

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-39L940-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-39L940-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

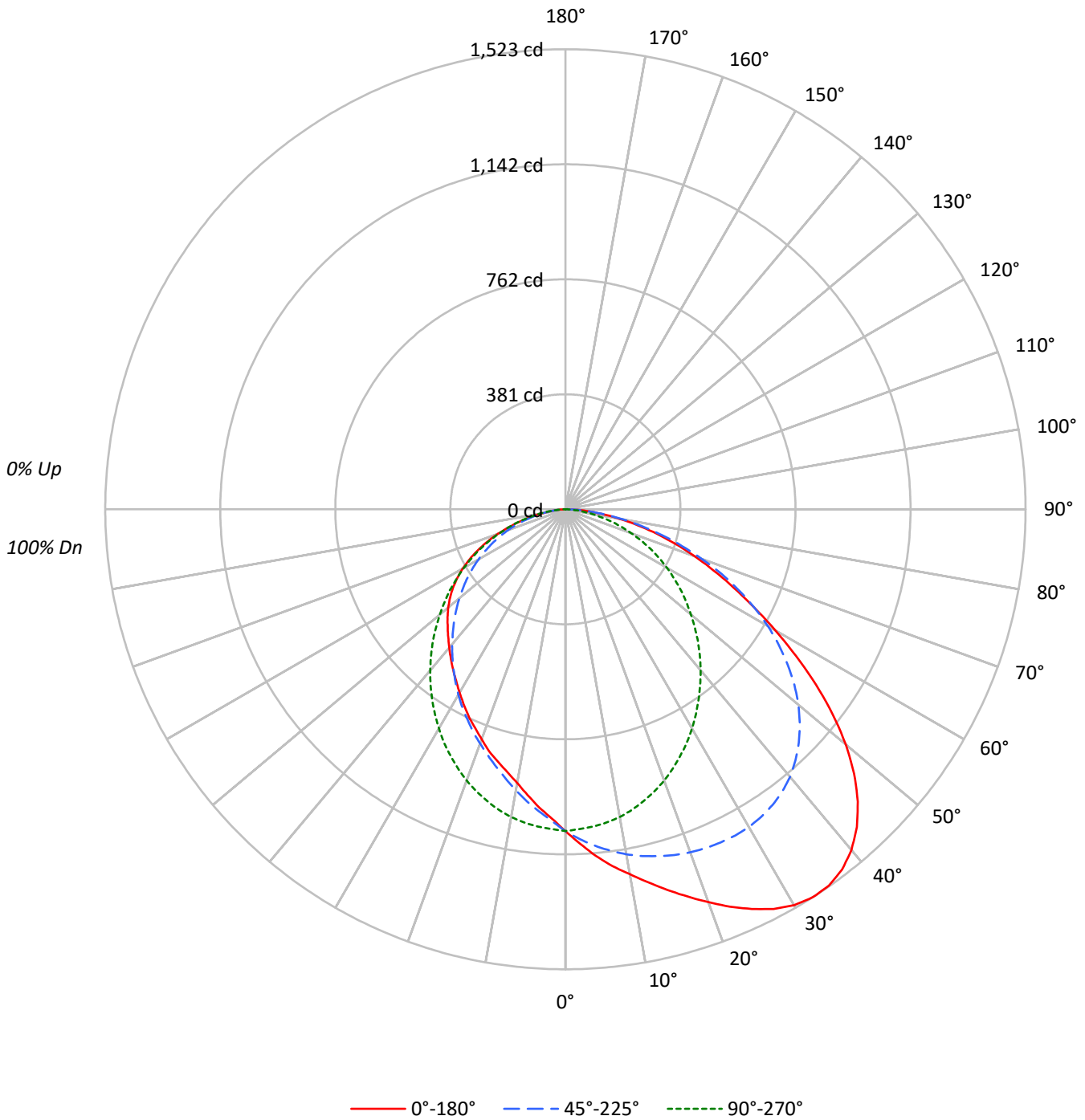
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3299.4 lumens
Efficiency: N/A
Efficacy: 72.0 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): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10255	10255	10255
5°	11128	10193	9579
10°	11988	10114	8988
15°	13004	9967	8618
20°	14179	9792	8299
25°	15510	9562	8041
30°	16825	9311	7783
35°	17871	9036	7616
40°	18505	8748	7517
45°	18634	8447	7499
50°	18144	8125	7580
55°	16990	7833	7629
60°	15444	7477	7554
65°	14003	7071	7260
70°	12816	6556	6668
75°	11628	5896	5732
80°	10168	4929	4419
85°	8561	3579	3292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	3.1
10°-20°	294.2	8.9
20°-30°	461.0	14.0
30°-40°	577.9	17.5
40°-50°	615.2	18.6
50°-60°	555.4	16.8
60°-70°	411.1	12.5
70°-80°	225.6	6.8
80°-90°	57.9	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°	856.3	26.0
0°-40°	1434.2	43.5
0°-60°	2604.8	78.9
0°-90°	3299.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3299.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1065	1065	1065	1065	1065	
5°	1152	1118	1055	1004	991	112
15°	1305	1189	1000	883	865	372
25°	1460	1217	900	768	757	676
35°	1521	1195	769	646	648	948
45°	1369	1092	620	520	551	1049
55°	1012	899	467	395	454	903
65°	615	633	310	268	319	613
75°	313	331	158	137	154	332
85°	78	76	32	30	30	92
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°	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1108.1	1105.9	1103.3	1102.4	1098.5	1093.2	1088.4	1088.4	1082.7	1069.2	1059.5
5°	1151.5	1148.0	1141.4	1136.1	1127.8	1117.8	1107.7	1101.6	1088.0	1067.4	1054.7
7.5°	1191.3	1186.9	1178.6	1168.5	1155.0	1140.1	1123.4	1110.3	1089.7	1062.2	1046.0
10°	1226.3	1222.4	1212.3	1200.1	1180.8	1159.8	1135.3	1115.6	1087.5	1053.4	1034.6
12.5°	1264.9	1260.9	1246.9	1230.3	1204.0	1176.0	1143.6	1116.4	1081.9	1040.7	1019.2
15°	1304.7	1299.5	1283.7	1261.4	1226.3	1188.7	1148.8	1113.8	1072.7	1025.4	1000.0
17.5°	1344.1	1338.9	1319.2	1290.7	1246.9	1200.1	1151.0	1107.7	1059.5	1006.5	979.0
