

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-42L850-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-42L850-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

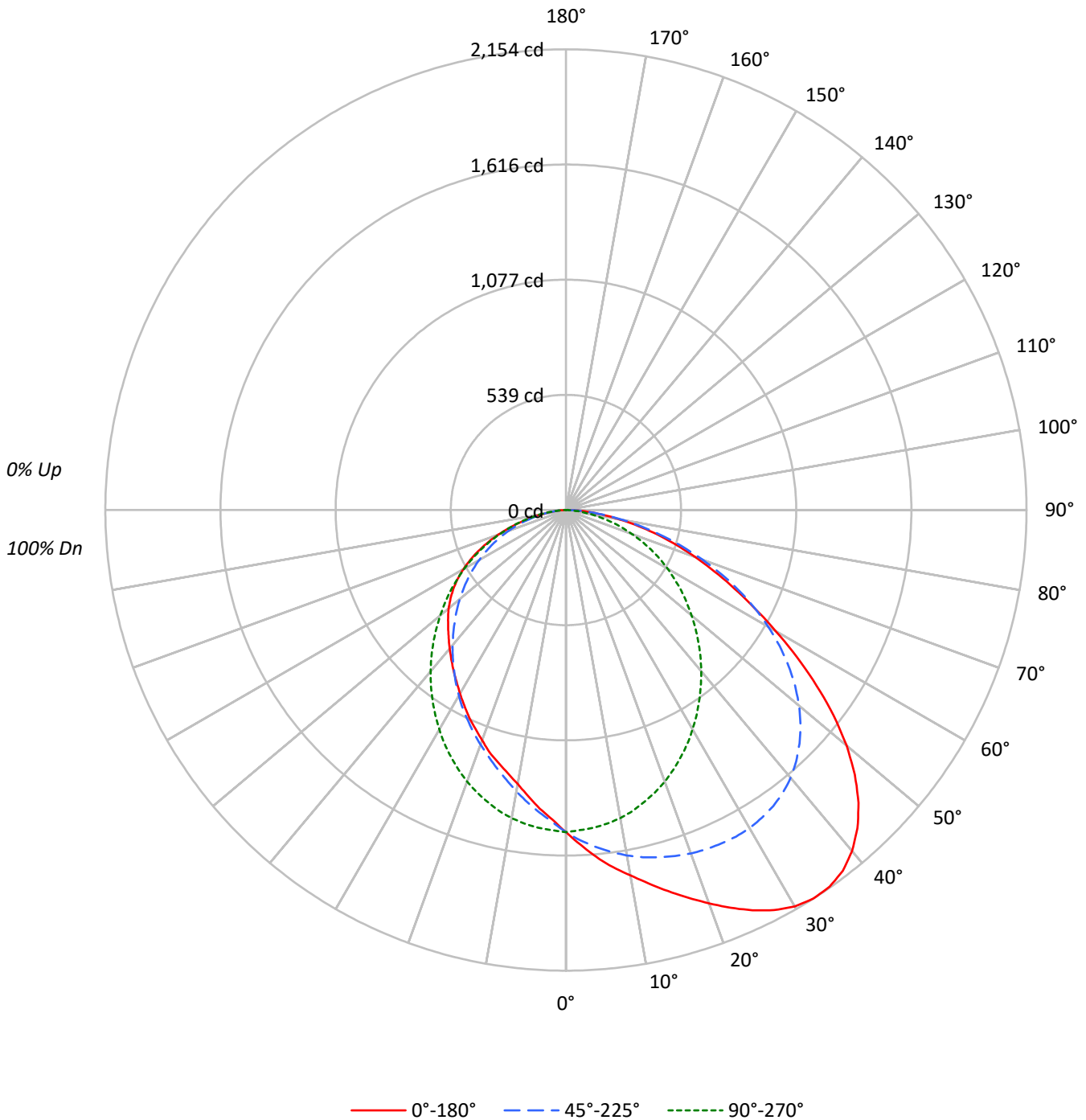
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4665.2 lumens  
Efficiency: N/A  
Efficacy: 101.0 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): 46.2  
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

TEST NUMBER: P  
CATALOG NUMBER: 4APN-X-42L850-UNV-ASY

### Luminous Intensity Polar Plot





TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-42L850-UNV-ASY

**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°	14501	14501	14501
5°	15734	14412	13544
10°	16951	14300	12709
15°	18387	14092	12186
20°	20048	13845	11733
25°	21930	13520	11369
30°	23791	13164	11004
35°	25269	12776	10768
40°	26164	12370	10627
45°	26348	11943	10603
50°	25655	11488	10718
55°	24022	11076	10786
60°	21837	10573	10681
65°	19798	9998	10267
70°	18122	9269	9427
75°	16441	8336	8105
80°	14382	6969	6248
85°	12107	5059	4650



