

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-22L935-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-22L935-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/  
ASYMMETRIC Lens  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

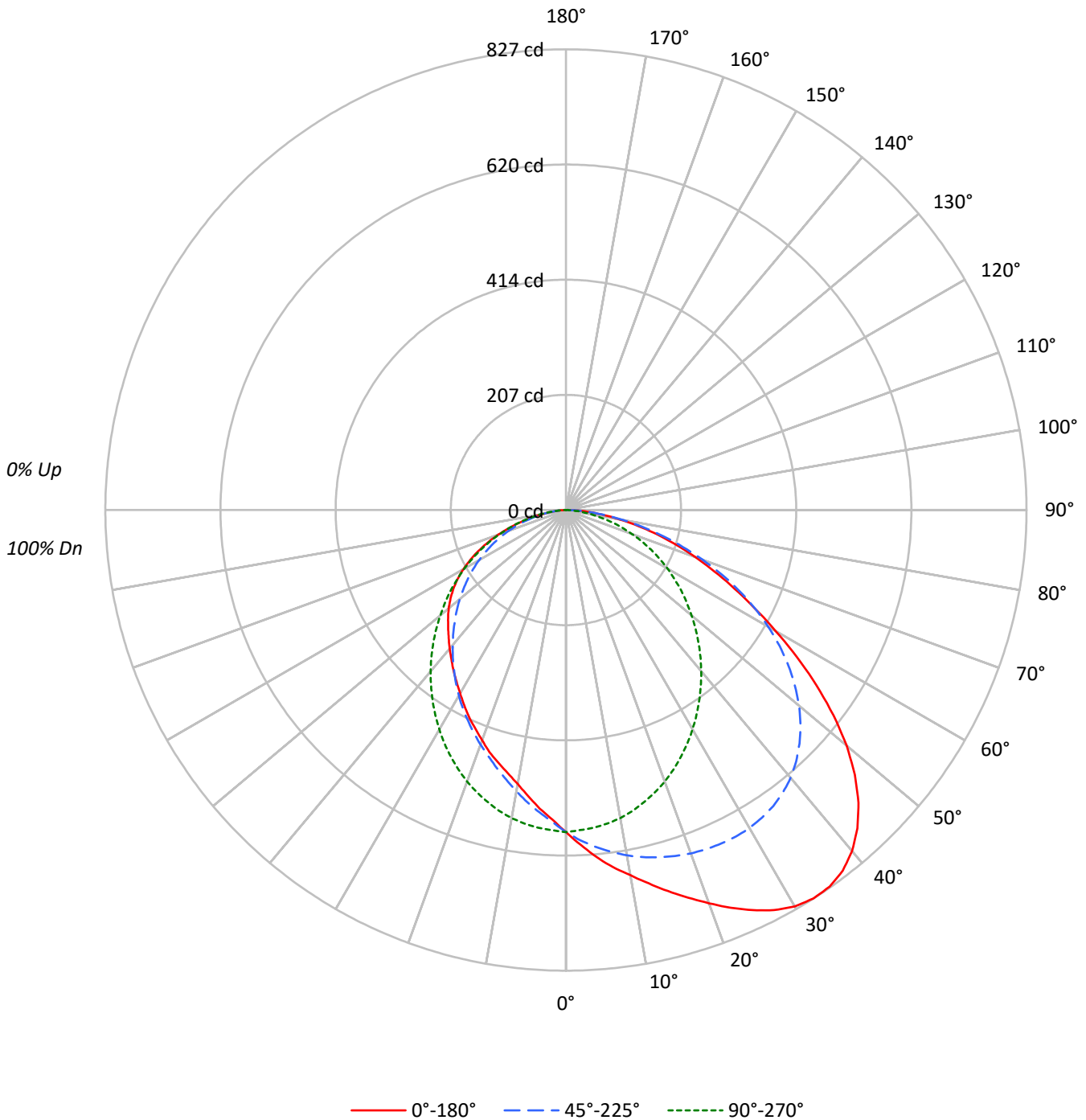
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1790.9 lumens  
Efficiency: N/A  
Efficacy: 74.6 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): 24  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P  
CATALOG NUMBER: 4APN-X-22L935-UNV-ASY

### Luminous Intensity Polar Plot





TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-22L935-UNV-ASY

**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°	5567	5567	5567
5°	6040	5533	5199
10°	6507	5490	4879
15°	7059	5410	4678
20°	7696	5315	4504
25°	8419	5190	4365
30°	9132	5054	4224
35°	9700	4904	4133
40°	10044	4749	4079
45°	10115	4584	4071
50°	9849	4409	4114
55°	9222	4252	4141
60°	8383	4059	4099
65°	7602	3838	3941
70°	6958	3558	3620
75°	6312	3199	3113
80°	5522	2672	2401
85°	4650	1944	1789



