

Indoor Luminaire Photometric Data

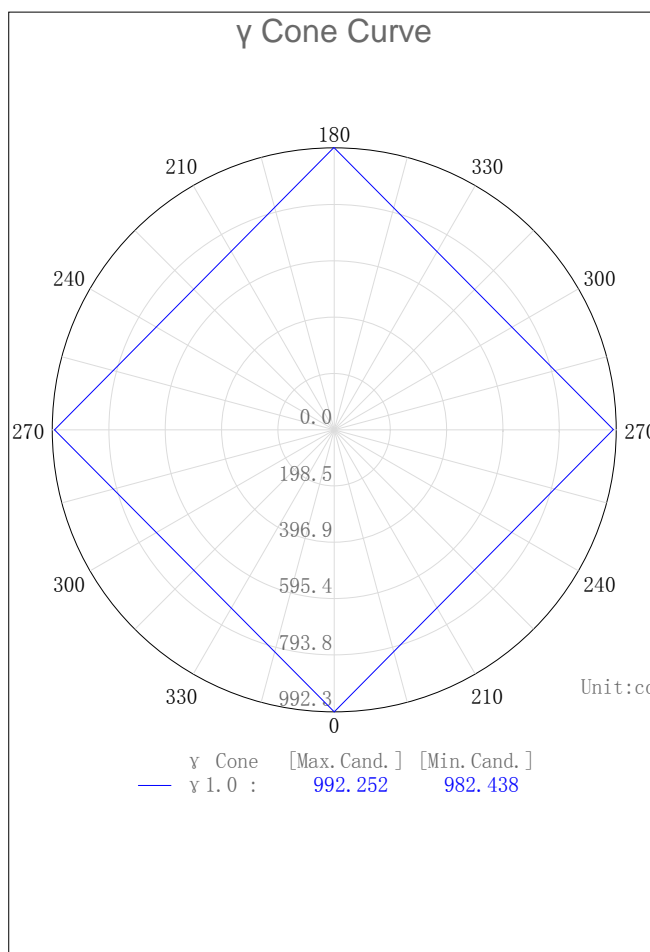
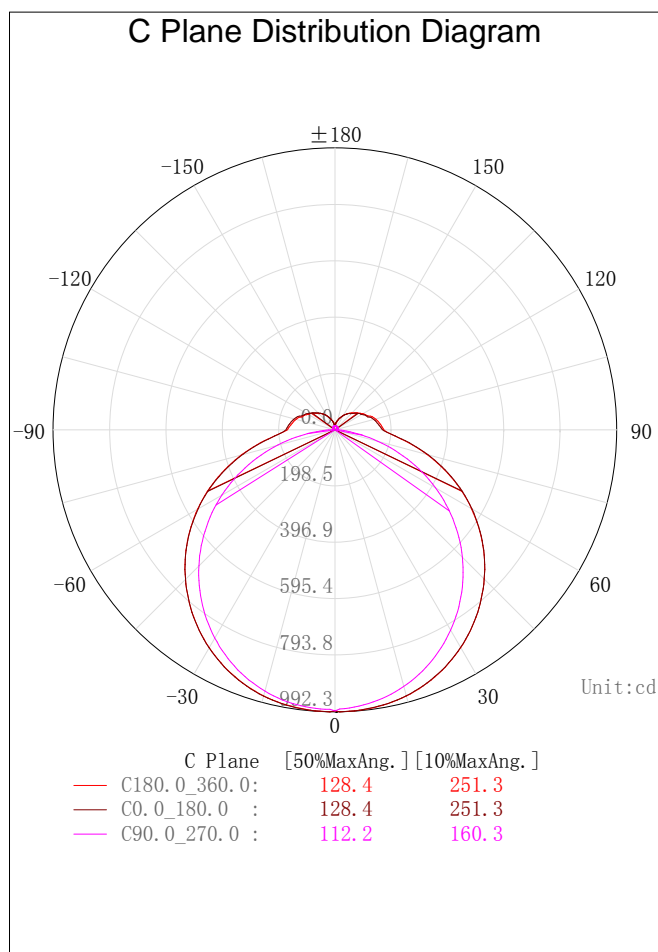
Description Information

| | | |
|---|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Date: 2017/02/16 |
| Manufacture: | ShldAngle(°): | Test Machine:GON-2000 |
| Test Lab: | Frequency (Hz): | Lamp CCT (K): Ra: |
| Lum. Size (W*L*H): 0.080m*1.200m*0.065m | Lum. Area (m2): 0.174 | Lum. W (kg): 5.000 |
| 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): 3522.200 | Luminaire Flux: 3522.199lm | Field Angle(10%Imax): 251.3 |
| Rated Power(W): | Luminaire Efficiency: 100.00% | Down Lumens&Percent: 3154.824lm 89.57% |
| Rated Voltage(V): | Luminaire EER(lm/W): 88.967 | Up Lumens&Percent: 367.375lm 10.43% |
| Tested Power(W): 39.590 | Max. Cand. (cd): 992.252 | S/MH: C0_a180=1.328 C90_270=1.248 |
| Lamps' Inside: 1 | Max Cand@Ang. (°): C=180.0 γ=1.0 | CIE Type: General Diffuse |
| Tested Electric:U=240.0V, I=0.173A, PF=0.000 | Beam Angle(50%Imax): 128.4 | ErP Φ use(120°): 2321.300lm |
| Lamp Size (W*L*H): 0.080m*1.200m*0.065m | Left=-64.3 Right=64.1 | IRF: 104.490% |

