

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: P708954

Luminaire Tested: **24APR-X-200L940-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708954  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-200L940-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture EXAM Light  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

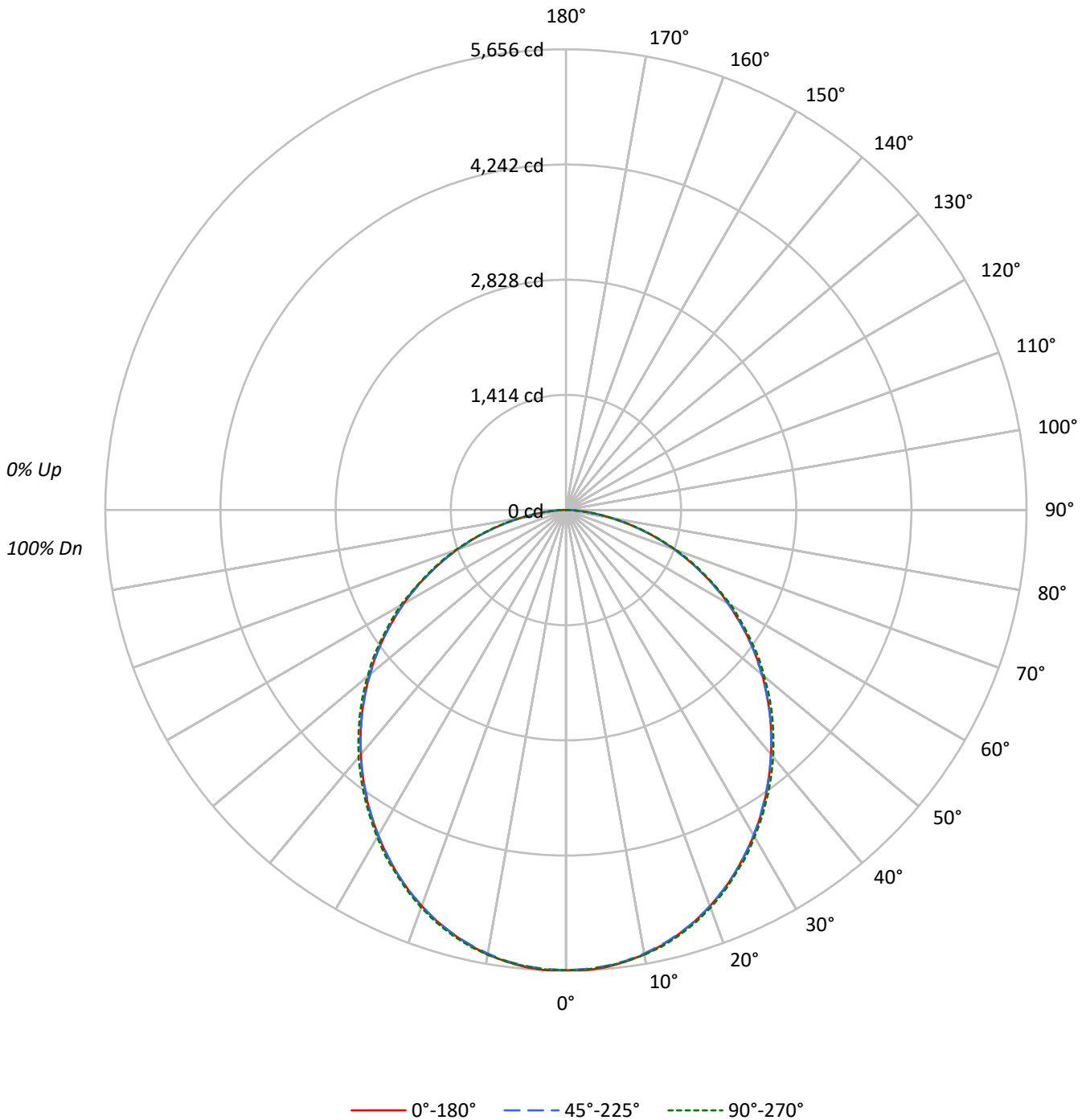
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15331.7 lumens  
Efficiency: N/A  
Efficacy: 97.6 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): 157.1  
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	100	100	100	100
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70	70	70	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	59	59	59	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50	50	50	50
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	44	44	44	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38	38	38	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34	34	34	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30	30	30	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	39	33	29	27	27	27	27
10	53	40	32	27	52	39	32	27	39	32	27	38	31	27	37	31	26	25	25	25	25

