

## Nuura Goniophotometer Test Report

### Product Info

Luminaire : **Miira 3 Circle / optic clear**

Lamp : **G9 E3light LED, 3.5W / 250 Lumen**

Manufacturer : **Nuura**

Nuber of Lamps : **3**

Lumens per Lamp : **0 lm**

Luminous Length : **540 mm**

Luminous Width : **0 mm**

Luminous Height : **245 mm**

### Electric Parameters

Voltage : **231.00 V** Current : **0.0520 A** Power : **10.73 W** Power Factor : **0.898** Frequency : **50.00 Hz**

### Photometric Parameters

CIE Class : **General Diffuse**

Measurement Flux : **738.7 lm**

Upward Ratio : **41.48 %**

Maximum Intensity : **87.86 cd**

Central Intensity : **43.19 cd**

Luminaire Efficacy Rating (LER) : **69**

Beam Angle (C0-C180,C90-C270) : **282.9 °, 241.3 °**

Field Angle (C0-C180,C90-C270) : **332.3 °, 323.3 °**

Total Rated Lamp Lumens : **738.7 lm**

Efficiency : **100.00 %**

Downward Ratio : **58.52 %**

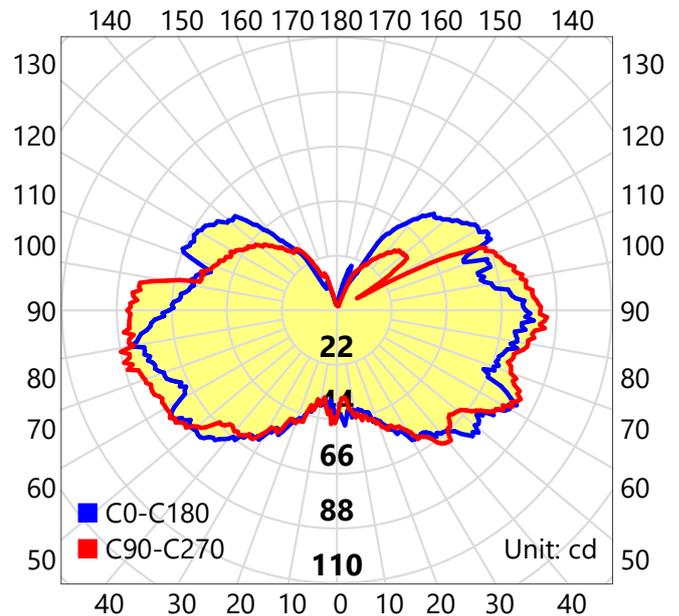
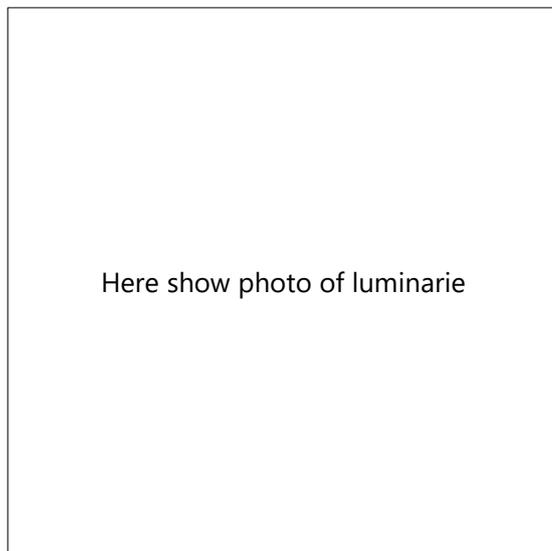
Position Of Maximum Intensity : **C270° γ79°**

S/MH(C0-C180,C90-C270) : **2.26, 2.06**

Energy Efficiency Class : **G (EU 2019/2015 η<sub>TM</sub>:69lm/W)**

Beam Angle (C45-C225,C135-C315) : **267.5 °, 253.6 °**

Field Angle (C45-C225,C135-C315) : **318.6 °, 319.6 °**



Average Beam Angle (50%): 261.3°

Test Type : Type C Test Distance : 6.119 m

Test Device : Lisun LSG-1700B

Test Lab :

