

## Line-element examples for grey samples ( $0,2 \leq x \leq 5$ )

$F_{\mathbf{u}}(x)$  is called the line-element function of  $f_{\mathbf{u}}(x)$ .

Both functions are normalized to the surround value:

$$\frac{d[F_{\mathbf{u}}(x)]}{dx} = f_{\mathbf{u}}(x) \quad [1]$$

$$F_{\mathbf{u}}(x) = \int \frac{f'_{\mathbf{u}}(x)}{f_{\mathbf{u}}(x)} dx \quad [2]$$

Example for the normalized functions with  $x_{\mathbf{u}}=1$ :

$$F_{\mathbf{u}}(x) = \frac{F(x)}{F(x_{\mathbf{u}})} = \frac{\ln(1+bx)}{\ln(1+b)} \quad [3]$$

$$f_{\mathbf{u}}(x) = \frac{f(x)}{f(x_{\mathbf{u}})} = \frac{1+bx}{1+b} \quad [4]$$