

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: P437776

Luminaire Tested: **ISS-SA1E-830-U-T4FT**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437776  
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: ISS-SA1E-830-U-T4FT  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

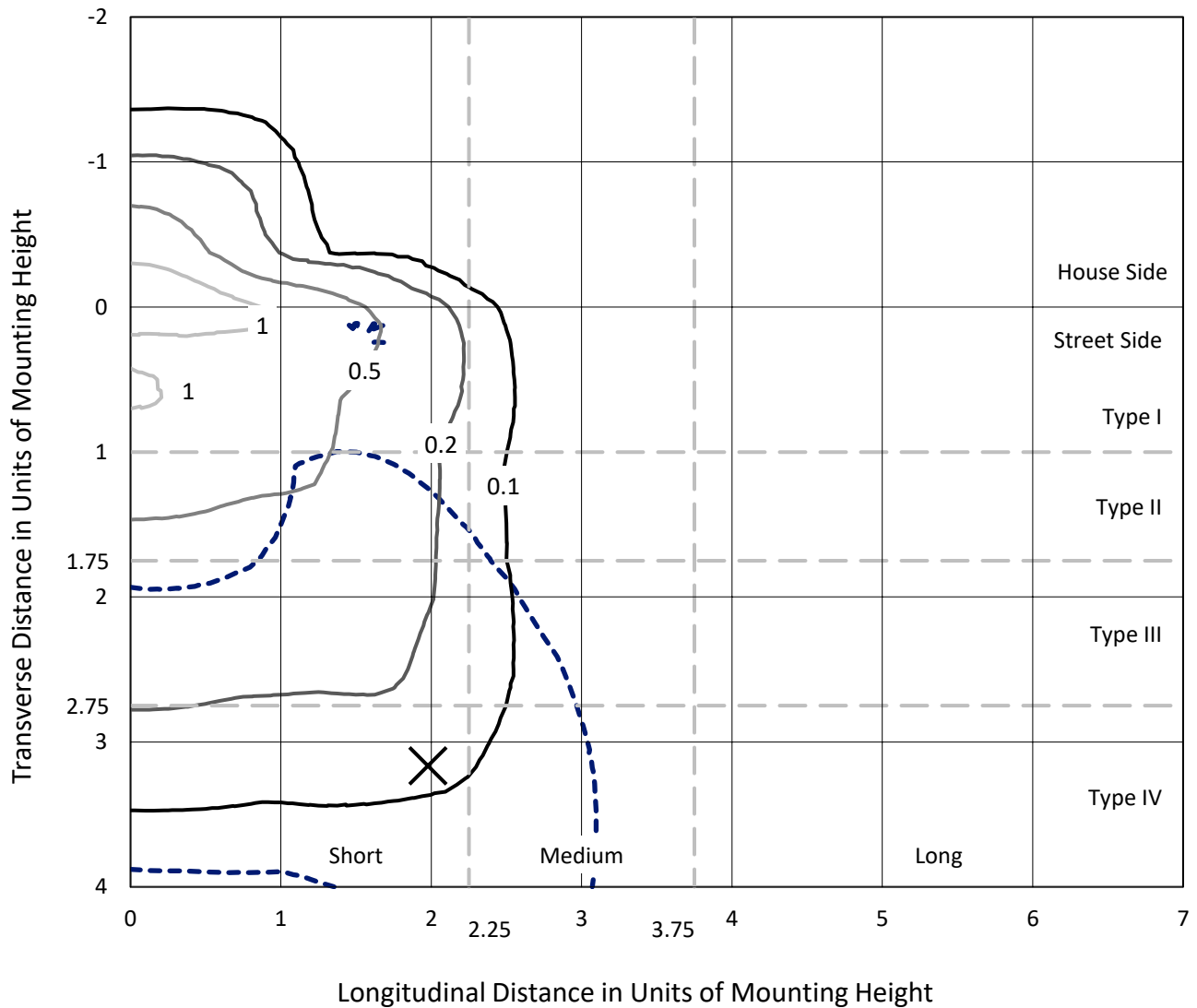
Lumens per Lamp: N/A  
Luminaire Lumens: 5641 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 58.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

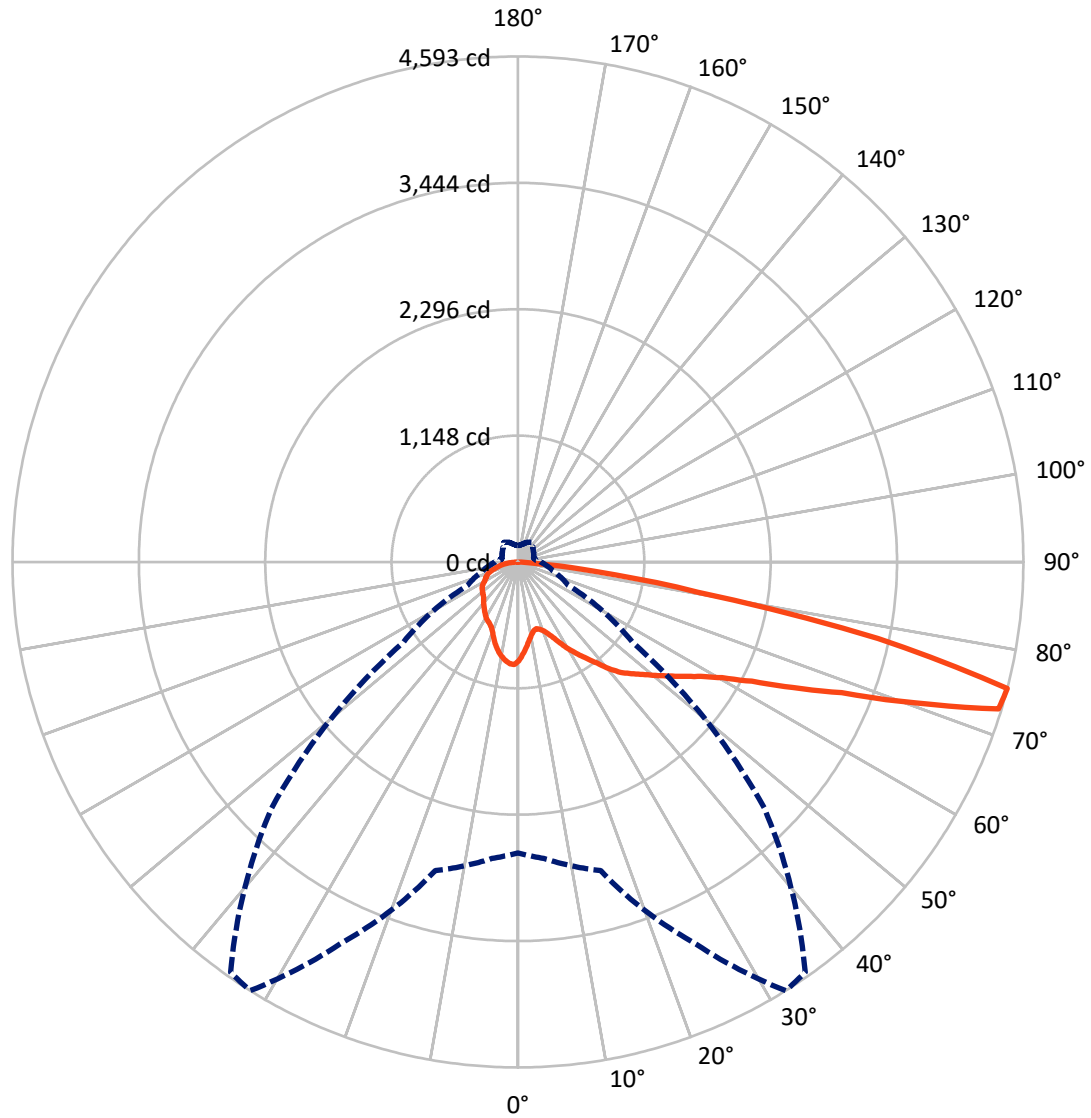
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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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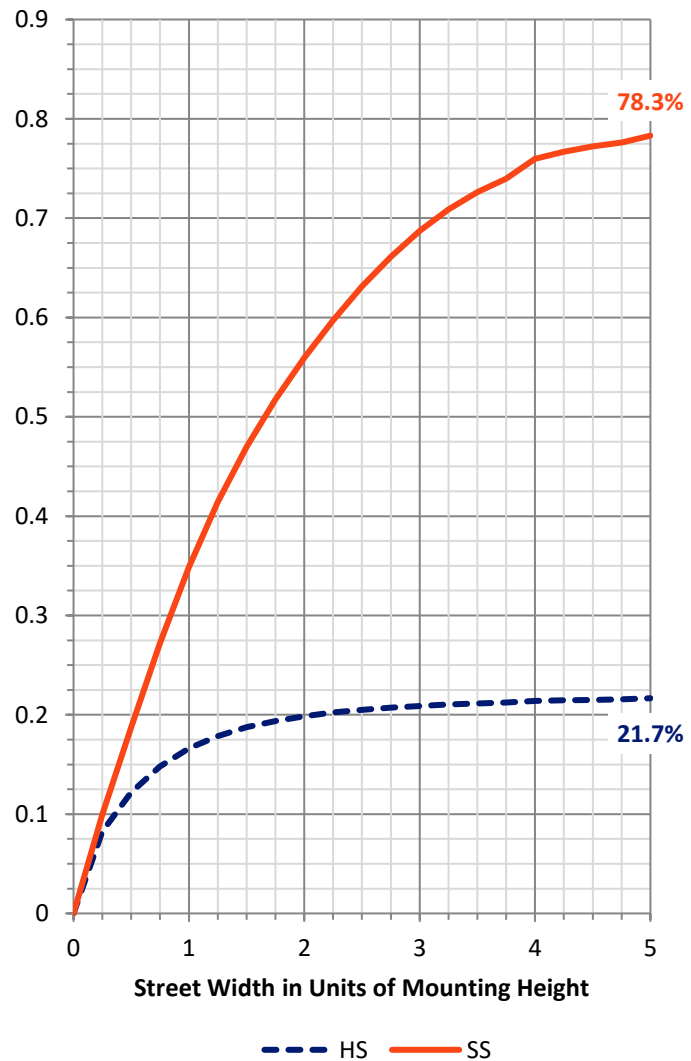
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1236.0	0.0	1236.0
	% Fixture	21.9	0.0	21.9
<b>Street Side</b>	Lumens	4405.0	0.0	4405.0
	% Fixture	78.1	0.0	78.1
<b>Total</b>	Lumens	5641.0	0.0	5641.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.5	1.4
10°-20°	222.9	4.0
20°-30°	368.9	6.5
30°-40°	549.8	9.7
40°-50°	782.8	13.9
50°-60°	1077.0	19.1
60°-70°	1357.2	24.1
70°-80°	1097.2	19.5
80°-90°	103.7	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°	5641.0	100.0
