

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: P276148

Luminaire Tested: **24CZ2-35-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35-UNV-L82765-W2A1-U-5700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3507.8 lumens
Efficiency: N/A
Efficacy: 131.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

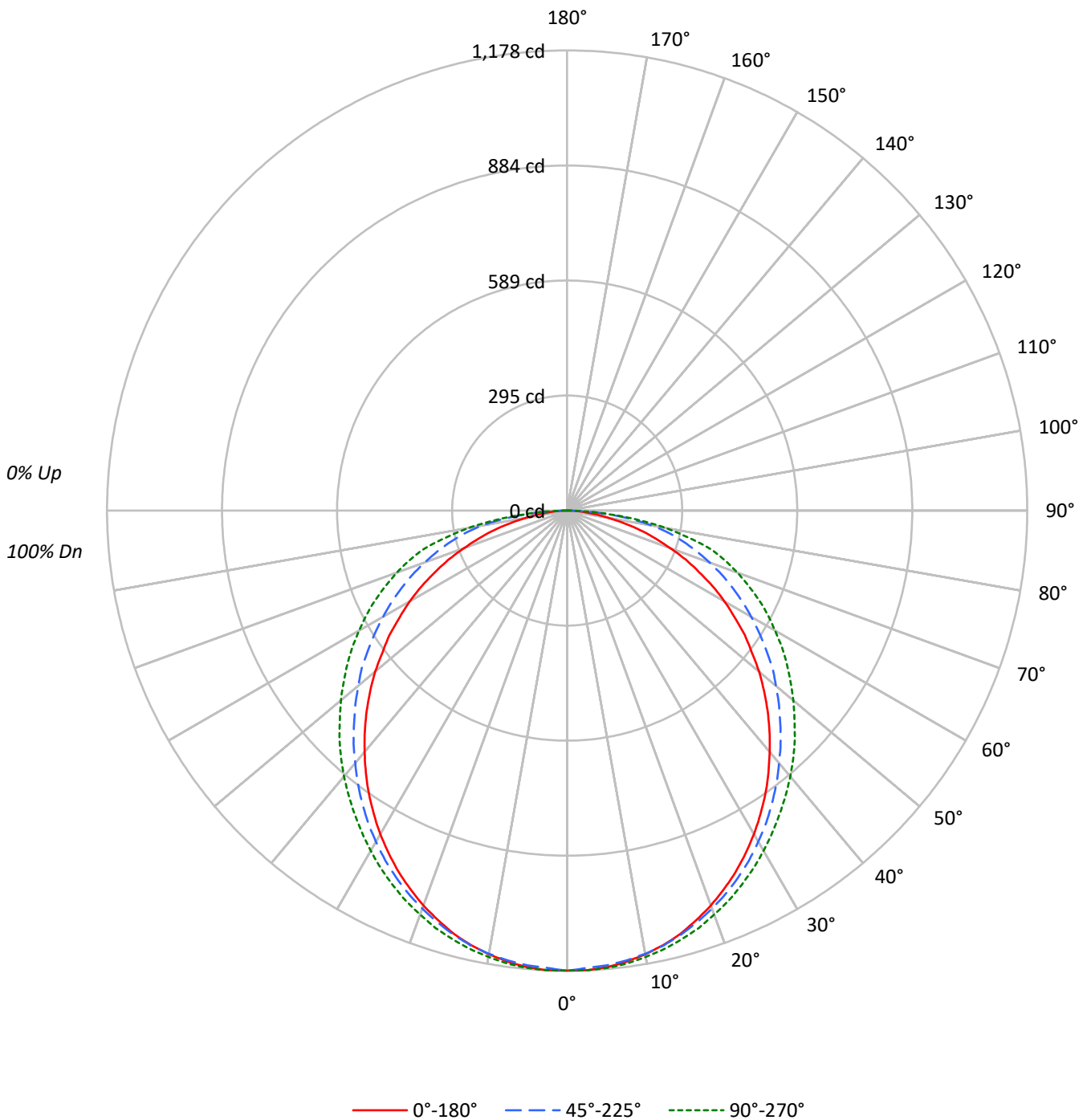
Input Watts (W): 26.784
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| 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 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 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 | 60 | 68 | 63 | 58 | 56 |
| 4 | 81 | 69 | 59 | 52 | 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 | 44 | 38 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 |
| 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 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1585 | 1585 | 1585 |
| 5° | 1584 | 1578 | 1588 |
| 10° | 1575 | 1574 | 1585 |
| 15° | 1562 | 1566 | 1582 |
| 20° | 1541 | 1552 | 1576 |
| 25° | 1515 | 1538 | 1569 |
| 30° | 1486 | 1521 | 1562 |
| 35° | 1454 | 1502 | 1558 |
| 40° | 1417 | 1483 | 1561 |
| 45° | 1381 | 1468 | 1568 |
| 50° | 1343 | 1460 | 1583 |
| 55° | 1302 | 1458 | 1612 |
| 60° | 1251 | 1465 | 1654 |
| 65° | 1185 | 1487 | 1726 |
| 70° | 1101 | 1524 | 1824 |
| 75° | 1004 | 1601 | 1978 |
| 80° | 825 | 1723 | 1977 |
| 85° | 633 | 1590 | 1698 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.4 | 3.2 |
| 10°-20° | 318.0 | 9.1 |
| 20°-30° | 478.5 | 13.6 |
| 30°-40° | 573.5 | 16.3 |
| 40°-50° | 597.6 | 17.0 |
| 50°-60° | 556.0 | 15.9 |
| 60°-70° | 457.9 | 13.1 |
| 70°-80° | 311.9 | 8.9 |
| 80°-90° | 103.0 | 2.9 |
| 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° | 907.9 | 25.9 |
| 0°-40° | 1481.4 | 42.2 |
| 0°-60° | 2635.0 | 75.1 |
| 0°-90° | 3507.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3507.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1178 | 1178 | 1178 | 1178 | 1178 | |
| 5° | 1173 | 1173 | 1168 | 1174 | 1175 | 111 |
| 15° | 1122 | 1123 | 1124 | 1134 | 1136 | 316 |
| 25° | 1021 | 1026 | 1036 | 1054 | 1057 | 470 |
| 35° | 885 | 896 | 914 | 939 | 948 | 553 |
