

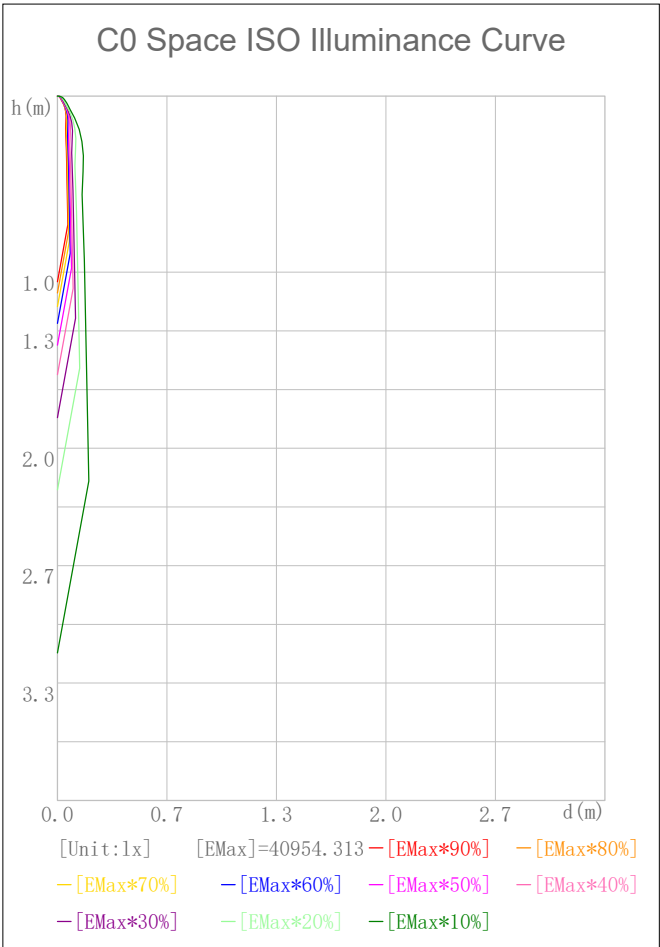
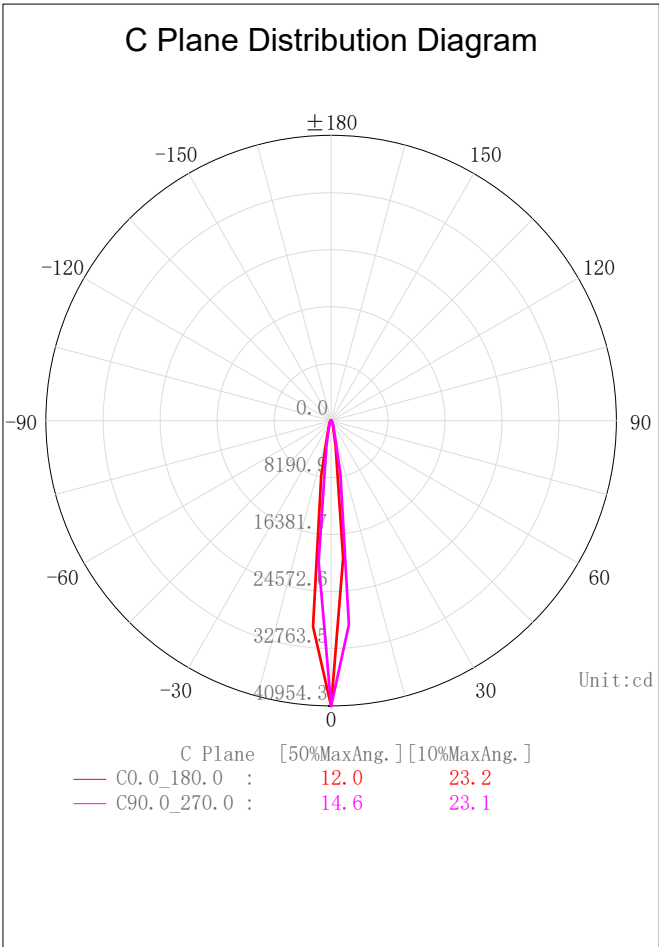
Indoor Luminaire Photometric Data

Description Information

| | | | |
|--|-------------------------|----------------------|-----------------------|
| Luminary Name: DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2022/08/23 |
| Manufacture: Shenzhen Norming Lighting | | Shld. Ang(°): | Test Machine:GON-2000 |
| Test Lab: Quality Department | | Frequency (Hz): | Lamp CCT (K): Ra: |
| Lum. Size (W*L*H):0.110m*0.110m*0.000m | | Lum. Area (m2):0.010 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=5.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

