

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-24L930-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-24L930-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

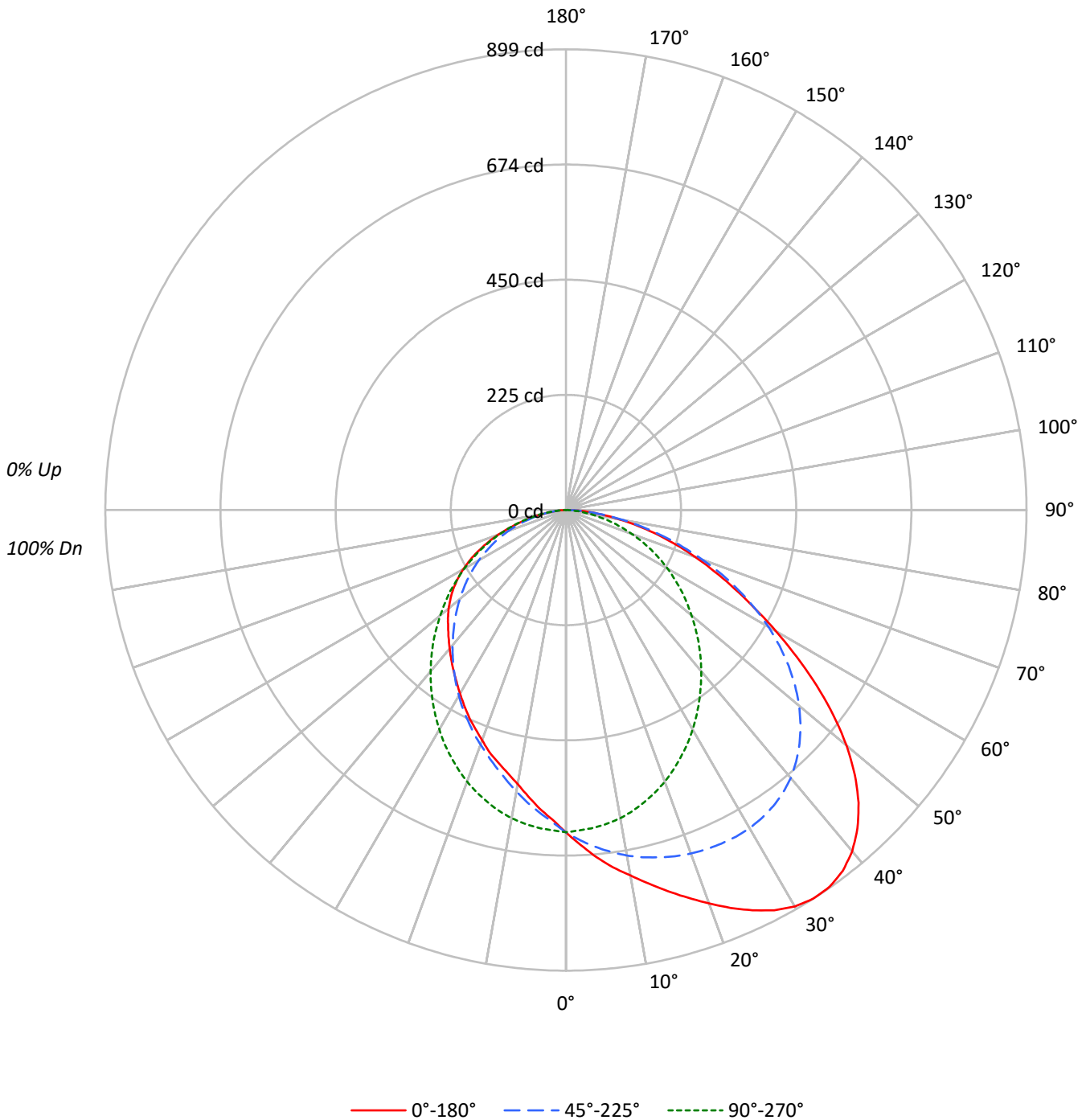
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1947.6 lumens
Efficiency: N/A
Efficacy: 69.8 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 (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	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°	6054	6054	6054
5°	6569	6017	5654
10°	7077	5970	5305
15°	7676	5883	5087
20°	8369	5780	4898
25°	9156	5644	4746
30°	9932	5496	4593
35°	10548	5333	4495
40°	10923	5164	4436
45°	11000	4986	4426
50°	10710	4796	4475
55°	10029	4624	4503
60°	9117	4413	4459
65°	8265	4173	4285
70°	7566	3870	3935
75°	6863	3482	3385
80°	6004	2911	2606
85°	5048	2110	1944



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	3.1
10°-20°	173.7	8.9
20°-30°	272.1	14.0
30°-40°	341.1	17.5
40°-50°	363.1	18.6
50°-60°	327.8	16.8
60°-70°	242.7	12.5
70°-80°	133.2	6.8
80°-90°	34.2	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°	505.5	26.0
0°-40°	846.6	43.5
0°-60°	1537.6	78.9
0°-90°	1947.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1947.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	629	629	629	629	629	
5°	680	660	623	593	585	66
15°	770	702	590	521	510	220
25°	862	718	531	453	447	399
35°	898	706	454	381	382	560
45°	808	645	366	307	325	619
55°	598	531	276	233	268	533
65°	363	374	183	158	188	362
75°	184	196	94	81	91	196
85°	46	45	19	18	18	54
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°	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8
2.5°	654.1	652.8	651.3	650.7	648.4	645.3	642.5	642.5	639.1	631.1	625.4
5°	679.7	677.6	673.7	670.6	665.7	659.8	653.8	650.2	642.2	630.1	622.6
7.5°	703.2	700.6	695.7	689.8	681.8	673.0	663.1	655.4	643.2	627.0	617.4
10°	723.9	721.6	715.6	708.4	697.0	684.6	670.1	658.5	642.0	621.8	610.7
12.5°	746.6	744.3	736.0	726.2	710.7	694.2	675.0	659.0	638.6	614.3	601.6
15°	770.1	767.0	757.7	744.6	723.9	701.7	678.1	657.5	633.2	605.3	590.3
17.5°	793.4	790.3	778.7	761.9	736.0	708.4	679.4	653.8	625.4	594.1	577.9
