

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: P437937

Luminaire Tested: **ISS-SA1F-830-U-SL4**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437937  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-SA1F-830-U-SL4  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6001 lumens  
Efficiency: N/A  
Efficacy: 90.9 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

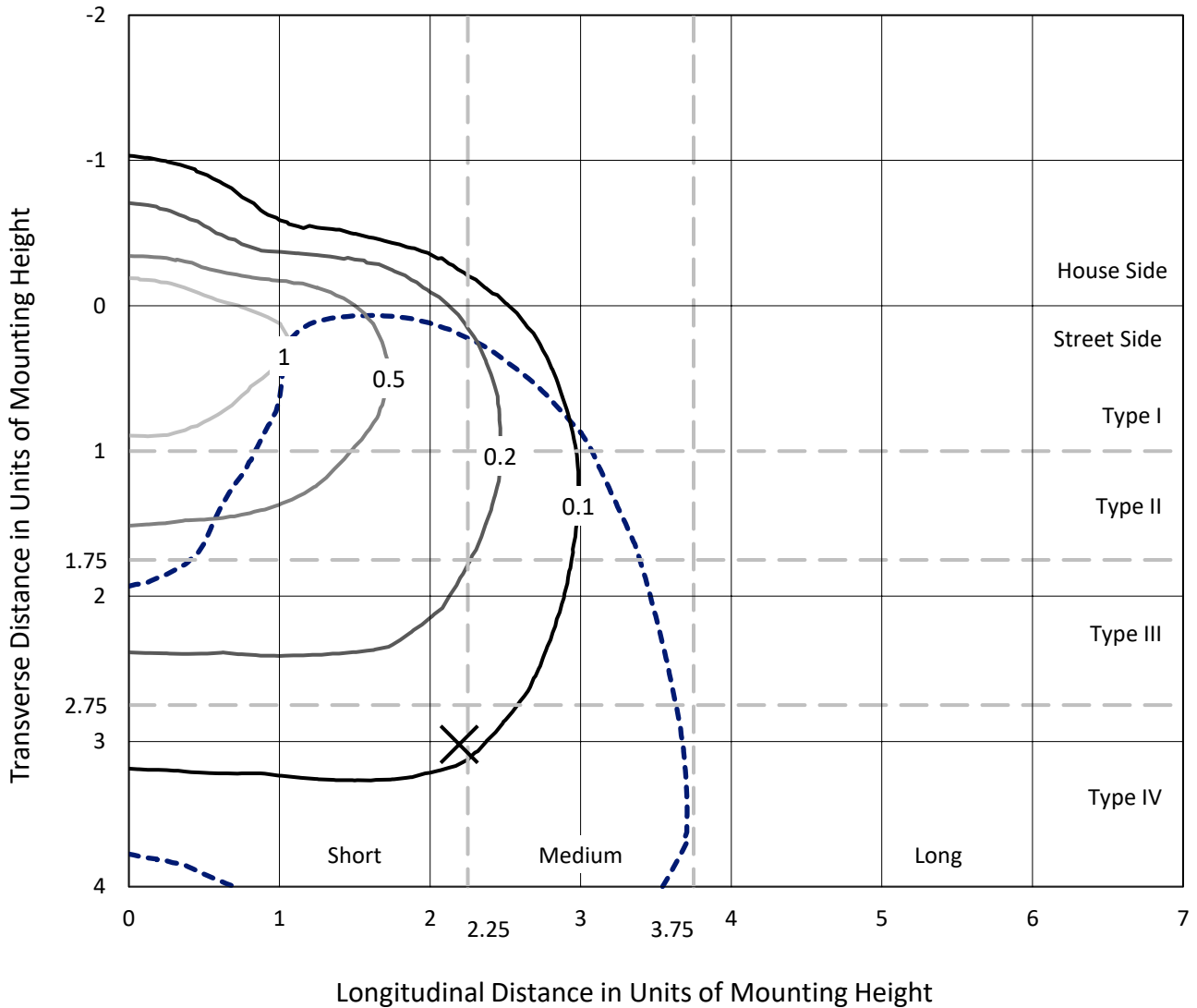
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

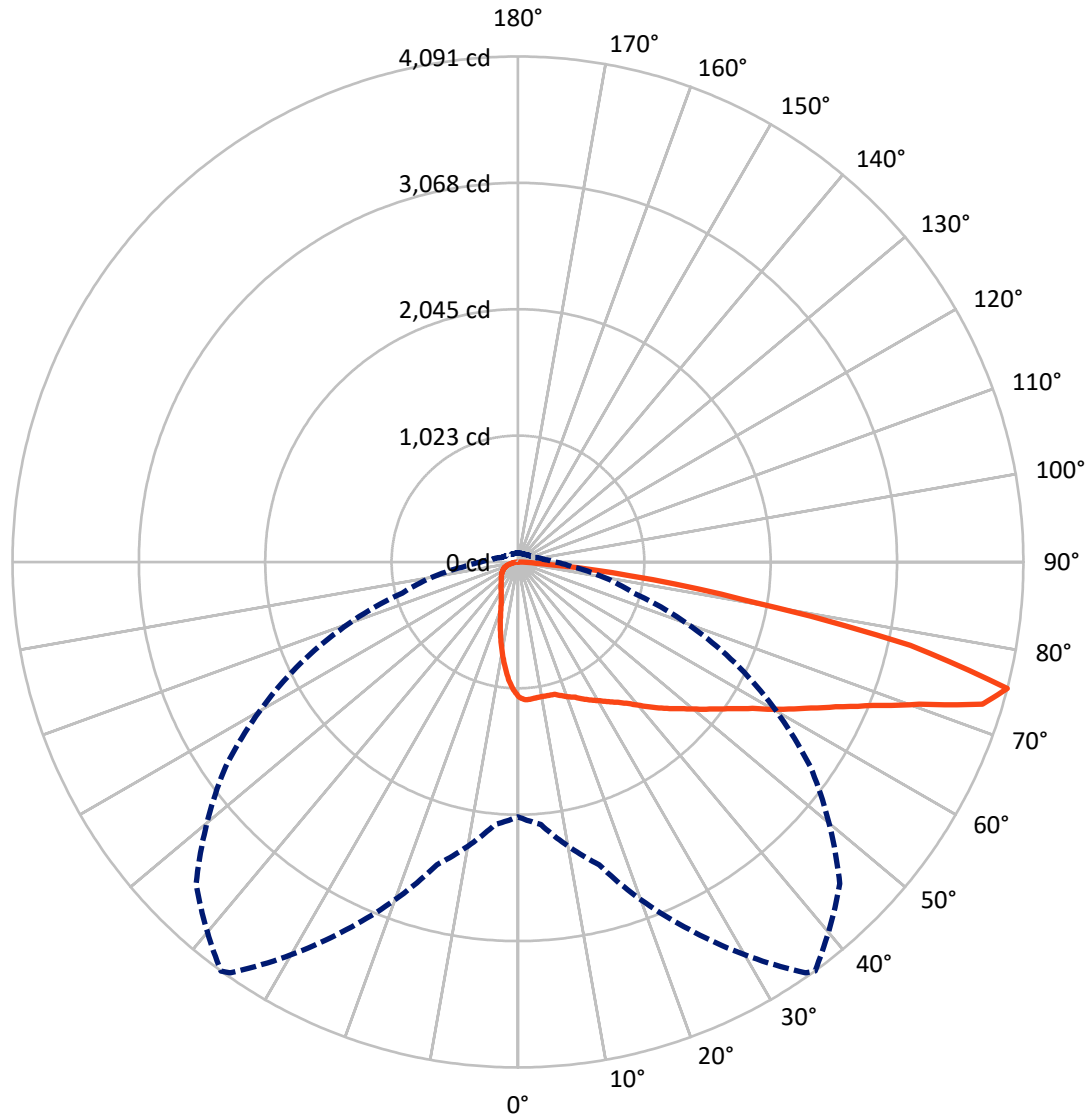
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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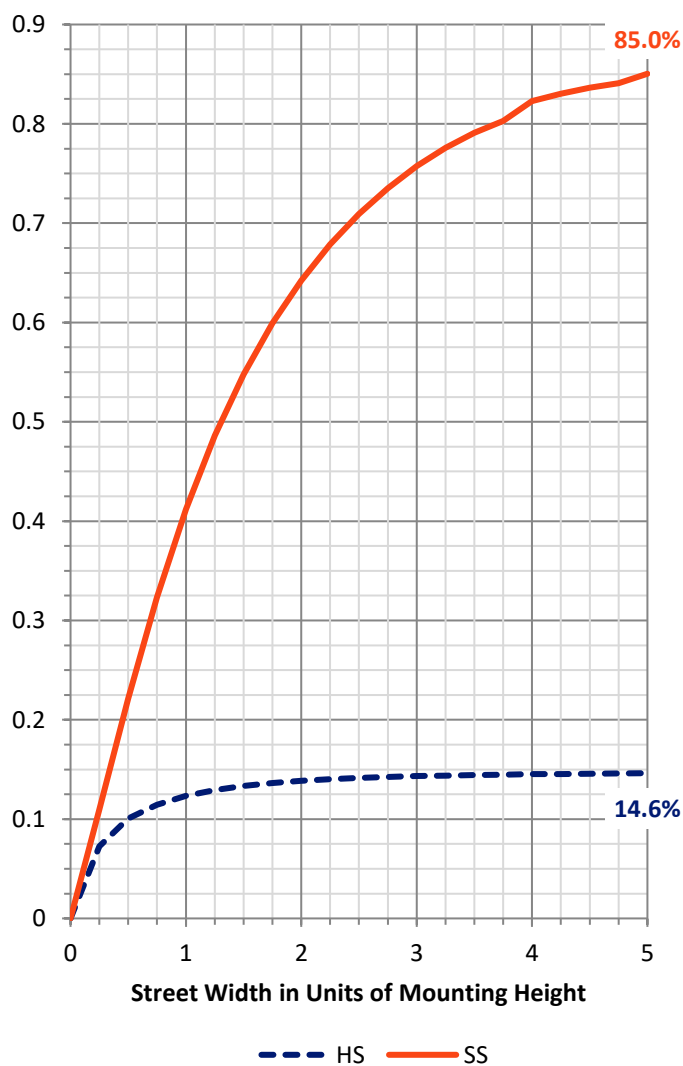
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	885.6	0.0	885.6
	% Fixture	14.8	0.0	14.8
<b>Street Side</b>	Lumens	5115.4	0.0	5115.4
	% Fixture	85.2	0.0	85.2
<b>Total</b>	Lumens	6001.0	0.0	6001.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	1.6
10°-20°	249.7	4.2
20°-30°	386.1	6.4
30°-40°	559.3	9.3
40°-50°	808.9	13.5
50°-60°	1121.9	18.7
60°-70°	1416.7	23.6
70°-80°	1216.9	20.3
80°-90°	145.0	2.4
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°	6001.0	100.0
0°-180°	6001.0	100.0

