

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-39L935-X-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-39L935-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

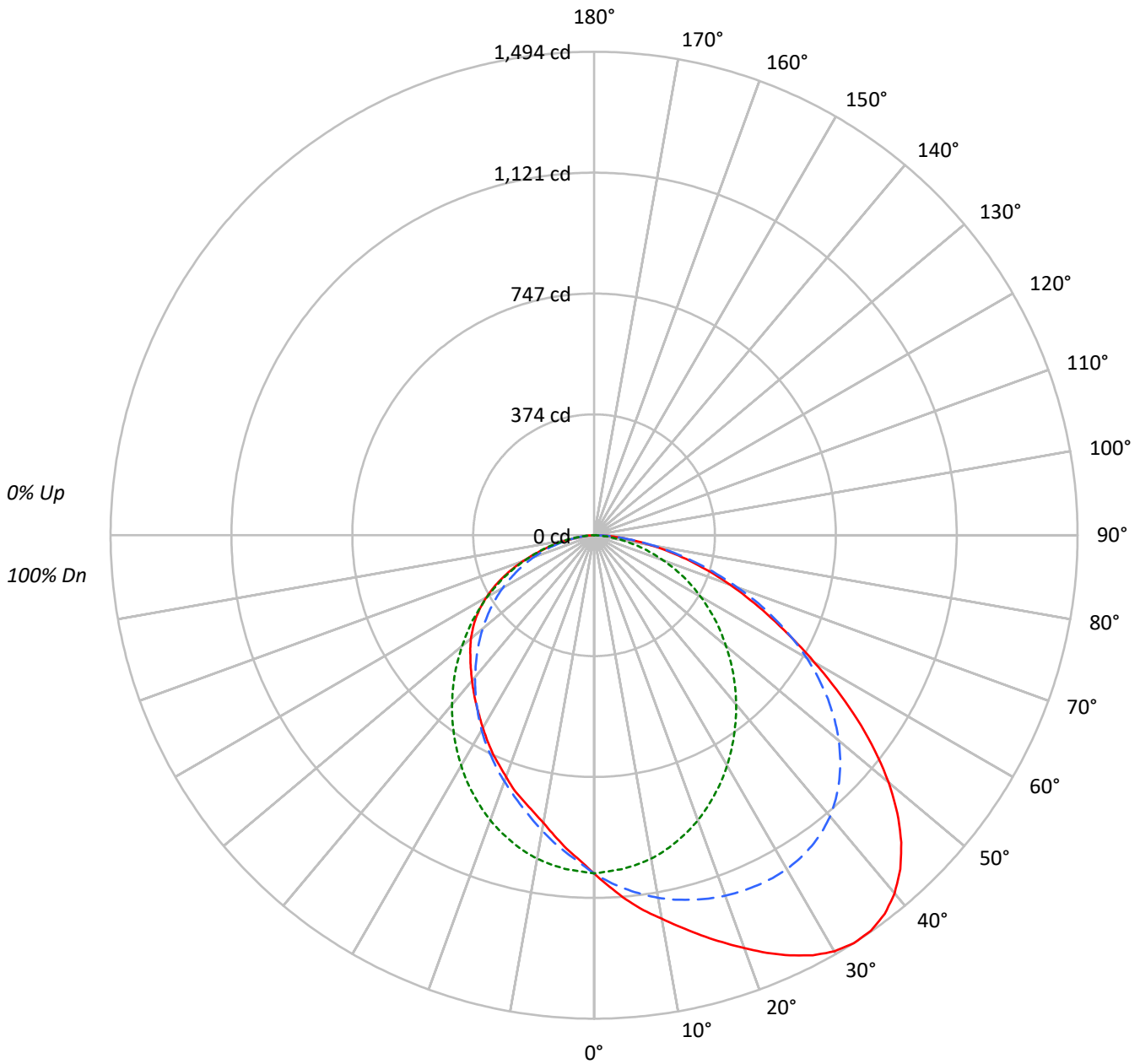
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3236.7 lumens
Efficiency: N/A
Efficacy: 70.7 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): 45.8
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



— 0°-180° - - 45°-225° - - - 90°-270°



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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°	10061	10061	10061
5°	10917	9999	9397
10°	11760	9922	8817
15°	12757	9778	8455
20°	13909	9606	8141
25°	15216	9381	7888
30°	16506	9133	7635
35°	17532	8864	7471
40°	18153	8582	7373
45°	18280	8286	7356
50°	17799	7970	7436
55°	16667	7684	7483
60°	15150	7336	7409
65°	13736	6937	7123
70°	12574	6432	6542
75°	11408	5784	5624
80°	9979	4835	4336
85°	8395	3513	3225



