

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: P709036

Luminaire Tested: **24APR-67-160L940-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709036
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-67-160L940-UNV
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

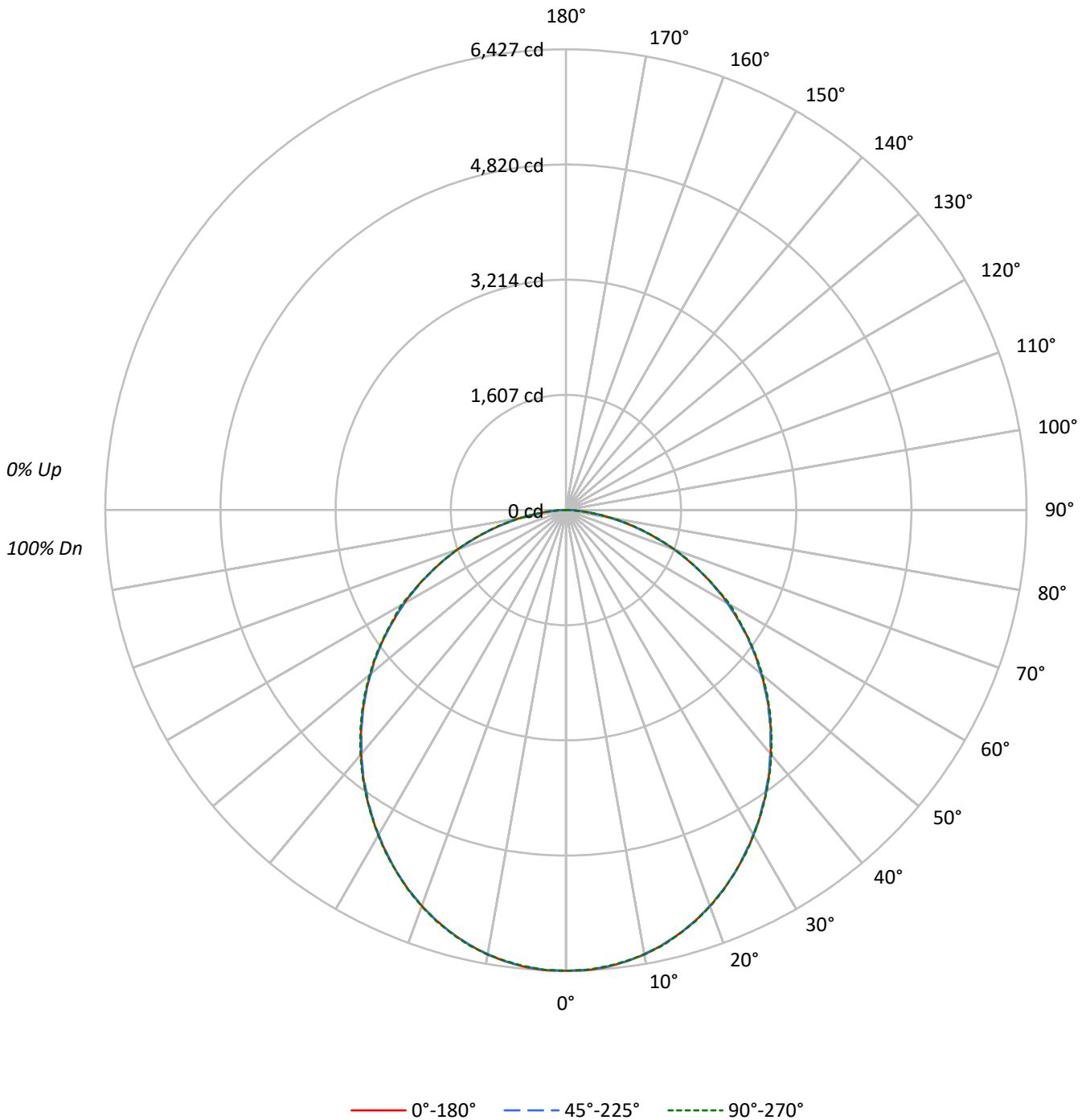
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17344.2 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 181.5
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	100				100
1	109	104	100	96	106	102	98	94	98	94	92	94	91	89	90	88	86	84				84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70				70
3	90	80	72	65	88	78	71	65	75	69	63	73	67	62	70	65	61	59				59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51				51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	51	46	44				44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38				38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34				34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30				30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27				27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25				25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8647	8647	8647
5°	8648	8640	8635
10°	8603	8595	8602
15°	8522	8522	8531
20°	8417	8411	8424
25°	8285	8281	8281
30°	8135	8123	8136
35°	7976	7955	7986
40°	7807	7792	7833
45°	7640	7625	7666
50°	7458	7438	7486
55°	7254	7236	7279
60°	7015	6998	7121
65°	6695	6697	6715
70°	6328	6294	6336
75°	5773	5728	5766
80°	4984	4922	4955
85°	3887	3850	3841



