

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: P437087

Luminaire Tested: **ISC-SA1A-830-U-T2-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437087  
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: ISC-SA1A-830-U-T2-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 350mA 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: 1699 lumens  
Efficiency: N/A  
Efficacy: 84.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G0

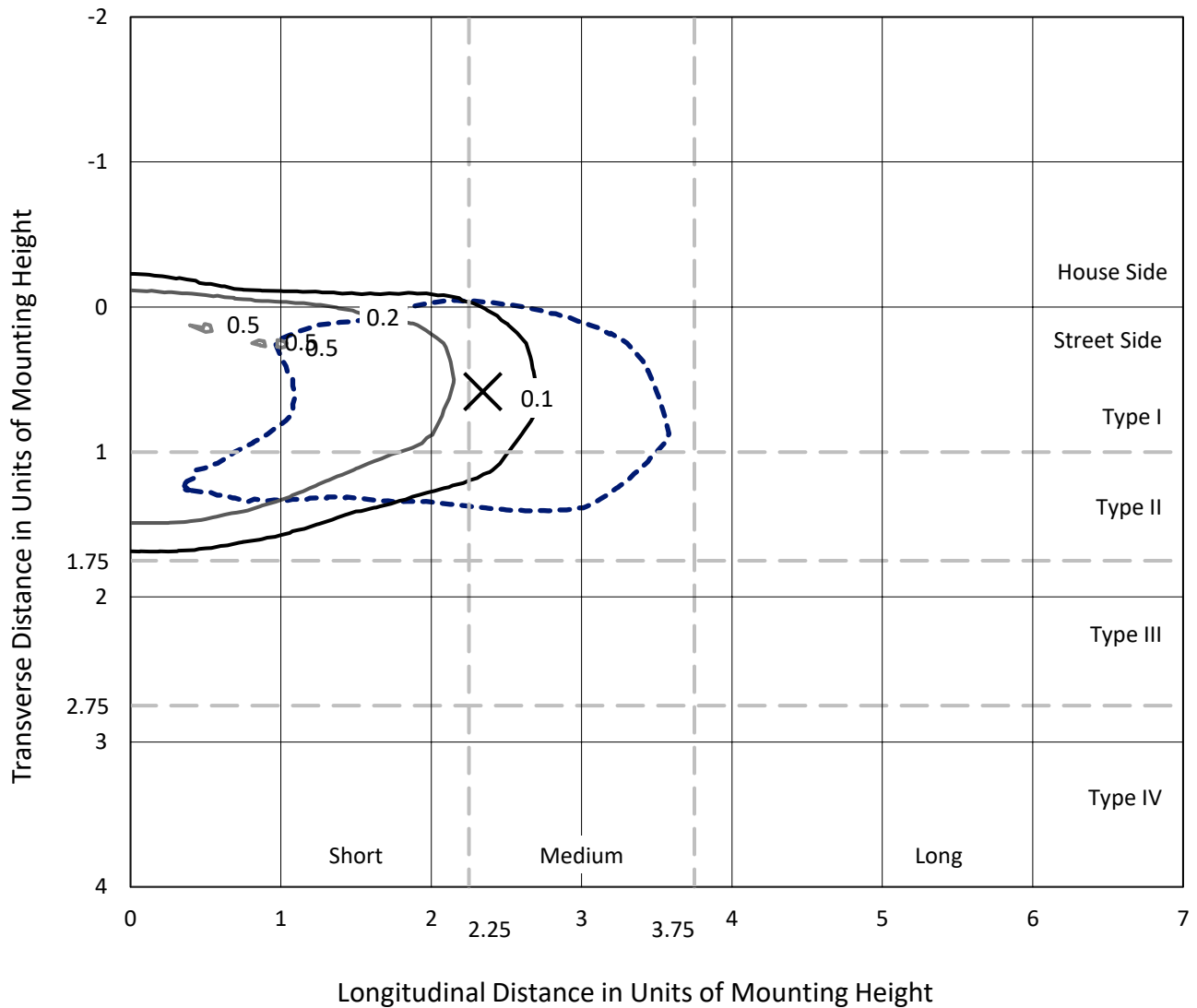
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

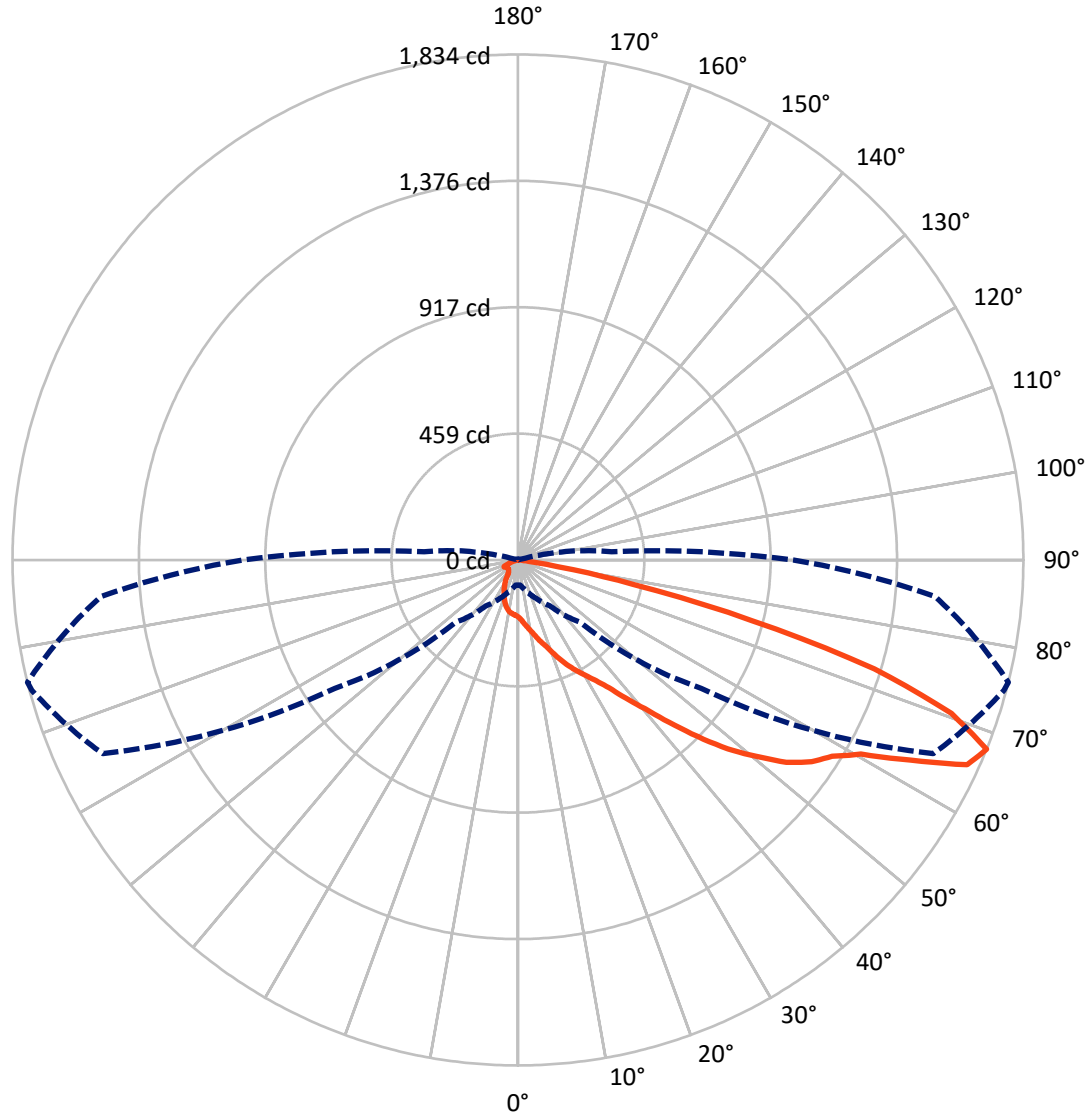
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.5 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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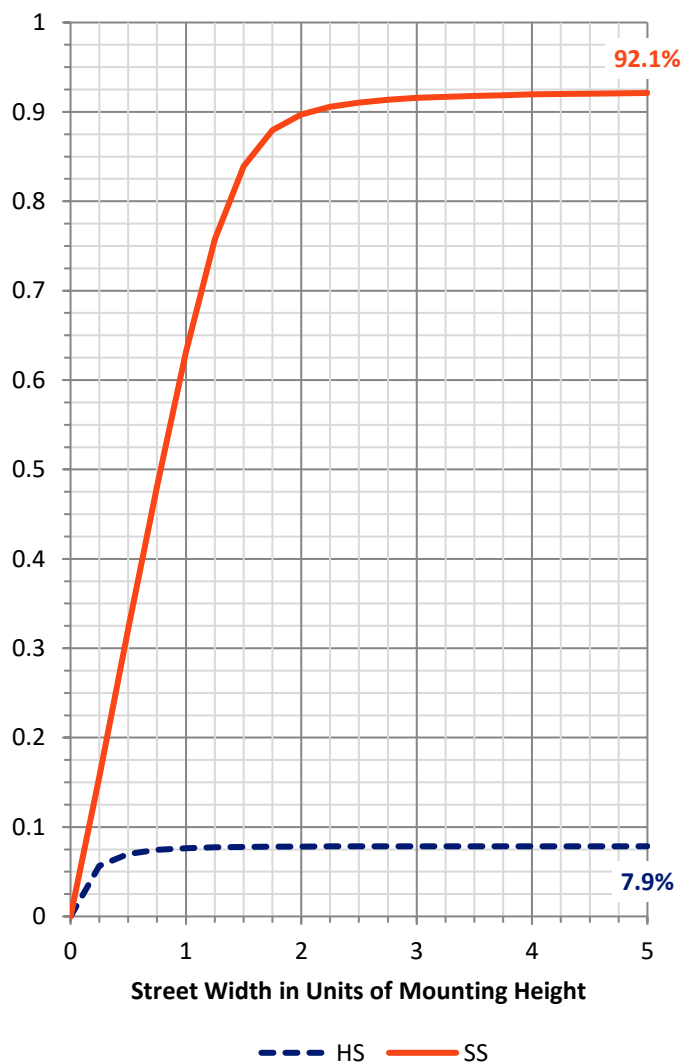
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	134.4	0.0	134.4
	% Fixture	7.9	0.0	7.9
<b>Street Side</b>	Lumens	1564.6	0.0	1564.6
	% Fixture	92.1	0.0	92.1
<b>Total</b>	Lumens	1699.0	0.0	1699.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.8	1.2
10°-20°	55.2	3.2
20°-30°	95.3	5.6
30°-40°	169.7	10.0
40°-50°	302.2	17.8
