

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-39-42L935-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-39-42L935-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

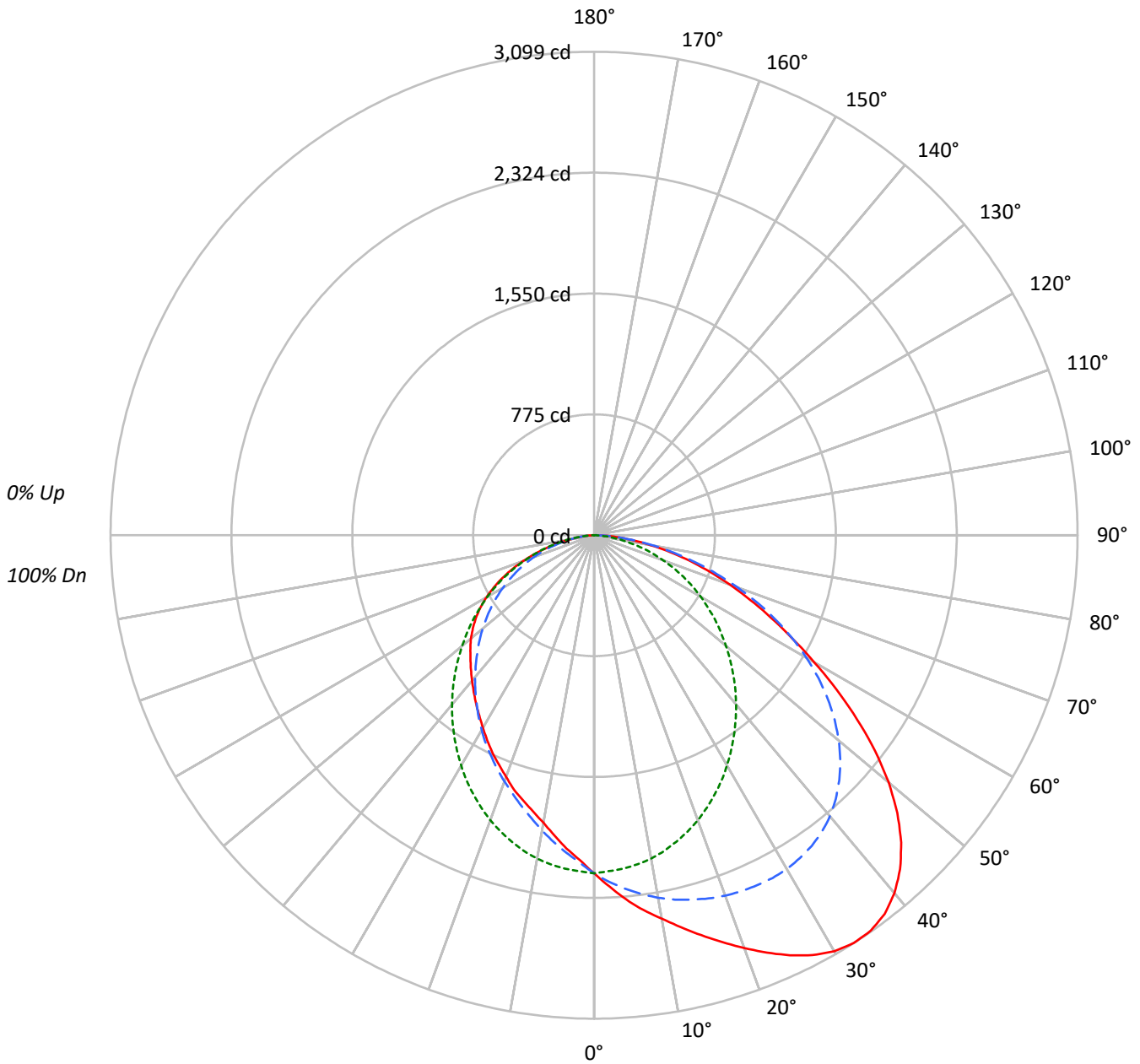
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6712.0 lumens
Efficiency: N/A
Efficacy: 73.0 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): 92
Input Voltage (V): 120
Input Current (A_{in}): 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



— 0°-180° - - 45°-225° - - - 90°-270°



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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°	20862	20862	20862
5°	22637	20735	19487
10°	24388	20574	18285
15°	26454	20276	17532
20°	28844	19920	16881
25°	31552	19452	16358
30°	34228	18941	15832
35°	36355	18381	15493
40°	37644	17797	15290
45°	37907	17184	15254
50°	36911	16528	15421
55°	34563	15935	15518
60°	31418	15211	15365
65°	28487	14386	14771
70°	26074	13337	13562
75°	23654	11992	11661
80°	20691	10024	8987
85°	17409	7279	6694



