

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: P263294

Luminaire Tested: **24CZ-LD5-70-SQP-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263294  
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-LD5-70-SQP-UNV-L82765-W2A1-U-2700K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4283.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 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

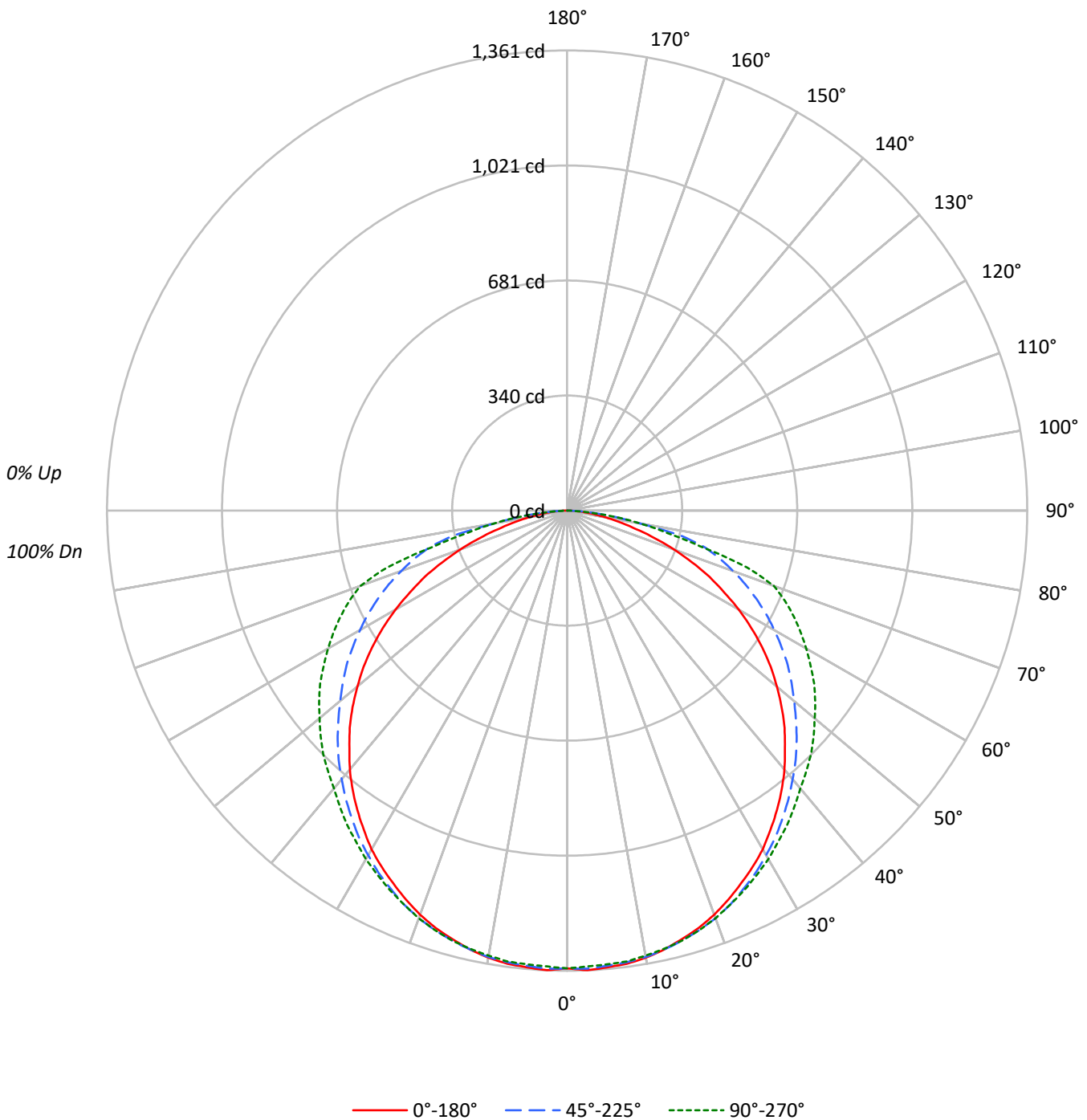
Input Watts (W): 53.661  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1822 | 1822 | 1822 |
| 5°  | 1832 | 1826 | 1820 |
| 10° | 1835 | 1832 | 1826 |
| 15° | 1827 | 1834 | 1834 |
| 20° | 1821 | 1837 | 1837 |
| 25° | 1806 | 1833 | 1839 |
| 30° | 1798 | 1829 | 1849 |
| 35° | 1777 | 1824 | 1864 |
| 40° | 1756 | 1822 | 1885 |
| 45° | 1730 | 1827 | 1941 |
| 50° | 1695 | 1834 | 2000 |
| 55° | 1650 | 1868 | 2092 |
| 60° | 1578 | 1905 | 2197 |
| 65° | 1479 | 1965 | 2352 |
| 70° | 1323 | 2054 | 2559 |
| 75° | 1093 | 2197 | 2116 |
| 80° | 891  | 1697 | 1714 |
| 85° | 718  | 1127 | 1059 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 128.6  | 3.0       |
| 10°-20°   | 371.1  | 8.7       |
| 20°-30°   | 567.1  | 13.2      |
| 30°-40°   | 693.6  | 16.2      |
| 40°-50°   | 742.1  | 17.3      |
| 50°-60°   | 710.6  | 16.6      |
| 60°-70°   | 601.1  | 14.0      |
| 70°-80°   | 381.1  | 8.9       |
| 80°-90°   | 87.7   | 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°    | 1066.7 | 24.9      |
| 0°-40°    | 1760.3 | 41.1      |
| 0°-60°    | 3213.1 | 75.0      |
| 0°-90°    | 4283.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4283.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1354 | 1354  | 1354 | 1354  | 1354 |      |
| 5°  | 1356 | 1350  | 1352 | 1350  | 1347 | 129  |
| 15° | 1312 | 1310  | 1316 | 1316  | 1316 | 371  |
| 25° | 1217 | 1217  | 1234 | 1239  | 1239 | 561  |
| 35° | 1082 | 1088  | 1111 | 1126  | 1135 | 677  |
| 45° | 909  | 925   | 960  | 1000  | 1020 | 700  |
| 55° | 704  | 726   | 796  | 863   | 892  | 628  |
| 65° | 465  | 509   | 617  | 701   | 739  | 458  |
| 75° | 210  | 296   | 423  | 420   | 407  | 229  |
