

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-32-34L850-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-32-34L850-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

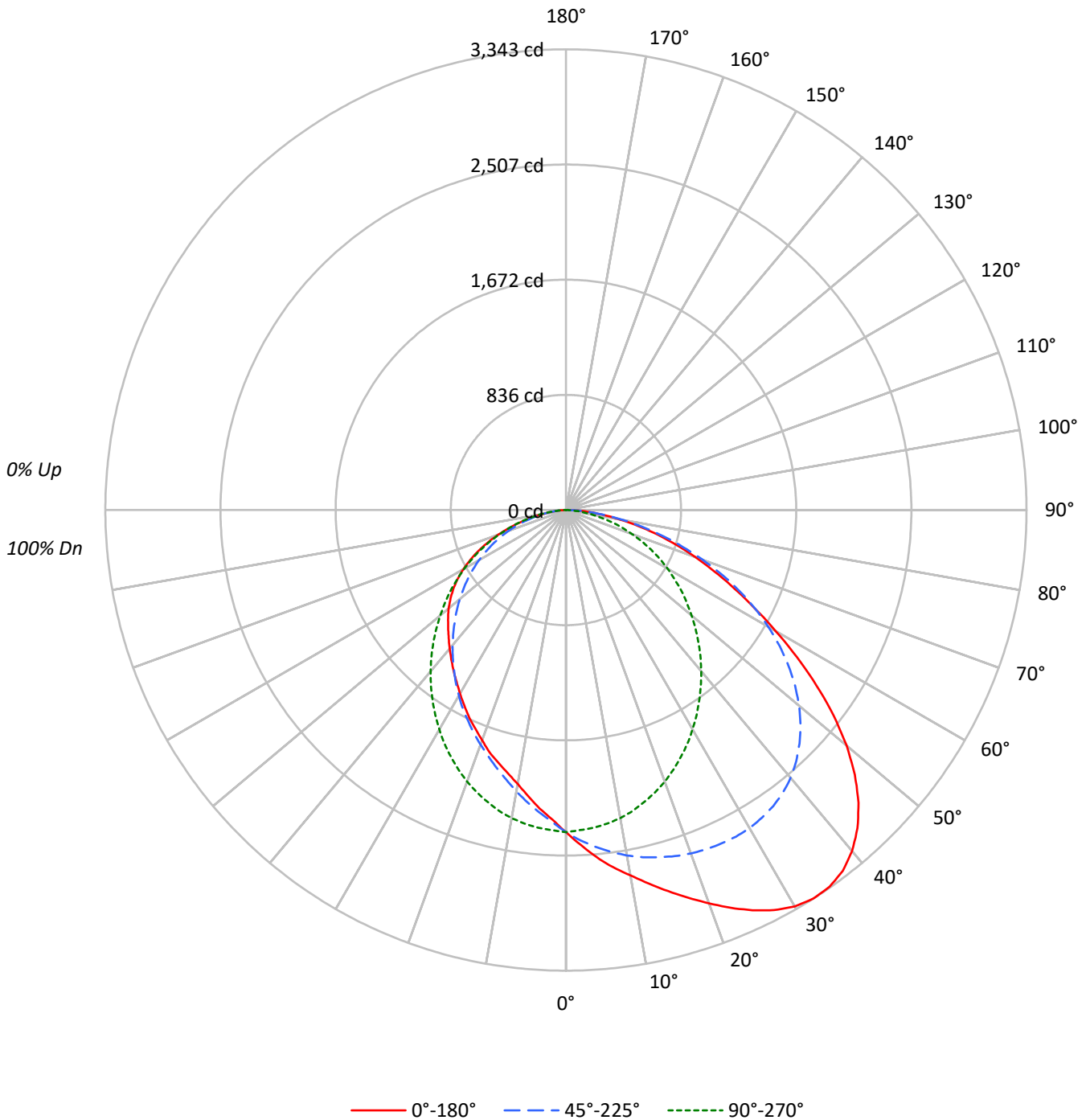
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7240.5 lumens
Efficiency: N/A
Efficacy: 99.2 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): 73
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°	22505	22505	22505
5°	24420	22368	21021
10°	26309	22194	19724
15°	28536	21871	18912
20°	31115	21488	18211
25°	34037	20984	17646
30°	36923	20432	17079
35°	39217	19828	16713
40°	40607	19198	16494
45°	40892	18536	16457
50°	39818	17829	16635
55°	37284	17191	16739
60°	33892	16409	16576
65°	30728	15518	15935
70°	28126	14387	14632
75°	25517	12937	12580
80°	22321	10811	9697
85°	18789	7854	7213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.0	3.1
10°-20°	645.7	8.9
20°-30°	1011.5	14.0
30°-40°	1268.1	17.5
40°-50°	1350.0	18.6
50°-60°	1218.7	16.8
60°-70°	902.2	12.5
70°-80°	495.0	6.8
80°-90°	127.1	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°	1879.2	26.0
0°-40°	3147.4	43.5
0°-60°	5716.1	78.9
0°-90°	7240.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7240.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2338	2338	2338	2338	2338	
5°	2527	2453	2314	2203	2175	246
15°	2863	2608	2194	1938	1898	817
25°	3204	2670	1975	1684	1661	1483
35°	3337	2623	1687	1417	1422	2081
45°	3003	2397	1361	1140	1209	2303
55°	2221	1972	1024	868	997	1981
65°	1349	1389	681	587	700	1346
75°	686	727	348	301	338	729
85°	170	167	71	66	65	201
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°	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6
2.5°	2431.7	2426.9	2421.2	2419.3	2410.6	2399.1	2388.5	2388.5	2376.0	2346.2	2325.1
5°	2526.9	2519.2	2504.8	2493.2	2475.0	2452.9	2430.8	2417.3	2387.6	2342.4	2314.5
7.5°	2614.3	2604.7	2586.4	2564.3	2534.6	2501.9	2465.4	2436.6	2391.4	2330.9	2295.3
10°	2691.2	2682.5	2660.4	2633.5	2591.2	2545.1	2491.3	2448.1	2386.6	2311.6	2270.3
12.5°	2775.7	2767.1	2736.3	2699.8	2642.2	2580.7	2509.6	2450.0	2374.1	2283.8	2236.7
15°	2863.1	2851.6	2817.0	2768.0	2691.2	2608.5	2521.1	2444.2	2353.9	2250.2	2194.4
17.5°	2949.6	2938.1	2894.8	2832.4	2736.3	2633.5	2525.9	2430.8	2325.1	2208.8	2148.3
20°	3037.0	3025.5	2970.7	2892.0	2775.7	2651.8	2524.9	2410.6	2290.5	2161.8	2097.4
