

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: FAIL-SAFE

Report Number: P25886

Luminaire Tested: **TRE15-LD4-40W-40-CL-WH-UNV-ED1C**

Test Date: 03/24/15



Test Information

Test Method: LM-79-08
Report Number: P25886
Test Lab: INNOVATION CENTER-P2
Test Date: 03/24/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: TRE15-LD4-40W-40-CL-WH-UNV-ED1C
Description: FAILSAFE TERRAPIN 15" DIAMETER 40 WATT-4000K WALL MOUNT
LUMINAIRE CLEAR LENS WITH WHITE BORDER, WHITE EYELID AND
INTERNAL WHITE REFLECTOR
Light Source: (112) NICHIA 4000K LEDS
1FS402256M8404-0
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OSROT40UNVDIM1F

Summary

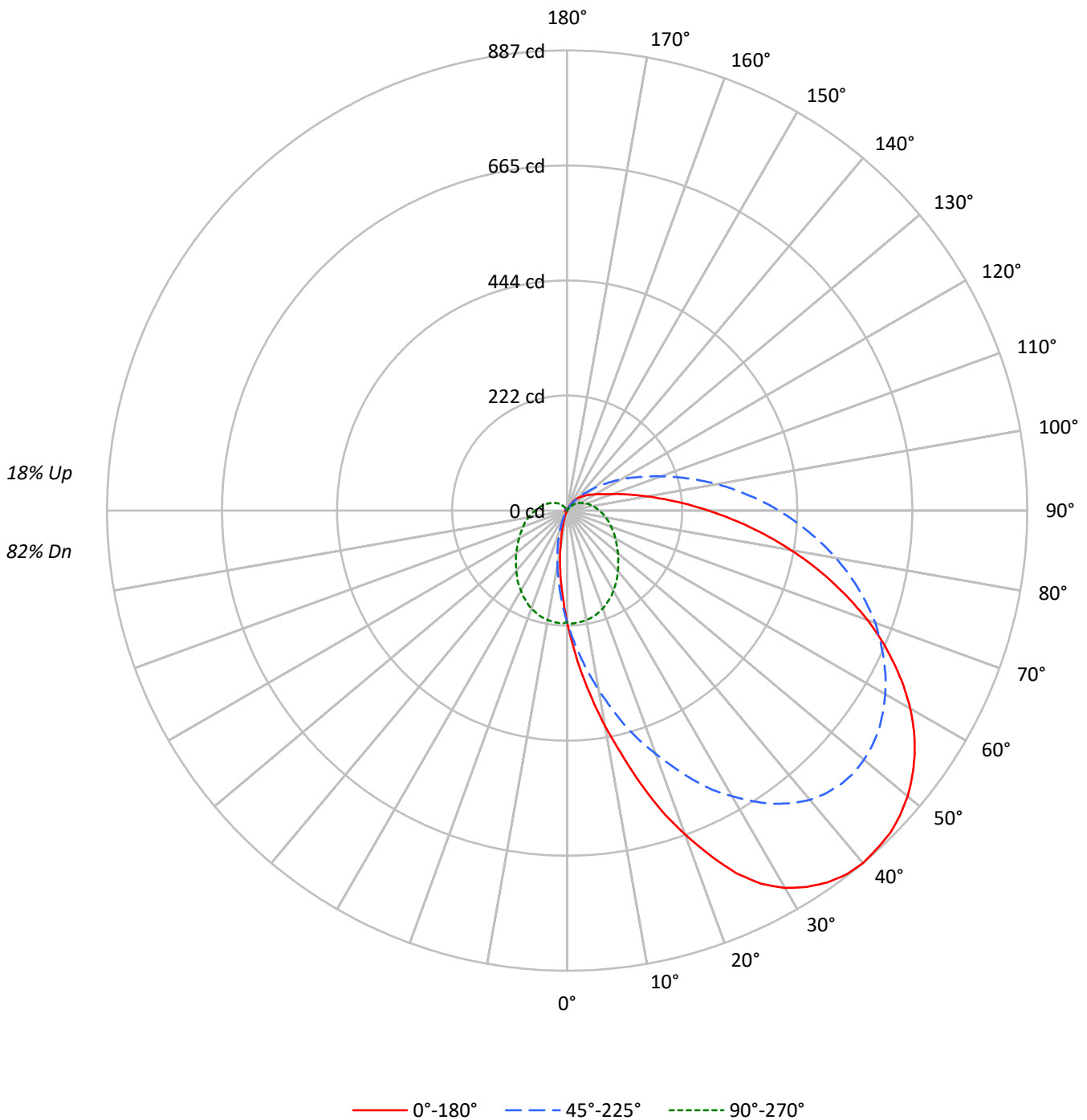
Lumens per Lamp: N/A
Luminaire Lumens: 2046.2 lumens
Efficiency: N/A
Efficacy: 47.6 lumens/watt
Spacing Criteria (0/90/45): 2.46 / 1.23 / 2.26
Luminous Opening: Circular (Dia: 1.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 43
Input Voltage (V): 120.06
Input Current (Ain): 0.35997
Voltage Rise (V): NR
Power Factor: 0.9984
Total Harmonic Distortion (THDi): 7.15%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

Luminous Intensity Polar Plot





TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

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 | 93 | 93 | 93 | 86 | 86 | 86 | 82 |
| 1 | 100 | 93 | 87 | 82 | 95 | 89 | 84 | 79 | 82 | 77 | 73 | 75 | 71 | 68 | 68 | 65 | 63 | 59 |
| 2 | 89 | 78 | 70 | 63 | 84 | 75 | 67 | 60 | 68 | 62 | 56 | 62 | 57 | 52 | 57 | 52 | 49 | 45 |
| 3 | 80 | 67 | 57 | 49 | 75 | 64 | 55 | 48 | 58 | 51 | 45 | 53 | 47 | 42 | 48 | 43 | 39 | 35 |
| 4 | 72 | 58 | 48 | 40 | 68 | 56 | 46 | 39 | 51 | 43 | 36 | 46 | 39 | 34 | 42 | 36 | 32 | 29 |
| 5 | 66 | 51 | 41 | 33 | 62 | 49 | 39 | 32 | 45 | 37 | 30 | 41 | 34 | 28 | 37 | 31 | 26 | 24 |
| 6 | 60 | 45 | 35 | 28 | 57 | 43 | 34 | 27 | 40 | 32 | 26 | 36 | 29 | 24 | 33 | 27 | 23 | 20 |
| 7 | 55 | 41 | 31 | 24 | 52 | 39 | 30 | 24 | 36 | 28 | 22 | 33 | 26 | 21 | 30 | 24 | 19 | 17 |
| 8 | 51 | 37 | 27 | 21 | 49 | 35 | 26 | 20 | 32 | 25 | 19 | 30 | 23 | 18 | 27 | 21 | 17 | 15 |
| 9 | 48 | 33 | 24 | 19 | 45 | 32 | 24 | 18 | 29 | 22 | 17 | 27 | 21 | 16 | 25 | 19 | 15 | 13 |
| 10 | 44 | 30 | 22 | 16 | 42 | 29 | 21 | 16 | 27 | 20 | 15 | 25 | 19 | 14 | 23 | 17 | 13 | 11 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|------|------|
| 0° | 1886 | 1886 | 1886 |
| 5° | 2747 | 1911 | 1206 |
| 10° | 3759 | 1906 | 668 |
| 15° | 4931 | 1898 | 318 |
| 20° | 6198 | 1876 | 121 |
