

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: P21504

Luminaire Tested: **AEL2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P21504
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 OUTPUT. 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: (10) SMT LEDS 5000K
SAMSUNG 5000K LED
Ballast/Driver: (1) DIGITAL ELECTRONIC DRIVER
051-1524

Summary

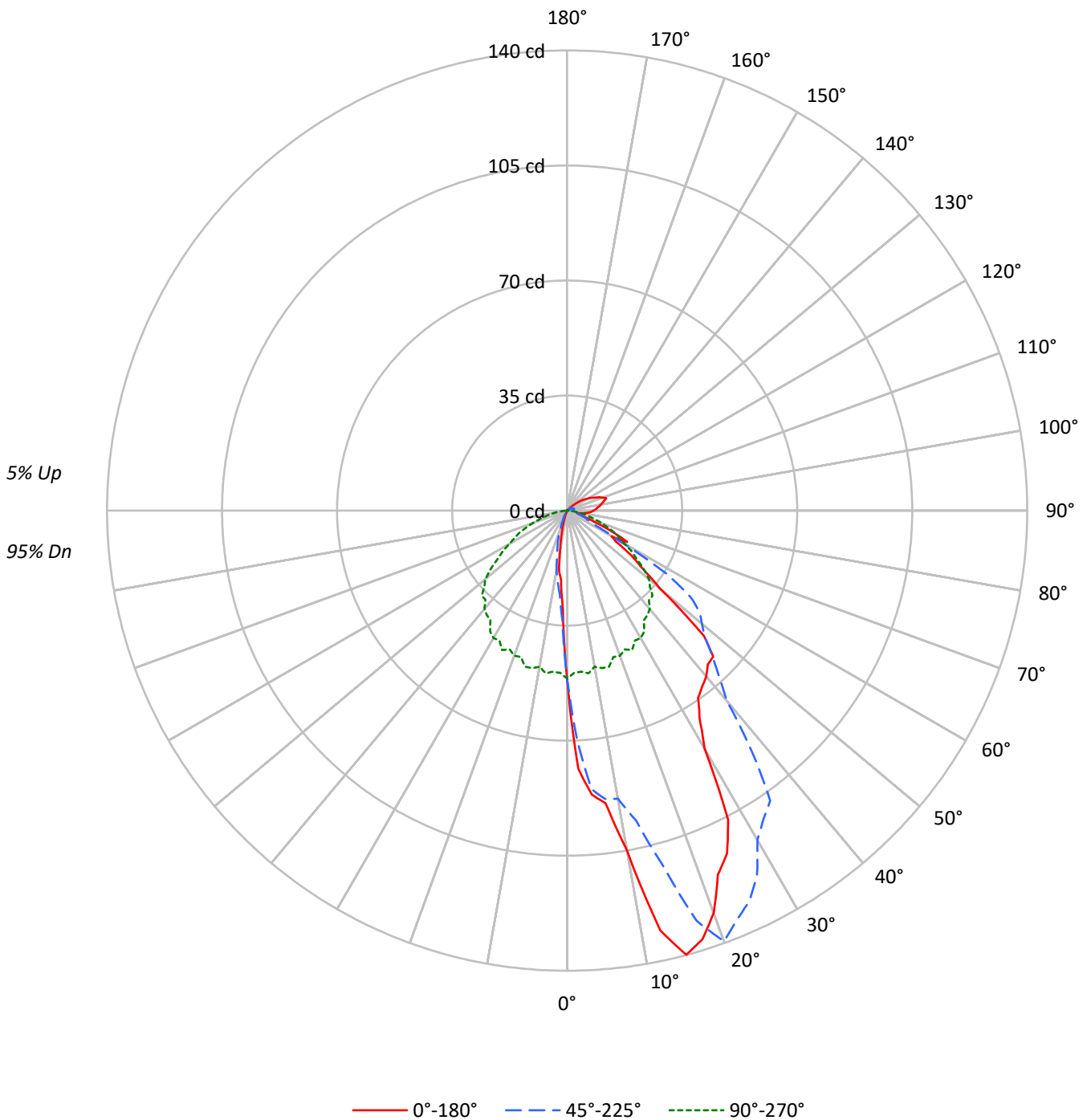
Lumens per Lamp: N/A
Luminaire Lumens: 143.8 lumens
Efficiency: N/A
Efficacy: 46.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.29 / 1.34
Luminous Opening: Rectangular (W 0.67' x L: 0.27' x H: 0')
CIE Type: Direct

