

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-30L850-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-30L850-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

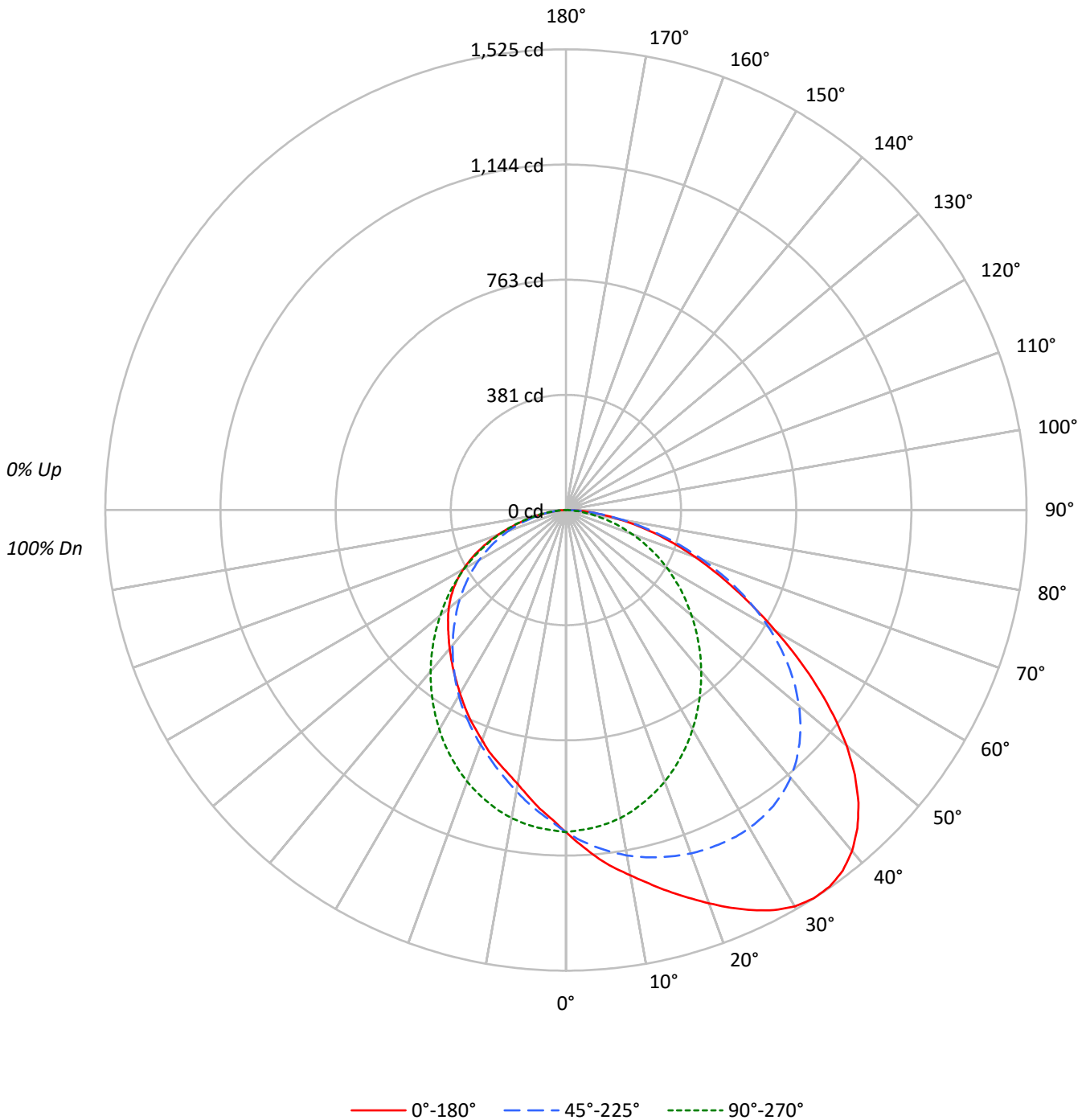
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3302.6 lumens
Efficiency: N/A
Efficacy: 101.6 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): 32.5
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	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°	10266	10266	10266
5°	11139	10202	9589
10°	12000	10124	8997
15°	13017	9977	8626
20°	14193	9802	8307
25°	15525	9571	8049
30°	16842	9320	7791
35°	17888	9045	7623
40°	18522	8757	7523
45°	18653	8455	7506
50°	18162	8133	7588
55°	17006	7842	7635
60°	15460	7484	7561
65°	14017	7078	7267
70°	12830	6561	6674
75°	11639	5899	5740
80°	10179	4934	4424
85°	8572	3579	3292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.1
10°-20°	294.5	8.9
20°-30°	461.4	14.0
30°-40°	578.4	17.5
40°-50°	615.8	18.6
50°-60°	555.9	16.8
60°-70°	411.5	12.5
70°-80°	225.8	6.8
80°-90°	58.0	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°	857.2	26.0
0°-40°	1435.6	43.5
0°-60°	2607.3	78.9
0°-90°	3302.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3302.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1066	1066	1066	1066	1066	
5°	1153	1119	1056	1005	992	112
15°	1306	1190	1001	884	866	372
25°	1462	1218	901	768	758	676
35°	1522	1196	770	646	649	949
45°	1370	1093	621	520	551	1050
55°	1013	900	467	396	455	904
65°	615	634	311	268	319	614
75°	313	332	159	137	154	333
85°	78	76	32	30	30	92
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°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1109.2	1107.0	1104.4	1103.5	1099.6	1094.3	1089.5	1089.5	1083.8	1070.2	1060.6
5°	1152.6	1149.1	1142.5	1137.2	1128.9	1118.8	1108.8	1102.6	1089.0	1068.4	1055.7
7.5°	1192.5	1188.1	1179.8	1169.7	1156.1	1141.2	1124.5	1111.4	1090.8	1063.2	1047.0
10°	1227.5	1223.6	1213.5	1201.2	1181.9	1160.9	1136.4	1116.6	1088.6	1054.4	1035.6
12.5°	1266.1	1262.1	1248.1	1231.5	1205.2	1177.1	1144.7	1117.5	1082.9	1041.7	1020.2
15°	1306.0	1300.7	1284.9	1262.6	1227.5	1189.8	1150.0	1114.9	1073.7	1026.4	1001.0
17.5°	1345.4	1340.2	1320.4	1291.9	1248.1	1201.2	1152.1	1108.8	1060.6	1007.5	979.9
