

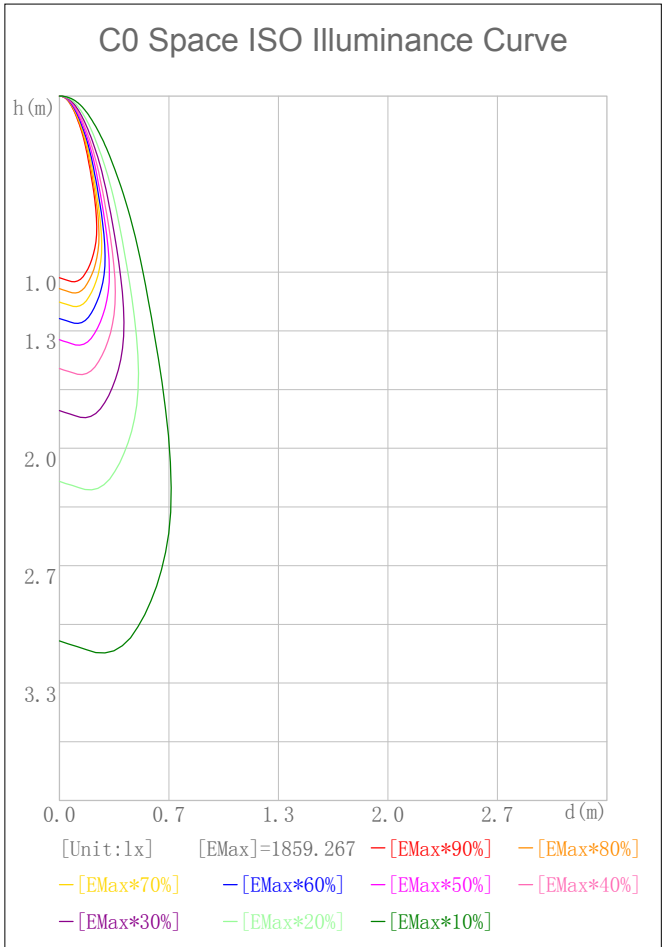
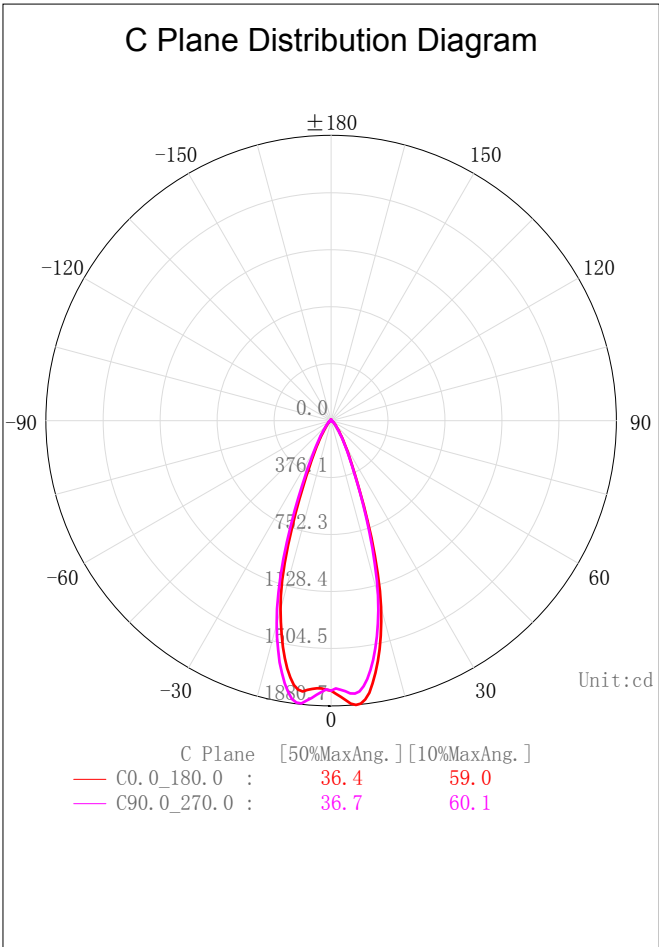
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|----------------------|-----------------------|
| Luminary Name: MD10-09-XX-03 3000K RA90 36D | | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2019/12/04 |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | | Shld.Ang(°): | Test Machine:GON-2000 |
| Test Lab: QUality peatment | | Frequency (Hz): | Lamp CCT(K): Ra: |
| Lum. Size (W*L*H):0.050m*0.050m*0.050m | | Lum. Area (m2):0.005 | Lum. W(kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=1.0 | Temp. (°C): 25 | Humidity(%): 50.0 |

Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|---|--------------------------------|---------------------------------------|--|
| Rated Flux(lm): 836.070 | Luminary Flux(lm): 836.067 | Field Angle(10%Imax): 59.0(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 819.867lm 98.06% | |
| Rated Voltage(V): | Luminary EER(lm/W): 90.259 | Up Lumens&Percent: 16.200lm 1.94% | |
| Tested Power(W): 9.263 | Max. Candela(cd): 1880.655 | S/MH: C0_a180=0.629 C90_270=0.632 | |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=5.0 | CIE Type: Semi-Direct | |
| Tested Electrics (V, A, pf):240.5, 0.041, 0.928 | Beam Angle(50%Imax): 36.4(°) | ErP ϕ use(90°): 759.520lm | |
| Lamp Size (W*L*H):0.050m*0.050m*0.050m | Left=-18.4°, Right=18.0° | IRF(%): 491.522 | |



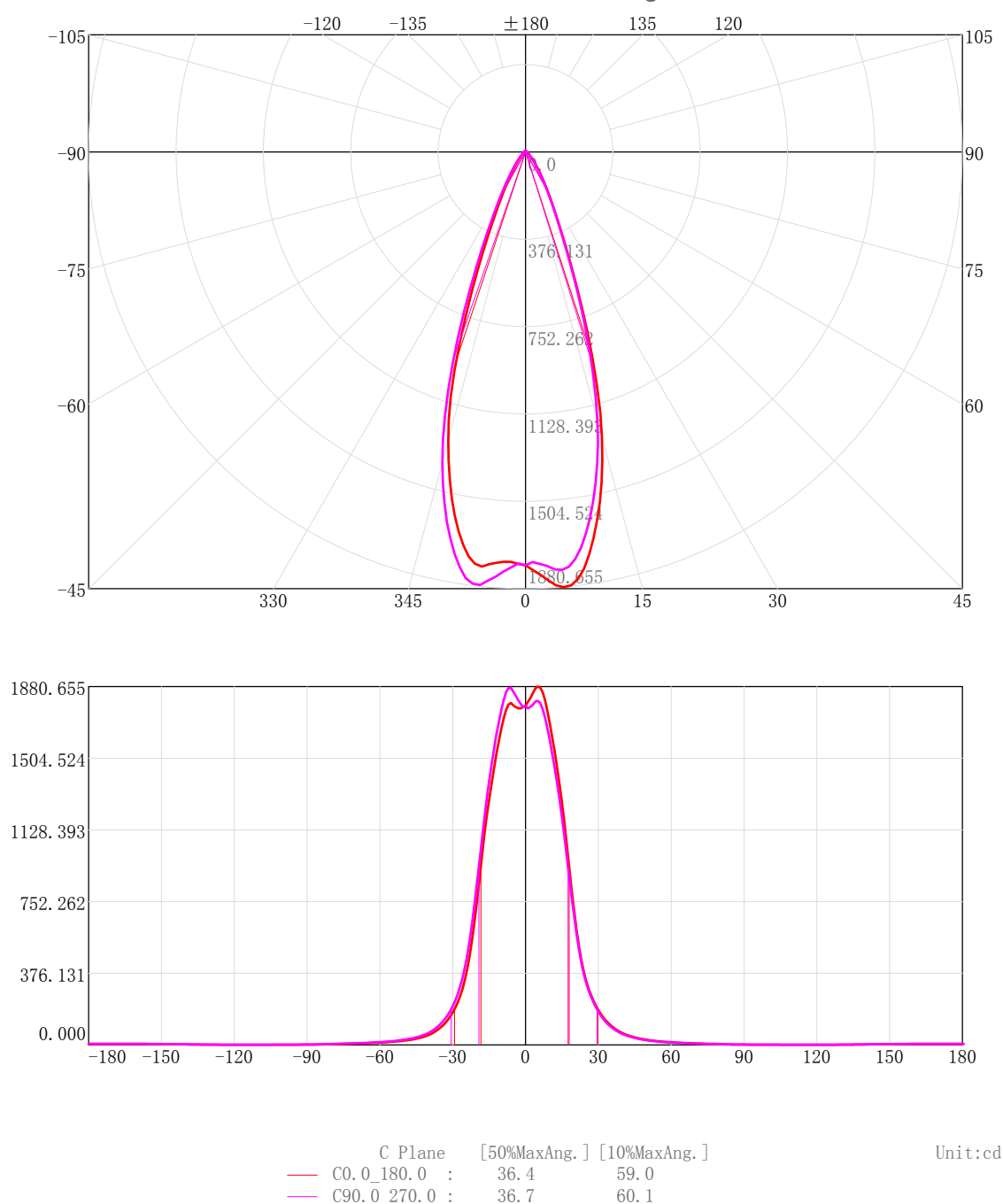
IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

