

Scaled data based on original data using
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: P21002

Luminaire Tested: **UTR050LEDEU22**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: P21002
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: UTR050LEDEU22
Description: TRADITIONARE LED POST TOP FIXTURE TYPE 2 DISTRIBUTION, ACRYLIC PANELS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2900.5 lumens
Efficiency: N/A
Efficacy: 50.5 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.38' x L: 1.38' x H: 1')
IES Classification: Type IV - V Long - Non-Cutoff
BUG Rating: B1 - U3 - G3

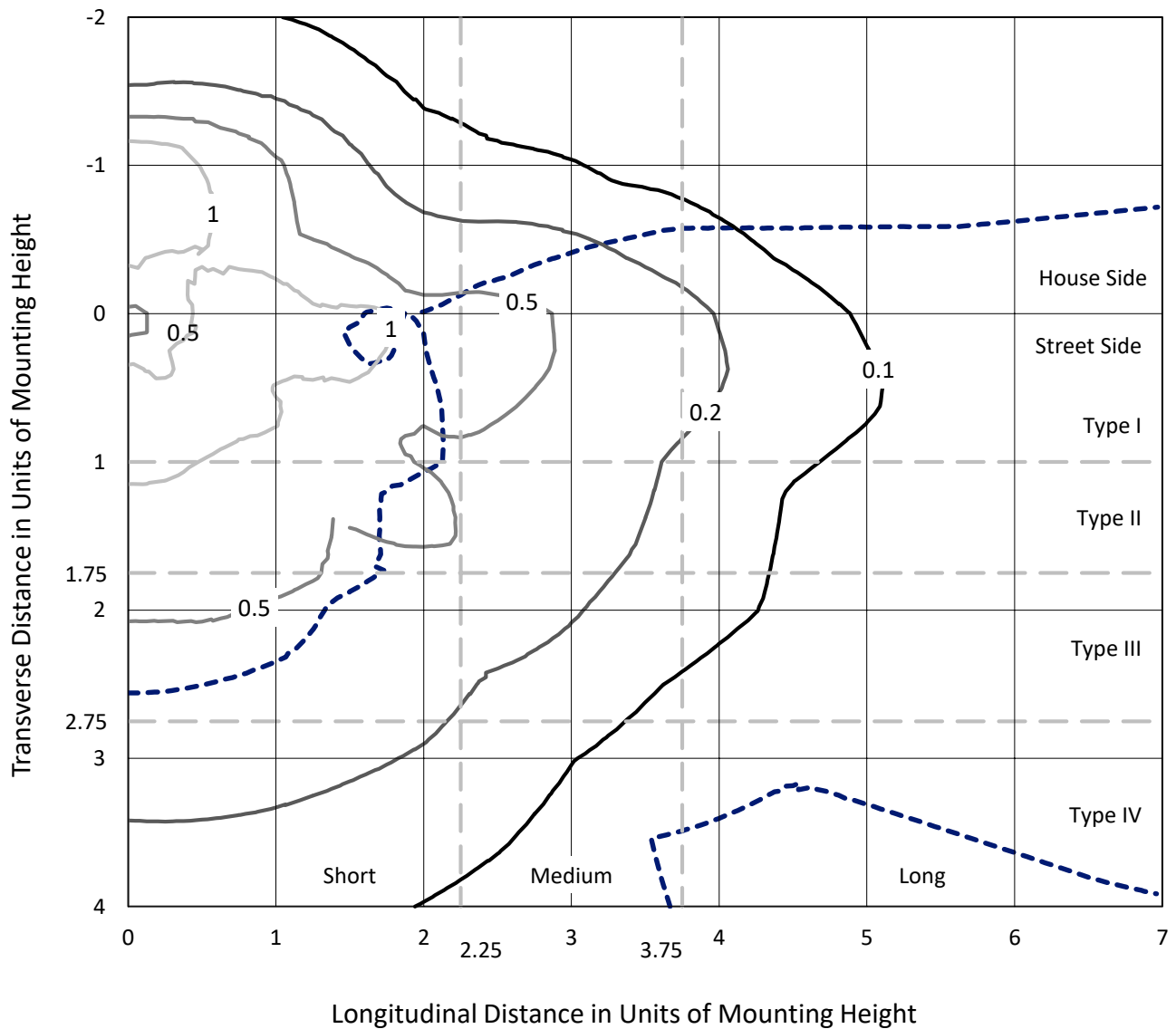
Input Watts (W): 57.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

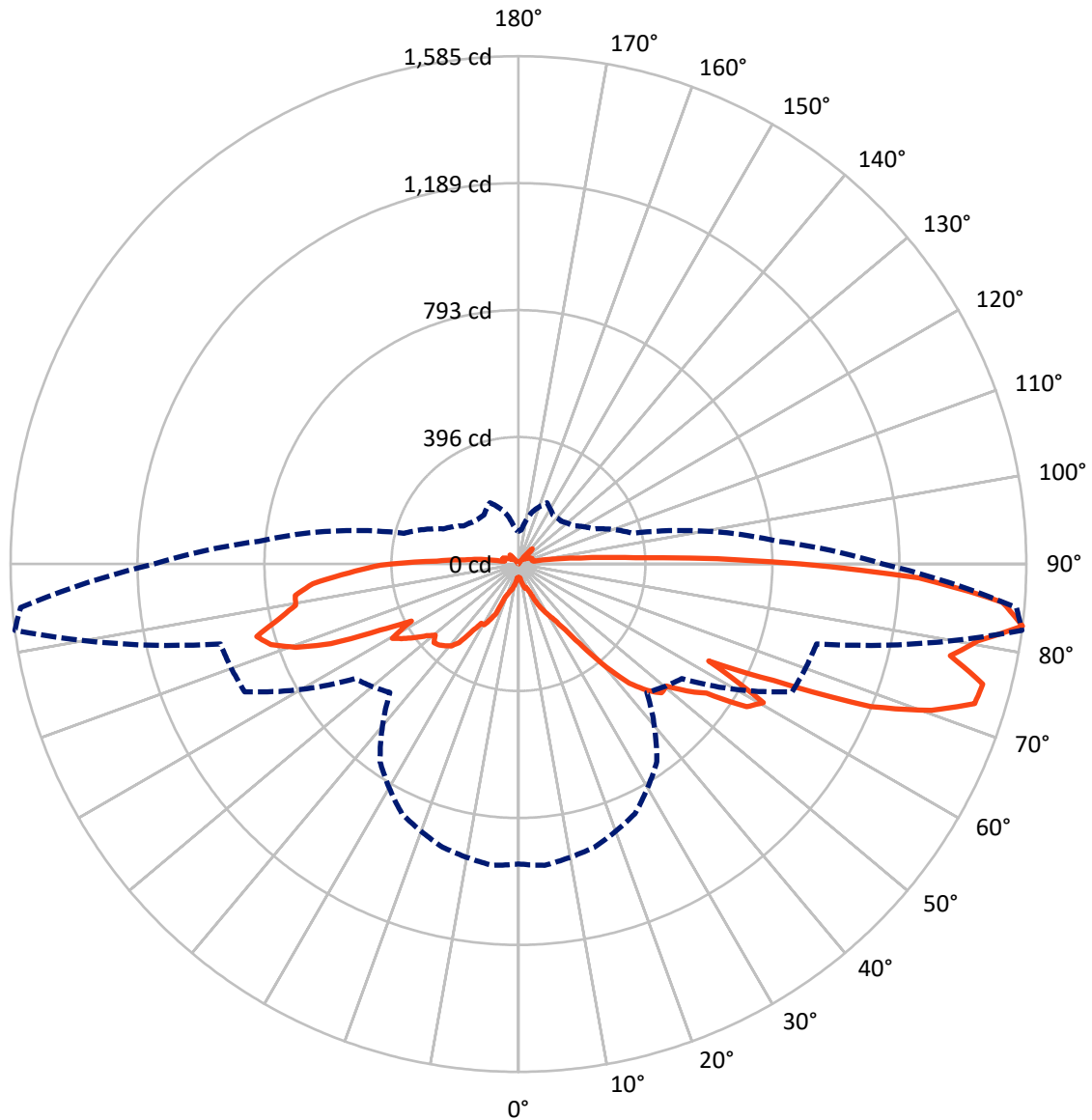
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2 fc
 Type IV - V Long - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 82.5-Deg Lateral - - - Horizontal Cone Through 82.5-Deg Vertical



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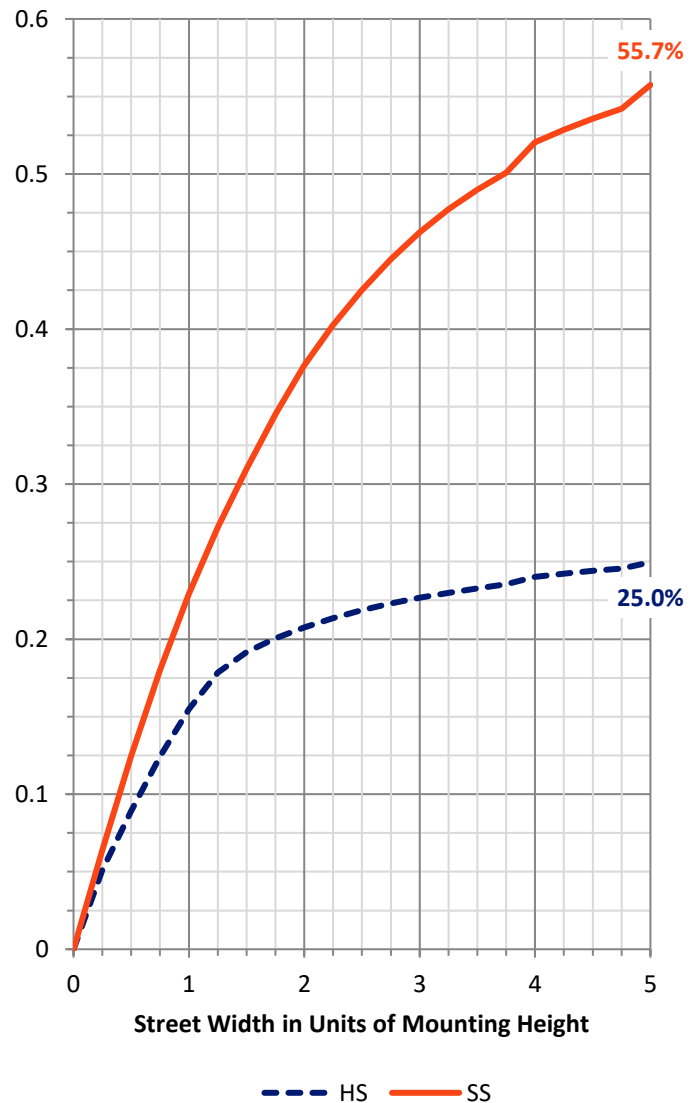
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 776.4 | 145.8 | 922.2 |
| | % Fixture | 26.8 | 5.0 | 31.8 |
| Street Side | Lumens | 1815.9 | 162.4 | 1978.3 |
| | % Fixture | 62.6 | 5.6 | 68.2 |
| Total | Lumens | 2592.4 | 308.2 | 2900.5 |
| | % Fixture | 89.4 | 10.6 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 4.9 | 0.2 |
| 10°-20° | 25.0 | 0.9 |
| 20°-30° | 68.7 | 2.4 |
| 30°-40° | 158.2 | 5.5 |
