

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P209446

Luminaire Tested: **LDSQ6B30D010 EU6B30508035 6LBCSSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35359)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6B30D010 EU6B30508035 6LBCSSQ1MMS
Description: PORTFOLIO LD6 SERIES 6" RECESSED FIXTURE WITH A SQUARE SHALLOW CAST METALLIC SILVER TRIM
MEDIUM DISTRIBUTION WITH MATTE METALLIC SILVER TRIM
WATTAGE D010TR-27.4 W DE010-27.95 W D5LT-27.65 W DMX-27.73 W DL2-29.56 W
DL3-29.67 W DLE-29.73 W
Light Source: HIGH LUMEN LED 3500 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3281.3 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.22 / 1.33
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

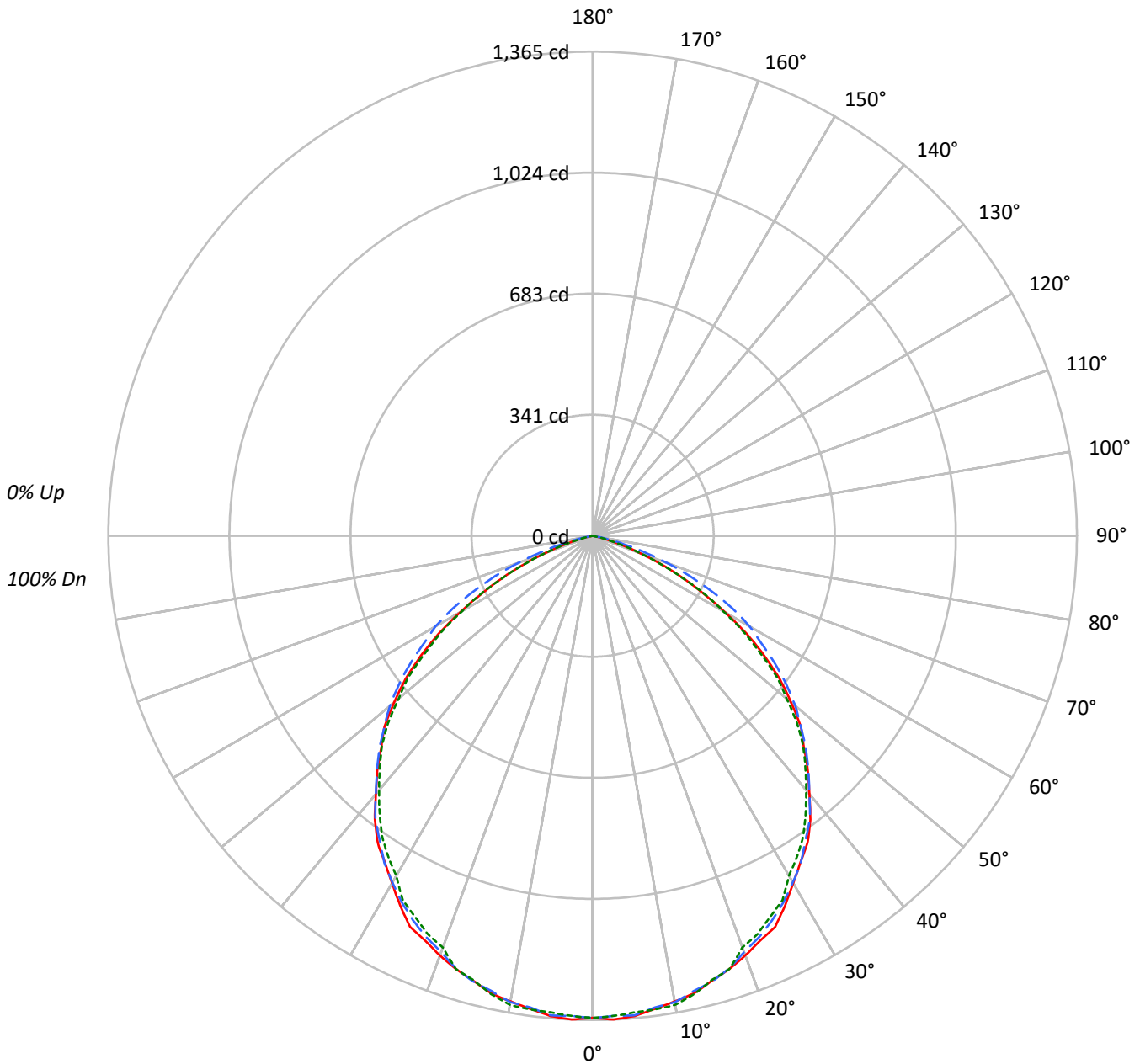
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P209446

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 50 | | | | | | | | | 30 | | | | | | | | | 10 | | | | | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 2 | 102 | 94 | 88 | 83 | 99 | 93 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | | | | | | | | | | | | | | | |
| 3 | 93 | 84 | 76 | 70 | 91 | 82 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 67 | 74 | 70 | 66 | 64 | | | | | | | | | | | | | | | | | | | |
| 4 | 86 | 75 | 67 | 60 | 84 | 73 | 66 | 60 | 71 | 64 | 59 | 69 | 63 | 58 | 67 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 5 | 79 | 67 | 59 | 52 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | | | | | | | | | | | | | | | |
| 6 | 73 | 61 | 52 | 46 | 71 | 60 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | | | | | | | | | | | | | | | |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | | | | | | | | | | | | |
| 8 | 63 | 50 | 42 | 37 | 62 | 50 | 42 | 36 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | | | | | | | | | | | | | | | | | |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 32 | 31 | | | | | | | | | | | | | | | | | | | |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--|-----|-----|
| 0° | Luminaire represents a point source (luminous area is zero). | | |
| 5° | No luminance values can be calculated. | | |
| 10° | | | |
| 15° | | | |
| 20° | | | |
| 25° | | | |
| 30° | | | |
| 35° | | | |
| 40° | | | |
| 45° | | | |
| 50° | | | |
| 55° | | | |
