

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-37L935-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-37L935-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

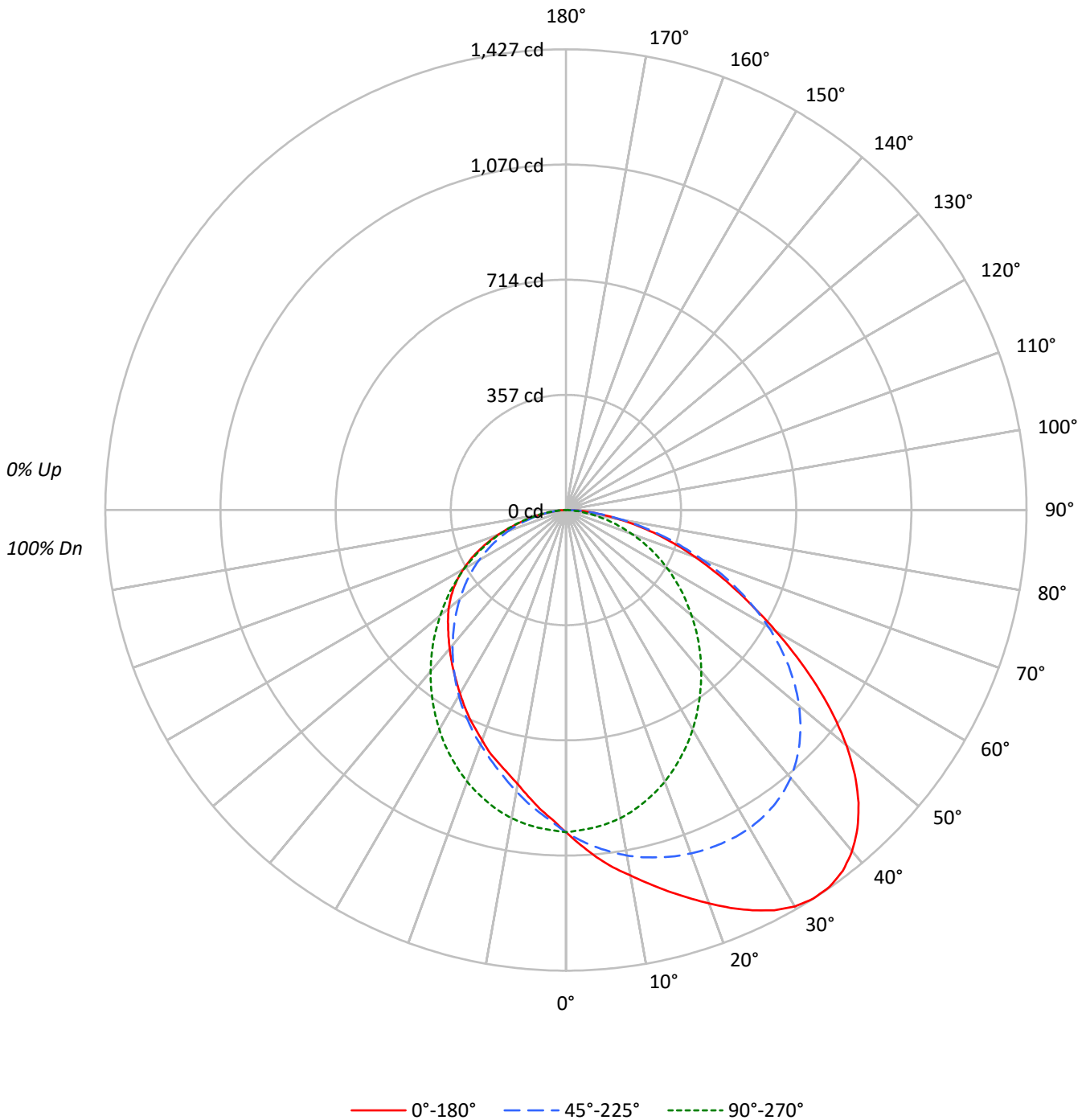
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3091.3 lumens
Efficiency: N/A
Efficacy: 75.8 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 (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°	9608	9608	9608
5°	10426	9550	8975
10°	11232	9476	8421
15°	12184	9338	8075
20°	13285	9175	7775
25°	14532	8959	7534
30°	15765	8723	7291
35°	16743	8466	7135
40°	17337	8197	7042
45°	17459	7914	7025
50°	16999	7612	7102
55°	15919	7340	7147
60°	14470	7007	7076
65°	13119	6624	6802
70°	12008	6142	6246
75°	10895	5524	5371
80°	9530	4618	4141
85°	8019	3358	3082



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	3.1
10°-20°	275.7	8.9
20°-30°	431.9	14.0
30°-40°	541.4	17.5
40°-50°	576.4	18.6
50°-60°	520.3	16.8
60°-70°	385.2	12.5
70°-80°	211.4	6.8
80°-90°	54.3	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°	802.3	26.0
0°-40°	1343.8	43.5
0°-60°	2440.5	78.9
0°-90°	3091.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3091.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	998	998	998	998	998	
5°	1079	1047	988	941	929	105
15°	1222	1114	937	827	810	349
25°	1368	1140	843	719	709	633
35°	1425	1120	720	605	607	888
45°	1282	1024	581	487	516	983
55°	948	842	437	370	426	846
65°	576	593	291	251	299	575
75°	293	310	148	128	144	311
85°	73	71	30	28	28	86
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°	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0
2.5°	1038.2	1036.2	1033.7	1032.9	1029.2	1024.3	1019.8	1019.8	1014.4	1001.7	992.7
5°	1078.8	1075.6	1069.4	1064.5	1056.7	1047.3	1037.8	1032.1	1019.4	1000.1	988.2
7.5°	1116.2	1112.1	1104.3	1094.8	1082.1	1068.2	1052.6	1040.3	1021.0	995.2	980.0
10°	1149.0	1145.3	1135.9	1124.4	1106.3	1086.6	1063.7	1045.2	1019.0	987.0	969.3
12.5°	1185.1	1181.4	1168.3	1152.7	1128.1	1101.8	1071.5	1046.0	1013.6	975.1	955.0
15°	1222.4	1217.5	1202.7	1181.8	1149.0	1113.7	1076.4	1043.6	1005.0	960.7	936.9
17.5°	1259.3	1254.4	1235.9	1209.3	1168.3	1124.4	1078.4	1037.8	992.7	943.1	917.2
20°	1296.7	1291.7	1268.4	1234.7	1185.1	1132.2	1078.0	1029.2	977.9	923.0	895.5
