

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: P709028

Luminaire Tested: **24APR-49-116L930-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709028  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-49-116L930-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

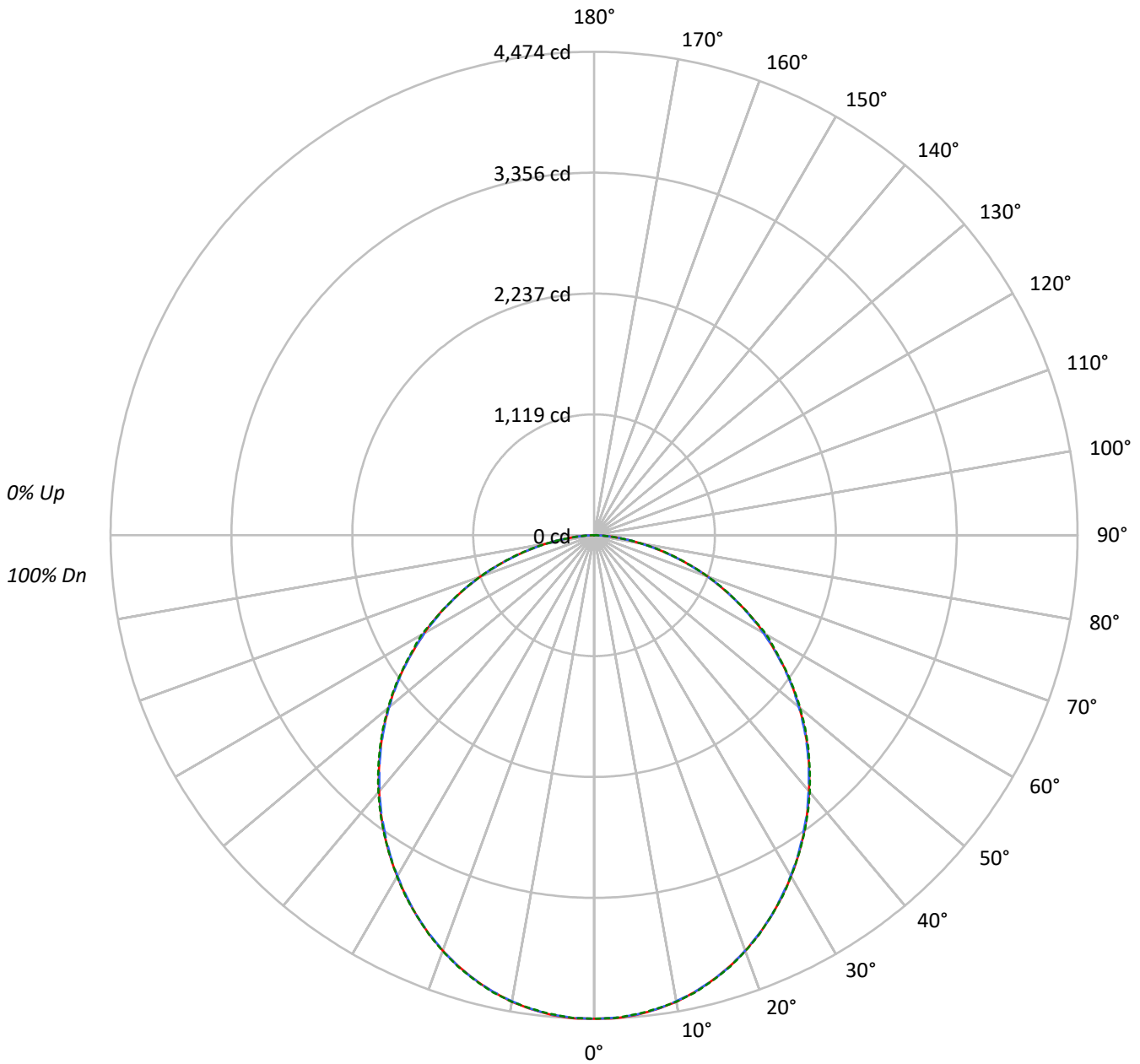
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12073.8 lumens  
Efficiency: N/A  
Efficacy: 93.8 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): 128.7  
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				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°	6020	6020	6020
5°	6020	6014	6011
10°	5989	5983	5988
15°	5932	5932	5939
20°	5859	5855	5864
25°	5767	5765	5765
30°	5663	5655	5664
35°	5552	5538	5560
40°	5435	5424	5453
45°	5319	5308	5337
50°	5192	5178	5211
55°	5050	5037	5067
60°	4883	4871	4957
65°	4661	4662	4675
70°	4405	4382	4410
75°	4018	3987	4014
80°	3469	3426	3450
85°	2706	2680	2674



