

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735924

Luminaire Tested: S122RDR-S485D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-S485D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1963.0 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

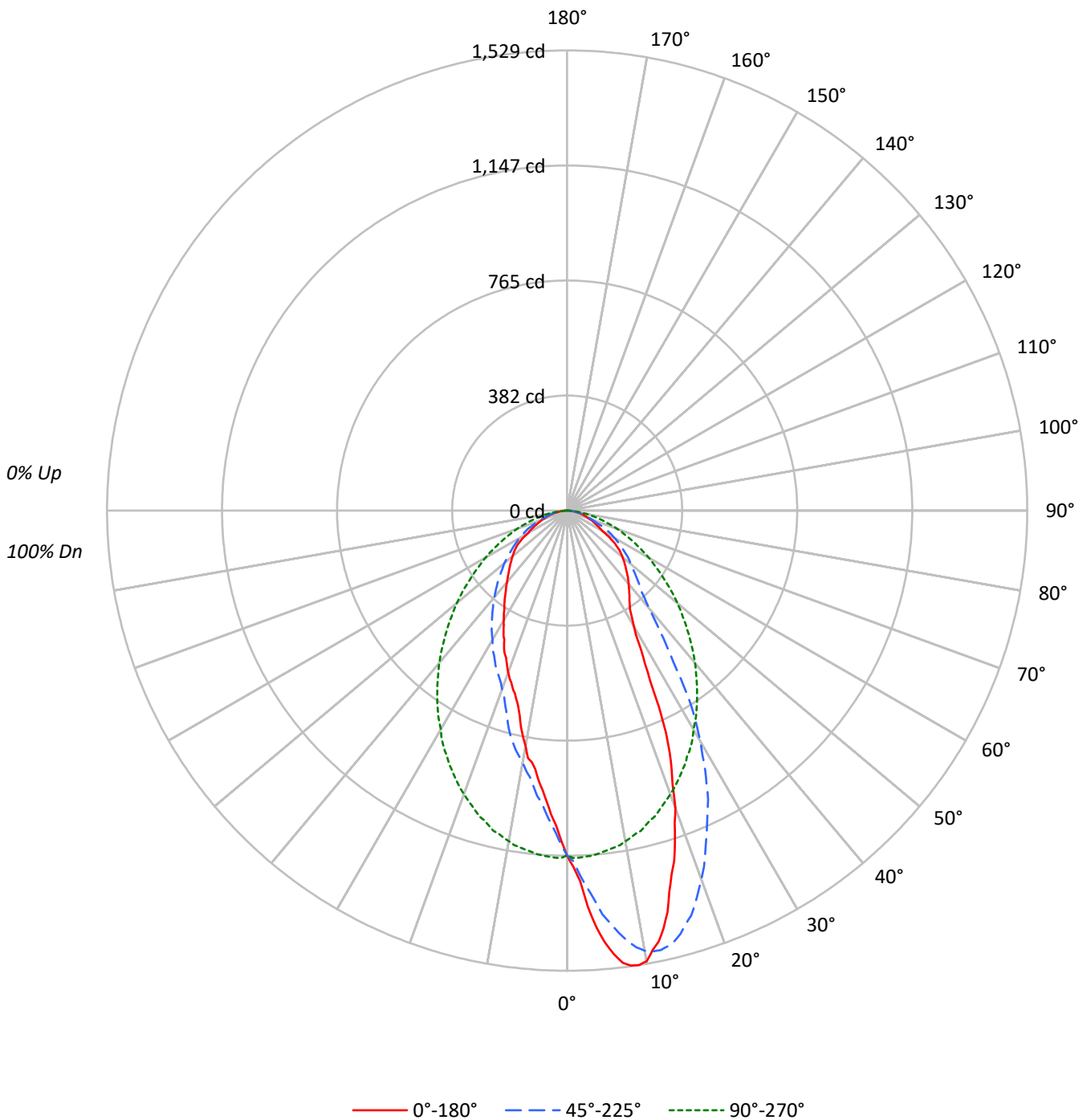
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735924