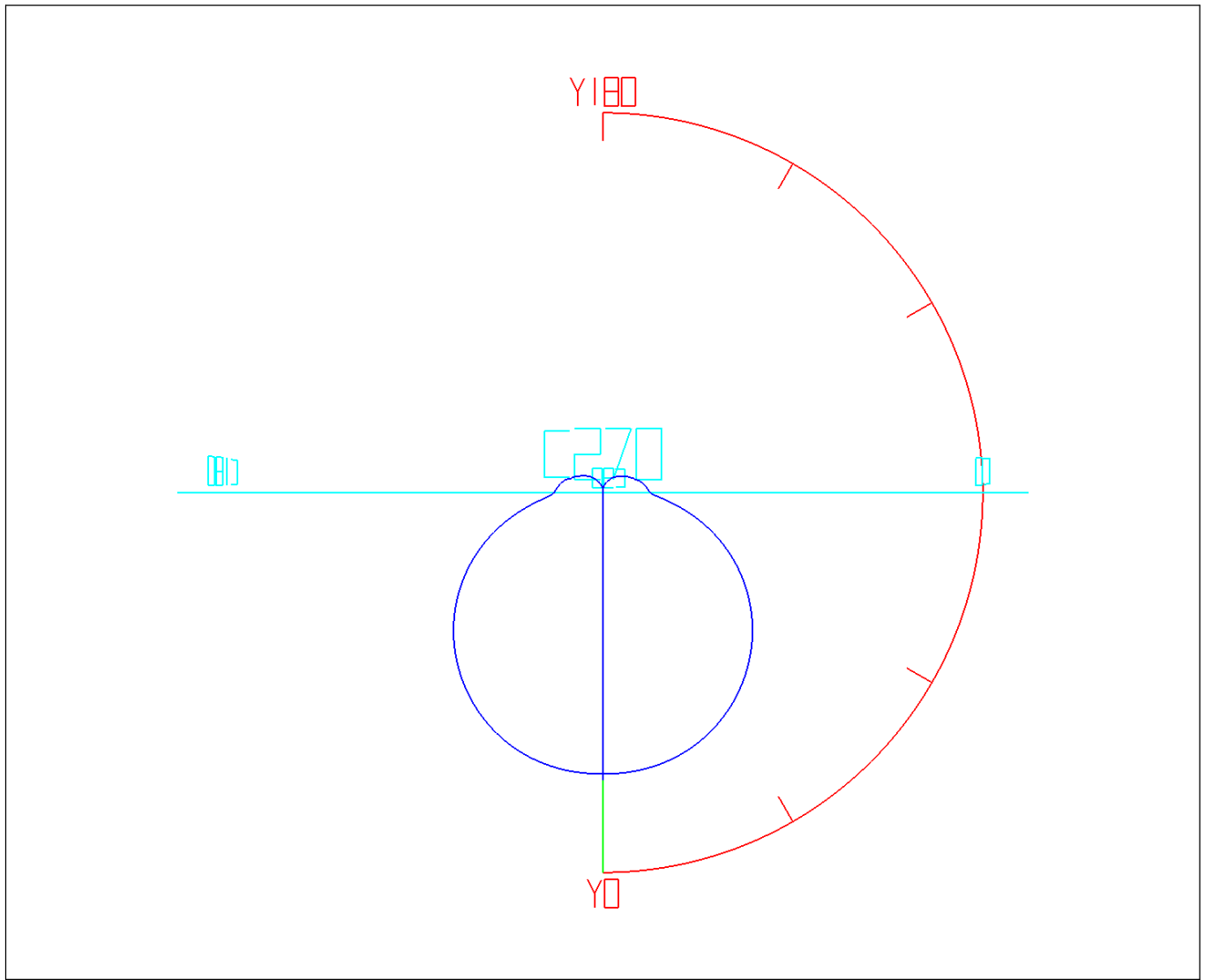
Lighting Distribution Diagram



3D Light Intensity Distribution Modal

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

3D Light Intensity Distribution Modal



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

IES Indoor Report

Photometric Filename:LEDBATTEN40W-4K.IES

Zonal Flux Tabulation

| Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|-----------|----------------|----------------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|
| 0.0-1.0 | 0.95 | 0.95 | 0.03 | 0.03 | 47.0-48.0 | 54.00 | 54.00 | 1.53 | 1.53 |
| 1.0-2.0 | 2.83 | 3.78 | 0.08 | 0.11 | 48.0-49.0 | 53.81 | 107.81 | 1.53 | 3.06 |
| 2.0-3.0 | 4.72 | 8.50 | 0.13 | 0.24 | 49.0-50.0 | 53.55 | 161.36 | 1.52 | 4.58 |
| 3.0-4.0 | 6.60 | 15.10 | 0.19 | 0.43 | 50.0-51.0 | 53.22 | 214.58 | 1.51 | 6.09 |
| 4.0-5.0 | 8.47 | 23.58 | 0.24 | 0.67 | 51.0-52.0 | 52.83 | 267.40 | 1.50 | 7.59 |
| 5.0-6.0 | 10.34 | 33.92 | 0.29 | 0.96 | 52.0-53.0 | 52.37 | 319.77 | 1.49 | 9.08 |
| 6.0-7.0 | 12.19 | 46.11 | 0.35 | 1.31 | 53.0-54.0 | 51.84 | 371.61 | 1.47 | 10.55 |
| 7.0-8.0 | 14.03 | 60.14 | 0.40 | 1.71 | 54.0-55.0 | 51.26 | 422.87 | 1.46 | 12.01 |
| 8.0-9.0 | 15.85 | 75.99 | 0.45 | 2.16 | 55.0-56.0 | 50.61 | 473.48 | 1.44 | 13.44 |
| 9.0-10.0 | 17.66 | 93.65 | 0.50 | 2.66 | 56.0-57.0 | 49.91 | 523.38 | 1.42 | 14.86 |
| 10.0-11.0 | 19.44 | 113.09 | 0.55 | 3.21 | 57.0-58.0 | 49.13 | 572.52 | 1.39 | 16.25 |
| 11.0-12.0 | 21.20 | 134.28 | 0.60 | 3.81 | 58.0-59.0 | 48.30 | 620.82 | 1.37 | 17.63 |
| 12.0-13.0 | 22.93 | 157.22 | 0.65 | 4.46 | 59.0-60.0 | 47.41 | 668.23 | 1.35 | 18.97 |
| 13.0-14.0 | 24.64 | 181.86 | 0.70 | 5.16 | 60.0-61.0 | 46.47 | 714.70 | 1.32 | 20.29 |
| 14.0-15.0 | 26.31 | 208.17 | 0.75 | 5.91 | 61.0-62.0 | 45.47 | 760.17 | 1.29 | 21.58 |
| 15.0-16.0 | 27.96 | 236.13 | 0.79 | 6.70 | 62.0-63.0 | 44.41 | 804.57 | 1.26 | 22.84 |
| 16.0-17.0 | 29.57 | 265.70 | 0.84 | 7.54 | 63.0-64.0 | 43.30 | 847.87 | 1.23 | 24.07 |
| 17.0-18.0 | 31.14 | 296.84 | 0.88 | 8.43 | 64.0-65.0 | 42.13 | 890.00 | 1.20 | 25.27 |
| 18.0-19.0 | 32.68 | 329.52 | 0.93 | 9.36 | 65.0-66.0 | 40.91 | 930.91 | 1.16 | 26.43 |
| 19.0-20.0 | 34.17 | 363.69 | 0.97 | 10.33 | 66.0-67.0 | 39.66 | 970.57 | 1.13 | 27.56 |
| 20.0-21.0 | 35.63 | 399.32 | 1.01 | 11.34 | 67.0-68.0 | 38.36 | 1008.93 | 1.09 | 28.64 |
| 21.0-22.0 | 37.03 | 436.35 | 1.05 | 12.39 | 68.0-69.0 | 37.01 | 1045.94 | 1.05 | 29.70 |
| 22.0-23.0 | 38.39 | 474.75 | 1.09 | 13.48 | 69.0-70.0 | 35.62 | 1081.56 | 1.01 | 30.71 |
| 23.0-24.0 | 39.71 | 514.45 | 1.13 | 14.61 | 70.0-71.0 | 34.19 | 1115.75 | 0.97 | 31.68 |
| 24.0-25.0 | 40.98 | 555.43 | 1.16 | 15.77 | 71.0-72.0 | 32.73 | 1148.48 | 0.93 | 32.61 |
| 25.0-26.0 | 42.19 | 597.62 | 1.20 | 16.97 | 72.0-73.0 | 31.25 | 1179.72 | 0.89 | 33.49 |
| 26.0-27.0 | 43.36 | 640.98 | 1.23 | 18.20 | 73.0-74.0 | 29.74 | 1209.46 | 0.84 | 34.34 |
| 27.0-28.0 | 44.46 | 685.44 | 1.26 | 19.46 | 74.0-75.0 | 28.20 | 1237.66 | 0.80 | 35.14 |
| 28.0-29.0 | 45.52 | 730.96 | 1.29 | 20.75 | 75.0-76.0 | 26.65 | 1264.31 | 0.76 | 35.90 |
| 29.0-30.0 | 46.52 | 777.48 | 1.32 | 22.07 | 76.0-77.0 | 25.10 | 1289.40 | 0.71 | 36.61 |
| 30.0-31.0 | 47.46 | 824.94 | 1.35 | 23.42 | 77.0-78.0 | 23.55 | 1312.95 | 0.67 | 37.28 |
| 31.0-32.0 | 48.35 | 873.28 | 1.37 | 24.79 | 78.0-79.0 | 22.01 | 1334.96 | 0.63 | 37.90 |
| 32.0-33.0 | 49.17 | 922.45 | 1.40 | 26.19 | 79.0-80.0 | 20.50 | 1355.47 | 0.58 | 38.48 |
| 33.0-34.0 | 49.93 | 972.39 | 1.42 | 27.61 | 80.0-81.0 | 19.02 | 1374.49 | 0.54 | 39.02 |
| 34.0-35.0 | 50.63 | 1023.02 | 1.44 | 29.04 | 81.0-82.0 | 17.58 | 1392.06 | 0.50 | 39.52 |
| 35.0-36.0 | 51.28 | 1074.30 | 1.46 | 30.50 | 82.0-83.0 | 16.19 | 1408.26 | 0.46 | 39.98 |
| 36.0-37.0 | 51.86 | 1126.16 | 1.47 | 31.97 | 83.0-84.0 | 14.89 | 1423.15 | 0.42 | 40.41 |
| 37.0-38.0 | 52.38 | 1178.54 | 1.49 | 33.46 | 84.0-85.0 | 13.69 | 1436.84 | 0.39 | 40.79 |
| 38.0-39.0 | 52.84 | 1231.38 | 1.50 | 34.96 | 85.0-86.0 | 12.60 | 1449.43 | 0.36 | 41.15 |
| 39.0-40.0 | 53.22 | 1284.60 | 1.51 | 36.47 | 86.0-87.0 | 11.65 | 1461.09 | 0.33 | 41.48 |
| 40.0-41.0 | 53.55 | 1338.15 | 1.52 | 37.99 | 87.0-88.0 | 10.89 | 1471.98 | 0.31 | 41.79 |
| 41.0-42.0 | 53.81 | 1391.96 | 1.53 | 39.52 | 88.0-89.0 | 10.30 | 1482.28 | 0.29 | 42.08 |
| 42.0-43.0 | 54.01 | 1445.97 | 1.53 | 41.05 | 89.0-90.0 | 9.89 | 1492.17 | 0.28 | 42.36 |
| 43.0-44.0 | 54.14 | 1500.11 | 1.54 | 42.59 | 90.0-91.0 | 9.65 | 1501.81 | 0.27 | 42.64 |
| 44.0-45.0 | 54.21 | 1554.32 | 1.54 | 44.13 | 91.0-92.0 | 9.51 | 1511.33 | 0.27 | 42.91 |
| 45.0-46.0 | 54.20 | 1608.52 | 1.54 | 45.67 | 92.0-93.0 | 9.42 | 1520.75 | 0.27 | 43.18 |
| 46.0-47.0 | 54.14 | 1662.66 | 1.54 | 47.21 | 93.0-94.0 | 9.32 | 1530.07 | 0.26 | 43.44 |