Test By : P. Nellemose

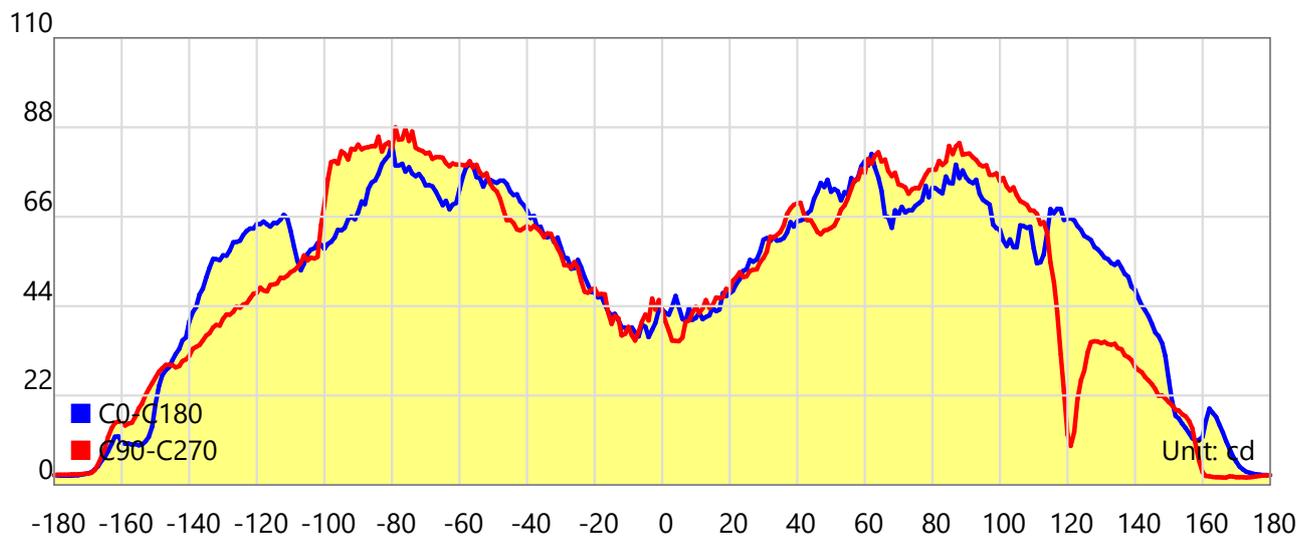
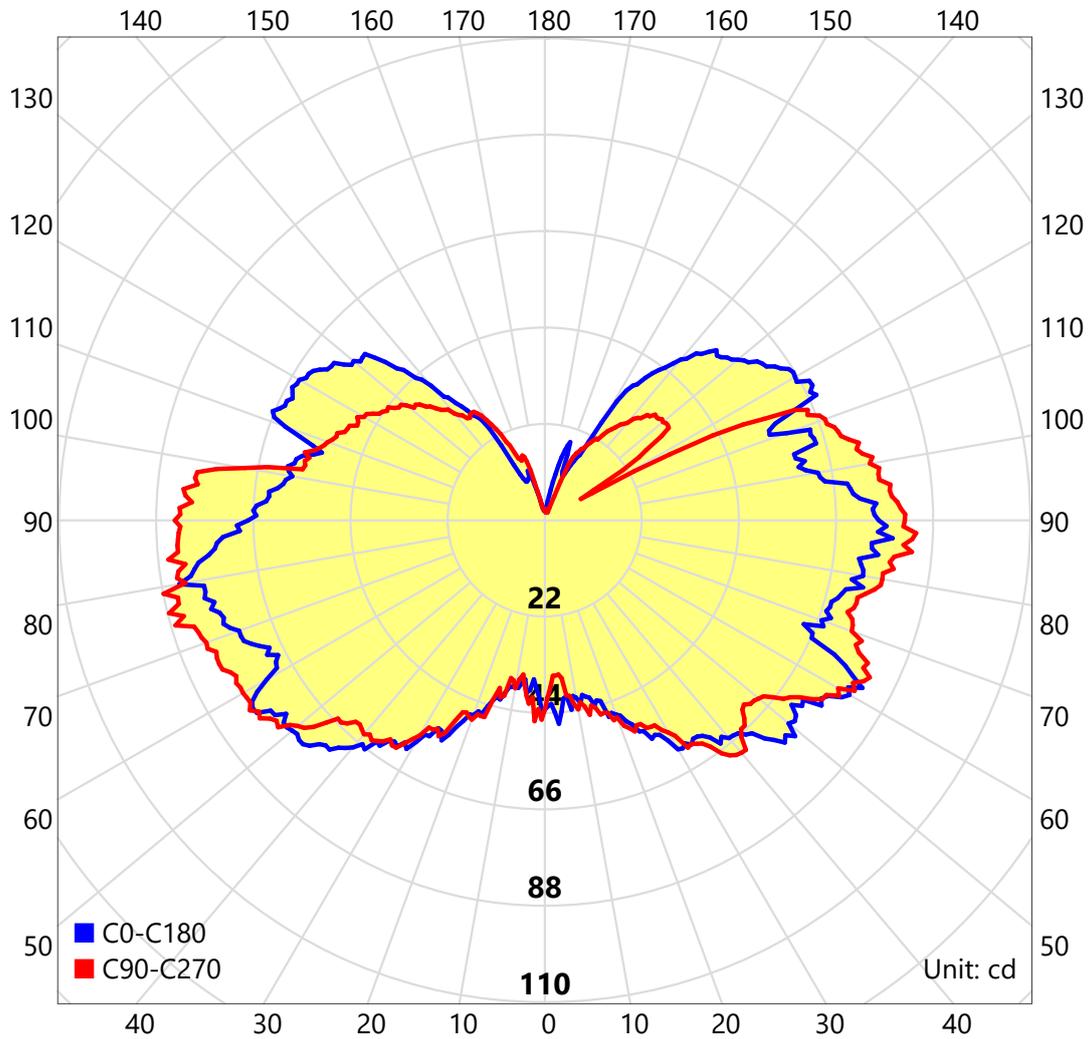
C Plane (°): 0.0-360.0:45.0 γ (°): 0.0-180.0:1.0

