

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: P437942

Luminaire Tested: **ISS-SA1F-830-U-T2-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437942  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-7)  
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-T2-HSS  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

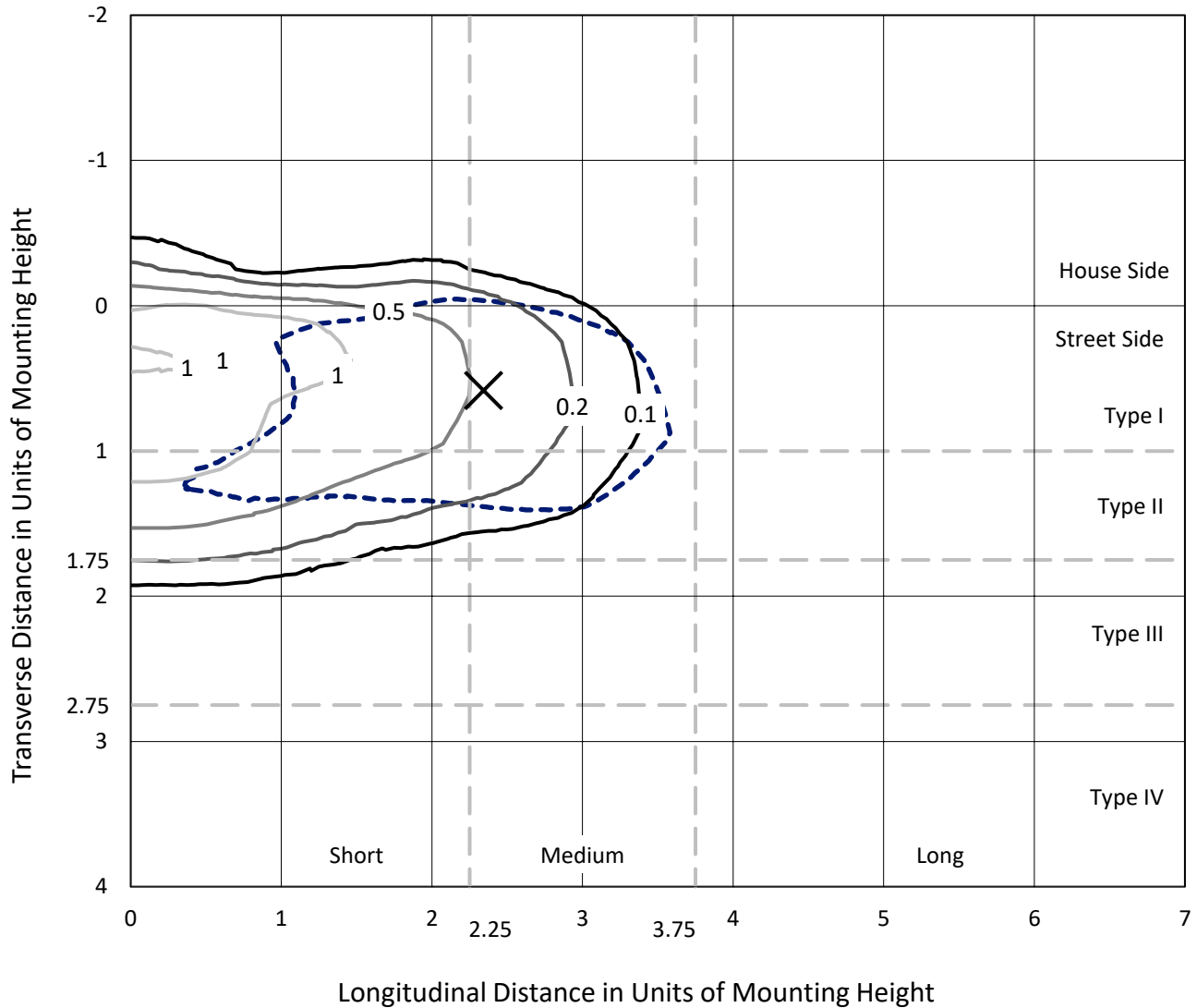
Lumens per Lamp: N/A  
Luminaire Lumens: 4787 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



REPORT NUMBER: P437942  
 CATALOG NUMBER: ISS-SA1F-830-U-T2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

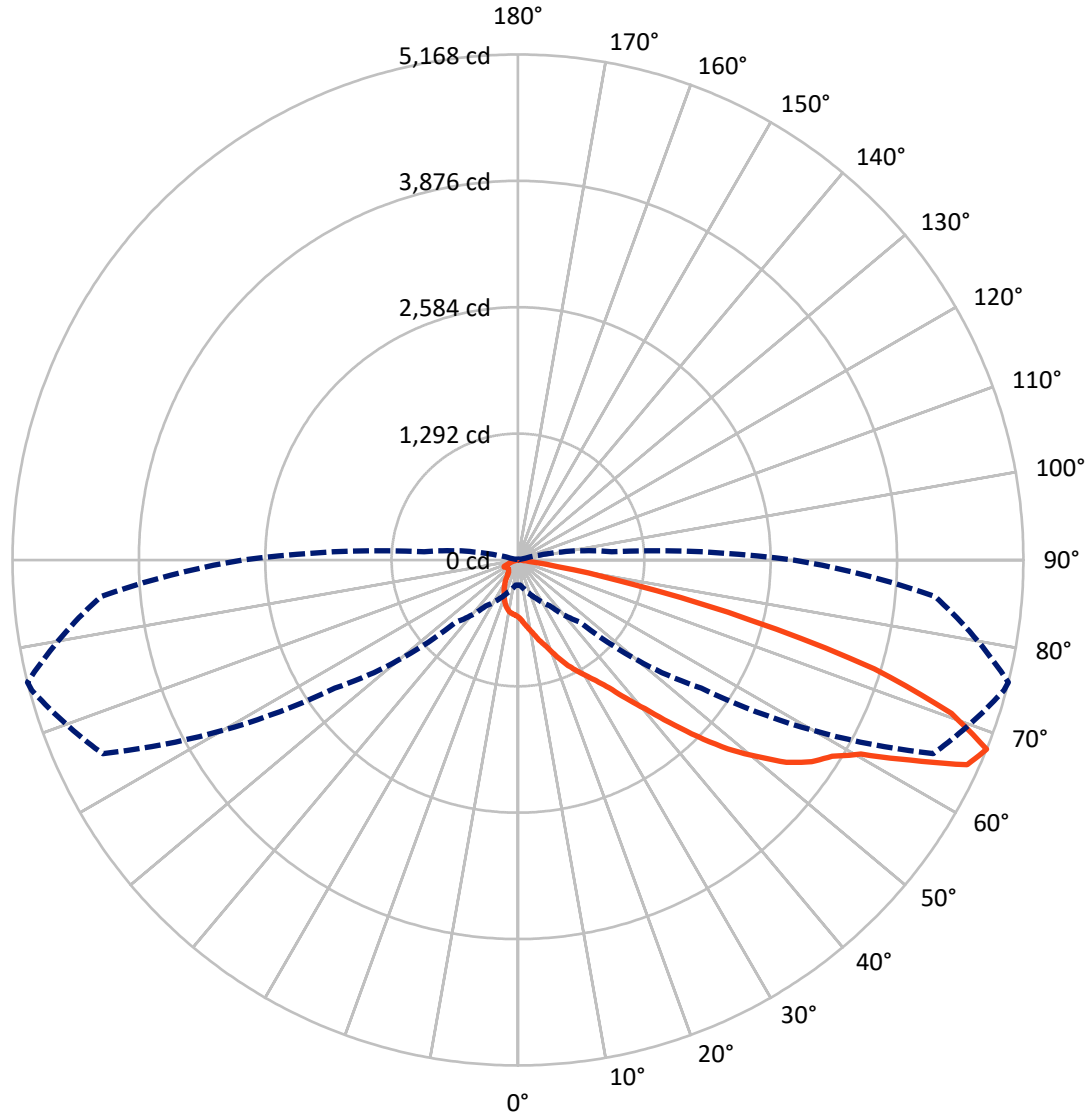
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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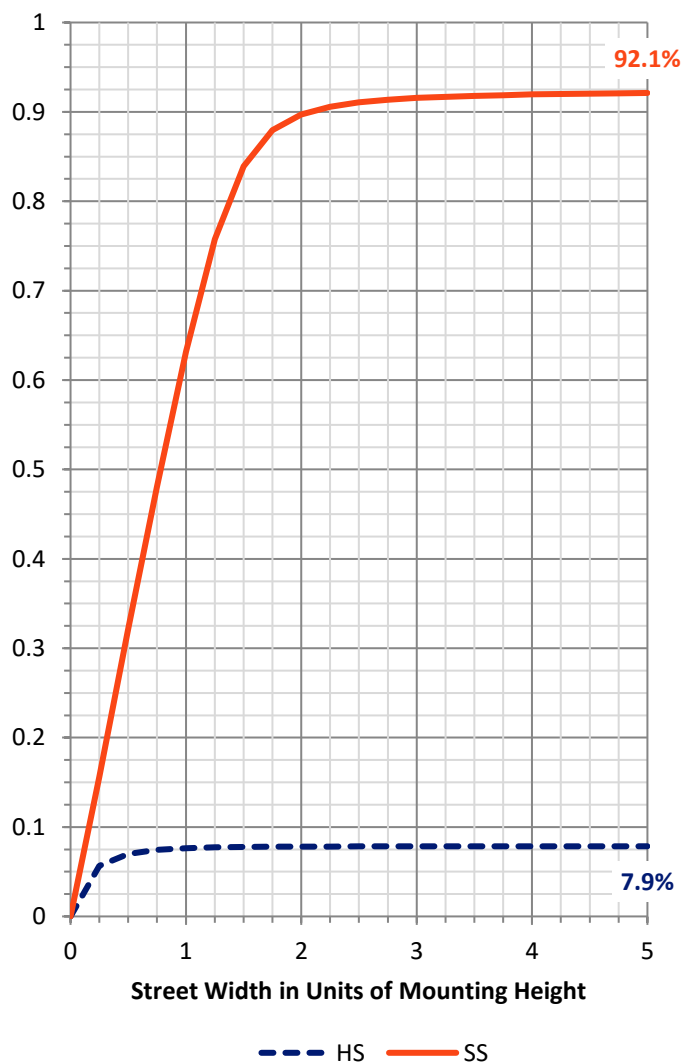
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	378.7	0.0	378.7
	% Fixture	7.9	0.0	7.9
<b>Street Side</b>	Lumens	4408.3	0.0	4408.3
	% Fixture	92.1	0.0	92.1
<b>Total</b>	Lumens	4787.0	0.0	4787.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.8	1.2
10°-20°	155.6	3.2
