

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: P732228

Luminaire Tested: **24CZ2-40HE-S-B2750-W2D-3500K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P732228
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: 24CZ2-40HE-S-B2750-W2D-3500K
Description: 2X4 4000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 3500K CCT AND SMOOTH LENS

Light Source: -
Ballast/Driver: -

Summary

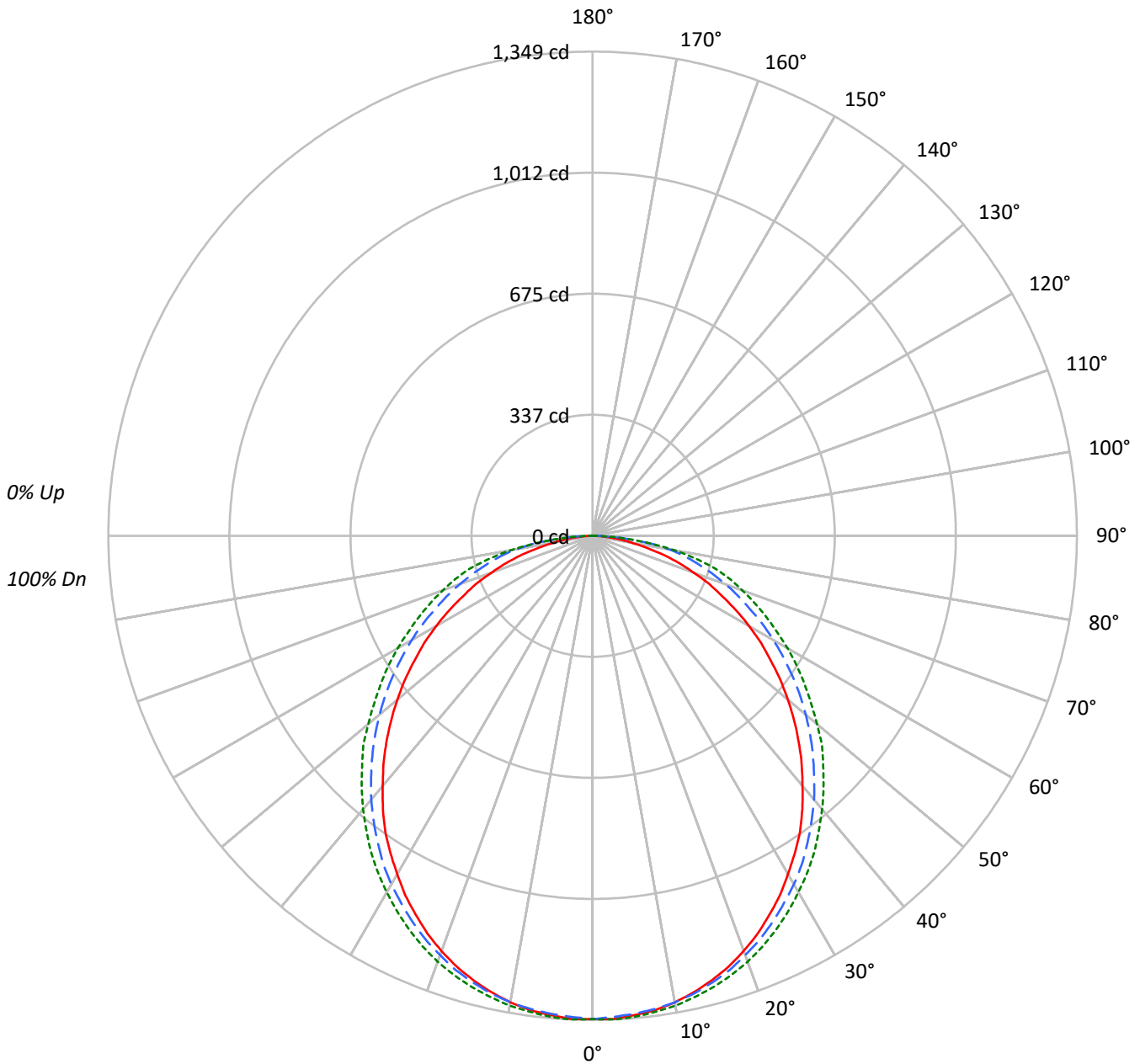
Lumens per Lamp: N/A
Luminaire Lumens: 3833.0 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|---|
| RF | 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 | 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° | 1901 | 1901 | 1901 |
| 5° | 1899 | 1894 | 1906 |
| 10° | 1891 | 1891 | 1905 |
| 15° | 1873 | 1882 | 1902 |
| 20° | 1849 | 1867 | 1896 |
| 25° | 1814 | 1848 | 1885 |
| 30° | 1774 | 1827 | 1869 |
| 35° | 1735 | 1798 | 1854 |
| 40° | 1676 | 1768 | 1833 |
| 45° | 1621 | 1733 | 1813 |
| 50° | 1558 | 1700 | 1791 |
| 55° | 1489 | 1669 | 1774 |
| 60° | 1420 | 1643 | 1770 |
| 65° | 1329 | 1614 | 1781 |
| 70° | 1231 | 1623 | 1829 |
| 75° | 1102 | 1653 | 1932 |
| 80° | 891 | 1751 | 1890 |
| 85° | 670 | 1537 | 1500 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.5 | 3.3 |
| 10°-20° | 364.3 | 9.5 |
| 20°-30° | 547.5 | 14.3 |
| 30°-40° | 652.2 | 17.0 |
| 40°-50° | 667.5 | 17.4 |
| 50°-60° | 601.0 | 15.7 |
| 60°-70° | 472.0 | 12.3 |
| 70°-80° | 306.3 | 8.0 |
| 80°-90° | 94.7 | 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° | 1039.3 | 27.1 |
| 0°-40° | 1691.5 | 44.1 |
| 0°-60° | 2960.0 | 77.2 |
| 0°-90° | 3833.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3833.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1347 | 1347 | 1347 | 1347 | 1347 | |
| 5° | 1340 | 1343 | 1337 | 1344 | 1345 | 127 |
| 15° | 1282 | 1286 | 1288 | 1299 | 1302 | 362 |
| 25° | 1165 | 1175 | 1187 | 1206 | 1210 | 537 |
| 35° | 1007 | 1019 | 1043 | 1069 | 1076 | 628 |
| 45° | 812 | 832 | 868 | 901 | 908 | 626 |
| 55° | 605 | 632 | 678 | 714 | 721 | 542 |
