

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: P708823

Luminaire Tested: **24APR-X-80L840-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708823  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-80L840-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

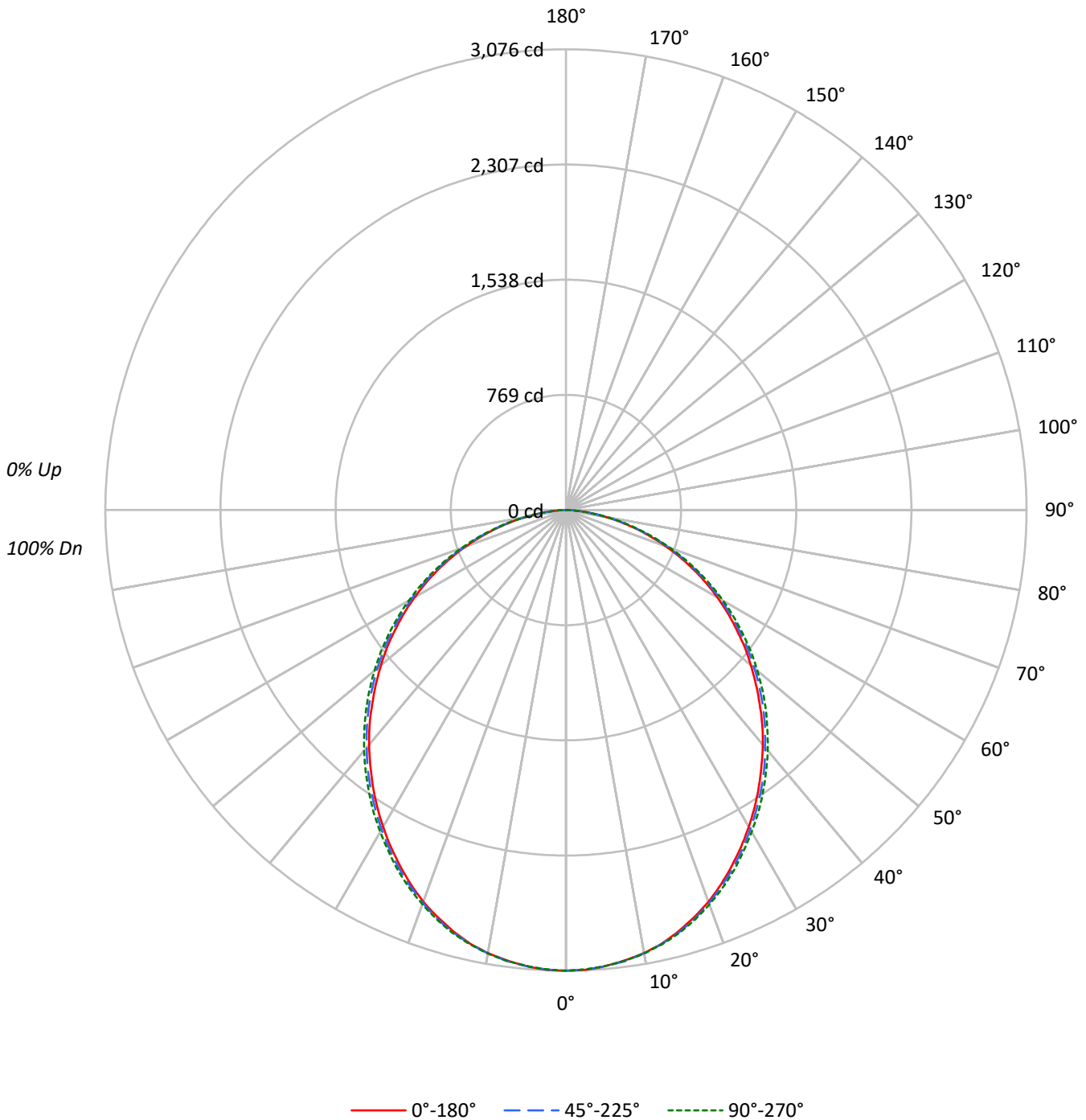
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8060.4 lumens  
Efficiency: N/A  
Efficacy: 117.2 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				
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°	8276	8276	8276
5°	8256	8258	8253
10°	8206	8214	8216
15°	8108	8131	8147
20°	7972	7999	8025
25°	7784	7836	7882
30°	7587	7650	7707
35°	7386	7467	7539
40°	7185	7269	7366
45°	6960	7086	7184
50°	6751	6877	6985
55°	6520	6657	6774
60°	6285	6413	6536
65°	5981	6115	6232
70°	5600	5723	5839
75°	5054	5179	5273
80°	4265	4421	4463
85°	3171	3372	3313



