

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: P259203

Luminaire Tested: **14CZ-LD5-44-SQP-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P259203
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35908)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-44-SQP-UNV-L92765-W2A1-U-4500K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2549.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

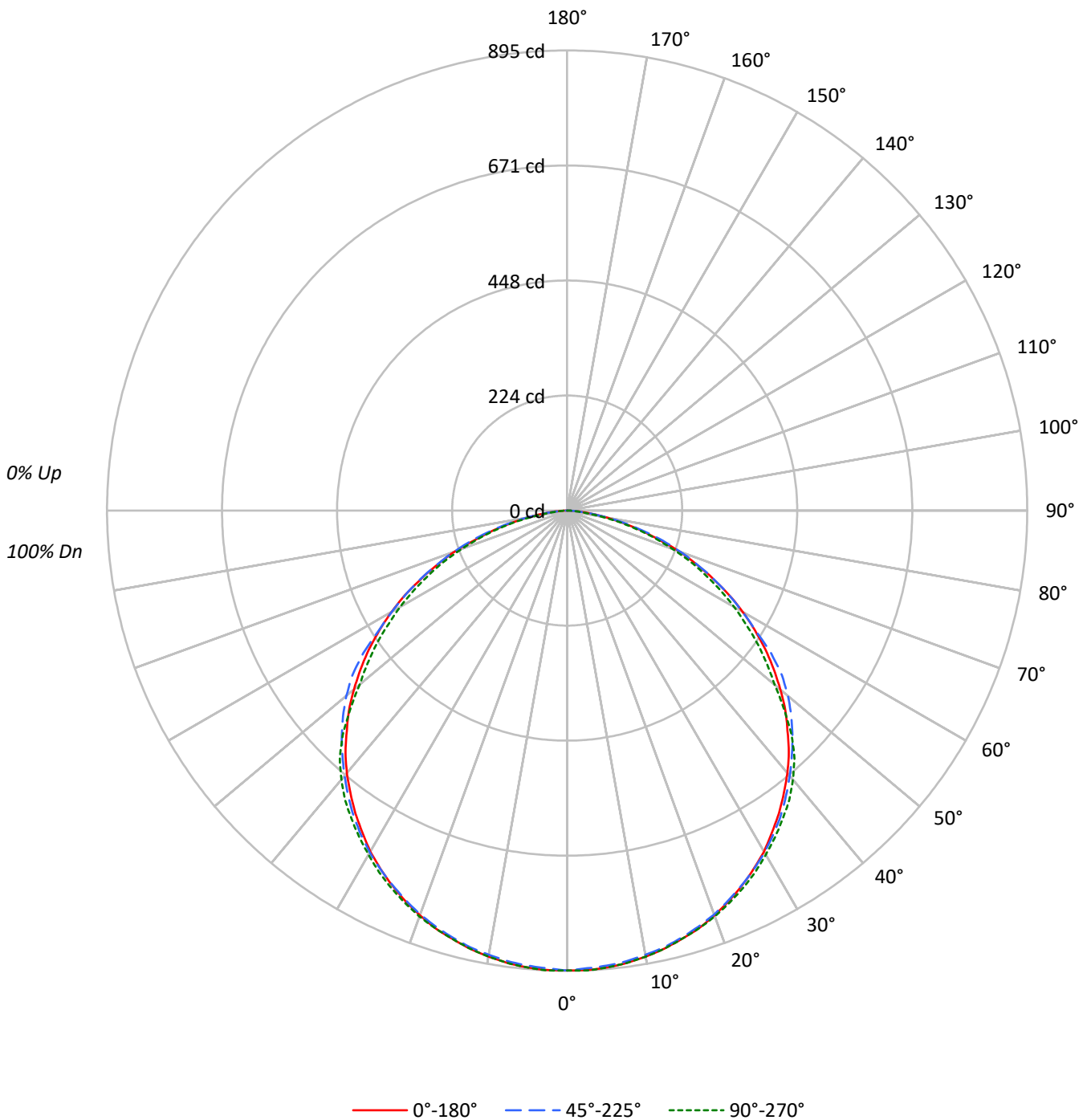
Input Watts (W): 36.27
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 62 | 59 |
| 4 | 83 | 71 | 62 | 55 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 41 | 54 | 47 | 41 | 52 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 42 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 55 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2407 | 2407 | 2407 |
| 5° | 2409 | 2400 | 2409 |
| 10° | 2407 | 2397 | 2407 |
| 15° | 2403 | 2396 | 2403 |
| 20° | 2398 | 2393 | 2406 |
| 25° | 2389 | 2387 | 2405 |
| 30° | 2380 | 2385 | 2401 |
| 35° | 2360 | 2380 | 2402 |
| 40° | 2341 | 2366 | 2399 |
| 45° | 2307 | 2359 | 2349 |
| 50° | 2267 | 2346 | 2205 |
| 55° | 2208 | 2273 | 2122 |
| 60° | 2124 | 2119 | 2021 |
| 65° | 1990 | 2001 | 1891 |
| 70° | 1828 | 1847 | 1712 |
| 75° | 1535 | 1606 | 1463 |
| 80° | 1218 | 1244 | 1031 |
| 85° | 800 | 692 | 587 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.7 | 3.3 |
| 10°-20° | 243.5 | 9.6 |
| 20°-30° | 371.8 | 14.6 |
| 30°-40° | 453.6 | 17.8 |
| 40°-50° | 474.3 | 18.6 |
| 50°-60° | 419.9 | 16.5 |
| 60°-70° | 309.2 | 12.1 |
| 70°-80° | 160.1 | 6.3 |
| 80°-90° | 31.9 | 1.3 |
| 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° | 699.9 | 27.5 |
| 0°-40° | 1153.5 | 45.3 |
| 0°-60° | 2047.8 | 80.3 |
| 0°-90° | 2549.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2549.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 894 | 894 | 894 | 894 | 894 | |
| 5° | 892 | 892 | 888 | 892 | 892 | 85 |
| 15° | 862 | 862 | 860 | 863 | 862 | 244 |
| 25° | 805 | 805 | 804 | 809 | 810 | 371 |
| 35° | 718 | 720 | 724 | 731 | 731 | 449 |
| 45° | 606 | 611 | 620 | 625 | 617 | 468 |
