

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: P843152

Luminaire Tested: **24CZ2-60HE-S-UNV-B40**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P843152
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P272125)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-S-UNV-B40
Description: 2X4 6000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 4000K CCT AND SMOOTH LENS

Light Source: -
Ballast/Driver: -

Summary

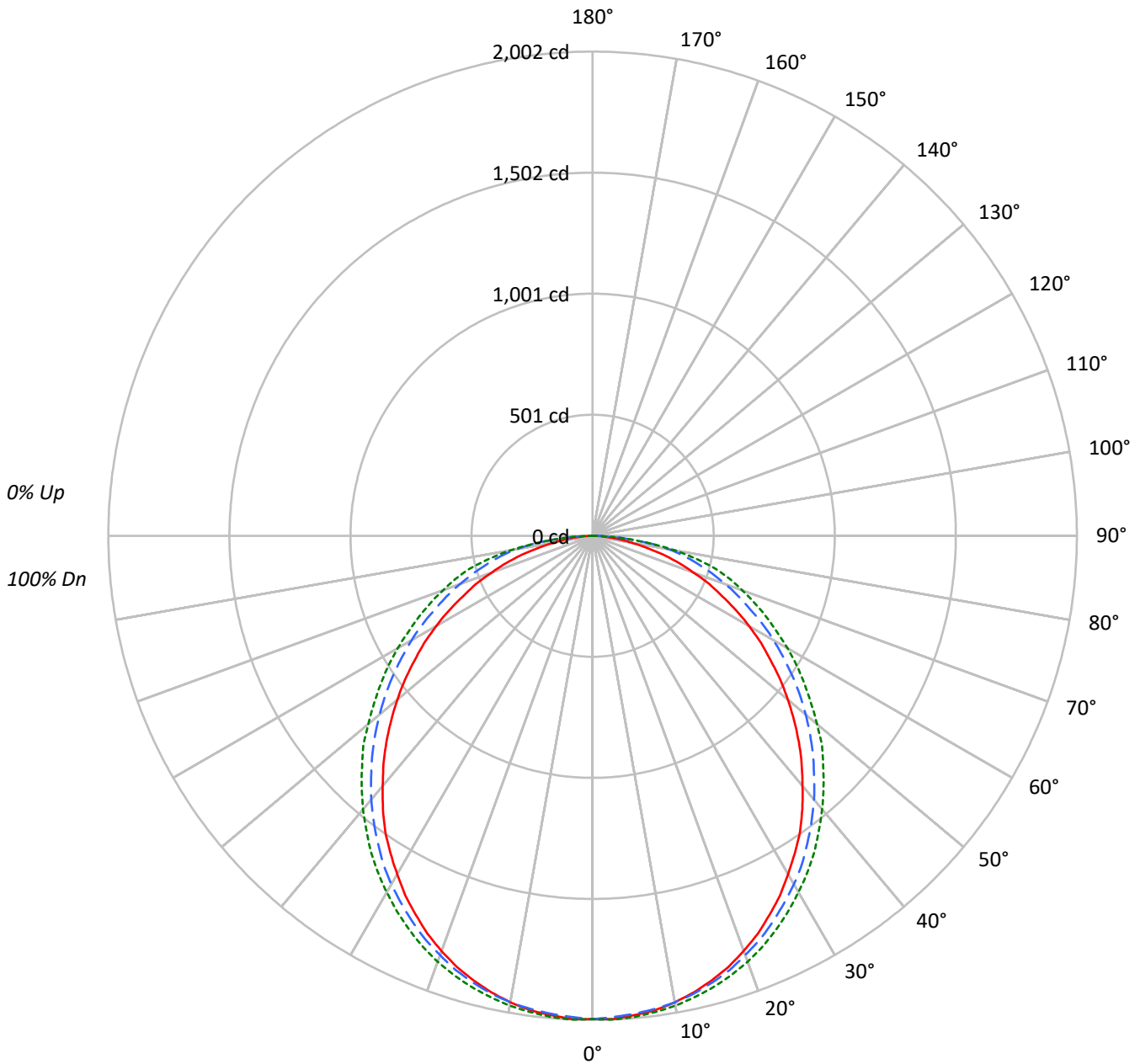
Lumens per Lamp: N/A
Luminaire Lumens: 5689.0 lumens
Efficiency: N/A
Efficacy: 126.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 45
Input Voltage (V): NR
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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CATALOG NUMBER: 24CZ2-60HE-S-UNV-B40

