

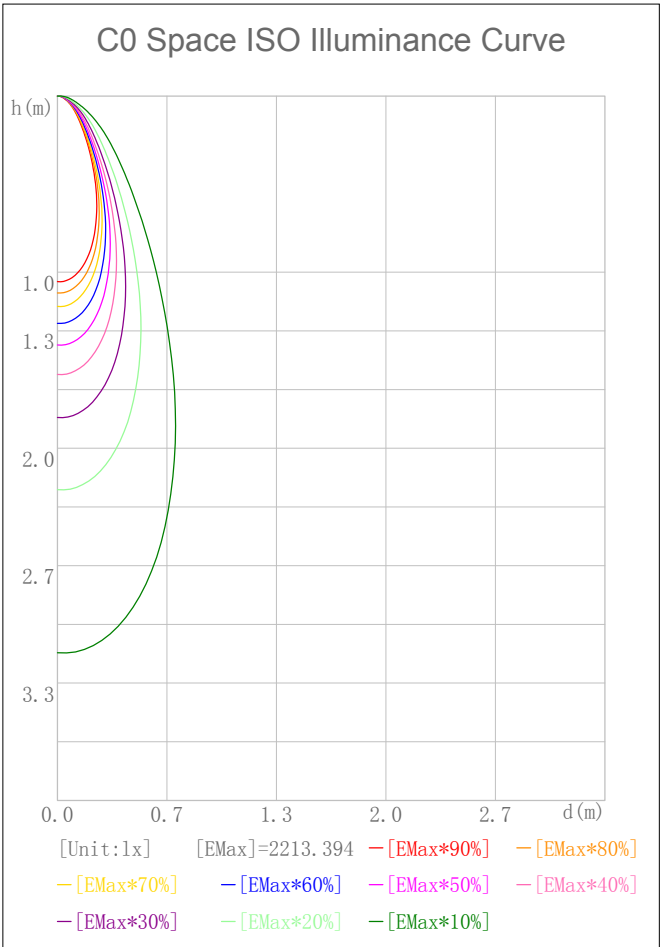
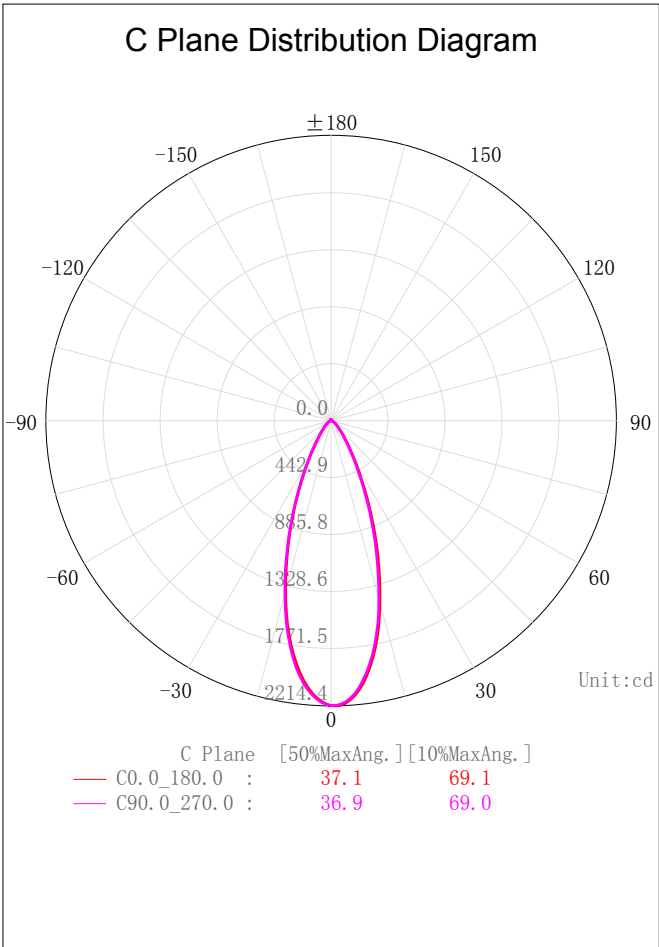
Indoor Luminaire Photometric Data

Description Information

| | | |
|---|-------------------------|-----------------------|
| Luminary Name: MD10-13-TW-01 6500K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Date: 2020/01/08 |
| 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): 0.498m*0.498m*0.750m | Lum. Area (m2): 0.622 | Lum. W (kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=1.0 | Temp. (°C): 25 |
| | | Humidity (%): |

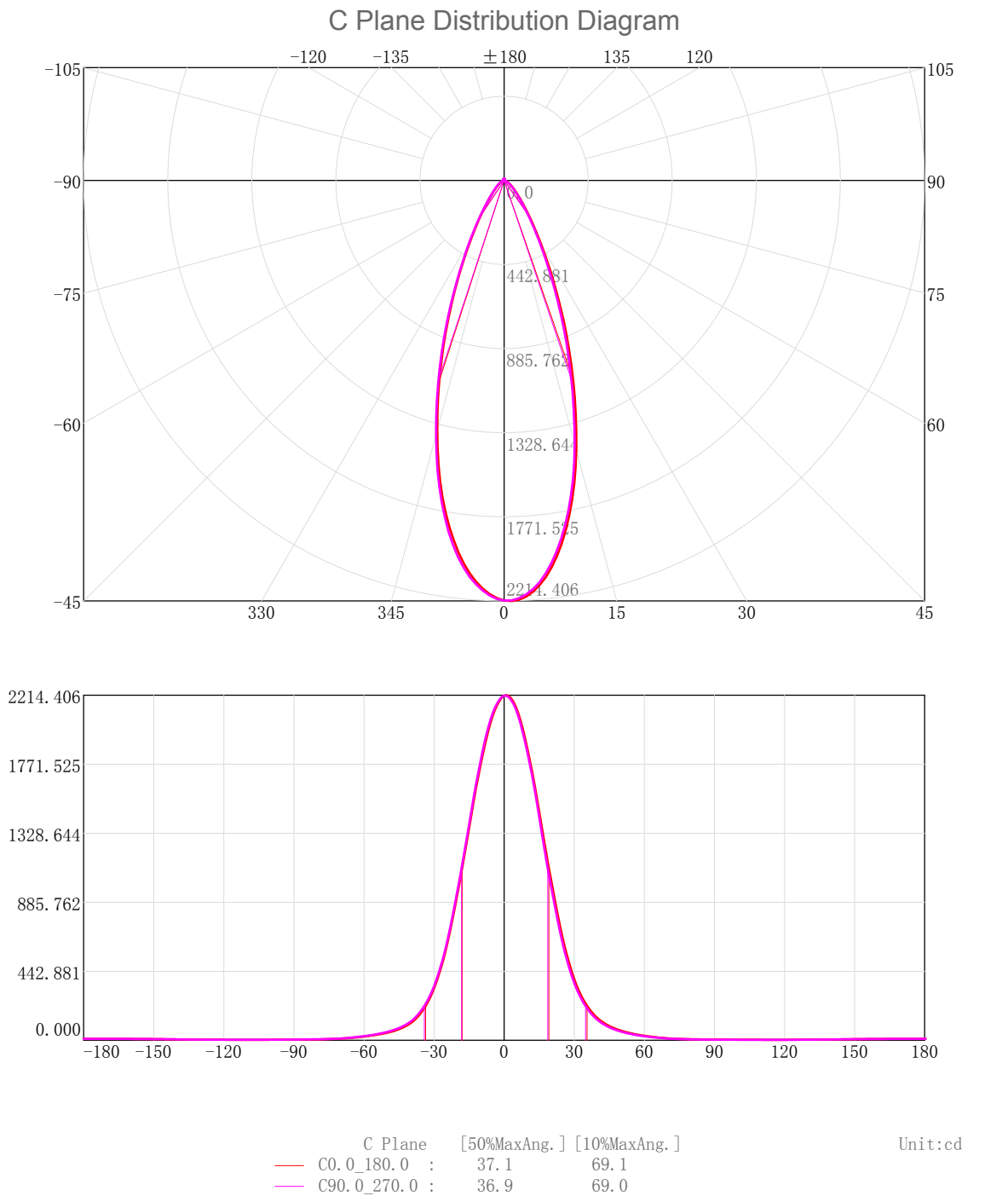
Character Parameter

| Lamp Speciality Parameter | Luminaire Speciality Parameter | |
|--|--------------------------------|--|
| Rated Flux(lm): 1166.710 | Luminary Flux(lm): 1166.713 | Field Angle(10%Imax): 69.1(°) |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 1133.956lm 97.19% |
| Rated Voltage(V): | Luminary EER(lm/W): 111.434 | Up Lumens&Percent: 32.757lm 2.81% |
| Tested Power(W): 10.470 | Max. Candela(cd): 2214.406 | S/MH: C0_a180=0.603 C90_270=0.600 |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=0.0 γ=1.0 | CIE Type: Semi-Direct |
| Tested Electrics (V, A, pf): 34.9, 0.299 | Beam Angle(50%Imax): 37.1(°) | ErP ϕ use(90°): 1031.464lm |
| Lamp Size (W*L*H): 0.498m*0.498m*0.750m | Left=-18.0°, Right=19.1° | IRF (%): 420.030 |



