

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: P258814

Luminaire Tested: **14CZ-LD5-44-S-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258814
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35112)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-44-S-UNV-L82765-W2A1-U-5000K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4580.0 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

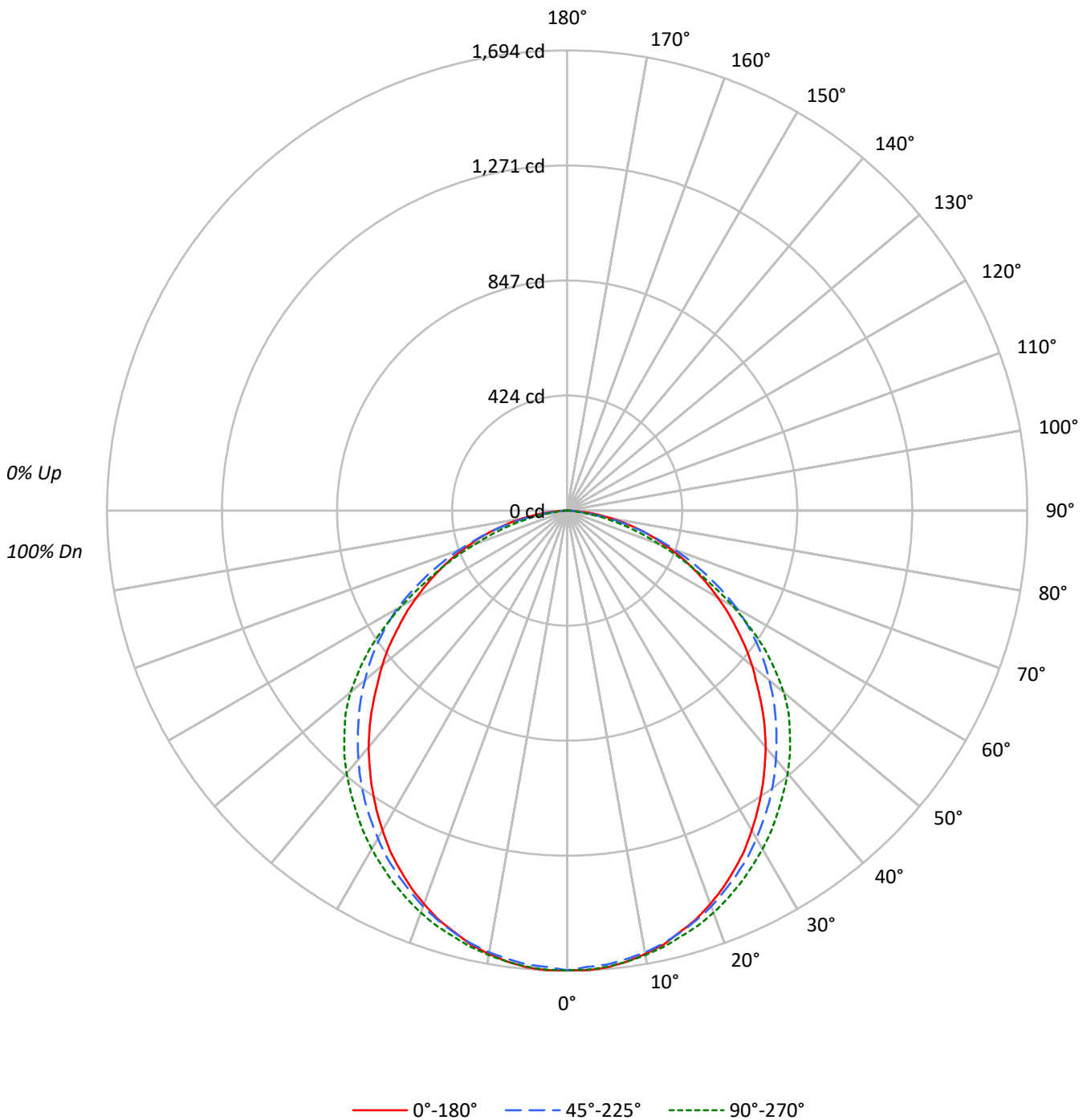
Input Watts (W): 36.456
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4553 | 4553 | 4553 |
| 5° | 4559 | 4532 | 4554 |
| 10° | 4528 | 4511 | 4539 |
| 15° | 4474 | 4480 | 4520 |
| 20° | 4412 | 4442 | 4512 |
| 25° | 4327 | 4387 | 4490 |
| 30° | 4223 | 4331 | 4471 |
| 35° | 4110 | 4271 | 4445 |
| 40° | 3993 | 4201 | 4438 |
| 45° | 3852 | 4132 | 4411 |
| 50° | 3725 | 4067 | 4357 |
| 55° | 3581 | 4002 | 4165 |
| 60° | 3449 | 3888 | 3800 |
| 65° | 3301 | 3638 | 3340 |
| 70° | 3115 | 3308 | 2826 |
| 75° | 2907 | 2864 | 2334 |
| 80° | 2562 | 2214 | 1708 |
| 85° | 2016 | 1071 | 945 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 159.9 | 3.5 |
| 10°-20° | 455.4 | 9.9 |
| 20°-30° | 683.5 | 14.9 |
| 30°-40° | 814.8 | 17.8 |
| 40°-50° | 839.3 | 18.3 |
| 50°-60° | 748.0 | 16.3 |
| 60°-70° | 538.9 | 11.8 |
| 70°-80° | 281.9 | 6.2 |
| 80°-90° | 58.3 | 1.3 |
| 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° | 1298.8 | 28.4 |
| 0°-40° | 2113.6 | 46.1 |
| 0°-60° | 3700.9 | 80.8 |
| 0°-90° | 4580.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4580.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1692 | 1692 | 1692 | 1692 | 1692 | |
| 5° | 1688 | 1684 | 1678 | 1688 | 1686 | 160 |
| 15° | 1606 | 1608 | 1608 | 1624 | 1622 | 453 |
| 25° | 1457 | 1465 | 1478 | 1506 | 1512 | 671 |
| 35° | 1251 | 1267 | 1300 | 1343 | 1353 | 782 |
| 45° | 1012 | 1035 | 1086 | 1147 | 1159 | 781 |
| 55° | 763 | 788 | 853 | 892 | 888 | 684 |
| 65° | 518 | 537 | 571 | 545 | 524 | 514 |
| 75° | 280 | 294 | 276 | 239 | 224 | 296 |
