

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-35L840-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-35L840-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

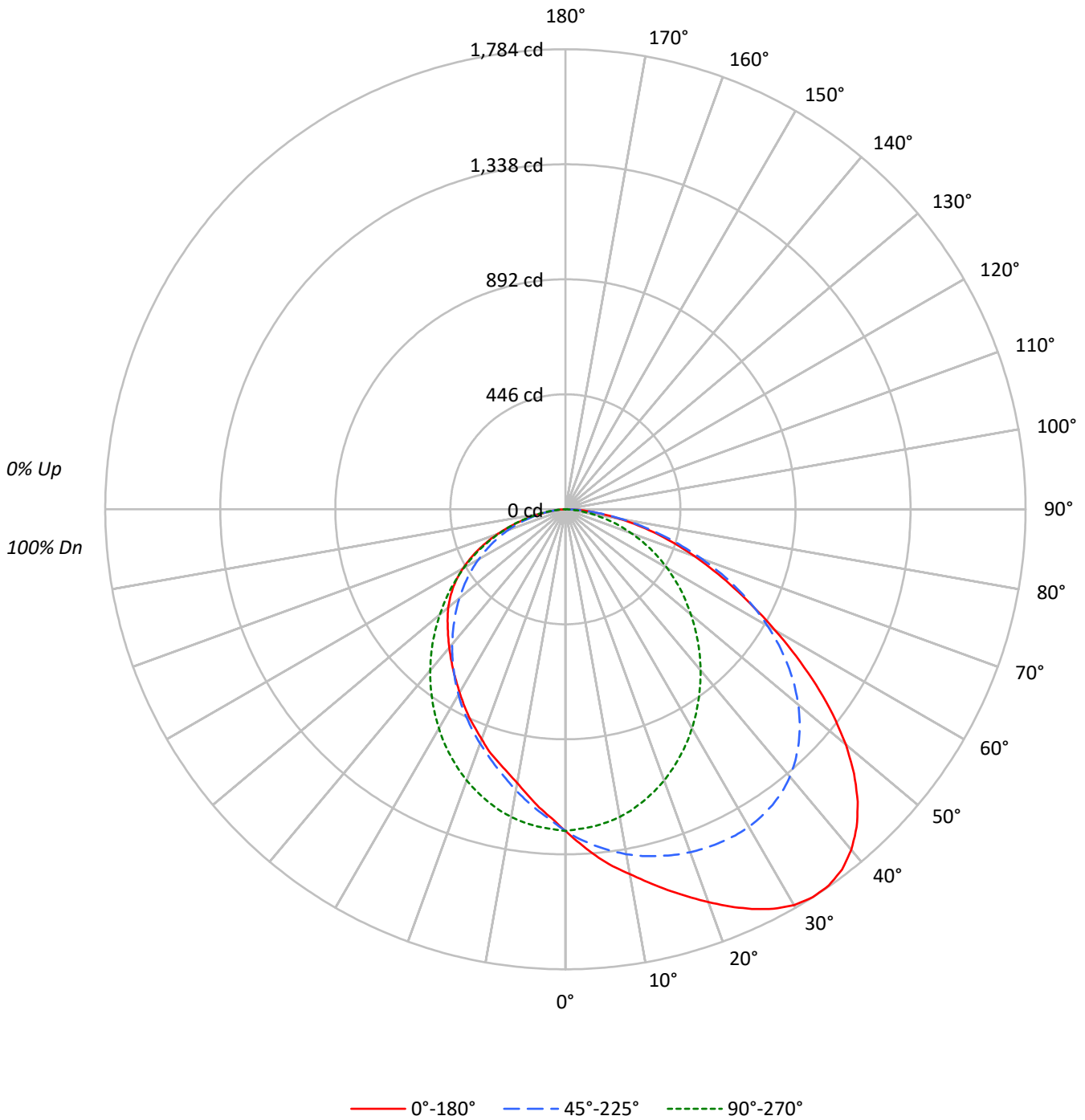
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3864.0 lumens
Efficiency: N/A
Efficacy: 95.6 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 (A_{in}): 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	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	43	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23	23	23	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12010	12010	12010
5°	13032	11937	11218
10°	14040	11844	10527
15°	15230	11672	10094
20°	16605	11467	9719
25°	18165	11198	9417
30°	19704	10904	9115
35°	20928	10582	8919
40°	21670	10246	8802
45°	21822	9893	8782
50°	21249	9515	8877
55°	19898	9175	8933
60°	18086	8757	8846
65°	16399	8281	8504
70°	15009	7679	7808
75°	13618	6904	6714
80°	11909	5771	5173
85°	10030	4186	3855



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.5	3.1
10°-20°	344.6	8.9
20°-30°	539.8	14.0
30°-40°	676.8	17.5
40°-50°	720.5	18.6
50°-60°	650.4	16.8
60°-70°	481.5	12.5
70°-80°	264.2	6.8
80°-90°	67.8	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°	1002.9	26.0
0°-40°	1679.6	43.5
0°-60°	3050.5	78.9
0°-90°	3864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3864.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1248	1248	1248	1248	1248	
5°	1348	1309	1235	1176	1161	131
15°	1528	1392	1171	1034	1013	436
25°	1710	1425	1054	899	886	791
35°	1781	1400	900	756	759	1110
45°	1603	1279	727	609	645	1229
55°	1186	1053	547	463	532	1057
65°	720	741	364	313	373	718
75°	366	388	186	160	180	389
85°	91	89	38	35	35	107
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°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
2.5°	1297.7	1295.2	1292.1	1291.1	1286.5	1280.3	1274.7	1274.7	1268.0	1252.1	1240.8
5°	1348.5	1344.4	1336.7	1330.6	1320.8	1309.0	1297.2	1290.1	1274.2	1250.1	1235.2
7.5°	1395.2	1390.0	1380.3	1368.5	1352.6	1335.2	1315.7	1300.3	1276.2	1243.9	1224.9
10°	1436.2	1431.6	1419.8	1405.4	1382.9	1358.2	1329.5	1306.5	1273.6	1233.6	1211.6
12.5°	1481.3	1476.7	1460.3	1440.8	1410.0	1377.2	1339.3	1307.5	1267.0	1218.8	1193.7
15°	1528.0	1521.8	1503.4	1477.2	1436.2	1392.1	1345.4	1304.4	1256.2	1200.8	1171.1
