

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: P437595

Luminaire Tested: **ISS-SA1D-830-U-SL4**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437595  
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-SA1D-830-U-SL4  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

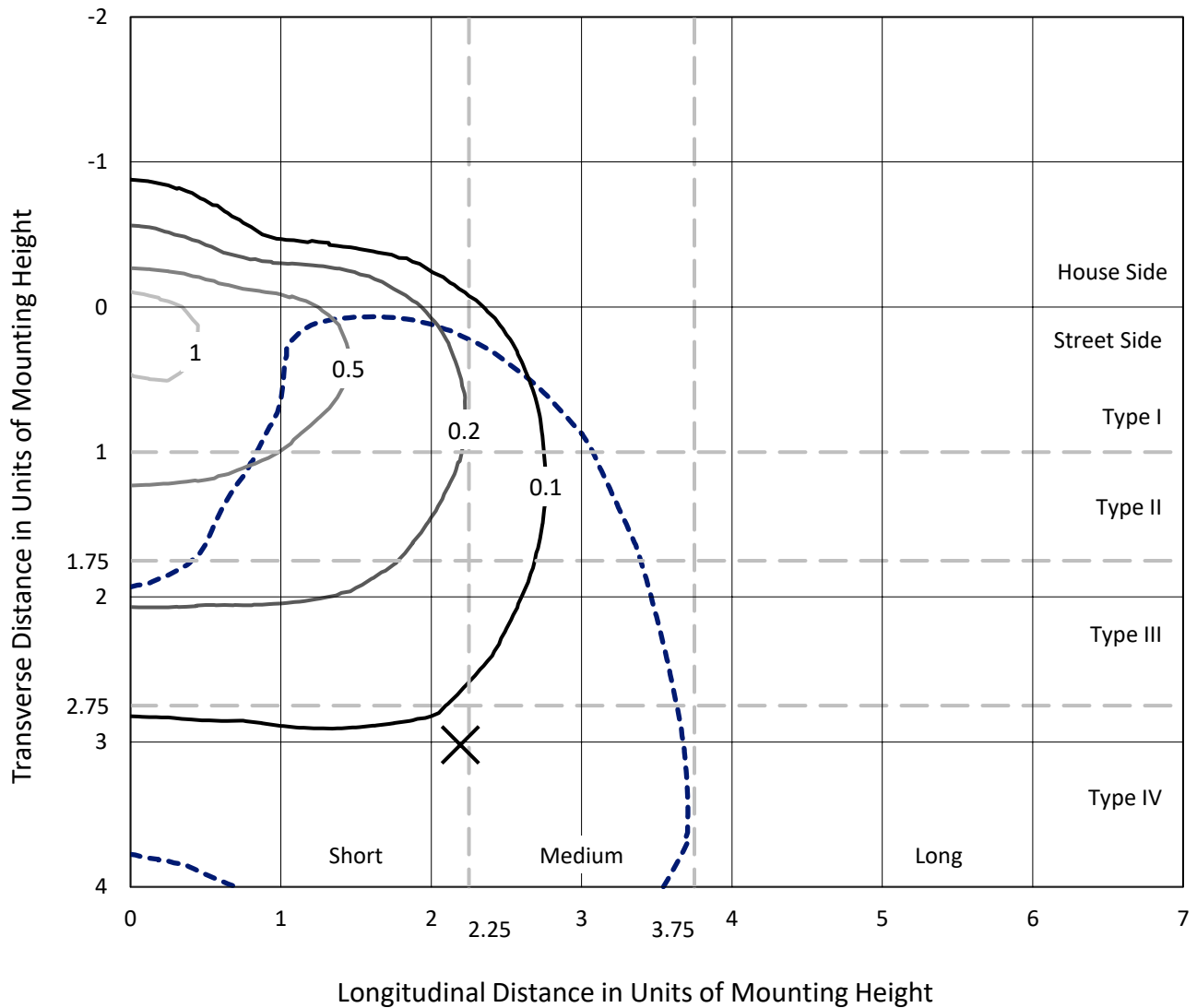
Lumens per Lamp: N/A  
Luminaire Lumens: 4392 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

