Colour Match xenon lights

The introduction of xenon light led to the discussion about light colour and colour displacement of xenon lights. At the beginning of the xenon era, the light radiated by xenon lights was a white-bluish colour. The xenon lights had a colour temperature of 5800 Kelvin, which corresponds to average daylight. In the past, however, complaints were often received from car drivers who felt irritated by the perceived high glare. In-depth investigations revealed, however, that the light colour similar to daylight was unusual at the time, and "tempted" people to look directly into the approaching headlight. In order to combat the emerging "negative image", the automotive industry and the EU commission responsible apparently agreed to reduce the light colour. The xenon lights currently on sale in Europe have a colour temperature of a good 4200 Kelvin. Which is why the xenon light in more recent vehicles appears yellowish-white rather than whitish-blue as with older vehicles. The graph shows the different colour temperatures.

1800K 4000K 5500K 7000K 10000K

With older xenon lights, so-called "colour displacement" takes place. This means that the older the light is, the more the light colour moves towards "white-blue". If only one light is replaced by a new one, e.g. after an accident, the difference in colour to the old light can be clearly seen. The industry has reacted to this problem by introducing the so-called "Colour Match" xenon light. These lights have a colour temperature of 4800 K to begin with, so that on replacement, the difference in colour to the older xenon light is only slight or even non-existent. Yet the purchase of a xenon light must be considered carefully. If only one light fails for age reasons, it is advisable to install two new xenon lights, since it is likely the other one will fail soon, too. If only the faulty light is replaced by a Colour Match light and the second light fails as well after a certain time, another Colour Match light must be

used on account of the light colour. Since the Colour Match light costs more than a standard xenon light, the customer will pay more in this case.
In addition, a change in light colour is hardly noticeable in the xenon lights used today. New mixtures of metal salts and gases mean that the Kelvin number only increases slightly (approx. 100 K after 1000 operating hours).