

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: P277271

Luminaire Tested: **22CZ2-20HE-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277271
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20HE-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1861.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

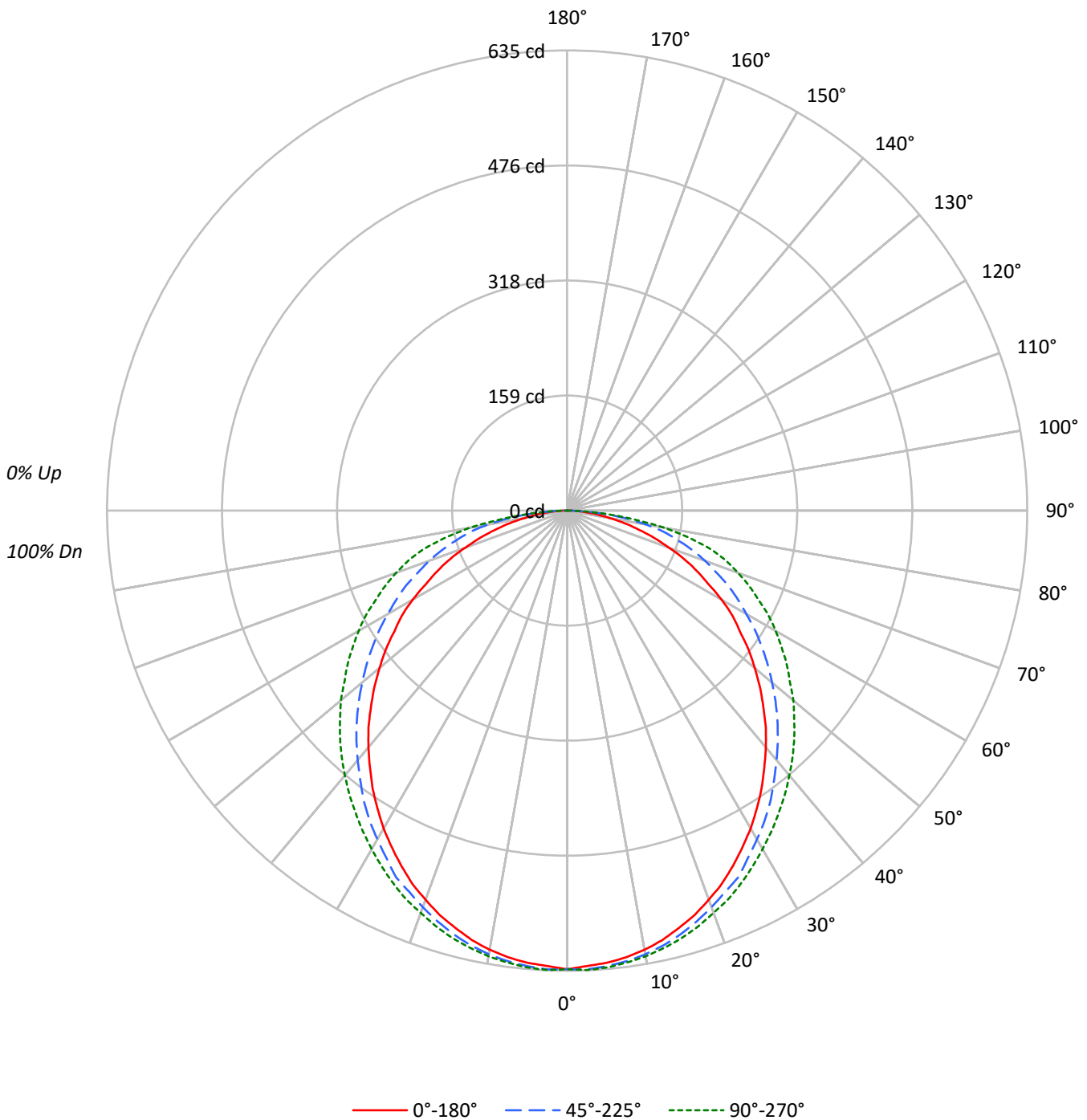
Input Watts (W): 15.903
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 86 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 89 | 78 | 69 | 63 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | 56 |
| 4 | 81 | 69 | 60 | 53 | 79 | 67 | 59 | 52 | 65 | 57 | 52 | 63 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 75 | 61 | 52 | 45 | 72 | 60 | 52 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 46 | 39 | 52 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1703 | 1703 | 1703 |
| 5° | 1692 | 1704 | 1709 |
| 10° | 1682 | 1699 | 1706 |
| 15° | 1661 | 1686 | 1702 |
| 20° | 1636 | 1668 | 1692 |
| 25° | 1607 | 1659 | 1686 |
| 30° | 1574 | 1628 | 1676 |
| 35° | 1537 | 1606 | 1672 |
| 40° | 1499 | 1579 | 1676 |
| 45° | 1457 | 1561 | 1687 |
| 50° | 1415 | 1545 | 1706 |
| 55° | 1366 | 1538 | 1736 |
| 60° | 1326 | 1538 | 1789 |
| 65° | 1259 | 1563 | 1854 |
| 70° | 1175 | 1592 | 1974 |
| 75° | 1076 | 1647 | 2132 |
| 80° | 936 | 1717 | 2100 |
| 85° | 821 | 1525 | 1667 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.8 | 3.2 |
| 10°-20° | 170.5 | 9.2 |
| 20°-30° | 255.9 | 13.7 |
| 30°-40° | 305.8 | 16.4 |
| 40°-50° | 317.9 | 17.1 |
| 50°-60° | 294.7 | 15.8 |
| 60°-70° | 241.7 | 13.0 |
| 70°-80° | 163.4 | 8.8 |
| 80°-90° | 51.3 | 2.8 |
| 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° | 486.2 | 26.1 |
| 0°-40° | 791.9 | 42.6 |
| 0°-60° | 1404.6 | 75.5 |
| 0°-90° | 1861.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1861.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 633 | 633 | 633 | 633 | 633 | |
| 5° | 626 | 627 | 631 | 632 | 633 | 59 |
| 15° | 596 | 599 | 605 | 609 | 611 | 168 |
| 25° | 541 | 546 | 559 | 565 | 568 | 249 |
