

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: P276859

Luminaire Tested: **24CZ2-30-RDP-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276859
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: 24CZ2-30-RDP-UNV-L93050-W2A1-U-4000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1771.5 lumens
Efficiency: N/A
Efficacy: 79.3 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

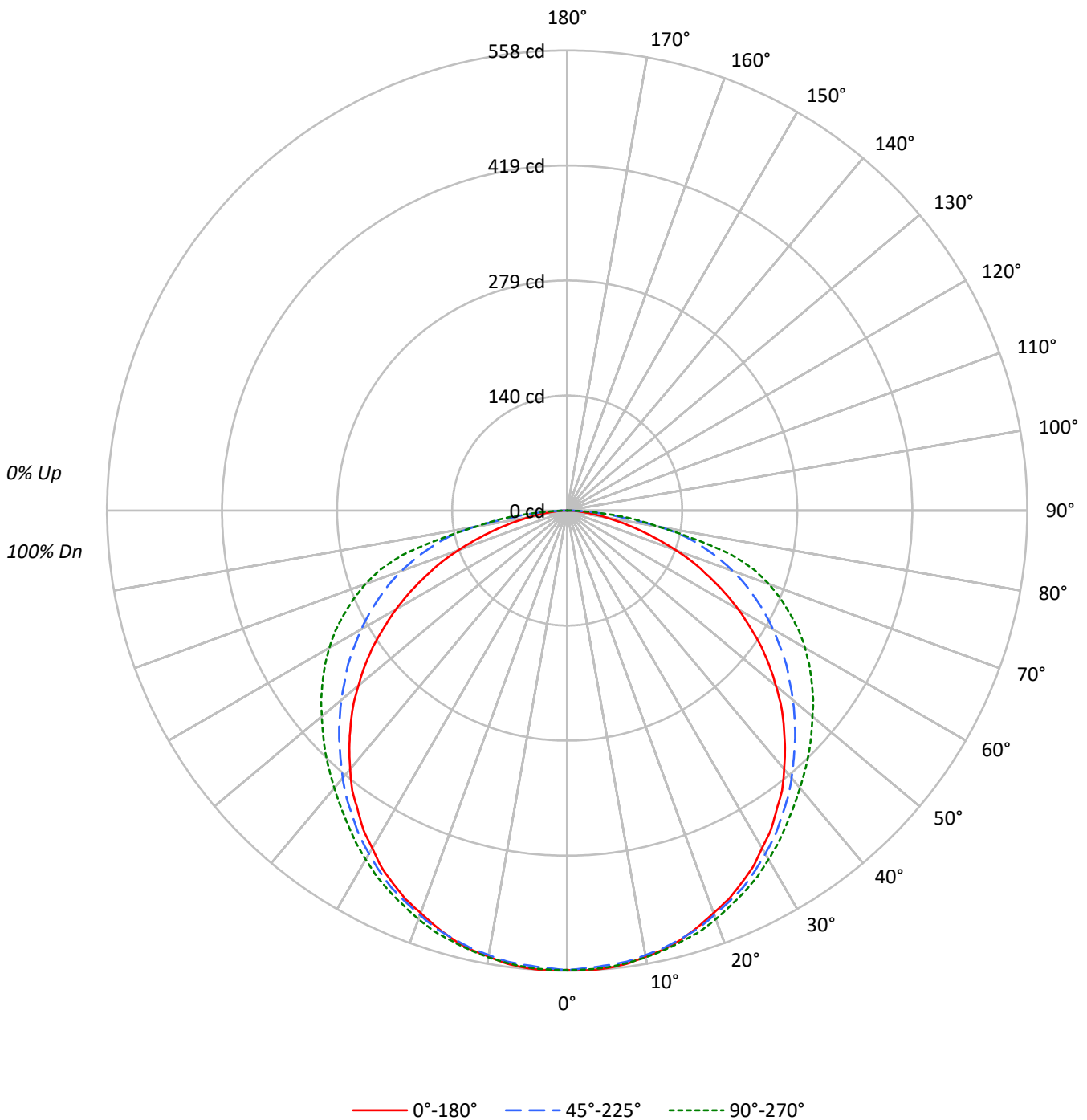
Input Watts (W): 22.327812
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 68 | 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° | 750 | 750 | 750 |
| 5° | 752 | 748 | 751 |
| 10° | 750 | 748 | 752 |
| 15° | 749 | 748 | 753 |
| 20° | 744 | 747 | 755 |
| 25° | 741 | 749 | 757 |
| 30° | 734 | 747 | 759 |
| 35° | 727 | 745 | 762 |
| 40° | 719 | 744 | 772 |
| 45° | 707 | 744 | 789 |
| 50° | 692 | 749 | 813 |
| 55° | 674 | 761 | 849 |
| 60° | 646 | 776 | 896 |
| 65° | 604 | 803 | 951 |
| 70° | 550 | 840 | 1023 |
| 75° | 466 | 886 | 1069 |
| 80° | 367 | 892 | 865 |
| 85° | 272 | 678 | 760 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.8 | 3.0 |
| 10°-20° | 152.1 | 8.6 |
| 20°-30° | 232.6 | 13.1 |
| 30°-40° | 284.3 | 16.0 |
| 40°-50° | 303.0 | 17.1 |
| 50°-60° | 289.7 | 16.4 |
| 60°-70° | 245.4 | 13.9 |
| 70°-80° | 164.9 | 9.3 |
| 80°-90° | 46.5 | 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° | 437.5 | 24.7 |
| 0°-40° | 721.8 | 40.7 |
| 0°-60° | 1314.6 | 74.2 |
| 0°-90° | 1771.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1771.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 557 | 557 | 557 | 557 | 557 | |
| 5° | 557 | 556 | 554 | 556 | 556 | 53 |
| 15° | 538 | 538 | 537 | 541 | 540 | 152 |
| 25° | 499 | 501 | 504 | 509 | 510 | 230 |
| 35° | 443 | 446 | 453 | 462 | 464 | 277 |
| 45° | 372 | 378 | 391 | 408 | 415 | 287 |
| 55° | 287 | 298 | 324 | 350 | 362 | 256 |
| 65° | 190 | 209 | 252 | 286 | 299 | 188 |
| 75° | 90 | 122 | 170 | 200 | 206 | 96 |
| 85° | 18 | 36 | 44 | 47 | 49 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276859

