

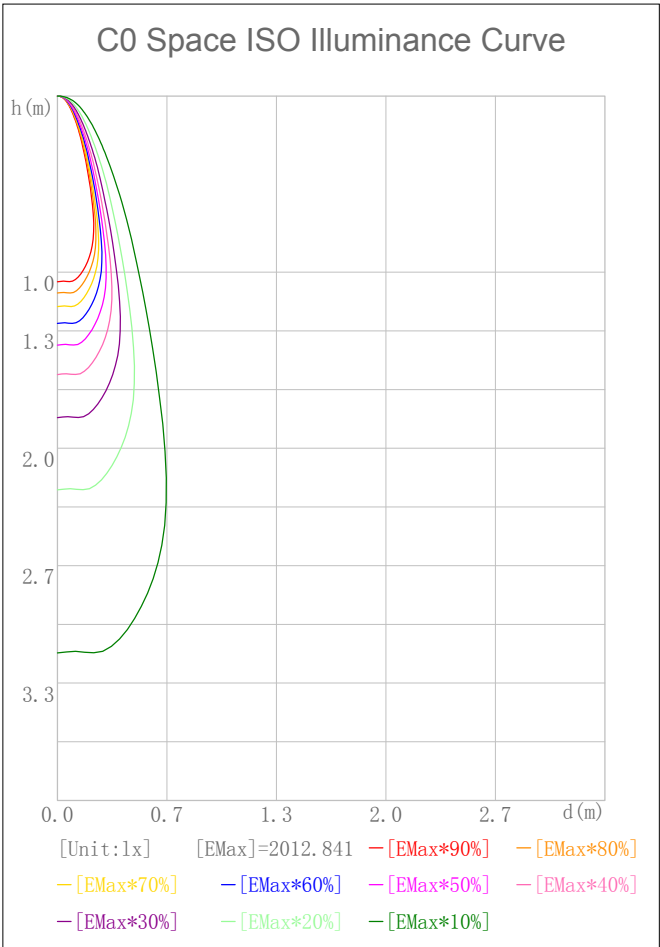
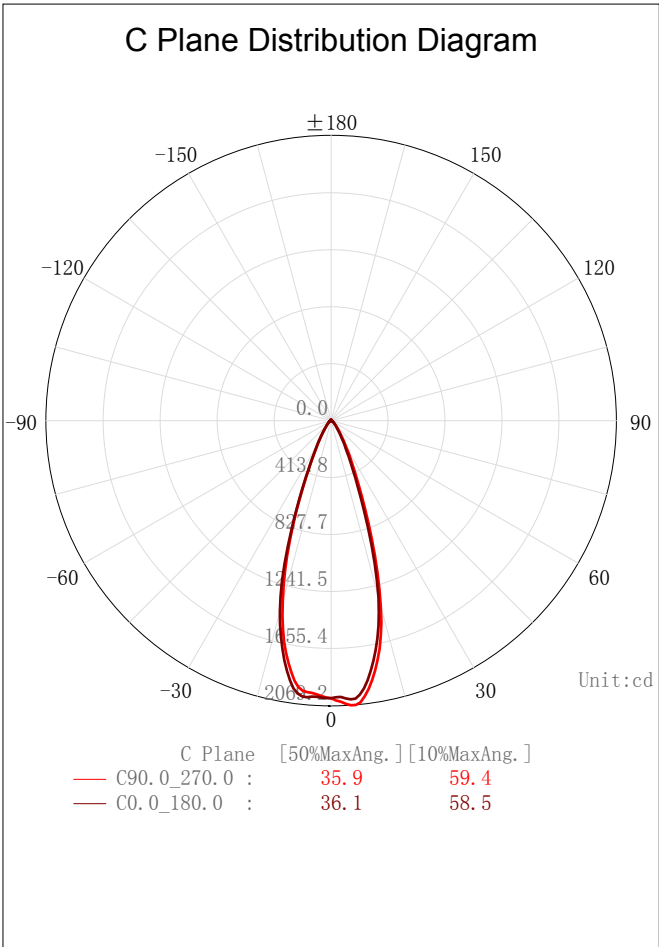
Indoor Luminaire Photometric Data

Description Information

| | | |
|---|-------------------------|-----------------------|
| Luminary Name: MD10-09-XX-03 4000K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Date: 2019/12/03 |
| 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): 893.970 | Luminary Flux(lm): 893.968 | Field Angle(10%Imax): 59.4(°) |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 875.928lm 97.98% |
| Rated Voltage(V): | Luminary EER(lm/W): 97.044 | Up Lumens&Percent: 18.040lm 2.02% |
| Tested Power(W): 9.212 | Max. Candela(cd): 2069.195 | S/MH: C0_a180=0.611 C90_270=0.610 |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=90.0 γ=4.0 | CIE Type: Semi-Direct |
| Tested Electrics (V, A, pf):241.4, 0.041, 0.921 | Beam Angle(50%Imax): 35.9(°) | ErP Φ use(90°): 830.831lm |
| Lamp Size (W*L*H):0.050m*0.050m*0.050m | Left=-18.0°, Right=17.9° | IRF(%): 520.870 |



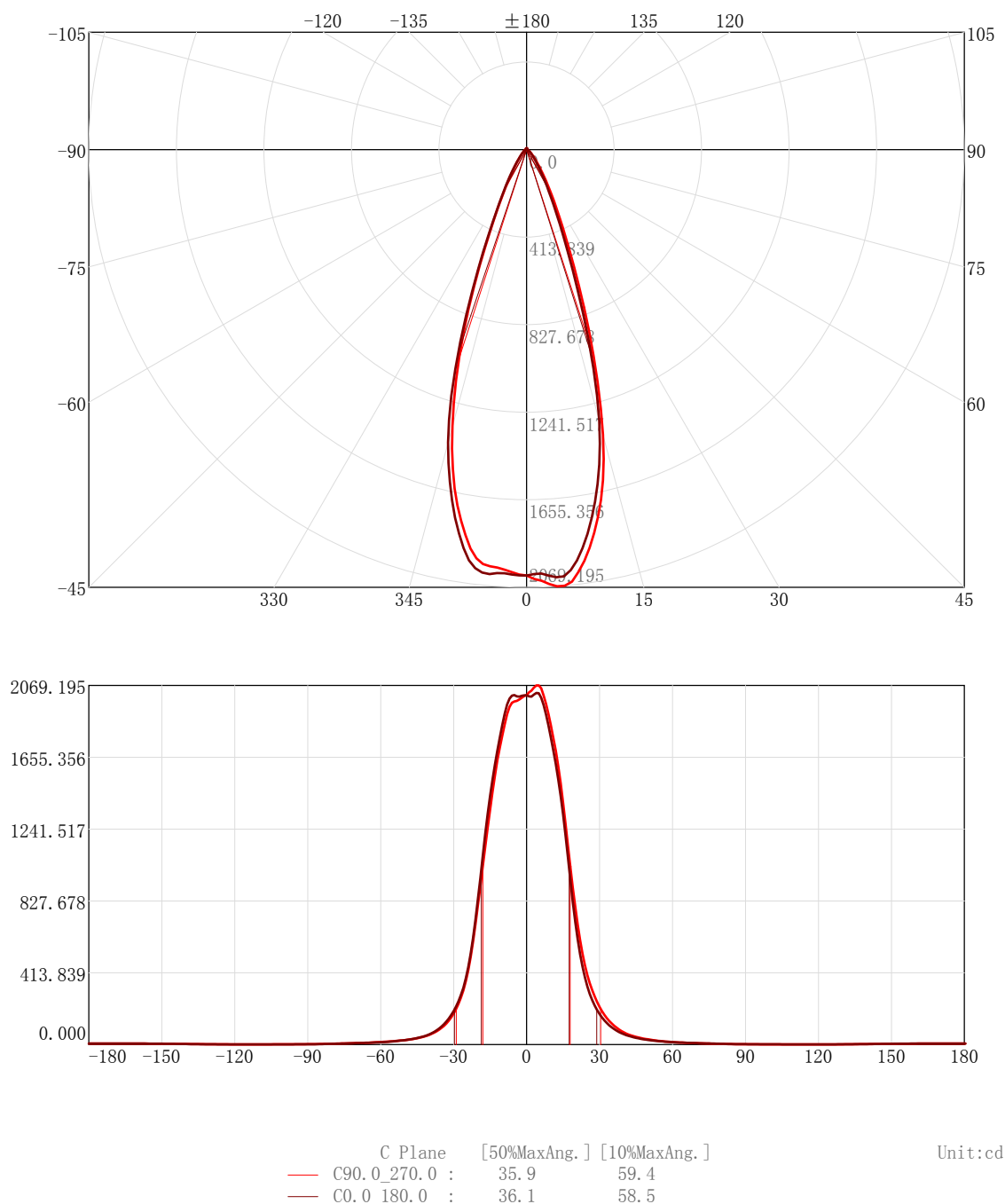
IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

