GRADUS

Colour & Contrast

A design guide for the use of Gradus products incorporating light reflectance values (LRVs)

August 2018

5 Fifth Edition

Introduction

This leaflet provides information about colour and contrast within the built environment and why it is important to provide a colour contrast between different surfaces for people with a visual impairment.

Details from research that has been undertaken into colour and contrast are included, in addition to recommendations from the latest legislation and guidelines, what light reflectance values (LRVs) are, why they are important and what the implications are for Gradus products.

Colour coded sheets for Gradus products are also available, detailing the LRV of each colour within the range.

Contents

Colour & Contrast — Design Guidelines:

Improving access to buildings for all users in line with the Equality Act 2010 is fundamental and specifiers are using as many tools as possible to ensure that buildings are designed or refurbished in order to create an inclusive environment.

Studies, including Project Rainbow (a research project carried out by Reading University in conjunction with the Royal National Institute of Blind People (RNIB), The Guide Dogs for the Blind Association (GDBA) and ICI Paints) identified the importance of colour and contrast in improving the built environment for visually impaired people.

Project Rainbow identified that colour and contrast can provide designers with a mechanism for highlighting critical surfaces and special features and can provide the basis for wayfinding for visually impaired people.

Project Rainbow states that:

Critical Surfaces: Identified as large areas of an interior that form the impression of shape, space and proximity when scanned by a visually impaired person, i.e. floors, walls, ceilings, stairs and doors. Project Rainbow continues to inform that 'navigating through a building is much easier if these areas are colour contrasted' and expands on specific details:

Patterns: 'In general, some critical surfaces may be covered in a subtle pattern or striped finish, but highly contrasting colours in irregular, busy or geometric patterns are very unhelpful and should be avoided. If a pattern is used on a critical surface it is the colour that occupies the largest proportion of the area which is the most important.'

Reflective Finishes: 'On critical surfaces, the use of highly reflective shiny surfaces can cause considerable confusion for visually impaired and fully sighted people. Such finishes should always be used with caution, and wherever possible, matt or mid sheen finishes are recommended. This will also allow for the full benefit of colour differentiation to be realised.'

Two Colours Used: 'On critical surfaces where two colours are to be used…the upper part of the wall should be sufficiently different from the ceiling colour and the lower wall should be sufficiently different from the colours used for the floor.'

Patterns: patterned carpet and no stair edgings - looks like a ramp

✗

Reflective finishes: flooring should not be shiny - looks like puddles of water

✗

Two colours: panelling same colour as floor - makes the room look bigger than it actually is

✗

Colour & Contrast — Design Guidelines:

Special Features: Identified as areas that need to be highlighted to allow a building to be used effectively by visually impaired people, i.e. stair edgings, handrails and door opening furniture.

'Special features are additional areas, smaller that critical features, that need to be highlighted to allow the building to be used more easily by visually impaired people. Such features include sanitary ware, handrails, door handles, finger plates, switches, socket outlets, and stair nosing etc, all of which should be contrasted against the background against which they will be seen. Smaller items such as these will need a greater colour difference from their surroundings in order to be identified.'

Trim: 'Special attention is needed to those items used in an internal environment to improve the decorative appeal and overall finish of an interior. Such items, which include coving, skirting, architrave, dado rail etc, should be decorated in colours used on larger critical surfaces.'

Special features: stair edgings - different colour and luminance to flooring to define step edges ✓

Special features: door opening furniture contrasts with the door ✓

Overall environment: good contrast between floor and wall and handrail and wall. ✓

BS 8300-2:2018 and The Building Regulations 2010: Approved Document M

British Standard BS 8300-2:2018 states that light reflectance values (LRVs) are used to assess visual contrast using the method of measurement detailed in BS 8493:2008+A1:2010. Approved Document M (ADM) directly refers to colour and contrast in the definitions section, stating:

'Contrast visually, when used to indicate the visual perception of one element of the building, or fitting within the building, against another means that the difference in light reflectance value between the two surfaces is greater than 30 points.'

Approved Document M (ADM) then refers to Colour, Contrast & Perception – Design Guidance for Internal Built Environments, Reading University (Project Rainbow).

Light Reflectance Values (LRVs) explained

The 'Colour Contrast & Perception' document produced by Reading University uses light reflectance values (LRVs) to measure colour and contrast in products/surfaces and determines whether or not a suitable contrast has been achieved between surfaces.

The study concluded that visually impaired people may be unable to perceive some or all colours. However, many people with a visual impairment can perceive light and dark and, therefore, LRVs are a suitable method to measure contrast.

Reflectance is the proportion of light that a surface reflects compared to the amount of light that falls on the surface. An LRV is a value given to a surface to denote the amount of light reflected.

LRVs are marked on a scale of 1 to 100 depending on the percentage of light reflected. Dark, matt and/or textured surfaces absorb a large amount of light and, therefore, have low reflectance values. On the other hand, light, glossy and/or smooth surfaces reflect the majority of light that falls on them and have high reflectance values.

For example, a colour with an LRV of 60 (which means it reflects 60% of the light that falls on it) will reflect more light than that of a colour with an LRV of 30.

Light reflectance scale

Black 0  White 100

In order to achieve a suitable contrast between different surfaces, Project Rainbow and Approved Document M (ADM) recommend that there is at least a 30 point (not 30%) difference in the LRVs of the two surfaces.

How to measure LRVs

The British Standard BS 8493:2008+A1:2010, specifies the method of test to determine the light reflectance value (LRV) of different surfaces of materials, including preparation of specimens in standardised conditions.

Previous to this standard being published, two widely used methods of measurement had been used - the CIE L value (fluorescent light) and the CIE Y value (natural daylight), causing confusion and potentially dangerous specifications. This new standard has adopted the CIE Y value as the single consistent method of measurement for LRVs that is to be used across all industries.

BS 8493:2008+A1:2010 stipulates that a spectrophotometer (apparatus) is used to measure the LRV using CIE Tristimulus Y, Illuminant D65 (natural daylight) and the 10° colorimetric observer. Further to this, the standard details the number of measurements that need to be taken from each specimen, using a measurement grid (see figures 1 and figure 2 below).

The standard states that the results of the LRV measurements shall then be put into a test report.

All relevant Gradus products have been measured using the CIE Y value and a test report is available upon request.