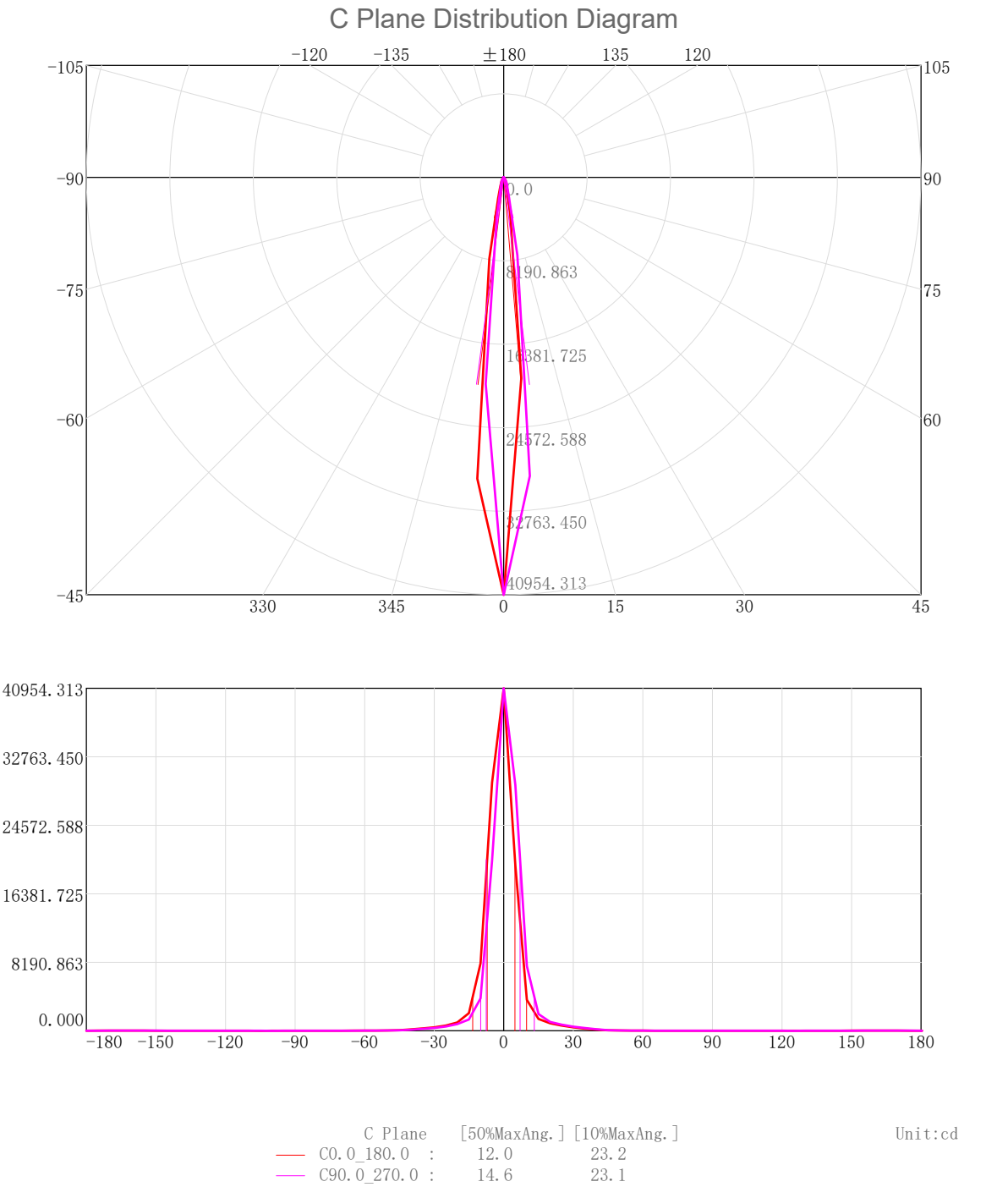
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|--------------------------------|--|--|
| Rated Flux(lm): 3266.840 | Luminary Flux(lm): 3266.844 | Field Angle(10%Imax): 23.2(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 3186.686lm 97.55% | |
| Rated Voltage(V): | Luminary EER(lm/W): 97.025 | Up Lumens&Percent: 80.158lm 2.45% | |
| Tested Power(W): 33.670 | Max. Candela(cd): 40954.313 | S/MH: C0_a180=0.216 C90_270=0.203 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=0.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):239.8, 0.146, 0.960 | Beam Angle(50%Imax): 12.0(°) | ErP Φ use(90°): 3248.900lm | |
| Lamp Size (W*L*H):0.110m*0.110m*0.000m | Left=-7.1°, Right=4.8° | IRF(%): 2869.957 | |



2D Plane Light Intensity Distribution Curve

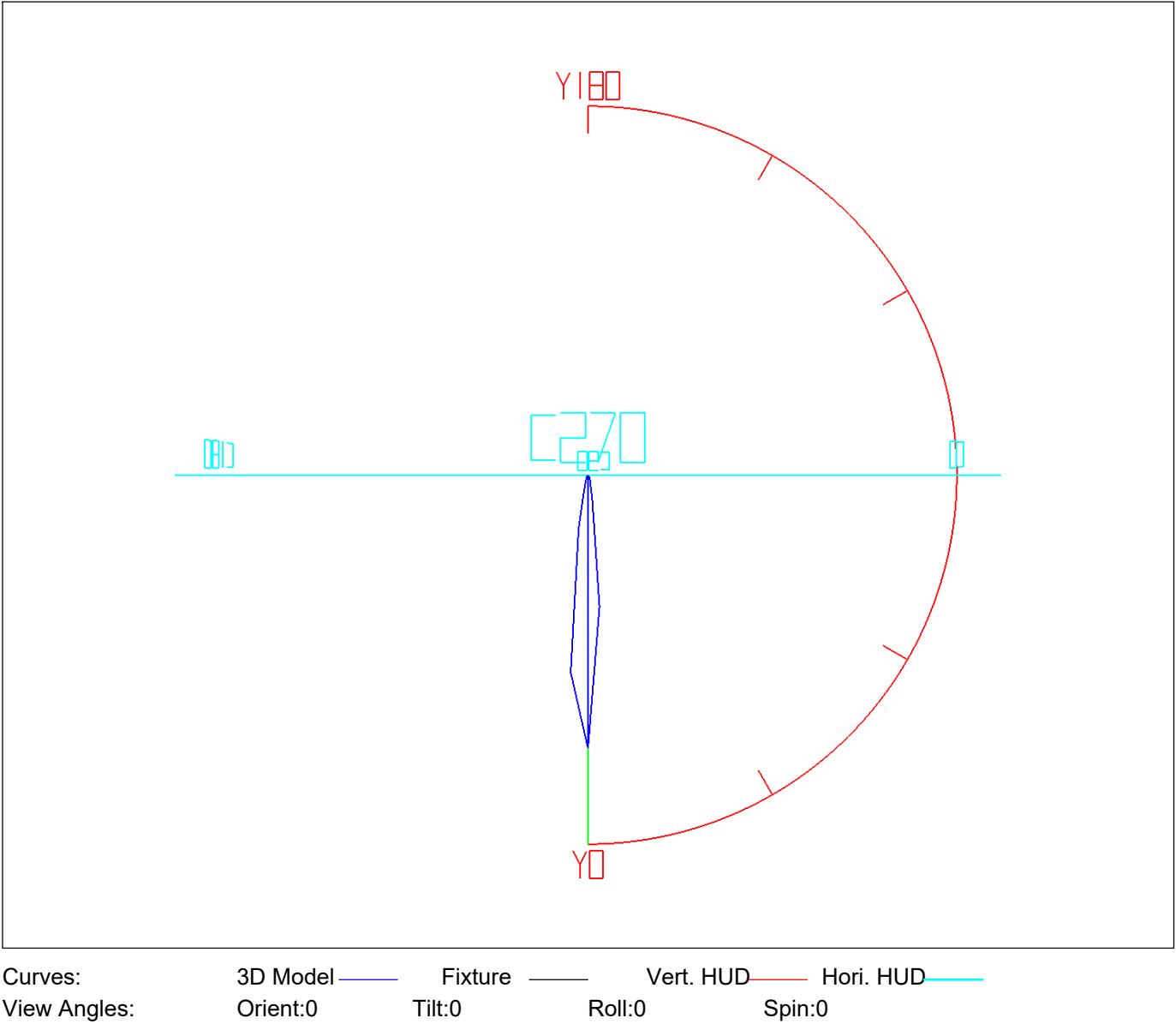
| | | |
|---|-----------------------|-----------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |



3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |

3D Light Intensity Distribution Modal

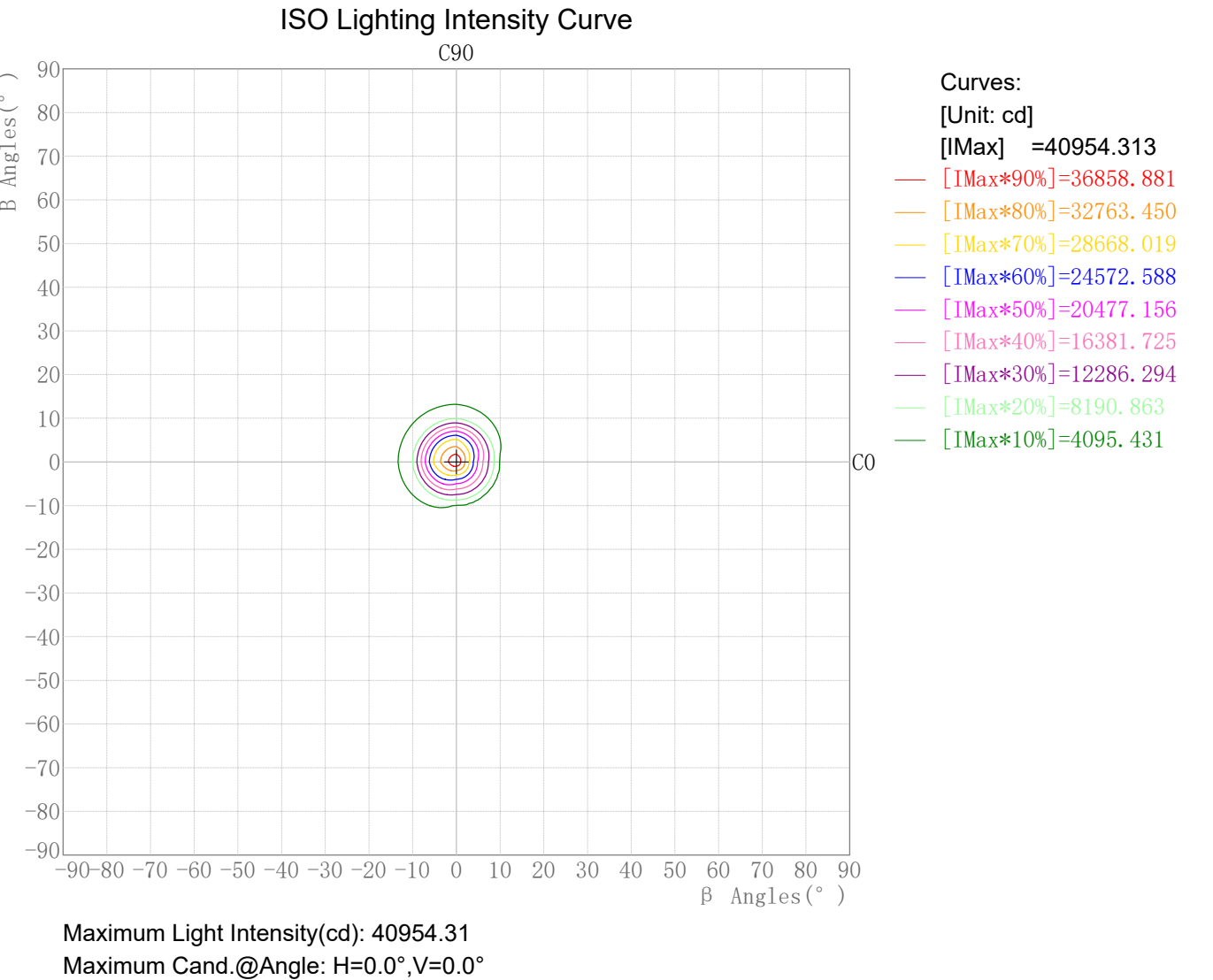


Zonal Flux Tabulation

| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-------------|-------------------|-------------------|-----------|-----------|
| 0.0-5.0 | 786.05 | 786.05 | 24.06 | 24.06 |
| 5.0-10.0 | 1096.67 | 1882.72 | 33.57 | 57.63 |
| 10.0-15.0 | 449.89 | 2332.61 | 13.77 | 71.40 |
| 15.0-20.0 | 219.90 | 2552.51 | 6.73 | 78.13 |
| 20.0-25.0 | 165.47 | 2717.98 | 5.07 | 83.20 |
| 25.0-30.0 | 133.54 | 2851.52 | 4.09 | 87.29 |
| 30.0-35.0 | 103.11 | 2954.63 | 3.16 | 90.44 |
| 35.0-40.0 | 74.00 | 3028.63 | 2.27 | 92.71 |
| 40.0-45.0 | 43.80 | 3072.42 | 1.34 | 94.05 |
| 45.0-50.0 | 24.89 | 3097.31 | 0.76 | 94.81 |
| 50.0-55.0 | 18.64 | 3115.95 | 0.57 | 95.38 |
| 55.0-60.0 | 14.71 | 3130.66 | 0.45 | 95.83 |
| 60.0-65.0 | 12.47 | 3143.14 | 0.38 | 96.21 |
| 65.0-70.0 | 10.86 | 3154.00 | 0.33 | 96.55 |
| 70.0-75.0 | 9.54 | 3163.54 | 0.29 | 96.84 |
| 75.0-80.0 | 8.50 | 3172.03 | 0.26 | 97.10 |
| 80.0-85.0 | 7.73 | 3179.76 | 0.24 | 97.33 |
| 85.0-90.0 | 6.93 | 3186.69 | 0.21 | 97.55 |
| 90.0-95.0 | 5.98 | 3192.66 | 0.18 | 97.73 |
| 95.0-100.0 | 5.24 | 3197.90 | 0.16 | 97.89 |
| 100.0-105.0 | 4.78 | 3202.68 | 0.15 | 98.04 |
| 105.0-110.0 | 4.57 | 3207.24 | 0.14 | 98.18 |
| 110.0-115.0 | 4.37 | 3211.61 | 0.13 | 98.31 |
| 115.0-120.0 | 4.13 | 3215.74 | 0.13 | 98.44 |
| 120.0-125.0 | 4.00 | 3219.74 | 0.12 | 98.56 |
| 125.0-130.0 | 4.03 | 3223.77 | 0.12 | 98.68 |
| 130.0-135.0 | 4.25 | 3228.02 | 0.13 | 98.81 |
| 135.0-140.0 | 4.86 | 3232.88 | 0.15 | 98.96 |
| 140.0-145.0 | 5.94 | 3238.83 | 0.18 | 99.14 |
| 145.0-150.0 | 6.61 | 3245.43 | 0.20 | 99.34 |
| 150.0-155.0 | 6.31 | 3251.74 | 0.19 | 99.54 |
| 155.0-160.0 | 5.39 | 3257.13 | 0.16 | 99.70 |
| 160.0-165.0 | 4.27 | 3261.40 | 0.13 | 99.83 |
| 165.0-170.0 | 3.11 | 3264.50 | 0.10 | 99.93 |
| 170.0-175.0 | 1.79 | 3266.30 | 0.05 | 99.98 |
| 175.0-180.0 | 0.55 | 3266.84 | 0.02 | 100.00 |