2D Plane Light Intensity Distribution Curve

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |



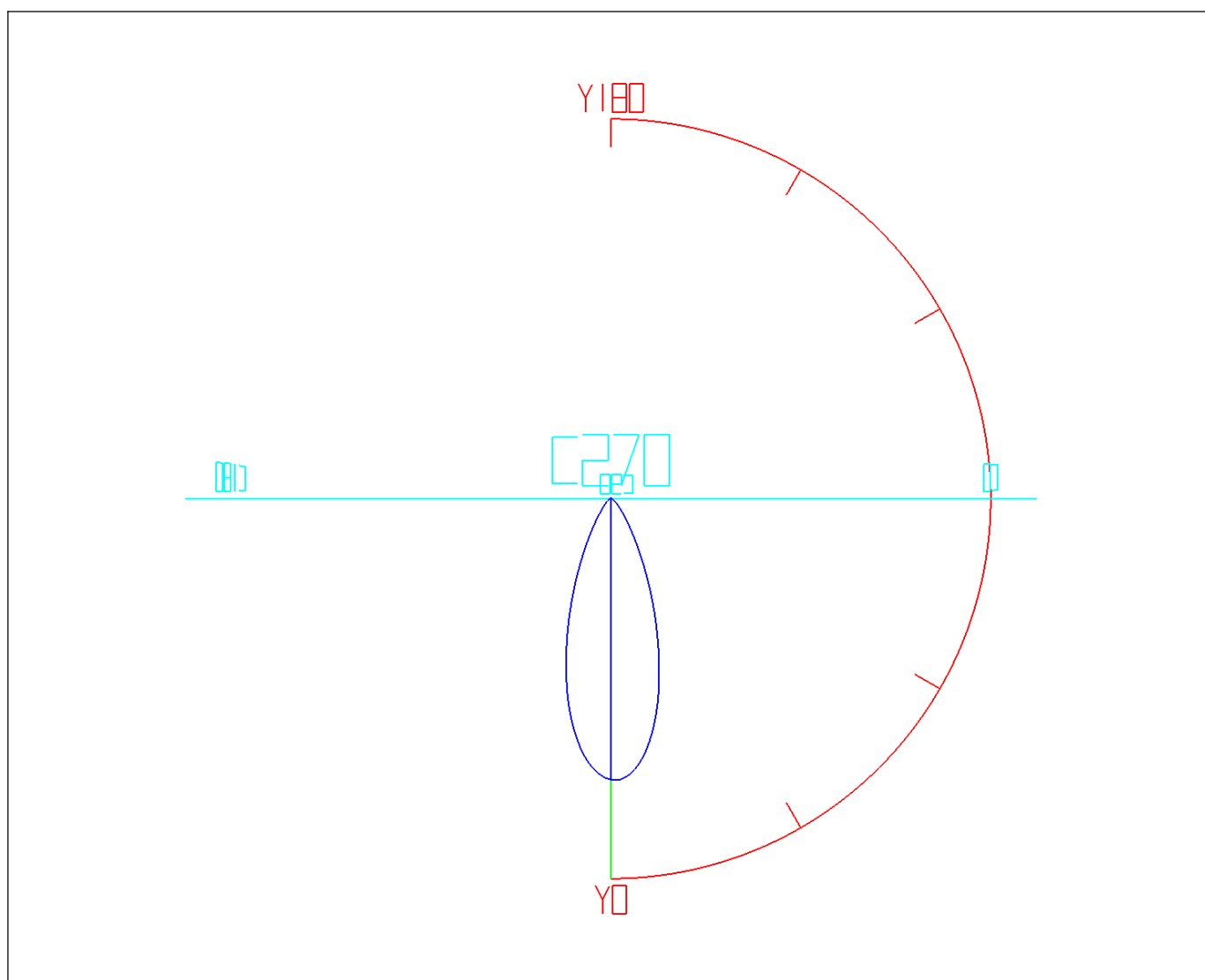
IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

