

Scaled data based on original data using
LM-35-02 Approved Method for Photometric Testing of Floodlights Using High Intensity
Discharge or Incandescent Filament Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: LUMIERE

Report Number: P12500

Luminaire Tested: **450-MH70T6-12-MB-BK**

Issue Date: 3/3/2020

Test Information

Test Method: LM-35-02
Report Number: P12500
Test Lab: PEACHTREE CITY
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 450-MH70T6-12-MB-BK
Description: LUMIERE MINI FLOOD CARMEL 450 T6 HID FIXTURE WITH CLEAR GLASS LENS, PATTERNED SPECULAR REFLECTOR.
Light Source: BIPIN G12 BASE CLEAR T6 CERAMIC METAL HALIDE LAMP. CMH70/T6/U 70 WATTS
Ballast/Driver: -

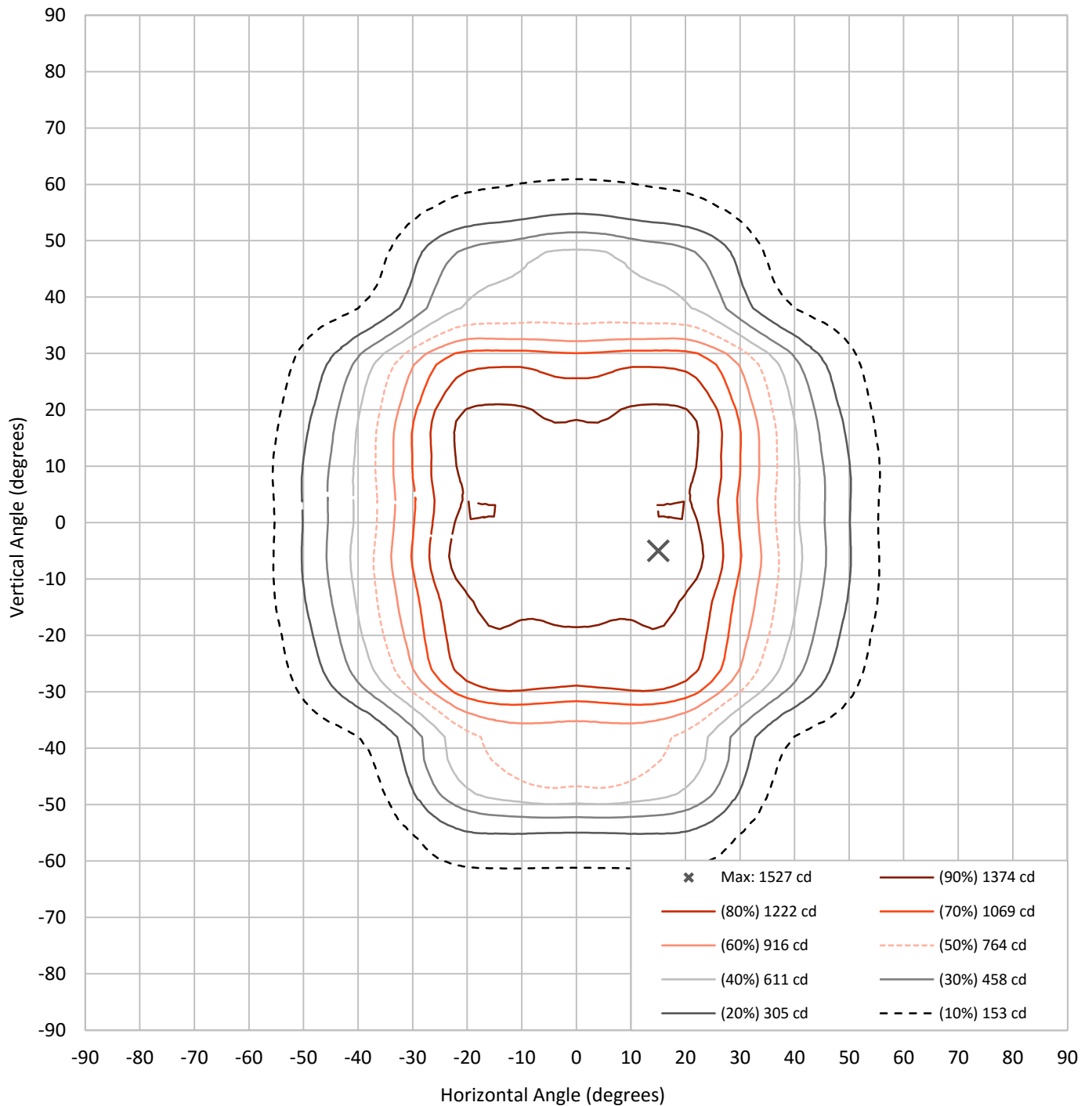
Summary

| | | | |
|-----------------------------------|--|----------------------|-------------------|
| Lumens per Lamp: | 6600 (1 lamp) | NEMA Type: | 6H x 6V |
| Luminaire Lumens: | 2515.5 lumens | Max Intensity: | 1527 candela |
| Efficiency: | 38.1% | Max Intensity Angle: | 15°H x -5°V |
| Efficacy: | 35.9 lumens/watt | | |
| Luminous Opening: | Rectangular (W 0.25' x L: 0.15' x H: 0') | | |
| Beam Angle (50%): | 74°H x 78°V | Field Angle (10%): | 110.2°H x 120.6°V |
| Beam Lumens: | 1815.3 lumens | Field Lumens: | 2423.9 lumens |
| Beam Efficiency: | 72.2% | Field Efficiency: | 96.4% |
| Input Watts (W): | 70 | | |
| Input Voltage (V): | NR | | |
| Input Current (A _{in}): | NR | | |
| Voltage Rise (V): | 1.8 | | |
| 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 | | |

