

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: P437082

Luminaire Tested: **ISS-SA1A-830-U-SL4**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437082  
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-SA1A-830-U-SL4  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 350mA 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: 2130 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

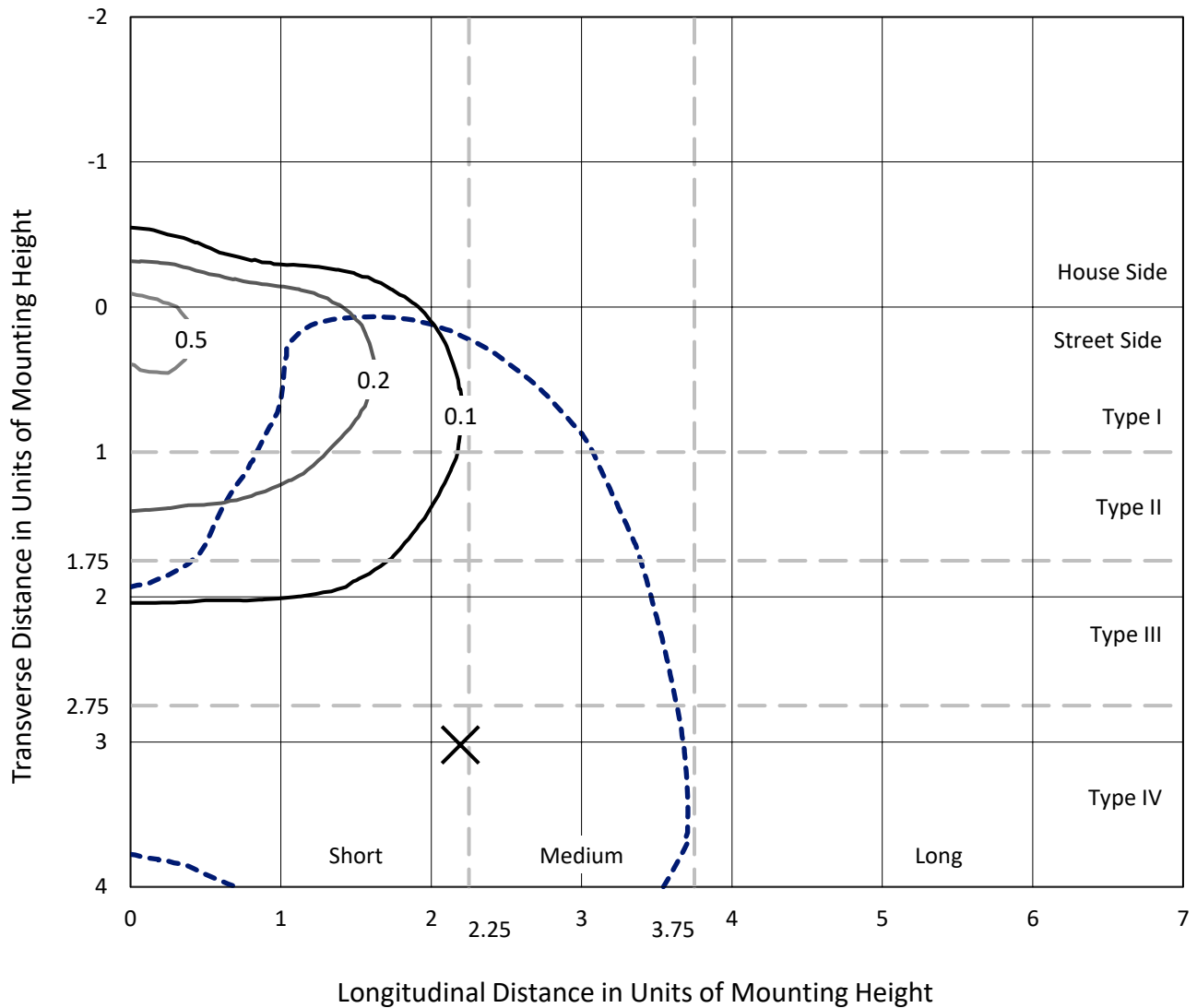
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

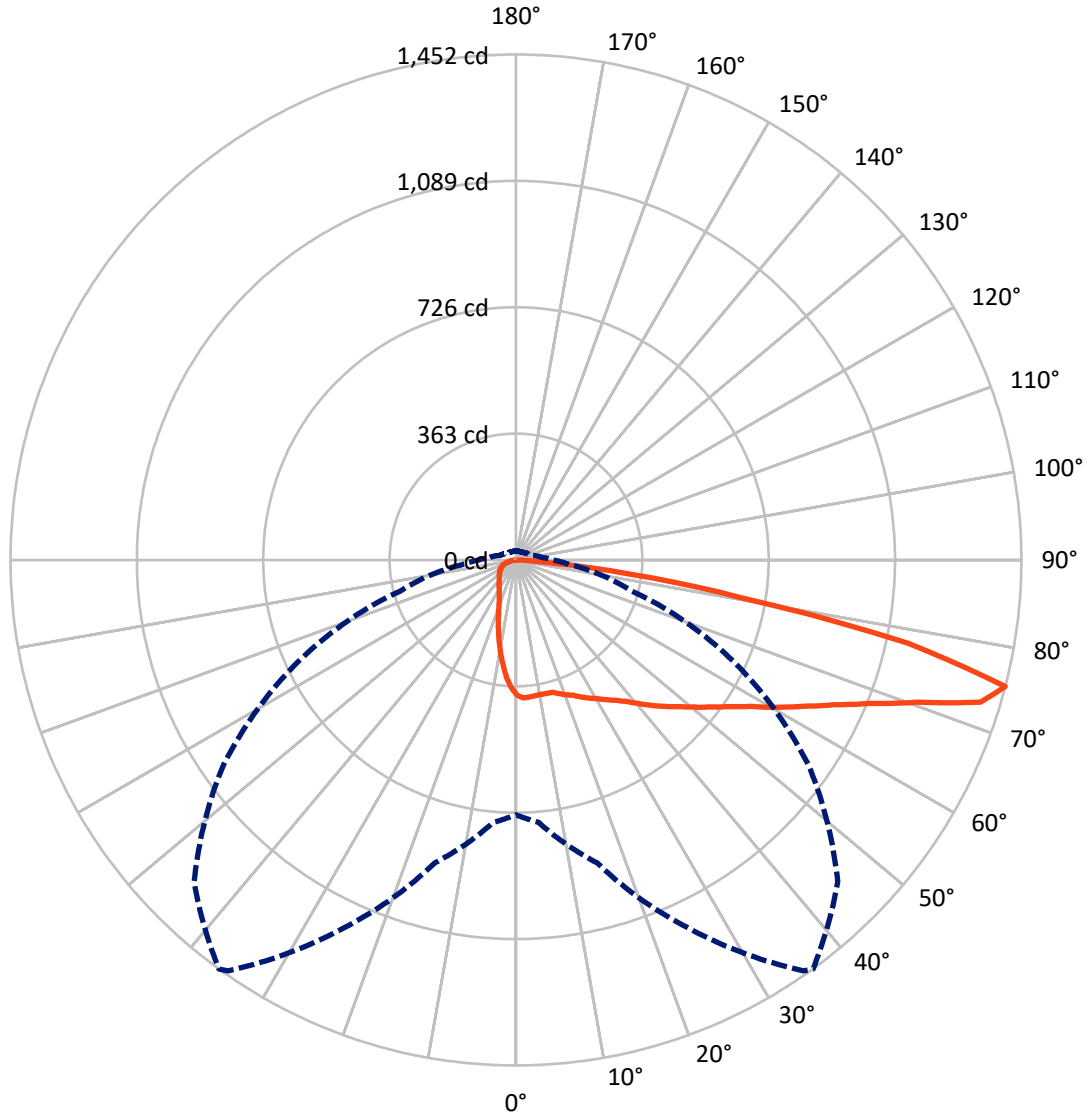
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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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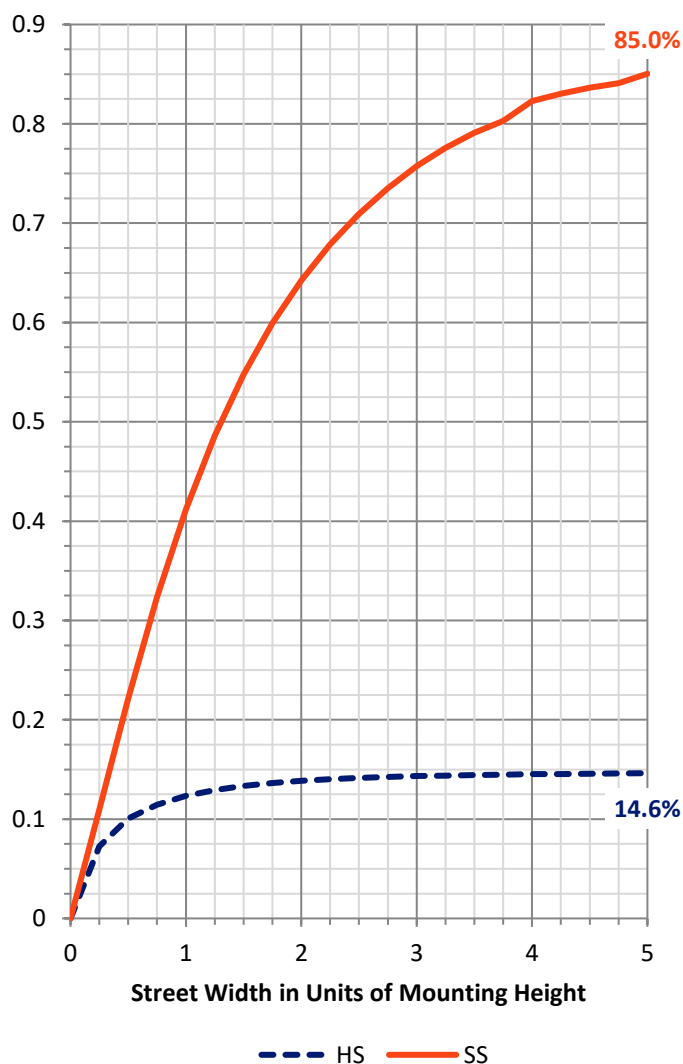
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	314.4	0.0	314.4
	% Fixture	14.8	0.0	14.8
<b>Street Side</b>	Lumens	1815.7	0.0	1815.7
	% Fixture	85.2	0.0	85.2
<b>Total</b>	Lumens	2130.0	0.0	2130.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	1.6
10°-20°	88.6	4.2
20°-30°	137.1	6.4
30°-40°	198.5	9.3
40°-50°	287.1	13.5
50°-60°	398.2	18.7
60°-70°	502.8	23.6
70°-80°	431.9	20.3
