



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

## Nata

|                          |                     |
|--------------------------|---------------------|
| LumCAT: 1407-N           |                     |
| Luminaire: 92.70.051.00  |                     |
| Report No: NATA0100      | Voltage(V): 37.3000 |
| Test No: GC2018080104    | Current(A): 0.2000  |
| LampCAT: BRIDGELUX V4 HD | Power (W): 7.4600   |
| Lamp flux(lm): 732.0     | PF: 0.0000          |
| Number of Lamps: 1       | Ballast type: AC    |
| Length(mm): 39           | Width(mm): 39       |
| Phm Type: C              | Height(mm): 0       |

## Photometric Results

Lumens(lm): 618.75  
Efficiency(%): 84.53%  
Lumens(lm)/Power(W): 83.48  
Central intensity(cd): 774.410  
Maximum intensity(cd): 774.410  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=43.5  
[C90/270]Total=43.5  
Field angle(10%Imax): [C0/180]Total=92.7  
[C90/270]Total=92.7  
Maximum s/h(1/2): C0\_180=0.67 C90\_270=0.67  
Maximum s/h(1/4): C0\_180=0.76 C90\_270=0.76  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 85.08%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 95.351%

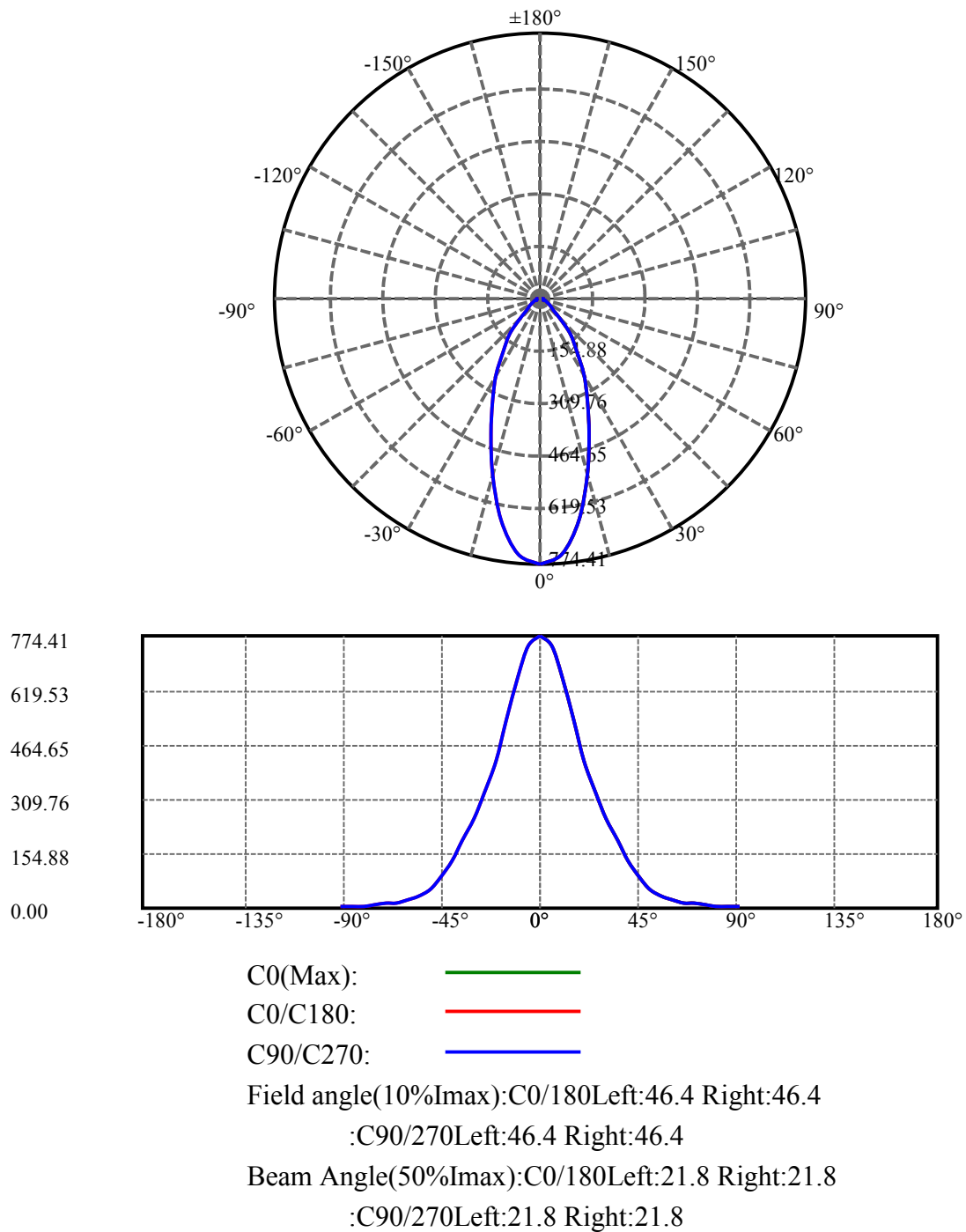
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 774.410       | 4.631       | 4.631     | .633%       | .748%      |
| 5.0                | 746.709       | 35.673      | 40.304    | 4.873%      | 6.514%     |
| 10.0               | 657.594       | 62.592      | 102.896   | 8.551%      | 16.630%    |
| 15.0               | 532.506       | 75.546      | 178.441   | 10.320%     | 28.839%    |
| 20.0               | 420.679       | 78.866      | 257.308   | 10.774%     | 41.585%    |
| 25.0               | 325.576       | 75.421      | 332.728   | 10.303%     | 53.774%    |
| 30.0               | 255.021       | 69.893      | 402.622   | 9.548%      | 65.070%    |
| 35.0               | 192.126       | 60.404      | 463.026   | 8.252%      | 74.832%    |
| 40.0               | 136.347       | 48.040      | 511.066   | 6.563%      | 82.596%    |
| 45.0               | 86.039        | 33.348      | 544.414   | 4.556%      | 87.986%    |
| 50.0               | 54.286        | 22.794      | 567.209   | 3.114%      | 91.670%    |
| 55.0               | 34.383        | 15.438      | 582.647   | 2.109%      | 94.165%    |
| 60.0               | 23.585        | 11.196      | 593.842   | 1.529%      | 95.974%    |
| 65.0               | 16.641        | 8.267       | 602.109   | 1.129%      | 97.310%    |
| 70.0               | 12.188        | 6.278       | 608.387   | .858%       | 98.325%    |
| 75.0               | 8.486         | 4.493       | 612.88    | .614%       | 99.051%    |
| 80.0               | 5.747         | 3.102       | 615.982   | .424%       | 99.552%    |
| 85.0               | 3.716         | 2.029       | 618.011   | .277%       | 99.880%    |
| 90.0               | 2.705         | 0.741       | 618.752   | .101%       | 100.000%   |