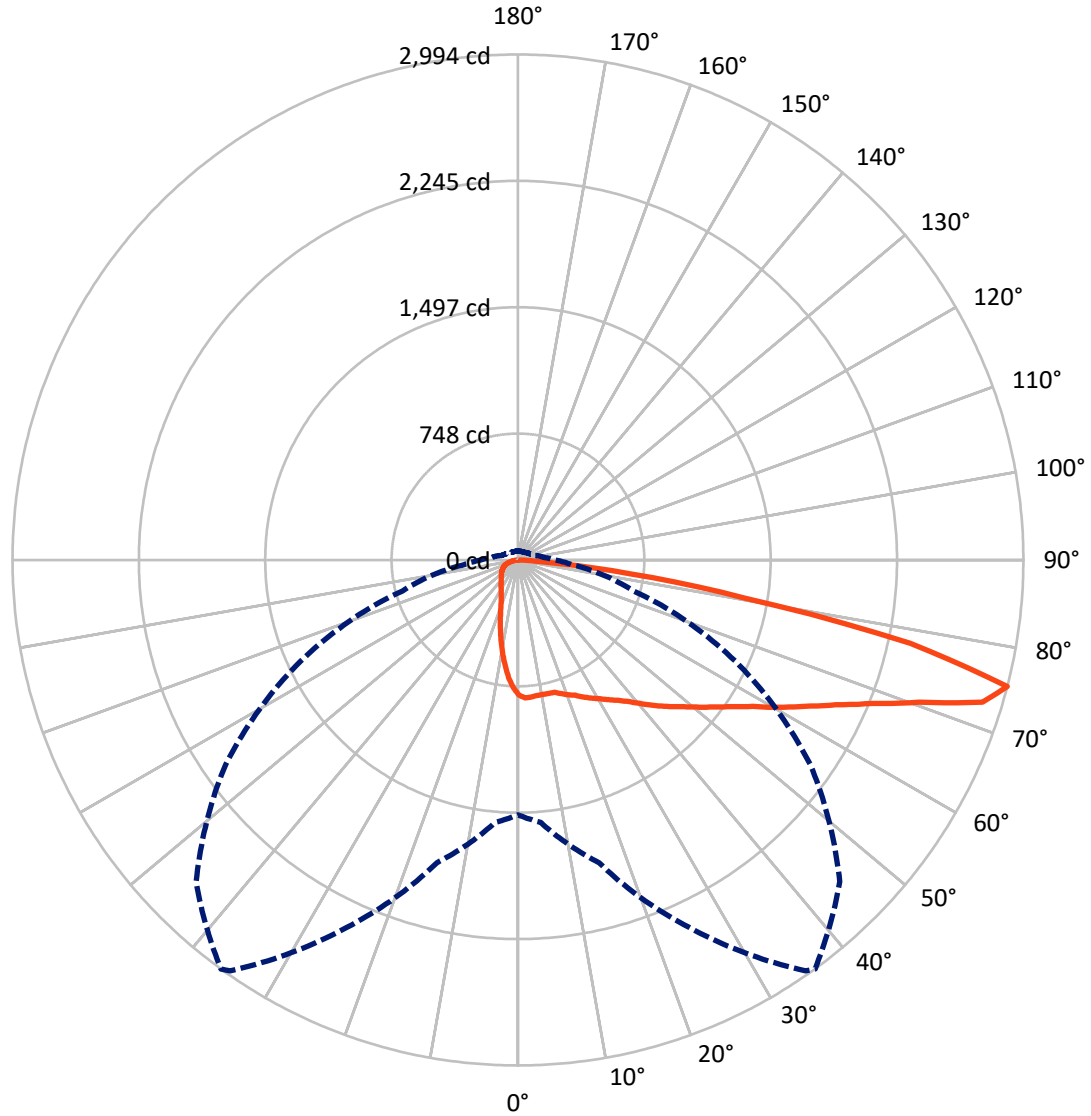
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 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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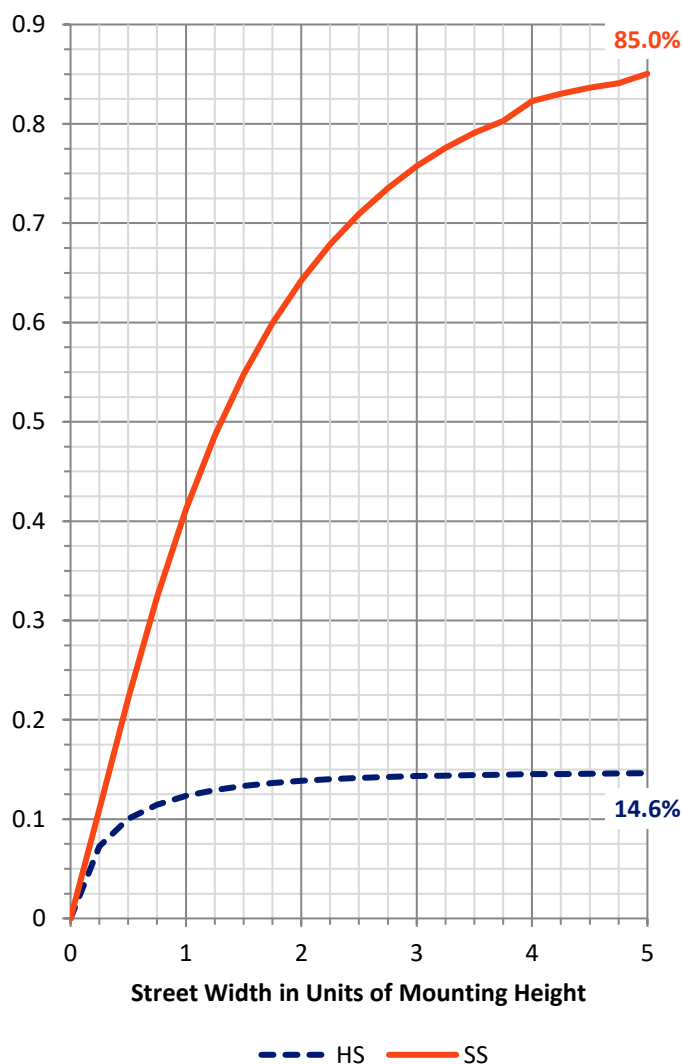
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	648.2	0.0	648.2
	% Fixture	14.8	0.0	14.8
<b>Street Side</b>	Lumens	3743.8	0.0	3743.8
	% Fixture	85.2	0.0	85.2
<b>Total</b>	Lumens	4392.0	0.0	4392.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	1.6
10°-20°	182.7	4.2
20°-30°	282.6	6.4
30°-40°	409.3	9.3
40°-50°	592.0	13.5
50°-60°	821.1	18.7
60°-70°	1036.8	23.6
70°-80°	890.6	20.3
80°-90°	106.1	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°	4392.0	100.0
0°-180°	4392.0	100.0