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-22L935-UNV-ASY

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.9	3.1
10°-20°	159.7	8.9
20°-30°	250.2	14.0
30°-40°	313.7	17.5
40°-50°	333.9	18.6
50°-60°	301.5	16.8
60°-70°	223.2	12.5
70°-80°	122.4	6.8
80°-90°	31.4	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°	464.8	26.0
0°-40°	778.5	43.5
0°-60°	1413.9	78.9
0°-90°	1790.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1790.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	578	578	578	578	578	
5°	625	607	572	545	538	61
15°	708	645	543	479	469	202
25°	793	660	489	417	411	367
35°	825	649	417	350	352	515
45°	743	593	337	282	299	570
55°	549	488	253	215	247	490
65°	334	344	168	145	173	333
75°	170	180	86	74	84	180
85°	42	41	18	16	16	50
90°	0	0	0	0	0	



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-22L935-UNV-ASY

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2
2.5°	601.5	600.3	598.9	598.4	596.3	593.4	590.8	590.8	587.7	580.3	575.1
5°	625.0	623.1	619.5	616.7	612.2	606.7	601.2	597.9	590.6	579.4	572.5
7.5°	646.6	644.3	639.7	634.3	626.9	618.8	609.8	602.7	591.5	576.5	567.7
10°	665.6	663.5	658.0	651.4	640.9	629.5	616.2	605.5	590.3	571.8	561.6
12.5°	686.6	684.4	676.8	667.8	653.5	638.3	620.7	606.0	587.2	564.9	553.2
15°	708.2	705.3	696.8	684.7	665.6	645.2	623.6	604.6	582.2	556.6	542.8
17.5°	729.6	726.7	716.0	700.6	676.8	651.4	624.8	601.2	575.1	546.4	531.4
20°	751.2	748.4	734.8	715.3	686.6	655.9	624.5	596.3	566.6	534.7	518.8
22.5°	772.8	769.5	753.1	729.3	694.6	659.0	621.9	589.4	555.9	521.4	504.3
25°	792.6	789.2	771.2	743.1	703.2	660.4	617.4	579.9	544.0	506.7	488.6
27.5°	809.7	805.6	786.8	756.0	710.6	660.9	611.5	569.2	530.2	490.7	472.4
30°	821.5	818.0	798.0	765.0	714.8	659.2	603.9	556.6	514.3	473.6	454.6
32.5°	826.8	823.7	804.0	769.3	715.6	655.0	594.6	542.5	497.6	455.6	436.3
35°	825.3	822.3	803.5	768.6	713.4	648.8	582.9	526.6	479.8	436.8	417.3
37.5°	816.3	812.8	795.6	762.1	707.2	639.7	569.6	509.3	460.6	417.5	397.8
40°	799.2	795.6	780.9	750.0	696.8	627.6	554.4	490.7	440.8	397.3	377.9
42.5°	774.7	770.9	759.3	731.0	681.8	611.7	537.1	471.0	419.9	377.9	357.4
45°	742.9	739.1	731.2	707.2	662.3	592.9	517.4	449.6	398.1	355.8	336.7
47.5°	703.4	700.1	696.3	677.8	638.3	571.3	495.3	426.8	375.2	335.1	315.6
50°	657.6	654.2	655.4	642.8	610.5	546.4	471.0	402.8	351.7	312.0	294.4
52.5°	605.5	602.9	608.6	603.1	578.2	518.5	445.1	378.1	327.7	290.2	273.3
55°	549.4	546.6	557.5	559.2	542.1	487.9	415.6	352.4	303.5	268.8	253.3
57.5°	491.7	489.3	503.3	511.2	502.6	454.9	385.9	326.1	278.5	246.4	231.0
60°	435.4	433.5	448.2	461.0	460.1	419.9	355.0	297.5	253.6	223.9	210.8
62.5°	382.4	380.2	395.0	410.2	415.6	382.6	324.4	269.5	228.6	201.3	189.6
65°	333.7	331.5	344.1	359.8	369.8	343.6	291.4	240.5	203.4	178.5	168.5
67.5°	289.0	289.0	296.8	311.3	323.4	303.7	257.6	212.9	177.5	157.3	147.3
70°	247.2	246.9	252.6	262.8	276.9	260.9	223.4	183.9	153.0	135.2	126.4
72.5°	207.5	209.1	211.3	219.1	233.8	220.1	189.4	155.4	129.0	113.4	106.0
75°	169.7	169.4	172.5	179.4	190.1	179.9	155.4	127.6	105.3	92.4	86.0
77.5°	133.6	133.3	135.9	140.0	149.0	140.9	122.6	102.0	82.0	71.3	66.8
80°	99.6	99.6	102.0	104.1	110.7	104.3	91.5	76.3	60.1	51.8	48.2
82.5°	69.2	70.6	69.6	72.5	76.3	70.8	62.7	52.3	39.9	34.2	31.8
85°	42.1	43.3	42.1	44.4	46.1	41.4	37.3	31.1	23.1	19.2	17.6
87.5°	21.6	21.4	21.2	22.3	22.8	20.0	17.6	15.0	10.2	7.8	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-22L935-UNV-ASY

