

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: P263347

Luminaire Tested: **24CZ-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263347  
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-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 6500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3136.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 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

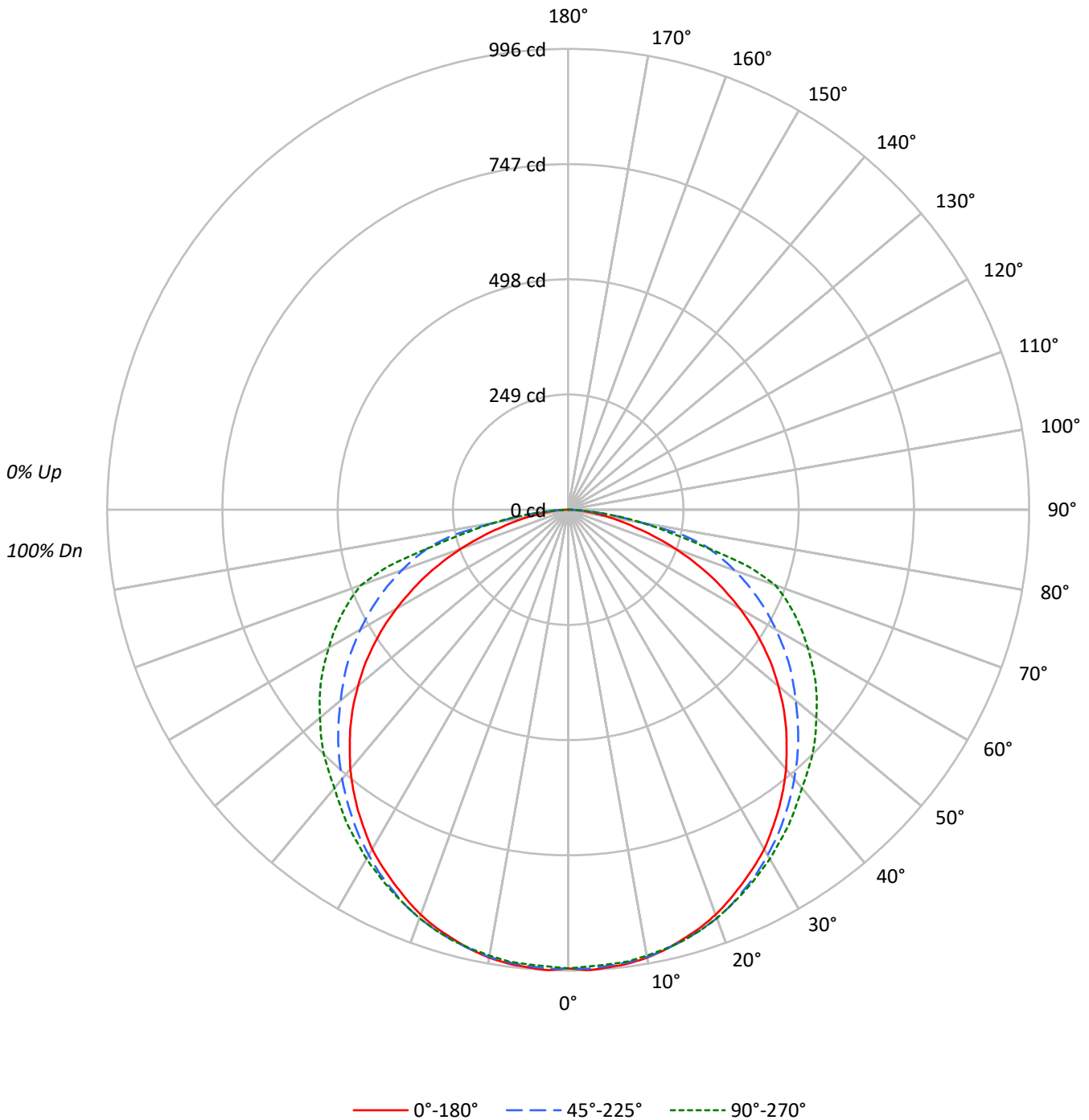
Input Watts (W): 36.549  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P263347

CATALOG NUMBER: 24CZ-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K

### Luminous Intensity Polar Plot





TEST NUMBER: P263347

CATALOG NUMBER: 24CZ-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K

**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°  | 1334 | 1334 | 1334 |
| 5°  | 1341 | 1337 | 1332 |
| 10° | 1343 | 1341 | 1337 |
| 15° | 1338 | 1343 | 1343 |
| 20° | 1334 | 1345 | 1345 |
| 25° | 1323 | 1342 | 1347 |
| 30° | 1316 | 1339 | 1354 |
| 35° | 1301 | 1336 | 1365 |
| 40° | 1286 | 1334 | 1380 |
| 45° | 1267 | 1338 | 1421 |
| 50° | 1241 | 1343 | 1465 |
| 55° | 1208 | 1368 | 1531 |
| 60° | 1155 | 1395 | 1608 |
| 65° | 1083 | 1439 | 1722 |
| 70° | 969  | 1504 | 1873 |
| 75° | 800  | 1608 | 1550 |
| 80° | 652  | 1243 | 1255 |
| 85° | 525  | 826  | 775  |



