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## Nata

Client: NT

LumCAT: 3-2987-LM

Luminaire: 92.70.121.00 LED HOLDER

Report No: 20251110-B014

Ballast type: DC

Test No: 20251110-C014

Voltage(V): 36.610

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.710

Lamp flux(lm): 3662.0

Power (W): 25.990

Number of Lamps: 1

PF: 0.000

Length(mm): 85

Width(mm): 85

Phm Type: C

Height(mm): 51

## Photometric Results

Lumens(lm): 3524.61, Efficiency(%): 96.25% , Luminous Efficacy(lm/W): 135.61

Central intensity(cd): 7723.829, Maximum intensity(cd): 7723.829

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=38.4

[C90/270]Total=38.4

Field angle(10%Imax): [C0/180]Total=66.4

[C90/270]Total=66.4

Maximum s/h(1/2): C0\_180=0.64 C90\_270=0.64

Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61

Up flux rate of lamp(%): 0.00%

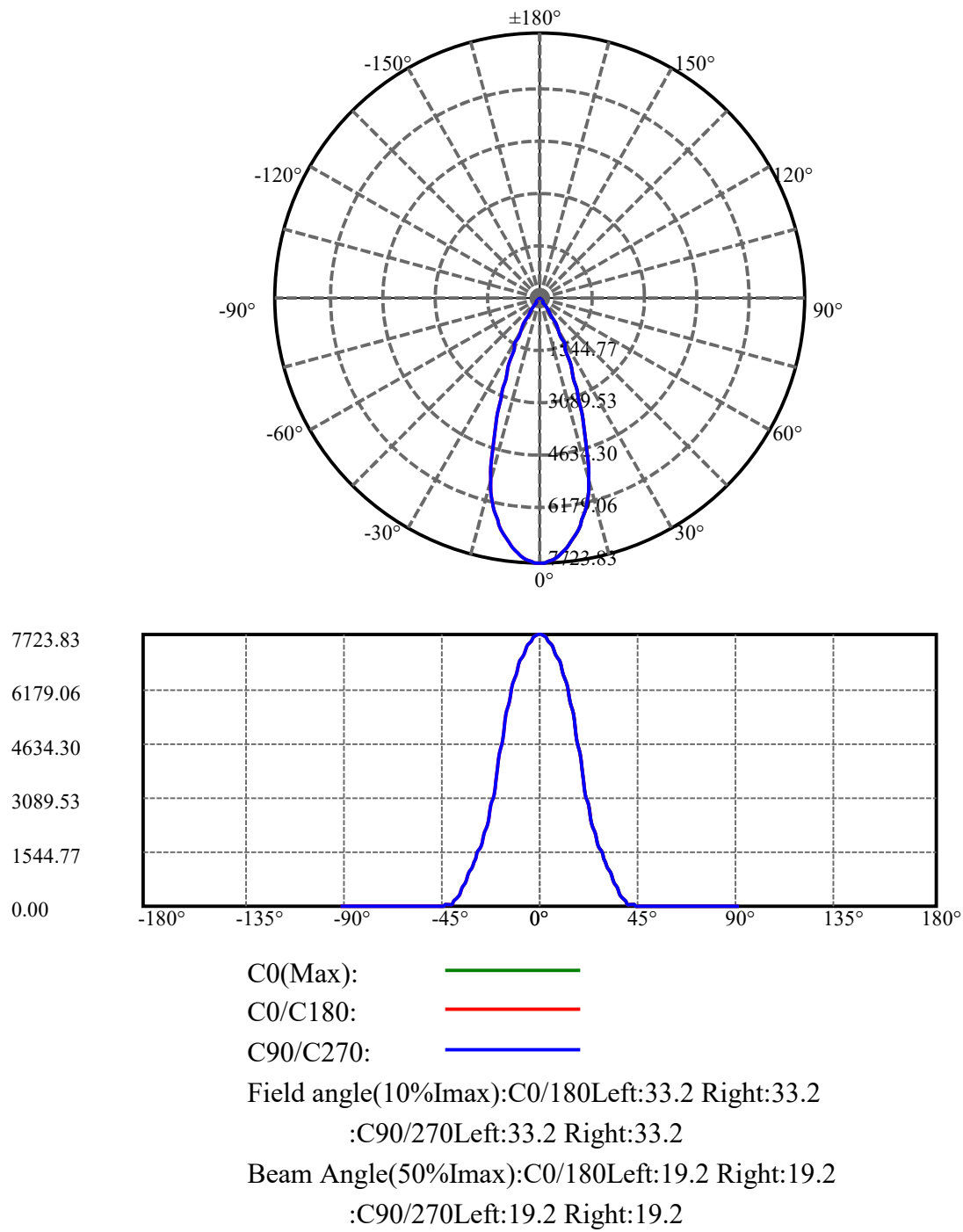
Down flux rate of lamp(%): 96.25%

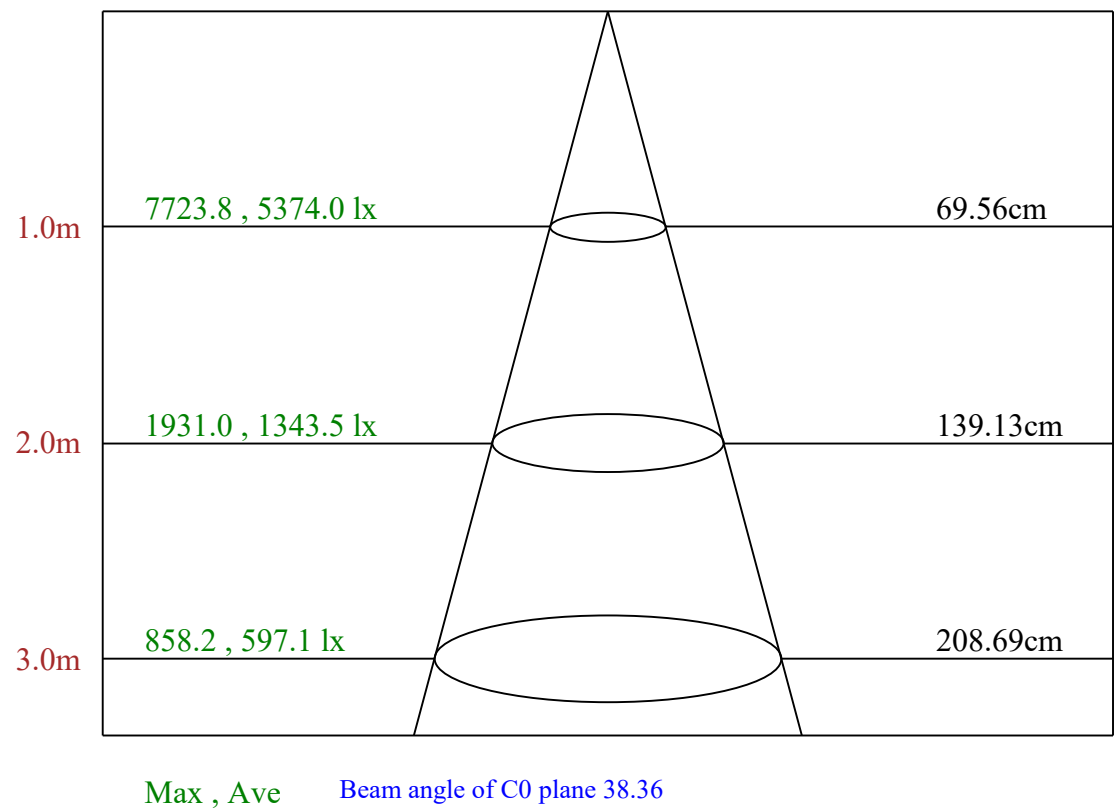
Up flux rate of LUM(%): - -

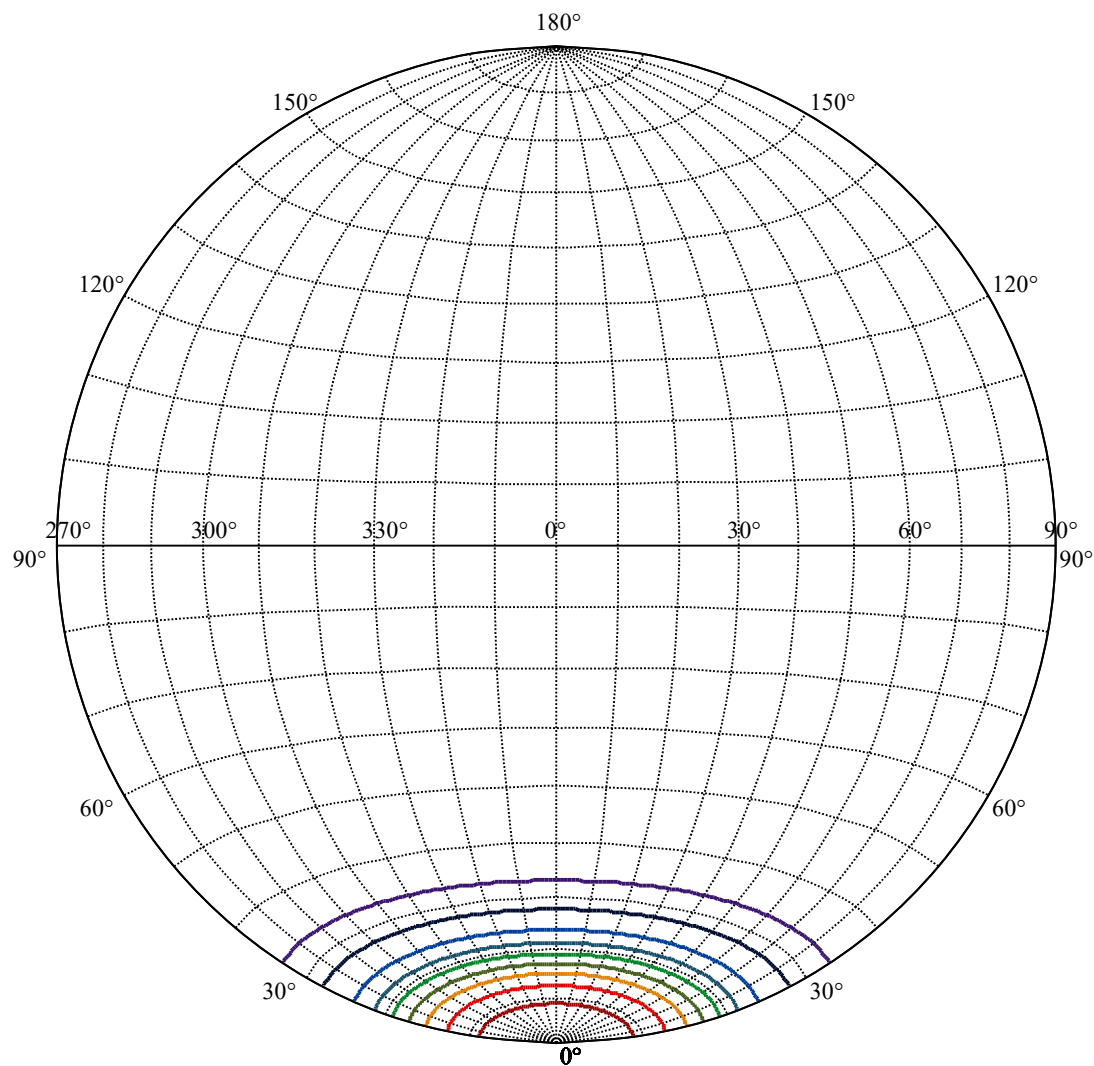
Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.262%