2D Plane Light Intensity Distribution Curve

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

C Plane Distribution Diagram



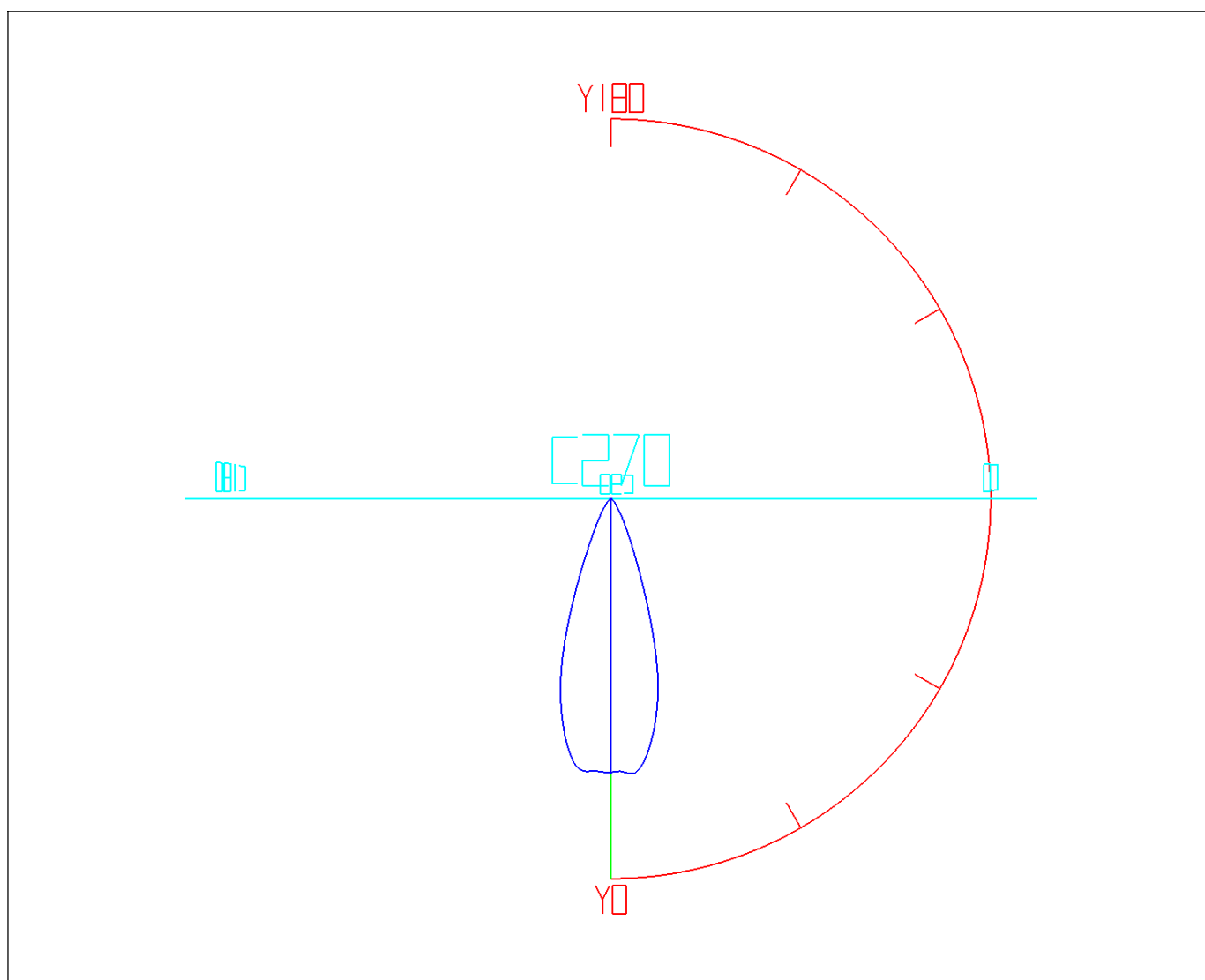
IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