Temperature : 23.0°C

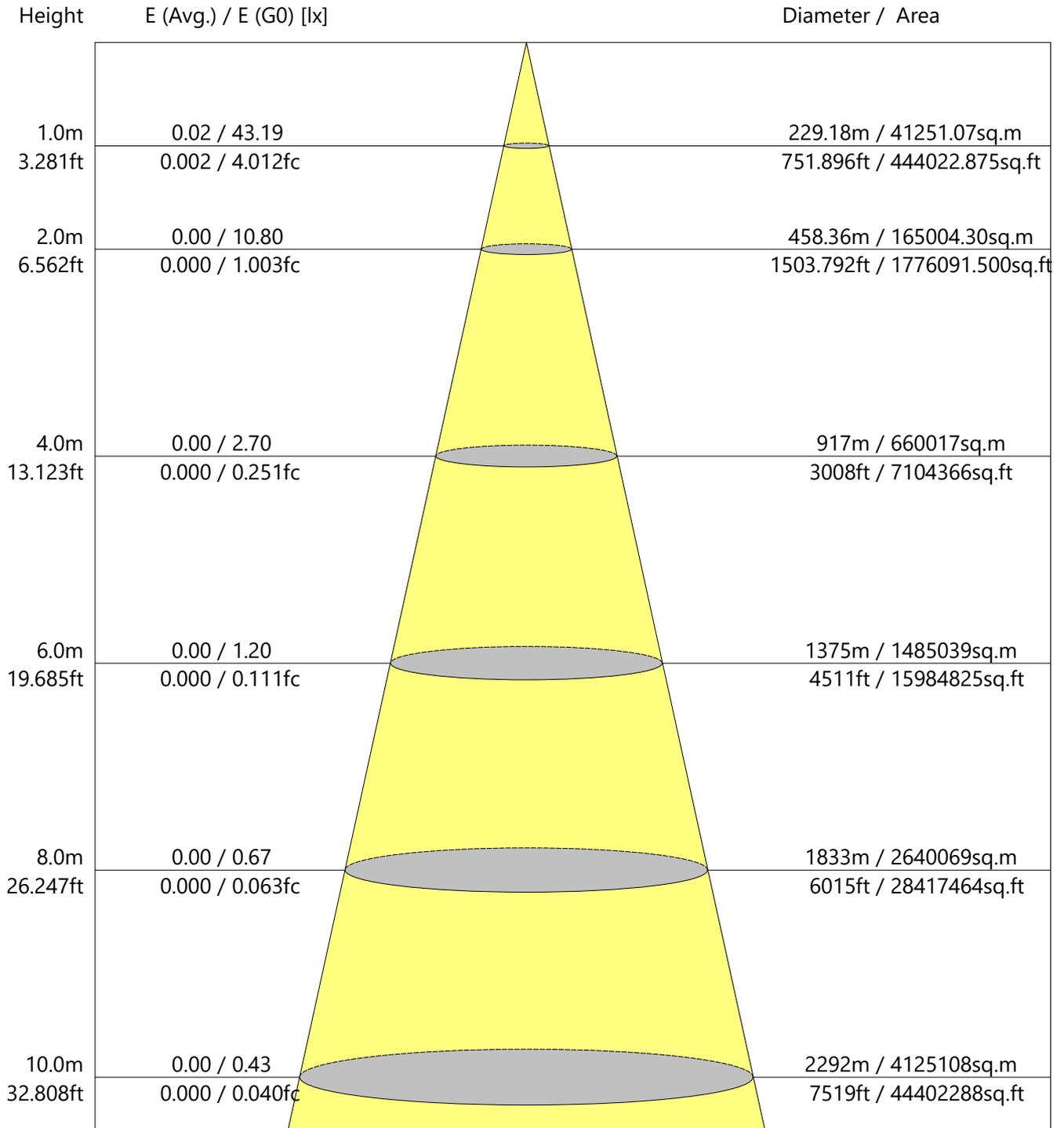
Humidity : 75.0%

Review By :

## Light Distribution Curve



## Average Illuminance Effective Figure



Beam Angle: 179° Flux Out: 715.73lm

## Zonal Flux

| Gamma °   | lmean cd | Zonal Flux lm | Sum Zonal Flux lm | Rel Zonal Flux % | Sum Rel Zonal Flux % |
|-----------|----------|---------------|-------------------|------------------|----------------------|
| 0.0-1.0   | 42.9     | 0.0           | 0.0               | 0.01             | 0.01                 |
| 1.0-2.0   | 41.9     | 0.1           | 0.2               | 0.02             | 0.02                 |
| 2.0-3.0   | 40.7     | 0.2           | 0.4               | 0.03             | 0.05                 |
| 3.0-4.0   | 39.9     | 0.3           | 0.6               | 0.04             | 0.08                 |
| 4.0-5.0   | 39.5     | 0.3           | 1.0               | 0.05             | 0.13                 |
| 5.0-6.0   | 39.2     | 0.4           | 1.4               | 0.06             | 0.19                 |
| 6.0-7.0   | 38.9     | 0.5           | 1.9               | 0.07             | 0.25                 |
| 7.0-8.0   | 38.9     | 0.6           | 2.4               | 0.08             | 0.33                 |
| 8.0-9.0   | 39.2     | 0.6           | 3.1               | 0.09             | 0.41                 |
| 9.0-10.0  | 40.0     | 0.7           | 3.8               | 0.10             | 0.51                 |
| 10.0-11.0 | 40.5     | 0.8           | 4.6               | 0.11             | 0.62                 |
| 11.0-12.0 | 40.8     | 0.9           | 5.5               | 0.12             | 0.74                 |
| 12.0-13.0 | 41.6     | 1.0           | 6.5               | 0.13             | 0.88                 |
| 13.0-14.0 | 42.3     | 1.1           | 7.5               | 0.15             | 1.02                 |
| 14.0-15.0 | 43.0     | 1.2           | 8.7               | 0.16             | 1.18                 |
| 15.0-16.0 | 43.9     | 1.3           | 10.0              | 0.17             | 1.36                 |
| 16.0-17.0 | 44.9     | 1.4           | 11.4              | 0.19             | 1.55                 |
| 17.0-18.0 | 46.0     | 1.5           | 12.9              | 0.21             | 1.75                 |