50°-60°	453.2	26.7
60°-70°	429.3	25.3
70°-80°	167.3	9.8
80°-90°	6.9	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°	1699.0	100.0
0°-180°	1699.0	100.0

**Coefficient of Utilization**



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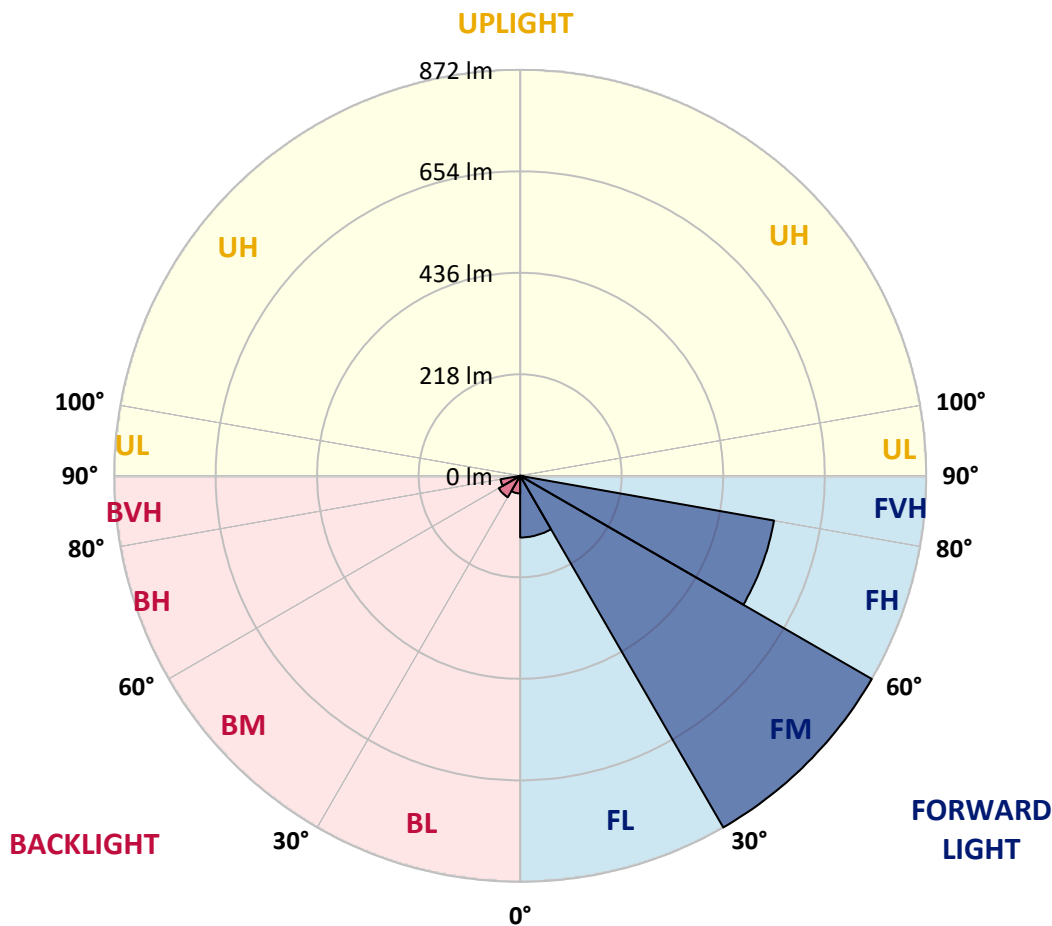
CATALOG NUMBER: ISC-SA1A-830-U-T2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	132.5	7.8			
FM (30°-60°)	872.1	51.3			
FH (60°-80°)	553.7	32.6			G0/660
FVH (80°-90°)	6.3	0.4			G0/10
BL (0°-30°)	37.8	2.2	B0/110		
BM (30°-60°)	53.1	3.1	B0/220		
BH (60°-80°)	42.9	2.5	B0/110		G0/110
BVH (80°-90°)	0.6	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-G0**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6
2.5°	244.8	242.4	240.8	240.0	238.4	233.6	229.7	222.5	216.2	216.2	212.2
5°	267.0	266.2	263.0	261.4	260.7	257.5	250.3	241.6	231.2	230.5	220.9
7.5°	273.4	274.2	274.2	275.8	276.5	275.0	268.6	260.7	247.1	245.6	231.2
10°	271.0	271.0	273.4	278.1	284.5	287.7	286.9	280.5	264.6	263.0	243.2
12.5°	262.2	263.8	267.8	275.8	287.7	297.2	302.8	300.4	284.5	282.9	259.1
15°	250.3	251.9	259.1	270.2	286.1	304.4	317.1	324.2	308.3	306.7	275.8
