

## Now You See It, Then You Didn't. How Modern Lights Highlight Hazards Your Grandparents Would Have Missed



- Comparison of car headlights from the past century highlights effectiveness of today's tech
- Cyclist 12 metres away – once almost invisible to drivers – is clearly seen with modern lights
- Same night-time driving scenario simulated with six cars spanning 109 years
- Car lights evolve from dim gas lamps to modern bright xenon and LED beams
- Lights now adapt to speed, surroundings. Cars can automatically brake for people at night
- In future, more and more cars will use LED lights that help reduce driver fatigue

**COLOGNE, Germany, Feb. 7, 2017** – New car headlight technology means modern drivers really do live in an age of enlightenment, with a stark contrast between the night-time driving visibility enjoyed today and the drastically less effective headlamps their grandparents used to light the road ahead.

A series of images showing the view from cars spanning from a 1908 Ford Model T up to a new Ford Mustang shines a light on just how far headlight technology has come. The cyclist is just 12 metres ahead of each vehicle illuminating the scene.

Drivers of the Model T – more than 15 million of which were sold from 1908 to 1927 – would have to first light the acetylene lamps before hitting the road. Today's drivers not only benefit from bright xenon and LED headlights but also from technology that can automatically brake for

pedestrians. Further images show the illumination from cars of the 1930s, 1960s, 1970s and 1990s.

“In terms of lighting technology, we have come out of the dark ages,” said Michael Koherr, Ford’s lighting research engineer. “It is quite incredible what a fundamental difference these changes contribute in terms of road safety and driver comfort.”

Xenon headlights – featured on the Mustang – have around three times the output of halogen bulbs. Like the sophisticated LED headlights offered for cars including the Ford Edge SUV, xenon lights produce a bright white light that can make them appear up to five times brighter than the yellowish light of halogen bulbs.

Of course, drivers now may be travelling faster than Model T drivers. But they also benefit from significant improvements in technology that mean lighting adapts to speed and surroundings. Headlights are also now designed to gradually fade at the edge of the beam pattern, rather than stopping abruptly, allowing objects in the dark to come steadily into view rather than appearing suddenly in view.

“We have gone from what were essentially glorified candles to efficient and effective xenon and LED lights. In the future we’ll see more super-bright LED lights equipped to cars, which can actually help drivers remain alert. Visibility at night is now so much better. Like night and day,” said Koherr.

“We are now developing new spot lighting technology that helps draw the driver’s attention to pedestrians, cyclists and even large animals in the vehicle’s path. This would use an infra-red camera to locate and track people and bigger animals up to 120 metres away.”

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\* Images taken at Ford’s Heritage Centre in Dagenham, UK, using a 1908 Ford Model T, 1932 Ford Model Y, 1966 Ford Anglia 105e (first launched 1959), 1976 Ford Fiesta, 1994 Ford Mondeo and a 2016 Ford Mustang GT lighting the scene from approximately 12 metres. Camera settings for all images; iso 1600, exposure 1/13, aperture f/9

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