

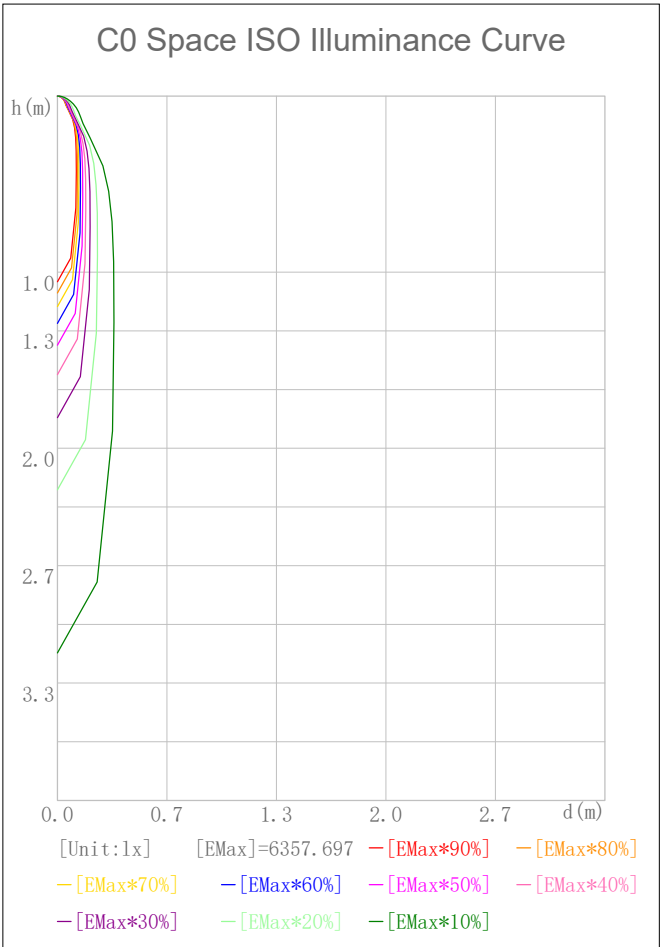
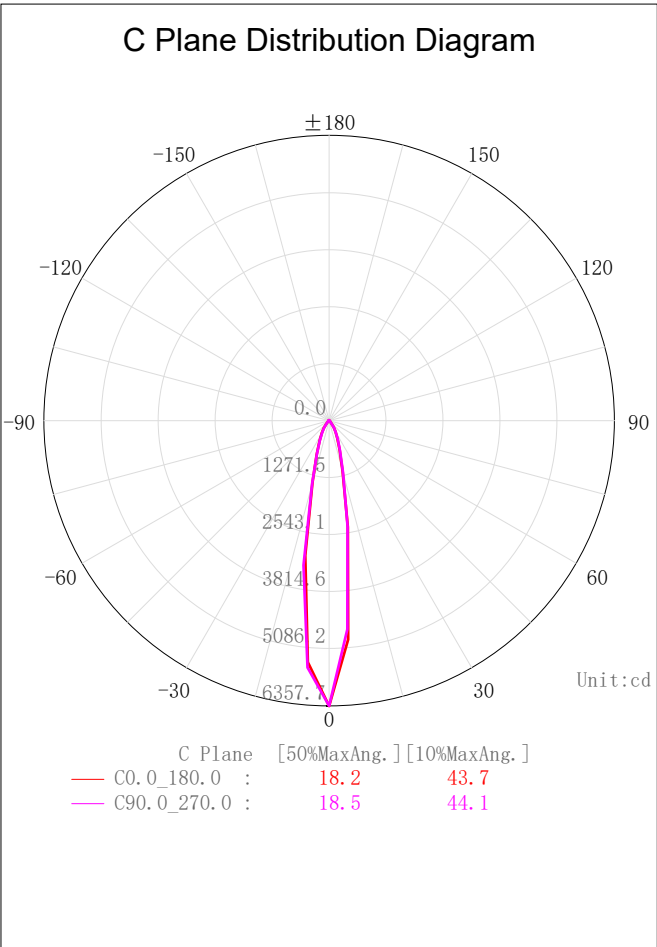
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name: DL51-15-XX-01 3000K RA90 15D | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2022/08/09 |
| 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):0.055m*0.055m*0.000m | | Lum. Area (m2):0.003 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=5.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

