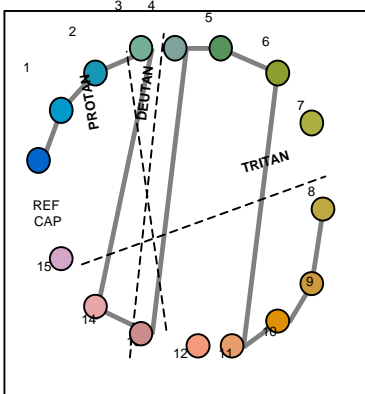


# Farnsworth and Arrangement Tests

| Product        | P/N    | Congenital | Acquired | Range          | Technical Papers Published | # Disks | Software Available? | Magnetic Version | Time to administer |
|----------------|--------|------------|----------|----------------|----------------------------|---------|---------------------|------------------|--------------------|
| Farnsworth D15 | FD15   | Yes        | Limited  | Med to Strong  | Many                       | 15      | Yes                 | Yes              | Moderate           |
| Lanthony D15   | LD15   | No         | Yes      | Normal vs Mild | Many                       | 15      | Yes                 | Yes              | Moderate           |
| 100 Hue        | F100   | Yes        | Yes      | Full           | Many                       | 100     | Several             | Yes              | Very Slow          |
| Sahlgrens      | 4595   | No         | Yes      | Normal vs Mild | Limited                    | 12      | No                  | No               | Quick              |
| Lanthony 40    | 126977 | No         | Yes      | unknown        | Limited                    | 40      | No                  | No               | Slow               |
| Roth 28        | 4506R  | Yes        |          | Med to Strong  | Limited                    | 28      | No                  | No               | Slow               |



## Farnsworth D15

Subset of the well-known Farnsworth 100 Hue Test. Intended for occupational evaluation and classification instead of in-depth study of color vision defects. Contains a reference disc and fifteen numbered discs which make up an incomplete color circle. Patient arranges the discs and then evaluation of the patient's arrangement separates 'normal' color perception from moderate and strong defects in deutan, protan or tritan axis color discrimination. Boxed in a clear plastic container for easy scoring and includes instructions, non-latex gloves and laminated score card.

- FD15C** Farnsworth D15 Kit
- 4428B** Laminated Scorecard
- 4433R** Replacement Color Disc
- 4495** Protective Cloth Pouch
- 5794R** Score Sheets, stack of 50

Spanish and French Available  
see Multi-language Section



## Magnetic Farnsworth D15

Same test as Farnsworth D15 except discs are enclosed in a sealed plastic box and arranged by using a magnetic pen. The discs are kept clean and cannot be lost. Kit includes magnetic pen, score sheet and cloth pouch.

- 4528C** Magnetic D15 Kit
- 4529** Replacement Magnetic Pen

## Lanthony Desaturated Test

Same test as the Farnsworth D-15 except colors are desaturated, which makes the test much more difficult. Separates normal color vision from any level of defect. Recommended for disease detection. Two Versions: loose disc and magnetic.

- LD15C** Lanthony Loose Kit
- 4540C** Magnetic Lanthony

Spanish and French Available  
see Multi-language Section



## 100 Hue Farnsworth Test

Examines hue discrimination ability. Recommended for critical color vocational and clinical diagnostic applications. We offer two versions: F100R Boxed and 4541R Magnetic. Magnetic 100 Hue encloses discs in four sealed plastic boxes. Arrangement is done using a magnetic pen, thus the discs are kept clean and loss is prevented. Both versions include CD with MS-Excel scoring template.

- F100R** 100 Hue Test Kit
- 4541R** Magnetic 100 Hue

### **100 Hue Accessories:**

- 4436B** Laminated Score Sheet
- 4819R** Pad of 100 score sheets
- 4433R** Replacement Color Disk
- 5320B** MS-Excel score template





### Roth 28 Disc Test

Studies the characteristic axes of dyschromatopsia similar to the D15, however, it provides a greater degree of sensitivity. Comes with a transparent base to make scoring readable. Includes laminated scoring template and instructions.

**4506R Roth 28 Hue Test**



### Lanthony 40 hue Test

Reduced form of the 100 Hue test. Quicker to administer. Includes 100 score sheets. Special order

**6050 Lanthony 40 Hue**  
**101311 100 Score Sheets**

### Sahlgren's Test for Acquired Defects

Desaturated chip test for detecting and grading acquired color deficiency. Requires only two minutes for quantitative estimation of saturation thresholds for bluish pigment colors. Highly sensitive to and specific for differences between normal and acquired vision defects. Laminated instructions.

**4595 Sahlgren's Test**



### MS-Excel Template to Score 100 Hue

Farnsworth F100 Hue Tests results can be scored on an MS-Excel Spreadsheet using this Software Template. The patient's selections are scored as errors from a perfect selection and graphed. Hue discrimination ability is estimated from the total error score and the type of color deficiency is determined from the graphical representation of the results. Ships on CD. Requires Excel 97 or later.

