

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: P276175

Luminaire Tested: **24CZ2-50-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276175
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: 24CZ2-50-UNV-L82765-W2A1-U-5700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4933.4 lumens
Efficiency: N/A
Efficacy: 120.8 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

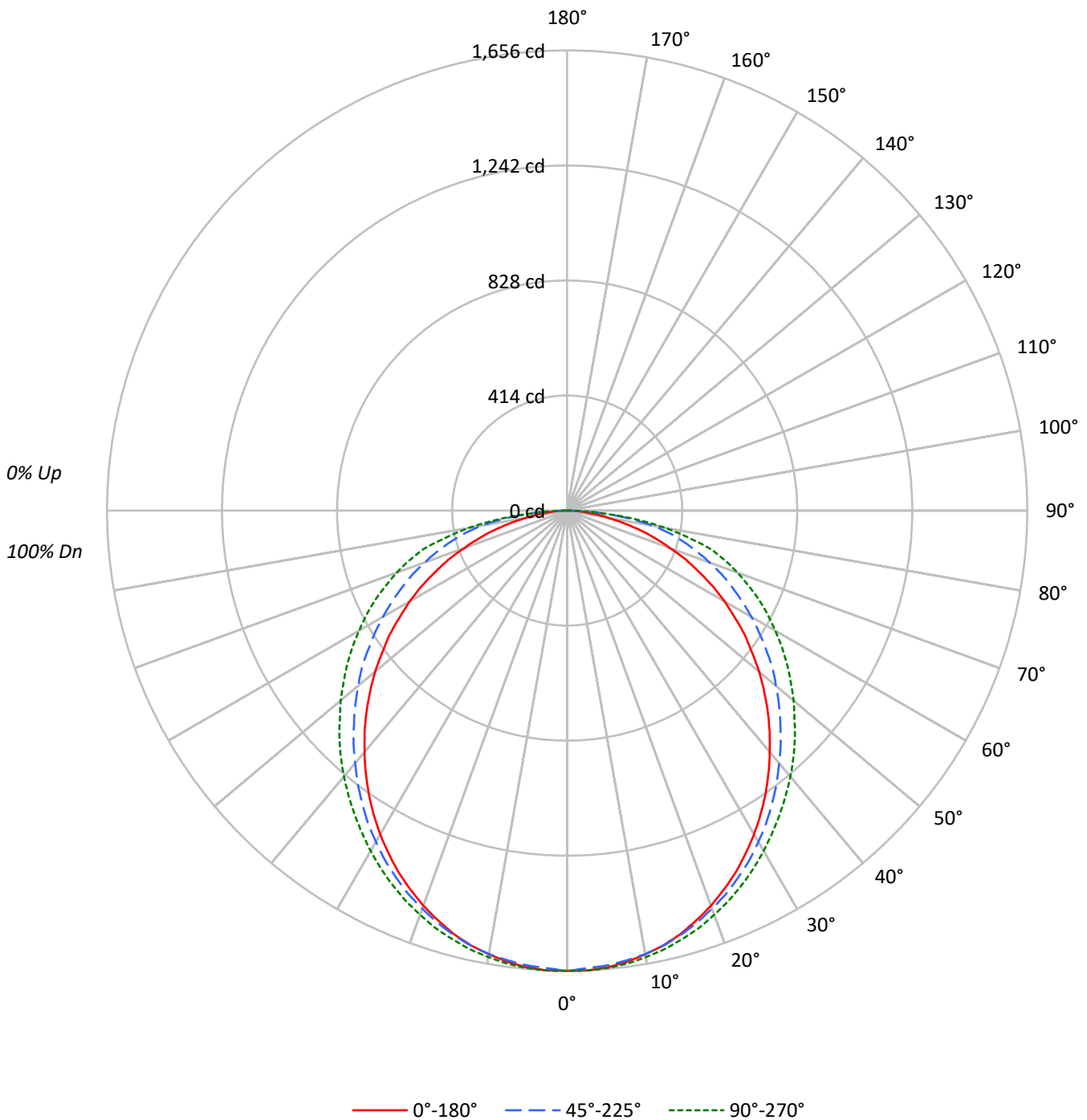
Input Watts (W): 40.827
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2229 | 2229 | 2229 |
| 5° | 2228 | 2219 | 2233 |
| 10° | 2216 | 2213 | 2229 |
| 15° | 2197 | 2202 | 2225 |
| 20° | 2167 | 2183 | 2216 |
| 25° | 2131 | 2163 | 2207 |
| 30° | 2090 | 2139 | 2197 |
| 35° | 2044 | 2112 | 2191 |
| 40° | 1992 | 2085 | 2195 |
| 45° | 1942 | 2065 | 2206 |
| 50° | 1889 | 2054 | 2226 |
| 55° | 1831 | 2051 | 2267 |
| 60° | 1759 | 2060 | 2326 |
| 65° | 1667 | 2091 | 2427 |
| 70° | 1548 | 2144 | 2565 |
| 75° | 1412 | 2251 | 2782 |
| 80° | 1161 | 2424 | 2781 |
| 85° | 889 | 2237 | 2390 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 156.7 | 3.2 |
| 10°-20° | 447.2 | 9.1 |
| 20°-30° | 673.0 | 13.6 |
| 30°-40° | 806.5 | 16.3 |
| 40°-50° | 840.5 | 17.0 |
| 50°-60° | 782.0 | 15.9 |
| 60°-70° | 644.0 | 13.1 |
| 70°-80° | 438.6 | 8.9 |
| 80°-90° | 144.8 | 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° | 1276.9 | 25.9 |
| 0°-40° | 2083.4 | 42.2 |
| 0°-60° | 3705.9 | 75.1 |
| 0°-90° | 4933.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4933.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1656 | 1656 | 1656 | 1656 | 1656 | |
| 5° | 1650 | 1650 | 1643 | 1651 | 1653 | 157 |
| 15° | 1577 | 1579 | 1581 | 1595 | 1597 | 444 |
| 25° | 1436 | 1442 | 1457 | 1482 | 1487 | 661 |
| 35° | 1245 | 1260 | 1286 | 1320 | 1334 | 778 |
| 45° | 1021 | 1042 | 1085 | 1139 | 1159 | 787 |
| 55° | 780 | 807 | 874 | 943 | 966 | 696 |
| 65° | 524 | 568 | 657 | 734 | 762 | 520 |
| 75° | 272 | 333 | 433 | 510 | 535 | 286 |
| 85° | 58 | 112 | 145 | 155 | 155 | 71 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276175

