

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: P437947

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

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437947  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISC-SA1F-830-U-T4FT  
Description: IMPACT ELITE LED CYLINDER 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: 6160 lumens  
Efficiency: N/A  
Efficacy: 93.3 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

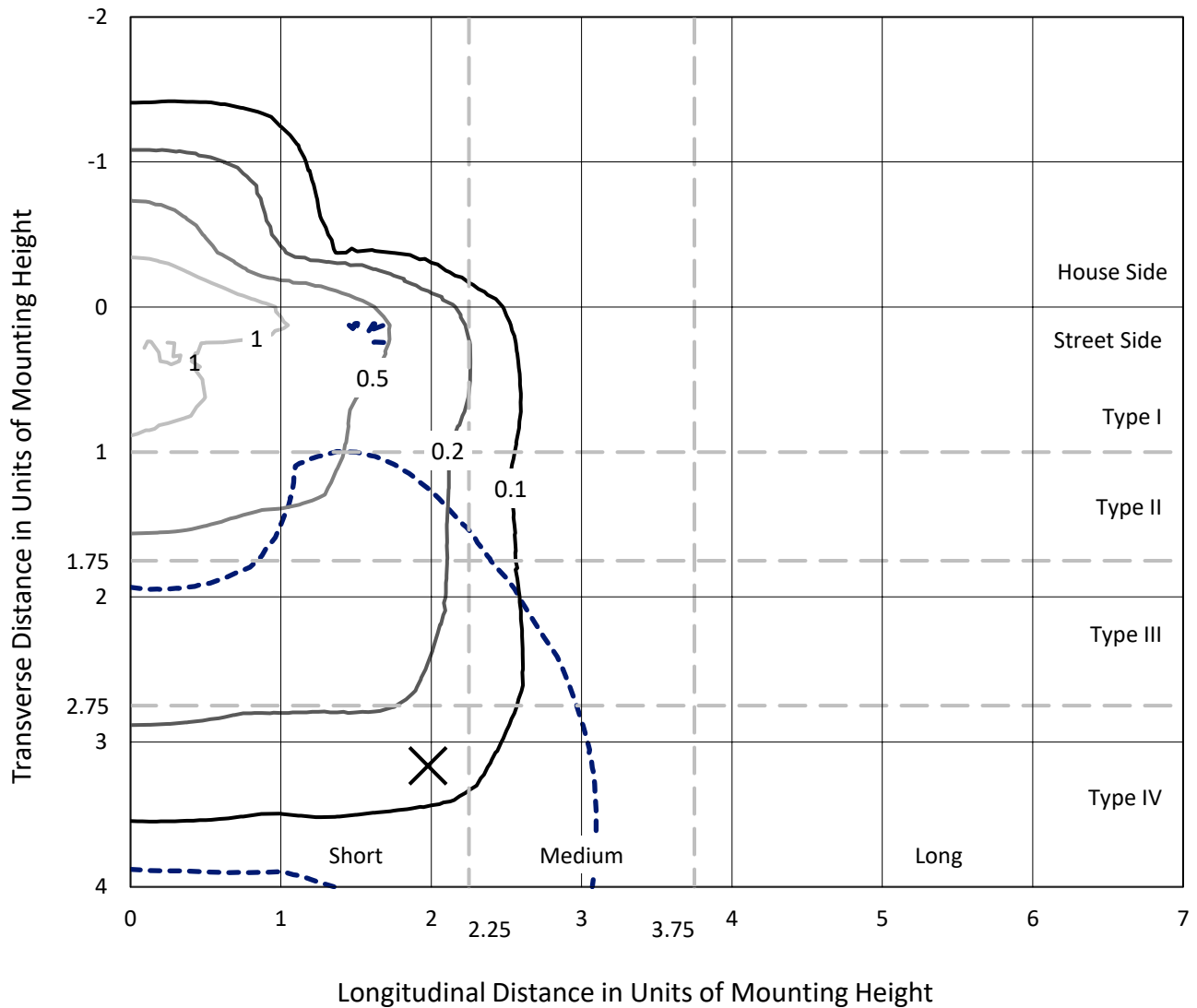
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

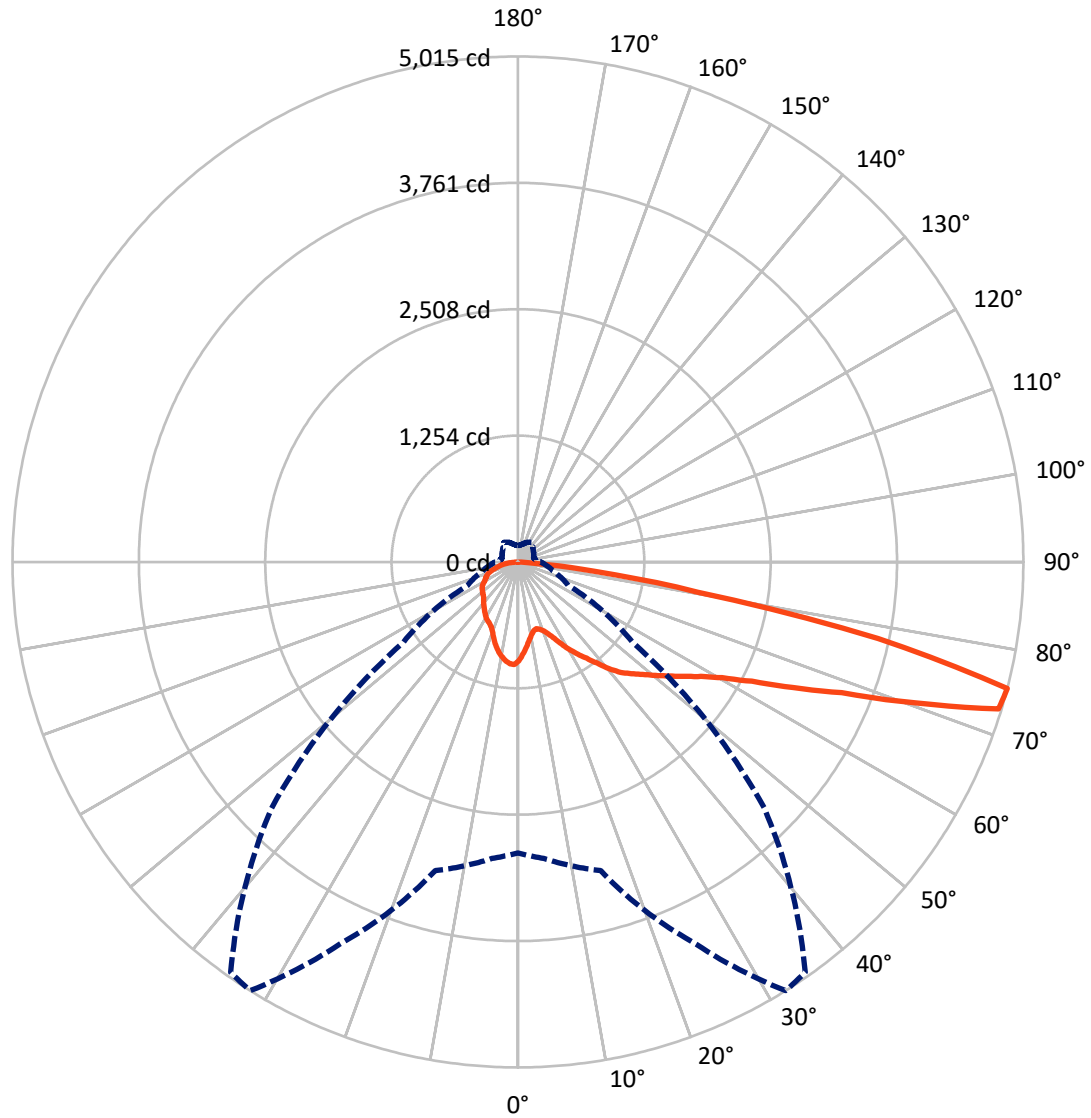
× Max cd  
 - - - 1/2 Max cd



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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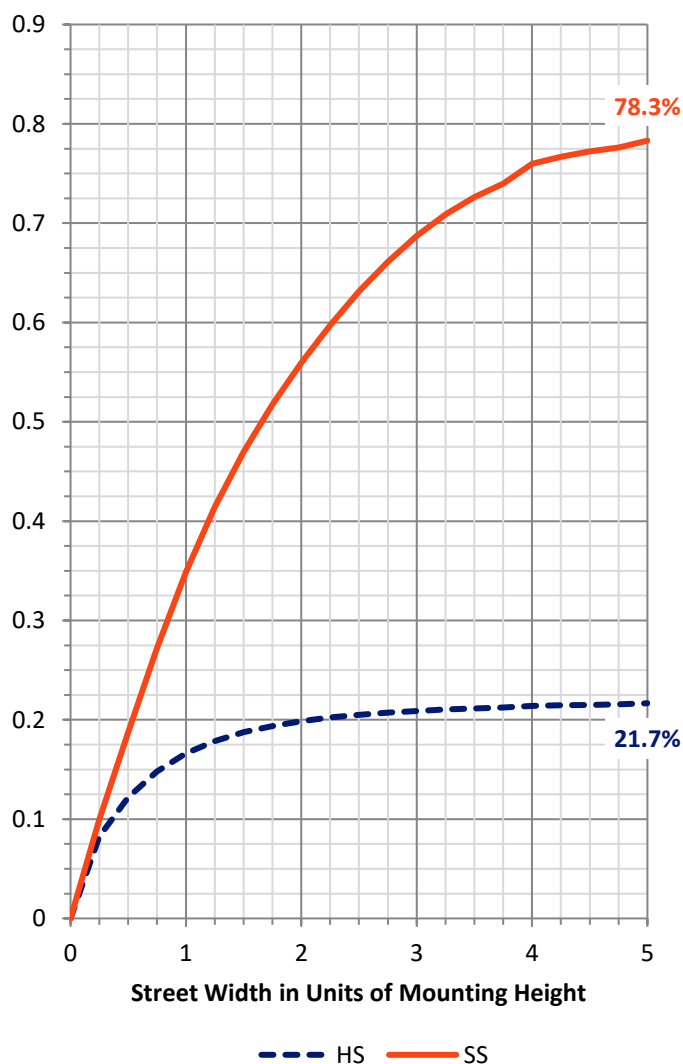
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1349.7	0.0	1349.7
	% Fixture	21.9	0.0	21.9
<b>Street Side</b>	Lumens	4810.3	0.0	4810.3
	% Fixture	78.1	0.0	78.1
<b>Total</b>	Lumens	6160.0	0.0	6160.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	1.4
10°-20°	243.4	4.0
20°-30°	402.8	6.5
30°-40°	600.4	9.7
40°-50°	854.8	13.9
50°-60°	1176.1	19.1
60°-70°	1482.1	24.1
70°-80°	1198.1	19.5
80°-90°	113.2	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°	6160.0	100.0