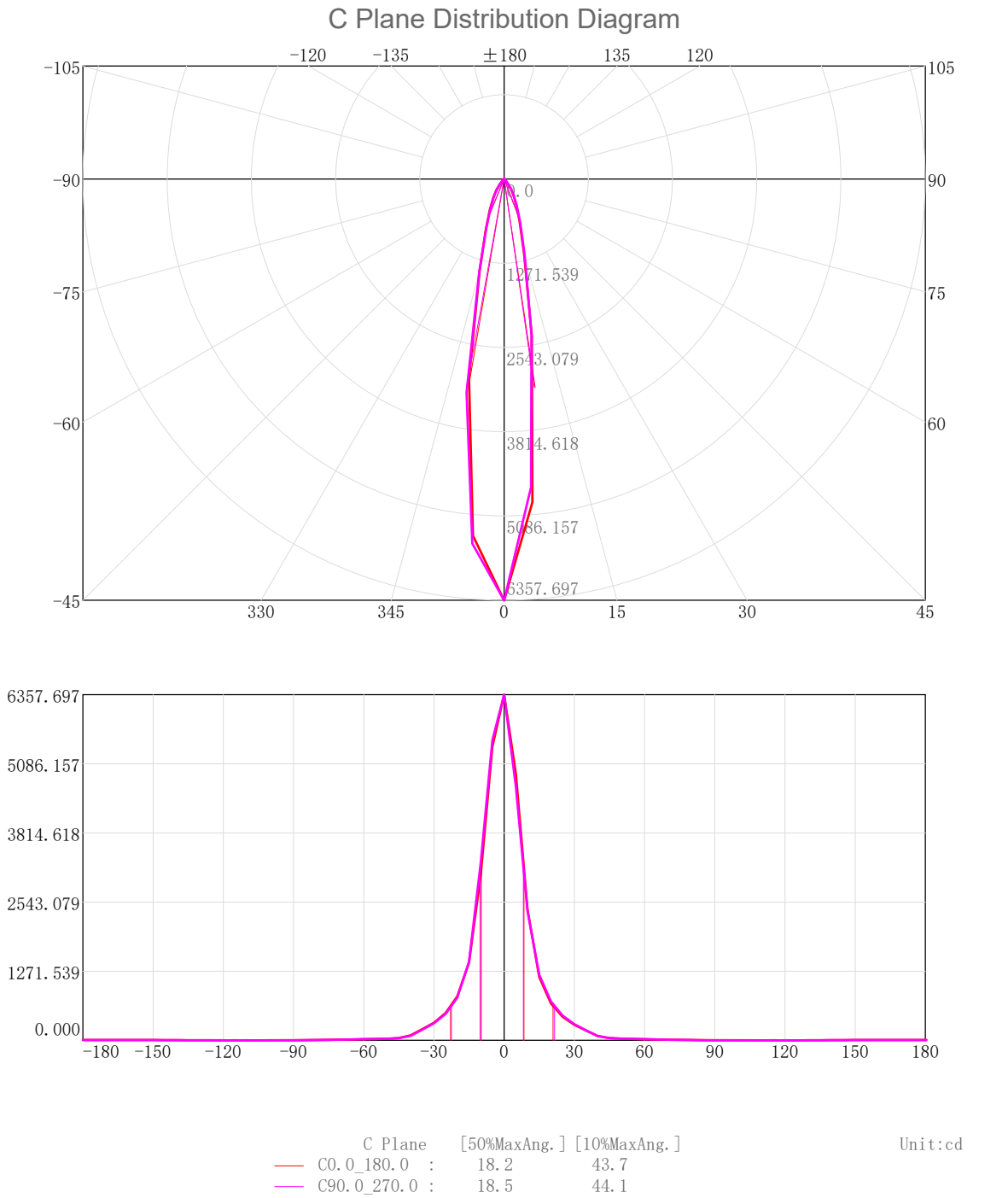
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|--------------------------------|--|--|
| Rated Flux(lm): 1290.340 | Luminary Flux(lm): 1290.343 | Field Angle(10%Imax): 43.7(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 1272.552lm 98.62% | |
| Rated Voltage(V): | Luminary EER(lm/W): 90.550 | Up Lumens&Percent: 17.791lm 1.38% | |
| Tested Power(W): 14.250 | Max. Candela(cd): 6357.697 | S/MH: C0_a180=0.312 C90_270=0.316 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=0.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):240.2, 0.061, 0.971 | Beam Angle(50%Imax): 18.2(°) | ErP Φ use(90°): 1200.948lm | |
| Lamp Size (W*L*H):0.055m*0.055m*0.000m | Left=-9.7°, Right=8.5° | IRF(%): 1098.240 | |



2D Plane Light Intensity Distribution Curve

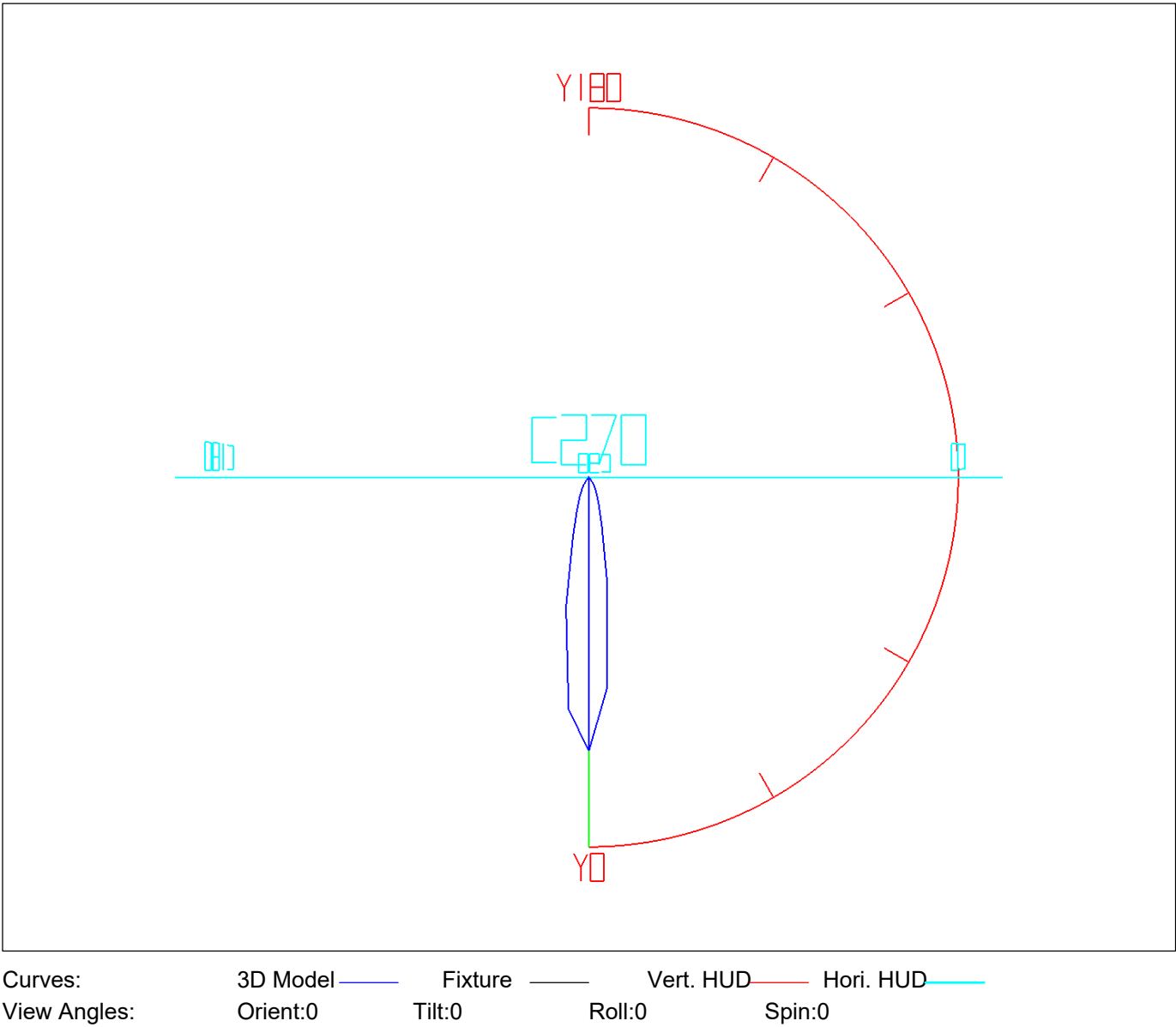
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/09 |



