

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: P263497

Luminaire Tested: **24CZ-LD5-35-RDP-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263497
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-LD5-35-RDP-UNV-L83050-W2A1-U-3000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (336) 80 CRI LEDS TUNED AT 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2311.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

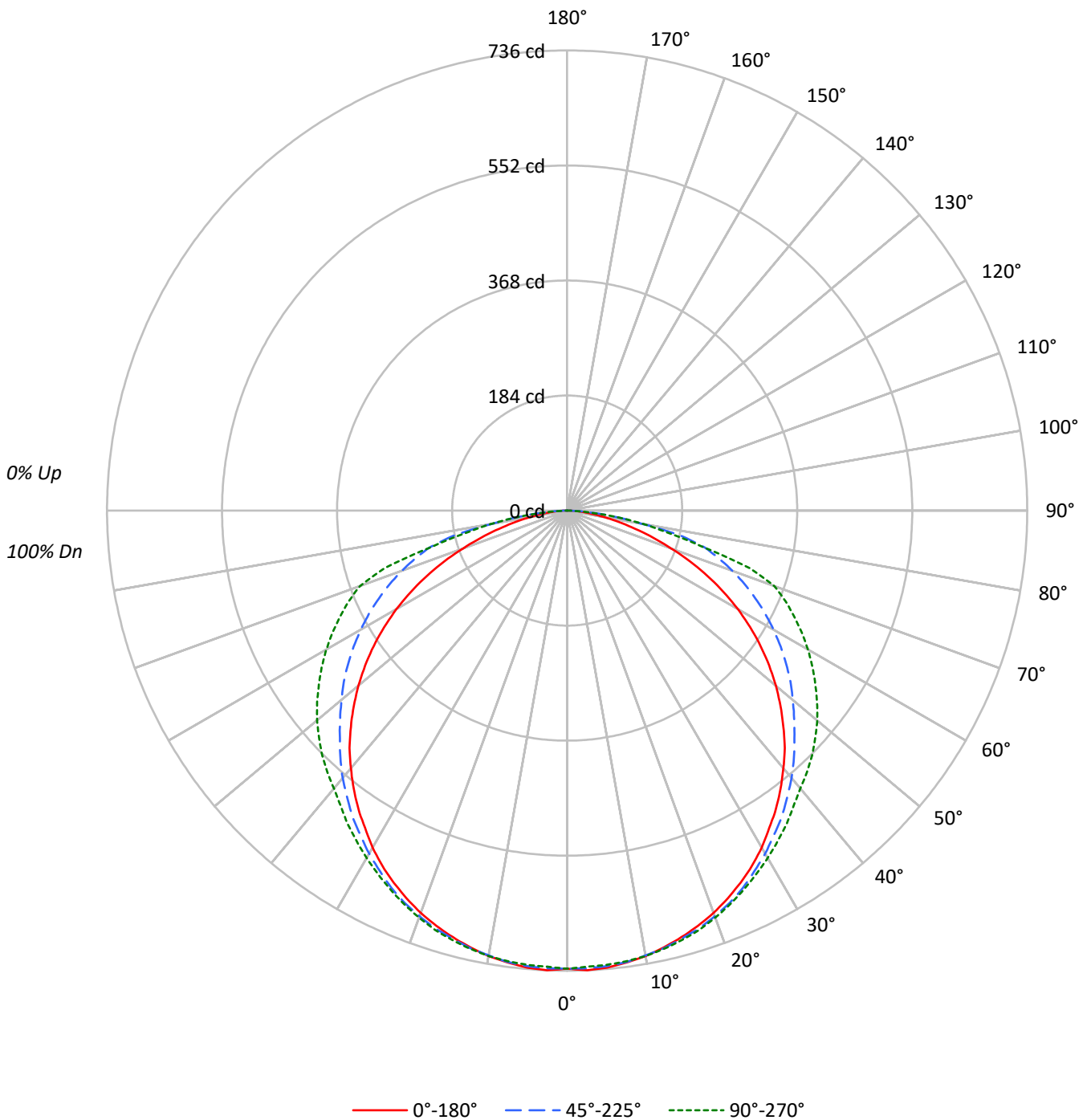
Input Watts (W): 24.13164
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 986 | 986 | 986 |
| 5° | 991 | 988 | 985 |
| 10° | 988 | 987 | 988 |
| 15° | 984 | 987 | 990 |
| 20° | 981 | 989 | 992 |
| 25° | 974 | 988 | 993 |
| 30° | 967 | 984 | 997 |
| 35° | 957 | 983 | 1005 |
| 40° | 945 | 981 | 1019 |
| 45° | 931 | 978 | 1054 |
| 50° | 912 | 986 | 1093 |
| 55° | 886 | 1003 | 1137 |
| 60° | 848 | 1026 | 1197 |
| 65° | 790 | 1058 | 1275 |
| 70° | 698 | 1105 | 1388 |
| 75° | 585 | 1183 | 1165 |
| 80° | 467 | 934 | 969 |
| 85° | 369 | 633 | 579 |



