

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-32L940-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-32L940-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

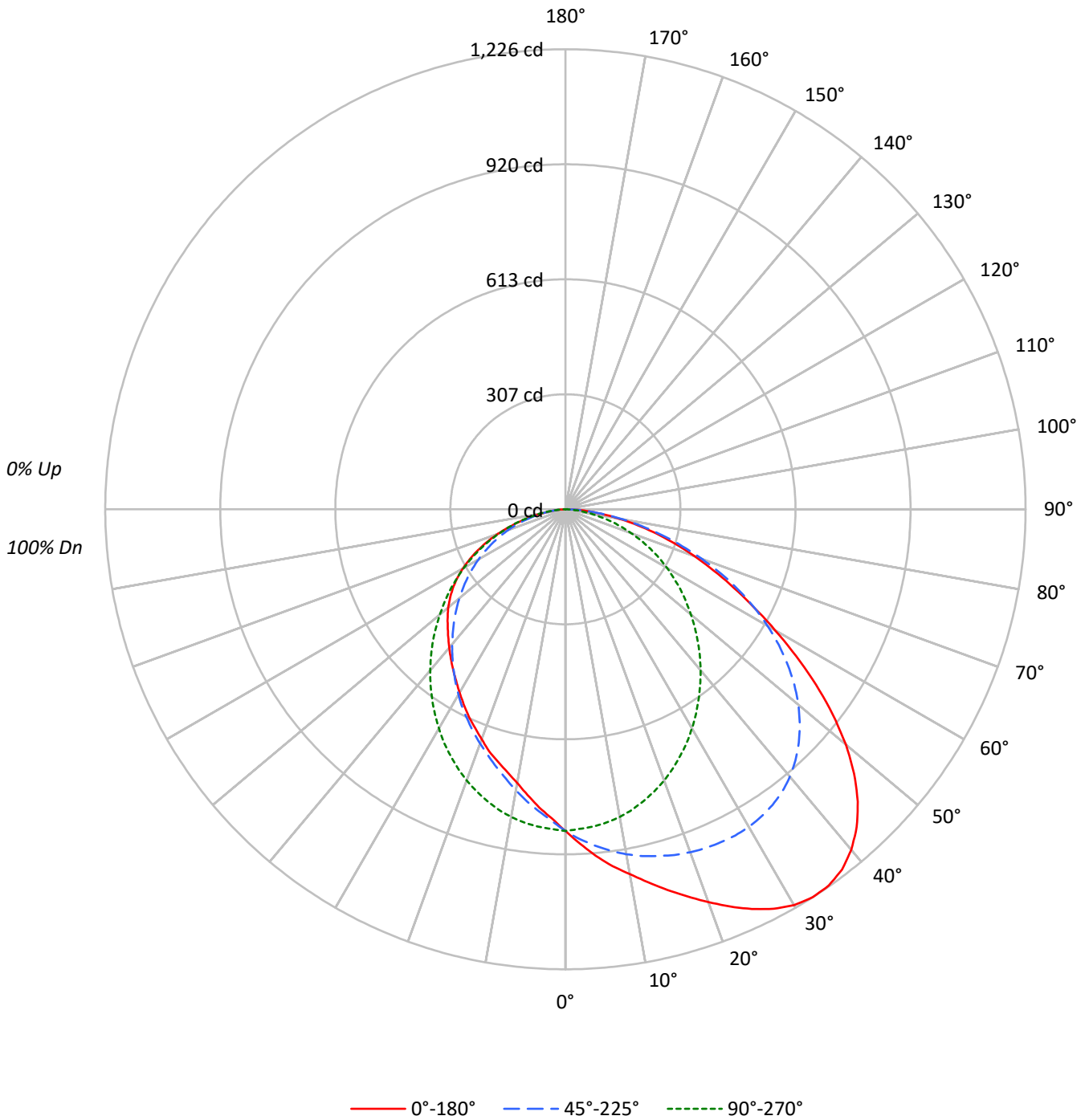
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2655.6 lumens
Efficiency: N/A
Efficacy: 73.0 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): 36.4
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	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°	8254	8254	8254
5°	8957	8204	7710
10°	9649	8140	7234
15°	10466	8021	6937
20°	11412	7882	6679
25°	12484	7696	6472
30°	13542	7494	6264
35°	14383	7273	6129
40°	14894	7042	6050
45°	14998	6798	6036
50°	14603	6539	6102
55°	13675	6304	6140
60°	12431	6019	6079
65°	11269	5691	5843
70°	10316	5278	5365
75°	9359	4746	4612
80°	8183	3964	3554
85°	6893	2883	2651



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	3.1
10°-20°	236.8	8.9
20°-30°	371.0	14.0
30°-40°	465.1	17.5
40°-50°	495.1	18.6
50°-60°	447.0	16.8
60°-70°	330.9	12.5
70°-80°	181.6	6.8
80°-90°	46.6	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°	689.2	26.0
0°-40°	1154.3	43.5
0°-60°	2096.5	78.9
0°-90°	2655.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2655.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	857	857	857	857	857	
5°	927	900	849	808	798	90
15°	1050	957	805	711	696	300
25°	1175	979	724	618	609	544
35°	1224	962	619	520	522	763
45°	1102	879	499	418	443	845
55°	815	723	376	318	366	727
65°	495	510	250	215	256	494
75°	252	267	128	110	124	267
85°	62	61	26	24	24	74
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°	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3
2.5°	891.9	890.1	888.0	887.3	884.1	879.9	876.0	876.0	871.4	860.5	852.8
5°	926.8	923.9	918.7	914.4	907.7	899.6	891.5	886.6	875.7	859.1	848.9
7.5°	958.8	955.3	948.6	940.5	929.6	917.6	904.2	893.6	877.1	854.9	841.8
10°	987.0	983.9	975.7	965.9	950.4	933.5	913.7	897.9	875.3	847.8	832.7
12.5°	1018.0	1014.9	1003.6	990.2	969.1	946.5	920.4	898.6	870.7	837.6	820.3
15°	1050.1	1045.9	1033.2	1015.2	987.0	956.7	924.7	896.5	863.3	825.3	804.8
17.5°	1081.8	1077.6	1061.7	1038.8	1003.6	965.9	926.4	891.5	852.8	810.1	787.9