| 65° | 398 | 429 | 483 | 524 | 533 | 396 |
| 75° | 202 | 241 | 303 | 345 | 354 | 214 |
| 85° | 41 | 77 | 95 | 93 | 93 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1346.6 | 1346.6 | 1346.6 | 1346.6 | 1346.6 |
| 2.5° | 1347.8 | 1347.8 | 1341.6 | 1347.8 | 1349.0 |
| 5° | 1340.5 | 1343.0 | 1336.8 | 1344.1 | 1345.3 |
| 7.5° | 1333.1 | 1333.1 | 1329.5 | 1336.8 | 1338.1 |
| 10° | 1319.8 | 1320.9 | 1319.8 | 1328.3 | 1329.5 |
| 12.5° | 1302.8 | 1305.1 | 1306.4 | 1314.9 | 1316.1 |
| 15° | 1282.1 | 1285.7 | 1288.1 | 1299.1 | 1301.6 |
| 17.5° | 1258.9 | 1262.6 | 1268.6 | 1280.8 | 1283.3 |
| 20° | 1230.9 | 1235.7 | 1243.1 | 1258.9 | 1262.6 |
| 22.5° | 1200.5 | 1205.4 | 1217.5 | 1232.1 | 1238.2 |
| 25° | 1165.2 | 1174.8 | 1187.0 | 1206.5 | 1210.2 |
| 27.5° | 1129.8 | 1138.3 | 1154.2 | 1174.8 | 1179.8 |
| 30° | 1088.4 | 1101.8 | 1121.3 | 1142.0 | 1146.8 |
| 32.5° | 1048.3 | 1061.6 | 1084.8 | 1106.8 | 1112.8 |
| 35° | 1006.9 | 1019.1 | 1043.4 | 1068.9 | 1076.3 |
| 37.5° | 959.4 | 975.2 | 1002.0 | 1027.6 | 1034.9 |
| 40° | 909.5 | 929.0 | 959.4 | 986.2 | 994.7 |
| 42.5° | 862.0 | 882.6 | 913.1 | 942.3 | 952.0 |
| 45° | 812.1 | 831.6 | 868.1 | 901.0 | 908.3 |
| 47.5° | 760.9 | 782.9 | 821.8 | 854.6 | 866.8 |
| 50° | 709.8 | 733.0 | 774.4 | 808.4 | 815.7 |
| 52.5° | 658.6 | 683.0 | 726.9 | 763.4 | 767.0 |
| 55° | 605.1 | 631.9 | 678.2 | 713.5 | 720.8 |
| 57.5° | 556.4 | 579.6 | 629.4 | 666.0 | 674.5 |
| 60° | 502.9 | 528.4 | 581.9 | 616.1 | 627.0 |
| 62.5° | 451.7 | 478.5 | 534.5 | 568.6 | 578.3 |
| 65° | 398.1 | 428.6 | 483.3 | 523.5 | 533.2 |
| 67.5° | 351.9 | 381.1 | 439.5 | 478.5 | 488.2 |
| 70° | 298.2 | 331.2 | 393.3 | 433.5 | 443.2 |
| 72.5° | 252.0 | 286.0 | 348.2 | 387.1 | 401.8 |
| 75° | 202.1 | 241.0 | 303.2 | 344.6 | 354.3 |
| 77.5° | 153.4 | 198.5 | 261.7 | 293.4 | 293.4 |
| 80° | 109.6 | 157.1 | 215.5 | 230.2 | 232.5 |
| 82.5° | 71.9 | 118.1 | 159.5 | 158.3 | 158.3 |
| 85° | 41.4 | 76.7 | 94.9 | 92.6 | 92.6 |
| 87.5° | 15.8 | 31.7 | 34.0 | 34.0 | 32.9 |
| 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)