

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: P33960

Luminaire Tested: **4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P33960
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U
Description: METALUX 4FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A
Light Source: (112) COOPER LIGHTING 3500K LEDS
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

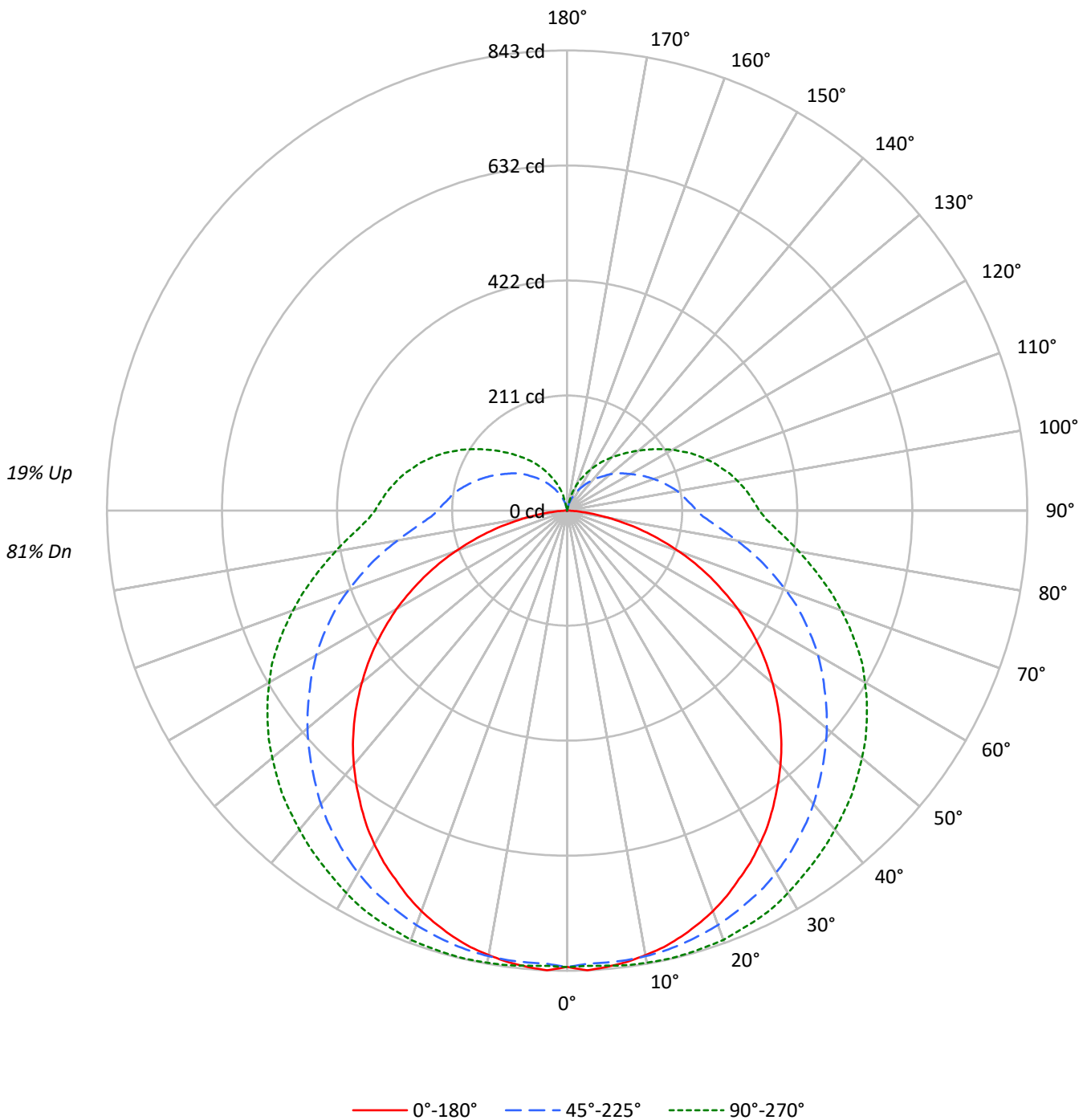
Lumens per Lamp: N/A
Luminaire Lumens: 3989.6 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 43.2
Input Voltage (V): NR
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: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

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 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 110 | 101 | 101 | 101 | 92 | 92 | 92 | 85 | 85 | 85 | 81 |
| 1 | 102 | 96 | 91 | 86 | 97 | 92 | 87 | 83 | 84 | 80 | 77 | 77 | 74 | 71 | 70 | 68 | 66 | 62 |
| 2 | 91 | 82 | 74 | 68 | 87 | 78 | 71 | 65 | 72 | 66 | 61 | 66 | 61 | 57 | 60 | 56 | 53 | 50 |
| 3 | 83 | 71 | 62 | 55 | 78 | 68 | 60 | 53 | 62 | 56 | 50 | 57 | 51 | 47 | 52 | 48 | 44 | 41 |
| 4 | 75 | 62 | 53 | 46 | 71 | 60 | 51 | 45 | 55 | 48 | 42 | 50 | 44 | 39 | 46 | 41 | 37 | 34 |
| 5 | 69 | 55 | 46 | 39 | 65 | 53 | 44 | 38 | 49 | 41 | 36 | 45 | 39 | 34 | 41 | 36 | 32 | 29 |
| 6 | 63 | 50 | 40 | 34 | 60 | 48 | 39 | 33 | 44 | 36 | 31 | 40 | 34 | 29 | 37 | 32 | 27 | 25 |
| 7 | 59 | 45 | 36 | 29 | 56 | 43 | 34 | 29 | 40 | 32 | 27 | 37 | 30 | 26 | 34 | 28 | 24 | 22 |
| 8 | 54 | 41 | 32 | 26 | 52 | 39 | 31 | 25 | 36 | 29 | 24 | 33 | 27 | 23 | 31 | 25 | 21 | 19 |
| 9 | 51 | 37 | 29 | 23 | 48 | 36 | 28 | 22 | 33 | 26 | 21 | 31 | 25 | 20 | 28 | 23 | 19 | 17 |
| 10 | 47 | 34 | 26 | 21 | 45 | 33 | 25 | 20 | 31 | 24 | 19 | 28 | 22 | 18 | 26 | 21 | 17 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5999 | 5999 | 5999 |
| 5° | 6011 | 5728 | 5697 |
| 10° | 5960 | 5537 | 5483 |
| 15° | 5904 | 5359 | 5301 |
| 20° | 5831 | 5195 | 5144 |
| 25° | 5732 | 5036 | 4989 |
| 30° | 5646 | 4891 | 4840 |
| 35° | 5531 | 4737 | 4700 |
| 40° | 5412 | 4590 | 4583 |
| 45° | 5272 | 4433 | 4488 |