| 18.0-19.0 | 47.0     | 1.6           | 14.6              | 0.22             | 1.97                 |
| 19.0-20.0 | 47.9     | 1.8           | 16.3              | 0.24             | 2.21                 |
| 20.0-21.0 | 48.6     | 1.9           | 18.2              | 0.25             | 2.46                 |
| 21.0-22.0 | 49.4     | 2.0           | 20.2              | 0.27             | 2.73                 |
| 22.0-23.0 | 50.5     | 2.1           | 22.3              | 0.29             | 3.02                 |
| 23.0-24.0 | 51.8     | 2.3           | 24.6              | 0.31             | 3.32                 |
| 24.0-25.0 | 52.8     | 2.4           | 27.0              | 0.33             | 3.65                 |
| 25.0-26.0 | 53.8     | 2.5           | 29.5              | 0.34             | 3.99                 |
| 26.0-27.0 | 54.6     | 2.7           | 32.2              | 0.36             | 4.35                 |
| 27.0-28.0 | 55.1     | 2.8           | 35.0              | 0.38             | 4.73                 |
| 28.0-29.0 | 56.0     | 2.9           | 37.9              | 0.40             | 5.13                 |
| 29.0-30.0 | 57.6     | 3.1           | 41.0              | 0.42             | 5.55                 |
| 30.0-31.0 | 59.0     | 3.3           | 44.3              | 0.44             | 5.99                 |
| 31.0-32.0 | 60.0     | 3.4           | 47.7              | 0.47             | 6.46                 |
| 32.0-33.0 | 60.9     | 3.6           | 51.3              | 0.49             | 6.95                 |
| 33.0-34.0 | 61.4     | 3.7           | 55.0              | 0.50             | 7.45                 |
| 34.0-35.0 | 61.7     | 3.8           | 58.9              | 0.52             | 7.97                 |
| 35.0-36.0 | 62.1     | 4.0           | 62.8              | 0.54             | 8.50                 |
| 36.0-37.0 | 63.1     | 4.1           | 66.9              | 0.56             | 9.06                 |
| 37.0-38.0 | 64.5     | 4.3           | 71.2              | 0.58             | 9.64                 |
| 38.0-39.0 | 65.4     | 4.5           | 75.7              | 0.60             | 10.25                |
| 39.0-40.0 | 66.3     | 4.6           | 80.3              | 0.63             | 10.87                |

