

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: P292849

Luminaire Tested: **22GR-LD5-20-FGW080-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292849
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-LD5-20-FGW080-UNV-L92765-W2A1-U-4000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1534.0 lumens
Efficiency: N/A
Efficacy: 98.2 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

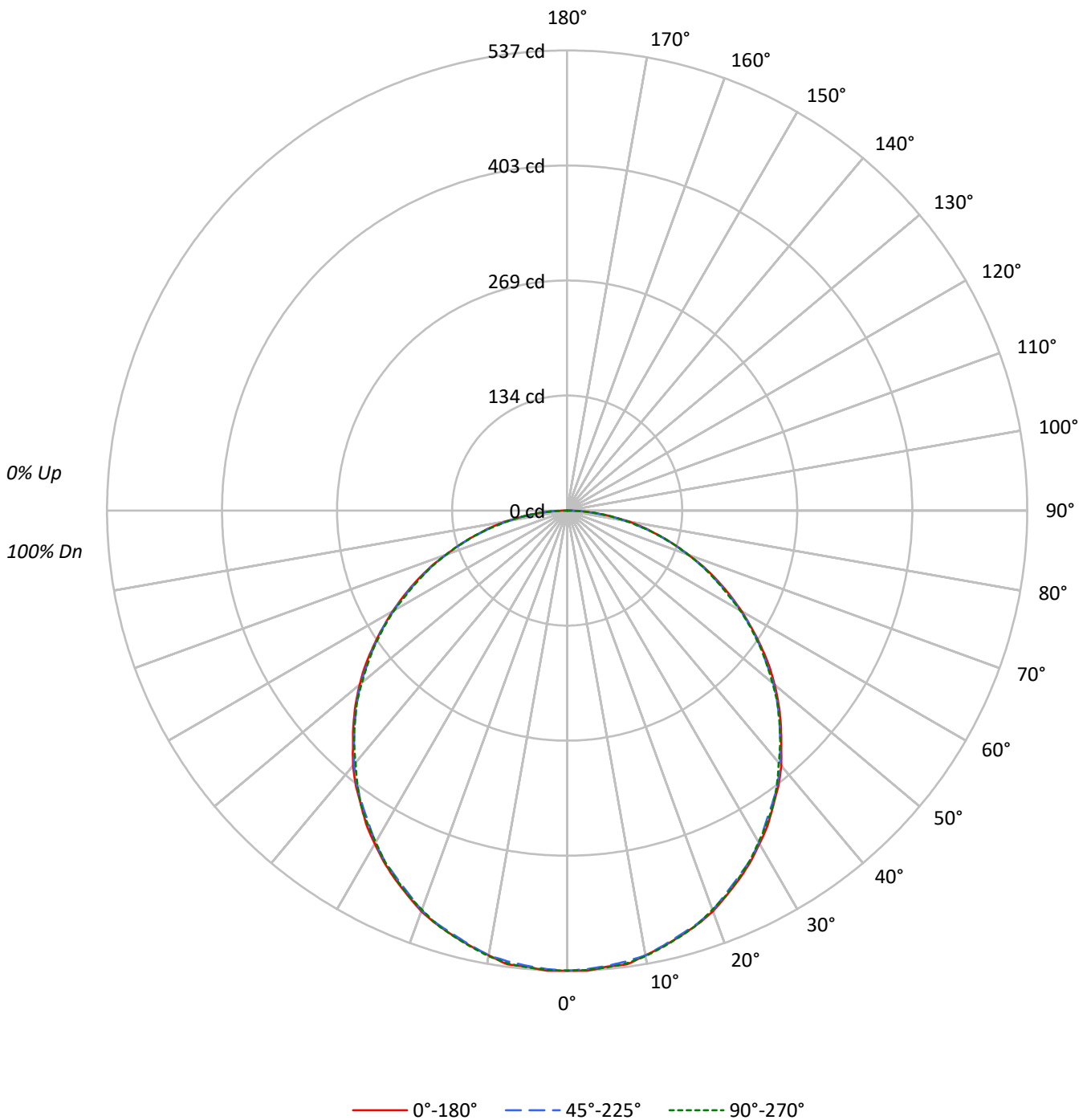
Input Watts (W): 15.624
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1445 | 1445 | 1445 |
| 5° | 1443 | 1441 | 1445 |
| 10° | 1440 | 1440 | 1442 |
| 15° | 1431 | 1427 | 1432 |
| 20° | 1425 | 1422 | 1419 |
| 25° | 1410 | 1402 | 1406 |
| 30° | 1395 | 1391 | 1388 |
| 35° | 1378 | 1372 | 1378 |
| 40° | 1365 | 1359 | 1350 |
| 45° | 1342 | 1333 | 1333 |
| 50° | 1324 | 1316 | 1309 |
| 55° | 1295 | 1287 | 1285 |
| 60° | 1265 | 1258 | 1253 |
| 65° | 1233 | 1219 | 1213 |
| 70° | 1183 | 1180 | 1183 |
| 75° | 1143 | 1129 | 1138 |
| 80° | 1131 | 1075 | 1068 |
| 85° | 1000 | 973 | 988 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 50.8 | 3.3 |
| 10°-20° | 144.9 | 9.4 |
| 20°-30° | 218.2 | 14.2 |
| 30°-40° | 261.9 | 17.1 |
| 40°-50° | 271.0 | 17.7 |
| 50°-60° | 245.5 | 16.0 |
| 60°-70° | 190.3 | 12.4 |
| 70°-80° | 115.6 | 7.5 |
| 80°-90° | 35.8 | 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° | 413.9 | 27.0 |
| 0°-40° | 675.8 | 44.1 |
| 0°-60° | 1192.3 | 77.7 |
| 0°-90° | 1534.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1534.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 537 | 537 | 537 | 537 | 537 | |
| 5° | 534 | 534 | 533 | 535 | 535 | 51 |
| 15° | 514 | 514 | 512 | 514 | 514 | 145 |
| 25° | 475 | 474 | 472 | 474 | 473 | 219 |
| 35° | 419 | 419 | 418 | 418 | 419 | 263 |
| 45° | 353 | 352 | 350 | 350 | 350 | 272 |
| 55° | 276 | 276 | 274 | 274 | 274 | 247 |
| 65° | 194 | 194 | 191 | 192 | 190 | 192 |
