

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: P276145

Luminaire Tested: **24CZ2-35-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276145
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-4500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3417.9 lumens
Efficiency: N/A
Efficacy: 129.0 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

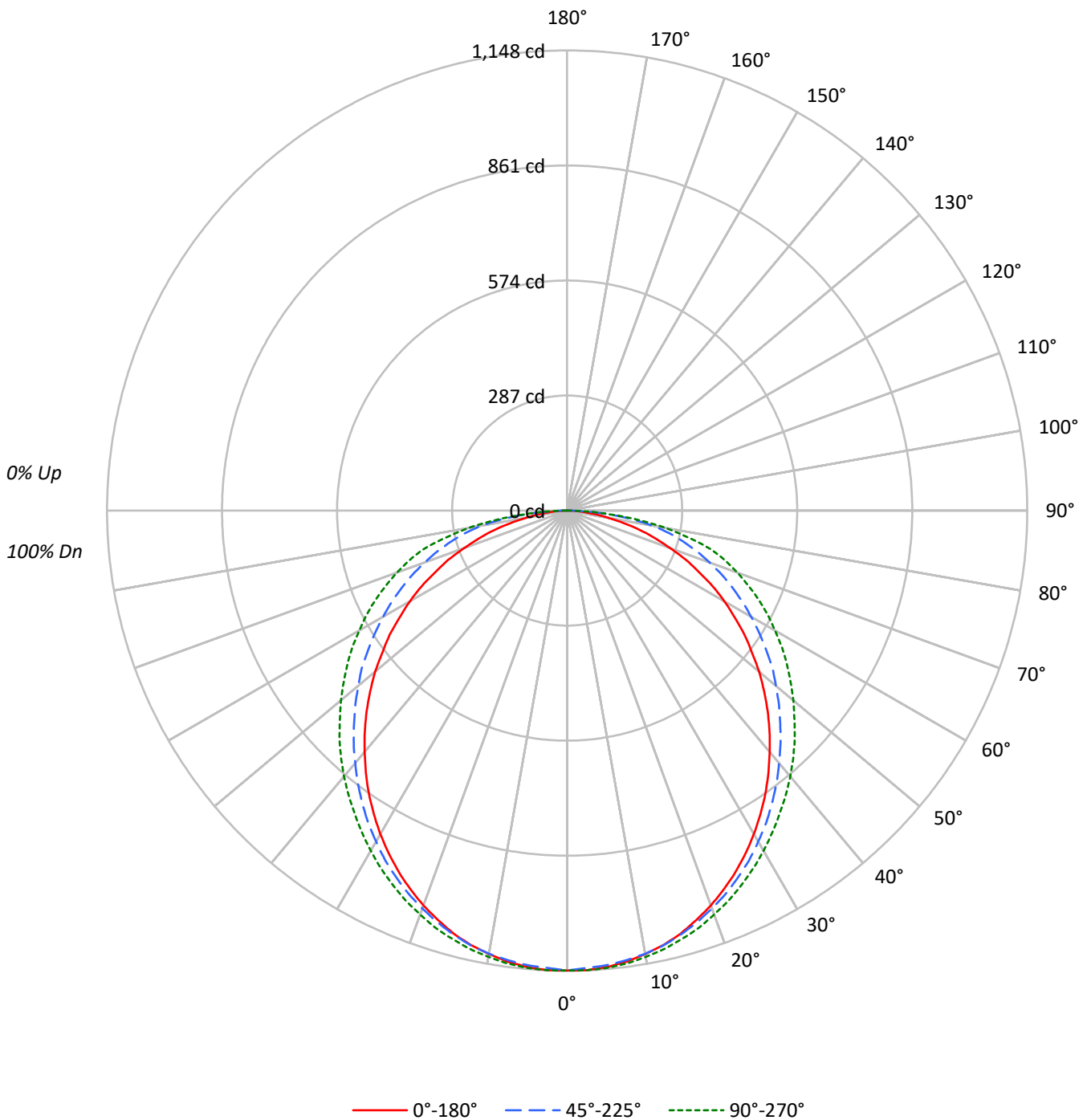
Input Watts (W): 26.505
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 108 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 89 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 | | | | | 67 | | | |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 58 | 56 | | | | | 56 | | | |
| 4 | 81 | 69 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 | | | | | 48 | | | |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 | | | | | 41 | | | |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 38 | 49 | 43 | 38 | 36 | | | | | 36 | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 | | | | | 32 | | | |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 | | | | | 28 | | | |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | 25 | | | |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 | | | | | 23 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1544 | 1544 | 1544 |
| 5° | 1544 | 1538 | 1547 |
| 10° | 1535 | 1534 | 1544 |
| 15° | 1522 | 1525 | 1541 |
| 20° | 1501 | 1512 | 1535 |
| 25° | 1477 | 1499 | 1529 |
| 30° | 1448 | 1482 | 1522 |
| 35° | 1417 | 1463 | 1518 |
| 40° | 1380 | 1444 | 1521 |
| 45° | 1346 | 1430 | 1528 |
| 50° | 1308 | 1423 | 1542 |
| 55° | 1268 | 1421 | 1571 |
| 60° | 1219 | 1427 | 1612 |
| 65° | 1155 | 1449 | 1681 |
| 70° | 1072 | 1485 | 1777 |
| 75° | 978 | 1560 | 1927 |
| 80° | 804 | 1679 | 1927 |
| 85° | 616 | 1550 | 1655 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 108.5 | 3.2 |
| 10°-20° | 309.8 | 9.1 |
| 20°-30° | 466.3 | 13.6 |
| 30°-40° | 558.8 | 16.3 |
| 40°-50° | 582.3 | 17.0 |
| 50°-60° | 541.8 | 15.9 |
| 60°-70° | 446.2 | 13.1 |
| 70°-80° | 303.9 | 8.9 |
| 80°-90° | 100.3 | 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° | 884.6 | 25.9 |
| 0°-40° | 1443.4 | 42.2 |
| 0°-60° | 2567.5 | 75.1 |
| 0°-90° | 3417.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3417.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1148 | 1148 | 1148 | 1148 | 1148 | |
| 5° | 1143 | 1143 | 1138 | 1144 | 1145 | 108 |
| 15° | 1093 | 1094 | 1095 | 1105 | 1106 | 308 |
| 25° | 995 | 999 | 1010 | 1027 | 1030 | 458 |
| 35° | 862 | 873 | 891 | 915 | 924 | 539 |
| 45° | 707 | 722 | 752 | 789 | 803 | 545 |
| 55° | 541 | 559 | 606 | 654 | 670 | 482 |
| 65° | 363 | 394 | 455 | 509 | 528 | 360 |
| 75° | 188 | 230 | 300 | 354 | 371 | 198 |
| 85° | 40 | 78 | 100 | 107 | 107 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276145

