

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: P276739

Luminaire Tested: **24CZ2-35HE-RDP-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276739
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35HE-RDP-UNV-L83050-W2A1-U-4000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2351.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

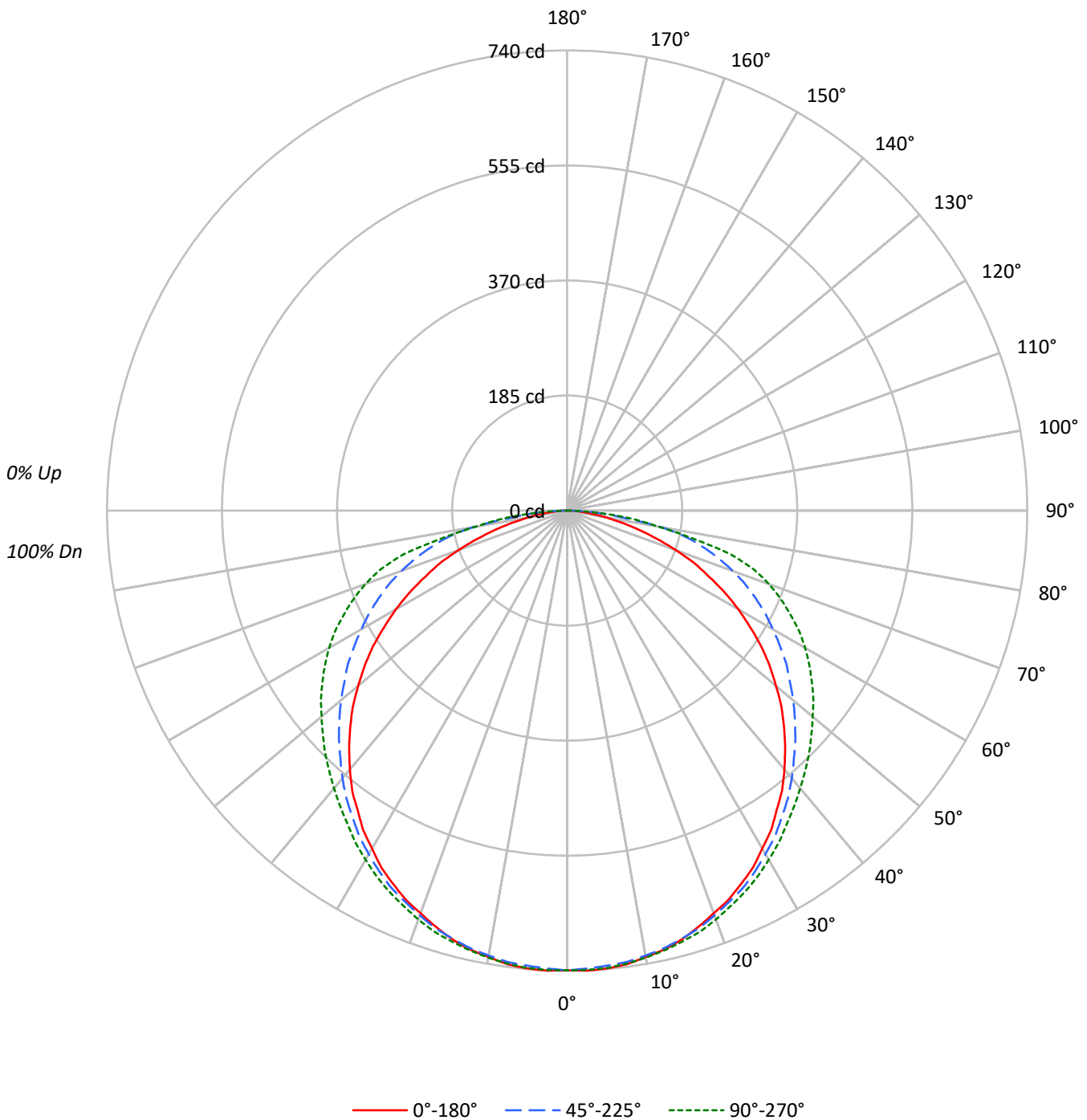
Input Watts (W): 24.73614
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 88 | 86 | 84 | 82 |
| 2 | 97 | 89 | 81 | 75 | 95 | 87 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 77 | 73 | 69 | 67 |
| 3 | 88 | 77 | 68 | 62 | 86 | 76 | 67 | 61 | 72 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 51 | 64 | 57 | 51 | 62 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 51 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 45 | 38 | 51 | 44 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 24 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 995 | 995 | 995 |
| 5° | 999 | 992 | 997 |
| 10° | 996 | 993 | 997 |
| 15° | 994 | 992 | 999 |
| 20° | 987 | 992 | 1002 |
| 25° | 983 | 994 | 1004 |
| 30° | 975 | 991 | 1007 |
| 35° | 965 | 988 | 1011 |
| 40° | 954 | 987 | 1024 |
| 45° | 939 | 987 | 1047 |
| 50° | 918 | 993 | 1079 |
| 55° | 894 | 1009 | 1127 |
| 60° | 857 | 1029 | 1189 |
| 65° | 802 | 1066 | 1262 |
| 70° | 729 | 1115 | 1358 |
| 75° | 618 | 1176 | 1419 |
| 80° | 488 | 1184 | 1148 |
| 85° | 360 | 900 | 1008 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 70.1 | 3.0 |
| 10°-20° | 201.8 | 8.6 |
| 20°-30° | 308.7 | 13.1 |
| 30°-40° | 377.3 | 16.0 |
| 40°-50° | 402.1 | 17.1 |
| 50°-60° | 384.5 | 16.4 |
| 60°-70° | 325.7 | 13.9 |
| 70°-80° | 218.9 | 9.3 |
| 80°-90° | 61.8 | 2.6 |
| 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° | 580.6 | 24.7 |
| 0°-40° | 958.0 | 40.7 |
| 0°-60° | 1744.6 | 74.2 |
| 0°-90° | 2351.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2351.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 739 | 739 | 739 | 739 | 739 | |
| 5° | 739 | 738 | 735 | 738 | 738 | 70 |
| 15° | 714 | 714 | 712 | 718 | 717 | 201 |
