

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: P259136

Luminaire Tested: **14CZ-LD5-39-SQP-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P259136
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-LD5-39-SQP-UNV-L82765-W2A1-U-2700K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (168) 80 CRI LEDS TUNED AT 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2309.0 lumens
Efficiency: N/A
Efficacy: 74.6 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

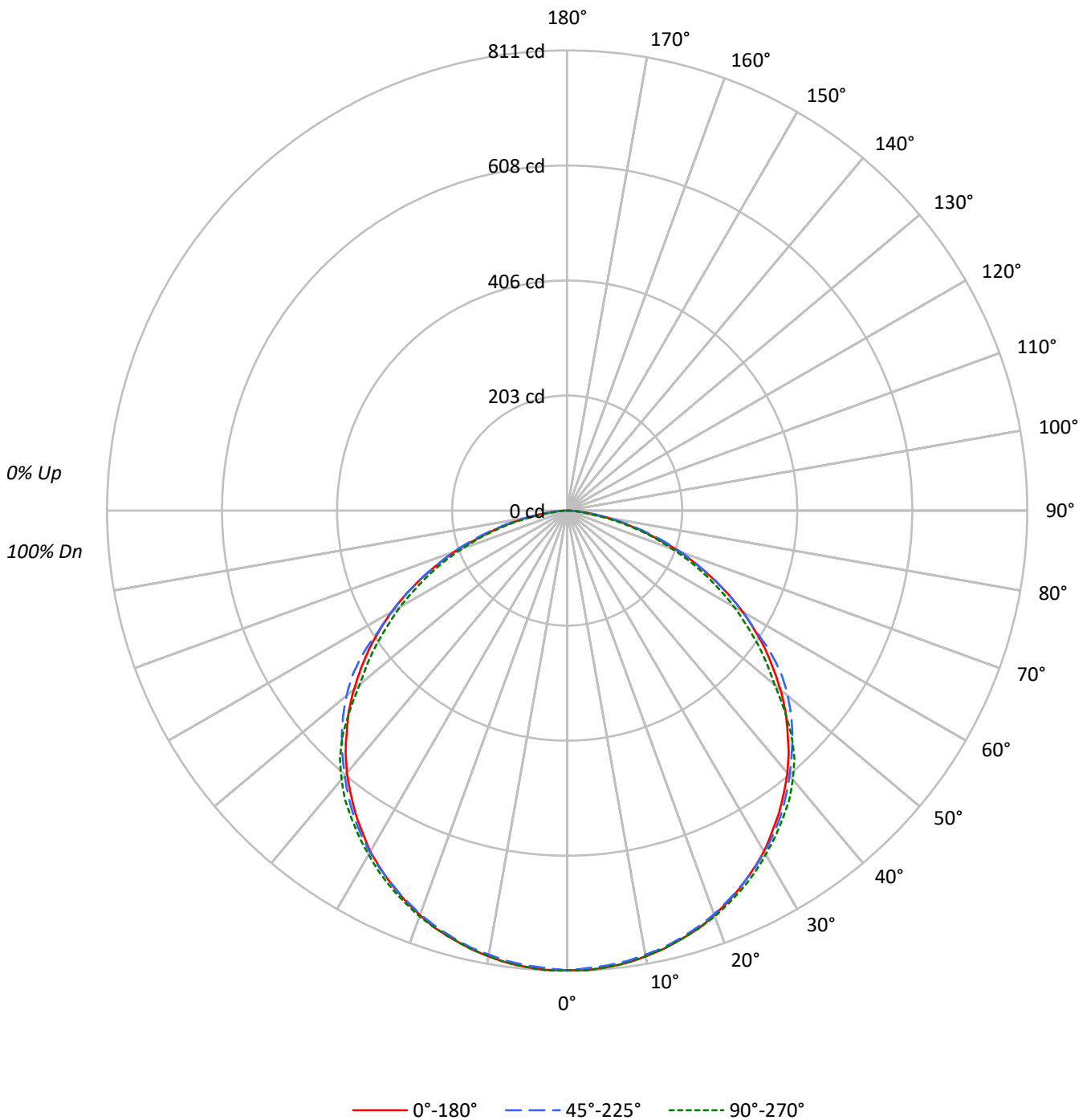
Input Watts (W): 30.969
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2181 | 2181 | 2181 |
| 5° | 2182 | 2174 | 2182 |
| 10° | 2180 | 2171 | 2180 |
| 15° | 2177 | 2170 | 2177 |
| 20° | 2172 | 2168 | 2179 |
| 25° | 2164 | 2162 | 2178 |
| 30° | 2156 | 2160 | 2175 |
| 35° | 2138 | 2156 | 2176 |
| 40° | 2121 | 2143 | 2173 |
| 45° | 2089 | 2137 | 2128 |
| 50° | 2053 | 2125 | 1997 |
| 55° | 2000 | 2059 | 1923 |
| 60° | 1924 | 1919 | 1831 |
| 65° | 1803 | 1813 | 1713 |
| 70° | 1655 | 1674 | 1551 |
| 75° | 1390 | 1456 | 1326 |
| 80° | 1103 | 1127 | 933 |
| 85° | 726 | 627 | 531 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 76.7 | 3.3 |
| 10°-20° | 220.5 | 9.6 |
| 20°-30° | 336.8 | 14.6 |
| 30°-40° | 410.9 | 17.8 |
| 40°-50° | 429.7 | 18.6 |
| 50°-60° | 380.4 | 16.5 |
| 60°-70° | 280.1 | 12.1 |
| 70°-80° | 145.0 | 6.3 |
| 80°-90° | 28.9 | 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° | 634.0 | 27.5 |
| 0°-40° | 1044.9 | 45.3 |
| 0°-60° | 1855.0 | 80.3 |
| 0°-90° | 2309.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2309.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 810 | 810 | 810 | 810 | 810 | |
| 5° | 808 | 808 | 805 | 808 | 808 | 77 |
| 15° | 781 | 781 | 779 | 782 | 781 | 221 |
| 25° | 729 | 729 | 728 | 733 | 734 | 336 |
| 35° | 651 | 652 | 656 | 662 | 662 | 407 |
| 45° | 549 | 554 | 562 | 566 | 559 | 424 |
| 55° | 426 | 435 | 439 | 416 | 410 | 380 |
| 65° | 283 | 300 | 285 | 274 | 269 | 280 |
| 75° | 134 | 143 | 140 | 131 | 128 | 143 |
| 85° | 24 | 25 | 20 | 18 | 17 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P259136

