Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: METALUX

Report Number: P880970

Luminaire Tested: **24CZ2-60VHE-SQR-B2750-W2D-4000K**

Issue Date: 10/2/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

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**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P880970 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P474669) |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 10/2/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | METALUX |
| Catalog Number: | 24CZ2-60VHE-SQR-B2750-W2D-4000K |
| Description: | 2X4 6000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 4000K CCT AND SQR LENS |

| | |
|---|---|
| Light Source: | - |
| Ballast/Driver: | - |

| Luminaire Equipment: | Sample No. | Condition | Description |
|---|---|---|---|

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5446.0 lumens |
| Efficiency: | N/A |
| Efficacy: | 115.9 lumens/watt |
| Spacing Criteria (0/90/45): | 1.21 / 1.3 / 1.39 |
| Luminous Opening: | Rectangular (W 1.92' x L: 3.98' x H: 0') |
| CIE Type: | Direct |

| | |
|---|---|
| Input Watts (W): | 47 |
| Input Voltage (V): | NR |
| 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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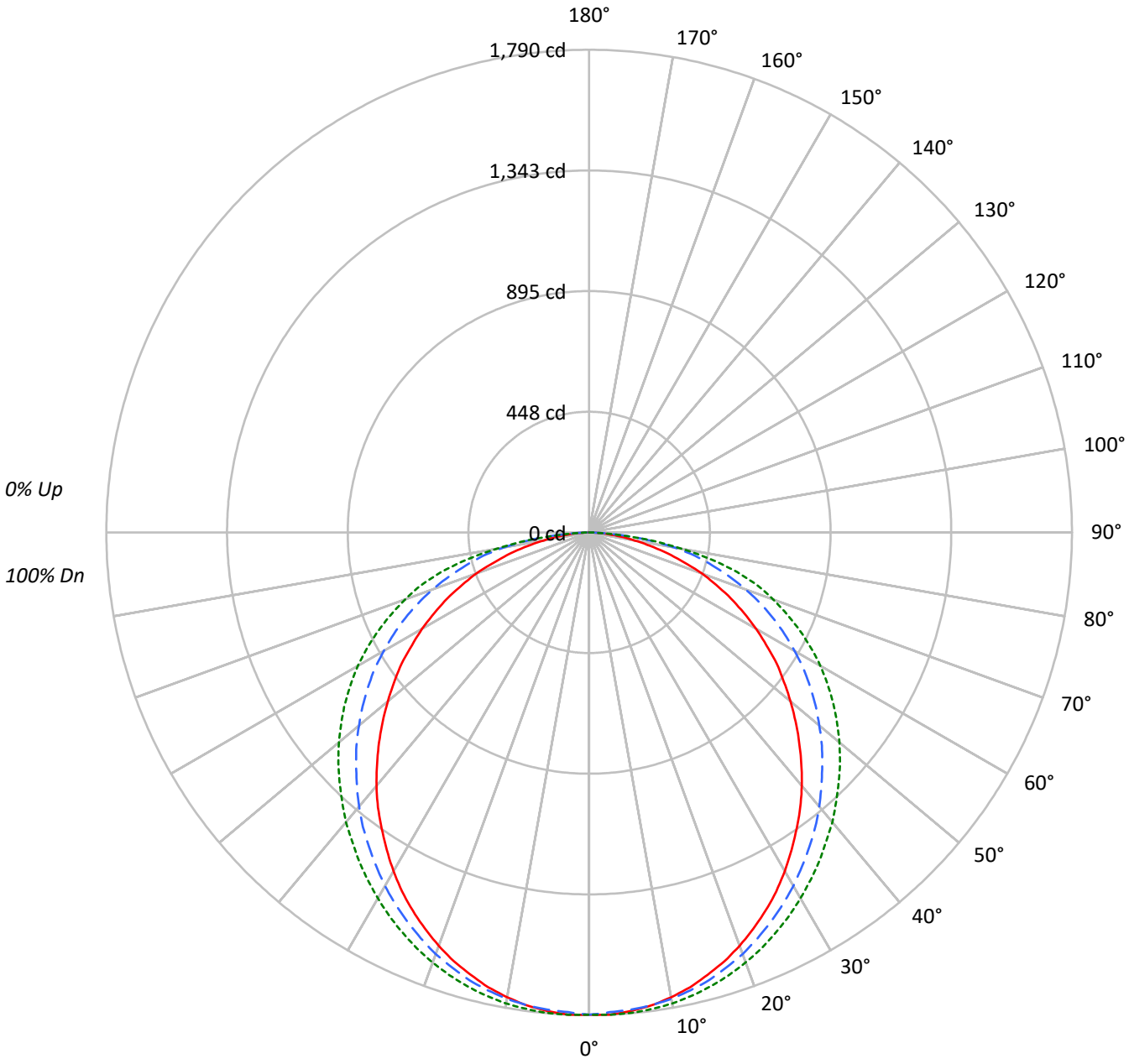
## Luminous Intensity Polar Plot



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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 98 | 94 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 87 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 59 | 56 |
| 4 | 81 | 69 | 59 | 53 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 34 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 27 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 50 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 24 | 23 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 2525 | 2525 | 2525 |
| 5° | 2524 | 2517 | 2534 |
| 10° | 2509 | 2517 | 2542 |
| 15° | 2481 | 2512 | 2546 |
| 20° | 2450 | 2500 | 2549 |
| 25° | 2410 | 2482 | 2550 |
| 30° | 2364 | 2467 | 2554 |
| 35° | 2310 | 2452 | 2563 |
| 40° | 2260 | 2445 | 2584 |
| 45° | 2199 | 2438 | 2612 |
| 50° | 2140 | 2445 | 2659 |
| 55° | 2090 | 2462 | 2719 |
| 60° | 2019 | 2481 | 2795 |
| 65° | 1938 | 2511 | 2879 |
| 70° | 1838 | 2545 | 2995 |
| 75° | 1647 | 2581 | 3093 |
| 80° | 1387 | 2589 | 2806 |
| 85° | 1028 | 1958 | 1846 |

