

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-37L850-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-37L850-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

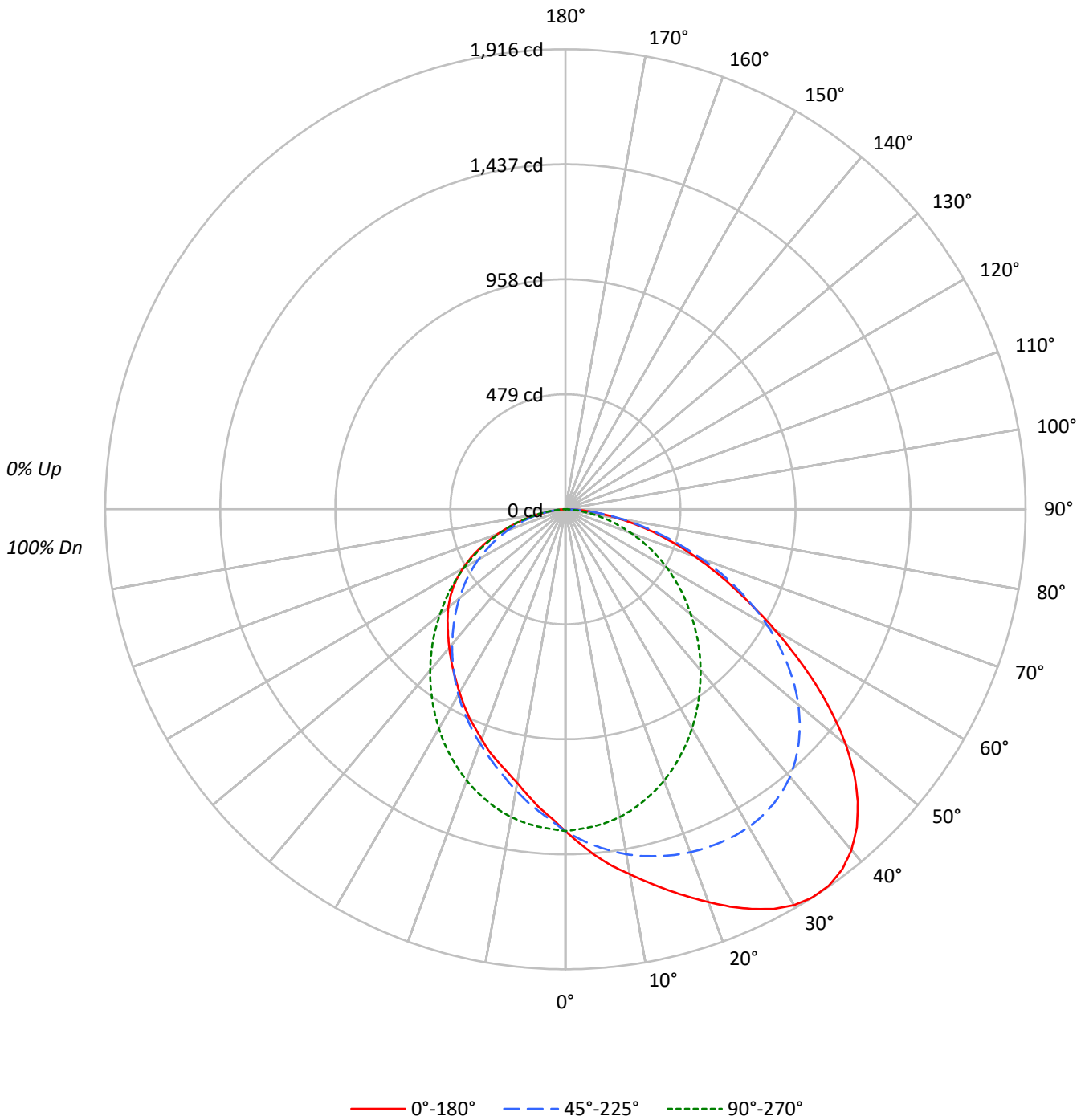
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4150.7 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): 40.8
Input Voltage (V): 120
Input Current (A_{in}): 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°	12902	12902	12902
5°	13999	12822	12051
10°	15081	12723	11307
15°	16359	12538	10842
20°	17837	12319	10440
25°	19513	12029	10116
30°	21167	11713	9790
35°	22482	11367	9581
40°	23279	11005	9456
45°	23443	10627	9434
50°	22826	10221	9536
55°	21374	9854	9596
60°	19428	9406	9502
65°	17616	8896	9135
70°	16123	8248	8388
75°	14630	7417	7213
80°	12796	6198	5555
85°	10770	4507	4142



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	3.1
10°-20°	370.1	8.9
20°-30°	579.9	14.0
30°-40°	727.0	17.5
40°-50°	773.9	18.6
50°-60°	698.7	16.8
60°-70°	517.2	12.5
70°-80°	283.8	6.8
80°-90°	72.9	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°	1077.3	26.0
0°-40°	1804.3	43.5
0°-60°	3276.9	78.9
0°-90°	4150.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4150.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1340	1340	1340	1340	1340	
5°	1449	1406	1327	1263	1247	141
15°	1641	1495	1258	1111	1088	468
25°	1837	1531	1132	966	952	850
35°	1913	1504	967	812	815	1193
45°	1722	1374	780	654	693	1320
55°	1273	1131	587	497	572	1136
65°	773	796	390	336	401	772
75°	393	417	199	172	194	418
85°	98	96	41	38	38	115
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°	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1
2.5°	1394.0	1391.3	1388.0	1386.9	1381.9	1375.3	1369.2	1369.2	1362.1	1345.0	1332.9
5°	1448.6	1444.2	1435.9	1429.3	1418.8	1406.2	1393.5	1385.8	1368.7	1342.8	1326.8
7.5°	1498.7	1493.2	1482.7	1470.0	1453.0	1434.2	1413.3	1396.8	1370.9	1336.2	1315.8
10°	1542.7	1537.8	1525.1	1509.7	1485.5	1459.0	1428.2	1403.4	1368.1	1325.2	1301.5
12.5°	1591.2	1586.3	1568.6	1547.7	1514.7	1479.4	1438.6	1404.5	1361.0	1309.2	1282.2
15°	1641.3	1634.7	1614.9	1586.8	1542.7	1495.4	1445.3	1401.2	1349.4	1289.9	1258.0
17.5°	1690.9	1684.3	1659.5	1623.7	1568.6	1509.7	1448.0	1393.5	1332.9	1266.3	1231.6
20°	1741.0	1734.4	1703.0	1657.9	1591.2	1520.2	1447.5	1381.9	1313.1	1239.3	1202.4
