

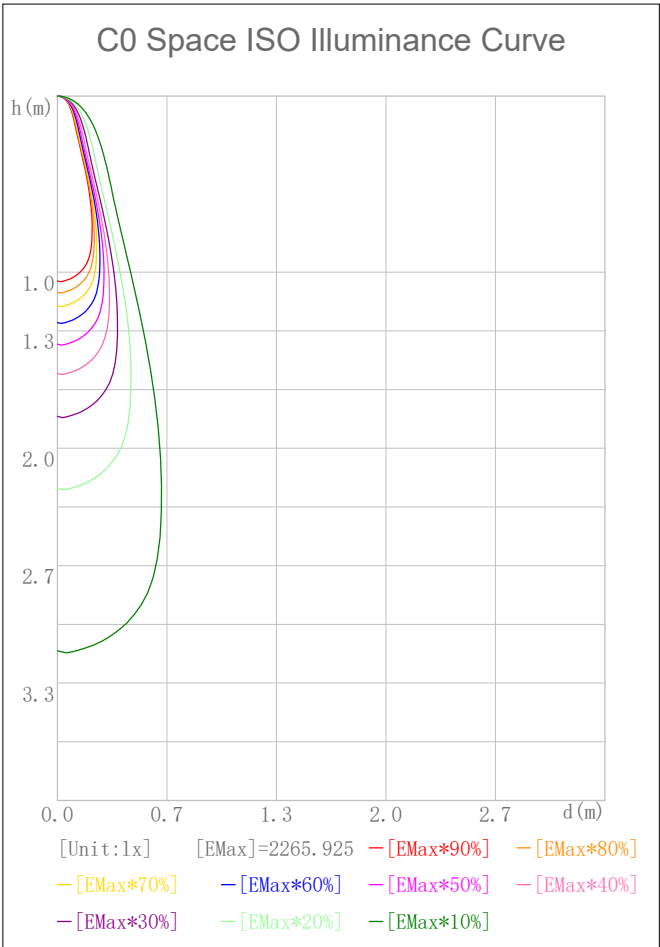
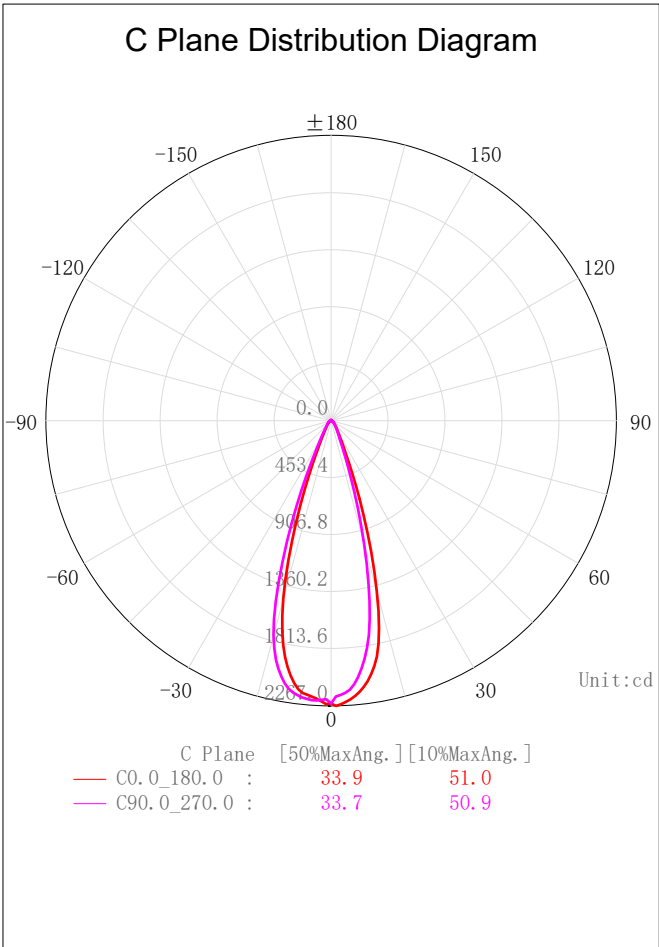
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name: TR08-09-XX-01 4000K RA90 36D | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2021/10/28 |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | | Shld. Ang(°): | Test Machine:GON-2000 |
| Test Lab: Quality Department | | Frequency (Hz): | Lamp CCT (K): Ra: |
| Lum. Size (W*L*H):0.076m*0.076m*0.000m | | Lum. Area (m2):0.005 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=1.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

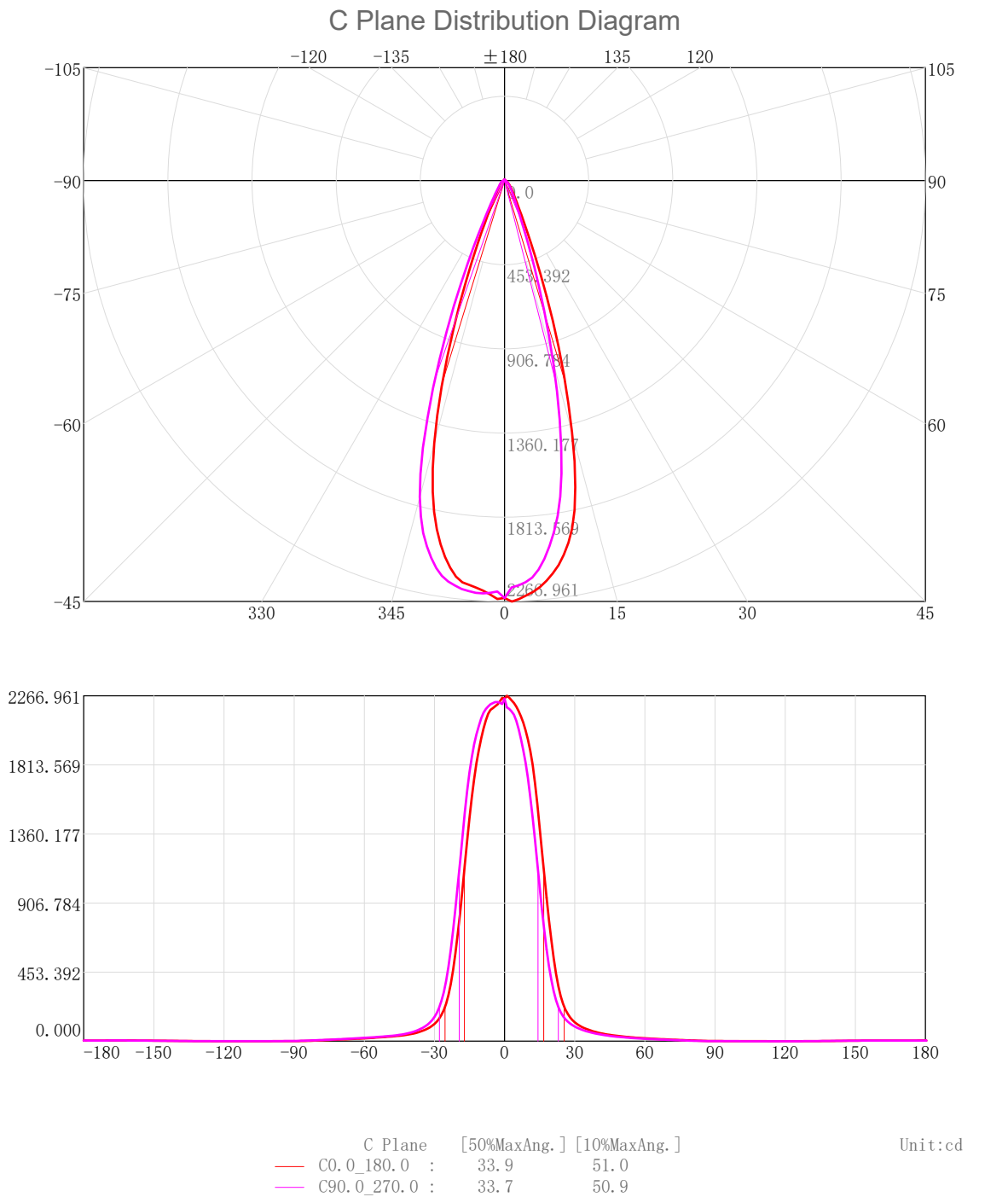
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|--------------------------------|---------------------------------------|--|
| Rated Flux(lm): 847.380 | Luminary Flux(lm): 847.385 | Field Angle(10%Imax): 51.0(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 838.327lm 98.93% | |
| Rated Voltage(V): | Luminary EER(lm/W): 95.598 | Up Lumens&Percent: 9.058lm 1.07% | |
| Tested Power(W): 8.864 | Max. Candela(cd): 2266.961 | S/MH: C0_a180=0.577 C90_270=0.571 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=1.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):241.1, 0.040, 0.899 | Beam Angle(50%Imax): 33.9(°) | ErP ϕ use(90°): 747.083lm | |
| Lamp Size (W*L*H):0.076m*0.076m*0.000m | Left=-17.2°, Right=16.7° | IRF(%): 594.187 | |