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-X-42L850-UNV-ASY

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.0	3.1
10°-20°	416.0	8.9
20°-30°	651.8	14.0
30°-40°	817.1	17.5
40°-50°	869.9	18.6
50°-60°	785.3	16.8
60°-70°	581.3	12.5
70°-80°	319.0	6.8
80°-90°	81.9	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°	1210.8	26.0
0°-40°	2027.9	43.5
0°-60°	3683.0	78.9
0°-90°	4665.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4665.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1506	1506	1506	1506	1506	
5°	1628	1580	1491	1420	1402	159
15°	1845	1681	1414	1249	1223	526
25°	2064	1720	1273	1085	1070	955
35°	2150	1690	1087	913	916	1341
45°	1935	1544	877	735	779	1484
55°	1431	1271	660	559	643	1276
65°	869	895	439	378	451	867
75°	442	469	224	194	218	470
85°	110	108	46	43	42	129
90°	0	0	0	0	0	



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-42L850-UNV-ASY

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2
2.5°	1566.8	1563.7	1560.0	1558.8	1553.2	1545.8	1539.0	1539.0	1530.9	1511.7	1498.1
5°	1628.1	1623.2	1613.9	1606.4	1594.7	1580.4	1566.2	1557.5	1538.3	1509.2	1491.3
7.5°	1684.4	1678.2	1666.5	1652.2	1633.1	1612.0	1588.5	1569.9	1540.8	1501.8	1478.9
10°	1734.0	1728.4	1714.2	1696.8	1669.6	1639.9	1605.2	1577.3	1537.7	1489.4	1462.8
12.5°	1788.4	1782.9	1763.1	1739.5	1702.4	1662.8	1617.0	1578.6	1529.7	1471.5	1441.2
15°	1844.8	1837.3	1815.1	1783.5	1734.0	1680.7	1624.4	1574.9	1516.7	1449.8	1413.9
17.5°	1900.5	1893.1	1865.2	1825.0	1763.1	1696.8	1627.5	1566.2	1498.1	1423.2	1384.2
20°	1956.8	1949.4	1914.1	1863.3	1788.4	1708.6	1626.9	1553.2	1475.8	1392.9	1351.4
22.5°	2013.2	2004.5	1961.8	1899.9	1809.5	1716.6	1620.1	1535.2	1448.0	1358.2	1313.6
25°	2064.5	2055.9	2008.8	1935.8	1831.8	1720.3	1608.3	1510.5	1417.0	1319.8	1272.8
27.5°	2109.1	2098.6	2049.7	1969.2	1851.0	1721.6	1592.8	1482.6	1381.1	1278.3	1230.7
30°	2140.1	2130.8	2078.8	1992.7	1862.1	1717.2	1573.0	1449.8	1339.6	1233.8	1184.2
32.5°	2153.7	2145.6	2094.3	2003.9	1864.0	1706.1	1548.9	1413.3	1296.3	1186.7	1136.6
35°	2150.0	2141.9	2093.0	2002.0	1858.4	1690.0	1518.5	1371.8	1249.9	1137.8	1087.1
37.5°	2126.4	2117.2	2072.6	1985.3	1842.3	1666.5	1483.9	1326.6	1199.7	1087.7	1036.3
40°	2081.9	2072.6	2034.2	1953.7	1815.1	1634.9	1444.2	1278.3	1148.3	1035.1	984.3
42.5°	2018.1	2008.2	1977.9	1904.2	1776.1	1593.4	1399.1	1227.0	1093.9	984.3	931.1
45°	1935.2	1925.3	1904.8	1842.3	1725.3	1544.5	1347.7	1171.2	1036.9	926.7	877.2
47.5°	1832.4	1823.7	1813.8	1765.5	1662.8	1488.2	1290.1	1111.8	977.5	872.9	822.1
50°	1712.9	1704.2	1707.3	1674.5	1590.3	1423.2	1227.0	1049.3	916.2	812.8	767.0
52.5°	1577.3	1570.5	1585.4	1571.2	1506.2	1350.8	1159.5	984.9	853.7	755.9	711.9
55°	1431.2	1423.8	1452.3	1456.6	1412.1	1270.9	1082.7	918.1	790.5	700.1	659.9
57.5°	1280.8	1274.6	1311.2	1331.6	1309.3	1184.9	1005.3	849.3	725.5	642.0	601.7
60°	1134.1	1129.2	1167.5	1201.0	1198.5	1093.9	924.9	775.1	660.5	583.1	549.1
62.5°	996.1	990.5	1028.9	1068.5	1082.7	996.7	845.0	702.0	595.5	524.3	494.0
65°	869.1	863.6	896.4	937.2	963.2	895.1	759.0	626.5	529.9	464.9	438.9
67.5°	752.8	752.8	773.2	811.0	842.5	791.1	671.1	554.7	462.4	409.8	383.8
70°	643.8	643.2	658.1	684.7	721.2	679.7	581.9	479.1	398.7	352.2	329.3
72.5°	540.4	544.8	550.3	570.8	609.1	573.2	493.4	404.9	336.1	295.3	276.1
75°	442.0	441.4	449.4	467.4	495.2	468.6	404.9	332.4	274.2	240.8	224.1
77.5°	347.9	347.3	354.1	364.6	388.1	367.1	319.4	265.6	213.6	185.7	174.0
80°	259.4	259.4	265.6	271.1	288.5	271.8	238.3	198.7	156.6	135.0	125.7
82.5°	180.1	183.9	181.4	188.8	198.7	184.5	163.4	136.2	104.0	89.1	83.0
85°	109.6	112.7	109.6	115.8	120.1	107.7	97.2	81.1	60.0	50.1	45.8
87.5°	56.3	55.7	55.1	58.2	59.4	52.0	45.8	39.0	26.6	20.4	17.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-42L850-UNV-ASY

