

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P273772

Luminaire Tested: **4RCG-4-78D-L935**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273772
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1804-709-7-R2)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4RCG-4-78D-L935
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH FROST FLUSH LENS
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

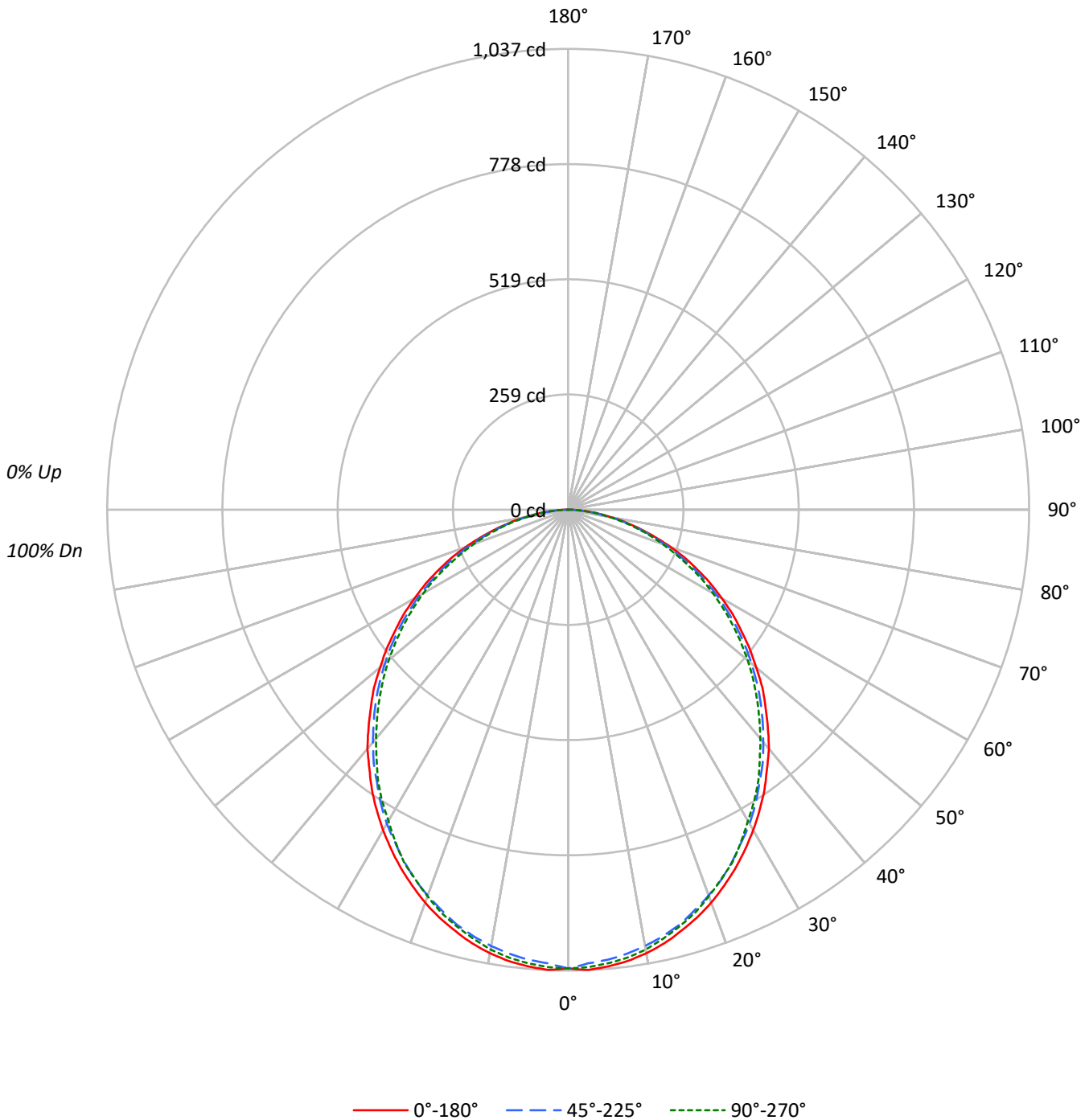
Lumens per Lamp: N/A
Luminaire Lumens: 2663.9 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26
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: P273772
CATALOG NUMBER: 4RCG-4-78D-L935

Luminous Intensity Polar Plot





TEST NUMBER: P273772

CATALOG NUMBER: 4RCG-4-78D-L935

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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 77 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 44 |
| 6 | 71 | 58 | 49 | 42 | 69 | 57 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 51 | 43 | 37 | 50 | 43 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12513 | 12513 | 12513 |
| 5° | 12551 | 12372 | 12467 |
| 10° | 12473 | 12271 | 12367 |
| 15° | 12317 | 12133 | 12176 |
| 20° | 12139 | 11918 | 11939 |
| 25° | 11907 | 11677 | 11700 |
| 30° | 11653 | 11424 | 11316 |
| 35° | 11389 | 11096 | 11033 |
| 40° | 11117 | 10804 | 10639 |
| 45° | 10760 | 10494 | 10287 |
| 50° | 10407 | 10147 | 9936 |
| 55° | 10044 | 9789 | 9535 |
| 60° | 9663 | 9392 | 9122 |
| 65° | 9235 | 8891 | 8593 |
| 70° | 8665 | 8300 | 7995 |
| 75° | 7943 | 7620 | 7381 |
| 80° | 6973 | 6729 | 6492 |
| 85° | 5869 | 5744 | 5271 |



