

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: SURE-LITES

Report Number: E430-18

Luminaire Tested: **029-84**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: E430-18  
Test Lab:  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SURE-LITES  
Catalog Number: 029-84  
Description: SURE-LITES EMERGENCY  
EFFICIENCY 87.1  
Light Source: 132 LUMENS Incandescent (Low Voltage)  
ANSI# 908  
Ballast/Driver: -

**Summary**

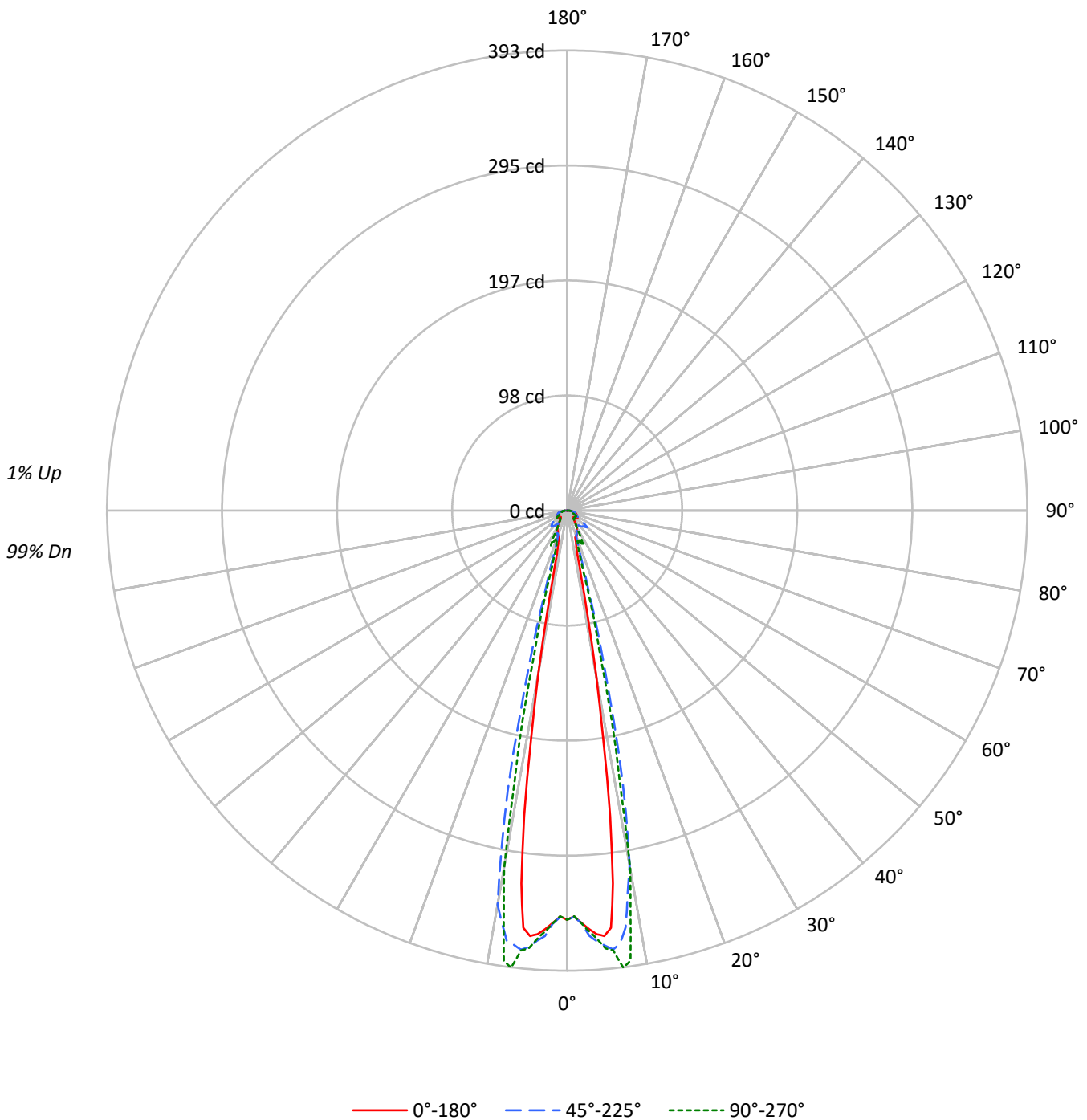
Lumens per Lamp: 132 (1 lamp)  
Luminaire Lumens: 114.8 lumens  
Efficiency: 87.0%  
Efficacy: 11.5 lumens/watt  
Spacing Criteria (0/90/45): 0.33 / 0.42 / 0.37  
Luminous Opening: (L: 0.38 ' x W: -0.38 ' x H: 0 '  
CIE Type: Direct

