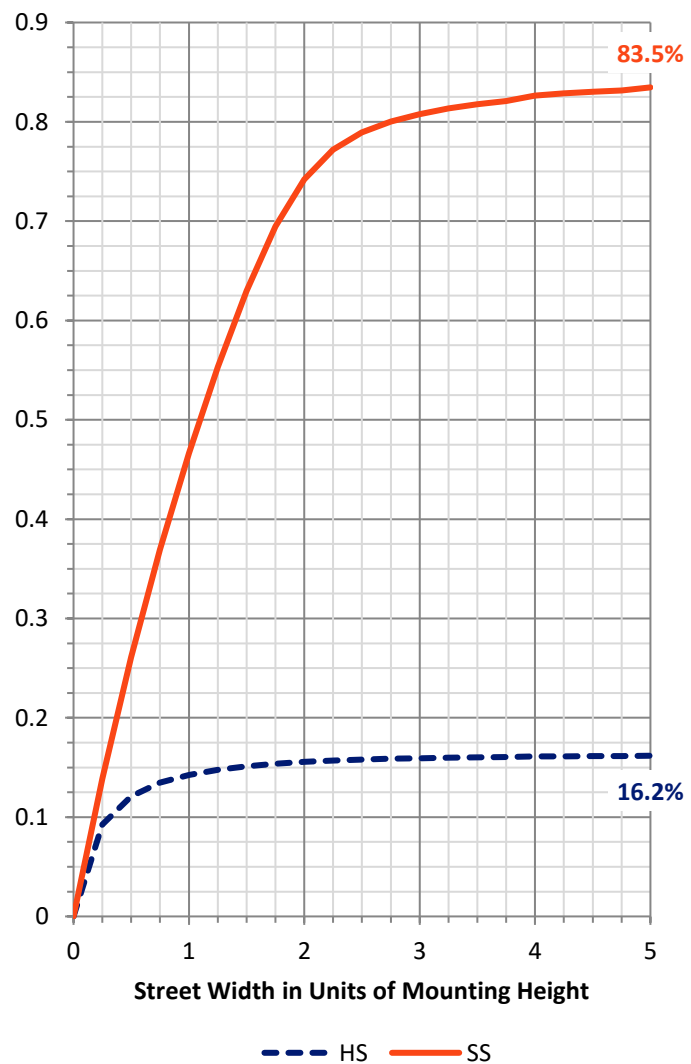
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	734.2	0.0	734.2
	% Fixture	16.3	0.0	16.3
<b>Street Side</b>	Lumens	3763.8	0.0	3763.8
	% Fixture	83.7	0.0	83.7
<b>Total</b>	Lumens	4498.0	0.0	4498.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.6	2.4
10°-20°	246.2	5.5
20°-30°	317.2	7.1
30°-40°	405.8	9.0
40°-50°	563.2	12.5
50°-60°	830.1	18.5
60°-70°	1116.9	24.8
70°-80°	812.5	18.1
80°-90°	96.6	2.1
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°	4498.0	100.0
0°-180°	4498.0	100.0

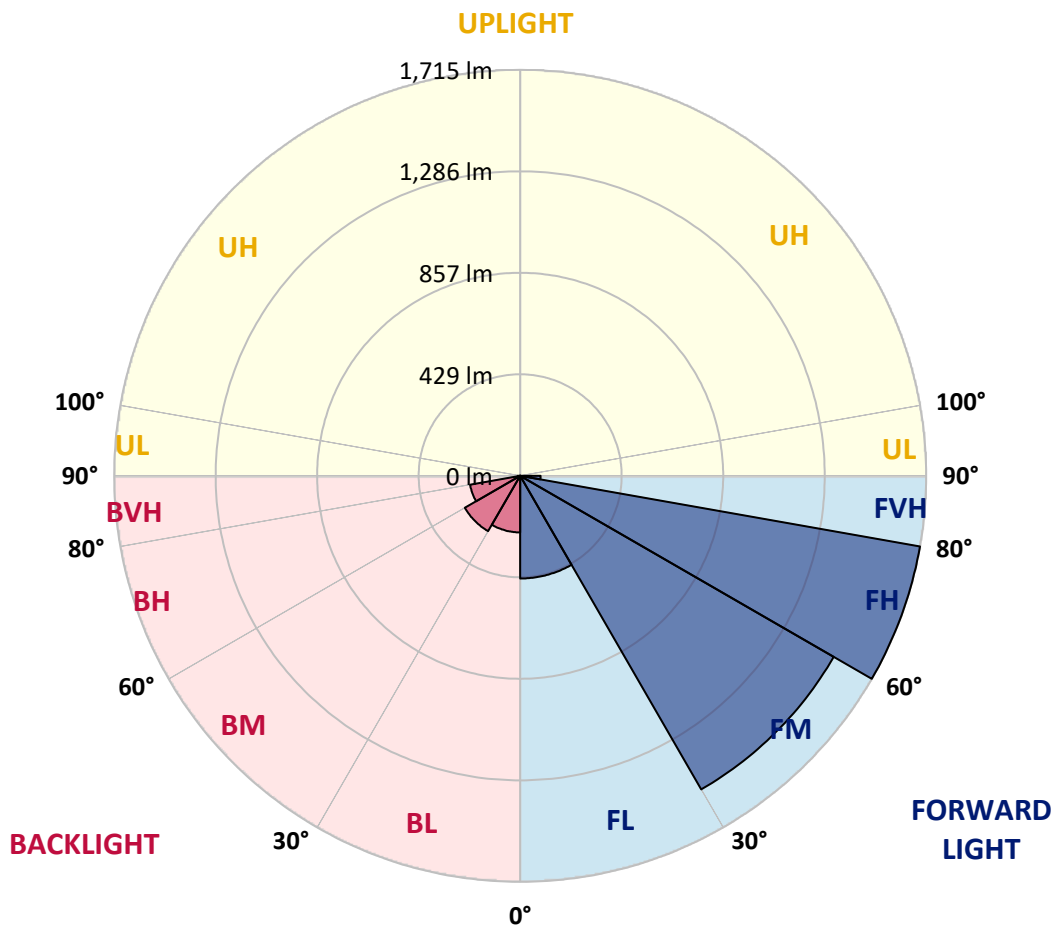


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	433.8	9.6			
FM (30°-60°)	1529.2	34.0			
FH (60°-80°)	1714.6	38.1			G1/1800
FVH (80°-90°)	86.2	1.9			G1/100
BL (0°-30°)	239.1	5.3	B1/500		
BM (30°-60°)	269.9	6.0	B1/1000		
BH (60°-80°)	214.8	4.8	B1/500		G1/500
BVH (80°-90°)	10.4	0.2			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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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6
2.5°	1270.1	1270.1	1275.0	1278.2	1273.3	1278.2	1276.6	1275.0	1276.6	1276.6	1273.3
5°	1217.6	1224.2	1224.2	1225.8	1237.3	1245.5	1248.8	1252.0	1253.7	1255.3	1252.0
7.5°	1153.7	1157.0	1160.3	1175.0	1181.6	1199.6	1211.1	1217.6	1224.2	1227.4	1217.6
10°	1083.2	1088.1	1098.0	1109.5	1125.8	1150.4	1170.1	1181.6	1191.4	1196.3	1184.8
12.5°	1024.2	1025.9	1035.7	1053.7	1073.4	1107.8	1132.4	1145.5	1158.6	1168.4	1155.3
15°	970.2	971.8	980.0	1001.3	1024.2	1061.9	1098.0	1117.6	1135.7	1152.1	1134.0
17.5°	927.5	932.5	935.7	953.8	981.6	1022.6	1070.1	1089.8	1117.6	1142.2	1119.3
