

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: P263314

Luminaire Tested: **24CZ-LD5-30SE-SQP-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263314  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-30SE-SQP-UNV-L82765-W2A1-U-3500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1961.0 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

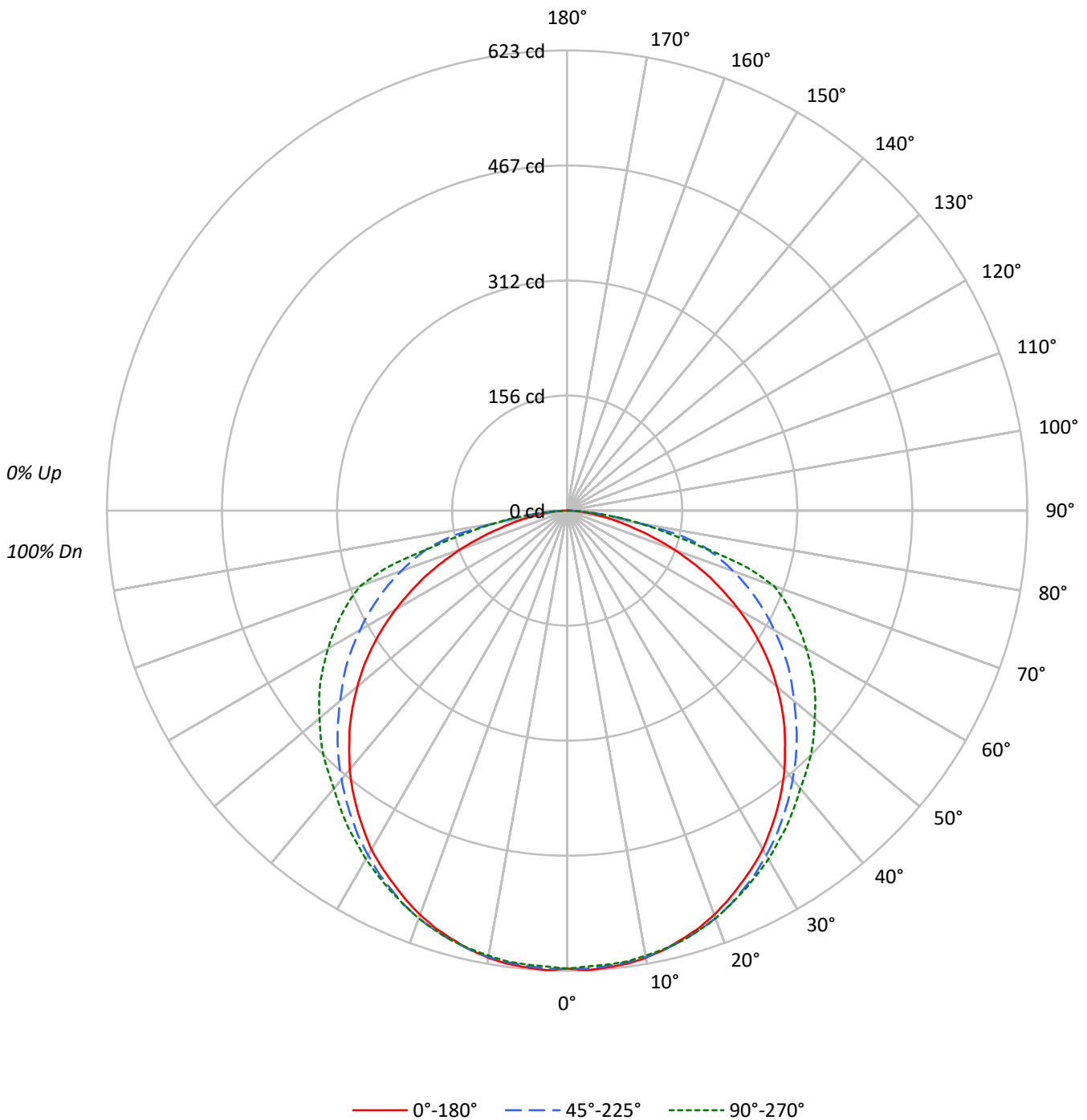
Input Watts (W): 21.855  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 63  | 58  | 56  |
| 4   | 81  | 68  | 59  | 52  | 79  | 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  | 62  | 49  | 40  | 34  | 47  | 39  | 34  |  | 45  | 39  | 33  |  | 44  | 38  | 33  | 31  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  |  | 42  | 35  | 30  |  | 40  | 34  | 29  | 28  |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 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°  | 834 | 834  | 834  |
| 5°  | 839 | 836  | 833  |
| 10° | 840 | 839  | 836  |
| 15° | 837 | 840  | 840  |
| 20° | 834 | 841  | 841  |
| 25° | 827 | 839  | 842  |
| 30° | 823 | 837  | 847  |
| 35° | 814 | 835  | 853  |
| 40° | 804 | 834  | 863  |
| 45° | 792 | 836  | 889  |
| 50° | 776 | 840  | 916  |
| 55° | 756 | 856  | 958  |
| 60° | 722 | 872  | 1006 |
| 65° | 677 | 900  | 1077 |
| 70° | 606 | 940  | 1172 |
| 75° | 500 | 1006 | 969  |
| 80° | 408 | 777  | 785  |
| 85° | 329 | 516  | 485  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 58.9   | 3.0       |
| 10°-20°   | 169.9  | 8.7       |
| 20°-30°   | 259.7  | 13.2      |
| 30°-40°   | 317.6  | 16.2      |
| 40°-50°   | 339.8  | 17.3      |
| 50°-60°   | 325.4  | 16.6      |
| 60°-70°   | 275.2  | 14.0      |
| 70°-80°   | 174.5  | 8.9       |
| 80°-90°   | 40.1   | 2.0       |
| 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°    | 488.4  | 24.9      |
| 0°-40°    | 806.0  | 41.1      |
| 0°-60°    | 1471.1 | 75.0      |
| 0°-90°    | 1961.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1961.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 620 | 620   | 620 | 620   | 620 |      |
| 5°  | 621 | 618   | 619 | 618   | 617 | 59   |
| 15° | 601 | 600   | 603 | 603   | 603 | 170  |
| 25° | 557 | 557   | 565 | 567   | 567 | 257  |
