

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: P260298

Luminaire Tested: **22CZ-LD5-29-SQP-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P260298
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25713)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ-LD5-29-SQP-UNV-L82765-W2A1-U-4500K
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER
WITH SQP LENS
Light Source: (168) 80 CRI LEDS TUNED AT 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1812.0 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

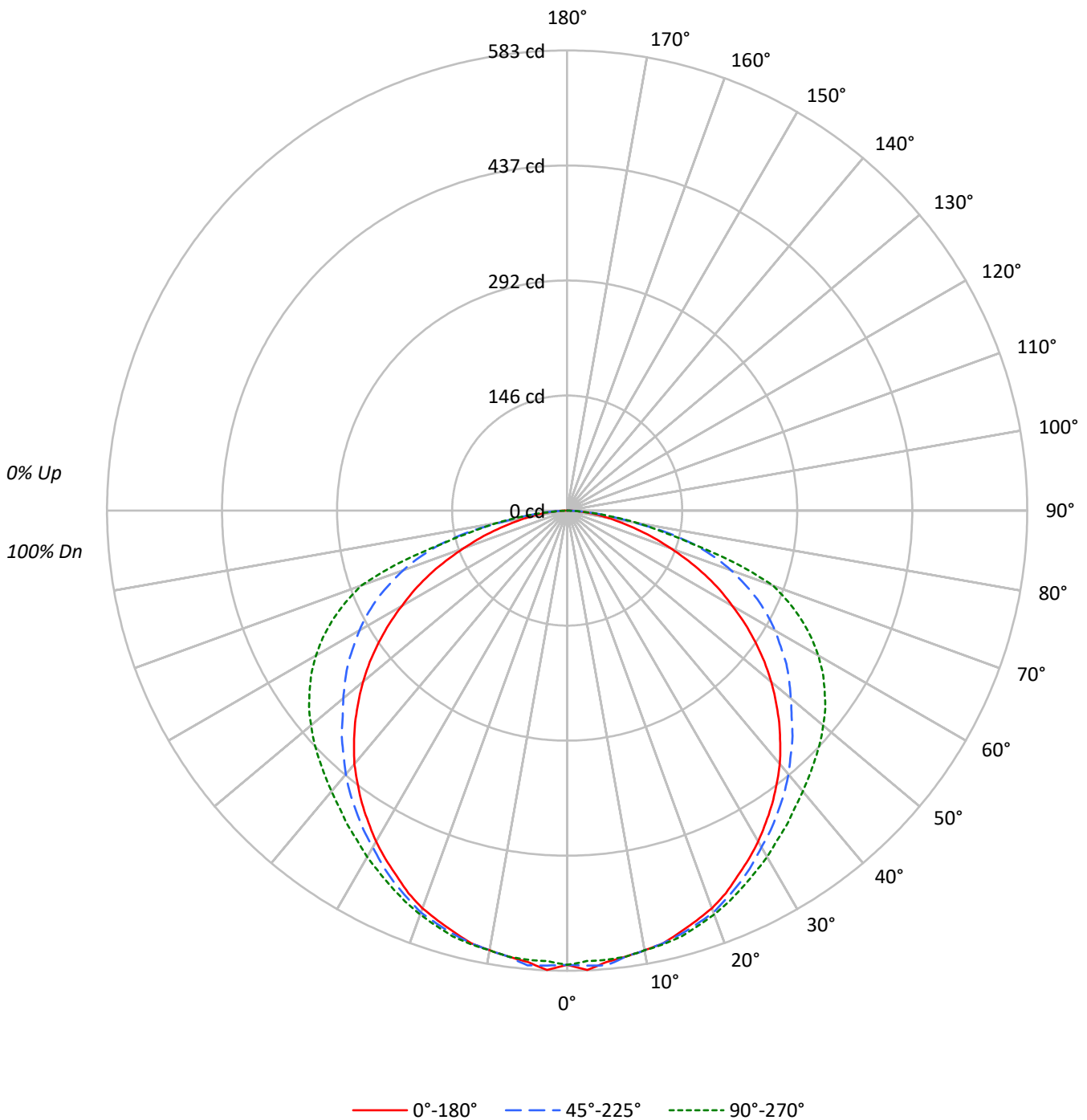
Input Watts (W): 21.204
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 108 | 103 | 99 | 95 | 105 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 87 | 89 | 87 | 85 | 83 | | | | | 83 | | | |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 | | | | | 68 | | | |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 59 | 68 | 63 | 58 | 56 | | | | | 56 | | | |
| 4 | 81 | 68 | 59 | 52 | 79 | 67 | 58 | 52 | 64 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 50 | 47 | | | | | 47 | | | |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 44 | 58 | 50 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 41 | | | | | 41 | | | |
| 6 | 68 | 55 | 45 | 39 | 66 | 54 | 45 | 39 | 52 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 37 | 35 | | | | | 35 | | | |
| 7 | 63 | 49 | 40 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 33 | 44 | 38 | 33 | 31 | | | | | 31 | | | |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 28 | | | | | 28 | | | |
| 9 | 55 | 41 | 33 | 27 | 54 | 41 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 | | | | | 25 | | | |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 35 | 28 | 24 | 22 | | | | | 22 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1549 | 1549 | 1549 |
| 5° | 1551 | 1562 | 1543 |
| 10° | 1546 | 1546 | 1546 |
| 15° | 1541 | 1548 | 1556 |
| 20° | 1535 | 1552 | 1560 |
| 25° | 1517 | 1542 | 1563 |
| 30° | 1504 | 1530 | 1574 |
| 35° | 1488 | 1530 | 1595 |
| 40° | 1473 | 1532 | 1631 |
| 45° | 1446 | 1537 | 1692 |
| 50° | 1414 | 1549 | 1773 |
| 55° | 1367 | 1591 | 1868 |
| 60° | 1302 | 1636 | 1977 |
| 65° | 1228 | 1694 | 2088 |
| 70° | 1096 | 1738 | 2181 |
| 75° | 951 | 1742 | 1726 |
| 80° | 807 | 1286 | 1396 |
| 85° | 695 | 868 | 781 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 54.6 | 3.0 |
| 10°-20° | 156.9 | 8.7 |
| 20°-30° | 239.2 | 13.2 |
| 30°-40° | 292.6 | 16.1 |
| 40°-50° | 314.8 | 17.4 |
| 50°-60° | 305.0 | 16.8 |
| 60°-70° | 258.4 | 14.3 |
