



SGSO

Address: LIT by CARDI

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Client:

LumCAT: 0017440227 KAI 8.5W 4000K 1000lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-01-005

Current(A): 0.0420

LampCAT: LED

Power (W): 8.5000

Lamp flux(lm)

PF: 0.8745

Number of Lamps: 1

Ballast type:

Length(mm): -192

Width(mm): -192

Phm Type: C

Height(mm): 0

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Photometric Results

Lumens(lm): 1000.00

Lumens(lm)/Power(W): 117.65

Central intensity(cd): 499.872

Maximum intensity(cd): 501.739

Angle of maximum intensity:  $C=112.5$   $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=83.5

[C90/270]Total=84.5

Field angle(10%Imax): [C0/180]Total=141.4

[C90/270]Total=143.3

Maximum s/h(1/2): C0\_180=1.17 C90\_270=1.14

Maximum s/h(1/4): C0\_180=1.23 C90\_270=1.19

Up flux rate of LUM(%): 0.84%

Down flux rate of LUM(%): 99.16%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 86.860%

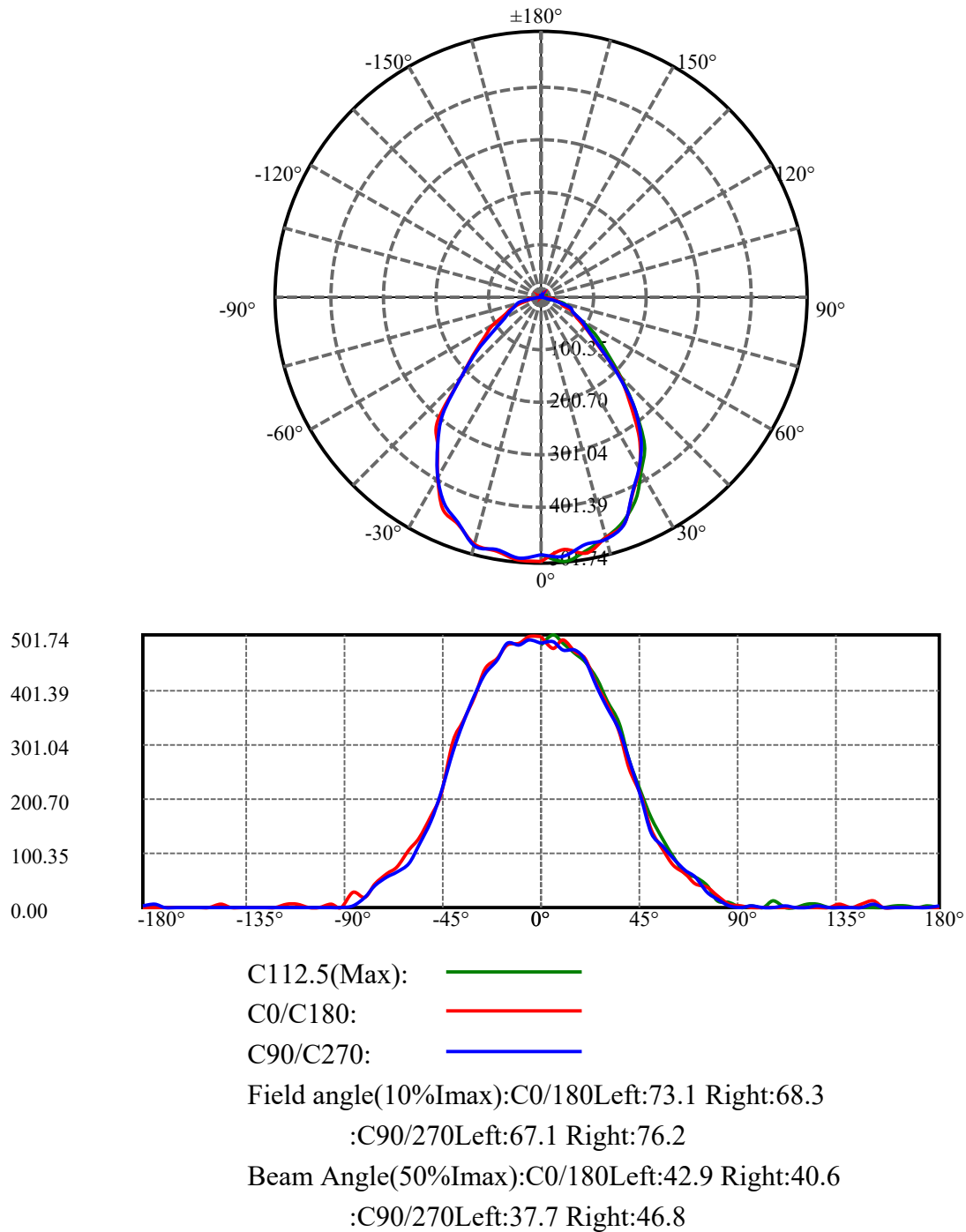
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 528.882       | 0.000       | 0         | .000%       | .000%      |
| 5.0                | 526.118       | 11.713      | 11.713    | 1.171%      | 1.171%     |
| 10.0               | 523.681       | 34.878      | 46.592    | 3.488%      | 4.659%     |
| 15.0               | 514.235       | 57.181      | 103.773   | 5.718%      | 10.377%    |
| 20.0               | 493.760       | 77.153      | 180.926   | 7.715%      | 18.093%    |
| 25.0               | 456.981       | 92.609      | 273.535   | 9.261%      | 27.353%    |
| 30.0               | 413.418       | 102.300     | 375.836   | 10.230%     | 37.583%    |
| 35.0               | 361.088       | 105.924     | 481.759   | 10.592%     | 48.176%    |
| 40.0               | 302.703       | 102.856     | 584.616   | 10.286%     | 58.461%    |
| 45.0               | 238.012       | 92.983      | 677.599   | 9.298%      | 67.760%    |
| 50.0               | 178.622       | 78.188      | 755.786   | 7.819%      | 75.578%    |
| 55.0               | 134.080       | 63.146      | 818.933   | 6.315%      | 81.893%    |
| 60.0               | 97.300        | 49.671      | 868.604   | 4.967%      | 86.860%    |
| 65.0               | 75.996        | 39.126      | 907.731   | 3.913%      | 90.773%    |
| 70.0               | 57.983        | 31.507      | 939.238   | 3.151%      | 93.924%    |
| 75.0               | 42.533        | 24.401      | 963.638   | 2.440%      | 96.364%    |
| 80.0               | 24.068        | 16.550      | 980.189   | 1.655%      | 98.019%    |
| 85.0               | 9.848         | 8.559       | 988.748   | .856%       | 98.875%    |
| 90.0               | 1.332         | 2.843       | 991.591   | .284%       | 99.159%    |
| 95.0               | 1.834         | 0.805       | 992.396   | .080%       | 99.239%    |
| 100.0              | 0.151         | 0.501       | 992.897   | .050%       | 99.289%    |
| 105.0              | 0.980         | 0.281       | 993.178   | .028%       | 99.318%    |
| 110.0              | 2.010         | 0.726       | 993.903   | .073%       | 99.390%    |
| 115.0              | 1.382         | 0.798       | 994.701   | .080%       | 99.470%    |
| 120.0              | 3.065         | 1.004       | 995.705   | .100%       | 99.570%    |
| 125.0              | 1.985         | 1.084       | 996.789   | .108%       | 99.679%    |
| 130.0              | 0.729         | 0.548       | 997.337   | .055%       | 99.733%    |
| 135.0              | 1.105         | 0.344       | 997.681   | .034%       | 99.768%    |
| 140.0              | 0.779         | 0.324       | 998.005   | .032%       | 99.800%    |
| 145.0              | 2.562         | 0.518       | 998.523   | .052%       | 99.852%    |
| 150.0              | 2.864         | 0.742       | 999.265   | .074%       | 99.926%    |
| 155.0              | 0.201         | 0.360       | 999.625   | .036%       | 99.962%    |
| 160.0              | 0.578         | 0.076       | 999.701   | .008%       | 99.970%    |
| 165.0              | 0.452         | 0.079       | 999.78    | .008%       | 99.978%    |
| 170.0              | 1.708         | 0.119       | 999.899   | .012%       | 99.990%    |
| 175.0              | 0.930         | 0.088       | 999.987   | .009%       | 99.998%    |
| 180.0              | 0.452         | 0.015       | 1000.002  | .002%       | 100.000%   |

