

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: P708977

Luminaire Tested: **24APR-58L840-X-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708977
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-58L840-X-UNV
Description: ArcMed Patient Recessed 2x4 Fixture Ambient Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

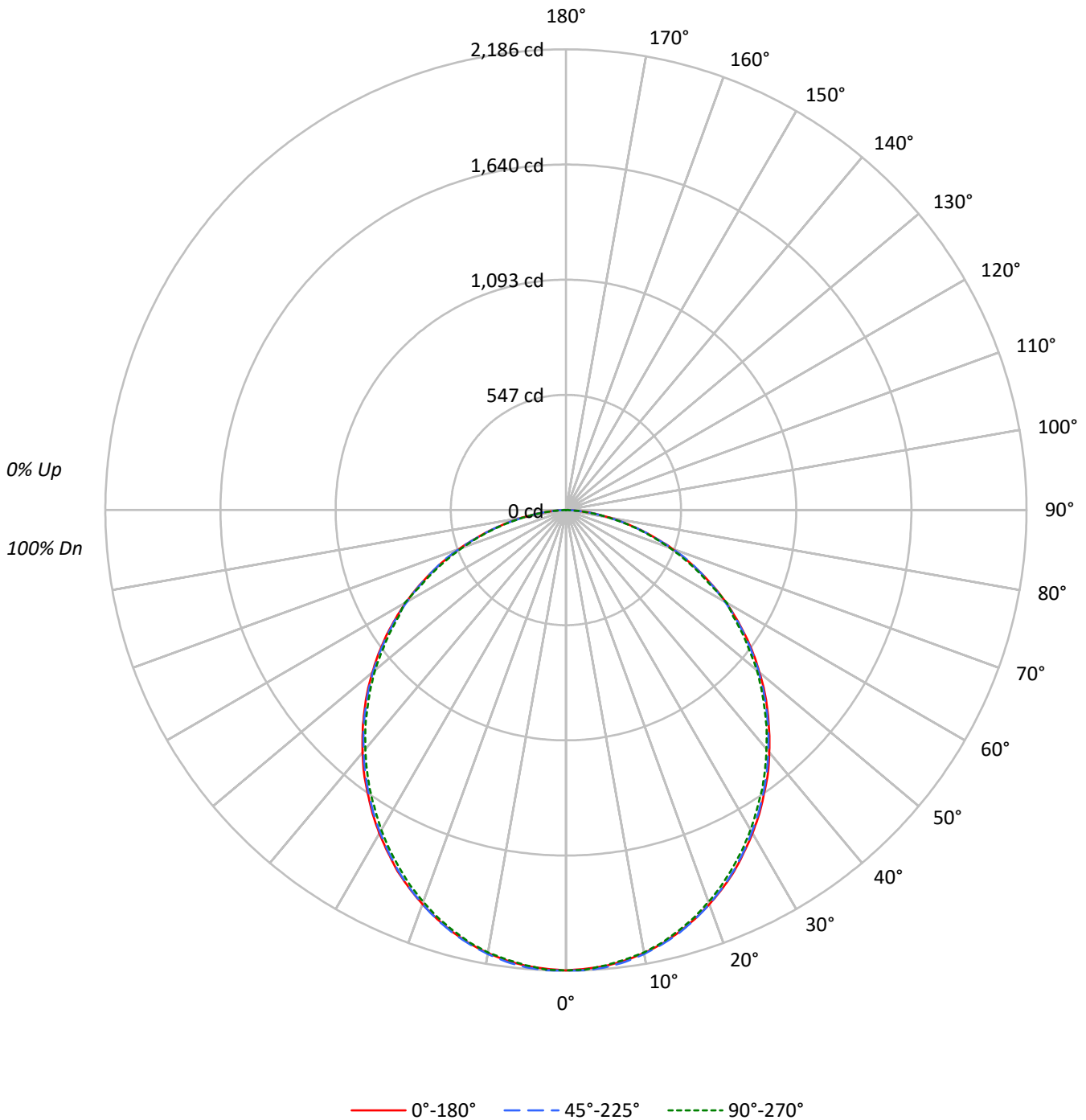
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5818.6 lumens
Efficiency: N/A
Efficacy: 112.3 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): 51.8
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° | 2939 | 2939 | 2939 |
| 5° | 2933 | 2941 | 2929 |
| 10° | 2916 | 2923 | 2912 |
| 15° | 2888 | 2893 | 2878 |
| 20° | 2850 | 2849 | 2833 |
| 25° | 2807 | 2801 | 2779 |
| 30° | 2752 | 2742 | 2722 |
| 35° | 2694 | 2685 | 2663 |
| 40° | 2637 | 2624 | 2601 |
| 45° | 2577 | 2564 | 2537 |
| 50° | 2511 | 2500 | 2475 |
| 55° | 2442 | 2429 | 2398 |
| 60° | 2360 | 2345 | 2377 |
| 65° | 2252 | 2246 | 2203 |
| 70° | 2113 | 2116 | 2059 |
| 75° | 1919 | 1904 | 1861 |
| 80° | 1649 | 1627 | 1584 |
| 85° | 1260 | 1249 | 1153 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 206.3 | 3.5 |
| 10°-20° | 584.5 | 10.0 |
| 20°-30° | 867.6 | 14.9 |
| 30°-40° | 1021.2 | 17.6 |
| 40°-50° | 1037.8 | 17.8 |
| 50°-60° | 922.6 | 15.9 |
| 60°-70° | 695.9 | 12.0 |
| 70°-80° | 386.5 | 6.6 |
| 80°-90° | 96.1 | 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° | 1658.4 | 28.5 |
| 0°-40° | 2679.6 | 46.1 |
| 0°-60° | 4640.1 | 79.7 |
| 0°-90° | 5818.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5818.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2185 | 2185 | 2185 | 2185 | 2185 | |
| 5° | 2171 | 2175 | 2178 | 2174 | 2168 | 206 |
| 15° | 2074 | 2076 | 2077 | 2072 | 2066 | 585 |
| 25° | 1891 | 1889 | 1887 | 1878 | 1872 | 870 |
| 35° | 1640 | 1641 | 1635 | 1625 | 1622 | 1027 |
| 45° | 1354 | 1354 | 1347 | 1336 | 1333 | 1045 |
| 55° | 1041 | 1033 | 1035 | 1024 | 1022 | 930 |
| 65° | 708 | 703 | 705 | 696 | 692 | 700 |
| 75° | 369 | 364 | 366 | 364 | 358 | 391 |
| 85° | 82 | 80 | 81 | 77 | 75 | 98 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P708977

