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## Nata

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LumCAT: 1-0871-A  
Luminaire: 92.70.043.00  
Report No: NATA0100  
Test No: GC2019092607  
LampCAT: EDISON 2PHM10WW38P55020  
Lamp flux(lm): 327.2  
Number of Lamps: 1  
Length(mm): 0  
Phm Type: C

Voltage(V): 8.9600  
Current(A): 0.2990  
Power (W): 2.6700  
PF: 0.0000  
Ballast type: DC  
Width(mm): 0  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 294.17  
Efficiency(%): 89.91%  
Lumens(lm)/Power(W): 110.18  
Central intensity(cd): 6002.015  
Maximum intensity(cd): 6002.015  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=7.5  
                                  [C90/270]Total=7.5  
Field angle(10%Imax): [C0/180]Total=16.5  
                                  [C90/270]Total=16.5  
Maximum s/h(1/2): C0\_180=0.13 C90\_270=0.13  
Maximum s/h(1/4): C0\_180=0.14 C90\_270=0.14  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 89.91%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.419%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 6002.016      | 0.000       | 0         | .000%       | .000%      |
| 1.0                | 5714.438      | 5.606       | 5.606     | 1.713%      | 1.906%     |
| 2.0                | 4893.680      | 15.226      | 20.832    | 4.653%      | 7.082%     |
| 3.0                | 3760.031      | 20.697      | 41.529    | 6.325%      | 14.117%    |
| 4.0                | 2726.156      | 21.711      | 63.24     | 6.635%      | 21.498%    |
| 5.0                | 1845.380      | 19.667      | 82.907    | 6.011%      | 28.183%    |
| 6.0                | 1245.565      | 16.244      | 99.15     | 4.964%      | 33.705%    |
| 7.0                | 885.157       | 13.225      | 112.376   | 4.042%      | 38.201%    |
| 8.0                | 642.762       | 10.935      | 123.311   | 3.342%      | 41.918%    |
| 9.0                | 454.718       | 8.894       | 132.205   | 2.718%      | 44.941%    |
| 10.0               | 337.331       | 7.168       | 139.373   | 2.191%      | 47.378%    |
| 11.0               | 274.134       | 6.110       | 145.483   | 1.867%      | 49.455%    |
| 12.0               | 225.563       | 5.462       | 150.945   | 1.669%      | 51.312%    |
| 13.0               | 196.390       | 5.008       | 155.953   | 1.530%      | 53.014%    |
| 14.0               | 184.226       | 4.872       | 160.824   | 1.489%      | 54.670%    |
| 15.0               | 180.141       | 5.002       | 165.827   | 1.529%      | 56.371%    |
| 16.0               | 176.210       | 5.222       | 171.048   | 1.596%      | 58.146%    |
| 17.0               | 170.655       | 5.402       | 176.45    | 1.651%      | 59.982%    |
| 18.0               | 164.334       | 5.523       | 181.973   | 1.688%      | 61.859%    |
| 19.0               | 158.541       | 5.617       | 187.59    | 1.717%      | 63.769%    |
| 20.0               | 153.042       | 5.703       | 193.293   | 1.743%      | 65.707%    |
| 21.0               | 148.549       | 5.791       | 199.084   | 1.770%      | 67.676%    |
| 22.0               | 142.988       | 5.859       | 204.943   | 1.791%      | 69.668%    |
| 23.0               | 137.173       | 5.879       | 210.822   | 1.797%      | 71.666%    |
| 24.0               | 131.126       | 5.866       | 216.687   | 1.793%      | 73.660%    |
| 25.0               | 124.446       | 5.811       | 222.499   | 1.776%      | 75.635%    |
| 26.0               | 118.477       | 5.734       | 228.233   | 1.753%      | 77.585%    |
| 27.0               | 114.525       | 5.700       | 233.933   | 1.742%      | 79.523%    |
| 28.0               | 111.255       | 5.716       | 239.65    | 1.747%      | 81.466%    |
| 29.0               | 108.183       | 5.741       | 245.391   | 1.755%      | 83.417%    |
| 30.0               | 105.272       | 5.763       | 251.154   | 1.761%      | 85.376%    |
| 31.0               | 102.516       | 5.782       | 256.936   | 1.767%      | 87.342%    |
| 32.0               | 99.197        | 5.779       | 262.715   | 1.766%      | 89.307%    |
| 33.0               | 96.012        | 5.751       | 268.466   | 1.758%      | 91.262%    |
| 34.0               | 84.002        | 5.448       | 273.914   | 1.665%      | 93.113%    |
| 35.0               | 65.025        | 4.628       | 278.542   | 1.414%      | 94.687%    |
| 36.0               | 40.514        | 3.360       | 281.902   | 1.027%      | 95.829%    |
| 37.0               | 21.059        | 2.008       | 283.911   | .614%       | 96.512%    |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 8.311         | 0.980       | 284.891   | .300%       | 96.845%    |
| 39.0               | 4.366         | 0.433       | 285.324   | .132%       | 96.992%    |
| 40.0               | 3.783         | 0.284       | 285.608   | .087%       | 97.089%    |
| 41.0               | 3.459         | 0.258       | 285.866   | .079%       | 97.176%    |
| 42.0               | 3.157         | 0.240       | 286.106   | .073%       | 97.258%    |
| 43.0               | 2.953         | 0.226       | 286.332   | .069%       | 97.335%    |
| 44.0               | 2.791         | 0.217       | 286.549   | .066%       | 97.409%    |
| 45.0               | 2.700         | 0.211       | 286.76    | .064%       | 97.480%    |
| 46.0               | 2.602         | 0.207       | 286.968   | .063%       | 97.551%    |
| 47.0               | 2.524         | 0.204       | 287.172   | .062%       | 97.620%    |
| 48.0               | 2.454         | 0.201       | 287.373   | .062%       | 97.689%    |
| 49.0               | 2.384         | 0.199       | 287.571   | .061%       | 97.756%    |
| 50.0               | 2.278         | 0.194       | 287.766   | .059%       | 97.822%    |
| 51.0               | 2.187         | 0.189       | 287.955   | .058%       | 97.886%    |
| 52.0               | 2.095         | 0.184       | 288.138   | .056%       | 97.949%    |
| 53.0               | 2.004         | 0.178       | 288.317   | .054%       | 98.009%    |
| 54.0               | 1.941         | 0.174       | 288.491   | .053%       | 98.069%    |
| 55.0               | 1.913         | 0.172       | 288.663   | .053%       | 98.127%    |
| 56.0               | 1.870         | 0.171       | 288.834   | .052%       | 98.185%    |
| 57.0               | 1.849         | 0.170       | 289.004   | .052%       | 98.243%    |
| 58.0               | 1.863         | 0.172       | 289.175   | .052%       | 98.301%    |
| 59.0               | 1.849         | 0.174       | 289.349   | .053%       | 98.360%    |
| 60.0               | 1.828         | 0.174       | 289.523   | .053%       | 98.419%    |
| 61.0               | 1.828         | 0.174       | 289.697   | .053%       | 98.479%    |
| 62.0               | 1.828         | 0.176       | 289.873   | .054%       | 98.539%    |
| 63.0               | 1.863         | 0.180       | 290.053   | .055%       | 98.600%    |
| 64.0               | 1.877         | 0.184       | 290.236   | .056%       | 98.662%    |
| 65.0               | 1.877         | 0.186       | 290.422   | .057%       | 98.725%    |
| 66.0               | 1.765         | 0.182       | 290.604   | .056%       | 98.787%    |
| 67.0               | 1.645         | 0.171       | 290.775   | .052%       | 98.845%    |
| 68.0               | 1.547         | 0.162       | 290.937   | .049%       | 98.900%    |
| 69.0               | 1.498         | 0.155       | 291.092   | .047%       | 98.953%    |
| 70.0               | 1.477         | 0.153       | 291.245   | .047%       | 99.005%    |
| 71.0               | 1.463         | 0.152       | 291.397   | .046%       | 99.057%    |
| 72.0               | 1.455         | 0.152       | 291.549   | .046%       | 99.108%    |
| 73.0               | 1.441         | 0.151       | 291.7     | .046%       | 99.160%    |
| 74.0               | 1.441         | 0.152       | 291.852   | .046%       | 99.211%    |
| 75.0               | 1.434         | 0.152       | 292.004   | .046%       | 99.263%    |

