

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: P260896

Luminaire Tested: **24CZ-LD5-60-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P260896
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-LD5-60-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: 5576.0 lumens
Efficiency: N/A
Efficacy: 123.1 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

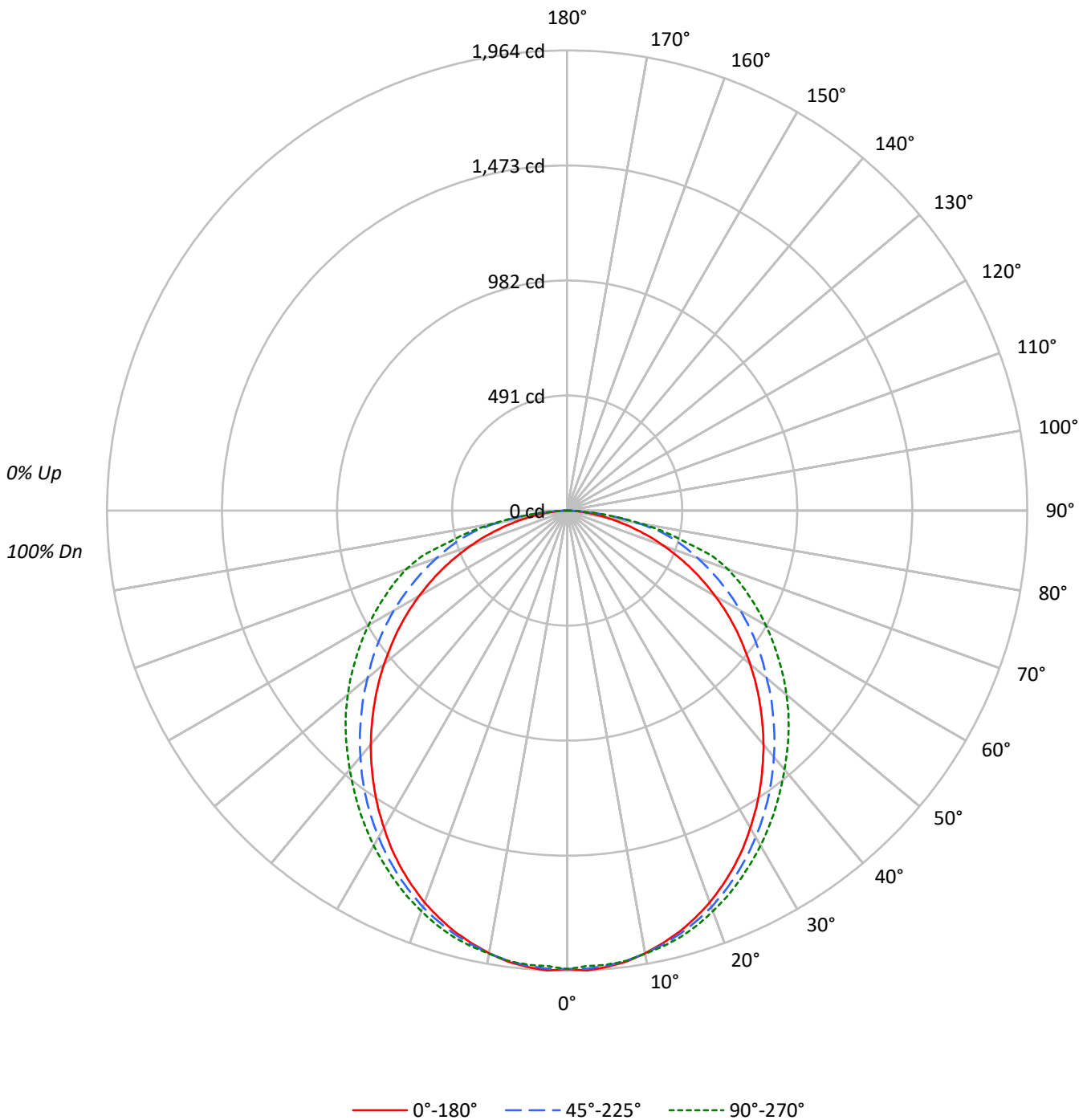
Input Watts (W): 45.291
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | 83 | | | |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 68 | | | | | 68 | | | |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 61 | 68 | 64 | 60 | 57 | | | | | 57 | | | |
| 4 | 82 | 69 | 60 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 49 | | | | | 49 | | | |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 | | | | | 42 | | | |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 | | | | | 37 | | | |
| 7 | 64 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 32 | | | | | 32 | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | | 29 | | | |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 38 | 32 | 28 | 26 | | | | | 26 | | | |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 24 | | | | | 24 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2633 | 2633 | 2633 |
| 5° | 2640 | 2633 | 2628 |
| 10° | 2621 | 2621 | 2624 |
| 15° | 2590 | 2604 | 2622 |
| 20° | 2548 | 2578 | 2605 |
| 25° | 2494 | 2542 | 2585 |
| 30° | 2429 | 2500 | 2566 |
| 35° | 2361 | 2459 | 2546 |
| 40° | 2290 | 2411 | 2535 |
| 45° | 2212 | 2365 | 2543 |
| 50° | 2134 | 2326 | 2558 |
| 55° | 2056 | 2311 | 2584 |
| 60° | 1963 | 2296 | 2636 |
| 65° | 1860 | 2298 | 2723 |
| 70° | 1720 | 2336 | 2869 |
| 75° | 1538 | 2442 | 2729 |
| 80° | 1287 | 2337 | 2500 |
| 85° | 973 | 1798 | 1709 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 184.9 | 3.3 |
| 10°-20° | 526.3 | 9.4 |
| 20°-30° | 786.8 | 14.1 |
| 30°-40° | 933.4 | 16.7 |
| 40°-50° | 960.7 | 17.2 |
| 50°-60° | 881.3 | 15.8 |
| 60°-70° | 712.6 | 12.8 |
| 70°-80° | 462.5 | 8.3 |
| 80°-90° | 127.5 | 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° | 1498.0 | 26.9 |
| 0°-40° | 2431.4 | 43.6 |
| 0°-60° | 4273.4 | 76.6 |
| 0°-90° | 5576.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5576.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1957 | 1957 | 1957 | 1957 | 1957 | |
| 5° | 1955 | 1942 | 1949 | 1947 | 1945 | 185 |
| 15° | 1860 | 1852 | 1869 | 1877 | 1882 | 524 |
| 25° | 1680 | 1682 | 1712 | 1728 | 1741 | 773 |
| 35° | 1438 | 1449 | 1497 | 1529 | 1550 | 899 |
| 45° | 1163 | 1182 | 1243 | 1302 | 1336 | 897 |
| 55° | 876 | 903 | 985 | 1065 | 1102 | 783 |
| 65° | 584 | 619 | 722 | 817 | 855 | 577 |
| 75° | 296 | 351 | 470 | 525 | 525 | 315 |
| 85° | 63 | 107 | 116 | 113 | 111 | 77 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P260896