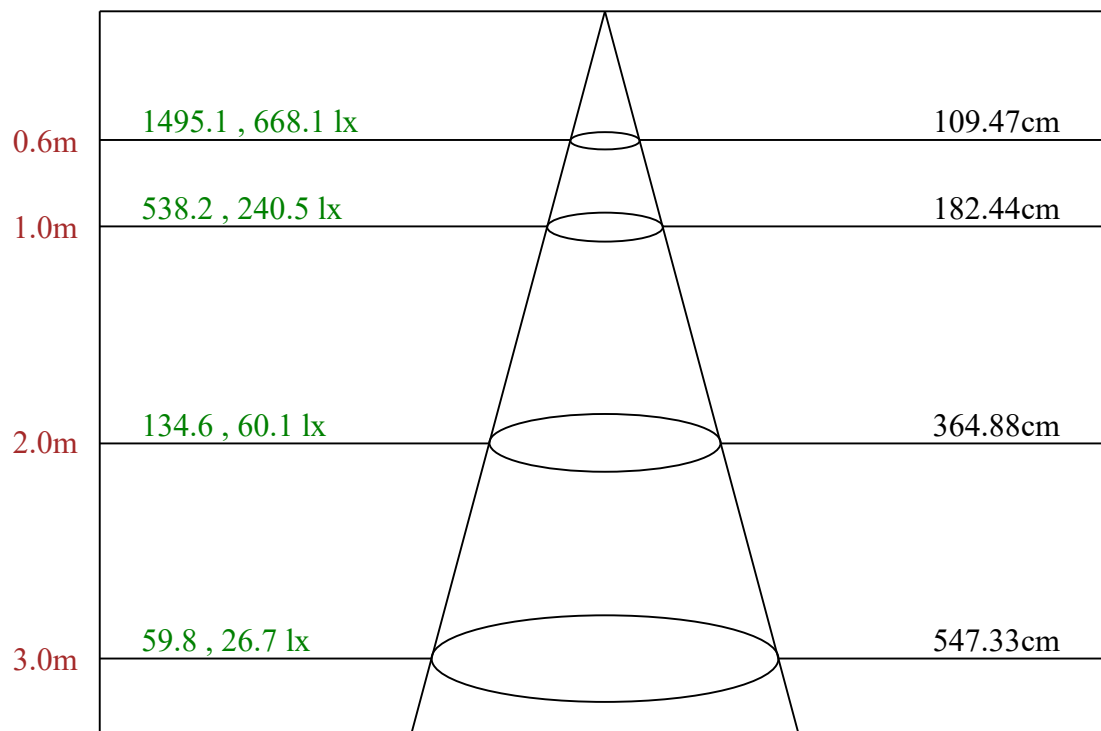
## ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Fixt   |
|---------|---------|---------|
| 0-30    | 375.84  | 37.58%  |
| 0-40    | 584.62  | 58.46%  |
| 0-60    | 868.60  | 86.86%  |
| 0-90    | 991.59  | 99.16%  |
| 0-120   | 995.70  | 99.57%  |
| 0-180   | 1000.00 | 100.00% |
| 60-90   | 172.66  | 17.27%  |
| 90-120  | 6.96    | 0.70%   |
| 90-130  | 8.59    | 0.86%   |
| 90-150  | 10.52   | 1.05%   |
| 90-180  | 11.24   | 1.12%   |
| 0-53.50 | 800.00  | 80.00%  |

## ZONAL LUMEN SUMMARY

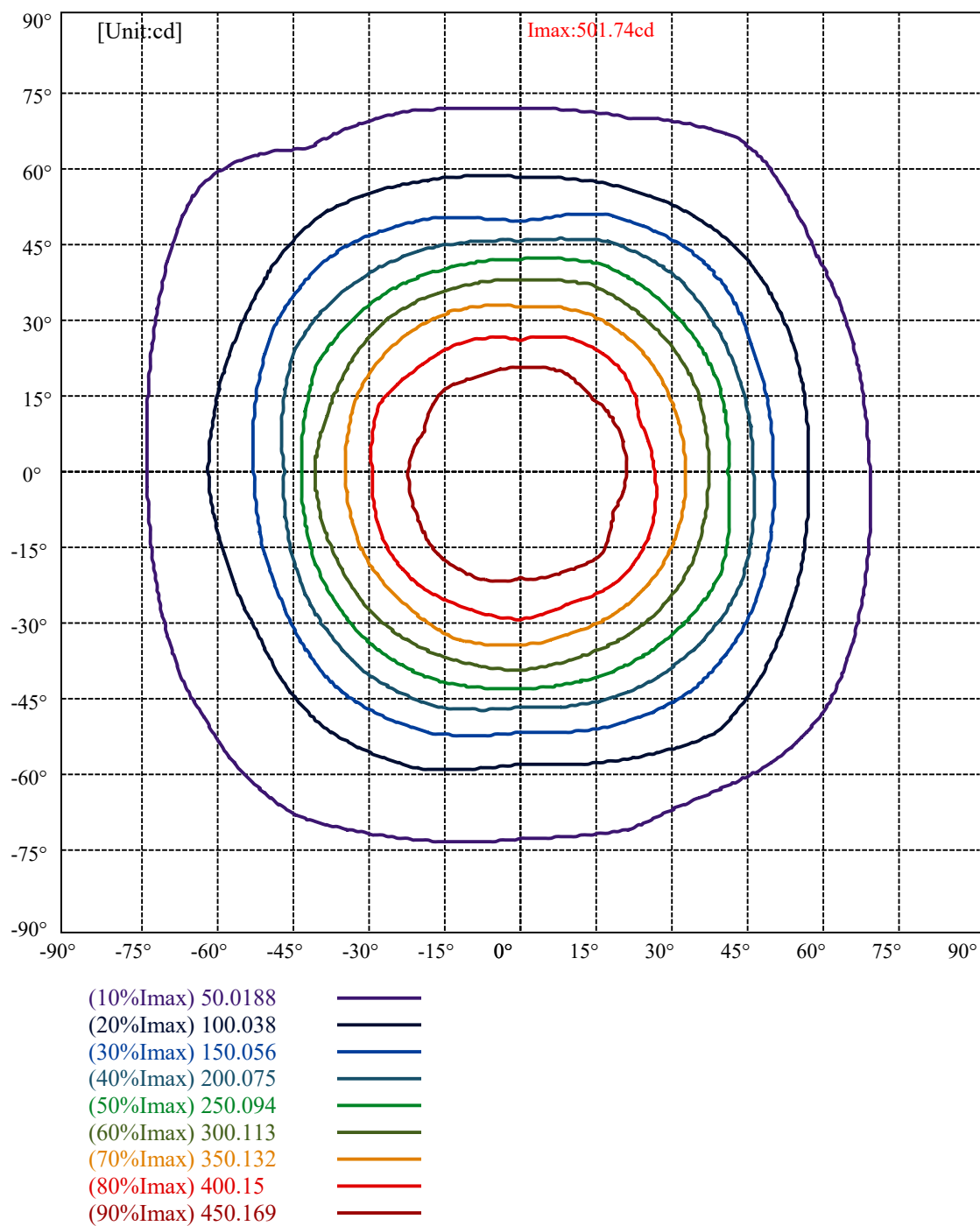
|         |        |
|---------|--------|
| 0-10    | 46.59  |
| 10-20   | 134.33 |
| 20-30   | 194.91 |
| 30-40   | 208.78 |
| 40-50   | 171.17 |
| 50-60   | 112.82 |
| 60-70   | 70.63  |
| 70-80   | 40.95  |
| 80-90   | 11.40  |
| 90-100  | 1.31   |
| 100-110 | 1.01   |
| 110-120 | 1.80   |
| 120-130 | 1.63   |
| 130-140 | 0.67   |
| 140-150 | 1.26   |
| 150-160 | 0.44   |
| 160-170 | 0.20   |
| 170-180 | 0.09   |