3D Light Intensity Distribution Modal

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

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

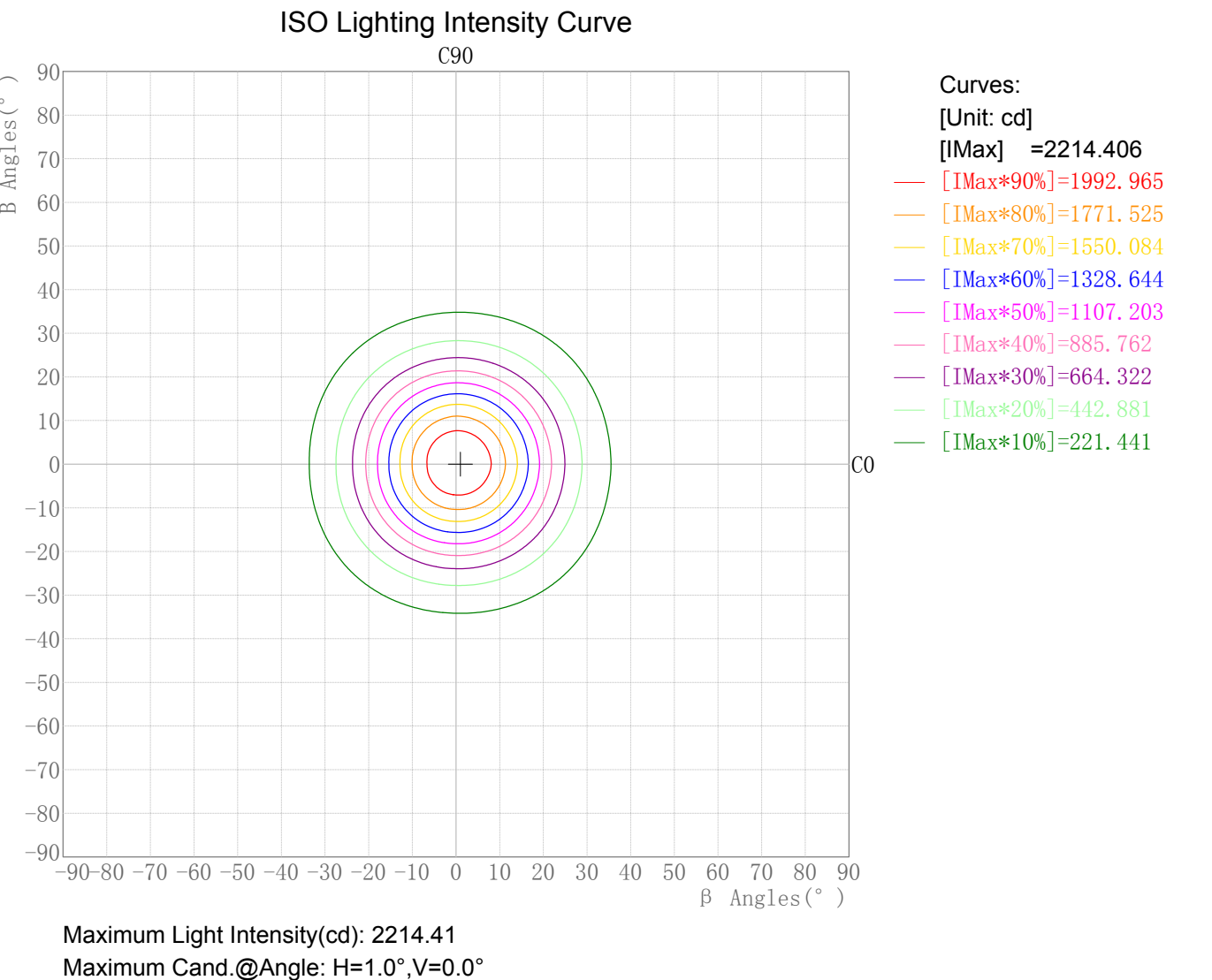
| Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone(γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 2.11 | 2.11 | 0.18 | 0.18 | 47.0-48.0 | 5.43 | 1054.42 | 0.47 | 90.38 |
| 1.0-2.0 | 6.32 | 8.43 | 0.54 | 0.72 | 48.0-49.0 | 5.11 | 1059.53 | 0.44 | 90.81 |
| 2.0-3.0 | 10.44 | 18.88 | 0.90 | 1.62 | 49.0-50.0 | 4.82 | 1064.35 | 0.41 | 91.23 |
| 3.0-4.0 | 14.45 | 33.33 | 1.24 | 2.86 | 50.0-51.0 | 4.54 | 1068.89 | 0.39 | 91.62 |
| 4.0-5.0 | 18.30 | 51.62 | 1.57 | 4.42 | 51.0-52.0 | 4.28 | 1073.17 | 0.37 | 91.98 |
| 5.0-6.0 | 21.93 | 73.55 | 1.88 | 6.30 | 52.0-53.0 | 4.04 | 1077.20 | 0.35 | 92.33 |
| 6.0-7.0 | 25.31 | 98.87 | 2.17 | 8.47 | 53.0-54.0 | 3.81 | 1081.01 | 0.33 | 92.65 |
| 7.0-8.0 | 28.40 | 127.27 | 2.43 | 10.91 | 54.0-55.0 | 3.59 | 1084.60 | 0.31 | 92.96 |
| 8.0-9.0 | 31.17 | 158.44 | 2.67 | 13.58 | 55.0-56.0 | 3.38 | 1087.99 | 0.29 | 93.25 |
| 9.0-10.0 | 33.60 | 192.04 | 2.88 | 16.46 | 56.0-57.0 | 3.19 | 1091.17 | 0.27 | 93.53 |
| 10.0-11.0 | 35.68 | 227.72 | 3.06 | 19.52 | 57.0-58.0 | 3.00 | 1094.17 | 0.26 | 93.78 |
| 11.0-12.0 | 37.37 | 265.09 | 3.20 | 22.72 | 58.0-59.0 | 2.82 | 1096.99 | 0.24 | 94.02 |
| 12.0-13.0 | 38.66 | 303.74 | 3.31 | 26.03 | 59.0-60.0 | 2.65 | 1099.63 | 0.23 | 94.25 |
| 13.0-14.0 | 39.53 | 343.27 | 3.39 | 29.42 | 60.0-61.0 | 2.48 | 1102.11 | 0.21 | 94.46 |
| 14.0-15.0 | 39.98 | 383.25 | 3.43 | 32.85 | 61.0-62.0 | 2.33 | 1104.44 | 0.20 | 94.66 |
| 15.0-16.0 | 40.06 | 423.31 | 3.43 | 36.28 | 62.0-63.0 | 2.18 | 1106.62 | 0.19 | 94.85 |
| 16.0-17.0 | 39.84 | 463.15 | 3.41 | 39.70 | 63.0-64.0 | 2.03 | 1108.65 | 0.17 | 95.02 |
| 17.0-18.0 | 39.32 | 502.47 | 3.37 | 43.07 | 64.0-65.0 | 1.90 | 1110.55 | 0.16 | 95.19 |
| 18.0-19.0 | 38.51 | 540.98 | 3.30 | 46.37 | 65.0-66.0 | 1.76 | 1112.31 | 0.15 | 95.34 |
| 19.0-20.0 | 37.45 | 578.43 | 3.21 | 49.58 | 66.0-67.0 | 1.64 | 1113.94 | 0.14 | 95.48 |
| 20.0-21.0 | 36.18 | 614.61 | 3.10 | 52.68 | 67.0-68.0 | 1.51 | 1115.45 | 0.13 | 95.61 |
| 21.0-22.0 | 34.72 | 649.33 | 2.98 | 55.66 | 68.0-69.0 | 1.39 | 1116.85 | 0.12 | 95.73 |
| 22.0-23.0 | 33.09 | 682.42 | 2.84 | 58.49 | 69.0-70.0 | 1.29 | 1118.14 | 0.11 | 95.84 |
| 23.0-24.0 | 31.32 | 713.75 | 2.68 | 61.18 | 70.0-71.0 | 1.21 | 1119.35 | 0.10 | 95.94 |
| 24.0-25.0 | 29.47 | 743.22 | 2.53 | 63.70 | 71.0-72.0 | 1.14 | 1120.49 | 0.10 | 96.04 |
| 25.0-26.0 | 27.61 | 770.82 | 2.37 | 66.07 | 72.0-73.0 | 1.07 | 1121.56 | 0.09 | 96.13 |
| 26.0-27.0 | 25.77 | 796.60 | 2.21 | 68.28 | 73.0-74.0 | 1.01 | 1122.57 | 0.09 | 96.22 |
| 27.0-28.0 | 23.98 | 820.58 | 2.06 | 70.33 | 74.0-75.0 | 0.95 | 1123.53 | 0.08 | 96.30 |
| 28.0-29.0 | 22.25 | 842.83 | 1.91 | 72.24 | 75.0-76.0 | 0.90 | 1124.42 | 0.08 | 96.38 |
| 29.0-30.0 | 20.58 | 863.41 | 1.76 | 74.00 | 76.0-77.0 | 0.85 | 1125.27 | 0.07 | 96.45 |
| 30.0-31.0 | 19.01 | 882.43 | 1.63 | 75.63 | 77.0-78.0 | 0.81 | 1126.08 | 0.07 | 96.52 |
| 31.0-32.0 | 17.56 | 899.98 | 1.50 | 77.14 | 78.0-79.0 | 0.77 | 1126.85 | 0.07 | 96.58 |
| 32.0-33.0 | 16.21 | 916.19 | 1.39 | 78.53 | 79.0-80.0 | 0.75 | 1127.60 | 0.06 | 96.65 |
| 33.0-34.0 | 14.95 | 931.14 | 1.28 | 79.81 | 80.0-81.0 | 0.72 | 1128.32 | 0.06 | 96.71 |
| 34.0-35.0 | 13.79 | 944.93 | 1.18 | 80.99 | 81.0-82.0 | 0.70 | 1129.02 | 0.06 | 96.77 |
| 35.0-36.0 | 12.71 | 957.64 | 1.09 | 82.08 | 82.0-83.0 | 0.68 | 1129.71 | 0.06 | 96.83 |
| 36.0-37.0 | 11.72 | 969.36 | 1.00 | 83.08 | 83.0-84.0 | 0.66 | 1130.37 | 0.06 | 96.89 |
| 37.0-38.0 | 10.81 | 980.17 | 0.93 | 84.01 | 84.0-85.0 | 0.64 | 1131.02 | 0.06 | 96.94 |
| 38.0-39.0 | 9.99 | 990.16 | 0.86 | 84.87 | 85.0-86.0 | 0.63 | 1131.64 | 0.05 | 96.99 |
| 39.0-40.0 | 9.26 | 999.43 | 0.79 | 85.66 | 86.0-87.0 | 0.61 | 1132.25 | 0.05 | 97.05 |
| 40.0-41.0 | 8.61 | 1008.03 | 0.74 | 86.40 | 87.0-88.0 | 0.59 | 1132.84 | 0.05 | 97.10 |
| 41.0-42.0 | 8.01 | 1016.05 | 0.69 | 87.09 | 88.0-89.0 | 0.57 | 1133.40 | 0.05 | 97.15 |
| 42.0-43.0 | 7.47 | 1023.52 | 0.64 | 87.73 | 89.0-90.0 | 0.55 | 1133.96 | 0.05 | 97.19 |
| 43.0-44.0 | 6.99 | 1030.51 | 0.60 | 88.33 | 90.0-91.0 | 0.54 | 1134.50 | 0.05 | 97.24 |
| 44.0-45.0 | 6.55 | 1037.06 | 0.56 | 88.89 | 91.0-92.0 | 0.53 | 1135.03 | 0.05 | 97.28 |
| 45.0-46.0 | 6.15 | 1043.21 | 0.53 | 89.41 | 92.0-93.0 | 0.52 | 1135.54 | 0.04 | 97.33 |
| 46.0-47.0 | 5.78 | 1048.98 | 0.50 | 89.91 | 93.0-94.0 | 0.51 | 1136.05 | 0.04 | 97.37 |

