

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: P437264

Luminaire Tested: **ISS-SA1B-830-U-T4W-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437264  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISS-SA1B-830-U-T4W-HSS  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

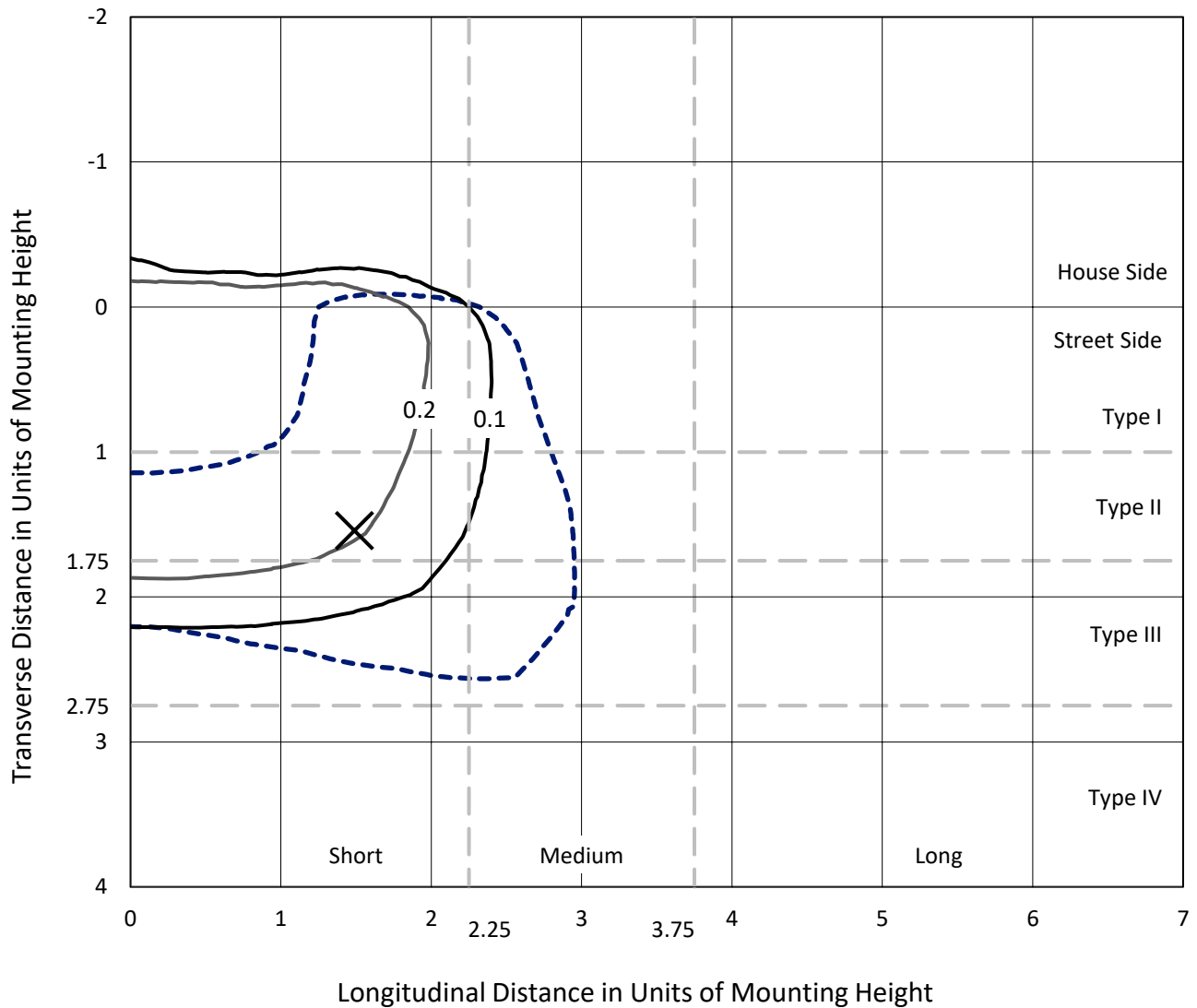
Lumens per Lamp: N/A  
Luminaire Lumens: 2053 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

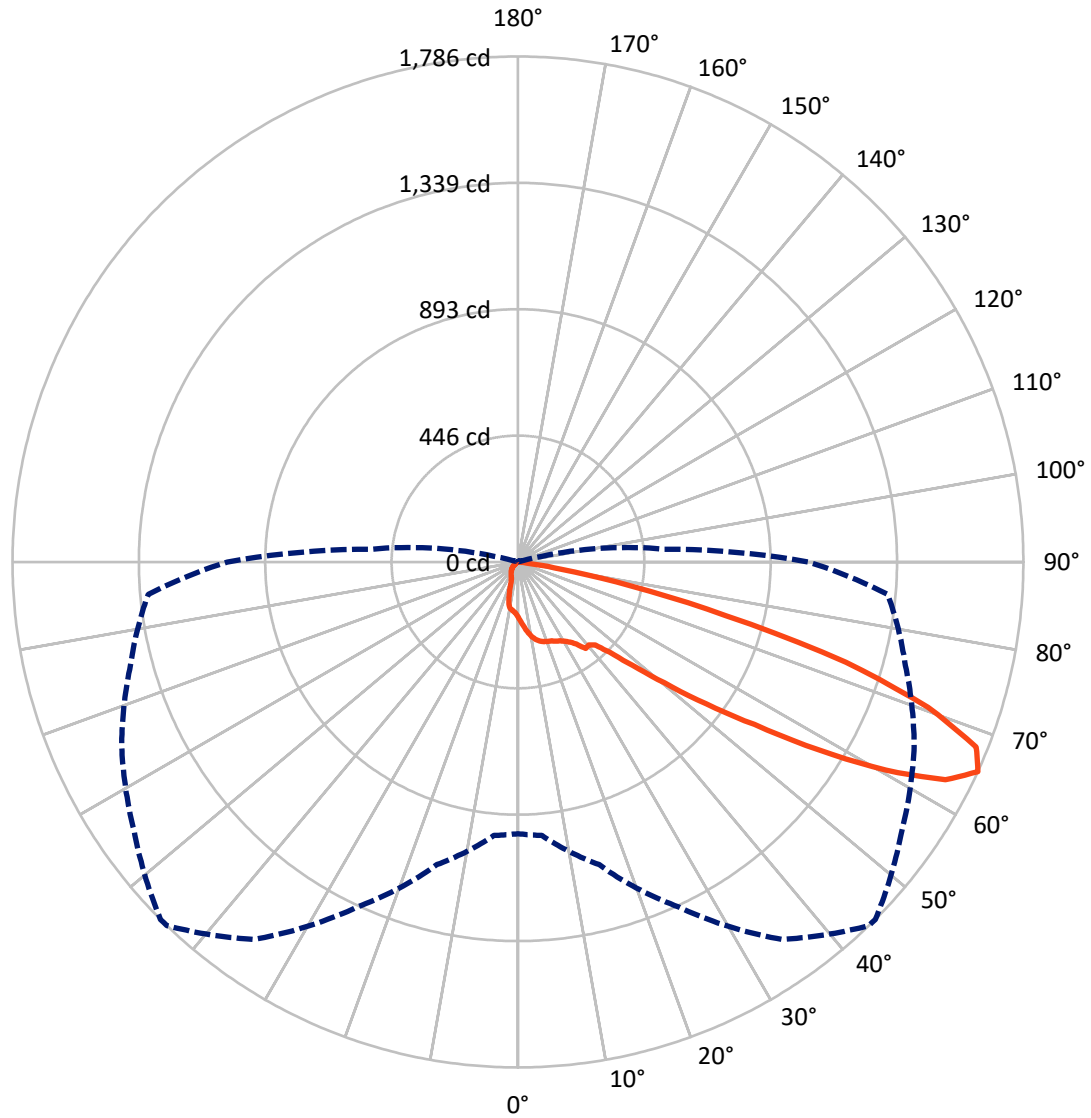
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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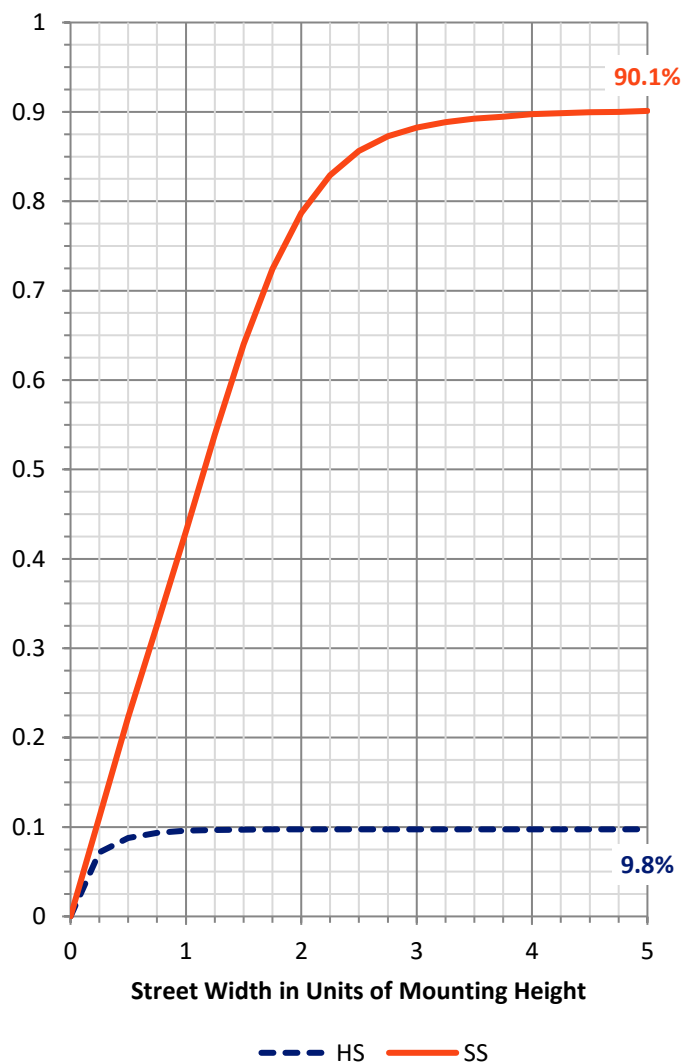
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	202.0	0.0	202.0
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	1851.1	0.0	1851.1
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	2053.0	0.0	2053.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.8	1.0
10°-20°	59.8	2.9
20°-30°	95.7	4.7
30°-40°	142.1	6.9
40°-50°	259.0	12.6
50°-60°	543.1	26.5
60°-70°	691.2	33.7
70°-80°	232.0	11.3
80°-90°	10.4	0.5
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°	2053.0	100.0
