

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-34L940-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-34L940-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/  
ASYMMETRIC Lens  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

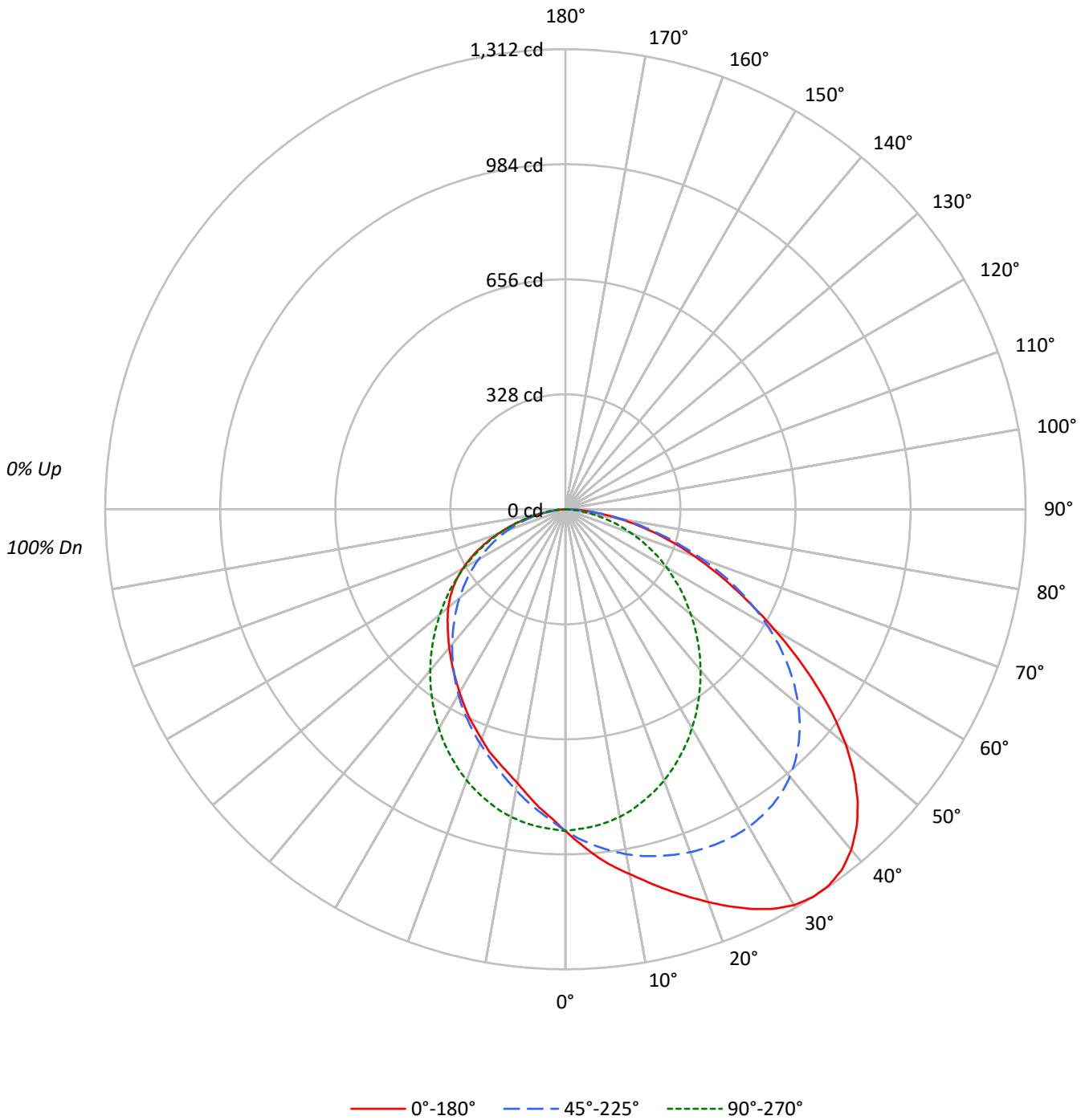
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2841.6 lumens  
Efficiency: N/A  
Efficacy: 77.2 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): 36.8  
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	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	43	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23	23	23	23

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

	0°	90°	180°
0°	8832	8832	8832
5°	9584	8779	8250
10°	10325	8710	7741
15°	11200	8584	7422
20°	12211	8433	7147
25°	13358	8236	6926
30°	14491	8018	6702
35°	15391	7782	6559
40°	15937	7534	6474
45°	16048	7275	6459
50°	15626	6997	6529
55°	14633	6747	6570
60°	13301	6441	6506
65°	12060	6089	6253
70°	11040	5647	5742
75°	10013	5077	4936
80°	8760	4241	3803
85°	7368	3082	2828



