

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: P

Luminaire Tested: **4APN-24L940-X-UNV-ASY**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-24L940-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

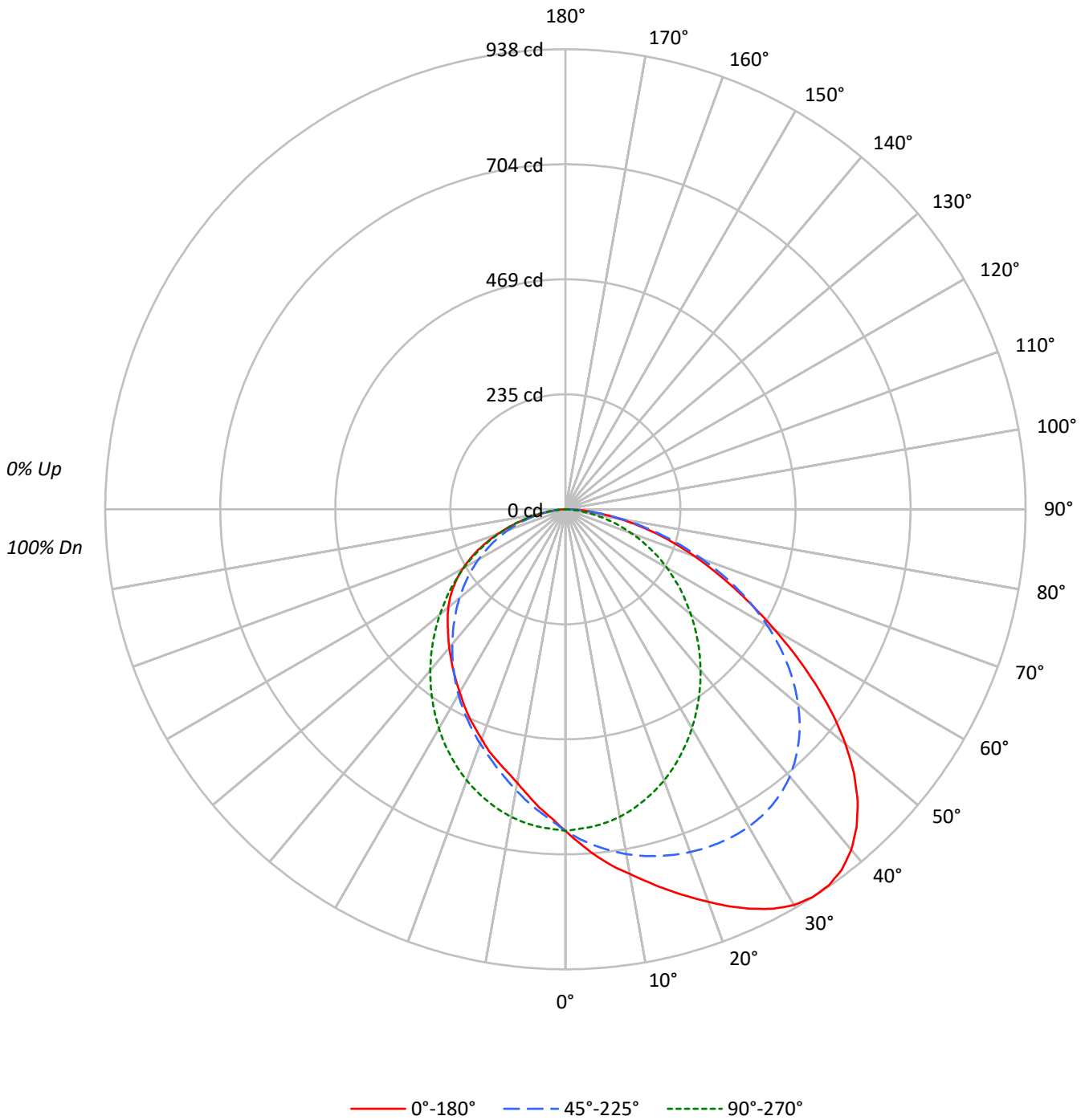
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2031.0 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 1.18 / 1.46
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 27.9
Input Voltage (V): 120
Input Current (A_{in}): 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	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	72	72	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	60	60	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	52	52	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	45	45	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	39	39	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	35	35	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	31	31	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	28	28	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	25	25	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6313	6313	6313
5°	6850	6275	5897
10°	7380	6226	5533
15°	8004	6136	5305
20°	8728	6027	5108
25°	9548	5886	4950
30°	10357	5732	4790
35°	11001	5563	4688
40°	11391	5385	4627
45°	11471	5200	4616
50°	11169	5001	4667
55°	10459	4822	4696
60°	9506	4604	4650
65°	8620	4353	4469
70°	7890	4036	4104
75°	7157	3630	3530
80°	6259	3033	2722
85°	5269	2198	2021



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.3	3.1
10°-20°	181.1	8.9
20°-30°	283.7	14.0
30°-40°	355.7	17.5
40°-50°	378.7	18.6
50°-60°	341.9	16.8
60°-70°	253.1	12.5
70°-80°	138.9	6.8
80°-90°	35.6	1.8
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°	527.1	26.0
0°-40°	882.9	43.5
0°-60°	1603.4	78.9
0°-90°	2031.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2031.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	656	656	656	656	656	
5°	709	688	649	618	610	69
15°	803	732	616	544	532	229
25°	899	749	554	472	466	416
35°	936	736	473	398	399	584
45°	842	672	382	320	339	646
55°	623	553	287	243	280	556
65°	378	390	191	165	196	378
75°	192	204	98	84	95	205
85°	48	47	20	19	18	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7
2.5°	682.1	680.8	679.2	678.6	676.2	673.0	670.0	670.0	666.5	658.1	652.2