**Coefficient of Utilization**

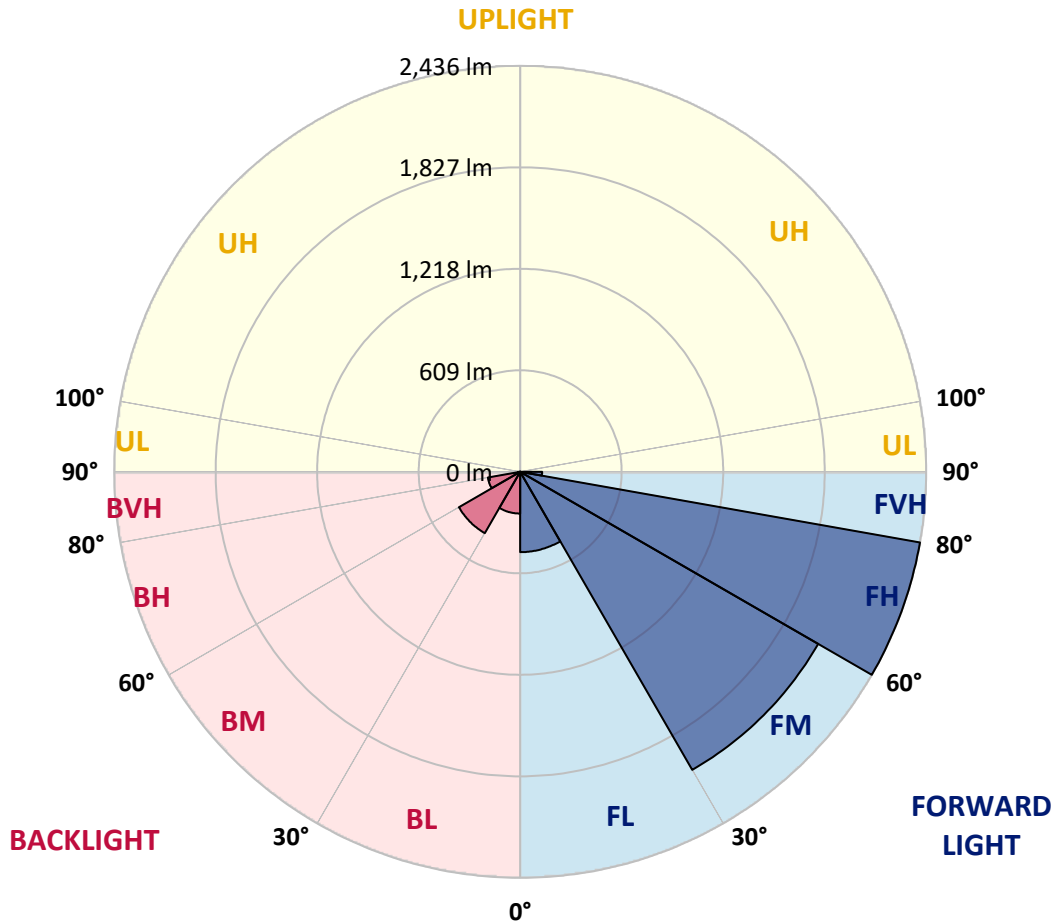


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	481.9	8.0			
FM (30°-60°)	2065.5	34.4			
FH (60°-80°)	2436.4	40.6			G2/5000
FVH (80°-90°)	131.6	2.2			G2/225
BL (0°-30°)	250.5	4.2	B1/500		
BM (30°-60°)	424.6	7.1	B1/1000		
BH (60°-80°)	197.1	3.3	B1/500		G1/500
BVH (80°-90°)	13.4	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-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9
2.5°	1126.2	1126.2	1126.2	1124.0	1119.5	1117.2	1112.8	1108.3	1106.0	1097.1	1094.9
5°	1126.2	1128.4	1126.2	1124.0	1119.5	1115.0	1110.5	1101.6	1094.9	1083.7	1072.5
7.5°	1115.0	1117.2	1117.2	1115.0	1110.5	1108.3	1103.8	1092.6	1083.7	1068.0	1050.1
10°	1097.1	1101.6	1101.6	1103.8	1106.0	1106.0	1101.6	1092.6	1079.2	1061.3	1032.2
12.5°	1074.7	1085.9	1092.6	1099.3	1108.3	1108.3	1110.5	1097.1	1085.9	1061.3	1032.2
15°	1068.0	1074.7	1088.1	1108.3	1117.2	1110.5	1119.5	1112.8	1099.3	1074.7	1038.9
17.5°	1065.7	1072.5	1094.9	1119.5	1132.9	1137.4	1137.4	1128.4	1112.8	1088.1	1043.4
20°	1074.7	1083.7	1112.8	1144.1	1164.3	1164.3	1162.0	1150.8	1130.7	1101.6	1052.3
22.5°	1103.8	1106.0	1139.6	1177.7	1193.4	1188.9	1193.4	1173.2	1150.8	1121.7	1063.5
