

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-35L835-X-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-35L835-X-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/  
ASYMMETRIC Lens  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

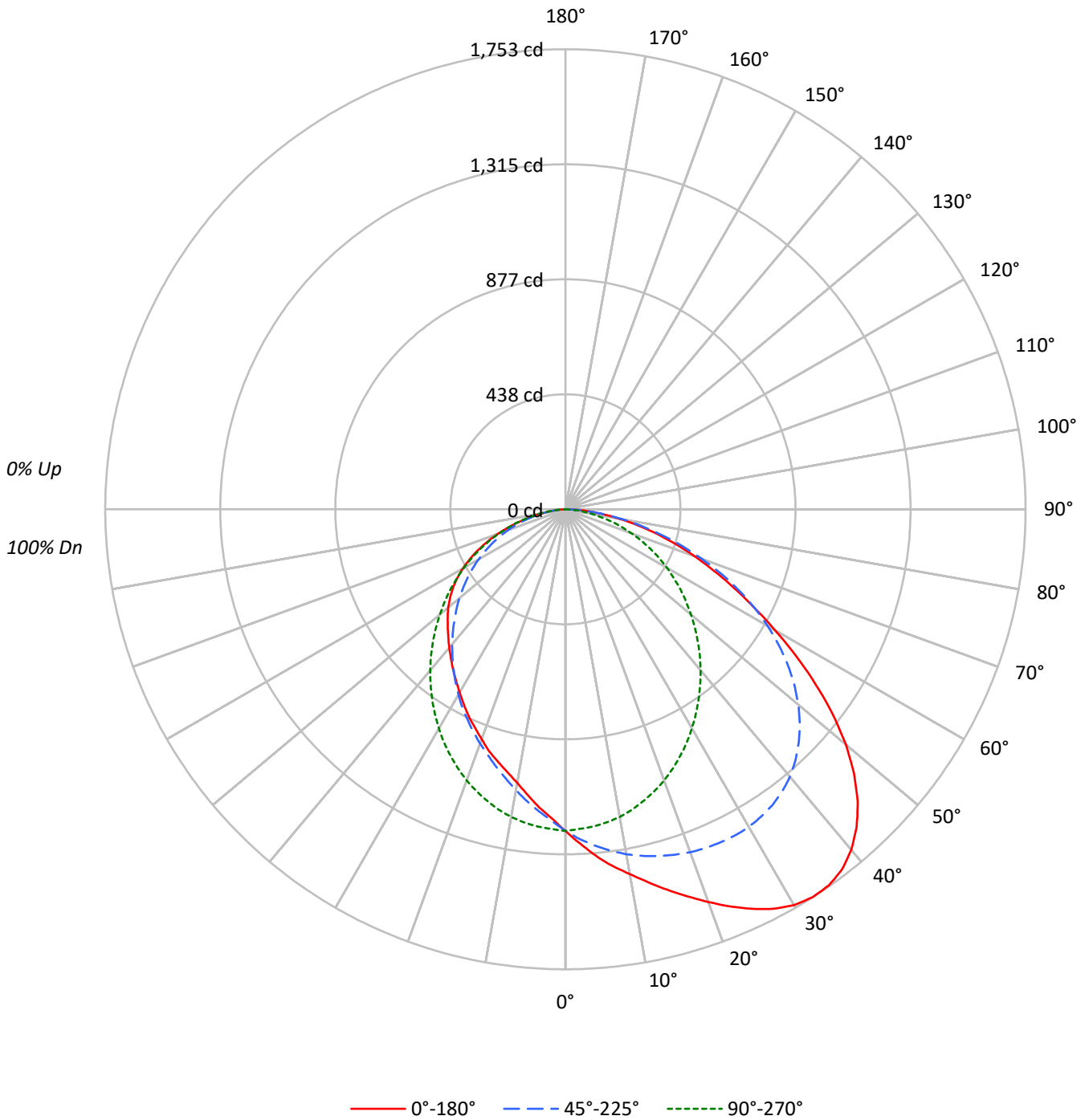
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3796.4 lumens  
Efficiency: N/A  
Efficacy: 94.0 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): 40.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	11800	11800	11800
5°	12804	11728	11022
10°	13795	11637	10342
15°	14962	11468	9917
20°	16314	11267	9549
25°	17847	11003	9252
30°	19360	10713	8954
35°	20563	10397	8763
40°	21292	10067	8649
45°	21441	9718	8628
50°	20877	9349	8723
55°	19549	9013	8777
60°	17770	8603	8692
65°	16112	8137	8354
70°	14747	7544	7670
75°	13380	6785	6595
80°	11704	5672	5084
85°	9853	4120	3789



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.4	3.1
10°-20°	338.6	8.9
20°-30°	530.4	14.0
30°-40°	664.9	17.5
40°-50°	707.9	18.6
50°-60°	639.0	16.8
60°-70°	473.1	12.5
70°-80°	259.6	6.8
80°-90°	66.6	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°	985.3	26.0
0°-40°	1650.3	43.5
0°-60°	2997.2	78.9
0°-90°	3796.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3796.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1226	1226	1226	1226	1226	
5°	1325	1286	1214	1155	1140	129
15°	1501	1368	1151	1016	995	428
25°	1680	1400	1036	883	871	778
35°	1750	1375	885	743	746	1091
45°	1575	1257	714	598	634	1207
55°	1165	1034	537	455	523	1039
65°	707	728	357	308	367	706
75°	360	381	182	158	177	382
85°	89	88	37	35	34	105
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°	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7
2.5°	1275.1	1272.5	1269.5	1268.5	1264.0	1257.9	1252.4	1252.4	1245.8	1230.2	1219.1
5°	1324.9	1320.9	1313.3	1307.3	1297.7	1286.1	1274.5	1267.5	1251.9	1228.2	1213.6
7.5°	1370.8	1365.7	1356.2	1344.6	1329.0	1311.8	1292.7	1277.6	1253.9	1222.2	1203.5
10°	1411.1	1406.5	1394.9	1380.8	1358.7	1334.5	1306.3	1283.6	1251.4	1212.1	1190.4
12.5°	1455.4	1450.9	1434.7	1415.6	1385.4	1353.1	1315.9	1284.6	1244.8	1197.5	1172.8
15°	1501.2	1495.2	1477.1	1451.4	1411.1	1367.7	1321.9	1281.6	1234.2	1179.8	1150.6
17.5°	1546.6	1540.5	1517.9	1485.1	1434.7	1380.8	1324.4	1274.5	1219.1	1158.2	1126.4