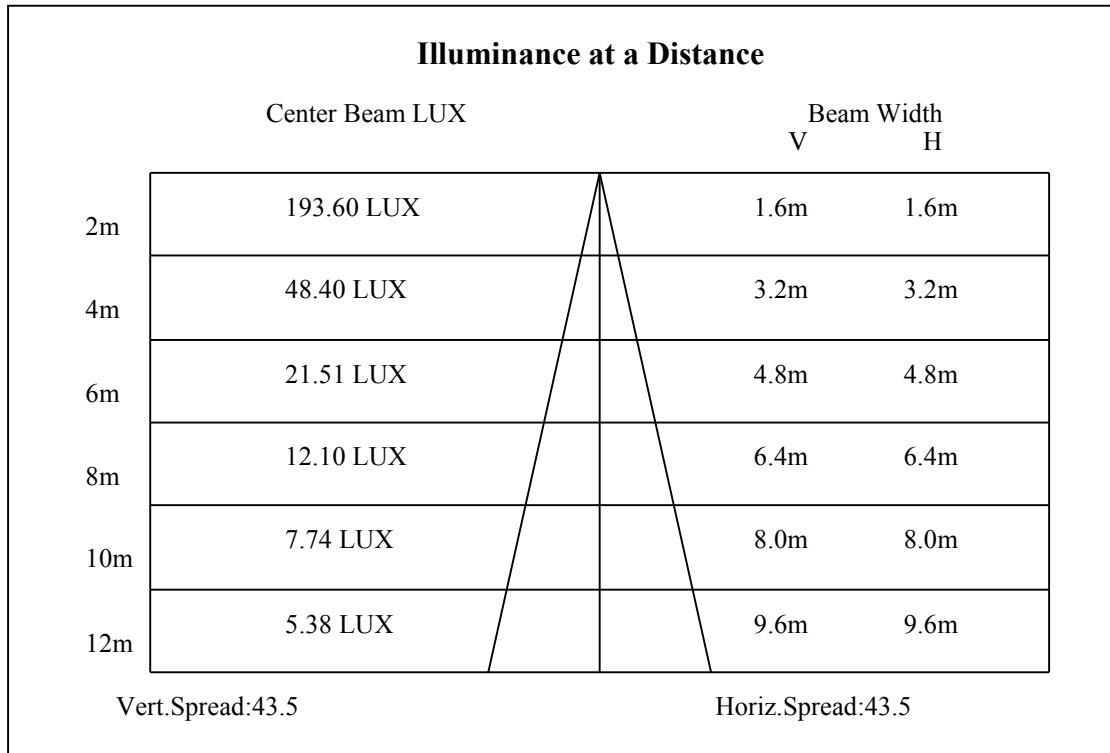
## ZONAL LUMEN SUMMARY

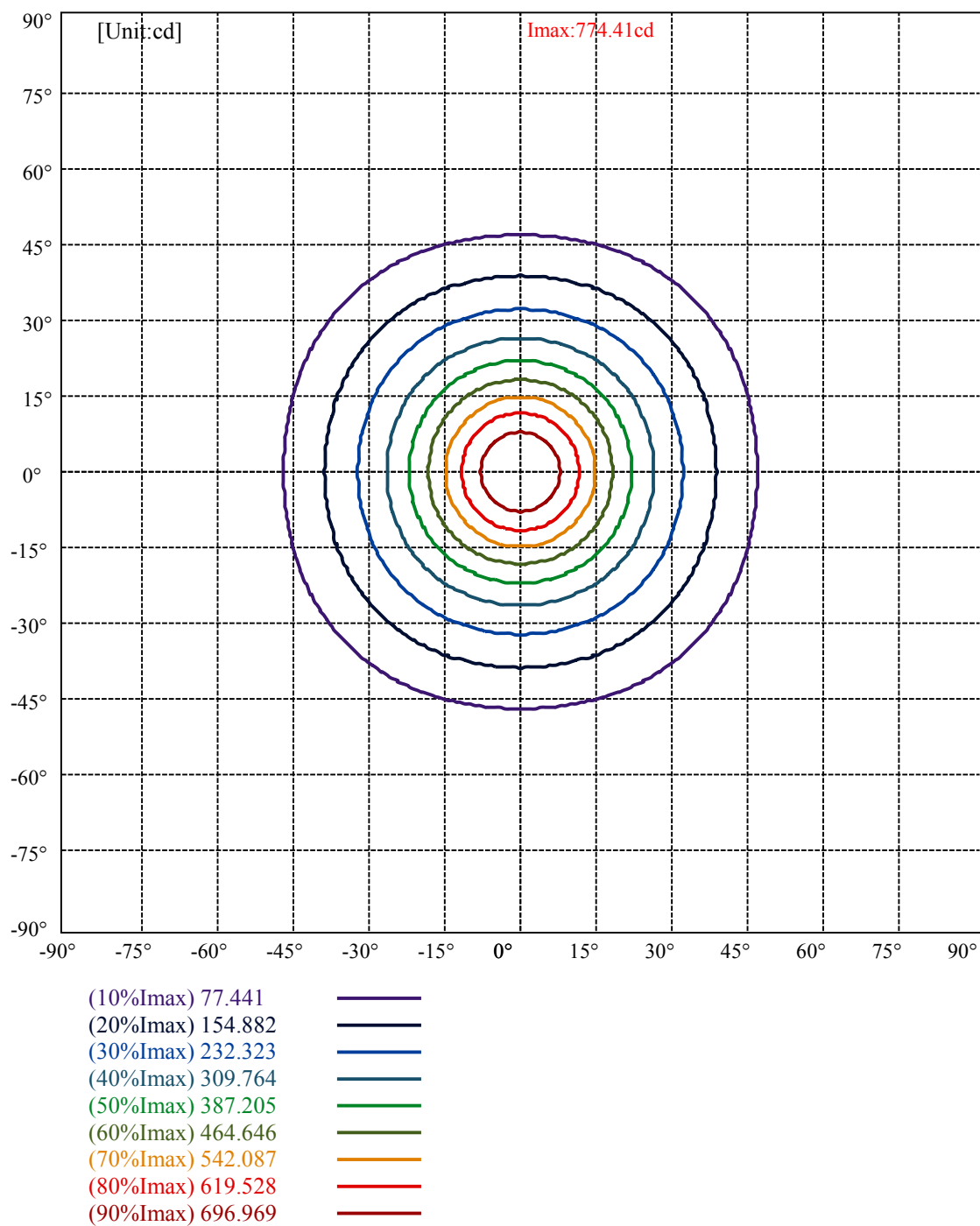
| Zone    | Lumens | %Lamp  | %Fixt   |
|---------|--------|--------|---------|
| 0-30    | 402.62 | 55.00% | 65.07%  |
| 0-40    | 511.07 | 69.82% | 82.60%  |
| 0-60    | 593.84 | 81.13% | 95.97%  |
| 0-90    | 618.01 | 84.43% | 99.88%  |
| 0-120   | 618.01 | 84.43% | 99.88%  |
| 0-180   | 618.75 | 84.53% | 100.00% |
| 60-90   | 35.36  | 4.83%  | 5.72%   |
| 90-120  | 0.00   | 0.00%  | 0.00%   |