25°	1141.9	1146.3	1173.2	1218.0	1227.0	1229.2	1222.5	1200.1	1175.5	1146.3	1076.9
27.5°	1193.4	1200.1	1220.2	1262.8	1269.5	1265.0	1256.1	1229.2	1204.6	1177.7	1103.8
30°	1253.8	1258.3	1282.9	1300.8	1307.6	1303.1	1296.4	1267.3	1247.1	1222.5	1144.1
32.5°	1312.0	1314.3	1341.1	1359.0	1347.9	1347.9	1338.9	1309.8	1294.1	1289.6	1195.6
35°	1372.5	1377.0	1401.6	1410.5	1392.6	1394.9	1392.6	1368.0	1372.5	1381.4	1274.0
37.5°	1428.5	1435.2	1464.3	1466.5	1459.8	1453.1	1459.8	1446.4	1455.3	1491.1	1365.8
40°	1477.7	1486.7	1522.5	1529.2	1527.0	1527.0	1531.4	1529.2	1562.8	1621.0	1477.7
42.5°	1518.0	1529.2	1571.8	1589.7	1603.1	1609.8	1625.5	1630.0	1679.2	1773.3	1607.6
45°	1558.3	1569.5	1627.7	1656.8	1688.2	1690.4	1721.8	1737.4	1829.2	1914.3	1748.6
47.5°	1605.3	1618.8	1672.5	1730.7	1766.5	1773.3	1831.5	1862.8	1974.8	2084.5	1880.7
50°	1670.3	1674.7	1717.3	1815.8	1860.6	1871.8	1936.7	2001.6	2124.8	2234.5	1997.2
52.5°	1750.9	1746.4	1766.5	1891.9	1961.3	1977.0	2082.2	2147.2	2294.9	2395.7	2089.0
55°	1818.0	1813.6	1842.7	1979.2	2089.0	2093.4	2218.8	2281.5	2451.7	2514.4	2167.3
57.5°	1896.4	1887.4	1916.6	2084.5	2234.5	2236.7	2382.3	2453.9	2592.7	2619.6	2218.8
60°	1961.3	1961.3	1999.4	2187.5	2395.7	2420.3	2552.4	2608.4	2729.3	2695.7	2243.4