| 25° | 7462 | 1839 | 19 |
| 30° | 8508 | 1803 | 10 |
| 35° | 9369 | 1777 | 11 |
| 40° | 10156 | 1740 | 23 |
| 45° | 10916 | 1724 | 25 |
| 50° | 11694 | 1747 | 41 |
| 55° | 12509 | 1789 | 46 |
| 60° | 13402 | 1877 | 70 |
| 65° | 14424 | 2034 | 83 |
| 70° | 15798 | 2308 | 103 |
| 75° | 17894 | 2813 | 136 |
| 80° | 22124 | 3839 | 202 |
| 85° | 35324 | 6944 | 403 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 21.3 | 1.0 |
| 10°-20° | 71.2 | 3.5 |
| 20°-30° | 135.8 | 6.6 |
| 30°-40° | 202.6 | 9.9 |
| 40°-50° | 253.7 | 12.4 |
| 50°-60° | 279.9 | 13.7 |
| 60°-70° | 277.3 | 13.6 |
| 70°-80° | 247.1 | 12.1 |
| 80°-90° | 197.5 | 9.7 |
| 90°-100° | 143.4 | 7.0 |
| 100°-110° | 96.1 | 4.7 |
| 110°-120° | 59.8 | 2.9 |
| 120°-130° | 34.6 | 1.7 |
| 130°-140° | 17.4 | 0.8 |
| 140°-150° | 6.8 | 0.3 |
| 150°-160° | 1.6 | 0.1 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 228.3 | 11.2 |
| 0°-40° | 430.8 | 21.1 |
| 0°-60° | 964.5 | 47.1 |
| 0°-90° | 1686.4 | 82.4 |
| 90°-120° | 299.4 | 14.6 |
| 90°-150° | 358.1 | 17.5 |
| 90°-180° | 360.0 | 17.6 |
| 0°-180° | 2046.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-----|-----|-----|------|------|------|
| 0° | 215 | 215 | 215 | 215 | 215 | |
| 5° | 312 | 280 | 217 | 157 | 137 | 33 |
| 15° | 543 | 428 | 209 | 69 | 35 | 157 |
| 25° | 771 | 572 | 190 | 22 | 2 | 356 |
| 35° | 875 | 690 | 166 | 3 | 1 | 548 |
| 45° | 880 | 746 | 139 | 1 | 2 | 678 |
| 55° | 818 | 734 | 117 | 1 | 3 | 731 |
| 65° | 695 | 673 | 98 | 2 | 4 | 687 |
| 75° | 528 | 581 | 83 | 3 | 4 | 557 |
| 85° | 351 | 467 | 69 | 3 | 4 | 305 |
| 90° | 272 | 408 | 62 | 3 | 4 | 150 |
| 95° | 207 | 349 | 56 | 3 | 4 | 159 |
| 105° | 120 | 240 | 45 | 3 | 3 | 129 |
| 115° | 75 | 153 | 34 | 2 | 3 | 76 |
| 125° | 53 | 91 | 25 | 2 | 3 | 48 |
| 135° | 38 | 46 | 15 | 2 | 3 | 29 |
| 145° | 23 | 19 | 6 | 2 | 3 | 15 |
| 155° | 8 | 6 | 3 | 2 | 3 | 3 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0° | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 |
| 2.5° | 260 | 261 | 259 | 258 | 257 | 255 | 252 | 251 | 249 | 246 | 244 |
| 5° | 312 | 311 | 310 | 307 | 306 | 301 | 296 | 293 | 287 | 280 | 275 |
| 7.5° | 365 | 364 | 362 | 358 | 354 | 348 | 341 | 333 | 325 | 315 | 307 |
| 10° | 422 | 420 | 417 | 411 | 406 | 397 | 387 | 376 | 364 | 351 | 337 |
| 12.5° | 478 | 475 | 473 | 468 | 462 | 451 | 436 | 422 | 406 | 388 | 370 |
| 15° | 543 | 538 | 531 | 528 | 518 | 506 | 487 | 469 | 449 | 428 | 403 |