20°	1384.0	1378.7	1353.7	1317.8	1264.9	1208.4	1150.6	1098.5	1043.8	985.1	955.8
22.5°	1423.8	1417.7	1387.5	1343.7	1279.7	1214.1	1145.8	1085.8	1024.1	960.6	929.1
25°	1460.1	1454.0	1420.7	1369.1	1295.5	1216.7	1137.5	1068.3	1002.2	933.4	900.2
27.5°	1491.7	1484.2	1449.6	1392.7	1309.1	1217.6	1126.5	1048.6	976.8	904.1	870.4
30°	1513.5	1507.0	1470.2	1409.3	1317.0	1214.5	1112.5	1025.4	947.4	872.6	837.6
32.5°	1523.2	1517.5	1481.1	1417.2	1318.3	1206.6	1095.4	999.5	916.8	839.3	803.8
35°	1520.6	1514.9	1480.3	1415.9	1314.3	1195.2	1074.0	970.2	884.0	804.7	768.8
37.5°	1503.9	1497.3	1465.8	1404.1	1303.0	1178.6	1049.5	938.2	848.5	769.3	732.9
40°	1472.4	1465.8	1438.7	1381.8	1283.7	1156.3	1021.4	904.1	812.2	732.0	696.1
42.5°	1427.3	1420.3	1398.8	1346.7	1256.1	1126.9	989.5	867.8	773.6	696.1	658.5
45°	1368.6	1361.6	1347.2	1303.0	1220.2	1092.4	953.1	828.4	733.3	655.4	620.4
47.5°	1295.9	1289.8	1282.8	1248.7	1176.0	1052.5	912.4	786.3	691.3	617.3	581.4
50°	1211.4	1205.3	1207.5	1184.3	1124.8	1006.5	867.8	742.1	648.0	574.9	542.5
52.5°	1115.6	1110.8	1121.3	1111.2	1065.2	955.3	820.0	696.6	603.8	534.6	503.5
55°	1012.2	1007.0	1027.1	1030.2	998.7	898.8	765.7	649.3	559.1	495.2	466.7
57.5°	905.9	901.5	927.3	941.8	926.0	838.0	711.0	600.7	513.1	454.0	425.6
60°	802.1	798.6	825.7	849.4	847.6	773.6	654.1	548.2	467.2	412.4	388.3
62.5°	704.5	700.5	727.7	755.7	765.7	704.9	597.6	496.5	421.2	370.8	349.4
65°	614.7	610.8	634.0	662.9	681.2	633.1	536.8	443.1	374.8	328.8	310.4
67.5°	532.4	532.4	546.8	573.5	595.9	559.5	474.6	392.3	327.1	289.8	271.4
70°	455.3	454.9	465.4	484.2	510.1	480.7	411.6	338.9	282.0	249.1	232.9
72.5°	382.2	385.3	389.2	403.7	430.8	405.4	348.9	286.3	237.7	208.8	195.3
75°	312.6	312.2	317.9	330.6	350.3	331.4	286.3	235.1	194.0	170.3	158.5
77.5°	246.1	245.6	250.4	257.9	274.5	259.6	225.9	187.8	151.0	131.3	123.0
80°	183.4	183.4	187.8	191.8	204.0	192.2	168.6	140.5	110.8	95.4	88.9
82.5°	127.4	130.0	128.3	133.5	140.5	130.5	115.6	96.3	73.6	63.0	58.7
85°	77.5	79.7	77.5	81.9	84.9	76.2	68.7	57.4	42.5	35.5	32.4
87.5°	39.8	39.4	39.0	41.2	42.0	36.8	32.4	27.6	18.8	14.4	12.3
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°	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1053.8	1056.5	1052.5	1038.1	1032.4	1026.3	1023.6	1021.0	1025.8	1024.5