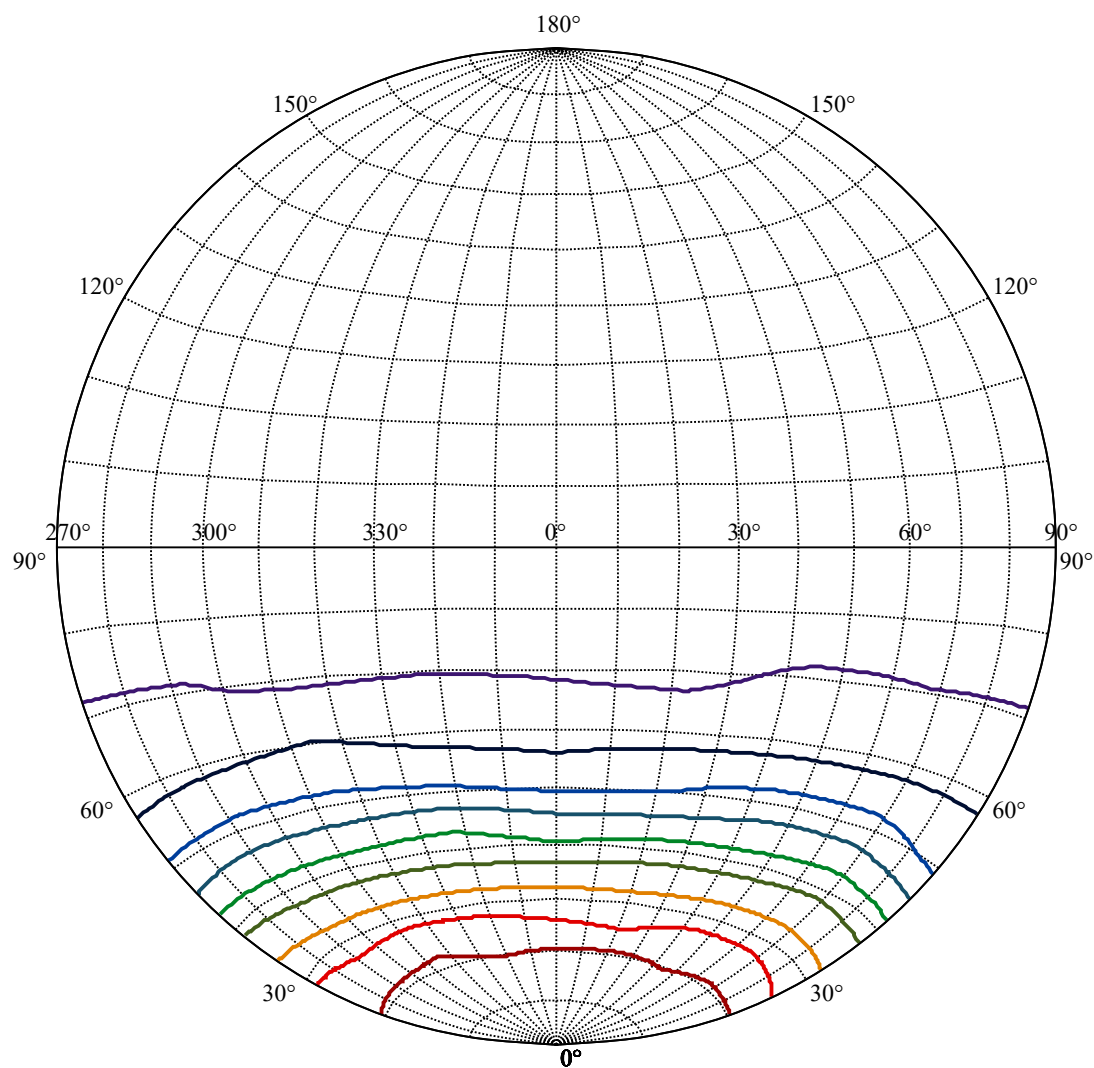




Max , Ave

Beam angle of C112.5 plane 84.74





House

[Unit:cd]