| 85° | 65 | 57 | 35 | 31 | 31 | 77 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 14CZ-LD5-44-S-UNV-L82765-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1691.9 | 1691.9 | 1691.9 | 1691.9 | 1691.9 |
| 2.5° | 1693.9 | 1689.8 | 1681.6 | 1691.9 | 1691.9 |
| 5° | 1687.8 | 1683.7 | 1677.6 | 1687.8 | 1685.7 |
| 7.5° | 1675.5 | 1671.4 | 1665.3 | 1677.6 | 1675.5 |
| 10° | 1657.2 | 1655.1 | 1651.0 | 1663.3 | 1661.2 |
| 12.5° | 1636.8 | 1634.7 | 1632.7 | 1644.9 | 1644.9 |
| 15° | 1606.1 | 1608.2 | 1608.2 | 1624.5 | 1622.5 |
| 17.5° | 1577.6 | 1579.6 | 1581.6 | 1602.1 | 1602.1 |
| 20° | 1540.8 | 1542.9 | 1551.0 | 1573.5 | 1575.5 |
| 22.5° | 1502.1 | 1504.1 | 1514.3 | 1540.8 | 1544.9 |
| 25° | 1457.2 | 1465.3 | 1477.6 | 1506.1 | 1512.3 |
| 27.5° | 1412.3 | 1418.4 | 1438.8 | 1471.4 | 1475.5 |
| 30° | 1359.2 | 1371.4 | 1393.9 | 1430.6 | 1438.8 |
| 32.5° | 1306.1 | 1320.4 | 1347.0 | 1387.8 | 1398.0 |
| 35° | 1251.0 | 1267.4 | 1300.0 | 1342.9 | 1353.1 |
| 37.5° | 1193.9 | 1208.2 | 1249.0 | 1293.9 | 1308.2 |
| 40° | 1136.7 | 1151.0 | 1195.9 | 1247.0 | 1263.3 |
| 42.5° | 1075.5 | 1095.9 | 1140.8 | 1198.0 | 1214.3 |
| 45° | 1012.3 | 1034.7 | 1085.7 | 1147.0 | 1159.2 |
| 47.5° | 946.9 | 971.4 | 1030.6 | 1091.8 | 1106.1 |
| 50° | 889.8 | 912.3 | 971.4 | 1030.6 | 1040.8 |
| 52.5° | 828.6 | 849.0 | 914.3 | 963.3 | 965.3 |
| 55° | 763.3 | 787.8 | 853.1 | 891.8 | 887.8 |
| 57.5° | 704.1 | 724.5 | 787.8 | 808.2 | 795.9 |
| 60° | 640.8 | 659.2 | 722.5 | 724.5 | 706.1 |
| 62.5° | 579.6 | 598.0 | 646.9 | 632.7 | 610.2 |
| 65° | 518.4 | 536.7 | 571.4 | 544.9 | 524.5 |
| 67.5° | 459.2 | 475.5 | 495.9 | 461.2 | 440.8 |
| 70° | 395.9 | 418.4 | 420.4 | 379.6 | 359.2 |
| 72.5° | 340.8 | 353.1 | 349.0 | 310.2 | 291.8 |
| 75° | 279.6 | 293.9 | 275.5 | 238.8 | 224.5 |
| 77.5° | 222.5 | 232.7 | 208.2 | 173.5 | 163.3 |
| 80° | 165.3 | 171.4 | 142.9 | 116.3 | 110.2 |
| 82.5° | 112.2 | 112.2 | 81.6 | 63.3 | 57.1 |
| 85° | 65.3 | 57.1 | 34.7 | 30.6 | 30.6 |
| 87.5° | 22.4 | 14.3 | 14.3 | 14.3 | 14.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)