

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: P292817

Luminaire Tested: **22GR-LD5-24-FGW080-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292817
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-26)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-24-FGW080-UNV-L93050-W2A1-U-3500K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1732.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

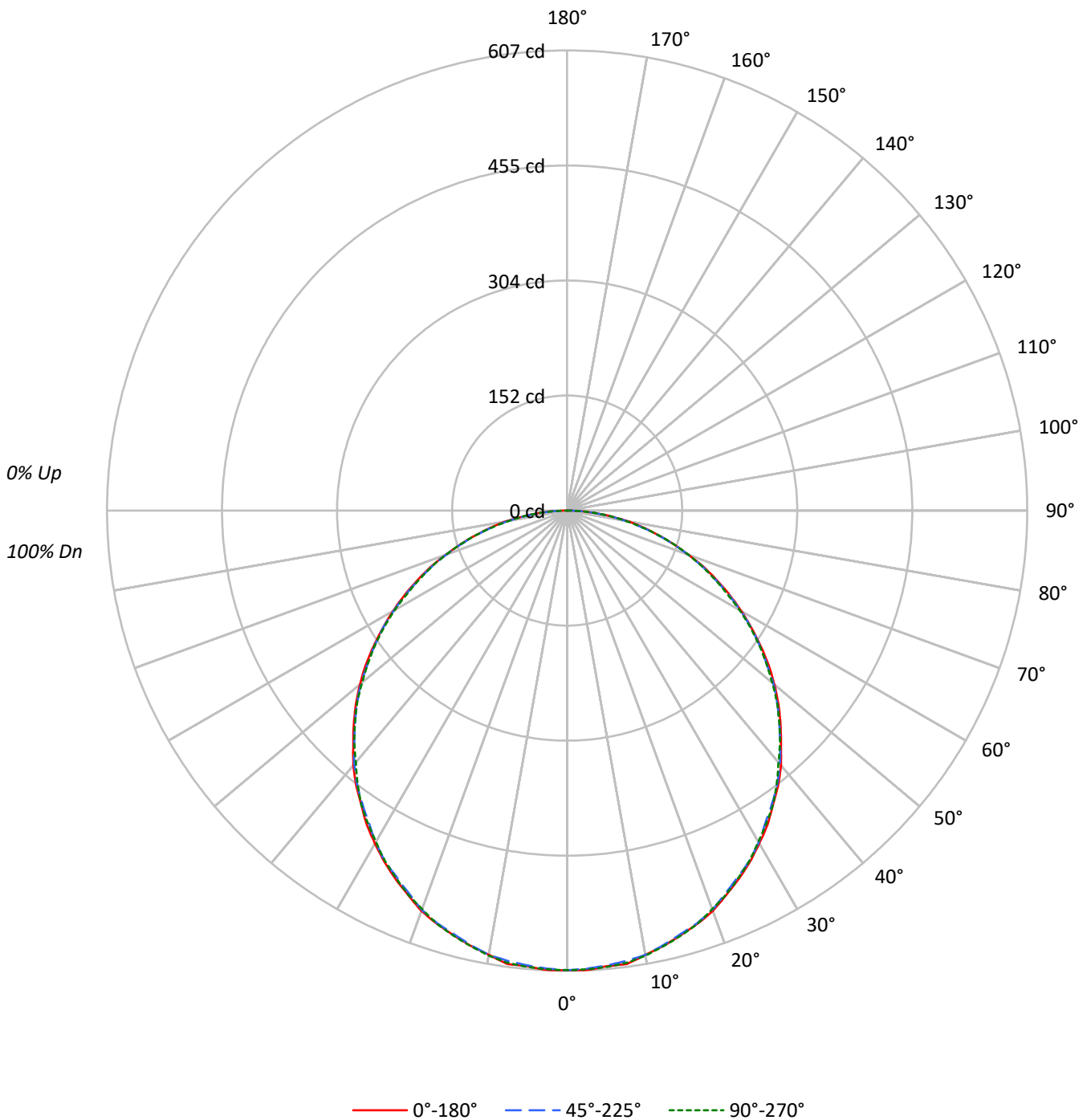
Input Watts (W): 18.507
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1631 | 1631 | 1631 |
| 5° | 1629 | 1626 | 1632 |
| 10° | 1626 | 1626 | 1629 |
| 15° | 1615 | 1611 | 1617 |
| 20° | 1609 | 1605 | 1602 |
| 25° | 1591 | 1583 | 1587 |
| 30° | 1575 | 1571 | 1568 |
| 35° | 1555 | 1549 | 1555 |
| 40° | 1542 | 1535 | 1524 |
| 45° | 1515 | 1506 | 1506 |
| 50° | 1495 | 1486 | 1477 |
| 55° | 1463 | 1453 | 1451 |
| 60° | 1429 | 1420 | 1415 |
| 65° | 1393 | 1376 | 1370 |
| 70° | 1337 | 1333 | 1337 |
| 75° | 1290 | 1275 | 1285 |
| 80° | 1277 | 1213 | 1206 |
| 85° | 1130 | 1099 | 1115 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.3 | 3.3 |
| 10°-20° | 163.6 | 9.4 |
| 20°-30° | 246.4 | 14.2 |
| 30°-40° | 295.7 | 17.1 |
| 40°-50° | 306.0 | 17.7 |
| 50°-60° | 277.2 | 16.0 |
| 60°-70° | 214.9 | 12.4 |
| 70°-80° | 130.5 | 7.5 |
| 80°-90° | 40.4 | 2.3 |
| 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° | 467.4 | 27.0 |
| 0°-40° | 763.0 | 44.1 |
| 0°-60° | 1346.3 | 77.7 |
| 0°-90° | 1732.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1732.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 606 | 606 | 606 | 606 | 606 | |
| 5° | 603 | 603 | 602 | 604 | 604 | 57 |
| 15° | 580 | 580 | 578 | 581 | 580 | 164 |
| 25° | 536 | 535 | 533 | 535 | 534 | 247 |
| 35° | 474 | 474 | 471 | 472 | 474 | 297 |
| 45° | 398 | 398 | 396 | 396 | 396 | 307 |
| 55° | 312 | 311 | 310 | 309 | 309 | 279 |
| 65° | 219 | 219 | 216 | 217 | 215 | 216 |
| 75° | 124 | 124 | 123 | 123 | 124 | 132 |