TEST NUMBER: P273772

CATALOG NUMBER: 4RCG-4-78D-L935

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.2 | 3.6 |
| 10°-20° | 274.2 | 10.3 |
| 20°-30° | 404.5 | 15.2 |
| 30°-40° | 472.0 | 17.7 |
| 40°-50° | 473.5 | 17.8 |
| 50°-60° | 414.8 | 15.6 |
| 60°-70° | 307.5 | 11.5 |
| 70°-80° | 172.9 | 6.5 |
| 80°-90° | 47.1 | 1.8 |
| 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° | 776.0 | 29.1 |
| 0°-40° | 1247.9 | 46.8 |
| 0°-60° | 2136.3 | 80.2 |
| 0°-90° | 2663.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2663.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1032 | 1032 | 1032 | 1032 | 1032 | |
| 5° | 1032 | 1028 | 1017 | 1027 | 1025 | 98 |
| 15° | 982 | 979 | 967 | 972 | 970 | 277 |
| 25° | 890 | 885 | 873 | 876 | 875 | 410 |
| 35° | 770 | 764 | 750 | 747 | 746 | 481 |
| 45° | 628 | 625 | 612 | 605 | 600 | 485 |
| 55° | 475 | 475 | 463 | 455 | 451 | 426 |
| 65° | 322 | 319 | 310 | 302 | 300 | 319 |
| 75° | 170 | 166 | 163 | 160 | 158 | 180 |
| 85° | 42 | 42 | 41 | 40 | 38 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P273772

CATALOG NUMBER: 4RCG-4-78D-L935

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1032.3 | 1032.3 | 1032.3 | 1032.3 | 1032.3 |
| 2.5° | 1036.6 | 1033.2 | 1022.0 | 1031.5 | 1030.6 |
| 5° | 1031.5 | 1028.0 | 1016.8 | 1027.2 | 1024.6 |
| 7.5° | 1024.6 | 1020.3 | 1008.2 | 1017.7 | 1016.8 |
| 10° | 1013.4 | 1009.1 | 997.0 | 1005.6 | 1004.8 |
| 12.5° | 999.6 | 995.3 | 983.3 | 990.1 | 988.4 |
| 15° | 981.5 | 979.0 | 966.9 | 972.1 | 970.3 |
| 17.5° | 962.6 | 958.3 | 945.4 | 950.5 | 950.5 |
| 20° | 941.1 | 936.8 | 923.9 | 929.0 | 925.6 |
| 22.5° | 916.1 | 910.9 | 900.6 | 903.2 | 899.7 |
| 25° | 890.3 | 885.1 | 873.1 | 875.6 | 874.8 |
| 27.5° | 861.9 | 856.7 | 843.8 | 843.8 | 842.1 |
| 30° | 832.6 | 828.3 | 816.2 | 812.8 | 808.5 |
| 32.5° | 801.6 | 795.6 | 784.4 | 781.8 | 778.3 |
| 35° | 769.7 | 763.7 | 749.9 | 747.3 | 745.6 |
| 37.5° | 734.4 | 730.1 | 718.9 | 712.0 | 707.7 |
| 40° | 702.6 | 695.7 | 682.8 | 676.7 | 672.4 |
| 42.5° | 664.7 | 661.2 | 647.5 | 641.4 | 636.3 |
| 45° | 627.7 | 625.1 | 612.2 | 605.3 | 600.1 |
| 47.5° | 592.4 | 588.1 | 575.1 | 566.5 | 564.0 |
| 50° | 551.9 | 549.3 | 538.1 | 530.4 | 526.9 |
| 52.5° | 514.9 | 512.3 | 501.1 | 492.5 | 489.0 |
| 55° | 475.3 | 475.3 | 463.2 | 454.6 | 451.2 |
| 57.5° | 439.1 | 435.7 | 424.5 | 417.6 | 413.3 |
| 60° | 398.6 | 396.1 | 387.4 | 378.0 | 376.3 |
| 62.5° | 361.6 | 358.2 | 347.8 | 341.0 | 339.2 |
| 65° | 322.0 | 318.6 | 310.0 | 302.2 | 299.6 |
| 67.5° | 285.0 | 279.0 | 272.1 | 265.2 | 261.7 |
| 70° | 244.5 | 241.1 | 234.2 | 229.0 | 225.6 |
| 72.5° | 205.8 | 202.3 | 198.0 | 193.7 | 192.0 |
| 75° | 169.6 | 166.2 | 162.7 | 160.1 | 157.6 |
| 77.5° | 133.5 | 131.7 | 129.1 | 125.7 | 125.7 |
| 80° | 99.9 | 98.2 | 96.4 | 93.8 | 93.0 |
| 82.5° | 69.7 | 68.9 | 67.2 | 66.3 | 66.3 |
| 85° | 42.2 | 42.2 | 41.3 | 39.6 | 37.9 |
| 87.5° | 18.9 | 17.2 | 17.2 | 15.5 | 15.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)