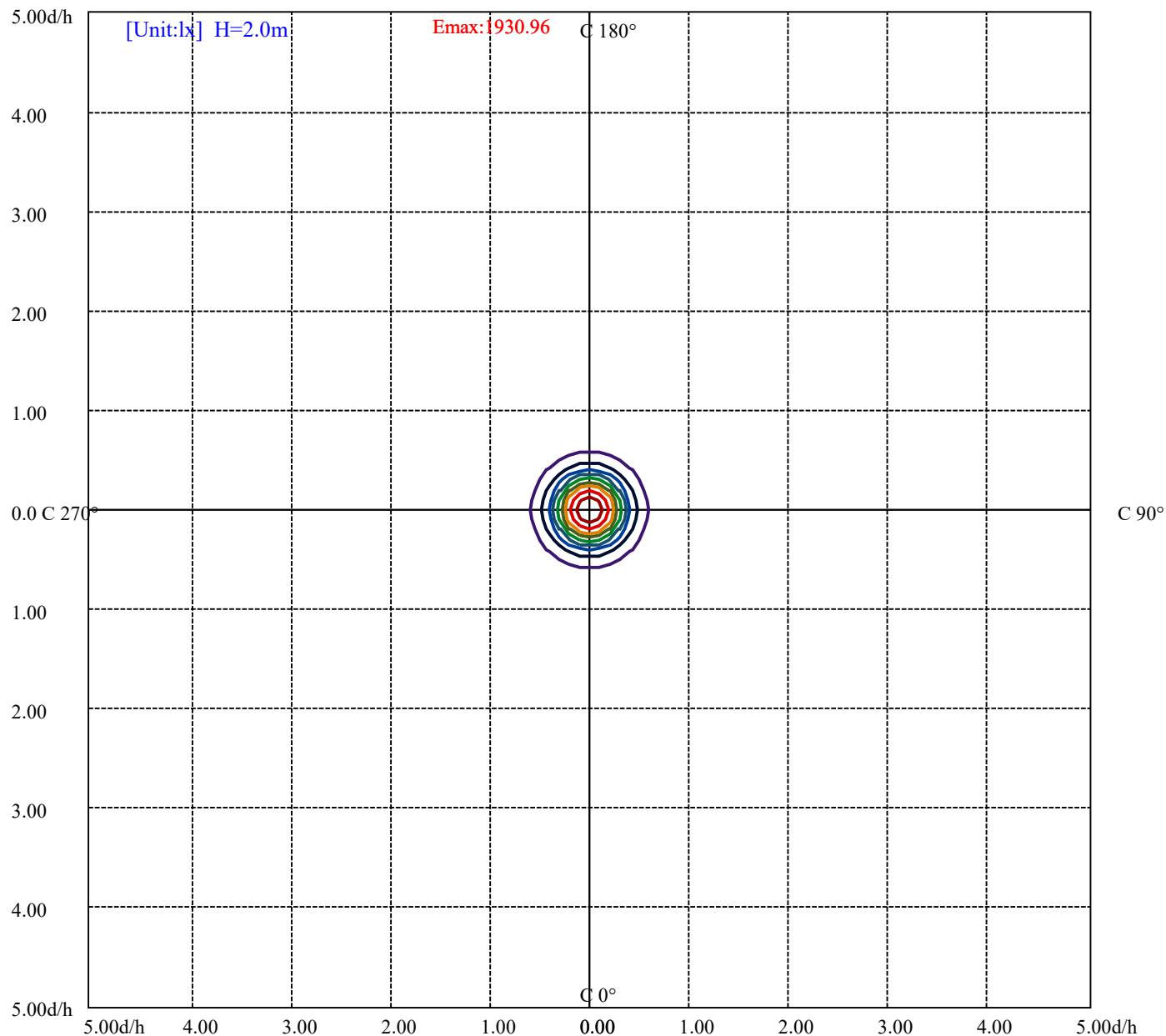


House

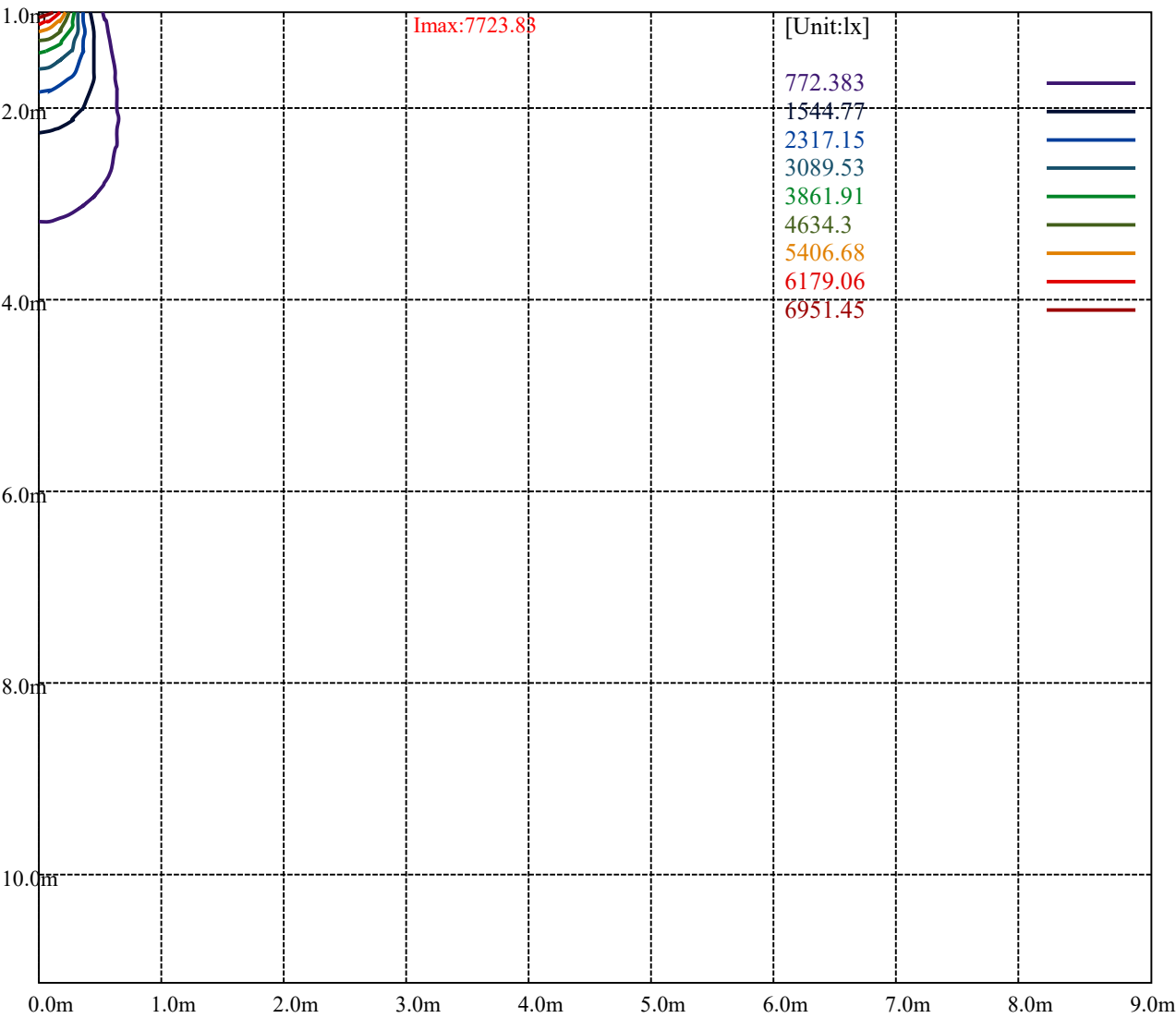
[Unit:cd]

Road

|                   |  |
|-------------------|--|
| Imax:7723.83      |  |
| (10%Imax) 772.383 |  |
| (20%Imax) 1544.77 |  |
| (30%Imax) 2317.15 |  |
| (40%Imax) 3089.53 |  |
| (50%Imax) 3861.91 |  |
| (60%Imax) 4634.3  |  |
| (70%Imax) 5406.68 |  |
| (80%Imax) 6179.06 |  |
| (90%Imax) 6951.45 |  |



|           |          |   |
|-----------|----------|---|
| (10%Emax) | 193.0957 | — |
| (20%Emax) | 386.1925 | — |
| (30%Emax) | 579.2875 | — |
| (40%Emax) | 772.3825 | — |
| (50%Emax) | 965.4775 | — |
| (60%Emax) | 1158.575 | — |
| (70%Emax) | 1351.67  | — |
| (80%Emax) | 1544.765 | — |
| (90%Emax) | 1737.86  | — |



