



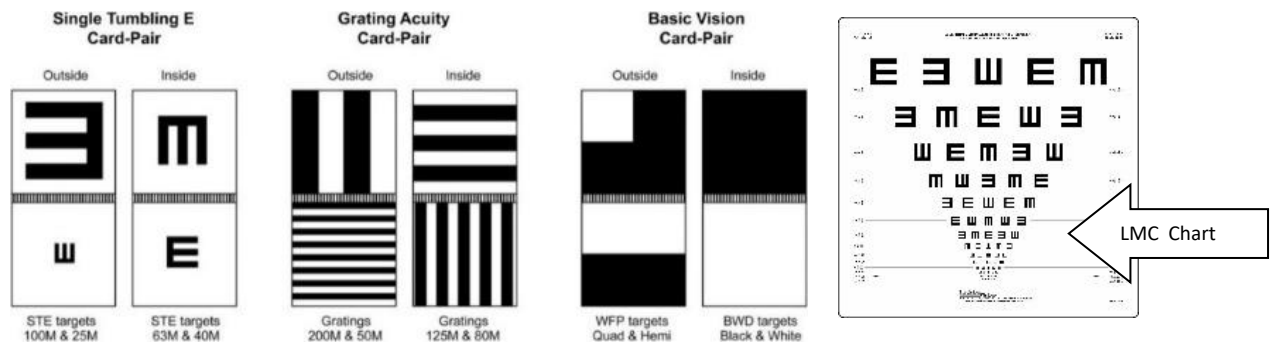
GUIDELINES FOR VISUALLY IMPAIRED (VI) CLASSIFICATION FOR LAWN BOWLS

The visual assessment is to be performed by an Ophthalmologist or a Registered Optometrist. Classification of the athlete will be made by the appointed Chief Classifier after all required documentation has been submitted and assessed.

Note Bowls classification is sports specific and may differ from other para sports.

VISUAL ACUITY

- PLEASE NOTE LOGMAR ACUITY IS REQUIRED FOR VI CLASSIFICATION
- Visual Acuity measurements must be verified using one or more of the **Berkeley Rudimentary Vision Test (BRVT) Charts**:
 - Grating Acuity Cards or Basic Vision Test Cards if the athlete is severely visually impaired
 - Single **Tumbling “E” (STE) CARDS** 100M, 63M, 40M, 25M
 OR for better visual acuity levels:
 - LogMAR Tumbling “E” EDTRS ACUITY CHART (LMC Chart)**



- PAY PARTICULAR ATTENTION TO THE CRITICAL DIVIDING LINES USED IN THE CLASSIFICATION SYSTEM by using repeated measurements **all** of which must be recorded by placing a cross in the appropriate blocks on Table 1 & Table 2. A minimum of **3 readings** are required **per eye** (except for B1). If results are **inconsistent** and show more than 0.2 log MAR difference – allow athlete to rest and **repeat with more readings**.
- Athlete classification is divided into the following classes as noted by the various shadings on acuity table:
 - B1** NLP up to LogMAR 2.7 (LogMAR 2.6 is out)
 - B2** LogMAR 2.6 up to LogMAR 1.5 (LogMAR 1.4 is out) irrespective of visual field
 - B3** LogMAR 1.4 up to LogMAR 1.0 (LogMAR 0.9 is out) irrespective of visual field
 - B4** LogMAR 0.9 or better acuity TOGETHER with a field of vision of less than 20 deg in diameter

VISUAL FIELD

- A visual field test using an **automated field analyser** must be attached to the application for all athletes **with significantly restricted visual field – mandatory for B4**.
- Athletes should be tested by a 30, 24 or 10 degree central field test.
- One of the following perimeters should be used: Goldman Perimeter with intensity III/4e, Humphrey Field Analyzer 10DB or Octopus (Interzeag) with equivalent isopter to the Goldman III/4e stimulus.
- Visual field shall mean the total visual field and shall be taken as the maximum sum of the fields about the point of fixation along any line through the point of fixation (e.g. temporal plus nasal or upper plus lower), whichever produces the largest result. Visual fields must be referred by diameter (not radius).