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

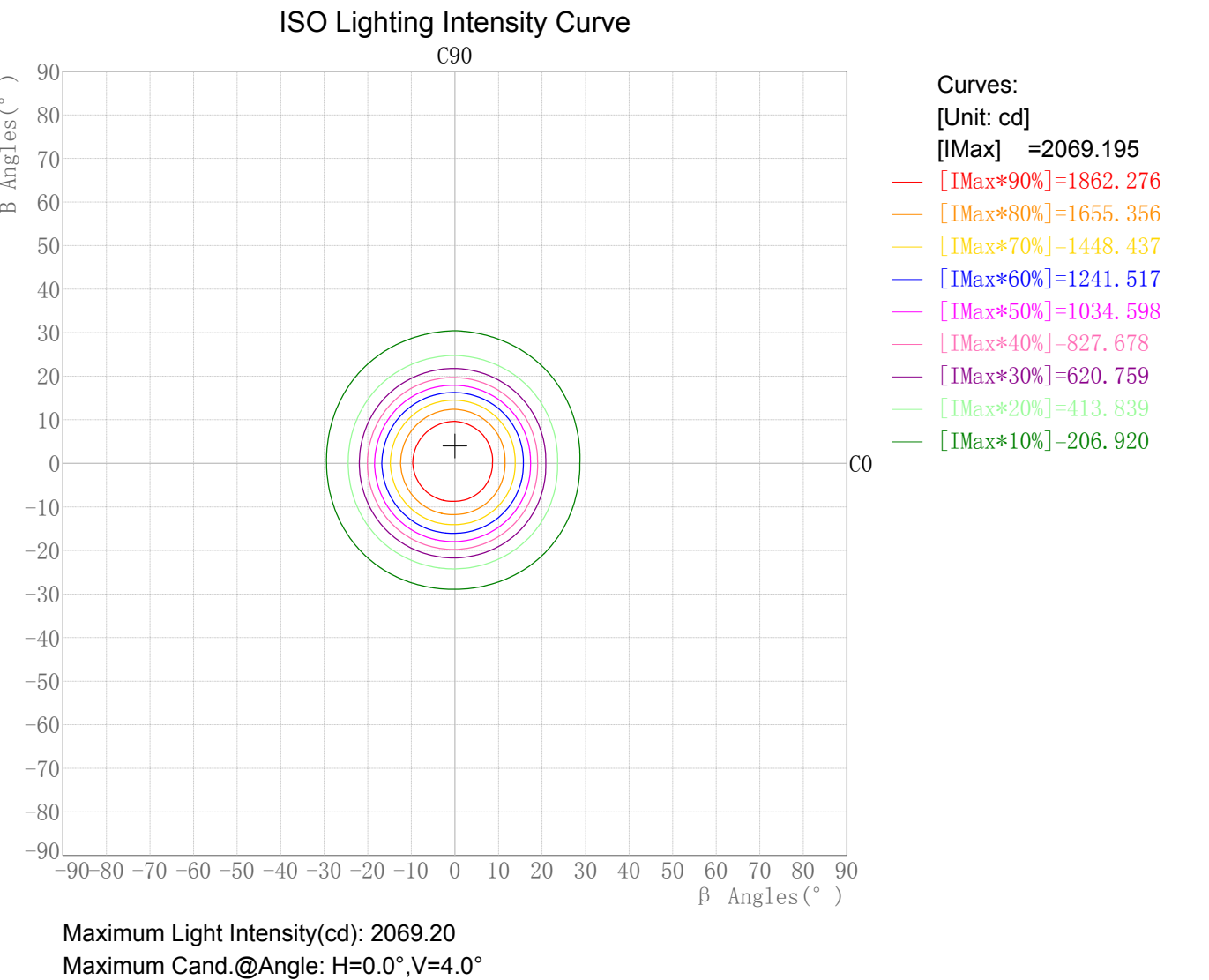
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 1.93 | 1.93 | 0.22 | 0.22 | 47.0-48.0 | 2.67 | 830.26 | 0.30 | 92.87 |
| 1.0-2.0 | 5.78 | 7.71 | 0.65 | 0.86 | 48.0-49.0 | 2.53 | 832.79 | 0.28 | 93.16 |
| 2.0-3.0 | 9.64 | 17.34 | 1.08 | 1.94 | 49.0-50.0 | 2.40 | 835.19 | 0.27 | 93.42 |
| 3.0-4.0 | 13.51 | 30.85 | 1.51 | 3.45 | 50.0-51.0 | 2.27 | 837.46 | 0.25 | 93.68 |
| 4.0-5.0 | 17.39 | 48.24 | 1.94 | 5.40 | 51.0-52.0 | 2.15 | 839.61 | 0.24 | 93.92 |
| 5.0-6.0 | 21.17 | 69.41 | 2.37 | 7.76 | 52.0-53.0 | 2.04 | 841.66 | 0.23 | 94.15 |
| 6.0-7.0 | 24.73 | 94.14 | 2.77 | 10.53 | 53.0-54.0 | 1.93 | 843.59 | 0.22 | 94.36 |
| 7.0-8.0 | 27.97 | 122.12 | 3.13 | 13.66 | 54.0-55.0 | 1.83 | 845.42 | 0.20 | 94.57 |
| 8.0-9.0 | 30.84 | 152.96 | 3.45 | 17.11 | 55.0-56.0 | 1.74 | 847.16 | 0.19 | 94.76 |
| 9.0-10.0 | 33.31 | 186.27 | 3.73 | 20.84 | 56.0-57.0 | 1.65 | 848.81 | 0.18 | 94.95 |
| 10.0-11.0 | 35.42 | 221.69 | 3.96 | 24.80 | 57.0-58.0 | 1.58 | 850.39 | 0.18 | 95.12 |
| 11.0-12.0 | 37.13 | 258.82 | 4.15 | 28.95 | 58.0-59.0 | 1.50 | 851.89 | 0.17 | 95.29 |
| 12.0-13.0 | 38.36 | 297.18 | 4.29 | 33.24 | 59.0-60.0 | 1.44 | 853.33 | 0.16 | 95.45 |
| 13.0-14.0 | 39.09 | 336.27 | 4.37 | 37.62 | 60.0-61.0 | 1.37 | 854.70 | 0.15 | 95.61 |
| 14.0-15.0 | 39.22 | 375.49 | 4.39 | 42.00 | 61.0-62.0 | 1.31 | 856.02 | 0.15 | 95.75 |
| 15.0-16.0 | 38.71 | 414.21 | 4.33 | 46.33 | 62.0-63.0 | 1.26 | 857.28 | 0.14 | 95.90 |
| 16.0-17.0 | 37.55 | 451.76 | 4.20 | 50.53 | 63.0-64.0 | 1.21 | 858.48 | 0.13 | 96.03 |
| 17.0-18.0 | 35.80 | 487.56 | 4.00 | 54.54 | 64.0-65.0 | 1.16 | 859.64 | 0.13 | 96.16 |
| 18.0-19.0 | 33.52 | 521.08 | 3.75 | 58.29 | 65.0-66.0 | 1.11 | 860.75 | 0.12 | 96.28 |
| 19.0-20.0 | 30.88 | 551.96 | 3.45 | 61.74 | 66.0-67.0 | 1.06 | 861.81 | 0.12 | 96.40 |
| 20.0-21.0 | 28.10 | 580.06 | 3.14 | 64.89 | 67.0-68.0 | 1.02 | 862.83 | 0.11 | 96.52 |
| 21.0-22.0 | 25.32 | 605.38 | 2.83 | 67.72 | 68.0-69.0 | 0.98 | 863.81 | 0.11 | 96.63 |
| 22.0-23.0 | 22.71 | 628.09 | 2.54 | 70.26 | 69.0-70.0 | 0.94 | 864.75 | 0.10 | 96.73 |
| 23.0-24.0 | 20.32 | 648.41 | 2.27 | 72.53 | 70.0-71.0 | 0.90 | 865.65 | 0.10 | 96.83 |
| 24.0-25.0 | 18.20 | 666.62 | 2.04 | 74.57 | 71.0-72.0 | 0.86 | 866.50 | 0.10 | 96.93 |
| 25.0-26.0 | 16.35 | 682.97 | 1.83 | 76.40 | 72.0-73.0 | 0.82 | 867.33 | 0.09 | 97.02 |
| 26.0-27.0 | 14.74 | 697.71 | 1.65 | 78.05 | 73.0-74.0 | 0.78 | 868.11 | 0.09 | 97.11 |
| 27.0-28.0 | 13.35 | 711.06 | 1.49 | 79.54 | 74.0-75.0 | 0.75 | 868.85 | 0.08 | 97.19 |
| 28.0-29.0 | 12.12 | 723.18 | 1.36 | 80.90 | 75.0-76.0 | 0.71 | 869.56 | 0.08 | 97.27 |
| 29.0-30.0 | 11.03 | 734.21 | 1.23 | 82.13 | 76.0-77.0 | 0.67 | 870.23 | 0.08 | 97.34 |
| 30.0-31.0 | 10.05 | 744.26 | 1.12 | 83.25 | 77.0-78.0 | 0.64 | 870.87 | 0.07 | 97.42 |
| 31.0-32.0 | 9.16 | 753.43 | 1.03 | 84.28 | 78.0-79.0 | 0.60 | 871.47 | 0.07 | 97.48 |
| 32.0-33.0 | 8.35 | 761.78 | 0.93 | 85.21 | 79.0-80.0 | 0.57 | 872.04 | 0.06 | 97.55 |
| 33.0-34.0 | 7.62 | 769.40 | 0.85 | 86.07 | 80.0-81.0 | 0.53 | 872.56 | 0.06 | 97.61 |
| 34.0-35.0 | 6.96 | 776.36 | 0.78 | 86.84 | 81.0-82.0 | 0.49 | 873.06 | 0.05 | 97.66 |
| 35.0-36.0 | 6.36 | 782.72 | 0.71 | 87.56 | 82.0-83.0 | 0.45 | 873.51 | 0.05 | 97.71 |
| 36.0-37.0 | 5.83 | 788.55 | 0.65 | 88.21 | 83.0-84.0 | 0.42 | 873.93 | 0.05 | 97.76 |
| 37.0-38.0 | 5.35 | 793.90 | 0.60 | 88.81 | 84.0-85.0 | 0.39 | 874.32 | 0.04 | 97.80 |
| 38.0-39.0 | 4.93 | 798.83 | 0.55 | 89.36 | 85.0-86.0 | 0.36 | 874.68 | 0.04 | 97.84 |
| 39.0-40.0 | 4.54 | 803.37 | 0.51 | 89.87 | 86.0-87.0 | 0.34 | 875.01 | 0.04 | 97.88 |
| 40.0-41.0 | 4.21 | 807.58 | 0.47 | 90.34 | 87.0-88.0 | 0.32 | 875.33 | 0.04 | 97.92 |
| 41.0-42.0 | 3.91 | 811.49 | 0.44 | 90.77 | 88.0-89.0 | 0.30 | 875.64 | 0.03 | 97.95 |
| 42.0-43.0 | 3.65 | 815.14 | 0.41 | 91.18 | 89.0-90.0 | 0.29 | 875.93 | 0.03 | 97.98 |
| 43.0-44.0 | 3.41 | 818.55 | 0.38 | 91.56 | 90.0-91.0 | 0.28 | 876.21 | 0.03 | 98.01 |
| 44.0-45.0 | 3.20 | 821.75 | 0.36 | 91.92 | 91.0-92.0 | 0.28 | 876.49 | 0.03 | 98.04 |
| 45.0-46.0 | 3.01 | 824.75 | 0.34 | 92.26 | 92.0-93.0 | 0.27 | 876.76 | 0.03 | 98.07 |
| 46.0-47.0 | 2.83 | 827.59 | 0.32 | 92.57 | 93.0-94.0 | 0.26 | 877.02 | 0.03 | 98.10 |