20°	816.9	813.8	799.1	777.9	746.6	713.3	679.2	648.4	616.1	581.5	564.2
22.5°	840.4	836.8	819.0	793.1	755.4	716.6	676.3	640.9	604.5	567.0	548.4
25°	861.9	858.3	838.6	808.1	764.7	718.2	671.4	630.6	591.6	551.0	531.3
27.5°	880.5	876.1	855.7	822.1	772.7	718.7	665.0	619.0	576.6	533.7	513.8
30°	893.4	889.5	867.8	831.9	777.4	716.9	656.7	605.3	559.3	515.1	494.4
32.5°	899.1	895.7	874.3	836.6	778.1	712.2	646.6	590.0	541.2	495.4	474.5
35°	897.5	894.2	873.8	835.8	775.8	705.5	633.9	572.7	521.8	475.0	453.8
37.5°	887.7	883.8	865.2	828.8	769.1	695.7	619.5	553.8	500.8	454.1	432.6
40°	869.1	865.2	849.2	815.6	757.7	682.5	602.9	533.7	479.4	432.1	410.9
42.5°	842.5	838.4	825.7	794.9	741.5	665.2	584.1	512.2	456.7	410.9	388.7
45°	807.9	803.7	795.2	769.1	720.3	644.8	562.6	489.0	432.9	386.9	366.2
47.5°	765.0	761.3	757.2	737.1	694.2	621.3	538.6	464.1	408.1	364.4	343.2
50°	715.1	711.5	712.8	699.1	663.9	594.1	512.2	438.0	382.5	339.3	320.2
52.5°	658.5	655.6	661.9	655.9	628.8	563.9	484.0	411.2	356.4	315.5	297.2
55°	597.5	594.4	606.3	608.1	589.5	530.6	452.0	383.3	330.0	292.3	275.5
57.5°	534.7	532.1	547.4	555.9	546.6	494.6	419.7	354.6	302.9	268.0	251.2
60°	473.5	471.4	487.4	501.4	500.3	456.7	386.1	323.6	275.8	243.4	229.2
62.5°	415.8	413.5	429.5	446.1	452.0	416.1	352.8	293.1	248.6	218.9	206.2
65°	362.8	360.5	374.2	391.3	402.1	373.7	316.8	261.5	221.2	194.1	183.2
67.5°	314.3	314.3	322.8	338.5	351.7	330.3	280.1	231.6	193.1	171.1	160.2
70°	268.8	268.5	274.7	285.8	301.1	283.8	242.9	200.0	166.4	147.0	137.5
72.5°	225.6	227.4	229.7	238.3	254.3	239.3	206.0	169.0	140.3	123.3	115.3
75°	184.5	184.3	187.6	195.1	206.7	195.6	169.0	138.8	114.5	100.5	93.6
77.5°	145.2	145.0	147.8	152.2	162.0	153.3	133.4	110.9	89.2	77.5	72.6
80°	108.3	108.3	110.9	113.2	120.4	113.5	99.5	83.0	65.4	56.3	52.5
82.5°	75.2	76.8	75.7	78.8	83.0	77.0	68.2	56.9	43.4	37.2	34.6
85°	45.7	47.0	45.7	48.3	50.1	45.0	40.6	33.9	25.1	20.9	19.1
87.5°	23.5	23.3	23.0	24.3	24.8	21.7	19.1	16.3	11.1	8.5	7.2
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°	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8	628.8
2.5°	622.1	623.6	621.3	612.7	609.4	605.8	604.2	602.7	605.5	604.7
5°	616.9	615.1	609.1	598.3	592.6	586.6	583.8	582.0	585.9	585.1