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 | 0.50 | 1136.55 | 0.04 | 97.41 | 141.0-142.0 | 0.44 | 1155.67 | 0.04 | 99.05 |
| 95.0-96.0 | 0.49 | 1137.04 | 0.04 | 97.46 | 142.0-143.0 | 0.44 | 1156.11 | 0.04 | 99.09 |
| 96.0-97.0 | 0.48 | 1137.52 | 0.04 | 97.50 | 143.0-144.0 | 0.44 | 1156.55 | 0.04 | 99.13 |
| 97.0-98.0 | 0.47 | 1137.99 | 0.04 | 97.54 | 144.0-145.0 | 0.44 | 1156.99 | 0.04 | 99.17 |
| 98.0-99.0 | 0.46 | 1138.45 | 0.04 | 97.58 | 145.0-146.0 | 0.44 | 1157.44 | 0.04 | 99.21 |
| 99.0-100.0 | 0.45 | 1138.91 | 0.04 | 97.62 | 146.0-147.0 | 0.44 | 1157.88 | 0.04 | 99.24 |
| 100.0-101.0 | 0.45 | 1139.35 | 0.04 | 97.66 | 147.0-148.0 | 0.44 | 1158.32 | 0.04 | 99.28 |
| 101.0-102.0 | 0.44 | 1139.79 | 0.04 | 97.69 | 148.0-149.0 | 0.44 | 1158.76 | 0.04 | 99.32 |
| 102.0-103.0 | 0.43 | 1140.23 | 0.04 | 97.73 | 149.0-150.0 | 0.43 | 1159.19 | 0.04 | 99.36 |
| 103.0-104.0 | 0.43 | 1140.65 | 0.04 | 97.77 | 150.0-151.0 | 0.43 | 1159.62 | 0.04 | 99.39 |
| 104.0-105.0 | 0.42 | 1141.07 | 0.04 | 97.80 | 151.0-152.0 | 0.42 | 1160.05 | 0.04 | 99.43 |
| 105.0-106.0 | 0.41 | 1141.49 | 0.04 | 97.84 | 152.0-153.0 | 0.42 | 1160.46 | 0.04 | 99.46 |
| 106.0-107.0 | 0.41 | 1141.90 | 0.04 | 97.87 | 153.0-154.0 | 0.41 | 1160.88 | 0.04 | 99.50 |
| 107.0-108.0 | 0.40 | 1142.30 | 0.03 | 97.91 | 154.0-155.0 | 0.40 | 1161.28 | 0.03 | 99.53 |
| 108.0-109.0 | 0.40 | 1142.70 | 0.03 | 97.94 | 155.0-156.0 | 0.39 | 1161.67 | 0.03 | 99.57 |
| 109.0-110.0 | 0.39 | 1143.09 | 0.03 | 97.98 | 156.0-157.0 | 0.38 | 1162.05 | 0.03 | 99.60 |
| 110.0-111.0 | 0.39 | 1143.48 | 0.03 | 98.01 | 157.0-158.0 | 0.37 | 1162.43 | 0.03 | 99.63 |
| 111.0-112.0 | 0.39 | 1143.87 | 0.03 | 98.04 | 158.0-159.0 | 0.36 | 1162.79 | 0.03 | 99.66 |
| 112.0-113.0 | 0.38 | 1144.25 | 0.03 | 98.07 | 159.0-160.0 | 0.35 | 1163.13 | 0.03 | 99.69 |
| 113.0-114.0 | 0.38 | 1144.63 | 0.03 | 98.11 | 160.0-161.0 | 0.33 | 1163.47 | 0.03 | 99.72 |
| 114.0-115.0 | 0.38 | 1145.00 | 0.03 | 98.14 | 161.0-162.0 | 0.32 | 1163.79 | 0.03 | 99.75 |
| 115.0-116.0 | 0.37 | 1145.38 | 0.03 | 98.17 | 162.0-163.0 | 0.31 | 1164.09 | 0.03 | 99.78 |
| 116.0-117.0 | 0.37 | 1145.75 | 0.03 | 98.20 | 163.0-164.0 | 0.29 | 1164.38 | 0.02 | 99.80 |
| 117.0-118.0 | 0.37 | 1146.12 | 0.03 | 98.24 | 164.0-165.0 | 0.28 | 1164.66 | 0.02 | 99.82 |
| 118.0-119.0 | 0.37 | 1146.49 | 0.03 | 98.27 | 165.0-166.0 | 0.26 | 1164.92 | 0.02 | 99.85 |
| 119.0-120.0 | 0.37 | 1146.86 | 0.03 | 98.30 | 166.0-167.0 | 0.24 | 1165.16 | 0.02 | 99.87 |
| 120.0-121.0 | 0.37 | 1147.23 | 0.03 | 98.33 | 167.0-168.0 | 0.23 | 1165.39 | 0.02 | 99.89 |
| 121.0-122.0 | 0.37 | 1147.60 | 0.03 | 98.36 | 168.0-169.0 | 0.21 | 1165.60 | 0.02 | 99.90 |
| 122.0-123.0 | 0.37 | 1147.97 | 0.03 | 98.39 | 169.0-170.0 | 0.19 | 1165.79 | 0.02 | 99.92 |
| 123.0-124.0 | 0.37 | 1148.35 | 0.03 | 98.43 | 170.0-171.0 | 0.17 | 1165.96 | 0.01 | 99.94 |
| 124.0-125.0 | 0.37 | 1148.72 | 0.03 | 98.46 | 171.0-172.0 | 0.16 | 1166.12 | 0.01 | 99.95 |
| 125.0-126.0 | 0.38 | 1149.10 | 0.03 | 98.49 | 172.0-173.0 | 0.14 | 1166.26 | 0.01 | 99.96 |
| 126.0-127.0 | 0.38 | 1149.48 | 0.03 | 98.52 | 173.0-174.0 | 0.12 | 1166.38 | 0.01 | 99.97 |
| 127.0-128.0 | 0.38 | 1149.86 | 0.03 | 98.56 | 174.0-175.0 | 0.10 | 1166.48 | 0.01 | 99.98 |
| 128.0-129.0 | 0.39 | 1150.25 | 0.03 | 98.59 | 175.0-176.0 | 0.08 | 1166.56 | 0.01 | 99.99 |
| 129.0-130.0 | 0.39 | 1150.64 | 0.03 | 98.62 | 176.0-177.0 | 0.07 | 1166.63 | 0.01 | 99.99 |
| 130.0-131.0 | 0.40 | 1151.04 | 0.03 | 98.66 | 177.0-178.0 | 0.05 | 1166.68 | 0.00 | 100.00 |
| 131.0-132.0 | 0.40 | 1151.44 | 0.03 | 98.69 | 178.0-179.0 | 0.03 | 1166.70 | 0.00 | 100.00 |
| 132.0-133.0 | 0.40 | 1151.84 | 0.03 | 98.73 | 179.0-180.0 | 0.01 | 1166.71 | 0.00 | 100.00 |
| 133.0-134.0 | 0.41 | 1152.25 | 0.04 | 98.76 | | | | | |
| 134.0-135.0 | 0.41 | 1152.66 | 0.04 | 98.80 | | | | | |
| 135.0-136.0 | 0.42 | 1153.08 | 0.04 | 98.83 | | | | | |
| 136.0-137.0 | 0.42 | 1153.50 | 0.04 | 98.87 | | | | | |
| 137.0-138.0 | 0.43 | 1153.93 | 0.04 | 98.90 | | | | | |
| 138.0-139.0 | 0.43 | 1154.36 | 0.04 | 98.94 | | | | | |
| 139.0-140.0 | 0.43 | 1154.79 | 0.04 | 98.98 | | | | | |
| 140.0-141.0 | 0.44 | 1155.23 | 0.04 | 99.02 | | | | | |

Rectangle ISO Lighting Intensity Diagram

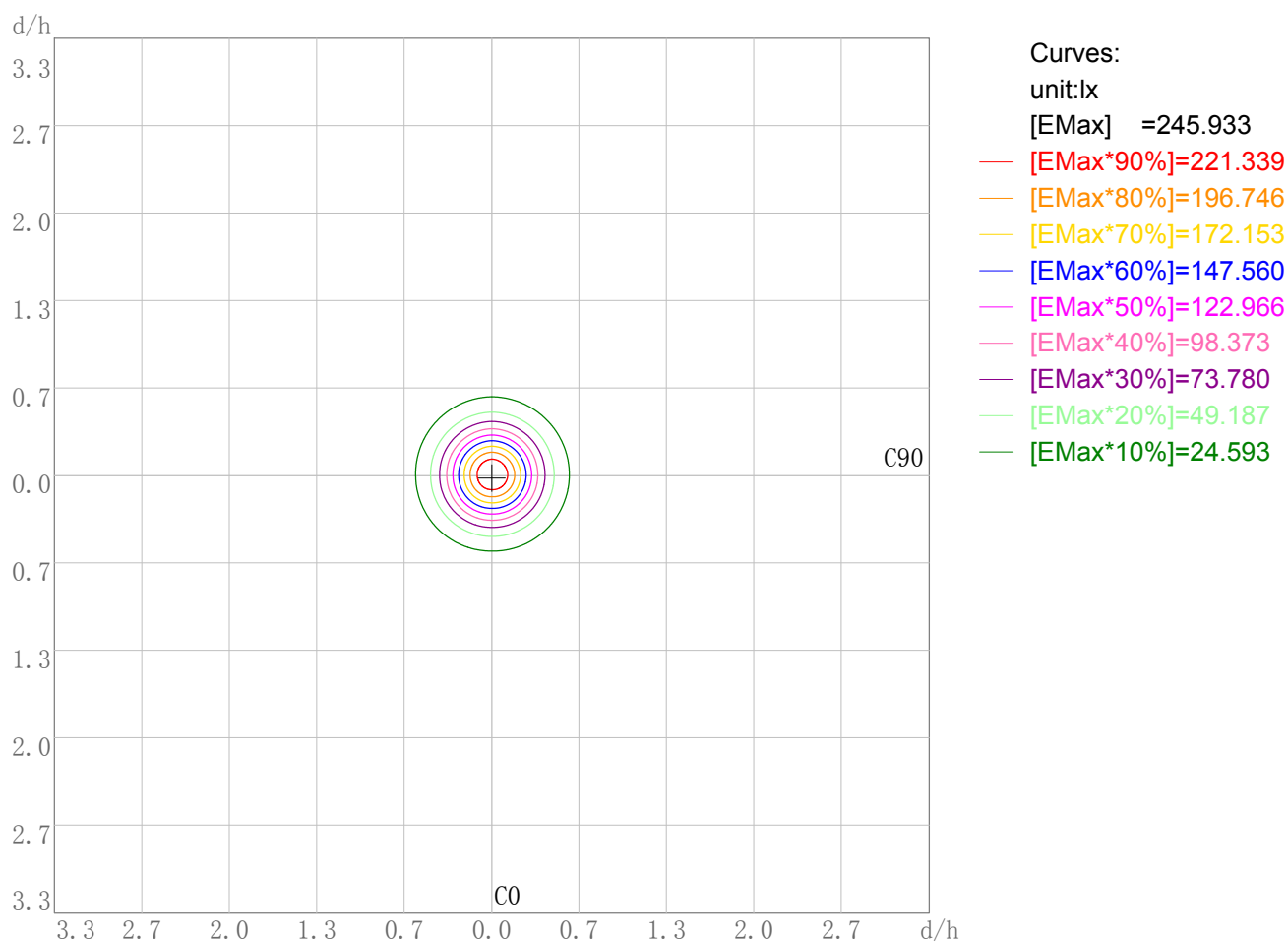
| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K RA90 36D | Lum. Catalog: | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2020/01/08 |