17.5°	1574.1	1568.0	1544.9	1511.6	1460.3	1405.4	1348.0	1297.2	1240.8	1178.8	1146.5
20°	1620.8	1614.6	1585.4	1543.3	1481.3	1415.2	1347.5	1286.5	1222.4	1153.7	1119.3
22.5°	1667.4	1660.2	1624.9	1573.6	1498.7	1421.8	1341.8	1271.6	1199.3	1124.9	1088.0
25°	1710.0	1702.8	1663.8	1603.3	1517.2	1424.9	1332.1	1251.1	1173.7	1093.2	1054.2
27.5°	1746.9	1738.2	1697.7	1631.0	1533.1	1425.9	1319.3	1228.0	1143.9	1058.8	1019.3
30°	1772.5	1764.8	1721.8	1650.5	1542.3	1422.3	1302.9	1200.8	1109.6	1021.9	980.9
32.5°	1783.8	1777.2	1734.6	1659.7	1543.9	1413.1	1282.9	1170.6	1073.7	982.9	941.4
35°	1780.7	1774.1	1733.6	1658.2	1539.2	1399.8	1257.7	1136.2	1035.2	942.4	900.4
37.5°	1761.3	1753.6	1716.6	1644.4	1525.9	1380.3	1229.0	1098.8	993.7	900.9	858.3
40°	1724.3	1716.6	1684.9	1618.2	1503.4	1354.1	1196.2	1058.8	951.1	857.3	815.3
42.5°	1671.5	1663.3	1638.2	1577.2	1471.0	1319.8	1158.8	1016.2	906.0	815.3	771.2
45°	1602.8	1594.6	1577.7	1525.9	1429.0	1279.3	1116.2	970.1	858.8	767.6	726.6
47.5°	1517.7	1510.5	1502.3	1462.3	1377.2	1232.6	1068.5	920.9	809.6	723.0	680.9
50°	1418.7	1411.6	1414.1	1387.0	1317.2	1178.8	1016.2	869.1	758.9	673.2	635.3
52.5°	1306.5	1300.8	1313.1	1301.3	1247.5	1118.8	960.4	815.8	707.1	626.1	589.6
55°	1185.5	1179.3	1202.9	1206.5	1169.6	1052.7	896.8	760.4	654.8	579.9	546.6
57.5°	1060.9	1055.7	1086.0	1102.9	1084.4	981.4	832.7	703.5	600.9	531.7	498.4
60°	939.3	935.2	967.0	994.7	992.7	906.0	766.0	641.9	547.1	483.0	454.8
62.5°	825.0	820.4	852.2	885.0	896.8	825.5	699.9	581.4	493.3	434.3	409.2
65°	719.9	715.3	742.4	776.3	797.8	741.4	628.6	518.9	438.9	385.1	363.5
67.5°	623.5	623.5	640.4	671.7	697.8	655.3	555.8	459.4	383.0	339.4	317.9
70°	533.2	532.7	545.0	567.1	597.3	563.0	482.0	396.9	330.2	291.7	272.8
72.5°	447.6	451.2	455.8	472.7	504.5	474.8	408.7	335.3	278.4	244.6	228.7
75°	366.1	365.6	372.2	387.1	410.2	388.1	335.3	275.3	227.1	199.5	185.6
77.5°	288.2	287.6	293.3	302.0	321.5	304.1	264.6	220.0	176.9	153.8	144.1
80°	214.8	214.8	220.0	224.6	238.9	225.1	197.4	164.6	129.7	111.8	104.1
82.5°	149.2	152.3	150.2	156.4	164.6	152.8	135.4	112.8	86.1	73.8	68.7
85°	90.8	93.3	90.8	95.9	99.5	89.2	80.5	67.2	49.7	41.5	37.9
87.5°	46.7	46.1	45.6	48.2	49.2	43.1	37.9	32.3	22.0	16.9	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°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
2.5°	1234.2	1237.2	1232.6	1215.7	1209.0	1201.9	1198.8	1195.7	1201.3	1199.8
