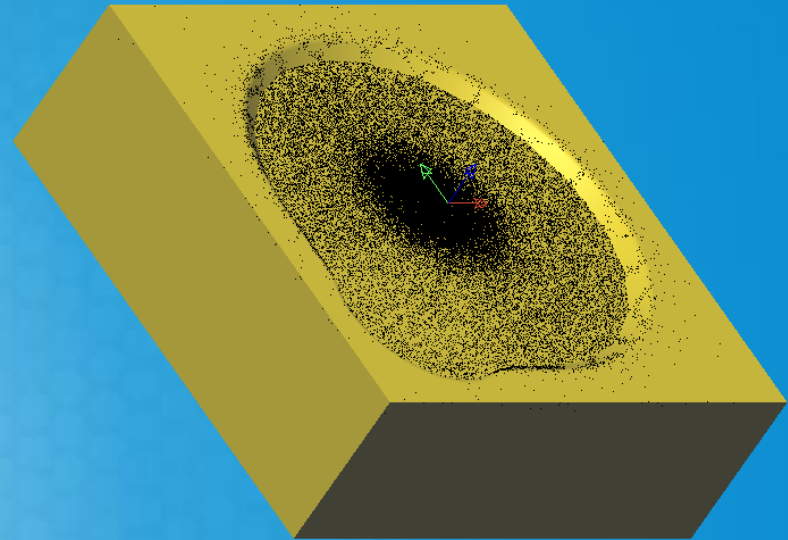


LUXEON Versat 2020 50 Amber Bin0/Amber Bin1

Optical Rayset Readme

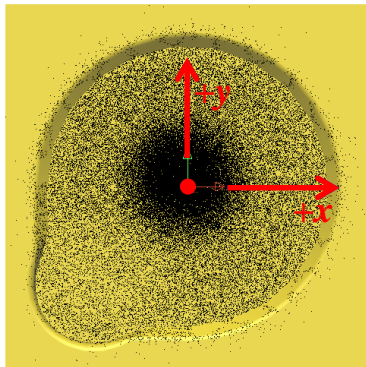
October 7th, 2019



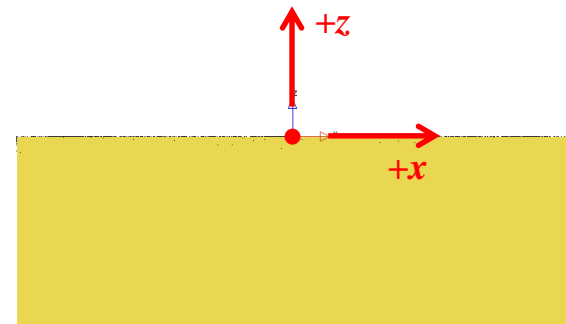
LUXEON Versat 2020 50 Amber Bin0/Amber Bin1