80°-90°	51.5	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°	2130.0	100.0
0°-180°	2130.0	100.0

**Coefficient of Utilization**



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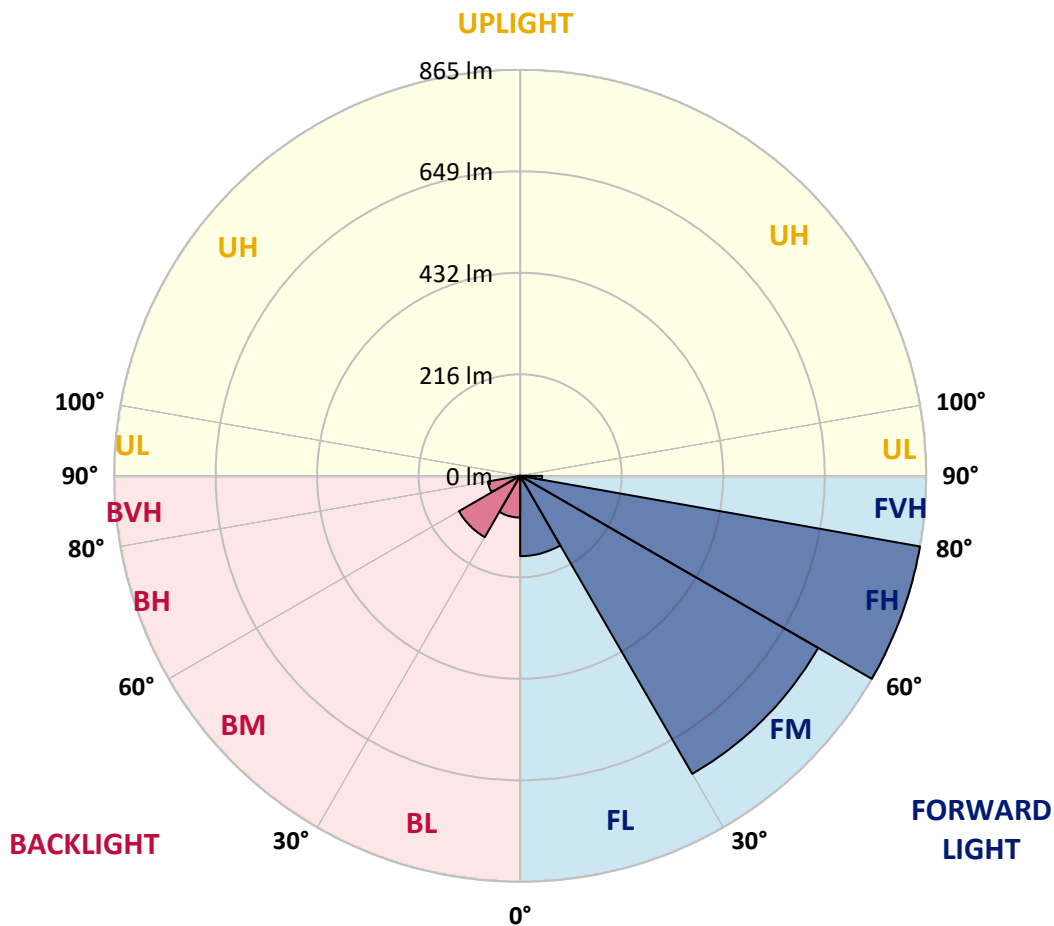
CATALOG NUMBER: ISS-SA1A-830-U-SL4

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	171.1	8.0			
FM (30°-60°)	733.1	34.4			
FH (60°-80°)	864.8	40.6			G1/1800
FVH (80°-90°)	46.7	2.2			G1/100
BL (0°-30°)	88.9	4.2	B0/110		
BM (30°-60°)	150.7	7.1	B0/220		
BH (60°-80°)	70.0	3.3	B0/110		G0/110
BVH (80°-90°)	4.8	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6
2.5°	399.7	399.7	399.7	398.9	397.3	396.6	395.0	393.4	392.6	389.4	388.6
5°	399.7	400.5	399.7	398.9	397.3	395.8	394.2	391.0	388.6	384.6	380.7
7.5°	395.8	396.6	396.6	395.8	394.2	393.4	391.8	387.8	384.6	379.1	372.7
10°	389.4	391.0	391.0	391.8	392.6	392.6	391.0	387.8	383.0	376.7	366.4
12.5°	381.5	385.4	387.8	390.2	393.4	393.4	394.2	389.4	385.4	376.7	366.4
15°	379.1	381.5	386.2	393.4	396.6	394.2	397.3	395.0	390.2	381.5	368.7
17.5°	378.3	380.7	388.6	397.3	402.1	403.7	403.7	400.5	395.0	386.2	370.3
20°	381.5	384.6	395.0	406.1	413.2	413.2	412.4	408.5	401.3	391.0	373.5
