

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-35L850-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-35L850-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

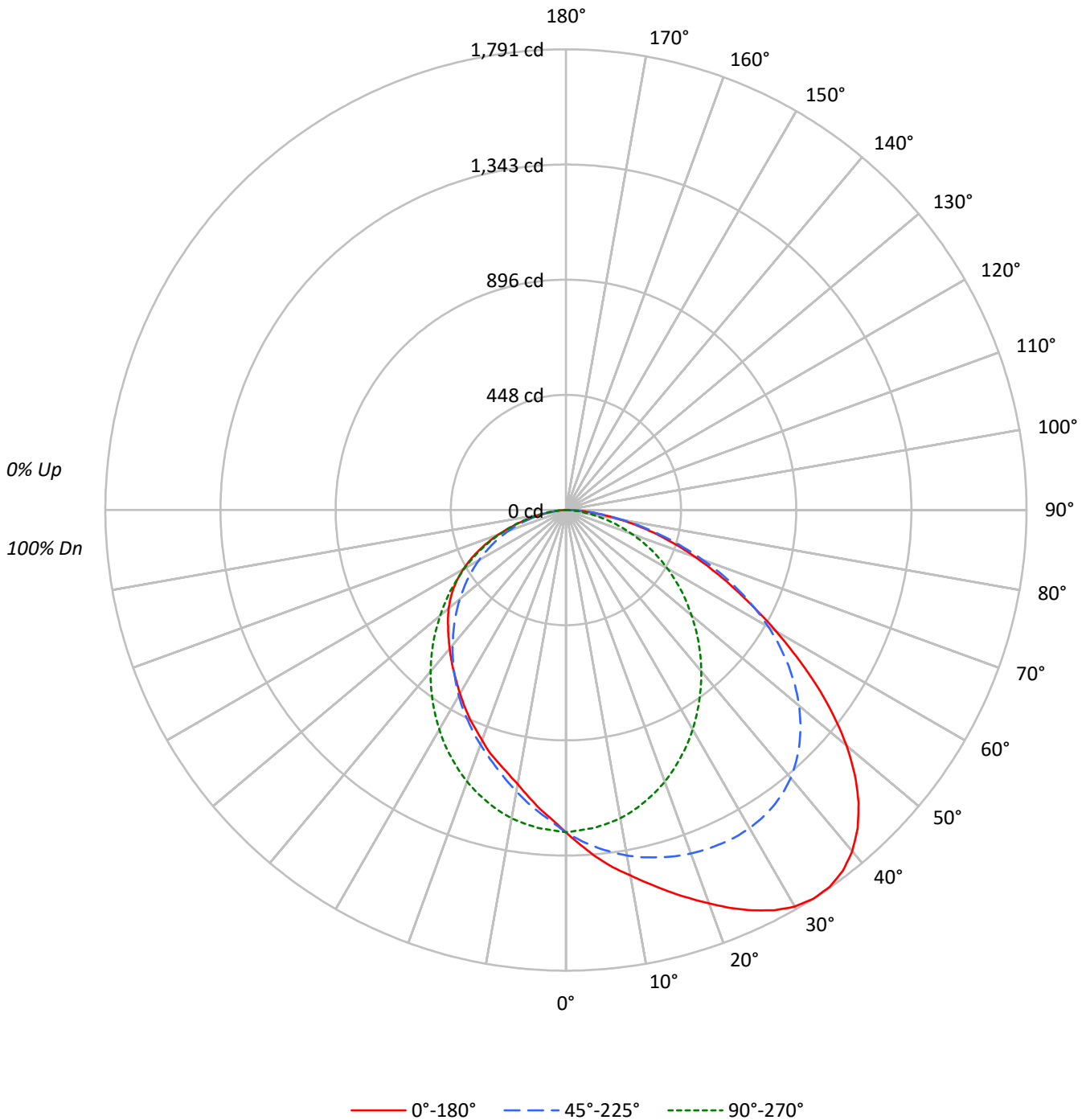
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3880.2 lumens
Efficiency: N/A
Efficacy: 96.0 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): 40.4
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				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°	12060	12060	12060
5°	13087	11987	11265
10°	14099	11894	10571
15°	15293	11721	10135
20°	16675	11516	9760
25°	18241	11245	9456
30°	19788	10950	9152
35°	21016	10627	8956
40°	21762	10289	8839
45°	21915	9934	8819
50°	21338	9556	8915
55°	19981	9213	8971
60°	18163	8794	8882
65°	16468	8317	8538
70°	15074	7710	7842
75°	13674	6934	6740
80°	11959	5794	5195
85°	10063	4209	3866



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	3.1
10°-20°	346.0	8.9
20°-30°	542.1	14.0
30°-40°	679.6	17.5
40°-50°	723.5	18.6
50°-60°	653.1	16.8
60°-70°	483.5	12.5
70°-80°	265.3	6.8
80°-90°	68.1	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°	1007.1	26.0
0°-40°	1686.7	43.5
0°-60°	3063.3	78.9
0°-90°	3880.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3880.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1253	1253	1253	1253	1253	
5°	1354	1314	1240	1181	1166	132
15°	1534	1398	1176	1038	1017	438
25°	1717	1431	1059	903	890	795
35°	1788	1406	904	760	762	1115
45°	1610	1285	730	611	648	1234
55°	1190	1057	549	465	534	1062
65°	723	744	365	315	375	721
75°	368	390	186	161	181	391
85°	91	90	38	36	35	108
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°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7
2.5°	1303.2	1300.6	1297.5	1296.5	1291.9	1285.7	1280.0	1280.0	1273.3	1257.4	1246.0
5°	1354.2	1350.0	1342.3	1336.1	1326.4	1314.5	1302.7	1295.5	1279.5	1255.3	1240.4
7.5°	1401.0	1395.9	1386.1	1374.2	1358.3	1340.8	1321.2	1305.8	1281.6	1249.1	1230.1
10°	1442.2	1437.6	1425.7	1411.3	1388.7	1363.9	1335.1	1311.9	1279.0	1238.8	1216.7
12.5°	1487.5	1482.9	1466.4	1446.8	1416.0	1383.0	1344.9	1313.0	1272.3	1223.9	1198.7
15°	1534.4	1528.2	1509.7	1483.4	1442.2	1397.9	1351.1	1309.9	1261.5	1205.9	1176.0
17.5°	1580.7	1574.5	1551.4	1517.9	1466.4	1411.3	1353.7	1302.7	1246.0	1183.7	1151.3
