

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: P263754

Luminaire Tested: **24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263754  
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-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2858.0 lumens  
Efficiency: N/A  
Efficacy: 92.3 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

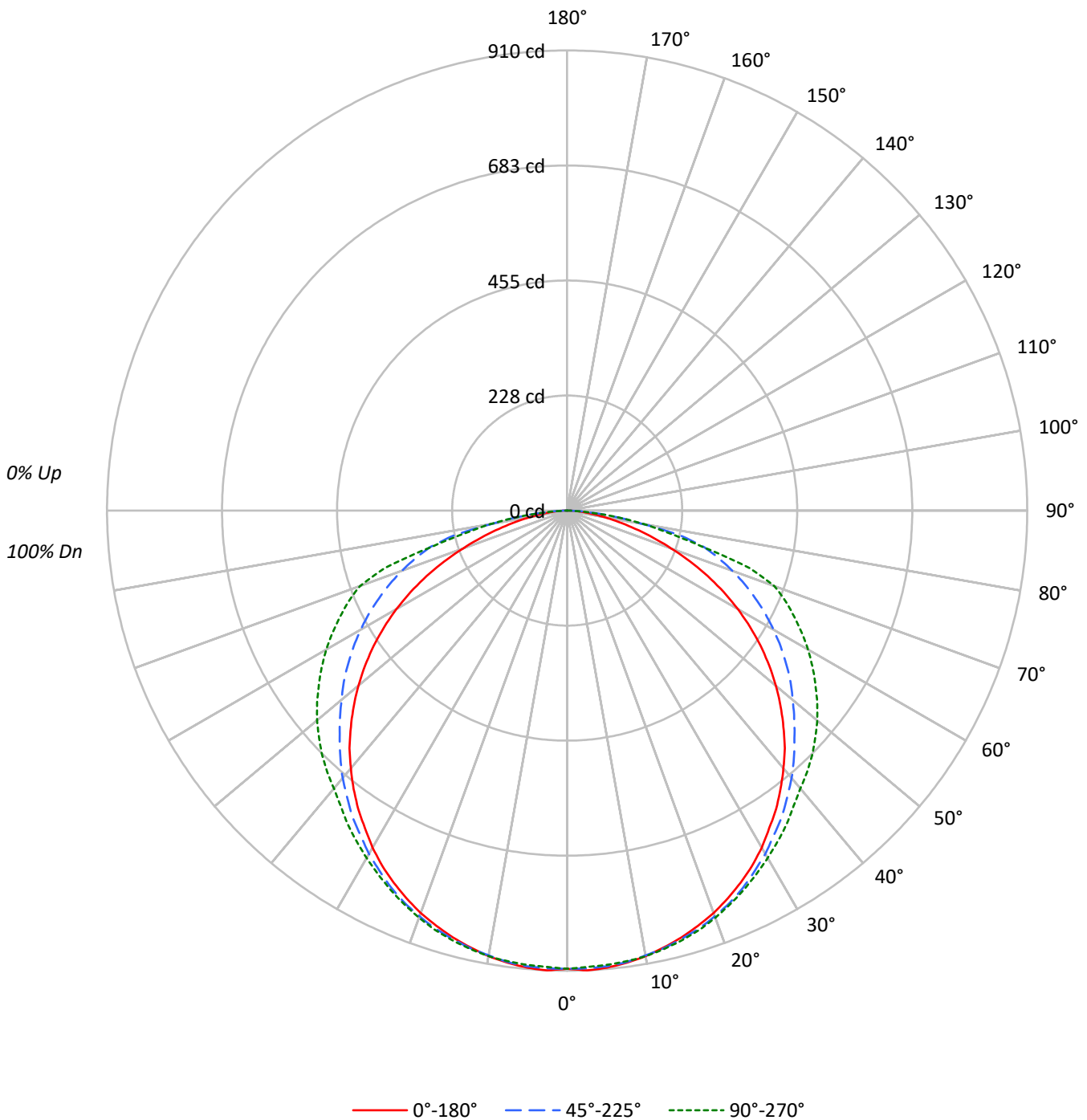
Input Watts (W): 30.969  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P263754

CATALOG NUMBER: 24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P263754

CATALOG NUMBER: 24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K

**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°  | 1219 | 1219 | 1219 |
| 5°  | 1226 | 1222 | 1218 |
| 10° | 1223 | 1220 | 1223 |
| 15° | 1217 | 1221 | 1225 |
| 20° | 1213 | 1223 | 1227 |
| 25° | 1205 | 1222 | 1228 |
| 30° | 1196 | 1217 | 1233 |
| 35° | 1183 | 1215 | 1243 |
| 40° | 1169 | 1213 | 1260 |
| 45° | 1151 | 1210 | 1304 |
| 50° | 1128 | 1219 | 1352 |
| 55° | 1096 | 1241 | 1406 |
| 60° | 1049 | 1268 | 1480 |
| 65° | 976  | 1308 | 1577 |
| 70° | 864  | 1367 | 1716 |
| 75° | 724  | 1463 | 1441 |
| 80° | 578  | 1155 | 1199 |
| 85° | 455  | 781  | 716  |