2D Plane Light Intensity Distribution Curve

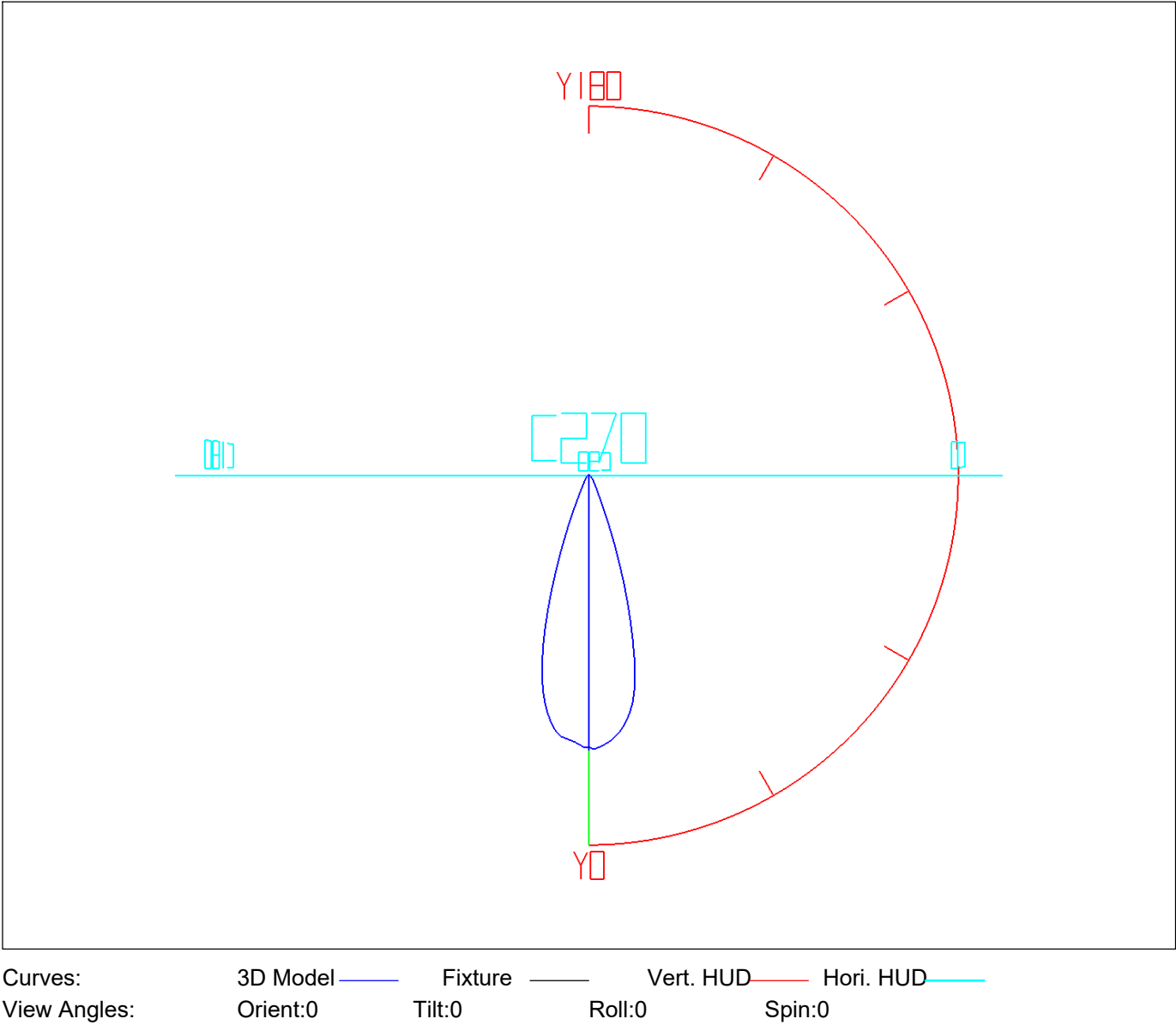
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |



3D Light Intensity Distribution Modal

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |

3D Light Intensity Distribution Modal



Zonal Flux Tabulation

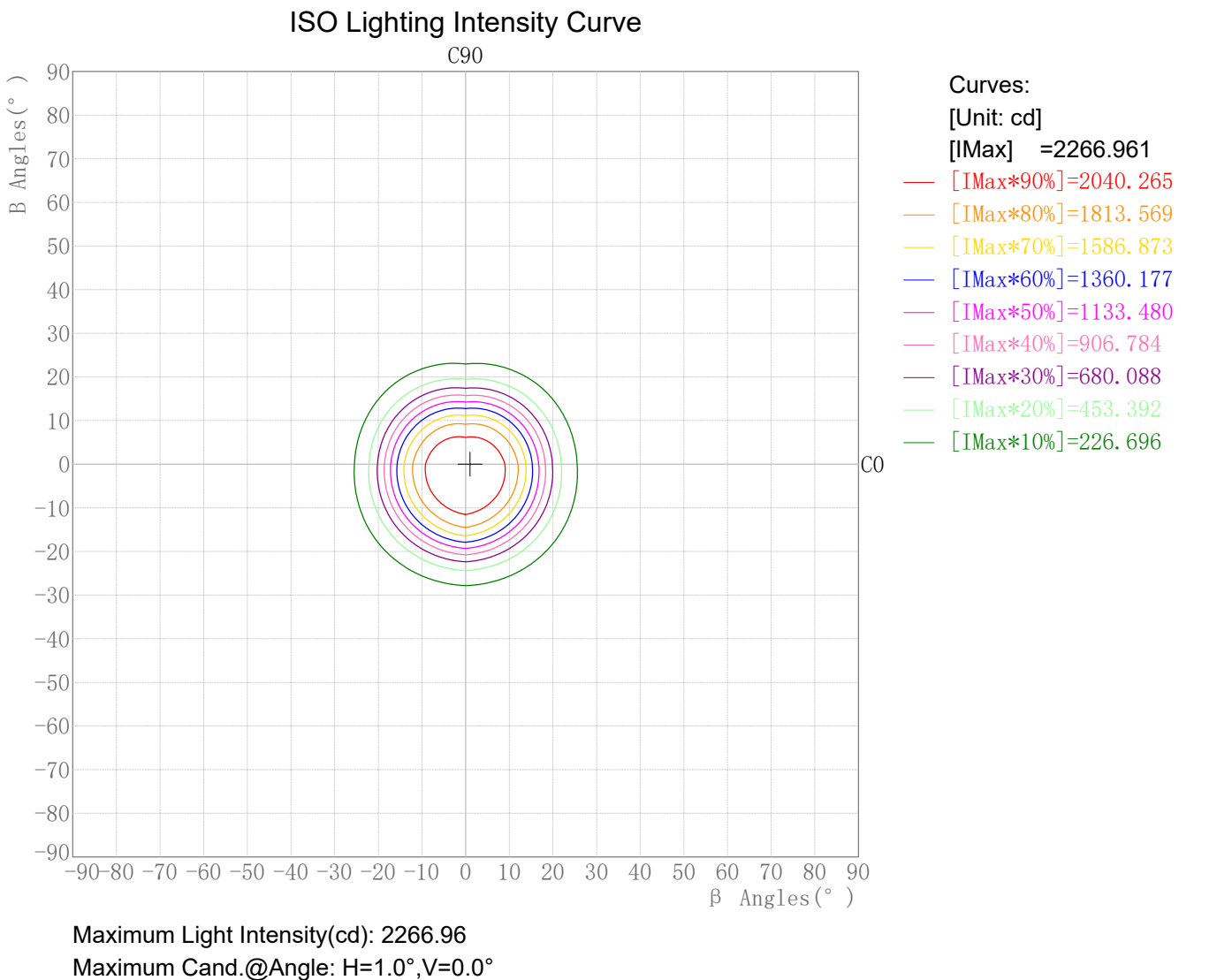
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 2.14 | 2.14 | 0.25 | 0.25 | 47.0-48.0 | 2.77 | 784.30 | 0.33 | 92.56 |
| 1.0-2.0 | 6.39 | 8.53 | 0.75 | 1.01 | 48.0-49.0 | 2.68 | 786.98 | 0.32 | 92.87 |
| 2.0-3.0 | 10.60 | 19.13 | 1.25 | 2.26 | 49.0-50.0 | 2.60 | 789.58 | 0.31 | 93.18 |
| 3.0-4.0 | 14.75 | 33.88 | 1.74 | 4.00 | 50.0-51.0 | 2.52 | 792.09 | 0.30 | 93.48 |
| 4.0-5.0 | 18.81 | 52.69 | 2.22 | 6.22 | 51.0-52.0 | 2.44 | 794.53 | 0.29 | 93.76 |
| 5.0-6.0 | 22.74 | 75.43 | 2.68 | 8.90 | 52.0-53.0 | 2.36 | 796.89 | 0.28 | 94.04 |
| 6.0-7.0 | 26.48 | 101.90 | 3.12 | 12.03 | 53.0-54.0 | 2.28 | 799.18 | 0.27 | 94.31 |
| 7.0-8.0 | 29.96 | 131.87 | 3.54 | 15.56 | 54.0-55.0 | 2.21 | 801.39 | 0.26 | 94.57 |
| 8.0-9.0 | 33.15 | 165.02 | 3.91 | 19.47 | 55.0-56.0 | 2.14 | 803.52 | 0.25 | 94.82 |
| 9.0-10.0 | 35.95 | 200.97 | 4.24 | 23.72 | 56.0-57.0 | 2.06 | 805.58 | 0.24 | 95.07 |
| 10.0-11.0 | 38.25 | 239.22 | 4.51 | 28.23 | 57.0-58.0 | 1.99 | 807.58 | 0.24 | 95.30 |
| 11.0-12.0 | 39.94 | 279.17 | 4.71 | 32.94 | 58.0-59.0 | 1.93 | 809.50 | 0.23 | 95.53 |
| 12.0-13.0 | 40.95 | 320.11 | 4.83 | 37.78 | 59.0-60.0 | 1.86 | 811.36 | 0.22 | 95.75 |
| 13.0-14.0 | 41.19 | 361.30 | 4.86 | 42.64 | 60.0-61.0 | 1.79 | 813.15 | 0.21 | 95.96 |
| 14.0-15.0 | 40.61 | 401.92 | 4.79 | 47.43 | 61.0-62.0 | 1.73 | 814.88 | 0.20 | 96.17 |
| 15.0-16.0 | 39.25 | 441.16 | 4.63 | 52.06 | 62.0-63.0 | 1.66 | 816.55 | 0.20 | 96.36 |
| 16.0-17.0 | 37.19 | 478.35 | 4.39 | 56.45 | 63.0-64.0 | 1.60 | 818.15 | 0.19 | 96.55 |
| 17.0-18.0 | 34.51 | 512.86 | 4.07 | 60.52 | 64.0-65.0 | 1.54 | 819.68 | 0.18 | 96.73 |
| 18.0-19.0 | 31.34 | 544.20 | 3.70 | 64.22 | 65.0-66.0 | 1.47 | 821.16 | 0.17 | 96.91 |
| 19.0-20.0 | 27.96 | 572.16 | 3.30 | 67.52 | 66.0-67.0 | 1.41 | 822.56 | 0.17 | 97.07 |
| 20.0-21.0 | 24.54 | 596.70 | 2.90 | 70.42 | 67.0-68.0 | 1.34 | 823.91 | 0.16 | 97.23 |
| 21.0-22.0 | 21.24 | 617.94 | 2.51 | 72.92 | 68.0-69.0 | 1.28 | 825.19 | 0.15 | 97.38 |
| 22.0-23.0 | 18.20 | 636.14 | 2.15 | 75.07 | 69.0-70.0 | 1.22 | 826.41 | 0.14 | 97.52 |
| 23.0-24.0 | 15.53 | 651.67 | 1.83 | 76.90 | 70.0-71.0 | 1.15 | 827.56 | 0.14 | 97.66 |
| 24.0-25.0 | 13.27 | 664.93 | 1.57 | 78.47 | 71.0-72.0 | 1.09 | 828.65 | 0.13 | 97.79 |
| 25.0-26.0 | 11.41 | 676.35 | 1.35 | 79.82 | 72.0-73.0 | 1.03 | 829.68 | 0.12 | 97.91 |
| 26.0-27.0 | 9.93 | 686.27 | 1.17 | 80.99 | 73.0-74.0 | 0.97 | 830.65 | 0.11 | 98.03 |
| 27.0-28.0 | 8.75 | 695.03 | 1.03 | 82.02 | 74.0-75.0 | 0.90 | 831.55 | 0.11 | 98.13 |
| 28.0-29.0 | 7.83 | 702.86 | 0.92 | 82.94 | 75.0-76.0 | 0.84 | 832.39 | 0.10 | 98.23 |
| 29.0-30.0 | 7.10 | 709.95 | 0.84 | 83.78 | 76.0-77.0 | 0.78 | 833.17 | 0.09 | 98.32 |
| 30.0-31.0 | 6.50 | 716.46 | 0.77 | 84.55 | 77.0-78.0 | 0.72 | 833.88 | 0.08 | 98.41 |
| 31.0-32.0 | 6.01 | 722.47 | 0.71 | 85.26 | 78.0-79.0 | 0.66 | 834.54 | 0.08 | 98.48 |
| 32.0-33.0 | 5.60 | 728.07 | 0.66 | 85.92 | 79.0-80.0 | 0.60 | 835.14 | 0.07 | 98.56 |
| 33.0-34.0 | 5.24 | 733.30 | 0.62 | 86.54 | 80.0-81.0 | 0.54 | 835.68 | 0.06 | 98.62 |
| 34.0-35.0 | 4.92 | 738.22 | 0.58 | 87.12 | 81.0-82.0 | 0.49 | 836.17 | 0.06 | 98.68 |
| 35.0-36.0 | 4.64 | 742.86 | 0.55 | 87.67 | 82.0-83.0 | 0.43 | 836.60 | 0.05 | 98.73 |
| 36.0-37.0 | 4.39 | 747.25 | 0.52 | 88.18 | 83.0-84.0 | 0.37 | 836.97 | 0.04 | 98.77 |
| 37.0-38.0 | 4.16 | 751.41 | 0.49 | 88.68 | 84.0-85.0 | 0.32 | 837.29 | 0.04 | 98.81 |
| 38.0-39.0 | 3.95 | 755.37 | 0.47 | 89.14 | 85.0-86.0 | 0.27 | 837.57 | 0.03 | 98.84 |
| 39.0-40.0 | 3.77 | 759.13 | 0.44 | 89.59 | 86.0-87.0 | 0.23 | 837.80 | 0.03 | 98.87 |
| 40.0-41.0 | 3.60 | 762.73 | 0.42 | 90.01 | 87.0-88.0 | 0.20 | 838.00 | 0.02 | 98.89 |
| 41.0-42.0 | 3.44 | 766.18 | 0.41 | 90.42 | 88.0-89.0 | 0.17 | 838.17 | 0.02 | 98.91 |
| 42.0-43.0 | 3.31 | 769.48 | 0.39 | 90.81 | 89.0-90.0 | 0.15 | 838.33 | 0.02 | 98.93 |
| 43.0-44.0 | 3.18 | 772.66 | 0.38 | 91.18 | 90.0-91.0 | 0.14 | 838.47 | 0.02 | 98.95 |
| 44.0-45.0 | 3.06 | 775.72 | 0.36 | 91.54 | 91.0-92.0 | 0.13 | 838.59 | 0.02 | 98.96 |
| 45.0-46.0 | 2.96 | 778.68 | 0.35 | 91.89 | 92.0-93.0 | 0.12 | 838.71 | 0.01 | 98.98 |
| 46.0-47.0 | 2.86 | 781.54 | 0.34 | 92.23 | 93.0-94.0 | 0.11 | 838.83 | 0.01 | 98.99 |

Zonal Flux Tabulation - (Cont.)

| Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-------------|-------------------|-------------------|-----------|-----------|-------------|-------------------|-------------------|-----------|-----------|
| 94.0-95.0 | 0.11 | 838.93 | 0.01 | 99.00 | 141.0-142.0 | 0.16 | 841.97 | 0.02 | 99.36 |
| 95.0-96.0 | 0.10 | 839.03 | 0.01 | 99.02 | 142.0-143.0 | 0.17 | 842.14 | 0.02 | 99.38 |
| 96.0-97.0 | 0.09 | 839.13 | 0.01 | 99.03 | 143.0-144.0 | 0.18 | 842.32 | 0.02 | 99.40 |
| 97.0-98.0 | 0.09 | 839.22 | 0.01 | 99.04 | 144.0-145.0 | 0.19 | 842.51 | 0.02 | 99.42 |
| 98.0-99.0 | 0.08 | 839.30 | 0.01 | 99.05 | 145.0-146.0 | 0.19 | 842.70 | 0.02 | 99.45 |
| 99.0-100.0 | 0.08 | 839.38 | 0.01 | 99.06 | 146.0-147.0 | 0.20 | 842.90 | 0.02 | 99.47 |
| 100.0-101.0 | 0.07 | 839.45 | 0.01 | 99.06 | 147.0-148.0 | 0.20 | 843.10 | 0.02 | 99.49 |
| 101.0-102.0 | 0.07 | 839.52 | 0.01 | 99.07 | 148.0-149.0 | 0.20 | 843.30 | 0.02 | 99.52 |
| 102.0-103.0 | 0.06 | 839.58 | 0.01 | 99.08 | 149.0-150.0 | 0.21 | 843.51 | 0.02 | 99.54 |
| 103.0-104.0 | 0.06 | 839.64 | 0.01 | 99.09 | 150.0-151.0 | 0.21 | 843.72 | 0.02 | 99.57 |
| 104.0-105.0 | 0.06 | 839.70 | 0.01 | 99.09 | 151.0-152.0 | 0.21 | 843.93 | 0.02 | 99.59 |
| 105.0-106.0 | 0.05 | 839.75 | 0.01 | 99.10 | 152.0-153.0 | 0.21 | 844.13 | 0.02 | 99.62 |
| 106.0-107.0 | 0.05 | 839.80 | 0.01 | 99.10 | 153.0-154.0 | 0.21 | 844.34 | 0.02 | 99.64 |
| 107.0-108.0 | 0.04 | 839.84 | 0.01 | 99.11 | 154.0-155.0 | 0.21 | 844.55 | 0.02 | 99.67 |
| 108.0-109.0 | 0.04 | 839.88 | 0.00 | 99.11 | 155.0-156.0 | 0.20 | 844.76 | 0.02 | 99.69 |
| 109.0-110.0 | 0.04 | 839.92 | 0.00 | 99.12 | 156.0-157.0 | 0.20 | 844.96 | 0.02 | 99.71 |
| 110.0-111.0 | 0.04 | 839.95 | 0.00 | 99.12 | 157.0-158.0 | 0.20 | 845.15 | 0.02 | 99.74 |
| 111.0-112.0 | 0.03 | 839.99 | 0.00 | 99.13 | 158.0-159.0 | 0.19 | 845.35 | 0.02 | 99.76 |
| 112.0-113.0 | 0.03 | 840.02 | 0.00 | 99.13 | 159.0-160.0 | 0.19 | 845.53 | 0.02 | 99.78 |
| 113.0-114.0 | 0.03 | 840.05 | 0.00 | 99.13 | 160.0-161.0 | 0.18 | 845.71 | 0.02 | 99.80 |
| 114.0-115.0 | 0.03 | 840.08 | 0.00 | 99.14 | 161.0-162.0 | 0.17 | 845.88 | 0.02 | 99.82 |
| 115.0-116.0 | 0.03 | 840.10 | 0.00 | 99.14 | 162.0-163.0 | 0.16 | 846.04 | 0.02 | 99.84 |
| 116.0-117.0 | 0.03 | 840.13 | 0.00 | 99.14 | 163.0-164.0 | 0.15 | 846.20 | 0.02 | 99.86 |
| 117.0-118.0 | 0.03 | 840.15 | 0.00 | 99.15 | 164.0-165.0 | 0.14 | 846.34 | 0.02 | 99.88 |
| 118.0-119.0 | 0.02 | 840.18 | 0.00 | 99.15 | 165.0-166.0 | 0.14 | 846.48 | 0.02 | 99.89 |
| 119.0-120.0 | 0.03 | 840.20 | 0.00 | 99.15 | 166.0-167.0 | 0.13 | 846.60 | 0.01 | 99.91 |
| 120.0-121.0 | 0.03 | 840.23 | 0.00 | 99.16 | 167.0-168.0 | 0.12 | 846.72 | 0.01 | 99.92 |
| 121.0-122.0 | 0.03 | 840.26 | 0.00 | 99.16 | 168.0-169.0 | 0.11 | 846.82 | 0.01 | 99.93 |
| 122.0-123.0 | 0.03 | 840.28 | 0.00 | 99.16 | 169.0-170.0 | 0.10 | 846.92 | 0.01 | 99.95 |
| 123.0-124.0 | 0.03 | 840.31 | 0.00 | 99.17 | 170.0-171.0 | 0.09 | 847.01 | 0.01 | 99.96 |
| 124.0-125.0 | 0.03 | 840.35 | 0.00 | 99.17 | 171.0-172.0 | 0.08 | 847.09 | 0.01 | 99.97 |
| 125.0-126.0 | 0.04 | 840.38 | 0.00 | 99.17 | 172.0-173.0 | 0.07 | 847.16 | 0.01 | 99.97 |
| 126.0-127.0 | 0.04 | 840.42 | 0.00 | 99.18 | 173.0-174.0 | 0.06 | 847.22 | 0.01 | 99.98 |
| 127.0-128.0 | 0.05 | 840.47 | 0.01 | 99.18 | 174.0-175.0 | 0.05 | 847.27 | 0.01 | 99.99 |
| 128.0-129.0 | 0.05 | 840.52 | 0.01 | 99.19 | 175.0-176.0 | 0.04 | 847.31 | 0.00 | 99.99 |
| 129.0-130.0 | 0.06 | 840.58 | 0.01 | 99.20 | 176.0-177.0 | 0.03 | 847.34 | 0.00 | 100.00 |
| 130.0-131.0 | 0.07 | 840.64 | 0.01 | 99.21 | 177.0-178.0 | 0.02 | 847.37 | 0.00 | 100.00 |
| 131.0-132.0 | 0.07 | 840.72 | 0.01 | 99.21 | 178.0-179.0 | 0.01 | 847.38 | 0.00 | 100.00 |
| 132.0-133.0 | 0.08 | 840.80 | 0.01 | 99.22 | 179.0-180.0 | 0.00 | 847.38 | 0.00 | 100.00 |
| 133.0-134.0 | 0.09 | 840.89 | 0.01 | 99.23 | | | | | |
| 134.0-135.0 | 0.10 | 841.00 | 0.01 | 99.25 | | | | | |
| 135.0-136.0 | 0.11 | 841.11 | 0.01 | 99.26 | | | | | |
| 136.0-137.0 | 0.12 | 841.23 | 0.01 | 99.27 | | | | | |
| 137.0-138.0 | 0.13 | 841.36 | 0.02 | 99.29 | | | | | |
| 138.0-139.0 | 0.14 | 841.50 | 0.02 | 99.31 | | | | | |
| 139.0-140.0 | 0.15 | 841.65 | 0.02 | 99.32 | | | | | |
| 140.0-141.0 | 0.16 | 841.80 | 0.02 | 99.34 | | | | | |

Rectangle ISO Lighting Intensity Diagram

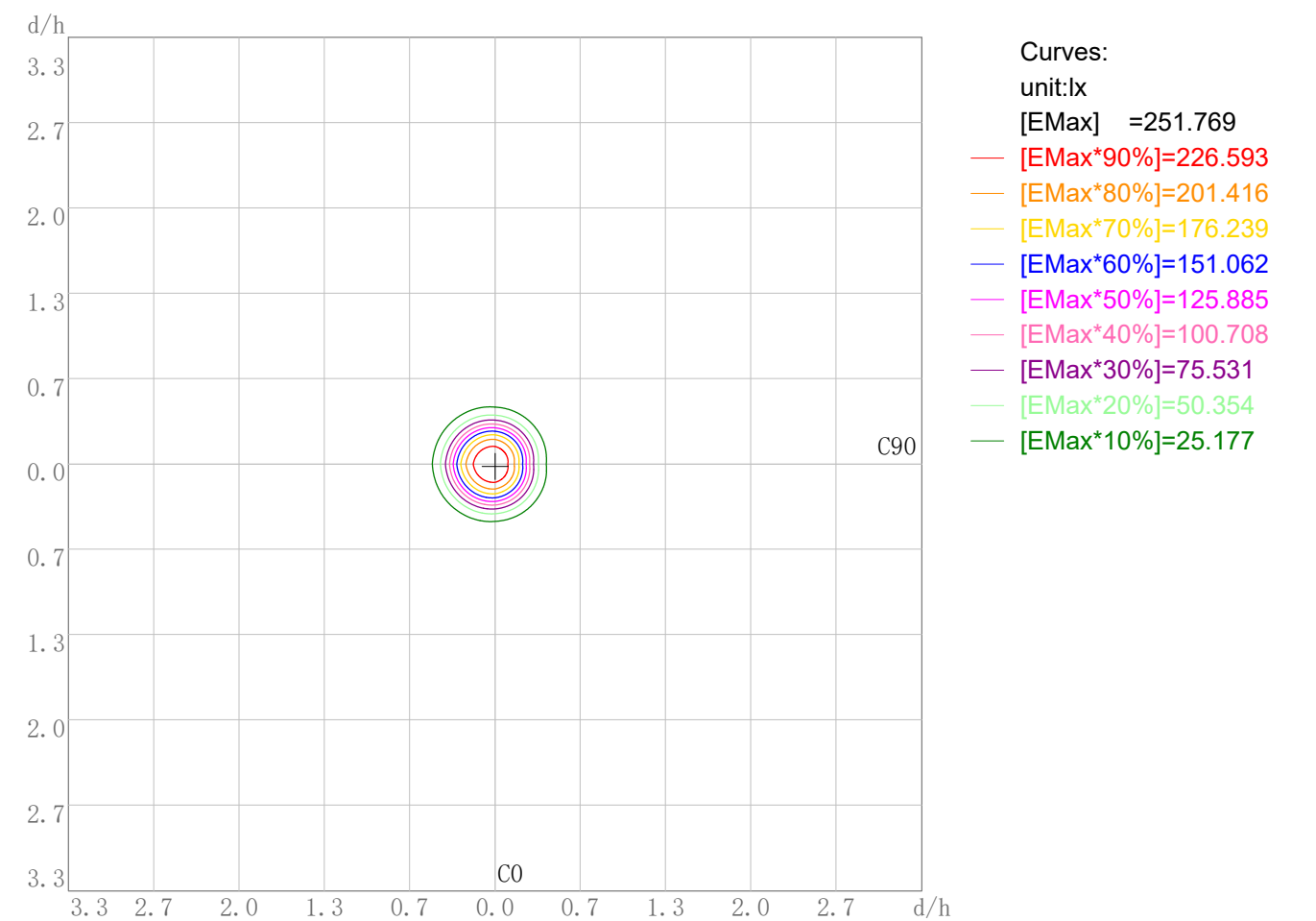
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |



Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2021/10/28 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 251.77
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

