

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: P437934

Luminaire Tested: **ISC-SA1F-830-U-SL3-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437934  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-17)  
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-SL3-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5201 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

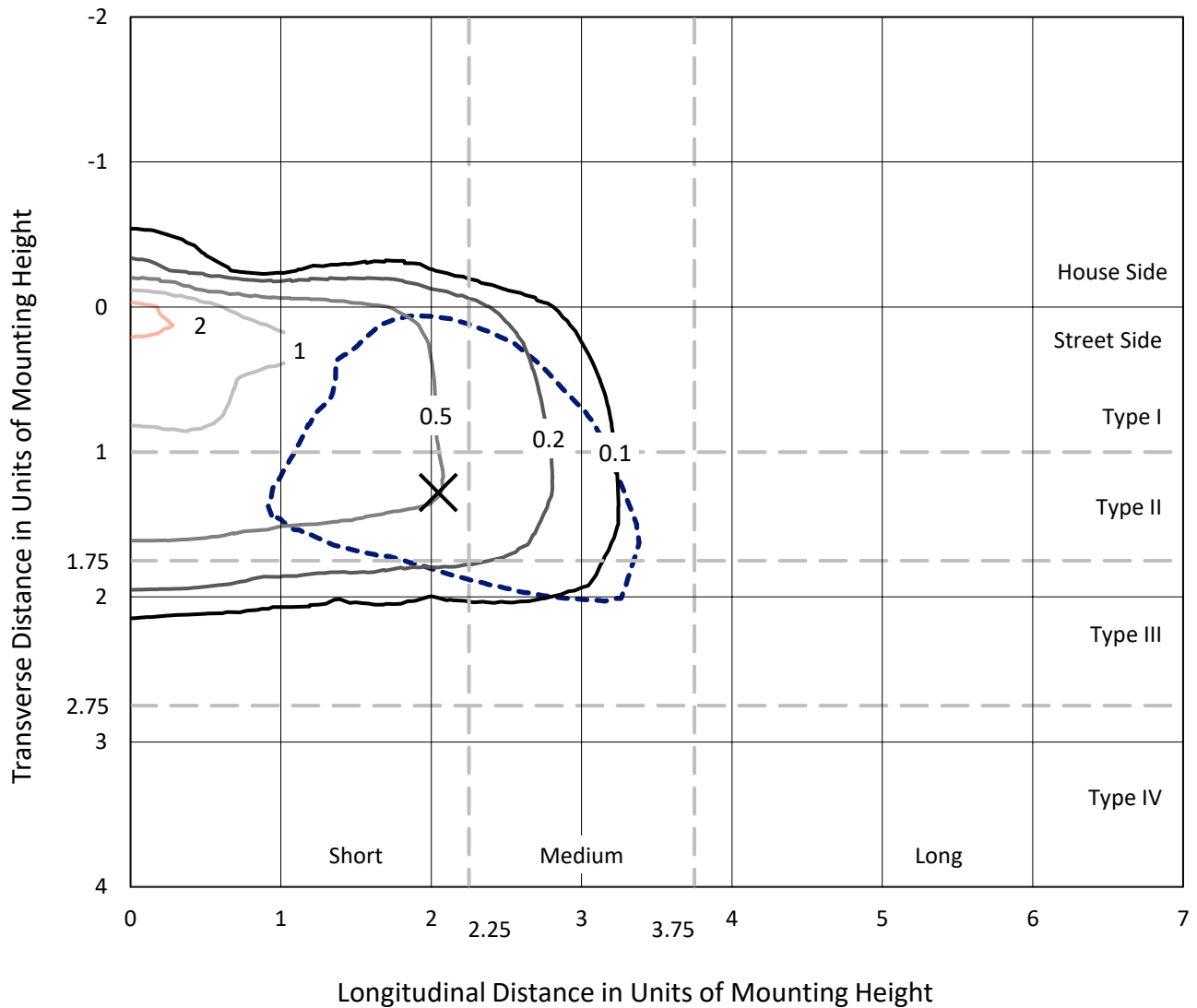
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P437934  
 CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