| 35° | 468 | 474 | 489 | 504 | 509 | 292 |
| 45° | 383 | 390 | 410 | 434 | 443 | 296 |
| 55° | 291 | 300 | 328 | 357 | 370 | 262 |
| 65° | 198 | 209 | 245 | 278 | 291 | 196 |
| 75° | 104 | 121 | 158 | 190 | 205 | 110 |
| 85° | 27 | 37 | 49 | 55 | 54 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 632.8 | 632.8 | 632.8 | 632.8 | 632.8 |
| 2.5° | 629.1 | 630.9 | 633.7 | 634.6 | 634.6 |
| 5° | 626.4 | 627.3 | 630.9 | 631.9 | 632.8 |
| 7.5° | 621.8 | 623.6 | 627.3 | 628.2 | 629.1 |
| 10° | 615.4 | 617.2 | 621.8 | 623.6 | 624.5 |
| 12.5° | 607.1 | 609.0 | 614.5 | 617.2 | 618.1 |
| 15° | 596.1 | 598.9 | 605.3 | 609.0 | 610.8 |
| 17.5° | 585.2 | 587.9 | 594.3 | 599.8 | 601.6 |
| 20° | 571.4 | 577.8 | 582.4 | 589.7 | 590.7 |
| 22.5° | 557.7 | 561.3 | 569.6 | 576.9 | 580.6 |
| 25° | 541.2 | 545.8 | 558.6 | 565.0 | 567.8 |
| 27.5° | 523.8 | 530.2 | 540.3 | 550.4 | 554.0 |
| 30° | 506.4 | 511.0 | 523.8 | 535.7 | 539.4 |
| 32.5° | 487.2 | 493.6 | 507.3 | 519.2 | 524.7 |
| 35° | 467.9 | 474.4 | 489.0 | 503.7 | 509.1 |
| 37.5° | 446.9 | 454.2 | 468.9 | 486.3 | 493.6 |
| 40° | 426.7 | 432.2 | 449.6 | 470.7 | 477.1 |
| 42.5° | 405.7 | 412.1 | 430.4 | 453.3 | 460.6 |
| 45° | 382.8 | 390.1 | 410.3 | 434.1 | 443.2 |
| 47.5° | 360.8 | 368.1 | 390.1 | 413.9 | 424.9 |
| 50° | 337.9 | 347.1 | 369.0 | 396.5 | 407.5 |
| 52.5° | 315.9 | 324.2 | 348.9 | 377.3 | 387.4 |
| 55° | 291.2 | 300.4 | 327.8 | 357.1 | 370.0 |
| 57.5° | 271.1 | 277.5 | 307.7 | 337.9 | 350.7 |
| 60° | 246.3 | 254.6 | 285.7 | 317.8 | 332.4 |
| 62.5° | 219.8 | 233.5 | 265.6 | 298.5 | 313.2 |
| 65° | 197.8 | 208.8 | 245.4 | 277.5 | 291.2 |
| 67.5° | 174.9 | 186.8 | 222.5 | 256.4 | 272.0 |
| 70° | 149.3 | 164.8 | 202.4 | 236.3 | 250.9 |
| 72.5° | 126.4 | 142.9 | 181.3 | 214.3 | 229.8 |
| 75° | 103.5 | 120.9 | 158.4 | 190.5 | 205.1 |
| 77.5° | 81.5 | 100.7 | 137.4 | 162.1 | 171.2 |
| 80° | 60.4 | 78.8 | 110.8 | 128.2 | 135.5 |
| 82.5° | 42.1 | 57.7 | 81.5 | 90.7 | 92.5 |
| 85° | 26.6 | 36.6 | 49.4 | 54.9 | 54.0 |
| 87.5° | 11.9 | 14.7 | 18.3 | 20.1 | 19.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)