

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: P843057

Luminaire Tested: **24CZ2-40HE-HRP-UNV-B50**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P843057
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P295011)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-HRP-UNV-B50
Description: 2X4 4000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 5000K CCT AND HRP LENS

Light Source: -
Ballast/Driver: -

Summary

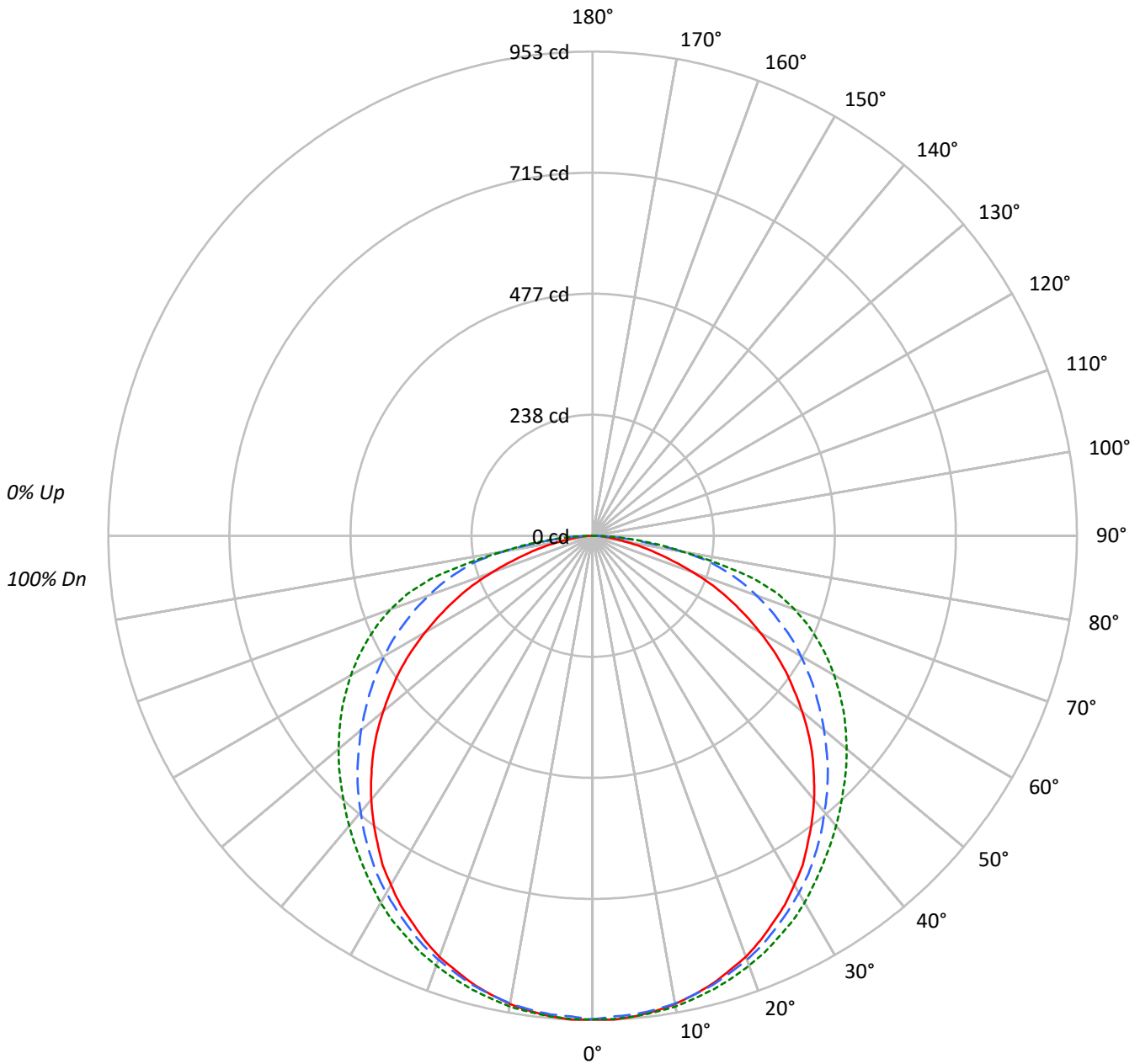
Lumens per Lamp: N/A
Luminaire Lumens: 2934.0 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')
CIE Type: Direct