TEST NUMBER: P263754

CATALOG NUMBER: 24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 85.9   | 3.0       |
| 10°-20°   | 247.3  | 8.7       |
| 20°-30°   | 377.7  | 13.2      |
| 30°-40°   | 461.8  | 16.2      |
| 40°-50°   | 494.3  | 17.3      |
| 50°-60°   | 474.1  | 16.6      |
| 60°-70°   | 400.3  | 14.0      |
| 70°-80°   | 255.9  | 9.0       |
| 80°-90°   | 60.5   | 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°    | 711.0  | 24.9      |
| 0°-40°    | 1172.8 | 41.0      |
| 0°-60°    | 2141.3 | 74.9      |
| 0°-90°    | 2858.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2858.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 906 | 906   | 906 | 906   | 906 |      |
| 5°  | 907 | 902   | 905 | 903   | 902 | 86   |
| 15° | 874 | 871   | 876 | 879   | 879 | 247  |
| 25° | 812 | 810   | 823 | 826   | 827 | 374  |
| 35° | 720 | 726   | 740 | 750   | 757 | 450  |
| 45° | 605 | 615   | 636 | 665   | 685 | 467  |
| 55° | 467 | 482   | 529 | 577   | 599 | 417  |
| 65° | 307 | 336   | 411 | 468   | 495 | 302  |
| 75° | 139 | 198   | 281 | 287   | 277 | 150  |
| 85° | 30  | 49    | 51  | 49    | 46  | 35   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P263754

CATALOG NUMBER: 24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 906.0 | 906.0 | 906.0 | 906.0 | 906.0 |
| 2.5°  | 910.2 | 904.6 | 906.0 | 906.0 | 903.2 |
| 5°    | 907.4 | 901.8 | 904.6 | 903.2 | 901.8 |
| 7.5°  | 901.8 | 897.6 | 900.4 | 900.4 | 899.0 |
| 10°   | 894.8 | 890.5 | 893.3 | 894.8 | 894.8 |
| 12.5° | 884.9 | 882.1 | 886.3 | 886.3 | 887.7 |
| 15°   | 873.7 | 870.8 | 876.5 | 879.3 | 879.3 |
| 17.5° | 861.0 | 859.6 | 866.6 | 868.0 | 869.4 |
| 20°   | 846.9 | 845.5 | 854.0 | 854.0 | 856.8 |
| 22.5° | 830.0 | 828.6 | 839.9 | 839.9 | 842.7 |
| 25°   | 811.8 | 810.3 | 823.0 | 825.8 | 827.2 |
| 27.5° | 792.1 | 790.6 | 803.3 | 807.5 | 810.3 |
| 30°   | 769.5 | 769.5 | 783.6 | 789.2 | 793.5 |
| 32.5° | 744.2 | 748.4 | 761.1 | 769.5 | 775.2 |
| 35°   | 720.3 | 725.9 | 740.0 | 749.8 | 756.9 |
| 37.5° | 693.6 | 699.2 | 714.7 | 727.3 | 735.8 |
| 40°   | 665.4 | 672.5 | 690.8 | 704.8 | 717.5 |
| 42.5° | 637.3 | 644.3 | 664.0 | 685.1 | 702.0 |
| 45°   | 604.9 | 614.8 | 635.9 | 665.4 | 685.1 |
| 47.5° | 572.6 | 582.4 | 609.2 | 645.7 | 665.4 |
| 50°   | 538.8 | 550.1 | 582.4 | 624.6 | 645.7 |
| 52.5° | 503.7 | 516.3 | 557.1 | 602.1 | 623.2 |
| 55°   | 467.1 | 482.5 | 529.0 | 576.8 | 599.3 |
| 57.5° | 429.1 | 446.0 | 500.8 | 551.5 | 575.4 |
| 60°   | 389.7 | 410.8 | 471.3 | 524.8 | 550.1 |
| 62.5° | 348.9 | 374.2 | 441.8 | 496.6 | 523.3 |
| 65°   | 306.7 | 336.2 | 410.8 | 468.5 | 495.2 |
| 67.5° | 263.1 | 302.5 | 379.8 | 440.3 | 467.1 |
| 70°   | 219.5 | 265.9 | 347.5 | 409.4 | 436.1 |
| 72.5° | 178.7 | 232.1 | 315.1 | 372.8 | 378.4 |
| 75°   | 139.3 | 198.4 | 281.4 | 287.0 | 277.1 |
| 77.5° | 104.1 | 164.6 | 232.1 | 206.8 | 205.4 |
| 80°   | 74.6  | 132.2 | 149.1 | 153.3 | 154.8 |
| 82.5° | 49.2  | 99.9  | 97.1  | 99.9  | 98.5  |
| 85°   | 29.5  | 49.2  | 50.6  | 49.2  | 46.4  |
| 87.5° | 14.1  | 18.3  | 14.1  | 12.7  | 11.3  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)