



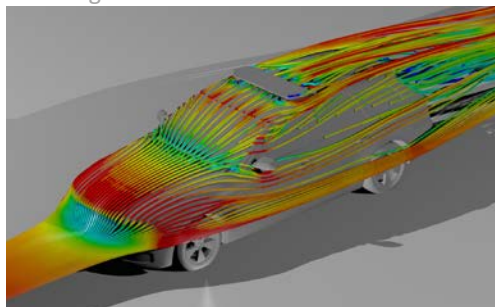
Aerodynamic investigation of Redtronic Lightbars

This is a generalised report which outlines the aerodynamic performance of Redtronic lightbars. Computational Fluid Dynamics (CFD) has been used as a tool to study the effect of the light bar on a typical automotive vehicle. The automotive vehicle was chosen to be the DrivAer model, a BMW/Audi hybrid vehicle developed for academia and industry wishing to investigate realistic car models. For this study an estate configuration has been chosen which is similar to a BMW 3 series estate or an Audi A4 estate.

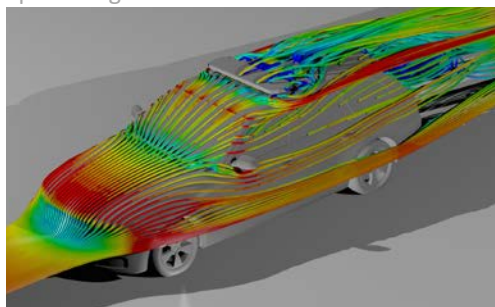
For the simulations the light bar was mounted on top of the vehicle, thus the resulting aerodynamic forces are representative of the performance of the light bar on a realistic vehicle rather than only looking at the light bar in isolation.

For a full technical report please speak with your designated sales representative.

