

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-37L930-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-37L930-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

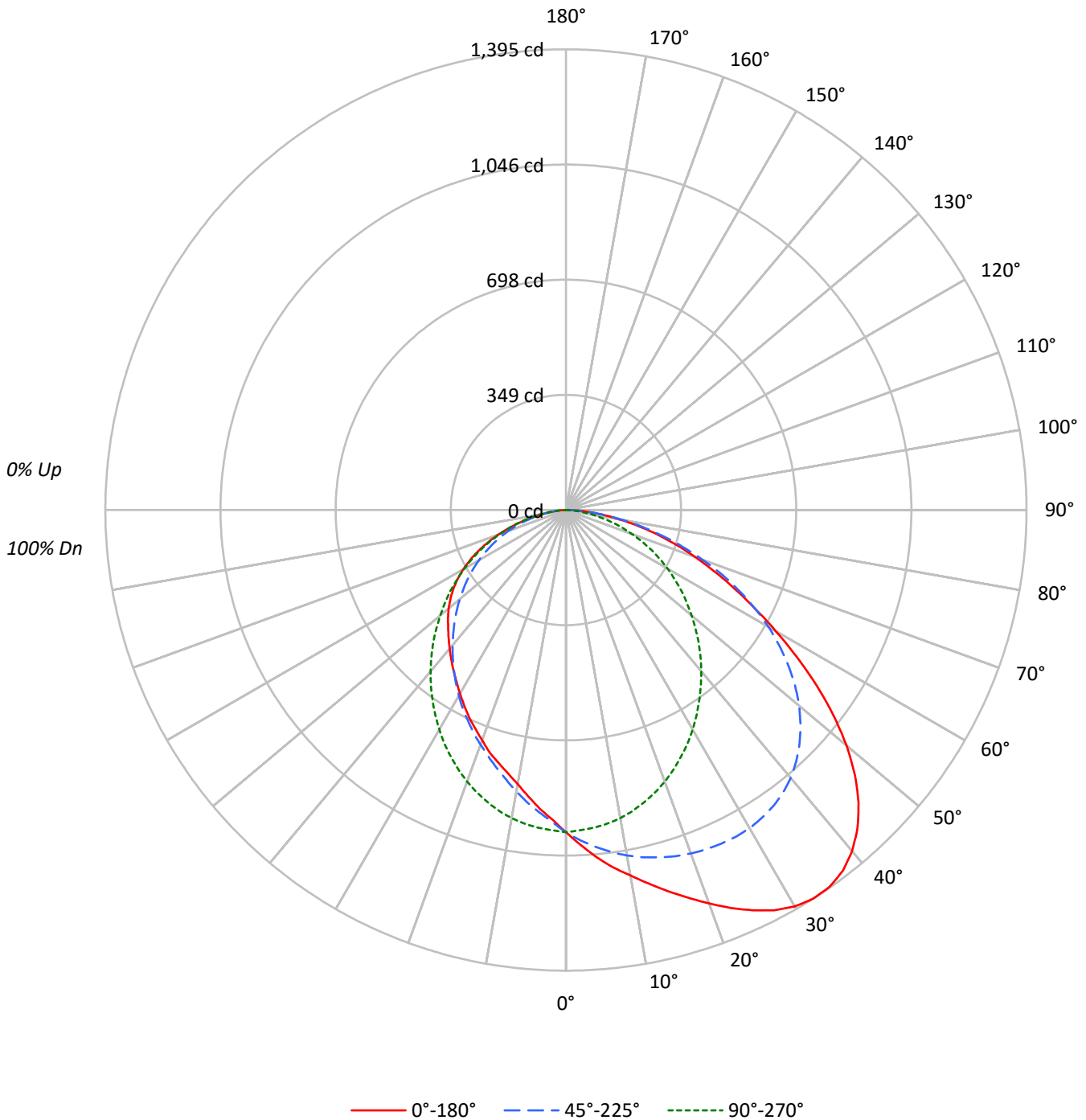
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3021.9 lumens
Efficiency: N/A
Efficacy: 74.1 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_{in}): 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°	9392	9392	9392
5°	10192	9336	8773
10°	10980	9263	8232
15°	11911	9129	7894
20°	12986	8969	7600
25°	14206	8757	7365
30°	15410	8528	7128
35°	16367	8275	6975
40°	16947	8013	6885
45°	17067	7736	6867
50°	16618	7441	6942
55°	15561	7175	6986
60°	14144	6849	6918
65°	12825	6476	6650
70°	11738	6004	6105
75°	10650	5401	5249
80°	9314	4513	4047
85°	7843	3281	3016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.7	3.1
10°-20°	269.5	8.9
20°-30°	422.2	14.0
30°-40°	529.3	17.5
40°-50°	563.4	18.6
50°-60°	508.7	16.8
60°-70°	376.5	12.5
70°-80°	206.6	6.8
80°-90°	53.0	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°	784.3	26.0
0°-40°	1313.6	43.5
0°-60°	2385.7	78.9
0°-90°	3021.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3021.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	976	976	976	976	976	
5°	1055	1024	966	920	908	103
15°	1195	1089	916	809	792	341
25°	1337	1114	824	703	693	619
35°	1393	1095	704	592	594	868
45°	1254	1000	568	476	504	961
55°	927	823	428	362	416	827
65°	563	580	284	245	292	562
75°	286	304	145	126	141	304
85°	71	70	30	28	27	84
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°	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6
2.5°	1014.9	1012.9	1010.5	1009.7	1006.1	1001.3	996.9	996.9	991.7	979.2	970.4
5°	1054.6	1051.4	1045.4	1040.6	1033.0	1023.7	1014.5	1008.9	996.5	977.6	966.0
7.5°	1091.1	1087.1	1079.5	1070.2	1057.8	1044.2	1028.9	1016.9	998.1	972.8	958.0
10°	1123.2	1119.6	1110.3	1099.1	1081.5	1062.2	1039.8	1021.7	996.1	964.8	947.5
12.5°	1158.5	1154.9	1142.0	1126.8	1102.7	1077.1	1047.4	1022.5	990.8	953.2	933.5
15°	1195.0	1190.1	1175.7	1155.3	1123.2	1088.7	1052.2	1020.1	982.4	939.1	915.9
17.5°	1231.0	1226.2	1208.2	1182.1	1142.0	1099.1	1054.2	1014.5	970.4	921.9	896.6
20°	1267.5	1262.7	1239.9	1207.0	1158.5	1106.7	1053.8	1006.1	956.0	902.2	875.4
