

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-24-26L930-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-24-26L930-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
w/ ASYMMETRIC Lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

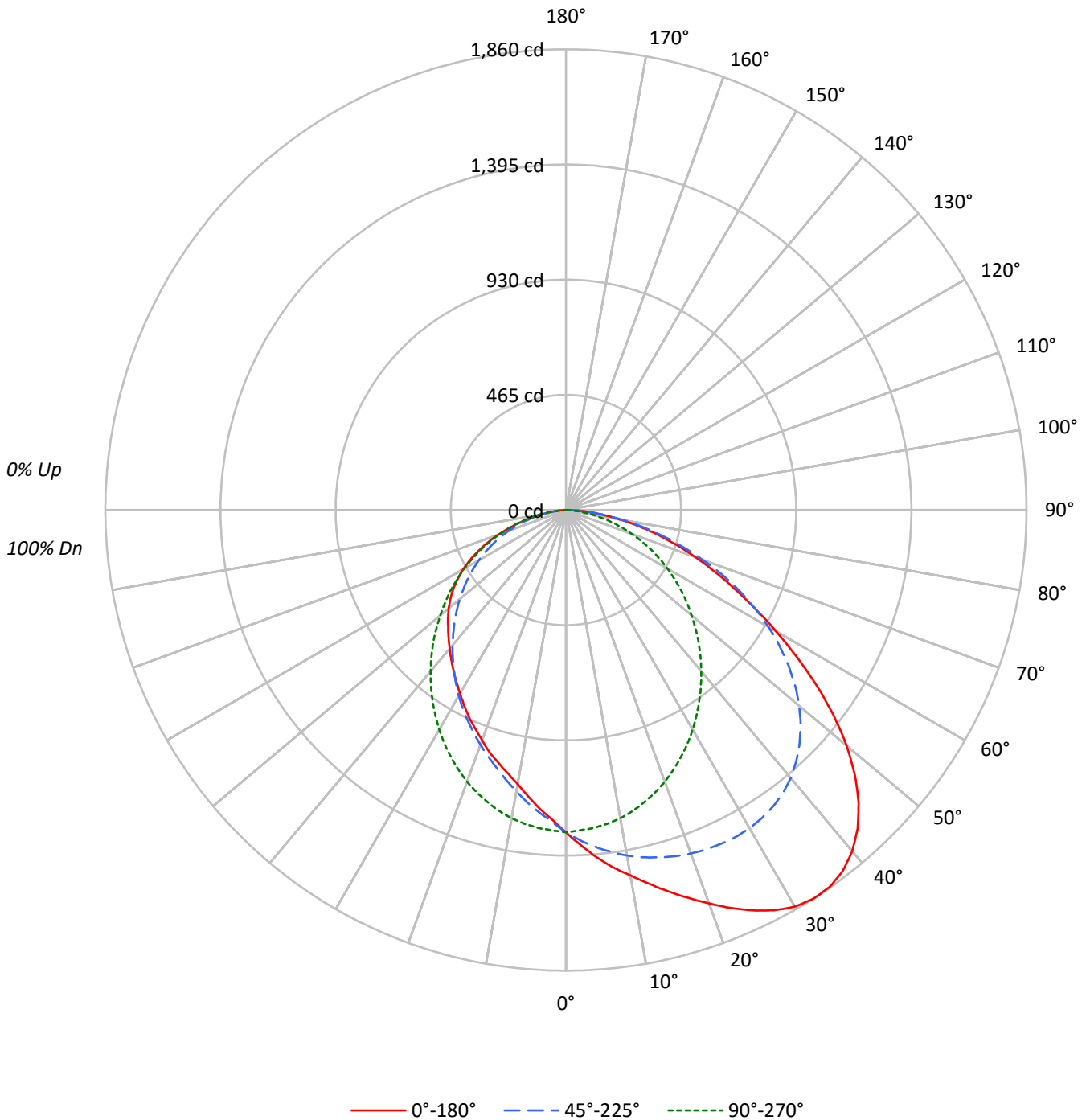
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4030.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 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): 56  
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°	12526	12526	12526
5°	13593	12450	11700
10°	14643	12354	10978
15°	15883	12174	10527
20°	17318	11960	10136
25°	18945	11680	9822
30°	20551	11372	9506
35°	21829	11037	9302
40°	22602	10686	9181
45°	22760	10318	9159
50°	22162	9924	9259
55°	20753	9569	9317
60°	18864	9132	9227
65°	17103	8638	8868
70°	15656	8008	8143
75°	14202	7201	7001
80°	12424	6021	5394
85°	10461	4374	4021



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.6	3.1
10°-20°	359.4	8.9
20°-30°	563.0	14.0
30°-40°	705.8	17.5
40°-50°	751.4	18.6
50°-60°	678.4	16.8
60°-70°	502.2	12.5
70°-80°	275.5	6.8
80°-90°	70.7	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°	1046.0	26.0
0°-40°	1751.8	43.5
0°-60°	3181.6	78.9
0°-90°	4030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4030.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1301	1301	1301	1301	1301	
5°	1406	1365	1288	1226	1211	137
15°	1594	1452	1221	1079	1056	455
25°	1784	1486	1100	938	925	825
35°	1857	1460	939	789	792	1158
45°	1672	1334	758	635	673	1282
55°	1236	1098	570	483	555	1103
65°	751	773	379	327	389	749
75°	382	405	194	167	188	406
85°	95	93	40	37	36	112
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°	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	1353.5	1350.8	1347.6	1346.6	1341.7	1335.3	1329.4	1329.4	1322.5	1305.9	1294.1
5°	1406.5	1402.2	1394.2	1387.7	1377.6	1365.3	1353.0	1345.5	1328.9	1303.8	1288.3
7.5°	1455.1	1449.8	1439.6	1427.3	1410.7	1392.5	1372.2	1356.2	1331.0	1297.4	1277.6
10°	1497.9	1493.1	1480.8	1465.8	1442.3	1416.6	1386.7	1362.6	1328.4	1286.7	1263.7
12.5°	1545.0	1540.1	1523.0	1502.7	1470.6	1436.4	1396.8	1363.7	1321.4	1271.2	1244.9
15°	1593.6	1587.2	1568.0	1540.7	1497.9	1451.9	1403.2	1360.5	1310.2	1252.4	1221.4
17.5°	1641.7	1635.3	1611.3	1576.5	1523.0	1465.8	1405.9	1353.0	1294.1	1229.4	1195.8