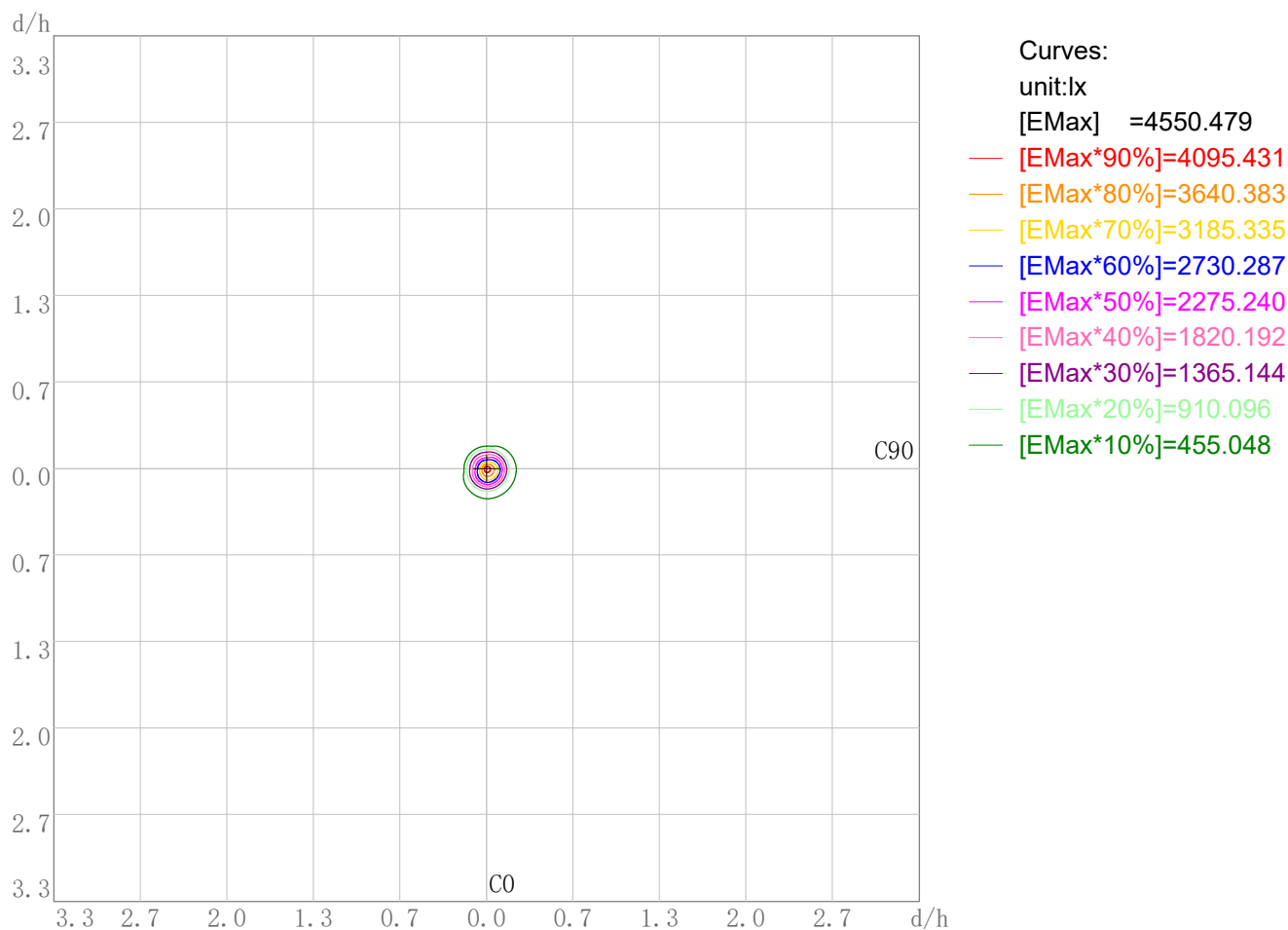
Rectangle ISO Lighting Intensity Diagram

| | | |
|--|-----------------------|------------------------------|
| Lum. Name: DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/23 |



Photometric Filename:DL51-35-XX-01 4000K RA90 15D 电镀亮黑.IES

| | | |
|--|-----------------------|------------------------------|
| Lum. Name: DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
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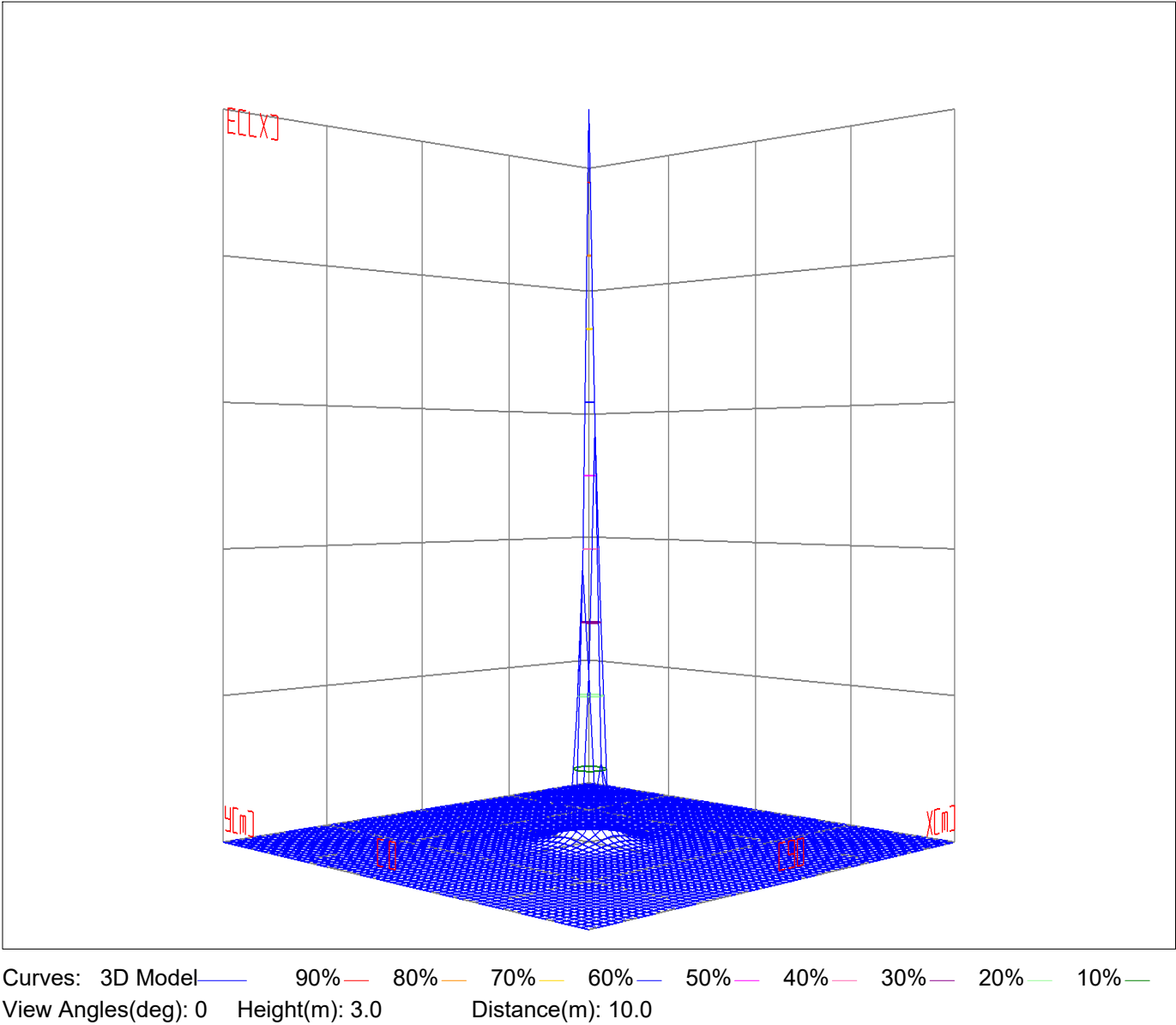


Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 4550.48
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

| | | |
|--|-----------------------|------------------------------|
| Lum. Name: DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/23 |

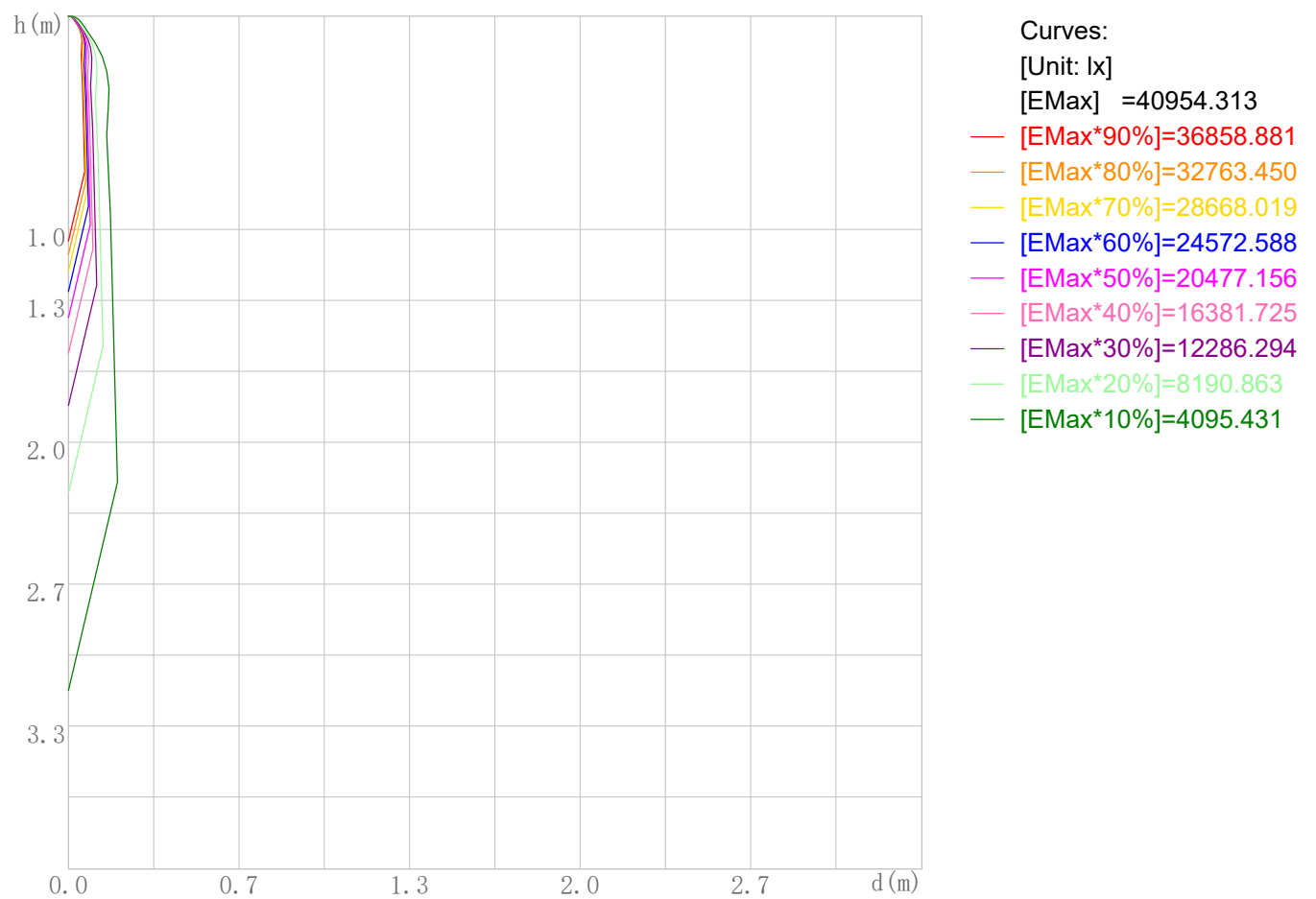
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

| | | |
|--|-----------------------|------------------------------|
| Lum. Name: DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/23 |

