

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: P708935

Luminaire Tested: **24APR-X-181L840-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708935
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-X-181L840-UNV
Description: ArcMed Patient Recessed 2x4 Fixture EXAM Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

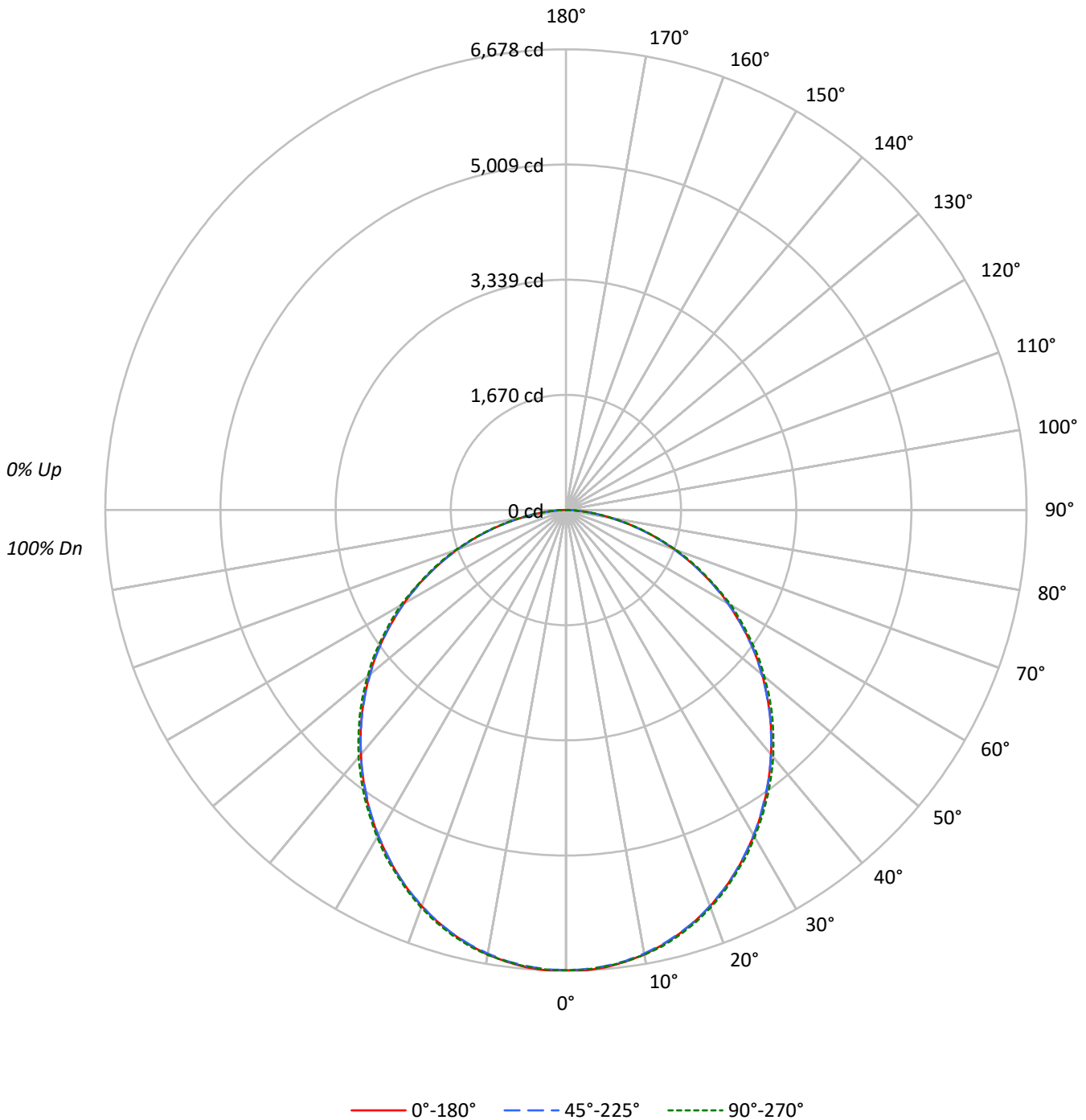
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18102.9 lumens
Efficiency: N/A
Efficacy: 130.1 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): 139.1
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	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°	8975	8975	8975
5°	8985	8961	8970
10°	8940	8920	8944
15°	8856	8849	8884
20°	8750	8743	8783
25°	8611	8614	8643
30°	8461	8455	8502
35°	8301	8281	8357
40°	8125	8120	8212
45°	7957	7951	8047
50°	7773	7757	7861
55°	7561	7550	7655
60°	7312	7308	7448
65°	6980	6992	7074
70°	6617	6563	6700
75°	6049	6001	6116
80°	5232	5168	5274
85°	4116	4074	4187