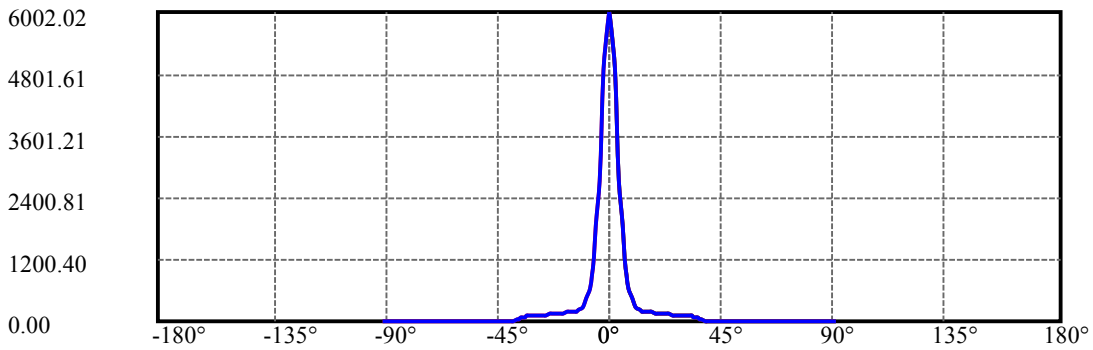
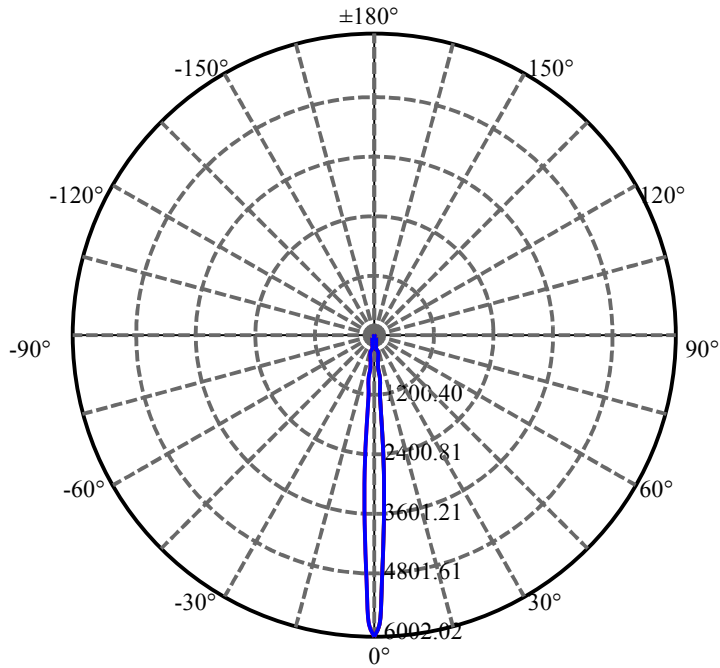
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 1.413         | 0.151       | 292.155   | .046%       | 99.314%    |
| 77.0               | 1.392         | 0.150       | 292.304   | .046%       | 99.365%    |
| 78.0               | 1.392         | 0.149       | 292.454   | .046%       | 99.416%    |
| 79.0               | 1.378         | 0.149       | 292.602   | .045%       | 99.466%    |
| 80.0               | 1.385         | 0.149       | 292.751   | .046%       | 99.517%    |
| 81.0               | 1.357         | 0.148       | 292.9     | .045%       | 99.567%    |
| 82.0               | 1.350         | 0.147       | 293.046   | .045%       | 99.617%    |
| 83.0               | 1.308         | 0.144       | 293.191   | .044%       | 99.666%    |
| 84.0               | 1.308         | 0.142       | 293.333   | .044%       | 99.715%    |
| 85.0               | 1.294         | 0.142       | 293.475   | .043%       | 99.763%    |
| 86.0               | 1.294         | 0.141       | 293.617   | .043%       | 99.811%    |
| 87.0               | 1.280         | 0.141       | 293.758   | .043%       | 99.859%    |
| 88.0               | 1.266         | 0.139       | 293.897   | .043%       | 99.906%    |
| 89.0               | 1.259         | 0.138       | 294.035   | .042%       | 99.953%    |
| 90.0               | 1.238         | 0.137       | 294.172   | .042%       | 100.000%   |

ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp  | %Fixt   |
|---------|--------|--------|---------|
| 0-30    | 251.15 | 76.76% | 85.38%  |
| 0-40    | 285.61 | 87.29% | 97.09%  |
| 0-60    | 289.52 | 88.48% | 98.42%  |
| 0-90    | 294.04 | 89.86% | 99.95%  |
| 0-120   | 294.04 | 89.86% | 99.95%  |
| 0-180   | 294.17 | 89.91% | 100.00% |
| 60-90   | 4.69   | 1.43%  | 1.59%   |
| 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%   |
| 0-27.25 | 235.34 | 71.92% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 139.37 |
| 10-20   | 53.92  |
| 20-30   | 57.86  |
| 30-40   | 34.45  |
| 40-50   | 2.16   |
| 50-60   | 1.76   |
| 60-70   | 1.72   |
| 70-80   | 1.51   |
| 80-90   | 1.28   |
| 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   |