Luminance Table

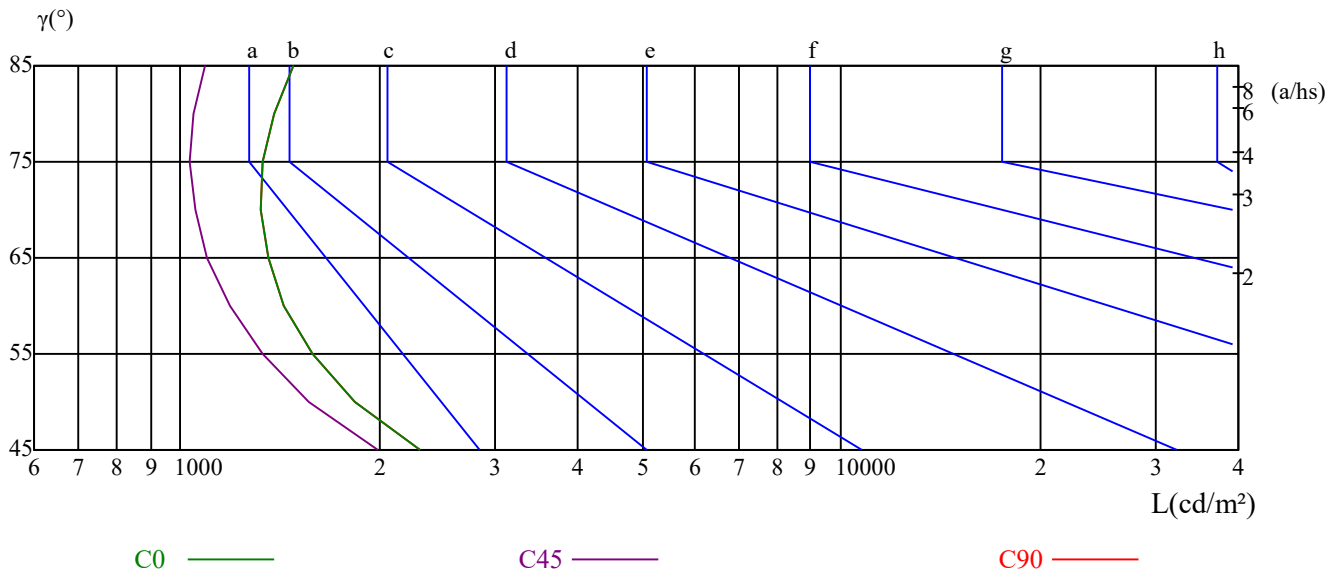
| $\gamma$ | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   |
|----------|------|------|------|------|------|------|------|------|------|
| C0       | 2299 | 1834 | 1584 | 1438 | 1355 | 1321 | 1329 | 1386 | 1479 |
| C45      | 1990 | 1564 | 1329 | 1187 | 1099 | 1050 | 1033 | 1050 | 1087 |
| C90      | 2299 | 1834 | 1584 | 1438 | 1355 | 1321 | 1329 | 1386 | 1479 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 3099       | 3099       | 3099    | 4306       | 4306       | 4306    | 11625      | 11625      | 11625   |

Glare Table

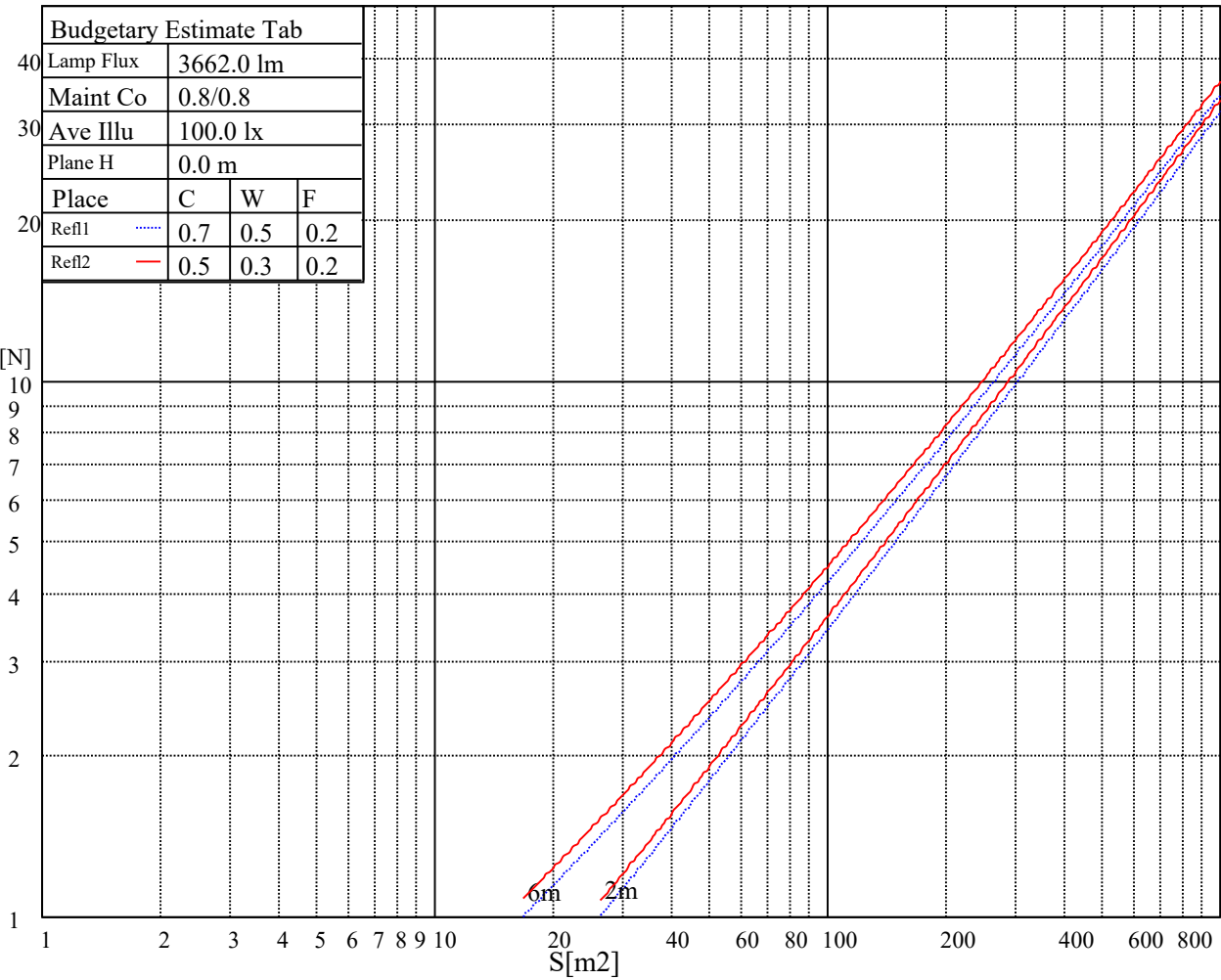
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |       |       |       |
| 1.5   | B       |                                | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85  | C       |                                |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.2   | D       |                                |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55  | E       |                                |      |      |       | 2000  | 1000  | 500   | <=300 |
|       |         | a                              | b    | c    | d     | e     | f     | g     | h     |

