

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: P263590

Luminaire Tested: **24CZ-LD5-50-RDP-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-50-RDP-UNV-L93050-W2A1-U-4500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (336) 90 CRI LEDS TUNED AT 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3262.5 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

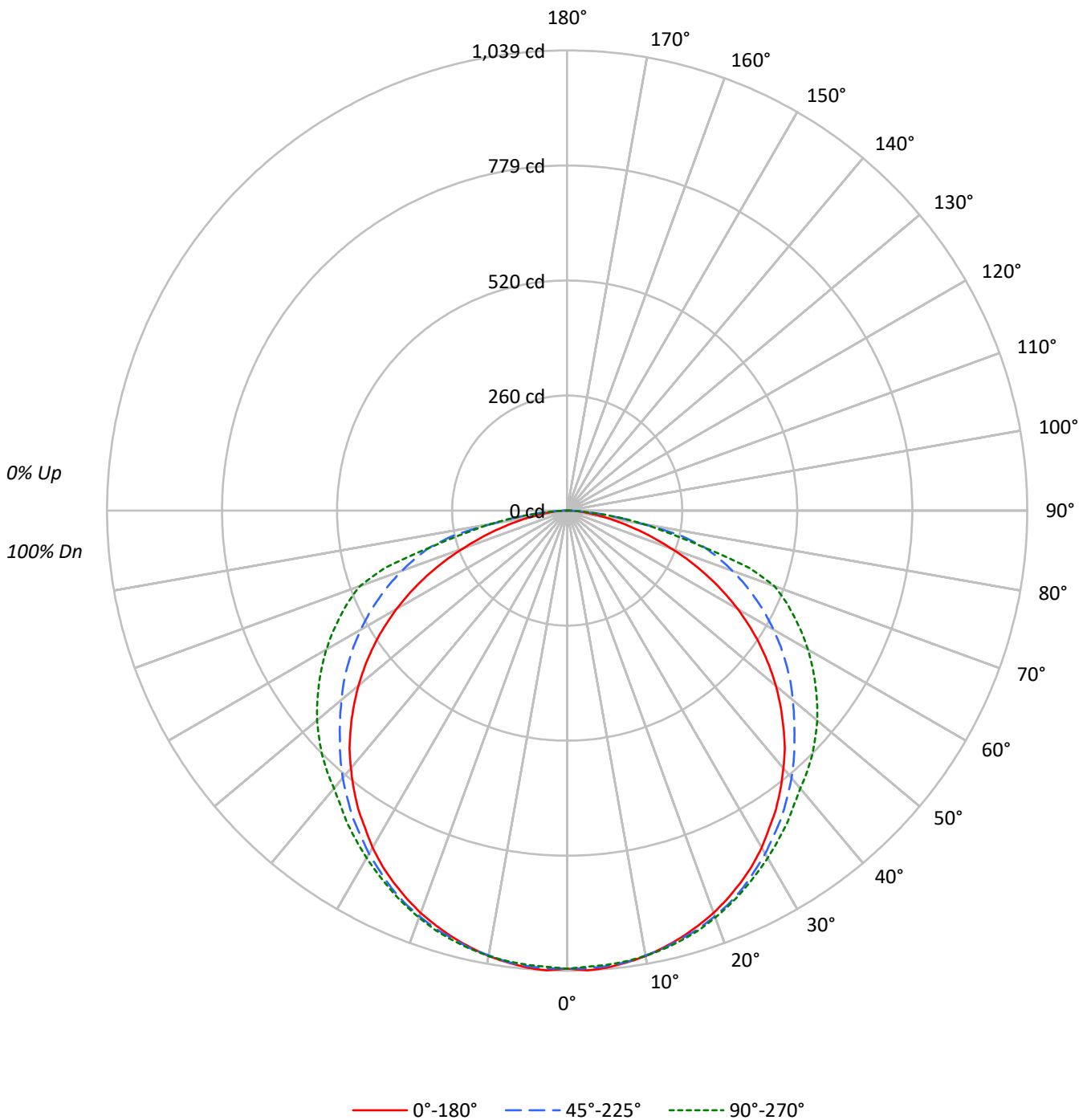
Input Watts (W): 37.211904
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 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 | 61 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 41 | 32 | 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° | 1392 | 1392 | 1392 |
| 5° | 1399 | 1395 | 1390 |
| 10° | 1395 | 1393 | 1395 |
| 15° | 1389 | 1394 | 1398 |
| 20° | 1384 | 1396 | 1400 |
| 25° | 1376 | 1395 | 1402 |
| 30° | 1365 | 1390 | 1407 |
| 35° | 1351 | 1387 | 1419 |
| 40° | 1334 | 1385 | 1439 |
| 45° | 1314 | 1381 | 1488 |
| 50° | 1288 | 1392 | 1543 |
| 55° | 1251 | 1416 | 1605 |
| 60° | 1197 | 1448 | 1690 |
| 65° | 1115 | 1493 | 1800 |
| 70° | 985 | 1561 | 1959 |
| 75° | 827 | 1670 | 1645 |
| 80° | 659 | 1319 | 1369 |
| 85° | 520 | 892 | 818 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 98.1 | 3.0 |
| 10°-20° | 282.3 | 8.7 |
| 20°-30° | 431.2 | 13.2 |
| 30°-40° | 527.2 | 16.2 |
| 40°-50° | 564.3 | 17.3 |
| 50°-60° | 541.3 | 16.6 |
| 60°-70° | 457.0 | 14.0 |
| 70°-80° | 292.1 | 9.0 |
| 80°-90° | 69.1 | 2.1 |
| 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° | 811.6 | 24.9 |
| 0°-40° | 1338.8 | 41.0 |
| 0°-60° | 2444.3 | 74.9 |
| 0°-90° | 3262.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3262.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1034 | 1034 | 1034 | 1034 | 1034 | |
| 5° | 1036 | 1029 | 1033 | 1031 | 1029 | 98 |
| 15° | 997 | 994 | 1000 | 1004 | 1004 | 282 |
| 25° | 927 | 925 | 940 | 943 | 944 | 427 |
| 35° | 822 | 829 | 845 | 856 | 864 | 514 |
| 45° | 691 | 702 | 726 | 760 | 782 | 533 |
| 55° | 533 | 551 | 604 | 658 | 684 | 476 |
