

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: P209384

Luminaire Tested: **LDSQ6B60D010 EU6B60708050 6LBSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209384
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: LDSQ6B60D010 EU6B60708050 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 5000 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6158.8 lumens
Efficiency: N/A
Efficacy: 98.6 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

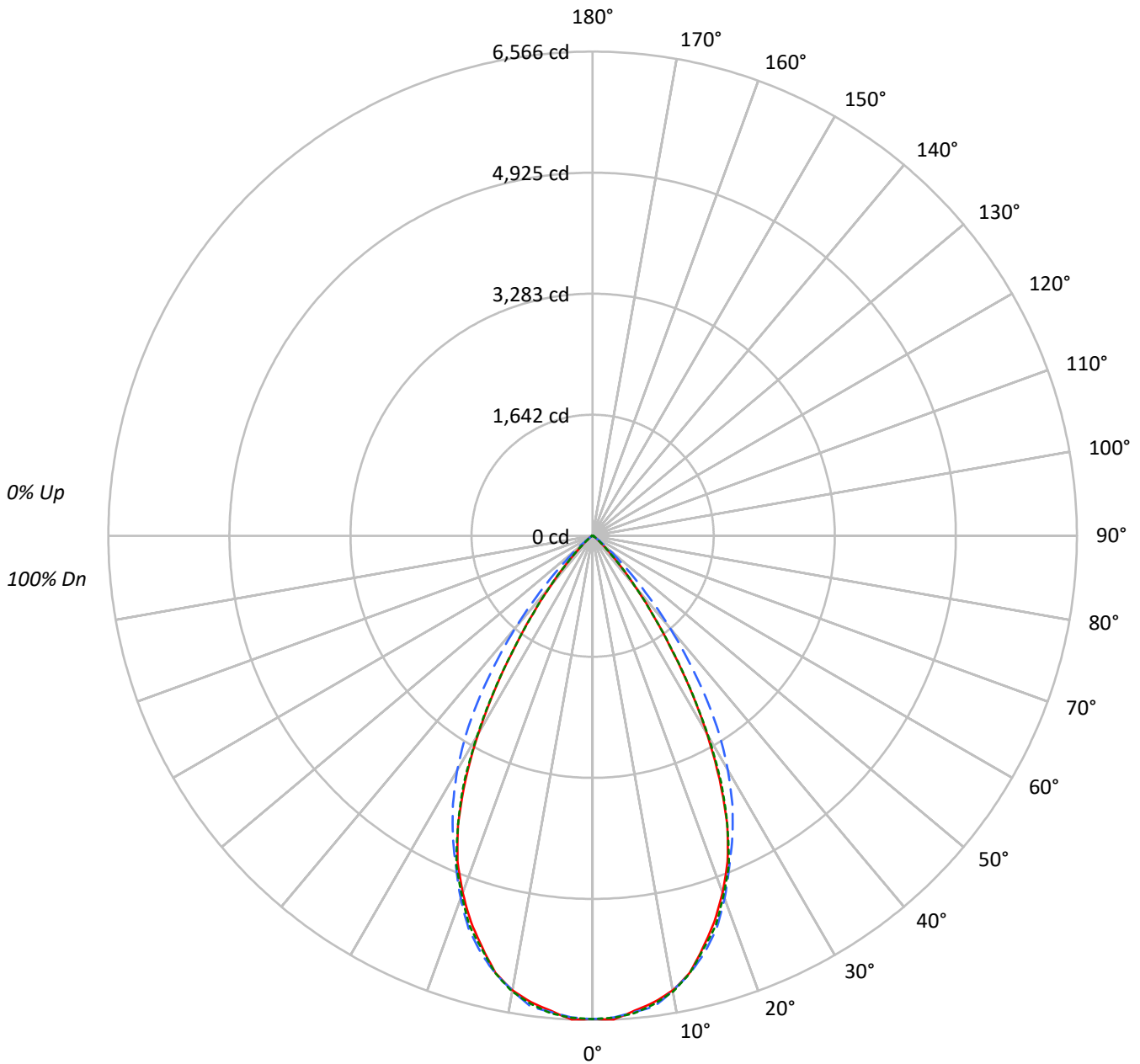
Input Watts (W): 62.48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P209384

