

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: P708837

Luminaire Tested: **24APR-X-89L935-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708837  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-89L935-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

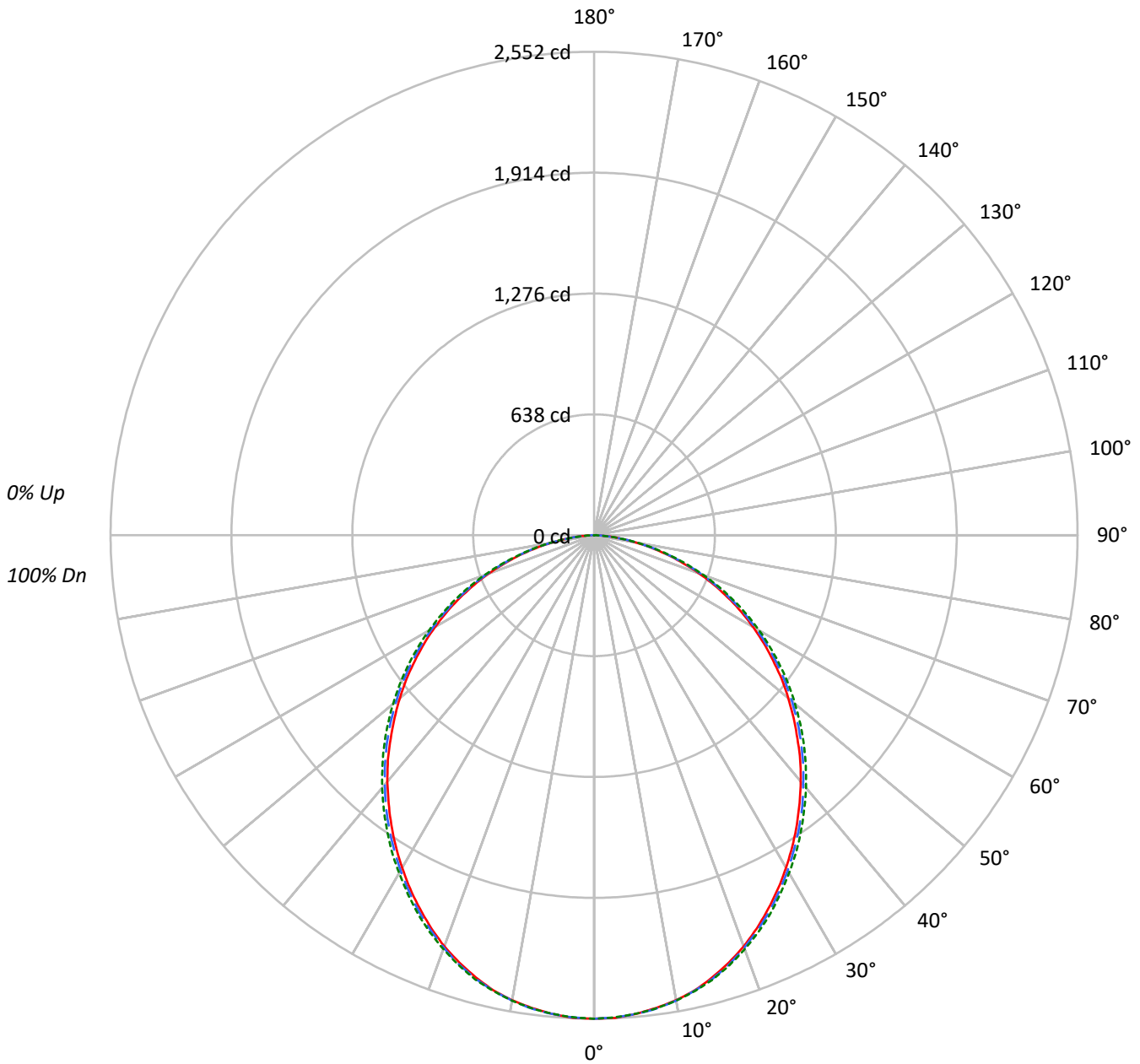
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6688.8 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.31  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 77.7  
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				
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	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	73	73	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

