

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: P276512

Luminaire Tested: **24CZ2-55HE-S-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276512
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-55HE-S-UNV-L82765-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5680.7 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

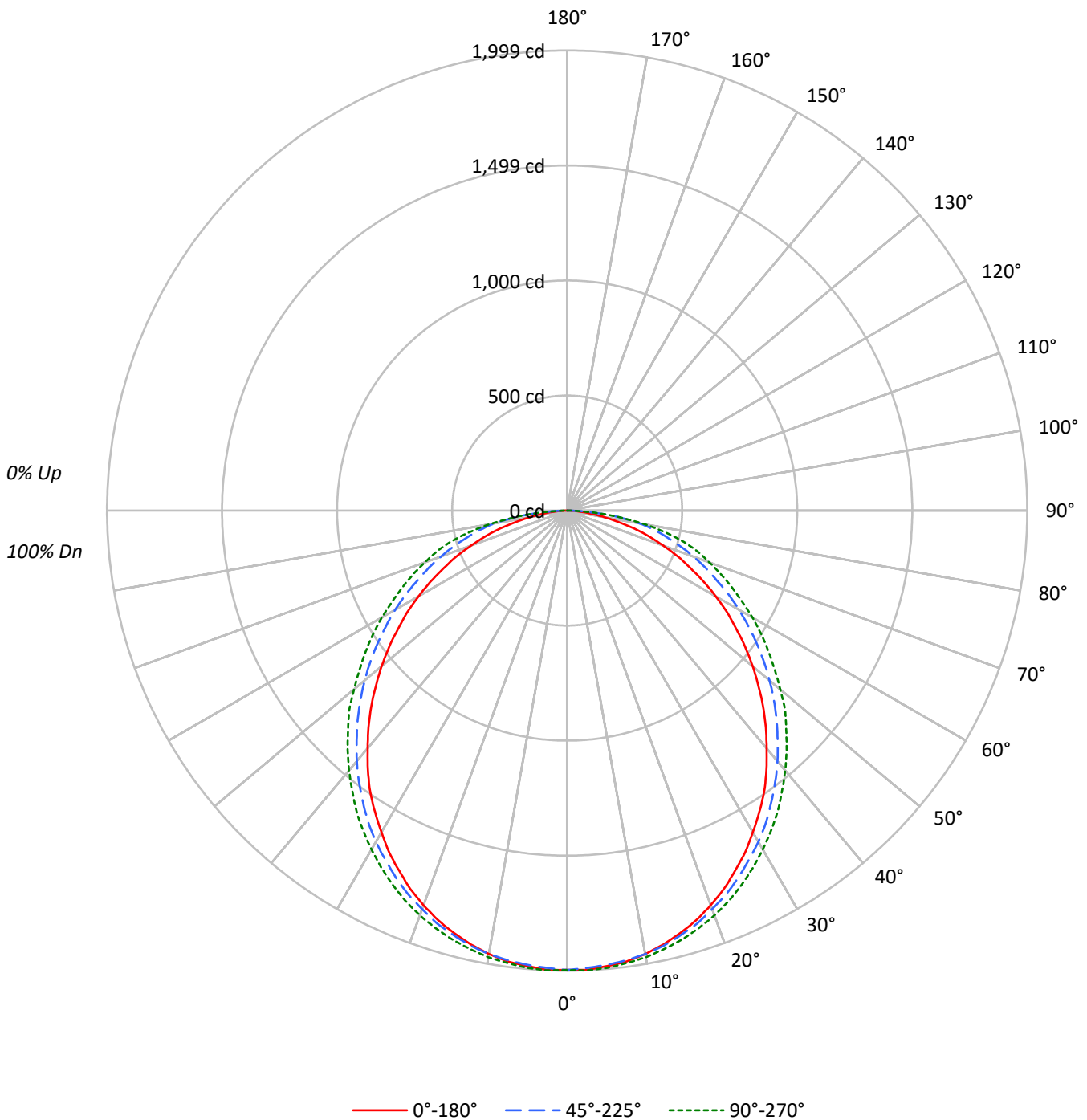
Input Watts (W): 41.013
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 |
| 3 | 89 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 |
| 6 | 70 | 56 | 47 | 40 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2685 | 2685 | 2685 |
| 5° | 2683 | 2676 | 2693 |
| 10° | 2672 | 2672 | 2692 |
| 15° | 2647 | 2659 | 2687 |
| 20° | 2612 | 2638 | 2679 |
| 25° | 2564 | 2612 | 2663 |
| 30° | 2506 | 2582 | 2641 |
| 35° | 2451 | 2540 | 2620 |
| 40° | 2367 | 2497 | 2589 |
| 45° | 2290 | 2448 | 2561 |
| 50° | 2202 | 2402 | 2530 |
| 55° | 2104 | 2358 | 2506 |
| 60° | 2005 | 2321 | 2501 |
| 65° | 1878 | 2280 | 2516 |
| 70° | 1739 | 2293 | 2584 |
| 75° | 1557 | 2336 | 2730 |
| 80° | 1258 | 2475 | 2670 |
| 85° | 946 | 2172 | 2117 |