2D Plane Light Intensity Distribution Curve

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

C Plane Distribution Diagram



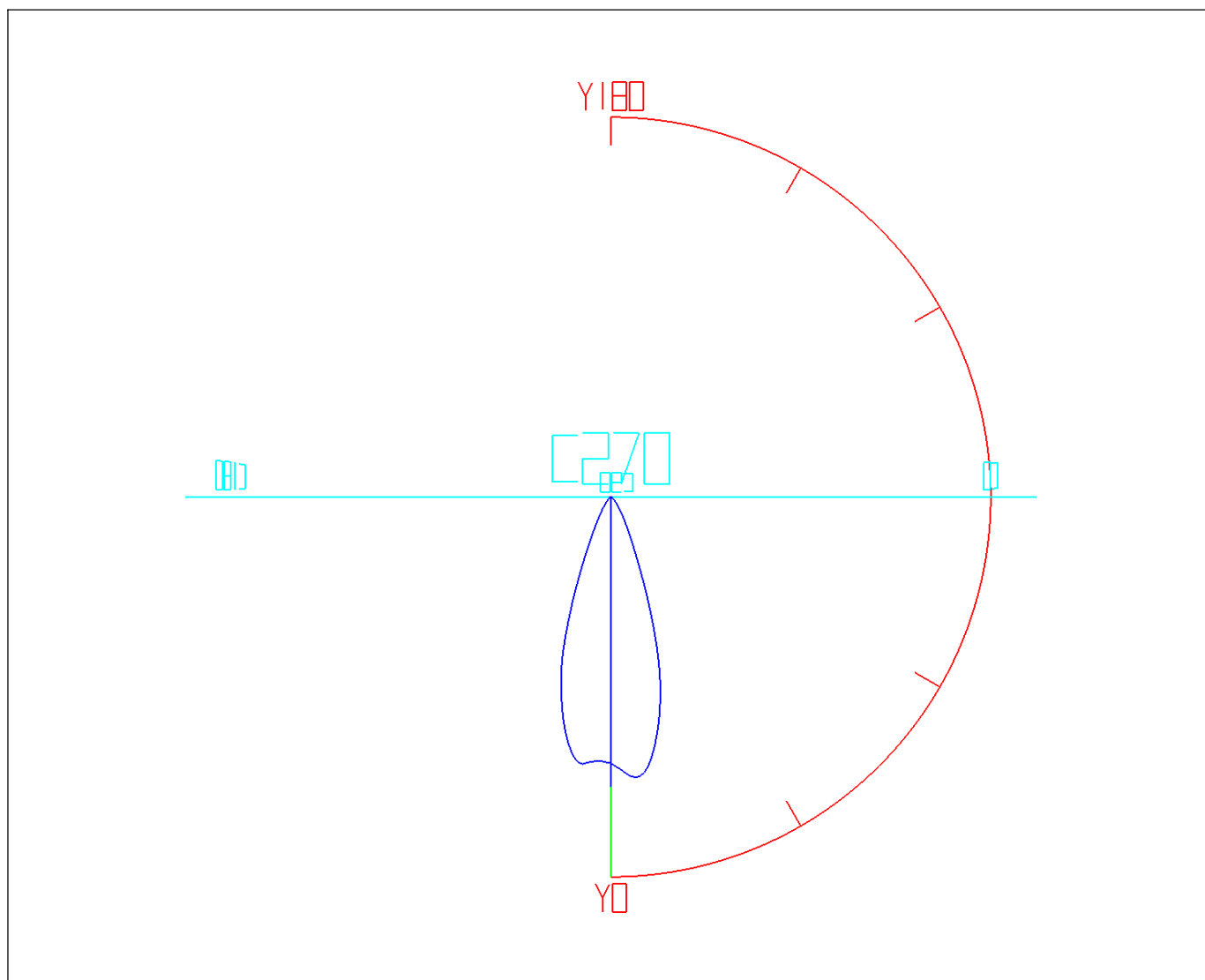
IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