0°-180°	2053.0	100.0

**Coefficient of Utilization**



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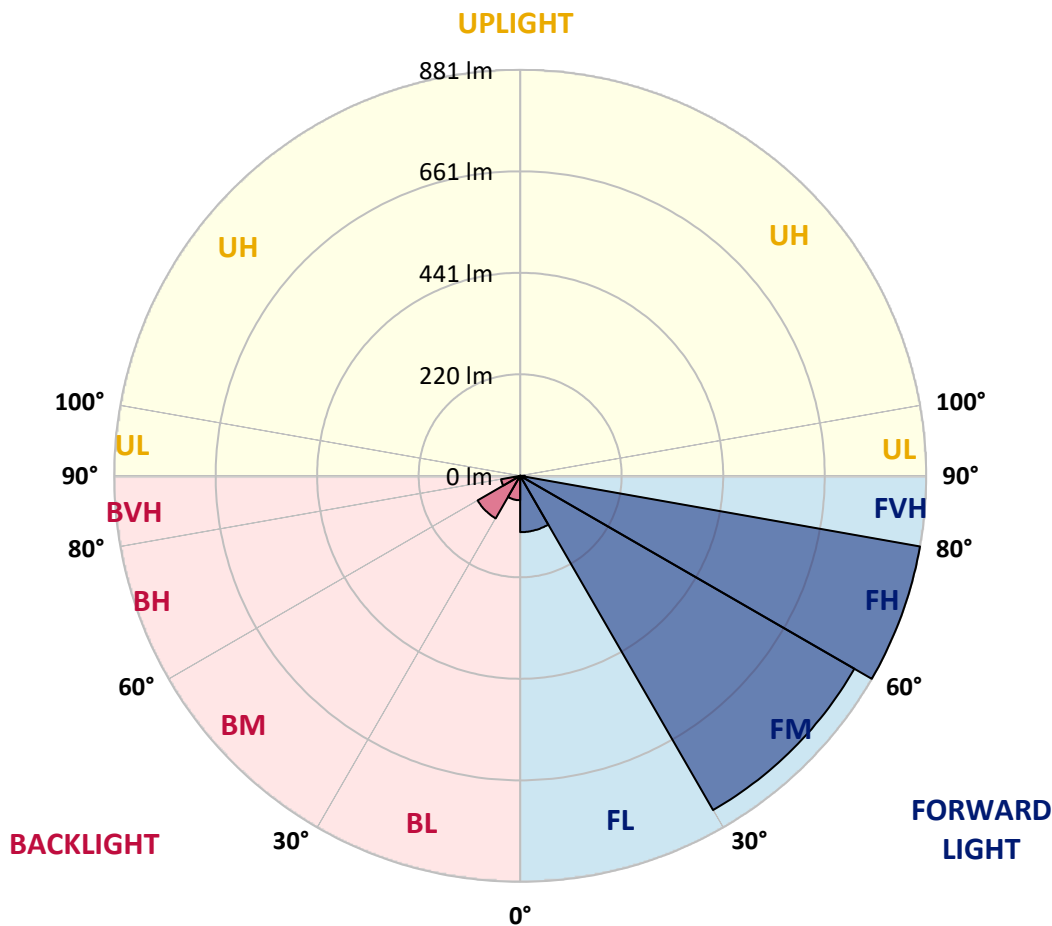
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	122.3	6.0			
FM (30°-60°)	837.6	40.8			
FH (60°-80°)	881.1	42.9			G1/1800
FVH (80°-90°)	10.1	0.5			G1/100
BL (0°-30°)	53.0	2.6	B0/110		
BM (30°-60°)	106.5	5.2	B0/220		
BH (60°-80°)	42.1	2.1	B0/110		G0/110
BVH (80°-90°)	0.3	0.0			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
2.5°	220.4	221.4	217.4	218.4	216.4	212.4	211.4	208.5	204.5	201.5	198.5
5°	249.2	248.2	246.2	242.2	237.3	231.3	229.3	223.4	216.4	208.5	202.5
7.5°	273.0	273.0	270.0	266.0	258.1	250.2	248.2	240.2	230.3	219.4	208.5
10°	293.8	292.8	289.9	284.9	275.0	268.0	265.0	255.1	243.2	231.3	218.4
12.5°	309.7	309.7	305.7	298.8	287.9	280.9	278.9	270.0	258.1	244.2	226.3
15°	318.7	317.7	314.7	305.7	297.8	289.9	288.9	280.9	271.0	256.1	237.3
17.5°	318.7	319.6	314.7	309.7	302.8	295.8	294.8	288.9	278.9	266.0	246.2
20°	314.7	314.7	310.7	306.7	302.8	299.8	298.8	294.8	286.9	276.0	256.1
22.5°	309.7	308.7	307.7	304.8	303.8	302.8	303.8	301.8	296.8	284.9	266.0