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CATALOG NUMBER: 24CZ-LD5-35-RDP-UNV-L83050-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.5 | 3.0 |
| 10°-20° | 200.0 | 8.7 |
| 20°-30° | 305.5 | 13.2 |
| 30°-40° | 373.4 | 16.2 |
| 40°-50° | 399.7 | 17.3 |
| 50°-60° | 383.4 | 16.6 |
| 60°-70° | 323.7 | 14.0 |
| 70°-80° | 206.9 | 9.0 |
| 80°-90° | 48.9 | 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° | 574.9 | 24.9 |
| 0°-40° | 948.3 | 41.0 |
| 0°-60° | 1731.5 | 74.9 |
| 0°-90° | 2311.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2311.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 733 | 733 | 733 | 733 | 733 | |
| 5° | 734 | 729 | 732 | 730 | 729 | 70 |
| 15° | 706 | 704 | 709 | 711 | 711 | 199 |
| 25° | 656 | 655 | 666 | 668 | 669 | 303 |
| 35° | 582 | 587 | 598 | 606 | 612 | 364 |
| 45° | 489 | 497 | 514 | 538 | 554 | 377 |
| 55° | 378 | 390 | 428 | 466 | 485 | 337 |
| 65° | 248 | 272 | 332 | 379 | 400 | 245 |
| 75° | 113 | 160 | 228 | 232 | 224 | 121 |
| 85° | 24 | 40 | 41 | 40 | 38 | 29 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 732.6 | 732.6 | 732.6 | 732.6 | 732.6 |
| 2.5° | 736.0 | 731.5 | 732.6 | 732.6 | 730.3 |
| 5° | 733.7 | 729.2 | 731.5 | 730.3 | 729.2 |
| 7.5° | 729.2 | 725.8 | 728.1 | 728.1 | 726.9 |
| 10° | 723.5 | 720.1 | 722.4 | 723.5 | 723.5 |
| 12.5° | 715.5 | 713.3 | 716.7 | 716.7 | 717.8 |
| 15° | 706.4 | 704.2 | 708.7 | 711.0 | 711.0 |
| 17.5° | 696.2 | 695.1 | 700.8 | 701.9 | 703.0 |
| 20° | 684.8 | 683.7 | 690.5 | 690.5 | 692.8 |
| 22.5° | 671.2 | 670.0 | 679.1 | 679.1 | 681.4 |
| 25° | 656.4 | 655.3 | 665.5 | 667.8 | 668.9 |
| 27.5° | 640.5 | 639.3 | 649.6 | 653.0 | 655.3 |
| 30° | 622.3 | 622.3 | 633.6 | 638.2 | 641.6 |
| 32.5° | 601.8 | 605.2 | 615.4 | 622.3 | 626.8 |
| 35° | 582.4 | 587.0 | 598.4 | 606.3 | 612.0 |
| 37.5° | 560.8 | 565.4 | 577.9 | 588.1 | 595.0 |
| 40° | 538.1 | 543.8 | 558.6 | 569.9 | 580.2 |
| 42.5° | 515.3 | 521.0 | 536.9 | 554.0 | 567.7 |
| 45° | 489.2 | 497.1 | 514.2 | 538.1 | 554.0 |
| 47.5° | 463.0 | 471.0 | 492.6 | 522.2 | 538.1 |
| 50° | 435.7 | 444.8 | 471.0 | 505.1 | 522.2 |
| 52.5° | 407.3 | 417.5 | 450.5 | 486.9 | 504.0 |
| 55° | 377.7 | 390.2 | 427.7 | 466.4 | 484.6 |
| 57.5° | 347.0 | 360.6 | 405.0 | 445.9 | 465.3 |
| 60° | 315.1 | 332.2 | 381.1 | 424.3 | 444.8 |
| 62.5° | 282.1 | 302.6 | 357.2 | 401.6 | 423.2 |
| 65° | 248.0 | 271.9 | 332.2 | 378.8 | 400.4 |
| 67.5° | 212.7 | 244.6 | 307.1 | 356.1 | 377.7 |
| 70° | 177.5 | 215.0 | 281.0 | 331.0 | 352.7 |
| 72.5° | 144.5 | 187.7 | 254.8 | 301.5 | 306.0 |
| 75° | 112.6 | 160.4 | 227.5 | 232.1 | 224.1 |
| 77.5° | 84.2 | 133.1 | 187.7 | 167.2 | 166.1 |
| 80° | 60.3 | 106.9 | 120.6 | 124.0 | 125.1 |
| 82.5° | 39.8 | 80.8 | 78.5 | 80.8 | 79.6 |
| 85° | 23.9 | 39.8 | 41.0 | 39.8 | 37.5 |
| 87.5° | 11.4 | 14.8 | 11.4 | 10.2 | 9.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)