Advanced Calibration of Pupil Reactions Under Luminosity Influence

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QUICK INTRO - PUPIL DILATE WHEN

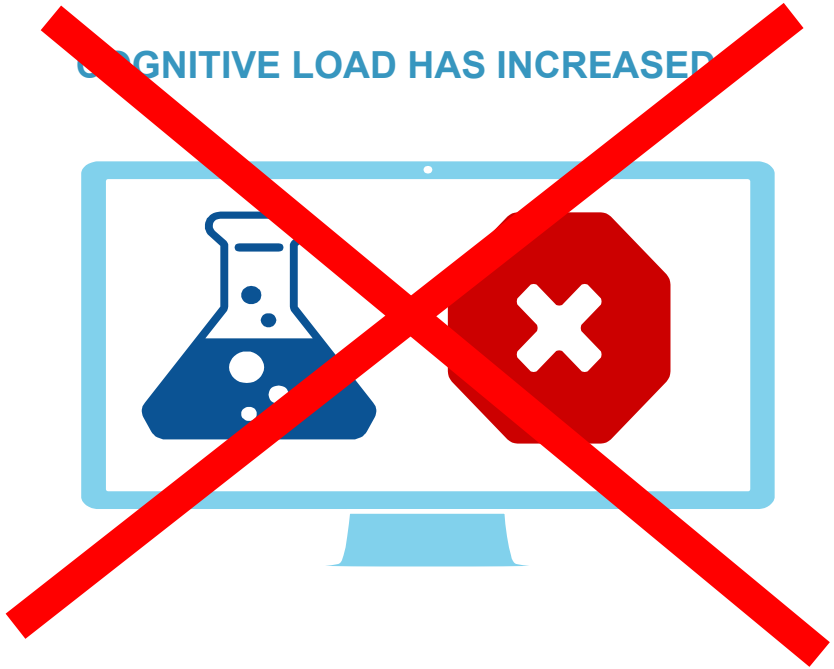
INTERFACE BECOMES DARKER

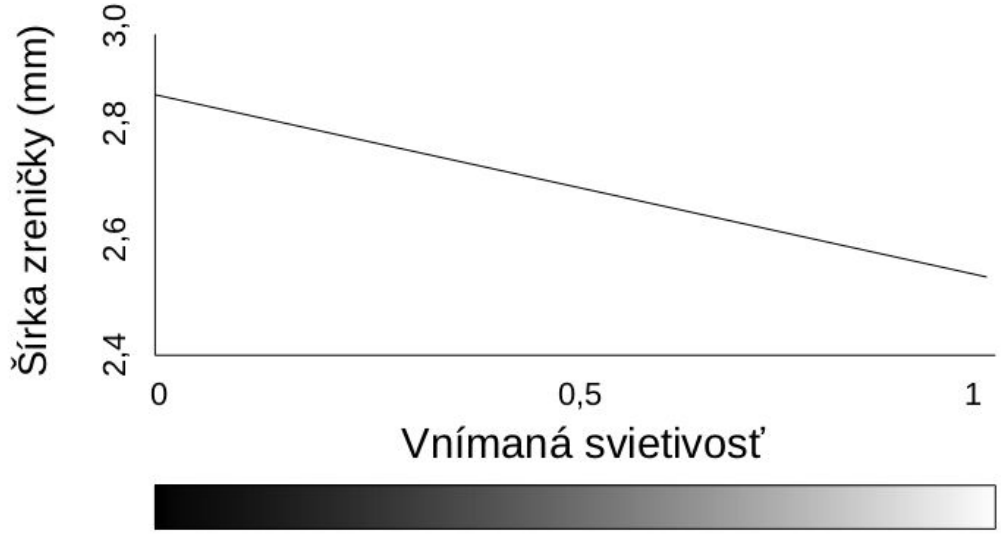
COGNITIVE LOAD HAS INCREASED

LIGHT REACTIONS CAN BE CALIBRATED

INTERFACE BECOMES DARKER

COGNITIVE LOAD HAS INCREASED




Šírka zreničky (mm)
3,0
2,8
2,6
2,4
0
0,5
1
Vnímaná svietivosť

Vysoký vplyv

Nízky vplyv

Minimálny vplyv

Fixácia [x=0, y=0]

