

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: P260878

Luminaire Tested: **24CZ-LD5-50-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P260878
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-50-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (336) 90 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4646.0 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

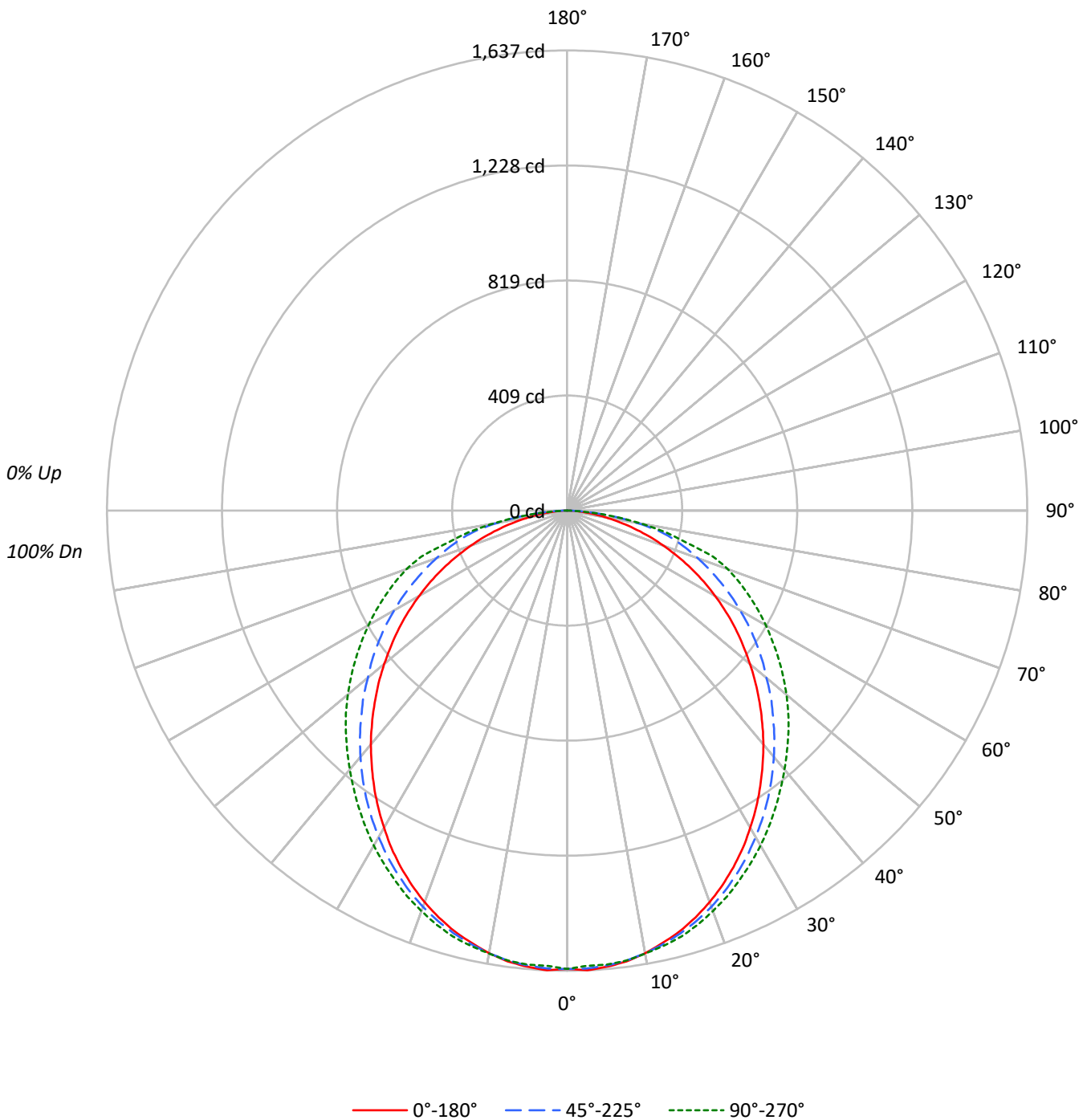
Input Watts (W): 36.549
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 61 | 68 | 64 | 60 | 57 |
| 4 | 82 | 69 | 60 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 32 |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2194 | 2194 | 2194 |
| 5° | 2200 | 2194 | 2189 |
| 10° | 2184 | 2184 | 2186 |
| 15° | 2158 | 2169 | 2185 |
| 20° | 2123 | 2148 | 2171 |
| 25° | 2078 | 2118 | 2154 |
| 30° | 2024 | 2083 | 2138 |
| 35° | 1967 | 2048 | 2122 |
| 40° | 1908 | 2009 | 2112 |
| 45° | 1843 | 1971 | 2119 |
| 50° | 1778 | 1938 | 2131 |
| 55° | 1713 | 1925 | 2153 |
| 60° | 1635 | 1914 | 2196 |
| 65° | 1550 | 1914 | 2269 |
| 70° | 1433 | 1946 | 2391 |
| 75° | 1282 | 2034 | 2274 |
| 80° | 1072 | 1947 | 2083 |
| 85° | 810 | 1497 | 1425 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 154.1 | 3.3 |
| 10°-20° | 438.5 | 9.4 |
| 20°-30° | 655.6 | 14.1 |
| 30°-40° | 777.7 | 16.7 |
| 40°-50° | 800.5 | 17.2 |
| 50°-60° | 734.3 | 15.8 |
| 60°-70° | 593.7 | 12.8 |
| 70°-80° | 385.3 | 8.3 |
| 80°-90° | 106.3 | 2.3 |
| 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° | 1248.2 | 26.9 |
| 0°-40° | 2025.9 | 43.6 |
| 0°-60° | 3560.7 | 76.6 |
| 0°-90° | 4646.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4646.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1630 | 1630 | 1630 | 1630 | 1630 | |
| 5° | 1629 | 1618 | 1624 | 1623 | 1621 | 155 |
| 15° | 1549 | 1543 | 1557 | 1564 | 1568 | 436 |
| 25° | 1400 | 1401 | 1427 | 1440 | 1451 | 644 |
| 35° | 1198 | 1207 | 1247 | 1274 | 1292 | 749 |
| 45° | 969 | 985 | 1036 | 1085 | 1114 | 748 |
| 55° | 730 | 752 | 821 | 888 | 918 | 652 |
| 65° | 487 | 515 | 601 | 681 | 713 | 481 |
| 75° | 247 | 293 | 391 | 438 | 438 | 262 |
| 85° | 52 | 89 | 97 | 94 | 92 | 64 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P260878