CATALOG NUMBER: 14CZ-LD5-39-SQP-UNV-L82765-W2A1-U-2700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 810.3 | 810.3 | 810.3 | 810.3 | 810.3 |
| 2.5° | 810.3 | 810.3 | 807.1 | 810.3 | 811.1 |
| 5° | 807.9 | 807.9 | 804.8 | 807.9 | 807.9 |
| 7.5° | 804.0 | 803.2 | 800.9 | 804.0 | 804.0 |
| 10° | 797.8 | 797.8 | 794.6 | 798.5 | 797.8 |
| 12.5° | 790.7 | 789.9 | 788.4 | 791.5 | 790.7 |
| 15° | 781.3 | 781.3 | 779.0 | 782.1 | 781.3 |
| 17.5° | 771.9 | 771.2 | 768.8 | 771.9 | 771.9 |
| 20° | 758.6 | 757.9 | 757.1 | 760.2 | 761.0 |
| 22.5° | 744.6 | 743.8 | 743.0 | 747.7 | 747.7 |
| 25° | 728.9 | 728.9 | 728.1 | 732.8 | 733.6 |
| 27.5° | 711.7 | 711.7 | 712.5 | 718.8 | 718.0 |
| 30° | 693.7 | 693.7 | 695.3 | 700.0 | 700.0 |
| 32.5° | 671.8 | 673.4 | 676.5 | 682.0 | 682.0 |
| 35° | 650.7 | 652.3 | 656.2 | 662.4 | 662.4 |
| 37.5° | 627.3 | 629.6 | 633.5 | 641.3 | 642.9 |
| 40° | 603.8 | 605.4 | 610.0 | 618.7 | 618.7 |
| 42.5° | 578.0 | 579.5 | 585.8 | 594.4 | 592.8 |
| 45° | 549.0 | 553.7 | 561.6 | 566.2 | 559.2 |
| 47.5° | 521.7 | 524.8 | 535.7 | 530.3 | 518.5 |
| 50° | 490.4 | 496.6 | 507.6 | 488.0 | 477.1 |
| 52.5° | 458.3 | 465.4 | 477.1 | 449.7 | 443.5 |
| 55° | 426.3 | 434.9 | 438.8 | 416.1 | 409.8 |
| 57.5° | 391.8 | 401.2 | 393.4 | 380.1 | 373.8 |
| 60° | 357.4 | 368.4 | 356.6 | 344.1 | 340.2 |
| 62.5° | 321.4 | 334.0 | 320.7 | 309.7 | 304.2 |
| 65° | 283.1 | 300.3 | 284.7 | 273.7 | 269.0 |
| 67.5° | 245.6 | 263.6 | 247.1 | 237.8 | 234.6 |
| 70° | 210.4 | 220.6 | 212.7 | 203.3 | 197.1 |
| 72.5° | 168.2 | 178.3 | 176.8 | 166.6 | 162.7 |
| 75° | 133.7 | 143.1 | 140.0 | 131.4 | 127.5 |
| 77.5° | 99.3 | 109.5 | 106.4 | 96.2 | 94.6 |
| 80° | 71.2 | 78.2 | 72.7 | 63.4 | 60.2 |
| 82.5° | 44.6 | 50.1 | 43.0 | 36.0 | 34.4 |
| 85° | 23.5 | 25.0 | 20.3 | 18.0 | 17.2 |
| 87.5° | 7.8 | 8.6 | 8.6 | 7.8 | 7.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)