LumiLab

Luminance Reflectance Value (LRV) Test Report

LRV Testing of ProTile Carpet Tiles

Dated: 20 April 2026
Reference: EG-261904-LL

LumiLab (Egress Group)
Office 131/203 Rooks Road
Vermont, Victoria 3133

20 April 2026

Tested for: Quest Flooring Pty Ltd

Luminance Reflectance Value (LRV) Test Report

Background

Quest Flooring Pty Ltd has engaged LumiLab to:

- Undertake luminance reflective value testing of the samples provided to our office; and
- Prepare a Luminance Reflectance Value (**LRV**) Test Report that presents the test findings.

Description of Samples

Eight (8) different Protile Carpet Tile samples were provided, each with one sample. Each sample is a 500mm long x 500mm wide carpet tile.

No.	Description of samples
1	Protile Business Class Carpet Tile (Colour: Lounge)
2	Protile Economy Class Carpet Tile (Colour: Night Sky)
3	ProTile Business Class Carpet Tile (Colour: Hideaway)
4	ProTile Business Class Carpet Tile (Colour: Akaroa)
5	ProTile Business Class Carpet Tile (Colour: Harbour)
6	ProTile Economy Class Carpet Tile (Colour: Gravity)
7	ProTile Economy Class Carpet Tile (Colour: Atmosphere)
8	ProTile Economy Class Carpet Tile (Colour: Nova)

Photos of each sample are provided in Attachment 3.

Technical Reference

This report references the following:

- Appendix B of Australian Standard (AS) 1428.1-2009 'Design for access and mobility, Part 1: General requirements for access – New building work' (**AS 1428.1-2009**)
- Appendix B of Australian Standard (AS) 1428.1-2021 'Design for access and mobility, Part 1: General requirements for access – New building work' (**AS 1428.1-2021**)
- Appendix E of Australian Standard AS/NZS 1428.4.1-2009 'Design for access and mobility, Part 4.1: Means to assist the orientation of people with vision impairment—Tactile ground surface indicators' (**AS/NZS 1428.4.1**)

Laboratory Testing Equipment

LumiLab uses compliant testing apparatus meeting AS 1428.1 Appendix B and AS 1428.4.1 Appendix E requirements:

- Model: Konica Minolta CR-400 tristimulus colorimeter
- Illuminating and viewing system: Diffuse illumination/0<° (d/0) viewing angle, specular component included. Conforms to JIS Z 8722 condition c standard
- Light source: Pulsed xenon lamp
- Measurement time: 1 second
- Minimum measurement interval: 3 seconds
- Measurement / illumination area: ⌀ 8mm
- Observer: 2° Closely matches CIE 1931 Standard Observer
- Illuminant used: CIE Standard Illuminant D65
- Color space and colorimetric data: CIE for Yxy

Testing Methodology

The following is a summary of the laboratory testing methodology, conducted in accordance with requirements of AS 1428.1, Clause B3.3 and AS/NZS 1428.4.1, Clause E3.3:

- The apparatus was first calibrated in accordance with the manufacturer's instructions.
- The tristimulus value 'Y' (LRV measurements) was taken in five (5) random locations in a dry condition.
- As the surface is not uniformly coloured, a further twenty-five (25) random locations were measured.
- This process was repeated for each sample.
- These results are presented below.

Definitions

The following terms are used in this report:

Term	Definition
Luminance contrast	The light reflected from one surface or component, compared to the light reflected from another surface or component.
LRV	Luminance reflective value
Bowman-Sapolinski equation	To determine the luminance contrast between the samples tested, the LRVs are entered into the Bowman-Sapolinski equation: C = 125 (Y2 – Y1)/(Y1 + Y2 + 25), where: C = luminance contrast Y1 and Y2 = LRV of each surface

Testing Conditions

Samples 1 and 2 were tested under the following conditions:

- Date tested: 30 November 2025
- Consultant: Lee Wilson
- Temperature: 23.2◦c
- Humidity: 51.5%

Samples 3 to 8 were tested under the following conditions:

- Date tested: 19 April 2026
- Consultant: Lee Wilson
- Temperature: 17.7◦c
- Humidity: 56.8%

LRV Test Results

The following are the test results of the tristimulus value Y (LRV):

No.	Description of samples	LRV Measurements (Yd)
1	Protile Business Class Carpet Tile (Colour: Lounge)	1.75
2	Protile Economy Class Carpet Tile (Colour: Night Sky)	2.69
3	ProTile Business Class Carpet Tile (Colour: Hideaway)	5.35
4	ProTile Business Class Carpet Tile (Colour: Akaroa)	3.64
5	ProTile Business Class Carpet Tile (Colour: Harbour)	9.76
6	ProTile Economy Class Carpet Tile (Colour: Gravity)	3.18
7	ProTile Economy Class Carpet Tile (Colour: Atmosphere)	3.67
8	ProTile Economy Class Carpet Tile (Colour: Nova)	3.59

The test measurements for each sample are provided in Attachment 2.

Please contact the undersigned to discuss this report.

Yours sincerely,

Lee Wilson, Disability Access Consultant / Director
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Attachment 1: Statement of Limitations

This report has been prepared in accordance with the agreement between the Client and Egress Group Pty Ltd / LumiLab. Within the limitations of the agreed-upon scope of services, this engagement has been undertaken and performed professionally, by generally accepted practices, using a degree of skill and care ordinarily exercised by members of its profession and consulting practice. No other warranty, expressed or implied, is made.

Egress Group Pty Ltd / LumiLab owns the intellectual property outlined in this report. The report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where Egress Group Pty Ltd provides written approval. The report must not be copied, reproduced, adapted, rebranded, modified or altered in any way. The unauthorised use of this report in any form is prohibited.

