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Light Blue USA-Rayhil

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Client:

LumCAT: INV-16-CCT-UNV-\*\*-4000K

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.200

Lamp flux(lm): 1534.8

Power (W): 23.810

Number of Lamps: 1

PF: 0.993

Length(mm): -380

Width(mm): -380

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 1534.76, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 64.46

Central intensity(cd): 529.866, Maximum intensity(cd): 529.866

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

Beam Angle(50%Imax): [C0/180]Total=113.2

[C90/270]Total=114.2

Field angle(10%Imax): [C0/180]Total=162.4

[C90/270]Total=162.0

Maximum s/h(1/2): C0\_180=1.27 C90\_270=1.26

Maximum s/h(1/4): C0\_180=1.38 C90\_270=1.38

Up flux rate of lamp(%): 0.43%

Down flux rate of lamp(%): 99.57%

Up flux rate of LUM(%): 0.43%

Down flux rate of LUM(%): 99.57%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 78.230%

Light Blue USA-Rayhil INV-16-CCT-UNV-\*\*-4000K

Zonal flux distribution table

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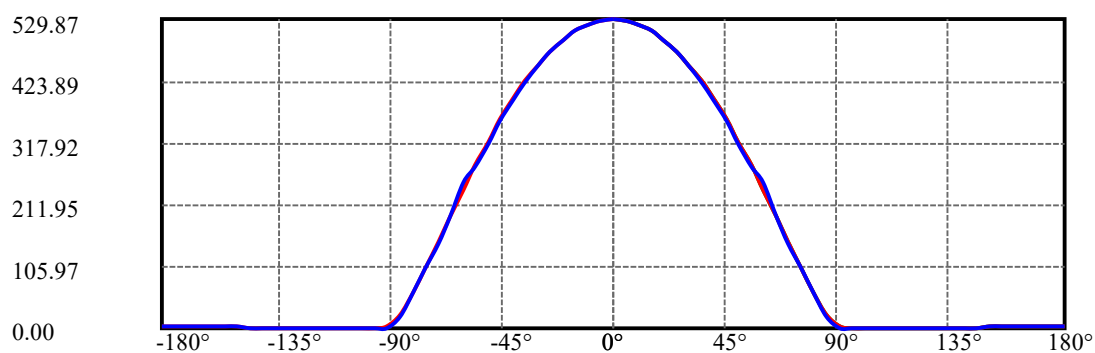
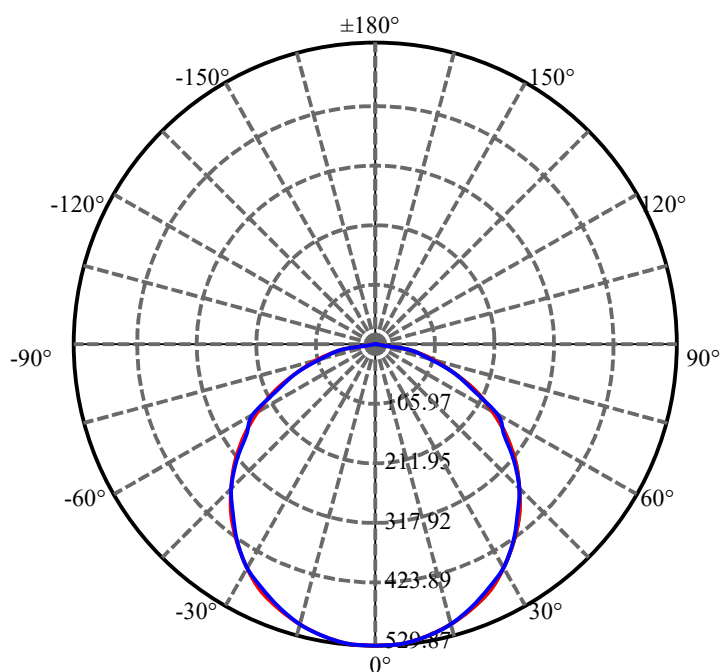
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 529.866       | 0.000       | 0         | 0.00%       | 0.00%      |
| 5.0                | 527.730       | 12.643      | 12.643    | 0.82%       | 0.82%      |
| 10.0               | 520.786       | 37.509      | 50.152    | 2.44%       | 3.27%      |
| 15.0               | 509.722       | 61.129      | 111.281   | 3.98%       | 7.25%      |
| 20.0               | 494.040       | 82.724      | 194.005   | 5.39%       | 12.64%     |
| 25.0               | 474.659       | 101.599     | 295.604   | 6.62%       | 19.26%     |
| 30.0               | 451.157       | 117.163     | 412.766   | 7.63%       | 26.89%     |
| 35.0               | 423.572       | 128.810     | 541.576   | 8.39%       | 35.29%     |
| 40.0               | 392.859       | 136.215     | 677.792   | 8.88%       | 44.16%     |
| 45.0               | 356.386       | 138.729     | 816.521   | 9.04%       | 53.20%     |
| 50.0               | 318.079       | 136.285     | 952.806   | 8.88%       | 62.08%     |
| 55.0               | 276.950       | 129.379     | 1082.185  | 8.43%       | 70.51%     |
| 60.0               | 235.480       | 118.447     | 1200.632  | 7.72%       | 78.23%     |
| 65.0               | 191.030       | 103.685     | 1304.317  | 6.76%       | 84.99%     |
| 70.0               | 146.736       | 85.524      | 1389.842  | 5.57%       | 90.56%     |
| 75.0               | 103.585       | 65.430      | 1455.272  | 4.26%       | 94.82%     |
| 80.0               | 62.380        | 44.408      | 1499.679  | 2.89%       | 97.71%     |
| 85.0               | 20.486        | 22.517      | 1522.196  | 1.47%       | 99.18%     |
| 90.0               | 1.258         | 5.954       | 1528.15   | 0.39%       | 99.57%     |
| 95.0               | 0.763         | 0.553       | 1528.703  | 0.04%       | 99.61%     |
| 100.0              | 0.686         | 0.394       | 1529.097  | 0.03%       | 99.63%     |
| 105.0              | 0.534         | 0.326       | 1529.423  | 0.02%       | 99.65%     |
| 110.0              | 0.496         | 0.269       | 1529.692  | 0.02%       | 99.67%     |
| 115.0              | 0.648         | 0.290       | 1529.982  | 0.02%       | 99.69%     |
| 120.0              | 0.992         | 0.399       | 1530.38   | 0.03%       | 99.71%     |
| 125.0              | 0.916         | 0.441       | 1530.821  | 0.03%       | 99.74%     |
| 130.0              | 0.916         | 0.398       | 1531.22   | 0.03%       | 99.77%     |
| 135.0              | 0.916         | 0.370       | 1531.59   | 0.02%       | 99.79%     |
| 140.0              | 0.916         | 0.339       | 1531.929  | 0.02%       | 99.82%     |
| 145.0              | 1.374         | 0.382       | 1532.311  | 0.02%       | 99.84%     |
| 150.0              | 1.640         | 0.444       | 1532.754  | 0.03%       | 99.87%     |
| 155.0              | 2.289         | 0.497       | 1533.252  | 0.03%       | 99.90%     |
| 160.0              | 2.327         | 0.484       | 1533.736  | 0.03%       | 99.93%     |
| 165.0              | 2.479         | 0.396       | 1534.132  | 0.03%       | 99.96%     |
| 170.0              | 3.129         | 0.333       | 1534.465  | 0.02%       | 99.98%     |
| 175.0              | 3.281         | 0.229       | 1534.694  | 0.01%       | 100.00%    |
| 180.0              | 1.831         | 0.061       | 1534.755  | 0.00%       | 100.00%    |