| 75° | 110 | 110 | 109 | 109 | 110 | 117 |
| 85° | 32 | 32 | 32 | 32 | 32 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 536.9 | 536.9 | 536.9 | 536.9 | 536.9 |
| 2.5° | 537.4 | 535.1 | 535.6 | 536.5 | 536.5 |
| 5° | 534.2 | 534.2 | 533.3 | 534.7 | 535.1 |
| 7.5° | 534.2 | 532.0 | 530.6 | 532.0 | 532.9 |
| 10° | 527.0 | 526.1 | 527.0 | 526.6 | 527.9 |
| 12.5° | 520.7 | 519.8 | 519.8 | 521.1 | 521.1 |
| 15° | 513.5 | 513.5 | 512.1 | 514.4 | 513.9 |
| 17.5° | 506.3 | 506.3 | 505.4 | 505.4 | 506.3 |
| 20° | 497.7 | 495.5 | 496.4 | 495.9 | 495.5 |
| 22.5° | 486.0 | 484.7 | 483.8 | 485.1 | 485.6 |
| 25° | 474.8 | 473.9 | 472.1 | 473.9 | 473.4 |
| 27.5° | 462.6 | 461.7 | 461.2 | 460.3 | 461.2 |
| 30° | 449.1 | 448.2 | 447.7 | 446.8 | 446.8 |
| 32.5° | 435.6 | 433.8 | 431.5 | 433.8 | 433.3 |
| 35° | 419.4 | 419.4 | 417.5 | 418.0 | 419.4 |
| 37.5° | 404.9 | 404.0 | 403.1 | 401.8 | 402.2 |
| 40° | 388.7 | 387.4 | 386.9 | 386.0 | 384.2 |
| 42.5° | 369.8 | 369.8 | 368.0 | 368.5 | 368.0 |
| 45° | 352.7 | 352.2 | 350.4 | 350.4 | 350.4 |
| 47.5° | 334.7 | 334.2 | 332.9 | 332.0 | 332.9 |
| 50° | 316.2 | 314.4 | 314.4 | 313.0 | 312.6 |
| 52.5° | 296.8 | 295.5 | 293.7 | 294.1 | 293.2 |
| 55° | 276.1 | 275.7 | 274.3 | 273.9 | 273.9 |
| 57.5° | 255.4 | 255.8 | 254.9 | 253.1 | 253.6 |
| 60° | 235.1 | 234.7 | 233.8 | 232.9 | 232.9 |
| 62.5° | 214.4 | 214.4 | 212.6 | 212.6 | 210.8 |
| 65° | 193.7 | 193.7 | 191.4 | 192.3 | 190.5 |
| 67.5° | 173.0 | 172.5 | 171.2 | 170.7 | 171.2 |
| 70° | 150.4 | 150.9 | 150.0 | 150.0 | 150.4 |
| 72.5° | 130.2 | 129.7 | 129.3 | 129.3 | 130.2 |
| 75° | 109.9 | 109.5 | 108.6 | 108.6 | 109.5 |
| 77.5° | 91.4 | 89.2 | 88.7 | 89.6 | 88.3 |
| 80° | 73.0 | 69.8 | 69.4 | 68.9 | 68.9 |
| 82.5° | 51.3 | 50.0 | 50.4 | 50.0 | 50.9 |
| 85° | 32.4 | 32.0 | 31.5 | 31.5 | 32.0 |
| 87.5° | 15.3 | 14.4 | 14.4 | 14.0 | 14.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)