

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P520474

Luminaire Tested: **4WSLA-100-L935-UNV-U**

Issue Date: 5/3/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P520474  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-689-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/3/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4WSLA-100-L935-UNV-U  
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3500K, 90 CRI  
LEDS WITH NO UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

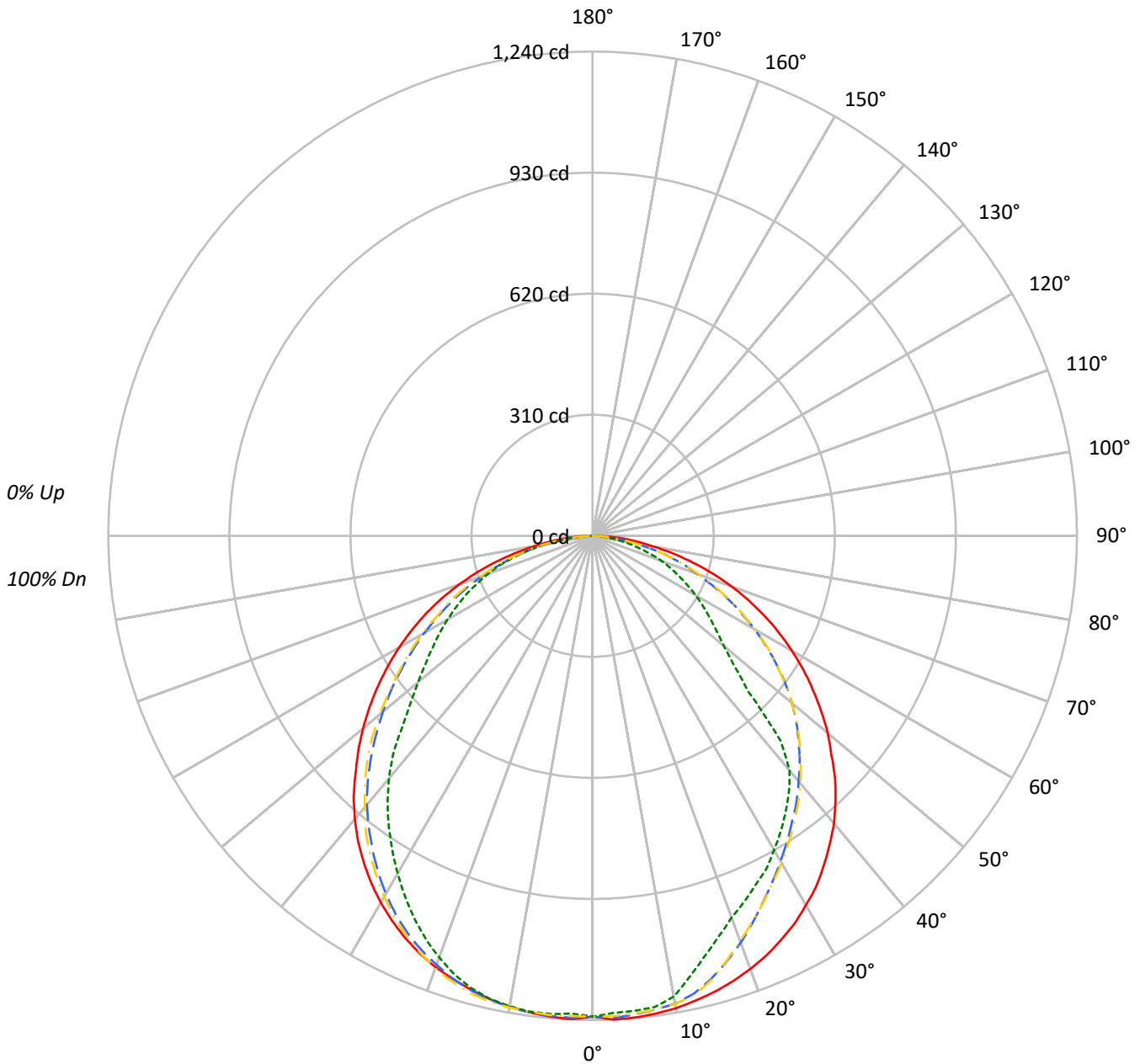
Lumens per Lamp: N/A  
Luminaire Lumens: 3303.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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CATALOG NUMBER: 4WSLA-100-L935-UNV-U