Coordinate system

Top view



Side view

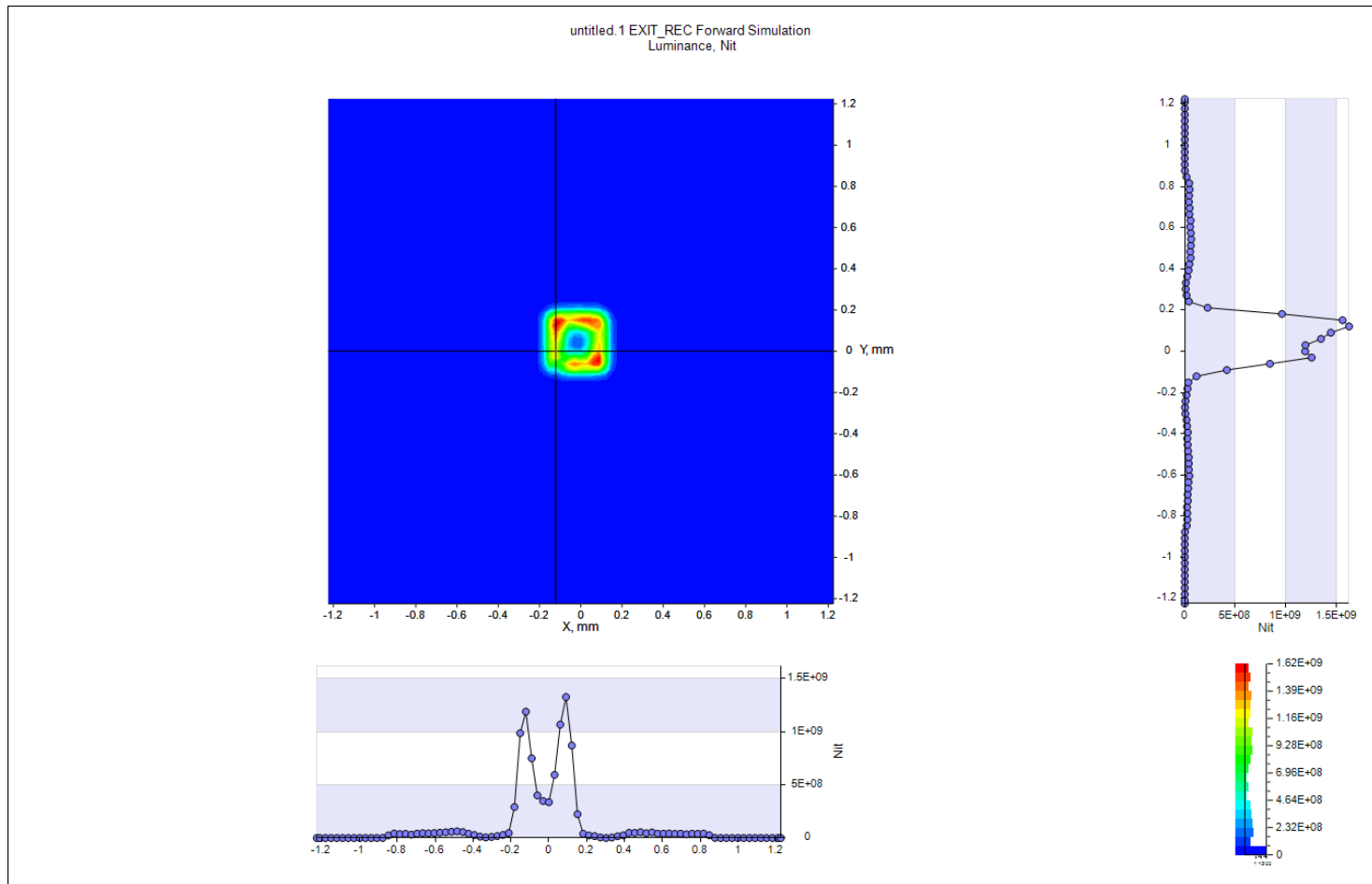


**CAD file and rayset files share the same coordinate system,
the origin is marked by the red dot in the sketches above:**

xy center == center of light emitting area
z=0 plane == top edge of light emitting area