**Coefficient of Utilization**

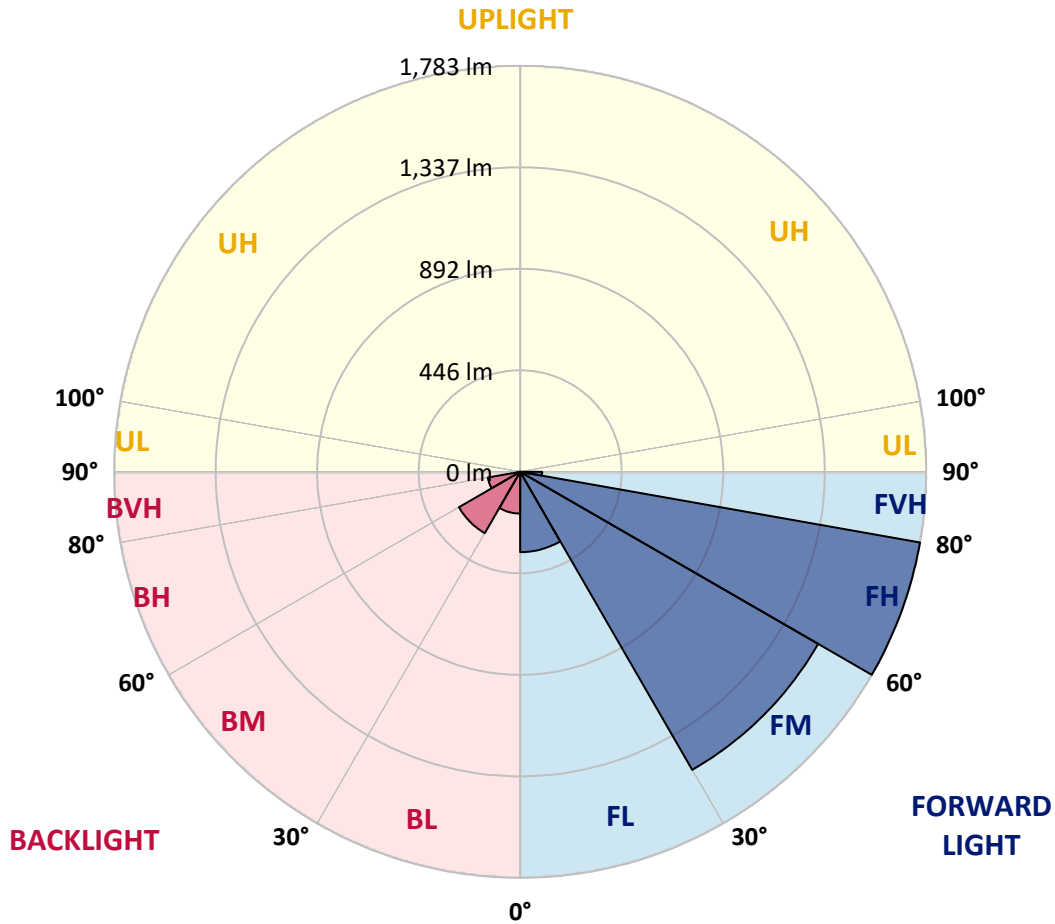


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	352.7	8.0			
FM (30°-60°)	1511.7	34.4			
FH (60°-80°)	1783.1	40.6			G1/1800
FVH (80°-90°)	96.3	2.2			G1/100
BL (0°-30°)	183.3	4.2	B1/500		
BM (30°-60°)	310.8	7.1	B1/1000		
BH (60°-80°)	144.3	3.3	B1/500		G1/500
BVH (80°-90°)	9.8	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type IV Short