CATALOG NUMBER: S122RDR-S485D950-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735924

CATALOG NUMBER: S122RDR-S485D950-X4F0-XX-UDD-W-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|---|----|--|--|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | | | | | | | | | |
| RC | 80 | | | | | | | | | 70 | | | | | | | | | 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 | 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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 57 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|-------|-------|-------|-------|-------|
| 0° | 22022 | 22022 | 22022 | 22022 | 22022 |
| 5° | 27781 | 25986 | 22106 | 18781 | 17985 |
| 10° | 29675 | 28976 | 21770 | 16619 | 15530 |
| 15° | 26102 | 28967 | 21195 | 14903 | 12941 |
| 20° | 21519 | 26661 | 20518 | 12936 | 11710 |
| 25° | 15342 | 23406 | 19696 | 11981 | 10534 |
| 30° | 9817 | 19634 | 18639 | 10993 | 9357 |
| 35° | 8454 | 14468 | 17669 | 10200 | 8487 |
| 40° | 7969 | 10579 | 16578 | 9437 | 7796 |
| 45° | 7527 | 9063 | 15413 | 8745 | 7358 |
| 50° | 7168 | 8262 | 14318 | 8137 | 7087 |
| 55° | 6578 | 7641 | 13090 | 7480 | 6833 |
| 60° | 5190 | 6966 | 12025 | 7020 | 5774 |
| 65° | 4698 | 6236 | 10902 | 6517 | 5262 |
| 70° | 4339 | 5035 | 9914 | 5614 | 4839 |
| 75° | 4040 | 4552 | 8644 | 5013 | 4552 |
| 80° | 3741 | 4118 | 7317 | 4494 | 4118 |
| 85° | 3352 | 3639 | 5624 | 3948 | 3639 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 21572 cd/sqm



TEST NUMBER: P735924

CATALOG NUMBER: S122RDR-S485D950-X4F0-XX-UDD-W-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.1 | 5.7 |
| 10°-20° | 298.6 | 15.2 |
| 20°-30° | 374.5 | 19.1 |
| 30°-40° | 356.8 | 18.2 |
| 40°-50° | 314.8 | 16.0 |
| 50°-60° | 247.6 | 12.6 |
| 60°-70° | 158.0 | 8.0 |
| 70°-80° | 80.3 | 4.1 |
| 80°-90° | 21.3 | 1.1 |
| 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° | 784.2 | 39.9 |
| 0°-40° | 1141.0 | 58.1 |
| 0°-60° | 1703.4 | 86.8 |
| 0°-90° | 1963.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1963.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1146 | 1146 | 1146 | 1146 | 1146 | |
| 5° | 1440 | 1347 | 1146 | 973 | 932 | 140 |
| 15° | 1312 | 1456 | 1065 | 749 | 650 | 363 |
| 25° | 723 | 1104 | 929 | 565 | 497 | 326 |
| 35° | 360 | 617 | 753 | 435 | 362 | 229 |
| 45° | 277 | 333 | 567 | 322 | 271 | 215 |
| 55° | 196 | 228 | 391 | 223 | 204 | 172 |
| 65° | 103 | 137 | 240 | 143 | 116 | 103 |
| 75° | 54 | 61 | 116 | 68 | 61 | 58 |
| 85° | 15 | 16 | 26 | 18 | 16 | 17 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P735924