LUXEON Versat 2020 50 Amber Bin0/Amber Bin1

Source size

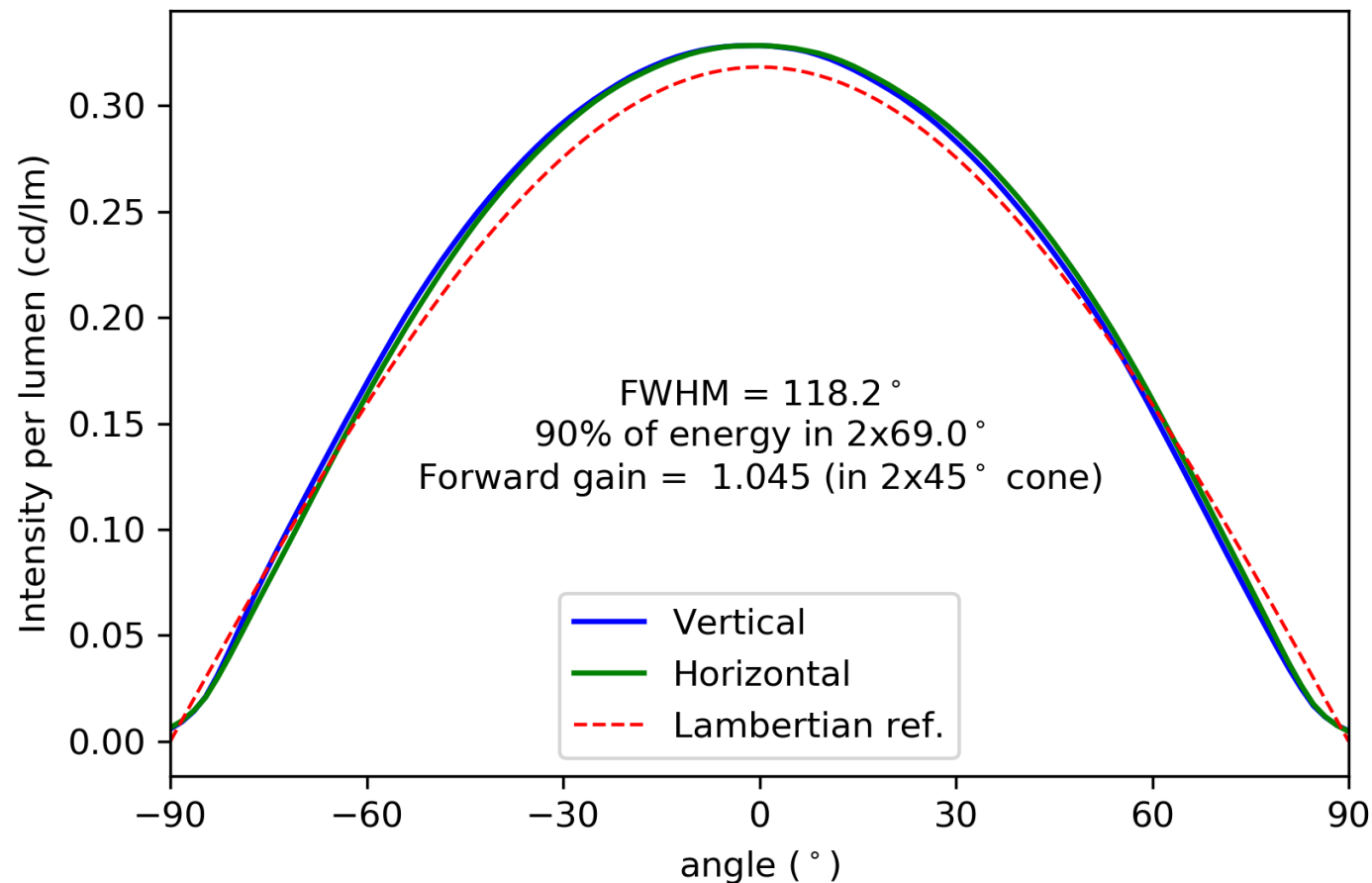


The two orthogonal lines in the luminance image mark the reference planes of the two luminance cross sections.

LUXEON Versat 2020 50 Amber Bin0/Amber Bin1

Luminous intensity distribution

Intensity per lumen over angle for vertical and horizontal slices
with lambertian cosine as reference



Download File Nomenclature (see next slide)

Example

LUXEON_Altilon_SMD2_1x4_gen4plus_20190206_20Mray_proj_Z_spectral_LT.ray

Product Name

Reference Date

helps identifying underlying dataset

Number of rays

e.g. 20 M = $20 \cdot 10^6$ rays

Ray starting points

'proj' indicates that ray starting points have been **projected** onto the CAD surface (---).

Spectral range

$\begin{Bmatrix} Y \\ Z \\ - \end{Bmatrix} = \begin{Bmatrix} \text{only yellow} \\ \text{only blue} \\ \text{full} \end{Bmatrix}$ spectrum taken into account

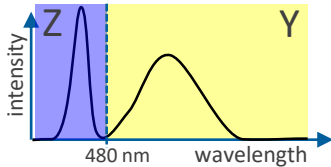
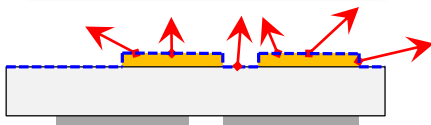
Spectral Information

$\begin{Bmatrix} \text{spectral} \\ - \end{Bmatrix} = \text{individual rays } \begin{Bmatrix} \text{do} \\ \text{don't} \end{Bmatrix} \text{ carry wavelength information}$

Target Software Package

LightTools (LT), ASAP, Zemax, ...

