

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: P209376

Luminaire Tested: **LDSQ6B50D010 EU6B30509040 6LBSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209376
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35360)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6B50D010 EU6B30509040 6LBSQ1LI
Description: PORTFOLIO LD6 SERIES 6" RECESSED FIXTURE WITH A SQUARE LOW
IRIDESCENT TRIM.
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
D010TE
Light Source: HIGH LUMEN LED 4000 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4562.9 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 0.92 / 0.92 / 0.95
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

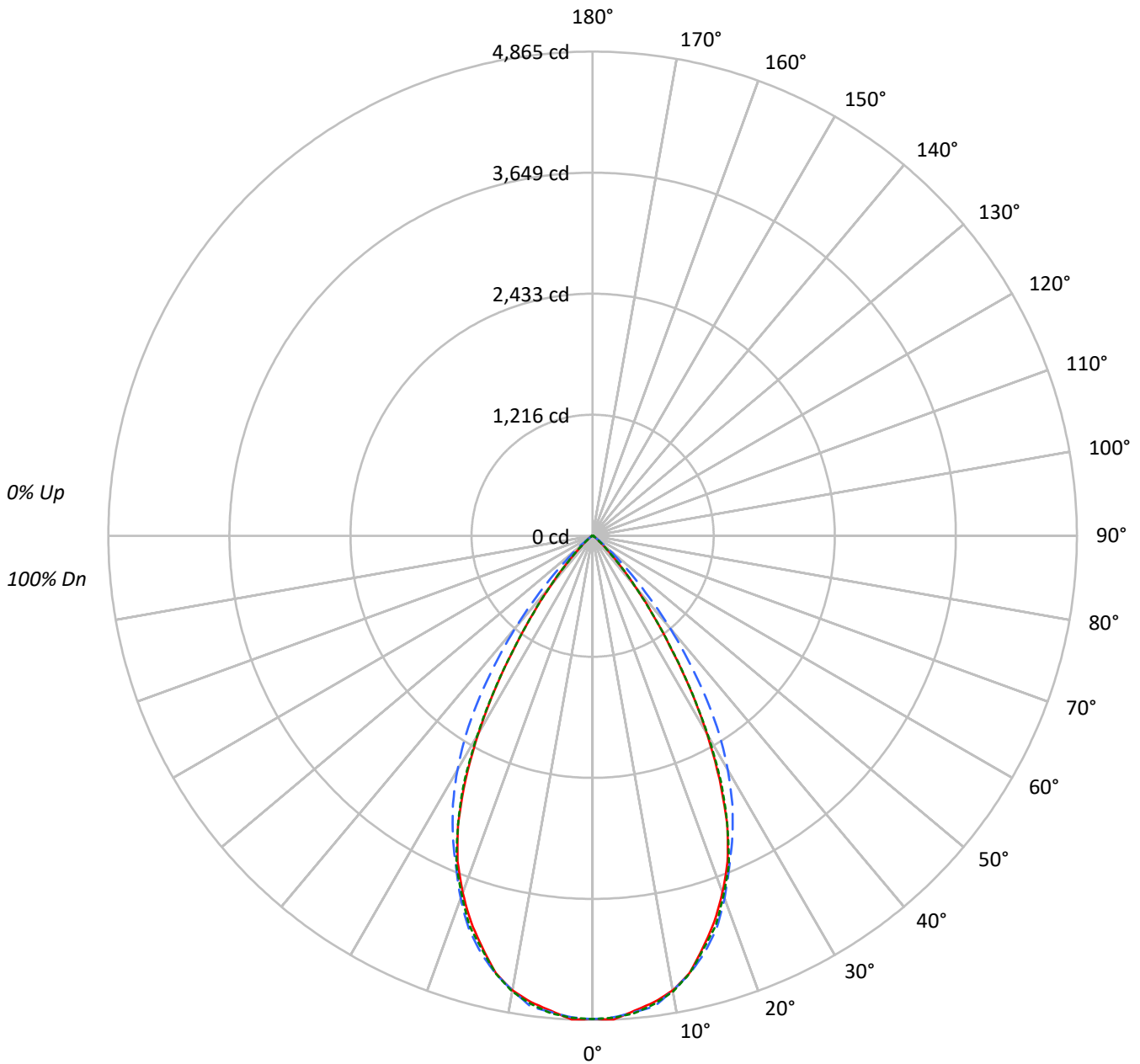
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P209376

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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 | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 98 | 95 | 92 | 95 | 92 | 90 | 92 | 90 | 88 | 87 | | | | | | | | | | | | | | | | | | | |
| 3 | 102 | 96 | 91 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 89 | 86 | 83 | 87 | 84 | 82 | 80 | | | | | | | | | | | | | | | | | | | |
| 4 | 97 | 89 | 84 | 79 | 95 | 88 | 83 | 79 | 86 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 5 | 92 | 83 | 78 | 73 | 90 | 82 | 77 | 73 | 81 | 76 | 72 | 79 | 75 | 72 | 77 | 74 | 71 | 69 | | | | | | | | | | | | | | | | | | | |
| 6 | 87 | 78 | 72 | 68 | 86 | 77 | 72 | 67 | 76 | 71 | 67 | 74 | 70 | 67 | 73 | 69 | 66 | 65 | | | | | | | | | | | | | | | | | | | |
| 7 | 83 | 73 | 67 | 63 | 81 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 66 | 62 | 69 | 65 | 62 | 60 | | | | | | | | | | | | | | | | | | | |
| 8 | 79 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 62 | 58 | 65 | 61 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 9 | 75 | 65 | 59 | 55 | 74 | 64 | 59 | 55 | 64 | 58 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 53 | | | | | | | | | | | | | | | | | | | |
| 10 | 71 | 61 | 55 | 52 | 70 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 55 | 51 | 59 | 54 | 51 | 50 | | | | | | | | | | | | | | | | | | | |

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° | 454.6 | 10.0 |
