

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-42L930-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-42L930-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

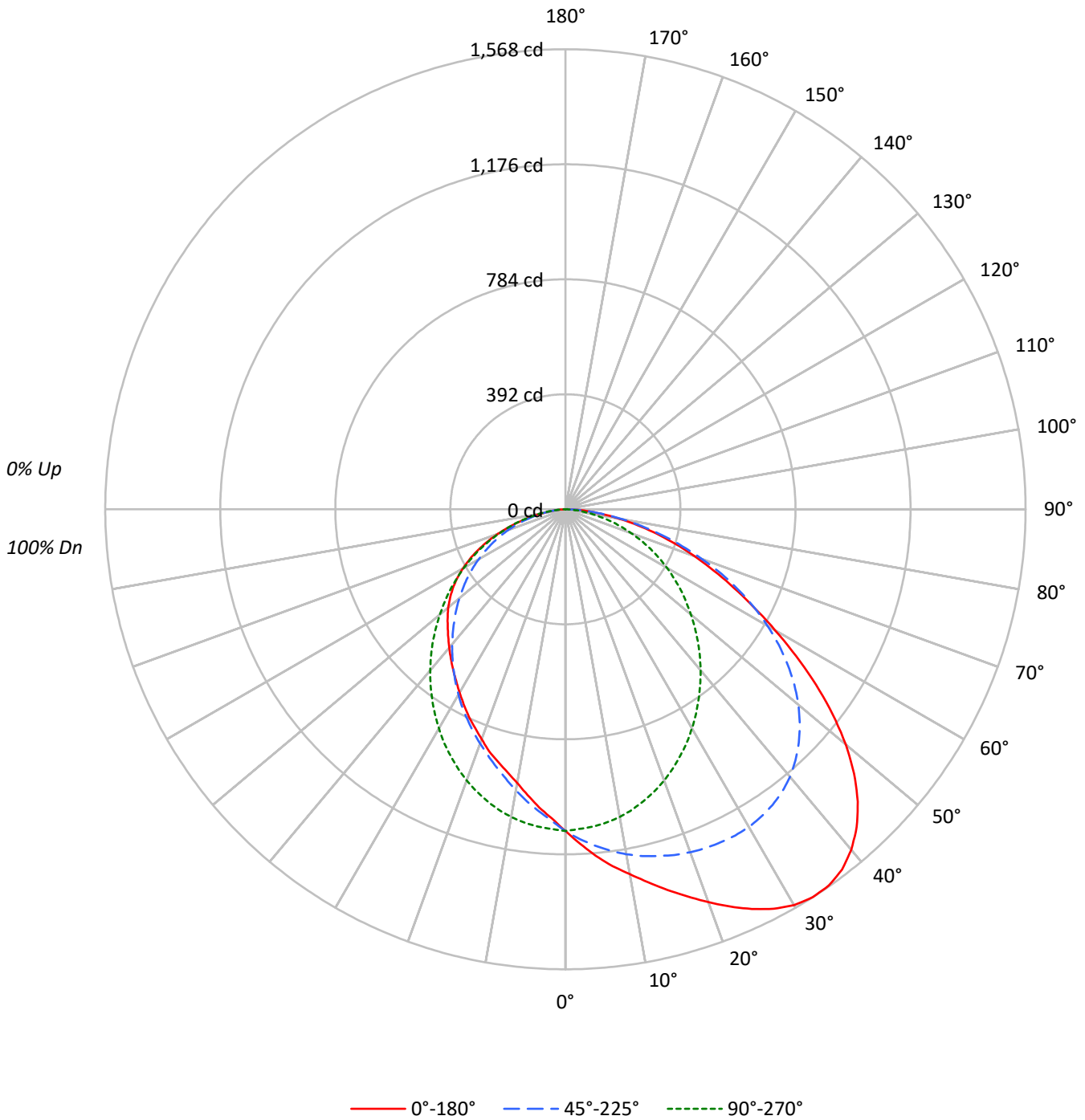
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3396.5 lumens
Efficiency: N/A
Efficacy: 73.5 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°	10556	10556	10556
5°	11455	10492	9861
10°	12341	10411	9253
15°	13387	10260	8872
20°	14596	10080	8542
25°	15967	9843	8278
30°	17321	9585	8012
35°	18397	9301	7839
40°	19049	9006	7738
45°	19182	8695	7720
50°	18678	8363	7803
55°	17490	8063	7852
60°	15899	7698	7775
65°	14415	7278	7474
70°	13193	6750	6863
75°	11970	6071	5899
80°	10467	5073	4546
85°	8815	3689	3380



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.1	3.1
10°-20°	302.9	8.9
20°-30°	474.5	14.0
30°-40°	594.9	17.5
40°-50°	633.3	18.6
50°-60°	571.7	16.8
60°-70°	423.2	12.5
70°-80°	232.2	6.8
80°-90°	59.6	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°	881.5	26.0
0°-40°	1476.4	43.5
0°-60°	2681.4	78.9
0°-90°	3396.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3396.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1096	1096	1096	1096	1096	
5°	1185	1151	1086	1033	1020	115
15°	1343	1224	1029	909	890	383
25°	1503	1252	927	790	779	696
35°	1565	1230	791	665	667	976
45°	1409	1124	639	535	567	1080
55°	1042	925	480	407	468	929
65°	633	652	320	275	328	631
75°	322	341	163	141	159	342
85°	80	78	33	31	31	94
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°	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5
2.5°	1140.7	1138.5	1135.8	1134.9	1130.8	1125.4	1120.4	1120.4	1114.6	1100.6	1090.7
5°	1185.3	1181.7	1175.0	1169.6	1161.0	1150.6	1140.3	1134.0	1120.0	1098.8	1085.7
7.5°	1226.3	1221.8	1213.3	1202.9	1188.9	1173.6	1156.5	1143.0	1121.8	1093.4	1076.7
10°	1262.4	1258.3	1248.0	1235.4	1215.5	1193.9	1168.7	1148.4	1119.5	1084.4	1065.0
12.5°	1302.1	1298.0	1283.6	1266.5	1239.4	1210.6	1177.2	1149.3	1113.7	1071.3	1049.2
15°	1343.1	1337.7	1321.4	1298.5	1262.4	1223.6	1182.6	1146.6	1104.2	1055.5	1029.4
17.5°	1383.6	1378.2	1358.0	1328.7	1283.6	1235.4	1184.9	1140.3	1090.7	1036.2	1007.8
20°	1424.7	1419.2	1393.6	1356.6	1302.1	1243.9	1184.4	1130.8	1074.5	1014.1	983.9
