

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-24-26L850-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-24-26L850-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

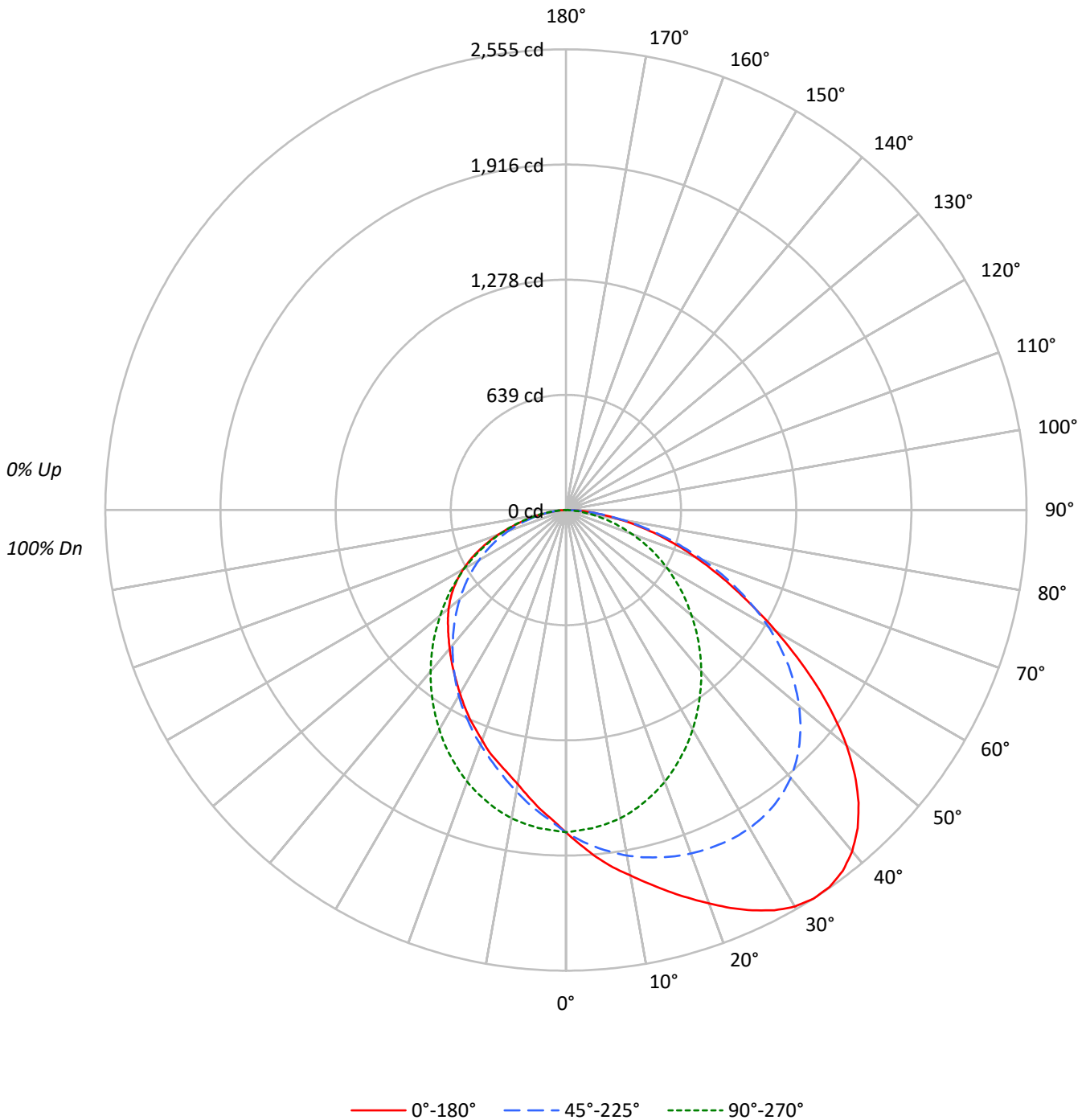
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5535.5 lumens
Efficiency: N/A
Efficacy: 98.8 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): 56
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





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	43	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23	23	23	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17205	17205	17205
5°	18669	17101	16071
10°	20113	16968	15079
15°	21817	16722	14459
20°	23788	16428	13922
25°	26022	16042	13491
30°	28229	15621	13057
35°	29981	15159	12776
40°	31044	14678	12610
45°	31263	14171	12580
50°	30442	13631	12717
55°	28504	13142	12797
60°	25911	12544	12672
65°	23493	11864	12181
70°	21503	11000	11186
75°	19510	9891	9619
80°	17065	8266	7413
85°	14360	6009	5512



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.7	3.1
10°-20°	493.6	8.9
20°-30°	773.3	14.0
30°-40°	969.5	17.5
40°-50°	1032.1	18.6
50°-60°	931.7	16.8
60°-70°	689.7	12.5
70°-80°	378.5	6.8
80°-90°	97.2	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°	1436.7	26.0
0°-40°	2406.2	43.5
0°-60°	4370.1	78.9
0°-90°	5535.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5535.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1787	1787	1787	1787	1787	
5°	1932	1875	1770	1684	1663	188
15°	2189	1994	1678	1482	1451	624
25°	2450	2041	1510	1288	1270	1134
35°	2551	2005	1290	1083	1087	1591
45°	2296	1833	1041	872	924	1760
55°	1698	1508	783	663	762	1514
65°	1031	1062	521	449	535	1029
75°	524	556	266	230	259	557
85°	130	128	54	51	50	154
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°	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1
2.5°	1859.1	1855.4	1851.0	1849.6	1842.9	1834.1	1826.1	1826.1	1816.5	1793.7	1777.6
5°	1931.8	1926.0	1914.9	1906.1	1892.2	1875.3	1858.4	1848.1	1825.3	1790.8	1769.5
7.5°	1998.7	1991.3	1977.4	1960.5	1937.7	1912.7	1884.8	1862.8	1828.3	1782.0	1754.8
10°	2057.4	2050.8	2033.9	2013.4	1981.0	1945.8	1904.6	1871.6	1824.6	1767.3	1735.7
12.5°	2122.1	2115.5	2092.0	2064.0	2020.0	1973.0	1918.6	1873.1	1815.0	1746.0	1710.0
15°	2188.9	2180.1	2153.7	2116.2	2057.4	1994.3	1927.4	1868.7	1799.6	1720.3	1677.7
17.5°	2255.0	2246.2	2213.2	2165.4	2092.0	2013.4	1931.1	1858.4	1777.6	1688.7	1642.4
