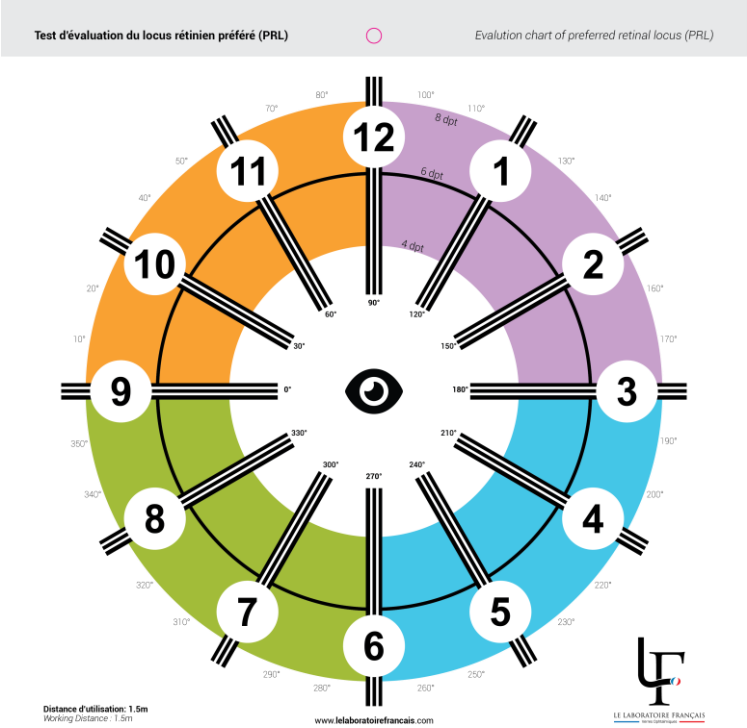
Methodology for Using **the PRL Test**

Location of the Preferred Retinal Locus

For optics and low vision professionals



Enhanced Parent Dial · Operating distance: 1.50 m · Equivalent contrast in all colors

2	12	4 · 6 · 8 Δ	360°
Additional methods	Time positions	Prismatic values	graduation (30° pitch)

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Verres Ophtalmiques

Summary

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1 FUNDAMENTAL PRINCIPLE — TWO METHODS, ONE RESULT

The PRL LESA FRANCE dial allows localization of the **Preferred Retinal Locus (PRL)**—a functional peripheral retinal area used as a substitute for the injured fovea—according to two complementary approaches that converge toward the **same clinical outcome**.

METHOD 1 — Active central mounting	METHOD 2 — Natural free gaze
The patient **stares at the center** and describes what **they DO NOT see**.	The patient **looks freely** and describes what they **see in the BETTER**.
→ Reveals SCOTOME	**→ Reveals the PRL**
Prism base oriented **toward** the unseen area.	Base of the prism opposite the viewed area.

⟹ **CONVERGENCE** *Both methods always give the same result because the scotoma and the PRL are, by definition, in opposite positions on the retina.*

Method 1 — Active central fixation (detection by the scotoma)

The patient **fixes the eye at the center** of the dial and maintains this fixation at all times. They are asked to describe the area they **cannot see** or see the most poorly—while keeping their eyes on the center.

Unseen area = scotoma → base of the prism oriented **toward this area**.

Advantage	Limit
Very precise; direct mapping of the scotoma.	Requires the ability to maintain a grip, even if imperfect.

Method 2 — Natural free gaze (detection by PRL)

The patient **looks at the dial naturally**, without any fixation constraints. They are asked to describe the area they **see best** — color, circle, number.

Area seen = PRL → base of the prism at the **opposite** end (to bring this area back to central vision).

Advantage	Limit
Accessible to all, more comfortable, without constraints.	Less precise if the PRL is not yet stable.

Prismatic orientation rule — valid for both methods

In **Method 1**, the base takes the angle of the unseen area. In **Method 2**, the base is subtracted from the angle of the viewed area by **+180°** (last column).

