

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-30L840-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-30L840-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

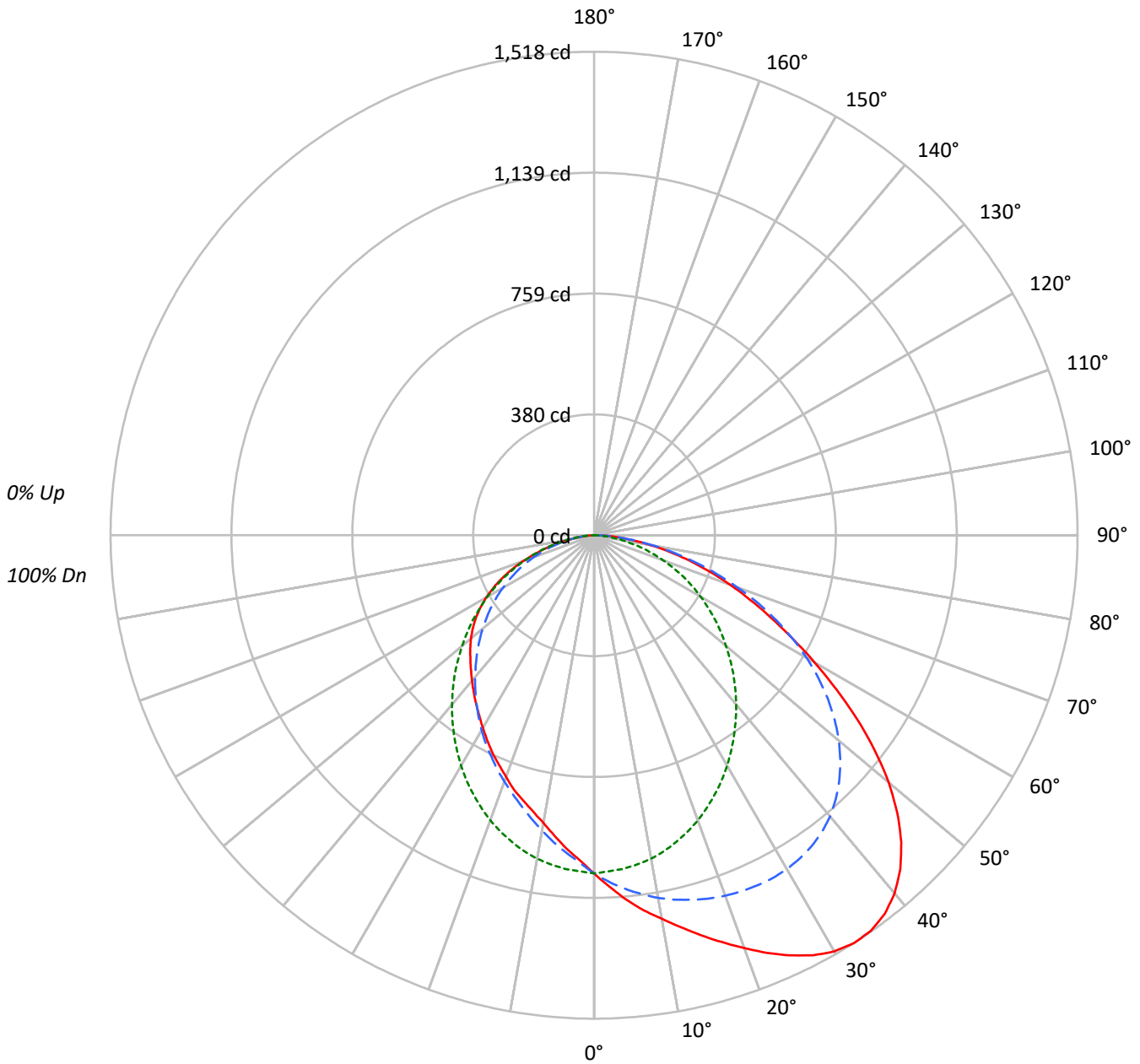
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3288.8 lumens
Efficiency: N/A
Efficacy: 101.2 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 (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°	10222	10222	10222
5°	11092	10160	9548
10°	11950	10081	8960
15°	12962	9935	8591
20°	14133	9761	8272
25°	15460	9532	8016
30°	16772	9281	7757
35°	17814	9006	7591
40°	18445	8721	7492
45°	18574	8420	7475
50°	18087	8098	7556
55°	16936	7808	7603
60°	15394	7453	7529
65°	13957	7048	7237
70°	12777	6536	6646
75°	11591	5877	5713
80°	10140	4912	4402
85°	8528	3568	3281



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.8	3.1
10°-20°	293.3	8.9
20°-30°	459.5	14.0
30°-40°	576.0	17.5
40°-50°	613.2	18.6
50°-60°	553.6	16.8
60°-70°	409.8	12.5
70°-80°	224.9	6.8
80°-90°	57.7	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°	853.6	26.0
0°-40°	1429.6	43.5
0°-60°	2596.4	78.9
0°-90°	3288.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3288.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1062	1062	1062	1062	1062	
5°	1148	1114	1051	1001	988	112
15°	1300	1185	997	880	862	371
25°	1455	1213	897	765	755	674
35°	1516	1191	766	644	646	945
45°	1364	1089	618	518	549	1046
55°	1009	896	465	394	453	900
65°	613	631	309	267	318	611
75°	312	330	158	137	154	331
85°	77	76	32	30	30	91
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°	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8
2.5°	1104.6	1102.4	1099.8	1098.9	1095.0	1089.7	1084.9	1084.9	1079.3	1065.7	1056.1
5°	1147.8	1144.3	1137.7	1132.5	1124.2	1114.2	1104.1	1098.0	1084.5	1064.0	1051.3
7.5°	1187.5	1183.1	1174.8	1164.8	1151.3	1136.4	1119.8	1106.7	1086.2	1058.7	1042.6
10°	1222.4	1218.5	1208.4	1196.2	1177.0	1156.1	1131.6	1112.0	1084.1	1050.0	1031.2
12.5°	1260.8	1256.9	1242.9	1226.3	1200.1	1172.2	1139.9	1112.9	1078.4	1037.4	1016.0
15°	1300.5	1295.3	1279.6	1257.3	1222.4	1184.9	1145.2	1110.2	1069.2	1022.1	996.8
17.5°	1339.8	1334.6	1314.9	1286.5	1242.9	1196.2	1147.3	1104.1	1056.1	1003.3	975.8
