

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-35-37L850-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-35-37L850-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

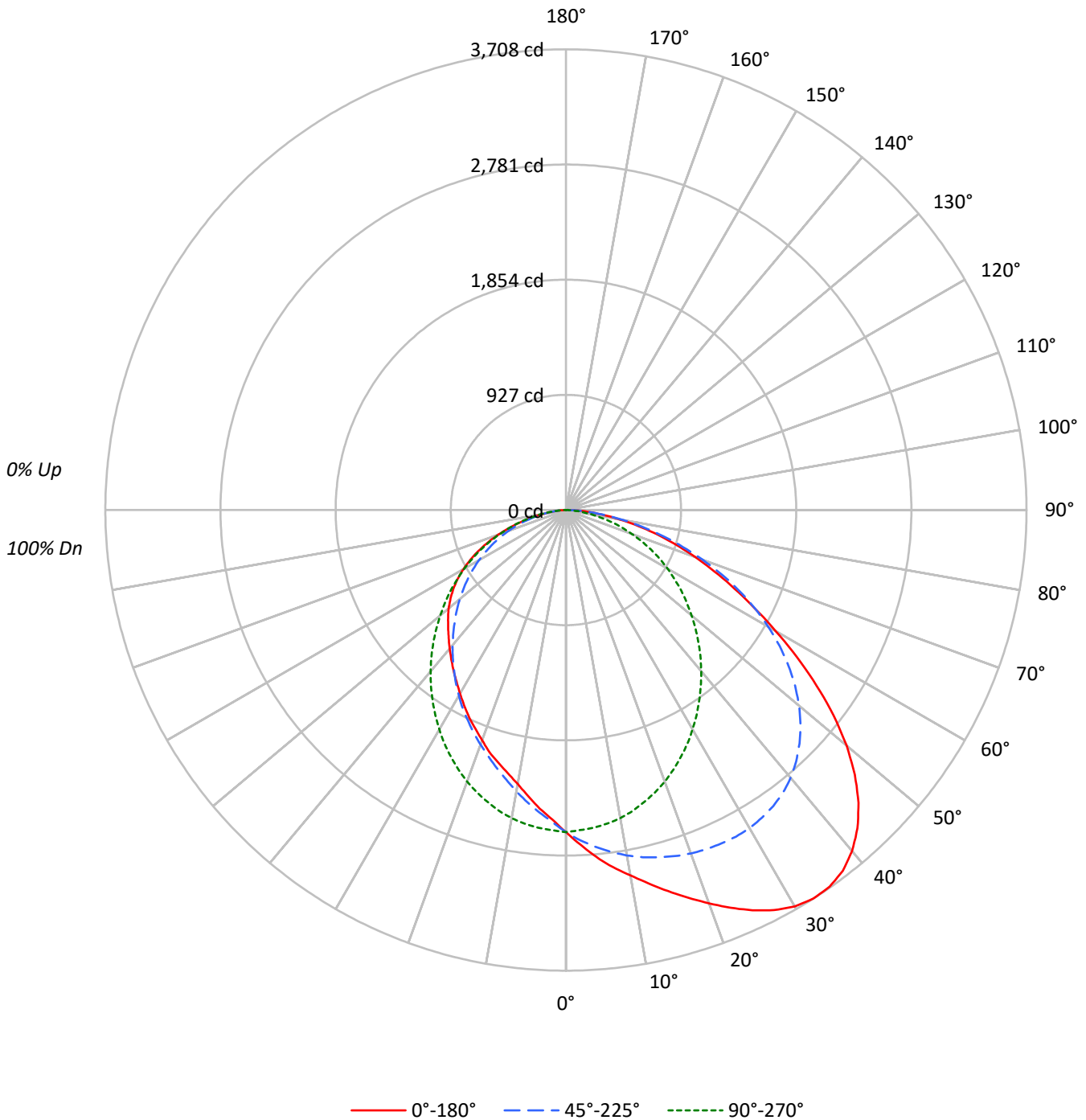
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8030.9 lumens  
Efficiency: N/A  
Efficacy: 99.1 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): 81  
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°	24962	24962	24962
5°	27086	24810	23317
10°	29181	24618	21877
15°	31652	24260	20977
20°	34512	23834	20198
25°	37753	23274	19573
30°	40954	22662	18943
35°	43498	21993	18537
40°	45041	21295	18295
45°	45356	20560	18252
50°	44164	19776	18451
55°	41354	19067	18567
60°	37591	18201	18384
65°	34084	17213	17673
70°	31197	15957	16228
75°	28303	14351	13953
80°	24755	11992	10756
85°	20833	8715	8008



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	246.2	3.1
10°-20°	716.2	8.9
20°-30°	1122.0	14.0
30°-40°	1406.6	17.5
40°-50°	1497.4	18.6
50°-60°	1351.8	16.8
60°-70°	1000.7	12.5
70°-80°	549.1	6.8
80°-90°	141.0	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°	2084.4	26.0
0°-40°	3491.0	43.5
0°-60°	6340.2	78.9
0°-90°	8030.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8030.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2593	2593	2593	2593	2593	
5°	2803	2721	2567	2444	2413	273
15°	3176	2893	2434	2150	2105	906
25°	3554	2962	2191	1868	1843	1645
35°	3701	2909	1871	1572	1577	2308
45°	3331	2659	1510	1265	1341	2554
55°	2464	2188	1136	962	1106	2197
65°	1496	1541	756	651	776	1493
75°	761	807	386	334	375	809
85°	189	185	79	74	72	223
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°	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8
2.5°	2697.2	2691.9	2685.5	2683.4	2673.8	2661.0	2649.3	2649.3	2635.4	2602.4	2578.9
5°	2802.7	2794.2	2778.2	2765.4	2745.2	2720.7	2696.2	2681.2	2648.2	2598.1	2567.2
7.5°	2899.7	2889.0	2868.8	2844.3	2811.3	2775.0	2734.5	2702.6	2652.5	2585.3	2545.9
10°	2985.0	2975.4	2950.9	2921.0	2874.1	2823.0	2763.3	2715.3	2647.1	2564.0	2518.2
12.5°	3078.7	3069.1	3035.0	2994.6	2930.6	2862.4	2783.5	2717.5	2633.3	2533.1	2480.9
15°	3175.7	3162.9	3124.6	3070.2	2985.0	2893.3	2796.3	2711.1	2610.9	2495.8	2434.0
17.5°	3271.6	3258.8	3210.9	3141.6	3035.0	2921.0	2801.7	2696.2	2578.9	2450.0	2382.9
20°	3368.6	3355.8	3295.1	3207.7	3078.7	2941.3	2800.6	2673.8	2540.6	2397.8	2326.4