Method 1 — NOT seen area (scotoma)	Method 2 — VUE zone (PRL)	Prism base	Base angle (M2: read + 180°)
12 h / 90° (top)	6 h / 270° (down)	**SUPERIOR Base**	**270° + 180° = 90°**
3 h / 180° (right)	9 h / 0° (left)	**TEMPORAL BASE (OD)**	**0° + 180° = 180°**
6 h / 270° (down)	12 h / 90° (top)	**LOWER BASE**	**90° + 180° = 270°**
9 h / 0° (left)	3 h / 180° (right)	**NASAL base (NOD)**	**180° + 180° = 0°**
2 h / ~60°	8 h / ~240°	**Supertemporal basis**	**240° + 180° = 60°**
4 h / ~120°	10 h / ~300°	**Inferotemporal base**	**300° + 180° = 120°**
8 h / ~240°	2 h / ~60°	**Infernonasal base**	**60° + 180° = 240°**

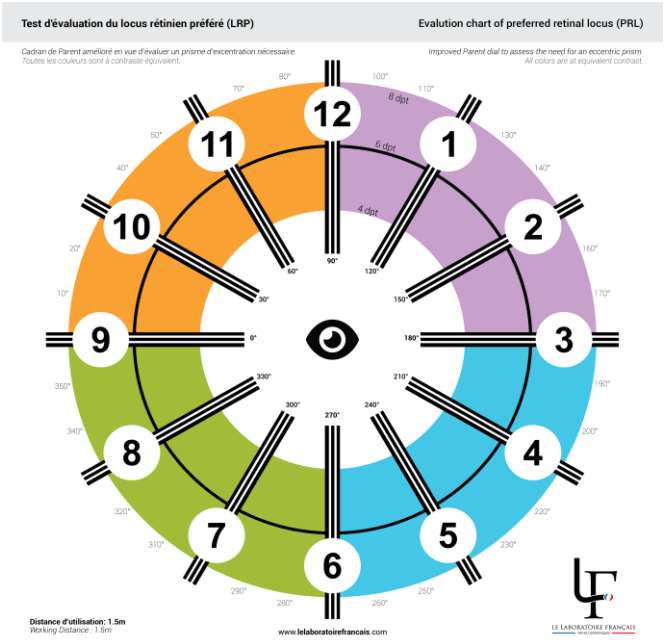
Method 1 — NOT seen area (scotoma)	Method 2 — VUE zone (PRL)	Prism base	Base angle (M2: read + 180°)
10 h / ~300°	4 h / ~120°	**Superonasal base**	**120° + 180° = 300°**

RULE METHOD 2 *The dial displays the angle of the area the patient sees best (the PRL). The base is oriented in the opposite direction: base orientation = value read on the dial + 180° (modulo 360°). On the clock, this means aiming for the diametrically opposite position — e.g. PRL at 8 o'clock → base at 2 o'clock.*

Both methods always give the same result because scotoma and PRL are, by definition, in opposite positions on the retina.

2 THE PRL LESA FRANCE DIAL

The dial features a **12-position clock** and a **360° angular graduation** (not 30°). Four colored dials, all with **equivalent contrast**, facilitate the description of the area perceived by the patient. Three concentric rings correspond to the **estimated prismatic power**.



Identifying colored quadrants

Color	Time positions	Angular range	Indicative anatomical landmark
Orange	9 a.m. → 12 p.m.	0° – 90°	Supertemporal (DO)
Violet	12 p.m. → 3 a.m.	90° – 180°	Supranasal (OD)
Cyan	3 → 6 h	180° – 270°	Inferonasal (DO)
Green	6 a.m. → 9 a.m.	270° – 360°	Inferotemporal (OD)

Concentric rings — prismatic power

Ring	Position	Estimated power
Interior	closest to the center	**4 Δ**
Median	intermediate	**6 Δ**
External	the farthest from the center	**8 Δ**

ANGULAR CONVENTION *0° at 9 a.m. · 90° at 12 p.m. · 180° at 3 a.m. · 270° at 6 a.m. The stylized eye in the center marks the fixation point of Method 1.*