3D Light Intensity Distribution Modal



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

Zonal Flux Tabulation

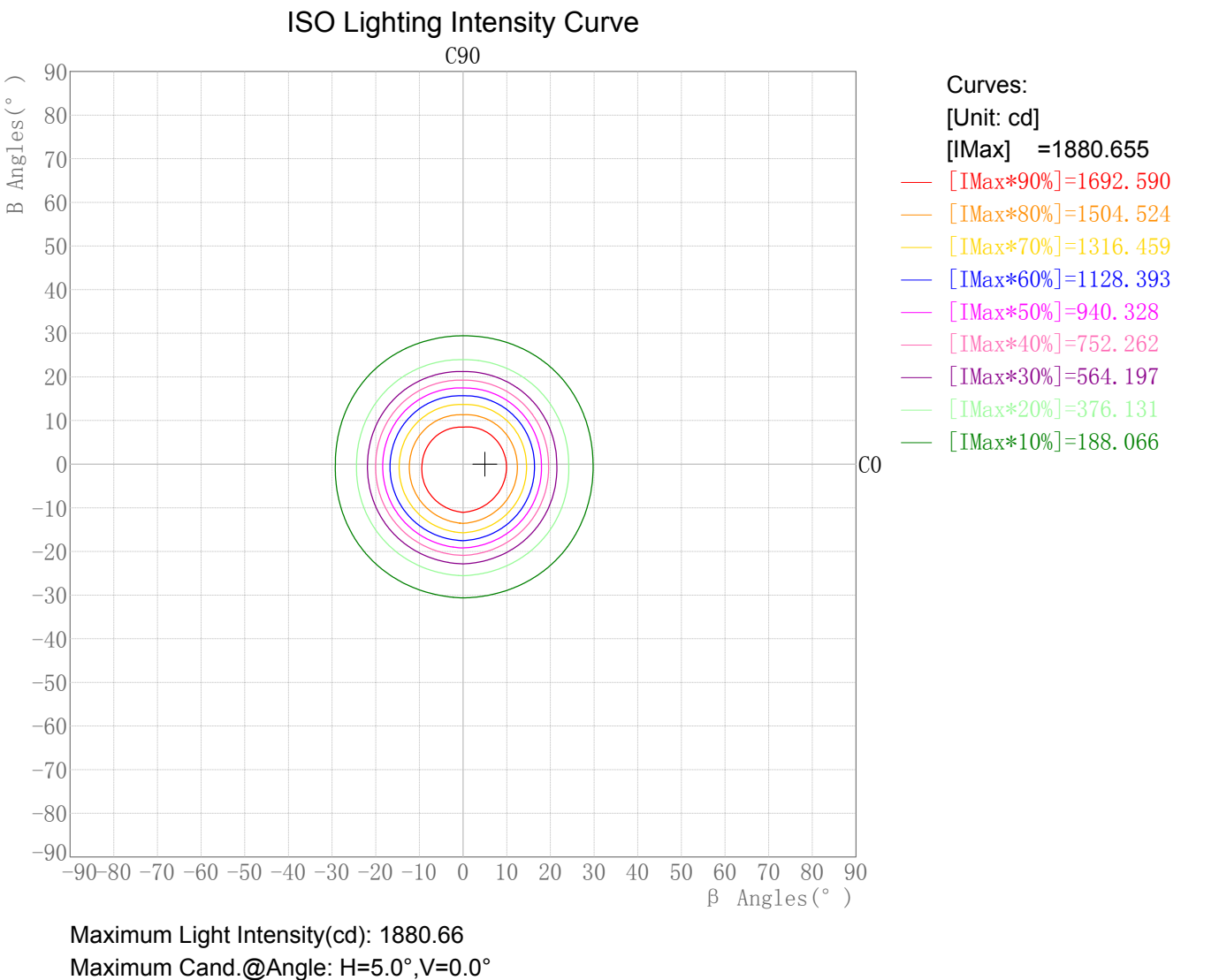
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 1.70 | 1.70 | 0.20 | 0.20 | 47.0-48.0 | 2.52 | 777.28 | 0.30 | 92.97 |
| 1.0-2.0 | 5.12 | 6.82 | 0.61 | 0.82 | 48.0-49.0 | 2.38 | 779.65 | 0.28 | 93.25 |
| 2.0-3.0 | 8.58 | 15.40 | 1.03 | 1.84 | 49.0-50.0 | 2.24 | 781.90 | 0.27 | 93.52 |
| 3.0-4.0 | 12.12 | 27.52 | 1.45 | 3.29 | 50.0-51.0 | 2.12 | 784.02 | 0.25 | 93.77 |
| 4.0-5.0 | 15.70 | 43.22 | 1.88 | 5.17 | 51.0-52.0 | 2.01 | 786.03 | 0.24 | 94.01 |
| 5.0-6.0 | 19.26 | 62.48 | 2.30 | 7.47 | 52.0-53.0 | 1.90 | 787.93 | 0.23 | 94.24 |
| 6.0-7.0 | 22.68 | 85.16 | 2.71 | 10.19 | 53.0-54.0 | 1.80 | 789.73 | 0.22 | 94.46 |
| 7.0-8.0 | 25.79 | 110.96 | 3.09 | 13.27 | 54.0-55.0 | 1.71 | 791.45 | 0.20 | 94.66 |
| 8.0-9.0 | 28.53 | 139.49 | 3.41 | 16.68 | 55.0-56.0 | 1.63 | 793.07 | 0.19 | 94.86 |
| 9.0-10.0 | 30.87 | 170.36 | 3.69 | 20.38 | 56.0-57.0 | 1.55 | 794.62 | 0.19 | 95.04 |
| 10.0-11.0 | 32.82 | 203.18 | 3.93 | 24.30 | 57.0-58.0 | 1.48 | 796.10 | 0.18 | 95.22 |
| 11.0-12.0 | 34.38 | 237.56 | 4.11 | 28.41 | 58.0-59.0 | 1.41 | 797.51 | 0.17 | 95.39 |
| 12.0-13.0 | 35.52 | 273.08 | 4.25 | 32.66 | 59.0-60.0 | 1.35 | 798.86 | 0.16 | 95.55 |
| 13.0-14.0 | 36.22 | 309.30 | 4.33 | 37.00 | 60.0-61.0 | 1.29 | 800.15 | 0.15 | 95.70 |
| 14.0-15.0 | 36.47 | 345.78 | 4.36 | 41.36 | 61.0-62.0 | 1.23 | 801.39 | 0.15 | 95.85 |
| 15.0-16.0 | 36.23 | 382.00 | 4.33 | 45.69 | 62.0-63.0 | 1.18 | 802.57 | 0.14 | 95.99 |
| 16.0-17.0 | 35.36 | 417.36 | 4.23 | 49.92 | 63.0-64.0 | 1.13 | 803.70 | 0.14 | 96.13 |
| 17.0-18.0 | 33.84 | 451.20 | 4.05 | 53.97 | 64.0-65.0 | 1.08 | 804.78 | 0.13 | 96.26 |
| 18.0-19.0 | 31.78 | 482.98 | 3.80 | 57.77 | 65.0-66.0 | 1.04 | 805.82 | 0.12 | 96.38 |
| 19.0-20.0 | 29.34 | 512.32 | 3.51 | 61.28 | 66.0-67.0 | 1.00 | 806.82 | 0.12 | 96.50 |
| 20.0-21.0 | 26.72 | 539.03 | 3.20 | 64.47 | 67.0-68.0 | 0.96 | 807.77 | 0.11 | 96.62 |
| 21.0-22.0 | 24.07 | 563.10 | 2.88 | 67.35 | 68.0-69.0 | 0.91 | 808.69 | 0.11 | 96.72 |
| 22.0-23.0 | 21.55 | 584.65 | 2.58 | 69.93 | 69.0-70.0 | 0.88 | 809.56 | 0.10 | 96.83 |
| 23.0-24.0 | 19.27 | 603.92 | 2.30 | 72.23 | 70.0-71.0 | 0.84 | 810.40 | 0.10 | 96.93 |
| 24.0-25.0 | 17.29 | 621.21 | 2.07 | 74.30 | 71.0-72.0 | 0.80 | 811.20 | 0.10 | 97.03 |
| 25.0-26.0 | 15.56 | 636.77 | 1.86 | 76.16 | 72.0-73.0 | 0.76 | 811.97 | 0.09 | 97.12 |
| 26.0-27.0 | 14.05 | 650.82 | 1.68 | 77.84 | 73.0-74.0 | 0.73 | 812.69 | 0.09 | 97.20 |
| 27.0-28.0 | 12.73 | 663.55 | 1.52 | 79.37 | 74.0-75.0 | 0.69 | 813.39 | 0.08 | 97.29 |
| 28.0-29.0 | 11.57 | 675.12 | 1.38 | 80.75 | 75.0-76.0 | 0.66 | 814.04 | 0.08 | 97.37 |
| 29.0-30.0 | 10.53 | 685.65 | 1.26 | 82.01 | 76.0-77.0 | 0.62 | 814.67 | 0.07 | 97.44 |
| 30.0-31.0 | 9.60 | 695.25 | 1.15 | 83.16 | 77.0-78.0 | 0.59 | 815.25 | 0.07 | 97.51 |
| 31.0-32.0 | 8.75 | 704.00 | 1.05 | 84.20 | 78.0-79.0 | 0.55 | 815.81 | 0.07 | 97.58 |
| 32.0-33.0 | 7.98 | 711.98 | 0.95 | 85.16 | 79.0-80.0 | 0.52 | 816.33 | 0.06 | 97.64 |
| 33.0-34.0 | 7.29 | 719.27 | 0.87 | 86.03 | 80.0-81.0 | 0.49 | 816.81 | 0.06 | 97.70 |
| 34.0-35.0 | 6.66 | 725.92 | 0.80 | 86.83 | 81.0-82.0 | 0.45 | 817.26 | 0.05 | 97.75 |
| 35.0-36.0 | 6.09 | 732.01 | 0.73 | 87.55 | 82.0-83.0 | 0.41 | 817.68 | 0.05 | 97.80 |
| 36.0-37.0 | 5.58 | 737.59 | 0.67 | 88.22 | 83.0-84.0 | 0.38 | 818.06 | 0.05 | 97.85 |
| 37.0-38.0 | 5.11 | 742.70 | 0.61 | 88.83 | 84.0-85.0 | 0.35 | 818.41 | 0.04 | 97.89 |
| 38.0-39.0 | 4.70 | 747.40 | 0.56 | 89.39 | 85.0-86.0 | 0.33 | 818.74 | 0.04 | 97.93 |
| 39.0-40.0 | 4.33 | 751.74 | 0.52 | 89.91 | 86.0-87.0 | 0.30 | 819.04 | 0.04 | 97.96 |
| 40.0-41.0 | 4.01 | 755.75 | 0.48 | 90.39 | 87.0-88.0 | 0.29 | 819.33 | 0.03 | 98.00 |
| 41.0-42.0 | 3.73 | 759.48 | 0.45 | 90.84 | 88.0-89.0 | 0.27 | 819.60 | 0.03 | 98.03 |
| 42.0-43.0 | 3.47 | 762.95 | 0.42 | 91.25 | 89.0-90.0 | 0.26 | 819.87 | 0.03 | 98.06 |
| 43.0-44.0 | 3.25 | 766.19 | 0.39 | 91.64 | 90.0-91.0 | 0.26 | 820.12 | 0.03 | 98.09 |
| 44.0-45.0 | 3.04 | 769.23 | 0.36 | 92.01 | 91.0-92.0 | 0.25 | 820.37 | 0.03 | 98.12 |
| 45.0-46.0 | 2.85 | 772.08 | 0.34 | 92.35 | 92.0-93.0 | 0.24 | 820.61 | 0.03 | 98.15 |
| 46.0-47.0 | 2.68 | 774.76 | 0.32 | 92.67 | 93.0-94.0 | 0.23 | 820.84 | 0.03 | 98.18 |