22.5°	391.8	392.6	404.5	418.0	423.6	422.0	423.6	416.4	408.5	398.1	377.5
25°	405.3	406.9	416.4	432.3	435.5	436.3	433.9	426.0	417.2	406.9	382.3
27.5°	423.6	426.0	433.1	448.2	450.6	449.0	445.8	436.3	427.5	418.0	391.8
30°	445.0	446.6	455.4	461.7	464.1	462.5	460.1	449.8	442.6	433.9	406.1
32.5°	465.7	466.5	476.0	482.4	478.4	478.4	475.2	464.9	459.3	457.7	424.4
35°	487.2	488.7	497.5	500.7	494.3	495.1	494.3	485.6	487.2	490.3	452.2
37.5°	507.0	509.4	519.7	520.5	518.1	515.8	518.1	513.4	516.6	529.3	484.8
40°	524.5	527.7	540.4	542.8	542.0	542.0	543.6	542.8	554.7	575.4	524.5
42.5°	538.8	542.8	557.9	564.2	569.0	571.4	577.0	578.5	596.0	629.4	570.6
45°	553.1	557.1	577.7	588.1	599.2	600.0	611.1	616.7	649.3	679.5	620.7
47.5°	569.8	574.6	593.6	614.3	627.0	629.4	650.1	661.2	700.9	739.9	667.5
50°	592.8	594.4	609.5	644.5	660.4	664.4	687.4	710.5	754.2	793.1	708.9
52.5°	621.5	619.9	627.0	671.5	696.2	701.7	739.1	762.1	814.6	850.3	741.5
55°	645.3	643.7	654.0	702.5	741.5	743.0	787.5	809.8	870.2	892.4	769.3
57.5°	673.1	669.9	680.3	739.9	793.1	793.9	845.6	871.0	920.3	929.8	787.5
60°	696.2	696.2	709.7	776.4	850.3	859.1	906.0	925.8	968.7	956.8	796.3
