

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: P277569

Luminaire Tested: **22CZ2-29HE-RDP-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277569
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-29HE-RDP-UNV-L82765-W2A1-U-4000K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1775.0 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

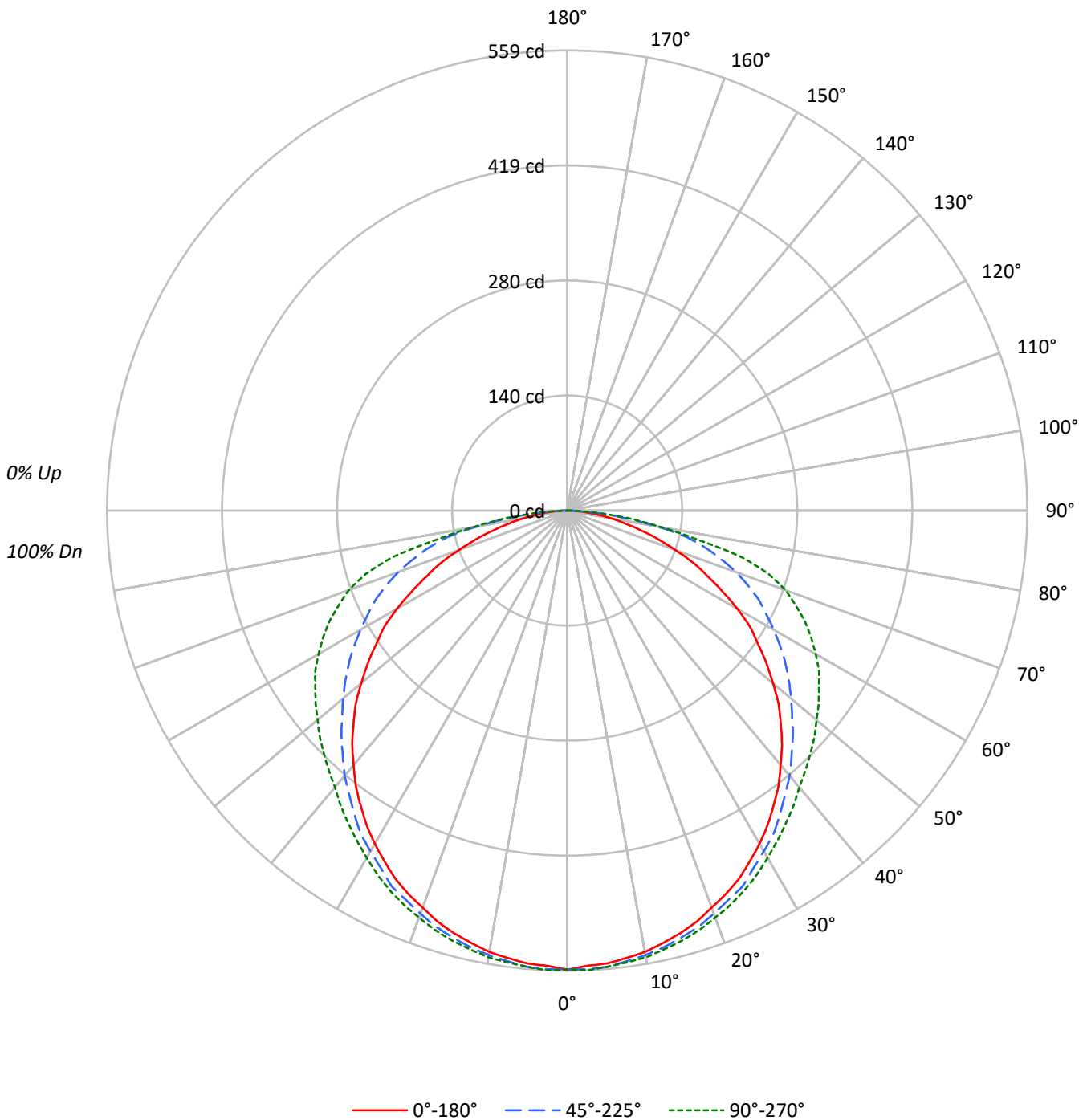
Input Watts (W): 21.111
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 96 | 92 | 96 | 92 | 89 | 92 | 89 | 86 | 88 | 86 | 84 | 82 |
| 2 | 97 | 88 | 81 | 75 | 95 | 86 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 76 | 72 | 69 | 67 |
| 3 | 88 | 77 | 68 | 61 | 86 | 75 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 55 |
| 4 | 80 | 68 | 59 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 50 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 33 | 61 | 48 | 39 | 33 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 35 | 30 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 32 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 24 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1500 | 1500 | 1500 |
| 5° | 1492 | 1503 | 1503 |
| 10° | 1488 | 1498 | 1506 |
| 15° | 1480 | 1495 | 1506 |
| 20° | 1470 | 1492 | 1507 |
| 25° | 1466 | 1496 | 1512 |
| 30° | 1453 | 1485 | 1513 |
| 35° | 1437 | 1480 | 1523 |
| 40° | 1417 | 1477 | 1541 |
| 45° | 1396 | 1476 | 1590 |
| 50° | 1366 | 1487 | 1656 |
| 55° | 1329 | 1519 | 1752 |
| 60° | 1286 | 1560 | 1876 |
| 65° | 1197 | 1638 | 2029 |
| 70° | 1099 | 1716 | 2219 |
| 75° | 964 | 1806 | 2295 |
| 80° | 829 | 1720 | 1801 |
| 85° | 726 | 1250 | 1371 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.7 | 3.0 |
| 10°-20° | 151.4 | 8.5 |
| 20°-30° | 231.0 | 13.0 |
| 30°-40° | 282.1 | 15.9 |
| 40°-50° | 301.6 | 17.0 |
| 50°-60° | 291.1 | 16.4 |
| 60°-70° | 250.6 | 14.1 |
| 70°-80° | 169.6 | 9.6 |
| 80°-90° | 44.7 | 2.5 |
| 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° | 435.2 | 24.5 |
| 0°-40° | 717.3 | 40.4 |
| 0°-60° | 1310.1 | 73.8 |
| 0°-90° | 1775.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1775.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 558 | 558 | 558 | 558 | 558 | |
