

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: P259465

Luminaire Tested: **22CZ-LD5-34-S-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259465  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25712)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-34-S-UNV-L82765-W2A1-U-3500K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3423.0 lumens  
Efficiency: N/A  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.24 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

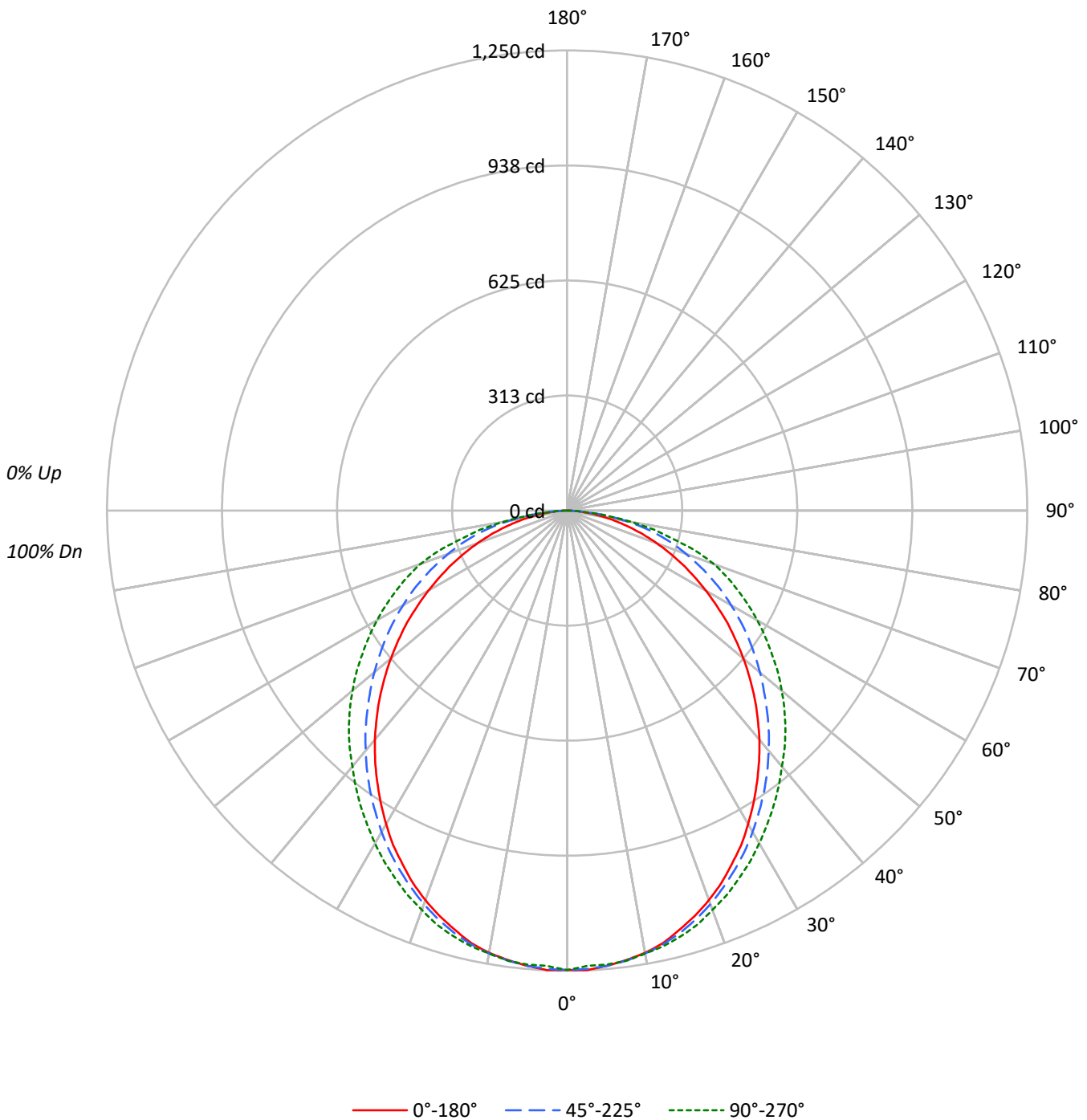
Input Watts (W): 25.761  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 87  | 85  | 83  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 77  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 90  | 79  | 71  | 64  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 64  | 60  | 58  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 61  | 54  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 56  | 52  | 50  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  | 43  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 56  | 47  | 41  | 68  | 56  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 35  | 33  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 27  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 32  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |    |    |    |    |    |    |    |    |   |    |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3358 | 3358 | 3358 |
| 5°  | 3353 | 3353 | 3344 |
| 10° | 3333 | 3338 | 3338 |
| 15° | 3284 | 3307 | 3334 |
| 20° | 3225 | 3258 | 3305 |
| 25° | 3144 | 3197 | 3276 |
| 30° | 3055 | 3132 | 3244 |
| 35° | 2954 | 3062 | 3214 |
| 40° | 2853 | 2992 | 3188 |
| 45° | 2740 | 2922 | 3191 |
| 50° | 2616 | 2864 | 3187 |
| 55° | 2492 | 2815 | 3186 |
| 60° | 2345 | 2770 | 3212 |
| 65° | 2199 | 2732 | 3256 |
| 70° | 2031 | 2703 | 3338 |
| 75° | 1829 | 2684 | 3094 |
| 80° | 1605 | 2497 | 2701 |
| 85° | 1318 | 1877 | 1677 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 117.8  | 3.4       |
| 10°-20°   | 334.8  | 9.8       |
| 20°-30°   | 497.2  | 14.5      |
| 30°-40°   | 585.3  | 17.1      |
| 40°-50°   | 596.7  | 17.4      |
| 50°-60°   | 538.1  | 15.7      |
| 60°-70°   | 423.9  | 12.4      |
| 70°-80°   | 261.4  | 7.6       |
| 80°-90°   | 67.9   | 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°    | 949.8  | 27.7      |
| 0°-40°    | 1535.0 | 44.8      |
| 0°-60°    | 2669.8 | 78.0      |
| 0°-90°    | 3423.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3423.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1248 | 1248  | 1248 | 1248  | 1248 |      |
