

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: P261045

Luminaire Tested: **24CZ-LD5-50SE-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261045
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-LD5-50SE-S-UNV-L83050-W2A1-U-4500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED AT 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5408.0 lumens
Efficiency: N/A
Efficacy: 129.8 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

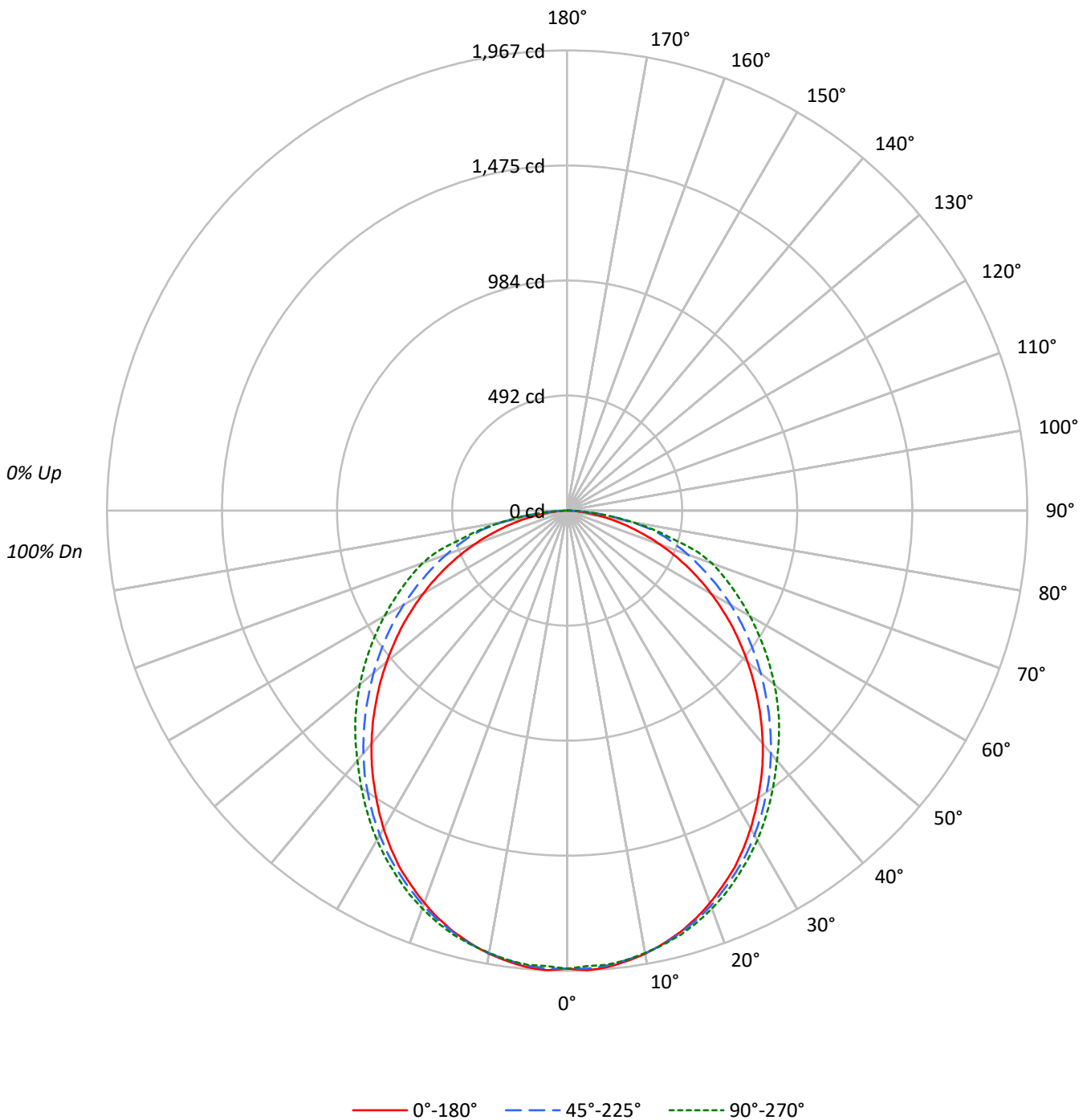
Input Watts (W): 41.656839
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P261045

CATALOG NUMBER: 24CZ-LD5-50SE-S-UNV-L83050-W2A1-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P261045

CATALOG NUMBER: 24CZ-LD5-50SE-S-UNV-L83050-W2A1-U-4500K

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° | 2634 | 2634 | 2634 |
| 5° | 2647 | 2637 | 2632 |
| 10° | 2628 | 2626 | 2623 |
| 15° | 2599 | 2604 | 2614 |
| 20° | 2556 | 2574 | 2592 |
| 25° | 2506 | 2533 | 2559 |
| 30° | 2438 | 2488 | 2527 |
| 35° | 2362 | 2435 | 2486 |
| 40° | 2285 | 2380 | 2449 |
| 45° | 2198 | 2318 | 2438 |
| 50° | 2109 | 2260 | 2422 |
| 55° | 2018 | 2212 | 2415 |
| 60° | 1913 | 2174 | 2426 |
| 65° | 1799 | 2148 | 2475 |
| 70° | 1657 | 2159 | 2591 |
| 75° | 1469 | 2236 | 2414 |
| 80° | 1227 | 2119 | 2175 |
| 85° | 917 | 1695 | 1556 |