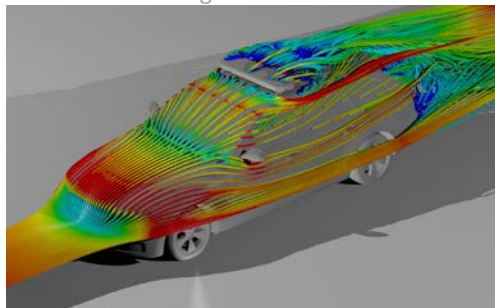
Bullitt lightbar



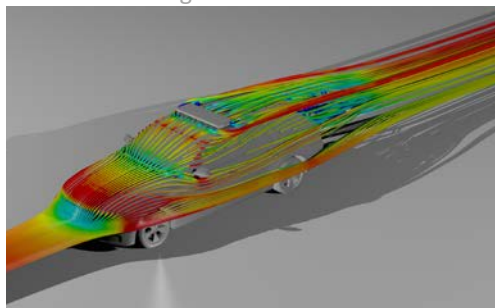
Spartan lightbar



Double-Stack FX lightbar



Low-Profile FX lightbar

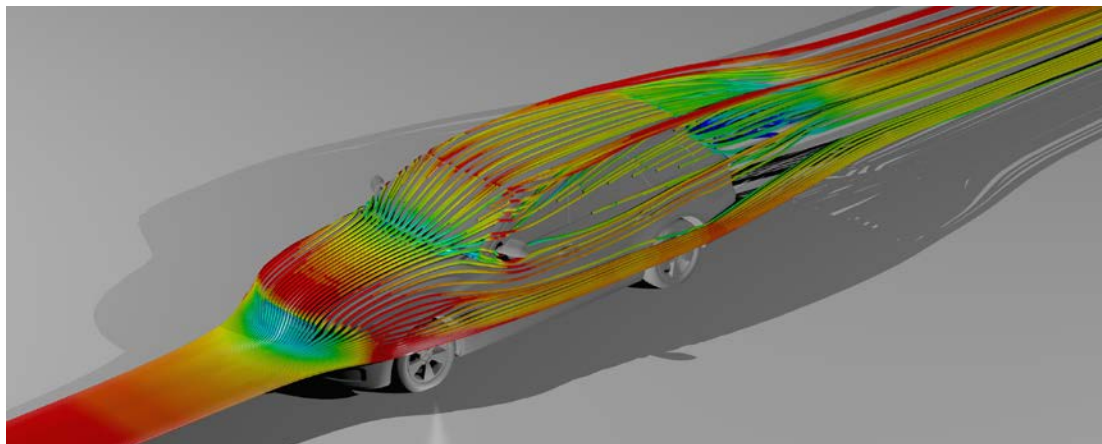


	Miles Per Gallon (MPG)
Redtronic Bullitt Light bar	58.55
Redtronic Spartan Light bar	51.48
Redtronic Double-Stack Light bar	47.02
Redtronic Low-Profile Light bar	54.68