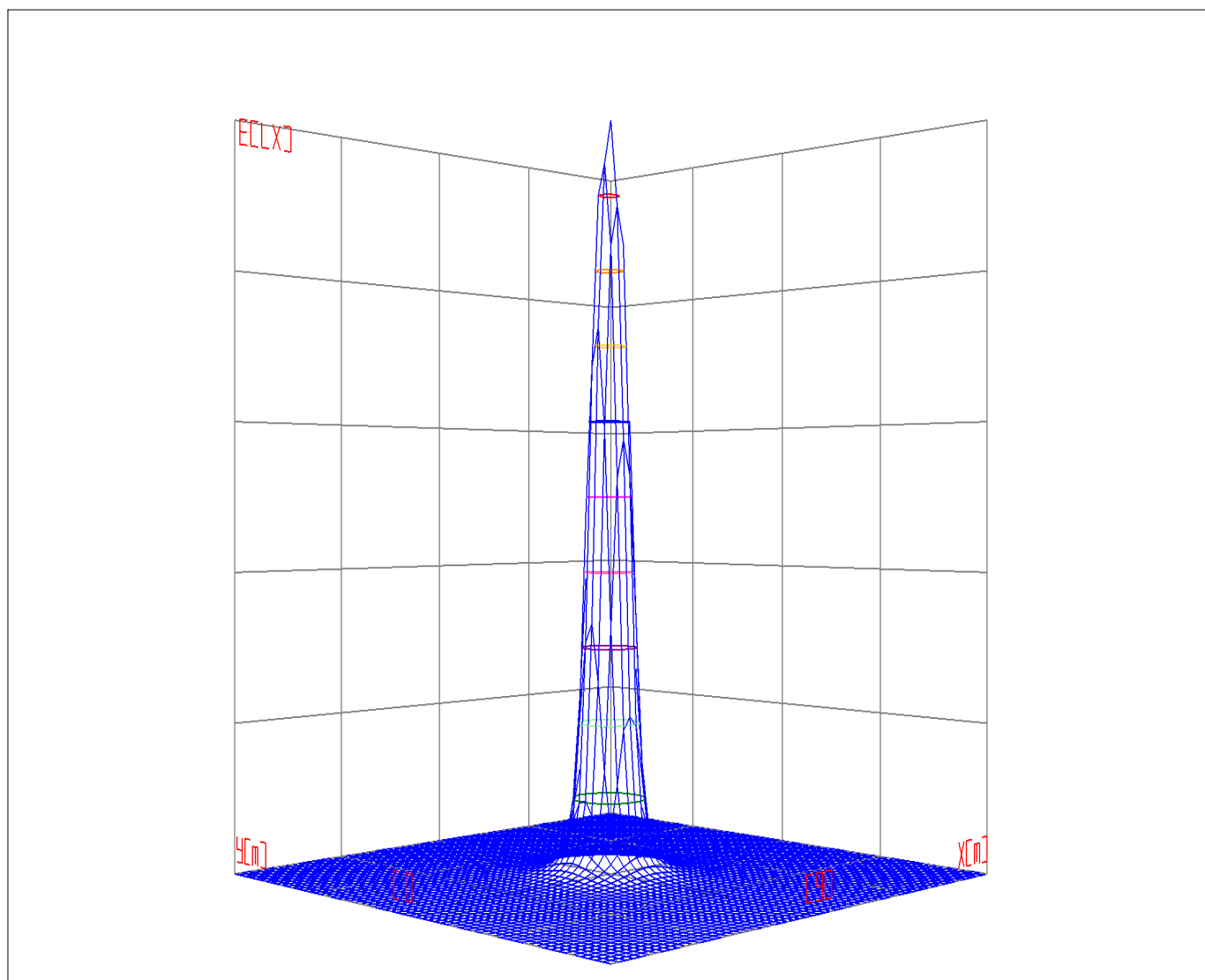
IES Indoor Report

Photometric Filename:TR08-09-XX-01 4000K RA90 36D.IES

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: TR08-09-XX-01 4000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2021/10/28 |

3D Plane Illuminance Modal

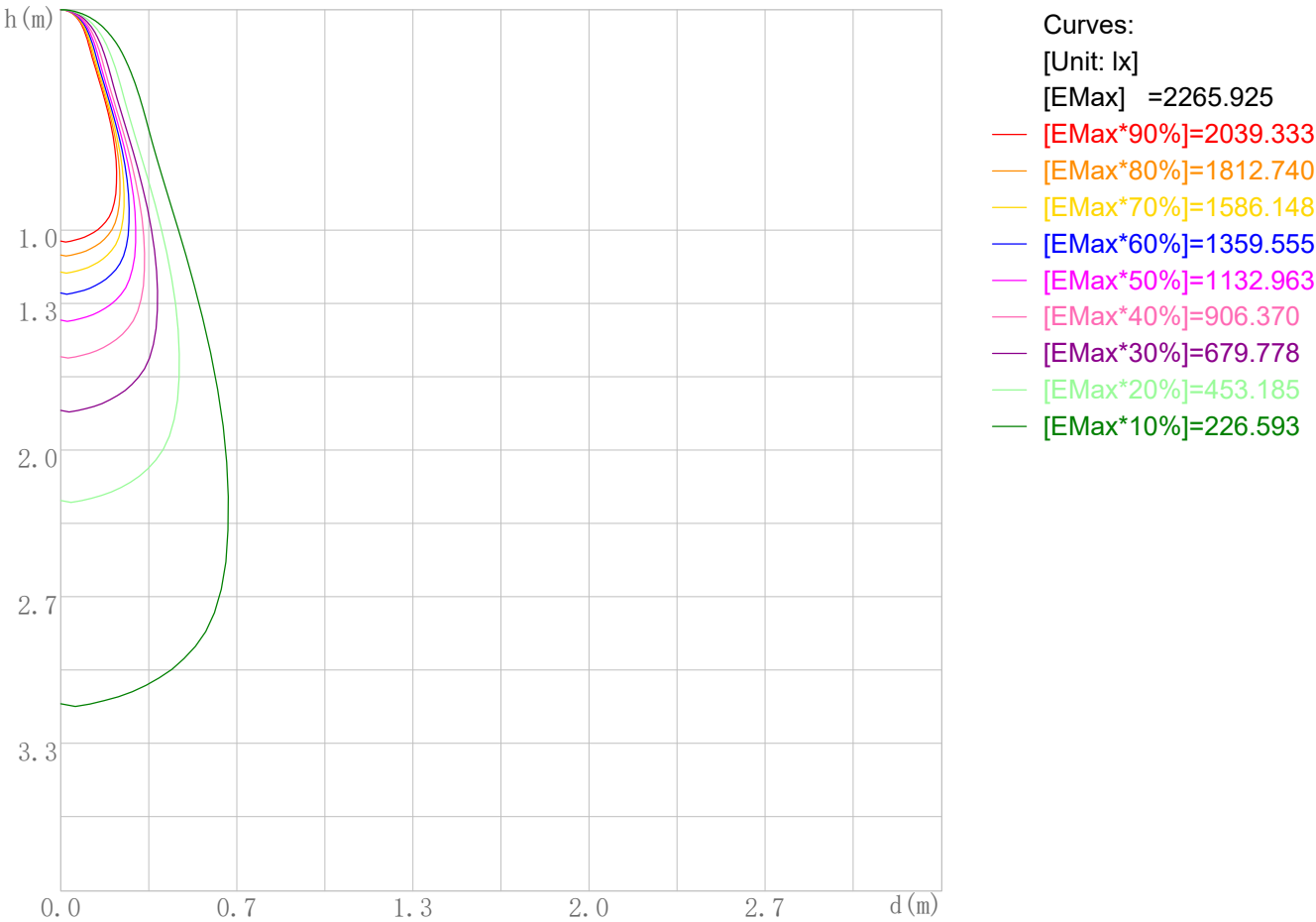


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |

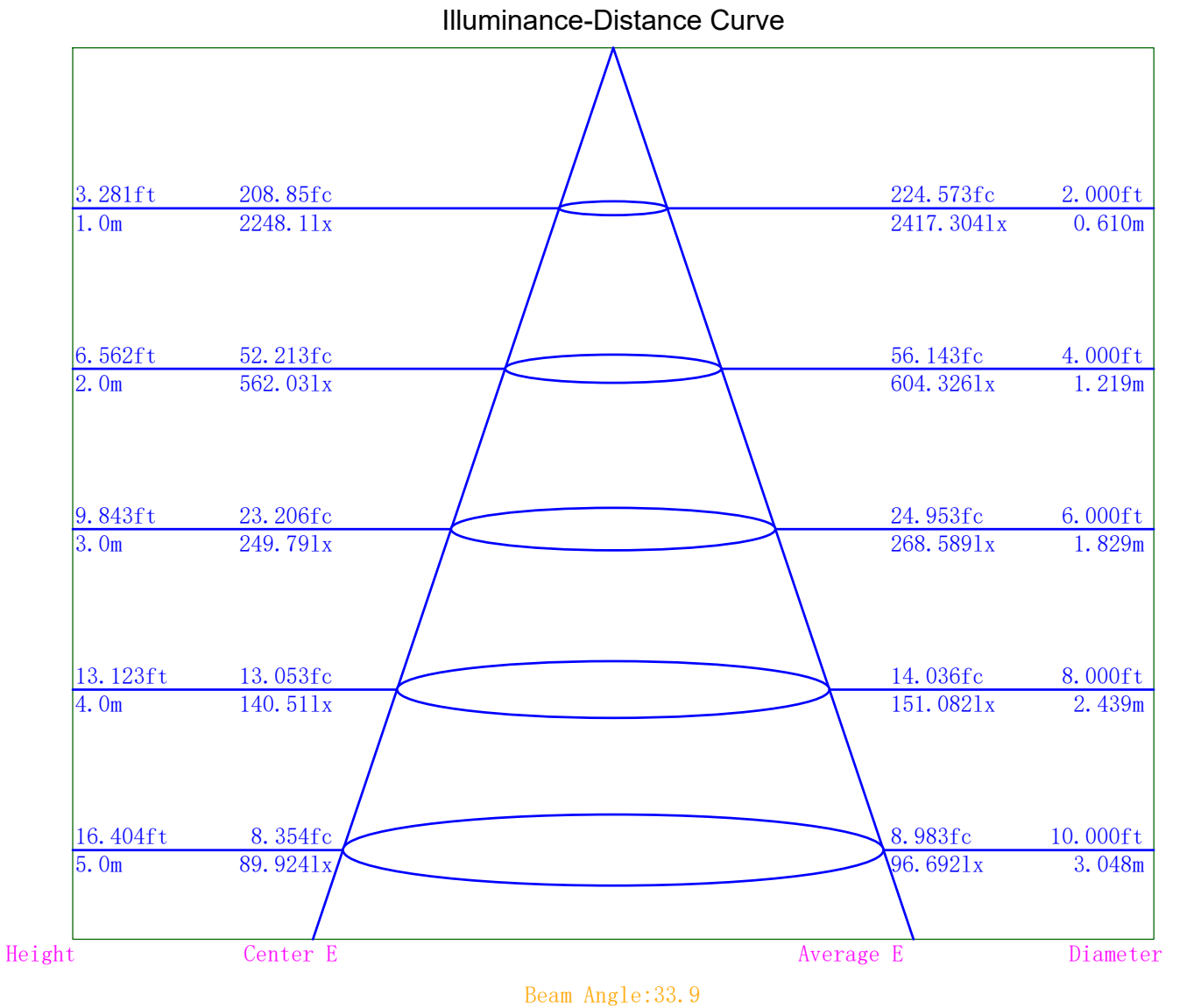
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2265.93lx,1.0deg
Plane Maximum Lighting Intensity and @Angle:2266.961cd,0deg

