

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-32L950-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-32L950-X-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/  
ASYMMETRIC Lens  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

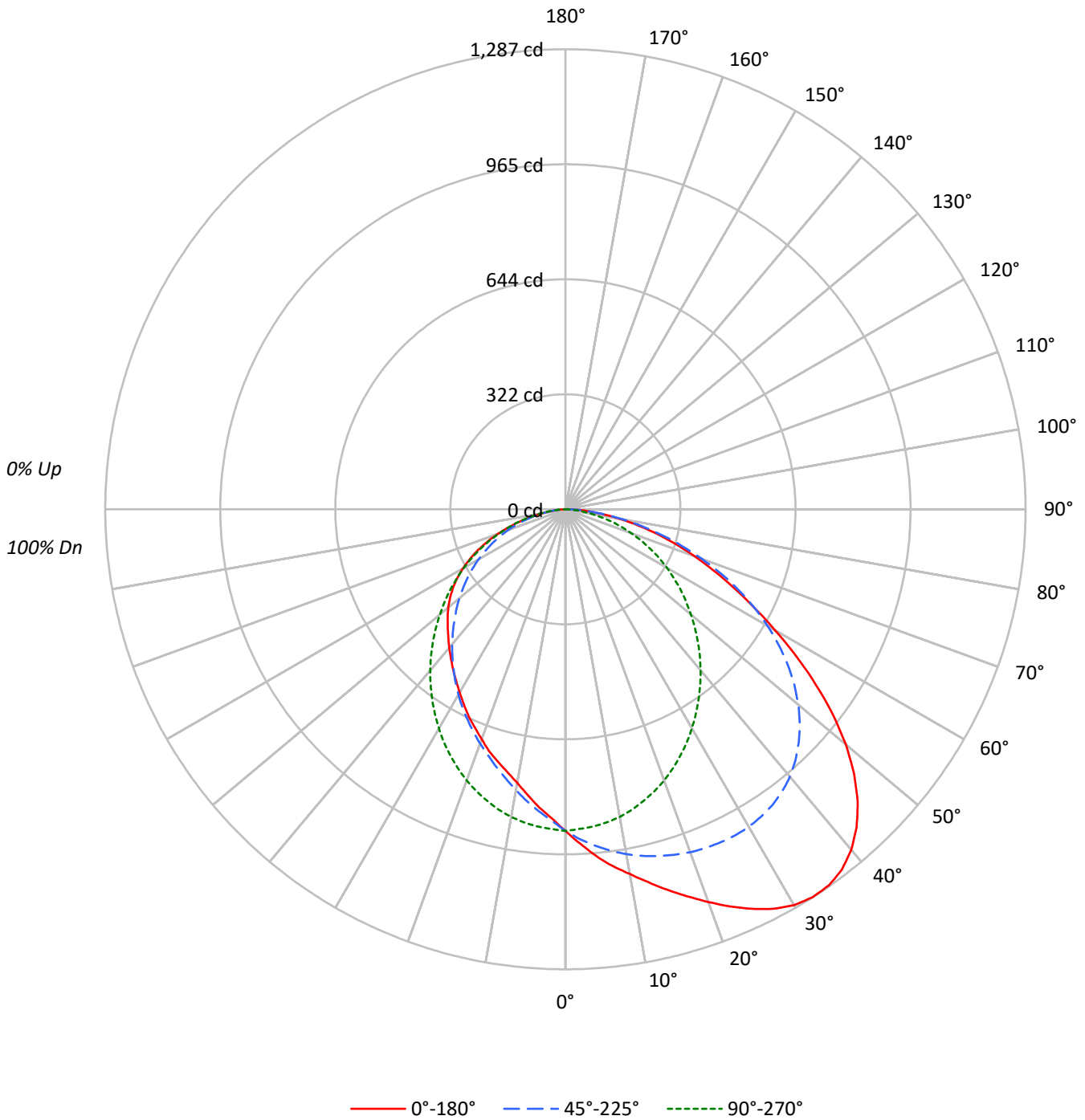
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2787.2 lumens  
Efficiency: N/A  
Efficacy: 76.6 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 (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°	8663	8663	8663
5°	9400	8611	8092
10°	10127	8543	7593
15°	10985	8419	7280
20°	11978	8272	7010
25°	13102	8077	6793
30°	14214	7865	6574
35°	15096	7632	6433
40°	15632	7391	6349
45°	15740	7136	6335
50°	15328	6863	6403
55°	14353	6618	6444
60°	13047	6317	6381
65°	11830	5973	6132
70°	10826	5540	5633
75°	9824	4981	4843
80°	8593	4164	3731
85°	7235	3027	2773



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.5	3.1
10°-20°	248.5	8.9
20°-30°	389.4	14.0
30°-40°	488.2	17.5
40°-50°	519.7	18.6
50°-60°	469.1	16.8
60°-70°	347.3	12.5
70°-80°	190.6	6.8
80°-90°	48.9	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°	723.4	26.0
0°-40°	1211.6	43.5
0°-60°	2200.4	78.9
0°-90°	2787.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	900	900	900	900	900	
5°	973	944	891	848	837	95
15°	1102	1004	845	746	730	314
25°	1233	1028	760	648	640	571
35°	1284	1010	649	546	547	801
45°	1156	923	524	439	465	886
55°	855	759	394	334	384	763
65°	519	535	262	226	269	518
75°	264	280	134	116	130	281
85°	66	64	27	26	25	77
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°	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8
2.5°	936.1	934.2	932.0	931.3	927.9	923.5	919.4	919.4	914.6	903.2	895.0
5°	972.7	969.7	964.2	959.8	952.7	944.2	935.7	930.5	919.1	901.7	891.0
7.5°	1006.4	1002.7	995.6	987.1	975.7	963.1	949.0	937.9	920.5	897.2	883.6
10°	1035.9	1032.6	1024.1	1013.7	997.5	979.7	959.0	942.4	918.7	889.8	873.9
12.5°	1068.5	1065.2	1053.3	1039.3	1017.1	993.4	966.0	943.1	913.9	879.1	861.0
15°	1102.1	1097.7	1084.4	1065.5	1035.9	1004.1	970.5	940.9	906.1	866.2	844.7
17.5°	1135.4	1131.0	1114.3	1090.3	1053.3	1013.7	972.3	935.7	895.0	850.3	827.0
20°	1169.1	1164.6	1143.6	1113.2	1068.5	1020.8	972.0	927.9	881.7	832.2	807.4