C0(Max): —————

C0/C180: —————

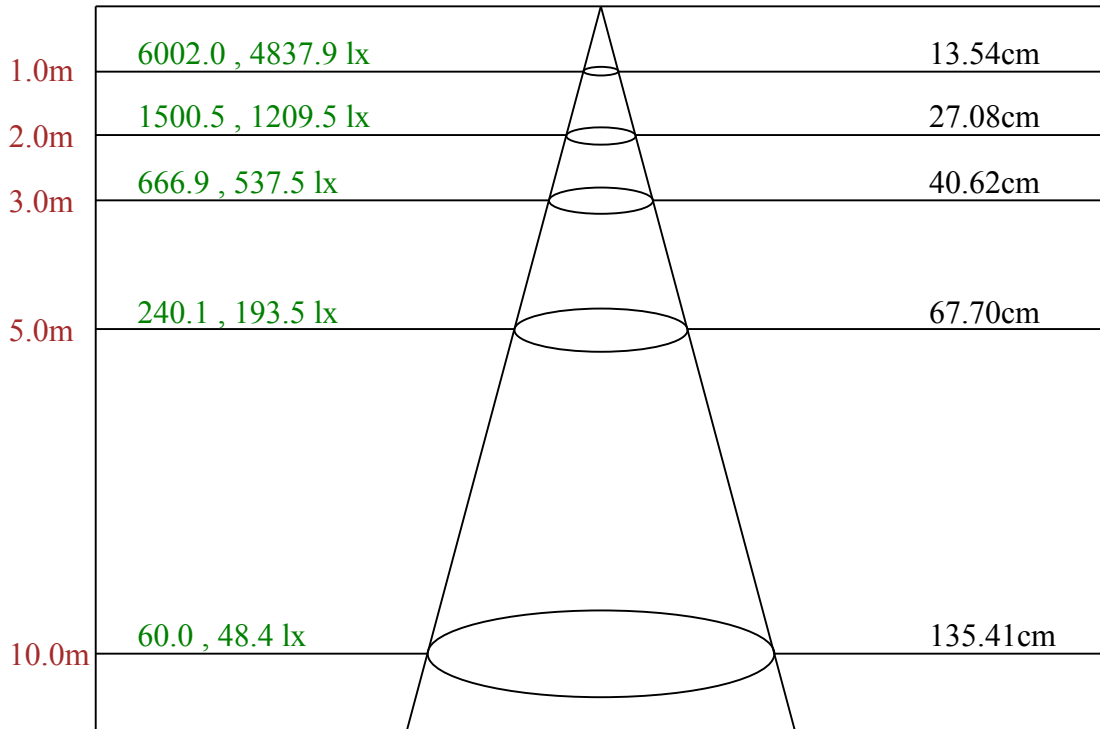
C90/C270: —————

Field angle(10%Imax):C0/180Left:8.2 Right:8.2

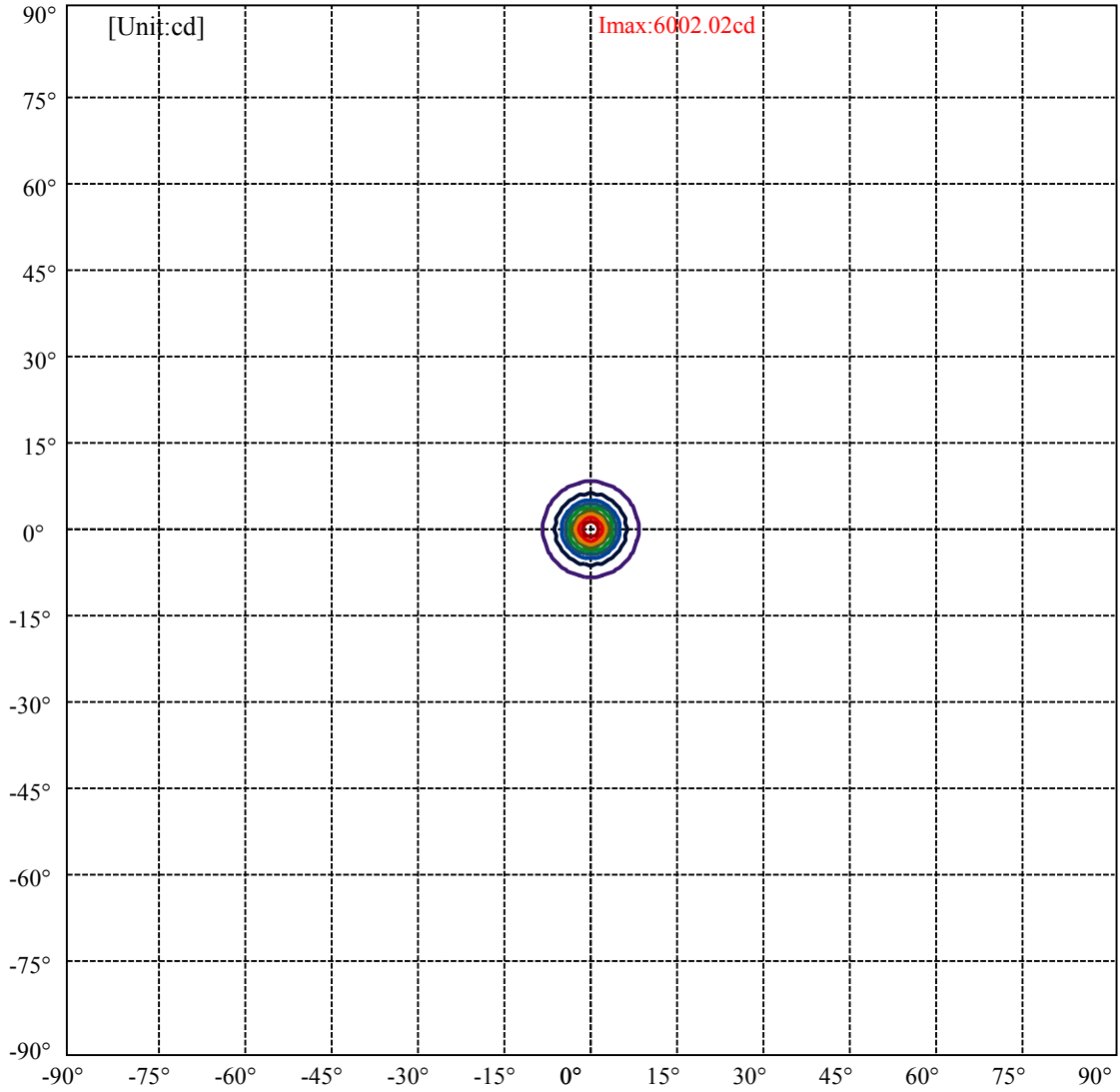
:C90/270Left:8.2 Right:8.2

Beam Angle(50%Imax):C0/180Left:3.7 Right:3.7

:C90/270Left:3.7 Right:3.7

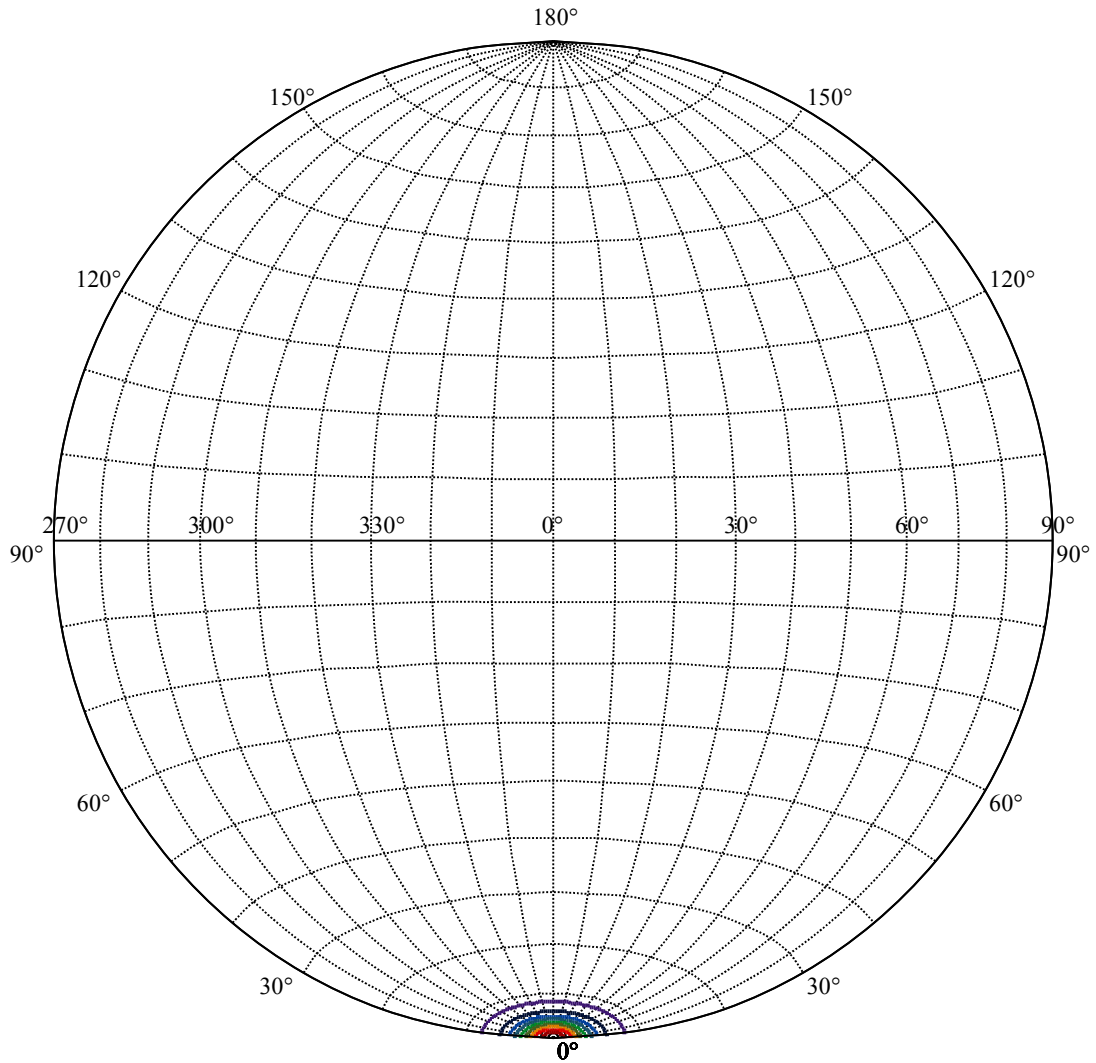


Max , Ave      Beam angle of C0 plane 7.75