0°-180°	6160.0	100.0

**Coefficient of Utilization**

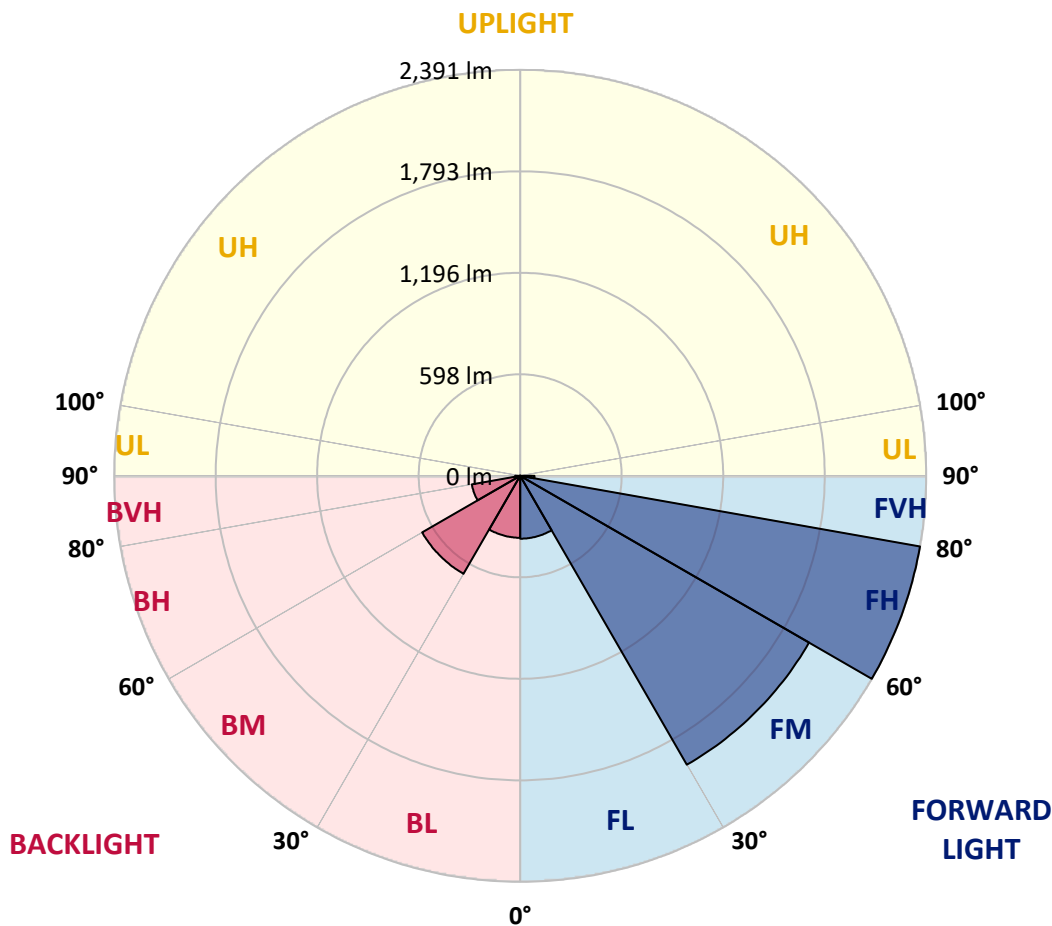


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	370.3	6.0			
FM (30°-60°)	1964.6	31.9			
FH (60°-80°)	2391.2	38.8			G2/5000
FVH (80°-90°)	84.1	1.4			G1/100
BL (0°-30°)	364.9	5.9	B1/500		
BM (30°-60°)	666.7	10.8	B1/1000		
BH (60°-80°)	289.1	4.7	B1/500		G1/500
BVH (80°-90°)	29.1	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°	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6
2.5°	895.5	902.3	904.5	909.0	917.9	913.4	924.6	938.1	956.0	964.9	982.8
5°	819.4	819.4	826.1	837.3	853.0	853.0	873.1	897.8	929.1	953.7	985.1
7.5°	752.2	752.2	759.0	772.4	788.1	799.3	823.9	862.0	904.5	951.5	991.8
10°	696.3	698.5	703.0	716.4	736.6	747.8	783.6	826.1	882.1	942.5	998.5
12.5°	676.1	673.9	671.7	682.8	698.5	707.5	747.8	801.5	866.4	940.3	1012.0
15°	691.8	687.3	680.6	680.6	687.3	691.8	725.4	781.4	853.0	938.1	1027.6
17.5°	732.1	727.6	711.9	696.3	700.8	703.0	725.4	770.2	846.3	947.0	1050.0
20°	788.1	781.4	754.5	734.3	729.9	729.9	743.3	776.9	850.8	964.9	1079.1
22.5°	855.2	848.5	817.2	781.4	776.9	774.6	781.4	803.7	864.2	985.1	1123.9
25°	944.8	938.1	900.0	855.2	839.6	837.3	830.6	844.0	886.6	1012.0	1155.2