Road

Imax:501.74

(10%Imax) 46.59218

(20%Imax) 93.18399

(30%Imax) 139.7769

(40%Imax) 186.3689

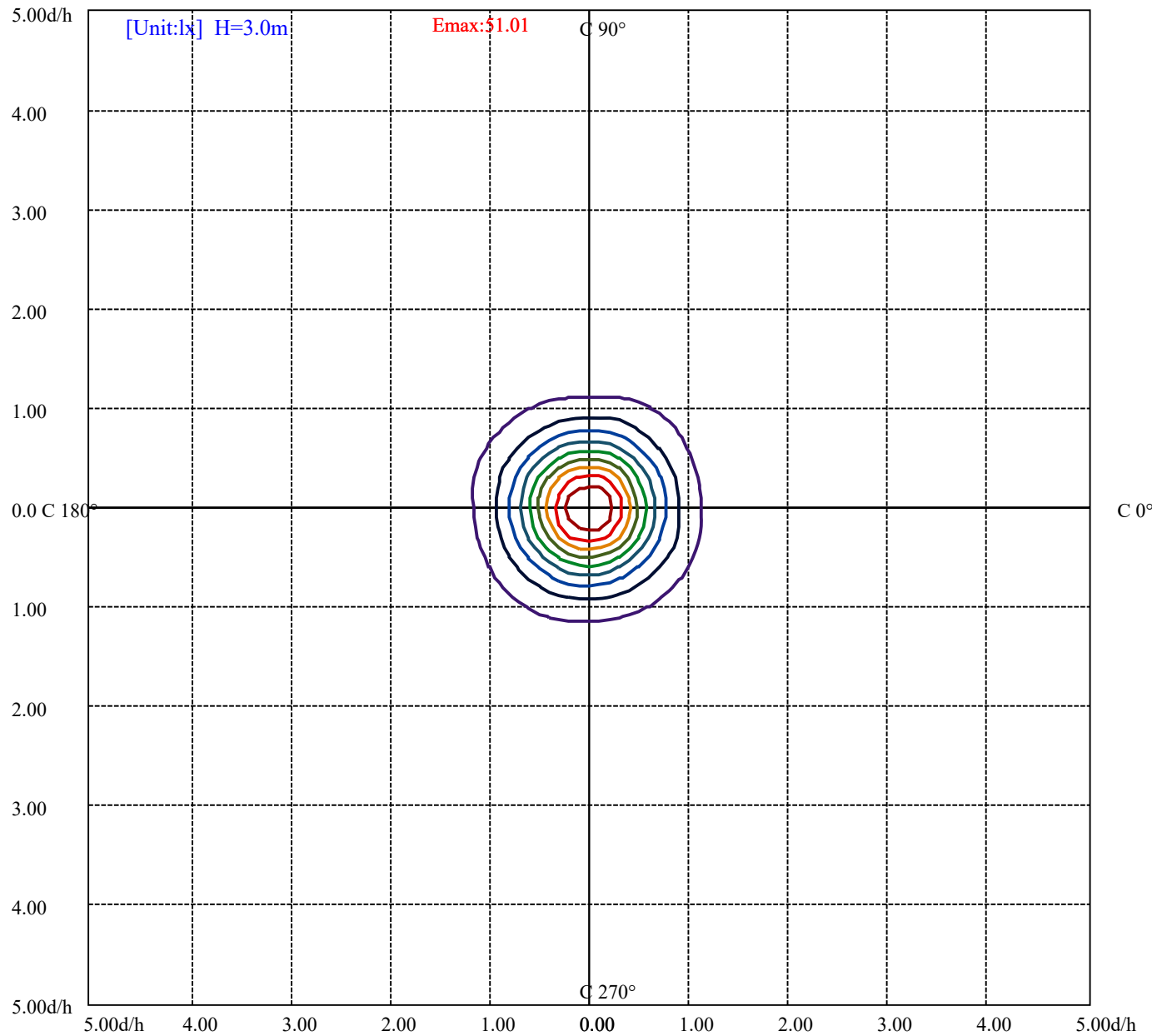
(50%Imax) 232.9609

(60%Imax) 279.5529

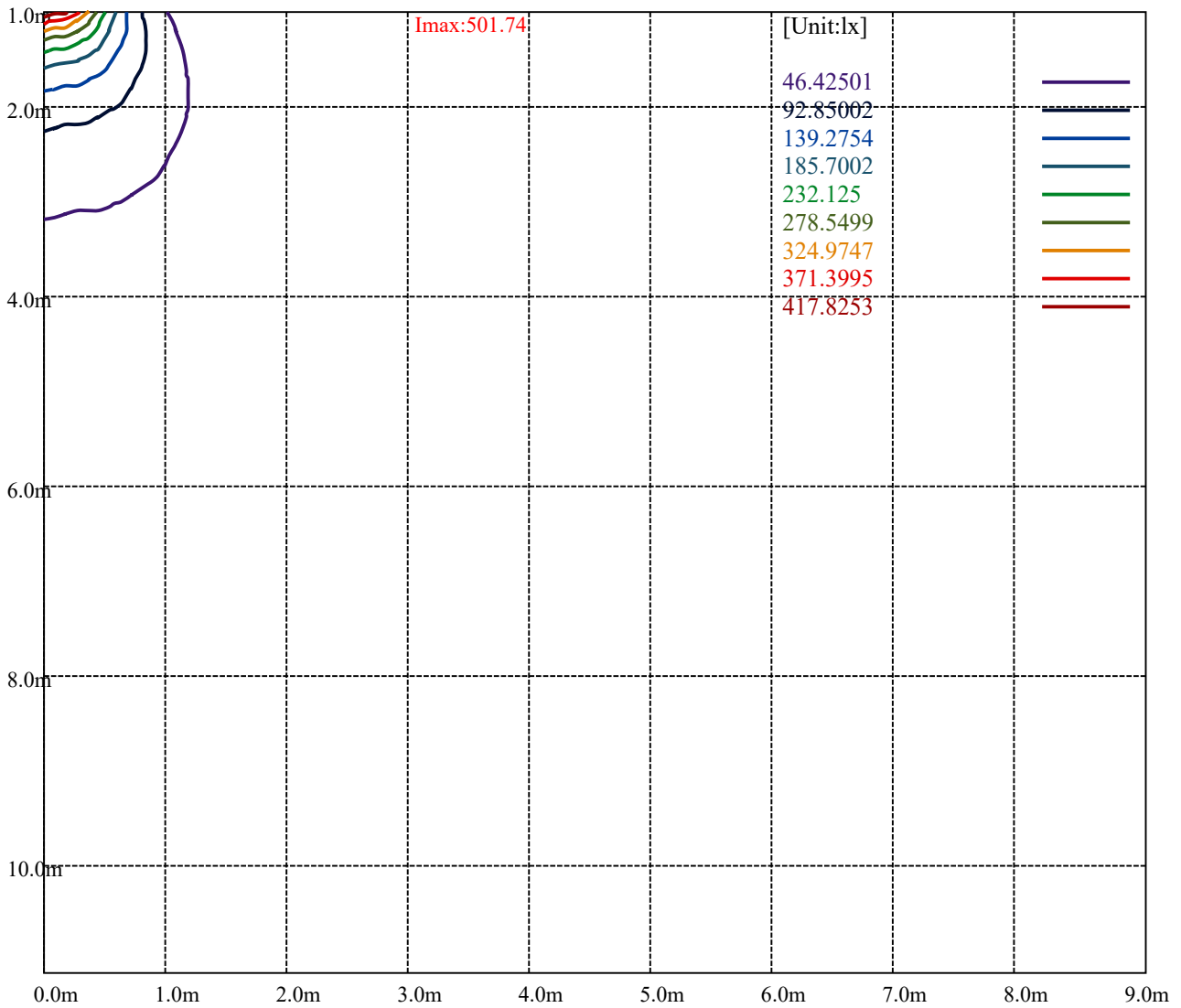
(70%Imax) 326.1458

(80%Imax) 372.7378

(90%Imax) 419.3298



|           |          |   |
|-----------|----------|---|
| (10%Emax) | 5.100536 | — |
| (20%Emax) | 10.20107 | — |
| (30%Emax) | 15.30158 | — |
| (40%Emax) | 20.4021  | — |
| (50%Emax) | 25.50263 | — |
| (60%Emax) | 30.60325 | — |
| (70%Emax) | 35.70378 | — |
| (80%Emax) | 40.80431 | — |
| (90%Emax) | 45.90483 | — |



Luminance Table

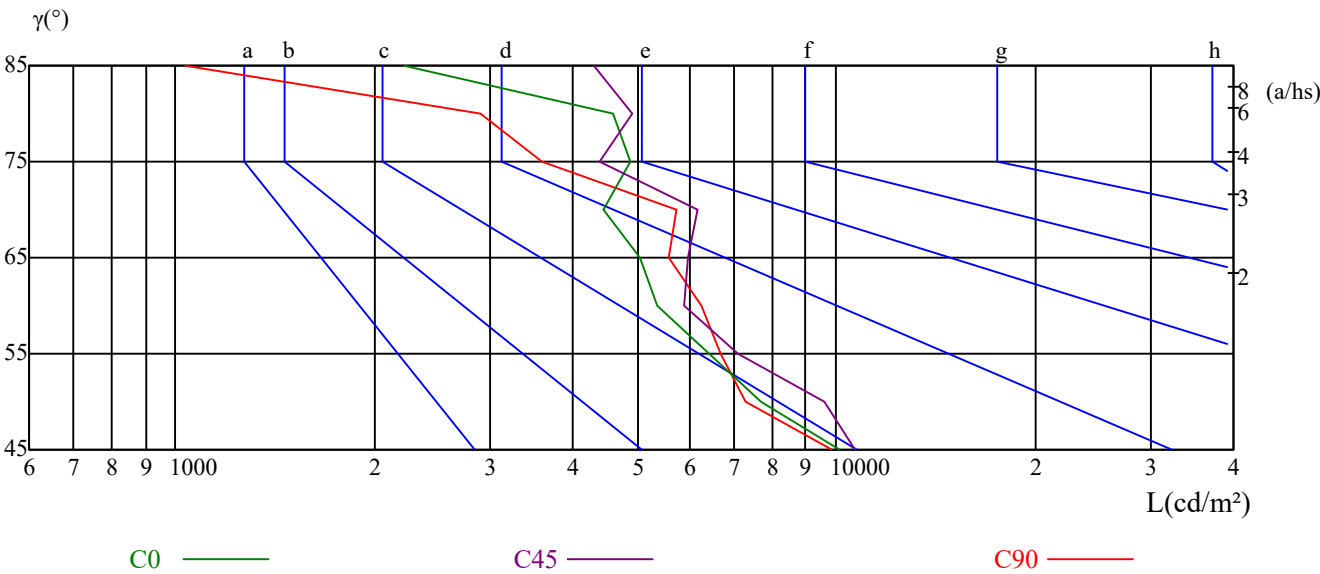
| $\gamma$ | 45    | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   |
|----------|-------|------|------|------|------|------|------|------|------|
| C0       | 10120 | 7703 | 6429 | 5364 | 5065 | 4449 | 4882 | 4604 | 2219 |
| C45      | 10667 | 9629 | 7126 | 5880 | 5949 | 6183 | 4384 | 4901 | 4290 |
| C90      | 9883  | 7302 | 6677 | 6241 | 5583 | 5730 | 3587 | 2896 | 1036 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 5553       | 5476       | 5972    | 5331       | 4583       | 5194    | 6435       | 1258       | 4031    |

