

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: P277121

Luminaire Tested: **24CZ2-35-RDP-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277121  
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: 24CZ2-35-RDP-UNV-L92765-W2A1-U-5000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2092.0 lumens  
Efficiency: N/A  
Efficacy: 78.4 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

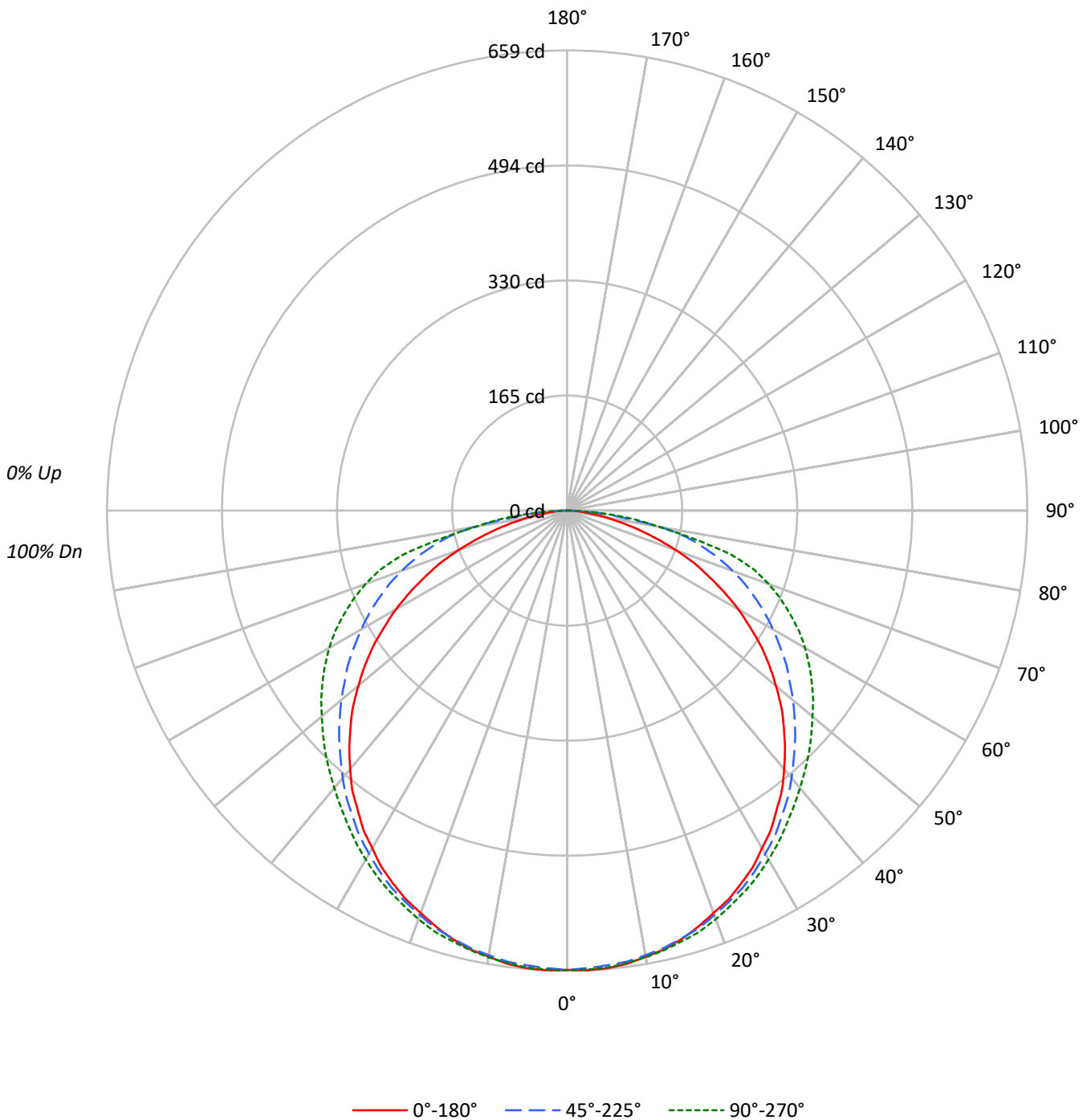
Input Watts (W): 26.691  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 885 | 885  | 885  |
| 5°  | 889 | 883  | 887  |
| 10° | 886 | 883  | 888  |
| 15° | 885 | 883  | 889  |
| 20° | 878 | 883  | 891  |
| 25° | 875 | 884  | 893  |
| 30° | 867 | 882  | 896  |
| 35° | 859 | 879  | 900  |
| 40° | 849 | 878  | 911  |
| 45° | 835 | 879  | 932  |
| 50° | 817 | 884  | 960  |
| 55° | 796 | 898  | 1003 |
| 60° | 762 | 916  | 1058 |
| 65° | 713 | 948  | 1123 |
| 70° | 649 | 992  | 1208 |
| 75° | 550 | 1046 | 1262 |
| 80° | 434 | 1053 | 1021 |
| 85° | 321 | 801  | 897  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 62.4   | 3.0       |
| 10°-20°   | 179.6  | 8.6       |
| 20°-30°   | 274.6  | 13.1      |
| 30°-40°   | 335.7  | 16.0      |
| 40°-50°   | 357.8  | 17.1      |
| 50°-60°   | 342.1  | 16.4      |
| 60°-70°   | 289.8  | 13.9      |
| 70°-80°   | 194.8  | 9.3       |
| 80°-90°   | 54.9   | 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°    | 516.7  | 24.7      |
| 0°-40°    | 852.4  | 40.7      |
| 0°-60°    | 1552.4 | 74.2      |
| 0°-90°    | 2092.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2092.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 658 | 658   | 658 | 658   | 658 |      |
| 5°  | 658 | 657   | 654 | 657   | 657 | 63   |
| 15° | 635 | 635   | 634 | 639   | 638 | 179  |
| 25° | 589 | 592   | 596 | 601   | 602 | 272  |
| 35° | 523 | 527   | 535 | 546   | 548 | 328  |
| 45° | 439 | 446   | 462 | 482   | 490 | 339  |
| 55° | 339 | 352   | 383 | 413   | 428 | 302  |
| 65° | 224 | 247   | 298 | 337   | 353 | 223  |