22.5°	3465.6	3450.7	3377.1	3270.6	3115.0	2955.1	2788.9	2642.9	2492.6	2338.1	2261.4
25°	3554.0	3539.1	3458.1	3332.4	3153.3	2961.5	2768.6	2600.3	2439.3	2272.0	2191.0
27.5°	3630.8	3612.6	3528.5	3389.9	3186.4	2963.6	2742.0	2552.3	2377.5	2200.6	2118.6
30°	3684.0	3668.1	3578.5	3430.4	3205.6	2956.2	2707.9	2495.8	2306.1	2123.9	2038.6
32.5°	3707.5	3693.6	3605.2	3449.6	3208.8	2937.0	2666.3	2432.9	2231.5	2042.9	1956.6
35°	3701.1	3687.2	3603.1	3446.4	3199.2	2909.3	2614.1	2361.5	2151.6	1958.7	1871.3
37.5°	3660.6	3644.6	3567.9	3417.6	3171.5	2868.8	2554.4	2283.7	2065.3	1872.4	1783.9
40°	3583.9	3567.9	3501.8	3363.3	3124.6	2814.5	2486.2	2200.6	1976.8	1781.8	1694.4
42.5°	3474.1	3457.1	3404.8	3278.0	3057.4	2743.1	2408.4	2112.2	1883.1	1694.4	1602.8
45°	3331.3	3314.3	3279.1	3171.5	2970.0	2658.9	2320.0	2016.3	1785.0	1595.3	1510.1
47.5°	3154.4	3139.5	3122.4	3039.3	2862.4	2561.9	2220.9	1914.0	1682.7	1502.6	1415.2
50°	2948.7	2933.8	2939.1	2882.7	2737.7	2450.0	2112.2	1806.3	1577.2	1399.2	1320.4
52.5°	2715.3	2703.6	2729.2	2704.7	2592.8	2325.3	1996.0	1695.5	1469.6	1301.2	1225.5
55°	2463.8	2451.1	2500.1	2507.5	2430.8	2187.8	1863.9	1580.4	1360.9	1205.3	1136.0
57.5°	2204.9	2194.2	2257.1	2292.3	2253.9	2039.7	1730.7	1462.1	1249.0	1105.1	1035.8
60°	1952.3	1943.8	2009.9	2067.4	2063.1	1883.1	1592.1	1334.2	1137.1	1003.9	945.3
62.5°	1714.7	1705.1	1771.2	1839.4	1863.9	1715.7	1454.6	1208.5	1025.2	902.6	850.4
65°	1496.2	1486.6	1543.1	1613.4	1658.2	1541.0	1306.5	1078.5	912.2	800.3	755.6
67.5°	1295.9	1295.9	1331.0	1396.0	1450.4	1361.9	1155.2	954.8	796.1	705.5	660.7
70°	1108.3	1107.2	1132.8	1178.6	1241.5	1170.1	1001.7	824.8	686.3	606.4	566.9
72.5°	930.3	937.8	947.4	982.6	1048.6	986.8	849.3	697.0	578.7	508.3	475.3
75°	760.9	759.8	773.7	804.6	852.5	806.7	697.0	572.3	472.1	414.5	385.8
77.5°	598.9	597.8	609.6	627.7	668.2	631.9	549.9	457.2	367.7	319.7	299.5
80°	446.5	446.5	457.2	466.8	496.6	467.8	410.3	342.1	269.6	232.3	216.3
82.5°	310.1	316.5	312.2	325.0	342.1	317.6	281.3	234.4	179.0	153.5	142.8
85°	188.6	194.0	188.6	199.3	206.7	185.4	167.3	139.6	103.4	86.3	78.9
87.5°	97.0	95.9	94.8	100.2	102.3	89.5	78.9	67.1	45.8	35.2	29.8
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°	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8	2592.8
2.5°	2565.1	2571.5	2561.9	2526.7	2512.9	2497.9	2491.6	2485.2	2496.9	2493.7
5°	2543.8	2536.3	2511.8	2467.0	2443.6	2419.1	2407.4	2399.9	2415.9	2412.7
