

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: P437094

Luminaire Tested: **ISC-SA1A-830-U-T4W**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437094  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-12)  
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-T4W  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2209 lumens  
Efficiency: N/A  
Efficacy: 109.9 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

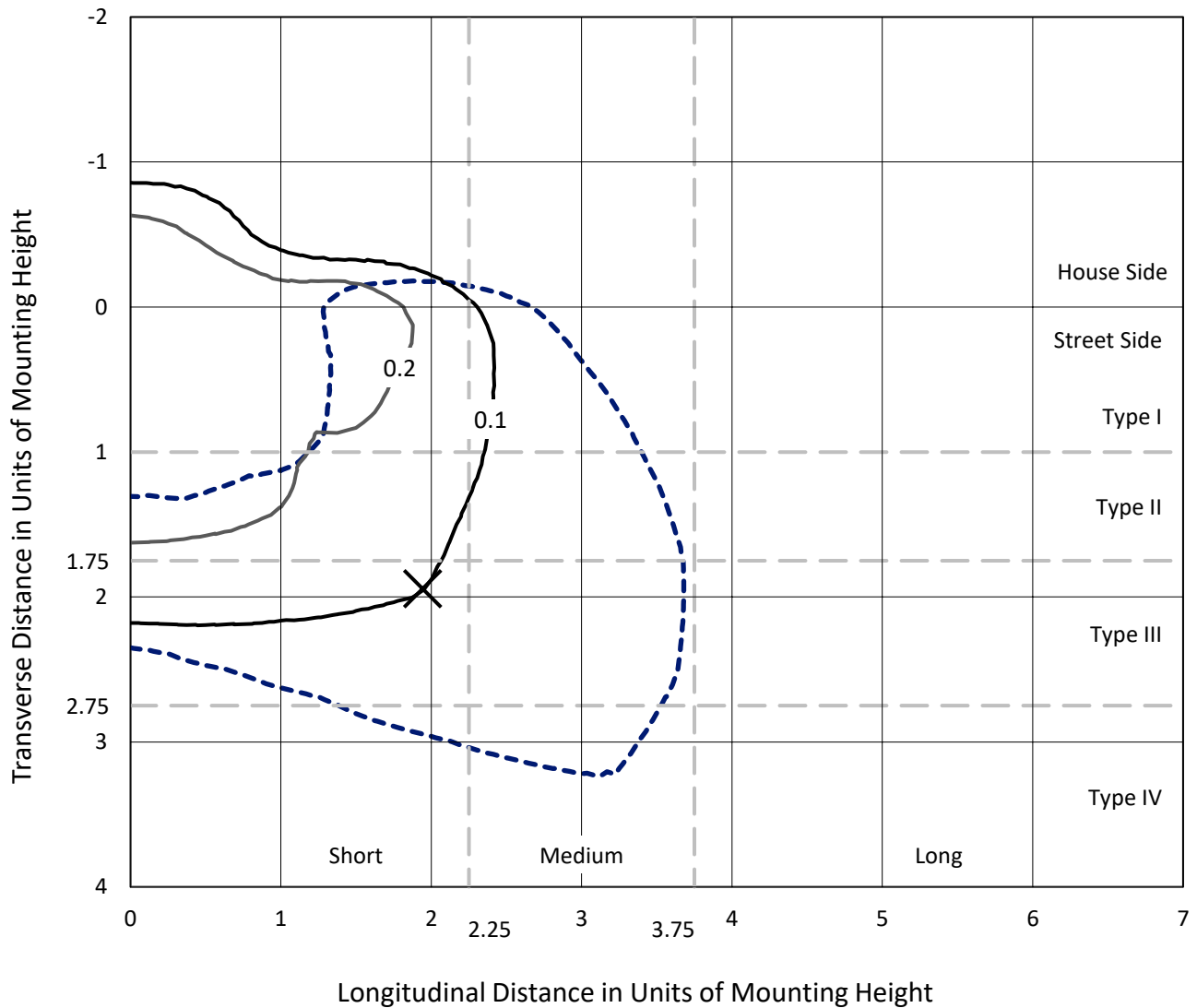
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P437094  
 CATALOG NUMBER: ISC-SA1A-830-U-T4W