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CATALOG NUMBER: ISS-SA1D-830-U-SL4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3
2.5°	824.2	824.2	824.2	822.6	819.3	817.7	814.4	811.1	809.5	802.9	801.3
5°	824.2	825.9	824.2	822.6	819.3	816.0	812.8	806.2	801.3	793.1	784.9
7.5°	816.0	817.7	817.7	816.0	812.8	811.1	807.9	799.7	793.1	781.6	768.5
10°	802.9	806.2	806.2	807.9	809.5	809.5	806.2	799.7	789.8	776.7	755.4
12.5°	786.6	794.7	799.7	804.6	811.1	811.1	812.8	802.9	794.7	776.7	755.4
15°	781.6	786.6	796.4	811.1	817.7	812.8	819.3	814.4	804.6	786.6	760.3
17.5°	780.0	784.9	801.3	819.3	829.2	832.4	832.4	825.9	814.4	796.4	763.6
20°	786.6	793.1	814.4	837.3	852.1	852.1	850.5	842.3	827.5	806.2	770.2
22.5°	807.9	809.5	834.1	861.9	873.4	870.1	873.4	858.7	842.3	821.0	778.4
25°	835.7	839.0	858.7	891.4	898.0	899.6	894.7	878.3	860.3	839.0	788.2
27.5°	873.4	878.3	893.1	924.2	929.1	925.8	919.3	899.6	881.6	861.9	807.9
30°	917.6	920.9	938.9	952.1	957.0	953.7	948.8	927.5	912.7	894.7	837.3
32.5°	960.2	961.9	981.5	994.7	986.5	986.5	979.9	958.6	947.1	943.9	875.0
35°	1004.5	1007.8	1025.8	1032.3	1019.2	1020.9	1019.2	1001.2	1004.5	1011.0	932.4
37.5°	1045.5	1050.4	1071.7	1073.3	1068.4	1063.5	1068.4	1058.6	1065.1	1091.3	999.6
40°	1081.5	1088.1	1114.3	1119.2	1117.6	1117.6	1120.8	1119.2	1143.8	1186.4	1081.5
42.5°	1111.0	1119.2	1150.3	1163.4	1173.3	1178.2	1189.7	1192.9	1229.0	1297.8	1176.5
45°	1140.5	1148.7	1191.3	1212.6	1235.5	1237.2	1260.1	1271.6	1338.8	1401.0	1279.8
47.5°	1174.9	1184.7	1224.1	1266.7	1292.9	1297.8	1340.4	1363.4	1445.3	1525.6	1376.5
50°	1222.4	1225.7	1256.8	1328.9	1361.7	1369.9	1417.4	1465.0	1555.1	1635.4	1461.7
52.5°	1281.4	1278.1	1292.9	1384.7	1435.5	1446.9	1523.9	1571.5	1679.6	1753.4	1528.9
55°	1330.6	1327.3	1348.6	1448.6	1528.9	1532.1	1623.9	1669.8	1794.3	1840.2	1586.2
57.5°	1387.9	1381.4	1402.7	1525.6	1635.4	1637.0	1743.5	1796.0	1897.6	1917.2	1623.9
60°	1435.5	1435.5	1463.3	1601.0	1753.4	1771.4	1868.1	1909.0	1997.5	1972.9	1641.9
62.5°	1479.7	1487.9	1527.2	1700.9	1892.6	1907.4	2005.7	2022.1	2100.7	2015.5	1622.3
65°	1532.1	1545.2	1620.6	1820.5	2058.1	2068.0	2149.9	2172.8	2204.0	2013.9	1537.1
67.5°	1587.8	1609.2	1709.1	1954.9	2240.0	2266.2	2354.7	2331.8	2272.8	1950.0	1358.4
70°	1663.2	1689.4	1832.0	2133.5	2489.1	2521.9	2638.2	2497.3	2236.8	1722.2	1101.2
72.5°	1720.6	1755.0	1950.0	2364.6	2826.7	2877.5	2849.6	2500.6	2005.7	1373.2	737.4
75°	1509.2	1561.6	1856.6	2402.3	2970.9	2993.8	2695.6	2113.9	1420.7	709.5	317.9
77.5°	1102.8	1099.5	1356.8	1866.4	2435.0	2374.4	2045.0	1374.8	675.1	257.3	160.6
80°	553.9	532.6	734.1	994.7	1314.2	1355.2	1209.3	714.4	267.1	137.6	96.7