### Luminous Intensity Polar Plot





TEST NUMBER: P520474

CATALOG NUMBER: 4WSLA-100-L935-UNV-U

**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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 73  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 67  | 63  | 70  | 66  | 62  | 60  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 76  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 71  | 57  | 49  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 46  | 41  | 39  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 66  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 34  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 61  | 48  | 39  | 33  | 60  | 47  | 39  | 33  | 46  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 30  | 28  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 54  | 40  | 33  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 90°  | 180° | 270° |
|-----|------|------|------|------|
| 0°  | 6626 | 6626 | 6626 | 6626 |
| 5°  | 6691 | 6598 | 6680 | 6641 |
| 10° | 6714 | 6548 | 6696 | 6685 |
| 15° | 6735 | 6201 | 6706 | 6683 |
| 20° | 6761 | 5959 | 6734 | 6582 |
| 25° | 6782 | 5860 | 6747 | 6417 |
| 30° | 6789 | 5776 | 6740 | 6206 |
| 35° | 6779 | 5663 | 6709 | 5976 |
| 40° | 6757 | 5513 | 6650 | 5699 |
| 45° | 6682 | 4284 | 6530 | 5229 |
| 50° | 6581 | 3666 | 6421 | 4878 |
| 55° | 6464 | 3433 | 6297 | 4692 |
| 60° | 6342 | 3278 | 6151 | 4614 |
| 65° | 6192 | 3103 | 5980 | 4559 |
| 70° | 5945 | 2952 | 5696 | 4491 |
| 75° | 5535 | 2595 | 5273 | 4271 |
| 80° | 4912 | 2170 | 4606 | 3623 |
| 85° | 4650 | 1550 | 4082 | 2081 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 117.0  | 3.5       |
| 10°-20°   | 333.7  | 10.1      |
| 20°-30°   | 498.6  | 15.1      |
| 30°-40°   | 593.5  | 18.0      |
| 40°-50°   | 593.3  | 18.0      |
| 50°-60°   | 510.5  | 15.5      |
| 60°-70°   | 384.2  | 11.6      |
| 70°-80°   | 218.9  | 6.6       |
| 80°-90°   | 53.3   | 1.6       |
| 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°    | 949.3  | 28.7      |
| 0°-40°    | 1542.8 | 46.7      |
| 0°-60°    | 2646.5 | 80.1      |
| 0°-90°    | 3303.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3303.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 90°  | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1231 | 1231 | 1231 | 1231 | 1231 |      |
| 5°  | 1238 | 1221 | 1236 | 1229 | 1238 | 118  |
| 15° | 1209 | 1113 | 1204 | 1200 | 1209 | 342  |
| 25° | 1142 | 987  | 1136 | 1081 | 1142 | 527  |
| 35° | 1032 | 862  | 1021 | 910  | 1032 | 646  |
| 45° | 878  | 563  | 858  | 687  | 878  | 676  |
| 55° | 689  | 366  | 671  | 500  | 689  | 616  |
| 65° | 486  | 244  | 470  | 358  | 486  | 480  |
| 75° | 266  | 125  | 254  | 205  | 266  | 282  |
| 85° | 75   | 25   | 66   | 34   | 75   | 82   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 |
| 2.5°  | 1240.5 | 1229.3 | 1235.9 | 1233.9 | 1223.3 | 1227.3 | 1231.2 | 1227.3 | 1239.2 | 1228.6 | 1235.9 |
| 5°    | 1238.5 | 1226.6 | 1230.6 | 1226.6 | 1221.3 | 1222.7 | 1228.6 | 1224.6 | 1236.5 | 1225.3 | 1234.6 |
| 7.5°  | 1234.6 | 1220.0 | 1224.0 | 1222.0 | 1217.4 | 1218.0 | 1224.0 | 1220.7 | 1231.2 | 1220.7 | 1231.2 |
| 10°   | 1228.6 | 1213.4 | 1216.7 | 1208.1 | 1198.2 | 1205.5 | 1217.4 | 1214.1 | 1225.3 | 1213.4 | 1225.3 |
| 12.5° | 1219.4 | 1204.2 | 1200.9 | 1172.5 | 1154.6 | 1168.5 | 1204.8 | 1204.8 | 1215.4 | 1204.2 | 1216.7 |
