

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: P708961

Luminaire Tested: **24APR-X-160L950-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708961  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-160L950-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture EXAM Light  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

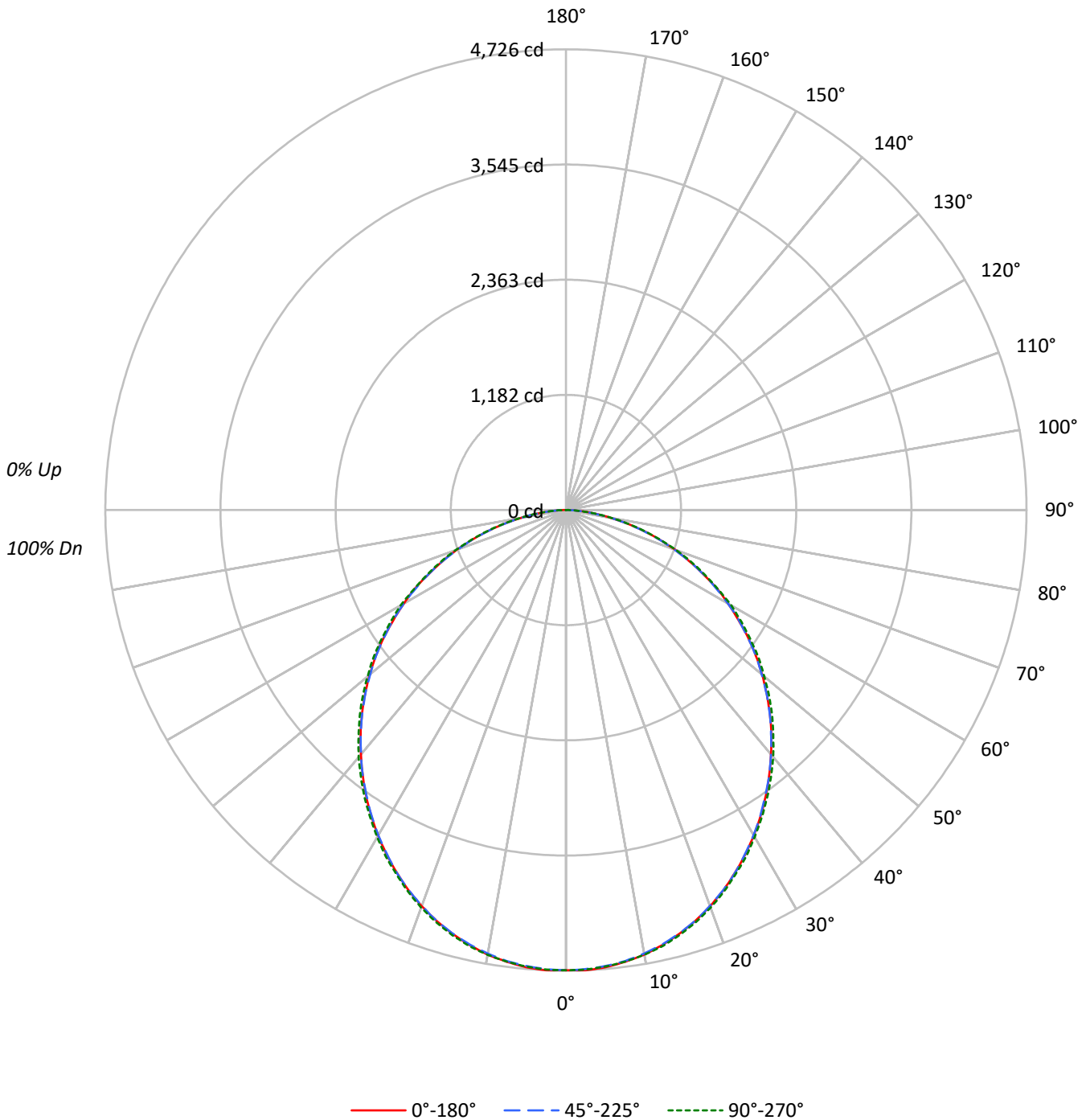
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12811.9 lumens  
Efficiency: N/A  
Efficacy: 105.7 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): 121.2  
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				
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	91	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	72	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	50
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	46	46	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	40	40	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	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	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	27	39	32	27	38	31	27	37	31	26	26	26	26	25

