

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-32L935-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-32L935-X-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/  
ASYMMETRIC Lens  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

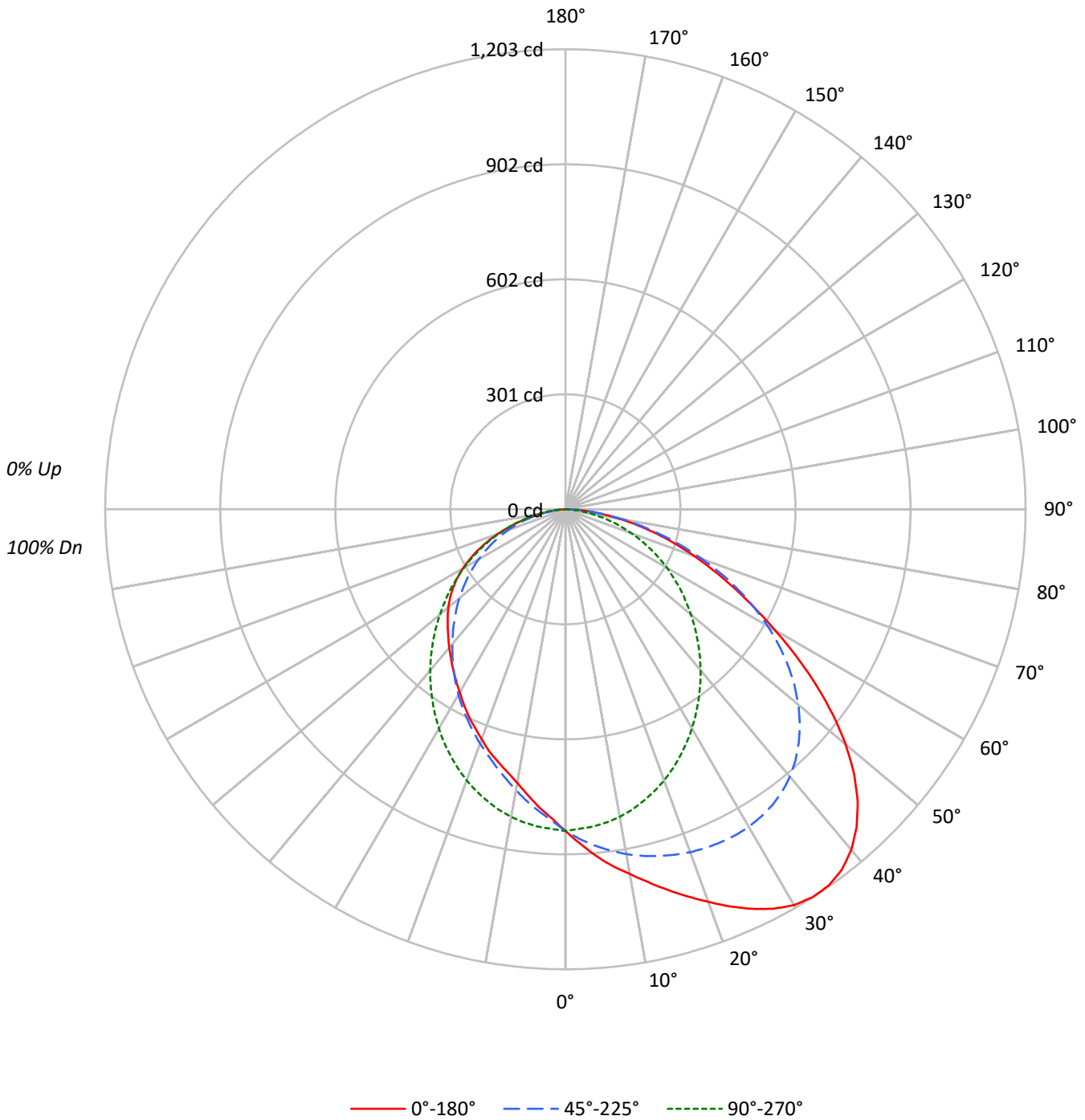
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2605.0 lumens  
Efficiency: N/A  
Efficacy: 71.6 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): 36.4  
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

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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°	8097	8097	8097
5°	8786	8047	7563
10°	9465	7985	7096
15°	10267	7869	6804
20°	11195	7731	6552
25°	12246	7549	6349
30°	13284	7351	6144
35°	14109	7134	6013
40°	14610	6907	5934
45°	14712	6669	5921
50°	14326	6415	5985
55°	13414	6185	6022
60°	12194	5903	5963
65°	11055	5583	5734
70°	10119	5177	5264
75°	9180	4653	4527
80°	8028	3892	3487
85°	6760	2828	2596



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	3.1
10°-20°	232.3	8.9
20°-30°	363.9	14.0
30°-40°	456.3	17.5
40°-50°	485.7	18.6
50°-60°	438.5	16.8
60°-70°	324.6	12.5
70°-80°	178.1	6.8
80°-90°	45.7	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°	676.1	26.0
0°-40°	1132.4	43.5
0°-60°	2056.6	78.9
0°-90°	2605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2605.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	841	841	841	841	841	
5°	909	882	833	793	783	89
15°	1030	938	790	697	683	294
25°	1153	961	711	606	598	534
35°	1200	944	607	510	512	749
45°	1081	862	490	410	435	828
55°	799	710	368	312	359	713
65°	485	500	245	211	252	484
75°	247	262	125	108	122	262
85°	61	60	26	24	24	72
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°	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0
2.5°	874.9	873.2	871.1	870.4	867.3	863.1	859.3	859.3	854.9	844.1	836.5
5°	909.1	906.4	901.2	897.0	890.5	882.5	874.6	869.7	859.0	842.8	832.7
7.5°	940.6	937.1	930.6	922.6	911.9	900.1	887.0	876.6	860.4	838.6	825.8
10°	968.2	965.1	957.2	947.5	932.3	915.7	896.3	880.8	858.7	831.7	816.8
12.5°	998.7	995.5	984.5	971.3	950.6	928.5	902.9	881.5	854.2	821.7	804.7
15°	1030.1	1026.0	1013.5	995.9	968.2	938.5	907.0	879.4	846.9	809.6	789.5
