

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: P261379

Luminaire Tested: **24CZ-LD5-45SE-S-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261379
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-LD5-45SE-S-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 90 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4273.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

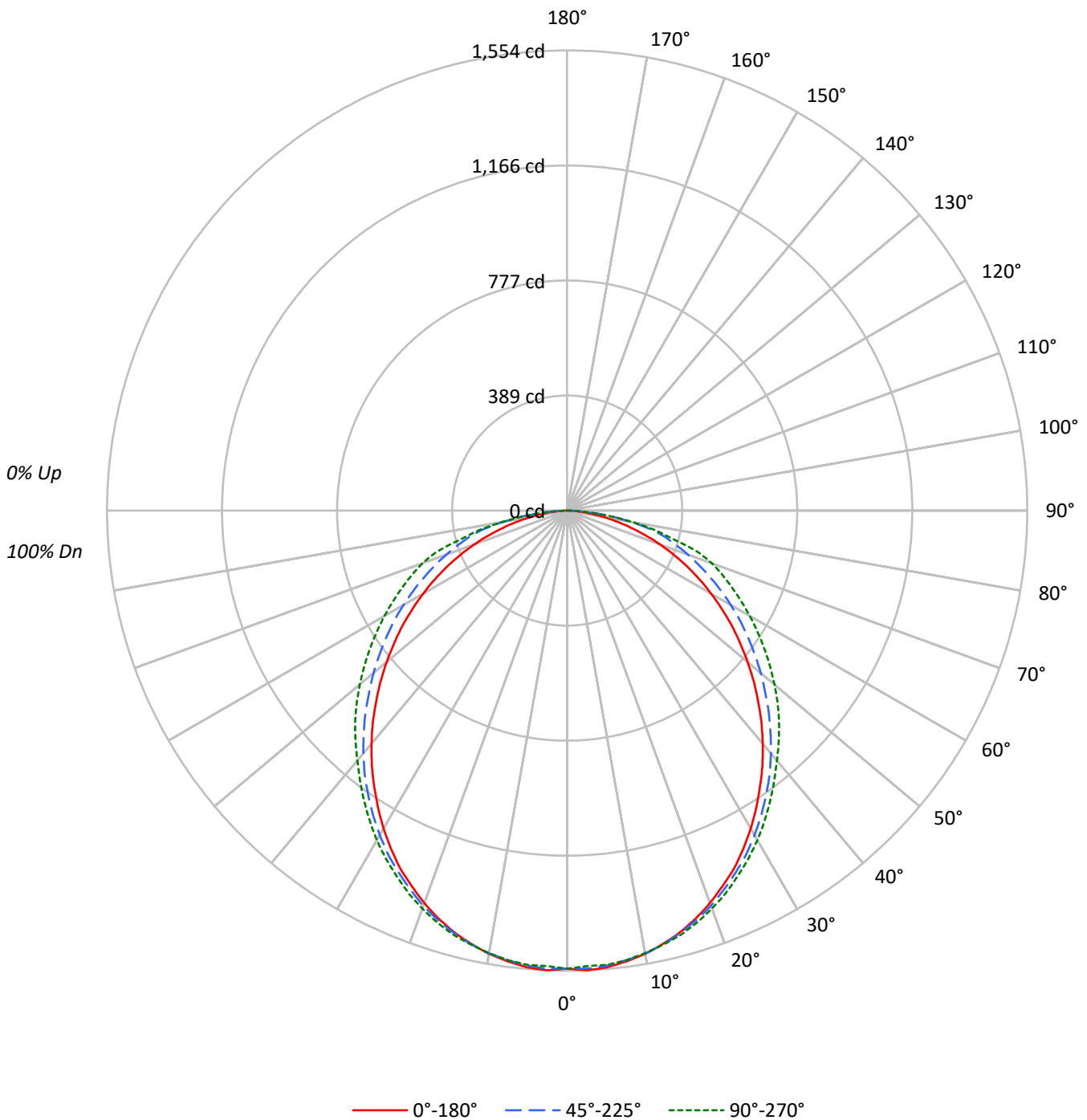
Input Watts (W): 35.805
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2081 | 2081 | 2081 |
| 5° | 2091 | 2083 | 2080 |
| 10° | 2077 | 2075 | 2073 |
| 15° | 2054 | 2058 | 2066 |
| 20° | 2019 | 2034 | 2048 |
| 25° | 1980 | 2001 | 2022 |
| 30° | 1926 | 1966 | 1997 |
| 35° | 1866 | 1924 | 1964 |
| 40° | 1806 | 1880 | 1935 |
| 45° | 1737 | 1832 | 1926 |
| 50° | 1667 | 1786 | 1914 |
| 55° | 1594 | 1748 | 1908 |
| 60° | 1511 | 1718 | 1917 |
| 65° | 1421 | 1698 | 1955 |
| 70° | 1309 | 1706 | 2047 |
| 75° | 1160 | 1766 | 1907 |
| 80° | 969 | 1674 | 1719 |
| 85° | 724 | 1338 | 1229 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 146.3 | 3.4 |
| 10°-20° | 415.9 | 9.7 |
| 20°-30° | 619.9 | 14.5 |
| 30°-40° | 729.7 | 17.1 |
| 40°-50° | 741.5 | 17.4 |
| 50°-60° | 666.7 | 15.6 |
| 60°-70° | 526.7 | 12.3 |
| 70°-80° | 334.1 | 7.8 |
| 80°-90° | 92.2 | 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° | 1182.1 | 27.7 |
| 0°-40° | 1911.8 | 44.7 |
| 0°-60° | 3320.0 | 77.7 |
| 0°-90° | 4273.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4273.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1547 | 1547 | 1547 | 1547 | 1547 | |
| 5° | 1548 | 1536 | 1543 | 1540 | 1540 | 147 |
| 15° | 1474 | 1467 | 1477 | 1482 | 1483 | 415 |
| 25° | 1334 | 1332 | 1348 | 1356 | 1362 | 613 |
| 35° | 1136 | 1143 | 1172 | 1184 | 1196 | 711 |
| 45° | 913 | 926 | 963 | 991 | 1012 | 704 |
| 55° | 680 | 697 | 745 | 793 | 813 | 607 |
| 65° | 446 | 469 | 533 | 592 | 614 | 442 |
| 75° | 223 | 262 | 340 | 370 | 367 | 238 |