| 5°  | 1241 | 1243  | 1241 | 1240  | 1238 | 118  |
| 15° | 1179 | 1184  | 1187 | 1194  | 1197 | 332  |
| 25° | 1059 | 1065  | 1077 | 1095  | 1103 | 488  |
| 35° | 899  | 909   | 932  | 962   | 978  | 563  |
| 45° | 720  | 732   | 768  | 814   | 838  | 555  |
| 55° | 531  | 549   | 600  | 654   | 679  | 474  |
| 65° | 345  | 370   | 429  | 483   | 511  | 342  |
| 75° | 176  | 206   | 258  | 288   | 298  | 188  |
| 85° | 43   | 54    | 61   | 58    | 54   | 50   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1247.9 | 1247.9 | 1247.9 | 1247.9 | 1247.9 |
| 2.5°  | 1249.5 | 1249.5 | 1246.2 | 1243.0 | 1238.0 |
| 5°    | 1241.3 | 1243.0 | 1241.3 | 1239.7 | 1238.0 |
| 7.5°  | 1231.4 | 1233.1 | 1233.1 | 1233.1 | 1233.1 |
| 10°   | 1219.9 | 1221.6 | 1221.6 | 1221.6 | 1221.6 |
| 12.5° | 1203.5 | 1205.1 | 1206.8 | 1208.4 | 1211.7 |
| 15°   | 1178.8 | 1183.8 | 1187.1 | 1193.6 | 1196.9 |
| 17.5° | 1154.2 | 1159.1 | 1164.0 | 1172.3 | 1178.8 |
| 20°   | 1126.2 | 1129.5 | 1137.7 | 1147.6 | 1154.2 |
| 22.5° | 1095.0 | 1099.9 | 1108.1 | 1121.3 | 1131.2 |
| 25°   | 1058.8 | 1065.4 | 1076.9 | 1095.0 | 1103.2 |
| 27.5° | 1024.3 | 1029.2 | 1044.0 | 1063.7 | 1075.3 |
| 30°   | 983.2  | 989.8  | 1007.8 | 1032.5 | 1044.0 |
| 32.5° | 942.1  | 950.3  | 970.0  | 998.0  | 1011.1 |
| 35°   | 899.3  | 909.2  | 932.2  | 961.8  | 978.3  |
| 37.5° | 856.6  | 866.5  | 892.8  | 925.6  | 943.7  |
| 40°   | 812.2  | 822.1  | 851.7  | 887.8  | 907.6  |
| 42.5° | 766.2  | 777.7  | 810.6  | 851.7  | 874.7  |
| 45°   | 720.1  | 731.6  | 767.8  | 813.8  | 838.5  |
| 47.5° | 672.4  | 685.6  | 725.1  | 776.0  | 800.7  |
| 50°   | 624.8  | 639.6  | 684.0  | 736.6  | 761.2  |
| 52.5° | 577.1  | 593.5  | 641.2  | 695.5  | 721.8  |
| 55°   | 531.1  | 549.1  | 600.1  | 654.4  | 679.0  |
| 57.5° | 481.7  | 503.1  | 557.4  | 610.0  | 637.9  |
| 60°   | 435.7  | 458.7  | 514.6  | 567.2  | 596.8  |
| 62.5° | 389.7  | 414.3  | 473.5  | 526.1  | 554.1  |
| 65°   | 345.3  | 369.9  | 429.1  | 483.4  | 511.3  |
| 67.5° | 300.9  | 328.8  | 386.4  | 440.6  | 468.6  |
| 70°   | 258.1  | 287.7  | 343.6  | 396.2  | 424.2  |
| 72.5° | 217.0  | 246.6  | 302.5  | 351.8  | 368.3  |
| 75°   | 175.9  | 205.5  | 258.1  | 287.7  | 297.6  |
| 77.5° | 138.1  | 166.1  | 212.1  | 230.2  | 243.3  |
| 80°   | 103.6  | 128.2  | 161.1  | 172.6  | 174.3  |
| 82.5° | 70.7   | 92.1   | 111.8  | 113.4  | 111.8  |
| 85°   | 42.7   | 54.3   | 60.8   | 57.5   | 54.3   |
| 87.5° | 19.7   | 21.4   | 19.7   | 13.2   | 8.2    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)