3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |

3D Light Intensity Distribution Modal

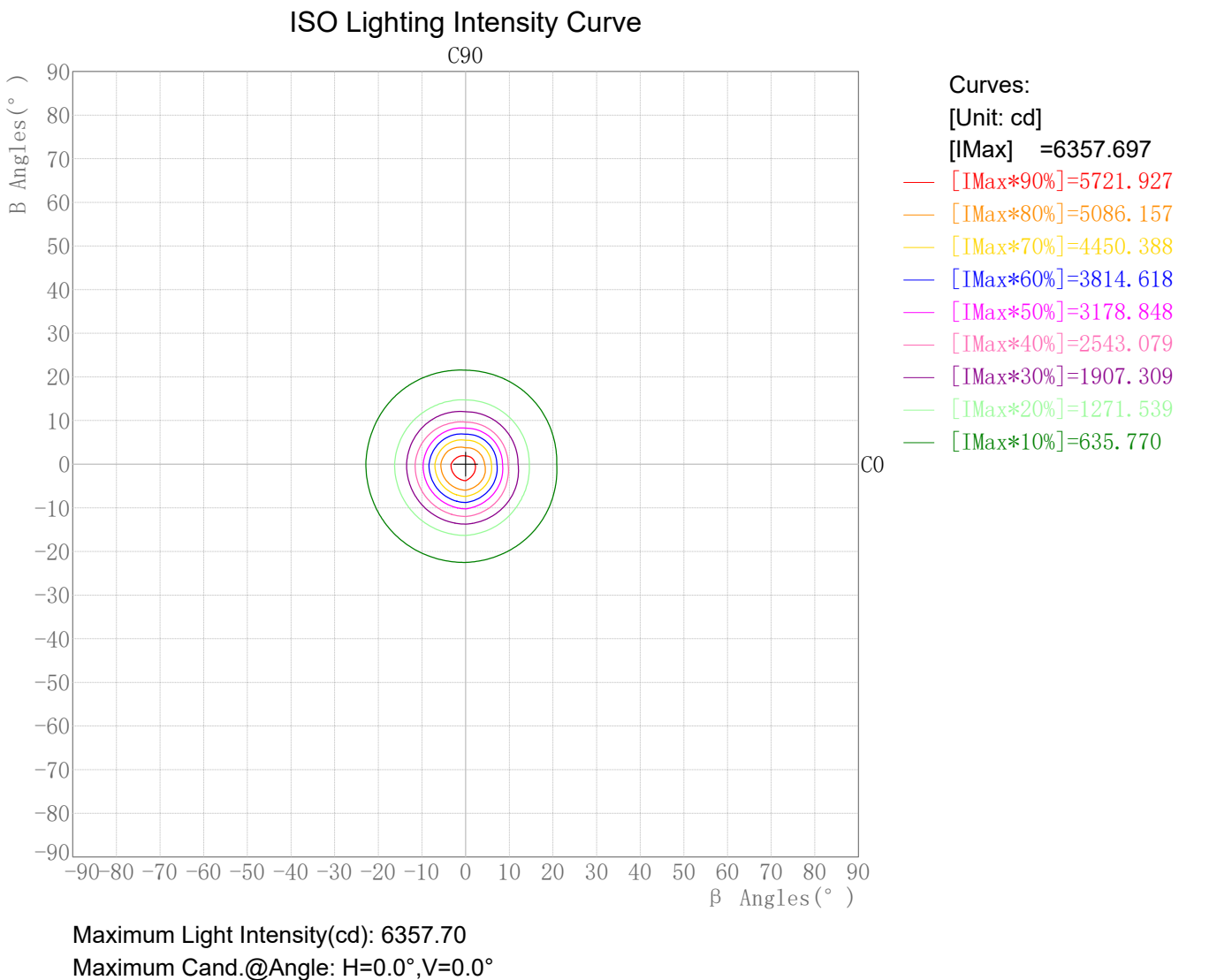


Zonal Flux Tabulation

| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|---------------|-------------------|-------------------|-----------|-----------|
| 0. 0-5. 0 | 137. 23 | 137. 23 | 10. 64 | 10. 64 |
| 5. 0-10. 0 | 282. 57 | 419. 80 | 21. 90 | 32. 53 |
| 10. 0-15. 0 | 242. 60 | 662. 40 | 18. 80 | 51. 34 |
| 15. 0-20. 0 | 169. 73 | 832. 13 | 13. 15 | 64. 49 |
| 20. 0-25. 0 | 127. 78 | 959. 91 | 9. 90 | 74. 39 |
| 25. 0-30. 0 | 98. 30 | 1058. 21 | 7. 62 | 82. 01 |
| 30. 0-35. 0 | 73. 36 | 1131. 57 | 5. 69 | 87. 70 |
| 35. 0-40. 0 | 46. 09 | 1177. 65 | 3. 57 | 91. 27 |
| 40. 0-45. 0 | 23. 49 | 1201. 14 | 1. 82 | 93. 09 |
| 45. 0-50. 0 | 15. 13 | 1216. 27 | 1. 17 | 94. 26 |
| 50. 0-55. 0 | 12. 77 | 1229. 04 | 0. 99 | 95. 25 |
| 55. 0-60. 0 | 11. 26 | 1240. 30 | 0. 87 | 96. 12 |
| 60. 0-65. 0 | 9. 50 | 1249. 80 | 0. 74 | 96. 86 |
| 65. 0-70. 0 | 7. 70 | 1257. 50 | 0. 60 | 97. 45 |
| 70. 0-75. 0 | 5. 98 | 1263. 48 | 0. 46 | 97. 92 |
| 75. 0-80. 0 | 4. 35 | 1267. 83 | 0. 34 | 98. 26 |
| 80. 0-85. 0 | 2. 94 | 1270. 77 | 0. 23 | 98. 48 |
| 85. 0-90. 0 | 1. 78 | 1272. 55 | 0. 14 | 98. 62 |
| 90. 0-95. 0 | 1. 14 | 1273. 69 | 0. 09 | 98. 71 |
| 95. 0-100. 0 | 0. 86 | 1274. 55 | 0. 07 | 98. 78 |
| 100. 0-105. 0 | 0. 68 | 1275. 23 | 0. 05 | 98. 83 |
| 105. 0-110. 0 | 0. 61 | 1275. 85 | 0. 05 | 98. 88 |
| 110. 0-115. 0 | 0. 61 | 1276. 46 | 0. 05 | 98. 92 |
| 115. 0-120. 0 | 0. 60 | 1277. 06 | 0. 05 | 98. 97 |
| 120. 0-125. 0 | 0. 59 | 1277. 65 | 0. 05 | 99. 02 |
| 125. 0-130. 0 | 0. 71 | 1278. 36 | 0. 06 | 99. 07 |
| 130. 0-135. 0 | 0. 93 | 1279. 29 | 0. 07 | 99. 14 |
| 135. 0-140. 0 | 1. 25 | 1280. 54 | 0. 10 | 99. 24 |
| 140. 0-145. 0 | 1. 57 | 1282. 11 | 0. 12 | 99. 36 |
| 145. 0-150. 0 | 1. 77 | 1283. 88 | 0. 14 | 99. 50 |
| 150. 0-155. 0 | 1. 79 | 1285. 67 | 0. 14 | 99. 64 |
| 155. 0-160. 0 | 1. 61 | 1287. 28 | 0. 12 | 99. 76 |
| 160. 0-165. 0 | 1. 32 | 1288. 60 | 0. 10 | 99. 87 |
| 165. 0-170. 0 | 0. 97 | 1289. 57 | 0. 08 | 99. 94 |
| 170. 0-175. 0 | 0. 58 | 1290. 15 | 0. 04 | 99. 99 |
| 175. 0-180. 0 | 0. 19 | 1290. 34 | 0. 01 | 100. 00 |