Input Watts (W): 10  
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: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20			
RC	80				70				50				30				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	104	104	104	104	101	101	101	101	96	96	96		92	92	92		88	88	88	86
1	96	92	89	86	93	90	87	85	86	84	82		83	81	79		80	78	77	75
2	89	84	79	74	87	82	77	74	79	75	72		76	73	70		73	71	68	67
3	84	77	71	66	82	75	70	66	73	68	65		70	67	63		68	65	62	61
4	79	71	65	61	77	70	64	60	68	63	59		66	62	58		64	61	58	56
5	75	67	61	56	74	66	60	56	64	59	55		62	58	55		61	57	54	53
6	72	63	57	53	70	62	56	52	61	56	52		59	55	52		58	54	51	50
7	69	60	54	50	67	59	54	50	58	53	49		57	52	49		56	52	49	47
8	66	57	51	48	65	57	51	47	55	51	47		54	50	47		54	50	47	45
9	64	55	49	46	63	54	49	46	53	49	45		53	48	45		52	48	45	44
10	61	53	48	44	60	52	47	44	52	47	44		51	47	44		50	46	44	42

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	32.8	28.5	24.8	0°	350	350	350	350	350	
10°-20°	21.8	19.0	16.5	5°	365	373	375	374	365	28
20°-30°	9.7	8.5	7.4	15°	29	70	49	80	29	11
30°-40°	8.4	7.3	6.4	25°	19	20	33	19	19	9
40°-50°	9.3	8.1	7.0	35°	11	14	10	13	11	7
50°-60°	10.7	9.3	8.1	45°	8	19	9	19	8	6
60°-70°	9.7	8.4	7.3	55°	11	14	11	12	11	9
70°-80°	7.5	6.6	5.7	65°	9	8	5	9	9	9
80°-90°	4.1	3.6	3.1	75°	7	7	5	8	7	7
90°-100°	1.0	0.9	0.8	85°	3	3	3	3	3	3
100°-110°	0.0	0.0	0.0	90°	1	2	1	2	1	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	64.3	56.0	48.7	165°	0	0	0	0	0	0
0°-40°	72.7	63.4	55.1	175°	0	0	0	0	0	0
0°-60°	92.7	80.8	70.2	180°	0	0	0	0	0	0
0°-90°	114.0	99.3	86.4							
90°-120°	1.0	0.9	0.8							
90°-150°	1.0	0.9	0.8							
90°-180°	1.0	0.9	0.8							
0°-180°	114.8	100.0	87.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5
1°	346.7	346.8	347.2	346.6	346.6	347.1	347.1	346.9	347.2	346.7	346.7
2°	352.5	351.5	351.6	352.9	353.9	352.7	353.2	353.9	353.4	354.2	353.9
3°	357.9	357.0	360.4	360.8	362.0	363.7	363.9	364.0	361.4	360.8	358.6
4°	362.7	364.4	367.9	371.2	372.5	368.9	368.2	367.3	368.3	367.1	367.9
5°	364.7	365.6	371.3	375.8	374.2	373.1	374.3	375.1	378.9	378.8	375.3
6°	358.4	361.6	373.0	377.6	373.9	376.9	377.1	378.0	380.4	380.1	380.0
7°	320.7	328.6	338.4	353.8	366.7	372.1	373.7	375.5	385.5	391.6	391.4
