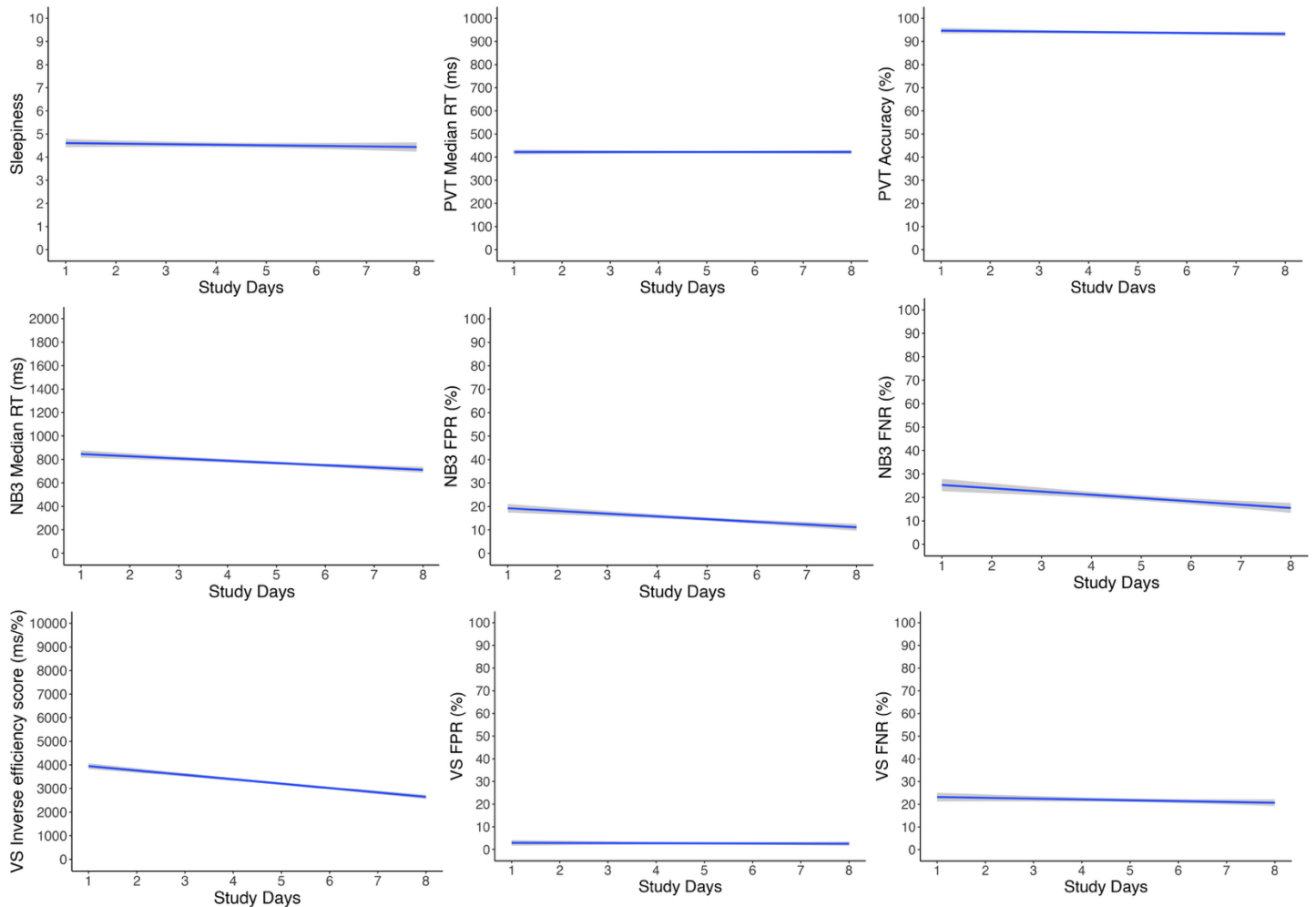


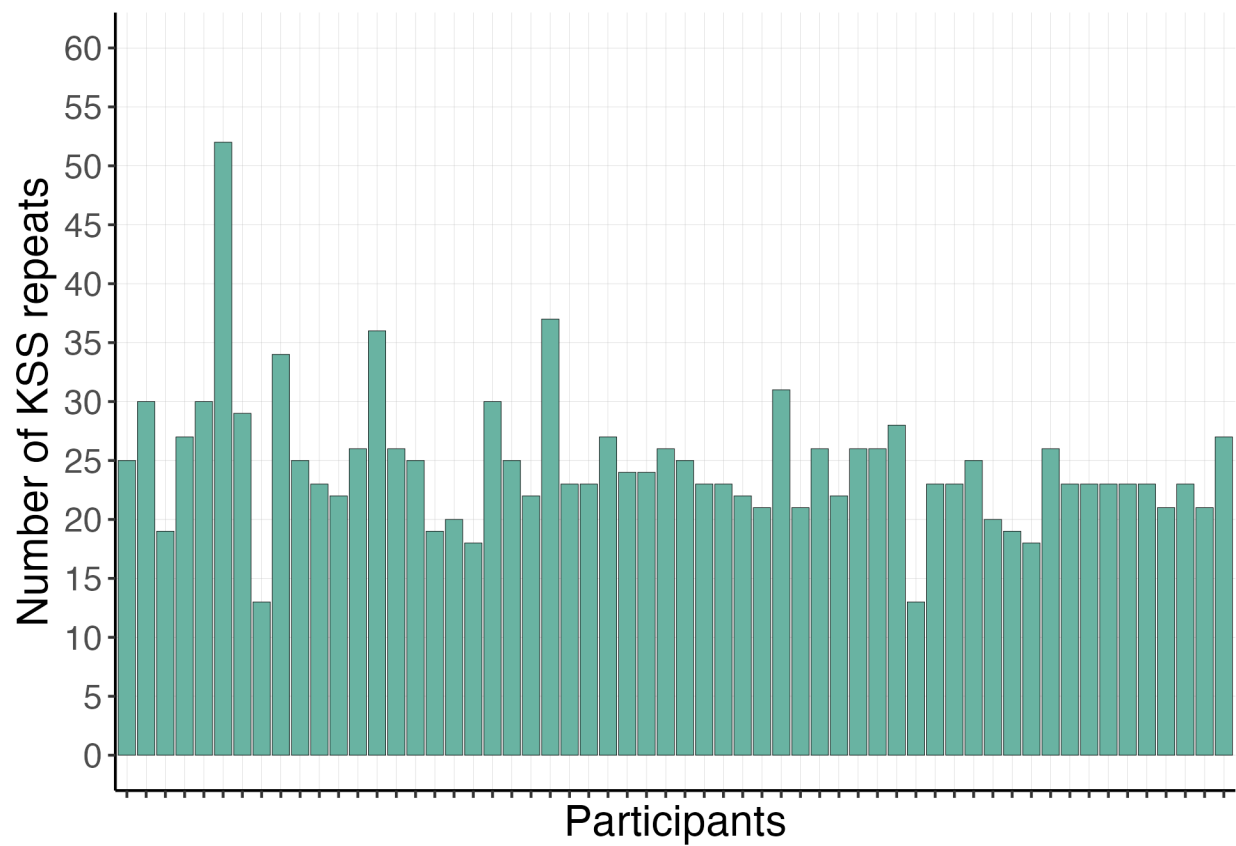
Supplementary information

Figure S1: The learning effect was investigated for subjective sleepiness reports (KSS), PVT reaction time and accuracy, NB3 false positive rate (FPR) and false negative rate (FNR), as well as visual search (VS) inverse efficiency score (IES), FPR, and FNR. A linear mixed model with random participant intercepts was used to estimate changes in cognitive variables across task days. This model also controlled for interaction effects between the number of games played daily and task day. KSS and PVT showed no significant learning effect and were not influenced by the number of tasks completed per day. In contrast, NB3 demonstrated significant improvement across task days. Specifically, NB3 median reaction time decreased by 16.8 ms per task day ($p = 0.008$), FPR decreased by 1.5% per task day ($p = 1.85e-06$), and FNR decreased by 1.6% per task day ($p = 0.006$). VS also showed significant improvement across task days, with the IES decreasing by 241.2 ms/% per task day ($p < 2e-16$). Additionally, VS was influenced by the number of tasks completed per day, with each additional session played reducing the IES by 40.2 ($p = 0.023$). Overall, PVT was independent of the number of tasks completed per day and showed no learning effect. In contrast, NB3 and VS, which were slightly more complex tasks, exhibited a learning effect. Increased task repetition led to greater practice effects, though this was only observed in VS IES.