| 10°-20° | 1209.2 | 26.5 |
| 20°-30° | 1484.0 | 32.5 |
| 30°-40° | 1024.5 | 22.5 |
| 40°-50° | 320.3 | 7.0 |
| 50°-60° | 50.0 | 1.1 |
| 60°-70° | 14.5 | 0.3 |
| 70°-80° | 4.8 | 0.1 |
| 80°-90° | 1.1 | 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° | 3147.8 | 69.0 |
| 0°-40° | 4172.2 | 91.4 |
| 0°-60° | 4542.6 | 99.6 |
| 0°-90° | 4562.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4562.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 4856 | 4856 | 4856 | 4856 | 4856 | |
| 5° | 4791 | 4810 | 4804 | 4805 | 4816 | 453 |
| 15° | 4283 | 4345 | 4338 | 4332 | 4299 | 1198 |
| 25° | 3197 | 3280 | 3323 | 3301 | 3200 | 1433 |
| 35° | 1349 | 1596 | 1980 | 1611 | 1355 | 862 |
| 45° | 254 | 347 | 557 | 344 | 260 | 227 |
| 55° | 43 | 46 | 52 | 46 | 40 | 42 |
| 65° | 12 | 15 | 12 | 15 | 12 | 14 |
| 75° | 3 | 3 | 3 | 3 | 3 | 4 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P209376

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 |
| 2.5° | 4864.6 | 4797.3 | 4840.2 | 4831.0 | 4855.5 | 4870.8 | 4855.5 | 4883.0 | 4864.6 | 4843.2 | 4849.3 |
| 5° | 4791.2 | 4800.4 | 4797.3 | 4803.5 | 4809.6 | 4809.6 | 4840.2 | 4843.2 | 4849.3 | 4803.5 | 4815.7 |
| 7.5° | 4727.0 | 4727.0 | 4742.3 | 4736.1 | 4757.6 | 4751.4 | 4754.5 | 4779.0 | 4782.0 | 4769.8 | 4760.6 |
| 10° | 4638.2 | 4626.0 | 4610.7 | 4610.7 | 4638.2 | 4641.3 | 4665.8 | 4668.8 | 4687.2 | 4638.2 | 4644.4 |
| 12.5° | 4500.6 | 4494.4 | 4470.0 | 4482.2 | 4503.6 | 4491.4 | 4531.2 | 4534.2 | 4528.1 | 4506.7 | 4518.9 |
| 15° | 4283.3 | 4307.8 | 4301.7 | 4298.6 | 4347.6 | 4341.5 | 4338.4 | 4347.6 | 4350.6 | 4338.4 | 4329.2 |
| 17.5° | 4066.1 | 4087.5 | 4090.6 | 4096.7 | 4105.9 | 4115.1 | 4127.3 | 4161.0 | 4148.7 | 4139.5 | 4170.1 |
| 20° | 3815.2 | 3806.0 | 3830.5 | 3855.0 | 3864.2 | 3864.2 | 3882.5 | 3907.0 | 3888.7 | 3876.4 | 3879.5 |
| 22.5° | 3542.9 | 3558.2 | 3546.0 | 3570.5 | 3582.7 | 3598.0 | 3616.4 | 3637.8 | 3622.5 | 3588.8 | 3628.6 |
| 25° | 3197.2 | 3206.4 | 3246.2 | 3243.1 | 3261.5 | 3298.2 | 3325.7 | 3325.7 | 3325.7 | 3322.6 | 3322.6 |
| 27.5° | 2762.8 | 2756.6 | 2805.6 | 2839.2 | 2885.1 | 2943.3 | 2980.0 | 3038.1 | 3047.3 | 3038.1 | 3016.7 |
