

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: P261169

Luminaire Tested: **24CZ-LD5-55-S-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261169
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-55-S-UNV-L82765-W2A1-U-3500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 80 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5529.0 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

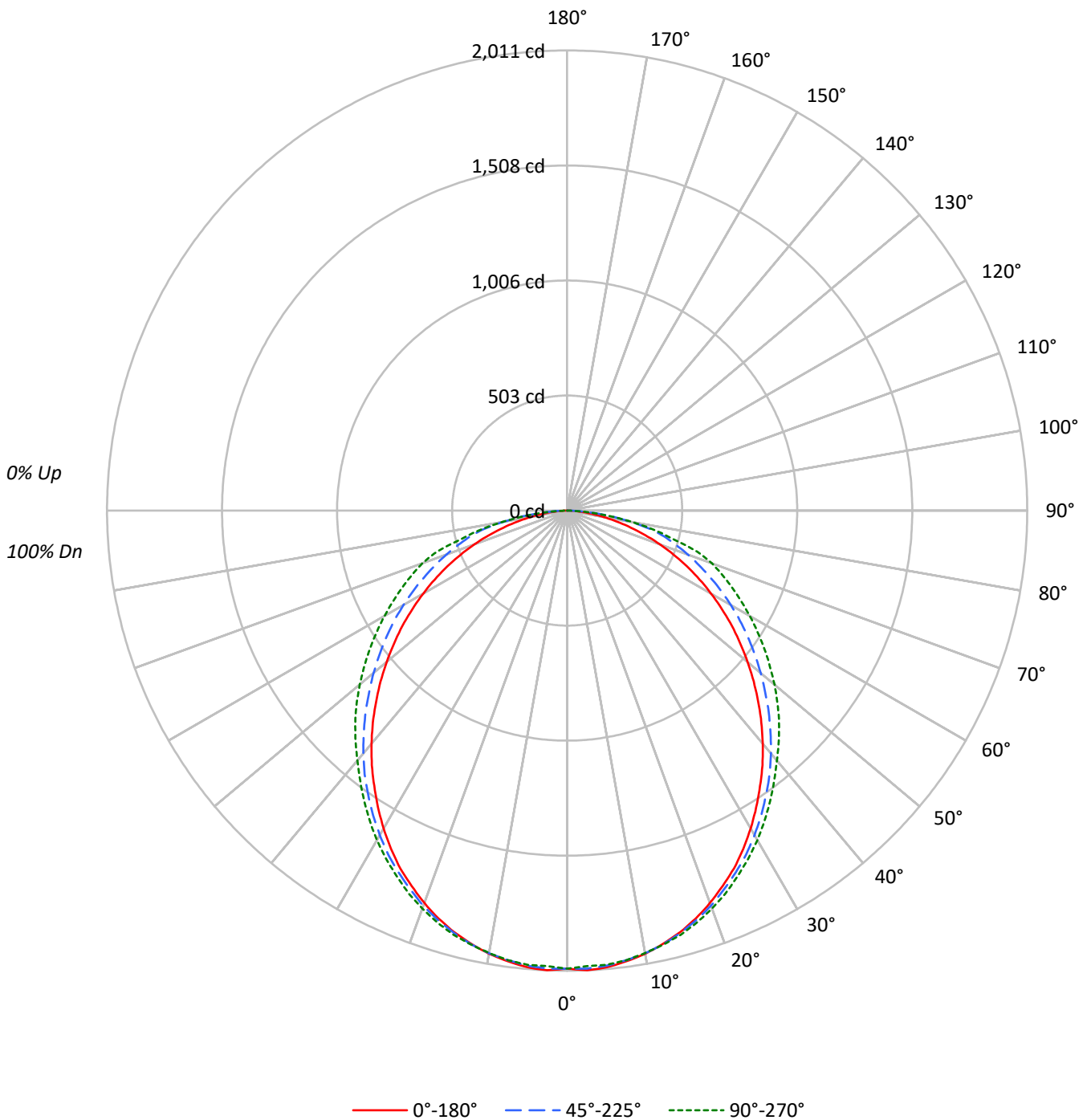
Input Watts (W): 40.269
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | 83 | | | |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 | | | | | 69 | | | |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | 58 | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 | | | | | 50 | | | |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 | | | | | 43 | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 | | | | | 33 | | | |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 | | | | | 27 | | | |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 | | | | | 24 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2693 | 2693 | 2693 |
| 5° | 2706 | 2696 | 2691 |
| 10° | 2687 | 2684 | 2682 |
| 15° | 2657 | 2663 | 2673 |
| 20° | 2613 | 2632 | 2650 |
| 25° | 2562 | 2589 | 2616 |
| 30° | 2492 | 2544 | 2584 |
| 35° | 2414 | 2490 | 2541 |
| 40° | 2336 | 2433 | 2504 |
| 45° | 2247 | 2370 | 2492 |
| 50° | 2156 | 2310 | 2476 |
| 55° | 2063 | 2261 | 2468 |
| 60° | 1956 | 2223 | 2480 |
| 65° | 1839 | 2196 | 2530 |
| 70° | 1694 | 2207 | 2649 |
| 75° | 1501 | 2286 | 2467 |
| 80° | 1254 | 2166 | 2224 |
| 85° | 937 | 1732 | 1590 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 189.2 | 3.4 |
| 10°-20° | 538.2 | 9.7 |
| 20°-30° | 802.1 | 14.5 |
| 30°-40° | 944.2 | 17.1 |
| 40°-50° | 959.5 | 17.4 |
| 50°-60° | 862.6 | 15.6 |
| 60°-70° | 681.5 | 12.3 |
| 70°-80° | 432.4 | 7.8 |
| 80°-90° | 119.3 | 2.2 |
| 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° | 1529.5 | 27.7 |
| 0°-40° | 2473.7 | 44.7 |
| 0°-60° | 4295.8 | 77.7 |
| 0°-90° | 5529.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5529.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2002 | 2002 | 2002 | 2002 | 2002 | |
| 5° | 2003 | 1987 | 1996 | 1992 | 1992 | 190 |
| 15° | 1908 | 1899 | 1912 | 1917 | 1919 | 537 |
