

# 3D Radiation Pattern Measurement Results

## 1. Informations

|                  |  |                 |  |
|------------------|--|-----------------|--|
| Date             |  | Test Engineer   |  |
| Customer         |  | Antenna Version |  |
| Model / Revision |  |                 |  |
| Test Condition   |  |                 |  |

|               |               |               |
|---------------|---------------|---------------|
|               |               |               |
| Photo / Graph | Photo / Graph | Photo / Graph |

## 2. Test Results

| No | Frequency | Peak Value |          | Minimum Value |           | Avg. Gain | Efficiency |
|----|-----------|------------|----------|---------------|-----------|-----------|------------|
|    | [MHz]     | Value[dBi] | Degree   | Value[dBi]    | Degree    | [dBi]     | [%]        |
| 1  | 2400.000  | 5.238506   | 90 / 300 | -26.936387    | 60 / 120  | 0.206081  | 104.859582 |
| 2  | 2408.000  | 5.135662   | 90 / 300 | -25.026437    | 180 / 270 | 0.063806  | 101.480027 |
| 3  | 2416.000  | 5.309491   | 90 / 300 | -23.966895    | 180 / 270 | 0.225239  | 105.323171 |
| 4  | 2424.000  | 5.319186   | 90 / 300 | -20.420937    | 180 / 270 | 0.186861  | 104.396540 |
| 5  | 2432.000  | 5.397759   | 90 / 300 | -18.730382    | 180 / 270 | 0.261717  | 106.211538 |
| 6  | 2440.000  | 5.469690   | 90 / 300 | -16.355327    | 180 / 270 | 0.301774  | 107.195711 |
| 7  | 2448.000  | 5.151177   | 90 / 300 | -15.719991    | 60 / 90   | 0.127415  | 102.977292 |
| 8  | 2456.000  | 5.295668   | 90 / 300 | -18.700336    | 60 / 90   | 0.309382  | 107.383649 |
| 9  | 2464.000  | 5.055672   | 90 / 330 | -13.607167    | 60 / 90   | 0.225551  | 105.330725 |
| 10 | 2472.000  | 4.856009   | 90 / 300 | -15.784211    | 60 / 90   | 0.075097  | 101.744207 |
| 11 | 2480.000  | 4.916589   | 90 / 300 | -16.826683    | 60 / 90   | 0.160664  | 103.768697 |
| 12 |           |            |          |               |           |           |            |
| 13 |           |            |          |               |           |           |            |
| 14 |           |            |          |               |           |           |            |
| 15 |           |            |          |               |           |           |            |
| 16 |           |            |          |               |           |           |            |
| 17 |           |            |          |               |           |           |            |
| 18 |           |            |          |               |           |           |            |
| 19 |           |            |          |               |           |           |            |
| 20 |           |            |          |               |           |           |            |
| 21 |           |            |          |               |           |           |            |
| 22 |           |            |          |               |           |           |            |
| 23 |           |            |          |               |           |           |            |
| 24 |           |            |          |               |           |           |            |
| 25 |           |            |          |               |           |           |            |
| 26 |           |            |          |               |           |           |            |
| 27 |           |            |          |               |           |           |            |
| 28 |           |            |          |               |           |           |            |
| 29 |           |            |          |               |           |           |            |
| 30 |           |            |          |               |           |           |            |

| - Data -  |        |          |          |          |        |              |          |            |  |
|-----------|--------|----------|----------|----------|--------|--------------|----------|------------|--|
| Summary   |        | Rowdata  |          | H Plane  |        | E1 Plane     |          | E2 Plane   |  |
| Frequency |        | Max Gain |          | Min Gain |        | Average Gain |          | Efficiency |  |
| [MHz]     | ϕ[Deg] | ϕ[Deg]   | Gain[dB] | ϕ[Deg]   | ϕ[Deg] | Gain[dB]     | Gain[dB] | [%]        |  |
| 2,400,000 | 90.0   | 300.0    | 5.239    | 60.0     | 120.0  | -26.936      | 0.206    | 104.860    |  |
| 2,408,000 | 90.0   | 300.0    | 5.136    | 180.0    | 270.0  | -25.026      | 0.064    | 101.480    |  |
| 2,416,000 | 90.0   | 300.0    | 5.309    | 180.0    | 270.0  | -23.967      | 0.225    | 105.323    |  |
| 2,424,000 | 90.0   | 300.0    | 5.319    | 180.0    | 270.0  | -20.421      | 0.187    | 104.397    |  |
| 2,432,000 | 90.0   | 300.0    | 5.398    | 180.0    | 270.0  | -18.730      | 0.262    | 106.212    |  |
| 2,440,000 | 90.0   | 300.0    | 5.470    | 180.0    | 270.0  | -16.365      | 0.302    | 107.196    |  |
| 2,448,000 | 90.0   | 300.0    | 5.151    | 60.0     | 90.0   | -15.720      | 0.127    | 102.977    |  |
| 2,456,000 | 90.0   | 300.0    | 5.296    | 60.0     | 90.0   | -18.700      | 0.309    | 107.384    |  |
| 2,464,000 | 90.0   | 330.0    | 5.056    | 60.0     | 90.0   | -13.607      | 0.226    | 105.331    |  |
| 2,472,000 | 90.0   | 300.0    | 4.856    | 60.0     | 90.0   | -15.784      | 0.075    | 101.744    |  |

## - Polarization -

Horizontal + Vertical

FILE NAME

TEST\_20160309

## - Frequency -

2400,000  
2408,000  
2416,000  
2424,000  
2432,000  
2440,000  
2448,000  
2456,000

## - Theta -

0.0  
30.0  
60.0  
90.0  
120.0  
150.0  
180.0

## - Phi -

0.0  
30.0  
60.0  
90.0  
120.0  
150.0  
180.0  
210.0

## - Graph -

Line Graph

## - Scale -

☒ Auto ☐ Manual Min -26.9364 Max 5.46969 Setup

Open

Exit

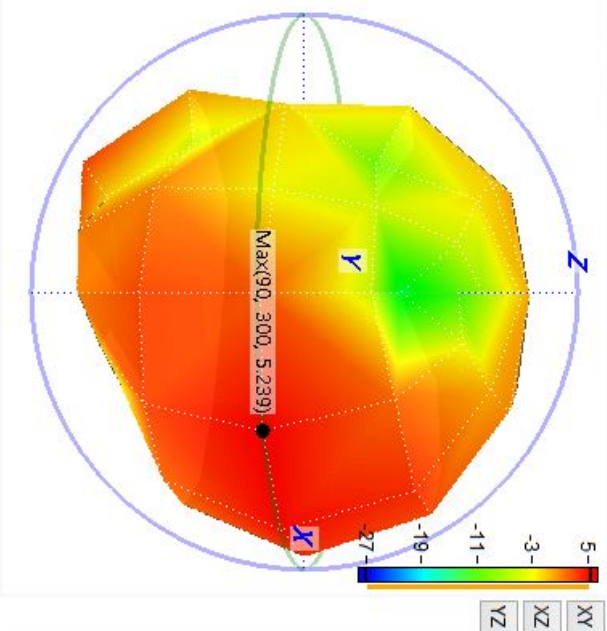
Report

ECC

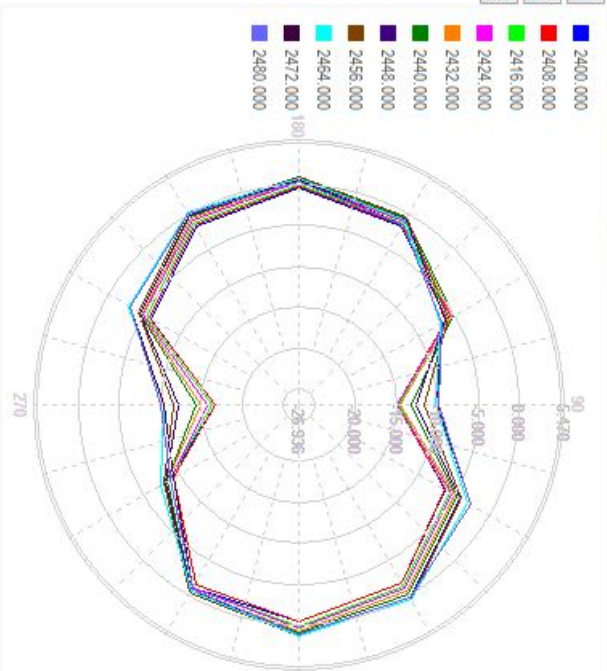
Multiple Cut

H/E1/E2 Plane

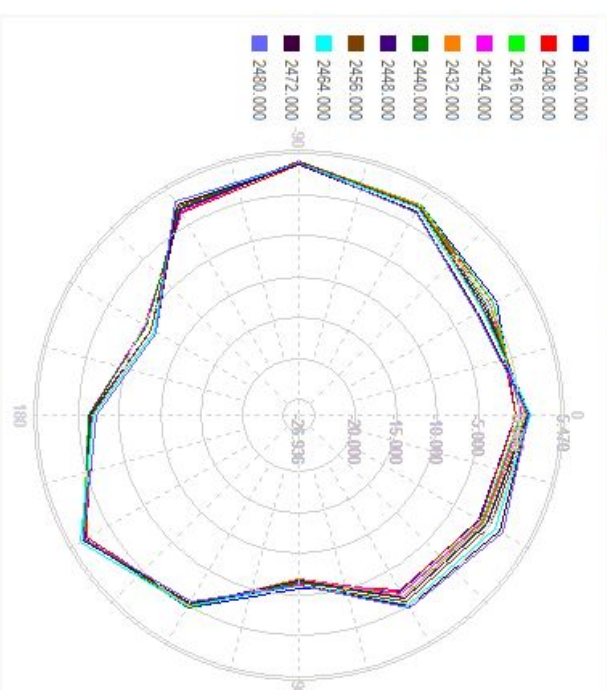
## - 3D Graph -



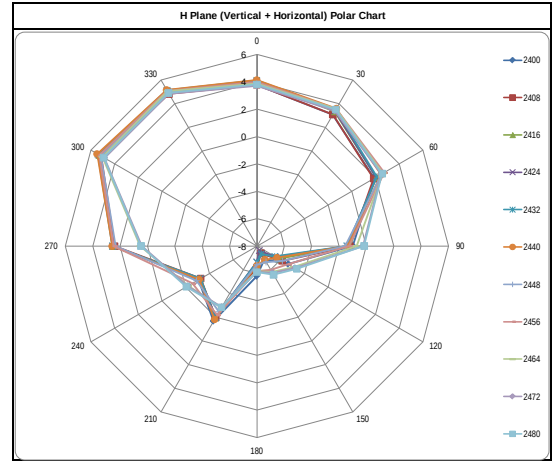
## - Theta PolarLine Graph -



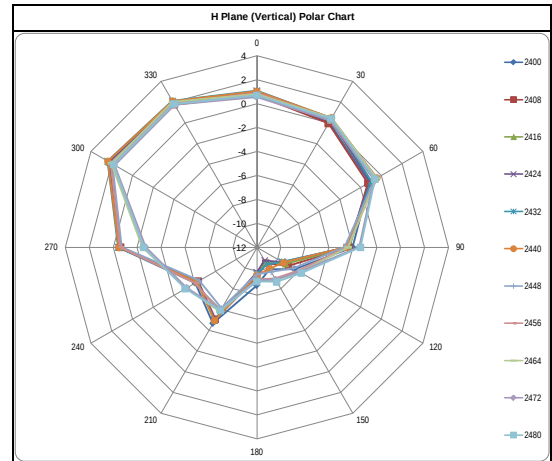
## - Phi PolarLine Graph -



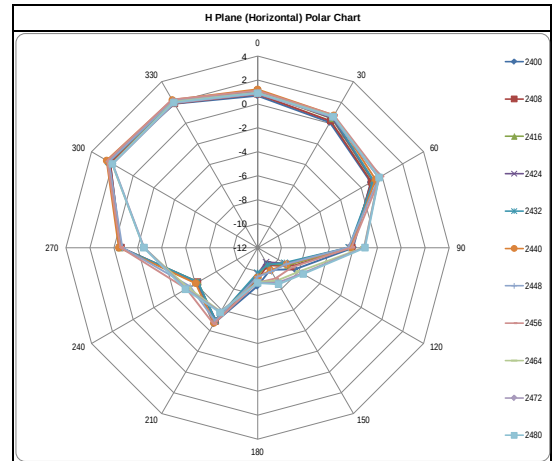
| H Plane (Vertical + Horizontal) |                    |                |              |            |                |              |            |                   |
|---------------------------------|--------------------|----------------|--------------|------------|----------------|--------------|------------|-------------------|
| No                              | Frequency<br>(MHz) | Maximum Value  |              |            | Minimum Value  |              |            | Avg. Gain<br>(dB) |
|                                 |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) |                   |
| 1                               | 2400               | 90             | 300          | 5.24       | 90             | 150          | -6.87      | 1.49              |
| 2                               | 2408               | 90             | 300          | 5.14       | 90             | 150          | -7.39      | 1.40              |
| 3                               | 2416               | 90             | 300          | 5.31       | 90             | 150          | -7.48      | 1.56              |
| 4                               | 2424               | 90             | 300          | 5.32       | 90             | 150          | -7.63      | 1.56              |
| 5                               | 2432               | 90             | 300          | 5.40       | 90             | 150          | -7.33      | 1.62              |
| 6                               | 2440               | 90             | 300          | 5.47       | 90             | 150          | -6.85      | 1.72              |
| 7                               | 2448               | 90             | 300          | 5.15       | 90             | 150          | -6.65      | 1.53              |
| 8                               | 2456               | 90             | 300          | 5.30       | 90             | 180          | -6.17      | 1.70              |
| 9                               | 2464               | 90             | 330          | 5.06       | 90             | 180          | -6.17      | 1.48              |
| 10                              | 2472               | 90             | 300          | 4.86       | 90             | 180          | -6.13      | 1.37              |
| 11                              | 2480               | 90             | 300          | 4.92       | 90             | 180          | -6.09      | 1.45              |
| 12                              |                    |                |              |            |                |              |            |                   |
| 13                              |                    |                |              |            |                |              |            |                   |
| 14                              |                    |                |              |            |                |              |            |                   |
| 15                              |                    |                |              |            |                |              |            |                   |
| 16                              |                    |                |              |            |                |              |            |                   |
| 17                              |                    |                |              |            |                |              |            |                   |
| 18                              |                    |                |              |            |                |              |            |                   |
| 19                              |                    |                |              |            |                |              |            |                   |
| 20                              |                    |                |              |            |                |              |            |                   |
| 21                              |                    |                |              |            |                |              |            |                   |
| 22                              |                    |                |              |            |                |              |            |                   |
| 23                              |                    |                |              |            |                |              |            |                   |
| 24                              |                    |                |              |            |                |              |            |                   |
| 25                              |                    |                |              |            |                |              |            |                   |
| 26                              |                    |                |              |            |                |              |            |                   |
| 27                              |                    |                |              |            |                |              |            |                   |
| 28                              |                    |                |              |            |                |              |            |                   |
| 29                              |                    |                |              |            |                |              |            |                   |
| 30                              |                    |                |              |            |                |              |            |                   |



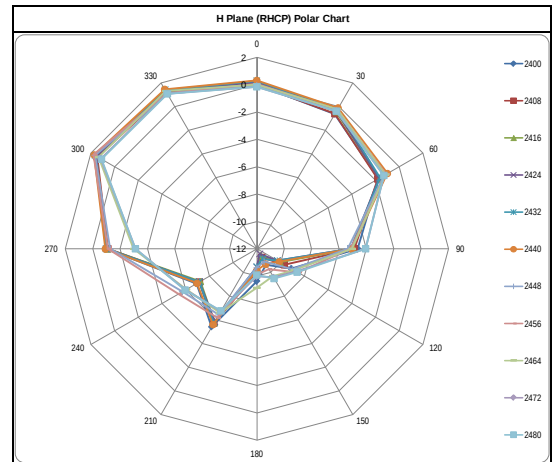
| H Plane (Vertical) |                    |                |              |            |                |              |            |                   |
|--------------------|--------------------|----------------|--------------|------------|----------------|--------------|------------|-------------------|
| No                 | Frequency<br>(MHz) | Maximum Value  |              |            | Minimum Value  |              |            | Avg. Gain<br>(dB) |
|                    |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) |                   |
| 1                  | 2400               | 90             | 300          | 2.25       | 90             | 150          | -9.89      | -1.50             |
| 2                  | 2408               | 90             | 300          | 2.04       | 90             | 150          | -10.47     | -1.70             |
| 3                  | 2416               | 90             | 300          | 2.27       | 90             | 150          | -10.52     | -1.48             |
| 4                  | 2424               | 90             | 300          | 2.28       | 90             | 150          | -10.70     | -1.49             |
| 5                  | 2432               | 90             | 300          | 2.39       | 90             | 150          | -10.35     | -1.40             |
| 6                  | 2440               | 90             | 300          | 2.37       | 90             | 150          | -9.91      | -1.37             |
| 7                  | 2448               | 90             | 300          | 1.93       | 90             | 180          | -9.73      | -1.64             |
| 8                  | 2456               | 90             | 300          | 2.08       | 90             | 180          | -9.31      | -1.47             |
| 9                  | 2464               | 90             | 330          | 2.05       | 90             | 180          | -9.23      | -1.59             |
| 10                 | 2472               | 90             | 330          | 1.73       | 90             | 180          | -9.23      | -1.78             |
| 11                 | 2480               | 90             | 330          | 1.83       | 90             | 180          | -9.15      | -1.66             |
| 12                 |                    |                |              |            |                |              |            |                   |
| 13                 |                    |                |              |            |                |              |            |                   |
| 14                 |                    |                |              |            |                |              |            |                   |
| 15                 |                    |                |              |            |                |              |            |                   |
| 16                 |                    |                |              |            |                |              |            |                   |
| 17                 |                    |                |              |            |                |              |            |                   |
| 18                 |                    |                |              |            |                |              |            |                   |
| 19                 |                    |                |              |            |                |              |            |                   |
| 20                 |                    |                |              |            |                |              |            |                   |
| 21                 |                    |                |              |            |                |              |            |                   |
| 22                 |                    |                |              |            |                |              |            |                   |
| 23                 |                    |                |              |            |                |              |            |                   |
| 24                 |                    |                |              |            |                |              |            |                   |
| 25                 |                    |                |              |            |                |              |            |                   |
| 26                 |                    |                |              |            |                |              |            |                   |
| 27                 |                    |                |              |            |                |              |            |                   |
| 28                 |                    |                |              |            |                |              |            |                   |
| 29                 |                    |                |              |            |                |              |            |                   |
| 30                 |                    |                |              |            |                |              |            |                   |



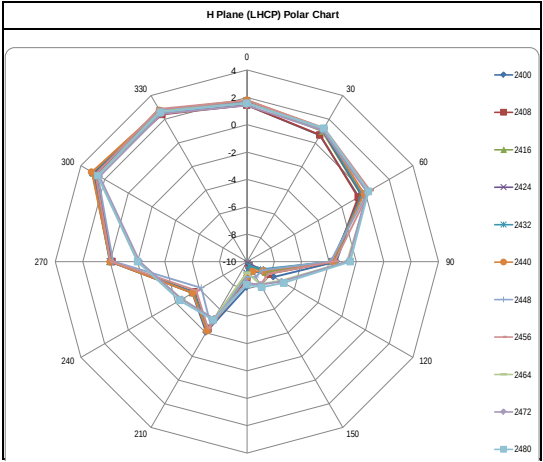
| H Plane (Horizontal) |                    |                |              |            |                |              |            |                   |
|----------------------|--------------------|----------------|--------------|------------|----------------|--------------|------------|-------------------|
| No                   | Frequency<br>(MHz) | Maximum Value  |              |            | Minimum Value  |              |            | Avg. Gain<br>(dB) |
|                      |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) |                   |
| 1                    | 2400               | 90             | 300          | 2.21       | 90             | 150          | -9.87      | -1.54             |
| 2                    | 2408               | 90             | 300          | 2.21       | 90             | 150          | -10.32     | -1.53             |
| 3                    | 2416               | 90             | 300          | 2.33       | 90             | 150          | -10.46     | -1.42             |
| 4                    | 2424               | 90             | 300          | 2.34       | 90             | 150          | -10.58     | -1.41             |
| 5                    | 2432               | 90             | 300          | 2.36       | 90             | 150          | -10.32     | -1.38             |
| 6                    | 2440               | 90             | 300          | 2.55       | 90             | 150          | -9.81      | -1.22             |
| 7                    | 2448               | 90             | 300          | 2.35       | 90             | 150          | -9.71      | -1.33             |
| 8                    | 2456               | 90             | 300          | 2.49       | 90             | 180          | -9.06      | -1.15             |
| 9                    | 2464               | 90             | 330          | 2.04       | 90             | 180          | -9.13      | -1.47             |
| 10                   | 2472               | 90             | 300          | 1.96       | 90             | 180          | -9.05      | -1.51             |
| 11                   | 2480               | 90             | 300          | 1.99       | 90             | 180          | -9.05      | -1.47             |
| 12                   |                    |                |              |            |                |              |            |                   |
| 13                   |                    |                |              |            |                |              |            |                   |
| 14                   |                    |                |              |            |                |              |            |                   |
| 15                   |                    |                |              |            |                |              |            |                   |
| 16                   |                    |                |              |            |                |              |            |                   |
| 17                   |                    |                |              |            |                |              |            |                   |
| 18                   |                    |                |              |            |                |              |            |                   |
| 19                   |                    |                |              |            |                |              |            |                   |
| 20                   |                    |                |              |            |                |              |            |                   |
| 21                   |                    |                |              |            |                |              |            |                   |
| 22                   |                    |                |              |            |                |              |            |                   |
| 23                   |                    |                |              |            |                |              |            |                   |
| 24                   |                    |                |              |            |                |              |            |                   |
| 25                   |                    |                |              |            |                |              |            |                   |
| 26                   |                    |                |              |            |                |              |            |                   |
| 27                   |                    |                |              |            |                |              |            |                   |
| 28                   |                    |                |              |            |                |              |            |                   |
| 29                   |                    |                |              |            |                |              |            |                   |
| 30                   |                    |                |              |            |                |              |            |                   |



