

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-42L940-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-42L940-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

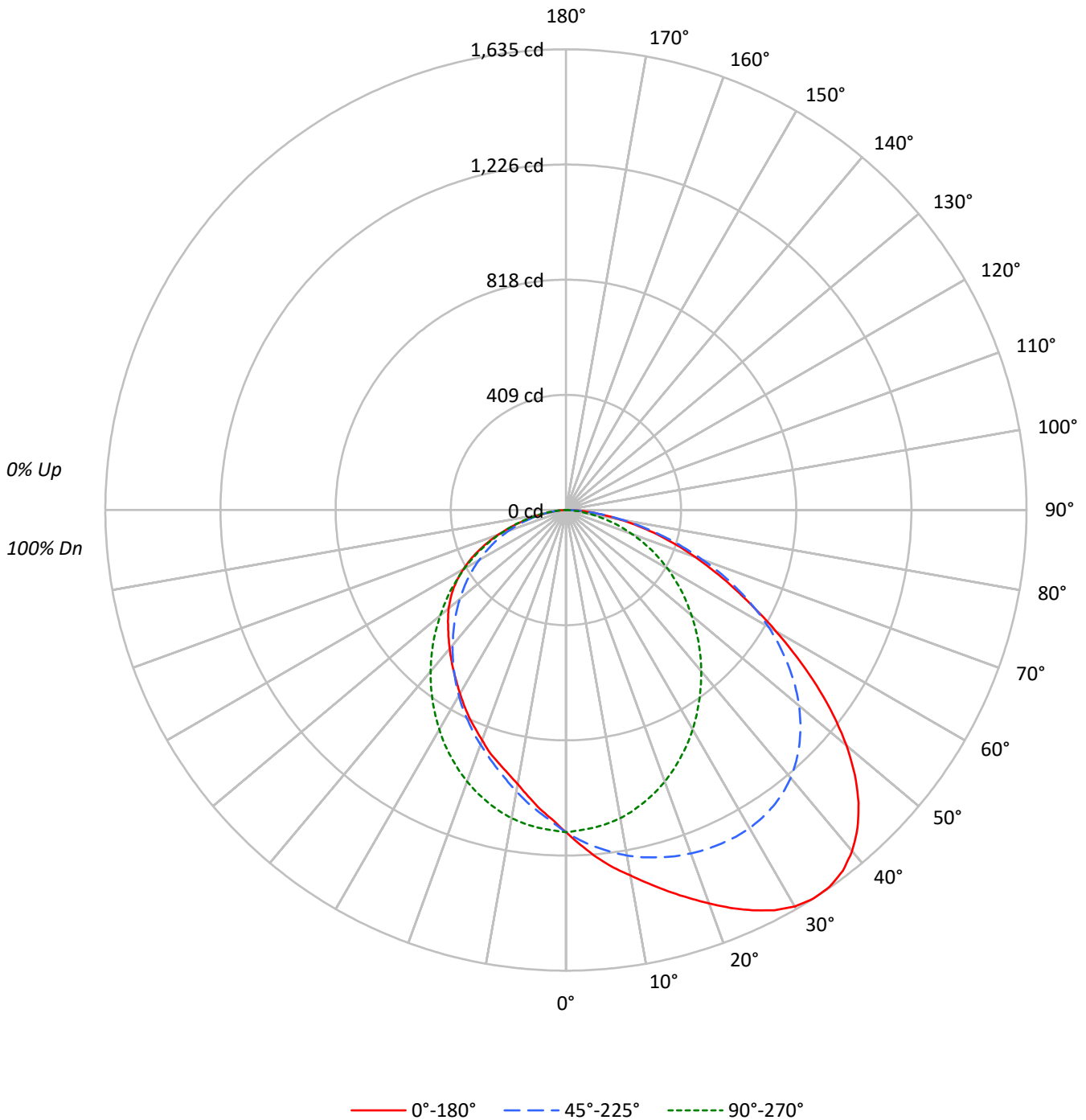
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3541.8 lumens
Efficiency: N/A
Efficacy: 76.7 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): 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°	11009	11009	11009
5°	11946	10942	10284
10°	12869	10857	9649
15°	13960	10700	9251
20°	15220	10512	8908
25°	16650	10265	8632
30°	18062	9995	8354
35°	19184	9700	8175
40°	19864	9392	8068
45°	20003	9068	8049
50°	19478	8721	8137
55°	18238	8409	8189
60°	16578	8027	8108
65°	15033	7590	7795
70°	13759	7037	7158
75°	12483	6327	6152
80°	10916	5289	4740
85°	9190	3844	3535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.6	3.1
10°-20°	315.9	8.9
20°-30°	494.8	14.0
30°-40°	620.3	17.5
40°-50°	660.4	18.6
50°-60°	596.2	16.8
60°-70°	441.3	12.5
70°-80°	242.2	6.8
80°-90°	62.2	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°	919.3	26.0
0°-40°	1539.6	43.5
0°-60°	2796.2	78.9
0°-90°	3541.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3541.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1144	1144	1144	1144	1144	
5°	1236	1200	1132	1078	1064	120
15°	1401	1276	1074	948	928	399
25°	1567	1306	966	824	813	725
35°	1632	1283	825	693	696	1018
45°	1469	1173	666	558	591	1126
55°	1087	965	501	424	488	969
65°	660	680	333	287	342	658
75°	336	356	170	147	165	357
85°	83	82	35	32	32	98
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°	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5
2.5°	1189.5	1187.2	1184.4	1183.4	1179.2	1173.6	1168.4	1168.4	1162.3	1147.7	1137.4
5°	1236.1	1232.3	1225.3	1219.6	1210.7	1199.9	1189.1	1182.5	1167.9	1145.8	1132.2
7.5°	1278.8	1274.1	1265.2	1254.4	1239.8	1223.9	1206.0	1191.9	1169.8	1140.2	1122.8
10°	1316.4	1312.2	1301.4	1288.2	1267.6	1245.0	1218.7	1197.5	1167.5	1130.8	1110.6
12.5°	1357.8	1353.6	1338.5	1320.7	1292.5	1262.4	1227.6	1198.5	1161.3	1117.2	1094.1
15°	1400.6	1394.9	1378.0	1354.0	1316.4	1276.0	1233.3	1195.7	1151.5	1100.7	1073.5
17.5°	1442.9	1437.2	1416.1	1385.5	1338.5	1288.2	1235.6	1189.1	1137.4	1080.5	1050.9
20°	1485.6	1480.0	1453.2	1414.7	1357.8	1297.2	1235.1	1179.2	1120.5	1057.5	1026.0