IES Indoor Report

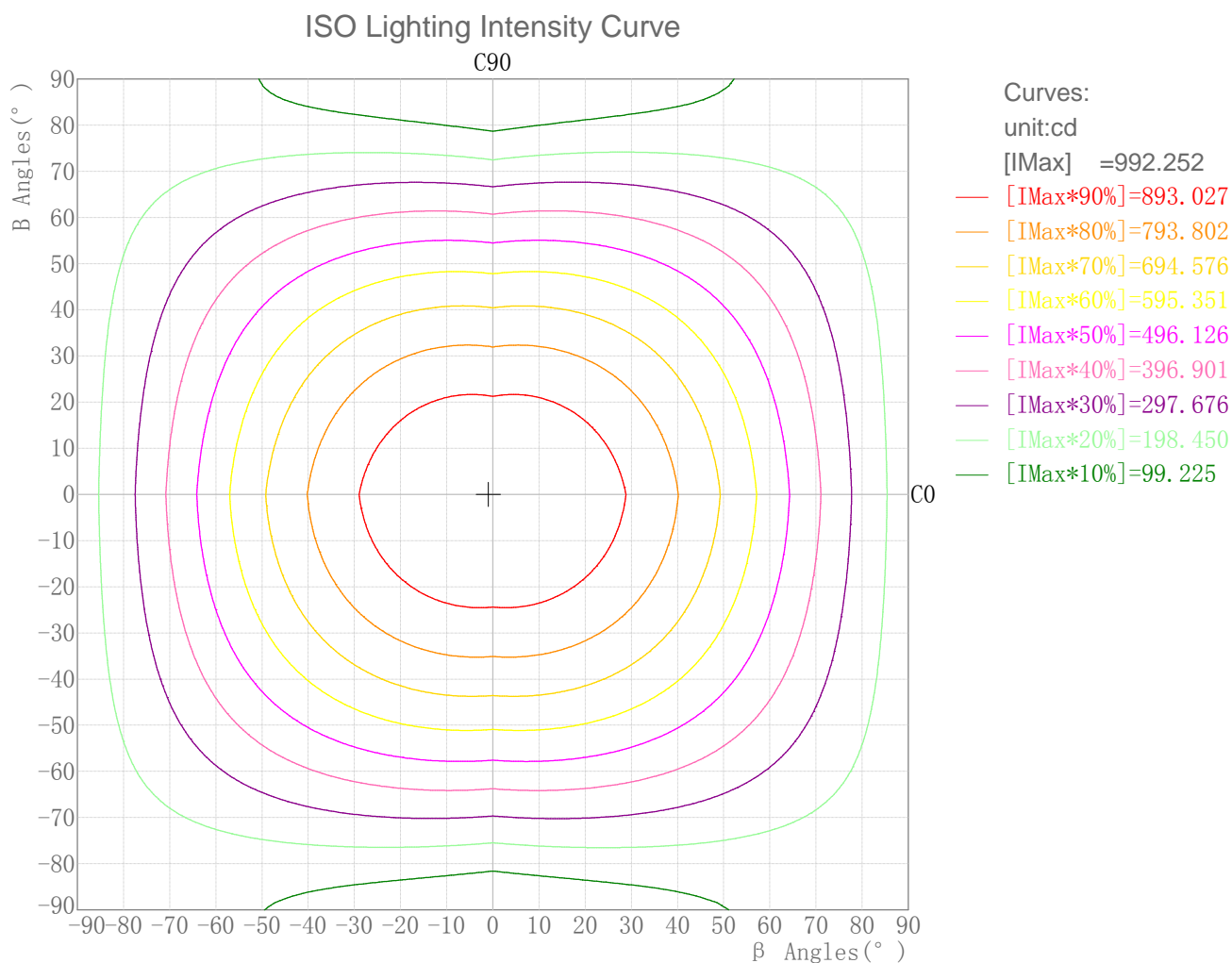
Photometric Filename:LEDBATTEN40W-4K.IES

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 | 9.23 | 9.23 | 0.26 | 0.26 | 141.0-142.0 | 2.81 | 2.81 | 0.08 | 0.08 |
| 95.0-96.0 | 9.13 | 18.35 | 0.26 | 0.52 | 142.0-143.0 | 2.69 | 5.50 | 0.08 | 0.16 |
| 96.0-97.0 | 9.02 | 27.37 | 0.26 | 0.78 | 143.0-144.0 | 2.58 | 8.08 | 0.07 | 0.23 |
| 97.0-98.0 | 8.91 | 36.29 | 0.25 | 1.03 | 144.0-145.0 | 2.47 | 10.55 | 0.07 | 0.30 |
| 98.0-99.0 | 8.81 | 45.09 | 0.25 | 1.28 | 145.0-146.0 | 2.36 | 12.91 | 0.07 | 0.37 |
| 99.0-100.0 | 8.70 | 53.79 | 0.25 | 1.53 | 146.0-147.0 | 2.25 | 15.15 | 0.06 | 0.43 |
| 100.0-101.0 | 8.59 | 62.38 | 0.24 | 1.77 | 147.0-148.0 | 2.14 | 17.29 | 0.06 | 0.49 |
| 101.0-102.0 | 8.48 | 70.85 | 0.24 | 2.01 | 148.0-149.0 | 2.03 | 19.32 | 0.06 | 0.55 |
| 102.0-103.0 | 8.36 | 79.21 | 0.24 | 2.25 | 149.0-150.0 | 1.93 | 21.25 | 0.05 | 0.60 |
| 103.0-104.0 | 8.23 | 87.45 | 0.23 | 2.48 | 150.0-151.0 | 1.82 | 23.07 | 0.05 | 0.66 |
| 104.0-105.0 | 8.11 | 95.55 | 0.23 | 2.71 | 151.0-152.0 | 1.71 | 24.79 | 0.05 | 0.70 |
| 105.0-106.0 | 7.97 | 103.52 | 0.23 | 2.94 | 152.0-153.0 | 1.61 | 26.39 | 0.05 | 0.75 |
| 106.0-107.0 | 7.84 | 111.36 | 0.22 | 3.16 | 153.0-154.0 | 1.51 | 27.90 | 0.04 | 0.79 |
| 107.0-108.0 | 7.70 | 119.06 | 0.22 | 3.38 | 154.0-155.0 | 1.42 | 29.31 | 0.04 | 0.83 |
| 108.0-109.0 | 7.55 | 126.61 | 0.21 | 3.59 | 155.0-156.0 | 1.33 | 30.64 | 0.04 | 0.87 |
| 109.0-110.0 | 7.37 | 133.98 | 0.21 | 3.80 | 156.0-157.0 | 1.24 | 31.89 | 0.04 | 0.91 |
| 110.0-111.0 | 7.15 | 141.13 | 0.20 | 4.01 | 157.0-158.0 | 1.16 | 33.05 | 0.03 | 0.94 |
| 111.0-112.0 | 6.93 | 148.06 | 0.20 | 4.20 | 158.0-159.0 | 1.08 | 34.13 | 0.03 | 0.97 |
| 112.0-113.0 | 6.74 | 154.80 | 0.19 | 4.40 | 159.0-160.0 | 1.00 | 35.13 | 0.03 | 1.00 |
| 113.0-114.0 | 6.59 | 161.39 | 0.19 | 4.58 | 160.0-161.0 | 0.92 | 36.05 | 0.03 | 1.02 |
| 114.0-115.0 | 6.46 | 167.86 | 0.18 | 4.77 | 161.0-162.0 | 0.85 | 36.90 | 0.02 | 1.05 |
| 115.0-116.0 | 6.35 | 174.20 | 0.18 | 4.95 | 162.0-163.0 | 0.78 | 37.69 | 0.02 | 1.07 |
| 116.0-117.0 | 6.22 | 180.42 | 0.18 | 5.12 | 163.0-164.0 | 0.72 | 38.40 | 0.02 | 1.09 |
| 117.0-118.0 | 6.07 | 186.49 | 0.17 | 5.29 | 164.0-165.0 | 0.65 | 39.06 | 0.02 | 1.11 |
| 118.0-119.0 | 5.90 | 192.39 | 0.17 | 5.46 | 165.0-166.0 | 0.59 | 39.65 | 0.02 | 1.13 |
| 119.0-120.0 | 5.74 | 198.14 | 0.16 | 5.63 | 166.0-167.0 | 0.53 | 40.18 | 0.02 | 1.14 |
| 120.0-121.0 | 5.58 | 203.72 | 0.16 | 5.78 | 167.0-168.0 | 0.48 | 40.66 | 0.01 | 1.15 |
| 121.0-122.0 | 5.45 | 209.17 | 0.15 | 5.94 | 168.0-169.0 | 0.43 | 41.09 | 0.01 | 1.17 |
| 122.0-123.0 | 5.33 | 214.50 | 0.15 | 6.09 | 169.0-170.0 | 0.38 | 41.47 | 0.01 | 1.18 |
| 123.0-124.0 | 5.18 | 219.68 | 0.15 | 6.24 | 170.0-171.0 | 0.33 | 41.79 | 0.01 | 1.19 |
| 124.0-125.0 | 5.02 | 224.70 | 0.14 | 6.38 | 171.0-172.0 | 0.28 | 42.08 | 0.01 | 1.19 |
| 125.0-126.0 | 4.87 | 229.58 | 0.14 | 6.52 | 172.0-173.0 | 0.24 | 42.32 | 0.01 | 1.20 |
| 126.0-127.0 | 4.73 | 234.31 | 0.13 | 6.65 | 173.0-174.0 | 0.20 | 42.52 | 0.01 | 1.21 |
| 127.0-128.0 | 4.60 | 238.90 | 0.13 | 6.78 | 174.0-175.0 | 0.16 | 42.68 | 0.00 | 1.21 |
| 128.0-129.0 | 4.46 | 243.36 | 0.13 | 6.91 | 175.0-176.0 | 0.13 | 42.81 | 0.00 | 1.22 |
| 129.0-130.0 | 4.32 | 247.68 | 0.12 | 7.03 | 176.0-177.0 | 0.09 | 42.91 | 0.00 | 1.22 |
| 130.0-131.0 | 4.17 | 251.85 | 0.12 | 7.15 | 177.0-178.0 | 0.07 | 42.97 | 0.00 | 1.22 |
| 131.0-132.0 | 4.03 | 255.88 | 0.11 | 7.26 | 178.0-179.0 | 0.04 | 43.01 | 0.00 | 1.22 |
| 132.0-133.0 | 3.89 | 259.77 | 0.11 | 7.38 | 179.0-180.0 | 0.01 | 43.02 | 0.00 | 1.22 |
| 133.0-134.0 | 3.76 | 263.52 | 0.11 | 7.48 | | | | | |
| 134.0-135.0 | 3.62 | 267.15 | 0.10 | 7.58 | | | | | |
| 135.0-136.0 | 3.50 | 270.65 | 0.10 | 7.68 | | | | | |
| 136.0-137.0 | 3.39 | 274.04 | 0.10 | 7.78 | | | | | |
| 137.0-138.0 | 3.28 | 277.31 | 0.09 | 7.87 | | | | | |
| 138.0-139.0 | 3.16 | 280.48 | 0.09 | 7.96 | | | | | |
| 139.0-140.0 | 3.04 | 283.52 | 0.09 | 8.05 | | | | | |
| 140.0-141.0 | 2.93 | 286.45 | 0.08 | 8.13 | | | | | |

