

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-35L940-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-35L940-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

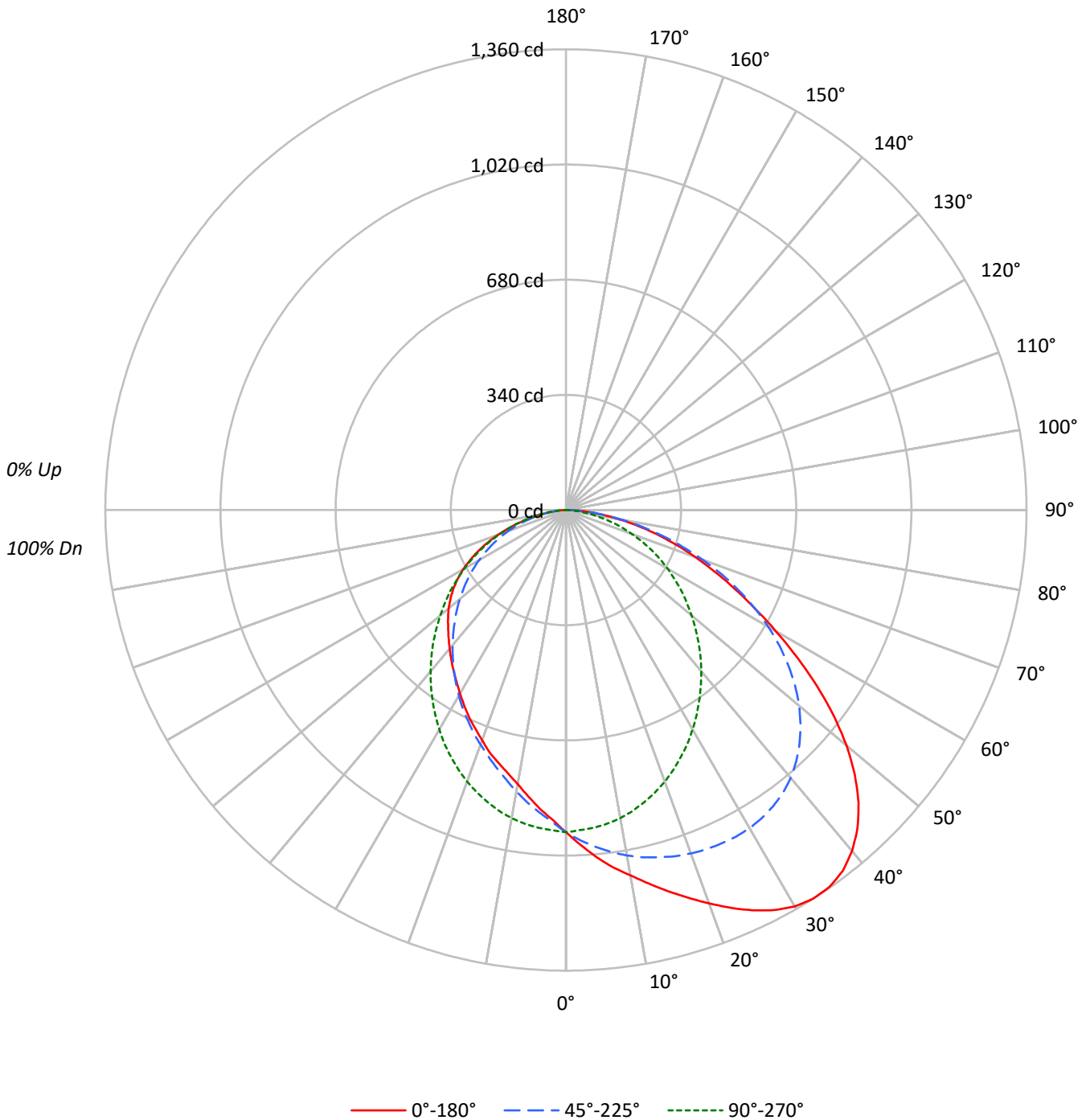
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2945.9 lumens
Efficiency: N/A
Efficacy: 72.9 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 (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°	9157	9157	9157
5°	9936	9101	8553
10°	10704	9030	8025
15°	11611	8899	7695
20°	12660	8743	7409
25°	13849	8537	7180
30°	15023	8313	6949
35°	15956	8067	6799
40°	16521	7812	6711
45°	16638	7541	6696
50°	16201	7254	6768
55°	15170	6994	6811
60°	13790	6676	6745
65°	12502	6315	6483
70°	11442	5855	5953
75°	10382	5263	5118
80°	9081	4402	3942
85°	7644	3192	2938



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.3	3.1
10°-20°	262.7	8.9
20°-30°	411.6	14.0
30°-40°	516.0	17.5
40°-50°	549.3	18.6
50°-60°	495.9	16.8
60°-70°	367.1	12.5
70°-80°	201.4	6.8
80°-90°	51.7	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°	764.6	26.0
0°-40°	1280.6	43.5
0°-60°	2325.7	78.9
0°-90°	2945.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2945.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	951	951	951	951	951	
5°	1028	998	942	896	885	100
15°	1165	1061	893	788	772	332
25°	1304	1086	804	685	676	603
35°	1358	1067	686	577	578	847
45°	1222	975	554	464	492	937
55°	904	802	417	353	406	806
65°	549	565	277	239	285	548
75°	279	296	142	122	138	297
85°	69	68	29	27	27	82
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°	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1
2.5°	989.4	987.4	985.1	984.3	980.8	976.1	971.8	971.8	966.7	954.6	946.0
5°	1028.1	1025.0	1019.1	1014.4	1007.0	998.0	989.0	983.5	971.4	953.0	941.7
7.5°	1063.7	1059.8	1052.3	1043.3	1031.2	1017.9	1003.1	991.4	973.0	948.4	933.9
10°	1094.9	1091.4	1082.4	1071.5	1054.3	1035.5	1013.6	996.0	971.0	940.5	923.7
12.5°	1129.3	1125.8	1113.3	1098.5	1075.0	1050.0	1021.1	996.8	965.9	929.2	910.0
15°	1164.9	1160.2	1146.2	1126.2	1094.9	1061.3	1025.8	994.5	957.7	915.5	892.8
17.5°	1200.1	1195.4	1177.8	1152.4	1113.3	1071.5	1027.7	989.0	946.0	898.7	874.1
20°	1235.7	1231.0	1208.7	1176.6	1129.3	1078.9	1027.3	980.8	931.9	879.6	853.4
