

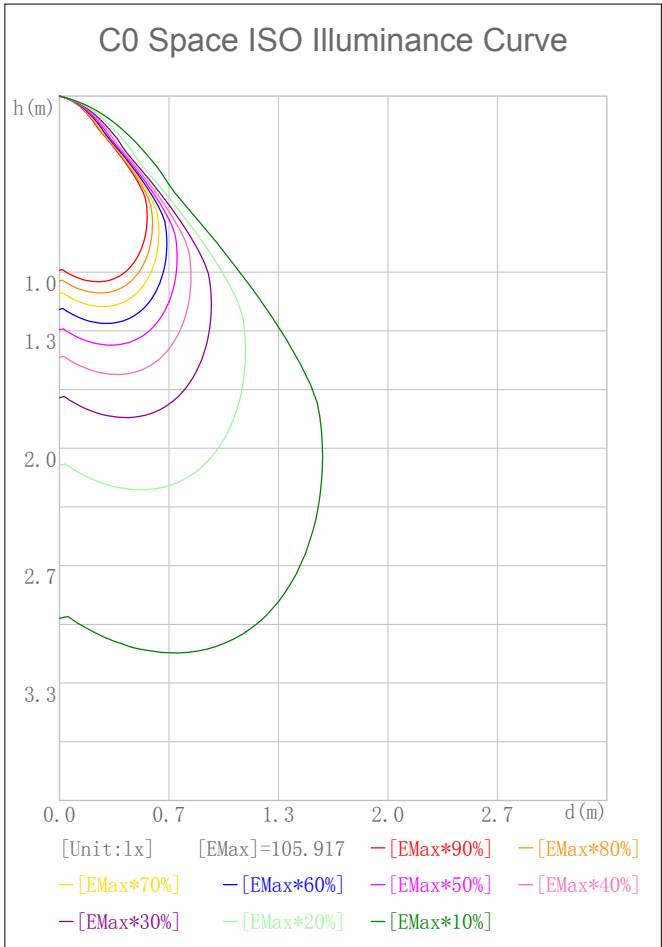
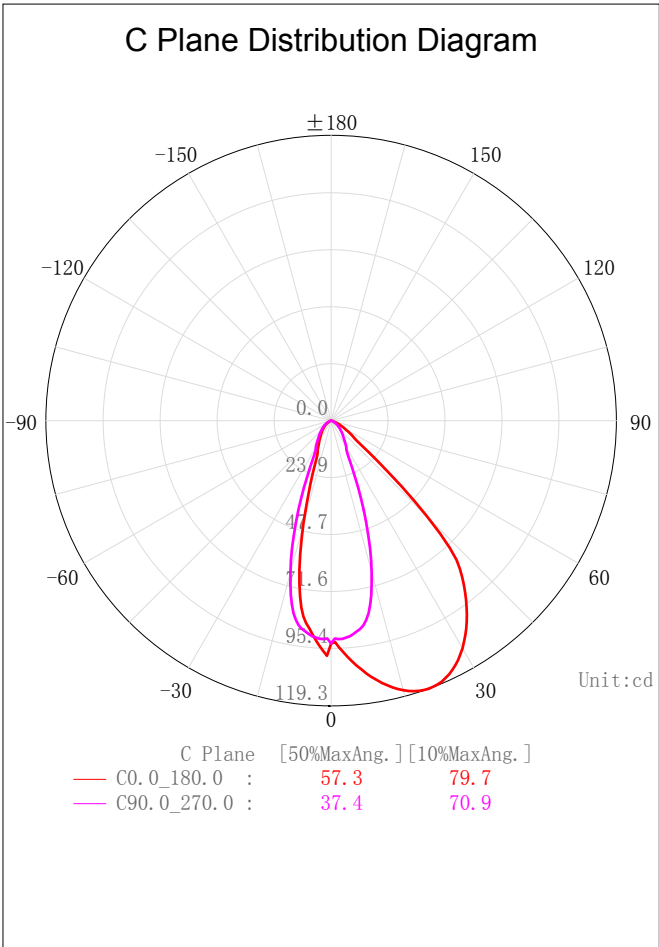
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name: ST02-03-XX-06 3000K RA90 | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2021/01/28 |
| 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):0.050m*0.000m*0.000m | | Lum. Area (m2):0.002 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=30.0 γ=1.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

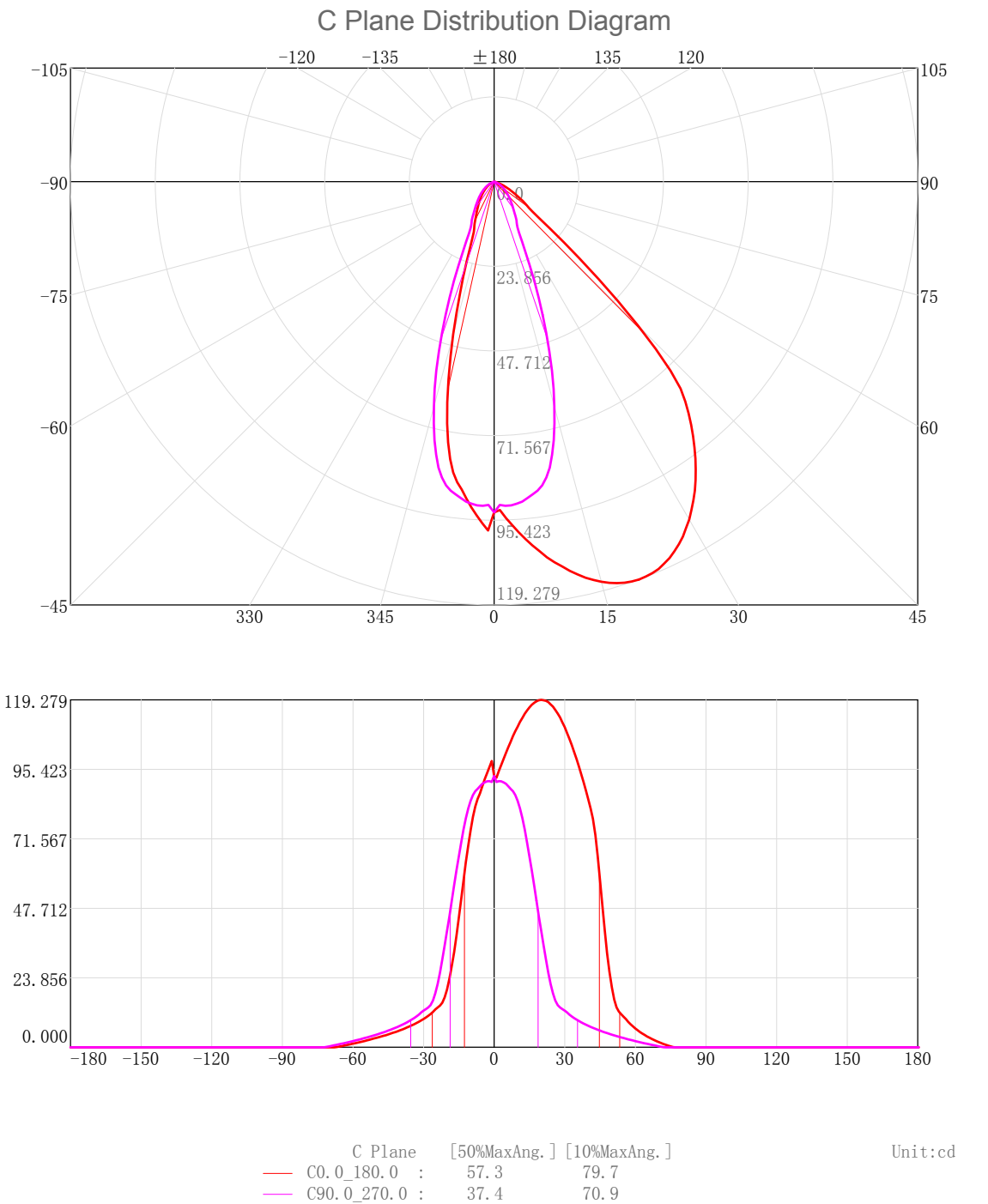
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|---------------------------------|---------------------------------------|--|
| Rated Flux(lm): 78.400 | Luminary Flux(lm): 78.400 | Field Angle(10%Imax): 79.7(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 78.400lm 100.00% | |
| Rated Voltage(V): | Luminary EER(lm/W): 28.792 | Up Lumens&Percent: 0.000lm 0.00% | |
| Tested Power(W): 2.723 | Max. Candela(cd): 119.279 | S/MH: C0_a180=1.012 C90_270=0.627 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=20.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):240.3, 0.013, 0.835 | Beam Angle(50%Imax): 57.3(°) | ErP ϕ use(90°): 69.530lm | |
| Lamp Size(W*L*H):0.050m*0.000m*0.000m | Left=-12.6°, Right=44.7° | IRF(%): 201.456 | |



