

LIGHT: DO YOU CARE?

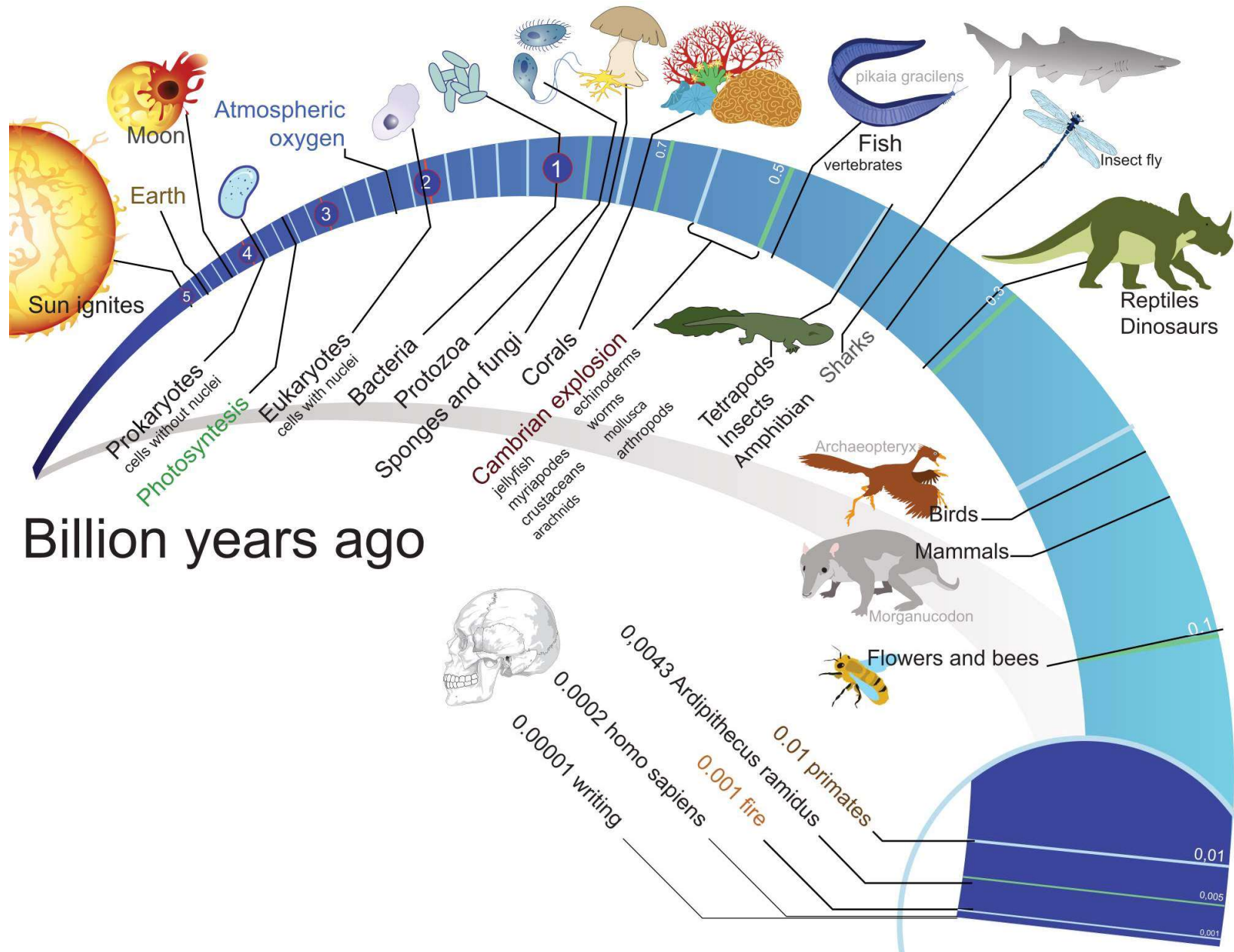
LIGHTING DESIGN CAMPUS

PALAGI MARINE LIGHTS

3 JULY 2019

LIGHT





LIGHT:

interdisciplinary field

EYE
BRAIN
COLOUR
SPACE
CONTRAST



TECHNOLOGY
HUMAN
SCIENCE
ART
DESIGN



LIGHT:

How is it?