20°	1113.9	1109.7	1089.6	1060.7	1018.0	972.6	926.1	884.1	840.1	792.9	769.3
22.5°	1146.0	1141.0	1116.7	1081.5	1030.0	977.2	922.2	873.9	824.2	773.1	747.8
25°	1175.2	1170.3	1143.5	1101.9	1042.7	979.3	915.5	859.8	806.6	751.3	724.5
27.5°	1200.6	1194.6	1166.7	1120.9	1053.6	980.0	906.7	844.0	786.2	727.7	700.5
30°	1218.2	1212.9	1183.3	1134.3	1060.0	977.5	895.4	825.3	762.6	702.3	674.1
32.5°	1225.9	1221.4	1192.1	1140.7	1061.0	971.2	881.7	804.5	737.9	675.5	647.0
35°	1223.8	1219.2	1191.4	1139.6	1057.9	962.0	864.4	780.9	711.5	647.7	618.8
37.5°	1210.4	1205.2	1179.8	1130.1	1048.7	948.6	844.7	755.2	682.9	619.1	589.9
40°	1185.1	1179.8	1157.9	1112.1	1033.2	930.6	822.1	727.7	653.7	589.2	560.3
42.5°	1148.8	1143.1	1125.9	1083.9	1011.0	907.0	796.4	698.4	622.7	560.3	530.0
45°	1101.6	1095.9	1084.3	1048.7	982.1	879.2	767.1	666.7	590.2	527.5	499.3
47.5°	1043.1	1038.1	1032.5	1005.0	946.5	847.1	734.4	632.9	556.4	496.9	468.0
50°	975.0	970.1	971.9	953.2	905.3	810.1	698.4	597.3	521.5	462.7	436.6
52.5°	897.9	894.0	902.5	894.3	857.3	768.9	660.0	560.6	485.9	430.3	405.2
55°	814.7	810.5	826.7	829.2	803.8	723.4	616.3	522.6	450.0	398.5	375.6
57.5°	729.1	725.6	746.3	758.0	745.3	674.5	572.3	483.5	413.0	365.4	342.5
60°	645.6	642.7	664.6	683.6	682.2	622.7	526.5	441.2	376.0	331.9	312.6
62.5°	567.0	563.8	585.7	608.2	616.3	567.3	481.0	399.6	339.0	298.5	281.2
65°	494.7	491.6	510.3	533.5	548.3	509.5	432.0	356.6	301.6	264.6	249.8
67.5°	428.5	428.5	440.1	461.6	479.6	450.3	382.0	315.7	263.2	233.3	218.5
70°	366.5	366.1	374.6	389.7	410.5	386.9	331.2	272.7	226.9	200.5	187.5
72.5°	307.6	310.1	313.3	324.9	346.7	326.3	280.8	230.5	191.3	168.1	157.2
75°	251.6	251.2	255.8	266.0	281.9	266.8	230.5	189.2	156.1	137.1	127.6
77.5°	198.0	197.7	201.6	207.6	220.9	209.0	181.8	151.2	121.6	105.7	99.0
80°	147.6	147.6	151.2	154.3	164.2	154.7	135.7	113.1	89.2	76.8	71.5
82.5°	102.5	104.7	103.2	107.5	113.1	105.0	93.0	77.5	59.2	50.7	47.2
85°	62.4	64.1	62.4	65.9	68.4	61.3	55.3	46.2	34.2	28.5	26.1
87.5°	32.1	31.7	31.4	33.1	33.8	29.6	26.1	22.2	15.2	11.6	9.9
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°	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3	857.3
2.5°	848.2	850.3	847.1	835.5	830.9	826.0	823.9	821.8	825.6	824.6
