

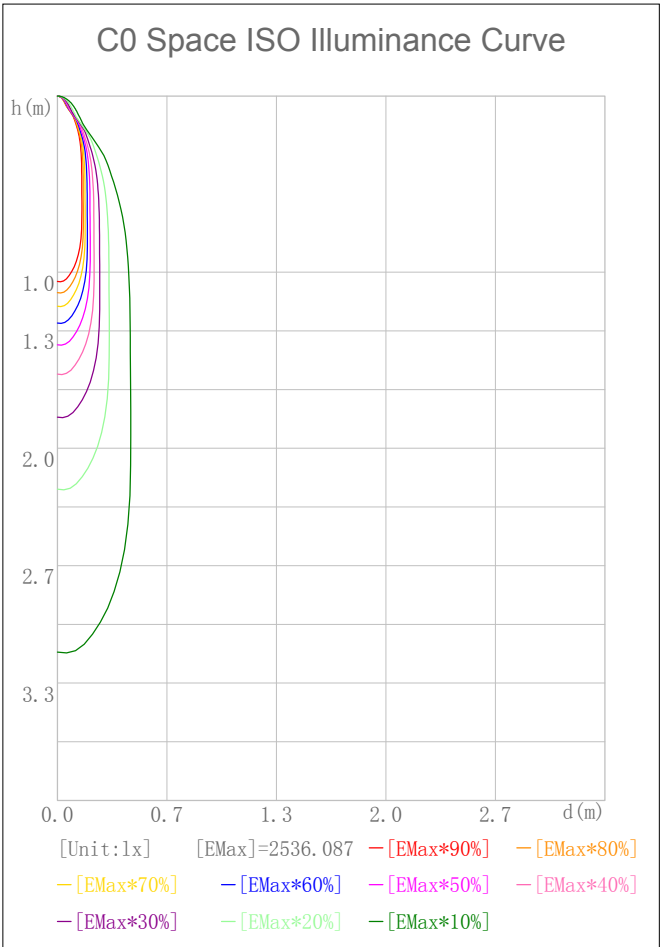
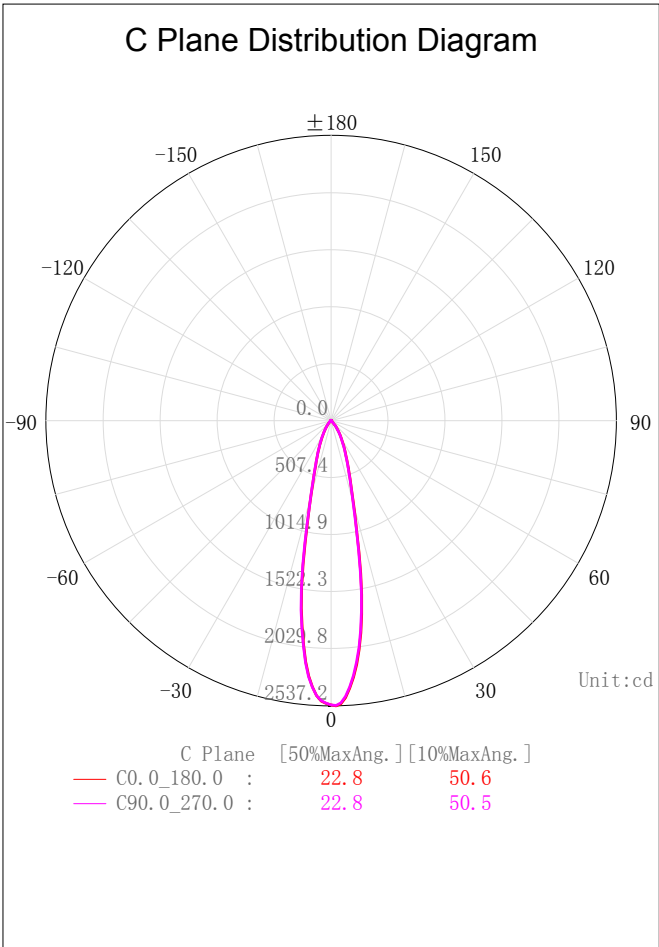
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name:SD02-08-XX-01 3000K RA90 24D | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2021/04/29 |
| 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):0.050m*0.000m*0.000m | | Lum. Area (m2):0.002 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=1.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

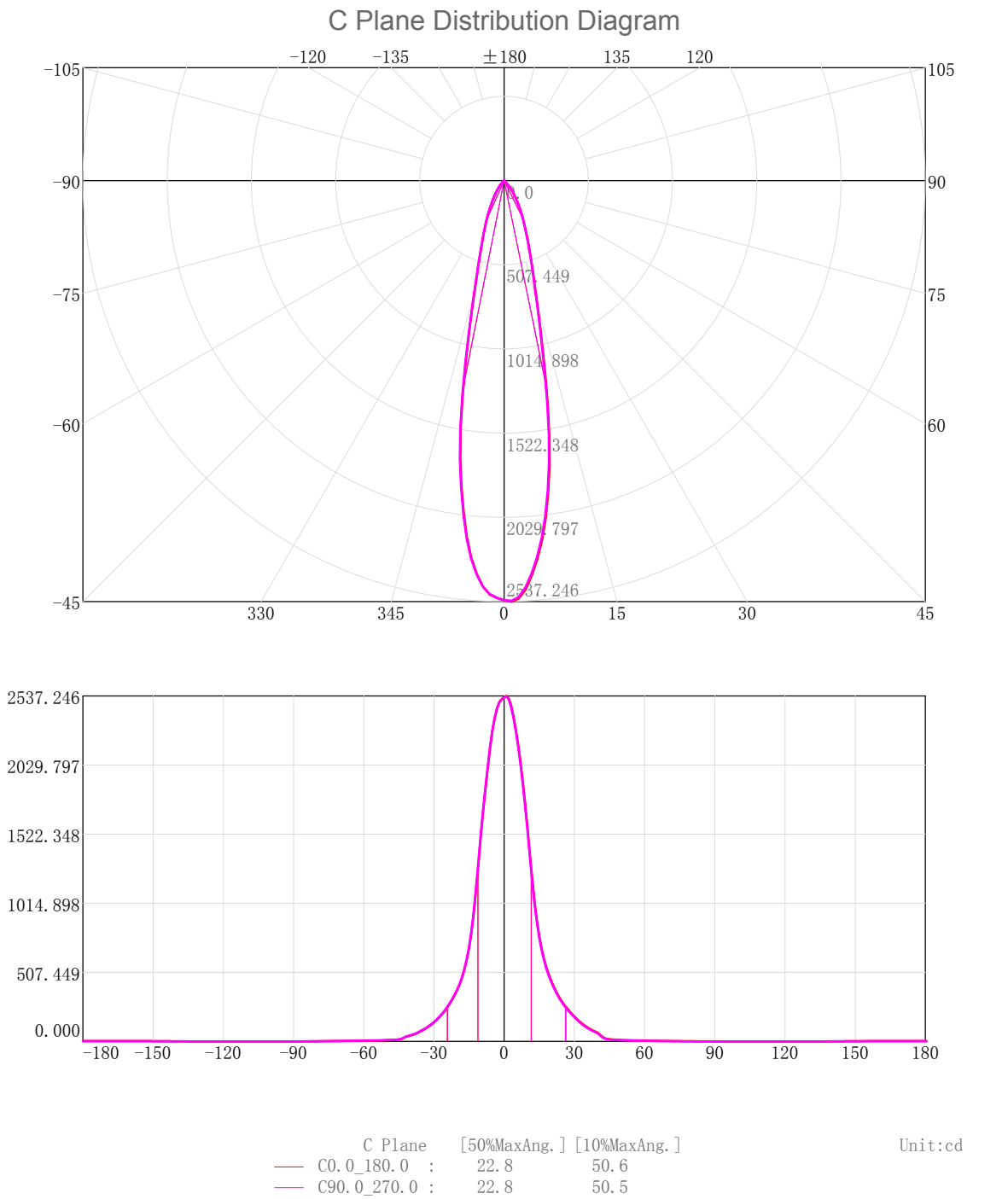
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|--------------------------------|---------------------------------------|--|
| Rated Flux(lm): 625.710 | Luminary Flux(lm): 625.709 | Field Angle(10%Imax): 50.6(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 621.916lm 99.39% | |
| Rated Voltage(V): | Luminary EER(lm/W): 79.993 | Up Lumens&Percent: 3.793lm 0.61% | |
| Tested Power(W): 7.822 | Max. Candela(cd): 2537.246 | S/MH: C0_a180=0.390 C90_270=0.390 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=1.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):240.3, 0.035, 0.909 | Beam Angle(50%Imax): 22.8(°) | ErP Φ use(90°): 600.238lm | |
| Lamp Size (W*L*H):0.050m*0.000m*0.000m | Left=-11.2°, Right=11.6° | IRF(%): 837.391 | |