2D Plane Light Intensity Distribution Curve

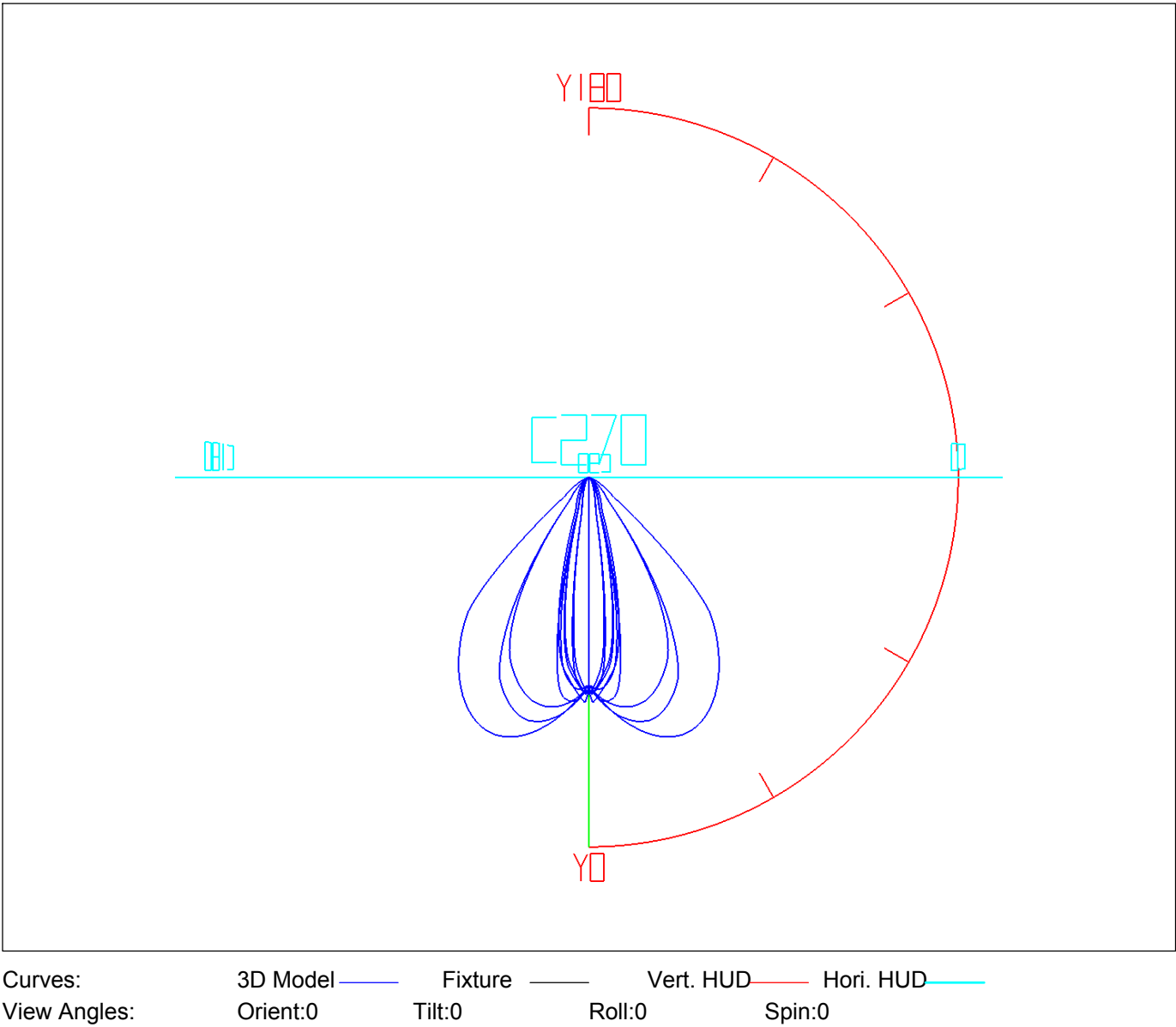
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:ST02-03-XX-06 3000K RA90 | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date:2021/01/28 |