Rectangle ISO Lighting Intensity Diagram

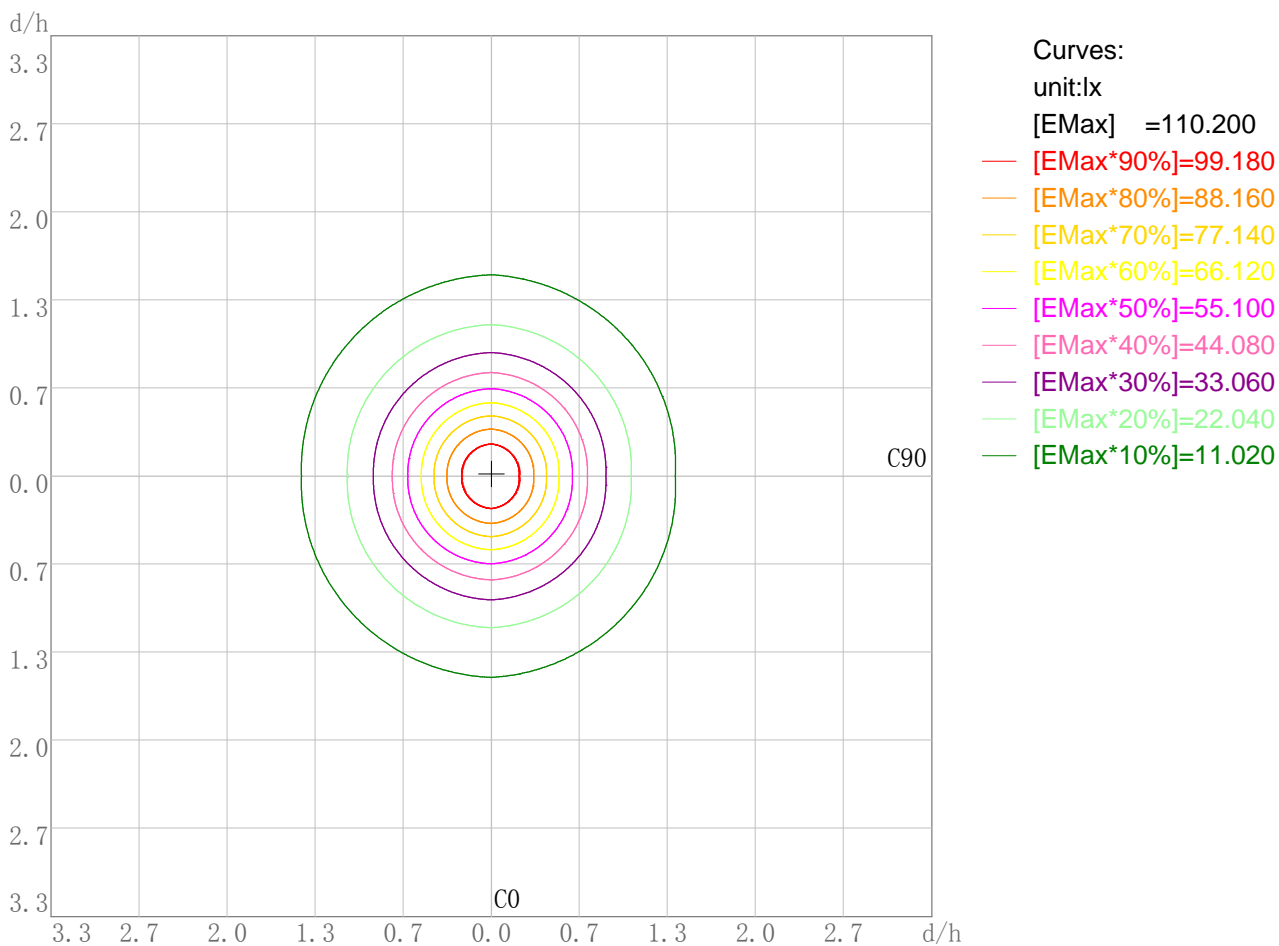
| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |



Plane ISO-Illuminance Diagram

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

Plane ISO-Illuminance Curve

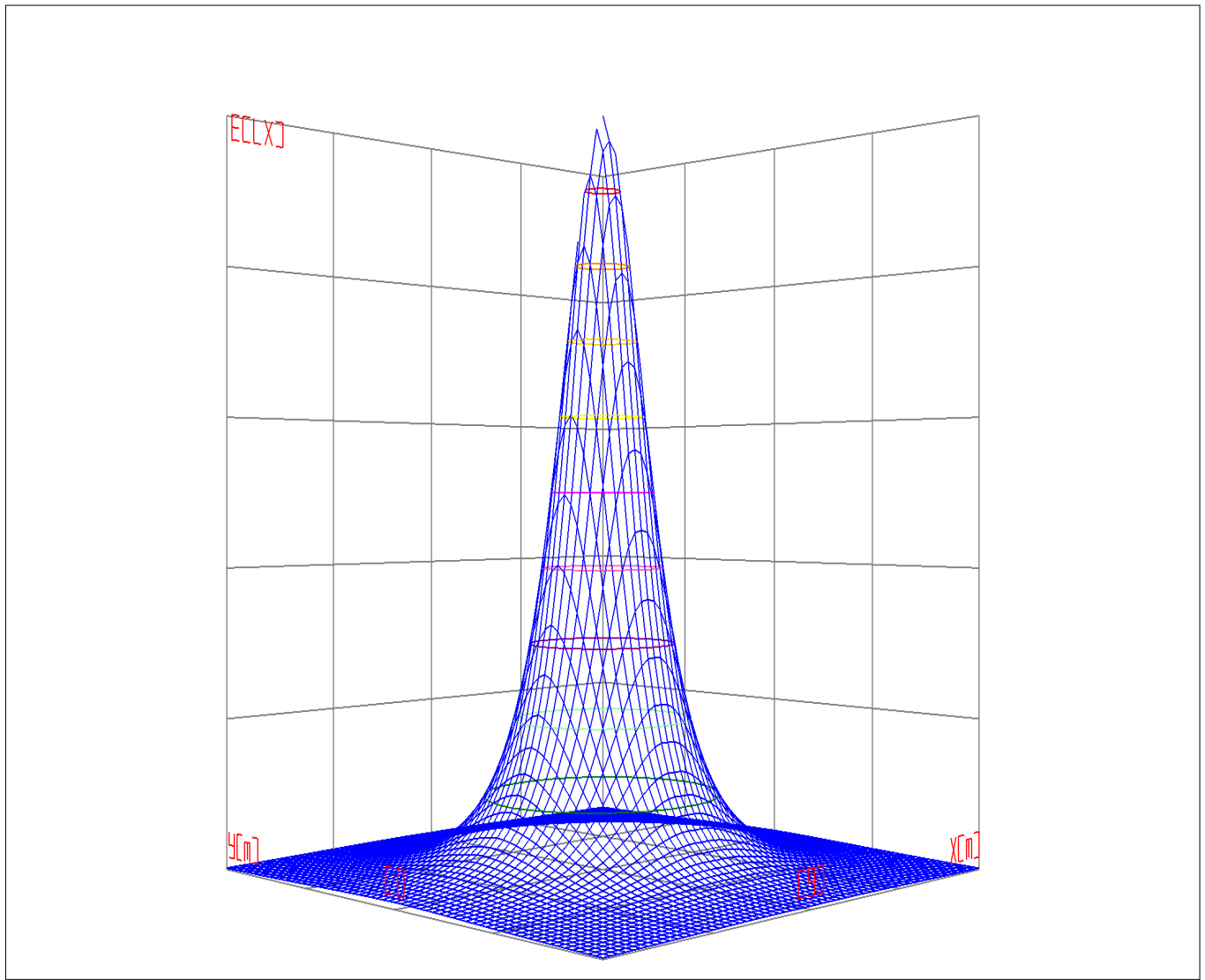


Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 110.20
 Working Plane Maximum Illuminance Position(d/h):H0.0 V-0.0

