

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: P276794

Luminaire Tested: **24CZ2-40-RDP-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40-RDP-UNV-L83050-W2A1-U-4000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2704.0 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

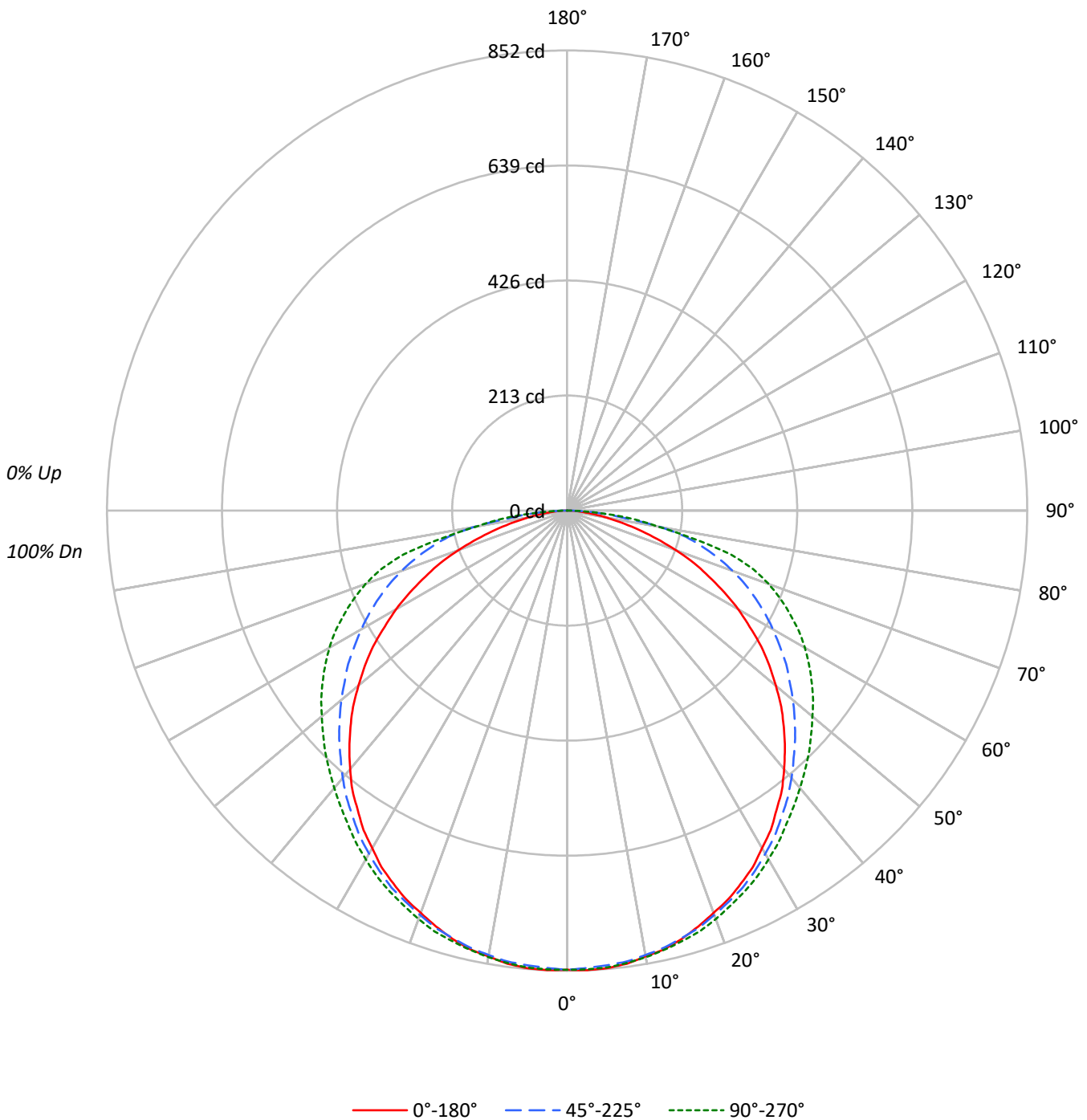
Input Watts (W): 31.110453
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 88 | 86 | 84 | 82 |
| 2 | 97 | 89 | 81 | 75 | 95 | 87 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 77 | 73 | 69 | 67 |
| 3 | 88 | 77 | 68 | 62 | 86 | 76 | 68 | 61 | 72 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 51 | 64 | 57 | 51 | 62 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 51 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 45 | 38 | 51 | 44 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 24 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1144 | 1144 | 1144 |
| 5° | 1148 | 1141 | 1147 |
| 10° | 1145 | 1142 | 1147 |
| 15° | 1143 | 1142 | 1149 |
| 20° | 1135 | 1141 | 1152 |
| 25° | 1131 | 1143 | 1155 |
| 30° | 1121 | 1140 | 1159 |
| 35° | 1110 | 1137 | 1163 |
| 40° | 1098 | 1136 | 1178 |
| 45° | 1079 | 1136 | 1205 |
| 50° | 1056 | 1143 | 1241 |
| 55° | 1029 | 1161 | 1296 |
| 60° | 985 | 1184 | 1368 |
| 65° | 922 | 1225 | 1452 |
| 70° | 839 | 1282 | 1562 |
| 75° | 711 | 1353 | 1631 |
| 80° | 561 | 1361 | 1320 |
| 85° | 414 | 1036 | 1159 |