3 CONTRAINDICATIONS AND LIMITS

3.1 Absolute contraindications

Pathology / situation	Reason for exclusion	Orientation
Retinitis pigmentosa	Peripheral and annular **scotoma** — non-central. The logic of the test (central scotoma / peripheral LRP) is reversed; the dial does not allow identification of a residual central PRL.	ERG assessment, specialized low vision
Zero AV / light perception only	No functional retina available — both methods are inapplicable.	Deep rehabilitation
Severely unstable nystagmus (> 10°/s)	Method 1 not applicable (no stable fixation); Method 2 possible but unreliable.	Micro-perimeter, mfERG
Absolute bilateral total scotoma	No functional area accessible for either method.	Multidisciplinary assessment

3.2 Limiting factors

Factor	Method 1	Method 2	Adaptation
Cognitive disorders	Hard-to-maintain attachment	Usable with guidance	Favoring M2, simplifying deposit
FRONT < 1/20	Difficult	Possible if dial is enlarged	Enlarge or zoom in on the dial
Moderate nystagmus	Unstable results	More suitable	Favor M2, multiply handovers
Non-stabilized PRL	Contradictory answers	Vague answers	Multiplying passes, noting instability
Eye strain	Compromised fastening	Less affected	Test at the start of consultation
Retinitis pigmentosa	**Absolute contraindication — the two methods**		**Do not take the test**

4 PREPARATION — MANDATORY PRE-STEP

Preliminary refraction

- Refraction with correction in use (ETDRS / Snellen).
- Note the OD **/ OG / ODG** visibility.
- Optimize if possible → note the **first improvement in views**.
- Identify **the dominant eye**.
- Identify **the eye with the best residual vision** → the test begins with this eye.

Environment

- Distance: **1.50 m ± 10 cm** (corneal plane).
- Uniform illumination, **300–500 lux**, no reflections on the dial.
- Centered dial at eye level.
- Usual optical correction is achieved.

Choice of method according to the patient

Patient situation	Recommended method
Cooperative patient, able to fix	**Method 1 first**
Moderate cognitive disorders	**Method 2**
Moderate nystagmus	**Method 2**
Unstable or uncertain PRL	**Both — cross-referencing results**
Tired patient	**Method 2**
Results to be confirmed	**Both — checking consistency**

⚠ **HEAD POSTURE** *Observe and note the spontaneous head position before any handover (chin-up, chin-down, D/G rotation). Never correct: this is a valuable clinical indicator to correlate with the result.*

5 OVERVIEW OF THE METHODOLOGY

Overview of the five-phase process. The **column "Measurement to be recorded"** indicates, for each step, the data to be reported on the patient record (§11). Detection is conducted **eye by eye (monocular);** the final setup is **binocular** (see §7).

Action	Instrument	Measure to be recorded
PHASE 1 · REFRACTION		
Visual examination with correction during use	ETDRS / Snellen	**OD / OG / ODG view**
Refraction optimization	ETDRS	First possible improvement of the visus (OD / OG / ODG)
Dominant eye detection	—	OD / OG
Identification of the eye with better residual vision	—	**OD / OG — starting eye**
PHASE 2 · PRL TEST (DIAL, 1.50 m)		
Monocular detection of scotoma (M1) and/or PRL (M2), occulted contralateral eye	PRL dial	Zone ____ h / ____°; color; circle Δ
Insertion of the temporary prism, base oriented according to the result	Test prisms 4–8 Δ	Temporary basic orientation (°)
Aging in 30° then 10° increments	Test prisms	**Final basic orientation (°)**
Resumption of the test on the contralateral eye (if equivalent vision)	LRP dial	Identified contralateral PRL
PHASE 3 · FUNCTIONAL VERIFICATION		
Monocular vision with the prism (better vision eye)	ETDRS	Visus OD / OG with prism
Transfer to the contralateral eye: **same power, same orientation**	Conjugate prism	OD / OG Vision
Complete binocular test (parallel/conjugated prisms)	—	**2nd improvement of the visus (ODG); orientation validated**
PHASE 4 · MOBILITY AND COMFORT		
Walking, looking at different distances, facial recognition	—	Stability / comfort; possible discomfort
PHASE 5 · CONTRAST AND FILTERS		
Photoselective filters indoors then outdoors (polarized ±)	Photoselective filters	Retained coloration; comfort

READING THE TABLE PHASES *1 and 2 take place in monocular vision (one eye occulted). Phase 3 transitions to binocular : the prism of the better eye is transferred identically onto the other eye, then validated together. The detail is developed in §7.*

6 DETAILED PROCUREMENT PROTOCOL

In both methods: **the contralateral eye is obscured** and the **best correction is provided**.

