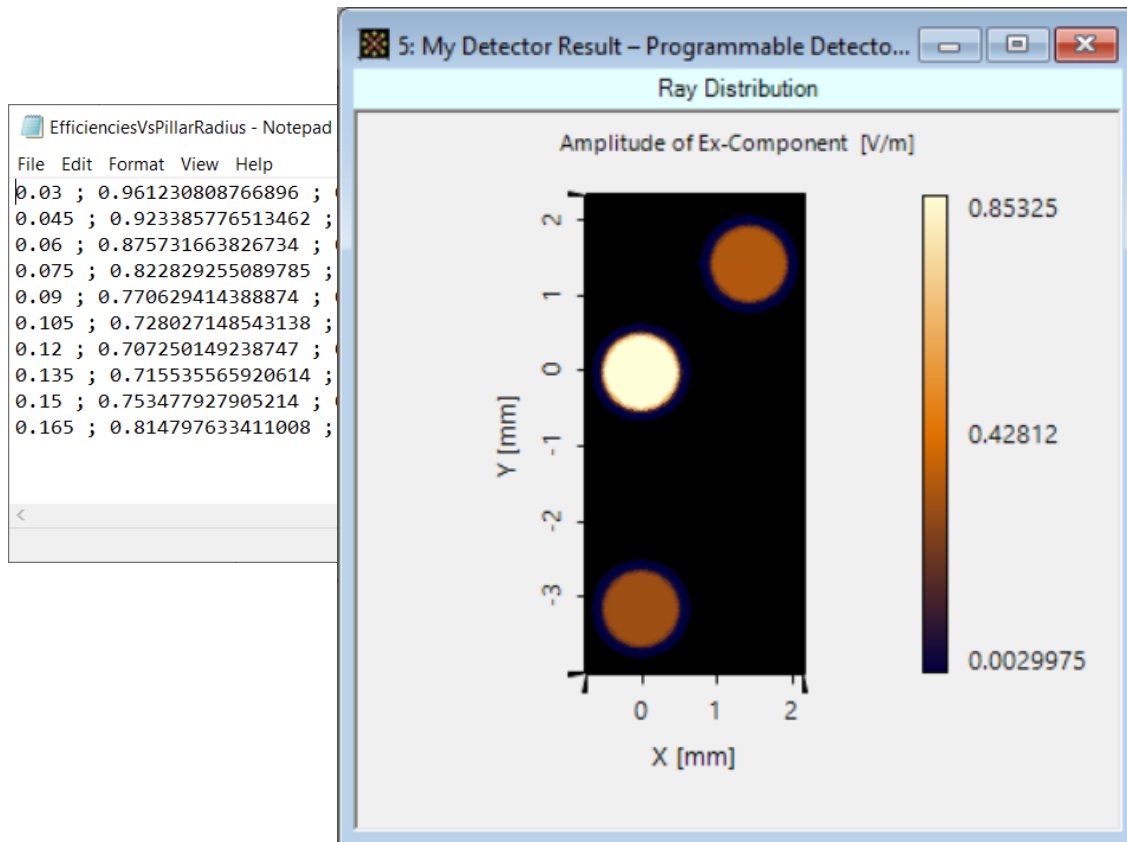


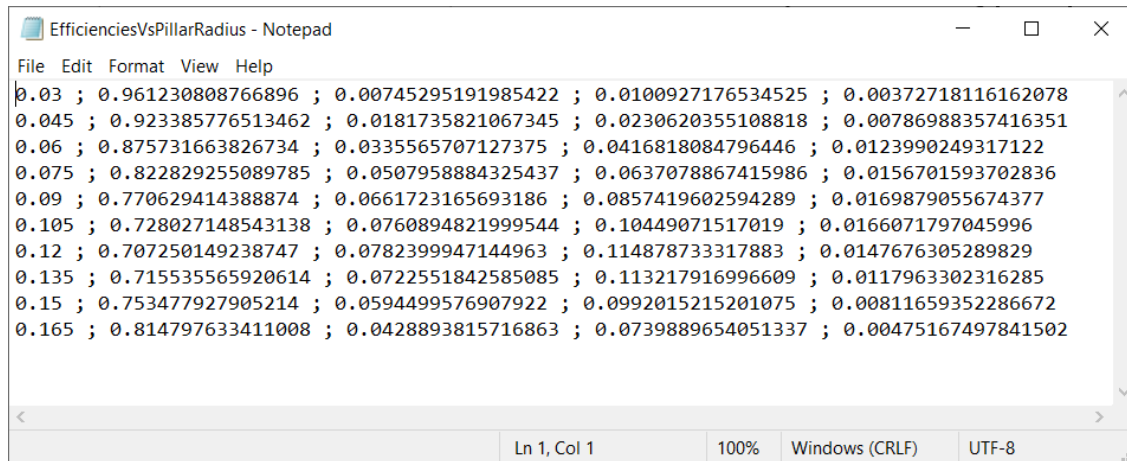
Import of Precalculated Diffraction Efficiencies

Abstract

This Demo shows how to use precalculated efficiency to define a grating in VirtualLab Fusion.