20°	1385.3	1380.0	1355.1	1319.1	1266.1	1209.6	1151.7	1099.6	1044.8	986.1	956.7
22.5°	1425.2	1419.0	1388.8	1345.0	1281.0	1215.3	1146.9	1086.8	1025.1	961.5	930.0
25°	1461.5	1455.4	1422.1	1370.4	1296.8	1217.9	1138.6	1069.3	1003.1	934.3	901.0
27.5°	1493.1	1485.7	1451.0	1394.1	1310.4	1218.8	1127.6	1049.6	977.7	905.0	871.2
30°	1515.0	1508.4	1471.6	1410.7	1318.2	1215.7	1113.6	1026.4	948.4	873.4	838.4
32.5°	1524.7	1519.0	1482.6	1418.6	1319.6	1207.8	1096.5	1000.5	917.7	840.1	804.6
35°	1522.0	1516.3	1481.7	1417.3	1315.6	1196.4	1075.0	971.2	884.8	805.5	769.6
37.5°	1505.4	1498.8	1467.2	1405.5	1304.2	1179.8	1050.5	939.2	849.3	770.0	733.6
40°	1473.8	1467.2	1440.1	1383.1	1284.9	1157.4	1022.4	905.0	812.9	732.7	696.8
42.5°	1428.7	1421.7	1400.2	1348.0	1257.3	1128.0	990.4	868.6	774.4	696.8	659.1
45°	1370.0	1362.9	1348.5	1304.2	1221.4	1093.4	954.1	829.2	734.1	656.1	621.0
47.5°	1297.2	1291.1	1284.1	1249.9	1177.1	1053.5	913.3	787.1	692.0	617.9	582.0
50°	1212.6	1206.5	1208.7	1185.5	1125.9	1007.5	868.6	742.8	648.6	575.4	543.0
52.5°	1116.6	1111.8	1122.3	1112.3	1066.3	956.3	820.8	697.2	604.3	535.1	504.0
55°	1013.2	1008.0	1028.1	1031.2	999.6	899.7	766.5	649.9	559.6	495.7	467.2
57.5°	906.7	902.3	928.2	942.7	926.9	838.8	711.7	601.3	513.6	454.5	426.0
60°	802.9	799.4	826.5	850.2	848.4	774.4	654.7	548.7	467.6	412.8	388.7
62.5°	705.1	701.2	728.4	756.4	766.5	705.6	598.2	497.0	421.6	371.2	349.7
65°	615.3	611.4	634.6	663.5	681.9	633.7	537.3	443.5	375.1	329.1	310.7
67.5°	532.9	532.9	547.4	574.1	596.5	560.1	475.1	392.7	327.4	290.1	271.7
70°	455.8	455.3	465.9	484.7	510.6	481.2	412.0	339.2	282.2	249.4	233.1
72.5°	382.6	385.7	389.6	404.1	431.2	405.8	349.3	286.6	238.0	209.0	195.5
75°	312.9	312.5	318.2	330.9	350.6	331.8	286.6	235.3	194.1	170.5	158.6
77.5°	246.3	245.9	250.7	258.1	274.8	259.9	226.1	188.0	151.2	131.5	123.1
80°	183.6	183.6	188.0	192.0	204.2	192.4	168.7	140.7	110.9	95.5	89.0
82.5°	127.5	130.2	128.4	133.7	140.7	130.6	115.7	96.4	73.6	63.1	58.7
85°	77.6	79.8	77.6	82.0	85.0	76.3	68.8	57.4	42.5	35.5	32.4
87.5°	39.9	39.4	39.0	41.2	42.1	36.8	32.4	27.6	18.8	14.5	12.3
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°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1054.9	1057.5	1053.5	1039.1	1033.4	1027.2	1024.6	1022.0	1026.8	1025.5