25°	308.7	307.7	305.7	303.8	304.8	309.7	309.7	310.7	305.7	295.8	278.0
27.5°	312.7	312.7	309.7	306.7	308.7	315.7	315.7	318.7	315.7	308.7	290.9
30°	329.6	325.6	320.6	314.7	316.7	324.6	325.6	331.6	331.6	326.6	311.7
32.5°	352.4	348.4	335.5	327.6	327.6	337.5	337.5	347.4	356.4	346.4	323.6
35°	370.3	368.3	353.4	343.5	346.4	355.4	358.4	374.2	382.2	357.4	329.6
37.5°	429.8	426.9	398.1	361.3	363.3	388.1	390.1	397.1	390.1	362.3	341.5
40°	509.2	511.2	481.4	420.9	374.2	385.2	385.2	397.1	401.0	384.2	370.3
42.5°	629.4	617.4	587.7	505.3	422.9	401.0	402.0	418.9	439.8	429.8	431.8
45°	733.6	724.7	692.9	613.5	501.3	453.7	449.7	471.5	512.2	521.2	544.0
47.5°	825.9	817.0	803.1	728.6	618.4	546.0	531.1	552.9	623.4	670.1	685.9
50°	937.1	939.1	907.3	864.6	746.5	670.1	666.1	667.1	778.3	817.0	839.8
52.5°	1078.1	1075.1	1019.5	996.7	924.2	832.9	810.0	823.9	934.1	961.9	999.6
55°	1178.3	1175.3	1148.5	1144.6	1120.7	1013.5	1007.6	1006.6	1105.8	1117.8	1162.4
57.5°	1236.9	1241.8	1260.7	1311.3	1331.2	1253.8	1236.9	1204.1	1259.7	1256.7	1305.4
60°	1246.8	1254.7	1308.4	1424.5	1535.7	1494.0	1471.2	1385.8	1400.7	1375.9	1405.6
