

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-24-26L830-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-24-26L830-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

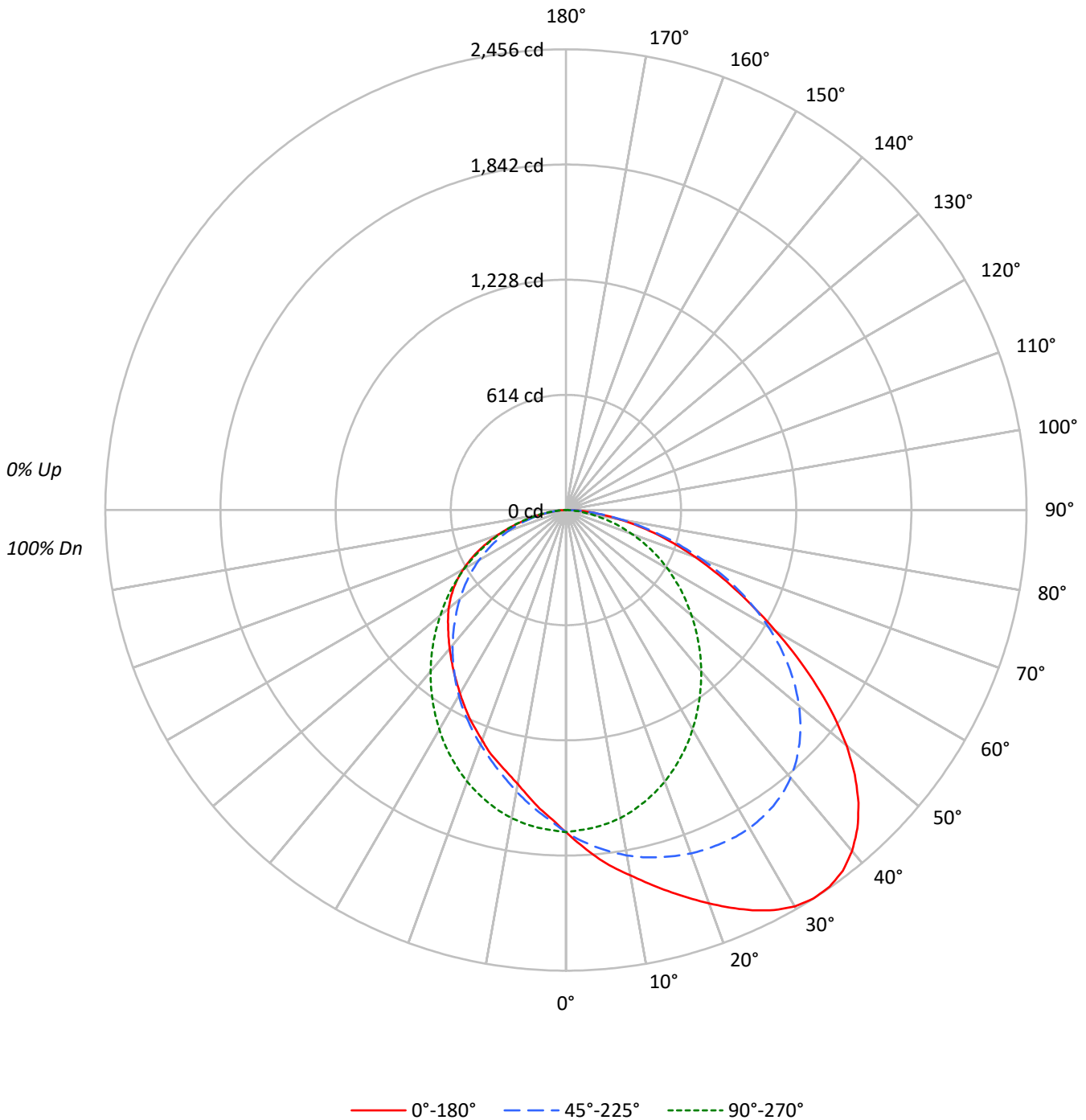
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5319.3 lumens
Efficiency: N/A
Efficacy: 95.0 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): 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				
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°	16533	16533	16533
5°	17940	16433	15443
10°	19328	16305	14491
15°	20965	16069	13895
20°	22859	15787	13378
25°	25006	15416	12964
30°	27126	15011	12547
35°	28811	14568	12278
40°	29833	14105	12118
45°	30042	13618	12090
50°	29253	13098	12222
55°	27391	12629	12298
60°	24898	12055	12177
65°	22575	11399	11707
70°	20664	10570	10750
75°	18747	9504	9244
80°	16400	7945	7124
85°	13797	5766	5302



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.1	3.1
10°-20°	474.4	8.9
20°-30°	743.1	14.0
30°-40°	931.7	17.5
40°-50°	991.8	18.6
50°-60°	895.4	16.8
60°-70°	662.8	12.5
70°-80°	363.7	6.8
80°-90°	93.4	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°	1380.6	26.0
0°-40°	2312.2	43.5
0°-60°	4199.4	78.9
0°-90°	5319.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5319.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1717	1717	1717	1717	1717	
5°	1856	1802	1700	1618	1598	181
15°	2103	1916	1612	1424	1394	600
25°	2354	1962	1451	1237	1220	1089
35°	2451	1927	1240	1041	1045	1529
45°	2206	1761	1000	838	888	1692
55°	1632	1449	752	637	733	1455
65°	991	1021	500	431	514	989
75°	504	534	256	221	248	536
85°	125	123	52	49	48	148
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°	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3
2.5°	1786.5	1783.0	1778.7	1777.3	1771.0	1762.5	1754.7	1754.7	1745.6	1723.7	1708.2
5°	1856.4	1850.7	1840.2	1831.7	1818.3	1802.0	1785.8	1775.9	1754.0	1720.9	1700.4
7.5°	1920.6	1913.6	1900.2	1883.9	1862.0	1838.0	1811.2	1790.0	1756.9	1712.4	1686.3
10°	1977.1	1970.7	1954.5	1934.7	1903.7	1869.8	1830.3	1798.5	1753.3	1698.3	1667.9
12.5°	2039.2	2032.9	2010.3	1983.4	1941.1	1895.9	1843.7	1799.9	1744.2	1677.8	1643.2
15°	2103.4	2095.0	2069.6	2033.6	1977.1	1916.4	1852.2	1795.7	1729.3	1653.1	1612.2
17.5°	2167.0	2158.5	2126.7	2080.8	2010.3	1934.7	1855.7	1785.8	1708.2	1622.8	1578.3
