

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-42L950-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-42L950-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

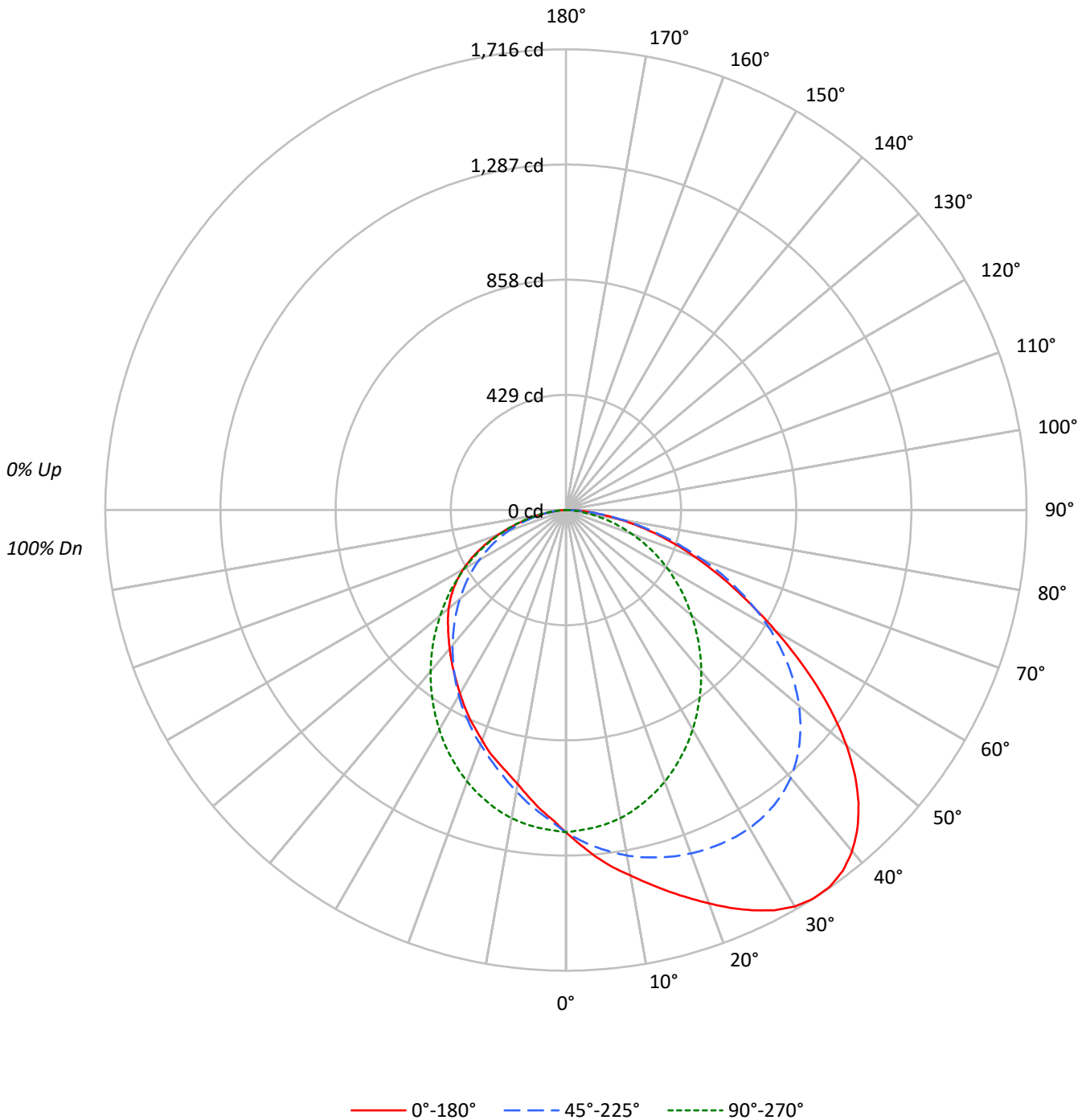
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3717.4 lumens
Efficiency: N/A
Efficacy: 80.5 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

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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°	11555	11555	11555
5°	12537	11484	10793
10°	13507	11395	10127
15°	14651	11230	9710
20°	15975	11032	9350
25°	17475	10773	9060
30°	18957	10491	8769
35°	20135	10180	8581
40°	20848	9857	8468
45°	20995	9517	8450
50°	20443	9154	8540
55°	19143	8825	8594
60°	17400	8424	8511
65°	15778	7966	8180
70°	14440	7386	7513
75°	13101	6643	6457
80°	11460	5550	4979
85°	9643	4032	3700



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.0	3.1
10°-20°	331.5	8.9
20°-30°	519.3	14.0
30°-40°	651.1	17.5
40°-50°	693.1	18.6
50°-60°	625.7	16.8
60°-70°	463.2	12.5
70°-80°	254.2	6.8
80°-90°	65.2	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°	964.8	26.0
0°-40°	1615.9	43.5
0°-60°	2934.8	78.9
0°-90°	3717.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3717.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1200	1200	1200	1200	1200	
5°	1297	1259	1188	1131	1117	126
15°	1470	1339	1127	995	974	419
25°	1645	1371	1014	865	853	761
35°	1713	1347	866	728	730	1068
45°	1542	1231	699	586	621	1182
55°	1140	1013	526	445	512	1017
65°	693	713	350	301	359	691
75°	352	373	179	154	174	374
85°	87	86	36	34	34	103
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°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2
2.5°	1248.5	1246.0	1243.1	1242.1	1237.6	1231.7	1226.3	1226.3	1219.9	1204.6	1193.7
5°	1297.3	1293.4	1286.0	1280.1	1270.7	1259.4	1248.0	1241.1	1225.8	1202.6	1188.3
7.5°	1342.2	1337.3	1327.9	1316.6	1301.3	1284.5	1265.8	1251.0	1227.8	1196.7	1178.5
10°	1381.7	1377.2	1365.9	1352.1	1330.4	1306.7	1279.1	1256.9	1225.3	1186.8	1165.6
12.5°	1425.1	1420.7	1404.9	1386.1	1356.5	1325.0	1288.5	1257.9	1218.9	1172.5	1148.4
15°	1470.0	1464.1	1446.3	1421.2	1381.7	1339.3	1294.4	1254.9	1208.5	1155.3	1126.7
17.5°	1514.4	1508.5	1486.3	1454.2	1404.9	1352.1	1296.8	1248.0	1193.7	1134.1	1103.0
