

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: P292673

Luminaire Tested: **22GR-LD5-28-A19/156-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292673
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-LD5-28-A19/156-UNV-L92765-W2A1-U-5000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A19/156 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2656.0 lumens
Efficiency: N/A
Efficacy: 117.5 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

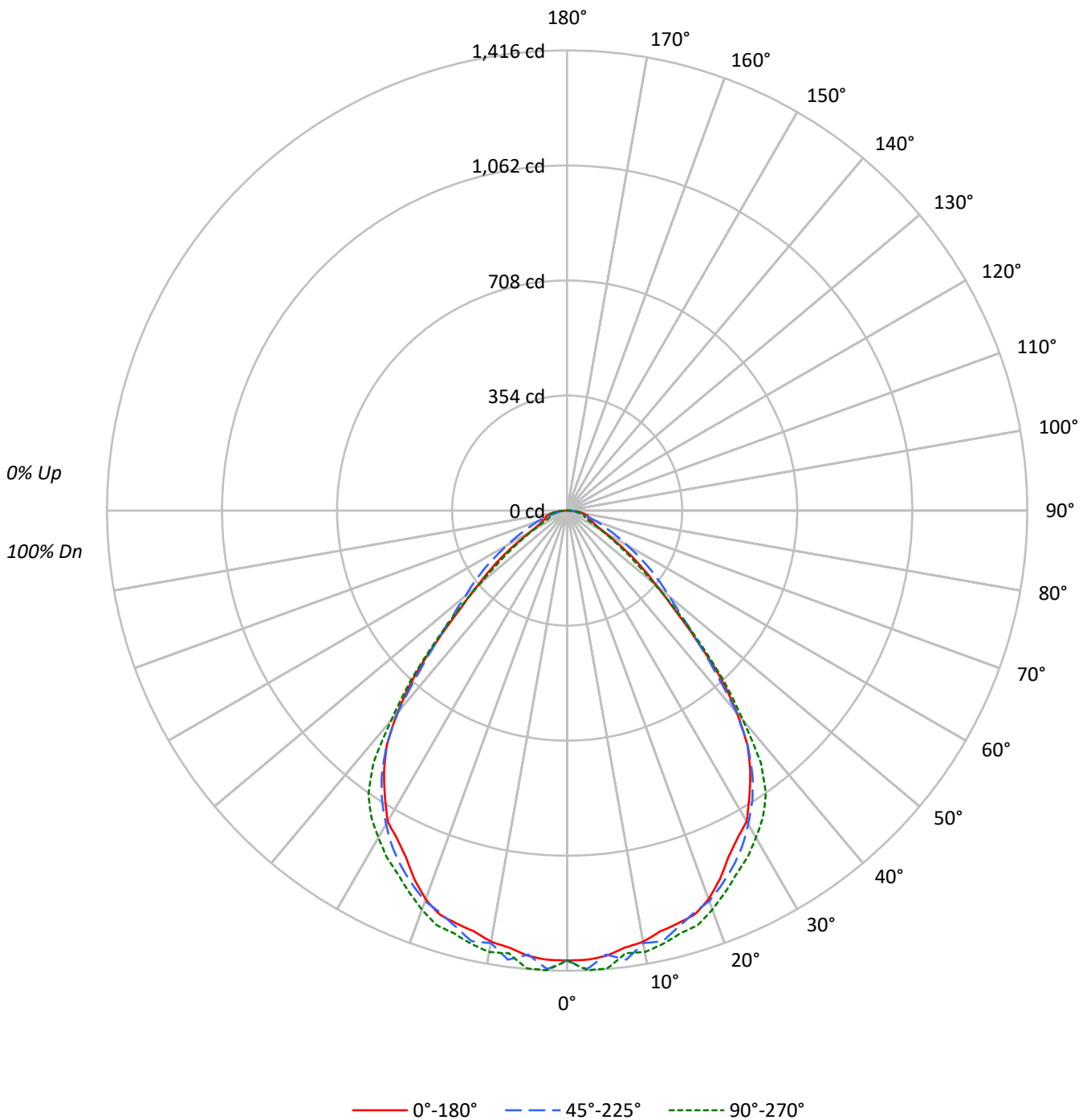
Input Watts (W): 22.599
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P292673

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Luminous Intensity Polar Plot





