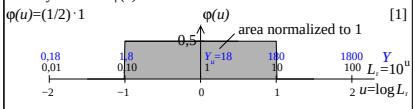
Density and distribution function for luminance and lightness

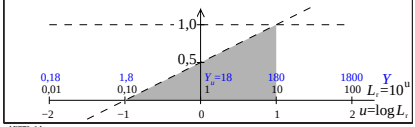
Density function $\varphi(u)$

$\varphi(u)=(1/2)\cdot 1$ [1]



Distribution function $\phi(u)$

$\phi(u)=(1/2)\cdot(1+u)$ [2]



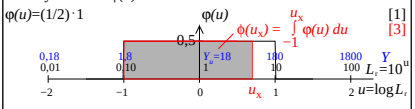
AET70−1A

Density and distribution function for luminance and lightness

Density function $\varphi(u)$

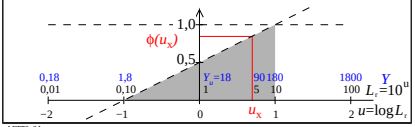
$\varphi(u)=(1/2)\cdot 1$ [1]

$\phi(u_x)=\int_{-1}^{u_x}\varphi(u)\,du$ [3]



Distribution function $\phi(u)$

$\phi(u)=(1/2)\cdot(1+u)$ [2]

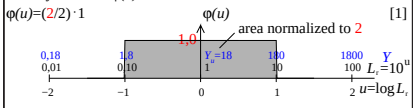


AET70−2A

Density and distribution function for luminance and lightness

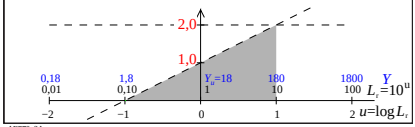
Density function $\varphi(u)$

$\varphi(u)=(2/2)\cdot 1$ [1]



Distribution function $\phi(u)$

$\phi(u)=(2/2)\cdot(1+u)$ [2]



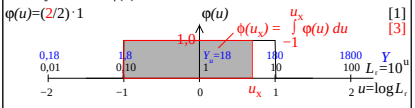
AET70−3A

Density and distribution function for luminance and lightness

Density function $\varphi(u)$

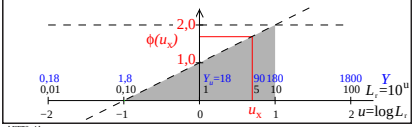
$\varphi(u)=(2/2)\cdot 1$ [1]

$\phi(u_x)=\int_{-1}^{u_x}\varphi(u)\,du$ [3]



Distribution function $\phi(u)$

$\phi(u)=(2/2)\cdot(1+u)$ [2]

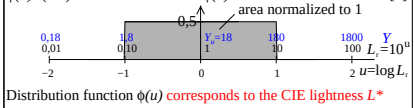


AET70−4A

Density and distribution function for luminance and lightness

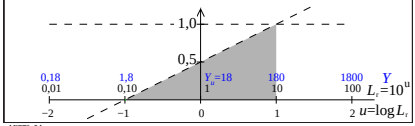
Density function $\varphi(u)$ compare with CIE luminance contrast $L/\Delta L$

$\varphi(u)=(1/2)\cdot 1$ [1]



Distribution function $\phi(u)$ corresponds to the CIE lightness L^*

$\phi(u)=(1/2)\cdot(1+u)$ [2]



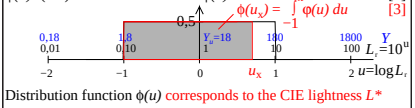
AET70−5A

Density and distribution function for luminance and lightness

Density function $\varphi(u)$ compare with CIE luminance contrast $L/\Delta L$

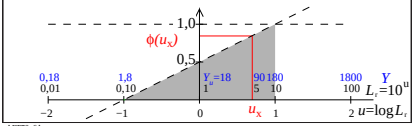
$\varphi(u)=(1/2)\cdot 1$ [1]

$\phi(u_x)=\int_{-1}^{u_x}\varphi(u)\,du$ [3]



Distribution function $\phi(u)$ corresponds to the CIE lightness L^*

$\phi(u)=(1/2)\cdot(1+u)$ [2]

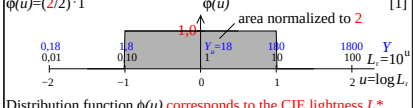


AET70−6A

Density and distribution function for luminance and lightness

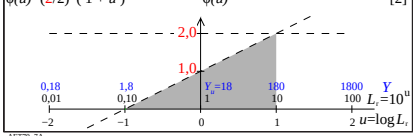
Density function $\varphi(u)$ compare with CIE luminance contrast $L/\Delta L$

$\varphi(u)=(2/2)\cdot 1$ [1]



Distribution function $\phi(u)$ corresponds to the CIE lightness L^*

$\phi(u)=(2/2)\cdot(1+u)$ [2]



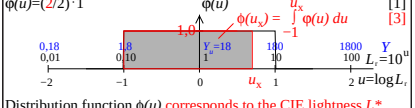
AET70−7A

Density and distribution function for luminance and lightness

Density function $\varphi(u)$ compare with CIE luminance contrast $L/\Delta L$

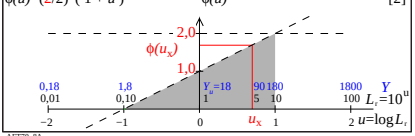
$\varphi(u)=(2/2)\cdot 1$ [1]

$\phi(u_x)=\int_{-1}^{u_x}\varphi(u)\,du$ [3]



Distribution function $\phi(u)$ corresponds to the CIE lightness L^*

$\phi(u)=(2/2)\cdot(1+u)$ [2]



AET70−8A

AET70−7R