6.1 Method 1 — Active central fixation (scotoma detection)

INSTRUCTIONS *"Look at the eye in the center of the dial and hold this fixture at all times. Even if you can't see it well, keep looking toward the center. Don't move your eyes. Tell me what you can't see or see very poorly around you." »*

Questions in order — the patient maintains the fixation:

1	Do you see the dial as a whole?
2	Do you see the eye in the center? (If not→ confirmed central scotoma — that's expected.)
3	While holding the fixation: which area of the dial do you see the most or not at all? Indicate it. → = **scotomatal area**
4	By maintaining the fixation: which numbers (1 to 12) do you not see?
5	By maintaining fixation: which color do you see least or not at all? (I. not at all · II. partially · III. distinctly)
6	Estimate the extent of the unseen area (1 sector, 2 sectors, plus...).

📊 **Result M1: scotomatal zone ____ h / ____° — color not seen _____ — extent ____ sectors. → Base of the prism oriented TOWARD this zone.**

6.2 Method 2 — Natural free gaze (PRL detection)

INSTRUCTION: *"Look at the dial as you naturally do. Don't force yourself to look at a particular point. Just tell me which area you see best—the sharpest, the most visible. There is no right or wrong answer." »*

Questions in order:

1	Which dial color do you see best? → identifies the **quadrant of the PRL**.
2	At which circle is your best vision? Internal (4 Δ) / Median (6 Δ) / External (8 Δ) → **estimated prismatic power**.
3	Which number (1 to 12) or angle do you see best or first? → **position of the PRL read on the dial**.
4	Do you see the eye in the center? If yes→ the PRL approaches the center → low-power prism. If not, → confirmed central scotoma.
5	What is the quality of vision in this area? (I. distinctly · II. partially · III. poorly / not seeing well)

➞ **Base orientation = value read on the dial + 180°** (diametrically opposite position of the PRL).

📊 **Result M2: PRL zone ____ h / ____° (read angle) — color _____ — circle ____ Δ. → Prism base = read angle + 180° (opposite position on the dial).**

Consistency check between the two methods

If both methods have been used, the results should point to the **same basic orientation of the prism**.

EXAMPLE *M1 → scotoma at 2 h → supertemporal base · M2 → LRP at 8 h → supertemporal base ✓. A discrepancy requires repeating the less well-conducted handover.*

7 FROM MONOCULAR TEST TO BINOCULAR MOUNT

Detection of the scotoma / PRL and determination of the prism are done **eye by eye, in monocular vision**. However, the final prescription is **always a binocular setup**: the orientation and power retained on the better eye are reported identically on the contralateral eye, then validated with both eyes open.

Refraction → Monocular detection (strong eye) → Determined prism (strong eye) → Contralateral eye transfer — same Δ, same base → Binocular validation → Mobility & comfort

7.1 Why Detection is Monocular

- **Blocked contralateral eye** : the scotoma and the PRL specific to each eye are isolated, without interference from the other.
- Where **starts with the eye with better residual vision** : it carries the most reliable information to determine orientation and power.
- On this eye, **orientation and power are indivisible** : they form a unique pair determined by methods 1 and/or 2 then by refinement (not 30° then 10°).
- The test is **redone on the contralateral eye only if the residual vision is equivalent** between the two eyes (§7.6); otherwise, the prism of the strong eye is simply shifted.