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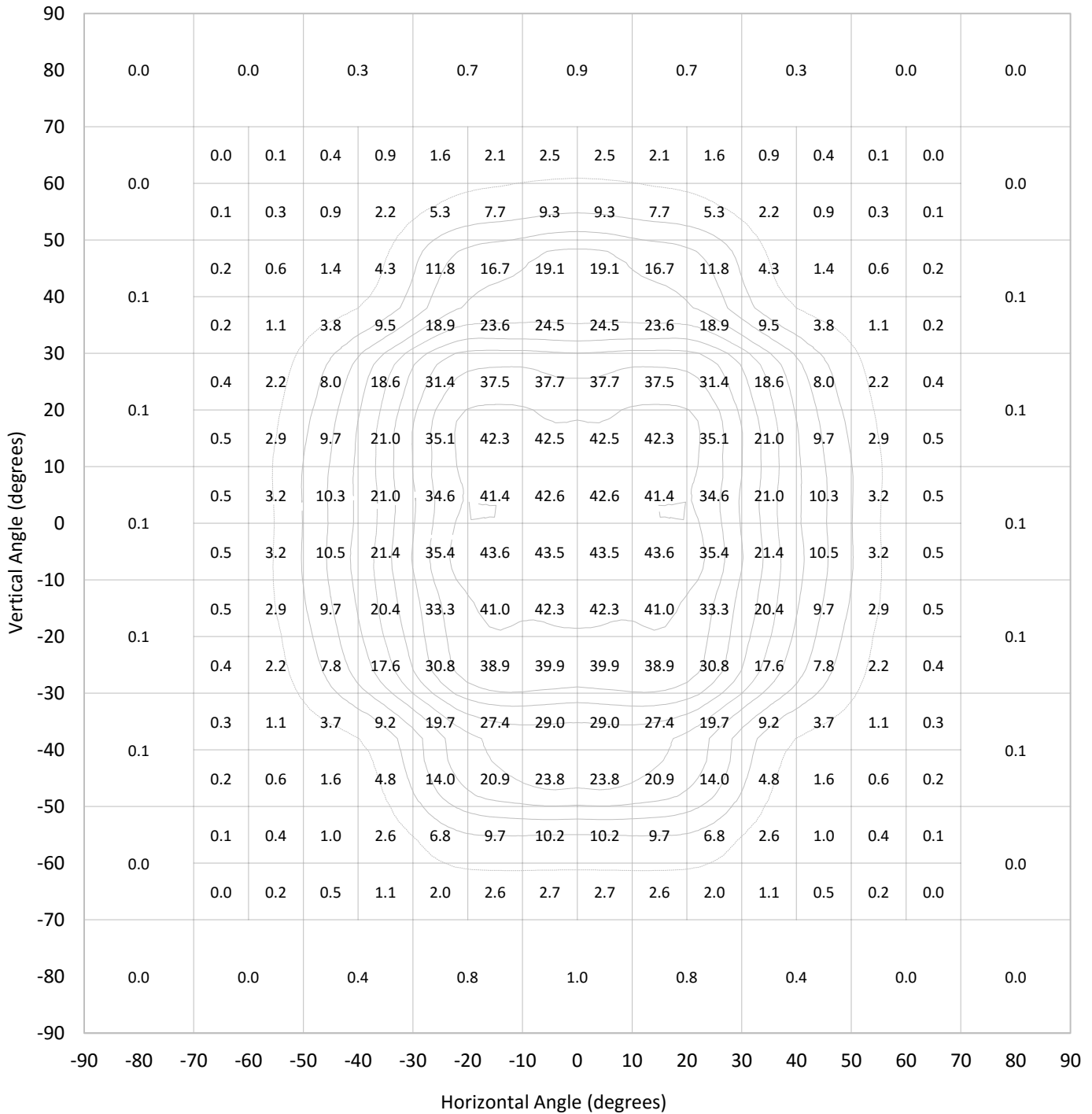
Iso-Candela Plot