|                   |   |
|-------------------|---|
| (10%Imax) 600.202 | — |
| (20%Imax) 1200.4  | — |
| (30%Imax) 1800.6  | — |
| (40%Imax) 2400.81 | — |
| (50%Imax) 3001.01 | — |
| (60%Imax) 3601.21 | — |
| (70%Imax) 4201.41 | — |
| (80%Imax) 4801.61 | — |
| (90%Imax) 5401.81 | — |





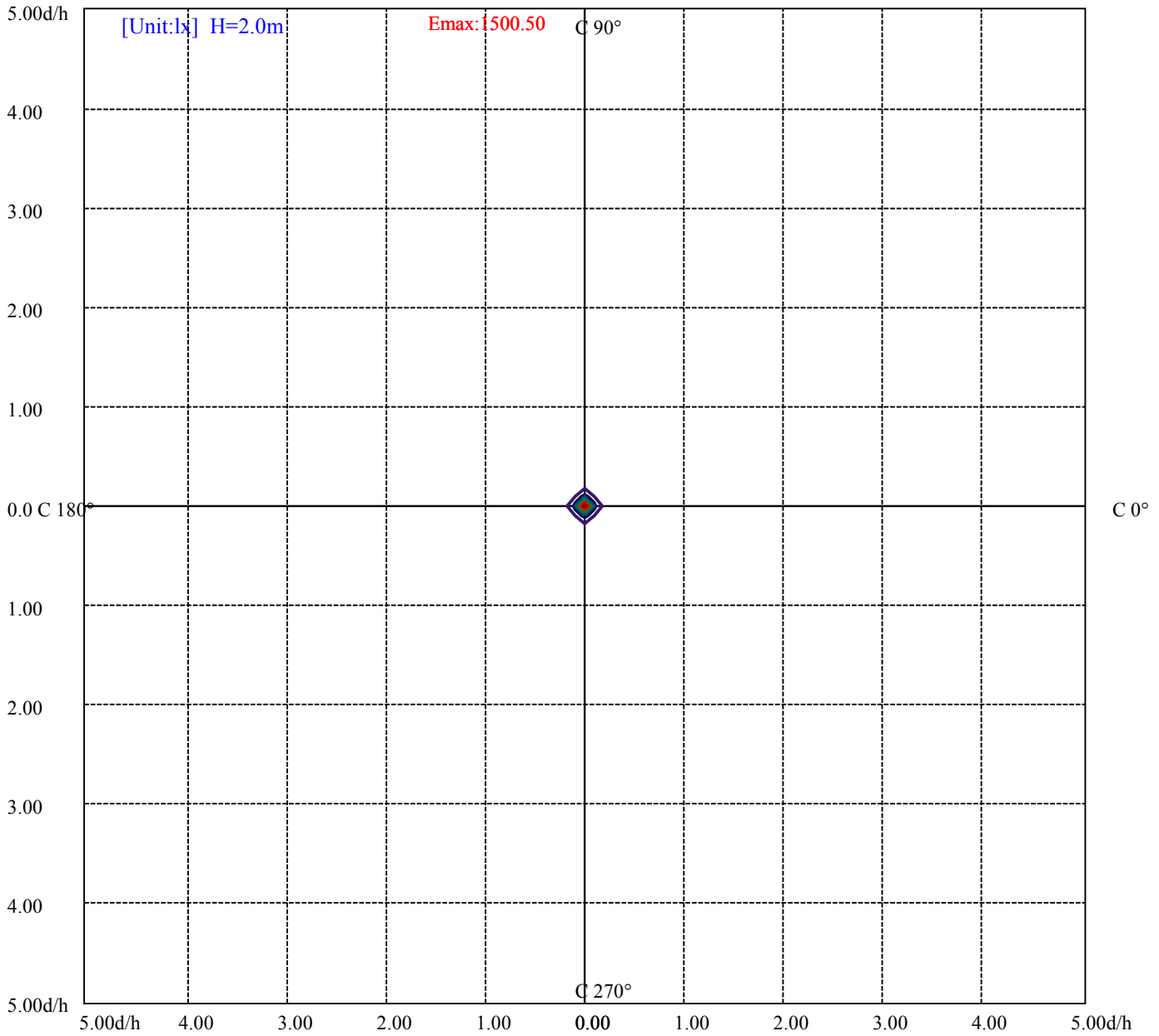
House

[Unit:cd]