20°	903.0	901.3	903.0	914.4	943.9	984.9	1040.6	1068.5	1101.3	1135.7	1104.5
22.5°	888.2	891.5	889.9	894.8	912.8	953.8	1009.5	1048.8	1086.5	1130.8	1091.4
25°	888.2	893.1	891.5	889.9	896.4	924.3	983.3	1022.6	1070.1	1130.8	1076.7
27.5°	904.6	906.2	903.0	898.1	898.1	907.9	960.3	996.4	1061.9	1129.1	1068.5
30°	919.4	922.6	922.6	919.4	914.4	909.5	943.9	981.6	1053.7	1139.0	1061.9
32.5°	939.0	942.3	948.9	952.1	945.6	930.8	948.9	980.0	1055.4	1160.3	1063.6
35°	963.6	966.9	976.7	993.1	988.2	963.6	966.9	994.7	1068.5	1183.2	1070.1
37.5°	983.3	988.2	1009.5	1037.3	1039.0	1012.8	1011.1	1030.8	1093.1	1219.3	1093.1
40°	1002.9	1009.5	1040.6	1086.5	1096.3	1081.6	1071.8	1086.5	1137.3	1271.7	1130.8
42.5°	1029.2	1035.7	1076.7	1134.0	1158.6	1152.1	1145.5	1166.8	1204.5	1342.2	1189.8
45°	1057.0	1070.1	1122.6	1186.5	1230.7	1235.6	1242.2	1255.3	1284.8	1440.5	1273.3
47.5°	1107.8	1119.3	1179.9	1245.5	1302.8	1329.1	1340.5	1356.9	1374.9	1530.6	1374.9
50°	1176.6	1199.6	1253.7	1317.6	1384.8	1435.6	1465.1	1465.1	1484.7	1638.8	1486.4
52.5°	1279.9	1301.2	1334.0	1394.6	1474.9	1555.2	1596.2	1602.7	1596.2	1742.0	1599.4
55°	1366.7	1388.0	1419.2	1463.4	1565.0	1689.6	1760.0	1755.1	1732.2	1851.8	1710.9
57.5°	1463.4	1479.8	1507.7	1543.7	1656.8	1828.9	1932.1	1927.2	1884.6	1963.3	1832.2
60°	1504.4	1527.3	1578.1	1651.9	1799.4	2007.5	2128.8	2114.0	2019.0	2082.9	1940.3
62.5°	1381.5	1424.1	1527.3	1676.5	1964.9	2305.8	2386.1	2338.5	2209.1	2214.0	2086.2
65°	1104.5	1081.6	1238.9	1486.4	1978.0	2674.5	2779.4	2676.1	2446.7	2381.1	2251.7
67.5°	630.9	640.8	716.1	983.3	1628.9	2825.3	3461.1	3279.2	2818.7	2641.7	2451.6
