

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: P709038

Luminaire Tested: **24APR-49-116L940-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709038  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-49-116L940-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

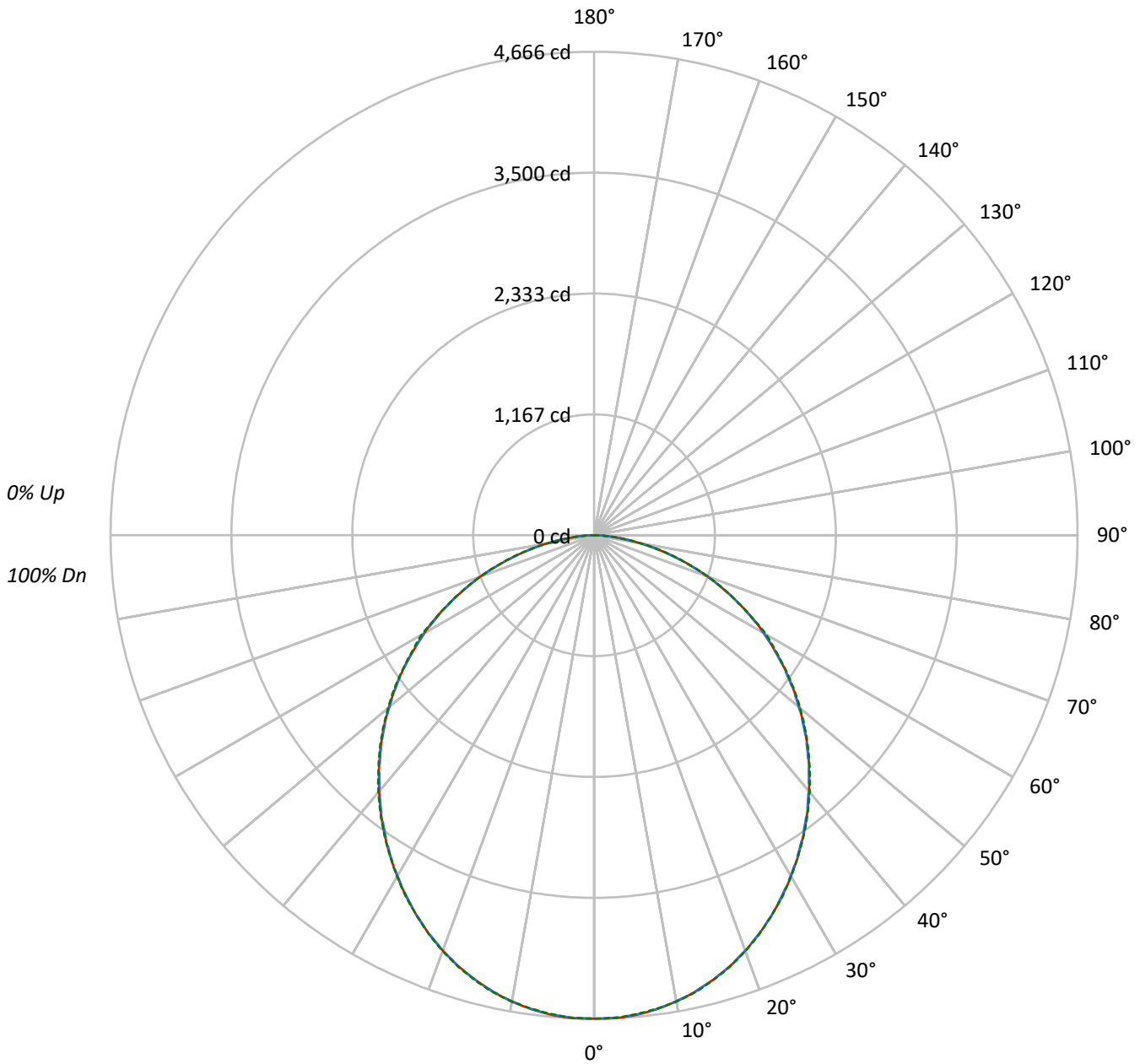
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12590.7 lumens  
Efficiency: N/A  
Efficacy: 97.8 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°	6278	6278	6278
5°	6278	6272	6268
10°	6245	6240	6245
15°	6186	6186	6193
20°	6110	6106	6115
25°	6014	6012	6012
30°	5906	5897	5906
35°	5790	5775	5798
40°	5667	5657	5686
45°	5546	5535	5565
50°	5414	5400	5435
55°	5266	5252	5284
60°	5092	5080	5169
65°	4861	4862	4875
70°	4594	4569	4599
75°	4191	4158	4186
80°	3618	3573	3597
85°	2822	2794	2788



