

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: P263096

Luminaire Tested: **24CZ-LD5-50-SQP-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263096
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-50-SQP-UNV-L83050-W2A1-U-5000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (336) 80 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3527.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

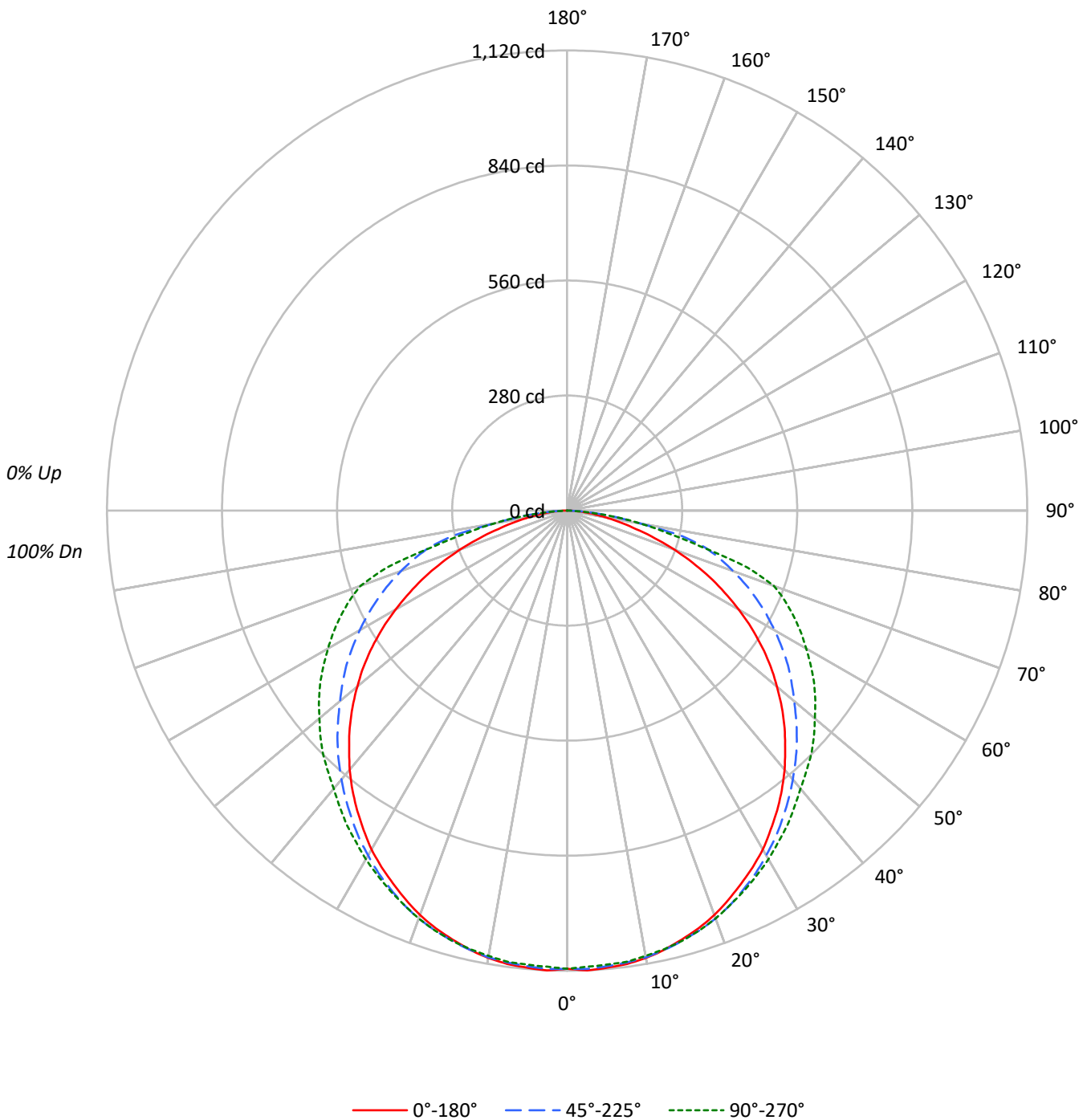
Input Watts (W): 37.461888
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 101 | 97 | 93 | 96 | 93 | 90 | | 92 | 90 | 87 | | 89 | 87 | 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 | 60 | | 70 | 64 | 59 | | 67 | 63 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 79 | 67 | 58 | 52 | 64 | 57 | 51 | | 62 | 56 | 50 | | 60 | 54 | 50 | 47 |
| 5 | 74 | 61 | 51 | 45 | 72 | 60 | 51 | 44 | 57 | 50 | 44 | | 55 | 49 | 43 | | 54 | 48 | 43 | 41 |
| 6 | 68 | 55 | 45 | 39 | 66 | 54 | 45 | 38 | 52 | 44 | 38 | | 50 | 43 | 38 | | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | | 45 | 39 | 33 | | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | | 42 | 35 | 30 | | 40 | 34 | 29 | 28 |
| 9 | 55 | 41 | 33 | 27 | 54 | 41 | 33 | 27 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | | 35 | 29 | 24 | | 35 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1500 | 1500 | 1500 |
| 5° | 1508 | 1503 | 1499 |
| 10° | 1511 | 1508 | 1503 |
| 15° | 1505 | 1510 | 1510 |
| 20° | 1500 | 1513 | 1513 |
| 25° | 1488 | 1509 | 1515 |
| 30° | 1480 | 1506 | 1523 |
| 35° | 1463 | 1502 | 1535 |
| 40° | 1446 | 1501 | 1552 |
| 45° | 1425 | 1505 | 1598 |
| 50° | 1396 | 1510 | 1647 |
| 55° | 1359 | 1539 | 1722 |
| 60° | 1299 | 1569 | 1809 |
| 65° | 1218 | 1618 | 1937 |
| 70° | 1089 | 1691 | 2107 |
| 75° | 900 | 1809 | 1743 |
| 80° | 734 | 1398 | 1412 |
| 85° | 591 | 928 | 872 |