20°	1379.5	1374.3	1349.4	1313.6	1260.8	1204.5	1146.9	1095.0	1040.4	981.9	952.7
22.5°	1419.2	1413.1	1383.0	1339.4	1275.6	1210.2	1142.1	1082.3	1020.8	957.5	926.1
25°	1455.4	1449.3	1416.2	1364.7	1291.3	1212.8	1133.8	1064.9	999.0	930.4	897.3
27.5°	1486.9	1479.4	1445.0	1388.2	1304.9	1213.7	1122.9	1045.2	973.6	901.2	867.6
30°	1508.7	1502.1	1465.5	1404.8	1312.7	1210.6	1108.9	1022.1	944.4	869.8	834.9
32.5°	1518.3	1512.6	1476.4	1412.7	1314.0	1202.8	1091.9	996.3	913.9	836.6	801.3
35°	1515.7	1510.0	1475.5	1411.4	1310.1	1191.4	1070.5	967.1	881.1	802.1	766.3
37.5°	1499.1	1492.5	1461.1	1399.6	1298.8	1174.8	1046.1	935.2	845.8	766.8	730.6
40°	1467.7	1461.1	1434.1	1377.3	1279.6	1152.6	1018.2	901.2	809.5	729.7	693.9
42.5°	1422.7	1415.7	1394.3	1342.4	1252.1	1123.3	986.3	865.0	771.1	693.9	656.4
45°	1364.2	1357.2	1342.8	1298.8	1216.3	1088.9	950.1	825.7	731.0	653.3	618.4
47.5°	1291.8	1285.7	1278.7	1244.7	1172.2	1049.1	909.5	783.8	689.1	615.3	579.6
50°	1207.6	1201.4	1203.6	1180.5	1121.1	1003.3	865.0	739.7	645.9	573.0	540.7
52.5°	1112.0	1107.2	1117.7	1107.6	1061.8	952.3	817.4	694.3	601.8	532.9	501.9
55°	1009.0	1003.8	1023.8	1026.9	995.5	896.0	763.3	647.2	557.3	493.6	465.2
57.5°	902.9	898.6	924.3	938.7	923.0	835.3	708.7	598.8	511.5	452.6	424.2
60°	799.5	796.0	823.1	846.6	844.9	771.1	652.0	546.4	465.7	411.1	387.1
62.5°	702.2	698.3	725.3	753.3	763.3	702.6	595.7	494.9	419.8	369.6	348.3
65°	612.7	608.8	631.9	660.7	679.1	631.1	535.0	441.7	373.6	327.7	309.4
67.5°	530.7	530.7	545.1	571.7	594.0	557.7	473.1	391.0	326.0	288.9	270.6
70°	453.9	453.4	463.9	482.7	508.4	479.2	410.2	337.8	281.1	248.3	232.2
72.5°	381.0	384.0	388.0	402.4	429.4	404.1	347.8	285.4	237.0	208.2	194.6
75°	311.6	311.2	316.8	329.5	349.1	330.4	285.4	234.4	193.3	169.8	158.0
77.5°	245.3	244.8	249.6	257.0	273.6	258.8	225.2	187.2	150.6	130.9	122.6
80°	182.9	182.9	187.2	191.1	203.4	191.6	168.0	140.1	110.4	95.1	88.6
82.5°	127.0	129.6	127.9	133.1	140.1	130.1	115.2	96.0	73.3	62.8	58.5
85°	77.2	79.4	77.2	81.6	84.7	75.9	68.5	57.2	42.3	35.3	32.3
87.5°	39.7	39.3	38.8	41.0	41.9	36.7	32.3	27.5	18.8	14.4	12.2
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°	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8	1061.8
2.5°	1050.4	1053.1	1049.1	1034.7	1029.1	1023.0	1020.3	1017.7	1022.5	1021.2