| 60° | | | |
| 65° | | | |
| 70° | | | |
| 75° | | | |
| 80° | | | |
| 85° | | | |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 128.5 | 3.9 |
| 10°-20° | 366.5 | 11.2 |
| 20°-30° | 551.6 | 16.8 |
| 30°-40° | 652.5 | 19.9 |
| 40°-50° | 651.1 | 19.8 |
| 50°-60° | 540.0 | 16.5 |
| 60°-70° | 315.5 | 9.6 |
| 70°-80° | 75.1 | 2.3 |
| 80°-90° | 0.5 | 0.0 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1046.6 | 31.9 |
| 0°-40° | 1699.1 | 51.8 |
| 0°-60° | 2890.2 | 88.1 |
| 0°-90° | 3281.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3281.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1359 | 1359 | 1359 | 1359 | 1359 | |
| 5° | 1359 | 1352 | 1357 | 1353 | 1349 | 129 |
| 15° | 1299 | 1298 | 1301 | 1295 | 1297 | 367 |
| 25° | 1217 | 1203 | 1197 | 1193 | 1185 | 556 |
| 35° | 1056 | 1046 | 1046 | 1040 | 1034 | 657 |
| 45° | 842 | 843 | 850 | 841 | 840 | 651 |
| 55° | 591 | 612 | 627 | 610 | 577 | 525 |
| 65° | 279 | 314 | 369 | 313 | 277 | 277 |
| 75° | 40 | 58 | 90 | 57 | 38 | 54 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 |
| 2.5° | 1365.1 | 1357.1 | 1363.1 | 1351.1 | 1359.1 | 1351.1 | 1353.1 | 1349.1 | 1357.1 | 1355.1 | 1353.1 |
| 5° | 1359.1 | 1361.1 | 1357.1 | 1361.1 | 1355.1 | 1349.1 | 1355.1 | 1351.1 | 1339.1 | 1357.1 | 1353.1 |
| 7.5° | 1345.1 | 1347.1 | 1343.1 | 1349.1 | 1345.1 | 1337.1 | 1353.1 | 1341.1 | 1339.1 | 1341.1 | 1349.1 |
| 10° | 1333.1 | 1337.1 | 1335.1 | 1333.1 | 1335.1 | 1335.1 | 1331.0 | 1325.0 | 1331.0 | 1335.1 | 1333.1 |
| 12.5° | 1321.0 | 1327.0 | 1323.0 | 1319.0 | 1315.0 | 1317.0 | 1321.0 | 1311.0 | 1311.0 | 1315.0 | 1327.0 |
| 15° | 1299.0 | 1303.0 | 1305.0 | 1297.0 | 1297.0 | 1299.0 | 1307.0 | 1291.0 | 1299.0 | 1301.0 | 1303.0 |
| 17.5° | 1280.9 | 1282.9 | 1282.9 | 1276.9 | 1280.9 | 1274.9 | 1280.9 | 1272.9 | 1280.9 | 1278.9 | 1282.9 |
| 20° | 1258.9 | 1262.9 | 1258.9 | 1258.9 | 1254.9 | 1256.9 | 1256.9 | 1256.9 | 1250.9 | 1248.9 | 1252.9 |
| 22.5° | 1234.8 | 1234.8 | 1230.8 | 1234.8 | 1230.8 | 1228.8 | 1238.8 | 1222.8 | 1238.8 | 1224.8 | 1236.8 |
| 25° | 1216.8 | 1206.8 | 1200.7 | 1198.7 | 1206.8 | 1198.7 | 1202.8 | 1196.7 | 1200.7 | 1196.7 | 1198.7 |
| 27.5° | 1174.7 | 1168.7 | 1166.7 | 1168.7 | 1168.7 | 1166.7 | 1174.7 | 1152.6 | 1166.7 | 1164.7 | 1164.7 |