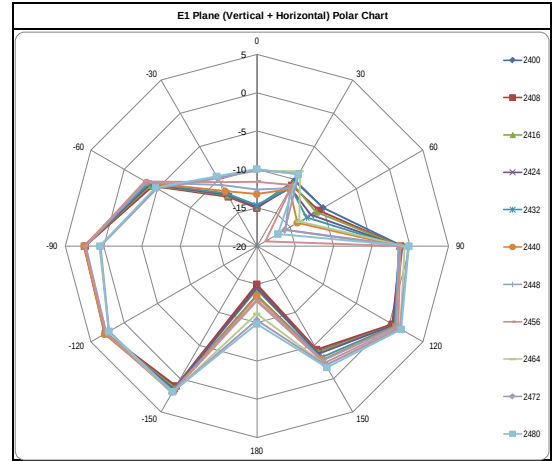
| H Plane (RHCP) |                    |                |              |            |                |              |            |                   |
|----------------|--------------------|----------------|--------------|------------|----------------|--------------|------------|-------------------|
| No             | Frequency<br>(MHz) | Maximum Value  |              |            | Minimum Value  |              |            | Avg. Gain<br>(dB) |
|                |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dBi) |                   |
| 1              | 2400               | 90             | 300          | 1.54       | 90             | 150          | -10.66     | -2.20             |
| 2              | 2408               | 90             | 300          | 1.45       | 90             | 150          | -11.27     | -2.30             |
| 3              | 2416               | 90             | 300          | 1.55       | 90             | 150          | -11.46     | -2.22             |
| 4              | 2424               | 90             | 300          | 1.54       | 90             | 150          | -11.57     | -2.21             |
| 5              | 2432               | 90             | 300          | 1.64       | 90             | 150          | -11.15     | -2.12             |
| 6              | 2440               | 90             | 300          | 1.72       | 90             | 150          | -10.70     | -1.99             |
| 7              | 2448               | 90             | 300          | 1.66       | 90             | 150          | -10.91     | -2.20             |
| 8              | 2456               | 90             | 300          | 1.77       | 90             | 150          | -10.27     | -2.06             |
| 9              | 2464               | 90             | 300          | 1.36       | 90             | 150          | -9.69      | -2.29             |
| 10             | 2472               | 90             | 300          | 1.17       | 90             | 180          | -9.99      | -2.39             |
| 11             | 2480               | 90             | 300          | 1.10       | 90             | 180          | -10.07     | -2.41             |
| 12             |                    |                |              |            |                |              |            |                   |
| 13             |                    |                |              |            |                |              |            |                   |
| 14             |                    |                |              |            |                |              |            |                   |
| 15             |                    |                |              |            |                |              |            |                   |
| 16             |                    |                |              |            |                |              |            |                   |
| 17             |                    |                |              |            |                |              |            |                   |
| 18             |                    |                |              |            |                |              |            |                   |
| 19             |                    |                |              |            |                |              |            |                   |
| 20             |                    |                |              |            |                |              |            |                   |
| 21             |                    |                |              |            |                |              |            |                   |
| 22             |                    |                |              |            |                |              |            |                   |
| 23             |                    |                |              |            |                |              |            |                   |
| 24             |                    |                |              |            |                |              |            |                   |
| 25             |                    |                |              |            |                |              |            |                   |
| 26             |                    |                |              |            |                |              |            |                   |
| 27             |                    |                |              |            |                |              |            |                   |
| 28             |                    |                |              |            |                |              |            |                   |
| 29             |                    |                |              |            |                |              |            |                   |
| 30             |                    |                |              |            |                |              |            |                   |



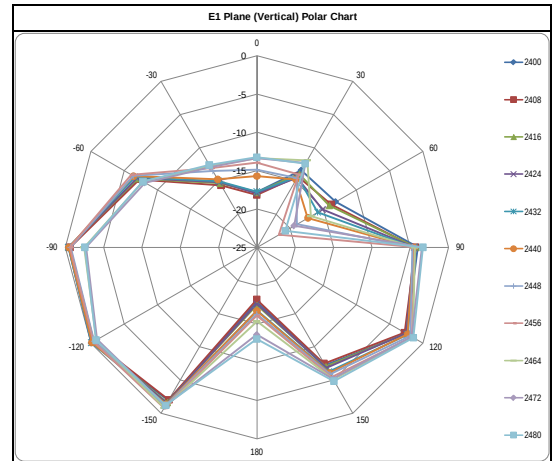
| H Plane (LHCP) |           |               |         |         |               |         |         |            |                |
|----------------|-----------|---------------|---------|---------|---------------|---------|---------|------------|----------------|
| No             | Frequency | Maximum Value |         |         | Minimum Value |         |         | Avg. Gain  |                |
|                |           | [MHz]         | Θ [Deg] | Φ [Deg] | Value[dBi]    | Θ [Deg] | Φ [Deg] | Value[dBi] | Efficiency [%] |
| 1              | 2400      | 90            | 300     | 2.82    | 90            | 150     | -9.22   | -0.93      | 80.68          |
| 2              | 2408      | 90            | 300     | 2.71    | 90            | 150     | -9.67   | -1.02      | 79.04          |
| 3              | 2416      | 90            | 300     | 2.94    | 90            | 150     | -9.70   | -0.80      | 83.12          |
| 4              | 2424      | 90            | 300     | 2.96    | 90            | 150     | -9.88   | -0.80      | 83.21          |
| 5              | 2432      | 90            | 300     | 3.02    | 90            | 150     | -9.65   | -0.76      | 83.89          |
| 6              | 2440      | 90            | 300     | 3.09    | 90            | 150     | -9.16   | -0.70      | 85.21          |
| 7              | 2448      | 90            | 330     | 2.76    | 90            | 180     | -8.87   | -0.87      | 81.93          |
| 8              | 2456      | 90            | 330     | 2.88    | 90            | 180     | -8.43   | -0.67      | 85.71          |
| 9              | 2464      | 90            | 330     | 2.67    | 90            | 180     | -9.21   | -0.88      | 81.60          |
| 10             | 2472      | 90            | 330     | 2.46    | 90            | 180     | -8.43   | -1.00      | 79.38          |
| 11             | 2480      | 90            | 330     | 2.60    | 90            | 180     | -8.30   | -0.85      | 82.15          |
| 12             |           |               |         |         |               |         |         |            |                |
| 13             |           |               |         |         |               |         |         |            |                |
| 14             |           |               |         |         |               |         |         |            |                |
| 15             |           |               |         |         |               |         |         |            |                |
| 16             |           |               |         |         |               |         |         |            |                |
| 17             |           |               |         |         |               |         |         |            |                |
| 18             |           |               |         |         |               |         |         |            |                |
| 19             |           |               |         |         |               |         |         |            |                |
| 20             |           |               |         |         |               |         |         |            |                |
| 21             |           |               |         |         |               |         |         |            |                |
| 22             |           |               |         |         |               |         |         |            |                |
| 23             |           |               |         |         |               |         |         |            |                |
| 24             |           |               |         |         |               |         |         |            |                |
| 25             |           |               |         |         |               |         |         |            |                |
| 26             |           |               |         |         |               |         |         |            |                |
| 27             |           |               |         |         |               |         |         |            |                |
| 28             |           |               |         |         |               |         |         |            |                |
| 29             |           |               |         |         |               |         |         |            |                |
| 30             |           |               |         |         |               |         |         |            |                |



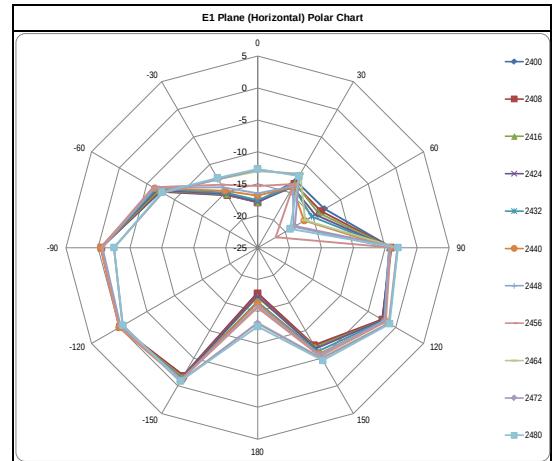
| E1 Plane (Vertical + Horizontal) |                    |                |              |           |                |              |           |                   |
|----------------------------------|--------------------|----------------|--------------|-----------|----------------|--------------|-----------|-------------------|
| No                               | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              |           | Avg. Gain<br>(dB) |
|                                  |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) |                   |
| 1                                | 2400               | 90             | -120         | 2.96      | 90             | 180          | -14.85    | -1.72             |
| 2                                | 2408               | 90             | -120         | 2.73      | 90             | 0            | -15.04    | -1.89             |
| 3                                | 2416               | 90             | -120         | 2.82      | 90             | 0            | -14.84    | -1.72             |
| 4                                | 2424               | 90             | -120         | 2.80      | 90             | 0            | -14.90    | -1.70             |
| 5                                | 2432               | 90             | -120         | 2.89      | 90             | 0            | -14.65    | -1.58             |
| 6                                | 2440               | 90             | -120         | 2.94      | 90             | 60           | -13.90    | -1.50             |
| 7                                | 2448               | 90             | -120         | 2.66      | 90             | 60           | -15.72    | -1.57             |
| 8                                | 2456               | 90             | -120         | 2.81      | 90             | 60           | -18.70    | -1.37             |
| 9                                | 2464               | 90             | -120         | 2.31      | 90             | 60           | -13.61    | -1.65             |
| 10                               | 2472               | 90             | -120         | 2.24      | 90             | 60           | -15.78    | -1.69             |
| 11                               | 2480               | 90             | -120         | 2.23      | 90             | 60           | -16.83    | -1.60             |
| 12                               |                    |                |              |           |                |              |           |                   |
| 13                               |                    |                |              |           |                |              |           |                   |
| 14                               |                    |                |              |           |                |              |           |                   |
| 15                               |                    |                |              |           |                |              |           |                   |
| 16                               |                    |                |              |           |                |              |           |                   |
| 17                               |                    |                |              |           |                |              |           |                   |
| 18                               |                    |                |              |           |                |              |           |                   |
| 19                               |                    |                |              |           |                |              |           |                   |
| 20                               |                    |                |              |           |                |              |           |                   |
| 21                               |                    |                |              |           |                |              |           |                   |
| 22                               |                    |                |              |           |                |              |           |                   |
| 23                               |                    |                |              |           |                |              |           |                   |
| 24                               |                    |                |              |           |                |              |           |                   |
| 25                               |                    |                |              |           |                |              |           |                   |
| 26                               |                    |                |              |           |                |              |           |                   |
| 27                               |                    |                |              |           |                |              |           |                   |
| 28                               |                    |                |              |           |                |              |           |                   |
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| 30                               |                    |                |              |           |                |              |           |                   |



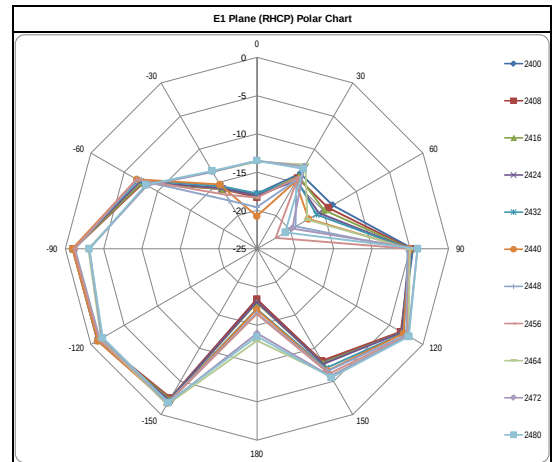
| E1 Plane (Vertical) |                    |                |              |           |                |              |           |                   |
|---------------------|--------------------|----------------|--------------|-----------|----------------|--------------|-----------|-------------------|
| No                  | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              |           | Avg. Gain<br>(dB) |
|                     |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) |                   |
| 1                   | 2400               | 90             | -120         | -0.05     | 90             | 180          | -17.86    | -4.72             |
| 2                   | 2408               | 90             | -120         | -0.43     | 90             | 180          | -18.20    | -4.99             |
| 3                   | 2416               | 90             | -120         | -0.30     | 90             | 0            | -17.84    | -4.78             |
| 4                   | 2424               | 90             | -120         | -0.27     | 90             | 0            | -17.96    | -4.77             |
| 5                   | 2432               | 90             | -120         | -0.09     | 90             | 0            | -17.73    | -4.60             |
| 6                   | 2440               | 90             | -120         | -0.16     | 90             | 60           | -17.31    | -4.61             |
| 7                   | 2448               | 90             | -120         | -0.46     | 90             | 60           | -18.99    | -4.59             |
| 8                   | 2456               | 90             | -120         | -0.36     | 90             | 60           | -21.70    | -4.38             |
| 9                   | 2464               | 90             | -120         | -0.80     | 90             | 60           | -16.87    | -4.78             |
| 10                  | 2472               | 90             | -120         | -0.91     | 90             | 60           | -19.37    | -4.85             |
| 11                  | 2480               | 90             | -120         | -0.78     | 90             | 60           | -20.70    | -4.72             |
| 12                  |                    |                |              |           |                |              |           |                   |
| 13                  |                    |                |              |           |                |              |           |                   |
| 14                  |                    |                |              |           |                |              |           |                   |
| 15                  |                    |                |              |           |                |              |           |                   |
| 16                  |                    |                |              |           |                |              |           |                   |
| 17                  |                    |                |              |           |                |              |           |                   |
| 18                  |                    |                |              |           |                |              |           |                   |
| 19                  |                    |                |              |           |                |              |           |                   |
| 20                  |                    |                |              |           |                |              |           |                   |
| 21                  |                    |                |              |           |                |              |           |                   |
| 22                  |                    |                |              |           |                |              |           |                   |
| 23                  |                    |                |              |           |                |              |           |                   |
| 24                  |                    |                |              |           |                |              |           |                   |
| 25                  |                    |                |              |           |                |              |           |                   |
| 26                  |                    |                |              |           |                |              |           |                   |
| 27                  |                    |                |              |           |                |              |           |                   |
| 28                  |                    |                |              |           |                |              |           |                   |
| 29                  |                    |                |              |           |                |              |           |                   |
| 30                  |                    |                |              |           |                |              |           |                   |



| E1 Plane (Horizontal) |                    |                |              |           |                |              |           |                   |
|-----------------------|--------------------|----------------|--------------|-----------|----------------|--------------|-----------|-------------------|
| No                    | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              |           | Avg. Gain<br>(dB) |
|                       |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) |                   |
| 1                     | 2400               | 90             | -120         | -0.06     | 90             | 180          | -17.86    | -4.75             |
| 2                     | 2408               | 90             | -120         | -0.14     | 90             | 0            | -17.94    | -4.80             |
| 3                     | 2416               | 90             | -120         | -0.09     | 90             | 0            | -17.87    | -4.68             |
| 4                     | 2424               | 90             | -120         | -0.16     | 90             | 0            | -17.85    | -4.65             |
| 5                     | 2432               | 90             | -120         | -0.14     | 90             | 0            | -17.59    | -4.57             |
| 6                     | 2440               | 90             | -120         | 0.01      | 90             | 0            | -16.84    | -4.41             |
| 7                     | 2448               | 90             | -120         | -0.24     | 90             | 60           | -18.48    | -4.58             |
| 8                     | 2456               | 90             | -120         | -0.05     | 90             | 60           | -21.72    | -4.37             |
| 9                     | 2464               | 90             | -120         | -0.59     | 90             | 60           | -16.38    | -4.54             |
| 10                    | 2472               | 90             | -120         | -0.64     | 90             | 60           | -18.28    | -4.55             |
| 11                    | 2480               | 90             | -120         | -0.65     | 90             | 60           | -19.12    | -4.49             |
| 12                    |                    |                |              |           |                |              |           |                   |
| 13                    |                    |                |              |           |                |              |           |                   |
| 14                    |                    |                |              |           |                |              |           |                   |
| 15                    |                    |                |              |           |                |              |           |                   |
| 16                    |                    |                |              |           |                |              |           |                   |
| 17                    |                    |                |              |           |                |              |           |                   |
| 18                    |                    |                |              |           |                |              |           |                   |
| 19                    |                    |                |              |           |                |              |           |                   |
| 20                    |                    |                |              |           |                |              |           |                   |
| 21                    |                    |                |              |           |                |              |           |                   |
| 22                    |                    |                |              |           |                |              |           |                   |
| 23                    |                    |                |              |           |                |              |           |                   |
| 24                    |                    |                |              |           |                |              |           |                   |
| 25                    |                    |                |              |           |                |              |           |                   |
| 26                    |                    |                |              |           |                |              |           |                   |
| 27                    |                    |                |              |           |                |              |           |                   |
| 28                    |                    |                |              |           |                |              |           |                   |
| 29                    |                    |                |              |           |                |              |           |                   |
| 30                    |                    |                |              |           |                |              |           |                   |

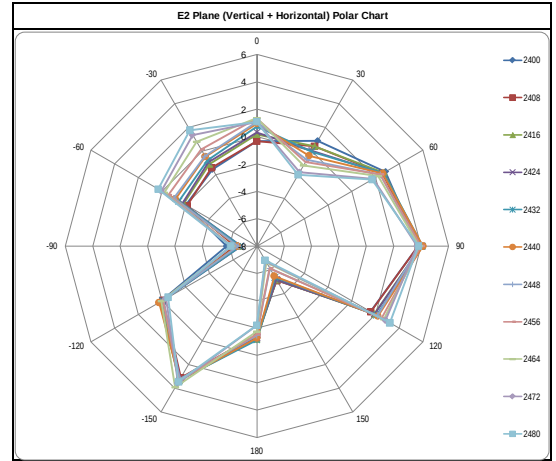


| E1 Plane (RHCP) |                    |                |              |           |                |              |           |                   |
|-----------------|--------------------|----------------|--------------|-----------|----------------|--------------|-----------|-------------------|
| No              | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              |           | Avg. Gain<br>(dB) |
|                 |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) |                   |
| 1               | 2400               | 90             | -90          | -0.95     | 90             | 180          | -18.39    | -5.39             |
| 2               | 2408               | 90             | -90          | -1.12     | 90             | 180          | -18.42    | -5.57             |
| 3               | 2416               | 90             | -90          | -1.07     | 90             | 0            | -18.04    | -5.46             |
| 4               | 2424               | 90             | -90          | -1.02     | 90             | 0            | -18.09    | -5.42             |
| 5               | 2432               | 90             | -90          | -0.97     | 90             | 0            | -17.77    | -5.27             |
| 6               | 2440               | 90             | -90          | -0.93     | 90             | 0            | -20.74    | -5.20             |
| 7               | 2448               | 90             | -90          | -1.28     | 90             | 0            | -19.59    | -5.36             |
| 8               | 2456               | 90             | -90          | -1.13     | 90             | 60           | -22.18    | -5.17             |
| 9               | 2464               | 90             | -150         | -1.51     | 90             | 60           | -17.39    | -5.42             |
| 10              | 2472               | 90             | -120         | -1.63     | 90             | 60           | -19.69    | -5.42             |
| 11              | 2480               | 90             | -120         | -1.75     | 90             | 60           | -20.72    | -5.43             |
| 12              |                    |                |              |           |                |              |           |                   |
| 13              |                    |                |              |           |                |              |           |                   |
| 14              |                    |                |              |           |                |              |           |                   |
| 15              |                    |                |              |           |                |              |           |                   |
| 16              |                    |                |              |           |                |              |           |                   |
| 17              |                    |                |              |           |                |              |           |                   |
| 18              |                    |                |              |           |                |              |           |                   |
| 19              |                    |                |              |           |                |              |           |                   |
| 20              |                    |                |              |           |                |              |           |                   |
| 21              |                    |                |              |           |                |              |           |                   |
| 22              |                    |                |              |           |                |              |           |                   |
| 23              |                    |                |              |           |                |              |           |                   |
| 24              |                    |                |              |           |                |              |           |                   |
| 25              |                    |                |              |           |                |              |           |                   |
| 26              |                    |                |              |           |                |              |           |                   |
| 27              |                    |                |              |           |                |              |           |                   |
| 28              |                    |                |              |           |                |              |           |                   |
| 29              |                    |                |              |           |                |              |           |                   |
| 30              |                    |                |              |           |                |              |           |                   |

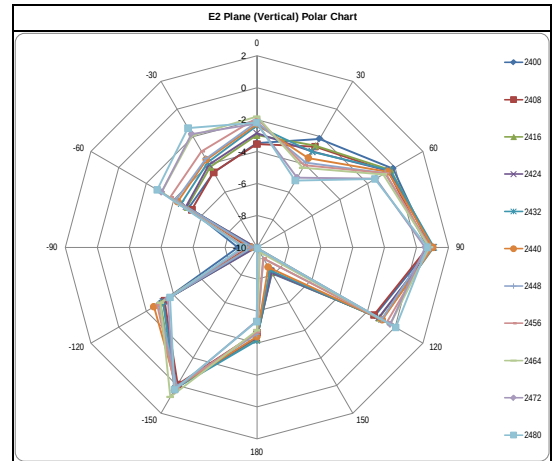




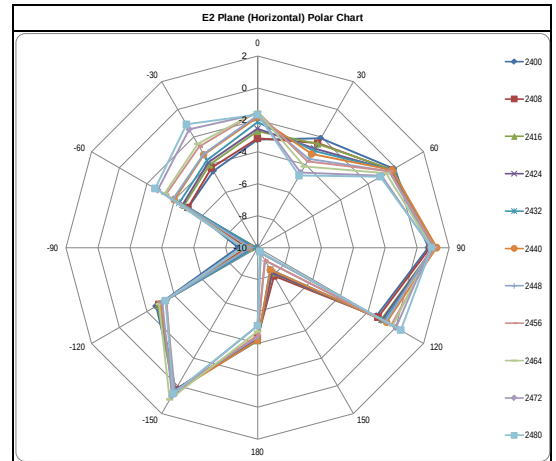
| E2 Plane (Vertical + Horizontal) |           |               |         |               |         |           |            |         |           |
|----------------------------------|-----------|---------------|---------|---------------|---------|-----------|------------|---------|-----------|
| No                               | Frequency | Maximum Value |         | Minimum Value |         | Avg. Gain | Efficiency |         |           |
|                                  | [MHz]     | Θ [Deg]       | Φ [Deg] | Value[dB]     | Θ [Deg] |           |            | Φ [Deg] | Value[dB] |
| 1                                | 2400      | 90            | 90      | 3.78          | 90      | -90       | -5.79      | 0.58    | 114.30    |
| 2                                | 2408      | 90            | 90      | 3.78          | 90      | -90       | -6.39      | 0.45    | 110.92    |
| 3                                | 2416      | 90            | 90      | 4.02          | 90      | -90       | -6.63      | 0.67    | 116.65    |
| 4                                | 2424      | 90            | 90      | 4.04          | 90      | -90       | -6.84      | 0.62    | 115.27    |
| 5                                | 2432      | 90            | 90      | 4.10          | 90      | -90       | -6.81      | 0.72    | 118.16    |
| 6                                | 2440      | 90            | 90      | 4.13          | 90      | -90       | -6.57      | 0.79    | 119.89    |
| 7                                | 2448      | 90            | 90      | 3.87          | 90      | -90       | -6.65      | 0.65    | 116.01    |
| 8                                | 2456      | 90            | 90      | 4.01          | 90      | -90       | -6.17      | 0.82    | 120.66    |
| 9                                | 2464      | 90            | -150    | 3.93          | 90      | 150       | -6.60      | 0.94    | 124.08    |
| 10                               | 2472      | 90            | 90      | 3.71          | 90      | 150       | -6.74      | 0.79    | 119.88    |
| 11                               | 2480      | 90            | 90      | 3.80          | 90      | 150       | -6.81      | 0.86    | 121.94    |
| 12                               |           |               |         |               |         |           |            |         |           |
| 13                               |           |               |         |               |         |           |            |         |           |
| 14                               |           |               |         |               |         |           |            |         |           |
| 15                               |           |               |         |               |         |           |            |         |           |
| 16                               |           |               |         |               |         |           |            |         |           |
| 17                               |           |               |         |               |         |           |            |         |           |
| 18                               |           |               |         |               |         |           |            |         |           |
| 19                               |           |               |         |               |         |           |            |         |           |
| 20                               |           |               |         |               |         |           |            |         |           |
| 21                               |           |               |         |               |         |           |            |         |           |
| 22                               |           |               |         |               |         |           |            |         |           |
| 23                               |           |               |         |               |         |           |            |         |           |
| 24                               |           |               |         |               |         |           |            |         |           |
| 25                               |           |               |         |               |         |           |            |         |           |
| 26                               |           |               |         |               |         |           |            |         |           |
| 27                               |           |               |         |               |         |           |            |         |           |
| 28                               |           |               |         |               |         |           |            |         |           |
| 29                               |           |               |         |               |         |           |            |         |           |
| 30                               |           |               |         |               |         |           |            |         |           |