22.5°	3124.5	3111.0	3044.7	2948.6	2808.4	2664.3	2514.4	2382.7	2247.3	2108.0	2038.8
25°	3204.2	3190.8	3117.7	3004.4	2843.0	2670.0	2496.1	2344.3	2199.2	2048.4	1975.4
27.5°	3273.4	3257.1	3181.2	3056.3	2872.7	2671.9	2472.1	2301.1	2143.5	1984.0	1910.0
30°	3321.4	3307.0	3226.3	3092.8	2890.0	2665.2	2441.4	2250.2	2079.1	1914.8	1838.0
32.5°	3342.6	3330.1	3250.3	3110.1	2892.9	2647.9	2403.9	2193.5	2011.9	1841.8	1764.0
35°	3336.8	3324.3	3248.4	3107.2	2884.3	2622.9	2356.8	2129.1	1939.8	1765.9	1687.1
37.5°	3300.3	3285.9	3216.7	3081.2	2859.3	2586.4	2303.0	2059.0	1862.0	1688.1	1608.4
40°	3231.1	3216.7	3157.1	3032.2	2817.0	2537.4	2241.5	1984.0	1782.3	1606.4	1527.6
42.5°	3132.2	3116.8	3069.7	2955.4	2756.5	2473.1	2171.4	1904.3	1697.7	1527.6	1445.0
45°	3003.4	2988.0	2956.3	2859.3	2677.7	2397.2	2091.6	1817.8	1609.3	1438.3	1361.4
47.5°	2843.9	2830.5	2815.1	2740.2	2580.7	2309.7	2002.3	1725.6	1517.1	1354.7	1275.9
50°	2658.5	2645.0	2649.8	2598.9	2468.3	2208.8	1904.3	1628.5	1422.0	1261.5	1190.4
52.5°	2448.1	2437.5	2460.6	2438.5	2337.6	2096.4	1799.5	1528.6	1324.9	1173.1	1104.9
55°	2221.3	2209.8	2254.0	2260.7	2191.5	1972.5	1680.4	1424.8	1226.9	1086.6	1024.2
57.5°	1987.9	1978.3	2034.9	2066.6	2032.1	1838.9	1560.3	1318.2	1126.0	996.3	933.9
60°	1760.2	1752.5	1812.0	1863.9	1860.1	1697.7	1435.4	1202.9	1025.2	905.1	852.2
62.5°	1545.9	1537.3	1596.8	1658.3	1680.4	1546.9	1311.5	1089.5	924.3	813.8	766.7
65°	1348.9	1340.3	1391.2	1454.6	1495.0	1389.3	1177.9	972.3	822.4	721.5	681.2
67.5°	1168.3	1168.3	1200.0	1258.6	1307.6	1227.9	1041.5	860.9	717.7	636.0	595.7
70°	999.2	998.3	1021.3	1062.6	1119.3	1054.9	903.1	743.6	618.7	546.7	511.1
72.5°	838.8	845.5	854.1	885.8	945.4	889.7	765.7	628.4	521.7	458.3	428.5
75°	686.0	685.0	697.5	725.4	768.6	727.3	628.4	515.9	425.6	373.7	347.8
77.5°	540.0	539.0	549.6	565.9	602.4	569.7	495.8	412.2	331.5	288.2	270.0
80°	402.6	402.6	412.2	420.8	447.7	421.8	369.9	308.4	243.1	209.5	195.0
82.5°	279.6	285.4	281.5	293.0	308.4	286.3	253.6	211.4	161.4	138.4	128.7
85°	170.1	174.9	170.1	179.7	186.4	167.2	150.8	125.9	93.2	77.8	71.1
87.5°	87.4	86.5	85.5	90.3	92.2	80.7	71.1	60.5	41.3	31.7	26.9
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°	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6	2337.6
2.5°	2312.6	2318.4	2309.7	2278.0	2265.5	2252.1	2246.3	2240.5	2251.1	2248.2
5°	2293.4	2286.7	2264.6	2224.2	2203.1	2181.0	2170.4	2163.7	2178.1	2175.2