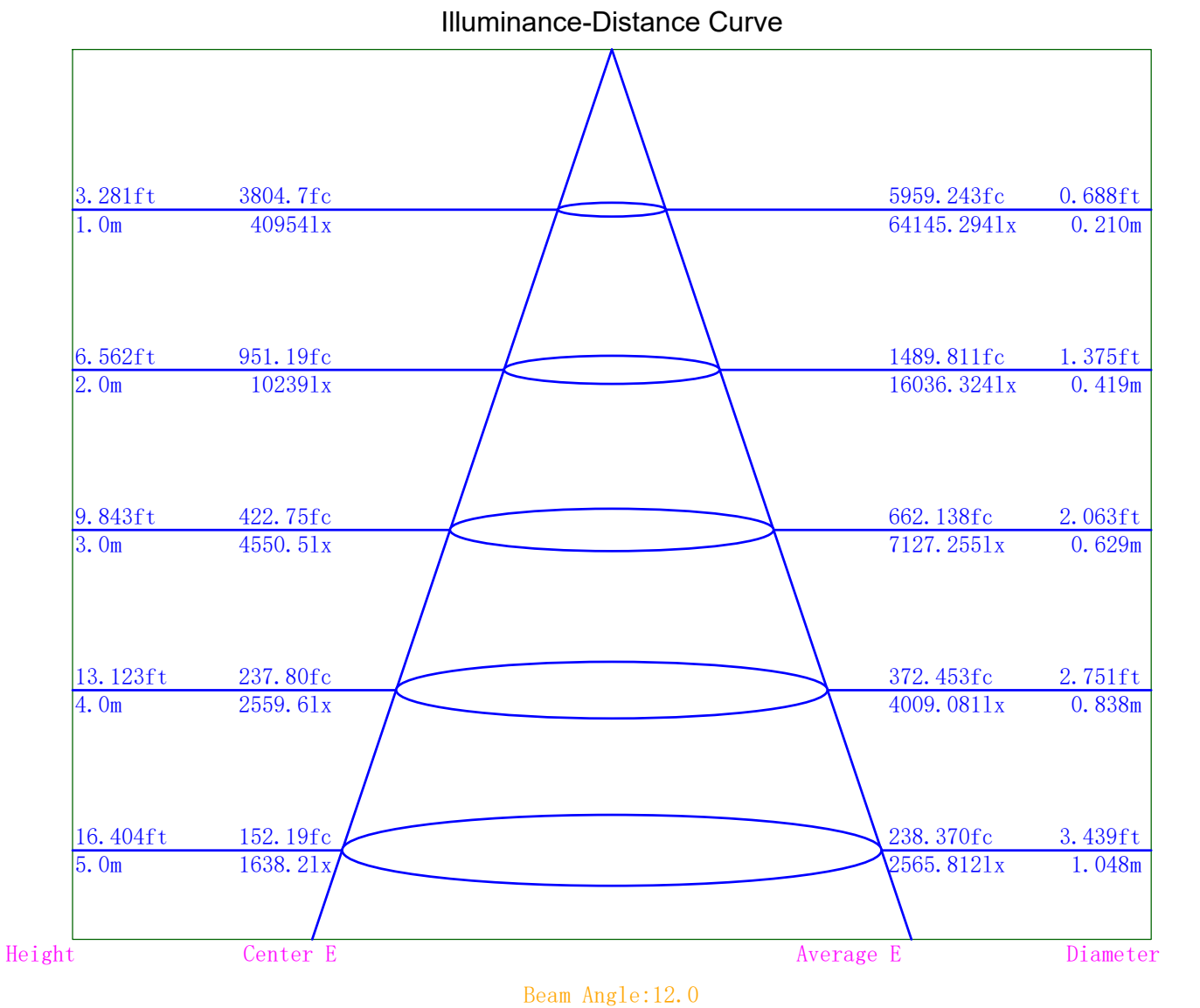
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:40954.31lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:40954.313cd,0deg

Illuminance-Distance Diagram

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |



Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |

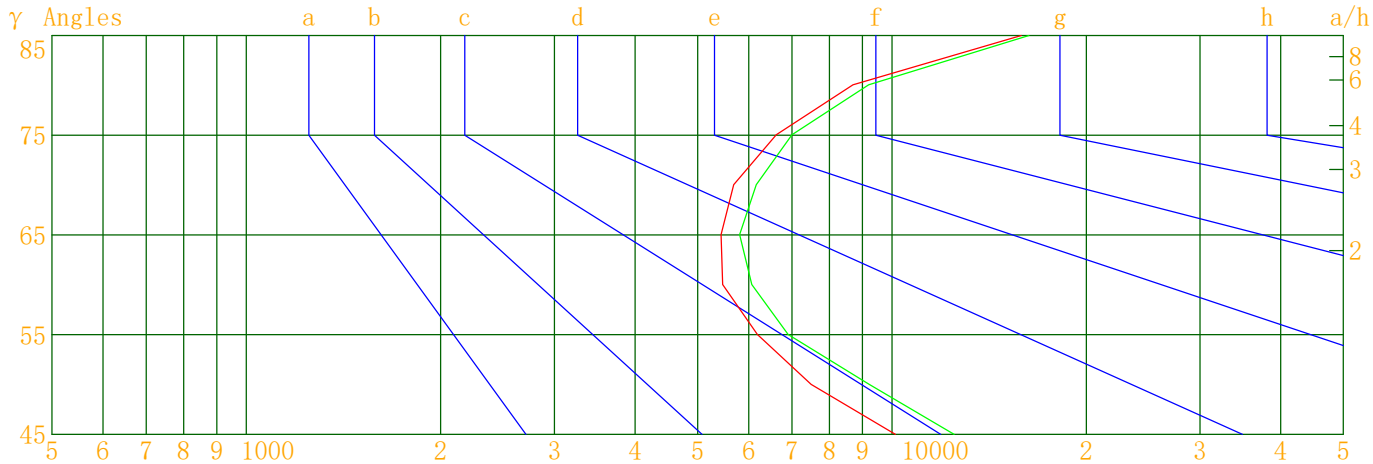
Glare Grade Table

| GI | Quality | Using Illuminance | | | | | | | |
|------|---------|-------------------|------|------|-------|-------|-------|-------|-------|
| 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 | a | | | | 2000 | 1000 | 500 | <=300 |
| | | | b | c | d | e | f | g | h |

Luminance Table

| Gama(deg) | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|-----------|-------|------|------|------|------|------|------|------|-------|
| C0 | 10121 | 7495 | 6187 | 5467 | 5437 | 5687 | 6618 | 8701 | 15858 |
| C90 | 12482 | 9225 | 6905 | 6065 | 5810 | 6162 | 6999 | 9202 | 16295 |