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CATALOG NUMBER: 24CZ-LD5-50-SQP-UNV-L83050-W2A1-U-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.9 | 3.0 |
| 10°-20° | 305.6 | 8.7 |
| 20°-30° | 467.0 | 13.2 |
| 30°-40° | 571.2 | 16.2 |
| 40°-50° | 611.1 | 17.3 |
| 50°-60° | 585.2 | 16.6 |
| 60°-70° | 495.0 | 14.0 |
| 70°-80° | 313.8 | 8.9 |
| 80°-90° | 72.2 | 2.0 |
| 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° | 878.4 | 24.9 |
| 0°-40° | 1449.6 | 41.1 |
| 0°-60° | 2646.0 | 75.0 |
| 0°-90° | 3527.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3527.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1115 | 1115 | 1115 | 1115 | 1115 | |
| 5° | 1117 | 1111 | 1113 | 1111 | 1110 | 106 |
| 15° | 1080 | 1078 | 1084 | 1084 | 1084 | 305 |
| 25° | 1002 | 1002 | 1017 | 1020 | 1020 | 462 |
| 35° | 891 | 896 | 915 | 927 | 935 | 557 |
| 45° | 749 | 762 | 791 | 824 | 840 | 577 |
| 55° | 579 | 598 | 656 | 710 | 734 | 517 |
| 65° | 383 | 419 | 508 | 578 | 608 | 377 |
| 75° | 173 | 244 | 348 | 346 | 335 | 188 |
| 85° | 38 | 58 | 60 | 55 | 56 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P263096

CATALOG NUMBER: 24CZ-LD5-50-SQP-UNV-L83050-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1115.0 | 1115.0 | 1115.0 | 1115.0 | 1115.0 |
| 2.5° | 1120.4 | 1115.0 | 1116.8 | 1115.0 | 1111.3 |
| 5° | 1116.8 | 1111.3 | 1113.1 | 1111.3 | 1109.5 |
| 7.5° | 1113.1 | 1107.7 | 1109.5 | 1107.7 | 1107.7 |
| 10° | 1105.8 | 1100.4 | 1104.0 | 1102.2 | 1100.4 |
| 12.5° | 1094.9 | 1091.3 | 1094.9 | 1093.1 | 1093.1 |
| 15° | 1080.3 | 1078.5 | 1084.0 | 1084.0 | 1084.0 |
| 17.5° | 1065.8 | 1063.9 | 1071.2 | 1071.2 | 1071.2 |
| 20° | 1047.5 | 1045.7 | 1056.7 | 1056.7 | 1056.7 |
| 22.5° | 1025.7 | 1023.9 | 1038.4 | 1038.4 | 1038.4 |
| 25° | 1002.0 | 1002.0 | 1016.6 | 1020.2 | 1020.2 |
| 27.5° | 978.3 | 978.3 | 994.7 | 1000.2 | 1000.2 |
| 30° | 952.8 | 952.8 | 969.2 | 976.5 | 980.1 |
| 32.5° | 921.8 | 925.5 | 943.7 | 952.8 | 956.5 |
| 35° | 890.9 | 896.3 | 914.6 | 927.3 | 934.6 |
| 37.5° | 858.1 | 863.5 | 885.4 | 900.0 | 909.1 |
| 40° | 823.5 | 830.7 | 854.4 | 872.6 | 883.6 |
| 42.5° | 785.2 | 796.1 | 823.5 | 847.1 | 861.7 |
| 45° | 748.8 | 761.5 | 790.7 | 823.5 | 839.9 |
| 47.5° | 708.7 | 723.3 | 756.1 | 798.0 | 814.4 |
| 50° | 666.8 | 681.4 | 721.4 | 768.8 | 787.0 |
| 52.5° | 624.9 | 641.3 | 688.6 | 739.7 | 761.5 |
| 55° | 579.3 | 597.6 | 655.9 | 710.5 | 734.2 |
| 57.5° | 532.0 | 553.8 | 619.4 | 677.7 | 703.2 |
| 60° | 482.8 | 510.1 | 583.0 | 644.9 | 672.2 |
| 62.5° | 431.8 | 464.6 | 546.5 | 612.1 | 641.3 |
| 65° | 382.6 | 419.0 | 508.3 | 577.5 | 608.5 |
| 67.5° | 329.7 | 375.3 | 470.0 | 544.7 | 573.9 |
| 70° | 276.9 | 329.7 | 429.9 | 506.5 | 535.6 |
| 72.5° | 224.1 | 287.8 | 389.9 | 459.1 | 459.1 |
| 75° | 173.1 | 244.1 | 348.0 | 346.1 | 335.2 |
| 77.5° | 131.2 | 204.0 | 286.0 | 244.1 | 245.9 |
| 80° | 94.7 | 164.0 | 180.4 | 180.4 | 182.2 |
| 82.5° | 63.8 | 125.7 | 116.6 | 114.8 | 118.4 |
| 85° | 38.3 | 58.3 | 60.1 | 54.7 | 56.5 |
| 87.5° | 18.2 | 20.0 | 16.4 | 10.9 | 10.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)