Rectangle ISO Lighting Intensity Diagram

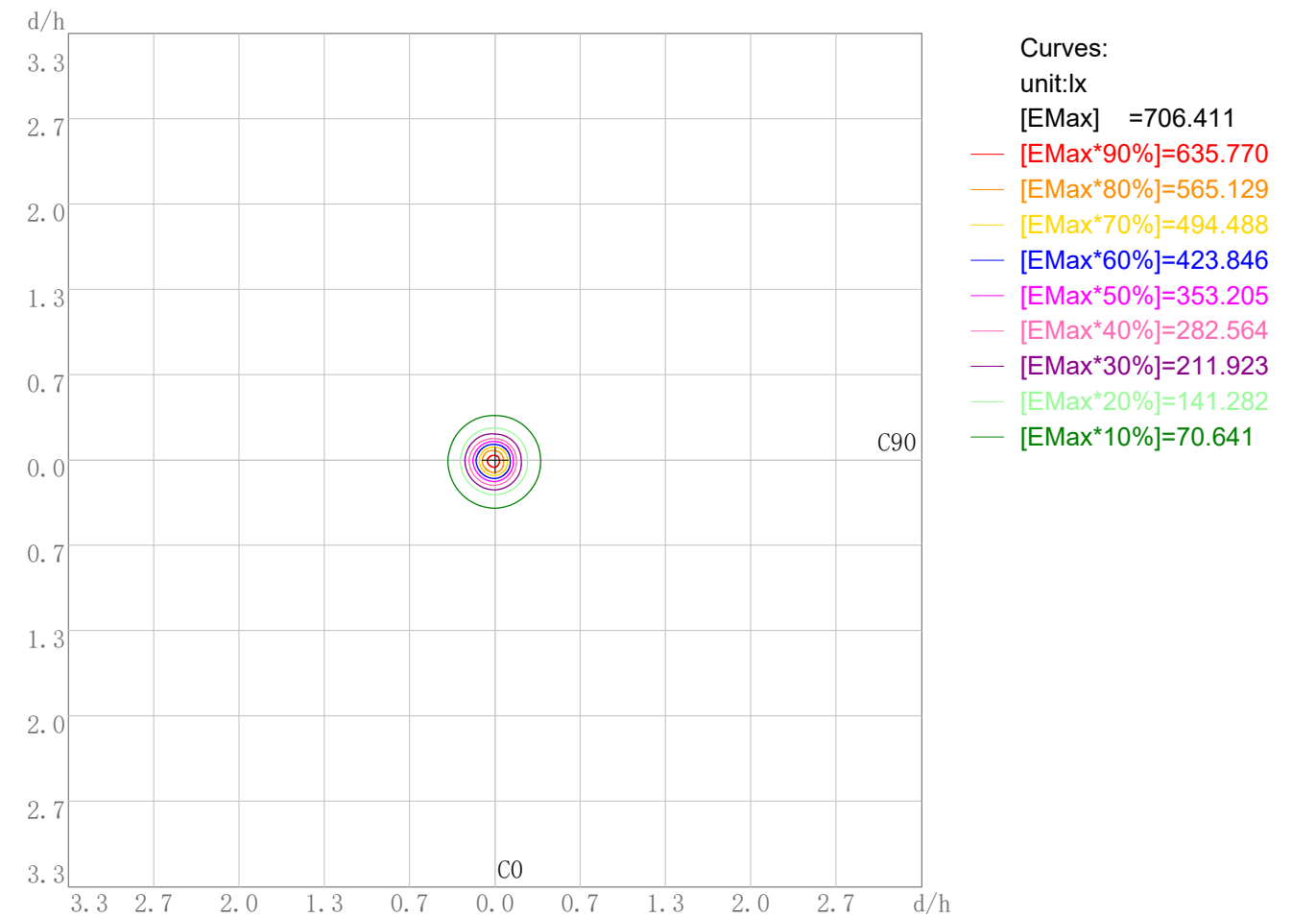
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/09 |



Plane ISO-Illuminance Diagram

| | | |
|--|-----------------------|------------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