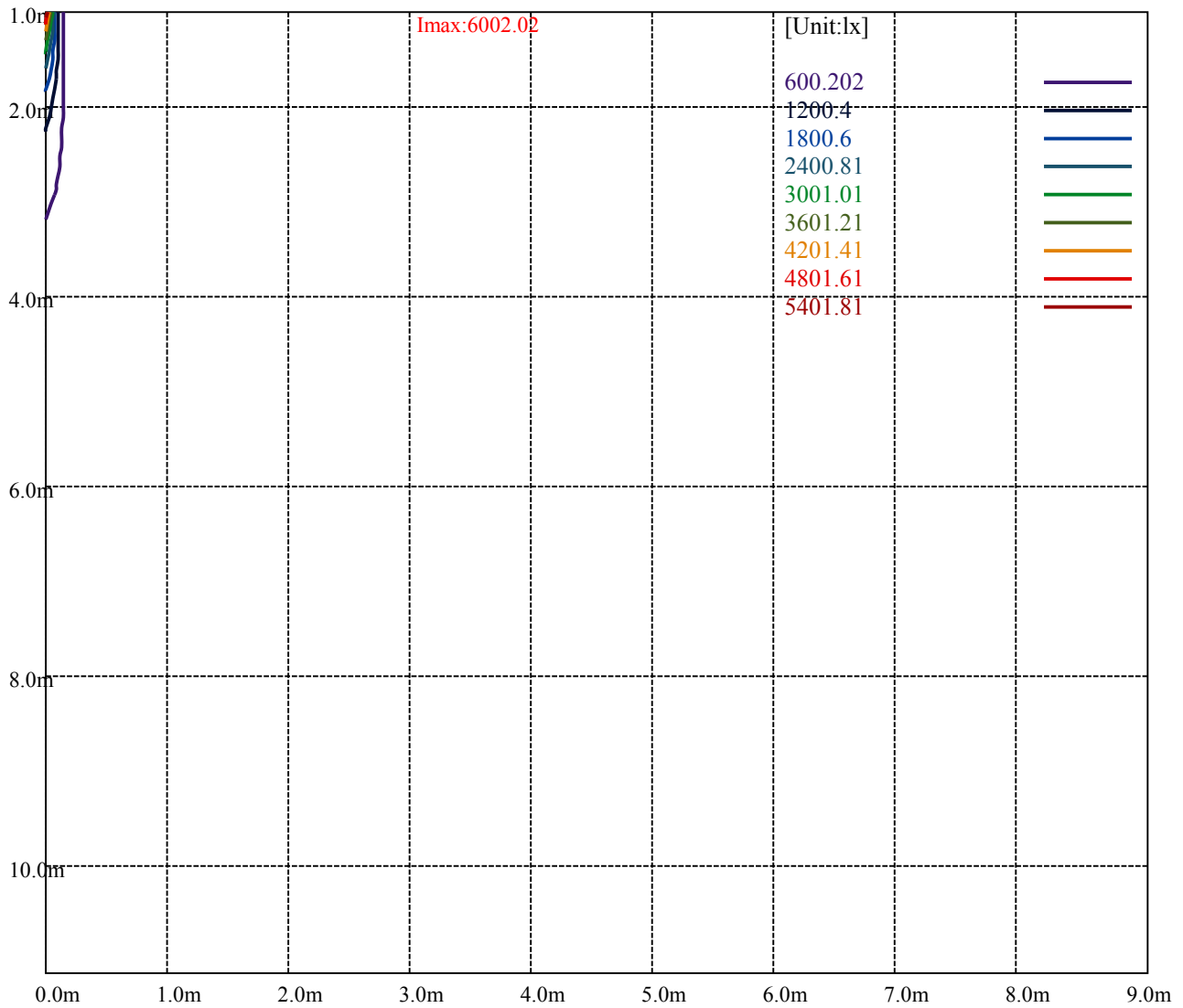
Road

**Imax:6002.02**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 600.202 | — |
| (20%Imax) | 1200.4  | — |
| (30%Imax) | 1800.6  | — |
| (40%Imax) | 2400.81 | — |
| (50%Imax) | 3001.01 | — |
| (60%Imax) | 3601.21 | — |
| (70%Imax) | 4201.41 | — |
| (80%Imax) | 4801.61 | — |
| (90%Imax) | 5401.81 | — |



- (10%Emax) 150.0493
- (20%Emax) 300.0975
- (30%Emax) 450.1475
- (40%Emax) 600.1975
- (50%Emax) 750.2475
- (60%Emax) 900.295
- (70%Emax) 1050.345
- (80%Emax) 1200.395
- (90%Emax) 1350.443



