

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: P276168

Luminaire Tested: **24CZ2-50-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276168
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: 24CZ2-50-UNV-L82765-W2A1-U-2700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4342.1 lumens
Efficiency: N/A
Efficacy: 109.3 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

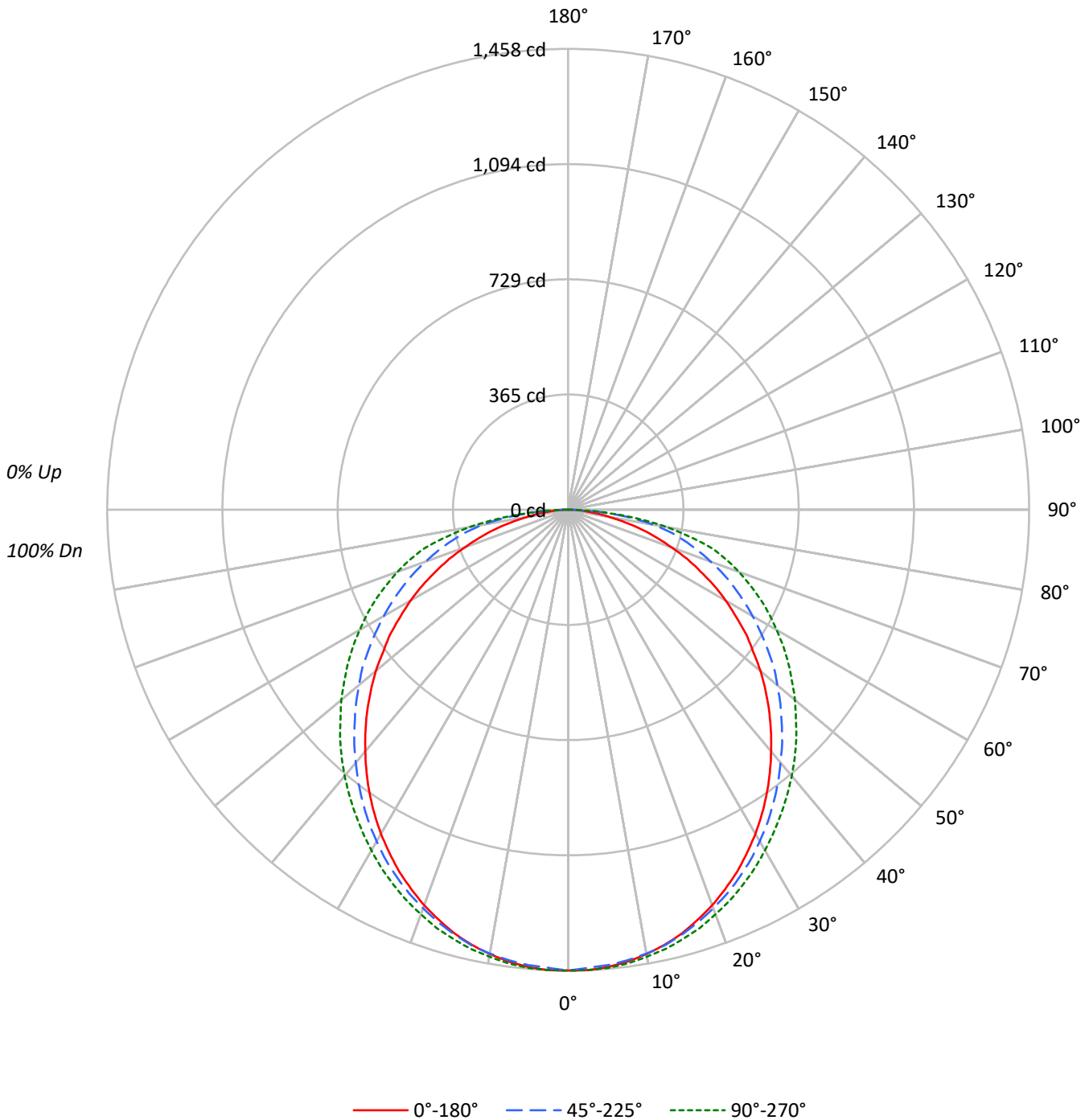
Input Watts (W): 39.711
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 89 | 86 | 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 | 61 | 70 | 64 | 60 | 68 | 63 | 58 | 56 |
| 4 | 81 | 69 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 38 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1962 | 1962 | 1962 |
| 5° | 1961 | 1953 | 1965 |
| 10° | 1950 | 1948 | 1962 |
| 15° | 1934 | 1938 | 1958 |
| 20° | 1907 | 1921 | 1950 |
| 25° | 1876 | 1904 | 1943 |
| 30° | 1840 | 1882 | 1934 |
| 35° | 1800 | 1859 | 1928 |
| 40° | 1754 | 1835 | 1932 |
| 45° | 1710 | 1817 | 1941 |
| 50° | 1662 | 1808 | 1960 |
| 55° | 1611 | 1805 | 1996 |
| 60° | 1548 | 1813 | 2047 |
| 65° | 1467 | 1841 | 2136 |
| 70° | 1363 | 1887 | 2258 |
| 75° | 1243 | 1981 | 2449 |
| 80° | 1022 | 2133 | 2448 |
| 85° | 783 | 1968 | 2103 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.9 | 3.2 |
| 10°-20° | 393.6 | 9.1 |
| 20°-30° | 592.4 | 13.6 |
| 30°-40° | 709.9 | 16.3 |
| 40°-50° | 739.8 | 17.0 |
| 50°-60° | 688.3 | 15.9 |
| 60°-70° | 566.9 | 13.1 |
| 70°-80° | 386.1 | 8.9 |
| 80°-90° | 127.5 | 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° | 1123.9 | 25.9 |
| 0°-40° | 1833.7 | 42.2 |
| 0°-60° | 3261.8 | 75.1 |
| 0°-90° | 4342.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4342.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1458 | 1458 | 1458 | 1458 | 1458 | |
| 5° | 1452 | 1452 | 1446 | 1454 | 1455 | 138 |
| 15° | 1388 | 1390 | 1391 | 1404 | 1406 | 391 |
| 25° | 1264 | 1270 | 1282 | 1304 | 1309 | 582 |
| 35° | 1096 | 1109 | 1132 | 1162 | 1174 | 685 |
| 45° | 898 | 917 | 955 | 1003 | 1020 | 693 |
| 55° | 687 | 710 | 770 | 830 | 851 | 612 |
| 65° | 461 | 500 | 578 | 646 | 671 | 457 |
| 75° | 239 | 293 | 381 | 449 | 471 | 252 |
| 85° | 51 | 98 | 128 | 136 | 136 | 63 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276168