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

	0°	45°	90°
0°	6868	6868	6868
5°	6851	6853	6849
10°	6810	6816	6818
15°	6729	6748	6760
20°	6616	6637	6659
25°	6459	6502	6540
30°	6296	6348	6395
35°	6129	6196	6256
40°	5963	6032	6113
45°	5776	5880	5962
50°	5602	5707	5797
55°	5410	5524	5621
60°	5215	5322	5424
65°	4963	5075	5172
70°	4648	4749	4845
75°	4194	4297	4376
80°	3539	3668	3704
85°	2634	2797	2751



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.8	3.6
10°-20°	682.3	10.2
20°-30°	1007.9	15.1
30°-40°	1179.4	17.6
40°-50°	1191.2	17.8
50°-60°	1052.8	15.7
60°-70°	788.1	11.8
70°-80°	438.0	6.5
80°-90°	108.3	1.6
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°	1931.1	28.9
0°-40°	3110.5	46.5
0°-60°	5354.4	80.1
0°-90°	6688.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6688.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2552	2552	2552	2552	2552	
5°	2536	2537	2537	2538	2536	241
15°	2415	2417	2422	2427	2427	681
25°	2175	2178	2190	2197	2203	1002
35°	1866	1871	1886	1899	1904	1167
45°	1518	1529	1545	1561	1566	1172
55°	1153	1162	1178	1192	1198	1033
65°	779	785	797	808	812	772
75°	403	406	413	421	421	428
85°	85	88	91	89	89	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2552.2	2552.2	2552.2	2552.2	2552.2
2.5°	2549.9	2549.9	2547.7	2548.4	2546.9
5°	2536.2	2537.0	2537.0	2537.8	2535.5
7.5°	2516.5	2518.0	2520.3	2521.0	2518.7
10°	2492.1	2493.6	2494.4	2497.4	2495.1
12.5°	2460.1	2460.9	2461.6	2466.2	2463.9
15°	2415.2	2416.7	2422.1	2426.6	2426.6
17.5°	2365.0	2368.0	2374.1	2380.2	2378.7
20°	2310.2	2312.5	2317.8	2326.2	2325.4
22.5°	2245.5	2247.8	2255.4	2264.5	2266.8
25°	2175.4	2178.5	2189.9	2196.8	2202.8
27.5°	2103.1	2106.9	2117.6	2128.3	2131.3
30°	2026.3	2032.3	2043.0	2054.4	2058.2
32.5°	1947.9	1950.9	1965.4	1977.5	1985.2
35°	1865.6	1871.0	1886.2	1899.1	1904.5
37.5°	1781.2	1788.8	1804.8	1818.5	1823.0
40°	1697.4	1703.5	1717.2	1734.7	1740.1
42.5°	1610.7	1616.0	1632.7	1648.0	1653.3
45°	1517.8	1529.2	1545.2	1561.2	1566.5
47.5°	1428.0	1438.6	1454.6	1470.6	1476.7
50°	1338.2	1349.6	1363.3	1380.0	1384.6
52.5°	1248.3	1257.5	1271.9	1286.4	1293.2
55°	1153.2	1162.3	1177.5	1192.0	1198.1
57.5°	1063.4	1069.5	1083.9	1097.6	1102.9
60°	969.0	975.1	988.8	1003.2	1007.8
62.5°	876.1	879.9	892.9	906.6	909.6
65°	779.4	784.8	797.0	807.6	812.2
67.5°	685.1	689.6	700.3	711.7	714.0
70°	590.7	593.7	603.6	612.0	615.8
72.5°	495.5	498.6	509.2	513.8	517.6
75°	403.4	405.7	413.3	420.9	420.9
77.5°	313.6	317.4	323.5	326.5	328.1
80°	228.4	232.2	236.7	239.8	239.0
82.5°	150.7	154.5	157.6	159.1	157.6
85°	85.3	88.3	90.6	89.1	89.1
87.5°	33.5	35.0	36.5	35.8	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)