20°	2321.9	2313.1	2271.2	2211.0	2122.1	2027.3	1930.4	1842.9	1751.1	1652.7	1603.5
22.5°	2388.7	2378.4	2327.7	2254.3	2147.0	2036.9	1922.3	1821.6	1718.1	1611.6	1558.7
25°	2449.7	2439.4	2383.6	2296.9	2173.5	2041.3	1908.3	1792.3	1681.4	1566.0	1510.2
27.5°	2502.6	2490.1	2432.0	2336.6	2196.3	2042.7	1890.0	1759.2	1638.7	1516.8	1460.3
30°	2539.3	2528.3	2466.6	2364.5	2209.5	2037.6	1866.5	1720.3	1589.5	1463.9	1405.2
32.5°	2555.4	2545.9	2484.9	2377.7	2211.7	2024.4	1837.8	1676.9	1538.1	1408.1	1348.6
35°	2551.0	2541.5	2483.5	2375.5	2205.1	2005.3	1801.8	1627.7	1483.0	1350.1	1289.8
37.5°	2523.1	2512.1	2459.2	2355.7	2186.0	1977.4	1760.7	1574.1	1423.5	1290.6	1229.6
40°	2470.2	2459.2	2413.7	2318.2	2153.7	1939.9	1713.7	1516.8	1362.6	1228.1	1167.9
42.5°	2394.6	2382.8	2346.8	2259.4	2107.4	1890.7	1660.0	1455.8	1297.9	1167.9	1104.7
45°	2296.2	2284.4	2260.2	2186.0	2047.1	1832.7	1599.1	1389.7	1230.3	1099.6	1040.8
47.5°	2174.2	2163.9	2152.2	2094.9	1973.0	1765.8	1530.8	1319.2	1159.8	1035.7	975.5
50°	2032.5	2022.2	2025.8	1986.9	1887.0	1688.7	1455.8	1245.0	1087.1	964.4	910.1
52.5°	1871.6	1863.5	1881.1	1864.2	1787.1	1602.8	1375.8	1168.6	1012.9	896.9	844.7
55°	1698.2	1689.4	1723.2	1728.4	1675.5	1508.0	1284.7	1089.3	938.0	830.8	783.0
57.5°	1519.8	1512.4	1555.7	1580.0	1553.5	1405.9	1192.9	1007.8	860.9	761.7	714.0
60°	1345.7	1339.8	1385.3	1425.0	1422.1	1297.9	1097.4	919.6	783.7	691.9	651.5
62.5°	1181.9	1175.3	1220.8	1267.8	1284.7	1182.6	1002.6	833.0	706.6	622.2	586.2
65°	1031.3	1024.7	1063.6	1112.1	1142.9	1062.1	900.5	743.3	628.8	551.6	520.8
67.5°	893.2	893.2	917.4	962.2	999.7	938.7	796.2	658.1	548.7	486.3	455.4
70°	763.9	763.2	780.8	812.4	855.7	806.5	690.5	568.5	473.0	418.0	390.8
72.5°	641.2	646.4	653.0	677.2	722.8	680.2	585.4	480.4	398.9	350.4	327.6
75°	524.5	523.7	533.3	554.6	587.6	556.0	480.4	394.4	325.4	285.7	265.9
77.5°	412.8	412.1	420.2	432.6	460.6	435.6	379.0	315.1	253.4	220.4	206.4
80°	307.8	307.8	315.1	321.7	342.3	322.5	282.8	235.8	185.8	160.1	149.1
82.5°	213.7	218.2	215.2	224.0	235.8	218.9	193.9	161.6	123.4	105.8	98.4
85°	130.0	133.7	130.0	137.4	142.5	127.8	115.3	96.2	71.2	59.5	54.4
87.5°	66.8	66.1	65.4	69.0	70.5	61.7	54.4	46.3	31.6	24.2	20.6
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°	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1	1787.1
2.5°	1768.0	1772.4	1765.8	1741.6	1732.0	1721.8	1717.3	1712.9	1721.0	1718.8
