

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

$F_u(Y_r)$ is called the line-element function of $f_u(Y_r)$.

Both functions are normalized to the surround value:

$$\frac{d[F_u(Y_r)]}{dY_r} = f_u(Y_r) \quad [1]$$

$$F_u(Y_r) = \int \frac{f'_u(Y_r)}{f_u(Y_r)} dY_r \quad [2]$$

Example for the normalized functions with $Y_r=1$:

$$F_u(Y_r) = \frac{F(Y_r)}{F(1)} = \frac{\ln(1+b Y_r)}{\ln(1+b)} \quad [3]$$

$$f_u(Y_r) = \frac{f(Y_r)}{f(1)} = \frac{1+b Y_r}{1+b} \quad [4]$$