

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: FAIL-SAFE

Report Number: P708930

Luminaire Tested: **24APR-X-181L835-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708930  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-181L835-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture EXAM Light  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

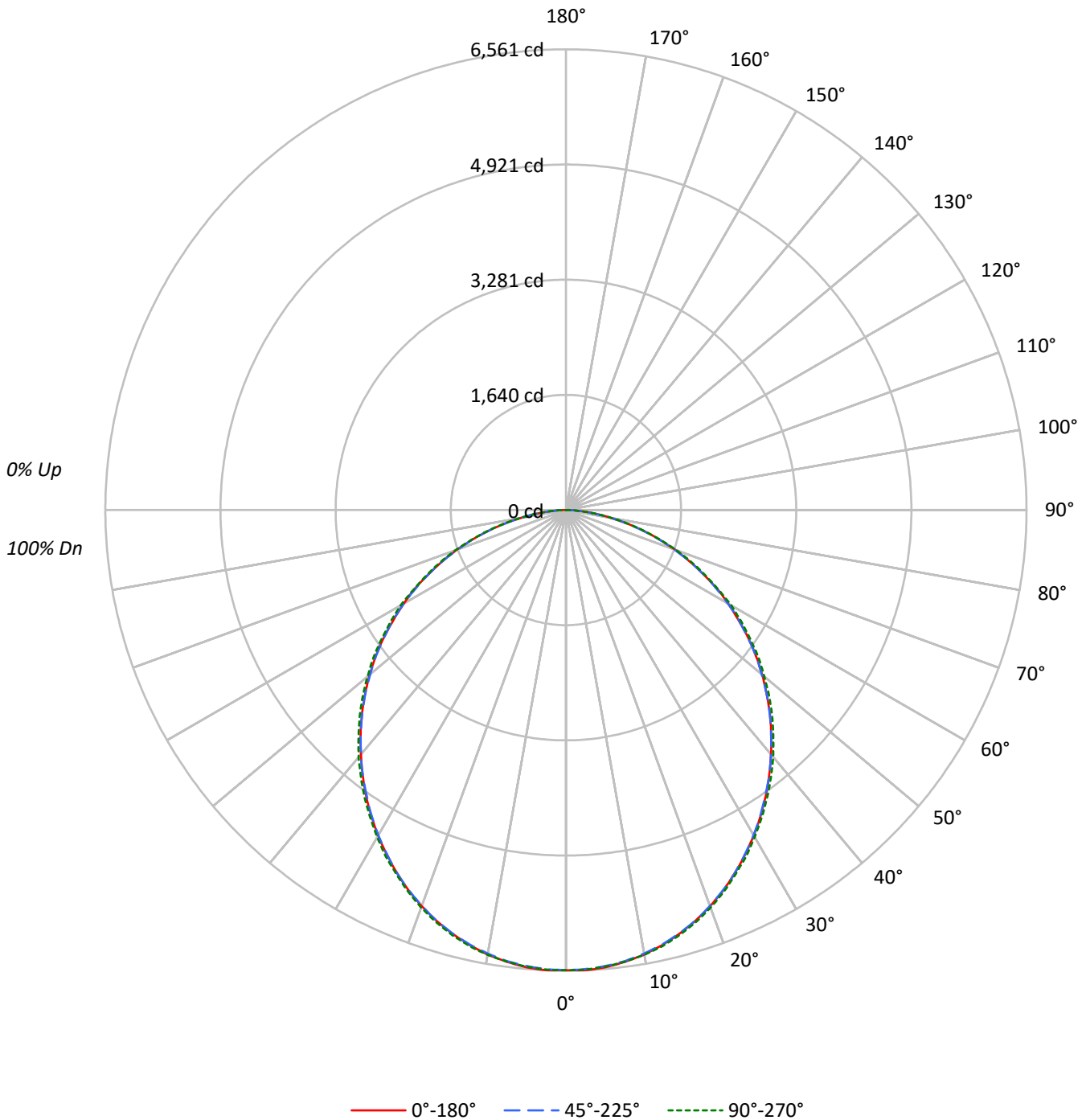
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17786.0 lumens  
Efficiency: N/A  
Efficacy: 127.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 139.1  
Input Voltage (V): 120  
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				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	50
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	46	46	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	40	40	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	36	36	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	32	32	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	27	39	32	27	38	31	27	37	31	26	26	26	26	25