5°	1046.1	1043.0	1032.9	1014.5	1004.9	994.8	990.0	986.9	993.5	992.2
7.5°	1034.3	1025.5	1010.6	988.2	976.0	962.4	955.8	951.9	956.3	955.4
10°	1019.4	1004.9	986.5	959.8	945.3	930.4	922.9	917.2	920.8	920.3
12.5°	1000.5	981.7	959.3	929.1	914.2	898.8	892.3	888.3	892.7	891.4
15°	979.5	956.7	930.8	900.2	883.9	869.9	865.1	862.0	865.5	865.5
17.5°	956.3	929.5	901.0	869.9	854.6	843.6	838.8	836.6	838.4	841.0
20°	930.4	900.6	869.9	839.7	826.5	815.1	810.8	808.6	812.5	810.8
22.5°	901.9	870.4	838.4	809.9	798.0	786.7	782.3	781.0	785.3	783.6
25°	871.7	837.5	805.9	780.1	768.2	758.6	754.7	753.3	755.5	757.7
27.5°	843.2	804.6	773.5	750.3	739.8	730.6	727.0	724.9	726.6	729.2
30°	808.6	771.3	740.6	719.2	709.1	700.3	697.7	695.9	698.6	700.8
32.5°	776.1	738.4	707.8	686.7	678.0	669.6	669.2	668.3	671.4	674.0
35°	741.1	704.3	674.5	654.7	646.4	639.4	640.7	642.0	645.5	648.6
37.5°	705.6	669.6	641.2	623.2	615.3	609.6	613.5	615.3	620.1	623.2
40°	669.6	633.7	607.4	591.2	583.3	580.7	586.4	590.3	596.0	598.6
42.5°	632.8	599.5	573.2	558.3	551.8	551.8	559.2	565.3	571.9	574.5
45°	596.0	563.6	538.6	525.0	520.2	523.7	532.5	540.4	548.7	551.3
47.5°	558.8	527.2	504.4	492.1	489.5	494.8	505.7	516.3	525.9	529.4
50°	521.5	493.0	470.2	458.8	458.8	465.4	479.4	492.6	503.1	506.6
52.5°	484.3	457.1	433.9	425.5	427.3	436.5	452.7	466.3	478.1	481.6
55°	446.6	419.8	399.7	392.7	395.7	407.1	423.8	439.6	451.0	454.9
57.5°	409.3	383.9	365.5	359.8	364.2	376.9	396.2	409.8	421.6	425.1
60°	371.6	345.8	331.3	326.9	332.6	345.8	365.5	378.2	389.2	392.7
62.5°	334.4	310.3	297.6	293.6	300.2	314.2	333.5	344.9	353.2	356.7
65°	296.7	275.2	263.4	260.8	267.8	281.4	299.8	309.4	315.5	319.0
67.5°	259.4	241.0	230.1	227.9	235.3	247.6	264.7	270.0	275.7	279.2
70°	222.6	206.0	196.8	195.5	202.0	213.9	228.3	231.0	234.0	237.1
72.5°	186.3	173.1	163.9	163.5	169.6	179.2	191.1	191.5	192.4	195.5
75°	151.2	139.4	132.4	133.7	137.2	145.1	154.3	151.6	152.1	154.3
77.5°	117.4	107.8	103.0	103.9	106.5	112.2	118.3	115.3	113.5	115.7
80°	84.6	76.3	74.5	74.9	76.7	80.6	84.1	81.5	78.0	79.8
82.5°	55.7	50.4	49.5	50.0	51.3	53.5	54.3	50.4	49.5	50.8
85°	30.7	28.5	28.5	29.8	30.2	30.7	30.7	28.5	28.9	29.8
87.5°	12.3	12.3	13.6	14.9	14.0	12.3	10.5	7.0	7.0	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)