| 17.5° | 607 | 601 | 596 | 587 | 574 | 558 | 538 | 516 | 491 | 464 | 434 |
| 20° | 664 | 662 | 655 | 644 | 629 | 612 | 587 | 560 | 531 | 499 | 465 |
| 22.5° | 719 | 717 | 710 | 699 | 682 | 660 | 636 | 606 | 572 | 535 | 496 |
| 25° | 771 | 768 | 761 | 750 | 733 | 709 | 684 | 651 | 613 | 572 | 526 |
| 27.5° | 811 | 809 | 803 | 792 | 775 | 753 | 725 | 692 | 651 | 607 | 556 |
| 30° | 840 | 838 | 832 | 822 | 808 | 787 | 760 | 727 | 685 | 636 | 583 |
| 32.5° | 860 | 859 | 854 | 845 | 832 | 812 | 786 | 755 | 714 | 664 | 608 |
| 35° | 875 | 874 | 870 | 862 | 850 | 833 | 808 | 779 | 739 | 690 | 631 |
| 37.5° | 884 | 883 | 878 | 872 | 861 | 845 | 824 | 796 | 759 | 711 | 652 |
| 40° | 887 | 885 | 882 | 875 | 866 | 852 | 833 | 807 | 772 | 728 | 670 |
| 42.5° | 884 | 884 | 881 | 875 | 867 | 854 | 837 | 813 | 781 | 739 | 682 |
| 45° | 880 | 879 | 876 | 871 | 864 | 852 | 836 | 815 | 785 | 746 | 693 |
| 47.5° | 870 | 869 | 868 | 862 | 856 | 846 | 832 | 812 | 785 | 749 | 698 |
| 50° | 857 | 856 | 855 | 850 | 845 | 836 | 824 | 805 | 781 | 747 | 700 |
| 52.5° | 839 | 839 | 838 | 835 | 831 | 823 | 812 | 795 | 773 | 742 | 697 |
| 55° | 818 | 818 | 817 | 816 | 812 | 806 | 797 | 783 | 762 | 734 | 692 |
| 57.5° | 793 | 793 | 792 | 792 | 791 | 786 | 779 | 767 | 748 | 722 | 683 |
| 60° | 764 | 764 | 764 | 766 | 766 | 763 | 759 | 748 | 732 | 708 | 672 |
| 62.5° | 731 | 732 | 733 | 737 | 739 | 738 | 736 | 728 | 714 | 692 | 659 |
| 65° | 695 | 698 | 699 | 704 | 707 | 710 | 711 | 705 | 693 | 673 | 643 |
| 67.5° | 657 | 659 | 663 | 668 | 675 | 679 | 683 | 679 | 671 | 653 | 626 |
| 70° | 616 | 617 | 623 | 630 | 638 | 646 | 652 | 652 | 645 | 632 | 606 |
| 72.5° | 572 | 575 | 583 | 590 | 600 | 611 | 620 | 623 | 618 | 607 | 585 |
| 75° | 528 | 531 | 540 | 548 | 560 | 574 | 585 | 591 | 590 | 581 | 561 |
| 77.5° | 483 | 487 | 496 | 506 | 520 | 536 | 550 | 558 | 560 | 554 | 538 |
| 80° | 438 | 442 | 451 | 464 | 479 | 496 | 511 | 524 | 529 | 526 | 514 |
| 82.5° | 394 | 398 | 407 | 421 | 438 | 457 | 474 | 489 | 499 | 497 | 487 |
| 85° | 351 | 355 | 365 | 380 | 398 | 418 | 438 | 455 | 465 | 467 | 460 |
| 87.5° | 310 | 316 | 324 | 341 | 360 | 380 | 401 | 420 | 432 | 437 | 433 |
| 90° | 272 | 277 | 287 | 304 | 323 | 344 | 365 | 385 | 400 | 408 | 406 |
| 92.5° | 238 | 243 | 252 | 269 | 289 | 310 | 332 | 351 | 368 | 379 | 378 |
| 95° | 207 | 211 | 221 | 238 | 256 | 278 | 301 | 319 | 338 | 349 | 353 |
| 97.5° | 180 | 184 | 194 | 210 | 228 | 249 | 271 | 289 | 308 | 321 | 325 |