2D Plane Light Intensity Distribution Curve

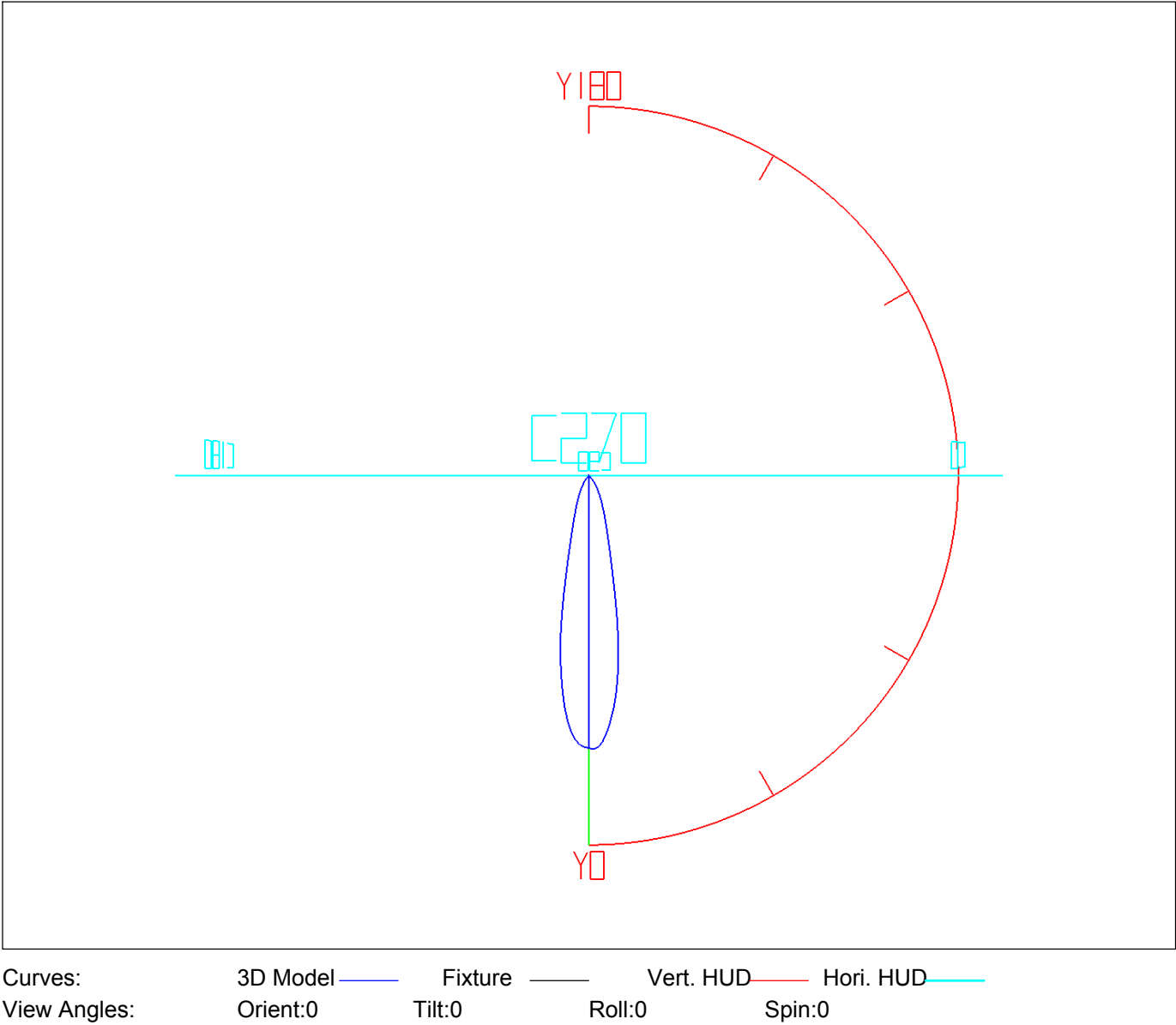
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:SD02-08-XX-01 3000K RA90 24D | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date:2021/04/29 |



