

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: P263229

Luminaire Tested: **24CZ-LD5-30-SQP-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263229
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-LD5-30-SQP-UNV-L82765-W2A1-U-5700K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH SQP LENS
Light Source: (336) 80 CRI LEDS TUNED AT 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2119.0 lumens
Efficiency: N/A
Efficacy: 105.0 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

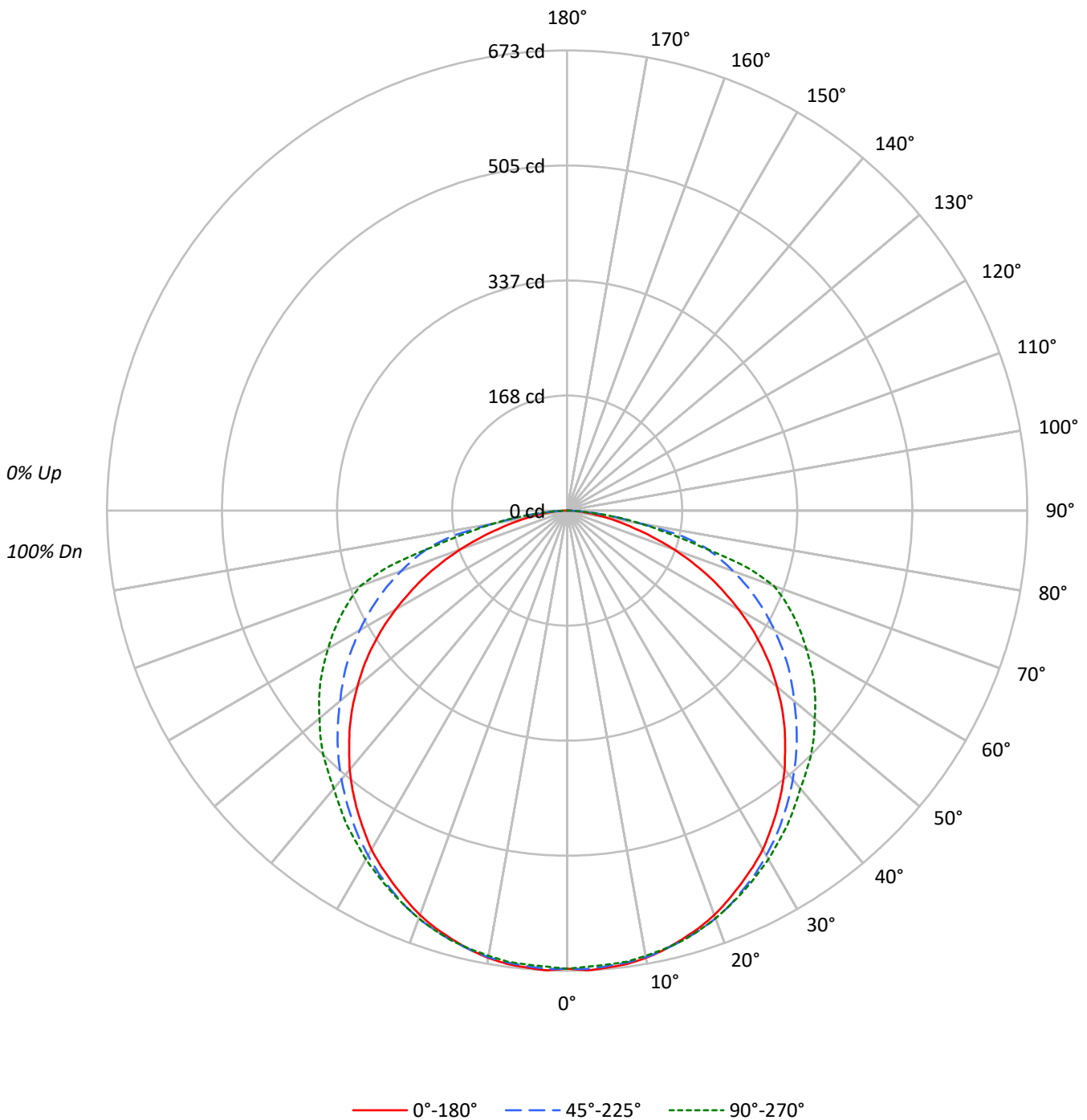
Input Watts (W): 20.181
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 901 | 901 | 901 |
| 5° | 906 | 903 | 900 |
| 10° | 908 | 906 | 903 |
| 15° | 904 | 907 | 907 |
| 20° | 901 | 909 | 909 |
| 25° | 894 | 907 | 910 |
| 30° | 889 | 905 | 915 |
| 35° | 879 | 903 | 922 |
| 40° | 869 | 902 | 932 |
| 45° | 856 | 904 | 960 |
| 50° | 839 | 907 | 990 |
| 55° | 817 | 924 | 1035 |
| 60° | 781 | 943 | 1087 |
| 65° | 732 | 972 | 1164 |
| 70° | 655 | 1016 | 1266 |
| 75° | 541 | 1087 | 1047 |
| 80° | 441 | 840 | 848 |
| 85° | 355 | 557 | 523 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 63.6 | 3.0 |
| 10°-20° | 183.6 | 8.7 |
| 20°-30° | 280.6 | 13.2 |
| 30°-40° | 343.1 | 16.2 |
| 40°-50° | 367.2 | 17.3 |
| 50°-60° | 351.6 | 16.6 |
| 60°-70° | 297.4 | 14.0 |
| 70°-80° | 188.5 | 8.9 |
| 80°-90° | 43.4 | 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° | 527.8 | 24.9 |
| 0°-40° | 870.9 | 41.1 |
| 0°-60° | 1589.7 | 75.0 |
| 0°-90° | 2119.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2119.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 670 | 670 | 670 | 670 | 670 | |
| 5° | 671 | 668 | 669 | 668 | 667 | 64 |
| 15° | 649 | 648 | 651 | 651 | 651 | 183 |
| 25° | 602 | 602 | 611 | 613 | 613 | 278 |
| 35° | 535 | 538 | 550 | 557 | 562 | 335 |
| 45° | 450 | 458 | 475 | 495 | 505 | 347 |
| 55° | 348 | 359 | 394 | 427 | 441 | 310 |
| 65° | 230 | 252 | 305 | 347 | 366 | 226 |
