

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: P292586

Luminaire Tested: **22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292586  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33284)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3309.0 lumens  
Efficiency: N/A  
Efficacy: 131.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.21  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

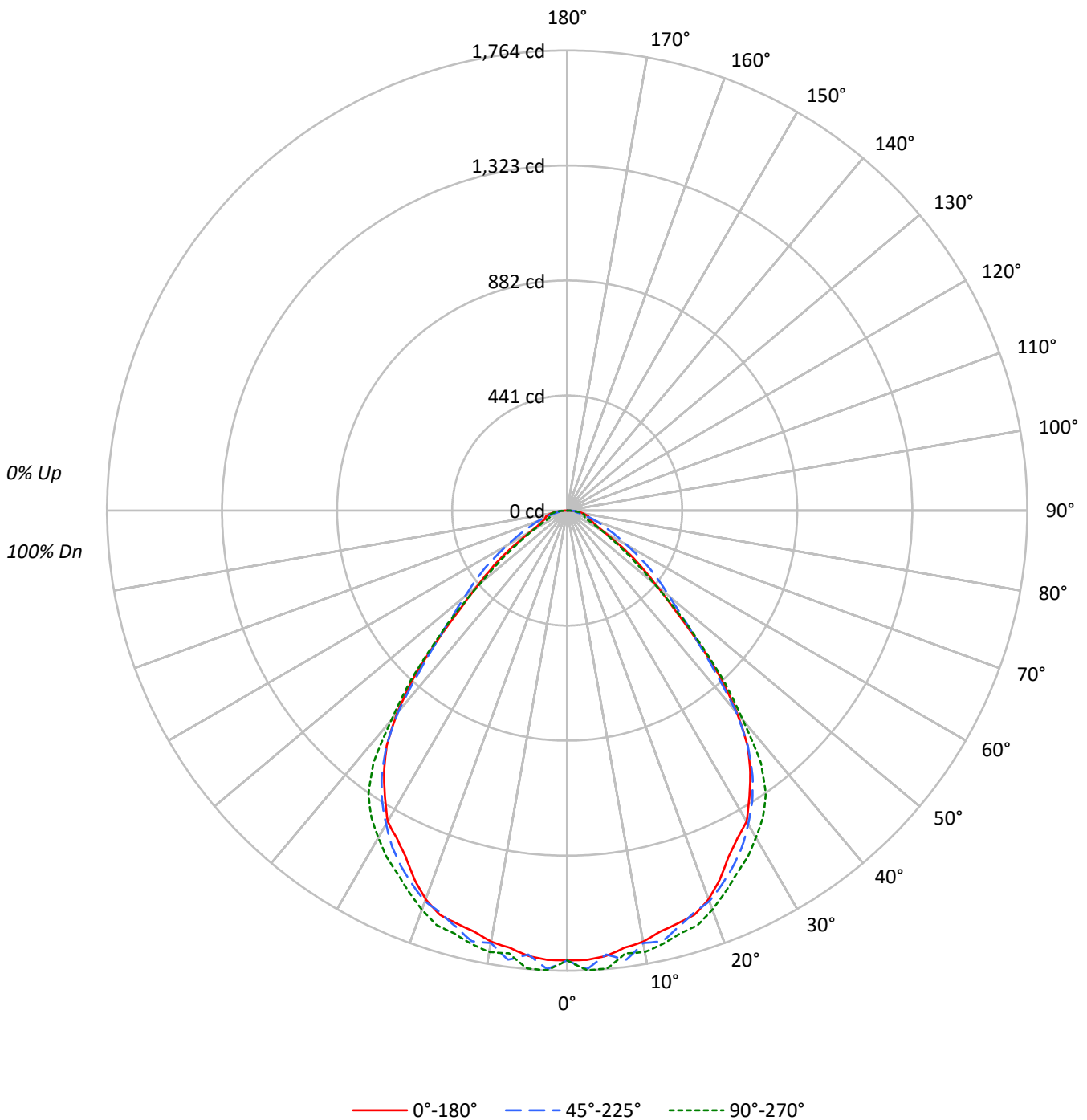
Input Watts (W): 25.203  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P292586

