

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: P21502

Luminaire Tested: **AEL2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P21502  
Test Lab: INNOVATION CENTER P2  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SURE-LITES  
Catalog Number: AEL2  
Description: SURE-LITES LED ARCHITECTURAL EMERGENCY LIGHT WITH SPECULAR REFLECTOR, CLEAR PRISMATIC LENS AND LOW LIGHT MODE. BATTERY PACK UNPLUGGED ON THIS TEST. ---ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING A 500 WATT, NIST TRACEABLE, AND OMNI-DIRECTIONAL LAB LUMEN STANDARD IN THE GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET----  
Light Source: (1) 3500K SMT LED  
3500K LED  
Ballast/Driver: (1) DIGITAL ELECTRONIC DRIVER  
051-1524

**Summary**

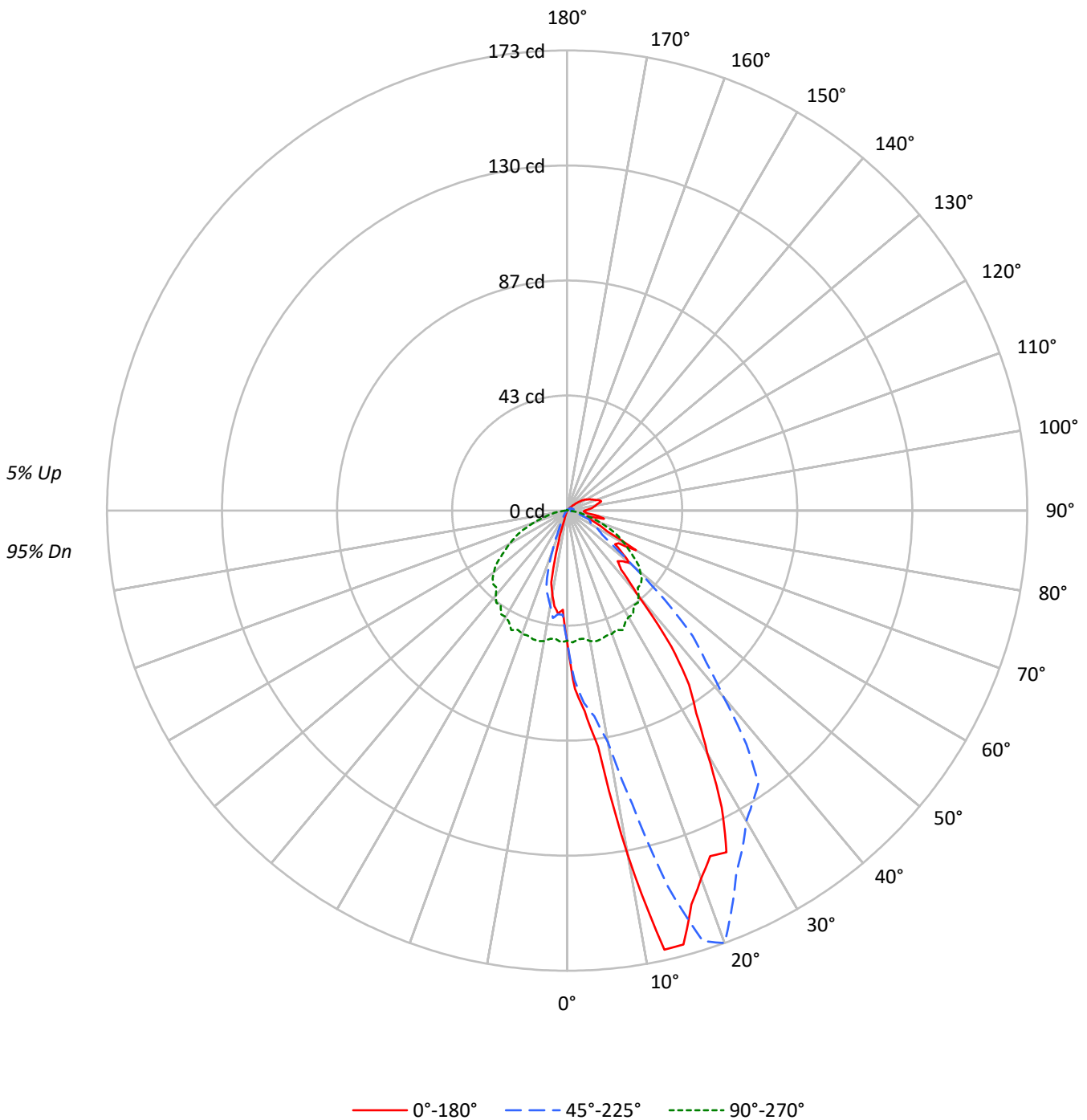
Lumens per Lamp: N/A  
Luminaire Lumens: 157.8 lumens  
Efficiency: N/A  
Efficacy: 49.3 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.38 / 1.41  
Luminous Opening: Rectangular (W 0.67' x L: 0.27' x H: 0')  
CIE Type: Direct