70°	427.7	437.6	470.3	583.4	935.7	2525.4	4016.6	4052.7	3393.9	2872.8	2458.2
72.5°	334.3	335.9	370.4	458.9	567.0	1586.3	3818.4	4224.8	3787.2	2881.0	2255.0
75°	255.6	257.3	288.4	391.7	509.7	768.6	2907.2	3543.0	3552.9	2649.9	1842.0
77.5°	162.2	170.4	206.5	313.0	478.5	509.7	1851.8	2495.9	2561.4	1963.3	963.6
80°	78.7	81.9	103.2	199.9	421.2	450.7	1102.9	1660.1	1438.8	765.3	293.3
82.5°	32.8	34.4	49.2	86.9	268.8	381.8	552.3	853.8	555.5	208.1	95.0
85°	6.6	8.2	11.5	21.3	86.9	186.8	226.2	221.2	134.4	63.9	36.1
87.5°	0.0	0.0	0.0	1.6	1.6	3.3	3.3	3.3	3.3	3.3	3.3
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°	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6	1276.6
2.5°	1271.7	1271.7	1258.6	1248.8	1237.3	1229.1	1220.9	1211.1	1209.4	1214.3	1219.3
5°	1245.5	1238.9	1217.6	1197.9	1175.0	1148.8	1132.4	1111.1	1099.6	1104.5	1101.3
7.5°	1211.1	1201.2	1161.9	1129.1	1083.2	1042.3	1014.4	983.3	962.0	953.8	948.9
10°	1175.0	1155.3	1102.9	1043.9	983.3	922.6	871.8	822.7	798.1	796.4	770.2
12.5°	1140.6	1114.4	1040.6	955.4	871.8	789.9	714.5	660.4	593.2	573.6	580.1
15°	1112.7	1076.7	973.4	865.3	757.1	653.9	555.5	475.2	416.3	394.9	386.8
17.5°	1086.5	1035.7	911.2	781.7	645.7	516.2	396.6	335.9	299.9	286.8	286.8
20°	1057.0	998.0	844.0	688.3	522.8	383.5	293.3	263.8	252.4	250.7	249.1
22.5°	1034.1	960.3	775.1	590.0	408.1	291.7	242.5	229.4	229.4	231.1	231.1
25°	1006.2	917.7	701.4	485.1	314.6	234.3	214.7	209.8	214.7	219.6	219.6
27.5°	986.5	880.0	634.2	386.8	244.2	203.2	193.4	195.0	201.6	208.1	208.1
30°	970.2	844.0	563.7	304.8	203.2	180.3	178.6	181.9	188.5	195.0	193.4
32.5°	953.8	816.1	486.7	240.9	175.3	165.5	163.9	168.8	173.7	175.3	178.6