Illuminance-Distance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |



Indoor Luminance Limiting Curves

| | | |
|--|--------------------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catalog:Lum. Catalog: LED | Test ID:01 |
| Lamp Name: | Lamp Catalog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |

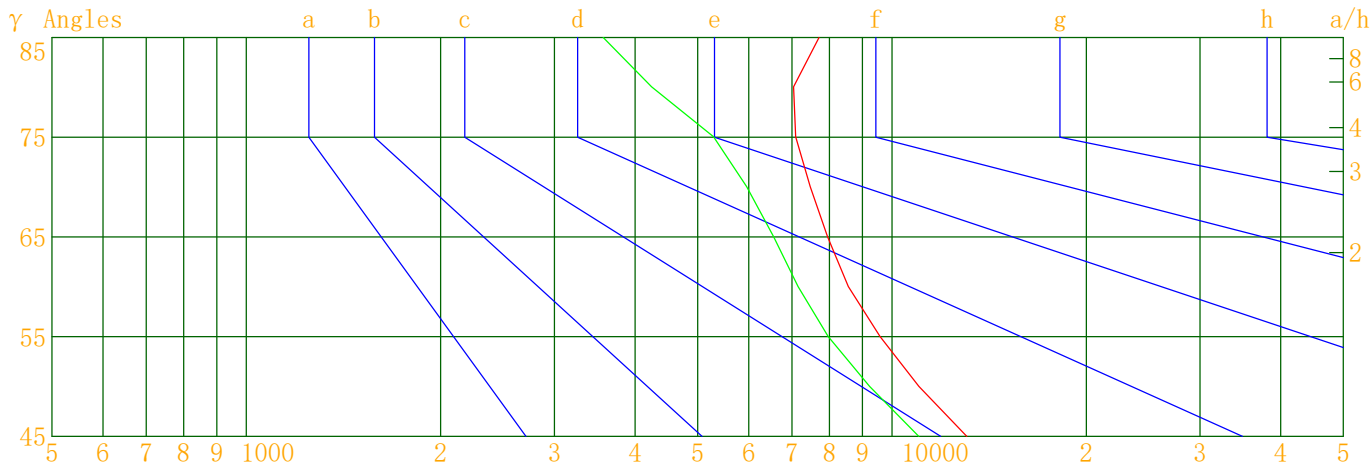
Glare Grade Table

| 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 | 13056 | 11010 | 9583 | 8559 | 7948 | 7472 | 7095 | 7040 | 7709 |
| C90 | 11001 | 9235 | 7965 | 7152 | 6554 | 5956 | 5292 | 4244 | 3571 |

Luminance Limiting Curve



Luminous Size:

Length(m)=-0.076

Width(m)=-0.076

Height(m)=0.000

Area(m^2)=0.004536

Luminous Type:

Without Luminous Side

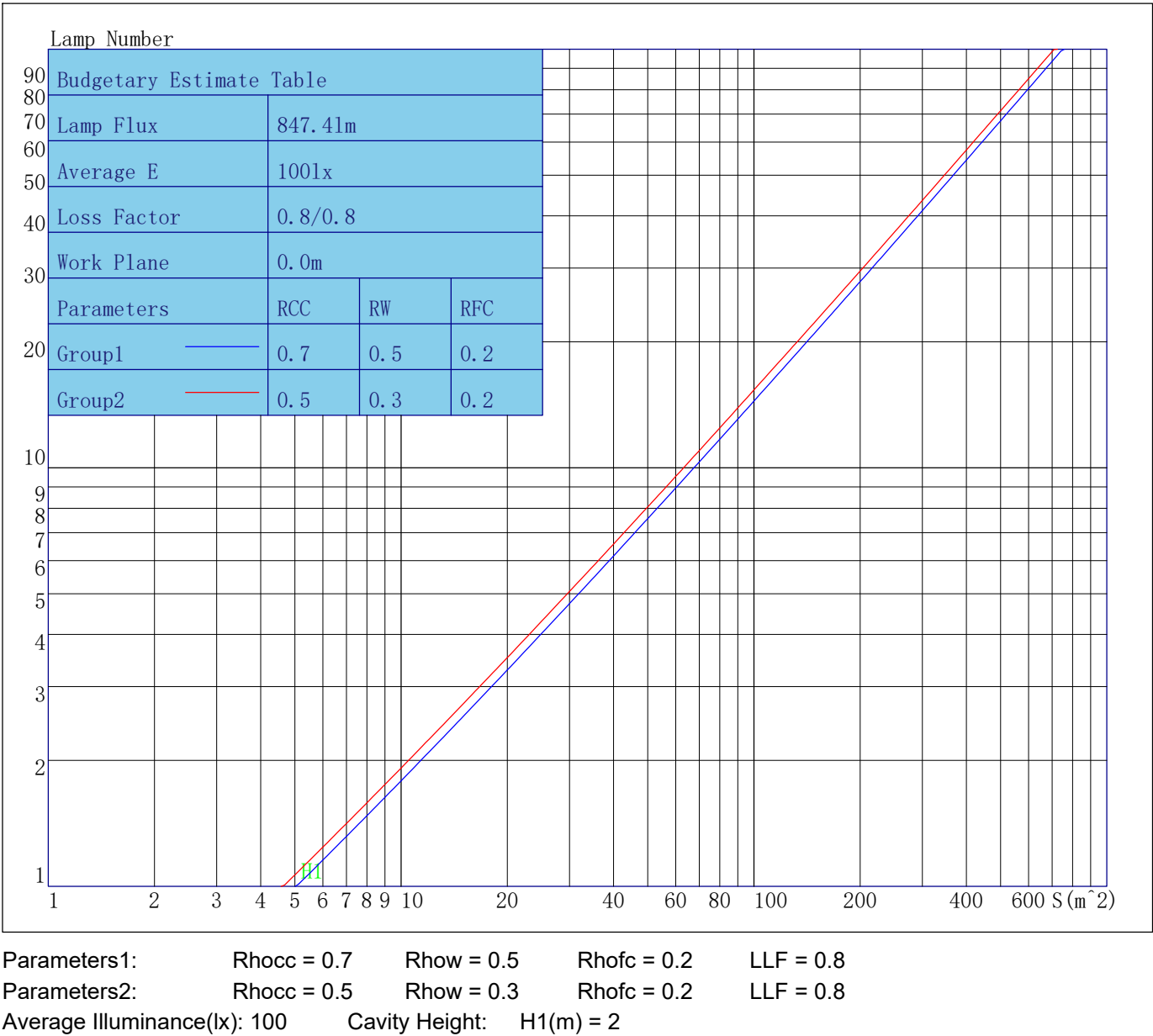
Luminous Curves:

C0-C180 Color: —

C90-C270 Color: —

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2021/10/28 |



Indoor Coefficient of Utilization Table

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |

| 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 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 |
| 2 | 109 | 104 | 101 | 97 | 106 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 93 | 91 | 90 | 88 |
| 3 | 104 | 98 | 94 | 91 | 102 | 97 | 93 | 90 | 94 | 91 | 88 | 92 | 89 | 87 | 89 | 87 | 85 | 84 |
| 4 | 100 | 93 | 89 | 85 | 98 | 92 | 88 | 84 | 90 | 86 | 83 | 88 | 85 | 82 | 86 | 83 | 81 | 80 |
| 5 | 96 | 89 | 84 | 80 | 95 | 88 | 83 | 80 | 86 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 76 |
| 6 | 93 | 85 | 80 | 76 | 91 | 84 | 79 | 76 | 83 | 79 | 75 | 81 | 78 | 75 | 80 | 77 | 74 | 73 |
| 7 | 89 | 82 | 76 | 73 | 88 | 81 | 76 | 73 | 80 | 75 | 72 | 78 | 75 | 72 | 77 | 74 | 71 | 70 |
| 8 | 86 | 78 | 73 | 70 | 85 | 78 | 73 | 70 | 77 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 68 |
| 9 | 83 | 75 | 70 | 67 | 82 | 75 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 66 | 72 | 69 | 66 | 65 |
| 10 | 81 | 73 | 68 | 65 | 80 | 72 | 68 | 65 | 71 | 67 | 64 | 71 | 67 | 64 | 70 | 66 | 64 | 63 |

