

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: P275715

Luminaire Tested: **14CZ2-44-S-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P275715  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-44-S-UNV-L92765-W2A1-U-2700K  
Description: CRUZE 2.0 1x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3405.0 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

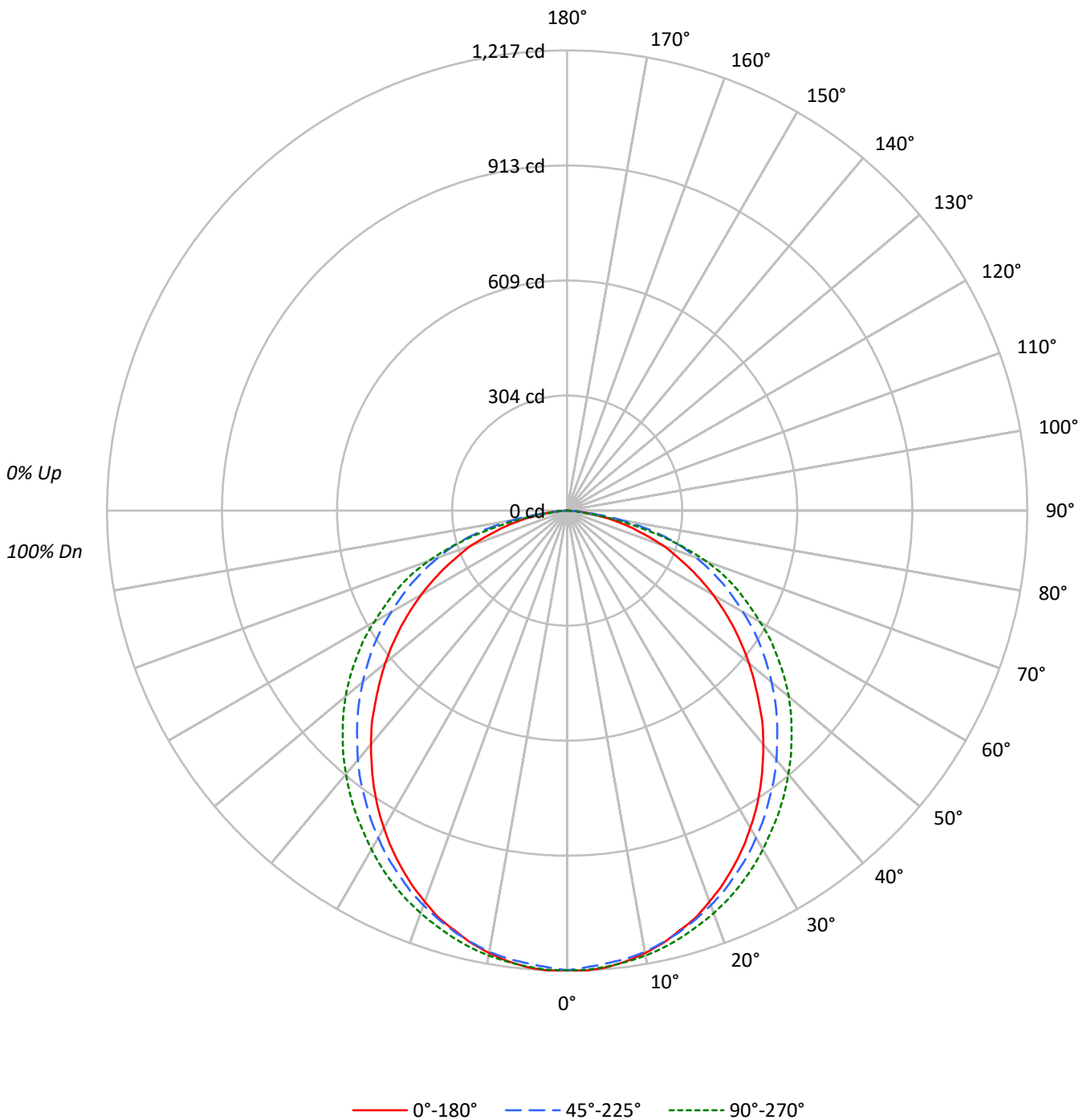
Input Watts (W): 35.526  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |
| 2   | 99  | 90  | 84  | 78  | 96  | 89  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 70  |
| 3   | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 65  | 61  | 58  |
| 4   | 82  | 70  | 61  | 55  | 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  | 55  | 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  | 35  | 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  | 33  | 29  | 39  | 33  | 28  | 27  |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3271 | 3271 | 3271 |
| 5°  | 3274 | 3247 | 3270 |
| 10° | 3248 | 3238 | 3266 |
| 15° | 3203 | 3212 | 3255 |
| 20° | 3152 | 3181 | 3244 |
| 25° | 3088 | 3143 | 3233 |
| 30° | 3011 | 3105 | 3216 |
| 35° | 2928 | 3061 | 3206 |
| 40° | 2835 | 3025 | 3197 |
| 45° | 2731 | 2987 | 3193 |
| 50° | 2629 | 2954 | 3202 |
| 55° | 2519 | 2930 | 3192 |
| 60° | 2399 | 2890 | 3171 |
| 65° | 2257 | 2881 | 3171 |
| 70° | 2125 | 2856 | 3082 |
| 75° | 1843 | 2791 | 2633 |
| 80° | 1491 | 2250 | 1753 |
| 85° | 991  | 781  | 522  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 114.8  | 3.4       |
| 10°-20°   | 326.6  | 9.6       |
| 20°-30°   | 489.9  | 14.4      |
| 30°-40°   | 584.4  | 17.2      |
| 40°-50°   | 604.2  | 17.7      |
| 50°-60°   | 551.6  | 16.2      |
| 60°-70°   | 434.1  | 12.7      |
| 70°-80°   | 252.7  | 7.4       |
| 80°-90°   | 46.6   | 1.4       |
| 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°    | 931.3  | 27.4      |
| 0°-40°    | 1515.8 | 44.5      |
| 0°-60°    | 2671.6 | 78.5      |
| 0°-90°    | 3405.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3405.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1216 | 1216  | 1216 | 1216  | 1216 |      |
| 5°  | 1212 | 1209  | 1202 | 1212  | 1210 | 115  |
| 15° | 1150 | 1151  | 1153 | 1168  | 1168 | 324  |
| 25° | 1040 | 1045  | 1058 | 1084  | 1089 | 479  |