5°	708.8	706.7	702.6	699.4	694.3	688.1	681.9	678.1	669.7	657.1	649.3
7.5°	733.3	730.6	725.5	719.3	711.0	701.8	691.6	683.5	670.8	653.8	643.9
10°	754.9	752.5	746.3	738.7	726.9	713.9	698.8	686.7	669.5	648.4	636.9
12.5°	778.6	776.2	767.6	757.3	741.2	723.9	704.0	687.3	666.0	640.6	627.4
15°	803.1	799.9	790.2	776.5	754.9	731.7	707.2	685.6	660.3	631.2	615.6
17.5°	827.4	824.2	812.0	794.5	767.6	738.7	708.5	681.9	652.2	619.6	602.6
20°	851.9	848.7	833.3	811.2	778.6	743.8	708.3	676.2	642.5	606.4	588.3
22.5°	876.4	872.7	854.1	827.1	787.8	747.4	705.3	668.4	630.4	591.3	571.9
25°	898.8	895.0	874.6	842.8	797.5	749.0	700.2	657.6	616.9	574.6	554.1
27.5°	918.2	913.6	892.3	857.3	805.8	749.5	693.4	645.5	601.3	556.5	535.8
30°	931.7	927.7	905.0	867.6	810.7	747.6	684.8	631.2	583.2	537.1	515.6
32.5°	937.6	934.1	911.8	872.4	811.5	742.8	674.3	615.3	564.4	516.7	494.8
35°	936.0	932.5	911.2	871.6	809.1	735.8	661.1	597.2	544.1	495.4	473.3
37.5°	925.8	921.7	902.3	864.3	802.1	725.5	646.0	577.6	522.3	473.5	451.2
40°	906.4	902.3	885.6	850.6	790.2	711.8	628.8	556.5	499.9	450.6	428.5
42.5°	878.6	874.3	861.1	829.0	773.2	693.7	609.1	534.2	476.2	428.5	405.3
45°	842.5	838.2	829.3	802.1	751.1	672.4	586.7	509.9	451.4	403.5	381.9
47.5°	797.8	794.0	789.7	768.6	723.9	647.9	561.7	484.0	425.6	380.0	357.9
50°	745.7	742.0	743.3	729.0	692.4	619.6	534.2	456.8	398.9	353.9	333.9
52.5°	686.7	683.7	690.2	684.0	655.7	588.1	504.8	428.8	371.7	329.1	309.9
55°	623.1	619.9	632.3	634.2	614.8	553.3	471.4	399.7	344.2	304.8	287.3
57.5°	557.6	554.9	570.8	579.7	570.0	515.8	437.7	369.8	315.9	279.5	262.0
60°	493.7	491.6	508.3	522.8	521.8	476.2	402.6	337.4	287.6	253.9	239.1
62.5°	433.6	431.2	447.9	465.2	471.4	433.9	367.9	305.6	259.3	228.3	215.1
65°	378.4	376.0	390.3	408.0	419.4	389.7	330.4	272.7	230.7	202.4	191.1
67.5°	327.7	327.7	336.6	353.1	366.8	344.4	292.1	241.5	201.3	178.4	167.1
70°	280.3	280.0	286.5	298.1	314.0	295.9	253.3	208.6	173.6	153.4	143.4
72.5°	235.3	237.2	239.6	248.5	265.2	249.6	214.8	176.3	146.3	128.6	120.2
75°	192.4	192.2	195.7	203.5	215.6	204.0	176.3	144.7	119.4	104.8	97.6
77.5°	151.5	151.2	154.2	158.7	169.0	159.8	139.1	115.6	93.0	80.9	75.7
80°	112.9	112.9	115.6	118.0	125.6	118.3	103.8	86.5	68.2	58.8	54.7
82.5°	78.4	80.0	79.0	82.2	86.5	80.3	71.2	59.3	45.3	38.8	36.1
85°	47.7	49.1	47.7	50.4	52.3	46.9	42.3	35.3	26.1	21.8	19.9