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 169.5 | 3.1 |
| 10°-20° | 485.8 | 8.9 |
| 20°-30° | 735.5 | 13.5 |
| 30°-40° | 889.7 | 16.3 |
| 40°-50° | 939.1 | 17.2 |
| 50°-60° | 885.6 | 16.3 |
| 60°-70° | 730.1 | 13.4 |
| 70°-80° | 479.0 | 8.8 |
| 80°-90° | 131.7 | 2.4 |
| 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° | 1390.8 | 25.5 |
| 0°-40° | 2280.5 | 41.9 |
| 0°-60° | 4105.2 | 75.4 |
| 0°-90° | 5446.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5446.0 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 1789 | 1789 | 1789 | 1789 | 1789 | |
| 5° | 1782 | 1782 | 1777 | 1789 | 1789 | 169 |
| 15° | 1698 | 1708 | 1719 | 1739 | 1743 | 479 |
| 25° | 1548 | 1567 | 1594 | 1627 | 1637 | 713 |
| 35° | 1341 | 1376 | 1423 | 1472 | 1488 | 839 |
| 45° | 1102 | 1151 | 1222 | 1287 | 1308 | 850 |
| 55° | 849 | 909 | 1001 | 1075 | 1105 | 757 |
| 65° | 580 | 650 | 752 | 832 | 862 | 573 |
| 75° | 302 | 379 | 473 | 548 | 567 | 319 |
| 85° | 64 | 110 | 121 | 117 | 114 | 79 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | 1788.9 | 1788.9 | 1788.9 | *1788.9* | 1788.9 |
| 2.5° | *1790.5* | *1788.9* | *1781.1* | *1791.4* | *1790.5* |
| 5° | 1781.8 | 1781.8 | 1776.7 | *1788.9* | 1788.9 |
| 7.5° | 1769.6 | 1770.6 | 1768.7 | *1782.7* | 1782.7 |
| 10° | 1750.6 | 1754.0 | 1756.6 | *1772.4* | 1774.0 |
| 12.5° | 1727.9 | 1734.1 | 1739.2 | *1758.4* | 1760.2 |
| 15° | 1698.3 | 1707.9 | 1719.2 | *1739.2* | 1742.8 |
| 17.5° | 1667.8 | 1679.3 | 1691.4 | *1717.6* | 1721.9 |
| 20° | 1631.4 | 1644.4 | 1664.4 | *1690.5* | 1697.4 |
| 22.5° | 1590.5 | 1608.7 | 1629.6 | *1660.9* | 1669.7 |
| 25° | 1547.9 | 1566.9 | 1594.0 | *1627.0* | 1637.4 |
| 27.5° | 1501.8 | 1524.3 | 1554.8 | *1593.1* | 1604.3 |
| 30° | 1450.4 | 1476.4 | 1514.0 | *1554.8* | 1566.9 |
| 32.5° | 1396.4 | 1426.9 | 1468.6 | *1514.0* | 1527.8 |
| 35° | 1340.8 | 1375.5 | 1423.4 | *1472.2* | 1487.8 |
| 37.5° | 1285.9 | 1320.7 | 1377.3 | *1428.7* | 1443.4 |
| 40° | 1226.7 | 1265.0 | 1326.9 | *1381.7* | 1402.5 |
| 42.5° | 1164.1 | 1209.5 | 1274.6 | *1335.6* | 1355.5 |
| 45° | 1101.5 | 1151.0 | 1221.6 | *1286.8* | 1308.5 |
| 47.5° | 1038.0 | 1092.8 | 1170.3 | *1236.3* | 1261.5 |
| 50° | 974.5 | 1032.7 | 1113.7 | *1185.0* | 1211.1 |
| 52.5° | 910.0 | 971.0 | 1058.8 | *1134.5* | 1158.1 |
| 55° | 849.3 | 909.1 | 1000.6 | *1075.4* | 1104.9 |
| 57.5° | 778.7 | 846.5 | 943.1 | *1018.9* | 1047.6 |
| 60° | 715.2 | 781.4 | 878.8 | *958.9* | 990.1 |
| 62.5° | 646.4 | 714.2 | 817.0 | *897.0* | 927.5 |
| 65° | 580.3 | 650.0 | 751.8 | *831.8* | 862.1 |
| 67.5° | 509.0 | 582.1 | 686.5 | *764.0* | 793.5 |
| 70° | 445.5 | 514.3 | 616.8 | *696.1* | 725.7 |
| 72.5° | 368.0 | 446.4 | 544.6 | *623.0* | 655.1 |
| 75° | 302.0 | 379.3 | 473.3 | *548.2* | 567.3 |
| 77.5° | 232.3 | 309.8 | 402.9 | *451.5* | 464.6 |
| 80° | 170.6 | 243.5 | 318.5 | *344.6* | 345.3 |
| 82.5° | 114.9 | 179.3 | 221.9 | *235.0* | 233.2 |
| 85° | 63.5 | 109.6 | 120.9 | *117.4* | 114.0 |
| 87.5° | 26.1 | 36.5 | 29.6 | *20.9* | 16.5 |
| 90° | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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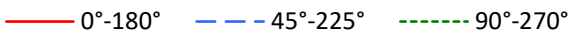
Report Generated By 670246072 / DESKTOP-50001EG


0°-180°
45°-225°
90°-270°

(END OF REPORT)