5°	841.1	838.7	830.6	815.8	808.0	799.9	796.0	793.6	798.9	797.8
7.5°	831.6	824.6	812.6	794.6	784.8	773.8	768.5	765.4	768.9	768.2
10°	819.6	808.0	793.2	771.7	760.1	748.1	742.1	737.5	740.4	740.0
12.5°	804.5	789.3	771.4	747.1	735.1	722.7	717.5	714.3	717.8	716.7
15°	787.6	769.3	748.5	723.8	710.8	699.5	695.6	693.1	696.0	696.0
17.5°	768.9	747.4	724.5	699.5	687.1	678.3	674.5	672.7	674.1	676.2
20°	748.1	724.1	699.5	675.2	664.6	655.4	651.9	650.1	653.3	651.9
22.5°	725.2	699.8	674.1	651.2	641.7	632.5	629.0	627.9	631.5	630.1
25°	700.9	673.4	648.0	627.2	617.7	610.0	606.8	605.7	607.5	609.3
27.5°	678.0	647.0	622.0	603.3	594.8	587.4	584.6	582.8	584.3	586.4
30°	650.1	620.2	595.5	578.3	570.2	563.1	561.0	559.6	561.7	563.5
32.5°	624.1	593.8	569.1	552.2	545.1	538.4	538.1	537.4	539.9	542.0
35°	595.9	566.3	542.3	526.5	519.8	514.1	515.2	516.2	519.1	521.5
37.5°	567.3	538.4	515.5	501.1	494.7	490.2	493.3	494.7	498.6	501.1
40°	538.4	509.5	488.4	475.4	469.0	466.9	471.5	474.7	479.2	481.4
42.5°	508.8	482.1	460.9	448.9	443.7	443.7	449.6	454.6	459.9	462.0
45°	479.2	453.2	433.1	422.2	418.3	421.1	428.1	434.5	441.2	443.3
47.5°	449.3	423.9	405.6	395.7	393.6	397.8	406.7	415.1	422.9	425.7
50°	419.3	396.4	378.1	368.9	368.9	374.2	385.5	396.1	404.5	407.4
52.5°	389.4	367.5	348.9	342.2	343.6	351.0	364.0	374.9	384.5	387.3
55°	359.1	337.6	321.4	315.7	318.2	327.4	340.8	353.4	362.6	365.8
57.5°	329.1	308.7	293.9	289.3	292.8	303.0	318.6	329.5	339.0	341.8
60°	298.8	278.0	266.4	262.9	267.5	278.0	293.9	304.1	312.9	315.7
62.5°	268.9	249.5	239.3	236.1	241.4	252.7	268.2	277.3	284.0	286.8
65°	238.6	221.3	211.8	209.7	215.3	226.2	241.0	248.8	253.7	256.5
67.5°	208.6	193.8	185.0	183.2	189.2	199.1	212.8	217.1	221.6	224.5
70°	179.0	165.6	158.2	157.2	162.4	172.0	183.6	185.7	188.2	190.6
72.5°	149.8	139.2	131.8	131.4	136.4	144.1	153.6	154.0	154.7	157.2
75°	121.6	112.1	106.4	107.5	110.3	116.6	124.0	121.9	122.3	124.0
77.5°	94.4	86.7	82.8	83.5	85.6	90.2	95.1	92.7	91.3	93.0
80°	68.0	61.3	59.9	60.3	61.7	64.8	67.7	65.5	62.7	64.1
82.5°	44.8	40.5	39.8	40.2	41.2	43.0	43.7	40.5	39.8	40.9
85°	24.7	22.9	22.9	24.0	24.3	24.7	24.7	22.9	23.3	24.0
87.5°	9.9	9.9	10.9	12.0	11.3	9.9	8.5	5.6	5.6	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)