

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: P708993

Luminaire Tested: **24APR-49L935-X-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708993
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-49L935-X-UNV
Description: ArcMed Patient Recessed 2x4 Fixture Ambient Light
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

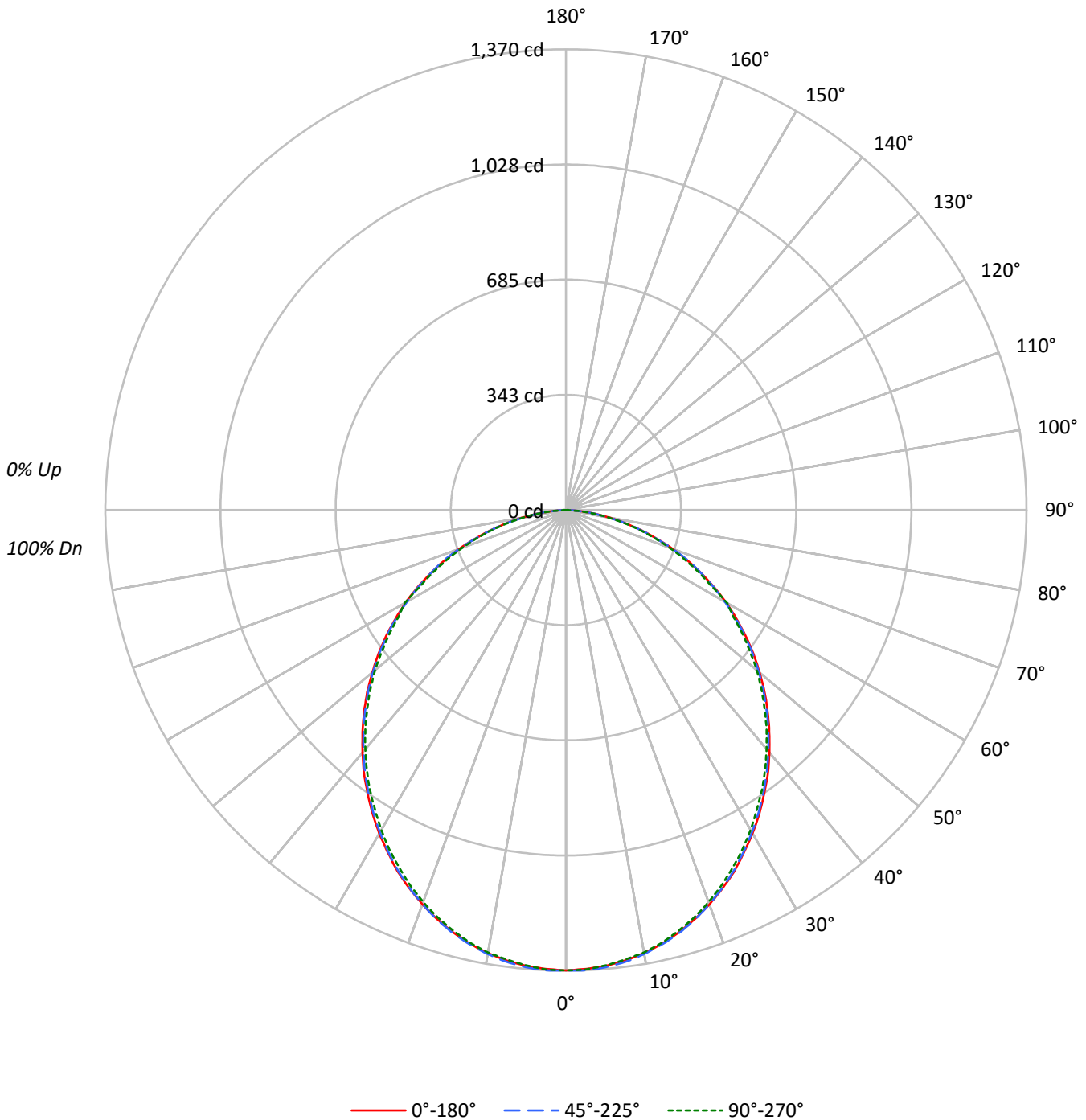
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3647.3 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.32
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 42.8
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 | | | | 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 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 86 | 86 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 72 | 72 | 72 | 72 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 61 | 61 | 61 | 61 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 53 | 53 | 53 | 51 |
| 5 | 76 | 63 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 46 | 46 | 46 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 41 | 41 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 36 | 36 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 32 | 32 | 32 | 30 |
| 9 | 57 | 44 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 29 | 29 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 27 | 27 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1842 | 1842 | 1842 |
| 5° | 1838 | 1844 | 1836 |
| 10° | 1828 | 1832 | 1825 |
| 15° | 1811 | 1814 | 1804 |
| 20° | 1787 | 1786 | 1776 |
| 25° | 1760 | 1756 | 1742 |
| 30° | 1725 | 1719 | 1706 |
| 35° | 1689 | 1683 | 1669 |
| 40° | 1653 | 1645 | 1630 |
| 45° | 1615 | 1607 | 1590 |
| 50° | 1574 | 1567 | 1552 |
| 55° | 1531 | 1522 | 1503 |
| 60° | 1480 | 1470 | 1490 |
| 65° | 1412 | 1408 | 1381 |
| 70° | 1325 | 1327 | 1290 |
| 75° | 1203 | 1194 | 1167 |
| 80° | 1034 | 1020 | 993 |
| 85° | 790 | 783 | 722 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.3 | 3.5 |
| 10°-20° | 366.4 | 10.0 |
| 20°-30° | 543.8 | 14.9 |
| 30°-40° | 640.1 | 17.6 |
| 40°-50° | 650.5 | 17.8 |
| 50°-60° | 578.3 | 15.9 |
| 60°-70° | 436.2 | 12.0 |
| 70°-80° | 242.3 | 6.6 |
| 80°-90° | 60.2 | 1.7 |
| 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° | 1039.5 | 28.5 |
| 0°-40° | 1679.7 | 46.1 |
| 0°-60° | 2908.5 | 79.7 |
| 0°-90° | 3647.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3647.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1369 | 1369 | 1369 | 1369 | 1369 | |
| 5° | 1361 | 1363 | 1365 | 1363 | 1359 | 129 |
| 15° | 1300 | 1301 | 1302 | 1299 | 1295 | 366 |
| 25° | 1185 | 1184 | 1183 | 1177 | 1173 | 545 |
| 35° | 1028 | 1029 | 1025 | 1019 | 1016 | 644 |
| 45° | 849 | 849 | 844 | 838 | 836 | 655 |
| 55° | 652 | 648 | 649 | 642 | 641 | 583 |
| 65° | 444 | 441 | 442 | 436 | 434 | 439 |
| 75° | 231 | 228 | 230 | 228 | 224 | 245 |
| 85° | 51 | 50 | 51 | 48 | 47 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P708993