3D Plane ISO Illuminance Diagram

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

3D Plane Illuminance Modal

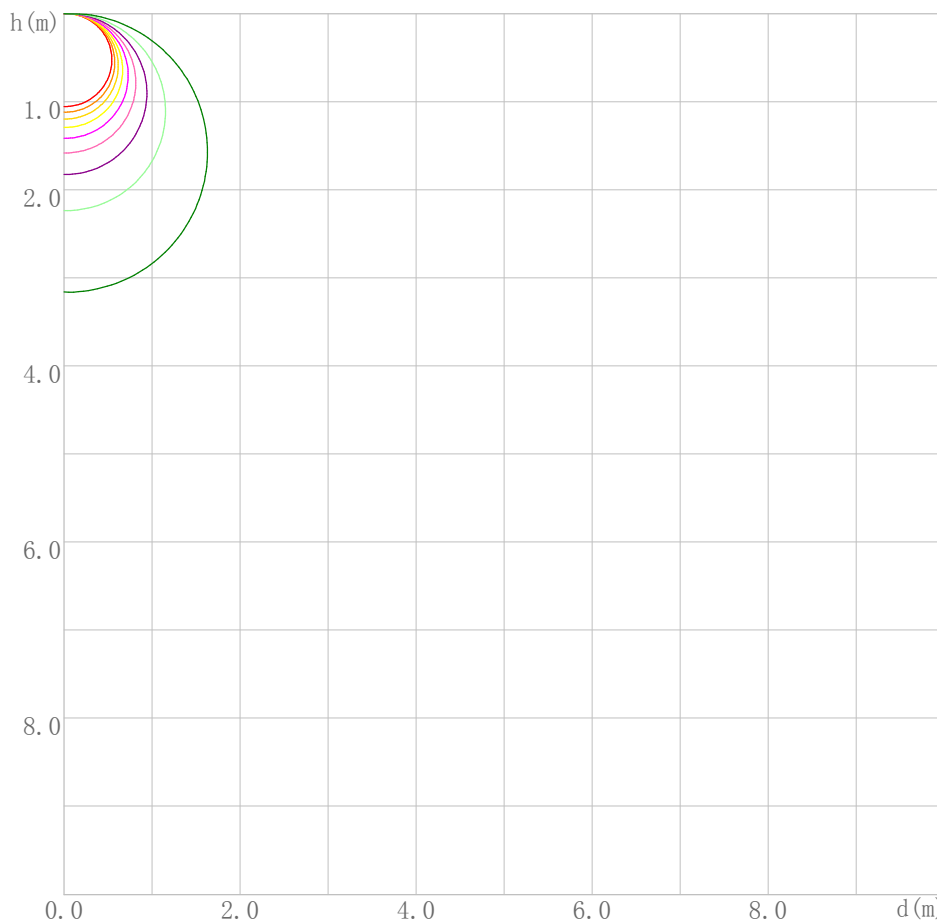


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

Space ISO Illuminance Curve

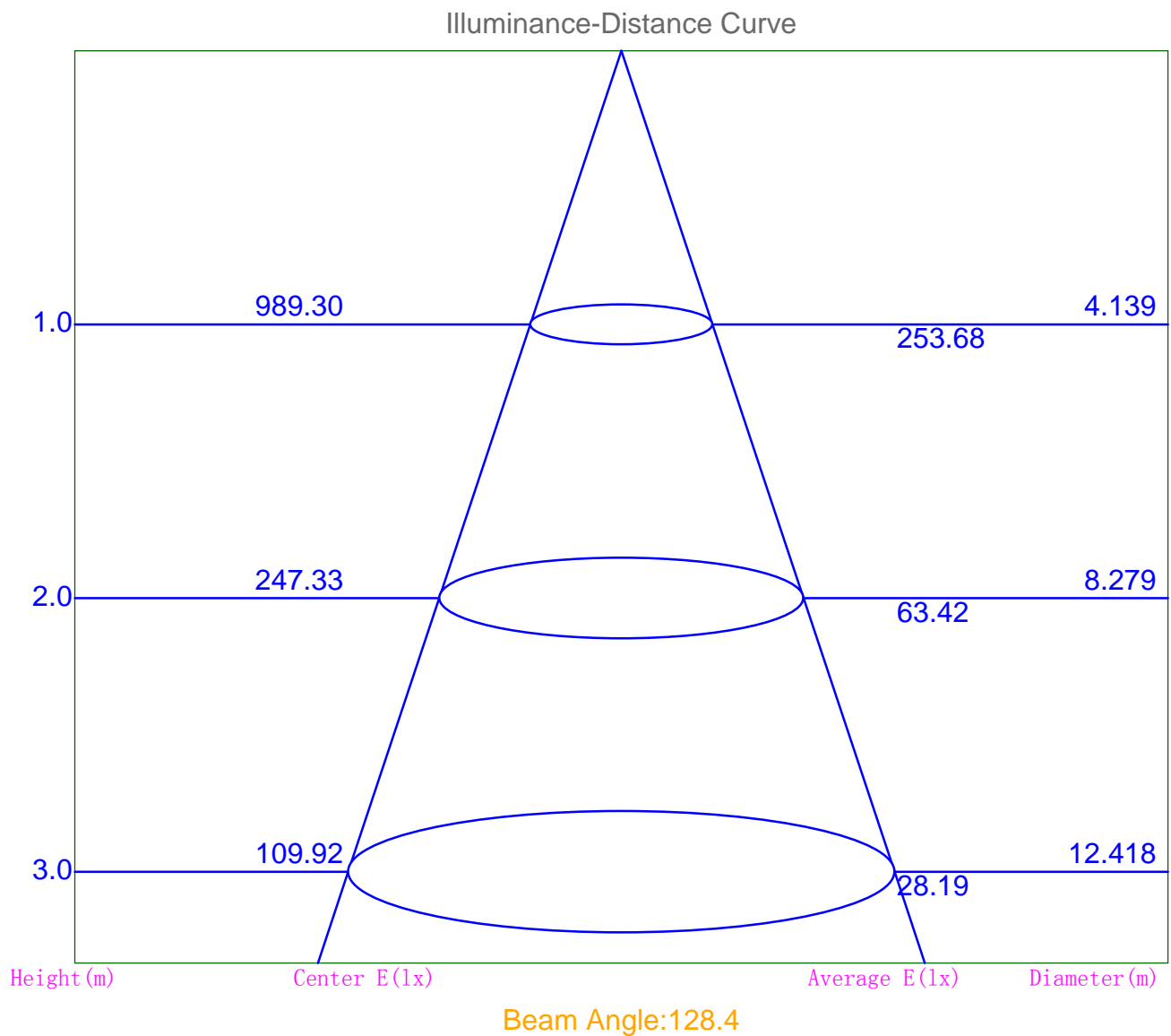


- Curves:
unit:lx
[EMax] =991.766
- [EMax*90%]=892.589
 - [EMax*80%]=793.413
 - [EMax*70%]=694.236
 - [EMax*60%]=595.059
 - [EMax*50%]=495.883
 - [EMax*40%]=396.706
 - [EMax*30%]=297.530
 - [EMax*20%]=198.353
 - [EMax*10%]=99.177

Space Plane Maximum Illuminance and @Angle:991.77,1.0deg
Plane Maximum Lighting Intensity and @Angle:992.219cd,0deg