0°-180°	5641.0	100.0

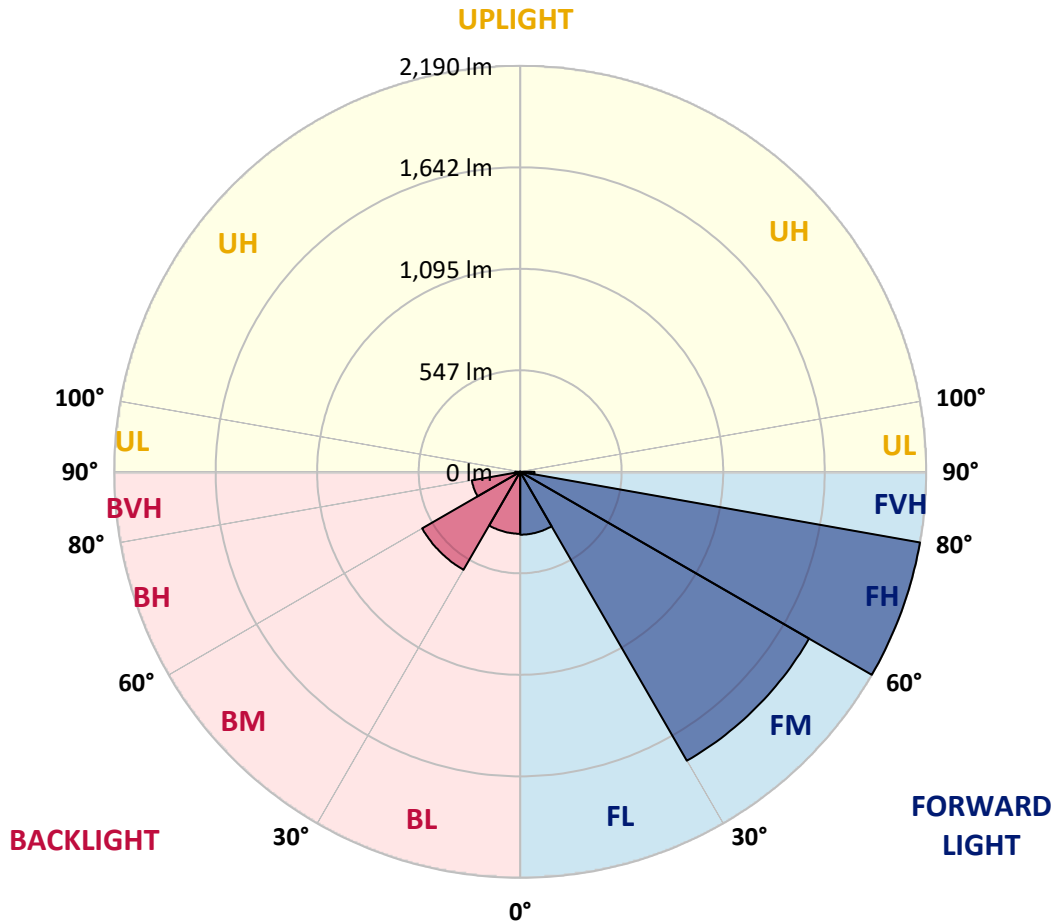


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	339.1	6.0			
FM (30°-60°)	1799.1	31.9			
FH (60°-80°)	2189.7	38.8			G2/5000
FVH (80°-90°)	77.0	1.4			G1/100
BL (0°-30°)	334.1	5.9	B1/500		
BM (30°-60°)	610.5	10.8	B1/1000		
BH (60°-80°)	264.7	4.7	B1/500		G1/500
BVH (80°-90°)	26.7	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°	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0
2.5°	820.1	826.2	828.3	832.4	840.6	836.5	846.7	859.0	875.4	883.6	900.0
5°	750.4	750.4	756.5	766.8	781.1	781.1	799.6	822.1	850.8	873.4	902.1
7.5°	688.9	688.9	695.0	707.3	721.7	731.9	754.5	789.3	828.3	871.3	908.2
10°	637.6	639.7	643.8	656.1	674.5	684.8	717.6	756.5	807.8	863.1	914.4
12.5°	619.2	617.1	615.1	625.3	639.7	647.9	684.8	734.0	793.4	861.1	926.7
15°	633.5	629.4	623.3	623.3	629.4	633.5	664.3	715.5	781.1	859.0	941.0
17.5°	670.4	666.3	652.0	637.6	641.7	643.8	664.3	705.3	775.0	867.2	961.5
20°	721.7	715.5	690.9	672.5	668.4	668.4	680.7	711.4	779.1	883.6	988.2
22.5°	783.2	777.0	748.3	715.5	711.4	709.4	715.5	736.0	791.4	902.1	1029.2
25°	865.2	859.0	824.2	783.2	768.8	766.8	760.6	772.9	811.9	926.7	1057.9