| 70°-80° | 156.2 | 8.6 |
| 80°-90° | 34.3 | 1.9 |
| 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° | 450.7 | 24.9 |
| 0°-40° | 743.3 | 41.0 |
| 0°-60° | 1363.2 | 75.2 |
| 0°-90° | 1812.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1812.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 576 | 576 | 576 | 576 | 576 | |
| 5° | 574 | 574 | 578 | 576 | 571 | 55 |
| 15° | 553 | 554 | 556 | 557 | 559 | 156 |
| 25° | 511 | 514 | 519 | 524 | 526 | 236 |
| 35° | 453 | 456 | 466 | 478 | 486 | 283 |
| 45° | 380 | 387 | 404 | 429 | 445 | 293 |
| 55° | 291 | 304 | 339 | 378 | 398 | 260 |
| 65° | 193 | 214 | 266 | 308 | 328 | 190 |
| 75° | 92 | 124 | 168 | 170 | 166 | 98 |
| 85° | 22 | 27 | 28 | 27 | 25 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 575.5 | 575.5 | 575.5 | 575.5 | 575.5 |
| 2.5° | 582.6 | 581.2 | 576.9 | 574.1 | 571.3 |
| 5° | 574.1 | 574.1 | 578.4 | 575.5 | 571.3 |
| 7.5° | 569.9 | 569.9 | 569.9 | 576.9 | 569.9 |
| 10° | 565.7 | 567.1 | 565.7 | 571.3 | 565.7 |
| 12.5° | 561.5 | 561.5 | 561.5 | 562.9 | 562.9 |
| 15° | 553.0 | 554.4 | 555.8 | 557.2 | 558.7 |
| 17.5° | 544.6 | 546.0 | 548.8 | 550.2 | 551.6 |
| 20° | 536.1 | 537.5 | 541.8 | 541.8 | 544.6 |
| 22.5° | 524.9 | 524.9 | 530.5 | 531.9 | 536.1 |
| 25° | 510.8 | 513.6 | 519.3 | 523.5 | 526.3 |
| 27.5° | 498.1 | 501.0 | 506.6 | 512.2 | 516.4 |
| 30° | 484.1 | 486.9 | 492.5 | 501.0 | 506.6 |
| 32.5° | 468.6 | 471.4 | 479.9 | 489.7 | 495.3 |
| 35° | 453.1 | 455.9 | 465.8 | 478.4 | 485.5 |
| 37.5° | 436.2 | 440.4 | 451.7 | 465.8 | 474.2 |
| 40° | 419.3 | 423.6 | 436.2 | 451.7 | 464.4 |
| 42.5° | 399.6 | 405.3 | 419.3 | 440.4 | 454.5 |
| 45° | 379.9 | 387.0 | 403.9 | 429.2 | 444.7 |
| 47.5° | 358.8 | 365.9 | 385.6 | 417.9 | 434.8 |
| 50° | 337.7 | 346.2 | 370.1 | 405.3 | 423.6 |
| 52.5° | 315.2 | 323.7 | 354.6 | 392.6 | 412.3 |
| 55° | 291.3 | 304.0 | 339.1 | 378.5 | 398.2 |
| 57.5° | 267.4 | 281.4 | 320.8 | 363.1 | 384.2 |
| 60° | 242.0 | 258.9 | 304.0 | 346.2 | 367.3 |
| 62.5° | 218.1 | 236.4 | 285.7 | 327.9 | 349.0 |
| 65° | 192.8 | 213.9 | 266.0 | 308.2 | 327.9 |
| 67.5° | 166.0 | 192.8 | 243.4 | 284.3 | 304.0 |
| 70° | 139.3 | 170.3 | 220.9 | 258.9 | 277.2 |
| 72.5° | 115.4 | 147.8 | 195.6 | 228.0 | 228.0 |
| 75° | 91.5 | 123.8 | 167.5 | 170.3 | 166.0 |
| 77.5° | 70.4 | 101.3 | 130.9 | 119.6 | 122.4 |
| 80° | 52.1 | 77.4 | 83.0 | 87.2 | 90.1 |
| 82.5° | 35.2 | 52.1 | 53.5 | 56.3 | 56.3 |
| 85° | 22.5 | 26.7 | 28.1 | 26.7 | 25.3 |
| 87.5° | 9.9 | 11.3 | 8.4 | 5.6 | 4.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)