

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: P292705

Luminaire Tested: **22GR-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292705
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-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A19/156 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3494.0 lumens
Efficiency: N/A
Efficacy: 100.5 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

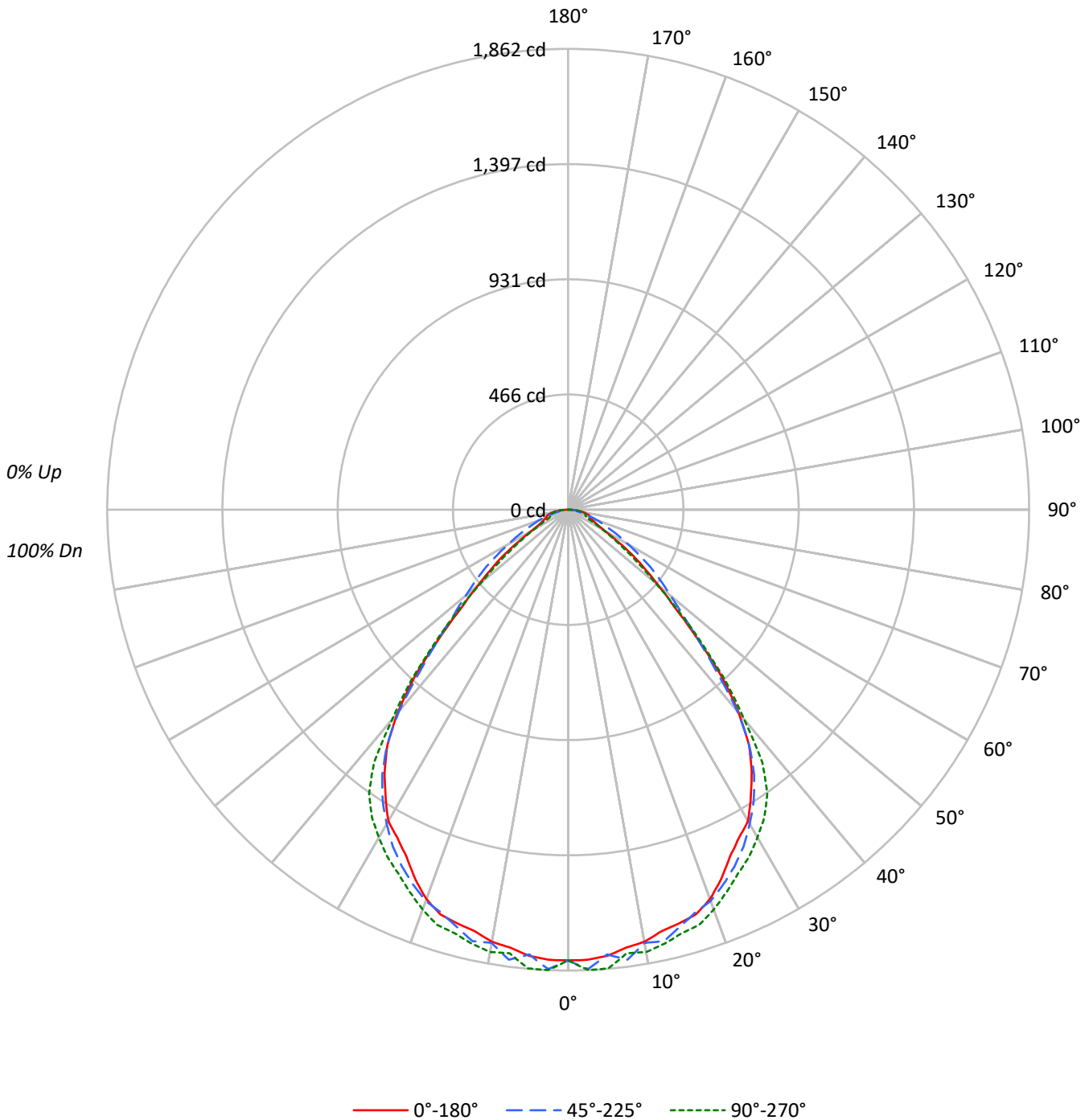
Input Watts (W): 34.782
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P292705

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P292705

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K

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 | 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 | | | | | 100 | | | |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 91 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 85 | 91 | 86 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 79 | 73 | 82 | 77 | 72 | 79 | 75 | 71 | 77 | 73 | 70 | 68 | | | | | 68 | | | |
| 4 | 88 | 78 | 71 | 65 | 86 | 77 | 70 | 64 | 75 | 68 | 64 | 72 | 67 | 63 | 70 | 66 | 62 | 60 | | | | | 60 | | | |
| 5 | 82 | 71 | 63 | 58 | 80 | 70 | 63 | 57 | 68 | 62 | 57 | 66 | 61 | 56 | 64 | 59 | 56 | 54 | | | | | 54 | | | |
| 6 | 77 | 65 | 57 | 51 | 75 | 64 | 57 | 51 | 62 | 56 | 51 | 61 | 55 | 50 | 59 | 54 | 50 | 48 | | | | | 48 | | | |
| 7 | 72 | 60 | 52 | 46 | 70 | 59 | 51 | 46 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 49 | 45 | 44 | | | | | 44 | | | |
| 8 | 67 | 55 | 47 | 42 | 66 | 54 | 47 | 42 | 53 | 46 | 42 | 52 | 46 | 41 | 51 | 45 | 41 | 40 | | | | | 40 | | | |
| 9 | 63 | 51 | 43 | 38 | 62 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | 36 | | | |
| 10 | 59 | 47 | 40 | 35 | 58 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 | | | | | 33 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4900 | 4900 | 4900 |
| 5° | 4888 | 4872 | 5026 |
| 10° | 4843 | 4856 | 4958 |
| 15° | 4821 | 4858 | 4936 |
| 20° | 4795 | 4819 | 4922 |
| 25° | 4590 | 4720 | 4818 |
| 30° | 4515 | 4556 | 4750 |
| 35° | 4246 | 4300 | 4606 |
| 40° | 3762 | 3736 | 3884 |
| 45° | 2810 | 2817 | 2895 |
| 50° | 1978 | 2251 | 1916 |
| 55° | 1460 | 1900 | 1309 |
| 60° | 913 | 1502 | 855 |
| 65° | 744 | 1190 | 597 |
| 70° | 738 | 991 | 589 |
| 75° | 916 | 728 | 762 |
| 80° | 1021 | 573 | 931 |
| 85° | 1016 | 1068 | 1044 |