| 50° | 5101 | 4294 | 4386 |
| 55° | 4916 | 4150 | 4294 |
| 60° | 4675 | 4026 | 4196 |
| 65° | 4342 | 3871 | 4088 |
| 70° | 3886 | 3699 | 3957 |
| 75° | 3260 | 3518 | 3831 |
| 80° | 2349 | 3317 | 3725 |
| 85° | 1105 | 3201 | 3668 |



TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 79.7 | 2.0 |
| 10°-20° | 233.1 | 5.8 |
| 20°-30° | 364.4 | 9.1 |
| 30°-40° | 458.3 | 11.5 |
| 40°-50° | 506.1 | 12.7 |
| 50°-60° | 505.8 | 12.7 |
| 60°-70° | 456.4 | 11.4 |
| 70°-80° | 366.0 | 9.2 |
| 80°-90° | 267.0 | 6.7 |
| 90°-100° | 215.7 | 5.4 |
| 100°-110° | 179.3 | 4.5 |
| 110°-120° | 138.9 | 3.5 |
| 120°-130° | 99.0 | 2.5 |
| 130°-140° | 64.0 | 1.6 |
| 140°-150° | 36.3 | 0.9 |
| 150°-160° | 16.0 | 0.4 |
| 160°-170° | 3.4 | 0.1 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 677.3 | 17.0 |
| 0°-40° | 1135.6 | 28.5 |
| 0°-60° | 2147.5 | 53.8 |
| 0°-90° | 3237.0 | 81.1 |
| 90°-120° | 533.9 | 13.4 |
| 90°-150° | 733.2 | 18.4 |
| 90°-180° | 753.0 | 18.9 |
| 0°-180° | 3989.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 836 | 836 | 836 | 836 | 836 | |
| 5° | 839 | 837 | 831 | 838 | 837 | 80 |
| 15° | 808 | 814 | 821 | 839 | 841 | 228 |
| 25° | 745 | 764 | 789 | 818 | 826 | 344 |
| 35° | 659 | 692 | 736 | 775 | 787 | 412 |
| 45° | 552 | 599 | 662 | 716 | 737 | 426 |
| 55° | 428 | 490 | 576 | 645 | 670 | 382 |
| 65° | 290 | 368 | 480 | 557 | 585 | 286 |
| 75° | 145 | 246 | 371 | 454 | 482 | 153 |
| 85° | 23 | 138 | 268 | 354 | 384 | 31 |
| 90° | 0 | 110 | 237 | 322 | 352 | 1 |
| 95° | 0 | 96 | 220 | 306 | 335 | 0 |
| 105° | 1 | 74 | 187 | 267 | 295 | 0 |
| 115° | 1 | 60 | 151 | 222 | 249 | 1 |
| 125° | 1 | 48 | 119 | 174 | 196 | 1 |
| 135° | 1 | 35 | 87 | 132 | 148 | 1 |
| 145° | 1 | 22 | 59 | 95 | 108 | 1 |
| 155° | 1 | 12 | 34 | 54 | 68 | 0 |
| 165° | 1 | 4 | 14 | 20 | 29 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0° | 836 | 836 | 836 | 836 | 836 | 836 | 836 | 836 | 836 | 836 | 836 |
| 2.5° | 843 | 842 | 839 | 838 | 839 | 839 | 838 | 836 | 834 | 831 | 831 |
| 5° | 839 | 839 | 837 | 836 | 837 | 837 | 837 | 836 | 833 | 831 | 832 |
| 7.5° | 834 | 834 | 832 | 832 | 833 | 834 | 834 | 834 | 832 | 831 | 832 |
