

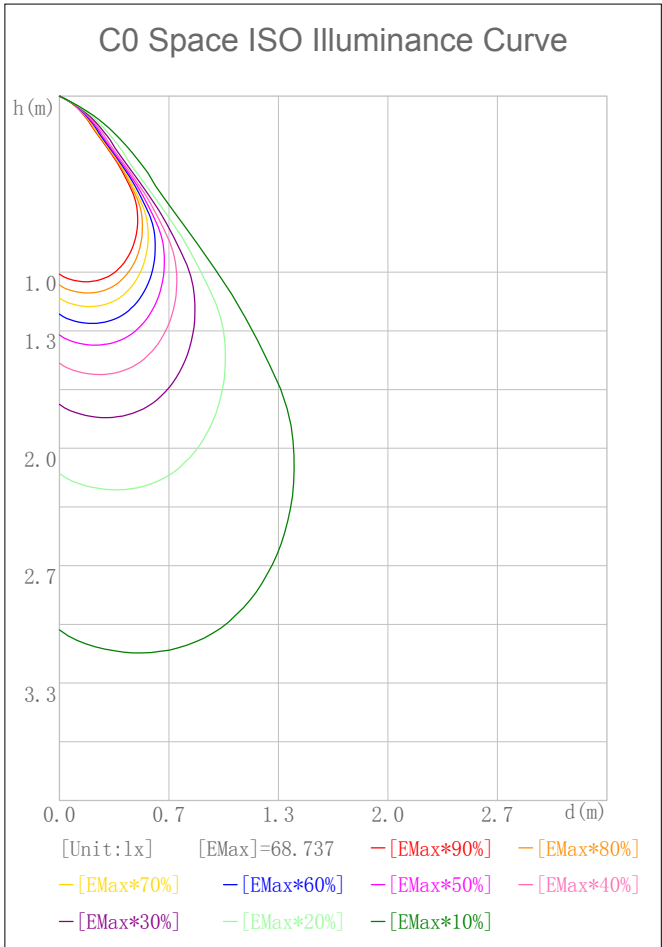
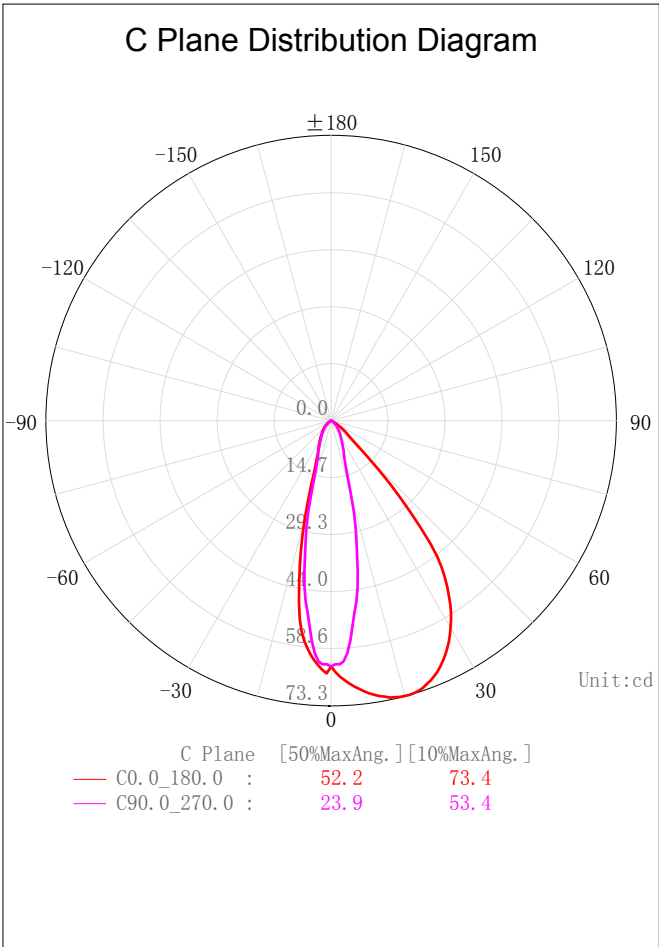
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name: ST02-03-PR-04 4000K RA90 | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2020/12/25 |
| 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):0.000m*0.000m*0.000m | | Lum. Area (m2):0.000 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=30.0 γ=1.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

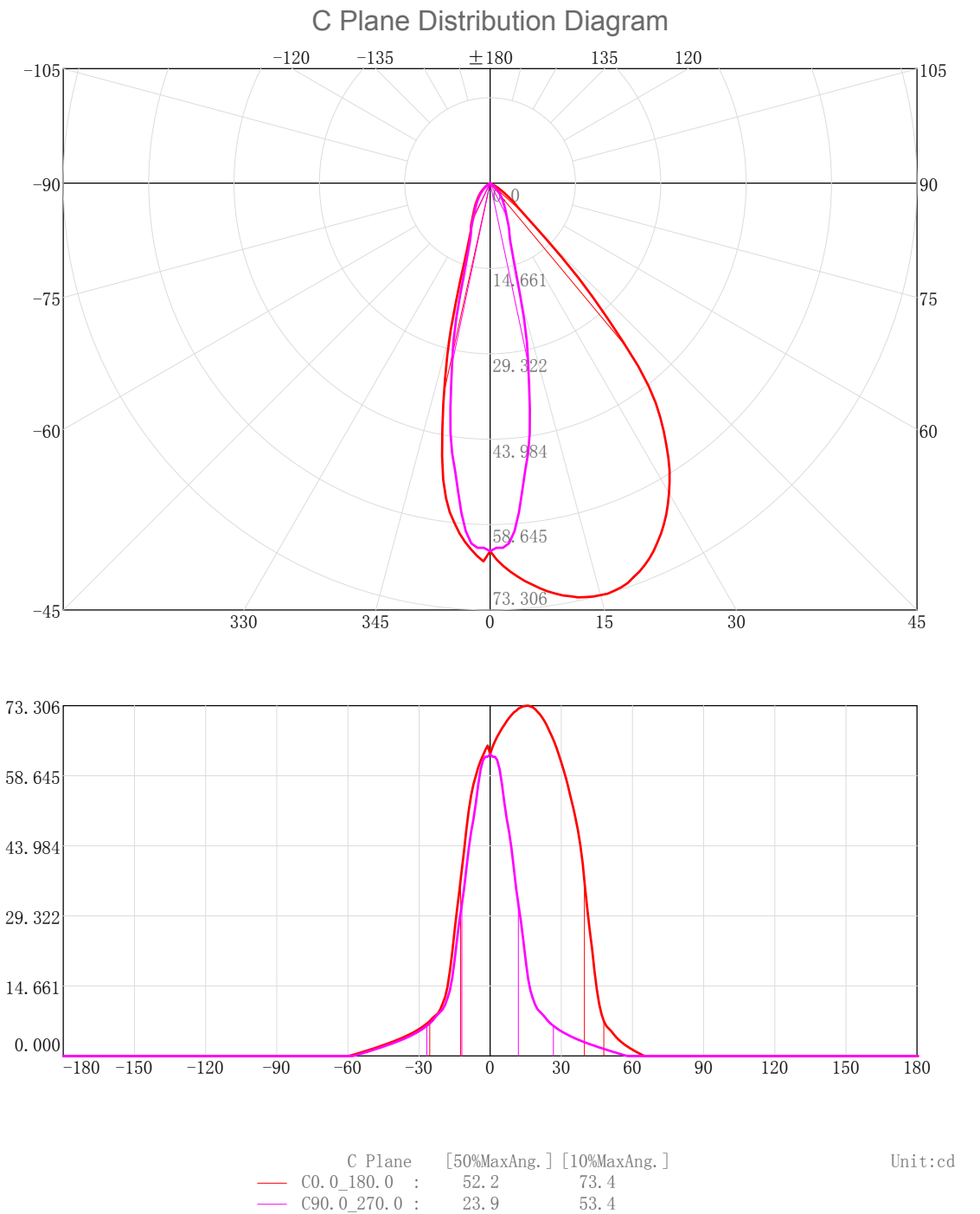
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|---------------------------------|---------------------------------------|--|
| Rated Flux(lm): 32.360 | Luminary Flux(lm): 32.355 | Field Angle(10%Imax): 73.4(°) | |
| Rated Power(W): | Luminary Efficiency: 99.99% | Down Lumens&Percent: 32.355lm 100.00% | |
| Rated Voltage(V): | Luminary EER(lm/W): 11.126 | Up Lumens&Percent: 0.000lm 0.00% | |
| Tested Power(W): 2.908 | Max. Candela(cd): 73.306 | S/MH: C0_a180=0.898 C90_270=0.404 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=16.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):240.4, 0.014, 0.847 | Beam Angle(50%Imax): 52.2(°) | ErP ϕ use(90°): 30.357lm | |
| Lamp Size (W*L*H):0.000m*0.000m*0.000m | Left=-12.5°, Right=39.8° | IRF(%): 320.114 | |



