

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-24-26L835-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-24-26L835-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

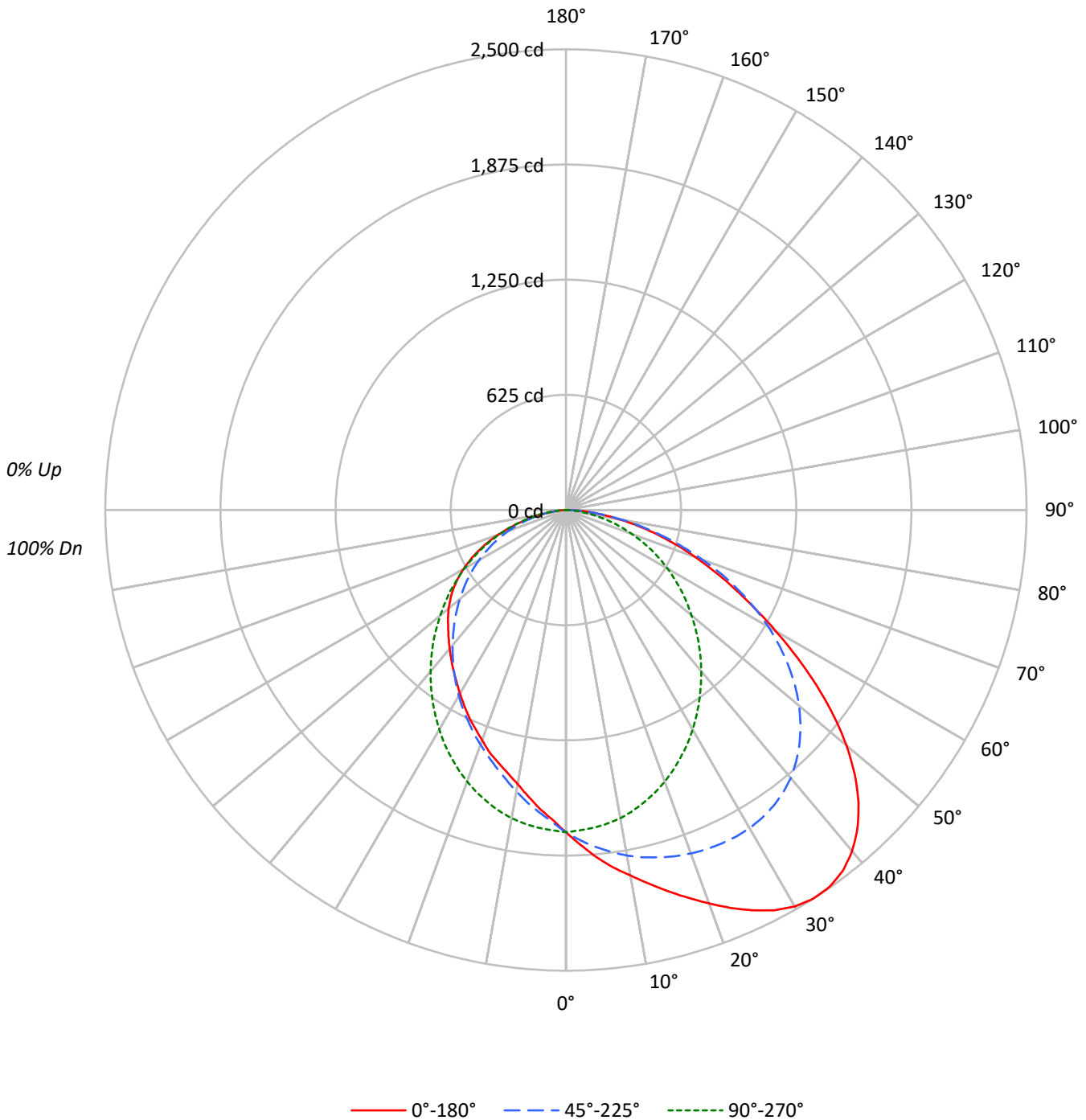
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5415.8 lumens
Efficiency: N/A
Efficacy: 96.7 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°	16833	16833	16833
5°	18266	16731	15724
10°	19679	16601	14754
15°	21345	16360	14146
20°	23274	16073	13621
25°	25459	15696	13200
30°	27618	15283	12774
35°	29334	14832	12500
40°	30373	14361	12338
45°	30586	13864	12309
50°	29783	13336	12443
55°	27888	12859	12521
60°	25351	12273	12398
65°	22985	11607	11919
70°	21038	10761	10944
75°	19086	9679	9411
80°	16693	8089	7252
85°	14051	5877	5402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.1	3.1
10°-20°	483.0	8.9
20°-30°	756.6	14.0
30°-40°	948.6	17.5
40°-50°	1009.8	18.6
50°-60°	911.6	16.8
60°-70°	674.8	12.5
70°-80°	370.3	6.8
80°-90°	95.1	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°	1405.6	26.0
0°-40°	2354.2	43.5
0°-60°	4275.6	78.9
0°-90°	5415.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5415.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1748	1748	1748	1748	1748	
5°	1890	1835	1731	1648	1627	184
15°	2142	1951	1641	1450	1419	611
25°	2397	1997	1478	1260	1243	1109
35°	2496	1962	1262	1060	1064	1556
45°	2246	1793	1018	853	904	1722
55°	1662	1475	766	649	746	1482
65°	1009	1039	510	439	523	1007
75°	513	544	260	225	253	545
85°	127	125	53	50	49	150
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°	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5
2.5°	1818.9	1815.3	1811.0	1809.6	1803.1	1794.5	1786.6	1786.6	1777.2	1755.0	1739.1
5°	1890.1	1884.3	1873.5	1864.9	1851.3	1834.7	1818.2	1808.1	1785.9	1752.1	1731.2
7.5°	1955.5	1948.3	1934.6	1918.1	1895.8	1871.4	1844.1	1822.5	1788.7	1743.5	1716.9
10°	2013.0	2006.5	1990.0	1969.8	1938.2	1903.7	1863.5	1831.1	1785.1	1729.1	1698.2
12.5°	2076.2	2069.7	2046.7	2019.4	1976.3	1930.3	1877.1	1832.6	1775.8	1708.2	1673.0
15°	2141.6	2133.0	2107.1	2070.4	2013.0	1951.1	1885.8	1828.3	1760.7	1683.1	1641.4
17.5°	2206.3	2197.6	2165.3	2118.6	2046.7	1969.8	1889.3	1818.2	1739.1	1652.2	1606.9
20°	2271.7	2263.0	2222.1	2163.2	2076.2	1983.5	1888.6	1803.1	1713.3	1617.0	1568.8