Test Type : Type C      Test Distance : 6.119 m  
 Test Device : Lisun LSG-1700B  
 Test Lab :  
 Test By : P. Nellemose

C Plane (°): 0.0-360.0:45.0    γ (°): 0.0-180.0:1.0  
 Temperature : 23.0°C      Humidity : 75.0%  
 Review By :

## Zonal Flux

| Gamma °   | lmean cd | Zonal Flux lm | Sum Zonal Flux lm | Rel Zonal Flux % | Sum Rel Zonal Flux % |
|-----------|----------|---------------|-------------------|------------------|----------------------|
| 40.0-41.0 | 67.3     | 4.8           | 85.1              | 0.65             | 11.52                |
| 41.0-42.0 | 67.6     | 4.9           | 90.0              | 0.66             | 12.19                |
| 42.0-43.0 | 67.8     | 5.0           | 95.0              | 0.68             | 12.87                |
| 43.0-44.0 | 68.3     | 5.2           | 100.2             | 0.70             | 13.56                |
| 44.0-45.0 | 68.8     | 5.3           | 105.5             | 0.72             | 14.28                |
| 45.0-46.0 | 69.5     | 5.4           | 110.9             | 0.74             | 15.02                |
| 46.0-47.0 | 70.3     | 5.6           | 116.5             | 0.76             | 15.77                |
| 47.0-48.0 | 71.0     | 5.7           | 122.3             | 0.78             | 16.55                |
| 48.0-49.0 | 71.5     | 5.9           | 128.1             | 0.80             | 17.35                |
| 49.0-50.0 | 71.7     | 6.0           | 134.1             | 0.81             | 18.16                |
| 50.0-51.0 | 72.3     | 6.1           | 140.2             | 0.83             | 18.98                |
| 51.0-52.0 | 73.1     | 6.3           | 146.5             | 0.85             | 19.83                |
| 52.0-53.0 | 73.6     | 6.4           | 152.9             | 0.87             | 20.70                |
| 53.0-54.0 | 74.3     | 6.5           | 159.5             | 0.89             | 21.59                |
| 54.0-55.0 | 75.1     | 6.7           | 166.2             | 0.91             | 22.49                |
| 55.0-56.0 | 76.2     | 6.9           | 173.0             | 0.93             | 23.43                |
| 56.0-57.0 | 77.2     | 7.1           | 180.1             | 0.96             | 24.38                |
| 57.0-58.0 | 77.6     | 7.2           | 187.3             | 0.97             | 25.35                |
| 58.0-59.0 | 77.9     | 7.3           | 194.6             | 0.99             | 26.34                |
| 59.0-60.0 | 78.0     | 7.4           | 201.9             | 1.00             | 27.34                |
| 60.0-61.0 | 77.8     | 7.4           | 209.4             | 1.01             | 28.34                |
| 61.0-62.0 | 77.8     | 7.5           | 216.9             | 1.01             | 29.36                |
| 62.0-63.0 | 78.0     | 7.6           | 224.4             | 1.03             | 30.38                |
| 63.0-64.0 | 78.0     | 7.7           | 232.1             | 1.04             | 31.42                |
| 64.0-65.0 | 77.8     | 7.7           | 239.8             | 1.04             | 32.46                |
| 65.0-66.0 | 77.1     | 7.7           | 247.5             | 1.04             | 33.50                |
| 66.0-67.0 | 75.9     | 7.6           | 255.1             | 1.03             | 34.54                |
| 67.0-68.0 | 74.6     | 7.6           | 262.7             | 1.02             | 35.56                |
| 68.0-69.0 | 73.6     | 7.5           | 270.2             | 1.02             | 36.58                |
| 69.0-70.0 | 72.5     | 7.4           | 277.6             | 1.01             | 37.58                |
| 70.0-71.0 | 71.1     | 7.3           | 285.0             | 0.99             | 38.58                |
| 71.0-72.0 | 70.3     | 7.3           | 292.3             | 0.99             | 39.57                |
| 72.0-73.0 | 70.0     | 7.3           | 299.6             | 0.99             | 40.56                |
| 73.0-74.0 | 70.1     | 7.4           | 307.0             | 1.00             | 41.56                |
| 74.0-75.0 | 70.8     | 7.5           | 314.4             | 1.01             | 42.57                |
| 75.0-76.0 | 71.3     | 7.6           | 322.0             | 1.03             | 43.59                |
| 76.0-77.0 | 71.8     | 7.7           | 329.7             | 1.04             | 44.63                |
| 77.0-78.0 | 72.8     | 7.8           | 337.5             | 1.05             | 45.69                |
| 78.0-79.0 | 73.4     | 7.9           | 345.3             | 1.07             | 46.75                |
| 79.0-80.0 | 73.4     | 7.9           | 353.3             | 1.07             | 47.83                |