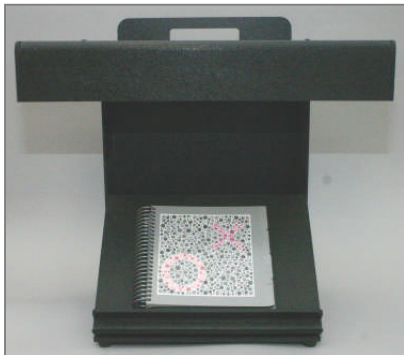
**5320B Excel Scoring Template**

# Daylight Illumination for Color Vision Testing

Each of the color tests listed recommends daylight or equivalent for proper illumination. This includes Farnsworth D15, 100 Hue, SPP, HRR and Ishihara, for example. The True Daylight bulb gives off 6280 degree K light which closely matches the standards set by the International Commission of Illumination. The Tru-Daylight bulb has been the subject of numerous color vision testing studies (see list below) and has been the recommended light source since the MacBeth Lamp became unavailable. The Daylight Illuminators have been approved by the U.S. Food and Drug Administration and the U.S. Defense Personnel Support Center for the armed forces and provides a Color Rendering Index (CRI) of 94 as recommended in various clinical studies and the National Research Monograph. Daylight illumination has been found to be very important for acquired color vision defects (such as Plaquenil screening) and critical occupational applications. Consistency of lighting from exam to exam is very important in detection of drug interactions. Further, the use of daylight has been found to be very beneficial in stereopsis, and visual acuity testing.

References:

Bailey, James E, Neitz, M., Tait, D., Neitz, J (2004). Evaluation of an updated HRR color vision test. *Visual Neuroscience* 21, 431-436, Cambridge University  
 Dain, S.J. (1998). Daylight simulators and colour vision tests. *Ophthalmic and Physiological Optics*, 18(6) 540-544.  
 Dain, S.J. and Honson, V.J. (1989) Selection of an optimal light source for the FM 100-Hue Test. *Doc.Ophthalmol. Proc. Ser.* 52, 425-432  
 Dain, S.J. and Honson, V.J.(1993) Suitability of Fluorescent tube sources for the Ishihara Test in *Colour Vision Deficiencies XI*, pp. 327-333.



## Illuminator for Pseudoisochromatic Tests with Easel

The Daylight Illuminator provides the proper angle and lighting for testing with Pseudoisochromatic plates. The easel helps avoid damaging fingerprints on the plates because the plates are presented standing on their own. The easel is removable for installation of a Flat Tray in order to use the Illuminator with arrangement tests.

The new Daylight Illuminator with Universal Power Supply adapts to any combination of 50 or 60 Hz and 110 or 220 volt. Kit includes slip in plug adapters for US, UK and Germany. Has UL, CSA and CE markings.

**5137R Illuminator with removable easel 110V**

**5735R Illuminator with removable Easel 110/220V Universal PS**



## Illuminators for Arrangement Tests

The 100 Hue Flat Tray is specifically designed to be used with Farnsworth 100 Hue, Farnsworth D15 and Lanthony Desaturated D15 tests. The 100 Hue tray is removable and measures 22" by 6" (108 by 30 cm). The raised Tray for the Magnetic Farnsworth or Roth 28 tests is 10 x 18 x 1.75 inch (26 x 46 x 3.5 cm) and includes a black rubber dull mat. See above description of 110/220V Universal Power Supply version.

**5139R Illuminator with removable Flat Tray 110V US \$ 239.00**

**5733R Illuminator with removable Flat Tray for Universal PS 110/220V**

**6123R Illuminator with Tray for Magnetic Farnsworth or Roth 28 110V**

**6124R Illuminator with Tray for Mag Farnsworth or Roth 28 110/220V**



## Accessories for Daylight Illuminators

The Daylight Bulbs are 15 watts. What is different about these bulbs is that they provide 6280K daylight which is what is required for accurate color vision testing.

**5141R Easel for use with Pseudoisochromatic Plate tests**

**5142R Flat Tray for mounting in place of removable Easel**

**6122 Illuminator Tray for Magnetic Farnsworth or Roth 28**

**6665R Daylight 18 inch Replacement Bulb**

## Daylight Illuminator Common Features

Each Daylight Illuminator Includes convenient handle for ease of transport, light switch and 4 ft cord. Dimensions are 17.5" high, 10" deep and 19" wide (44.5 cm H x 25.4 cm D x 48.3 cm W). The Plug Adapter kit provides 4 plug adapters (see photo) which includes adapters for:

- Type G for United Kingdom, Ireland, Cyprus, Malta, Malaysia, Singapore and Hong Kong
- Type F and C for Germany, Austria, the Netherlands, Sweden, Norway, Finland, Portugal, Spain, Brazil, Argentina, Peru and Eastern Europe
- Type H and I for Israel, Australia, New Zealand, Papua New Guinea and Argentina
- Type A for North and Central America, Brazil, Peru

The power supply handle power inputs: 47 to 63 HZ and 100 to 240 volts. The Universal Power Supply version is designed for shipment outside of the U.S.



Note: 5141R Easel and 5142R Flat Tray come with Velcro™ for easy mounting. 5142R Flat Tray is the same as the tray included with the F100R kit. The 6122 raised Tray has rubber feet.