62.5°	1166.4	1189.2	1284.5	1448.3	1638.9	1694.5	1675.6	1543.6	1508.9	1457.3	1419.5
65°	959.9	969.8	1106.8	1345.1	1628.0	1785.8	1785.8	1655.8	1544.6	1417.5	1311.3
67.5°	663.1	668.1	834.8	1085.0	1461.2	1746.1	1761.0	1653.8	1482.1	1261.7	1069.1
70°	376.2	404.0	505.3	758.4	1151.5	1537.7	1553.5	1504.9	1240.9	935.1	700.8
72.5°	156.8	174.7	246.2	441.7	783.2	1211.1	1238.9	1193.2	927.2	570.8	331.6
75°	48.6	50.6	81.4	192.6	427.8	760.4	807.0	805.1	553.9	267.0	135.0
77.5°	26.8	27.8	38.7	78.4	187.6	406.0	434.8	411.0	274.0	115.2	41.7
80°	12.9	13.9	20.8	37.7	82.4	151.9	178.7	165.8	95.3	54.6	13.9
82.5°	4.0	5.0	9.9	16.9	32.8	35.7	35.7	63.5	48.6	35.7	6.9
85°	0.0	0.0	3.0	6.0	6.0	6.0	6.0	13.9	22.8	21.8	3.0
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0
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°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
2.5°	196.6	195.6	191.6	187.6	185.6	183.6	181.7	179.7	179.7	180.7	179.7
5°	198.5	195.6	189.6	183.6	179.7	176.7	172.7	171.7	170.7	171.7	171.7
7.5°	203.5	199.5	190.6	181.7	175.7	170.7	167.8	166.8	164.8	164.8	164.8