62.5°	717.6	721.6	740.7	824.9	917.9	925.0	972.7	980.7	1018.8	977.5	786.8
65°	743.0	749.4	786.0	882.9	998.1	1002.9	1042.6	1053.8	1068.9	976.7	745.4
67.5°	770.1	780.4	828.9	948.1	1086.4	1099.1	1142.0	1130.9	1102.2	945.7	658.8
70°	806.6	819.3	888.5	1034.7	1207.1	1223.0	1279.5	1211.1	1084.8	835.2	534.0
72.5°	834.4	851.1	945.7	1146.8	1370.9	1395.5	1382.0	1212.7	972.7	666.0	357.6
75°	731.9	757.3	900.4	1165.0	1440.8	1451.9	1307.3	1025.2	689.0	344.1	154.2
77.5°	534.8	533.2	658.0	905.2	1180.9	1151.5	991.8	666.8	327.4	124.8	77.9
80°	268.6	258.3	356.0	482.4	637.3	657.2	586.5	346.5	129.5	66.8	46.9
82.5°	99.3	101.7	130.3	197.1	320.3	325.0	236.8	147.0	70.7	35.0	24.6
85°	38.1	39.7	42.9	42.9	59.6	66.0	61.2	58.8	23.8	11.9	13.5
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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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 CATALOG NUMBER: ISS-SA1A-830-U-SL4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6	388.6
2.5°	386.2	384.6	381.5	375.9	372.7	370.3	367.2	364.0	363.2	362.4	366.4
5°	376.7	374.3	366.4	359.2	351.3	344.9	338.5	333.0	329.8	329.0	330.6