3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |

3D Light Intensity Distribution Modal



Zonal Flux Tabulation

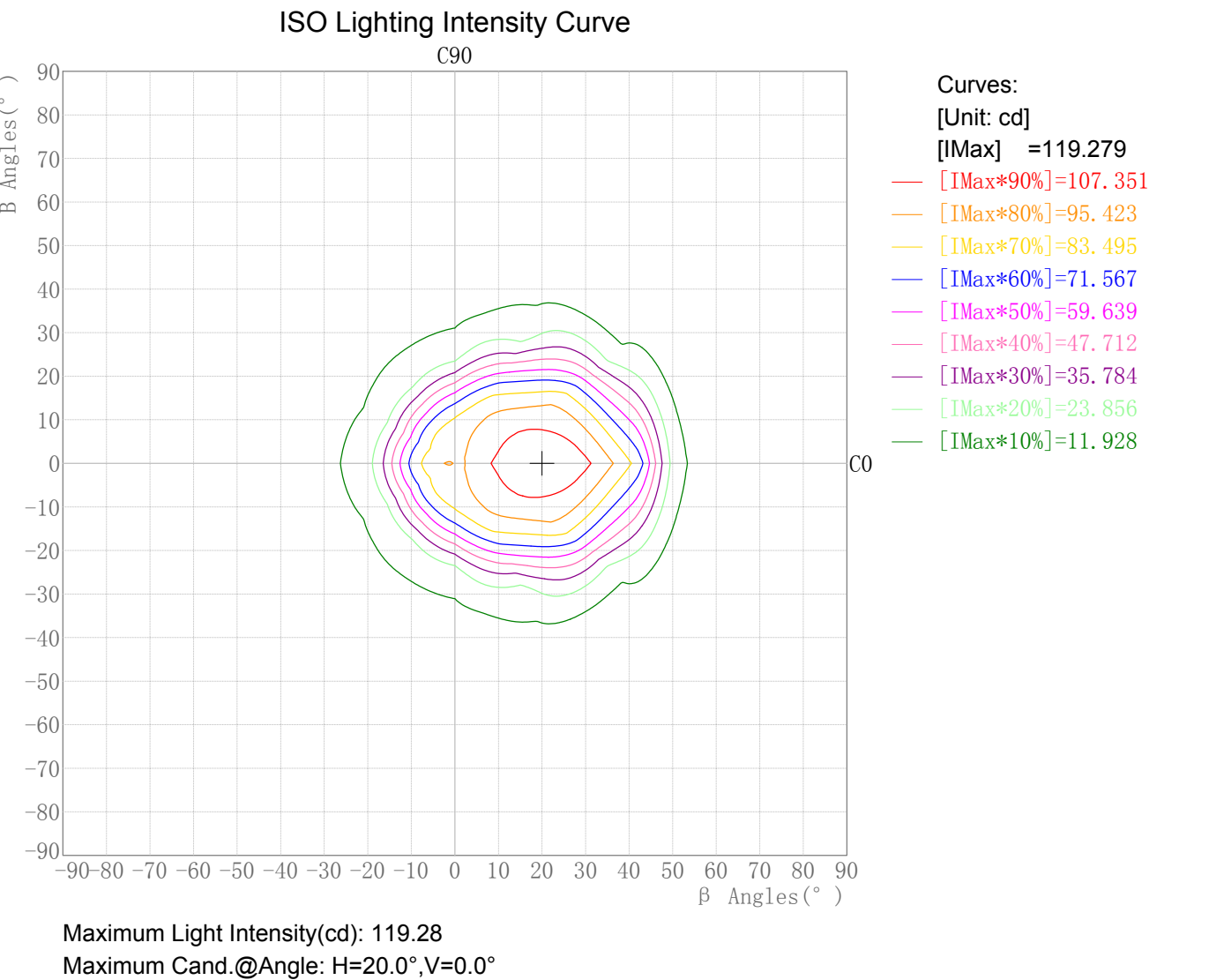
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 0.09 | 0.09 | 0.11 | 0.11 | 47.0-48.0 | 0.69 | 71.82 | 0.88 | 91.61 |
| 1.0-2.0 | 0.27 | 0.36 | 0.34 | 0.45 | 48.0-49.0 | 0.63 | 72.45 | 0.80 | 92.41 |
| 2.0-3.0 | 0.45 | 0.80 | 0.57 | 1.02 | 49.0-50.0 | 0.57 | 73.02 | 0.73 | 93.14 |
| 3.0-4.0 | 0.62 | 1.42 | 0.79 | 1.82 | 50.0-51.0 | 0.52 | 73.54 | 0.66 | 93.80 |
| 4.0-5.0 | 0.80 | 2.22 | 1.02 | 2.83 | 51.0-52.0 | 0.47 | 74.01 | 0.60 | 94.40 |
| 5.0-6.0 | 0.97 | 3.19 | 1.24 | 4.07 | 52.0-53.0 | 0.44 | 74.45 | 0.56 | 94.96 |
| 6.0-7.0 | 1.14 | 4.33 | 1.45 | 5.53 | 53.0-54.0 | 0.41 | 74.86 | 0.53 | 95.48 |
| 7.0-8.0 | 1.30 | 5.64 | 1.66 | 7.19 | 54.0-55.0 | 0.39 | 75.25 | 0.49 | 95.98 |
| 8.0-9.0 | 1.46 | 7.09 | 1.86 | 9.05 | 55.0-56.0 | 0.36 | 75.61 | 0.46 | 96.44 |
| 9.0-10.0 | 1.59 | 8.69 | 2.03 | 11.08 | 56.0-57.0 | 0.34 | 75.95 | 0.43 | 96.87 |
| 10.0-11.0 | 1.72 | 10.40 | 2.19 | 13.27 | 57.0-58.0 | 0.31 | 76.26 | 0.40 | 97.27 |
| 11.0-12.0 | 1.82 | 12.22 | 2.32 | 15.59 | 58.0-59.0 | 0.29 | 76.54 | 0.37 | 97.63 |
| 12.0-13.0 | 1.90 | 14.13 | 2.43 | 18.02 | 59.0-60.0 | 0.26 | 76.81 | 0.34 | 97.97 |
| 13.0-14.0 | 1.97 | 16.10 | 2.52 | 20.53 | 60.0-61.0 | 0.24 | 77.05 | 0.31 | 98.28 |
| 14.0-15.0 | 2.02 | 18.12 | 2.58 | 23.12 | 61.0-62.0 | 0.22 | 77.27 | 0.28 | 98.56 |
| 15.0-16.0 | 2.06 | 20.19 | 2.63 | 25.75 | 62.0-63.0 | 0.20 | 77.46 | 0.25 | 98.81 |
| 16.0-17.0 | 2.08 | 22.27 | 2.65 | 28.40 | 63.0-64.0 | 0.17 | 77.64 | 0.22 | 99.03 |
| 17.0-18.0 | 2.09 | 24.35 | 2.66 | 31.06 | 64.0-65.0 | 0.15 | 77.79 | 0.19 | 99.22 |
| 18.0-19.0 | 2.08 | 26.43 | 2.65 | 33.71 | 65.0-66.0 | 0.13 | 77.92 | 0.17 | 99.39 |
| 19.0-20.0 | 2.07 | 28.50 | 2.64 | 36.35 | 66.0-67.0 | 0.11 | 78.03 | 0.14 | 99.53 |
| 20.0-21.0 | 2.05 | 30.55 | 2.62 | 38.97 | 67.0-68.0 | 0.10 | 78.13 | 0.12 | 99.66 |
| 21.0-22.0 | 2.04 | 32.59 | 2.60 | 41.57 | 68.0-69.0 | 0.08 | 78.21 | 0.10 | 99.76 |
| 22.0-23.0 | 2.03 | 34.62 | 2.59 | 44.15 | 69.0-70.0 | 0.06 | 78.27 | 0.08 | 99.84 |
| 23.0-24.0 | 2.02 | 36.63 | 2.57 | 46.73 | 70.0-71.0 | 0.05 | 78.32 | 0.06 | 99.90 |
| 24.0-25.0 | 2.01 | 38.64 | 2.56 | 49.29 | 71.0-72.0 | 0.03 | 78.35 | 0.04 | 99.94 |
| 25.0-26.0 | 1.99 | 40.63 | 2.54 | 51.83 | 72.0-73.0 | 0.02 | 78.37 | 0.03 | 99.96 |
| 26.0-27.0 | 1.97 | 42.61 | 2.51 | 54.34 | 73.0-74.0 | 0.01 | 78.39 | 0.02 | 99.98 |
| 27.0-28.0 | 1.95 | 44.55 | 2.48 | 56.83 | 74.0-75.0 | 0.01 | 78.40 | 0.01 | 99.99 |
| 28.0-29.0 | 1.92 | 46.47 | 2.45 | 59.27 | 75.0-76.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 29.0-30.0 | 1.88 | 48.36 | 2.40 | 61.68 | 76.0-77.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 30.0-31.0 | 1.84 | 50.20 | 2.35 | 64.03 | 77.0-78.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 31.0-32.0 | 1.80 | 51.99 | 2.29 | 66.32 | 78.0-79.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 32.0-33.0 | 1.74 | 53.74 | 2.22 | 68.54 | 79.0-80.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 33.0-34.0 | 1.68 | 55.42 | 2.15 | 70.69 | 80.0-81.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 34.0-35.0 | 1.63 | 57.05 | 2.07 | 72.76 | 81.0-82.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 35.0-36.0 | 1.57 | 58.61 | 2.00 | 74.76 | 82.0-83.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 36.0-37.0 | 1.50 | 60.11 | 1.92 | 76.68 | 83.0-84.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 37.0-38.0 | 1.44 | 61.55 | 1.83 | 78.51 | 84.0-85.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 38.0-39.0 | 1.37 | 62.92 | 1.74 | 80.25 | 85.0-86.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 39.0-40.0 | 1.29 | 64.21 | 1.65 | 81.90 | 86.0-87.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 40.0-41.0 | 1.22 | 65.43 | 1.55 | 83.46 | 87.0-88.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 41.0-42.0 | 1.14 | 66.57 | 1.46 | 84.91 | 88.0-89.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 42.0-43.0 | 1.07 | 67.64 | 1.36 | 86.27 | 89.0-90.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 43.0-44.0 | 0.99 | 68.62 | 1.26 | 87.53 | 90.0-91.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 44.0-45.0 | 0.91 | 69.53 | 1.16 | 88.69 | 91.0-92.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 45.0-46.0 | 0.83 | 70.36 | 1.06 | 89.75 | 92.0-93.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 46.0-47.0 | 0.76 | 71.13 | 0.97 | 90.72 | 93.0-94.0 | 0.00 | 78.40 | 0.00 | 100.00 |