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1147.5 | 1147.5 | 1147.5 | 1147.5 | 1147.5 |
| 2.5° | 1147.5 | 1147.5 | 1141.8 | 1147.5 | 1147.5 |
| 5° | 1143.0 | 1143.0 | 1138.4 | 1144.1 | 1145.3 |
| 7.5° | 1135.0 | 1136.1 | 1131.6 | 1138.4 | 1139.6 |
| 10° | 1123.6 | 1124.7 | 1122.5 | 1129.3 | 1130.4 |
| 12.5° | 1109.9 | 1111.0 | 1111.0 | 1119.0 | 1120.2 |
| 15° | 1092.8 | 1093.9 | 1095.1 | 1105.3 | 1106.5 |
| 17.5° | 1071.1 | 1074.5 | 1076.8 | 1089.4 | 1091.7 |
| 20° | 1048.3 | 1051.7 | 1056.3 | 1070.0 | 1072.3 |
| 22.5° | 1022.1 | 1026.6 | 1034.6 | 1049.4 | 1052.9 |
| 25° | 994.7 | 999.3 | 1009.5 | 1026.6 | 1030.1 |
| 27.5° | 963.9 | 970.7 | 983.3 | 1001.5 | 1006.1 |
| 30° | 932.0 | 938.8 | 953.6 | 973.0 | 979.9 |
| 32.5° | 897.7 | 906.9 | 924.0 | 945.6 | 952.5 |
| 35° | 862.4 | 872.6 | 890.9 | 914.8 | 924.0 |
| 37.5° | 824.7 | 836.1 | 857.8 | 884.0 | 895.5 |
| 40° | 785.9 | 799.6 | 822.4 | 853.2 | 865.8 |
| 42.5° | 747.2 | 759.7 | 788.2 | 821.3 | 835.0 |
| 45° | 707.2 | 722.1 | 751.7 | 789.4 | 803.1 |
| 47.5° | 666.2 | 681.0 | 716.4 | 756.3 | 768.8 |
| 50° | 625.1 | 639.9 | 679.9 | 722.1 | 736.9 |
| 52.5° | 580.6 | 600.0 | 645.6 | 687.8 | 702.7 |
| 55° | 540.7 | 558.9 | 605.7 | 653.6 | 669.6 |
| 57.5° | 495.1 | 516.7 | 568.1 | 618.3 | 635.4 |
| 60° | 452.9 | 475.7 | 530.4 | 581.8 | 598.9 |
| 62.5° | 409.5 | 434.6 | 492.8 | 545.3 | 564.6 |
| 65° | 362.7 | 393.5 | 455.1 | 508.8 | 528.1 |
| 67.5° | 320.5 | 352.5 | 417.5 | 472.3 | 489.4 |
| 70° | 272.6 | 311.4 | 377.6 | 432.3 | 451.7 |
| 72.5° | 231.6 | 270.3 | 339.9 | 393.5 | 412.9 |
| 75° | 188.2 | 230.4 | 300.0 | 353.6 | 370.7 |
| 77.5° | 144.9 | 191.6 | 261.2 | 302.3 | 308.0 |
| 80° | 103.8 | 152.9 | 216.7 | 240.7 | 248.7 |
| 82.5° | 73.0 | 117.5 | 159.7 | 175.7 | 180.2 |
| 85° | 39.9 | 77.6 | 100.4 | 107.2 | 107.2 |
| 87.5° | 17.1 | 33.1 | 39.9 | 41.1 | 42.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)