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2	578.2
2.5°	572.0	573.4	571.3	563.5	560.4	557.0	555.6	554.2	556.8	556.1
5°	567.3	565.6	560.1	550.2	544.9	539.5	536.8	535.2	538.7	538.0
7.5°	560.8	556.1	548.0	535.9	529.2	521.9	518.3	516.2	518.5	518.1
10°	552.8	544.9	534.9	520.4	512.6	504.5	500.5	497.4	499.3	499.1
12.5°	542.5	532.3	520.2	503.8	495.7	487.4	483.8	481.7	484.1	483.4
15°	531.1	518.8	504.8	488.1	479.3	471.7	469.1	467.5	469.4	469.4
17.5°	518.5	504.0	488.6	471.7	463.4	457.5	454.9	453.7	454.6	456.0
20°	504.5	488.4	471.7	455.3	448.2	442.0	439.6	438.5	440.6	439.6
22.5°	489.1	472.0	454.6	439.2	432.8	426.6	424.2	423.5	425.9	424.9
25°	472.7	454.1	437.0	423.0	416.6	411.4	409.2	408.5	409.7	410.9
27.5°	457.2	436.3	419.4	406.9	401.1	396.2	394.3	393.1	394.0	395.4
30°	438.5	418.3	401.6	390.0	384.5	379.8	378.3	377.4	378.8	380.0
32.5°	420.9	400.4	383.8	372.4	367.6	363.1	362.9	362.4	364.1	365.5
35°	401.9	381.9	365.7	355.0	350.5	346.7	347.4	348.2	350.1	351.7
37.5°	382.6	363.1	347.7	337.9	333.7	330.6	332.7	333.7	336.3	337.9
40°	363.1	343.6	329.4	320.6	316.3	314.9	318.0	320.1	323.2	324.6
42.5°	343.2	325.1	310.8	302.8	299.2	299.2	303.2	306.6	310.1	311.6
45°	323.2	305.6	292.1	284.7	282.1	284.0	288.7	293.0	297.5	299.0
47.5°	303.0	285.9	273.5	266.9	265.5	268.3	274.2	279.9	285.2	287.1
50°	282.8	267.4	255.0	248.8	248.8	252.4	260.0	267.1	272.8	274.7
52.5°	262.6	247.9	235.3	230.8	231.7	236.7	245.5	252.9	259.3	261.2
55°	242.2	227.7	216.7	212.9	214.6	220.8	229.8	238.4	244.5	246.7
57.5°	222.0	208.2	198.2	195.1	197.5	204.4	214.8	222.2	228.6	230.5
60°	201.5	187.5	179.7	177.3	180.4	187.5	198.2	205.1	211.0	212.9
62.5°	181.3	168.3	161.4	159.2	162.8	170.4	180.8	187.0	191.5	193.4
65°	160.9	149.2	142.8	141.4	145.2	152.6	162.6	167.8	171.1	173.0
67.5°	140.7	130.7	124.8	123.6	127.6	134.3	143.5	146.4	149.5	151.4
70°	120.7	111.7	106.7	106.0	109.6	116.0	123.8	125.2	126.9	128.6
72.5°	101.0	93.9	88.9	88.6	92.0	97.2	103.6	103.9	104.3	106.0
75°	82.0	75.6	71.8	72.5	74.4	78.7	83.7	82.2	82.5	83.7
77.5°	63.7	58.5	55.8	56.3	57.7	60.8	64.2	62.5	61.6	62.7
80°	45.9	41.4	40.4	40.6	41.6	43.7	45.6	44.2	42.3	43.3
82.5°	30.2	27.3	26.9	27.1	27.8	29.0	29.5	27.3	26.9	27.6
85°	16.6	15.4	15.4	16.2	16.4	16.6	16.6	15.4	15.7	16.2
87.5°	6.7	6.7	7.4	8.1	7.6	6.7	5.7	3.8	3.8	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)