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	422.8	3.5
10°-20°	1200.9	9.9
20°-30°	1788.4	14.8
30°-40°	2112.9	17.5
40°-50°	2155.5	17.9
50°-60°	1923.3	15.9
60°-70°	1450.0	12.0
70°-80°	813.0	6.7
80°-90°	206.9	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°	3412.2	28.3
0°-40°	5525.1	45.8
0°-60°	9604.0	79.5
0°-90°	12073.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12073.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4474	4474	4474	4474	4474	
5°	4457	4455	4453	4454	4450	423
15°	4259	4256	4259	4262	4264	1201
25°	3885	3880	3883	3887	3883	1789
35°	3380	3376	3371	3381	3385	2114
45°	2795	2794	2790	2798	2805	2156
55°	2153	2148	2147	2154	2160	1923
65°	1464	1457	1464	1469	1468	1452
75°	773	760	767	763	772	818
85°	175	169	174	173	173	210
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4474.0	4474.0	4474.0	4474.0	4474.0
2.5°	4474.0	4471.9	4470.2	4469.7	4470.6
5°	4457.3	4455.1	4453.0	4453.8	4450.4
7.5°	4425.0	4425.5	4423.8	4424.2	4420.3
10°	4383.4	4381.2	4379.5	4383.4	4382.9
12.5°	4327.1	4323.2	4324.9	4330.9	4331.4
15°	4258.7	4256.2	4258.7	4261.8	4263.5
17.5°	4181.0	4178.8	4181.8	4182.3	4185.7
20°	4092.0	4089.4	4089.4	4093.7	4095.5
22.5°	3993.6	3989.8	3990.6	3993.6	3995.8
25°	3884.9	3880.2	3883.2	3886.6	3883.2
27.5°	3767.6	3765.0	3762.0	3766.3	3771.9
30°	3645.1	3640.0	3639.6	3642.6	3645.6
32.5°	3515.8	3509.8	3509.8	3513.6	3516.2
35°	3380.4	3375.7	3371.4	3381.3	3384.7
37.5°	3240.8	3235.2	3234.8	3240.8	3246.4
40°	3094.3	3089.5	3088.2	3098.6	3104.6
42.5°	2946.4	2943.4	2940.4	2950.7	2955.5
45°	2795.2	2793.5	2789.6	2797.8	2804.6
47.5°	2639.6	2634.1	2632.8	2642.2	2649.1
50°	2480.2	2478.1	2473.8	2482.4	2489.7
52.5°	2318.7	2316.1	2313.1	2320.8	2328.5
55°	2152.8	2148.1	2147.2	2153.7	2160.1
57.5°	1980.1	1976.2	1982.2	1988.2	1993.4
60°	1814.6	1805.6	1810.3	1817.2	1842.1
62.5°	1648.3	1632.4	1635.9	1654.8	1644.0
65°	1464.0	1456.7	1464.4	1468.7	1468.3
67.5°	1291.2	1282.7	1294.3	1290.8	1296.0
70°	1119.8	1104.8	1113.8	1115.1	1121.1
72.5°	942.8	929.9	937.6	941.5	945.3
75°	773.0	759.7	767.0	762.7	772.2
77.5°	604.2	596.0	600.7	603.7	611.0
80°	447.7	438.7	442.2	442.6	445.2
82.5°	303.4	296.5	297.4	305.1	302.1
85°	175.3	168.9	173.6	173.2	173.2
87.5°	68.3	63.2	67.9	67.5	66.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)