

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: E430-17

Luminaire Tested: **029-3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: E430-17
Test Lab:
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SURE-LITES
Catalog Number: 029-3
Description: SURE-LITES EMERGENCY
EFFICIENCY 89.3
Light Source: 108 LUMENS Incandescent (Low Voltage)
ANSI#7613
Ballast/Driver: -

Summary

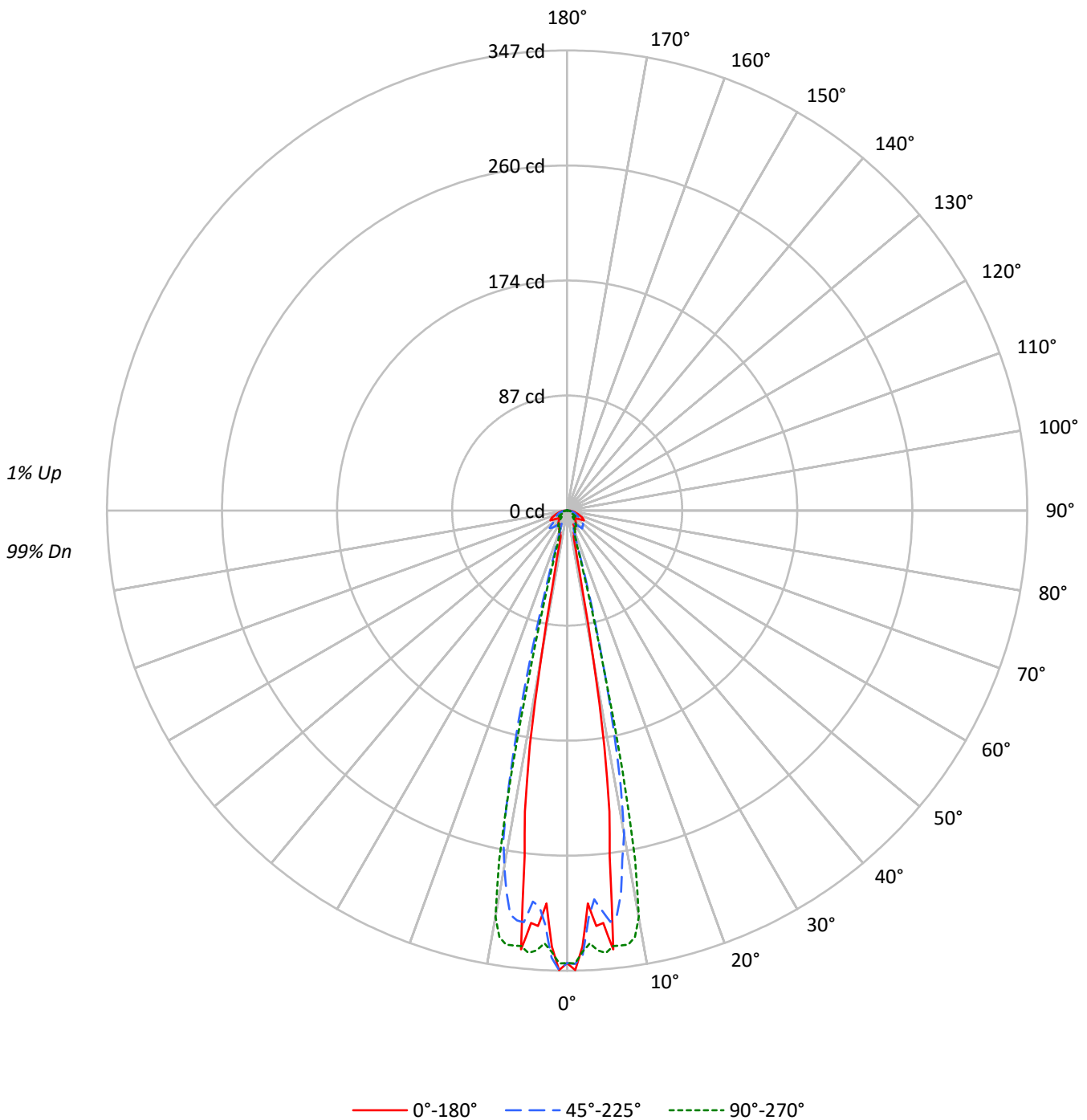
Lumens per Lamp: 108 (1 lamp)
Luminaire Lumens: 96.6 lumens
Efficiency: 89.5%
Efficacy: 9.7 lumens/watt
Spacing Criteria (0/90/45): 0.32 / 0.43 / 0.36
Luminous Opening: (L: 0.38 ' x W: -0.38 ' x H: 0 '
CIE Type: Direct

