

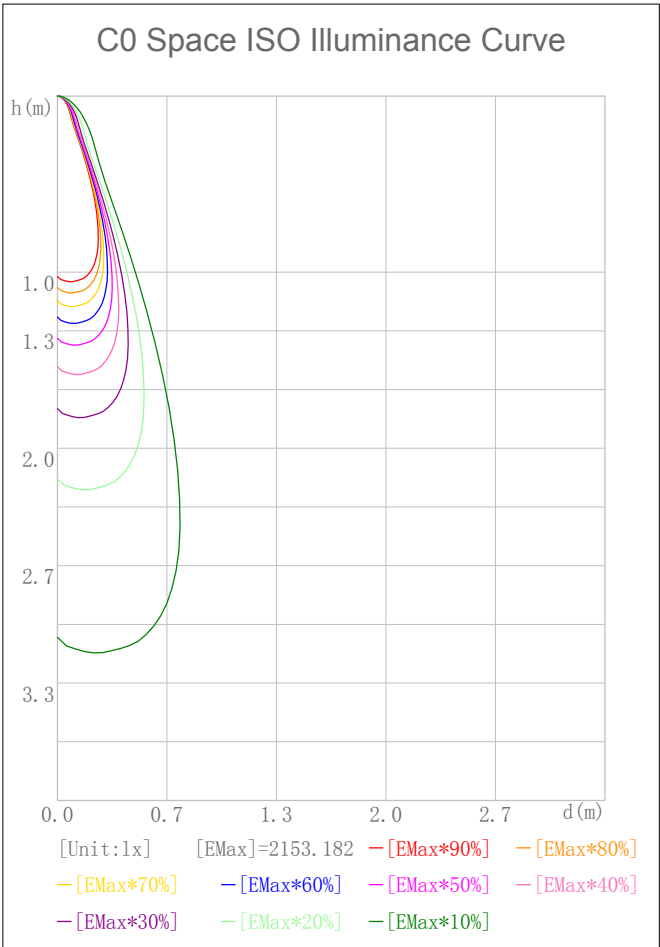
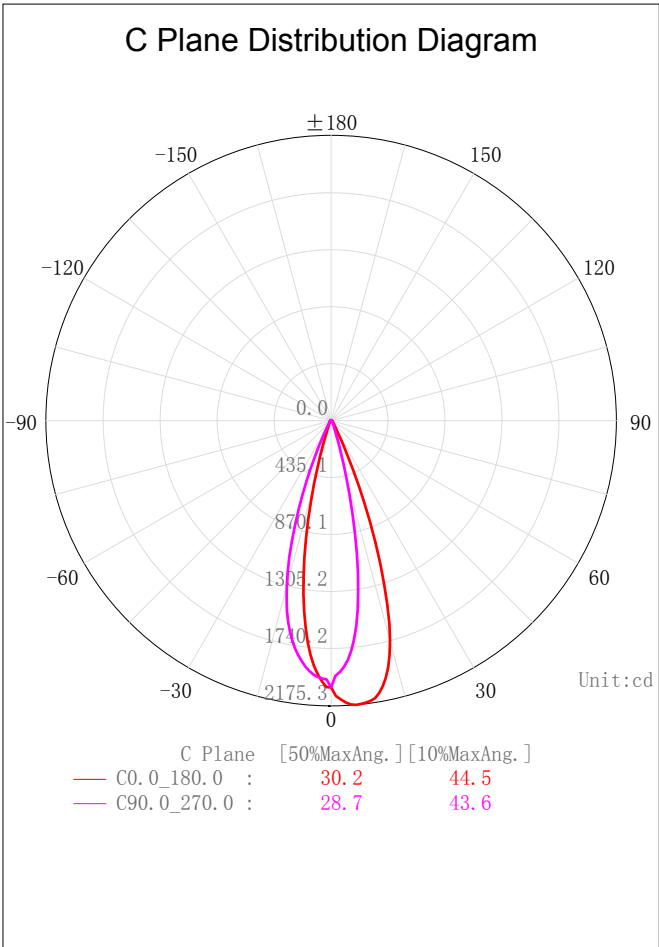
Indoor Luminaire Photometric Data

Description Information

|   |                         |                      |                       |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name:WL02-06-XX-02 4000K RA90 24D      |                         | 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):0.038m*0.038m*0.000m          |                         | Lum. Area (m2):0.001 | Lum. W (kg): 0.000    |
| Test System: C, γ                               | Test Step: C=90.0 γ=1.0 | Temp. (°C): 25       | Humidity(%): 50.0     |

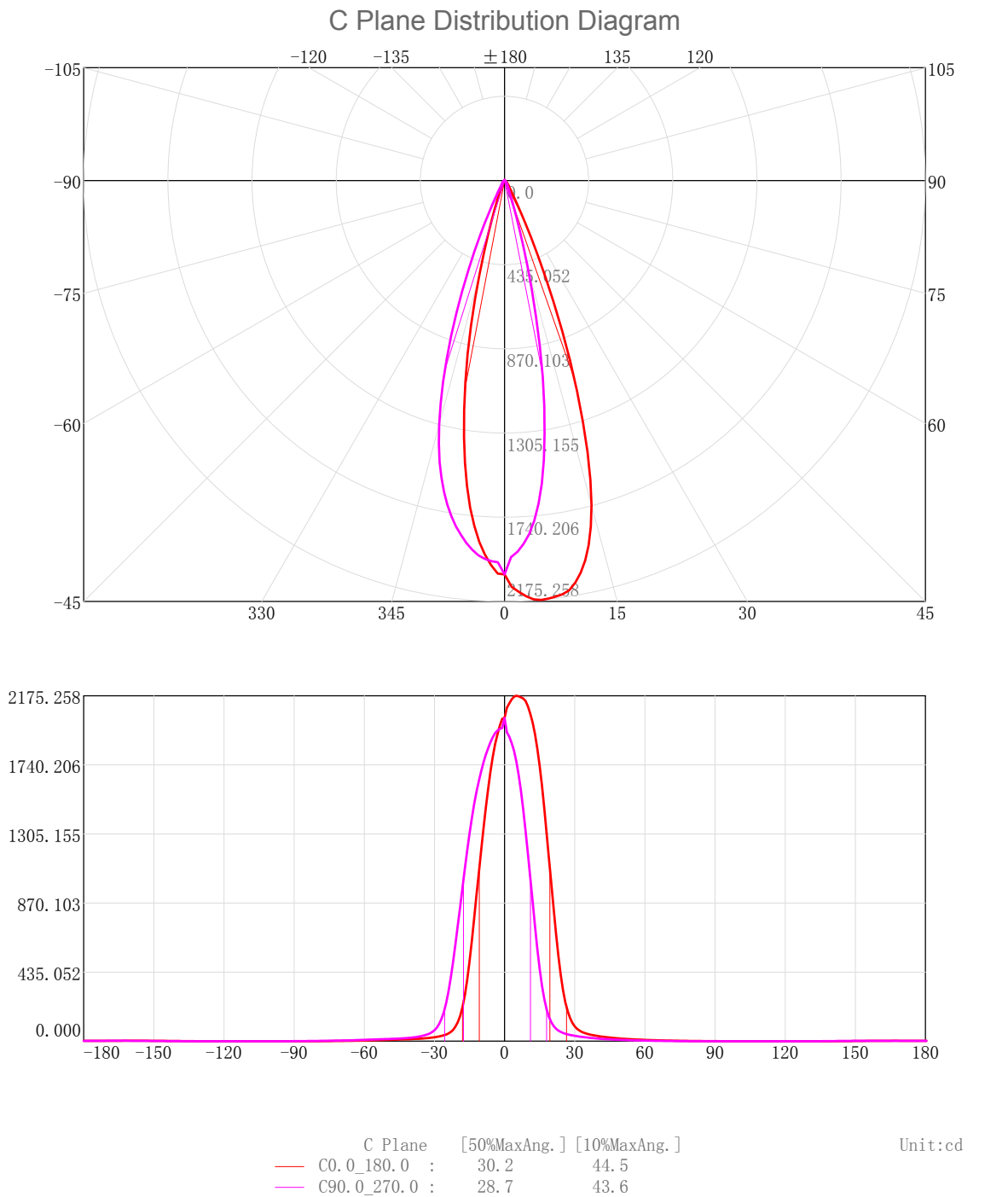
Character Parameter

| Lamp Speciality Parameter                       |                                | Luminaire Speciality Parameter        |  |
|---|--------------------------------|---------------------------------------|--|
| Rated Flux(lm): 579.400                         | Luminary Flux(lm): 579.404     | Field Angle(10%Imax): 44.5(°)         |  |
| Rated Power(W):                                 | Luminary Efficiency: 100.00%   | Down Lumens&Percent: 575.829lm 99.38% |  |
| Rated Voltage(V):                               | Luminary EER(lm/W): 93.770     | Up Lumens&Percent: 3.576lm 0.62%      |  |
| Tested Power(W): 6.179                          | Max. Candela(cd): 2175.258     | S/MH: C0_a180=0.532 C90_270=0.484     |  |
| Lamps' Inside: 1                                | Max Cand@Ang. (°): C=0.0 γ=5.0 | CIE Type: Semi-Direct                 |  |
| Tested Electrics (V, A, pf):240.9, 0.030, 0.844 | Beam Angle(50%Imax): 30.2(°)   | ErP ϕ use(90°): 480.203lm             |  |
| Lamp Size (W*L*H):0.038m*0.038m*0.000m          | Left=-10.8°, Right=19.4°       | IRF(%): 641.021                       |  |