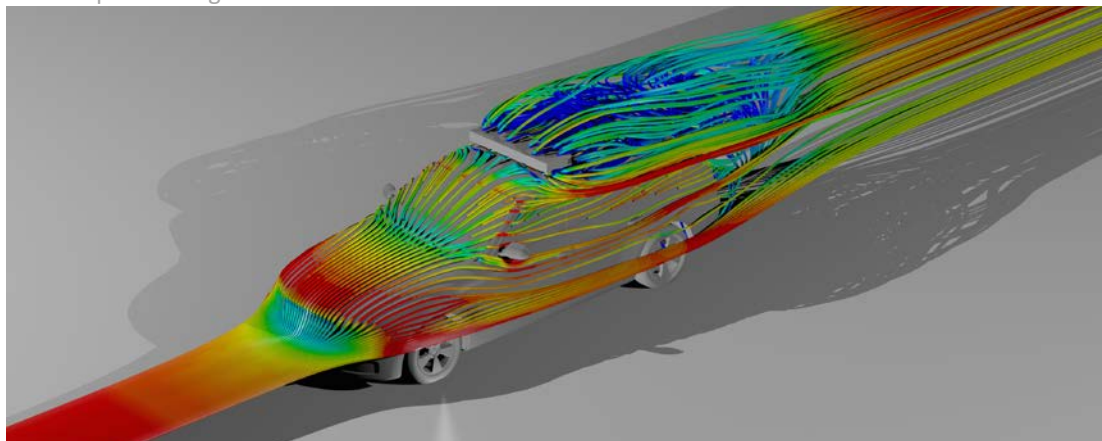


Bullitt Lightbar

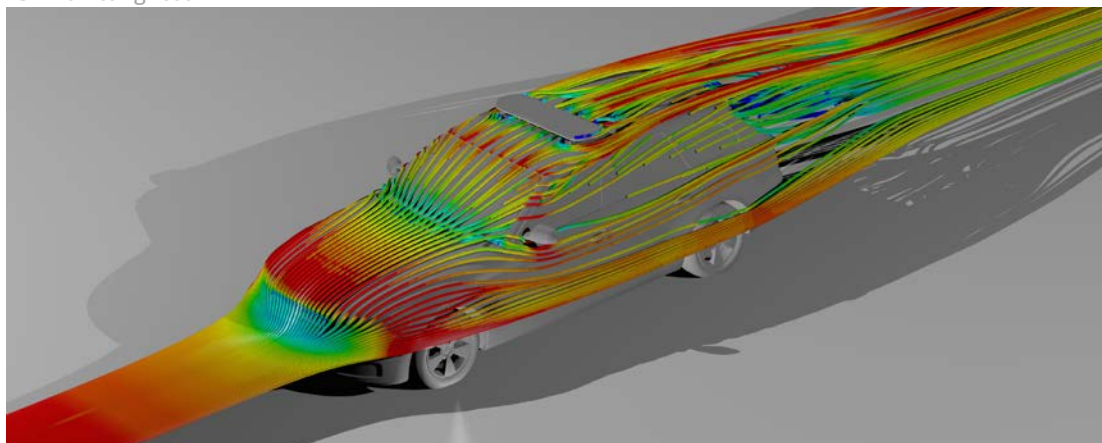
L1 - Baseline estate vehicle



L2 - Unoptimised lightbar



L3 - Bullitt lightbar

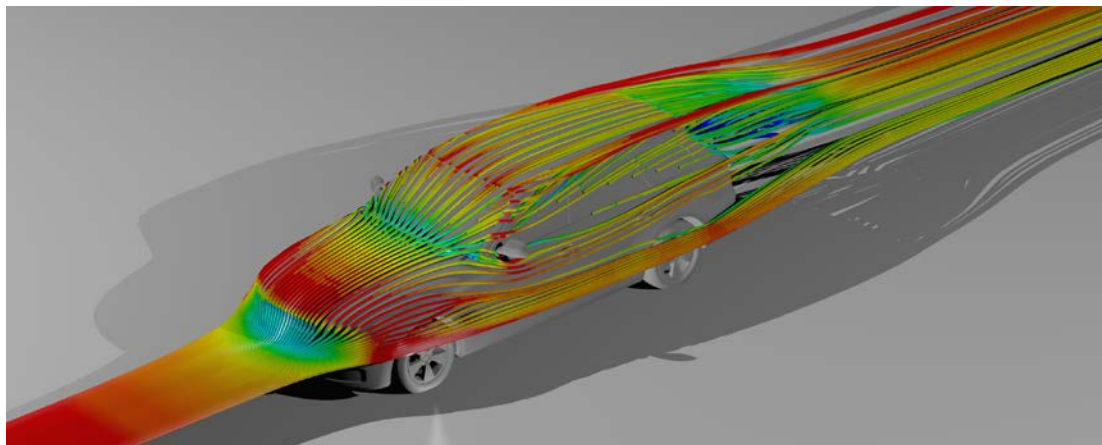


	Miles Per Gallon (MPG)
Baseline Car (no light bar) – L1	60
Unoptimised light bar – L2	40.94
Redtronic Bullitt Light bar – L3	58.55