Illustrations based on BS 8493:2008+A1:2010
- Light Reflectance Value (LRV) of a surface - method of test

Figure 1: measurement grid for specimens that do not have a pattern or textured surface i.e. accessories

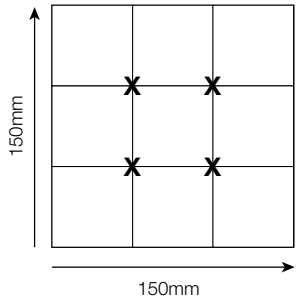
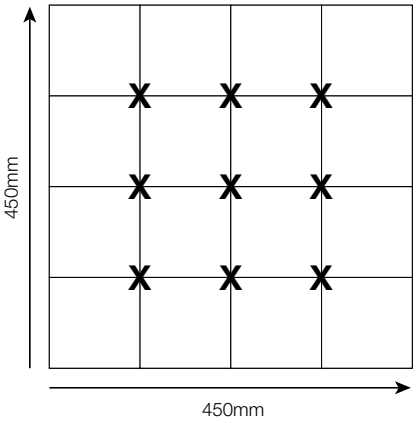


Figure 2: measurement grid for carpets and floorcoverings



LRVs should be considered when specifying:

Flooring Accessories

Stair Edgings

Wall Protection

Dual Rail
High Impact Corner Guards
Wall Guards
Kick Plates

Matting

Primary Barrier Matting
Secondary Barrier Matting

Carpets

Carpet

What the colour & contrast guidelines mean for Gradus flooring accessories:

Stair Edgings

Gradus is the market leader in contract flooring accessories and offers the widest choice of product solutions for stairs and floors. Gradus stair edgings help to reduce accidents on stairs by offering increased slip-resistance in both interior and exterior environments. The range of stair edging colours from Gradus allows specifiers and users to achieve colour contrast to the surrounding floorcovering, ensuring the provision of an inclusive environment for all building users.

BS 8300-2:2018: 'Each step nosing should incorporate a durable permanently contrasting continuous material for the full width of the stair on both the tread and the riser to help people who are blind or partially sighted appreciate the extent of the stair and identify individual treads. The contrasting material should extend 50mm to 65mm in width from the front edge of the tread and 30mm to 55mm from the top of the riser, and should contrast visually with the remainder of the tread and riser.'

Approved Document M (ADM): 'All nosings are made apparent by means of a permanently contrasting material 55mm wide on both the tread and the riser.'

Colour, Contrast & Perception (Project Rainbow): 'The nosing of every step in a flight of stairs should be adequately colour or luminance contrasted with the remainder of the step and the floor coverings adjacent to the top and bottom of the flight.'

Stair Edging

Skirtings

Gradus skirtings can help define where the floor ends and the wall begins whilst providing a neat, attractive join between the wall and the floor. The wide choice of colours and materials available provides a solution for every environment from healthcare through to commercial office.

BS 8300-2:2018: 'To avoid giving the wrong impression about the size of a room, skirtings should have the same LRV as the wall so that the junction between the skirting and the floor marks the extent of the room.'

Colour, Contrast & Perception (Project Rainbow): 'Skirting should be either decorated the same colour as the wall, the same colour as the floor or, if different to one or the other or both, must be decorated in a colour which highlights even further the junction.'

Best practise is considered to be to match the skirting to the wall or floor if height is 100mm or less. If the skirting is over 100mm in height it should match the wall to ensure that the room does not appear larger than it actually is.

Skirting

What the colour & contrast guidelines mean for Gradus wall protection & matting:

Wall Protection

Gradus Wall Protection systems provide an essential barrier against damage caused to walls, corners and doors by both pedestrian and wheeled traffic. The comprehensive range of products is available in a wide choice of colours to provide suitable contrast with surrounding surface finishes, aiding access around a building for all users.

BS 8300-2:2018:
Design of accessible and inclusive built environment

Explains how to design, build and manage the built environment in an inclusive way.

Projections: 'Columns, ducts and similar full height elements should not project more than 100mm into the access route within a lobby. If such projections are unavoidable, a guard rail or other hazard projection contrasting visually against the background should be provided to guide people who are blind or partially sighted around this type of projection.'

Visual contrast of doors and walls: 'All Internal doors should be identifiable and contrast visually with the surrounding wall and floor finishes, achieving at least 30 points LRV.'

Way-finding: 'Way-finding should use spatial, physical and environmental clues to help people plan and navigate moving from one place to another. Appropriate way-finding clues should be incorporated which could include but are not limited to visual communication e.g. visual clarity in terms of colour and contrast.'

Approved Document M (ADM): 'All door opening furniture contrasts visually with the surface of the door.'

'A handrail should contrast visually with the background against which it is seen, without being highly reflective.'

Colour, Contrast & Perception (Project Rainbow): 'Finger plates and kick plates on doors should be sufficiently different in colour to the door.'

'Handrails should be adequately contrasted with the adjacent wall finish.'

Barrier Matting

Gradus barrier matting provides an effective barrier against dirt and moisture at entrances, access points and circulation areas in all contract environments. All Gradus matting efficiently removes and retains soil and moisture from pedestrian and wheeled traffic to give superior long term performance and reduce slip accidents.

BS 8300-2:2018: 'The ingress of soil and surface moisture to buildings, or their transfer between adjacent internal areas, should be reduced to the lowest practicable level, e.g. through the use of appropriate entrance flooring systems, conforming to BS 7953.'

'Deep pile carpets and coir matting on the surface of the floor or within a matwell should not be used.'

'The LRV of a wall should be 30 points different from that of the ceiling and of the floor.'

Approved Document M (ADM): 'Floor surface materials within the lobby do not impede the movement of wheelchairs e.g. not coir matting, and changes in floor materials do not create a potential trip hazard.'

'The floor surface helps to remove rainwater from shoes and wheelchairs.'

'Where matwells are provided, the surface of the mat is level with the surface of the adjacent floor finish.'

BS 7953:1999: 'The function of the entrance flooring system is to reduce the incidence of slip accidents by reducing the amount of soil and moisture tracked onto hard and resilient floors.

… an entrance flooring system should have the following qualities:
- Removal and retention of soil
- Ease of cleaning and maintenance
- Retention of physical characteristics'

Primary barrier matting

Boulevard 6000 secondary barrier matting

What the colour & contrast guidelines mean for Gradus carpets:

Carpet

Gradus is a manufacturer of premium quality carpet tile and plank, broadloom and impervious backed carpets which excel in terms of functionality, aesthetics and ease of maintenance.

Utilising a range of high performance yarns, Gradus' extensive range of carpets is suitable for a wide variety of contract applications including commercial offices, healthcare and education environments.

There are a number of colour and contrast design guidelines to assist with specifying a suitable floorcovering in order to achieve an inclusive environment in line with Equality Act 2010:

BS 8300-2:2018: 'Floor patterning that could be mistaken for steps, e.g. stripes, should not be used for floors in corridors.'

'Deep pile carpet should not be used on stair treads.'

'Differences in LRV should be used to assess the degree of visual contrast between surfaces such as floors, walls, doors and ceilings and between key fittings/fixtures and surrounding surfaces. The LRV of a wall should be 30 points different from that of the ceiling and of the floor.'

'Large, repeating patterns that incorporate bold contrasting colours or simulate steps should not be used for any floor surface.'