2D Plane Light Intensity Distribution Curve

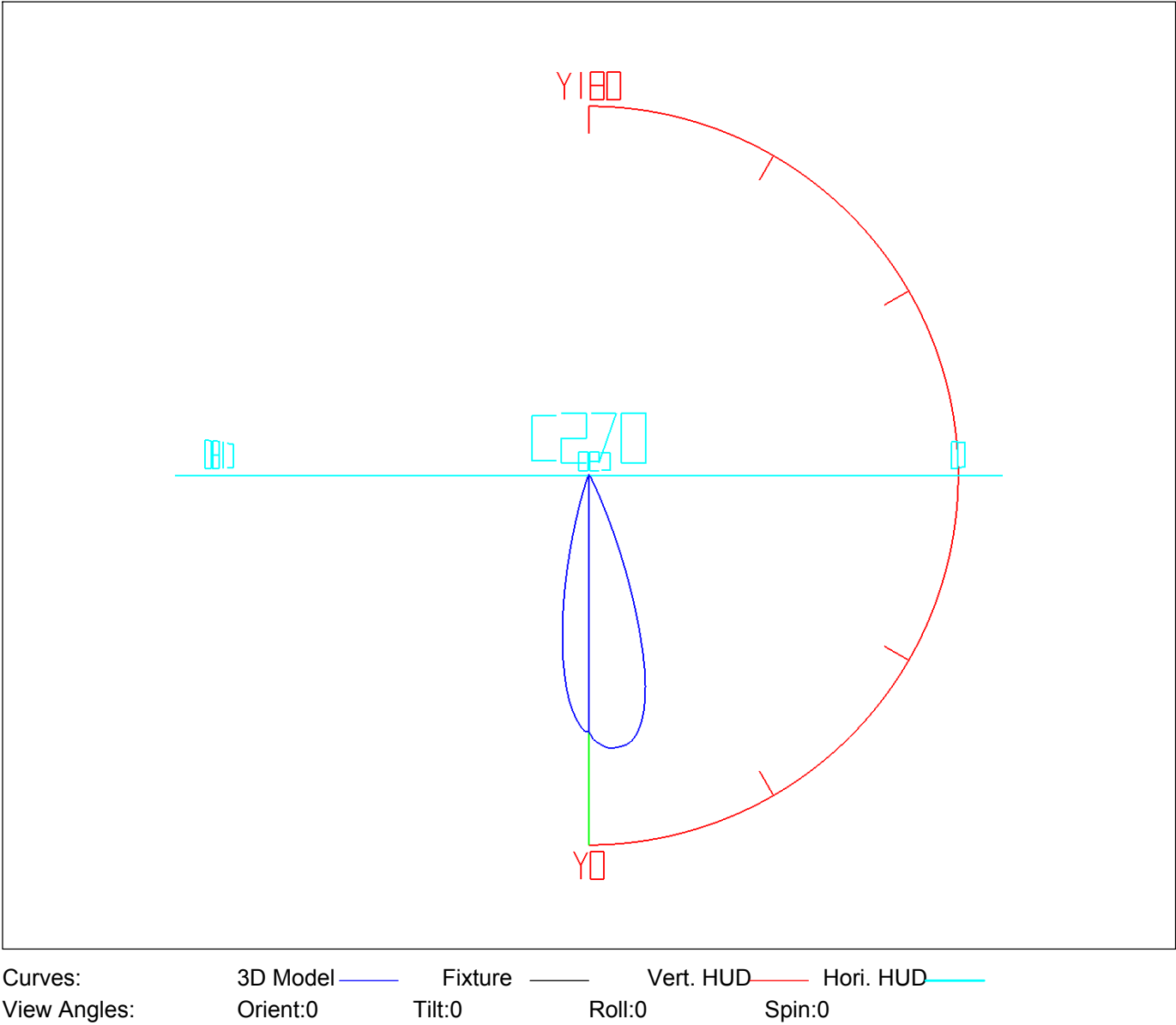
|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K RA90 24D         | Lum. Catelog:         | Test ID: 01                  |
| Lamp Name:                                      | Lamp Catelog: LED     | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2021/10/28        |