22.5°	1791.1	1783.4	1745.4	1690.4	1609.9	1527.3	1441.4	1365.9	1288.3	1208.4	1168.8
25°	1836.9	1829.2	1787.3	1722.3	1629.8	1530.6	1430.9	1343.9	1260.7	1174.3	1132.4
27.5°	1876.5	1867.2	1823.6	1752.0	1646.8	1531.7	1417.2	1319.1	1228.8	1137.4	1095.0
30°	1904.1	1895.8	1849.5	1773.0	1656.8	1527.9	1399.5	1289.9	1191.9	1097.7	1053.6
32.5°	1916.2	1909.0	1863.3	1782.9	1658.4	1518.0	1378.1	1257.4	1153.3	1055.9	1011.2
35°	1912.9	1905.7	1862.2	1781.2	1653.5	1503.6	1351.1	1220.5	1112.0	1012.3	967.2
37.5°	1891.9	1883.7	1844.0	1766.4	1639.1	1482.7	1320.2	1180.3	1067.4	967.7	922.0
40°	1852.3	1844.0	1809.9	1738.3	1614.9	1454.6	1285.0	1137.4	1021.7	920.9	875.7
42.5°	1795.6	1786.7	1759.8	1694.2	1580.2	1417.7	1244.8	1091.7	973.2	875.7	828.4
45°	1721.8	1712.9	1694.8	1639.1	1535.0	1374.2	1199.1	1042.1	922.6	824.5	780.5
47.5°	1630.3	1622.6	1613.8	1570.8	1479.4	1324.1	1147.8	989.2	869.7	776.6	731.4
50°	1524.0	1516.3	1519.1	1489.9	1415.0	1266.3	1091.7	933.6	815.2	723.2	682.4
52.5°	1403.4	1397.3	1410.6	1397.9	1340.1	1201.8	1031.6	876.3	759.5	672.5	633.4
55°	1273.4	1266.8	1292.1	1296.0	1256.3	1130.8	963.3	816.8	703.4	622.9	587.1
57.5°	1139.6	1134.1	1166.6	1184.7	1164.9	1054.2	894.5	755.7	645.5	571.2	535.4
60°	1009.0	1004.6	1038.8	1068.5	1066.3	973.2	822.9	689.6	587.7	518.8	488.5
62.5°	886.2	881.3	915.4	950.7	963.3	886.8	751.8	624.6	529.9	466.5	439.5
65°	773.3	768.3	797.5	833.9	857.0	796.4	675.3	557.4	471.5	413.6	390.5
67.5°	669.8	669.8	687.9	721.5	749.6	703.9	597.0	493.5	411.4	364.6	341.5
70°	572.8	572.3	585.5	609.2	641.7	604.8	517.7	426.3	354.7	313.4	293.0
72.5°	480.8	484.7	489.6	507.8	542.0	510.0	439.0	360.2	299.1	262.7	245.6
75°	393.3	392.7	399.9	415.8	440.6	416.9	360.2	295.8	244.0	214.3	199.4
77.5°	309.5	309.0	315.0	324.4	345.3	326.6	284.2	236.3	190.0	165.2	154.8
80°	230.8	230.8	236.3	241.2	256.7	241.8	212.1	176.8	139.3	120.1	111.8
82.5°	160.3	163.6	161.4	168.0	176.8	164.1	145.4	121.2	92.5	79.3	73.8
85°	97.5	100.2	97.5	103.0	106.9	95.8	86.5	72.2	53.4	44.6	40.8
87.5°	50.1	49.6	49.0	51.8	52.9	46.3	40.8	34.7	23.7	18.2	15.4
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°	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1	1340.1
2.5°	1325.7	1329.0	1324.1	1305.9	1298.7	1291.0	1287.7	1284.4	1290.5	1288.8