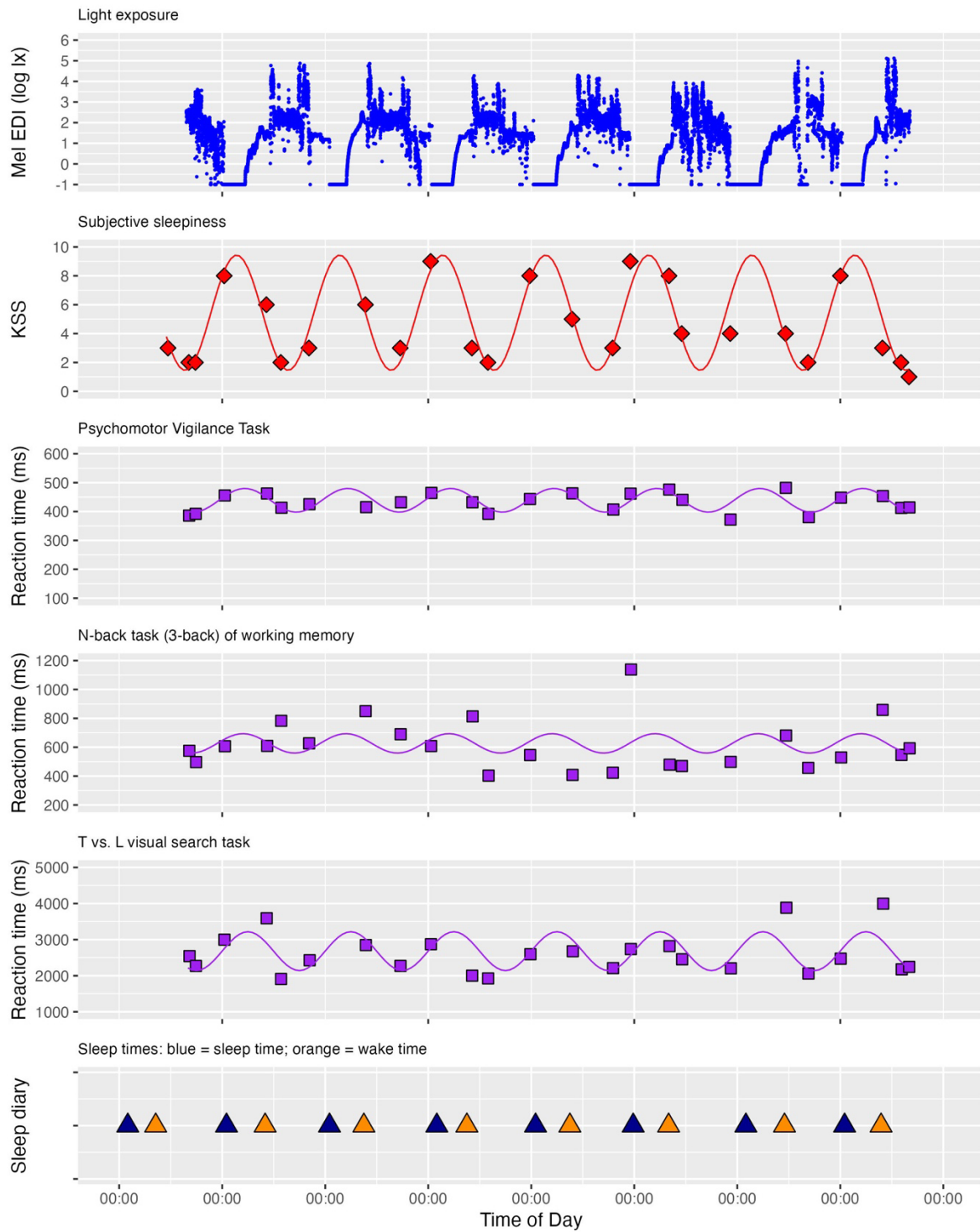
Supplementary information

Figure S2: Brightertime app entries per participant.



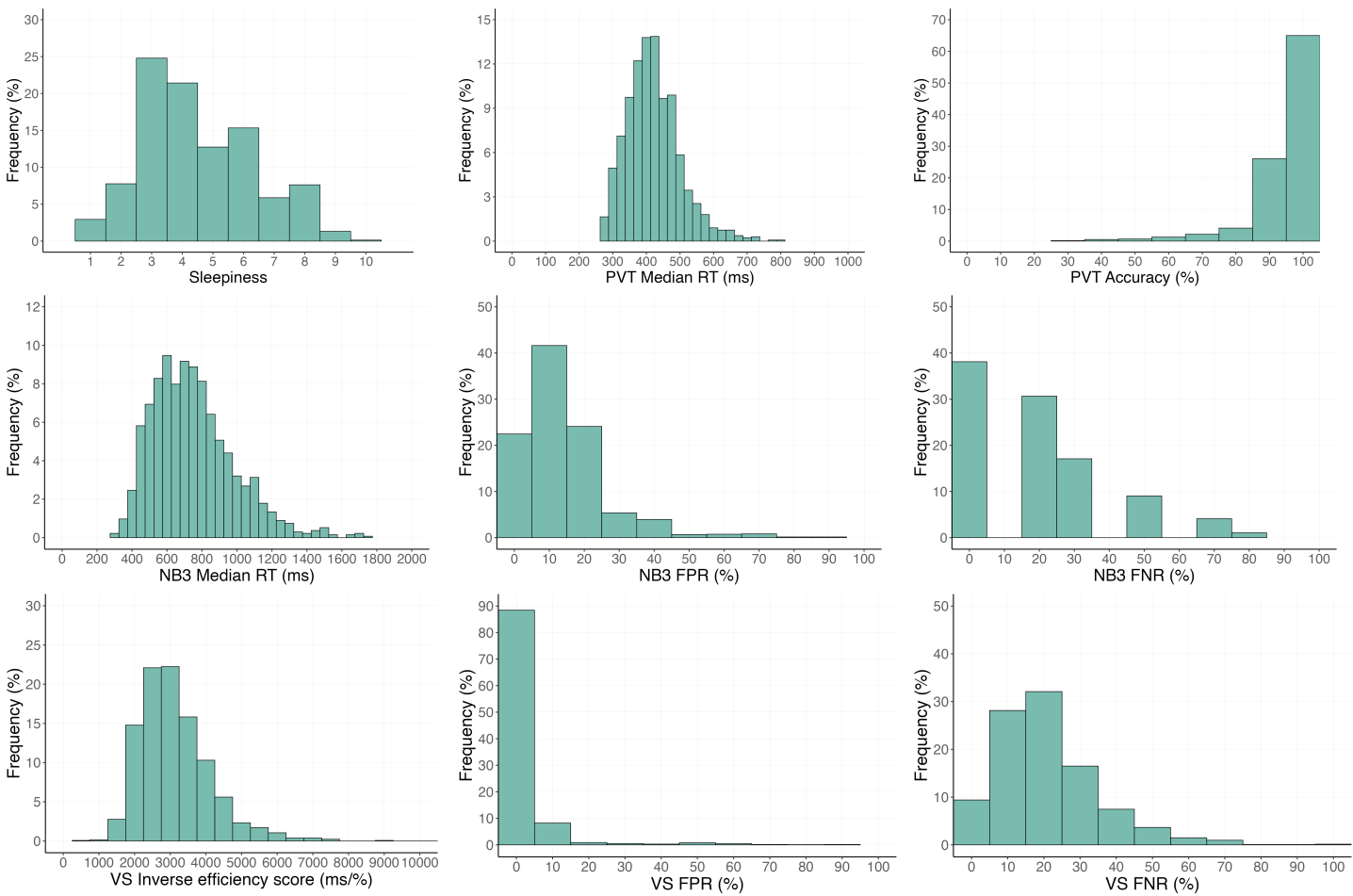
Supplementary information

Figure S3: Study design (representative data structure for one participant). Lines show a sinusoidal fit with a 24-hour period. Abbreviations: Mel EDI – Melanopic Daylight Illuminance; KSS – Karolinska Sleepiness Scale.



