cedargrove_colorfader

ColorFader is a CircuitPython helper for brightness and gamma adjustment of an integer RGB color value. Gamma is optionally applied after the brightness calculation. Transparency is preserved. Returns an adjusted integer color value.

To adjust a ***displayio*** palette or multiple color ***list***, use the ***cedargrove_palettefader.PaletteFader*** class.

- Author(s): JG Cedar Grove Maker Studios

Implementation Notes

Hardware:

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://circuitpython.org/downloads

```
color_fader(source_color=None, brightness=1.0, gamma=1.0)
```

Scale a 24-bit RGB source color value in proportion to the brightness setting (0 to 1.0). The adjusted color's gamma value is typically from 0.0 to 2.0 with a default of 1.0 for no gamma adjustment. Returns an adjusted 24-bit RGB color value or None if the source color is None (transparent).

Parameters:

- **source_color** – The integer RGB color value to be adjusted. Default is ***None***.
- **brightness** – The brightness floating point value for color value adjustment. Value range is 0.0 to 1.0. Default is 1.0 (maximum brightness).
- **gamma** – The gamma floating point value for color value adjustment. Value range is 0.0 to 2.0. Default is 1.0 (no gamma adjustment).

Example:

```
>>> from cedargrove_colorfader import color_fader
>>> # Dim a pure red color to 50%; no gamma adjustment
>>> print(hex(color_fader(source_color=0xFF0000, brightness=0.5, gamma=1.0)))
0x7f0000
```