82.5°	204.8	209.7	268.7	406.4	660.4	670.2	488.3	303.1	145.8	72.1	50.8
85°	78.7	81.9	88.5	88.5	122.9	136.0	126.2	121.3	49.2	24.6	27.9
87.5°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3	801.3
2.5°	796.4	793.1	786.6	775.1	768.5	763.6	757.1	750.5	748.9	747.2	755.4
5°	776.7	771.8	755.4	740.7	724.3	711.2	698.1	686.6	680.0	678.4	681.7
7.5°	757.1	750.5	725.9	696.4	668.6	645.6	622.7	611.2	593.2	593.2	594.8
10°	745.6	734.1	699.7	655.5	619.4	578.4	550.6	522.7	511.3	503.1	499.8
12.5°	739.0	721.0	675.1	626.0	570.2	516.2	478.5	444.1	426.0	412.9	412.9
15°	740.7	721.0	658.7	594.8	522.7	457.2	409.7	372.0	349.0	335.9	332.6
17.5°	739.0	714.4	639.1	555.5	475.2	406.4	349.0	309.7	286.8	278.6	276.9
20°	742.3	709.5	616.1	519.5	429.3	355.6	296.6	260.5	247.4	240.9	239.2
22.5°	743.9	699.7	593.2	480.1	380.2	308.1	258.9	234.3	224.5	219.6	217.9
25°	747.2	698.1	567.0	444.1	339.2	272.0	234.3	213.0	208.1	204.8	204.8
27.5°	760.3	698.1	544.0	398.2	296.6	242.5	213.0	199.9	196.6	195.0	195.0
30°	776.7	701.3	522.7	360.5	263.8	219.6	198.3	188.4	186.8	185.2	185.2
32.5°	804.6	712.8	498.1	324.5	236.0	203.2	186.8	178.6	175.3	175.3	175.3
35°	842.3	732.5	473.6	291.7	213.0	186.8	175.3	167.1	165.5	167.1	167.1
37.5°	896.3	755.4	452.3	262.2	195.0	173.7	163.9	158.9	157.3	157.3	158.9
40°	963.5	796.4	431.0	239.2	181.9	162.2	155.7	150.8	149.1	150.8	150.8
42.5°	1037.3	840.6	412.9	216.3	168.8	154.0	145.8	142.6	140.9	142.6	144.2
45°	1119.2	886.5	398.2	199.9	158.9	145.8	139.3	137.6	136.0	136.0	137.6
47.5°	1188.0	935.7	386.7	188.4	150.8	139.3	134.4	131.1	129.5	127.8	129.5
50°	1251.9	973.4	383.4	181.9	145.8	132.7	127.8	124.5	122.9	121.3	122.9
52.5°	1299.4	993.0	383.4	177.0	140.9	127.8	122.9	119.6	118.0	114.7	116.3
55°	1332.2	1002.9	378.5	173.7	136.0	122.9	116.3	114.7	113.1	109.8	109.8
57.5°	1351.9	1001.2	360.5	172.1	134.4	116.3	111.4	109.8	108.2	104.9	104.9
60°	1348.6	970.1	327.7	165.5	131.1	111.4	104.9	104.9	104.9	101.6	101.6
62.5°	1301.1	883.2	273.7	155.7	127.8	106.5	98.3	101.6	103.2	100.0	100.0
65°	1173.3	750.5	226.1	142.6	119.6	101.6	93.4	98.3	101.6	100.0	98.3
67.5°	988.1	594.8	186.8	129.5	111.4	95.0	86.8	93.4	95.0	95.0	95.0
70°	763.6	427.7	154.0	113.1	100.0	85.2	78.7	81.9	83.6	83.6	85.2
72.5°	452.3	255.6	126.2	96.7	85.2	73.7	68.8	70.5	68.8	68.8	68.8
75°	222.9	158.9	101.6	81.9	72.1	62.3	57.4	54.1	54.1	54.1	52.4
77.5°	136.0	118.0	83.6	65.5	57.4	47.5	44.2	41.0	41.0	41.0	41.0
80°	96.7	91.8	63.9	49.2	39.3	34.4	32.8	31.1	31.1	29.5	29.5
82.5°	60.6	68.8	47.5	32.8	26.2	24.6	22.9	21.3	19.7	18.0	18.0
85°	34.4	44.2	27.9	18.0	14.7	11.5	9.8	9.8	8.2	8.2	6.6
87.5°	1.6	3.3	3.3	3.3	3.3	1.6	1.6	1.6	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**

