

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: P276807

Luminaire Tested: **24CZ2-30HE-RDP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-30HE-RDP-UNV-L93050-W2A1-U-3000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1519.6 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

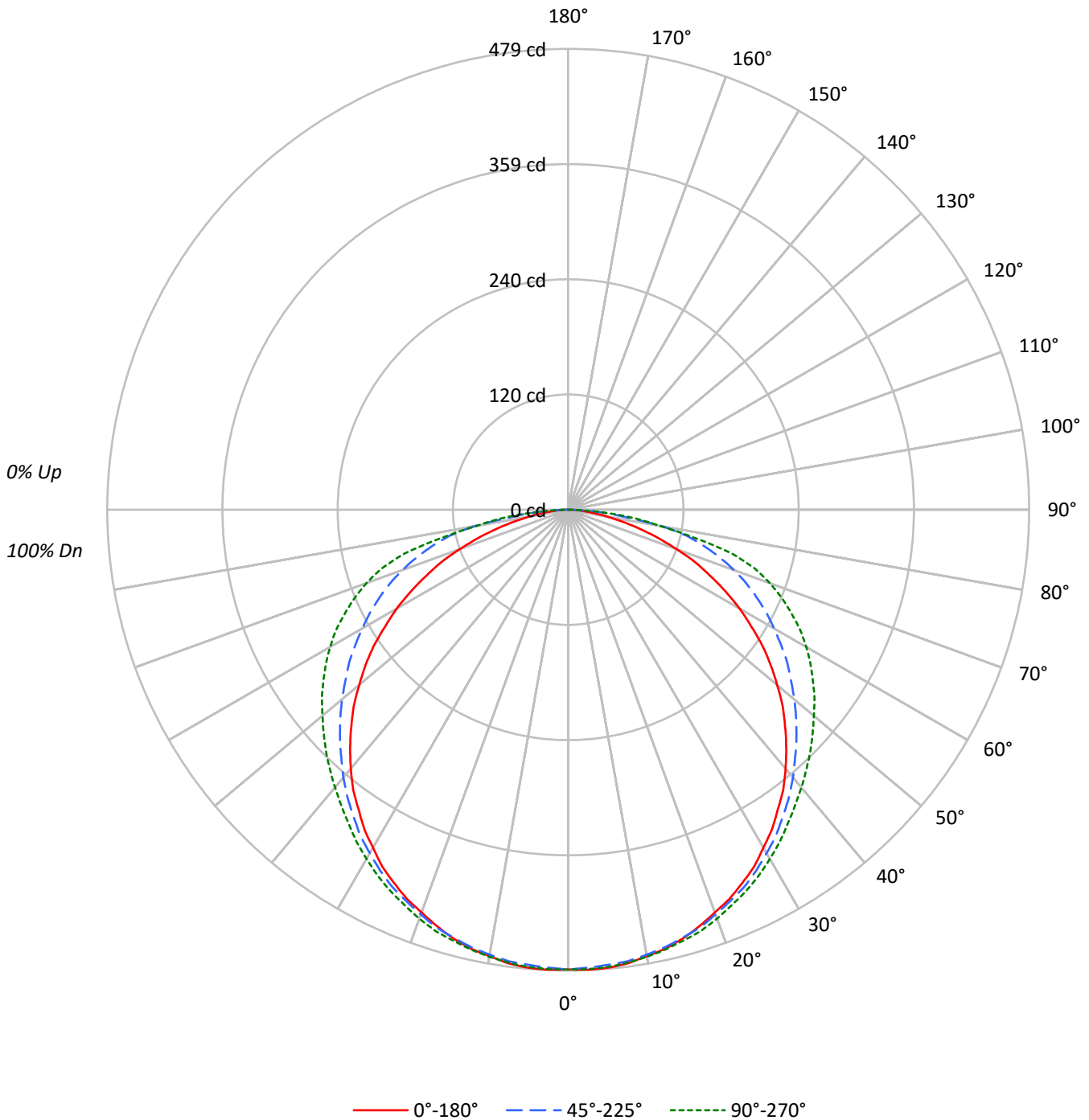
Input Watts (W): 20.074329
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 93 | 89 | 92 | 89 | 87 | 88 | 86 | 84 | 82 |
| 2 | 97 | 89 | 81 | 75 | 95 | 87 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 77 | 73 | 69 | 67 |
| 3 | 88 | 77 | 68 | 62 | 86 | 76 | 67 | 61 | 72 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 51 | 64 | 57 | 51 | 62 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 51 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 45 | 38 | 51 | 44 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 27 | 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° | 643 | 643 | 643 |
| 5° | 645 | 641 | 644 |
| 10° | 644 | 642 | 645 |
| 15° | 643 | 641 | 646 |
| 20° | 638 | 641 | 648 |
| 25° | 636 | 642 | 649 |
| 30° | 630 | 641 | 651 |
| 35° | 624 | 639 | 654 |
| 40° | 617 | 638 | 662 |
| 45° | 607 | 638 | 677 |
| 50° | 593 | 642 | 697 |
| 55° | 578 | 652 | 728 |
| 60° | 554 | 665 | 769 |
| 65° | 518 | 689 | 816 |
| 70° | 471 | 721 | 878 |
| 75° | 400 | 760 | 917 |
| 80° | 315 | 765 | 742 |
| 85° | 233 | 582 | 651 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.3 | 3.0 |
| 10°-20° | 130.5 | 8.6 |
| 20°-30° | 199.5 | 13.1 |
| 30°-40° | 243.9 | 16.0 |
| 40°-50° | 259.9 | 17.1 |
| 50°-60° | 248.5 | 16.4 |
| 60°-70° | 210.5 | 13.9 |
| 70°-80° | 141.5 | 9.3 |
| 80°-90° | 39.9 | 2.6 |
| 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° | 375.3 | 24.7 |
| 0°-40° | 619.2 | 40.7 |
| 0°-60° | 1127.7 | 74.2 |
| 0°-90° | 1519.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1519.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 478 | 478 | 478 | 478 | 478 | |
| 5° | 478 | 477 | 475 | 477 | 477 | 45 |
| 15° | 461 | 461 | 460 | 464 | 464 | 130 |
| 25° | 428 | 430 | 433 | 436 | 437 | 197 |
| 35° | 380 | 383 | 389 | 396 | 398 | 238 |
| 45° | 319 | 324 | 335 | 350 | 356 | 246 |
| 55° | 246 | 256 | 278 | 300 | 310 | 220 |
| 65° | 163 | 179 | 216 | 245 | 256 | 162 |
| 75° | 77 | 105 | 146 | 171 | 176 | 82 |
| 85° | 15 | 31 | 38 | 41 | 42 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276807