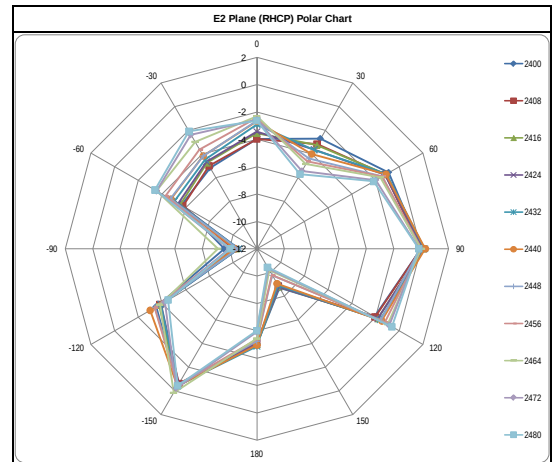
| E2 Plane (Vertical) |                    |                |              |           |                |              |                   |                   |           |
|---------------------|--------------------|----------------|--------------|-----------|----------------|--------------|-------------------|-------------------|-----------|
| No                  | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              | Avg. Gain<br>(dB) | Efficiency<br>(%) |           |
|                     |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) |                   |                   | Value(dB) |
| 1                   | 2400               | 90             | 90           | 0.85      | 90             | -90          | -8.82             | -2.45             | 56.85     |
| 2                   | 2408               | 90             | 90           | 0.72      | 90             | -90          | -9.50             | -2.70             | 53.75     |
| 3                   | 2416               | 90             | 90           | 1.01      | 90             | -90          | -9.70             | -2.41             | 57.39     |
| 4                   | 2424               | 90             | 90           | 1.01      | 90             | -90          | -9.91             | -2.48             | 56.50     |
| 5                   | 2432               | 90             | 90           | 1.09      | 90             | -90          | -9.77             | -2.34             | 58.29     |
| 6                   | 2440               | 90             | 90           | 1.03      | 90             | -90          | -9.66             | -2.35             | 58.23     |
| 7                   | 2448               | 90             | 90           | 0.77      | 90             | -90          | -9.73             | -2.47             | 56.58     |
| 8                   | 2456               | 90             | 90           | 0.89      | 90             | -90          | -9.31             | -2.31             | 58.76     |
| 9                   | 2464               | 90             | -150         | 0.84      | 90             | 150          | -9.64             | -2.11             | 61.53     |
| 10                  | 2472               | 90             | 90           | 0.55      | 90             | 150          | -9.90             | -2.41             | 57.42     |
| 11                  | 2480               | 90             | 90           | 0.69      | 90             | 150          | -9.92             | -2.30             | 58.90     |
| 12                  |                    |                |              |           |                |              |                   |                   |           |
| 13                  |                    |                |              |           |                |              |                   |                   |           |
| 14                  |                    |                |              |           |                |              |                   |                   |           |
| 15                  |                    |                |              |           |                |              |                   |                   |           |
| 16                  |                    |                |              |           |                |              |                   |                   |           |
| 17                  |                    |                |              |           |                |              |                   |                   |           |
| 18                  |                    |                |              |           |                |              |                   |                   |           |
| 19                  |                    |                |              |           |                |              |                   |                   |           |
| 20                  |                    |                |              |           |                |              |                   |                   |           |
| 21                  |                    |                |              |           |                |              |                   |                   |           |
| 22                  |                    |                |              |           |                |              |                   |                   |           |
| 23                  |                    |                |              |           |                |              |                   |                   |           |
| 24                  |                    |                |              |           |                |              |                   |                   |           |
| 25                  |                    |                |              |           |                |              |                   |                   |           |
| 26                  |                    |                |              |           |                |              |                   |                   |           |
| 27                  |                    |                |              |           |                |              |                   |                   |           |
| 28                  |                    |                |              |           |                |              |                   |                   |           |
| 29                  |                    |                |              |           |                |              |                   |                   |           |
| 30                  |                    |                |              |           |                |              |                   |                   |           |



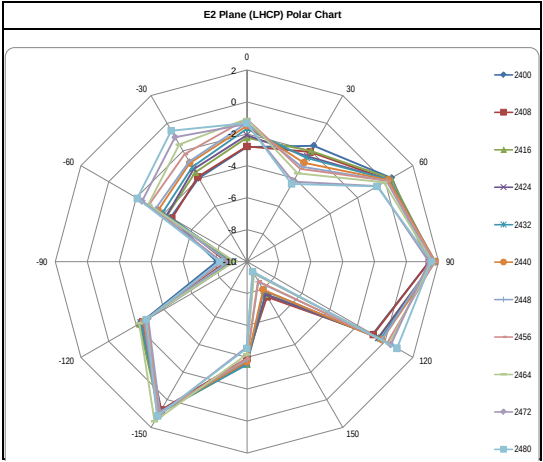
| E2 Plane (Horizontal) |                    |                |              |                |              |                   |                   |       |
|-----------------------|--------------------|----------------|--------------|----------------|--------------|-------------------|-------------------|-------|
| No                    | Frequency<br>(MHz) | Maximum Value  |              | Minimum Value  |              | Avg. Gain<br>(dB) | Efficiency<br>(%) |       |
|                       |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | $\Theta$ (Deg) | $\Phi$ (Deg) |                   |                   |       |
| 1                     | 2400               | 90             | 90           | 0.69           | 90           | -8.78             | -2.41             | 57.44 |
| 2                     | 2408               | 90             | 90           | 0.83           | 90           | -9.31             | -2.43             | 57.16 |
| 3                     | 2416               | 90             | 90           | 1.01           | 90           | -9.59             | -2.27             | 59.26 |
| 4                     | 2424               | 90             | 90           | 1.06           | 90           | -9.79             | -2.31             | 58.77 |
| 5                     | 2432               | 90             | 90           | 1.10           | 90           | -9.87             | -2.23             | 59.87 |
| 6                     | 2440               | 90             | 90           | 1.22           | 90           | -9.51             | -2.10             | 61.66 |
| 7                     | 2448               | 90             | 90           | 0.95           | 90           | -9.58             | -2.26             | 59.43 |
| 8                     | 2456               | 90             | 90           | 1.10           | 90           | -9.08             | -2.08             | 61.90 |
| 9                     | 2464               | 90             | -150         | 1.00           | 90           | -9.59             | -2.04             | 62.55 |
| 10                    | 2472               | 90             | 90           | 0.84           | 90           | -9.61             | -2.04             | 62.47 |
| 11                    | 2480               | 90             | 90           | 0.89           | 90           | -9.71             | -2.00             | 63.05 |
| 12                    |                    |                |              |                |              |                   |                   |       |
| 13                    |                    |                |              |                |              |                   |                   |       |
| 14                    |                    |                |              |                |              |                   |                   |       |
| 15                    |                    |                |              |                |              |                   |                   |       |
| 16                    |                    |                |              |                |              |                   |                   |       |
| 17                    |                    |                |              |                |              |                   |                   |       |
| 18                    |                    |                |              |                |              |                   |                   |       |
| 19                    |                    |                |              |                |              |                   |                   |       |
| 20                    |                    |                |              |                |              |                   |                   |       |
| 21                    |                    |                |              |                |              |                   |                   |       |
| 22                    |                    |                |              |                |              |                   |                   |       |
| 23                    |                    |                |              |                |              |                   |                   |       |
| 24                    |                    |                |              |                |              |                   |                   |       |
| 25                    |                    |                |              |                |              |                   |                   |       |
| 26                    |                    |                |              |                |              |                   |                   |       |
| 27                    |                    |                |              |                |              |                   |                   |       |
| 28                    |                    |                |              |                |              |                   |                   |       |
| 29                    |                    |                |              |                |              |                   |                   |       |
| 30                    |                    |                |              |                |              |                   |                   |       |



| E2 Plane (RHCP) |                    |                |              |           |                |              |           |                   |                   |
|-----------------|--------------------|----------------|--------------|-----------|----------------|--------------|-----------|-------------------|-------------------|
| No              | Frequency<br>(MHz) | Maximum Value  |              |           | Minimum Value  |              |           | Avg. Gain<br>(dB) | Efficiency<br>(%) |
|                 |                    | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) | $\Theta$ (Deg) | $\Phi$ (Deg) | Value(dB) |                   |                   |
| 1               | 2400               | 90             | 90           | 0.00      | 90             | -90          | -9.61     | -3.11             | 48.85             |
| 2               | 2408               | 90             | 90           | 0.00      | 90             | -90          | -10.22    | -3.26             | 47.22             |
| 3               | 2416               | 90             | 90           | 0.15      | 90             | -90          | -10.50    | -3.11             | 48.91             |
| 4               | 2424               | 90             | 90           | 0.17      | 90             | -90          | -10.67    | -3.15             | 48.37             |
| 5               | 2432               | 90             | 90           | 0.27      | 90             | -90          | -10.67    | -3.01             | 50.02             |
| 6               | 2440               | 90             | 90           | 0.31      | 90             | -90          | -10.42    | -2.89             | 51.42             |
| 7               | 2448               | 90             | 90           | -0.05     | 90             | -90          | -10.62    | -3.11             | 48.91             |
| 8               | 2456               | 90             | 90           | 0.05      | 90             | -90          | -10.10    | -2.97             | 50.51             |
| 9               | 2464               | 90             | -150         | 0.16      | 90             | 150          | -10.20    | -2.79             | 52.56             |
| 10              | 2472               | 90             | 90           | -0.15     | 90             | 150          | -10.33    | -2.96             | 50.54             |
| 11              | 2480               | 90             | 90           | -0.16     | 90             | 150          | -10.43    | -2.98             | 50.29             |
| 12              |                    |                |              |           |                |              |           |                   |                   |
| 13              |                    |                |              |           |                |              |           |                   |                   |
| 14              |                    |                |              |           |                |              |           |                   |                   |
| 15              |                    |                |              |           |                |              |           |                   |                   |
| 16              |                    |                |              |           |                |              |           |                   |                   |
| 17              |                    |                |              |           |                |              |           |                   |                   |
| 18              |                    |                |              |           |                |              |           |                   |                   |
| 19              |                    |                |              |           |                |              |           |                   |                   |
| 20              |                    |                |              |           |                |              |           |                   |                   |
| 21              |                    |                |              |           |                |              |           |                   |                   |
| 22              |                    |                |              |           |                |              |           |                   |                   |
| 23              |                    |                |              |           |                |              |           |                   |                   |
| 24              |                    |                |              |           |                |              |           |                   |                   |
| 25              |                    |                |              |           |                |              |           |                   |                   |
| 26              |                    |                |              |           |                |              |           |                   |                   |
| 27              |                    |                |              |           |                |              |           |                   |                   |
| 28              |                    |                |              |           |                |              |           |                   |                   |
| 29              |                    |                |              |           |                |              |           |                   |                   |
| 30              |                    |                |              |           |                |              |           |                   |                   |



| E2 Plane (LHCP) |           |               |         |            |               |         |            |           |       |
|-----------------|-----------|---------------|---------|------------|---------------|---------|------------|-----------|-------|
| No              | Frequency | Maximum Value |         |            | Minimum Value |         |            | Avg. Gain |       |
|                 | [MHz]     | Θ [Deg]       | Φ [Deg] | Value(dBi) | Θ [Deg]       | Φ [Deg] | Value(dBi) | [dBi]     | [%]   |
| 1               | 2400      | 90            | 90      | 1.43       | 90            | -90     | -8.12      | -1.84     | 65.44 |
| 2               | 2408      | 90            | 90      | 1.43       | 90            | -90     | -8.72      | -1.96     | 63.70 |
| 3               | 2416      | 90            | 90      | 1.73       | 90            | -90     | -8.93      | -1.69     | 67.74 |
| 4               | 2424      | 90            | 90      | 1.75       | 90            | -90     | -9.16      | -1.75     | 66.90 |
| 5               | 2432      | 90            | 90      | 1.79       | 90            | -90     | -9.11      | -1.67     | 68.13 |
| 6               | 2440      | 90            | 90      | 1.81       | 90            | -90     | -8.89      | -1.65     | 68.47 |
| 7               | 2448      | 90            | 90      | 1.62       | 90            | -90     | -8.87      | -1.73     | 67.10 |
| 8               | 2456      | 90            | 90      | 1.78       | 90            | 150     | -8.58      | -1.54     | 70.15 |
| 9               | 2464      | 90            | 90      | 1.58       | 90            | -90     | -9.21      | -1.46     | 71.52 |
| 10              | 2472      | 90            | 90      | 1.41       | 90            | 150     | -9.24      | -1.59     | 69.34 |
| 11              | 2480      | 90            | 90      | 1.57       | 90            | 150     | -9.28      | -1.45     | 71.65 |
| 12              |           |               |         |            |               |         |            |           |       |
| 13              |           |               |         |            |               |         |            |           |       |
| 14              |           |               |         |            |               |         |            |           |       |
| 15              |           |               |         |            |               |         |            |           |       |
| 16              |           |               |         |            |               |         |            |           |       |
| 17              |           |               |         |            |               |         |            |           |       |
| 18              |           |               |         |            |               |         |            |           |       |
| 19              |           |               |         |            |               |         |            |           |       |
| 20              |           |               |         |            |               |         |            |           |       |
| 21              |           |               |         |            |               |         |            |           |       |
| 22              |           |               |         |            |               |         |            |           |       |
| 23              |           |               |         |            |               |         |            |           |       |
| 24              |           |               |         |            |               |         |            |           |       |
| 25              |           |               |         |            |               |         |            |           |       |
| 26              |           |               |         |            |               |         |            |           |       |
| 27              |           |               |         |            |               |         |            |           |       |
| 28              |           |               |         |            |               |         |            |           |       |
| 29              |           |               |         |            |               |         |            |           |       |
| 30              |           |               |         |            |               |         |            |           |       |



| Horizontal + Vertical |                |        |        |                     |       |       |        |
|-----------------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |        |                     |       |       |        |
|                       | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0                     | -0.34          | 0.88   | 2.86   | 3.78                | 1.57  | -5.13 | -1.31  |
| 30                    | -1.81          | 0.51   | 0.85   | 3.08                | 2.23  | -6.35 | -2.08  |
| 60                    | -6.28          | -1.98  | -2.21  | 1.90                | 2.06  | -5.57 | -4.79  |
| 90                    | -14.82         | -10.16 | -10.01 | -0.99               | 0.58  | -4.15 | -14.85 |
| 120                   | -6.13          | -6.02  | -26.94 | -5.36               | -2.29 | -1.98 | -6.40  |
| 150                   | -1.74          | -0.19  | -4.54  | -6.87               | 0.33  | 3.01  | -1.61  |
| 180                   | -0.47          | -1.51  | -2.01  | -5.79               | 0.19  | 3.26  | -0.14  |
| 210                   | -1.69          | -2.18  | -7.14  | -1.66               | -4.17 | -1.45 | -1.00  |
| 240                   | -5.98          | -4.10  | -3.96  | -3.07               | 1.11  | 1.38  | -5.28  |
| 270                   | -16.72         | -12.36 | -4.30  | 2.50                | 2.96  | 1.15  | -25.44 |
| 300                   | -8.82          | -3.32  | 1.96   | 5.24                | 2.98  | -1.40 | -6.51  |
| 330                   | -1.14          | -0.27  | 3.78   | 4.90                | 2.03  | -2.90 | -1.88  |
| 360                   | -0.34          | 0.88   | 2.86   | 3.78                | 1.57  | -5.13 | -1.31  |
| Avg.                  | -3.73          | -2.42  | -1.25  | 1.14                | 0.85  | -0.89 | -3.68  |
| Peak Value            |                |        | 5.239  | Minimum Value ##### |       |       |        |

| Horizontal      |                |        |        |                     |       |       |        |
|-----------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |                     |       |       |        |
|                 | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0               | -3.25          | -2.11  | -0.16  | 0.69                | -1.41 | -8.17 | -4.34  |
| 30              | -4.76          | -2.43  | -2.15  | 0.09                | -0.74 | -9.35 | -5.08  |
| 60              | -9.10          | -5.04  | -5.25  | -1.08               | -0.95 | -8.62 | -7.85  |
| 90              | -17.83         | -12.94 | -12.89 | -4.00               | -2.41 | -7.11 | -17.86 |
| 120             | -9.12          | -9.17  | -29.59 | -8.38               | -5.26 | -5.03 | -9.52  |
| 150             | -4.81          | -3.16  | -7.26  | -9.87               | -2.62 | 0.04  | -4.51  |
| 180             | -3.47          | -4.47  | -4.98  | -8.78               | -2.66 | 0.31  | -3.22  |
| 210             | -4.76          | -5.19  | -10.16 | -4.67               | -7.23 | -4.44 | -3.98  |
| 240             | -8.89          | -7.22  | -7.05  | -6.10               | -1.97 | -1.56 | -8.40  |
| 270             | -19.70         | -15.54 | -7.49  | -0.59               | -0.06 | -1.83 | -28.84 |
| 300             | -18.86         | -6.29  | -1.06  | 2.21                | 0.00  | -4.37 | -9.62  |
| 330             | -3.99          | -3.24  | 0.82   | 1.88                | -0.99 | -5.90 | -4.84  |
| 360             | -3.25          | -2.11  | -0.16  | 0.69                | -1.41 | -8.17 | -4.34  |
| Avg.            | -6.77          | -5.41  | -4.24  | -1.89               | -2.14 | -3.87 | -6.69  |
| Peak Value      |                |        | 2.211  | Minimum Value ##### |       |       |        |

| Vertical        |                |        |        |       |       |       |        |
|-----------------|----------------|--------|--------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |       |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150   | 180    |
| 0               | -3.47          | -2.15  | -0.14  | 0.85  | -1.46 | -8.11 | -4.31  |
| 30              | -4.89          | -2.56  | -2.16  | 0.05  | -0.82 | -9.37 | -5.10  |
| 60              | -9.48          | -4.95  | -5.19  | -1.14 | -0.94 | -8.54 | -7.74  |
| 90              | -17.83         | -13.42 | -13.16 | -4.00 | -2.44 | -7.21 | -17.86 |
| 120             | -9.17          | -8.90  | -30.34 | -8.36 | -5.35 | -4.96 | -9.31  |
| 150             | -4.69          | -3.25  | -7.87  | -9.89 | -2.75 | -0.03 | -4.73  |
| 180             | -3.49          | -4.58  | -5.06  | -8.82 | -2.98 | 0.19  | -3.07  |
| 210             | -4.65          | -5.19  | -10.14 | -4.68 | -7.14 | -4.49 | -4.04  |
| 240             | -9.10          | -7.00  | -6.90  | -6.06 | -1.83 | -1.71 | -8.19  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -19.76 | -15.19 | -7.14         | -0.43 | -0.05 | -1.90 | -28.08 |
| 300        | -9.27  | -6.37  | -1.04         | 2.25  | -0.07 | -4.45 | -9.42  |
| 330        | -4.33  | -3.32  | 0.71          | 1.91  | -0.96 | -5.93 | -4.95  |
| 360        | -3.47  | -2.15  | -0.14         | 0.85  | -1.46 | -8.11 | -4.31  |
| Avg.       | -6.70  | -5.45  | -4.27         | -1.85 | -2.18 | -3.94 | -6.68  |
| Peak Value |        | 2.245  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |       |        |
|-----------------|----------------|--------|---------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |       |       |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150   | 180    |
| 0               | -3.98          | -2.72  | -0.88         | 0.00   | -2.06 | -8.70 | -4.98  |
| 30              | -5.51          | -3.06  | -2.96         | -0.63  | -1.47 | -9.95 | -5.65  |
| 60              | -9.93          | -5.66  | -5.97         | -1.75  | -1.65 | -9.05 | -8.49  |
| 90              | -17.79         | -13.64 | -13.59        | -4.63  | -3.16 | -7.87 | -18.39 |
| 120             | -9.79          | -9.62  | -29.98        | -9.09  | -6.11 | -5.55 | -10.07 |
| 150             | -5.39          | -3.85  | -8.03         | -10.66 | -3.30 | -0.62 | -5.30  |
| 180             | -4.12          | -5.17  | -5.63         | -9.61  | -3.50 | -0.45 | -3.85  |
| 210             | -5.40          | -5.87  | -10.71        | -5.41  | -7.81 | -5.03 | -4.61  |
| 240             | -9.71          | -7.89  | -7.60         | -6.90  | -2.50 | -2.37 | -8.90  |
| 270             | -20.11         | -15.80 | -7.74         | -0.98  | -0.99 | -2.47 | -29.26 |
| 300             | -10.60         | -6.92  | -1.64         | 1.54   | -0.77 | -5.20 | -10.14 |
| 330             | -4.89          | -3.98  | 0.14          | 1.21   | -1.63 | -6.57 | -5.53  |
| 360             | -3.98          | -2.72  | -0.88         | 0.00   | -2.06 | -8.70 | -4.98  |
| Avg.            | -7.34          | -6.06  | -4.91         | -2.55  | -2.87 | -4.56 | -7.33  |
| Peak Value      |                | 1.541  | Minimum Value |        | ##### |       |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -2.81          | -1.62  | 0.47          | 1.43  | -0.89 | -7.65 | -3.76  |
| 30              | -4.23          | -2.00  | -1.48         | 0.67  | -0.18 | -8.83 | -4.60  |
| 60              | -8.73          | -4.42  | -4.59         | -0.55 | -0.35 | -8.15 | -7.20  |
| 90              | -17.87         | -12.75 | -12.51        | -3.45 | -1.80 | -6.56 | -17.38 |
| 120             | -8.58          | -8.52  | -29.91        | -7.74 | -4.62 | -4.50 | -8.84  |
| 150             | -4.19          | -2.64  | -7.12         | -9.22 | -2.14 | 0.55  | -4.04  |
| 180             | -2.93          | -3.97  | -4.48         | -8.12 | -2.23 | 0.86  | -2.54  |
| 210             | -4.10          | -4.60  | -9.66         | -4.05 | -6.63 | -3.96 | -3.48  |
| 240             | -8.38          | -6.44  | -6.42         | -5.39 | -1.38 | -1.00 | -7.76  |
| 270             | -19.37         | -14.97 | -6.92         | -0.08 | 0.71  | -1.34 | -27.76 |
| 300             | -13.55         | -5.81  | -0.53         | 2.82  | 0.60  | -3.75 | -8.98  |
| 330             | -3.52          | -2.67  | 1.32          | 2.48  | -0.41 | -5.35 | -4.34  |
| 360             | -2.81          | -1.62  | 0.47          | 1.43  | -0.89 | -7.65 | -3.76  |
| Avg.            | -6.20          | -4.88  | -3.69         | -1.28 | -1.55 | -3.34 | -6.13  |
| Peak Value      |                | 2.822  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 23.50          | 23.96 | 22.19 | 21.70 | 23.51 | 24.37 | 23.05 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 22.64 | 24.27 | 21.41  | 22.59         | 22.58 | 23.83 | 24.37  |
| 60         | 23.19 | 22.97 | 22.01  | 23.28         | 22.51 | 25.75 | 22.55  |
| 90         | 46.14 | 25.83 | 24.16  | 23.36         | 22.19 | 22.47 | 24.77  |
| 120        | 23.17 | 23.95 | 48.48  | 22.20         | 21.35 | 24.43 | 23.03  |
| 150        | 23.25 | 23.15 | 25.58  | 21.68         | 23.48 | 23.42 | 22.78  |
| 180        | 23.28 | 23.21 | 23.59  | 21.31         | 22.74 | 22.48 | 22.46  |
| 210        | 22.54 | 22.72 | 24.40  | 22.13         | 23.39 | 24.15 | 23.82  |
| 240        | 22.35 | 21.59 | 23.33  | 21.24         | 23.77 | 22.07 | 23.67  |
| 270        | 27.42 | 26.47 | 26.54  | 25.65         | 20.23 | 23.76 | 21.27  |
| 300        | 15.49 | 23.95 | 23.96  | 22.66         | 22.09 | 21.59 | 23.53  |
| 330        | 22.06 | 22.43 | 23.36  | 22.67         | 23.12 | 23.07 | 23.31  |
| 360        | 23.50 | 23.96 | 22.19  | 21.70         | 23.51 | 24.37 | 23.05  |
| Avg.       | 35.24 | 23.57 | 37.50  | 22.37         | 22.33 | 23.25 | 22.96  |
| Peak Value |       |       | 48.479 | Minimum Value |       |       | 15.491 |