22.5°	2337.1	2327.0	2277.4	2205.6	2100.6	1992.8	1880.7	1782.3	1680.9	1576.7	1525.0
25°	2396.7	2386.7	2332.0	2247.2	2126.5	1997.1	1867.1	1753.5	1645.0	1532.2	1477.6
27.5°	2448.5	2436.2	2379.5	2286.0	2148.8	1998.6	1849.1	1721.2	1603.3	1484.0	1428.7
30°	2484.4	2473.6	2413.2	2313.3	2161.7	1993.5	1826.1	1683.1	1555.2	1432.3	1374.8
32.5°	2500.2	2490.9	2431.2	2326.3	2163.9	1980.6	1798.1	1640.7	1504.9	1377.7	1319.5
35°	2495.9	2486.5	2429.8	2324.1	2157.4	1961.9	1762.9	1592.5	1451.0	1320.9	1262.0
37.5°	2468.6	2457.8	2406.1	2304.7	2138.7	1934.6	1722.6	1540.1	1392.8	1262.7	1203.0
40°	2416.8	2406.1	2361.5	2268.1	2107.1	1898.0	1676.6	1484.0	1333.1	1201.6	1142.7
42.5°	2342.8	2331.3	2296.1	2210.6	2061.8	1849.8	1624.2	1424.4	1269.9	1142.7	1080.9
45°	2246.5	2235.0	2211.3	2138.7	2002.9	1793.0	1564.5	1359.7	1203.7	1075.8	1018.3
47.5°	2127.2	2117.2	2105.7	2049.6	1930.3	1727.6	1497.7	1290.7	1134.8	1013.3	954.4
50°	1988.5	1978.5	1982.0	1944.0	1846.2	1652.2	1424.4	1218.1	1063.6	943.6	890.4
52.5°	1831.1	1823.2	1840.5	1823.9	1748.5	1568.1	1346.0	1143.4	991.0	877.5	826.5
55°	1661.5	1652.9	1686.0	1691.0	1639.3	1475.4	1256.9	1065.8	917.7	812.8	766.1
57.5°	1486.9	1479.7	1522.1	1545.8	1520.0	1375.5	1167.1	986.0	842.3	745.2	698.5
60°	1316.6	1310.8	1355.4	1394.2	1391.3	1269.9	1073.7	899.8	766.8	677.0	637.4
62.5°	1156.3	1149.8	1194.4	1240.4	1256.9	1157.0	981.0	815.0	691.3	608.7	573.5
65°	1009.0	1002.5	1040.6	1088.0	1118.2	1039.2	881.1	727.3	615.2	539.7	509.5
67.5°	873.9	873.9	897.6	941.4	978.1	918.4	779.0	643.9	536.8	475.7	445.6
70°	747.4	746.7	763.9	794.8	837.2	789.1	675.5	556.2	462.8	408.9	382.3
72.5°	627.4	632.4	638.9	662.6	707.2	665.5	572.8	470.0	390.2	342.8	320.5
75°	513.1	512.4	521.7	542.6	574.9	544.0	470.0	385.9	318.4	279.6	260.2
77.5°	403.9	403.2	411.1	423.3	450.6	426.2	370.8	308.3	247.9	215.6	201.9
80°	301.1	301.1	308.3	314.8	334.9	315.5	276.7	230.7	181.8	156.7	145.9
82.5°	209.1	213.4	210.6	219.2	230.7	214.2	189.7	158.1	120.7	103.5	96.3
85°	127.2	130.8	127.2	134.4	139.4	125.0	112.8	94.1	69.7	58.2	53.2
87.5°	65.4	64.7	64.0	67.6	69.0	60.4	53.2	45.3	30.9	23.7	20.1
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°	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5	1748.5
2.5°	1729.8	1734.1	1727.6	1703.9	1694.6	1684.5	1680.2	1675.9	1683.8	1681.7
5°	1715.4	1710.4	1693.9	1663.7	1647.9	1631.3	1623.4	1618.4	1629.2	1627.0