### Iso-Footcandle Lines of Horizontal Illumination

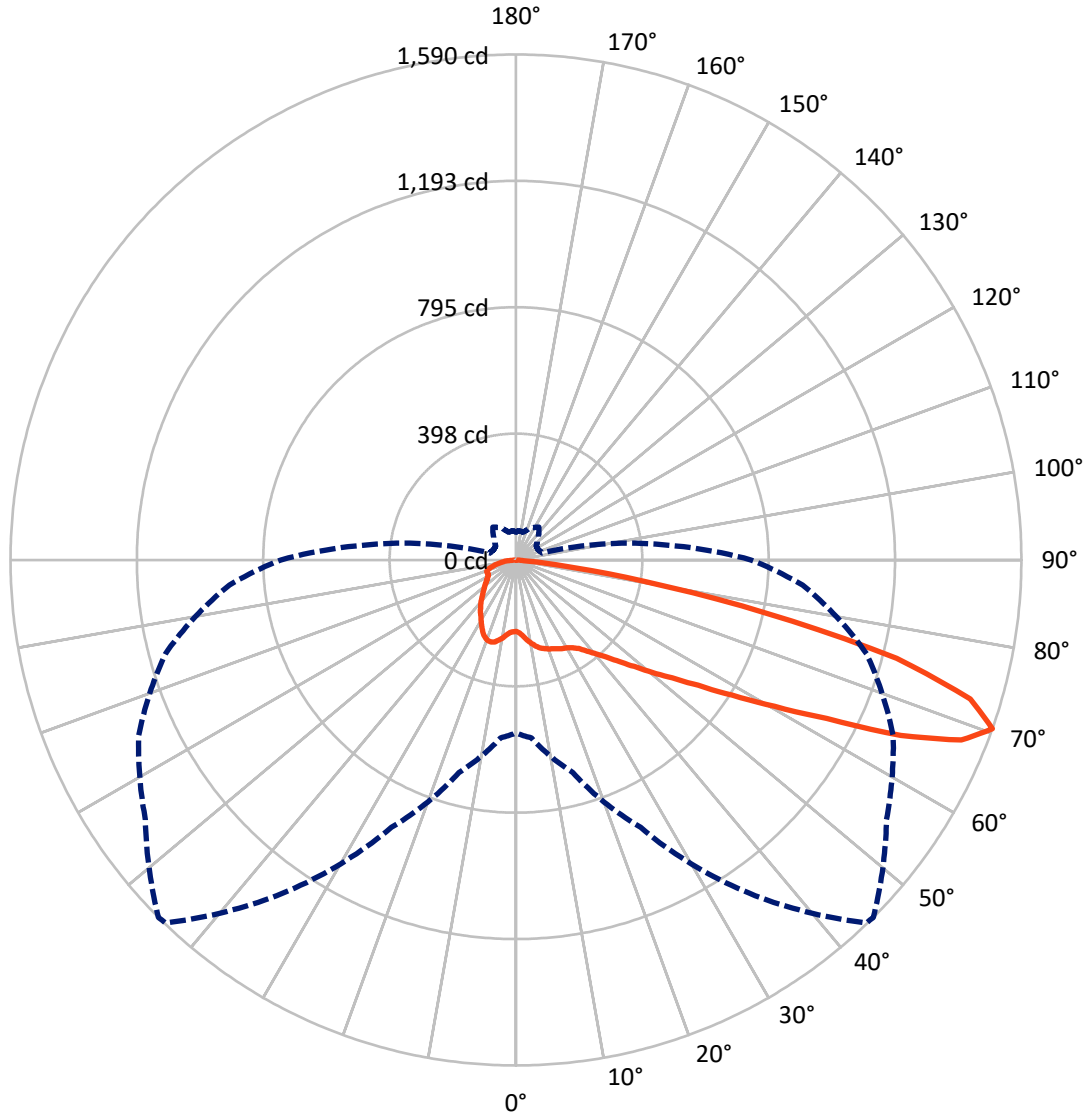
× Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P437094  
CATALOG NUMBER: ISC-SA1A-830-U-T4W