7.5°	2267.5	2248.2	2215.6	2166.6	2139.7	2109.9	2095.5	2086.8	2096.4	2094.5
10°	2234.8	2203.1	2162.7	2104.1	2072.4	2039.7	2023.4	2010.9	2018.6	2017.6
12.5°	2193.5	2152.2	2103.2	2036.9	2004.2	1970.6	1956.2	1947.5	1957.1	1954.2
15°	2147.4	2097.4	2040.7	1973.5	1937.9	1907.2	1896.6	1889.9	1897.5	1897.5
17.5°	2096.4	2037.8	1975.4	1907.2	1873.5	1849.5	1838.9	1834.1	1838.0	1843.7
20°	2039.7	1974.4	1907.2	1840.9	1812.0	1787.1	1777.5	1772.6	1781.3	1777.5
22.5°	1977.3	1908.1	1838.0	1775.5	1749.6	1724.6	1715.0	1712.1	1721.7	1717.9
25°	1911.0	1836.1	1766.9	1710.2	1684.3	1663.1	1654.5	1651.6	1656.4	1661.2
27.5°	1848.5	1764.0	1695.8	1644.9	1621.8	1601.6	1593.9	1589.1	1593.0	1598.7
30°	1772.6	1691.0	1623.7	1576.6	1554.5	1535.3	1529.6	1525.7	1531.5	1536.3
32.5°	1701.5	1618.9	1551.7	1505.5	1486.3	1468.1	1467.1	1465.2	1471.9	1477.7
35°	1624.7	1544.0	1478.6	1435.4	1417.2	1401.8	1404.7	1407.5	1415.2	1422.0
37.5°	1546.9	1468.1	1405.6	1366.2	1348.9	1336.5	1345.1	1348.9	1359.5	1366.2
40°	1468.1	1389.3	1331.6	1296.1	1278.8	1273.0	1285.5	1294.2	1306.7	1312.4
42.5°	1387.4	1314.4	1256.7	1224.0	1209.6	1209.6	1226.0	1239.4	1253.8	1259.6
45°	1306.7	1235.6	1180.8	1151.0	1140.5	1148.1	1167.4	1184.6	1202.9	1208.7
47.5°	1225.0	1155.8	1105.9	1079.0	1073.2	1084.7	1108.7	1131.8	1152.9	1160.6
50°	1143.3	1080.9	1030.9	1005.9	1005.9	1020.4	1051.1	1079.9	1103.0	1110.7
52.5°	1061.7	1002.1	951.2	932.9	936.8	956.9	992.5	1022.3	1048.2	1055.9
55°	979.0	920.4	876.2	860.9	867.6	892.6	929.1	963.7	988.6	997.3
57.5°	897.4	841.6	801.3	788.8	798.4	826.3	868.5	898.3	924.3	932.0
60°	814.7	758.1	726.4	716.7	729.2	758.1	801.3	829.2	853.2	860.9
62.5°	733.1	680.2	652.4	643.7	658.1	688.9	731.2	756.1	774.4	782.1
65°	650.5	603.4	577.4	571.7	587.0	616.8	657.2	678.3	691.8	699.5
67.5°	568.8	528.4	504.4	499.6	515.9	542.8	580.3	591.8	604.3	612.0
70°	488.1	451.6	431.4	428.5	442.9	468.9	500.6	506.3	513.1	519.8
72.5°	408.3	379.5	359.3	358.4	371.8	393.0	418.9	419.9	421.8	428.5
75°	331.5	305.5	290.2	293.0	300.7	318.0	338.2	332.4	333.4	338.2
77.5°	257.5	236.4	225.8	227.7	233.5	246.0	259.4	252.7	248.8	253.6
80°	185.4	167.2	163.3	164.3	168.1	176.8	184.5	178.7	171.0	174.9
82.5°	122.0	110.5	108.6	109.5	112.4	117.2	119.1	110.5	108.6	111.5
85°	67.3	62.5	62.5	65.3	66.3	67.3	67.3	62.5	63.4	65.3
87.5°	26.9	26.9	29.8	32.7	30.7	26.9	23.1	15.4	15.4	18.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)