| 100° | 157 | 160 | 170 | 185 | 202 | 222 | 241 | 261 | 280 | 293 | 301 |
| 102.5° | 137 | 140 | 149 | 163 | 179 | 197 | 216 | 234 | 252 | 266 | 274 |
| 105° | 120 | 122 | 130 | 143 | 158 | 175 | 193 | 210 | 226 | 240 | 249 |
| 107.5° | 106 | 107 | 115 | 126 | 139 | 154 | 171 | 187 | 202 | 216 | 225 |
| 110° | 93 | 95 | 101 | 111 | 123 | 136 | 151 | 166 | 180 | 193 | 202 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 83 | 85 | 90 | 99 | 109 | 121 | 134 | 147 | 160 | 172 | 180 |
| 115° | 75 | 76 | 81 | 88 | 97 | 107 | 119 | 130 | 142 | 153 | 160 |
| 117.5° | 69 | 69 | 73 | 79 | 86 | 95 | 105 | 115 | 126 | 136 | 142 |
| 120° | 63 | 63 | 66 | 71 | 77 | 85 | 94 | 103 | 112 | 120 | 124 |
| 122.5° | 57 | 58 | 60 | 64 | 69 | 76 | 83 | 91 | 99 | 105 | 108 |
| 125° | 53 | 53 | 55 | 58 | 62 | 68 | 74 | 80 | 87 | 91 | 94 |
| 127.5° | 49 | 49 | 50 | 53 | 56 | 61 | 66 | 71 | 76 | 78 | 80 |
| 130° | 45 | 45 | 46 | 48 | 50 | 54 | 58 | 62 | 65 | 66 | 68 |
| 132.5° | 41 | 41 | 42 | 43 | 46 | 48 | 51 | 54 | 55 | 55 | 57 |
| 135° | 38 | 38 | 38 | 39 | 41 | 43 | 45 | 46 | 45 | 46 | 47 |
| 137.5° | 34 | 34 | 35 | 35 | 36 | 37 | 38 | 38 | 37 | 38 | 38 |
| 140° | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 31 | 30 | 30 | 31 |
| 142.5° | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 25 | 24 | 24 | 24 |
| 145° | 23 | 23 | 23 | 23 | 22 | 21 | 21 | 19 | 19 | 19 | 19 |
| 147.5° | 19 | 19 | 18 | 18 | 18 | 17 | 16 | 15 | 15 | 14 | 14 |
| 150° | 15 | 15 | 15 | 14 | 14 | 13 | 12 | 12 | 11 | 11 | 10 |
| 152.5° | 11 | 11 | 11 | 11 | 11 | 10 | 9 | 9 | 8 | 8 | 8 |
| 155° | 8 | 9 | 8 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 6 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° | 105° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 0° | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 |
| 2.5° | 241 | 238 | 236 | 232 | 229 | 225 | 222 | 218 | 214 | 210 | 206 |
| 5° | 268 | 262 | 255 | 248 | 240 | 233 | 225 | 217 | 209 | 202 | 194 |
| 7.5° | 295 | 286 | 274 | 263 | 251 | 239 | 228 | 216 | 205 | 194 | 183 |
| 10° | 322 | 308 | 293 | 277 | 262 | 245 | 229 | 214 | 199 | 185 | 172 |
| 12.5° | 350 | 331 | 311 | 291 | 270 | 250 | 230 | 212 | 193 | 177 | 160 |
| 15° | 379 | 355 | 329 | 304 | 279 | 256 | 231 | 209 | 187 | 168 | 150 |
| 17.5° | 406 | 375 | 346 | 316 | 287 | 259 | 231 | 205 | 181 | 159 | 139 |
| 20° | 431 | 396 | 361 | 326 | 293 | 261 | 229 | 201 | 174 | 150 | 129 |
| 22.5° | 456 | 416 | 375 | 336 | 298 | 262 | 227 | 196 | 167 | 142 | 119 |