Illuminance-Distance Diagram

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |



Indoor Luminance Limiting Curves

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

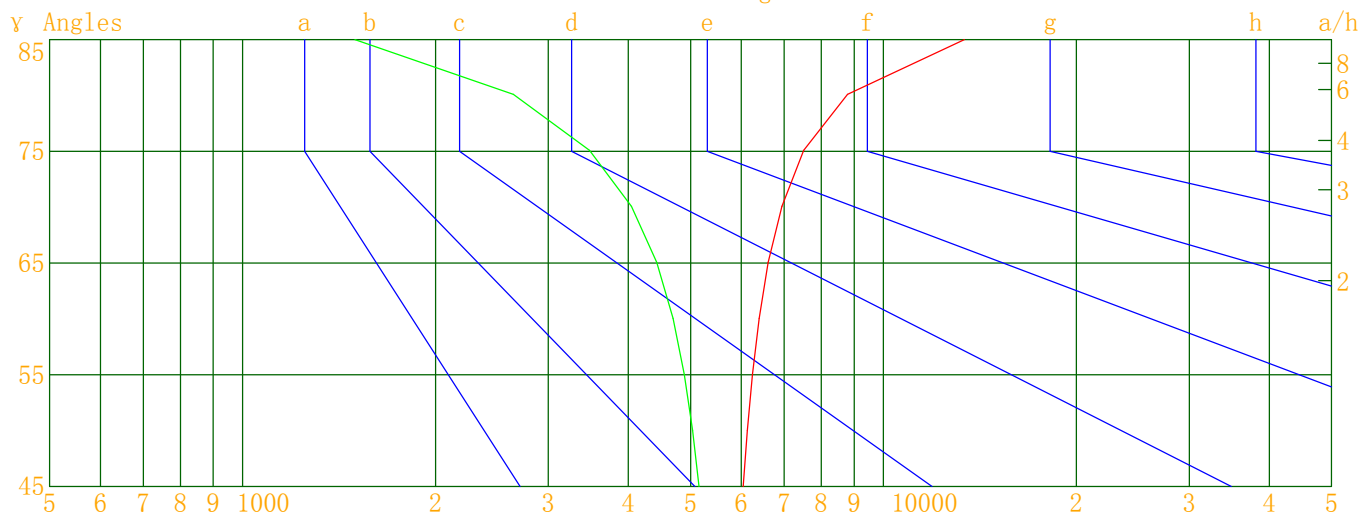
Glare Grade Table

| GI | Quality | Using Illuminance | | | | | | | |
|------|---------|-------------------|------|------|-------|-------|-------|-------|-------|
| | | a | b | c | d | e | f | g | h |
| 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 | 6042 | 6131 | 6246 | 6395 | 6607 | 6941 | 7510 | 8786 | 13371 |
| C90 | 5155 | 5038 | 4890 | 4694 | 4426 | 4044 | 3478 | 2645 | 1497 |

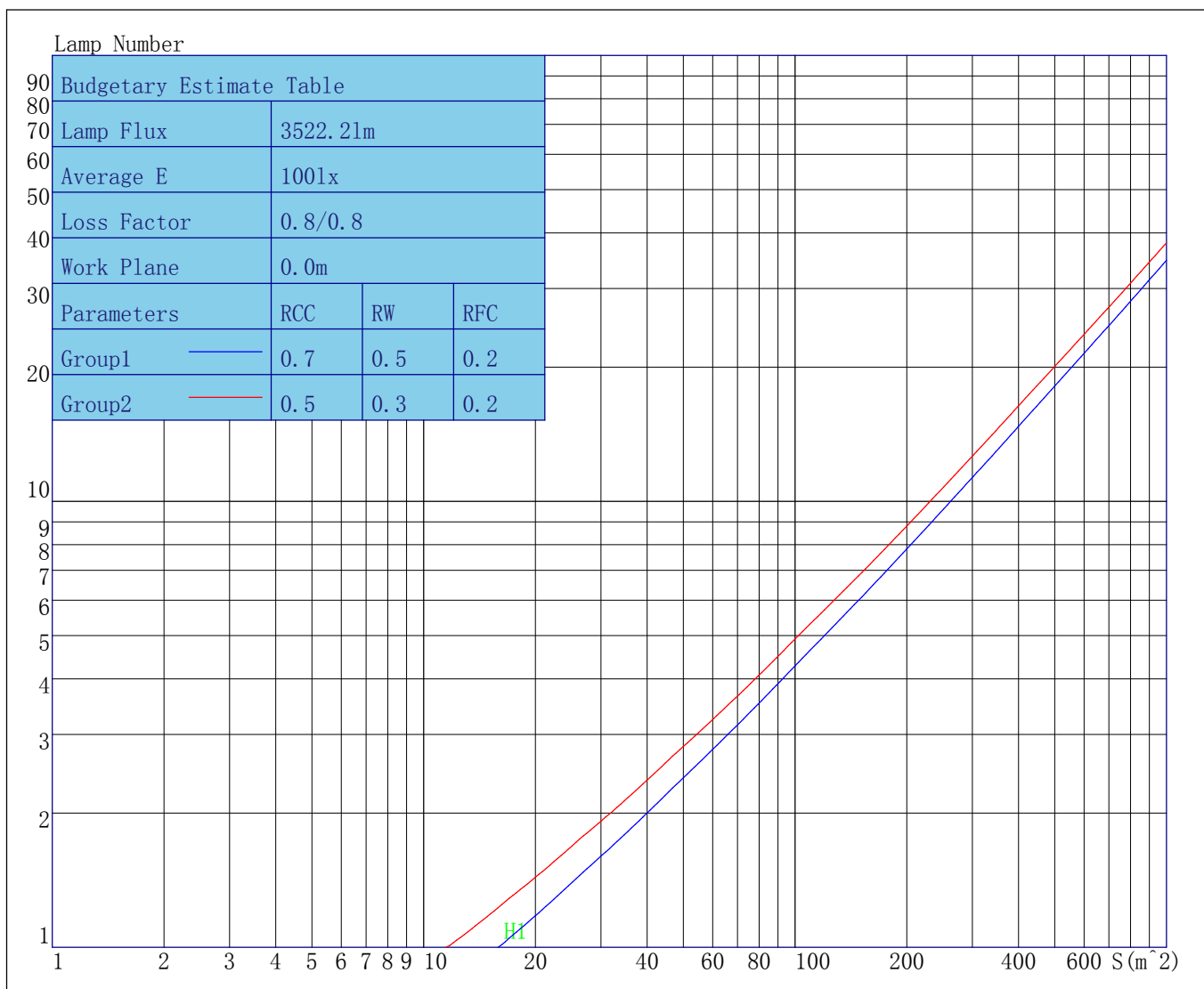
Luminance Limiting Curve



Luminous Size: Length(m)=1.200 Width(m)=0.080 Height(m)=0.065 Area(m²)=0.174000
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

Indoor Budgetary Estimate Table

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |



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: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

| 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 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 105 | 105 | 105 | 99 | 99 | 99 | 92 | 92 | 92 | 90 |
| 1 | 105 | 100 | 95 | 91 | 101 | 97 | 92 | 89 | 90 | 87 | 84 | 85 | 82 | 79 | 79 | 77 | 75 | 72 |
| 2 | 95 | 86 | 79 | 73 | 91 | 84 | 77 | 71 | 78 | 73 | 68 | 73 | 69 | 65 | 69 | 65 | 62 | 59 |
| 3 | 86 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 57 | 64 | 59 | 54 | 60 | 56 | 52 | 49 |
| 4 | 79 | 66 | 57 | 51 | 76 | 64 | 56 | 50 | 61 | 53 | 48 | 57 | 51 | 46 | 54 | 49 | 44 | 42 |
| 5 | 72 | 59 | 50 | 43 | 69 | 57 | 49 | 42 | 54 | 47 | 41 | 51 | 45 | 40 | 48 | 43 | 38 | 36 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 41 | 36 | 46 | 40 | 35 | 44 | 38 | 33 | 31 |
| 7 | 62 | 48 | 39 | 33 | 59 | 47 | 38 | 32 | 44 | 37 | 31 | 42 | 35 | 31 | 40 | 34 | 30 | 27 |
| 8 | 57 | 44 | 35 | 29 | 55 | 43 | 34 | 29 | 40 | 33 | 28 | 38 | 32 | 27 | 36 | 31 | 26 | 24 |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 37 | 30 | 25 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 48 | 36 | 28 | 23 | 34 | 27 | 23 | 33 | 26 | 22 | 31 | 26 | 22 | 20 |

Unified Glare Rating Table

| | | |
|----------------------------|--------------------------|-----------------------|
| Lum. Name: LEDBATTEN40W-4K | Lum. Catalog: LED BATTEN | Test ID: |
| Lamp Name: 4000K | Lamp Catalog: SMD2835 | Test Lab: |
| Manufacture: | Test Machine:GON-2000 | Test Date: 2017/02/16 |

