# Luminance Contrast Report

**Product:** Appular Corrugated Stair Nosing
**Product Code:** SN-APC - Various
**Address:** 8a Lara Way, Campbellfield VIC 3061
**Testing Date:** 29/09/2022

As requested, we have determined the luminance contrast of the sample provided. These test results and report should be used as a good guidance only with the test method specified in the standards AS/NZS 1428.4.1.2009 Paragraph E3, Appendix E.

## Product

**Product Name:** Appular Corrugated Stair Nosing

**Product Description:**
Aluminium Stair Nosing with Aluminium Corrugated Insert

*Only Black Pictured

## Test Results

**Overall view of test results per colour - Please see table of results on next page**

| Colour | Dry LRV Average | Wet LRV Average |
|---|---|---|
| **Black** | 1.900 | 1.410 |
| **Clear** | 48.986 | 48.947 |
| **Brass** | 52.400 | 55.058 |

# Table of LRV Results

| Dry Measurements | | Wet Measurements | | Dry Measurements | | Wet Measurements | |
|---|---|---|---|---|---|---|---|
| **Colour** | Black | | | **Colour** | Clear | | |
| 1.894 | 1.91 | 1.462 | 1.417 | 49.13 | 48.956 | 48.99 | 49.016 |
| 1.891 | 1.897 | 1.434 | 1.292 | 49.074 | 48.877 | 48.933 | 48.973 |
| 1.887 | 1.888 | 1.466 | 1.354 | 49.074 | 49.05 | 48.463 | 48.898 |
| 1.895 | 1.905 | 1.471 | 1.429 | 49.074 | 49.174 | 48.913 | 48.765 |
| 1.878 | 1.917 | 1.506 | 1.209 | 49.048 | 48.892 | 48.801 | 49.125 |
| 1.876 | 1.895 | 1.43 | 1.422 | 49.025 | 49.136 | 48.991 | 48.891 |
| 1.875 | 1.936 | 1.523 | 1.302 | 48.91 | 49.051 | 48.9 | 48.882 |
| 1.875 | 1.909 | 1.5 | 1.458 | 48.99 | 49.137 | 48.988 | 49.361 |
| 1.878 | 1.89 | 1.437 | 1.273 | 48.985 | 49.099 | 48.696 | 49.503 |
| 1.894 | 1.927 | 1.363 | 1.454 | 49.057 | 49.144 | 49.018 | 48.831 |
| Mean Dry LRV | 1.90 | Mean Wet LRV | 1.410 | Mean Dry LRV | 48.986 | Mean Wet LRV | 48.947 |
| **Colour** | Brass | | | | | | |
| 52.49 | 52.373 | 55.105 | 55.161 | | | | |
| 52.23 | 52.582 | 54.762 | 54.163 | | | | |
| 52.543 | 52.394 | 54.87 | 55.087 | | | | |
| 52.245 | 52.492 | 54.652 | 55.068 | | | | |
| 52.317 | 52.249 | 54.408 | 54.954 | | | | |
| 52.617 | 52.43 | 54.988 | 55.736 | | | | |
| 52.584 | 52.253 | 55.062 | 55.673 | | | | |
| 52.809 | 52.39 | 55.002 | 55.805 | | | | |
| 52.778 | 52.462 | 55.178 | 55.254 | | | | |
| 51.239 | 52.53 | 54.624 | 55.611 | | | | |
| Mean Dry LRV | 52.40 | Mean Wet LRV | 55.058 | | | | |

| 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:<br>C = 125 (Y2 − Y1)/(Y1 + Y2 + 25), where:<br>C = luminance contrast<br>Y1 and Y2 = LRV of each surface |
| TGSI | | Tactile Ground Surface Indicator |
| Integrated TGSI | | Tactile ground surface indicators that are in a defined pattern and which are of the same luminance and material as the base surface. |
| Discrete TGSI | | Individually installed TGSIs, which provide the same luminance for the sloping sides and upper surface of the truncated cone. |
| Composite Discrete TGSI | | Tactile ground surface indicators that are individually installed and which provide a differing luminance for the sloping sides and upper surface of the truncated cone. |
| Stair Nosing | | A strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel. |

## Onsite Laboratory Testing Equipment

Sterling Supplies uses compliant testing apparatus meeting AS/NZS 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
- Colour space and colorimetric data: CIE for Yxy

## Testing Methodology

The following is a summary of the testing methodology, conducted in accordance with requirements of AS 1428.4.1, Clause E3.3:

- The apparatus was firstly calibrated in accordance with the manufacturer's instructions.
- The tristimulus value 'Y' (LRV measurements) were taken of the surface in random locations in dry & wet conditions.
- 20 measurements were taken. See table of results.
- Surface area was swept with a rag to remove dust particles and soiling prior to testing
- Wet Measurements were determined after 5 minutes of water ponding on the surface.