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CATALOG NUMBER: 24CZ2-40-RDP-UNV-L83050-W2A1-U-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 80.7 | 3.0 |
| 10°-20° | 232.1 | 8.6 |
| 20°-30° | 355.0 | 13.1 |
| 30°-40° | 434.0 | 16.0 |
| 40°-50° | 462.5 | 17.1 |
| 50°-60° | 442.2 | 16.4 |
| 60°-70° | 374.6 | 13.9 |
| 70°-80° | 251.8 | 9.3 |
| 80°-90° | 71.0 | 2.6 |
| 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° | 667.8 | 24.7 |
| 0°-40° | 1101.8 | 40.7 |
| 0°-60° | 2006.6 | 74.2 |
| 0°-90° | 2704.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2704.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 850 | 850 | 850 | 850 | 850 | |
| 5° | 850 | 849 | 845 | 849 | 849 | 81 |
| 15° | 821 | 821 | 820 | 826 | 825 | 231 |
| 25° | 762 | 764 | 770 | 777 | 778 | 351 |
| 35° | 676 | 681 | 692 | 706 | 708 | 423 |
| 45° | 567 | 577 | 597 | 622 | 633 | 438 |
| 55° | 439 | 455 | 495 | 534 | 553 | 391 |
| 65° | 290 | 319 | 385 | 436 | 456 | 288 |
| 75° | 137 | 186 | 260 | 304 | 314 | 146 |
| 85° | 27 | 55 | 67 | 72 | 75 | 33 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 850.3 | 850.3 | 850.3 | 850.3 | 850.3 |
| 2.5° | 851.7 | 851.7 | 847.6 | 850.3 | 850.3 |
| 5° | 850.3 | 849.0 | 845.0 | 849.0 | 849.0 |
| 7.5° | 846.3 | 845.0 | 842.3 | 846.3 | 845.0 |
| 10° | 838.3 | 838.3 | 835.6 | 839.6 | 839.6 |
| 12.5° | 831.6 | 830.2 | 828.9 | 834.2 | 832.9 |
| 15° | 820.8 | 820.8 | 819.5 | 826.2 | 824.8 |
| 17.5° | 807.4 | 808.8 | 810.1 | 815.5 | 816.8 |
| 20° | 792.7 | 795.3 | 796.7 | 804.7 | 804.7 |
| 22.5° | 779.2 | 780.6 | 783.3 | 791.3 | 791.3 |
| 25° | 761.8 | 764.5 | 769.9 | 776.6 | 777.9 |
| 27.5° | 744.4 | 745.7 | 752.4 | 761.8 | 763.2 |
| 30° | 721.6 | 725.6 | 733.6 | 744.4 | 745.7 |
| 32.5° | 701.5 | 705.5 | 714.9 | 725.6 | 728.3 |
| 35° | 676.0 | 681.3 | 692.1 | 705.5 | 708.2 |
| 37.5° | 653.2 | 657.2 | 670.6 | 685.4 | 689.4 |
| 40° | 625.0 | 633.1 | 646.5 | 663.9 | 670.6 |
| 42.5° | 596.8 | 604.9 | 621.0 | 643.8 | 651.8 |
| 45° | 567.3 | 576.7 | 596.8 | 622.3 | 633.1 |
| 47.5° | 537.8 | 548.6 | 571.4 | 600.9 | 612.9 |
| 50° | 504.3 | 517.7 | 545.9 | 579.4 | 592.8 |
| 52.5° | 472.1 | 488.2 | 519.1 | 556.6 | 574.0 |
| 55° | 438.6 | 454.7 | 494.9 | 533.8 | 552.6 |
| 57.5° | 401.0 | 422.5 | 466.7 | 511.0 | 531.1 |
| 60° | 366.2 | 386.3 | 439.9 | 488.2 | 508.3 |
| 62.5° | 328.6 | 355.4 | 413.1 | 464.1 | 484.2 |
| 65° | 289.7 | 319.2 | 384.9 | 435.9 | 456.0 |
| 67.5° | 254.8 | 287.0 | 356.8 | 407.7 | 427.8 |
| 70° | 213.3 | 253.5 | 325.9 | 376.9 | 397.0 |
| 72.5° | 174.4 | 218.6 | 293.7 | 343.4 | 362.1 |
| 75° | 136.8 | 186.4 | 260.2 | 304.5 | 313.8 |
| 77.5° | 101.9 | 154.2 | 225.3 | 244.1 | 237.4 |
| 80° | 72.4 | 123.4 | 175.7 | 166.3 | 170.3 |
| 82.5° | 46.9 | 93.9 | 108.6 | 123.4 | 127.4 |
| 85° | 26.8 | 55.0 | 67.1 | 72.4 | 75.1 |
| 87.5° | 12.1 | 20.1 | 26.8 | 26.8 | 25.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)