62.5°	2021.8	2033.0	2086.7	2324.0	2586.0	2606.2	2740.5	2762.9	2870.3	2753.9	2216.6
65°	2093.4	2111.3	2214.3	2487.5	2812.1	2825.6	2937.5	2968.9	3011.4	2751.7	2100.1
67.5°	2169.6	2198.7	2335.2	2671.1	3060.7	3096.5	3217.4	3186.0	3105.4	2664.4	1856.1
70°	2272.5	2308.4	2503.2	2915.1	3401.0	3445.8	3604.7	3412.2	3056.2	2353.1	1504.6
72.5°	2350.9	2397.9	2664.4	3230.8	3862.2	3931.6	3893.6	3416.7	2740.5	1876.2	1007.5
75°	2062.1	2133.7	2536.7	3282.3	4059.2	4090.6	3683.1	2888.3	1941.2	969.5	434.4
77.5°	1506.8	1502.3	1853.9	2550.2	3327.1	3244.3	2794.2	1878.5	922.5	351.5	219.4
80°	756.8	727.7	1003.1	1359.0	1795.6	1851.6	1652.4	976.2	365.0	188.1	132.1
82.5°	279.9	286.6	367.2	555.3	902.3	915.7	667.2	414.2	199.3	98.5	69.4
85°	107.5	111.9	120.9	120.9	167.9	185.8	172.4	165.7	67.2	33.6	38.1
87.5°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	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°	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9	1094.9
2.5°	1088.1	1083.7	1074.7	1059.0	1050.1	1043.4	1034.4	1025.4	1023.2	1021.0	1032.2
5°	1061.3	1054.6	1032.2	1012.0	989.6	971.7	953.8	938.1	929.2	926.9	931.4
7.5°	1034.4	1025.4	991.9	951.6	913.5	882.2	850.8	835.1	810.5	810.5	812.7