| 85° | 46   | 71    | 73   | 66    | 69   | 55   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1353.9 | 1353.9 | 1353.9 | 1353.9 | 1353.9 |
| 2.5°  | 1360.6 | 1353.9 | 1356.1 | 1353.9 | 1349.5 |
| 5°    | 1356.1 | 1349.5 | 1351.7 | 1349.5 | 1347.3 |
| 7.5°  | 1351.7 | 1345.1 | 1347.3 | 1345.1 | 1345.1 |
| 10°   | 1342.9 | 1336.2 | 1340.7 | 1338.5 | 1336.2 |
| 12.5° | 1329.6 | 1325.2 | 1329.6 | 1327.4 | 1327.4 |
| 15°   | 1311.9 | 1309.7 | 1316.3 | 1316.3 | 1316.3 |
| 17.5° | 1294.2 | 1292.0 | 1300.8 | 1300.8 | 1300.8 |
| 20°   | 1272.1 | 1269.9 | 1283.1 | 1283.1 | 1283.1 |
| 22.5° | 1245.5 | 1243.3 | 1261.0 | 1261.0 | 1261.0 |
| 25°   | 1216.8 | 1216.8 | 1234.5 | 1238.9 | 1238.9 |
| 27.5° | 1188.0 | 1188.0 | 1207.9 | 1214.6 | 1214.6 |
| 30°   | 1157.0 | 1157.0 | 1177.0 | 1185.8 | 1190.2 |
| 32.5° | 1119.4 | 1123.9 | 1146.0 | 1157.0 | 1161.5 |
| 35°   | 1081.8 | 1088.5 | 1110.6 | 1126.1 | 1134.9 |
| 37.5° | 1042.0 | 1048.6 | 1075.2 | 1092.9 | 1103.9 |
| 40°   | 1000.0 | 1008.8 | 1037.6 | 1059.7 | 1073.0 |
| 42.5° | 953.5  | 966.8  | 1000.0 | 1028.7 | 1046.4 |
| 45°   | 909.3  | 924.7  | 960.1  | 1000.0 | 1019.9 |
| 47.5° | 860.6  | 878.3  | 918.1  | 969.0  | 988.9  |
| 50°   | 809.7  | 827.4  | 876.1  | 933.6  | 955.7  |
| 52.5° | 758.8  | 778.7  | 836.3  | 898.2  | 924.7  |
| 55°   | 703.5  | 725.6  | 796.4  | 862.8  | 891.6  |
| 57.5° | 646.0  | 672.5  | 752.2  | 823.0  | 854.0  |
| 60°   | 586.3  | 619.4  | 707.9  | 783.2  | 816.3  |
| 62.5° | 524.3  | 564.1  | 663.7  | 743.3  | 778.7  |
| 65°   | 464.6  | 508.8  | 617.2  | 701.3  | 738.9  |
| 67.5° | 400.4  | 455.7  | 570.8  | 661.5  | 696.9  |
| 70°   | 336.3  | 400.4  | 522.1  | 615.0  | 650.4  |
| 72.5° | 272.1  | 349.5  | 473.4  | 557.5  | 557.5  |
| 75°   | 210.2  | 296.5  | 422.6  | 420.3  | 407.1  |
| 77.5° | 159.3  | 247.8  | 347.3  | 296.5  | 298.7  |
| 80°   | 115.0  | 199.1  | 219.0  | 219.0  | 221.2  |
| 82.5° | 77.4   | 152.6  | 141.6  | 139.4  | 143.8  |
| 85°   | 46.5   | 70.8   | 73.0   | 66.4   | 68.6   |
| 87.5° | 22.1   | 24.3   | 19.9   | 13.3   | 13.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)