

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-24-26L940-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-24-26L940-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
w/ ASYMMETRIC Lens  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

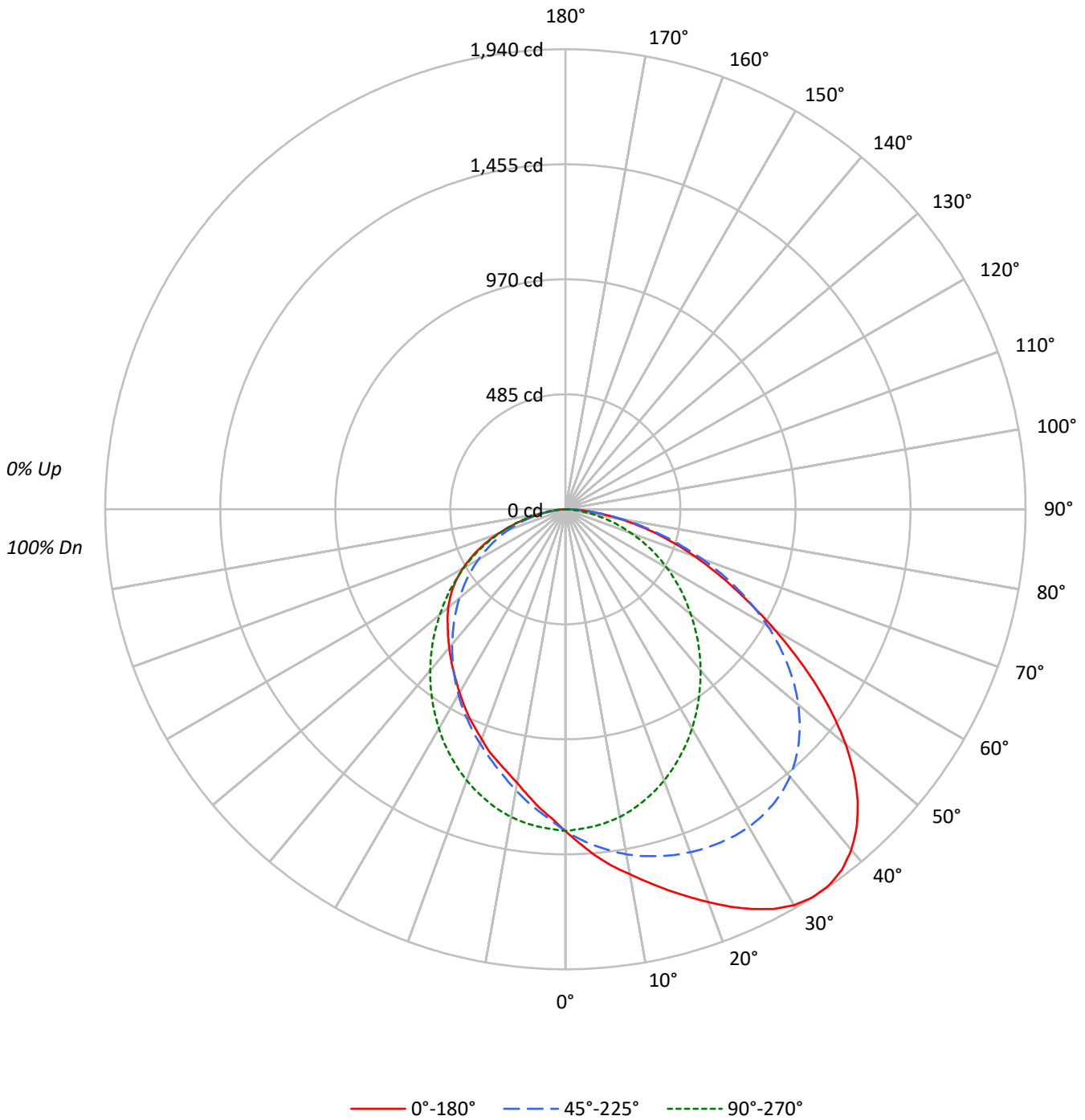
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4202.6 lumens  
Efficiency: N/A  
Efficacy: 75.0 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				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	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	43	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23	23	23	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	13062	13062	13062
5°	14174	12983	12202
10°	15270	12883	11449
15°	16564	12695	10978
20°	18060	12473	10570
25°	19756	12180	10242
30°	21432	11859	9913
35°	22763	11510	9701
40°	23569	11144	9574
45°	23735	10759	9551
50°	23112	10349	9656
55°	21641	9979	9717
60°	19673	9525	9622
65°	17837	9007	9249
70°	16326	8352	8492
75°	14812	7510	7302
80°	12957	6276	5627
85°	10903	4562	4186



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.9	3.1
10°-20°	374.8	8.9
20°-30°	587.1	14.0
30°-40°	736.1	17.5
40°-50°	783.6	18.6
50°-60°	707.4	16.8
60°-70°	523.7	12.5
70°-80°	287.3	6.8
80°-90°	73.8	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°	1090.8	26.0
0°-40°	1826.8	43.5
0°-60°	3317.8	78.9
0°-90°	4202.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4202.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1357	1357	1357	1357	1357	
5°	1467	1424	1343	1279	1263	143
15°	1662	1514	1274	1125	1101	474
25°	1860	1550	1147	978	964	861
35°	1937	1522	979	823	825	1208
45°	1743	1391	790	662	702	1337
55°	1289	1145	594	504	579	1150
65°	783	806	395	341	406	781
75°	398	422	202	175	196	423
85°	99	97	41	38	38	117
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°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8
2.5°	1411.5	1408.7	1405.3	1404.2	1399.2	1392.5	1386.4	1386.4	1379.1	1361.8	1349.6
5°	1466.7	1462.2	1453.8	1447.2	1436.6	1423.7	1410.9	1403.1	1385.8	1359.6	1343.4
7.5°	1517.4	1511.8	1501.2	1488.4	1471.1	1452.2	1431.0	1414.2	1388.0	1352.9	1332.3
10°	1562.0	1557.0	1544.2	1528.6	1504.0	1477.3	1446.0	1420.9	1385.3	1341.8	1317.8
12.5°	1611.1	1606.1	1588.2	1567.1	1533.6	1497.9	1456.6	1422.1	1378.0	1325.6	1298.3
15°	1661.9	1655.2	1635.1	1606.6	1562.0	1514.1	1463.3	1418.7	1366.3	1306.1	1273.7