CATALOG NUMBER: S122RDR-S485D950-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1145.7 | 1145.7 | 1145.7 | 1145.7 | 1145.7 | 1145.7 | 1145.7 | 1145.7 | 1145.7 |
| 1° | 1184.2 | 1189.8 | 1164.3 | 1167.0 | 1154.6 | 1132.6 | 1111.2 | 1113.3 | 1098.1 |
| 2° | 1231.8 | 1246.2 | 1211.1 | 1189.8 | 1153.9 | 1115.4 | 1072.6 | 1067.1 | 1048.5 |
| 3° | 1317.9 | 1311.0 | 1253.1 | 1209.7 | 1151.2 | 1093.3 | 1039.6 | 1027.2 | 1011.3 |
| 4° | 1387.5 | 1366.8 | 1295.8 | 1235.2 | 1149.8 | 1067.8 | 1007.2 | 985.8 | 970.0 |
| 5° | 1439.8 | 1413.7 | 1346.8 | 1254.5 | 1145.7 | 1053.4 | 973.4 | 949.3 | 932.1 |
| 6° | 1481.9 | 1461.9 | 1379.9 | 1272.4 | 1140.2 | 1032.0 | 953.5 | 921.1 | 903.2 |
| 7° | 1514.2 | 1497.7 | 1413.7 | 1296.5 | 1135.3 | 1010.6 | 921.8 | 888.0 | 866.7 |
| 8° | 1526.6 | 1519.1 | 1444.7 | 1313.8 | 1129.8 | 995.5 | 893.5 | 863.2 | 843.9 |
| 9° | 1528.7 | 1529.4 | 1469.5 | 1330.3 | 1125.0 | 967.9 | 873.5 | 842.5 | 832.2 |
| 10° | 1520.4 | 1526.6 | 1484.6 | 1348.9 | 1115.4 | 954.1 | 851.5 | 821.9 | 795.7 |
| 11° | 1488.1 | 1515.6 | 1492.2 | 1361.3 | 1107.1 | 932.1 | 832.2 | 793.6 | 767.5 |
| 12° | 1463.9 | 1490.1 | 1492.9 | 1377.1 | 1097.4 | 921.8 | 815.7 | 764.0 | 736.5 |
| 13° | 1424.0 | 1451.5 | 1486.0 | 1381.3 | 1091.9 | 896.3 | 795.0 | 733.7 | 699.9 |
| 14° | 1376.5 | 1420.5 | 1475.0 | 1390.2 | 1078.2 | 874.2 | 774.3 | 691.0 | 671.0 |
| 15° | 1311.7 | 1374.4 | 1455.7 | 1393.7 | 1065.1 | 859.1 | 748.9 | 669.6 | 650.3 |
| 16° | 1258.0 | 1328.9 | 1429.5 | 1393.7 | 1056.8 | 838.4 | 721.3 | 651.0 | 631.7 |
| 17° | 1217.3 | 1275.2 | 1408.1 | 1394.4 | 1043.0 | 823.9 | 693.7 | 633.8 | 618.6 |
| 18° | 1160.1 | 1224.9 | 1374.4 | 1391.6 | 1028.6 | 806.7 | 670.3 | 619.3 | 600.7 |
| 19° | 1096.8 | 1173.9 | 1338.6 | 1386.8 | 1016.1 | 788.8 | 645.5 | 604.2 | 588.3 |
| 20° | 1052.0 | 1122.9 | 1303.4 | 1379.2 | 1003.1 | 777.1 | 632.4 | 587.0 | 572.5 |
| 21° | 976.9 | 1063.7 | 1268.3 | 1368.9 | 989.3 | 757.1 | 614.5 | 571.8 | 556.0 |
| 22.5° | 900.4 | 980.3 | 1203.5 | 1351.7 | 966.5 | 732.3 | 594.5 | 553.2 | 529.8 |
| 23° | 870.8 | 960.3 | 1183.6 | 1346.8 | 959.0 | 726.1 | 588.3 | 544.9 | 524.3 |
| 24° | 807.4 | 900.4 | 1142.2 | 1331.7 | 942.4 | 705.4 | 576.6 | 528.4 | 513.9 |
| 25° | 723.4 | 849.4 | 1103.6 | 1315.8 | 928.7 | 690.3 | 564.9 | 515.3 | 496.7 |
| 26° | 628.3 | 779.9 | 1068.5 | 1296.5 | 909.4 | 669.6 | 549.1 | 502.9 | 476.7 |
| 27° | 569.7 | 719.9 | 1021.0 | 1275.9 | 895.6 | 654.5 | 536.0 | 484.3 | 465.7 |
| 28° | 522.9 | 625.5 | 978.3 | 1255.9 | 879.1 | 635.9 | 527.0 | 471.2 | 449.2 |
| 29° | 471.9 | 573.9 | 928.0 | 1229.0 | 861.1 | 614.5 | 512.6 | 458.1 | 434.7 |
| 30° | 442.3 | 518.8 | 884.6 | 1209.0 | 839.8 | 600.0 | 495.3 | 445.0 | 421.6 |
| 32.5° | 388.5 | 427.8 | 766.8 | 1151.9 | 799.1 | 558.7 | 467.1 | 409.2 | 389.2 |
| 35° | 360.3 | 381.0 | 616.6 | 1085.0 | 753.0 | 524.3 | 434.7 | 379.6 | 361.7 |
| 37.5° | 338.9 | 351.3 | 509.1 | 1013.4 | 706.1 | 494.0 | 405.1 | 352.0 | 334.8 |
| 40° | 317.6 | 327.2 | 421.6 | 944.5 | 660.7 | 464.3 | 376.1 | 323.8 | 310.7 |
| 42.5° | 298.3 | 305.9 | 365.8 | 876.3 | 613.8 | 434.0 | 347.9 | 301.7 | 290.0 |
| 45° | 276.9 | 283.8 | 333.4 | 793.6 | 567.0 | 403.0 | 321.7 | 277.6 | 270.7 |
| 47.5° | 259.0 | 263.9 | 302.4 | 719.9 | 520.8 | 373.4 | 294.9 | 258.3 | 253.5 |
| 50° | 239.7 | 245.9 | 276.3 | 637.9 | 478.8 | 344.5 | 272.1 | 241.1 | 237.0 |
| 52.5° | 221.1 | 223.9 | 254.2 | 556.0 | 434.7 | 316.2 | 248.0 | 223.9 | 221.1 |
| 55° | 196.3 | 207.4 | 228.0 | 471.9 | 390.6 | 290.0 | 223.2 | 206.0 | 203.9 |
| 57.5° | 168.1 | 182.6 | 204.6 | 396.1 | 349.3 | 261.1 | 203.2 | 189.5 | 180.5 |
| 60° | 135.0 | 152.3 | 181.2 | 329.3 | 312.8 | 234.9 | 182.6 | 161.2 | 150.2 |
| 62.5° | 118.5 | 124.0 | 159.8 | 275.6 | 275.6 | 210.1 | 161.9 | 138.5 | 133.6 |
| 65° | 103.3 | 107.5 | 137.1 | 228.0 | 239.7 | 182.6 | 143.3 | 119.9 | 115.7 |