7.2 Insertion and refinement of the prism — on the strong eye

1	Insert a temporary prism (start at **4 Δ**), oriented base according to the results of methods 1 and/or 2 (M2: read angle + 180°).
2	Ask: "Do you see parts of the dial you didn't see? Is the central eye more visible? »
3	**Refine in 30° increments** clockwise until patient feedback is negative.
4	Turn in the opposite direction in 30° increments until negative return, then return to the best position.
5	Refine in **10° increments** (can also be performed by the patient themselves).
6	If there is no improvement to 4 Δ → increase to **6 Δ, then 8 Δ**, and restart the refinement.
📊 **Strong eye prism: final orientation ____° | power ____ Δ | base position ____ h**	

7.3 Why the mount is binocular — principle of conjugate prisms

The two prisms are **combined** ("yoked"): **same power and same orientation** in front of each eye. This is not a practical simplification, it is a physiological necessity.

- Two identical prisms move **the entire visual scene in the same way for each eye** : the correspondence between the two retinal images is preserved.
- This preserved correspondence **maintains binocular fusion** : the brain continues to superimpose the two images into one.
- Conversely, two different orientations or powers create a **disparity between the two eyes** → merger conflict→ **diplopia**.
- Only the binocular display provides vision **comfortable in real conditions** (movements, faces, varied distances); a monocular prism alone does not allow this.

PRESCRIPTION RULE *The orientation and power prescribed on the better eye are transferred as is to the contralateral eye. The second improvement in vision is then recorded, measured with binoculars.*

7.4 Detailed sequence of monocular → binocular passage

Example with **OD = eye with better residual vision** (reverse OD/OG if it is the OG). At each step, the "Eye occult" column indicates the occlusion status.

No.	Hidden eye	Action	To be recorded
1	OG	Prism **validated on the strong eye (OD)** after refinement at 30° / 10° (§7.2).	Orientation ____° · power ____ Δ
2	OG	Measurement **of the OD monocular with prism** (ETDRS).	Vista OD with prism
3	—	**Decision** : is residual vision equivalent between the two eyes? **Yes** → repeat M1/M2 on the OG (§7.6). **No** → transfer the prism (step 4).	Starting eye / guide eye
4	OD	Place in front of the OG a prism **of the same power and orientation** (conjugate), in front of the best optical correction.	OG prism: ____ Δ / ____°
5	OD	**OG monocular vis measurement with prism**.	Visus OG with prism
6	None	**Desocclusion**: **complete binocular** test with both prisms oriented parallel.	Visus ODG with prisms (2nd improvement)
7	None	Check **unique and stable image, absence of diplopia, comfort** — instructions and criteria in §7.5.	Merge: yes / no diplopia: yes / no
8	None	If diplopia or discomfort → **titration/penalization** (§7.7), then a new binocular test.	Adjustments made
9	None	Mobility **and contrast tests in binocular** (§8) → **definitive binocular prescription**.	Prescription OD / OG

MILESTONE *Steps 1 to 5: one eye is still occulted (monocular). Steps 6 to 9: both eyes are open (binocular). The passage takes place at step 6, once both prisms are in place.*

7.5 Binocular test — instructions and validation criteria

INSTRUCTION *"Both your eyes are now uncovered, with a prism in front of each. Look at the dial, then at the room around you. Do you see a single image, sharp and steady? Do you see double at one point, even briefly? Is it more comfortable than with one eye?" "*

Criterion	Expected	If the criterion is not met
Single image	A single image, no splitting, neither in fixation nor in head movement.	diplopia → titration (§7.7); orthoptic balance if persistent.
Stability	Stable image; no annoying ripple when moving.	Reduce power; verify the identity of the two orientations.
Binocular visus	Visus ODG with prisms ≥ best monocular visus with prism.	Check the transfer (same Δ, same °) on the 2nd eye; resume the refinement.
Perceived improvement	Dial/center eye areas best seen or as well as monocular.	Reconsider orientation; recross M1 and M2.
Comfort	No dizziness, nausea, or eye strain.	Reduce potency; recall normal adaptation within ~7 days.