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	440.9	3.5
10°-20°	1252.3	9.9
20°-30°	1865.0	14.8
30°-40°	2203.4	17.5
40°-50°	2247.8	17.9
50°-60°	2005.7	15.9
60°-70°	1512.1	12.0
70°-80°	847.8	6.7
80°-90°	215.7	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°	3558.3	28.3
0°-40°	5761.6	45.8
0°-60°	10015.1	79.5
0°-90°	12590.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12590.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4666	4666	4666	4666	4666	
5°	4648	4646	4644	4644	4641	441
15°	4441	4438	4441	4444	4446	1252
25°	4051	4046	4049	4053	4049	1866
35°	3525	3520	3516	3526	3530	2205
45°	2915	2913	2909	2918	2925	2248
55°	2245	2240	2239	2246	2253	2005
65°	1527	1519	1527	1532	1531	1515
75°	806	792	800	795	805	853
85°	183	176	181	181	181	219
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4665.6	4665.6	4665.6	4665.6	4665.6
2.5°	4665.6	4663.3	4661.5	4661.1	4662.0
5°	4648.1	4645.9	4643.6	4644.5	4640.9
7.5°	4614.5	4614.9	4613.1	4613.6	4609.6
10°	4571.0	4568.8	4567.0	4571.0	4570.6
12.5°	4512.3	4508.3	4510.1	4516.4	4516.8
15°	4441.1	4438.4	4441.1	4444.2	4446.0
17.5°	4360.0	4357.7	4360.9	4361.3	4364.9
20°	4267.2	4264.5	4264.5	4269.0	4270.8
22.5°	4164.6	4160.6	4161.5	4164.6	4166.8
25°	4051.2	4046.3	4049.4	4053.0	4049.4
27.5°	3928.9	3926.2	3923.1	3927.6	3933.4
30°	3801.2	3795.8	3795.4	3798.5	3801.6
32.5°	3666.3	3660.0	3660.0	3664.1	3666.8
35°	3525.2	3520.2	3515.8	3526.1	3529.6
37.5°	3379.5	3373.7	3373.3	3379.5	3385.4
40°	3226.7	3221.8	3220.5	3231.2	3237.5
42.5°	3072.6	3069.5	3066.3	3077.1	3082.0
45°	2914.9	2913.1	2909.0	2917.5	2924.7
47.5°	2752.7	2746.8	2745.5	2755.3	2762.5
50°	2586.4	2584.2	2579.7	2588.6	2596.3
52.5°	2417.9	2415.2	2412.1	2420.2	2428.2
55°	2245.0	2240.0	2239.1	2245.9	2252.6
57.5°	2064.8	2060.8	2067.1	2073.3	2078.7
60°	1892.3	1882.9	1887.8	1895.0	1921.0
62.5°	1718.9	1702.3	1705.9	1725.6	1714.4
65°	1526.7	1519.0	1527.1	1531.6	1531.1
67.5°	1346.5	1337.6	1349.7	1346.1	1351.5
70°	1167.7	1152.1	1161.5	1162.8	1169.1
72.5°	983.1	969.7	977.7	981.8	985.8
75°	806.1	792.2	799.9	795.4	805.2
77.5°	630.0	621.5	626.4	629.6	637.2
80°	466.9	457.5	461.1	461.5	464.2
82.5°	316.4	309.2	310.1	318.1	315.0
85°	182.8	176.1	181.0	180.6	180.6
87.5°	71.2	65.9	70.8	70.4	69.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)