

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: P263618

Luminaire Tested: **24CZ-LD5-30SE-RDP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263618
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-LD5-30SE-RDP-UNV-L93050-W2A1-U-3500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1791.7 lumens
Efficiency: N/A
Efficacy: 80.8 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

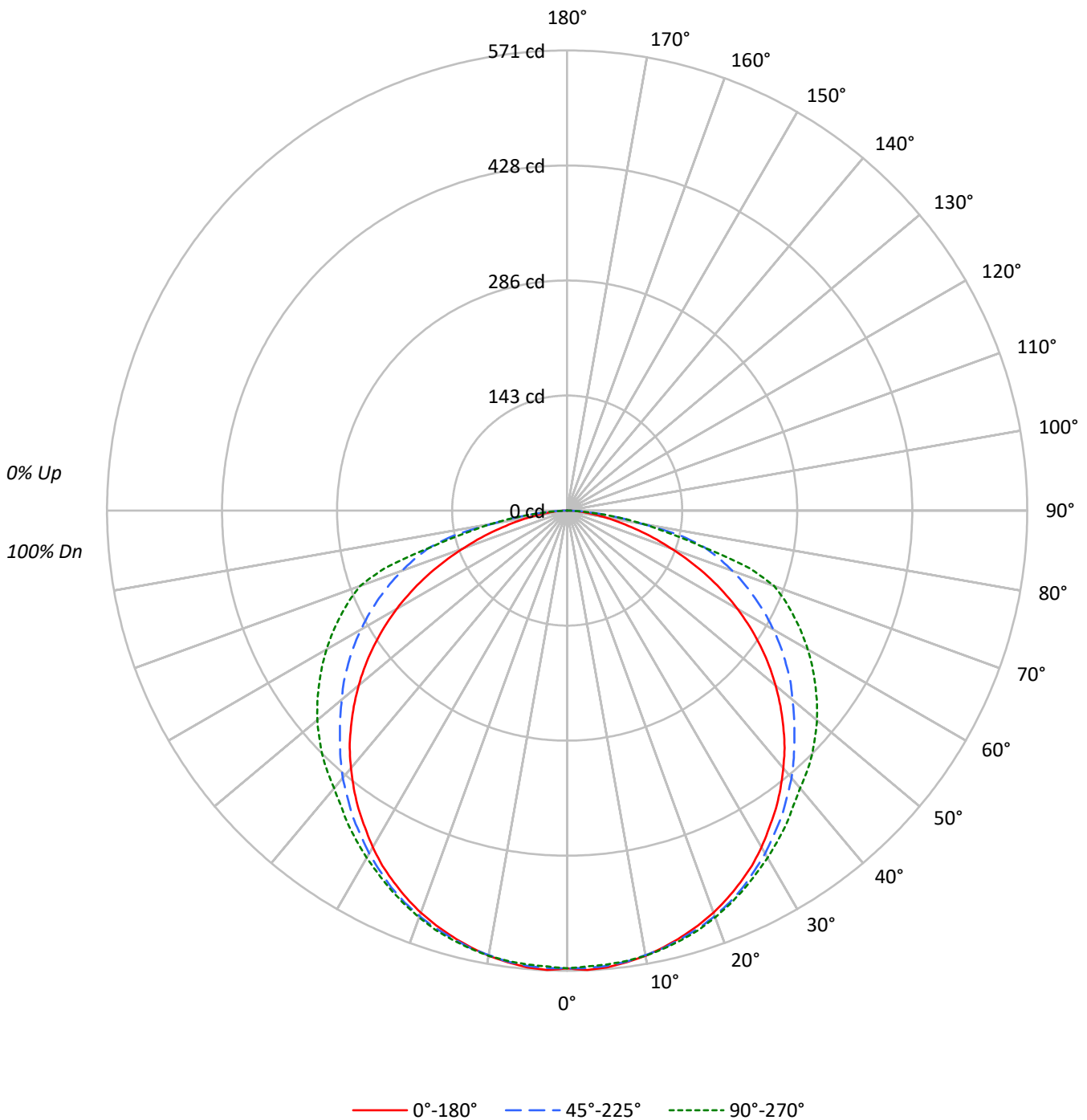
Input Watts (W): 22.175478
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 61 | 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° | 764 | 764 | 764 |
| 5° | 768 | 766 | 764 |
| 10° | 766 | 765 | 766 |
| 15° | 763 | 765 | 768 |
| 20° | 760 | 767 | 769 |
| 25° | 756 | 766 | 770 |
| 30° | 749 | 763 | 773 |
| 35° | 742 | 762 | 779 |
| 40° | 733 | 761 | 790 |
| 45° | 722 | 759 | 817 |
| 50° | 707 | 764 | 847 |
| 55° | 687 | 778 | 881 |
| 60° | 657 | 795 | 928 |
| 65° | 612 | 820 | 989 |
| 70° | 541 | 857 | 1076 |
| 75° | 454 | 917 | 904 |
| 80° | 362 | 724 | 752 |
| 85° | 286 | 491 | 449 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 53.9 | 3.0 |
| 10°-20° | 155.0 | 8.7 |
| 20°-30° | 236.8 | 13.2 |
| 30°-40° | 289.5 | 16.2 |
| 40°-50° | 309.9 | 17.3 |
| 50°-60° | 297.3 | 16.6 |
| 60°-70° | 251.0 | 14.0 |
| 70°-80° | 160.4 | 9.0 |
| 80°-90° | 37.9 | 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° | 445.7 | 24.9 |
| 0°-40° | 735.3 | 41.0 |
| 0°-60° | 1342.4 | 74.9 |
| 0°-90° | 1791.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1791.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 568 | 568 | 568 | 568 | 568 | |
| 5° | 569 | 565 | 567 | 566 | 565 | 54 |
| 15° | 548 | 546 | 550 | 551 | 551 | 155 |
| 25° | 509 | 508 | 516 | 518 | 519 | 235 |
| 35° | 452 | 455 | 464 | 470 | 474 | 282 |
| 45° | 379 | 385 | 399 | 417 | 430 | 293 |
| 55° | 293 | 302 | 332 | 362 | 376 | 261 |
| 65° | 192 | 211 | 258 | 294 | 310 | 190 |