Zonal flux distribution table

| ZONAL LUMEN SUMMARY |         |         |         |
|---------------------|---------|---------|---------|
| Zone                | Lumens  | %Lamp   | %Fixt   |
| 0-30                | 412.77  | 26.89%  | 26.89%  |
| 0-40                | 677.79  | 44.16%  | 44.16%  |
| 0-60                | 1200.63 | 78.23%  | 78.23%  |
| 0-90                | 1528.15 | 99.57%  | 99.57%  |
| 0-120               | 1530.38 | 99.71%  | 99.71%  |
| 0-180               | 1534.76 | 100.00% | 100.00% |
| 60-90               | 327.52  | 21.34%  | 21.34%  |
| 90-120              | 2.23    | 0.15%   | 0.15%   |
| 90-130              | 3.07    | 0.20%   | 0.20%   |
| 90-150              | 4.60    | 0.30%   | 0.30%   |
| 90-180              | 6.54    | 0.43%   | 0.43%   |
| 0-61.31             | 1227.80 | 80.00%  | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 50.15  |
| 10-20   | 143.85 |
| 20-30   | 218.76 |
| 30-40   | 265.03 |
| 40-50   | 275.01 |
| 50-60   | 247.83 |
| 60-70   | 189.21 |
| 70-80   | 109.84 |
| 80-90   | 28.47  |
| 90-100  | 0.95   |
| 100-110 | 0.60   |
| 110-120 | 0.69   |
| 120-130 | 0.84   |
| 130-140 | 0.71   |
| 140-150 | 0.83   |
| 150-160 | 0.98   |
| 160-170 | 0.73   |
| 170-180 | 0.23   |



