

## Lift ghost

Go inside the EPS lift in the atrium. Look at the ceiling light. You can see a square grid. Close the lift door. Now look at the reflection of the ceiling in the door. Do you see the squares of the grid now? What happened to them and why? Suggest an experimental way to confirm your arguments, without destroying the lift.

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Noticed and suggested by Jerry DiMarco

*Answer of problem*      **Lift ghost**

In the reflection you see only horizontal lines, and the lines that run ‘vertically’ disappear.

It is all about scattering of light.

If you shine a laser pointer at the door you will find that the reflected beam forms a nice horizontal line. This means that the surface of the door represents a vertical diffraction grating (surface was polished in this way).

The lines of the ceiling grid that run along the diffraction grating all got spread over a large angle and basically disappear. But the horizontal lines remain.