CATALOG NUMBER: 22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P292586

CATALOG NUMBER: 22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K

**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   | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 91  | 90  | 88  |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 85  | 91  | 86  | 83  | 88  | 84  | 81  | 85  | 82  | 79  | 77  |
| 3   | 95  | 86  | 79  | 74  | 93  | 85  | 79  | 73  | 82  | 77  | 72  | 79  | 75  | 71  | 77  | 73  | 70  | 68  |
| 4   | 88  | 78  | 71  | 65  | 86  | 77  | 70  | 64  | 75  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 62  | 60  |
| 5   | 82  | 71  | 63  | 58  | 80  | 70  | 63  | 57  | 68  | 62  | 57  | 66  | 61  | 56  | 64  | 59  | 56  | 54  |
| 6   | 77  | 65  | 57  | 51  | 75  | 64  | 57  | 51  | 62  | 56  | 51  | 61  | 55  | 50  | 59  | 54  | 50  | 48  |
| 7   | 72  | 60  | 52  | 46  | 70  | 59  | 51  | 46  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 49  | 45  | 44  |
| 8   | 67  | 55  | 47  | 42  | 66  | 54  | 47  | 42  | 53  | 46  | 42  | 52  | 46  | 41  | 51  | 45  | 41  | 40  |
| 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |
| 10  | 59  | 47  | 40  | 35  | 58  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 39  | 35  | 33  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4641 | 4641 | 4641 |
| 5°  | 4629 | 4614 | 4760 |
| 10° | 4587 | 4599 | 4695 |
| 15° | 4566 | 4600 | 4674 |
| 20° | 4541 | 4564 | 4662 |
| 25° | 4347 | 4470 | 4563 |
| 30° | 4276 | 4314 | 4499 |
| 35° | 4021 | 4072 | 4362 |
| 40° | 3563 | 3538 | 3678 |
| 45° | 2661 | 2667 | 2742 |
| 50° | 1873 | 2131 | 1815 |
| 55° | 1383 | 1800 | 1240 |
| 60° | 864  | 1422 | 810  |
| 65° | 705  | 1127 | 566  |
| 70° | 699  | 939  | 558  |
| 75° | 867  | 689  | 722  |
| 80° | 967  | 544  | 882  |
| 85° | 963  | 1010 | 988  |



TEST NUMBER: P292586

CATALOG NUMBER: 22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 164.2  | 5.0       |
| 10°-20°   | 467.6  | 14.1      |
| 20°-30°   | 692.6  | 20.9      |
| 30°-40°   | 775.8  | 23.4      |
| 40°-50°   | 570.0  | 17.2      |
| 50°-60°   | 318.6  | 9.6       |
| 60°-70°   | 177.6  | 5.4       |
| 70°-80°   | 104.3  | 3.2       |
| 80°-90°   | 38.3   | 1.2       |
| 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°    | 1324.3 | 40.0      |
| 0°-40°    | 2100.1 | 63.5      |
| 0°-60°    | 2988.7 | 90.3      |
| 0°-90°    | 3309.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3309.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1725 | 1725  | 1725 | 1725  | 1725 |      |
| 5°  | 1714 | 1746  | 1708 | 1743  | 1762 | 162  |
| 15° | 1639 | 1649  | 1651 | 1676  | 1678 | 463  |
| 25° | 1464 | 1476  | 1506 | 1526  | 1537 | 679  |
| 35° | 1224 | 1225  | 1240 | 1296  | 1328 | 758  |
| 45° | 699  | 756   | 701  | 751   | 720  | 546  |
| 55° | 295  | 359   | 384  | 383   | 264  | 263  |
| 65° | 111  | 196   | 177  | 227   | 89   | 114  |
| 75° | 83   | 118   | 66   | 133   | 69   | 84   |
| 85° | 31   | 46    | 33   | 42    | 32   | 34   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P292586