| 90-130  | 0.00   | 0.00%  | 0.00%   |
| 90-150  | 0.00   | 0.00%  | 0.00%   |
| 90-180  | 0.00   | 0.00%  | 0.00%   |
| 0-38.33 | 495.00 | 67.62% | 80.00%  |

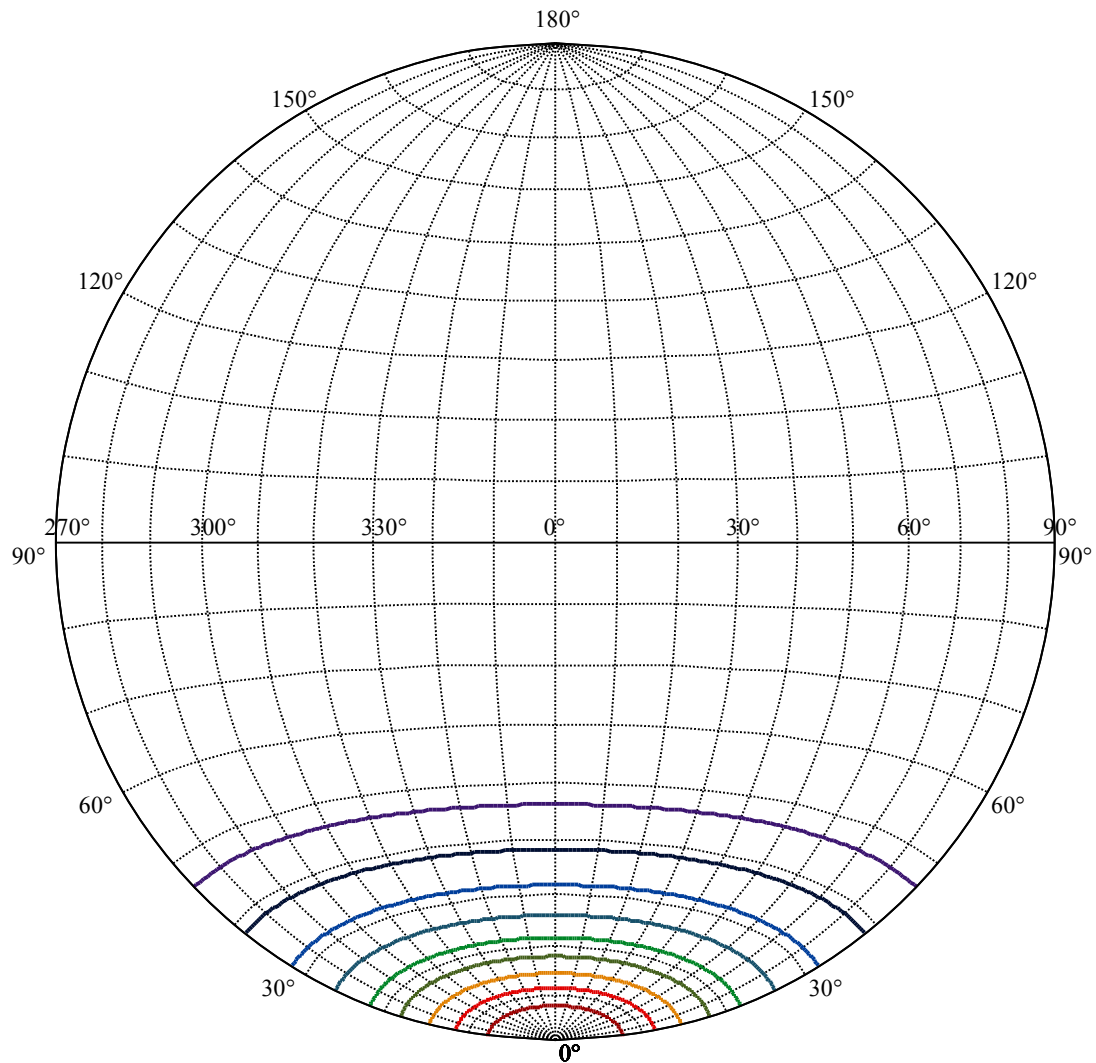
## ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 102.90 |
| 10-20   | 154.41 |
| 20-30   | 145.31 |
| 30-40   | 108.44 |
| 40-50   | 56.14  |
| 50-60   | 26.63  |
| 60-70   | 14.54  |
| 70-80   | 7.59   |
| 80-90   | 2.03   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |









House

[Unit:cd]

Road

Imax:774.41

(10%Imax) 77.441

(20%Imax) 154.882

(30%Imax) 232.323

(40%Imax) 309.764

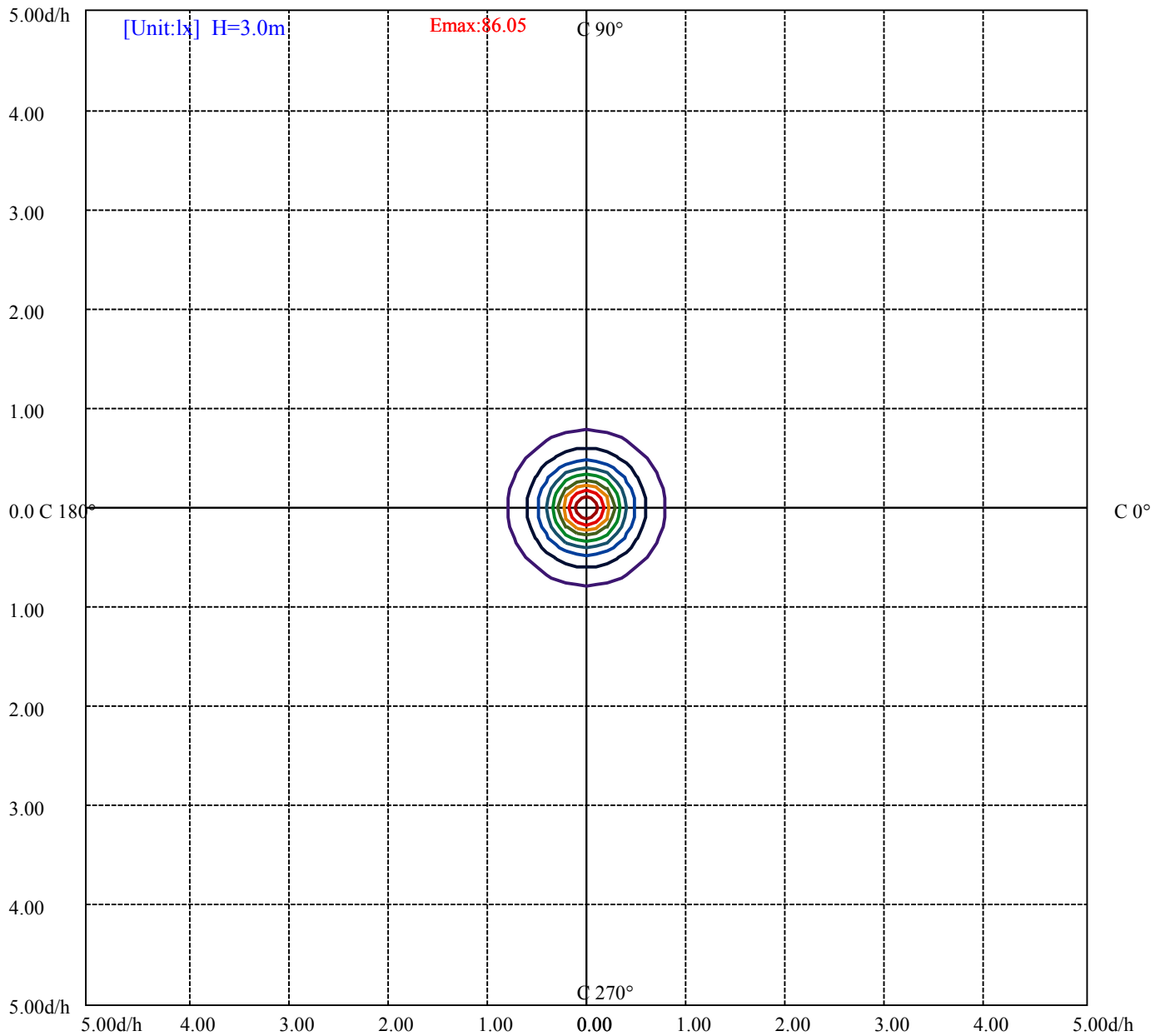
(50%Imax) 387.205

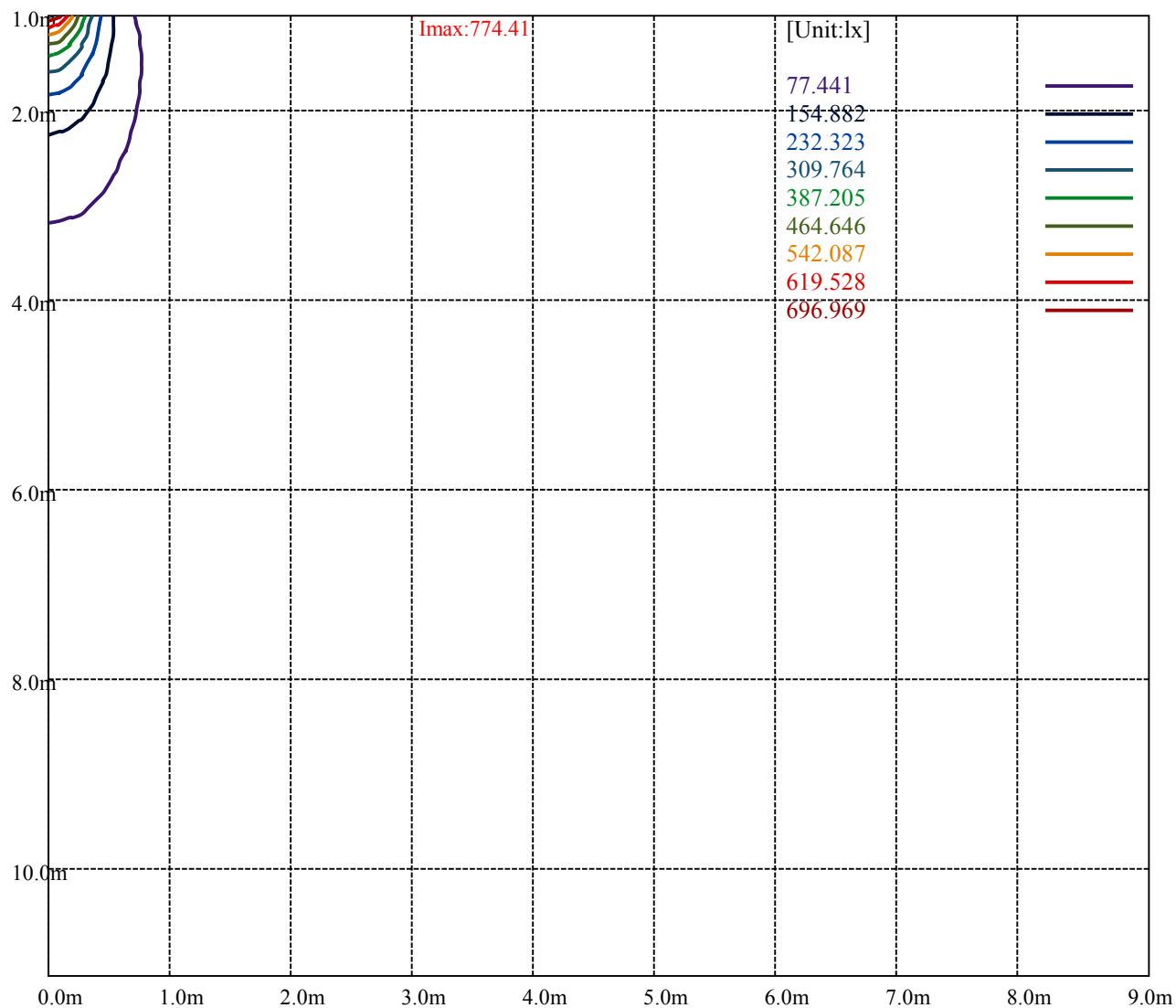
(60%Imax) 464.646

(70%Imax) 542.087

(80%Imax) 619.528

(90%Imax) 696.969





Luminance Table