27.5°	953.3	955.4	914.4	859.0	844.7	838.5	822.1	820.1	836.5	947.2	1107.1
30°	1035.4	1031.3	988.2	943.1	922.6	914.4	887.7	875.4	865.2	977.9	1164.5
32.5°	1074.3	1080.5	1060.0	1016.9	1000.5	986.1	955.4	934.9	920.5	1025.1	1234.2
35°	1139.9	1142.0	1133.8	1107.1	1074.3	1064.1	1035.4	1021.0	990.2	1082.5	1318.3
37.5°	1205.5	1211.7	1209.6	1193.2	1164.5	1154.3	1129.7	1123.5	1062.0	1154.3	1422.8
40°	1303.9	1293.7	1279.3	1285.5	1275.2	1269.1	1258.8	1238.3	1162.5	1232.2	1525.4
42.5°	1410.5	1392.1	1340.8	1357.2	1371.6	1377.7	1392.1	1369.5	1267.0	1349.0	1609.4
45°	1496.6	1482.3	1414.6	1418.7	1447.4	1467.9	1535.6	1523.3	1402.3	1476.1	1722.2
47.5°	1545.9	1533.6	1486.4	1506.9	1525.4	1554.1	1685.3	1675.0	1529.5	1613.5	1857.5
50°	1615.6	1595.1	1550.0	1586.9	1619.7	1642.2	1830.8	1826.7	1638.1	1755.0	2011.3
52.5°	1654.5	1634.0	1629.9	1681.2	1720.1	1750.9	1986.6	1974.3	1744.7	1896.4	2156.8
55°	1707.8	1711.9	1738.6	1777.5	1832.9	1884.1	2138.4	2076.9	1843.1	2035.9	2300.3
57.5°	1824.7	1820.6	1871.8	1890.3	1962.0	2027.7	2318.8	2185.5	1925.1	2136.3	2368.0
60°	1980.5	1988.7	2007.2	2054.3	2132.2	2232.7	2493.0	2298.3	1978.4	2208.1	2355.7