### Iso-Footcandle Lines of Horizontal Illumination

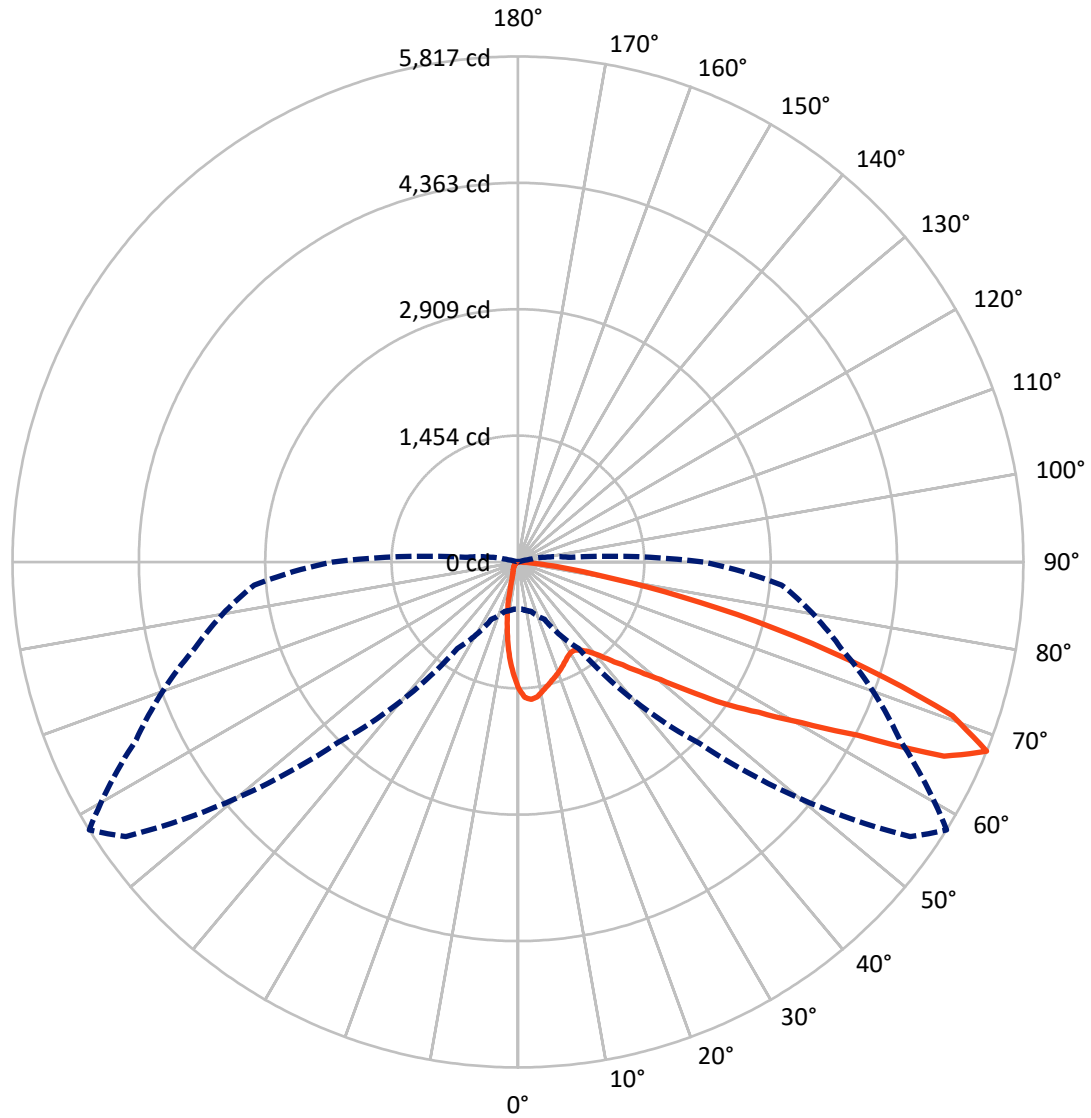
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type III - Short - N/A