File Extension



Additional Application Notes

Randomization

In some cases, reducing the number of rays in a rayset might be desirable. In order to facilitate the generation of reduced raysets, **all raysets mentioned in this readme file are randomized.** Hence, a rayset having 5 million rays (5M) can simply be generated by taking the first 5M rays from 20M rayset.

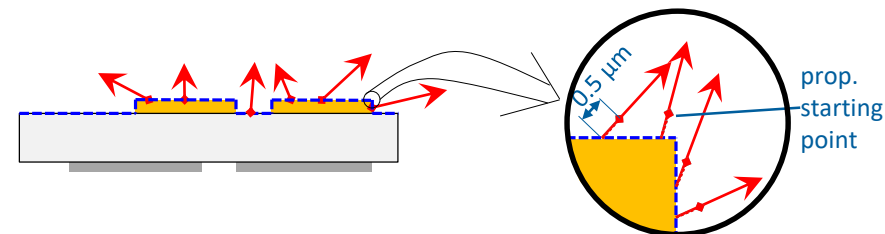
Projected Raysets: Propagated ray starting points

For projected raysets, the following procedure is applied for obtaining the starting points:

- (1) Project rays on CAD surface (---) → ray starting points
- (2) Propagate rays by 0.5 μm → propagated starting points (•)

All raysets mentioned in this readme file provide propagated starting points.

If raytracing includes the LED CAD, unpropagated rays are prone to be blocked at the surface. Rays with propagated starting points should not suffer from this problem.



LUXEON Versat 2020 50 Amber Bin 0

Link to download folder

<https://raysets.lumileds.com/index.php/s/xcgKiQDzfGkTzpB>

Files available for download

Prosource

LUXEON_Versat_2020_50_Amber_20191007_1178.rs8	48.0 MB
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LightTools

Projected rayset:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays_proj_LT.ray	534 MB	20MRays
Spectral projected rayset:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays_proj_spectral_LT.ray	610 MB	20MRays

ASAP/LucidShape

Projected rayset:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays_proj_ASAP.dis	534 MB	20MRays
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OPTIS SPEOS

Spectral projected rayset:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays_proj_spectral_Speos.ray	610 MB	20MRays
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Zemax

Projected rayset:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays_proj_zemax.dat	534 MB	20MRays
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Spectrum

LUXEON_Versat_2020_50_Amber_Bin0_20191023_spectrum.txt	17.4 kB
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CAD

STEP:	LUXEON_Versat_2020_50_Amber_20191007_geometry.STEP	228 kB
IGES:	LUXEON_Versat_2020_50_Amber_20191007_geometry.IGS	363 kB

Far Field

ies:	LUXEON_Versat_2020_50_Amber_Bin0_20191007_20MRays.ies	10.8 kB
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LUXEON Versat 2020 50 Amber Bin 1

Link to download folder

<https://raysets.lumileds.com/index.php/s/MbddYKFdAFrsbrs>

Files available for download

Prosource

LUXEON_Versat_2020_50_Amber_20191007_1178.rs8	48.0 MB
---	---------

LightTools

Projected rayset:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays_proj_LT.ray	534 MB	20MRays
Spectral projected rayset:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays_proj_spectral_LT.ray	610 MB	20MRays

ASAP/LucidShape

Projected rayset:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays_proj_ASAP.dis	534 MB	20MRays
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OPTIS SPEOS

Spectral projected rayset:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays_proj_spectral_Speos.ray	610 MB	20MRays
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Zemax

Projected rayset:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays_proj_zemax.dat	534 MB	20MRays
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Spectrum

LUXEON_Versat_2020_50_Amber_Bin1_20191023_spectrum.txt	9.72 kB
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CAD