## Zonal Flux

| Gamma °     | lmean cd | Zonal Flux lm | Sum Zonal Flux lm | Rel Zonal Flux % | Sum Rel Zonal Flux % |
|-------------|----------|---------------|-------------------|------------------|----------------------|
| 80.0-81.0   | 73.6     | 8.0           | 361.2             | 1.08             | 48.90                |
| 81.0-82.0   | 73.4     | 8.0           | 369.2             | 1.08             | 49.98                |
| 82.0-83.0   | 72.6     | 7.9           | 377.1             | 1.07             | 51.05                |
| 83.0-84.0   | 72.5     | 7.9           | 385.0             | 1.07             | 52.12                |
| 84.0-85.0   | 72.6     | 7.9           | 392.9             | 1.07             | 53.19                |
| 85.0-86.0   | 72.1     | 7.9           | 400.8             | 1.07             | 54.26                |
| 86.0-87.0   | 72.0     | 7.9           | 408.7             | 1.07             | 55.33                |
| 87.0-88.0   | 71.7     | 7.9           | 416.5             | 1.06             | 56.39                |
| 88.0-89.0   | 71.6     | 7.9           | 424.4             | 1.06             | 57.45                |
| 89.0-90.0   | 71.6     | 7.9           | 432.2             | 1.06             | 58.52                |
| 90.0-91.0   | 71.2     | 7.8           | 440.0             | 1.06             | 59.57                |
| 91.0-92.0   | 71.3     | 7.8           | 447.9             | 1.06             | 60.63                |
| 92.0-93.0   | 71.5     | 7.8           | 455.7             | 1.06             | 61.69                |
| 93.0-94.0   | 71.2     | 7.8           | 463.5             | 1.06             | 62.75                |
| 94.0-95.0   | 71.2     | 7.8           | 471.3             | 1.05             | 63.80                |
| 95.0-96.0   | 71.4     | 7.8           | 479.1             | 1.05             | 64.86                |
| 96.0-97.0   | 71.1     | 7.7           | 486.8             | 1.05             | 65.91                |
| 97.0-98.0   | 71.2     | 7.7           | 494.6             | 1.05             | 66.95                |
| 98.0-99.0   | 71.5     | 7.8           | 502.3             | 1.05             | 68.00                |
| 99.0-100.0  | 71.5     | 7.7           | 510.0             | 1.05             | 69.05                |
| 100.0-101.0 | 71.4     | 7.7           | 517.7             | 1.04             | 70.09                |
| 101.0-102.0 | 70.7     | 7.6           | 525.3             | 1.03             | 71.12                |
| 102.0-103.0 | 69.9     | 7.5           | 532.8             | 1.01             | 72.13                |
| 103.0-104.0 | 69.3     | 7.4           | 540.2             | 1.00             | 73.13                |
| 104.0-105.0 | 67.7     | 7.2           | 547.4             | 0.97             | 74.11                |
| 105.0-106.0 | 66.1     | 7.0           | 554.4             | 0.95             | 75.05                |
| 106.0-107.0 | 64.5     | 6.8           | 561.2             | 0.92             | 75.97                |
| 107.0-108.0 | 62.5     | 6.5           | 567.7             | 0.88             | 76.85                |
| 108.0-109.0 | 61.0     | 6.3           | 574.0             | 0.86             | 77.71                |
| 109.0-110.0 | 59.9     | 6.2           | 580.2             | 0.84             | 78.55                |
| 110.0-111.0 | 58.7     | 6.0           | 586.3             | 0.82             | 79.37                |
| 111.0-112.0 | 57.5     | 5.9           | 592.1             | 0.79             | 80.16                |
| 112.0-113.0 | 56.8     | 5.8           | 597.9             | 0.78             | 80.94                |
| 113.0-114.0 | 56.4     | 5.7           | 603.6             | 0.77             | 81.71                |
| 114.0-115.0 | 55.7     | 5.6           | 609.1             | 0.75             | 82.46                |
| 115.0-116.0 | 55.0     | 5.4           | 614.6             | 0.74             | 83.20                |
| 116.0-117.0 | 54.4     | 5.3           | 619.9             | 0.72             | 83.92                |
| 117.0-118.0 | 53.4     | 5.2           | 625.1             | 0.70             | 84.63                |
| 118.0-119.0 | 52.1     | 5.0           | 630.1             | 0.68             | 85.31                |
| 119.0-120.0 | 50.9     | 4.9           | 635.0             | 0.66             | 85.96                |