Approved Document M (ADM): 'In order to help people with visual impairment to appreciate the size of a space they have entered, or to find their way around, there should be a visual contrast between the wall and ceiling, and between the wall and floor. Such attention to surface finishes should be coupled with good natural light and artificial lighting design.'

'Floor surface finishes with patterns that could be mistaken for steps or changes in level are avoided.'

Colour, Contrast & Perception (Project Rainbow): 'In general, some critical surfaces may be covered in a subtle pattern or striped finish, but highly contrasting colours in irregular, busy or geometric patterns are very unhelpful and should be avoided. If a pattern is used on a critical surface it is the colour that occupies the largest proportion of the area which is the most important.'

Lafite Connect Design carpet tile

Stratus carpet tile

Colour Coded LRV Sheets and Additional Information

A sheet has been produced for each of the flooring accessories, wall protection, matting and floorcoverings ranges offered by Gradus, depicting all colours within the range and the light reflectance value (LRV), using the Y value method of measurement, which corresponds to each colour.

Individual sheets are available from Gradus technical support on 01625 428922.

If you would like additional information or advice on LRVs, how they relate to Gradus products or a copy of a test report, contact Gradus Technical Support on 01625 428922.

How LRVs are measured
These values have been determined with reference to the CIE Tristimulus $Y_{10}9$ Illuminant D65 and the 10° colorimetric observer, in accordance with BS 8493:2008+A1:2010.
The Y co-ordinate represents lightness and extends from 0 (black) to 100 (white) and has been used as a measure of light reflectance values (LRVs).

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LRVs for stair edgings – channel colours

PVC-u hardnose - satin finish


Black
4.99


Brown
7.15


Burgundy
5.89

Buttercup
62.62


Bluebell
9.76

Canvas
55.43

Clay
51.53


Dove
26.19


Evergreen
6.63


Glacier
42.73


Granite
11.69


Ink
5.40

Jade
55.54

Linen
37.50


Midnight
6.77

Sky
55.38

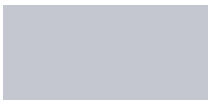

Snowdrift
80.54

Wisp
56.62

PVC-u hardnose - metallic finish


Burnt Almond
9.92


Doubloon
22.01


Silver
48.29


Zinc
15.91

Remaining stair edgings channel colours continued on the next page

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LRVs for stair edgings – channel colours continued

Flexible Pvc


Black
4.56


Brown
6.05


Dove
26.99


Granite
12.77

Snowdrift
83.77

Metal finish


Aluminium
67.66


Bronze
63.00


Chrome
49.79

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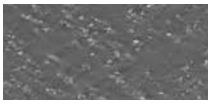
LRVs for stair edgings – insert colours

Xtra-grip inserts


Bamboo
45.84

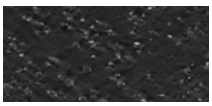

Concrete
37.44


Frost
66.51


Graphite
12.56


Neptune
5.03

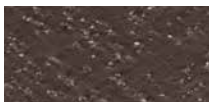

Ochre
49.97


Onyx
4.52


Pumice
46.83

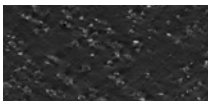

Quarry
24.71

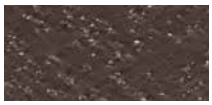

Surf
43.58


Umber
5.71

Xtra-grip Plus inserts


Air
43.58

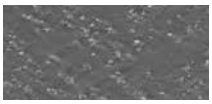

Asphalt
4.52


Bark
5.71


Calcite
66.51


Citrine
49.97


Dusk
37.44


Mercury
12.56


Prairie
45.84


Sandstone
46.83


Shark
5.03


Smoke
24.71

Interior standard finish


Burgundy
5.70

Buttercup
55.54

Canvas
53.27

Clay
47.97


Cloud
28.57


Coffee
6.05


Evergreen
6.69


Glacier
42.09


Ink
4.96

Jade
53.98


Jet
4.56


Lead
12.77

Linen
38.59


Midnight
6.56


Ocean
8.00

Photoluminescent
57.59


Poppy
10.39

Sky
52.63


Snowdrift
83.77


Steel
26.99

Wisp
58.17

How LRVs are measured
These values have been determined with reference to the CIE Tristimulus $Y_{10}9$ Illuminant D65 and the 10° colorimetric observer, in accordance with BS 8493:2008+A1:2010. The Y co-ordinate represents lightness and extends from 0 (black) to 100 (white) and has been used as a measure of light reflectance values (LRVs).

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LRVs for stair edgings – insert colours

Interior grained finish


Black
6.47


Brown
12.13


Dove
23.40


Granite
13.44

Standard exterior

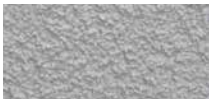
Blizzard
LRV: 83.25


Hurricane
LRV: 30.43


Sandstorm
LRV: 50.77


Tornado
LRV: 4.49

Heavy duty exterior


Ash
24.77

Avalanche
73.00


Charcoal
4.07


Firestorm
43.96

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LRVs for stairtile – insert colours


Black
3.70


Brown
8.99


White
58.38


Yellow
44.92

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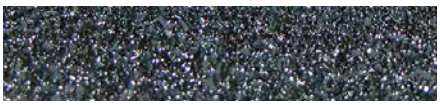
LRV for safety track™



Black
4.58

How LRVs are measured
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LRVs for skirtings, capping strips & accessories

Standard


Almond
38.00


Azure
9.99


Black
4.62


Bluebell
11.28


Blueberry
22.97


Brown
7.04


Dove
26.50


Dune
49.67


Evergreen
6.53


Glacier
40.09


Granite
10.44


Hickory
16.10


Leaf
31.58

Mist
58.74

Salmon
50.61


Snowdrift
80.86


Stone
19.73

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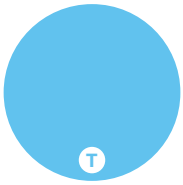
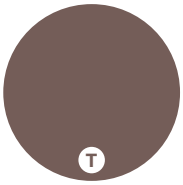
LRVs for SureProtect Endure®