20°	1559.3	1553.4	1525.2	1484.8	1425.1	1361.5	1296.4	1237.6	1176.0	1109.9	1076.8
22.5°	1604.2	1597.3	1563.2	1513.9	1441.9	1367.9	1290.9	1223.3	1153.8	1082.3	1046.7
25°	1645.1	1638.2	1600.7	1542.5	1459.6	1370.8	1281.6	1203.6	1129.1	1051.7	1014.2
27.5°	1680.6	1672.2	1633.3	1569.1	1474.9	1371.8	1269.2	1181.4	1100.5	1018.6	980.6
30°	1705.3	1697.9	1656.4	1587.9	1483.8	1368.4	1253.4	1155.3	1067.5	983.1	943.7
32.5°	1716.1	1709.7	1668.8	1596.8	1485.3	1359.5	1234.2	1126.2	1032.9	945.6	905.7
35°	1713.2	1706.8	1667.8	1595.3	1480.8	1346.7	1210.0	1093.1	995.9	906.7	866.2
37.5°	1694.4	1687.0	1651.5	1582.0	1468.0	1327.9	1182.4	1057.1	956.0	866.7	825.8
40°	1658.9	1651.5	1620.9	1556.8	1446.3	1302.8	1150.8	1018.6	915.0	824.8	784.3
42.5°	1608.1	1600.2	1576.0	1517.3	1415.2	1269.7	1114.8	977.7	871.6	784.3	741.9
45°	1542.0	1534.1	1517.8	1468.0	1374.8	1230.7	1073.9	933.3	826.3	738.4	699.0
47.5°	1460.1	1453.2	1445.3	1406.8	1325.0	1185.9	1028.0	885.9	778.9	695.5	655.1
50°	1364.9	1358.0	1360.5	1334.3	1267.2	1134.1	977.7	836.1	730.1	647.7	611.2
52.5°	1256.9	1251.5	1263.3	1252.0	1200.2	1076.3	923.9	784.8	680.2	602.3	567.3
55°	1140.5	1134.6	1157.2	1160.7	1125.2	1012.7	862.8	731.5	629.9	557.9	525.8
57.5°	1020.6	1015.7	1044.8	1061.1	1043.3	944.1	801.1	676.8	578.1	511.5	479.5
60°	903.7	899.8	930.3	957.0	955.0	871.6	737.0	617.6	526.3	464.7	437.5
62.5°	793.7	789.3	819.8	851.4	862.8	794.2	673.3	559.4	474.5	417.8	393.6
65°	692.6	688.1	714.3	746.8	767.6	713.3	604.8	499.2	422.3	370.5	349.7
67.5°	599.8	599.8	616.1	646.2	671.4	630.4	534.7	442.0	368.5	326.6	305.8
70°	513.0	512.5	524.4	545.6	574.7	541.6	463.7	381.8	317.7	280.7	262.4
72.5°	430.6	434.1	438.5	454.8	485.4	456.8	393.1	322.6	267.9	235.3	220.0
75°	352.2	351.7	358.1	372.4	394.6	373.4	322.6	264.9	218.5	191.9	178.6
77.5°	277.2	276.7	282.2	290.5	309.3	292.5	254.5	211.6	170.2	148.0	138.6
80°	206.7	206.7	211.6	216.1	229.9	216.6	189.9	158.3	124.8	107.5	100.1
82.5°	143.5	146.5	144.5	150.5	158.3	147.0	130.2	108.5	82.9	71.0	66.1
85°	87.3	89.8	87.3	92.2	95.7	85.8	77.4	64.6	47.8	40.0	36.5
87.5°	44.9	44.4	43.9	46.4	47.4	41.4	36.5	31.1	21.2	16.3	13.8
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°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2
2.5°	1187.3	1190.3	1185.9	1169.6	1163.2	1156.3	1153.3	1150.3	1155.8	1154.3