C0(Max): —————

C0/C180: —————

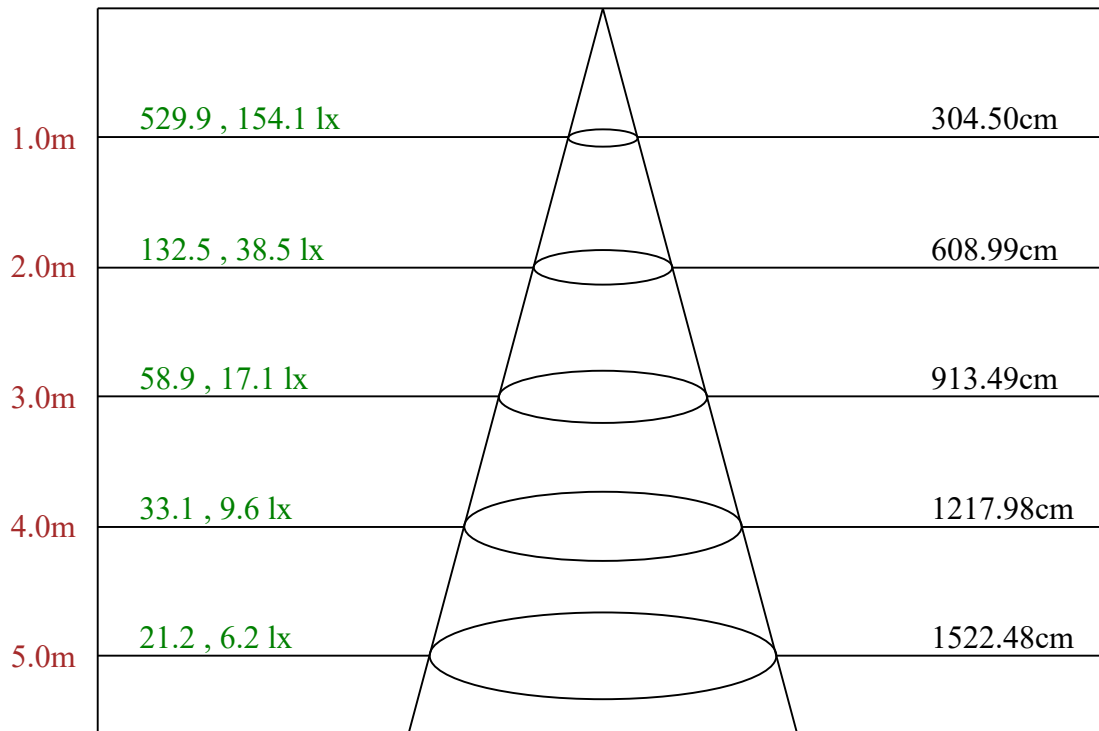
C90/C270: —————

Field angle(10%Imax):C0/180Left:81.2 Right:81.2

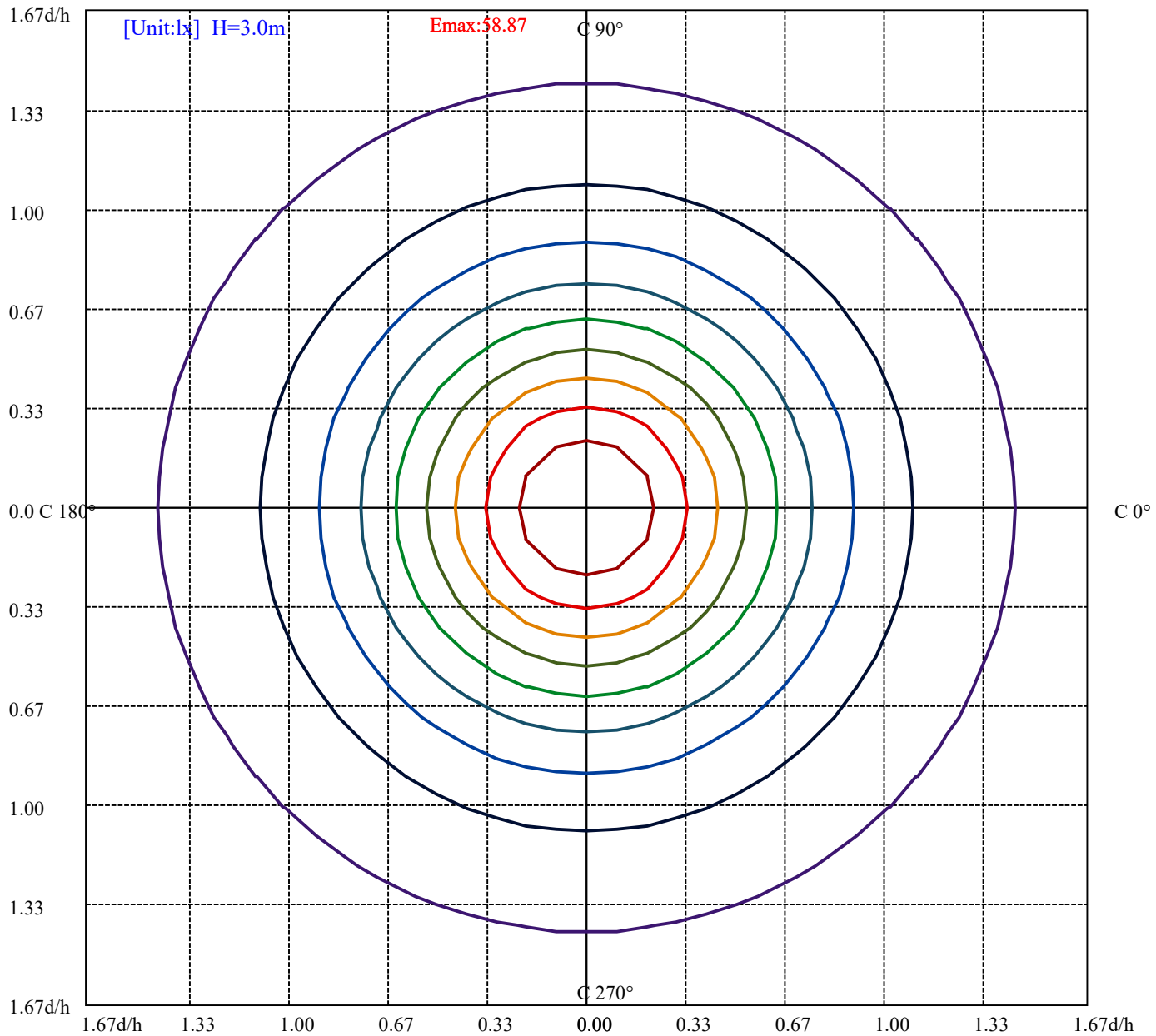
:C90/270Left:81.0 Right:81.0

Beam Angle(50%Imax):C0/180Left:56.6 Right:56.6

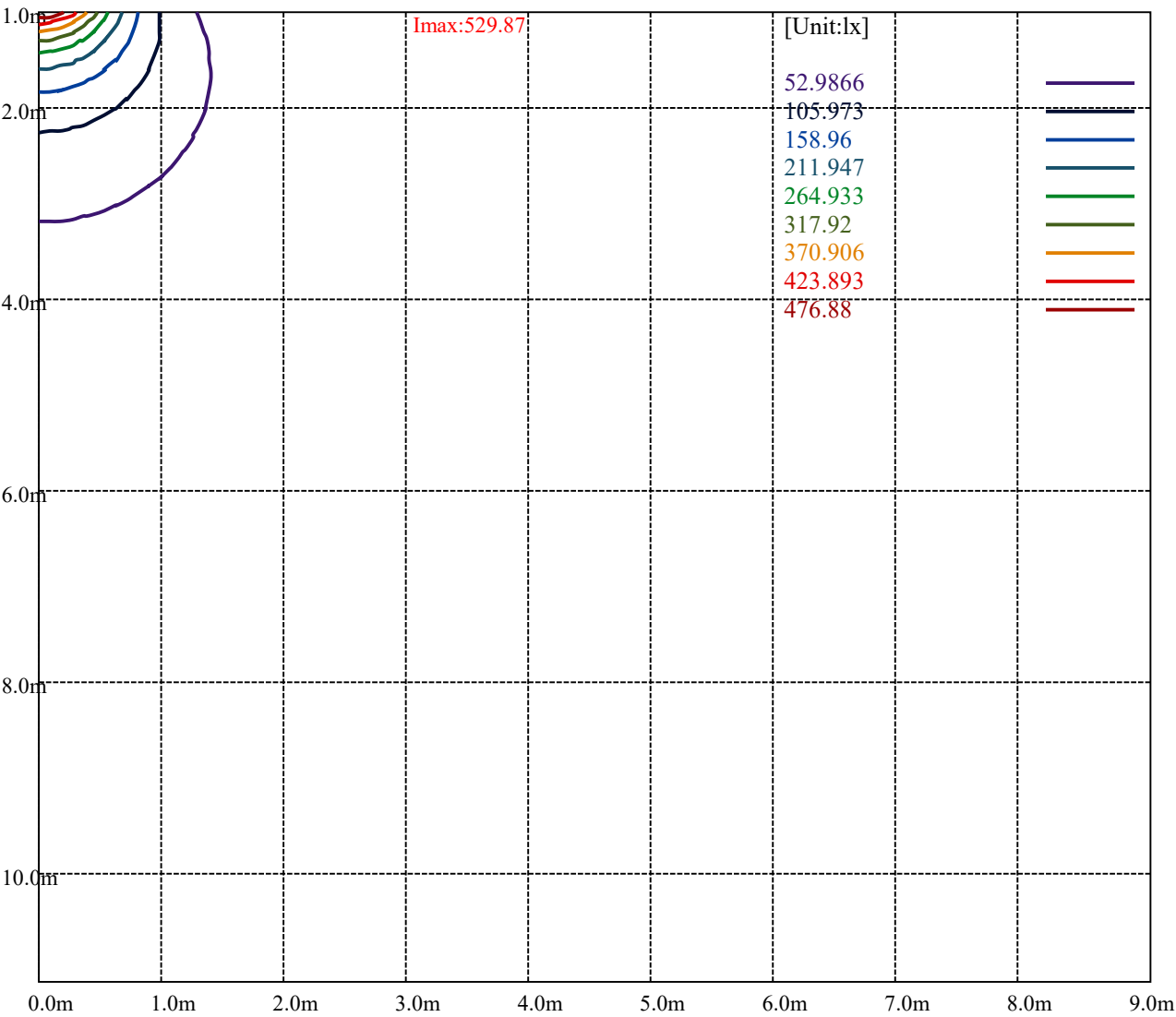
:C90/270Left:57.1 Right:57.1



Max , Ave      Beam angle of C0 plane 113.40



|                    |   |
|--------------------|---|
| (10%Emax) 5.8874   | — |
| (20%Emax) 11.77478 | — |
| (30%Emax) 17.66222 | — |
| (40%Emax) 23.54967 | — |
| (50%Emax) 29.437   | — |
| (60%Emax) 35.32445 | — |
| (70%Emax) 41.21178 | — |
| (80%Emax) 47.09922 | — |
| (90%Emax) 52.98667 | — |



# Light Blue USA-Rayhil INV-16-CCT-UNV-\*\*-4000K

## Luminance Limiting Curve(no luminous side)

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Luminance Table

| $\gamma$ | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   |
|----------|------|------|------|------|------|------|------|------|------|
| C0       | 4458 | 4393 | 4282 | 4160 | 4004 | 3801 | 3524 | 3179 | 2203 |
| C45      | 4441 | 4357 | 4256 | 4114 | 3978 | 3787 | 3553 | 3096 | 2063 |
| C90      | 4435 | 4338 | 4242 | 4405 | 3959 | 3758 | 3482 | 3096 | 1994 |

