

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-37L950-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-37L950-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/  
ASYMMETRIC Lens  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

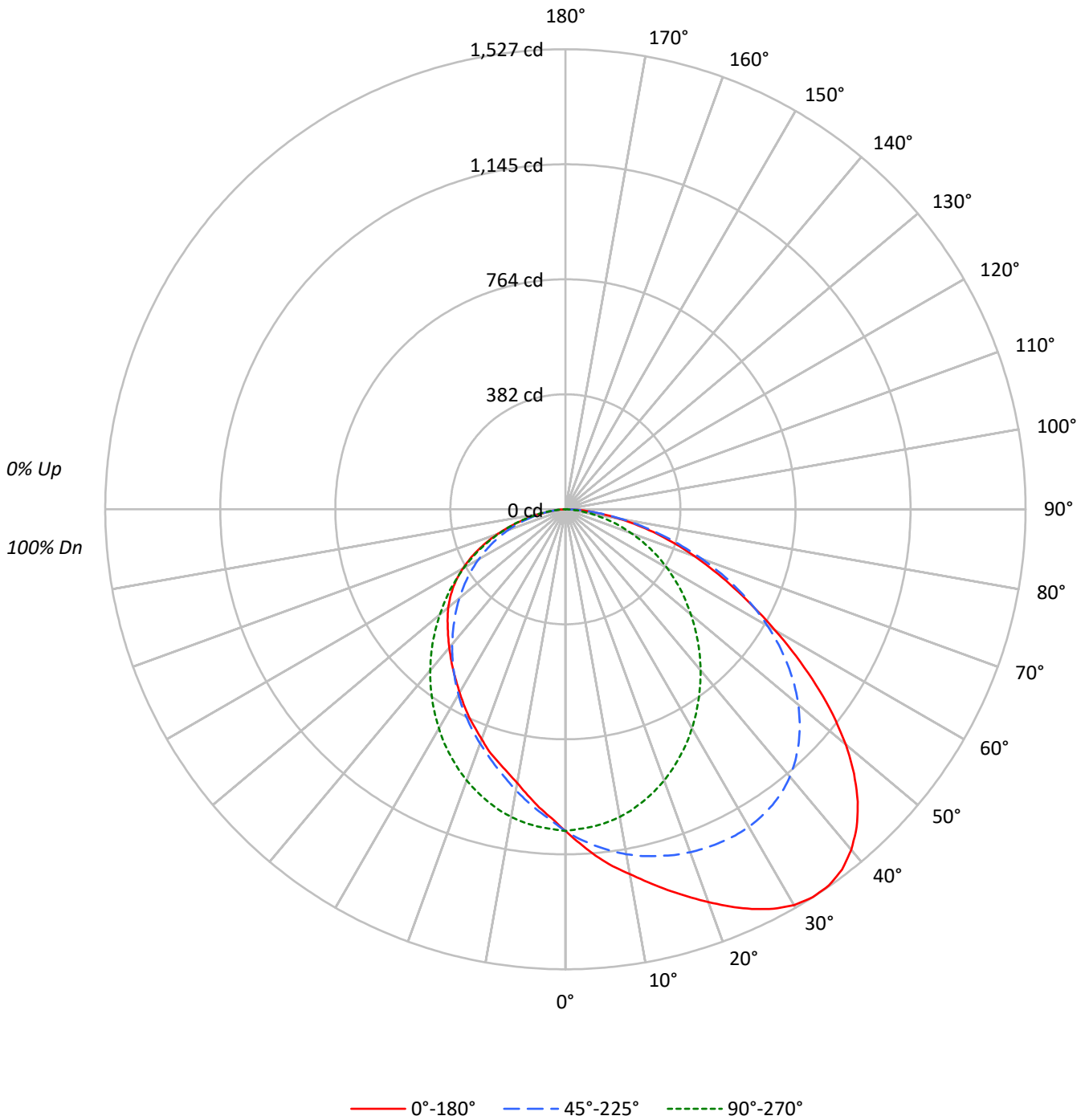
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3307.5 lumens  
Efficiency: N/A  
Efficacy: 81.1 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): 40.8  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	10280	10280	10280
5°	11155	10218	9602
10°	12017	10139	9010
15°	13036	9991	8639
20°	14213	9816	8318
25°	15548	9586	8060
30°	16866	9334	7802
35°	17915	9058	7635
40°	18550	8770	7534
45°	18680	8467	7517
50°	18189	8145	7600
55°	17031	7854	7647
60°	15481	7496	7571
65°	14037	7089	7278
70°	12847	6573	6682
75°	11658	5911	5747
80°	10196	4940	4430
85°	8583	3590	3292



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.4	3.1
10°-20°	294.9	8.9
20°-30°	462.1	14.0
30°-40°	579.3	17.5
40°-50°	616.7	18.6
50°-60°	556.7	16.8
60°-70°	412.1	12.5
70°-80°	226.1	6.8
80°-90°	58.1	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°	858.4	26.0
0°-40°	1437.7	43.5
0°-60°	2611.2	78.9
0°-90°	3307.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3307.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1068	1068	1068	1068	1068	
5°	1154	1120	1057	1006	994	112
15°	1308	1192	1002	885	867	373
25°	1464	1220	902	769	759	677
35°	1524	1198	771	647	650	951
45°	1372	1095	622	521	552	1052
55°	1015	901	468	396	456	905
65°	616	635	311	268	320	615
75°	313	332	159	137	154	333
85°	78	76	32	30	30	92
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°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1110.8	1108.6	1106.0	1105.1	1101.2	1095.9	1091.1	1091.1	1085.4	1071.8	1062.1
5°	1154.3	1150.8	1144.2	1138.9	1130.6	1120.5	1110.4	1104.2	1090.6	1070.0	1057.3
7.5°	1194.2	1189.8	1181.5	1171.4	1157.8	1142.9	1126.2	1113.0	1092.4	1064.7	1048.5
10°	1229.3	1225.4	1215.3	1203.0	1183.7	1162.6	1138.0	1118.3	1090.2	1056.0	1037.1
12.5°	1268.0	1264.0	1250.0	1233.3	1206.9	1178.9	1146.4	1119.2	1084.5	1043.2	1021.7
15°	1307.9	1302.6	1286.8	1264.4	1229.3	1191.6	1151.6	1116.5	1075.3	1027.9	1002.4
17.5°	1347.4	1342.1	1322.4	1293.8	1250.0	1203.0	1153.8	1110.4	1062.1	1009.0	981.4