5°	1753.3	1748.2	1731.3	1700.4	1684.3	1667.4	1659.3	1654.2	1665.2	1663.0
7.5°	1733.5	1718.8	1693.8	1656.4	1635.8	1613.0	1602.0	1595.4	1602.8	1601.3
10°	1708.5	1684.3	1653.4	1608.6	1584.4	1559.4	1546.9	1537.4	1543.3	1542.5
12.5°	1676.9	1645.4	1607.9	1557.2	1532.2	1506.5	1495.5	1488.9	1496.2	1494.0
15°	1641.7	1603.5	1560.2	1508.7	1481.6	1458.1	1450.0	1444.8	1450.7	1450.7
17.5°	1602.8	1557.9	1510.2	1458.1	1432.3	1414.0	1405.9	1402.2	1405.2	1409.6
20°	1559.4	1509.5	1458.1	1407.4	1385.3	1366.2	1358.9	1355.2	1361.8	1358.9
22.5°	1511.7	1458.8	1405.2	1357.4	1337.6	1318.5	1311.1	1308.9	1316.3	1313.3
25°	1461.0	1403.7	1350.8	1307.5	1287.6	1271.5	1264.9	1262.7	1266.3	1270.0
27.5°	1413.2	1348.6	1296.5	1257.5	1239.9	1224.5	1218.6	1214.9	1217.9	1222.3
30°	1355.2	1292.8	1241.4	1205.4	1188.5	1173.8	1169.4	1166.4	1170.8	1174.5
32.5°	1300.9	1237.7	1186.3	1151.0	1136.3	1122.4	1121.6	1120.2	1125.3	1129.7
35°	1242.1	1180.4	1130.4	1097.4	1083.4	1071.7	1073.9	1076.1	1082.0	1087.1
37.5°	1182.6	1122.4	1074.6	1044.5	1031.3	1021.7	1028.3	1031.3	1039.4	1044.5
40°	1122.4	1062.1	1018.1	990.9	977.7	973.3	982.8	989.4	999.0	1003.4
42.5°	1060.7	1004.8	960.8	935.8	924.8	924.8	937.3	947.6	958.6	963.0
45°	999.0	944.6	902.7	880.0	871.9	877.8	892.5	905.7	919.6	924.0
47.5°	936.5	883.6	845.4	824.9	820.5	829.3	847.7	865.3	881.4	887.3
50°	874.1	826.4	788.2	769.1	769.1	780.1	803.6	825.6	843.2	849.1
52.5°	811.7	766.1	727.2	713.2	716.2	731.6	758.8	781.5	801.4	807.3
55°	748.5	703.7	669.9	658.1	663.3	682.4	710.3	736.7	755.8	762.4
57.5°	686.1	643.5	612.6	603.1	610.4	631.7	664.0	686.8	706.6	712.5
60°	622.9	579.5	555.3	548.0	557.5	579.5	612.6	633.9	652.3	658.1
62.5°	560.5	520.1	498.7	492.1	503.2	526.7	559.0	578.1	592.0	597.9
65°	497.3	461.3	441.5	437.0	448.8	471.6	502.4	518.6	528.9	534.7
67.5°	434.8	404.0	385.6	382.0	394.4	415.0	443.7	452.5	462.0	467.9
70°	373.1	345.2	329.8	327.6	338.6	358.5	382.7	387.1	392.2	397.4
72.5°	312.2	290.1	274.7	274.0	284.3	300.4	320.3	321.0	322.5	327.6
75°	253.4	233.6	221.8	224.0	229.9	243.1	258.6	254.1	254.9	258.6
77.5°	196.9	180.7	172.6	174.1	178.5	188.0	198.3	193.2	190.2	193.9
80°	141.8	127.8	124.9	125.6	128.5	135.2	141.0	136.6	130.7	133.7
82.5°	93.3	84.5	83.0	83.7	85.9	89.6	91.1	84.5	83.0	85.2
85°	51.4	47.7	47.7	49.9	50.7	51.4	51.4	47.7	48.5	49.9
87.5°	20.6	20.6	22.8	25.0	23.5	20.6	17.6	11.8	11.8	14.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)