REPORT NUMBER: P437934  
CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P437934

CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

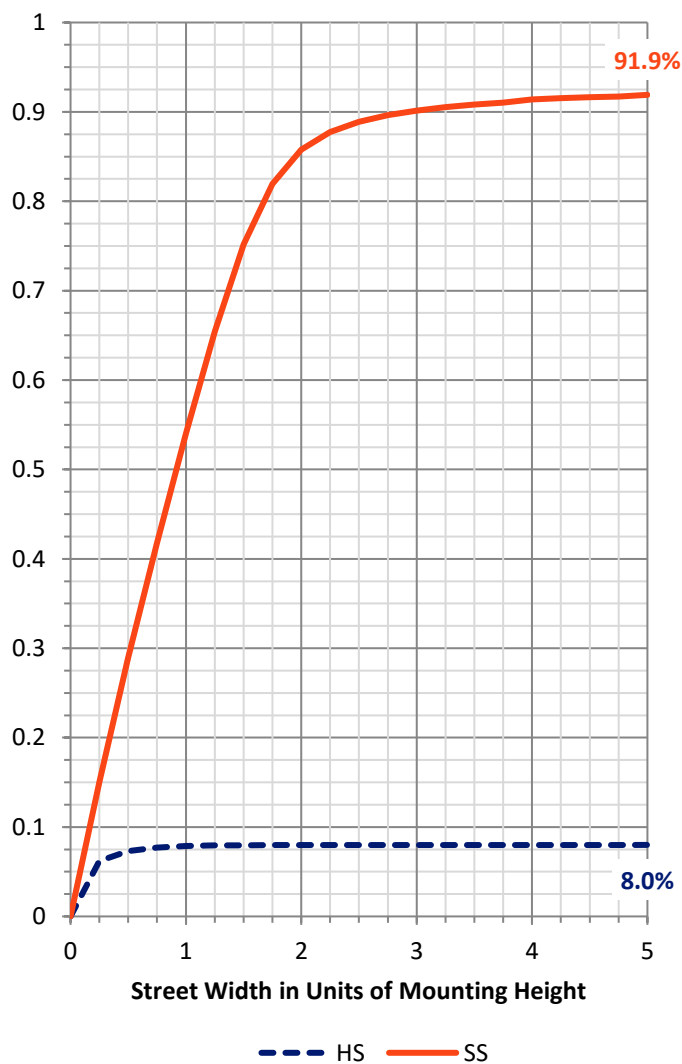
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	419.3	0.0	419.3
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	4781.7	0.0	4781.7
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	5201.0	0.0	5201.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.2	2.3
10°-20°	247.1	4.8
20°-30°	334.3	6.4
30°-40°	459.8	8.8
40°-50°	719.8	13.8
50°-60°	1212.7	23.3
60°-70°	1439.1	27.7
70°-80°	625.0	12.0
80°-90°	45.9	0.9
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°	5201.0	100.0
0°-180°	5201.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P437934