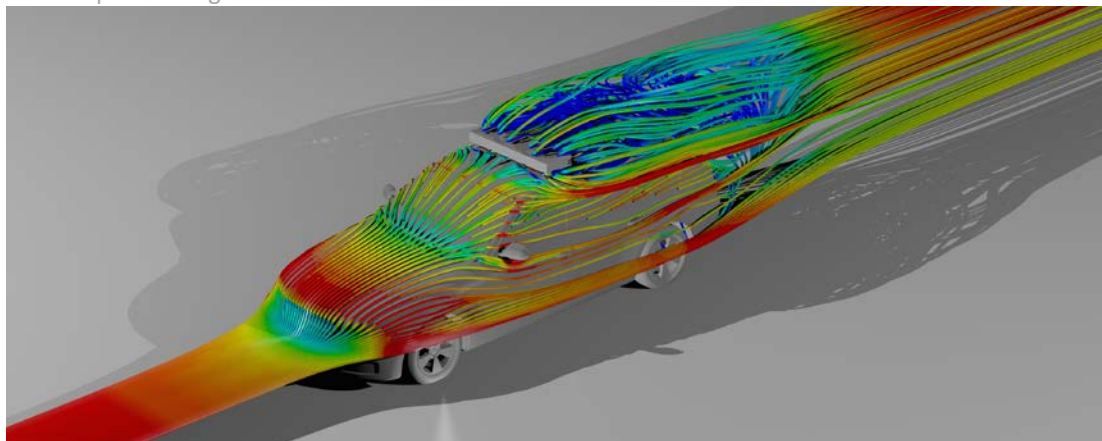


Spartan Lightbar

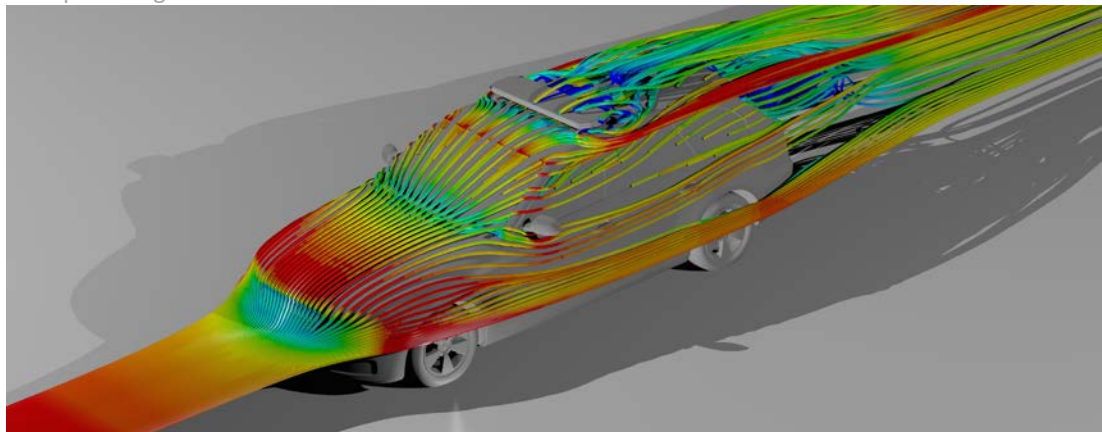
L1 - Baseline estate vehicle



L2 - Unoptimised lightbar



L3 - Spartan lightbar

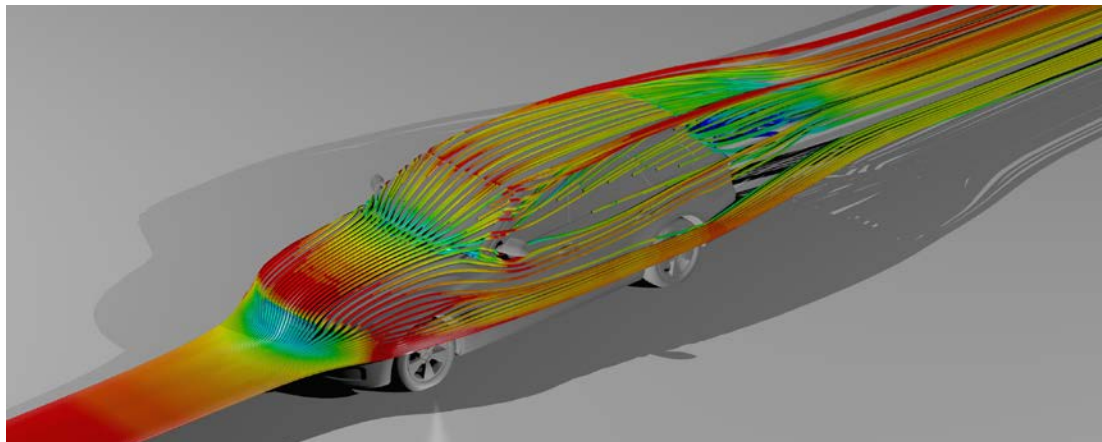


	Miles Per Gallon (MPG)
Baseline Car (no light bar) – L1	60
Unoptimised light bar – L2	40.94
Redtronic Spartan Light bar – L3	51.48