20°	1387.3	1382.1	1357.0	1321.1	1268.0	1211.3	1153.4	1101.2	1046.3	987.5	958.1
22.5°	1427.3	1421.1	1390.8	1347.0	1282.9	1217.0	1148.6	1088.4	1026.6	962.9	931.3
25°	1463.7	1457.6	1424.2	1372.4	1298.7	1219.7	1140.2	1070.9	1004.6	935.7	902.4
27.5°	1495.3	1487.8	1453.2	1396.1	1312.3	1220.6	1129.3	1051.1	979.2	906.3	872.5
30°	1517.2	1510.7	1473.8	1412.8	1320.2	1217.5	1115.2	1027.9	949.8	874.7	839.6
32.5°	1526.9	1521.2	1484.8	1420.7	1321.5	1209.6	1098.1	1002.0	919.0	841.4	805.8
35°	1524.3	1518.6	1483.9	1419.4	1317.5	1198.2	1076.6	972.6	886.1	806.7	770.7
37.5°	1507.6	1501.0	1469.4	1407.5	1306.1	1181.5	1052.0	940.5	850.6	771.1	734.7
40°	1476.0	1469.4	1442.2	1385.1	1286.8	1159.1	1023.9	906.3	814.1	733.8	697.8
42.5°	1430.8	1423.8	1402.3	1350.0	1259.2	1129.7	991.9	869.9	775.5	697.8	660.1
45°	1372.0	1364.9	1350.5	1306.1	1223.2	1095.0	955.5	830.4	735.1	657.0	621.9
47.5°	1299.1	1293.0	1285.9	1251.7	1178.9	1055.1	914.6	788.2	693.0	618.8	582.8
50°	1214.4	1208.3	1210.5	1187.2	1127.5	1009.0	869.9	743.9	649.6	576.3	543.8
52.5°	1118.3	1113.5	1124.0	1113.9	1067.8	957.7	822.0	698.3	605.2	535.9	504.7
55°	1014.7	1009.4	1029.6	1032.7	1001.1	901.0	767.6	650.9	560.5	496.4	467.9
57.5°	908.1	903.7	929.6	944.1	928.3	840.0	712.8	602.2	514.4	455.1	426.6
60°	804.0	800.5	827.7	851.4	849.7	775.5	655.7	549.5	468.3	413.4	389.3
62.5°	706.2	702.2	729.4	757.5	767.6	706.6	599.1	497.7	422.2	371.7	350.2
65°	616.2	612.3	635.5	664.5	682.9	634.6	538.1	444.2	375.7	329.6	311.2
67.5°	533.7	533.7	548.2	574.9	597.3	560.9	475.8	393.2	327.9	290.5	272.1
70°	456.4	456.0	466.5	485.4	511.3	481.9	412.6	339.7	282.6	249.7	233.5
72.5°	383.2	386.2	390.2	404.7	431.9	406.4	349.8	287.0	238.3	209.4	195.7
75°	313.4	312.9	318.6	331.4	351.1	332.2	287.0	235.7	194.4	170.7	158.9
77.5°	246.7	246.2	251.0	258.5	275.2	260.3	226.5	188.3	151.4	131.7	123.3
80°	183.9	183.9	188.3	192.2	204.5	192.7	169.0	140.9	111.0	95.7	89.1
82.5°	127.7	130.4	128.6	133.9	140.9	130.8	115.9	96.6	73.7	63.2	58.8
85°	77.7	79.9	77.7	82.1	85.1	76.4	68.9	57.5	42.6	35.6	32.5
87.5°	39.9	39.5	39.1	41.3	42.1	36.9	32.5	27.7	18.9	14.5	12.3
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°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1056.4	1059.0	1055.1	1040.6	1034.9	1028.8	1026.1	1023.5	1028.3	1027.0
