

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-35L930-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-35L930-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

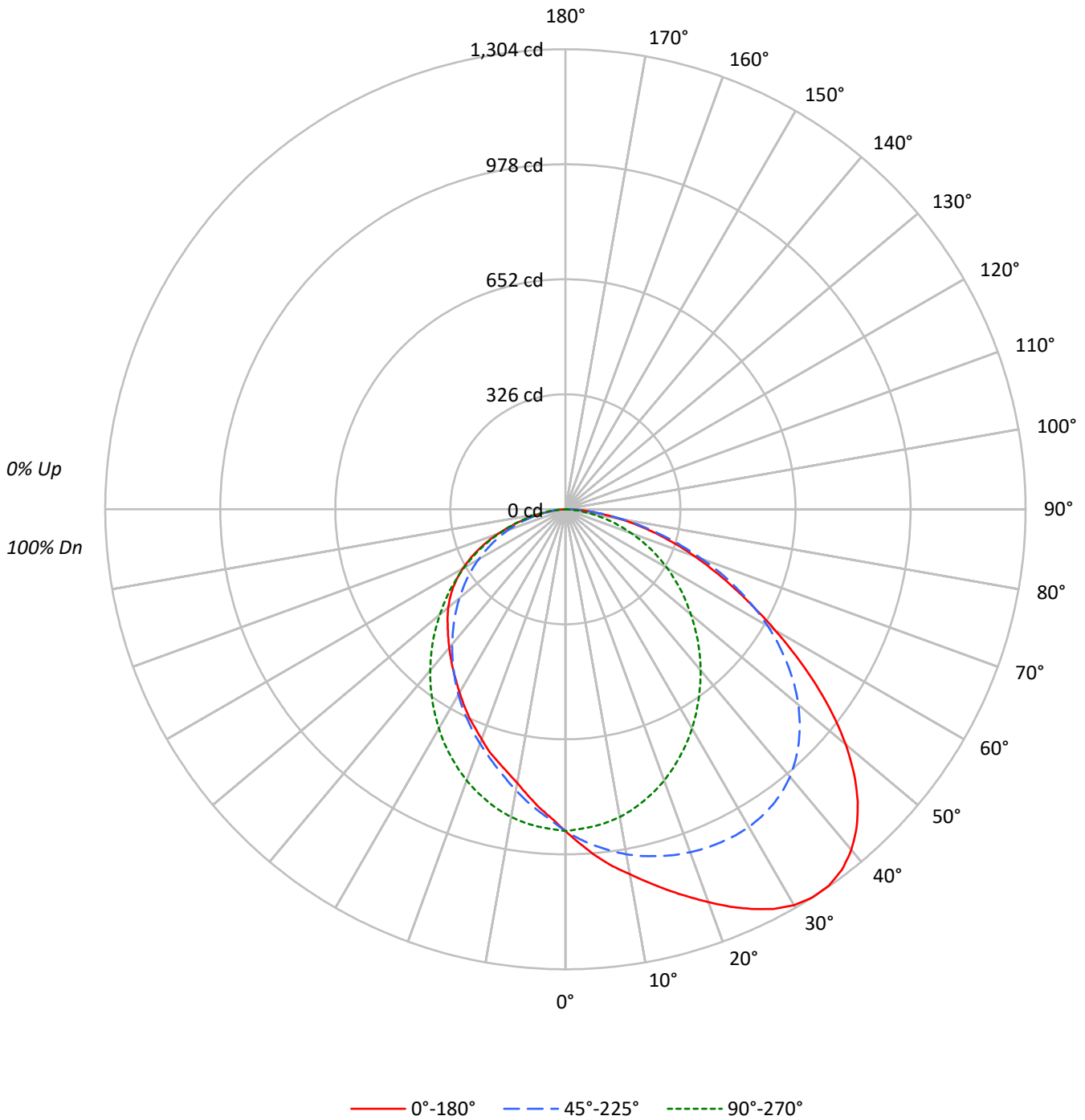
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2824.9 lumens
Efficiency: N/A
Efficacy: 69.9 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				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°	8780	8780	8780
5°	9528	8727	8202
10°	10265	8659	7696
15°	11134	8534	7379
20°	12140	8384	7105
25°	13279	8187	6885
30°	14406	7972	6663
35°	15301	7736	6520
40°	15843	7490	6436
45°	15954	7232	6421
50°	15535	6956	6490
55°	14547	6707	6531
60°	13222	6402	6468
65°	11989	6055	6217
70°	10975	5613	5709
75°	9954	5048	4906
80°	8710	4219	3781
85°	7324	3060	2817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	3.1
10°-20°	251.9	8.9
20°-30°	394.7	14.0
30°-40°	494.8	17.5
40°-50°	526.7	18.6
50°-60°	475.5	16.8
60°-70°	352.0	12.5
70°-80°	193.1	6.8
80°-90°	49.6	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°	733.2	26.0
0°-40°	1228.0	43.5
0°-60°	2230.2	78.9
0°-90°	2824.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2824.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	912	912	912	912	912	
5°	986	957	903	860	849	96
15°	1117	1018	856	756	740	319
25°	1250	1042	771	657	648	579
35°	1302	1023	658	553	555	812
45°	1172	935	531	445	472	898
55°	867	770	400	338	389	773
65°	526	542	266	229	273	525
75°	268	284	136	117	132	284
85°	66	65	28	26	26	78
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°	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0
2.5°	948.8	946.9	944.6	943.9	940.5	936.0	931.9	931.9	927.0	915.4	907.2
5°	985.9	982.9	977.2	972.8	965.6	957.0	948.4	943.1	931.5	913.9	903.0
7.5°	1020.0	1016.2	1009.1	1000.5	988.9	976.1	961.9	950.6	933.0	909.4	895.5
10°	1050.0	1046.6	1038.0	1027.5	1011.0	993.0	972.0	955.1	931.1	901.9	885.8
12.5°	1083.0	1079.6	1067.6	1053.3	1030.9	1006.9	979.1	955.9	926.3	891.0	872.7
15°	1117.1	1112.6	1099.1	1080.0	1050.0	1017.7	983.6	953.6	918.4	877.9	856.2
17.5°	1150.8	1146.3	1129.4	1105.1	1067.6	1027.5	985.5	948.4	907.2	861.8	838.2
20°	1184.9	1180.4	1159.1	1128.3	1083.0	1034.6	985.1	940.5	893.7	843.4	818.3