| 10° | 827 | 826 | 825 | 826 | 828 | 829 | 831 | 830 | 829 | 829 | 831 |
| 12.5° | 819 | 817 | 817 | 818 | 821 | 823 | 825 | 825 | 825 | 826 | 829 |
| 15° | 808 | 807 | 807 | 808 | 812 | 816 | 818 | 819 | 820 | 821 | 825 |
| 17.5° | 795 | 795 | 795 | 797 | 802 | 806 | 809 | 812 | 813 | 815 | 821 |
| 20° | 781 | 781 | 782 | 785 | 790 | 795 | 799 | 802 | 805 | 808 | 815 |
| 22.5° | 764 | 765 | 766 | 770 | 776 | 782 | 787 | 791 | 795 | 799 | 806 |
| 25° | 745 | 747 | 749 | 754 | 761 | 768 | 774 | 779 | 784 | 789 | 797 |
| 27.5° | 727 | 727 | 731 | 737 | 744 | 753 | 760 | 766 | 772 | 779 | 787 |
| 30° | 706 | 707 | 711 | 718 | 727 | 736 | 745 | 751 | 758 | 766 | 775 |
| 32.5° | 684 | 685 | 690 | 697 | 707 | 718 | 727 | 734 | 743 | 752 | 761 |
| 35° | 659 | 661 | 667 | 675 | 686 | 697 | 708 | 716 | 726 | 736 | 747 |
| 37.5° | 634 | 637 | 643 | 651 | 664 | 677 | 687 | 697 | 708 | 720 | 731 |
| 40° | 608 | 612 | 617 | 628 | 642 | 655 | 666 | 677 | 690 | 702 | 714 |
| 42.5° | 581 | 584 | 591 | 603 | 617 | 631 | 643 | 656 | 669 | 682 | 695 |
| 45° | 552 | 556 | 564 | 576 | 592 | 606 | 620 | 634 | 648 | 662 | 676 |
| 47.5° | 522 | 527 | 535 | 549 | 565 | 581 | 595 | 611 | 626 | 642 | 657 |
| 50° | 491 | 497 | 506 | 521 | 538 | 554 | 570 | 586 | 603 | 621 | 638 |
| 52.5° | 460 | 465 | 476 | 492 | 510 | 527 | 544 | 562 | 581 | 599 | 617 |
| 55° | 428 | 433 | 444 | 460 | 480 | 499 | 517 | 537 | 557 | 576 | 596 |
| 57.5° | 394 | 399 | 413 | 430 | 450 | 470 | 490 | 513 | 534 | 554 | 574 |
| 60° | 361 | 366 | 379 | 398 | 418 | 441 | 463 | 487 | 510 | 531 | 551 |
| 62.5° | 325 | 332 | 347 | 365 | 389 | 411 | 435 | 460 | 483 | 506 | 527 |
| 65° | 290 | 296 | 311 | 331 | 355 | 382 | 407 | 433 | 457 | 480 | 501 |
| 67.5° | 254 | 261 | 277 | 298 | 325 | 352 | 378 | 404 | 431 | 455 | 474 |
| 70° | 217 | 224 | 243 | 265 | 292 | 321 | 350 | 376 | 402 | 426 | 448 |
| 72.5° | 180 | 188 | 206 | 232 | 262 | 291 | 320 | 349 | 374 | 398 | 420 |
| 75° | 145 | 153 | 173 | 200 | 231 | 261 | 291 | 320 | 346 | 371 | 392 |
| 77.5° | 110 | 120 | 139 | 169 | 202 | 232 | 262 | 291 | 318 | 343 | 366 |