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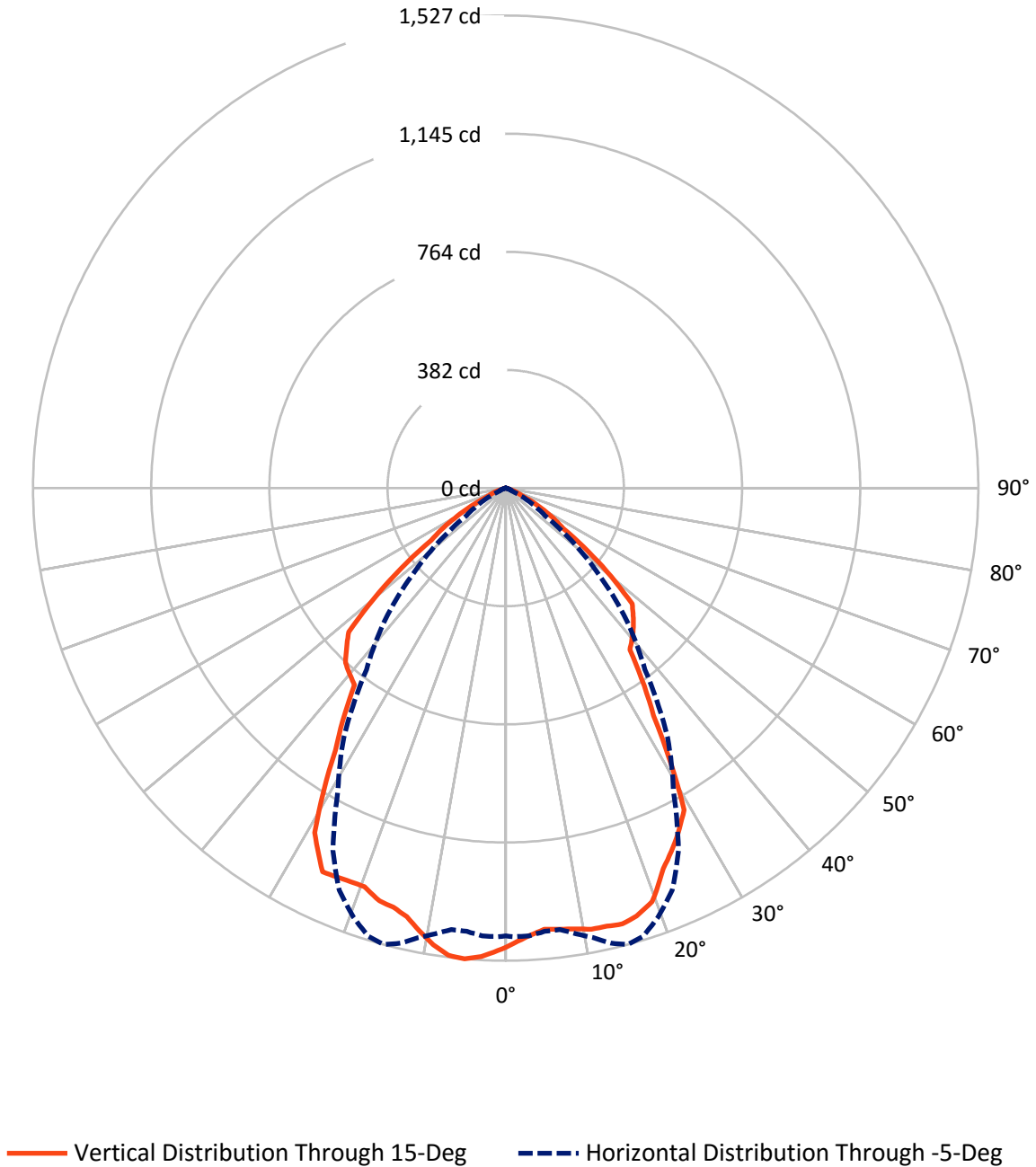
Lumen Table