| 40°-50° | 251.6 | 8.7 |
| 50°-60° | 332.0 | 11.4 |
| 60°-70° | 490.3 | 16.9 |
| 70°-80° | 715.7 | 24.7 |
| 80°-90° | 546.0 | 18.8 |
| 90°-100° | 159.8 | 5.5 |
| 100°-110° | 55.3 | 1.9 |
| 110°-120° | 42.5 | 1.5 |
| 120°-130° | 27.2 | 0.9 |
| 130°-140° | 18.8 | 0.6 |
| 140°-150° | 4.4 | 0.2 |
| 150°-160° | 0.1 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 2592.4 | 89.4 |
| 0°-180° | 2900.5 | 100.0 |



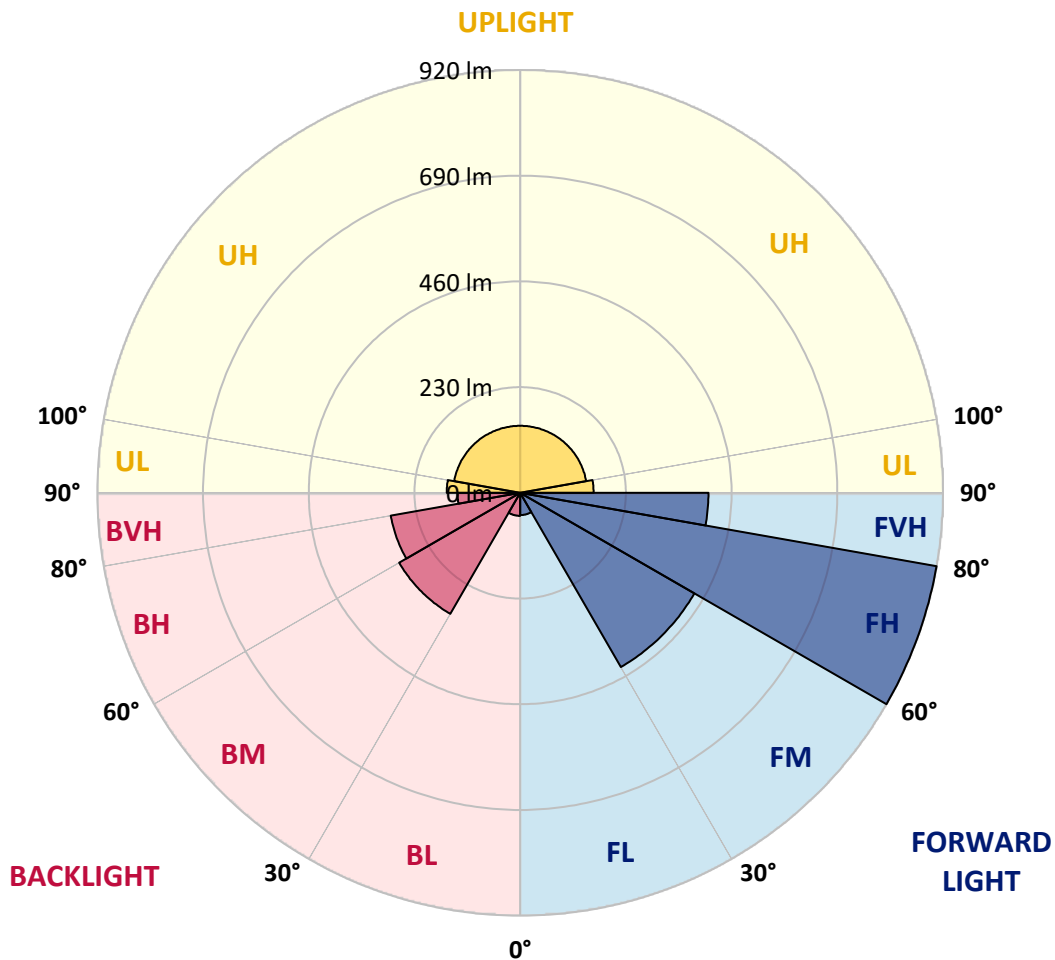
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|--------|---------|
| | | | B | U | G |
| FL (0°-30°) | 48.5 | 1.7 | | | |
| FM (30°-60°) | 437.8 | 15.1 | | | |
| FH (60°-80°) | 920.0 | 31.7 | | | G1/1800 |
| FVH (80°-90°) | 409.7 | 14.1 | | | G3/500 |
| BL (0°-30°) | 50.2 | 1.7 | B0/110 | | |
| BM (30°-60°) | 304.0 | 10.5 | B1/1000 | | |
| BH (60°-80°) | 286.0 | 9.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 136.3 | 4.7 | | | G2/225 |
| UL (90°-100°) | 159.8 | 5.5 | | U3/500 | |
| UH (100°-180°) | 145.8 | 5.0 | | U3/500 | |

BUG Rating: B1-U3-G3

Type IV V Long





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82.5° | 85° |
|--------|------|-----|-----|-----|------|-----|------|------|------|-------|------|
| 0° | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| 2.5° | 46 | 47 | 45 | 38 | 36 | 37 | 40 | 41 | 41 | 42 | 43 |
| 5° | 46 | 46 | 45 | 42 | 42 | 42 | 42 | 43 | 43 | 43 | 44 |
| 7.5° | 47 | 48 | 47 | 44 | 45 | 49 | 51 | 49 | 49 | 50 | 51 |