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	630.6	3.5
10°-20°	1793.0	9.9
20°-30°	2674.0	14.8
30°-40°	3164.1	17.5
40°-50°	3233.1	17.9
50°-60°	2889.4	16.0
60°-70°	2177.8	12.0
70°-80°	1225.9	6.8
80°-90°	314.9	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°	5097.6	28.2
0°-40°	8261.7	45.6
0°-60°	14384.3	79.5
0°-90°	18102.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18102.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6671	6671	6671	6671	6671	
5°	6652	6643	6635	6642	6642	631
15°	6357	6349	6353	6366	6378	1793
25°	5800	5792	5802	5821	5822	2672
35°	5054	5043	5042	5076	5088	3160
45°	4182	4178	4179	4211	4229	3225
55°	3223	3223	3219	3247	3264	2879
65°	2192	2182	2196	2217	2222	2177
75°	1164	1142	1154	1149	1176	1231
85°	267	256	264	268	271	318
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6670.8	6670.8	6670.8	6670.8	6670.8
2.5°	6678.1	6668.0	6660.7	6664.4	6667.1
5°	6652.5	6643.3	6635.0	6641.5	6641.5
7.5°	6603.9	6599.3	6592.9	6598.4	6600.2
10°	6543.4	6533.4	6528.8	6541.6	6546.2
12.5°	6458.2	6446.3	6450.0	6466.5	6473.8
15°	6357.4	6349.2	6352.9	6365.7	6377.6
17.5°	6242.9	6233.8	6242.0	6253.0	6264.0
20°	6111.0	6101.8	6106.4	6122.0	6133.9
22.5°	5964.4	5955.2	5960.7	5974.5	5987.3
25°	5800.4	5792.2	5802.2	5820.6	5821.5
27.5°	5629.1	5619.9	5622.7	5641.9	5659.3
30°	5445.8	5433.9	5442.2	5461.4	5472.4
32.5°	5253.4	5242.4	5248.9	5270.8	5283.7
35°	5053.7	5042.7	5041.8	5075.7	5087.6
37.5°	4842.1	4835.7	4841.1	4868.6	4883.3
40°	4625.8	4616.7	4623.1	4657.9	4675.3
42.5°	4406.9	4401.4	4402.3	4437.1	4450.9
45°	4181.5	4177.8	4178.7	4210.8	4229.1
47.5°	3948.8	3940.5	3944.2	3977.2	3996.4
50°	3713.3	3711.5	3706.0	3739.0	3755.5
52.5°	3471.4	3467.8	3467.8	3497.1	3520.9
55°	3223.2	3223.2	3218.6	3247.0	3263.5
57.5°	2963.0	2964.8	2972.1	2997.8	3014.3
60°	2717.4	2708.3	2715.6	2738.5	2767.8
62.5°	2472.8	2445.3	2452.6	2473.7	2485.6
65°	2192.4	2182.4	2196.1	2217.2	2221.8
67.5°	1935.0	1924.9	1932.2	1946.9	1967.1
70°	1682.1	1655.6	1668.4	1684.0	1703.2
72.5°	1416.4	1393.5	1411.8	1424.7	1438.4
75°	1163.6	1141.6	1154.4	1148.9	1176.4
77.5°	909.8	894.2	905.2	916.2	937.3
80°	675.2	657.8	667.0	671.6	680.7
82.5°	459.9	447.1	449.8	468.2	462.7
85°	266.6	255.6	263.9	267.5	271.2
87.5°	105.4	95.3	103.5	106.3	107.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)