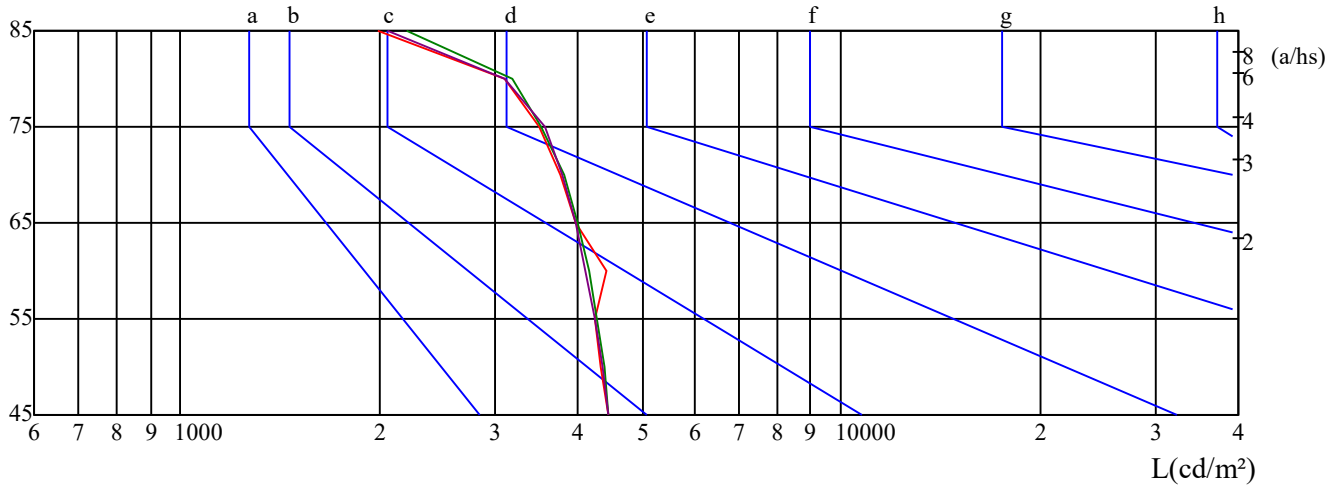
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 4004       | 3959       | 3978    | 3524       | 3482       | 3553    | 2203       | 1994       | 2063    |

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

$\gamma(^{\circ})$



C0 ———

C45 ———

C90 ———



| 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 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1    | 1.04                                    | 0.99 | 0.96 | 1.01 | 0.97 | 0.94 | 0.97 | 0.94 | 0.91 | 0.93 | 0.90 | 0.88 | 0.89 | 0.87 | 0.85 | 0.83 |
| 2    | 0.90                                    | 0.83 | 0.78 | 0.88 | 0.82 | 0.77 | 0.85 | 0.79 | 0.75 | 0.81 | 0.77 | 0.73 | 0.78 | 0.75 | 0.71 | 0.69 |
| 3    | 0.79                                    | 0.71 | 0.64 | 0.78 | 0.70 | 0.64 | 0.74 | 0.68 | 0.63 | 0.72 | 0.66 | 0.61 | 0.69 | 0.64 | 0.60 | 0.58 |
| 4    | 0.70                                    | 0.61 | 0.54 | 0.69 | 0.60 | 0.54 | 0.66 | 0.59 | 0.53 | 0.64 | 0.57 | 0.52 | 0.61 | 0.56 | 0.52 | 0.49 |
| 5    | 0.63                                    | 0.53 | 0.47 | 0.61 | 0.53 | 0.46 | 0.59 | 0.52 | 0.46 | 0.57 | 0.51 | 0.45 | 0.55 | 0.49 | 0.45 | 0.43 |
| 6    | 0.56                                    | 0.47 | 0.41 | 0.55 | 0.47 | 0.41 | 0.53 | 0.46 | 0.40 | 0.52 | 0.45 | 0.40 | 0.50 | 0.44 | 0.39 | 0.37 |
| 7    | 0.51                                    | 0.42 | 0.36 | 0.50 | 0.42 | 0.36 | 0.49 | 0.41 | 0.36 | 0.47 | 0.40 | 0.35 | 0.46 | 0.40 | 0.35 | 0.33 |
| 8    | 0.46                                    | 0.38 | 0.32 | 0.46 | 0.38 | 0.32 | 0.44 | 0.37 | 0.32 | 0.43 | 0.36 | 0.31 | 0.42 | 0.36 | 0.31 | 0.29 |
| 9    | 0.43                                    | 0.34 | 0.29 | 0.42 | 0.34 | 0.29 | 0.41 | 0.34 | 0.29 | 0.40 | 0.33 | 0.28 | 0.39 | 0.33 | 0.28 | 0.26 |
| 10   | 0.39                                    | 0.31 | 0.26 | 0.39 | 0.31 | 0.26 | 0.38 | 0.31 | 0.26 | 0.37 | 0.30 | 0.26 | 0.36 | 0.30 | 0.26 | 0.24 |