Plane ISO-Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 245.93

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

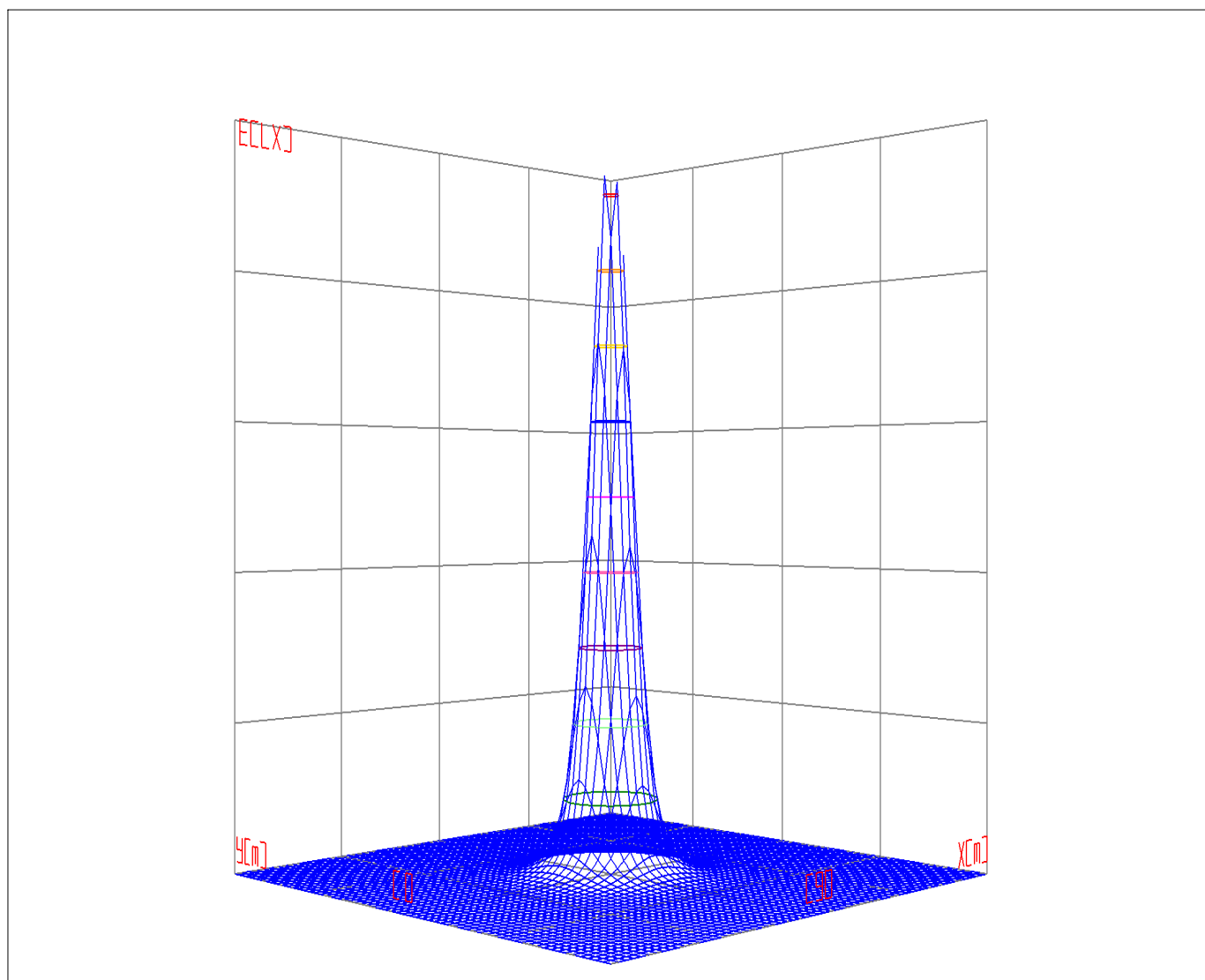
IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

3D Plane ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

3D Plane Illuminance Modal



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

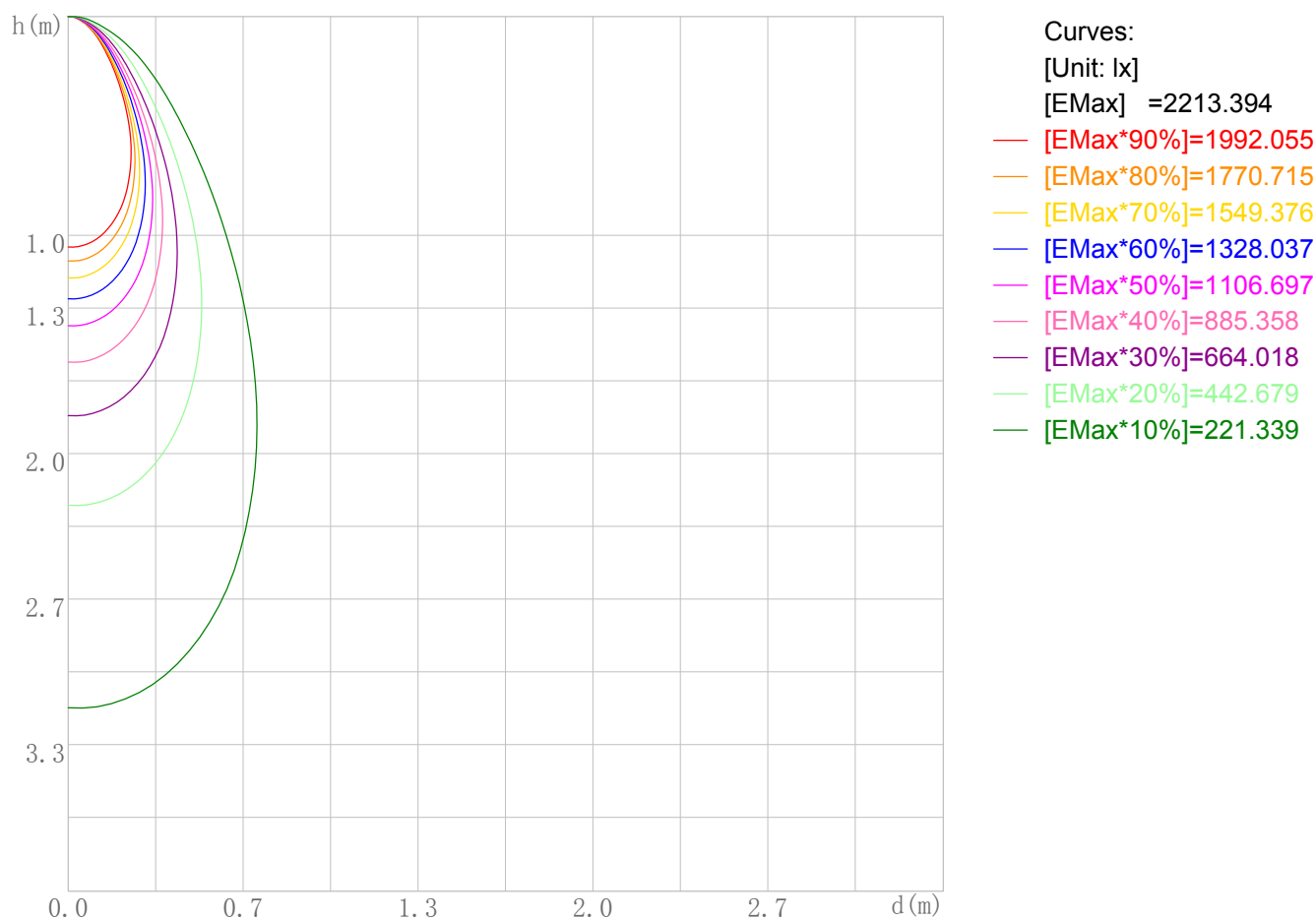
IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

Space ISO Illuminance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2213.39lx,1.0deg
Plane Maximum Lighting Intensity and @Angle:2214.406cd,0deg

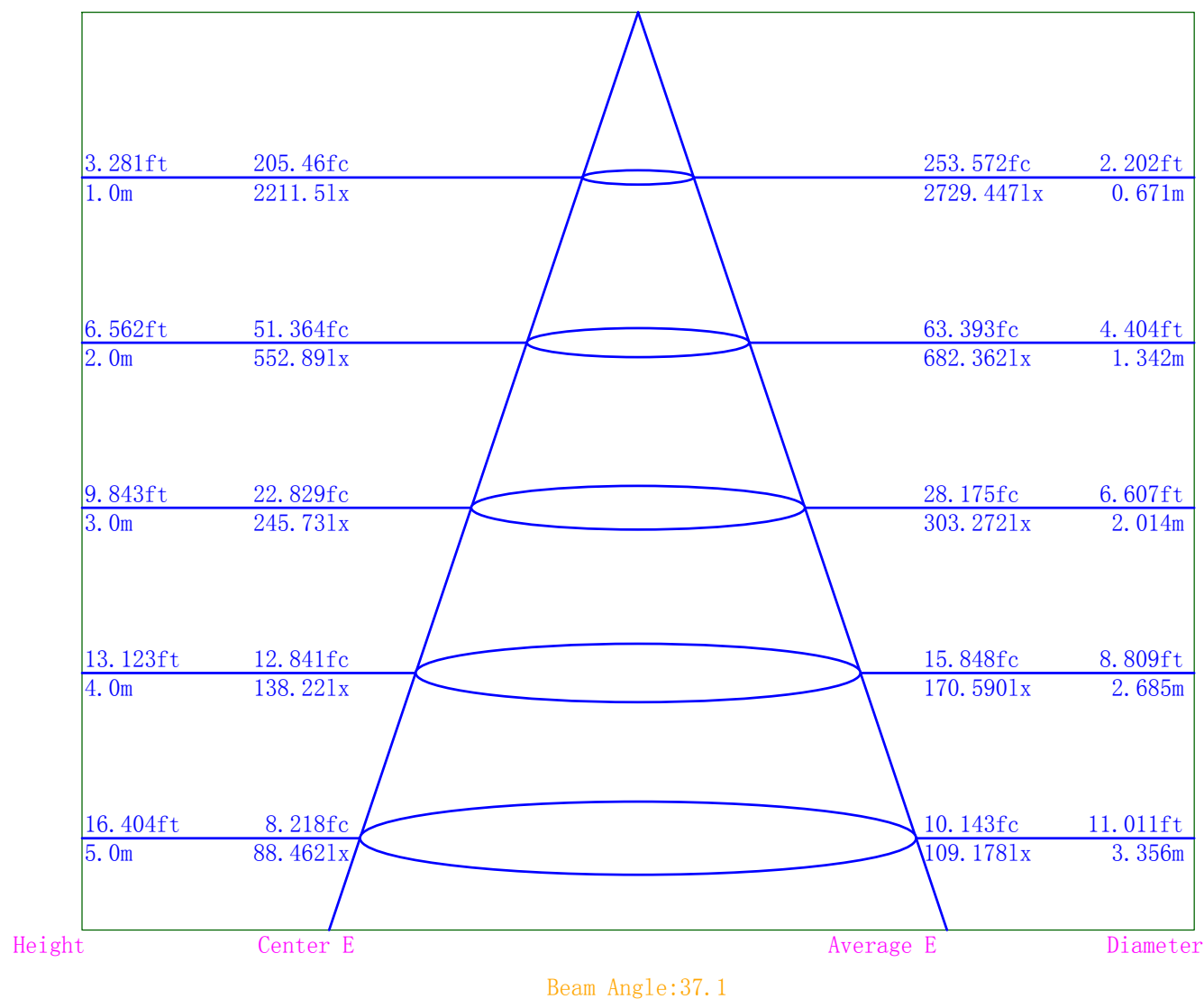
IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

