

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-37L940-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-37L940-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

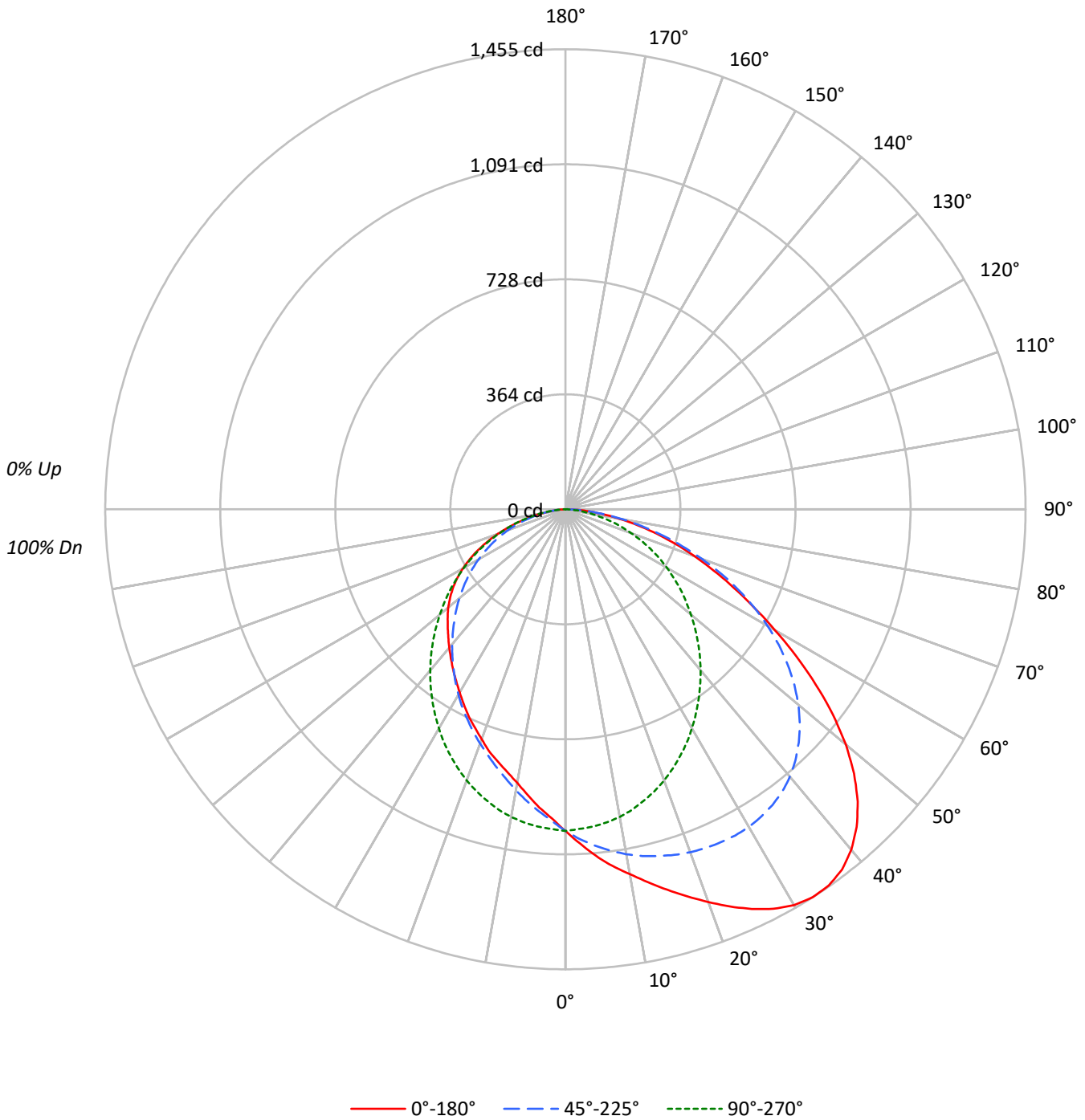
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3151.3 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): 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	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°	9795	9795	9795
5°	10629	9735	9149
10°	11450	9660	8584
15°	12420	9519	8232
20°	13542	9352	7926
25°	14814	9132	7680
30°	16070	8892	7433
35°	17069	8630	7274
40°	17674	8356	7179
45°	17798	8067	7162
50°	17330	7760	7240
55°	16228	7483	7286
60°	14751	7142	7215
65°	13374	6754	6934
70°	12242	6263	6367
75°	11107	5632	5475
80°	9713	4707	4219
85°	8174	3413	3137



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	3.1
10°-20°	281.0	8.9
20°-30°	440.2	14.0
30°-40°	551.9	17.5
40°-50°	587.6	18.6
50°-60°	530.4	16.8
60°-70°	392.7	12.5
70°-80°	215.5	6.8
80°-90°	55.3	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°	817.9	26.0
0°-40°	1369.8	43.5
0°-60°	2487.8	78.9
0°-90°	3151.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3151.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1017	1017	1017	1017	1017	
5°	1100	1068	1007	959	947	107
15°	1246	1135	955	843	826	355
25°	1395	1162	860	733	723	645
35°	1452	1142	734	617	619	906
45°	1307	1043	592	496	526	1002
55°	967	858	446	378	434	862
65°	587	605	296	256	304	586
75°	299	316	151	131	147	317
85°	74	73	31	29	28	87
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°	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4
2.5°	1058.4	1056.3	1053.8	1052.9	1049.2	1044.1	1039.5	1039.5	1034.1	1021.1	1011.9
5°	1099.8	1096.4	1090.1	1085.1	1077.2	1067.6	1057.9	1052.1	1039.1	1019.5	1007.3
7.5°	1137.8	1133.6	1125.7	1116.1	1103.1	1088.9	1073.0	1060.5	1040.8	1014.5	999.0
10°	1171.3	1167.5	1157.9	1146.2	1127.8	1107.7	1084.3	1065.5	1038.7	1006.1	988.1
12.5°	1208.1	1204.3	1190.9	1175.0	1149.9	1123.2	1092.2	1066.3	1033.3	994.0	973.5
15°	1246.1	1241.1	1226.0	1204.7	1171.3	1135.3	1097.3	1063.8	1024.5	979.3	955.1
17.5°	1283.8	1278.7	1259.9	1232.7	1190.9	1146.2	1099.3	1057.9	1011.9	961.4	935.0
