

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: P230488

Luminaire Tested: **24CZ-LD5-65-RDP-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230488
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-65-RDP-UNV-L930-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RDP LENS
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3588.8 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

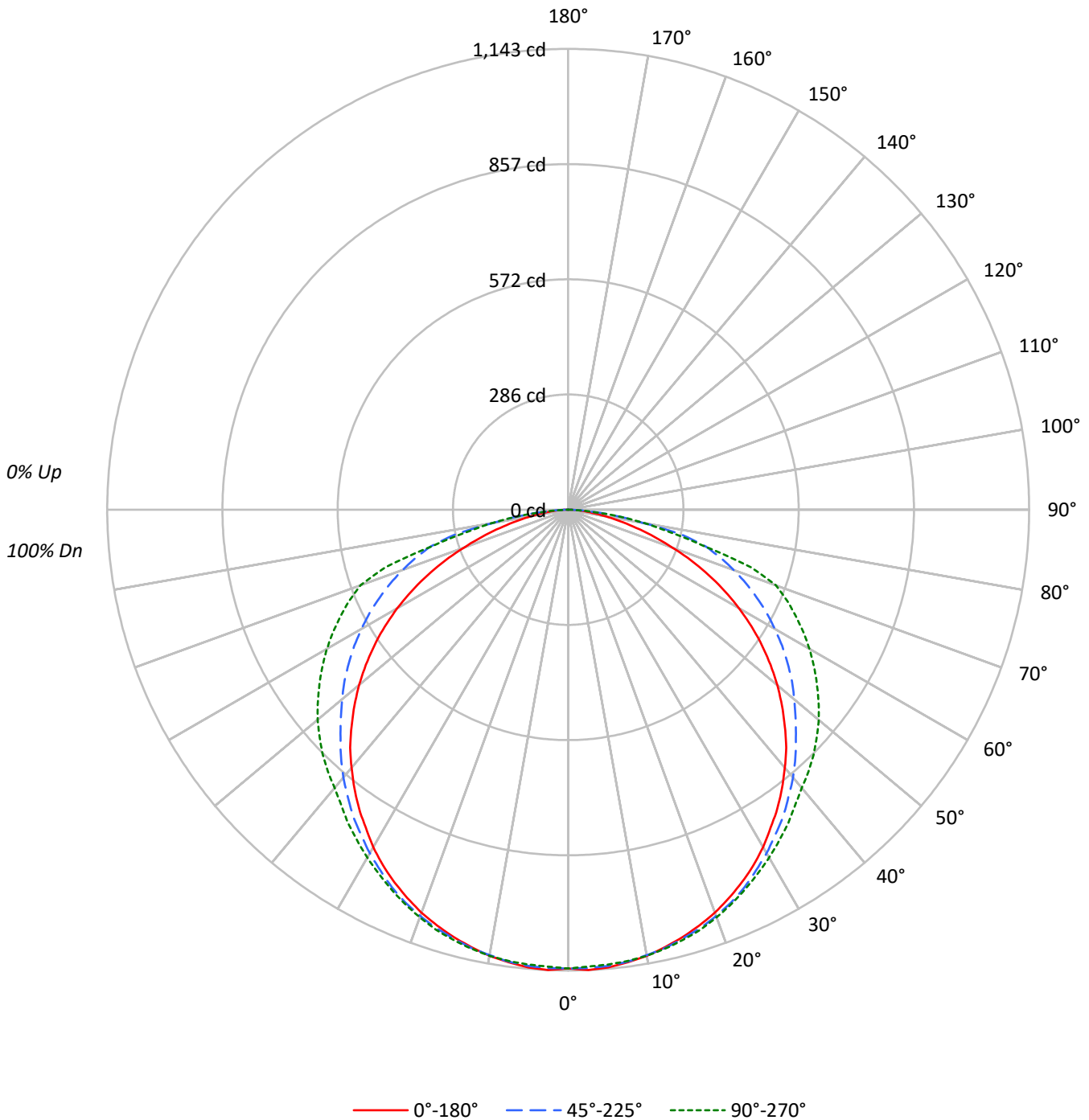
Input Watts (W): 57.64
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 101 | 97 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 87 | 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 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 52 | 64 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 50 | 47 |
| 5 | 74 | 61 | 51 | 45 | 72 | 60 | 51 | 44 | 57 | 50 | 44 | 55 | 49 | 43 | 54 | 48 | 43 | 41 |
| 6 | 68 | 55 | 45 | 39 | 66 | 54 | 45 | 38 | 52 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 41 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 35 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1531 | 1531 | 1531 |
| 5° | 1539 | 1534 | 1529 |
| 10° | 1535 | 1533 | 1535 |
| 15° | 1528 | 1533 | 1538 |
| 20° | 1523 | 1535 | 1541 |
| 25° | 1513 | 1534 | 1542 |
| 30° | 1501 | 1529 | 1548 |
| 35° | 1486 | 1526 | 1561 |
| 40° | 1468 | 1524 | 1583 |
| 45° | 1445 | 1519 | 1637 |
| 50° | 1416 | 1531 | 1697 |
| 55° | 1376 | 1558 | 1765 |
| 60° | 1317 | 1593 | 1859 |
| 65° | 1226 | 1642 | 1980 |
| 70° | 1084 | 1716 | 2154 |
| 75° | 909 | 1837 | 1809 |
| 80° | 725 | 1451 | 1506 |
| 85° | 573 | 982 | 900 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.9 | 3.0 |
| 10°-20° | 310.5 | 8.7 |
| 20°-30° | 474.3 | 13.2 |
| 30°-40° | 579.9 | 16.2 |
| 40°-50° | 620.7 | 17.3 |
| 50°-60° | 595.4 | 16.6 |
| 60°-70° | 502.7 | 14.0 |
| 70°-80° | 321.3 | 9.0 |
| 80°-90° | 76.0 | 2.1 |
| 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° | 892.8 | 24.9 |
| 0°-40° | 1472.7 | 41.0 |
| 0°-60° | 2688.8 | 74.9 |
| 0°-90° | 3588.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3588.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1138 | 1138 | 1138 | 1138 | 1138 | |
| 5° | 1140 | 1132 | 1136 | 1134 | 1132 | 108 |
| 15° | 1097 | 1094 | 1101 | 1104 | 1104 | 310 |
| 25° | 1019 | 1018 | 1034 | 1037 | 1039 | 470 |
| 35° | 904 | 912 | 929 | 942 | 950 | 566 |
| 45° | 760 | 772 | 798 | 836 | 860 | 586 |
| 55° | 586 | 606 | 664 | 724 | 753 | 523 |
| 65° | 385 | 422 | 516 | 588 | 622 | 380 |
| 75° | 175 | 249 | 353 | 360 | 348 | 188 |
| 85° | 37 | 62 | 64 | 62 | 58 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P230488