22.5°	1304.0	1298.4	1270.7	1230.6	1172.1	1111.9	1049.4	994.5	937.9	879.8	850.9
25°	1337.3	1331.7	1301.2	1253.9	1186.5	1114.4	1041.8	978.4	917.9	854.9	824.4
27.5°	1366.2	1359.4	1327.7	1275.6	1199.0	1115.2	1031.8	960.4	894.6	828.0	797.2
30°	1386.2	1380.2	1346.5	1290.8	1206.2	1112.3	1018.9	939.1	867.7	799.2	767.1
32.5°	1395.0	1389.8	1356.6	1298.0	1207.4	1105.1	1003.3	915.5	839.7	768.7	736.2
35°	1392.6	1387.4	1355.8	1296.8	1203.8	1094.7	983.6	888.6	809.6	737.0	704.1
37.5°	1377.4	1371.4	1342.5	1286.0	1193.3	1079.5	961.2	859.3	777.1	704.5	671.3
40°	1348.5	1342.5	1317.7	1265.5	1175.7	1059.0	935.5	828.0	743.8	670.5	637.6
42.5°	1307.2	1300.8	1281.2	1233.4	1150.4	1032.2	906.2	794.8	708.6	637.6	603.1
45°	1253.5	1247.1	1233.8	1193.3	1117.6	1000.5	873.0	758.7	671.7	600.3	568.2
47.5°	1186.9	1181.3	1174.9	1143.6	1077.1	964.0	835.7	720.2	633.2	565.4	532.5
50°	1109.5	1103.9	1105.9	1084.7	1030.1	921.9	794.8	679.7	593.5	526.5	496.8
52.5°	1021.7	1017.3	1026.9	1017.7	975.6	875.0	751.1	638.0	553.0	489.6	461.1
55°	927.1	922.3	940.7	943.5	914.7	823.2	701.3	594.7	512.1	453.5	427.5
57.5°	829.7	825.6	849.3	862.5	848.1	767.5	651.2	550.2	470.0	415.8	389.8
60°	734.6	731.4	756.3	777.9	776.3	708.6	599.1	502.0	427.9	377.7	355.7
62.5°	645.2	641.6	666.4	692.1	701.3	645.6	547.4	454.7	385.8	339.6	320.0
65°	563.0	559.4	580.6	607.1	623.9	579.8	491.6	405.8	343.2	301.1	284.3
67.5°	487.6	487.6	500.8	525.3	545.7	512.5	434.7	359.3	299.5	265.5	248.6
70°	417.0	416.6	426.3	443.5	467.2	440.3	376.9	310.4	258.2	228.2	213.3
72.5°	350.1	352.9	356.5	369.7	394.6	371.3	319.6	262.2	217.7	191.3	178.8
75°	286.3	285.9	291.1	302.7	320.8	303.6	262.2	215.3	177.6	156.0	145.2
77.5°	225.4	225.0	229.4	236.2	251.4	237.8	206.9	172.0	138.3	120.3	112.7
80°	168.0	168.0	172.0	175.6	186.9	176.0	154.4	128.7	101.5	87.4	81.4
82.5°	116.7	119.1	117.5	122.3	128.7	119.5	105.9	88.2	67.4	57.7	53.7
85°	71.0	73.0	71.0	75.0	77.8	69.8	63.0	52.5	38.9	32.5	29.7
87.5°	36.5	36.1	35.7	37.7	38.5	33.7	29.7	25.3	17.2	13.2	11.2
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°	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6	975.6
2.5°	965.2	967.6	964.0	950.7	945.5	939.9	937.5	935.1	939.5	938.3
