

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-X-30L930-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-X-30L930-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

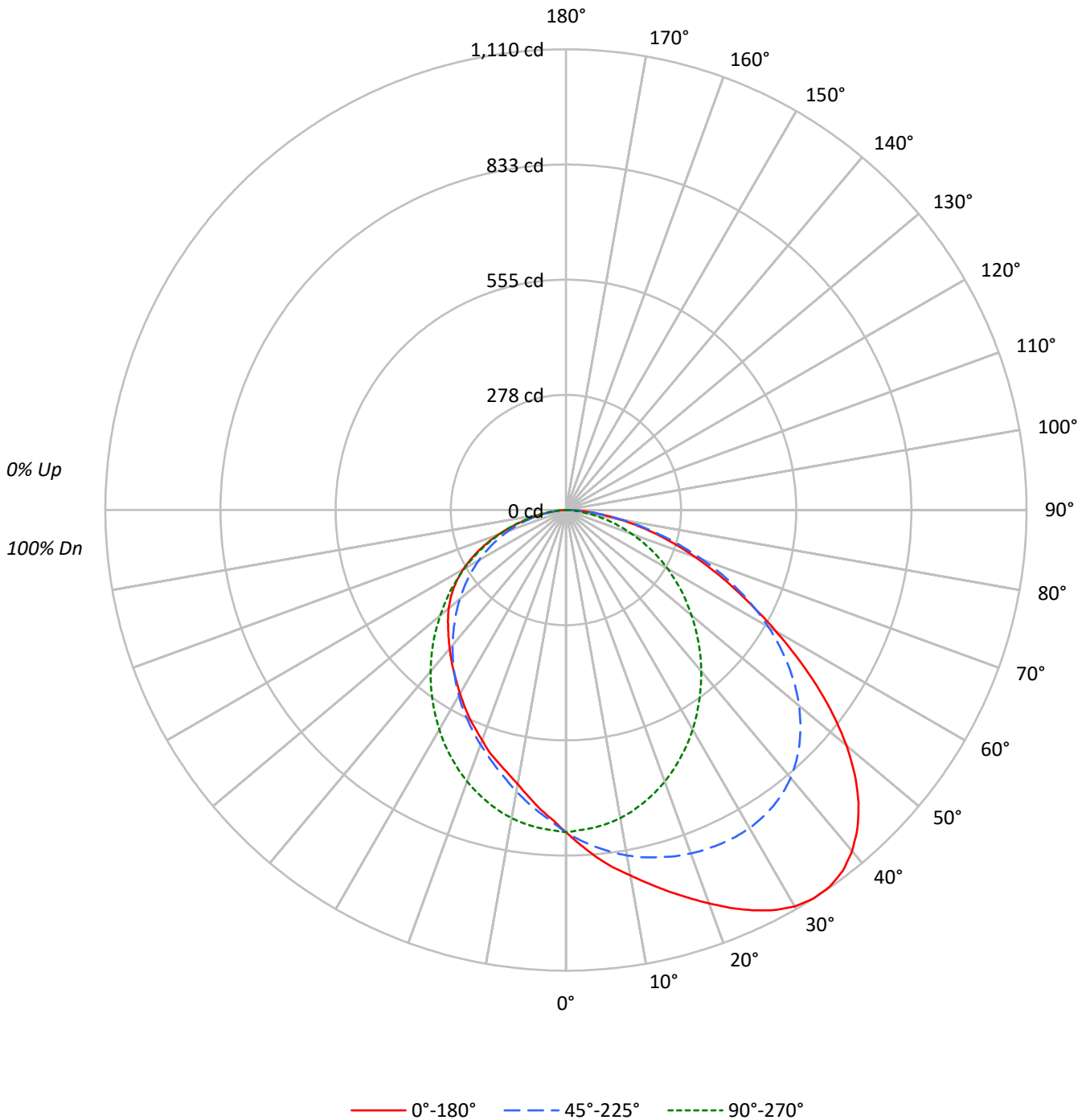
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2404.4 lumens
Efficiency: N/A
Efficacy: 74.0 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): 32.5
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°	7474	7474	7474
5°	8109	7428	6980
10°	8737	7370	6550
15°	9477	7263	6280
20°	10332	7136	6048
25°	11302	6968	5859
30°	12262	6786	5672
35°	13023	6585	5550
40°	13485	6376	5477
45°	13580	6155	5465
50°	13222	5921	5524
55°	12382	5708	5559
60°	11254	5449	5505
65°	10206	5153	5292
70°	9340	4777	4858
75°	8474	4296	4177
80°	7413	3593	3221
85°	6241	2607	2397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	3.1
10°-20°	214.4	8.9
20°-30°	335.9	14.0
30°-40°	421.1	17.5
40°-50°	448.3	18.6
50°-60°	404.7	16.8
60°-70°	299.6	12.5
70°-80°	164.4	6.8
80°-90°	42.2	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°	624.1	26.0
0°-40°	1045.2	43.5
0°-60°	1898.2	78.9
0°-90°	2404.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2404.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	776	776	776	776	776	
5°	839	814	769	732	722	82
15°	951	866	729	644	630	271
25°	1064	887	656	559	552	492
35°	1108	871	560	471	472	691
45°	997	796	452	379	401	765
55°	738	655	340	288	331	658
65°	448	461	226	195	232	447
75°	228	242	116	100	112	242
85°	56	56	24	22	22	67
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°	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	807.5	805.9	804.0	803.4	800.5	796.7	793.2	793.2	789.0	779.1	772.1
5°	839.1	836.6	831.8	827.9	821.9	814.5	807.2	802.7	792.9	777.9	768.6
7.5°	868.1	865.0	858.9	851.6	841.7	830.8	818.7	809.1	794.1	774.0	762.2
10°	893.7	890.8	883.5	874.5	860.5	845.2	827.3	813.0	792.5	767.6	753.9
12.5°	921.8	918.9	908.7	896.5	877.4	857.0	833.4	813.6	788.4	758.4	742.8
15°	950.8	947.0	935.5	919.2	893.7	866.2	837.2	811.7	781.7	747.2	728.7
17.5°	979.5	975.7	961.3	940.6	908.7	874.5	838.8	807.2	772.1	733.5	713.4
20°	1008.5	1004.7	986.5	960.4	921.8	880.6	838.5	800.5	760.6	717.9	696.5
