

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: P708822

Luminaire Tested: **24APR-X-89L840-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708822
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-X-89L840-UNV
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

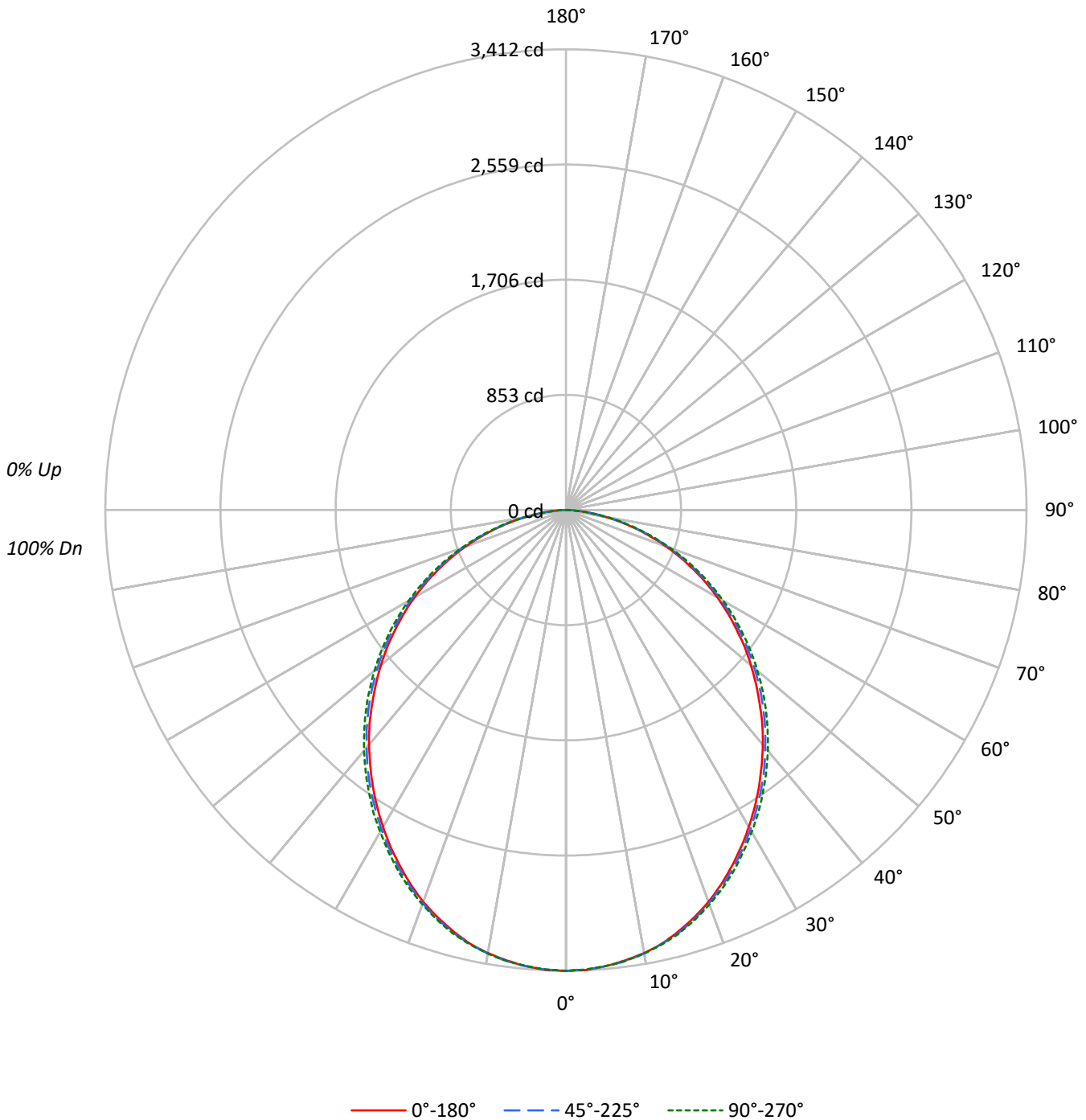
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8943.5 lumens
Efficiency: N/A
Efficacy: 115.1 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): 77.7
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