| 10° | 46 | 46 | 46 | 43 | 46 | 52 | 61 | 59 | 60 | 61 | 61 |
| 12.5° | 53 | 53 | 52 | 49 | 49 | 55 | 65 | 65 | 70 | 71 | 72 |
| 15° | 83 | 84 | 81 | 74 | 70 | 65 | 72 | 71 | 75 | 79 | 80 |
| 17.5° | 110 | 110 | 111 | 107 | 101 | 90 | 84 | 87 | 75 | 77 | 78 |
| 20° | 138 | 136 | 133 | 134 | 127 | 118 | 99 | 105 | 86 | 86 | 86 |
| 22.5° | 123 | 121 | 117 | 112 | 119 | 129 | 126 | 125 | 104 | 104 | 105 |
| 25° | 136 | 132 | 121 | 108 | 115 | 140 | 176 | 156 | 135 | 136 | 138 |
| 27.5° | 186 | 182 | 163 | 138 | 132 | 166 | 230 | 214 | 161 | 161 | 164 |
| 30° | 234 | 229 | 212 | 190 | 176 | 168 | 251 | 277 | 200 | 184 | 202 |
| 32.5° | 266 | 264 | 251 | 230 | 221 | 202 | 242 | 320 | 255 | 209 | 228 |
| 35° | 279 | 280 | 270 | 254 | 250 | 235 | 234 | 322 | 318 | 252 | 265 |
| 37.5° | 290 | 291 | 279 | 267 | 266 | 261 | 260 | 344 | 370 | 326 | 337 |
| 40° | 308 | 310 | 296 | 289 | 280 | 291 | 302 | 344 | 401 | 424 | 397 |
| 42.5° | 322 | 324 | 310 | 303 | 304 | 307 | 344 | 321 | 410 | 508 | 455 |
| 45° | 330 | 331 | 321 | 315 | 320 | 315 | 367 | 312 | 428 | 563 | 525 |
| 47.5° | 337 | 338 | 337 | 329 | 330 | 339 | 381 | 304 | 432 | 601 | 583 |
| 50° | 365 | 367 | 367 | 345 | 339 | 371 | 411 | 331 | 437 | 599 | 596 |
| 52.5° | 402 | 401 | 381 | 358 | 357 | 403 | 430 | 355 | 532 | 658 | 654 |
| 55° | 382 | 380 | 390 | 389 | 374 | 426 | 462 | 399 | 571 | 712 | 733 |
| 57.5° | 455 | 452 | 454 | 417 | 385 | 425 | 492 | 499 | 687 | 840 | 889 |