Input Watts (W): 3.2  
Input Voltage (V): NR  
Input Current (Ain): 0.0574  
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	118	118	118	118	115	115	115	115	108	108	108	103	103	103	98	98	98	95
1	110	106	102	99	106	103	100	97	98	95	93	93	91	89	89	87	86	84
2	101	94	89	84	98	92	87	83	88	84	80	84	81	78	81	78	75	73
3	94	85	78	72	91	83	77	71	79	74	70	76	72	68	73	69	66	64
4	87	76	69	63	84	75	68	62	72	66	61	69	64	60	67	62	59	57
5	81	69	61	56	78	68	61	55	65	59	54	63	58	53	61	56	52	50
6	75	63	55	50	73	62	55	49	60	53	48	58	52	48	56	51	47	45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	51	46	42	40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37
9	61	49	42	36	60	48	41	36	47	40	36	45	40	35	44	39	35	33
10	58	45	38	33	56	45	38	33	43	37	33	42	37	32	41	36	32	30

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

	0°	90°	180°
0°	2915	2915	2915
5°	4530	2902	2322
10°	7985	3015	1937
15°	10424	3086	864
20°	9339	3128	70
25°	9321	3263	33
30°	7256	3180	21
35°	5815	3166	7
40°	3152	3245	0
45°	2268	3305	0
50°	2838	3330	0
55°	2287	3180	0
60°	3553	2981	0
65°	1975	2793	0
70°	1464	2318	0
75°	2119	1866	0
80°	4017	1614	0
85°	4651	889	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.5	3.5
10°-20°	21.4	13.6
20°-30°	32.4	20.6
30°-40°	34.2	21.7
40°-50°	24.9	15.8
50°-60°	16.8	10.6
60°-70°	9.3	5.9
70°-80°	3.9	2.5
80°-90°	1.8	1.1
90°-100°	1.7	1.1
100°-110°	2.3	1.5
110°-120°	1.9	1.2
120°-130°	1.2	0.7
130°-140°	0.4	0.2
140°-150°	0.1	0.1
150°-160°	0.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	59.4	37.6
0°-40°	93.6	59.3
0°-60°	135.3	85.7
0°-90°	150.2	95.2
90°-120°	5.8	3.7
90°-150°	7.5	4.7
90°-180°	8.0	5.1
0°-180°	157.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	49	49	49	49	49	
5°	76	73	48	39	39	9
15°	169	146	50	30	14	45
25°	142	150	50	6	0	61
35°	80	125	44	2	0	48
45°	27	67	39	1	0	23
55°	22	16	31	0	0	23
65°	14	10	20	0	0	15
75°	9	4	8	0	0	11
85°	7	1	1	0	0	6
90°	7	1	0	0	0	4
95°	9	2	0	0	0	8
105°	13	2	0	0	0	13
115°	10	2	0	0	0	10
125°	6	2	0	0	0	6
135°	2	1	0	0	0	1
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9
2.5°	67.1	66.9	63.7	57.3	49.6	43.0	39.2	37.8	37.3
5°	75.7	77.0	72.6	64.0	48.5	38.1	39.1	40.2	38.8
7.5°	89.5	85.9	77.9	69.8	48.6	37.8	40.7	38.3	36.3
10°	131.9	118.7	88.4	74.6	49.8	40.6	36.4	33.3	32.0
12.5°	169.1	160.4	113.0	76.5	50.3	41.3	33.1	28.6	27.5
15°	168.9	174.8	146.4	82.3	50.0	38.1	30.5	19.6	14.0
17.5°	155.3	163.8	169.7	85.6	49.3	35.5	23.9	7.8	3.5
20°	147.2	151.3	173.0	96.6	49.3	32.6	16.2	3.1	1.1
22.5°	140.6	145.4	161.8	108.9	48.5	29.5	9.8	1.7	0.7
25°	141.7	140.5	150.4	121.8	49.6	26.4	6.1	1.2	0.5
27.5°	125.8	135.4	142.8	135.8	47.3	22.7	4.1	0.6	0.3
30°	105.4	118.8	134.7	138.6	46.2	19.1	3.0	0.5	0.3
32.5°	90.4	98.3	129.9	139.5	46.2	16.8	2.5	0.3	0.2
35°	79.9	86.0	125.3	131.1	43.5	14.6	1.8	0.2	0.1