3D Light Intensity Distribution Modal

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

3D Light Intensity Distribution Modal



IES Indoor Report

Photometric Filename:WL02-06-XX-02 4000K RA90 24D.IES

Zonal Flux Tabulation

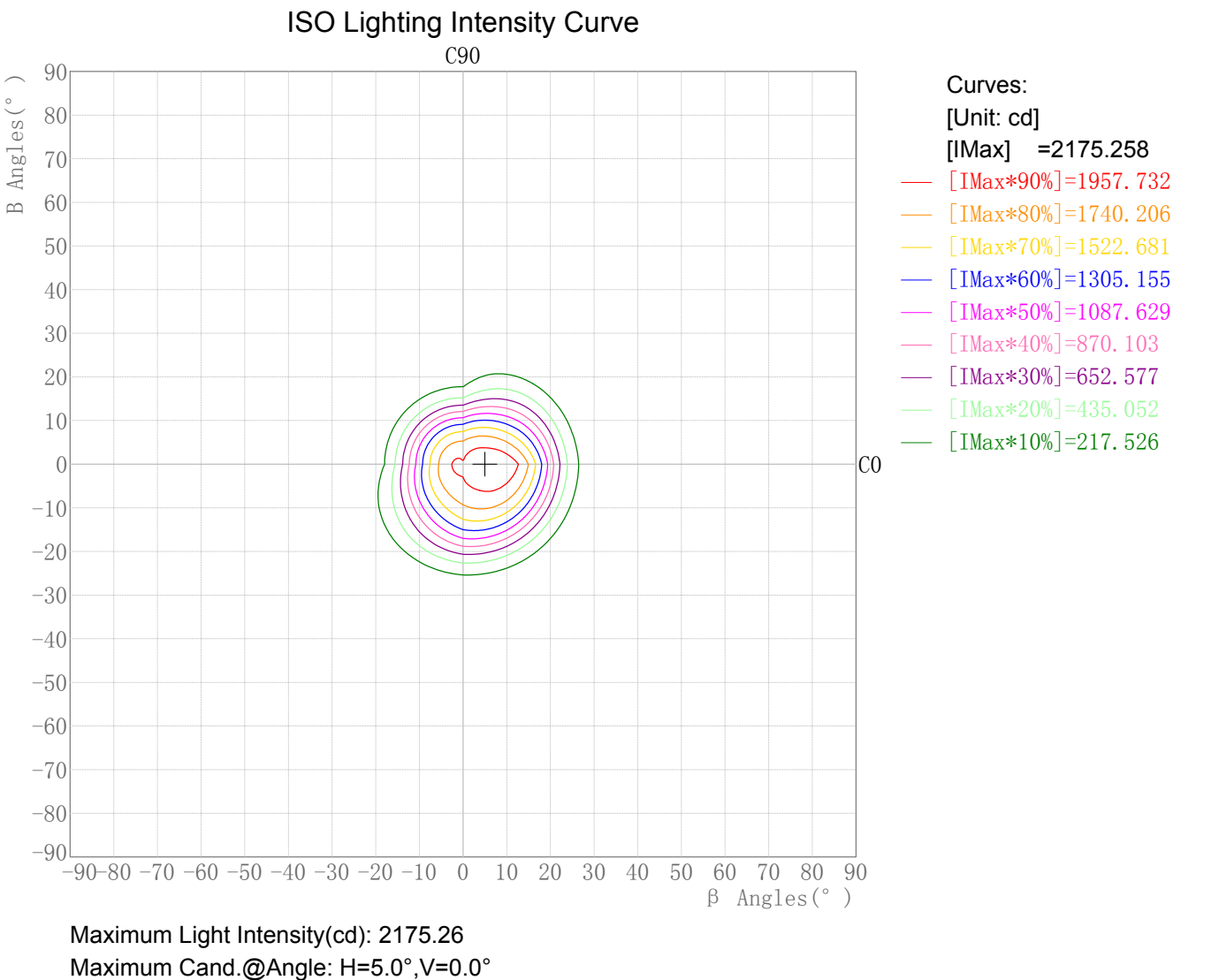
| Zone(γ)   | Zone Flux<br>(lm) | Sums Flux<br>(lm) | Zone%Lamp | Sums%Lamp | Zone(γ)   | Zone Flux<br>(lm) | Sums Flux<br>(lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0   | 1.94              | 1.94              | 0.33      | 0.33      | 47.0-48.0 | 1.12              | 558.29            | 0.19      | 96.36     |
| 1.0-2.0   | 5.76              | 7.70              | 0.99      | 1.33      | 48.0-49.0 | 1.07              | 559.36            | 0.19      | 96.54     |
| 2.0-3.0   | 9.52              | 17.22             | 1.64      | 2.97      | 49.0-50.0 | 1.03              | 560.39            | 0.18      | 96.72     |
| 3.0-4.0   | 13.17             | 30.39             | 2.27      | 5.24      | 50.0-51.0 | 0.99              | 561.38            | 0.17      | 96.89     |
| 4.0-5.0   | 16.62             | 47.01             | 2.87      | 8.11      | 51.0-52.0 | 0.95              | 562.32            | 0.16      | 97.05     |
| 5.0-6.0   | 19.81             | 66.82             | 3.42      | 11.53     | 52.0-53.0 | 0.91              | 563.23            | 0.16      | 97.21     |
| 6.0-7.0   | 22.67             | 89.49             | 3.91      | 15.45     | 53.0-54.0 | 0.87              | 564.10            | 0.15      | 97.36     |
| 7.0-8.0   | 25.18             | 114.67            | 4.35      | 19.79     | 54.0-55.0 | 0.83              | 564.92            | 0.14      | 97.50     |
| 8.0-9.0   | 27.26             | 141.93            | 4.71      | 24.50     | 55.0-56.0 | 0.79              | 565.71            | 0.14      | 97.64     |
| 9.0-10.0  | 28.87             | 170.80            | 4.98      | 29.48     | 56.0-57.0 | 0.75              | 566.46            | 0.13      | 97.77     |
| 10.0-11.0 | 29.96             | 200.77            | 5.17      | 34.65     | 57.0-58.0 | 0.71              | 567.17            | 0.12      | 97.89     |
| 11.0-12.0 | 30.53             | 231.29            | 5.27      | 39.92     | 58.0-59.0 | 0.67              | 567.85            | 0.12      | 98.01     |
| 12.0-13.0 | 30.54             | 261.83            | 5.27      | 45.19     | 59.0-60.0 | 0.64              | 568.48            | 0.11      | 98.12     |
| 13.0-14.0 | 30.00             | 291.83            | 5.18      | 50.37     | 60.0-61.0 | 0.60              | 569.09            | 0.10      | 98.22     |
| 14.0-15.0 | 29.01             | 320.84            | 5.01      | 55.37     | 61.0-62.0 | 0.57              | 569.65            | 0.10      | 98.32     |
| 15.0-16.0 | 27.63             | 348.47            | 4.77      | 60.14     | 62.0-63.0 | 0.53              | 570.18            | 0.09      | 98.41     |
| 16.0-17.0 | 25.90             | 374.37            | 4.47      | 64.61     | 63.0-64.0 | 0.50              | 570.68            | 0.09      | 98.50     |
| 17.0-18.0 | 23.92             | 398.28            | 4.13      | 68.74     | 64.0-65.0 | 0.47              | 571.15            | 0.08      | 98.58     |
| 18.0-19.0 | 21.77             | 420.06            | 3.76      | 72.50     | 65.0-66.0 | 0.44              | 571.58            | 0.08      | 98.65     |
| 19.0-20.0 | 19.52             | 439.58            | 3.37      | 75.87     | 66.0-67.0 | 0.41              | 571.99            | 0.07      | 98.72     |
| 20.0-21.0 | 17.21             | 456.79            | 2.97      | 78.84     | 67.0-68.0 | 0.38              | 572.36            | 0.07      | 98.79     |
| 21.0-22.0 | 14.87             | 471.66            | 2.57      | 81.40     | 68.0-69.0 | 0.35              | 572.71            | 0.06      | 98.85     |
| 22.0-23.0 | 12.57             | 484.22            | 2.17      | 83.57     | 69.0-70.0 | 0.33              | 573.04            | 0.06      | 98.90     |
| 23.0-24.0 | 10.43             | 494.65            | 1.80      | 85.37     | 70.0-71.0 | 0.30              | 573.34            | 0.05      | 98.95     |
| 24.0-25.0 | 8.53              | 503.18            | 1.47      | 86.84     | 71.0-72.0 | 0.28              | 573.62            | 0.05      | 99.00     |
| 25.0-26.0 | 6.92              | 510.10            | 1.19      | 88.04     | 72.0-73.0 | 0.26              | 573.88            | 0.04      | 99.05     |
| 26.0-27.0 | 5.62              | 515.71            | 0.97      | 89.01     | 73.0-74.0 | 0.24              | 574.11            | 0.04      | 99.09     |
| 27.0-28.0 | 4.61              | 520.32            | 0.79      | 89.80     | 74.0-75.0 | 0.22              | 574.33            | 0.04      | 99.13     |
| 28.0-29.0 | 3.84              | 524.15            | 0.66      | 90.46     | 75.0-76.0 | 0.20              | 574.53            | 0.03      | 99.16     |
| 29.0-30.0 | 3.27              | 527.43            | 0.56      | 91.03     | 76.0-77.0 | 0.18              | 574.71            | 0.03      | 99.19     |
| 30.0-31.0 | 2.86              | 530.29            | 0.49      | 91.52     | 77.0-78.0 | 0.16              | 574.87            | 0.03      | 99.22     |
| 31.0-32.0 | 2.57              | 532.86            | 0.44      | 91.97     | 78.0-79.0 | 0.15              | 575.02            | 0.03      | 99.24     |
| 32.0-33.0 | 2.34              | 535.20            | 0.40      | 92.37     | 79.0-80.0 | 0.13              | 575.15            | 0.02      | 99.27     |
| 33.0-34.0 | 2.16              | 537.36            | 0.37      | 92.74     | 80.0-81.0 | 0.12              | 575.26            | 0.02      | 99.29     |
| 34.0-35.0 | 2.02              | 539.38            | 0.35      | 93.09     | 81.0-82.0 | 0.10              | 575.36            | 0.02      | 99.30     |
| 35.0-36.0 | 1.89              | 541.27            | 0.33      | 93.42     | 82.0-83.0 | 0.09              | 575.45            | 0.02      | 99.32     |
| 36.0-37.0 | 1.79              | 543.06            | 0.31      | 93.73     | 83.0-84.0 | 0.08              | 575.53            | 0.01      | 99.33     |
| 37.0-38.0 | 1.70              | 544.76            | 0.29      | 94.02     | 84.0-85.0 | 0.07              | 575.59            | 0.01      | 99.34     |
| 38.0-39.0 | 1.62              | 546.39            | 0.28      | 94.30     | 85.0-86.0 | 0.06              | 575.65            | 0.01      | 99.35     |
| 39.0-40.0 | 1.55              | 547.93            | 0.27      | 94.57     | 86.0-87.0 | 0.05              | 575.71            | 0.01      | 99.36     |
| 40.0-41.0 | 1.48              | 549.42            | 0.26      | 94.83     | 87.0-88.0 | 0.05              | 575.75            | 0.01      | 99.37     |
| 41.0-42.0 | 1.43              | 550.84            | 0.25      | 95.07     | 88.0-89.0 | 0.04              | 575.80            | 0.01      | 99.38     |
| 42.0-43.0 | 1.37              | 552.21            | 0.24      | 95.31     | 89.0-90.0 | 0.03              | 575.83            | 0.01      | 99.38     |
| 43.0-44.0 | 1.32              | 553.53            | 0.23      | 95.54     | 90.0-91.0 | 0.03              | 575.86            | 0.00      | 99.39     |
| 44.0-45.0 | 1.26              | 554.79            | 0.22      | 95.75     | 91.0-92.0 | 0.02              | 575.88            | 0.00      | 99.39     |
| 45.0-46.0 | 1.21              | 556.01            | 0.21      | 95.96     | 92.0-93.0 | 0.02              | 575.90            | 0.00      | 99.40     |
| 46.0-47.0 | 1.16              | 557.17            | 0.20      | 96.16     | 93.0-94.0 | 0.01              | 575.91            | 0.00      | 99.40     |

Zonal Flux Tabulation - (Cont.)