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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° | 613.6 | 10.0 |
| 10°-20° | 1632.1 | 26.5 |
| 20°-30° | 2003.1 | 32.5 |
| 30°-40° | 1382.8 | 22.5 |
| 40°-50° | 432.3 | 7.0 |
| 50°-60° | 67.5 | 1.1 |
| 60°-70° | 19.5 | 0.3 |
| 70°-80° | 6.4 | 0.1 |
| 80°-90° | 1.4 | 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° | 4248.8 | 69.0 |
| 0°-40° | 5631.6 | 91.4 |
| 0°-60° | 6131.4 | 99.6 |
| 0°-90° | 6158.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6158.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6554 | 6554 | 6554 | 6554 | 6554 | |
| 5° | 6467 | 6492 | 6484 | 6486 | 6500 | 611 |
| 15° | 5782 | 5864 | 5856 | 5848 | 5802 | 1617 |
| 25° | 4316 | 4427 | 4485 | 4456 | 4320 | 1934 |
| 35° | 1821 | 2154 | 2672 | 2174 | 1829 | 1163 |
| 45° | 343 | 469 | 752 | 465 | 351 | 307 |
| 55° | 58 | 62 | 70 | 62 | 54 | 56 |
| 65° | 16 | 21 | 16 | 21 | 16 | 18 |
| 75° | 4 | 4 | 4 | 4 | 4 | 6 |
| 85° | 0 | 0 | 0 | 0 | 0 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P209384