5°	1045.1	1042.0	1031.9	1013.6	1003.9	993.9	989.0	986.0	992.5	991.2
7.5°	1033.3	1024.5	1009.6	987.3	975.0	961.5	954.9	950.9	955.3	954.4
10°	1018.4	1003.9	985.5	958.8	944.4	929.5	922.0	916.4	919.9	919.4
12.5°	999.5	980.7	958.4	928.2	913.3	898.0	891.4	887.5	891.8	890.5
15°	978.5	955.8	929.9	899.3	883.1	869.1	864.3	861.2	864.7	864.7
17.5°	955.3	928.6	900.2	869.1	853.7	842.8	838.0	835.8	837.6	840.2
20°	929.5	899.7	869.1	838.9	825.7	814.3	810.0	807.8	811.7	810.0
22.5°	901.0	869.5	837.6	809.1	797.3	785.9	781.5	780.2	784.6	782.8
25°	870.8	836.7	805.2	779.3	767.5	757.9	753.9	752.6	754.8	757.0
27.5°	842.4	803.8	772.8	749.5	739.0	729.8	726.3	724.2	725.9	728.5
30°	807.8	770.6	739.9	718.5	708.4	699.6	697.0	695.3	697.9	700.1
32.5°	775.4	737.7	707.1	686.1	677.3	669.0	668.6	667.7	670.7	673.4
35°	740.4	703.6	673.8	654.1	645.8	638.8	640.1	641.4	644.9	648.0
37.5°	704.9	669.0	640.5	622.6	614.7	609.0	612.9	614.7	619.5	622.6
40°	669.0	633.1	606.8	590.6	582.7	580.1	585.8	589.7	595.4	598.1
42.5°	632.2	598.9	572.7	557.8	551.2	551.2	558.7	564.8	571.4	574.0
45°	595.4	563.0	538.1	524.5	519.7	523.2	532.0	539.8	548.2	550.8
47.5°	558.2	526.7	503.9	491.7	489.0	494.3	505.2	515.8	525.4	528.9
50°	521.0	492.5	469.8	458.4	458.4	465.0	479.0	492.1	502.6	506.1
52.5°	483.8	456.6	433.4	425.1	426.9	436.1	452.3	465.8	477.7	481.2
55°	446.1	419.4	399.3	392.3	395.4	406.7	423.4	439.1	450.5	454.5
57.5°	408.9	383.5	365.1	359.5	363.8	376.5	395.8	409.4	421.2	424.7
60°	371.3	345.4	331.0	326.6	332.3	345.4	365.1	377.8	388.8	392.3
62.5°	334.1	310.0	297.3	293.3	299.9	313.9	333.2	344.6	352.9	356.4
65°	296.4	275.0	263.1	260.5	267.5	281.1	299.5	309.1	315.2	318.7
67.5°	259.2	240.8	229.9	227.7	235.1	247.4	264.4	269.7	275.4	278.9
70°	222.4	205.8	196.6	195.3	201.8	213.7	228.1	230.7	233.8	236.9
72.5°	186.1	172.9	163.7	163.3	169.4	179.1	190.9	191.3	192.2	195.3
75°	151.0	139.2	132.2	133.5	137.0	144.9	154.1	151.5	151.9	154.1
77.5°	117.3	107.7	102.9	103.8	106.4	112.1	118.2	115.1	113.4	115.6
80°	84.5	76.2	74.4	74.9	76.6	80.6	84.1	81.4	77.9	79.7
82.5°	55.6	50.3	49.5	49.9	51.2	53.4	54.3	50.3	49.5	50.8
85°	30.6	28.5	28.5	29.8	30.2	30.6	30.6	28.5	28.9	29.8
87.5°	12.3	12.3	13.6	14.9	14.0	12.3	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)