8°	263.9	264.7	282.7	298.1	329.7	359.3	370.9	384.5	390.0	390.2	384.5
9°	197.7	207.6	212.9	242.0	279.4	330.8	356.4	380.2	383.1	361.6	352.9
10°	142.1	136.6	154.2	180.7	225.5	307.4	342.1	356.7	352.3	333.8	308.9
11°	89.9	93.8	99.0	126.5	179.7	262.7	294.3	316.8	304.7	281.8	254.5
12°	59.0	57.9	64.1	85.0	133.1	212.9	244.7	257.3	246.2	207.7	175.7
13°	39.5	41.5	41.1	55.4	94.8	155.9	179.1	199.9	181.4	143.3	128.0
14°	32.7	33.6	33.1	41.7	61.6	113.0	128.6	131.4	120.2	103.9	91.5
15°	29.2	29.6	29.3	34.6	40.1	69.8	80.0	85.8	76.7	60.2	51.6
16°	27.0	26.8	27.0	29.5	31.5	47.1	54.4	57.1	46.3	38.1	36.6
17°	24.0	24.7	25.1	25.5	26.3	35.1	37.0	38.0	34.1	31.1	30.0
18°	23.0	23.0	23.7	23.5	23.8	28.0	28.4	29.9	27.5	27.5	29.6
19°	23.0	22.5	23.2	22.3	23.0	24.6	25.2	24.9	25.4	26.2	27.4
20°	23.2	21.8	22.4	21.1	23.6	22.3	22.3	24.0	25.2	25.1	27.1
21°	22.8	21.4	21.6	19.6	22.4	22.0	21.7	23.6	23.4	24.6	26.9
22°	22.1	20.9	20.1	18.8	21.5	21.9	21.2	22.6	23.9	25.7	27.1
23°	20.6	20.5	18.7	18.5	20.8	20.7	21.7	21.3	24.2	26.4	27.1
24°	19.4	20.2	17.6	18.7	19.1	20.1	20.3	21.6	25.0	28.0	30.4
25°	19.5	19.8	16.9	19.5	18.6	19.5	19.1	21.4	26.7	29.6	31.5
30°	16.3	17.1	18.3	18.8	17.6	16.0	17.7	18.0	16.4	14.9	15.6
35°	11.0	11.3	14.1	14.3	14.6	14.2	13.1	12.7	11.1	9.5	9.8
40°	8.4	9.1	12.0	12.0	16.7	17.7	17.1	13.9	10.4	8.6	8.4
45°	7.7	8.0	9.1	11.3	14.3	19.1	19.0	15.1	11.2	8.9	8.8
50°	9.3	9.2	9.5	10.2	13.7	22.3	16.0	13.6	13.9	10.0	8.4
55°	11.0	11.0	11.1	10.2	14.3	14.0	12.1	13.0	14.5	12.2	10.6
60°	8.9	8.6	10.1	9.8	11.2	9.8	10.3	12.7	17.8	12.8	8.7
65°	9.1	8.2	8.4	8.0	8.6	7.9	9.4	11.9	16.4	10.7	6.1
75°	7.1	6.7	6.2	7.8	6.8	7.4	7.7	7.6	8.4	11.1	6.2
85°	2.6	2.2	2.5	3.7	3.8	3.4	3.2	3.0	5.6	6.3	3.1
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	140°	145°	155°	165°	175°
0°	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5
1°	346.5	346.7	346.7	347.2	346.9	347.1	347.1	346.6	346.6	347.2	346.8
2°	353.0	353.9	354.2	353.4	353.9	353.2	352.7	353.9	352.9	351.6	351.5
3°	359.9	358.6	360.8	361.4	364.0	363.9	363.7	362.0	360.8	360.4	357.0
4°	366.6	367.9	367.1	368.3	367.3	368.2	368.9	372.5	371.2	367.9	364.4
5°	375.4	375.3	378.8	378.9	375.1	374.3	373.1	374.2	375.8	371.3	365.6
6°	377.7	380.0	380.1	380.4	378.0	377.1	376.9	373.9	377.6	373.0	361.6