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 |
| 2.5° | 6566.2 | 6475.3 | 6533.1 | 6520.8 | 6553.8 | 6574.4 | 6553.8 | 6591.0 | 6566.2 | 6537.3 | 6545.5 |
| 5° | 6467.1 | 6479.5 | 6475.3 | 6483.6 | 6491.8 | 6491.8 | 6533.1 | 6537.3 | 6545.5 | 6483.6 | 6500.1 |
| 7.5° | 6380.3 | 6380.3 | 6401.0 | 6392.7 | 6421.6 | 6413.4 | 6417.5 | 6450.5 | 6454.7 | 6438.2 | 6425.8 |
| 10° | 6260.6 | 6244.1 | 6223.4 | 6223.4 | 6260.6 | 6264.7 | 6297.7 | 6301.9 | 6326.7 | 6260.6 | 6268.8 |
| 12.5° | 6074.7 | 6066.5 | 6033.5 | 6050.0 | 6078.9 | 6062.4 | 6116.0 | 6120.2 | 6111.9 | 6083.0 | 6099.5 |
| 15° | 5781.5 | 5814.6 | 5806.3 | 5802.2 | 5868.3 | 5860.0 | 5855.9 | 5868.3 | 5872.4 | 5855.9 | 5843.5 |
| 17.5° | 5488.3 | 5517.2 | 5521.4 | 5529.6 | 5542.0 | 5554.4 | 5570.9 | 5616.4 | 5599.8 | 5587.4 | 5628.7 |
| 20° | 5149.7 | 5137.3 | 5170.3 | 5203.4 | 5215.8 | 5215.8 | 5240.6 | 5273.6 | 5248.8 | 5232.3 | 5236.4 |
| 22.5° | 4782.2 | 4802.8 | 4786.3 | 4819.3 | 4835.8 | 4856.5 | 4881.3 | 4910.2 | 4889.5 | 4844.1 | 4897.8 |
| 25° | 4315.5 | 4327.9 | 4381.6 | 4377.5 | 4402.2 | 4451.8 | 4489.0 | 4489.0 | 4489.0 | 4484.8 | 4484.8 |
| 27.5° | 3729.1 | 3720.8 | 3786.9 | 3832.3 | 3894.3 | 3972.7 | 4022.3 | 4100.8 | 4113.2 | 4100.8 | 4071.9 |
| 30° | 3101.4 | 3093.1 | 3175.7 | 3233.5 | 3345.0 | 3382.2 | 3518.5 | 3592.8 | 3671.3 | 3667.1 | 3646.5 |
| 32.5° | 2448.9 | 2465.4 | 2531.5 | 2614.1 | 2704.9 | 2820.6 | 2948.6 | 3113.8 | 3184.0 | 3200.5 | 3163.3 |
| 35° | 1821.2 | 1846.0 | 1907.9 | 1978.1 | 2089.6 | 2217.6 | 2395.2 | 2552.1 | 2671.9 | 2671.9 | 2643.0 |
| 37.5° | 1313.2 | 1321.5 | 1379.3 | 1424.7 | 1540.4 | 1656.0 | 1808.8 | 2023.5 | 2097.9 | 2126.8 | 2097.9 |
| 40° | 896.1 | 896.1 | 929.2 | 978.7 | 1073.7 | 1172.8 | 1313.2 | 1474.3 | 1581.7 | 1627.1 | 1577.5 |
| 42.5° | 569.9 | 578.2 | 602.9 | 636.0 | 706.2 | 792.9 | 900.3 | 1020.0 | 1098.5 | 1131.5 | 1086.1 |
| 45° | 342.8 | 351.0 | 371.7 | 396.4 | 441.9 | 495.6 | 569.9 | 656.6 | 722.7 | 751.6 | 731.0 |
| 47.5° | 206.5 | 214.7 | 223.0 | 239.5 | 272.6 | 309.7 | 346.9 | 396.4 | 437.7 | 441.9 | 433.6 |
| 50° | 119.8 | 119.8 | 128.0 | 140.4 | 156.9 | 177.6 | 198.2 | 227.1 | 239.5 | 256.0 | 239.5 |
| 52.5° | 78.5 | 78.5 | 78.5 | 82.6 | 90.9 | 99.1 | 107.4 | 123.9 | 132.1 | 132.1 | 128.0 |
| 55° | 57.8 | 57.8 | 57.8 | 57.8 | 61.9 | 61.9 | 61.9 | 66.1 | 70.2 | 70.2 | 70.2 |
| 57.5° | 41.3 | 41.3 | 41.3 | 45.4 | 45.4 | 45.4 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 |
| 60° | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 28.9 | 28.9 | 28.9 |
| 62.5° | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| 65° | 16.5 | 16.5 | 16.5 | 20.6 | 20.6 | 20.6 | 20.6 | 16.5 | 16.5 | 16.5 | 16.5 |
| 67.5° | 12.4 | 12.4 | 12.4 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 12.4 | 12.4 | 12.4 |
| 70° | 8.3 | 8.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 |
| 72.5° | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 75° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 77.5° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 80° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 82.5° | 0.0 | 0.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 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° | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 | 6553.8 |
| 2.5° | 6570.3 | 6549.7 | 6549.7 | 6549.7 | 6541.4 | 6549.7 | 6562.0 | 6541.4 |
| 5° | 6500.1 | 6508.4 | 6471.2 | 6500.1 | 6512.5 | 6491.8 | 6541.4 | 6500.1 |
| 7.5° | 6438.2 | 6425.8 | 6368.0 | 6409.3 | 6434.0 | 6442.3 | 6438.2 | 6405.1 |
| 10° | 6314.3 | 6285.4 | 6260.6 | 6260.6 | 6252.3 | 6248.2 | 6293.6 | 6277.1 |
| 12.5° | 6091.3 | 6111.9 | 6074.7 | 6095.4 | 6078.9 | 6083.0 | 6087.1 | 6078.9 |
| 15° | 5901.3 | 5880.7 | 5831.1 | 5864.1 | 5843.5 | 5822.8 | 5864.1 | 5802.2 |
| 17.5° | 5604.0 | 5599.8 | 5570.9 | 5550.3 | 5558.5 | 5554.4 | 5575.1 | 5546.1 |
| 20° | 5252.9 | 5261.2 | 5244.7 | 5236.4 | 5224.0 | 5195.1 | 5219.9 | 5186.9 |
| 22.5° | 4873.0 | 4881.3 | 4897.8 | 4864.8 | 4868.9 | 4827.6 | 4864.8 | 4827.6 |
| 25° | 4489.0 | 4484.8 | 4464.2 | 4447.7 | 4402.2 | 4356.8 | 4348.5 | 4319.6 |
| 27.5° | 4067.7 | 4038.8 | 3989.3 | 3935.6 | 3865.4 | 3803.4 | 3799.3 | 3778.6 |
| 30° | 3605.2 | 3543.3 | 3452.4 | 3365.7 | 3258.3 | 3163.3 | 3163.3 | 3130.3 |
| 32.5° | 3117.9 | 2977.5 | 2853.6 | 2746.2 | 2605.8 | 2552.1 | 2498.5 | 2469.5 |
| 35° | 2535.6 | 2411.7 | 2263.1 | 2085.5 | 2019.4 | 1887.3 | 1895.5 | 1829.4 |
| 37.5° | 1986.4 | 1833.6 | 1693.2 | 1548.6 | 1433.0 | 1371.1 | 1338.0 | 1305.0 |
| 40° | 1474.3 | 1325.6 | 1172.8 | 1077.8 | 974.6 | 920.9 | 900.3 | 892.0 |
| 42.5° | 1007.6 | 883.7 | 784.6 | 706.2 | 652.5 | 594.7 | 578.2 | 569.9 |
| 45° | 656.6 | 586.4 | 495.6 | 433.6 | 396.4 | 363.4 | 363.4 | 351.0 |
| 47.5° | 392.3 | 346.9 | 301.5 | 260.2 | 235.4 | 214.7 | 206.5 | 202.4 |
| 50° | 218.9 | 194.1 | 169.3 | 152.8 | 136.3 | 123.9 | 119.8 | 119.8 |
| 52.5° | 119.8 | 107.4 | 99.1 | 86.7 | 78.5 | 78.5 | 78.5 | 74.3 |
| 55° | 61.9 | 61.9 | 61.9 | 61.9 | 57.8 | 57.8 | 57.8 | 53.7 |
| 57.5° | 41.3 | 41.3 | 45.4 | 45.4 | 45.4 | 41.3 | 41.3 | 41.3 |
| 60° | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 |
| 62.5° | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| 65° | 16.5 | 20.6 | 20.6 | 20.6 | 20.6 | 16.5 | 16.5 | 16.5 |
| 67.5° | 12.4 | 16.5 | 16.5 | 16.5 | 12.4 | 12.4 | 12.4 | 12.4 |
| 70° | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 8.3 | 8.3 | 8.3 |
| 72.5° | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 75° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 77.5° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 80° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 82.5° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 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)