| 60° | 657 | 642 | 568 | 487 | 428 | 442 | 574 | 531 | 728 | 878 | 903 |
| 62.5° | 674 | 669 | 677 | 634 | 532 | 512 | 666 | 543 | 594 | 667 | 684 |
| 65° | 581 | 590 | 658 | 671 | 685 | 627 | 810 | 607 | 730 | 875 | 894 |
| 67.5° | 687 | 683 | 686 | 698 | 791 | 763 | 1046 | 817 | 975 | 1188 | 1214 |
| 70° | 880 | 882 | 889 | 877 | 910 | 888 | 1217 | 1043 | 1181 | 1368 | 1394 |
| 72.5° | 940 | 947 | 966 | 967 | 1007 | 921 | 1267 | 1173 | 1240 | 1489 | 1516 |
| 75° | 861 | 889 | 930 | 952 | 973 | 889 | 1061 | 1191 | 1169 | 1497 | 1552 |
| 77.5° | 823 | 842 | 894 | 948 | 924 | 824 | 892 | 1136 | 1043 | 1378 | 1412 |
| 80° | 855 | 870 | 894 | 920 | 871 | 724 | 759 | 1065 | 957 | 1454 | 1442 |
| 82.5° | 936 | 944 | 915 | 860 | 753 | 567 | 623 | 943 | 963 | 1585 | 1560 |
| 85° | 1000 | 999 | 888 | 721 | 540 | 398 | 492 | 705 | 1002 | 1515 | 1447 |
| 87.5° | 844 | 829 | 689 | 504 | 332 | 250 | 380 | 526 | 1008 | 1250 | 1135 |
| 90° | 537 | 519 | 427 | 302 | 198 | 164 | 282 | 392 | 848 | 788 | 675 |
| 92.5° | 314 | 303 | 250 | 173 | 117 | 114 | 195 | 233 | 566 | 367 | 334 |
| 95° | 165 | 158 | 130 | 90 | 74 | 84 | 141 | 157 | 353 | 196 | 197 |
| 97.5° | 48 | 48 | 51 | 51 | 57 | 62 | 99 | 102 | 153 | 114 | 117 |
| 100° | 34 | 34 | 38 | 40 | 48 | 52 | 76 | 63 | 53 | 51 | 53 |
| 102.5° | 32 | 32 | 35 | 37 | 44 | 48 | 61 | 54 | 48 | 45 | 48 |
| 105° | 31 | 32 | 34 | 34 | 41 | 47 | 52 | 49 | 47 | 44 | 46 |
| 107.5° | 31 | 31 | 32 | 32 | 40 | 50 | 48 | 47 | 50 | 44 | 46 |
