

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: P709030

Luminaire Tested: **24APR-76-181L935-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709030  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-76-181L935-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

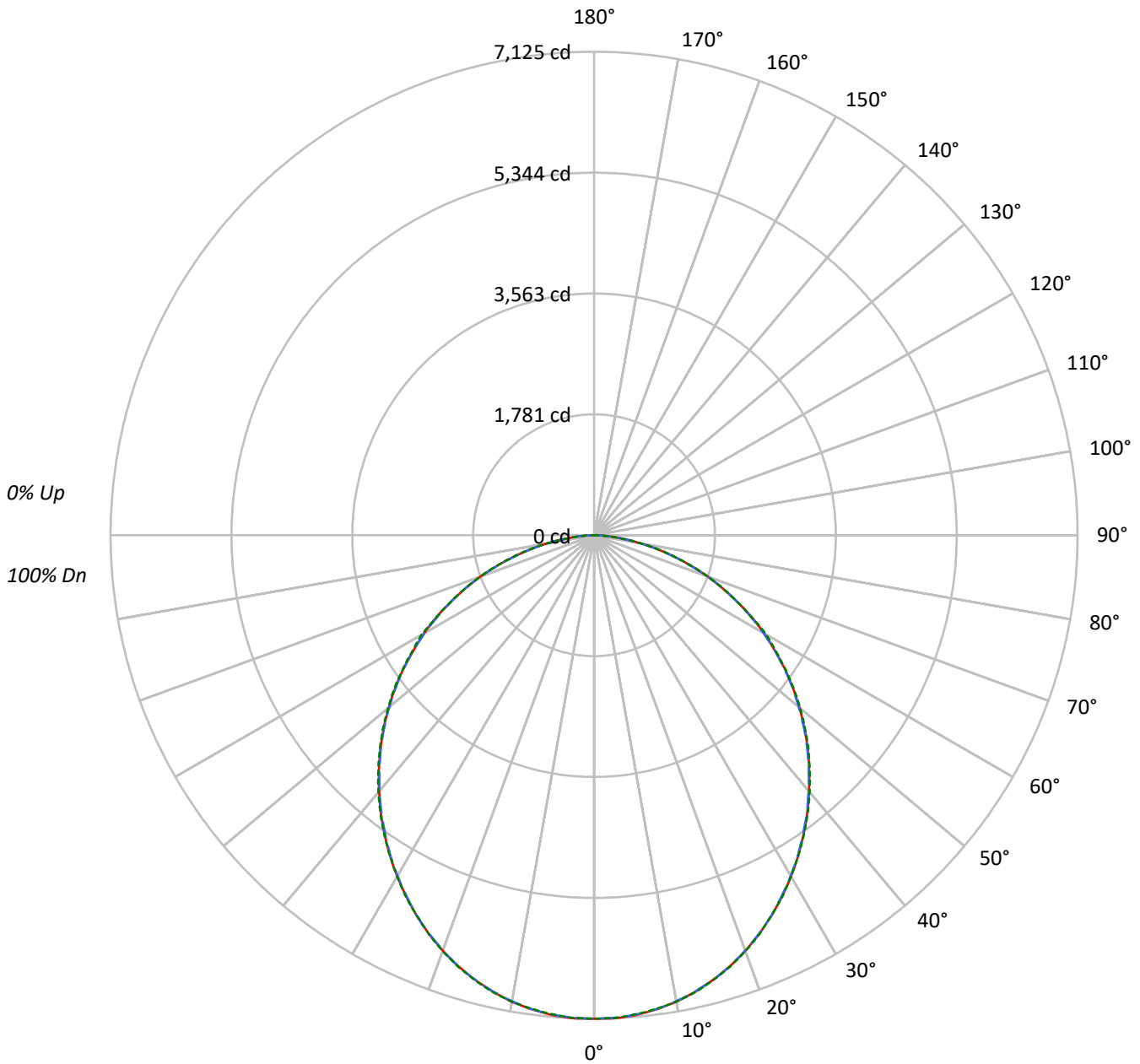
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19227.3 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 208.5  
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



— 0°-180°    - - - 45°-225°    - · - · - 90°-270°



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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	92	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	73	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	51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	51	46	46	46	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	40	40	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	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	40	34	29	29	29	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	26	26	26	25