27.5°	1041.1	1043.3	998.5	938.1	922.4	915.7	897.8	895.5	913.4	1034.3	1209.0
30°	1130.6	1126.1	1079.1	1029.9	1007.5	998.5	969.4	956.0	944.8	1067.9	1271.7
32.5°	1173.1	1179.9	1157.5	1110.5	1092.6	1076.9	1043.3	1020.9	1005.2	1119.4	1347.8
35°	1244.8	1247.0	1238.1	1209.0	1173.1	1162.0	1130.6	1114.9	1081.4	1182.1	1439.6
37.5°	1316.4	1323.2	1320.9	1303.0	1271.7	1260.5	1233.6	1226.9	1159.7	1260.5	1553.8
40°	1423.9	1412.7	1397.0	1403.7	1392.6	1385.8	1374.6	1352.3	1269.4	1345.5	1665.7
42.5°	1540.3	1520.2	1464.2	1482.1	1497.8	1504.5	1520.2	1495.5	1383.6	1473.2	1757.5
45°	1634.3	1618.7	1544.8	1549.3	1580.6	1603.0	1676.9	1663.5	1531.4	1612.0	1880.6
47.5°	1688.1	1674.6	1623.2	1645.5	1665.7	1697.0	1840.3	1829.1	1670.2	1762.0	2028.4
50°	1764.2	1741.8	1692.6	1732.9	1768.7	1793.3	1999.3	1994.8	1788.8	1916.4	2196.3
52.5°	1806.7	1784.4	1779.9	1835.8	1878.4	1912.0	2169.4	2156.0	1905.2	2070.9	2355.3
55°	1864.9	1869.4	1898.5	1941.1	2001.5	2057.5	2335.1	2267.9	2012.7	2223.2	2512.0
57.5°	1992.6	1988.1	2044.1	2064.2	2142.6	2214.2	2532.1	2386.6	2102.3	2332.9	2585.9
60°	2162.7	2171.7	2191.8	2243.3	2328.4	2438.1	2722.4	2509.7	2160.5	2411.2	2572.4