| Horizontal + Vertical |                |        |                     |       |       |       |        |
|-----------------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |                     |       |       |       |        |
|                       | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0                     | -0.33          | 0.43   | 2.61                | 3.78  | 1.61  | -5.09 | -1.49  |
| 30                    | -1.84          | -0.08  | 0.72                | 3.11  | 2.21  | -6.62 | -2.25  |
| 60                    | -6.40          | -2.60  | -2.26               | 1.85  | 1.89  | -5.94 | -5.03  |
| 90                    | -15.04         | -10.86 | -10.68              | -1.20 | 0.42  | -4.40 | -15.00 |
| 120                   | -6.02          | -5.85  | -23.94              | -5.86 | -2.75 | -2.35 | -6.61  |
| 150                   | -1.60          | -0.07  | -4.73               | -7.39 | -0.07 | 2.86  | -1.80  |
| 180                   | -0.29          | -1.39  | -2.12               | -6.39 | -0.08 | 3.11  | -0.32  |
| 210                   | -1.53          | -2.50  | -7.51               | -1.98 | -4.57 | -1.80 | -1.21  |
| 240                   | -5.88          | -4.39  | -4.04               | -3.27 | 0.85  | 1.21  | -5.52  |
| 270                   | -16.64         | -12.59 | -4.32               | 2.40  | 2.73  | 1.08  | -25.03 |
| 300                   | -9.28          | -3.83  | 1.86                | 5.14  | 2.93  | -1.33 | -6.64  |
| 330                   | -1.61          | -0.63  | 3.65                | 4.84  | 2.03  | -2.93 | -2.11  |
| 360                   | -0.33          | 0.43   | 2.61                | 3.78  | 1.61  | -5.09 | -1.49  |
| Avg.                  | -3.73          | -2.72  | -1.39               | 1.05  | 0.69  | -1.05 | -3.87  |
| Peak Value            |                | 5.136  | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |        |       |       |        |
|-----------------|----------------|--------|---------------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |        |       |       |        |
|                 | 0              | 30     | 60                  | 90     | 120   | 150   | 180    |
| 0               | -3.16          | -2.45  | -0.31               | 0.83   | -1.28 | -7.95 | -4.37  |
| 30              | -4.66          | -2.96  | -2.12               | 0.23   | -0.68 | -9.52 | -5.12  |
| 60              | -9.15          | -5.54  | -5.22               | -1.03  | -1.01 | -8.87 | -7.96  |
| 90              | -17.94         | -13.48 | -13.58              | -4.12  | -2.45 | -7.34 | -17.83 |
| 120             | -8.88          | -8.92  | -26.31              | -8.81  | -5.62 | -5.33 | -9.59  |
| 150             | -4.55          | -2.96  | -7.43               | -10.32 | -2.94 | 0.00  | -4.61  |
| 180             | -3.21          | -4.22  | -4.97               | -9.31  | -2.87 | 0.28  | -3.24  |
| 210             | -4.50          | -5.41  | -10.38              | -4.90  | -7.49 | -4.68 | -4.11  |
| 240             | -8.71          | -7.44  | -7.08               | -6.21  | -2.09 | -1.65 | -8.63  |
| 270             | -19.39         | -15.53 | -7.35               | -0.58  | -0.14 | -1.83 | -27.91 |
| 300             | -19.01         | -6.72  | -1.04               | 2.21   | -0.01 | -4.24 | -9.67  |
| 330             | -4.72          | -3.50  | 0.76                | 1.90   | -0.92 | -5.84 | -4.96  |
| 360             | -3.16          | -2.45  | -0.31               | 0.83   | -1.28 | -7.95 | -4.37  |
| Avg.            | -6.71          | -5.62  | -4.29               | -1.88  | -2.20 | -3.93 | -6.77  |
| Peak Value      |                | 2.210  | Minimum Value ##### |        |       |       |        |

| Vertical        |                |        |        |        |       |       |        |
|-----------------|----------------|--------|--------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |        |       |       |        |
|                 | 0              | 30     | 60     | 90     | 120   | 150   | 180    |
| 0               | -3.53          | -2.71  | -0.49  | 0.72   | -1.52 | -8.26 | -4.65  |
| 30              | -5.05          | -3.23  | -2.47  | -0.04  | -0.93 | -9.73 | -5.40  |
| 60              | -9.69          | -5.68  | -5.32  | -1.29  | -1.22 | -9.03 | -8.13  |
| 90              | -18.16         | -14.29 | -13.79 | -4.30  | -2.74 | -7.49 | -18.20 |
| 120             | -9.19          | -8.79  | -27.71 | -8.93  | -5.89 | -5.39 | -9.64  |
| 150             | -4.67          | -3.21  | -8.09  | -10.47 | -3.22 | -0.30 | -5.02  |
| 180             | -3.39          | -4.58  | -5.30  | -9.50  | -3.32 | -0.08 | -3.42  |
| 210             | -4.58          | -5.62  | -10.66 | -5.07  | -7.67 | -4.95 | -4.33  |
| 240             | -9.07          | -7.37  | -7.03  | -6.35  | -2.24 | -1.95 | -8.43  |

|            |        |        |                     |       |       |       |        |
|------------|--------|--------|---------------------|-------|-------|-------|--------|
| 270        | -19.93 | -15.67 | -7.30               | -0.64 | -0.43 | -2.03 | -28.17 |
| 300        | -9.77  | -6.97  | -1.26               | 2.04  | -0.15 | -4.45 | -9.63  |
| 330        | -4.52  | -3.78  | 0.51                | 1.76  | -1.05 | -6.04 | -5.29  |
| 360        | -3.53  | -2.71  | -0.49               | 0.72  | -1.52 | -8.26 | -4.65  |
| Avg.       | -6.76  | -5.85  | -4.52               | -2.04 | -2.43 | -4.19 | -6.99  |
| Peak Value |        | 2.039  | Minimum Value ##### |       |       |       |        |

| RHCP            |                |        |                     |        |       |        |        |
|-----------------|----------------|--------|---------------------|--------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |        |       |        |        |
|                 | 0              | 30     | 60                  | 90     | 120   | 150    | 180    |
| 0               | -3.99          | -3.17  | -1.17               | 0.00   | -2.01 | -8.85  | -5.15  |
| 30              | -5.50          | -3.67  | -3.09               | -0.59  | -1.48 | -10.30 | -5.89  |
| 60              | -10.00         | -6.27  | -6.00               | -1.79  | -1.83 | -9.52  | -8.67  |
| 90              | -18.26         | -14.33 | -14.25              | -4.88  | -3.33 | -8.09  | -18.42 |
| 120             | -9.77          | -9.48  | -27.16              | -9.68  | -6.54 | -5.99  | -10.34 |
| 150             | -5.25          | -3.74  | -8.25               | -11.27 | -3.69 | -0.79  | -5.51  |
| 180             | -3.96          | -5.02  | -5.77               | -10.22 | -3.82 | -0.62  | -4.05  |
| 210             | -5.25          | -6.18  | -11.07              | -5.74  | -8.25 | -5.40  | -4.89  |
| 240             | -9.61          | -8.28  | -7.70               | -7.15  | -2.86 | -2.56  | -9.20  |
| 270             | -20.12         | -16.01 | -7.85               | -1.12  | -1.22 | -2.51  | -28.27 |
| 300             | -10.94         | -7.44  | -1.74               | 1.45   | -0.77 | -5.07  | -10.31 |
| 330             | -5.23          | -4.37  | 0.00                | 1.15   | -1.65 | -6.53  | -5.82  |
| 360             | -3.99          | -3.17  | -1.17               | 0.00   | -2.01 | -8.85  | -5.15  |
| Avg.            | -7.34          | -6.37  | -5.07               | -2.65  | -3.03 | -4.73  | -7.56  |
| Peak Value      |                | 1.447  | Minimum Value ##### |        |       |        |        |

| LHCP            |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -2.78          | -2.06  | 0.26                | 1.43  | -0.86 | -7.46 | -3.94  |
| 30              | -4.30          | -2.59  | -1.61               | 0.69  | -0.21 | -9.04 | -4.71  |
| 60              | -8.89          | -5.04  | -4.64               | -0.60 | -0.50 | -8.45 | -7.49  |
| 90              | -17.85         | -13.44 | -13.19              | -3.63 | -1.96 | -6.83 | -17.64 |
| 120             | -8.41          | -8.31  | -26.76              | -8.18 | -5.09 | -4.81 | -9.00  |
| 150             | -4.05          | -2.52  | -7.29               | -9.67 | -2.54 | 0.42  | -4.21  |
| 180             | -2.72          | -3.86  | -4.57               | -8.72 | -2.47 | 0.72  | -2.72  |
| 210             | -3.93          | -4.94  | -10.03              | -4.34 | -7.00 | -4.30 | -3.64  |
| 240             | -8.27          | -6.68  | -6.50               | -5.55 | -1.56 | -1.15 | -7.95  |
| 270             | -19.22         | -15.22 | -6.86               | -0.15 | 0.48  | -1.42 | -27.81 |
| 300             | -14.26         | -6.32  | -0.64               | 2.71  | 0.52  | -3.72 | -9.08  |
| 330             | -4.08          | -3.01  | 1.19                | 2.42  | -0.41 | -5.41 | -4.52  |
| 360             | -2.78          | -2.06  | 0.26                | 1.43  | -0.86 | -7.46 | -3.94  |
| Avg.            | -6.21          | -5.17  | -3.82               | -1.37 | -1.70 | -3.48 | -6.30  |
| Peak Value      |                | 2.712  | Minimum Value ##### |       |       |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\Theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 23.21          | 23.93 | 21.76 | 21.69 | 23.56 | 21.95 | 23.16 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 23.22 | 24.18 | 21.42  | 22.63         | 22.70 | 22.82 | 23.40  |
| 60         | 23.94 | 22.99 | 22.17  | 23.26         | 22.31 | 24.19 | 23.38  |
| 90         | 32.64 | 25.85 | 24.23  | 22.90         | 22.06 | 22.85 | 26.96  |
| 120        | 22.14 | 23.41 | 32.69  | 21.28         | 21.57 | 23.34 | 22.26  |
| 150        | 23.21 | 23.08 | 25.16  | 20.74         | 23.58 | 23.16 | 22.50  |
| 180        | 22.90 | 23.50 | 23.27  | 21.31         | 22.17 | 22.29 | 22.35  |
| 210        | 22.39 | 22.97 | 24.49  | 21.91         | 22.82 | 23.99 | 22.89  |
| 240        | 22.29 | 20.71 | 23.23  | 20.76         | 22.51 | 21.78 | 22.90  |
| 270        | 25.71 | 26.91 | 24.85  | 25.10         | 20.21 | 24.04 | 31.53  |
| 300        | 14.47 | 23.79 | 23.96  | 22.77         | 22.57 | 22.20 | 23.05  |
| 330        | 23.63 | 22.19 | 23.30  | 22.75         | 22.92 | 23.80 | 22.52  |
| 360        | 23.21 | 23.93 | 21.76  | 21.69         | 23.56 | 21.95 | 23.16  |
| Avg.       | 24.93 | 23.56 | 25.27  | 22.09         | 22.15 | 22.76 | 24.72  |
| Peak Value |       |       | 32.690 | Minimum Value |       |       | 14.474 |

| Horizontal + Vertical |                |        |        |                     |       |       |        |
|-----------------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |        |                     |       |       |        |
|                       | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0                     | 0.17           | 0.43   | 2.73   | 4.02                | 1.92  | -5.16 | -1.21  |
| 30                    | -1.34          | -0.25  | 0.90   | 3.37                | 2.46  | -6.70 | -1.86  |
| 60                    | -5.68          | -2.75  | -2.09  | 2.06                | 2.10  | -5.80 | -4.68  |
| 90                    | -14.84         | -10.60 | -11.07 | -1.23               | 0.66  | -4.01 | -14.32 |
| 120                   | -5.81          | -5.51  | -19.16 | -6.15               | -2.73 | -2.03 | -6.47  |
| 150                   | -1.26          | 0.25   | -4.70  | -7.48               | -0.08 | 3.07  | -1.68  |
| 180                   | 0.05           | -1.09  | -1.82  | -6.63               | 0.10  | 3.34  | -0.27  |
| 210                   | -1.21          | -2.72  | -7.99  | -1.96               | -4.65 | -1.65 | -1.18  |
| 240                   | -5.50          | -4.51  | -4.12  | -3.23               | 0.78  | 1.51  | -5.47  |
| 270                   | -16.27         | -12.36 | -4.10  | 2.52                | 2.82  | 1.40  | -23.97 |
| 300                   | -8.80          | -3.92  | 2.05   | 5.31                | 3.18  | -0.95 | -6.23  |
| 330                   | -1.17          | -0.51  | 3.83   | 5.04                | 2.26  | -2.90 | -1.92  |
| 360                   | 0.17           | 0.43   | 2.73   | 4.02                | 1.92  | -5.16 | -1.21  |
| Avg.                  | -3.32          | -2.67  | -1.24  | 1.21                | 0.86  | -0.81 | -3.69  |
| Peak Value            |                |        | 5.309  | Minimum Value ##### |       |       |        |

| Horizontal      |                |        |        |                     |       |       |        |
|-----------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |                     |       |       |        |
|                 | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0               | -2.72          | -2.50  | -0.24  | 1.01                | -1.03 | -8.16 | -4.17  |
| 30              | -4.23          | -3.18  | -2.02  | 0.45                | -0.51 | -9.67 | -4.81  |
| 60              | -8.57          | -5.75  | -5.15  | -0.88               | -0.87 | -8.69 | -7.70  |
| 90              | -17.87         | -13.30 | -14.07 | -4.21               | -2.23 | -7.02 | -17.22 |
| 120             | -8.68          | -8.62  | -22.10 | -9.09               | -5.67 | -5.08 | -9.45  |
| 150             | -4.27          | -2.68  | -7.46  | -10.46              | -3.02 | 0.12  | -4.59  |
| 180             | -2.94          | -4.01  | -4.70  | -9.59               | -2.80 | 0.45  | -3.23  |
| 210             | -4.22          | -5.66  | -10.95 | -4.98               | -7.56 | -4.59 | -4.13  |
| 240             | -8.43          | -7.53  | -7.22  | -6.24               | -2.16 | -1.38 | -8.62  |
| 270             | -18.97         | -15.39 | -7.14  | -0.51               | -0.09 | -1.58 | -26.60 |
| 300             | -18.44         | -6.86  | -0.94  | 2.33                | 0.12  | -3.94 | -9.43  |
| 330             | -4.37          | -3.41  | 0.87   | 2.04                | -0.75 | -5.93 | -4.83  |
| 360             | -2.72          | -2.50  | -0.24  | 1.01                | -1.03 | -8.16 | -4.17  |
| Avg.            | -6.37          | -5.61  | -4.21  | -1.77               | -2.10 | -3.76 | -6.66  |
| Peak Value      |                |        | 2.331  | Minimum Value ##### |       |       |        |

| Vertical        |                |        |        |        |       |       |        |
|-----------------|----------------|--------|--------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |        |       |       |        |
|                 | 0              | 30     | 60     | 90     | 120   | 150   | 180    |
| 0               | -2.97          | -2.65  | -0.32  | 1.01   | -1.15 | -8.17 | -4.26  |
| 30              | -4.48          | -3.35  | -2.21  | 0.26   | -0.59 | -9.75 | -4.93  |
| 60              | -8.80          | -5.78  | -5.05  | -1.02  | -0.95 | -8.94 | -7.68  |
| 90              | -17.84         | -13.94 | -14.09 | -4.27  | -2.47 | -7.02 | -17.44 |
| 120             | -8.96          | -8.43  | -22.24 | -9.25  | -5.81 | -5.01 | -9.51  |
| 150             | -4.27          | -2.85  | -7.98  | -10.52 | -3.15 | -0.01 | -4.79  |
| 180             | -2.99          | -4.19  | -4.96  | -9.70  | -3.03 | 0.21  | -3.34  |
| 210             | -4.21          | -5.79  | -11.05 | -4.97  | -7.77 | -4.74 | -4.24  |
| 240             | -8.58          | -7.52  | -7.05  | -6.24  | -2.30 | -1.61 | -8.35  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -19.62 | -15.34 | -7.07         | -0.48 | -0.30 | -1.64 | -27.39 |
| 300        | -9.30  | -7.00  | -0.98         | 2.27  | 0.22  | -3.99 | -9.06  |
| 330        | -4.00  | -3.64  | 0.78          | 2.02  | -0.76 | -5.89 | -5.04  |
| 360        | -2.97  | -2.65  | -0.32         | 1.01  | -1.15 | -8.17 | -4.26  |
| Avg.       | -6.29  | -5.75  | -4.30         | -1.83 | -2.20 | -3.88 | -6.74  |
| Peak Value |        | 2.268  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |        |        |
|-----------------|----------------|--------|---------------|--------|-------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |       |        |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150    | 180    |
| 0               | -3.55          | -3.25  | -1.11         | 0.15   | -1.78 | -8.78  | -4.98  |
| 30              | -5.06          | -3.94  | -2.95         | -0.41  | -1.33 | -10.45 | -5.58  |
| 60              | -9.38          | -6.49  | -5.89         | -1.67  | -1.69 | -9.45  | -8.41  |
| 90              | -18.04         | -14.05 | -14.89        | -4.99  | -3.15 | -7.78  | -17.91 |
| 120             | -9.57          | -9.23  | -22.39        | -10.05 | -6.58 | -5.75  | -10.16 |
| 150             | -5.00          | -3.46  | -8.37         | -11.46 | -3.86 | -0.69  | -5.42  |
| 180             | -3.72          | -4.74  | -5.53         | -10.50 | -3.75 | -0.43  | -4.05  |
| 210             | -5.01          | -6.46  | -11.55        | -5.79  | -8.36 | -5.29  | -4.93  |
| 240             | -9.23          | -8.45  | -7.84         | -7.23  | -3.01 | -2.34  | -9.28  |
| 270             | -19.92         | -15.99 | -7.72         | -1.07  | -1.10 | -2.31  | -27.47 |
| 300             | -10.49         | -7.68  | -1.59         | 1.55   | -0.63 | -4.76  | -9.96  |
| 330             | -4.87          | -4.32  | 0.11          | 1.28   | -1.50 | -6.64  | -5.70  |
| 360             | -3.55          | -3.25  | -1.11         | 0.15   | -1.78 | -8.78  | -4.98  |
| Avg.            | -7.00          | -6.40  | -4.98         | -2.56  | -2.94 | -4.56  | -7.44  |
| Peak Value      |                | 1.548  | Minimum Value |        | ##### |        |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -2.24          | -1.99  | 0.42          | 1.73  | -0.49 | -7.63 | -3.57  |
| 30              | -3.74          | -2.68  | -1.41         | 1.01  | 0.11  | -9.08 | -4.25  |
| 60              | -8.09          | -5.15  | -4.43         | -0.33 | -0.26 | -8.26 | -7.07  |
| 90              | -17.67         | -13.22 | -13.40        | -3.60 | -1.67 | -6.38 | -16.82 |
| 120             | -8.18          | -7.92  | -21.96        | -8.43 | -5.04 | -4.44 | -8.89  |
| 150             | -3.66          | -2.16  | -7.14         | -9.70 | -2.43 | 0.70  | -4.07  |
| 180             | -2.32          | -3.54  | -4.23         | -8.93 | -2.21 | 0.98  | -2.63  |
| 210             | -3.55          | -5.11  | -10.51        | -4.28 | -7.07 | -4.12 | -3.55  |
| 240             | -7.89          | -6.76  | -6.53         | -5.44 | -1.57 | -0.79 | -7.80  |
| 270             | -18.72         | -14.82 | -6.57         | 0.01  | 0.55  | -1.01 | -26.53 |
| 300             | -13.71         | -6.30  | -0.41         | 2.94  | 0.85  | -3.29 | -8.63  |
| 330             | -3.58          | -2.85  | 1.43          | 2.68  | -0.11 | -5.29 | -4.28  |
| 360             | -2.24          | -1.99  | 0.42          | 1.73  | -0.49 | -7.63 | -3.57  |
| Avg.            | -5.75          | -5.07  | -3.63         | -1.15 | -1.48 | -3.19 | -6.06  |
| Peak Value      |                | 2.939  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.43          | 22.85 | 21.11 | 20.83 | 22.60 | 23.59 | 21.86 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 22.41 | 22.78 | 21.07  | 21.77         | 21.65 | 22.13 | 22.36  |
| 60         | 22.61 | 22.26 | 21.53  | 22.26         | 21.71 | 23.29 | 22.30  |
| 90         | 33.35 | 26.43 | 21.35  | 21.96         | 21.43 | 21.84 | 24.01  |
| 120        | 21.96 | 22.45 | 32.03  | 20.59         | 21.08 | 22.47 | 22.71  |
| 150        | 22.27 | 22.54 | 23.03  | 19.91         | 21.76 | 21.95 | 22.19  |
| 180        | 21.94 | 23.21 | 22.51  | 20.89         | 21.05 | 21.83 | 21.79  |
| 210        | 21.54 | 22.20 | 24.51  | 21.24         | 22.60 | 23.40 | 22.05  |
| 240        | 22.26 | 20.23 | 22.42  | 19.76         | 21.67 | 21.03 | 21.42  |
| 270        | 23.24 | 23.43 | 23.55  | 24.08         | 20.50 | 22.55 | 25.38  |
| 300        | 14.73 | 21.99 | 23.32  | 21.95         | 21.43 | 21.50 | 22.30  |
| 330        | 22.60 | 21.45 | 22.41  | 21.89         | 21.95 | 22.24 | 21.80  |
| 360        | 22.43 | 22.85 | 21.11  | 20.83         | 22.60 | 23.59 | 21.86  |
| Avg.       | 24.78 | 22.56 | 24.40  | 21.23         | 21.31 | 22.04 | 22.32  |
| Peak Value |       |       | 33.348 | Minimum Value |       |       | 14.730 |