20°-30°	268.4	5.6
30°-40°	478.2	10.0
40°-50°	851.6	17.8
50°-60°	1277.0	26.7
60°-70°	1209.5	25.3
70°-80°	471.4	9.8
80°-90°	19.5	0.4
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°	4787.0	100.0
0°-180°	4787.0	100.0

**Coefficient of Utilization**



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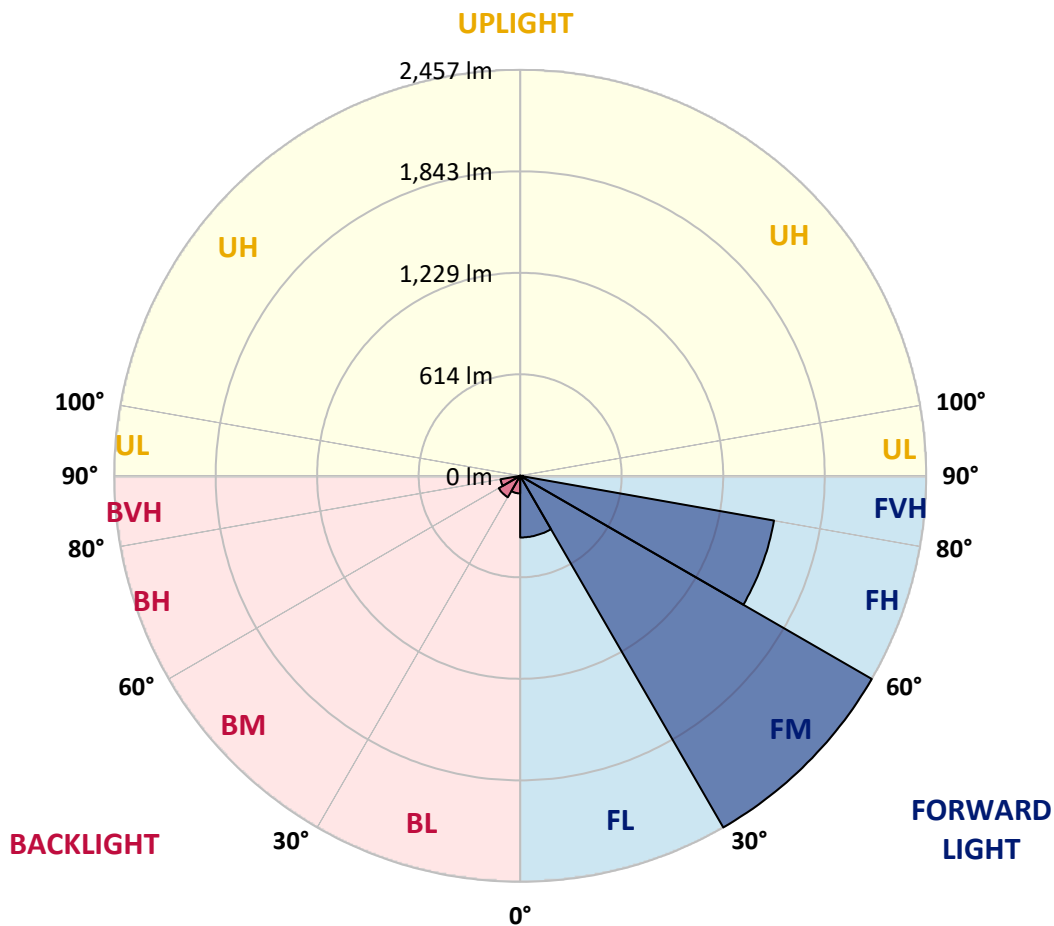
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	373.2	7.8			
FM (30°-60°)	2457.3	51.3			
FH (60°-80°)	1560.0	32.6			G1/1800
FVH (80°-90°)	17.8	0.4			G1/100
BL (0°-30°)	106.6	2.2	B0/110		
BM (30°-60°)	149.5	3.1	B0/220		
BH (60°-80°)	120.9	2.5	B1/500		G1/500
BVH (80°-90°)	1.7	0.0			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1
2.5°	689.6	682.9	678.4	676.2	671.7	658.3	647.1	626.9	609.0	609.0	597.8
5°	752.3	750.1	741.1	736.6	734.4	725.4	705.3	680.7	651.6	649.3	622.4
7.5°	770.2	772.5	772.5	776.9	779.2	774.7	756.8	734.4	696.3	691.9	651.6
10°	763.5	763.5	770.2	783.7	801.6	810.5	808.3	790.4	745.6	741.1	685.1
12.5°	738.9	743.4	754.5	776.9	810.5	837.4	853.1	846.3	801.6	797.1	729.9