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

	0°	45°	90°
0°	7601	7601	7601
5°	7610	7590	7597
10°	7571	7555	7575
15°	7500	7495	7524
20°	7410	7405	7438
25°	7293	7295	7319
30°	7166	7161	7201
35°	7030	7014	7077
40°	6881	6877	6955
45°	6739	6734	6815
50°	6583	6570	6658
55°	6404	6394	6484
60°	6193	6189	6308
65°	5911	5921	5991
70°	5604	5559	5675
75°	5123	5083	5179
80°	4431	4377	4467
85°	3486	3450	3546



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	534.1	3.5
10°-20°	1518.5	9.9
20°-30°	2264.7	14.8
30°-40°	2679.8	17.5
40°-50°	2738.2	17.9
50°-60°	2447.1	16.0
60°-70°	1844.5	12.0
70°-80°	1038.2	6.8
80°-90°	266.7	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°	4317.3	28.2
0°-40°	6997.1	45.6
0°-60°	12182.4	79.5
0°-90°	15331.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15331.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5650	5650	5650	5650	5650	
5°	5634	5626	5619	5625	5625	535
15°	5384	5377	5380	5391	5401	1518
25°	4912	4906	4914	4930	4930	2263
35°	4280	4271	4270	4299	4309	2676
45°	3541	3538	3539	3566	3582	2731
55°	2730	2730	2726	2750	2764	2438
65°	1857	1848	1860	1878	1882	1844
75°	985	967	978	973	996	1042
85°	226	216	224	227	230	269
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5649.6	5649.6	5649.6	5649.6	5649.6
2.5°	5655.9	5647.3	5641.1	5644.2	5646.5
5°	5634.1	5626.4	5619.4	5624.8	5624.8
7.5°	5593.0	5589.1	5583.7	5588.3	5589.9
10°	5541.8	5533.3	5529.4	5540.2	5544.1
12.5°	5469.6	5459.5	5462.6	5476.6	5482.8
15°	5384.3	5377.3	5380.4	5391.3	5401.3
17.5°	5287.3	5279.5	5286.5	5295.8	5305.1
20°	5175.5	5167.8	5171.7	5184.9	5194.9
22.5°	5051.4	5043.6	5048.3	5059.9	5070.8
25°	4912.5	4905.5	4914.0	4929.6	4930.3
27.5°	4767.4	4759.6	4762.0	4778.3	4793.0
30°	4612.2	4602.1	4609.1	4625.4	4634.7
32.5°	4449.3	4439.9	4445.4	4464.0	4474.9
35°	4280.1	4270.8	4270.0	4298.7	4308.8
37.5°	4100.9	4095.4	4100.1	4123.4	4135.8
40°	3917.7	3910.0	3915.4	3944.9	3959.6
42.5°	3732.3	3727.6	3728.4	3757.9	3769.5
45°	3541.4	3538.3	3539.1	3566.2	3581.8
47.5°	3344.3	3337.3	3340.4	3368.4	3384.7
50°	3144.9	3143.3	3138.7	3166.6	3180.6
52.5°	2940.0	2936.9	2936.9	2961.8	2982.0
55°	2729.8	2729.8	2725.9	2749.9	2763.9
57.5°	2509.4	2511.0	2517.2	2538.9	2552.9
60°	2301.4	2293.7	2299.9	2319.3	2344.1
62.5°	2094.3	2071.0	2077.2	2095.0	2105.1
65°	1856.8	1848.3	1859.9	1877.8	1881.7
67.5°	1638.8	1630.3	1636.5	1648.9	1666.0
70°	1424.6	1402.1	1413.0	1426.2	1442.5
72.5°	1199.6	1180.2	1195.7	1206.6	1218.2
75°	985.4	966.8	977.7	973.0	996.3
77.5°	770.5	757.3	766.6	775.9	793.8
80°	571.9	557.1	564.9	568.8	576.5
82.5°	389.5	378.7	381.0	396.5	391.9
85°	225.8	216.5	223.5	226.6	229.7
87.5°	89.2	80.7	87.7	90.0	90.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)