

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-24L850-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-24L850-X-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/  
ASYMMETRIC Lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

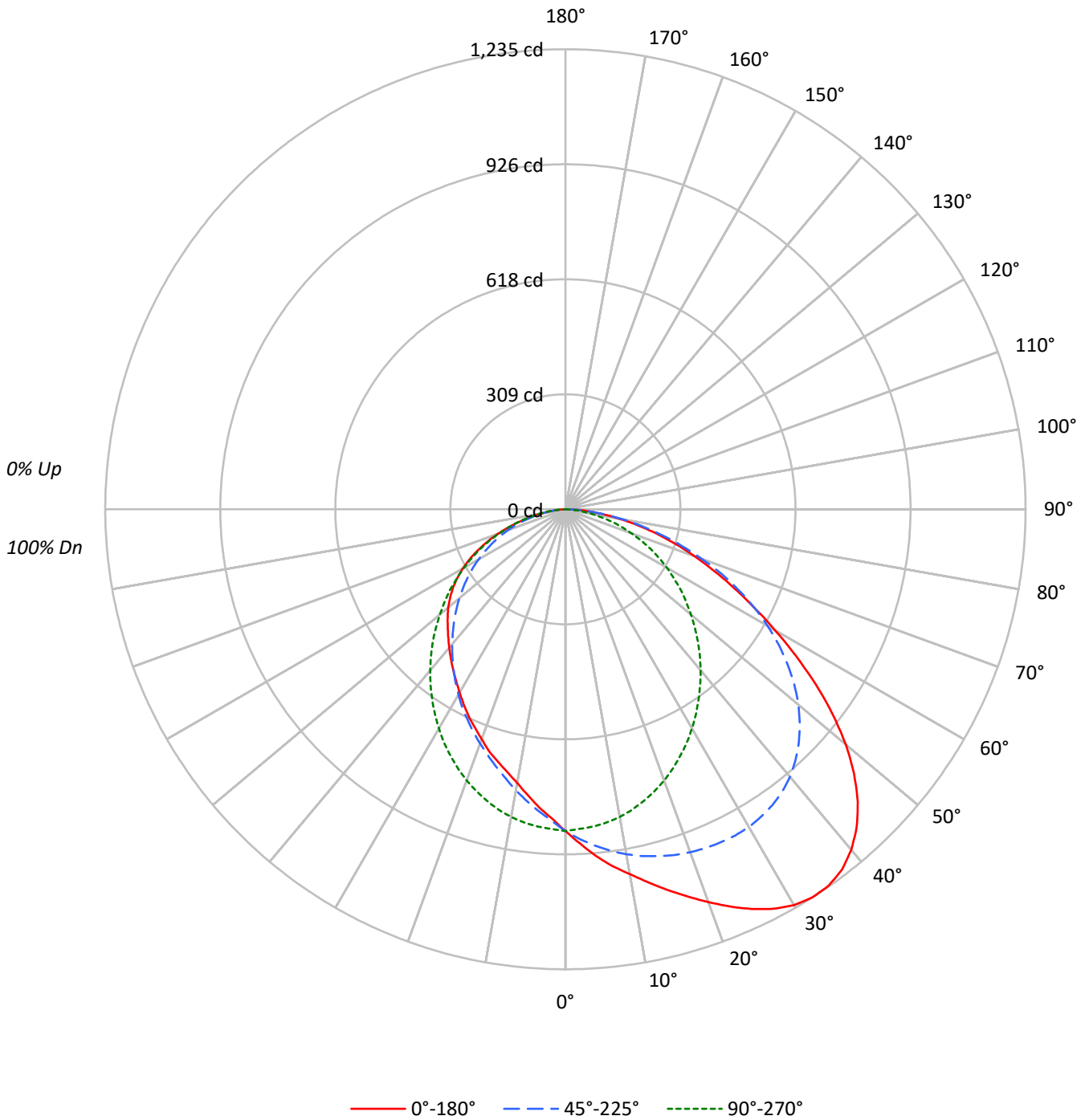
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2675.1 lumens  
Efficiency: N/A  
Efficacy: 95.9 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<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-24L850-X-UNV-ASY

### Luminous Intensity Polar Plot





TEST NUMBER: P  
 CATALOG NUMBER: 4APN-24L850-X-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°	8315	8315	8315
5°	9022	8264	7767
10°	9720	8200	7288
15°	10543	8081	6988
20°	11496	7939	6728
25°	12575	7752	6520
30°	13642	7549	6310
35°	14489	7326	6175
40°	15003	7093	6094
45°	15109	6848	6081
50°	14711	6587	6147
55°	13775	6351	6185
60°	12521	6063	6125
65°	11354	5734	5886
70°	10392	5314	5405
75°	9429	4780	4650
80°	8244	3997	3582
85°	6937	2905	2662