| 110° | 29 | 29 | 30 | 29 | 39 | 58 | 51 | 48 | 50 | 46 | 48 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82.5° | 85° |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 112.5° | 27 | 27 | 26 | 26 | 34 | 56 | 50 | 42 | 43 | 45 | 46 |
| 115° | 26 | 26 | 24 | 24 | 31 | 47 | 47 | 36 | 39 | 42 | 43 |
| 117.5° | 26 | 26 | 24 | 23 | 29 | 40 | 47 | 33 | 35 | 39 | 40 |
| 120° | 25 | 25 | 23 | 21 | 28 | 35 | 44 | 30 | 32 | 36 | 37 |
| 122.5° | 23 | 23 | 22 | 19 | 25 | 31 | 37 | 29 | 29 | 34 | 36 |
| 125° | 21 | 21 | 19 | 16 | 21 | 26 | 30 | 28 | 27 | 30 | 32 |
| 127.5° | 20 | 20 | 18 | 13 | 17 | 22 | 24 | 25 | 25 | 26 | 27 |
| 130° | 19 | 19 | 17 | 11 | 14 | 19 | 20 | 22 | 24 | 24 | 24 |
| 132.5° | 21 | 21 | 19 | 13 | 14 | 16 | 18 | 22 | 25 | 24 | 24 |
| 135° | 36 | 36 | 32 | 22 | 16 | 11 | 26 | 32 | 47 | 47 | 44 |
| 137.5° | 32 | 32 | 27 | 17 | 11 | 7 | 22 | 35 | 64 | 64 | 59 |
| 140° | 23 | 23 | 21 | 12 | 6 | 2 | 10 | 21 | 35 | 38 | 38 |
| 142.5° | 12 | 13 | 11 | 3 | 0 | 0 | 1 | 7 | 13 | 17 | 18 |
| 145° | 7 | 7 | 6 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 8 |
| 147.5° | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 150° | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 |



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 CATALOG NUMBER: UTR050LEDEU22

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|------|-----|------|------|------|------|------|------|------|------|------|
