

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: P276978

Luminaire Tested: **24CZ2-30-RDP-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276978  
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-L82765-W2A1-U-5500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2006.7 lumens  
Efficiency: N/A  
Efficacy: 89.5 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

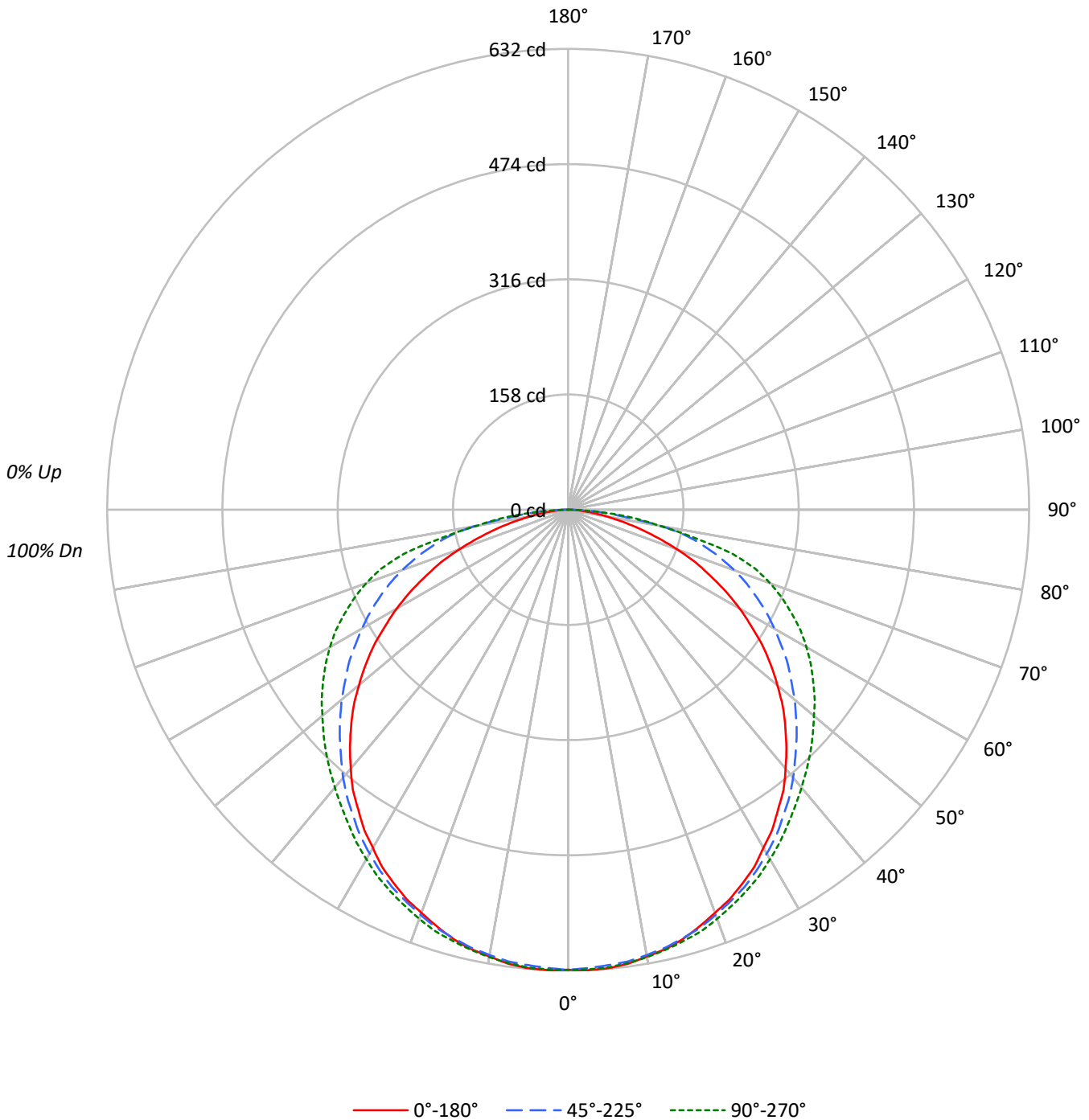
Input Watts (W): 22.413  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 849 | 849  | 849  |
| 5°  | 852 | 847  | 851  |
| 10° | 850 | 847  | 851  |
| 15° | 849 | 847  | 853  |
| 20° | 842 | 847  | 855  |
| 25° | 839 | 848  | 857  |
| 30° | 832 | 846  | 860  |
| 35° | 824 | 844  | 863  |
| 40° | 815 | 843  | 874  |
| 45° | 801 | 843  | 894  |
| 50° | 783 | 848  | 921  |
| 55° | 764 | 862  | 962  |
| 60° | 731 | 879  | 1015 |
| 65° | 684 | 910  | 1077 |
| 70° | 623 | 952  | 1159 |
| 75° | 528 | 1004 | 1211 |
| 80° | 416 | 1010 | 979  |
| 85° | 307 | 769  | 860  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.9   | 3.0       |
| 10°-20°   | 172.3  | 8.6       |
| 20°-30°   | 263.5  | 13.1      |
| 30°-40°   | 322.1  | 16.0      |
| 40°-50°   | 343.2  | 17.1      |
| 50°-60°   | 328.2  | 16.4      |
| 60°-70°   | 278.0  | 13.9      |
| 70°-80°   | 186.9  | 9.3       |
| 80°-90°   | 52.7   | 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°    | 495.6  | 24.7      |
| 0°-40°    | 817.7  | 40.7      |
| 0°-60°    | 1489.1 | 74.2      |
| 0°-90°    | 2006.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2006.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 631 | 631   | 631 | 631   | 631 |      |
| 5°  | 631 | 630   | 627 | 630   | 630 | 60   |
| 15° | 609 | 609   | 608 | 613   | 612 | 172  |
| 25° | 565 | 567   | 571 | 576   | 577 | 261  |
| 35° | 502 | 506   | 514 | 524   | 526 | 314  |
| 45° | 421 | 428   | 443 | 462   | 470 | 325  |
| 55° | 326 | 337   | 367 | 396   | 410 | 290  |
| 65° | 215 | 237   | 286 | 324   | 338 | 213  |