17.5°	1712.0	1705.4	1680.3	1644.0	1588.2	1528.6	1466.1	1410.9	1349.6	1282.1	1246.9
20°	1762.8	1756.1	1724.3	1678.6	1611.1	1539.2	1465.6	1399.2	1329.5	1254.8	1217.4
22.5°	1813.5	1805.7	1767.3	1711.5	1630.1	1546.4	1459.4	1383.0	1304.4	1223.5	1183.4
25°	1859.8	1852.0	1809.6	1743.8	1650.1	1549.8	1448.8	1360.7	1276.5	1189.0	1146.6
27.5°	1900.0	1890.5	1846.4	1773.9	1667.4	1550.9	1434.9	1335.6	1244.2	1151.6	1108.6
30°	1927.9	1919.5	1872.7	1795.1	1677.5	1547.0	1417.0	1306.1	1206.8	1111.4	1066.8
32.5°	1940.1	1932.9	1886.6	1805.2	1679.1	1536.9	1395.3	1273.2	1167.8	1069.1	1023.9
35°	1936.8	1929.5	1885.5	1803.5	1674.1	1522.4	1368.0	1235.8	1125.9	1025.0	979.3
37.5°	1915.6	1907.2	1867.1	1788.4	1659.6	1501.2	1336.7	1195.1	1080.8	979.8	933.5
40°	1875.4	1867.1	1832.5	1760.0	1635.1	1472.8	1301.0	1151.6	1034.5	932.4	886.7
42.5°	1818.0	1809.1	1781.8	1715.4	1600.0	1435.4	1260.3	1105.3	985.4	886.7	838.7
45°	1743.3	1734.4	1715.9	1659.6	1554.2	1391.4	1214.0	1055.1	934.1	834.8	790.2
47.5°	1650.7	1642.9	1634.0	1590.5	1497.9	1340.6	1162.2	1001.6	880.6	786.3	740.6
50°	1543.1	1535.3	1538.1	1508.5	1432.7	1282.1	1105.3	945.2	825.4	732.2	691.0
52.5°	1420.9	1414.8	1428.2	1415.4	1356.8	1216.8	1044.5	887.3	769.0	680.9	641.3
55°	1289.3	1282.6	1308.3	1312.2	1272.0	1144.9	975.4	827.0	712.1	630.7	594.5
57.5°	1153.8	1148.2	1181.1	1199.5	1179.5	1067.4	905.7	765.1	653.6	578.3	542.1
60°	1021.7	1017.2	1051.8	1081.9	1079.6	985.4	833.2	698.2	595.0	525.3	494.7
62.5°	897.3	892.3	926.8	962.5	975.4	897.8	761.2	632.4	536.5	472.3	445.0
65°	783.0	777.9	807.5	844.3	867.7	806.4	683.7	564.4	477.4	418.8	395.4
67.5°	678.1	678.1	696.5	730.5	759.0	712.7	604.5	499.7	416.6	369.2	345.8
70°	580.0	579.4	592.8	616.8	649.7	612.3	524.2	431.6	359.1	317.3	296.7
72.5°	486.8	490.7	495.8	514.2	548.7	516.4	444.5	364.7	302.8	266.0	248.7
75°	398.2	397.6	404.9	421.0	446.1	422.2	364.7	299.5	247.0	216.9	201.9
77.5°	313.4	312.9	319.0	328.5	349.7	330.7	287.8	239.2	192.4	167.3	156.7
80°	233.7	233.7	239.2	244.3	259.9	244.8	214.7	179.0	141.1	121.6	113.2
82.5°	162.3	165.6	163.4	170.1	179.0	166.2	147.2	122.7	93.7	80.3	74.7
85°	98.7	101.5	98.7	104.3	108.2	97.0	87.6	73.1	54.1	45.2	41.3
87.5°	50.7	50.2	49.6	52.4	53.5	46.8	41.3	35.1	24.0	18.4	15.6
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°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8