Illuminance-Distance Diagram

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

Illuminance-Distance Curve



IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

Indoor Luminance Limiting Curves

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K RA90 36D | Lum. Catalog: LED | Test ID: 01 |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality peatment |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2020/01/08 |

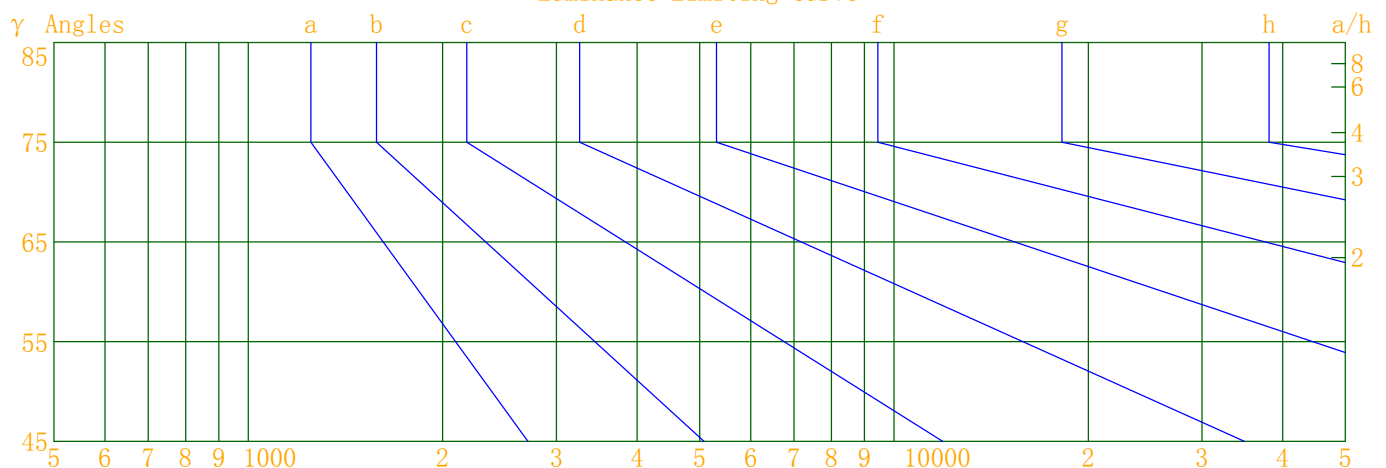
Glare Grade Table

| 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 | 210 | 156 | 120 | 95 | 76 | 61 | 59 | 68 | 116 |
| C90 | 191 | 141 | 109 | 86 | 69 | 55 | 52 | 59 | 101 |

Luminance Limiting Curve



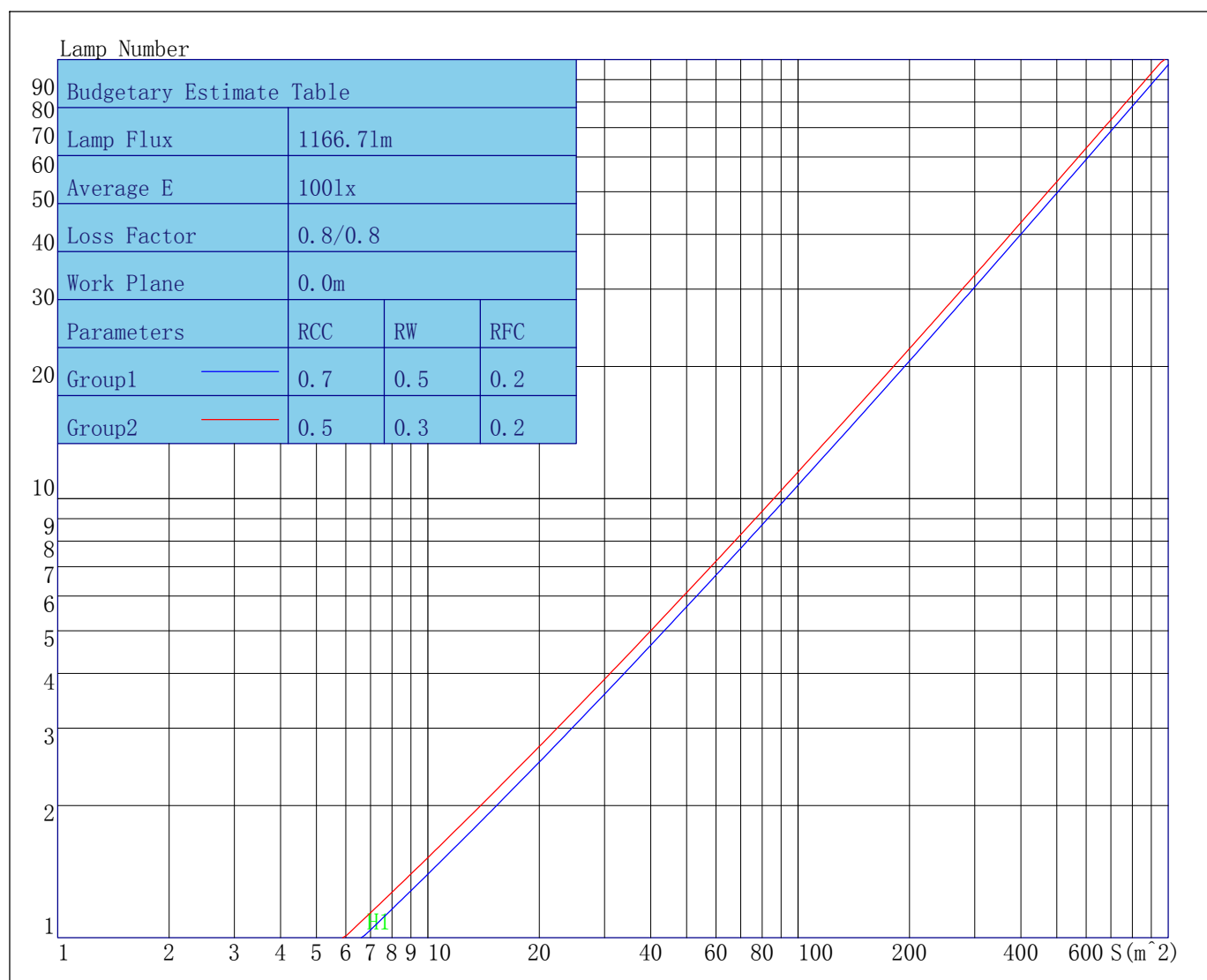
Luminous Size: Length(m)=0.498 Width(m)=0.498 Height(m)=0.750 Area(m^2)=0.621504
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

Indoor Budgetary Estimate Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |



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:MD10-13-TW-01 6500K RA90 36D.IES

Indoor Coefficient of Utilization Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

| 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 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 104 | 104 | 104 | 99 | 99 | 99 | 97 |
| 1 | 113 | 110 | 107 | 105 | 110 | 107 | 105 | 103 | 103 | 101 | 99 | 99 | 97 | 96 | 95 | 94 | 93 | 91 |
| 2 | 107 | 102 | 98 | 95 | 105 | 100 | 96 | 93 | 96 | 93 | 91 | 93 | 91 | 89 | 90 | 88 | 86 | 84 |
| 3 | 102 | 95 | 91 | 87 | 100 | 94 | 89 | 86 | 91 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 81 | 79 |
| 4 | 97 | 90 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 83 | 80 | 77 | 81 | 78 | 76 | 74 |
| 5 | 92 | 84 | 79 | 75 | 91 | 83 | 78 | 74 | 81 | 77 | 73 | 79 | 75 | 72 | 77 | 74 | 71 | 70 |
| 6 | 88 | 80 | 74 | 70 | 87 | 79 | 73 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 74 | 70 | 67 | 66 |
| 7 | 84 | 76 | 70 | 66 | 83 | 75 | 69 | 66 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 63 |
| 8 | 81 | 72 | 66 | 62 | 79 | 71 | 66 | 62 | 70 | 65 | 62 | 69 | 64 | 61 | 67 | 64 | 61 | 59 |
| 9 | 77 | 68 | 63 | 59 | 76 | 68 | 62 | 59 | 67 | 62 | 59 | 66 | 61 | 58 | 65 | 61 | 58 | 57 |
| 10 | 74 | 65 | 60 | 56 | 73 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 62 | 58 | 55 | 54 |

Unified Glare Rating Table

| | | |
|---|-----------------------|----------------------------|
| Lum. Name: MD10-13-TW-01 6500K 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: 2020/01/08 |