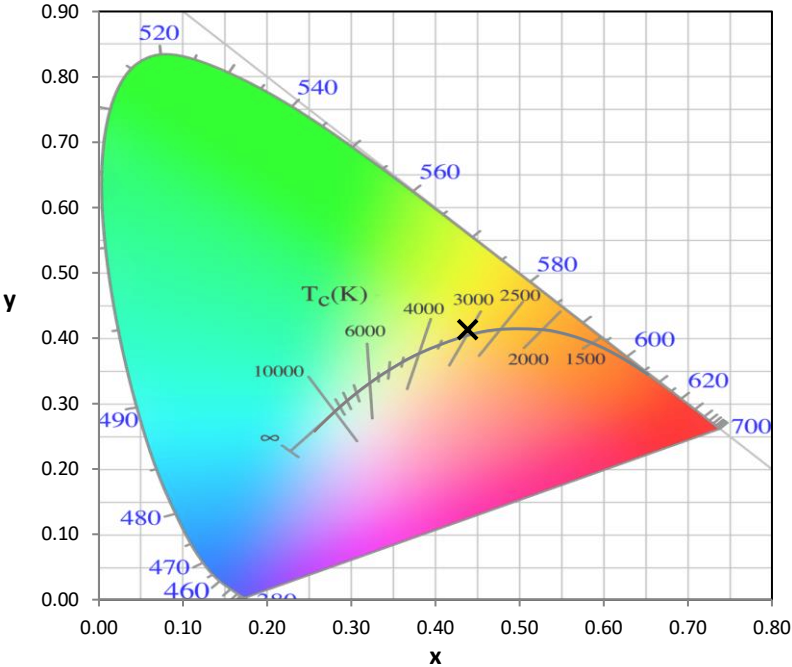
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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