15°	705.3	709.8	729.9	761.3	806.0	857.5	893.4	913.5	868.7	864.3	776.9
17.5°	658.3	662.7	685.1	732.2	794.9	866.5	935.9	976.2	938.1	924.7	826.2
20°	640.4	644.8	662.7	700.8	774.7	866.5	974.0	1050.1	1021.0	1009.8	888.9
22.5°	712.0	709.8	694.1	698.6	754.5	859.8	1003.1	1141.9	1119.5	1103.8	956.1
25°	841.9	850.8	828.4	776.9	768.0	853.1	1023.2	1213.5	1211.3	1195.6	1025.5
27.5°	991.9	996.4	971.7	918.0	844.1	866.5	1045.6	1285.2	1296.4	1283.0	1079.2
30°	1115.0	1130.7	1112.8	1063.5	985.2	924.7	1061.3	1350.1	1388.2	1370.3	1130.7
32.5°	1291.9	1298.6	1280.7	1209.1	1128.5	1036.7	1090.4	1406.1	1488.9	1473.3	1191.2
35°	1477.8	1486.7	1453.1	1374.8	1276.2	1173.2	1159.8	1482.2	1634.5	1603.1	1283.0
37.5°	1643.4	1652.4	1636.7	1540.4	1444.2	1334.5	1283.0	1585.2	1811.4	1791.2	1397.1
40°	1775.5	1797.9	1793.5	1710.6	1621.0	1522.5	1459.8	1706.1	2015.1	1997.2	1542.7
42.5°	1909.9	1925.6	1916.6	1856.1	1793.5	1733.0	1654.6	1874.1	2277.1	2268.1	1724.0
45°	2077.8	2102.4	2091.2	2042.0	1965.9	1952.4	1878.5	2075.6	2588.3	2574.9	1943.5
47.5°	2326.3	2348.7	2330.8	2263.6	2176.3	2151.7	2089.0	2303.9	2892.8	2886.1	2160.7