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CATALOG NUMBER: 24CZ2-55HE-S-UNV-L82765-W2A1-U-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 188.9 | 3.3 |
| 10°-20° | 539.8 | 9.5 |
| 20°-30° | 811.5 | 14.3 |
| 30°-40° | 966.6 | 17.0 |
| 40°-50° | 989.3 | 17.4 |
| 50°-60° | 890.7 | 15.7 |
| 60°-70° | 699.4 | 12.3 |
| 70°-80° | 454.0 | 8.0 |
| 80°-90° | 140.4 | 2.5 |
| 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° | 1540.3 | 27.1 |
| 0°-40° | 2506.9 | 44.1 |
| 0°-60° | 4386.9 | 77.2 |
| 0°-90° | 5680.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5680.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1996 | 1996 | 1996 | 1996 | 1996 | |
| 5° | 1987 | 1990 | 1981 | 1992 | 1994 | 189 |
| 15° | 1900 | 1905 | 1909 | 1925 | 1929 | 536 |
| 25° | 1727 | 1741 | 1759 | 1788 | 1794 | 795 |
| 35° | 1492 | 1510 | 1546 | 1584 | 1595 | 931 |
| 45° | 1204 | 1232 | 1286 | 1335 | 1346 | 928 |
| 55° | 897 | 936 | 1005 | 1057 | 1068 | 804 |
| 65° | 590 | 635 | 716 | 776 | 790 | 587 |
| 75° | 300 | 357 | 449 | 511 | 525 | 317 |
| 85° | 61 | 114 | 141 | 137 | 137 | 74 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24CZ2-55HE-S-UNV-L82765-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1995.7 | 1995.7 | 1995.7 | 1995.7 | 1995.7 |
| 2.5° | 1997.5 | 1997.5 | 1988.4 | 1997.5 | 1999.3 |
| 5° | 1986.6 | 1990.2 | 1981.2 | 1992.1 | 1993.9 |
| 7.5° | 1975.8 | 1975.8 | 1970.4 | 1981.2 | 1983.0 |
| 10° | 1956.0 | 1957.8 | 1956.0 | 1968.6 | 1970.4 |
| 12.5° | 1930.7 | 1934.3 | 1936.1 | 1948.7 | 1950.5 |
| 15° | 1900.0 | 1905.4 | 1909.0 | 1925.3 | 1928.9 |
| 17.5° | 1865.7 | 1871.2 | 1880.2 | 1898.2 | 1901.8 |
| 20° | 1824.2 | 1831.5 | 1842.3 | 1865.7 | 1871.2 |
| 22.5° | 1779.1 | 1786.3 | 1804.4 | 1826.0 | 1835.1 |
| 25° | 1726.8 | 1741.2 | 1759.3 | 1788.2 | 1793.6 |
| 27.5° | 1674.5 | 1687.1 | 1710.6 | 1741.2 | 1748.5 |
| 30° | 1613.1 | 1633.0 | 1661.8 | 1692.5 | 1699.7 |
| 32.5° | 1553.6 | 1573.4 | 1607.7 | 1640.2 | 1649.2 |
| 35° | 1492.2 | 1510.3 | 1546.4 | 1584.3 | 1595.1 |
| 37.5° | 1421.9 | 1445.3 | 1485.0 | 1522.9 | 1533.7 |
| 40° | 1347.9 | 1376.8 | 1421.9 | 1461.6 | 1474.2 |
| 42.5° | 1277.5 | 1308.2 | 1353.3 | 1396.6 | 1411.0 |
| 45° | 1203.5 | 1232.4 | 1286.5 | 1335.3 | 1346.1 |
| 47.5° | 1127.7 | 1160.2 | 1218.0 | 1266.7 | 1284.7 |
| 50° | 1052.0 | 1086.2 | 1147.6 | 1198.1 | 1208.9 |
| 52.5° | 976.2 | 1012.3 | 1077.2 | 1131.4 | 1136.8 |
| 55° | 896.8 | 936.5 | 1005.0 | 1057.4 | 1068.2 |
| 57.5° | 824.6 | 858.9 | 932.9 | 987.0 | 999.6 |
| 60° | 745.2 | 783.1 | 862.5 | 913.0 | 929.3 |
| 62.5° | 669.4 | 709.1 | 792.1 | 842.7 | 857.1 |
| 65° | 590.0 | 635.1 | 716.3 | 775.9 | 790.3 |
| 67.5° | 521.5 | 564.8 | 651.4 | 709.1 | 723.6 |
| 70° | 442.1 | 490.8 | 582.8 | 642.4 | 656.8 |
| 72.5° | 373.5 | 424.0 | 516.1 | 573.8 | 595.4 |
| 75° | 299.5 | 357.3 | 449.3 | 510.6 | 525.1 |
| 77.5° | 227.4 | 294.1 | 387.9 | 434.9 | 434.9 |
| 80° | 162.4 | 232.8 | 319.4 | 341.0 | 344.6 |
| 82.5° | 106.5 | 175.0 | 236.4 | 234.6 | 234.6 |
| 85° | 61.3 | 113.7 | 140.7 | 137.1 | 137.1 |
| 87.5° | 23.5 | 46.9 | 50.5 | 50.5 | 48.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)