20°	1690.4	1684.0	1653.5	1609.7	1545.0	1476.0	1405.4	1341.7	1274.9	1203.2	1167.4
22.5°	1739.1	1731.6	1694.7	1641.2	1563.1	1482.9	1399.5	1326.2	1250.8	1173.3	1134.8
25°	1783.5	1776.0	1735.3	1672.2	1582.4	1486.1	1389.3	1304.8	1224.1	1140.1	1099.5
27.5°	1822.0	1812.9	1770.6	1701.1	1599.0	1487.2	1376.0	1280.8	1193.1	1104.3	1063.1
30°	1848.7	1840.7	1795.8	1721.4	1608.6	1483.5	1358.9	1252.4	1157.2	1065.8	1023.0
32.5°	1860.5	1853.5	1809.1	1731.1	1610.2	1473.8	1338.0	1220.9	1119.8	1025.2	981.8
35°	1857.3	1850.3	1808.1	1729.5	1605.4	1459.9	1311.8	1185.1	1079.7	982.9	939.1
37.5°	1836.9	1828.9	1790.4	1715.0	1591.5	1439.6	1281.8	1146.0	1036.4	939.6	895.2
40°	1798.4	1790.4	1757.3	1687.7	1568.0	1412.3	1247.6	1104.3	992.0	894.1	850.3
42.5°	1743.4	1734.8	1708.6	1645.0	1534.3	1376.5	1208.6	1059.9	944.9	850.3	804.3
45°	1671.7	1663.1	1645.5	1591.5	1490.4	1334.3	1164.2	1011.8	895.7	800.6	757.8
47.5°	1582.9	1575.4	1566.9	1525.2	1436.4	1285.6	1114.5	960.5	844.4	754.0	710.2
50°	1479.7	1472.2	1474.9	1446.6	1373.8	1229.4	1059.9	906.4	791.5	702.2	662.6
52.5°	1362.6	1356.7	1369.6	1357.3	1301.1	1166.9	1001.6	850.8	737.5	653.0	615.0
55°	1236.4	1230.0	1254.6	1258.3	1219.8	1097.9	935.3	793.1	682.9	604.8	570.1
57.5°	1106.4	1101.1	1132.6	1150.3	1131.0	1023.6	868.5	733.7	626.8	554.6	519.8
60°	979.7	975.4	1008.6	1037.5	1035.3	944.9	798.9	669.5	570.6	503.8	474.3
62.5°	860.4	855.6	888.8	923.0	935.3	861.0	730.0	606.4	514.5	453.0	426.7
65°	750.8	746.0	774.3	809.6	832.1	773.3	655.6	541.2	457.8	401.6	379.2
67.5°	650.3	650.3	667.9	700.6	727.8	683.4	579.7	479.2	399.5	354.0	331.6
70°	556.2	555.6	568.5	591.5	623.0	587.2	502.7	413.9	344.4	304.3	284.5
72.5°	466.9	470.6	475.4	493.1	526.2	495.2	426.2	349.7	290.4	255.1	238.5
75°	381.8	381.3	388.2	403.8	427.8	404.8	349.7	287.2	236.9	208.0	193.6
77.5°	300.5	300.0	305.9	315.0	335.3	317.1	275.9	229.4	184.5	160.4	150.3
80°	224.1	224.1	229.4	234.2	249.2	234.8	205.9	171.7	135.3	116.6	108.6
82.5°	155.6	158.8	156.7	163.1	171.7	159.4	141.2	117.6	89.8	77.0	71.7
85°	94.7	97.3	94.7	100.0	103.7	93.1	84.0	70.1	51.9	43.3	39.6
87.5°	48.7	48.1	47.6	50.3	51.3	44.9	39.6	33.7	23.0	17.6	15.0
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°	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	1287.2	1290.4	1285.6	1267.9	1261.0	1253.5	1250.3	1247.1	1253.0	1251.4