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 | 0.23 | 821.07 | 0.03 | 98.21 | 141.0-142.0 | 0.24 | 829.31 | 0.03 | 99.19 |
| 95.0-96.0 | 0.22 | 821.29 | 0.03 | 98.23 | 142.0-143.0 | 0.25 | 829.55 | 0.03 | 99.22 |
| 96.0-97.0 | 0.21 | 821.50 | 0.03 | 98.26 | 143.0-144.0 | 0.25 | 829.80 | 0.03 | 99.25 |
| 97.0-98.0 | 0.21 | 821.71 | 0.02 | 98.28 | 144.0-145.0 | 0.25 | 830.06 | 0.03 | 99.28 |
| 98.0-99.0 | 0.20 | 821.91 | 0.02 | 98.31 | 145.0-146.0 | 0.26 | 830.31 | 0.03 | 99.31 |
| 99.0-100.0 | 0.20 | 822.11 | 0.02 | 98.33 | 146.0-147.0 | 0.26 | 830.57 | 0.03 | 99.34 |
| 100.0-101.0 | 0.19 | 822.30 | 0.02 | 98.35 | 147.0-148.0 | 0.26 | 830.83 | 0.03 | 99.37 |
| 101.0-102.0 | 0.19 | 822.49 | 0.02 | 98.38 | 148.0-149.0 | 0.26 | 831.10 | 0.03 | 99.40 |
| 102.0-103.0 | 0.18 | 822.67 | 0.02 | 98.40 | 149.0-150.0 | 0.26 | 831.36 | 0.03 | 99.44 |
| 103.0-104.0 | 0.18 | 822.85 | 0.02 | 98.42 | 150.0-151.0 | 0.26 | 831.62 | 0.03 | 99.47 |
| 104.0-105.0 | 0.17 | 823.02 | 0.02 | 98.44 | 151.0-152.0 | 0.26 | 831.88 | 0.03 | 99.50 |
| 105.0-106.0 | 0.17 | 823.19 | 0.02 | 98.46 | 152.0-153.0 | 0.26 | 832.14 | 0.03 | 99.53 |
| 106.0-107.0 | 0.17 | 823.36 | 0.02 | 98.48 | 153.0-154.0 | 0.25 | 832.39 | 0.03 | 99.56 |
| 107.0-108.0 | 0.16 | 823.52 | 0.02 | 98.50 | 154.0-155.0 | 0.25 | 832.64 | 0.03 | 99.59 |
| 108.0-109.0 | 0.16 | 823.68 | 0.02 | 98.52 | 155.0-156.0 | 0.25 | 832.89 | 0.03 | 99.62 |
| 109.0-110.0 | 0.16 | 823.83 | 0.02 | 98.54 | 156.0-157.0 | 0.24 | 833.13 | 0.03 | 99.65 |
| 110.0-111.0 | 0.15 | 823.99 | 0.02 | 98.55 | 157.0-158.0 | 0.24 | 833.37 | 0.03 | 99.68 |
| 111.0-112.0 | 0.15 | 824.14 | 0.02 | 98.57 | 158.0-159.0 | 0.23 | 833.60 | 0.03 | 99.70 |
| 112.0-113.0 | 0.15 | 824.28 | 0.02 | 98.59 | 159.0-160.0 | 0.22 | 833.82 | 0.03 | 99.73 |
| 113.0-114.0 | 0.15 | 824.43 | 0.02 | 98.61 | 160.0-161.0 | 0.21 | 834.03 | 0.03 | 99.76 |
| 114.0-115.0 | 0.14 | 824.57 | 0.02 | 98.63 | 161.0-162.0 | 0.20 | 834.23 | 0.02 | 99.78 |
| 115.0-116.0 | 0.14 | 824.72 | 0.02 | 98.64 | 162.0-163.0 | 0.19 | 834.43 | 0.02 | 99.80 |
| 116.0-117.0 | 0.14 | 824.86 | 0.02 | 98.66 | 163.0-164.0 | 0.18 | 834.61 | 0.02 | 99.83 |
| 117.0-118.0 | 0.14 | 825.00 | 0.02 | 98.68 | 164.0-165.0 | 0.17 | 834.79 | 0.02 | 99.85 |
| 118.0-119.0 | 0.14 | 825.14 | 0.02 | 98.69 | 165.0-166.0 | 0.16 | 834.95 | 0.02 | 99.87 |
| 119.0-120.0 | 0.14 | 825.28 | 0.02 | 98.71 | 166.0-167.0 | 0.15 | 835.10 | 0.02 | 99.88 |
| 120.0-121.0 | 0.14 | 825.42 | 0.02 | 98.73 | 167.0-168.0 | 0.14 | 835.24 | 0.02 | 99.90 |
| 121.0-122.0 | 0.14 | 825.57 | 0.02 | 98.74 | 168.0-169.0 | 0.13 | 835.37 | 0.02 | 99.92 |
| 122.0-123.0 | 0.14 | 825.71 | 0.02 | 98.76 | 169.0-170.0 | 0.12 | 835.49 | 0.01 | 99.93 |
| 123.0-124.0 | 0.15 | 825.86 | 0.02 | 98.78 | 170.0-171.0 | 0.11 | 835.60 | 0.01 | 99.94 |
| 124.0-125.0 | 0.15 | 826.00 | 0.02 | 98.80 | 171.0-172.0 | 0.10 | 835.70 | 0.01 | 99.96 |
| 125.0-126.0 | 0.15 | 826.16 | 0.02 | 98.81 | 172.0-173.0 | 0.09 | 835.78 | 0.01 | 99.97 |
| 126.0-127.0 | 0.15 | 826.31 | 0.02 | 98.83 | 173.0-174.0 | 0.07 | 835.86 | 0.01 | 99.97 |
| 127.0-128.0 | 0.16 | 826.47 | 0.02 | 98.85 | 174.0-175.0 | 0.06 | 835.92 | 0.01 | 99.98 |
| 128.0-129.0 | 0.16 | 826.63 | 0.02 | 98.87 | 175.0-176.0 | 0.05 | 835.97 | 0.01 | 99.99 |
| 129.0-130.0 | 0.17 | 826.80 | 0.02 | 98.89 | 176.0-177.0 | 0.04 | 836.01 | 0.00 | 99.99 |
| 130.0-131.0 | 0.17 | 826.98 | 0.02 | 98.91 | 177.0-178.0 | 0.03 | 836.04 | 0.00 | 100.00 |
| 131.0-132.0 | 0.18 | 827.16 | 0.02 | 98.93 | 178.0-179.0 | 0.02 | 836.06 | 0.00 | 100.00 |
| 132.0-133.0 | 0.19 | 827.34 | 0.02 | 98.96 | 179.0-180.0 | 0.01 | 836.07 | 0.00 | 100.00 |
| 133.0-134.0 | 0.19 | 827.53 | 0.02 | 98.98 | | | | | |
| 134.0-135.0 | 0.20 | 827.73 | 0.02 | 99.00 | | | | | |
| 135.0-136.0 | 0.21 | 827.94 | 0.02 | 99.03 | | | | | |
| 136.0-137.0 | 0.21 | 828.15 | 0.03 | 99.05 | | | | | |
| 137.0-138.0 | 0.22 | 828.37 | 0.03 | 99.08 | | | | | |
| 138.0-139.0 | 0.23 | 828.60 | 0.03 | 99.11 | | | | | |
| 139.0-140.0 | 0.23 | 828.83 | 0.03 | 99.13 | | | | | |
| 140.0-141.0 | 0.24 | 829.07 | 0.03 | 99.16 | | | | | |

Rectangle ISO Lighting Intensity Diagram

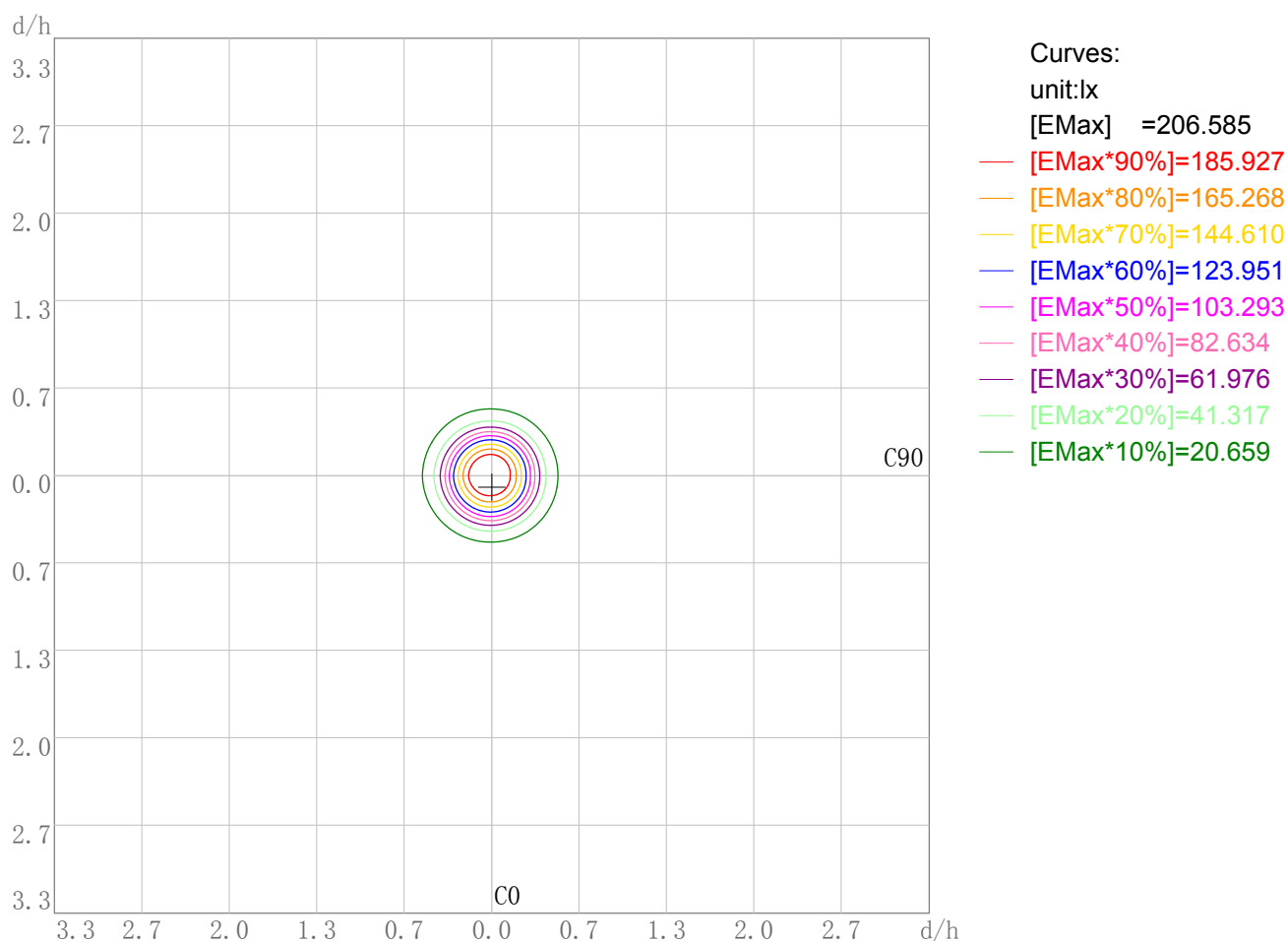
| | | |
|---|-----------------------|----------------------------|
| Lum. Name:MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID:01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |



Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

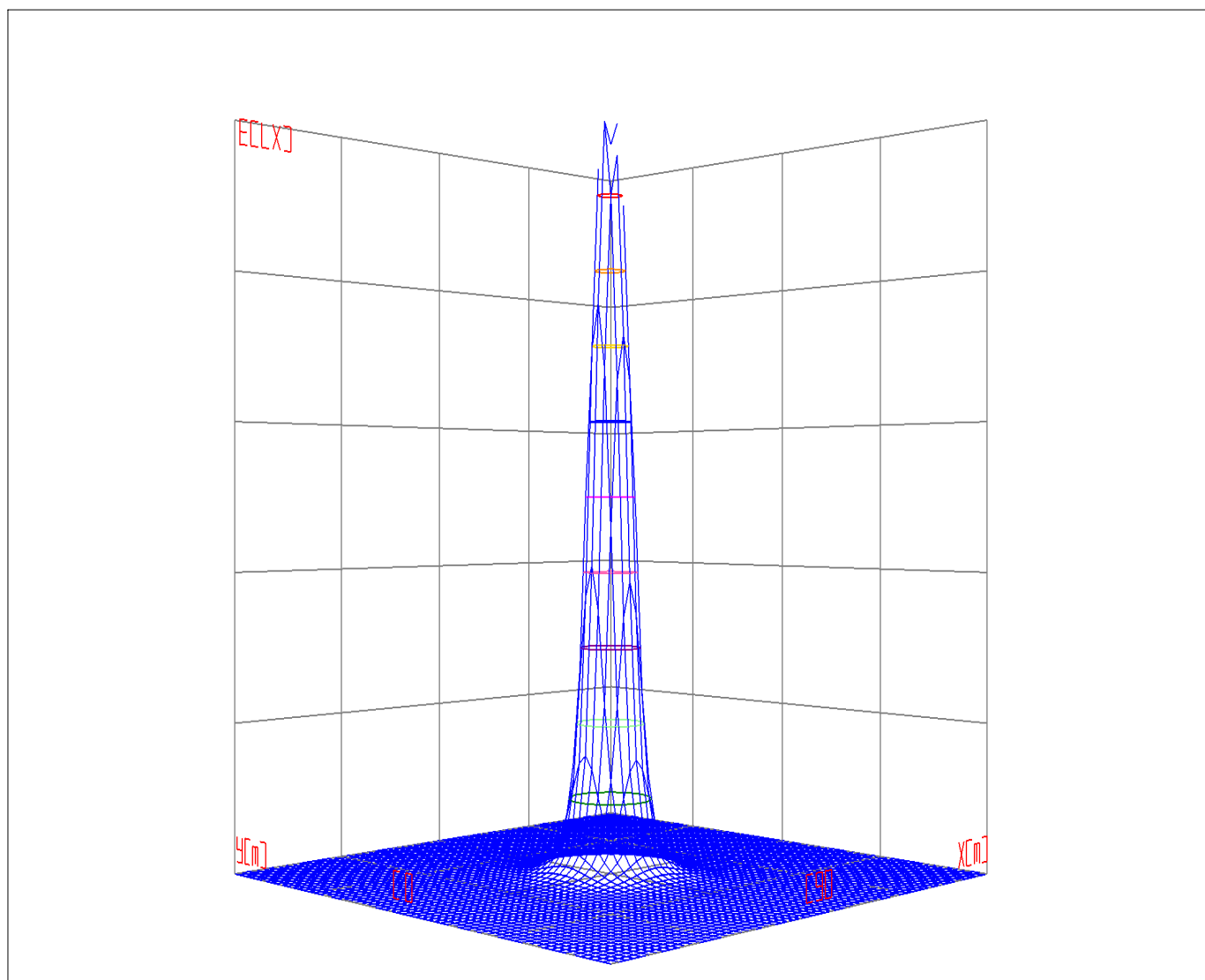
Working Plane Maximum Illuminance(lx): 206.59

