

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: P28172

Luminaire Tested: **G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C**

Test Date: 08/15/16



Test Information

Test Method: LM-79-08
Report Number: P28172
Test Lab: INNOVATION CENTER-P2
Test Date: 08/15/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C
Description: G12 FLAT MOUNT, EYELID LENS
Light Source: (112) NICHIA 4000K LEDS
NF2L757DRT
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER (700mA)
OT40W

Summary

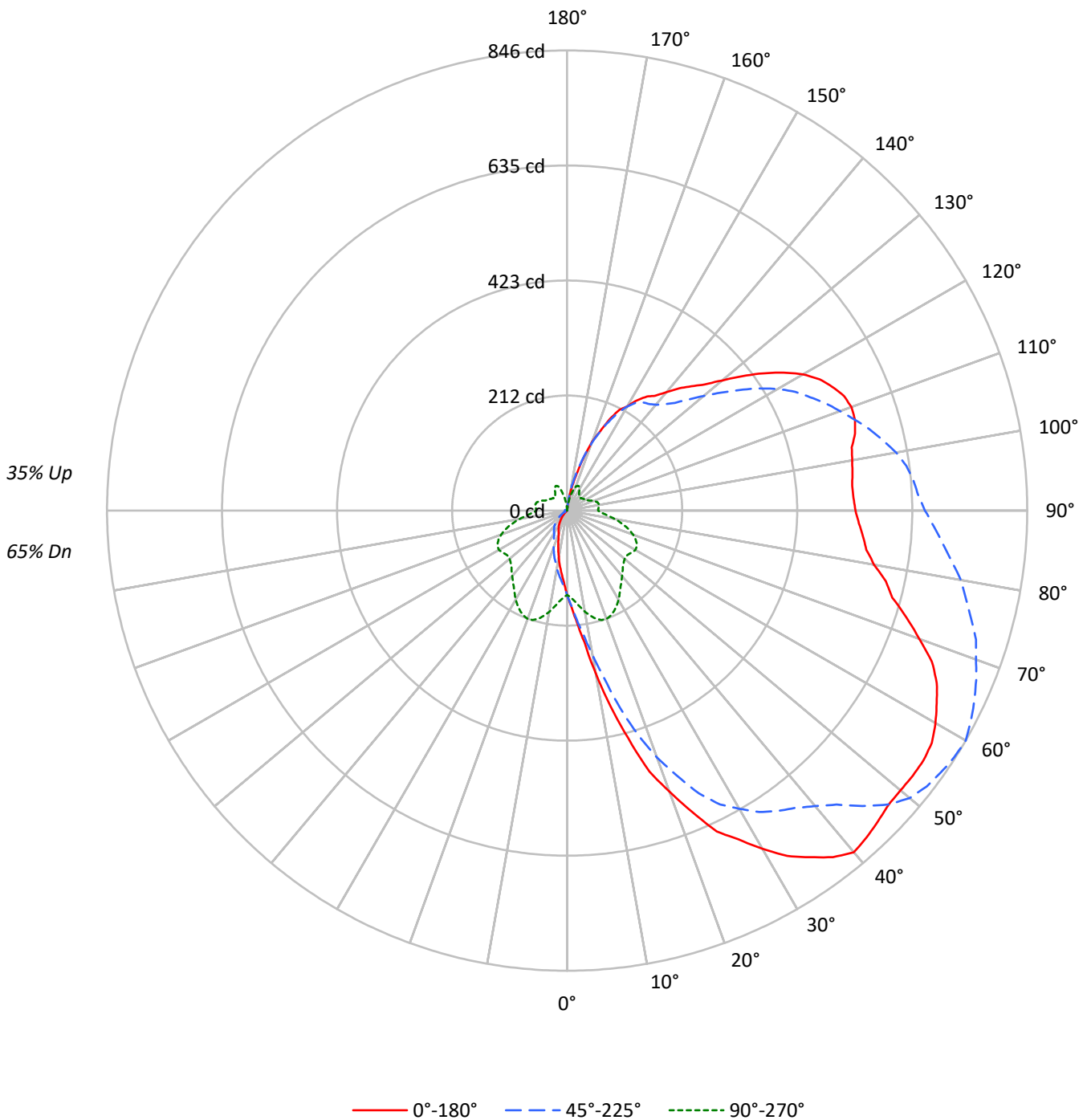
Lumens per Lamp: N/A
Luminaire Lumens: 3078.4 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 2.82 / 1.59 / 2.8
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 0.42' x H: 0.83')
CIE Type: Semi-Direct