Unified Glare Rating Table

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR08-09-XX-01 4000K RA90 36D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2021/10/28 |

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 | 15.3 | 16.4 | 15.7 | 16.7 | 17.0 | 14.3 | 15.4 | 14.7 | 15.7 | 16.1 |
| | 16.3 | 17.3 | 16.7 | 17.6 | 18.0 | 15.2 | 16.2 | 15.6 | 16.5 | 16.9 |
| | 16.8 | 17.7 | 17.2 | 18.0 | 18.4 | 15.6 | 16.5 | 16.0 | 16.9 | 17.3 |
| | 17.2 | 18.0 | 17.6 | 18.4 | 18.8 | 15.8 | 16.6 | 16.3 | 17.0 | 17.5 |
| | 17.3 | 18.1 | 17.8 | 18.5 | 18.9 | 15.9 | 16.7 | 16.3 | 17.1 | 17.5 |
| | 17.4 | 18.2 | 17.9 | 18.6 | 19.1 | 15.9 | 16.7 | 16.4 | 17.1 | 17.5 |
| X=4H Y=2H | 15.7 | 16.5 | 16.1 | 16.9 | 17.3 | 14.7 | 15.6 | 15.2 | 16.0 | 16.4 |
| | 16.9 | 17.6 | 17.3 | 18.1 | 18.5 | 15.9 | 16.6 | 16.3 | 17.0 | 17.5 |
| | 17.5 | 18.1 | 17.9 | 18.6 | 19.1 | 16.3 | 17.0 | 16.8 | 17.5 | 17.9 |
| | 18.0 | 18.6 | 18.5 | 19.1 | 19.6 | 16.7 | 17.3 | 17.1 | 17.7 | 18.2 |
| | 18.2 | 18.8 | 18.7 | 19.2 | 19.7 | 16.8 | 17.3 | 17.2 | 17.8 | 18.3 |
| | 18.4 | 18.9 | 18.9 | 19.4 | 19.9 | 16.8 | 17.3 | 17.3 | 17.8 | 18.3 |
| X=8H Y=4H | 17.7 | 18.2 | 18.1 | 18.7 | 19.2 | 16.5 | 17.1 | 17.0 | 17.6 | 18.1 |
| | 18.3 | 18.8 | 18.9 | 19.3 | 19.9 | 17.0 | 17.4 | 17.5 | 18.0 | 18.5 |
| | 18.6 | 19.1 | 19.2 | 19.6 | 20.1 | 17.1 | 17.6 | 17.7 | 18.1 | 18.6 |
| | 18.9 | 19.3 | 19.5 | 19.8 | 20.4 | 17.3 | 17.6 | 17.8 | 18.2 | 18.7 |
| X=12H Y=4H | 17.7 | 18.1 | 18.2 | 18.6 | 19.1 | 16.5 | 17.0 | 17.0 | 17.5 | 18.0 |
| | 18.4 | 18.8 | 18.9 | 19.3 | 19.9 | 17.0 | 17.4 | 17.6 | 17.9 | 18.5 |
| | 18.7 | 19.1 | 19.3 | 19.6 | 20.2 | 17.2 | 17.6 | 17.8 | 18.1 | 18.7 |
| Variations with the objverver position at spacings | | | | | | | | | | |
| S=1.0H | 0.4/-0.4 | | | | | 0.6/-0.6 | | | | |
| S=1.5H | 0.7/-0.8 | | | | | 0.9/-1.1 | | | | |
| S=2.0H | 0.9/-1.0 | | | | | 1.2/-1.5 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 2.5 | | | | | 2.1 | | | | |