| 65° | 350 | 384 | 469 | 535 | 565 | 345 |
| 75° | 159 | 226 | 321 | 328 | 316 | 171 |
| 85° | 34 | 56 | 58 | 56 | 53 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1034.2 | 1034.2 | 1034.2 | 1034.2 | 1034.2 |
| 2.5° | 1039.1 | 1032.6 | 1034.2 | 1034.2 | 1031.0 |
| 5° | 1035.9 | 1029.4 | 1032.6 | 1031.0 | 1029.4 |
| 7.5° | 1029.4 | 1024.6 | 1027.8 | 1027.8 | 1026.2 |
| 10° | 1021.4 | 1016.6 | 1019.8 | 1021.4 | 1021.4 |
| 12.5° | 1010.2 | 1006.9 | 1011.8 | 1011.8 | 1013.4 |
| 15° | 997.3 | 994.1 | 1000.5 | 1003.7 | 1003.7 |
| 17.5° | 982.9 | 981.3 | 989.3 | 990.9 | 992.5 |
| 20° | 966.8 | 965.2 | 974.8 | 974.8 | 978.0 |
| 22.5° | 947.5 | 945.9 | 958.8 | 958.8 | 962.0 |
| 25° | 926.6 | 925.0 | 939.5 | 942.7 | 944.3 |
| 27.5° | 904.2 | 902.6 | 917.0 | 921.8 | 925.0 |
| 30° | 878.5 | 878.5 | 894.5 | 901.0 | 905.8 |
| 32.5° | 849.6 | 854.4 | 868.8 | 878.5 | 884.9 |
| 35° | 822.3 | 828.7 | 844.7 | 856.0 | 864.0 |
| 37.5° | 791.7 | 798.2 | 815.8 | 830.3 | 839.9 |
| 40° | 759.6 | 767.7 | 788.5 | 804.6 | 819.0 |
| 42.5° | 727.5 | 735.5 | 758.0 | 782.1 | 801.4 |
| 45° | 690.6 | 701.8 | 725.9 | 759.6 | 782.1 |
| 47.5° | 653.6 | 664.9 | 695.4 | 737.1 | 759.6 |
| 50° | 615.1 | 627.9 | 664.9 | 713.1 | 737.1 |
| 52.5° | 574.9 | 589.4 | 636.0 | 687.4 | 711.4 |
| 55° | 533.2 | 550.8 | 603.8 | 658.5 | 684.1 |
| 57.5° | 489.8 | 509.1 | 571.7 | 629.5 | 656.8 |
| 60° | 444.9 | 468.9 | 538.0 | 599.0 | 627.9 |
| 62.5° | 398.3 | 427.2 | 504.3 | 566.9 | 597.4 |
| 65° | 350.1 | 383.8 | 468.9 | 534.8 | 565.3 |
| 67.5° | 300.3 | 345.3 | 433.6 | 502.7 | 533.2 |
| 70° | 250.5 | 303.5 | 396.7 | 467.3 | 497.9 |
| 72.5° | 204.0 | 265.0 | 359.7 | 425.6 | 432.0 |
| 75° | 159.0 | 226.4 | 321.2 | 327.6 | 316.4 |
| 77.5° | 118.8 | 187.9 | 265.0 | 236.1 | 234.5 |
| 80° | 85.1 | 151.0 | 170.2 | 175.1 | 176.7 |
| 82.5° | 56.2 | 114.0 | 110.8 | 114.0 | 112.4 |
| 85° | 33.7 | 56.2 | 57.8 | 56.2 | 53.0 |
| 87.5° | 16.1 | 20.9 | 16.1 | 14.5 | 12.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)