It is important to note that the material tested is naturally subject to surface variations and Egress Group Pty Ltd / LumiLab cannot be held accountable or responsible for any variations in LRVs across different samples of the same material tested.

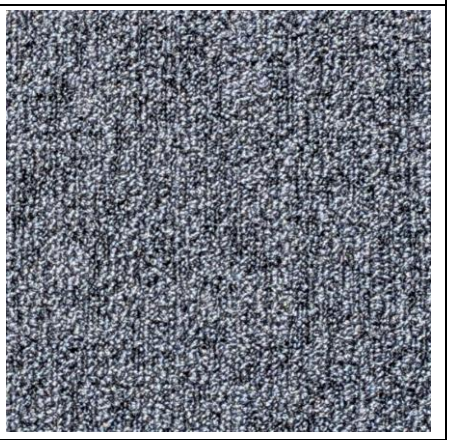
LumiLab is not currently accredited by the National Association of Testing Authorities (NATA).

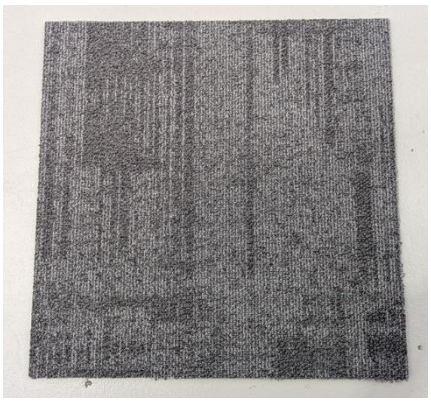
Attachment 2: LRV Test Results Table

No.	Sample Name	Dry LRV Measurements (Yd)					Mean Dry LRV (Yd)
1	Protile Business Class Carpet Tile (Colour: Lounge)	1.83	1.76	1.40	1.88	1.77	1.75
		1.53	2.62	1.72	2.01	2.26	
		1.58	1.55	1.97	1.35	1.68	
		1.74	1.83	1.98	1.91	2.00	
		2.77	1.38	2.01	1.53	1.56	
		1.25	1.70	1.27	1.18	1.44	
2	Protile Economy Class Carpet Tile (Colour: Night Sky)	2.62	2.71	2.66	3.01	2.83	2.69
		2.51	3.02	2.83	2.41	3.10	
		2.61	2.19	3.13	2.64	2.58	
		2.99	2.64	2.51	2.46	2.88	
		2.12	2.59	3.01	2.75	2.90	
		3.21	2.69	2.02	2.31	2.82	
3	ProTile Business Class Carpet Tile (Colour: Hideaway)	6.56	6.19	6.23	4.61	3.35	5.35
		6.67	5.61	7.15	5.77	6.33	
		5.82	5.84	4.69	4.34	4.78	
		5.00	3.08	7.13	6.51	4.40	
		4.53	6.47	4.59	5.06	4.05	
		5.36	6.16	4.54	4.49	5.24	
4	ProTile Business Class Carpet Tile (Colour: Akaroa)	3.77	3.33	3.04	3.56	3.22	3.64
		2.79	3.50	4.02	3.96	7.16	
		2.91	4.14	3.59	3.06	3.31	
		3.39	3.51	3.32	3.20	3.87	
		3.23	3.54	3.69	3.59	3.55	
		3.91	3.26	3.89	3.27	4.55	
5	ProTile Business Class Carpet Tile (Colour: Harbour)	10.78	10.15	10.84	10.33	8.33	9.76
		8.39	8.26	11.57	8.95	11.43	
		10.63	8.75	7.01	8.88	10.45	
		9.67	10.41	9.83	11.18	11.53	
		10.61	9.24	9.10	7.99	9.03	
		10.67	9.55	10.25	12.16	6.76	
6	ProTile Economy Class Carpet Tile (Colour: Gravity)	2.97	3.20	3.01	3.35	2.85	3.18
		3.15	3.16	3.24	3.69	2.91	
		2.95	3.70	2.90	2.73	2.72	
		3.61	3.07	3.01	2.72	3.54	
		2.81	4.17	3.48	3.10	3.97	
		3.19	2.96	2.76	3.23	3.15	

7	ProTile Economy Class Carpet Tile (Colour: Atmosphere)	2.29 5.42 4.57 2.53 3.23 4.14	2.85 2.37 4.35 4.02 4.92 4.35	3.63 3.97 3.68 2.75 2.73 4.16	4.13 4.82 2.54 4.47 2.36 3.93	3.88 3.19 2.38 4.23 4.07 3.99	3.67
8	ProTile Economy Class Carpet Tile (Colour: Nova)	3.83 2.98 4.06 4.58 2.60 3.11	3.45 3.57 4.19 5.56 2.81 3.69	3.20 4.80 5.24 2.83 2.65 4.55	4.30 2.98 2.30 2.59 4.14 4.70	2.68 2.36 4.53 3.61 2.29 3.65	3.59

69*Attachment 3: Photographs

No.	Sample Name	Photograph 1	Photograph 2
1	Protile Business Class Carpet Tile (Colour: Lounge)		
2	Protile Economy Class Carpet Tile (Colour: Night Sky)		
3	ProTile Business Class Carpet Tile (Colour: Hideaway)		
4	ProTile Business Class Carpet Tile (Colour: Akaroa)		

No.	Sample Name	Photograph 1	Photograph 2
5	ProTile Business Class Carpet Tile (Colour: Harbour)		
6	ProTile Economy Class Carpet Tile (Colour: Gravity)		
7	ProTile Economy Class Carpet Tile (Colour: Atmosphere)		
8	ProTile Economy Class Carpet Tile (Colour: Nova)		