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P437094

CATALOG NUMBER: ISC-SA1A-830-U-T4W

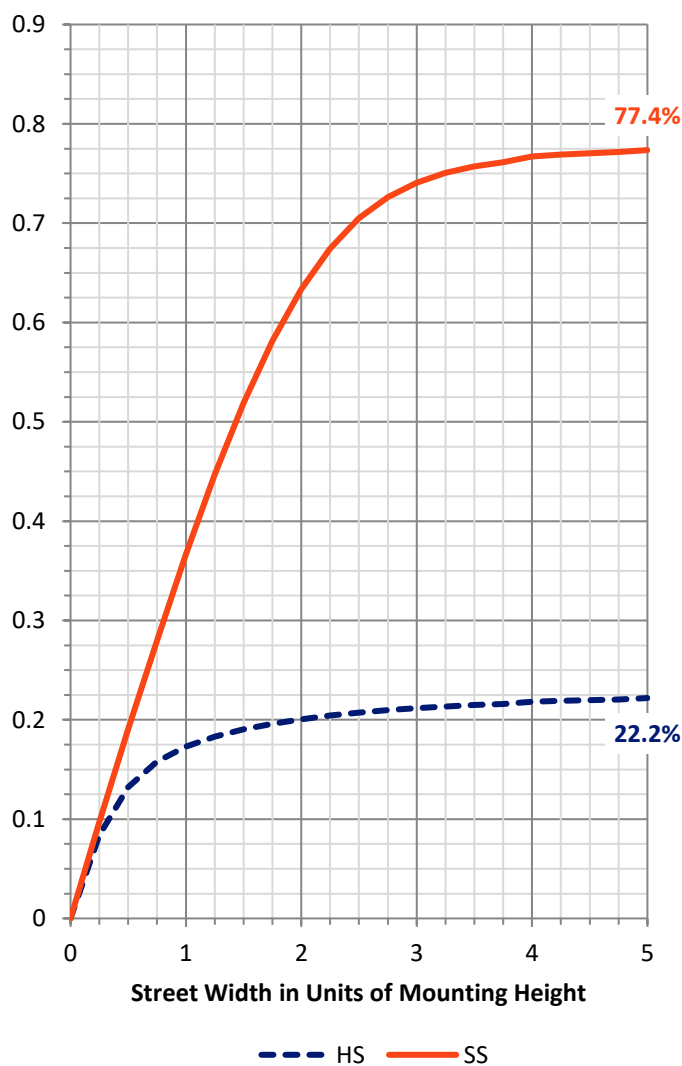
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	498.7	0.0	498.7
	% Fixture	22.6	0.0	22.6
<b>Street Side</b>	Lumens	1710.2	0.0	1710.2
	% Fixture	77.4	0.0	77.4
<b>Total</b>	Lumens	2209.0	0.0	2209.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.2	1.0
10°-20°	77.6	3.5
20°-30°	131.4	5.9
30°-40°	190.0	8.6
40°-50°	273.9	12.4
50°-60°	449.3	20.3
60°-70°	643.7	29.1
70°-80°	382.6	17.3
80°-90°	37.5	1.7
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°	2209.0	100.0
0°-180°	2209.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P437094

