

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-37L830-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-37L830-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

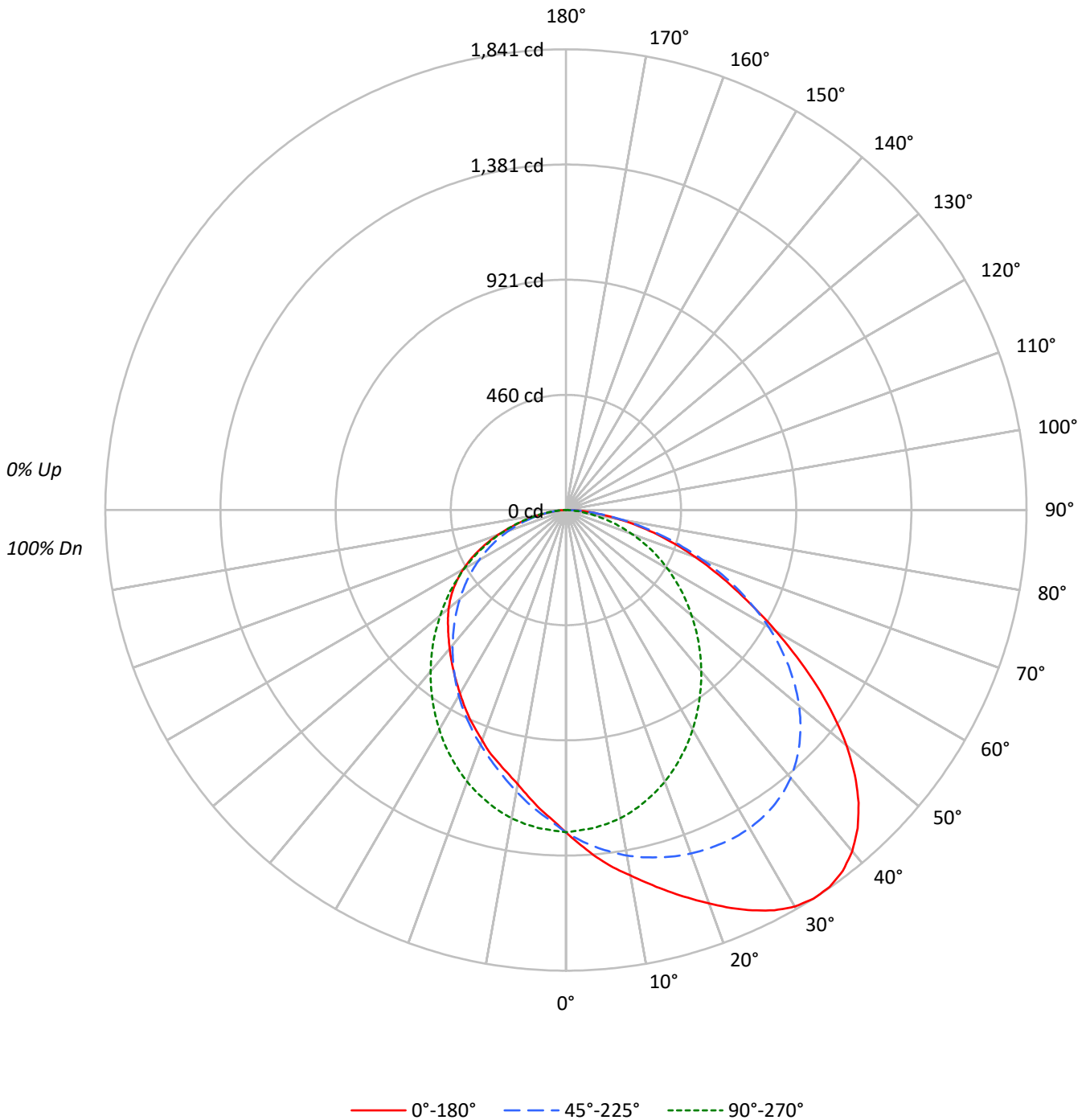
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3988.8 lumens
Efficiency: N/A
Efficacy: 97.8 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 (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

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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°	12398	12398	12398
5°	13452	12323	11581
10°	14493	12227	10866
15°	15721	12049	10419
20°	17141	11837	10032
25°	18751	11560	9721
30°	20341	11256	9408
35°	21604	10923	9207
40°	22370	10577	9086
45°	22528	10211	9066
50°	21936	9822	9165
55°	20540	9470	9222
60°	18671	9040	9131
65°	16928	8549	8777
70°	15496	7927	8059
75°	14057	7127	6930
80°	12297	5954	5339
85°	10350	4330	3977



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	3.1
10°-20°	355.7	8.9
20°-30°	557.3	14.0
30°-40°	698.6	17.5
40°-50°	743.7	18.6
50°-60°	671.4	16.8
60°-70°	497.0	12.5
70°-80°	272.7	6.8
80°-90°	70.0	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°	1035.3	26.0
0°-40°	1733.9	43.5
0°-60°	3149.0	78.9
0°-90°	3988.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3988.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1288	1288	1288	1288	1288	
5°	1392	1351	1275	1214	1198	136
15°	1577	1437	1209	1068	1045	450
25°	1765	1471	1088	928	915	817
35°	1838	1445	929	781	783	1146
45°	1655	1321	750	628	666	1269
55°	1224	1087	564	478	549	1091
65°	743	765	375	323	385	741
75°	378	401	192	166	186	402
85°	94	92	39	36	36	111
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°	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8
2.5°	1339.6	1337.0	1333.8	1332.8	1328.0	1321.6	1315.8	1315.8	1308.9	1292.5	1280.9
5°	1392.0	1387.8	1379.9	1373.5	1363.5	1351.3	1339.1	1331.7	1315.3	1290.4	1275.1
7.5°	1440.2	1434.9	1424.9	1412.7	1396.3	1378.3	1358.2	1342.3	1317.4	1284.1	1264.5
10°	1482.5	1477.8	1465.6	1450.8	1427.5	1402.1	1372.5	1348.6	1314.8	1273.5	1250.7
12.5°	1529.1	1524.4	1507.4	1487.3	1455.6	1421.7	1382.5	1349.7	1307.9	1258.1	1232.2
15°	1577.3	1570.9	1551.9	1524.9	1482.5	1437.0	1388.9	1346.5	1296.8	1239.6	1208.9
17.5°	1624.9	1618.6	1594.8	1560.4	1507.4	1450.8	1391.5	1339.1	1280.9	1216.8	1183.5