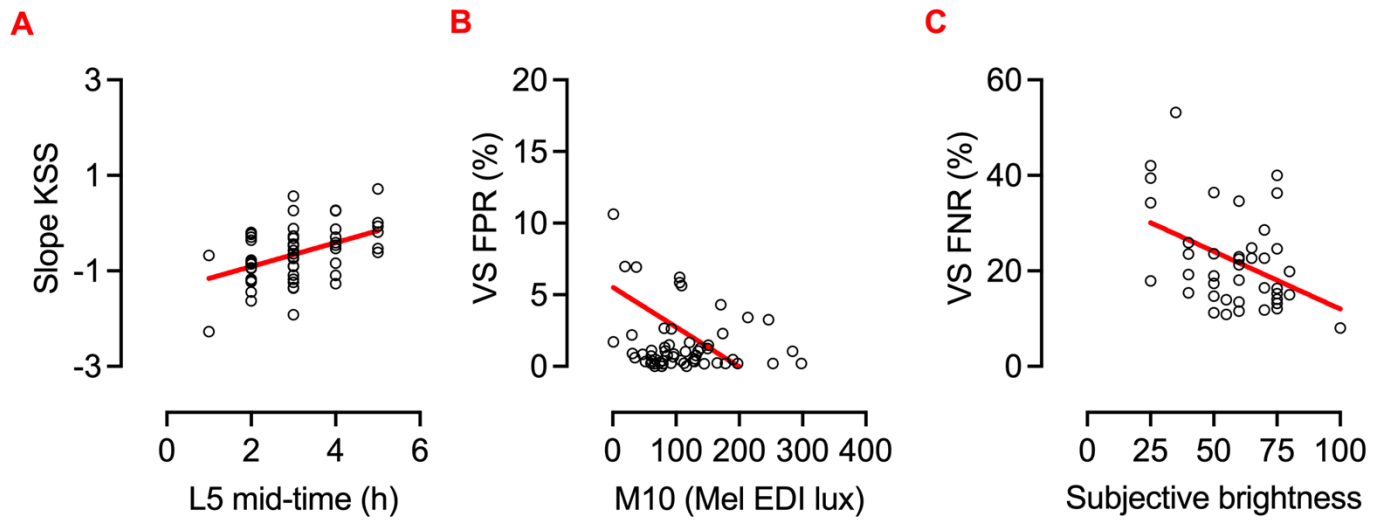
Supplementary information

Figure S4: Distributions of cognitive variables with the maximum factor loadings.



Supplementary information

Figure S5: Scatterplots highlighting key findings Figure 4. **A)** Midpoint of the dimmest 5-hour period vs. KSS melanopic photosensitivity slope. **B)** M10 (Mel EDI lux) vs. VS false positive rate (%), based on weekly averages. **C)** Subjective brightness from in-lab pupillometric assay vs. VS false negative rate (%).



Supplementary information

Table S1: Summary statistics for all cognitive outcome variables.

	MIN.	1ST QU.	MEDIAN	MEAN	3RD QU.	MAX.	STD.DEV
Psychomotor Vigilance Task (PVT)							
FNR	0.000	0.000	0.000	3.080	3.571	62.963	6.656
FDR	0.000	0.000	0.000	3.414	3.704	65.385	6.776
ACCURACY	32.143	92.857	96.429	93.899	100.000	100.000	9.370
MEDIANRT	263.000	369.000	413.750	421.531	470.000	800.000	79.309
IES	274.964	397.088	453.929	483.272	523.767	1869.560	153.160
SLOW10	289.000	460.400	533.700	551.455	621.750	953.400	128.418
FAST10	236.200	313.600	350.600	354.147	386.675	682.600	58.617
LAPSE	0.000	2.000	4.000	6.115	9.000	27.000	5.807
N-Back Task (3-back)							
FNR	0.000	0.000	16.667	18.916	33.333	83.333	19.943
FPR	0.000	6.250	12.500	13.754	18.750	93.750	13.549
FDR	0.000	14.286	25.000	27.583	42.857	85.714	21.025
FOR	0.000	0.000	6.250	7.537	12.500	42.857	7.859
ACCURACY	31.818	77.273	86.364	84.838	95.455	100.000	12.620
DPRIME	-0.629	1.249	2.094	1.974	2.681	3.355	0.926
MEDIANRT	285.500	577.000	719.000	750.481	878.000	1755.000	234.328
IES	337.167	716.152	909.975	961.841	1141.486	2899.769	343.581
SLOW10	360.000	798.900	996.500	1028.424	1229.800	1888.000	307.159
FAST10	115.000	455.000	540.200	581.899	659.000	1755.000	183.078
Visual search (VS)							
FNR	0.000	11.111	19.139	21.318	28.571	100.000	14.128
FPR	0.000	0.000	0.000	2.474	0.000	86.957	8.656
FDR	0.000	0.000	0.000	2.927	0.000	70.588	9.113
FOR	0.000	9.091	16.000	17.352	23.077	70.000	10.620
ACCURACY	38.095	85.714	90.476	87.921	95.238	100.000	9.563
DPRIME	-0.632	2.385	2.718	2.663	3.019	4.001	0.698
MEDIANRT	295.000	2088.375	2541.750	2637.490	3076.125	7523.500	821.914
IES	575.423	2431.322	2959.385	3134.033	3640.271	15273.615	1043.709
SLOW10	455.500	3258.650	3975.600	4210.635	4991.025	9852.000	1325.897
FAST10	206.000	1035.175	1225.000	1300.882	1494.900	4826.400	425.862
SLOPE	-1973.975	399.432	694.819	746.680	1049.531	2887.974	513.565