22.5°	1037.6	1033.1	1011.1	979.2	932.6	884.7	835.0	791.3	746.3	700.0	677.0
25°	1064.0	1059.6	1035.3	997.7	944.1	886.7	828.9	778.5	730.3	680.2	656.0
27.5°	1087.0	1081.6	1056.4	1014.9	954.0	887.3	820.9	764.1	711.8	658.8	634.3
30°	1103.0	1098.2	1071.4	1027.0	959.7	885.1	810.7	747.2	690.4	635.9	610.4
32.5°	1110.0	1105.8	1079.4	1032.8	960.7	879.3	798.3	728.4	668.1	611.6	585.8
35°	1108.1	1103.9	1078.7	1031.8	957.8	871.0	782.6	707.0	644.2	586.4	560.3
37.5°	1096.0	1091.2	1068.2	1023.2	949.5	858.9	764.8	683.7	618.3	560.6	534.1
40°	1073.0	1068.2	1048.4	1006.9	935.5	842.6	744.4	658.8	591.8	533.5	507.3
42.5°	1040.1	1035.0	1019.4	981.4	915.4	821.2	721.1	632.4	563.8	507.3	479.9
45°	997.4	992.3	981.7	949.5	889.2	796.0	694.6	603.7	534.4	477.6	452.1
47.5°	944.4	939.9	934.8	909.9	857.0	767.0	664.9	573.0	503.8	449.9	423.7
50°	882.8	878.4	880.0	863.0	819.7	733.5	632.4	540.8	472.2	418.9	395.3
52.5°	813.0	809.4	817.1	809.8	776.3	696.2	597.6	507.6	440.0	389.6	366.9
55°	737.7	733.8	748.5	750.7	727.8	655.0	558.0	473.2	407.4	360.9	340.1
57.5°	660.1	656.9	675.8	686.3	674.8	610.7	518.1	437.7	373.9	330.9	310.1
60°	584.5	582.0	601.7	619.0	617.7	563.8	476.7	399.5	340.4	300.6	283.0
62.5°	513.4	510.5	530.3	550.7	558.0	513.7	435.5	361.8	306.9	270.2	254.6
65°	448.0	445.1	462.0	483.0	496.5	461.4	391.2	322.9	273.1	239.6	226.2
67.5°	388.0	388.0	398.5	418.0	434.2	407.8	345.9	285.9	238.3	211.2	197.8
70°	331.8	331.5	339.2	352.9	371.7	350.3	299.9	246.9	205.5	181.5	169.7
72.5°	278.5	280.8	283.6	294.2	314.0	295.4	254.3	208.7	173.2	152.2	142.3
75°	227.8	227.5	231.6	240.9	255.2	241.5	208.7	171.3	141.3	124.1	115.5
77.5°	179.3	179.0	182.5	187.9	200.0	189.2	164.6	136.9	110.1	95.7	89.7
80°	133.7	133.7	136.9	139.7	148.7	140.1	122.8	102.4	80.7	69.6	64.8
82.5°	92.8	94.8	93.5	97.3	102.4	95.1	84.2	70.2	53.6	45.9	42.8
85°	56.5	58.1	56.5	59.7	61.9	55.5	50.1	41.8	30.9	25.8	23.6
87.5°	29.0	28.7	28.4	30.0	30.6	26.8	23.6	20.1	13.7	10.5	8.9
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°	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	768.0	769.9	767.0	756.5	752.3	747.9	746.0	744.0	747.5	746.6
5°	761.6	759.4	752.0	738.6	731.6	724.3	720.7	718.5	723.3	722.3
