

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-39L930-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-39L930-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

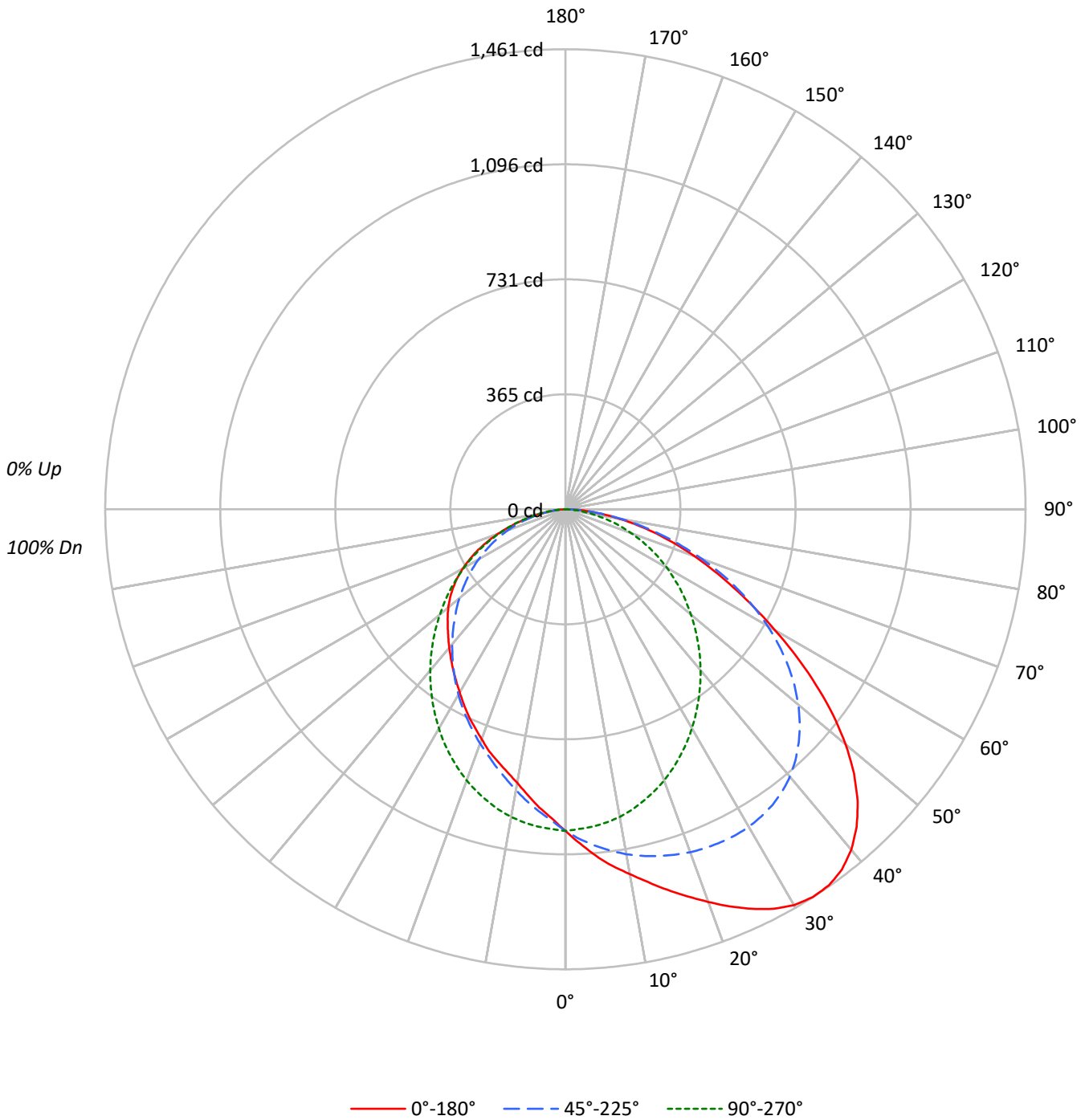
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3164.0 lumens
Efficiency: N/A
Efficacy: 69.1 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): 45.8
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°	9834	9834	9834
5°	10671	9774	9186
10°	11496	9699	8619
15°	12470	9557	8265
20°	13596	9390	7957
25°	14874	9169	7711
30°	16135	8929	7463
35°	17137	8664	7303
40°	17744	8390	7208
45°	17868	8100	7192
50°	17399	7791	7269
55°	16293	7513	7315
60°	14811	7170	7244
65°	13429	6782	6962
70°	12290	6288	6393
75°	11152	5654	5498
80°	9752	4724	4236
85°	8207	3435	3148



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	3.1
10°-20°	282.2	8.9
20°-30°	442.0	14.0
30°-40°	554.2	17.5
40°-50°	589.9	18.6
50°-60°	532.6	16.8
60°-70°	394.2	12.5
70°-80°	216.3	6.8
80°-90°	55.5	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°	821.2	26.0
0°-40°	1375.3	43.5
0°-60°	2497.9	78.9
0°-90°	3164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3164.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1022	1022	1022	1022	1022	
5°	1104	1072	1011	963	950	108
15°	1251	1140	959	847	829	357
25°	1400	1167	863	736	726	648
35°	1458	1146	737	619	621	909
45°	1312	1048	595	498	528	1006
55°	971	862	448	379	436	866
65°	590	607	298	256	306	588
75°	300	318	152	131	148	319
85°	74	73	31	29	28	88
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°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1062.6	1060.5	1058.0	1057.2	1053.4	1048.4	1043.7	1043.7	1038.3	1025.3	1016.0
5°	1104.2	1100.8	1094.5	1089.5	1081.5	1071.9	1062.2	1056.3	1043.3	1023.6	1011.4
7.5°	1142.4	1138.2	1130.2	1120.6	1107.6	1093.3	1077.3	1064.7	1045.0	1018.5	1003.0
10°	1176.0	1172.2	1162.6	1150.8	1132.3	1112.2	1088.7	1069.8	1042.9	1010.1	992.1
12.5°	1212.9	1209.2	1195.7	1179.8	1154.6	1127.7	1096.6	1070.6	1037.4	998.0	977.4
15°	1251.1	1246.1	1231.0	1209.6	1176.0	1139.9	1101.7	1068.1	1028.6	983.3	958.9
17.5°	1288.9	1283.9	1265.0	1237.7	1195.7	1150.8	1103.8	1062.2	1016.0	965.2	938.8