| 5° | 552 | 554 | 556 | 556 | 556 | 52 |
| 15° | 531 | 533 | 537 | 539 | 541 | 150 |
| 25° | 494 | 496 | 504 | 507 | 509 | 227 |
| 35° | 437 | 441 | 450 | 460 | 464 | 274 |
| 45° | 367 | 373 | 388 | 407 | 418 | 283 |
| 55° | 283 | 292 | 324 | 356 | 373 | 254 |
| 65° | 188 | 206 | 257 | 298 | 319 | 187 |
| 75° | 93 | 123 | 174 | 209 | 221 | 99 |
| 85° | 24 | 33 | 40 | 42 | 44 | 26 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 557.6 | 557.6 | 557.6 | 557.6 | 557.6 |
| 2.5° | 553.6 | 554.9 | 557.6 | 557.6 | 558.9 |
| 5° | 552.3 | 553.6 | 556.3 | 556.3 | 556.3 |
| 7.5° | 548.4 | 549.7 | 552.3 | 553.6 | 553.6 |
| 10° | 544.5 | 545.8 | 548.4 | 549.7 | 551.0 |
| 12.5° | 538.0 | 539.3 | 543.2 | 545.8 | 545.8 |
| 15° | 531.4 | 532.7 | 536.7 | 539.3 | 540.6 |
| 17.5° | 523.6 | 526.2 | 530.1 | 532.7 | 534.1 |
| 20° | 513.2 | 515.8 | 521.0 | 524.9 | 526.2 |
| 22.5° | 504.0 | 506.6 | 511.9 | 515.8 | 518.4 |
| 25° | 493.6 | 496.2 | 504.0 | 506.6 | 509.2 |
| 27.5° | 480.5 | 483.1 | 489.7 | 494.9 | 498.8 |
| 30° | 467.5 | 470.1 | 477.9 | 484.4 | 487.0 |
| 32.5° | 453.1 | 457.0 | 466.2 | 471.4 | 475.3 |
| 35° | 437.4 | 441.3 | 450.5 | 459.6 | 463.5 |
| 37.5° | 421.8 | 425.7 | 434.8 | 446.6 | 451.8 |
| 40° | 403.5 | 408.7 | 420.5 | 436.1 | 438.7 |
| 42.5° | 386.5 | 393.0 | 403.5 | 421.8 | 428.3 |
| 45° | 366.9 | 373.4 | 387.8 | 407.4 | 417.8 |
| 47.5° | 348.6 | 355.2 | 370.8 | 394.3 | 407.4 |
| 50° | 326.4 | 335.6 | 355.2 | 382.6 | 395.6 |
| 52.5° | 305.5 | 313.4 | 339.5 | 369.5 | 385.2 |
| 55° | 283.3 | 292.5 | 323.8 | 356.5 | 373.4 |
| 57.5° | 263.8 | 271.6 | 306.9 | 343.4 | 363.0 |
| 60° | 239.0 | 249.4 | 289.9 | 329.1 | 348.6 |
| 62.5° | 212.8 | 228.5 | 272.9 | 313.4 | 334.3 |
| 65° | 188.0 | 206.3 | 257.2 | 297.7 | 318.6 |
| 67.5° | 165.8 | 185.4 | 237.6 | 280.7 | 300.3 |
| 70° | 139.7 | 164.5 | 218.1 | 259.8 | 282.0 |
| 72.5° | 116.2 | 143.6 | 195.9 | 237.6 | 257.2 |
| 75° | 92.7 | 122.7 | 173.7 | 208.9 | 220.7 |
| 77.5° | 71.8 | 100.5 | 148.9 | 159.3 | 160.6 |
| 80° | 53.5 | 79.7 | 111.0 | 112.3 | 116.2 |
| 82.5° | 36.6 | 56.1 | 71.8 | 78.3 | 79.7 |
| 85° | 23.5 | 32.6 | 40.5 | 41.8 | 44.4 |
| 87.5° | 10.4 | 11.8 | 14.4 | 13.1 | 13.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)