5°	1223.9	1220.3	1208.5	1187.0	1175.7	1163.9	1158.3	1154.7	1162.4	1160.8
7.5°	1210.1	1199.8	1182.4	1156.2	1141.9	1126.0	1118.3	1113.7	1118.8	1117.8
10°	1192.6	1175.7	1154.2	1122.9	1106.0	1088.5	1079.8	1073.2	1077.3	1076.8
12.5°	1170.6	1148.5	1122.4	1087.0	1069.6	1051.6	1043.9	1039.3	1044.4	1042.9
15°	1146.0	1119.3	1089.1	1053.2	1034.2	1017.8	1012.1	1008.6	1012.7	1012.7
17.5°	1118.8	1087.5	1054.2	1017.8	999.8	987.0	981.4	978.8	980.9	983.9
20°	1088.5	1053.7	1017.8	982.4	967.0	953.7	948.6	946.0	950.6	948.6
22.5°	1055.2	1018.3	980.9	947.5	933.7	920.4	915.2	913.7	918.8	916.8
25°	1019.8	979.8	942.9	912.7	898.8	887.6	882.9	881.4	884.0	886.5
27.5°	986.5	941.4	905.0	877.8	865.5	854.7	850.6	848.1	850.1	853.2
30°	946.0	902.4	866.5	841.4	829.6	819.4	816.3	814.2	817.3	819.9
32.5°	908.1	864.0	828.1	803.5	793.2	783.5	783.0	781.9	785.5	788.6
35°	867.0	824.0	789.1	766.0	756.3	748.1	749.6	751.2	755.3	758.9
37.5°	825.5	783.5	750.1	729.1	719.9	713.2	717.8	719.9	725.5	729.1
40°	783.5	741.4	710.7	691.7	682.5	679.4	686.0	690.7	697.3	700.4
42.5°	740.4	701.4	670.7	653.2	645.5	645.5	654.3	661.4	669.1	672.2
45°	697.3	659.4	630.2	614.3	608.6	612.7	623.0	632.2	641.9	645.0
47.5°	653.7	616.8	590.2	575.8	572.7	578.9	591.7	604.0	615.3	619.4
50°	610.2	576.8	550.2	536.8	536.8	544.5	560.9	576.3	588.6	592.7
52.5°	566.6	534.8	507.6	497.9	499.9	510.7	529.7	545.6	559.4	563.5
55°	522.5	491.2	467.6	459.4	463.0	476.3	495.8	514.3	527.6	532.2
57.5°	478.9	449.2	427.6	421.0	426.1	441.0	463.5	479.4	493.3	497.4
60°	434.8	404.6	387.6	382.5	389.2	404.6	427.6	442.5	455.3	459.4
62.5°	391.2	363.0	348.1	343.5	351.2	367.6	390.2	403.5	413.3	417.4
65°	347.1	322.0	308.2	305.1	313.3	329.2	350.7	362.0	369.2	373.3
67.5°	303.5	282.0	269.2	266.6	275.3	289.7	309.7	315.8	322.5	326.6
70°	260.5	241.0	230.2	228.7	236.4	250.2	267.1	270.2	273.8	277.4
72.5°	217.9	202.5	191.8	191.3	198.4	209.7	223.6	224.1	225.1	228.7
75°	176.9	163.1	154.8	156.4	160.5	169.7	180.5	177.4	177.9	180.5
77.5°	137.4	126.1	120.5	121.5	124.6	131.3	138.4	134.9	132.8	135.4
80°	99.0	89.2	87.2	87.7	89.7	94.3	98.4	95.4	91.3	93.3
82.5°	65.1	59.0	57.9	58.5	60.0	62.6	63.6	59.0	57.9	59.5
85°	35.9	33.3	33.3	34.9	35.4	35.9	35.9	33.3	33.8	34.9
87.5°	14.4	14.4	15.9	17.4	16.4	14.4	12.3	8.2	8.2	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)