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 557.1 | 557.1 | 557.1 | 557.1 | 557.1 |
| 2.5° | 558.0 | 558.0 | 555.3 | 557.1 | 557.1 |
| 5° | 557.1 | 556.2 | 553.6 | 556.2 | 556.2 |
| 7.5° | 554.4 | 553.6 | 551.8 | 554.4 | 553.6 |
| 10° | 549.2 | 549.2 | 547.4 | 550.1 | 550.1 |
| 12.5° | 544.8 | 543.9 | 543.0 | 546.5 | 545.7 |
| 15° | 537.8 | 537.8 | 536.9 | 541.3 | 540.4 |
| 17.5° | 529.0 | 529.8 | 530.7 | 534.2 | 535.1 |
| 20° | 519.3 | 521.1 | 521.9 | 527.2 | 527.2 |
| 22.5° | 510.5 | 511.4 | 513.1 | 518.4 | 518.4 |
| 25° | 499.1 | 500.8 | 504.4 | 508.8 | 509.6 |
| 27.5° | 487.7 | 488.5 | 492.9 | 499.1 | 500.0 |
| 30° | 472.7 | 475.4 | 480.6 | 487.7 | 488.5 |
| 32.5° | 459.6 | 462.2 | 468.3 | 475.4 | 477.1 |
| 35° | 442.9 | 446.4 | 453.4 | 462.2 | 463.9 |
| 37.5° | 427.9 | 430.6 | 439.3 | 449.0 | 451.6 |
| 40° | 409.5 | 414.7 | 423.5 | 434.9 | 439.3 |
| 42.5° | 391.0 | 396.3 | 406.8 | 421.8 | 427.0 |
| 45° | 371.7 | 377.8 | 391.0 | 407.7 | 414.7 |
| 47.5° | 352.4 | 359.4 | 374.3 | 393.6 | 401.6 |
| 50° | 330.4 | 339.2 | 357.6 | 379.6 | 388.4 |
| 52.5° | 309.3 | 319.8 | 340.0 | 364.7 | 376.1 |
| 55° | 287.3 | 297.9 | 324.2 | 349.7 | 362.0 |
| 57.5° | 262.7 | 276.8 | 305.8 | 334.8 | 348.0 |
| 60° | 239.9 | 253.1 | 288.2 | 319.8 | 333.0 |
| 62.5° | 215.3 | 232.9 | 270.6 | 304.0 | 317.2 |
| 65° | 189.8 | 209.1 | 252.2 | 285.6 | 298.8 |
| 67.5° | 166.9 | 188.0 | 233.7 | 267.1 | 280.3 |
| 70° | 139.7 | 166.1 | 213.5 | 246.9 | 260.1 |
| 72.5° | 114.2 | 143.2 | 192.4 | 224.9 | 237.2 |
| 75° | 89.6 | 122.1 | 170.5 | 199.5 | 205.6 |
| 77.5° | 66.8 | 101.0 | 147.6 | 159.9 | 155.5 |
| 80° | 47.4 | 80.8 | 115.1 | 109.0 | 111.6 |
| 82.5° | 30.8 | 61.5 | 71.2 | 80.8 | 83.5 |
| 85° | 17.6 | 36.0 | 43.9 | 47.4 | 49.2 |
| 87.5° | 7.9 | 13.2 | 17.6 | 17.6 | 16.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)