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 | 0.00 | 78.40 | 0.00 | 100.00 | 141.0-142.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 95.0-96.0 | 0.00 | 78.40 | 0.00 | 100.00 | 142.0-143.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 96.0-97.0 | 0.00 | 78.40 | 0.00 | 100.00 | 143.0-144.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 97.0-98.0 | 0.00 | 78.40 | 0.00 | 100.00 | 144.0-145.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 98.0-99.0 | 0.00 | 78.40 | 0.00 | 100.00 | 145.0-146.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 99.0-100.0 | 0.00 | 78.40 | 0.00 | 100.00 | 146.0-147.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 100.0-101.0 | 0.00 | 78.40 | 0.00 | 100.00 | 147.0-148.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 101.0-102.0 | 0.00 | 78.40 | 0.00 | 100.00 | 148.0-149.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 102.0-103.0 | 0.00 | 78.40 | 0.00 | 100.00 | 149.0-150.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 103.0-104.0 | 0.00 | 78.40 | 0.00 | 100.00 | 150.0-151.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 104.0-105.0 | 0.00 | 78.40 | 0.00 | 100.00 | 151.0-152.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 105.0-106.0 | 0.00 | 78.40 | 0.00 | 100.00 | 152.0-153.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 106.0-107.0 | 0.00 | 78.40 | 0.00 | 100.00 | 153.0-154.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 107.0-108.0 | 0.00 | 78.40 | 0.00 | 100.00 | 154.0-155.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 108.0-109.0 | 0.00 | 78.40 | 0.00 | 100.00 | 155.0-156.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 109.0-110.0 | 0.00 | 78.40 | 0.00 | 100.00 | 156.0-157.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 110.0-111.0 | 0.00 | 78.40 | 0.00 | 100.00 | 157.0-158.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 111.0-112.0 | 0.00 | 78.40 | 0.00 | 100.00 | 158.0-159.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 112.0-113.0 | 0.00 | 78.40 | 0.00 | 100.00 | 159.0-160.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 113.0-114.0 | 0.00 | 78.40 | 0.00 | 100.00 | 160.0-161.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 114.0-115.0 | 0.00 | 78.40 | 0.00 | 100.00 | 161.0-162.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 115.0-116.0 | 0.00 | 78.40 | 0.00 | 100.00 | 162.0-163.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 116.0-117.0 | 0.00 | 78.40 | 0.00 | 100.00 | 163.0-164.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 117.0-118.0 | 0.00 | 78.40 | 0.00 | 100.00 | 164.0-165.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 118.0-119.0 | 0.00 | 78.40 | 0.00 | 100.00 | 165.0-166.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 119.0-120.0 | 0.00 | 78.40 | 0.00 | 100.00 | 166.0-167.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 120.0-121.0 | 0.00 | 78.40 | 0.00 | 100.00 | 167.0-168.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 121.0-122.0 | 0.00 | 78.40 | 0.00 | 100.00 | 168.0-169.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 122.0-123.0 | 0.00 | 78.40 | 0.00 | 100.00 | 169.0-170.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 123.0-124.0 | 0.00 | 78.40 | 0.00 | 100.00 | 170.0-171.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 124.0-125.0 | 0.00 | 78.40 | 0.00 | 100.00 | 171.0-172.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 125.0-126.0 | 0.00 | 78.40 | 0.00 | 100.00 | 172.0-173.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 126.0-127.0 | 0.00 | 78.40 | 0.00 | 100.00 | 173.0-174.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 127.0-128.0 | 0.00 | 78.40 | 0.00 | 100.00 | 174.0-175.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 128.0-129.0 | 0.00 | 78.40 | 0.00 | 100.00 | 175.0-176.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 129.0-130.0 | 0.00 | 78.40 | 0.00 | 100.00 | 176.0-177.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 130.0-131.0 | 0.00 | 78.40 | 0.00 | 100.00 | 177.0-178.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 131.0-132.0 | 0.00 | 78.40 | 0.00 | 100.00 | 178.0-179.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 132.0-133.0 | 0.00 | 78.40 | 0.00 | 100.00 | 179.0-180.0 | 0.00 | 78.40 | 0.00 | 100.00 |
| 133.0-134.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 134.0-135.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 135.0-136.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 136.0-137.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 137.0-138.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 138.0-139.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 139.0-140.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |
| 140.0-141.0 | 0.00 | 78.40 | 0.00 | 100.00 | | | | | |

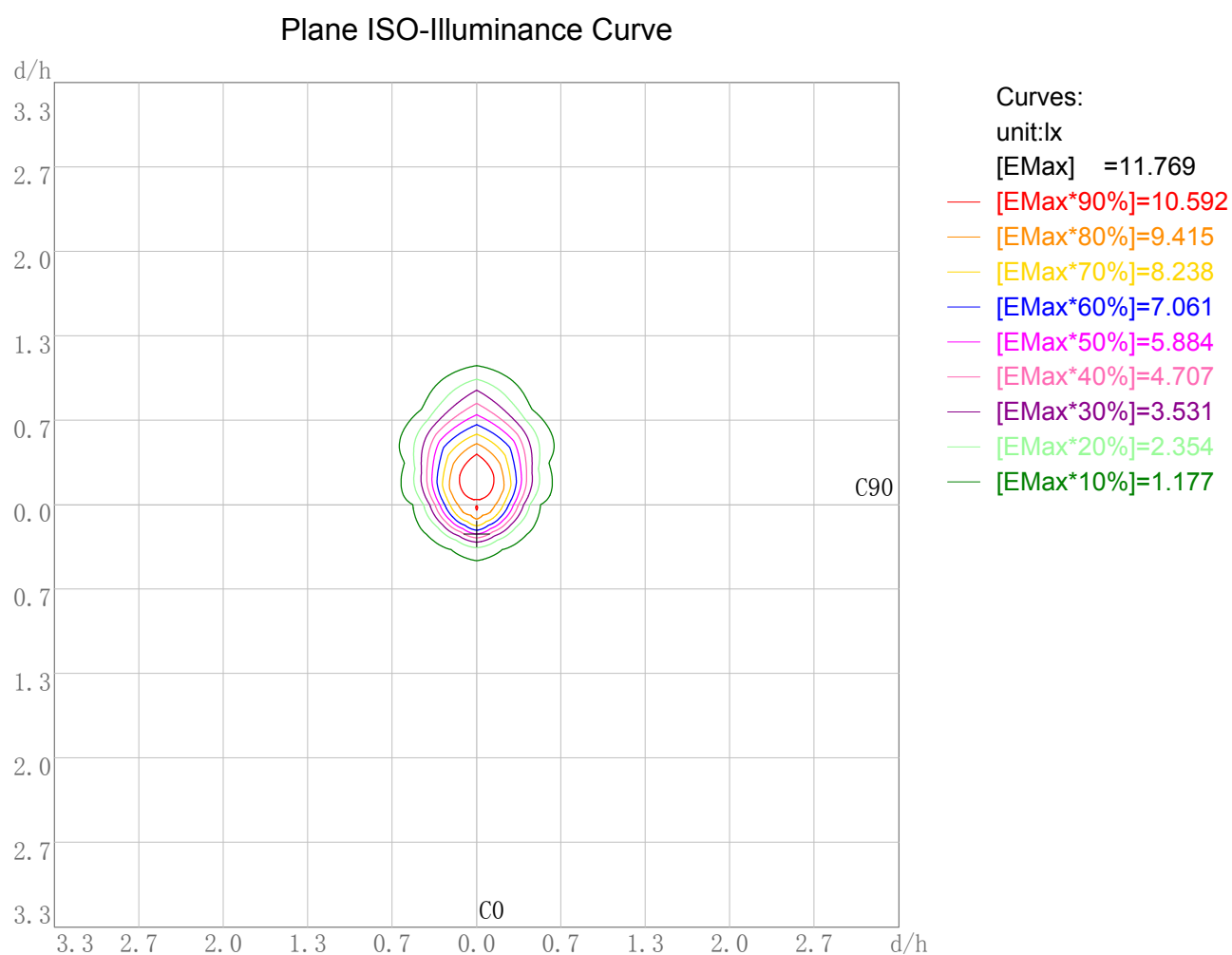
Rectangle ISO Lighting Intensity Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |



Photometric Filename:ST02-03-XX-06 3000K RA90.IES

| | | |
|--|------------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |



Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 11.77
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.2

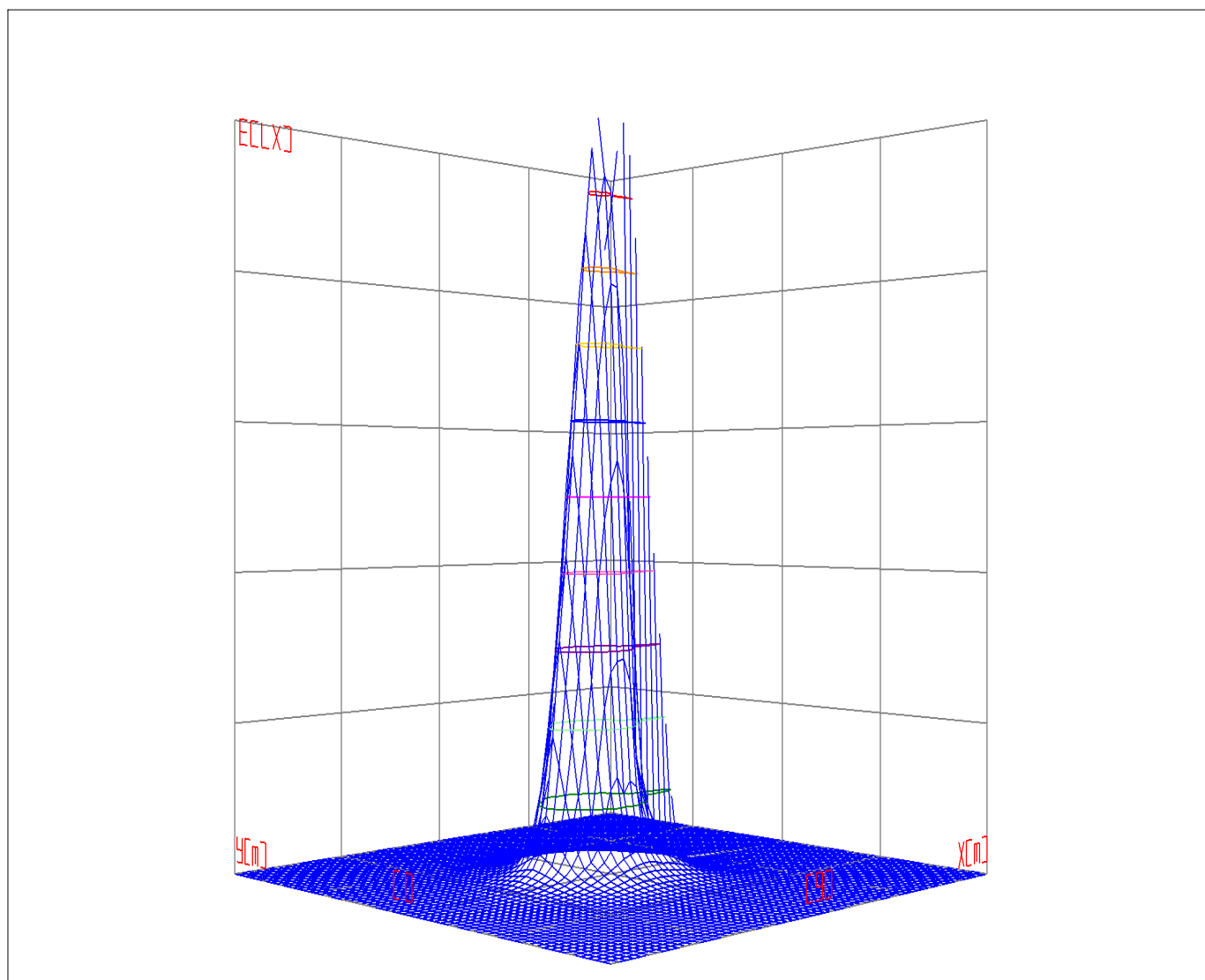
IES Indoor Report

Photometric Filename:ST02-03-XX-06 3000K RA90.IES

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |

3D Plane Illuminance Modal

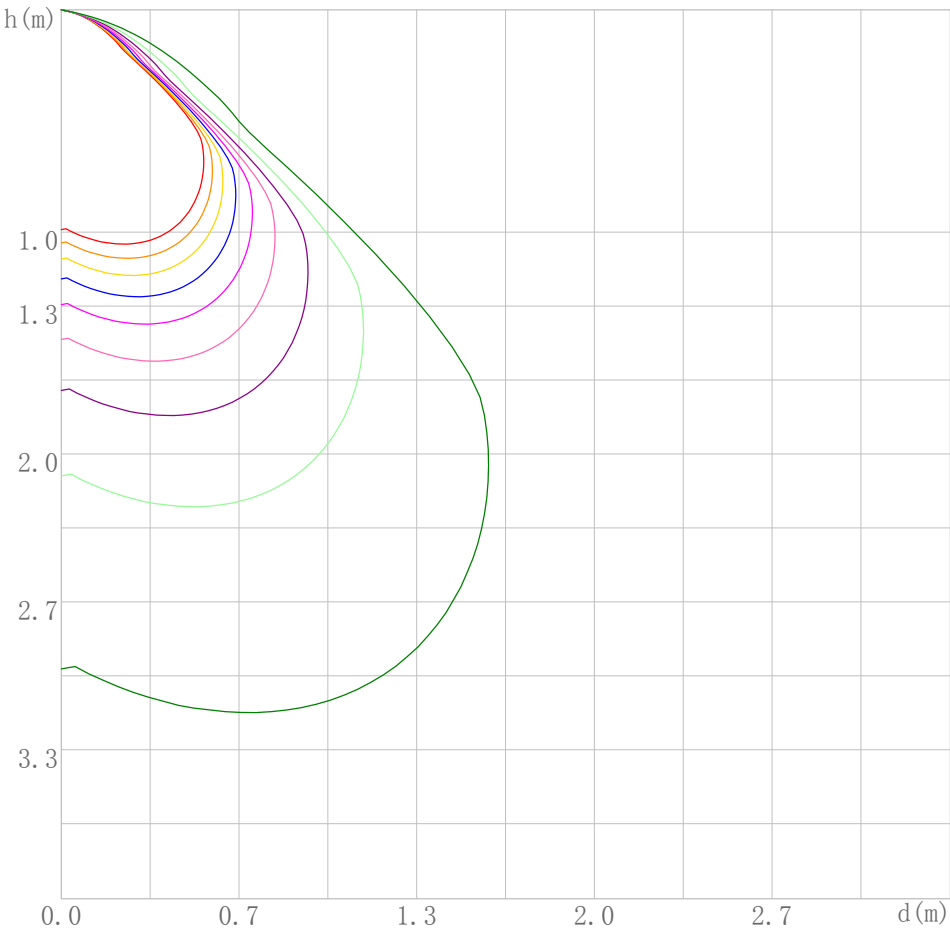


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:ST02-03-XX-06 3000K RA90 | 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:2021/01/28 |