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2	1506.2
2.5°	1490.1	1493.8	1488.2	1467.8	1459.7	1451.1	1447.3	1443.6	1450.4	1448.6
5°	1477.7	1473.3	1459.1	1433.1	1419.5	1405.2	1398.4	1394.1	1403.4	1401.5
7.5°	1461.0	1448.6	1427.5	1396.0	1378.6	1359.4	1350.2	1344.6	1350.8	1349.5
10°	1439.9	1419.5	1393.5	1355.7	1335.3	1314.2	1303.7	1295.7	1300.6	1300.0
12.5°	1413.3	1386.7	1355.1	1312.4	1291.3	1269.7	1260.4	1254.8	1261.0	1259.2
15°	1383.6	1351.4	1314.9	1271.5	1248.6	1228.8	1222.0	1217.7	1222.6	1222.6
17.5°	1350.8	1313.0	1272.8	1228.8	1207.2	1191.7	1184.9	1181.8	1184.2	1188.0
20°	1314.2	1272.2	1228.8	1186.1	1167.5	1151.4	1145.2	1142.2	1147.7	1145.2
22.5°	1274.0	1229.4	1184.2	1144.0	1127.3	1111.2	1105.0	1103.1	1109.3	1106.9
25°	1231.3	1183.0	1138.4	1101.9	1085.2	1071.6	1066.0	1064.1	1067.2	1070.3
27.5°	1191.1	1136.6	1092.6	1059.8	1045.0	1032.0	1027.0	1023.9	1026.4	1030.1
30°	1142.2	1089.5	1046.2	1015.9	1001.6	989.2	985.5	983.1	986.8	989.9
32.5°	1096.3	1043.1	999.8	970.1	957.7	945.9	945.3	944.1	948.4	952.1
35°	1046.8	994.8	952.7	924.9	913.1	903.2	905.1	906.9	911.9	916.2
37.5°	996.7	945.9	905.7	880.3	869.1	861.1	866.7	869.1	876.0	880.3
40°	945.9	895.1	858.0	835.1	824.0	820.2	828.3	833.9	841.9	845.6
42.5°	893.9	846.9	809.7	788.7	779.4	779.4	789.9	798.6	807.9	811.6
45°	841.9	796.1	760.8	741.6	734.8	739.8	752.1	763.3	775.1	778.8
47.5°	789.3	744.7	712.5	695.2	691.5	698.9	714.4	729.2	742.9	747.8
50°	736.7	696.4	664.2	648.1	648.1	657.4	677.2	695.8	710.7	715.6
52.5°	684.1	645.7	612.9	601.1	603.6	616.6	639.5	658.7	675.4	680.3
55°	630.8	593.1	564.6	554.7	559.0	575.1	598.6	620.9	637.0	642.6
57.5°	578.2	542.3	516.3	508.2	514.4	532.4	559.6	578.8	595.5	600.5
60°	525.0	488.4	468.0	461.8	469.9	488.4	516.3	534.2	549.7	554.7
62.5°	472.3	438.3	420.3	414.8	424.1	443.9	471.1	487.2	499.0	503.9
65°	419.1	388.8	372.1	368.3	378.2	397.4	423.4	437.1	445.7	450.7
67.5°	366.5	340.5	325.0	321.9	332.4	349.8	373.9	381.3	389.4	394.3
70°	314.5	291.0	278.0	276.1	285.4	302.1	322.5	326.2	330.6	334.9
72.5°	263.1	244.5	231.5	230.9	239.6	253.2	269.9	270.5	271.8	276.1
75°	213.6	196.9	187.0	188.8	193.8	204.9	217.9	214.2	214.8	217.9
77.5°	165.9	152.3	145.5	146.7	150.4	158.5	167.1	162.8	160.3	163.4
80°	119.5	107.7	105.2	105.9	108.3	113.9	118.9	115.1	110.2	112.7
82.5°	78.6	71.2	70.0	70.6	72.4	75.5	76.8	71.2	70.0	71.8
85°	43.3	40.2	40.2	42.1	42.7	43.3	43.3	40.2	40.9	42.1
87.5°	17.3	17.3	19.2	21.0	19.8	17.3	14.9	9.9	9.9	11.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)