TEST NUMBER: P735924

CATALOG NUMBER: S122RDR-S485D950-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|------|-------|-------|-------|-------|--------|-------|--------|------|
| 67.5° | 90.2 | 93.7 | 104.7 | 190.1 | 206.7 | 159.1 | 118.5 | 104.7 | 99.9 |
| 70° | 77.2 | 79.9 | 89.6 | 155.0 | 176.4 | 135.7 | 99.9 | 89.6 | 86.1 |
| 72.5° | 65.4 | 68.2 | 73.7 | 116.4 | 144.7 | 113.0 | 84.0 | 76.5 | 73.7 |
| 75° | 54.4 | 55.8 | 61.3 | 86.8 | 116.4 | 90.2 | 67.5 | 62.7 | 61.3 |
| 77.5° | 44.1 | 44.8 | 48.2 | 62.0 | 90.2 | 68.9 | 54.4 | 50.3 | 49.6 |
| 80° | 33.8 | 34.4 | 37.2 | 44.8 | 66.1 | 49.6 | 40.6 | 38.6 | 37.2 |
| 82.5° | 24.1 | 24.8 | 26.2 | 30.3 | 44.8 | 33.8 | 28.9 | 28.2 | 26.2 |
| 85° | 15.2 | 15.2 | 16.5 | 18.6 | 25.5 | 19.3 | 17.9 | 17.2 | 16.5 |
| 87.5° | 6.9 | 6.9 | 7.6 | 7.6 | 11.7 | 8.3 | 8.3 | 7.6 | 6.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)