20°	1673.1	1666.7	1636.6	1593.2	1529.1	1460.8	1391.0	1328.0	1261.8	1190.9	1155.4
22.5°	1721.3	1713.9	1677.3	1624.4	1547.1	1467.7	1385.2	1312.6	1238.0	1161.3	1123.2
25°	1765.2	1757.8	1717.6	1655.1	1566.2	1470.9	1375.1	1291.5	1211.6	1128.5	1088.2
27.5°	1803.3	1794.3	1752.5	1683.7	1582.6	1472.0	1361.9	1267.7	1180.9	1093.0	1052.2
30°	1829.8	1821.8	1777.4	1703.8	1592.1	1468.3	1344.9	1239.6	1145.4	1054.9	1012.5
32.5°	1841.4	1834.5	1790.6	1713.3	1593.7	1458.7	1324.3	1208.4	1108.3	1014.7	971.8
35°	1838.2	1831.4	1789.5	1711.7	1588.9	1445.0	1298.4	1172.9	1068.6	972.8	929.4
37.5°	1818.1	1810.2	1772.1	1697.4	1575.2	1424.9	1268.7	1134.3	1025.8	930.0	886.0
40°	1780.0	1772.1	1739.3	1670.4	1551.9	1397.9	1234.8	1093.0	981.8	885.0	841.6
42.5°	1725.5	1717.0	1691.1	1628.1	1518.5	1362.4	1196.2	1049.1	935.3	841.6	796.1
45°	1654.6	1646.1	1628.6	1575.2	1475.1	1320.6	1152.3	1001.4	886.6	792.4	750.0
47.5°	1566.7	1559.3	1550.8	1509.5	1421.7	1272.4	1103.0	950.6	835.8	746.3	702.9
50°	1464.6	1457.1	1459.8	1431.7	1359.8	1216.8	1049.1	897.2	783.4	695.0	655.8
52.5°	1348.6	1342.8	1355.5	1343.3	1287.8	1154.9	991.4	842.1	729.9	646.3	608.7
55°	1223.7	1217.4	1241.7	1245.4	1207.3	1086.6	925.7	784.9	675.9	598.6	564.2
57.5°	1095.1	1089.8	1121.0	1138.5	1119.5	1013.1	859.6	726.2	620.3	548.9	514.5
60°	969.7	965.4	998.2	1026.8	1024.7	935.3	790.8	662.7	564.8	498.6	469.5
62.5°	851.6	846.9	879.7	913.6	925.7	852.2	722.5	600.2	509.2	448.3	422.4
65°	743.1	738.4	766.4	801.3	823.6	765.4	648.9	535.6	453.1	397.5	375.3
67.5°	643.6	643.6	661.1	693.4	720.4	676.4	573.8	474.2	395.4	350.4	328.2
70°	550.5	549.9	562.6	585.4	616.6	581.2	497.5	409.7	340.9	301.2	281.6
72.5°	462.1	465.8	470.5	488.0	520.8	490.1	421.8	346.2	287.4	252.5	236.1
75°	377.9	377.4	384.3	399.6	423.4	400.7	346.2	284.2	234.5	205.9	191.6
77.5°	297.5	296.9	302.8	311.8	331.9	313.9	273.1	227.1	182.6	158.8	148.7
80°	221.8	221.8	227.1	231.8	246.7	232.4	203.8	169.9	133.9	115.4	107.4
82.5°	154.0	157.2	155.1	161.4	169.9	157.7	139.7	116.4	88.9	76.2	70.9
85°	93.7	96.3	93.7	99.0	102.7	92.1	83.1	69.3	51.3	42.9	39.2
87.5°	48.2	47.6	47.1	49.8	50.8	44.5	39.2	33.3	22.8	17.5	14.8
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°	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8	1287.8
2.5°	1274.0	1277.2	1272.4	1255.0	1248.1	1240.7	1237.5	1234.3	1240.1	1238.5
