

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: P277218

Luminaire Tested: **22CZ2-20HE-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277218
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-L82765-W2A1-U-5500K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2093.0 lumens
Efficiency: N/A
Efficacy: 130.8 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

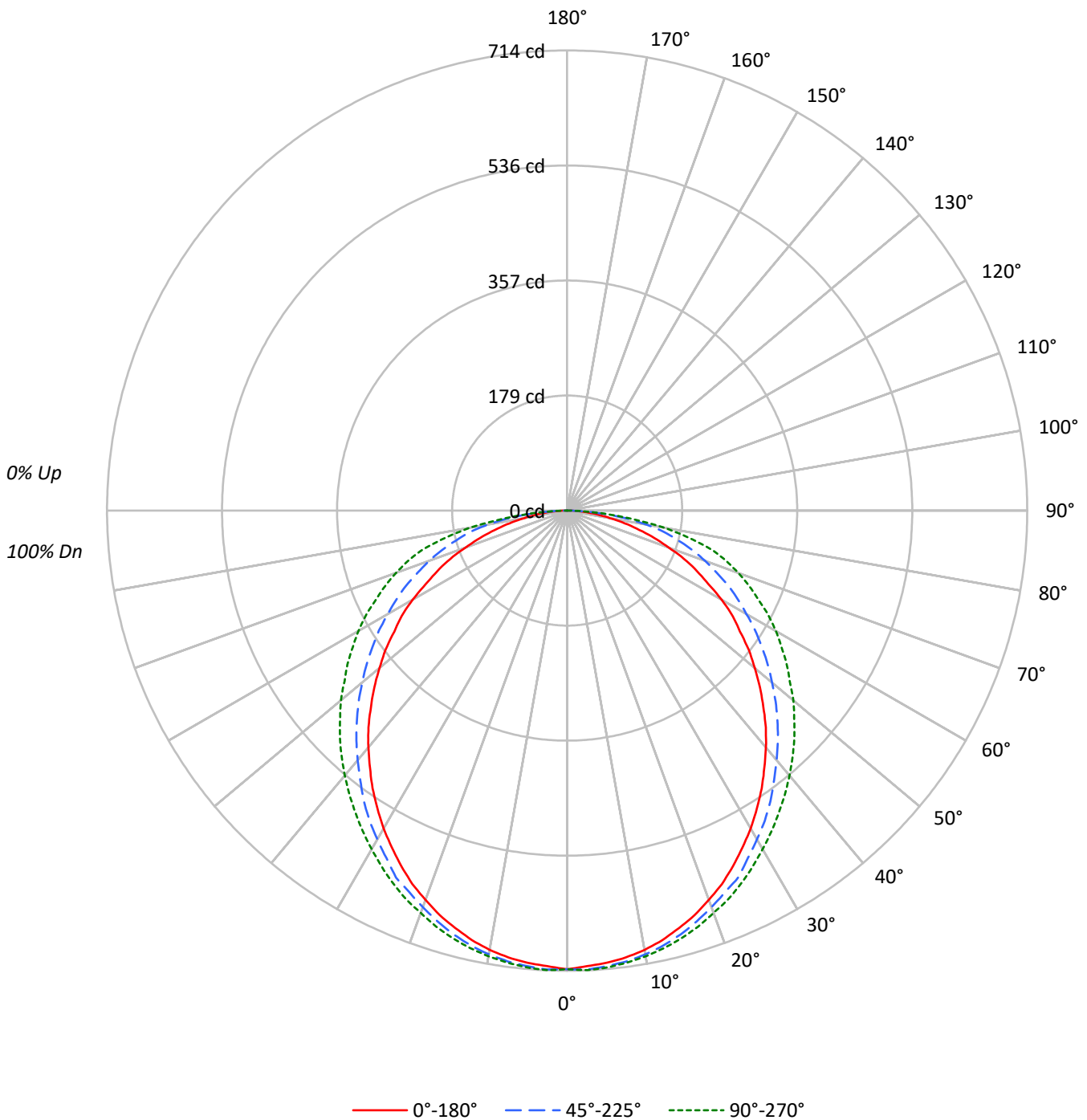
Input Watts (W): 15.996
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P277218

CATALOG NUMBER: 22CZ2-20HE-UNV-L82765-W2A1-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P277218

CATALOG NUMBER: 22CZ2-20HE-UNV-L82765-W2A1-U-5500K

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° | 1915 | 1915 | 1915 |
| 5° | 1903 | 1917 | 1922 |
| 10° | 1891 | 1911 | 1919 |
| 15° | 1868 | 1897 | 1914 |
| 20° | 1840 | 1876 | 1902 |
| 25° | 1807 | 1865 | 1896 |
| 30° | 1770 | 1830 | 1885 |
| 35° | 1729 | 1807 | 1881 |
| 40° | 1686 | 1776 | 1885 |
| 45° | 1638 | 1756 | 1897 |
| 50° | 1591 | 1737 | 1919 |
| 55° | 1536 | 1730 | 1952 |
| 60° | 1491 | 1729 | 2012 |
| 65° | 1417 | 1757 | 2085 |
| 70° | 1321 | 1791 | 2220 |
| 75° | 1210 | 1853 | 2399 |
| 80° | 1054 | 1931 | 2362 |
| 85° | 923 | 1717 | 1877 |