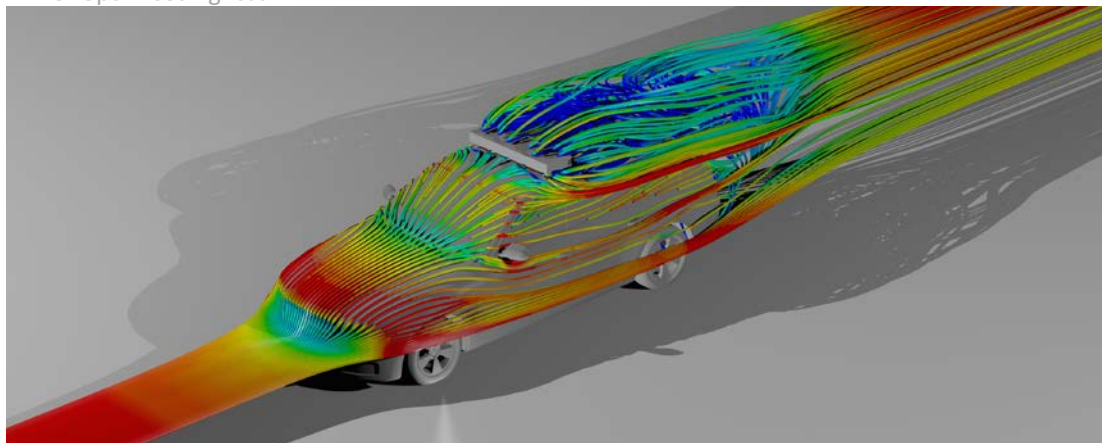


Double-Stack FX Lightbar

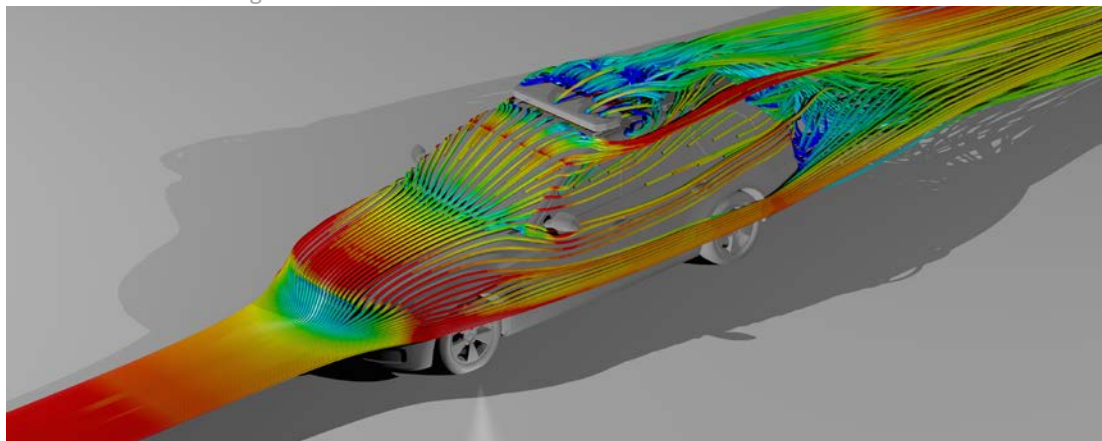
L1 - Baseline estate vehicle



L2 - Unoptimised lightbar



L3 - Double-Stack FX lightbar

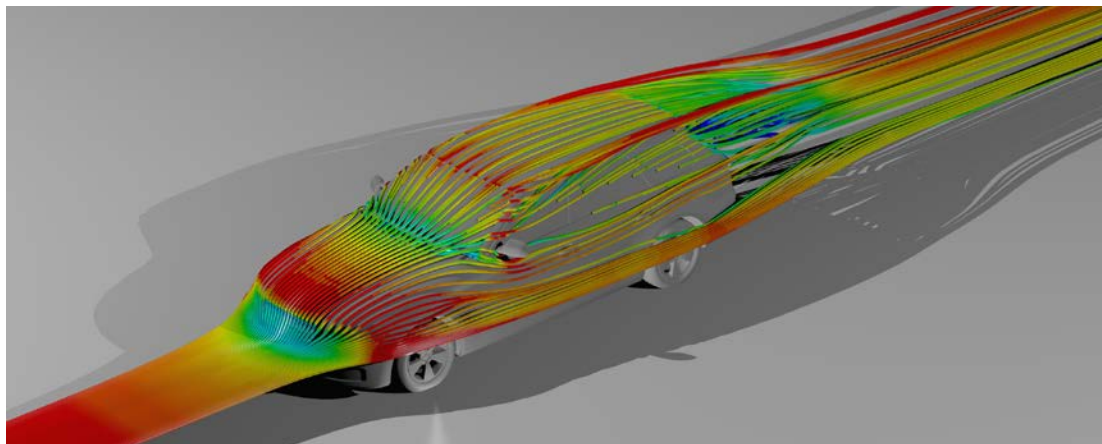


	Miles Per Gallon (MPG)
Baseline Car (no light bar) – L1	60
Unoptimised light bar – L2	40.94
Redtronic Double-Stack Light bar – L3	47.02

