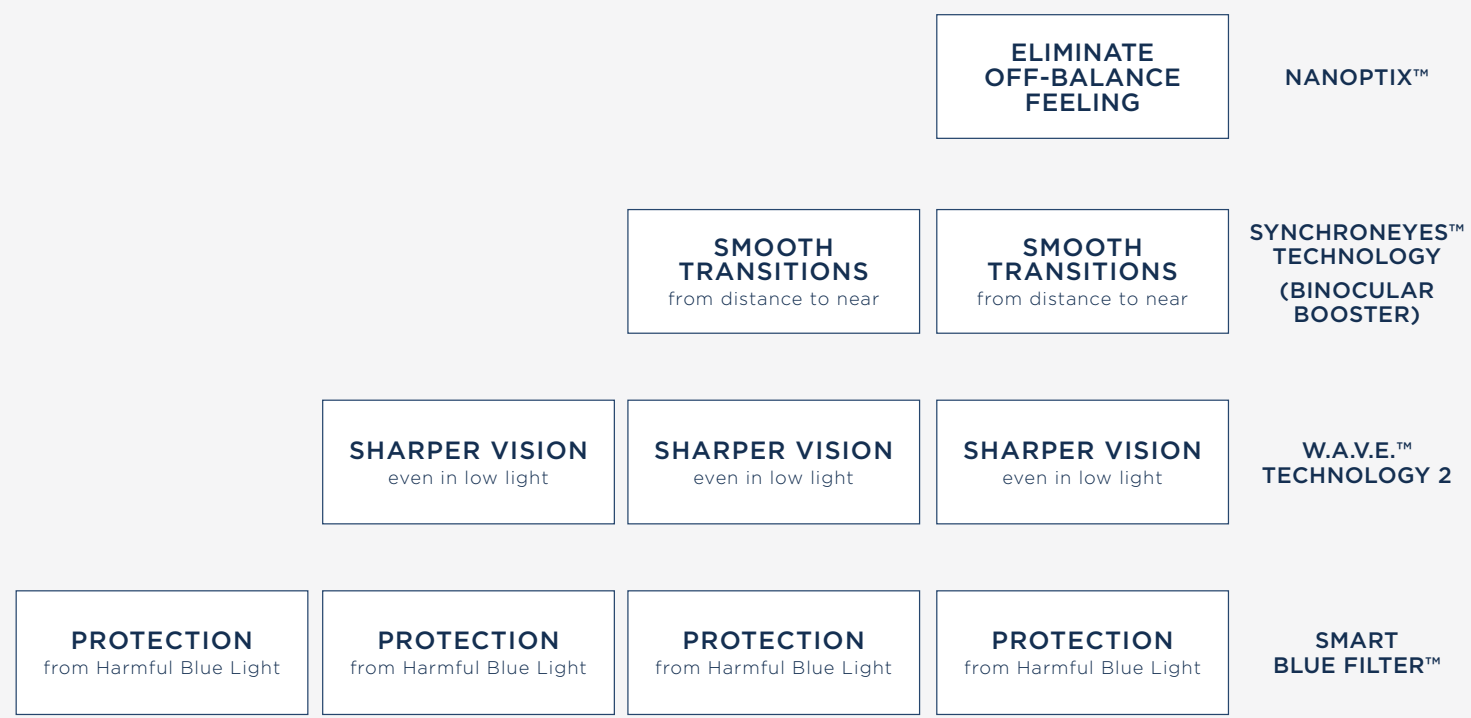


**COMPETITIVE  
PERFORMANCE  
REPORT**

**Varilux<sup>®</sup> Digital Progressive Lenses**



varilux.com



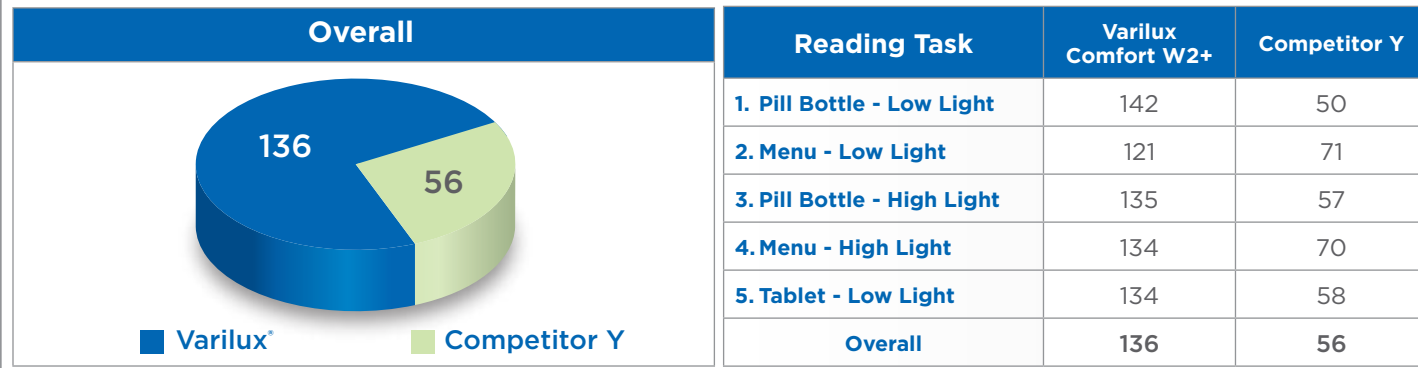
## Varilux Comfort® W2+ lenses were preferred over the leading competitor by more than 2 to 1

**Objective:** To compare the performance of Varilux Comfort W2+ lenses versus Competitor Y premium PAL in a variety of tasks in high and low lighting conditions.