TEST NUMBER: P292705

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 173.3 | 5.0 |
| 10°-20° | 493.7 | 14.1 |
| 20°-30° | 731.3 | 20.9 |
| 30°-40° | 819.1 | 23.4 |
| 40°-50° | 601.9 | 17.2 |
| 50°-60° | 336.4 | 9.6 |
| 60°-70° | 187.5 | 5.4 |
| 70°-80° | 110.2 | 3.2 |
| 80°-90° | 40.5 | 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° | 1398.4 | 40.0 |
| 0°-40° | 2217.5 | 63.5 |
| 0°-60° | 3155.8 | 90.3 |
| 0°-90° | 3494.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3494.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1821 | 1821 | 1821 | 1821 | 1821 | |
| 5° | 1810 | 1843 | 1804 | 1841 | 1860 | 171 |
| 15° | 1730 | 1741 | 1744 | 1770 | 1772 | 489 |
| 25° | 1546 | 1558 | 1590 | 1612 | 1623 | 717 |
| 35° | 1292 | 1293 | 1309 | 1368 | 1402 | 801 |
| 45° | 738 | 798 | 740 | 793 | 761 | 577 |
| 55° | 311 | 379 | 405 | 404 | 279 | 278 |
| 65° | 117 | 208 | 187 | 240 | 94 | 121 |
| 75° | 88 | 124 | 70 | 141 | 73 | 89 |
| 85° | 33 | 49 | 35 | 44 | 34 | 36 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292705

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L92765-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1821.0 | 1821.0 | 1821.0 | 1821.0 | 1821.0 |
| 2.5° | 1820.2 | 1836.6 | 1858.0 | 1860.5 | 1862.1 |
| 5° | 1809.5 | 1843.2 | 1803.7 | 1840.7 | 1860.5 |
| 7.5° | 1784.8 | 1805.3 | 1834.1 | 1797.1 | 1807.8 |
| 10° | 1772.4 | 1777.3 | 1777.3 | 1823.4 | 1814.4 |
| 12.5° | 1744.4 | 1777.3 | 1785.6 | 1776.5 | 1796.3 |
| 15° | 1730.4 | 1741.1 | 1743.6 | 1769.9 | 1771.6 |
| 17.5° | 1714.8 | 1712.3 | 1706.5 | 1725.5 | 1759.2 |
| 20° | 1674.4 | 1665.4 | 1682.7 | 1705.7 | 1718.9 |
| 22.5° | 1615.2 | 1617.6 | 1638.2 | 1657.2 | 1672.0 |
| 25° | 1546.0 | 1558.4 | 1589.6 | 1611.9 | 1622.6 |
| 27.5° | 1494.2 | 1512.3 | 1533.7 | 1560.0 | 1581.4 |
| 30° | 1453.0 | 1451.3 | 1466.2 | 1504.0 | 1528.7 |
| 32.5° | 1373.1 | 1378.9 | 1394.5 | 1439.8 | 1474.4 |
| 35° | 1292.5 | 1293.3 | 1308.9 | 1368.2 | 1402.0 |
| 37.5° | 1199.4 | 1192.9 | 1201.9 | 1266.1 | 1288.3 |
| 40° | 1071.0 | 1072.7 | 1063.6 | 1108.9 | 1105.6 |
| 42.5° | 921.2 | 934.4 | 887.4 | 946.7 | 942.6 |
| 45° | 738.4 | 798.5 | 740.1 | 792.8 | 760.7 |
| 47.5° | 582.8 | 671.8 | 623.2 | 661.9 | 601.8 |
| 50° | 472.5 | 563.9 | 537.6 | 554.9 | 457.7 |
| 52.5° | 387.7 | 461.8 | 470.1 | 474.2 | 357.3 |
| 55° | 311.2 | 378.7 | 405.0 | 404.2 | 279.1 |
| 57.5° | 229.7 | 307.9 | 338.3 | 350.7 | 211.6 |
| 60° | 169.6 | 256.0 | 279.1 | 306.2 | 158.9 |
| 62.5° | 136.7 | 224.7 | 230.5 | 268.4 | 121.0 |
| 65° | 116.9 | 207.5 | 186.9 | 239.6 | 93.8 |
| 67.5° | 103.7 | 193.5 | 152.3 | 214.0 | 79.9 |
| 70° | 93.8 | 172.1 | 126.0 | 191.8 | 74.9 |
| 72.5° | 91.4 | 146.5 | 97.1 | 171.2 | 74.1 |
| 75° | 88.1 | 124.3 | 70.0 | 140.8 | 73.3 |
| 77.5° | 75.7 | 106.2 | 50.2 | 108.7 | 68.3 |
| 80° | 65.9 | 84.8 | 37.0 | 81.5 | 60.1 |
| 82.5° | 51.0 | 64.2 | 32.9 | 61.7 | 48.6 |
| 85° | 32.9 | 48.6 | 34.6 | 44.5 | 33.8 |
| 87.5° | 15.6 | 27.2 | 24.7 | 23.9 | 17.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)