



# Clinical Evaluation of Varilux Comfort® vs. Digitally Surfaced Full Back Side PAL

Research conducted by independent 3rd Party - sponsored by Essilor of America

## PURPOSE

To compare the performance of two PAL design formats:

- 1.) Varilux Comfort® - introduced in 1994- has a front surface molded progression with distance power traditionally generated on back surface
- 2.) FBS #SS- introduced in 2007- has a spherical front surface with progression and distance power digitally generated onto the back surface

## METHODS

Subject masked, non-dispensing, randomized design

Fitting parameters:

- ♦monocular Pds
- ♦FRP @ center pupil
- ♦min. fitting height =18
- ♦min. 10mm between FRP & superior edge of lens

Each subject subjectively compared designs for:

- ♦Distance (comfort, width, swim)
- ♦Intermediate (comfort, width, swim)
- ♦Near (comfort, width, swim)
- ♦Ease of focal change between targets placed:
  - intermediate - distance
  - near - distance
- ♦Overall Preference for:
  - Distance
  - Intermediate
  - Near
  - Focal Change
  - Overall

## SUBJECTS

N = 33 subjects

Average Age = 53 (r = 42 to 63 years of age)

Avg Dist. Rx (OD) = -1.50 sph (r = -6.75 to +2.75)  
-0.60 cyl (r = sph to -1.50)

Myopes = 22 Hyperopes = 11 Astigmats = 29  
(14 > -2.00) (1 > +2.00) (4 > -1.00)

Avg. ADD = +2.00 (r = +0.75 to +2.50)

Avg. Fitting Height = 22mm (r = 18mm to 31.5mm)

Current Primary Correction Type:

23 = PALs (none wearing either PAL assessed)

5 = SV (DVO or NVO)

5 = Contact Lenses (1 monovision, 1 multifocal)

Inclusion Criteria:

20/25 or better in each eye

current refraction (<6 months old)

Exclusion Criteria:

systemic condition having influence on VA

medical treatment/medication influencing VA

## CONCLUSIONS

Varilux Comfort® was preferred in 14/15 of the areas measured (equivalent in one). The results were significantly in favor of Varilux Comfort for *distance visual comfort* (p=0.038), *change of focus* (p=0.044), *intermediate overall* (p=0.031), and most significantly, **subjects preferred Varilux Comfort overall 3:1** (p=0.0176). Although increased width of field is the primary claim of the FBS design, Varilux Comfort was preferred for width of field in all three visual zones.

## STATISTICAL RESULTS

N = 33	Varilux Comfort	FBS #SS	No Preference
Distance Visual Comfort	20	8	5
Subjective Distance Width	13	11	9
Distance Swim	16	6	11
Intermediate Comfort	14	6	13
Intermediate Width	16	10	7
Intermediate Swim	12	9	12
Near Comfort	11	11	11
Near Width	13	11	9
Near Swim	12	10	11
Change Focus: Int-Distance	15	5	13
Change Focus: Near-Distance	11	10	12
DISTANCE OVERALL	19	9	5
INTERMEDIATE OVERALL	19	7	7
NEAR OVERALL	16	10	7
EASE OF CHANGING FOCUS OVERALL	13	6	14
OVERALL PREFERENCE	22	8	3