5°	1041.7	1038.7	1028.6	1010.3	1000.7	990.7	985.9	982.8	989.4	988.0
7.5°	1029.9	1021.2	1006.4	984.1	971.9	958.4	951.8	947.9	952.3	951.4
10°	1015.1	1000.7	982.4	955.7	941.3	926.5	919.1	913.4	916.9	916.5
12.5°	996.3	977.6	955.3	925.2	910.4	895.1	888.5	884.6	889.0	887.7
15°	975.4	952.7	926.9	896.4	880.2	866.3	861.5	858.4	861.9	861.9
17.5°	952.3	925.6	897.3	866.3	851.0	840.1	835.3	833.1	834.9	837.5
20°	926.5	896.8	866.3	836.2	823.1	811.7	807.4	805.2	809.1	807.4
22.5°	898.1	866.7	834.9	806.5	794.7	783.4	779.0	777.7	782.1	780.3
25°	868.0	834.0	802.6	776.8	765.0	755.4	751.5	750.2	752.4	754.6
27.5°	839.7	801.3	770.3	747.1	736.7	727.5	724.0	721.8	723.6	726.2
30°	805.2	768.1	737.5	716.2	706.1	697.4	694.8	693.0	695.6	697.8
32.5°	772.9	735.4	704.8	683.9	675.1	666.8	666.4	665.5	668.6	671.2
35°	738.0	701.3	671.6	652.0	643.7	636.7	638.0	639.3	642.8	645.9
37.5°	702.6	666.8	638.5	620.6	612.7	607.1	611.0	612.7	617.5	620.6
40°	666.8	631.1	604.9	588.7	580.9	578.2	583.9	587.8	593.5	596.1
42.5°	630.2	597.0	570.8	556.0	549.4	549.4	556.9	563.0	569.5	572.1
45°	593.5	561.2	536.4	522.8	518.0	521.5	530.2	538.1	546.4	549.0
47.5°	556.4	525.0	502.3	490.1	487.5	492.7	503.6	514.1	523.7	527.2
50°	519.3	491.0	468.3	456.9	456.9	463.5	477.4	490.5	501.0	504.5
52.5°	482.2	455.2	432.0	423.8	425.5	434.7	450.8	464.3	476.1	479.6
55°	444.7	418.1	398.0	391.0	394.1	405.4	422.0	437.7	449.1	453.0
57.5°	407.6	382.3	364.0	358.3	362.7	375.3	394.5	408.0	419.8	423.3
60°	370.1	344.3	329.9	325.6	331.2	344.3	364.0	376.6	387.5	391.0
62.5°	333.0	309.0	296.3	292.4	298.9	312.9	332.1	343.5	351.7	355.2
65°	295.5	274.1	262.3	259.7	266.6	280.2	298.5	308.1	314.2	317.7
67.5°	258.4	240.0	229.1	226.9	234.4	246.6	263.6	268.8	274.5	278.0
70°	221.7	205.1	195.9	194.6	201.2	213.0	227.4	230.0	233.0	236.1
72.5°	185.5	172.4	163.2	162.8	168.9	178.5	190.3	190.7	191.6	194.6
75°	150.6	138.8	131.8	133.1	136.6	144.5	153.6	151.0	151.4	153.6
77.5°	117.0	107.4	102.6	103.4	106.0	111.7	117.8	114.8	113.0	115.2
80°	84.2	75.9	74.2	74.6	76.4	80.3	83.8	81.2	77.7	79.4
82.5°	55.4	50.2	49.3	49.8	51.1	53.2	54.1	50.2	49.3	50.6
85°	30.5	28.4	28.4	29.7	30.1	30.5	30.5	28.4	28.8	29.7
87.5°	12.2	12.2	13.5	14.8	14.0	12.2	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)