Supplementary information

Table S2: Correlation matrices and factor loadings of cognitive variables.

	FNR	FDR	ACC	MEDIANRT	IES	SLOW10	FAST10	LAPSE	FPR	FOR	DPRIME	SLOPE
Psychomotor Vigilance Task (PVT) - Correlation matrix												
FNR	1.000	0.322	-0.808	0.463	0.782	0.519	0.326	0.302				
FDR	0.322	1.000	-0.803	0.122	0.587	0.188	0.029	0.002				
ACCURACY	-0.808	-0.803	1.000	-0.370	-0.831	-0.450	-0.226	-0.202				
MEDIANRT	0.463	0.122	-0.370	1.000	0.766	0.858	0.912	0.888				
IES	0.782	0.587	-0.831	0.766	1.000	0.770	0.634	0.595				
SLOW10	0.519	0.188	-0.450	0.858	0.770	1.000	0.736	0.824				
FAST10	0.326	0.029	-0.226	0.912	0.634	0.736	1.000	0.839				
LAPSE	0.302	0.002	-0.202	0.888	0.595	0.824	0.839	1.000				
N-Back Task (3-back) - Correlation matrix												
FNR	1.000	0.597	-0.668	0.197	0.445	0.013	0.298		0.304	0.963	-0.822	
FPR	0.304	0.882	-0.912	0.114	0.578	0.081	0.105		1.000	0.476	-0.757	
FDR	0.597	1.000	-0.946	0.193	0.606	0.099	0.222		0.882	0.696	-0.921	
FOR	0.963	0.696	-0.787	0.193	0.531	0.025	0.278		0.476	1.000	-0.886	
ACCURACY	-0.668	-0.946	1.000	-0.174	-0.643	-0.069	-0.211		-0.912	-0.787	0.945	
DPRIME	-0.822	-0.921	0.945	-0.222	-0.616	-0.098	-0.266		-0.757	-0.886	1.000	
MEDIANRT	0.197	0.193	-0.174	1.000	0.791	0.770	0.835		0.114	0.193	-0.222	
IES	0.445	0.606	-0.643	0.791	1.000	0.707	0.746		0.578	0.531	-0.616	
SLOW10	0.013	0.099	-0.069	0.770	0.707	1.000	0.561		0.081	0.025	-0.098	
FAST10	0.298	0.222	-0.211	0.835	0.746	0.561	1.000		0.105	0.278	-0.266	
Visual search (VS) - Correlation matrix												
FNR	1.000	0.393	-0.860	-0.059	0.281	-0.051	0.070		0.273	0.864	-0.833	-0.101
FPR	0.273	0.924	-0.664	-0.257	0.031	-0.136	-0.239		1.000	0.444	-0.698	-0.204
FDR	0.393	1.000	-0.710	-0.230	0.084	-0.125	-0.196		0.924	0.452	-0.757	-0.187
FOR	0.864	0.452	-0.907	-0.142	0.224	-0.083	-0.068		0.444	1.000	-0.861	-0.143
ACCURACY	-0.860	-0.710	1.000	0.146	-0.282	0.067	0.055		-0.664	-0.907	0.948	0.166
DPRIME	-0.833	-0.757	0.948	0.158	-0.227	0.090	0.066		-0.698	-0.861	1.000	0.160
MEDIANRT	-0.059	-0.230	0.146	1.000	0.861	0.896	0.800		-0.257	-0.142	0.158	0.571
IES	0.281	0.084	-0.282	0.861	1.000	0.873	0.766		0.031	0.224	-0.227	0.451
SLOW10	-0.051	-0.125	0.067	0.896	0.873	1.000	0.697		-0.136	-0.083	0.090	0.558
FAST10	0.070	-0.196	0.055	0.800	0.766	0.697	1.000		-0.239	-0.068	0.066	0.392
SLOPE	-0.101	-0.187	0.166	0.571	0.451	0.558	0.392		-0.204	-0.143	0.160	1.000