10°	1018.7	1003.1	956.0	895.6	846.3	790.4	752.3	714.2	698.6	687.4	682.9
12.5°	1009.8	985.1	922.5	855.3	779.2	705.3	653.8	606.8	582.1	564.2	564.2
15°	1012.0	985.1	900.1	812.7	714.2	624.7	559.7	508.2	476.9	459.0	454.5
17.5°	1009.8	976.2	873.2	759.0	649.3	555.3	476.9	423.2	391.8	380.6	378.4
20°	1014.2	969.5	841.8	709.8	586.6	485.9	405.3	356.0	338.1	329.1	326.9
22.5°	1016.5	956.0	810.5	656.0	519.4	420.9	353.8	320.2	306.7	300.0	297.8
25°	1021.0	953.8	774.7	606.8	463.5	371.7	320.2	291.1	284.3	279.9	279.9
27.5°	1038.9	953.8	743.3	544.1	405.3	331.4	291.1	273.2	268.7	266.4	266.4
30°	1061.3	958.3	714.2	492.6	360.5	300.0	270.9	257.5	255.2	253.0	253.0
32.5°	1099.3	973.9	680.6	443.3	322.4	277.6	255.2	244.0	239.6	239.6	239.6
35°	1150.8	1000.8	647.1	398.5	291.1	255.2	239.6	228.4	226.1	228.4	228.4
37.5°	1224.7	1032.2	618.0	358.2	266.4	237.3	223.9	217.2	214.9	214.9	217.2
40°	1316.5	1088.1	588.8	326.9	248.5	221.7	212.7	206.0	203.7	206.0	206.0
42.5°	1417.3	1148.6	564.2	295.5	230.6	210.5	199.3	194.8	192.6	194.8	197.0
45°	1529.2	1211.3	544.1	273.2	217.2	199.3	190.3	188.1	185.8	185.8	188.1
47.5°	1623.2	1278.4	528.4	257.5	206.0	190.3	183.6	179.1	176.9	174.6	176.9
50°	1710.6	1329.9	523.9	248.5	199.3	181.4	174.6	170.2	167.9	165.7	167.9