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

	0°	45°	90°
0°	8818	8818	8818
5°	8828	8805	8813
10°	8783	8764	8787
15°	8701	8694	8728
20°	8597	8590	8629
25°	8460	8463	8491
30°	8313	8307	8353
35°	8156	8136	8210
40°	7983	7978	8068
45°	7817	7812	7906
50°	7637	7622	7723
55°	7429	7418	7522
60°	7185	7180	7318
65°	6858	6869	6950
70°	6502	6449	6583
75°	5943	5896	6009
80°	5140	5078	5182
85°	4043	4001	4113



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	619.6	3.5
10°-20°	1761.6	9.9
20°-30°	2627.2	14.8
30°-40°	3108.8	17.5
40°-50°	3176.6	17.9
50°-60°	2838.8	16.0
60°-70°	2139.7	12.0
70°-80°	1204.4	6.8
80°-90°	309.4	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°-30°	5008.4	28.2
0°-40°	8117.2	45.6
0°-60°	14132.6	79.5
0°-90°	17786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17786.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6554	6554	6554	6554	6554	
5°	6536	6527	6519	6525	6525	620
15°	6246	6238	6242	6254	6266	1761
25°	5699	5691	5701	5719	5720	2626
35°	4965	4954	4954	4987	4999	3105
45°	4108	4105	4106	4137	4155	3169
55°	3167	3167	3162	3190	3206	2828
65°	2154	2144	2158	2178	2183	2139
75°	1143	1122	1134	1129	1156	1209
85°	262	251	259	263	266	313
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6554.0	6554.0	6554.0	6554.0	6554.0
2.5°	6561.2	6551.3	6544.1	6547.7	6550.4
5°	6536.0	6527.0	6518.9	6525.2	6525.2
7.5°	6488.3	6483.8	6477.5	6482.9	6484.7
10°	6428.9	6419.0	6414.5	6427.1	6431.6
12.5°	6345.2	6333.5	6337.1	6353.3	6360.5
15°	6246.2	6238.1	6241.7	6254.3	6266.0
17.5°	6133.7	6124.7	6132.8	6143.6	6154.4
20°	6004.0	5995.0	5999.5	6014.8	6026.5
22.5°	5860.0	5851.0	5856.4	5869.9	5882.5
25°	5698.9	5690.8	5700.7	5718.7	5719.6
27.5°	5530.6	5521.6	5524.3	5543.2	5560.3
30°	5350.5	5338.8	5346.9	5365.8	5376.6
32.5°	5161.5	5150.7	5157.0	5178.6	5191.2
35°	4965.3	4954.5	4953.6	4986.9	4998.6
37.5°	4757.3	4751.0	4756.4	4783.4	4797.8
40°	4544.9	4535.9	4542.2	4576.4	4593.5
42.5°	4329.8	4324.4	4325.3	4359.5	4373.0
45°	4108.3	4104.7	4105.6	4137.1	4155.1
47.5°	3879.7	3871.6	3875.2	3907.6	3926.5
50°	3648.3	3646.5	3641.1	3673.5	3689.7
52.5°	3410.7	3407.1	3407.1	3435.9	3459.3
55°	3166.8	3166.8	3162.3	3190.2	3206.4
57.5°	2911.1	2912.9	2920.1	2945.3	2961.5
60°	2669.9	2660.9	2668.1	2690.6	2719.4
62.5°	2429.5	2402.5	2409.7	2430.4	2442.1
65°	2154.1	2144.2	2157.7	2178.4	2182.9
67.5°	1901.1	1891.2	1898.4	1912.8	1932.6
70°	1652.7	1626.6	1639.2	1654.5	1673.4
72.5°	1391.6	1369.1	1387.1	1399.7	1413.2
75°	1143.2	1121.6	1134.2	1128.8	1155.8
77.5°	893.9	878.6	889.4	900.2	920.9
80°	663.4	646.3	655.3	659.8	668.8
82.5°	451.9	439.3	442.0	460.0	454.6
85°	261.9	251.1	259.2	262.8	266.4
87.5°	103.5	93.6	101.7	104.4	105.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)