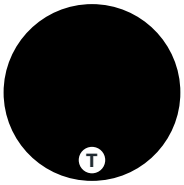
031 Alum
71.91

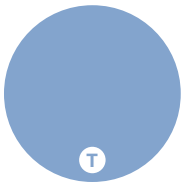
022 Apricot
60.68


018 Azure
45.14

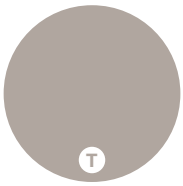

024 Bamboo
54.74

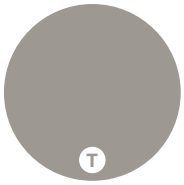

010 Bark
16.61

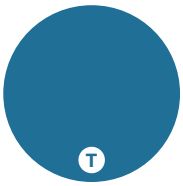

036 Black
5.08

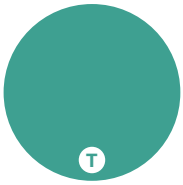

017 Bluebell
36.50

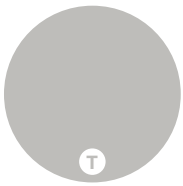
001 Chalk
87.51

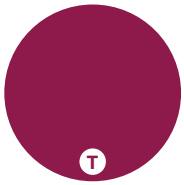

014 Cinnamon
42.30


003 Clay
33.86

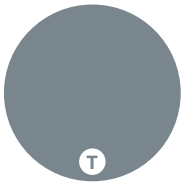

020 Denim
16.91


025 Emerald
29.53

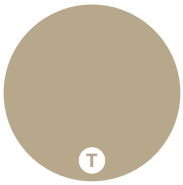

032 Flint
43.70

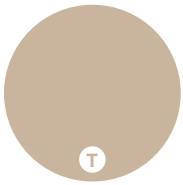

029 Garnet
10.43

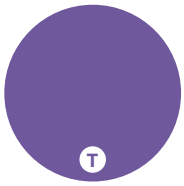
016 Glacier
59.27


004 Granite
24.07

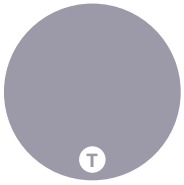
002 Gravel
53.71

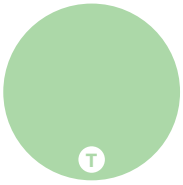

013 Greige
38.97

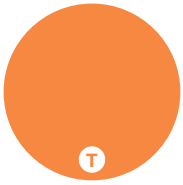

035 Hessian
35.79


030 Iris
18.61

006 Ivory
81.98


015 Lavender Grey
37.18

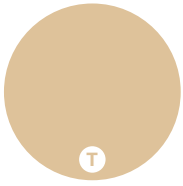

023 Meadow
54.63

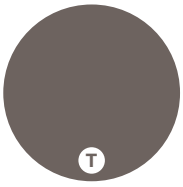

027 Melon
38.00

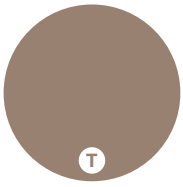
011 Pebble
59.08


028 Poppy
16.31

034 Rose Quartz
52.08


008 Sand
52.26


005 Shale
17.88


009 Sienna
26.67


033 Slate
7.03

021 Straw
75.21


019 Ultramarine
27.39

007 Wicker
70.36

T Textured finish

How LRVs are measured
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LRVs for SureProtect Design®

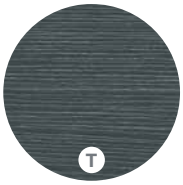
Woods

061 Beech
40.30

069 Brown Cedar
10.50

062 Light Oak
35.4

060 Maple
50.0



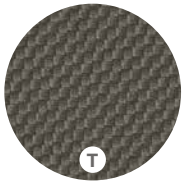
068 Smoky Ceder
18.4

065 Stripped Pine
37.0

067 Wenge
6.6

Metals & Composites

050 Brushed Aluminium
41.4

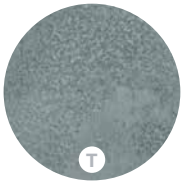


051 Composite
16.0

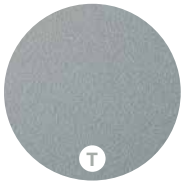
081 Copper
20.9

082 Gold
27.3

052 Light Concrete
45.8



053 Medium Concrete
31.0



080 Silver
42.4

T Textured finish

How LRVs are measured
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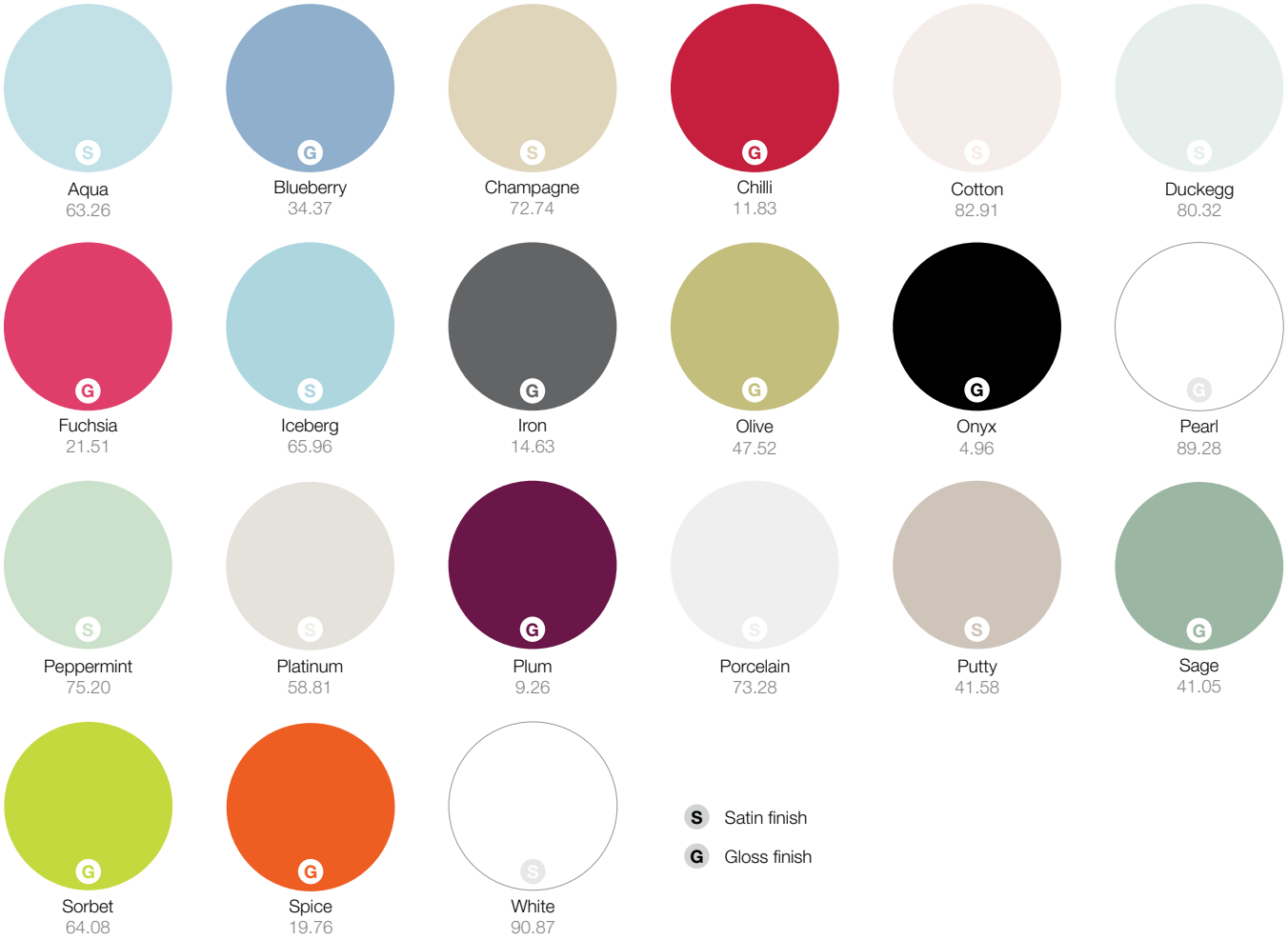
LRVs for SureProtect Pure®



How LRVs are measured
These values have been determined with reference to the CIE Tristimulus $Y_{10}9$ Illuminant D65 and the 10° colorimetric observer, in accordance with BS 8493:2008+A1:2010. The Y co-ordinate represents lightness and extends from 0 (black) to 100 (white) and has been used as a measure of light reflectance values (LRVs).

