

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: P263288

Luminaire Tested: **24CZ-LD5-65-SQP-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263288  
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-LD5-65-SQP-UNV-L82765-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH SQP LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4319.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 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

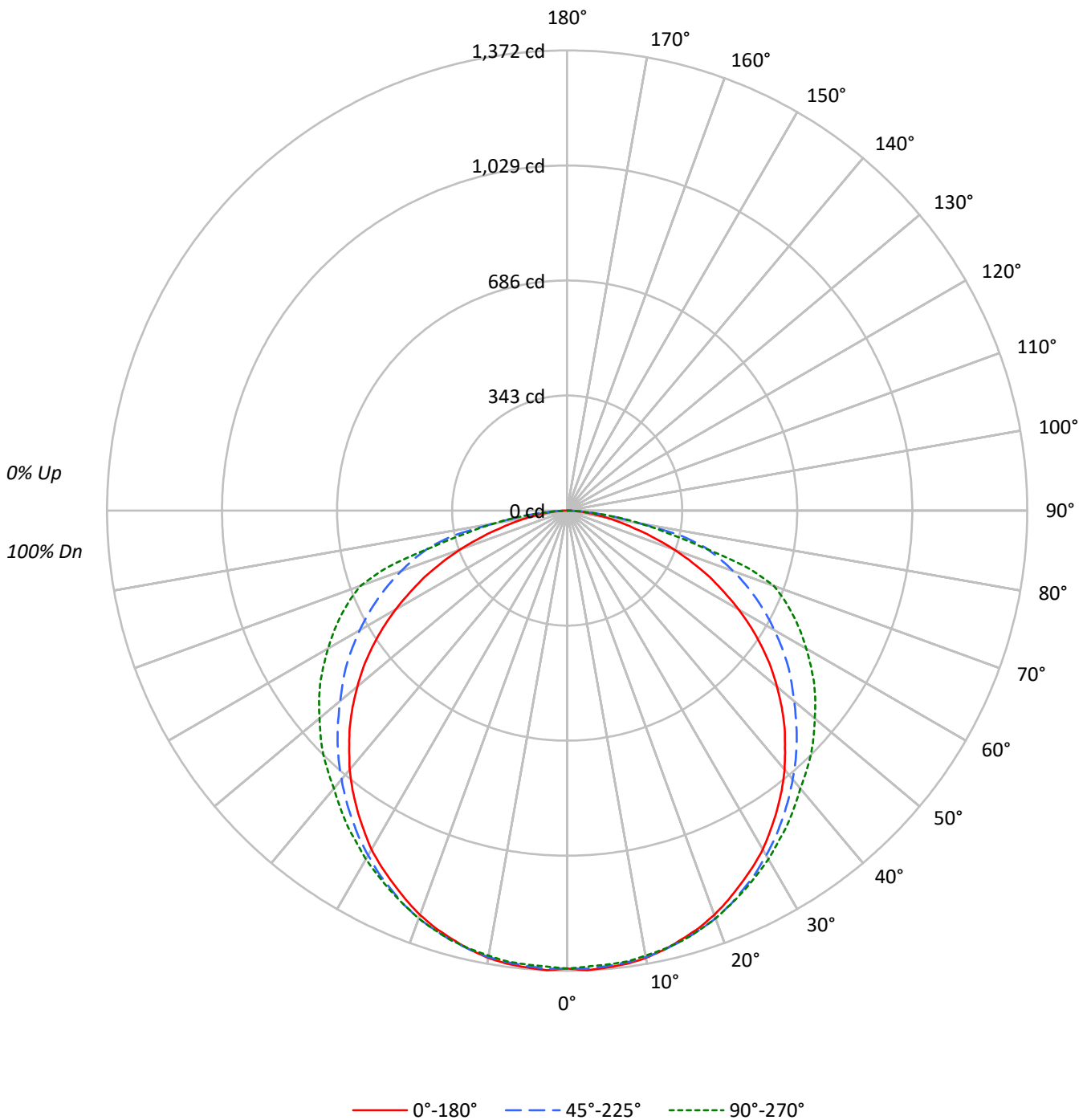
Input Watts (W): 49.476  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P263288

CATALOG NUMBER: 24CZ-LD5-65-SQP-UNV-L82765-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P263288

CATALOG NUMBER: 24CZ-LD5-65-SQP-UNV-L82765-W2A1-U-4000K

**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°  | 1837 | 1837 | 1837 |
| 5°  | 1847 | 1841 | 1835 |
| 10° | 1850 | 1847 | 1841 |
| 15° | 1843 | 1849 | 1849 |
| 20° | 1837 | 1853 | 1853 |
| 25° | 1822 | 1848 | 1855 |
| 30° | 1813 | 1844 | 1865 |
| 35° | 1792 | 1839 | 1880 |
| 40° | 1771 | 1838 | 1900 |
| 45° | 1745 | 1842 | 1957 |
| 50° | 1709 | 1849 | 2017 |
| 55° | 1664 | 1884 | 2109 |
| 60° | 1591 | 1921 | 2215 |
| 65° | 1492 | 1982 | 2372 |
| 70° | 1334 | 2071 | 2580 |
| 75° | 1102 | 2215 | 2134 |
| 80° | 899  | 1712 | 1729 |
| 85° | 722  | 1136 | 1068 |