22.5°	1202.7	1197.6	1172.0	1135.1	1081.1	1025.6	967.9	917.2	865.1	811.4	784.8
25°	1233.4	1228.3	1200.1	1156.5	1094.4	1027.8	960.9	902.4	846.6	788.5	760.4
27.5°	1260.1	1253.8	1224.6	1176.5	1105.8	1028.5	951.6	885.8	825.1	763.7	735.3
30°	1278.6	1273.0	1241.9	1190.5	1112.5	1026.0	939.8	866.2	800.3	737.1	707.5
32.5°	1286.7	1281.9	1251.2	1197.2	1113.6	1019.3	925.4	844.4	774.5	709.0	679.0
35°	1284.5	1279.7	1250.4	1196.1	1110.3	1009.7	907.2	819.6	746.7	679.8	649.4
37.5°	1270.4	1264.9	1238.2	1186.1	1100.7	995.6	886.5	792.6	716.8	649.8	619.1
40°	1243.8	1238.2	1215.3	1167.2	1084.4	976.8	862.9	763.7	686.1	618.4	588.1
42.5°	1205.7	1199.8	1181.7	1137.6	1061.1	952.0	835.9	733.0	653.5	588.1	556.2
45°	1156.1	1150.2	1138.0	1100.7	1030.8	922.8	805.2	699.7	619.5	553.7	524.1
47.5°	1094.7	1089.6	1083.6	1054.8	993.4	889.1	770.8	664.2	584.0	521.5	491.2
50°	1023.4	1018.2	1020.0	1000.4	950.1	850.3	733.0	626.9	547.4	485.6	458.2
52.5°	942.4	938.3	947.2	938.7	899.8	807.0	692.7	588.4	510.0	451.6	425.3
55°	855.1	850.6	867.7	870.2	843.6	759.3	646.9	548.5	472.3	418.3	394.3
57.5°	765.2	761.5	783.3	795.5	782.2	707.9	600.6	507.4	433.5	383.5	359.5
60°	677.6	674.6	697.5	717.5	716.0	653.5	552.5	463.0	394.6	348.4	328.1
62.5°	595.1	591.8	614.7	638.4	646.9	595.5	504.8	419.4	355.8	313.3	295.1
65°	519.3	515.9	535.5	559.9	575.5	534.8	453.4	374.3	316.6	277.8	262.2
67.5°	449.7	449.7	461.9	484.5	503.4	472.7	400.9	331.4	276.3	244.8	229.3
70°	384.6	384.3	393.1	409.0	430.9	406.1	347.7	286.3	238.2	210.4	196.8
72.5°	322.9	325.5	328.8	341.0	363.9	342.5	294.8	241.9	200.8	176.4	165.0
75°	264.1	263.7	268.5	279.2	295.9	280.0	241.9	198.6	163.8	143.9	133.9
77.5°	207.9	207.5	211.6	217.8	231.9	219.3	190.8	158.7	127.6	111.0	103.9
80°	155.0	155.0	158.7	162.0	172.3	162.4	142.4	118.7	93.6	80.6	75.1
82.5°	107.6	109.8	108.4	112.8	118.7	110.2	97.6	81.4	62.1	53.3	49.6
85°	65.5	67.3	65.5	69.2	71.8	64.4	58.1	48.4	35.9	30.0	27.4
87.5°	33.7	33.3	32.9	34.8	35.5	31.1	27.4	23.3	15.9	12.2	10.4
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°	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8	899.8
2.5°	890.2	892.4	889.1	876.9	872.1	866.9	864.7	862.5	866.5	865.4