22.5°	1271.2	1265.8	1238.8	1199.7	1142.6	1084.0	1023.0	969.5	914.3	857.7	829.5
25°	1303.7	1298.2	1268.5	1222.4	1156.7	1086.3	1015.6	953.8	894.8	833.4	803.7
27.5°	1331.8	1325.2	1294.3	1243.5	1168.8	1087.1	1005.8	936.2	872.1	807.2	777.1
30°	1351.4	1345.5	1312.7	1258.3	1175.9	1084.4	993.3	915.5	845.9	779.1	747.8
32.5°	1360.0	1354.9	1322.5	1265.4	1177.0	1077.4	978.1	892.5	818.6	749.4	717.7
35°	1357.6	1352.6	1321.7	1264.2	1173.5	1067.2	958.9	866.3	789.3	718.5	686.4
37.5°	1342.8	1336.9	1308.8	1253.7	1163.4	1052.3	937.0	837.7	757.6	686.8	654.4
40°	1314.6	1308.8	1284.5	1233.7	1146.2	1032.4	912.0	807.2	725.1	653.6	621.6
42.5°	1274.4	1268.1	1249.0	1202.4	1121.5	1006.2	883.5	774.8	690.7	621.6	587.9
45°	1222.0	1215.7	1202.8	1163.4	1089.5	975.3	851.0	739.6	654.8	585.2	553.9
47.5°	1157.1	1151.6	1145.4	1114.9	1050.0	939.8	814.7	702.1	617.3	551.2	519.1
50°	1081.7	1076.2	1078.1	1057.4	1004.3	898.7	774.8	662.6	578.5	513.3	484.3
52.5°	996.0	991.7	1001.1	992.1	951.1	853.0	732.2	621.9	539.1	477.3	449.5
55°	903.8	899.1	917.1	919.8	891.7	802.5	683.7	579.7	499.2	442.1	416.7
57.5°	808.8	804.9	828.0	840.9	826.8	748.2	634.8	536.3	458.1	405.4	380.0
60°	716.2	713.0	737.3	758.4	756.8	690.7	584.0	489.4	417.1	368.2	346.7
62.5°	629.0	625.5	649.7	674.7	683.7	629.4	533.6	443.3	376.1	331.1	311.9
65°	548.8	545.3	566.0	591.8	608.3	565.3	479.3	395.6	334.6	293.6	277.2
67.5°	475.3	475.3	488.2	512.1	532.0	499.6	423.7	350.3	292.0	258.8	242.4
70°	406.5	406.2	415.5	432.3	455.4	429.2	367.5	302.6	251.7	222.4	208.0
72.5°	341.3	344.0	347.5	360.4	384.7	362.0	311.6	255.7	212.3	186.5	174.3
75°	279.1	278.7	283.8	295.1	312.7	295.9	255.7	209.9	173.2	152.1	141.5
77.5°	219.7	219.3	223.6	230.2	245.1	231.8	201.7	167.7	134.9	117.3	109.8
80°	163.8	163.8	167.7	171.2	182.2	171.6	150.5	125.5	98.9	85.2	79.4
82.5°	113.8	116.1	114.5	119.2	125.5	116.5	103.2	86.0	65.7	56.3	52.4
85°	69.2	71.1	69.2	73.1	75.8	68.0	61.4	51.2	37.9	31.7	28.9
87.5°	35.6	35.2	34.8	36.7	37.5	32.8	28.9	24.6	16.8	12.9	10.9
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°	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1	951.1
2.5°	940.9	943.3	939.8	926.9	921.8	916.3	914.0	911.6	915.9	914.7