7.6 Decision tree according to asymmetry between the two eyes

Location	Conduct to be followed	Point of Vigilance
Clearly asymmetric residual vision (general case)	Determine the prism on the **strong eye**; transfer it **to the same** (same Δ, same °) on the weak eye.	Validate the fusion with the binocular test (§7.5).
Equivalent or slightly different residual vision	**Redo M1/M2 on the contralateral eye**; perform **several binocular tests**; favor orientation of the **dominant eye**.	Increased caution during walking tests; describe visual comfort.
PRL in different directions	**First, equip the director eye** with a well-tolerated prism; gradually integrate the contralateral eye.	Risk of persistent diplopia → an essential ortholeptic assessment.
Very distant amplitudes (e.g., 10 Δ vs 12 Δ)	Harmonize on the power tolerated by the guiding eye; **slightly penalize** the contralateral eye if necessary.	Never allow two powers to diverge in binoculars.
Persistent diplopia despite titration	Return to a well-tolerated prism on the guiding eye; penalization of the contralateral; orthoptics.	Do not prescribe with binoculars until fusion is achieved.

7.7 Preventing diplopia — titration and penalization

Consistency between the PRLs of both eyes is essential to avoid persistent binocular diplopia.

- Some **divergent base directions**, or **Very distant amplitudes** between the two eyes, disrupt motor fusion.
- **Titration** : adjust power in increments of **2 to 3 Δ** up to the best tolerated value with binoculars, then retest.
- **Penalty** of the contralateral eye: reduce its contribution to fusion — a lower power prism on this eye, or slight optical penalty — in order to allow the**guide eye guide**. Decision to be made with the orthoptic assessment.
- In case of clearly divergent LRPs: **Essential orthoptical assessment** before any final assembly.

ADAPTATION *The initial disorientation is normal and generally subsides within ~7 days. Intolerable or persistent discomfort from the start beyond 2 to 3 weeks requires reassessment of strength.*

7.8 What to Record for the Binocular

Starting eye / guide eye	OD / OG
Strong eye prism	____ Δ / ____°
Contralateral eye prism (conjugate)	____ Δ / _____° — identical: yes / no
Monocular Visus with prism	OD ____ / OG ____
Binocular sight with prisms (2nd improvement)	ODG ____
Fusion obtained / diplopia	yes / no · yes / no
Adjustments (titration, penalty)	_____

8 FUNCTIONAL VERIFICATION — MOBILITY AND CONTRAST

Once the binocular mount is validated (§7), the effectiveness is checked under real conditions.

Mobility and visual comfort

1	Have **the patient walk** and have them look at objects at different distances to check stability and comfort.
2	Ask them to **observe and recognize people** 's faces.
3	In case of significant discomfort or disorientation→ **reduce potency**. Remember that the initial disorientation is normal and generally disappears within ~7 days.

Contrast and photoselective filters

1	Test **photoselective filters** to improve contrast and protect against UV and blue light — first indoors.
2	Test the filters outdoors, including stacking with various **polarized filters**.

TO BE RECORDED *Photoselective coloration retention and comfort level, indoors and outdoors (see sheet §11).*

9 HEAD POSTURE — CLINICAL CORRELATION

Spontaneous head posture is a natural indicator of the location of the PRL. It should be **observed without correction before the test** and reassessed after prescription.

Spontaneous deviation	Probable scotoma (M1)	Probable PRL (M2)	Expected prism base
Right rotation	Left zone ~9 h	Right zone ~3 h	Nasal OD / Temporal OG
Left rotation	Right zone ~3 h	Left zone ~9 h	Temporal OD / Nasal OG
Chin-up	Upper zone ~12 h	Lower zone ~6 h	Superior
Chin-down	Lower zone ~6 h	Upper zone ~12 h	Lower
Mixed posture	Oblique zone	Opposite oblique zone	Combining angles

POST-PRESCRIPTION VALIDATION *A properly prescribed prism should reduce or eliminate postural compensation. If posture does not change, → reconsider orientation or power.*