CATALOG NUMBER: 24CZ-LD5-50-UNV-L92765-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1630.5 | 1630.5 | 1630.5 | 1630.5 | 1630.5 |
| 2.5° | 1636.9 | 1624.1 | 1630.5 | 1628.9 | 1621.0 |
| 5° | 1628.9 | 1617.8 | 1624.1 | 1622.6 | 1621.0 |
| 7.5° | 1617.8 | 1606.6 | 1614.6 | 1613.0 | 1614.6 |
| 10° | 1598.7 | 1589.1 | 1598.7 | 1600.3 | 1600.3 |
| 12.5° | 1574.8 | 1566.9 | 1579.6 | 1582.8 | 1586.0 |
| 15° | 1549.4 | 1543.0 | 1557.3 | 1563.7 | 1568.5 |
| 17.5° | 1517.6 | 1512.8 | 1530.3 | 1538.2 | 1544.6 |
| 20° | 1482.6 | 1481.0 | 1500.1 | 1508.0 | 1516.0 |
| 22.5° | 1442.8 | 1442.8 | 1465.1 | 1474.6 | 1485.7 |
| 25° | 1399.8 | 1401.4 | 1426.9 | 1439.6 | 1450.8 |
| 27.5° | 1353.7 | 1355.3 | 1385.5 | 1401.4 | 1414.2 |
| 30° | 1302.8 | 1309.2 | 1341.0 | 1361.7 | 1376.0 |
| 32.5° | 1251.9 | 1259.9 | 1294.9 | 1318.7 | 1334.6 |
| 35° | 1197.8 | 1207.4 | 1247.1 | 1274.2 | 1291.7 |
| 37.5° | 1142.1 | 1153.3 | 1196.2 | 1226.5 | 1247.1 |
| 40° | 1086.5 | 1099.2 | 1143.7 | 1178.7 | 1202.6 |
| 42.5° | 1027.6 | 1041.9 | 1091.2 | 1132.6 | 1158.1 |
| 45° | 968.8 | 984.7 | 1035.6 | 1084.9 | 1113.5 |
| 47.5° | 909.9 | 929.0 | 983.1 | 1037.2 | 1067.4 |
| 50° | 849.5 | 868.5 | 925.8 | 987.8 | 1018.1 |
| 52.5° | 789.0 | 811.3 | 874.9 | 938.5 | 968.8 |
| 55° | 730.1 | 752.4 | 820.8 | 887.6 | 917.9 |
| 57.5° | 669.7 | 692.0 | 766.7 | 836.7 | 867.0 |
| 60° | 607.7 | 633.1 | 711.1 | 782.6 | 816.0 |
| 62.5° | 547.2 | 574.3 | 657.0 | 733.3 | 765.1 |
| 65° | 486.8 | 515.4 | 601.3 | 680.8 | 712.6 |
| 67.5° | 424.7 | 458.1 | 547.2 | 628.3 | 661.7 |
| 70° | 364.3 | 400.9 | 494.7 | 575.8 | 607.7 |
| 72.5° | 305.4 | 345.2 | 442.2 | 524.9 | 544.0 |
| 75° | 246.6 | 292.7 | 391.3 | 437.5 | 437.5 |
| 77.5° | 190.9 | 241.8 | 334.1 | 351.6 | 361.1 |
| 80° | 138.4 | 194.1 | 251.3 | 272.0 | 268.8 |
| 82.5° | 92.3 | 147.9 | 179.8 | 179.8 | 175.0 |
| 85° | 52.5 | 89.1 | 97.0 | 93.9 | 92.3 |
| 87.5° | 22.3 | 33.4 | 30.2 | 23.9 | 20.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)