| 25° | 481 | 435 | 389 | 344 | 302 | 262 | 224 | 190 | 159 | 133 | 110 |
| 27.5° | 505 | 453 | 402 | 352 | 306 | 262 | 220 | 185 | 152 | 125 | 101 |
| 30° | 527 | 470 | 413 | 358 | 307 | 260 | 216 | 178 | 145 | 117 | 93 |
| 32.5° | 547 | 485 | 422 | 363 | 307 | 257 | 211 | 172 | 138 | 110 | 85 |
| 35° | 568 | 500 | 431 | 367 | 308 | 254 | 206 | 166 | 131 | 103 | 78 |
| 37.5° | 584 | 513 | 439 | 369 | 306 | 250 | 200 | 159 | 124 | 96 | 72 |
| 40° | 601 | 525 | 445 | 371 | 304 | 245 | 194 | 152 | 117 | 90 | 66 |
| 42.5° | 613 | 535 | 451 | 371 | 301 | 240 | 188 | 146 | 111 | 84 | 60 |
| 45° | 624 | 543 | 455 | 371 | 297 | 234 | 182 | 139 | 106 | 79 | 55 |
| 47.5° | 631 | 549 | 458 | 370 | 293 | 229 | 175 | 134 | 100 | 74 | 51 |
| 50° | 635 | 554 | 460 | 368 | 288 | 223 | 169 | 128 | 94 | 69 | 47 |
| 52.5° | 636 | 555 | 460 | 366 | 283 | 217 | 163 | 122 | 90 | 65 | 44 |
| 55° | 633 | 555 | 459 | 362 | 278 | 211 | 157 | 117 | 85 | 61 | 40 |
| 57.5° | 628 | 552 | 456 | 358 | 273 | 205 | 152 | 112 | 81 | 57 | 38 |
| 60° | 620 | 547 | 452 | 353 | 267 | 199 | 146 | 107 | 77 | 54 | 35 |
| 62.5° | 611 | 541 | 448 | 348 | 261 | 193 | 141 | 103 | 73 | 51 | 33 |
| 65° | 598 | 532 | 442 | 343 | 255 | 187 | 136 | 98 | 70 | 48 | 30 |
| 67.5° | 585 | 521 | 434 | 337 | 249 | 182 | 131 | 94 | 66 | 45 | 28 |
| 70° | 567 | 509 | 424 | 329 | 243 | 177 | 127 | 90 | 63 | 43 | 26 |
| 72.5° | 549 | 495 | 414 | 322 | 237 | 172 | 122 | 87 | 60 | 40 | 25 |
| 75° | 530 | 479 | 403 | 314 | 231 | 166 | 118 | 83 | 57 | 38 | 23 |
| 77.5° | 509 | 462 | 391 | 305 | 224 | 161 | 113 | 79 | 54 | 36 | 22 |
| 80° | 487 | 444 | 378 | 296 | 217 | 155 | 109 | 76 | 51 | 34 | 20 |
| 82.5° | 464 | 425 | 363 | 286 | 211 | 150 | 105 | 72 | 48 | 32 | 19 |
| 85° | 441 | 405 | 348 | 275 | 203 | 145 | 100 | 69 | 46 | 30 | 18 |
| 87.5° | 417 | 385 | 333 | 264 | 196 | 139 | 96 | 65 | 43 | 28 | 16 |
| 90° | 393 | 364 | 317 | 253 | 188 | 134 | 92 | 62 | 41 | 26 | 15 |
| 92.5° | 368 | 345 | 301 | 242 | 181 | 129 | 88 | 59 | 38 | 24 | 14 |
| 95° | 344 | 323 | 284 | 230 | 174 | 124 | 84 | 56 | 36 | 22 | 13 |
| 97.5° | 319 | 303 | 268 | 218 | 166 | 118 | 80 | 53 | 34 | 21 | 12 |
| 100° | 296 | 282 | 251 | 206 | 157 | 113 | 76 | 50 | 32 | 19 | 11 |
| 102.5° | 273 | 261 | 234 | 194 | 149 | 107 | 73 | 47 | 30 | 18 | 10 |
| 105° | 249 | 239 | 217 | 182 | 141 | 102 | 69 | 45 | 28 | 17 | 9 |
| 107.5° | 226 | 219 | 200 | 169 | 132 | 96 | 65 | 42 | 26 | 15 | 8 |