Input Watts (W): 32.5
Input Voltage (V): 120.0
Input Current (A_{in}): 0.2720
Voltage Rise (V): NR
Power Factor: 0.9991
Total Harmonic Distortion (THDi): 7.43%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.1
Test Distance: 25 FT

TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

Luminous Intensity Polar Plot





TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-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 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 92 | 92 | 92 | 80 | 80 | 80 | 70 | 70 | 70 | 65 |
| 1 | 96 | 89 | 84 | 78 | 90 | 84 | 78 | 74 | 73 | 69 | 65 | 63 | 60 | 57 | 54 | 51 | 49 | 44 |
| 2 | 85 | 75 | 67 | 60 | 79 | 70 | 63 | 56 | 61 | 55 | 50 | 52 | 47 | 43 | 44 | 40 | 37 | 33 |
| 3 | 77 | 64 | 55 | 47 | 71 | 60 | 51 | 44 | 52 | 45 | 39 | 44 | 39 | 34 | 37 | 33 | 29 | 25 |
| 4 | 69 | 56 | 46 | 38 | 64 | 52 | 43 | 36 | 45 | 38 | 32 | 38 | 32 | 28 | 32 | 27 | 24 | 20 |
| 5 | 63 | 49 | 39 | 32 | 58 | 46 | 37 | 30 | 39 | 32 | 26 | 34 | 28 | 23 | 28 | 23 | 20 | 16 |
| 6 | 58 | 43 | 34 | 27 | 53 | 40 | 32 | 25 | 35 | 28 | 22 | 30 | 24 | 19 | 25 | 20 | 16 | 14 |
| 7 | 53 | 39 | 29 | 23 | 49 | 36 | 28 | 22 | 31 | 24 | 19 | 27 | 21 | 17 | 23 | 18 | 14 | 11 |
| 8 | 49 | 35 | 26 | 20 | 45 | 33 | 24 | 19 | 28 | 21 | 17 | 24 | 19 | 14 | 21 | 16 | 12 | 10 |
| 9 | 46 | 32 | 23 | 17 | 42 | 30 | 22 | 16 | 26 | 19 | 14 | 22 | 17 | 13 | 19 | 14 | 11 | 8 |
| 10 | 42 | 29 | 21 | 15 | 39 | 27 | 20 | 14 | 24 | 17 | 13 | 20 | 15 | 11 | 17 | 13 | 9 | 7 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|------|------|
| 0° | 4805 | 4805 | 4805 |
| 5° | 5456 | 4807 | 3072 |
| 10° | 7098 | 5058 | 2048 |
| 15° | 9048 | 5214 | 1316 |
| 20° | 10501 | 5128 | 859 |
| 25° | 11522 | 4759 | 655 |
| 30° | 11928 | 4289 | 482 |
| 35° | 12266 | 3806 | 315 |
| 40° | 12390 | 3455 | 181 |
| 45° | 11808 | 3178 | 73 |
| 50° | 11403 | 3037 | 0 |
| 55° | 11212 | 3094 | 0 |
| 60° | 10861 | 3291 | 0 |
| 65° | 10402 | 3289 | 0 |
| 70° | 9615 | 3120 | 0 |
| 75° | 8759 | 2810 | 0 |
| 80° | 8288 | 2382 | 0 |
| 85° | 8139 | 1946 | 0 |



TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 16.5 | 0.5 |
| 10°-20° | 65.9 | 2.1 |
| 20°-30° | 136.4 | 4.4 |
| 30°-40° | 207.1 | 6.7 |
| 40°-50° | 269.6 | 8.8 |
| 50°-60° | 321.4 | 10.4 |
| 60°-70° | 345.9 | 11.2 |
| 70°-80° | 331.9 | 10.8 |
| 80°-90° | 299.2 | 9.7 |
| 90°-100° | 273.6 | 8.9 |
| 100°-110° | 246.4 | 8.0 |
| 110°-120° | 202.8 | 6.6 |
| 120°-130° | 148.9 | 4.8 |
| 130°-140° | 97.7 | 3.2 |
| 140°-150° | 65.8 | 2.1 |
| 150°-160° | 37.2 | 1.2 |
| 160°-170° | 11.5 | 0.4 |
| 170°-180° | 0.7 | 0.0 |
| 0°-30° | 218.7 | 7.1 |
| 0°-40° | 425.8 | 13.8 |
| 0°-60° | 1016.7 | 33.0 |
| 0°-90° | 1993.8 | 64.8 |
| 90°-120° | 722.8 | 23.5 |
| 90°-150° | 1035.2 | 33.6 |
| 90°-180° | 1085.0 | 35.2 |
| 0°-180° | 3078.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-----|-----|-----|------|------|------|
| 0° | 155 | 155 | 155 | 155 | 155 | |
| 5° | 206 | 201 | 168 | 128 | 116 | 23 |
| 15° | 433 | 375 | 206 | 90 | 63 | 126 |
| 25° | 651 | 574 | 204 | 58 | 37 | 299 |
| 35° | 778 | 674 | 171 | 42 | 20 | 489 |
| 45° | 808 | 768 | 145 | 28 | 5 | 626 |
| 55° | 800 | 839 | 139 | 13 | 0 | 715 |
| 65° | 750 | 826 | 141 | 5 | 0 | 738 |
| 75° | 619 | 769 | 111 | 4 | 0 | 662 |
| 85° | 546 | 693 | 68 | 4 | 0 | 451 |
| 90° | 530 | 658 | 57 | 4 | 0 | 291 |
| 95° | 526 | 639 | 58 | 4 | 0 | 432 |
| 105° | 548 | 576 | 58 | 4 | 0 | 577 |
| 115° | 538 | 493 | 44 | 3 | 0 | 532 |
| 125° | 440 | 386 | 37 | 2 | 0 | 395 |
| 135° | 323 | 280 | 33 | 1 | 0 | 252 |
| 145° | 256 | 243 | 38 | 0 | 0 | 160 |
| 155° | 186 | 180 | 50 | 0 | 0 | 86 |
| 165° | 74 | 81 | 34 | 0 | 0 | 24 |
| 175° | 1 | 6 | 2 | 0 | 0 | 1 |
| 180° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0° | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| 2.5° | 177 | 175 | 176 | 177 | 176 | 177 | 175 | 173 | 170 | 166 | 162 |
| 5° | 206 | 204 | 204 | 205 | 203 | 205 | 201 | 196 | 190 | 182 | 173 |
| 7.5° | 244 | 241 | 240 | 239 | 235 | 236 | 230 | 224 | 214 | 201 | 186 |
| 10° | 305 | 300 | 297 | 290 | 280 | 280 | 270 | 256 | 240 | 221 | 200 |
| 12.5° | 368 | 364 | 363 | 354 | 342 | 341 | 316 | 293 | 269 | 241 | 213 |
| 15° | 433 | 428 | 426 | 418 | 403 | 402 | 375 | 338 | 297 | 262 | 225 |
| 17.5° | 503 | 498 | 486 | 478 | 459 | 459 | 431 | 390 | 328 | 278 | 232 |
| 20° | 550 | 553 | 546 | 534 | 513 | 512 | 483 | 439 | 362 | 288 | 236 |
| 22.5° | 599 | 600 | 596 | 576 | 562 | 562 | 527 | 484 | 394 | 300 | 238 |
| 25° | 651 | 647 | 647 | 619 | 609 | 605 | 574 | 523 | 425 | 313 | 236 |