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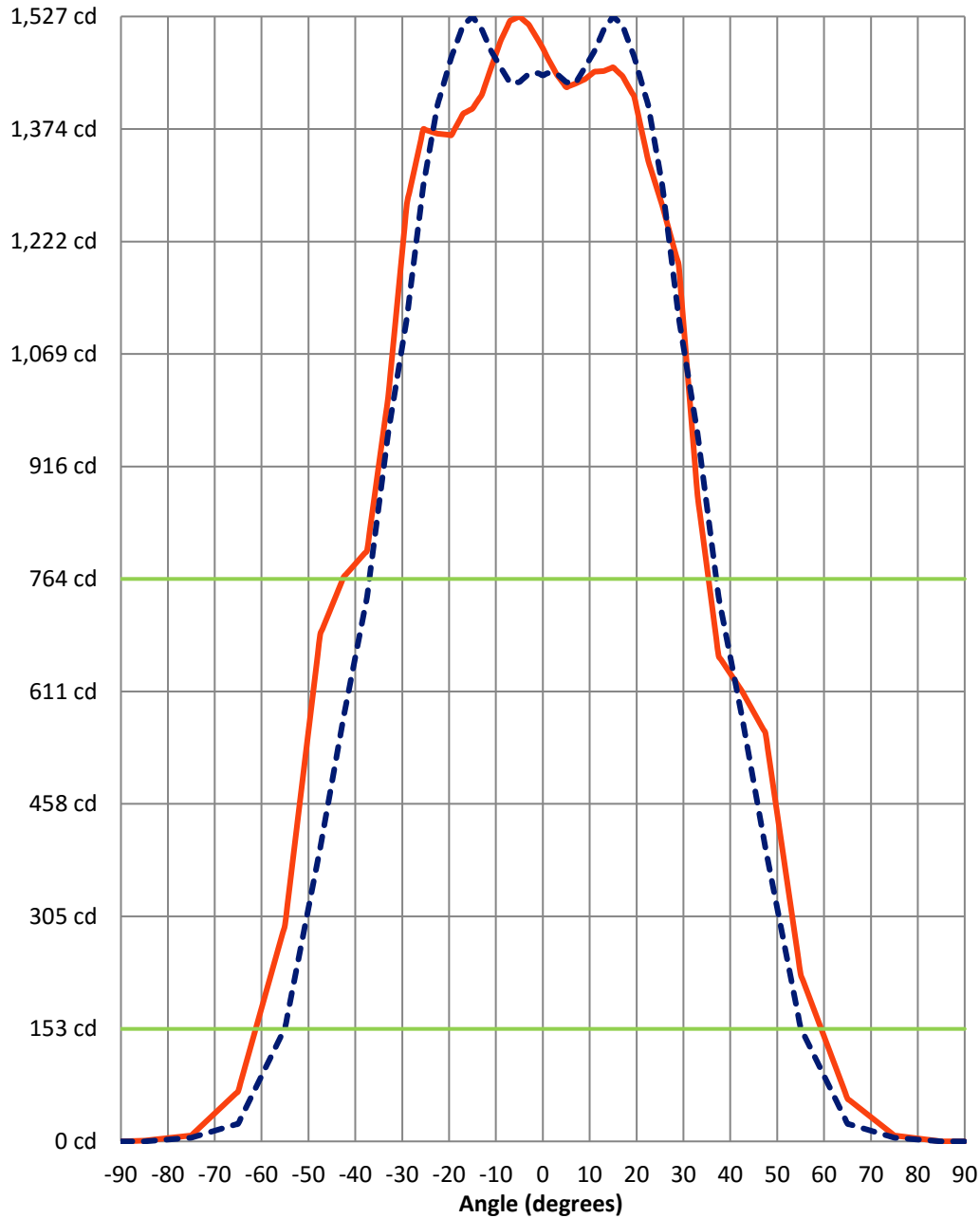
Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
 H Angle: 74°
 V Angle: 78°
 Lumens: 1815.3
 Efficiency: 72.2%

Field:
 H Angle: 110.2°
 V Angle: 120.6°
 Lumens: 2423.9
 Efficiency: 96.4%

Spill:
 Lumens: 91.6
 Efficiency: 3.6%

— Vertical Distribution through 15-Deg
 - - Horizontal Distribution through -5-Deg



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FIELD
BEAM

CANDELA DISTRIBUTION:

| | 0° | 1° | 3° | 5° | 7° | 9° | 11° | 13° | 15° | 17° | 19.5° |
|--------|------|------|------|------|------|------|------|------|------|------|-------|
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 75° | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 7 |
| 65° | 62 | 62 | 62 | 61 | 61 | 61 | 61 | 60 | 58 | 57 | 54 |
| 55° | 285 | 284 | 280 | 274 | 266 | 256 | 247 | 232 | 227 | 221 | 210 |
| 47.5° | 657 | 657 | 653 | 641 | 621 | 597 | 574 | 562 | 554 | 544 | 514 |
| 42.5° | 664 | 664 | 664 | 661 | 651 | 639 | 627 | 617 | 611 | 601 | 585 |
| 37.5° | 675 | 675 | 678 | 685 | 683 | 677 | 669 | 663 | 659 | 654 | 634 |
| 33° | 853 | 853 | 857 | 864 | 869 | 870 | 871 | 872 | 877 | 884 | 886 |
| 29° | 1148 | 1149 | 1152 | 1163 | 1175 | 1186 | 1191 | 1187 | 1189 | 1186 | 1177 |
| 25.5° | 1226 | 1226 | 1225 | 1235 | 1253 | 1268 | 1273 | 1273 | 1270 | 1266 | 1258 |
| 22.5° | 1278 | 1278 | 1274 | 1279 | 1300 | 1319 | 1326 | 1331 | 1331 | 1331 | 1324 |
| 19.5° | 1362 | 1360 | 1353 | 1356 | 1375 | 1399 | 1413 | 1419 | 1418 | 1413 | 1400 |
| 17° | 1388 | 1385 | 1381 | 1385 | 1402 | 1423 | 1438 | 1445 | 1446 | 1441 | 1427 |
| 15° | 1404 | 1404 | 1402 | 1406 | 1415 | 1432 | 1446 | 1455 | 1458 | 1453 | 1433 |
| 13° | 1417 | 1416 | 1412 | 1412 | 1417 | 1433 | 1446 | 1455 | 1453 | 1454 | 1437 |
| 11° | 1414 | 1414 | 1409 | 1409 | 1410 | 1424 | 1439 | 1450 | 1452 | 1447 | 1430 |
| 9° | 1417 | 1417 | 1411 | 1407 | 1403 | 1412 | 1421 | 1437 | 1442 | 1437 | 1415 |
| 7° | 1422 | 1423 | 1416 | 1408 | 1397 | 1403 | 1414 | 1427 | 1436 | 1429 | 1404 |
| 5° | 1415 | 1417 | 1409 | 1395 | 1386 | 1394 | 1406 | 1422 | 1431 | 1423 | 1398 |
| 3° | 1416 | 1416 | 1406 | 1394 | 1390 | 1400 | 1416 | 1435 | 1448 | 1444 | 1412 |
| 1° | 1416 | 1416 | 1404 | 1393 | 1393 | 1410 | 1424 | 1453 | 1471 | 810 | 1437 |