7.5°	609.9	604.7	596.0	582.8	575.5	567.5	563.6	561.3	563.9	563.4
10°	601.1	592.6	581.7	566.0	557.4	548.7	544.3	540.9	543.0	542.7
12.5°	590.0	578.9	565.7	547.9	539.1	530.1	526.2	523.8	526.4	525.7
15°	577.6	564.2	548.9	530.8	521.3	513.0	510.2	508.3	510.4	510.4
17.5°	563.9	548.1	531.3	513.0	503.9	497.5	494.6	493.4	494.4	495.9
20°	548.7	531.1	513.0	495.2	487.4	480.7	478.1	476.8	479.1	478.1
22.5°	531.9	513.3	494.4	477.6	470.6	463.9	461.3	460.5	463.1	462.1
25°	514.0	493.9	475.3	460.0	453.0	447.4	445.0	444.2	445.5	446.8
27.5°	497.2	474.5	456.1	442.4	436.2	430.8	428.7	427.5	428.5	430.0
30°	476.8	454.8	436.8	424.1	418.1	413.0	411.4	410.4	411.9	413.2
32.5°	457.7	435.5	417.4	405.0	399.8	394.9	394.6	394.1	395.9	397.5
35°	437.0	415.3	397.7	386.1	381.2	377.1	377.8	378.6	380.7	382.5
37.5°	416.1	394.9	378.1	367.5	362.8	359.5	361.8	362.8	365.7	367.5
40°	394.9	373.7	358.2	348.6	344.0	342.4	345.8	348.1	351.5	353.0
42.5°	373.2	353.5	338.0	329.2	325.4	325.4	329.8	333.4	337.3	338.8
45°	351.5	332.3	317.6	309.6	306.8	308.8	314.0	318.7	323.6	325.1
47.5°	329.5	310.9	297.5	290.2	288.7	291.8	298.2	304.4	310.1	312.2
50°	307.5	290.7	277.3	270.6	270.6	274.5	282.7	290.5	296.7	298.8
52.5°	285.6	269.5	255.9	250.9	252.0	257.4	267.0	275.0	282.0	284.0
55°	263.3	247.6	235.7	231.6	233.4	240.1	249.9	259.2	265.9	268.3
57.5°	241.4	226.4	215.5	212.2	214.8	222.3	233.6	241.6	248.6	250.7
60°	219.2	203.9	195.4	192.8	196.2	203.9	215.5	223.0	229.5	231.6
62.5°	197.2	183.0	175.5	173.2	177.0	185.3	196.7	203.4	208.3	210.4
65°	175.0	162.3	155.3	153.8	157.9	165.9	176.8	182.5	186.1	188.1
67.5°	153.0	142.1	135.7	134.4	138.8	146.0	156.1	159.2	162.6	164.6
70°	131.3	121.5	116.0	115.3	119.1	126.1	134.6	136.2	138.0	139.8
72.5°	109.8	102.1	96.7	96.4	100.0	105.7	112.7	112.9	113.5	115.3
75°	89.2	82.2	78.0	78.8	80.9	85.5	91.0	89.4	89.7	91.0
77.5°	69.3	63.6	60.7	61.2	62.8	66.2	69.8	68.0	66.9	68.2
80°	49.9	45.0	43.9	44.2	45.2	47.6	49.6	48.1	46.0	47.0
82.5°	32.8	29.7	29.2	29.5	30.2	31.5	32.0	29.7	29.2	30.0
85°	18.1	16.8	16.8	17.6	17.8	18.1	18.1	16.8	17.1	17.6
87.5°	7.2	7.2	8.0	8.8	8.3	7.2	6.2	4.1	4.1	4.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)