| 85° | 47 | 81 | 87 | 80 | 80 | 58 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24CZ-LD5-45SE-S-UNV-L92765-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1546.9 | 1546.9 | 1546.9 | 1546.9 | 1546.9 |
| 2.5° | 1554.0 | 1542.6 | 1548.3 | 1545.5 | 1539.8 |
| 5° | 1548.3 | 1535.5 | 1542.6 | 1539.8 | 1539.8 |
| 7.5° | 1535.5 | 1525.6 | 1531.3 | 1529.8 | 1531.3 |
| 10° | 1519.9 | 1509.9 | 1518.5 | 1518.5 | 1517.0 |
| 12.5° | 1498.6 | 1490.0 | 1500.0 | 1500.0 | 1501.4 |
| 15° | 1474.4 | 1467.3 | 1477.2 | 1481.5 | 1482.9 |
| 17.5° | 1444.5 | 1437.4 | 1450.2 | 1454.5 | 1458.8 |
| 20° | 1410.4 | 1407.6 | 1420.4 | 1424.6 | 1430.3 |
| 22.5° | 1372.0 | 1372.0 | 1384.8 | 1390.5 | 1399.0 |
| 25° | 1333.6 | 1332.2 | 1347.9 | 1356.4 | 1362.1 |
| 27.5° | 1288.1 | 1289.6 | 1309.5 | 1318.0 | 1325.1 |
| 30° | 1239.8 | 1242.6 | 1265.4 | 1275.3 | 1285.3 |
| 32.5° | 1188.6 | 1194.3 | 1219.9 | 1231.3 | 1241.2 |
| 35° | 1136.0 | 1143.1 | 1171.6 | 1184.3 | 1195.7 |
| 37.5° | 1083.4 | 1093.4 | 1123.2 | 1136.0 | 1148.8 |
| 40° | 1028.0 | 1036.5 | 1070.6 | 1086.2 | 1101.9 |
| 42.5° | 971.1 | 982.5 | 1016.6 | 1039.3 | 1057.8 |
| 45° | 912.8 | 925.6 | 962.6 | 991.0 | 1012.3 |
| 47.5° | 854.5 | 871.6 | 907.1 | 945.5 | 964.0 |
| 50° | 796.2 | 813.3 | 853.1 | 895.7 | 914.2 |
| 52.5° | 736.5 | 753.5 | 799.0 | 843.1 | 863.0 |
| 55° | 679.6 | 696.7 | 745.0 | 793.4 | 813.3 |
| 57.5° | 619.9 | 638.4 | 692.4 | 742.2 | 762.1 |
| 60° | 561.6 | 580.1 | 638.4 | 691.0 | 712.3 |
| 62.5° | 504.7 | 524.6 | 585.8 | 641.2 | 662.6 |
| 65° | 446.4 | 469.2 | 533.2 | 591.5 | 614.2 |
| 67.5° | 389.6 | 415.2 | 482.0 | 543.1 | 567.3 |
| 70° | 332.7 | 362.6 | 433.6 | 496.2 | 520.4 |
| 72.5° | 277.2 | 309.9 | 385.3 | 447.9 | 460.7 |
| 75° | 223.2 | 261.6 | 339.8 | 369.7 | 366.8 |
| 77.5° | 172.0 | 214.7 | 288.6 | 294.3 | 302.8 |
| 80° | 125.1 | 172.0 | 216.1 | 227.5 | 221.8 |
| 82.5° | 82.5 | 129.4 | 155.0 | 149.3 | 147.9 |
| 85° | 46.9 | 81.0 | 86.7 | 79.6 | 79.6 |
| 87.5° | 19.9 | 32.7 | 28.4 | 21.3 | 19.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)