2D Plane Light Intensity Distribution Curve

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name: ST02-03-PR-04 4000K RA90 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Deparment |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2020/12/25 |



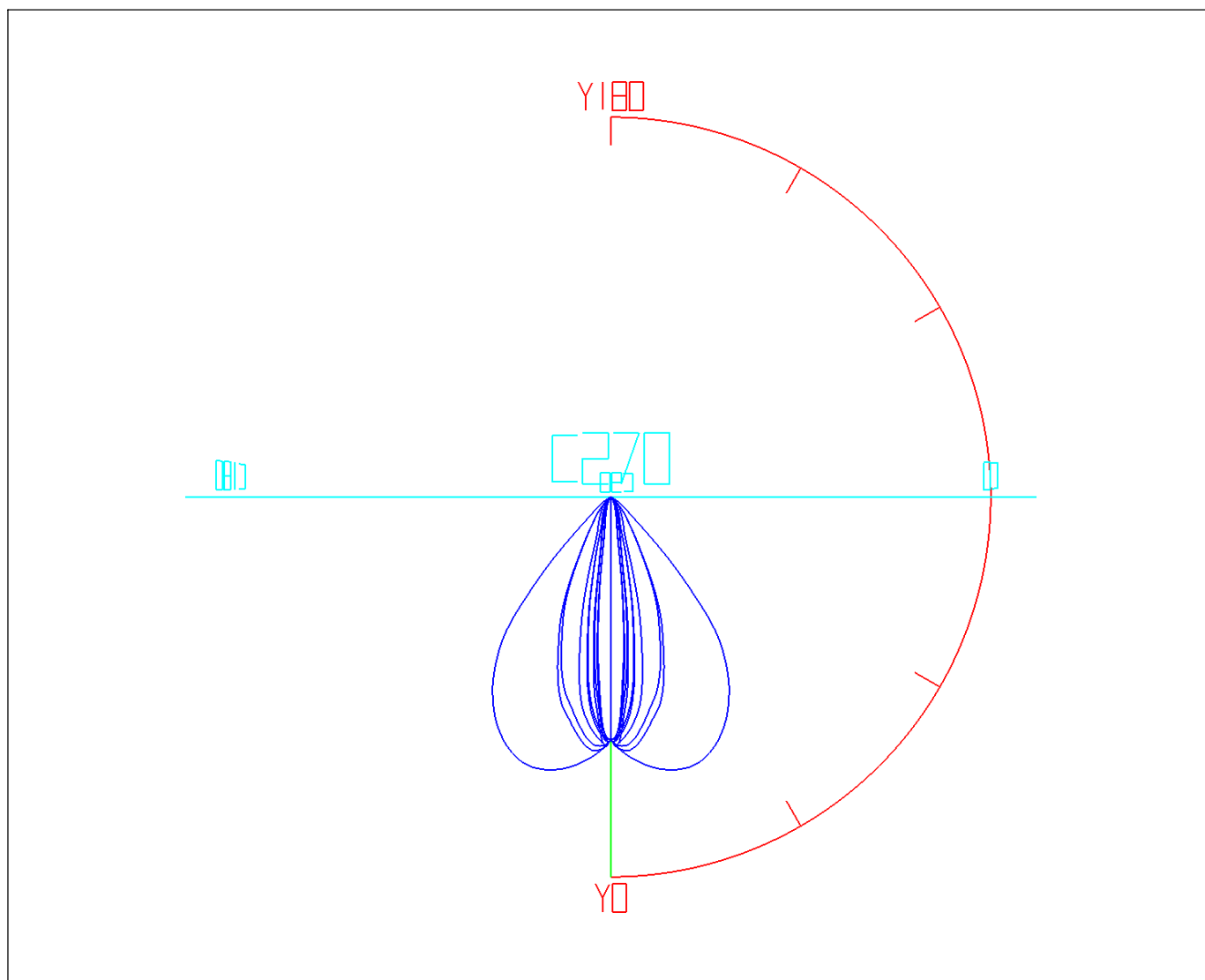
IES Indoor Report

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |

3D Light Intensity Distribution Modal



Curves: 3D Model — Fixture — Vert. HUD — Hori. HUD —
View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