2.5°	1342.3	1345.7	1340.6	1322.2	1315.0	1307.2	1303.8	1300.5	1306.6	1304.9
5°	1331.2	1327.3	1314.4	1291.0	1278.7	1265.9	1259.8	1255.9	1264.2	1262.6
7.5°	1316.1	1304.9	1286.0	1257.5	1241.9	1224.6	1216.3	1211.3	1216.8	1215.7
10°	1297.1	1278.7	1255.3	1221.3	1202.9	1183.9	1174.5	1167.2	1171.7	1171.1
12.5°	1273.2	1249.2	1220.7	1182.3	1163.3	1143.8	1135.4	1130.4	1136.0	1134.3
15°	1246.4	1217.4	1184.5	1145.5	1124.8	1107.0	1100.8	1096.9	1101.4	1101.4
17.5°	1216.8	1182.8	1146.6	1107.0	1087.5	1073.5	1067.4	1064.6	1066.8	1070.2
20°	1183.9	1146.0	1107.0	1068.5	1051.8	1037.3	1031.7	1028.9	1033.9	1031.7
22.5°	1147.7	1107.5	1066.8	1030.6	1015.5	1001.0	995.4	993.8	999.3	997.1
25°	1109.2	1065.7	1025.6	992.7	977.6	965.3	960.3	958.6	961.4	964.2
27.5°	1073.0	1023.9	984.3	954.7	941.3	929.6	925.2	922.4	924.6	928.0
30°	1028.9	981.5	942.5	915.1	902.3	891.2	887.8	885.6	888.9	891.7
32.5°	987.6	939.7	900.6	873.9	862.7	852.1	851.6	850.4	854.3	857.7
35°	943.0	896.2	858.3	833.2	822.6	813.6	815.3	817.0	821.4	825.4
37.5°	897.8	852.1	815.9	793.0	783.0	775.7	780.7	783.0	789.1	793.0
40°	852.1	806.4	772.9	752.3	742.3	738.9	746.2	751.2	758.4	761.8
42.5°	805.3	762.9	729.4	710.5	702.1	702.1	711.6	719.4	727.8	731.1
45°	758.4	717.2	685.4	668.1	662.0	666.4	677.6	687.6	698.2	701.5
47.5°	711.0	670.9	641.9	626.3	622.9	629.6	643.6	656.9	669.2	673.7
50°	663.6	627.4	598.4	583.9	583.9	592.2	610.1	626.8	640.2	644.7
52.5°	616.2	581.6	552.1	541.5	543.7	555.4	576.1	593.4	608.4	612.9
55°	568.3	534.2	508.6	499.7	503.6	518.1	539.3	559.3	573.8	578.9
57.5°	520.9	488.5	465.1	457.8	463.4	479.6	504.1	521.4	536.5	540.9
60°	472.9	440.0	421.6	416.0	423.3	440.0	465.1	481.3	495.2	499.7
62.5°	425.5	394.8	378.7	373.6	382.0	399.8	424.4	438.9	449.5	453.9
65°	377.5	350.2	335.2	331.8	340.7	358.0	381.4	393.7	401.5	406.0
67.5°	330.1	306.7	292.8	290.0	299.5	315.1	336.8	343.5	350.8	355.2
70°	283.3	262.1	250.4	248.7	257.1	272.1	290.5	293.9	297.8	301.7
72.5°	237.0	220.3	208.6	208.0	215.8	228.1	243.1	243.7	244.8	248.7
75°	192.4	177.3	168.4	170.1	174.6	184.6	196.3	193.0	193.5	196.3
77.5°	149.5	137.2	131.1	132.2	135.5	142.8	150.6	146.7	144.4	147.2
80°	107.6	97.0	94.8	95.4	97.6	102.6	107.1	103.7	99.3	101.5
82.5°	70.8	64.1	63.0	63.6	65.2	68.0	69.2	64.1	63.0	64.7
85°	39.0	36.2	36.2	37.9	38.5	39.0	39.0	36.2	36.8	37.9
87.5°	15.6	15.6	17.3	19.0	17.8	15.6	13.4	8.9	8.9	10.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)