20°	1592.4	1586.4	1557.7	1516.4	1455.4	1390.4	1323.9	1264.0	1201.0	1133.5	1099.7
22.5°	1638.3	1631.2	1596.5	1546.1	1472.5	1397.0	1318.4	1249.4	1178.3	1105.3	1069.0
25°	1680.1	1673.0	1634.7	1575.3	1490.7	1400.0	1308.8	1229.2	1153.1	1074.0	1035.8
27.5°	1716.4	1707.8	1668.0	1602.5	1506.3	1401.0	1296.2	1206.5	1123.9	1040.3	1001.5
30°	1741.5	1734.0	1691.7	1621.6	1515.3	1397.5	1280.1	1179.8	1090.2	1004.0	963.7
32.5°	1752.6	1746.1	1704.3	1630.7	1516.9	1388.4	1260.4	1150.1	1054.9	965.7	924.9
35°	1749.6	1743.1	1703.3	1629.2	1512.3	1375.3	1235.8	1116.4	1017.1	925.9	884.6
37.5°	1730.5	1722.9	1686.6	1615.6	1499.2	1356.2	1207.5	1079.6	976.3	885.1	843.3
40°	1694.2	1686.6	1655.4	1589.9	1477.1	1330.5	1175.3	1040.3	934.5	842.3	801.0
42.5°	1642.3	1634.2	1609.6	1549.6	1445.3	1296.7	1138.5	998.5	890.2	801.0	757.7
45°	1574.8	1566.7	1550.1	1499.2	1404.0	1256.9	1096.7	953.1	843.8	754.1	713.8
47.5°	1491.2	1484.1	1476.1	1436.8	1353.1	1211.1	1049.9	904.8	795.5	710.3	669.0
50°	1393.9	1386.9	1389.4	1362.7	1294.2	1158.2	998.5	853.9	745.6	661.5	624.2
52.5°	1283.6	1278.1	1290.2	1278.6	1225.7	1099.2	943.6	801.5	694.7	615.1	579.3
55°	1164.7	1158.7	1181.9	1185.4	1149.1	1034.2	881.1	747.1	643.3	569.8	537.0
57.5°	1042.3	1037.3	1067.0	1083.6	1065.5	964.2	818.1	691.2	590.4	522.4	489.7
60°	922.9	918.9	950.1	977.3	975.3	890.2	752.6	630.7	537.5	474.6	446.8
62.5°	810.6	806.0	837.3	869.5	881.1	811.1	687.7	571.3	484.6	426.7	402.0
65°	707.3	702.8	729.5	762.7	783.9	728.5	617.6	509.8	431.2	378.3	357.2
67.5°	612.6	612.6	629.2	659.9	685.6	643.8	546.1	451.4	376.3	333.5	312.3
70°	523.9	523.4	535.5	557.2	586.9	553.1	473.5	389.9	324.4	286.6	268.0
72.5°	439.8	443.3	447.9	464.5	495.7	466.5	401.5	329.5	273.5	240.3	224.7
75°	359.7	359.2	365.7	380.3	403.0	381.4	329.5	270.5	223.2	196.0	182.4
77.5°	283.1	282.6	288.2	296.7	315.9	298.7	259.9	216.1	173.8	151.1	141.6
80°	211.1	211.1	216.1	220.7	234.8	221.2	194.0	161.7	127.5	109.8	102.3
82.5°	146.6	149.6	147.6	153.7	161.7	150.1	133.0	110.8	84.6	72.5	67.5
85°	89.2	91.7	89.2	94.2	97.7	87.7	79.1	66.0	48.9	40.8	37.3
87.5°	45.8	45.3	44.8	47.4	48.4	42.3	37.3	31.7	21.7	16.6	14.1
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°	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7	1225.7
2.5°	1212.6	1215.6	1211.1	1194.4	1187.9	1180.8	1177.8	1174.8	1180.3	1178.8