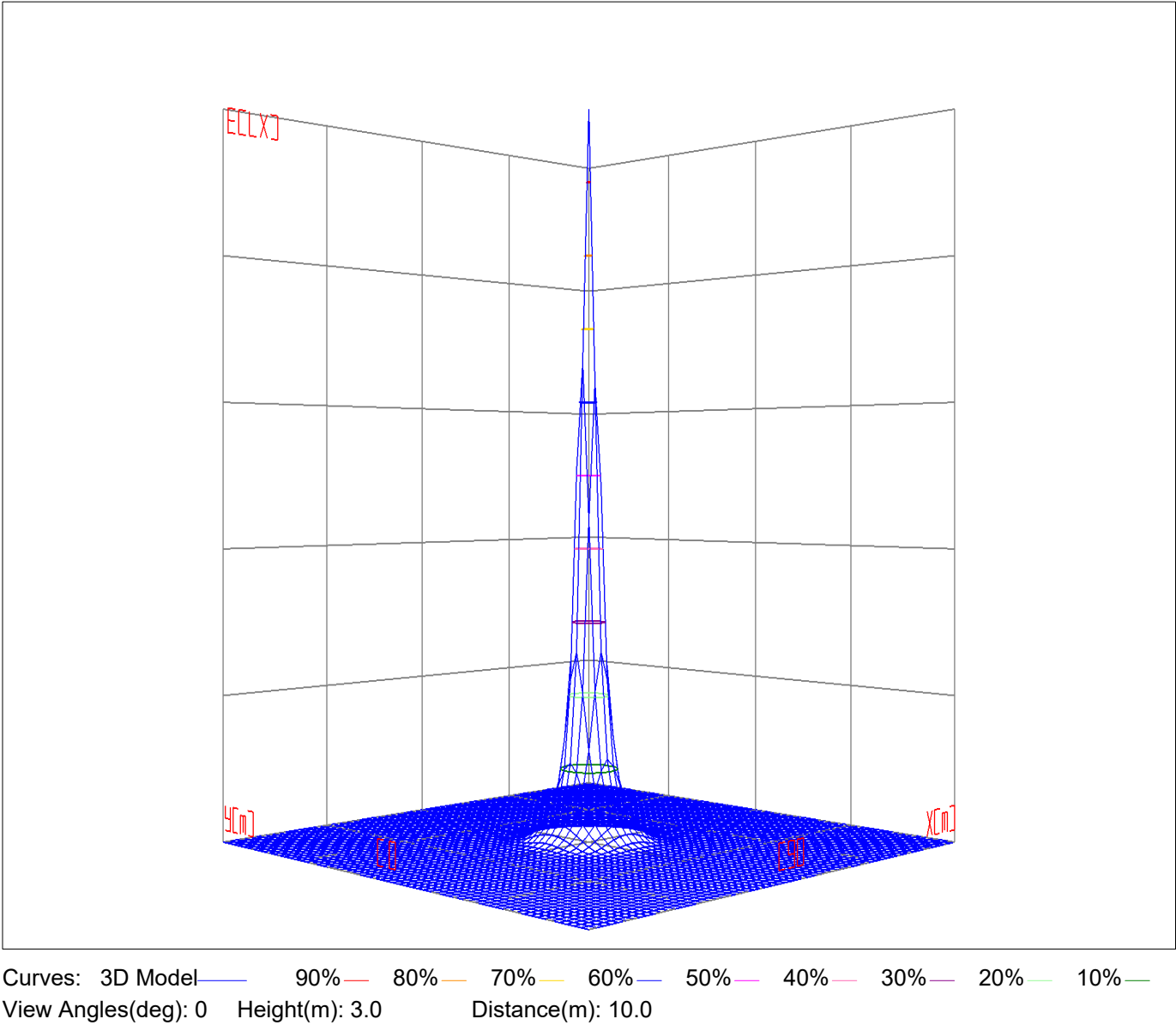
Working Plane Maximum Illuminance(lx): 706.41

Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |

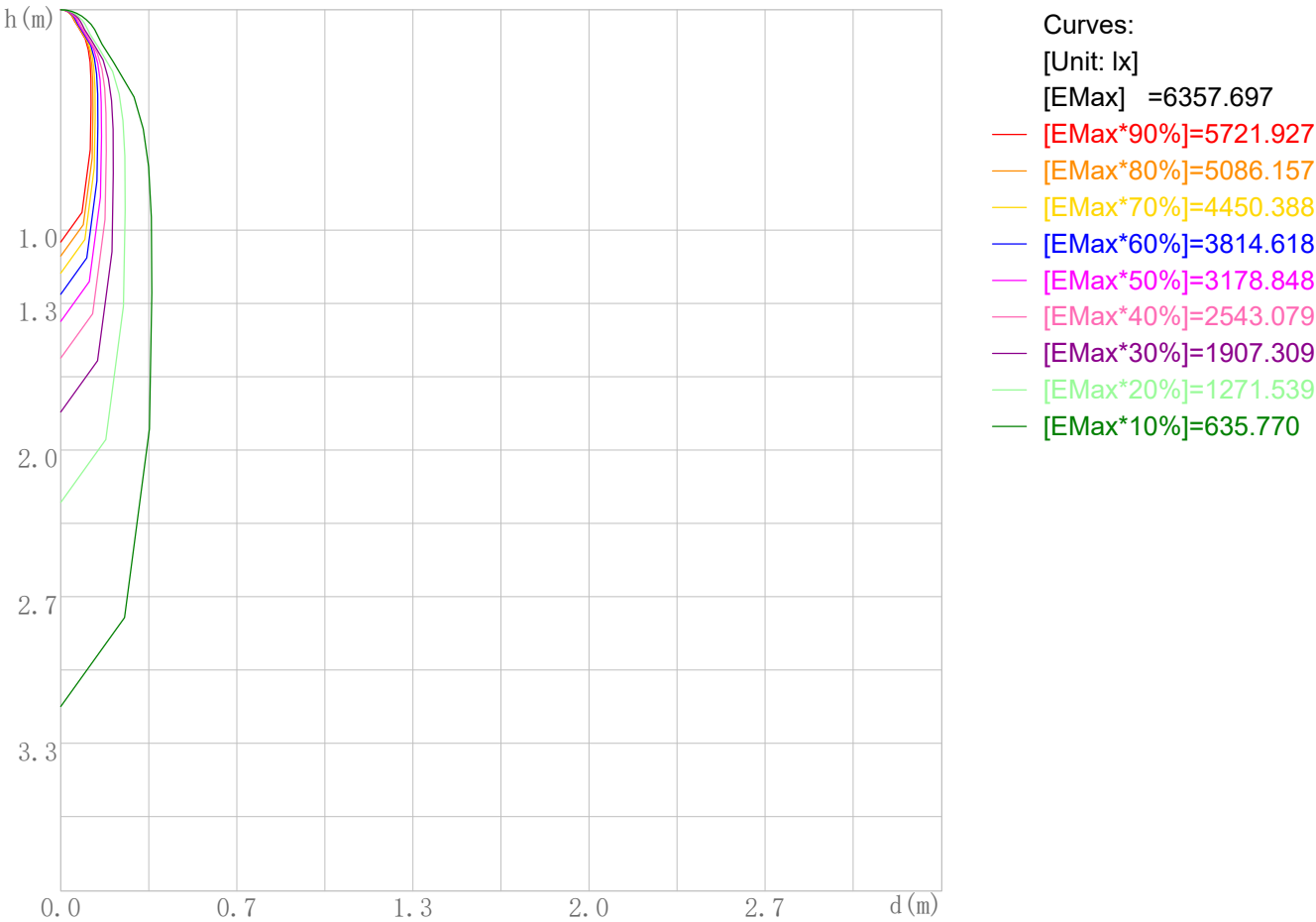
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |

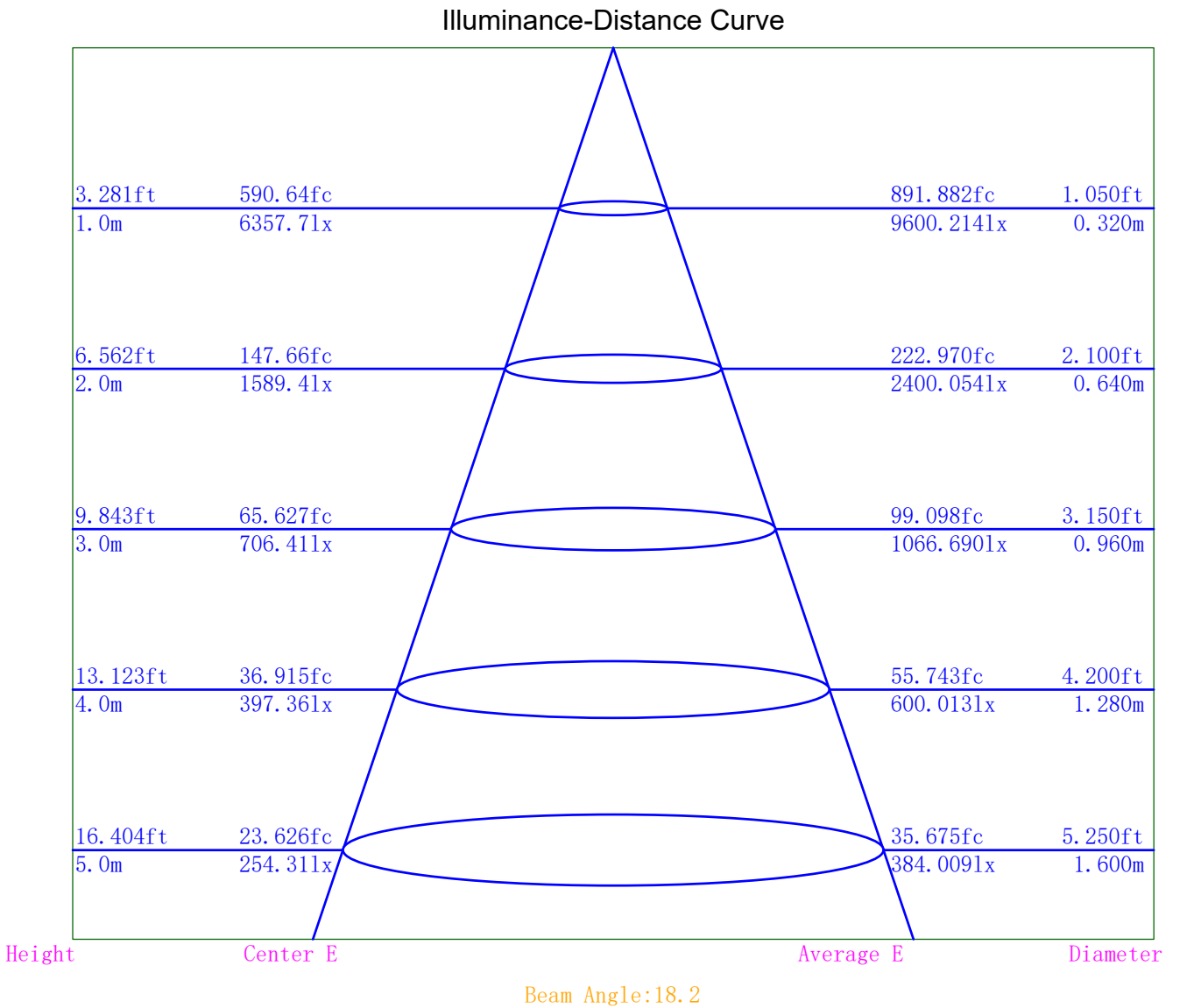
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:6357.70lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:6357.697cd,0deg

Illuminance-Distance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/09 |



Indoor Luminance Limiting Curves

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/09 |

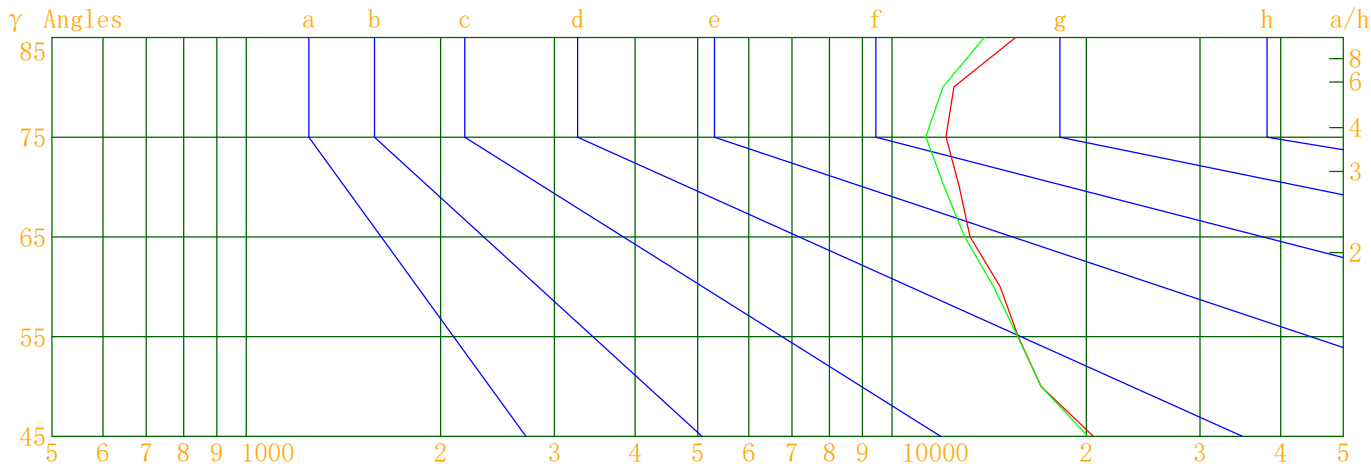
Glare Grade Table

| 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 | 20512 | 17014 | 15682 | 14701 | 13208 | 12714 | 12124 | 12477 | 15540 |
| C90 | 20117 | 17021 | 15658 | 14367 | 12953 | 12047 | 11282 | 11997 | 13894 |