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.2	3.6
10°-20°	822.3	10.2
20°-30°	1214.6	15.1
30°-40°	1421.2	17.6
40°-50°	1435.4	17.8
50°-60°	1268.7	15.7
60°-70°	949.7	11.8
70°-80°	527.8	6.5
80°-90°	130.5	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°	2327.1	28.9
0°-40°	3748.3	46.5
0°-60°	6452.4	80.1
0°-90°	8060.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8060.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3076	3076	3076	3076	3076	
5°	3056	3057	3057	3058	3055	290
15°	2910	2912	2919	2924	2924	820
25°	2622	2625	2639	2647	2655	1207
35°	2248	2255	2273	2289	2295	1406
45°	1829	1843	1862	1881	1888	1413
55°	1390	1401	1419	1436	1444	1244
65°	939	946	960	973	979	930
75°	486	489	498	507	507	515
85°	103	106	109	107	107	126
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3075.6	3075.6	3075.6	3075.6	3075.6
2.5°	3072.8	3072.8	3070.1	3071.0	3069.2
5°	3056.3	3057.2	3057.2	3058.2	3055.4
7.5°	3032.5	3034.3	3037.1	3038.0	3035.2
10°	3003.1	3005.0	3005.9	3009.5	3006.8
12.5°	2964.6	2965.5	2966.4	2971.9	2969.2
15°	2910.5	2912.3	2918.7	2924.2	2924.2
17.5°	2849.9	2853.6	2860.9	2868.3	2866.5
20°	2783.9	2786.6	2793.1	2803.2	2802.2
22.5°	2705.9	2708.7	2717.9	2728.9	2731.6
25°	2621.5	2625.2	2639.0	2647.2	2654.6
27.5°	2534.4	2539.0	2551.8	2564.7	2568.3
30°	2441.8	2449.1	2461.9	2475.7	2480.3
32.5°	2347.3	2350.9	2368.4	2383.1	2392.2
35°	2248.2	2254.6	2273.0	2288.6	2295.0
37.5°	2146.4	2155.6	2174.8	2191.3	2196.8
40°	2045.5	2052.8	2069.3	2090.4	2096.9
42.5°	1940.9	1947.4	1967.5	1985.9	1992.3
45°	1829.0	1842.8	1862.0	1881.3	1887.7
47.5°	1720.8	1733.6	1752.9	1772.2	1779.5
50°	1612.6	1626.3	1642.8	1663.0	1668.5
52.5°	1504.3	1515.3	1532.7	1550.2	1558.4
55°	1389.7	1400.7	1419.0	1436.4	1443.8
57.5°	1281.4	1288.8	1306.2	1322.7	1329.1
60°	1167.7	1175.0	1191.5	1209.0	1214.5
62.5°	1055.8	1060.4	1076.0	1092.5	1096.1
65°	939.3	945.7	960.4	973.2	978.7
67.5°	825.5	831.0	843.9	857.6	860.4
70°	711.8	715.5	727.4	737.5	742.1
72.5°	597.1	600.8	613.6	619.2	623.7
75°	486.1	488.9	498.1	507.2	507.2
77.5°	377.9	382.5	389.8	393.5	395.3
80°	275.2	279.8	285.3	288.9	288.0
82.5°	181.6	186.2	189.9	191.7	189.9
85°	102.7	106.4	109.2	107.3	107.3
87.5°	40.4	42.2	44.0	43.1	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)