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-24L850-X-UNV-ASY

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.0	3.1
10°-20°	238.6	8.9
20°-30°	373.7	14.0
30°-40°	468.5	17.5
40°-50°	498.8	18.6
50°-60°	450.3	16.8
60°-70°	333.3	12.5
70°-80°	182.9	6.8
80°-90°	47.0	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°	694.3	26.0
0°-40°	1162.8	43.5
0°-60°	2111.9	78.9
0°-90°	2675.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2675.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	864	864	864	864	864	
5°	934	906	855	814	804	91
15°	1058	964	811	716	701	302
25°	1184	986	730	622	614	548
35°	1233	969	623	524	525	769
45°	1110	886	503	421	447	851
55°	821	729	378	320	368	732
65°	498	513	252	217	258	497
75°	254	269	128	111	125	269
85°	63	62	26	24	24	74
90°	0	0	0	0	0	



TEST NUMBER: P

CATALOG NUMBER: 4APN-24L850-X-UNV-ASY

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	898.4	896.7	894.5	893.8	890.6	886.4	882.5	882.5	877.9	866.9	859.0
5°	933.6	930.7	925.4	921.2	914.4	906.3	898.1	893.1	882.1	865.4	855.1
7.5°	965.9	962.3	955.6	947.4	936.4	924.4	910.9	900.2	883.5	861.2	848.0
10°	994.3	991.1	982.9	973.0	957.4	940.3	920.5	904.5	881.8	854.1	838.8
12.5°	1025.5	1022.3	1011.0	997.5	976.2	953.5	927.2	905.2	877.1	843.8	826.4
15°	1057.8	1053.6	1040.8	1022.7	994.3	963.8	931.5	903.1	869.7	831.4	810.8
17.5°	1089.8	1085.5	1069.5	1046.5	1011.0	973.0	933.2	898.1	859.0	816.1	793.7
20°	1122.1	1117.8	1097.6	1068.5	1025.5	979.7	932.9	890.6	846.3	798.7	774.9
22.5°	1154.4	1149.4	1124.9	1089.4	1037.6	984.3	929.0	880.3	830.3	778.8	753.3
25°	1183.8	1178.9	1151.9	1110.0	1050.4	986.5	922.2	866.1	812.5	756.8	729.8
27.5°	1209.4	1203.4	1175.3	1129.2	1061.4	987.2	913.4	850.2	792.0	733.0	705.7
30°	1227.2	1221.8	1192.0	1142.7	1067.8	984.7	902.0	831.4	768.2	707.5	679.1
32.5°	1235.0	1230.3	1200.9	1149.1	1068.8	978.3	888.2	810.4	743.3	680.5	651.7
35°	1232.8	1228.2	1200.2	1148.0	1065.6	969.1	870.8	786.6	716.7	652.4	623.3
37.5°	1219.3	1214.0	1188.5	1138.4	1056.4	955.6	850.9	760.7	687.9	623.7	594.2
40°	1193.8	1188.5	1166.5	1120.3	1040.8	937.5	828.2	733.0	658.5	593.5	564.4
42.5°	1157.2	1151.5	1134.1	1091.9	1018.4	913.7	802.2	703.6	627.2	564.4	533.9
45°	1109.7	1104.0	1092.3	1056.4	989.3	885.7	772.8	671.6	594.6	531.4	503.0
47.5°	1050.7	1045.8	1040.1	1012.4	953.5	853.4	739.8	637.5	560.5	500.5	471.4
50°	982.2	977.3	979.0	960.2	911.9	816.1	703.6	601.7	525.4	466.1	439.8
52.5°	904.5	900.6	909.1	900.9	863.7	774.6	664.9	564.8	489.5	433.4	408.2
55°	820.7	816.4	832.8	835.3	809.7	728.8	620.9	526.4	453.3	401.5	378.4
57.5°	734.4	730.9	751.8	763.6	750.8	679.4	576.5	487.0	416.0	368.1	345.0
60°	650.3	647.5	669.5	688.7	687.2	627.2	530.3	444.4	378.8	334.4	314.9
62.5°	571.2	568.0	590.0	612.7	620.9	571.5	484.5	402.5	341.5	300.7	283.3
65°	498.4	495.2	514.0	537.4	552.3	513.3	435.2	359.2	303.9	266.6	251.7
67.5°	431.7	431.7	443.4	465.0	483.1	453.7	384.8	318.1	265.2	235.0	220.1
70°	369.2	368.8	377.3	392.6	413.5	389.8	333.7	274.8	228.6	202.0	188.8
72.5°	309.9	312.4	315.6	327.3	349.3	328.7	282.9	232.2	192.8	169.3	158.3
75°	253.5	253.1	257.7	268.0	284.0	268.7	232.2	190.6	157.3	138.1	128.5
77.5°	199.5	199.1	203.0	209.1	222.6	210.5	183.2	152.3	122.5	106.5	99.7
80°	148.7	148.7	152.3	155.5	165.4	155.8	136.7	113.9	89.8	77.4	72.1
82.5°	103.3	105.4	104.0	108.3	113.9	105.8	93.7	78.1	59.6	51.1	47.6
85°	62.8	64.6	62.8	66.4	68.9	61.8	55.7	46.5	34.4	28.8	26.3
87.5°	32.3	31.9	31.6	33.4	34.1	29.8	26.3	22.4	15.3	11.7	9.9
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-24L850-X-UNV-ASY