IES Indoor Report

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

Zonal Flux Tabulation

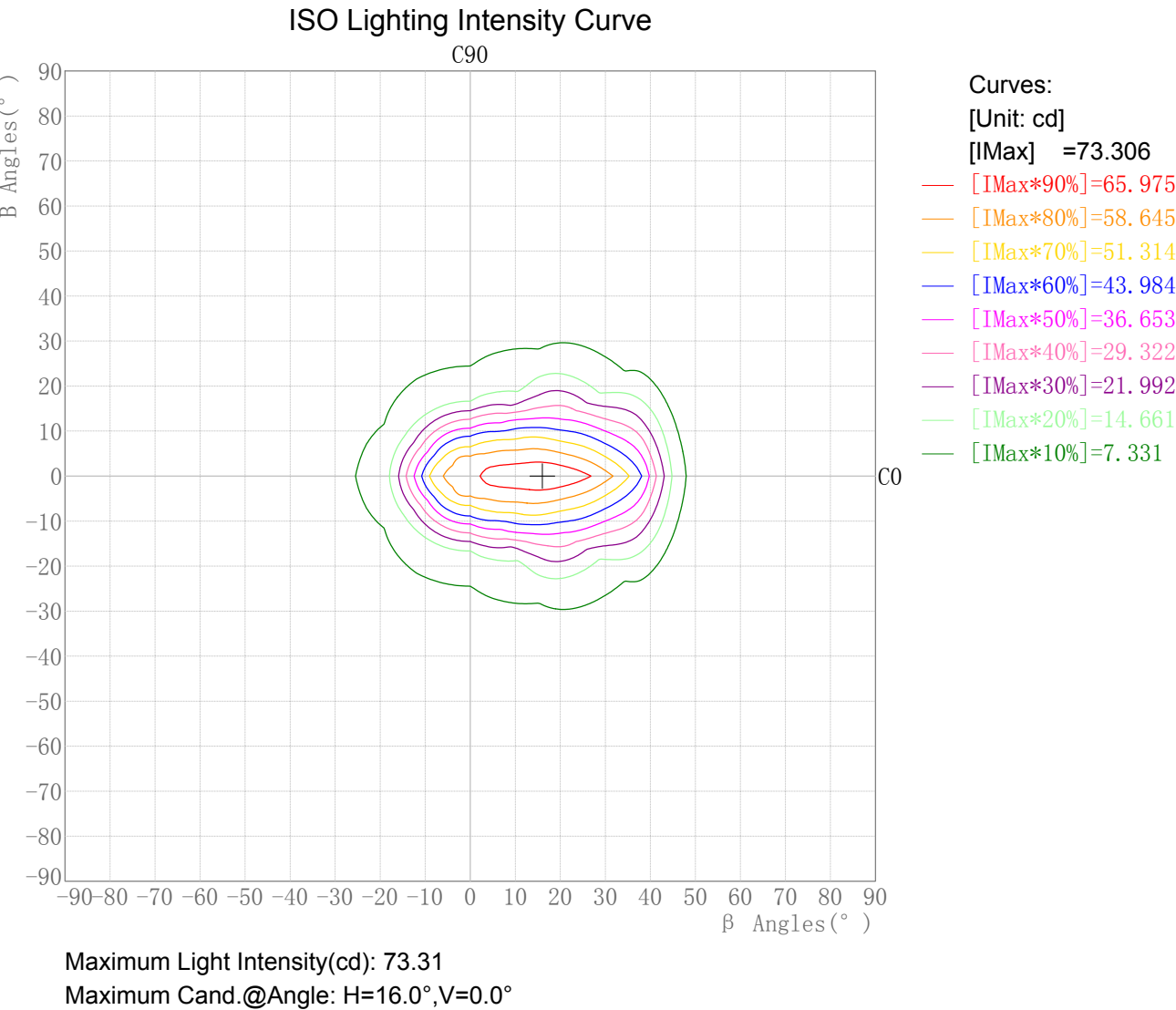
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 0.06 | 0.06 | 0.19 | 0.19 | 47.0-48.0 | 0.21 | 31.08 | 0.66 | 96.03 |
| 1.0-2.0 | 0.18 | 0.24 | 0.56 | 0.75 | 48.0-49.0 | 0.19 | 31.27 | 0.60 | 96.63 |
| 2.0-3.0 | 0.30 | 0.55 | 0.94 | 1.69 | 49.0-50.0 | 0.18 | 31.44 | 0.54 | 97.17 |
| 3.0-4.0 | 0.42 | 0.97 | 1.30 | 2.99 | 50.0-51.0 | 0.16 | 31.60 | 0.49 | 97.66 |
| 4.0-5.0 | 0.53 | 1.50 | 1.63 | 4.62 | 51.0-52.0 | 0.14 | 31.75 | 0.44 | 98.11 |
| 5.0-6.0 | 0.62 | 2.12 | 1.93 | 6.55 | 52.0-53.0 | 0.13 | 31.87 | 0.39 | 98.50 |
| 6.0-7.0 | 0.71 | 2.83 | 2.19 | 8.74 | 53.0-54.0 | 0.11 | 31.98 | 0.34 | 98.84 |
| 7.0-8.0 | 0.78 | 3.61 | 2.42 | 11.16 | 54.0-55.0 | 0.09 | 32.08 | 0.29 | 99.12 |
| 8.0-9.0 | 0.85 | 4.46 | 2.62 | 13.79 | 55.0-56.0 | 0.08 | 32.15 | 0.24 | 99.36 |
| 9.0-10.0 | 0.90 | 5.36 | 2.77 | 16.56 | 56.0-57.0 | 0.06 | 32.22 | 0.19 | 99.55 |
| 10.0-11.0 | 0.93 | 6.29 | 2.87 | 19.43 | 57.0-58.0 | 0.05 | 32.26 | 0.15 | 99.70 |
| 11.0-12.0 | 0.95 | 7.23 | 2.92 | 22.35 | 58.0-59.0 | 0.04 | 32.30 | 0.11 | 99.81 |
| 12.0-13.0 | 0.96 | 8.19 | 2.96 | 25.31 | 59.0-60.0 | 0.02 | 32.32 | 0.07 | 99.88 |
| 13.0-14.0 | 0.96 | 9.15 | 2.96 | 28.27 | 60.0-61.0 | 0.01 | 32.34 | 0.05 | 99.93 |
| 14.0-15.0 | 0.95 | 10.09 | 2.92 | 31.19 | 61.0-62.0 | 0.01 | 32.35 | 0.03 | 99.96 |
| 15.0-16.0 | 0.92 | 11.02 | 2.85 | 34.04 | 62.0-63.0 | 0.01 | 32.35 | 0.02 | 99.97 |
| 16.0-17.0 | 0.90 | 11.91 | 2.77 | 36.81 | 63.0-64.0 | 0.00 | 32.35 | 0.01 | 99.98 |
| 17.0-18.0 | 0.87 | 12.78 | 2.68 | 39.50 | 64.0-65.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 18.0-19.0 | 0.85 | 13.63 | 2.61 | 42.11 | 65.0-66.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 19.0-20.0 | 0.83 | 14.46 | 2.56 | 44.67 | 66.0-67.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 20.0-21.0 | 0.82 | 15.28 | 2.53 | 47.21 | 67.0-68.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 21.0-22.0 | 0.82 | 16.09 | 2.52 | 49.73 | 68.0-69.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 22.0-23.0 | 0.81 | 16.91 | 2.52 | 52.25 | 69.0-70.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 23.0-24.0 | 0.81 | 17.72 | 2.51 | 54.76 | 70.0-71.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 24.0-25.0 | 0.81 | 18.53 | 2.50 | 57.26 | 71.0-72.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 25.0-26.0 | 0.80 | 19.33 | 2.48 | 59.74 | 72.0-73.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 26.0-27.0 | 0.79 | 20.12 | 2.45 | 62.19 | 73.0-74.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 27.0-28.0 | 0.78 | 20.90 | 2.40 | 64.59 | 74.0-75.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 28.0-29.0 | 0.76 | 21.66 | 2.34 | 66.94 | 75.0-76.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 29.0-30.0 | 0.74 | 22.40 | 2.28 | 69.22 | 76.0-77.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 30.0-31.0 | 0.71 | 23.11 | 2.21 | 71.42 | 77.0-78.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 31.0-32.0 | 0.69 | 23.80 | 2.13 | 73.55 | 78.0-79.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 32.0-33.0 | 0.67 | 24.47 | 2.06 | 75.61 | 79.0-80.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 33.0-34.0 | 0.64 | 25.11 | 1.99 | 77.60 | 80.0-81.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 34.0-35.0 | 0.62 | 25.73 | 1.92 | 79.52 | 81.0-82.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 35.0-36.0 | 0.60 | 26.33 | 1.85 | 81.38 | 82.0-83.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 36.0-37.0 | 0.58 | 26.91 | 1.78 | 83.16 | 83.0-84.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 37.0-38.0 | 0.55 | 27.46 | 1.70 | 84.86 | 84.0-85.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 38.0-39.0 | 0.52 | 27.98 | 1.61 | 86.47 | 85.0-86.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 39.0-40.0 | 0.49 | 28.47 | 1.51 | 87.98 | 86.0-87.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 40.0-41.0 | 0.45 | 28.92 | 1.39 | 89.37 | 87.0-88.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 41.0-42.0 | 0.41 | 29.34 | 1.28 | 90.65 | 88.0-89.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 42.0-43.0 | 0.38 | 29.71 | 1.17 | 91.82 | 89.0-90.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 43.0-44.0 | 0.34 | 30.05 | 1.05 | 92.88 | 90.0-91.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 44.0-45.0 | 0.30 | 30.36 | 0.93 | 93.81 | 91.0-92.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 45.0-46.0 | 0.27 | 30.62 | 0.83 | 94.64 | 92.0-93.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 46.0-47.0 | 0.24 | 30.86 | 0.73 | 95.37 | 93.0-94.0 | 0.00 | 32.36 | 0.00 | 99.99 |