Glare Table

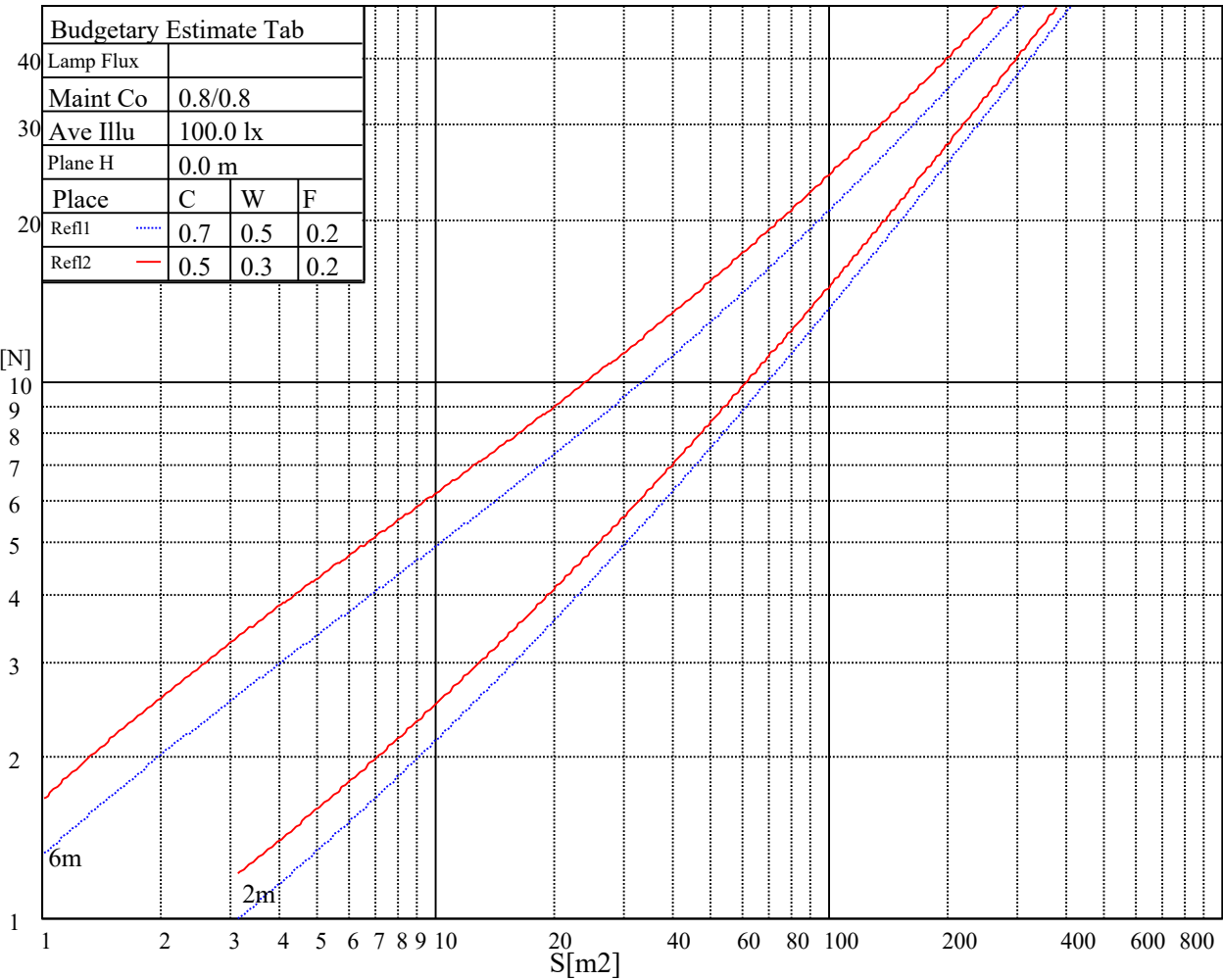
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