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.1	3.1
10°-20°	253.4	8.9
20°-30°	397.0	14.0
30°-40°	497.7	17.5
40°-50°	529.8	18.6
50°-60°	478.3	16.8
60°-70°	354.1	12.5
70°-80°	194.3	6.8
80°-90°	49.9	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°	737.5	26.0
0°-40°	1235.2	43.5
0°-60°	2243.4	78.9
0°-90°	2841.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2841.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	917	917	917	917	917	
5°	992	963	908	865	854	97
15°	1124	1024	861	760	745	320
25°	1258	1048	775	661	652	582
35°	1310	1029	662	556	558	817
45°	1179	941	534	448	474	904
55°	872	774	402	340	391	777
65°	529	545	267	230	274	528
75°	269	285	136	118	133	286
85°	67	66	28	26	26	79
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°	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4
2.5°	954.4	952.5	950.2	949.5	946.1	941.5	937.4	937.4	932.5	920.8	912.5
5°	991.7	988.7	983.0	978.5	971.3	962.7	954.0	948.7	937.0	919.3	908.4
7.5°	1026.0	1022.2	1015.1	1006.4	994.7	981.9	967.6	956.2	938.5	914.8	900.8
10°	1056.2	1052.8	1044.1	1033.5	1017.0	998.9	977.7	960.8	936.6	907.2	891.0
12.5°	1089.3	1086.0	1073.9	1059.6	1036.9	1012.8	984.9	961.5	931.7	896.3	877.8
15°	1123.7	1119.1	1105.6	1086.3	1056.2	1023.7	989.4	959.3	923.8	883.1	861.2
17.5°	1157.6	1153.1	1136.1	1111.6	1073.9	1033.5	991.3	954.0	912.5	866.9	843.1
20°	1191.9	1187.4	1165.9	1135.0	1089.3	1040.7	990.9	946.1	898.9	848.4	823.1
22.5°	1226.2	1220.9	1194.9	1157.2	1102.2	1045.6	986.8	935.1	882.0	827.3	800.1
25°	1257.5	1252.2	1223.6	1179.1	1115.7	1047.9	979.6	920.0	863.1	803.9	775.3
27.5°	1284.7	1278.3	1248.5	1199.5	1127.4	1048.6	970.2	903.1	841.2	778.6	749.6
30°	1303.5	1297.9	1266.2	1213.8	1134.2	1046.0	958.1	883.1	816.0	751.5	721.3
32.5°	1311.8	1306.9	1275.6	1220.6	1135.4	1039.2	943.4	860.8	789.6	722.8	692.3
35°	1309.6	1304.7	1274.9	1219.4	1132.0	1029.4	924.9	835.6	761.3	693.1	662.1
37.5°	1295.2	1289.6	1262.4	1209.3	1122.2	1015.1	903.8	808.1	730.8	662.5	631.2
40°	1268.1	1262.4	1239.0	1190.0	1105.6	995.8	879.7	778.6	699.5	630.5	599.5
42.5°	1229.2	1223.2	1204.7	1159.9	1081.8	970.6	852.2	747.3	666.3	599.5	567.1
45°	1178.7	1172.7	1160.2	1122.2	1050.9	940.8	820.9	713.4	631.6	564.5	534.3
47.5°	1116.1	1110.8	1104.8	1075.4	1012.8	906.5	785.8	677.2	595.4	531.7	500.7
50°	1043.3	1038.1	1040.0	1020.0	968.7	866.9	747.3	639.1	558.1	495.1	467.2
52.5°	960.8	956.6	965.7	957.0	917.4	822.8	706.2	599.9	520.0	460.4	433.6
55°	871.8	867.3	884.6	887.2	860.1	774.1	659.5	559.2	481.5	426.5	402.0
57.5°	780.2	776.4	798.6	811.1	797.5	721.7	612.4	517.3	441.9	391.0	366.5
60°	690.8	687.8	711.2	731.5	730.0	666.3	563.3	472.1	402.3	355.2	334.5
62.5°	606.7	603.3	626.7	650.8	659.5	607.1	514.7	427.6	362.7	319.4	300.9
65°	529.4	526.0	546.0	570.9	586.7	545.2	462.3	381.6	322.8	283.2	267.3
67.5°	458.5	458.5	471.0	494.0	513.2	481.9	408.7	337.9	281.7	249.6	233.8
70°	392.2	391.8	400.8	417.0	439.3	414.0	354.4	291.9	242.8	214.6	200.6