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	3.1
10°-20°	288.6	8.9
20°-30°	452.2	14.0
30°-40°	566.9	17.5
40°-50°	603.5	18.6
50°-60°	544.8	16.8
60°-70°	403.3	12.5
70°-80°	221.3	6.8
80°-90°	56.8	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°	840.1	26.0
0°-40°	1407.0	43.5
0°-60°	2555.3	78.9
0°-90°	3236.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3236.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1045	1045	1045	1045	1045	
5°	1130	1096	1035	985	972	110
15°	1280	1166	981	866	848	365
25°	1432	1194	883	753	743	663
35°	1492	1172	754	634	636	930
45°	1343	1072	609	510	540	1029
55°	993	882	458	388	446	886
65°	603	621	304	262	313	602
75°	307	325	156	134	151	326
85°	76	75	32	30	29	90
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°	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0
2.5°	1087.1	1084.9	1082.3	1081.5	1077.6	1072.5	1067.7	1067.7	1062.2	1048.8	1039.4
5°	1129.6	1126.1	1119.7	1114.6	1106.4	1096.5	1086.6	1080.6	1067.3	1047.1	1034.7
7.5°	1168.7	1164.4	1156.2	1146.3	1133.0	1118.4	1102.1	1089.2	1069.0	1042.0	1026.1
10°	1203.0	1199.2	1189.3	1177.3	1158.4	1137.7	1113.7	1094.4	1066.9	1033.4	1014.9
12.5°	1240.8	1237.0	1223.2	1206.9	1181.1	1153.6	1121.9	1095.2	1061.3	1020.9	999.9
15°	1279.9	1274.8	1259.3	1237.4	1203.0	1166.1	1127.0	1092.6	1052.3	1005.9	981.0
17.5°	1318.6	1313.4	1294.1	1266.2	1223.2	1177.3	1129.2	1086.6	1039.4	987.4	960.4
20°	1357.6	1352.5	1328.0	1292.8	1240.8	1185.4	1128.7	1077.6	1023.9	966.4	937.6
22.5°	1396.7	1390.7	1361.1	1318.1	1255.4	1191.0	1124.0	1065.2	1004.6	942.3	911.4
25°	1432.4	1426.4	1393.7	1343.0	1270.9	1193.6	1115.8	1048.0	983.1	915.7	883.1
27.5°	1463.3	1456.0	1422.1	1366.2	1284.2	1194.4	1105.1	1028.7	958.2	886.9	853.8
30°	1484.8	1478.3	1442.3	1382.6	1291.9	1191.4	1091.4	1005.9	929.4	856.0	821.6
32.5°	1494.2	1488.6	1453.0	1390.3	1293.2	1183.7	1074.6	980.5	899.4	823.4	788.6
35°	1491.7	1486.1	1452.1	1389.0	1289.4	1172.5	1053.6	951.8	867.2	789.4	754.2
37.5°	1475.3	1468.9	1438.0	1377.4	1278.2	1156.2	1029.5	920.4	832.4	754.6	719.0
40°	1444.4	1438.0	1411.3	1355.5	1259.3	1134.3	1002.0	886.9	796.7	718.1	682.9
42.5°	1400.2	1393.3	1372.3	1321.1	1232.2	1105.5	970.7	851.3	758.9	682.9	646.0
45°	1342.6	1335.7	1321.6	1278.2	1197.0	1071.6	935.0	812.6	719.4	643.0	608.6
47.5°	1271.3	1265.3	1258.4	1224.9	1153.6	1032.5	895.1	771.4	678.2	605.6	570.4
50°	1188.4	1182.4	1184.6	1161.8	1103.4	987.4	851.3	728.0	635.7	563.9	532.1
52.5°	1094.4	1089.6	1099.9	1090.1	1045.0	937.2	804.5	683.3	592.3	524.4	493.9
55°	993.0	987.8	1007.6	1010.6	979.7	881.8	751.2	636.9	548.5	485.8	457.8
57.5°	888.6	884.3	909.7	923.9	908.4	822.1	697.5	589.3	503.4	445.4	417.5
60°	786.8	783.4	810.0	833.2	831.5	758.9	641.7	537.7	458.3	404.6	381.0
62.5°	691.1	687.2	713.8	741.3	751.2	691.5	586.3	487.1	413.2	363.8	342.7
65°	603.0	599.2	621.9	650.3	668.3	621.1	526.6	434.7	367.7	322.6	304.5
67.5°	522.3	522.3	536.4	562.6	584.5	548.9	465.6	384.8	320.8	284.3	266.3