CATALOG NUMBER: 24APR-58L840-X-UNV

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2184.6 | 2184.6 | 2184.6 | 2184.6 | 2184.6 |
| 2.5° | 2179.0 | 2183.2 | 2186.0 | 2182.5 | 2181.8 |
| 5° | 2171.3 | 2174.8 | 2177.6 | 2174.1 | 2168.5 |
| 7.5° | 2156.0 | 2160.1 | 2162.2 | 2158.8 | 2151.1 |
| 10° | 2134.3 | 2138.5 | 2139.2 | 2135.7 | 2131.5 |
| 12.5° | 2107.8 | 2110.6 | 2110.6 | 2107.8 | 2102.9 |
| 15° | 2073.6 | 2075.7 | 2077.1 | 2072.2 | 2066.0 |
| 17.5° | 2034.6 | 2038.0 | 2036.7 | 2029.0 | 2026.2 |
| 20° | 1990.6 | 1993.4 | 1989.9 | 1985.0 | 1978.7 |
| 22.5° | 1942.5 | 1943.2 | 1940.4 | 1934.8 | 1928.5 |
| 25° | 1890.8 | 1889.4 | 1886.6 | 1878.3 | 1872.0 |
| 27.5° | 1830.8 | 1833.6 | 1826.6 | 1819.0 | 1814.8 |
| 30° | 1771.5 | 1772.2 | 1765.2 | 1755.5 | 1752.0 |
| 32.5° | 1708.0 | 1706.6 | 1701.7 | 1691.3 | 1685.7 |
| 35° | 1640.3 | 1641.0 | 1634.8 | 1625.0 | 1621.5 |
| 37.5° | 1574.8 | 1570.6 | 1565.7 | 1554.5 | 1552.4 |
| 40° | 1501.5 | 1500.8 | 1493.8 | 1484.1 | 1480.6 |
| 42.5° | 1428.2 | 1427.5 | 1422.0 | 1412.2 | 1409.4 |
| 45° | 1354.3 | 1354.3 | 1347.3 | 1336.1 | 1333.3 |
| 47.5° | 1278.9 | 1276.1 | 1271.2 | 1261.5 | 1258.0 |
| 50° | 1199.4 | 1197.3 | 1194.5 | 1183.3 | 1182.6 |
| 52.5° | 1121.2 | 1119.8 | 1115.0 | 1105.2 | 1099.6 |
| 55° | 1041.0 | 1033.3 | 1035.4 | 1024.3 | 1022.2 |
| 57.5° | 958.7 | 951.0 | 955.2 | 945.4 | 941.2 |
| 60° | 877.0 | 869.4 | 871.5 | 865.2 | 883.3 |
| 62.5° | 793.3 | 788.4 | 788.4 | 803.1 | 776.6 |
| 65° | 707.5 | 703.3 | 705.4 | 696.3 | 692.1 |
| 67.5° | 623.1 | 616.8 | 630.0 | 613.3 | 606.3 |
| 70° | 537.2 | 533.1 | 537.9 | 528.2 | 523.3 |
| 72.5° | 452.1 | 448.6 | 447.2 | 443.8 | 439.6 |
| 75° | 369.1 | 364.2 | 366.3 | 363.5 | 357.9 |
| 77.5° | 288.2 | 286.8 | 286.1 | 282.6 | 278.4 |
| 80° | 212.8 | 211.4 | 210.0 | 207.2 | 204.4 |
| 82.5° | 142.3 | 140.9 | 140.2 | 138.8 | 138.1 |
| 85° | 81.6 | 79.5 | 80.9 | 77.4 | 74.7 |
| 87.5° | 30.7 | 30.0 | 31.4 | 28.6 | 26.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)