Space ISO Illuminance Curve



- Curves:
- [Unit: lx]
- [EMax] =105.917
- [EMax*90%]=95.325

— [EMax*80%]=84.734

— [EMax*70%]=74.142

— [EMax*60%]=63.550

— [EMax*50%]=52.959

— [EMax*40%]=42.367

— [EMax*30%]=31.775

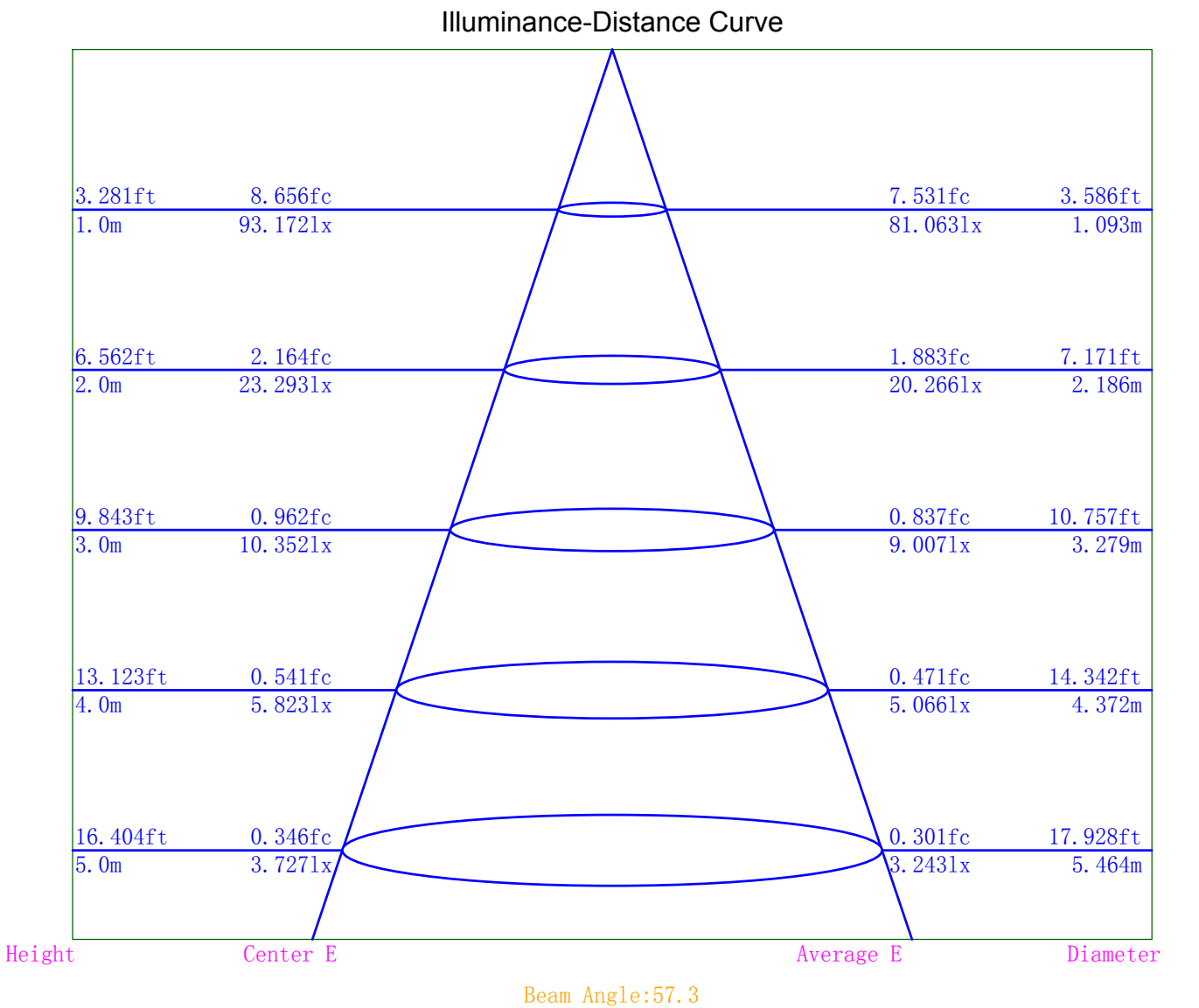
— [EMax*20%]=21.183

— [EMax*10%]=10.592

Space Plane Maximum Illuminance and @Angle:105.92lx,13.0deg
Plane Maximum Lighting Intensity and @Angle:119.279cd,0deg

Illuminance-Distance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:ST02-03-XX-06 3000K RA90 | 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:2021/01/28 |



Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |

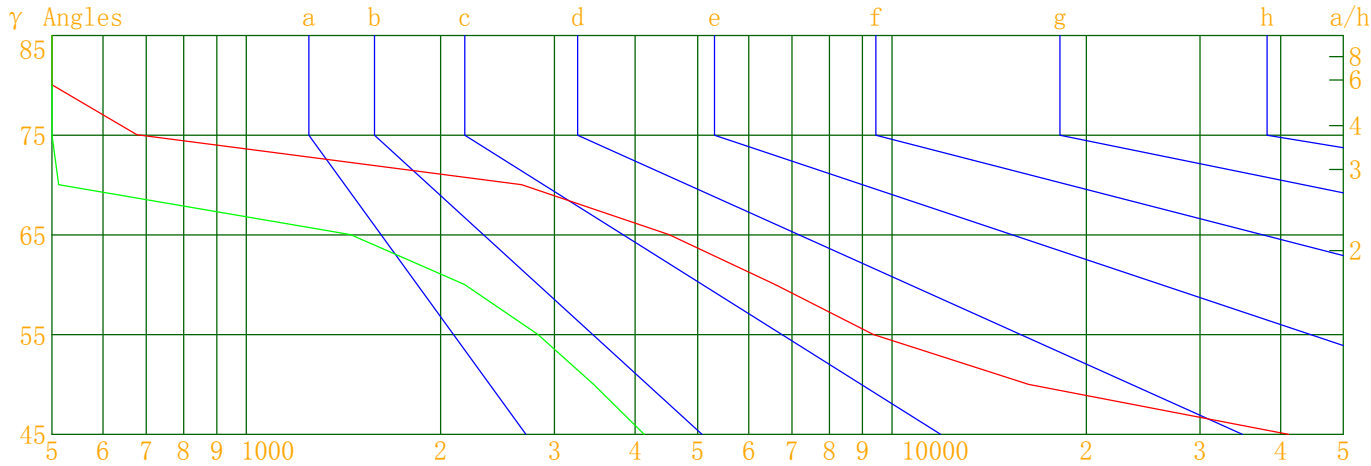
Glare Grade Table

| 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 | 41140 | 16289 | 9356 | 6593 | 4517 | 2668 | 677 | 0 | 0 |
| C90 | 4134 | 3451 | 2830 | 2179 | 1450 | 512 | 0 | 0 | 0 |