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 | 0.00 | 32.36 | 0.00 | 99.99 | 141.0-142.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 95.0-96.0 | 0.00 | 32.36 | 0.00 | 99.99 | 142.0-143.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 96.0-97.0 | 0.00 | 32.36 | 0.00 | 99.99 | 143.0-144.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 97.0-98.0 | 0.00 | 32.36 | 0.00 | 99.99 | 144.0-145.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 98.0-99.0 | 0.00 | 32.36 | 0.00 | 99.99 | 145.0-146.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 99.0-100.0 | 0.00 | 32.36 | 0.00 | 99.99 | 146.0-147.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 100.0-101.0 | 0.00 | 32.36 | 0.00 | 99.99 | 147.0-148.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 101.0-102.0 | 0.00 | 32.36 | 0.00 | 99.99 | 148.0-149.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 102.0-103.0 | 0.00 | 32.36 | 0.00 | 99.99 | 149.0-150.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 103.0-104.0 | 0.00 | 32.36 | 0.00 | 99.99 | 150.0-151.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 104.0-105.0 | 0.00 | 32.36 | 0.00 | 99.99 | 151.0-152.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 105.0-106.0 | 0.00 | 32.36 | 0.00 | 99.99 | 152.0-153.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 106.0-107.0 | 0.00 | 32.36 | 0.00 | 99.99 | 153.0-154.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 107.0-108.0 | 0.00 | 32.36 | 0.00 | 99.99 | 154.0-155.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 108.0-109.0 | 0.00 | 32.36 | 0.00 | 99.99 | 155.0-156.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 109.0-110.0 | 0.00 | 32.36 | 0.00 | 99.99 | 156.0-157.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 110.0-111.0 | 0.00 | 32.36 | 0.00 | 99.99 | 157.0-158.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 111.0-112.0 | 0.00 | 32.36 | 0.00 | 99.99 | 158.0-159.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 112.0-113.0 | 0.00 | 32.36 | 0.00 | 99.99 | 159.0-160.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 113.0-114.0 | 0.00 | 32.36 | 0.00 | 99.99 | 160.0-161.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 114.0-115.0 | 0.00 | 32.36 | 0.00 | 99.99 | 161.0-162.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 115.0-116.0 | 0.00 | 32.36 | 0.00 | 99.99 | 162.0-163.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 116.0-117.0 | 0.00 | 32.36 | 0.00 | 99.99 | 163.0-164.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 117.0-118.0 | 0.00 | 32.36 | 0.00 | 99.99 | 164.0-165.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 118.0-119.0 | 0.00 | 32.36 | 0.00 | 99.99 | 165.0-166.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 119.0-120.0 | 0.00 | 32.36 | 0.00 | 99.99 | 166.0-167.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 120.0-121.0 | 0.00 | 32.36 | 0.00 | 99.99 | 167.0-168.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 121.0-122.0 | 0.00 | 32.36 | 0.00 | 99.99 | 168.0-169.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 122.0-123.0 | 0.00 | 32.36 | 0.00 | 99.99 | 169.0-170.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 123.0-124.0 | 0.00 | 32.36 | 0.00 | 99.99 | 170.0-171.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 124.0-125.0 | 0.00 | 32.36 | 0.00 | 99.99 | 171.0-172.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 125.0-126.0 | 0.00 | 32.36 | 0.00 | 99.99 | 172.0-173.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 126.0-127.0 | 0.00 | 32.36 | 0.00 | 99.99 | 173.0-174.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 127.0-128.0 | 0.00 | 32.36 | 0.00 | 99.99 | 174.0-175.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 128.0-129.0 | 0.00 | 32.36 | 0.00 | 99.99 | 175.0-176.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 129.0-130.0 | 0.00 | 32.36 | 0.00 | 99.99 | 176.0-177.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 130.0-131.0 | 0.00 | 32.36 | 0.00 | 99.99 | 177.0-178.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 131.0-132.0 | 0.00 | 32.36 | 0.00 | 99.99 | 178.0-179.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 132.0-133.0 | 0.00 | 32.36 | 0.00 | 99.99 | 179.0-180.0 | 0.00 | 32.36 | 0.00 | 99.99 |
| 133.0-134.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 134.0-135.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 135.0-136.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 136.0-137.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 137.0-138.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 138.0-139.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 139.0-140.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |
| 140.0-141.0 | 0.00 | 32.36 | 0.00 | 99.99 | | | | | |

Rectangle ISO Lighting Intensity Diagram

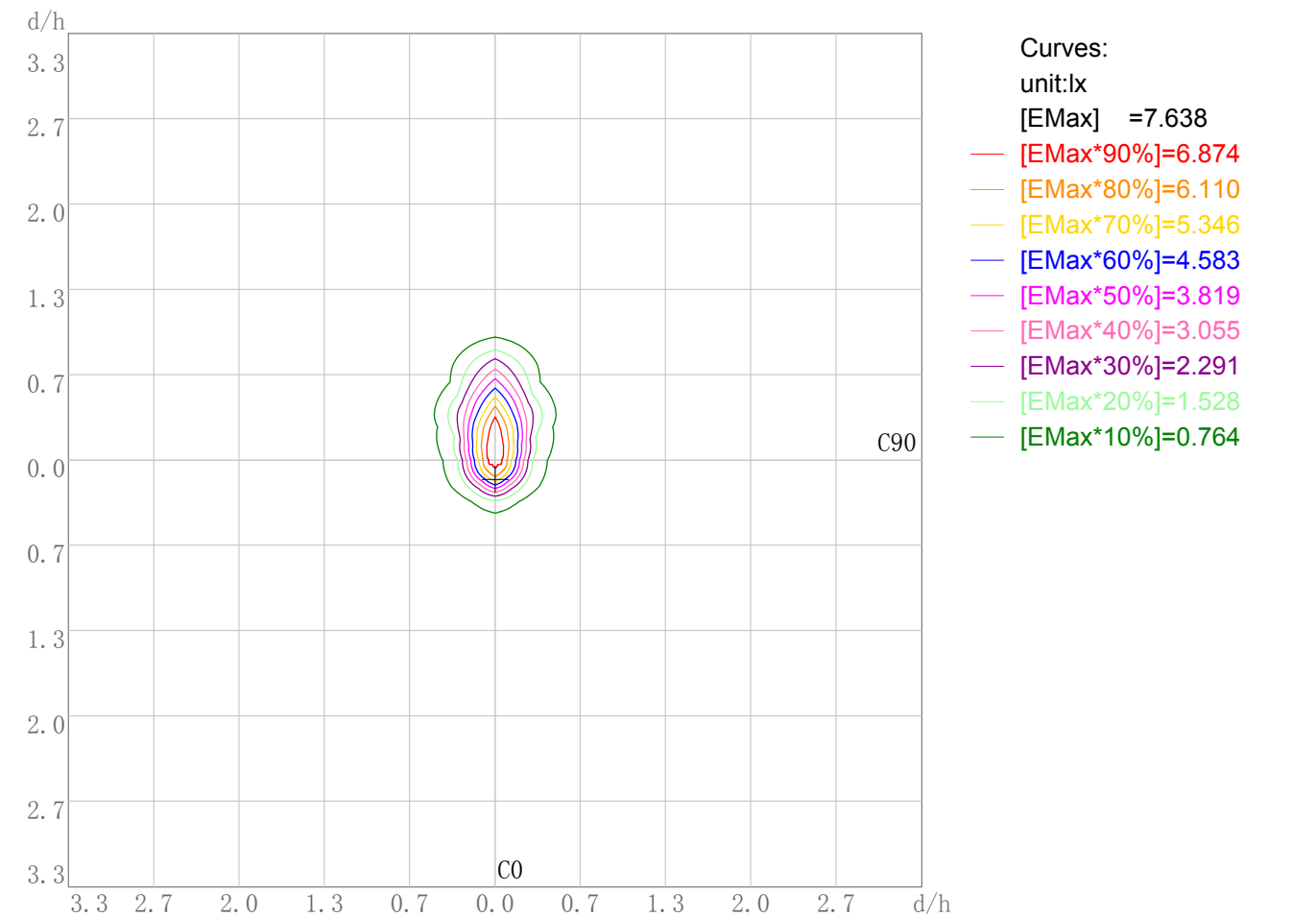
| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K RA90 | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2020/12/25 |



Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 7.64
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.1

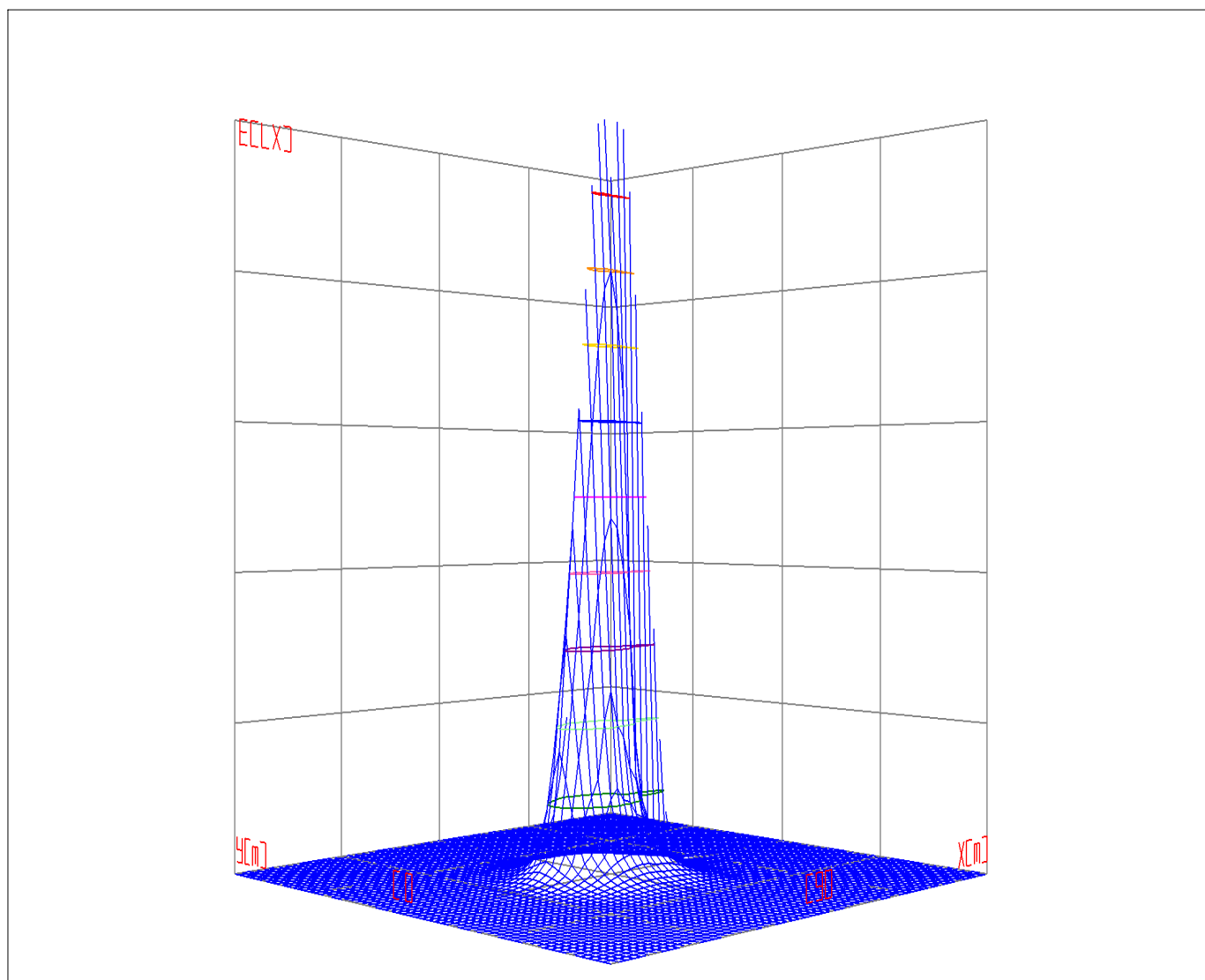
IES Indoor Report

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |

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

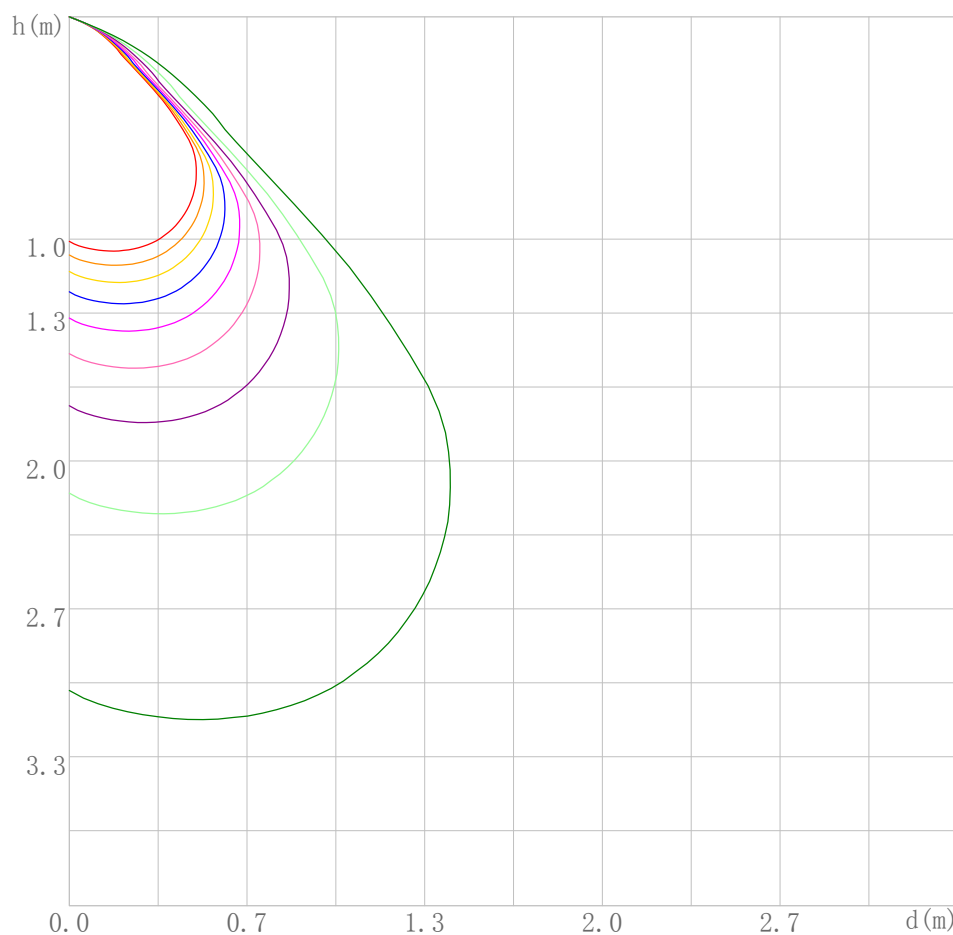
IES Indoor Report

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

Space ISO Illuminance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |

Space ISO Illuminance Curve



Curves:

[Unit: lx]

[EMax] =68.737

— [EMax*90%]=61.864

— [EMax*80%]=54.990

— [EMax*70%]=48.116

— [EMax*60%]=41.242

— [EMax*50%]=34.369

— [EMax*40%]=27.495

— [EMax*30%]=20.621

— [EMax*20%]=13.747

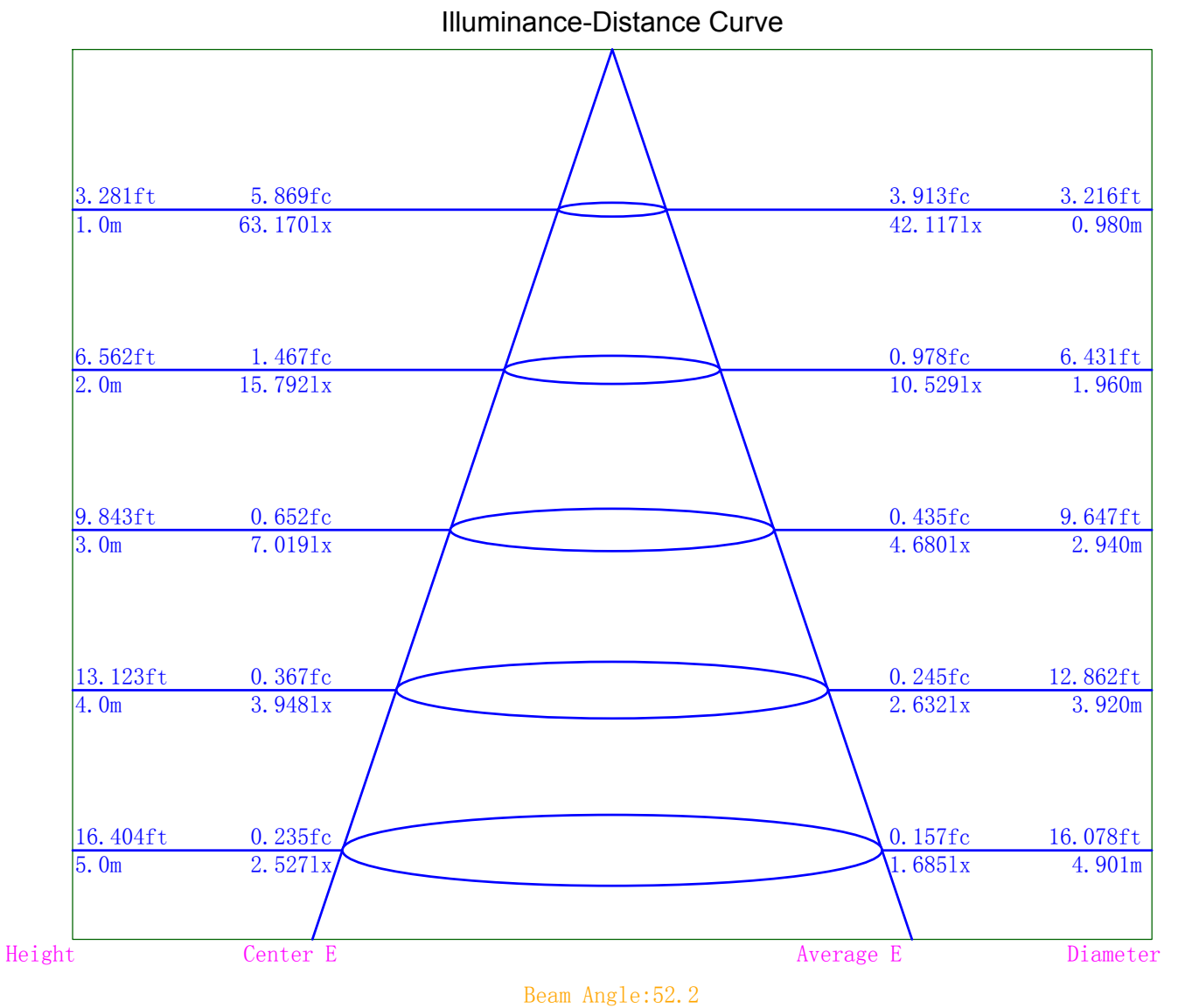
— [EMax*10%]=6.874

Space Plane Maximum Illuminance and @Angle:68.74lx,9.0deg

Plane Maximum Lighting Intensity and @Angle:73.306cd,0deg

Illuminance-Distance Diagram

| | | |
|--|-----------------------|----------------------------|
| Lum. Name:ST02-03-PR-04 4000K RA90 | Lum. Catelog: | Test ID:01 |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Deparment |
| Manufacture:Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date:2020/12/25 |



Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |

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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Luminance Limiting Curve



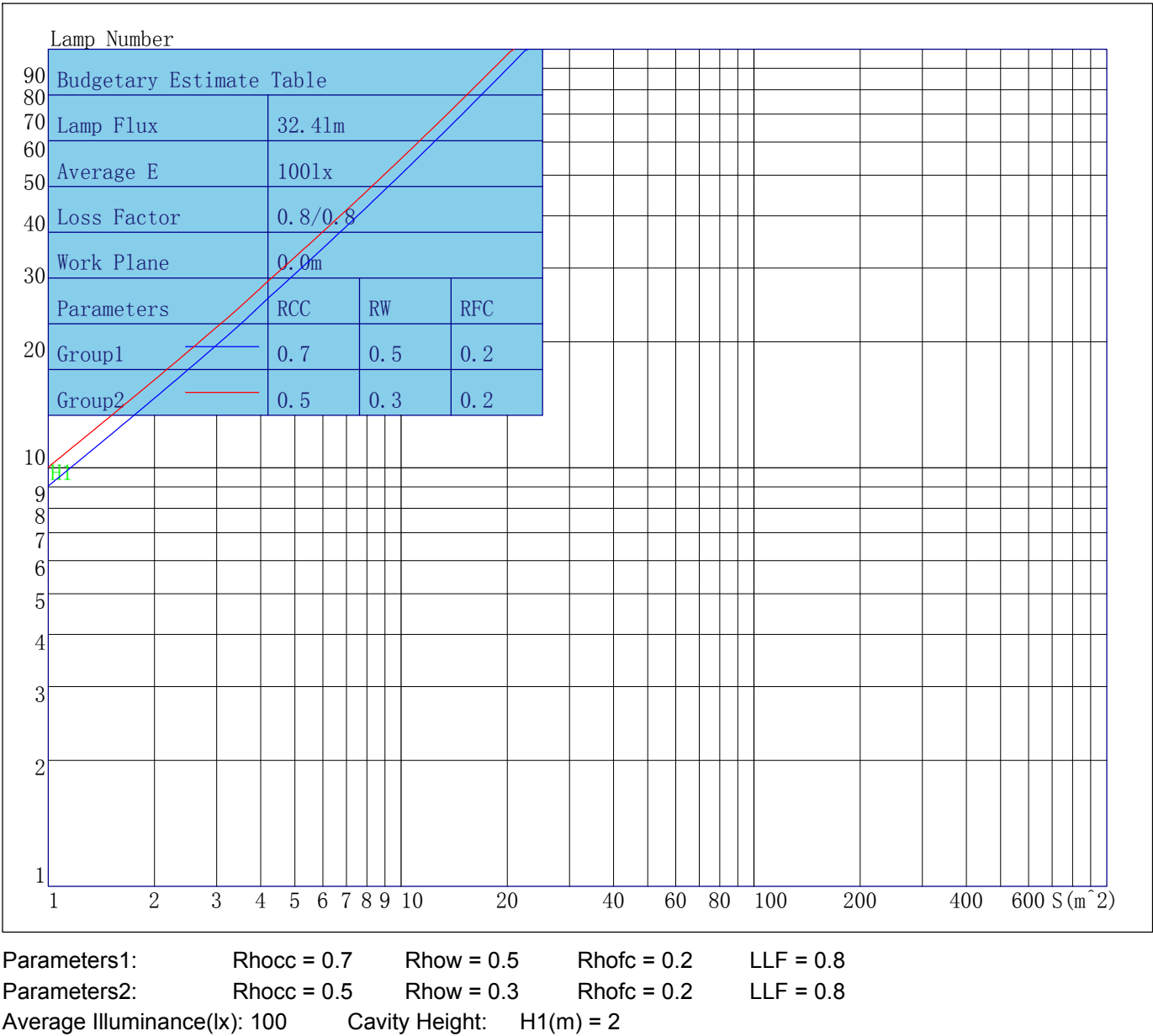
Luminous Size: Length(m)=0.000 Width(m)=0.000 Height(m)=0.000 Area(m^2)=0.000000

