

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: P276022

Luminaire Tested: **24CZ2-35-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35-UNV-L93050-W2A1-U-3000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2617.9 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

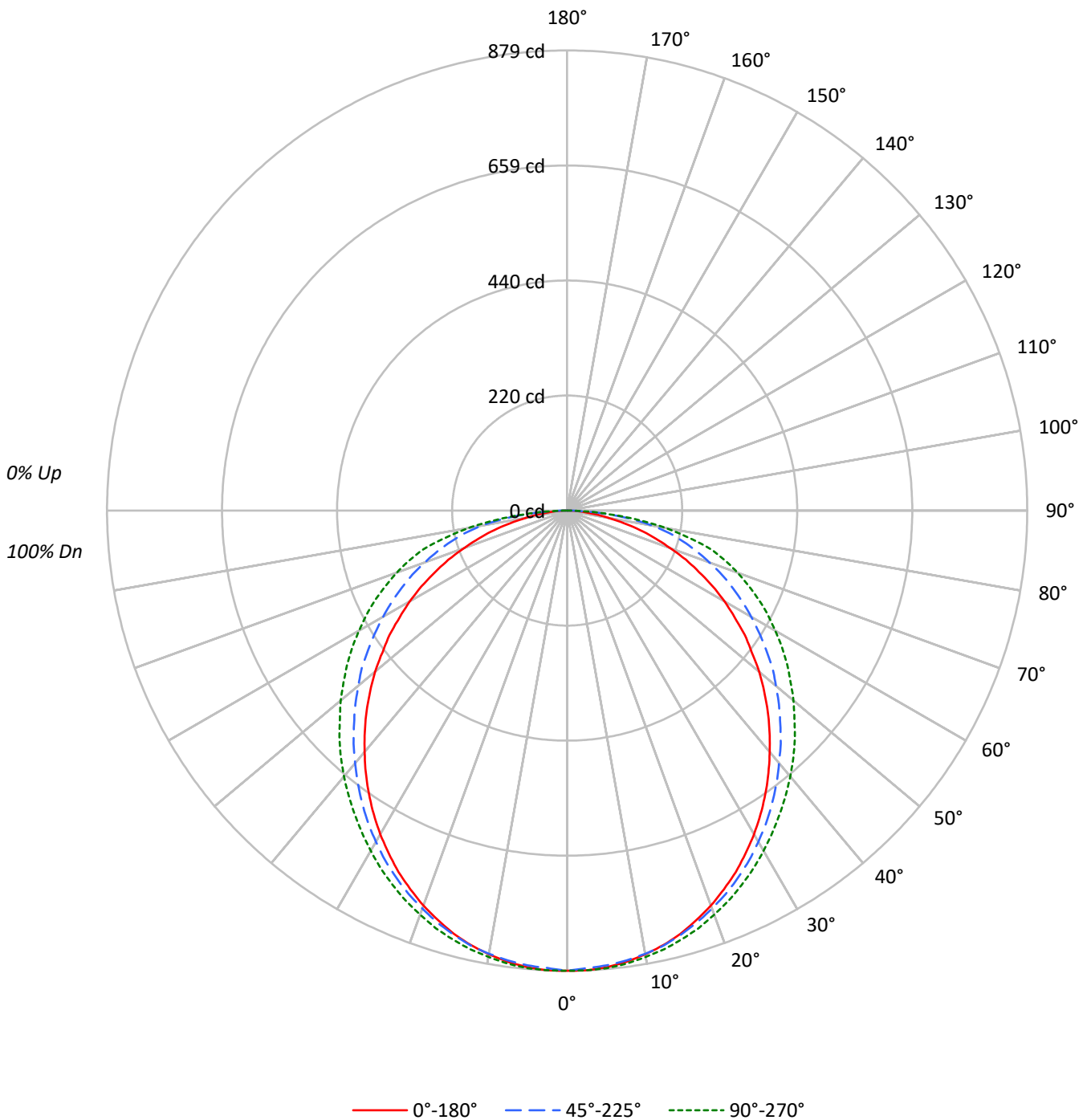
Input Watts (W): 26.63892
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 89 | 86 | 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 | 61 | 70 | 64 | 60 | 68 | 63 | 58 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 81 | 69 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 38 | 49 | 43 | 38 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1183 | 1183 | 1183 |
| 5° | 1182 | 1178 | 1185 |
| 10° | 1176 | 1175 | 1183 |
| 15° | 1166 | 1168 | 1181 |
| 20° | 1150 | 1159 | 1176 |
| 25° | 1131 | 1148 | 1171 |
| 30° | 1109 | 1135 | 1166 |
| 35° | 1085 | 1121 | 1162 |
| 40° | 1057 | 1106 | 1165 |
| 45° | 1031 | 1096 | 1170 |
| 50° | 1002 | 1090 | 1181 |
| 55° | 971 | 1088 | 1203 |
| 60° | 934 | 1093 | 1234 |
| 65° | 884 | 1110 | 1288 |
| 70° | 821 | 1138 | 1361 |
| 75° | 750 | 1195 | 1476 |
| 80° | 616 | 1286 | 1476 |
| 85° | 472 | 1187 | 1267 |