62.5°	2485.1	2433.6	2424.7	2438.1	2606.0	2733.6	2908.2	2619.4	2185.1	2413.5	2431.4
65°	2812.0	2791.8	2722.4	2756.0	3000.0	3116.5	3147.8	2691.1	2135.8	2274.7	2117.9
67.5°	3150.0	3147.8	3073.9	3170.2	3463.5	3600.0	3414.2	2677.6	1974.7	1950.0	1627.6
70°	3497.1	3512.7	3512.7	3785.9	4186.6	4222.4	3712.0	2550.0	1654.5	1381.4	951.5
72.5°	3649.3	3658.3	3738.9	4345.6	4985.9	4997.1	3882.1	2165.0	1128.4	736.6	479.1
75°	2885.9	2953.0	3170.2	4184.4	5015.0	4970.2	3459.0	1385.8	550.8	367.2	266.4
77.5°	1132.9	1157.5	1598.5	2664.2	3653.8	3698.6	2238.8	553.0	279.9	232.8	192.5
80°	320.2	335.8	566.4	1059.0	1804.5	1994.8	891.1	239.6	188.1	170.2	138.8
82.5°	114.2	129.9	210.5	405.2	770.2	812.7	241.8	118.7	120.9	109.7	85.1
85°	15.7	13.4	29.1	73.9	170.2	143.3	40.3	31.3	49.3	51.5	35.8
87.5°	0.0	0.0	0.0	2.2	2.2	2.2	0.0	0.0	0.0	2.2	2.2
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°	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6	980.6
2.5°	987.3	991.8	1000.8	1005.2	1009.7	1018.7	1016.4	1020.9	1020.9	1018.7	1023.1
5°	996.3	1007.5	1018.7	1023.1	1025.4	1025.4	1014.2	1007.5	1005.2	1003.0	1005.2
7.5°	1005.2	1020.9	1032.1	1029.9	1020.9	1005.2	991.8	980.6	969.4	964.9	969.4
10°	1020.9	1036.6	1043.3	1027.6	1003.0	978.4	958.2	942.5	924.6	922.4	924.6