3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

3D Light Intensity Distribution Modal



Zonal Flux Tabulation

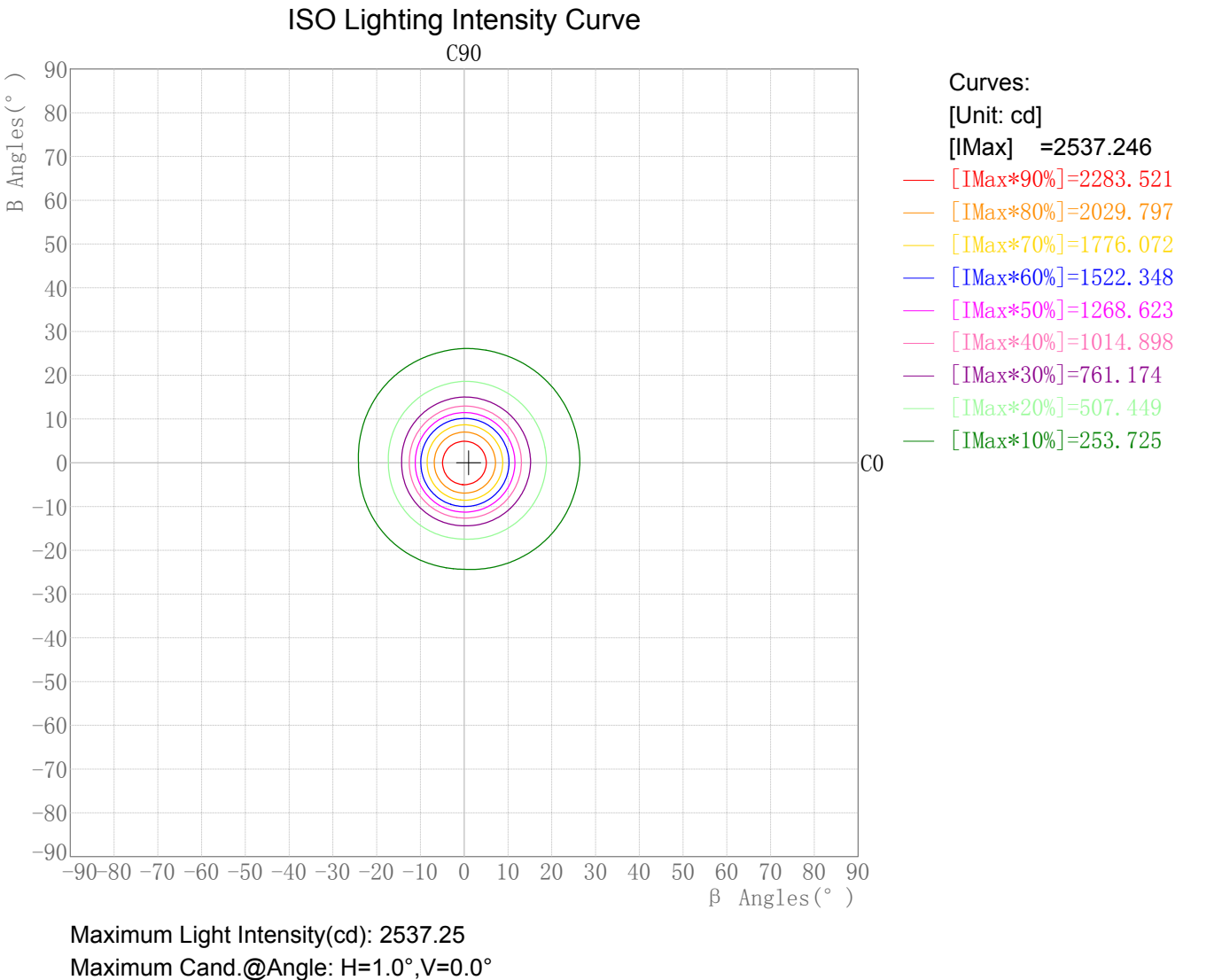
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 2.42 | 2.42 | 0.39 | 0.39 | 47.0-48.0 | 0.97 | 605.18 | 0.16 | 96.72 |
| 1.0-2.0 | 7.22 | 9.64 | 1.15 | 1.54 | 48.0-49.0 | 0.92 | 606.10 | 0.15 | 96.87 |
| 2.0-3.0 | 11.86 | 21.50 | 1.90 | 3.44 | 49.0-50.0 | 0.87 | 606.97 | 0.14 | 97.01 |
| 3.0-4.0 | 16.18 | 37.67 | 2.59 | 6.02 | 50.0-51.0 | 0.82 | 607.80 | 0.13 | 97.14 |
| 4.0-5.0 | 20.05 | 57.72 | 3.20 | 9.22 | 51.0-52.0 | 0.78 | 608.58 | 0.12 | 97.26 |
| 5.0-6.0 | 23.38 | 81.10 | 3.74 | 12.96 | 52.0-53.0 | 0.74 | 609.32 | 0.12 | 97.38 |
| 6.0-7.0 | 26.03 | 107.12 | 4.16 | 17.12 | 53.0-54.0 | 0.71 | 610.03 | 0.11 | 97.49 |
| 7.0-8.0 | 27.94 | 135.07 | 4.47 | 21.59 | 54.0-55.0 | 0.68 | 610.71 | 0.11 | 97.60 |
| 8.0-9.0 | 29.11 | 164.18 | 4.65 | 26.24 | 55.0-56.0 | 0.66 | 611.37 | 0.11 | 97.71 |
| 9.0-10.0 | 29.43 | 193.61 | 4.70 | 30.94 | 56.0-57.0 | 0.64 | 612.01 | 0.10 | 97.81 |
| 10.0-11.0 | 28.76 | 222.36 | 4.60 | 35.54 | 57.0-58.0 | 0.61 | 612.62 | 0.10 | 97.91 |
| 11.0-12.0 | 27.22 | 249.58 | 4.35 | 39.89 | 58.0-59.0 | 0.59 | 613.21 | 0.09 | 98.00 |
| 12.0-13.0 | 25.26 | 274.84 | 4.04 | 43.92 | 59.0-60.0 | 0.57 | 613.78 | 0.09 | 98.09 |
| 13.0-14.0 | 23.30 | 298.14 | 3.72 | 47.65 | 60.0-61.0 | 0.55 | 614.33 | 0.09 | 98.18 |
| 14.0-15.0 | 21.55 | 319.68 | 3.44 | 51.09 | 61.0-62.0 | 0.53 | 614.85 | 0.08 | 98.26 |
| 15.0-16.0 | 20.06 | 339.74 | 3.21 | 54.30 | 62.0-63.0 | 0.51 | 615.36 | 0.08 | 98.35 |
| 16.0-17.0 | 18.80 | 358.54 | 3.00 | 57.30 | 63.0-64.0 | 0.49 | 615.85 | 0.08 | 98.42 |
| 17.0-18.0 | 17.73 | 376.27 | 2.83 | 60.13 | 64.0-65.0 | 0.47 | 616.32 | 0.07 | 98.50 |
| 18.0-19.0 | 16.79 | 393.05 | 2.68 | 62.82 | 65.0-66.0 | 0.45 | 616.77 | 0.07 | 98.57 |
| 19.0-20.0 | 15.94 | 408.99 | 2.55 | 65.36 | 66.0-67.0 | 0.43 | 617.20 | 0.07 | 98.64 |
| 20.0-21.0 | 15.17 | 424.17 | 2.43 | 67.79 | 67.0-68.0 | 0.41 | 617.61 | 0.07 | 98.71 |
| 21.0-22.0 | 14.45 | 438.62 | 2.31 | 70.10 | 68.0-69.0 | 0.39 | 618.00 | 0.06 | 98.77 |
| 22.0-23.0 | 13.73 | 452.35 | 2.19 | 72.29 | 69.0-70.0 | 0.38 | 618.38 | 0.06 | 98.83 |
| 23.0-24.0 | 13.04 | 465.39 | 2.08 | 74.38 | 70.0-71.0 | 0.36 | 618.73 | 0.06 | 98.89 |
| 24.0-25.0 | 12.36 | 477.75 | 1.98 | 76.35 | 71.0-72.0 | 0.33 | 619.07 | 0.05 | 98.94 |
| 25.0-26.0 | 11.71 | 489.45 | 1.87 | 78.22 | 72.0-73.0 | 0.31 | 619.38 | 0.05 | 98.99 |
| 26.0-27.0 | 11.06 | 500.51 | 1.77 | 79.99 | 73.0-74.0 | 0.29 | 619.68 | 0.05 | 99.04 |
| 27.0-28.0 | 10.42 | 510.93 | 1.66 | 81.66 | 74.0-75.0 | 0.27 | 619.95 | 0.04 | 99.08 |
| 28.0-29.0 | 9.78 | 520.71 | 1.56 | 83.22 | 75.0-76.0 | 0.25 | 620.20 | 0.04 | 99.12 |
| 29.0-30.0 | 9.16 | 529.87 | 1.46 | 84.68 | 76.0-77.0 | 0.23 | 620.43 | 0.04 | 99.16 |
| 30.0-31.0 | 8.54 | 538.41 | 1.37 | 86.05 | 77.0-78.0 | 0.21 | 620.65 | 0.03 | 99.19 |
| 31.0-32.0 | 7.94 | 546.35 | 1.27 | 87.32 | 78.0-79.0 | 0.20 | 620.84 | 0.03 | 99.22 |
| 32.0-33.0 | 7.35 | 553.70 | 1.18 | 88.49 | 79.0-80.0 | 0.18 | 621.02 | 0.03 | 99.25 |
| 33.0-34.0 | 6.79 | 560.49 | 1.09 | 89.58 | 80.0-81.0 | 0.16 | 621.18 | 0.03 | 99.28 |
| 34.0-35.0 | 6.24 | 566.73 | 1.00 | 90.57 | 81.0-82.0 | 0.14 | 621.32 | 0.02 | 99.30 |
| 35.0-36.0 | 5.72 | 572.45 | 0.91 | 91.49 | 82.0-83.0 | 0.13 | 621.45 | 0.02 | 99.32 |
| 36.0-37.0 | 5.23 | 577.69 | 0.84 | 92.32 | 83.0-84.0 | 0.11 | 621.56 | 0.02 | 99.34 |
| 37.0-38.0 | 4.77 | 582.45 | 0.76 | 93.09 | 84.0-85.0 | 0.09 | 621.65 | 0.02 | 99.35 |
| 38.0-39.0 | 4.36 | 586.82 | 0.70 | 93.78 | 85.0-86.0 | 0.08 | 621.73 | 0.01 | 99.36 |
| 39.0-40.0 | 3.98 | 590.79 | 0.64 | 94.42 | 86.0-87.0 | 0.06 | 621.80 | 0.01 | 99.37 |
| 40.0-41.0 | 3.47 | 594.26 | 0.55 | 94.97 | 87.0-88.0 | 0.05 | 621.85 | 0.01 | 99.38 |
| 41.0-42.0 | 2.82 | 597.08 | 0.45 | 95.42 | 88.0-89.0 | 0.04 | 621.89 | 0.01 | 99.39 |
| 42.0-43.0 | 2.14 | 599.22 | 0.34 | 95.77 | 89.0-90.0 | 0.03 | 621.92 | 0.00 | 99.39 |
| 43.0-44.0 | 1.58 | 600.80 | 0.25 | 96.02 | 90.0-91.0 | 0.02 | 621.94 | 0.00 | 99.40 |
| 44.0-45.0 | 1.25 | 602.05 | 0.20 | 96.22 | 91.0-92.0 | 0.02 | 621.96 | 0.00 | 99.40 |
| 45.0-46.0 | 1.12 | 603.17 | 0.18 | 96.40 | 92.0-93.0 | 0.01 | 621.97 | 0.00 | 99.40 |
| 46.0-47.0 | 1.04 | 604.21 | 0.17 | 96.56 | 93.0-94.0 | 0.01 | 621.98 | 0.00 | 99.40 |