| 0° | 1420 | 1421 | 1409 | 1401 | 1403 | 1417 | 1434 | 1464 | 1484 | 1478 | 1445 |
| -1° | 1427 | 1430 | 1419 | 1411 | 1413 | 1427 | 1445 | 1476 | 1495 | 1487 | 1452 |
| -3° | 1444 | 1446 | 1441 | 1429 | 1430 | 1446 | 1469 | 1497 | 1516 | 1505 | 1462 |
| -5° | 1447 | 1450 | 1449 | 1438 | 1437 | 1458 | 1480 | 1509 | 1527 | 1515 | 1472 |
| -7° | 1444 | 1448 | 1448 | 1439 | 1438 | 1452 | 1475 | 1507 | 1521 | 1510 | 1473 |
| -9° | 1434 | 1434 | 1434 | 1427 | 1426 | 1435 | 1452 | 1479 | 1494 | 1480 | 1444 |
| -11° | 1424 | 1425 | 1423 | 1417 | 1413 | 1419 | 1429 | 1448 | 1458 | 1445 | 1409 |
| -13° | 1424 | 1424 | 1423 | 1408 | 1399 | 1400 | 1403 | 1417 | 1421 | 1410 | 1377 |
| -15° | 1420 | 1418 | 1414 | 1398 | 1389 | 1388 | 1390 | 1398 | 1402 | 1390 | 1359 |
| -17° | 1407 | 1405 | 1403 | 1389 | 1383 | 1380 | 1384 | 1392 | 1395 | 1380 | 1348 |
| -19.5° | 1349 | 1348 | 1350 | 1344 | 1339 | 1340 | 1350 | 1363 | 1366 | 1355 | 1326 |
| -22.5° | 1337 | 1339 | 1343 | 1341 | 1337 | 1339 | 1351 | 1364 | 1368 | 1354 | 1318 |
| -25.5° | 1337 | 1340 | 1345 | 1348 | 1349 | 1359 | 1372 | 1377 | 1374 | 1350 | 1305 |
| -29° | 1232 | 1237 | 1244 | 1253 | 1258 | 1270 | 1278 | 1280 | 1273 | 1254 | 1211 |
| -33° | 984 | 985 | 992 | 1006 | 1011 | 1015 | 1021 | 1018 | 1010 | 994 | 960 |
| -37.5° | 844 | 844 | 841 | 843 | 842 | 844 | 840 | 824 | 802 | 775 | 735 |
| -42.5° | 869 | 868 | 869 | 866 | 854 | 839 | 818 | 791 | 766 | 745 | 722 |
| -47.5° | 752 | 755 | 764 | 767 | 757 | 739 | 719 | 705 | 688 | 664 | 618 |
| -55° | 283 | 283 | 284 | 284 | 287 | 292 | 297 | 295 | 294 | 298 | 291 |
| -65° | 72 | 72 | 73 | 72 | 72 | 70 | 70 | 70 | 68 | 66 | 65 |
| -75° | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| -85° | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| -90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (continued):