22.5°	1219.0	1213.8	1187.9	1150.4	1095.7	1039.5	981.0	929.6	876.8	822.4	795.4
25°	1250.1	1244.9	1216.4	1172.2	1109.2	1041.7	973.9	914.6	858.0	799.2	770.7
27.5°	1277.1	1270.8	1241.1	1192.4	1120.8	1042.5	964.5	897.8	836.3	774.1	745.2
30°	1295.9	1290.3	1258.8	1206.7	1127.6	1039.9	952.5	877.9	811.2	747.1	717.1
32.5°	1304.1	1299.3	1268.1	1213.4	1128.7	1033.1	937.9	855.8	784.9	718.6	688.2
35°	1301.9	1297.0	1267.4	1212.3	1125.3	1023.4	919.5	830.7	756.8	689.0	658.2
37.5°	1287.6	1282.0	1255.0	1202.2	1115.6	1009.1	898.5	803.3	726.5	658.6	627.5
40°	1260.6	1255.0	1231.8	1183.0	1099.1	990.0	874.5	774.1	695.4	626.8	596.0
42.5°	1222.0	1216.0	1197.7	1153.1	1075.5	964.9	847.2	743.0	662.4	596.0	563.8
45°	1171.8	1165.8	1153.4	1115.6	1044.7	935.3	816.1	709.2	627.9	561.2	531.2
47.5°	1109.6	1104.3	1098.3	1069.1	1006.9	901.2	781.2	673.2	591.9	528.5	497.8
50°	1037.2	1032.0	1033.9	1014.0	963.0	861.8	743.0	635.4	554.8	492.2	464.4
52.5°	955.1	951.0	960.0	951.4	912.0	817.9	702.1	596.4	516.9	457.7	431.1
55°	866.7	862.2	879.4	882.0	855.0	769.6	655.6	555.9	478.7	424.0	399.6
57.5°	775.6	771.8	793.9	806.3	792.8	717.5	608.8	514.3	439.3	388.7	364.4
60°	686.7	683.7	707.0	727.2	725.7	662.4	560.0	469.3	400.0	353.1	332.5
62.5°	603.1	599.8	623.0	647.0	655.6	603.5	511.7	425.1	360.6	317.5	299.1
65°	526.3	522.9	542.8	567.5	583.3	542.0	459.6	379.4	320.9	281.5	265.8
67.5°	455.8	455.8	468.2	491.1	510.2	479.1	406.3	335.9	280.0	248.2	232.4
70°	389.9	389.5	398.5	414.6	436.7	411.6	352.4	290.1	241.4	213.3	199.4
72.5°	327.2	329.9	333.2	345.6	368.9	347.1	298.8	245.2	203.5	178.8	167.2
75°	267.6	267.3	272.1	283.0	299.9	283.8	245.2	201.3	166.1	145.8	135.7
77.5°	210.7	210.3	214.4	220.8	235.0	222.3	193.4	160.8	129.3	112.5	105.3
80°	157.1	157.1	160.8	164.2	174.7	164.6	144.3	120.3	94.8	81.7	76.1
82.5°	109.1	111.3	109.8	114.3	120.3	111.7	99.0	82.5	63.0	54.0	50.2
85°	66.3	68.2	66.3	70.1	72.7	65.2	58.9	49.1	36.4	30.4	27.7
87.5°	34.1	33.7	33.4	35.2	36.0	31.5	27.7	23.6	16.1	12.4	10.5
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°	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0	912.0
2.5°	902.3	904.5	901.2	888.8	883.9	878.7	876.4	874.2	878.3	877.2