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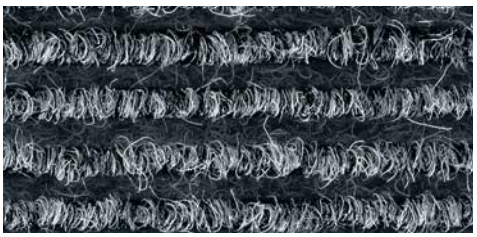
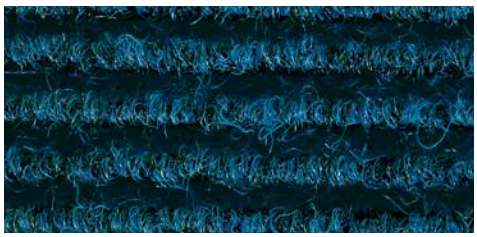
LRVs for Boulevard 1500



Calculus
9.03



Marinus
2.71

Tempestas
2.14

Terra
10.89

How LRVs are measured
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LRVs for Boulevard 5000HD

Corncrake
9.52

Cuckoo
5.63

Jackdaw
1.73

Kestrel
5.42

Moorhen
2.98

Redpoll
4.14

Shelduck
5.20

Swallow
2.08

How LRVs are measured
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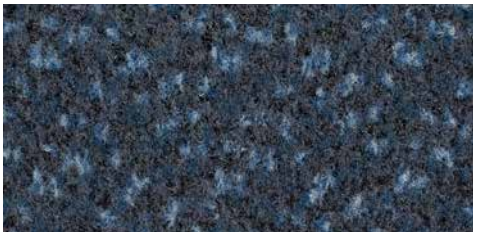
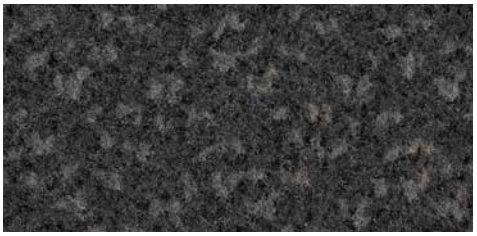
LRVs for Boulevard 6000

Atlantic
1.90

Galaxy
2.56



Indigo
4.01



Nickel
3.70

Nightfall
1.48

Rosemary
4.45

Shadow
5.36

Walnut
2.86

How LRVs are measured
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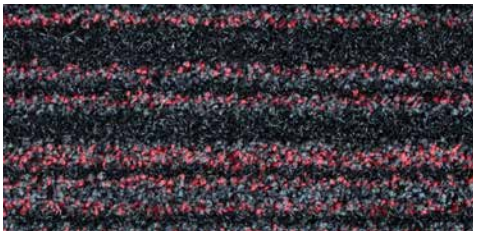
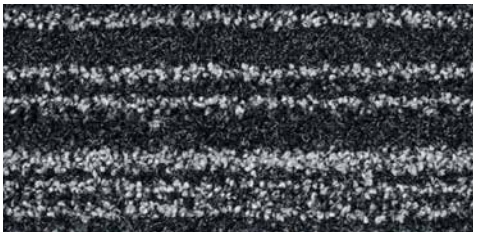
LRVs for Boulevard 7000



Red Oak
1.98

Hazelnut
2.37



Gray Birch
5.60

Black Ash
3.06

How LRVs are measured
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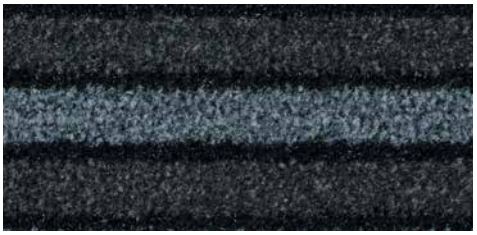
LRVs Boulevard Stripe^{HD}



Magpie
3.85

Raven
2.48

How LRVs are measured
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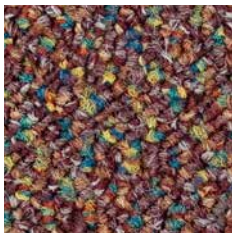
Sandstorm 25017
LRV 13.98

Cliff Shadow 25006
LRV 10.81

Nile Brown 25007
LRV 9.03

Blue Mountain 25008
LRV 9.70

Lunar Gray 25003
LRV 9.82

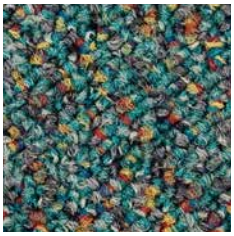


Red Sands 25015
LRV 8.80

Kalahari 25013
LRV 9.28

Seafarer 25012
LRV 10.67

Lost Horizon 25016
LRV 7.42



Gulf Stream 25009
LRV 10.50

Oregon Forest 25010
LRV 7.87

Aquarelle 25011
LRV 10.94

How LRVs are measured
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Oatmeal 03807
LRV 16.72

Barley 03816
LRV 15.94

Redwood 03820
LRV 8.34

Brindle 03811
LRV 13.46

Soft Sage 03825
LRV 14.34

Damson 03822
LRV 4.09

Jade 03824
LRV 12.27

Cosmos Blue 03804
LRV 10.49

Anthracite 03808
LRV 9.05

Mermaid 03812
LRV 8.67

Marine Blue 03823
LRV 7.46

Jet 03827
LRV 2.26

How LRVs are measured
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Ironstone 06707
LRV 10.02

Himley 06709
LRV 3.68

Brunswick 06708
LRV 8.12

Tonbridge 06711
LRV 4.98

How LRVs are measured
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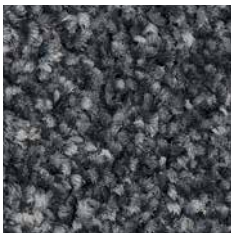
Warm Stone 07101
LRV 22.40