| 75° | 102 | 138   | 193 | 226   | 233 | 109  |
| 85° | 20  | 41    | 50  | 54    | 56  | 25   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 631.1 | 631.1 | 631.1 | 631.1 | 631.1 |
| 2.5°  | 632.1 | 632.1 | 629.1 | 631.1 | 631.1 |
| 5°    | 631.1 | 630.1 | 627.1 | 630.1 | 630.1 |
| 7.5°  | 628.1 | 627.1 | 625.1 | 628.1 | 627.1 |
| 10°   | 622.1 | 622.1 | 620.1 | 623.1 | 623.1 |
| 12.5° | 617.1 | 616.1 | 615.1 | 619.1 | 618.1 |
| 15°   | 609.2 | 609.2 | 608.2 | 613.1 | 612.1 |
| 17.5° | 599.2 | 600.2 | 601.2 | 605.2 | 606.2 |
| 20°   | 588.3 | 590.2 | 591.2 | 597.2 | 597.2 |
| 22.5° | 578.3 | 579.3 | 581.3 | 587.3 | 587.3 |
| 25°   | 565.4 | 567.4 | 571.3 | 576.3 | 577.3 |
| 27.5° | 552.4 | 553.4 | 558.4 | 565.4 | 566.4 |
| 30°   | 535.5 | 538.5 | 544.5 | 552.4 | 553.4 |
| 32.5° | 520.6 | 523.6 | 530.5 | 538.5 | 540.5 |
| 35°   | 501.7 | 505.6 | 513.6 | 523.6 | 525.5 |
| 37.5° | 484.7 | 487.7 | 497.7 | 508.6 | 511.6 |
| 40°   | 463.8 | 469.8 | 479.8 | 492.7 | 497.7 |
| 42.5° | 442.9 | 448.9 | 460.8 | 477.8 | 483.7 |
| 45°   | 421.0 | 428.0 | 442.9 | 461.8 | 469.8 |
| 47.5° | 399.1 | 407.1 | 424.0 | 445.9 | 454.9 |
| 50°   | 374.3 | 384.2 | 405.1 | 430.0 | 439.9 |
| 52.5° | 350.4 | 362.3 | 385.2 | 413.1 | 426.0 |
| 55°   | 325.5 | 337.4 | 367.3 | 396.2 | 410.1 |
| 57.5° | 297.6 | 313.5 | 346.4 | 379.2 | 394.2 |
| 60°   | 271.7 | 286.7 | 326.5 | 362.3 | 377.2 |
| 62.5° | 243.9 | 263.8 | 306.6 | 344.4 | 359.3 |
| 65°   | 215.0 | 236.9 | 285.7 | 323.5 | 338.4 |
| 67.5° | 189.1 | 213.0 | 264.8 | 302.6 | 317.5 |
| 70°   | 158.3 | 188.1 | 241.9 | 279.7 | 294.6 |
| 72.5° | 129.4 | 162.2 | 218.0 | 254.8 | 268.7 |
| 75°   | 101.5 | 138.4 | 193.1 | 225.9 | 232.9 |
| 77.5° | 75.6  | 114.5 | 167.2 | 181.2 | 176.2 |
| 80°   | 53.7  | 91.6  | 130.4 | 123.4 | 126.4 |
| 82.5° | 34.8  | 69.7  | 80.6  | 91.6  | 94.6  |
| 85°   | 19.9  | 40.8  | 49.8  | 53.7  | 55.7  |
| 87.5° | 9.0   | 14.9  | 19.9  | 19.9  | 18.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)