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | | | | | | | | | | | | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | | | | | | | | | | | | |
| 3 | 89 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | | | | | | | | | | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 | | | | | | | | | | | | | | | | | | | |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 | | | | | | | | | | | | | | | | | | | |
| 6 | 70 | 56 | 47 | 40 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | | | | | | | | | | | | | | | | |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 33 | | | | | | | | | | | | | | | | | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | | | | | | | | | | | | | | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | | | | | | | | | | | | | | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2821 | 2821 | 2821 |
| 5° | 2819 | 2811 | 2829 |
| 10° | 2807 | 2807 | 2828 |
| 15° | 2780 | 2793 | 2823 |
| 20° | 2744 | 2771 | 2814 |
| 25° | 2693 | 2744 | 2797 |
| 30° | 2633 | 2712 | 2774 |
| 35° | 2575 | 2668 | 2752 |
| 40° | 2487 | 2623 | 2720 |
| 45° | 2406 | 2572 | 2691 |
| 50° | 2313 | 2523 | 2658 |
| 55° | 2210 | 2477 | 2633 |
| 60° | 2107 | 2438 | 2627 |
| 65° | 1973 | 2396 | 2643 |
| 70° | 1826 | 2409 | 2714 |
| 75° | 1636 | 2454 | 2867 |
| 80° | 1322 | 2599 | 2805 |
| 85° | 994 | 2282 | 2225 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 189.2 | 3.3 |
| 10°-20° | 540.6 | 9.5 |
| 20°-30° | 812.7 | 14.3 |
| 30°-40° | 968.0 | 17.0 |
| 40°-50° | 990.7 | 17.4 |
| 50°-60° | 892.0 | 15.7 |
| 60°-70° | 700.5 | 12.3 |
| 70°-80° | 454.6 | 8.0 |
| 80°-90° | 140.6 | 2.5 |
| 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° | 1542.5 | 27.1 |
| 0°-40° | 2510.5 | 44.1 |
| 0°-60° | 4393.3 | 77.2 |
| 0°-90° | 5689.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5689.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1999 | 1999 | 1999 | 1999 | 1999 | |
| 5° | 1990 | 1993 | 1984 | 1995 | 1997 | 189 |
| 15° | 1903 | 1908 | 1912 | 1928 | 1932 | 537 |
| 25° | 1729 | 1744 | 1762 | 1791 | 1796 | 797 |
| 35° | 1494 | 1512 | 1549 | 1586 | 1597 | 932 |
| 45° | 1205 | 1234 | 1288 | 1337 | 1348 | 929 |
| 55° | 898 | 938 | 1006 | 1059 | 1070 | 805 |
| 65° | 591 | 636 | 717 | 777 | 791 | 588 |
| 75° | 300 | 358 | 450 | 511 | 526 | 317 |
| 85° | 61 | 114 | 141 | 137 | 137 | 74 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P843152

CATALOG NUMBER: 24CZ2-60HE-S-UNV-B40

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1998.7 | 1998.7 | 1998.7 | 1998.7 | 1998.7 |
| 2.5° | 2000.4 | 2000.4 | 1991.3 | 2000.4 | 2002.2 |
| 5° | 1989.5 | 1993.2 | 1984.1 | 1995.0 | 1996.7 |
| 7.5° | 1978.6 | 1978.6 | 1973.2 | 1984.1 | 1986.0 |
| 10° | 1958.8 | 1960.6 | 1958.8 | 1971.5 | 1973.2 |
| 12.5° | 1933.6 | 1937.1 | 1939.0 | 1951.6 | 1953.4 |
| 15° | 1902.9 | 1908.3 | 1911.8 | 1928.1 | 1931.8 |
| 17.5° | 1868.5 | 1873.9 | 1882.8 | 1900.9 | 1904.6 |
| 20° | 1826.9 | 1834.1 | 1845.0 | 1868.5 | 1873.9 |
| 22.5° | 1781.8 | 1789.0 | 1807.1 | 1828.6 | 1837.8 |
| 25° | 1729.4 | 1743.7 | 1761.8 | 1790.8 | 1796.2 |
| 27.5° | 1676.9 | 1689.5 | 1713.0 | 1743.7 | 1751.1 |
| 30° | 1615.5 | 1635.3 | 1664.3 | 1695.0 | 1702.1 |
| 32.5° | 1555.8 | 1575.6 | 1610.0 | 1642.7 | 1651.6 |
| 35° | 1494.4 | 1512.5 | 1548.6 | 1586.5 | 1597.4 |
| 37.5° | 1423.9 | 1447.4 | 1487.3 | 1525.1 | 1536.0 |
| 40° | 1349.9 | 1378.8 | 1423.9 | 1463.7 | 1476.4 |
| 42.5° | 1279.3 | 1310.0 | 1355.3 | 1398.6 | 1413.0 |
| 45° | 1205.3 | 1234.3 | 1288.5 | 1337.2 | 1348.1 |
| 47.5° | 1129.3 | 1162.0 | 1219.7 | 1268.4 | 1286.5 |
| 50° | 1053.6 | 1088.0 | 1149.3 | 1199.9 | 1210.7 |
| 52.5° | 977.6 | 1013.7 | 1078.8 | 1133.0 | 1138.5 |
| 55° | 898.1 | 937.9 | 1006.5 | 1059.0 | 1069.9 |
| 57.5° | 825.8 | 860.2 | 934.2 | 988.5 | 1001.1 |
| 60° | 746.3 | 784.2 | 863.7 | 914.4 | 930.5 |
| 62.5° | 670.4 | 710.2 | 793.4 | 843.9 | 858.3 |
| 65° | 590.9 | 636.2 | 717.4 | 777.0 | 791.4 |
| 67.5° | 522.3 | 565.6 | 652.3 | 710.2 | 724.6 |
| 70° | 442.6 | 491.6 | 583.7 | 643.4 | 657.7 |
| 72.5° | 374.0 | 424.6 | 516.9 | 574.6 | 596.3 |
| 75° | 300.0 | 357.7 | 450.0 | 511.4 | 525.8 |
| 77.5° | 227.7 | 294.6 | 388.4 | 435.4 | 435.4 |
| 80° | 162.6 | 233.2 | 319.8 | 341.6 | 345.1 |
| 82.5° | 106.7 | 175.3 | 236.7 | 234.9 | 234.9 |
| 85° | 61.4 | 113.9 | 140.9 | 137.4 | 137.4 |
| 87.5° | 23.5 | 47.0 | 50.5 | 50.5 | 48.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)