| 75° | 104 | 147 | 209 | 208 | 201 | 113 |
| 85° | 23 | 35 | 36 | 33 | 34 | 27 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 669.9 | 669.9 | 669.9 | 669.9 | 669.9 |
| 2.5° | 673.1 | 669.9 | 671.0 | 669.9 | 667.7 |
| 5° | 671.0 | 667.7 | 668.8 | 667.7 | 666.6 |
| 7.5° | 668.8 | 665.5 | 666.6 | 665.5 | 665.5 |
| 10° | 664.4 | 661.1 | 663.3 | 662.2 | 661.1 |
| 12.5° | 657.8 | 655.6 | 657.8 | 656.7 | 656.7 |
| 15° | 649.1 | 648.0 | 651.2 | 651.2 | 651.2 |
| 17.5° | 640.3 | 639.2 | 643.6 | 643.6 | 643.6 |
| 20° | 629.4 | 628.3 | 634.8 | 634.8 | 634.8 |
| 22.5° | 616.2 | 615.1 | 623.9 | 623.9 | 623.9 |
| 25° | 602.0 | 602.0 | 610.8 | 612.9 | 612.9 |
| 27.5° | 587.8 | 587.8 | 597.6 | 600.9 | 600.9 |
| 30° | 572.4 | 572.4 | 582.3 | 586.7 | 588.9 |
| 32.5° | 553.8 | 556.0 | 567.0 | 572.4 | 574.6 |
| 35° | 535.2 | 538.5 | 549.5 | 557.1 | 561.5 |
| 37.5° | 515.5 | 518.8 | 531.9 | 540.7 | 546.2 |
| 40° | 494.7 | 499.1 | 513.3 | 524.3 | 530.8 |
| 42.5° | 471.7 | 478.3 | 494.7 | 509.0 | 517.7 |
| 45° | 449.9 | 457.5 | 475.0 | 494.7 | 504.6 |
| 47.5° | 425.8 | 434.5 | 454.2 | 479.4 | 489.3 |
| 50° | 400.6 | 409.4 | 433.4 | 461.9 | 472.8 |
| 52.5° | 375.4 | 385.3 | 413.7 | 444.4 | 457.5 |
| 55° | 348.1 | 359.0 | 394.0 | 426.9 | 441.1 |
| 57.5° | 319.6 | 332.7 | 372.1 | 407.2 | 422.5 |
| 60° | 290.1 | 306.5 | 350.3 | 387.5 | 403.9 |
| 62.5° | 259.4 | 279.1 | 328.4 | 367.8 | 385.3 |
| 65° | 229.9 | 251.7 | 305.4 | 347.0 | 365.6 |
| 67.5° | 198.1 | 225.5 | 282.4 | 327.3 | 344.8 |
| 70° | 166.4 | 198.1 | 258.3 | 304.3 | 321.8 |
| 72.5° | 134.6 | 172.9 | 234.2 | 275.8 | 275.8 |
| 75° | 104.0 | 146.7 | 209.1 | 208.0 | 201.4 |
| 77.5° | 78.8 | 122.6 | 171.8 | 146.7 | 147.8 |
| 80° | 56.9 | 98.5 | 108.4 | 108.4 | 109.5 |
| 82.5° | 38.3 | 75.5 | 70.1 | 69.0 | 71.1 |
| 85° | 23.0 | 35.0 | 36.1 | 32.8 | 33.9 |
| 87.5° | 10.9 | 12.0 | 9.9 | 6.6 | 6.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)