10 COMMON MISTAKES TO AVOID

Error	Method concerned	Consequence
Telling the patient NOT to look at the center during M1	Method 1	**Total invalidation — the scotoma cannot be detected**
During M2, orient the patient toward an area ("can you see better there?")	Method 2	Suggestion → biased result
Correcting head posture before the test	Both	Loss of the natural postural indicator
Incorrect distance (≠ 1.50 m)	Both	Offset of prismatic values
Uneven lighting or glare	Both	Contrast bias → localization error
Applying the test to retinitis pigmentosa	Both	**Absolute contraindication**
Not checking consistency between M1 and M2	Both	Prescription on unconfirmed result
Test without the usual optical correction	Both	Clinically non-transposable outcomes

11 DOCUMENTATION AND MONITORING

Results Sheets

OD Results	OG Results
Method used: M1 / M2 / both	Method used: M1 / M2 / both
Scotomatal zone (M1): ____ h / ____°	Scotomatal zone (M1): ____ h / ____°
PRL zone — read angle (M2): ____ h / ____°	PRL zone — read angle (M2): ____ h / ____°
Color concerned: _____	Color concerned: _____
Final prismatic power: ____ Δ	Final prismatic power: ____ Δ
Prism base orientation (M2: lu + 180°): ____°	Prism base orientation (M2: lu + 180°): ____°
Initial view / with prism: ____ / ____	Initial view / with prism: ____ / ____
PRL: stable / unstable / absent	PRL: stable / unstable / absent

Common data

Date, practitioner, signature	Spontaneous head posture (forward)
Starting eye / guide eye: OD / OG	Head posture after prism
1st Vision (Refraction) Improvement	2nd Visus improvement (binocular, with prisms)
Conjugate prisms (same Δ, same base): yes / no	Binocular Visus with ODG Prisms
Mobility test: satisfactory / discomfort	Photoselective filters tested
M1 / M2 consistency: yes / no / one method	

Recommended follow-up

- **Day+7** : tolerance, residual disorientation.
- **D+30** : adaptation, reassessment if necessary.
- **3 months** : posture and vision control with prism.
- Functional assessment (reading, ADQ).
- Progressive pathology → immediate reassessment.

> **FUNDAMENTAL PRINCIPLE** *"Two paths lead to the same result: what the patient does not see when fixing the center (scotoma) and what they see best when looking freely (PRL) are the two sides of the same retinal reality. The practitioner chooses the most accessible path for each patient — and crosses the two as soon as possible to validate the prescription. "*

12 CASES OF PROGRESSIVE LENSES

This section completes the protocol when the final equipment is carried out on **progressive lenses**. Two specificities must then be controlled: the **orientation constraint of the base** imposed by the progress corridor, and the management of the **factory-integrated lightening prism** in any progressive lens.

12.1 What changes with a progressive lens

Unlike a single-lens lens, a progressive lens is not uniform anywhere: the intensity varies along a **vertical meridian** (the progression corridor), and the areas on either side of the corridor show inevitable **surface astigmatism** that degrades acuity—a critical point in a patient whose residual vision is already reduced.

- **The progression corridor** connects the distance vision zone (top) to the near zone (bottom); sharp vision exists only along this quasi-vertical axis.
- **Two reference points** coexist on the glass: **centering cross** (axis of primary view) and the **prism reference point (PRP)**, located a few millimeters lower, where manufacturers usually control the prism.
- **A prism of lightening** (lower base) is factory-integrated in almost all progressive systems (see §12.3).

12.2 Base orientation : stay ± 30° from vertical

LESA France clinical observation: with progressive assembly, the eccentric prism must maintain a base oriented within a **cone of ± 30° around the vertical** — that is, between **60° and 120°** (upper bases) or between **240° and 300°** (lower bases). Beyond that, comfort and acuity deteriorate.

Basic orientation	Progressive compatibility	Driving
90° ± 30° (60° → 120°)	**Compatible**	Progressive installation possible
270° ± 30° (240° → 300°)	**Compatible**	Progressive installation possible
Marked or horizontal oblique bases (0° / 180° ± 30°)	**Not recommended**	Prefer two single-focus devices (VL and VP)

Why this limit? The horizontal component of a prism shifts the line of sight **laterally, outside the meridian**: the patient then constantly looks through the peripheral astigmatism zones of the glass, with loss of acuity and sensations of undulation—precisely what a low-vision patient cannot afford. At ± 30° from the vertical, this horizontal component remains limited to half the prismatic power (sin 30° = 0.5); An almost vertical prism moves the image **along the corridor**, which progressive drawing tolerates well.