TEST NUMBER: P261045

CATALOG NUMBER: 24CZ-LD5-50SE-S-UNV-L83050-W2A1-U-4500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 185.1 | 3.4 |
| 10°-20° | 526.4 | 9.7 |
| 20°-30° | 784.5 | 14.5 |
| 30°-40° | 923.5 | 17.1 |
| 40°-50° | 938.5 | 17.4 |
| 50°-60° | 843.8 | 15.6 |
| 60°-70° | 666.6 | 12.3 |
| 70°-80° | 422.9 | 7.8 |
| 80°-90° | 116.7 | 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° | 1496.1 | 27.7 |
| 0°-40° | 2419.6 | 44.7 |
| 0°-60° | 4201.8 | 77.7 |
| 0°-90° | 5408.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5408.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1958 | 1958 | 1958 | 1958 | 1958 | |
| 5° | 1960 | 1943 | 1952 | 1949 | 1949 | 186 |
| 15° | 1866 | 1857 | 1870 | 1875 | 1877 | 526 |
| 25° | 1688 | 1686 | 1706 | 1717 | 1724 | 776 |
| 35° | 1438 | 1447 | 1483 | 1499 | 1513 | 900 |
| 45° | 1155 | 1171 | 1218 | 1254 | 1281 | 891 |
| 55° | 860 | 882 | 943 | 1004 | 1029 | 768 |
| 65° | 565 | 594 | 675 | 749 | 777 | 560 |
| 75° | 282 | 331 | 430 | 468 | 464 | 301 |
| 85° | 59 | 103 | 110 | 101 | 101 | 73 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P261045

CATALOG NUMBER: 24CZ-LD5-50SE-S-UNV-L83050-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1957.8 | 1957.8 | 1957.8 | 1957.8 | 1957.8 |
| 2.5° | 1966.8 | 1952.4 | 1959.6 | 1956.0 | 1948.8 |
| 5° | 1959.6 | 1943.4 | 1952.4 | 1948.8 | 1948.8 |
| 7.5° | 1943.4 | 1930.8 | 1938.0 | 1936.2 | 1938.0 |
| 10° | 1923.6 | 1911.0 | 1921.8 | 1921.8 | 1920.0 |
| 12.5° | 1896.6 | 1885.8 | 1898.4 | 1898.4 | 1900.2 |
| 15° | 1866.0 | 1857.0 | 1869.6 | 1875.0 | 1876.8 |
| 17.5° | 1828.2 | 1819.2 | 1835.4 | 1840.8 | 1846.2 |
| 20° | 1785.0 | 1781.4 | 1797.6 | 1803.0 | 1810.2 |
| 22.5° | 1736.5 | 1736.5 | 1752.7 | 1759.9 | 1770.7 |
| 25° | 1687.9 | 1686.1 | 1705.9 | 1716.7 | 1723.9 |
| 27.5° | 1630.3 | 1632.1 | 1657.3 | 1668.1 | 1677.1 |
| 30° | 1569.1 | 1572.7 | 1601.5 | 1614.1 | 1626.7 |
| 32.5° | 1504.3 | 1511.5 | 1543.9 | 1558.3 | 1570.9 |
| 35° | 1437.8 | 1446.8 | 1482.7 | 1498.9 | 1513.3 |
| 37.5° | 1371.2 | 1383.8 | 1421.6 | 1437.8 | 1454.0 |
| 40° | 1301.0 | 1311.8 | 1355.0 | 1374.8 | 1394.6 |
| 42.5° | 1229.0 | 1243.4 | 1286.6 | 1315.4 | 1338.8 |
| 45° | 1155.2 | 1171.4 | 1218.2 | 1254.2 | 1281.2 |
| 47.5° | 1081.5 | 1103.1 | 1148.0 | 1196.6 | 1220.0 |
| 50° | 1007.7 | 1029.3 | 1079.7 | 1133.6 | 1157.0 |
| 52.5° | 932.1 | 953.7 | 1011.3 | 1067.1 | 1092.3 |
| 55° | 860.1 | 881.7 | 942.9 | 1004.1 | 1029.3 |
| 57.5° | 784.6 | 808.0 | 876.3 | 939.3 | 964.5 |
| 60° | 710.8 | 734.2 | 808.0 | 874.5 | 901.5 |
| 62.5° | 638.8 | 664.0 | 741.4 | 811.5 | 838.5 |
| 65° | 565.0 | 593.8 | 674.8 | 748.6 | 777.4 |
| 67.5° | 493.0 | 525.4 | 610.0 | 687.4 | 718.0 |
| 70° | 421.1 | 458.9 | 548.8 | 628.0 | 658.6 |
| 72.5° | 350.9 | 392.3 | 487.6 | 566.8 | 583.0 |
| 75° | 282.5 | 331.1 | 430.1 | 467.9 | 464.3 |
| 77.5° | 217.7 | 271.7 | 365.3 | 372.5 | 383.3 |
| 80° | 158.4 | 217.7 | 273.5 | 287.9 | 280.7 |
| 82.5° | 104.4 | 163.7 | 196.1 | 188.9 | 187.1 |
| 85° | 59.4 | 102.6 | 109.8 | 100.8 | 100.8 |
| 87.5° | 25.2 | 41.4 | 36.0 | 27.0 | 25.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)