

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-34L850-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-34L850-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

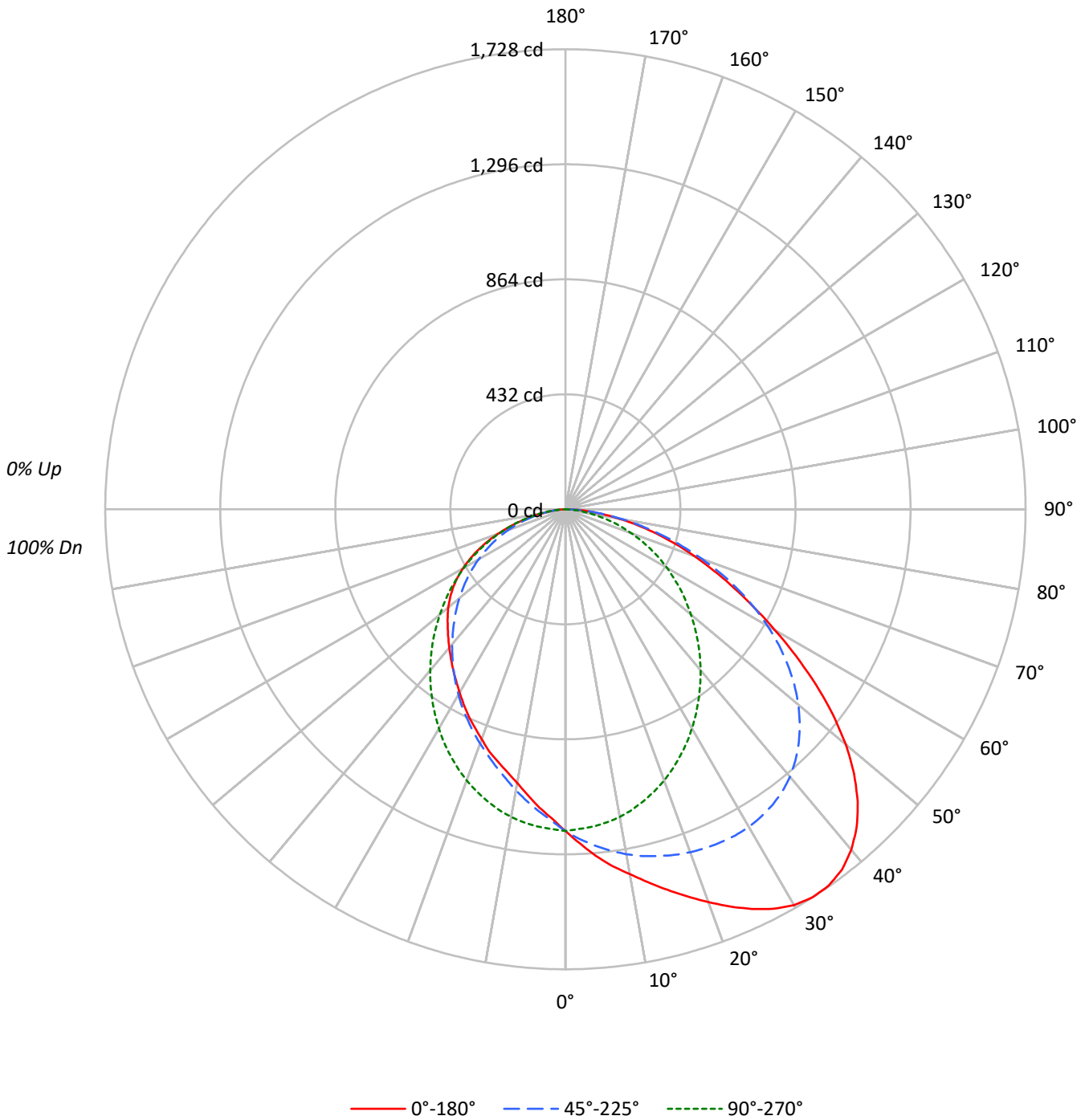
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3742.8 lumens
Efficiency: N/A
Efficacy: 101.7 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				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°	11634	11634	11634
5°	12623	11562	10866
10°	13599	11473	10196
15°	14751	11307	9777
20°	16084	11108	9413
25°	17594	10847	9122
30°	19086	10562	8828
35°	20272	10250	8638
40°	20990	9925	8526
45°	21137	9582	8507
50°	20582	9217	8599
55°	19274	8886	8653
60°	17520	8482	8568
65°	15885	8021	8237
70°	14539	7437	7563
75°	13190	6688	6502
80°	11537	5589	5012
85°	9710	4065	3734



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	3.1
10°-20°	333.8	8.9
20°-30°	522.9	14.0
30°-40°	655.5	17.5
40°-50°	697.9	18.6
50°-60°	630.0	16.8
60°-70°	466.4	12.5
70°-80°	255.9	6.8
80°-90°	65.7	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°	971.4	26.0
0°-40°	1627.0	43.5
0°-60°	2954.8	78.9
0°-90°	3742.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3742.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1208	1208	1208	1208	1208	
5°	1306	1268	1196	1139	1124	127
15°	1480	1348	1134	1002	981	422
25°	1656	1380	1021	871	859	767
35°	1725	1356	872	733	735	1076
45°	1552	1239	704	590	625	1190
55°	1148	1020	529	448	516	1024
65°	697	718	352	304	362	696
75°	355	376	180	156	175	377
85°	88	86	37	34	34	104
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°	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4
2.5°	1257.0	1254.5	1251.6	1250.6	1246.1	1240.1	1234.7	1234.7	1228.2	1212.8	1201.9
5°	1306.2	1302.2	1294.8	1288.8	1279.4	1268.0	1256.5	1249.6	1234.2	1210.8	1196.4
7.5°	1351.4	1346.4	1337.0	1325.6	1310.2	1293.3	1274.4	1259.5	1236.2	1204.9	1186.5
10°	1391.1	1386.7	1375.2	1361.3	1339.5	1315.6	1287.8	1265.5	1233.7	1194.9	1173.6
12.5°	1434.8	1430.4	1414.5	1395.6	1365.8	1334.0	1297.3	1266.5	1227.2	1180.5	1156.2
15°	1480.0	1474.1	1456.2	1430.9	1391.1	1348.4	1303.2	1263.5	1216.8	1163.2	1134.4
17.5°	1524.7	1518.8	1496.4	1464.1	1414.5	1361.3	1305.7	1256.5	1201.9	1141.8	1110.5
20°	1569.9	1564.0	1535.7	1494.9	1434.8	1370.8	1305.2	1246.1	1184.0	1117.5	1084.2