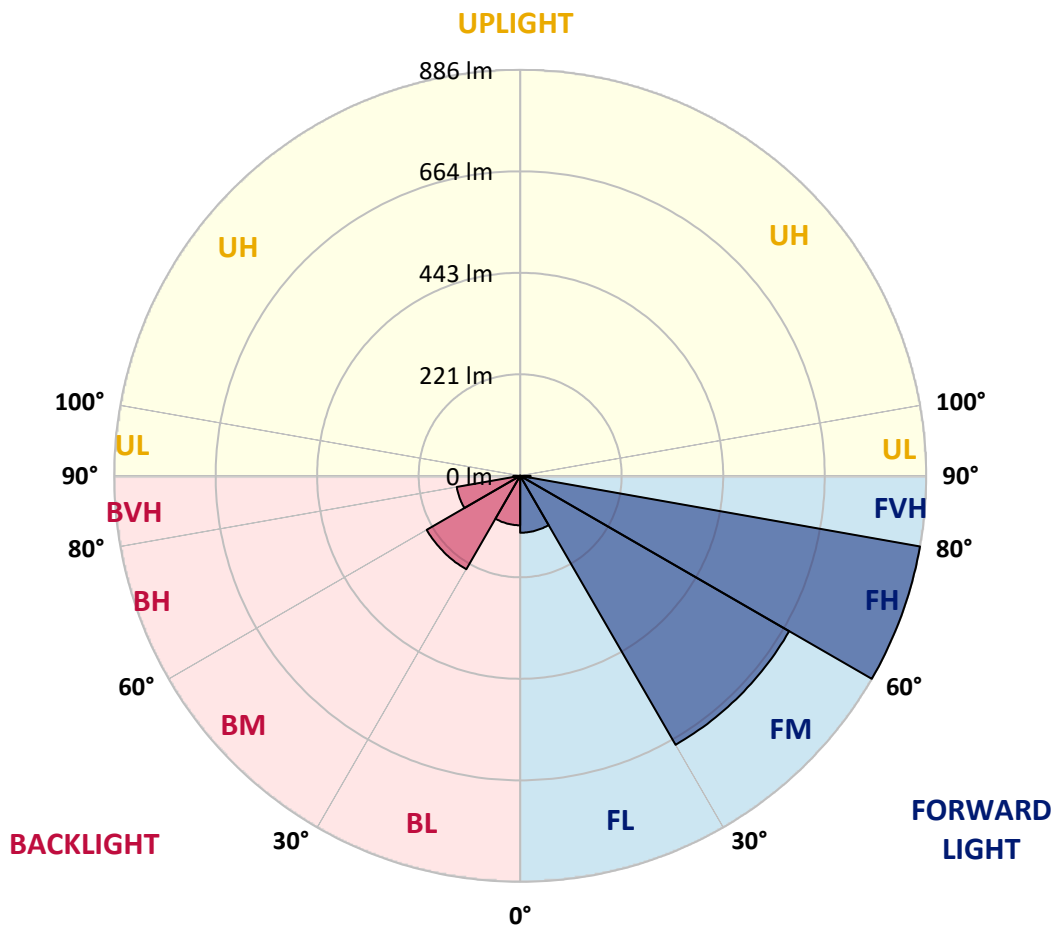
CATALOG NUMBER: ISC-SA1A-830-U-T4W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	124.2	5.6			
FM (30°-60°)	677.7	30.7			
FH (60°-80°)	885.7	40.1			G1/1800
FVH (80°-90°)	22.6	1.0			G1/100
BL (0°-30°)	107.9	4.9	B0/110		
BM (30°-60°)	235.4	10.7	B1/1000		
BH (60°-80°)	140.5	6.4	B1/500		G1/500
BVH (80°-90°)	14.9	0.7			G1/100
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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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9
2.5°	236.0	236.0	235.2	234.4	232.8	231.2	230.4	228.0	228.0	227.3	225.7
5°	253.5	251.9	251.1	247.9	245.5	241.6	240.8	235.2	232.0	229.6	228.0
7.5°	271.8	272.5	269.4	265.4	259.8	254.3	254.3	247.9	242.4	236.8	232.0
10°	289.2	289.2	285.3	280.5	274.9	267.8	266.2	259.0	252.7	245.5	240.0
12.5°	302.7	301.9	297.2	292.4	285.3	279.7	278.1	269.4	263.8	255.1	247.1
15°	312.3	312.3	307.5	300.4	293.2	287.6	287.6	281.3	273.3	264.6	255.1
17.5°	317.8	317.0	313.1	305.1	298.8	294.0	293.2	288.4	283.7	274.9	263.0
20°	317.8	316.2	313.1	306.7	301.2	298.0	298.8	294.8	291.6	281.3	271.8
22.5°	317.0	316.2	310.7	305.9	304.3	303.5	302.7	301.2	295.6	287.6	279.7
25°	324.2	323.4	317.0	310.7	307.5	307.5	309.1	305.9	302.7	294.8	287.6
27.5°	344.1	340.9	332.1	320.2	315.5	314.7	315.5	311.5	309.1	303.5	297.2
30°	377.4	375.8	362.3	340.1	327.4	321.0	320.2	319.4	316.2	312.3	306.7
32.5°	421.1	419.5	398.9	370.3	343.3	329.0	329.8	325.8	325.8	320.2	315.5
35°	475.2	472.0	451.3	410.8	367.1	343.3	341.7	336.1	336.9	327.4	322.6
37.5°	522.8	519.7	499.8	452.1	397.3	366.3	363.9	350.4	341.7	329.8	330.6
40°	563.4	564.2	549.9	502.2	436.2	391.7	387.8	361.5	351.2	340.9	345.6
42.5°	604.7	607.1	597.5	546.7	476.0	419.5	418.0	380.6	371.9	363.9	375.0
45°	645.2	650.0	642.0	594.4	520.5	461.7	455.3	411.6	406.0	401.3	434.6
47.5°	681.0	682.6	681.8	644.4	569.7	509.3	500.6	452.1	459.3	472.0	527.6
50°	725.5	727.8	715.1	694.5	636.5	563.4	555.4	503.0	532.4	573.7	657.9