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

	0°	45°	90°
0°	6352	6352	6352
5°	6359	6342	6348
10°	6327	6313	6330
15°	6267	6263	6287
20°	6193	6188	6216
25°	6094	6096	6116
30°	5988	5984	6017
35°	5875	5861	5914
40°	5750	5747	5812
45°	5631	5627	5695
50°	5501	5490	5563
55°	5351	5343	5418
60°	5175	5172	5271
65°	4940	4948	5006
70°	4683	4645	4742
75°	4281	4247	4328
80°	3703	3657	3733
85°	2913	2882	2963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	446.3	3.5
10°-20°	1268.9	9.9
20°-30°	1892.5	14.8
30°-40°	2239.3	17.5
40°-50°	2288.2	17.9
50°-60°	2044.9	16.0
60°-70°	1541.3	12.0
70°-80°	867.6	6.8
80°-90°	222.8	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°	3607.7	28.2
0°-40°	5847.1	45.6
0°-60°	10180.2	79.5
0°-90°	12811.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12811.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4721	4721	4721	4721	4721	
5°	4708	4702	4696	4700	4700	447
15°	4499	4494	4496	4505	4514	1269
25°	4105	4099	4106	4119	4120	1891
35°	3577	3569	3568	3592	3601	2236
45°	2959	2957	2957	2980	2993	2282
55°	2281	2281	2278	2298	2310	2037
65°	1552	1544	1554	1569	1572	1541
75°	824	808	817	813	833	871
85°	189	181	187	189	192	225
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4721.1	4721.1	4721.1	4721.1	4721.1
2.5°	4726.3	4719.2	4714.0	4716.6	4718.5
5°	4708.1	4701.6	4695.8	4700.3	4700.3
7.5°	4673.8	4670.5	4666.0	4669.9	4671.2
10°	4631.0	4623.8	4620.6	4629.7	4632.9
12.5°	4570.7	4562.2	4564.8	4576.5	4581.7
15°	4499.3	4493.5	4496.1	4505.2	4513.6
17.5°	4418.3	4411.8	4417.6	4425.4	4433.2
20°	4324.9	4318.4	4321.7	4332.7	4341.1
22.5°	4221.2	4214.7	4218.6	4228.3	4237.4
25°	4105.1	4099.3	4106.4	4119.4	4120.0
27.5°	3983.9	3977.4	3979.3	3992.9	4005.3
30°	3854.2	3845.7	3851.6	3865.2	3873.0
32.5°	3718.0	3710.2	3714.8	3730.3	3739.4
35°	3576.6	3568.9	3568.2	3592.2	3600.6
37.5°	3426.9	3422.3	3426.2	3445.7	3456.0
40°	3273.8	3267.4	3271.9	3296.5	3308.9
42.5°	3118.9	3115.0	3115.6	3140.3	3150.0
45°	2959.4	2956.8	2957.4	2980.1	2993.1
47.5°	2794.7	2788.8	2791.4	2814.8	2828.4
50°	2628.0	2626.7	2622.8	2646.2	2657.8
52.5°	2456.8	2454.2	2454.2	2475.0	2491.9
55°	2281.1	2281.1	2277.9	2298.0	2309.6
57.5°	2097.0	2098.3	2103.5	2121.6	2133.3
60°	1923.2	1916.7	1921.9	1938.1	1958.9
62.5°	1750.1	1730.6	1735.8	1750.7	1759.1
65°	1551.7	1544.5	1554.2	1569.2	1572.4
67.5°	1369.4	1362.3	1367.5	1377.9	1392.1
70°	1190.5	1171.7	1180.8	1191.8	1205.4
72.5°	1002.4	986.2	999.2	1008.3	1018.0
75°	823.5	807.9	817.0	813.1	832.6
77.5°	643.9	632.9	640.6	648.4	663.3
80°	477.9	465.6	472.0	475.3	481.8
82.5°	325.5	316.4	318.4	331.3	327.4
85°	188.7	180.9	186.7	189.3	191.9
87.5°	74.6	67.4	73.3	75.2	75.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)