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 | 0.01 | 621.99 | 0.00 | 99.41 | 141.0-142.0 | 0.08 | 622.44 | 0.01 | 99.48 |
| 95.0-96.0 | 0.01 | 622.00 | 0.00 | 99.41 | 142.0-143.0 | 0.09 | 622.53 | 0.01 | 99.49 |
| 96.0-97.0 | 0.00 | 622.00 | 0.00 | 99.41 | 143.0-144.0 | 0.09 | 622.62 | 0.02 | 99.51 |
| 97.0-98.0 | 0.00 | 622.00 | 0.00 | 99.41 | 144.0-145.0 | 0.10 | 622.72 | 0.02 | 99.52 |
| 98.0-99.0 | 0.00 | 622.00 | 0.00 | 99.41 | 145.0-146.0 | 0.11 | 622.83 | 0.02 | 99.54 |
| 99.0-100.0 | 0.00 | 622.00 | 0.00 | 99.41 | 146.0-147.0 | 0.11 | 622.94 | 0.02 | 99.56 |
| 100.0-101.0 | 0.00 | 622.00 | 0.00 | 99.41 | 147.0-148.0 | 0.12 | 623.06 | 0.02 | 99.58 |
| 101.0-102.0 | 0.00 | 622.00 | 0.00 | 99.41 | 148.0-149.0 | 0.12 | 623.18 | 0.02 | 99.60 |
| 102.0-103.0 | 0.00 | 622.00 | 0.00 | 99.41 | 149.0-150.0 | 0.12 | 623.30 | 0.02 | 99.62 |
| 103.0-104.0 | 0.00 | 622.00 | 0.00 | 99.41 | 150.0-151.0 | 0.13 | 623.43 | 0.02 | 99.64 |
| 104.0-105.0 | 0.00 | 622.00 | 0.00 | 99.41 | 151.0-152.0 | 0.13 | 623.56 | 0.02 | 99.66 |
| 105.0-106.0 | 0.00 | 622.00 | 0.00 | 99.41 | 152.0-153.0 | 0.13 | 623.69 | 0.02 | 99.68 |
| 106.0-107.0 | 0.00 | 622.00 | 0.00 | 99.41 | 153.0-154.0 | 0.13 | 623.81 | 0.02 | 99.70 |
| 107.0-108.0 | 0.00 | 622.00 | 0.00 | 99.41 | 154.0-155.0 | 0.13 | 623.94 | 0.02 | 99.72 |
| 108.0-109.0 | 0.00 | 622.00 | 0.00 | 99.41 | 155.0-156.0 | 0.12 | 624.06 | 0.02 | 99.74 |
| 109.0-110.0 | 0.00 | 622.00 | 0.00 | 99.41 | 156.0-157.0 | 0.12 | 624.19 | 0.02 | 99.76 |
| 110.0-111.0 | 0.00 | 622.00 | 0.00 | 99.41 | 157.0-158.0 | 0.12 | 624.31 | 0.02 | 99.78 |
| 111.0-112.0 | 0.00 | 622.00 | 0.00 | 99.41 | 158.0-159.0 | 0.12 | 624.42 | 0.02 | 99.79 |
| 112.0-113.0 | 0.00 | 622.00 | 0.00 | 99.41 | 159.0-160.0 | 0.11 | 624.54 | 0.02 | 99.81 |
| 113.0-114.0 | 0.00 | 622.00 | 0.00 | 99.41 | 160.0-161.0 | 0.11 | 624.64 | 0.02 | 99.83 |
| 114.0-115.0 | 0.00 | 622.00 | 0.00 | 99.41 | 161.0-162.0 | 0.11 | 624.75 | 0.02 | 99.85 |
| 115.0-116.0 | 0.00 | 622.00 | 0.00 | 99.41 | 162.0-163.0 | 0.10 | 624.85 | 0.02 | 99.86 |
| 116.0-117.0 | 0.00 | 622.00 | 0.00 | 99.41 | 163.0-164.0 | 0.10 | 624.95 | 0.02 | 99.88 |
| 117.0-118.0 | 0.00 | 622.00 | 0.00 | 99.41 | 164.0-165.0 | 0.09 | 625.04 | 0.01 | 99.89 |
| 118.0-119.0 | 0.00 | 622.00 | 0.00 | 99.41 | 165.0-166.0 | 0.09 | 625.12 | 0.01 | 99.91 |
| 119.0-120.0 | 0.00 | 622.00 | 0.00 | 99.41 | 166.0-167.0 | 0.08 | 625.21 | 0.01 | 99.92 |
| 120.0-121.0 | 0.00 | 622.00 | 0.00 | 99.41 | 167.0-168.0 | 0.07 | 625.28 | 0.01 | 99.93 |
| 121.0-122.0 | 0.00 | 622.00 | 0.00 | 99.41 | 168.0-169.0 | 0.07 | 625.35 | 0.01 | 99.94 |
| 122.0-123.0 | 0.00 | 622.00 | 0.00 | 99.41 | 169.0-170.0 | 0.06 | 625.41 | 0.01 | 99.95 |
| 123.0-124.0 | 0.00 | 622.00 | 0.00 | 99.41 | 170.0-171.0 | 0.06 | 625.47 | 0.01 | 99.96 |
| 124.0-125.0 | 0.00 | 622.00 | 0.00 | 99.41 | 171.0-172.0 | 0.05 | 625.52 | 0.01 | 99.97 |
| 125.0-126.0 | 0.00 | 622.00 | 0.00 | 99.41 | 172.0-173.0 | 0.04 | 625.57 | 0.01 | 99.98 |
| 126.0-127.0 | 0.00 | 622.00 | 0.00 | 99.41 | 173.0-174.0 | 0.04 | 625.60 | 0.01 | 99.98 |
| 127.0-128.0 | 0.00 | 622.00 | 0.00 | 99.41 | 174.0-175.0 | 0.03 | 625.64 | 0.01 | 99.99 |
| 128.0-129.0 | 0.00 | 622.00 | 0.00 | 99.41 | 175.0-176.0 | 0.03 | 625.66 | 0.00 | 99.99 |
| 129.0-130.0 | 0.00 | 622.00 | 0.00 | 99.41 | 176.0-177.0 | 0.02 | 625.68 | 0.00 | 100.00 |
| 130.0-131.0 | 0.00 | 622.01 | 0.00 | 99.41 | 177.0-178.0 | 0.01 | 625.70 | 0.00 | 100.00 |
| 131.0-132.0 | 0.01 | 622.01 | 0.00 | 99.41 | 178.0-179.0 | 0.01 | 625.71 | 0.00 | 100.00 |
| 132.0-133.0 | 0.01 | 622.02 | 0.00 | 99.41 | 179.0-180.0 | 0.00 | 625.71 | 0.00 | 100.00 |
| 133.0-134.0 | 0.01 | 622.04 | 0.00 | 99.41 | | | | | |
| 134.0-135.0 | 0.02 | 622.06 | 0.00 | 99.42 | | | | | |
| 135.0-136.0 | 0.03 | 622.09 | 0.00 | 99.42 | | | | | |
| 136.0-137.0 | 0.04 | 622.12 | 0.01 | 99.43 | | | | | |
| 137.0-138.0 | 0.05 | 622.17 | 0.01 | 99.43 | | | | | |
| 138.0-139.0 | 0.05 | 622.22 | 0.01 | 99.44 | | | | | |
| 139.0-140.0 | 0.06 | 622.29 | 0.01 | 99.45 | | | | | |
| 140.0-141.0 | 0.07 | 622.36 | 0.01 | 99.46 | | | | | |

Rectangle ISO Lighting Intensity Diagram

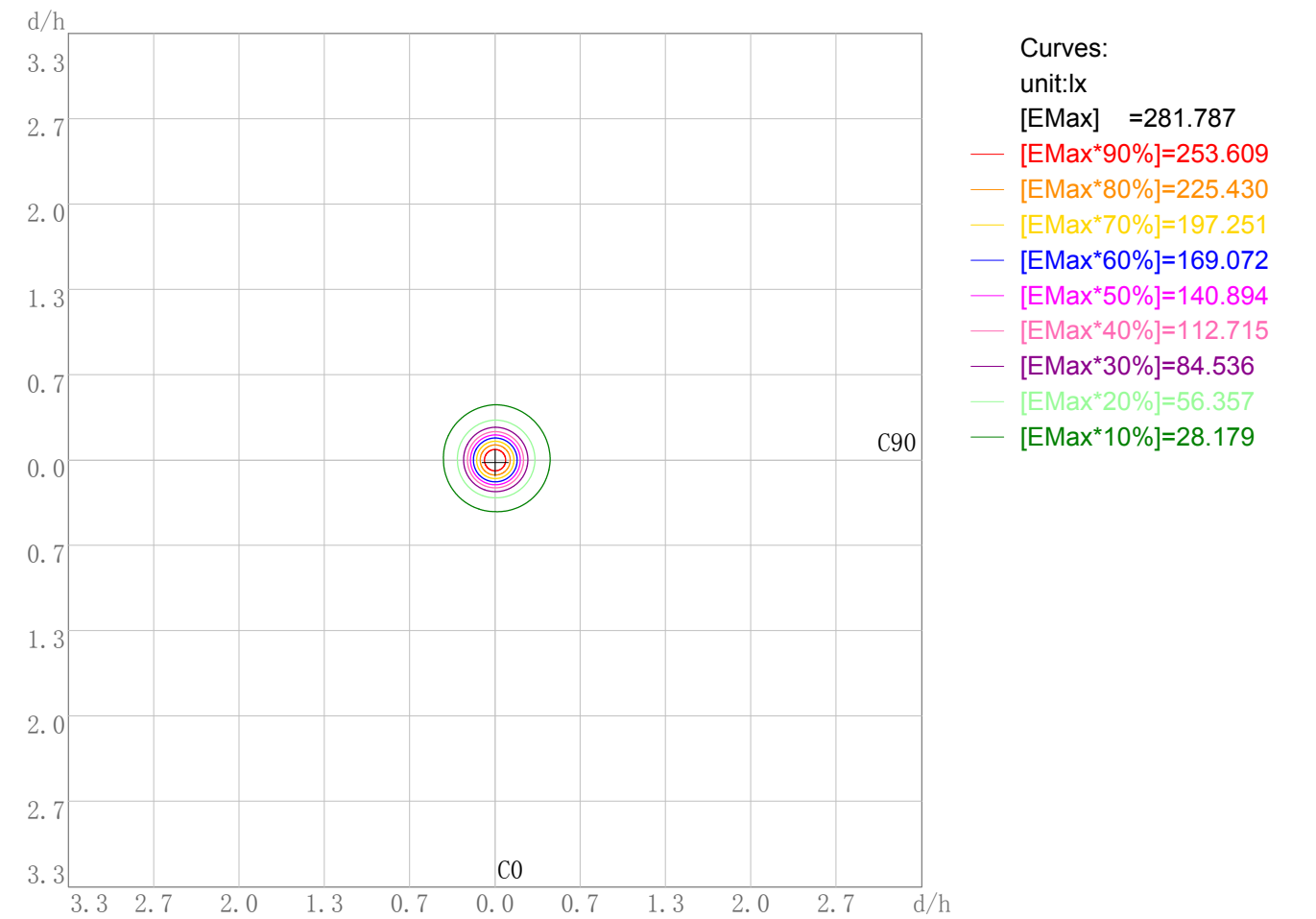
| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2021/04/29 |



Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 281.79

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

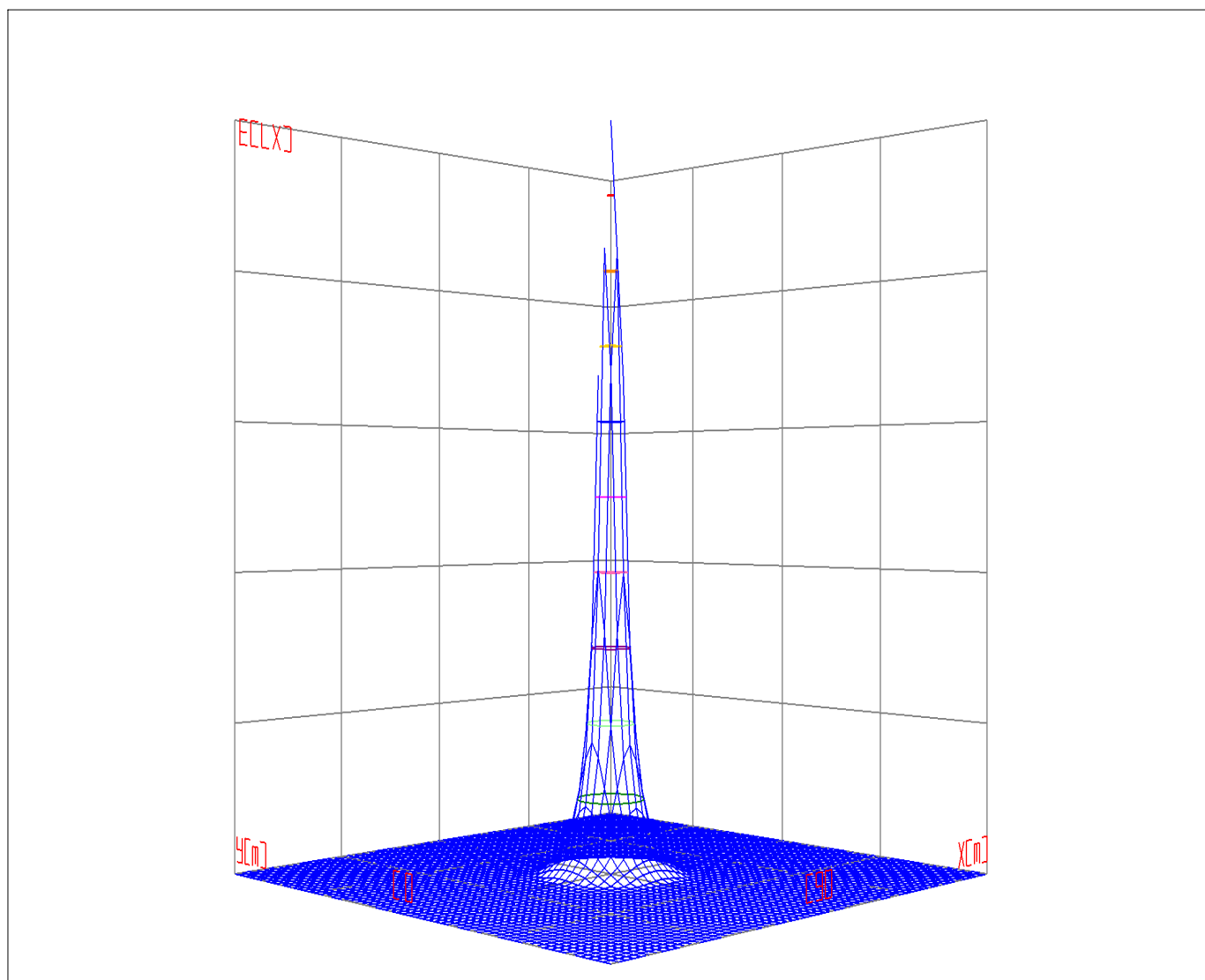
IES Indoor Report

Photometric Filename:SD02-08-XX-01 3000K RA90 24D.IES

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

3D Plane Illuminance Modal

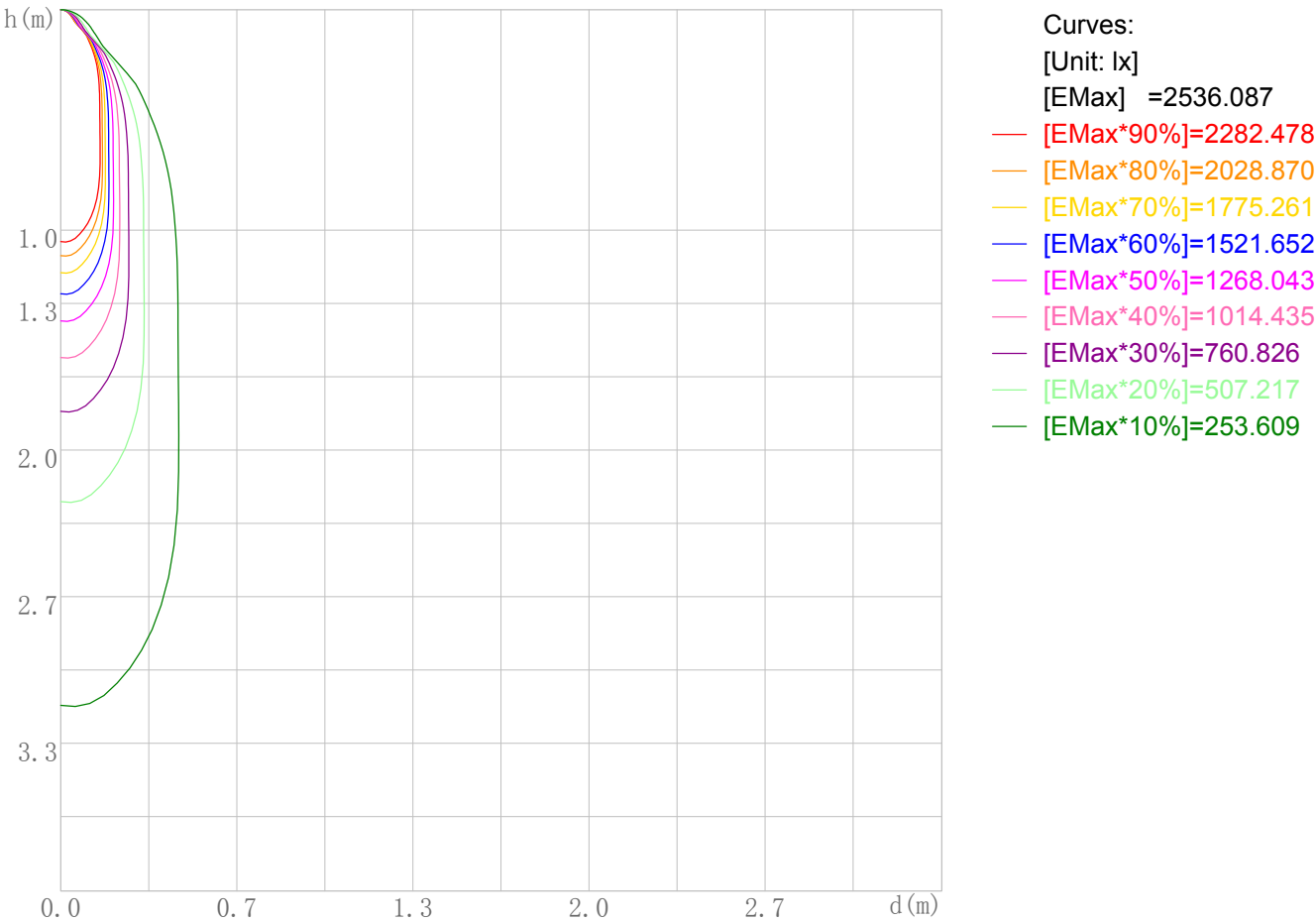


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

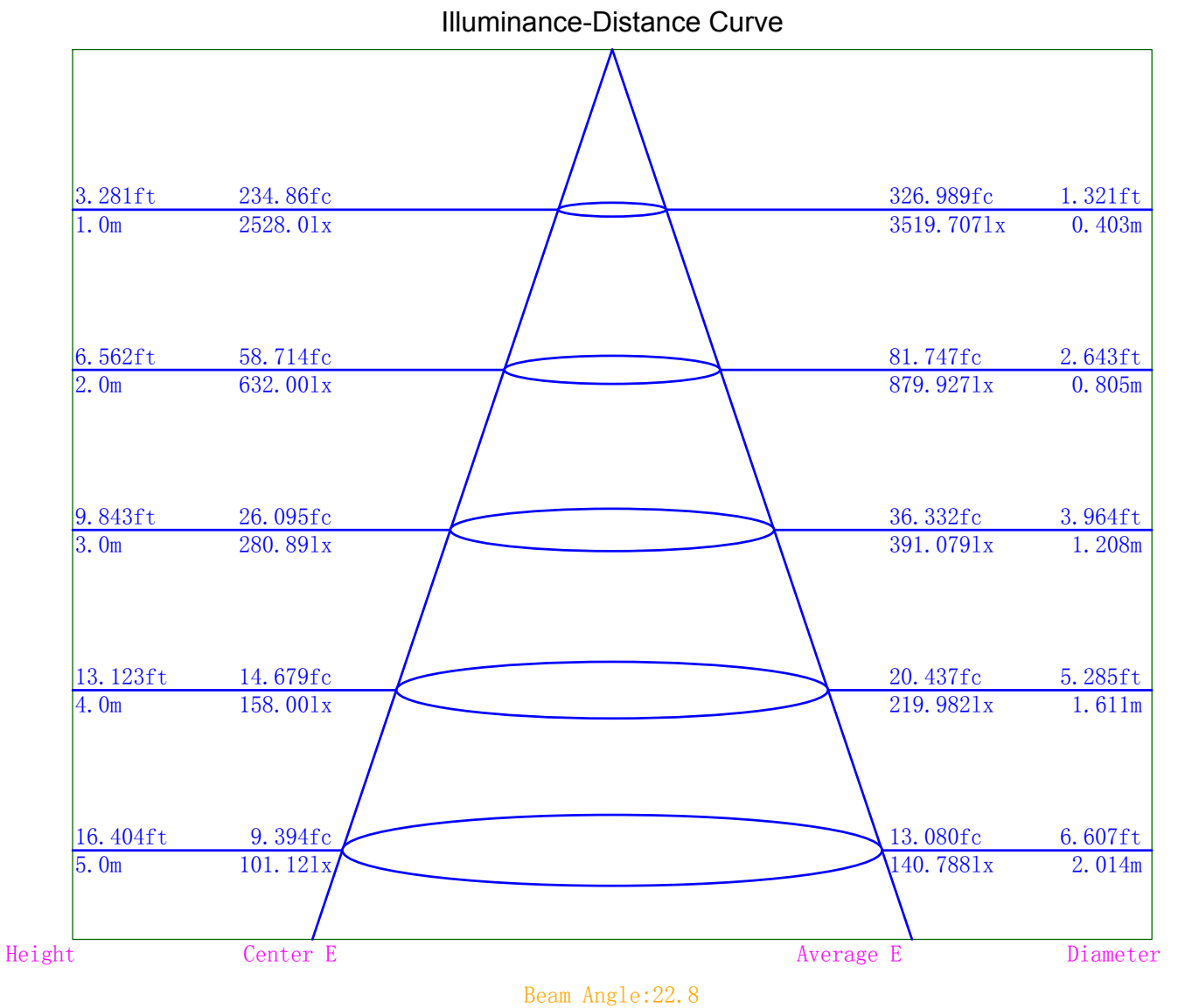
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2536.09lx,1.0deg
Plane Maximum Lighting Intensity and @Angle:2537.246cd,0deg