5°	1177.5	1174.0	1162.7	1142.0	1131.1	1119.8	1114.3	1110.9	1118.3	1116.8
7.5°	1164.2	1154.3	1137.5	1112.4	1098.5	1083.3	1075.9	1071.4	1076.3	1075.4
10°	1147.4	1131.1	1110.4	1080.3	1064.0	1047.2	1038.9	1032.4	1036.4	1035.9
12.5°	1126.2	1105.0	1079.8	1045.8	1029.0	1011.7	1004.3	999.9	1004.8	1003.3
15°	1102.5	1076.8	1047.7	1013.2	995.0	979.2	973.7	970.3	974.2	974.2
17.5°	1076.3	1046.3	1014.2	979.2	961.9	949.6	944.1	941.7	943.7	946.6
20°	1047.2	1013.7	979.2	945.1	930.3	917.5	912.6	910.1	914.5	912.6
22.5°	1015.2	979.7	943.7	911.6	898.3	885.4	880.5	879.0	884.0	882.0
25°	981.1	942.7	907.1	878.0	864.7	853.9	849.4	848.0	850.4	852.9
27.5°	949.1	905.7	870.6	844.5	832.7	822.3	818.4	815.9	817.9	820.8
30°	910.1	868.2	833.7	809.5	798.1	788.3	785.3	783.3	786.3	788.8
32.5°	873.6	831.2	796.7	773.0	763.1	753.7	753.2	752.3	755.7	758.7
35°	834.1	792.7	759.2	737.0	727.6	719.7	721.2	722.7	726.6	730.1
37.5°	794.2	753.7	721.7	701.4	692.6	686.2	690.6	692.6	698.0	701.4
40°	753.7	713.3	683.7	665.4	656.6	653.6	660.0	664.5	670.9	673.8
42.5°	712.3	674.8	645.2	628.4	621.0	621.0	629.4	636.3	643.7	646.7
45°	670.9	634.4	606.2	591.0	585.5	589.5	599.3	608.2	617.6	620.6
47.5°	628.9	593.4	567.8	554.0	551.0	556.9	569.2	581.1	591.9	595.9
50°	587.0	554.9	529.3	516.5	516.5	523.9	539.7	554.5	566.3	570.2
52.5°	545.1	514.5	488.4	479.0	481.0	491.3	509.6	524.9	538.2	542.1
55°	502.7	472.6	449.9	442.0	445.4	458.3	477.0	494.8	507.6	512.0
57.5°	460.7	432.1	411.4	405.0	409.9	424.2	445.9	461.2	474.5	478.5
60°	418.3	389.2	372.9	368.0	374.4	389.2	411.4	425.7	438.0	442.0
62.5°	376.4	349.2	334.9	330.5	337.9	353.7	375.4	388.2	397.6	401.5
65°	334.0	309.8	296.5	293.5	301.4	316.7	337.4	348.3	355.2	359.1
67.5°	292.0	271.3	259.0	256.5	264.9	278.7	297.9	303.9	310.3	314.2
70°	250.6	231.8	221.5	220.0	227.4	240.7	257.0	260.0	263.4	266.9
72.5°	209.6	194.8	184.5	184.0	190.9	201.8	215.1	215.6	216.6	220.0
75°	170.2	156.9	149.0	150.5	154.4	163.3	173.6	170.7	171.2	173.6
77.5°	132.2	121.3	115.9	116.9	119.9	126.3	133.2	129.7	127.8	130.2
80°	95.2	85.8	83.9	84.4	86.3	90.8	94.7	91.8	87.8	89.8
82.5°	62.6	56.7	55.7	56.2	57.7	60.2	61.2	56.7	55.7	57.2
85°	34.5	32.1	32.1	33.5	34.0	34.5	34.5	32.1	32.6	33.5
87.5°	13.8	13.8	15.3	16.8	15.8	13.8	11.8	7.9	7.9	9.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)