

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-32L840-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-32L840-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

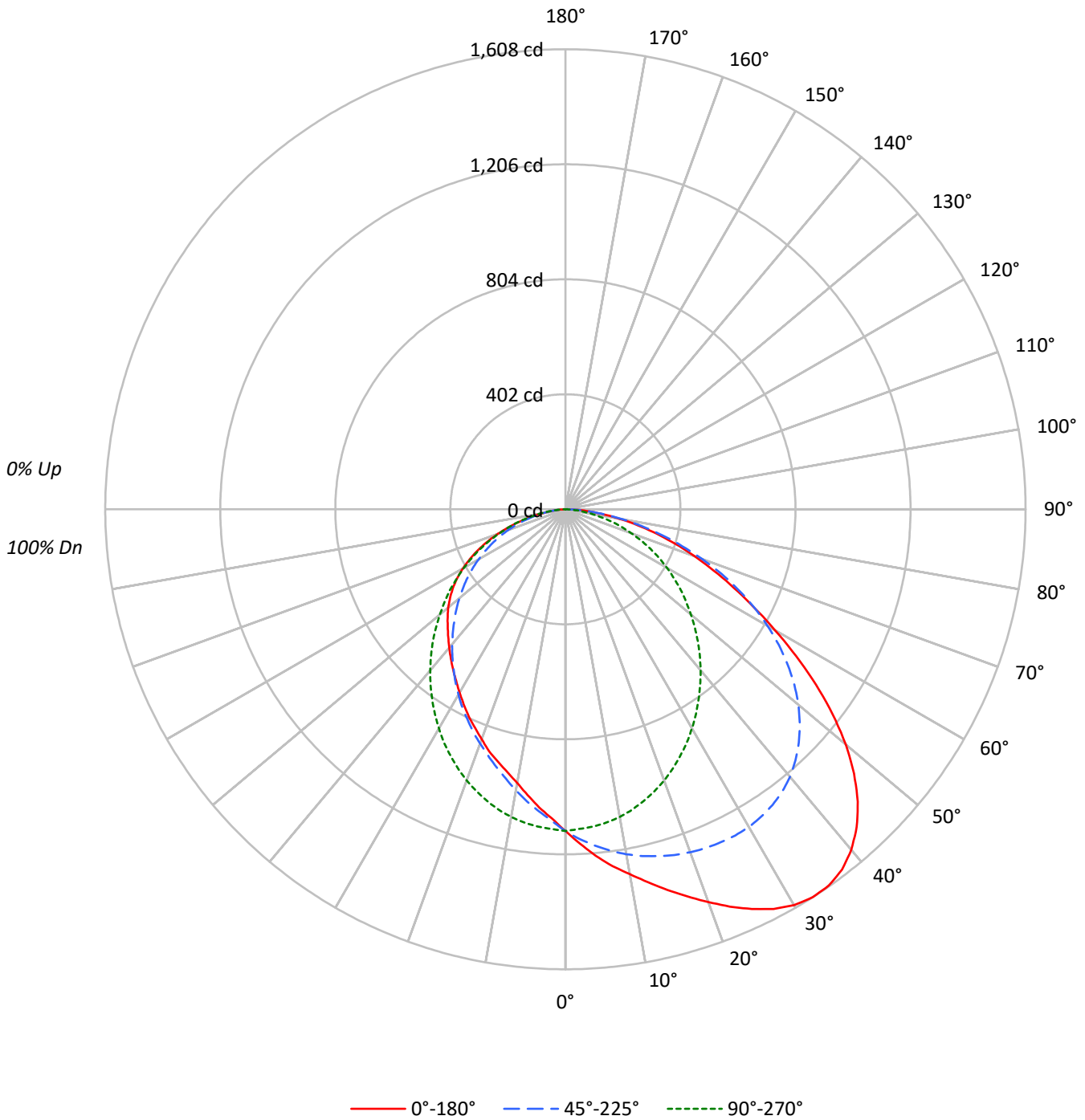
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3483.1 lumens
Efficiency: N/A
Efficacy: 95.7 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): 36.4
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				
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°	10826	10826	10826
5°	11748	10760	10113
10°	12656	10677	9488
15°	13727	10522	9098
20°	14968	10337	8761
25°	16374	10095	8489
30°	17762	9829	8216
35°	18866	9539	8040
40°	19535	9236	7935
45°	19671	8917	7916
50°	19155	8578	8002
55°	17936	8270	8053
60°	16303	7894	7973
65°	14782	7465	7666
70°	13531	6922	7037
75°	12275	6223	6052
80°	10739	5200	4663
85°	9036	3778	3468



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.8	3.1
10°-20°	310.6	8.9
20°-30°	486.6	14.0
30°-40°	610.1	17.5
40°-50°	649.4	18.6
50°-60°	586.3	16.8
60°-70°	434.0	12.5
70°-80°	238.1	6.8
80°-90°	61.1	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°	904.0	26.0
0°-40°	1514.1	43.5
0°-60°	2749.8	78.9
0°-90°	3483.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3483.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1124	1124	1124	1124	1124	
5°	1216	1180	1113	1060	1046	118
15°	1377	1255	1056	932	913	393
25°	1541	1284	950	810	799	713
35°	1605	1262	812	682	684	1001
45°	1445	1153	655	549	581	1108
55°	1069	949	493	417	480	953
65°	649	668	328	282	336	647
75°	330	350	167	145	163	351
85°	82	80	34	32	31	97
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°	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5
2.5°	1169.8	1167.5	1164.7	1163.8	1159.7	1154.1	1149.0	1149.0	1143.0	1128.7	1118.5
5°	1215.6	1211.9	1204.9	1199.4	1190.6	1180.0	1169.4	1162.9	1148.6	1126.8	1113.4
7.5°	1257.6	1253.0	1244.2	1233.6	1219.3	1203.6	1186.0	1172.1	1150.4	1121.3	1104.2
10°	1294.6	1290.5	1279.8	1266.9	1246.5	1224.4	1198.5	1177.7	1148.1	1112.0	1092.2
12.5°	1335.3	1331.1	1316.3	1298.8	1271.0	1241.5	1207.3	1178.6	1142.1	1098.6	1076.0
15°	1377.3	1371.8	1355.2	1331.6	1294.6	1254.9	1212.8	1175.8	1132.4	1082.5	1055.7
17.5°	1418.9	1413.4	1392.6	1362.6	1316.3	1266.9	1215.1	1169.4	1118.5	1062.6	1033.5
