

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: P292622

Luminaire Tested: **22GR-LD5-24-A19/156-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292622
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-LD5-24-A19/156-UNV-L93050-W2A1-U-4000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A19/156 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2206.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

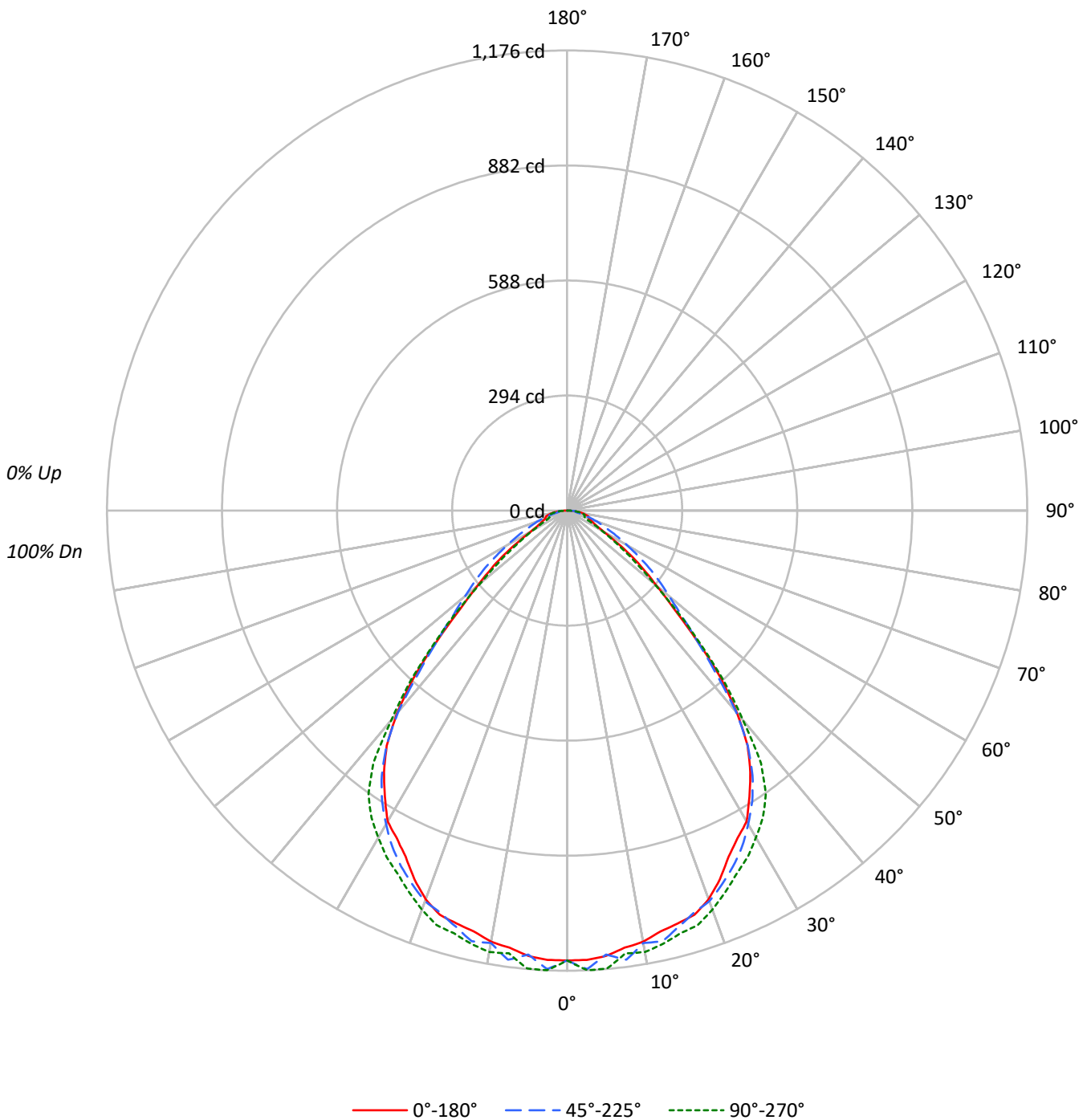
Input Watts (W): 18.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292622