5°	1314.7	1310.9	1298.2	1275.1	1262.9	1250.3	1244.2	1240.4	1248.6	1247.0
7.5°	1299.9	1288.8	1270.1	1242.0	1226.6	1209.5	1201.3	1196.3	1201.8	1200.7
10°	1281.1	1262.9	1239.8	1206.2	1188.0	1169.3	1160.0	1152.8	1157.2	1156.6
12.5°	1257.4	1233.8	1205.7	1167.7	1148.9	1129.7	1121.4	1116.4	1121.9	1120.3
15°	1231.0	1202.4	1169.9	1131.3	1110.9	1093.3	1087.2	1083.4	1087.8	1087.8
17.5°	1201.8	1168.2	1132.4	1093.3	1074.0	1060.3	1054.2	1051.4	1053.6	1057.0
20°	1169.3	1131.9	1093.3	1055.3	1038.8	1024.5	1019.0	1016.2	1021.2	1019.0
22.5°	1133.5	1093.9	1053.6	1017.8	1003.0	988.7	983.1	981.5	987.0	984.8
25°	1095.5	1052.5	1012.9	980.4	965.5	953.4	948.5	946.8	949.6	952.3
27.5°	1059.7	1011.2	972.1	942.9	929.7	918.2	913.8	911.0	913.2	916.5
30°	1016.2	969.4	930.8	903.8	891.2	880.2	876.8	874.6	877.9	880.7
32.5°	975.4	928.1	889.5	863.1	852.1	841.6	841.0	839.9	843.8	847.1
35°	931.4	885.1	847.7	822.9	812.4	803.6	805.2	806.9	811.3	815.2
37.5°	886.8	841.6	805.8	783.2	773.3	766.1	771.1	773.3	779.4	783.2
40°	841.6	796.4	763.4	743.0	733.1	729.8	736.9	741.9	749.1	752.4
42.5°	795.3	753.5	720.4	701.7	693.4	693.4	702.8	710.5	718.8	722.1
45°	749.1	708.3	676.9	659.8	653.8	658.2	669.2	679.1	689.6	692.9
47.5°	702.2	662.6	634.0	618.5	615.2	621.8	635.6	648.8	660.9	665.3
50°	655.4	619.6	591.0	576.7	576.7	584.9	602.6	619.1	632.3	636.7
52.5°	608.6	574.5	545.3	534.8	537.0	548.6	569.0	586.0	600.9	605.3
55°	561.2	527.7	502.3	493.5	497.4	511.7	532.6	552.4	566.8	571.7
57.5°	514.4	482.5	459.4	452.2	457.7	473.7	497.9	515.0	529.9	534.3
60°	467.1	434.6	416.4	410.9	418.0	434.6	459.4	475.3	489.1	493.5
62.5°	420.2	390.0	374.0	369.0	377.3	394.9	419.1	433.5	443.9	448.3
65°	372.9	345.9	331.0	327.7	336.5	353.6	376.7	388.9	396.6	401.0
67.5°	326.1	302.9	289.2	286.4	295.8	311.2	332.7	339.3	346.4	350.8
70°	279.8	258.9	247.3	245.6	253.9	268.8	287.0	290.3	294.1	298.0
72.5°	234.1	217.6	206.0	205.4	213.2	225.3	240.1	240.7	241.8	245.6
75°	190.0	175.1	166.3	168.0	172.4	182.3	193.9	190.6	191.1	193.9
77.5°	147.6	135.5	129.4	130.5	133.8	141.0	148.7	144.9	142.7	145.4
80°	106.3	95.8	93.6	94.2	96.4	101.3	105.8	102.4	98.0	100.2
82.5°	69.9	63.3	62.2	62.8	64.4	67.2	68.3	63.3	62.2	63.9
85°	38.6	35.8	35.8	37.5	38.0	38.6	38.6	35.8	36.4	37.5
87.5°	15.4	15.4	17.1	18.7	17.6	15.4	13.2	8.8	8.8	10.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)