Luminance Limiting Curve



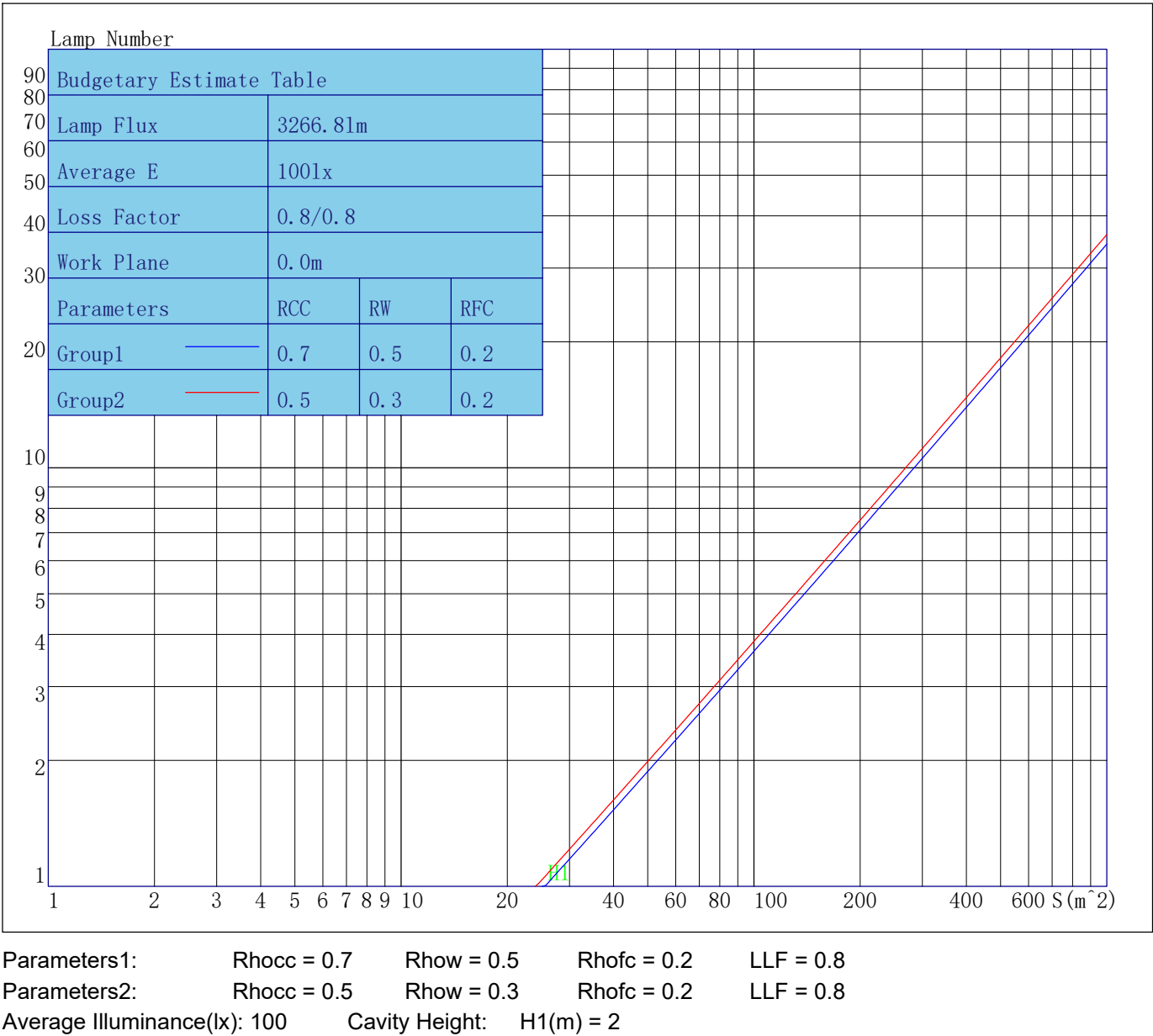
Luminous Size:Length(m)=-0.110Width(m)=-0.110Height(m)=0.000Area(m^2)=0.009503

Luminous Type:Without Luminous Side

Luminous Curves:C0-C180 Color: C90-C270 Color:

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/23 |



Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|-----------------------------|
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| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |

| Coefficients of Utilization - Zonal Cavity Method | | | | | | | | | | | | | | | | | | |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Coef. | Effective Floor Cavity Reflectance RFC=0.20 | | | | | | | | | | | | | | | | | |
| RhoCC (%) | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
| RhoW (%) | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | Coefficient of Utilization(%) | | | | | | | | | | | | | | | | | |
| 0 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 114 | 112 | 110 | 109 | 112 | 110 | 108 | 107 | 105 | 104 | 103 | 101 | 100 | 99 | 98 | 97 | 96 | 94 |
| 2 | 111 | 107 | 104 | 102 | 108 | 105 | 103 | 100 | 102 | 100 | 98 | 98 | 97 | 95 | 96 | 94 | 93 | 91 |
| 3 | 107 | 103 | 99 | 96 | 105 | 101 | 98 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 94 | 92 | 90 | 89 |
| 4 | 104 | 99 | 95 | 92 | 103 | 98 | 95 | 92 | 96 | 93 | 91 | 94 | 91 | 89 | 92 | 90 | 88 | 87 |
| 5 | 102 | 96 | 92 | 89 | 100 | 95 | 91 | 89 | 93 | 90 | 88 | 92 | 89 | 87 | 90 | 88 | 86 | 85 |
| 6 | 99 | 93 | 89 | 87 | 98 | 93 | 89 | 86 | 91 | 88 | 86 | 90 | 87 | 85 | 88 | 86 | 84 | 83 |
| 7 | 97 | 91 | 87 | 84 | 96 | 90 | 87 | 84 | 89 | 86 | 84 | 88 | 85 | 83 | 87 | 84 | 82 | 81 |
| 8 | 95 | 89 | 85 | 82 | 94 | 88 | 85 | 82 | 87 | 84 | 82 | 86 | 83 | 81 | 85 | 83 | 81 | 80 |
| 9 | 93 | 87 | 83 | 81 | 92 | 86 | 83 | 81 | 86 | 82 | 80 | 85 | 82 | 80 | 84 | 81 | 80 | 79 |
| 10 | 91 | 85 | 82 | 79 | 90 | 85 | 81 | 79 | 84 | 81 | 79 | 83 | 80 | 79 | 83 | 80 | 78 | 77 |

Unified Glare Rating Table

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name:DL51-35-XX-01 4000K RA90 15D 电镀亮黑 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/23 |

