

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: P708813

Luminaire Tested: **24APR-X-80L830-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708813  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-80L830-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

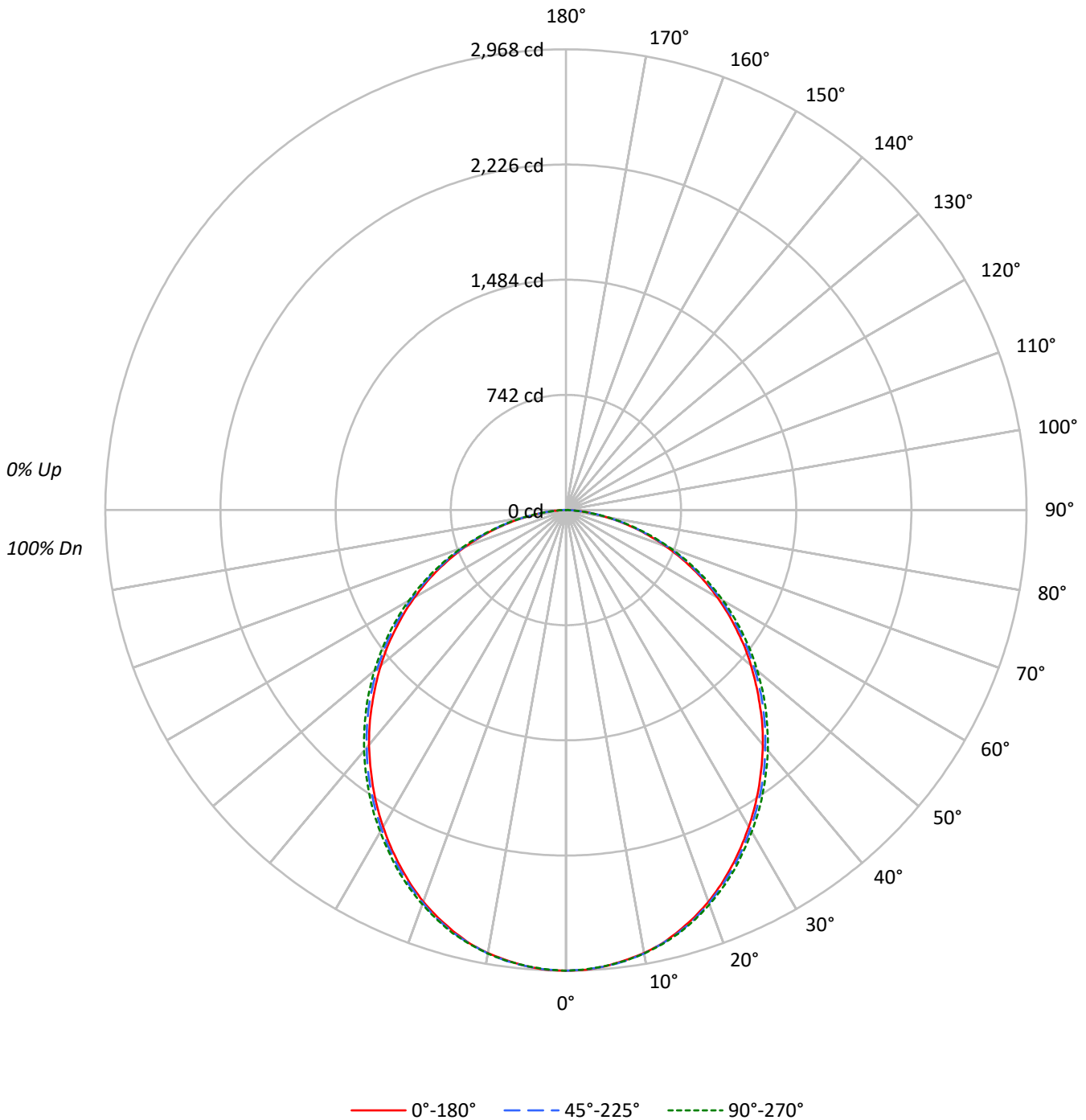
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7778.3 lumens  
Efficiency: N/A  
Efficacy: 113.1 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): 68.8  
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	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°	7987	7987	7987
5°	7967	7969	7965
10°	7919	7926	7929
15°	7824	7847	7862
20°	7693	7718	7744
25°	7511	7561	7606
30°	7322	7382	7437
35°	7127	7205	7275
40°	6934	7015	7108
45°	6717	6838	6933
50°	6514	6637	6741
55°	6291	6424	6536
60°	6064	6188	6308
65°	5771	5901	6014
70°	5404	5522	5634
75°	4877	4997	5089
80°	4114	4266	4307
85°	3060	3251	3199