Light Blue USA-Rayhil INV-16-CCT-UNV-\*\*-4000K

| Intensity data(cd) |        |        |        |        |        |        |        |        |        | Appendix Page: 10 Total:12 |  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------------|--|
| C/γ(°)             | 0.0    | 5.0    | 10.0   | 15.0   | 20.0   | 25.0   | 30.0   | 35.0   | 40.0   |                            |  |
| 0.0                | 529.87 | 529.87 | 525.33 | 516.26 | 502.65 | 485.41 | 463.63 | 437.32 | 408.29 |                            |  |
| 15.0               | 529.87 | 529.87 | 525.31 | 515.30 | 501.64 | 484.35 | 462.50 | 437.91 | 406.96 |                            |  |
| 30.0               | 529.87 | 528.95 | 524.39 | 515.27 | 500.68 | 484.27 | 460.56 | 435.02 | 406.75 |                            |  |
| 45.0               | 529.87 | 528.95 | 523.47 | 514.34 | 500.63 | 480.53 | 459.52 | 433.03 | 403.79 |                            |  |
| 60.0               | 529.87 | 528.95 | 523.45 | 515.20 | 499.61 | 481.28 | 458.36 | 431.78 | 400.61 |                            |  |
| 75.0               | 529.87 | 528.95 | 522.53 | 512.45 | 497.78 | 478.53 | 454.70 | 429.94 | 399.69 |                            |  |
| 90.0               | 529.87 | 528.03 | 521.62 | 512.45 | 496.86 | 477.61 | 453.78 | 427.19 | 396.02 |                            |  |
| 105.0              | 529.87 | 528.03 | 521.62 | 510.62 | 495.03 | 475.78 | 453.78 | 425.36 | 395.11 |                            |  |
| 120.0              | 529.87 | 528.03 | 521.60 | 510.58 | 495.89 | 475.69 | 453.65 | 426.10 | 393.96 |                            |  |
| 135.0              | 529.87 | 528.95 | 521.59 | 510.55 | 494.91 | 475.59 | 452.59 | 426.84 | 392.80 |                            |  |
| 150.0              | 529.87 | 528.03 | 521.59 | 510.55 | 481.11 | 476.51 | 454.43 | 425.92 | 393.72 |                            |  |
| 165.0              | 529.87 | 528.03 | 521.59 | 509.63 | 495.83 | 476.51 | 452.59 | 425.00 | 391.88 |                            |  |
| 180.0              | 529.87 | 526.24 | 517.16 | 503.55 | 487.22 | 465.45 | 440.04 | 411.01 | 378.35 |                            |  |
| 195.0              | 529.87 | 525.31 | 516.21 | 504.37 | 486.17 | 467.05 | 441.56 | 411.51 | 377.83 |                            |  |
| 210.0              | 529.87 | 525.31 | 517.10 | 503.42 | 487.00 | 466.03 | 441.40 | 413.13 | 379.39 |                            |  |
| 225.0              | 529.87 | 526.21 | 517.08 | 504.29 | 487.84 | 466.83 | 441.25 | 412.93 | 379.13 |                            |  |
| 240.0              | 529.87 | 527.12 | 518.87 | 506.03 | 488.61 | 468.45 | 442.78 | 414.36 | 382.27 |                            |  |
| 255.0              | 529.87 | 526.20 | 518.87 | 506.03 | 489.53 | 468.45 | 444.61 | 416.19 | 382.27 |                            |  |
| 270.0              | 529.87 | 527.12 | 518.87 | 506.95 | 490.45 | 469.36 | 446.44 | 417.11 | 385.02 |                            |  |
| 285.0              | 529.87 | 526.20 | 518.87 | 507.86 | 491.36 | 471.20 | 447.36 | 418.03 | 410.69 |                            |  |
| 300.0              | 529.87 | 527.11 | 519.76 | 508.75 | 505.07 | 472.93 | 449.05 | 420.59 | 390.28 |                            |  |
| 315.0              | 529.87 | 528.03 | 520.67 | 509.63 | 493.07 | 474.67 | 450.75 | 423.16 | 390.96 |                            |  |
| 330.0              | 529.87 | 528.03 | 520.67 | 509.63 | 493.99 | 474.67 | 451.67 | 423.16 | 390.96 |                            |  |
| 345.0              | 529.87 | 528.03 | 520.67 | 509.63 | 493.99 | 474.67 | 450.75 | 423.16 | 391.88 |                            |  |