CATALOG NUMBER: 24CZ-LD5-60-UNV-L92765-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1956.9 | 1956.9 | 1956.9 | 1956.9 | 1956.9 |
| 2.5° | 1964.5 | 1949.2 | 1956.9 | 1955.0 | 1945.4 |
| 5° | 1955.0 | 1941.6 | 1949.2 | 1947.3 | 1945.4 |
| 7.5° | 1941.6 | 1928.2 | 1937.8 | 1935.9 | 1937.8 |
| 10° | 1918.7 | 1907.2 | 1918.7 | 1920.6 | 1920.6 |
| 12.5° | 1890.1 | 1880.5 | 1895.8 | 1899.6 | 1903.4 |
| 15° | 1859.5 | 1851.9 | 1869.1 | 1876.7 | 1882.4 |
| 17.5° | 1821.3 | 1815.6 | 1836.6 | 1846.2 | 1853.8 |
| 20° | 1779.3 | 1777.4 | 1800.3 | 1809.9 | 1819.4 |
| 22.5° | 1731.6 | 1731.6 | 1758.3 | 1769.8 | 1783.2 |
| 25° | 1680.1 | 1682.0 | 1712.5 | 1727.8 | 1741.2 |
| 27.5° | 1624.7 | 1626.6 | 1662.9 | 1682.0 | 1697.2 |
| 30° | 1563.6 | 1571.2 | 1609.4 | 1634.2 | 1651.4 |
| 32.5° | 1502.5 | 1512.1 | 1554.1 | 1582.7 | 1601.8 |
| 35° | 1437.6 | 1449.1 | 1496.8 | 1529.2 | 1550.2 |
| 37.5° | 1370.8 | 1384.1 | 1435.7 | 1472.0 | 1496.8 |
| 40° | 1304.0 | 1319.2 | 1372.7 | 1414.7 | 1443.3 |
| 42.5° | 1233.3 | 1250.5 | 1309.7 | 1359.3 | 1389.9 |
| 45° | 1162.7 | 1181.8 | 1242.9 | 1302.0 | 1336.4 |
| 47.5° | 1092.0 | 1114.9 | 1179.9 | 1244.8 | 1281.0 |
| 50° | 1019.5 | 1042.4 | 1111.1 | 1185.6 | 1221.9 |
| 52.5° | 946.9 | 973.7 | 1050.0 | 1126.4 | 1162.7 |
| 55° | 876.3 | 903.0 | 985.1 | 1065.3 | 1101.6 |
| 57.5° | 803.8 | 830.5 | 920.2 | 1004.2 | 1040.5 |
| 60° | 729.3 | 759.8 | 853.4 | 939.3 | 979.4 |
| 62.5° | 656.8 | 689.2 | 788.5 | 880.1 | 918.3 |
| 65° | 584.2 | 618.6 | 721.7 | 817.1 | 855.3 |
| 67.5° | 509.7 | 549.8 | 656.8 | 754.1 | 794.2 |
| 70° | 437.2 | 481.1 | 593.7 | 691.1 | 729.3 |
| 72.5° | 366.6 | 414.3 | 530.7 | 630.0 | 652.9 |
| 75° | 295.9 | 351.3 | 469.7 | 525.0 | 525.0 |
| 77.5° | 229.1 | 290.2 | 400.9 | 421.9 | 433.4 |
| 80° | 166.1 | 232.9 | 301.6 | 326.5 | 322.6 |
| 82.5° | 110.7 | 177.6 | 215.7 | 215.7 | 210.0 |
| 85° | 63.0 | 106.9 | 116.5 | 112.6 | 110.7 |
| 87.5° | 26.7 | 40.1 | 36.3 | 28.6 | 24.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)