12.5°	1034.3	1054.5	1054.5	1018.7	985.1	951.5	920.2	895.5	873.1	866.4	866.4
15°	1056.7	1072.4	1056.7	1007.5	960.5	917.9	873.1	841.8	814.9	803.7	806.0
17.5°	1081.4	1092.6	1052.3	989.6	933.6	877.6	819.4	776.9	756.7	745.5	747.8
20°	1110.5	1112.7	1052.3	967.2	893.3	819.4	756.7	725.4	711.9	705.2	707.5
22.5°	1148.5	1139.6	1045.5	938.1	841.8	761.2	703.0	694.0	694.0	694.0	700.8
25°	1188.8	1164.2	1034.3	900.0	774.6	691.8	669.4	680.6	689.6	689.6	694.0
27.5°	1229.1	1188.8	1012.0	844.0	696.3	642.5	651.5	669.4	678.4	678.4	682.8
30°	1278.4	1217.9	985.1	767.9	622.4	609.0	631.4	653.7	667.2	667.2	671.7
32.5°	1341.1	1242.6	944.8	689.6	573.1	579.9	604.5	629.1	644.8	649.3	651.5
35°	1410.5	1276.1	888.8	602.2	539.6	557.5	577.6	600.0	613.4	617.9	617.9
37.5°	1482.1	1309.7	814.9	528.4	510.5	535.1	555.2	566.4	575.4	575.4	575.4
40°	1553.8	1327.6	718.7	470.2	481.3	517.2	535.1	530.6	528.4	521.6	523.9
42.5°	1627.6	1341.1	615.7	427.6	452.2	497.0	510.5	499.3	481.3	470.2	472.4
45°	1708.2	1361.2	530.6	396.3	423.1	479.1	492.5	470.2	447.8	429.9	425.4
47.5°	1800.0	1394.8	454.5	367.2	405.2	467.9	481.3	450.0	420.9	396.3	391.8
50°	1925.4	1446.3	396.3	347.0	394.0	461.2	472.4	432.1	398.5	367.2	364.9