**Method:** Each subject performed several tasks and expressed a preference for one of the two PAL designs. Tasks included:

1. Reading a pill bottle in low illumination
2. Reading a restaurant menu in low illumination
3. Reading a pill bottle in high illumination
4. Reading a restaurant menu in high illumination
5. Reading an article on a tablet computer in low illumination

**Conclusions:** The subjects preferred Varilux Comfort W2+ lenses in each task in each lighting condition, with 71% of wearers expressing a preference for Varilux Comfort W2+ lenses overall.



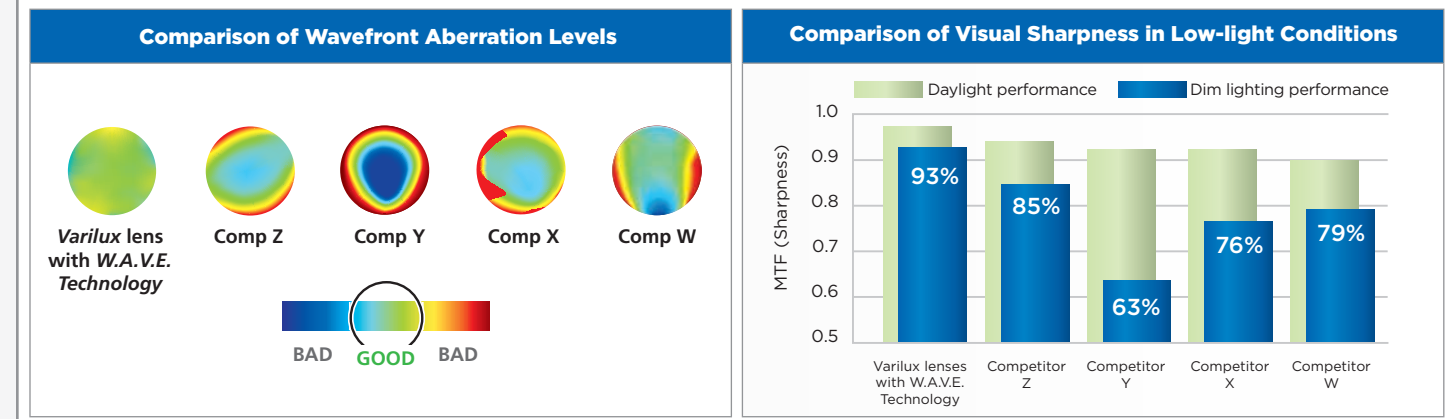
\*Study conducted in 2016 by independent third party sponsored by Essilor of America, Inc. (n=192)

## Varilux lenses with W.A.V.E. Technology 2 preserve visual sharpness better than competitors, especially in dim lighting

**Objective:** To compare visual sharpness of Varilux lenses with W.A.V.E. Technology 2 compared to five competing PAL designs in different lighting conditions.

**Method:** Tests compared wavefront aberration levels and contrast sensitivity of Varilux lenses with W.A.V.E. Technology 2 and four competitor premium PALs of identical prescription and material in daylight and dim lighting conditions.

**Conclusions:** Varilux lenses with W.A.V.E. Technology 2 maintained better contrast sensitivity in both low-light and bright-light conditions as indicated by a higher modulation transfer function (MTF). Evaluation based on a -4.00 D lens with +2.00 D add and pupillary diameters of 3 mm (bright light) and 8 mm (dim light).



\*Study conducted in 2010 by independent third party sponsored by Essilor of America, Inc. Modulation = difference (in luminance) between the brightest and darkest portion of a perceived object. Transfer Function = the amount of modulation contained in the image made by the lens divided by the amount of modulation in the actual object.