TEST NUMBER: P276022

CATALOG NUMBER: 24CZ2-35-UNV-L93050-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.1 | 3.2 |
| 10°-20° | 237.3 | 9.1 |
| 20°-30° | 357.1 | 13.6 |
| 30°-40° | 428.0 | 16.3 |
| 40°-50° | 446.0 | 17.0 |
| 50°-60° | 415.0 | 15.9 |
| 60°-70° | 341.8 | 13.1 |
| 70°-80° | 232.8 | 8.9 |
| 80°-90° | 76.8 | 2.9 |
| 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° | 677.6 | 25.9 |
| 0°-40° | 1105.6 | 42.2 |
| 0°-60° | 1966.5 | 75.1 |
| 0°-90° | 2617.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2617.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 879 | 879 | 879 | 879 | 879 | |
| 5° | 876 | 876 | 872 | 876 | 877 | 83 |
| 15° | 837 | 838 | 839 | 847 | 848 | 236 |
| 25° | 762 | 765 | 773 | 786 | 789 | 351 |
| 35° | 660 | 668 | 682 | 701 | 708 | 413 |
| 45° | 542 | 553 | 576 | 605 | 615 | 418 |
| 55° | 414 | 428 | 464 | 501 | 513 | 369 |
| 65° | 278 | 301 | 349 | 390 | 404 | 276 |
| 75° | 144 | 176 | 230 | 271 | 284 | 152 |
| 85° | 31 | 59 | 77 | 82 | 82 | 38 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276022

CATALOG NUMBER: 24CZ2-35-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 879.0 | 879.0 | 879.0 | 879.0 | 879.0 |
| 2.5° | 879.0 | 879.0 | 874.6 | 879.0 | 879.0 |
| 5° | 875.5 | 875.5 | 872.0 | 876.3 | 877.2 |
| 7.5° | 869.3 | 870.2 | 866.7 | 872.0 | 872.8 |
| 10° | 860.6 | 861.5 | 859.7 | 865.0 | 865.8 |
| 12.5° | 850.1 | 851.0 | 851.0 | 857.1 | 858.0 |
| 15° | 837.0 | 837.9 | 838.8 | 846.6 | 847.5 |
| 17.5° | 820.4 | 823.0 | 824.8 | 834.4 | 836.1 |
| 20° | 802.9 | 805.6 | 809.1 | 819.5 | 821.3 |
| 22.5° | 782.8 | 786.3 | 792.5 | 803.8 | 806.4 |
| 25° | 761.9 | 765.4 | 773.2 | 786.3 | 789.0 |
| 27.5° | 738.3 | 743.5 | 753.1 | 767.1 | 770.6 |
| 30° | 713.8 | 719.1 | 730.4 | 745.3 | 750.5 |
| 32.5° | 687.6 | 694.6 | 707.7 | 724.3 | 729.5 |
| 35° | 660.5 | 668.4 | 682.4 | 700.7 | 707.7 |
| 37.5° | 631.7 | 640.4 | 657.0 | 677.1 | 685.9 |
| 40° | 602.0 | 612.5 | 629.9 | 653.5 | 663.1 |
| 42.5° | 572.3 | 581.9 | 603.7 | 629.1 | 639.6 |
| 45° | 541.7 | 553.1 | 575.8 | 604.6 | 615.1 |
| 47.5° | 510.2 | 521.6 | 548.7 | 579.3 | 588.9 |
| 50° | 478.8 | 490.2 | 520.7 | 553.1 | 564.4 |
| 52.5° | 444.7 | 459.6 | 494.5 | 526.8 | 538.2 |
| 55° | 414.1 | 428.1 | 463.9 | 500.6 | 512.9 |
| 57.5° | 379.2 | 395.8 | 435.1 | 473.6 | 486.7 |
| 60° | 346.9 | 364.3 | 406.3 | 445.6 | 458.7 |
| 62.5° | 313.7 | 332.9 | 377.4 | 417.6 | 432.5 |
| 65° | 277.8 | 301.4 | 348.6 | 389.7 | 404.5 |
| 67.5° | 245.5 | 270.0 | 319.8 | 361.7 | 374.8 |
| 70° | 208.8 | 238.5 | 289.2 | 331.1 | 346.0 |
| 72.5° | 177.4 | 207.1 | 260.4 | 301.4 | 316.3 |
| 75° | 144.2 | 176.5 | 229.8 | 270.9 | 284.0 |
| 77.5° | 111.0 | 146.8 | 200.1 | 231.5 | 235.9 |
| 80° | 79.5 | 117.1 | 166.0 | 184.4 | 190.5 |
| 82.5° | 55.9 | 90.0 | 122.3 | 134.6 | 138.0 |
| 85° | 30.6 | 59.4 | 76.9 | 82.1 | 82.1 |
| 87.5° | 13.1 | 25.3 | 30.6 | 31.5 | 32.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)