52.5°	2053.0	1484.3	356.0	329.1	380.6	447.8	461.2	418.7	378.4	344.8	340.3
55°	2147.0	1479.9	320.2	311.2	362.7	429.9	450.0	403.0	351.5	320.2	315.7
57.5°	2187.3	1388.1	291.0	295.5	342.5	407.5	432.1	378.4	331.3	304.5	302.2
60°	2117.9	1240.3	270.9	277.6	320.2	378.4	398.5	360.5	317.9	293.3	291.0
62.5°	1997.0	1074.6	255.2	264.2	297.8	351.5	378.4	338.1	300.0	282.1	279.9
65°	1710.5	893.3	239.6	248.5	277.6	324.6	360.5	324.6	286.6	268.7	266.4
67.5°	1291.8	642.5	223.9	232.8	259.7	304.5	344.8	306.7	266.4	253.0	253.0
70°	770.2	394.0	203.7	217.2	237.3	279.9	320.2	282.1	241.8	237.3	232.8
72.5°	376.1	250.7	185.8	197.0	212.7	248.5	284.3	250.7	210.5	199.3	197.0
75°	226.1	181.3	161.2	174.6	185.8	208.2	239.6	214.9	183.6	165.7	163.4
77.5°	163.4	136.6	136.6	150.0	150.0	172.4	206.0	183.6	154.5	143.3	141.0
80°	116.4	103.0	111.9	120.9	116.4	145.5	174.6	154.5	125.4	116.4	114.2
82.5°	76.1	71.6	85.1	82.8	82.8	111.9	143.3	116.4	91.8	76.1	71.6
85°	31.3	35.8	49.3	47.0	47.0	62.7	73.9	60.4	42.5	33.6	33.6
87.5°	0.0	2.2	6.7	4.5	4.5	6.7	2.2	2.2	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**

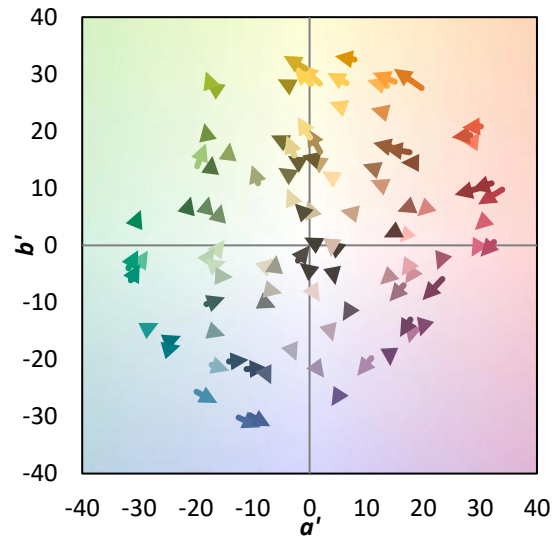
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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