10°	211.4	204.5	192.6	182.7	174.7	167.8	158.8	148.9	142.9	139.0	136.0
12.5°	219.4	211.4	195.6	183.6	174.7	154.9	133.0	114.2	104.2	99.3	98.3
15°	228.3	218.4	201.5	187.6	163.8	127.1	97.3	81.4	77.4	77.4	76.4
17.5°	235.3	226.3	206.5	188.6	143.9	95.3	73.5	68.5	69.5	71.5	71.5
20°	246.2	235.3	213.4	179.7	111.2	71.5	64.5	65.5	66.5	67.5	68.5
22.5°	256.1	244.2	221.4	159.8	81.4	61.5	61.5	62.5	63.5	64.5	65.5
25°	268.0	257.1	229.3	131.0	62.5	56.6	57.6	59.6	60.6	61.5	61.5
27.5°	281.9	270.0	229.3	103.2	54.6	52.6	52.6	54.6	55.6	57.6	57.6
30°	300.8	287.9	223.4	76.4	50.6	48.6	47.6	49.6	50.6	52.6	52.6
32.5°	312.7	304.8	210.4	57.6	46.7	44.7	43.7	43.7	44.7	46.7	46.7
35°	324.6	320.6	190.6	49.6	43.7	41.7	39.7	37.7	37.7	37.7	37.7
37.5°	343.5	349.4	161.8	45.7	41.7	38.7	35.7	32.8	30.8	29.8	28.8
40°	382.2	387.1	133.0	42.7	38.7	35.7	30.8	26.8	23.8	21.8	21.8
42.5°	442.7	438.8	101.3	40.7	35.7	31.8	25.8	21.8	17.9	15.9	15.9
45°	548.0	503.3	74.5	37.7	33.8	28.8	21.8	16.9	12.9	11.9	11.9
47.5°	677.0	577.7	56.6	35.7	30.8	24.8	16.9	12.9	9.9	8.9	8.9
50°	816.0	654.2	46.7	32.8	27.8	20.8	13.9	8.9	6.9	6.9	6.9