20°	1321.8	1316.8	1293.0	1258.7	1208.1	1154.1	1098.9	1049.2	996.9	940.9	912.8
22.5°	1359.9	1354.0	1325.2	1283.3	1222.3	1159.6	1094.3	1037.0	978.1	917.4	887.3
25°	1394.6	1388.7	1356.9	1307.6	1237.3	1162.1	1086.4	1020.3	957.2	891.5	859.7
27.5°	1424.7	1417.6	1384.5	1330.2	1250.3	1162.9	1075.9	1001.5	932.9	863.5	831.3
30°	1445.6	1439.3	1404.2	1346.1	1257.8	1160.0	1062.5	979.3	904.9	833.4	799.9
32.5°	1454.8	1449.3	1414.6	1353.6	1259.1	1152.5	1046.2	954.7	875.6	801.6	767.7
35°	1452.3	1446.8	1413.8	1352.3	1255.3	1141.6	1025.7	926.6	844.3	768.6	734.3
37.5°	1436.4	1430.1	1400.0	1341.0	1244.4	1125.7	1002.3	896.1	810.4	734.7	700.0
40°	1406.3	1400.0	1374.1	1319.7	1226.0	1104.4	975.6	863.5	775.7	699.2	664.9
42.5°	1363.2	1356.5	1336.0	1286.3	1199.7	1076.3	945.0	828.8	738.9	664.9	628.9
45°	1307.2	1300.5	1286.7	1244.4	1165.4	1043.3	910.3	791.2	700.4	626.0	592.5
47.5°	1237.8	1231.9	1225.2	1192.6	1123.2	1005.3	871.4	751.0	660.3	589.6	555.3
50°	1157.1	1151.2	1153.3	1131.1	1074.3	961.4	828.8	708.8	618.9	549.0	518.1
52.5°	1065.5	1060.9	1070.9	1061.3	1017.4	912.4	783.2	665.3	576.6	510.6	480.9
55°	966.8	961.8	981.0	983.9	953.8	858.5	731.4	620.1	534.0	472.9	445.8
57.5°	865.2	861.0	885.7	899.5	884.4	800.4	679.1	573.7	490.1	433.6	406.5
60°	766.1	762.7	788.7	811.2	809.6	738.9	624.7	523.5	446.2	393.9	370.9
62.5°	672.8	669.1	695.0	721.7	731.4	673.2	570.8	474.2	402.3	354.2	333.7
65°	587.1	583.3	605.5	633.1	650.7	604.7	512.7	423.2	357.9	314.0	296.5
67.5°	508.5	508.5	522.3	547.8	569.1	534.4	453.3	374.7	312.4	276.8	259.3
70°	434.9	434.5	444.5	462.5	487.2	459.1	393.1	323.7	269.3	237.9	222.5
72.5°	365.1	368.0	371.7	385.5	411.5	387.2	333.3	273.5	227.1	199.5	186.5
75°	298.6	298.1	303.6	315.7	334.5	316.5	273.5	224.6	185.2	162.7	151.4
77.5°	235.0	234.6	239.2	246.3	262.2	248.0	215.8	179.4	144.3	125.4	117.5
80°	175.2	175.2	179.4	183.2	194.9	183.6	161.0	134.2	105.8	91.2	84.9
82.5°	121.7	124.2	122.5	127.5	134.2	124.6	110.4	92.0	70.3	60.2	56.0
85°	74.0	76.1	74.0	78.2	81.1	72.8	65.7	54.8	40.6	33.9	30.9
87.5°	38.1	37.6	37.2	39.3	40.1	35.1	30.9	26.3	18.0	13.8	11.7
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°	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4	1017.4
2.5°	1006.5	1009.0	1005.3	991.5	986.0	980.2	977.7	975.2	979.8	978.5