| 35° | 891  | 903   | 932  | 967   | 976  | 557  |
| 45° | 718  | 741   | 785  | 829   | 839  | 554  |
| 55° | 537  | 566   | 625  | 670   | 680  | 480  |
| 65° | 354  | 392   | 452  | 488   | 498  | 352  |
| 75° | 177  | 220   | 268  | 263   | 253  | 188  |
| 85° | 32   | 46    | 25   | 20    | 17   | 42   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1215.5 | 1215.5 | 1215.5 | 1215.5 | 1215.5 |
| 2.5°  | 1217.2 | 1213.8 | 1208.8 | 1217.2 | 1215.5 |
| 5°    | 1212.2 | 1208.8 | 1202.0 | 1212.2 | 1210.5 |
| 7.5°  | 1202.0 | 1198.6 | 1195.3 | 1205.4 | 1203.7 |
| 10°   | 1188.5 | 1186.8 | 1185.1 | 1197.0 | 1195.3 |
| 12.5° | 1171.6 | 1171.6 | 1169.9 | 1183.5 | 1183.5 |
| 15°   | 1149.7 | 1151.4 | 1153.1 | 1168.3 | 1168.3 |
| 17.5° | 1129.4 | 1127.7 | 1132.8 | 1149.7 | 1151.4 |
| 20°   | 1100.7 | 1104.1 | 1110.9 | 1131.1 | 1132.8 |
| 22.5° | 1072.0 | 1075.4 | 1087.2 | 1107.5 | 1112.5 |
| 25°   | 1040.0 | 1045.0 | 1058.5 | 1083.8 | 1088.9 |
| 27.5° | 1006.2 | 1012.9 | 1031.5 | 1058.5 | 1063.6 |
| 30°   | 969.0  | 979.2  | 999.4  | 1029.8 | 1034.9 |
| 32.5° | 931.9  | 942.0  | 967.4  | 997.7  | 1004.5 |
| 35°   | 891.4  | 903.2  | 931.9  | 967.4  | 975.8  |
| 37.5° | 849.2  | 864.4  | 898.1  | 933.6  | 943.7  |
| 40°   | 807.0  | 823.9  | 861.0  | 898.1  | 910.0  |
| 42.5° | 764.8  | 781.7  | 822.2  | 864.4  | 876.2  |
| 45°   | 717.5  | 741.1  | 785.0  | 828.9  | 839.1  |
| 47.5° | 671.9  | 697.2  | 746.2  | 790.1  | 803.6  |
| 50°   | 628.0  | 653.3  | 705.7  | 751.3  | 764.8  |
| 52.5° | 582.4  | 609.5  | 665.2  | 712.4  | 724.3  |
| 55°   | 536.9  | 565.6  | 624.6  | 670.2  | 680.4  |
| 57.5° | 491.3  | 521.7  | 582.4  | 626.3  | 638.2  |
| 60°   | 445.7  | 477.8  | 536.9  | 580.8  | 589.2  |
| 62.5° | 400.1  | 433.9  | 494.7  | 533.5  | 541.9  |
| 65°   | 354.5  | 391.7  | 452.4  | 487.9  | 498.0  |
| 67.5° | 310.6  | 347.8  | 406.9  | 440.6  | 449.1  |
| 70°   | 270.1  | 303.9  | 363.0  | 388.3  | 391.7  |
| 72.5° | 219.5  | 261.7  | 319.1  | 332.6  | 324.1  |
| 75°   | 177.3  | 219.5  | 268.4  | 263.4  | 253.2  |
| 77.5° | 135.1  | 177.3  | 209.3  | 192.5  | 179.0  |
| 80°   | 96.2   | 138.4  | 145.2  | 119.9  | 113.1  |
| 82.5° | 62.5   | 96.2   | 81.0   | 62.5   | 50.6   |
| 85°   | 32.1   | 45.6   | 25.3   | 20.3   | 16.9   |
| 87.5° | 10.1   | 6.8    | 3.4    | 3.4    | 1.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)