5°	1276.5	1272.8	1260.5	1238.0	1226.2	1213.9	1208.0	1204.3	1212.3	1210.7
7.5°	1262.1	1251.4	1233.2	1205.9	1190.9	1174.4	1166.3	1161.5	1166.9	1165.8
10°	1243.9	1226.2	1203.8	1171.2	1153.5	1135.3	1126.2	1119.3	1123.6	1123.0
12.5°	1220.9	1197.9	1170.6	1133.7	1115.5	1096.8	1088.8	1084.0	1089.3	1087.7
15°	1195.2	1167.4	1135.9	1098.4	1078.6	1061.5	1055.6	1051.9	1056.2	1056.2
17.5°	1166.9	1134.3	1099.5	1061.5	1042.8	1029.4	1023.6	1020.9	1023.0	1026.2
20°	1135.3	1099.0	1061.5	1024.6	1008.6	994.7	989.3	986.7	991.5	989.3
22.5°	1100.6	1062.1	1023.0	988.3	973.8	959.9	954.6	953.0	958.3	956.2
25°	1063.7	1021.9	983.4	951.9	937.5	925.7	920.9	919.3	921.9	924.6
27.5°	1028.9	981.8	943.9	915.5	902.7	891.5	887.2	884.5	886.7	889.9
30°	986.7	941.2	903.8	877.6	865.3	854.6	851.4	849.2	852.4	855.1
32.5°	947.1	901.1	863.7	838.0	827.3	817.1	816.6	815.5	819.3	822.5
35°	904.3	859.4	823.0	798.9	788.8	780.2	781.8	783.4	787.7	791.5
37.5°	861.0	817.1	782.4	760.4	750.8	743.9	748.7	750.8	756.7	760.4
40°	817.1	773.3	741.2	721.4	711.8	708.6	715.5	720.3	727.3	730.5
42.5°	772.2	731.6	699.5	681.3	673.3	673.3	682.4	689.9	697.9	701.1
45°	727.3	687.7	657.2	640.7	634.8	639.1	649.7	659.4	669.5	672.7
47.5°	681.8	643.3	615.5	600.5	597.3	603.8	617.1	630.0	641.7	646.0
50°	636.4	601.6	573.8	559.9	559.9	567.9	585.0	601.1	613.9	618.2
52.5°	590.9	557.8	529.4	519.3	521.4	532.6	552.4	569.0	583.4	587.7
55°	544.9	512.3	487.7	479.2	482.9	496.8	517.1	536.4	550.3	555.1
57.5°	499.5	468.5	446.0	439.0	444.4	459.9	483.4	500.0	514.5	518.7
60°	453.5	421.9	404.3	398.9	405.9	421.9	446.0	461.5	474.9	479.2
62.5°	408.0	378.6	363.1	358.3	366.3	383.4	407.0	420.9	431.0	435.3
65°	362.0	335.8	321.4	318.2	326.7	343.3	365.8	377.5	385.0	389.3
67.5°	316.6	294.1	280.8	278.1	287.2	302.1	323.0	329.4	336.4	340.6
70°	271.7	251.3	240.1	238.5	246.5	261.0	278.6	281.8	285.6	289.3
72.5°	227.3	211.2	200.0	199.5	207.0	218.7	233.2	233.7	234.8	238.5
75°	184.5	170.1	161.5	163.1	167.4	177.0	188.2	185.0	185.6	188.2
77.5°	143.3	131.6	125.7	126.7	129.9	136.9	144.4	140.6	138.5	141.2
80°	103.2	93.1	90.9	91.4	93.6	98.4	102.7	99.5	95.2	97.3
82.5°	67.9	61.5	60.4	61.0	62.6	65.2	66.3	61.5	60.4	62.0
85°	37.4	34.8	34.8	36.4	36.9	37.4	37.4	34.8	35.3	36.4
87.5°	15.0	15.0	16.6	18.2	17.1	15.0	12.8	8.6	8.6	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)