Soft Taupe 07102
LRV 18.70

Natural Truffle 07103
LRV 11.89



Rich Granite 07104
LRV 5.32

Moroccan Flair 07105
LRV 11.28

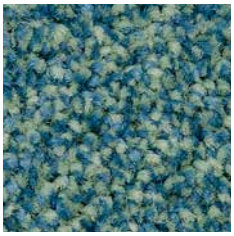
Autumn Leaves 07106
LRV 10.45

Lilac Heather 07107
LRV 12.37

Velvet Damson 07108
LRV 4.04

Natural Hessian 07109
LRV 16.02

Wild Meadow 07110
LRV 13.70



Mineral Spring 07111
LRV 12.60

Deep Blue 07112
LRV 5.94

How LRVs are measured
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Caramel 06102
LRV 14.94

Tin 06103
LRV 16.93

Ice 06105
LRV 11.73

Ocean 06108
LRV 6.26

Shale 06106
LRV 11.22

Granite 06109
LRV 10.83

Basalt 06110
LRV 7.49

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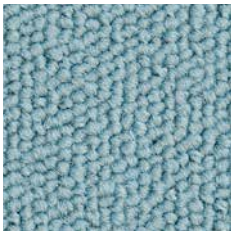
Gold
Loop Pile 101 LRV 25.24
Cut Pile 777 LRV 24.85

Orange
Loop Pile 102 LRV 16.36
Cut Pile 666 LRV 15.31

Red
Loop Pile 103 LRV 7.75
Cut Pile 555 LRV 7.38

Green
Loop Pile 104 LRV 18.50
Cut Pile 444 LRV 18.10



Sky
Loop Pile 105 LRV 24.46
Cut Pile 333 LRV 24.77

Blue
Loop Pile 106 LRV 4.93
Cut Pile 222 LRV 4.56

How LRVs are measured
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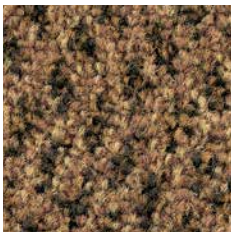
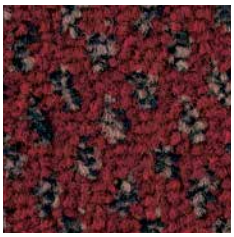


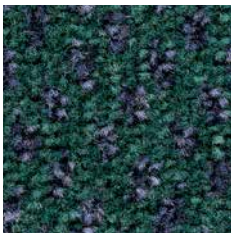
Cornfield 00225
LRV 17.44

Beachwood 00245
LRV 11.76

Rich Red 00220
LRV 4.45



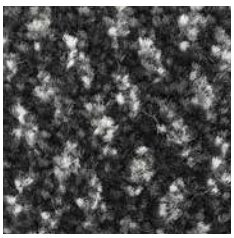
Ancient Ruby 00235
LRV 3.65



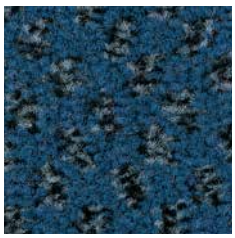
Thistle 00215
LRV 6.53

Black Forest 00209
LRV 12.15

Graphite Storm 00239
LRV 5.43



Silver Birch 00246
LRV 6.63



Winter Fjord 00216
LRV 5.46

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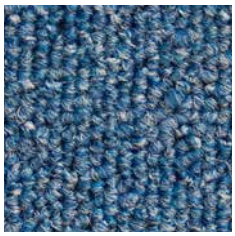
LRVs **Lafite - Plains**

Ciron 06801
LRV 11.13

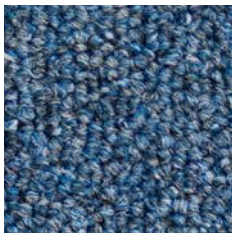
Maine 06804
LRV 11.72



Loire 06807
LRV 7.49

Bordeaux 06802
LRV 6.58

Rouen 06805
LRV 9.61



Tarn 06808
LRV 6.50

Marseille 06803
LRV 7.44

Belfort 06806
LRV 5.92

Sevran 06809
LRV 6.34

How LRVs are measured
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LRVs **Lafite - Stripes**

Toulouse 06810
LRV 7.94

Maronne 06811
LRV 8.63

Lyon 06812
LRV 8.88

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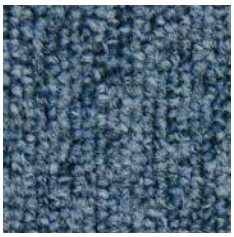
LRVs Lafite Connect - Plains

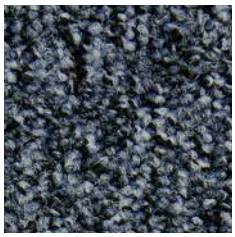

LC1
LRV 14.24


LC5
LRV 10.99

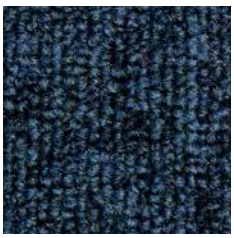

LC9
LRV 13.72

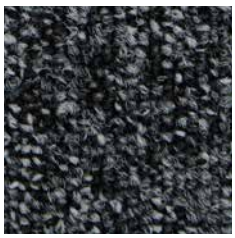

LC2
LRV 6.36


LC6
LRV 12.45

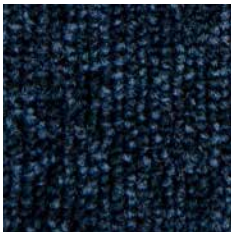

LC10
LRV 9.26


LC3
LRV 5.59


LC7
LRV 7.49


LC11
LRV 7.20


LC4
LRV 4.20


LC8
LRV 5.57


LC12
LRV 3.55

How LRVs are measured
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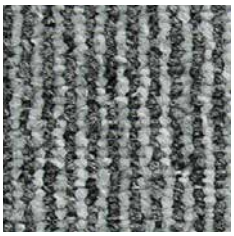
LRVs Lafite Connect - Stripes


LCS13
LRV 15.49


LCS15
LRV 13.70


LCS17
LRV 9.19


LCS19
LRV 7.55


LCS14
LRV 6.96


LCS16
LRV 8.48


LCS18
LRV 8.16


LCS20
LRV 5.19

LRVs Lafite Connect - Space


LCSPACE28
LRV 10.24


LCSPACE29
LRV 7.84


LCSPACE30
LRV 8.36


LCSPACE31
LRV 3.90


LCSPACE32
LRV 9.30


LCSPACE33
LRV 8.02

How LRVs are measured
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LRVs **Latour - Plains**