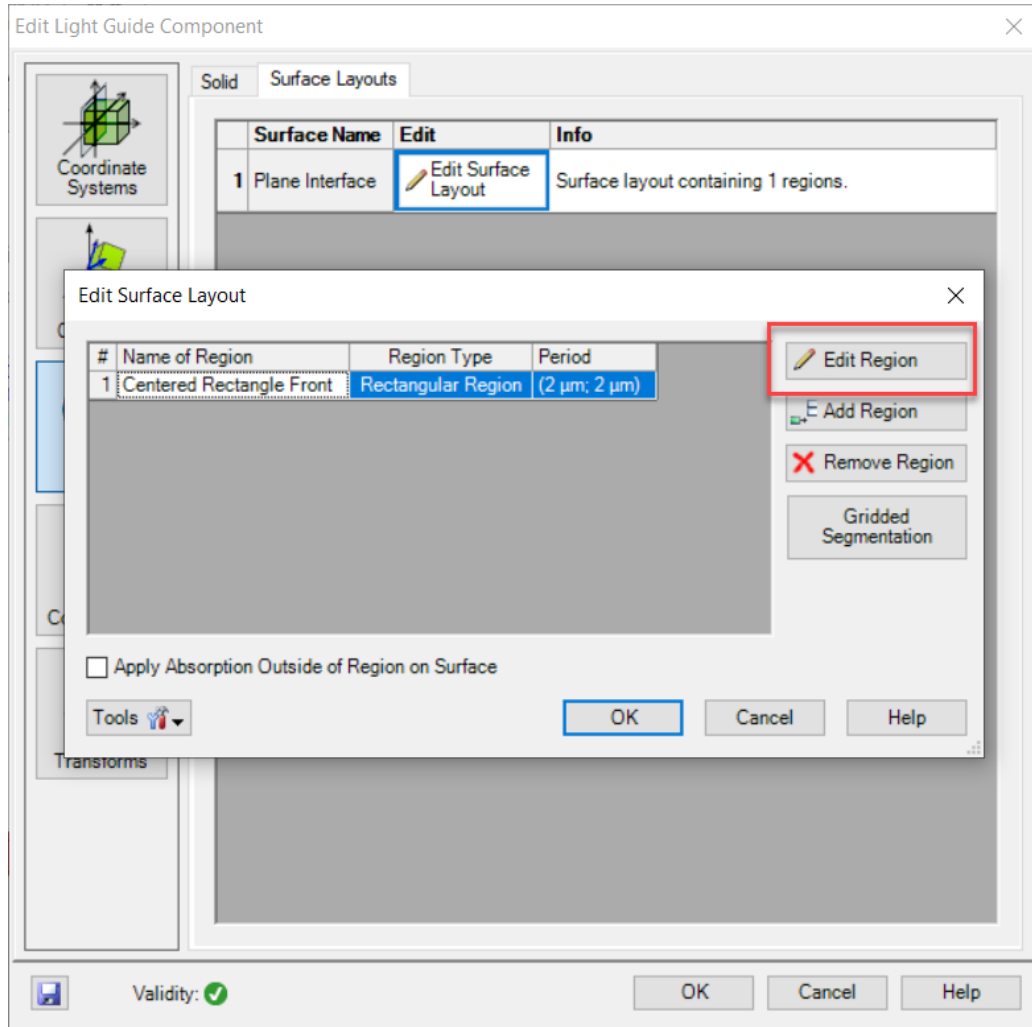
Import Format



```
EfficienciesVsPillarRadius - Notepad
File Edit Format View Help
0.03 ; 0.961230808766896 ; 0.00745295191985422 ; 0.0100927176534525 ; 0.00372718116162078
0.045 ; 0.923385776513462 ; 0.0181735821067345 ; 0.0230620355108818 ; 0.00786988357416351
0.06 ; 0.875731663826734 ; 0.0335565707127375 ; 0.0416818084796446 ; 0.0123990249317122
0.075 ; 0.822829255089785 ; 0.0507958884325437 ; 0.0637078867415986 ; 0.0156701593702836
0.09 ; 0.770629414388874 ; 0.0661723165693186 ; 0.0857419602594289 ; 0.0169879055674377
0.105 ; 0.728027148543138 ; 0.0760894821999544 ; 0.10449071517019 ; 0.0166071797045996
0.12 ; 0.707250149238747 ; 0.0782399947144963 ; 0.114878733317883 ; 0.0147676305289829
0.135 ; 0.715535565920614 ; 0.0722551842585085 ; 0.113217916996609 ; 0.0117963302316285
0.15 ; 0.753477927905214 ; 0.0594499576907922 ; 0.0992015215201075 ; 0.00811659352286672
0.165 ; 0.814797633411008 ; 0.0428893815716863 ; 0.0739889654051337 ; 0.00475167497841502
```

- The pre-calculated efficiency value is given in a form of data array, in this example, each column represents the pillar radius(um), R(0,0) efficiency, R(0,-2) efficiency, R(-1,+1) efficiency and T(-1,-1) efficiency, respectively.

Workflow



- Defined the grating region in the lightguide component.

Workflow

1

2

3

Validity: ✓

Validity: ✓

Number of Entries: 5 × 10

Parameter Extraction

Make Entries Available for Parameter Extraction

Array Index #0 ->	0	1	2	3	4
0	0.03	0.96123	0.007453	0.010093	0.0037272
1	0.045	0.92339	0.018174	0.023062	0.0078699
2	0.06	0.87573	0.033557	0.041682	0.012399
3	0.075	0.82283	0.050796	0.063708	0.01567
4	0.09	0.77063	0.066172	0.085742	0.016988
5	0.105	0.72803	0.076089	0.10449	0.016607
6	0.12	0.70725	0.07824	0.11488	0.014768
7	0.135	0.71554	0.072255	0.113	0.011796

Reset Table

Export / Import

OK Cancel Help

- Set the grating by programmable efficiencies and generate module to read the import data.
- Edit the involved parameter and choose the import data array file.

Document Information

title	Define Gratings with Precalculated Efficiency
document code	Demo.0027
version	1.0
VL version used for simulations	VirtualLab 2020.1
category	Demo
further reading	