22.5°	1615.1	1608.2	1573.9	1524.2	1451.7	1377.2	1299.7	1231.7	1161.7	1089.7	1053.9
25°	1656.3	1649.4	1611.6	1553.0	1469.6	1380.2	1290.3	1211.8	1136.8	1058.9	1021.1
27.5°	1692.1	1683.7	1644.4	1579.9	1485.0	1381.2	1277.9	1189.5	1108.0	1025.6	987.3
30°	1716.9	1709.5	1667.8	1598.7	1493.9	1377.7	1262.0	1163.2	1074.8	989.8	950.1
32.5°	1727.9	1721.4	1680.2	1607.7	1495.4	1368.8	1242.6	1133.9	1040.0	952.1	911.9
35°	1724.9	1718.4	1679.2	1606.2	1491.0	1355.9	1218.3	1100.6	1002.7	912.8	872.1
37.5°	1706.0	1698.6	1662.8	1592.8	1478.0	1337.0	1190.5	1064.3	962.5	872.6	831.4
40°	1670.2	1662.8	1632.0	1567.4	1456.2	1311.7	1158.7	1025.6	921.3	830.4	789.7
42.5°	1619.1	1611.1	1586.8	1527.7	1424.9	1278.4	1122.4	984.4	877.6	789.7	747.0
45°	1552.5	1544.6	1528.2	1478.0	1384.2	1239.2	1081.2	939.7	831.9	743.5	703.8
47.5°	1470.1	1463.1	1455.2	1416.5	1334.0	1194.0	1035.0	892.0	784.2	700.3	659.6
50°	1374.2	1367.3	1369.8	1343.4	1275.9	1141.8	984.4	841.8	735.0	652.1	615.4
52.5°	1265.5	1260.0	1271.9	1260.5	1208.4	1083.7	930.2	790.2	684.9	606.4	571.2
55°	1148.3	1142.3	1165.1	1168.6	1132.9	1019.6	868.6	736.5	634.2	561.7	529.4
57.5°	1027.6	1022.6	1051.9	1068.3	1050.4	950.6	806.6	681.4	582.1	515.0	482.7
60°	909.9	905.9	936.7	963.5	961.5	877.6	742.0	621.8	529.9	467.8	440.5
62.5°	799.1	794.6	825.4	857.2	868.6	799.6	677.9	563.2	477.8	420.7	396.3
65°	697.3	692.8	719.2	751.9	772.8	718.2	608.9	502.6	425.1	373.0	352.1
67.5°	603.9	603.9	620.3	650.6	675.9	634.7	538.4	445.0	371.0	328.8	307.9
70°	516.5	516.0	527.9	549.3	578.6	545.3	466.9	384.4	319.8	282.6	264.2
72.5°	433.6	437.1	441.5	457.9	488.7	459.9	395.8	324.8	269.7	236.9	221.5
75°	354.6	354.1	360.6	375.0	397.3	376.0	324.8	266.7	220.0	193.2	179.8
77.5°	279.1	278.6	284.1	292.5	311.4	294.5	256.3	213.1	171.3	149.0	139.6
80°	208.1	208.1	213.1	217.5	231.4	218.0	191.2	159.4	125.7	108.3	100.8
82.5°	144.5	147.5	145.5	151.5	159.4	148.0	131.1	109.3	83.4	71.5	66.6
85°	87.9	90.4	87.9	92.9	96.4	86.4	78.0	65.1	48.2	40.2	36.8
87.5°	45.2	44.7	44.2	46.7	47.7	41.7	36.8	31.3	21.4	16.4	13.9
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°	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4	1208.4
2.5°	1195.4	1198.4	1194.0	1177.6	1171.1	1164.2	1161.2	1158.2	1163.7	1162.2