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	106	106	106	106	104	104	104	104	99	99	99		94	94	94		90	90	90	88
1	99	95	92	89	96	93	90	87	89	86	84		85	83	81		82	80	79	77
2	92	86	81	76	90	84	79	75	81	77	74		78	75	72		75	72	70	68
3	86	79	73	68	84	77	72	67	74	70	66		72	68	65		70	66	64	62
4	81	73	67	62	79	72	66	61	69	64	60		67	63	60		65	62	59	57
5	77	68	62	57	75	67	61	57	65	60	56		63	59	56		62	58	55	53
6	73	64	58	54	72	63	57	53	62	57	53		60	56	52		59	55	52	50
7	70	61	55	51	69	60	54	50	59	54	50		58	53	50		56	52	49	48
8	67	58	52	48	66	57	52	48	56	51	48		55	51	48		54	50	47	46
9	65	56	50	46	64	55	50	46	54	49	46		53	49	46		52	48	46	44
10	63	54	48	45	62	53	48	45	52	48	44		52	47	44		51	47	44	43

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°	27.6	28.6	25.6	0°	341	341	341	341	341	
10°-20°	18.2	18.8	16.8	5°	312	303	335	296	312	24
20°-30°	5.9	6.1	5.4	15°	19	56	45	70	19	8
30°-40°	7.7	8.0	7.1	25°	11	10	14	9	11	6
40°-50°	8.7	9.1	8.1	35°	12	13	10	14	12	7
50°-60°	9.8	10.1	9.0	45°	7	16	7	19	7	6
60°-70°	8.5	8.8	7.9	55°	11	12	8	10	11	10
70°-80°	6.0	6.2	5.6	65°	12	7	4	8	12	12
80°-90°	3.1	3.2	2.9	75°	7	5	3	5	7	8
90°-100°	0.9	0.9	0.8	85°	3	2	1	2	3	3
100°-110°	0.2	0.2	0.2	90°	2	1	1	1	2	0
110°-120°	0.2	0.2	0.2	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°	51.7	53.5	47.8	165°	0	0	0	0	0	0
0°-40°	59.4	61.5	55.0	175°	0	0	0	0	0	0
0°-60°	77.9	80.6	72.1	180°	0	0	0	0	0	0
0°-90°	95.5	98.9	88.4							
90°-120°	1.2	1.3	1.1							
90°-150°	1.2	1.3	1.1							
90°-180°	1.0	1.0	0.9							
0°-180°	96.6	100.0	89.5							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2
1°	346.6	349.1	347.5	342.8	343.7	342.0	346.6	342.1	343.4	342.6	341.7
2°	329.0	333.0	324.7	332.9	331.7	335.2	337.2	333.9	336.5	336.3	334.5
3°	296.6	295.2	295.8	297.3	305.9	307.4	313.1	317.4	324.9	329.5	328.7
4°	314.0	311.9	311.4	304.7	296.2	293.9	299.5	302.3	310.1	321.0	331.0
5°	312.2	312.4	314.3	315.8	309.9	303.1	296.0	295.8	306.1	319.3	333.4
6°	332.8	321.6	311.2	317.5	312.8	311.8	312.1	306.9	304.2	314.8	327.3
7°	262.6	261.6	256.8	267.8	292.1	307.3	311.4	312.2	302.0	312.7	325.5
8°	229.1	234.1	230.5	239.9	262.9	291.7	307.6	314.2	314.3	315.2	323.0
9°	179.6	176.4	187.7	208.0	241.3	266.2	292.1	316.7	318.5	314.8	318.4
10°	114.7	118.5	113.8	139.5	188.9	247.5	272.4	298.8	321.5	305.0	302.1