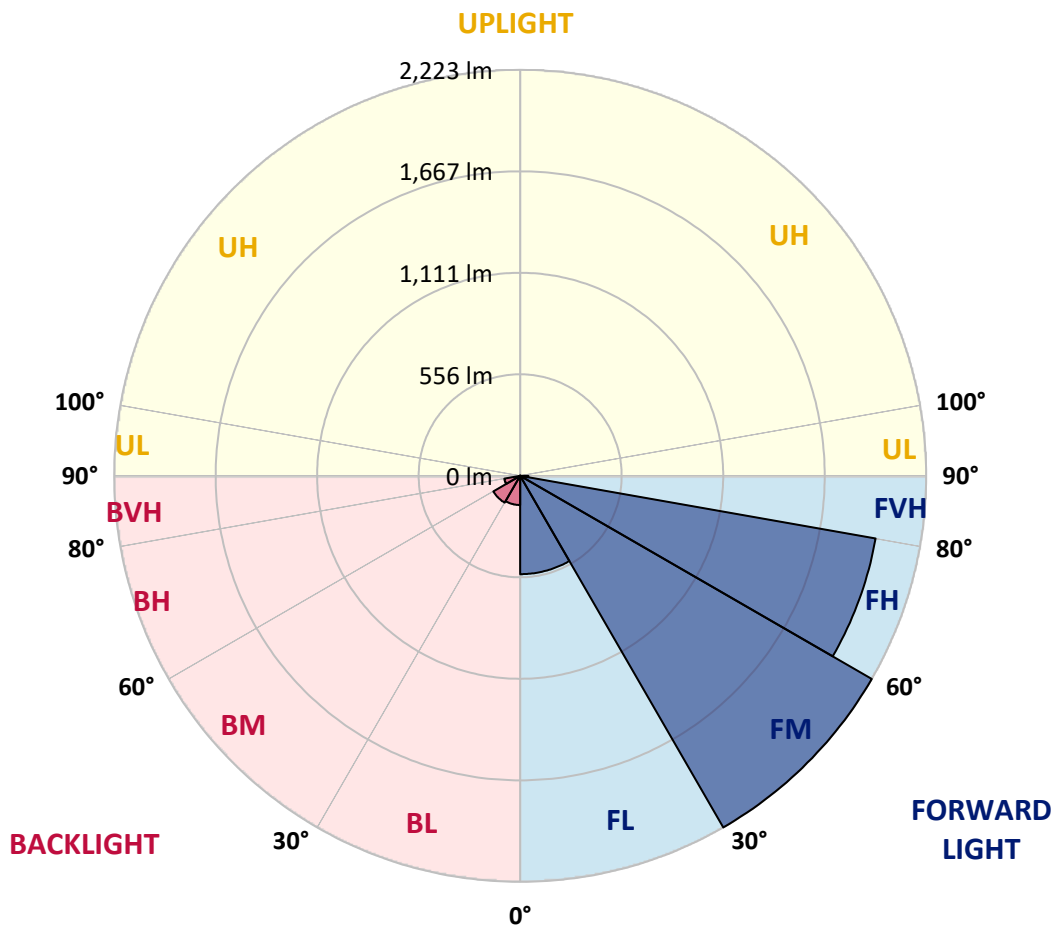
CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	538.6	10.4			
FM (30°-60°)	2222.7	42.7			
FH (60°-80°)	1975.9	38.0			G2/5000
FVH (80°-90°)	44.5	0.9			G1/100
BL (0°-30°)	160.1	3.1	B1/500		
BM (30°-60°)	169.6	3.3	B0/220		
BH (60°-80°)	88.2	1.7	B0/110		G0/110
BVH (80°-90°)	1.4	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-G2**