> **SCIENTIFIC STATUS** *This ± 30° threshold is a rule derived from LESA France clinical practice. To our knowledge, no published study has specifically validated it; however, it is consistent with the documented perspective of progressive devices (astigmatism of lateral areas, limited clear vision in the corridor) and with the recommended caution when wearing conjugated prisms on progressive ones (navigation, stairs). Favorable point: LHP are most often in a higher position, so most prescriptions naturally follow vertical bases.*

12.3 The Lightening Prism — and Why It Must Be Removed

The **lightening prism** ("prism thinning") is a lower base prism factory-cut in both progressive lenses, typically on the order of **2/3 of the addition** (e.g., addition +2.00 D → ≈ 1.3 Δ lower base). Identical on both eyes, it cancels out in binocular vision: its only role is **cosmetic** — balancing the top/bottom thickness of the glass and lightening it. It is controlled at **the prism reference point**, not at the centering cross.

Combined with an eccentric prism, it ceases to be neutral: the two prisms **add up vectorially**, and the value carefully determined by the PRL test is distorted.

Prescribed prism (PRL test)	With ≈ 1.3 Δ base weight reduction inf.	Effect
6 Δ upper base (90°)	**≈ 4.7 Δ results**	Power reduced by ~20%
6 Δ lower base (270°)	**≈ 7.3 Δ results**	Power increased by ~20%
6 Δ oblique base (60°)	**≈ 4.9 Δ at ~52°**	Modified power AND orientation

- The effective power no longer corresponds to that validated on the dial (4 / 6 / 8 Δ) nor to the orientation refined to within 10°.
- No **frontocometer inspection becomes ambiguous** : in the PRP, you read the sum therapeutic prism + relief, impossible to interpret without knowing each person's share.
- **Conclusion: the relief must be eliminated** as soon as an eccentric prism is prescribed. Manufacturers accept this removal upon order.

12.4 The practice of the French LESA Laboratory — "eccentric prisms" option

On the LESA order form, simply **check the "eccentric prisms" option**. Two actions are then automatically applied to the glass calculation:

1	The **lightening prism is removed** from both lenses: no parasitic prism is added to the prescription.
2	The eccentric prism is **applied to the centering cross** — the axis of the primary gaze — and not to the prism reference point.

Applying the prism to the **centering cross** ensures that the prismatic effect delivered in the primary view is exactly as validated in the test (dial fixed straight in front, at 1.50 m). The clinical result is thus transferred without delay to the final equipment.

EQUIPMENT INSPECTION *Check the value and orientation of the prism with the frontocometer **at the centering cross** (and not at the PRP), on **each of the two lenses**: same Δ, same orientation (conjugated prisms). Counterpart of eliminating the lightweight: a slightly thicker upper edge — inform the installer for the choice of frame.*

12.5 Specific Points of Caution for Progressive Developments

Error	Background	Consequence
Forget to check the "eccentric prisms" option	Order	Lightweight-preserved → effective prism distorted from ± 1 to 1.5 Δ
Check the PRP prism instead of the centering cross	Reception / inspection	Uninterpretable reading; wrongly rejected or wrongly validated
Prescribe a base > 30° from vertical to progressive	Prescription	Chronically misaligned gaze in areas of lateral astigmatism
Replace a single glass (one with lighter, the other without)	Breakdown / renewal	Vertical prismatic imbalance → diplopia, sloped floors
Mounting height not suitable after removing the weight	Editing	Unsightly upper edge thickness; review the gauge
Test the patient on the dial with their progressives in non-primary comparison	Handover	The measured prism no longer corresponds to the corridor used

IN SUMMARY, *Progressive + eccentric prism = possible, under three conditions: base at ± 30° from the vertical, lightening removed, prism applied and controlled at the centering cross. Outside this framework, prefer two single-vision devices.*