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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°	9183	9183	9183
5°	9161	9163	9158
10°	9105	9113	9116
15°	8997	9022	9039
20°	8846	8875	8904
25°	8636	8694	8745
30°	8419	8488	8551
35°	8195	8285	8365
40°	7973	8066	8173
45°	7723	7862	7971
50°	7490	7631	7750
55°	7234	7387	7515
60°	6973	7115	7252
65°	6636	6785	6914
70°	6214	6350	6478
75°	5608	5745	5852
80°	4731	4905	4953
85°	3520	3739	3677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.0	3.6
10°-20°	912.3	10.2
20°-30°	1347.7	15.1
30°-40°	1576.9	17.6
40°-50°	1592.7	17.8
50°-60°	1407.7	15.7
60°-70°	1053.7	11.8
70°-80°	585.6	6.5
80°-90°	144.8	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°	2582.1	28.9
0°-40°	4158.9	46.5
0°-60°	7159.3	80.1
0°-90°	8943.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8943.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3412	3412	3412	3412	3412	
5°	3391	3392	3392	3393	3390	322
15°	3229	3231	3238	3245	3245	910
25°	2909	2913	2928	2937	2945	1340
35°	2494	2502	2522	2539	2546	1560
45°	2029	2045	2066	2087	2094	1567
55°	1542	1554	1574	1594	1602	1381
65°	1042	1049	1066	1080	1086	1032
75°	539	542	553	563	563	572
85°	114	118	121	119	119	140
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3412.5	3412.5	3412.5	3412.5	3412.5
2.5°	3409.5	3409.5	3406.4	3407.4	3405.4
5°	3391.2	3392.2	3392.2	3393.2	3390.1
7.5°	3364.7	3366.7	3369.8	3370.8	3367.7
10°	3332.1	3334.2	3335.2	3339.2	3336.2
12.5°	3289.4	3290.4	3291.4	3297.5	3294.5
15°	3229.3	3231.4	3238.5	3244.6	3244.6
17.5°	3162.2	3166.2	3174.4	3182.5	3180.5
20°	3088.9	3091.9	3099.1	3110.3	3109.2
22.5°	3002.4	3005.4	3015.6	3027.8	3030.9
25°	2908.7	2912.8	2928.1	2937.2	2945.4
27.5°	2812.1	2817.1	2831.4	2845.6	2849.7
30°	2709.3	2717.4	2731.7	2746.9	2752.0
32.5°	2604.4	2608.5	2627.8	2644.1	2654.3
35°	2494.5	2501.6	2522.0	2539.3	2546.4
37.5°	2381.5	2391.7	2413.1	2431.4	2437.5
40°	2269.6	2277.7	2296.1	2319.5	2326.6
42.5°	2153.6	2160.7	2183.1	2203.4	2210.6
45°	2029.4	2044.7	2066.0	2087.4	2094.5
47.5°	1909.3	1923.6	1944.9	1966.3	1974.4
50°	1789.2	1804.5	1822.8	1845.2	1851.3
52.5°	1669.1	1681.3	1700.7	1720.0	1729.2
55°	1541.9	1554.1	1574.5	1593.8	1601.9
57.5°	1421.8	1429.9	1449.3	1467.6	1474.7
60°	1295.6	1303.7	1322.1	1341.4	1347.5
62.5°	1171.4	1176.5	1193.8	1212.1	1216.2
65°	1042.2	1049.3	1065.6	1079.8	1085.9
67.5°	916.0	922.1	936.3	951.6	954.7
70°	789.8	793.8	807.1	818.3	823.4
72.5°	662.6	666.6	680.9	687.0	692.1
75°	539.4	542.5	552.6	562.8	562.8
77.5°	419.3	424.4	432.5	436.6	438.7
80°	305.3	310.4	316.5	320.6	319.6
82.5°	201.5	206.6	210.7	212.7	210.7
85°	114.0	118.1	121.1	119.1	119.1
87.5°	44.8	46.8	48.9	47.8	45.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)