20°	1461.0	1455.5	1429.1	1391.2	1335.3	1275.7	1214.7	1159.7	1101.9	1039.9	1009.0
22.5°	1503.1	1496.6	1464.7	1418.5	1351.0	1281.7	1209.6	1146.2	1081.1	1014.1	980.8
25°	1541.4	1535.0	1499.8	1445.3	1367.6	1284.4	1200.8	1127.8	1058.0	985.4	950.3
27.5°	1574.7	1566.8	1530.3	1470.3	1382.0	1285.4	1189.2	1107.0	1031.2	954.4	918.8
30°	1597.8	1590.9	1552.1	1487.8	1390.3	1282.1	1174.4	1082.5	1000.2	921.2	884.2
32.5°	1608.0	1602.0	1563.6	1496.1	1391.7	1273.8	1156.4	1055.2	967.8	886.0	848.6
35°	1605.2	1599.2	1562.7	1494.7	1387.5	1261.8	1133.8	1024.2	933.2	849.5	811.6
37.5°	1587.6	1580.7	1547.4	1482.3	1375.5	1244.2	1107.9	990.5	895.7	812.1	773.7
40°	1554.4	1547.4	1518.8	1458.7	1355.2	1220.7	1078.3	954.4	857.4	772.8	734.9
42.5°	1506.8	1499.4	1476.7	1421.7	1326.0	1189.7	1044.6	916.1	816.7	734.9	695.1
45°	1444.8	1437.4	1422.2	1375.5	1288.1	1153.2	1006.2	874.5	774.2	691.9	654.9
47.5°	1368.1	1361.6	1354.2	1318.2	1241.5	1111.1	963.2	830.1	729.8	651.7	613.8
50°	1278.9	1272.4	1274.7	1250.2	1187.4	1062.6	916.1	783.4	684.1	606.9	572.7
52.5°	1177.7	1172.6	1183.7	1173.1	1124.5	1008.5	865.7	735.4	637.4	564.3	531.5
55°	1068.6	1063.1	1084.3	1087.6	1054.3	948.9	808.4	685.4	590.2	522.7	492.7
57.5°	956.3	951.7	978.9	994.2	977.5	884.6	750.6	634.1	541.7	479.3	449.3
60°	846.7	843.0	871.7	896.7	894.8	816.7	690.5	578.7	493.2	435.4	410.0
62.5°	743.7	739.5	768.2	797.8	808.4	744.1	630.9	524.1	444.6	391.5	368.8
65°	648.9	644.8	669.3	699.8	719.2	668.3	566.7	467.7	395.6	347.1	327.7
67.5°	562.0	562.0	577.3	605.5	629.1	590.7	501.0	414.1	345.3	306.0	286.6
70°	480.7	480.2	491.3	511.2	538.5	507.5	434.5	357.7	297.7	263.0	245.9
72.5°	403.5	406.7	410.9	426.1	454.8	428.0	368.4	302.3	251.0	220.5	206.1
75°	330.0	329.5	335.6	349.0	369.8	349.9	302.3	248.2	204.8	179.8	167.3
77.5°	259.8	259.3	264.4	272.2	289.8	274.1	238.5	198.3	159.5	138.7	129.9
80°	193.7	193.7	198.3	202.4	215.4	202.9	177.9	148.4	116.9	100.8	93.8
82.5°	134.5	137.3	135.4	141.0	148.4	137.7	122.0	101.7	77.6	66.6	61.9
85°	81.8	84.1	81.8	86.4	89.7	80.4	72.6	60.5	44.8	37.4	34.2
87.5°	42.1	41.6	41.1	43.4	44.4	38.8	34.2	29.1	19.9	15.3	12.9
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°	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5	1124.5
2.5°	1112.5	1115.3	1111.1	1095.9	1089.9	1083.4	1080.6	1077.8	1082.9	1081.5
