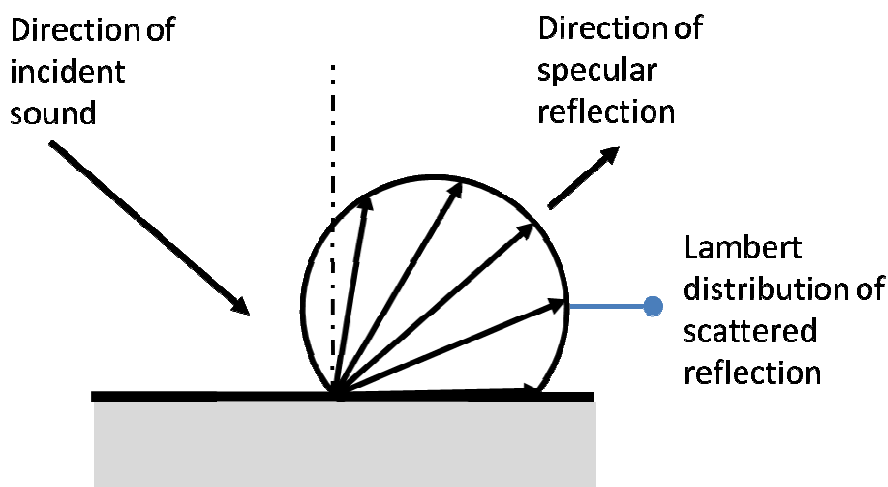


## Oblique Lambert

In ODEON version 8.0 from 2005 the Oblique Lambert was introduced in order to improve the calculation of late reflections. The traditional Lambert distribution for scattered sound reflection has a maximum perpendicular to the reflecting surface. However, with the Oblique Lambert the radiation pattern is tilted to have maximum radiation in the direction of the specular reflection.



The method is used in combination with the 'Reflection Based Scattering' and a frequency dependent scattering coefficient is applied.

The physical and theoretical background was described in a paper from BNAM 2004, and the approximation in ODEON with the Oblique Lambert was presented in Forum Acusticum 2005.

### References:

J.H. Rindel: Modelling the directional characteristics of sound reflections. Proceedings of Joint Baltic-Nordic Acoustics Meeting 2004. Mariehamn, Åland, Finland.

C.L. Christensen, J.H. Rindel: A new scattering method that combines roughness and diffraction effects. Proceedings of Forum Acusticum, Budapest, 2005, pp. 2159-2164.