| 30° | 2297.7 | 2291.6 | 2352.8 | 2395.6 | 2478.2 | 2505.8 | 2606.7 | 2661.8 | 2719.9 | 2716.9 | 2701.6 |
| 32.5° | 1814.3 | 1826.5 | 1875.5 | 1936.7 | 2004.0 | 2089.7 | 2184.5 | 2306.9 | 2358.9 | 2371.1 | 2343.6 |
| 35° | 1349.3 | 1367.6 | 1413.5 | 1465.5 | 1548.1 | 1643.0 | 1774.5 | 1890.8 | 1979.5 | 1979.5 | 1958.1 |
| 37.5° | 972.9 | 979.0 | 1021.9 | 1055.5 | 1141.2 | 1226.9 | 1340.1 | 1499.2 | 1554.2 | 1575.7 | 1554.2 |
| 40° | 663.9 | 663.9 | 688.4 | 725.1 | 795.5 | 868.9 | 972.9 | 1092.3 | 1171.8 | 1205.5 | 1168.7 |
| 42.5° | 422.2 | 428.3 | 446.7 | 471.2 | 523.2 | 587.4 | 667.0 | 755.7 | 813.8 | 838.3 | 804.7 |
| 45° | 253.9 | 260.1 | 275.4 | 293.7 | 327.4 | 367.1 | 422.2 | 486.5 | 535.4 | 556.8 | 541.5 |
| 47.5° | 153.0 | 159.1 | 165.2 | 177.5 | 201.9 | 229.5 | 257.0 | 293.7 | 324.3 | 327.4 | 321.3 |
| 50° | 88.7 | 88.7 | 94.8 | 104.0 | 116.3 | 131.6 | 146.9 | 168.3 | 177.5 | 189.7 | 177.5 |
| 52.5° | 58.1 | 58.1 | 58.1 | 61.2 | 67.3 | 73.4 | 79.5 | 91.8 | 97.9 | 97.9 | 94.8 |
| 55° | 42.8 | 42.8 | 42.8 | 42.8 | 45.9 | 45.9 | 45.9 | 49.0 | 52.0 | 52.0 | 52.0 |
| 57.5° | 30.6 | 30.6 | 30.6 | 33.7 | 33.7 | 33.7 | 30.6 | 30.6 | 30.6 | 30.6 | 30.6 |
| 60° | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 21.4 | 21.4 | 21.4 |
| 62.5° | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 |
| 65° | 12.2 | 12.2 | 12.2 | 15.3 | 15.3 | 15.3 | 15.3 | 12.2 | 12.2 | 12.2 | 12.2 |
| 67.5° | 9.2 | 9.2 | 9.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 9.2 | 9.2 | 9.2 |
| 70° | 6.1 | 6.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| 72.5° | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| 75° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 77.5° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 80° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 82.5° | 0.0 | 0.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 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° | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 | 4855.5 |
| 2.5° | 4867.7 | 4852.4 | 4852.4 | 4852.4 | 4846.3 | 4852.4 | 4861.6 | 4846.3 |
| 5° | 4815.7 | 4821.8 | 4794.3 | 4815.7 | 4824.9 | 4809.6 | 4846.3 | 4815.7 |
| 7.5° | 4769.8 | 4760.6 | 4717.8 | 4748.4 | 4766.7 | 4772.9 | 4769.8 | 4745.3 |