52.5°	947.0	705.8	38.7	29.8	23.8	16.9	9.9	6.9	6.0	6.0	6.0
55°	1069.1	737.6	31.8	25.8	19.9	12.9	7.9	6.0	5.0	4.0	4.0
57.5°	1152.5	732.6	25.8	20.8	14.9	8.9	6.0	5.0	4.0	3.0	3.0
60°	1181.3	688.9	19.9	16.9	10.9	6.9	5.0	4.0	3.0	2.0	2.0
62.5°	1140.6	602.6	15.9	12.9	7.9	6.0	4.0	3.0	2.0	1.0	1.0
65°	1026.4	518.2	11.9	8.9	6.0	4.0	3.0	2.0	1.0	0.0	0.0
67.5°	817.0	402.0	9.9	6.0	4.0	3.0	2.0	1.0	0.0	0.0	0.0
70°	511.2	252.1	7.9	4.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0
72.5°	248.2	124.1	6.0	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0
75°	92.3	40.7	5.0	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	29.8	13.9	4.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0
80°	10.9	6.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
82.5°	5.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	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**

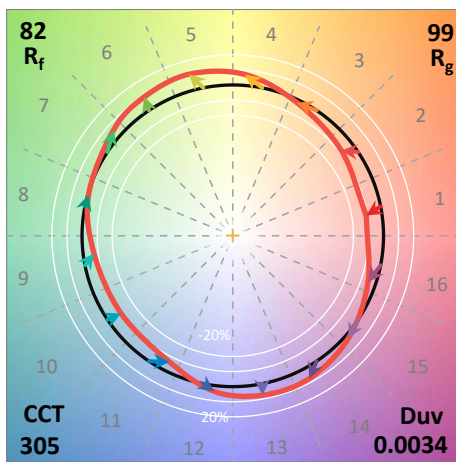
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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**



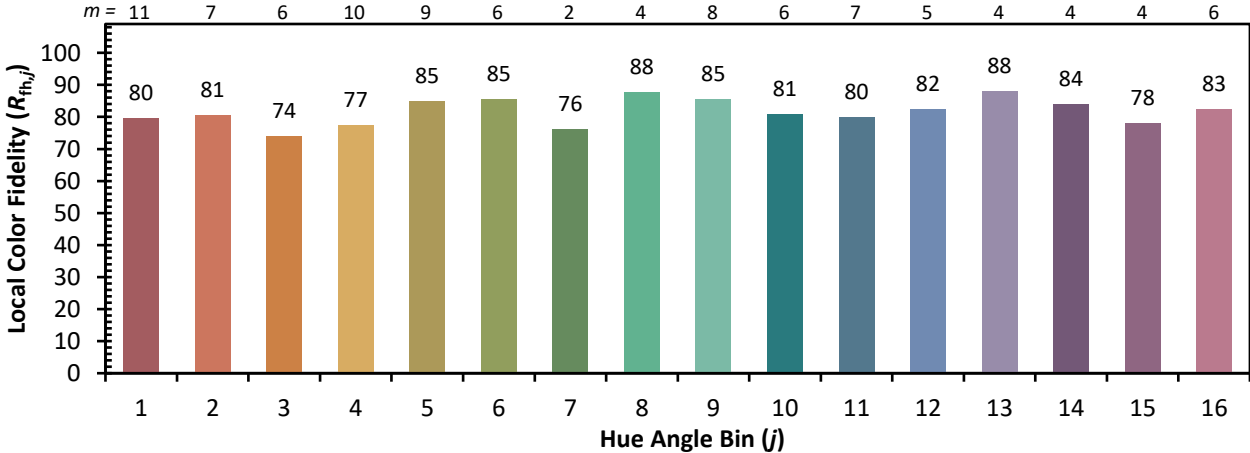


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)