

S2. Effect sizes and power

Table S2.1 Statistics of main effect of Light condition for all parameters

Dependent variable	F	p	f^2
Vitality	$F_{2,74} = 0.50$	0.61	< 0.01
KSS	$F_{2,77} = 0.23$	0.79	< 0.01
M_{RT}	$F_{2,46} = 2.53$	0.09	< 0.01
M_{RT10%slow}	$F_{2,70} = 3.20$	0.05	< 0.01
M_{RT10%fast}	$F_{2,73} = 0.38$	0.69	< 0.01
SD_{RT}	$F_{2,71} = 2.37$	0.10	0.01
CV_{RT}	$F_{2,66} = 1.43$	0.25	0.01
PVT motivation	$F_{2,61} = 0.57$	0.57	< 0.01
Mean SCL	$F_{2,66} = 2.04$	0.14	< 0.01
Pupil Power	$F_{2,62} = 175.68$	< 0.001	0.33
PUI	$F_{2,49} = 197.33$	< 0.001	0.42
SD_{PD}	$F_{2,66} = 179.64$	< 0.001	0.36
Calm	$F_{2,42} = 3.39$	0.04	< 0.01
Happy	$F_{2,68} = 0.36$	0.70	< 0.01
Comfort_v	$F_{2,79} = 13.37$	< 0.001	0.03
Sensation_{VI}	$F_{2,73} = 98.56$	< 0.001	0.21
Sensation_{VC}	$F_{2,80} = 39.47$	< 0.001	0.23
	F	p	$R^2_{\text{fixed-effect}}$
Light Appraisal	$F_{2,80} = 13.45$	< 0.001	0.13
HES factor	$F_{2,80} = 2.73$	0.07	0.02

F : F-value, p : p-value and f^2 : Cohen's f^2

Table L.2 Power for mood and comfort related parameters

Dependent variable	Main effect condition	Dim vs Intermittent	Dim vs Bright	Intermittent vs Bright
Calm	17.7 %	3.1 %	21.2 %	7.6 %
Happy	4.6 %	4.1 %	4.8 %	1.3 %
Comfort_v	69.4 %	44.9 %	81.0%	2.5 %
Sensation_{vi}	100 %	3.6 %	100 %	98 %
Sensation_{vc}	98.9 %	0.4 %	99.2 %	93.6 %
Light Appraisal	97.0 %	97.6 %	89.8 %	4.2 %
HES factor	27.7 %	1.9 %	27.0 %	21.0 %