Test Type : Type C      Test Distance : 6.119 m  
 Test Device : Lisun LSG-1700B  
 Test Lab :  
 Test By : P. Nellemose

C Plane (°): 0.0-360.0:45.0    γ (°): 0.0-180.0:1.0  
 Temperature : 23.0°C      Humidity : 75.0%  
 Review By :

## Zonal Flux

| Gamma °     | I <sub>mean</sub> cd | Zonal Flux lm | Sum Zonal Flux lm | Rel Zonal Flux % | Sum Rel Zonal Flux % |
|-------------|----------------------|---------------|-------------------|------------------|----------------------|
| 120.0-121.0 | 50.1                 | 4.7           | 639.7             | 0.64             | 86.61                |
| 121.0-122.0 | 49.6                 | 4.6           | 644.3             | 0.63             | 87.23                |
| 122.0-123.0 | 49.8                 | 4.6           | 649.0             | 0.62             | 87.86                |
| 123.0-124.0 | 50.1                 | 4.6           | 653.5             | 0.62             | 88.48                |
| 124.0-125.0 | 49.7                 | 4.5           | 658.0             | 0.61             | 89.09                |
| 125.0-126.0 | 49.5                 | 4.4           | 662.5             | 0.60             | 89.68                |
| 126.0-127.0 | 49.4                 | 4.4           | 666.8             | 0.59             | 90.27                |
| 127.0-128.0 | 48.5                 | 4.2           | 671.0             | 0.57             | 90.84                |
| 128.0-129.0 | 47.7                 | 4.1           | 675.1             | 0.55             | 91.40                |
| 129.0-130.0 | 46.9                 | 4.0           | 679.1             | 0.54             | 91.94                |
| 130.0-131.0 | 45.9                 | 3.8           | 682.9             | 0.52             | 92.45                |
| 131.0-132.0 | 45.2                 | 3.7           | 686.6             | 0.50             | 92.96                |
| 132.0-133.0 | 45.1                 | 3.7           | 690.3             | 0.49             | 93.45                |
| 133.0-134.0 | 44.6                 | 3.5           | 693.8             | 0.48             | 93.93                |
| 134.0-135.0 | 44.0                 | 3.4           | 697.3             | 0.47             | 94.40                |
| 135.0-136.0 | 43.5                 | 3.3           | 700.6             | 0.45             | 94.85                |
| 136.0-137.0 | 42.4                 | 3.2           | 703.8             | 0.43             | 95.28                |
| 137.0-138.0 | 41.0                 | 3.0           | 706.8             | 0.41             | 95.69                |
| 138.0-139.0 | 39.3                 | 2.9           | 709.7             | 0.39             | 96.08                |
| 139.0-140.0 | 37.2                 | 2.7           | 712.4             | 0.36             | 96.44                |
| 140.0-141.0 | 34.2                 | 2.4           | 714.7             | 0.32             | 96.76                |
| 141.0-142.0 | 30.9                 | 2.1           | 716.8             | 0.29             | 97.05                |
| 142.0-143.0 | 28.6                 | 1.9           | 718.8             | 0.26             | 97.31                |
| 143.0-144.0 | 27.2                 | 1.8           | 720.5             | 0.24             | 97.55                |
| 144.0-145.0 | 26.3                 | 1.7           | 722.2             | 0.23             | 97.77                |
| 145.0-146.0 | 25.2                 | 1.6           | 723.8             | 0.21             | 97.99                |
| 146.0-147.0 | 24.3                 | 1.5           | 725.3             | 0.20             | 98.19                |
| 147.0-148.0 | 23.6                 | 1.4           | 726.6             | 0.19             | 98.37                |
| 148.0-149.0 | 22.2                 | 1.3           | 727.9             | 0.17             | 98.55                |
| 149.0-150.0 | 20.0                 | 1.1           | 729.0             | 0.15             | 98.70                |
| 150.0-151.0 | 18.3                 | 1.0           | 730.0             | 0.13             | 98.83                |
| 151.0-152.0 | 17.1                 | 0.9           | 730.9             | 0.12             | 98.95                |
| 152.0-153.0 | 16.4                 | 0.8           | 731.7             | 0.11             | 99.06                |
| 153.0-154.0 | 15.8                 | 0.8           | 732.5             | 0.10             | 99.17                |
| 154.0-155.0 | 15.2                 | 0.7           | 733.2             | 0.10             | 99.27                |
| 155.0-156.0 | 14.5                 | 0.7           | 733.9             | 0.09             | 99.36                |
| 156.0-157.0 | 13.6                 | 0.6           | 734.5             | 0.08             | 99.44                |
| 157.0-158.0 | 12.7                 | 0.5           | 735.0             | 0.07             | 99.51                |
| 158.0-159.0 | 12.0                 | 0.5           | 735.5             | 0.07             | 99.57                |
| 159.0-160.0 | 11.7                 | 0.4           | 736.0             | 0.06             | 99.63                |