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	854.4	856.6	853.4	841.6	837.0	832.1	829.9	827.8	831.7	830.6
5°	847.3	844.8	836.7	821.8	814.0	805.8	801.9	799.4	804.7	803.7
7.5°	837.7	830.6	818.6	800.5	790.5	779.5	774.2	771.0	774.6	773.8
10°	825.7	814.0	799.1	777.4	765.7	753.6	747.6	743.0	745.8	745.5
12.5°	810.4	795.1	777.0	752.6	740.5	728.1	722.7	719.5	723.1	722.0
15°	793.4	774.9	754.0	729.1	716.0	704.6	700.7	698.2	701.1	701.1
17.5°	774.6	752.9	729.8	704.6	692.2	683.3	679.4	677.7	679.1	681.2
20°	753.6	729.5	704.6	680.1	669.5	660.3	656.7	654.9	658.1	656.7
22.5°	730.5	705.0	679.1	656.0	646.4	637.2	633.6	632.6	636.1	634.7
25°	706.0	678.4	652.8	631.9	622.3	614.5	611.3	610.2	612.0	613.8
27.5°	683.0	651.7	626.5	607.7	599.2	591.7	588.9	587.1	588.6	590.7
30°	654.9	624.8	599.9	582.5	574.4	567.3	565.1	563.7	565.8	567.6
32.5°	628.7	598.1	573.3	556.2	549.1	542.4	542.0	541.3	543.8	546.0
35°	600.3	570.4	546.3	530.3	523.6	517.9	519.0	520.0	522.9	525.4
37.5°	571.5	542.4	519.3	504.8	498.4	493.8	497.0	498.4	502.3	504.8
40°	542.4	513.3	492.0	478.9	472.5	470.3	475.0	478.2	482.8	484.9
42.5°	512.6	485.6	464.3	452.2	446.9	446.9	452.9	457.9	463.2	465.4
45°	482.8	456.5	436.3	425.3	421.4	424.2	431.3	437.7	444.4	446.6
47.5°	452.6	427.0	408.6	398.6	396.5	400.8	409.6	418.2	426.0	428.8
50°	422.4	399.3	380.9	371.7	371.7	377.0	388.3	399.0	407.5	410.4
52.5°	392.2	370.2	351.4	344.7	346.1	353.6	366.7	377.7	387.3	390.1
55°	361.7	340.1	323.7	318.1	320.5	329.8	343.3	356.0	365.3	368.5
57.5°	331.5	311.0	296.1	291.4	295.0	305.3	320.9	331.9	341.5	344.3
60°	301.0	280.1	268.4	264.8	269.4	280.1	296.1	306.3	315.2	318.1
62.5°	270.8	251.3	241.0	237.8	243.2	254.5	270.1	279.4	286.1	289.0
65°	240.3	222.9	213.3	211.2	216.9	227.9	242.8	250.6	255.6	258.4
67.5°	210.1	195.2	186.4	184.6	190.6	200.6	214.4	218.7	223.3	226.1
70°	180.3	166.8	159.4	158.3	163.6	173.2	184.9	187.1	189.6	192.0
72.5°	150.9	140.2	132.8	132.4	137.4	145.2	154.8	155.1	155.8	158.3
75°	122.5	112.9	107.2	108.3	111.1	117.5	125.0	122.8	123.2	125.0
77.5°	95.1	87.3	83.4	84.1	86.3	90.9	95.8	93.4	91.9	93.7
80°	68.5	61.8	60.3	60.7	62.1	65.3	68.2	66.0	63.2	64.6
82.5°	45.1	40.8	40.1	40.5	41.5	43.3	44.0	40.8	40.1	41.2
85°	24.8	23.1	23.1	24.1	24.5	24.8	24.8	23.1	23.4	24.1
87.5°	9.9	9.9	11.0	12.1	11.4	9.9	8.5	5.7	5.7	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)