Luminance Limiting Curve



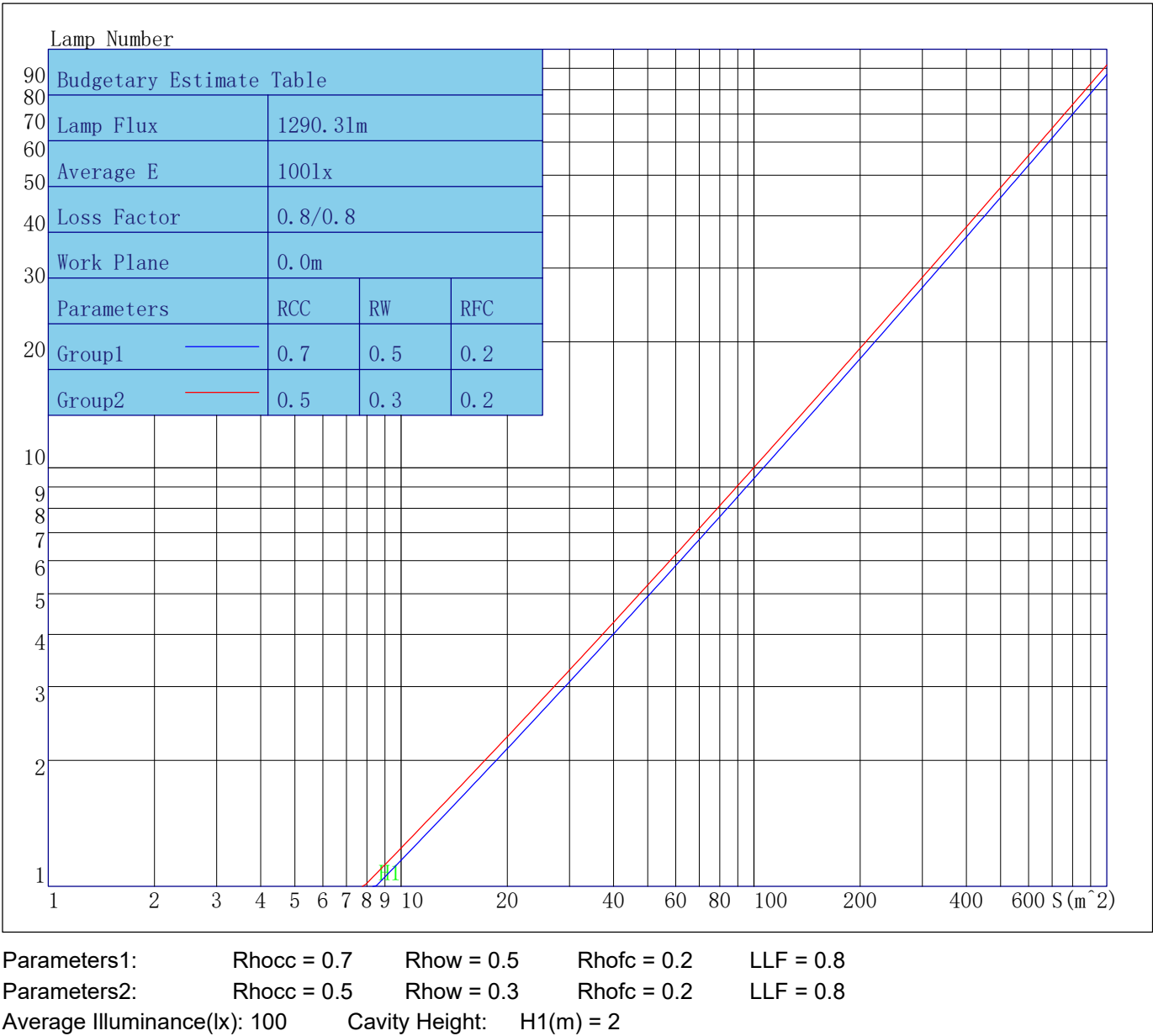
Luminous Size:Length(m)=0.055Width(m)=0.055Height(m)=0.000Area(m^2)=0.003025

Luminous Type:Without Luminous Side

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

Indoor Budgetary Estimate Table

| | | |
|--|-----------------------|------------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |



Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date: 2022/08/09 |

| 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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 101 | 101 | 101 | 99 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 98 | 97 | 96 | 95 | 94 |
| 2 | 109 | 105 | 101 | 98 | 107 | 103 | 100 | 97 | 100 | 97 | 95 | 96 | 94 | 93 | 94 | 92 | 90 | 89 |
| 3 | 105 | 99 | 95 | 92 | 103 | 98 | 94 | 91 | 95 | 92 | 89 | 93 | 90 | 88 | 90 | 88 | 86 | 85 |
| 4 | 101 | 94 | 90 | 86 | 99 | 93 | 89 | 86 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 84 | 82 | 81 |
| 5 | 97 | 90 | 85 | 82 | 96 | 89 | 85 | 81 | 87 | 83 | 80 | 86 | 82 | 80 | 84 | 81 | 79 | 78 |
| 6 | 94 | 86 | 81 | 78 | 92 | 86 | 81 | 78 | 84 | 80 | 77 | 83 | 79 | 76 | 81 | 78 | 76 | 75 |
| 7 | 90 | 83 | 78 | 75 | 89 | 82 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 75 | 73 | 72 |
| 8 | 88 | 80 | 75 | 72 | 86 | 79 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 76 | 73 | 71 | 69 |
| 9 | 85 | 77 | 72 | 69 | 84 | 77 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 74 | 71 | 68 | 67 |
| 10 | 82 | 75 | 70 | 67 | 81 | 74 | 70 | 67 | 73 | 69 | 67 | 73 | 69 | 66 | 72 | 69 | 66 | 65 |

Unified Glare Rating Table

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:DL51-15-XX-01 3000K RA90 15D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting | Test Machine:GON-2000 | Test Date:2022/08/09 |