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 477.9 | 477.9 | 477.9 | 477.9 | 477.9 |
| 2.5° | 478.6 | 478.6 | 476.4 | 477.9 | 477.9 |
| 5° | 477.9 | 477.1 | 474.9 | 477.1 | 477.1 |
| 7.5° | 475.6 | 474.9 | 473.4 | 475.6 | 474.9 |
| 10° | 471.1 | 471.1 | 469.6 | 471.9 | 471.9 |
| 12.5° | 467.3 | 466.6 | 465.8 | 468.8 | 468.1 |
| 15° | 461.3 | 461.3 | 460.5 | 464.3 | 463.6 |
| 17.5° | 453.8 | 454.5 | 455.3 | 458.3 | 459.0 |
| 20° | 445.5 | 447.0 | 447.7 | 452.3 | 452.3 |
| 22.5° | 437.9 | 438.7 | 440.2 | 444.7 | 444.7 |
| 25° | 428.1 | 429.6 | 432.7 | 436.4 | 437.2 |
| 27.5° | 418.3 | 419.1 | 422.9 | 428.1 | 428.9 |
| 30° | 405.5 | 407.8 | 412.3 | 418.3 | 419.1 |
| 32.5° | 394.2 | 396.5 | 401.8 | 407.8 | 409.3 |
| 35° | 379.9 | 382.9 | 388.9 | 396.5 | 398.0 |
| 37.5° | 367.1 | 369.3 | 376.9 | 385.2 | 387.4 |
| 40° | 351.3 | 355.8 | 363.3 | 373.1 | 376.9 |
| 42.5° | 335.4 | 339.9 | 349.0 | 361.8 | 366.3 |
| 45° | 318.8 | 324.1 | 335.4 | 349.7 | 355.8 |
| 47.5° | 302.3 | 308.3 | 321.1 | 337.7 | 344.5 |
| 50° | 283.4 | 291.0 | 306.8 | 325.6 | 333.2 |
| 52.5° | 265.3 | 274.4 | 291.7 | 312.8 | 322.6 |
| 55° | 246.5 | 255.5 | 278.1 | 300.0 | 310.5 |
| 57.5° | 225.4 | 237.4 | 262.3 | 287.2 | 298.5 |
| 60° | 205.8 | 217.1 | 247.2 | 274.4 | 285.7 |
| 62.5° | 184.7 | 199.7 | 232.2 | 260.8 | 272.1 |
| 65° | 162.8 | 179.4 | 216.3 | 245.0 | 256.3 |
| 67.5° | 143.2 | 161.3 | 200.5 | 229.1 | 240.4 |
| 70° | 119.8 | 142.5 | 183.2 | 211.8 | 223.1 |
| 72.5° | 98.0 | 122.9 | 165.1 | 193.0 | 203.5 |
| 75° | 76.9 | 104.8 | 146.2 | 171.1 | 176.4 |
| 77.5° | 57.3 | 86.7 | 126.6 | 137.2 | 133.4 |
| 80° | 40.7 | 69.3 | 98.7 | 93.5 | 95.7 |
| 82.5° | 26.4 | 52.8 | 61.1 | 69.3 | 71.6 |
| 85° | 15.1 | 30.9 | 37.7 | 40.7 | 42.2 |
| 87.5° | 6.8 | 11.3 | 15.1 | 15.1 | 14.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)