| 75° | 106 | 144   | 201 | 236   | 243 | 113  |
| 85° | 21  | 42    | 52  | 56    | 58  | 26   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 657.9 | 657.9 | 657.9 | 657.9 | 657.9 |
| 2.5°  | 658.9 | 658.9 | 655.8 | 657.9 | 657.9 |
| 5°    | 657.9 | 656.8 | 653.7 | 656.8 | 656.8 |
| 7.5°  | 654.8 | 653.7 | 651.6 | 654.8 | 653.7 |
| 10°   | 648.5 | 648.5 | 646.5 | 649.6 | 649.6 |
| 12.5° | 643.3 | 642.3 | 641.3 | 645.4 | 644.4 |
| 15°   | 635.0 | 635.0 | 634.0 | 639.2 | 638.2 |
| 17.5° | 624.7 | 625.7 | 626.7 | 630.9 | 631.9 |
| 20°   | 613.2 | 615.3 | 616.4 | 622.6 | 622.6 |
| 22.5° | 602.9 | 603.9 | 606.0 | 612.2 | 612.2 |
| 25°   | 589.4 | 591.5 | 595.6 | 600.8 | 601.8 |
| 27.5° | 575.9 | 576.9 | 582.1 | 589.4 | 590.4 |
| 30°   | 558.3 | 561.4 | 567.6 | 575.9 | 576.9 |
| 32.5° | 542.7 | 545.8 | 553.1 | 561.4 | 563.4 |
| 35°   | 523.0 | 527.1 | 535.4 | 545.8 | 547.9 |
| 37.5° | 505.3 | 508.4 | 518.8 | 530.2 | 533.3 |
| 40°   | 483.5 | 489.8 | 500.1 | 513.6 | 518.8 |
| 42.5° | 461.8 | 468.0 | 480.4 | 498.1 | 504.3 |
| 45°   | 438.9 | 446.2 | 461.8 | 481.5 | 489.8 |
| 47.5° | 416.1 | 424.4 | 442.0 | 464.9 | 474.2 |
| 50°   | 390.2 | 400.5 | 422.3 | 448.3 | 458.6 |
| 52.5° | 365.3 | 377.7 | 401.6 | 430.6 | 444.1 |
| 55°   | 339.3 | 351.8 | 382.9 | 413.0 | 427.5 |
| 57.5° | 310.3 | 326.9 | 361.1 | 395.3 | 410.9 |
| 60°   | 283.3 | 298.8 | 340.3 | 377.7 | 393.3 |
| 62.5° | 254.2 | 275.0 | 319.6 | 359.0 | 374.6 |
| 65°   | 224.1 | 247.0 | 297.8 | 337.2 | 352.8 |
| 67.5° | 197.2 | 222.1 | 276.0 | 315.4 | 331.0 |
| 70°   | 165.0 | 196.1 | 252.1 | 291.6 | 307.1 |
| 72.5° | 134.9 | 169.1 | 227.2 | 265.6 | 280.2 |
| 75°   | 105.8 | 144.2 | 201.3 | 235.5 | 242.8 |
| 77.5° | 78.9  | 119.3 | 174.3 | 188.9 | 183.7 |
| 80°   | 56.0  | 95.5  | 135.9 | 128.7 | 131.8 |
| 82.5° | 36.3  | 72.6  | 84.0  | 95.5  | 98.6  |
| 85°   | 20.8  | 42.5  | 51.9  | 56.0  | 58.1  |
| 87.5° | 9.3   | 15.6  | 20.8  | 20.8  | 19.7  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)