5°	957.2	954.4	945.1	928.3	919.5	910.2	905.8	903.0	909.0	907.8
7.5°	946.3	938.3	924.7	904.2	893.0	880.6	874.6	871.0	875.0	874.2
10°	932.7	919.5	902.6	878.2	864.9	851.3	844.5	839.3	842.5	842.1
12.5°	915.5	898.2	877.8	850.1	836.5	822.4	816.4	812.8	816.8	815.6
15°	896.2	875.4	851.7	823.6	808.8	796.0	791.6	788.7	792.0	792.0
17.5°	875.0	850.5	824.4	796.0	781.9	771.9	767.5	765.5	767.1	769.5
20°	851.3	824.0	796.0	768.3	756.3	745.8	741.8	739.8	743.4	741.8
22.5°	825.2	796.4	767.1	741.0	730.2	719.8	715.8	714.6	718.6	717.0
25°	797.6	766.3	737.4	713.8	702.9	694.1	690.5	689.3	691.3	693.3
27.5°	771.5	736.2	707.7	686.5	676.9	668.5	665.2	663.2	664.8	667.2
30°	739.8	705.7	677.7	658.0	648.8	640.8	638.4	636.8	639.2	641.2
32.5°	710.2	675.7	647.6	628.4	620.3	612.7	612.3	611.5	614.3	616.7
35°	678.1	644.4	617.1	599.1	591.5	585.0	586.2	587.5	590.7	593.5
37.5°	645.6	612.7	586.6	570.2	563.0	557.8	561.4	563.0	567.4	570.2
40°	612.7	579.8	555.8	540.9	533.7	531.3	536.5	540.1	545.3	547.8
42.5°	579.0	548.6	524.5	510.9	504.8	504.8	511.7	517.3	523.3	525.7
45°	545.3	515.7	492.8	480.4	476.0	479.2	487.2	494.4	502.0	504.4
47.5°	511.3	482.4	461.5	450.3	447.9	452.7	462.7	472.4	481.2	484.4
50°	477.2	451.1	430.3	419.8	419.8	425.9	438.7	450.7	460.3	463.5
52.5°	443.1	418.2	397.0	389.4	391.0	399.4	414.2	426.7	437.5	440.7
55°	408.6	384.1	365.7	359.3	362.1	372.5	387.8	402.2	412.6	416.2
57.5°	374.5	351.3	334.4	329.2	333.2	344.9	362.5	374.9	385.8	389.0
60°	340.0	316.4	303.1	299.1	304.4	316.4	334.4	346.1	356.1	359.3
62.5°	306.0	283.9	272.3	268.7	274.7	287.5	305.2	315.6	323.2	326.4
65°	271.5	251.8	241.0	238.6	245.0	257.4	274.3	283.1	288.7	291.9
67.5°	237.4	220.5	210.5	208.5	215.3	226.6	242.2	247.0	252.2	255.4
70°	203.7	188.5	180.0	178.8	184.9	195.7	208.9	211.3	214.1	216.9
72.5°	170.4	158.4	150.0	149.6	155.2	164.0	174.8	175.2	176.0	178.8
75°	138.3	127.5	121.1	122.3	125.5	132.7	141.1	138.7	139.1	141.1
77.5°	107.5	98.6	94.2	95.0	97.4	102.7	108.3	105.5	103.9	105.9
80°	77.4	69.8	68.2	68.6	70.2	73.8	77.0	74.6	71.4	73.0
82.5°	50.9	46.1	45.3	45.7	46.9	48.9	49.7	46.1	45.3	46.5
85°	28.1	26.1	26.1	27.3	27.7	28.1	28.1	26.1	26.5	27.3
87.5°	11.2	11.2	12.4	13.6	12.8	11.2	9.6	6.4	6.4	7.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)