Luminance Limiting Curve

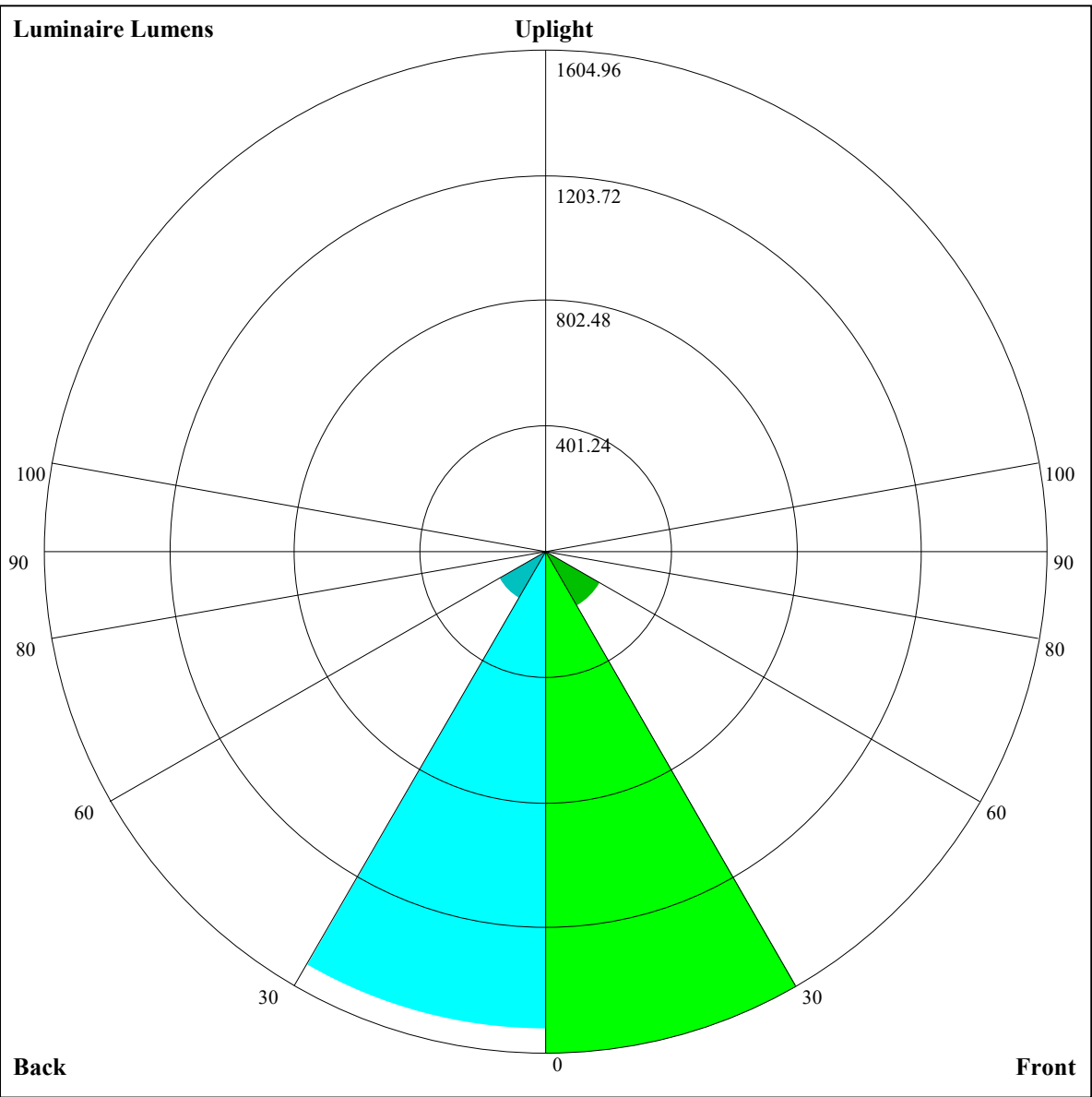


| Illumination assessment according UGR             |     |                  |       |       |       |       |                |       |       |       |       |
|---------------------------------------------------|-----|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Rf of Ceiling                                     | 70  | 70               | 50    | 50    | 30    | 70    | 70             | 50    | 50    | 30    |       |
| Rf of Wall                                        | 50  | 30               | 50    | 30    | 30    | 50    | 30             | 50    | 30    | 30    |       |
| Rf of Floor                                       | 20  | 20               | 20    | 20    | 20    | 20    | 20             | 20    | 20    | 20    |       |
| Room dimensions                                   |     | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X                                                 | Y   |                  |       |       |       |       |                |       |       |       |       |
| 2H                                                | 2H  | 16.39            | 17.29 | 16.75 | 17.60 | 17.92 | 16.29          | 17.19 | 16.65 | 17.50 | 17.81 |
|                                                   | 3H  | 16.20            | 17.00 | 16.59 | 17.34 | 17.68 | 16.10          | 16.90 | 16.49 | 17.23 | 17.58 |
|                                                   | 4H  | 16.11            | 16.85 | 16.52 | 17.21 | 17.58 | 16.01          | 16.75 | 16.42 | 17.11 | 17.48 |
|                                                   | 6H  | 16.06            | 16.73 | 16.48 | 17.11 | 17.51 | 15.96          | 16.63 | 16.38 | 17.01 | 17.41 |
|                                                   | 8H  | 16.01            | 16.65 | 16.43 | 17.04 | 17.45 | 15.91          | 16.55 | 16.33 | 16.94 | 17.35 |
|                                                   | 12H | 15.97            | 16.58 | 16.40 | 16.97 | 17.39 | 15.87          | 16.48 | 16.30 | 16.87 | 17.29 |
| 4H                                                | 2H  | 16.07            | 16.80 | 16.47 | 17.16 | 17.53 | 15.96          | 16.70 | 16.37 | 17.06 | 17.43 |
|                                                   | 3H  | 15.85            | 16.47 | 16.28 | 16.87 | 17.28 | 15.75          | 16.37 | 16.18 | 16.77 | 17.19 |
|                                                   | 4H  | 15.81            | 16.34 | 16.25 | 16.77 | 17.22 | 15.71          | 16.24 | 16.15 | 16.67 | 17.12 |
|                                                   | 6H  | 15.73            | 16.20 | 16.21 | 16.66 | 17.11 | 15.63          | 16.10 | 16.11 | 16.56 | 17.01 |
|                                                   | 8H  | 15.72            | 16.15 | 16.21 | 16.61 | 17.09 | 15.62          | 16.06 | 16.11 | 16.52 | 16.99 |
|                                                   | 12H | 15.73            | 16.13 | 16.22 | 16.58 | 17.10 | 15.63          | 16.03 | 16.12 | 16.48 | 17.01 |
| 8H                                                | 4H  | 15.62            | 16.06 | 16.11 | 16.52 | 16.99 | 15.52          | 15.96 | 16.01 | 16.42 | 16.89 |
|                                                   | 6H  | 15.56            | 15.92 | 16.07 | 16.40 | 16.91 | 15.46          | 15.82 | 15.97 | 16.30 | 16.81 |
|                                                   | 8H  | 15.62            | 15.92 | 16.16 | 16.44 | 16.94 | 15.52          | 15.82 | 16.06 | 16.34 | 16.84 |