17.5°	233.6	235.2	243.2	259.9	282.1	307.5	332.2	346.5	333.0	328.2	293.2
20°	227.3	228.9	235.2	248.7	275.0	307.5	345.7	372.7	362.4	358.4	315.5
22.5°	252.7	251.9	246.3	247.9	267.8	305.2	356.0	405.3	397.3	391.8	339.3
25°	298.8	302.0	294.0	275.8	272.6	302.8	363.2	430.7	429.9	424.4	364.0
27.5°	352.0	353.6	344.9	325.8	299.6	307.5	371.1	456.1	460.1	455.3	383.0
30°	395.7	401.3	395.0	377.5	349.7	328.2	376.7	479.2	492.7	486.3	401.3
32.5°	458.5	460.9	454.6	429.1	400.5	367.9	387.0	499.1	528.5	522.9	422.8
35°	524.5	527.7	515.7	487.9	453.0	416.4	411.6	526.1	580.1	569.0	455.3
37.5°	583.3	586.5	580.9	546.7	512.6	473.6	455.3	562.6	642.9	635.7	495.9
40°	630.2	638.1	636.5	607.1	575.3	540.4	518.1	605.5	715.2	708.8	547.5
42.5°	677.9	683.4	680.2	658.8	636.5	615.1	587.3	665.1	808.2	805.0	611.9
45°	737.5	746.2	742.2	724.7	697.7	693.0	666.7	736.7	918.6	913.9	689.8
47.5°	825.7	833.6	827.3	803.4	772.4	763.7	741.4	817.7	1026.7	1024.3	766.9
50°	873.3	881.3	898.0	902.0	881.3	834.4	808.2	894.8	1123.7	1119.7	840.8
52.5°	856.7	863.8	904.3	942.5	987.8	948.0	889.2	978.2	1212.7	1219.8	913.1
55°	785.1	794.7	852.7	913.9	1023.5	1076.8	1009.2	1072.8	1282.6	1292.9	960.8