62.5°	2275.7	2228.6	2220.4	2232.7	2386.4	2503.3	2663.2	2398.7	2001.0	2210.1	2226.5
65°	2575.1	2556.6	2493.0	2523.8	2747.3	2853.9	2882.6	2464.3	1955.9	2083.0	1939.5
67.5°	2884.6	2882.6	2814.9	2903.1	3171.7	3296.7	3126.6	2452.0	1808.3	1785.7	1490.5
70°	3202.4	3216.8	3216.8	3466.9	3833.9	3866.7	3399.2	2335.2	1515.1	1265.0	871.3
72.5°	3341.8	3350.0	3423.8	3979.4	4565.8	4576.1	3555.1	1982.5	1033.3	674.5	438.7
75°	2642.7	2704.2	2903.1	3831.8	4592.5	4551.5	3167.6	1269.1	504.4	336.2	244.0
77.5°	1037.4	1060.0	1463.8	2439.7	3345.9	3386.9	2050.2	506.4	256.3	213.2	176.3
80°	293.2	307.5	518.7	969.7	1652.5	1826.7	816.0	219.4	172.2	155.8	127.1
82.5°	104.6	118.9	192.7	371.1	705.3	744.2	221.4	108.7	110.7	100.5	77.9
85°	14.4	12.3	26.7	67.7	155.8	131.2	36.9	28.7	45.1	47.2	32.8
87.5°	0.0	0.0	0.0	2.1	2.1	2.1	0.0	0.0	0.0	2.1	2.1
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°	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0	898.0
2.5°	904.1	908.2	916.4	920.5	924.6	932.8	930.8	934.9	934.9	932.8	936.9
5°	912.3	922.6	932.8	936.9	939.0	939.0	928.7	922.6	920.5	918.5	920.5
7.5°	920.5	934.9	945.1	943.1	934.9	920.5	908.2	898.0	887.7	883.6	887.7
10°	934.9	949.2	955.4	941.0	918.5	895.9	877.5	863.1	846.7	844.7	846.7