| 80° | 77 | 86 | 110 | 140 | 172 | 204 | 234 | 264 | 291 | 315 | 339 |
| 82.5° | 48 | 58 | 83 | 114 | 145 | 177 | 208 | 238 | 265 | 290 | 314 |
| 85° | 23 | 35 | 60 | 90 | 122 | 154 | 185 | 214 | 242 | 268 | 291 |
| 87.5° | 7 | 18 | 43 | 73 | 104 | 136 | 166 | 196 | 223 | 249 | 272 |
| 90° | 0 | 11 | 34 | 62 | 94 | 125 | 155 | 184 | 211 | 237 | 260 |
| 92.5° | 0 | 8 | 29 | 57 | 87 | 118 | 148 | 176 | 203 | 229 | 252 |
| 95° | 0 | 7 | 26 | 52 | 81 | 111 | 140 | 169 | 196 | 220 | 244 |
| 97.5° | 0 | 7 | 24 | 48 | 76 | 105 | 134 | 162 | 188 | 213 | 236 |
| 100° | 0 | 7 | 22 | 44 | 70 | 98 | 127 | 154 | 180 | 205 | 227 |
| 102.5° | 0 | 7 | 21 | 41 | 66 | 93 | 119 | 146 | 172 | 196 | 218 |
| 105° | 1 | 6 | 20 | 39 | 62 | 87 | 113 | 139 | 164 | 187 | 208 |
| 107.5° | 0 | 6 | 20 | 38 | 59 | 82 | 106 | 131 | 155 | 178 | 199 |
| 110° | 1 | 6 | 19 | 36 | 56 | 77 | 100 | 124 | 147 | 169 | 190 |



TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 0 | 5 | 18 | 35 | 54 | 74 | 95 | 117 | 138 | 160 | 180 |
| 115° | 1 | 5 | 18 | 34 | 51 | 70 | 90 | 110 | 131 | 151 | 170 |
| 117.5° | 1 | 5 | 17 | 32 | 49 | 67 | 85 | 104 | 123 | 142 | 160 |
| 120° | 1 | 4 | 15 | 30 | 47 | 64 | 81 | 99 | 116 | 134 | 151 |
| 122.5° | 1 | 4 | 14 | 28 | 44 | 61 | 77 | 93 | 110 | 126 | 142 |
| 125° | 1 | 3 | 13 | 26 | 41 | 56 | 72 | 88 | 103 | 119 | 133 |
| 127.5° | 0 | 3 | 12 | 24 | 38 | 52 | 67 | 82 | 97 | 111 | 125 |
| 130° | 1 | 2 | 10 | 22 | 35 | 49 | 62 | 75 | 89 | 104 | 117 |
| 132.5° | 1 | 2 | 9 | 20 | 32 | 45 | 57 | 69 | 82 | 95 | 109 |
| 135° | 1 | 2 | 8 | 17 | 29 | 41 | 52 | 64 | 76 | 87 | 99 |
| 137.5° | 1 | 1 | 7 | 15 | 26 | 37 | 48 | 59 | 69 | 80 | 91 |
| 140° | 1 | 1 | 6 | 14 | 23 | 33 | 43 | 53 | 63 | 73 | 82 |
| 142.5° | 1 | 1 | 6 | 12 | 20 | 30 | 39 | 48 | 57 | 66 | 74 |
| 145° | 1 | 1 | 5 | 11 | 18 | 27 | 35 | 43 | 51 | 59 | 67 |
| 147.5° | 1 | 1 | 4 | 10 | 16 | 23 | 31 | 38 | 45 | 52 | 59 |
| 150° | 1 | 1 | 3 | 8 | 14 | 20 | 27 | 33 | 39 | 46 | 52 |
| 152.5° | 1 | 1 | 3 | 7 | 12 | 17 | 23 | 29 | 35 | 40 | 45 |
| 155° | 1 | 1 | 2 | 6 | 10 | 15 | 20 | 25 | 29 | 34 | 38 |