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.8	3.1
10°-20°	598.6	8.9
20°-30°	937.7	14.0
30°-40°	1175.6	17.5
40°-50°	1251.5	18.6
50°-60°	1129.8	16.8
60°-70°	836.4	12.5
70°-80°	458.9	6.8
80°-90°	117.8	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°	1742.1	26.0
0°-40°	2917.6	43.5
0°-60°	5298.9	78.9
0°-90°	6712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6712.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2167	2167	2167	2167	2167	
5°	2342	2274	2146	2042	2016	228
15°	2654	2418	2034	1796	1759	757
25°	2970	2475	1831	1561	1540	1375
35°	3093	2432	1564	1314	1318	1929
45°	2784	2222	1262	1057	1120	2135
55°	2059	1828	949	804	924	1836
65°	1250	1288	632	544	648	1248
75°	636	674	322	279	314	676
85°	158	155	66	62	61	186
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°	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0
2.5°	2254.3	2249.8	2244.5	2242.7	2234.7	2224.0	2214.2	2214.2	2202.6	2175.0	2155.4
5°	2342.4	2335.3	2321.9	2311.3	2294.3	2273.8	2253.4	2240.9	2213.3	2171.4	2145.6
7.5°	2423.5	2414.6	2397.6	2377.2	2349.6	2319.3	2285.4	2258.7	2216.8	2160.7	2127.8
10°	2494.7	2486.7	2466.2	2441.3	2402.1	2359.3	2309.5	2269.4	2212.4	2142.9	2104.6
12.5°	2573.1	2565.1	2536.6	2502.7	2449.3	2392.3	2326.4	2271.2	2200.8	2117.1	2073.4
15°	2654.2	2643.5	2611.4	2566.0	2494.7	2418.1	2337.1	2265.8	2182.1	2085.9	2034.3
17.5°	2734.3	2723.6	2683.5	2625.7	2536.6	2441.3	2341.5	2253.4	2155.4	2047.6	1991.5
20°	2815.4	2804.7	2753.9	2680.9	2573.1	2458.2	2340.6	2234.7	2123.3	2004.0	1944.3
22.5°	2896.4	2883.9	2822.5	2733.4	2603.4	2469.8	2330.8	2208.8	2083.2	1954.1	1890.0
25°	2970.3	2957.9	2890.2	2785.1	2635.5	2475.1	2313.9	2173.2	2038.7	1898.9	1831.2
27.5°	3034.5	3019.3	2949.0	2833.2	2663.1	2476.9	2291.7	2133.1	1987.1	1839.2	1770.6
30°	3079.0	3065.6	2990.8	2867.0	2679.1	2470.7	2263.2	2085.9	1927.4	1775.1	1703.8
32.5°	3098.6	3087.0	3013.1	2883.1	2681.8	2454.6	2228.4	2033.4	1865.0	1707.4	1635.2
35°	3093.3	3081.7	3011.3	2880.4	2673.8	2431.5	2184.8	1973.7	1798.2	1637.0	1564.0
37.5°	3059.4	3046.0	2981.9	2856.3	2650.6	2397.6	2134.9	1908.7	1726.1	1564.9	1491.0
40°	2995.3	2981.9	2926.7	2810.9	2611.4	2352.2	2077.9	1839.2	1652.2	1489.2	1416.1
42.5°	2903.5	2889.3	2845.6	2739.7	2555.3	2292.6	2012.9	1765.3	1573.8	1416.1	1339.5
45°	2784.2	2769.9	2740.6	2650.6	2482.3	2222.2	1939.0	1685.1	1491.8	1333.3	1262.1
47.5°	2636.3	2623.9	2609.6	2540.2	2392.3	2141.1	1856.1	1599.6	1406.3	1255.8	1182.8
50°	2464.4	2452.0	2456.4	2409.2	2288.1	2047.6	1765.3	1509.7	1318.2	1169.4	1103.5
52.5°	2269.4	2259.6	2281.0	2260.5	2167.0	1943.4	1668.2	1417.0	1228.2	1087.5	1024.3
55°	2059.2	2048.5	2089.5	2095.7	2031.6	1828.5	1557.8	1320.8	1137.4	1007.3	949.4
57.5°	1842.8	1833.9	1886.4	1915.8	1883.7	1704.7	1446.4	1222.0	1043.8	923.6	865.7
60°	1631.7	1624.6	1679.8	1727.9	1724.3	1573.8	1330.6	1115.1	950.3	839.0	790.0
62.5°	1433.1	1425.1	1480.3	1537.3	1557.8	1434.0	1215.7	1010.0	856.8	754.4	710.7
65°	1250.5	1242.5	1289.7	1348.5	1385.9	1287.9	1091.9	901.3	762.4	668.9	631.5
67.5°	1083.0	1083.0	1112.4	1166.8	1212.2	1138.3	965.5	798.0	665.3	589.6	552.2
70°	926.3	925.4	946.8	985.1	1037.6	977.9	837.2	689.4	573.6	506.8	473.8