|                                                   | 12H | 15.67            | 15.89 | 16.21 | 16.41 | 16.93 | 15.57          | 15.79 | 16.12 | 16.31 | 16.84 |
| 12H                                               | 4H  | 15.57            | 15.97 | 16.06 | 16.43 | 16.95 | 15.47          | 15.88 | 15.97 | 16.33 | 16.85 |
|                                                   | 6H  | 15.56            | 15.85 | 16.10 | 16.38 | 16.88 | 15.46          | 15.76 | 16.00 | 16.28 | 16.78 |
|                                                   | 8H  | 15.59            | 15.82 | 16.14 | 16.33 | 16.86 | 15.50          | 15.72 | 16.04 | 16.24 | 16.76 |
| Variation with the observer position at spacings: |     |                  |       |       |       |       |                |       |       |       |       |
| S = 1.0H                                          |     | 6.3/-9.7         |       |       |       |       | 6.3/-9.7       |       |       |       |       |
| S = 1.5H                                          |     | 8.9/-8.1         |       |       |       |       | 8.9/-8.1       |       |       |       |       |
| S = 2.0H                                          |     | 10.8/-7.0        |       |       |       |       | 10.8/-7.0      |       |       |       |       |
| Standard tables:                                  |     | BK1              |       |       |       |       | BK1            |       |       |       |       |
| Uncorrected UGR                                   |     | -4.3             |       |       |       |       | -4.3           |       |       |       |       |

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| RHOCC | 80                                     |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|----------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                     | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFCIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.15                                   | 1.15 | 1.15 | 1.12 | 1.12 | 1.12 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1     | 1.08                                   | 1.05 | 1.04 | 1.06 | 1.04 | 1.02 | 1.02 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.91 |
| 2     | 1.02                                   | 0.98 | 0.95 | 1.00 | 0.97 | 0.94 | 0.97 | 0.94 | 0.92 | 0.94 | 0.92 | 0.90 | 0.91 | 0.90 | 0.88 | 0.87 |
| 3     | 0.96                                   | 0.92 | 0.89 | 0.95 | 0.91 | 0.88 | 0.92 | 0.89 | 0.87 | 0.90 | 0.88 | 0.85 | 0.88 | 0.86 | 0.84 | 0.83 |
| 4     | 0.91                                   | 0.87 | 0.83 | 0.90 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.86 | 0.83 | 0.81 | 0.85 | 0.82 | 0.80 | 0.79 |
| 5     | 0.87                                   | 0.82 | 0.79 | 0.86 | 0.82 | 0.78 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.76 | 0.75 |
| 6     | 0.83                                   | 0.78 | 0.75 | 0.82 | 0.78 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.72 |
| 7     | 0.79                                   | 0.74 | 0.71 | 0.79 | 0.74 | 0.71 | 0.78 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 8     | 0.76                                   | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.66 |
| 9     | 0.73                                   | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.72 | 0.67 | 0.65 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.63 |
| 10    | 0.70                                   | 0.65 | 0.62 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.67 | 0.64 | 0.62 | 0.61 |



Luminaire Lumens:

FL=1604.96,FM=199.83,FH=9.01,FVH=4.01

BL=1525.97,BM=174.97,BH=8.97,BVH=4

UL=0,UH=0

BUG Rating:B3-U0-G0

## Intensity data(cd)

| C/ $\gamma$ (°) | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0     |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0             | 7749.88 | 7758.49 | 7768.83 | 7762.80 | 7716.29 | 7630.18 | 7525.11 | 7380.43 | 7279.67 |
| 45.0            | 7695.63 | 7731.80 | 7741.27 | 7764.52 | 7777.44 | 7727.49 | 7666.35 | 7581.95 | 7461.38 |
| 90.0            | 7730.07 | 7738.69 | 7772.27 | 7749.88 | 7692.18 | 7616.40 | 7499.28 | 7420.91 | 7331.35 |
| 135.0           | 7719.74 | 7732.66 | 7737.82 | 7756.77 | 7719.74 | 7655.15 | 7557.84 | 7420.05 | 7337.37 |
| 180.0           | 7749.88 | 7713.71 | 7643.96 | 7556.98 | 7403.68 | 7284.84 | 7153.08 | 7008.40 | 6812.05 |
| 225.0           | 7695.63 | 7622.43 | 7502.72 | 7380.43 | 7273.65 | 7142.75 | 6961.04 | 6796.55 | 6630.34 |
| 270.0           | 7730.07 | 7702.52 | 7648.26 | 7549.23 | 7445.88 | 7335.65 | 7228.00 | 7059.21 | 6913.67 |
| 315.0           | 7719.74 | 7689.60 | 7610.37 | 7503.58 | 7399.38 | 7277.09 | 7159.97 | 6991.18 | 6847.36 |
| 360.0           | 7749.88 | 7758.49 | 7768.83 | 7762.80 | 7716.29 | 7630.18 | 7525.11 | 7380.43 | 7279.67 |
| C/ $\gamma$ (°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0             | 7161.69 | 6978.26 | 6818.08 | 6641.54 | 6447.77 | 6152.38 | 5879.39 | 5577.11 | 5228.33 |
| 45.0            | 7377.85 | 7275.37 | 7147.05 | 6963.62 | 6806.02 | 6608.81 | 6380.60 | 6049.90 | 5738.16 |
| 90.0            | 7219.39 | 7050.60 | 6908.50 | 6737.99 | 6535.61 | 6229.89 | 5951.73 | 5639.98 | 5174.94 |
| 135.0           | 7218.53 | 7050.60 | 6889.56 | 6731.10 | 6508.91 | 6295.34 | 6030.10 | 5680.46 | 5343.73 |
| 180.0           | 6652.73 | 6429.69 | 6230.75 | 5993.07 | 5659.79 | 5372.15 | 5042.32 | 4660.81 | 4175.11 |
| 225.0           | 6452.94 | 6206.64 | 5966.37 | 5615.87 | 5304.12 | 4957.92 | 4485.13 | 4096.74 | 3724.71 |
| 270.0           | 6756.94 | 6595.03 | 6353.90 | 6128.27 | 5866.47 | 5565.92 | 5147.38 | 4762.43 | 4256.06 |
| 315.0           | 6669.96 | 6427.10 | 6195.44 | 5933.64 | 5634.81 | 5292.92 | 4816.69 | 4404.18 | 3990.81 |
| 360.0           | 7161.69 | 6978.26 | 6818.08 | 6641.54 | 6447.77 | 6152.38 | 5879.39 | 5577.11 | 5228.33 |
| C/ $\gamma$ (°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0             | 4751.24 | 4338.73 | 3940.00 | 3493.05 | 3175.27 | 2883.33 | 2537.13 | 2289.11 | 1717.80 |
| 45.0            | 5399.71 | 4904.53 | 4491.16 | 4076.93 | 3602.42 | 3265.70 | 2956.53 | 2603.45 | 2348.53 |
| 90.0            | 4777.07 | 4358.54 | 3853.88 | 3495.63 | 3171.83 | 2804.10 | 2532.83 | 2286.53 | 1921.39 |
| 135.0           | 4982.90 | 4579.86 | 4092.43 | 3721.26 | 3387.12 | 3086.57 | 2736.07 | 2483.74 | 2194.38 |
| 180.0           | 3805.66 | 3474.10 | 3168.38 | 2813.57 | 2554.36 | 2314.95 | 2041.95 | 1841.30 | 1632.03 |
| 225.0           | 3308.76 | 3007.34 | 2730.04 | 2476.85 | 2245.19 | 1716.34 | 1716.34 | 1636.16 | 1466.60 |
| 270.0           | 3865.94 | 3518.02 | 3129.63 | 2844.58 | 2576.75 | 2333.03 | 2055.73 | 1862.83 | 1694.90 |
| 315.0           | 3622.23 | 3212.30 | 2912.61 | 2571.58 | 2325.28 | 1946.36 | 1714.79 | 1674.83 | 1527.40 |
| 360.0           | 4751.24 | 4338.73 | 3940.00 | 3493.05 | 3175.27 | 2883.33 | 2537.13 | 2289.11 | 1717.80 |
| C/ $\gamma$ (°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0             | 1717.80 | 1635.47 | 1487.35 | 1344.65 | 1243.21 | 1131.68 | 1005.52 | 831.04  | 681.20  |
| 45.0            | 2112.57 | 1853.35 | 1676.81 | 1526.10 | 1404.68 | 1273.78 | 1156.66 | 1030.06 | 894.00  |
| 90.0            | 1696.27 | 1656.83 | 1512.58 | 1392.02 | 1247.08 | 1114.72 | 982.87  | 809.86  | 666.13  |
| 135.0           | 1987.70 | 1797.38 | 1594.14 | 1456.35 | 1343.53 | 1192.83 | 1057.62 | 920.69  | 775.15  |
| 180.0           | 1486.49 | 1365.92 | 1204.02 | 1067.95 | 931.89  | 795.82  | 611.53  | 464.26  | 464.26  |
| 225.0           | 1350.68 | 1219.61 | 1037.47 | 891.15  | 748.46  | 577.34  | 446.27  | 319.93  | 183.00  |
| 270.0           | 1548.49 | 1393.48 | 1260.86 | 1114.46 | 944.80  | 800.99  | 650.28  | 486.66  | 455.65  |
| 315.0           | 1369.45 | 1256.81 | 1128.84 | 995.01  | 820.79  | 677.15  | 538.07  | 406.39  | 258.87  |
| 360.0           | 1717.80 | 1635.47 | 1487.35 | 1344.65 | 1243.21 | 1131.68 | 1005.52 | 831.04  | 681.20  |
| C/ $\gamma$ (°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0             | 529.71  | 387.88  | 236.48  | 138.13  | 72.43   | 41.25   | 34.96   | 26.27   | 20.93   |
| 45.0            | 717.45  | 576.22  | 437.57  | 437.57  | 158.29  | 69.93   | 46.50   | 39.18   | 31.09   |
| 90.0            | 488.38  | 360.32  | 241.30  | 141.75  | 63.64   | 45.13   | 37.81   | 29.88   | 22.74   |
| 135.0           | 591.72  | 448.76  | 448.76  | 291.25  | 106.96  | 51.67   | 40.39   | 31.52   | 24.97   |
| 180.0           | 296.25  | 101.62  | 54.94   | 39.70   | 33.41   | 25.23   | 20.41   | 18.34   | 17.57   |
| 225.0           | 100.41  | 57.53   | 43.40   | 34.36   | 27.47   | 22.65   | 20.67   | 19.29   | 18.34   |
| 270.0           | 308.13  | 118.24  | 63.04   | 44.09   | 37.12   | 27.82   | 22.39   | 19.98   | 18.95   |
| 315.0           | 156.65  | 81.81   | 43.66   | 35.65   | 28.68   | 21.44   | 18.34   | 17.40   | 16.53   |
| 360.0           | 529.71  | 387.88  | 236.48  | 138.13  | 72.43   | 41.25   | 34.96   | 26.27   | 20.93   |