22.5°	1334.0	1328.2	1299.9	1258.9	1199.0	1137.5	1073.5	1017.3	959.5	900.0	870.5
25°	1368.0	1362.3	1331.1	1282.7	1213.8	1140.0	1065.7	1000.9	939.0	874.6	843.4
27.5°	1397.6	1390.6	1358.2	1304.9	1226.5	1140.8	1055.5	982.4	915.2	847.1	815.5
30°	1418.1	1411.9	1377.5	1320.5	1233.9	1137.9	1042.3	960.7	887.7	817.5	784.7
32.5°	1427.1	1421.8	1387.7	1327.8	1235.1	1130.5	1026.3	936.5	859.0	786.4	753.1
35°	1424.6	1419.3	1386.9	1326.6	1231.4	1119.9	1006.2	909.0	828.2	754.0	720.3
37.5°	1409.1	1402.9	1373.4	1315.5	1220.8	1104.3	983.3	879.1	795.0	720.7	686.7
40°	1379.5	1373.4	1347.9	1294.6	1202.7	1083.4	957.0	847.1	760.9	685.9	652.2
42.5°	1337.3	1330.7	1310.6	1261.8	1176.9	1055.9	927.1	813.0	724.8	652.2	616.9
45°	1282.3	1275.7	1262.2	1220.8	1143.2	1023.5	893.0	776.1	687.1	614.1	581.3
47.5°	1214.2	1208.5	1201.9	1169.9	1101.8	986.1	854.9	736.7	647.7	578.4	544.8
50°	1135.0	1129.3	1131.3	1109.6	1053.8	943.1	813.0	695.3	607.1	538.6	508.2
52.5°	1045.2	1040.7	1050.5	1041.1	998.0	895.1	768.3	652.6	565.7	500.9	471.7
55°	948.4	943.5	962.3	965.2	935.7	842.2	717.4	608.3	523.8	463.9	437.3
57.5°	848.7	844.6	868.8	882.4	867.6	785.1	666.2	562.8	480.8	425.4	398.7
60°	751.5	748.2	773.6	795.8	794.2	724.8	612.8	513.6	437.7	386.4	363.9
62.5°	660.0	656.3	681.8	708.0	717.4	660.4	559.9	465.2	394.6	347.4	327.3
65°	575.9	572.2	594.0	621.1	638.3	593.2	502.9	415.1	351.1	308.1	290.8
67.5°	498.8	498.8	512.3	537.4	558.3	524.2	444.7	367.5	306.4	271.6	254.3
70°	426.6	426.2	436.0	453.7	477.9	450.4	385.6	317.5	264.2	233.4	218.2
72.5°	358.1	361.0	364.7	378.2	403.6	379.9	326.9	268.3	222.7	195.7	183.0
75°	292.9	292.5	297.8	309.7	328.2	310.5	268.3	220.3	181.7	159.6	148.5
77.5°	230.5	230.1	234.6	241.6	257.2	243.3	211.7	176.0	141.5	123.1	115.3
80°	171.9	171.9	176.0	179.7	191.2	180.1	157.9	131.7	103.8	89.4	83.3
82.5°	119.4	121.8	120.2	125.1	131.7	122.2	108.3	90.2	68.9	59.1	55.0
85°	72.6	74.7	72.6	76.7	79.6	71.4	64.4	53.7	39.8	33.2	30.4
87.5°	37.3	36.9	36.5	38.6	39.4	34.5	30.4	25.8	17.6	13.5	11.5
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°	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0	998.0
2.5°	987.4	989.8	986.1	972.6	967.3	961.5	959.1	956.6	961.1	959.9