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 | 0.25 | 877.27 | 0.03 | 98.13 | 141.0-142.0 | 0.27 | 886.56 | 0.03 | 99.17 |
| 95.0-96.0 | 0.25 | 877.52 | 0.03 | 98.16 | 142.0-143.0 | 0.27 | 886.83 | 0.03 | 99.20 |
| 96.0-97.0 | 0.24 | 877.76 | 0.03 | 98.19 | 143.0-144.0 | 0.28 | 887.11 | 0.03 | 99.23 |
| 97.0-98.0 | 0.23 | 877.99 | 0.03 | 98.21 | 144.0-145.0 | 0.28 | 887.39 | 0.03 | 99.26 |
| 98.0-99.0 | 0.23 | 878.22 | 0.03 | 98.24 | 145.0-146.0 | 0.28 | 887.67 | 0.03 | 99.30 |
| 99.0-100.0 | 0.22 | 878.44 | 0.02 | 98.26 | 146.0-147.0 | 0.29 | 887.96 | 0.03 | 99.33 |
| 100.0-101.0 | 0.22 | 878.66 | 0.02 | 98.29 | 147.0-148.0 | 0.29 | 888.25 | 0.03 | 99.36 |
| 101.0-102.0 | 0.21 | 878.87 | 0.02 | 98.31 | 148.0-149.0 | 0.29 | 888.53 | 0.03 | 99.39 |
| 102.0-103.0 | 0.21 | 879.07 | 0.02 | 98.33 | 149.0-150.0 | 0.29 | 888.82 | 0.03 | 99.42 |
| 103.0-104.0 | 0.20 | 879.28 | 0.02 | 98.36 | 150.0-151.0 | 0.29 | 889.11 | 0.03 | 99.46 |
| 104.0-105.0 | 0.20 | 879.47 | 0.02 | 98.38 | 151.0-152.0 | 0.29 | 889.39 | 0.03 | 99.49 |
| 105.0-106.0 | 0.19 | 879.67 | 0.02 | 98.40 | 152.0-153.0 | 0.28 | 889.68 | 0.03 | 99.52 |
| 106.0-107.0 | 0.19 | 879.85 | 0.02 | 98.42 | 153.0-154.0 | 0.28 | 889.96 | 0.03 | 99.55 |
| 107.0-108.0 | 0.18 | 880.04 | 0.02 | 98.44 | 154.0-155.0 | 0.28 | 890.23 | 0.03 | 99.58 |
| 108.0-109.0 | 0.18 | 880.22 | 0.02 | 98.46 | 155.0-156.0 | 0.27 | 890.50 | 0.03 | 99.61 |
| 109.0-110.0 | 0.18 | 880.40 | 0.02 | 98.48 | 156.0-157.0 | 0.26 | 890.77 | 0.03 | 99.64 |
| 110.0-111.0 | 0.17 | 880.57 | 0.02 | 98.50 | 157.0-158.0 | 0.26 | 891.02 | 0.03 | 99.67 |
| 111.0-112.0 | 0.17 | 880.75 | 0.02 | 98.52 | 158.0-159.0 | 0.25 | 891.27 | 0.03 | 99.70 |
| 112.0-113.0 | 0.17 | 880.92 | 0.02 | 98.54 | 159.0-160.0 | 0.24 | 891.51 | 0.03 | 99.73 |
| 113.0-114.0 | 0.17 | 881.08 | 0.02 | 98.56 | 160.0-161.0 | 0.23 | 891.75 | 0.03 | 99.75 |
| 114.0-115.0 | 0.17 | 881.25 | 0.02 | 98.58 | 161.0-162.0 | 0.22 | 891.97 | 0.02 | 99.78 |
| 115.0-116.0 | 0.16 | 881.41 | 0.02 | 98.60 | 162.0-163.0 | 0.21 | 892.18 | 0.02 | 99.80 |
| 116.0-117.0 | 0.16 | 881.58 | 0.02 | 98.61 | 163.0-164.0 | 0.20 | 892.38 | 0.02 | 99.82 |
| 117.0-118.0 | 0.16 | 881.74 | 0.02 | 98.63 | 164.0-165.0 | 0.19 | 892.57 | 0.02 | 99.84 |
| 118.0-119.0 | 0.16 | 881.90 | 0.02 | 98.65 | 165.0-166.0 | 0.18 | 892.75 | 0.02 | 99.86 |
| 119.0-120.0 | 0.16 | 882.06 | 0.02 | 98.67 | 166.0-167.0 | 0.17 | 892.92 | 0.02 | 99.88 |
| 120.0-121.0 | 0.16 | 882.22 | 0.02 | 98.69 | 167.0-168.0 | 0.15 | 893.07 | 0.02 | 99.90 |
| 121.0-122.0 | 0.16 | 882.38 | 0.02 | 98.70 | 168.0-169.0 | 0.14 | 893.21 | 0.02 | 99.92 |
| 122.0-123.0 | 0.16 | 882.55 | 0.02 | 98.72 | 169.0-170.0 | 0.13 | 893.34 | 0.01 | 99.93 |
| 123.0-124.0 | 0.17 | 882.71 | 0.02 | 98.74 | 170.0-171.0 | 0.12 | 893.46 | 0.01 | 99.94 |
| 124.0-125.0 | 0.17 | 882.88 | 0.02 | 98.76 | 171.0-172.0 | 0.11 | 893.57 | 0.01 | 99.95 |
| 125.0-126.0 | 0.17 | 883.05 | 0.02 | 98.78 | 172.0-173.0 | 0.09 | 893.66 | 0.01 | 99.97 |
| 126.0-127.0 | 0.17 | 883.23 | 0.02 | 98.80 | 173.0-174.0 | 0.08 | 893.74 | 0.01 | 99.97 |
| 127.0-128.0 | 0.18 | 883.41 | 0.02 | 98.82 | 174.0-175.0 | 0.07 | 893.81 | 0.01 | 99.98 |
| 128.0-129.0 | 0.18 | 883.59 | 0.02 | 98.84 | 175.0-176.0 | 0.06 | 893.87 | 0.01 | 99.99 |
| 129.0-130.0 | 0.19 | 883.78 | 0.02 | 98.86 | 176.0-177.0 | 0.04 | 893.91 | 0.00 | 99.99 |
| 130.0-131.0 | 0.20 | 883.98 | 0.02 | 98.88 | 177.0-178.0 | 0.03 | 893.94 | 0.00 | 100.00 |
| 131.0-132.0 | 0.20 | 884.18 | 0.02 | 98.90 | 178.0-179.0 | 0.02 | 893.96 | 0.00 | 100.00 |
| 132.0-133.0 | 0.21 | 884.39 | 0.02 | 98.93 | 179.0-180.0 | 0.01 | 893.97 | 0.00 | 100.00 |
| 133.0-134.0 | 0.22 | 884.60 | 0.02 | 98.95 | | | | | |
| 134.0-135.0 | 0.22 | 884.82 | 0.02 | 98.98 | | | | | |
| 135.0-136.0 | 0.23 | 885.05 | 0.03 | 99.00 | | | | | |
| 136.0-137.0 | 0.24 | 885.29 | 0.03 | 99.03 | | | | | |
| 137.0-138.0 | 0.24 | 885.53 | 0.03 | 99.06 | | | | | |
| 138.0-139.0 | 0.25 | 885.78 | 0.03 | 99.08 | | | | | |
| 139.0-140.0 | 0.26 | 886.03 | 0.03 | 99.11 | | | | | |
| 140.0-141.0 | 0.26 | 886.30 | 0.03 | 99.14 | | | | | |

Rectangle ISO Lighting Intensity Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |



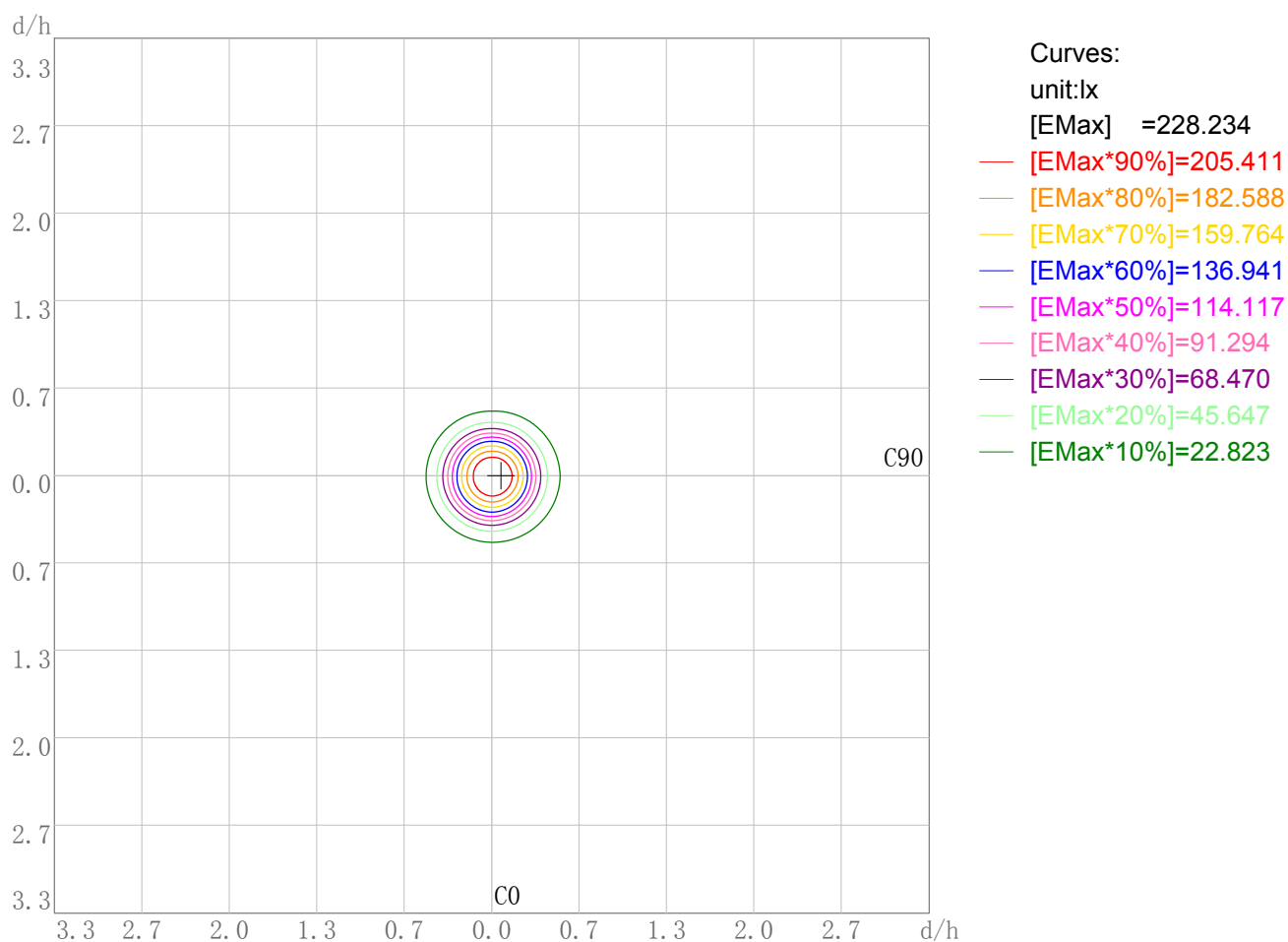
IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