| 360.0              | 529.87 | 529.87 | 525.33 | 516.26 | 502.65 | 485.41 | 463.63 | 437.32 | 408.29 |                            |  |
| C/γ(°)             | 45.0   | 50.0   | 55.0   | 60.0   | 65.0   | 70.0   | 75.0   | 80.0   | 85.0   |                            |  |
| 0.0                | 372.90 | 337.52 | 296.69 | 254.05 | 210.49 | 166.04 | 121.58 | 80.75  | 38.11  |                            |  |
| 15.0               | 372.36 | 334.13 | 294.07 | 254.01 | 210.31 | 165.70 | 122.00 | 78.30  | 36.42  |                            |  |
| 30.0               | 369.36 | 333.79 | 292.75 | 250.80 | 206.11 | 162.33 | 118.56 | 77.52  | 35.57  |                            |  |
| 45.0               | 369.08 | 330.71 | 290.51 | 247.58 | 206.47 | 158.96 | 117.85 | 74.00  | 32.89  |                            |  |
| 60.0               | 367.61 | 330.02 | 289.68 | 246.60 | 202.60 | 157.68 | 113.67 | 72.42  | 29.34  |                            |  |
| 75.0               | 363.94 | 326.35 | 285.10 | 241.10 | 199.85 | 155.84 | 112.76 | 69.67  | 28.42  |                            |  |
| 90.0               | 363.02 | 322.69 | 284.18 | 241.10 | 197.10 | 153.09 | 109.09 | 68.75  | 24.75  |                            |  |
| 105.0              | 360.27 | 322.69 | 281.43 | 238.35 | 197.10 | 150.34 | 109.09 | 66.00  | 23.83  |                            |  |
| 120.0              | 359.98 | 319.57 | 281.00 | 237.84 | 194.68 | 150.60 | 106.52 | 66.12  | 23.88  |                            |  |
| 135.0              | 358.76 | 320.13 | 278.73 | 236.42 | 192.26 | 150.86 | 107.63 | 64.39  | 22.08  |                            |  |
| 150.0              | 357.84 | 321.97 | 278.73 | 238.26 | 194.10 | 149.94 | 105.79 | 62.55  | 23.00  |                            |  |
| 165.0              | 358.76 | 321.97 | 280.57 | 237.34 | 194.10 | 149.94 | 107.63 | 63.47  | 22.08  |                            |  |
| 180.0              | 342.05 | 303.04 | 260.40 | 217.75 | 173.30 | 128.84 | 85.29  | 44.46  | 5.44   |                            |  |
| 195.0              | 340.50 | 301.35 | 259.47 | 215.77 | 174.80 | 130.19 | 86.49  | 44.61  | 5.46   |                            |  |
| 210.0              | 342.00 | 302.78 | 260.83 | 217.05 | 174.19 | 130.41 | 88.46  | 44.69  | 7.30   |                            |  |
| 225.0              | 342.59 | 304.22 | 264.02 | 219.26 | 177.23 | 132.47 | 89.53  | 46.59  | 8.22   |                            |  |
| 240.0              | 346.52 | 307.10 | 264.93 | 221.85 | 177.84 | 133.84 | 92.59  | 47.67  | 10.08  |                            |  |
| 255.0              | 346.52 | 308.02 | 264.93 | 223.68 | 179.68 | 136.59 | 92.59  | 83.42  | 11.92  |                            |  |
| 270.0              | 348.36 | 309.85 | 267.68 | 258.52 | 182.43 | 138.43 | 95.34  | 53.17  | 14.67  |                            |  |
| 285.0              | 352.02 | 312.60 | 271.35 | 227.35 | 186.09 | 139.34 | 98.09  | 55.92  | 15.58  |                            |  |
| 300.0              | 351.71 | 314.98 | 273.66 | 230.50 | 187.34 | 142.34 | 99.18  | 56.02  | 18.37  |                            |  |
| 315.0              | 354.16 | 315.53 | 274.13 | 229.98 | 186.74 | 145.35 | 102.11 | 58.87  | 18.40  |                            |  |
| 330.0              | 356.92 | 315.53 | 275.97 | 233.66 | 189.50 | 145.35 | 101.19 | 57.95  | 17.48  |                            |  |
| 345.0              | 356.00 | 317.37 | 275.97 | 232.74 | 190.42 | 147.19 | 103.03 | 59.79  | 18.40  |                            |  |
| 360.0              | 372.90 | 337.52 | 296.69 | 254.05 | 210.49 | 166.04 | 121.58 | 80.75  | 38.11  |                            |  |