| 10° | 4678.0 | 4656.6 | 4638.2 | 4638.2 | 4632.1 | 4629.1 | 4662.7 | 4650.5 |
| 12.5° | 4512.8 | 4528.1 | 4500.6 | 4515.9 | 4503.6 | 4506.7 | 4509.7 | 4503.6 |
| 15° | 4372.1 | 4356.8 | 4320.1 | 4344.5 | 4329.2 | 4313.9 | 4344.5 | 4298.6 |
| 17.5° | 4151.8 | 4148.7 | 4127.3 | 4112.0 | 4118.1 | 4115.1 | 4130.4 | 4108.9 |
| 20° | 3891.7 | 3897.8 | 3885.6 | 3879.5 | 3870.3 | 3848.9 | 3867.2 | 3842.8 |
| 22.5° | 3610.2 | 3616.4 | 3628.6 | 3604.1 | 3607.2 | 3576.6 | 3604.1 | 3576.6 |
| 25° | 3325.7 | 3322.6 | 3307.3 | 3295.1 | 3261.5 | 3227.8 | 3221.7 | 3200.3 |
| 27.5° | 3013.6 | 2992.2 | 2955.5 | 2915.7 | 2863.7 | 2817.8 | 2814.8 | 2799.5 |
| 30° | 2671.0 | 2625.1 | 2557.8 | 2493.5 | 2414.0 | 2343.6 | 2343.6 | 2319.1 |
| 32.5° | 2309.9 | 2205.9 | 2114.1 | 2034.6 | 1930.6 | 1890.8 | 1851.0 | 1829.6 |
| 35° | 1878.5 | 1786.8 | 1676.6 | 1545.1 | 1496.1 | 1398.2 | 1404.3 | 1355.4 |
| 37.5° | 1471.6 | 1358.4 | 1254.4 | 1147.3 | 1061.7 | 1015.8 | 991.3 | 966.8 |
| 40° | 1092.3 | 982.1 | 868.9 | 798.5 | 722.0 | 682.3 | 667.0 | 660.9 |
| 42.5° | 746.5 | 654.7 | 581.3 | 523.2 | 483.4 | 440.6 | 428.3 | 422.2 |
| 45° | 486.5 | 434.5 | 367.1 | 321.3 | 293.7 | 269.2 | 269.2 | 260.1 |
| 47.5° | 290.7 | 257.0 | 223.3 | 192.8 | 174.4 | 159.1 | 153.0 | 149.9 |
| 50° | 162.2 | 143.8 | 125.4 | 113.2 | 101.0 | 91.8 | 88.7 | 88.7 |
| 52.5° | 88.7 | 79.5 | 73.4 | 64.3 | 58.1 | 58.1 | 58.1 | 55.1 |
| 55° | 45.9 | 45.9 | 45.9 | 45.9 | 42.8 | 42.8 | 42.8 | 39.8 |
| 57.5° | 30.6 | 30.6 | 33.7 | 33.7 | 33.7 | 30.6 | 30.6 | 30.6 |
| 60° | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| 62.5° | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 |
| 65° | 12.2 | 15.3 | 15.3 | 15.3 | 15.3 | 12.2 | 12.2 | 12.2 |
| 67.5° | 9.2 | 12.2 | 12.2 | 12.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| 70° | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 6.1 | 6.1 | 6.1 |
| 72.5° | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| 75° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 77.5° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 80° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 82.5° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 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)