5°	1185.5	1182.0	1170.6	1149.8	1138.8	1127.4	1121.9	1118.5	1125.9	1124.4
7.5°	1172.1	1162.2	1145.3	1120.0	1106.0	1090.7	1083.2	1078.7	1083.7	1082.7
10°	1155.2	1138.8	1118.0	1087.7	1071.3	1054.4	1046.0	1039.5	1043.5	1043.0
12.5°	1133.9	1112.5	1087.2	1052.9	1036.0	1018.6	1011.2	1006.7	1011.7	1010.2
15°	1110.0	1084.2	1054.9	1020.1	1001.8	985.9	980.4	976.9	980.9	980.9
17.5°	1083.7	1053.4	1021.1	985.9	968.5	956.1	950.6	948.1	950.1	953.1
20°	1054.4	1020.6	985.9	951.6	936.7	923.8	918.8	916.3	920.8	918.8
22.5°	1022.1	986.4	950.1	917.8	904.4	891.5	886.5	885.0	890.0	888.0
25°	987.8	949.1	913.3	884.0	870.6	859.7	855.2	853.7	856.2	858.7
27.5°	955.6	911.9	876.6	850.3	838.4	827.9	823.9	821.5	823.5	826.4
30°	916.3	874.1	839.3	815.0	803.6	793.7	790.7	788.7	791.7	794.1
32.5°	879.6	836.9	802.1	778.3	768.3	758.9	758.4	757.4	760.9	763.9
35°	839.8	798.1	764.3	742.0	732.6	724.6	726.1	727.6	731.6	735.0
37.5°	799.6	758.9	726.6	706.2	697.3	690.8	695.3	697.3	702.8	706.2
40°	758.9	718.2	688.4	670.0	661.0	658.1	664.5	669.0	675.4	678.4
42.5°	717.2	679.4	649.6	632.7	625.3	625.3	633.7	640.7	648.1	651.1
45°	675.4	638.7	610.4	595.0	589.5	593.5	603.4	612.4	621.8	624.8
47.5°	633.2	597.5	571.6	557.7	554.8	560.7	573.1	585.1	596.0	600.0
50°	591.0	558.7	532.9	520.0	520.0	527.4	543.3	558.2	570.2	574.1
52.5°	548.8	518.0	491.7	482.3	484.2	494.7	513.0	528.4	541.8	545.8
55°	506.1	475.8	452.9	445.0	448.5	461.4	480.3	498.1	511.1	515.5
57.5°	463.9	435.1	414.2	407.8	412.7	427.1	449.0	464.4	477.8	481.8
60°	421.2	391.9	375.5	370.5	377.0	391.9	414.2	428.6	441.0	445.0
62.5°	378.9	351.6	337.2	332.8	340.2	356.1	378.0	390.9	400.3	404.3
65°	336.2	311.9	298.5	295.5	303.5	318.9	339.7	350.6	357.6	361.6
67.5°	294.0	273.2	260.7	258.3	266.7	280.6	300.0	305.9	312.4	316.4
70°	252.3	233.4	223.0	221.5	229.0	242.4	258.8	261.7	265.2	268.7
72.5°	211.1	196.2	185.7	185.3	192.2	203.1	216.5	217.0	218.0	221.5
75°	171.3	157.9	150.0	151.5	155.5	164.4	174.8	171.8	172.3	174.8
77.5°	133.1	122.2	116.7	117.7	120.7	127.1	134.1	130.6	128.6	131.1
80°	95.9	86.4	84.4	84.9	86.9	91.4	95.4	92.4	88.4	90.4
82.5°	63.1	57.1	56.1	56.6	58.1	60.6	61.6	57.1	56.1	57.6
85°	34.8	32.3	32.3	33.8	34.3	34.8	34.8	32.3	32.8	33.8
87.5°	13.9	13.9	15.4	16.9	15.9	13.9	11.9	7.9	7.9	9.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)