Type III Short





REPORT NUMBER: P437934

CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3
2.5°	1634.5	1625.5	1621.1	1618.8	1603.2	1589.7	1562.9	1560.6	1542.7	1509.1	1475.5
5°	1598.7	1605.4	1607.6	1614.4	1612.1	1612.1	1594.2	1589.7	1565.1	1518.1	1453.1
7.5°	1520.3	1518.1	1522.6	1540.5	1549.4	1567.3	1565.1	1569.6	1558.4	1506.9	1415.1
10°	1406.1	1410.6	1424.0	1439.7	1464.3	1495.7	1515.8	1520.3	1529.3	1486.7	1379.3
12.5°	1300.9	1307.6	1316.6	1347.9	1374.8	1424.0	1462.1	1471.1	1489.0	1466.6	1347.9
15°	1213.6	1215.8	1222.5	1251.6	1296.4	1359.1	1415.1	1428.5	1457.6	1448.7	1323.3
17.5°	1144.2	1146.4	1155.3	1180.0	1215.8	1289.7	1365.8	1388.2	1430.8	1437.5	1296.4
20°	1106.1	1106.1	1106.1	1121.8	1157.6	1227.0	1316.6	1347.9	1408.4	1419.6	1274.0
22.5°	1094.9	1094.9	1090.4	1094.9	1117.3	1175.5	1267.3	1305.4	1381.5	1412.8	1247.1
25°	1110.6	1103.9	1103.9	1092.7	1094.9	1133.0	1222.5	1265.1	1365.8	1408.4	1233.7
27.5°	1139.7	1137.4	1128.5	1119.5	1106.1	1115.0	1184.5	1227.0	1350.1	1415.1	1222.5
30°	1173.3	1173.3	1168.8	1164.3	1141.9	1124.0	1166.5	1204.6	1343.4	1426.3	1215.8
32.5°	1211.3	1209.1	1220.3	1224.8	1197.9	1164.3	1171.0	1206.8	1347.9	1459.9	1220.3
35°	1256.1	1256.1	1276.3	1303.1	1280.7	1229.2	1213.6	1244.9	1370.3	1495.7	1238.2
37.5°	1305.4	1307.6	1343.4	1381.5	1365.8	1321.0	1294.2	1305.4	1417.3	1562.9	1278.5
40°	1363.6	1363.6	1417.3	1480.0	1480.0	1428.5	1392.7	1401.6	1484.5	1659.1	1350.1
42.5°	1426.3	1433.0	1509.1	1585.2	1607.6	1560.6	1522.6	1533.7	1592.0	1784.5	1455.4
45°	1515.8	1536.0	1634.5	1708.4	1753.2	1730.8	1681.5	1690.5	1733.0	1965.9	1614.4
47.5°	1674.8	1692.7	1777.8	1851.7	1907.7	1918.9	1896.5	1892.0	1909.9	2178.6	1815.9
50°	1865.1	1880.8	1939.0	2001.7	2080.1	2147.2	2133.8	2127.1	2133.8	2411.5	2062.2
52.5°	2053.2	2046.5	2115.9	2149.5	2259.2	2407.0	2465.2	2465.2	2429.4	2655.5	2304.0
55°	2221.1	2250.2	2324.1	2384.6	2476.4	2653.3	2850.3	2874.9	2751.8	2897.3	2505.5
57.5°	2201.0	2230.1	2366.7	2557.0	2827.9	3067.5	3260.1	3264.5	3085.4	3083.2	2754.0
60°	1965.9	1968.1	2151.7	2440.6	2982.4	3665.3	3777.3	3754.9	3376.5	3342.9	3096.6
62.5°	1383.7	1374.8	1612.1	1979.3	2751.8	3992.2	4560.9	4390.8	3860.1	3750.4	3416.8
65°	806.1	801.6	893.4	1182.2	2084.6	3761.6	5362.5	5389.4	4496.0	3958.6	3349.6
67.5°	541.8	546.3	588.9	729.9	1215.8	2951.1	5510.3	5817.0	4849.8	3851.2	3047.3
70°	398.6	398.6	432.1	537.4	721.0	1849.5	4814.0	5304.3	4919.2	3582.5	2550.3
72.5°	284.4	284.4	331.4	434.4	588.9	953.8	3578.0	4204.9	4153.4	2973.5	1764.4
75°	181.4	185.8	237.3	356.0	537.4	611.3	2427.1	3047.3	2897.3	1663.6	752.3
77.5°	69.4	78.4	127.6	262.0	470.2	508.3	1383.7	1921.1	1529.3	582.2	201.5
80°	24.6	24.6	42.5	134.3	331.4	418.7	723.2	953.8	497.1	141.1	76.1
82.5°	4.5	4.5	15.7	56.0	163.5	291.1	420.9	470.2	194.8	47.0	44.8
85°	0.0	0.0	2.2	11.2	38.1	29.1	167.9	159.0	60.5	20.2	29.1