35°	947.2	793.2	409.7	198.3	159.0	154.0	154.0	155.7	157.3	159.0	159.0
37.5°	952.1	775.1	340.9	168.8	149.1	147.5	145.9	144.2	144.2	144.2	145.9
40°	971.8	768.6	281.9	152.4	140.9	140.9	137.7	132.7	131.1	132.7	131.1
42.5°	1011.1	781.7	232.7	142.6	134.4	132.7	127.8	124.5	122.9	122.9	121.3
45°	1073.4	804.6	199.9	136.0	129.5	124.5	119.6	116.4	114.7	116.4	116.4
47.5°	1155.3	847.2	177.0	129.5	124.5	116.4	109.8	108.2	108.2	111.4	111.4
50°	1253.7	904.6	163.9	126.2	119.6	109.8	103.2	101.6	103.2	106.5	108.2
52.5°	1358.5	976.7	160.6	124.5	114.7	103.2	98.3	96.7	98.3	101.6	103.2
55°	1463.4	1055.4	168.8	124.5	109.8	98.3	95.0	90.1	91.8	95.0	96.7
57.5°	1574.9	1140.6	193.4	121.3	106.5	95.0	90.1	85.2	85.2	88.5	88.5
60°	1694.5	1237.3	239.3	121.3	103.2	91.8	83.6	78.7	78.7	78.7	80.3
62.5°	1827.2	1353.6	293.3	122.9	104.9	88.5	77.0	70.5	70.5	72.1	70.5
65°	2023.9	1527.3	308.1	124.5	108.2	85.2	72.1	65.6	63.9	63.9	63.9
67.5°	2145.2	1547.0	239.3	121.3	113.1	85.2	67.2	59.0	57.4	55.7	55.7
70°	2056.7	1358.5	170.4	116.4	113.1	85.2	63.9	54.1	50.8	47.5	47.5
72.5°	1779.7	1078.3	139.3	109.8	104.9	80.3	59.0	49.2	44.2	41.0	41.0
75°	1425.7	765.3	118.0	101.6	88.5	63.9	49.2	41.0	37.7	36.1	36.1
77.5°	694.8	376.9	91.8	88.5	70.5	47.5	39.3	34.4	32.8	29.5	29.5
80°	203.2	139.3	68.8	70.5	44.2	32.8	29.5	27.9	26.2	22.9	24.6
82.5°	93.4	78.7	49.2	44.2	27.9	19.7	19.7	18.0	16.4	14.7	14.7
85°	37.7	39.3	26.2	21.3	13.1	9.8	8.2	8.2	6.6	6.6	6.6
87.5°	3.3	4.9	4.9	3.3	3.3	1.6	0.0	0.0	0.0	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 <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)