CATALOG NUMBER: 22GR-LD5-24-A19/156-UNV-L93050-W2A1-U-4000K

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° | 3094 | 3094 | 3094 |
| 5° | 3086 | 3076 | 3173 |
| 10° | 3058 | 3066 | 3130 |
| 15° | 3044 | 3067 | 3116 |
| 20° | 3027 | 3042 | 3108 |
| 25° | 2898 | 2980 | 3042 |
| 30° | 2851 | 2876 | 2999 |
| 35° | 2681 | 2715 | 2908 |
| 40° | 2375 | 2359 | 2452 |
| 45° | 1774 | 1778 | 1828 |
| 50° | 1249 | 1421 | 1210 |
| 55° | 922 | 1200 | 827 |
| 60° | 576 | 948 | 540 |
| 65° | 470 | 751 | 378 |
| 70° | 467 | 625 | 372 |
| 75° | 578 | 460 | 481 |
| 80° | 645 | 363 | 587 |
| 85° | 642 | 673 | 658 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 109.4 | 5.0 |
| 10°-20° | 311.7 | 14.1 |
| 20°-30° | 461.7 | 20.9 |
| 30°-40° | 517.2 | 23.4 |
| 40°-50° | 380.0 | 17.2 |
| 50°-60° | 212.4 | 9.6 |
| 60°-70° | 118.4 | 5.4 |
| 70°-80° | 69.5 | 3.2 |
| 80°-90° | 25.6 | 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° | 882.9 | 40.0 |
| 0°-40° | 1400.1 | 63.5 |
| 0°-60° | 1992.5 | 90.3 |
| 0°-90° | 2206.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2206.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1150 | 1150 | 1150 | 1150 | 1150 | |
| 5° | 1142 | 1164 | 1139 | 1162 | 1175 | 108 |
| 15° | 1092 | 1099 | 1101 | 1118 | 1118 | 309 |
| 25° | 976 | 984 | 1004 | 1018 | 1024 | 452 |
| 35° | 816 | 816 | 826 | 864 | 885 | 506 |
| 45° | 466 | 504 | 467 | 500 | 480 | 364 |
| 55° | 196 | 239 | 256 | 255 | 176 | 175 |
| 65° | 74 | 131 | 118 | 151 | 59 | 76 |
| 75° | 56 | 78 | 44 | 89 | 46 | 56 |
| 85° | 21 | 31 | 22 | 28 | 21 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292622

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1149.7 | 1149.7 | 1149.7 | 1149.7 | 1149.7 |
| 2.5° | 1149.2 | 1159.6 | 1173.1 | 1174.7 | 1175.7 |
| 5° | 1142.4 | 1163.7 | 1138.8 | 1162.2 | 1174.7 |
| 7.5° | 1126.8 | 1139.8 | 1158.0 | 1134.6 | 1141.4 |
| 10° | 1119.0 | 1122.2 | 1122.2 | 1151.3 | 1145.5 |
| 12.5° | 1101.4 | 1122.2 | 1127.4 | 1121.6 | 1134.1 |
| 15° | 1092.5 | 1099.3 | 1100.8 | 1117.5 | 1118.5 |
| 17.5° | 1082.7 | 1081.1 | 1077.5 | 1089.4 | 1110.7 |
| 20° | 1057.2 | 1051.5 | 1062.4 | 1076.9 | 1085.3 |
| 22.5° | 1019.8 | 1021.3 | 1034.3 | 1046.3 | 1055.6 |
| 25° | 976.1 | 983.9 | 1003.7 | 1017.7 | 1024.4 |
| 27.5° | 943.4 | 954.8 | 968.3 | 984.9 | 998.5 |
| 30° | 917.4 | 916.3 | 925.7 | 949.6 | 965.2 |
| 32.5° | 867.0 | 870.6 | 880.5 | 909.1 | 930.9 |
| 35° | 816.0 | 816.5 | 826.4 | 863.8 | 885.1 |
| 37.5° | 757.3 | 753.1 | 758.8 | 799.4 | 813.4 |
| 40° | 676.2 | 677.2 | 671.5 | 700.1 | 698.0 |
| 42.5° | 581.6 | 589.9 | 560.3 | 597.7 | 595.1 |
| 45° | 466.2 | 504.2 | 467.3 | 500.5 | 480.3 |
| 47.5° | 368.0 | 424.1 | 393.5 | 417.9 | 379.9 |
| 50° | 298.3 | 356.0 | 339.4 | 350.3 | 289.0 |
| 52.5° | 244.8 | 291.6 | 296.8 | 299.4 | 225.6 |
| 55° | 196.5 | 239.1 | 255.7 | 255.2 | 176.2 |
| 57.5° | 145.0 | 194.4 | 213.6 | 221.4 | 133.6 |
| 60° | 107.1 | 161.6 | 176.2 | 193.4 | 100.3 |
| 62.5° | 86.3 | 141.9 | 145.5 | 169.4 | 76.4 |
| 65° | 73.8 | 131.0 | 118.0 | 151.2 | 59.3 |
| 67.5° | 65.5 | 122.1 | 96.2 | 135.1 | 50.4 |
| 70° | 59.3 | 108.6 | 79.5 | 121.1 | 47.3 |
| 72.5° | 57.7 | 92.5 | 61.3 | 108.1 | 46.8 |
| 75° | 55.6 | 78.5 | 44.2 | 88.9 | 46.3 |
| 77.5° | 47.8 | 67.0 | 31.7 | 68.6 | 43.1 |
| 80° | 41.6 | 53.5 | 23.4 | 51.5 | 37.9 |
| 82.5° | 32.2 | 40.5 | 20.8 | 39.0 | 30.7 |
| 85° | 20.8 | 30.7 | 21.8 | 28.1 | 21.3 |
| 87.5° | 9.9 | 17.2 | 15.6 | 15.1 | 10.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)