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 | 2248.10 | 2248.10 | 2248.10 | 2248.10 |
| γ 1.0 | 2266.96 | 2191.06 | 2253.31 | 2212.85 |
| γ 2.0 | 2254.47 | 2180.91 | 2230.27 | 2220.92 |
| γ 3.0 | 2237.13 | 2165.23 | 2210.94 | 2225.65 |
| γ 4.0 | 2219.26 | 2142.52 | 2197.65 | 2225.36 |
| γ 5.0 | 2196.43 | 2102.77 | 2185.60 | 2218.72 |
| γ 6.0 | 2166.33 | 2049.42 | 2174.95 | 2211.44 |
| γ 7.0 | 2131.41 | 1983.53 | 2148.71 | 2196.74 |
| γ 8.0 | 2090.99 | 1910.22 | 2105.26 | 2180.26 |
| γ 9.0 | 2039.85 | 1828.42 | 2051.53 | 2155.53 |
| γ 10.0 | 1980.39 | 1728.84 | 1987.64 | 2119.00 |
| γ 11.0 | 1908.39 | 1605.96 | 1913.05 | 2070.04 |
| γ 12.0 | 1813.23 | 1467.85 | 1824.02 | 2013.33 |
| γ 13.0 | 1694.67 | 1321.31 | 1719.53 | 1947.98 |
| γ 14.0 | 1557.77 | 1168.29 | 1599.09 | 1863.30 |
| γ 15.0 | 1402.59 | 1014.37 | 1463.95 | 1764.07 |
| γ 16.0 | 1245.99 | 864.14 | 1315.35 | 1642.86 |
| γ 17.0 | 1093.04 | 727.67 | 1160.57 | 1503.26 |
| γ 18.0 | 941.71 | 602.91 | 999.56 | 1342.84 |
| γ 19.0 | 796.24 | 494.14 | 845.48 | 1182.37 |
| γ 20.0 | 662.95 | 401.90 | 704.50 | 1023.13 |
| γ 21.0 | 544.42 | 328.08 | 577.02 | 870.01 |
| γ 22.0 | 443.89 | 269.30 | 467.09 | 727.42 |
| γ 23.0 | 362.21 | 224.72 | 375.84 | 599.24 |
| γ 24.0 | 296.95 | 190.96 | 302.82 | 488.53 |
| γ 25.0 | 247.11 | 165.04 | 246.05 | 396.21 |
| γ 26.0 | 209.01 | 145.03 | 203.93 | 321.45 |
| γ 27.0 | 179.73 | 129.21 | 171.61 | 263.08 |
| γ 28.0 | 157.05 | 116.46 | 146.99 | 218.71 |
| γ 29.0 | 139.17 | 105.81 | 128.11 | 184.80 |
| γ 30.0 | 124.78 | 96.94 | 113.19 | 158.79 |
| γ 31.0 | 112.95 | 89.03 | 100.96 | 138.32 |
| γ 32.0 | 103.05 | 82.23 | 90.94 | 121.99 |
| γ 33.0 | 94.53 | 76.14 | 82.27 | 108.66 |
| γ 34.0 | 87.05 | 70.69 | 74.98 | 97.69 |
| γ 35.0 | 80.53 | 65.80 | 68.62 | 88.19 |
| γ 36.0 | 74.86 | 61.59 | 63.19 | 80.24 |
| γ 37.0 | 69.56 | 57.42 | 58.29 | 73.33 |
| γ 38.0 | 64.89 | 53.69 | 54.15 | 67.34 |
| γ 39.0 | 60.52 | 50.29 | 50.44 | 62.01 |
| γ 40.0 | 56.63 | 47.31 | 47.24 | 57.47 |
| γ 41.0 | 53.11 | 44.45 | 44.35 | 53.47 |
| γ 42.0 | 49.96 | 41.94 | 41.97 | 49.94 |
| γ 43.0 | 47.02 | 39.51 | 39.77 | 46.88 |
| γ 44.0 | 44.30 | 37.36 | 37.82 | 44.12 |
| γ 45.0 | 41.88 | 35.29 | 36.10 | 41.82 |
| γ 46.0 | 39.57 | 33.43 | 34.52 | 39.78 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 37.51 | 31.65 | 33.10 | 37.88 |
| γ 48.0 | 35.56 | 29.99 | 31.77 | 36.21 |
| γ 49.0 | 33.80 | 28.42 | 30.50 | 34.75 |
| γ 50.0 | 32.10 | 26.93 | 29.27 | 33.33 |
| γ 51.0 | 30.57 | 25.57 | 28.12 | 31.98 |
| γ 52.0 | 29.07 | 24.27 | 26.98 | 30.72 |
| γ 53.0 | 27.62 | 23.04 | 25.89 | 29.53 |
| γ 54.0 | 26.22 | 21.83 | 24.84 | 28.33 |
| γ 55.0 | 24.94 | 20.73 | 23.83 | 27.23 |
| γ 56.0 | 23.70 | 19.64 | 22.83 | 26.11 |
| γ 57.0 | 22.50 | 18.73 | 21.89 | 25.10 |
| γ 58.0 | 21.36 | 17.86 | 20.92 | 24.04 |
| γ 59.0 | 20.36 | 17.04 | 20.05 | 23.08 |
| γ 60.0 | 19.41 | 16.22 | 19.16 | 22.10 |
| γ 61.0 | 18.52 | 15.46 | 18.29 | 21.16 |
| γ 62.0 | 17.66 | 14.70 | 17.46 | 20.24 |
| γ 63.0 | 16.83 | 13.97 | 16.65 | 19.37 |
| γ 64.0 | 16.01 | 13.26 | 15.86 | 18.50 |
| γ 65.0 | 15.24 | 12.56 | 15.10 | 17.65 |
| γ 66.0 | 14.45 | 11.86 | 14.33 | 16.84 |
| γ 67.0 | 13.70 | 11.18 | 13.60 | 16.01 |
| γ 68.0 | 13.00 | 10.54 | 12.86 | 15.27 |
| γ 69.0 | 12.27 | 9.90 | 12.15 | 14.50 |
| γ 70.0 | 11.59 | 9.24 | 11.44 | 13.75 |
| γ 71.0 | 10.92 | 8.60 | 10.75 | 13.02 |
| γ 72.0 | 10.29 | 7.97 | 10.08 | 12.30 |
| γ 73.0 | 9.60 | 7.34 | 9.43 | 11.60 |
| γ 74.0 | 8.98 | 6.78 | 8.79 | 10.96 |
| γ 75.0 | 8.33 | 6.21 | 8.12 | 10.27 |
| γ 76.0 | 7.73 | 5.64 | 7.46 | 9.58 |
| γ 77.0 | 7.17 | 5.03 | 6.81 | 8.90 |
| γ 78.0 | 6.65 | 4.42 | 6.24 | 8.25 |
| γ 79.0 | 6.12 | 3.89 | 5.69 | 7.65 |
| γ 80.0 | 5.55 | 3.34 | 5.03 | 7.12 |
| γ 81.0 | 5.03 | 2.93 | 4.44 | 6.59 |
| γ 82.0 | 4.51 | 2.66 | 3.90 | 5.98 |
| γ 83.0 | 3.90 | 2.38 | 3.09 | 5.32 |
| γ 84.0 | 3.48 | 1.89 | 2.58 | 4.78 |
| γ 85.0 | 3.05 | 1.41 | 2.21 | 4.11 |
| γ 86.0 | 2.56 | 1.20 | 1.85 | 3.59 |
| γ 87.0 | 2.18 | 1.03 | 1.54 | 3.14 |
| γ 88.0 | 1.92 | 0.97 | 1.23 | 2.63 |
| γ 89.0 | 1.67 | 0.92 | 1.05 | 2.20 |
| γ 90.0 | 1.57 | 0.86 | 0.96 | 1.90 |
| γ 91.0 | 1.49 | 0.80 | 0.89 | 1.68 |
| γ 92.0 | 1.41 | 0.76 | 0.82 | 1.54 |
| γ 93.0 | 1.35 | 0.71 | 0.76 | 1.45 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 1.28 | 0.67 | 0.69 | 1.36 |
| γ 95.0 | 1.22 | 0.63 | 0.64 | 1.28 |
| γ 96.0 | 1.16 | 0.59 | 0.59 | 1.20 |
| γ 97.0 | 1.12 | 0.56 | 0.54 | 1.13 |
| γ 98.0 | 1.05 | 0.52 | 0.49 | 1.06 |
| γ 99.0 | 1.01 | 0.48 | 0.45 | 1.00 |
| γ 100.0 | 0.97 | 0.45 | 0.43 | 0.94 |
| γ 101.0 | 0.93 | 0.41 | 0.39 | 0.89 |
| γ 102.0 | 0.88 | 0.38 | 0.36 | 0.85 |
| γ 103.0 | 0.83 | 0.35 | 0.33 | 0.80 |
| γ 104.0 | 0.79 | 0.32 | 0.31 | 0.76 |
| γ 105.0 | 0.74 | 0.27 | 0.29 | 0.72 |
| γ 106.0 | 0.69 | 0.25 | 0.27 | 0.68 |
| γ 107.0 | 0.64 | 0.21 | 0.25 | 0.65 |
| γ 108.0 | 0.61 | 0.18 | 0.23 | 0.62 |
| γ 109.0 | 0.56 | 0.15 | 0.23 | 0.59 |
| γ 110.0 | 0.52 | 0.12 | 0.22 | 0.56 |
| γ 111.0 | 0.49 | 0.10 | 0.22 | 0.55 |
| γ 112.0 | 0.45 | 0.08 | 0.20 | 0.52 |
| γ 113.0 | 0.42 | 0.07 | 0.20 | 0.50 |
| γ 114.0 | 0.39 | 0.05 | 0.21 | 0.50 |
| γ 115.0 | 0.36 | 0.05 | 0.21 | 0.49 |
| γ 116.0 | 0.34 | 0.03 | 0.22 | 0.48 |
| γ 117.0 | 0.32 | 0.03 | 0.22 | 0.47 |
| γ 118.0 | 0.30 | 0.03 | 0.22 | 0.47 |
| γ 119.0 | 0.30 | 0.05 | 0.24 | 0.46 |
| γ 120.0 | 0.29 | 0.06 | 0.25 | 0.46 |
| γ 121.0 | 0.28 | 0.08 | 0.28 | 0.47 |
| γ 122.0 | 0.28 | 0.10 | 0.30 | 0.47 |
| γ 123.0 | 0.29 | 0.14 | 0.33 | 0.48 |
| γ 124.0 | 0.30 | 0.19 | 0.36 | 0.50 |
| γ 125.0 | 0.33 | 0.25 | 0.42 | 0.51 |
| γ 126.0 | 0.37 | 0.30 | 0.49 | 0.55 |
| γ 127.0 | 0.42 | 0.39 | 0.55 | 0.59 |
| γ 128.0 | 0.47 | 0.49 | 0.64 | 0.65 |
| γ 129.0 | 0.55 | 0.59 | 0.73 | 0.70 |
| γ 130.0 | 0.63 | 0.71 | 0.85 | 0.78 |
| γ 131.0 | 0.73 | 0.85 | 0.97 | 0.86 |
| γ 132.0 | 0.85 | 0.99 | 1.09 | 0.95 |
| γ 133.0 | 0.97 | 1.14 | 1.22 | 1.05 |
| γ 134.0 | 1.11 | 1.30 | 1.36 | 1.17 |
| γ 135.0 | 1.25 | 1.45 | 1.50 | 1.29 |
| γ 136.0 | 1.39 | 1.63 | 1.66 | 1.41 |
| γ 137.0 | 1.55 | 1.80 | 1.81 | 1.56 |
| γ 138.0 | 1.71 | 1.97 | 1.98 | 1.70 |
| γ 139.0 | 1.88 | 2.15 | 2.14 | 1.84 |
| γ 140.0 | 2.04 | 2.31 | 2.31 | 2.00 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 2.23 | 2.48 | 2.47 | 2.16 |
| γ 142.0 | 2.39 | 2.65 | 2.65 | 2.31 |
| γ 143.0 | 2.56 | 2.82 | 2.83 | 2.47 |
| γ 144.0 | 2.74 | 2.98 | 3.00 | 2.64 |
| γ 145.0 | 2.91 | 3.14 | 3.17 | 2.80 |
| γ 146.0 | 3.08 | 3.29 | 3.36 | 2.96 |
| γ 147.0 | 3.25 | 3.43 | 3.50 | 3.13 |
| γ 148.0 | 3.40 | 3.58 | 3.67 | 3.28 |
| γ 149.0 | 3.56 | 3.73 | 3.83 | 3.43 |
| γ 150.0 | 3.71 | 3.86 | 3.99 | 3.60 |
| γ 151.0 | 3.87 | 3.98 | 4.14 | 3.74 |
| γ 152.0 | 4.00 | 4.12 | 4.28 | 3.90 |
| γ 153.0 | 4.14 | 4.23 | 4.42 | 4.04 |
| γ 154.0 | 4.28 | 4.34 | 4.54 | 4.19 |
| γ 155.0 | 4.40 | 4.43 | 4.65 | 4.32 |
| γ 156.0 | 4.50 | 4.51 | 4.77 | 4.44 |
| γ 157.0 | 4.60 | 4.58 | 4.86 | 4.56 |
| γ 158.0 | 4.70 | 4.63 | 4.95 | 4.66 |
| γ 159.0 | 4.76 | 4.67 | 5.00 | 4.77 |
| γ 160.0 | 4.82 | 4.69 | 5.06 | 4.84 |
| γ 161.0 | 4.87 | 4.71 | 5.10 | 4.91 |
| γ 162.0 | 4.90 | 4.70 | 5.11 | 4.96 |
| γ 163.0 | 4.91 | 4.70 | 5.12 | 5.00 |
| γ 164.0 | 4.91 | 4.66 | 5.12 | 5.02 |
| γ 165.0 | 4.92 | 4.65 | 5.11 | 5.03 |
| γ 166.0 | 4.90 | 4.64 | 5.08 | 5.02 |
| γ 167.0 | 4.90 | 4.63 | 5.05 | 5.01 |
| γ 168.0 | 4.87 | 4.63 | 5.02 | 4.98 |
| γ 169.0 | 4.87 | 4.64 | 4.98 | 4.96 |
| γ 170.0 | 4.86 | 4.65 | 4.95 | 4.92 |
| γ 171.0 | 4.86 | 4.69 | 4.91 | 4.90 |
| γ 172.0 | 4.87 | 4.71 | 4.90 | 4.87 |
| γ 173.0 | 4.88 | 4.75 | 4.89 | 4.86 |
| γ 174.0 | 4.89 | 4.80 | 4.88 | 4.84 |
| γ 175.0 | 4.90 | 4.84 | 4.89 | 4.85 |
| γ 176.0 | 4.93 | 4.87 | 4.89 | 4.87 |
| γ 177.0 | 4.93 | 4.91 | 4.90 | 4.88 |
| γ 178.0 | 4.94 | 4.90 | 4.91 | 4.91 |
| γ 179.0 | 4.93 | 4.91 | 4.93 | 4.93 |
| γ 180.0 | 4.92 | 4.92 | 4.92 | 4.92 |