72.5°	329.2	331.8	335.2	347.7	371.0	349.2	300.5	246.6	204.7	179.9	168.2
75°	269.2	268.8	273.8	284.7	301.7	285.4	246.6	202.5	167.0	146.7	136.5
77.5°	211.9	211.5	215.7	222.1	236.4	223.6	194.6	161.8	130.1	113.1	106.0
80°	158.0	158.0	161.8	165.2	175.7	165.5	145.2	121.0	95.4	82.2	76.5
82.5°	109.7	112.0	110.5	115.0	121.0	112.4	99.5	83.0	63.3	54.3	50.5
85°	66.7	68.6	66.7	70.5	73.2	65.6	59.2	49.4	36.6	30.5	27.9
87.5°	34.3	33.9	33.6	35.4	36.2	31.7	27.9	23.8	16.2	12.4	10.6
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°	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4	917.4
2.5°	907.6	909.9	906.5	894.0	889.1	883.8	881.6	879.3	883.5	882.3
5°	900.1	897.4	888.7	872.9	864.6	855.9	851.8	849.2	854.8	853.7
7.5°	889.9	882.3	869.5	850.3	839.7	828.0	822.4	819.0	822.8	822.0
10°	877.1	864.6	848.8	825.8	813.3	800.5	794.1	789.2	792.2	791.8
12.5°	860.8	844.6	825.4	799.4	786.6	773.4	767.7	764.3	768.1	767.0
15°	842.7	823.1	800.9	774.5	760.5	748.5	744.3	741.7	744.7	744.7
17.5°	822.8	799.8	775.3	748.5	735.3	725.9	721.7	719.8	721.3	723.6
20°	800.5	774.9	748.5	722.5	711.2	701.3	697.6	695.7	699.1	697.6
22.5°	776.0	748.9	721.3	696.8	686.6	676.8	673.1	671.9	675.7	674.2
25°	750.0	720.6	693.4	671.2	661.0	652.7	649.3	648.2	650.1	652.0
27.5°	725.5	692.3	665.5	645.5	636.5	628.6	625.6	623.7	625.2	627.4
30°	695.7	663.6	637.2	618.8	610.1	602.6	600.3	598.8	601.0	602.9
32.5°	667.8	635.4	609.0	590.9	583.3	576.2	575.8	575.0	577.7	579.9
35°	637.6	605.9	580.3	563.3	556.2	550.1	551.3	552.4	555.4	558.1
37.5°	607.1	576.2	551.7	536.2	529.4	524.5	527.9	529.4	533.6	536.2
40°	576.2	545.2	522.6	508.7	501.9	499.6	504.5	507.9	512.8	515.1
42.5°	544.5	515.8	493.2	480.4	474.7	474.7	481.1	486.4	492.1	494.3
45°	512.8	484.9	463.4	451.7	447.6	450.6	458.1	464.9	472.1	474.4
47.5°	480.8	453.6	434.0	423.4	421.2	425.7	435.1	444.2	452.5	455.5
50°	448.7	424.2	404.6	394.8	394.8	400.4	412.5	423.8	432.9	435.9
52.5°	416.7	393.3	373.3	366.1	367.6	375.6	389.5	401.2	411.4	414.4
55°	384.2	361.2	343.9	337.9	340.5	350.3	364.6	378.2	388.0	391.4
57.5°	352.2	330.3	314.5	309.6	313.3	324.3	340.9	352.6	362.7	365.8
60°	319.8	297.5	285.1	281.3	286.2	297.5	314.5	325.4	334.8	337.9
62.5°	287.7	267.0	256.0	252.6	258.3	270.4	286.9	296.8	303.9	306.9
65°	255.3	236.8	226.6	224.4	230.4	242.1	257.9	266.2	271.5	274.5
67.5°	223.2	207.4	198.0	196.1	202.5	213.0	227.7	232.3	237.2	240.2
70°	191.6	177.2	169.3	168.2	173.8	184.0	196.5	198.7	201.4	204.0
72.5°	160.3	148.9	141.0	140.6	145.9	154.2	164.4	164.8	165.5	168.2
75°	130.1	119.9	113.9	115.0	118.0	124.8	132.7	130.5	130.8	132.7
77.5°	101.1	92.8	88.6	89.4	91.6	96.5	101.8	99.2	97.7	99.5
80°	72.8	65.6	64.1	64.5	66.0	69.4	72.4	70.1	67.1	68.6
82.5°	47.9	43.4	42.6	43.0	44.1	46.0	46.8	43.4	42.6	43.7
85°	26.4	24.5	24.5	25.6	26.0	26.4	26.4	24.5	24.9	25.6
87.5°	10.6	10.6	11.7	12.8	12.1	10.6	9.0	6.0	6.0	7.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)