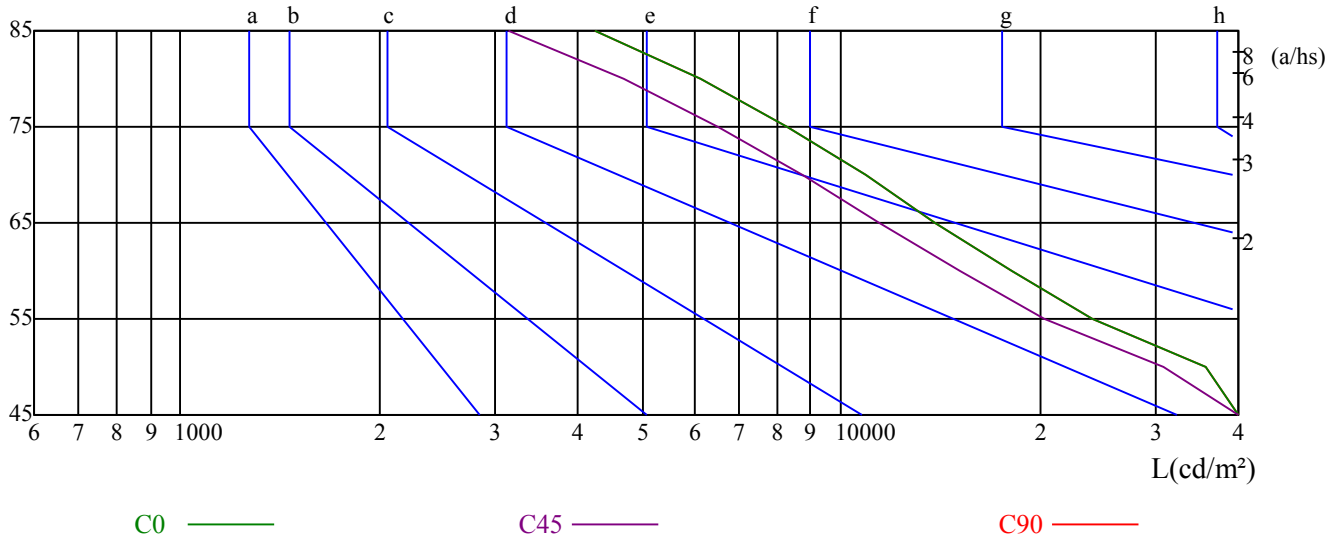
| $\gamma$ | 45    | 50    | 55    | 60    | 65    | 70    | 75   | 80   | 85   |
|----------|-------|-------|-------|-------|-------|-------|------|------|------|
| C0       | 54391 | 35651 | 23966 | 18140 | 13910 | 10896 | 8303 | 6134 | 4237 |
| C45      | 47694 | 30810 | 20394 | 15182 | 11430 | 8771  | 6528 | 4688 | 3130 |