20°	1627.6	1621.4	1592.0	1549.8	1487.5	1421.1	1353.1	1291.9	1227.5	1158.5	1124.0
22.5°	1674.4	1667.2	1631.7	1580.2	1505.0	1427.8	1347.5	1276.9	1204.3	1129.7	1092.6
25°	1717.2	1710.0	1670.8	1610.1	1523.6	1430.9	1337.7	1256.3	1178.6	1097.8	1058.6
27.5°	1754.2	1745.5	1704.8	1637.9	1539.5	1431.9	1324.8	1233.2	1148.7	1063.3	1023.6
30°	1780.0	1772.3	1729.0	1657.4	1548.8	1428.3	1308.3	1205.9	1114.2	1026.2	985.0
32.5°	1791.3	1784.6	1741.9	1666.7	1550.3	1419.0	1288.3	1175.5	1078.2	987.0	945.3
35°	1788.2	1781.5	1740.9	1665.2	1545.7	1405.7	1263.0	1141.0	1039.6	946.4	904.2
37.5°	1768.7	1760.9	1723.9	1651.3	1532.3	1386.1	1234.2	1103.4	997.9	904.7	861.9
40°	1731.6	1723.9	1691.9	1625.0	1509.7	1359.8	1201.2	1063.3	955.1	860.9	818.7
42.5°	1678.5	1670.3	1645.1	1583.8	1477.2	1325.3	1163.7	1020.5	909.8	818.7	774.4
45°	1609.6	1601.3	1584.3	1532.3	1435.0	1284.7	1120.9	974.2	862.4	770.8	729.6
47.5°	1524.1	1516.9	1508.6	1468.5	1383.0	1237.8	1073.0	924.7	813.0	726.0	683.8
50°	1424.7	1417.5	1420.1	1392.8	1322.8	1183.7	1020.5	872.7	762.0	676.1	638.0
52.5°	1311.9	1306.3	1318.6	1306.8	1252.7	1123.5	964.4	819.2	710.0	628.7	592.1
55°	1190.4	1184.3	1207.9	1211.5	1174.5	1057.1	900.5	763.6	657.5	582.3	548.9
57.5°	1065.3	1060.2	1090.5	1107.5	1089.0	985.5	836.2	706.4	603.5	533.9	500.5
60°	943.3	939.2	971.1	998.9	996.8	909.8	769.2	644.6	549.4	485.0	456.7
62.5°	828.5	823.8	855.8	888.7	900.5	829.0	702.8	583.9	495.3	436.1	410.9
65°	722.9	718.3	745.6	779.5	801.2	744.5	631.3	521.1	440.7	386.7	365.1
67.5°	626.1	626.1	643.1	674.5	700.8	658.0	558.1	461.3	384.6	340.9	319.2
70°	535.5	535.0	547.3	569.5	599.8	565.4	484.0	398.5	331.6	293.0	273.9
72.5°	449.5	453.1	457.7	474.7	506.7	476.8	410.4	336.7	279.6	245.6	229.6
75°	367.6	367.1	373.8	388.7	411.9	389.8	336.7	276.5	228.1	200.3	186.4
77.5°	289.4	288.9	294.5	303.3	322.8	305.3	265.7	220.9	177.6	154.5	144.7
80°	215.7	215.7	220.9	225.5	239.9	226.0	198.2	165.3	130.3	112.2	104.5
82.5°	149.8	152.9	150.9	157.0	165.3	153.4	135.9	113.3	86.5	74.1	69.0
85°	91.1	93.7	91.1	96.3	99.9	89.6	80.8	67.5	49.9	41.7	38.1
87.5°	46.9	46.3	45.8	48.4	49.4	43.3	38.1	32.4	22.1	17.0	14.4
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°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7
2.5°	1239.3	1242.4	1237.8	1220.8	1214.1	1206.9	1203.8	1200.7	1206.4	1204.8