Supplementary information

	FACTOR1	FACTOR2	FACTOR3
Psychomotor Vigilance Task (PVT) - Loading matrix			
FNR	0.311	0.767	
FDR	-0.057	0.822	
ACCURACY	-0.163	-0.984	
MEDIANRT	0.967	0.216	
IES	0.626	0.742	
SLOW10	0.819	0.322	
FAST10	0.923	0.077	
LAPSE	0.907	0.055	
N-Back Task (3-back) - Loading matrix			
FNR	0.218	0.111	0.967
FPR	0.992	0.074	0.083
FDR	0.847	0.097	0.415
FOR	0.395	0.130	0.891
ACCURACY	-0.868	-0.106	-0.482
DPRIME	-0.697	-0.119	-0.678
MEDIANRT	0.041	0.907	0.090
IES	0.500	0.825	0.253
SLOW10	0.027	0.865	-0.091
FAST10	0.028	0.823	0.206
Visual search (VS) - Loading matrix			
FNR	0.015	0.961	0.039
FPR	-0.135	0.248	0.957
FDR	-0.102	0.354	0.860
FOR	-0.049	0.909	0.220
ACCURACY	0.008	-0.878	-0.465
DPRIME	0.047	-0.815	-0.511
MEDIANRT	0.945	-0.090	-0.113
IES	0.950	0.278	0.094
SLOW10	0.937	-0.068	0.007
FAST10	0.808	0.031	-0.145
SLOPE	0.531	-0.124	-0.106

Supplementary information

Table S3: Mixed model results for cognitive measures in relation to sleep duration, sleep midpoint, time awake, and time of day (standardized coefficient, p value, sample size, effect size).

	KSS	PVT MEDIANRT	PVT ACCURACY	NB3 MEDIANRT	NB3 FPR	NB3 FNR	VS IES	VS FPR	VS FNR
Model coefficients									
SIN (TIME OF DAY)	0.237	0.021	0.029	0.055	-0.024	-0.026	0.002	-0.007	-0.036
COS (TIME OF DAY)	0.441	0.074	-0.039	-0.012	0.029	0.022	0.029	0.029	0.059
TIMEAWAKE	-1.042	-0.099	-0.091	-0.212	0.039	0.124	-0.113	0.026	0.111
TIMEAWAKE ²	1.361	0.183	0.051	0.186	0.014	-0.077	0.154	0.001	0.001
SLEEP DURATION	-0.096	-0.085	0.031	-0.029	0.000	-0.022	-0.039	0.017	-0.071
SLEEP MIDPOINT	0.024	-0.047	0.010	-0.036	-0.081	-0.041	-0.106	-0.007	-0.099
Model p-values									
SIN (TIME OF DAY)	7.85E-09	2.39E-01	1.74E-01	2.65E-02	2.78E-01	3.03E-01	9.10E-01	7.75E-01	1.79E-01
COS (TIME OF DAY)	1.96E-14	4.71E-03	1.84E-01	6.60E-01	2.14E-01	3.87E-01	1.71E-01	1.90E-01	4.38E-02
TIMEAWAKE	5.13E-09	5.39E-01	2.27E-01	2.75E-01	8.12E-01	5.47E-01	5.14E-01	7.67E-01	3.03E-01
TIMEAWAKE ²	3.29E-12	2.84E-01	5.33E-01	3.25E-01	9.30E-01	7.08E-01	3.65E-01	9.93E-01	9.95E-01
SLEEP DURATION	2.96E-03	2.57E-04	2.53E-01	3.64E-01	9.99E-01	4.95E-01	1.13E-01	4.88E-01	4.39E-02
SLEEP MIDPOINT	5.83E-01	2.22E-01	7.56E-01	3.39E-01	8.94E-02	3.03E-01	3.73E-02	8.27E-01	6.09E-03
Model sample sizes									
SIN (TIME OF DAY)	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
COS (TIME OF DAY)	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
TIMEAWAKE	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
TIMEAWAKE ²	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
SLEEP DURATION	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
SLEEP MIDPOINT	1405.000	1312.000	1312.000	1323.000	1323.000	1323.000	1319.000	1319.000	1319.000
Model effect sizes (eta-squared)									
SIN (TIME OF DAY)	0.476	0.002	0.023	0.029	0.004	0.002	0.000	0.002	0.030
COS (TIME OF DAY)	0.673	0.143	0.034	0.003	0.033	0.001	0.002	0.022	0.088
TIMEAWAKE	0.517	0.002	0.012	0.037	0.000	0.003	0.007	0.001	0.019
TIMEAWAKE ²	0.643	0.009	0.006	0.034	0.000	0.001	0.015	0.000	0.000
SLEEP DURATION	0.306	0.079	0.020	0.027	0.000	0.014	0.004	0.006	0.137
SLEEP MIDPOINT	0.010	0.039	0.001	0.001	0.055	0.053	0.096	0.000	0.007

Supplementary information

Table S4: Mixed model results for recent melanopic EDI and cognitive measures (standardized coefficient, p value).