50°	2460.7	2483.1	2530.1	2541.3	2483.1	2351.0	2277.1	2521.1	3166.0	3154.8	2368.9
52.5°	2413.7	2433.8	2548.0	2655.5	2783.1	2671.1	2505.5	2756.2	3416.7	3436.9	2572.6
55°	2212.2	2239.0	2402.5	2574.9	2883.9	3033.9	2843.6	3022.7	3613.8	3642.9	2707.0
57.5°	1804.6	1836.0	2046.5	2312.9	2729.4	3125.7	3262.2	3389.9	3748.1	3786.2	2879.4
60°	1081.4	1130.7	1347.9	1701.7	2279.3	2908.5	3560.0	3918.3	4010.1	4028.0	3246.6
62.5°	600.1	588.9	763.5	1054.6	1571.8	2362.2	3515.3	4560.9	4504.9	4504.9	3873.5
65°	360.5	371.7	461.2	626.9	913.5	1558.4	3134.6	4957.2	5031.1	5046.7	4381.8
67.5°	255.2	257.5	322.4	429.9	570.9	897.8	2286.0	4684.0	5145.3	5167.7	4281.0
70°	165.7	167.9	230.6	306.7	407.5	494.8	1397.1	3860.1	4713.1	4701.9	3786.2
72.5°	100.8	105.2	145.5	226.1	313.5	279.9	752.3	2789.8	3734.7	3810.8	2971.2
75°	62.7	67.2	87.3	156.7	219.4	190.3	331.4	1862.9	2409.2	2467.4	1918.8
77.5°	35.8	40.3	56.0	89.6	156.7	132.1	156.7	978.5	1166.5	1204.6	770.2
80°	13.4	15.7	29.1	44.8	96.3	80.6	71.6	331.4	371.7	416.5	235.1