TEST NUMBER: P263288

CATALOG NUMBER: 24CZ-LD5-65-SQP-UNV-L82765-W2A1-U-4000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 129.7  | 3.0       |
| 10°-20°   | 374.2  | 8.7       |
| 20°-30°   | 571.9  | 13.2      |
| 30°-40°   | 699.4  | 16.2      |
| 40°-50°   | 748.4  | 17.3      |
| 50°-60°   | 716.6  | 16.6      |
| 60°-70°   | 606.2  | 14.0      |
| 70°-80°   | 384.3  | 8.9       |
| 80°-90°   | 88.4   | 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°    | 1075.7 | 24.9      |
| 0°-40°    | 1775.1 | 41.1      |
| 0°-60°    | 3240.1 | 75.0      |
| 0°-90°    | 4319.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4319.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1365 | 1365  | 1365 | 1365  | 1365 |      |
| 5°  | 1368 | 1361  | 1363 | 1361  | 1359 | 130  |
| 15° | 1323 | 1321  | 1327 | 1327  | 1327 | 374  |
| 25° | 1227 | 1227  | 1245 | 1249  | 1249 | 566  |
| 35° | 1091 | 1098  | 1120 | 1136  | 1144 | 683  |
| 45° | 917  | 932   | 968  | 1008  | 1028 | 706  |
| 55° | 709  | 732   | 803  | 870   | 899  | 633  |
| 65° | 468  | 513   | 622  | 707   | 745  | 462  |
| 75° | 212  | 299   | 426  | 424   | 410  | 230  |
| 85° | 47   | 71    | 74   | 67    | 69   | 56   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P263288

CATALOG NUMBER: 24CZ-LD5-65-SQP-UNV-L82765-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1365.3 | 1365.3 | 1365.3 | 1365.3 | 1365.3 |
| 2.5°  | 1372.0 | 1365.3 | 1367.5 | 1365.3 | 1360.9 |
| 5°    | 1367.5 | 1360.9 | 1363.1 | 1360.9 | 1358.6 |
| 7.5°  | 1363.1 | 1356.4 | 1358.6 | 1356.4 | 1356.4 |
| 10°   | 1354.2 | 1347.5 | 1351.9 | 1349.7 | 1347.5 |
| 12.5° | 1340.8 | 1336.3 | 1340.8 | 1338.5 | 1338.5 |
| 15°   | 1322.9 | 1320.7 | 1327.4 | 1327.4 | 1327.4 |
| 17.5° | 1305.1 | 1302.9 | 1311.8 | 1311.8 | 1311.8 |
| 20°   | 1282.8 | 1280.5 | 1293.9 | 1293.9 | 1293.9 |
| 22.5° | 1256.0 | 1253.8 | 1271.6 | 1271.6 | 1271.6 |
| 25°   | 1227.0 | 1227.0 | 1244.8 | 1249.3 | 1249.3 |
| 27.5° | 1198.0 | 1198.0 | 1218.1 | 1224.8 | 1224.8 |
| 30°   | 1166.8 | 1166.8 | 1186.8 | 1195.8 | 1200.2 |
| 32.5° | 1128.8 | 1133.3 | 1155.6 | 1166.8 | 1171.2 |
| 35°   | 1090.9 | 1097.6 | 1119.9 | 1135.5 | 1144.5 |
| 37.5° | 1050.8 | 1057.5 | 1084.2 | 1102.1 | 1113.2 |
| 40°   | 1008.4 | 1017.3 | 1046.3 | 1068.6 | 1082.0 |
| 42.5° | 961.5  | 974.9  | 1008.4 | 1037.4 | 1055.2 |
| 45°   | 916.9  | 932.5  | 968.2  | 1008.4 | 1028.4 |
| 47.5° | 867.8  | 885.7  | 925.8  | 977.1  | 997.2  |
| 50°   | 816.5  | 834.4  | 883.4  | 941.4  | 963.8  |
| 52.5° | 765.2  | 785.3  | 843.3  | 905.7  | 932.5  |
| 55°   | 709.4  | 731.7  | 803.1  | 870.1  | 899.1  |
| 57.5° | 651.4  | 678.2  | 758.5  | 829.9  | 861.1  |
| 60°   | 591.2  | 624.7  | 713.9  | 789.7  | 823.2  |
| 62.5° | 528.7  | 568.9  | 669.3  | 749.6  | 785.3  |
| 65°   | 468.5  | 513.1  | 622.4  | 707.2  | 745.1  |
| 67.5° | 403.8  | 459.6  | 575.6  | 667.0  | 702.7  |
| 70°   | 339.1  | 403.8  | 526.5  | 620.2  | 655.9  |
| 72.5° | 274.4  | 352.5  | 477.4  | 562.2  | 562.2  |
| 75°   | 211.9  | 298.9  | 426.1  | 423.9  | 410.5  |
| 77.5° | 160.6  | 249.9  | 350.3  | 298.9  | 301.2  |
| 80°   | 116.0  | 200.8  | 220.9  | 220.9  | 223.1  |
| 82.5° | 78.1   | 153.9  | 142.8  | 140.5  | 145.0  |
| 85°   | 46.8   | 71.4   | 73.6   | 66.9   | 69.2   |
| 87.5° | 22.3   | 24.5   | 20.1   | 13.4   | 13.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)