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 | 1.9 | 3.0 | 2.4 | 3.3 | 3.7 | 1.5 | 2.5 | 1.9 | 2.9 | 3.3 | |
| | Y=3H | 2.2 | 3.1 | 2.7 | 3.5 | 4.0 | 1.7 | 2.6 | 2.2 | 3.0 | 3.5 |
| | Y=4H | 2.3 | 3.2 | 2.8 | 3.6 | 4.0 | 1.8 | 2.7 | 2.3 | 3.1 | 3.6 |
| | Y=6H | 2.5 | 3.3 | 3.0 | 3.7 | 4.2 | 2.0 | 2.7 | 2.4 | 3.2 | 3.6 |
| | Y=8H | 2.6 | 3.3 | 3.1 | 3.8 | 4.3 | 2.1 | 2.8 | 2.6 | 3.2 | 3.7 |
| | Y=12H | 2.8 | 3.5 | 3.3 | 3.9 | 4.4 | 2.2 | 2.9 | 2.7 | 3.4 | 3.9 |
| X=4H Y=2H | 2.0 | 2.8 | 2.4 | 3.2 | 3.7 | 1.5 | 2.3 | 2.0 | 2.8 | 3.2 | |
| | Y=3H | 2.4 | 3.0 | 2.8 | 3.5 | 4.0 | 1.9 | 2.6 | 2.3 | 3.0 | 3.5 |
| | Y=4H | 2.6 | 3.2 | 3.0 | 3.6 | 4.2 | 2.1 | 2.7 | 2.6 | 3.2 | 3.7 |
| | Y=6H | 2.8 | 3.4 | 3.4 | 3.9 | 4.4 | 2.3 | 2.8 | 2.8 | 3.3 | 3.9 |
| | Y=8H | 3.0 | 3.5 | 3.6 | 4.0 | 4.6 | 2.5 | 3.0 | 3.0 | 3.5 | 4.0 |
| | Y=12H | 3.3 | 3.8 | 3.9 | 4.3 | 4.8 | 2.7 | 3.2 | 3.3 | 3.7 | 4.3 |
| X=8H Y=4H | 2.6 | 3.1 | 3.1 | 3.6 | 4.1 | 2.1 | 2.6 | 2.6 | 3.1 | 3.6 | |
| | Y=6H | 3.0 | 3.4 | 3.5 | 3.9 | 4.5 | 2.4 | 2.8 | 3.0 | 3.4 | 4.0 |
| | Y=8H | 3.3 | 3.6 | 3.9 | 4.2 | 4.8 | 2.7 | 3.1 | 3.3 | 3.7 | 4.2 |
| | Y=12H | 3.8 | 4.1 | 4.3 | 4.6 | 5.3 | 3.2 | 3.5 | 3.7 | 4.0 | 4.7 |
| X=12H Y=4H | 2.5 | 3.0 | 3.1 | 3.5 | 4.0 | 2.0 | 2.5 | 2.6 | 3.0 | 3.6 | |
| | Y=6H | 3.0 | 3.4 | 3.6 | 3.9 | 4.5 | 2.5 | 2.8 | 3.1 | 3.4 | 4.0 |
| | Y=8H | 3.4 | 3.7 | 4.0 | 4.3 | 4.9 | 2.8 | 3.2 | 3.4 | 3.7 | 4.3 |
| Variations with the objerver position at spacings | | | | | | | | | | | |
| S=1.0H | 0.1/-0.1 | | | | | 0.2/-0.2 | | | | | |
| S=1.5H | 0.3/-0.3 | | | | | 0.4/-0.3 | | | | | |
| S=2.0H | 0.7/-0.5 | | | | | 0.8/-0.6 | | | | | |
| Reduced UGR Table: | | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | | |
| Correction Value | 1.6 | | | | | 1.5 | | | | | |