5°	894.8	892.2	883.5	867.8	859.5	850.9	846.8	844.2	849.8	848.7
7.5°	884.7	877.2	864.4	845.3	834.8	823.2	817.6	814.2	817.9	817.2
10°	871.9	859.5	843.8	820.9	808.6	795.8	789.4	784.6	787.6	787.2
12.5°	855.8	839.7	820.6	794.7	781.9	768.8	763.2	759.8	763.6	762.5
15°	837.8	818.3	796.2	770.0	756.1	744.1	740.0	737.3	740.3	740.3
17.5°	817.9	795.1	770.7	744.1	731.0	721.6	717.5	715.6	717.1	719.3
20°	795.8	770.3	744.1	718.2	707.0	697.2	693.5	691.6	695.0	693.5
22.5°	771.5	744.5	717.1	692.7	682.6	672.9	669.1	668.0	671.7	670.2
25°	745.6	716.3	689.4	667.2	657.1	648.9	645.5	644.4	646.3	648.1
27.5°	721.2	688.2	661.6	641.8	632.8	624.9	621.9	620.0	621.5	623.8
30°	691.6	659.7	633.5	615.1	606.5	599.0	596.8	595.3	597.5	599.4
32.5°	663.9	631.6	605.4	587.4	579.9	572.8	572.4	571.7	574.3	576.5
35°	633.9	602.4	576.9	560.0	552.9	546.9	548.0	549.2	552.2	554.8
37.5°	603.5	572.8	548.4	533.0	526.3	521.4	524.8	526.3	530.4	533.0
40°	572.8	542.0	519.6	505.7	498.9	496.7	501.6	504.9	509.8	512.1
42.5°	541.3	512.8	490.3	477.6	471.9	471.9	478.3	483.6	489.2	491.4
45°	509.8	482.1	460.7	449.1	445.0	448.0	455.5	462.2	469.3	471.6
47.5°	477.9	451.0	431.5	421.0	418.7	423.2	432.6	441.6	449.8	452.8
50°	446.1	421.7	402.2	392.5	392.5	398.1	410.1	421.3	430.3	433.3
52.5°	414.2	391.0	371.1	364.0	365.5	373.4	387.2	398.8	409.0	412.0
55°	382.0	359.1	341.9	335.9	338.5	348.2	362.5	376.0	385.7	389.1
57.5°	350.1	328.4	312.6	307.8	311.5	322.4	338.9	350.5	360.6	363.6
60°	317.9	295.8	283.4	279.6	284.5	295.8	312.6	323.5	332.9	335.9
62.5°	286.0	265.4	254.5	251.2	256.8	268.8	285.3	295.0	302.1	305.1
65°	253.8	235.4	225.3	223.0	229.0	240.7	256.4	264.6	269.9	272.9
67.5°	221.9	206.2	196.8	194.9	201.3	211.8	226.4	230.9	235.8	238.8
70°	190.4	176.2	168.3	167.2	172.8	182.9	195.3	197.5	200.2	202.8
72.5°	159.3	148.1	140.2	139.8	145.1	153.3	163.4	163.8	164.6	167.2
75°	129.3	119.2	113.2	114.3	117.3	124.1	131.9	129.7	130.1	131.9
77.5°	100.5	92.2	88.1	88.8	91.1	96.0	101.2	98.6	97.1	99.0
80°	72.3	65.2	63.7	64.1	65.6	69.0	72.0	69.7	66.7	68.2
82.5°	47.6	43.1	42.4	42.7	43.9	45.7	46.5	43.1	42.4	43.5
85°	26.2	24.4	24.4	25.5	25.9	26.2	26.2	24.4	24.7	25.5
87.5°	10.5	10.5	11.6	12.7	12.0	10.5	9.0	6.0	6.0	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)