| 15°   | 1208.8 | 1192.3 | 1174.4 | 1131.5 | 1113.0 | 1126.9 | 1177.1 | 1194.3 | 1203.5 | 1192.3 | 1204.8 |
| 17.5° | 1196.2 | 1177.1 | 1142.7 | 1092.5 | 1075.4 | 1089.2 | 1140.8 | 1178.4 | 1190.3 | 1178.4 | 1189.6 |
| 20°   | 1180.4 | 1157.9 | 1109.0 | 1051.6 | 1040.4 | 1052.9 | 1104.4 | 1159.3 | 1175.8 | 1161.2 | 1169.2 |
| 22.5° | 1163.2 | 1136.1 | 1071.4 | 1019.9 | 1014.6 | 1022.5 | 1069.4 | 1135.5 | 1157.3 | 1142.1 | 1147.4 |
| 25°   | 1142.1 | 1110.4 | 1033.7 | 990.8  | 986.8  | 991.5  | 1035.1 | 1107.7 | 1136.1 | 1120.3 | 1122.3 |
| 27.5° | 1119.6 | 1085.3 | 998.1  | 966.4  | 962.4  | 964.4  | 1000.7 | 1076.7 | 1111.7 | 1095.8 | 1092.5 |
| 30°   | 1092.5 | 1055.5 | 962.4  | 933.3  | 929.4  | 936.6  | 967.7  | 1045.0 | 1084.6 | 1068.8 | 1058.8 |
| 32.5° | 1065.5 | 1023.2 | 927.4  | 904.9  | 897.0  | 903.6  | 933.3  | 1011.9 | 1054.9 | 1038.4 | 1021.9 |
| 35°   | 1031.8 | 988.8  | 891.1  | 868.6  | 862.0  | 869.3  | 899.0  | 977.6  | 1021.2 | 1004.7 | 982.2  |
| 37.5° | 996.8  | 952.5  | 858.0  | 837.6  | 825.7  | 834.3  | 864.0  | 941.9  | 986.2  | 969.0  | 941.3  |
| 40°   | 961.7  | 914.2  | 821.1  | 799.9  | 784.7  | 797.3  | 827.7  | 904.3  | 946.6  | 930.7  | 899.0  |
| 42.5° | 920.8  | 875.9  | 784.7  | 755.0  | 712.1  | 752.4  | 788.7  | 866.6  | 905.6  | 890.4  | 852.1  |
| 45°   | 877.9  | 834.9  | 746.4  | 674.4  | 562.8  | 681.0  | 749.1  | 827.0  | 858.0  | 843.5  | 801.9  |
| 47.5° | 829.0  | 792.6  | 707.4  | 597.8  | 489.5  | 604.4  | 708.8  | 789.3  | 813.1  | 797.3  | 751.0  |
| 50°   | 786.0  | 750.4  | 666.5  | 533.1  | 437.9  | 540.3  | 665.8  | 747.1  | 766.9  | 752.4  | 700.8  |
| 52.5° | 737.2  | 706.1  | 622.2  | 475.6  | 399.6  | 482.9  | 620.9  | 703.5  | 719.3  | 702.2  | 650.6  |
| 55°   | 688.9  | 661.2  | 575.3  | 424.7  | 365.9  | 431.3  | 574.0  | 658.6  | 671.1  | 651.3  | 597.8  |
| 57.5° | 640.1  | 615.0  | 527.1  | 379.2  | 334.9  | 386.4  | 530.4  | 612.3  | 620.9  | 595.8  | 546.9  |
| 60°   | 589.2  | 568.1  | 478.2  | 338.9  | 304.5  | 344.8  | 476.9  | 566.1  | 571.4  | 544.3  | 497.4  |
| 62.5° | 538.3  | 519.2  | 429.4  | 301.9  | 273.5  | 305.8  | 432.7  | 517.2  | 520.5  | 494.7  | 446.5  |
| 65°   | 486.2  | 468.3  | 381.8  | 262.9  | 243.7  | 269.5  | 385.1  | 466.3  | 469.6  | 440.6  | 397.0  |
| 67.5° | 432.0  | 417.5  | 330.9  | 233.2  | 215.3  | 235.2  | 337.5  | 414.8  | 416.8  | 388.4  | 348.8  |
| 70°   | 377.8  | 365.3  | 286.0  | 200.8  | 187.6  | 201.5  | 290.6  | 358.0  | 362.0  | 331.6  | 299.9  |
| 72.5° | 322.3  | 312.4  | 242.4  | 167.1  | 155.2  | 167.1  | 245.1  | 305.8  | 308.5  | 283.4  | 252.3  |
| 75°   | 266.2  | 258.9  | 198.2  | 134.1  | 124.8  | 133.4  | 199.5  | 253.6  | 253.6  | 229.9  | 205.4  |
| 77.5° | 212.0  | 206.7  | 151.9  | 103.0  | 96.4   | 101.7  | 152.6  | 200.8  | 199.5  | 181.0  | 161.8  |
| 80°   | 158.5  | 154.6  | 109.0  | 74.6   | 70.0   | 72.7   | 109.0  | 148.6  | 148.6  | 135.4  | 112.3  |
| 82.5° | 113.6  | 109.0  | 72.0   | 48.9   | 46.2   | 47.6   | 70.7   | 103.7  | 105.7  | 95.8   | 76.0   |
| 85°   | 75.3   | 64.7   | 39.0   | 27.1   | 25.1   | 25.8   | 37.0   | 60.1   | 66.1   | 55.5   | 39.6   |
| 87.5° | 33.0   | 21.8   | 9.9    | 4.0    | 2.0    | 2.6    | 7.9    | 19.2   | 25.1   | 16.5   | 5.3    |
| 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):**