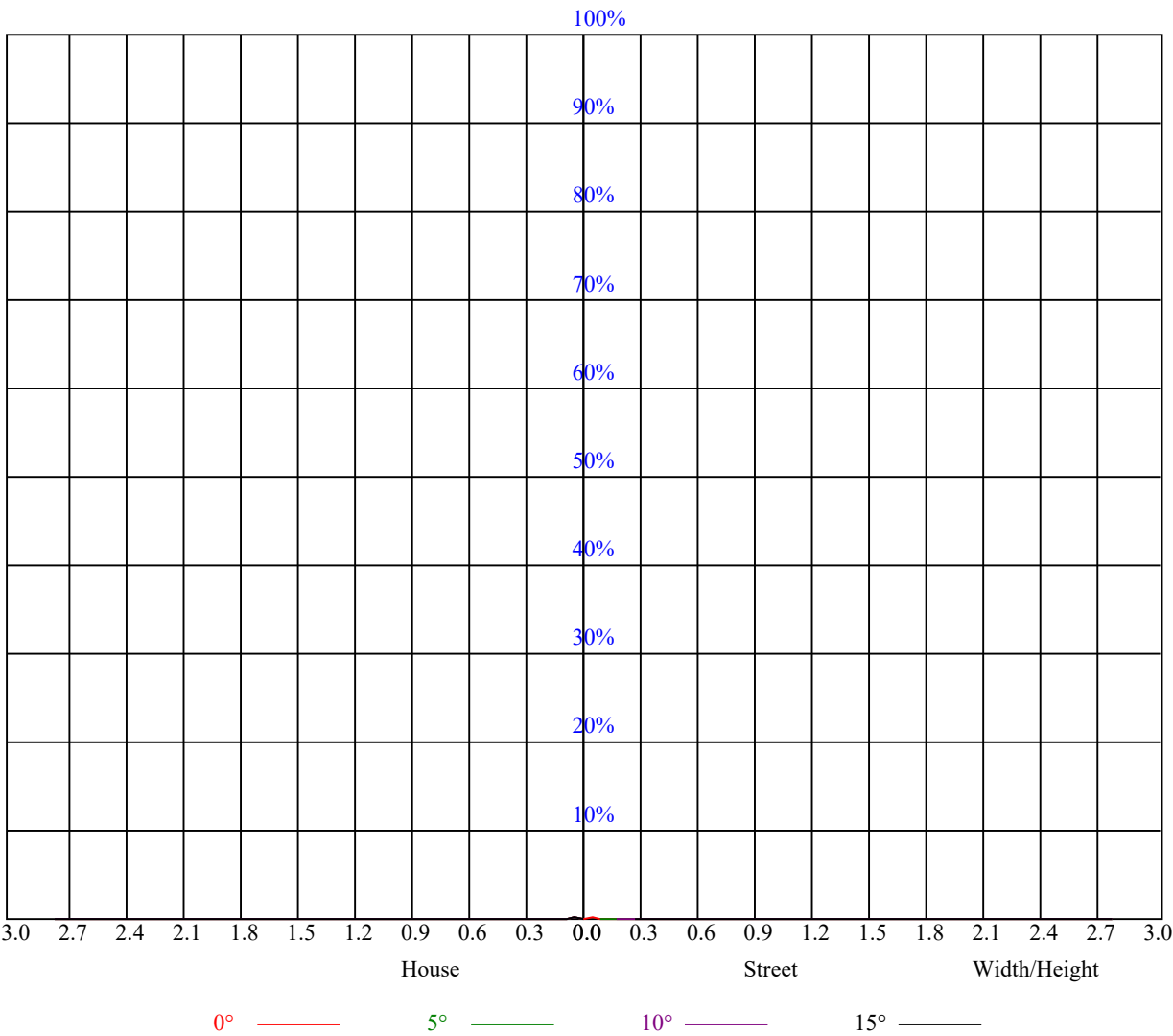


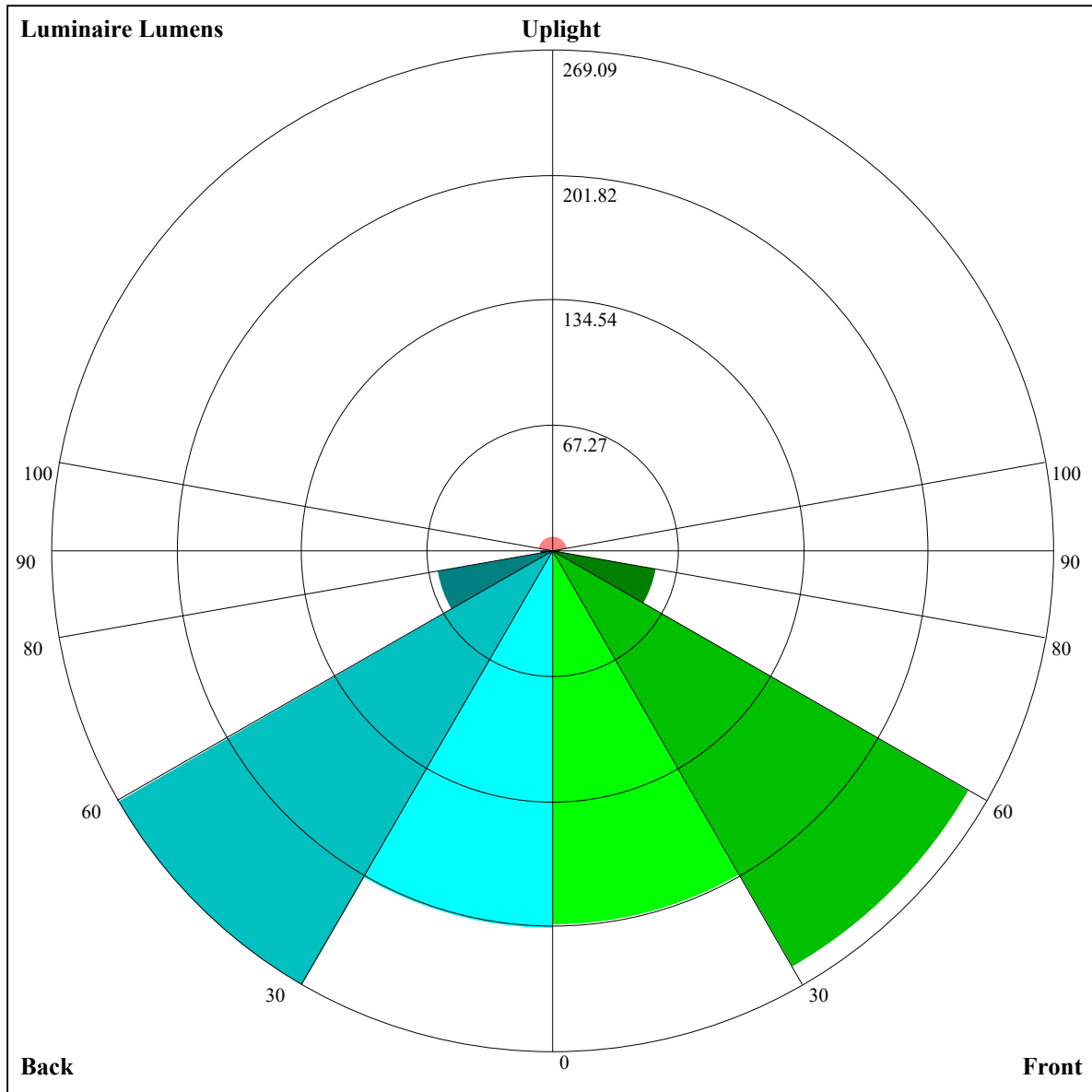
| Illumination assessment according UGR             |     |                  |       |       |       |       |                |       |       |       |       |
|---------------------------------------------------|-----|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| 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  | 14.00            | 15.44 | 14.38 | 15.77 | 16.11 | 14.38          | 15.81 | 14.75 | 16.14 | 16.48 |
|                                                   | 3H  | 14.77            | 16.06 | 15.17 | 16.42 | 16.78 | 15.41          | 16.70 | 15.81 | 17.06 | 17.42 |
|                                                   | 4H  | 15.19            | 16.40 | 15.60 | 16.76 | 17.15 | 15.78          | 16.99 | 16.19 | 17.36 | 17.74 |
|                                                   | 6H  | 15.58            | 16.70 | 16.00 | 17.08 | 17.50 | 15.99          | 17.10 | 16.41 | 17.49 | 17.91 |
|                                                   | 8H  | 15.67            | 16.74 | 16.09 | 17.14 | 17.56 | 16.00          | 17.07 | 16.42 | 17.47 | 17.89 |
|                                                   | 12H | 15.68            | 16.71 | 16.11 | 17.11 | 17.54 | 15.96          | 16.99 | 16.40 | 17.40 | 17.83 |
| 4H                                                | 2H  | 14.46            | 15.67 | 14.87 | 16.04 | 16.42 | 14.78          | 15.98 | 15.19 | 16.35 | 16.74 |
|                                                   | 3H  | 15.39            | 16.40 | 15.82 | 16.81 | 17.24 | 16.03          | 17.05 | 16.47 | 17.45 | 17.89 |
|                                                   | 4H  | 15.94            | 16.83 | 16.39 | 17.27 | 17.73 | 16.62          | 17.52 | 17.07 | 17.95 | 18.41 |
|                                                   | 6H  | 16.36            | 17.15 | 16.84 | 17.61 | 18.08 | 16.92          | 17.72 | 17.40 | 18.18 | 18.64 |
|                                                   | 8H  | 16.50            | 17.25 | 16.99 | 17.71 | 18.19 | 16.99          | 17.74 | 17.48 | 18.20 | 18.68 |
|                                                   | 12H | 16.56            | 17.25 | 17.05 | 17.71 | 18.23 | 17.00          | 17.69 | 17.50 | 18.15 | 18.68 |
| 8H                                                | 4H  | 16.17            | 16.91 | 16.65 | 17.37 | 17.86 | 16.78          | 17.52 | 17.27 | 17.99 | 18.47 |
|                                                   | 6H  | 16.67            | 17.29 | 17.18 | 17.77 | 18.29 | 17.23          | 17.85 | 17.73 | 18.33 | 18.85 |
|                                                   | 8H  | 16.90            | 17.44 | 17.43 | 17.96 | 18.47 | 17.42          | 17.95 | 17.95 | 18.48 | 18.99 |
|                                                   | 12H | 16.98            | 17.43 | 17.52 | 17.96 | 18.49 | 17.46          | 17.91 | 18.00 | 18.44 | 18.97 |
| 12H                                               | 4H  | 16.19            | 16.88 | 16.68 | 17.34 | 17.86 | 16.78          | 17.47 | 17.27 | 17.93 | 18.45 |
|                                                   | 6H  | 16.78            | 17.32 | 17.31 | 17.85 | 18.36 | 17.31          | 17.85 | 17.84 | 18.38 | 18.89 |
|                                                   | 8H  | 17.00            | 17.45 | 17.54 | 17.98 | 18.51 | 17.50          | 17.95 | 18.04 | 18.47 | 19.01 |
| Variation with the observer position at spacings: |     |                  |       |       |       |       |                |       |       |       |       |
| S = 1.0H                                          |     | 0.3/-0.9         |       |       |       |       | 0.3/-0.9       |       |       |       |       |
| S = 1.5H                                          |     | 0.8/-1.0         |       |       |       |       | 1.0/-1.1       |       |       |       |       |
| S = 2.0H                                          |     | 1.7/-1.2         |       |       |       |       | 2.1/-1.8       |       |       |       |       |
| Standard tables:                                  |     | BK3              |       |       |       |       | BK3            |       |       |       |       |
| Uncorrected UGR                                   |     | 3.0              |       |       |       |       | 2.8            |       |       |       |       |