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: ST02-03-PR-04 4000K 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: 2020/12/25 |



Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name: ST02-03-PR-04 4000K RA90 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: Quality Deparment |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2020/12/25 |

| 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 | 114 | 111 | 108 | 106 | 111 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 100 | 98 | 98 | 97 | 96 | 94 |
| 2 | 108 | 103 | 99 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 93 | 95 | 93 | 91 | 93 | 91 | 89 | 87 |
| 3 | 103 | 96 | 92 | 88 | 101 | 95 | 91 | 87 | 92 | 89 | 86 | 90 | 87 | 84 | 88 | 85 | 83 | 81 |
| 4 | 98 | 90 | 85 | 81 | 96 | 89 | 84 | 80 | 87 | 83 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 76 |
| 5 | 93 | 85 | 79 | 75 | 91 | 84 | 79 | 75 | 82 | 77 | 74 | 80 | 76 | 73 | 79 | 75 | 73 | 71 |
| 6 | 88 | 80 | 74 | 70 | 87 | 79 | 74 | 70 | 78 | 73 | 69 | 76 | 72 | 69 | 75 | 71 | 68 | 67 |
| 7 | 84 | 75 | 69 | 65 | 83 | 75 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 63 |
| 8 | 80 | 71 | 65 | 61 | 79 | 71 | 65 | 61 | 70 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 61 | 59 |
| 9 | 77 | 68 | 62 | 58 | 76 | 67 | 62 | 58 | 66 | 61 | 58 | 65 | 61 | 58 | 64 | 60 | 57 | 56 |
| 10 | 74 | 64 | 59 | 55 | 73 | 64 | 58 | 55 | 63 | 58 | 55 | 62 | 58 | 55 | 62 | 57 | 54 | 53 |

Unified Glare Rating Table

| | | |
|---|-----------------------|-----------------------------|
| Lum. Name: ST02-03-PR-04 4000K RA90 | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Deparment |
| Manufacture: Shenzhen Norming Lighting Co.Ltd | Test Machine:GON-2000 | Test Date: 2020/12/25 |

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 | -12.9 | -11.8 | -12.5 | -11.5 | -11.2 | -12.9 | -11.8 | -12.5 | -11.5 | -11.2 | |
| | Y=3H | -13.0 | -12.1 | -12.7 | -11.8 | -11.4 | -13.0 | -12.1 | -12.7 | -11.8 | -11.4 |
| | Y=4H | -13.1 | -12.3 | -12.7 | -12.0 | -11.6 | -13.1 | -12.3 | -12.7 | -12.0 | -11.6 |
| | Y=6H | -13.2 | -12.5 | -12.8 | -12.1 | -11.7 | -13.2 | -12.5 | -12.8 | -12.1 | -11.7 |
| | Y=8H | -13.3 | -12.6 | -12.9 | -12.2 | -11.8 | -13.3 | -12.6 | -12.9 | -12.2 | -11.8 |
| | Y=12H | -13.4 | -12.7 | -12.9 | -12.3 | -11.9 | -13.4 | -12.7 | -12.9 | -12.3 | -11.9 |
| X=4H Y=2H | -13.1 | -12.3 | -12.7 | -12.0 | -11.6 | -13.1 | -12.3 | -12.7 | -12.0 | -11.6 | |
| | Y=3H | -13.3 | -12.7 | -12.9 | -12.3 | -11.8 | -13.3 | -12.7 | -12.9 | -12.3 | -11.8 |
| | Y=4H | -13.5 | -12.9 | -13.0 | -12.4 | -12.0 | -13.5 | -12.9 | -13.0 | -12.4 | -12.0 |
| | Y=6H | -13.6 | -13.1 | -13.1 | -12.6 | -12.1 | -13.6 | -13.1 | -13.1 | -12.6 | -12.1 |
| | Y=8H | -13.6 | -13.2 | -13.2 | -12.7 | -12.2 | -13.6 | -13.2 | -13.2 | -12.7 | -12.2 |
| | Y=12H | -13.7 | -13.3 | -13.2 | -12.8 | -12.3 | -13.7 | -13.3 | -13.2 | -12.8 | -12.3 |
| X=8H Y=4H | -13.6 | -13.2 | -13.2 | -12.7 | -12.2 | -13.6 | -13.2 | -13.2 | -12.7 | -12.2 | |
| | Y=6H | -13.8 | -13.4 | -13.2 | -12.9 | -12.4 | -13.8 | -13.4 | -13.2 | -12.9 | -12.4 |
| | Y=8H | -13.8 | -13.5 | -13.3 | -13.0 | -12.5 | -13.8 | -13.5 | -13.3 | -13.0 | -12.5 |
| | Y=12H | -13.9 | -13.6 | -13.4 | -13.1 | -12.5 | -13.9 | -13.6 | -13.4 | -13.1 | -12.5 |
| X=12H Y=4H | -13.7 | -13.3 | -13.2 | -12.8 | -12.3 | -13.7 | -13.3 | -13.2 | -12.8 | -12.3 | |
| | Y=6H | -13.8 | -13.5 | -13.3 | -13.0 | -12.5 | -13.8 | -13.5 | -13.3 | -13.0 | -12.5 |
| | Y=8H | -13.9 | -13.6 | -13.4 | -13.1 | -12.5 | -13.9 | -13.6 | -13.4 | -13.1 | -12.5 |
| Variations with the objerver position at spacings | | | | | | | | | | | |
| S=1.0H | 0.0/0.0 | | | | | 0.0/0.0 | | | | | |
| S=1.5H | 0.0/0.0 | | | | | 0.0/0.0 | | | | | |
| S=2.0H | 0.0/0.0 | | | | | 0.0/0.0 | | | | | |
| Reduced UGR Table: | | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | | |
| Correction Value | 0.0 | | | | | 0.0 | | | | | |