5°	933.1	930.4	921.4	905.0	896.4	887.4	883.1	880.3	886.2	885.0
7.5°	922.6	914.7	901.4	881.5	870.6	858.4	852.6	849.1	853.0	852.2
10°	909.3	896.4	879.9	856.1	843.2	829.9	823.3	818.2	821.3	820.9
12.5°	892.5	875.6	855.7	828.7	815.4	801.8	795.9	792.4	796.3	795.1
15°	873.7	853.4	830.3	802.9	788.5	776.0	771.7	768.9	772.1	772.1
17.5°	853.0	829.1	803.7	776.0	762.3	752.5	748.2	746.3	747.8	750.2
20°	829.9	803.3	776.0	749.0	737.3	727.1	723.2	721.2	724.8	723.2
22.5°	804.5	776.4	747.8	722.4	711.9	701.7	697.8	696.6	700.5	699.0
25°	777.5	747.0	718.9	695.8	685.3	676.7	673.2	672.0	673.9	675.9
27.5°	752.1	717.7	690.0	669.2	659.9	651.7	648.5	646.6	648.1	650.5
30°	721.2	688.0	660.6	641.5	632.5	624.7	622.3	620.8	623.1	625.1
32.5°	692.3	658.7	631.3	612.6	604.7	597.3	596.9	596.1	598.9	601.2
35°	661.0	628.2	601.6	584.0	576.6	570.3	571.5	572.7	575.8	578.5
37.5°	629.4	597.3	571.9	555.9	548.8	543.8	547.3	548.8	553.1	555.9
40°	597.3	565.3	541.8	527.3	520.3	518.0	523.0	526.6	531.6	534.0
42.5°	564.5	534.8	511.3	498.0	492.2	492.2	498.8	504.3	510.1	512.5
45°	531.6	502.7	480.4	468.3	464.0	467.1	475.0	482.0	489.4	491.8
47.5°	498.4	470.3	449.9	439.0	436.6	441.3	451.1	460.5	469.1	472.2
50°	465.2	439.8	419.4	409.3	409.3	415.1	427.7	439.4	448.8	451.9
52.5°	432.0	407.7	387.0	379.6	381.1	389.3	403.8	415.9	426.5	429.6
55°	398.3	374.5	356.5	350.3	353.0	363.2	378.0	392.1	402.2	405.8
57.5°	365.1	342.4	326.0	320.9	324.8	336.2	353.4	365.5	376.1	379.2
60°	331.5	308.4	295.5	291.6	296.7	308.4	326.0	337.4	347.1	350.3
62.5°	298.3	276.8	265.4	261.9	267.8	280.3	297.5	307.6	315.1	318.2
65°	264.6	245.5	234.9	232.6	238.8	251.0	267.4	276.0	281.5	284.6
67.5°	231.4	215.0	205.2	203.3	209.9	220.9	236.1	240.8	245.9	249.0
70°	198.6	183.7	175.5	174.3	180.2	190.8	203.7	206.0	208.7	211.5
72.5°	166.1	154.4	146.2	145.8	151.3	159.9	170.4	170.8	171.6	174.3
75°	134.9	124.3	118.1	119.2	122.4	129.4	137.6	135.3	135.6	137.6
77.5°	104.8	96.2	91.9	92.6	95.0	100.1	105.5	102.8	101.2	103.2
80°	75.4	68.0	66.5	66.8	68.4	71.9	75.1	72.7	69.6	71.1
82.5°	49.6	45.0	44.2	44.6	45.7	47.7	48.5	45.0	44.2	45.3
85°	27.4	25.4	25.4	26.6	27.0	27.4	27.4	25.4	25.8	26.6
87.5°	10.9	10.9	12.1	13.3	12.5	10.9	9.4	6.3	6.3	7.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)