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.1	3.6
10°-20°	793.5	10.2
20°-30°	1172.1	15.1
30°-40°	1371.5	17.6
40°-50°	1385.2	17.8
50°-60°	1224.3	15.7
60°-70°	916.5	11.8
70°-80°	509.3	6.5
80°-90°	125.9	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°	2245.7	28.9
0°-40°	3617.1	46.5
0°-60°	6226.6	80.1
0°-90°	7778.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7778.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2968	2968	2968	2968	2968	
5°	2949	2950	2950	2951	2948	280
15°	2809	2810	2817	2822	2822	791
25°	2530	2533	2547	2555	2562	1165
35°	2170	2176	2193	2208	2215	1357
45°	1765	1778	1797	1816	1822	1363
55°	1341	1352	1369	1386	1393	1201
65°	906	913	927	939	944	898
75°	469	472	481	490	490	497
85°	99	103	105	104	104	121
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2967.9	2967.9	2967.9	2967.9	2967.9
2.5°	2965.3	2965.3	2962.6	2963.5	2961.7
5°	2949.4	2950.2	2950.2	2951.1	2948.5
7.5°	2926.3	2928.1	2930.8	2931.6	2929.0
10°	2898.0	2899.8	2900.7	2904.2	2901.6
12.5°	2860.8	2861.7	2862.6	2867.9	2865.3
15°	2808.6	2810.4	2816.6	2821.9	2821.9
17.5°	2750.2	2753.7	2760.8	2767.9	2766.1
20°	2686.5	2689.1	2695.3	2705.0	2704.2
22.5°	2611.2	2613.9	2622.7	2633.4	2636.0
25°	2529.8	2533.3	2546.6	2554.6	2561.7
27.5°	2445.7	2450.1	2462.5	2474.9	2478.4
30°	2356.3	2363.4	2375.8	2389.0	2393.5
32.5°	2265.1	2268.7	2285.5	2299.6	2308.5
35°	2169.5	2175.7	2193.4	2208.5	2214.7
37.5°	2071.3	2080.1	2098.7	2114.6	2120.0
40°	1973.9	1981.0	1996.9	2017.3	2023.5
42.5°	1873.0	1879.2	1898.7	1916.4	1922.6
45°	1765.0	1778.3	1796.9	1815.5	1821.7
47.5°	1660.6	1673.0	1691.5	1710.1	1717.2
50°	1556.1	1569.4	1585.3	1604.8	1610.1
52.5°	1451.7	1462.3	1479.1	1495.9	1503.9
55°	1341.0	1351.6	1369.3	1386.2	1393.2
57.5°	1236.6	1243.6	1260.5	1276.4	1282.6
60°	1126.8	1133.9	1149.8	1166.6	1172.0
62.5°	1018.8	1023.2	1038.3	1054.2	1057.8
65°	906.4	912.6	926.8	939.2	944.5
67.5°	796.6	802.0	814.3	827.6	830.3
70°	686.9	690.4	701.9	711.7	716.1
72.5°	576.2	579.8	592.2	597.5	601.9
75°	469.1	471.8	480.6	489.5	489.5
77.5°	364.7	369.1	376.2	379.7	381.5
80°	265.5	270.0	275.3	278.8	277.9
82.5°	175.3	179.7	183.2	185.0	183.2
85°	99.1	102.7	105.3	103.6	103.6
87.5°	38.9	40.7	42.5	41.6	39.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)