| 157.5° | 1 | 1 | 1 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 |
| 160° | 1 | 1 | 1 | 3 | 6 | 10 | 13 | 17 | 20 | 23 | 26 |
| 162.5° | 1 | 1 | 1 | 2 | 5 | 7 | 10 | 13 | 16 | 18 | 20 |
| 165° | 1 | 1 | 1 | 1 | 3 | 5 | 7 | 10 | 12 | 14 | 15 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| 0° | 836 | 836 | 836 | 836 | 836 | 836 | 836 | 836 |
| 2.5° | 834 | 836 | 837 | 837 | 836 | 836 | 835 | 835 |
| 5° | 835 | 838 | 838 | 839 | 839 | 839 | 838 | 837 |
| 7.5° | 836 | 838 | 840 | 840 | 841 | 841 | 840 | 840 |
| 10° | 835 | 838 | 840 | 841 | 842 | 842 | 842 | 841 |
| 12.5° | 833 | 837 | 839 | 841 | 842 | 843 | 842 | 842 |
| 15° | 830 | 835 | 838 | 840 | 841 | 842 | 841 | 841 |
| 17.5° | 826 | 831 | 834 | 837 | 839 | 840 | 839 | 839 |
| 20° | 821 | 826 | 830 | 833 | 835 | 837 | 837 | 837 |
| 22.5° | 813 | 819 | 824 | 827 | 830 | 831 | 831 | 831 |
| 25° | 805 | 811 | 816 | 820 | 823 | 825 | 826 | 826 |
| 27.5° | 795 | 802 | 808 | 811 | 815 | 817 | 818 | 819 |
| 30° | 784 | 791 | 797 | 801 | 805 | 808 | 809 | 809 |
| 32.5° | 771 | 778 | 785 | 790 | 794 | 797 | 799 | 798 |
| 35° | 757 | 765 | 772 | 778 | 782 | 785 | 787 | 787 |
| 37.5° | 741 | 750 | 759 | 765 | 769 | 773 | 775 | 776 |
| 40° | 725 | 734 | 743 | 750 | 756 | 759 | 762 | 763 |
| 42.5° | 707 | 718 | 728 | 735 | 741 | 745 | 749 | 750 |
| 45° | 689 | 701 | 712 | 720 | 727 | 732 | 735 | 737 |
| 47.5° | 671 | 684 | 695 | 705 | 712 | 717 | 720 | 721 |
| 50° | 652 | 666 | 678 | 689 | 696 | 701 | 704 | 705 |
| 52.5° | 633 | 648 | 659 | 670 | 678 | 684 | 688 | 689 |
| 55° | 613 | 627 | 640 | 650 | 659 | 665 | 670 | 670 |
| 57.5° | 592 | 607 | 620 | 631 | 640 | 647 | 649 | 651 |
| 60° | 569 | 584 | 598 | 610 | 619 | 625 | 629 | 630 |
| 62.5° | 544 | 561 | 575 | 588 | 596 | 604 | 608 | 610 |
| 65° | 520 | 536 | 551 | 563 | 573 | 579 | 583 | 585 |
| 67.5° | 494 | 511 | 527 | 538 | 547 | 554 | 559 | 560 |
| 70° | 467 | 485 | 499 | 513 | 522 | 529 | 533 | 534 |
| 72.5° | 441 | 458 | 474 | 486 | 495 | 503 | 507 | 509 |
| 75° | 413 | 431 | 447 | 460 | 469 | 476 | 480 | 482 |
| 77.5° | 387 | 404 | 421 | 433 | 443 | 450 | 455 | 456 |