| 0° | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| 2.5° | 43 | 42 | 41 | 42 | 42 | 43 | 46 | 50 | 56 | 57 | 56 |
| 5° | 44 | 45 | 47 | 49 | 51 | 53 | 56 | 57 | 60 | 62 | 62 |
| 7.5° | 52 | 53 | 54 | 56 | 57 | 59 | 59 | 58 | 62 | 64 | 64 |
| 10° | 62 | 63 | 63 | 63 | 64 | 63 | 62 | 62 | 65 | 65 | 65 |
| 12.5° | 72 | 73 | 73 | 75 | 73 | 71 | 72 | 76 | 80 | 81 | 80 |
| 15° | 81 | 81 | 87 | 93 | 93 | 93 | 98 | 100 | 105 | 106 | 105 |
| 17.5° | 80 | 82 | 102 | 102 | 106 | 112 | 112 | 117 | 124 | 126 | 126 |
| 20° | 88 | 96 | 113 | 110 | 113 | 113 | 119 | 126 | 133 | 134 | 133 |
| 22.5° | 106 | 110 | 117 | 115 | 115 | 114 | 115 | 114 | 122 | 127 | 129 |
| 25° | 145 | 173 | 165 | 144 | 120 | 113 | 116 | 128 | 144 | 155 | 159 |
| 27.5° | 190 | 200 | 182 | 157 | 127 | 127 | 140 | 163 | 192 | 209 | 211 |
| 30° | 226 | 225 | 198 | 165 | 140 | 150 | 175 | 200 | 233 | 252 | 255 |
| 32.5° | 241 | 225 | 197 | 171 | 156 | 175 | 206 | 235 | 266 | 286 | 287 |
| 35° | 272 | 262 | 223 | 163 | 163 | 193 | 226 | 253 | 283 | 298 | 299 |
| 37.5° | 343 | 322 | 263 | 174 | 172 | 205 | 237 | 261 | 296 | 317 | 318 |
| 40° | 375 | 352 | 270 | 177 | 184 | 216 | 249 | 281 | 320 | 342 | 341 |
| 42.5° | 387 | 364 | 280 | 180 | 191 | 228 | 265 | 301 | 336 | 354 | 352 |
| 45° | 410 | 381 | 274 | 186 | 198 | 242 | 279 | 315 | 356 | 374 | 374 |
| 47.5° | 444 | 389 | 273 | 191 | 210 | 256 | 293 | 331 | 370 | 389 | 391 |
| 50° | 431 | 366 | 268 | 201 | 229 | 270 | 308 | 353 | 376 | 369 | 367 |