Input Watts (W): 3.1
Input Voltage (V): NR
Input Current (Ain): 0.0556
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 2 HR
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	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	109	106	102	99	106	103	100	97	98	95	93	93	91	89	89	87	86	83				
2	101	94	88	83	98	92	87	82	88	83	79	84	80	77	80	77	75	72				
3	93	84	77	71	91	82	76	70	79	73	69	75	71	67	72	69	65	63				
4	86	76	68	62	84	74	67	61	71	65	60	68	63	59	66	61	57	55				
5	80	68	60	54	77	67	59	54	64	58	53	62	56	52	60	55	51	49				
6	74	62	54	48	72	61	53	48	58	52	47	56	51	46	54	49	45	43				
7	69	56	48	43	67	55	48	42	53	47	42	52	46	41	50	45	41	39				
8	64	52	44	38	62	51	43	38	49	42	38	48	42	37	46	41	37	35				
9	60	48	40	35	58	47	39	35	45	39	34	44	38	34	43	37	33	32				
10	56	44	37	32	55	43	36	31	42	36	31	41	35	31	40	34	30	29				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3046	3046	3046
5°	5194	2944	1263
10°	6362	2918	745
15°	8634	3037	346
20°	8266	2982	51
25°	7571	3078	13
30°	5748	3084	7
35°	5058	2962	7
40°	5121	3043	0
45°	5295	3094	0
50°	3413	3014	0
55°	2484	2702	0
60°	1860	2420	0
65°	2088	2257	0
70°	994	1935	0
75°	760	1589	0
80°	1476	1339	0
85°	4583	684	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	3.6
10°-20°	17.3	12.0
20°-30°	26.8	18.6
30°-40°	29.3	20.4
40°-50°	27.1	18.8
50°-60°	18.1	12.6
60°-70°	8.9	6.2
70°-80°	2.8	2.0
80°-90°	1.5	1.0
90°-100°	1.7	1.2
100°-110°	2.1	1.5
110°-120°	1.8	1.2
120°-130°	1.0	0.7
130°-140°	0.3	0.2
140°-150°	0.1	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	49.2	34.2
0°-40°	78.5	54.6
0°-60°	123.7	86.0
0°-90°	136.9	95.2
90°-120°	5.6	3.9
90°-150°	6.9	4.8
90°-180°	7.0	4.9
0°-180°	143.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	51	51	51	51	51	
5°	87	85	49	26	21	9
15°	140	111	49	11	6	38
25°	115	131	47	3	0	51
35°	70	108	41	1	0	45
45°	63	62	37	0	0	45
55°	24	46	26	0	0	21
65°	15	7	16	0	0	14
75°	3	2	7	0	0	4
85°	7	1	1	0	0	5
90°	8	2	0	0	0	4
95°	9	2	0	0	0	8
105°	12	2	0	0	0	12
115°	9	2	0	0	0	9
125°	5	1	0	0	0	5
135°	1	0	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°	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1
2.5°	78.6	75.7	69.7	60.7	49.4	39.6	33.2	30.4	30.1
5°	86.8	87.5	85.1	72.4	49.2	32.8	25.6	21.3	21.1
7.5°	89.8	91.5	88.5	80.7	49.9	27.6	21.9	19.3	18.7
10°	105.1	100.4	89.0	86.3	48.2	24.2	18.6	14.5	12.3
12.5°	130.8	121.8	96.5	86.4	49.1	23.6	14.2	10.1	8.3
15°	139.9	137.5	111.1	88.2	49.2	21.0	11.4	6.6	5.6
17.5°	136.8	136.2	130.8	88.1	46.7	18.1	9.0	4.3	3.0
20°	130.3	130.8	139.5	88.7	47.0	16.7	6.3	1.7	0.8
22.5°	119.9	126.8	134.8	91.5	45.7	12.9	4.1	0.9	0.3
25°	115.1	115.7	131.1	99.1	46.8	11.9	2.6	0.5	0.2
27.5°	106.0	114.5	125.1	106.0	44.6	9.7	2.0	0.4	0.2
30°	83.5	103.0	115.7	109.8	44.8	8.3	1.4	0.2	0.1
32.5°	75.0	84.3	111.2	109.9	43.6	7.0	0.9	0.2	0.1
35°	69.5	78.1	107.7	107.4	40.7	6.4	0.7	0.1	0.1