87.5°	0.0	0.0	0.0	0.0	2.2	2.2	4.5	4.5	4.5	4.5	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P437934  
 CATALOG NUMBER: ISC-SA1F-830-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3	1464.3
2.5°	1448.7	1430.8	1379.3	1343.4	1294.2	1244.9	1213.6	1188.9	1177.7	1162.1	1168.8
5°	1412.8	1372.5	1278.5	1193.4	1112.8	1027.7	965.0	909.1	891.1	859.8	855.3
7.5°	1359.1	1303.1	1164.3	1030.0	900.1	792.6	696.3	622.5	555.3	526.2	544.1
10°	1307.6	1231.5	1050.1	871.0	698.6	548.6	434.4	344.8	293.3	270.9	275.4
12.5°	1258.3	1162.1	931.4	718.7	508.3	338.1	246.3	199.3	183.6	181.4	176.9
15°	1215.8	1097.1	826.2	557.5	338.1	212.7	174.6	163.5	161.2	161.2	161.2
17.5°	1168.8	1030.0	712.0	409.7	221.7	165.7	154.5	152.3	150.0	150.0	150.0
20°	1133.0	971.7	606.8	286.6	170.2	147.8	143.3	143.3	141.1	141.1	141.1
22.5°	1094.9	911.3	503.8	210.5	145.5	136.6	132.1	129.9	129.9	127.6	127.6
25°	1059.1	855.3	405.3	161.2	129.9	123.1	118.7	116.4	116.4	114.2	112.0
27.5°	1036.7	810.5	317.9	136.6	116.4	112.0	107.5	103.0	98.5	96.3	96.3
30°	1021.0	756.8	241.8	118.7	107.5	100.8	94.0	87.3	80.6	78.4	78.4
32.5°	998.6	714.3	185.8	107.5	96.3	89.6	80.6	73.9	67.2	62.7	62.7
35°	998.6	678.4	143.3	96.3	87.3	78.4	71.6	60.5	53.7	51.5	49.3
37.5°	1014.3	638.1	118.7	89.6	80.6	71.6	62.7	51.5	44.8	42.5	42.5
40°	1050.1	624.7	100.8	80.6	71.6	62.7	53.7	42.5	38.1	33.6	33.6
42.5°	1124.0	629.2	89.6	76.1	64.9	56.0	44.8	35.8	31.3	29.1	29.1
45°	1231.5	642.6	82.8	69.4	58.2	47.0	38.1	31.3	24.6	22.4	22.4
47.5°	1381.5	685.1	73.9	62.7	51.5	40.3	31.3	24.6	20.2	17.9	17.9
50°	1560.6	759.0	69.4	56.0	47.0	33.6	24.6	17.9	13.4	13.4	13.4
52.5°	1771.1	832.9	62.7	51.5	40.3	29.1	20.2	13.4	11.2	9.0	9.0
55°	1948.0	897.9	56.0	47.0	33.6	22.4	15.7	11.2	9.0	6.7	6.7
57.5°	2178.6	991.9	47.0	40.3	26.9	17.9	11.2	9.0	4.5	4.5	4.5
60°	2487.6	1103.9	40.3	33.6	20.2	13.4	9.0	4.5	4.5	2.2	2.2
62.5°	2619.7	1014.3	35.8	26.9	15.7	9.0	6.7	4.5	2.2	2.2	2.2
65°	2474.1	828.4	29.1	20.2	11.2	6.7	4.5	2.2	2.2	0.0	0.0
67.5°	2133.8	611.3	24.6	13.4	9.0	4.5	2.2	0.0	0.0	0.0	0.0
70°	1739.7	452.3	17.9	9.0	4.5	4.5	2.2	0.0	0.0	0.0	0.0
72.5°	1204.6	273.2	13.4	6.7	4.5	2.2	2.2	0.0	0.0	0.0	0.0
75°	468.0	107.5	11.2	6.7	4.5	2.2	0.0	0.0	0.0	0.0	0.0
77.5°	132.1	38.1	9.0	4.5	4.5	2.2	2.2	2.2	0.0	0.0	0.0
80°	53.7	20.2	6.7	4.5	4.5	4.5	2.2	2.2	0.0	0.0	0.0
82.5°	33.6	11.2	4.5	2.2	2.2	2.2	2.2	0.0	0.0	0.0	0.0
85°	22.4	6.7	4.5	2.2	2.2	0.0	0.0	0.0	0.0	2.2	2.2
87.5°	4.5	4.5	2.2	2.2	2.2	2.2	0.0	0.0	0.0	0.0	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



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

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

**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

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

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			

REPORT NUMBER: SP1-2408-195-9

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)