| 110° | 204 | 200 | 183 | 157 | 124 | 91 | 61 | 40 | 24 | 14 | 8 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° | 105° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 112.5° | 183 | 180 | 167 | 144 | 115 | 85 | 58 | 37 | 22 | 13 | 7 |
| 115° | 163 | 162 | 151 | 132 | 106 | 79 | 54 | 34 | 21 | 12 | 6 |
| 117.5° | 144 | 144 | 136 | 120 | 98 | 73 | 50 | 32 | 19 | 11 | 6 |
| 120° | 127 | 127 | 121 | 108 | 89 | 67 | 46 | 30 | 18 | 10 | 5 |
| 122.5° | 111 | 111 | 107 | 96 | 80 | 61 | 43 | 27 | 16 | 9 | 5 |
| 125° | 97 | 97 | 93 | 84 | 71 | 55 | 39 | 25 | 15 | 8 | 4 |
| 127.5° | 83 | 83 | 80 | 73 | 62 | 49 | 35 | 23 | 14 | 8 | 4 |
| 130° | 71 | 71 | 68 | 63 | 54 | 43 | 31 | 21 | 12 | 7 | 4 |
| 132.5° | 59 | 59 | 57 | 53 | 46 | 37 | 27 | 18 | 11 | 6 | 3 |
| 135° | 49 | 49 | 47 | 44 | 38 | 31 | 23 | 15 | 9 | 5 | 3 |
| 137.5° | 39 | 39 | 38 | 35 | 31 | 25 | 19 | 13 | 8 | 5 | 3 |
| 140° | 31 | 31 | 30 | 28 | 24 | 20 | 15 | 11 | 7 | 4 | 3 |
| 142.5° | 24 | 24 | 23 | 21 | 19 | 15 | 12 | 8 | 5 | 4 | 3 |
| 145° | 19 | 18 | 17 | 16 | 14 | 12 | 9 | 6 | 4 | 3 | 3 |
| 147.5° | 14 | 13 | 13 | 12 | 10 | 9 | 7 | 5 | 4 | 3 | 3 |
| 150° | 10 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 3 | 3 |
| 152.5° | 7 | 7 | 7 | 6 | 5 | 5 | 4 | 3 | 3 | 3 | 3 |
| 155° | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | 160° |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 |
| 2.5° | 202 | 199 | 195 | 191 | 187 | 185 | 183 | 179 | 178 | 176 | 174 |
| 5° | 187 | 181 | 174 | 168 | 162 | 157 | 153 | 148 | 146 | 142 | 140 |
| 7.5° | 173 | 164 | 154 | 146 | 139 | 131 | 126 | 120 | 116 | 112 | 109 |
| 10° | 159 | 148 | 135 | 126 | 118 | 108 | 101 | 95 | 90 | 85 | 82 |
| 12.5° | 145 | 132 | 120 | 108 | 97 | 87 | 79 | 73 | 67 | 62 | 58 |
| 15° | 133 | 118 | 103 | 91 | 80 | 69 | 61 | 54 | 49 | 44 | 41 |
| 17.5° | 121 | 105 | 89 | 76 | 64 | 54 | 45 | 40 | 34 | 30 | 27 |
| 20° | 109 | 92 | 75 | 62 | 51 | 41 | 33 | 28 | 23 | 20 | 17 |
| 22.5° | 98 | 80 | 64 | 50 | 40 | 30 | 24 | 19 | 15 | 12 | 10 |
| 25° | 88 | 70 | 54 | 41 | 30 | 22 | 16 | 12 | 8 | 6 | 4 |
| 27.5° | 79 | 61 | 45 | 33 | 23 | 16 | 10 | 6 | 4 | 2 | 1 |
| 30° | 71 | 53 | 38 | 26 | 17 | 10 | 6 | 3 | 1 | 1 | 1 |
| 32.5° | 63 | 45 | 31 | 20 | 12 | 6 | 2 | 1 | 1 | 1 | 1 |
| 35° | 57 | 39 | 26 | 15 | 8 | 3 | 1 | 1 | 1 | 1 | 1 |