5°	1229.0	1225.4	1213.6	1192.0	1180.6	1168.8	1163.1	1159.5	1167.3	1165.7
7.5°	1215.1	1204.8	1187.3	1161.1	1146.7	1130.7	1123.0	1118.3	1123.5	1122.5
10°	1197.6	1180.6	1159.0	1127.6	1110.6	1093.1	1084.4	1077.7	1081.8	1081.3
12.5°	1175.5	1153.4	1127.1	1091.6	1074.1	1056.0	1048.3	1043.7	1048.8	1047.3
15°	1150.8	1124.0	1093.6	1057.6	1038.5	1022.1	1016.4	1012.8	1016.9	1016.9
17.5°	1123.5	1092.1	1058.6	1022.1	1004.0	991.2	985.5	982.9	985.0	988.1
20°	1093.1	1058.1	1022.1	986.5	971.1	957.7	952.6	950.0	954.6	952.6
22.5°	1059.6	1022.6	985.0	951.5	937.6	924.2	919.1	917.5	922.7	920.6
25°	1024.1	984.0	946.9	916.5	902.6	891.3	886.6	885.1	887.7	890.2
27.5°	990.7	945.3	908.8	881.5	869.1	858.3	854.2	851.6	853.7	856.8
30°	950.0	906.2	870.2	844.9	833.1	822.8	819.7	817.6	820.7	823.3
32.5°	911.9	867.6	831.6	806.8	796.5	786.8	786.2	785.2	788.8	791.9
35°	870.7	827.4	792.4	769.2	759.5	751.2	752.8	754.3	758.4	762.0
37.5°	829.0	786.8	753.3	732.2	722.9	716.2	720.8	722.9	728.6	732.2
40°	786.8	744.5	713.6	694.6	685.3	682.2	688.9	693.6	700.3	703.3
42.5°	743.5	704.4	673.5	656.0	648.2	648.2	657.0	664.2	671.9	675.0
45°	700.3	662.2	632.8	616.8	611.2	615.3	625.6	634.9	644.6	647.7
47.5°	656.5	619.4	592.6	578.2	575.1	581.3	594.2	606.5	617.9	622.0
50°	612.7	579.3	552.5	539.1	539.1	546.8	563.3	578.7	591.1	595.2
52.5°	569.0	537.0	509.7	500.0	502.0	512.8	531.9	547.8	561.7	565.9
55°	524.7	493.3	469.6	461.3	464.9	478.3	497.9	516.4	529.8	534.5
57.5°	480.9	451.0	429.4	422.7	427.9	442.8	465.5	481.4	495.3	499.4
60°	436.6	406.3	389.3	384.1	390.8	406.3	429.4	444.4	457.2	461.3
62.5°	392.9	364.5	349.6	345.0	352.7	369.2	391.8	405.2	415.0	419.1
65°	348.6	323.4	309.5	306.4	314.6	330.6	352.2	363.5	370.7	374.8
67.5°	304.8	283.2	270.3	267.7	276.5	290.9	311.0	317.2	323.9	328.0
70°	261.6	242.0	231.2	229.6	237.4	251.3	268.3	271.3	275.0	278.6
72.5°	218.8	203.4	192.6	192.1	199.3	210.6	224.5	225.0	226.0	229.6
75°	177.6	163.7	155.5	157.0	161.2	170.4	181.2	178.2	178.7	181.2
77.5°	138.0	126.7	121.0	122.0	125.1	131.8	139.0	135.4	133.4	135.9
80°	99.4	89.6	87.5	88.0	90.1	94.7	98.9	95.8	91.7	93.7
82.5°	65.4	59.2	58.2	58.7	60.2	62.8	63.8	59.2	58.2	59.7
85°	36.0	33.5	33.5	35.0	35.5	36.0	36.0	33.5	34.0	35.0
87.5°	14.4	14.4	16.0	17.5	16.5	14.4	12.4	8.2	8.2	9.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)