| Zone(γ)     | Zone Flux<br>(lm) | Sums Flux<br>(lm) | Zone%Lamp | Sums%Lamp | Zone(γ)     | Zone Flux<br>(lm) | Sums Flux<br>(lm) | Zone%Lamp | Sums%Lamp |
|-------------|-------------------|-------------------|-----------|-----------|-------------|-------------------|-------------------|-----------|-----------|
| 94.0-95.0   | 0.01              | 575.92            | 0.00      | 99.40     | 141.0-142.0 | 0.07              | 576.32            | 0.01      | 99.47     |
| 95.0-96.0   | 0.01              | 575.93            | 0.00      | 99.40     | 142.0-143.0 | 0.08              | 576.39            | 0.01      | 99.48     |
| 96.0-97.0   | 0.00              | 575.93            | 0.00      | 99.40     | 143.0-144.0 | 0.08              | 576.48            | 0.01      | 99.50     |
| 97.0-98.0   | 0.00              | 575.93            | 0.00      | 99.40     | 144.0-145.0 | 0.09              | 576.57            | 0.02      | 99.51     |
| 98.0-99.0   | 0.00              | 575.93            | 0.00      | 99.40     | 145.0-146.0 | 0.10              | 576.67            | 0.02      | 99.53     |
| 99.0-100.0  | 0.00              | 575.93            | 0.00      | 99.40     | 146.0-147.0 | 0.10              | 576.77            | 0.02      | 99.55     |
| 100.0-101.0 | 0.00              | 575.93            | 0.00      | 99.40     | 147.0-148.0 | 0.11              | 576.88            | 0.02      | 99.57     |
| 101.0-102.0 | 0.00              | 575.93            | 0.00      | 99.40     | 148.0-149.0 | 0.11              | 576.99            | 0.02      | 99.58     |
| 102.0-103.0 | 0.00              | 575.93            | 0.00      | 99.40     | 149.0-150.0 | 0.12              | 577.11            | 0.02      | 99.60     |
| 103.0-104.0 | 0.00              | 575.93            | 0.00      | 99.40     | 150.0-151.0 | 0.12              | 577.23            | 0.02      | 99.63     |
| 104.0-105.0 | 0.00              | 575.93            | 0.00      | 99.40     | 151.0-152.0 | 0.12              | 577.35            | 0.02      | 99.65     |
| 105.0-106.0 | 0.00              | 575.93            | 0.00      | 99.40     | 152.0-153.0 | 0.12              | 577.47            | 0.02      | 99.67     |
| 106.0-107.0 | 0.00              | 575.93            | 0.00      | 99.40     | 153.0-154.0 | 0.12              | 577.60            | 0.02      | 99.69     |
| 107.0-108.0 | 0.00              | 575.93            | 0.00      | 99.40     | 154.0-155.0 | 0.12              | 577.72            | 0.02      | 99.71     |
| 108.0-109.0 | 0.00              | 575.93            | 0.00      | 99.40     | 155.0-156.0 | 0.12              | 577.84            | 0.02      | 99.73     |
| 109.0-110.0 | 0.00              | 575.93            | 0.00      | 99.40     | 156.0-157.0 | 0.12              | 577.96            | 0.02      | 99.75     |
| 110.0-111.0 | 0.00              | 575.93            | 0.00      | 99.40     | 157.0-158.0 | 0.12              | 578.08            | 0.02      | 99.77     |
| 111.0-112.0 | 0.00              | 575.93            | 0.00      | 99.40     | 158.0-159.0 | 0.12              | 578.19            | 0.02      | 99.79     |
| 112.0-113.0 | 0.00              | 575.93            | 0.00      | 99.40     | 159.0-160.0 | 0.11              | 578.31            | 0.02      | 99.81     |
| 113.0-114.0 | 0.00              | 575.93            | 0.00      | 99.40     | 160.0-161.0 | 0.11              | 578.41            | 0.02      | 99.83     |
| 114.0-115.0 | 0.00              | 575.93            | 0.00      | 99.40     | 161.0-162.0 | 0.10              | 578.52            | 0.02      | 99.85     |
| 115.0-116.0 | 0.00              | 575.93            | 0.00      | 99.40     | 162.0-163.0 | 0.10              | 578.61            | 0.02      | 99.86     |
| 116.0-117.0 | 0.00              | 575.93            | 0.00      | 99.40     | 163.0-164.0 | 0.09              | 578.71            | 0.02      | 99.88     |
| 117.0-118.0 | 0.00              | 575.93            | 0.00      | 99.40     | 164.0-165.0 | 0.09              | 578.79            | 0.01      | 99.90     |
| 118.0-119.0 | 0.00              | 575.93            | 0.00      | 99.40     | 165.0-166.0 | 0.08              | 578.87            | 0.01      | 99.91     |
| 119.0-120.0 | 0.00              | 575.93            | 0.00      | 99.40     | 166.0-167.0 | 0.07              | 578.95            | 0.01      | 99.92     |
| 120.0-121.0 | 0.00              | 575.93            | 0.00      | 99.40     | 167.0-168.0 | 0.07              | 579.02            | 0.01      | 99.93     |
| 121.0-122.0 | 0.00              | 575.93            | 0.00      | 99.40     | 168.0-169.0 | 0.06              | 579.08            | 0.01      | 99.94     |
| 122.0-123.0 | 0.00              | 575.93            | 0.00      | 99.40     | 169.0-170.0 | 0.06              | 579.14            | 0.01      | 99.95     |
| 123.0-124.0 | 0.00              | 575.93            | 0.00      | 99.40     | 170.0-171.0 | 0.05              | 579.19            | 0.01      | 99.96     |
| 124.0-125.0 | 0.00              | 575.93            | 0.00      | 99.40     | 171.0-172.0 | 0.05              | 579.23            | 0.01      | 99.97     |
| 125.0-126.0 | 0.00              | 575.93            | 0.00      | 99.40     | 172.0-173.0 | 0.04              | 579.27            | 0.01      | 99.98     |
| 126.0-127.0 | 0.00              | 575.93            | 0.00      | 99.40     | 173.0-174.0 | 0.03              | 579.31            | 0.01      | 99.98     |
| 127.0-128.0 | 0.00              | 575.93            | 0.00      | 99.40     | 174.0-175.0 | 0.03              | 579.34            | 0.01      | 99.99     |
| 128.0-129.0 | 0.00              | 575.93            | 0.00      | 99.40     | 175.0-176.0 | 0.02              | 579.36            | 0.00      | 99.99     |
| 129.0-130.0 | 0.00              | 575.94            | 0.00      | 99.40     | 176.0-177.0 | 0.02              | 579.38            | 0.00      | 100.00    |
| 130.0-131.0 | 0.00              | 575.94            | 0.00      | 99.40     | 177.0-178.0 | 0.01              | 579.39            | 0.00      | 100.00    |
| 131.0-132.0 | 0.01              | 575.95            | 0.00      | 99.40     | 178.0-179.0 | 0.01              | 579.40            | 0.00      | 100.00    |
| 132.0-133.0 | 0.01              | 575.96            | 0.00      | 99.41     | 179.0-180.0 | 0.00              | 579.40            | 0.00      | 100.00    |
| 133.0-134.0 | 0.01              | 575.97            | 0.00      | 99.41     |             |                   |                   |           |           |
| 134.0-135.0 | 0.02              | 575.99            | 0.00      | 99.41     |             |                   |                   |           |           |
| 135.0-136.0 | 0.03              | 576.01            | 0.00      | 99.42     |             |                   |                   |           |           |
| 136.0-137.0 | 0.03              | 576.05            | 0.01      | 99.42     |             |                   |                   |           |           |
| 137.0-138.0 | 0.04              | 576.08            | 0.01      | 99.43     |             |                   |                   |           |           |
| 138.0-139.0 | 0.05              | 576.13            | 0.01      | 99.44     |             |                   |                   |           |           |
| 139.0-140.0 | 0.05              | 576.18            | 0.01      | 99.44     |             |                   |                   |           |           |
| 140.0-141.0 | 0.06              | 576.25            | 0.01      | 99.46     |             |                   |                   |           |           |

Rectangle ISO Lighting Intensity Diagram

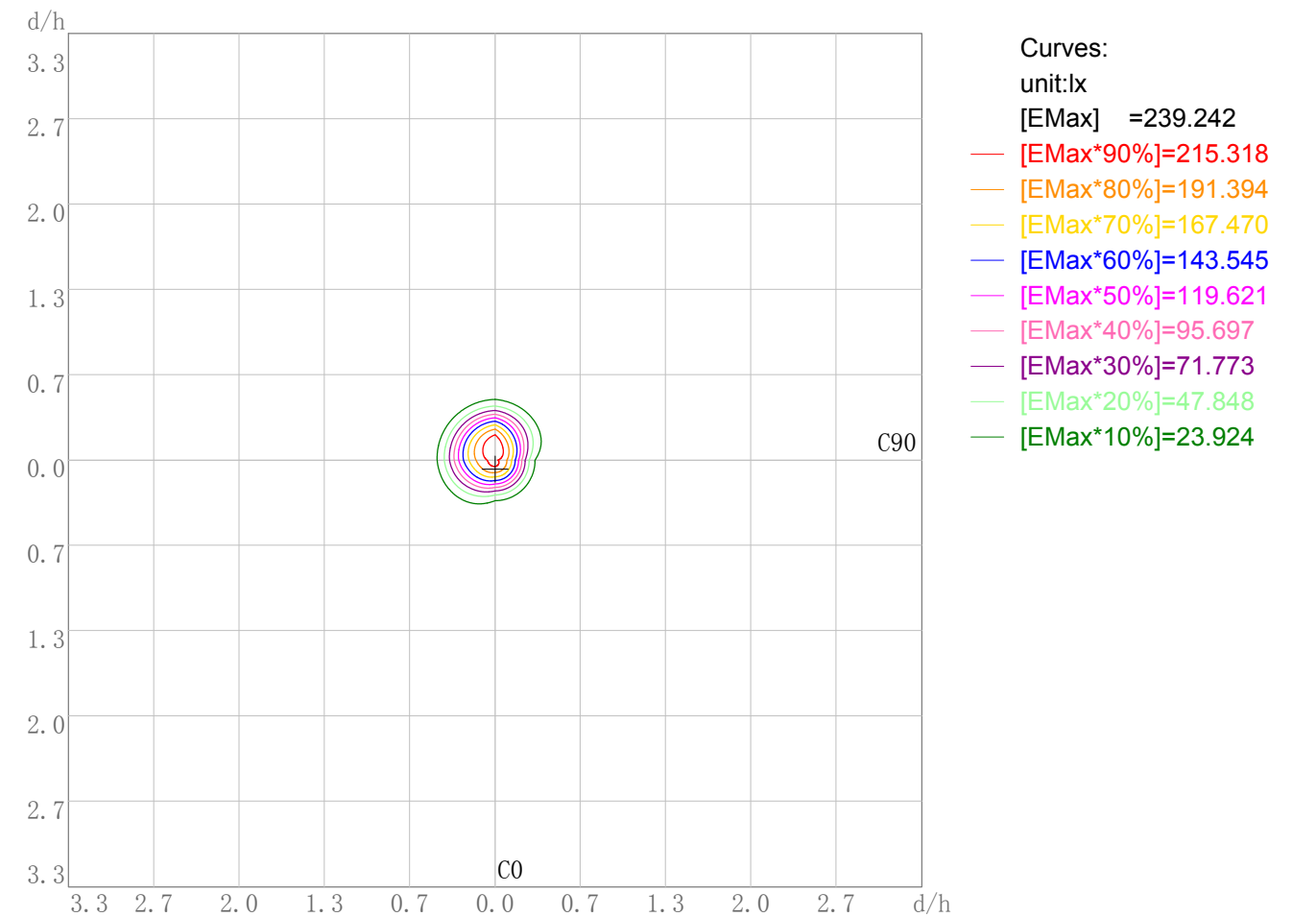
|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K RA90 24D         | Lum. Catalog:         | Test ID: 01                  |
| Lamp Name:                                      | Lamp Catalog: LED     | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2021/10/28        |