Obvious

Obscure

Has momentum
but
No matter

Can be felt

but

Not touched

Visible
&
Invisible

Perceive our
physical as well
as metaphorical
surroundings

Emotions
Imagination
Perception
Space

LIGHT



SCIENCE

light¹

[lahyt] [SHOW IPA](#) 

[SYNONYMS](#) | [EXAMPLES](#) | [WORD ORIGIN](#) | [IDIOMS](#)

[SEE MORE SYNONYMS FOR *light* ON THESAURUS.COM](#)

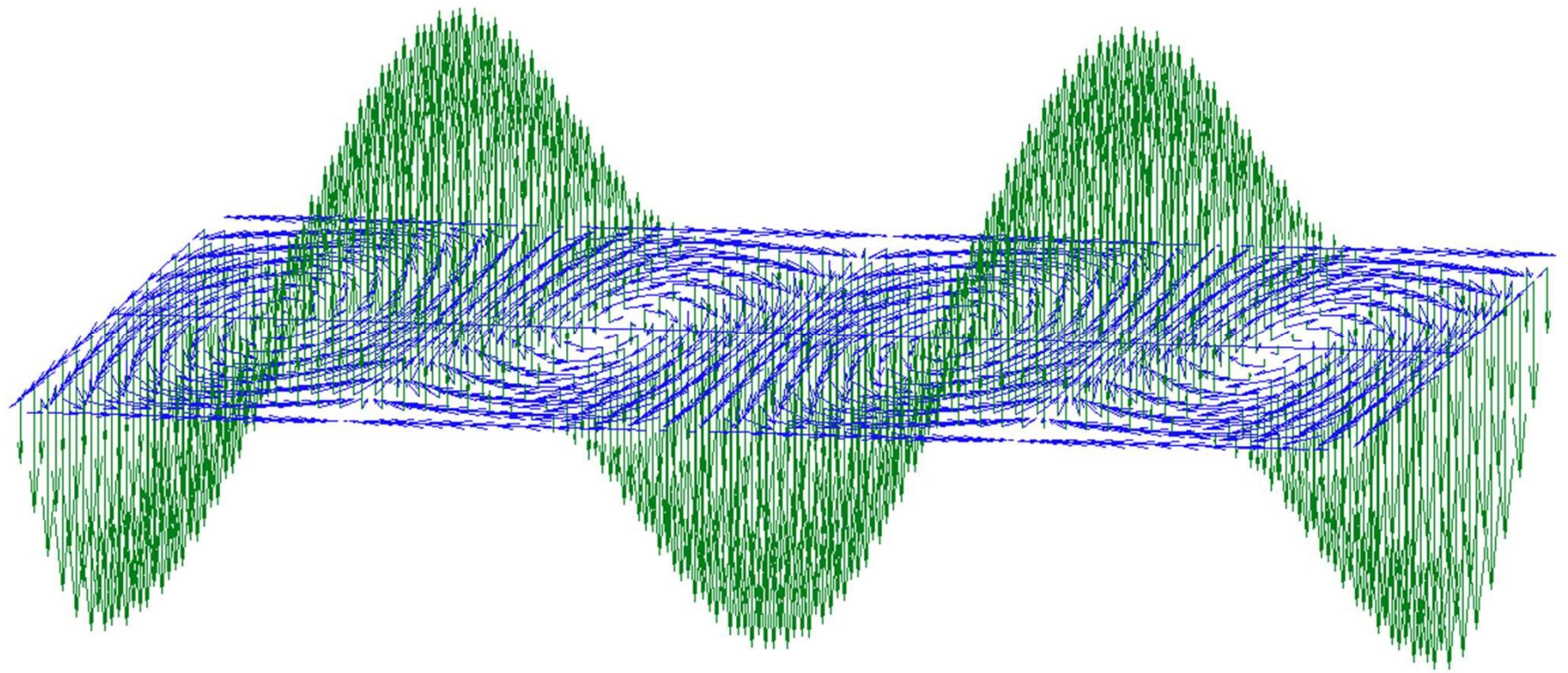
noun

- 1 something that makes things visible or affords illumination:

All colors depend on light.

