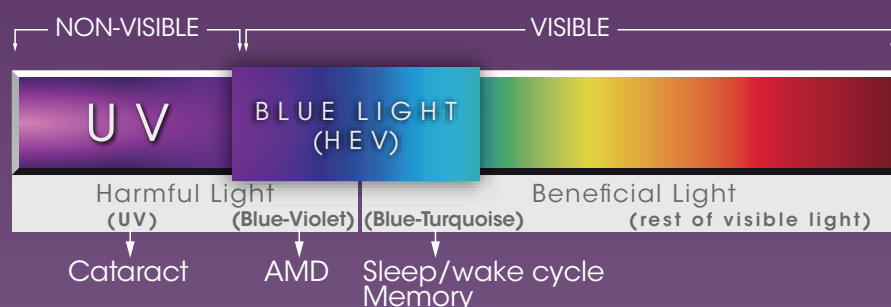


# Light can be both harmful and beneficial to your vision and health

## UV and Blue Light can contribute to developing eye disease<sup>1,2</sup>

- UV light is a major risk factor for many eye diseases, including cataract
- Blue Light (also known as High Energy Visible, or HEV light), at specific wavelengths, is a risk factor for the onset of age-related macular degeneration (AMD), the leading cause of severe vision loss and legal blindness in adults over 60
- The number of cataract and AMD cases will double in the US in 30 years

## There are different types of Blue Light within the Light Spectrum



## Blue-Violet light is one type of harmful light that is present everywhere

- **Outside:** Emitted all year round in any weather (sunny, cloudy, rainy, etc). This is even true when light comes through windows in your home, office or car
- **Inside:** Present throughout the day and night. It is emitted from many modern digital devices including computers, tablets, most smartphones as well as compact fluorescent lightbulbs
- Exposure to Blue-Violet light is cumulative over your life and is one of the risk factors contributing to the early onset of AMD

## Light including Blue-Turquoise is important for vision and everyday health<sup>3</sup>

- Light is essential for color perception, clarity and sharpness of vision
- Blue-Turquoise light aids in the function of the sleep/wake cycle, memory, mood, cognitive performance, and pupillary constriction reflex

*Eyes need to be protected from harmful Blue-Violet and UV light while allowing beneficial light to pass through.*

NEW

# Crizal® PREVENENCIA™ No-Glare Lenses

The first No-Glare lens on the market that selectively deflects harmful light, providing improved protection for eyes.

## Light scan™

Introducing a selective No-Glare technology that protects eyes from the most harmful band within the Blue-Violet spectrum (415-455 nm).<sup>4</sup>

Light Scan™ works 3 ways:



COVERED BY ONE OR MORE PATENTS

1

Selectively filters out harmful light (both Blue-Violet and UV)

2

Allows beneficial light to pass through (visible light, including Blue-Turquoise)

3

Maintains excellent transparency (clear No-Glare lens) for optimal vision at all times

Crizal® Prevenencia™ lenses deflect 20% of harmful Blue-Violet light and in recent lab tests, Crizal Prevenencia reduced retinal cell death by **25%<sup>\*\*</sup>**



Crizal Prevenencia has an Eye-Sun Protection Factor (E-SPF®) of 25, which provides wearers' eyes with **25x more protection** from UV than with no lens at all.<sup>†</sup>

Crizal Prevenencia lenses provide superior clarity of vision with improved protection.

RESISTS



glare



scratch



smudge



dust



water



UV rays

For more information, go to [Crizal.com](http://Crizal.com)

**Crizal®**  
Live Life in the Clear™

<sup>†</sup>Results from *in-vitro* tests on swine (pig) retinal cells<sup>4</sup>

<sup>\*</sup>25% less light-induced retinal cell death rate vs a naked eye, with a 20% cut of Blue-Violet light. In *in vitro* experiments conducted by Essilor and Paris Vision Institute, retinal pigment epithelium cells were exposed to Blue-Violet light, reproducing the physiological exposure to sunlight of the 40-year-old eye.

1. Taylor HR, West S, Munoz B, Bressler SB, et al. The long-term effects of visible light on the eye. *Arch Ophthalmol*. 1992;110:99-104 [FN 51]. 2. Fletcher AE, Bentham GC, Agnew M, et al. Sunlight exposure, antioxidants, and age-related macular degeneration. *Arch Ophthalmol*. 2008;126:1396-1403 [FN 54]. 3. Ishikawa H, Onodera A, Asakawa K, Nakadomari S, Shimizu K. Effects of selective-wavelength block filters on pupillary light reflex under red and blue light stimuli. *Jpn J Ophthalmol*. 2012;56(2):181-6 [FN 82]. 4. Arnault E, Barrau C, Nanteau C, et al. Characterization of the blue light toxicity spectrum on A2E-loaded RPE cells in sunlight normalized conditions. Poster presented at: Association for Research and Vision in Ophthalmology Annual Meeting; May 5-9, 2013; Seattle, WA.

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