Plane ISO-Illuminance Diagram

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 239.24

Working Plane Maximum Illuminance Position(d/h):H0.0 V0.1

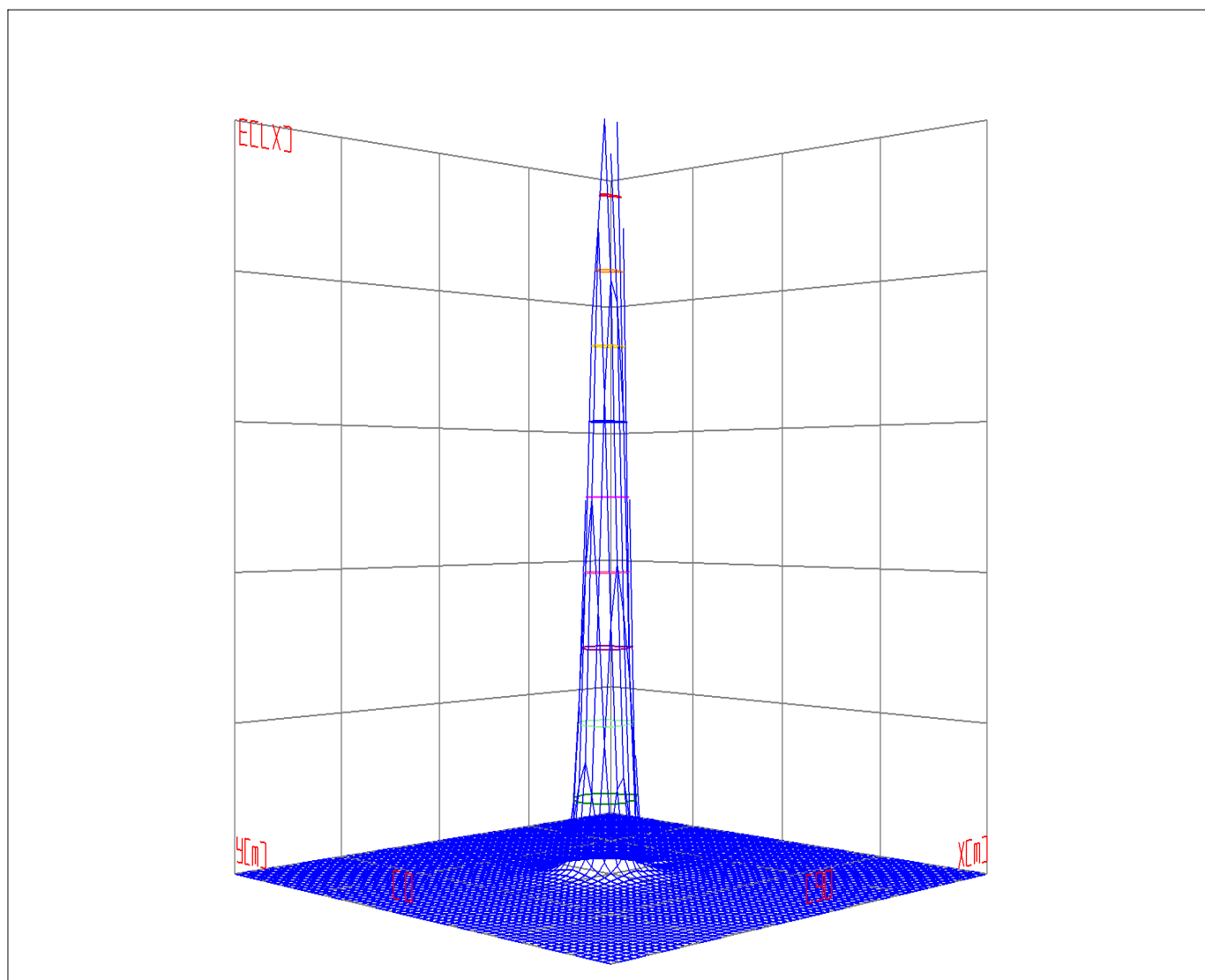
# IES Indoor Report

Photometric Filename:WL02-06-XX-02 4000K RA90 24D.IES

## 3D Plane ISO Illuminance Diagram

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

## 3D Plane Illuminance Modal



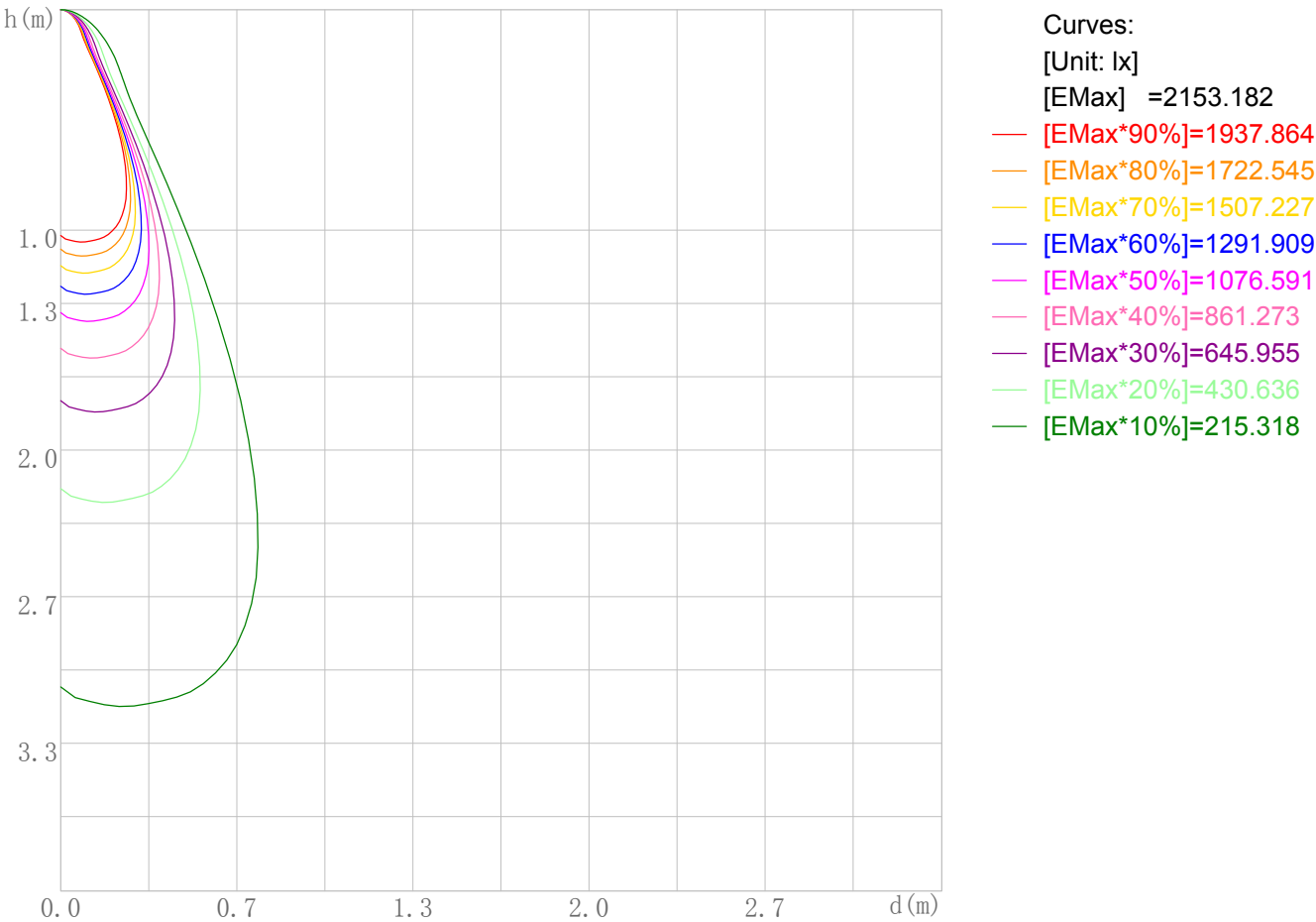
Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0