22.5°	1528.4	1521.8	1489.4	1442.4	1373.8	1303.3	1230.0	1165.6	1099.3	1031.2	997.3
25°	1567.4	1560.8	1525.1	1469.7	1390.7	1306.1	1221.0	1146.8	1075.8	1002.0	966.3
27.5°	1601.3	1593.3	1556.1	1495.0	1405.3	1307.0	1209.3	1125.6	1048.6	970.5	934.3
30°	1624.8	1617.7	1578.2	1512.9	1413.7	1303.8	1194.2	1100.7	1017.1	936.7	899.1
32.5°	1635.1	1629.0	1590.0	1521.4	1415.1	1295.3	1175.9	1073.0	984.2	901.0	862.9
35°	1632.3	1626.2	1589.0	1520.0	1410.9	1283.1	1152.9	1041.5	948.9	863.8	825.3
37.5°	1614.4	1607.4	1573.5	1507.3	1398.7	1265.2	1126.6	1007.2	910.8	825.8	786.8
40°	1580.6	1573.5	1544.4	1483.3	1378.0	1241.2	1096.5	970.5	871.8	785.8	747.3
42.5°	1532.2	1524.7	1501.6	1445.7	1348.4	1209.8	1062.2	931.5	830.5	747.3	706.9
45°	1469.2	1461.7	1446.2	1398.7	1309.9	1172.6	1023.2	889.2	787.2	703.6	666.0
47.5°	1391.2	1384.6	1377.1	1340.4	1262.4	1129.9	979.5	844.1	742.1	662.7	624.1
50°	1300.5	1293.9	1296.2	1271.3	1207.4	1080.5	931.5	796.6	695.6	617.1	582.3
52.5°	1197.5	1192.4	1203.6	1192.8	1143.5	1025.5	880.3	747.8	648.1	573.9	540.5
55°	1086.6	1081.0	1102.6	1105.9	1072.0	964.9	822.0	697.0	600.2	531.6	501.0
57.5°	972.4	967.7	995.4	1011.0	994.0	899.6	763.3	644.8	550.8	487.4	456.8
60°	861.0	857.3	886.4	911.8	909.9	830.5	702.2	588.4	501.5	442.7	416.9
62.5°	756.2	752.0	781.1	811.2	822.0	756.7	641.5	533.0	452.1	398.1	375.1
65°	659.9	655.6	680.5	711.6	731.3	679.6	576.2	475.6	402.3	353.0	333.2
67.5°	571.5	571.5	587.0	615.7	639.7	600.6	509.5	421.1	351.1	311.1	291.4
70°	488.8	488.3	499.6	519.8	547.5	516.1	441.8	363.8	302.7	267.4	250.0
72.5°	410.3	413.6	417.8	433.3	462.5	435.2	374.6	307.4	255.2	224.2	209.6
75°	335.6	335.1	341.2	354.8	376.0	355.8	307.4	252.4	208.2	182.8	170.1
77.5°	264.1	263.7	268.8	276.8	294.7	278.7	242.5	201.6	162.1	141.0	132.1
80°	196.9	196.9	201.6	205.9	219.0	206.3	180.9	150.9	118.9	102.5	95.4
82.5°	136.8	139.6	137.7	143.3	150.9	140.1	124.1	103.4	79.0	67.7	63.0
85°	83.2	85.5	83.2	87.9	91.2	81.8	73.8	61.6	45.6	38.1	34.8
87.5°	42.8	42.3	41.8	44.2	45.1	39.5	34.8	29.6	20.2	15.5	13.2
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°	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5	1143.5
2.5°	1131.3	1134.1	1129.9	1114.3	1108.2	1101.7	1098.8	1096.0	1101.2	1099.8