20°	1327.1	1322.1	1298.2	1263.7	1212.9	1158.8	1103.4	1053.4	1000.9	944.7	916.5
22.5°	1365.3	1359.5	1330.5	1288.5	1227.2	1164.2	1098.7	1041.2	982.0	921.1	890.9
25°	1400.2	1394.3	1362.4	1312.9	1242.3	1166.7	1090.8	1024.4	961.0	895.1	863.2
27.5°	1430.4	1423.3	1390.1	1335.5	1255.3	1167.6	1080.3	1005.5	936.7	867.0	834.7
30°	1451.4	1445.1	1409.8	1351.5	1262.9	1164.7	1066.8	983.3	908.5	836.8	803.2
32.5°	1460.6	1455.2	1420.3	1359.0	1264.2	1157.1	1050.5	958.5	879.2	804.8	770.8
35°	1458.1	1452.7	1419.5	1357.8	1260.4	1146.2	1029.9	930.4	847.7	771.7	737.2
37.5°	1442.2	1435.9	1405.6	1346.4	1249.5	1130.2	1006.4	899.7	813.7	737.7	702.8
40°	1411.9	1405.6	1379.6	1325.0	1231.0	1108.8	979.5	867.0	778.8	702.0	667.6
42.5°	1368.7	1362.0	1341.4	1291.4	1204.5	1080.7	948.9	832.1	741.9	667.6	631.4
45°	1312.4	1305.7	1291.9	1249.5	1170.1	1047.5	914.0	794.3	703.2	628.5	594.9
47.5°	1242.7	1236.9	1230.1	1197.4	1127.7	1009.3	875.0	754.0	662.9	592.0	557.6
50°	1161.7	1155.8	1157.9	1135.7	1078.6	965.2	832.1	711.6	621.4	551.3	520.2
52.5°	1069.8	1065.1	1075.2	1065.6	1021.5	916.1	786.4	668.0	579.0	512.6	482.8
55°	970.7	965.6	985.0	987.9	957.7	861.9	734.3	622.6	536.1	474.8	447.6
57.5°	868.7	864.5	889.2	903.1	888.0	803.6	681.8	576.0	492.1	435.4	408.1
60°	769.2	765.8	791.8	814.5	812.8	741.9	627.2	525.6	448.0	395.5	372.4
62.5°	675.5	671.8	697.8	724.7	734.3	676.0	573.1	476.1	403.9	355.6	335.0
65°	589.5	585.7	607.9	635.6	653.3	607.1	514.7	424.9	359.4	315.3	297.7
67.5°	510.5	510.5	524.4	550.0	571.4	536.6	455.1	376.2	313.6	277.9	260.3
70°	436.6	436.2	446.3	464.3	489.1	461.0	394.7	325.0	270.4	238.9	223.4
72.5°	366.5	369.5	373.2	387.1	413.1	388.8	334.6	274.6	228.0	200.3	187.3
75°	299.8	299.3	304.8	317.0	335.9	317.8	274.6	225.5	186.0	163.3	152.0
77.5°	236.0	235.5	240.2	247.3	263.2	249.0	216.6	180.1	144.8	126.0	118.0
80°	175.9	175.9	180.1	183.9	195.6	184.3	161.6	134.8	106.2	91.5	85.2
82.5°	122.2	124.7	123.0	128.1	134.8	125.1	110.8	92.4	70.5	60.5	56.3
85°	74.3	76.4	74.3	78.5	81.4	73.1	65.9	55.0	40.7	34.0	31.1
87.5°	38.2	37.8	37.4	39.5	40.3	35.3	31.1	26.5	18.1	13.9	11.8
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°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1010.6	1013.1	1009.3	995.5	990.0	984.1	981.6	979.1	983.7	982.4