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



| RHOC | 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    | 1.19                                    | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.99 |
| 1    | 1.06                                    | 1.02 | 0.99 | 1.04 | 1.00 | 0.97 | 0.99 | 0.97 | 0.94 | 0.95 | 0.93 | 0.91 | 0.92 | 0.90 | 0.88 | 0.86 |
| 2    | 0.95                                    | 0.89 | 0.84 | 0.93 | 0.87 | 0.83 | 0.89 | 0.84 | 0.81 | 0.86 | 0.82 | 0.79 | 0.83 | 0.80 | 0.77 | 0.75 |
| 3    | 0.85                                    | 0.77 | 0.72 | 0.83 | 0.76 | 0.71 | 0.80 | 0.74 | 0.70 | 0.77 | 0.73 | 0.68 | 0.75 | 0.71 | 0.67 | 0.65 |
| 4    | 0.76                                    | 0.68 | 0.63 | 0.75 | 0.68 | 0.62 | 0.72 | 0.66 | 0.61 | 0.70 | 0.65 | 0.60 | 0.68 | 0.63 | 0.59 | 0.57 |
| 5    | 0.69                                    | 0.61 | 0.55 | 0.68 | 0.60 | 0.55 | 0.66 | 0.59 | 0.54 | 0.64 | 0.58 | 0.53 | 0.62 | 0.57 | 0.53 | 0.51 |
| 6    | 0.63                                    | 0.55 | 0.49 | 0.62 | 0.54 | 0.49 | 0.60 | 0.53 | 0.48 | 0.58 | 0.52 | 0.48 | 0.57 | 0.52 | 0.47 | 0.46 |
| 7    | 0.58                                    | 0.50 | 0.44 | 0.57 | 0.49 | 0.44 | 0.55 | 0.48 | 0.44 | 0.54 | 0.48 | 0.43 | 0.52 | 0.47 | 0.43 | 0.41 |
| 8    | 0.53                                    | 0.45 | 0.40 | 0.52 | 0.45 | 0.40 | 0.51 | 0.44 | 0.39 | 0.50 | 0.44 | 0.39 | 0.49 | 0.43 | 0.39 | 0.37 |
| 9    | 0.49                                    | 0.41 | 0.36 | 0.48 | 0.41 | 0.36 | 0.47 | 0.41 | 0.36 | 0.46 | 0.40 | 0.36 | 0.45 | 0.40 | 0.36 | 0.34 |
| 10   | 0.46                                    | 0.38 | 0.33 | 0.45 | 0.38 | 0.33 | 0.44 | 0.37 | 0.33 | 0.43 | 0.37 | 0.33 | 0.42 | 0.37 | 0.33 | 0.31 |





Luminaire Lumens:

FL=200.93,FM=257.9,FH=56.15,FVH=4.75

BL=202.9,BM=269.09,BH=63.16,BVH=6.92

UL=1.41,UH=7.65

BUG Rating:B1-U1-G0

## Intensity data(cd)

| C/γ(°) | 0.0    | 5.0    | 10.0   | 15.0   | 20.0   | 25.0   | 30.0   | 35.0   | 40.0   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0    | 499.87 | 477.47 | 491.29 | 469.63 | 457.31 | 409.53 | 372.57 | 323.67 | 256.10 |
| 22.5   | 480.09 | 495.77 | 490.17 | 470.01 | 459.93 | 400.94 | 367.72 | 328.89 | 272.89 |
| 45.0   | 494.27 | 467.39 | 480.46 | 480.46 | 448.73 | 430.06 | 375.93 | 333.00 | 274.39 |
| 67.5   | 489.05 | 489.79 | 493.90 | 480.46 | 458.06 | 423.72 | 382.65 | 333.00 | 288.95 |
| 90.0   | 486.81 | 490.17 | 472.99 | 473.74 | 454.70 | 406.54 | 367.72 | 328.15 | 271.78 |
| 112.5  | 484.19 | 501.74 | 486.06 | 468.89 | 451.34 | 420.36 | 379.66 | 340.09 | 271.78 |
| 135.0  | 498.01 | 498.75 | 481.21 | 475.98 | 461.05 | 429.32 | 381.53 | 345.69 | 286.33 |
| 157.5  | 497.26 | 493.15 | 495.39 | 470.75 | 450.59 | 440.14 | 404.68 | 348.31 | 285.21 |
| 180.0  | 499.87 | 498.38 | 487.55 | 484.19 | 456.94 | 439.40 | 390.49 | 342.33 | 304.63 |
| 202.5  | 480.09 | 476.35 | 483.82 | 481.58 | 464.78 | 428.20 | 398.70 | 341.21 | 293.05 |
| 225.0  | 494.27 | 486.81 | 474.86 | 474.86 | 475.61 | 426.70 | 397.21 | 335.61 | 293.05 |
| 247.5  | 489.05 | 478.59 | 490.54 | 480.09 | 468.89 | 429.69 | 387.88 | 349.43 | 284.47 |
| 270.0  | 486.81 | 492.78 | 484.57 | 485.31 | 453.95 | 430.81 | 391.24 | 338.97 | 287.45 |
| 292.5  | 484.19 | 494.27 | 483.82 | 490.17 | 462.54 | 417.37 | 380.04 | 328.89 | 275.13 |
| 315.0  | 498.01 | 492.41 | 492.03 | 474.49 | 464.03 | 435.66 | 382.65 | 326.28 | 275.88 |
| 337.5  | 497.26 | 484.19 | 493.15 | 480.83 | 448.73 | 422.22 | 382.65 | 322.17 | 277.00 |
| 360.0  | 499.87 | 477.47 | 491.29 | 469.63 | 457.31 | 409.53 | 372.57 | 323.67 | 256.10 |
|        |        |        |        |        |        |        |        |        |        |
| C/γ(°) | 45.0   | 50.0   | 55.0   | 60.0   | 65.0   | 70.0   | 75.0   | 80.0   | 85.0   |
| 0.0    | 207.19 | 143.35 | 106.77 | 77.65  | 61.97  | 44.05  | 36.58  | 23.15  | 5.60   |
| 22.5   | 210.55 | 150.07 | 122.08 | 74.66  | 59.36  | 34.35  | 30.99  | 15.68  | 5.60   |
| 45.0   | 218.39 | 179.19 | 118.34 | 85.12  | 72.80  | 61.22  | 32.85  | 24.64  | 10.83  |
| 67.5   | 223.99 | 175.09 | 122.08 | 84.74  | 66.08  | 51.14  | 42.19  | 22.40  | 7.47   |
| 90.0   | 202.34 | 135.89 | 110.88 | 90.34  | 68.32  | 56.74  | 26.88  | 14.56  | 2.61   |
| 112.5  | 213.16 | 164.26 | 123.94 | 92.96  | 63.46  | 57.12  | 39.57  | 13.07  | 8.96   |
| 135.0  | 223.99 | 176.58 | 139.99 | 101.17 | 66.45  | 50.40  | 41.07  | 28.75  | 3.36   |
| 157.5  | 242.66 | 188.15 | 140.74 | 93.33  | 83.62  | 65.33  | 50.77  | 21.65  | 0.00   |
| 180.0  | 210.18 | 167.62 | 126.93 | 107.52 | 73.92  | 60.85  | 43.31  | 19.79  | 26.88  |
| 202.5  | 227.72 | 163.51 | 123.57 | 82.50  | 77.28  | 55.62  | 38.45  | 31.73  | 19.79  |
| 225.0  | 231.46 | 178.82 | 134.77 | 98.93  | 78.02  | 63.09  | 45.92  | 39.57  | 20.91  |
| 247.5  | 234.82 | 179.94 | 134.39 | 100.80 | 78.77  | 65.70  | 41.44  | 25.39  | 16.80  |
| 270.0  | 210.92 | 158.66 | 114.61 | 80.64  | 65.70  | 54.88  | 41.81  | 20.16  | 3.73   |
| 292.5  | 222.12 | 167.25 | 125.81 | 89.22  | 54.88  | 53.38  | 41.07  | 22.03  | 0.00   |
| 315.0  | 222.50 | 166.50 | 129.91 | 102.66 | 75.04  | 40.69  | 35.84  | 12.32  | 5.60   |
| 337.5  | 234.82 | 159.41 | 117.59 | 83.62  | 83.62  | 47.04  | 43.31  | 22.77  | 8.21   |
| 360.0  | 207.19 | 143.35 | 106.77 | 77.65  | 61.97  | 44.05  | 36.58  | 23.15  | 5.60   |
|        |        |        |        |        |        |        |        |        |        |
| C/γ(°) | 90.0   | 95.0   | 100.0  | 105.0  | 110.0  | 115.0  | 120.0  | 125.0  | 130.0  |
| 0.0    | 2.24   | 0.37   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 22.5   | 13.07  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 14.19  | 0.00   | 0.00   |
| 45.0   | 0.00   | 7.84   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 8.21   |
| 67.5   | 0.00   | 0.75   | 0.00   | 0.00   | 0.00   | 4.85   | 0.00   | 0.37   | 0.00   |
| 90.0   | 0.00   | 2.99   | 0.37   | 0.75   | 3.73   | 0.00   | 0.00   | 4.48   | 0.00   |
| 112.5  | 0.00   | 2.99   | 0.00   | 11.95  | 0.75   | 0.37   | 6.72   | 7.09   | 0.00   |
| 135.0  | 0.00   | 0.00   | 0.37   | 1.87   | 0.00   | 6.72   | 10.83  | 10.08  | 0.00   |
| 157.5  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 2.24   | 0.00   | 1.12   | 0.00   |
| 180.0  | 0.75   | 5.60   | 1.49   | 0.00   | 4.85   | 6.35   | 0.00   | 0.00   | 0.00   |
| 202.5  | 0.00   | 1.12   | 0.00   | 0.00   | 10.08  | 0.00   | 11.20  | 0.00   | 0.00   |
| 225.0  | 0.00   | 0.00   | 0.00   | 0.00   | 2.61   | 0.00   | 0.37   | 0.00   | 2.61   |
| 247.5  | 3.73   | 5.60   | 0.00   | 0.00   | 4.85   | 0.00   | 0.00   | 0.00   | 0.00   |
| 270.0  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 1.49   | 0.00   |
| 292.5  | 0.00   | 0.00   | 0.00   | 0.00   | 2.99   | 0.00   | 2.24   | 0.00   | 0.00   |
| 315.0  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 1.12   | 0.00   |
| 337.5  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 3.73   | 0.00   |
| 360.0  | 2.24   | 0.37   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |

| Intensity data(cd)    |       |       |       |       |       |       |       |       | Appendix Page: 17 Total:17 |  |  |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------------|--|--|
| C/ $\gamma(^{\circ})$ | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0                      |  |  |
| 0.0                   | 5.23  | 0.00  | 6.72  | 12.32 | 1.49  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 22.5                  | 0.00  | 0.00  | 6.72  | 0.00  | 0.00  | 0.00  | 0.00  | 7.47  | 0.00                       |  |  |
| 45.0                  | 0.00  | 0.00  | 0.00  | 2.99  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 67.5                  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 1.49  | 0.00  | 0.00  | 0.00                       |  |  |
| 90.0                  | 0.00  | 0.75  | 0.00  | 5.60  | 0.37  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 112.5                 | 0.00  | 0.00  | 0.00  | 0.75  | 0.75  | 3.73  | 1.87  | 0.00  | 2.61                       |  |  |
| 135.0                 | 11.20 | 7.84  | 6.72  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 157.5                 | 0.00  | 0.00  | 11.57 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 3.73                       |  |  |
| 180.0                 | 0.00  | 0.00  | 5.23  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 202.5                 | 0.00  | 2.99  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 2.99  | 0.00                       |  |  |
| 225.0                 | 0.00  | 0.00  | 1.12  | 7.47  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 247.5                 | 0.00  | 0.00  | 0.00  | 0.00  | 0.37  | 3.36  | 0.00  | 11.20 | 0.00                       |  |  |
| 270.0                 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 7.47                       |  |  |
| 292.5                 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 4.85  | 0.00  | 0.00                       |  |  |
| 315.0                 | 0.00  | 0.00  | 0.00  | 13.44 | 0.00  | 0.00  | 0.00  | 3.73  | 0.00                       |  |  |
| 337.5                 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| 360.0                 | 5.23  | 0.00  | 6.72  | 12.32 | 1.49  | 0.00  | 0.00  | 0.00  | 0.00                       |  |  |
| C/ $\gamma(^{\circ})$ | 180.0 |       |       |       |       |       |       |       |                            |  |  |
| 0.0                   | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 22.5                  | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 45.0                  | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 67.5                  | 0.75  |       |       |       |       |       |       |       |                            |  |  |
| 90.0                  | 2.61  |       |       |       |       |       |       |       |                            |  |  |
| 112.5                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 135.0                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 157.5                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 180.0                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 202.5                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 225.0                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 247.5                 | 0.75  |       |       |       |       |       |       |       |                            |  |  |
| 270.0                 | 2.61  |       |       |       |       |       |       |       |                            |  |  |
| 292.5                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 315.0                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 337.5                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |
| 360.0                 | 0.00  |       |       |       |       |       |       |       |                            |  |  |