

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: P263735

Luminaire Tested: **24CZ-LD5-30SE-RDP-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263735  
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-L82765-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2104.0 lumens  
Efficiency: N/A  
Efficacy: 95.5 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

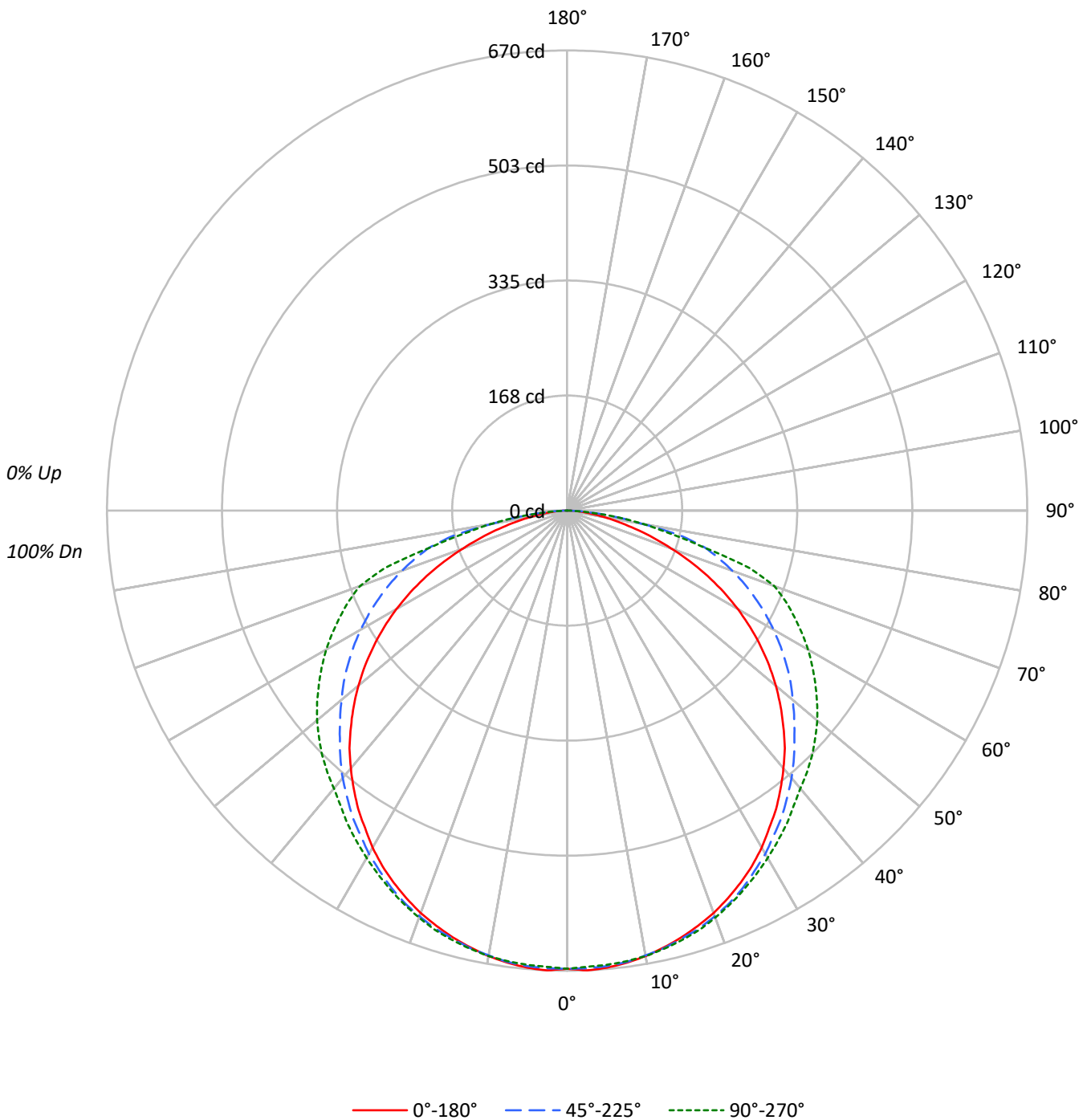
Input Watts (W): 22.041  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 897 | 897  | 897  |
| 5°  | 902 | 899  | 897  |
| 10° | 900 | 899  | 900  |
| 15° | 896 | 899  | 902  |
| 20° | 893 | 900  | 903  |
| 25° | 887 | 900  | 904  |
| 30° | 880 | 896  | 907  |
| 35° | 871 | 895  | 915  |
| 40° | 860 | 893  | 928  |
| 45° | 847 | 891  | 960  |
| 50° | 830 | 898  | 995  |
| 55° | 806 | 913  | 1035 |
| 60° | 772 | 934  | 1090 |
| 65° | 719 | 963  | 1161 |
| 70° | 636 | 1006 | 1263 |
| 75° | 533 | 1077 | 1061 |
| 80° | 425 | 851  | 883  |
| 85° | 335 | 576  | 528  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 63.3   | 3.0       |
| 10°-20°   | 182.1  | 8.7       |
| 20°-30°   | 278.1  | 13.2      |
| 30°-40°   | 340.0  | 16.2      |
| 40°-50°   | 363.9  | 17.3      |
| 50°-60°   | 349.1  | 16.6      |
| 60°-70°   | 294.7  | 14.0      |
| 70°-80°   | 188.4  | 9.0       |
| 80°-90°   | 44.5   | 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°    | 523.4  | 24.9      |
| 0°-40°    | 863.4  | 41.0      |
| 0°-60°    | 1576.4 | 74.9      |
| 0°-90°    | 2104.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2104.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 667 | 667   | 667 | 667   | 667 |      |
| 5°  | 668 | 664   | 666 | 665   | 664 | 63   |
| 15° | 643 | 641   | 645 | 647   | 647 | 182  |
| 25° | 598 | 597   | 606 | 608   | 609 | 275  |
| 35° | 530 | 534   | 545 | 552   | 557 | 332  |
| 45° | 445 | 453   | 468 | 490   | 504 | 343  |
| 55° | 344 | 355   | 389 | 425   | 441 | 307  |
| 65° | 226 | 248   | 302 | 345   | 365 | 223  |