7.5°	2515.0	2493.7	2457.4	2403.1	2373.3	2340.2	2324.2	2314.6	2325.3	2323.2
10°	2478.8	2443.6	2398.8	2333.8	2298.7	2262.4	2244.3	2230.5	2239.0	2237.9
12.5°	2432.9	2387.1	2332.8	2259.2	2223.0	2185.7	2169.7	2160.1	2170.8	2167.6
15°	2381.8	2326.4	2263.5	2188.9	2149.5	2115.4	2103.6	2096.2	2104.7	2104.7
17.5°	2325.3	2260.3	2191.0	2115.4	2078.1	2051.4	2039.7	2034.4	2038.6	2045.0
20°	2262.4	2190.0	2115.4	2041.8	2009.9	1982.2	1971.5	1966.2	1975.8	1971.5
22.5°	2193.2	2116.4	2038.6	1969.4	1940.6	1912.9	1902.2	1899.0	1909.7	1905.4
25°	2119.6	2036.5	1959.8	1896.9	1868.1	1844.7	1835.1	1831.9	1837.2	1842.6
27.5°	2050.4	1956.6	1880.9	1824.4	1798.9	1776.5	1768.0	1762.6	1766.9	1773.3
30°	1966.2	1875.6	1801.0	1748.8	1724.3	1703.0	1696.6	1692.3	1698.7	1704.0
32.5°	1887.3	1795.7	1721.1	1669.9	1648.6	1628.4	1627.3	1625.2	1632.6	1639.0
35°	1802.1	1712.5	1640.1	1592.1	1571.9	1554.8	1558.0	1561.2	1569.7	1577.2
37.5°	1715.7	1628.4	1559.1	1515.4	1496.2	1482.4	1491.9	1496.2	1507.9	1515.4
40°	1628.4	1541.0	1477.0	1437.6	1418.4	1412.0	1425.9	1435.5	1449.3	1455.7
42.5°	1538.8	1457.8	1393.9	1357.7	1341.7	1341.7	1359.8	1374.7	1390.7	1397.1
45°	1449.3	1370.5	1309.7	1276.7	1265.0	1273.5	1294.8	1314.0	1334.2	1340.6
47.5°	1358.7	1282.0	1226.6	1196.8	1190.4	1203.1	1229.8	1255.4	1278.8	1287.3
50°	1268.2	1198.9	1143.5	1115.8	1115.8	1131.7	1165.9	1197.8	1223.4	1231.9
52.5°	1177.6	1111.5	1055.0	1034.8	1039.0	1061.4	1100.8	1133.9	1162.7	1171.2
55°	1085.9	1020.9	971.9	954.8	962.3	990.0	1030.5	1068.9	1096.6	1106.2
57.5°	995.3	933.5	888.8	874.9	885.6	916.5	963.4	996.4	1025.2	1033.7
60°	903.7	840.8	805.7	795.0	808.8	840.8	888.8	919.7	946.3	954.8
62.5°	813.1	754.5	723.6	714.0	730.0	764.1	811.0	838.7	858.9	867.5
65°	721.5	669.2	640.5	634.1	651.1	684.2	728.9	752.4	767.3	775.8
67.5°	630.9	586.1	559.5	554.2	572.3	602.1	643.7	656.5	670.3	678.8
70°	541.4	500.9	478.5	475.3	491.3	520.1	555.2	561.6	569.1	576.5
72.5°	452.9	420.9	398.6	397.5	412.4	435.9	464.6	465.7	467.8	475.3
75°	367.7	338.9	321.8	325.0	333.6	352.7	375.1	368.7	369.8	375.1
77.5°	285.6	262.2	250.4	252.6	259.0	272.8	287.7	280.3	276.0	281.3
80°	205.7	185.4	181.2	182.2	186.5	196.1	204.6	198.2	189.7	194.0
82.5°	135.3	122.6	120.4	121.5	124.7	130.0	132.1	122.6	120.4	123.6
85°	74.6	69.3	69.3	72.5	73.5	74.6	74.6	69.3	70.3	72.5
87.5°	29.8	29.8	33.0	36.2	34.1	29.8	25.6	17.1	17.1	20.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)