- 2 *Physics.*

- a Also called **luminous energy**, **radiant energy**. electromagnetic radiation to which the organs of sight react, ranging in wavelength from about 400 to 700 nm and propagated at a speed of 186,282 mi./sec (299,972 km/sec), considered variously as a wave, corpuscular, or quantum phenomenon.
- b a similar form of radiant energy that does not affect the retina, as ultraviolet or infrared rays.



4

25

0

0.2

0.4

0.6

0.8

Electromagnetic Radiation

The different types of electromagnetic radiation shown in the electromagnetic spectrum consists of radio waves, microwaves, infrared waves, **visible light**, ultraviolet radiation, X-rays, and gamma rays. The part of the electromagnetic spectrum that we are able to see is the visible light spectrum.

ELECTROMAGNETIC SPECTRUM

GAMMA RAYS

X-RAYS

ULTRAVIOLET

INFRARED

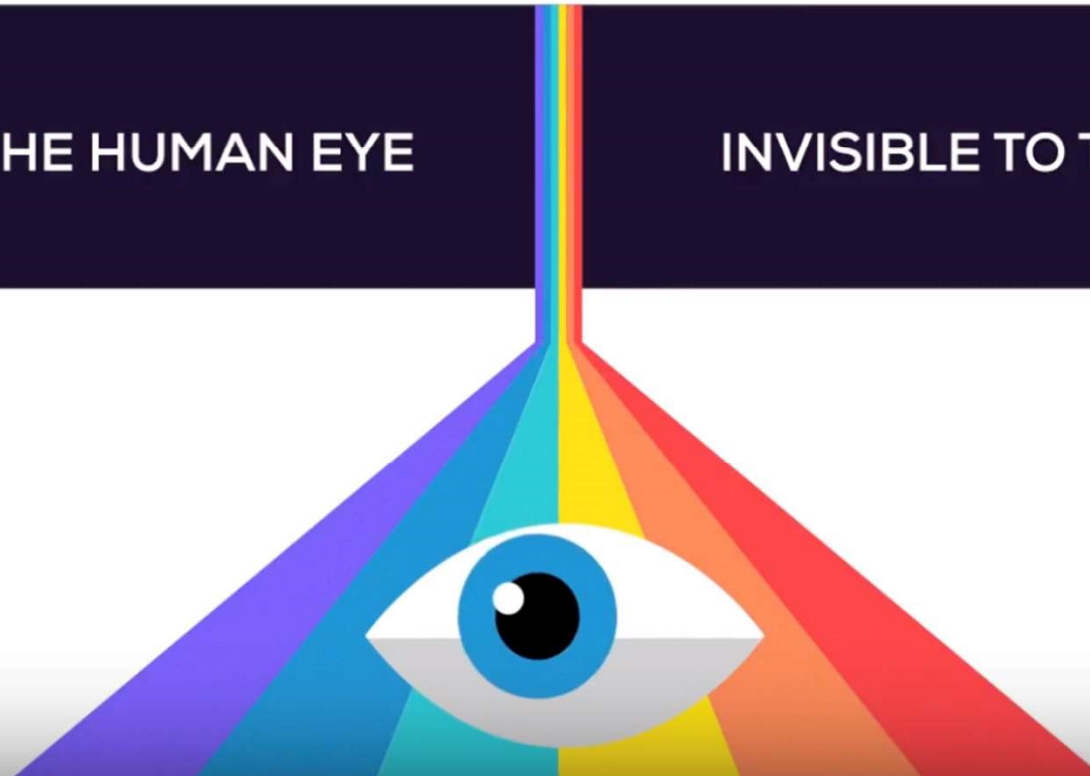
RADAR

FM TV

AM

INVISIBLE TO THE HUMAN EYE

INVISIBLE TO THE HUMAN EYE



LIGHT



HUMAN

DO WE SEE LIGHT?

