Varilux® Digital Progressive Lenses

Varilux Physio DRx / Varilux Comfort DRx	Varilux Comfort W2+	Varilux Physio W3+	Varilux X series	
LARGE READING AREA	LARGE READING AREA	LARGE READING AREA	LARGE READING AREA	CUSTOMIZED NEAR VISION
SHARPER VISION even in low light	SHARPER VISION even in low light	SHARPER VISION even in low light		W.A.V.E. TECHNOLOGY 2™
SMOOTH TRANSITIONS from distance to near	SMOOTH TRANSITIONS from distance to near			SYNCHRONEYES™ TECHNOLOGY (BINOCULAR BOOSTER)
HELPS ELIMINATE OFF-BALANCE FEELING				NANOPTIX™
REDUCES HEAD MOVEMENT within arm's reach				XTEND™ TECHNOLOGY

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Essilor Better Sight. Better Life.

Transitions™ Crizal® VARILUX® Eyezen™ XperioUV™

Patients prefer Varilux® X Series™ lenses 7:10 over Varilux® S Series™ lenses

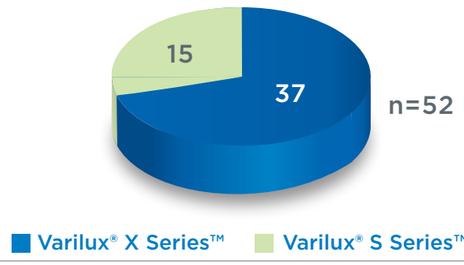
Objective: To compare the performance of Varilux X Series lenses versus Varilux S Series lenses in a variety of tasks.

Method: Each subject was asked to compare in a double-blind study two pairs of lenses in terms of preference and satisfaction while performing a series of tasks. Tasks included:

- Reading and typing text messages on a cell phone
- Reading text on a tablet
- Determining movement of objects being separated
- Looking at different locations within a car (odometer, radio station, GPS, side mirror, and rear view mirror)

Conclusions: Over 70% of subjects preferred Varilux X Series over Varilux S Series overall.

Overall Performance



Task	Varilux® X Series™	Varilux® S Series™
Reading and typing text messages on a cell phone	35	17
Reading text on a tablet	36	16
Visual Separation	33	19
Looking at different locations in a car	34	18
Overall Performance	**37**	**15**

Study conducted in 2017 by an independent third party sponsored by Essilor of America, Inc. (n=52)

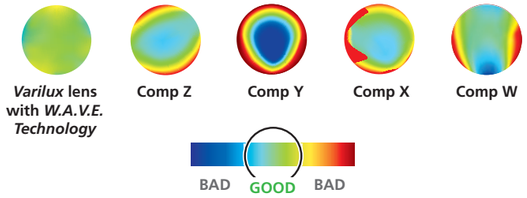
Varilux™ lenses with W.A.V.E. Technology 2™ preserve visual sharpness better than competitors, especially in dim lighting

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

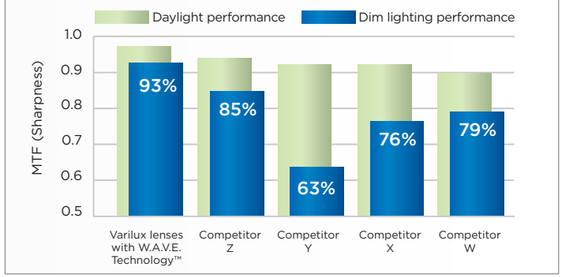
Method: Tests compared wavefront aberration levels and contrast sensitivity of Varilux lenses with W.A.V.E. Technology 2 and four competitor premium PALs of identical prescription and material in daylight and dim lighting conditions.

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).

Comparison of Wavefront Aberration Levels



Comparison of Visual Sharpness in Low-light Conditions



*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.

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

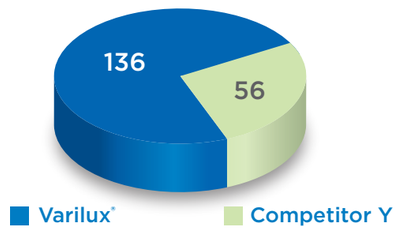
Objective: To compare the performance of Varilux Comfort W2+ lenses versus Competitor Y premium PAL in a variety of tasks in high and low lighting conditions.

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.

Overall



Reading Task	Varilux Comfort W2+	Competitor Y
1. Pill Bottle - Low Light	142	50
2. Menu - Low Light	121	71
3. Pill Bottle - High Light	135	57
4. Menu - High Light	134	70
5. Tablet - Low Light	134	58
Overall	**136**	**56**

*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™ preferred 25:1 in dim lighting

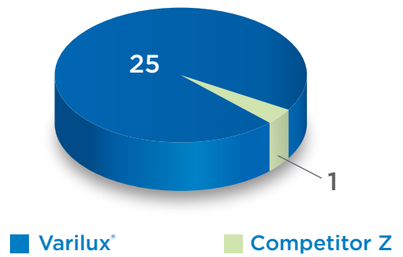
Objective: To evaluate and compare the performance of Varilux lenses with Wavefront Advanced Vision Enhancement (W.A.V.E.) Technology 2 versus Competitor Z premium PAL for use in dim lighting conditions.

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.

Overall Performance



Reading Task	Varilux with W.A.V.E Technology 2	Competitor Z	No Preference
1. Near Visual Quality	19	2	9
2. Near Vision – Menu	19	4	7
3. Near Visual Width	14	5	11
Overall Performance	**25**	**1**	**4**

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