Light Blue USA-Rayhil INV-16-CCT-UNV-\*\*-4000K

| Intensity data(cd) |       |       |       |       |       |       |       |       | Appendix Page: 11 Total:12 |  |  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------------|--|--|
| C/γ(°)             | 90.0  | 95.0  | 100.0 | 105.0 | 110.0 | 115.0 | 120.0 | 125.0 | 130.0                      |  |  |
| 0.0                | 2.72  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 15.0               | 2.73  | 0.91  | 0.00  | 0.00  | 0.00  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 30.0               | 2.74  | 0.91  | 0.91  | 0.91  | 0.00  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 45.0               | 1.83  | 0.91  | 0.91  | 0.00  | 0.00  | 0.00  | 0.91  | 0.91  | 0.91                       |  |  |
| 60.0               | 1.83  | 0.92  | 0.00  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 75.0               | 1.83  | 0.92  | 0.92  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 90.0               | 0.92  | 0.92  | 0.00  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 105.0              | 0.92  | 0.00  | 0.92  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 120.0              | 0.92  | 0.00  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 135.0              | 0.92  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 150.0              | 0.92  | 0.92  | 0.92  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 165.0              | 0.92  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.92  | 0.92  | 0.92                       |  |  |
| 180.0              | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 195.0              | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 210.0              | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 225.0              | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| 240.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 255.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 270.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 1.83  | 0.92  | 0.92                       |  |  |
| 285.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 1.83  | 0.92  | 0.92                       |  |  |
| 300.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 315.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 330.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 345.0              | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92                       |  |  |
| 360.0              | 2.72  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91                       |  |  |
| C/γ(°)             | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0                      |  |  |
| 0.0                | 0.91  | 0.91  | 1.81  | 1.81  | 2.72  | 2.72  | 2.72  | 3.63  | 3.63                       |  |  |
| 15.0               | 0.91  | 0.91  | 1.82  | 1.82  | 2.73  | 2.73  | 2.73  | 3.64  | 3.64                       |  |  |
| 30.0               | 0.91  | 0.91  | 1.82  | 1.82  | 2.74  | 2.74  | 2.74  | 3.65  | 3.65                       |  |  |
| 45.0               | 0.91  | 0.91  | 1.83  | 1.83  | 2.74  | 2.74  | 2.74  | 3.65  | 3.65                       |  |  |
| 60.0               | 0.92  | 0.92  | 1.83  | 1.83  | 2.75  | 2.75  | 2.75  | 3.67  | 3.67                       |  |  |
| 75.0               | 0.92  | 0.92  | 1.83  | 1.83  | 2.75  | 2.75  | 2.75  | 3.67  | 3.67                       |  |  |
| 90.0               | 0.92  | 0.92  | 1.83  | 1.83  | 2.75  | 2.75  | 2.75  | 2.75  | 3.67                       |  |  |
| 105.0              | 0.92  | 0.92  | 1.83  | 1.83  | 2.75  | 2.75  | 2.75  | 2.75  | 3.67                       |  |  |
| 120.0              | 0.92  | 0.92  | 1.84  | 1.84  | 2.75  | 2.75  | 2.75  | 3.67  | 3.67                       |  |  |
| 135.0              | 0.92  | 0.92  | 1.84  | 1.84  | 2.76  | 2.76  | 2.76  | 3.68  | 3.68                       |  |  |
| 150.0              | 0.92  | 0.92  | 1.84  | 1.84  | 2.76  | 2.76  | 2.76  | 3.68  | 3.68                       |  |  |
| 165.0              | 0.92  | 0.92  | 1.84  | 1.84  | 2.76  | 2.76  | 2.76  | 3.68  | 3.68                       |  |  |
| 180.0              | 0.91  | 0.91  | 0.91  | 1.81  | 1.81  | 2.72  | 2.72  | 2.72  | 2.72                       |  |  |
| 195.0              | 0.91  | 0.91  | 0.91  | 1.82  | 1.82  | 1.82  | 2.73  | 2.73  | 2.73                       |  |  |
| 210.0              | 0.91  | 0.91  | 0.91  | 1.82  | 1.82  | 1.82  | 2.74  | 2.74  | 2.74                       |  |  |
| 225.0              | 0.91  | 0.91  | 0.91  | 0.91  | 1.83  | 1.83  | 1.83  | 2.74  | 2.74                       |  |  |
| 240.0              | 0.92  | 0.92  | 0.92  | 0.92  | 1.83  | 1.83  | 1.83  | 2.75  | 2.75                       |  |  |
| 255.0              | 0.92  | 0.92  | 0.92  | 1.83  | 1.83  | 1.83  | 2.75  | 2.75  | 2.75                       |  |  |
| 270.0              | 0.92  | 0.92  | 0.92  | 1.83  | 1.83  | 1.83  | 1.83  | 2.75  | 2.75                       |  |  |
| 285.0              | 0.92  | 0.92  | 0.92  | 1.83  | 1.83  | 1.83  | 1.83  | 2.75  | 2.75                       |  |  |
| 300.0              | 0.92  | 0.92  | 0.92  | 0.92  | 1.84  | 1.84  | 1.84  | 2.75  | 3.67                       |  |  |
| 315.0              | 0.92  | 0.92  | 0.92  | 1.84  | 1.84  | 1.84  | 1.84  | 2.76  | 3.68                       |  |  |
| 330.0              | 0.92  | 0.92  | 0.92  | 0.92  | 1.84  | 1.84  | 1.84  | 2.76  | 2.76                       |  |  |
| 345.0              | 0.92  | 0.92  | 0.92  | 0.92  | 1.84  | 1.84  | 2.76  | 2.76  | 2.76                       |  |  |
| 360.0              | 0.91  | 0.91  | 1.81  | 1.81  | 2.72  | 2.72  | 2.72  | 3.63  | 3.63                       |  |  |

Intensity data(cd)

|        |       |
|--------|-------|
| C/γ(°) | 180.0 |
| 0.0    | 3.63  |
| 15.0   | 3.64  |
| 30.0   | 3.65  |
| 45.0   | 3.65  |
| 60.0   | 3.67  |
| 75.0   | 3.67  |
| 90.0   | 3.67  |
| 105.0  | 3.67  |
| 120.0  | 3.67  |
| 135.0  | 3.68  |
| 150.0  | 3.68  |
| 165.0  | 3.68  |
| 180.0  | 0.00  |
| 195.0  | 0.00  |
| 210.0  | 0.00  |
| 225.0  | 0.00  |
| 240.0  | 0.00  |
| 255.0  | 0.00  |
| 270.0  | 0.00  |
| 285.0  | 0.00  |
| 300.0  | 0.00  |
| 315.0  | 0.00  |
| 330.0  | 0.00  |
| 345.0  | 0.00  |
| 360.0  | 3.63  |