52.5°	791.4	794.6	758.8	746.1	719.1	628.5	616.6	577.7	641.2	703.2	803.3
55°	829.6	824.8	808.9	810.5	795.4	706.4	696.1	669.0	759.6	833.5	967.8
57.5°	854.2	851.8	861.3	882.8	882.8	806.5	802.5	790.6	886.8	975.8	1098.1
60°	893.9	898.7	920.9	963.8	986.9	937.6	935.2	937.6	1029.8	1075.1	1191.1
62.5°	918.6	928.9	985.3	1059.2	1107.7	1113.2	1098.1	1096.5	1141.0	1157.7	1252.3
65°	874.9	891.5	983.7	1103.7	1252.3	1342.1	1330.9	1234.8	1233.2	1232.4	1240.4
67.5°	759.6	772.3	905.8	1083.8	1330.2	1517.7	1511.3	1358.0	1320.6	1238.8	1129.1
70°	544.3	561.8	692.1	928.1	1280.1	1587.6	1590.0	1423.1	1309.5	1141.8	905.0
72.5°	336.9	337.7	421.9	661.1	1083.8	1485.1	1494.6	1358.8	1178.4	951.1	639.6
75°	104.1	112.8	178.8	346.4	733.4	1207.8	1237.2	1129.1	943.2	657.9	350.4
77.5°	51.6	53.2	64.4	127.1	352.8	781.9	804.1	754.1	595.9	318.6	147.0
80°	29.4	31.0	39.7	56.4	135.1	388.6	406.8	397.3	241.6	115.2	62.8
82.5°	14.3	15.1	19.9	28.6	57.2	116.0	130.3	143.0	92.2	61.2	34.2
85°	4.0	4.0	5.6	9.5	15.1	23.8	23.8	26.2	32.6	31.0	16.7
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	1.6	0.8	1.6	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P437094  
 CATALOG NUMBER: ISC-SA1A-830-U-T4W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9
2.5°	225.7	225.7	224.1	224.9	224.9	225.7	225.7	226.5	227.3	228.0	228.0
5°	227.3	226.5	225.7	226.5	227.3	228.8	231.2	233.6	235.2	237.6	236.8
7.5°	232.0	229.6	230.4	230.4	233.6	236.8	241.6	244.7	247.9	249.5	249.5
10°	237.6	236.0	235.2	238.4	241.6	247.9	251.9	256.7	259.0	263.0	261.4
12.5°	245.5	241.6	242.4	246.3	252.7	257.4	260.6	264.6	267.0	270.2	269.4
15°	251.9	249.5	250.3	256.7	263.0	266.2	267.8	269.4	270.2	272.5	273.3
17.5°	259.8	259.0	259.8	265.4	269.4	270.2	269.4	267.8	267.0	269.4	268.6
20°	268.6	267.8	268.6	272.5	271.0	267.8	264.6	262.2	259.8	261.4	262.2
22.5°	275.7	276.5	277.3	275.7	269.4	261.4	255.9	251.9	250.3	251.9	253.5
25°	284.5	285.3	286.1	278.1	263.0	250.3	242.4	240.0	240.8	243.1	243.9