57.5°	640.5	651.6	726.3	820.9	968.7	1109.4	1157.8	1203.1	1330.3	1343.8	1021.9
60°	383.8	401.3	478.4	604.0	809.0	1032.3	1263.5	1390.7	1423.3	1429.6	1152.3
62.5°	213.0	209.0	271.0	374.3	557.9	838.4	1247.6	1618.7	1598.9	1598.9	1374.8
65°	127.9	131.9	163.7	222.5	324.2	553.1	1112.5	1759.4	1785.6	1791.2	1555.2
67.5°	90.6	91.4	114.4	152.6	202.6	318.7	811.4	1662.5	1826.2	1834.1	1519.4
70°	58.8	59.6	81.9	108.9	144.6	175.6	495.9	1370.0	1672.8	1668.8	1343.8
72.5°	35.8	37.3	51.7	80.3	111.3	99.3	267.0	990.2	1325.5	1352.5	1054.5
75°	22.3	23.8	31.0	55.6	77.9	67.5	117.6	661.2	855.1	875.7	681.0
77.5°	12.7	14.3	19.9	31.8	55.6	46.9	55.6	347.3	414.0	427.5	273.4
80°	4.8	5.6	10.3	15.9	34.2	28.6	25.4	117.6	131.9	147.8	83.4
82.5°	0.8	1.6	4.8	9.5	13.5	13.5	11.1	35.8	36.6	38.9	22.3
85°	0.0	0.0	1.6	2.4	2.4	2.4	4.0	7.2	11.1	11.1	6.4
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	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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 CATALOG NUMBER: ISC-SA1A-830-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6	206.6