| 85° | 37 | 36 | 36 | 36 | 36 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 22GR-LD5-24-FGW080-UNV-L93050-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 606.2 | 606.2 | 606.2 | 606.2 | 606.2 |
| 2.5° | 606.7 | 604.2 | 604.7 | 605.7 | 605.7 |
| 5° | 603.2 | 603.2 | 602.1 | 603.7 | 604.2 |
| 7.5° | 603.2 | 600.6 | 599.1 | 600.6 | 601.6 |
| 10° | 595.0 | 594.0 | 595.0 | 594.5 | 596.0 |
| 12.5° | 587.9 | 586.9 | 586.9 | 588.4 | 588.4 |
| 15° | 579.8 | 579.8 | 578.2 | 580.8 | 580.3 |
| 17.5° | 571.6 | 571.6 | 570.6 | 570.6 | 571.6 |
| 20° | 562.0 | 559.4 | 560.4 | 559.9 | 559.4 |
| 22.5° | 548.7 | 547.2 | 546.2 | 547.7 | 548.2 |
| 25° | 536.0 | 535.0 | 533.0 | 535.0 | 534.5 |
| 27.5° | 522.3 | 521.3 | 520.8 | 519.8 | 520.8 |
| 30° | 507.0 | 506.0 | 505.5 | 504.5 | 504.5 |
| 32.5° | 491.8 | 489.8 | 487.2 | 489.8 | 489.2 |
| 35° | 473.5 | 473.5 | 471.4 | 472.0 | 473.5 |
| 37.5° | 457.2 | 456.2 | 455.2 | 453.6 | 454.2 |
| 40° | 438.9 | 437.4 | 436.9 | 435.8 | 433.8 |
| 42.5° | 417.5 | 417.5 | 415.5 | 416.0 | 415.5 |
| 45° | 398.2 | 397.7 | 395.7 | 395.7 | 395.7 |
| 47.5° | 377.9 | 377.4 | 375.8 | 374.8 | 375.8 |
| 50° | 357.0 | 355.0 | 355.0 | 353.5 | 352.9 |
| 52.5° | 335.1 | 333.6 | 331.6 | 332.1 | 331.1 |
| 55° | 311.8 | 311.2 | 309.7 | 309.2 | 309.2 |
| 57.5° | 288.4 | 288.9 | 287.9 | 285.8 | 286.3 |
| 60° | 265.5 | 265.0 | 263.9 | 262.9 | 262.9 |
| 62.5° | 242.1 | 242.1 | 240.0 | 240.0 | 238.0 |
| 65° | 218.7 | 218.7 | 216.1 | 217.2 | 215.1 |
| 67.5° | 195.3 | 194.8 | 193.3 | 192.7 | 193.3 |
| 70° | 169.9 | 170.4 | 169.4 | 169.4 | 169.9 |
| 72.5° | 147.0 | 146.5 | 146.0 | 146.0 | 147.0 |
| 75° | 124.1 | 123.6 | 122.6 | 122.6 | 123.6 |
| 77.5° | 103.2 | 100.7 | 100.2 | 101.2 | 99.7 |
| 80° | 82.4 | 78.8 | 78.3 | 77.8 | 77.8 |
| 82.5° | 58.0 | 56.5 | 57.0 | 56.5 | 57.5 |
| 85° | 36.6 | 36.1 | 35.6 | 35.6 | 36.1 |
| 87.5° | 17.3 | 16.3 | 16.3 | 15.8 | 15.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)