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

IES Indoor Report

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

Candela Tabulation

| V/H | C0. 0 | C30. 0 | C60. 0 | C90. 0 | C120. 0 | C150. 0 | C180. 0 |
|---------|--------|--------|--------|--------|---------|---------|---------|
| γ 0. 0 | 63. 17 | 63. 17 | 63. 17 | 63. 17 | 63. 17 | 63. 17 | 63. 17 |
| γ 1. 0 | 64. 64 | 64. 57 | 63. 32 | 62. 61 | 63. 43 | 62. 95 | 64. 95 |
| γ 2. 0 | 65. 81 | 65. 21 | 63. 88 | 62. 65 | 63. 21 | 62. 26 | 64. 05 |
| γ 3. 0 | 66. 81 | 65. 47 | 63. 82 | 61. 93 | 62. 43 | 61. 20 | 62. 93 |
| γ 4. 0 | 67. 71 | 65. 62 | 62. 75 | 59. 91 | 60. 97 | 59. 67 | 61. 76 |
| γ 5. 0 | 68. 57 | 65. 36 | 60. 58 | 56. 76 | 58. 25 | 57. 85 | 60. 37 |
| γ 6. 0 | 69. 32 | 64. 69 | 57. 84 | 52. 96 | 54. 47 | 55. 58 | 58. 64 |
| γ 7. 0 | 70. 07 | 63. 92 | 55. 32 | 49. 59 | 50. 50 | 52. 69 | 56. 90 |
| γ 8. 0 | 70. 77 | 62. 80 | 53. 21 | 46. 90 | 47. 01 | 49. 24 | 54. 57 |
| γ 9. 0 | 71. 34 | 61. 62 | 51. 26 | 43. 49 | 43. 75 | 45. 00 | 51. 50 |
| γ 10. 0 | 71. 88 | 60. 42 | 48. 59 | 39. 34 | 39. 95 | 40. 33 | 47. 51 |
| γ 11. 0 | 72. 25 | 59. 19 | 45. 31 | 35. 02 | 35. 83 | 36. 03 | 43. 03 |
| γ 12. 0 | 72. 72 | 57. 87 | 41. 74 | 31. 35 | 31. 67 | 32. 18 | 38. 62 |
| γ 13. 0 | 72. 95 | 56. 75 | 38. 29 | 28. 11 | 27. 87 | 28. 38 | 34. 36 |
| γ 14. 0 | 73. 15 | 55. 73 | 35. 48 | 24. 15 | 24. 37 | 24. 15 | 30. 39 |
| γ 15. 0 | 73. 24 | 54. 60 | 32. 65 | 19. 97 | 20. 56 | 20. 42 | 26. 14 |
| γ 16. 0 | 73. 31 | 53. 09 | 29. 17 | 16. 26 | 16. 99 | 17. 42 | 21. 58 |
| γ 17. 0 | 73. 14 | 51. 33 | 25. 40 | 13. 72 | 14. 06 | 14. 80 | 17. 66 |
| γ 18. 0 | 72. 96 | 49. 48 | 21. 74 | 12. 10 | 12. 02 | 12. 42 | 14. 47 |
| γ 19. 0 | 72. 60 | 47. 38 | 18. 78 | 10. 76 | 10. 65 | 10. 25 | 12. 34 |
| γ 20. 0 | 71. 99 | 45. 18 | 16. 78 | 9. 77 | 9. 58 | 8. 76 | 10. 94 |
| γ 21. 0 | 71. 47 | 42. 88 | 15. 21 | 9. 24 | 8. 94 | 7. 80 | 9. 76 |
| γ 22. 0 | 70. 79 | 40. 67 | 13. 82 | 8. 75 | 8. 50 | 7. 40 | 8. 90 |
| γ 23. 0 | 70. 01 | 38. 63 | 12. 68 | 8. 21 | 8. 07 | 7. 09 | 8. 48 |
| γ 24. 0 | 69. 08 | 36. 71 | 11. 98 | 7. 58 | 7. 59 | 6. 73 | 8. 10 |
| γ 25. 0 | 68. 01 | 34. 84 | 11. 40 | 7. 04 | 7. 07 | 6. 24 | 7. 57 |
| γ 26. 0 | 66. 96 | 32. 77 | 10. 84 | 6. 59 | 6. 65 | 5. 82 | 7. 06 |
| γ 27. 0 | 65. 74 | 30. 40 | 10. 13 | 6. 19 | 6. 29 | 5. 48 | 6. 65 |
| γ 28. 0 | 64. 44 | 27. 88 | 9. 39 | 5. 83 | 5. 94 | 5. 16 | 6. 28 |
| γ 29. 0 | 62. 96 | 25. 27 | 8. 76 | 5. 49 | 5. 63 | 4. 86 | 5. 95 |
| γ 30. 0 | 61. 42 | 22. 59 | 8. 21 | 5. 18 | 5. 34 | 4. 57 | 5. 63 |
| γ 31. 0 | 59. 81 | 19. 99 | 7. 68 | 4. 89 | 5. 05 | 4. 31 | 5. 32 |
| γ 32. 0 | 58. 13 | 17. 68 | 7. 21 | 4. 62 | 4. 79 | 4. 07 | 5. 04 |
| γ 33. 0 | 56. 17 | 15. 73 | 6. 78 | 4. 37 | 4. 54 | 3. 83 | 4. 78 |
| γ 34. 0 | 54. 11 | 14. 14 | 6. 38 | 4. 13 | 4. 31 | 3. 61 | 4. 53 |
| γ 35. 0 | 52. 00 | 12. 77 | 6. 01 | 3. 89 | 4. 08 | 3. 41 | 4. 29 |
| γ 36. 0 | 49. 73 | 11. 51 | 5. 66 | 3. 66 | 3. 87 | 3. 20 | 4. 05 |
| γ 37. 0 | 47. 26 | 10. 32 | 5. 32 | 3. 45 | 3. 66 | 2. 99 | 3. 82 |
| γ 38. 0 | 44. 23 | 9. 24 | 5. 02 | 3. 25 | 3. 46 | 2. 80 | 3. 61 |
| γ 39. 0 | 40. 44 | 8. 36 | 4. 72 | 3. 06 | 3. 28 | 2. 62 | 3. 41 |
| γ 40. 0 | 35. 41 | 7. 71 | 4. 44 | 2. 86 | 3. 10 | 2. 44 | 3. 21 |
| γ 41. 0 | 30. 74 | 7. 13 | 4. 18 | 2. 68 | 2. 91 | 2. 27 | 3. 02 |
| γ 42. 0 | 26. 41 | 6. 56 | 3. 90 | 2. 49 | 2. 74 | 2. 09 | 2. 83 |
| γ 43. 0 | 22. 28 | 6. 02 | 3. 65 | 2. 32 | 2. 56 | 1. 93 | 2. 63 |
| γ 44. 0 | 17. 72 | 5. 44 | 3. 41 | 2. 14 | 2. 38 | 1. 77 | 2. 45 |
| γ 45. 0 | 13. 85 | 4. 83 | 3. 19 | 1. 98 | 2. 23 | 1. 61 | 2. 28 |
| γ 46. 0 | 10. 82 | 4. 32 | 2. 96 | 1. 80 | 2. 07 | 1. 46 | 2. 10 |

Photometric Filename:ST02-03-PR-04 4000K RA90 .IES

[illegible]