CATALOG NUMBER: 24APR-49L935-X-UNV

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 |
| 2.5° | 1365.8 | 1368.5 | 1370.2 | 1368.0 | 1367.6 |
| 5° | 1361.0 | 1363.2 | 1365.0 | 1362.8 | 1359.3 |
| 7.5° | 1351.4 | 1354.0 | 1355.4 | 1353.2 | 1348.4 |
| 10° | 1337.9 | 1340.5 | 1340.9 | 1338.7 | 1336.1 |
| 12.5° | 1321.2 | 1323.0 | 1323.0 | 1321.2 | 1318.2 |
| 15° | 1299.8 | 1301.1 | 1302.0 | 1298.9 | 1295.0 |
| 17.5° | 1275.3 | 1277.5 | 1276.6 | 1271.8 | 1270.1 |
| 20° | 1247.8 | 1249.5 | 1247.3 | 1244.3 | 1240.3 |
| 22.5° | 1217.6 | 1218.0 | 1216.3 | 1212.8 | 1208.8 |
| 25° | 1185.2 | 1184.3 | 1182.6 | 1177.3 | 1173.4 |
| 27.5° | 1147.6 | 1149.4 | 1145.0 | 1140.2 | 1137.6 |
| 30° | 1110.4 | 1110.9 | 1106.5 | 1100.4 | 1098.2 |
| 32.5° | 1070.6 | 1069.8 | 1066.7 | 1060.1 | 1056.6 |
| 35° | 1028.2 | 1028.6 | 1024.7 | 1018.6 | 1016.4 |
| 37.5° | 987.1 | 984.5 | 981.4 | 974.4 | 973.1 |
| 40° | 941.2 | 940.7 | 936.4 | 930.2 | 928.1 |
| 42.5° | 895.3 | 894.8 | 891.3 | 885.2 | 883.4 |
| 45° | 848.9 | 848.9 | 844.5 | 837.5 | 835.8 |
| 47.5° | 801.7 | 799.9 | 796.9 | 790.7 | 788.5 |
| 50° | 751.8 | 750.5 | 748.7 | 741.7 | 741.3 |
| 52.5° | 702.8 | 701.9 | 698.9 | 692.8 | 689.3 |
| 55° | 652.5 | 647.7 | 649.0 | 642.0 | 640.7 |
| 57.5° | 600.9 | 596.1 | 598.7 | 592.6 | 590.0 |
| 60° | 549.8 | 544.9 | 546.3 | 542.3 | 553.7 |
| 62.5° | 497.3 | 494.2 | 494.2 | 503.4 | 486.8 |
| 65° | 443.5 | 440.8 | 442.2 | 436.5 | 433.9 |
| 67.5° | 390.6 | 386.6 | 394.9 | 384.4 | 380.1 |
| 70° | 336.8 | 334.1 | 337.2 | 331.1 | 328.0 |
| 72.5° | 283.4 | 281.2 | 280.3 | 278.2 | 275.5 |
| 75° | 231.4 | 228.3 | 229.6 | 227.9 | 224.4 |
| 77.5° | 180.6 | 179.8 | 179.3 | 177.1 | 174.5 |
| 80° | 133.4 | 132.5 | 131.6 | 129.9 | 128.1 |
| 82.5° | 89.2 | 88.3 | 87.9 | 87.0 | 86.6 |
| 85° | 51.2 | 49.9 | 50.7 | 48.5 | 46.8 |
| 87.5° | 19.2 | 18.8 | 19.7 | 17.9 | 16.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)