27.5°	295.6	298.0	295.6	277.3	254.3	236.0	229.6	228.8	229.6	232.0	234.4
30°	307.5	310.7	302.7	273.3	242.4	221.7	216.1	216.1	218.5	220.1	222.5
32.5°	317.8	324.2	309.1	266.2	225.7	208.2	204.2	202.6	202.6	204.2	205.0
35°	330.6	338.5	313.1	253.5	209.8	197.1	193.9	189.1	185.1	185.9	185.1
37.5°	343.3	355.2	311.5	233.6	192.3	184.3	181.2	174.0	167.7	163.7	165.3
40°	367.1	381.4	308.3	208.2	176.4	173.2	167.7	159.7	151.8	144.6	143.8
42.5°	409.2	410.0	301.2	185.1	161.3	159.7	154.9	147.8	138.3	128.7	128.7
45°	465.6	451.3	291.6	163.7	147.0	148.6	144.6	137.5	126.3	117.6	117.6
47.5°	550.7	500.6	273.3	144.6	135.1	138.3	135.9	128.7	116.8	108.9	108.9
50°	669.8	580.8	255.1	131.1	126.3	129.5	128.7	120.0	108.9	102.5	102.5
52.5°	808.1	685.7	242.4	120.8	116.0	121.6	121.6	113.6	103.3	98.5	97.7
55°	950.3	784.3	229.6	112.0	108.9	113.6	116.0	108.9	99.3	95.4	94.6
57.5°	1051.3	833.5	212.2	104.9	100.9	107.3	110.4	105.7	96.9	93.0	92.2
60°	1102.1	838.3	178.0	97.7	93.8	101.7	107.3	103.3	96.9	95.4	95.4
62.5°	1114.0	818.4	142.2	91.4	89.0	98.5	108.1	106.5	101.7	103.3	104.1
65°	1063.2	752.5	116.0	86.6	85.8	97.7	112.8	112.0	102.5	106.5	107.3
67.5°	941.6	638.1	98.5	81.8	81.0	99.3	121.6	112.0	96.9	100.9	99.3
70°	739.8	505.4	85.0	77.1	77.1	98.5	126.3	110.4	90.6	92.2	87.4
72.5°	486.3	331.3	75.5	72.3	69.9	89.8	123.2	107.3	87.4	82.6	77.1
75°	246.3	164.5	67.5	68.3	61.2	76.3	119.2	106.5	86.6	78.7	76.3
77.5°	101.7	77.1	60.4	62.0	51.6	65.2	112.0	98.5	77.9	69.9	67.5
80°	53.2	47.7	50.9	51.6	42.1	51.6	89.0	85.0	69.9	64.4	61.2
82.5°	31.0	30.2	38.9	39.7	29.4	42.1	78.7	73.9	58.8	52.4	50.9
85°	14.3	16.7	26.2	23.8	18.3	27.8	47.7	36.6	26.2	23.0	22.2
87.5°	1.6	2.4	5.6	5.6	4.0	2.4	0.8	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

REPORT NUMBER: SP1-2408-195-9

**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

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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)