| 52.5° | 480 | 388 | 289 | 208 | 244 | 283 | 321 | 328 | 296 | 245 | 238 |
| 55° | 583 | 428 | 294 | 215 | 238 | 285 | 289 | 225 | 173 | 143 | 140 |
| 57.5° | 760 | 467 | 307 | 226 | 234 | 259 | 207 | 161 | 137 | 118 | 116 |
| 60° | 880 | 508 | 304 | 224 | 225 | 204 | 165 | 139 | 127 | 114 | 112 |
| 62.5° | 737 | 418 | 260 | 213 | 194 | 170 | 153 | 139 | 130 | 115 | 112 |
| 65° | 907 | 540 | 292 | 203 | 172 | 165 | 157 | 144 | 136 | 123 | 118 |
| 67.5° | 1219 | 731 | 351 | 221 | 179 | 169 | 162 | 152 | 150 | 129 | 119 |
| 70° | 1387 | 854 | 407 | 246 | 201 | 183 | 172 | 160 | 171 | 127 | 109 |
| 72.5° | 1431 | 935 | 444 | 261 | 217 | 197 | 182 | 171 | 196 | 130 | 110 |
| 75° | 1410 | 979 | 453 | 266 | 220 | 199 | 189 | 189 | 230 | 126 | 109 |
| 77.5° | 1269 | 889 | 405 | 256 | 216 | 198 | 193 | 232 | 247 | 116 | 103 |
| 80° | 1194 | 818 | 375 | 258 | 215 | 197 | 193 | 249 | 228 | 112 | 104 |
| 82.5° | 1137 | 814 | 370 | 259 | 208 | 189 | 187 | 211 | 169 | 108 | 102 |
| 85° | 950 | 748 | 334 | 231 | 191 | 179 | 173 | 158 | 127 | 103 | 98 |
| 87.5° | 729 | 614 | 277 | 185 | 167 | 169 | 156 | 132 | 113 | 97 | 94 |
| 90° | 575 | 497 | 226 | 143 | 132 | 150 | 135 | 116 | 103 | 90 | 88 |
| 92.5° | 321 | 288 | 156 | 108 | 103 | 122 | 111 | 103 | 95 | 86 | 84 |
| 95° | 203 | 185 | 118 | 87 | 87 | 97 | 94 | 93 | 89 | 83 | 82 |
| 97.5° | 127 | 124 | 96 | 66 | 74 | 83 | 85 | 85 | 85 | 81 | 80 |
| 100° | 56 | 54 | 55 | 54 | 64 | 75 | 78 | 79 | 81 | 79 | 78 |