20°	2231.2	2222.7	2182.5	2124.6	2039.2	1948.1	1855.0	1771.0	1682.7	1588.2	1540.9
22.5°	2295.4	2285.5	2236.8	2166.3	2063.2	1957.3	1847.2	1750.5	1651.0	1548.6	1497.8
25°	2354.0	2344.1	2290.5	2207.2	2088.6	1961.6	1833.8	1722.3	1615.7	1504.9	1451.2
27.5°	2404.8	2392.8	2337.1	2245.3	2110.5	1963.0	1816.2	1690.5	1574.8	1457.6	1403.2
30°	2440.1	2429.5	2370.2	2272.1	2123.2	1958.0	1793.6	1653.1	1527.5	1406.8	1350.3
32.5°	2455.7	2446.5	2387.9	2284.8	2125.3	1945.3	1766.0	1611.5	1478.1	1353.1	1295.9
35°	2451.4	2442.2	2386.5	2282.7	2119.0	1927.0	1731.5	1564.2	1425.1	1297.4	1239.5
37.5°	2424.6	2414.0	2363.2	2263.7	2100.6	1900.2	1691.9	1512.6	1367.9	1240.2	1181.6
40°	2373.8	2363.2	2319.4	2227.7	2069.6	1864.2	1646.8	1457.6	1309.4	1180.2	1122.3
42.5°	2301.1	2289.8	2255.2	2171.2	2025.1	1816.9	1595.2	1399.0	1247.2	1122.3	1061.6
45°	2206.5	2195.2	2171.9	2100.6	1967.2	1761.1	1536.6	1335.5	1182.3	1056.7	1000.2
47.5°	2089.3	2079.4	2068.1	2013.1	1895.9	1696.9	1471.0	1267.7	1114.5	995.2	937.4
50°	1953.1	1943.2	1946.7	1909.3	1813.3	1622.8	1399.0	1196.4	1044.7	926.8	874.5
52.5°	1798.5	1790.7	1807.7	1791.4	1717.3	1540.2	1322.1	1123.0	973.4	861.8	811.7
55°	1631.9	1623.5	1655.9	1660.9	1610.0	1449.1	1234.5	1046.8	901.4	798.3	752.4
57.5°	1460.4	1453.3	1495.0	1518.3	1492.9	1351.0	1146.3	968.4	827.3	732.0	686.1
60°	1293.1	1287.5	1331.2	1369.4	1366.5	1247.2	1054.5	883.7	753.1	664.9	626.1
62.5°	1135.7	1129.4	1173.1	1218.3	1234.5	1136.4	963.5	800.4	679.0	597.9	563.3
65°	991.0	984.7	1022.1	1068.7	1098.3	1020.7	865.4	714.3	604.2	530.1	500.4
67.5°	858.3	858.3	881.6	924.7	960.7	902.1	765.1	632.4	527.3	467.3	437.6
70°	734.1	733.4	750.3	780.7	822.3	775.0	663.5	546.3	454.6	401.6	375.5
72.5°	616.2	621.1	627.5	650.8	694.6	653.6	562.6	461.6	383.3	336.7	314.8
75°	504.0	503.3	512.4	532.9	564.7	534.3	461.6	379.0	312.7	274.6	255.5
77.5°	396.7	396.0	403.7	415.7	442.6	418.6	364.2	302.8	243.5	211.8	198.3
80°	295.8	295.8	302.8	309.2	328.9	309.9	271.8	226.6	178.6	153.9	143.3
82.5°	205.4	209.6	206.8	215.3	226.6	210.3	186.3	155.3	118.6	101.6	94.6
85°	124.9	128.5	124.9	132.0	136.9	122.8	110.8	92.5	68.5	57.2	52.2
87.5°	64.2	63.5	62.8	66.3	67.8	59.3	52.2	44.5	30.4	23.3	19.8
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°	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3	1717.3
2.5°	1699.0	1703.2	1696.9	1673.6	1664.4	1654.5	1650.3	1646.0	1653.8	1651.7