82.5°	2.2	4.5	13.4	26.9	38.1	38.1	31.3	100.8	103.0	109.7	62.7
85°	0.0	0.0	4.5	6.7	6.7	6.7	11.2	20.2	31.3	31.3	17.9
87.5°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	4.5	4.5	4.5	4.5
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-SA1F-830-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1	582.1
2.5°	586.6	582.1	564.2	546.3	532.9	521.7	503.8	503.8	497.1	490.3	492.6
5°	602.3	588.9	555.3	521.7	490.3	461.2	436.6	425.4	409.7	405.3	403.0
7.5°	622.4	597.8	541.8	488.1	436.6	398.5	367.2	347.0	329.1	324.7	326.9
10°	647.1	611.3	526.2	443.3	380.6	333.6	297.8	282.1	262.0	255.2	248.5
12.5°	682.9	626.9	501.5	394.1	324.7	277.6	226.1	188.1	174.6	170.2	170.2
15°	712.0	635.9	470.2	347.0	277.6	203.8	161.2	154.5	152.3	152.3	152.3
17.5°	745.6	642.6	432.1	302.3	214.9	150.0	141.1	141.1	138.8	138.8	136.6
20°	781.4	644.8	391.8	262.0	152.3	134.3	127.6	125.4	120.9	118.7	118.7
22.5°	821.7	642.6	347.0	214.9	134.3	123.1	112.0	107.5	103.0	98.5	98.5
25°	855.3	638.1	306.7	154.5	123.1	107.5	96.3	89.6	85.1	82.8	80.6
27.5°	884.4	613.5	266.4	132.1	112.0	96.3	82.8	76.1	71.6	69.4	69.4