5°	1047.6	1044.6	1034.5	1016.0	1006.4	996.3	991.5	988.4	995.0	993.6
7.5°	1035.8	1027.0	1012.1	989.7	977.4	963.8	957.2	953.3	957.7	956.8
10°	1020.9	1006.4	987.9	961.2	946.7	931.8	924.3	918.6	922.1	921.7
12.5°	1002.0	983.1	960.7	930.4	915.5	900.2	893.6	889.6	894.0	892.7
15°	980.9	958.1	932.2	901.5	885.2	871.2	866.4	863.3	866.8	866.8
17.5°	957.7	930.9	902.4	871.2	855.8	844.9	840.0	837.8	839.6	842.2
20°	931.8	901.9	871.2	840.9	827.7	816.3	811.9	809.8	813.7	811.9
22.5°	903.2	871.6	839.6	811.1	799.2	787.8	783.4	782.1	786.5	784.7
25°	873.0	838.7	807.1	781.2	769.4	759.7	755.8	754.5	756.6	758.8
27.5°	844.4	805.8	774.6	751.4	740.8	731.6	728.1	725.9	727.7	730.3
30°	809.8	772.4	741.7	720.2	710.1	701.3	698.7	697.0	699.6	701.8
32.5°	777.3	739.5	708.8	687.7	679.0	670.6	670.2	669.3	672.4	675.0
35°	742.2	705.3	675.5	655.7	647.4	640.3	641.7	643.0	646.5	649.6
37.5°	706.6	670.6	642.1	624.1	616.2	610.5	614.4	616.2	621.0	624.1
40°	670.6	634.6	608.3	592.1	584.2	581.5	587.2	591.2	596.9	599.5
42.5°	633.8	600.4	574.1	559.1	552.6	552.6	560.0	566.2	572.8	575.4
45°	596.9	564.4	539.4	525.8	521.0	524.5	533.3	541.2	549.5	552.1
47.5°	559.6	528.0	505.2	492.9	490.2	495.5	506.5	517.0	526.7	530.2
50°	522.3	493.8	470.9	459.5	459.5	466.1	480.1	493.3	503.8	507.4
52.5°	485.0	457.8	434.5	426.2	427.9	437.1	453.4	467.0	478.8	482.3
55°	447.2	420.5	400.3	393.2	396.3	407.7	424.4	440.2	451.6	455.6
57.5°	409.9	384.5	366.0	360.3	364.7	377.4	396.8	410.4	422.2	425.7
60°	372.2	346.3	331.8	327.4	333.1	346.3	366.0	378.8	389.7	393.2
62.5°	334.9	310.7	298.0	294.1	300.6	314.7	334.0	345.4	353.7	357.3
65°	297.1	275.6	263.8	261.1	268.2	281.8	300.2	309.9	316.0	319.5
67.5°	259.8	241.4	230.4	228.2	235.7	248.0	265.1	270.4	276.1	279.6
70°	223.0	206.3	197.1	195.7	202.3	214.2	228.7	231.3	234.4	237.4
72.5°	186.5	173.4	164.1	163.7	169.9	179.5	191.4	191.8	192.7	195.7
75°	151.4	139.6	132.5	133.9	137.4	145.3	154.5	151.9	152.3	154.5
77.5°	117.6	108.0	103.1	104.0	106.7	112.4	118.5	115.4	113.7	115.9
80°	84.7	76.4	74.6	75.1	76.8	80.8	84.3	81.6	78.1	79.9
82.5°	55.7	50.5	49.6	50.0	51.4	53.5	54.4	50.5	49.6	50.9
85°	30.7	28.5	28.5	29.8	30.3	30.7	30.7	28.5	29.0	29.8
87.5°	12.3	12.3	13.6	14.9	14.0	12.3	10.5	7.0	7.0	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)