Luminance Limiting Curve



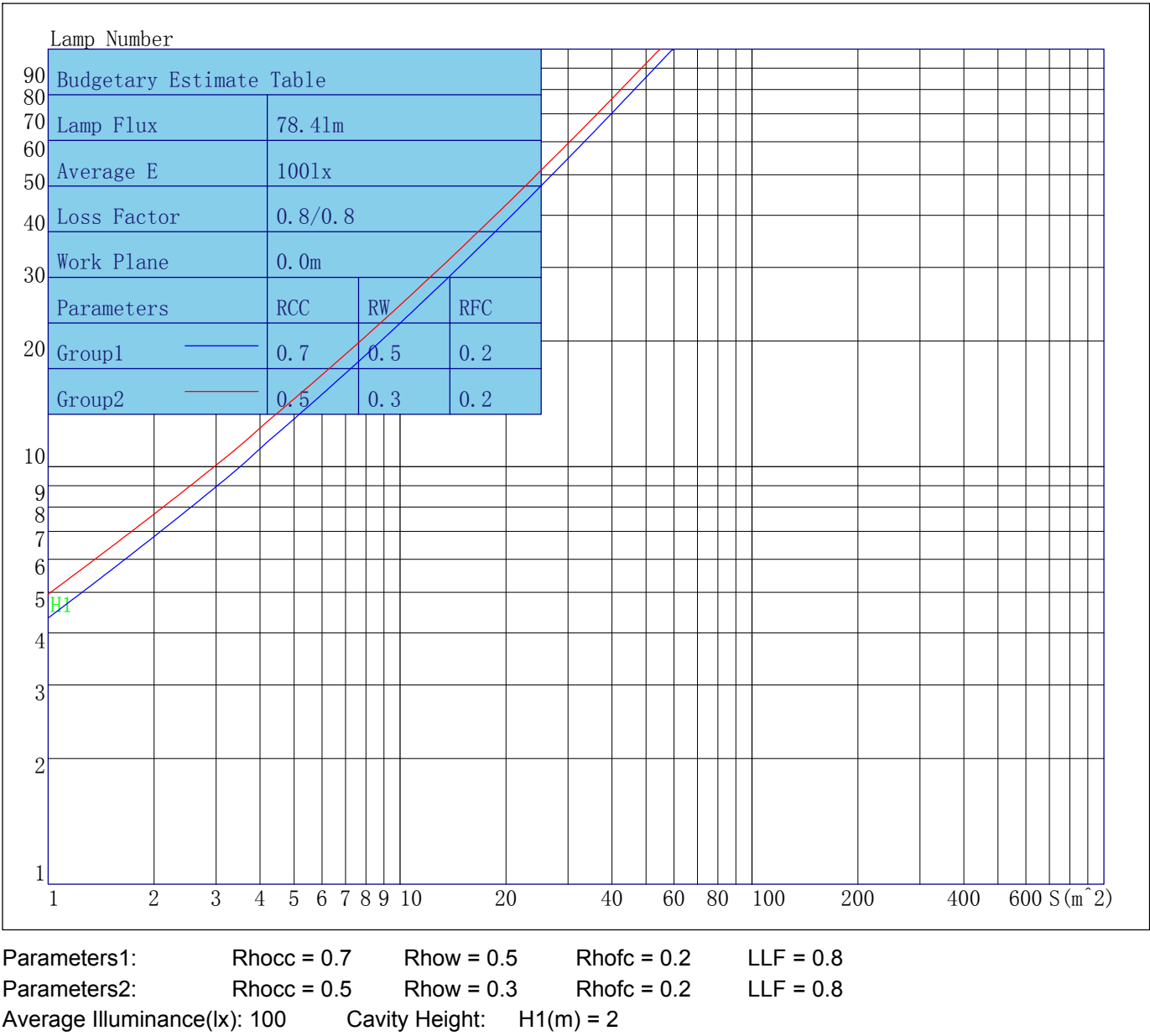
Luminous Size: Length(m)=0.000 Width(m)=-0.050 Height(m)=0.000 Area(m^2)=0.001963

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |



Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | 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: 2021/01/28 |

| 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 | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 107 | 105 | 111 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 95 | 94 | 93 |
| 2 | 107 | 102 | 97 | 93 | 105 | 100 | 96 | 92 | 97 | 93 | 90 | 93 | 91 | 88 | 91 | 89 | 87 | 85 |
| 3 | 101 | 94 | 88 | 84 | 99 | 92 | 87 | 83 | 90 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 78 |
| 4 | 95 | 87 | 81 | 76 | 93 | 86 | 80 | 76 | 84 | 79 | 75 | 82 | 77 | 74 | 80 | 76 | 73 | 72 |
| 5 | 90 | 81 | 75 | 70 | 88 | 80 | 74 | 70 | 78 | 73 | 69 | 76 | 72 | 68 | 75 | 71 | 68 | 66 |
| 6 | 85 | 75 | 69 | 64 | 83 | 75 | 69 | 64 | 73 | 68 | 64 | 72 | 67 | 63 | 70 | 66 | 63 | 61 |
| 7 | 81 | 71 | 64 | 60 | 79 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 57 |
| 8 | 76 | 66 | 60 | 56 | 75 | 66 | 60 | 55 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 53 |
| 9 | 73 | 62 | 56 | 52 | 71 | 62 | 56 | 52 | 61 | 55 | 52 | 60 | 55 | 51 | 59 | 55 | 51 | 50 |
| 10 | 69 | 59 | 53 | 49 | 68 | 58 | 53 | 49 | 58 | 52 | 49 | 57 | 52 | 48 | 56 | 52 | 48 | 47 |

Unified Glare Rating Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-XX-06 3000K RA90 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2021/01/28 |

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 | 22.6 | 23.7 | 23.0 | 24.0 | 24.4 | 13.3 | 14.4 | 13.7 | 14.7 | 15.1 |
| | 22.5 | 23.5 | 22.9 | 23.9 | 24.2 | 13.4 | 14.4 | 13.8 | 14.7 | 15.1 |
| | 22.5 | 23.4 | 22.9 | 23.7 | 24.1 | 13.3 | 14.2 | 13.7 | 14.6 | 15.0 |
| | 22.4 | 23.2 | 22.8 | 23.6 | 24.0 | 13.2 | 14.1 | 13.6 | 14.4 | 14.8 |
| | 22.3 | 23.1 | 22.7 | 23.5 | 23.9 | 13.2 | 14.0 | 13.6 | 14.3 | 14.8 |
| | 22.2 | 23.0 | 22.7 | 23.4 | 23.8 | 13.1 | 13.9 | 13.6 | 14.3 | 14.7 |
| X=4H Y=2H | 22.4 | 23.3 | 22.8 | 23.7 | 24.0 | 13.5 | 14.4 | 13.9 | 14.8 | 15.2 |
| | 22.3 | 23.1 | 22.7 | 23.5 | 23.9 | 13.7 | 14.4 | 14.1 | 14.8 | 15.2 |
| | 22.2 | 22.9 | 22.7 | 23.3 | 23.7 | 13.6 | 14.2 | 14.0 | 14.6 | 15.1 |
| | 22.1 | 22.7 | 22.6 | 23.1 | 23.6 | 13.5 | 14.0 | 13.9 | 14.5 | 14.9 |
| | 22.1 | 22.6 | 22.5 | 23.0 | 23.5 | 13.4 | 13.9 | 13.9 | 14.4 | 14.8 |
| | 22.0 | 22.4 | 22.5 | 22.9 | 23.4 | 13.3 | 13.8 | 13.8 | 14.3 | 14.8 |
| X=8H Y=4H | 22.1 | 22.6 | 22.5 | 23.0 | 23.5 | 13.4 | 13.9 | 13.9 | 14.4 | 14.8 |
| | 21.9 | 22.4 | 22.4 | 22.9 | 23.4 | 13.3 | 13.7 | 13.8 | 14.2 | 14.7 |
| | 21.9 | 22.2 | 22.4 | 22.8 | 23.3 | 13.2 | 13.6 | 13.7 | 14.1 | 14.6 |
| | 21.8 | 22.1 | 22.3 | 22.6 | 23.2 | 13.2 | 13.5 | 13.7 | 14.0 | 14.6 |
| X=12H Y=4H | 22.0 | 22.4 | 22.5 | 22.9 | 23.4 | 13.3 | 13.8 | 13.8 | 14.3 | 14.8 |
| | 21.9 | 22.2 | 22.4 | 22.7 | 23.3 | 13.2 | 13.6 | 13.8 | 14.1 | 14.6 |
| | 21.8 | 22.1 | 22.3 | 22.6 | 23.2 | 13.2 | 13.5 | 13.7 | 14.0 | 14.6 |
| Variations with the objerver position at spacings | | | | | | | | | | |
| S=1.0H | 5.0/0.0 | | | | | 0.0/0.0 | | | | |
| S=1.5H | 5.2/0.0 | | | | | 5.9/0.0 | | | | |
| S=2.0H | 5.9/-18.9 | | | | | 5.5/0.0 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 0.1 | | | | | 0.4 | | | | |

