**Overview**

An automotive illumination engineer needed to analyze illumination on a multitude of surfaces within a new headlamp compartment under development. The headlamp contained complex geometry with a large number of surfaces. It was important for the engineer to analyze sensor data on individual UV grids, and to see how light interacts within 3D geometric surroundings.

**The Challenge**

It is often necessary to display surface sensor data such as illuminance on complex, multi-surface geometry. Mathematically, optical handling of light data on a UV grid is only possible for single surfaces. Therefore, the display and visual inspection of actual sensor data in multi-surface shapes leads to a multitude of sensors on the base surfaces of those geometries.

**The Solution**

LucidShape® software delivers the following solutions for designing complex sensor surfaces:

- To display surface sensor data on complex geometries, LucidShape creates a mesh of the geometries
- By creating a joined mesh from a large number of surfaces, LucidShape maintains the original surface contour
- LucidShape assigns any surface sensor material to the mesh
- LucidShape displays and analyzes the data display in conjunction with model geometry in 3D

For more information, please contact Synopsys’ Optical Solutions Group at (626) 795-9101, visit synopsys.com/optical-solutions/lucidshape, or send an e-mail to lucidshapeinfo@synopsys.com.