| 27.5° | 681 | 687 | 684 | 663 | 649 | 645 | 609 | 556 | 451 | 329 | 231 |
| 30° | 718 | 723 | 713 | 701 | 683 | 680 | 633 | 580 | 472 | 343 | 223 |
| 32.5° | 753 | 751 | 744 | 737 | 709 | 708 | 657 | 595 | 486 | 352 | 215 |
| 35° | 778 | 781 | 774 | 765 | 733 | 728 | 674 | 606 | 492 | 357 | 204 |
| 37.5° | 803 | 808 | 799 | 792 | 756 | 751 | 689 | 614 | 494 | 359 | 195 |
| 40° | 820 | 826 | 824 | 817 | 786 | 778 | 709 | 624 | 495 | 363 | 190 |
| 42.5° | 815 | 818 | 828 | 840 | 815 | 802 | 733 | 642 | 501 | 371 | 187 |
| 45° | 808 | 818 | 834 | 847 | 840 | 827 | 768 | 664 | 512 | 378 | 184 |
| 47.5° | 801 | 817 | 839 | 855 | 849 | 840 | 800 | 691 | 528 | 385 | 183 |
| 50° | 800 | 813 | 839 | 860 | 860 | 850 | 822 | 721 | 545 | 392 | 184 |
| 52.5° | 801 | 808 | 834 | 861 | 865 | 858 | 833 | 747 | 564 | 400 | 188 |
| 55° | 800 | 801 | 823 | 860 | 869 | 863 | 839 | 768 | 584 | 412 | 196 |
| 57.5° | 795 | 793 | 814 | 854 | 873 | 867 | 844 | 776 | 605 | 428 | 205 |
| 60° | 782 | 780 | 796 | 842 | 866 | 864 | 846 | 781 | 627 | 439 | 212 |
| 62.5° | 766 | 762 | 776 | 830 | 856 | 860 | 837 | 781 | 644 | 445 | 211 |
| 65° | 750 | 743 | 751 | 817 | 846 | 851 | 826 | 777 | 652 | 447 | 205 |
| 67.5° | 726 | 717 | 724 | 803 | 832 | 839 | 814 | 771 | 648 | 441 | 198 |
| 70° | 689 | 681 | 702 | 787 | 817 | 826 | 800 | 764 | 635 | 430 | 188 |
| 72.5° | 654 | 647 | 680 | 771 | 804 | 812 | 788 | 751 | 618 | 414 | 177 |
| 75° | 619 | 616 | 652 | 750 | 788 | 794 | 769 | 736 | 594 | 392 | 165 |
| 77.5° | 600 | 603 | 646 | 737 | 771 | 777 | 751 | 718 | 571 | 368 | 152 |
| 80° | 573 | 580 | 628 | 721 | 750 | 758 | 735 | 697 | 545 | 343 | 138 |
| 82.5° | 555 | 560 | 611 | 707 | 728 | 734 | 713 | 671 | 518 | 320 | 124 |
| 85° | 546 | 548 | 595 | 696 | 718 | 720 | 693 | 644 | 491 | 298 | 108 |
| 87.5° | 537 | 539 | 583 | 684 | 707 | 710 | 675 | 620 | 467 | 276 | 96 |
| 90° | 530 | 533 | 576 | 674 | 700 | 699 | 658 | 597 | 441 | 258 | 87 |
| 92.5° | 527 | 532 | 574 | 672 | 694 | 695 | 646 | 577 | 423 | 241 | 83 |
| 95° | 526 | 532 | 577 | 672 | 691 | 690 | 639 | 566 | 406 | 228 | 82 |
| 97.5° | 529 | 534 | 584 | 670 | 686 | 683 | 629 | 551 | 389 | 218 | 82 |
| 100° | 532 | 539 | 585 | 660 | 674 | 671 | 614 | 534 | 373 | 212 | 82 |
| 102.5° | 536 | 542 | 578 | 642 | 658 | 653 | 595 | 518 | 362 | 208 | 81 |
| 105° | 548 | 543 | 568 | 621 | 635 | 632 | 576 | 504 | 349 | 204 | 78 |
| 107.5° | 555 | 547 | 556 | 602 | 613 | 609 | 555 | 489 | 340 | 198 | 75 |
| 110° | 556 | 547 | 541 | 579 | 586 | 584 | 534 | 471 | 329 | 191 | 70 |



TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 551 | 541 | 526 | 555 | 560 | 559 | 515 | 451 | 316 | 184 | 65 |
| 115° | 538 | 528 | 513 | 533 | 534 | 530 | 493 | 432 | 303 | 176 | 60 |
| 117.5° | 523 | 512 | 502 | 512 | 508 | 504 | 473 | 411 | 288 | 169 | 58 |
| 120° | 501 | 491 | 484 | 488 | 480 | 473 | 447 | 388 | 275 | 162 | 56 |
| 122.5° | 472 | 464 | 460 | 462 | 450 | 441 | 418 | 366 | 262 | 157 | 55 |
| 125° | 440 | 432 | 436 | 435 | 421 | 408 | 386 | 342 | 246 | 151 | 54 |
| 127.5° | 406 | 402 | 411 | 406 | 389 | 378 | 356 | 317 | 228 | 145 | 54 |
| 130° | 372 | 374 | 382 | 378 | 358 | 346 | 328 | 293 | 212 | 138 | 54 |
| 132.5° | 343 | 347 | 354 | 350 | 329 | 319 | 302 | 270 | 198 | 133 | 53 |
| 135° | 323 | 319 | 327 | 322 | 306 | 296 | 280 | 251 | 188 | 128 | 54 |
| 137.5° | 305 | 298 | 302 | 301 | 286 | 282 | 265 | 241 | 181 | 125 | 54 |
| 140° | 284 | 281 | 281 | 283 | 272 | 269 | 254 | 233 | 176 | 123 | 55 |
| 142.5° | 266 | 265 | 265 | 269 | 260 | 260 | 247 | 228 | 174 | 124 | 57 |
| 145° | 256 | 248 | 254 | 258 | 253 | 251 | 243 | 227 | 176 | 127 | 61 |
| 147.5° | 241 | 236 | 237 | 243 | 241 | 241 | 235 | 221 | 174 | 128 | 66 |
| 150° | 221 | 224 | 224 | 221 | 223 | 223 | 221 | 210 | 168 | 125 | 69 |
| 152.5° | 209 | 205 | 207 | 198 | 202 | 201 | 203 | 193 | 157 | 118 | 71 |
| 155° | 186 | 182 | 183 | 172 | 176 | 176 | 180 | 172 | 142 | 109 | 69 |
| 157.5° | 157 | 158 | 156 | 151 | 151 | 153 | 156 | 150 | 127 | 97 | 66 |
| 160° | 134 | 131 | 126 | 127 | 127 | 128 | 131 | 127 | 108 | 85 | 59 |
| 162.5° | 105 | 102 | 99 | 100 | 103 | 103 | 106 | 103 | 90 | 71 | 51 |
| 165° | 74 | 72 | 76 | 75 | 79 | 78 | 81 | 80 | 70 | 57 | 42 |
| 167.5° | 51 | 51 | 51 | 54 | 56 | 56 | 59 | 58 | 53 | 42 | 32 |
| 170° | 32 | 31 | 32 | 34 | 37 | 37 | 39 | 38 | 35 | 29 | 21 |
| 172.5° | 14 | 14 | 16 | 17 | 19 | 19 | 20 | 19 | 19 | 16 | 12 |
| 175° | 1 | 1 | 1 | 3 | 5 | 4 | 6 | 5 | 6 | 5 | 3 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|-----|------|------|------|------|------|------|------|------|------|
| 0° | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| 2.5° | 160 | 157 | 152 | 147 | 143 | 139 | 136 | 134 | 134 | 132 | 132 |
| 5° | 168 | 162 | 153 | 143 | 135 | 128 | 123 | 120 | 118 | 116 | 116 |
| 7.5° | 178 | 170 | 155 | 141 | 128 | 118 | 111 | 106 | 104 | 102 | 102 |
| 10° | 189 | 178 | 157 | 138 | 122 | 108 | 98 | 93 | 90 | 88 | 88 |
| 12.5° | 198 | 184 | 159 | 135 | 115 | 98 | 87 | 81 | 77 | 75 | 75 |
| 15° | 206 | 189 | 158 | 131 | 108 | 90 | 77 | 70 | 66 | 63 | 63 |
| 17.5° | 211 | 192 | 155 | 126 | 100 | 81 | 68 | 60 | 55 | 53 | 52 |
| 20° | 212 | 189 | 151 | 119 | 92 | 72 | 59 | 50 | 47 | 45 | 45 |
| 22.5° | 209 | 184 | 144 | 111 | 84 | 65 | 50 | 44 | 42 | 41 | 41 |
| 25° | 204 | 178 | 136 | 103 | 79 | 58 | 45 | 41 | 39 | 37 | 37 |
| 27.5° | 197 | 170 | 128 | 99 | 73 | 52 | 42 | 38 | 35 | 33 | 33 |
| 30° | 189 | 163 | 123 | 95 | 68 | 48 | 39 | 34 | 31 | 29 | 29 |
| 32.5° | 180 | 156 | 120 | 92 | 64 | 45 | 35 | 30 | 27 | 25 | 25 |
| 35° | 171 | 149 | 119 | 90 | 61 | 42 | 31 | 25 | 22 | 20 | 20 |
| 37.5° | 164 | 145 | 118 | 87 | 57 | 39 | 27 | 21 | 18 | 16 | 16 |
| 40° | 157 | 141 | 117 | 85 | 55 | 36 | 23 | 17 | 14 | 12 | 12 |
| 42.5° | 151 | 138 | 115 | 82 | 52 | 32 | 19 | 13 | 10 | 8 | 8 |
| 45° | 145 | 134 | 112 | 79 | 48 | 28 | 15 | 10 | 7 | 5 | 5 |
| 47.5° | 141 | 130 | 109 | 76 | 44 | 24 | 12 | 7 | 3 | 2 | 2 |
| 50° | 138 | 126 | 105 | 71 | 39 | 20 | 8 | 4 | 1 | 0 | 0 |
| 52.5° | 137 | 121 | 100 | 66 | 34 | 16 | 5 | 1 | 0 | 0 | 0 |
| 55° | 139 | 117 | 95 | 60 | 30 | 13 | 3 | 0 | 0 | 0 | 0 |
| 57.5° | 142 | 114 | 90 | 54 | 26 | 10 | 0 | 0 | 0 | 0 | 0 |
| 60° | 145 | 112 | 85 | 48 | 23 | 8 | 0 | 0 | 0 | 0 | 0 |
| 62.5° | 144 | 109 | 80 | 43 | 20 | 6 | 0 | 0 | 0 | 0 | 0 |
| 65° | 141 | 105 | 74 | 37 | 17 | 5 | 0 | 0 | 0 | 0 | 0 |
| 67.5° | 136 | 100 | 67 | 33 | 15 | 4 | 0 | 0 | 0 | 0 | 0 |
| 70° | 129 | 94 | 61 | 29 | 14 | 4 | 0 | 0 | 0 | 0 | 0 |
| 72.5° | 120 | 88 | 55 | 26 | 14 | 4 | 0 | 0 | 0 | 0 | 0 |
| 75° | 111 | 81 | 50 | 24 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 77.5° | 100 | 73 | 46 | 24 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 80° | 89 | 65 | 43 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 82.5° | 77 | 57 | 42 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 85° | 68 | 51 | 41 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 87.5° | 60 | 49 | 40 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 90° | 57 | 48 | 38 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 92.5° | 57 | 47 | 37 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 95° | 58 | 47 | 36 | 23 | 13 | 4 | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 59 | 48 | 36 | 23 | 12 | 4 | 0 | 0 | 0 | 0 | 0 |
| 100° | 60 | 49 | 36 | 22 | 12 | 4 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 59 | 49 | 35 | 22 | 12 | 4 | 0 | 0 | 0 | 0 | 0 |
| 105° | 58 | 48 | 35 | 22 | 12 | 4 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 55 | 46 | 35 | 22 | 12 | 3 | 0 | 0 | 0 | 0 | 0 |
| 110° | 52 | 44 | 35 | 22 | 12 | 3 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P28172