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

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

3D Plane Illuminance Modal

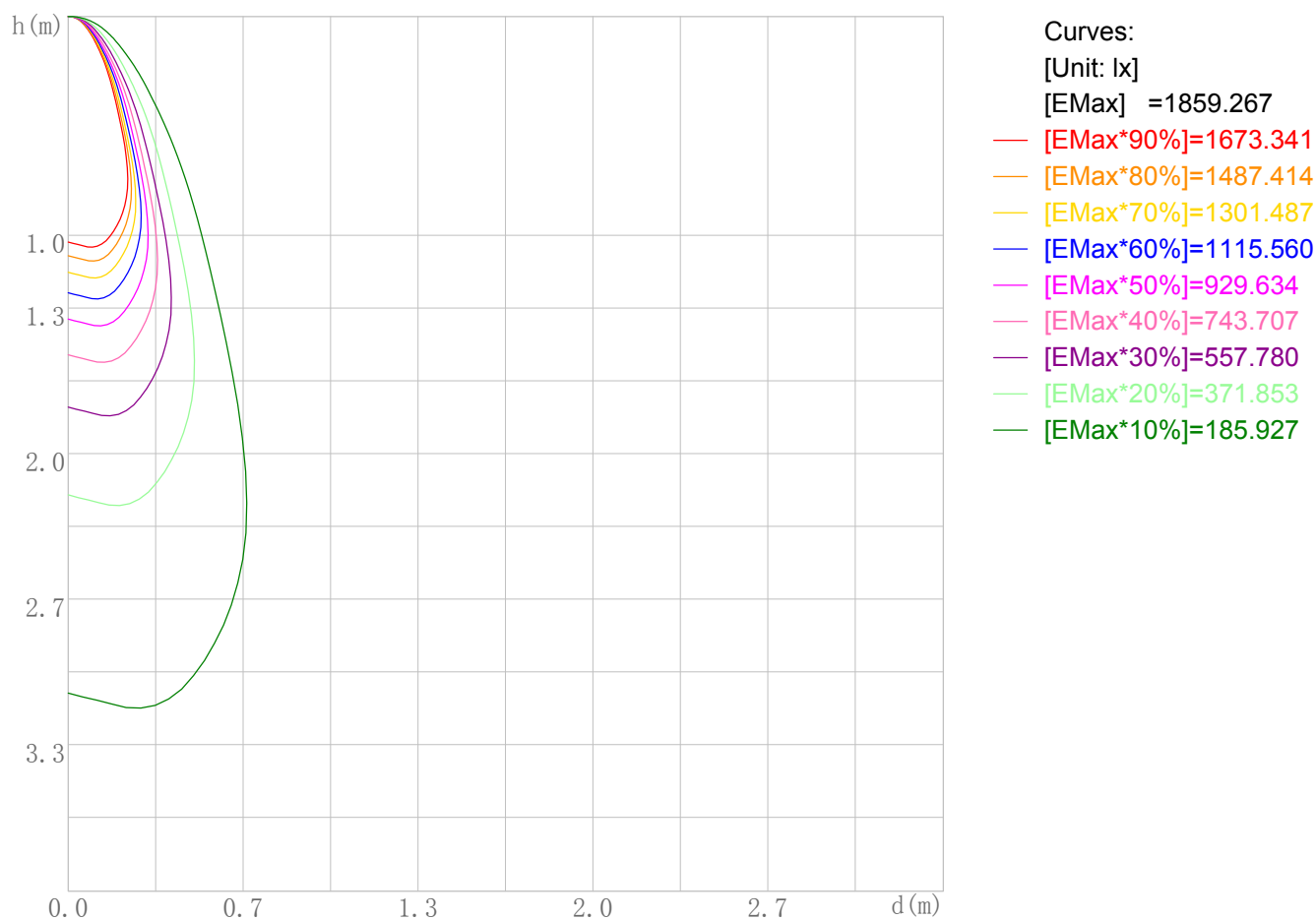


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:1859.27lx,5.0deg

Plane Maximum Lighting Intensity and @Angle:1880.655cd,0deg

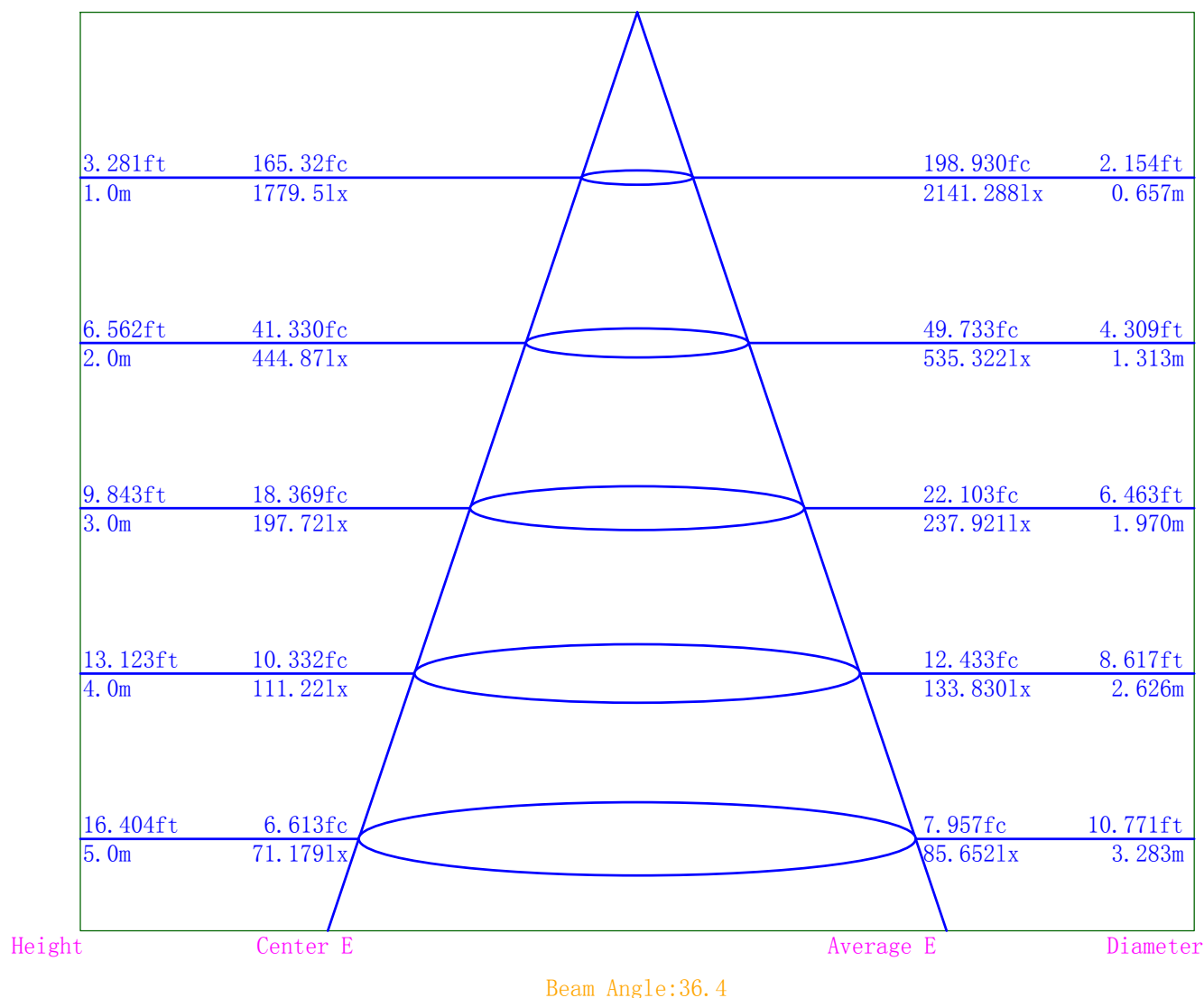
IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

Illuminance-Distance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

Illuminance-Distance Curve



IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

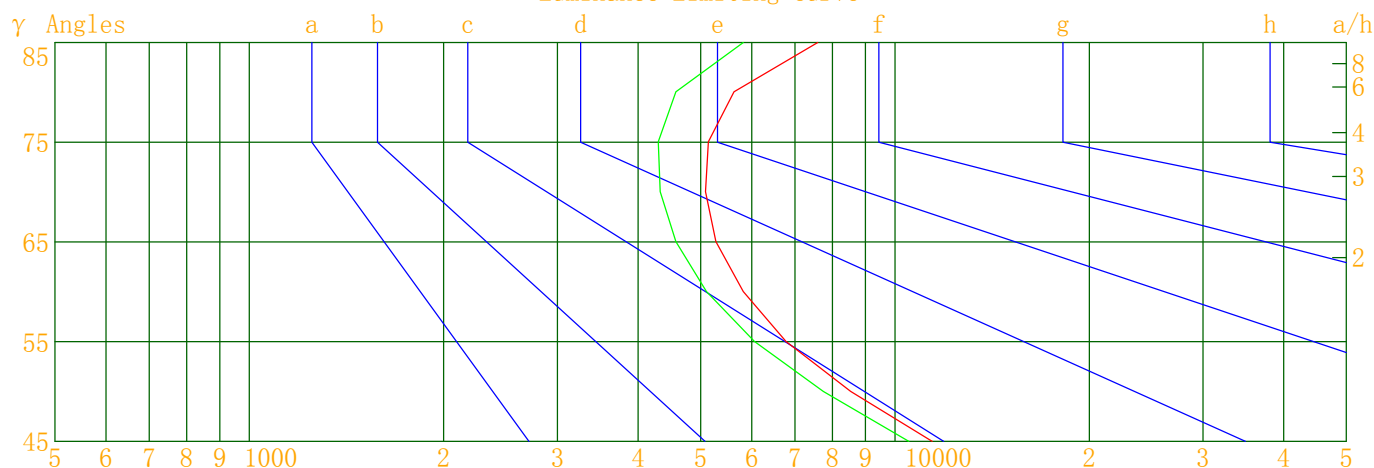
Glare Grade Table

| 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 | 11421 | 8537 | 6780 | 5823 | 5280 | 5089 | 5142 | 5633 | 7591 |
| C90 | 10504 | 7744 | 6060 | 5106 | 4579 | 4328 | 4300 | 4577 | 5822 |

Luminance Limiting Curve



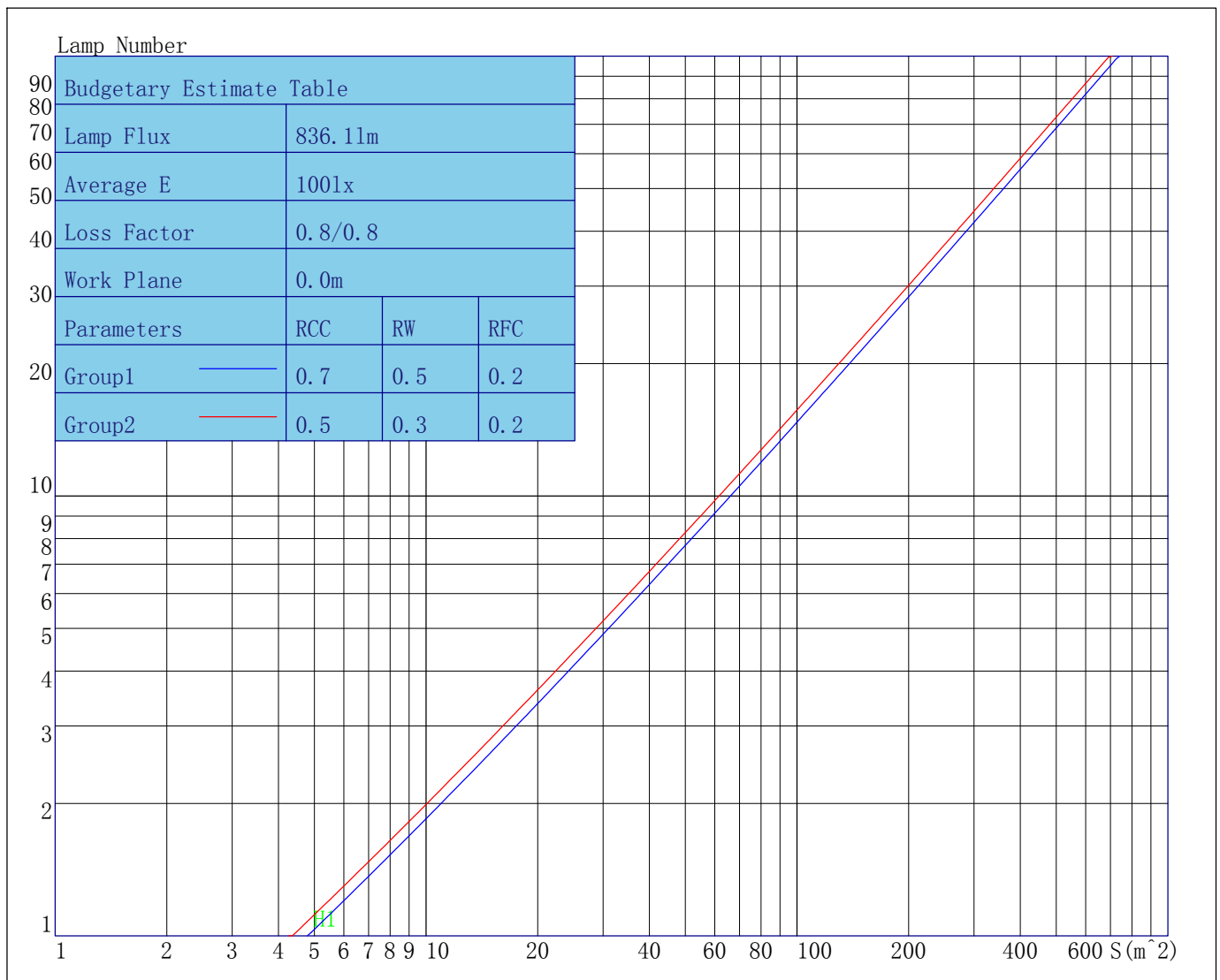
Luminous Size: Length(m)=0.050 Width(m)=0.050 Height(m)=0.050 Area(m^2)=0.005000
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |



Parameters1: Rhocc = 0.7 Rhow = 0.5 Rhofc = 0.2 LLF = 0.8
Parameters2: Rhocc = 0.5 Rhow = 0.3 Rhofc = 0.2 LLF = 0.8
Average Illuminance(lx): 100 Cavity Height: H1(m) = 2

Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 3000K RA90 36D | Lum. Catelog: | Test ID: 01 |
| Lamp Name: | Lamp Catelog: LED | Test Lab: QQualty peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/12/04 |

| 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 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 102 | 101 | 100 | 99 | 97 | 96 | 95 | 94 | 92 |
| 2 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 96 | 98 | 96 | 93 | 95 | 93 | 91 | 92 | 90 | 89 | 87 |
| 3 | 104 | 98 | 93 | 90 | 102 | 96 | 92 | 89 | 93 | 90 | 87 | 91 | 88 | 86 | 88 | 86 | 84 | 82 |
| 4 | 99 | 93 | 88 | 84 | 97 | 91 | 87 | 83 | 89 | 85 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 78 |
| 5 | 95 | 88 | 83 | 79 | 94 | 87 | 82 | 78 | 85 | 81 | 78 | 83 | 80 | 77 | 81 | 78 | 76 | 75 |
| 6 | 91 | 84 | 78 | 75 | 90 | 83 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 73 | 78 | 75 | 72 | 71 |
| 7 | 88 | 80 | 75 | 71 | 87 | 79 | 74 | 71 | 78 | 73 | 70 | 76 | 73 | 70 | 75 | 72 | 69 | 68 |
| 8 | 85 | 76 | 71 | 68 | 83 | 76 | 71 | 68 | 75 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 66 | 65 |
| 9 | 82 | 73 | 68 | 65 | 81 | 73 | 68 | 65 | 72 | 67 | 64 | 71 | 67 | 64 | 70 | 66 | 64 | 63 |
| 10 | 79 | 70 | 65 | 62 | 78 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | 67 | 64 | 61 | 60 |

Unified Glare Rating Table

Table with 3 columns: Lum. Name, Lum. Catalog, Test ID; Lamp Name, Lamp Catalog, Test Lab; Manufacture, Test Machine, Test Date.

Unified Glare Rating Table

Table with 11 columns for UGR values across different room sizes (Ceiling, Wall, Floor) and variations with observer position. Includes sections for Reduced UGR Table and Nordic Standard Table.

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 | 1779.48 | 1779.48 | 1779.48 | 1779.48 |
| γ 1.0 | 1800.53 | 1765.91 | 1773.89 | 1771.79 |
| γ 2.0 | 1820.71 | 1774.70 | 1765.84 | 1789.84 |
| γ 3.0 | 1845.16 | 1785.10 | 1766.70 | 1808.61 |
| γ 4.0 | 1870.13 | 1801.72 | 1772.51 | 1832.45 |
| γ 5.0 | 1880.66 | 1805.93 | 1781.42 | 1852.43 |
| γ 6.0 | 1876.08 | 1794.96 | 1794.67 | 1874.40 |
| γ 7.0 | 1852.11 | 1763.83 | 1786.21 | 1872.29 |
| γ 8.0 | 1811.79 | 1719.66 | 1758.58 | 1852.53 |
| γ 9.0 | 1752.89 | 1662.85 | 1713.72 | 1809.83 |
| γ 10.0 | 1687.91 | 1600.01 | 1659.07 | 1757.92 |
| γ 11.0 | 1614.74 | 1528.20 | 1596.30 | 1695.33 |
| γ 12.0 | 1538.89 | 1452.84 | 1526.05 | 1628.69 |
| γ 13.0 | 1455.67 | 1372.80 | 1448.32 | 1549.91 |
| γ 14.0 | 1365.94 | 1287.76 | 1368.59 | 1469.75 |
| γ 15.0 | 1271.51 | 1194.95 | 1285.50 | 1382.71 |
| γ 16.0 | 1167.71 | 1095.78 | 1200.57 | 1290.20 |
| γ 17.0 | 1052.47 | 988.26 | 1101.50 | 1185.28 |
| γ 18.0 | 934.62 | 883.44 | 988.06 | 1075.76 |
| γ 19.0 | 816.43 | 777.21 | 868.54 | 962.45 |
| γ 20.0 | 704.95 | 677.16 | 754.83 | 850.54 |
| γ 21.0 | 604.41 | 583.74 | 648.39 | 741.44 |
| γ 22.0 | 517.90 | 501.63 | 553.59 | 639.98 |
| γ 23.0 | 445.24 | 430.79 | 469.44 | 549.21 |
| γ 24.0 | 385.88 | 373.37 | 399.81 | 471.87 |
| γ 25.0 | 336.50 | 325.37 | 341.62 | 406.33 |
| γ 26.0 | 295.58 | 286.25 | 293.62 | 351.33 |
| γ 27.0 | 260.97 | 252.54 | 253.74 | 303.82 |
| γ 28.0 | 231.45 | 223.56 | 220.96 | 264.47 |
| γ 29.0 | 205.55 | 197.55 | 193.85 | 231.04 |
| γ 30.0 | 182.95 | 175.05 | 170.52 | 203.35 |
| γ 31.0 | 163.17 | 154.95 | 150.15 | 179.32 |
| γ 32.0 | 145.54 | 137.67 | 132.55 | 158.60 |
| γ 33.0 | 130.15 | 122.19 | 116.92 | 140.35 |
| γ 34.0 | 116.42 | 108.82 | 103.58 | 124.67 |
| γ 35.0 | 104.32 | 97.10 | 91.85 | 110.63 |
| γ 36.0 | 93.72 | 86.98 | 81.71 | 98.64 |
| γ 37.0 | 84.21 | 77.94 | 72.78 | 87.83 |
| γ 38.0 | 75.97 | 70.28 | 65.02 | 78.61 |
| γ 39.0 | 68.61 | 63.51 | 58.32 | 70.46 |
| γ 40.0 | 62.26 | 57.81 | 52.60 | 63.54 |
| γ 41.0 | 56.72 | 52.62 | 47.64 | 57.56 |
| γ 42.0 | 51.89 | 48.08 | 43.40 | 52.48 |
| γ 43.0 | 47.58 | 44.10 | 39.61 | 47.94 |
| γ 44.0 | 43.85 | 40.45 | 36.37 | 44.10 |
| γ 45.0 | 40.38 | 37.14 | 33.39 | 40.58 |
| γ 46.0 | 37.34 | 34.21 | 30.83 | 37.53 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 34.45 | 31.48 | 28.56 | 34.76 |
| γ 48.0 | 31.93 | 29.12 | 26.55 | 32.40 |
| γ 49.0 | 29.58 | 26.88 | 24.74 | 30.24 |
| γ 50.0 | 27.44 | 24.89 | 23.16 | 28.29 |
| γ 51.0 | 25.48 | 23.09 | 21.71 | 26.48 |
| γ 52.0 | 23.75 | 21.47 | 20.41 | 24.87 |
| γ 53.0 | 22.15 | 19.95 | 19.17 | 23.24 |
| γ 54.0 | 20.72 | 18.60 | 18.09 | 21.80 |
| γ 55.0 | 19.44 | 17.38 | 16.99 | 20.41 |
| γ 56.0 | 18.28 | 16.31 | 16.03 | 19.20 |
| γ 57.0 | 17.23 | 15.29 | 15.09 | 18.09 |
| γ 58.0 | 16.29 | 14.38 | 14.29 | 17.12 |
| γ 59.0 | 15.40 | 13.54 | 13.52 | 16.24 |
| γ 60.0 | 14.56 | 12.77 | 12.84 | 15.40 |
| γ 61.0 | 13.78 | 12.06 | 12.17 | 14.59 |
| γ 62.0 | 13.05 | 11.41 | 11.58 | 13.85 |
| γ 63.0 | 12.36 | 10.77 | 11.02 | 13.12 |
| γ 64.0 | 11.74 | 10.21 | 10.50 | 12.48 |
| γ 65.0 | 11.16 | 9.68 | 10.00 | 11.87 |
| γ 66.0 | 10.62 | 9.17 | 9.53 | 11.30 |
| γ 67.0 | 10.10 | 8.69 | 9.08 | 10.77 |
| γ 68.0 | 9.62 | 8.24 | 8.65 | 10.27 |
| γ 69.0 | 9.15 | 7.81 | 8.23 | 9.77 |
| γ 70.0 | 8.70 | 7.40 | 7.84 | 9.32 |
| γ 71.0 | 8.27 | 7.00 | 7.44 | 8.88 |
| γ 72.0 | 7.86 | 6.61 | 7.08 | 8.43 |
| γ 73.0 | 7.45 | 6.26 | 6.71 | 8.01 |
| γ 74.0 | 7.05 | 5.92 | 6.37 | 7.61 |
| γ 75.0 | 6.65 | 5.56 | 6.03 | 7.20 |
| γ 76.0 | 6.29 | 5.22 | 5.70 | 6.82 |
| γ 77.0 | 5.94 | 4.89 | 5.36 | 6.45 |
| γ 78.0 | 5.60 | 4.59 | 5.03 | 6.10 |
| γ 79.0 | 5.23 | 4.28 | 4.72 | 5.74 |
| γ 80.0 | 4.89 | 3.97 | 4.41 | 5.39 |
| γ 81.0 | 4.53 | 3.65 | 4.09 | 5.02 |
| γ 82.0 | 4.16 | 3.30 | 3.77 | 4.67 |
| γ 83.0 | 3.87 | 3.03 | 3.42 | 4.27 |
| γ 84.0 | 3.56 | 2.78 | 3.13 | 3.97 |
| γ 85.0 | 3.31 | 2.54 | 2.88 | 3.68 |
| γ 86.0 | 3.09 | 2.36 | 2.63 | 3.40 |
| γ 87.0 | 2.93 | 2.20 | 2.44 | 3.17 |
| γ 88.0 | 2.82 | 2.11 | 2.26 | 2.97 |
| γ 89.0 | 2.73 | 2.05 | 2.14 | 2.84 |
| γ 90.0 | 2.65 | 2.00 | 2.08 | 2.75 |
| γ 91.0 | 2.58 | 1.92 | 1.99 | 2.66 |
| γ 92.0 | 2.50 | 1.88 | 1.93 | 2.58 |
| γ 93.0 | 2.43 | 1.82 | 1.88 | 2.49 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 2.37 | 1.77 | 1.82 | 2.42 |
| γ 95.0 | 2.31 | 1.74 | 1.77 | 2.35 |
| γ 96.0 | 2.24 | 1.69 | 1.73 | 2.28 |
| γ 97.0 | 2.18 | 1.65 | 1.68 | 2.21 |
| γ 98.0 | 2.14 | 1.61 | 1.64 | 2.17 |
| γ 99.0 | 2.08 | 1.57 | 1.60 | 2.11 |
| γ 100.0 | 2.04 | 1.55 | 1.56 | 2.05 |
| γ 101.0 | 2.00 | 1.50 | 1.53 | 2.01 |
| γ 102.0 | 1.95 | 1.47 | 1.50 | 1.97 |
| γ 103.0 | 1.91 | 1.44 | 1.48 | 1.93 |
| γ 104.0 | 1.87 | 1.42 | 1.45 | 1.89 |
| γ 105.0 | 1.82 | 1.38 | 1.43 | 1.85 |
| γ 106.0 | 1.78 | 1.36 | 1.41 | 1.81 |
| γ 107.0 | 1.75 | 1.32 | 1.39 | 1.79 |
| γ 108.0 | 1.70 | 1.31 | 1.38 | 1.76 |
| γ 109.0 | 1.68 | 1.28 | 1.36 | 1.73 |
| γ 110.0 | 1.64 | 1.27 | 1.36 | 1.72 |
| γ 111.0 | 1.62 | 1.24 | 1.35 | 1.69 |
| γ 112.0 | 1.60 | 1.24 | 1.35 | 1.69 |
| γ 113.0 | 1.56 | 1.23 | 1.35 | 1.67 |
| γ 114.0 | 1.55 | 1.22 | 1.35 | 1.66 |
| γ 115.0 | 1.54 | 1.23 | 1.36 | 1.66 |
| γ 116.0 | 1.53 | 1.23 | 1.38 | 1.66 |
| γ 117.0 | 1.51 | 1.23 | 1.38 | 1.65 |
| γ 118.0 | 1.52 | 1.24 | 1.41 | 1.66 |
| γ 119.0 | 1.52 | 1.26 | 1.42 | 1.68 |
| γ 120.0 | 1.52 | 1.28 | 1.46 | 1.69 |
| γ 121.0 | 1.53 | 1.30 | 1.48 | 1.70 |
| γ 122.0 | 1.55 | 1.34 | 1.53 | 1.74 |
| γ 123.0 | 1.58 | 1.37 | 1.57 | 1.77 |
| γ 124.0 | 1.61 | 1.42 | 1.63 | 1.81 |
| γ 125.0 | 1.64 | 1.48 | 1.68 | 1.86 |
| γ 126.0 | 1.69 | 1.54 | 1.75 | 1.91 |
| γ 127.0 | 1.74 | 1.61 | 1.82 | 1.98 |
| γ 128.0 | 1.82 | 1.69 | 1.91 | 2.04 |
| γ 129.0 | 1.88 | 1.77 | 2.00 | 2.13 |
| γ 130.0 | 1.97 | 1.87 | 2.12 | 2.21 |
| γ 131.0 | 2.06 | 1.97 | 2.22 | 2.30 |
| γ 132.0 | 2.16 | 2.09 | 2.34 | 2.41 |
| γ 133.0 | 2.27 | 2.19 | 2.45 | 2.52 |
| γ 134.0 | 2.39 | 2.33 | 2.59 | 2.63 |
| γ 135.0 | 2.52 | 2.47 | 2.72 | 2.75 |
| γ 136.0 | 2.64 | 2.60 | 2.87 | 2.88 |
| γ 137.0 | 2.78 | 2.75 | 3.01 | 3.01 |
| γ 138.0 | 2.92 | 2.89 | 3.16 | 3.14 |
| γ 139.0 | 3.06 | 3.05 | 3.30 | 3.27 |
| γ 140.0 | 3.21 | 3.20 | 3.46 | 3.42 |