Ravenstone 03422
LRV 13.36

Glandford 03405
LRV 6.92

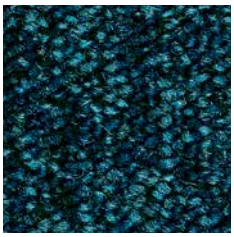
Wyre 03402
LRV 9.49

Cheviot 03401
LRV 5.19

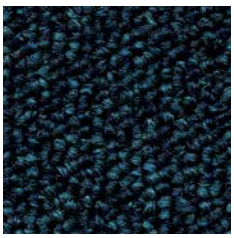
Cannock 03408
LRV 11.31

Matterhorn 03423
LRV 7.34

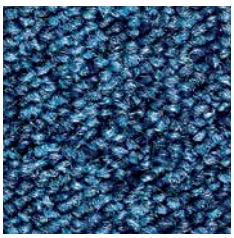
Glenavon 03417
LRV 2.45



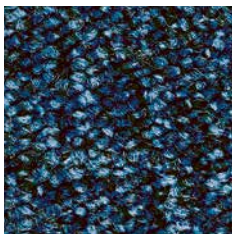
Niagara 03416
LRV 6.32



Scafell 03415
LRV 4.54



Derwent 03418
LRV 10.93



Coniston 03420
LRV 7.04

Langdale 03411
LRV 10.92

Wansdyke 03410
LRV 4.89

Torridon 03419
LRV 9.11

Howden 03421
LRV 10.37

Arfon 03404
LRV 8.74

Dovedale 03406
LRV 7.24

Cairngorm 03414
LRV 3.98

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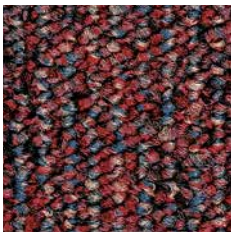
LRVs **Latour - Stripes**

Peebles 06002
LRV 7.62

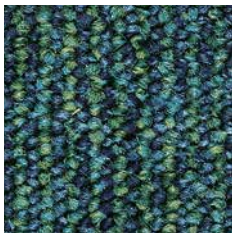


Talmine 06010
LRV 3.26

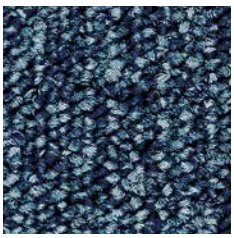
Wetheral 06008
LRV 3.62

Morden 06003
LRV 7.59

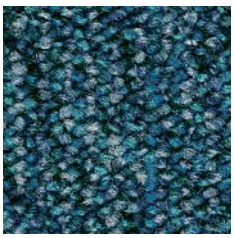
Ulverston 06001
LRV 3.34



Grasmere 06006
LRV 8.08

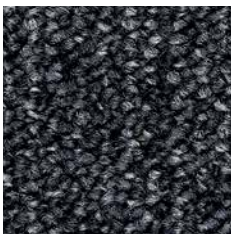


Stanage 06009
LRV 4.72



Rivelin 06007
LRV 4.46

Staffin 06004
LRV 3.67



Alston 06005
LRV 6.45

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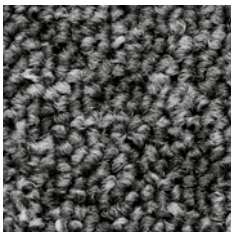
Hawk 03316
LRV 12.73

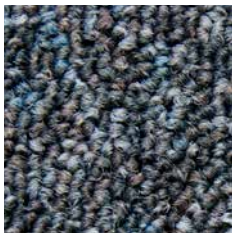


Lynx 03322
LRV 10.00

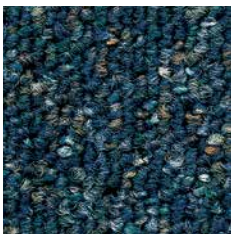
Barracuda 03305
LRV 9.84

Python 03307
LRV 8.17

Puma 03301
LRV 8.07



Wolf 03323
LRV 7.90



Orca 03303
LRV 6.06

Panther 03314
LRV 5.28

Piranha 03320
LRV 5.11

Osprey 03324
LRV 4.64

Stingray 03308
LRV 6.95

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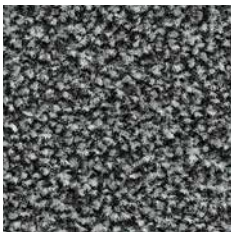
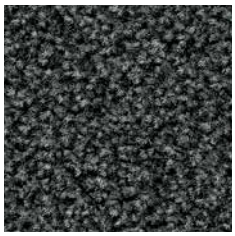
LRVs SqMile Exec - Plains

GRADUS

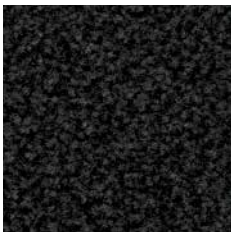
Bank 01313
LRV 9.02



Euston 01314
LRV 9.12



Westminster 01315
LRV 5.61



Farringdon 01310
LRV 1.80

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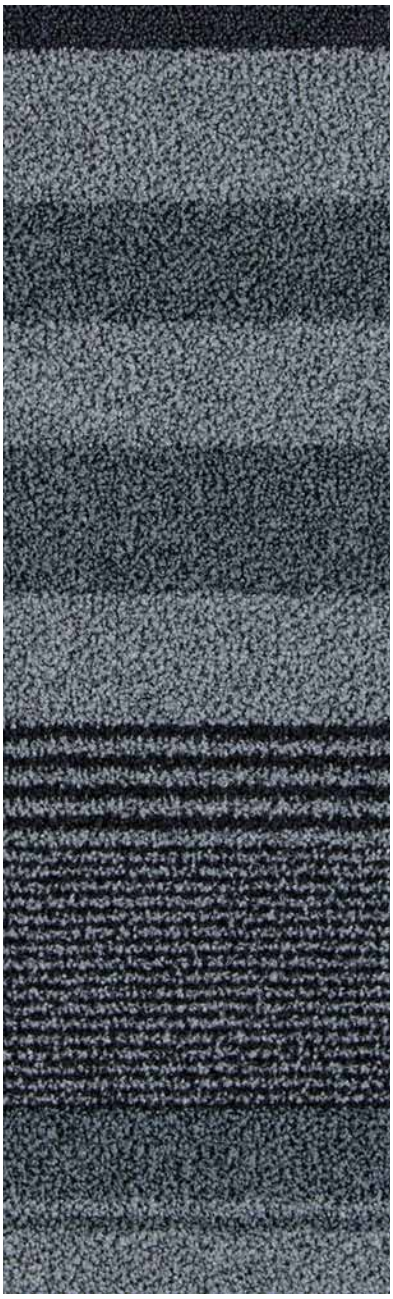
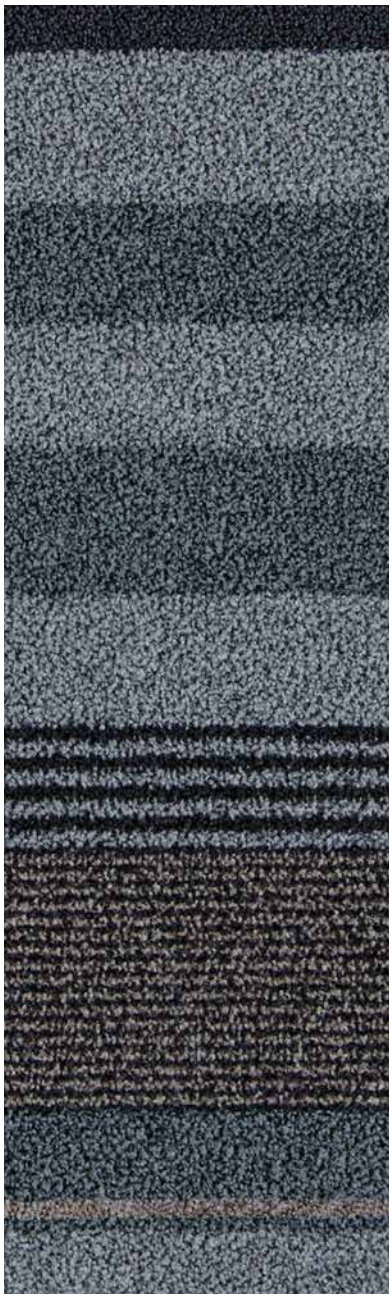