2.5°	208.2	206.6	200.3	193.9	189.1	185.2	178.8	178.8	176.4	174.0	174.8
5°	213.8	209.0	197.1	185.2	174.0	163.7	155.0	151.0	145.4	143.8	143.0
7.5°	220.9	212.2	192.3	173.2	155.0	141.5	130.3	123.2	116.8	115.2	116.0
10°	229.7	216.9	186.7	157.3	135.1	118.4	105.7	100.1	93.0	90.6	88.2
12.5°	242.4	222.5	178.0	139.9	115.2	98.5	80.3	66.8	62.0	60.4	60.4
15°	252.7	225.7	166.9	123.2	98.5	72.3	57.2	54.8	54.0	54.0	54.0
17.5°	264.6	228.1	153.4	107.3	76.3	53.2	50.1	50.1	49.3	49.3	48.5
20°	277.3	228.9	139.1	93.0	54.0	47.7	45.3	44.5	42.9	42.1	42.1
22.5°	291.6	228.1	123.2	76.3	47.7	43.7	39.7	38.1	36.6	35.0	35.0
25°	303.6	226.5	108.9	54.8	43.7	38.1	34.2	31.8	30.2	29.4	28.6
27.5°	313.9	217.7	94.6	46.9	39.7	34.2	29.4	27.0	25.4	24.6	24.6
30°	314.7	203.4	82.6	43.7	36.6	30.2	25.4	23.8	23.0	22.3	22.3
32.5°	319.5	189.1	69.9	41.3	32.6	27.0	23.0	21.5	19.9	19.9	19.9
35°	329.0	176.4	54.0	37.3	29.4	23.8	20.7	19.1	18.3	17.5	17.5
37.5°	344.1	167.7	44.5	34.2	27.0	21.5	19.1	17.5	16.7	15.9	15.9
40°	364.0	162.9	40.5	31.0	23.8	19.9	17.5	15.9	14.3	13.5	13.5
42.5°	398.1	162.9	37.3	27.8	21.5	18.3	15.9	14.3	12.7	11.9	11.9
45°	437.9	169.3	35.0	24.6	19.1	16.7	14.3	11.9	10.3	9.5	9.5