| 55° | 471 | 480 | 484 | 459 | 452 | 420 |
| 65° | 313 | 332 | 314 | 302 | 297 | 310 |
| 75° | 148 | 158 | 154 | 145 | 141 | 158 |
| 85° | 26 | 28 | 22 | 20 | 19 | 33 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 14CZ-LD5-44-SQP-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 894.5 | 894.5 | 894.5 | 894.5 | 894.5 |
| 2.5° | 894.5 | 894.5 | 891.0 | 894.5 | 895.4 |
| 5° | 891.9 | 891.9 | 888.4 | 891.9 | 891.9 |
| 7.5° | 887.6 | 886.7 | 884.1 | 887.6 | 887.6 |
| 10° | 880.7 | 880.7 | 877.2 | 881.5 | 880.7 |
| 12.5° | 872.9 | 872.0 | 870.3 | 873.8 | 872.9 |
| 15° | 862.5 | 862.5 | 860.0 | 863.4 | 862.5 |
| 17.5° | 852.2 | 851.3 | 848.7 | 852.2 | 852.2 |
| 20° | 837.5 | 836.6 | 835.8 | 839.2 | 840.1 |
| 22.5° | 822.0 | 821.1 | 820.2 | 825.4 | 825.4 |
| 25° | 804.7 | 804.7 | 803.8 | 809.0 | 809.9 |
| 27.5° | 785.7 | 785.7 | 786.6 | 793.5 | 792.6 |
| 30° | 765.8 | 765.8 | 767.6 | 772.7 | 772.7 |
| 32.5° | 741.7 | 743.4 | 746.8 | 752.9 | 752.9 |
| 35° | 718.4 | 720.1 | 724.4 | 731.3 | 731.3 |
| 37.5° | 692.5 | 695.0 | 699.4 | 708.0 | 709.7 |
| 40° | 666.5 | 668.3 | 673.5 | 683.0 | 683.0 |
| 42.5° | 638.1 | 639.8 | 646.7 | 656.2 | 654.5 |
| 45° | 606.1 | 611.3 | 619.9 | 625.1 | 617.3 |
| 47.5° | 575.9 | 579.3 | 591.4 | 585.4 | 572.4 |
| 50° | 541.4 | 548.3 | 560.4 | 538.8 | 526.7 |
| 52.5° | 506.0 | 513.7 | 526.7 | 496.5 | 489.6 |
| 55° | 470.6 | 480.1 | 484.4 | 459.3 | 452.4 |
| 57.5° | 432.6 | 442.9 | 434.3 | 419.6 | 412.7 |
| 60° | 394.6 | 406.7 | 393.7 | 379.9 | 375.6 |
| 62.5° | 354.9 | 368.7 | 354.0 | 341.9 | 335.9 |
| 65° | 312.6 | 331.5 | 314.3 | 302.2 | 297.0 |
| 67.5° | 271.1 | 291.0 | 272.8 | 262.5 | 259.0 |
| 70° | 232.3 | 243.5 | 234.8 | 224.5 | 217.6 |
| 72.5° | 185.6 | 196.9 | 195.1 | 183.9 | 179.6 |
| 75° | 147.6 | 158.0 | 154.5 | 145.1 | 140.7 |
| 77.5° | 109.7 | 120.9 | 117.4 | 106.2 | 104.5 |
| 80° | 78.6 | 86.3 | 80.3 | 69.9 | 66.5 |
| 82.5° | 49.2 | 55.3 | 47.5 | 39.7 | 38.0 |
| 85° | 25.9 | 27.6 | 22.4 | 19.9 | 19.0 |
| 87.5° | 8.6 | 9.5 | 9.5 | 8.6 | 8.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)