30°	886.7	573.2	232.9	123.1	103.0	85.1	71.6	67.2	64.9	62.7	62.7
32.5°	900.1	532.9	197.0	116.4	91.8	76.1	64.9	60.5	56.0	56.0	56.0
35°	927.0	497.1	152.3	105.2	82.8	67.2	58.2	53.7	51.5	49.3	49.3
37.5°	969.5	472.4	125.4	96.3	76.1	60.5	53.7	49.3	47.0	44.8	44.8
40°	1025.5	459.0	114.2	87.3	67.2	56.0	49.3	44.8	40.3	38.1	38.1
42.5°	1121.7	459.0	105.2	78.4	60.5	51.5	44.8	40.3	35.8	33.6	33.6
45°	1233.7	476.9	98.5	69.4	53.7	47.0	40.3	33.6	29.1	26.9	26.9
47.5°	1356.8	510.5	91.8	62.7	49.3	42.5	35.8	26.9	22.4	20.2	20.2
50°	1500.1	559.8	87.3	56.0	44.8	38.1	29.1	20.2	17.9	15.7	15.7
52.5°	1621.0	609.0	80.6	51.5	40.3	33.6	22.4	17.9	13.4	13.4	13.4
55°	1735.2	662.7	76.1	47.0	38.1	26.9	17.9	13.4	11.2	11.2	11.2
57.5°	1887.5	729.9	69.4	42.5	31.3	20.2	15.7	11.2	9.0	9.0	9.0
60°	2198.7	879.9	60.5	38.1	26.9	17.9	13.4	11.2	9.0	6.7	6.7
62.5°	2704.7	1124.0	51.5	33.6	20.2	15.7	11.2	9.0	6.7	4.5	4.5
65°	3024.9	1184.4	42.5	26.9	15.7	11.2	9.0	6.7	4.5	2.2	2.2
67.5°	2818.9	962.8	33.6	20.2	13.4	9.0	6.7	4.5	2.2	0.0	0.0
70°	2380.1	727.7	24.6	13.4	11.2	6.7	4.5	2.2	0.0	0.0	0.0