47.5°	481.6	181.2	32.6	22.3	17.5	15.1	12.7	9.5	7.9	7.2	7.2
50°	532.4	198.7	31.0	19.9	15.9	13.5	10.3	7.2	6.4	5.6	5.6
52.5°	575.3	216.2	28.6	18.3	14.3	11.9	7.9	6.4	4.8	4.8	4.8
55°	615.9	235.2	27.0	16.7	13.5	9.5	6.4	4.8	4.0	4.0	4.0
57.5°	669.9	259.1	24.6	15.1	11.1	7.2	5.6	4.0	3.2	3.2	3.2
60°	780.4	312.3	21.5	13.5	9.5	6.4	4.8	4.0	3.2	2.4	2.4
62.5°	960.0	398.9	18.3	11.9	7.2	5.6	4.0	3.2	2.4	1.6	1.6
65°	1073.6	420.4	15.1	9.5	5.6	4.0	3.2	2.4	1.6	0.8	0.8
67.5°	1000.5	341.7	11.9	7.2	4.8	3.2	2.4	1.6	0.8	0.0	0.0
70°	844.7	258.3	8.7	4.8	4.0	2.4	1.6	0.8	0.0	0.0	0.0
72.5°	667.5	196.3	7.9	4.0	3.2	1.6	1.6	0.8	0.0	0.0	0.0
75°	437.9	100.9	6.4	4.0	2.4	1.6	0.8	0.8	0.0	0.0	0.0
77.5°	172.4	38.1	4.8	3.2	2.4	1.6	0.8	0.8	0.0	0.0	0.0
80°	46.9	12.7	2.4	1.6	1.6	0.8	0.8	0.8	0.0	0.0	0.0
82.5°	11.9	5.6	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.0	0.0
85°	4.0	1.6	1.6	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
87.5°	1.6	1.6	1.6	0.8	0.8	0.8	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

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**

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)