| 75° | 102 | 146   | 207 | 211   | 204 | 110  |
| 85° | 22  | 36    | 37  | 36    | 34  | 26   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 667.0 | 667.0 | 667.0 | 667.0 | 667.0 |
| 2.5°  | 670.1 | 665.9 | 667.0 | 667.0 | 664.9 |
| 5°    | 668.0 | 663.9 | 665.9 | 664.9 | 663.9 |
| 7.5°  | 663.9 | 660.8 | 662.8 | 662.8 | 661.8 |
| 10°   | 658.7 | 655.6 | 657.7 | 658.7 | 658.7 |
| 12.5° | 651.5 | 649.4 | 652.5 | 652.5 | 653.5 |
| 15°   | 643.2 | 641.1 | 645.2 | 647.3 | 647.3 |
| 17.5° | 633.8 | 632.8 | 638.0 | 639.0 | 640.1 |
| 20°   | 623.5 | 622.5 | 628.7 | 628.7 | 630.7 |
| 22.5° | 611.1 | 610.0 | 618.3 | 618.3 | 620.4 |
| 25°   | 597.6 | 596.6 | 605.9 | 608.0 | 609.0 |
| 27.5° | 583.1 | 582.1 | 591.4 | 594.5 | 596.6 |
| 30°   | 566.5 | 566.5 | 576.9 | 581.0 | 584.1 |
| 32.5° | 547.9 | 551.0 | 560.3 | 566.5 | 570.7 |
| 35°   | 530.3 | 534.4 | 544.8 | 552.0 | 557.2 |
| 37.5° | 510.6 | 514.7 | 526.1 | 535.5 | 541.7 |
| 40°   | 489.9 | 495.1 | 508.5 | 518.9 | 528.2 |
| 42.5° | 469.2 | 474.3 | 488.8 | 504.4 | 516.8 |
| 45°   | 445.3 | 452.6 | 468.1 | 489.9 | 504.4 |
| 47.5° | 421.5 | 428.8 | 448.5 | 475.4 | 489.9 |
| 50°   | 396.7 | 405.0 | 428.8 | 459.8 | 475.4 |
| 52.5° | 370.8 | 380.1 | 410.1 | 443.3 | 458.8 |
| 55°   | 343.8 | 355.2 | 389.4 | 424.6 | 441.2 |
| 57.5° | 315.9 | 328.3 | 368.7 | 406.0 | 423.6 |
| 60°   | 286.9 | 302.4 | 347.0 | 386.3 | 405.0 |
| 62.5° | 256.9 | 275.5 | 325.2 | 365.6 | 385.3 |
| 65°   | 225.8 | 247.5 | 302.4 | 344.9 | 364.6 |
| 67.5° | 193.7 | 222.7 | 279.6 | 324.2 | 343.8 |
| 70°   | 161.6 | 195.7 | 255.8 | 301.4 | 321.1 |
| 72.5° | 131.5 | 170.9 | 232.0 | 274.5 | 278.6 |
| 75°   | 102.5 | 146.0 | 207.1 | 211.3 | 204.0 |
| 77.5° | 76.6  | 121.2 | 170.9 | 152.2 | 151.2 |
| 80°   | 54.9  | 97.4  | 109.8 | 112.9 | 113.9 |
| 82.5° | 36.2  | 73.5  | 71.5  | 73.5  | 72.5  |
| 85°   | 21.7  | 36.2  | 37.3  | 36.2  | 34.2  |
| 87.5° | 10.4  | 13.5  | 10.4  | 9.3   | 8.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)