72.5°	777.5	783.8	791.8	821.2	876.4	824.7	709.9	582.5	483.6	424.8	397.2
75°	635.9	635.0	646.6	672.4	712.5	674.2	582.5	478.3	394.6	346.5	322.4
77.5°	500.5	499.7	509.5	524.6	558.4	528.2	459.6	382.1	307.3	267.2	250.3
80°	373.2	373.2	382.1	390.1	415.0	391.0	342.9	285.9	225.3	194.2	180.8
82.5°	259.2	264.5	261.0	271.7	285.9	265.4	235.1	195.9	149.6	128.3	119.3
85°	157.6	162.1	157.6	166.6	172.8	155.0	139.8	116.7	86.4	72.1	65.9
87.5°	81.0	80.2	79.3	83.7	85.5	74.8	65.9	56.1	38.3	29.4	24.9
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°	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0	2167.0
2.5°	2143.8	2149.2	2141.1	2111.7	2100.2	2087.7	2082.4	2077.0	2086.8	2084.1
5°	2126.0	2119.8	2099.3	2061.9	2042.3	2021.8	2012.0	2005.8	2019.1	2016.4
7.5°	2101.9	2084.1	2053.9	2008.4	1983.5	1955.9	1942.5	1934.5	1943.4	1941.6
10°	2071.7	2042.3	2004.9	1950.5	1921.1	1890.9	1875.7	1864.1	1871.3	1870.4
12.5°	2033.4	1995.1	1949.6	1888.2	1857.9	1826.7	1813.4	1805.4	1814.3	1811.6
15°	1990.6	1944.3	1891.8	1829.4	1796.5	1768.0	1758.2	1751.9	1759.0	1759.0
17.5°	1943.4	1889.1	1831.2	1768.0	1736.8	1714.5	1704.7	1700.3	1703.8	1709.2
20°	1890.9	1830.3	1768.0	1706.5	1679.8	1656.6	1647.7	1643.3	1651.3	1647.7
22.5°	1833.0	1768.8	1703.8	1645.9	1621.9	1598.7	1589.8	1587.2	1596.1	1592.5
25°	1771.5	1702.0	1637.9	1585.4	1561.3	1541.7	1533.7	1531.0	1535.5	1539.9
27.5°	1713.6	1635.2	1572.0	1524.8	1503.4	1484.7	1477.6	1473.1	1476.7	1482.1
30°	1643.3	1567.6	1505.2	1461.6	1441.1	1423.3	1417.9	1414.4	1419.7	1424.2
32.5°	1577.4	1500.8	1438.4	1395.7	1377.8	1360.9	1360.0	1358.3	1364.5	1369.8
35°	1506.1	1431.3	1370.7	1330.6	1313.7	1299.5	1302.1	1304.8	1311.9	1318.2
37.5°	1434.0	1360.9	1303.0	1266.5	1250.5	1238.9	1246.9	1250.5	1260.3	1266.5
40°	1360.9	1287.9	1234.5	1201.5	1185.5	1180.1	1191.7	1199.7	1211.3	1216.6
42.5°	1286.1	1218.4	1165.0	1134.7	1121.3	1121.3	1136.5	1148.9	1162.3	1167.7
45°	1211.3	1145.4	1094.6	1067.0	1057.2	1064.3	1082.1	1098.2	1115.1	1120.4
47.5°	1135.6	1071.5	1025.1	1000.2	994.9	1005.6	1027.8	1049.2	1068.8	1075.9
50°	1059.9	1002.0	955.7	932.5	932.5	945.9	974.4	1001.1	1022.5	1029.6
52.5°	984.2	929.0	881.8	864.8	868.4	887.1	920.0	947.7	971.7	978.8
55°	907.6	853.2	812.3	798.0	804.3	827.4	861.3	893.3	916.5	924.5
57.5°	831.9	780.2	742.8	731.2	740.1	766.0	805.2	832.8	856.8	863.9
60°	755.3	702.7	673.3	664.4	676.0	702.7	742.8	768.6	790.9	798.0
62.5°	679.6	630.6	604.8	596.7	610.1	638.6	677.8	700.9	717.9	725.0
65°	603.0	559.3	535.3	529.9	544.2	571.8	609.2	628.8	641.3	648.4
67.5°	527.3	489.9	467.6	463.1	478.3	503.2	538.0	548.6	560.2	567.3
70°	452.5	418.6	399.9	397.2	410.6	434.6	464.0	469.4	475.6	481.8
72.5°	378.5	351.8	333.1	332.2	344.7	364.3	388.3	389.2	391.0	397.2
75°	307.3	283.2	269.0	271.7	278.8	294.8	313.5	308.2	309.1	313.5
77.5°	238.7	219.1	209.3	211.1	216.4	228.0	240.5	234.2	230.7	235.1
80°	171.9	155.0	151.4	152.3	155.9	163.9	171.0	165.7	158.5	162.1
82.5°	113.1	102.4	100.6	101.5	104.2	108.7	110.4	102.4	100.6	103.3
85°	62.3	57.9	57.9	60.6	61.5	62.3	62.3	57.9	58.8	60.6
87.5°	24.9	24.9	27.6	30.3	28.5	24.9	21.4	14.3	14.3	16.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)