

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: P708833

Luminaire Tested: **24APR-X-80L930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708833
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-X-80L930-UNV
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

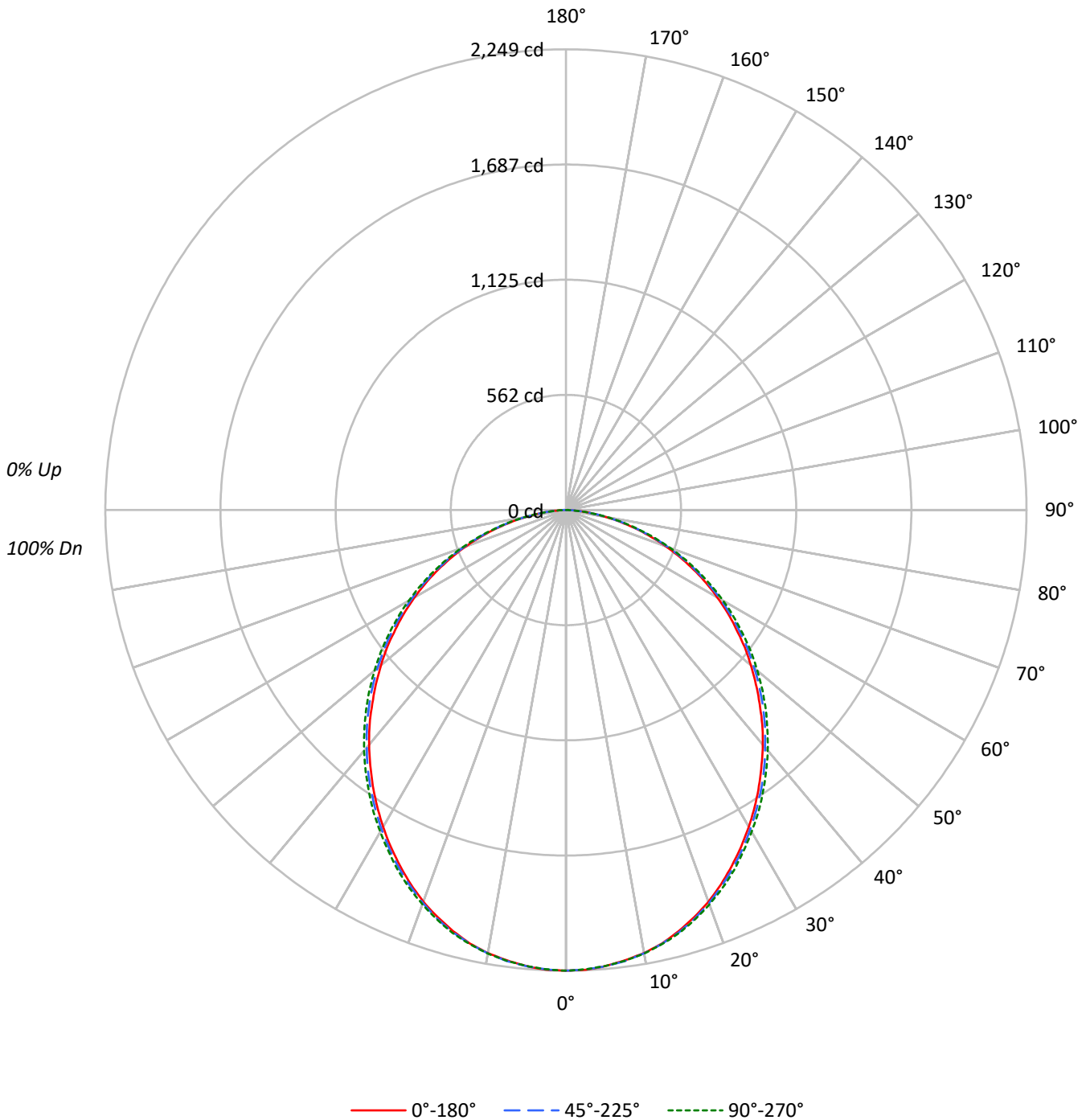
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5893.0 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.31
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 68.8
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