Illuminance-Distance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |



Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

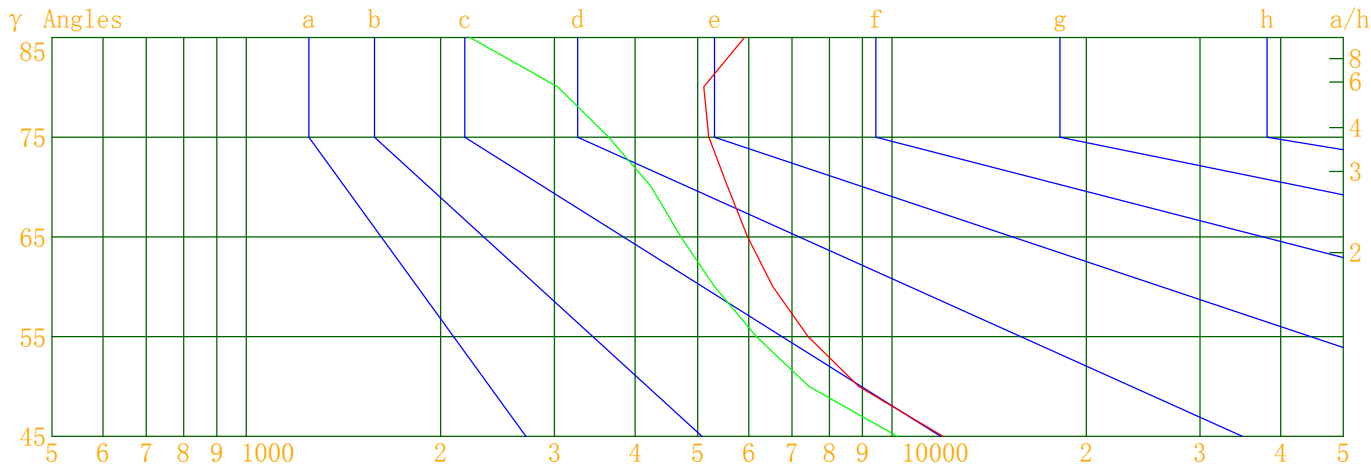
Glare Grade Table

| 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 | 11999 | 8881 | 7413 | 6536 | 5974 | 5565 | 5203 | 5112 | 5908 |
| C90 | 10192 | 7435 | 6165 | 5311 | 4707 | 4236 | 3634 | 3036 | 2221 |

Luminance Limiting Curve



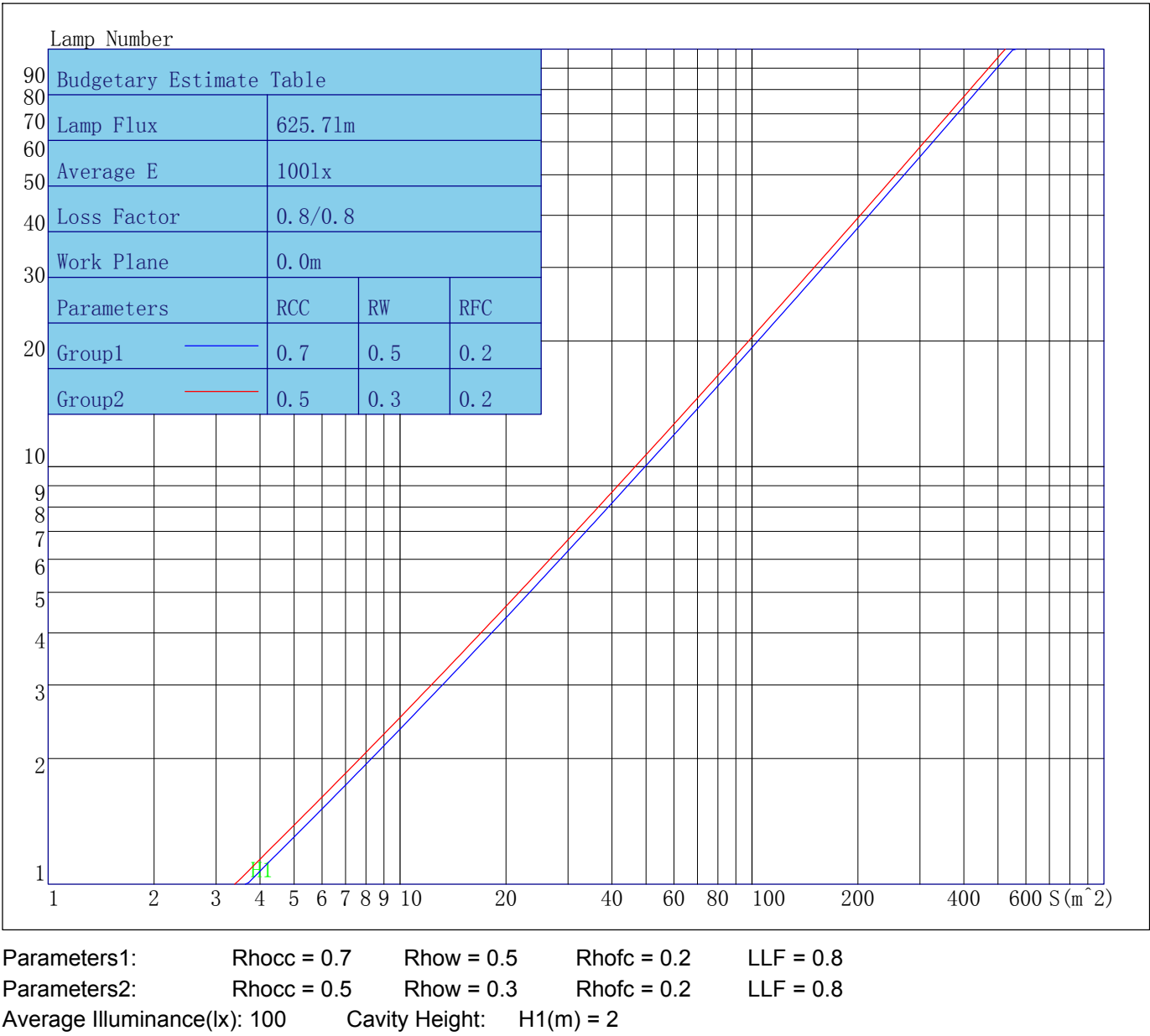
Luminous Size: Length(m)=0.000 Width(m)=-0.050 Height(m)=0.000 Area(m^2)=0.001963