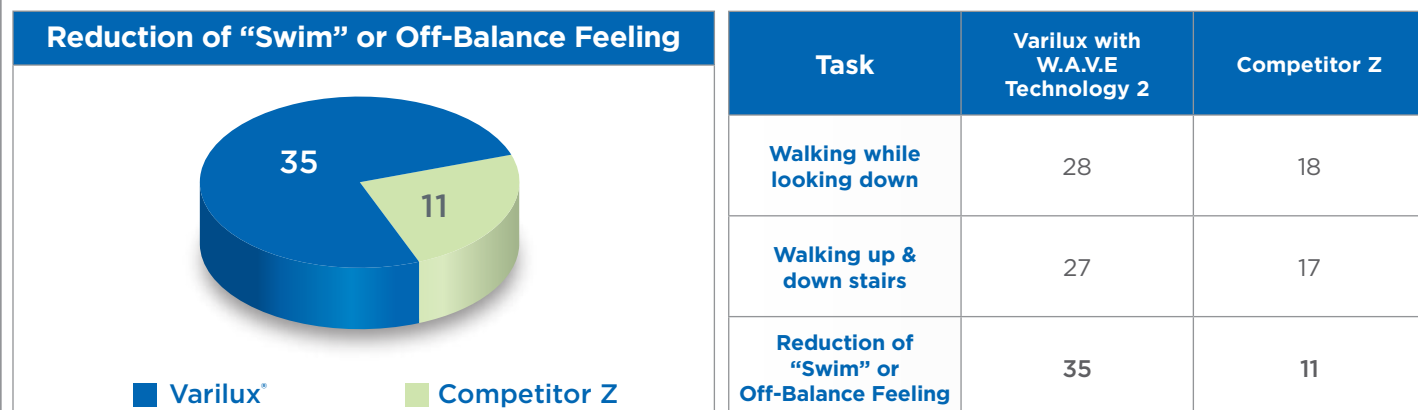
## Patients prefer Varilux S Design lenses 3:1 over the competition for reduction of off-balance feeling

**Objective:** To compare how Varilux S Design lenses and Competitor Z premium PAL reduce off-balance feeling or "swim" when performing certain visual tasks.

**Method:** Each subject performed several tasks and were asked which lens they preferred for the reduction of "swim" or off-balance feeling. Tasks included:

- Walking up and down stairs
- Walking while looking down

**Conclusions:** Varilux S Design lenses was preferred by 35 of the 46 wearers over Competitor Z for reducing the off-balance feeling commonly reported by PAL wearers.



\*Study conducted in 2012 by independent third party sponsored by Essilor of America, Inc. Results based on wearers who had a preference (n=46).

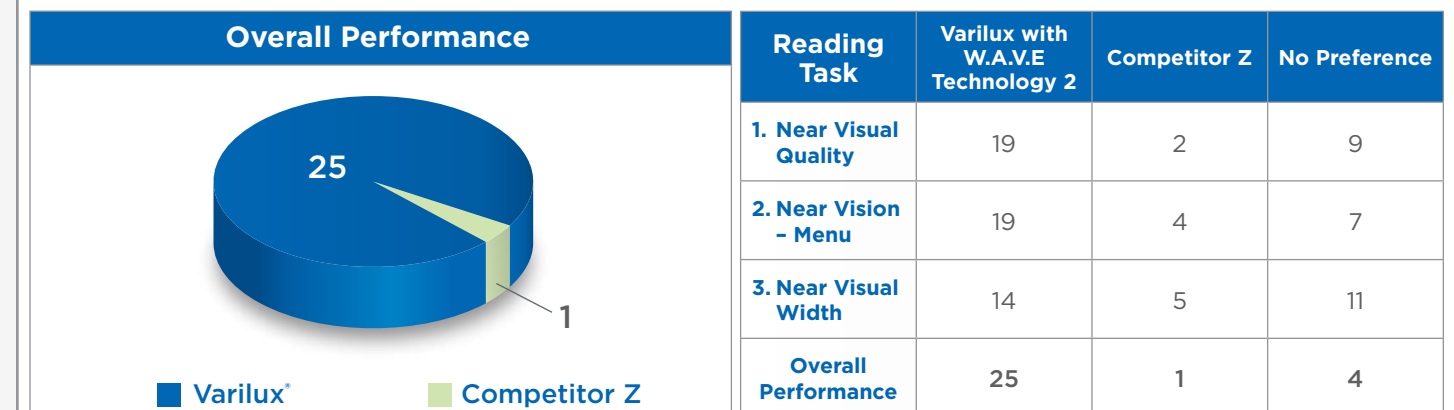
## Varilux lenses with W.A.V.E. Technology 2 preferred 25:1 in dim lighting

**Objective:** To evaluate and compare the performance of Varilux lenses with Wavefront Advanced Vision Enhancement (W.A.V.E.) Technology 2 versus Competitor Z premium PAL for use in dim lighting conditions.

**Method:** Each subject evaluated designs for three near activities as well as overall performance. Tasks included:

1. Near vision - Standard chart positioned at 16"
2. Near vision - Low contrast target (restaurant menu) positioned at 16"
3. Near vision - Column target to judge width of vision

**Conclusions:** Of the subjects who had a preference, 96% of wearers preferred Varilux lenses with W.A.V.E. Technology 2 over Competitor Z premium PAL overall for near vision activities in dim lighting conditions.



\*Study conducted in 2011 by independent third party sponsored by Essilor of America, Inc. Results based on wearers who had a preference (n=30).