7°	393.3	391.4	391.6	385.5	375.5	373.7	372.1	366.7	353.8	338.4	328.6
8°	388.3	384.5	390.2	390.0	384.5	370.9	359.3	329.7	298.1	282.7	264.7
9°	345.9	352.9	361.6	383.1	380.2	356.4	330.8	279.4	242.0	212.9	207.6
10°	310.7	308.9	333.8	352.3	356.7	342.1	307.4	225.5	180.7	154.2	136.6
11°	235.4	254.5	281.8	304.7	316.8	294.3	262.7	179.7	126.5	99.0	93.8
12°	183.0	175.7	207.7	246.2	257.3	244.7	212.9	133.1	85.0	64.1	57.9
13°	122.5	128.0	143.3	181.4	199.9	179.1	155.9	94.8	55.4	41.1	41.5
14°	93.1	91.5	103.9	120.2	131.4	128.6	113.0	61.6	41.7	33.1	33.6
15°	49.4	51.6	60.2	76.7	85.8	80.0	69.8	40.1	34.6	29.3	29.6
16°	38.2	36.6	38.1	46.3	57.1	54.4	47.1	31.5	29.5	27.0	26.8
17°	30.4	30.0	31.1	34.1	38.0	37.0	35.1	26.3	25.5	25.1	24.7
18°	30.3	29.6	27.5	27.5	29.9	28.4	28.0	23.8	23.5	23.7	23.0
19°	27.4	27.4	26.2	25.4	24.9	25.2	24.6	23.0	22.3	23.2	22.5
20°	28.7	27.1	25.1	25.2	24.0	22.3	22.3	23.6	21.1	22.4	21.8
21°	27.4	26.9	24.6	23.4	23.6	21.7	22.0	22.4	19.6	21.6	21.4
22°	26.3	27.1	25.7	23.9	22.6	21.2	21.9	21.5	18.8	20.1	20.9
23°	28.3	27.1	26.4	24.2	21.3	21.7	20.7	20.8	18.5	18.7	20.5
24°	31.2	30.4	28.0	25.0	21.6	20.3	20.1	19.1	18.7	17.6	20.2
25°	32.9	31.5	29.6	26.7	21.4	19.1	19.5	18.6	19.5	16.9	19.8
30°	16.1	15.6	14.9	16.4	18.0	17.7	16.0	17.6	18.8	18.3	17.1
35°	10.4	9.8	9.5	11.1	12.7	13.1	14.2	14.6	14.3	14.1	11.3
40°	8.9	8.4	8.6	10.4	13.9	17.1	17.7	16.7	12.0	12.0	9.1
45°	8.9	8.8	8.9	11.2	15.1	19.0	19.1	14.3	11.3	9.1	8.0
50°	8.7	8.4	10.0	13.9	13.6	16.0	22.3	13.7	10.2	9.5	9.2
55°	10.6	10.6	12.2	14.5	13.0	12.1	14.0	14.3	10.2	11.1	11.0
60°	8.2	8.7	12.8	17.8	12.7	10.3	9.8	11.2	9.8	10.1	8.6
65°	5.4	6.1	10.7	16.4	11.9	9.4	7.9	8.6	8.0	8.4	8.2
75°	5.3	6.2	11.1	8.4	7.6	7.7	7.4	6.8	7.8	6.2	6.7
85°	2.7	3.1	6.3	5.6	3.0	3.2	3.4	3.8	3.7	2.5	2.2
95°	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	180°
0°	349.5
1°	346.7
2°	352.5
3°	357.9
4°	362.7
5°	364.7
6°	358.4
7°	320.7
8°	263.9
9°	197.7
10°	142.1
11°	89.9
12°	59.0
13°	39.5
14°	32.7
15°	29.2
16°	27.0
17°	24.0
18°	23.0
19°	23.0
20°	23.2
21°	22.8
22°	22.1
23°	20.6
24°	19.4
25°	19.5
30°	16.3
35°	11.0
40°	8.4
45°	7.7
50°	9.3
55°	11.0
60°	8.9
65°	9.1
75°	7.1
85°	2.6
95°	0.0
105°	0.0
115°	0.0
180°	0.0

(END OF REPORT)