5°	1121.9	1118.6	1107.8	1088.0	1077.7	1066.9	1061.7	1058.4	1065.5	1064.1
7.5°	1109.2	1099.8	1083.8	1059.8	1046.7	1032.1	1025.1	1020.8	1025.5	1024.6
10°	1093.2	1077.7	1057.9	1029.3	1013.8	997.8	989.8	983.7	987.5	987.0
12.5°	1073.0	1052.8	1028.8	996.4	980.4	964.0	956.9	952.7	957.4	956.0
15°	1050.4	1026.0	998.3	965.4	948.0	932.9	927.8	924.5	928.2	928.2
17.5°	1025.5	996.9	966.3	932.9	916.5	904.7	899.6	897.2	899.1	901.9
20°	997.8	965.8	932.9	900.5	886.4	874.2	869.5	867.1	871.4	869.5
22.5°	967.2	933.4	899.1	868.5	855.9	843.6	838.9	837.5	842.2	840.3
25°	934.8	898.2	864.3	836.6	823.9	813.6	809.3	807.9	810.3	812.6
27.5°	904.3	862.9	829.5	804.6	793.3	783.5	779.7	777.4	779.2	782.1
30°	867.1	827.2	794.3	771.3	760.4	751.0	748.2	746.3	749.2	751.5
32.5°	832.4	791.9	759.0	736.5	727.1	718.1	717.7	716.7	720.0	722.8
35°	794.8	755.3	723.3	702.2	693.2	685.7	687.1	688.5	692.3	695.6
37.5°	756.7	718.1	687.6	668.3	659.9	653.8	658.0	659.9	665.0	668.3
40°	718.1	679.6	651.4	634.0	625.6	622.7	628.8	633.1	639.2	642.0
42.5°	678.7	642.9	614.7	598.8	591.7	591.7	599.7	606.3	613.3	616.2
45°	639.2	604.4	577.6	563.0	557.9	561.6	571.0	579.5	588.4	591.2
47.5°	599.2	565.4	541.0	527.8	525.0	530.6	542.4	553.6	564.0	567.7
50°	559.3	528.7	504.3	492.1	492.1	499.1	514.2	528.3	539.5	543.3
52.5°	519.3	490.2	465.3	456.4	458.2	468.1	485.5	500.1	512.8	516.5
55°	478.9	450.3	428.6	421.1	424.4	436.6	454.5	471.4	483.6	487.9
57.5°	439.0	411.7	392.0	385.9	390.6	404.2	424.9	439.4	452.1	455.9
60°	398.6	370.8	355.3	350.6	356.7	370.8	392.0	405.6	417.4	421.1
62.5°	358.6	332.8	319.1	314.9	321.9	337.0	357.7	369.9	378.8	382.6
65°	318.2	295.2	282.5	279.6	287.2	301.7	321.5	331.8	338.4	342.2
67.5°	278.2	258.5	246.7	244.4	252.4	265.5	283.9	289.5	295.6	299.4
70°	238.8	220.9	211.0	209.6	216.7	229.4	244.9	247.7	251.0	254.3
72.5°	199.7	185.6	175.8	175.3	181.9	192.2	204.9	205.4	206.3	209.6
75°	162.1	149.5	141.9	143.3	147.1	155.6	165.4	162.6	163.1	165.4
77.5°	126.0	115.6	110.4	111.4	114.2	120.3	126.9	123.6	121.7	124.1
80°	90.7	81.8	79.9	80.4	82.2	86.5	90.2	87.4	83.7	85.5
82.5°	59.7	54.0	53.1	53.6	55.0	57.3	58.3	54.0	53.1	54.5
85°	32.9	30.5	30.5	32.0	32.4	32.9	32.9	30.5	31.0	32.0
87.5°	13.2	13.2	14.6	16.0	15.0	13.2	11.3	7.5	7.5	8.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)