Space ISO Illuminance Diagram

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

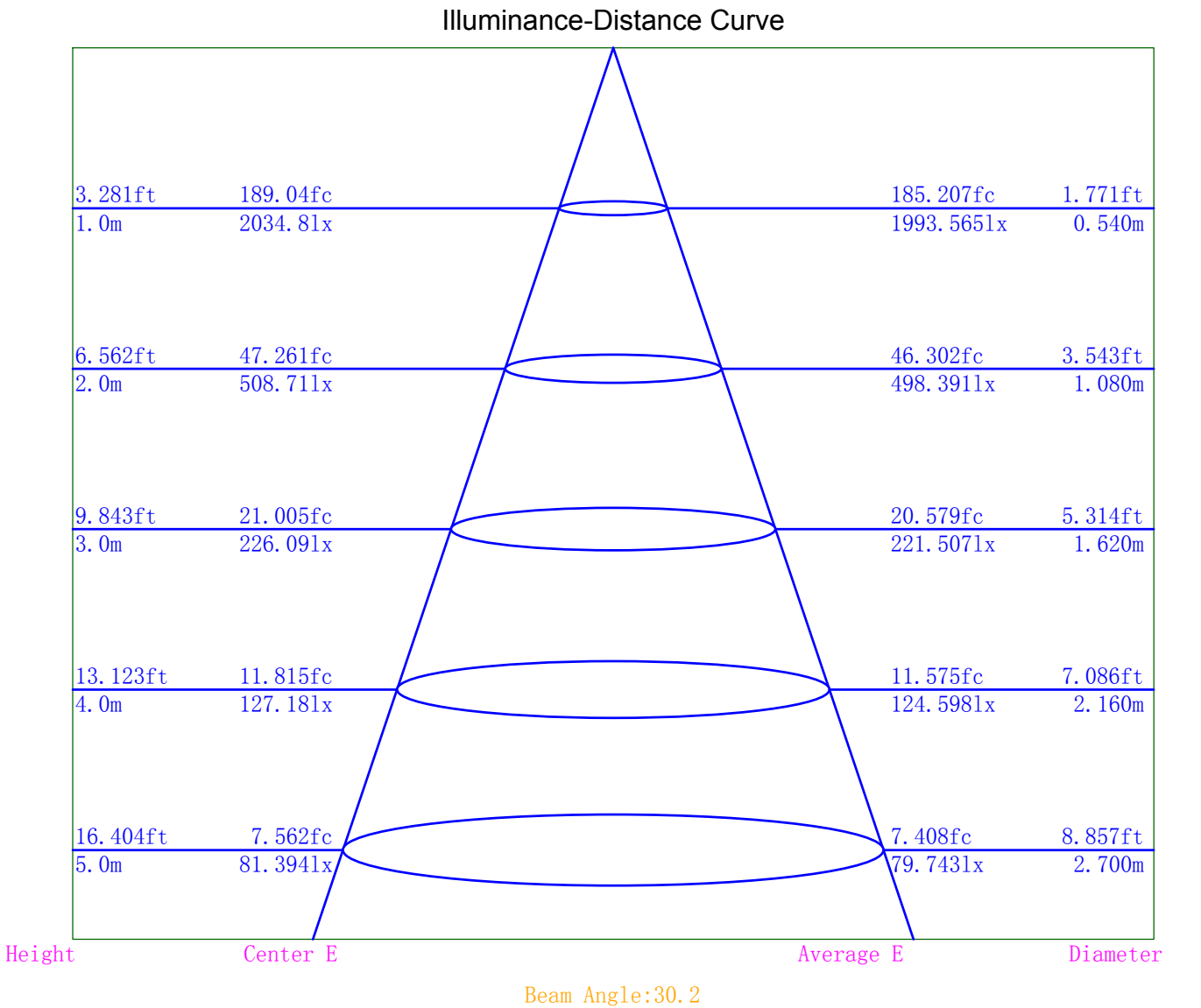
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2153.18lx,4.0deg  
Plane Maximum Lighting Intensity and @Angle:2175.258cd,0deg

Illuminance-Distance Diagram

|   |                       |                                 |
|---|-----------------------|---------------------------------|
| Lum. Name:    WL02-06-XX-02 4000K 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: 2021/10/28           |



Indoor Luminance Limiting Curves

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

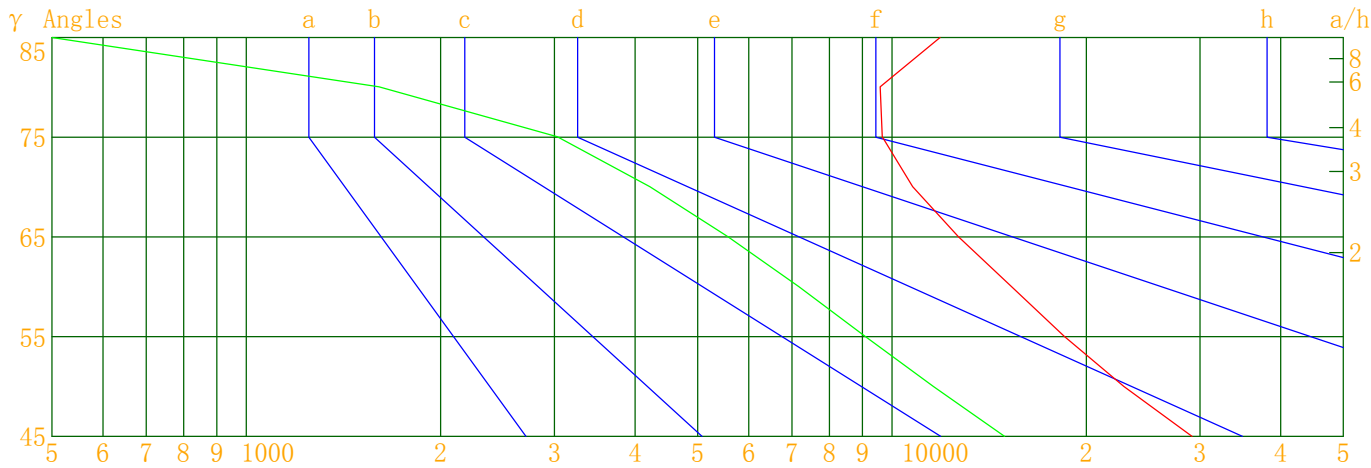
Glare Grade Table

| 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        | 29151 | 22864 | 18500 | 15316 | 12669 | 10766 | 9658 | 9587 | 11867 |
| C90       | 14944 | 11589 | 9095  | 7169  | 5566  | 4218  | 3032 | 1605 | 0     |

Luminance Limiting Curve



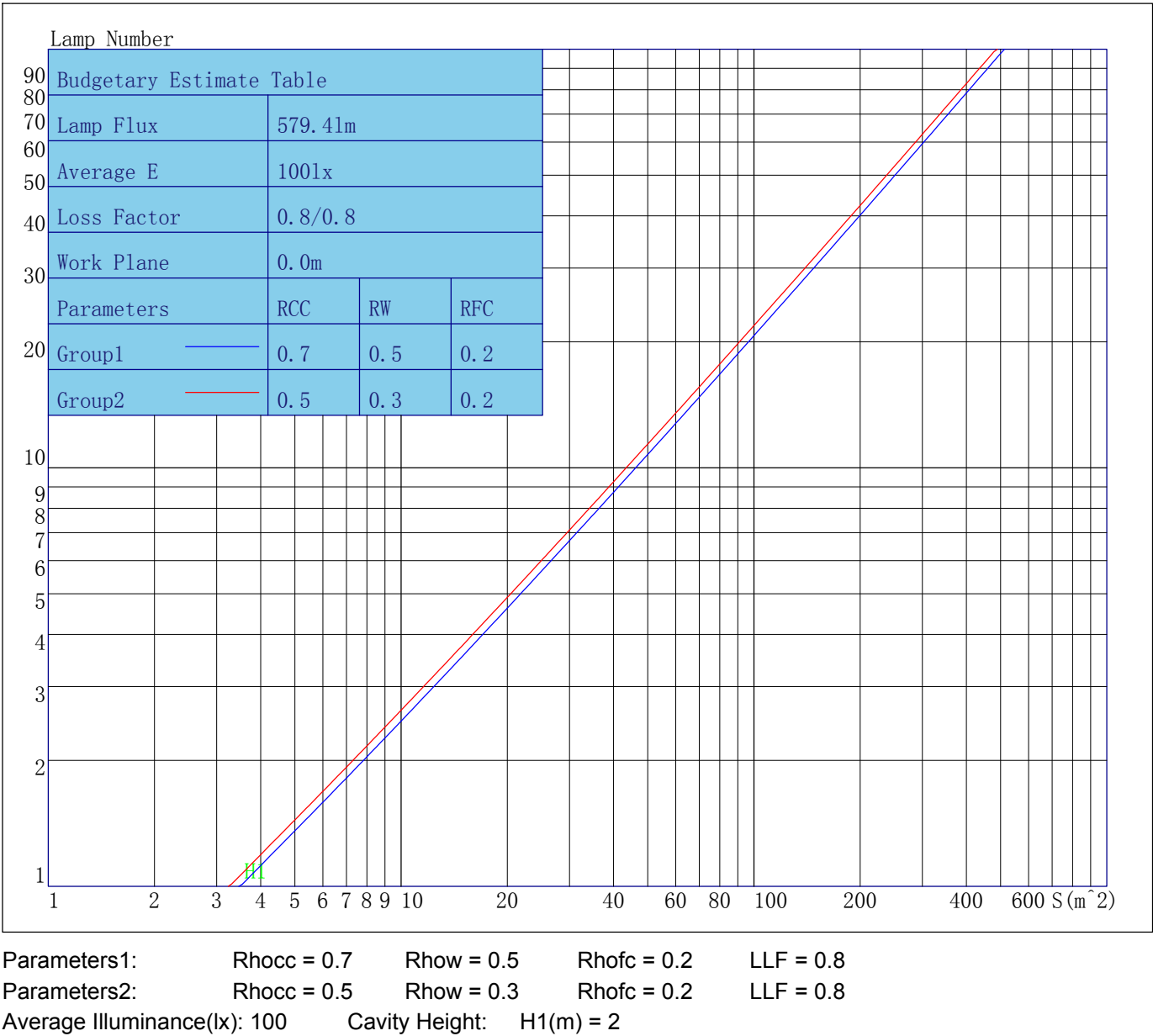
Luminous Size: Length(m)=-0.038 Width(m)=-0.038 Height(m)=0.000 Area(m^2)=0.001134