5°	1263.4	1259.7	1247.5	1225.3	1213.7	1201.5	1195.7	1192.0	1199.9	1198.3
7.5°	1249.1	1238.5	1220.5	1193.6	1178.7	1162.3	1154.4	1149.6	1154.9	1153.9
10°	1231.1	1213.7	1191.4	1159.2	1141.7	1123.7	1114.7	1107.8	1112.0	1111.5
12.5°	1208.4	1185.6	1158.6	1122.1	1104.1	1085.6	1077.6	1072.9	1078.2	1076.6
15°	1183.0	1155.4	1124.2	1087.2	1067.6	1050.6	1044.8	1041.1	1045.4	1045.4
17.5°	1154.9	1122.6	1088.2	1050.6	1032.1	1018.9	1013.1	1010.4	1012.5	1015.7
20°	1123.7	1087.7	1050.6	1014.1	998.2	984.5	979.2	976.5	981.3	979.2
22.5°	1089.3	1051.2	1012.5	978.1	963.8	950.1	944.8	943.2	948.5	946.4
25°	1052.8	1011.5	973.4	942.1	927.9	916.2	911.4	909.9	912.5	915.1
27.5°	1018.4	971.8	934.2	906.1	893.4	882.3	878.1	875.5	877.6	880.7
30°	976.5	931.6	894.5	868.6	856.4	845.8	842.6	840.5	843.7	846.3
32.5°	937.4	891.9	854.8	829.4	818.8	808.8	808.2	807.2	810.9	814.1
35°	895.0	850.6	814.6	790.8	780.7	772.2	773.8	775.4	779.6	783.4
37.5°	852.2	808.8	774.4	752.7	743.1	736.2	741.0	743.1	748.9	752.7
40°	808.8	765.4	733.6	714.0	704.5	701.3	708.2	713.0	719.8	723.0
42.5°	764.3	724.1	692.3	674.3	666.4	666.4	675.4	682.8	690.7	693.9
45°	719.8	680.7	650.5	634.1	628.3	632.5	643.1	652.6	662.7	665.9
47.5°	674.8	636.7	609.2	594.4	591.2	597.6	610.8	623.5	635.2	639.4
50°	629.9	595.5	567.9	554.2	554.2	562.1	579.0	594.9	607.6	611.9
52.5°	584.9	552.1	524.0	513.9	516.1	527.2	546.8	563.2	577.5	581.7
55°	539.3	507.1	482.7	474.2	478.0	491.7	511.8	530.9	544.6	549.4
57.5°	494.4	463.7	441.4	434.5	439.8	455.2	478.5	494.9	509.2	513.4
60°	448.8	417.6	400.1	394.9	401.7	417.6	441.4	456.8	470.0	474.2
62.5°	403.9	374.7	359.4	354.6	362.6	379.5	402.8	416.6	426.6	430.8
65°	358.3	332.4	318.1	314.9	323.4	339.8	362.0	373.7	381.1	385.3
67.5°	313.3	291.1	277.9	275.2	284.2	299.1	319.7	326.0	332.9	337.2
70°	268.9	248.8	237.7	236.1	244.0	258.3	275.8	278.9	282.6	286.3
72.5°	224.9	209.1	198.0	197.4	204.8	216.5	230.8	231.3	232.4	236.1
75°	182.6	168.3	159.8	161.4	165.7	175.2	186.3	183.1	183.7	186.3
77.5°	141.9	130.2	124.4	125.4	128.6	135.5	142.9	139.2	137.1	139.7
80°	102.2	92.1	90.0	90.5	92.6	97.4	101.6	98.4	94.2	96.3
82.5°	67.2	60.9	59.8	60.3	61.9	64.6	65.6	60.9	59.8	61.4
85°	37.1	34.4	34.4	36.0	36.5	37.1	37.1	34.4	34.9	36.0
87.5°	14.8	14.8	16.4	18.0	16.9	14.8	12.7	8.5	8.5	10.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)