

OPTICAL CLARITY



Wiley X BOSS Kryptek Highlander
Winner, Best New Eyewear, EFFTEX 2017/18



Anglers from all over the world – from elite professional anglers competing on the biggest stages to the everyday pleasure angler, have all grown to love Wiley X sunglasses. It's not hard to see why, as the sleek styling, protection, comfort and lens clarity found in each product all add up to create a winning combination that's hard to ignore. Anglers are demanding and want the full package, and Wiley X delivers.

Ever since Wiley X was established in 1987, the company has been a global leader within the protective eyewear market who supplies both military forces and law enforcement personnel with top of the range ballistic eyewear. It was then realised that anglers required this level of protection too along with other outdoor enthusiasts and hunters. Because of this, Wiley X is the only premium eyewear brand that tests its full range to both ANSI Z87.1 and EN 166 safety and optical standards. Eye protection in angling is paramount to individual safety as many angling tactics ensure that lures,

flies, metal spoons and hooks are flying in the air a lot of the time which can cause serious injury to unprotected eyes.

While Wiley X customers could be mistaken for thinking that ANSI, EN 166 and Military standards only apply to impact protection, it actually means a whole lot more, Optical Clarity. All Wiley X glasses undergo rigorous optical testing to ensure the high standards of ANSI and EN 166 are met. The amount of testing involved has ensured that Wiley X has developed and implemented all the necessary equipment and resources which takes place at their internal testing laboratory. Because these measures have been put into place and practise, it is no surprise that Wiley X has achieved a worldwide accreditation to the ISO 17025 standard which governs general requirements for the competence of testing and calibration laboratories.

The majority of Wiley X glasses are built to EN 166 Optical Class 1 however there are a select few models that are Optical Class 2 which are polarised mirror lenses. It's important to note

that that optical classed are affected by polarised film as well as lens thickness.

Wiley X builds all its lenses to meet or exceed these standards starting with their Smart Edge Lens Technology (SEL). SEL technology lenses are de-centred and tapered to ensure they meet both ANSI and EN 166 Optical Clarity standards.



STANDARDS BY CATEGORY

- **ANSI Z87.1** – Optical Quality, Transmittance, Haze, Refractive Power, Astigmatism, Resolving Power and Prismatic Power
- **EN 166** – Spherical, Astigmatic and Prismatic Refractive Power, Light Diffusion
- **MIL-PRF-32432 MCEPS** – Luminous Transmittance, Neutrality, Chromaticity, UV, Optical Distortion.

RESOLVING POWER, REFRACTIVE POWER, PRISMATIC POWER IN FOCUS

Resolving Power is a term that addresses the distortion in glasses. Ordinary lenses can distort objects viewed from distances. Wiley X lenses provide clear view which meet the

standards resulting in the angler experiencing no distortion thus using the Wiley X polarised lenses to their full potential.

Refractive Power can change the actual size of objects viewed through the lens so inferior lenses can actually alter the true size of objects as if looking through another person's prescription lenses. Wiley X rated lenses maintain the true size of the object being viewed with crisp and true vision.

Prismatic Power refers to how much lenses bend light. A problem with ordinary lenses is that light is bent and ultimately the object in view will appear off-centre. Casting accuracy can be hindered by way of casting to the wrong area even though you think you have. Wiley X lenses eliminate this problem and ensure that you cast where you are actually looking providing a true spatial relationship of objects.

So, what does this all mean to the angler? Well, quite simply, less stress. Anglers can be confident that their choice of Wiley X eyewear has been thoroughly tested to comply with high standards which incorporate all the benefits for a stress free day fishing, with high levels of functionality, protection and clear vision. Not only are Wiley X glasses the go-to brand for impact protection, they are also the brand for optical clarity.



STANDARDS TESTING OVERVIEW

ANSI Z87.1-2015

- **Optical Quality Test** – determines if the lenses are free of visible defects which would impair their optical quality.
- **Transmittance Test** - Measures the ultraviolet, luminous, infrared and blue-light, normal transmittance of lenses.
- **Haze Test** - Measures the haze in clear lenses.
- **Refractive Power, Astigmatism and Resolving Power Tests** - Determine that the protectors meet the optical

requirements for refractive power, astigmatism and resolving power of this standard.

- **Prismatic Power Test** - This test is intended to measure the prismatic power and prismatic imbalance of a protector.

MIL-PRF-32432 MCEPS

- **Luminous transmittance/neutrality/chromaticity/ Ultra violet Tests** - Determine photopic and scotopic luminous transmittance, neutrality and chromaticity of the lens.
- **Optical Distortion Tests** - Proves the eyewear lens is free of blurs or

distortion (evidenced by waves or ripples or shearing patterns) in the image of a straight line in any meridian when viewed through the lens.

EN 166

- **Spherical, Astigmatic And Prismatic Refractive Powers Test** - Determine the lenses meet the optical requirements for this standard.
- **Light Diffusion Test**- The luminance (L.) of an illuminated ocular is a measure of its light diffusion and is proportional to the illuminance. TTW

SEL TECHNOLOGY LENSES

Our SEL (Smart Edge Lens) technology lenses are de-centered and tapered to ensure they can meet ANSI optical clarity standards. They also block 100% of the sun's harmful UVA and UVB rays

SEL TECHNOLOGY RESOLVING POWER (CLARITY)



Ordinary lenses can distort objects viewed from a distance. As measured in tests utilizing the NBS pattern 20, Wiley X lenses provide a clear views.

REFRACTIVE POWER



Inferior lenses can alter the true size of objects, as if looking through another person's prescription lens. Wiley X ANSI safety lenses maintain true relative object size.

PRISMATIC POWER



It is common for ordinary lenses to bend light, causing focal objects to appear off center. Wiley X ANSI safety rated lenses provide a true spatial relationship of objects in the field of view.