5°	1103.3	1100.0	1089.4	1070.0	1059.8	1049.2	1044.1	1040.9	1047.8	1046.4
7.5°	1090.8	1081.5	1065.8	1042.3	1029.3	1015.0	1008.1	1003.9	1008.5	1007.6
10°	1075.1	1059.8	1040.4	1012.2	997.0	981.2	973.4	967.4	971.1	970.6
12.5°	1055.2	1035.3	1011.8	979.9	964.1	948.0	941.0	936.9	941.5	940.1
15°	1033.0	1009.0	981.7	949.4	932.3	917.5	912.4	909.1	912.8	912.8
17.5°	1008.5	980.3	950.3	917.5	901.3	889.7	884.6	882.3	884.2	887.0
20°	981.2	949.8	917.5	885.6	871.7	859.7	855.1	852.8	856.9	855.1
22.5°	951.2	917.9	884.2	854.1	841.7	829.6	825.0	823.6	828.3	826.4
25°	919.3	883.3	850.0	822.7	810.2	800.1	795.9	794.5	796.8	799.1
27.5°	889.3	848.6	815.8	791.3	780.2	770.5	766.8	764.5	766.3	769.1
30°	852.8	813.5	781.1	758.5	747.8	738.6	735.8	734.0	736.7	739.1
32.5°	818.6	778.8	746.4	724.3	715.0	706.2	705.8	704.9	708.1	710.9
35°	781.6	742.8	711.3	690.5	681.7	674.3	675.7	677.1	680.8	684.1
37.5°	744.1	706.2	676.2	657.2	648.9	642.9	647.1	648.9	654.0	657.2
40°	706.2	668.3	640.6	623.5	615.2	612.4	618.4	622.6	628.6	631.4
42.5°	667.4	632.3	604.6	588.8	581.9	581.9	589.8	596.2	603.2	605.9
45°	628.6	594.4	568.0	553.7	548.6	552.3	561.6	569.9	578.7	581.4
47.5°	589.3	556.0	532.0	519.0	516.3	521.8	533.4	544.5	554.6	558.3
50°	550.0	520.0	495.9	483.9	483.9	490.9	505.6	519.5	530.6	534.3
52.5°	510.7	482.1	457.6	448.8	450.6	460.3	477.4	491.8	504.3	508.0
55°	471.0	442.8	421.5	414.1	417.4	429.4	446.9	463.6	475.6	479.8
57.5°	431.7	404.9	385.5	379.5	384.1	397.5	417.8	432.2	444.6	448.3
60°	391.9	364.7	349.4	344.8	350.8	364.7	385.5	398.9	410.4	414.1
62.5°	352.7	327.2	313.8	309.7	316.6	331.4	351.7	363.7	372.5	376.2
65°	312.9	290.3	277.8	275.0	282.4	296.7	316.1	326.3	332.8	336.5
67.5°	273.6	254.2	242.7	240.3	248.2	261.1	279.2	284.7	290.7	294.4
70°	234.8	217.2	207.5	206.1	213.1	225.6	240.8	243.6	246.8	250.0
72.5°	196.4	182.6	172.9	172.4	178.9	189.0	201.5	202.0	202.9	206.1
75°	159.5	147.0	139.6	141.0	144.7	153.0	162.7	159.9	160.4	162.7
77.5°	123.9	113.7	108.6	109.5	112.3	118.3	124.8	121.6	119.7	122.0
80°	89.2	80.4	78.6	79.0	80.9	85.0	88.7	86.0	82.3	84.1
82.5°	58.7	53.2	52.2	52.7	54.1	56.4	57.3	53.2	52.2	53.6
85°	32.4	30.0	30.0	31.4	31.9	32.4	32.4	30.0	30.5	31.4
87.5°	12.9	12.9	14.3	15.7	14.8	12.9	11.1	7.4	7.4	8.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)