52.5°	1775.5	1356.8	523.9	241.8	192.6	174.6	167.9	163.4	161.2	156.7	159.0
55°	1820.3	1370.2	517.2	237.3	185.8	167.9	159.0	156.7	154.5	150.0	150.0
57.5°	1847.1	1368.0	492.6	235.1	183.6	159.0	152.2	150.0	147.8	143.3	143.3
60°	1842.7	1325.5	447.8	226.1	179.1	152.2	143.3	143.3	143.3	138.8	138.8
62.5°	1777.7	1206.8	373.9	212.7	174.6	145.5	134.3	138.8	141.1	136.6	136.6
65°	1603.1	1025.4	309.0	194.8	163.4	138.8	127.6	134.3	138.8	136.6	134.3
67.5°	1350.1	812.7	255.2	176.9	152.2	129.9	118.7	127.6	129.9	129.9	129.9
70°	1043.4	584.4	210.5	154.5	136.6	116.4	107.5	111.9	114.2	114.2	116.4
72.5°	618.0	349.3	172.4	132.1	116.4	100.8	94.0	96.3	94.0	94.0	94.0
75°	304.5	217.2	138.8	111.9	98.5	85.1	78.4	73.9	73.9	73.9	71.6
77.5°	185.8	161.2	114.2	89.6	78.4	64.9	60.5	56.0	56.0	56.0	56.0
80°	132.1	125.4	87.3	67.2	53.7	47.0	44.8	42.5	42.5	40.3	40.3
82.5°	82.8	94.0	64.9	44.8	35.8	33.6	31.3	29.1	26.9	24.6	24.6
85°	47.0	60.5	38.1	24.6	20.2	15.7	13.4	13.4	11.2	11.2	9.0
87.5°	2.2	4.5	4.5	4.5	4.5	2.2	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**

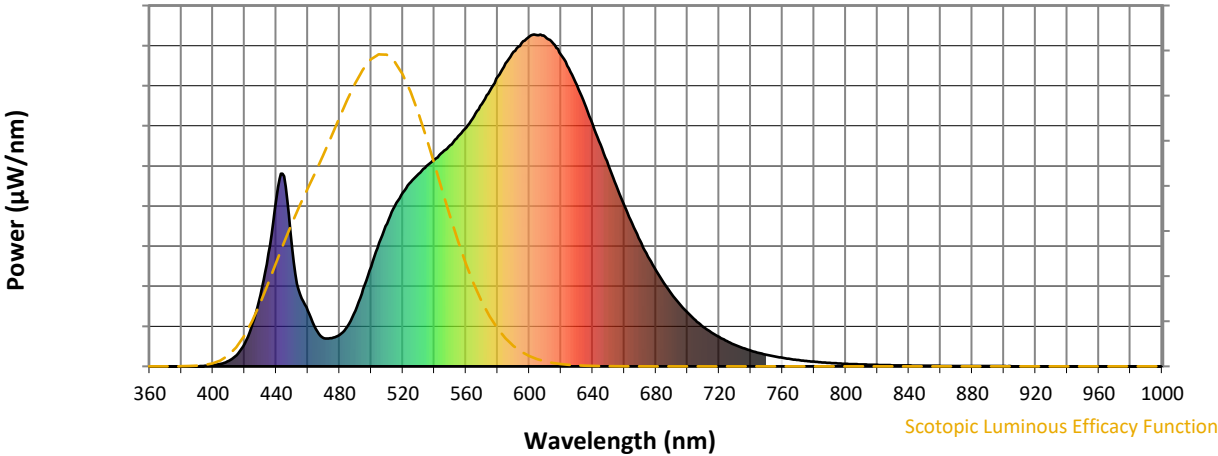


**Photopic Lumens: NR**

$\lambda$ (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)