22.5°	1465.7	1459.4	1428.3	1383.2	1317.4	1249.8	1179.5	1117.7	1054.2	988.8	956.4
25°	1503.1	1496.8	1462.5	1409.3	1333.6	1252.5	1170.9	1099.7	1031.6	960.9	926.6
27.5°	1535.5	1527.9	1492.3	1433.7	1347.6	1253.4	1159.6	1079.4	1005.5	930.7	896.0
30°	1558.1	1551.3	1513.4	1450.8	1355.7	1250.2	1145.2	1055.5	975.3	898.2	862.2
32.5°	1568.0	1562.1	1524.7	1458.9	1357.1	1242.1	1127.6	1028.9	943.8	864.0	827.5
35°	1565.3	1559.4	1523.8	1457.6	1353.0	1230.4	1105.6	998.7	910.0	828.4	791.4
37.5°	1548.1	1541.4	1508.9	1445.4	1341.3	1213.3	1080.3	965.8	873.5	791.9	754.5
40°	1515.7	1508.9	1481.0	1422.4	1321.4	1190.3	1051.5	930.7	836.0	753.6	716.6
42.5°	1469.3	1462.1	1440.0	1386.3	1293.1	1160.1	1018.6	893.3	796.4	716.6	677.8
45°	1408.9	1401.7	1386.8	1341.3	1256.1	1124.5	981.2	852.7	754.9	674.7	638.6
47.5°	1334.1	1327.8	1320.5	1285.4	1210.6	1083.5	939.3	809.5	711.7	635.5	598.5
50°	1247.1	1240.8	1243.0	1219.1	1157.8	1036.2	893.3	763.9	667.0	591.8	558.4
52.5°	1148.4	1143.4	1154.2	1143.9	1096.5	983.4	844.2	717.1	621.5	550.3	518.3
55°	1042.0	1036.6	1057.3	1060.5	1028.0	925.3	788.3	668.4	575.5	509.7	480.4
57.5°	932.5	928.0	954.6	969.5	953.2	862.6	731.9	618.4	528.2	467.4	438.1
60°	825.7	822.1	850.0	874.4	872.6	796.4	673.3	564.3	480.9	424.6	399.8
62.5°	725.2	721.1	749.1	777.9	788.3	725.6	615.2	511.1	433.6	381.7	359.7
65°	632.8	628.7	652.6	682.4	701.3	651.7	552.6	456.1	385.8	338.5	319.5
67.5°	548.0	548.0	562.9	590.4	613.4	576.0	488.6	403.8	336.7	298.4	279.4
70°	468.7	468.3	479.1	498.5	525.1	494.9	423.7	348.8	290.2	256.4	239.8
72.5°	393.5	396.6	400.7	415.5	443.5	417.3	359.2	294.8	244.7	215.0	201.0
75°	321.8	321.3	327.2	340.3	360.6	341.2	294.8	242.0	199.7	175.3	163.2
77.5°	253.3	252.8	257.8	265.5	282.6	267.3	232.6	193.3	155.5	135.2	126.6
80°	188.8	188.8	193.3	197.4	210.0	197.9	173.5	144.7	114.0	98.3	91.5
82.5°	131.2	133.9	132.1	137.5	144.7	134.3	119.0	99.2	75.7	64.9	60.4
85°	79.8	82.0	79.8	84.3	87.4	78.4	70.8	59.0	43.7	36.5	33.4
87.5°	41.0	40.6	40.1	42.4	43.3	37.9	33.4	28.4	19.4	14.9	12.6
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°	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5	1096.5
2.5°	1084.8	1087.5	1083.5	1068.6	1062.7	1056.4	1053.7	1051.0	1056.0	1054.6