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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**

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			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.32**

$\lambda$ (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			

**Summary**

$R_f = 81.5$   
 $R_g = 99.2$   
 $CIE R_a = 81.0$   
 $R_9 = 7.1$



**Color Vector Graphics**



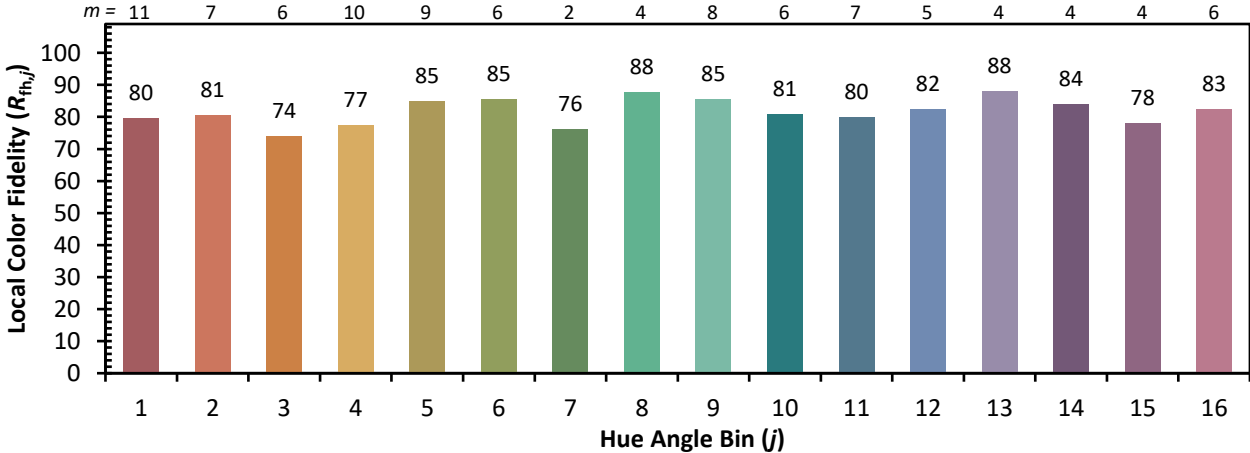


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)