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	607.4	3.5
10°-20°	1725.1	9.9
20°-30°	2569.1	14.8
30°-40°	3035.2	17.5
40°-50°	3096.4	17.9
50°-60°	2762.9	15.9
60°-70°	2082.9	12.0
70°-80°	1167.9	6.7
80°-90°	297.2	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°	4901.6	28.3
0°-40°	7936.9	45.8
0°-60°	13796.2	79.5
0°-90°	17344.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17344.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6427	6427	6427	6427	6427	
5°	6403	6400	6397	6398	6393	608
15°	6118	6114	6118	6122	6124	1725
25°	5581	5574	5578	5583	5578	2570
35°	4856	4849	4843	4857	4862	3037
45°	4015	4013	4007	4019	4029	3097
55°	3092	3086	3084	3094	3103	2762
65°	2103	2092	2104	2110	2109	2086
75°	1110	1091	1102	1096	1109	1175
85°	252	243	249	249	249	301
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6427.0	6427.0	6427.0	6427.0	6427.0
2.5°	6427.0	6423.9	6421.4	6420.8	6422.1
5°	6402.9	6399.8	6396.7	6398.0	6393.0
7.5°	6356.6	6357.2	6354.8	6355.4	6349.8
10°	6296.7	6293.7	6291.2	6296.7	6296.1
12.5°	6215.9	6210.3	6212.8	6221.4	6222.1
15°	6117.7	6114.0	6117.7	6122.1	6124.5
17.5°	6006.0	6002.9	6007.2	6007.9	6012.8
20°	5878.2	5874.5	5874.5	5880.7	5883.2
22.5°	5736.9	5731.3	5732.6	5736.9	5740.0
25°	5580.7	5573.9	5578.2	5583.2	5578.2
27.5°	5412.2	5408.5	5404.2	5410.3	5418.4
30°	5236.3	5228.9	5228.3	5232.6	5236.9
32.5°	5050.5	5041.8	5041.8	5047.4	5051.1
35°	4856.0	4849.3	4843.1	4857.3	4862.2
37.5°	4655.4	4647.4	4646.8	4655.4	4663.5
40°	4444.9	4438.2	4436.3	4451.1	4459.8
42.5°	4232.6	4228.3	4224.0	4238.8	4245.6
45°	4015.3	4012.9	4007.3	4019.0	4028.9
47.5°	3791.9	3783.8	3782.0	3795.6	3805.5
50°	3562.9	3559.8	3553.6	3566.0	3576.4
52.5°	3330.8	3327.1	3322.8	3333.9	3345.0
55°	3092.5	3085.7	3084.5	3093.7	3103.0
57.5°	2844.4	2838.8	2847.5	2856.1	2863.5
60°	2606.7	2593.8	2600.5	2610.4	2646.2
62.5°	2367.8	2345.0	2349.9	2377.1	2361.7
65°	2103.0	2092.5	2103.6	2109.8	2109.2
67.5°	1854.9	1842.5	1859.2	1854.3	1861.7
70°	1608.6	1587.0	1600.0	1601.8	1610.5
72.5°	1354.3	1335.8	1346.9	1352.4	1358.0
75°	1110.5	1091.3	1101.8	1095.6	1109.2
77.5°	867.9	856.2	862.9	867.3	877.8
80°	643.2	630.2	635.2	635.8	639.5
82.5°	435.8	425.9	427.1	438.3	433.9
85°	251.8	242.6	249.4	248.8	248.8
87.5°	98.1	90.7	97.5	96.9	95.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)