Test Type : Type C      Test Distance : 6.119 m  
Test Device : Lisun LSG-1700B  
Test Lab :  
Test By : P. Nellemose

C Plane (°): 0.0-360.0:45.0    γ (°): 0.0-180.0:1.0  
Temperature : 23.0°C      Humidity : 75.0%  
Review By :

## Zonal Flux

| Gamma °     | I <sub>mean</sub> cd | Zonal Flux lm | Sum Zonal Flux lm | Rel Zonal Flux % | Sum Rel Zonal Flux % |
|-------------|----------------------|---------------|-------------------|------------------|----------------------|
| 160.0-161.0 | 12.0                 | 0.4           | 736.4             | 0.06             | 99.69                |
| 161.0-162.0 | 12.4                 | 0.4           | 736.8             | 0.06             | 99.75                |
| 162.0-163.0 | 11.8                 | 0.4           | 737.2             | 0.05             | 99.80                |
| 163.0-164.0 | 10.4                 | 0.3           | 737.5             | 0.04             | 99.85                |
| 164.0-165.0 | 8.9                  | 0.3           | 737.8             | 0.04             | 99.88                |
| 165.0-166.0 | 7.4                  | 0.2           | 738.0             | 0.03             | 99.91                |
| 166.0-167.0 | 5.9                  | 0.2           | 738.1             | 0.02             | 99.93                |
| 167.0-168.0 | 4.7                  | 0.1           | 738.3             | 0.02             | 99.95                |
| 168.0-169.0 | 3.9                  | 0.1           | 738.3             | 0.01             | 99.96                |
| 169.0-170.0 | 3.3                  | 0.1           | 738.4             | 0.01             | 99.97                |
| 170.0-171.0 | 2.9                  | 0.1           | 738.5             | 0.01             | 99.97                |
| 171.0-172.0 | 2.7                  | 0.0           | 738.5             | 0.01             | 99.98                |
| 172.0-173.0 | 2.5                  | 0.0           | 738.5             | 0.00             | 99.98                |
| 173.0-174.0 | 2.4                  | 0.0           | 738.6             | 0.00             | 99.99                |
| 174.0-175.0 | 2.4                  | 0.0           | 738.6             | 0.00             | 99.99                |
| 175.0-176.0 | 2.4                  | 0.0           | 738.6             | 0.00             | 100.00               |
| 176.0-177.0 | 2.4                  | 0.0           | 738.6             | 0.00             | 100.00               |
| 177.0-178.0 | 2.4                  | 0.0           | 738.6             | 0.00             | 100.00               |
| 178.0-179.0 | 2.4                  | 0.0           | 738.7             | 0.00             | 100.00               |
| 179.0-180.0 | 2.4                  | 0.0           | 738.7             | 0.00             | 100.00               |