12.5°	947.2	965.6	965.6	932.8	902.1	871.3	842.6	820.1	799.6	793.4	793.4
15°	967.7	982.0	967.7	922.6	879.5	840.6	799.6	770.9	746.3	736.0	738.1
17.5°	990.2	1000.5	963.6	906.2	854.9	803.7	750.4	711.4	693.0	682.7	684.8
20°	1016.9	1019.0	963.6	885.7	818.0	750.4	693.0	664.3	652.0	645.8	647.9
22.5°	1051.8	1043.6	957.4	859.0	770.9	697.1	643.8	635.6	635.6	635.6	641.7
25°	1088.7	1066.1	947.2	824.2	709.4	633.5	613.0	623.3	631.5	631.5	635.6
27.5°	1125.6	1088.7	926.7	772.9	637.6	588.4	596.6	613.0	621.2	621.2	625.3
30°	1170.7	1115.3	902.1	703.2	570.0	557.7	578.2	598.7	611.0	611.0	615.1
32.5°	1228.1	1137.9	865.2	631.5	524.9	531.0	553.6	576.1	590.5	594.6	596.6
35°	1291.6	1168.6	813.9	551.5	494.1	510.5	529.0	549.5	561.8	565.9	565.9
37.5°	1357.2	1199.4	746.3	483.8	467.4	490.0	508.5	518.7	526.9	526.9	526.9
40°	1422.8	1215.8	658.1	430.5	440.8	473.6	490.0	485.9	483.8	477.7	479.7
42.5°	1490.5	1228.1	563.8	391.6	414.1	455.1	467.4	457.2	440.8	430.5	432.6
45°	1564.3	1246.5	485.9	362.9	387.5	438.7	451.0	430.5	410.0	393.6	389.5
47.5°	1648.4	1277.3	416.2	336.2	371.1	428.5	440.8	412.1	385.4	362.9	358.8
50°	1763.2	1324.4	362.9	317.8	360.8	422.3	432.6	395.7	364.9	336.2	334.2