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 | 2211.54 | 2211.54 | 2211.54 | 2211.54 |
| γ 1.0 | 2214.41 | 2210.87 | 2199.21 | 2203.23 |
| γ 2.0 | 2209.56 | 2201.70 | 2178.92 | 2186.28 |
| γ 3.0 | 2194.49 | 2183.95 | 2151.67 | 2161.59 |
| γ 4.0 | 2170.64 | 2158.18 | 2117.87 | 2130.89 |
| γ 5.0 | 2138.75 | 2124.87 | 2076.78 | 2093.57 |
| γ 6.0 | 2099.83 | 2082.22 | 2028.42 | 2048.50 |
| γ 7.0 | 2052.43 | 2032.05 | 1972.44 | 1995.98 |
| γ 8.0 | 1997.43 | 1974.70 | 1911.31 | 1937.40 |
| γ 9.0 | 1935.56 | 1912.57 | 1845.42 | 1871.15 |
| γ 10.0 | 1868.94 | 1845.33 | 1775.12 | 1799.40 |
| γ 11.0 | 1796.72 | 1772.49 | 1700.09 | 1723.58 |
| γ 12.0 | 1720.44 | 1694.45 | 1620.54 | 1644.44 |
| γ 13.0 | 1640.40 | 1612.56 | 1536.10 | 1560.50 |
| γ 14.0 | 1555.51 | 1525.92 | 1448.65 | 1472.50 |
| γ 15.0 | 1466.89 | 1434.19 | 1360.82 | 1384.07 |
| γ 16.0 | 1378.48 | 1341.29 | 1274.10 | 1296.90 |
| γ 17.0 | 1290.56 | 1251.40 | 1189.07 | 1210.89 |
| γ 18.0 | 1203.37 | 1163.40 | 1104.77 | 1125.32 |
| γ 19.0 | 1118.38 | 1077.66 | 1020.35 | 1041.00 |
| γ 20.0 | 1035.39 | 995.49 | 938.09 | 958.84 |
| γ 21.0 | 954.61 | 915.74 | 859.48 | 879.48 |
| γ 22.0 | 876.45 | 838.05 | 784.52 | 802.75 |
| γ 23.0 | 800.76 | 763.57 | 712.31 | 729.30 |
| γ 24.0 | 728.28 | 692.25 | 643.87 | 660.16 |
| γ 25.0 | 660.21 | 625.74 | 579.40 | 595.04 |
| γ 26.0 | 596.91 | 564.65 | 520.33 | 535.63 |
| γ 27.0 | 538.80 | 508.61 | 466.92 | 481.72 |
| γ 28.0 | 485.63 | 457.25 | 417.99 | 432.33 |
| γ 29.0 | 436.68 | 410.61 | 373.55 | 387.42 |
| γ 30.0 | 392.48 | 368.52 | 333.21 | 346.98 |
| γ 31.0 | 352.76 | 330.97 | 297.19 | 311.00 |
| γ 32.0 | 317.58 | 297.63 | 265.20 | 279.04 |
| γ 33.0 | 286.10 | 267.68 | 236.77 | 250.44 |
| γ 34.0 | 258.08 | 240.94 | 211.31 | 224.93 |
| γ 35.0 | 232.85 | 217.04 | 188.76 | 202.14 |
| γ 36.0 | 210.28 | 195.46 | 168.76 | 181.65 |
| γ 37.0 | 190.03 | 176.23 | 151.19 | 163.39 |
| γ 38.0 | 172.08 | 159.24 | 135.92 | 147.26 |
| γ 39.0 | 156.23 | 144.46 | 122.72 | 133.30 |
| γ 40.0 | 142.24 | 131.29 | 111.19 | 121.13 |
| γ 41.0 | 129.77 | 119.47 | 101.17 | 110.54 |
| γ 42.0 | 118.64 | 108.90 | 92.34 | 101.20 |
| γ 43.0 | 108.82 | 99.57 | 84.62 | 92.92 |
| γ 44.0 | 100.01 | 91.37 | 77.83 | 85.60 |
| γ 45.0 | 92.08 | 84.03 | 71.74 | 79.08 |
| γ 46.0 | 84.95 | 77.40 | 66.29 | 73.25 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 78.46 | 71.37 | 61.39 | 67.93 |
| γ 48.0 | 72.51 | 65.92 | 56.96 | 63.06 |
| γ 49.0 | 67.09 | 60.96 | 53.00 | 58.63 |
| γ 50.0 | 62.15 | 56.40 | 49.33 | 54.58 |
| γ 51.0 | 57.63 | 52.29 | 45.97 | 50.85 |
| γ 52.0 | 53.49 | 48.49 | 42.83 | 47.40 |
| γ 53.0 | 49.66 | 45.03 | 39.98 | 44.30 |
| γ 54.0 | 46.13 | 41.81 | 37.35 | 41.37 |
| γ 55.0 | 42.85 | 38.84 | 34.87 | 38.62 |
| γ 56.0 | 39.77 | 36.06 | 32.53 | 36.04 |
| γ 57.0 | 36.92 | 33.45 | 30.30 | 33.63 |
| γ 58.0 | 34.27 | 31.02 | 28.23 | 31.36 |
| γ 59.0 | 31.79 | 28.75 | 26.31 | 29.24 |
| γ 60.0 | 29.48 | 26.66 | 24.49 | 27.25 |
| γ 61.0 | 27.34 | 24.73 | 22.78 | 25.34 |
| γ 62.0 | 25.33 | 22.91 | 21.16 | 23.50 |
| γ 63.0 | 23.45 | 21.22 | 19.64 | 21.78 |
| γ 64.0 | 21.70 | 19.62 | 18.16 | 20.20 |
| γ 65.0 | 19.98 | 18.07 | 16.82 | 18.63 |
| γ 66.0 | 18.39 | 16.61 | 15.57 | 17.27 |
| γ 67.0 | 16.96 | 15.37 | 14.32 | 15.61 |
| γ 68.0 | 15.69 | 14.15 | 12.99 | 14.12 |
| γ 69.0 | 14.08 | 12.82 | 12.12 | 13.20 |
| γ 70.0 | 13.02 | 11.69 | 11.34 | 12.37 |
| γ 71.0 | 12.20 | 10.92 | 10.59 | 11.61 |
| γ 72.0 | 11.42 | 10.22 | 9.89 | 10.87 |
| γ 73.0 | 10.71 | 9.56 | 9.23 | 10.21 |
| γ 74.0 | 10.05 | 8.95 | 8.61 | 9.59 |
| γ 75.0 | 9.46 | 8.39 | 8.03 | 9.00 |
| γ 76.0 | 8.91 | 7.87 | 7.49 | 8.46 |
| γ 77.0 | 8.38 | 7.37 | 7.05 | 8.02 |
| γ 78.0 | 7.97 | 6.92 | 6.76 | 7.69 |
| γ 79.0 | 7.61 | 6.59 | 6.54 | 7.43 |
| γ 80.0 | 7.36 | 6.36 | 6.33 | 7.18 |
| γ 81.0 | 7.11 | 6.17 | 6.13 | 6.96 |
| γ 82.0 | 6.89 | 5.99 | 5.95 | 6.74 |
| γ 83.0 | 6.67 | 5.81 | 5.75 | 6.53 |
| γ 84.0 | 6.45 | 5.63 | 5.58 | 6.33 |
| γ 85.0 | 6.28 | 5.45 | 5.41 | 6.13 |
| γ 86.0 | 6.10 | 5.30 | 5.22 | 5.95 |
| γ 87.0 | 5.91 | 5.12 | 5.03 | 5.72 |
| γ 88.0 | 5.70 | 4.94 | 4.86 | 5.53 |
| γ 89.0 | 5.51 | 4.74 | 4.74 | 5.39 |
| γ 90.0 | 5.36 | 4.65 | 4.65 | 5.27 |
| γ 91.0 | 5.25 | 4.55 | 4.55 | 5.16 |
| γ 92.0 | 5.13 | 4.46 | 4.47 | 5.05 |
| γ 93.0 | 5.03 | 4.37 | 4.38 | 4.95 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 4.94 | 4.29 | 4.30 | 4.86 |
| γ 95.0 | 4.84 | 4.22 | 4.24 | 4.77 |
| γ 96.0 | 4.75 | 4.14 | 4.17 | 4.68 |
| γ 97.0 | 4.67 | 4.08 | 4.11 | 4.61 |
| γ 98.0 | 4.59 | 4.02 | 4.06 | 4.53 |
| γ 99.0 | 4.51 | 3.96 | 4.01 | 4.46 |
| γ 100.0 | 4.44 | 3.90 | 3.95 | 4.40 |
| γ 101.0 | 4.38 | 3.86 | 3.91 | 4.34 |
| γ 102.0 | 4.31 | 3.80 | 3.87 | 4.28 |
| γ 103.0 | 4.25 | 3.76 | 3.83 | 4.24 |
| γ 104.0 | 4.19 | 3.72 | 3.80 | 4.19 |
| γ 105.0 | 4.14 | 3.68 | 3.78 | 4.15 |
| γ 106.0 | 4.10 | 3.65 | 3.75 | 4.11 |
| γ 107.0 | 4.05 | 3.62 | 3.73 | 4.09 |
| γ 108.0 | 4.01 | 3.59 | 3.72 | 4.05 |
| γ 109.0 | 3.97 | 3.56 | 3.71 | 4.03 |
| γ 110.0 | 3.94 | 3.54 | 3.71 | 4.02 |
| γ 111.0 | 3.92 | 3.53 | 3.70 | 4.00 |
| γ 112.0 | 3.88 | 3.51 | 3.72 | 3.99 |
| γ 113.0 | 3.87 | 3.51 | 3.72 | 3.98 |
| γ 114.0 | 3.85 | 3.50 | 3.74 | 3.99 |
| γ 115.0 | 3.84 | 3.51 | 3.76 | 3.99 |
| γ 116.0 | 3.84 | 3.51 | 3.78 | 4.02 |
| γ 117.0 | 3.84 | 3.53 | 3.81 | 4.03 |
| γ 118.0 | 3.85 | 3.55 | 3.85 | 4.06 |
| γ 119.0 | 3.86 | 3.57 | 3.90 | 4.09 |
| γ 120.0 | 3.88 | 3.61 | 3.96 | 4.13 |
| γ 121.0 | 3.91 | 3.65 | 4.01 | 4.18 |
| γ 122.0 | 3.95 | 3.70 | 4.08 | 4.23 |
| γ 123.0 | 3.98 | 3.74 | 4.16 | 4.30 |
| γ 124.0 | 4.04 | 3.81 | 4.24 | 4.36 |
| γ 125.0 | 4.10 | 3.88 | 4.33 | 4.44 |
| γ 126.0 | 4.16 | 3.96 | 4.42 | 4.53 |
| γ 127.0 | 4.24 | 4.04 | 4.53 | 4.62 |
| γ 128.0 | 4.32 | 4.14 | 4.64 | 4.72 |
| γ 129.0 | 4.41 | 4.23 | 4.76 | 4.83 |
| γ 130.0 | 4.52 | 4.35 | 4.90 | 4.95 |
| γ 131.0 | 4.64 | 4.48 | 5.02 | 5.07 |
| γ 132.0 | 4.75 | 4.60 | 5.16 | 5.20 |
| γ 133.0 | 4.88 | 4.74 | 5.32 | 5.33 |
| γ 134.0 | 5.02 | 4.88 | 5.46 | 5.47 |
| γ 135.0 | 5.15 | 5.03 | 5.63 | 5.63 |
| γ 136.0 | 5.29 | 5.17 | 5.80 | 5.79 |
| γ 137.0 | 5.46 | 5.34 | 5.96 | 5.95 |
| γ 138.0 | 5.61 | 5.51 | 6.13 | 6.11 |
| γ 139.0 | 5.78 | 5.68 | 6.30 | 6.27 |
| γ 140.0 | 5.95 | 5.85 | 6.47 | 6.43 |

IES Indoor Report

Photometric Filename:MD10-13-TW-01 6500K RA90 36D.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 141.0 | 6.12 | 6.03 | 6.64 | 6.60 |
| γ 142.0 | 6.29 | 6.20 | 6.82 | 6.77 |
| γ 143.0 | 6.46 | 6.37 | 7.00 | 6.94 |
| γ 144.0 | 6.63 | 6.55 | 7.18 | 7.11 |
| γ 145.0 | 6.81 | 6.72 | 7.35 | 7.28 |
| γ 146.0 | 6.99 | 6.90 | 7.54 | 7.45 |
| γ 147.0 | 7.16 | 7.07 | 7.71 | 7.63 |
| γ 148.0 | 7.33 | 7.23 | 7.88 | 7.78 |
| γ 149.0 | 7.51 | 7.41 | 8.03 | 7.94 |
| γ 150.0 | 7.69 | 7.57 | 8.19 | 8.09 |
| γ 151.0 | 7.84 | 7.74 | 8.35 | 8.24 |
| γ 152.0 | 7.99 | 7.88 | 8.48 | 8.36 |
| γ 153.0 | 8.15 | 8.03 | 8.62 | 8.51 |
| γ 154.0 | 8.29 | 8.17 | 8.75 | 8.62 |
| γ 155.0 | 8.42 | 8.29 | 8.87 | 8.75 |
| γ 156.0 | 8.56 | 8.42 | 8.99 | 8.85 |
| γ 157.0 | 8.67 | 8.54 | 9.09 | 8.95 |
| γ 158.0 | 8.79 | 8.65 | 9.18 | 9.04 |
| γ 159.0 | 8.89 | 8.76 | 9.26 | 9.13 |
| γ 160.0 | 8.99 | 8.85 | 9.34 | 9.20 |
| γ 161.0 | 9.07 | 8.94 | 9.41 | 9.27 |
| γ 162.0 | 9.15 | 9.02 | 9.47 | 9.33 |
| γ 163.0 | 9.22 | 9.10 | 9.53 | 9.38 |
| γ 164.0 | 9.28 | 9.16 | 9.57 | 9.43 |
| γ 165.0 | 9.35 | 9.21 | 9.61 | 9.47 |
| γ 166.0 | 9.40 | 9.26 | 9.64 | 9.51 |
| γ 167.0 | 9.46 | 9.32 | 9.68 | 9.54 |
| γ 168.0 | 9.51 | 9.36 | 9.70 | 9.56 |
| γ 169.0 | 9.54 | 9.40 | 9.72 | 9.60 |
| γ 170.0 | 9.58 | 9.44 | 9.74 | 9.62 |
| γ 171.0 | 9.63 | 9.47 | 9.77 | 9.65 |
| γ 172.0 | 9.66 | 9.51 | 9.79 | 9.66 |
| γ 173.0 | 9.70 | 9.56 | 9.81 | 9.69 |
| γ 174.0 | 9.74 | 9.59 | 9.83 | 9.72 |
| γ 175.0 | 9.77 | 9.63 | 9.85 | 9.74 |
| γ 176.0 | 9.80 | 9.67 | 9.87 | 9.77 |
| γ 177.0 | 9.83 | 9.71 | 9.88 | 9.80 |
| γ 178.0 | 9.86 | 9.74 | 9.90 | 9.82 |
| γ 179.0 | 9.90 | 9.77 | 9.92 | 9.83 |
| γ 180.0 | 9.88 | 9.88 | 9.88 | 9.88 |