| 102.5° | 49 | 45 | 45 | 48 | 57 | 67 | 73 | 75 | 78 | 77 | 77 |
| 105° | 49 | 45 | 41 | 44 | 52 | 61 | 68 | 71 | 75 | 75 | 74 |
| 107.5° | 53 | 52 | 40 | 42 | 49 | 57 | 64 | 68 | 72 | 73 | 72 |
| 110° | 55 | 54 | 43 | 40 | 45 | 54 | 60 | 65 | 70 | 71 | 71 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|-----|------|------|------|------|------|------|------|------|------|
| 112.5° | 52 | 53 | 44 | 37 | 42 | 49 | 57 | 62 | 67 | 69 | 68 |
| 115° | 46 | 46 | 38 | 35 | 39 | 46 | 53 | 58 | 64 | 66 | 66 |
| 117.5° | 41 | 39 | 32 | 33 | 37 | 43 | 50 | 55 | 61 | 64 | 64 |
| 120° | 37 | 36 | 28 | 30 | 35 | 41 | 46 | 51 | 58 | 61 | 61 |
| 122.5° | 35 | 33 | 26 | 26 | 32 | 38 | 43 | 47 | 54 | 58 | 57 |
| 125° | 32 | 30 | 23 | 22 | 28 | 34 | 39 | 43 | 51 | 54 | 54 |
| 127.5° | 28 | 26 | 21 | 17 | 24 | 30 | 35 | 39 | 47 | 50 | 50 |
| 130° | 25 | 23 | 19 | 14 | 20 | 26 | 31 | 35 | 43 | 46 | 46 |
| 132.5° | 23 | 22 | 17 | 13 | 16 | 22 | 27 | 31 | 39 | 42 | 42 |
| 135° | 37 | 32 | 24 | 14 | 13 | 17 | 22 | 27 | 35 | 38 | 38 |
| 137.5° | 48 | 41 | 30 | 14 | 8 | 13 | 17 | 23 | 31 | 34 | 34 |
| 140° | 32 | 27 | 20 | 10 | 4 | 7 | 13 | 19 | 27 | 29 | 29 |
| 142.5° | 18 | 16 | 12 | 5 | 1 | 1 | 8 | 14 | 22 | 25 | 24 |
| 145° | 9 | 9 | 6 | 2 | 0 | 0 | 3 | 9 | 17 | 20 | 20 |
| 147.5° | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 4 | 12 | 15 | 14 |
| 150° | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 9 | 9 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 |

(END OF REPORT)