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 | | | | | | | | | |
| 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 | 98 | 94 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 86 | 84 | 82 | | | | | | | | | | | | | | | | | | | |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 | | | | | | | | | | | | | | | | | | | |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 59 | 68 | 63 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 4 | 81 | 68 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 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 | 38 | 50 | 43 | 38 | 49 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | |
| 7 | 63 | 50 | 41 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | 46 | 39 | 34 | 44 | 38 | 33 | 31 | | | | | | | | | | | | | | | | | | | |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 28 | | | | | | | | | | | | | | | | | | | |
| 9 | 55 | 41 | 33 | 27 | 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 | 24 | 35 | 29 | 24 | 23 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1344 | 1344 | 1344 |
| 5° | 1345 | 1340 | 1345 |
| 10° | 1341 | 1340 | 1348 |
| 15° | 1333 | 1337 | 1350 |
| 20° | 1325 | 1334 | 1352 |
| 25° | 1308 | 1328 | 1354 |
| 30° | 1293 | 1323 | 1359 |
| 35° | 1272 | 1316 | 1361 |
| 40° | 1249 | 1308 | 1373 |
| 45° | 1221 | 1307 | 1395 |
| 50° | 1181 | 1305 | 1432 |
| 55° | 1139 | 1314 | 1484 |
| 60° | 1075 | 1335 | 1550 |
| 65° | 993 | 1366 | 1636 |
| 70° | 867 | 1414 | 1744 |
| 75° | 703 | 1487 | 1802 |
| 80° | 519 | 1458 | 1458 |
| 85° | 398 | 1075 | 1213 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.2 | 3.1 |
| 10°-20° | 259.0 | 8.8 |
| 20°-30° | 394.2 | 13.4 |
| 30°-40° | 478.7 | 16.3 |
| 40°-50° | 505.7 | 17.2 |
| 50°-60° | 477.2 | 16.3 |
| 60°-70° | 396.8 | 13.5 |
| 70°-80° | 261.1 | 8.9 |
| 80°-90° | 71.2 | 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° | 743.4 | 25.3 |
| 0°-40° | 1222.0 | 41.7 |
| 0°-60° | 2205.0 | 75.2 |
| 0°-90° | 2934.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2934.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 952 | 952 | 952 | 952 | 952 | |
| 5° | 950 | 950 | 946 | 950 | 950 | 90 |
| 15° | 913 | 914 | 915 | 924 | 924 | 257 |
| 25° | 840 | 845 | 852 | 867 | 870 | 388 |
| 35° | 738 | 747 | 764 | 784 | 790 | 462 |
| 45° | 612 | 624 | 655 | 687 | 699 | 471 |
| 55° | 463 | 483 | 534 | 585 | 603 | 412 |
| 65° | 297 | 332 | 409 | 469 | 490 | 294 |
| 75° | 129 | 188 | 273 | 323 | 330 | 139 |
| 85° | 25 | 54 | 66 | 74 | 75 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P843057

CATALOG NUMBER: 24CZ2-40HE-HRP-UNV-B50

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 952.0 | 952.0 | 952.0 | 952.0 | 952.0 |
| 2.5° | 953.2 | 952.0 | 947.0 | 952.0 | 952.0 |
| 5° | 949.5 | 949.5 | 945.7 | 949.5 | 949.5 |
| 7.5° | 943.3 | 943.3 | 940.9 | 945.7 | 945.7 |
| 10° | 936.0 | 936.0 | 934.7 | 940.9 | 940.9 |
| 12.5° | 924.9 | 926.2 | 924.9 | 932.2 | 932.2 |
| 15° | 912.6 | 913.8 | 915.1 | 923.7 | 923.7 |
| 17.5° | 896.7 | 899.1 | 901.5 | 911.4 | 912.6 |
| 20° | 881.9 | 883.2 | 888.0 | 899.1 | 900.3 |
| 22.5° | 862.2 | 866.0 | 872.1 | 883.2 | 886.8 |
| 25° | 840.2 | 845.0 | 852.5 | 867.2 | 869.6 |
| 27.5° | 819.2 | 823.0 | 832.7 | 848.7 | 853.7 |
| 30° | 793.5 | 799.6 | 811.9 | 827.9 | 833.9 |
| 32.5° | 768.9 | 775.0 | 789.7 | 807.1 | 811.9 |
| 35° | 738.2 | 746.8 | 764.1 | 783.7 | 789.7 |
| 37.5° | 708.8 | 717.3 | 738.2 | 760.3 | 767.7 |
| 40° | 677.9 | 687.8 | 710.0 | 735.8 | 745.5 |
| 42.5° | 644.8 | 658.3 | 683.0 | 711.2 | 722.3 |
| 45° | 611.7 | 624.0 | 654.7 | 686.6 | 698.9 |
| 47.5° | 576.0 | 590.8 | 624.0 | 662.0 | 676.7 |
| 50° | 538.0 | 556.4 | 594.5 | 636.3 | 652.3 |
| 52.5° | 499.9 | 520.7 | 563.7 | 610.5 | 627.7 |
| 55° | 463.0 | 482.7 | 534.2 | 584.7 | 603.1 |
| 57.5° | 422.6 | 447.1 | 503.6 | 557.6 | 576.0 |
| 60° | 380.8 | 407.9 | 472.9 | 529.4 | 549.0 |
| 62.5° | 339.0 | 369.7 | 443.4 | 499.9 | 520.7 |
| 65° | 297.3 | 331.6 | 409.1 | 469.2 | 490.0 |
| 67.5° | 256.7 | 294.8 | 377.0 | 437.3 | 458.1 |
| 70° | 210.1 | 257.9 | 342.7 | 401.6 | 422.6 |
| 72.5° | 167.1 | 222.4 | 309.6 | 364.9 | 383.3 |
| 75° | 129.0 | 187.9 | 272.7 | 323.1 | 330.4 |
| 77.5° | 94.6 | 153.6 | 234.5 | 251.9 | 253.1 |
| 80° | 63.8 | 122.9 | 179.4 | 176.8 | 179.4 |
| 82.5° | 41.8 | 92.1 | 113.0 | 126.5 | 127.8 |
| 85° | 24.6 | 54.1 | 66.4 | 73.7 | 74.9 |
| 87.5° | 12.3 | 18.4 | 23.4 | 24.6 | 27.0 |
| 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)