	KSS	PVT MEDIANRT	PVT ACCURACY	NB3 MEDIANRT	NB3 FPR	NB3 FNR	VS IES	VS FPR	VS FNR
	Model coefficients								
30-MIN	-0.111	-0.085	0.001	-0.070	-0.046	-0.072	-0.026	0.006	0.004
60-MIN	-0.104	-0.056	-0.022	-0.083	-0.033	-0.053	-0.004	0.022	-0.024
90-MIN	-0.114	-0.047	-0.014	-0.084	-0.025	-0.041	0.012	-0.005	-0.010
120-MIN	-0.119	-0.029	-0.034	-0.078	-0.031	-0.037	0.016	-0.026	-0.012
	Model p-values								
30-MIN	2.85E-03	3.49E-03	9.64E-01	3.35E-02	1.30E-01	3.57E-02	3.93E-01	8.67E-01	9.06E-01
60-MIN	1.26E-02	8.66E-02	4.69E-01	1.83E-02	3.41E-01	1.49E-01	8.98E-01	6.07E-01	5.10E-01
90-MIN	6.68E-03	1.27E-01	6.56E-01	2.50E-02	4.80E-01	2.71E-01	7.22E-01	8.58E-01	7.94E-01
120-MIN	4.65E-03	3.15E-01	2.49E-01	5.16E-02	4.53E-01	3.55E-01	6.42E-01	3.82E-01	7.56E-01

Supplementary information

Table S5: Correlations between weekly melanopic EDI exposure variables and real-world light sensitivity in cognitive measures (Pearson correlation r , p value, sample size).

	KSS SLOPE	PVT SLOPE	NB3 SLOPE
	Pearson correlation r		
M10	-0.379	0.188	-0.140
L5	0.176	0.038	-0.071
DURATION ABOVE 250 LUX	-0.297	0.108	-0.281
DURATION ABOVE 10 LUX AFTER SUNSET	0.136	0.064	0.044
M10 MID-TIME	-0.036	-0.116	-0.086
L5 MID-TIME	0.443	-0.182	-0.078
LAST TIME ABOVE 1 LUX	0.307	-0.081	0.041
IS	-0.348	-0.045	0.086
IV	0.272	0.116	0.077
	p -values		
M10	4.73E-03	1.69E-01	3.13E-01
L5	2.02E-01	7.84E-01	6.10E-01
DURATION ABOVE 250 LUX	2.89E-02	4.34E-01	3.95E-02
DURATION ABOVE 10 LUX AFTER SUNSET	3.26E-01	6.40E-01	7.51E-01
M10 MID-TIME	7.94E-01	3.99E-01	5.35E-01
L5 MID-TIME	7.89E-04	1.84E-01	5.77E-01
LAST TIME ABOVE 1 LUX	2.41E-02	5.58E-01	7.70E-01
IS	1.00E-02	7.44E-01	5.35E-01
IV	4.70E-02	3.99E-01	5.79E-01
	sample sizes		
M10	54.000	55.000	54.000
L5	54.000	55.000	54.000
DURATION ABOVE 250 LUX	54.000	55.000	54.000
DURATION ABOVE 10 LUX AFTER SUNSET	54.000	55.000	54.000
M10 MID-TIME	54.000	55.000	54.000
L5 MID-TIME	54.000	55.000	54.000
LAST TIME ABOVE 1 LUX	54.000	55.000	54.000
IS	54.000	55.000	54.000
IV	54.000	55.000	54.000

Supplementary information

Table S6: Correlations between in-lab light sensitivity measures and real-world light sensitivity in cognition measures (Pearson correlation r, p value, sample size).

	KSS SLOPE	PVT SLOPE	NB3 SLOPE
			Pearson correlation r
BRIGHTNESS .75 THRESHOLD	0.197	0.244	0.153
BRIGHTNESS PREFERENCE	-0.113	0.215	-0.190
PIPR RESPONSE	0.341	-0.122	0.303
PIPR RESPONSE (NORM)	0.221	-0.123	0.213
INITIAL CONSTRICTION	-0.246	-0.332	-0.335
SUBJECTIVE BRIGHTNESS	0.086	0.019	-0.007
			p-values
BRIGHTNESS .75 THRESHOLD	3.44E-01	2.40E-01	4.76E-01
BRIGHTNESS PREFERENCE	4.98E-01	1.89E-01	2.52E-01
PIPR RESPONSE	3.35E-02	4.53E-01	6.09E-02
PIPR RESPONSE (NORM)	1.76E-01	4.49E-01	1.93E-01
INITIAL CONSTRICTION	1.30E-01	3.63E-02	3.71E-02
SUBJECTIVE BRIGHTNESS	6.03E-01	9.10E-01	9.68E-01
			sample sizes
BRIGHTNESS .75 THRESHOLD	25.000	25.000	24.000
BRIGHTNESS PREFERENCE	38.000	39.000	38.000
PIPR RESPONSE	39.000	40.000	39.000
PIPR RESPONSE (NORM)	39.000	40.000	39.000
INITIAL CONSTRICTION	39.000	40.000	39.000
SUBJECTIVE BRIGHTNESS	39.000	40.000	39.000

Supplementary information

Table S7: Correlations between weekly melanopic EDI exposure variables and average cognitive performance (Pearson correlation r, p value, sample size).