7.5°	753.0	746.6	735.7	719.5	710.5	700.6	695.9	693.0	696.2	695.5
10°	742.1	731.6	718.2	698.7	688.2	677.4	671.9	667.8	670.3	670.0
12.5°	728.4	714.7	698.4	676.4	665.5	654.4	649.6	646.7	649.9	649.0
15°	713.1	696.5	677.7	655.3	643.5	633.3	629.8	627.6	630.1	630.1
17.5°	696.2	676.7	656.0	633.3	622.2	614.2	610.7	609.1	610.4	612.3
20°	677.4	655.7	633.3	611.3	601.7	593.4	590.3	588.7	591.5	590.3
22.5°	656.6	633.6	610.4	589.6	581.0	572.7	569.5	568.6	571.7	570.5
25°	634.6	609.7	586.7	567.9	559.3	552.3	549.4	548.5	550.1	551.6
27.5°	613.9	585.8	563.1	546.2	538.6	531.9	529.3	527.7	529.0	530.9
30°	588.7	561.5	539.2	523.6	516.2	509.9	507.9	506.7	508.6	510.2
32.5°	565.0	537.6	515.3	500.0	493.6	487.5	487.2	486.6	488.8	490.7
35°	539.5	512.7	491.0	476.7	470.6	465.5	466.5	467.4	470.0	472.2
37.5°	513.7	487.5	466.8	453.7	448.0	443.8	446.7	448.0	451.5	453.7
40°	487.5	461.4	442.2	430.4	424.7	422.7	426.9	429.8	433.9	435.8
42.5°	460.7	436.5	417.3	406.5	401.7	401.7	407.1	411.6	416.4	418.3
45°	433.9	410.3	392.1	382.2	378.7	381.3	387.7	393.4	399.5	401.4
47.5°	406.8	383.8	367.2	358.3	356.4	360.2	368.2	375.8	382.9	385.4
50°	379.7	358.9	342.3	334.1	334.1	338.8	349.0	358.6	366.3	368.8
52.5°	352.6	332.8	315.9	309.8	311.1	317.8	329.6	339.5	348.1	350.6
55°	325.1	305.7	291.0	285.9	288.1	296.4	308.5	320.0	328.3	331.2
57.5°	298.0	279.5	266.1	261.9	265.1	274.4	288.4	298.3	306.9	309.5
60°	270.6	251.7	241.2	238.0	242.2	251.7	266.1	275.3	283.3	285.9
62.5°	243.4	225.9	216.6	213.8	218.6	228.8	242.8	251.1	257.2	259.7
65°	216.0	200.4	191.8	189.8	194.9	204.8	218.2	225.3	229.7	232.3
67.5°	188.9	175.5	167.5	165.9	171.3	180.3	192.7	196.5	200.7	203.2
70°	162.1	150.0	143.3	142.3	147.1	155.7	166.2	168.1	170.4	172.6
72.5°	135.6	126.0	119.3	119.0	123.5	130.5	139.1	139.4	140.1	142.3
75°	110.1	101.5	96.4	97.3	99.9	105.6	112.3	110.4	110.7	112.3
77.5°	85.5	78.5	75.0	75.6	77.5	81.7	86.1	83.9	82.6	84.2
80°	61.6	55.5	54.2	54.6	55.8	58.7	61.3	59.3	56.8	58.1
82.5°	40.5	36.7	36.1	36.4	37.3	38.9	39.6	36.7	36.1	37.0
85°	22.3	20.7	20.7	21.7	22.0	22.3	22.3	20.7	21.1	21.7
87.5°	8.9	8.9	9.9	10.8	10.2	8.9	7.7	5.1	5.1	6.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)