

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: P275961

Luminaire Tested: **24CZ2-45-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P275961
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: 24CZ2-45-UNV-L83050-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4545.0 lumens
Efficiency: N/A
Efficacy: 124.0 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

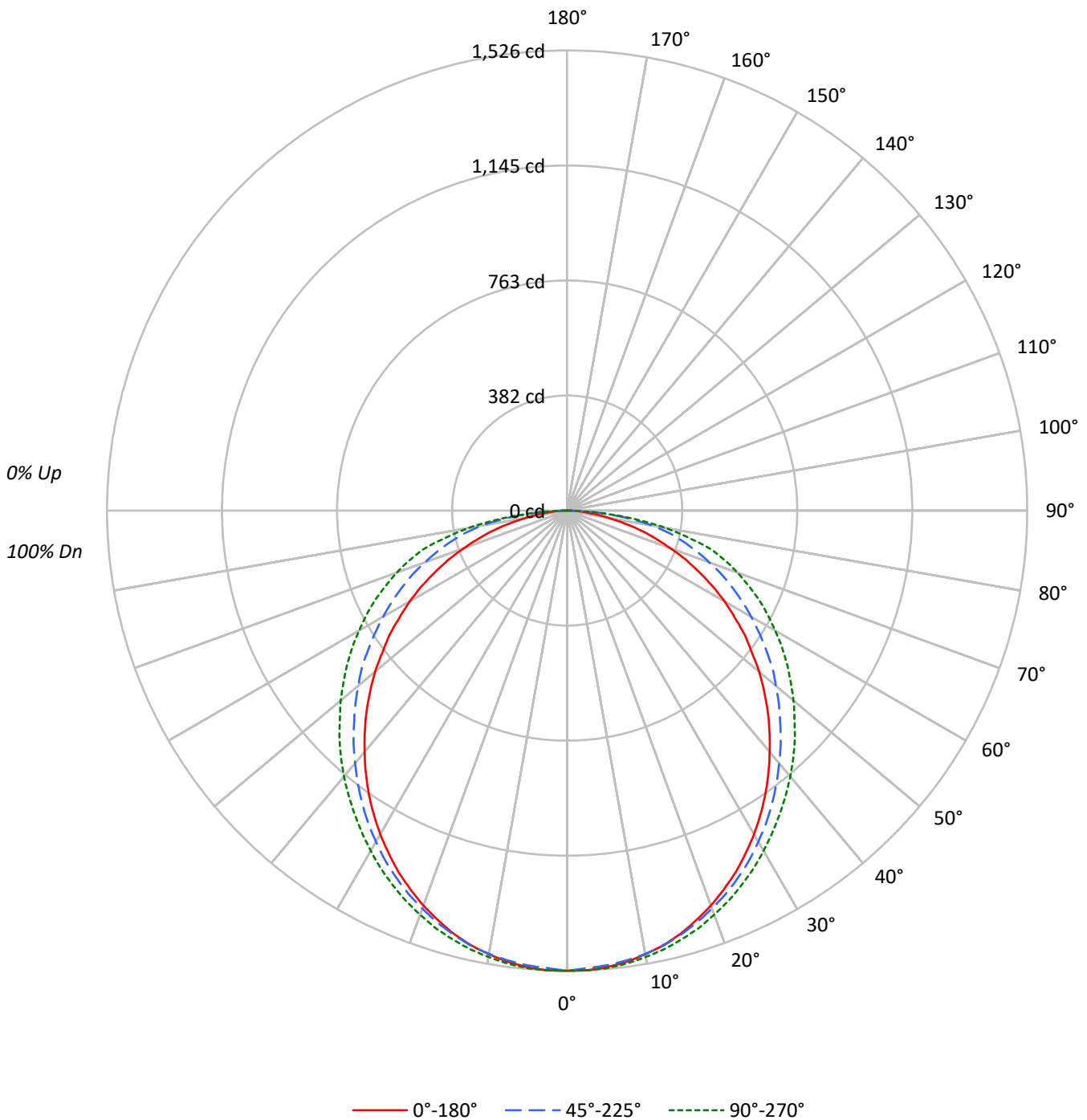
Input Watts (W): 36.642
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P275961

CATALOG NUMBER: 24CZ2-45-UNV-L83050-W2A1-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P275961

CATALOG NUMBER: 24CZ2-45-UNV-L83050-W2A1-U-5000K

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 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 89 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 | | | | | 67 | | | |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 58 | 56 | | | | | 56 | | | |
| 4 | 81 | 69 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 | | | | | 48 | | | |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 | | | | | 41 | | | |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 38 | 49 | 43 | 38 | 36 | | | | | 36 | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 | | | | | 32 | | | |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 | | | | | 28 | | | |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | 25 | | | |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 | | | | | 23 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2053 | 2053 | 2053 |
| 5° | 2053 | 2045 | 2057 |
| 10° | 2041 | 2039 | 2054 |
| 15° | 2024 | 2028 | 2050 |
| 20° | 1996 | 2011 | 2042 |
| 25° | 1964 | 1993 | 2033 |
| 30° | 1925 | 1970 | 2024 |
| 35° | 1884 | 1946 | 2018 |
| 40° | 1836 | 1921 | 2022 |
| 45° | 1790 | 1902 | 2032 |
| 50° | 1740 | 1892 | 2051 |
| 55° | 1687 | 1890 | 2089 |
| 60° | 1621 | 1898 | 2143 |
| 65° | 1536 | 1927 | 2236 |
| 70° | 1426 | 1975 | 2363 |
| 75° | 1301 | 2074 | 2563 |
| 80° | 1069 | 2233 | 2562 |
| 85° | 820 | 2061 | 2201 |