| 25° | 662 | 665 | 669 | 675 | 676 | 305 |
| 35° | 588 | 592 | 602 | 613 | 616 | 368 |
| 45° | 493 | 501 | 519 | 541 | 550 | 380 |
| 55° | 381 | 395 | 430 | 464 | 480 | 340 |
| 65° | 252 | 278 | 335 | 379 | 396 | 250 |
| 75° | 119 | 162 | 226 | 265 | 273 | 127 |
| 85° | 23 | 48 | 58 | 63 | 65 | 29 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 739.3 | 739.3 | 739.3 | 739.3 | 739.3 |
| 2.5° | 740.5 | 740.5 | 737.0 | 739.3 | 739.3 |
| 5° | 739.3 | 738.2 | 734.7 | 738.2 | 738.2 |
| 7.5° | 735.8 | 734.7 | 732.3 | 735.8 | 734.7 |
| 10° | 728.8 | 728.8 | 726.5 | 730.0 | 730.0 |
| 12.5° | 723.0 | 721.8 | 720.7 | 725.3 | 724.2 |
| 15° | 713.7 | 713.7 | 712.5 | 718.3 | 717.2 |
| 17.5° | 702.0 | 703.2 | 704.3 | 709.0 | 710.2 |
| 20° | 689.2 | 691.5 | 692.7 | 699.7 | 699.7 |
| 22.5° | 677.5 | 678.7 | 681.0 | 688.0 | 688.0 |
| 25° | 662.4 | 664.7 | 669.4 | 675.2 | 676.4 |
| 27.5° | 647.2 | 648.4 | 654.2 | 662.4 | 663.5 |
| 30° | 627.4 | 630.9 | 637.9 | 647.2 | 648.4 |
| 32.5° | 609.9 | 613.4 | 621.5 | 630.9 | 633.2 |
| 35° | 587.7 | 592.4 | 601.7 | 613.4 | 615.7 |
| 37.5° | 567.9 | 571.4 | 583.1 | 595.9 | 599.4 |
| 40° | 543.4 | 550.4 | 562.1 | 577.2 | 583.1 |
| 42.5° | 518.9 | 525.9 | 539.9 | 559.7 | 566.7 |
| 45° | 493.3 | 501.4 | 518.9 | 541.1 | 550.4 |
| 47.5° | 467.6 | 476.9 | 496.8 | 522.4 | 532.9 |
| 50° | 438.5 | 450.1 | 474.6 | 503.8 | 515.4 |
| 52.5° | 410.5 | 424.5 | 451.3 | 483.9 | 499.1 |
| 55° | 381.3 | 395.3 | 430.3 | 464.1 | 480.4 |
| 57.5° | 348.7 | 367.3 | 405.8 | 444.3 | 461.8 |
| 60° | 318.4 | 335.8 | 382.5 | 424.5 | 442.0 |
| 62.5° | 285.7 | 309.0 | 359.2 | 403.5 | 421.0 |
| 65° | 251.9 | 277.5 | 334.7 | 379.0 | 396.5 |
| 67.5° | 221.6 | 249.6 | 310.2 | 354.5 | 372.0 |
| 70° | 185.4 | 220.4 | 283.4 | 327.7 | 345.2 |
| 72.5° | 151.6 | 190.1 | 255.4 | 298.5 | 314.9 |
| 75° | 118.9 | 162.1 | 226.2 | 264.7 | 272.9 |
| 77.5° | 88.6 | 134.1 | 195.9 | 212.2 | 206.4 |
| 80° | 63.0 | 107.3 | 152.8 | 144.6 | 148.1 |
| 82.5° | 40.8 | 81.6 | 94.5 | 107.3 | 110.8 |
| 85° | 23.3 | 47.8 | 58.3 | 63.0 | 65.3 |
| 87.5° | 10.5 | 17.5 | 23.3 | 23.3 | 22.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)