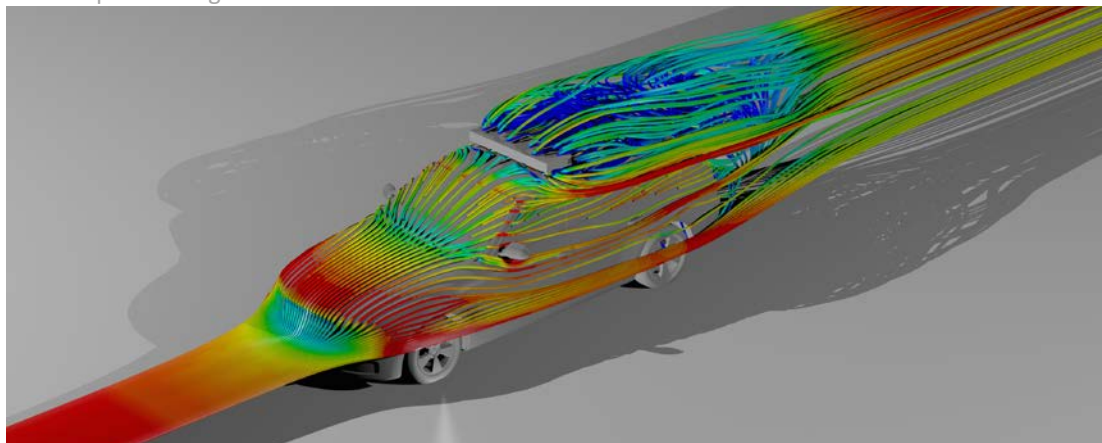


Low-Profile FX Lightbar

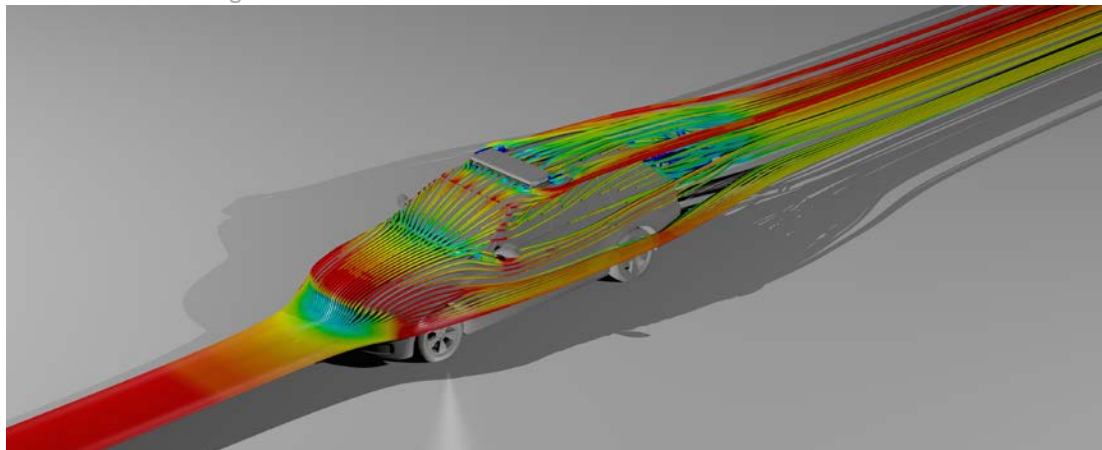
L1 - Baseline estate vehicle



L2 - Unoptimised lightbar



L3 - Low-Profile FX lightbar



	Miles Per Gallon (MPG)
Baseline Car (no light bar) – L1	60
Unoptimised light bar – L2	40.94
Redtronic Low-Profile Light bar – L3	54.68