|       | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|--------|--------|--------|--------|--------|
| 0°    | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 | 1231.2 |
| 2.5°  | 1235.2 | 1224.6 | 1228.6 | 1231.2 | 1228.6 | 1240.5 |
| 5°    | 1233.9 | 1229.3 | 1228.6 | 1231.9 | 1226.6 | 1238.5 |
| 7.5°  | 1231.9 | 1229.3 | 1228.6 | 1229.9 | 1223.3 | 1234.6 |
| 10°   | 1227.3 | 1223.3 | 1224.6 | 1226.6 | 1218.0 | 1228.6 |
| 12.5° | 1218.7 | 1214.7 | 1215.4 | 1222.0 | 1210.1 | 1219.4 |
| 15°   | 1204.2 | 1199.5 | 1204.2 | 1211.4 | 1200.9 | 1208.8 |
| 17.5° | 1185.0 | 1177.7 | 1185.7 | 1196.9 | 1189.0 | 1196.2 |
| 20°   | 1160.6 | 1149.3 | 1157.9 | 1178.4 | 1171.1 | 1180.4 |
| 22.5° | 1130.8 | 1117.0 | 1125.6 | 1155.3 | 1153.3 | 1163.2 |
| 25°   | 1097.2 | 1080.6 | 1092.5 | 1128.9 | 1132.8 | 1142.1 |
| 27.5° | 1059.5 | 1041.0 | 1056.9 | 1099.8 | 1109.0 | 1119.6 |
| 30°   | 1018.6 | 998.7  | 1017.2 | 1067.4 | 1081.3 | 1092.5 |
| 32.5° | 976.3  | 954.5  | 975.6  | 1031.1 | 1050.9 | 1065.5 |
| 35°   | 932.0  | 909.6  | 933.3  | 993.5  | 1017.2 | 1031.8 |
| 37.5° | 884.5  | 862.7  | 888.4  | 953.8  | 982.2  | 996.8  |
| 40°   | 835.6  | 811.1  | 840.2  | 906.9  | 944.6  | 961.7  |
| 42.5° | 785.4  | 755.0  | 790.7  | 862.7  | 903.6  | 920.8  |
| 45°   | 729.2  | 687.0  | 735.2  | 815.8  | 858.7  | 877.9  |
| 47.5° | 673.1  | 630.8  | 679.7  | 765.6  | 811.8  | 829.0  |
| 50°   | 618.9  | 582.6  | 621.6  | 710.7  | 764.2  | 786.0  |
| 52.5° | 569.4  | 539.7  | 572.7  | 657.2  | 715.4  | 737.2  |
| 55°   | 523.1  | 500.0  | 527.1  | 604.4  | 663.8  | 688.9  |
| 57.5° | 479.6  | 465.0  | 483.5  | 554.2  | 616.3  | 640.1  |
| 60°   | 438.6  | 428.7  | 441.9  | 504.7  | 560.1  | 589.2  |
| 62.5° | 398.3  | 393.0  | 402.9  | 452.5  | 508.0  | 538.3  |
| 65°   | 359.3  | 358.0  | 363.3  | 406.9  | 453.1  | 486.2  |
| 67.5° | 320.4  | 319.7  | 323.0  | 358.7  | 399.6  | 432.0  |
| 70°   | 281.4  | 285.4  | 283.4  | 306.5  | 346.1  | 377.8  |
| 72.5° | 241.8  | 247.7  | 244.4  | 258.9  | 297.2  | 322.3  |
| 75°   | 197.5  | 205.4  | 198.8  | 215.3  | 239.1  | 266.2  |
| 77.5° | 151.9  | 160.5  | 152.6  | 167.1  | 192.9  | 212.0  |
| 80°   | 109.0  | 116.9  | 110.3  | 121.5  | 144.0  | 158.5  |
| 82.5° | 68.7   | 74.6   | 69.4   | 80.6   | 103.0  | 113.6  |
| 85°   | 30.4   | 33.7   | 35.0   | 43.6   | 63.4   | 75.3   |
| 87.5° | 1.3    | 0.7    | 1.3    | 8.6    | 22.5   | 33.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - · 135°-315°









(END OF REPORT)