CATALOG NUMBER: G12-HE-BLK-LD4-30W-40-CL-UNV-ED1C

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|-----|------|------|------|------|------|------|------|------|------|
| 112.5° | 48 | 41 | 34 | 21 | 12 | 3 | 0 | 0 | 0 | 0 | 0 |
| 115° | 44 | 38 | 33 | 21 | 11 | 3 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 41 | 35 | 32 | 20 | 11 | 2 | 0 | 0 | 0 | 0 | 0 |
| 120° | 40 | 34 | 31 | 20 | 10 | 2 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 39 | 33 | 29 | 20 | 10 | 2 | 0 | 0 | 0 | 0 | 0 |
| 125° | 37 | 31 | 27 | 20 | 10 | 2 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 36 | 30 | 26 | 20 | 9 | 1 | 0 | 0 | 0 | 0 | 0 |
| 130° | 35 | 29 | 24 | 19 | 9 | 1 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 34 | 27 | 22 | 18 | 9 | 1 | 0 | 0 | 0 | 0 | 0 |
| 135° | 33 | 26 | 20 | 16 | 9 | 1 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 34 | 24 | 18 | 14 | 8 | 1 | 0 | 0 | 0 | 0 | 0 |
| 140° | 35 | 23 | 16 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 36 | 22 | 14 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 38 | 23 | 12 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 41 | 25 | 10 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 46 | 29 | 8 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 48 | 32 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 50 | 34 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 49 | 35 | 16 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 47 | 35 | 17 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 42 | 33 | 17 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 34 | 28 | 16 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 27 | 22 | 13 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 18 | 15 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 9 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)