TEST NUMBER: P292673

CATALOG NUMBER: 22GR-LD5-28-A19/156-UNV-L92765-W2A1-U-5000K

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° | 3725 | 3725 | 3725 |
| 5° | 3716 | 3704 | 3820 |
| 10° | 3681 | 3692 | 3769 |
| 15° | 3665 | 3692 | 3752 |
| 20° | 3645 | 3663 | 3742 |
| 25° | 3489 | 3588 | 3662 |
| 30° | 3432 | 3463 | 3611 |
| 35° | 3228 | 3269 | 3501 |
| 40° | 2860 | 2840 | 2952 |
| 45° | 2136 | 2141 | 2200 |
| 50° | 1504 | 1711 | 1456 |
| 55° | 1110 | 1445 | 995 |
| 60° | 694 | 1142 | 650 |
| 65° | 566 | 905 | 454 |
| 70° | 561 | 753 | 448 |
| 75° | 697 | 553 | 579 |
| 80° | 776 | 437 | 708 |
| 85° | 772 | 812 | 794 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 131.8 | 5.0 |
| 10°-20° | 375.3 | 14.1 |
| 20°-30° | 555.9 | 20.9 |
| 30°-40° | 622.7 | 23.4 |
| 40°-50° | 457.5 | 17.2 |
| 50°-60° | 255.7 | 9.6 |
| 60°-70° | 142.5 | 5.4 |
| 70°-80° | 83.7 | 3.2 |
| 80°-90° | 30.8 | 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° | 1063.0 | 40.0 |
| 0°-40° | 1685.7 | 63.5 |
| 0°-60° | 2398.9 | 90.3 |
| 0°-90° | 2656.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2656.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1384 | 1384 | 1384 | 1384 | 1384 | |
| 5° | 1376 | 1401 | 1371 | 1399 | 1414 | 130 |
| 15° | 1315 | 1324 | 1325 | 1345 | 1347 | 371 |
| 25° | 1175 | 1185 | 1208 | 1225 | 1233 | 545 |
| 35° | 982 | 983 | 995 | 1040 | 1066 | 609 |
| 45° | 561 | 607 | 563 | 603 | 578 | 439 |
| 55° | 236 | 288 | 308 | 307 | 212 | 211 |
| 65° | 89 | 158 | 142 | 182 | 71 | 92 |
| 75° | 67 | 94 | 53 | 107 | 56 | 67 |
| 85° | 25 | 37 | 26 | 34 | 26 | 27 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1384.2 | 1384.2 | 1384.2 | 1384.2 | 1384.2 |
| 2.5° | 1383.6 | 1396.1 | 1412.4 | 1414.3 | 1415.5 |
| 5° | 1375.5 | 1401.1 | 1371.1 | 1399.3 | 1414.3 |
| 7.5° | 1356.7 | 1372.3 | 1394.2 | 1366.1 | 1374.2 |
| 10° | 1347.3 | 1351.1 | 1351.1 | 1386.1 | 1379.2 |
| 12.5° | 1326.0 | 1351.1 | 1357.3 | 1350.4 | 1365.5 |
| 15° | 1315.4 | 1323.5 | 1325.4 | 1345.4 | 1346.7 |
| 17.5° | 1303.5 | 1301.6 | 1297.2 | 1311.6 | 1337.3 |
| 20° | 1272.8 | 1266.0 | 1279.1 | 1296.6 | 1306.6 |
| 22.5° | 1227.8 | 1229.7 | 1245.3 | 1259.7 | 1271.0 |
| 25° | 1175.2 | 1184.6 | 1208.4 | 1225.3 | 1233.4 |
| 27.5° | 1135.8 | 1149.6 | 1165.8 | 1185.9 | 1202.1 |
| 30° | 1104.5 | 1103.3 | 1114.5 | 1143.3 | 1162.1 |
| 32.5° | 1043.8 | 1048.2 | 1060.1 | 1094.5 | 1120.8 |
| 35° | 982.5 | 983.1 | 995.0 | 1040.1 | 1065.7 |
| 37.5° | 911.8 | 906.8 | 913.6 | 962.5 | 979.4 |
| 40° | 814.1 | 815.4 | 808.5 | 842.9 | 840.4 |
| 42.5° | 700.3 | 710.3 | 674.6 | 719.7 | 716.5 |
| 45° | 561.3 | 607.0 | 562.6 | 602.6 | 578.2 |
| 47.5° | 443.1 | 510.6 | 473.7 | 503.1 | 457.4 |
| 50° | 359.2 | 428.7 | 408.6 | 421.8 | 347.9 |
| 52.5° | 294.7 | 351.1 | 357.3 | 360.5 | 271.6 |
| 55° | 236.5 | 287.9 | 307.9 | 307.3 | 212.1 |
| 57.5° | 174.6 | 234.0 | 257.2 | 266.6 | 160.8 |
| 60° | 128.9 | 194.6 | 212.1 | 232.8 | 120.8 |
| 62.5° | 103.9 | 170.8 | 175.2 | 204.0 | 92.0 |
| 65° | 88.9 | 157.7 | 142.1 | 182.1 | 71.3 |
| 67.5° | 78.8 | 147.1 | 115.8 | 162.7 | 60.7 |
| 70° | 71.3 | 130.8 | 95.7 | 145.8 | 56.9 |
| 72.5° | 69.5 | 111.4 | 73.8 | 130.2 | 56.3 |
| 75° | 67.0 | 94.5 | 53.2 | 107.0 | 55.7 |
| 77.5° | 57.6 | 80.7 | 38.2 | 82.6 | 51.9 |
| 80° | 50.1 | 64.5 | 28.2 | 62.0 | 45.7 |
| 82.5° | 38.8 | 48.8 | 25.0 | 46.9 | 36.9 |
| 85° | 25.0 | 36.9 | 26.3 | 33.8 | 25.7 |
| 87.5° | 11.9 | 20.7 | 18.8 | 18.1 | 13.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)