## Intensity data(cd)

| C/ $\gamma$ (°) | 45.0  | 46.0  | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0             | 18.52 | 17.57 | 16.62 | 15.93 | 15.33 | 14.73 | 14.12 | 13.61 | 13.18 |
| 45.0            | 23.34 | 20.50 | 19.29 | 18.26 | 17.22 | 16.36 | 15.59 | 14.98 | 14.30 |
| 90.0            | 20.41 | 19.20 | 17.91 | 17.05 | 16.19 | 15.33 | 14.64 | 13.95 | 13.43 |
| 135.0           | 20.50 | 18.77 | 17.83 | 17.05 | 16.10 | 15.59 | 14.90 | 14.30 | 13.69 |
| 180.0           | 16.79 | 15.93 | 15.33 | 14.81 | 14.30 | 13.78 | 13.35 | 12.92 | 12.49 |
| 225.0           | 17.22 | 16.45 | 15.76 | 14.98 | 14.38 | 13.87 | 13.35 | 12.83 | 12.49 |
| 270.0           | 17.74 | 16.88 | 16.19 | 15.33 | 14.73 | 14.04 | 13.61 | 13.09 | 12.57 |
| 315.0           | 15.85 | 15.24 | 14.73 | 14.04 | 13.61 | 13.18 | 12.75 | 12.23 | 11.88 |
| 360.0           | 18.52 | 17.57 | 16.62 | 15.93 | 15.33 | 14.73 | 14.12 | 13.61 | 13.18 |
| C/ $\gamma$ (°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0             | 12.66 | 12.31 | 11.97 | 11.54 | 11.28 | 10.94 | 10.68 | 10.42 | 10.16 |
| 45.0            | 13.69 | 13.18 | 12.75 | 12.31 | 11.88 | 11.63 | 11.28 | 11.02 | 10.68 |
| 90.0            | 13.00 | 12.57 | 12.14 | 11.71 | 11.45 | 11.11 | 10.85 | 10.51 | 10.25 |
| 135.0           | 13.26 | 12.83 | 12.49 | 12.06 | 11.71 | 11.37 | 11.02 | 10.76 | 10.42 |
| 180.0           | 12.06 | 11.71 | 11.45 | 11.11 | 10.85 | 10.59 | 10.33 | 10.08 | 9.82  |
| 225.0           | 12.14 | 11.80 | 11.45 | 11.11 | 10.85 | 10.59 | 10.33 | 10.08 | 9.82  |
| 270.0           | 12.14 | 11.80 | 11.45 | 11.11 | 10.85 | 10.59 | 10.33 | 10.08 | 9.82  |
| 315.0           | 11.63 | 11.28 | 11.02 | 10.68 | 10.42 | 10.16 | 9.90  | 9.73  | 9.56  |
| 360.0           | 12.66 | 12.31 | 11.97 | 11.54 | 11.28 | 10.94 | 10.68 | 10.42 | 10.16 |
| C/ $\gamma$ (°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0             | 9.99  | 9.73  | 9.56  | 9.39  | 9.21  | 9.04  | 8.87  | 8.70  | 8.61  |
| 45.0            | 10.42 | 10.16 | 9.99  | 9.73  | 9.56  | 9.39  | 9.13  | 8.96  | 8.87  |
| 90.0            | 10.08 | 9.73  | 9.56  | 9.30  | 9.13  | 9.04  | 8.87  | 8.70  | 8.61  |
| 135.0           | 10.16 | 9.99  | 9.82  | 9.47  | 9.39  | 9.21  | 9.04  | 8.87  | 8.70  |
| 180.0           | 9.65  | 9.47  | 9.30  | 9.13  | 8.96  | 8.78  | 8.70  | 8.53  | 8.44  |
| 225.0           | 9.65  | 9.47  | 9.30  | 9.13  | 8.96  | 8.87  | 8.70  | 8.53  | 8.44  |
| 270.0           | 9.65  | 9.39  | 9.21  | 9.13  | 8.87  | 8.78  | 8.61  | 8.53  | 8.35  |
| 315.0           | 9.39  | 9.21  | 8.96  | 8.87  | 8.70  | 8.61  | 8.53  | 8.35  | 8.18  |
| 360.0           | 9.99  | 9.73  | 9.56  | 9.39  | 9.21  | 9.04  | 8.87  | 8.70  | 8.61  |
| C/ $\gamma$ (°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0             | 8.53  | 8.35  | 8.27  | 8.18  | 8.10  | 8.01  | 7.92  | 7.84  | 7.75  |
| 45.0            | 8.70  | 8.61  | 8.44  | 8.35  | 8.27  | 8.18  | 8.01  | 7.92  | 7.84  |
| 90.0            | 8.44  | 8.27  | 8.18  | 8.01  | 8.01  | 7.84  | 7.75  | 7.66  | 7.66  |
| 135.0           | 8.53  | 8.44  | 8.27  | 8.18  | 8.10  | 8.01  | 7.92  | 7.84  | 7.75  |
| 180.0           | 8.35  | 8.18  | 8.10  | 8.01  | 7.92  | 7.84  | 7.75  | 7.58  | 7.58  |
| 225.0           | 8.35  | 8.18  | 8.10  | 7.92  | 7.92  | 7.84  | 7.75  | 7.66  | 7.58  |
| 270.0           | 8.27  | 8.18  | 8.10  | 7.92  | 7.84  | 7.84  | 7.66  | 7.66  | 7.58  |
| 315.0           | 8.10  | 8.01  | 7.92  | 7.84  | 7.75  | 7.66  | 7.58  | 7.49  | 7.49  |
| 360.0           | 8.53  | 8.35  | 8.27  | 8.18  | 8.10  | 8.01  | 7.92  | 7.84  | 7.75  |
| C/ $\gamma$ (°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0             | 7.66  | 7.58  | 7.58  | 7.49  | 7.41  | 7.32  | 7.32  | 7.32  | 7.23  |
| 45.0            | 7.75  | 7.75  | 7.58  | 7.58  | 7.41  | 7.32  | 7.23  | 7.23  | 7.23  |
| 90.0            | 7.58  | 7.49  | 7.41  | 7.41  | 7.32  | 7.32  | 7.23  | 7.23  | 7.15  |
| 135.0           | 7.66  | 7.58  | 7.49  | 7.49  | 7.41  | 7.32  | 7.23  | 7.23  | 7.23  |
| 180.0           | 7.58  | 7.49  | 7.41  | 7.41  | 7.32  | 7.23  | 7.23  | 7.32  | 7.15  |
| 225.0           | 7.58  | 7.49  | 7.41  | 7.32  | 7.23  | 7.15  | 7.15  | 7.15  | 7.15  |
| 270.0           | 7.49  | 7.41  | 7.32  | 7.32  | 7.23  | 7.15  | 7.15  | 7.15  | 7.15  |
| 315.0           | 7.41  | 7.32  | 7.32  | 7.23  | 7.23  | 7.15  | 7.15  | 7.06  | 7.06  |
| 360.0           | 7.66  | 7.58  | 7.58  | 7.49  | 7.41  | 7.32  | 7.32  | 7.32  | 7.23  |

Intensity data(cd)

|                       |      |
|-----------------------|------|
| C/ $\gamma(^{\circ})$ | 90.0 |
| 0.0                   | 7.23 |
| 45.0                  | 7.15 |
| 90.0                  | 7.15 |
| 135.0                 | 7.15 |
| 180.0                 | 7.15 |
| 225.0                 | 7.15 |
| 270.0                 | 7.06 |
| 315.0                 | 7.15 |
| 360.0                 | 7.23 |