Luminance Table

| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

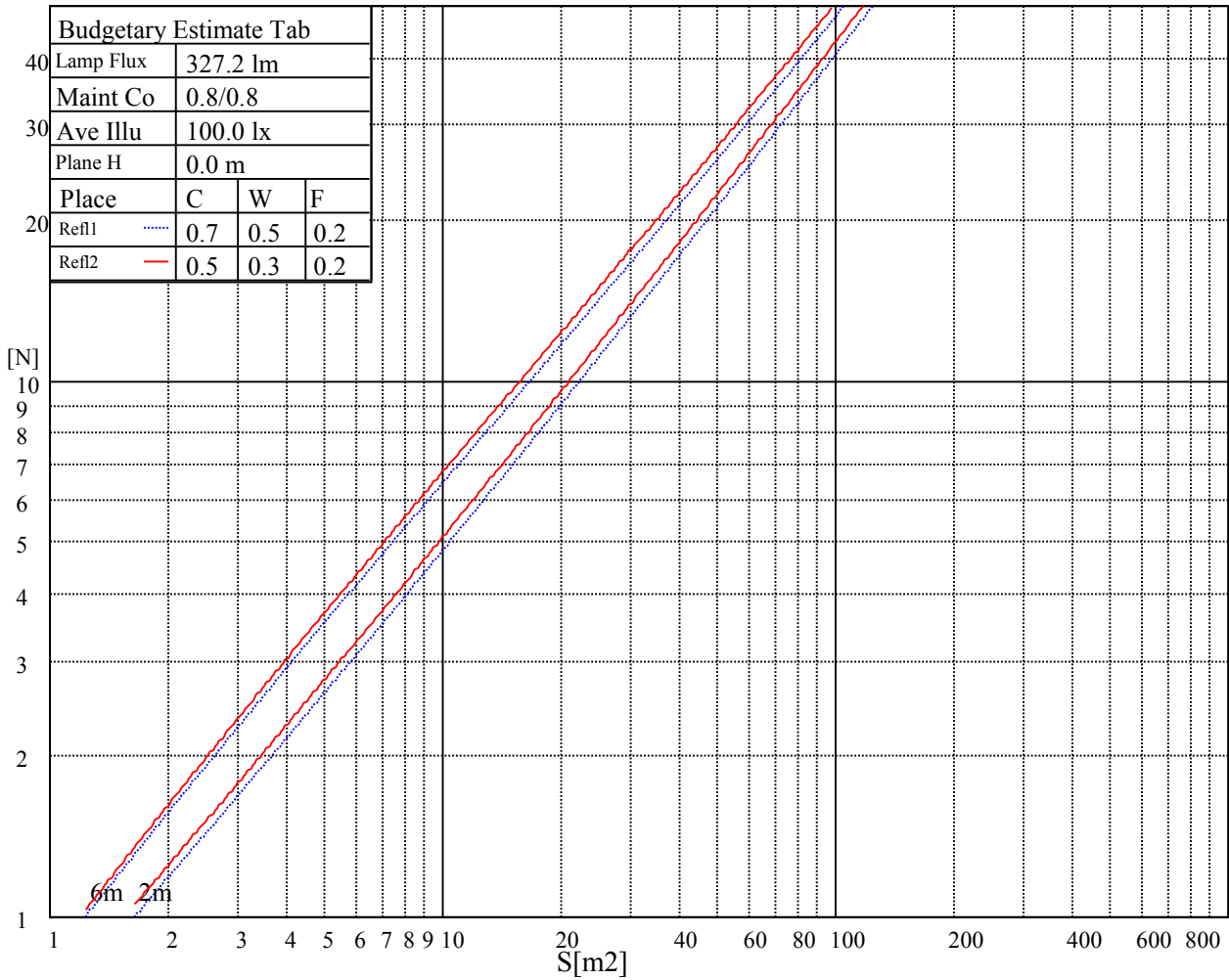
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0          | 0          | 0       | 0          | 0          | 0       | 0          | 0          | 0       |

Glare Table

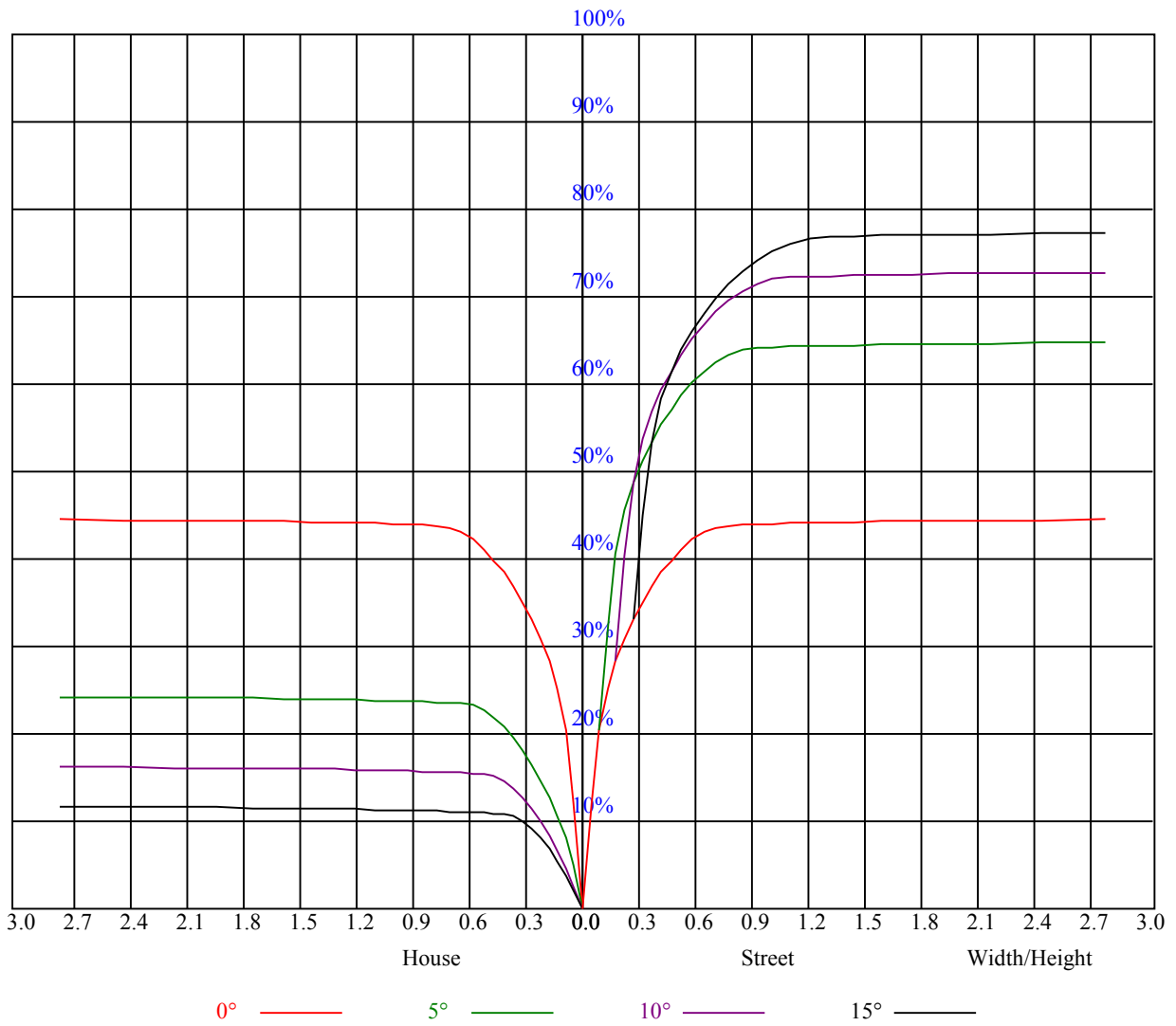
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |       |       |       |
| 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





| 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     | 1.07                                    | 1.07 | 1.07 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 | 0.90 |
| 1     | 1.01                                    | 0.99 | 0.97 | 0.99 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.88 | 0.86 |
| 2     | 0.96                                    | 0.93 | 0.91 | 0.94 | 0.92 | 0.90 | 0.92 | 0.90 | 0.88 | 0.89 | 0.87 | 0.86 | 0.87 | 0.85 | 0.84 | 0.83 |
| 3     | 0.92                                    | 0.88 | 0.85 | 0.90 | 0.87 | 0.85 | 0.88 | 0.86 | 0.83 | 0.86 | 0.84 | 0.82 | 0.84 | 0.82 | 0.81 | 0.80 |
| 4     | 0.88                                    | 0.84 | 0.81 | 0.87 | 0.83 | 0.81 | 0.85 | 0.82 | 0.80 | 0.83 | 0.81 | 0.79 | 0.82 | 0.80 | 0.78 | 0.77 |
| 5     | 0.84                                    | 0.81 | 0.78 | 0.84 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.81 | 0.78 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 6     | 0.81                                    | 0.78 | 0.75 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.74 | 0.79 | 0.76 | 0.74 | 0.77 | 0.75 | 0.73 | 0.72 |
| 7     | 0.79                                    | 0.75 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.75 | 0.73 | 0.71 | 0.70 |
| 8     | 0.76                                    | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.70 | 0.74 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 9     | 0.74                                    | 0.70 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.72 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 10    | 0.72                                    | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.70 | 0.67 | 0.66 | 0.65 |