| 80° | 360 | 378 | 394 | 407 | 417 | 425 | 429 | 431 |
| 82.5° | 335 | 353 | 369 | 382 | 392 | 399 | 405 | 407 |
| 85° | 312 | 330 | 347 | 360 | 370 | 378 | 382 | 384 |
| 87.5° | 293 | 312 | 328 | 342 | 352 | 359 | 363 | 365 |
| 90° | 281 | 299 | 315 | 329 | 339 | 346 | 351 | 352 |
| 92.5° | 273 | 291 | 307 | 320 | 330 | 338 | 342 | 343 |
| 95° | 265 | 282 | 299 | 312 | 322 | 329 | 333 | 335 |
| 97.5° | 256 | 274 | 290 | 303 | 313 | 320 | 325 | 326 |
| 100° | 247 | 265 | 281 | 293 | 304 | 310 | 315 | 316 |
| 102.5° | 238 | 256 | 271 | 284 | 294 | 301 | 305 | 307 |
| 105° | 228 | 245 | 261 | 273 | 283 | 290 | 294 | 295 |
| 107.5° | 219 | 235 | 251 | 263 | 273 | 279 | 283 | 285 |
| 110° | 209 | 225 | 239 | 251 | 261 | 268 | 272 | 273 |



TEST NUMBER: P33960

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L835-5LTD1-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 198 | 214 | 228 | 240 | 249 | 256 | 260 | 261 |
| 115° | 187 | 203 | 217 | 228 | 237 | 243 | 248 | 249 |
| 117.5° | 177 | 192 | 205 | 215 | 224 | 230 | 234 | 235 |
| 120° | 166 | 180 | 193 | 203 | 212 | 218 | 221 | 223 |
| 122.5° | 156 | 169 | 181 | 191 | 199 | 204 | 208 | 209 |
| 125° | 147 | 159 | 170 | 179 | 186 | 192 | 195 | 196 |
| 127.5° | 137 | 149 | 159 | 167 | 174 | 179 | 182 | 183 |
| 130° | 128 | 139 | 148 | 156 | 162 | 167 | 170 | 171 |
| 132.5° | 120 | 130 | 139 | 146 | 151 | 155 | 158 | 159 |
| 135° | 111 | 121 | 129 | 136 | 141 | 144 | 147 | 148 |
| 137.5° | 101 | 113 | 120 | 126 | 131 | 134 | 136 | 137 |
| 140° | 92 | 102 | 111 | 117 | 121 | 124 | 126 | 127 |
| 142.5° | 83 | 92 | 102 | 108 | 111 | 115 | 116 | 117 |
| 145° | 75 | 83 | 91 | 99 | 103 | 105 | 106 | 108 |
| 147.5° | 66 | 73 | 81 | 89 | 93 | 96 | 97 | 97 |
| 150° | 58 | 64 | 71 | 78 | 84 | 86 | 87 | 88 |
| 152.5° | 50 | 56 | 61 | 67 | 74 | 77 | 78 | 78 |
| 155° | 43 | 47 | 52 | 56 | 63 | 67 | 68 | 68 |
| 157.5° | 35 | 39 | 43 | 47 | 51 | 57 | 58 | 59 |
| 160° | 28 | 32 | 34 | 38 | 41 | 46 | 49 | 49 |
| 162.5° | 22 | 24 | 26 | 29 | 31 | 35 | 39 | 40 |
| 165° | 16 | 17 | 19 | 21 | 22 | 24 | 29 | 29 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)