TEST NUMBER: P275961

CATALOG NUMBER: 24CZ2-45-UNV-L83050-W2A1-U-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 144.3 | 3.2 |
| 10°-20° | 412.0 | 9.1 |
| 20°-30° | 620.0 | 13.6 |
| 30°-40° | 743.0 | 16.3 |
| 40°-50° | 774.3 | 17.0 |
| 50°-60° | 720.4 | 15.9 |
| 60°-70° | 593.3 | 13.1 |
| 70°-80° | 404.1 | 8.9 |
| 80°-90° | 133.4 | 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° | 1176.4 | 25.9 |
| 0°-40° | 1919.4 | 42.2 |
| 0°-60° | 3414.2 | 75.1 |
| 0°-90° | 4545.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4545.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1526 | 1526 | 1526 | 1526 | 1526 | |
| 5° | 1520 | 1520 | 1514 | 1521 | 1523 | 144 |
| 15° | 1453 | 1455 | 1456 | 1470 | 1471 | 409 |
| 25° | 1323 | 1329 | 1342 | 1365 | 1370 | 609 |
| 35° | 1147 | 1160 | 1185 | 1216 | 1229 | 717 |
| 45° | 940 | 960 | 1000 | 1050 | 1068 | 725 |
| 55° | 719 | 743 | 806 | 869 | 890 | 641 |
| 65° | 482 | 523 | 605 | 676 | 702 | 479 |
| 75° | 250 | 306 | 399 | 470 | 493 | 264 |
| 85° | 53 | 103 | 134 | 143 | 143 | 66 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P275961

CATALOG NUMBER: 24CZ2-45-UNV-L83050-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1526.0 | 1526.0 | 1526.0 | 1526.0 | 1526.0 |
| 2.5° | 1526.0 | 1526.0 | 1518.4 | 1526.0 | 1526.0 |
| 5° | 1519.9 | 1519.9 | 1513.8 | 1521.4 | 1522.9 |
| 7.5° | 1509.3 | 1510.8 | 1504.7 | 1513.8 | 1515.3 |
| 10° | 1494.1 | 1495.6 | 1492.6 | 1501.7 | 1503.2 |
| 12.5° | 1475.9 | 1477.4 | 1477.4 | 1488.0 | 1489.6 |
| 15° | 1453.2 | 1454.7 | 1456.2 | 1469.8 | 1471.4 |
| 17.5° | 1424.3 | 1428.9 | 1431.9 | 1448.6 | 1451.6 |
| 20° | 1394.0 | 1398.6 | 1404.6 | 1422.8 | 1425.9 |
| 22.5° | 1359.1 | 1365.2 | 1375.8 | 1395.5 | 1400.1 |
| 25° | 1322.7 | 1328.8 | 1342.4 | 1365.2 | 1369.7 |
| 27.5° | 1281.8 | 1290.9 | 1307.5 | 1331.8 | 1337.9 |
| 30° | 1239.3 | 1248.4 | 1268.1 | 1293.9 | 1303.0 |
| 32.5° | 1193.8 | 1205.9 | 1228.7 | 1257.5 | 1266.6 |
| 35° | 1146.8 | 1160.4 | 1184.7 | 1216.5 | 1228.7 |
| 37.5° | 1096.7 | 1111.9 | 1140.7 | 1175.6 | 1190.7 |
| 40° | 1045.1 | 1063.3 | 1093.7 | 1134.6 | 1151.3 |
| 42.5° | 993.5 | 1010.2 | 1048.2 | 1092.1 | 1110.3 |
| 45° | 940.5 | 960.2 | 999.6 | 1049.7 | 1067.9 |
| 47.5° | 885.9 | 905.6 | 952.6 | 1005.7 | 1022.4 |
| 50° | 831.2 | 851.0 | 904.1 | 960.2 | 979.9 |
| 52.5° | 772.1 | 797.9 | 858.5 | 914.7 | 934.4 |
| 55° | 719.0 | 743.3 | 805.5 | 869.2 | 890.4 |
| 57.5° | 658.3 | 687.1 | 755.4 | 822.1 | 844.9 |
| 60° | 602.2 | 632.5 | 705.3 | 773.6 | 796.4 |
| 62.5° | 544.6 | 577.9 | 655.3 | 725.1 | 750.8 |
| 65° | 482.4 | 523.3 | 605.2 | 676.5 | 702.3 |
| 67.5° | 426.2 | 468.7 | 555.2 | 628.0 | 650.7 |
| 70° | 362.5 | 414.1 | 502.1 | 574.9 | 600.7 |
| 72.5° | 307.9 | 359.5 | 452.0 | 523.3 | 549.1 |
| 75° | 250.3 | 306.4 | 398.9 | 470.2 | 493.0 |
| 77.5° | 192.6 | 254.8 | 347.4 | 402.0 | 409.6 |
| 80° | 138.0 | 203.3 | 288.2 | 320.1 | 330.7 |
| 82.5° | 97.1 | 156.2 | 212.4 | 233.6 | 239.7 |
| 85° | 53.1 | 103.1 | 133.5 | 142.6 | 142.6 |
| 87.5° | 22.8 | 44.0 | 53.1 | 54.6 | 56.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)