| 75° | 87 | 124 | 176 | 180 | 174 | 94 |
| 85° | 18 | 31 | 32 | 31 | 29 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 568.0 | 568.0 | 568.0 | 568.0 | 568.0 |
| 2.5° | 570.6 | 567.1 | 568.0 | 568.0 | 566.2 |
| 5° | 568.9 | 565.4 | 567.1 | 566.2 | 565.4 |
| 7.5° | 565.4 | 562.7 | 564.5 | 564.5 | 563.6 |
| 10° | 560.9 | 558.3 | 560.1 | 560.9 | 560.9 |
| 12.5° | 554.8 | 553.0 | 555.7 | 555.7 | 556.5 |
| 15° | 547.7 | 545.9 | 549.5 | 551.2 | 551.2 |
| 17.5° | 539.8 | 538.9 | 543.3 | 544.2 | 545.1 |
| 20° | 531.0 | 530.1 | 535.4 | 535.4 | 537.1 |
| 22.5° | 520.4 | 519.5 | 526.5 | 526.5 | 528.3 |
| 25° | 508.9 | 508.0 | 516.0 | 517.7 | 518.6 |
| 27.5° | 496.6 | 495.7 | 503.6 | 506.3 | 508.0 |
| 30° | 482.4 | 482.4 | 491.3 | 494.8 | 497.4 |
| 32.5° | 466.6 | 469.2 | 477.2 | 482.4 | 486.0 |
| 35° | 451.6 | 455.1 | 463.9 | 470.1 | 474.5 |
| 37.5° | 434.8 | 438.3 | 448.0 | 456.0 | 461.3 |
| 40° | 417.2 | 421.6 | 433.1 | 441.9 | 449.8 |
| 42.5° | 399.5 | 403.9 | 416.3 | 429.5 | 440.1 |
| 45° | 379.3 | 385.4 | 398.7 | 417.2 | 429.5 |
| 47.5° | 359.0 | 365.1 | 381.9 | 404.8 | 417.2 |
| 50° | 337.8 | 344.9 | 365.1 | 391.6 | 404.8 |
| 52.5° | 315.8 | 323.7 | 349.3 | 377.5 | 390.7 |
| 55° | 292.8 | 302.5 | 331.6 | 361.6 | 375.7 |
| 57.5° | 269.0 | 279.6 | 314.0 | 345.7 | 360.7 |
| 60° | 244.3 | 257.5 | 295.5 | 329.0 | 344.9 |
| 62.5° | 218.7 | 234.6 | 276.9 | 311.3 | 328.1 |
| 65° | 192.3 | 210.8 | 257.5 | 293.7 | 310.5 |
| 67.5° | 164.9 | 189.6 | 238.1 | 276.1 | 292.8 |
| 70° | 137.6 | 166.7 | 217.9 | 256.7 | 273.4 |
| 72.5° | 112.0 | 145.5 | 197.6 | 233.7 | 237.3 |
| 75° | 87.3 | 124.4 | 176.4 | 179.9 | 173.8 |
| 77.5° | 65.3 | 103.2 | 145.5 | 129.7 | 128.8 |
| 80° | 46.7 | 82.9 | 93.5 | 96.1 | 97.0 |
| 82.5° | 30.9 | 62.6 | 60.9 | 62.6 | 61.7 |
| 85° | 18.5 | 30.9 | 31.8 | 30.9 | 29.1 |
| 87.5° | 8.8 | 11.5 | 8.8 | 7.9 | 7.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)