| 35° | 495 | 498   | 508 | 516   | 520 | 310  |
| 45° | 416 | 423   | 440 | 458   | 467 | 321  |
| 55° | 322 | 332   | 365 | 395   | 408 | 287  |
| 65° | 213 | 233   | 283 | 321   | 338 | 210  |
| 75° | 96  | 136   | 194 | 192   | 186 | 105  |
| 85° | 21  | 32    | 33  | 30    | 31  | 25   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 619.9 | 619.9 | 619.9 | 619.9 | 619.9 |
| 2.5°  | 622.9 | 619.9 | 620.9 | 619.9 | 617.9 |
| 5°    | 620.9 | 617.9 | 618.9 | 617.9 | 616.9 |
| 7.5°  | 618.9 | 615.9 | 616.9 | 615.9 | 615.9 |
| 10°   | 614.8 | 611.8 | 613.8 | 612.8 | 611.8 |
| 12.5° | 608.8 | 606.7 | 608.8 | 607.8 | 607.8 |
| 15°   | 600.7 | 599.7 | 602.7 | 602.7 | 602.7 |
| 17.5° | 592.6 | 591.5 | 595.6 | 595.6 | 595.6 |
| 20°   | 582.4 | 581.4 | 587.5 | 587.5 | 587.5 |
| 22.5° | 570.3 | 569.3 | 577.4 | 577.4 | 577.4 |
| 25°   | 557.1 | 557.1 | 565.2 | 567.2 | 567.2 |
| 27.5° | 543.9 | 543.9 | 553.1 | 556.1 | 556.1 |
| 30°   | 529.8 | 529.8 | 538.9 | 542.9 | 545.0 |
| 32.5° | 512.5 | 514.6 | 524.7 | 529.8 | 531.8 |
| 35°   | 495.3 | 498.4 | 508.5 | 515.6 | 519.6 |
| 37.5° | 477.1 | 480.1 | 492.3 | 500.4 | 505.4 |
| 40°   | 457.8 | 461.9 | 475.1 | 485.2 | 491.3 |
| 42.5° | 436.6 | 442.6 | 457.8 | 471.0 | 479.1 |
| 45°   | 416.3 | 423.4 | 439.6 | 457.8 | 467.0 |
| 47.5° | 394.0 | 402.1 | 420.4 | 443.7 | 452.8 |
| 50°   | 370.7 | 378.8 | 401.1 | 427.5 | 437.6 |
| 52.5° | 347.4 | 356.5 | 382.9 | 411.2 | 423.4 |
| 55°   | 322.1 | 332.2 | 364.7 | 395.0 | 408.2 |
| 57.5° | 295.8 | 307.9 | 344.4 | 376.8 | 391.0 |
| 60°   | 268.4 | 283.6 | 324.1 | 358.6 | 373.8 |
| 62.5° | 240.1 | 258.3 | 303.9 | 340.3 | 356.5 |
| 65°   | 212.7 | 233.0 | 282.6 | 321.1 | 338.3 |
| 67.5° | 183.3 | 208.7 | 261.3 | 302.9 | 319.1 |
| 70°   | 154.0 | 183.3 | 239.0 | 281.6 | 297.8 |
| 72.5° | 124.6 | 160.0 | 216.8 | 255.3 | 255.3 |
| 75°   | 96.2  | 135.7 | 193.5 | 192.5 | 186.4 |
| 77.5° | 72.9  | 113.4 | 159.0 | 135.7 | 136.7 |
| 80°   | 52.7  | 91.2  | 100.3 | 100.3 | 101.3 |
| 82.5° | 35.5  | 69.9  | 64.8  | 63.8  | 65.8  |
| 85°   | 21.3  | 32.4  | 33.4  | 30.4  | 31.4  |
| 87.5° | 10.1  | 11.1  | 9.1   | 6.1   | 6.1   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)