Intensity data(cd)

|        |         |         |         |         |         |         |         |         |        |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| C/γ(°) | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0    |
| 0.0    | 6067.13 | 5427.00 | 4176.56 | 3085.31 | 2163.38 | 1371.94 | 965.81  | 692.44  | 484.31 |
| 45.0   | 6132.94 | 5786.44 | 4896.56 | 3727.13 | 2749.50 | 1864.69 | 1244.81 | 870.75  | 614.81 |
| 90.0   | 6006.94 | 5632.88 | 4831.31 | 3682.13 | 2626.88 | 1883.25 | 1116.96 | 821.93  | 610.03 |
| 135.0  | 5801.06 | 6090.19 | 5762.25 | 4786.31 | 3681.56 | 2549.81 | 1713.38 | 1212.75 | 915.19 |
| 180.0  | 6067.13 | 6207.75 | 5657.06 | 4507.31 | 3343.50 | 2264.63 | 1616.63 | 1087.14 | 802.86 |
| 225.0  | 6132.94 | 5832.56 | 4957.88 | 3726.00 | 2584.69 | 1831.50 | 1115.21 | 877.28  | 644.74 |
| 270.0  | 6006.94 | 5801.63 | 4956.75 | 3791.25 | 2785.50 | 1901.81 | 1272.94 | 891.00  | 636.75 |
| 315.0  | 5801.06 | 4937.06 | 3911.06 | 2774.81 | 1874.25 | 1095.41 | 918.79  | 627.98  | 433.41 |
| 360.0  | 6067.13 | 5427.00 | 4176.56 | 3085.31 | 2163.38 | 1371.94 | 965.81  | 692.44  | 484.31 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0   |
| 0.0    | 352.69  | 288.00  | 213.19  | 190.13  | 176.46  | 171.56  | 174.60  | 173.93  | 164.42 |
| 45.0   | 411.19  | 309.38  | 289.69  | 208.69  | 192.49  | 186.08  | 182.70  | 172.58  | 163.24 |
| 90.0   | 440.27  | 302.91  | 249.75  | 212.29  | 191.59  | 179.89  | 176.74  | 176.68  | 177.98 |
| 135.0  | 601.88  | 443.25  | 349.31  | 290.25  | 205.20  | 187.88  | 183.21  | 179.16  | 173.59 |
| 180.0  | 585.56  | 421.82  | 313.20  | 245.70  | 205.09  | 183.04  | 178.82  | 176.01  | 167.06 |
| 225.0  | 480.49  | 344.25  | 278.16  | 236.64  | 210.71  | 194.63  | 185.06  | 177.58  | 172.91 |
| 270.0  | 439.88  | 340.31  | 290.25  | 227.14  | 206.49  | 193.50  | 185.34  | 181.35  | 177.36 |
| 315.0  | 325.80  | 248.74  | 209.53  | 193.67  | 183.09  | 177.24  | 174.66  | 172.41  | 168.69 |
| 360.0  | 352.69  | 288.00  | 213.19  | 190.13  | 176.46  | 171.56  | 174.60  | 173.93  | 164.42 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0   |
| 0.0    | 152.61  | 141.08  | 130.84  | 131.01  | 125.16  | 116.21  | 103.89  | 88.65   | 76.44  |
| 45.0   | 156.83  | 153.06  | 150.81  | 148.73  | 145.52  | 143.10  | 140.46  | 134.66  | 130.67 |
| 90.0   | 176.40  | 171.28  | 164.48  | 157.78  | 152.27  | 146.87  | 140.79  | 134.27  | 128.48 |
| 135.0  | 163.35  | 156.09  | 149.79  | 142.82  | 136.46  | 130.73  | 126.79  | 124.82  | 120.99 |
| 180.0  | 159.81  | 154.35  | 149.06  | 142.54  | 135.56  | 127.91  | 122.12  | 116.89  | 111.43 |
| 225.0  | 169.88  | 165.60  | 161.55  | 157.11  | 149.18  | 142.37  | 135.96  | 128.25  | 122.57 |
| 270.0  | 172.29  | 168.08  | 162.84  | 157.33  | 152.16  | 145.97  | 139.56  | 133.99  | 128.64 |
| 315.0  | 163.52  | 158.79  | 154.97  | 151.09  | 147.60  | 144.23  | 139.44  | 134.04  | 128.59 |
| 360.0  | 152.61  | 141.08  | 130.84  | 131.01  | 125.16  | 116.21  | 103.89  | 88.65   | 76.44  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0   |
| 0.0    | 76.89   | 80.78   | 83.36   | 83.25   | 86.74   | 86.18   | 88.43   | 75.04   | 56.42  |
| 45.0   | 126.73  | 122.79  | 118.74  | 115.82  | 111.09  | 108.06  | 104.79  | 91.29   | 70.59  |
| 90.0   | 123.81  | 119.14  | 114.86  | 111.38  | 108.11  | 103.67  | 100.46  | 90.00   | 68.85  |
| 135.0  | 118.18  | 116.33  | 113.29  | 110.03  | 106.82  | 104.68  | 101.42  | 97.54   | 86.18  |
| 180.0  | 107.61  | 103.56  | 100.91  | 98.83   | 96.36   | 91.91   | 90.11   | 86.34   | 71.10  |
| 225.0  | 117.34  | 112.22  | 108.45  | 105.53  | 101.76  | 98.27   | 95.23   | 79.37   | 61.37  |
| 270.0  | 121.67  | 116.27  | 111.54  | 106.99  | 103.16  | 99.34   | 95.74   | 83.08   | 62.10  |
| 315.0  | 123.98  | 118.97  | 114.30  | 110.36  | 106.09  | 101.48  | 91.91   | 69.36   | 43.59  |
| 360.0  | 76.89   | 80.78   | 83.36   | 83.25   | 86.74   | 86.18   | 88.43   | 75.04   | 56.42  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0   |
| 0.0    | 31.44   | 16.48   | 8.55    | 6.64    | 5.63    | 5.06    | 4.39    | 4.05    | 3.71   |
| 45.0   | 48.26   | 23.29   | 8.78    | 6.02    | 5.46    | 5.06    | 4.61    | 4.22    | 3.99   |
| 90.0   | 42.24   | 19.41   | 6.69    | 3.38    | 3.15    | 2.87    | 2.70    | 2.59    | 2.42   |
| 135.0  | 62.04   | 40.89   | 16.43   | 4.73    | 3.49    | 3.26    | 2.98    | 2.87    | 2.76   |
| 180.0  | 48.88   | 29.31   | 11.81   | 4.67    | 3.99    | 3.66    | 3.32    | 3.09    | 2.93   |
| 225.0  | 36.00   | 13.39   | 5.01    | 3.15    | 2.81    | 2.53    | 2.36    | 2.19    | 2.14   |
| 270.0  | 35.49   | 17.27   | 5.12    | 2.93    | 2.64    | 2.42    | 2.25    | 2.14    | 2.03   |
| 315.0  | 19.74   | 8.44    | 4.11    | 3.43    | 3.09    | 2.81    | 2.64    | 2.48    | 2.36   |
| 360.0  | 31.44   | 16.48   | 8.55    | 6.64    | 5.63    | 5.06    | 4.39    | 4.05    | 3.71   |