5°	998.1	995.2	985.6	968.0	958.8	949.2	944.6	941.7	948.0	946.7
7.5°	986.9	978.5	964.3	943.0	931.2	918.3	912.0	908.2	912.4	911.6
10°	972.6	958.8	941.3	915.8	902.0	887.8	880.6	875.2	878.6	878.1
12.5°	954.7	936.7	915.4	886.5	872.3	857.6	851.4	847.6	851.8	850.5
15°	934.6	912.8	888.2	858.9	843.4	830.0	825.4	822.5	825.9	825.9
17.5°	912.4	886.9	859.7	830.0	815.4	805.0	800.4	798.3	799.9	802.5
20°	887.8	859.3	830.0	801.2	788.7	777.8	773.6	771.5	775.3	773.6
22.5°	860.6	830.5	799.9	772.8	761.5	750.6	746.4	745.2	749.3	747.7
25°	831.7	799.1	769.0	744.3	733.0	723.8	720.1	718.8	720.9	723.0
27.5°	804.5	767.7	738.1	715.9	705.9	697.1	693.7	691.6	693.3	695.8
30°	771.5	736.0	706.7	686.2	676.6	668.2	665.7	664.0	666.5	668.6
32.5°	740.6	704.6	675.3	655.3	646.9	638.9	638.5	637.7	640.6	643.1
35°	707.1	672.0	643.5	624.7	616.8	610.1	611.4	612.6	616.0	618.9
37.5°	673.2	638.9	611.8	594.6	587.1	581.7	585.4	587.1	591.7	594.6
40°	638.9	604.7	579.6	564.1	556.6	554.1	559.5	563.3	568.7	571.2
42.5°	603.8	572.0	547.0	532.7	526.5	526.5	533.6	539.4	545.7	548.2
45°	568.7	537.8	513.9	501.0	496.4	499.7	508.1	515.6	523.5	526.0
47.5°	533.2	503.0	481.3	469.6	467.1	472.1	482.6	492.6	501.8	505.1
50°	497.6	470.4	448.7	437.8	437.8	444.1	457.5	470.0	480.0	483.4
52.5°	462.1	436.1	414.0	406.0	407.7	416.5	432.0	444.9	456.2	459.6
55°	426.1	400.6	381.4	374.7	377.6	388.5	404.4	419.4	430.3	434.1
57.5°	390.6	366.3	348.7	343.3	347.5	359.6	378.0	391.0	402.3	405.6
60°	354.6	329.9	316.1	311.9	317.4	329.9	348.7	360.9	371.3	374.7
62.5°	319.1	296.1	283.9	280.2	286.4	299.8	318.2	329.1	337.0	340.4
65°	283.1	262.6	251.3	248.8	255.5	268.5	286.0	295.2	301.1	304.4
67.5°	247.6	230.0	219.5	217.4	224.6	236.3	252.6	257.6	263.0	266.4
70°	212.4	196.5	187.8	186.5	192.8	204.1	217.9	220.4	223.3	226.2
72.5°	177.7	165.2	156.4	156.0	161.8	171.0	182.3	182.7	183.6	186.5
75°	144.3	133.0	126.3	127.5	130.9	138.4	147.2	144.7	145.1	147.2
77.5°	112.1	102.9	98.3	99.1	101.6	107.0	112.9	110.0	108.3	110.4
80°	80.7	72.8	71.1	71.5	73.2	76.9	80.3	77.8	74.4	76.1
82.5°	53.1	48.1	47.3	47.7	48.9	51.0	51.9	48.1	47.3	48.5
85°	29.3	27.2	27.2	28.4	28.9	29.3	29.3	27.2	27.6	28.4
87.5°	11.7	11.7	13.0	14.2	13.4	11.7	10.0	6.7	6.7	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)