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |



Indoor Coefficient of Utilization Table

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K 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: 2021/10/28        |

| 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   | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95 |
| 2   | 110   | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 101 | 99  | 97  | 98  | 96  | 95  | 96  | 94  | 93  | 91 |
| 3   | 106   | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 95  | 92  | 90  | 93  | 91  | 89  | 88 |
| 4   | 103   | 97  | 92  | 89  | 101 | 96  | 92  | 89  | 94  | 90  | 88  | 92  | 89  | 86  | 90  | 87  | 85  | 84 |
| 5   | 99  | 93  | 88  | 85  | 98  | 92  | 88  | 85  | 90  | 87  | 84  | 89  | 85  | 83  | 87  | 84  | 82  | 81 |
| 6   | 96  | 89  | 85  | 81  | 95  | 88  | 84  | 81  | 87  | 83  | 81  | 86  | 82  | 80  | 84  | 82  | 79  | 78 |
| 7   | 93  | 86  | 81  | 78  | 92  | 85  | 81  | 78  | 84  | 80  | 78  | 83  | 80  | 77  | 82  | 79  | 77  | 76 |
| 8   | 90  | 83  | 79  | 76  | 89  | 83  | 78  | 75  | 82  | 78  | 75  | 81  | 77  | 75  | 80  | 77  | 74  | 73 |
| 9   | 88  | 80  | 76  | 73  | 87  | 80  | 76  | 73  | 79  | 75  | 73  | 78  | 75  | 72  | 77  | 74  | 72  | 71 |
| 10  | 85  | 78  | 74  | 71  | 84  | 78  | 73  | 71  | 77  | 73  | 70  | 76  | 73  | 70  | 75  | 72  | 70  | 69 |

Unified Glare Rating Table

|   |                       |                              |
|---|-----------------------|------------------------------|
| Lum. Name: WL02-06-XX-02 4000K RA90 24D         | 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: 2021/10/28        |

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                                       | 16.3            | 17.5 | 16.7 | 17.8 | 18.1 | 12.6          | 13.8 | 13.0 | 14.1 | 14.4 |
|  | 16.8            | 17.9 | 17.2 | 18.2 | 18.6 | 12.9          | 13.9 | 13.3 | 14.3 | 14.7 |
|  | 17.0            | 18.0 | 17.4 | 18.4 | 18.8 | 12.9          | 13.9 | 13.3 | 14.3 | 14.7 |
|  | 17.2            | 18.2 | 17.6 | 18.5 | 19.0 | 12.9          | 13.8 | 13.3 | 14.2 | 14.6 |
|  | 17.3            | 18.2 | 17.7 | 18.6 | 19.0 | 12.8          | 13.7 | 13.3 | 14.1 | 14.6 |
|  | 17.4            | 18.3 | 17.8 | 18.7 | 19.1 | 12.8          | 13.6 | 13.2 | 14.0 | 14.5 |
| X=4H    Y=2H                                       | 16.4            | 17.4 | 16.8 | 17.8 | 18.2 | 12.8          | 13.9 | 13.3 | 14.2 | 14.6 |
|  | 17.0            | 17.9 | 17.5 | 18.3 | 18.8 | 13.2          | 14.1 | 13.7 | 14.5 | 15.0 |
|  | 17.3            | 18.2 | 17.8 | 18.6 | 19.0 | 13.3          | 14.1 | 13.8 | 14.6 | 15.0 |
|  | 17.6            | 18.4 | 18.1 | 18.8 | 19.3 | 13.3          | 14.1 | 13.8 | 14.5 | 15.0 |
|  | 17.8            | 18.5 | 18.2 | 18.9 | 19.4 | 13.2          | 14.0 | 13.7 | 14.4 | 14.9 |
|  | 17.9            | 18.6 | 18.4 | 19.1 | 19.5 | 13.2          | 13.9 | 13.7 | 14.3 | 14.8 |
| X=8H    Y=4H                                       | 17.3            | 18.1 | 17.8 | 18.5 | 19.0 | 13.3          | 14.1 | 13.8 | 14.5 | 15.0 |
|  | 17.7            | 18.4 | 18.2 | 18.9 | 19.4 | 13.4          | 14.0 | 13.9 | 14.5 | 15.1 |
|  | 17.9            | 18.5 | 18.5 | 19.0 | 19.5 | 13.3          | 13.9 | 13.9 | 14.4 | 14.9 |
|  | 18.2            | 18.7 | 18.7 | 19.2 | 19.8 | 13.3          | 13.8 | 13.8 | 14.3 | 14.9 |
| X=12H    Y=4H                                      | 17.3            | 18.0 | 17.8 | 18.5 | 18.9 | 13.3          | 14.0 | 13.8 | 14.5 | 15.0 |
|  | 17.7            | 18.3 | 18.3 | 18.8 | 19.3 | 13.4          | 14.0 | 13.9 | 14.4 | 15.0 |
|  | 18.0            | 18.5 | 18.5 | 19.0 | 19.6 | 13.4          | 13.9 | 13.9 | 14.4 | 15.0 |
| Variations with the objverver position at spacings |                 |      |      |      |      |               |      |      |      |      |
| S=1.0H   | 0.3/-0.3        |      |      |      |      | 1.1/-1.3      |      |      |      |      |
| S=1.5H   | 0.7/-0.7        |      |      |      |      | 1.6/-2.1      |      |      |      |      |
| S=2.0H   | 1.2/-1.1        |      |      |      |      | 2.3/-2.8      |      |      |      |      |
| Reduced UGR Table:                                 |                 |      |      |      |      |               |      |      |      |      |
| Nordic Standard Table:                             | BK0             |      |      |      |      | BK0           |      |      |      |      |
| Correction Value                                   | 1.6             |      |      |      |      | 1.0           |      |      |      |      |

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

Candela Tabulation

| V/H    | C0.0    | C90.0   | C180.0  | C270.0  |
|--------|---------|---------|---------|---------|
| γ 0.0  | 2034.85 | 2034.85 | 2034.85 | 2034.85 |
| γ 1.0  | 2099.39 | 1945.60 | 2031.10 | 1972.06 |
| γ 2.0  | 2126.39 | 1918.94 | 1988.80 | 1967.26 |
| γ 3.0  | 2151.45 | 1880.39 | 1935.02 | 1957.12 |
| γ 4.0  | 2168.99 | 1830.61 | 1871.80 | 1940.72 |
| γ 5.0  | 2175.26 | 1763.51 | 1792.24 | 1914.67 |
| γ 6.0  | 2171.40 | 1678.27 | 1699.92 | 1883.28 |
| γ 7.0  | 2166.07 | 1577.70 | 1590.04 | 1844.92 |
| γ 8.0  | 2158.43 | 1457.60 | 1472.03 | 1804.47 |
| γ 9.0  | 2142.21 | 1323.18 | 1341.67 | 1756.64 |
| γ 10.0 | 2108.75 | 1182.02 | 1204.55 | 1700.56 |
| γ 11.0 | 2063.49 | 1033.87 | 1062.30 | 1639.46 |
| γ 12.0 | 2006.04 | 878.31  | 918.15  | 1569.35 |
| γ 13.0 | 1933.46 | 724.76  | 770.72  | 1491.56 |
| γ 14.0 | 1842.23 | 582.26  | 628.78  | 1401.47 |
| γ 15.0 | 1735.27 | 457.04  | 499.89  | 1305.25 |
| γ 16.0 | 1611.36 | 350.52  | 384.51  | 1198.14 |
| γ 17.0 | 1466.94 | 266.31  | 288.95  | 1085.60 |
| γ 18.0 | 1310.68 | 201.65  | 215.15  | 966.86  |
| γ 19.0 | 1150.98 | 153.81  | 159.81  | 846.86  |
| γ 20.0 | 989.75  | 119.18  | 119.92  | 726.66  |
| γ 21.0 | 831.49  | 95.76   | 91.81   | 610.70  |
| γ 22.0 | 678.73  | 79.05   | 71.79   | 499.60  |
| γ 23.0 | 540.32  | 67.47   | 58.50   | 400.02  |
| γ 24.0 | 421.54  | 59.17   | 49.26   | 311.76  |
| γ 25.0 | 323.26  | 52.68   | 42.55   | 239.91  |
| γ 26.0 | 246.16  | 47.41   | 37.52   | 182.65  |
| γ 27.0 | 188.20  | 43.25   | 33.48   | 139.57  |
| γ 28.0 | 145.94  | 39.83   | 29.93   | 107.38  |
| γ 29.0 | 115.07  | 36.86   | 27.19   | 84.45   |
| γ 30.0 | 93.51   | 34.18   | 24.87   | 68.70   |
| γ 31.0 | 78.42   | 31.78   | 22.95   | 57.24   |
| γ 32.0 | 67.58   | 29.64   | 21.27   | 49.29   |
| γ 33.0 | 59.29   | 27.68   | 19.86   | 43.20   |
| γ 34.0 | 53.10   | 25.86   | 18.67   | 38.33   |
| γ 35.0 | 48.06   | 24.14   | 17.56   | 34.08   |
| γ 36.0 | 44.07   | 22.56   | 16.62   | 30.84   |
| γ 37.0 | 40.58   | 20.97   | 15.82   | 28.23   |
| γ 38.0 | 37.62   | 19.53   | 15.10   | 26.10   |
| γ 39.0 | 34.92   | 18.17   | 14.37   | 24.21   |
| γ 40.0 | 32.59   | 16.96   | 13.76   | 22.64   |
| γ 41.0 | 30.47   | 15.84   | 13.20   | 21.28   |
| γ 42.0 | 28.54   | 14.80   | 12.69   | 20.10   |
| γ 43.0 | 26.75   | 13.78   | 12.19   | 19.06   |
| γ 44.0 | 25.02   | 12.85   | 11.71   | 18.13   |
| γ 45.0 | 23.38   | 11.98   | 11.22   | 17.30   |
| γ 46.0 | 21.78   | 11.19   | 10.74   | 16.51   |