CATALOG NUMBER: 24CZ-LD5-65-RDP-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1137.7 | 1137.7 | 1137.7 | 1137.7 | 1137.7 |
| 2.5° | 1143.0 | 1135.9 | 1137.7 | 1137.7 | 1134.2 |
| 5° | 1139.5 | 1132.4 | 1135.9 | 1134.2 | 1132.4 |
| 7.5° | 1132.4 | 1127.1 | 1130.6 | 1130.6 | 1128.9 |
| 10° | 1123.6 | 1118.3 | 1121.8 | 1123.6 | 1123.6 |
| 12.5° | 1111.2 | 1107.7 | 1113.0 | 1113.0 | 1114.7 |
| 15° | 1097.1 | 1093.5 | 1100.6 | 1104.1 | 1104.1 |
| 17.5° | 1081.2 | 1079.4 | 1088.2 | 1090.0 | 1091.8 |
| 20° | 1063.5 | 1061.7 | 1072.3 | 1072.3 | 1075.9 |
| 22.5° | 1042.3 | 1040.5 | 1054.7 | 1054.7 | 1058.2 |
| 25° | 1019.3 | 1017.6 | 1033.5 | 1037.0 | 1038.8 |
| 27.5° | 994.6 | 992.8 | 1008.7 | 1014.0 | 1017.6 |
| 30° | 966.3 | 966.3 | 984.0 | 991.1 | 996.4 |
| 32.5° | 934.5 | 939.8 | 955.7 | 966.3 | 973.4 |
| 35° | 904.5 | 911.6 | 929.2 | 941.6 | 950.4 |
| 37.5° | 870.9 | 878.0 | 897.4 | 913.3 | 923.9 |
| 40° | 835.6 | 844.4 | 867.4 | 885.1 | 901.0 |
| 42.5° | 800.3 | 809.1 | 833.8 | 860.3 | 881.5 |
| 45° | 759.6 | 772.0 | 798.5 | 835.6 | 860.3 |
| 47.5° | 719.0 | 731.4 | 764.9 | 810.9 | 835.6 |
| 50° | 676.6 | 690.7 | 731.4 | 784.4 | 810.9 |
| 52.5° | 632.4 | 648.3 | 699.6 | 756.1 | 782.6 |
| 55° | 586.5 | 605.9 | 664.2 | 724.3 | 752.6 |
| 57.5° | 538.8 | 560.0 | 628.9 | 692.5 | 722.5 |
| 60° | 489.3 | 515.8 | 591.8 | 658.9 | 690.7 |
| 62.5° | 438.1 | 469.9 | 554.7 | 623.6 | 657.2 |
| 65° | 385.1 | 422.2 | 515.8 | 588.3 | 621.8 |
| 67.5° | 330.4 | 379.8 | 477.0 | 552.9 | 586.5 |
| 70° | 275.6 | 333.9 | 436.3 | 514.1 | 547.6 |
| 72.5° | 224.4 | 291.5 | 395.7 | 468.1 | 475.2 |
| 75° | 174.9 | 249.1 | 353.3 | 360.4 | 348.0 |
| 77.5° | 130.7 | 206.7 | 291.5 | 259.7 | 257.9 |
| 80° | 93.6 | 166.1 | 187.3 | 192.6 | 194.3 |
| 82.5° | 61.8 | 125.4 | 121.9 | 125.4 | 123.7 |
| 85° | 37.1 | 61.8 | 63.6 | 61.8 | 58.3 |
| 87.5° | 17.7 | 23.0 | 17.7 | 15.9 | 14.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)