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |



Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

| 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 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 99 | 98 | 97 | 97 | 95 |
| 2 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 |
| 3 | 106 | 100 | 96 | 93 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 89 | 88 | 86 |
| 4 | 102 | 95 | 91 | 87 | 100 | 94 | 90 | 87 | 92 | 89 | 86 | 90 | 87 | 85 | 88 | 86 | 84 | 82 |
| 5 | 98 | 91 | 86 | 83 | 96 | 90 | 86 | 83 | 89 | 85 | 82 | 87 | 84 | 81 | 85 | 83 | 80 | 79 |
| 6 | 95 | 87 | 83 | 79 | 93 | 87 | 82 | 79 | 85 | 81 | 78 | 84 | 80 | 78 | 83 | 80 | 77 | 76 |
| 7 | 91 | 84 | 79 | 76 | 90 | 83 | 79 | 76 | 82 | 78 | 75 | 81 | 77 | 75 | 80 | 77 | 74 | 73 |
| 8 | 88 | 81 | 76 | 73 | 87 | 80 | 76 | 73 | 79 | 75 | 72 | 78 | 75 | 72 | 77 | 74 | 72 | 71 |
| 9 | 86 | 78 | 73 | 70 | 85 | 77 | 73 | 70 | 77 | 73 | 70 | 76 | 72 | 70 | 75 | 72 | 69 | 68 |
| 10 | 83 | 75 | 71 | 68 | 82 | 75 | 71 | 68 | 74 | 70 | 67 | 73 | 70 | 67 | 73 | 69 | 67 | 66 |

Unified Glare Rating Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: SD02-08-XX-01 3000K RA90 24D | 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: 2021/04/29 |

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 | 16.6 | 17.6 | 17.0 | 17.9 | 18.2 | 16.2 | 17.2 | 16.6 | 17.5 | 17.8 |
| | 16.7 | 17.6 | 17.1 | 17.9 | 18.3 | 16.3 | 17.1 | 16.6 | 17.4 | 17.8 |
| | 16.8 | 17.6 | 17.2 | 17.9 | 18.4 | 16.3 | 17.0 | 16.7 | 17.4 | 17.8 |
| | 16.9 | 17.6 | 17.3 | 18.0 | 18.4 | 16.2 | 16.9 | 16.7 | 17.3 | 17.7 |
| | 16.9 | 17.5 | 17.3 | 17.9 | 18.4 | 16.2 | 16.9 | 16.6 | 17.3 | 17.7 |
| | 16.9 | 17.5 | 17.3 | 17.9 | 18.4 | 16.2 | 16.8 | 16.6 | 17.2 | 17.6 |
| X=4H Y=2H | 16.5 | 17.2 | 16.9 | 17.6 | 18.0 | 16.1 | 16.8 | 16.5 | 17.2 | 17.6 |
| | 16.7 | 17.3 | 17.1 | 17.7 | 18.2 | 16.2 | 16.8 | 16.6 | 17.2 | 17.6 |
| | 16.8 | 17.4 | 17.3 | 17.8 | 18.3 | 16.2 | 16.8 | 16.7 | 17.2 | 17.7 |
| | 17.0 | 17.5 | 17.5 | 17.9 | 18.4 | 16.2 | 16.7 | 16.7 | 17.2 | 17.7 |
| | 17.0 | 17.5 | 17.5 | 17.9 | 18.4 | 16.2 | 16.7 | 16.7 | 17.1 | 17.6 |
| | 17.1 | 17.5 | 17.6 | 18.0 | 18.5 | 16.2 | 16.6 | 16.7 | 17.1 | 17.6 |
| X=8H Y=4H | 16.8 | 17.2 | 17.3 | 17.7 | 18.2 | 16.1 | 16.6 | 16.6 | 17.1 | 17.6 |
| | 17.0 | 17.4 | 17.5 | 17.9 | 18.4 | 16.2 | 16.6 | 16.7 | 17.1 | 17.6 |
| | 17.1 | 17.4 | 17.7 | 18.0 | 18.5 | 16.2 | 16.5 | 16.8 | 17.1 | 17.6 |
| | 17.2 | 17.5 | 17.8 | 18.0 | 18.6 | 16.2 | 16.5 | 16.8 | 17.0 | 17.6 |
| X=12H Y=4H | 16.7 | 17.1 | 17.2 | 17.6 | 18.1 | 16.1 | 16.5 | 16.6 | 17.0 | 17.5 |
| | 17.0 | 17.3 | 17.5 | 17.8 | 18.3 | 16.2 | 16.5 | 16.7 | 17.0 | 17.6 |
| | 17.1 | 17.4 | 17.7 | 17.9 | 18.5 | 16.2 | 16.5 | 16.8 | 17.0 | 17.6 |
| Variations with the objerver position at spacings | | | | | | | | | | |
| S=1.0H | 0.3/-0.4 | | | | | 0.6/-0.6 | | | | |
| S=1.5H | 0.7/-0.8 | | | | | 1.0/-1.1 | | | | |
| S=2.0H | 0.9/-1.0 | | | | | 1.3/-1.6 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 0.9 | | | | | 0.6 | | | | |

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 | 2528.01 | 2528.01 | 2528.01 | 2528.01 |
| γ 1.0 | 2537.25 | 2532.09 | 2515.61 | 2513.37 |
| γ 2.0 | 2519.28 | 2511.03 | 2495.00 | 2491.52 |
| γ 3.0 | 2467.73 | 2454.50 | 2448.70 | 2449.16 |
| γ 4.0 | 2385.94 | 2372.81 | 2373.69 | 2377.38 |
| γ 5.0 | 2290.02 | 2275.77 | 2279.40 | 2285.97 |
| γ 6.0 | 2179.30 | 2163.39 | 2154.40 | 2164.86 |
| γ 7.0 | 2052.77 | 2033.01 | 2005.15 | 2019.14 |
| γ 8.0 | 1906.85 | 1886.26 | 1850.61 | 1864.73 |
| γ 9.0 | 1745.78 | 1724.18 | 1687.10 | 1703.29 |
| γ 10.0 | 1569.99 | 1549.26 | 1505.89 | 1521.74 |
| γ 11.0 | 1381.11 | 1359.99 | 1302.62 | 1320.64 |
| γ 12.0 | 1192.16 | 1170.64 | 1108.60 | 1123.73 |
| γ 13.0 | 1024.79 | 1007.70 | 935.99 | 949.84 |
| γ 14.0 | 888.39 | 874.23 | 794.44 | 805.26 |
| γ 15.0 | 776.14 | 763.27 | 683.08 | 693.36 |
| γ 16.0 | 684.64 | 672.84 | 597.37 | 604.38 |
| γ 17.0 | 610.14 | 599.81 | 526.22 | 533.61 |
| γ 18.0 | 548.81 | 539.35 | 467.97 | 474.46 |
| γ 19.0 | 496.06 | 487.70 | 419.26 | 425.61 |
| γ 20.0 | 450.35 | 441.52 | 378.93 | 384.33 |
| γ 21.0 | 410.23 | 401.96 | 344.16 | 349.41 |
| γ 22.0 | 374.00 | 366.39 | 312.79 | 317.19 |
| γ 23.0 | 341.24 | 334.40 | 283.58 | 288.55 |
| γ 24.0 | 312.26 | 305.38 | 257.47 | 262.11 |
| γ 25.0 | 286.66 | 279.89 | 233.21 | 237.84 |
| γ 26.0 | 262.94 | 256.55 | 210.96 | 215.55 |
| γ 27.0 | 241.43 | 234.93 | 190.57 | 194.93 |
| γ 28.0 | 221.03 | 214.98 | 171.95 | 176.08 |
| γ 29.0 | 202.04 | 196.13 | 154.92 | 158.66 |
| γ 30.0 | 183.97 | 178.50 | 139.20 | 143.20 |
| γ 31.0 | 167.24 | 161.66 | 125.04 | 129.03 |
| γ 32.0 | 150.88 | 145.54 | 112.41 | 116.33 |
| γ 33.0 | 136.21 | 131.05 | 101.11 | 104.80 |
| γ 34.0 | 122.73 | 117.81 | 90.03 | 93.67 |
| γ 35.0 | 109.92 | 104.90 | 80.40 | 83.86 |
| γ 36.0 | 98.72 | 94.21 | 71.90 | 75.28 |
| γ 37.0 | 89.07 | 84.71 | 62.25 | 65.48 |
| γ 38.0 | 80.42 | 76.15 | 55.07 | 58.12 |
| γ 39.0 | 72.35 | 68.09 | 49.13 | 52.03 |
| γ 40.0 | 64.20 | 60.03 | 43.73 | 46.51 |
| γ 41.0 | 49.44 | 45.40 | 38.86 | 41.61 |
| γ 42.0 | 33.71 | 30.18 | 34.06 | 36.78 |
| γ 43.0 | 23.83 | 20.74 | 24.91 | 27.31 |
| γ 44.0 | 18.79 | 16.03 | 16.68 | 18.94 |
| γ 45.0 | 16.66 | 14.15 | 13.58 | 15.69 |
| γ 46.0 | 15.22 | 12.91 | 12.12 | 14.08 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 14.05 | 11.92 | 11.09 | 12.92 |
| γ 48.0 | 13.07 | 11.07 | 10.27 | 11.97 |
| γ 49.0 | 12.18 | 10.28 | 9.60 | 11.23 |
| γ 50.0 | 11.21 | 9.38 | 9.04 | 10.57 |
| γ 51.0 | 10.45 | 8.73 | 8.47 | 9.95 |
| γ 52.0 | 9.81 | 8.18 | 7.79 | 9.19 |
| γ 53.0 | 9.28 | 7.73 | 7.35 | 8.71 |
| γ 54.0 | 8.81 | 7.32 | 6.99 | 8.26 |
| γ 55.0 | 8.35 | 6.94 | 6.68 | 7.91 |
| γ 56.0 | 7.94 | 6.56 | 6.40 | 7.59 |
| γ 57.0 | 7.54 | 6.21 | 6.14 | 7.28 |
| γ 58.0 | 7.14 | 5.86 | 5.90 | 7.00 |
| γ 59.0 | 6.75 | 5.51 | 5.65 | 6.72 |
| γ 60.0 | 6.42 | 5.21 | 5.41 | 6.45 |
| γ 61.0 | 6.11 | 4.95 | 5.17 | 6.19 |
| γ 62.0 | 5.80 | 4.68 | 4.97 | 5.95 |
| γ 63.0 | 5.50 | 4.40 | 4.76 | 5.70 |
| γ 64.0 | 5.21 | 4.15 | 4.55 | 5.46 |
| γ 65.0 | 4.96 | 3.91 | 4.35 | 5.24 |
| γ 66.0 | 4.69 | 3.68 | 4.17 | 5.03 |
| γ 67.0 | 4.43 | 3.46 | 3.98 | 4.82 |
| γ 68.0 | 4.20 | 3.26 | 3.79 | 4.61 |
| γ 69.0 | 3.97 | 3.05 | 3.61 | 4.41 |
| γ 70.0 | 3.74 | 2.85 | 3.41 | 4.19 |
| γ 71.0 | 3.51 | 2.62 | 3.23 | 3.97 |
| γ 72.0 | 3.28 | 2.41 | 3.00 | 3.74 |
| γ 73.0 | 3.06 | 2.22 | 2.79 | 3.51 |
| γ 74.0 | 2.85 | 2.03 | 2.57 | 3.28 |
| γ 75.0 | 2.64 | 1.85 | 2.36 | 3.06 |
| γ 76.0 | 2.45 | 1.68 | 2.16 | 2.84 |
| γ 77.0 | 2.26 | 1.49 | 1.97 | 2.62 |
| γ 78.0 | 2.09 | 1.33 | 1.78 | 2.43 |
| γ 79.0 | 1.91 | 1.18 | 1.59 | 2.23 |
| γ 80.0 | 1.74 | 1.03 | 1.42 | 2.04 |
| γ 81.0 | 1.58 | 0.89 | 1.24 | 1.86 |
| γ 82.0 | 1.44 | 0.76 | 1.09 | 1.67 |
| γ 83.0 | 1.29 | 0.63 | 0.93 | 1.50 |
| γ 84.0 | 1.15 | 0.49 | 0.77 | 1.33 |
| γ 85.0 | 1.01 | 0.38 | 0.62 | 1.17 |
| γ 86.0 | 0.88 | 0.27 | 0.48 | 1.00 |
| γ 87.0 | 0.76 | 0.15 | 0.34 | 0.86 |
| γ 88.0 | 0.63 | 0.06 | 0.20 | 0.71 |
| γ 89.0 | 0.53 | 0.00 | 0.08 | 0.56 |
| γ 90.0 | 0.46 | 0.00 | 0.00 | 0.42 |
| γ 91.0 | 0.40 | 0.00 | 0.00 | 0.34 |
| γ 92.0 | 0.34 | 0.00 | 0.00 | 0.28 |
| γ 93.0 | 0.28 | 0.00 | 0.00 | 0.20 |