| 25° | 1726 | 1724 | 1744 | 1755 | 1762 | 793 |
| 35° | 1470 | 1479 | 1516 | 1532 | 1547 | 920 |
| 45° | 1181 | 1198 | 1246 | 1282 | 1310 | 911 |
| 55° | 879 | 902 | 964 | 1027 | 1052 | 785 |
| 65° | 578 | 607 | 690 | 765 | 795 | 572 |
| 75° | 289 | 338 | 440 | 478 | 475 | 307 |
| 85° | 61 | 105 | 112 | 103 | 103 | 75 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2001.6 | 2001.6 | 2001.6 | 2001.6 | 2001.6 |
| 2.5° | 2010.8 | 1996.1 | 2003.4 | 1999.8 | 1992.4 |
| 5° | 2003.4 | 1986.9 | 1996.1 | 1992.4 | 1992.4 |
| 7.5° | 1986.9 | 1974.0 | 1981.4 | 1979.5 | 1981.4 |
| 10° | 1966.6 | 1953.8 | 1964.8 | 1964.8 | 1963.0 |
| 12.5° | 1939.0 | 1928.0 | 1940.9 | 1940.9 | 1942.7 |
| 15° | 1907.8 | 1898.6 | 1911.5 | 1917.0 | 1918.8 |
| 17.5° | 1869.1 | 1859.9 | 1876.5 | 1882.0 | 1887.5 |
| 20° | 1825.0 | 1821.3 | 1837.9 | 1843.4 | 1850.7 |
| 22.5° | 1775.3 | 1775.3 | 1791.9 | 1799.2 | 1810.3 |
| 25° | 1725.6 | 1723.8 | 1744.0 | 1755.1 | 1762.4 |
| 27.5° | 1666.8 | 1668.6 | 1694.4 | 1705.4 | 1714.6 |
| 30° | 1604.2 | 1607.9 | 1637.3 | 1650.2 | 1663.1 |
| 32.5° | 1538.0 | 1545.4 | 1578.5 | 1593.2 | 1606.1 |
| 35° | 1469.9 | 1479.1 | 1515.9 | 1532.5 | 1547.2 |
| 37.5° | 1401.9 | 1414.7 | 1453.4 | 1469.9 | 1486.5 |
| 40° | 1330.1 | 1341.1 | 1385.3 | 1405.5 | 1425.8 |
| 42.5° | 1256.5 | 1271.2 | 1315.4 | 1344.8 | 1368.7 |
| 45° | 1181.1 | 1197.6 | 1245.5 | 1282.3 | 1309.9 |
| 47.5° | 1105.7 | 1127.7 | 1173.7 | 1223.4 | 1247.3 |
| 50° | 1030.2 | 1052.3 | 1103.8 | 1159.0 | 1182.9 |
| 52.5° | 953.0 | 975.0 | 1033.9 | 1090.9 | 1116.7 |
| 55° | 879.4 | 901.5 | 964.0 | 1026.6 | 1052.3 |
| 57.5° | 802.1 | 826.0 | 895.9 | 960.3 | 986.1 |
| 60° | 726.7 | 750.6 | 826.0 | 894.1 | 921.7 |
| 62.5° | 653.1 | 678.9 | 758.0 | 829.7 | 857.3 |
| 65° | 577.7 | 607.1 | 689.9 | 765.3 | 794.8 |
| 67.5° | 504.1 | 537.2 | 623.7 | 702.8 | 734.0 |
| 70° | 430.5 | 469.1 | 561.1 | 642.1 | 673.3 |
| 72.5° | 358.7 | 401.1 | 498.6 | 579.5 | 596.1 |
| 75° | 288.8 | 338.5 | 439.7 | 478.3 | 474.6 |
| 77.5° | 222.6 | 277.8 | 373.5 | 380.8 | 391.9 |
| 80° | 161.9 | 222.6 | 279.6 | 294.4 | 287.0 |
| 82.5° | 106.7 | 167.4 | 200.5 | 193.2 | 191.3 |
| 85° | 60.7 | 104.9 | 112.2 | 103.0 | 103.0 |
| 87.5° | 25.8 | 42.3 | 36.8 | 27.6 | 25.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)