| Horizontal + Vertical |                |        |        |                     |       |       |        |
|-----------------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |        |                     |       |       |        |
|                       | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0                     | 0.31           | 0.05   | 2.63   | 4.04                | 1.93  | -5.17 | -1.30  |
| 30                    | -1.17          | -0.83  | 0.88   | 3.42                | 2.42  | -6.76 | -1.88  |
| 60                    | -5.50          | -3.36  | -2.15  | 2.07                | 2.00  | -5.71 | -4.83  |
| 90                    | -14.90         | -11.25 | -11.85 | -1.37               | 0.62  | -3.77 | -14.50 |
| 120                   | -5.51          | -5.27  | -17.06 | -6.40               | -2.93 | -1.96 | -6.56  |
| 150                   | -1.03          | 0.41   | -4.71  | -7.63               | -0.31 | 3.03  | -1.73  |
| 180                   | 0.31           | -0.92  | -1.73  | -6.84               | -0.05 | 3.21  | -0.33  |
| 210                   | -0.87          | -2.97  | -8.38  | -2.00               | -5.01 | -1.64 | -1.24  |
| 240                   | -5.05          | -4.59  | -4.20  | -3.21               | 0.60  | 1.73  | -5.40  |
| 270                   | -15.80         | -12.23 | -3.89  | 2.53                | 2.80  | 1.58  | -20.42 |
| 300                   | -8.77          | -4.32  | 2.05   | 5.32                | 3.14  | -0.87 | -6.11  |
| 330                   | -1.08          | -0.75  | 3.77   | 5.07                | 2.18  | -2.95 | -2.00  |
| 360                   | 0.31           | 0.05   | 2.63   | 4.04                | 1.93  | -5.17 | -1.30  |
| Avg.                  | -3.10          | -2.87  | -1.28  | 1.22                | 0.78  | -0.77 | -3.74  |
| Peak Value            |                |        | 5.319  | Minimum Value ##### |       |       |        |

| Horizontal      |                |        |        |                     |       |       |        |
|-----------------|----------------|--------|--------|---------------------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |                     |       |       |        |
|                 | 0              | 30     | 60     | 90                  | 120   | 150   | 180    |
| 0               | -2.56          | -2.85  | -0.32  | 1.06                | -0.99 | -8.17 | -4.28  |
| 30              | -4.02          | -3.68  | -2.04  | 0.49                | -0.50 | -9.70 | -4.83  |
| 60              | -8.37          | -6.39  | -5.22  | -0.84               | -0.93 | -8.55 | -7.90  |
| 90              | -17.85         | -14.02 | -14.61 | -4.30               | -2.28 | -6.75 | -17.43 |
| 120             | -8.37          | -8.38  | -20.10 | -9.33               | -5.93 | -4.99 | -9.58  |
| 150             | -4.04          | -2.49  | -7.41  | -10.58              | -3.21 | 0.13  | -4.63  |
| 180             | -2.65          | -3.84  | -4.60  | -9.79               | -2.89 | 0.31  | -3.27  |
| 210             | -3.85          | -5.93  | -11.41 | -4.99               | -7.91 | -4.59 | -4.17  |
| 240             | -7.97          | -7.58  | -7.28  | -6.18               | -2.29 | -1.15 | -8.46  |
| 270             | -18.52         | -15.27 | -6.87  | -0.48               | -0.16 | -1.35 | -23.18 |
| 300             | -18.09         | -7.19  | -0.95  | 2.34                | 0.11  | -3.87 | -9.23  |
| 330             | -4.26          | -3.62  | 0.81   | 2.07                | -0.79 | -5.95 | -4.91  |
| 360             | -2.56          | -2.85  | -0.32  | 1.06                | -0.99 | -8.17 | -4.28  |
| Avg.            | -6.12          | -5.80  | -4.24  | -1.75               | -2.16 | -3.70 | -6.70  |
| Peak Value      |                |        | 2.342  | Minimum Value ##### |       |       |        |

| Vertical        |                |        |        |        |       |       |        |
|-----------------|----------------|--------|--------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |        |       |       |        |
|                 | 0              | 30     | 60     | 90     | 120   | 150   | 180    |
| 0               | -2.85          | -3.06  | -0.45  | 1.01   | -1.18 | -8.18 | -4.34  |
| 30              | -4.35          | -4.00  | -2.24  | 0.33   | -0.67 | -9.85 | -4.95  |
| 60              | -8.66          | -6.35  | -5.10  | -1.03  | -1.09 | -8.90 | -7.77  |
| 90              | -17.96         | -14.52 | -15.12 | -4.46  | -2.50 | -6.81 | -17.60 |
| 120             | -8.68          | -8.18  | -20.04 | -9.50  | -5.96 | -4.94 | -9.56  |
| 150             | -4.05          | -2.71  | -8.05  | -10.70 | -3.44 | -0.08 | -4.85  |
| 180             | -2.76          | -4.01  | -4.89  | -9.91  | -3.23 | 0.09  | -3.42  |
| 210             | -3.91          | -6.04  | -11.37 | -5.04  | -8.14 | -4.72 | -4.32  |
| 240             | -8.15          | -7.62  | -7.15  | -6.26  | -2.54 | -1.42 | -8.36  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -19.11 | -15.20 | -6.92         | -0.49 | -0.27 | -1.51 | -23.70 |
| 300        | -9.32  | -7.48  | -0.97         | 2.28  | 0.16  | -3.89 | -9.01  |
| 330        | -3.93  | -3.89  | 0.72          | 2.04  | -0.88 | -5.96 | -5.12  |
| 360        | -2.85  | -3.06  | -0.45         | 1.01  | -1.18 | -8.18 | -4.34  |
| Avg.       | -6.10  | -5.98  | -4.35         | -1.83 | -2.30 | -3.86 | -6.80  |
| Peak Value |        | 2.275  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |        |        |
|-----------------|----------------|--------|---------------|--------|-------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |       |        |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150    | 180    |
| 0               | -3.43          | -3.61  | -1.16         | 0.17   | -1.79 | -8.78  | -5.05  |
| 30              | -4.89          | -4.49  | -2.95         | -0.35  | -1.38 | -10.52 | -5.57  |
| 60              | -9.22          | -7.04  | -5.98         | -1.68  | -1.78 | -9.26  | -8.58  |
| 90              | -18.09         | -14.73 | -15.64        | -5.12  | -3.14 | -7.60  | -18.04 |
| 120             | -9.29          | -8.93  | -20.55        | -10.27 | -6.82 | -5.73  | -10.19 |
| 150             | -4.78          | -3.30  | -8.42         | -11.57 | -4.10 | -0.74  | -5.50  |
| 180             | -3.46          | -4.65  | -5.37         | -10.67 | -3.91 | -0.56  | -4.10  |
| 210             | -4.66          | -6.74  | -11.95        | -5.84  | -8.59 | -5.25  | -5.00  |
| 240             | -8.83          | -8.48  | -7.97         | -7.15  | -3.15 | -2.11  | -9.25  |
| 270             | -19.26         | -15.90 | -7.46         | -1.02  | -1.09 | -2.16  | -23.73 |
| 300             | -10.27         | -8.09  | -1.58         | 1.54   | -0.76 | -4.64  | -9.87  |
| 330             | -4.80          | -4.52  | 0.03          | 1.30   | -1.60 | -6.74  | -5.81  |
| 360             | -3.43          | -3.61  | -1.16         | 0.17   | -1.79 | -8.78  | -5.05  |
| Avg.            | -6.79          | -6.59  | -5.01         | -2.56  | -3.03 | -4.53  | -7.49  |
| Peak Value      |                | 1.543  | Minimum Value |        | ##### |        |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -2.08          | -2.39  | 0.28          | 1.75  | -0.47 | -7.64 | -3.68  |
| 30              | -3.57          | -3.27  | -1.45         | 1.07  | 0.08  | -9.14 | -4.30  |
| 60              | -7.90          | -5.79  | -4.47         | -0.30 | -0.36 | -8.24 | -7.20  |
| 90              | -17.73         | -13.83 | -14.19        | -3.74 | -1.75 | -6.09 | -17.04 |
| 120             | -7.87          | -7.71  | -19.63        | -8.70 | -5.21 | -4.32 | -9.03  |
| 150             | -3.42          | -1.99  | -7.12         | -9.88 | -2.67 | 0.67  | -4.09  |
| 180             | -2.06          | -3.30  | -4.19         | -9.16 | -2.34 | 0.85  | -2.70  |
| 210             | -3.22          | -5.34  | -10.89        | -4.32 | -7.52 | -4.13 | -3.61  |
| 240             | -7.41          | -6.87  | -6.57         | -5.46 | -1.79 | -0.59 | -7.70  |
| 270             | -18.40         | -14.66 | -6.40         | -0.01 | 0.52  | -0.81 | -23.15 |
| 300             | -14.13         | -6.68  | -0.42         | 2.96  | 0.87  | -3.23 | -8.48  |
| 330             | -3.48          | -3.11  | 1.39          | 2.71  | -0.18 | -5.29 | -4.34  |
| 360             | -2.08          | -2.39  | 0.28          | 1.75  | -0.47 | -7.64 | -3.68  |
| Avg.            | -5.53          | -5.28  | -3.67         | -1.15 | -1.56 | -3.14 | -6.11  |
| Peak Value      |                | 2.960  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.17          | 23.03 | 21.64 | 20.85 | 22.41 | 23.66 | 22.07 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 22.43 | 23.03 | 21.25  | 21.78         | 21.52 | 22.00 | 22.70  |
| 60         | 22.44 | 22.87 | 21.22  | 21.99         | 21.72 | 24.66 | 22.05  |
| 90         | 33.57 | 25.72 | 21.58  | 21.98         | 21.92 | 21.28 | 24.75  |
| 120        | 21.79 | 23.08 | 25.52  | 20.86         | 20.68 | 21.78 | 23.53  |
| 150        | 22.15 | 22.45 | 22.54  | 20.29         | 21.71 | 21.85 | 21.85  |
| 180        | 21.94 | 22.20 | 23.35  | 21.22         | 20.90 | 21.81 | 21.93  |
| 210        | 21.64 | 21.91 | 24.33  | 21.16         | 24.19 | 23.90 | 21.93  |
| 240        | 21.76 | 20.69 | 21.92  | 20.24         | 22.13 | 21.20 | 21.02  |
| 270        | 26.12 | 22.89 | 24.29  | 24.73         | 20.69 | 22.21 | 29.60  |
| 300        | 13.20 | 21.86 | 23.46  | 21.79         | 20.59 | 21.84 | 21.90  |
| 330        | 22.42 | 21.83 | 22.11  | 21.82         | 21.75 | 21.59 | 21.48  |
| 360        | 22.17 | 23.03 | 21.64  | 20.85         | 22.41 | 23.66 | 22.07  |
| Avg.       | 25.05 | 22.45 | 22.64  | 21.38         | 21.45 | 22.11 | 23.38  |
| Peak Value |       |       | 33.570 | Minimum Value |       |       | 13.197 |

| Horizontal + Vertical |                |        |                     |       |       |       |        |
|-----------------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |                     |       |       |       |        |
|                       | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 0.75           | -0.03  | 2.68                | 4.10  | 2.09  | -5.37 | -1.14  |
| 30                    | -0.64          | -1.08  | 0.96                | 3.52  | 2.55  | -6.79 | -1.69  |
| 60                    | -4.86          | -3.58  | -2.15               | 2.13  | 2.15  | -5.20 | -4.61  |
| 90                    | -14.65         | -11.13 | -12.53              | -1.41 | 0.80  | -3.21 | -13.61 |
| 120                   | -5.35          | -5.16  | -14.38              | -6.48 | -2.87 | -1.60 | -6.43  |
| 150                   | -0.86          | 0.62   | -4.59               | -7.33 | -0.41 | 3.24  | -1.67  |
| 180                   | 0.49           | -0.76  | -1.42               | -6.81 | -0.04 | 3.29  | -0.28  |
| 210                   | -0.57          | -3.23  | -8.88               | -1.94 | -5.08 | -1.24 | -1.21  |
| 240                   | -4.75          | -4.77  | -4.26               | -3.24 | 0.61  | 2.07  | -5.29  |
| 270                   | -15.05         | -12.04 | -3.65               | 2.54  | 2.89  | 1.75  | -18.73 |
| 300                   | -8.30          | -4.36  | 2.17                | 5.40  | 3.12  | -0.80 | -5.81  |
| 330                   | -0.73          | -0.72  | 3.81                | 5.13  | 2.19  | -2.99 | -1.83  |
| 360                   | 0.75           | -0.03  | 2.68                | 4.10  | 2.09  | -5.37 | -1.14  |
| Avg.                  | -2.76          | -2.90  | -1.20               | 1.27  | 0.85  | -0.57 | -3.61  |
| Peak Value            |                | 5.398  | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |        |       |       |        |
|-----------------|----------------|--------|---------------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |        |       |       |        |
|                 | 0              | 30     | 60                  | 90     | 120   | 150   | 180    |
| 0               | -2.13          | -3.01  | -0.30               | 1.10   | -0.87 | -8.41 | -4.15  |
| 30              | -3.52          | -3.96  | -2.02               | 0.56   | -0.41 | -9.77 | -4.65  |
| 60              | -7.77          | -6.64  | -5.24               | -0.81  | -0.83 | -8.09 | -7.67  |
| 90              | -17.59         | -13.95 | -15.25              | -4.38  | -2.15 | -6.19 | -16.49 |
| 120             | -8.29          | -8.27  | -17.42              | -9.41  | -5.89 | -4.62 | -9.53  |
| 150             | -3.87          | -2.33  | -7.25               | -10.32 | -3.33 | 0.31  | -4.62  |
| 180             | -2.50          | -3.68  | -4.34               | -9.87  | -2.90 | 0.37  | -3.26  |
| 210             | -3.61          | -6.18  | -11.92              | -4.96  | -8.06 | -4.23 | -4.15  |
| 240             | -7.66          | -7.80  | -7.33               | -6.23  | -2.36 | -0.85 | -8.36  |
| 270             | -17.89         | -15.09 | -6.68               | -0.53  | -0.14 | -1.17 | -21.81 |
| 300             | -17.21         | -7.21  | -0.86               | 2.38   | 0.14  | -3.83 | -8.93  |
| 330             | -3.94          | -3.68  | 0.81                | 2.11   | -0.80 | -5.99 | -4.74  |
| 360             | -2.13          | -3.01  | -0.30               | 1.10   | -0.87 | -8.41 | -4.15  |
| Avg.            | -5.81          | -5.85  | -4.19               | -1.73  | -2.13 | -3.52 | -6.59  |
| Peak Value      |                | 2.380  | Minimum Value ##### |        |       |       |        |

| Vertical        |                |        |        |        |       |       |        |
|-----------------|----------------|--------|--------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |        |       |       |        |
|                 | 0              | 30     | 60     | 90     | 120   | 150   | 180    |
| 0               | -2.40          | -3.08  | -0.37  | 1.09   | -0.97 | -8.35 | -4.15  |
| 30              | -3.78          | -4.22  | -2.07  | 0.46   | -0.52 | -9.84 | -4.75  |
| 60              | -7.98          | -6.55  | -5.08  | -0.94  | -0.89 | -8.34 | -7.56  |
| 90              | -17.73         | -14.34 | -15.85 | -4.47  | -2.27 | -6.25 | -16.75 |
| 120             | -8.43          | -8.07  | -17.36 | -9.58  | -5.86 | -4.61 | -9.35  |
| 150             | -3.87          | -2.45  | -7.97  | -10.35 | -3.52 | 0.15  | -4.73  |
| 180             | -2.54          | -3.86  | -4.52  | -9.77  | -3.21 | 0.19  | -3.31  |
| 210             | -3.56          | -6.31  | -11.86 | -4.94  | -8.13 | -4.27 | -4.29  |
| 240             | -7.87          | -7.77  | -7.21  | -6.27  | -2.45 | -1.04 | -8.24  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -18.24 | -15.01 | -6.63         | -0.41 | -0.09 | -1.35 | -21.67 |
| 300        | -8.89  | -7.54  | -0.82         | 2.39  | 0.09  | -3.79 | -8.72  |
| 330        | -3.54  | -3.77  | 0.78          | 2.13  | -0.85 | -6.00 | -4.95  |
| 360        | -2.40  | -3.08  | -0.37         | 1.09  | -0.97 | -8.35 | -4.15  |
| Avg.       | -5.73  | -5.96  | -4.23         | -1.74 | -2.21 | -3.64 | -6.64  |
| Peak Value |        | 2.395  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |        |        |
|-----------------|----------------|--------|---------------|--------|-------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |       |        |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150    | 180    |
| 0               | -2.92          | -3.66  | -1.04         | 0.27   | -1.60 | -8.92  | -4.86  |
| 30              | -4.29          | -4.68  | -2.84         | -0.23  | -1.20 | -10.58 | -5.37  |
| 60              | -8.57          | -7.27  | -6.00         | -1.61  | -1.57 | -8.69  | -8.38  |
| 90              | -17.77         | -14.60 | -16.06        | -5.14  | -2.94 | -6.99  | -17.15 |
| 120             | -9.09          | -8.79  | -18.06        | -10.26 | -6.69 | -5.31  | -10.05 |
| 150             | -4.57          | -3.04  | -8.27         | -11.15 | -4.13 | -0.48  | -5.41  |
| 180             | -3.20          | -4.46  | -5.04         | -10.67 | -3.89 | -0.46  | -3.98  |
| 210             | -4.31          | -6.91  | -12.47        | -5.74  | -8.61 | -4.82  | -4.92  |
| 240             | -8.55          | -8.60  | -7.95         | -7.15  | -3.01 | -1.69  | -8.99  |
| 270             | -18.50         | -15.55 | -7.16         | -0.97  | -1.00 | -1.94  | -22.06 |
| 300             | -9.80          | -8.05  | -1.46         | 1.64   | -0.75 | -4.60  | -9.60  |
| 330             | -4.43          | -4.44  | 0.08          | 1.40   | -1.54 | -6.74  | -5.61  |
| 360             | -2.92          | -3.66  | -1.04         | 0.27   | -1.60 | -8.92  | -4.86  |
| Avg.            | -6.40          | -6.57  | -4.90         | -2.47  | -2.92 | -4.29  | -7.33  |
| Peak Value      |                | 1.643  | Minimum Value |        | ##### |        |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -1.69          | -2.50  | 0.27          | 1.79  | -0.33 | -7.89 | -3.54  |
| 30              | -3.09          | -3.57  | -1.38         | 1.15  | 0.17  | -9.14 | -4.12  |
| 60              | -7.27          | -6.01  | -4.45         | -0.26 | -0.25 | -7.78 | -6.97  |
| 90              | -17.55         | -13.73 | -15.08        | -3.81 | -1.58 | -5.57 | -16.14 |
| 120             | -7.73          | -7.63  | -16.80        | -8.84 | -5.19 | -4.01 | -8.91  |
| 150             | -3.27          | -1.82  | -7.02         | -9.65 | -2.81 | 0.84  | -4.05  |
| 180             | -1.93          | -3.17  | -3.90         | -9.11 | -2.35 | 0.92  | -2.69  |
| 210             | -2.96          | -5.67  | -11.38        | -4.28 | -7.63 | -3.75 | -3.62  |
| 240             | -7.10          | -7.10  | -6.68         | -5.51 | -1.87 | -0.31 | -7.71  |
| 270             | -17.67         | -14.60 | -6.20         | -0.02 | 0.62  | -0.67 | -21.44 |
| 300             | -13.63         | -6.78  | -0.30         | 3.02  | 0.83  | -3.15 | -8.17  |
| 330             | -3.14          | -3.11  | 1.41          | 2.74  | -0.21 | -5.37 | -4.19  |
| 360             | -1.69          | -2.50  | 0.27          | 1.79  | -0.33 | -7.89 | -3.54  |
| Avg.            | -5.23          | -5.33  | -3.62         | -1.11 | -1.52 | -2.97 | -6.01  |
| Peak Value      |                | 3.023  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 23.03          | 23.53 | 22.42 | 21.17 | 22.74 | 24.54 | 22.43 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 23.29 | 23.86 | 21.55  | 22.03         | 22.08 | 21.66 | 22.86  |
| 60         | 22.52 | 22.77 | 21.01  | 22.21         | 22.36 | 25.59 | 21.81  |
| 90         | 37.77 | 26.03 | 24.97  | 22.38         | 22.13 | 21.79 | 24.74  |
| 120        | 22.19 | 23.53 | 22.79  | 21.73         | 21.31 | 22.54 | 23.64  |
| 150        | 22.48 | 23.06 | 22.91  | 21.33         | 22.39 | 22.41 | 22.12  |
| 180        | 22.71 | 22.56 | 23.68  | 20.93         | 21.07 | 22.04 | 22.62  |
| 210        | 22.24 | 22.90 | 24.07  | 21.55         | 24.94 | 24.21 | 22.51  |
| 240        | 21.62 | 21.32 | 22.78  | 20.51         | 23.65 | 22.04 | 22.65  |
| 270        | 26.41 | 25.28 | 25.16  | 25.19         | 20.60 | 22.75 | 28.97  |
| 300        | 13.29 | 22.70 | 23.49  | 22.02         | 20.82 | 21.58 | 21.69  |
| 330        | 22.62 | 22.31 | 22.37  | 22.29         | 22.31 | 22.09 | 21.73  |
| 360        | 23.03 | 23.53 | 22.42  | 21.17         | 22.74 | 24.54 | 22.43  |
| Avg.       | 27.92 | 23.16 | 22.92  | 21.77         | 22.02 | 22.62 | 23.40  |
| Peak Value |       |       | 37.769 | Minimum Value |       |       | 13.293 |