52.5°	1880.0	1359.3	326.0	301.4	348.5	410.0	422.3	383.4	346.5	315.7	311.6
55°	1966.1	1355.2	293.2	285.0	332.1	393.6	412.1	369.0	321.9	293.2	289.1
57.5°	2003.1	1271.1	266.5	270.6	313.7	373.1	395.7	346.5	303.4	278.8	276.8
60°	1939.5	1135.8	248.1	254.2	293.2	346.5	364.9	330.1	291.1	268.6	266.5
62.5°	1828.8	984.1	233.7	241.9	272.7	321.9	346.5	309.6	274.7	258.3	256.3
65°	1566.4	818.0	219.4	227.6	254.2	297.3	330.1	297.3	262.4	246.0	244.0
67.5°	1183.0	588.4	205.0	213.2	237.8	278.8	315.7	280.9	244.0	231.7	231.7
70°	705.3	360.8	186.6	198.9	217.3	256.3	293.2	258.3	221.4	217.3	213.2
72.5°	344.4	229.6	170.2	180.4	194.8	227.6	260.4	229.6	192.7	182.5	180.4
75°	207.1	166.1	147.6	159.9	170.2	190.7	219.4	196.8	168.1	151.7	149.7
77.5°	149.7	125.1	125.1	137.4	137.4	157.9	188.6	168.1	141.5	131.2	129.2
80°	106.6	94.3	102.5	110.7	106.6	133.3	159.9	141.5	114.8	106.6	104.6
82.5°	69.7	65.6	77.9	75.9	75.9	102.5	131.2	106.6	84.1	69.7	65.6
85°	28.7	32.8	45.1	43.1	43.1	57.4	67.7	55.4	39.0	30.8	30.8
87.5°	0.0	2.1	6.2	4.1	4.1	6.2	2.1	2.1	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



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 <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)