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 | 17.4 | 20.8 | 18.6 | 22.0 | 23.2 | 15.9 | 19.3 | 17.1 | 20.5 | 21.7 |
| Y=3H | 23.2 | 26.6 | 24.4 | 27.8 | 29.0 | 20.2 | 23.6 | 21.4 | 24.8 | 26.0 |
| Y=4H | 26.9 | 29.9 | 28.1 | 31.1 | 32.3 | 22.6 | 25.6 | 23.8 | 26.8 | 28.0 |
| Y=6H | 30.0 | 32.9 | 31.3 | 34.1 | 35.4 | 23.9 | 26.8 | 25.1 | 28.0 | 29.2 |
| Y=8H | 31.6 | 34.5 | 32.9 | 35.7 | 36.9 | 24.2 | 27.1 | 25.5 | 28.3 | 29.6 |
| Y=12H | 33.4 | 36.2 | 34.6 | 37.4 | 38.7 | 24.4 | 27.2 | 25.6 | 28.5 | 29.7 |
| X=4H Y=2H | 18.7 | 21.7 | 20.0 | 22.9 | 24.1 | 18.1 | 21.1 | 19.4 | 22.3 | 23.5 |
| Y=3H | 24.8 | 27.7 | 26.0 | 29.0 | 30.2 | 22.7 | 25.6 | 23.9 | 26.9 | 28.1 |
| Y=4H | 26.9 | 28.8 | 28.4 | 30.3 | 31.7 | 23.7 | 25.5 | 25.2 | 27.0 | 28.5 |
| Y=6H | 30.7 | 32.3 | 32.2 | 33.8 | 35.3 | 25.6 | 27.2 | 27.1 | 28.7 | 30.2 |
| Y=8H | 32.6 | 34.2 | 34.2 | 35.7 | 37.2 | 26.2 | 27.8 | 27.7 | 29.3 | 30.8 |
| Y=12H | 33.9 | 35.3 | 35.6 | 36.9 | 38.5 | 25.7 | 27.1 | 27.4 | 28.7 | 30.3 |
| X=8H Y=4H | 27.3 | 28.9 | 28.8 | 30.4 | 31.9 | 24.6 | 26.2 | 26.2 | 27.7 | 29.2 |
| Y=6H | 30.4 | 31.6 | 32.1 | 33.2 | 34.8 | 26.1 | 27.3 | 27.8 | 28.9 | 30.5 |
| Y=8H | 32.2 | 33.1 | 34.0 | 34.8 | 36.5 | 26.7 | 27.6 | 28.4 | 29.3 | 30.9 |
| Y=12H | 34.9 | 35.7 | 36.6 | 37.4 | 39.1 | 27.5 | 28.3 | 29.2 | 30.0 | 31.7 |
| X=12H Y=4H | 26.4 | 27.7 | 28.0 | 29.4 | 30.9 | 23.9 | 25.3 | 25.6 | 26.9 | 28.5 |
| Y=6H | 30.0 | 30.9 | 31.7 | 32.7 | 34.3 | 26.0 | 26.9 | 27.7 | 28.6 | 30.3 |
| Y=8H | 32.3 | 33.2 | 34.1 | 34.9 | 36.5 | 27.2 | 28.0 | 28.9 | 29.7 | 31.4 |
| Variations with the objerver position at spacings | | | | | | | | | | |
| S=1.0H | 2.1/-1.9 | | | | | 2.3/-0.4 | | | | |
| S=1.5H | -1.9/-20.1 | | | | | -0.4/-16.8 | | | | |
| S=2.0H | -1.9/-20.1 | | | | | -0.4/-16.8 | | | | |

IES Indoor Report
Photometric Filename:LEDBATTEN40W-4K.IES

Candela Tabulation

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|--------|--------|--------|--------|
| Y 0.0 | 989.30 | 989.30 | 989.30 | 989.30 |
| Y 1.0 | 992.22 | 982.44 | 992.25 | 983.54 |
| Y 2.0 | 991.96 | 981.27 | 991.99 | 983.56 |
| Y 3.0 | 991.44 | 979.80 | 991.50 | 983.17 |
| Y 4.0 | 990.90 | 977.99 | 990.97 | 982.50 |
| Y 5.0 | 990.03 | 975.84 | 990.30 | 981.48 |
| Y 6.0 | 988.98 | 973.25 | 989.39 | 980.06 |
| Y 7.0 | 987.79 | 970.45 | 988.30 | 978.34 |
| Y 8.0 | 986.38 | 967.18 | 986.96 | 976.24 |
| Y 9.0 | 984.67 | 963.62 | 985.33 | 973.78 |
| Y 10.0 | 982.69 | 959.74 | 983.40 | 971.00 |
| Y 11.0 | 980.47 | 955.48 | 981.21 | 967.84 |
| Y 12.0 | 978.01 | 950.86 | 978.78 | 964.35 |
| Y 13.0 | 975.20 | 945.87 | 976.13 | 960.42 |
| Y 14.0 | 972.23 | 940.64 | 973.03 | 956.20 |
| Y 15.0 | 968.78 | 935.04 | 969.73 | 951.63 |
| Y 16.0 | 965.16 | 929.11 | 966.15 | 946.82 |
| Y 17.0 | 961.23 | 922.88 | 962.27 | 941.64 |
| Y 18.0 | 957.00 | 916.25 | 958.05 | 936.03 |
| Y 19.0 | 952.49 | 909.41 | 953.54 | 930.12 |
| Y 20.0 | 947.77 | 902.15 | 948.70 | 924.00 |
| Y 21.0 | 942.71 | 894.79 | 943.63 | 917.49 |
| Y 22.0 | 937.15 | 887.02 | 938.18 | 910.66 |
| Y 23.0 | 931.48 | 878.83 | 932.48 | 903.48 |
| Y 24.0 | 925.46 | 870.37 | 926.62 | 896.07 |
| Y 25.0 | 919.31 | 861.78 | 920.36 | 888.29 |
| Y 26.0 | 912.93 | 852.77 | 913.86 | 880.26 |
| Y 27.0 | 906.13 | 843.59 | 907.07 | 871.83 |
| Y 28.0 | 898.98 | 834.05 | 900.03 | 863.26 |
| Y 29.0 | 891.70 | 824.21 | 892.72 | 854.36 |
| Y 30.0 | 884.25 | 814.14 | 885.12 | 845.04 |
| Y 31.0 | 876.58 | 803.94 | 877.31 | 835.56 |
| Y 32.0 | 868.67 | 793.25 | 869.18 | 825.79 |
| Y 33.0 | 860.32 | 782.42 | 860.82 | 815.70 |
| Y 34.0 | 851.49 | 771.40 | 852.24 | 805.40 |
| Y 35.0 | 842.75 | 760.05 | 843.39 | 794.93 |
| Y 36.0 | 833.86 | 748.50 | 834.30 | 784.13 |
| Y 37.0 | 824.84 | 736.76 | 825.11 | 773.07 |
| Y 38.0 | 815.45 | 724.67 | 815.63 | 761.82 |
| Y 39.0 | 805.68 | 712.39 | 805.89 | 750.30 |
| Y 40.0 | 795.66 | 700.06 | 795.80 | 738.49 |
| Y 41.0 | 785.55 | 687.20 | 785.65 | 726.48 |
| Y 42.0 | 775.32 | 674.27 | 775.32 | 714.28 |
| Y 43.0 | 765.08 | 661.23 | 764.91 | 701.74 |
| Y 44.0 | 754.39 | 647.83 | 754.08 | 688.96 |
| Y 45.0 | 743.40 | 634.26 | 743.00 | 676.04 |
| Y 46.0 | 732.09 | 620.55 | 731.79 | 662.97 |

IES Indoor Report
Photometric Filename:LEDBATTEN40W-4K.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|--------|--------|--------|--------|
| Y 47.0 | 720.57 | 606.56 | 720.33 | 649.60 |
| Y 48.0 | 709.12 | 592.35 | 708.72 | 636.07 |
| Y 49.0 | 697.69 | 577.99 | 696.97 | 622.26 |
| Y 50.0 | 685.77 | 563.45 | 684.94 | 608.21 |
| Y 51.0 | 673.60 | 548.79 | 672.73 | 594.02 |
| Y 52.0 | 661.17 | 533.92 | 660.32 | 579.74 |
| Y 53.0 | 648.46 | 518.76 | 647.68 | 565.18 |
| Y 54.0 | 635.91 | 503.41 | 634.91 | 550.34 |
| Y 55.0 | 623.40 | 488.00 | 621.99 | 535.22 |
| Y 56.0 | 610.42 | 472.38 | 608.86 | 520.09 |
| Y 57.0 | 597.16 | 456.64 | 595.54 | 504.83 |
| Y 58.0 | 583.70 | 440.76 | 582.06 | 489.36 |
| Y 59.0 | 570.03 | 424.64 | 568.45 | 473.70 |
| Y 60.0 | 556.37 | 408.40 | 554.66 | 457.85 |
| Y 61.0 | 542.93 | 392.04 | 540.72 | 441.83 |
| Y 62.0 | 528.98 | 375.54 | 526.66 | 425.64 |
| Y 63.0 | 514.75 | 359.02 | 512.47 | 409.36 |
| Y 64.0 | 500.32 | 342.33 | 498.08 | 392.97 |
| Y 65.0 | 485.83 | 325.49 | 483.53 | 376.46 |
| Y 66.0 | 471.51 | 308.61 | 468.93 | 359.78 |
| Y 67.0 | 457.33 | 291.66 | 454.28 | 342.97 |
| Y 68.0 | 442.67 | 274.65 | 439.45 | 326.01 |
| Y 69.0 | 427.93 | 257.67 | 424.52 | 308.99 |
| Y 70.0 | 413.09 | 240.66 | 409.41 | 291.92 |
| Y 71.0 | 397.98 | 223.61 | 394.35 | 274.84 |
| Y 72.0 | 383.09 | 206.62 | 379.40 | 257.76 |
| Y 73.0 | 368.36 | 189.80 | 364.44 | 240.56 |
| Y 74.0 | 353.38 | 173.07 | 349.41 | 223.40 |
| Y 75.0 | 338.21 | 156.65 | 334.38 | 206.38 |
| Y 76.0 | 323.18 | 140.45 | 319.41 | 189.48 |
| Y 77.0 | 308.27 | 124.53 | 304.71 | 172.72 |
| Y 78.0 | 293.74 | 109.08 | 290.24 | 156.15 |
| Y 79.0 | 279.59 | 94.19 | 276.10 | 139.83 |
| Y 80.0 | 265.47 | 79.92 | 262.27 | 123.83 |
| Y 81.0 | 251.61 | 66.43 | 248.82 | 108.30 |
| Y 82.0 | 238.27 | 53.78 | 235.91 | 93.30 |
| Y 83.0 | 225.54 | 42.15 | 223.73 | 78.91 |
| Y 84.0 | 213.71 | 31.69 | 212.38 | 65.33 |
| Y 85.0 | 202.77 | 22.70 | 202.07 | 52.64 |
| Y 86.0 | 192.21 | 15.36 | 192.90 | 41.05 |
| Y 87.0 | 184.08 | 9.94 | 185.37 | 30.87 |
| Y 88.0 | 176.84 | 6.72 | 179.40 | 22.25 |
| Y 89.0 | 170.52 | 5.74 | 174.65 | 15.42 |
| Y 90.0 | 166.66 | 5.82 | 171.66 | 10.78 |
| Y 91.0 | 164.42 | 5.88 | 170.07 | 8.56 |
| Y 92.0 | 162.82 | 5.99 | 168.54 | 8.09 |
| Y 93.0 | 161.22 | 6.10 | 167.01 | 8.02 |