37.5°	67.5	74.4	92.3	108.4	40.1	5.2	0.5	0.1	0.1
40°	65.8	72.2	75.6	101.2	39.1	4.7	0.3	0.0	0.0
42.5°	63.4	69.7	68.3	89.5	36.8	3.6	0.2	0.0	0.0
45°	62.8	64.9	62.3	81.7	36.7	3.1	0.2	0.0	0.0
47.5°	56.5	61.9	56.6	80.4	34.1	2.3	0.1	0.0	0.0
50°	36.8	52.3	53.5	74.5	32.5	1.8	0.0	0.0	0.0
52.5°	28.7	33.0	50.8	63.2	29.4	1.4	0.1	0.0	0.0
55°	23.9	24.3	45.9	51.0	26.0	1.1	0.1	0.0	0.0
57.5°	17.6	17.9	36.0	43.2	23.4	0.9	0.1	0.0	0.0
60°	15.6	14.4	17.6	38.3	20.3	0.7	0.1	0.0	0.0
62.5°	20.6	13.7	9.6	34.1	18.0	0.5	0.1	0.0	0.0
65°	14.8	18.3	7.1	27.3	16.0	0.4	0.1	0.0	0.0
67.5°	8.8	8.0	6.0	23.4	13.3	0.4	0.1	0.0	0.0
70°	5.7	5.0	4.6	17.4	11.1	0.3	0.1	0.0	0.0
72.5°	3.8	3.5	4.7	8.6	8.8	0.2	0.1	0.0	0.0
75°	3.3	2.7	2.3	4.3	6.9	0.2	0.1	0.0	0.0
77.5°	3.6	2.6	1.8	2.6	5.4	0.1	0.1	0.0	0.0
80°	4.3	2.8	1.0	1.0	3.9	0.1	0.1	0.0	0.0
82.5°	5.6	3.6	0.9	0.5	2.0	0.1	0.1	0.0	0.0
85°	6.7	4.4	1.2	0.4	1.0	0.1	0.1	0.0	0.0
87.5°	7.5	4.7	1.7	0.3	0.4	0.1	0.1	0.0	0.0
90°	8.0	5.0	1.8	0.3	0.1	0.1	0.1	0.0	0.0
92.5°	8.7	5.3	1.8	0.3	0.1	0.1	0.1	0.0	0.0
95°	9.1	5.7	1.9	0.2	0.1	0.1	0.1	0.0	0.0
97.5°	9.9	6.1	2.0	0.2	0.1	0.1	0.1	0.0	0.0
100°	10.4	6.5	2.1	0.1	0.1	0.1	0.1	0.0	0.0
102.5°	11.0	7.6	2.2	0.1	0.1	0.1	0.1	0.0	0.0
105°	11.7	8.5	2.1	0.1	0.1	0.1	0.1	0.0	0.0
107.5°	12.5	8.7	1.9	0.1	0.1	0.1	0.1	0.0	0.0
110°	11.5	8.2	1.8	0.1	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°	10.6	7.9	1.7	0.1	0.1	0.1	0.1	0.0	0.0
115°	9.3	7.4	1.6	0.2	0.1	0.1	0.1	0.0	0.0
117.5°	8.5	6.8	1.6	0.1	0.1	0.1	0.1	0.0	0.0
120°	7.4	6.1	1.5	0.1	0.1	0.1	0.1	0.0	0.0
122.5°	6.4	5.2	1.4	0.1	0.1	0.1	0.1	0.0	0.0
125°	5.4	4.3	1.2	0.1	0.1	0.1	0.1	0.0	0.0
127.5°	4.2	3.2	1.0	0.1	0.1	0.1	0.1	0.0	0.0
130°	2.9	2.3	0.8	0.1	0.1	0.1	0.1	0.0	0.0
132.5°	2.0	1.5	0.5	0.1	0.1	0.1	0.1	0.0	0.0
135°	1.3	0.9	0.4	0.1	0.1	0.1	0.1	0.1	0.0
137.5°	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0
140°	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
142.5°	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1
145°	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
147.5°	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1
150°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
152.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
155°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
157.5°	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2
160°	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1
162.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
165°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
167.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
170°	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0
172.5°	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
175°	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0
177.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)