| C90      | 54391 | 35651 | 23966 | 18140 | 13910 | 10896 | 8303 | 6134 | 4237 |

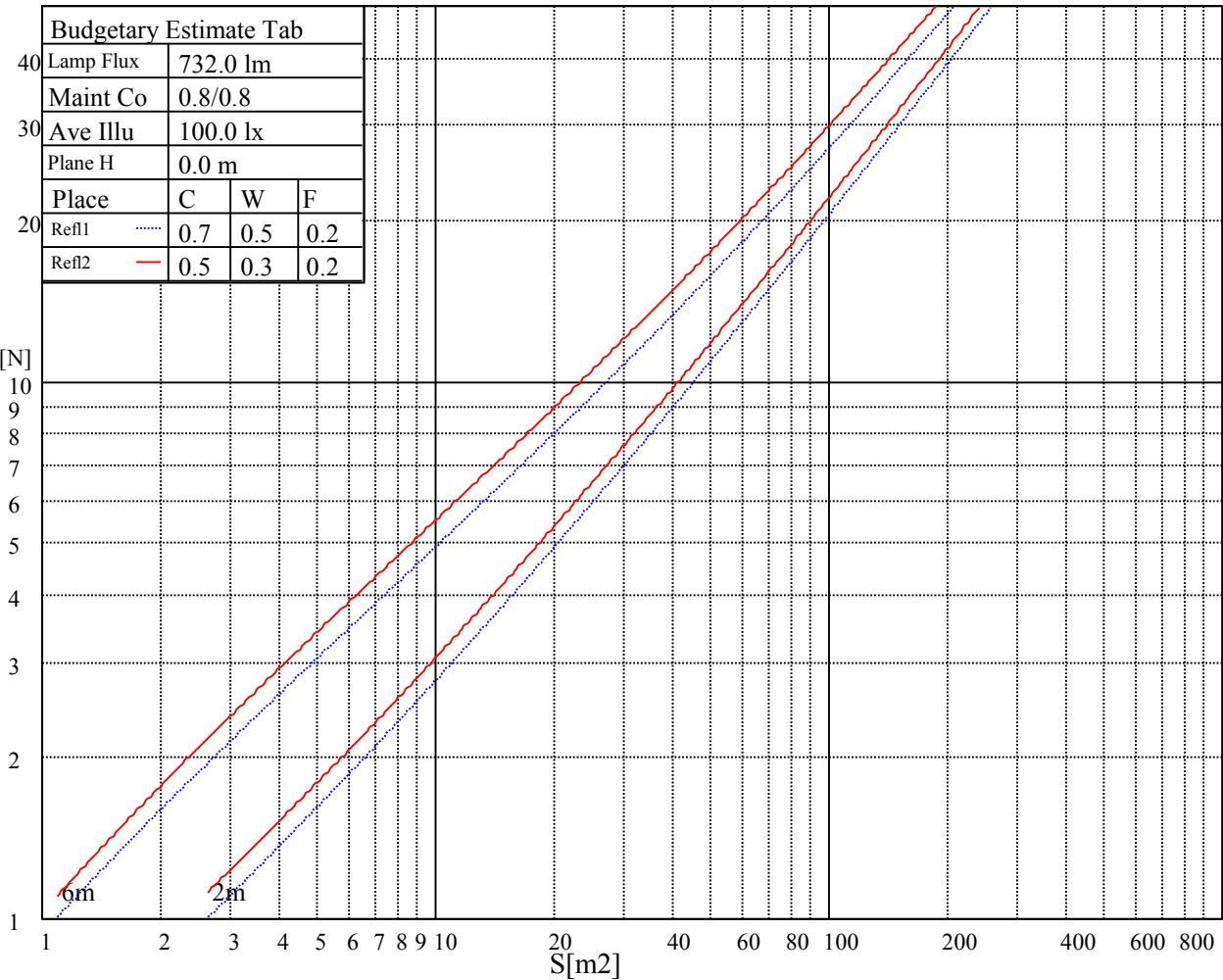
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 29207      | 29207      | 29207   | 24195      | 24195      | 24195   | 29072      | 29072      | 29072   |