| 45° | 726 | 741 | 772 | 810 | 824 | 560 |
| 55° | 555 | 574 | 622 | 671 | 687 | 495 |
| 65° | 372 | 404 | 467 | 522 | 542 | 370 |
| 75° | 193 | 236 | 308 | 363 | 380 | 204 |
| 85° | 41 | 80 | 103 | 110 | 110 | 51 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1177.7 | 1177.7 | 1177.7 | 1177.7 | 1177.7 |
| 2.5° | 1177.7 | 1177.7 | 1171.9 | 1177.7 | 1177.7 |
| 5° | 1173.0 | 1173.0 | 1168.4 | 1174.2 | 1175.4 |
| 7.5° | 1164.8 | 1166.0 | 1161.3 | 1168.4 | 1169.5 |
| 10° | 1153.1 | 1154.3 | 1152.0 | 1159.0 | 1160.2 |
| 12.5° | 1139.1 | 1140.3 | 1140.3 | 1148.5 | 1149.6 |
| 15° | 1121.5 | 1122.7 | 1123.9 | 1134.4 | 1135.6 |
| 17.5° | 1099.3 | 1102.8 | 1105.1 | 1118.0 | 1120.4 |
| 20° | 1075.9 | 1079.4 | 1084.1 | 1098.1 | 1100.5 |
| 22.5° | 1048.9 | 1053.6 | 1061.8 | 1077.0 | 1080.6 |
| 25° | 1020.8 | 1025.5 | 1036.1 | 1053.6 | 1057.1 |
| 27.5° | 989.2 | 996.3 | 1009.1 | 1027.9 | 1032.6 |
| 30° | 956.5 | 963.5 | 978.7 | 998.6 | 1005.6 |
| 32.5° | 921.3 | 930.7 | 948.3 | 970.5 | 977.5 |
| 35° | 885.0 | 895.6 | 914.3 | 938.9 | 948.3 |
| 37.5° | 846.4 | 858.1 | 880.4 | 907.3 | 919.0 |
| 40° | 806.6 | 820.7 | 844.1 | 875.7 | 888.6 |
| 42.5° | 766.8 | 779.7 | 809.0 | 842.9 | 856.9 |
| 45° | 725.8 | 741.1 | 771.5 | 810.1 | 824.2 |
| 47.5° | 683.7 | 698.9 | 735.2 | 776.2 | 789.0 |
| 50° | 641.5 | 656.8 | 697.7 | 741.1 | 756.3 |
| 52.5° | 595.9 | 615.8 | 662.6 | 705.9 | 721.1 |
| 55° | 554.9 | 573.6 | 621.6 | 670.8 | 687.2 |
| 57.5° | 508.1 | 530.3 | 583.0 | 634.5 | 652.1 |
| 60° | 464.8 | 488.2 | 544.4 | 597.1 | 614.6 |
| 62.5° | 420.3 | 446.0 | 505.7 | 559.6 | 579.5 |
| 65° | 372.3 | 403.9 | 467.1 | 522.1 | 542.0 |
| 67.5° | 329.0 | 361.7 | 428.5 | 484.7 | 502.2 |
| 70° | 279.8 | 319.6 | 387.5 | 443.7 | 463.6 |
| 72.5° | 237.7 | 277.5 | 348.9 | 403.9 | 423.8 |
| 75° | 193.2 | 236.5 | 307.9 | 362.9 | 380.5 |
| 77.5° | 148.7 | 196.7 | 268.1 | 310.2 | 316.1 |
| 80° | 106.5 | 156.9 | 222.4 | 247.0 | 255.2 |
| 82.5° | 74.9 | 120.6 | 163.9 | 180.3 | 185.0 |
| 85° | 41.0 | 79.6 | 103.0 | 110.0 | 110.0 |
| 87.5° | 17.6 | 34.0 | 41.0 | 42.1 | 43.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)