70°	446.7	446.2	456.6	475.0	500.4	471.6	403.7	332.4	276.6	244.4	228.5
72.5°	375.0	378.0	381.8	396.0	422.6	397.7	342.3	280.9	233.2	204.9	191.6
75°	306.7	306.2	311.8	324.3	343.6	325.1	280.9	230.6	190.3	167.1	155.5
77.5°	241.4	240.9	245.7	253.0	269.3	254.7	221.6	184.3	148.2	128.8	120.7
80°	180.0	180.0	184.3	188.1	200.1	188.6	165.4	137.9	108.7	93.6	87.2
82.5°	125.0	127.6	125.8	131.0	137.9	128.0	113.4	94.5	72.2	61.8	57.6
85°	76.0	78.2	76.0	80.3	83.3	74.7	67.4	56.3	41.7	34.8	31.8
87.5°	39.1	38.7	38.2	40.4	41.2	36.1	31.8	27.1	18.5	14.2	12.0
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°	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0	1045.0
2.5°	1033.8	1036.4	1032.5	1018.3	1012.8	1006.7	1004.2	1001.6	1006.3	1005.0
5°	1025.2	1022.2	1012.3	994.3	984.8	975.0	970.2	967.2	973.7	972.4
7.5°	1013.6	1005.0	990.4	968.5	956.5	943.2	936.7	932.9	937.2	936.3
10°	999.0	984.8	966.8	940.6	926.4	911.8	904.5	898.9	902.4	901.9
12.5°	980.5	962.1	940.2	910.5	895.9	880.9	874.5	870.6	874.9	873.6
15°	959.9	937.6	912.3	882.2	866.3	852.6	847.8	844.8	848.3	848.3
17.5°	937.2	911.0	883.1	852.6	837.5	826.8	822.1	819.9	821.6	824.2
20°	911.8	882.6	852.6	822.9	810.0	798.9	794.6	792.4	796.3	794.6
22.5°	883.9	853.0	821.6	793.7	782.1	771.0	766.7	765.4	769.7	767.9
25°	854.3	820.8	789.8	764.5	752.9	743.5	739.6	738.3	740.5	742.6
27.5°	826.4	788.6	758.1	735.3	725.0	716.0	712.5	710.4	712.1	714.7
30°	792.4	755.9	725.9	704.8	694.9	686.3	683.8	682.0	684.6	686.8
32.5°	760.6	723.7	693.6	673.0	664.4	656.3	655.8	655.0	658.0	660.6
35°	726.3	690.2	661.0	641.7	633.5	626.6	627.9	629.2	632.7	635.7
37.5°	691.5	656.3	628.4	610.7	603.0	597.4	601.3	603.0	607.7	610.7
40°	656.3	621.1	595.3	579.4	571.7	569.1	574.7	578.5	584.1	586.7
42.5°	620.2	587.6	561.8	547.2	540.7	540.7	548.0	554.1	560.5	563.1
45°	584.1	552.3	527.9	514.5	509.8	513.3	521.8	529.6	537.7	540.3
47.5°	547.6	516.7	494.4	482.3	479.8	484.9	495.6	506.0	515.4	518.8
50°	511.1	483.2	460.9	449.7	449.7	456.1	469.9	482.8	493.1	496.5
52.5°	474.6	448.0	425.2	417.0	418.8	427.8	443.7	457.0	468.6	472.0
55°	437.7	411.5	391.7	384.8	387.8	399.0	415.3	430.8	442.0	445.8
57.5°	401.2	376.2	358.2	352.6	356.9	369.4	388.3	401.6	413.2	416.6
60°	364.2	338.9	324.7	320.4	326.0	338.9	358.2	370.7	381.4	384.8
62.5°	327.7	304.1	291.6	287.8	294.2	308.0	326.8	338.0	346.2	349.6
65°	290.8	269.7	258.1	255.6	262.4	275.7	293.8	303.2	309.2	312.7
67.5°	254.3	236.2	225.5	223.3	230.6	242.7	259.4	264.6	270.2	273.6
70°	218.2	201.9	192.8	191.6	198.0	209.6	223.8	226.3	229.4	232.4
72.5°	182.5	169.7	160.6	160.2	166.2	175.7	187.3	187.7	188.6	191.6
75°	148.2	136.6	129.7	131.0	134.4	142.2	151.2	148.6	149.0	151.2
77.5°	115.1	105.7	100.9	101.8	104.4	110.0	116.0	113.0	111.2	113.4
80°	82.9	74.7	73.0	73.4	75.2	79.0	82.5	79.9	76.5	78.2
82.5°	54.5	49.4	48.5	49.0	50.3	52.4	53.3	49.4	48.5	49.8
85°	30.1	27.9	27.9	29.2	29.6	30.1	30.1	27.9	28.3	29.2
87.5°	12.0	12.0	13.3	14.6	13.7	12.0	10.3	6.9	6.9	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)