37.5°	64.4	77.3	110.7	127.7	43.7	12.8	1.4	0.2	0.1
40°	40.5	61.8	91.4	118.0	41.7	11.0	1.0	0.1	0.0
42.5°	30.0	38.7	77.4	107.2	39.3	9.3	0.7	0.0	0.0
45°	26.9	27.8	66.7	95.5	39.2	7.9	0.6	0.0	0.0
47.5°	28.1	24.1	49.8	91.2	38.0	6.4	0.4	0.0	0.0
50°	30.6	26.7	32.3	85.4	35.9	5.4	0.3	0.0	0.0
52.5°	25.9	28.0	22.1	72.9	33.9	4.3	0.1	0.0	0.0
55°	22.0	22.1	16.4	59.8	30.6	3.8	0.1	0.0	0.0
57.5°	22.9	19.2	14.4	48.5	27.6	3.2	0.1	0.0	0.0
60°	29.8	22.1	12.7	41.3	25.0	2.6	0.1	0.0	0.0
62.5°	17.0	23.4	10.0	31.6	22.3	1.9	0.1	0.0	0.0
65°	14.0	11.8	9.5	20.1	19.8	1.4	0.1	0.0	0.0
67.5°	10.8	9.1	8.8	13.8	16.3	0.9	0.1	0.0	0.0
70°	8.4	7.3	6.6	8.6	13.3	0.7	0.1	0.1	0.0
72.5°	7.8	6.3	5.3	4.9	10.6	0.5	0.1	0.0	0.0
75°	9.2	6.4	3.7	3.0	8.1	0.5	0.1	0.0	0.0
77.5°	14.2	8.8	2.2	1.8	6.2	0.3	0.1	0.0	0.0
80°	11.7	11.2	1.7	1.2	4.7	0.3	0.1	0.1	0.0
82.5°	7.4	5.1	1.4	0.8	2.5	0.2	0.1	0.0	0.0
85°	6.8	4.3	1.4	0.6	1.3	0.2	0.1	0.1	0.0
87.5°	6.2	3.8	1.3	0.4	0.5	0.1	0.1	0.0	0.0
90°	6.7	3.8	1.4	0.4	0.3	0.1	0.1	0.1	0.0
92.5°	7.5	4.2	1.7	0.4	0.2	0.1	0.1	0.0	0.0
95°	9.0	4.9	2.1	0.4	0.2	0.1	0.1	0.0	0.0
97.5°	9.9	6.0	2.3	0.3	0.2	0.1	0.1	0.0	0.0
100°	10.9	7.2	2.5	0.3	0.2	0.1	0.1	0.0	0.0
102.5°	11.7	8.4	2.4	0.3	0.2	0.1	0.1	0.0	0.0
105°	13.3	8.9	2.2	0.2	0.2	0.1	0.1	0.0	0.0
107.5°	12.8	8.6	2.0	0.2	0.1	0.1	0.1	0.0	0.0
110°	11.6	8.1	1.9	0.2	0.1	0.1	0.1	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	10.7	7.9	1.9	0.2	0.1	0.1	0.1	0.1	0.0
115°	9.9	7.8	1.8	0.2	0.1	0.1	0.1	0.0	0.0
117.5°	9.1	7.4	1.8	0.2	0.1	0.1	0.1	0.0	0.0
120°	8.3	6.9	1.7	0.1	0.1	0.1	0.1	0.0	0.0
122.5°	7.6	6.3	1.7	0.2	0.1	0.1	0.1	0.0	0.1
125°	6.3	5.3	1.5	0.1	0.1	0.1	0.1	0.0	0.0
127.5°	5.0	4.1	1.3	0.1	0.1	0.1	0.1	0.0	0.0
130°	3.7	3.0	1.1	0.1	0.1	0.2	0.2	0.1	0.1
132.5°	2.6	2.0	0.8	0.1	0.2	0.2	0.2	0.1	0.1
135°	1.8	1.4	0.6	0.2	0.2	0.2	0.2	0.1	0.1
137.5°	1.0	0.8	0.4	0.1	0.1	0.2	0.2	0.1	0.1
140°	0.4	0.5	0.2	0.1	0.1	0.2	0.2	0.1	0.1
142.5°	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.1
145°	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.1
147.5°	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
150°	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1
152.5°	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1
155°	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1
157.5°	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1
160°	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2
162.5°	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1
165°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
167.5°	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1
170°	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0
172.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
175°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
177.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

(END OF REPORT)