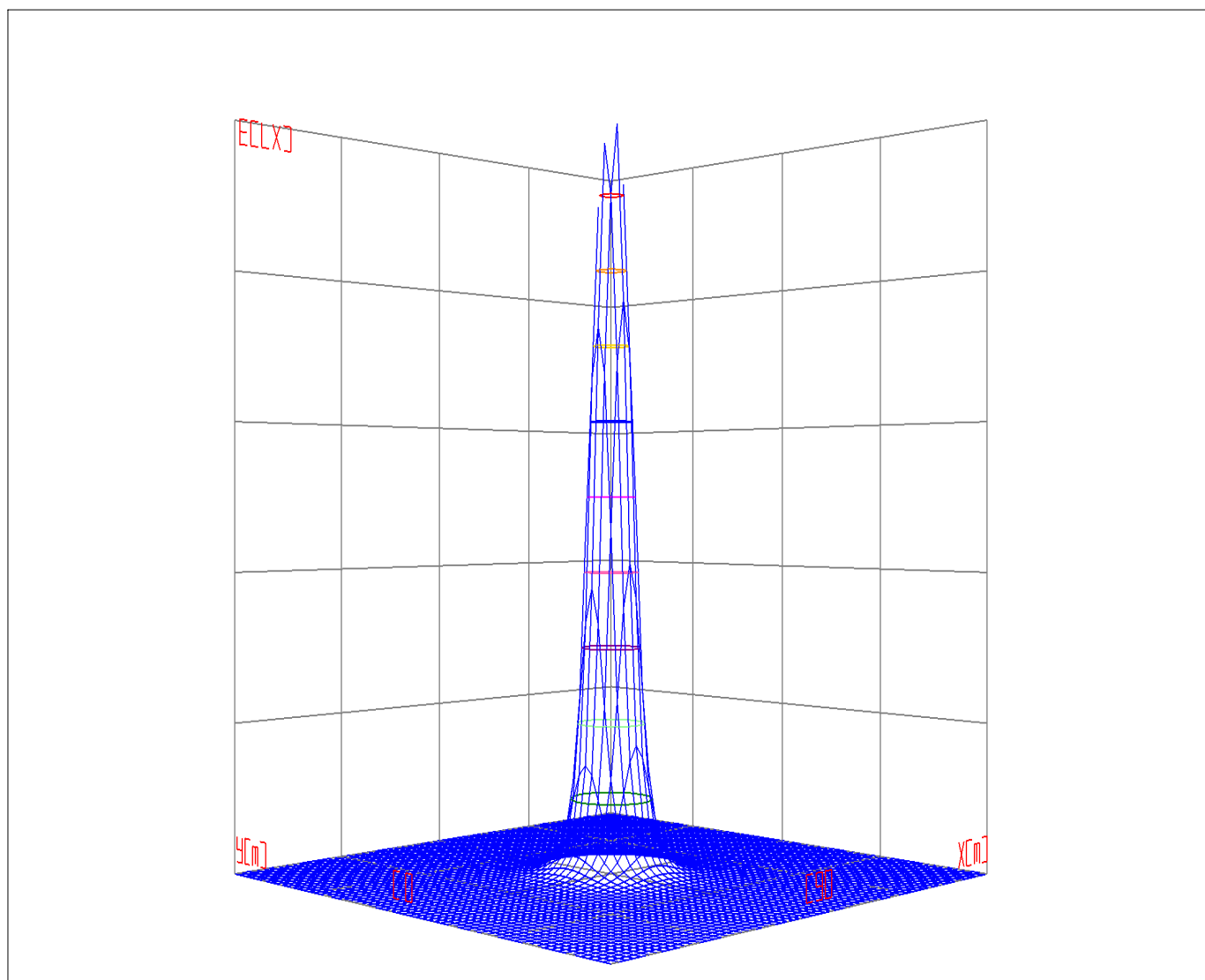
Working Plane Maximum Illuminance(lx): 228.23