11°	58.6	58.1	69.5	90.4	141.6	211.8	251.9	276.0	297.6	278.4	272.2
12°	36.3	35.5	37.9	55.1	89.3	168.3	211.4	240.4	236.8	219.4	195.4
13°	25.6	24.7	25.4	31.6	58.2	126.0	164.3	185.4	176.2	142.9	130.9
14°	20.5	21.0	18.7	20.5	36.7	85.8	112.3	120.5	121.2	93.0	75.6
15°	19.3	19.5	17.9	16.8	22.9	55.8	69.8	81.4	75.7	54.4	47.2
16°	18.5	18.4	17.2	15.2	16.8	31.9	44.3	50.5	41.7	33.2	27.2
17°	17.0	17.2	16.6	14.6	14.6	22.5	27.4	31.3	25.9	21.7	21.4
18°	17.1	16.6	15.9	15.2	14.2	17.1	20.8	21.9	18.3	16.4	20.4
19°	18.0	17.4	15.7	15.3	14.7	14.4	16.3	18.0	15.3	15.3	17.6
20°	15.7	16.6	16.1	14.3	15.2	13.3	14.7	15.8	14.9	14.5	16.2
21°	14.2	15.0	16.3	13.9	14.2	12.5	13.6	14.2	14.0	13.6	15.5
22°	14.1	15.4	18.0	15.4	14.5	11.4	12.2	12.3	13.0	12.1	15.5
23°	15.5	14.4	16.5	16.5	15.3	11.5	10.8	11.1	11.1	11.8	14.5
24°	13.3	12.9	14.4	15.2	13.8	10.4	10.0	9.9	9.8	11.2	13.3
25°	11.3	11.1	12.5	13.6	13.2	10.0	9.3	9.3	8.9	9.7	13.2
30°	13.4	13.1	15.3	15.0	14.4	11.9	11.1	9.3	10.3	12.1	13.8
35°	11.5	11.9	12.8	14.2	14.2	13.3	13.6	12.6	12.1	10.6	8.8
40°	9.6	9.9	14.1	12.3	14.7	17.6	16.6	13.7	9.1	8.2	6.3
45°	7.3	8.6	11.4	9.5	14.1	16.4	18.8	13.5	11.3	9.3	6.2
50°	9.4	8.6	10.4	8.5	12.3	15.9	12.4	12.4	12.5	8.4	8.6
55°	11.1	12.1	13.3	9.2	12.9	12.0	10.3	12.2	13.3	10.8	7.2
60°	14.7	10.3	11.0	10.7	11.6	10.3	9.8	11.0	14.5	8.4	4.0
65°	12.5	11.3	12.7	8.9	7.5	7.4	8.3	8.2	8.7	6.9	4.1
75°	6.8	6.8	6.5	7.1	5.9	5.0	5.2	4.0	6.0	7.3	3.8
85°	3.5	3.5	2.4	3.2	2.7	2.5	2.0	2.6	2.2	3.3	2.2
95°	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.2
105°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
115°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
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°	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2	341.2
1°	341.5	341.7	342.6	343.4	342.1	346.6	342.0	343.7	342.8	347.5	349.1
2°	332.9	334.5	336.3	336.5	333.9	337.2	335.2	331.7	332.9	324.7	333.0
3°	326.7	328.7	329.5	324.9	317.4	313.1	307.4	305.9	297.3	295.8	295.2
4°	332.5	331.0	321.0	310.1	302.3	299.5	293.9	296.2	304.7	311.4	311.9
5°	335.0	333.4	319.3	306.1	295.8	296.0	303.1	309.9	315.8	314.3	312.4
6°	330.3	327.3	314.8	304.2	306.9	312.1	311.8	312.8	317.5	311.2	321.6
7°	330.5	325.5	312.7	302.0	312.2	311.4	307.3	292.1	267.8	256.8	261.6