| 37.5° | 51 | 34 | 21 | 12 | 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40° | 45 | 30 | 17 | 8 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42.5° | 41 | 26 | 14 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45° | 37 | 22 | 11 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| 47.5° | 33 | 19 | 9 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| 50° | 30 | 17 | 7 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| 52.5° | 27 | 15 | 5 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| 55° | 24 | 13 | 4 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 3 |
| 57.5° | 22 | 11 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 60° | 20 | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 62.5° | 19 | 9 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 65° | 17 | 7 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 67.5° | 16 | 7 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| 70° | 15 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| 72.5° | 13 | 5 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 |
| 75° | 12 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 |
| 77.5° | 12 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| 80° | 11 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| 82.5° | 10 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| 85° | 9 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| 87.5° | 8 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 90° | 8 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 92.5° | 7 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 95° | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| 97.5° | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| 100° | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| 102.5° | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| 105° | 5 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 107.5° | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 110° | 4 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | 160° |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 112.5° | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 115° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 117.5° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 120° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 122.5° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 125° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 127.5° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 130° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 132.5° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 135° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 137.5° | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 140° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 142.5° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 145° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 147.5° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| 150° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 152.5° | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| 155° | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|--------|------|------|------|------|
| 0° | 215 | 215 | 215 | 215 |
| 2.5° | 174 | 173 | 170 | 171 |
| 5° | 138 | 137 | 136 | 137 |
| 7.5° | 107 | 105 | 103 | 105 |
| 10° | 79 | 76 | 76 | 75 |
| 12.5° | 56 | 54 | 52 | 52 |
| 15° | 38 | 36 | 35 | 35 |
| 17.5° | 24 | 23 | 23 | 22 |
| 20° | 15 | 14 | 13 | 13 |
| 22.5° | 8 | 7 | 6 | 6 |
| 25° | 3 | 2 | 2 | 2 |
| 27.5° | 1 | 1 | 1 | 1 |
| 30° | 1 | 1 | 1 | 1 |
| 32.5° | 1 | 1 | 1 | 1 |
| 35° | 1 | 1 | 1 | 1 |
| 37.5° | 1 | 2 | 2 | 2 |
| 40° | 2 | 2 | 2 | 2 |
| 42.5° | 2 | 2 | 2 | 2 |
| 45° | 2 | 2 | 2 | 2 |
| 47.5° | 2 | 3 | 3 | 3 |
| 50° | 2 | 3 | 3 | 3 |
| 52.5° | 2 | 3 | 3 | 3 |
| 55° | 3 | 3 | 3 | 3 |
| 57.5° | 3 | 3 | 4 | 4 |
| 60° | 3 | 3 | 4 | 4 |
| 62.5° | 3 | 4 | 4 | 4 |
| 65° | 4 | 4 | 4 | 4 |
| 67.5° | 4 | 4 | 4 | 4 |
| 70° | 4 | 4 | 4 | 4 |
| 72.5° | 4 | 4 | 4 | 4 |
| 75° | 4 | 4 | 4 | 4 |
| 77.5° | 4 | 4 | 4 | 4 |
| 80° | 4 | 4 | 4 | 4 |
| 82.5° | 4 | 4 | 4 | 4 |
| 85° | 4 | 4 | 4 | 4 |
| 87.5° | 4 | 4 | 4 | 4 |
| 90° | 4 | 4 | 4 | 4 |
| 92.5° | 4 | 4 | 4 | 4 |
| 95° | 4 | 4 | 4 | 4 |
| 97.5° | 4 | 4 | 4 | 4 |
| 100° | 4 | 4 | 4 | 4 |
| 102.5° | 4 | 4 | 4 | 3 |
| 105° | 3 | 3 | 3 | 3 |
| 107.5° | 3 | 3 | 3 | 3 |
| 110° | 3 | 3 | 3 | 3 |



TEST NUMBER: P25886

CATALOG NUMBER: TRE15-LD4-40W-40-CL-WH-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|--------|------|------|------|------|
| 112.5° | 3 | 3 | 3 | 3 |
| 115° | 3 | 3 | 3 | 3 |
| 117.5° | 3 | 3 | 3 | 3 |
| 120° | 3 | 3 | 3 | 3 |
| 122.5° | 3 | 3 | 3 | 3 |
| 125° | 3 | 3 | 3 | 3 |
| 127.5° | 3 | 3 | 3 | 3 |
| 130° | 3 | 3 | 3 | 3 |
| 132.5° | 3 | 3 | 3 | 3 |
| 135° | 2 | 3 | 3 | 3 |
| 137.5° | 3 | 3 | 3 | 3 |
| 140° | 3 | 3 | 3 | 3 |
| 142.5° | 3 | 3 | 3 | 3 |
| 145° | 3 | 3 | 3 | 3 |
| 147.5° | 3 | 3 | 3 | 3 |
| 150° | 3 | 3 | 3 | 3 |
| 152.5° | 3 | 3 | 3 | 2 |
| 155° | 3 | 3 | 3 | 3 |
| 157.5° | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 |

(END OF REPORT)