CATALOG NUMBER: 24CZ2-50-UNV-L82765-W2A1-U-2700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1457.9 | 1457.9 | 1457.9 | 1457.9 | 1457.9 |
| 2.5° | 1457.9 | 1457.9 | 1450.6 | 1457.9 | 1457.9 |
| 5° | 1452.1 | 1452.1 | 1446.3 | 1453.5 | 1455.0 |
| 7.5° | 1441.9 | 1443.4 | 1437.6 | 1446.3 | 1447.7 |
| 10° | 1427.4 | 1428.9 | 1426.0 | 1434.7 | 1436.1 |
| 12.5° | 1410.0 | 1411.5 | 1411.5 | 1421.6 | 1423.1 |
| 15° | 1388.3 | 1389.7 | 1391.2 | 1404.2 | 1405.7 |
| 17.5° | 1360.8 | 1365.1 | 1368.0 | 1384.0 | 1386.8 |
| 20° | 1331.8 | 1336.1 | 1341.9 | 1359.3 | 1362.2 |
| 22.5° | 1298.5 | 1304.2 | 1314.4 | 1333.2 | 1337.6 |
| 25° | 1263.7 | 1269.5 | 1282.5 | 1304.2 | 1308.6 |
| 27.5° | 1224.5 | 1233.2 | 1249.2 | 1272.4 | 1278.2 |
| 30° | 1184.0 | 1192.7 | 1211.5 | 1236.1 | 1244.8 |
| 32.5° | 1140.5 | 1152.1 | 1173.8 | 1201.4 | 1210.1 |
| 35° | 1095.6 | 1108.6 | 1131.8 | 1162.2 | 1173.8 |
| 37.5° | 1047.7 | 1062.2 | 1089.8 | 1123.1 | 1137.6 |
| 40° | 998.5 | 1015.9 | 1044.8 | 1084.0 | 1099.9 |
| 42.5° | 949.2 | 965.1 | 1001.4 | 1043.4 | 1060.8 |
| 45° | 898.5 | 917.3 | 955.0 | 1002.8 | 1020.2 |
| 47.5° | 846.3 | 865.2 | 910.1 | 960.8 | 976.7 |
| 50° | 794.1 | 813.0 | 863.7 | 917.3 | 936.2 |
| 52.5° | 737.6 | 762.3 | 820.2 | 873.8 | 892.7 |
| 55° | 686.9 | 710.1 | 769.5 | 830.4 | 850.7 |
| 57.5° | 628.9 | 656.5 | 721.7 | 785.4 | 807.2 |
| 60° | 575.3 | 604.3 | 673.9 | 739.1 | 760.8 |
| 62.5° | 520.2 | 552.1 | 626.0 | 692.7 | 717.3 |
| 65° | 460.8 | 500.0 | 578.2 | 646.3 | 671.0 |
| 67.5° | 407.2 | 447.8 | 530.4 | 600.0 | 621.7 |
| 70° | 346.4 | 395.6 | 479.7 | 549.2 | 573.9 |
| 72.5° | 294.2 | 343.5 | 431.9 | 500.0 | 524.6 |
| 75° | 239.1 | 292.7 | 381.1 | 449.2 | 471.0 |
| 77.5° | 184.0 | 243.5 | 331.9 | 384.0 | 391.3 |
| 80° | 131.9 | 194.2 | 275.3 | 305.8 | 315.9 |
| 82.5° | 92.7 | 149.3 | 202.9 | 223.2 | 229.0 |
| 85° | 50.7 | 98.5 | 127.5 | 136.2 | 136.2 |
| 87.5° | 21.7 | 42.0 | 50.7 | 52.2 | 53.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)