Glare Table

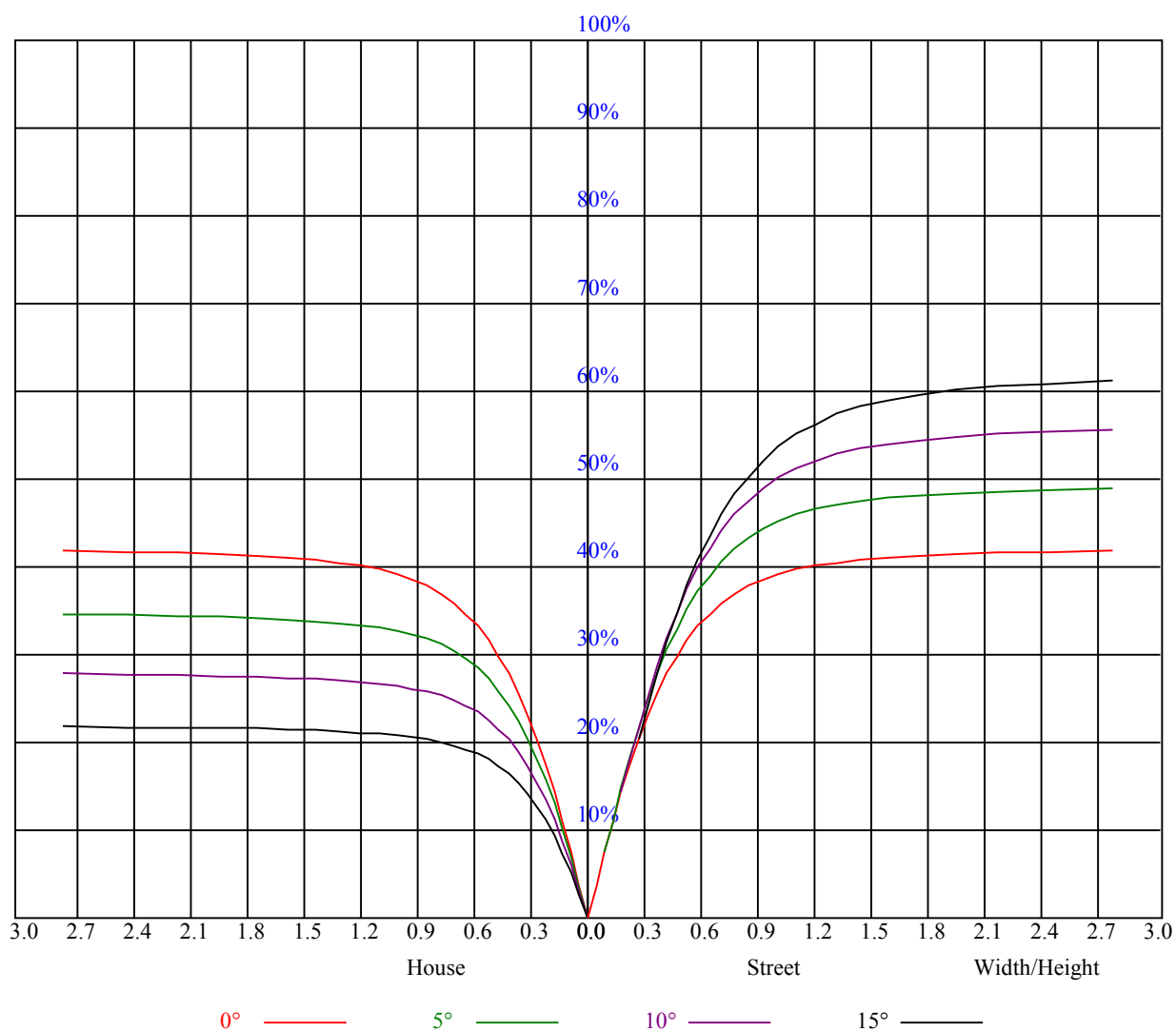
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000            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

Luminance Limiting Curve

 $\gamma(^{\circ})$ 



| 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   | COEFFICIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.01                                    | 1.01 | 1.01 | 0.99 | 0.99 | 0.99 | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.87 | 0.87 | 0.87 | 0.85 |
| 1     | 0.93                                    | 0.90 | 0.88 | 0.91 | 0.89 | 0.86 | 0.87 | 0.85 | 0.84 | 0.84 | 0.83 | 0.81 | 0.81 | 0.80 | 0.79 | 0.77 |
| 2     | 0.86                                    | 0.82 | 0.78 | 0.84 | 0.81 | 0.78 | 0.81 | 0.78 | 0.76 | 0.79 | 0.76 | 0.74 | 0.76 | 0.74 | 0.73 | 0.71 |
| 3     | 0.79                                    | 0.75 | 0.71 | 0.78 | 0.74 | 0.70 | 0.76 | 0.72 | 0.69 | 0.74 | 0.71 | 0.68 | 0.72 | 0.69 | 0.67 | 0.66 |
| 4     | 0.74                                    | 0.69 | 0.65 | 0.73 | 0.68 | 0.64 | 0.71 | 0.67 | 0.64 | 0.69 | 0.66 | 0.63 | 0.68 | 0.65 | 0.62 | 0.61 |
| 5     | 0.69                                    | 0.64 | 0.60 | 0.68 | 0.63 | 0.60 | 0.67 | 0.62 | 0.59 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.57 |
| 6     | 0.65                                    | 0.59 | 0.56 | 0.64 | 0.59 | 0.55 | 0.63 | 0.58 | 0.55 | 0.62 | 0.58 | 0.55 | 0.60 | 0.57 | 0.54 | 0.53 |
| 7     | 0.61                                    | 0.56 | 0.52 | 0.60 | 0.55 | 0.52 | 0.59 | 0.55 | 0.51 | 0.58 | 0.54 | 0.51 | 0.57 | 0.54 | 0.51 | 0.50 |
| 8     | 0.58                                    | 0.52 | 0.49 | 0.57 | 0.52 | 0.49 | 0.56 | 0.52 | 0.48 | 0.55 | 0.51 | 0.48 | 0.54 | 0.51 | 0.48 | 0.47 |
| 9     | 0.55                                    | 0.49 | 0.46 | 0.54 | 0.49 | 0.46 | 0.53 | 0.49 | 0.46 | 0.53 | 0.48 | 0.46 | 0.52 | 0.48 | 0.45 | 0.44 |
| 10    | 0.52                                    | 0.47 | 0.43 | 0.51 | 0.47 | 0.43 | 0.51 | 0.46 | 0.43 | 0.50 | 0.46 | 0.43 | 0.49 | 0.46 | 0.43 | 0.42 |