Intensity data(cd)

|        |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|
| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
| 0.0    | 3.54 | 3.43 | 3.32 | 3.21 | 3.09 | 2.98 | 2.87 | 2.76 | 2.70 |
| 45.0   | 3.77 | 3.54 | 3.43 | 3.32 | 3.15 | 2.93 | 2.70 | 2.53 | 2.36 |
| 90.0   | 2.36 | 2.31 | 2.19 | 2.14 | 2.03 | 1.91 | 1.86 | 1.74 | 1.69 |
| 135.0  | 2.76 | 2.70 | 2.76 | 2.70 | 2.70 | 2.59 | 2.42 | 2.25 | 2.08 |
| 180.0  | 2.81 | 2.76 | 2.70 | 2.64 | 2.64 | 2.53 | 2.42 | 2.31 | 2.19 |
| 225.0  | 2.08 | 1.97 | 1.91 | 1.86 | 1.80 | 1.69 | 1.69 | 1.63 | 1.58 |
| 270.0  | 1.97 | 1.91 | 1.80 | 1.74 | 1.69 | 1.69 | 1.63 | 1.63 | 1.58 |
| 315.0  | 2.31 | 2.19 | 2.08 | 2.03 | 1.97 | 1.91 | 1.91 | 1.91 | 1.86 |
| 360.0  | 3.54 | 3.43 | 3.32 | 3.21 | 3.09 | 2.98 | 2.87 | 2.76 | 2.70 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0    | 2.59 | 2.53 | 2.42 | 2.36 | 2.31 | 2.19 | 2.14 | 2.14 | 2.08 |
| 45.0   | 2.25 | 2.14 | 2.08 | 1.97 | 1.91 | 1.86 | 1.86 | 1.91 | 1.91 |
| 90.0   | 1.69 | 1.63 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 |
| 135.0  | 1.91 | 1.86 | 1.74 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 |
| 180.0  | 2.08 | 2.08 | 1.97 | 1.97 | 2.03 | 2.08 | 2.08 | 2.14 | 2.25 |
| 225.0  | 1.58 | 1.58 | 1.52 | 1.52 | 1.52 | 1.52 | 1.46 | 1.52 | 1.52 |
| 270.0  | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 1.63 | 1.58 | 1.58 |
| 315.0  | 1.86 | 1.91 | 1.97 | 2.08 | 2.25 | 2.25 | 2.14 | 2.03 | 1.97 |
| 360.0  | 2.59 | 2.53 | 2.42 | 2.36 | 2.31 | 2.19 | 2.14 | 2.14 | 2.08 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0    | 1.97 | 1.80 | 1.74 | 1.69 | 1.63 | 1.58 | 1.52 | 1.52 | 1.52 |
| 45.0   | 1.91 | 1.86 | 1.80 | 1.69 | 1.58 | 1.52 | 1.46 | 1.46 | 1.46 |
| 90.0   | 1.69 | 1.63 | 1.63 | 1.58 | 1.58 | 1.52 | 1.46 | 1.41 | 1.41 |
| 135.0  | 1.63 | 1.63 | 1.74 | 1.74 | 1.69 | 1.52 | 1.46 | 1.46 | 1.41 |
| 180.0  | 2.53 | 2.87 | 2.98 | 2.59 | 2.08 | 1.74 | 1.58 | 1.58 | 1.58 |
| 225.0  | 1.63 | 1.80 | 1.86 | 1.69 | 1.52 | 1.46 | 1.46 | 1.46 | 1.46 |
| 270.0  | 1.63 | 1.63 | 1.63 | 1.58 | 1.58 | 1.58 | 1.58 | 1.46 | 1.41 |
| 315.0  | 1.91 | 1.80 | 1.63 | 1.58 | 1.52 | 1.46 | 1.46 | 1.46 | 1.46 |
| 360.0  | 1.97 | 1.80 | 1.74 | 1.69 | 1.63 | 1.58 | 1.52 | 1.52 | 1.52 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0    | 1.52 | 1.46 | 1.46 | 1.46 | 1.46 | 1.41 | 1.41 | 1.41 | 1.41 |
| 45.0   | 1.46 | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 | 1.35 | 1.35 |
| 90.0   | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 | 1.35 | 1.29 | 1.35 |
| 135.0  | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 |
| 180.0  | 1.58 | 1.58 | 1.63 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 |
| 225.0  | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 | 1.35 | 1.35 |
| 270.0  | 1.46 | 1.46 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 |
| 315.0  | 1.41 | 1.41 | 1.41 | 1.41 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 |
| 360.0  | 1.52 | 1.46 | 1.46 | 1.46 | 1.46 | 1.41 | 1.41 | 1.41 | 1.41 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0    | 1.35 | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 | 1.24 | 1.24 |
| 45.0   | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 |
| 90.0   | 1.35 | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 | 1.29 |
| 135.0  | 1.35 | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 |
| 180.0  | 1.52 | 1.52 | 1.41 | 1.41 | 1.29 | 1.29 | 1.29 | 1.24 | 1.24 |
| 225.0  | 1.35 | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 |
| 270.0  | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 |
| 315.0  | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 | 1.24 | 1.24 |
| 360.0  | 1.35 | 1.35 | 1.29 | 1.29 | 1.29 | 1.29 | 1.24 | 1.24 | 1.24 |

Intensity data(cd)

|               |             |
|---------------|-------------|
| <b>C/γ(°)</b> | <b>90.0</b> |
| <b>0.0</b>    | <b>1.24</b> |
| <b>45.0</b>   | <b>1.24</b> |
| <b>90.0</b>   | <b>1.24</b> |
| <b>135.0</b>  | <b>1.24</b> |
| <b>180.0</b>  | <b>1.24</b> |
| <b>225.0</b>  | <b>1.24</b> |
| <b>270.0</b>  | <b>1.24</b> |
| <b>315.0</b>  | <b>1.24</b> |
| <b>360.0</b>  | <b>1.24</b> |