7.5°	367.2	364.0	352.1	337.7	324.2	313.1	302.0	296.4	287.7	287.7	288.5
10°	361.6	356.0	339.3	317.9	300.4	280.5	267.0	253.5	247.9	244.0	242.4
12.5°	358.4	349.7	327.4	303.6	276.6	250.3	232.1	215.4	206.6	200.3	200.3
15°	359.2	349.7	319.5	288.5	253.5	221.7	198.7	180.4	169.3	162.9	161.3
17.5°	358.4	346.5	309.9	269.4	230.5	197.1	169.3	150.2	139.1	135.1	134.3
20°	360.0	344.1	298.8	251.9	208.2	172.4	143.8	126.4	120.0	116.8	116.0
22.5°	360.8	339.3	287.7	232.8	184.4	149.4	125.6	113.6	108.9	106.5	105.7
25°	362.4	338.5	275.0	215.4	164.5	131.9	113.6	103.3	100.9	99.3	99.3
27.5°	368.7	338.5	263.8	193.1	143.8	117.6	103.3	97.0	95.4	94.6	94.6
30°	376.7	340.1	253.5	174.8	127.9	106.5	96.2	91.4	90.6	89.8	89.8
32.5°	390.2	345.7	241.6	157.4	114.4	98.5	90.6	86.6	85.0	85.0	85.0
35°	408.5	355.2	229.7	141.5	103.3	90.6	85.0	81.1	80.3	81.1	81.1
37.5°	434.7	366.4	219.3	127.2	94.6	84.2	79.5	77.1	76.3	76.3	77.1
40°	467.3	386.2	209.0	116.0	88.2	78.7	75.5	73.1	72.3	73.1	73.1
42.5°	503.0	407.7	200.3	104.9	81.9	74.7	70.7	69.1	68.3	69.1	69.9
45°	542.8	429.9	193.1	97.0	77.1	70.7	67.5	66.8	66.0	66.0	66.8
47.5°	576.2	453.8	187.5	91.4	73.1	67.5	65.2	63.6	62.8	62.0	62.8