17.5°	1061.2	1057.1	1041.5	1019.0	984.5	947.5	908.8	874.6	836.5	794.7	772.9
20°	1092.7	1088.5	1068.8	1040.5	998.7	954.1	908.4	867.3	824.1	777.8	754.6
22.5°	1124.1	1119.3	1095.4	1060.9	1010.4	958.6	904.6	857.3	808.5	758.4	733.5
25°	1152.8	1148.0	1121.7	1080.9	1022.8	960.6	898.1	843.4	791.2	737.0	710.7
27.5°	1177.7	1171.8	1144.5	1099.6	1033.6	961.3	889.4	827.9	771.2	713.8	687.2
30°	1195.0	1189.8	1160.8	1112.7	1039.8	958.9	878.4	809.6	748.0	688.9	661.3
32.5°	1202.6	1198.1	1169.4	1118.9	1040.8	952.7	864.9	789.2	723.8	662.7	634.7
35°	1200.5	1196.0	1168.7	1117.9	1037.7	943.7	847.9	766.0	697.9	635.3	607.0
37.5°	1187.4	1182.2	1157.3	1108.6	1028.7	930.6	828.6	740.8	669.9	607.3	578.7
40°	1162.5	1157.3	1135.9	1090.9	1013.5	912.9	806.5	713.8	641.2	578.0	549.6
42.5°	1126.9	1121.4	1104.4	1063.3	991.7	889.8	781.2	685.1	610.8	549.6	519.9
45°	1080.6	1075.0	1063.6	1028.7	963.4	862.5	752.5	654.0	579.0	517.5	489.8
47.5°	1023.2	1018.4	1012.8	985.9	928.5	831.0	720.4	620.8	545.8	487.4	459.1
50°	956.5	951.6	953.4	935.0	888.0	794.7	685.1	585.9	511.6	453.9	428.3
52.5°	880.8	877.0	885.3	877.3	841.0	754.3	647.4	550.0	476.7	422.1	397.5
55°	799.2	795.0	811.0	813.4	788.5	709.7	604.6	512.6	441.4	391.0	368.5
57.5°	715.2	711.7	732.1	743.5	731.1	661.6	561.4	474.3	405.1	358.5	336.0
60°	633.3	630.5	651.9	670.6	669.2	610.8	516.4	432.8	368.8	325.6	306.6
62.5°	556.2	553.1	574.5	596.6	604.6	556.5	471.8	392.0	332.5	292.8	275.8
65°	485.3	482.2	500.5	523.4	537.9	499.8	423.8	349.8	295.9	259.6	245.1
67.5°	420.3	420.3	431.7	452.8	470.5	441.8	374.7	309.7	258.2	228.8	214.3
70°	359.5	359.2	367.5	382.3	402.7	379.5	324.9	267.6	222.6	196.7	183.9
72.5°	301.8	304.2	307.3	318.7	340.1	320.1	275.5	226.1	187.7	164.9	154.2
75°	246.8	246.5	251.0	261.0	276.5	261.7	226.1	185.6	153.1	134.5	125.1
77.5°	194.3	193.9	197.7	203.6	216.7	205.0	178.4	148.3	119.3	103.7	97.1
80°	144.8	144.8	148.3	151.4	161.1	151.8	133.1	111.0	87.5	75.4	70.2
82.5°	100.6	102.7	101.3	105.4	111.0	103.0	91.3	76.0	58.1	49.8	46.3
85°	61.2	62.9	61.2	64.6	67.1	60.1	54.3	45.3	33.5	28.0	25.6
87.5°	31.5	31.1	30.8	32.5	33.2	29.0	25.6	21.8	14.9	11.4	9.7
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°	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0	841.0
2.5°	832.0	834.1	831.0	819.6	815.1	810.3	808.2	806.1	809.9	808.9