	KSS	PVT MEDIANRT	PVT ACCURACY	NB3 MEDIANRT	NB3 FPR	NB3 FNR	VS IES	VS FPR	VS FNR
									Pearson correlation r
M10	0.060	-0.325	0.222	0.054	-0.272	0.142	0.072	-0.527	-0.091
L5	-0.113	0.249	-0.183	0.081	0.143	0.109	0.134	0.144	0.129
DURATION ABOVE 250 LUX	0.147	-0.100	0.020	0.008	-0.032	0.242	0.091	-0.321	-0.009
DURATION ABOVE 10 LUX AFTER SUNSET	-0.091	0.159	0.106	0.040	0.025	0.080	-0.081	0.115	-0.049
M10 MID-TIME	-0.113	0.004	-0.110	-0.064	0.038	0.147	0.249	0.007	0.087
L5 MID-TIME	-0.053	0.333	-0.134	-0.080	0.223	-0.045	-0.138	0.235	0.167
LAST TIME ABOVE 1 LUX	-0.336	0.309	-0.081	0.084	0.184	0.091	0.143	0.231	0.134
IS	0.026	-0.322	0.302	0.134	-0.218	-0.099	-0.050	-0.275	-0.144
IV	0.052	0.332	-0.231	0.012	0.308	0.097	-0.042	0.436	0.087
									p-values
M10	6.63E-01	1.46E-02	1.01E-01	6.91E-01	4.26E-02	2.96E-01	5.96E-01	3.04E-05	5.06E-01
L5	4.08E-01	6.47E-02	1.76E-01	5.51E-01	2.91E-01	4.26E-01	3.24E-01	2.89E-01	3.42E-01
DURATION ABOVE 250 LUX	2.79E-01	4.64E-01	8.82E-01	9.53E-01	8.16E-01	7.23E-02	5.05E-01	1.60E-02	9.47E-01
DURATION ABOVE 10 LUX AFTER SUNSET	5.03E-01	2.42E-01	4.37E-01	7.69E-01	8.54E-01	5.58E-01	5.55E-01	3.99E-01	7.18E-01
M10 MID-TIME	4.06E-01	9.79E-01	4.18E-01	6.41E-01	7.82E-01	2.80E-01	6.38E-02	9.60E-01	5.26E-01
L5 MID-TIME	6.96E-01	1.22E-02	3.26E-01	5.56E-01	9.80E-02	7.42E-01	3.09E-01	8.12E-02	2.18E-01
LAST TIME ABOVE 1 LUX	1.14E-02	2.05E-02	5.55E-01	5.39E-01	1.75E-01	5.03E-01	2.94E-01	8.65E-02	3.25E-01
IS	8.48E-01	1.56E-02	2.39E-02	3.23E-01	1.06E-01	4.69E-01	7.16E-01	3.99E-02	2.90E-01
IV	7.05E-01	1.25E-02	8.69E-02	9.32E-01	2.10E-02	4.77E-01	7.61E-01	7.83E-04	5.26E-01
									sample sizes
M10	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
L5	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
DURATION ABOVE 250 LUX	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
DURATION ABOVE 10 LUX AFTER SUNSET	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
M10 MID-TIME	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
L5 MID-TIME	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
LAST TIME ABOVE 1 LUX	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
IS	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000
IV	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000	56.000

Supplementary information

Table S8: Correlations between in-lab light sensitivity measures and average cognitive performance (Pearson correlation r, p value, sample size).

	KSS	PVT MEDIANRT	PVT ACCURACY	NB3 MEDIANRT	NB3 FPR	NB3 FNR	VS IES	VS FPR	VS FNR
									Pearson correlation r
BRIGHTNESS .75 THRESHOLD	-0.088	0.362	-0.101	-0.256	0.272	0.390	0.145	0.140	0.222
BRIGHTNESS PREFERENCE	0.305	-0.326	-0.086	-0.244	-0.220	-0.086	-0.235	-0.131	-0.260
PIPR RESPONSE	-0.058	-0.086	0.325	0.324	-0.074	-0.167	0.090	-0.210	-0.241
PIPR RESPONSE (NORM)	-0.117	-0.134	0.292	0.326	-0.105	-0.184	0.100	-0.222	-0.240
INITIAL CONSTRICTION	-0.377	0.056	-0.154	-0.076	0.196	-0.068	0.005	0.434	0.248
SUBJECTIVE BRIGHTNESS	0.303	-0.186	0.324	-0.023	-0.365	-0.292	-0.180	-0.374	-0.415
									p-values
BRIGHTNESS .75 THRESHOLD	6.70E-01	6.89E-02	6.25E-01	2.07E-01	1.80E-01	4.89E-02	4.81E-01	4.96E-01	2.76E-01
BRIGHTNESS PREFERENCE	5.56E-02	4.02E-02	5.97E-01	1.29E-01	1.72E-01	5.99E-01	1.45E-01	4.21E-01	1.06E-01
PIPR RESPONSE	7.17E-01	5.92E-01	3.82E-02	3.87E-02	6.44E-01	2.98E-01	5.74E-01	1.87E-01	1.29E-01
PIPR RESPONSE (NORM)	4.65E-01	4.04E-01	6.41E-02	3.77E-02	5.13E-01	2.50E-01	5.32E-01	1.64E-01	1.30E-01
INITIAL CONSTRICTION	1.50E-02	7.30E-01	3.36E-01	6.38E-01	2.20E-01	6.74E-01	9.75E-01	4.56E-03	1.18E-01
SUBJECTIVE BRIGHTNESS	5.37E-02	2.45E-01	3.87E-02	8.87E-01	1.89E-02	6.39E-02	2.59E-01	1.61E-02	6.92E-03
									sample sizes
BRIGHTNESS .75 THRESHOLD	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000
BRIGHTNESS PREFERENCE	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000
PIPR RESPONSE	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000
PIPR RESPONSE (NORM)	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000
INITIAL CONSTRICTION	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000
SUBJECTIVE BRIGHTNESS	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000