50°	607.1	472.1	186.0	88.2	70.7	64.4	62.0	60.4	59.6	58.8	59.6
52.5°	630.2	481.6	186.0	85.8	68.3	62.0	59.6	58.0	57.2	55.6	56.4
55°	646.1	486.4	183.6	84.2	66.0	59.6	56.4	55.6	54.8	53.2	53.2
57.5°	655.6	485.6	174.8	83.4	65.2	56.4	54.0	53.2	52.5	50.9	50.9
60°	654.0	470.5	158.9	80.3	63.6	54.0	50.9	50.9	50.9	49.3	49.3
62.5°	631.0	428.3	132.7	75.5	62.0	51.7	47.7	49.3	50.1	48.5	48.5
65°	569.0	364.0	109.7	69.1	58.0	49.3	45.3	47.7	49.3	48.5	47.7
67.5°	479.2	288.5	90.6	62.8	54.0	46.1	42.1	45.3	46.1	46.1	46.1
70°	370.3	207.4	74.7	54.8	48.5	41.3	38.1	39.7	40.5	40.5	41.3
72.5°	219.3	124.0	61.2	46.9	41.3	35.8	33.4	34.2	33.4	33.4	33.4
75°	108.1	77.1	49.3	39.7	35.0	30.2	27.8	26.2	26.2	26.2	25.4
77.5°	66.0	57.2	40.5	31.8	27.8	23.0	21.5	19.9	19.9	19.9	19.9
80°	46.9	44.5	31.0	23.8	19.1	16.7	15.9	15.1	15.1	14.3	14.3
82.5°	29.4	33.4	23.0	15.9	12.7	11.9	11.1	10.3	9.5	8.7	8.7
85°	16.7	21.5	13.5	8.7	7.2	5.6	4.8	4.8	4.0	4.0	3.2
87.5°	0.8	1.6	1.6	1.6	1.6	0.8	0.8	0.8	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**



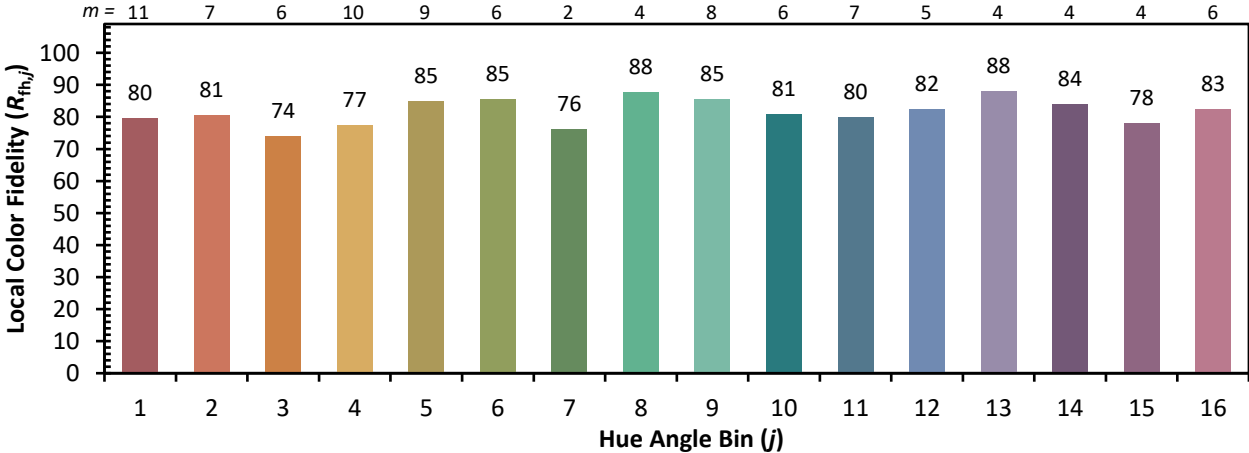


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)