87.5°	24.5	24.3	24.0	25.3	25.9	22.6	19.9	17.0	11.6	8.9	7.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7	655.7
2.5°	648.7	650.3	647.9	639.0	635.5	631.7	630.1	628.5	631.5	630.7
5°	643.3	641.4	635.2	623.9	618.0	611.8	608.8	606.9	611.0	610.2
7.5°	636.0	630.7	621.5	607.7	600.2	591.8	587.8	585.4	588.1	587.5
10°	626.9	618.0	606.7	590.2	581.3	572.2	567.6	564.1	566.2	566.0
12.5°	615.3	603.7	590.0	571.4	562.2	552.8	548.7	546.3	549.0	548.2
15°	602.4	588.3	572.4	553.6	543.6	535.0	532.0	530.1	532.3	532.3
17.5°	588.1	571.6	554.1	535.0	525.5	518.8	515.8	514.5	515.6	517.2
20°	572.2	553.8	535.0	516.4	508.3	501.3	498.6	497.2	499.7	498.6
22.5°	554.7	535.2	515.6	498.1	490.8	483.8	481.1	480.3	483.0	481.9
25°	536.1	515.0	495.6	479.7	472.5	466.5	464.1	463.3	464.6	466.0
27.5°	518.5	494.8	475.7	461.4	454.9	449.3	447.1	445.8	446.8	448.5
30°	497.2	474.3	455.5	442.3	436.1	430.7	429.1	428.0	429.6	430.9
32.5°	477.3	454.1	435.3	422.3	416.9	411.8	411.5	411.0	412.9	414.5
35°	455.7	433.1	414.8	402.6	397.5	393.2	394.0	394.8	397.0	398.9
37.5°	433.9	411.8	394.3	383.2	378.4	374.9	377.3	378.4	381.4	383.2
40°	411.8	389.7	373.5	363.6	358.7	357.1	360.6	363.0	366.5	368.2
42.5°	389.2	368.7	352.5	343.4	339.3	339.3	343.9	347.7	351.7	353.3
45°	366.5	346.6	331.2	322.9	319.9	322.1	327.5	332.3	337.4	339.0
47.5°	343.6	324.2	310.2	302.7	301.0	304.3	311.0	317.5	323.4	325.6
50°	320.7	303.2	289.2	282.2	282.2	286.2	294.8	302.9	309.4	311.6
52.5°	297.8	281.1	266.8	261.7	262.8	268.4	278.4	286.8	294.0	296.2
55°	274.6	258.2	245.8	241.5	243.4	250.4	260.6	270.3	277.3	279.8
57.5°	251.7	236.1	224.8	221.3	224.0	231.8	243.6	252.0	259.3	261.4
60°	228.5	212.6	203.7	201.1	204.6	212.6	224.8	232.6	239.3	241.5
62.5°	205.6	190.8	183.0	180.6	184.6	193.2	205.1	212.1	217.2	219.4
65°	182.5	169.3	162.0	160.4	164.7	173.0	184.3	190.3	194.0	196.2
67.5°	159.6	148.2	141.5	140.1	144.7	152.3	162.8	166.0	169.5	171.7
70°	136.9	126.7	121.0	120.2	124.2	131.5	140.4	142.0	143.9	145.8
72.5°	114.5	106.5	100.8	100.5	104.3	110.2	117.5	117.8	118.3	120.2
75°	93.0	85.7	81.4	82.2	84.4	89.2	94.9	93.3	93.5	94.9
77.5°	72.2	66.3	63.3	63.9	65.5	69.0	72.8	70.9	69.8	71.2
80°	52.0	46.9	45.8	46.1	47.2	49.6	51.7	50.1	48.0	49.1
82.5°	34.2	31.0	30.5	30.7	31.5	32.9	33.4	31.0	30.5	31.3
85°	18.9	17.5	17.5	18.3	18.6	18.9	18.9	17.5	17.8	18.3
87.5°	7.5	7.5	8.4	9.2	8.6	7.5	6.5	4.3	4.3	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)