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

IES Indoor Report

Photometric Filename:ST02-03-XX-06 3000K RA90.IES

Candela Tabulation

| V/H | C0. 0 | C30. 0 | C60. 0 | C90. 0 | C120. 0 | C150. 0 | C180. 0 |
|---------|---------|---------|--------|--------|---------|---------|---------|
| γ 0. 0 | 93. 17 | 93. 17 | 93. 17 | 93. 17 | 93. 17 | 93. 17 | 93. 17 |
| γ 1. 0 | 92. 53 | 92. 82 | 90. 92 | 91. 10 | 93. 67 | 94. 44 | 98. 29 |
| γ 2. 0 | 94. 81 | 94. 60 | 92. 14 | 91. 37 | 92. 83 | 92. 62 | 96. 24 |
| γ 3. 0 | 96. 85 | 96. 19 | 93. 20 | 91. 33 | 91. 86 | 90. 67 | 94. 14 |
| γ 4. 0 | 98. 98 | 97. 69 | 94. 00 | 90. 93 | 90. 66 | 88. 69 | 91. 96 |
| γ 5. 0 | 101. 04 | 99. 01 | 94. 57 | 90. 47 | 89. 27 | 86. 60 | 89. 61 |
| γ 6. 0 | 103. 00 | 100. 24 | 95. 01 | 89. 64 | 87. 92 | 84. 60 | 87. 19 |
| γ 7. 0 | 104. 87 | 101. 40 | 95. 21 | 88. 75 | 86. 32 | 82. 39 | 85. 28 |
| γ 8. 0 | 106. 84 | 102. 48 | 95. 27 | 87. 91 | 84. 06 | 79. 17 | 82. 71 |
| γ 9. 0 | 108. 54 | 103. 33 | 95. 14 | 86. 59 | 80. 92 | 74. 98 | 79. 14 |
| γ 10. 0 | 110. 06 | 103. 98 | 94. 93 | 84. 62 | 76. 74 | 69. 83 | 74. 56 |
| γ 11. 0 | 111. 70 | 104. 66 | 94. 46 | 82. 05 | 71. 87 | 64. 19 | 69. 36 |
| γ 12. 0 | 113. 11 | 105. 19 | 93. 95 | 78. 60 | 66. 43 | 58. 29 | 63. 54 |
| γ 13. 0 | 114. 50 | 105. 52 | 93. 36 | 74. 71 | 60. 85 | 51. 97 | 57. 13 |
| γ 14. 0 | 115. 63 | 105. 73 | 92. 29 | 70. 18 | 55. 37 | 45. 63 | 50. 72 |
| γ 15. 0 | 116. 67 | 105. 66 | 90. 88 | 65. 48 | 49. 96 | 39. 83 | 44. 48 |
| γ 16. 0 | 117. 56 | 105. 68 | 88. 82 | 60. 75 | 44. 26 | 34. 30 | 38. 31 |
| γ 17. 0 | 118. 25 | 105. 29 | 86. 31 | 55. 68 | 38. 48 | 28. 91 | 32. 68 |
| γ 18. 0 | 118. 79 | 104. 81 | 83. 26 | 50. 38 | 32. 94 | 23. 99 | 28. 00 |
| γ 19. 0 | 119. 12 | 104. 12 | 79. 81 | 45. 01 | 27. 90 | 19. 97 | 23. 66 |
| γ 20. 0 | 119. 28 | 103. 14 | 76. 10 | 39. 92 | 23. 41 | 16. 95 | 19. 82 |
| γ 21. 0 | 119. 16 | 102. 15 | 72. 14 | 34. 99 | 19. 84 | 14. 76 | 17. 14 |
| γ 22. 0 | 118. 93 | 100. 90 | 67. 87 | 30. 21 | 17. 31 | 13. 41 | 15. 31 |
| γ 23. 0 | 118. 51 | 99. 56 | 63. 17 | 25. 63 | 15. 54 | 12. 75 | 14. 34 |
| γ 24. 0 | 117. 74 | 98. 15 | 58. 38 | 21. 73 | 14. 59 | 12. 17 | 13. 69 |
| γ 25. 0 | 116. 95 | 96. 53 | 53. 53 | 18. 55 | 13. 94 | 11. 54 | 13. 01 |
| γ 26. 0 | 115. 82 | 94. 81 | 48. 45 | 16. 08 | 13. 31 | 10. 74 | 12. 15 |
| γ 27. 0 | 114. 58 | 92. 76 | 43. 19 | 14. 47 | 12. 61 | 10. 11 | 11. 39 |
| γ 28. 0 | 113. 24 | 90. 16 | 38. 03 | 13. 66 | 11. 83 | 9. 59 | 10. 78 |
| γ 29. 0 | 111. 51 | 86. 90 | 33. 42 | 13. 13 | 11. 22 | 9. 07 | 10. 24 |
| γ 30. 0 | 109. 89 | 83. 22 | 29. 32 | 12. 59 | 10. 66 | 8. 59 | 9. 72 |
| γ 31. 0 | 107. 86 | 79. 17 | 25. 50 | 11. 97 | 10. 14 | 8. 15 | 9. 23 |
| γ 32. 0 | 105. 90 | 74. 66 | 21. 91 | 11. 24 | 9. 65 | 7. 72 | 8. 78 |
| γ 33. 0 | 103. 75 | 69. 81 | 18. 96 | 10. 60 | 9. 19 | 7. 34 | 8. 34 |
| γ 34. 0 | 101. 40 | 64. 56 | 16. 88 | 10. 06 | 8. 74 | 6. 97 | 7. 92 |
| γ 35. 0 | 98. 97 | 58. 89 | 15. 67 | 9. 52 | 8. 35 | 6. 60 | 7. 53 |
| γ 36. 0 | 96. 40 | 52. 93 | 14. 92 | 9. 05 | 7. 97 | 6. 27 | 7. 17 |
| γ 37. 0 | 93. 74 | 46. 97 | 14. 25 | 8. 60 | 7. 59 | 5. 96 | 6. 82 |
| γ 38. 0 | 91. 02 | 41. 14 | 13. 61 | 8. 17 | 7. 25 | 5. 64 | 6. 48 |
| γ 39. 0 | 88. 18 | 35. 66 | 12. 92 | 7. 77 | 6. 91 | 5. 36 | 6. 15 |
| γ 40. 0 | 85. 17 | 30. 30 | 12. 08 | 7. 40 | 6. 59 | 5. 05 | 5. 84 |
| γ 41. 0 | 82. 02 | 25. 00 | 11. 35 | 7. 04 | 6. 28 | 4. 79 | 5. 54 |
| γ 42. 0 | 78. 46 | 20. 46 | 10. 71 | 6. 70 | 6. 00 | 4. 52 | 5. 25 |
| γ 43. 0 | 72. 86 | 16. 90 | 10. 12 | 6. 36 | 5. 71 | 4. 27 | 4. 98 |
| γ 44. 0 | 65. 52 | 14. 30 | 9. 55 | 6. 04 | 5. 43 | 4. 04 | 4. 70 |
| γ 45. 0 | 57. 12 | 12. 60 | 9. 03 | 5. 74 | 5. 17 | 3. 80 | 4. 44 |
| γ 46. 0 | 48. 59 | 11. 74 | 8. 54 | 5. 43 | 4. 91 | 3. 57 | 4. 17 |

Photometric Filename:ST02-03-XX-06 3000K RA90.IES[illegible]

Photometric Filename:ST02-03-XX-06 3000K RA90.IES

Candela Tabulation - (Cont.)

[illegible]