



ACHIEVING CONTRAST IN DESIGN  
WITH THE USE OF LIGHT REFLECTIVE VALUES

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Over recent years there has been growing awareness of the importance of colour, light and contrast in creating comfortable, usable and stimulating environments for people living with visual impairment. One of the key factors when designing an effective, practical and attractive scheme is to consider their perception of the world and how this is affected by this impairment.

The RNIB (Fact Sheet 25) advises that 96% of people registered blind and partially sighted have some degree of residual vision and that, in order to make the most of this residual vision, visual contrast should be employed. The degree of contrast between adjacent surfaces is an important indicator to the visually impaired when navigating their environment and this in turn reaps benefits for their independence, comfort and confidence.

In addition to those people who are born with or acquire a visual impairment through accident or disease, the normal ageing process produces sensory losses for everyone. This is of particular concern for those living with Alzheimer's disease or other dementias who

perhaps are unable to devise coping mechanisms of their own. It is important for design to compensate for this deterioration as this, coupled with a potential lack of understanding of this loss, affects a person's perception of the world around them and creates confusion and distress.

The light reflective value describes the amount of light a surface reflects, i.e., the lightness or darkness of a surface, on a scale of 0 - 99: the higher the number, the lighter the surface. The level of contrast between surfaces such as walls and ceilings, walls and doors, furniture and floors etc, is invaluable in giving clues to the visually impaired as to the size, shape and potential for navigation of a room. In terms of measuring visual contrast, the current guidelines in the Regulations and in the relevant Codes of Practice, BS8300:2009, recommends that adequate visual contrast is provided if the LRV of the contrasting areas exceeds 30 points.

As part of our continuing programme of initiatives to assist designers in creating the most beautiful, usable, comfortable and stimulating environments for their clients, Panaz have commissioned a series of LRV tests on some of our best selling colours using the latest integrating sphere spectrophotometer to measure the total quantity of light reflected from the surface of our fabrics.

Moving forward, this will continue to be a priority for us to support our new ranges and help our clients to create the best in design.

## VISUAL IMPAIRMENT AFFECTS A PERSON'S PERCEPTION OF THE WORLD AROUND THEM AND CREATES CONFUSION AND DISTRESS



COLOUR	AV. LRV
151 Teal	12.0
226 Lime	20.2
233 Pistachio	43.5
411 Spice	14.7
805 Cream	61.3
807 Mushroom	8.3
814 Espresso	5.2
823 Chablis	33.8
905 Dove	29.1
131 Azure	21.6
405 Crimson	6.0
105 Indigo	10.1
155 Duck Egg	42.1
198 Hyacinth	24.8
110 Pacific	25.3
117 Royal	14.5
134 Sky	33.4
204 Moss	32.4
634 Blossom	25.5
116 Navy	5.3
213 Aubergine	10.8
300 Gold	28.6
400 Red	10.9
407 Burgundy	6.5
412 Purple	6.8
703 Mink	10.8
904 Pewter	10.6
609 Rose	12.6
624 Mulberry	9.7
129 Ocean	25.8
414 Wine	8.3
116 Navy	5.3
841 Biscotti	54.0
251 Eau De Nile	31/32
506 Mist	31.0
971 Nickel	24.0
925 Putty	31.0
911 Steel	24.0
642 Thistle	16.0
206 Wasabi	27.0
321 Wheat	40.0

## DESIGNING FOR DEMENTIA AND THE APPLICATION OF LRVs

### USE OF TEXTURE

As discussed, the elderly gradually lose the ability to discriminate between colours and this is exaggerated for people living with dementia. For this reason, the use of contrasting colours is vital. Look also to add texture and semi-plains to create interest and, most importantly, select fabrics for bedding and seating which clearly contrast with carpets and other flooring optimising their visibility.

### LIGHT

Lighting is paramount to optimise the consideration given to LRVs. Importantly, natural daylight diffuses easily and is the best for the visually impaired. Ensure that windows are designed to allow curtains to be drawn back fully to avoid overlapping the window, allowing in as much light as possible.

Natural light has a therapeutic effect and is the best for mood and well being. Conversely, a good degree of darkness in the bedroom at night is important for a good sleep which in turn is beneficial to mood, alertness and sense of well being in the morning,

### DEFINE EDGES

Contrasting piping on the edge of seating, on bedspreads at the edge of the bed or on the drawn back edge of curtains will assist in making life easier.

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