7.5°	1696.0	1681.7	1657.2	1620.6	1600.4	1578.2	1567.4	1560.9	1568.1	1566.7
10°	1671.6	1647.9	1617.7	1573.9	1550.1	1525.7	1513.5	1504.1	1509.9	1509.2
12.5°	1640.7	1609.8	1573.1	1523.5	1499.1	1474.0	1463.2	1456.7	1463.9	1461.7
15°	1606.2	1568.8	1526.4	1476.1	1449.5	1426.5	1418.6	1413.6	1419.3	1419.3
17.5°	1568.1	1524.3	1477.6	1426.5	1401.4	1383.4	1375.5	1371.9	1374.8	1379.1
20°	1525.7	1476.8	1426.5	1376.9	1355.4	1336.7	1329.5	1325.9	1332.4	1329.5
22.5°	1479.0	1427.2	1374.8	1328.1	1308.7	1290.0	1282.8	1280.6	1287.8	1285.0
25°	1429.4	1373.3	1321.6	1279.2	1259.8	1244.0	1237.5	1235.4	1239.0	1242.6
27.5°	1382.7	1319.5	1268.4	1230.3	1213.1	1198.0	1192.2	1188.7	1191.5	1195.8
30°	1325.9	1264.8	1214.5	1179.3	1162.8	1148.4	1144.1	1141.2	1145.5	1149.1
32.5°	1272.7	1210.9	1160.6	1126.1	1111.8	1098.1	1097.4	1095.9	1101.0	1105.3
35°	1215.2	1154.9	1106.0	1073.7	1060.0	1048.5	1050.7	1052.8	1058.6	1063.6
37.5°	1157.0	1098.1	1051.4	1021.9	1009.0	999.6	1006.1	1009.0	1016.9	1021.9
40°	1098.1	1039.2	996.1	969.5	956.5	952.2	961.6	968.0	977.4	981.7
42.5°	1037.7	983.1	940.0	915.6	904.8	904.8	917.0	927.1	937.8	942.2
45°	977.4	924.2	883.2	860.9	853.0	858.8	873.2	886.1	899.8	904.1
47.5°	916.3	864.5	827.2	807.0	802.7	811.4	829.3	846.6	862.4	868.1
50°	855.2	808.5	771.1	752.4	752.4	763.2	786.2	807.8	825.0	830.8
52.5°	794.1	749.6	711.5	697.8	700.7	715.8	742.4	764.6	784.1	789.8
55°	732.3	688.5	655.4	643.9	648.9	667.6	694.9	720.8	739.5	746.0
57.5°	671.2	629.5	599.4	590.0	597.2	618.0	649.7	671.9	691.3	697.1
60°	609.4	567.0	543.3	536.1	545.5	567.0	599.4	620.2	638.2	643.9
62.5°	548.3	508.8	488.0	481.5	492.3	515.3	546.9	565.6	579.2	585.0
65°	486.5	451.3	431.9	427.6	439.1	461.4	491.6	507.4	517.4	523.2
67.5°	425.4	395.3	377.3	373.7	385.9	406.0	434.1	442.7	452.0	457.8
70°	365.1	337.8	322.7	320.5	331.3	350.7	374.4	378.7	383.8	388.8
72.5°	305.4	283.9	268.8	268.1	278.1	293.9	313.3	314.1	315.5	320.5
75°	247.9	228.5	217.0	219.2	224.9	237.9	253.0	248.7	249.4	253.0
77.5°	192.6	176.8	168.9	170.3	174.6	184.0	194.0	189.0	186.1	189.7
80°	138.7	125.0	122.2	122.9	125.8	132.2	138.0	133.7	127.9	130.8
82.5°	91.3	82.6	81.2	81.9	84.1	87.7	89.1	82.6	81.2	83.4
85°	50.3	46.7	46.7	48.9	49.6	50.3	50.3	46.7	47.4	48.9
87.5°	20.1	20.1	22.3	24.4	23.0	20.1	17.2	11.5	11.5	13.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)