IES Indoor Report
Photometric Filename:LEDBATTEN40W-4K.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|--------|-------|--------|--------|
| Y 94.0 | 159.56 | 6.18 | 165.49 | 7.95 |
| Y 95.0 | 157.84 | 6.28 | 163.97 | 7.89 |
| Y 96.0 | 156.08 | 6.41 | 162.43 | 7.89 |
| Y 97.0 | 154.30 | 6.49 | 160.85 | 7.89 |
| Y 98.0 | 152.63 | 6.59 | 159.25 | 7.86 |
| Y 99.0 | 151.02 | 6.71 | 157.67 | 7.88 |
| Y 100.0 | 149.43 | 6.78 | 156.02 | 7.92 |
| Y 101.0 | 147.86 | 6.90 | 154.38 | 7.92 |
| Y 102.0 | 146.22 | 7.04 | 152.70 | 7.94 |
| Y 103.0 | 144.50 | 7.13 | 150.97 | 7.99 |
| Y 104.0 | 142.74 | 7.24 | 149.14 | 8.02 |
| Y 105.0 | 140.89 | 7.38 | 147.27 | 8.04 |
| Y 106.0 | 139.02 | 7.47 | 145.35 | 8.12 |
| Y 107.0 | 137.16 | 7.58 | 143.39 | 8.17 |
| Y 108.0 | 135.28 | 7.73 | 141.43 | 8.22 |
| Y 109.0 | 132.78 | 7.83 | 139.44 | 8.29 |
| Y 110.0 | 128.63 | 7.91 | 137.11 | 8.36 |
| Y 111.0 | 125.32 | 8.05 | 133.22 | 8.39 |
| Y 112.0 | 123.11 | 8.18 | 128.61 | 8.47 |
| Y 113.0 | 121.43 | 8.27 | 125.63 | 8.55 |
| Y 114.0 | 120.01 | 8.39 | 123.42 | 8.60 |
| Y 115.0 | 118.87 | 8.51 | 121.62 | 8.67 |
| Y 116.0 | 117.76 | 8.59 | 120.12 | 8.78 |
| Y 117.0 | 115.25 | 8.70 | 118.96 | 8.84 |
| Y 118.0 | 112.19 | 8.85 | 117.18 | 8.89 |
| Y 119.0 | 110.03 | 8.91 | 114.99 | 9.01 |
| Y 120.0 | 107.59 | 9.01 | 112.80 | 9.09 |
| Y 121.0 | 105.30 | 9.14 | 110.59 | 9.14 |
| Y 122.0 | 105.24 | 9.23 | 108.33 | 9.24 |
| Y 123.0 | 104.03 | 9.33 | 106.29 | 9.32 |
| Y 124.0 | 101.79 | 9.43 | 104.04 | 9.37 |
| Y 125.0 | 99.17 | 9.52 | 101.91 | 9.46 |
| Y 126.0 | 97.41 | 9.62 | 99.88 | 9.57 |
| Y 127.0 | 95.67 | 9.74 | 97.98 | 9.61 |
| Y 128.0 | 93.95 | 9.82 | 96.08 | 9.73 |
| Y 129.0 | 92.15 | 9.88 | 94.19 | 9.82 |
| Y 130.0 | 89.96 | 10.00 | 92.33 | 9.87 |
| Y 131.0 | 87.43 | 10.07 | 90.52 | 9.96 |
| Y 132.0 | 85.27 | 10.17 | 88.68 | 10.06 |
| Y 133.0 | 83.43 | 10.28 | 86.87 | 10.15 |
| Y 134.0 | 81.36 | 10.37 | 85.07 | 10.19 |
| Y 135.0 | 79.58 | 10.44 | 83.23 | 10.29 |
| Y 136.0 | 78.55 | 10.55 | 81.43 | 10.39 |
| Y 137.0 | 77.65 | 10.63 | 79.66 | 10.44 |
| Y 138.0 | 76.35 | 10.70 | 77.87 | 10.55 |
| Y 139.0 | 75.06 | 10.80 | 76.10 | 10.63 |
| Y 140.0 | 73.59 | 10.86 | 74.32 | 10.67 |

IES Indoor Report
Photometric Filename:LEDBATTEN40W-4K.IES

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|-------|-------|--------|--------|
| Y 141.0 | 72.00 | 10.92 | 72.49 | 10.77 |
| Y 142.0 | 70.44 | 10.98 | 70.69 | 10.86 |
| Y 143.0 | 68.92 | 11.07 | 68.94 | 10.99 |
| Y 144.0 | 67.28 | 11.13 | 67.18 | 11.00 |
| Y 145.0 | 65.65 | 11.20 | 65.41 | 11.09 |
| Y 146.0 | 64.00 | 11.33 | 63.63 | 11.15 |
| Y 147.0 | 62.34 | 11.39 | 61.81 | 11.22 |
| Y 148.0 | 60.70 | 11.46 | 60.03 | 11.32 |
| Y 149.0 | 58.99 | 11.57 | 58.27 | 11.39 |
| Y 150.0 | 57.14 | 11.64 | 56.53 | 11.47 |
| Y 151.0 | 55.18 | 11.72 | 54.64 | 11.57 |
| Y 152.0 | 52.96 | 11.82 | 52.47 | 11.65 |
| Y 153.0 | 51.13 | 11.88 | 50.14 | 11.72 |
| Y 154.0 | 49.58 | 11.94 | 48.14 | 11.83 |
| Y 155.0 | 47.92 | 12.04 | 46.47 | 11.88 |
| Y 156.0 | 46.37 | 12.09 | 44.88 | 11.93 |
| Y 157.0 | 44.90 | 12.16 | 43.26 | 11.99 |
| Y 158.0 | 43.22 | 12.24 | 41.67 | 12.06 |
| Y 159.0 | 41.48 | 12.30 | 39.88 | 12.09 |
| Y 160.0 | 39.94 | 12.33 | 38.08 | 12.18 |
| Y 161.0 | 38.38 | 12.44 | 36.47 | 12.24 |
| Y 162.0 | 36.76 | 12.48 | 34.91 | 12.28 |
| Y 163.0 | 35.16 | 12.52 | 33.31 | 12.36 |
| Y 164.0 | 33.75 | 12.61 | 31.79 | 12.44 |
| Y 165.0 | 32.30 | 12.67 | 30.36 | 12.49 |
| Y 166.0 | 30.82 | 12.71 | 28.88 | 12.56 |
| Y 167.0 | 29.46 | 12.79 | 27.24 | 12.64 |
| Y 168.0 | 28.05 | 12.83 | 25.78 | 12.68 |
| Y 169.0 | 26.66 | 12.83 | 24.40 | 12.74 |
| Y 170.0 | 25.32 | 12.88 | 23.00 | 12.81 |
| Y 171.0 | 24.01 | 12.89 | 21.64 | 12.85 |
| Y 172.0 | 22.80 | 12.91 | 20.21 | 12.92 |
| Y 173.0 | 21.50 | 12.94 | 18.80 | 12.95 |
| Y 174.0 | 20.07 | 13.00 | 17.32 | 12.97 |
| Y 175.0 | 18.61 | 13.03 | 15.87 | 13.03 |
| Y 176.0 | 17.24 | 13.02 | 14.60 | 13.05 |
| Y 177.0 | 15.88 | 13.05 | 13.58 | 13.09 |
| Y 178.0 | 14.65 | 13.08 | 12.96 | 13.16 |
| Y 179.0 | 13.31 | 13.08 | 12.64 | 13.17 |
| Y 180.0 | 12.86 | 12.86 | 12.86 | 12.86 |