| Horizontal + Vertical |                |        |                     |       |       |       |        |
|-----------------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |                     |       |       |       |        |
|                       | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 0.96           | -0.37  | 2.62                | 4.13  | 2.22  | -5.47 | -1.28  |
| 30                    | -0.09          | -1.41  | 1.16                | 3.62  | 2.66  | -6.70 | -1.75  |
| 60                    | -4.60          | -4.12  | -2.33               | 2.49  | 2.23  | -4.92 | -4.72  |
| 90                    | -13.22         | -11.42 | -13.90              | -1.34 | 0.88  | -2.90 | -13.49 |
| 120                   | -5.09          | -4.91  | -12.62              | -6.30 | -2.96 | -1.92 | -7.17  |
| 150                   | -0.65          | 0.49   | -5.56               | -6.85 | -0.55 | 3.40  | -1.51  |
| 180                   | 0.67           | -0.45  | -1.11               | -6.57 | 0.26  | 3.33  | -0.15  |
| 210                   | -0.29          | -3.28  | -8.87               | -1.82 | -5.00 | -0.95 | -1.09  |
| 240                   | -4.46          | -4.83  | -3.98               | -3.12 | -0.27 | 2.28  | -5.01  |
| 270                   | -14.29         | -11.73 | -3.40               | 2.56  | 2.94  | 1.84  | -16.36 |
| 300                   | -8.31          | -4.58  | 2.24                | 5.47  | 3.11  | -0.69 | -6.65  |
| 330                   | -0.61          | -0.89  | 3.71                | 5.17  | 2.21  | -2.91 | -2.16  |
| 360                   | 0.96           | -0.37  | 2.62                | 4.13  | 2.22  | -5.47 | -1.28  |
| Avg.                  | -2.50          | -3.03  | -1.19               | 1.37  | 0.84  | -0.46 | -3.66  |
| Peak Value            |                | 5.470  | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -1.83          | -3.23  | -0.26               | 1.22  | -0.66 | -8.39 | -4.19  |
| 30              | -3.19          | -4.44  | -1.95               | 0.75  | -0.21 | -9.56 | -4.63  |
| 60              | -7.36          | -7.07  | -5.26               | -0.62 | -0.69 | -7.77 | -7.67  |
| 90              | -16.84         | -14.10 | -16.56              | -4.19 | -1.99 | -5.76 | -16.30 |
| 120             | -7.92          | -7.95  | -15.43              | -9.20 | -5.87 | -4.45 | -9.21  |
| 150             | -3.57          | -2.70  | -9.72               | -9.81 | -3.33 | 0.55  | -4.34  |
| 180             | -2.18          | -3.27  | -3.98               | -9.51 | -2.96 | 0.52  | -3.06  |
| 210             | -3.24          | -6.18  | -11.73              | -4.72 | -7.95 | -3.87 | -3.95  |
| 240             | -7.30          | -7.84  | -6.80               | -6.04 | -3.18 | -0.57 | -8.03  |
| 270             | -17.10         | -14.72 | -6.40               | -0.42 | 0.01  | -1.00 | -19.21 |
| 300             | -16.82         | -7.35  | -0.67               | 2.55  | 0.25  | -3.60 | -8.71  |
| 330             | -3.67          | -3.78  | 0.77                | 2.23  | -0.67 | -5.80 | -5.27  |
| 360             | -1.83          | -3.23  | -0.26               | 1.22  | -0.66 | -8.39 | -4.19  |
| Avg.            | -5.48          | -5.98  | -4.16               | -1.57 | -2.06 | -3.29 | -6.50  |
| Peak Value      |                | 2.548  | Minimum Value ##### |       |       |       |        |

| Vertical        |                |        |        |       |       |       |        |
|-----------------|----------------|--------|--------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |       |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150   | 180    |
| 0               | -2.28          | -3.54  | -0.52  | 1.03  | -0.93 | -8.57 | -4.39  |
| 30              | -3.02          | -4.41  | -1.75  | 0.46  | -0.49 | -9.86 | -4.90  |
| 60              | -7.88          | -7.20  | -5.42  | -0.43 | -0.87 | -8.09 | -7.79  |
| 90              | -15.70         | -14.79 | -17.31 | -4.52 | -2.28 | -6.06 | -16.71 |
| 120             | -8.28          | -7.90  | -15.83 | -9.43 | -6.08 | -5.46 | -11.42 |
| 150             | -3.76          | -2.34  | -7.66  | -9.91 | -3.79 | 0.21  | -4.71  |
| 180             | -2.50          | -3.66  | -4.28  | -9.66 | -2.55 | 0.10  | -3.26  |
| 210             | -3.36          | -6.40  | -12.03 | -4.93 | -8.07 | -4.06 | -4.26  |
| 240             | -7.66          | -7.85  | -7.20  | -6.22 | -3.38 | -0.90 | -8.02  |

|            |        |        |                     |       |       |       |        |
|------------|--------|--------|---------------------|-------|-------|-------|--------|
| 270        | -17.50 | -14.76 | -6.42               | -0.47 | -0.16 | -1.34 | -19.53 |
| 300        | -8.97  | -7.85  | -0.87               | 2.37  | -0.07 | -3.81 | -10.87 |
| 330        | -3.57  | -4.02  | 0.63                | 2.08  | -0.94 | -6.04 | -5.07  |
| 360        | -2.28  | -3.54  | -0.52               | 1.03  | -0.93 | -8.57 | -4.39  |
| Avg.       | -5.54  | -6.10  | -4.25               | -1.72 | -2.28 | -3.65 | -6.83  |
| Peak Value |        | 2.369  | Minimum Value ##### |       |       |       |        |

| RHCP            |                |        |                     |        |       |       |        |
|-----------------|----------------|--------|---------------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |        |       |       |        |
|                 | 0              | 30     | 60                  | 90     | 120   | 150   | 180    |
| 0               | -2.68          | -3.99  | -1.10               | 0.31   | -1.45 | -9.05 | -4.95  |
| 30              | -3.92          | -5.37  | -2.53               | -0.12  | -1.06 | -9.44 | -5.43  |
| 60              | -8.29          | -7.82  | -6.14               | -0.98  | -1.50 | -8.43 | -8.46  |
| 90              | -20.74         | -14.85 | -17.21              | -5.07  | -2.88 | -6.63 | -17.08 |
| 120             | -8.79          | -8.52  | -16.33              | -10.10 | -6.80 | -6.31 | -11.44 |
| 150             | -4.31          | -3.26  | -8.77               | -10.70 | -4.24 | -0.30 | -5.25  |
| 180             | -3.14          | -4.15  | -4.74               | -10.42 | -3.00 | -0.41 | -3.84  |
| 210             | -4.00          | -6.94  | -12.40              | -5.61  | -8.59 | -4.54 | -4.77  |
| 240             | -8.19          | -8.63  | -7.24               | -6.96  | -3.85 | -1.45 | -8.64  |
| 270             | -17.61         | -15.33 | -6.88               | -0.93  | -1.00 | -1.77 | -19.78 |
| 300             | -9.67          | -8.21  | -1.38               | 1.72   | -0.68 | -4.47 | -10.78 |
| 330             | -4.33          | -4.61  | 0.01                | 1.45   | -1.47 | -6.57 | -5.71  |
| 360             | -2.68          | -3.99  | -1.10               | 0.31   | -1.45 | -9.05 | -4.95  |
| Avg.            | -6.18          | -6.75  | -4.84               | -2.33  | -2.86 | -4.16 | -7.36  |
| Peak Value      |                | 1.721  | Minimum Value ##### |        |       |       |        |

| LHCP            |                |        |                     |       |       |        |        |
|-----------------|----------------|--------|---------------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |        |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150    | 180    |
| 0               | -1.49          | -2.85  | 0.22                | 1.81  | -0.22 | -7.97  | -3.71  |
| 30              | -2.41          | -3.65  | -1.26               | 1.24  | 0.26  | -10.00 | -4.18  |
| 60              | -7.03          | -6.54  | -4.66               | -0.11 | -0.16 | -7.47  | -7.10  |
| 90              | -14.07         | -14.05 | -16.64              | -3.74 | -1.50 | -5.29  | -15.98 |
| 120             | -7.50          | -7.40  | -15.02              | -8.65 | -5.28 | -3.88  | -9.21  |
| 150             | -3.10          | -1.89  | -8.38               | -9.16 | -2.97 | 0.98   | -3.89  |
| 180             | -1.66          | -2.87  | -3.58               | -8.89 | -2.52 | 0.93   | -2.57  |
| 210             | -2.70          | -5.72  | -11.41              | -4.16 | -7.49 | -3.45  | -3.52  |
| 240             | -6.86          | -7.18  | -6.76               | -5.43 | -2.77 | -0.12  | -7.49  |
| 270             | -17.00         | -14.21 | -5.98               | -0.01 | 0.69  | -0.64  | -18.99 |
| 300             | -14.01         | -7.05  | -0.23               | 3.09  | 0.76  | -3.05  | -8.77  |
| 330             | -3.02          | -3.29  | 1.29                | 2.76  | -0.22 | -5.35  | -4.68  |
| 360             | -1.49          | -2.85  | 0.22                | 1.81  | -0.22 | -7.97  | -3.71  |
| Avg.            | -4.94          | -5.43  | -3.65               | -1.04 | -1.57 | -2.87  | -6.06  |
| Peak Value      |                | 3.090  | Minimum Value ##### |       |       |        |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\Theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 23.31          | 23.62 | 22.37 | 21.30 | 23.02 | 24.15 | 22.92 |

|            |       |       |        |               |       |       |       |
|------------|-------|-------|--------|---------------|-------|-------|-------|
| 30         | 21.29 | 20.15 | 22.75  | 22.16         | 22.38 | 29.97 | 22.92 |
| 60         | 22.77 | 22.68 | 21.41  | 25.96         | 22.30 | 25.14 | 22.15 |
| 90         | 8.72  | 26.67 | 29.79  | 22.36         | 22.00 | 22.32 | 23.96 |
| 120        | 22.62 | 23.85 | 22.43  | 21.56         | 21.22 | 17.13 | 17.87 |
| 150        | 23.14 | 22.06 | 32.98  | 21.05         | 22.75 | 22.69 | 22.13 |
| 180        | 21.38 | 22.64 | 23.51  | 21.13         | 31.28 | 22.26 | 22.76 |
| 210        | 22.48 | 23.05 | 24.95  | 21.61         | 23.97 | 23.99 | 22.91 |
| 240        | 22.38 | 21.59 | 31.08  | 21.15         | 24.17 | 22.32 | 23.57 |
| 270        | 29.17 | 23.86 | 25.76  | 25.61         | 20.29 | 23.75 | 26.77 |
| 300        | 12.22 | 23.50 | 23.58  | 22.08         | 21.63 | 21.76 | 18.78 |
| 330        | 22.46 | 22.42 | 22.66  | 22.43         | 22.85 | 23.06 | 24.51 |
| 360        | 23.31 | 23.62 | 22.37  | 21.30         | 23.02 | 24.15 | 22.92 |
| Avg.       | 22.74 | 22.94 | 26.80  | 22.37         | 24.07 | 23.87 | 22.79 |
| Peak Value |       |       | 32.976 | Minimum Value |       |       | 8.723 |

| Horizontal + Vertical |                |        |                     |       |       |       |        |
|-----------------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |                     |       |       |       |        |
|                       | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 1.07           | -0.71  | 2.42                | 3.87  | 2.18  | -6.10 | -1.47  |
| 30                    | 0.35           | -1.96  | 0.98                | 3.43  | 2.64  | -7.06 | -1.77  |
| 60                    | -4.32          | -4.12  | -1.92               | 2.56  | 2.32  | -5.14 | -4.04  |
| 90                    | -12.62         | -11.25 | -15.72              | -1.54 | 1.07  | -2.74 | -13.02 |
| 120                   | -6.24          | -6.43  | -11.18              | -5.84 | -3.23 | -1.94 | -7.13  |
| 150                   | -0.78          | 0.39   | -5.34               | -6.65 | -1.61 | 2.86  | -2.05  |
| 180                   | 0.59           | -0.40  | -1.00               | -6.65 | -0.12 | 3.23  | -0.32  |
| 210                   | -0.13          | -3.51  | -8.63               | -2.46 | -5.34 | -0.93 | -1.05  |
| 240                   | -4.58          | -4.79  | -4.26               | -2.93 | -0.43 | 1.82  | -4.44  |
| 270                   | -12.27         | -10.80 | -3.37               | 2.30  | 2.66  | 1.89  | -15.46 |
| 300                   | -8.09          | -4.75  | 1.71                | 5.15  | 2.92  | -0.85 | -6.63  |
| 330                   | -0.53          | -1.37  | 3.50                | 5.01  | 2.32  | -3.06 | -2.26  |
| 360                   | 1.07           | -0.71  | 2.42                | 3.87  | 2.18  | -6.10 | -1.47  |
| Avg.                  | -2.43          | -3.28  | -1.35               | 1.18  | 0.71  | -0.67 | -3.69  |
| Peak Value            |                | 5.151  | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -1.74          | -3.58  | -0.48               | 0.95  | -0.70 | -9.04 | -4.39  |
| 30              | -2.50          | -5.07  | -2.07               | 0.57  | -0.24 | -9.92 | -4.75  |
| 60              | -7.13          | -6.68  | -4.26               | -0.29 | -0.50 | -8.45 | -6.46  |
| 90              | -16.55         | -13.95 | -18.48              | -4.42 | -2.05 | -5.64 | -15.83 |
| 120             | -10.25         | -8.22  | -13.71              | -9.24 | -6.15 | -4.55 | -9.14  |
| 150             | -3.72          | -2.83  | -9.47               | -9.71 | -5.20 | -0.54 | -5.23  |
| 180             | -2.30          | -3.24  | -3.89               | -9.58 | -3.37 | 0.38  | -3.22  |
| 210             | -2.84          | -6.63  | -12.10              | -4.92 | -8.33 | -4.04 | -4.19  |
| 240             | -7.40          | -7.37  | -7.17               | -5.50 | -3.39 | -1.36 | -6.80  |
| 270             | -16.50         | -14.15 | -6.41               | -0.70 | -0.24 | -1.22 | -18.34 |
| 300             | -16.25         | -7.59  | -0.78               | 2.35  | 0.01  | -3.76 | -8.76  |
| 330             | -3.55          | -4.56  | 0.60                | 2.17  | -0.61 | -5.75 | -5.30  |
| 360             | -1.74          | -3.58  | -0.48               | 0.95  | -0.70 | -9.04 | -4.39  |
| Avg.            | -5.41          | -6.21  | -4.21               | -1.68 | -2.25 | -3.71 | -6.54  |
| Peak Value      |                | 2.346  | Minimum Value ##### |       |       |       |        |

| Vertical        |                |        |        |       |       |        |        |
|-----------------|----------------|--------|--------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |        |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150    | 180    |
| 0               | -2.14          | -3.86  | -0.71  | 0.77  | -0.96 | -9.17  | -4.57  |
| 30              | -2.82          | -4.88  | -1.98  | 0.26  | -0.50 | -10.24 | -4.81  |
| 60              | -7.54          | -7.64  | -5.72  | -0.62 | -0.89 | -7.88  | -7.75  |
| 90              | -14.88         | -14.58 | -18.99 | -4.69 | -1.83 | -5.86  | -16.25 |
| 120             | -8.44          | -11.12 | -14.72 | -8.50 | -6.34 | -5.38  | -11.44 |
| 150             | -3.85          | -2.42  | -7.46  | -9.62 | -4.11 | 0.21   | -4.91  |
| 180             | -2.55          | -3.59  | -4.12  | -9.73 | -2.90 | 0.05   | -3.46  |
| 210             | -3.47          | -6.41  | -11.22 | -6.11 | -8.37 | -3.84  | -3.95  |
| 240             | -7.79          | -8.28  | -7.37  | -6.42 | -3.49 | -1.02  | -8.23  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -14.34 | -13.50 | -6.36         | -0.71 | -0.46 | -1.02 | -18.60 |
| 300        | -8.80  | -7.95  | -1.89         | 1.93  | -0.19 | -3.97 | -10.75 |
| 330        | -3.53  | -4.21  | 0.38          | 1.82  | -0.78 | -6.42 | -5.23  |
| 360        | -2.14  | -3.86  | -0.71         | 0.77  | -0.96 | -9.17 | -4.57  |
| Avg.       | -5.48  | -6.38  | -4.52         | -1.99 | -2.34 | -3.65 | -6.88  |
| Peak Value |        | 1.925  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |       |        |
|-----------------|----------------|--------|---------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |               |        |       |       |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150   | 180    |
| 0               | -2.64          | -4.39  | -1.43         | -0.05  | -1.54 | -9.76 | -5.23  |
| 30              | -3.39          | -6.01  | -2.77         | -0.40  | -1.14 | -9.81 | -5.78  |
| 60              | -8.02          | -7.54  | -5.72         | -1.22  | -1.64 | -9.60 | -7.53  |
| 90              | -19.59         | -14.64 | -19.16        | -5.35  | -2.51 | -6.58 | -16.58 |
| 120             | -9.41          | -10.74 | -16.03        | -9.00  | -7.12 | -6.44 | -11.61 |
| 150             | -4.50          | -3.47  | -8.48         | -10.91 | -5.36 | -1.05 | -5.67  |
| 180             | -3.32          | -4.17  | -4.70         | -10.62 | -3.40 | -0.54 | -4.13  |
| 210             | -3.80          | -8.31  | -16.79        | -6.42  | -9.15 | -6.14 | -4.99  |
| 240             | -8.37          | -8.28  | -7.51         | -5.72  | -4.19 | -1.90 | -7.88  |
| 270             | -19.22         | -17.72 | -6.97         | -1.28  | -1.37 | -1.88 | -19.10 |
| 300             | -9.45          | -8.53  | -1.99         | 1.66   | -0.86 | -4.65 | -10.75 |
| 330             | -4.23          | -5.10  | -0.26         | 1.07   | -1.44 | -6.38 | -5.79  |
| 360             | -2.64          | -4.39  | -1.43         | -0.05  | -1.54 | -9.76 | -5.23  |
| Avg.            | -6.13          | -7.15  | -5.11         | -2.55  | -3.06 | -4.57 | -7.47  |
| Peak Value      |                | 1.661  | Minimum Value |        | ##### |       |        |

| LHCP            |                |        |               |       |       |        |        |
|-----------------|----------------|--------|---------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |               |       |       |        |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150    | 180    |
| 0               | -1.33          | -3.13  | 0.11          | 1.62  | -0.22 | -8.54  | -3.83  |
| 30              | -2.03          | -4.14  | -1.39         | 1.11  | 0.28  | -10.36 | -3.97  |
| 60              | -6.73          | -6.76  | -4.26         | 0.20  | 0.09  | -7.07  | -6.62  |
| 90              | -13.60         | -13.91 | -18.34        | -3.88 | -1.44 | -5.05  | -15.55 |
| 120             | -9.10          | -8.43  | -12.90        | -8.72 | -5.51 | -3.84  | -9.05  |
| 150             | -3.17          | -1.91  | -8.22         | -8.70 | -4.00 | 0.59   | -4.53  |
| 180             | -1.68          | -2.77  | -3.41         | -8.87 | -2.87 | 0.86   | -2.66  |
| 210             | -2.57          | -5.25  | -9.35         | -4.69 | -7.68 | -2.48  | -3.30  |
| 240             | -6.92          | -7.37  | -7.04         | -6.16 | -2.80 | -0.58  | -7.07  |
| 270             | -13.25         | -11.79 | -5.87         | -0.20 | 0.48  | -0.47  | -17.91 |
| 300             | -13.78         | -7.11  | -0.70         | 2.57  | 0.57  | -3.19  | -8.75  |
| 330             | -2.94          | -3.77  | 1.14          | 2.76  | -0.06 | -5.79  | -4.80  |
| 360             | -1.33          | -3.13  | 0.11          | 1.62  | -0.22 | -8.54  | -3.83  |
| Avg.            | -4.85          | -5.57  | -3.72         | -1.21 | -1.65 | -2.94  | -6.06  |
| Peak Value      |                | 2.765  | Minimum Value |       | ##### |        |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\Theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.46          | 22.81 | 21.10 | 20.37 | 22.36 | 23.11 | 21.91 |

|            |       |       |        |               |       |       |       |
|------------|-------|-------|--------|---------------|-------|-------|-------|
| 30         | 22.20 | 19.39 | 22.05  | 21.25         | 21.82 | 30.05 | 19.69 |
| 60         | 22.59 | 26.99 | 21.52  | 21.78         | 20.08 | 16.77 | 25.61 |
| 90         | 9.58  | 27.56 | 26.44  | 21.47         | 24.23 | 21.13 | 24.50 |
| 120        | 34.93 | 17.58 | 14.98  | 35.75         | 20.67 | 16.56 | 16.68 |
| 150        | 22.33 | 20.91 | 36.56  | 17.93         | 22.13 | 20.50 | 23.66 |
| 180        | 20.53 | 21.87 | 22.65  | 19.95         | 30.32 | 21.86 | 21.50 |
| 210        | 23.01 | 15.16 | 7.87   | 20.05         | 21.44 | 13.65 | 20.25 |
| 240        | 21.58 | 25.67 | 31.30  | 32.06         | 21.98 | 22.38 | 26.62 |
| 270        | 9.61  | 9.65  | 23.99  | 24.15         | 19.50 | 21.82 | 23.34 |
| 300        | 12.24 | 21.81 | 22.61  | 25.61         | 21.72 | 21.54 | 18.83 |
| 330        | 22.60 | 22.33 | 21.92  | 20.22         | 22.04 | 29.35 | 24.85 |
| 360        | 22.46 | 22.81 | 21.10  | 20.37         | 22.36 | 23.11 | 21.91 |
| Avg.       | 25.37 | 22.69 | 27.65  | 27.24         | 23.24 | 23.71 | 22.80 |
| Peak Value |       |       | 36.560 | Minimum Value |       |       | 7.869 |