5°	1684.9	1679.9	1663.7	1634.0	1618.5	1602.3	1594.5	1589.6	1600.2	1598.0
7.5°	1665.8	1651.7	1627.7	1591.7	1571.9	1550.0	1539.5	1533.1	1540.2	1538.8
10°	1641.8	1618.5	1588.9	1545.8	1522.5	1498.5	1486.5	1477.3	1483.0	1482.3
12.5°	1611.5	1581.1	1545.1	1496.4	1472.4	1447.7	1437.1	1430.8	1437.8	1435.7
15°	1577.6	1540.9	1499.2	1449.8	1423.7	1401.1	1393.3	1388.4	1394.1	1394.1
17.5°	1540.2	1497.1	1451.2	1401.1	1376.4	1358.8	1351.0	1347.5	1350.3	1354.5
20°	1498.5	1450.5	1401.1	1352.4	1331.2	1312.9	1305.8	1302.3	1308.6	1305.8
22.5°	1452.6	1401.8	1350.3	1304.4	1285.4	1267.0	1259.9	1257.8	1264.9	1262.1
25°	1403.9	1348.9	1298.1	1256.4	1237.4	1221.8	1215.5	1213.4	1216.9	1220.4
27.5°	1358.1	1295.9	1245.8	1208.4	1191.5	1176.7	1171.0	1167.5	1170.3	1174.5
30°	1302.3	1242.3	1192.9	1158.3	1142.1	1127.9	1123.7	1120.9	1125.1	1128.7
32.5°	1250.1	1189.4	1139.9	1106.1	1092.0	1078.5	1077.8	1076.4	1081.4	1085.6
35°	1193.6	1134.3	1086.3	1054.5	1041.1	1029.8	1032.0	1034.1	1039.7	1044.7
37.5°	1136.4	1078.5	1032.7	1003.7	991.0	981.8	988.2	991.0	998.8	1003.7
40°	1078.5	1020.7	978.3	952.2	939.5	935.3	944.4	950.8	960.0	964.2
42.5°	1019.2	965.6	923.3	899.3	888.7	888.7	900.7	910.5	921.1	925.4
45°	960.0	907.7	867.5	845.6	837.8	843.5	857.6	870.3	883.7	888.0
47.5°	900.0	849.1	812.4	792.7	788.4	796.9	814.6	831.5	847.0	852.7
50°	840.0	794.1	757.4	739.0	739.0	749.6	772.2	793.4	810.3	816.0
52.5°	780.0	736.2	698.8	685.4	688.2	703.0	729.1	751.0	770.1	775.7
55°	719.3	676.2	643.7	632.4	637.4	655.7	682.6	708.0	726.3	732.7
57.5°	659.3	618.3	588.7	579.5	586.6	607.0	638.1	660.0	679.0	684.7
60°	598.6	556.9	533.6	526.6	535.7	556.9	588.7	609.1	626.8	632.4
62.5°	538.6	499.7	479.3	472.9	483.5	506.1	537.2	555.5	568.9	574.6
65°	477.9	443.3	424.2	420.0	431.3	453.2	482.8	498.3	508.2	513.9
67.5°	417.9	388.2	370.6	367.0	379.0	398.8	426.3	434.8	444.0	449.6
70°	358.6	331.7	316.9	314.8	325.4	344.5	367.7	372.0	376.9	381.9
72.5°	300.0	278.8	264.0	263.3	273.2	288.7	307.8	308.5	309.9	314.8
75°	243.5	224.5	213.2	215.3	220.9	233.6	248.5	244.2	244.9	248.5
77.5°	189.2	173.6	165.9	167.3	171.5	180.7	190.6	185.6	182.8	186.3
80°	136.2	122.8	120.0	120.7	123.5	129.9	135.5	131.3	125.6	128.5
82.5°	89.6	81.2	79.8	80.5	82.6	86.1	87.5	81.2	79.8	81.9
85°	49.4	45.9	45.9	48.0	48.7	49.4	49.4	45.9	46.6	48.0
87.5°	19.8	19.8	21.9	24.0	22.6	19.8	16.9	11.3	11.3	13.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)