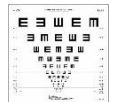


GUIDELINES FOR ACUITY TESTING USING BERKLEY RUDIMENTARY VISION TEST (BRVT): STE and LMC

- Acuity must be measured in EACH EYE – unaided & with best obtainable visual correction
- VA measurements need to be made **using different distances and several different Tumbling E sizes**. Results must be recorded by placing a cross in the appropriate blocks on the **LogMAR TABLES 1 & 2**. Results should be consistent - range of **variability** should NOT be more than **0.2 LogMAR**.
- For **each eye, at least 3 measurements (except for B1)** should be determined with no fixed procedure for letter sequence and distances used.
- **If there is significant inconsistency (range bigger than 0.2 LogMAR) then more distances and sizes need to be tested – 5 OR MORE READINGS REQUIRED. Allow the athlete to rest and repeat measurements.**

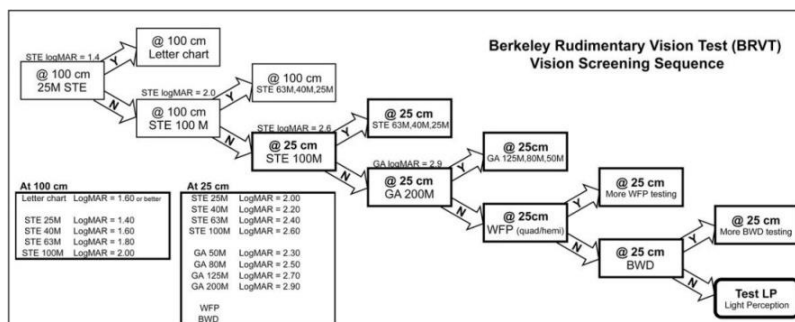
It is recommended to start at **1 meter** with a **100M Single Tumbling E (STE)** card-pair

- If the orientation of the **100M STE** can be readily recognized at 1m, increase the working distance until difficult to recognize – record the **greatest working distance** that the athlete is able to correctly identify the 100M STE.
- Repeat the above procedure with the 63M, 40M and 25M STE cards recording results for each letter size at the appropriate distance.
- Whenever the STE measurements are 1.0 LogMAR or better, the **big LogMAR EDTRS TUMBLING E CHART (LMC) must be used (ideally at 3-5 different distances)**. Athlete is to identify orientation of the optotypes across each row without isolating – end point is when at least 3(or more) of the 5 optotypes per row are answered correctly.



If the 100 M Single Tumbling (STE) cannot be recognized at 1 meter:

Reduce the viewing distance to **25 cm** and vary the STE card size – record the smallest STE size at the 25cm working distance that the athlete can correctly identify. Use Grating Charts Acuity Cards or Basic Vision Cards at 25cm if necessary - see table below with testing sequence when severely visually impaired



LIMITS FOR VI CLASSIFICATION CLASSES ARE AS FOLLOWS:

Limit B1 - unable to recognize single tumbling E 100M at 25cm (LogMAR 2.6 is out)

- **The STE is the task used to determine B2/B1 boundary**

Limit B2 – unable to recognize single tumbling E 25M at 1m (LogMAR 1.4 is out) irrespective of visual field

- **The STE is the task used to determine the B3/B2 boundary and confirmed with LMC ACUITY CHART**

Limit B3– unable to recognize the LogMAR 0.9 on the chart = 32M LogMAR chart at 4meters (LogMAR 0.9 is out) irrespective of visual field

- **LMC is MANDATORY to determine “good VA” border of the B3 range (boundary B3/B4)**

Limit B4 – able to recognize LogMAR 0.9 or better acuity on the LMC chart TOGETHER with a field of vision of less than 20 deg in DIAMETER

- **LMC is MANDATORY to determine VA + CENTRAL AUTOMATED VISUAL FIELD PLOT REQUIRED**

Should any additional explanation be required please contact Hazel Sacharowitz on hazel@lowvision.co.za or What’s App +27 82 3330444