| | 22.5° | 25.5° | 29° | 33° | 37.5° | 42.5° | 47.5° | 55° | 65° | 75° | 85° |
|--------|-------|-------|------|-----|-------|-------|-------|-----|-----|-----|-----|
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 7 | 6 | 6 | 5 | 4 | 3 | 1 | 0 | 0 | 0 | 0 |
| 65° | 50 | 46 | 42 | 36 | 29 | 22 | 15 | 7 | 1 | 0 | 0 |
| 55° | 192 | 169 | 137 | 89 | 63 | 46 | 32 | 17 | 4 | 0 | 0 |
| 47.5° | 464 | 396 | 296 | 184 | 97 | 66 | 47 | 27 | 10 | 2 | 0 |
| 42.5° | 545 | 459 | 345 | 221 | 125 | 79 | 57 | 32 | 11 | 1 | 0 |
| 37.5° | 602 | 529 | 413 | 293 | 189 | 127 | 92 | 40 | 14 | 2 | 0 |
| 33° | 845 | 768 | 659 | 506 | 368 | 251 | 172 | 57 | 18 | 3 | 0 |
| 29° | 1144 | 1054 | 930 | 759 | 578 | 382 | 246 | 81 | 20 | 3 | 0 |
| 25.5° | 1219 | 1131 | 998 | 831 | 643 | 444 | 280 | 101 | 22 | 3 | 0 |
| 22.5° | 1281 | 1184 | 1038 | 864 | 673 | 475 | 303 | 117 | 23 | 3 | 0 |
| 19.5° | 1353 | 1250 | 1091 | 903 | 697 | 504 | 332 | 131 | 25 | 4 | 0 |
| 17° | 1376 | 1274 | 1118 | 934 | 718 | 523 | 349 | 139 | 23 | 3 | 0 |
| 15° | 1378 | 1276 | 1124 | 942 | 727 | 531 | 360 | 143 | 22 | 3 | 0 |
| 13° | 1370 | 1266 | 1118 | 941 | 726 | 536 | 372 | 153 | 22 | 4 | 0 |
| 11° | 1366 | 1266 | 1115 | 941 | 728 | 545 | 381 | 157 | 22 | 4 | 0 |
| 9° | 1362 | 1272 | 1116 | 945 | 731 | 555 | 391 | 159 | 22 | 4 | 0 |
| 7° | 1348 | 1267 | 1105 | 936 | 721 | 560 | 396 | 159 | 23 | 4 | 0 |
| 5° | 1333 | 1246 | 1087 | 928 | 713 | 561 | 395 | 154 | 23 | 3 | 0 |
| 3° | 1338 | 1241 | 1087 | 926 | 713 | 560 | 393 | 152 | 23 | 4 | 0 |
| 1° | 1361 | 1254 | 1093 | 935 | 714 | 559 | 392 | 151 | 24 | 4 | 0 |
| 0° | 1371 | 1261 | 1096 | 940 | 714 | 559 | 391 | 150 | 23 | 4 | 0 |
| -1° | 1381 | 1269 | 1100 | 943 | 717 | 562 | 392 | 150 | 23 | 4 | 0 |
| -3° | 1394 | 1282 | 1106 | 950 | 726 | 570 | 395 | 152 | 24 | 5 | 0 |
| -5° | 1406 | 1297 | 1118 | 961 | 739 | 576 | 398 | 154 | 24 | 5 | 0 |