| Horizontal + Vertical |                |        |                     |       |       |       |        |
|-----------------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |        |                     |       |       |       |        |
|                       | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 1.32           | -0.90  | 2.44                | 4.01  | 2.55  | -6.13 | -1.57  |
| 30                    | 0.56           | -2.41  | 0.99                | 3.59  | 3.01  | -6.95 | -1.70  |
| 60                    | -4.00          | -4.55  | -2.06               | 2.74  | 2.62  | -4.62 | -4.19  |
| 90                    | -11.60         | -10.77 | -18.70              | -1.26 | 1.30  | -2.38 | -12.83 |
| 120                   | -5.87          | -5.92  | -9.79               | -5.34 | -3.23 | -1.69 | -6.64  |
| 150                   | -0.45          | 0.78   | -4.65               | -5.98 | -1.59 | 3.06  | -1.66  |
| 180                   | 0.88           | 0.14   | -0.54               | -6.17 | -0.09 | 3.35  | -0.06  |
| 210                   | 0.11           | -3.29  | -8.08               | -2.17 | -5.19 | -0.83 | -0.89  |
| 240                   | -4.27          | -4.87  | -4.07               | -2.55 | -0.26 | 2.06  | -4.25  |
| 270                   | -11.67         | -10.35 | -3.10               | 2.45  | 2.81  | 2.09  | -13.82 |
| 300                   | -7.91          | -4.79  | 1.91                | 5.30  | 3.18  | -0.53 | -6.50  |
| 330                   | -0.35          | -1.47  | 3.51                | 5.10  | 2.61  | -3.09 | -2.32  |
| 360                   | 1.32           | -0.90  | 2.44                | 4.01  | 2.55  | -6.13 | -1.57  |
| Avg.                  | -2.17          | -3.19  | -1.22               | 1.35  | 0.95  | -0.47 | -3.56  |
| Peak Value            |                | 5.296  | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -1.49          | -3.77  | -0.45               | 1.10  | -0.32 | -9.08 | -4.48  |
| 30              | -2.28          | -5.52  | -2.06               | 0.75  | 0.11  | -9.68 | -4.75  |
| 60              | -6.82          | -7.09  | -4.40               | -0.13 | -0.18 | -7.93 | -6.57  |
| 90              | -15.38         | -13.53 | -21.72              | -4.14 | -1.81 | -5.33 | -15.60 |
| 120             | -9.71          | -7.71  | -12.30              | -8.69 | -6.14 | -4.33 | -8.73  |
| 150             | -3.41          | -2.47  | -8.73               | -9.01 | -5.28 | -0.35 | -4.86  |
| 180             | -2.00          | -2.69  | -3.37               | -9.06 | -3.42 | 0.50  | -2.95  |
| 210             | -2.61          | -6.46  | -11.81              | -4.64 | -8.05 | -3.83 | -4.08  |
| 240             | -7.12          | -7.45  | -7.01               | -5.14 | -3.17 | -1.10 | -6.66  |
| 270             | -15.69         | -13.64 | -6.14               | -0.54 | -0.05 | -1.06 | -16.81 |
| 300             | -15.84         | -7.69  | -0.60               | 2.49  | 0.22  | -3.45 | -8.71  |
| 330             | -3.43          | -4.61  | 0.61                | 2.28  | -0.33 | -5.76 | -5.44  |
| 360             | -1.49          | -3.77  | -0.45               | 1.10  | -0.32 | -9.08 | -4.48  |
| Avg.            | -5.14          | -6.12  | -4.08               | -1.49 | -2.02 | -3.51 | -6.43  |
| Peak Value      |                | 2.486  | Minimum Value ##### |       |       |       |        |

| Vertical        |                |        |        |       |       |        |        |
|-----------------|----------------|--------|--------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |        |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150    | 180    |
| 0               | -1.90          | -4.06  | -0.70  | 0.89  | -0.60 | -9.20  | -4.68  |
| 30              | -2.64          | -5.33  | -1.98  | 0.41  | -0.11 | -10.27 | -4.67  |
| 60              | -7.21          | -8.08  | -5.88  | -0.42 | -0.62 | -7.36  | -7.95  |
| 90              | -13.96         | -14.06 | -21.70 | -4.41 | -1.61 | -5.46  | -16.10 |
| 120             | -8.19          | -10.63 | -13.37 | -8.03 | -6.34 | -5.11  | -10.82 |
| 150             | -3.52          | -2.01  | -6.80  | -8.98 | -4.01 | 0.41   | -4.50  |
| 180             | -2.27          | -3.05  | -3.73  | -9.31 | -2.80 | 0.18   | -3.20  |
| 210             | -3.21          | -6.15  | -10.47 | -5.80 | -8.35 | -3.86  | -3.73  |
| 240             | -7.44          | -8.36  | -7.14  | -6.03 | -3.37 | -0.81  | -7.97  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -13.86 | -13.09 | -6.08         | -0.57 | -0.36 | -0.78 | -16.85 |
| 300        | -8.67  | -7.90  | -1.66         | 2.08  | 0.13  | -3.62 | -10.48 |
| 330        | -3.30  | -4.36  | 0.38          | 1.89  | -0.47 | -6.48 | -5.22  |
| 360        | -1.90  | -4.06  | -0.70         | 0.89  | -0.60 | -9.20 | -4.68  |
| Avg.       | -5.22  | -6.29  | -4.39         | -1.82 | -2.10 | -3.45 | -6.70  |
| Peak Value |        | 2.075  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |       |       |        |
|-----------------|----------------|--------|---------------|--------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |       |       |        |
|                 | 0              | 30     | 60            | 90     | 120   | 150   | 180    |
| 0               | -2.43          | -4.63  | -1.44         | 0.05   | -1.20 | -9.78 | -5.37  |
| 30              | -3.21          | -6.51  | -2.77         | -0.25  | -0.81 | -9.79 | -5.77  |
| 60              | -7.74          | -7.90  | -5.89         | -1.08  | -1.38 | -9.11 | -7.60  |
| 90              | -18.30         | -14.24 | -22.18        | -5.14  | -2.30 | -6.15 | -16.45 |
| 120             | -9.08          | -10.30 | -14.19        | -8.52  | -7.14 | -6.26 | -11.13 |
| 150             | -4.23          | -3.12  | -7.86         | -10.27 | -5.37 | -0.85 | -5.31  |
| 180             | -3.07          | -3.63  | -4.29         | -10.10 | -3.39 | -0.45 | -3.91  |
| 210             | -3.55          | -8.14  | -15.56        | -6.19  | -8.99 | -6.10 | -4.86  |
| 240             | -8.04          | -8.38  | -7.34         | -5.40  | -4.11 | -1.72 | -7.74  |
| 270             | -18.55         | -16.86 | -6.84         | -1.13  | -1.22 | -1.72 | -17.31 |
| 300             | -9.23          | -8.60  | -1.84         | 1.77   | -0.59 | -4.34 | -10.67 |
| 330             | -4.04          | -5.20  | -0.26         | 1.13   | -1.16 | -6.57 | -5.95  |
| 360             | -2.43          | -4.63  | -1.44         | 0.05   | -1.20 | -9.78 | -5.37  |
| Avg.            | -5.89          | -7.09  | -5.01         | -2.40  | -2.84 | -4.40 | -7.37  |
| Peak Value      |                | 1.771  | Minimum Value |        | ##### |       |        |

| LHCP            |                |        |               |       |       |        |        |
|-----------------|----------------|--------|---------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |        |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150    | 180    |
| 0               | -1.06          | -3.30  | 0.15          | 1.78  | 0.18  | -8.58  | -3.91  |
| 30              | -1.81          | -4.56  | -1.38         | 1.28  | 0.68  | -10.15 | -3.86  |
| 60              | -6.38          | -7.24  | -4.39         | 0.41  | 0.41  | -6.54  | -6.84  |
| 90              | -12.65         | -13.37 | -21.29        | -3.55 | -1.19 | -4.75  | -15.31 |
| 120             | -8.69          | -7.89  | -11.76        | -8.18 | -5.49 | -3.56  | -8.55  |
| 150             | -2.81          | -1.50  | -7.47         | -8.01 | -3.94 | 0.79   | -4.12  |
| 180             | -1.37          | -2.22  | -2.91         | -8.43 | -2.83 | 1.01   | -2.37  |
| 210             | -2.33          | -5.01  | -8.93         | -4.36 | -7.53 | -2.36  | -3.12  |
| 240             | -6.63          | -7.43  | -6.83         | -5.73 | -2.56 | -0.30  | -6.84  |
| 270             | -12.67         | -11.44 | -5.49         | -0.05 | 0.62  | -0.24  | -16.40 |
| 300             | -13.71         | -7.12  | -0.47         | 2.75  | 0.83  | -2.86  | -8.59  |
| 330             | -2.78          | -3.87  | 1.14          | 2.88  | 0.26  | -5.68  | -4.78  |
| 360             | -1.06          | -3.30  | 0.15          | 1.78  | 0.18  | -8.58  | -3.91  |
| Avg.            | -4.57          | -5.46  | -3.57         | -1.02 | -1.39 | -2.72  | -5.89  |
| Peak Value      |                | 2.878  | Minimum Value |       | ##### |        |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.04          | 22.36 | 20.78 | 20.08 | 22.01 | 23.21 | 21.57 |

|            |       |       |        |               |       |       |       |
|------------|-------|-------|--------|---------------|-------|-------|-------|
| 30         | 21.91 | 19.04 | 21.97  | 21.15         | 21.35 | 33.68 | 19.20 |
| 60         | 22.14 | 28.30 | 21.28  | 21.38         | 19.76 | 16.64 | 27.14 |
| 90         | 10.05 | 25.94 | 25.88  | 20.82         | 23.87 | 21.93 | 23.68 |
| 120        | 33.06 | 17.22 | 17.13  | 34.13         | 20.46 | 16.25 | 16.61 |
| 150        | 21.73 | 20.63 | 32.87  | 17.76         | 21.74 | 20.56 | 23.36 |
| 180        | 20.22 | 21.83 | 22.02  | 20.36         | 29.84 | 21.51 | 21.11 |
| 210        | 23.10 | 14.97 | 8.77   | 19.58         | 21.53 | 13.49 | 20.03 |
| 240        | 21.83 | 25.22 | 30.73  | 34.30         | 21.01 | 21.76 | 25.76 |
| 270        | 9.73  | 10.40 | 22.18  | 24.08         | 19.55 | 21.42 | 25.62 |
| 300        | 11.97 | 21.44 | 22.08  | 25.03         | 21.78 | 21.36 | 18.48 |
| 330        | 22.83 | 22.29 | 21.89  | 19.98         | 21.78 | 25.87 | 23.40 |
| 360        | 22.04 | 22.36 | 20.78  | 20.08         | 22.01 | 23.21 | 21.57 |
| Avg.       | 24.10 | 22.53 | 25.50  | 27.13         | 22.87 | 24.74 | 22.84 |
| Peak Value |       |       | 34.303 | Minimum Value |       |       | 8.773 |

| Horizontal + Vertical |                |       |                     |       |       |       |        |
|-----------------------|----------------|-------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |       |                     |       |       |       |        |
|                       | 0              | 30    | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 1.36           | -1.19 | 2.23                | 3.87  | 2.72  | -6.60 | -1.74  |
| 30                    | 0.57           | -2.67 | 1.03                | 3.57  | 3.16  | -7.30 | -1.71  |
| 60                    | -3.07          | -5.05 | -1.74               | 2.62  | 2.83  | -4.60 | -3.67  |
| 90                    | -10.18         | -8.73 | -13.61              | -0.69 | 1.60  | -2.05 | -11.16 |
| 120                   | -6.94          | -5.74 | -9.11               | -4.91 | -1.84 | -1.93 | -7.60  |
| 150                   | -0.87          | 0.51  | -5.54               | -5.81 | -2.75 | 2.89  | -2.15  |
| 180                   | 0.69           | 0.81  | -0.18               | -6.17 | 0.06  | 3.93  | -0.33  |
| 210                   | 0.22           | -3.01 | -8.01               | -2.81 | -5.70 | -1.00 | -0.95  |
| 240                   | -2.89          | -4.80 | -4.30               | -2.21 | -0.53 | 1.70  | -3.94  |
| 270                   | -10.39         | -9.69 | -4.82               | 0.54  | 2.31  | 2.22  | -12.13 |
| 300                   | -7.48          | -6.27 | 1.85                | 5.03  | 3.23  | 0.01  | -6.43  |
| 330                   | -0.68          | -1.84 | 3.28                | 5.06  | 2.69  | -3.20 | -2.73  |
| 360                   | 1.36           | -1.19 | 2.23                | 3.87  | 2.72  | -6.60 | -1.74  |
| Avg.                  | -2.12          | -3.23 | -1.35               | 1.13  | 0.99  | -0.40 | -3.66  |
| Peak Value            |                | 5.056 | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |        |        |
|-----------------|----------------|--------|---------------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |        |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150    | 180    |
| 0               | -1.50          | -4.14  | -0.70               | 0.92  | -0.22 | -9.59  | -4.71  |
| 30              | -2.29          | -5.58  | -1.88               | 0.65  | 0.21  | -10.26 | -4.66  |
| 60              | -5.35          | -7.72  | -4.83               | -0.31 | -0.13 | -7.46  | -6.72  |
| 90              | -13.04         | -11.60 | -16.38              | -3.11 | -1.32 | -5.05  | -13.25 |
| 120             | -9.80          | -7.61  | -12.16              | -7.98 | -4.84 | -4.95  | -10.59 |
| 150             | -4.29          | -2.36  | -8.31               | -8.79 | -5.64 | -0.58  | -5.05  |
| 180             | -2.28          | -2.51  | -3.28               | -9.13 | -2.88 | 1.00   | -3.32  |
| 210             | -2.77          | -5.93  | -12.01              | -5.83 | -8.63 | -3.95  | -3.92  |
| 240             | -5.85          | -7.73  | -7.34               | -5.27 | -3.42 | -1.21  | -7.00  |
| 270             | -13.17         | -12.63 | -7.83               | -2.50 | -0.59 | -0.78  | -14.28 |
| 300             | -15.08         | -9.23  | -0.73               | 2.03  | 0.22  | -3.01  | -8.75  |
| 330             | -3.43          | -4.71  | 0.30                | 2.04  | -0.31 | -6.27  | -5.63  |
| 360             | -1.50          | -4.14  | -0.70               | 0.92  | -0.22 | -9.59  | -4.71  |
| Avg.            | -5.09          | -6.16  | -4.27               | -1.82 | -1.96 | -3.44  | -6.58  |
| Peak Value      |                | 2.044  | Minimum Value ##### |       |       |        |        |

| Vertical        |                |        |        |       |       |        |        |
|-----------------|----------------|--------|--------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |        |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150    | 180    |
| 0               | -1.81          | -4.26  | -0.86  | 0.80  | -0.35 | -9.64  | -4.79  |
| 30              | -2.60          | -5.79  | -2.08  | 0.47  | 0.09  | -10.35 | -4.78  |
| 60              | -6.96          | -8.44  | -4.67  | -0.47 | -0.23 | -7.76  | -6.63  |
| 90              | -13.36         | -11.89 | -16.87 | -4.39 | -1.51 | -5.08  | -15.34 |
| 120             | -10.11         | -10.29 | -12.07 | -7.87 | -4.87 | -4.93  | -10.63 |
| 150             | -3.50          | -2.63  | -8.81  | -8.86 | -5.88 | 0.29   | -5.27  |
| 180             | -2.35          | -1.91  | -3.10  | -9.23 | -3.02 | 0.84   | -3.35  |
| 210             | -2.81          | -6.11  | -10.21 | -5.81 | -8.80 | -4.06  | -4.01  |
| 240             | -5.96          | -7.89  | -7.27  | -5.16 | -3.67 | -1.41  | -6.90  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -13.65 | -12.76 | -7.83         | -2.45 | -0.80 | -0.81 | -16.23 |
| 300        | -8.30  | -9.33  | -1.62         | 2.01  | 0.23  | -2.99 | -10.26 |
| 330        | -3.97  | -4.99  | 0.24          | 2.05  | -0.33 | -6.16 | -5.84  |
| 360        | -1.81  | -4.26  | -0.86         | 0.80  | -0.35 | -9.64 | -4.79  |
| Avg.       | -5.17  | -6.33  | -4.44         | -1.94 | -2.08 | -3.38 | -6.77  |
| Peak Value |        | 2.047  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |       |       |        |        |
|-----------------|----------------|--------|---------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |        |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150    | 180    |
| 0               | -2.33          | -4.85  | -1.59         | -0.01 | -0.96 | -10.20 | -5.44  |
| 30              | -3.11          | -6.28  | -2.78         | -0.24 | -0.59 | -11.01 | -5.41  |
| 60              | -6.35          | -8.24  | -5.53         | -1.14 | -0.91 | -8.29  | -7.41  |
| 90              | -13.62         | -12.31 | -17.39        | -5.05 | -2.17 | -5.84  | -13.02 |
| 120             | -10.77         | -10.14 | -12.73        | -8.84 | -5.65 | -5.61  | -11.17 |
| 150             | -4.34          | -3.15  | -9.48         | -9.69 | -6.55 | -0.94  | -5.84  |
| 180             | -3.03          | -3.00  | -3.53         | -9.15 | -3.83 | 0.16   | -3.93  |
| 210             | -3.54          | -6.71  | -15.23        | -6.59 | -9.39 | -4.60  | -4.67  |
| 240             | -6.64          | -8.78  | -7.48         | -6.05 | -4.25 | -2.10  | -7.73  |
| 270             | -14.08         | -13.33 | -8.41         | -3.00 | -1.55 | -1.51  | -13.74 |
| 300             | -8.80          | -10.10 | -1.79         | 1.36  | -0.89 | -3.69  | -10.64 |
| 330             | -4.50          | -5.62  | -0.36         | 1.31  | -1.05 | -6.96  | -6.57  |
| 360             | -2.33          | -4.85  | -1.59         | -0.01 | -0.96 | -10.20 | -5.44  |
| Avg.            | -5.72          | -6.96  | -5.05         | -2.64 | -2.82 | -4.15  | -7.33  |
| Peak Value      |                | 1.357  | Minimum Value |       | ##### |        |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -1.07          | -3.63  | -0.10         | 1.58  | 0.30  | -9.10 | -4.16  |
| 30              | -1.86          | -5.16  | -1.30         | 1.24  | 0.78  | -9.70 | -4.12  |
| 60              | -5.83          | -7.89  | -4.09         | 0.25  | 0.44  | -7.03 | -6.05  |
| 90              | -12.81         | -11.24 | -15.96        | -2.68 | -0.77 | -4.40 | -15.73 |
| 120             | -9.27          | -7.69  | -11.58        | -7.17 | -4.18 | -4.36 | -10.11 |
| 150             | -3.46          | -1.93  | -7.79         | -8.10 | -5.09 | 0.56  | -4.56  |
| 180             | -1.70          | -1.53  | -2.87         | -9.21 | -2.22 | 1.57  | -2.81  |
| 210             | -2.15          | -5.42  | -8.92         | -5.16 | -8.13 | -3.48 | -3.36  |
| 240             | -5.28          | -7.01  | -7.14         | -4.52 | -2.93 | -0.64 | -6.28  |
| 270             | -12.81         | -12.14 | -7.31         | -2.01 | 0.01  | -0.18 | -17.22 |
| 300             | -13.29         | -8.60  | -0.60         | 2.60  | 1.11  | -2.40 | -8.50  |
| 330             | -3.01          | -4.19  | 0.83          | 2.67  | 0.30  | -5.57 | -5.04  |
| 360             | -1.07          | -3.63  | -0.10         | 1.58  | 0.30  | -9.10 | -4.16  |
| Avg.            | -4.61          | -5.63  | -3.76         | -1.23 | -1.35 | -2.78 | -6.11  |
| Peak Value      |                | 2.672  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.83          | 23.12 | 21.37 | 20.83 | 22.82 | 24.03 | 22.72 |

|            |       |       |        |               |       |       |       |
|------------|-------|-------|--------|---------------|-------|-------|-------|
| 30         | 22.87 | 23.84 | 21.41  | 21.43         | 22.06 | 22.47 | 22.55 |
| 60         | 30.53 | 33.96 | 21.67  | 21.98         | 22.18 | 22.82 | 22.12 |
| 90         | 26.60 | 24.18 | 21.77  | 17.38         | 21.85 | 21.64 | 16.20 |
| 120        | 21.33 | 17.07 | 23.64  | 20.33         | 21.45 | 22.84 | 24.31 |
| 150        | 25.95 | 23.06 | 20.27  | 20.82         | 21.56 | 21.32 | 22.68 |
| 180        | 22.40 | 21.48 | 28.47  | 49.88         | 20.71 | 21.82 | 23.88 |
| 210        | 21.93 | 22.59 | 9.16   | 21.69         | 22.84 | 23.81 | 22.43 |
| 240        | 22.15 | 19.86 | 34.06  | 21.08         | 22.38 | 21.52 | 21.57 |
| 270        | 22.72 | 23.28 | 24.03  | 24.92         | 20.96 | 22.32 | 14.09 |
| 300        | 11.93 | 21.28 | 23.27  | 22.90         | 18.81 | 22.62 | 18.24 |
| 330        | 21.31 | 21.68 | 23.30  | 22.14         | 22.20 | 21.93 | 21.12 |
| 360        | 22.83 | 23.12 | 21.37  | 20.83         | 22.82 | 24.03 | 22.72 |
| Avg.       | 24.09 | 25.26 | 25.72  | 38.81         | 21.42 | 22.16 | 21.44 |
| Peak Value |       |       | 49.879 | Minimum Value |       |       | 9.161 |