CATALOG NUMBER: 24CZ2-50-UNV-L82765-W2A1-U-5700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 |
| 2.5° | 1656.4 | 1656.4 | 1648.1 | 1656.4 | 1656.4 |
| 5° | 1649.8 | 1649.8 | 1643.2 | 1651.4 | 1653.1 |
| 7.5° | 1638.3 | 1639.9 | 1633.3 | 1643.2 | 1644.8 |
| 10° | 1621.8 | 1623.4 | 1620.1 | 1630.0 | 1631.7 |
| 12.5° | 1602.0 | 1603.7 | 1603.7 | 1615.2 | 1616.9 |
| 15° | 1577.3 | 1579.0 | 1580.6 | 1595.4 | 1597.1 |
| 17.5° | 1546.1 | 1551.0 | 1554.3 | 1572.4 | 1575.7 |
| 20° | 1513.1 | 1518.1 | 1524.6 | 1544.4 | 1547.7 |
| 22.5° | 1475.3 | 1481.8 | 1493.4 | 1514.8 | 1519.7 |
| 25° | 1435.7 | 1442.3 | 1457.1 | 1481.8 | 1486.8 |
| 27.5° | 1391.3 | 1401.2 | 1419.3 | 1445.6 | 1452.2 |
| 30° | 1345.2 | 1355.1 | 1376.5 | 1404.5 | 1414.3 |
| 32.5° | 1295.8 | 1309.0 | 1333.7 | 1364.9 | 1374.8 |
| 35° | 1244.7 | 1259.6 | 1285.9 | 1320.5 | 1333.7 |
| 37.5° | 1190.4 | 1206.9 | 1238.2 | 1276.0 | 1292.5 |
| 40° | 1134.4 | 1154.2 | 1187.1 | 1231.6 | 1249.7 |
| 42.5° | 1078.5 | 1096.6 | 1137.7 | 1185.5 | 1205.2 |
| 45° | 1020.8 | 1042.2 | 1085.0 | 1139.4 | 1159.1 |
| 47.5° | 961.5 | 983.0 | 1034.0 | 1091.6 | 1109.7 |
| 50° | 902.3 | 923.7 | 981.3 | 1042.2 | 1063.6 |
| 52.5° | 838.1 | 866.1 | 931.9 | 992.8 | 1014.2 |
| 55° | 780.4 | 806.8 | 874.3 | 943.4 | 966.5 |
| 57.5° | 714.6 | 745.9 | 820.0 | 892.4 | 917.1 |
| 60° | 653.7 | 686.6 | 765.6 | 839.7 | 864.4 |
| 62.5° | 591.1 | 627.3 | 711.3 | 787.0 | 815.0 |
| 65° | 523.6 | 568.0 | 656.9 | 734.3 | 762.3 |
| 67.5° | 462.7 | 508.8 | 602.6 | 681.6 | 706.3 |
| 70° | 393.5 | 449.5 | 545.0 | 624.0 | 652.0 |
| 72.5° | 334.2 | 390.2 | 490.7 | 568.0 | 596.0 |
| 75° | 271.7 | 332.6 | 433.0 | 510.4 | 535.1 |
| 77.5° | 209.1 | 276.6 | 377.0 | 436.3 | 444.6 |
| 80° | 149.8 | 220.6 | 312.8 | 347.4 | 358.9 |
| 82.5° | 105.4 | 169.6 | 230.5 | 253.6 | 260.1 |
| 85° | 57.6 | 112.0 | 144.9 | 154.8 | 154.8 |
| 87.5° | 24.7 | 47.7 | 57.6 | 59.3 | 60.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)