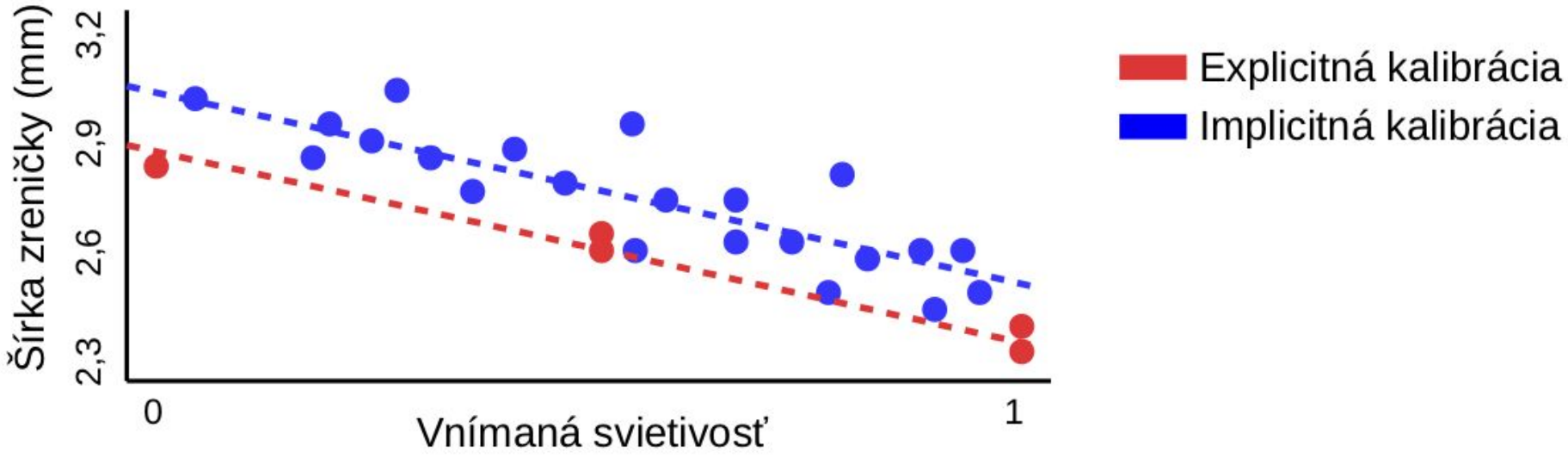
Fixácia [x=0, y=1]

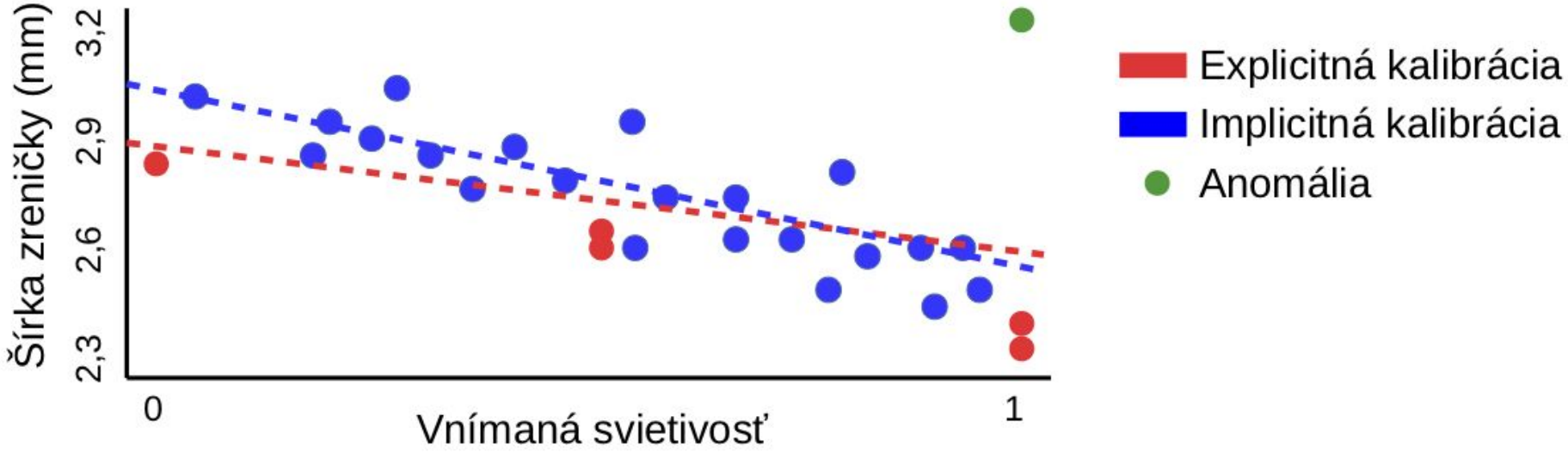
Fixácia [x=1, y=1]