72.5°	1880.8	553.0	22.4	11.2	9.0	4.5	4.5	2.2	0.0	0.0	0.0
75°	1233.7	284.4	17.9	11.2	6.7	4.5	2.2	2.2	0.0	0.0	0.0
77.5°	485.9	107.5	13.4	9.0	6.7	4.5	2.2	2.2	0.0	0.0	0.0
80°	132.1	35.8	6.7	4.5	4.5	2.2	2.2	2.2	0.0	0.0	0.0
82.5°	33.6	15.7	4.5	4.5	2.2	2.2	2.2	2.2	2.2	0.0	0.0
85°	11.2	4.5	4.5	2.2	2.2	2.2	0.0	0.0	0.0	0.0	0.0
87.5°	4.5	4.5	4.5	2.2	2.2	2.2	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**

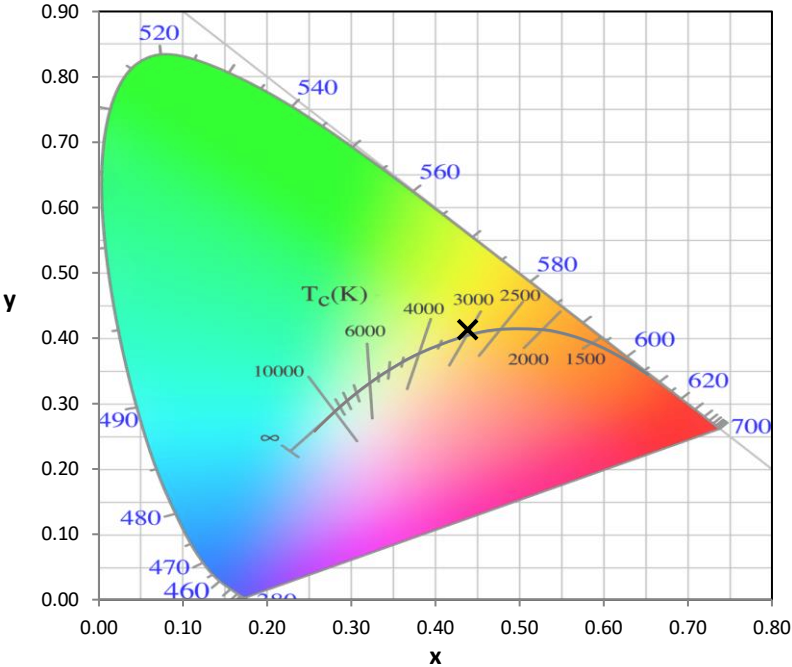
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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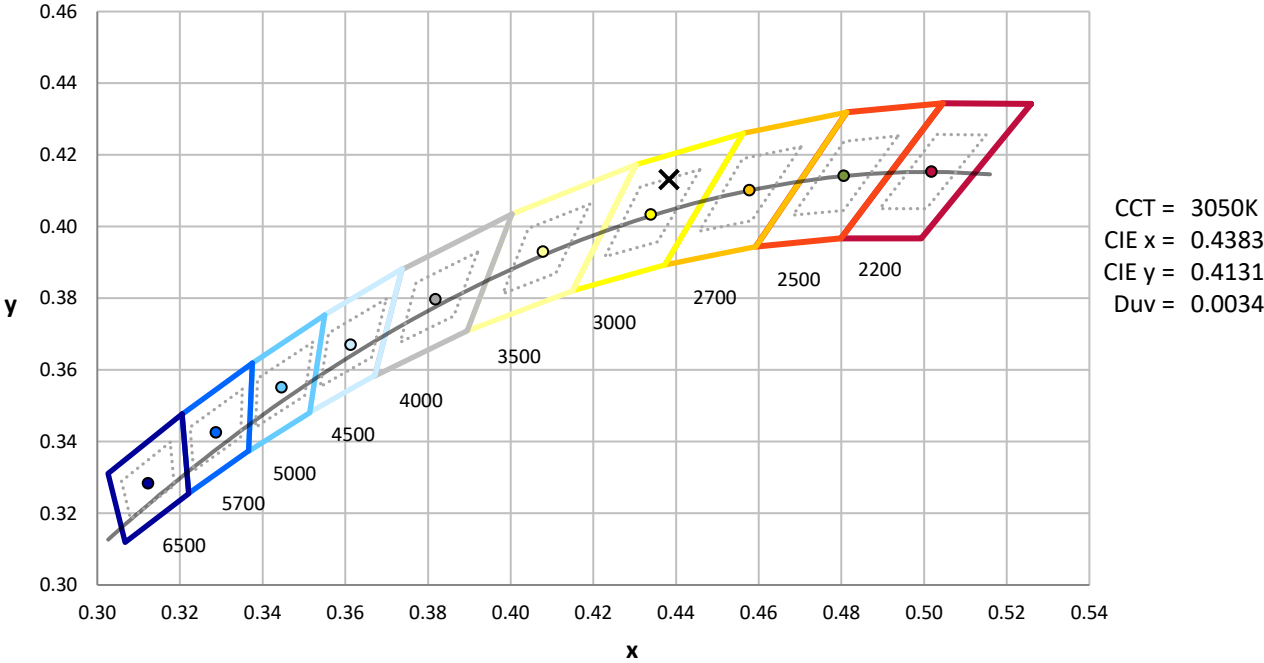
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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 (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (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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**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**

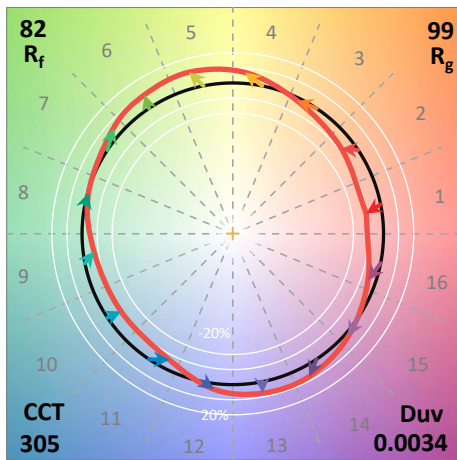
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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