Nata 1407-N

| Intensity data(cd) |        |        |        |        |        |        |        |        |        | Appendix Page: 14 Total:14 |  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------------|--|
| C/γ(°)             | 0.0    | 5.0    | 10.0   | 15.0   | 20.0   | 25.0   | 30.0   | 35.0   | 40.0   |                            |  |
| 0.0                | 771.34 | 772.39 | 713.86 | 610.36 | 492.20 | 376.31 | 303.91 | 230.91 | 160.38 |                            |  |
| 45.0               | 772.50 | 768.42 | 701.53 | 573.58 | 456.80 | 351.92 | 274.35 | 210.48 | 155.81 |                            |  |
| 90.0               | 775.47 | 753.17 | 663.93 | 532.56 | 413.69 | 313.16 | 241.04 | 181.47 | 128.56 |                            |  |
| 135.0              | 778.11 | 744.91 | 655.89 | 535.09 | 420.58 | 325.60 | 253.98 | 191.76 | 137.92 |                            |  |
| 180.0              | 771.34 | 718.65 | 609.53 | 486.09 | 382.15 | 300.88 | 233.88 | 172.16 | 119.91 |                            |  |
| 225.0              | 772.50 | 721.46 | 613.60 | 483.89 | 386.39 | 306.50 | 243.68 | 181.80 | 124.59 |                            |  |
| 270.0              | 775.91 | 741.39 | 646.03 | 510.65 | 400.65 | 308.76 | 238.23 | 180.64 | 126.08 |                            |  |
| 315.0              | 778.11 | 753.28 | 656.38 | 527.83 | 412.98 | 321.47 | 251.11 | 187.80 | 137.53 |                            |  |
| 360.0              | 771.34 | 772.39 | 713.86 | 610.36 | 492.20 | 376.31 | 303.91 | 230.91 | 160.38 |                            |  |
| C/γ(°)             | 45.0   | 50.0   | 55.0   | 60.0   | 65.0   | 70.0   | 75.0   | 80.0   | 85.0   |                            |  |
| 0.0                | 103.78 | 66.45  | 40.14  | 26.87  | 18.94  | 13.65  | 9.63   | 7.05   | 4.35   |                            |  |
| 45.0               | 100.86 | 63.04  | 39.26  | 25.93  | 17.89  | 13.21  | 9.41   | 6.50   | 4.13   |                            |  |
| 90.0               | 82.03  | 51.97  | 33.20  | 22.96  | 16.19  | 12.06  | 8.37   | 5.56   | 3.58   |                            |  |
| 135.0              | 86.88  | 54.95  | 34.25  | 23.45  | 16.85  | 12.22  | 8.48   | 5.56   | 3.58   |                            |  |
| 180.0              | 72.12  | 44.71  | 29.40  | 20.87  | 14.92  | 10.85  | 7.49   | 4.90   | 3.25   |                            |  |
| 225.0              | 75.54  | 47.51  | 30.56  | 21.42  | 15.25  | 11.18  | 7.65   | 5.07   | 3.52   |                            |  |
| 270.0              | 78.90  | 50.65  | 32.65  | 22.85  | 16.19  | 12.00  | 8.26   | 5.56   | 3.52   |                            |  |
| 315.0              | 88.20  | 55.00  | 35.62  | 24.33  | 16.90  | 12.33  | 8.59   | 5.78   | 3.80   |                            |  |
| 360.0              | 103.78 | 66.45  | 40.14  | 26.87  | 18.94  | 13.65  | 9.63   | 7.05   | 4.35   |                            |  |
| C/γ(°)             | 90.0   |        |        |        |        |        |        |        |        |                            |  |
| 0.0                | 2.92   |        |        |        |        |        |        |        |        |                            |  |
| 45.0               | 2.81   |        |        |        |        |        |        |        |        |                            |  |
| 90.0               | 2.70   |        |        |        |        |        |        |        |        |                            |  |
| 135.0              | 2.64   |        |        |        |        |        |        |        |        |                            |  |
| 180.0              | 2.64   |        |        |        |        |        |        |        |        |                            |  |
| 225.0              | 2.59   |        |        |        |        |        |        |        |        |                            |  |
| 270.0              | 2.64   |        |        |        |        |        |        |        |        |                            |  |
| 315.0              | 2.70   |        |        |        |        |        |        |        |        |                            |  |
| 360.0              | 2.92   |        |        |        |        |        |        |        |        |                            |  |