| 30° | 1130.6 | 1130.6 | 1134.6 | 1130.6 | 1134.6 | 1128.6 | 1136.6 | 1118.6 | 1130.6 | 1128.6 | 1130.6 |
| 32.5° | 1090.5 | 1092.5 | 1092.5 | 1096.5 | 1090.5 | 1092.5 | 1092.5 | 1086.5 | 1090.5 | 1092.5 | 1088.5 |
| 35° | 1056.4 | 1046.4 | 1046.4 | 1046.4 | 1046.4 | 1046.4 | 1050.4 | 1044.4 | 1050.4 | 1046.4 | 1046.4 |
| 37.5° | 1008.3 | 998.3 | 998.3 | 996.3 | 1006.3 | 1000.3 | 1010.3 | 1002.3 | 1002.3 | 1006.3 | 1006.3 |
| 40° | 950.2 | 954.2 | 948.2 | 956.2 | 954.2 | 946.2 | 964.2 | 952.2 | 960.2 | 950.2 | 958.2 |
| 42.5° | 898.1 | 900.1 | 898.1 | 896.1 | 904.1 | 902.1 | 910.1 | 902.1 | 900.1 | 900.1 | 914.1 |
| 45° | 841.9 | 841.9 | 841.9 | 847.9 | 841.9 | 843.9 | 851.9 | 847.9 | 851.9 | 849.9 | 864.0 |
| 47.5° | 795.8 | 785.8 | 783.8 | 795.8 | 793.8 | 795.8 | 795.8 | 797.8 | 799.8 | 795.8 | 801.8 |
| 50° | 729.7 | 725.7 | 725.7 | 727.7 | 729.7 | 733.7 | 739.7 | 743.7 | 739.7 | 745.7 | 747.7 |
| 52.5° | 665.5 | 661.5 | 663.5 | 671.5 | 675.5 | 673.5 | 683.6 | 685.6 | 683.6 | 687.6 | 687.6 |
| 55° | 591.4 | 587.3 | 593.4 | 603.4 | 609.4 | 615.4 | 625.4 | 617.4 | 625.4 | 627.4 | 629.4 |
| 57.5° | 515.2 | 513.2 | 515.2 | 525.2 | 531.2 | 545.2 | 561.3 | 561.3 | 569.3 | 563.3 | 569.3 |
| 60° | 431.0 | 431.0 | 439.0 | 445.0 | 461.1 | 471.1 | 487.1 | 495.1 | 503.2 | 511.2 | 507.2 |
| 62.5° | 350.8 | 352.8 | 358.8 | 372.9 | 382.9 | 396.9 | 414.9 | 423.0 | 437.0 | 445.0 | 441.0 |
| 65° | 278.6 | 278.6 | 282.6 | 294.7 | 304.7 | 322.7 | 338.8 | 356.8 | 364.8 | 368.8 | 370.8 |
| 67.5° | 208.5 | 206.5 | 214.5 | 222.5 | 232.5 | 250.6 | 268.6 | 278.6 | 292.7 | 296.7 | 294.7 |
| 70° | 140.3 | 142.3 | 146.3 | 154.4 | 166.4 | 180.4 | 200.5 | 208.5 | 216.5 | 220.5 | 216.5 |
| 72.5° | 88.2 | 88.2 | 90.2 | 98.2 | 106.2 | 116.3 | 130.3 | 138.3 | 148.3 | 150.3 | 146.3 |
| 75° | 40.1 | 40.1 | 44.1 | 48.1 | 54.1 | 62.1 | 72.2 | 78.2 | 84.2 | 90.2 | 90.2 |
| 77.5° | 8.0 | 10.0 | 12.0 | 12.0 | 16.0 | 22.1 | 28.1 | 34.1 | 40.1 | 40.1 | 40.1 |
| 80° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 4.0 | 6.0 | 10.0 | 10.0 | 10.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 | 1359.1 |
| 2.5° | 1359.1 | 1371.1 | 1359.1 | 1353.1 | 1361.1 | 1359.1 | 1353.1 | 1355.1 |
| 5° | 1353.1 | 1357.1 | 1361.1 | 1345.1 | 1355.1 | 1357.1 | 1353.1 | 1349.1 |