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 | 17.6 | 18.6 | 18.0 | 19.0 | 19.3 | 17.7 | 18.7 | 18.1 | 19.0 | 19.4 |
| | 18.3 | 19.1 | 18.7 | 19.5 | 19.9 | 18.3 | 19.2 | 18.7 | 19.5 | 19.9 |
| | 18.6 | 19.4 | 19.0 | 19.8 | 20.2 | 18.6 | 19.4 | 19.0 | 19.8 | 20.2 |
| | 18.9 | 19.6 | 19.4 | 20.0 | 20.5 | 18.8 | 19.6 | 19.3 | 20.0 | 20.4 |
| | 19.0 | 19.7 | 19.5 | 20.2 | 20.6 | 19.0 | 19.7 | 19.4 | 20.1 | 20.5 |
| | 19.2 | 19.8 | 19.6 | 20.3 | 20.7 | 19.1 | 19.7 | 19.5 | 20.2 | 20.6 |
| X=4H Y=2H | 17.8 | 18.6 | 18.2 | 19.0 | 19.4 | 17.8 | 18.6 | 18.3 | 19.0 | 19.5 |
| | 18.6 | 19.3 | 19.1 | 19.7 | 20.2 | 18.6 | 19.3 | 19.1 | 19.7 | 20.2 |
| | 19.1 | 19.7 | 19.5 | 20.1 | 20.6 | 19.0 | 19.6 | 19.5 | 20.1 | 20.6 |
| | 19.5 | 20.0 | 20.0 | 20.5 | 21.0 | 19.5 | 20.0 | 20.0 | 20.4 | 20.9 |
| | 19.7 | 20.2 | 20.2 | 20.7 | 21.2 | 19.6 | 20.1 | 20.2 | 20.6 | 21.1 |
| | 20.0 | 20.4 | 20.5 | 20.9 | 21.4 | 19.8 | 20.2 | 20.3 | 20.7 | 21.3 |
| X=8H Y=4H | 19.2 | 19.7 | 19.7 | 20.1 | 20.7 | 19.2 | 19.6 | 19.7 | 20.1 | 20.6 |
| | 19.8 | 20.2 | 20.3 | 20.7 | 21.3 | 19.7 | 20.1 | 20.3 | 20.6 | 21.2 |
| | 20.1 | 20.4 | 20.7 | 21.0 | 21.5 | 20.0 | 20.4 | 20.6 | 20.9 | 21.4 |
| | 20.5 | 20.8 | 21.0 | 21.3 | 21.9 | 20.3 | 20.6 | 20.9 | 21.1 | 21.8 |
| X=12H Y=4H | 19.2 | 19.6 | 19.7 | 20.1 | 20.6 | 19.2 | 19.6 | 19.7 | 20.1 | 20.6 |
| | 19.8 | 20.2 | 20.4 | 20.7 | 21.3 | 19.8 | 20.1 | 20.3 | 20.6 | 21.2 |
| | 20.2 | 20.5 | 20.8 | 21.0 | 21.6 | 20.1 | 20.4 | 20.7 | 20.9 | 21.6 |
| Variations with the objerver position at spacings | | | | | | | | | | |
| S=1.0H | 0.3/-0.3 | | | | | 0.3/-0.3 | | | | |
| S=1.5H | 0.6/-0.6 | | | | | 0.6/-0.6 | | | | |
| S=2.0H | 0.7/-0.8 | | | | | 0.8/-0.9 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 2.1 | | | | | 2.0 | | | | |

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 | 6357.70 | 6357.70 | 6357.70 | 6357.70 |
| γ 5.0 | 4896.48 | 4665.33 | 5403.46 | 5519.83 |
| γ 10.0 | 2409.14 | 2378.90 | 3051.91 | 3270.68 |
| γ 15.0 | 1165.73 | 1206.02 | 1429.54 | 1447.08 |
| γ 20.0 | 678.61 | 716.24 | 809.76 | 785.06 |
| γ 25.0 | 434.27 | 456.60 | 505.19 | 487.67 |
| γ 30.0 | 286.54 | 298.26 | 324.74 | 313.65 |
| γ 35.0 | 181.30 | 186.01 | 206.14 | 195.98 |
| γ 40.0 | 79.69 | 80.10 | 91.76 | 84.01 |
| γ 45.0 | 43.88 | 43.03 | 43.01 | 41.90 |
| γ 50.0 | 33.08 | 33.10 | 31.03 | 30.51 |
| γ 55.0 | 27.21 | 27.17 | 26.54 | 26.20 |
| γ 60.0 | 22.24 | 21.73 | 21.99 | 21.76 |
| γ 65.0 | 16.89 | 16.56 | 17.87 | 17.28 |
| γ 70.0 | 13.15 | 12.46 | 14.00 | 13.41 |
| γ 75.0 | 9.49 | 8.83 | 10.40 | 9.74 |
| γ 80.0 | 6.55 | 6.30 | 7.14 | 6.64 |
| γ 85.0 | 4.10 | 3.66 | 4.95 | 3.95 |
| γ 90.0 | 2.29 | 2.37 | 2.60 | 2.09 |
| γ 95.0 | 1.89 | 1.67 | 1.91 | 1.78 |
| γ 100.0 | 1.33 | 1.21 | 1.66 | 1.23 |
| γ 105.0 | 1.40 | 1.18 | 1.01 | 1.17 |
| γ 110.0 | 1.25 | 0.87 | 1.22 | 1.28 |
| γ 115.0 | 1.41 | 1.21 | 1.42 | 1.03 |
| γ 120.0 | 1.07 | 1.26 | 1.07 | 1.35 |
| γ 125.0 | 1.13 | 1.14 | 1.88 | 1.38 |
| γ 130.0 | 1.62 | 1.81 | 2.29 | 1.81 |
| γ 135.0 | 2.75 | 2.53 | 2.85 | 2.69 |
| γ 140.0 | 3.97 | 3.89 | 4.19 | 4.19 |
| γ 145.0 | 5.08 | 5.10 | 5.88 | 5.31 |
| γ 150.0 | 6.55 | 6.79 | 6.87 | 6.59 |
| γ 155.0 | 7.35 | 7.35 | 7.76 | 7.29 |
| γ 160.0 | 7.74 | 7.76 | 8.34 | 7.80 |
| γ 165.0 | 8.05 | 7.86 | 8.67 | 7.98 |
| γ 170.0 | 8.05 | 7.90 | 8.77 | 8.10 |
| γ 175.0 | 7.97 | 7.86 | 8.16 | 8.09 |
| γ 180.0 | 7.80 | 7.80 | 7.80 | 7.80 |