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

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

3D Plane Illuminance Modal

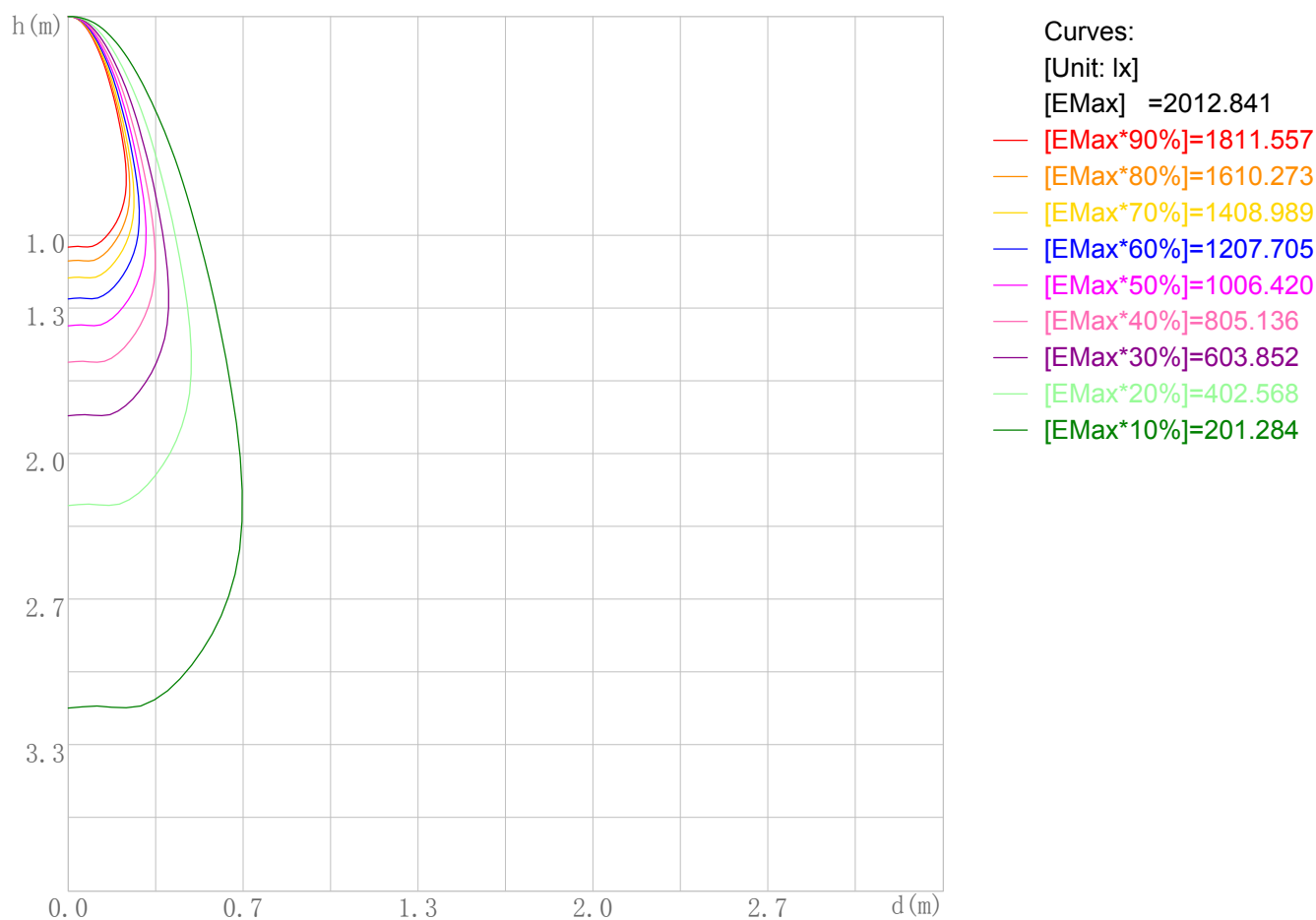


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2012.84lx,0.0deg

Plane Maximum Lighting Intensity and @Angle:2025.963cd,0deg

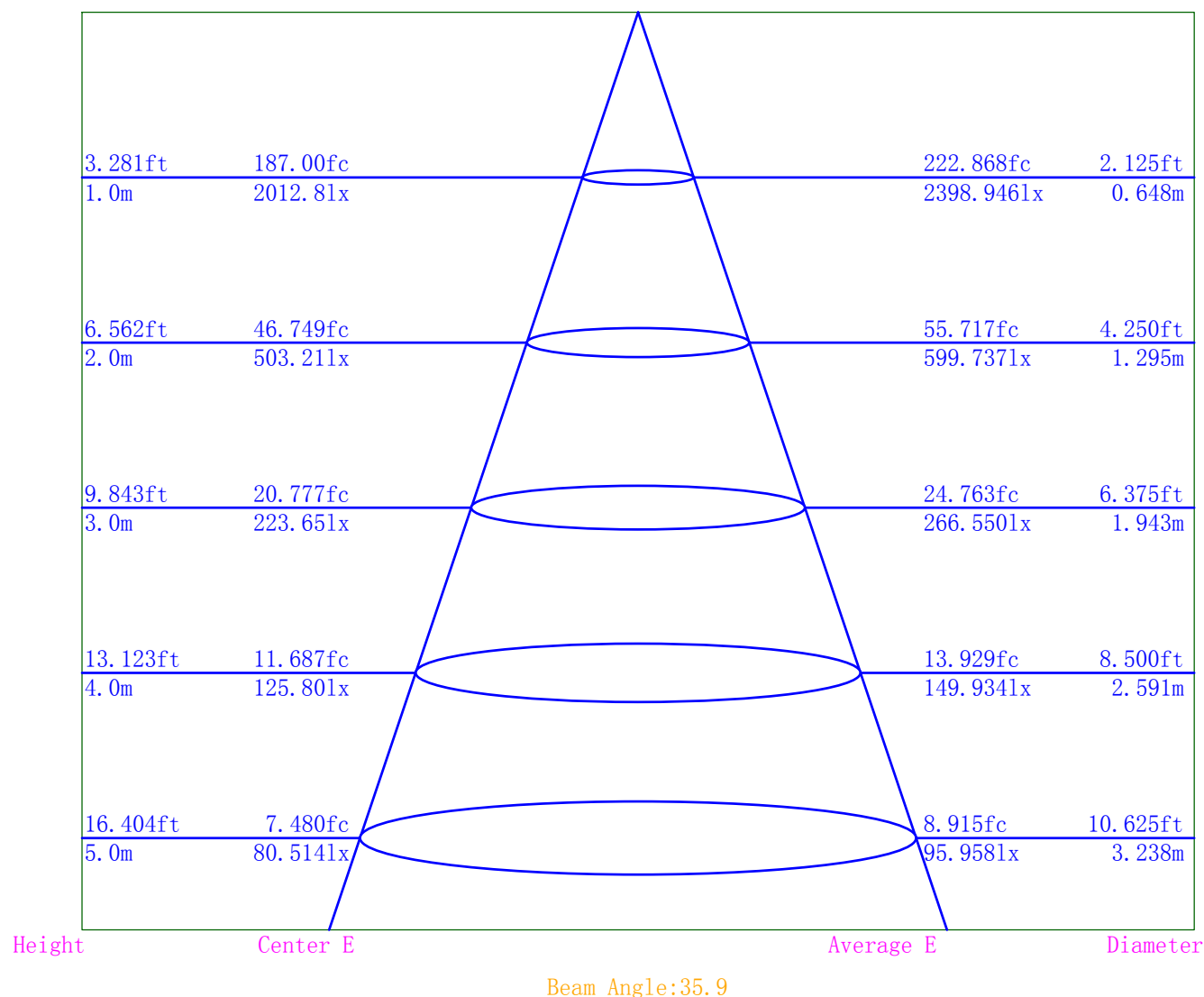
IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Illuminance-Distance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

Illuminance-Distance Curve



Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

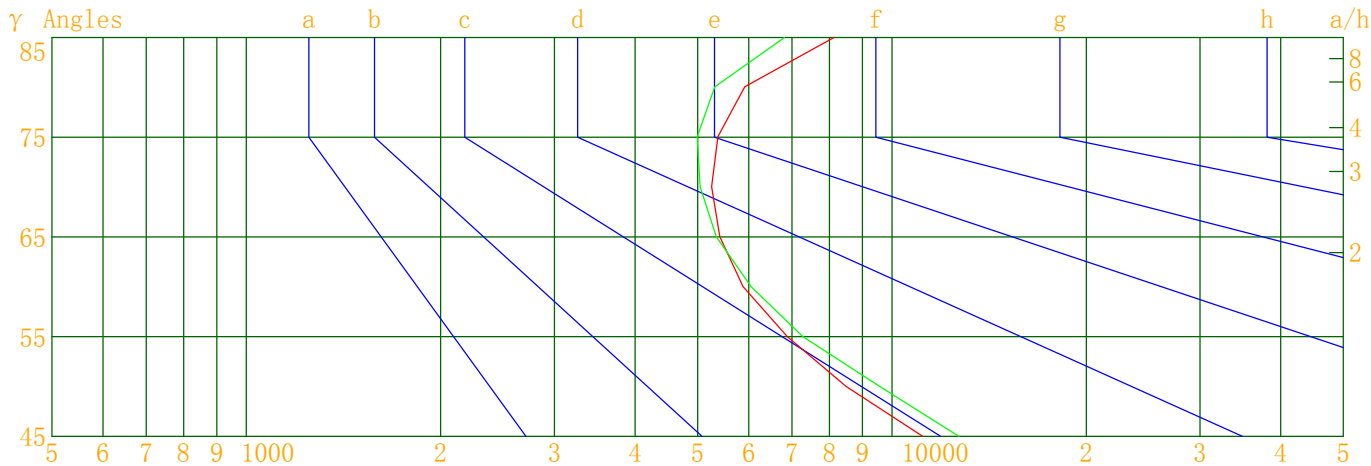
Glare Grade Table

| 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 | 11160 | 8491 | 6883 | 5877 | 5411 | 5258 | 5374 | 5917 | 8128 |
| C90 | 12698 | 9573 | 7273 | 6050 | 5344 | 5044 | 4993 | 5315 | 6815 |

Luminance Limiting Curve



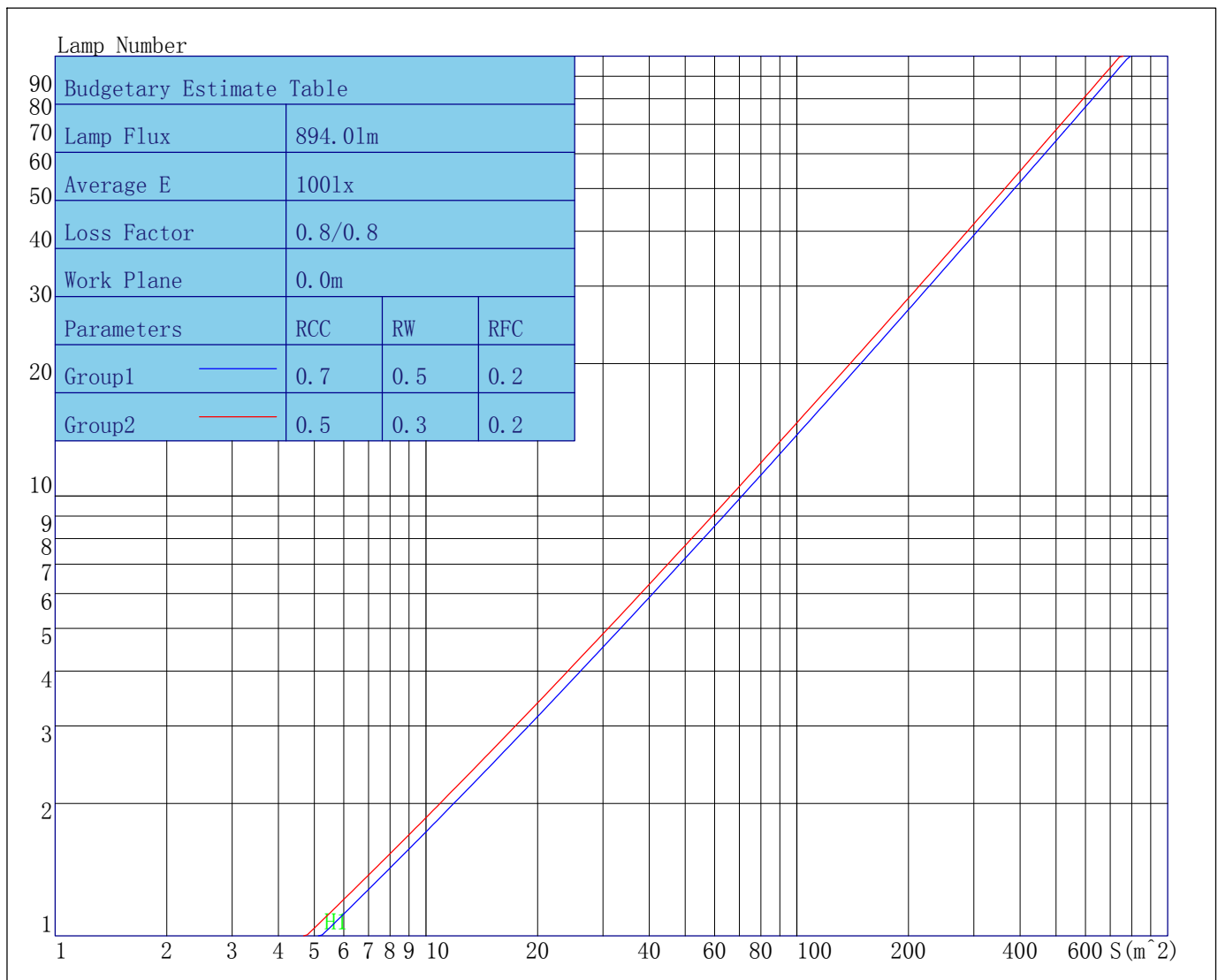
Luminous Size: Length(m)=0.050 Width(m)=0.050 Height(m)=0.050 Area(m^2)=0.005000
Luminous Type: Without Luminous Side
Luminous Curves: C0-C180 Color: C90-C270 Color:

IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |



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

IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-09-XX-03 4000K 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: 2019/12/03 |

| 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 | 83 |
| 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 | 79 | 85 | 81 | 78 | 83 | 80 | 77 | 81 | 78 | 76 | 75 |
| 6 | 92 | 84 | 79 | 75 | 90 | 83 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 73 | 78 | 75 | 73 | 71 |
| 7 | 88 | 80 | 75 | 71 | 87 | 79 | 74 | 71 | 78 | 74 | 70 | 77 | 73 | 70 | 75 | 72 | 69 | 68 |
| 8 | 85 | 77 | 71 | 68 | 84 | 76 | 71 | 68 | 75 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 67 | 65 |
| 9 | 82 | 74 | 68 | 65 | 81 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 64 | 70 | 67 | 64 | 63 |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 65 | 62 | 68 | 64 | 62 | 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 room surfaces and sizes, and 3 rows for variations with observer position at spacings (S=1.0H, S=1.5H, S=2.0H). Includes a section for Reduced UGR Table with Nordic Standard and Correction Value.

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 | 2012.84 | 2012.84 | 2012.84 | 2012.84 |
| γ 1.0 | 2006.26 | 2028.97 | 2012.12 | 2008.15 |
| γ 2.0 | 2004.72 | 2039.15 | 2009.58 | 1997.70 |
| γ 3.0 | 2016.34 | 2055.79 | 2004.71 | 1988.29 |
| γ 4.0 | 2025.96 | 2069.20 | 2006.57 | 1979.94 |
| γ 5.0 | 2024.49 | 2069.03 | 2013.57 | 1976.75 |
| γ 6.0 | 1998.33 | 2052.79 | 2009.95 | 1969.57 |
| γ 7.0 | 1956.51 | 2011.28 | 1992.84 | 1945.90 |
| γ 8.0 | 1901.63 | 1963.05 | 1959.75 | 1904.16 |
| γ 9.0 | 1838.72 | 1904.68 | 1906.27 | 1844.78 |
| γ 10.0 | 1769.39 | 1839.12 | 1841.57 | 1780.72 |
| γ 11.0 | 1695.89 | 1767.79 | 1771.44 | 1713.11 |
| γ 12.0 | 1615.20 | 1691.82 | 1693.21 | 1637.29 |
| γ 13.0 | 1527.56 | 1603.73 | 1612.49 | 1548.96 |
| γ 14.0 | 1432.88 | 1506.92 | 1525.88 | 1455.88 |
| γ 15.0 | 1327.45 | 1393.88 | 1432.83 | 1353.01 |
| γ 16.0 | 1208.04 | 1273.92 | 1329.00 | 1249.30 |
| γ 17.0 | 1081.27 | 1147.73 | 1216.27 | 1140.83 |
| γ 18.0 | 951.57 | 1025.82 | 1091.18 | 1030.23 |
| γ 19.0 | 824.82 | 906.16 | 962.06 | 914.97 |
| γ 20.0 | 706.78 | 794.45 | 837.77 | 802.25 |
| γ 21.0 | 606.91 | 691.14 | 719.75 | 693.60 |
| γ 22.0 | 520.34 | 601.70 | 614.32 | 592.88 |
| γ 23.0 | 448.93 | 523.71 | 523.07 | 503.87 |
| γ 24.0 | 387.49 | 457.56 | 445.58 | 428.13 |
| γ 25.0 | 335.63 | 401.03 | 381.60 | 365.30 |
| γ 26.0 | 291.79 | 353.78 | 328.37 | 313.20 |
| γ 27.0 | 255.48 | 312.46 | 285.31 | 270.15 |
| γ 28.0 | 224.91 | 277.05 | 249.11 | 234.45 |
| γ 29.0 | 198.98 | 245.05 | 219.17 | 204.38 |
| γ 30.0 | 176.64 | 217.84 | 193.27 | 178.96 |
| γ 31.0 | 157.11 | 193.32 | 170.56 | 157.27 |
| γ 32.0 | 139.92 | 172.10 | 150.74 | 138.52 |
| γ 33.0 | 124.80 | 153.05 | 132.92 | 122.20 |
| γ 34.0 | 111.52 | 136.52 | 117.59 | 108.35 |
| γ 35.0 | 100.01 | 121.90 | 104.13 | 96.22 |
| γ 36.0 | 89.73 | 109.16 | 92.36 | 85.82 |
| γ 37.0 | 80.84 | 97.75 | 82.32 | 76.86 |
| γ 38.0 | 73.02 | 87.64 | 73.64 | 69.21 |
| γ 39.0 | 66.38 | 78.72 | 65.98 | 62.62 |
| γ 40.0 | 60.33 | 70.87 | 59.47 | 56.84 |
| γ 41.0 | 55.18 | 64.12 | 53.94 | 51.86 |
| γ 42.0 | 50.55 | 58.36 | 49.20 | 47.44 |
| γ 43.0 | 46.45 | 53.22 | 45.06 | 43.59 |
| γ 44.0 | 42.76 | 48.84 | 41.42 | 40.19 |
| γ 45.0 | 39.46 | 44.89 | 38.22 | 37.20 |
| γ 46.0 | 36.49 | 41.39 | 35.40 | 34.51 |

IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 33.83 | 38.31 | 32.86 | 32.10 |
| γ 48.0 | 31.44 | 35.55 | 30.57 | 30.02 |
| γ 49.0 | 29.31 | 32.99 | 28.48 | 28.11 |
| γ 50.0 | 27.29 | 30.77 | 26.58 | 26.43 |
| γ 51.0 | 25.54 | 28.50 | 24.81 | 24.87 |
| γ 52.0 | 23.90 | 26.33 | 23.33 | 23.45 |
| γ 53.0 | 22.38 | 24.23 | 21.93 | 22.17 |
| γ 54.0 | 20.99 | 22.44 | 20.26 | 21.00 |
| γ 55.0 | 19.74 | 20.86 | 18.92 | 19.88 |
| γ 56.0 | 18.55 | 19.49 | 17.67 | 18.82 |
| γ 57.0 | 17.46 | 18.25 | 16.63 | 17.80 |
| γ 58.0 | 16.44 | 17.15 | 15.76 | 16.83 |
| γ 59.0 | 15.54 | 16.10 | 14.91 | 15.95 |
| γ 60.0 | 14.69 | 15.13 | 14.18 | 15.13 |
| γ 61.0 | 13.95 | 14.22 | 13.45 | 14.38 |
| γ 62.0 | 13.25 | 13.44 | 12.75 | 13.69 |
| γ 63.0 | 12.60 | 12.65 | 12.10 | 13.05 |
| γ 64.0 | 11.99 | 11.97 | 11.50 | 12.44 |
| γ 65.0 | 11.43 | 11.29 | 10.93 | 11.86 |
| γ 66.0 | 10.90 | 10.72 | 10.42 | 11.31 |
| γ 67.0 | 10.40 | 10.16 | 9.93 | 10.81 |
| γ 68.0 | 9.89 | 9.63 | 9.49 | 10.33 |
| γ 69.0 | 9.44 | 9.10 | 9.02 | 9.85 |
| γ 70.0 | 8.99 | 8.63 | 8.60 | 9.41 |
| γ 71.0 | 8.56 | 8.16 | 8.18 | 8.99 |
| γ 72.0 | 8.13 | 7.72 | 7.79 | 8.56 |
| γ 73.0 | 7.73 | 7.27 | 7.40 | 8.16 |
| γ 74.0 | 7.33 | 6.87 | 7.02 | 7.77 |
| γ 75.0 | 6.95 | 6.46 | 6.64 | 7.38 |
| γ 76.0 | 6.58 | 6.08 | 6.30 | 6.99 |
| γ 77.0 | 6.22 | 5.70 | 5.95 | 6.62 |
| γ 78.0 | 5.86 | 5.34 | 5.60 | 6.27 |
| γ 79.0 | 5.52 | 4.97 | 5.26 | 5.92 |
| γ 80.0 | 5.14 | 4.61 | 4.93 | 5.58 |
| γ 81.0 | 4.77 | 4.23 | 4.59 | 5.23 |
| γ 82.0 | 4.37 | 3.85 | 4.26 | 4.88 |
| γ 83.0 | 4.08 | 3.53 | 3.91 | 4.52 |
| γ 84.0 | 3.79 | 3.23 | 3.59 | 4.16 |
| γ 85.0 | 3.54 | 2.97 | 3.32 | 3.87 |
| γ 86.0 | 3.30 | 2.76 | 3.03 | 3.59 |
| γ 87.0 | 3.16 | 2.59 | 2.81 | 3.36 |
| γ 88.0 | 3.03 | 2.50 | 2.60 | 3.15 |
| γ 89.0 | 2.95 | 2.42 | 2.49 | 3.01 |
| γ 90.0 | 2.87 | 2.35 | 2.39 | 2.90 |
| γ 91.0 | 2.79 | 2.28 | 2.32 | 2.81 |
| γ 92.0 | 2.72 | 2.23 | 2.25 | 2.73 |
| γ 93.0 | 2.65 | 2.16 | 2.17 | 2.65 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 2.58 | 2.11 | 2.11 | 2.58 |
| γ 95.0 | 2.52 | 2.06 | 2.06 | 2.51 |
| γ 96.0 | 2.46 | 2.01 | 2.01 | 2.44 |
| γ 97.0 | 2.40 | 1.96 | 1.95 | 2.38 |
| γ 98.0 | 2.35 | 1.92 | 1.90 | 2.33 |
| γ 99.0 | 2.30 | 1.88 | 1.86 | 2.26 |
| γ 100.0 | 2.25 | 1.85 | 1.82 | 2.22 |
| γ 101.0 | 2.20 | 1.79 | 1.78 | 2.18 |
| γ 102.0 | 2.15 | 1.76 | 1.74 | 2.13 |
| γ 103.0 | 2.11 | 1.73 | 1.71 | 2.10 |
| γ 104.0 | 2.07 | 1.70 | 1.68 | 2.06 |
| γ 105.0 | 2.02 | 1.66 | 1.65 | 2.03 |
| γ 106.0 | 1.98 | 1.61 | 1.63 | 2.00 |
| γ 107.0 | 1.95 | 1.59 | 1.62 | 1.97 |
| γ 108.0 | 1.90 | 1.57 | 1.60 | 1.94 |
| γ 109.0 | 1.88 | 1.54 | 1.59 | 1.93 |
| γ 110.0 | 1.85 | 1.52 | 1.57 | 1.91 |
| γ 111.0 | 1.82 | 1.50 | 1.55 | 1.90 |
| γ 112.0 | 1.80 | 1.48 | 1.56 | 1.89 |
| γ 113.0 | 1.77 | 1.46 | 1.55 | 1.88 |
| γ 114.0 | 1.76 | 1.46 | 1.56 | 1.88 |
| γ 115.0 | 1.75 | 1.45 | 1.56 | 1.88 |
| γ 116.0 | 1.73 | 1.44 | 1.57 | 1.88 |
| γ 117.0 | 1.74 | 1.44 | 1.58 | 1.88 |
| γ 118.0 | 1.73 | 1.45 | 1.60 | 1.89 |
| γ 119.0 | 1.74 | 1.45 | 1.62 | 1.91 |
| γ 120.0 | 1.74 | 1.47 | 1.64 | 1.94 |
| γ 121.0 | 1.76 | 1.49 | 1.68 | 1.96 |
| γ 122.0 | 1.79 | 1.51 | 1.72 | 2.00 |
| γ 123.0 | 1.82 | 1.54 | 1.76 | 2.05 |
| γ 124.0 | 1.85 | 1.59 | 1.82 | 2.10 |
| γ 125.0 | 1.90 | 1.64 | 1.87 | 2.15 |
| γ 126.0 | 1.95 | 1.69 | 1.94 | 2.22 |
| γ 127.0 | 2.01 | 1.74 | 2.02 | 2.29 |
| γ 128.0 | 2.09 | 1.83 | 2.11 | 2.38 |
| γ 129.0 | 2.17 | 1.90 | 2.19 | 2.47 |
| γ 130.0 | 2.26 | 2.01 | 2.31 | 2.58 |
| γ 131.0 | 2.38 | 2.10 | 2.41 | 2.69 |
| γ 132.0 | 2.48 | 2.21 | 2.54 | 2.81 |
| γ 133.0 | 2.61 | 2.34 | 2.66 | 2.95 |
| γ 134.0 | 2.74 | 2.47 | 2.81 | 3.06 |
| γ 135.0 | 2.87 | 2.60 | 2.93 | 3.20 |
| γ 136.0 | 3.02 | 2.74 | 3.09 | 3.35 |
| γ 137.0 | 3.18 | 2.89 | 3.24 | 3.50 |
| γ 138.0 | 3.32 | 3.04 | 3.40 | 3.65 |
| γ 139.0 | 3.48 | 3.19 | 3.55 | 3.79 |
| γ 140.0 | 3.64 | 3.36 | 3.72 | 3.96 |

IES Indoor Report

Photometric Filename:MD10-09-XX-03 4000K RA90 36D.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 3.81 | 3.51 | 3.88 | 4.11 |
| γ 142.0 | 3.96 | 3.68 | 4.05 | 4.26 |
| γ 143.0 | 4.14 | 3.84 | 4.21 | 4.42 |
| γ 144.0 | 4.28 | 4.00 | 4.37 | 4.58 |
| γ 145.0 | 4.47 | 4.16 | 4.54 | 4.74 |
| γ 146.0 | 4.62 | 4.32 | 4.71 | 4.88 |
| γ 147.0 | 4.78 | 4.47 | 4.87 | 5.04 |
| γ 148.0 | 4.93 | 4.63 | 5.04 | 5.18 |
| γ 149.0 | 5.09 | 4.78 | 5.18 | 5.33 |
| γ 150.0 | 5.23 | 4.94 | 5.34 | 5.46 |
| γ 151.0 | 5.39 | 5.06 | 5.49 | 5.60 |
| γ 152.0 | 5.52 | 5.21 | 5.64 | 5.72 |
| γ 153.0 | 5.67 | 5.34 | 5.77 | 5.85 |
| γ 154.0 | 5.77 | 5.48 | 5.89 | 5.95 |
| γ 155.0 | 5.91 | 5.60 | 6.02 | 6.06 |
| γ 156.0 | 6.00 | 5.73 | 6.12 | 6.14 |
| γ 157.0 | 6.11 | 5.82 | 6.22 | 6.23 |
| γ 158.0 | 6.19 | 5.91 | 6.32 | 6.28 |
| γ 159.0 | 6.27 | 6.00 | 6.38 | 6.35 |
| γ 160.0 | 6.34 | 6.09 | 6.47 | 6.39 |
| γ 161.0 | 6.39 | 6.15 | 6.52 | 6.43 |
| γ 162.0 | 6.43 | 6.20 | 6.58 | 6.47 |
| γ 163.0 | 6.47 | 6.23 | 6.61 | 6.50 |
| γ 164.0 | 6.49 | 6.27 | 6.63 | 6.51 |
| γ 165.0 | 6.51 | 6.29 | 6.65 | 6.52 |
| γ 166.0 | 6.52 | 6.30 | 6.65 | 6.51 |
| γ 167.0 | 6.53 | 6.30 | 6.65 | 6.51 |
| γ 168.0 | 6.54 | 6.32 | 6.65 | 6.49 |
| γ 169.0 | 6.55 | 6.32 | 6.63 | 6.49 |
| γ 170.0 | 6.56 | 6.36 | 6.64 | 6.48 |
| γ 171.0 | 6.58 | 6.36 | 6.64 | 6.48 |
| γ 172.0 | 6.59 | 6.38 | 6.64 | 6.47 |
| γ 173.0 | 6.62 | 6.41 | 6.64 | 6.48 |
| γ 174.0 | 6.65 | 6.42 | 6.65 | 6.48 |
| γ 175.0 | 6.65 | 6.46 | 6.66 | 6.50 |
| γ 176.0 | 6.68 | 6.48 | 6.67 | 6.52 |
| γ 177.0 | 6.71 | 6.51 | 6.68 | 6.55 |
| γ 178.0 | 6.73 | 6.53 | 6.70 | 6.57 |
| γ 179.0 | 6.73 | 6.54 | 6.71 | 6.59 |
| γ 180.0 | 6.68 | 6.68 | 6.68 | 6.68 |