5°	1002.2	999.2	989.6	971.9	962.7	953.0	948.4	945.5	951.8	950.5
7.5°	990.8	982.4	968.2	946.8	935.0	922.0	915.7	911.9	916.1	915.3
10°	976.6	962.7	945.1	919.5	905.6	891.3	884.2	878.7	882.1	881.7
12.5°	958.5	940.5	919.0	890.1	875.8	861.1	854.8	851.0	855.2	854.0
15°	938.4	916.5	891.8	862.4	846.8	833.4	828.8	825.8	829.2	829.2
17.5°	916.1	890.5	863.2	833.4	818.7	808.2	803.6	801.5	803.2	805.7
20°	891.3	862.8	833.4	804.4	791.8	780.9	776.7	774.6	778.4	776.7
22.5°	864.0	833.8	803.2	775.9	764.5	753.6	749.4	748.2	752.4	750.7
25°	835.1	802.3	772.1	747.3	736.0	726.8	723.0	721.7	723.8	725.9
27.5°	807.8	770.8	741.0	718.8	708.7	699.9	696.5	694.4	696.1	698.6
30°	774.6	738.9	709.5	689.0	679.3	670.9	668.4	666.7	669.2	671.3
32.5°	743.5	707.4	678.1	657.9	649.5	641.5	641.1	640.3	643.2	645.7
35°	710.0	674.7	646.1	627.2	619.3	612.6	613.8	615.1	618.4	621.4
37.5°	676.0	641.5	614.2	597.0	589.5	584.0	587.8	589.5	594.1	597.0
40°	641.5	607.1	581.9	566.4	558.8	556.3	561.8	565.5	571.0	573.5
42.5°	606.3	574.3	549.2	534.9	528.6	528.6	535.7	541.6	547.9	550.4
45°	571.0	539.9	516.0	503.0	498.4	501.7	510.1	517.7	525.6	528.2
47.5°	535.3	505.1	483.2	471.5	469.0	474.0	484.5	494.6	503.8	507.2
50°	499.6	472.3	450.5	439.6	439.6	445.9	459.3	471.9	482.0	485.3
52.5°	463.9	437.9	415.6	407.7	409.3	418.2	433.7	446.7	458.1	461.4
55°	427.8	402.2	382.9	376.2	379.1	390.0	406.0	421.1	432.0	435.8
57.5°	392.1	367.8	350.2	344.7	348.9	361.1	379.5	392.6	403.9	407.2
60°	356.0	331.3	317.4	313.2	318.7	331.3	350.2	362.3	372.8	376.2
62.5°	320.3	297.3	285.1	281.3	287.6	301.0	319.5	330.4	338.4	341.8
65°	284.2	263.7	252.3	249.8	256.5	269.5	287.2	296.4	302.3	305.6
67.5°	248.5	230.9	220.4	218.3	225.5	237.2	253.6	258.6	264.1	267.4
70°	213.3	197.3	188.5	187.3	193.5	204.9	218.7	221.3	224.2	227.1
72.5°	178.4	165.8	157.0	156.6	162.5	171.7	183.1	183.5	184.3	187.3
75°	144.8	133.5	126.8	128.1	131.4	139.0	147.8	145.3	145.7	147.8
77.5°	112.5	103.3	98.7	99.5	102.0	107.5	113.4	110.4	108.7	110.8
80°	81.0	73.1	71.4	71.8	73.5	77.3	80.6	78.1	74.7	76.4
82.5°	53.3	48.3	47.4	47.9	49.1	51.2	52.1	48.3	47.4	48.7
85°	29.4	27.3	27.3	28.5	29.0	29.4	29.4	27.3	27.7	28.5
87.5°	11.8	11.8	13.0	14.3	13.4	11.8	10.1	6.7	6.7	8.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)