| Horizontal + Vertical |                |       |                     |       |       |       |        |
|-----------------------|----------------|-------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |       |                     |       |       |       |        |
|                       | 0              | 30    | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 1.08           | -1.76 | 1.82                | 3.71  | 2.85  | -6.74 | -2.22  |
| 30                    | 0.34           | -3.49 | 0.61                | 3.42  | 3.28  | -7.17 | -2.13  |
| 60                    | -2.64          | -5.70 | -2.23               | 2.50  | 2.84  | -4.20 | -4.06  |
| 90                    | -10.06         | -9.09 | -15.78              | -0.25 | 1.55  | -2.04 | -10.34 |
| 120                   | -6.80          | -6.82 | -8.52               | -4.79 | -1.99 | -2.00 | -7.43  |
| 150                   | -1.45          | 0.66  | -5.14               | -5.74 | -3.20 | 2.01  | -2.36  |
| 180                   | 0.47           | 1.38  | 0.07                | -6.13 | -0.33 | 3.56  | -0.65  |
| 210                   | 0.01           | -2.82 | -6.79               | -2.87 | -6.65 | -1.26 | -1.25  |
| 240                   | -3.07          | -4.95 | -4.51               | -2.16 | -0.76 | 1.63  | -4.26  |
| 270                   | -10.53         | -9.76 | -4.96               | 0.39  | 2.24  | 2.05  | -11.03 |
| 300                   | -9.28          | -6.49 | 1.17                | 4.86  | 3.15  | -0.27 | -7.64  |
| 330                   | -0.93          | -2.21 | 2.83                | 4.85  | 2.70  | -3.49 | -3.12  |
| 360                   | 1.08           | -1.76 | 1.82                | 3.71  | 2.85  | -6.74 | -2.22  |
| Avg.                  | -2.36          | -3.34 | -1.66               | 1.02  | 0.93  | -0.69 | -3.99  |
| Peak Value            |                | 4.856 | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |        |        |
|-----------------|----------------|--------|---------------------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |        |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150    | 180    |
| 0               | -1.64          | -4.59  | -1.01               | 0.84  | 0.02  | -9.61  | -5.08  |
| 30              | -2.44          | -6.27  | -2.23               | 0.59  | 0.43  | -10.03 | -4.98  |
| 60              | -5.46          | -8.60  | -5.19               | -0.32 | -0.03 | -6.90  | -7.00  |
| 90              | -12.80         | -11.90 | -18.28              | -3.08 | -1.28 | -4.92  | -13.13 |
| 120             | -9.57          | -9.80  | -11.53              | -7.69 | -4.94 | -4.88  | -10.36 |
| 150             | -4.34          | -2.13  | -7.79               | -8.62 | -5.97 | -0.79  | -5.17  |
| 180             | -2.40          | -1.46  | -2.80               | -9.05 | -3.13 | 0.73   | -3.52  |
| 210             | -2.88          | -5.66  | -9.63               | -5.80 | -9.47 | -4.11  | -4.07  |
| 240             | -5.90          | -7.78  | -7.33               | -5.10 | -3.54 | -1.17  | -7.12  |
| 270             | -13.25         | -12.63 | -7.80               | -2.54 | -0.64 | -0.81  | -13.85 |
| 300             | -14.68         | -9.26  | -1.75               | 1.96  | 0.25  | -3.24  | -10.72 |
| 330             | -3.59          | -5.01  | -0.06               | 1.95  | -0.18 | -6.45  | -5.94  |
| 360             | -1.64          | -4.59  | -1.01               | 0.84  | 0.02  | -9.61  | -5.08  |
| Avg.            | -5.19          | -6.16  | -4.53               | -1.85 | -1.93 | -3.54  | -6.85  |
| Peak Value      |                | 1.964  | Minimum Value ##### |       |       |        |        |

| Vertical        |                |        |        |       |       |        |        |
|-----------------|----------------|--------|--------|-------|-------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |       |        |        |
|                 | 0              | 30     | 60     | 90    | 120   | 150    | 180    |
| 0               | -2.24          | -4.97  | -1.38  | 0.55  | -0.34 | -9.90  | -5.39  |
| 30              | -2.92          | -6.76  | -2.57  | 0.23  | 0.10  | -10.35 | -5.30  |
| 60              | -5.86          | -8.83  | -5.30  | -0.71 | -0.33 | -7.53  | -7.14  |
| 90              | -13.37         | -12.31 | -19.37 | -3.44 | -1.65 | -5.18  | -13.58 |
| 120             | -10.06         | -9.86  | -11.52 | -7.91 | -5.07 | -5.15  | -10.52 |
| 150             | -4.59          | -2.57  | -8.54  | -8.88 | -6.46 | -1.22  | -5.58  |
| 180             | -2.69          | -1.80  | -3.10  | -9.23 | -3.56 | 0.36   | -3.81  |
| 210             | -3.12          | -6.01  | -9.97  | -5.96 | -9.86 | -4.44  | -4.46  |
| 240             | -6.26          | -8.15  | -7.71  | -5.24 | -4.02 | -1.59  | -7.43  |

|            |        |        |                     |       |       |       |        |
|------------|--------|--------|---------------------|-------|-------|-------|--------|
| 270        | -13.85 | -12.91 | -8.14               | -2.70 | -0.91 | -1.12 | -14.24 |
| 300        | -10.76 | -9.75  | -1.94               | 1.72  | 0.04  | -3.33 | -10.58 |
| 330        | -4.32  | -5.45  | -0.30               | 1.73  | -0.44 | -6.55 | -6.34  |
| 360        | -2.24  | -4.97  | -1.38               | 0.55  | -0.34 | -9.90 | -5.39  |
| Avg.       | -5.56  | -6.54  | -4.82               | -2.13 | -2.24 | -3.87 | -7.16  |
| Peak Value |        | 1.735  | Minimum Value ##### |       |       |       |        |

| RHCP            |                |        |                     |       |        |        |        |
|-----------------|----------------|--------|---------------------|-------|--------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |                     |       |        |        |        |
|                 | 0              | 30     | 60                  | 90    | 120    | 150    | 180    |
| 0               | -2.57          | -5.43  | -1.97               | -0.15 | -0.82  | -10.33 | -5.92  |
| 30              | -3.34          | -7.11  | -3.19               | -0.36 | -0.46  | -10.87 | -5.81  |
| 60              | -6.31          | -9.42  | -6.06               | -1.28 | -0.91  | -7.79  | -7.81  |
| 90              | -13.49         | -12.57 | -19.69              | -4.05 | -2.21  | -5.83  | -13.97 |
| 120             | -10.53         | -10.42 | -12.25              | -8.67 | -5.76  | -5.72  | -10.94 |
| 150             | -5.15          | -3.02  | -9.03               | -9.59 | -7.01  | -1.75  | -6.12  |
| 180             | -3.24          | -2.37  | -3.54               | -9.99 | -4.24  | -0.23  | -4.36  |
| 210             | -3.71          | -6.47  | -10.38              | -6.72 | -10.22 | -4.82  | -4.95  |
| 240             | -6.81          | -8.86  | -8.25               | -5.97 | -4.41  | -2.15  | -8.03  |
| 270             | -14.11         | -13.41 | -8.41               | -3.13 | -1.63  | -1.71  | -14.60 |
| 300             | -10.66         | -10.34 | -2.42               | 1.17  | -0.75  | -3.98  | -11.31 |
| 330             | -4.78          | -5.93  | -0.84               | 1.12  | -1.04  | -7.29  | -6.98  |
| 360             | -2.57          | -5.43  | -1.97               | -0.15 | -0.82  | -10.33 | -5.92  |
| Avg.            | -6.01          | -7.04  | -5.36               | -2.74 | -2.84  | -4.43  | -7.71  |
| Peak Value      |                | 1.167  | Minimum Value ##### |       |        |        |        |

| LHCP            |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -1.38          | -4.20  | -0.54               | 1.41  | 0.42  | -9.24 | -4.64  |
| 30              | -2.09          | -5.98  | -1.73               | 1.07  | 0.89  | -9.59 | -4.55  |
| 60              | -5.08          | -8.11  | -4.55               | 0.14  | 0.45  | -6.69 | -6.44  |
| 90              | -12.69         | -11.68 | -18.05              | -2.59 | -0.82 | -4.39 | -12.81 |
| 120             | -9.18          | -9.31  | -10.90              | -7.07 | -4.36 | -4.40 | -10.00 |
| 150             | -3.87          | -1.76  | -7.42               | -8.05 | -5.53 | -0.37 | -4.73  |
| 180             | -1.94          | -1.00  | -2.42               | -8.43 | -2.59 | 1.21  | -3.06  |
| 210             | -2.38          | -5.27  | -9.29               | -5.18 | -9.16 | -3.79 | -3.66  |
| 240             | -5.45          | -7.22  | -6.89               | -4.49 | -3.22 | -0.72 | -6.63  |
| 270             | -13.04         | -12.21 | -7.56               | -2.17 | -0.06 | -0.33 | -13.54 |
| 300             | -14.93         | -8.80  | -1.33               | 2.43  | 0.88  | -2.69 | -10.07 |
| 330             | -3.24          | -4.61  | 0.40                | 2.46  | 0.32  | -5.83 | -5.43  |
| 360             | -1.38          | -4.20  | -0.54               | 1.41  | 0.42  | -9.24 | -4.64  |
| Avg.            | -4.81          | -5.75  | -4.08               | -1.35 | -1.43 | -3.08 | -6.40  |
| Peak Value      |                | 2.465  | Minimum Value ##### |       |       |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 23.32          | 23.01 | 21.73 | 20.96 | 22.90 | 24.04 | 22.63 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 22.90 | 23.74 | 21.55  | 21.67         | 22.18 | 22.70 | 22.80  |
| 60         | 22.97 | 22.44 | 21.26  | 21.77         | 22.11 | 24.02 | 22.07  |
| 90         | 26.70 | 25.88 | 20.53  | 21.50         | 21.91 | 21.69 | 23.52  |
| 120        | 22.22 | 23.89 | 22.20  | 20.74         | 21.87 | 22.44 | 25.30  |
| 150        | 22.71 | 22.79 | 20.71  | 21.07         | 21.45 | 22.02 | 21.96  |
| 180        | 22.56 | 22.07 | 23.79  | 20.98         | 20.49 | 21.68 | 22.56  |
| 210        | 22.39 | 23.25 | 24.06  | 21.05         | 24.30 | 24.51 | 22.57  |
| 240        | 22.18 | 20.52 | 22.12  | 21.42         | 23.30 | 21.75 | 21.91  |
| 270        | 24.27 | 23.19 | 26.17  | 25.14         | 20.91 | 22.03 | 24.35  |
| 300        | 12.37 | 21.05 | 24.06  | 22.77         | 20.55 | 22.60 | 22.94  |
| 330        | 21.04 | 22.40 | 22.95  | 22.22         | 22.13 | 21.54 | 20.97  |
| 360        | 23.32 | 23.01 | 21.73  | 20.96         | 22.90 | 24.04 | 22.63  |
| Avg.       | 22.59 | 22.71 | 22.56  | 21.61         | 21.80 | 22.36 | 22.60  |
| Peak Value |       |       | 26.696 | Minimum Value |       |       | 12.372 |

| Horizontal + Vertical |                |       |                     |       |       |       |        |
|-----------------------|----------------|-------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg]       | $\Theta$ [deg] |       |                     |       |       |       |        |
|                       | 0              | 30    | 60                  | 90    | 120   | 150   | 180    |
| 0                     | 1.08           | -1.97 | 1.72                | 3.80  | 3.21  | -6.81 | -2.22  |
| 30                    | 0.35           | -3.88 | 0.53                | 3.53  | 3.59  | -6.88 | -2.15  |
| 60                    | -2.71          | -6.43 | -2.37               | 2.57  | 3.11  | -3.84 | -3.99  |
| 90                    | -9.95          | -9.21 | -16.83              | -0.17 | 1.75  | -1.71 | -9.82  |
| 120                   | -6.71          | -6.28 | -7.76               | -4.64 | -1.84 | -1.92 | -7.43  |
| 150                   | -1.51          | 0.96  | -4.68               | -5.57 | -3.56 | 1.95  | -2.54  |
| 180                   | 0.41           | 1.77  | 0.31                | -6.09 | -0.52 | 3.45  | -0.81  |
| 210                   | 0.00           | -2.34 | -6.51               | -2.83 | -7.05 | -1.33 | -1.49  |
| 240                   | -3.09          | -4.84 | -4.41               | -2.06 | -0.81 | 1.70  | -4.57  |
| 270                   | -10.05         | -9.49 | -4.74               | 0.47  | 2.29  | 1.96  | -10.91 |
| 300                   | -8.84          | -6.18 | 1.19                | 4.92  | 3.19  | -0.40 | -7.25  |
| 330                   | -0.92          | -2.20 | 2.71                | 4.91  | 2.94  | -3.47 | -3.03  |
| 360                   | 1.08           | -1.97 | 1.72                | 3.80  | 3.21  | -6.81 | -2.22  |
| Avg.                  | -2.36          | -3.19 | -1.64               | 1.10  | 1.08  | -0.70 | -4.06  |
| Peak Value            |                | 4.917 | Minimum Value ##### |       |       |       |        |

| Horizontal      |                |        |                     |       |       |       |        |
|-----------------|----------------|--------|---------------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |                     |       |       |       |        |
|                 | 0              | 30     | 60                  | 90    | 120   | 150   | 180    |
| 0               | -1.68          | -4.80  | -1.13               | 0.89  | 0.35  | -9.71 | -5.11  |
| 30              | -2.46          | -6.68  | -2.36               | 0.63  | 0.72  | -9.78 | -5.05  |
| 60              | -5.51          | -9.34  | -5.33               | -0.29 | 0.19  | -6.60 | -6.93  |
| 90              | -12.69         | -12.07 | -19.12              | -3.03 | -1.13 | -4.59 | -12.65 |
| 120             | -9.55          | -9.30  | -10.65              | -7.60 | -4.80 | -4.82 | -10.46 |
| 150             | -4.45          | -1.87  | -7.36               | -8.48 | -6.34 | -0.87 | -5.39  |
| 180             | -2.49          | -1.10  | -2.60               | -9.05 | -3.34 | 0.58  | -3.71  |
| 210             | -2.93          | -5.21  | -9.37               | -5.75 | -9.99 | -4.23 | -4.34  |
| 240             | -5.93          | -7.77  | -7.23               | -5.04 | -3.71 | -1.16 | -7.49  |
| 270             | -12.81         | -12.41 | -7.66               | -2.51 | -0.65 | -0.89 | -13.81 |
| 300             | -13.96         | -8.96  | -1.76               | 1.99  | 0.32  | -3.38 | -10.34 |
| 330             | -3.59          | -5.07  | -0.20               | 1.98  | 0.06  | -6.38 | -5.87  |
| 360             | -1.68          | -4.80  | -1.13               | 0.89  | 0.35  | -9.71 | -5.11  |
| Avg.            | -5.22          | -6.04  | -4.54               | -1.82 | -1.80 | -3.57 | -6.95  |
| Peak Value      |                | 1.986  | Minimum Value ##### |       |       |       |        |

| Vertical        |                |        |        |       |        |        |        |
|-----------------|----------------|--------|--------|-------|--------|--------|--------|
| $\phi$<br>[deg] | $\Theta$ [deg] |        |        |       |        |        |        |
|                 | 0              | 30     | 60     | 90    | 120    | 150    | 180    |
| 0               | -2.20          | -5.18  | -1.45  | 0.69  | 0.05   | -9.92  | -5.35  |
| 30              | -2.87          | -7.11  | -2.60  | 0.40  | 0.43   | -10.02 | -5.28  |
| 60              | -5.94          | -9.54  | -5.44  | -0.60 | 0.00   | -7.12  | -7.07  |
| 90              | -13.24         | -12.38 | -20.70 | -3.33 | -1.40  | -4.85  | -13.03 |
| 120             | -9.90          | -9.28  | -10.88 | -7.70 | -4.90  | -5.05  | -10.42 |
| 150             | -4.59          | -2.25  | -8.05  | -8.68 | -6.81  | -1.25  | -5.71  |
| 180             | -2.72          | -1.39  | -2.80  | -9.15 | -3.72  | 0.29   | -3.93  |
| 210             | -3.09          | -5.51  | -9.68  | -5.92 | -10.14 | -4.46  | -4.68  |
| 240             | -6.27          | -7.94  | -7.62  | -5.09 | -3.92  | -1.47  | -7.68  |

|            |        |        |               |       |       |       |        |
|------------|--------|--------|---------------|-------|-------|-------|--------|
| 270        | -13.33 | -12.59 | -7.85         | -2.57 | -0.78 | -1.21 | -14.03 |
| 300        | -10.43 | -9.43  | -1.87         | 1.82  | 0.04  | -3.43 | -10.19 |
| 330        | -4.29  | -5.36  | -0.39         | 1.83  | -0.21 | -6.59 | -6.21  |
| 360        | -2.20  | -5.18  | -1.45         | 0.69  | 0.05  | -9.92 | -5.35  |
| Avg.       | -5.52  | -6.35  | -4.77         | -2.00 | -2.06 | -3.85 | -7.19  |
| Peak Value |        | 1.828  | Minimum Value |       | ##### |       |        |

| RHCP            |                |        |               |        |        |        |        |
|-----------------|----------------|--------|---------------|--------|--------|--------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |        |        |        |        |
|                 | 0              | 30     | 60            | 90     | 120    | 150    | 180    |
| 0               | -2.64          | -5.70  | -2.13         | -0.16  | -0.59  | -10.43 | -6.01  |
| 30              | -3.42          | -7.57  | -3.43         | -0.37  | -0.23  | -10.72 | -5.93  |
| 60              | -6.52          | -10.31 | -6.30         | -1.28  | -0.73  | -7.44  | -7.89  |
| 90              | -13.49         | -12.91 | -20.72        | -4.05  | -2.12  | -5.60  | -13.53 |
| 120             | -10.54         | -9.91  | -11.60        | -8.59  | -5.75  | -5.70  | -11.10 |
| 150             | -5.30          | -2.81  | -8.62         | -9.49  | -7.45  | -1.90  | -6.45  |
| 180             | -3.37          | -2.09  | -3.40         | -10.07 | -4.52  | -0.44  | -4.61  |
| 210             | -3.83          | -6.15  | -10.19        | -6.76  | -10.62 | -5.03  | -5.29  |
| 240             | -6.90          | -8.87  | -8.22         | -5.95  | -4.49  | -2.19  | -8.41  |
| 270             | -13.70         | -13.26 | -8.27         | -3.12  | -1.75  | -1.83  | -14.57 |
| 300             | -10.28         | -10.06 | -2.55         | 1.10   | -0.78  | -4.25  | -11.07 |
| 330             | -4.89          | -6.06  | -1.09         | 1.08   | -0.87  | -7.36  | -6.93  |
| 360             | -2.64          | -5.70  | -2.13         | -0.16  | -0.59  | -10.43 | -6.01  |
| Avg.            | -6.10          | -6.99  | -5.45         | -2.76  | -2.79  | -4.53  | -7.88  |
| Peak Value      |                | 1.102  | Minimum Value |        | #####  |        |        |

| LHCP            |                |        |               |       |       |       |        |
|-----------------|----------------|--------|---------------|-------|-------|-------|--------|
| $\phi$<br>[deg] | $\theta$ [deg] |        |               |       |       |       |        |
|                 | 0              | 30     | 60            | 90    | 120   | 150   | 180    |
| 0               | -1.32          | -4.37  | -0.58         | 1.57  | 0.87  | -9.28 | -4.56  |
| 30              | -2.01          | -6.30  | -1.70         | 1.25  | 1.26  | -9.20 | -4.51  |
| 60              | -5.05          | -8.72  | -4.63         | 0.26  | 0.79  | -6.33 | -6.25  |
| 90              | -12.48         | -11.63 | -19.10        | -2.45 | -0.54 | -3.99 | -12.23 |
| 120             | -9.03          | -8.75  | -10.07        | -6.88 | -4.11 | -4.29 | -9.86  |
| 150             | -3.85          | -1.41  | -6.92         | -7.83 | -5.83 | -0.35 | -4.80  |
| 180             | -1.95          | -0.53  | -2.09         | -8.30 | -2.73 | 1.17  | -3.15  |
| 210             | -2.32          | -4.68  | -8.95         | -5.08 | -9.57 | -3.75 | -3.84  |
| 240             | -5.41          | -7.03  | -6.75         | -4.34 | -3.23 | -0.58 | -6.89  |
| 270             | -12.50         | -11.86 | -7.29         | -2.02 | 0.12  | -0.38 | -13.35 |
| 300             | -14.32         | -8.46  | -1.19         | 2.58  | 0.97  | -2.70 | -9.58  |
| 330             | -3.14          | -4.50  | 0.37          | 2.60  | 0.60  | -5.75 | -5.29  |
| 360             | -1.32          | -4.37  | -0.58         | 1.57  | 0.87  | -9.28 | -4.56  |
| Avg.            | -4.74          | -5.52  | -3.98         | -1.20 | -1.21 | -3.02 | -6.39  |
| Peak Value      |                | 2.600  | Minimum Value |       | ##### |       |        |

| AR              |                |       |       |       |       |       |       |
|-----------------|----------------|-------|-------|-------|-------|-------|-------|
| $\phi$<br>[deg] | $\theta$ [deg] |       |       |       |       |       |       |
|                 | 0              | 30    | 60    | 90    | 120   | 150   | 180   |
| 0               | 22.41          | 22.36 | 21.00 | 20.06 | 21.56 | 23.54 | 21.64 |

|            |       |       |        |               |       |       |        |
|------------|-------|-------|--------|---------------|-------|-------|--------|
| 30         | 21.86 | 22.78 | 20.04  | 20.60         | 21.35 | 21.20 | 21.76  |
| 60         | 21.46 | 20.76 | 20.33  | 21.08         | 21.14 | 23.87 | 20.52  |
| 90         | 24.70 | 22.71 | 20.62  | 20.76         | 20.89 | 20.70 | 22.52  |
| 120        | 21.25 | 23.57 | 21.14  | 20.15         | 20.53 | 21.81 | 22.93  |
| 150        | 21.60 | 21.89 | 20.18  | 20.43         | 20.63 | 20.99 | 20.50  |
| 180        | 21.82 | 20.93 | 22.41  | 19.89         | 19.78 | 20.71 | 21.57  |
| 210        | 21.27 | 21.50 | 22.95  | 20.33         | 24.32 | 22.66 | 21.56  |
| 240        | 21.35 | 19.57 | 21.48  | 20.69         | 22.86 | 20.70 | 21.20  |
| 270        | 23.25 | 21.88 | 24.91  | 23.99         | 19.41 | 21.56 | 23.10  |
| 300        | 12.82 | 20.71 | 22.16  | 21.40         | 19.95 | 21.00 | 21.38  |
| 330        | 19.93 | 20.94 | 21.55  | 21.16         | 21.43 | 20.72 | 20.54  |
| 360        | 22.41 | 22.36 | 21.00  | 20.06         | 21.56 | 23.54 | 21.64  |
| Avg.       | 21.39 | 21.42 | 21.44  | 20.68         | 21.02 | 21.42 | 21.34  |
| Peak Value |       |       | 24.905 | Minimum Value |       |       | 12.816 |