Central Line 01355



District Line 01366

How LRVs are measured
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Avalanche 06509
LRV 16.27

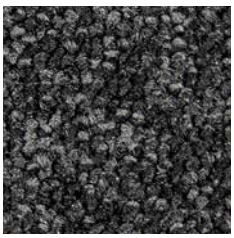
Arctic Mist 06512
LRV 13.94

Firestorm 06510
LRV 7.96

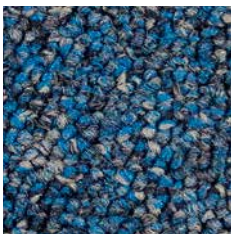
Typhoon 06502
LRV 8.73

Rainfall 06503
LRV 11.47

Storm Surge 06504
LRV 6.16

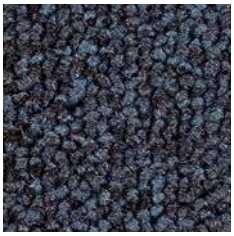


Jet Stream 06506
LRV 3.56

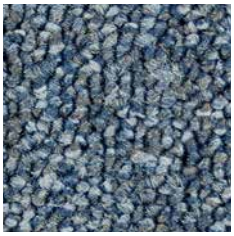


Ocean Tide 06507
LRV 7.50

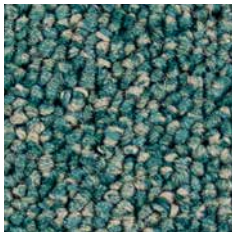
Solar Blue 06513
LRV 3.71



Blue Ridge 06505
LRV 3.96



Ice Storm 06514
LRV 11.22



Valley Breeze 06501
LRV 9.45

How LRVs are measured
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LRVs Streetwise Design - Originals

Flint 772
LRV 7.08

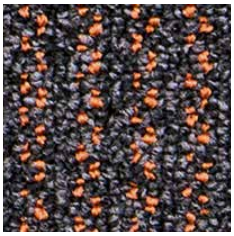
Iron 773
LRV 5.34

Coal 778
LRV 1.95

Slate 754
LRV 8.12

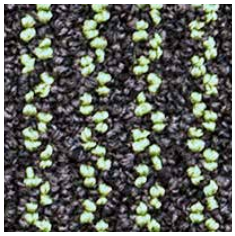
Clay 790
LRV 14.42

LRVs Streetwise Design - Brights

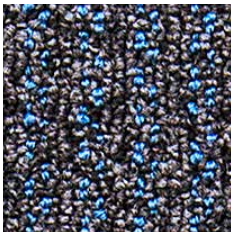


Orange 07201
LRV 4.08

Red 07202
LRV 4.08



Green 07203
LRV 5.95



Blue 07204
LRV 4.33

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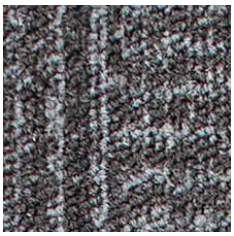
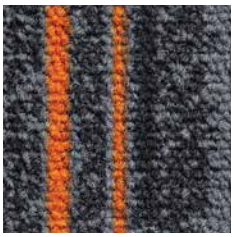


Light Grey 07700
LRV 9.81

Grey 06601
LRV 4.64

Natural 06602
LRV 6.59

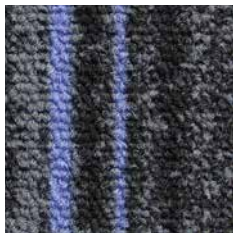
Yellow 06603
LRV 6.77



Orange 06604
LRV 6.95

Red 06605
LRV 4.41

Lime 06606
LRV 4.23



Lilac 06607
LRV 4.38

Light Blue 06608
LRV 6.52

Dark Blue 06611
LRV 3.93

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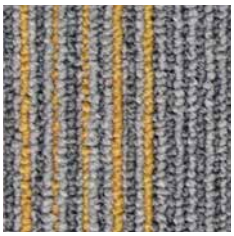
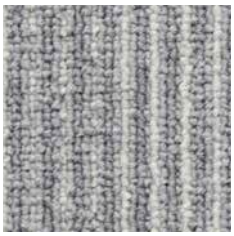


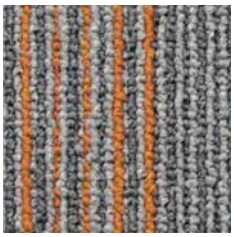
Citrine 07307
LRV 14.26



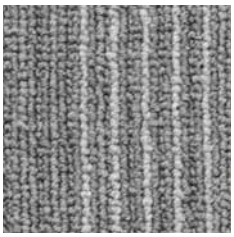
Quartz 07301
LRV 20.78

Lead 07304
LRV 6.02

Sapphire 07310
LRV 6.13



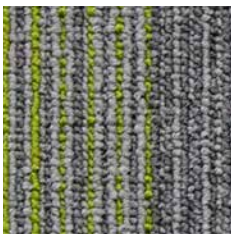
Amber 07308
LRV 12.98



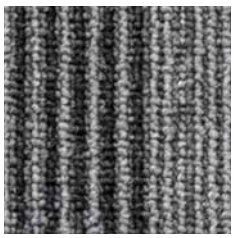
Pewter 07302
LRV 11.74

Graphite 07305
LRV 5.98

Amethyst 07311
LRV 6.49

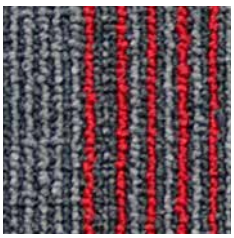


Peridot 07309
LRV 13.44



Steel 07303
LRV 11.29

Carbon 07306
LRV 2.43



Ruby 07312
LRV 6.99

How LRVs are measured
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Natural Straw 00318
LRV 21.68

Camouflage 00314
LRV 5.26

Azurite Blue 00322
LRV 2.84

Charcoal 00324
LRV 2.75

How LRVs are measured
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