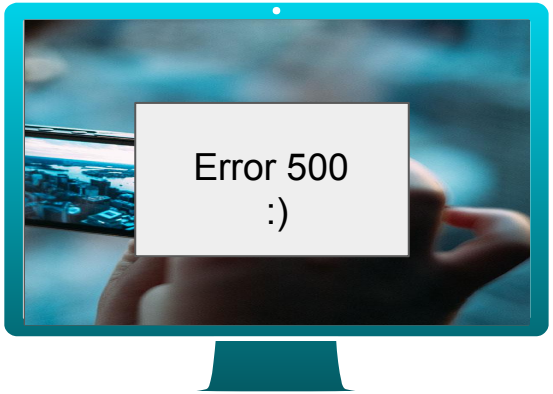
LUMINOSITY
1 + x = 1 ⇒ x = 0

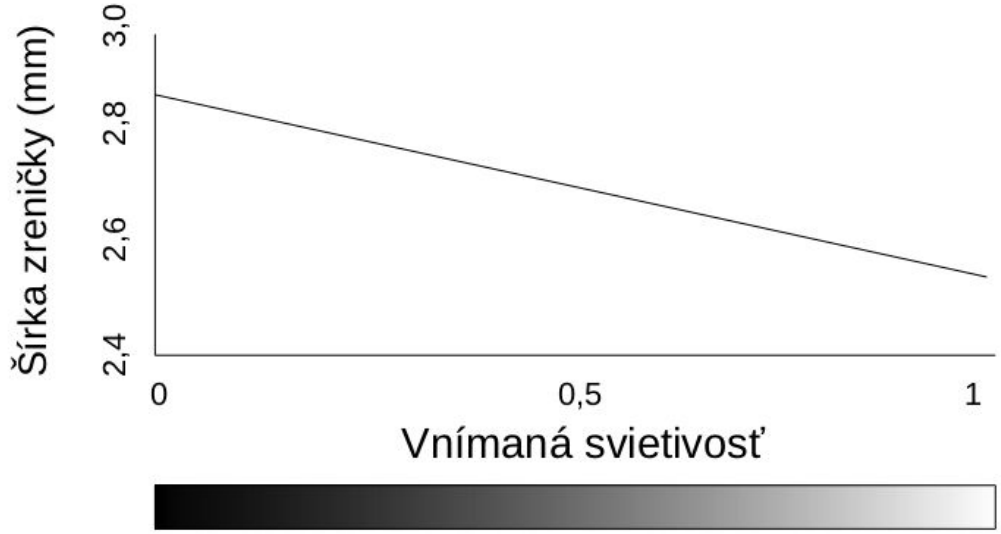
LUMINOSITY
0.5+ x = 0.9 ⇒ x = 0.4

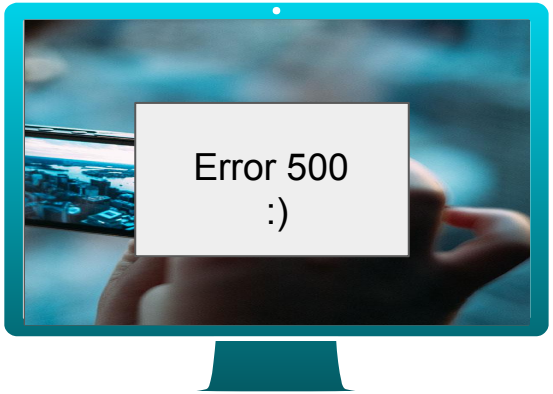
LUMINOSITY
0.25 + x = 0.8 ⇒ x = 0.55


Šírka zreničky (mm)
3,2
2,9
2,6
2,3
0
1
Vnímaná svietivosť
Explicitná kalibrácia
Implicitná kalibrácia


Šírka zreničky (mm)
2,3
2,6
2,9
3,2
0
1
Vnímaná svietivosť
Explicitná kalibrácia
Implicitná kalibrácia
Anomália


Error 500
:)


Šírka zreničky (mm)
3,0
2,8
2,6
2,4
0
0,5
1
Vnímaná svietivosť



Vysoký vplyv

Nízky vplyv

Minimálny vplyv

Fixácia [x=0, y=0]

LUMINOSITY
0.86 + 0 = 0.86

Fixácia [x=0, y=1]

LUMINOSITY
0.5 + x = ?

Fixácia [x=1, y=1]

LUMINOSITY
0.25 + x = ?

EXPLICIT CALIBRATION

Pupil = 3.2mm
Range = 1.5mm
Fixation = [1, 1]
Position influence = 25%
Perceived from monitor = 25%
Pupil size relative = 0.0
Perceived = 0.8
⇒ Perceived from outside = 80% - 25% = 55%

IMPLICIT CALIBRATION

Pupil = 3.2mm
Range = ?
Fixation = [1, 1]
Position influence = 25%
Perceived from monitor = 17%
Pupil size relative = ?
Perceived = ?
⇒ Perceived from outside = X% - 17% = ?

EXPLICIT CALIBRATION

Pupil = 3.2mm
Range = 1.5mm
Fixation = [1, 1]
Position influence = 25%
Perceived from monitor = 25%
Pupil size relative = 0.0
Perceived = 0.8
⇒ Perceived from outside = 80% - 25% = 55%

IMPLICIT CALIBRATION

Pupil = 3.2mm
Range = ?
Fixation = [1, 1]
Position influence = 25%
Perceived from monitor = 17%
Pupil size relative = ?
Perceived = 0.72
⇒ Perceived from outside = X% - 17% = 55%