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

	0°	45°	90°
0°	9586	9586	9586
5°	9587	9578	9572
10°	9537	9528	9536
15°	9447	9447	9457
20°	9331	9325	9338
25°	9185	9181	9181
30°	9019	9005	9020
35°	8842	8819	8853
40°	8655	8638	8684
45°	8470	8453	8499
50°	8268	8246	8299
55°	8042	8021	8069
60°	7776	7758	7894
65°	7422	7424	7444
70°	7015	6978	7023
75°	6399	6350	6393
80°	5525	5456	5493
85°	4310	4269	4258



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	673.4	3.5
10°-20°	1912.4	9.9
20°-30°	2848.1	14.8
30°-40°	3364.8	17.5
40°-50°	3432.6	17.9
50°-60°	3062.8	15.9
60°-70°	2309.1	12.0
70°-80°	1294.7	6.7
80°-90°	329.4	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°	5433.8	28.3
0°-40°	8798.6	45.8
0°-60°	15294.1	79.5
0°-90°	19227.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19227.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7125	7125	7125	7125	7125	
5°	7098	7095	7091	7093	7087	674
15°	6782	6778	6782	6787	6790	1912
25°	6187	6179	6184	6189	6184	2849
35°	5383	5376	5369	5385	5390	3367
45°	4451	4448	4442	4455	4466	3433
55°	3428	3421	3419	3430	3440	3062
65°	2331	2320	2332	2339	2338	2313
75°	1231	1210	1222	1215	1230	1303
85°	279	269	276	276	276	334
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7124.8	7124.8	7124.8	7124.8	7124.8
2.5°	7124.8	7121.4	7118.6	7117.9	7119.3
5°	7098.1	7094.7	7091.3	7092.6	7087.2
7.5°	7046.8	7047.5	7044.7	7045.4	7039.3
10°	6980.4	6977.0	6974.2	6980.4	6979.7
12.5°	6890.8	6884.6	6887.3	6896.9	6897.6
15°	6782.0	6777.9	6782.0	6786.8	6789.5
17.5°	6658.1	6654.7	6659.5	6660.2	6665.6
20°	6516.5	6512.4	6512.4	6519.2	6521.9
22.5°	6359.8	6353.6	6355.0	6359.8	6363.2
25°	6186.6	6179.1	6183.9	6189.4	6183.9
27.5°	5999.8	5995.7	5990.9	5997.8	6006.7
30°	5804.8	5796.6	5795.9	5800.7	5805.5
32.5°	5598.8	5589.3	5589.3	5595.4	5599.5
35°	5383.3	5375.8	5368.9	5384.6	5390.1
37.5°	5160.9	5152.0	5151.3	5160.9	5169.8
40°	4927.5	4920.0	4918.0	4934.4	4944.0
42.5°	4692.2	4687.4	4682.6	4699.0	4706.5
45°	4451.3	4448.5	4442.4	4455.4	4466.3
47.5°	4203.6	4194.7	4192.6	4207.7	4218.6
50°	3949.7	3946.3	3939.4	3953.1	3964.8
52.5°	3692.4	3688.3	3683.5	3695.8	3708.1
55°	3428.3	3420.7	3419.4	3429.6	3439.9
57.5°	3153.2	3147.0	3156.6	3166.2	3174.4
60°	2889.7	2875.4	2882.9	2893.8	2933.5
62.5°	2624.9	2599.6	2605.1	2635.2	2618.1
65°	2331.4	2319.7	2332.0	2338.9	2338.2
67.5°	2056.3	2042.6	2061.1	2055.6	2063.8
70°	1783.3	1759.3	1773.7	1775.7	1785.3
72.5°	1501.3	1480.8	1493.1	1499.3	1505.4
75°	1231.0	1209.8	1221.5	1214.6	1229.7
77.5°	962.1	949.1	956.6	961.4	973.1
80°	713.0	698.7	704.1	704.8	708.9
82.5°	483.1	472.2	473.5	485.8	481.1
85°	279.2	268.9	276.5	275.8	275.8
87.5°	108.8	100.6	108.1	107.4	106.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)