TEST NUMBER: P277218

CATALOG NUMBER: 22CZ2-20HE-UNV-L82765-W2A1-U-5500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 67.3 | 3.2 |
| 10°-20° | 191.7 | 9.2 |
| 20°-30° | 287.8 | 13.7 |
| 30°-40° | 343.9 | 16.4 |
| 40°-50° | 357.6 | 17.1 |
| 50°-60° | 331.4 | 15.8 |
| 60°-70° | 271.8 | 13.0 |
| 70°-80° | 183.8 | 8.8 |
| 80°-90° | 57.8 | 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° | 546.8 | 26.1 |
| 0°-40° | 890.7 | 42.6 |
| 0°-60° | 1579.6 | 75.5 |
| 0°-90° | 2093.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2093.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 712 | 712 | 712 | 712 | 712 | |
| 5° | 704 | 706 | 710 | 711 | 712 | 67 |
| 15° | 670 | 674 | 681 | 685 | 687 | 189 |
| 25° | 609 | 614 | 628 | 635 | 638 | 280 |
| 35° | 526 | 534 | 550 | 566 | 573 | 329 |
| 45° | 430 | 439 | 461 | 488 | 498 | 332 |
| 55° | 328 | 338 | 369 | 402 | 416 | 294 |
| 65° | 222 | 235 | 276 | 312 | 328 | 220 |
| 75° | 116 | 136 | 178 | 214 | 231 | 123 |
| 85° | 30 | 41 | 56 | 62 | 61 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P277218

CATALOG NUMBER: 22CZ2-20HE-UNV-L82765-W2A1-U-5500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 711.7 | 711.7 | 711.7 | 711.7 | 711.7 |
| 2.5° | 707.5 | 709.6 | 712.7 | 713.7 | 713.7 |
| 5° | 704.4 | 705.5 | 709.6 | 710.6 | 711.7 |
| 7.5° | 699.3 | 701.4 | 705.5 | 706.5 | 707.5 |
| 10° | 692.1 | 694.2 | 699.3 | 701.4 | 702.4 |
| 12.5° | 682.8 | 684.9 | 691.1 | 694.2 | 695.2 |
| 15° | 670.5 | 673.6 | 680.8 | 684.9 | 686.9 |
| 17.5° | 658.1 | 661.2 | 668.4 | 674.6 | 676.6 |
| 20° | 642.7 | 649.9 | 655.0 | 663.3 | 664.3 |
| 22.5° | 627.2 | 631.3 | 640.6 | 648.8 | 653.0 |
| 25° | 608.7 | 613.8 | 628.2 | 635.4 | 638.5 |
| 27.5° | 589.1 | 596.3 | 607.6 | 619.0 | 623.1 |
| 30° | 569.5 | 574.7 | 589.1 | 602.5 | 606.6 |
| 32.5° | 547.9 | 555.1 | 570.6 | 584.0 | 590.1 |
| 35° | 526.3 | 533.5 | 550.0 | 566.4 | 572.6 |
| 37.5° | 502.6 | 510.8 | 527.3 | 546.9 | 555.1 |
| 40° | 479.9 | 486.1 | 505.7 | 529.4 | 536.6 |
| 42.5° | 456.2 | 463.5 | 484.1 | 509.8 | 518.0 |
| 45° | 430.5 | 438.7 | 461.4 | 488.2 | 498.5 |
| 47.5° | 405.8 | 414.0 | 438.7 | 465.5 | 477.9 |
| 50° | 380.0 | 390.3 | 415.0 | 445.9 | 458.3 |
| 52.5° | 355.3 | 364.6 | 392.4 | 424.3 | 435.6 |
| 55° | 327.5 | 337.8 | 368.7 | 401.7 | 416.1 |
| 57.5° | 304.8 | 312.1 | 346.0 | 380.0 | 394.5 |
| 60° | 277.0 | 286.3 | 321.3 | 357.4 | 373.9 |
| 62.5° | 247.2 | 262.6 | 298.7 | 335.7 | 352.2 |
| 65° | 222.5 | 234.8 | 276.0 | 312.1 | 327.5 |
| 67.5° | 196.7 | 210.1 | 250.3 | 288.4 | 305.9 |
| 70° | 167.9 | 185.4 | 227.6 | 265.7 | 282.2 |
| 72.5° | 142.1 | 160.7 | 203.9 | 241.0 | 258.5 |
| 75° | 116.4 | 135.9 | 178.2 | 214.2 | 230.7 |
| 77.5° | 91.7 | 113.3 | 154.5 | 182.3 | 192.6 |
| 80° | 68.0 | 88.6 | 124.6 | 144.2 | 152.4 |
| 82.5° | 47.4 | 64.9 | 91.7 | 102.0 | 104.0 |
| 85° | 29.9 | 41.2 | 55.6 | 61.8 | 60.8 |
| 87.5° | 13.4 | 16.5 | 20.6 | 22.7 | 21.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)