CATALOG NUMBER: 22GR-LD5-32-A19/156-UNV-L82765-W2A1-U-5700K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1724.6 | 1724.6 | 1724.6 | 1724.6 | 1724.6 |
| 2.5°  | 1723.8 | 1739.4 | 1759.6 | 1762.0 | 1763.5 |
| 5°    | 1713.6 | 1745.6 | 1708.2 | 1743.3 | 1762.0 |
| 7.5°  | 1690.3 | 1709.7 | 1737.0 | 1701.9 | 1712.1 |
| 10°   | 1678.6 | 1683.2 | 1683.2 | 1726.9 | 1718.3 |
| 12.5° | 1652.1 | 1683.2 | 1691.0 | 1682.5 | 1701.2 |
| 15°   | 1638.8 | 1648.9 | 1651.3 | 1676.2 | 1677.8 |
| 17.5° | 1624.0 | 1621.6 | 1616.2 | 1634.1 | 1666.1 |
| 20°   | 1585.8 | 1577.2 | 1593.6 | 1615.4 | 1627.9 |
| 22.5° | 1529.6 | 1532.0 | 1551.5 | 1569.4 | 1583.4 |
| 25°   | 1464.2 | 1475.9 | 1505.5 | 1526.5 | 1536.7 |
| 27.5° | 1415.0 | 1432.2 | 1452.5 | 1477.4 | 1497.7 |
| 30°   | 1376.1 | 1374.5 | 1388.5 | 1424.4 | 1447.8 |
| 32.5° | 1300.4 | 1305.9 | 1320.7 | 1363.6 | 1396.3 |
| 35°   | 1224.0 | 1224.8 | 1239.6 | 1295.8 | 1327.7 |
| 37.5° | 1135.9 | 1129.7 | 1138.3 | 1199.1 | 1220.1 |
| 40°   | 1014.3 | 1015.9 | 1007.3 | 1050.2 | 1047.1 |
| 42.5° | 872.4  | 884.9  | 840.4  | 896.6  | 892.7  |
| 45°   | 699.3  | 756.2  | 700.9  | 750.8  | 720.4  |
| 47.5° | 552.0  | 636.2  | 590.2  | 626.8  | 569.9  |
| 50°   | 447.5  | 534.1  | 509.1  | 525.5  | 433.5  |
| 52.5° | 367.2  | 437.4  | 445.2  | 449.1  | 338.4  |
| 55°   | 294.7  | 358.6  | 383.6  | 382.8  | 264.3  |
| 57.5° | 217.5  | 291.6  | 320.4  | 332.1  | 200.4  |
| 60°   | 160.6  | 242.5  | 264.3  | 290.0  | 150.5  |
| 62.5° | 129.4  | 212.8  | 218.3  | 254.2  | 114.6  |
| 65°   | 110.7  | 196.5  | 177.0  | 226.9  | 88.9   |
| 67.5° | 98.2   | 183.2  | 144.2  | 202.7  | 75.6   |
| 70°   | 88.9   | 162.9  | 119.3  | 181.7  | 70.9   |
| 72.5° | 86.5   | 138.8  | 92.0   | 162.2  | 70.2   |
| 75°   | 83.4   | 117.7  | 66.3   | 133.3  | 69.4   |
| 77.5° | 71.7   | 100.6  | 47.6   | 102.9  | 64.7   |
| 80°   | 62.4   | 80.3   | 35.1   | 77.2   | 56.9   |
| 82.5° | 48.3   | 60.8   | 31.2   | 58.5   | 46.0   |
| 85°   | 31.2   | 46.0   | 32.7   | 42.1   | 32.0   |
| 87.5° | 14.8   | 25.7   | 23.4   | 22.6   | 16.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)