| -7° | 1407 | 1294 | 1117 | 963 | 746 | 573 | 397 | 155 | 23 | 3 | 0 |
| -9° | 1381 | 1270 | 1099 | 946 | 741 | 567 | 393 | 156 | 24 | 5 | 0 |
| -11° | 1348 | 1240 | 1080 | 931 | 731 | 556 | 382 | 153 | 24 | 5 | 0 |
| -13° | 1314 | 1210 | 1063 | 916 | 724 | 544 | 372 | 150 | 23 | 5 | 0 |
| -15° | 1296 | 1195 | 1052 | 907 | 713 | 530 | 363 | 147 | 25 | 5 | 0 |
| -17° | 1285 | 1184 | 1038 | 889 | 700 | 515 | 345 | 138 | 24 | 4 | 0 |
| -19.5° | 1268 | 1171 | 1026 | 864 | 682 | 495 | 330 | 127 | 25 | 4 | 0 |
| -22.5° | 1255 | 1153 | 1000 | 825 | 645 | 469 | 308 | 116 | 25 | 4 | 0 |
| -25.5° | 1238 | 1133 | 974 | 788 | 613 | 437 | 281 | 102 | 24 | 4 | 0 |
| -29° | 1139 | 1016 | 865 | 692 | 523 | 365 | 237 | 81 | 22 | 3 | 0 |
| -33° | 887 | 771 | 633 | 483 | 342 | 242 | 167 | 58 | 20 | 4 | 0 |
| -37.5° | 670 | 563 | 432 | 302 | 186 | 124 | 90 | 45 | 18 | 3 | 0 |
| -42.5° | 644 | 548 | 415 | 254 | 138 | 87 | 61 | 38 | 14 | 1 | 0 |
| -47.5° | 553 | 464 | 340 | 200 | 110 | 75 | 52 | 32 | 12 | 1 | 0 |
| -55° | 271 | 227 | 163 | 114 | 77 | 54 | 40 | 22 | 7 | 0 | 0 |
| -65° | 61 | 57 | 51 | 44 | 36 | 28 | 20 | 10 | 2 | 0 | 0 |
| -75° | 8 | 7 | 6 | 6 | 5 | 3 | 2 | 1 | 0 | 0 | 0 |
| -85° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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CANDELA DISTRIBUTION (continued):

| | 90° |
|--------|-----|
| 90° | 0 |
| 85° | 0 |
| 75° | 0 |
| 65° | 0 |
| 55° | 0 |
| 47.5° | 0 |
| 42.5° | 0 |
| 37.5° | 0 |
| 33° | 0 |
| 29° | 0 |
| 25.5° | 0 |
| 22.5° | 0 |
| 19.5° | 0 |
| 17° | 0 |
| 15° | 0 |
| 13° | 0 |
| 11° | 0 |
| 9° | 0 |
| 7° | 0 |
| 5° | 0 |
| 3° | 0 |
| 1° | 0 |
| 0° | 0 |
| -1° | 0 |
| -3° | 0 |
| -5° | 0 |
| -7° | 0 |
| -9° | 0 |
| -11° | 0 |
| -13° | 0 |
| -15° | 0 |
| -17° | 0 |
| -19.5° | 0 |
| -22.5° | 0 |
| -25.5° | 0 |
| -29° | 0 |
| -33° | 0 |
| -37.5° | 0 |
| -42.5° | 0 |
| -47.5° | 0 |
| -55° | 0 |
| -65° | 0 |
| -75° | 0 |
| -85° | 0 |
| -90° | 0 |

(END OF REPORT)