TEST NUMBER: P708833
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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 | 73 | 73 | 73 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 62 | 62 | 62 | 60 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 53 | 53 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 46 | 46 | 46 | 44 |
| 6 | 71 | 57 | 49 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 41 | 41 | 41 | 39 |
| 7 | 66 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 36 | 36 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 33 | 33 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 30 | 30 | 30 | 28 |
| 10 | 54 | 40 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 27 | 27 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6051 | 6051 | 6051 |
| 5° | 6036 | 6038 | 6034 |
| 10° | 5999 | 6005 | 6007 |
| 15° | 5928 | 5945 | 5956 |
| 20° | 5828 | 5848 | 5867 |
| 25° | 5691 | 5729 | 5763 |
| 30° | 5547 | 5593 | 5634 |
| 35° | 5400 | 5459 | 5512 |
| 40° | 5253 | 5315 | 5385 |
| 45° | 5089 | 5181 | 5252 |
| 50° | 4935 | 5028 | 5107 |
| 55° | 4767 | 4867 | 4952 |
| 60° | 4595 | 4688 | 4779 |
| 65° | 4372 | 4471 | 4556 |
| 70° | 4094 | 4184 | 4268 |
| 75° | 3695 | 3786 | 3855 |
| 80° | 3118 | 3233 | 3264 |
| 85° | 2319 | 2464 | 2424 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 212.2 | 3.6 |
| 10°-20° | 601.2 | 10.2 |
| 20°-30° | 888.0 | 15.1 |
| 30°-40° | 1039.0 | 17.6 |
| 40°-50° | 1049.4 | 17.8 |
| 50°-60° | 927.5 | 15.7 |
| 60°-70° | 694.3 | 11.8 |
| 70°-80° | 385.9 | 6.5 |
| 80°-90° | 95.4 | 1.6 |
| 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° | 1701.4 | 28.9 |
| 0°-40° | 2740.4 | 46.5 |
| 0°-60° | 4717.4 | 80.1 |
| 0°-90° | 5893.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5893.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2249 | 2249 | 2249 | 2249 | 2249 | |
| 5° | 2234 | 2235 | 2235 | 2236 | 2234 | 212 |
| 15° | 2128 | 2129 | 2134 | 2138 | 2138 | 600 |
| 25° | 1917 | 1919 | 1929 | 1935 | 1941 | 883 |
| 35° | 1644 | 1648 | 1662 | 1673 | 1678 | 1028 |
| 45° | 1337 | 1347 | 1361 | 1375 | 1380 | 1033 |
| 55° | 1016 | 1024 | 1037 | 1050 | 1056 | 910 |
| 65° | 687 | 691 | 702 | 712 | 716 | 680 |
| 75° | 355 | 357 | 364 | 371 | 371 | 377 |
| 85° | 75 | 78 | 80 | 78 | 78 | 92 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P708833

CATALOG NUMBER: 24APR-X-80L930-UNV

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2248.6 | 2248.6 | 2248.6 | 2248.6 | 2248.6 |
| 2.5° | 2246.5 | 2246.5 | 2244.5 | 2245.2 | 2243.9 |
| 5° | 2234.5 | 2235.1 | 2235.1 | 2235.8 | 2233.8 |
| 7.5° | 2217.0 | 2218.4 | 2220.4 | 2221.1 | 2219.1 |
| 10° | 2195.6 | 2196.9 | 2197.6 | 2200.3 | 2198.3 |
| 12.5° | 2167.4 | 2168.1 | 2168.8 | 2172.8 | 2170.8 |
| 15° | 2127.9 | 2129.2 | 2133.9 | 2137.9 | 2137.9 |
| 17.5° | 2083.6 | 2086.3 | 2091.6 | 2097.0 | 2095.7 |
| 20° | 2035.3 | 2037.3 | 2042.0 | 2049.4 | 2048.7 |
| 22.5° | 1978.3 | 1980.3 | 1987.0 | 1995.1 | 1997.1 |
| 25° | 1916.6 | 1919.3 | 1929.4 | 1935.4 | 1940.8 |
| 27.5° | 1852.9 | 1856.3 | 1865.6 | 1875.0 | 1877.7 |
| 30° | 1785.2 | 1790.5 | 1799.9 | 1810.0 | 1813.3 |
| 32.5° | 1716.1 | 1718.8 | 1731.5 | 1742.2 | 1749.0 |
| 35° | 1643.7 | 1648.4 | 1661.8 | 1673.2 | 1677.9 |
| 37.5° | 1569.2 | 1575.9 | 1590.0 | 1602.1 | 1606.1 |
| 40° | 1495.5 | 1500.8 | 1512.9 | 1528.3 | 1533.0 |
| 42.5° | 1419.0 | 1423.7 | 1438.5 | 1451.9 | 1456.6 |
| 45° | 1337.2 | 1347.3 | 1361.3 | 1375.4 | 1380.1 |
| 47.5° | 1258.1 | 1267.5 | 1281.5 | 1295.6 | 1301.0 |
| 50° | 1178.9 | 1189.0 | 1201.1 | 1215.8 | 1219.8 |
| 52.5° | 1099.8 | 1107.9 | 1120.6 | 1133.3 | 1139.4 |
| 55° | 1016.0 | 1024.0 | 1037.4 | 1050.2 | 1055.5 |
| 57.5° | 936.8 | 942.2 | 955.0 | 967.0 | 971.7 |
| 60° | 853.7 | 859.1 | 871.1 | 883.9 | 887.9 |
| 62.5° | 771.9 | 775.2 | 786.6 | 798.7 | 801.4 |
| 65° | 686.7 | 691.4 | 702.1 | 711.5 | 715.5 |
| 67.5° | 603.6 | 607.6 | 617.0 | 627.0 | 629.0 |
| 70° | 520.4 | 523.1 | 531.8 | 539.2 | 542.5 |
| 72.5° | 436.6 | 439.3 | 448.6 | 452.7 | 456.0 |
| 75° | 355.4 | 357.4 | 364.1 | 370.8 | 370.8 |
| 77.5° | 276.3 | 279.6 | 285.0 | 287.7 | 289.0 |
| 80° | 201.2 | 204.5 | 208.6 | 211.2 | 210.6 |
| 82.5° | 132.8 | 136.1 | 138.8 | 140.2 | 138.8 |
| 85° | 75.1 | 77.8 | 79.8 | 78.5 | 78.5 |
| 87.5° | 29.5 | 30.8 | 32.2 | 31.5 | 30.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)