Unified Glare Rating Table

| | | | | | | | | | | |
|--|-----------------|------|------|------|------|---------------|------|------|------|------|
| Ceiling RCC | 0.70 | 0.70 | 0.50 | 0.50 | 0.30 | 0.70 | 0.70 | 0.50 | 0.50 | 0.30 |
| Wall RW | 0.50 | 0.30 | 0.50 | 0.30 | 0.30 | 0.50 | 0.30 | 0.50 | 0.30 | 0.30 |
| Floor RFC | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Room Size | Vewed crosswise | | | | | Vewed endwise | | | | |
| X=2H Y=2H | 13.1 | 14.0 | 13.6 | 14.3 | 14.7 | 14.2 | 15.1 | 14.7 | 15.4 | 15.8 |
| | 13.7 | 14.4 | 14.1 | 14.8 | 15.2 | 14.7 | 15.4 | 15.1 | 15.8 | 16.2 |
| | 14.1 | 14.8 | 14.6 | 15.2 | 15.7 | 15.1 | 15.7 | 15.5 | 16.1 | 16.6 |
| | 14.8 | 15.4 | 15.3 | 15.8 | 16.3 | 15.6 | 16.2 | 16.1 | 16.6 | 17.1 |
| | 15.2 | 15.7 | 15.7 | 16.2 | 16.7 | 16.0 | 16.5 | 16.4 | 16.9 | 17.4 |
| | 15.8 | 16.3 | 16.3 | 16.7 | 17.2 | 16.4 | 17.0 | 16.9 | 17.4 | 17.9 |
| X=4H Y=2H | 13.2 | 13.8 | 13.7 | 14.2 | 14.7 | 14.2 | 14.9 | 14.7 | 15.3 | 15.7 |
| | 14.0 | 14.5 | 14.5 | 15.0 | 15.5 | 14.9 | 15.4 | 15.4 | 15.9 | 16.3 |
| | 14.7 | 15.1 | 15.2 | 15.6 | 16.1 | 15.5 | 15.9 | 15.9 | 16.4 | 16.9 |
| | 15.6 | 15.9 | 16.1 | 16.4 | 17.0 | 16.3 | 16.6 | 16.8 | 17.1 | 17.7 |
| | 16.2 | 16.5 | 16.7 | 17.0 | 17.5 | 16.8 | 17.1 | 17.3 | 17.6 | 18.1 |
| | 16.9 | 17.2 | 17.5 | 17.7 | 18.3 | 17.5 | 17.7 | 18.0 | 18.3 | 18.8 |
| X=8H Y=4H | 14.9 | 15.3 | 15.5 | 15.8 | 16.3 | 15.7 | 16.0 | 16.2 | 16.5 | 17.0 |
| | 16.1 | 16.3 | 16.7 | 16.9 | 17.4 | 16.7 | 16.9 | 17.3 | 17.5 | 18.0 |
| | 16.9 | 17.1 | 17.5 | 17.7 | 18.2 | 17.4 | 17.6 | 18.0 | 18.2 | 18.8 |
| | 17.9 | 18.1 | 18.5 | 18.6 | 19.3 | 18.4 | 18.5 | 19.0 | 19.1 | 19.7 |
| X=12H Y=4H | 15.0 | 15.2 | 15.5 | 15.8 | 16.3 | 15.7 | 15.9 | 16.2 | 16.5 | 17.0 |
| | 16.3 | 16.5 | 16.9 | 17.0 | 17.6 | 16.8 | 17.0 | 17.4 | 17.6 | 18.2 |
| | 17.2 | 17.3 | 17.8 | 17.9 | 18.5 | 17.7 | 17.8 | 18.3 | 18.4 | 19.0 |
| Variations with the objverver position at spacings | | | | | | | | | | |
| S=1.0H | 0.0/-0.0 | | | | | 0.1/-0.1 | | | | |
| S=1.5H | 0.1/-0.1 | | | | | 0.1/-0.1 | | | | |
| S=2.0H | 0.1/-0.1 | | | | | 0.1/-0.1 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 3.2 | | | | | 2.9 | | | | |

o the CIE Pub.117,data has been corrected,refers to the lamp's lumens 8.2flm.

Candela Tabulation

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|---------|---------|---------|---------|
| γ 0.0 | 40954.3 | 40954.3 | 40954.3 | 40954.3 |
| γ 5.0 | 19785.4 | 29404.0 | 29671.2 | 20331.0 |
| γ 10.0 | 3710.1 | 7752.6 | 8084.6 | 3886.6 |
| γ 15.0 | 1418.3 | 2006.4 | 2120.4 | 1357.5 |
| γ 20.0 | 903.4 | 1060.8 | 1002.8 | 803.6 |
| γ 25.0 | 633.7 | 742.4 | 638.3 | 525.8 |
| γ 30.0 | 422.4 | 504.2 | 413.5 | 340.5 |
| γ 35.0 | 265.6 | 332.9 | 284.6 | 236.9 |
| γ 40.0 | 140.2 | 199.5 | 178.7 | 135.6 |
| γ 45.0 | 68.0 | 83.9 | 76.4 | 63.9 |
| γ 50.0 | 45.8 | 56.4 | 54.1 | 44.3 |
| γ 55.0 | 33.7 | 37.6 | 37.2 | 33.8 |
| γ 60.0 | 26.0 | 28.8 | 30.1 | 27.3 |
| γ 65.0 | 21.8 | 23.3 | 24.9 | 22.9 |
| γ 70.0 | 18.5 | 20.0 | 20.9 | 19.1 |
| γ 75.0 | 16.3 | 17.2 | 17.7 | 16.3 |
| γ 80.0 | 14.4 | 15.2 | 15.4 | 14.6 |
| γ 85.0 | 13.1 | 13.5 | 14.2 | 13.5 |
| γ 90.0 | 11.4 | 11.9 | 12.5 | 11.0 |
| γ 95.0 | 10.8 | 10.7 | 10.2 | 8.8 |
| γ 100.0 | 9.8 | 10.2 | 8.6 | 8.1 |
| γ 105.0 | 9.4 | 9.3 | 8.0 | 8.1 |
| γ 110.0 | 9.1 | 9.4 | 8.1 | 8.5 |
| γ 115.0 | 8.4 | 8.8 | 8.3 | 8.5 |
| γ 120.0 | 8.1 | 8.2 | 8.6 | 9.0 |
| γ 125.0 | 8.3 | 8.1 | 9.3 | 9.5 |
| γ 130.0 | 9.6 | 8.8 | 10.2 | 10.3 |
| γ 135.0 | 11.6 | 10.1 | 10.9 | 12.6 |
| γ 140.0 | 15.6 | 13.0 | 13.8 | 17.5 |
| γ 145.0 | 21.5 | 18.6 | 19.7 | 22.9 |
| γ 150.0 | 25.0 | 23.1 | 23.7 | 25.1 |
| γ 155.0 | 26.1 | 25.2 | 26.0 | 25.3 |
| γ 160.0 | 26.7 | 25.0 | 26.7 | 24.4 |
| γ 165.0 | 26.6 | 25.4 | 27.2 | 25.2 |
| γ 170.0 | 26.0 | 26.5 | 26.8 | 26.0 |
| γ 175.0 | 22.7 | 25.1 | 24.8 | 22.8 |
| γ 180.0 | 21.8 | 21.8 | 21.8 | 21.8 |