8°	330.6	323.0	315.2	314.3	314.2	307.6	291.7	262.9	239.9	230.5	234.1
9°	325.9	318.4	314.8	318.5	316.7	292.1	266.2	241.3	208.0	187.7	176.4
10°	311.1	302.1	305.0	321.5	298.8	272.4	247.5	188.9	139.5	113.8	118.5
11°	268.2	272.2	278.4	297.6	276.0	251.9	211.8	141.6	90.4	69.5	58.1
12°	200.6	195.4	219.4	236.8	240.4	211.4	168.3	89.3	55.1	37.9	35.5
13°	124.3	130.9	142.9	176.2	185.4	164.3	126.0	58.2	31.6	25.4	24.7
14°	75.6	75.6	93.0	121.2	120.5	112.3	85.8	36.7	20.5	18.7	21.0
15°	44.7	47.2	54.4	75.7	81.4	69.8	55.8	22.9	16.8	17.9	19.5
16°	27.3	27.2	33.2	41.7	50.5	44.3	31.9	16.8	15.2	17.2	18.4
17°	19.7	21.4	21.7	25.9	31.3	27.4	22.5	14.6	14.6	16.6	17.2
18°	18.1	20.4	16.4	18.3	21.9	20.8	17.1	14.2	15.2	15.9	16.6
19°	17.9	17.6	15.3	15.3	18.0	16.3	14.4	14.7	15.3	15.7	17.4
20°	17.3	16.2	14.5	14.9	15.8	14.7	13.3	15.2	14.3	16.1	16.6
21°	16.9	15.5	13.6	14.0	14.2	13.6	12.5	14.2	13.9	16.3	15.0
22°	15.5	15.5	12.1	13.0	12.3	12.2	11.4	14.5	15.4	18.0	15.4
23°	13.8	14.5	11.8	11.1	11.1	10.8	11.5	15.3	16.5	16.5	14.4
24°	12.7	13.3	11.2	9.8	9.9	10.0	10.4	13.8	15.2	14.4	12.9
25°	13.6	13.2	9.7	8.9	9.3	9.3	10.0	13.2	13.6	12.5	11.1
30°	13.5	13.8	12.1	10.3	9.3	11.1	11.9	14.4	15.0	15.3	13.1
35°	10.3	8.8	10.6	12.1	12.6	13.6	13.3	14.2	14.2	12.8	11.9
40°	6.4	6.3	8.2	9.1	13.7	16.6	17.6	14.7	12.3	14.1	9.9
45°	6.7	6.2	9.3	11.3	13.5	18.8	16.4	14.1	9.5	11.4	8.6
50°	8.7	8.6	8.4	12.5	12.4	12.4	15.9	12.3	8.5	10.4	8.6
55°	7.5	7.2	10.8	13.3	12.2	10.3	12.0	12.9	9.2	13.3	12.1
60°	3.5	4.0	8.4	14.5	11.0	9.8	10.3	11.6	10.7	11.0	10.3
65°	3.6	4.1	6.9	8.7	8.2	8.3	7.4	7.5	8.9	12.7	11.3
75°	3.1	3.8	7.3	6.0	4.0	5.2	5.0	5.9	7.1	6.5	6.8
85°	1.3	2.2	3.3	2.2	2.6	2.0	2.5	2.7	3.2	2.4	3.5
95°	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.2
105°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
115°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
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°	341.2
1°	346.6
2°	329.0
3°	296.6
4°	314.0
5°	312.2
6°	332.8
7°	262.6
8°	229.1
9°	179.6
10°	114.7
11°	58.6
12°	36.3
13°	25.6
14°	20.5
15°	19.3
16°	18.5
17°	17.0
18°	17.1
19°	18.0
20°	15.7
21°	14.2
22°	14.1
23°	15.5
24°	13.3
25°	11.3
30°	13.4
35°	11.5
40°	9.6
45°	7.3
50°	9.4
55°	11.1
60°	14.7
65°	12.5
75°	6.8
85°	3.5
95°	0.1
105°	0.1
115°	0.1
180°	0.0

(END OF REPORT)