5°	1202.5	1199.0	1187.4	1166.2	1155.2	1143.6	1138.0	1134.5	1142.1	1140.5
7.5°	1188.9	1178.8	1161.7	1136.0	1121.9	1106.3	1098.7	1094.2	1099.2	1098.2
10°	1171.8	1155.2	1134.0	1103.3	1086.6	1069.5	1060.9	1054.4	1058.4	1057.9
12.5°	1150.1	1128.5	1102.8	1068.0	1050.9	1033.2	1025.7	1021.1	1026.2	1024.7
15°	1125.9	1099.7	1070.0	1034.8	1016.1	1000.0	994.4	990.9	995.0	995.0
17.5°	1099.2	1068.5	1035.8	1000.0	982.4	969.8	964.2	961.7	963.7	966.7
20°	1069.5	1035.3	1000.0	965.2	950.1	937.0	932.0	929.5	934.0	932.0
22.5°	1036.8	1000.5	963.7	931.0	917.4	904.3	899.2	897.7	902.8	900.7
25°	1002.0	962.7	926.4	896.7	883.1	872.0	867.5	866.0	868.5	871.0
27.5°	969.3	924.9	889.2	862.5	850.4	839.8	835.8	833.2	835.3	838.3
30°	929.5	886.6	851.4	826.7	815.1	805.0	802.0	800.0	803.0	805.5
32.5°	892.2	848.9	813.6	789.4	779.3	769.8	769.3	768.3	771.8	774.8
35°	851.9	809.6	775.3	752.6	743.1	735.0	736.5	738.0	742.1	745.6
37.5°	811.1	769.8	737.0	716.4	707.3	700.7	705.3	707.3	712.8	716.4
40°	769.8	728.5	698.2	679.6	670.5	667.5	674.0	678.6	685.1	688.2
42.5°	727.4	689.2	658.9	641.8	634.3	634.3	642.8	649.9	657.4	660.4
45°	685.1	647.9	619.1	603.5	598.0	602.0	612.1	621.2	630.7	633.7
47.5°	642.3	606.0	579.8	565.7	562.7	568.8	581.4	593.4	604.5	608.6
50°	599.5	566.7	540.5	527.5	527.5	535.0	551.1	566.2	578.3	582.4
52.5°	556.7	525.4	498.7	489.2	491.2	501.8	520.4	536.0	549.6	553.6
55°	513.3	482.6	459.4	451.4	454.9	468.0	487.1	505.3	518.4	522.9
57.5°	470.5	441.3	420.1	413.6	418.6	433.2	455.4	471.0	484.6	488.7
60°	427.2	397.5	380.9	375.8	382.4	397.5	420.1	434.8	447.4	451.4
62.5°	384.4	356.7	342.1	337.5	345.1	361.2	383.4	396.5	406.0	410.1
65°	341.1	316.4	302.8	299.7	307.8	323.4	344.6	355.7	362.7	366.7
67.5°	298.2	277.1	264.5	262.0	270.5	284.6	304.3	310.3	316.9	320.9
70°	255.9	236.8	226.2	224.7	232.2	245.8	262.5	265.5	269.0	272.5
72.5°	214.1	199.0	188.4	187.9	195.0	206.0	219.6	220.1	221.2	224.7
75°	173.8	160.2	152.1	153.7	157.7	166.7	177.3	174.3	174.8	177.3
77.5°	135.0	123.9	118.4	119.4	122.4	129.0	136.0	132.5	130.5	133.0
80°	97.2	87.7	85.6	86.1	88.2	92.7	96.7	93.7	89.7	91.7
82.5°	64.0	57.9	56.9	57.4	58.9	61.5	62.5	57.9	56.9	58.4
85°	35.3	32.7	32.7	34.3	34.8	35.3	35.3	32.7	33.2	34.3
87.5°	14.1	14.1	15.6	17.1	16.1	14.1	12.1	8.1	8.1	9.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)