| 7.5° | 1347.1 | 1349.1 | 1347.1 | 1343.1 | 1343.1 | 1343.1 | 1347.1 | 1347.1 |
| 10° | 1345.1 | 1339.1 | 1329.0 | 1323.0 | 1329.0 | 1329.0 | 1327.0 | 1343.1 |
| 12.5° | 1319.0 | 1327.0 | 1321.0 | 1309.0 | 1321.0 | 1319.0 | 1319.0 | 1323.0 |
| 15° | 1299.0 | 1299.0 | 1303.0 | 1286.9 | 1295.0 | 1293.0 | 1293.0 | 1297.0 |
| 17.5° | 1278.9 | 1278.9 | 1276.9 | 1272.9 | 1270.9 | 1276.9 | 1270.9 | 1280.9 |
| 20° | 1250.9 | 1254.9 | 1266.9 | 1246.9 | 1252.9 | 1246.9 | 1246.9 | 1234.8 |
| 22.5° | 1216.8 | 1236.8 | 1226.8 | 1224.8 | 1222.8 | 1224.8 | 1228.8 | 1214.8 |
| 25° | 1194.7 | 1194.7 | 1198.7 | 1186.7 | 1186.7 | 1190.7 | 1188.7 | 1184.7 |
| 27.5° | 1164.7 | 1162.7 | 1160.7 | 1156.6 | 1166.7 | 1158.7 | 1158.7 | 1158.7 |
| 30° | 1122.6 | 1128.6 | 1126.6 | 1116.6 | 1128.6 | 1124.6 | 1118.6 | 1106.5 |
| 32.5° | 1086.5 | 1094.5 | 1082.5 | 1080.5 | 1078.5 | 1080.5 | 1082.5 | 1072.5 |
| 35° | 1042.4 | 1044.4 | 1044.4 | 1036.4 | 1038.4 | 1036.4 | 1032.4 | 1034.4 |
| 37.5° | 1002.3 | 1000.3 | 990.3 | 986.3 | 988.3 | 988.3 | 990.3 | 986.3 |
| 40° | 946.2 | 952.2 | 952.2 | 938.1 | 942.2 | 938.1 | 938.1 | 936.1 |
| 42.5° | 900.1 | 902.1 | 896.1 | 890.0 | 890.0 | 888.0 | 884.0 | 888.0 |
| 45° | 851.9 | 849.9 | 843.9 | 837.9 | 837.9 | 835.9 | 831.9 | 839.9 |
| 47.5° | 797.8 | 793.8 | 791.8 | 783.8 | 783.8 | 771.8 | 773.8 | 781.8 |
| 50° | 743.7 | 739.7 | 731.7 | 727.7 | 721.7 | 715.6 | 713.6 | 713.6 |
| 52.5° | 679.6 | 679.6 | 671.5 | 663.5 | 661.5 | 657.5 | 653.5 | 655.5 |
| 55° | 623.4 | 623.4 | 617.4 | 603.4 | 595.4 | 585.3 | 579.3 | 577.3 |
| 57.5° | 559.3 | 555.3 | 543.2 | 527.2 | 519.2 | 511.2 | 505.2 | 505.2 |
| 60° | 495.1 | 485.1 | 473.1 | 459.1 | 445.0 | 431.0 | 427.0 | 425.0 |
| 62.5° | 425.0 | 414.9 | 392.9 | 376.9 | 366.8 | 358.8 | 350.8 | 356.8 |
| 65° | 354.8 | 340.8 | 320.7 | 304.7 | 294.7 | 282.6 | 276.6 | 276.6 |
| 67.5° | 280.6 | 266.6 | 246.6 | 230.5 | 220.5 | 212.5 | 204.5 | 204.5 |
| 70° | 206.5 | 196.4 | 178.4 | 164.4 | 156.4 | 144.3 | 142.3 | 142.3 |
| 72.5° | 140.3 | 128.3 | 114.3 | 104.2 | 96.2 | 88.2 | 84.2 | 82.2 |
| 75° | 78.2 | 70.2 | 60.1 | 54.1 | 46.1 | 42.1 | 38.1 | 38.1 |
| 77.5° | 32.1 | 26.1 | 20.0 | 16.0 | 12.0 | 10.0 | 8.0 | 10.0 |
| 80° | 6.0 | 4.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)