IES Indoor Report

Photometric Filename:MD10-09-XX-03 3000K RA90 36D.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 3.35 | 3.35 | 3.61 | 3.56 |
| γ 142.0 | 3.51 | 3.49 | 3.76 | 3.70 |
| γ 143.0 | 3.66 | 3.64 | 3.92 | 3.84 |
| γ 144.0 | 3.81 | 3.79 | 4.07 | 3.98 |
| γ 145.0 | 3.96 | 3.93 | 4.22 | 4.12 |
| γ 146.0 | 4.12 | 4.09 | 4.38 | 4.27 |
| γ 147.0 | 4.25 | 4.22 | 4.52 | 4.41 |
| γ 148.0 | 4.39 | 4.35 | 4.67 | 4.55 |
| γ 149.0 | 4.55 | 4.49 | 4.81 | 4.69 |
| γ 150.0 | 4.70 | 4.62 | 4.94 | 4.84 |
| γ 151.0 | 4.83 | 4.76 | 5.08 | 4.96 |
| γ 152.0 | 4.96 | 4.88 | 5.21 | 5.09 |
| γ 153.0 | 5.09 | 4.99 | 5.32 | 5.20 |
| γ 154.0 | 5.20 | 5.11 | 5.44 | 5.32 |
| γ 155.0 | 5.31 | 5.21 | 5.55 | 5.43 |
| γ 156.0 | 5.42 | 5.30 | 5.66 | 5.53 |
| γ 157.0 | 5.52 | 5.40 | 5.74 | 5.62 |
| γ 158.0 | 5.61 | 5.48 | 5.84 | 5.70 |
| γ 159.0 | 5.70 | 5.55 | 5.90 | 5.77 |
| γ 160.0 | 5.76 | 5.62 | 5.97 | 5.81 |
| γ 161.0 | 5.82 | 5.67 | 6.01 | 5.88 |
| γ 162.0 | 5.86 | 5.71 | 6.05 | 5.92 |
| γ 163.0 | 5.91 | 5.74 | 6.08 | 5.93 |
| γ 164.0 | 5.93 | 5.76 | 6.10 | 5.95 |
| γ 165.0 | 5.94 | 5.78 | 6.09 | 5.96 |
| γ 166.0 | 5.96 | 5.79 | 6.11 | 5.97 |
| γ 167.0 | 5.96 | 5.80 | 6.10 | 5.97 |
| γ 168.0 | 5.97 | 5.82 | 6.10 | 5.97 |
| γ 169.0 | 5.99 | 5.82 | 6.09 | 5.97 |
| γ 170.0 | 6.00 | 5.81 | 6.08 | 5.96 |
| γ 171.0 | 6.02 | 5.83 | 6.06 | 5.95 |
| γ 172.0 | 6.04 | 5.86 | 6.07 | 5.95 |
| γ 173.0 | 6.06 | 5.88 | 6.07 | 5.97 |
| γ 174.0 | 6.07 | 5.89 | 6.07 | 5.97 |
| γ 175.0 | 6.10 | 5.93 | 6.10 | 6.00 |
| γ 176.0 | 6.14 | 5.96 | 6.11 | 6.00 |
| γ 177.0 | 6.15 | 6.00 | 6.12 | 6.03 |
| γ 178.0 | 6.18 | 6.01 | 6.14 | 6.05 |
| γ 179.0 | 6.18 | 6.01 | 6.16 | 6.07 |
| γ 180.0 | 6.13 | 6.13 | 6.13 | 6.13 |