5°	979.2	976.3	966.9	949.6	940.6	931.2	926.7	923.8	929.9	928.7
7.5°	968.1	959.9	945.9	925.0	913.5	900.8	894.7	891.0	895.1	894.2
10°	954.1	940.6	923.4	898.4	884.8	870.9	863.9	858.6	861.8	861.4
12.5°	936.5	918.9	897.9	869.6	855.7	841.3	835.2	831.5	835.6	834.4
15°	916.8	895.5	871.3	842.6	827.4	814.3	809.7	806.9	810.2	810.2
17.5°	895.1	870.0	843.4	814.3	799.9	789.6	785.1	783.1	784.7	787.2
20°	870.9	843.0	814.3	786.0	773.6	763.0	758.9	756.8	760.5	758.9
22.5°	844.2	814.7	784.7	758.1	747.0	736.3	732.2	731.0	735.1	733.4
25°	815.9	783.9	754.4	730.2	719.1	710.1	706.4	705.1	707.2	709.2
27.5°	789.2	753.1	724.0	702.3	692.4	683.8	680.5	678.5	680.1	682.6
30°	756.8	722.0	693.2	673.1	663.7	655.5	653.0	651.4	653.9	655.9
32.5°	726.5	691.2	662.5	642.8	634.6	626.8	626.4	625.6	628.4	630.9
35°	693.7	659.2	631.3	612.8	605.1	598.5	599.7	601.0	604.2	607.1
37.5°	660.4	626.8	600.1	583.3	575.9	570.6	574.3	575.9	580.4	583.3
40°	626.8	593.2	568.5	553.4	546.0	543.5	548.9	552.5	557.9	560.3
42.5°	592.3	561.2	536.5	522.6	516.4	516.4	523.4	529.2	535.3	537.8
45°	557.9	527.5	504.1	491.4	486.9	490.2	498.4	505.8	513.6	516.0
47.5°	523.0	493.5	472.1	460.7	458.2	463.1	473.4	483.2	492.2	495.5
50°	488.1	461.5	440.2	429.5	429.5	435.6	448.8	461.1	470.9	474.2
52.5°	453.3	427.8	406.1	398.3	400.0	408.6	423.7	436.5	447.5	450.8
55°	418.0	393.0	374.1	367.5	370.4	381.1	396.7	411.4	422.1	425.8
57.5°	383.1	359.3	342.1	336.8	340.9	352.8	370.8	383.5	394.6	397.9
60°	347.9	323.7	310.1	306.0	311.3	323.7	342.1	354.0	364.3	367.5
62.5°	313.0	290.4	278.5	274.8	281.0	294.1	312.2	322.8	330.6	333.9
65°	277.7	257.6	246.5	244.1	250.6	263.4	280.6	289.6	295.3	298.6
67.5°	242.8	225.6	215.4	213.3	220.3	231.8	247.8	252.7	258.0	261.3
70°	208.4	192.8	184.2	183.0	189.1	200.2	213.7	216.2	219.0	221.9
72.5°	174.3	162.0	153.4	153.0	158.7	167.8	178.8	179.3	180.1	183.0
75°	141.5	130.4	123.9	125.1	128.4	135.8	144.4	141.9	142.3	144.4
77.5°	109.9	100.9	96.4	97.2	99.7	105.0	110.8	107.9	106.2	108.3
80°	79.2	71.4	69.7	70.1	71.8	75.5	78.8	76.3	73.0	74.7
82.5°	52.1	47.2	46.4	46.8	48.0	50.0	50.9	47.2	46.4	47.6
85°	28.7	26.7	26.7	27.9	28.3	28.7	28.7	26.7	27.1	27.9
87.5°	11.5	11.5	12.7	13.9	13.1	11.5	9.8	6.6	6.6	7.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)