TEST NUMBER: P263347

CATALOG NUMBER: 24CZ-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 94.2   | 3.0       |
| 10°-20°   | 271.7  | 8.7       |
| 20°-30°   | 415.2  | 13.2      |
| 30°-40°   | 507.8  | 16.2      |
| 40°-50°   | 543.4  | 17.3      |
| 50°-60°   | 520.3  | 16.6      |
| 60°-70°   | 440.2  | 14.0      |
| 70°-80°   | 279.0  | 8.9       |
| 80°-90°   | 64.2   | 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°    | 781.1  | 24.9      |
| 0°-40°    | 1288.9 | 41.1      |
| 0°-60°    | 2352.6 | 75.0      |
| 0°-90°    | 3136.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3136.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 991 | 991   | 991 | 991   | 991 |      |
| 5°  | 993 | 988   | 990 | 988   | 986 | 94   |
| 15° | 961 | 959   | 964 | 964   | 964 | 271  |
| 25° | 891 | 891   | 904 | 907   | 907 | 411  |
| 35° | 792 | 797   | 813 | 824   | 831 | 496  |
| 45° | 666 | 677   | 703 | 732   | 747 | 513  |
| 55° | 515 | 531   | 583 | 632   | 653 | 459  |
| 65° | 340 | 373   | 452 | 514   | 541 | 335  |
| 75° | 154 | 217   | 309 | 308   | 298 | 167  |
| 85° | 34  | 52    | 54  | 49    | 50  | 41   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P263347

CATALOG NUMBER: 24CZ-LD5-45SE-SQP-UNV-L82765-W2A1-U-6500K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 991.3 | 991.3 | 991.3 | 991.3 | 991.3 |
| 2.5°  | 996.2 | 991.3 | 993.0 | 991.3 | 988.1 |
| 5°    | 993.0 | 988.1 | 989.7 | 988.1 | 986.5 |
| 7.5°  | 989.7 | 984.9 | 986.5 | 984.9 | 984.9 |
| 10°   | 983.2 | 978.4 | 981.6 | 980.0 | 978.4 |
| 12.5° | 973.5 | 970.3 | 973.5 | 971.9 | 971.9 |
| 15°   | 960.6 | 959.0 | 963.8 | 963.8 | 963.8 |
| 17.5° | 947.6 | 946.0 | 952.5 | 952.5 | 952.5 |
| 20°   | 931.4 | 929.8 | 939.5 | 939.5 | 939.5 |
| 22.5° | 912.0 | 910.4 | 923.3 | 923.3 | 923.3 |
| 25°   | 890.9 | 890.9 | 903.9 | 907.1 | 907.1 |
| 27.5° | 869.9 | 869.9 | 884.4 | 889.3 | 889.3 |
| 30°   | 847.2 | 847.2 | 861.8 | 868.2 | 871.5 |
| 32.5° | 819.6 | 822.9 | 839.1 | 847.2 | 850.4 |
| 35°   | 792.1 | 797.0 | 813.2 | 824.5 | 831.0 |
| 37.5° | 762.9 | 767.8 | 787.2 | 800.2 | 808.3 |
| 40°   | 732.2 | 738.7 | 759.7 | 775.9 | 785.6 |
| 42.5° | 698.2 | 707.9 | 732.2 | 753.2 | 766.2 |
| 45°   | 665.8 | 677.1 | 703.0 | 732.2 | 746.8 |
| 47.5° | 630.1 | 643.1 | 672.2 | 709.5 | 724.1 |
| 50°   | 592.9 | 605.8 | 641.5 | 683.6 | 699.8 |
| 52.5° | 555.6 | 570.2 | 612.3 | 657.7 | 677.1 |
| 55°   | 515.1 | 531.3 | 583.1 | 631.7 | 652.8 |
| 57.5° | 473.0 | 492.4 | 550.7 | 602.6 | 625.3 |
| 60°   | 429.3 | 453.6 | 518.4 | 573.4 | 597.7 |
| 62.5° | 383.9 | 413.1 | 486.0 | 544.3 | 570.2 |
| 65°   | 340.2 | 372.6 | 451.9 | 513.5 | 541.0 |
| 67.5° | 293.2 | 333.7 | 417.9 | 484.3 | 510.3 |
| 70°   | 246.2 | 293.2 | 382.3 | 450.3 | 476.2 |
| 72.5° | 199.2 | 255.9 | 346.6 | 408.2 | 408.2 |
| 75°   | 153.9 | 217.1 | 309.4 | 307.8 | 298.1 |
| 77.5° | 116.6 | 181.4 | 254.3 | 217.1 | 218.7 |
| 80°   | 84.2  | 145.8 | 160.4 | 160.4 | 162.0 |
| 82.5° | 56.7  | 111.8 | 103.7 | 102.1 | 105.3 |
| 85°   | 34.0  | 51.8  | 53.5  | 48.6  | 50.2  |
| 87.5° | 16.2  | 17.8  | 14.6  | 9.7   | 9.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)