Candela Tabulation - (Cont.)

| V/H    | C0.0  | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 20.32 | 10.44 | 10.28  | 15.80  |
| γ 48.0 | 18.98 | 9.74  | 9.81   | 15.15  |
| γ 49.0 | 17.79 | 9.07  | 9.32   | 14.60  |
| γ 50.0 | 16.67 | 8.45  | 8.84   | 14.06  |
| γ 51.0 | 15.61 | 7.87  | 8.34   | 13.54  |
| γ 52.0 | 14.61 | 7.36  | 7.86   | 13.00  |
| γ 53.0 | 13.71 | 6.85  | 7.39   | 12.48  |
| γ 54.0 | 12.85 | 6.37  | 6.91   | 11.98  |
| γ 55.0 | 12.03 | 5.92  | 6.46   | 11.48  |
| γ 56.0 | 11.30 | 5.49  | 6.02   | 10.98  |
| γ 57.0 | 10.58 | 5.11  | 5.61   | 10.48  |
| γ 58.0 | 9.90  | 4.74  | 5.22   | 9.94   |
| γ 59.0 | 9.28  | 4.39  | 4.85   | 9.42   |
| γ 60.0 | 8.69  | 4.07  | 4.49   | 8.92   |
| γ 61.0 | 8.09  | 3.75  | 4.16   | 8.39   |
| γ 62.0 | 7.52  | 3.43  | 3.84   | 7.85   |
| γ 63.0 | 7.02  | 3.14  | 3.53   | 7.34   |
| γ 64.0 | 6.52  | 2.89  | 3.25   | 6.85   |
| γ 65.0 | 6.07  | 2.67  | 3.00   | 6.39   |
| γ 66.0 | 5.64  | 2.41  | 2.76   | 5.96   |
| γ 67.0 | 5.23  | 2.19  | 2.49   | 5.55   |
| γ 68.0 | 4.87  | 1.99  | 2.25   | 5.17   |
| γ 69.0 | 4.50  | 1.80  | 2.04   | 4.83   |
| γ 70.0 | 4.18  | 1.64  | 1.84   | 4.50   |
| γ 71.0 | 3.88  | 1.46  | 1.65   | 4.16   |
| γ 72.0 | 3.60  | 1.31  | 1.48   | 3.87   |
| γ 73.0 | 3.34  | 1.17  | 1.31   | 3.60   |
| γ 74.0 | 3.10  | 1.02  | 1.14   | 3.37   |
| γ 75.0 | 2.84  | 0.89  | 0.99   | 3.09   |
| γ 76.0 | 2.62  | 0.77  | 0.84   | 2.85   |
| γ 77.0 | 2.42  | 0.65  | 0.70   | 2.63   |
| γ 78.0 | 2.23  | 0.54  | 0.56   | 2.42   |
| γ 79.0 | 2.05  | 0.42  | 0.43   | 2.23   |
| γ 80.0 | 1.89  | 0.32  | 0.31   | 2.03   |
| γ 81.0 | 1.73  | 0.22  | 0.20   | 1.85   |
| γ 82.0 | 1.57  | 0.12  | 0.09   | 1.66   |
| γ 83.0 | 1.43  | 0.04  | 0.00   | 1.50   |
| γ 84.0 | 1.30  | 0.00  | 0.00   | 1.34   |
| γ 85.0 | 1.17  | 0.00  | 0.00   | 1.19   |
| γ 86.0 | 1.03  | 0.00  | 0.00   | 1.05   |
| γ 87.0 | 0.92  | 0.00  | 0.00   | 0.91   |
| γ 88.0 | 0.81  | 0.00  | 0.00   | 0.78   |
| γ 89.0 | 0.69  | 0.00  | 0.00   | 0.65   |
| γ 90.0 | 0.59  | 0.00  | 0.00   | 0.53   |
| γ 91.0 | 0.49  | 0.00  | 0.00   | 0.42   |
| γ 92.0 | 0.39  | 0.00  | 0.00   | 0.30   |
| γ 93.0 | 0.32  | 0.00  | 0.00   | 0.22   |



Candela Tabulation - (Cont.)

| V/H     | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0  | 0.26 | 0.00  | 0.00   | 0.15   |
| γ 95.0  | 0.22 | 0.00  | 0.00   | 0.10   |
| γ 96.0  | 0.17 | 0.00  | 0.00   | 0.04   |
| γ 97.0  | 0.12 | 0.00  | 0.00   | 0.00   |
| γ 98.0  | 0.08 | 0.00  | 0.00   | 0.00   |
| γ 99.0  | 0.04 | 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  | 0.01   | 0.00   |
| γ 130.0 | 0.00 | 0.00  | 0.13   | 0.00   |
| γ 131.0 | 0.00 | 0.00  | 0.25   | 0.00   |
| γ 132.0 | 0.00 | 0.00  | 0.38   | 0.00   |
| γ 133.0 | 0.00 | 0.02  | 0.51   | 0.00   |
| γ 134.0 | 0.00 | 0.16  | 0.65   | 0.00   |
| γ 135.0 | 0.00 | 0.29  | 0.80   | 0.03   |
| γ 136.0 | 0.00 | 0.44  | 0.94   | 0.13   |
| γ 137.0 | 0.00 | 0.58  | 1.09   | 0.24   |
| γ 138.0 | 0.00 | 0.73  | 1.23   | 0.35   |
| γ 139.0 | 0.00 | 0.88  | 1.38   | 0.47   |
| γ 140.0 | 0.10 | 1.03  | 1.52   | 0.61   |

Candela Tabulation - (Cont.)

| V/H     | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 0.23 | 1.18  | 1.67   | 0.73   |
| γ 142.0 | 0.37 | 1.32  | 1.82   | 0.87   |
| γ 143.0 | 0.51 | 1.46  | 1.96   | 1.00   |
| γ 144.0 | 0.65 | 1.60  | 2.09   | 1.14   |
| γ 145.0 | 0.79 | 1.73  | 2.24   | 1.28   |
| γ 146.0 | 0.95 | 1.86  | 2.36   | 1.42   |
| γ 147.0 | 1.09 | 1.99  | 2.48   | 1.55   |
| γ 148.0 | 1.24 | 2.11  | 2.59   | 1.70   |
| γ 149.0 | 1.38 | 2.22  | 2.70   | 1.84   |
| γ 150.0 | 1.52 | 2.33  | 2.79   | 1.96   |
| γ 151.0 | 1.66 | 2.42  | 2.88   | 2.09   |
| γ 152.0 | 1.81 | 2.52  | 2.96   | 2.22   |
| γ 153.0 | 1.94 | 2.60  | 3.01   | 2.33   |
| γ 154.0 | 2.09 | 2.66  | 3.07   | 2.45   |
| γ 155.0 | 2.21 | 2.73  | 3.11   | 2.55   |
| γ 156.0 | 2.32 | 2.78  | 3.14   | 2.65   |
| γ 157.0 | 2.44 | 2.81  | 3.15   | 2.74   |
| γ 158.0 | 2.54 | 2.82  | 3.17   | 2.84   |
| γ 159.0 | 2.64 | 2.83  | 3.16   | 2.90   |
| γ 160.0 | 2.73 | 2.83  | 3.15   | 2.97   |
| γ 161.0 | 2.82 | 2.81  | 3.13   | 3.02   |
| γ 162.0 | 2.87 | 2.78  | 3.10   | 3.07   |
| γ 163.0 | 2.93 | 2.75  | 3.06   | 3.11   |
| γ 164.0 | 2.98 | 2.73  | 3.01   | 3.12   |
| γ 165.0 | 3.01 | 2.69  | 2.95   | 3.14   |
| γ 166.0 | 3.02 | 2.67  | 2.90   | 3.14   |
| γ 167.0 | 3.03 | 2.64  | 2.85   | 3.13   |
| γ 168.0 | 3.03 | 2.64  | 2.79   | 3.09   |
| γ 169.0 | 3.00 | 2.63  | 2.75   | 3.07   |
| γ 170.0 | 2.98 | 2.63  | 2.73   | 3.02   |
| γ 171.0 | 2.96 | 2.64  | 2.71   | 2.98   |
| γ 172.0 | 2.94 | 2.66  | 2.69   | 2.92   |
| γ 173.0 | 2.92 | 2.68  | 2.70   | 2.88   |
| γ 174.0 | 2.90 | 2.71  | 2.69   | 2.84   |
| γ 175.0 | 2.89 | 2.74  | 2.71   | 2.82   |
| γ 176.0 | 2.89 | 2.78  | 2.72   | 2.81   |
| γ 177.0 | 2.88 | 2.81  | 2.73   | 2.81   |
| γ 178.0 | 2.87 | 2.81  | 2.75   | 2.80   |
| γ 179.0 | 2.84 | 2.79  | 2.79   | 2.83   |
| γ 180.0 | 2.81 | 2.81  | 2.81   | 2.81   |