5°	882.8	880.2	871.7	856.2	848.1	839.6	835.5	832.9	838.4	837.3
7.5°	872.8	865.4	852.9	834.0	823.6	812.2	806.6	803.3	807.0	806.3
10°	860.3	848.1	832.5	810.0	797.8	785.2	778.9	774.1	777.0	776.7
12.5°	844.4	828.5	809.6	784.1	771.5	758.6	753.0	749.7	753.4	752.3
15°	826.6	807.4	785.6	759.7	746.0	734.1	730.1	727.5	730.4	730.4
17.5°	807.0	784.4	760.4	734.1	721.2	712.0	707.9	706.0	707.5	709.7
20°	785.2	760.0	734.1	708.6	697.5	687.9	684.2	682.4	685.7	684.2
22.5°	761.1	734.5	707.5	683.5	673.5	663.9	660.2	659.1	662.8	661.3
25°	735.6	706.8	680.1	658.3	648.3	640.2	636.9	635.8	637.6	639.5
27.5°	711.6	679.0	652.8	633.2	624.3	616.5	613.6	611.7	613.2	615.4
30°	682.4	650.9	625.0	606.9	598.4	591.0	588.8	587.3	589.5	591.4
32.5°	655.0	623.2	597.3	579.5	572.2	565.1	564.8	564.0	566.6	568.8
35°	625.4	594.3	569.2	552.5	545.5	539.6	540.7	541.8	544.8	547.4
37.5°	595.5	565.1	541.1	525.9	519.3	514.5	517.8	519.3	523.3	525.9
40°	565.1	534.8	512.6	498.9	492.3	490.0	494.9	498.2	503.0	505.2
42.5°	534.1	505.9	483.8	471.2	465.6	465.6	471.9	477.1	482.6	484.9
45°	503.0	475.6	454.5	443.1	439.0	442.0	449.4	456.0	463.0	465.3
47.5°	471.6	444.9	425.7	415.3	413.1	417.6	426.8	435.7	443.8	446.8
50°	440.1	416.1	396.8	387.2	387.2	392.8	404.6	415.7	424.6	427.5
52.5°	408.7	385.7	366.1	359.1	360.6	368.4	382.1	393.5	403.5	406.5
55°	376.9	354.3	337.3	331.4	334.0	343.6	357.6	371.0	380.6	383.9
57.5°	345.4	324.0	308.5	303.6	307.3	318.1	334.3	345.8	355.8	358.8
60°	313.6	291.8	279.6	275.9	280.7	291.8	308.5	319.2	328.4	331.4
62.5°	282.2	261.9	251.1	247.8	253.3	265.2	281.5	291.1	298.1	301.1
65°	250.4	232.3	222.3	220.1	226.0	237.4	253.0	261.1	266.3	269.2
67.5°	218.9	203.4	194.2	192.3	198.6	209.0	223.4	227.8	232.6	235.6
70°	187.9	173.8	166.1	165.0	170.5	180.5	192.7	194.9	197.5	200.1
72.5°	157.2	146.1	138.3	138.0	143.1	151.3	161.3	161.6	162.4	165.0
75°	127.6	117.6	111.7	112.8	115.8	122.4	130.2	128.0	128.3	130.2
77.5°	99.1	91.0	86.9	87.7	89.9	94.7	99.9	97.3	95.8	97.6
80°	71.4	64.4	62.9	63.2	64.7	68.1	71.0	68.8	65.8	67.3
82.5°	47.0	42.5	41.8	42.2	43.3	45.1	45.9	42.5	41.8	42.9
85°	25.9	24.0	24.0	25.1	25.5	25.9	25.9	24.0	24.4	25.1
87.5°	10.4	10.4	11.5	12.6	11.8	10.4	8.9	5.9	5.9	7.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)