5°	1075.8	1072.7	1062.3	1043.4	1033.4	1023.1	1018.1	1015.0	1021.7	1020.4
7.5°	1063.6	1054.6	1039.3	1016.3	1003.7	989.7	983.0	978.9	983.4	982.5
10°	1048.3	1033.4	1014.5	987.0	972.2	956.8	949.2	943.3	946.9	946.5
12.5°	1028.9	1009.6	986.6	955.5	940.2	924.4	917.6	913.6	918.1	916.7
15°	1007.3	983.9	957.3	925.7	909.1	894.6	889.7	886.5	890.1	890.1
17.5°	983.4	955.9	926.6	894.6	878.9	867.6	862.6	860.4	862.2	864.9
20°	956.8	926.2	894.6	863.5	850.0	838.3	833.8	831.5	835.6	833.8
22.5°	927.5	895.1	862.2	832.9	820.7	809.0	804.5	803.1	807.6	805.8
25°	896.4	861.3	828.8	802.2	790.1	780.2	776.1	774.7	777.0	779.3
27.5°	867.1	827.5	795.5	771.6	760.8	751.3	747.7	745.5	747.3	750.0
30°	831.5	793.2	761.7	739.6	729.2	720.2	717.5	715.7	718.4	720.7
32.5°	798.2	759.4	727.9	706.2	697.2	688.7	688.2	687.3	690.5	693.2
35°	762.1	724.3	693.6	673.3	664.8	657.6	658.9	660.3	663.9	667.0
37.5°	725.6	688.7	659.4	640.9	632.8	626.9	631.0	632.8	637.7	640.9
40°	688.7	651.7	624.7	608.0	599.9	597.2	603.0	607.1	612.9	615.7
42.5°	650.8	616.6	589.5	574.2	567.4	567.4	575.1	581.4	588.2	590.9
45°	612.9	579.6	553.9	539.9	535.0	538.6	547.6	555.7	564.3	567.0
47.5°	574.6	542.2	518.8	506.1	503.4	508.8	520.1	530.9	540.8	544.4
50°	536.3	507.0	483.6	471.9	471.9	478.6	493.1	506.6	517.4	521.0
52.5°	498.0	470.1	446.2	437.6	439.4	448.9	465.6	479.5	491.7	495.3
55°	459.3	431.8	411.0	403.8	407.0	418.7	435.8	452.0	463.8	467.8
57.5°	421.0	394.8	375.9	370.0	374.5	387.6	407.4	421.4	433.6	437.2
60°	382.2	355.6	340.7	336.2	342.1	355.6	375.9	389.0	400.2	403.8
62.5°	343.9	319.1	306.0	302.0	308.7	323.2	343.0	354.7	363.3	366.9
65°	305.1	283.0	270.9	268.2	275.4	289.3	308.3	318.2	324.5	328.1
67.5°	266.8	247.9	236.6	234.4	242.0	254.6	272.2	277.6	283.5	287.1
70°	229.0	211.8	202.4	201.0	207.8	219.9	234.8	237.5	240.7	243.8
72.5°	191.5	178.0	168.6	168.1	174.4	184.3	196.5	197.0	197.9	201.0
75°	155.5	143.3	136.1	137.5	141.1	149.2	158.6	155.9	156.4	158.6
77.5°	120.8	110.9	105.9	106.8	109.5	115.4	121.7	118.5	116.7	119.0
80°	87.0	78.4	76.6	77.1	78.9	82.9	86.5	83.8	80.2	82.0
82.5°	57.2	51.8	50.9	51.4	52.7	55.0	55.9	51.8	50.9	52.3
85°	31.5	29.3	29.3	30.6	31.1	31.5	31.5	29.3	29.7	30.6
87.5°	12.6	12.6	14.0	15.3	14.4	12.6	10.8	7.2	7.2	8.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)