IES Indoor Report

Photometric Filename:SD02-08-XX-01 3000K RA90 24D.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 0.22 | 0.00 | 0.00 | 0.14 |
| γ 95.0 | 0.17 | 0.00 | 0.00 | 0.08 |
| γ 96.0 | 0.12 | 0.00 | 0.00 | 0.02 |
| γ 97.0 | 0.07 | 0.00 | 0.00 | 0.00 |
| γ 98.0 | 0.04 | 0.00 | 0.00 | 0.00 |
| γ 99.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 100.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 101.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 102.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 103.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 104.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 105.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 106.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 107.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 108.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 109.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 110.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 111.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 112.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 113.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 114.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 115.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 116.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 117.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 118.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 119.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 120.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 121.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 122.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 123.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 124.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 125.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 126.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 127.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 128.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| γ 129.0 | 0.00 | 0.00 | 0.00 | 0.01 |
| γ 130.0 | 0.00 | 0.00 | 0.00 | 0.09 |
| γ 131.0 | 0.00 | 0.00 | 0.08 | 0.16 |
| γ 132.0 | 0.00 | 0.00 | 0.16 | 0.24 |
| γ 133.0 | 0.00 | 0.00 | 0.26 | 0.34 |
| γ 134.0 | 0.09 | 0.00 | 0.37 | 0.44 |
| γ 135.0 | 0.19 | 0.04 | 0.49 | 0.54 |
| γ 136.0 | 0.30 | 0.15 | 0.62 | 0.67 |
| γ 137.0 | 0.41 | 0.27 | 0.75 | 0.80 |
| γ 138.0 | 0.53 | 0.39 | 0.88 | 0.93 |
| γ 139.0 | 0.65 | 0.52 | 1.02 | 1.06 |
| γ 140.0 | 0.79 | 0.66 | 1.16 | 1.20 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 0.93 | 0.81 | 1.32 | 1.34 |
| γ 142.0 | 1.07 | 0.94 | 1.46 | 1.47 |
| γ 143.0 | 1.20 | 1.09 | 1.61 | 1.62 |
| γ 144.0 | 1.35 | 1.24 | 1.75 | 1.76 |
| γ 145.0 | 1.49 | 1.37 | 1.89 | 1.90 |
| γ 146.0 | 1.62 | 1.51 | 2.02 | 2.03 |
| γ 147.0 | 1.74 | 1.65 | 2.15 | 2.16 |
| γ 148.0 | 1.89 | 1.79 | 2.27 | 2.27 |
| γ 149.0 | 2.01 | 1.91 | 2.38 | 2.38 |
| γ 150.0 | 2.14 | 2.03 | 2.48 | 2.49 |
| γ 151.0 | 2.24 | 2.12 | 2.58 | 2.58 |
| γ 152.0 | 2.34 | 2.23 | 2.67 | 2.66 |
| γ 153.0 | 2.43 | 2.33 | 2.74 | 2.75 |
| γ 154.0 | 2.52 | 2.40 | 2.82 | 2.81 |
| γ 155.0 | 2.59 | 2.49 | 2.87 | 2.87 |
| γ 156.0 | 2.67 | 2.56 | 2.92 | 2.92 |
| γ 157.0 | 2.74 | 2.63 | 2.98 | 2.97 |
| γ 158.0 | 2.81 | 2.69 | 3.03 | 3.02 |
| γ 159.0 | 2.85 | 2.74 | 3.07 | 3.06 |
| γ 160.0 | 2.91 | 2.79 | 3.11 | 3.09 |
| γ 161.0 | 2.95 | 2.83 | 3.13 | 3.13 |
| γ 162.0 | 2.99 | 2.88 | 3.15 | 3.14 |
| γ 163.0 | 3.03 | 2.92 | 3.19 | 3.17 |
| γ 164.0 | 3.06 | 2.95 | 3.21 | 3.19 |
| γ 165.0 | 3.10 | 2.98 | 3.23 | 3.21 |
| γ 166.0 | 3.11 | 3.01 | 3.24 | 3.22 |
| γ 167.0 | 3.14 | 3.02 | 3.24 | 3.22 |
| γ 168.0 | 3.15 | 3.03 | 3.24 | 3.22 |
| γ 169.0 | 3.15 | 3.04 | 3.24 | 3.23 |
| γ 170.0 | 3.15 | 3.04 | 3.23 | 3.21 |
| γ 171.0 | 3.15 | 3.03 | 3.21 | 3.19 |
| γ 172.0 | 3.13 | 3.02 | 3.19 | 3.17 |
| γ 173.0 | 3.11 | 3.01 | 3.17 | 3.14 |
| γ 174.0 | 3.10 | 3.00 | 3.14 | 3.12 |
| γ 175.0 | 3.08 | 2.98 | 3.12 | 3.10 |
| γ 176.0 | 3.07 | 2.97 | 3.10 | 3.09 |
| γ 177.0 | 3.08 | 2.97 | 3.09 | 3.07 |
| γ 178.0 | 3.08 | 2.98 | 3.10 | 3.06 |
| γ 179.0 | 3.08 | 2.99 | 3.11 | 3.06 |
| γ 180.0 | 3.07 | 3.07 | 3.07 | 3.07 |