5°	825.1	822.7	814.8	800.2	792.6	784.7	780.9	778.5	783.6	782.6
7.5°	815.8	808.9	797.1	779.5	769.8	759.1	753.9	750.8	754.3	753.6
10°	804.0	792.6	778.1	757.0	745.6	733.9	728.0	723.5	726.3	725.9
12.5°	789.2	774.3	756.7	732.8	721.1	709.0	703.8	700.7	704.1	703.1
15°	772.6	754.6	734.2	710.0	697.2	686.2	682.4	679.9	682.7	682.7
17.5°	754.3	733.2	710.7	686.2	674.1	665.4	661.6	659.9	661.3	663.3
20°	733.9	710.4	686.2	662.3	651.9	643.0	639.5	637.8	640.9	639.5
22.5°	711.4	686.5	661.3	638.8	629.5	620.5	617.0	616.0	619.4	618.1
25°	687.5	660.6	635.7	615.3	606.0	598.4	595.3	594.2	595.9	597.7
27.5°	665.1	634.7	610.1	591.8	583.5	576.2	573.5	571.7	573.1	575.2
30°	637.8	608.4	584.2	567.3	559.3	552.4	550.3	548.9	551.0	552.7
32.5°	612.2	582.5	558.3	541.7	534.8	528.2	527.8	527.2	529.6	531.6
35°	584.5	555.5	532.0	516.4	509.9	504.3	505.4	506.4	509.2	511.6
37.5°	556.5	528.2	505.7	491.5	485.3	480.8	483.9	485.3	489.1	491.5
40°	528.2	499.8	479.1	466.3	460.1	458.0	462.5	465.6	470.1	472.2
42.5°	499.2	472.9	452.1	440.4	435.2	435.2	441.1	445.9	451.1	453.2
45°	470.1	444.5	424.8	414.1	410.3	413.1	420.0	426.2	432.8	434.9
47.5°	440.7	415.8	397.9	388.2	386.1	390.3	398.9	407.2	414.8	417.6
50°	411.4	388.9	370.9	361.9	361.9	367.1	378.2	388.5	396.8	399.6
52.5°	382.0	360.5	342.2	335.6	337.0	344.3	357.1	367.8	377.1	379.9
55°	352.2	331.2	315.3	309.7	312.1	321.1	334.3	346.7	355.7	358.8
57.5°	322.9	302.8	288.3	283.8	287.3	297.3	312.5	323.2	332.5	335.3
60°	293.1	272.7	261.3	257.9	262.4	272.7	288.3	298.3	307.0	309.7
62.5°	263.7	244.7	234.7	231.6	236.8	247.8	263.1	272.0	278.6	281.4
65°	234.0	217.1	207.8	205.7	211.2	221.9	236.4	244.0	248.9	251.7
67.5°	204.6	190.1	181.5	179.8	185.6	195.3	208.8	212.9	217.4	220.2
70°	175.6	162.5	155.2	154.2	159.4	168.7	180.1	182.2	184.6	187.0
72.5°	146.9	136.5	129.3	128.9	133.8	141.4	150.7	151.1	151.8	154.2
75°	119.3	109.9	104.4	105.4	108.2	114.4	121.7	119.6	119.9	121.7
77.5°	92.6	85.0	81.2	81.9	84.0	88.5	93.3	90.9	89.5	91.3
80°	66.7	60.1	58.8	59.1	60.5	63.6	66.4	64.3	61.5	62.9
82.5°	43.9	39.8	39.1	39.4	40.4	42.2	42.9	39.8	39.1	40.1
85°	24.2	22.5	22.5	23.5	23.9	24.2	24.2	22.5	22.8	23.5
87.5°	9.7	9.7	10.7	11.8	11.1	9.7	8.3	5.5	5.5	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)