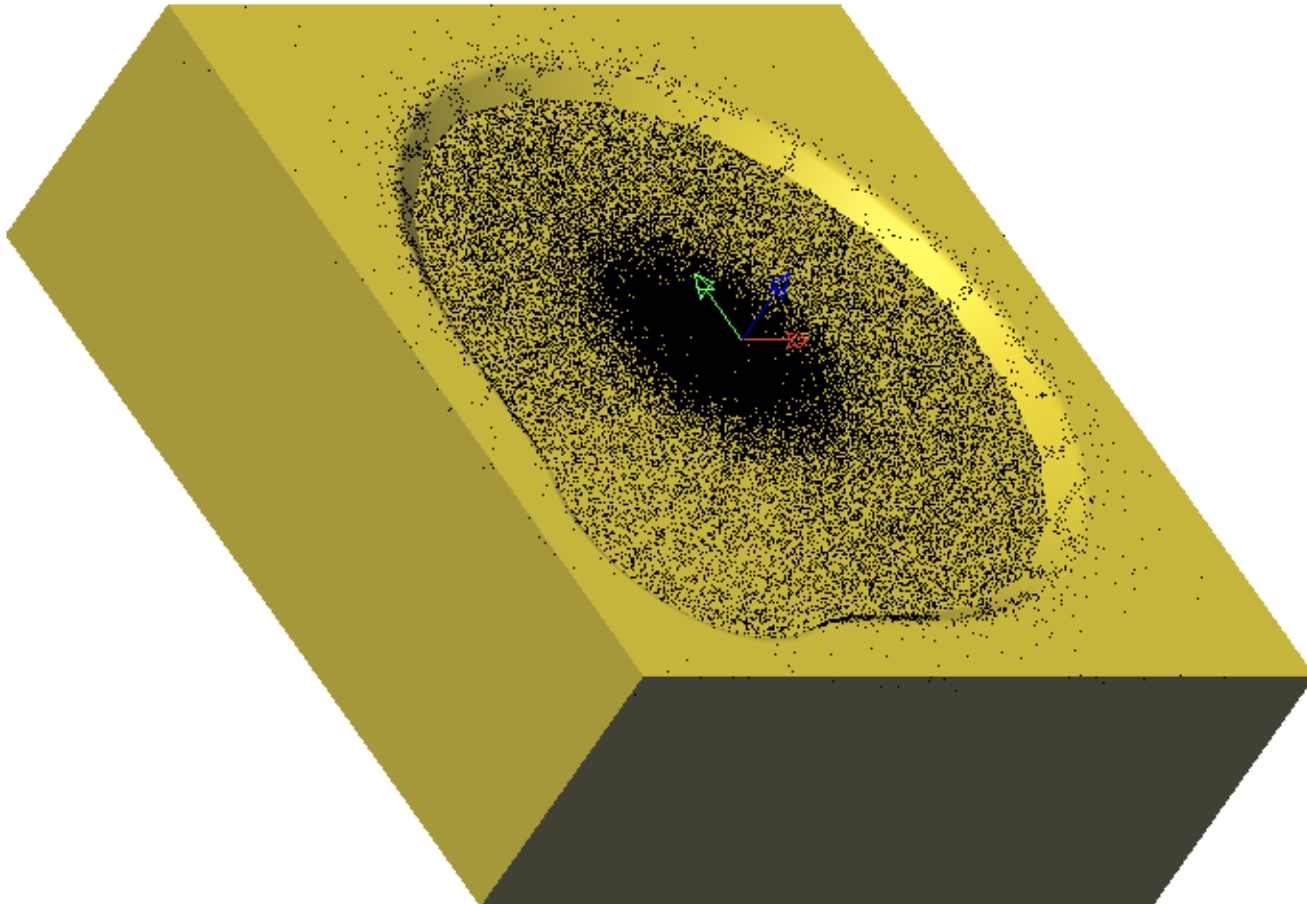
STEP:	LUXEON_Versat_2020_50_Amber_20191007_geometry.STEP	228 kB
IGES:	LUXEON_Versat_2020_50_Amber_20191007_geometry.IGS	363 kB

Far Field

ies:	LUXEON_Versat_2020_50_Amber_bin1_20191007_20MRays.ies	10.8 kB
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LUXEON Versat 2020 50 Amber Bin0/Amber Bin1

3D CAD view + ray starting points



Lumileds ref.: 1178_LUXEON Versat 2020 50 Amber Bin0/Amber Bin1_20191007



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