Objects do not make their own light

They are illuminated by a source

We see them as a result of the light reflected of them

To see something, light must enter the **eye**

The rods and cones will produce signals

Signals will be processed by the **brain**

LIGHT



DESIGN

ELEMENTS OF DESIGN

LINE

SHAPE

DIRECTION

SIZE

TEXTURE

COLOUR

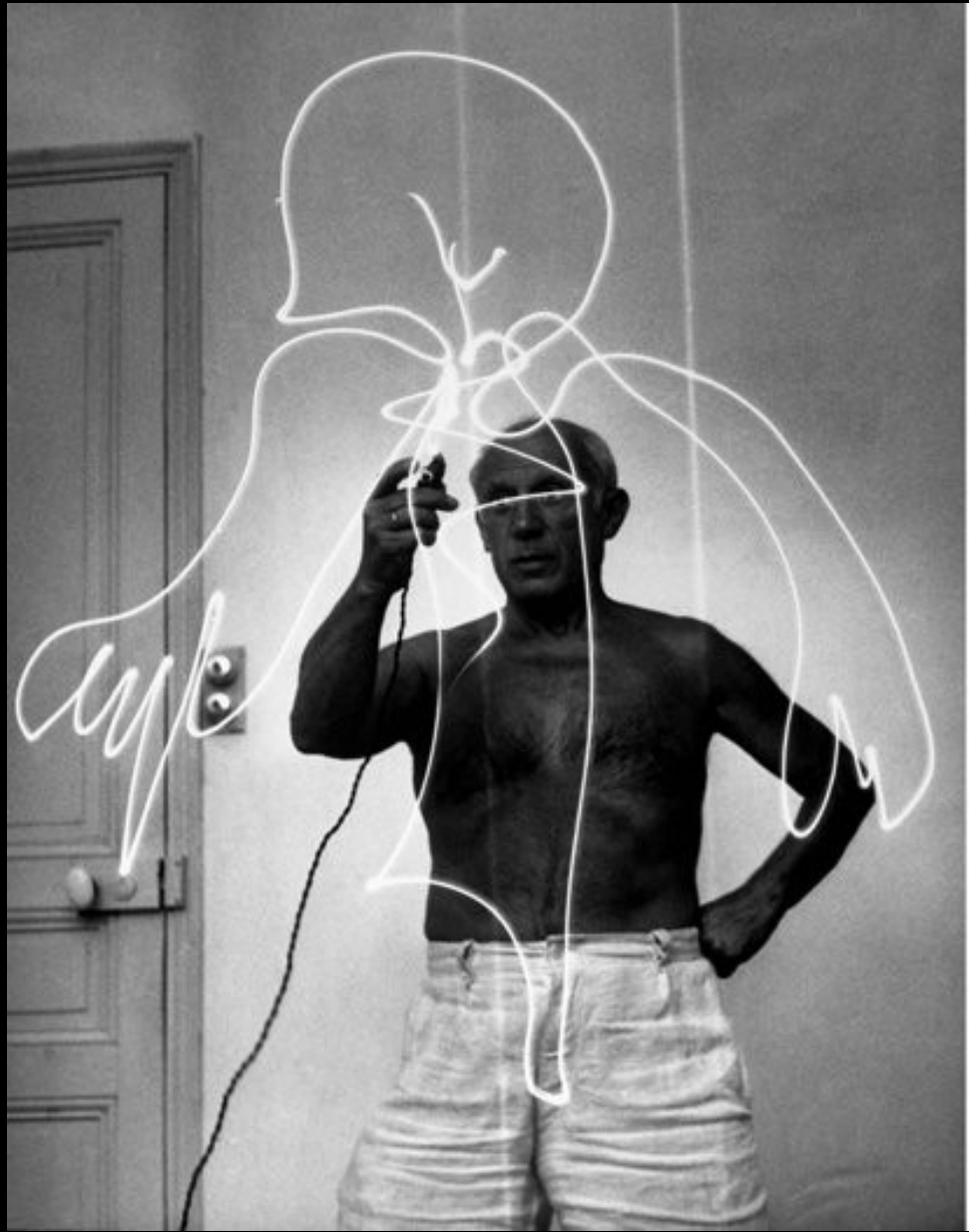
PRINCIPLES OF DESIGN

BALANCE
PROXIMITY
ALIGNMENT
REpetition
COLOUR
SPACE
CONTRAST

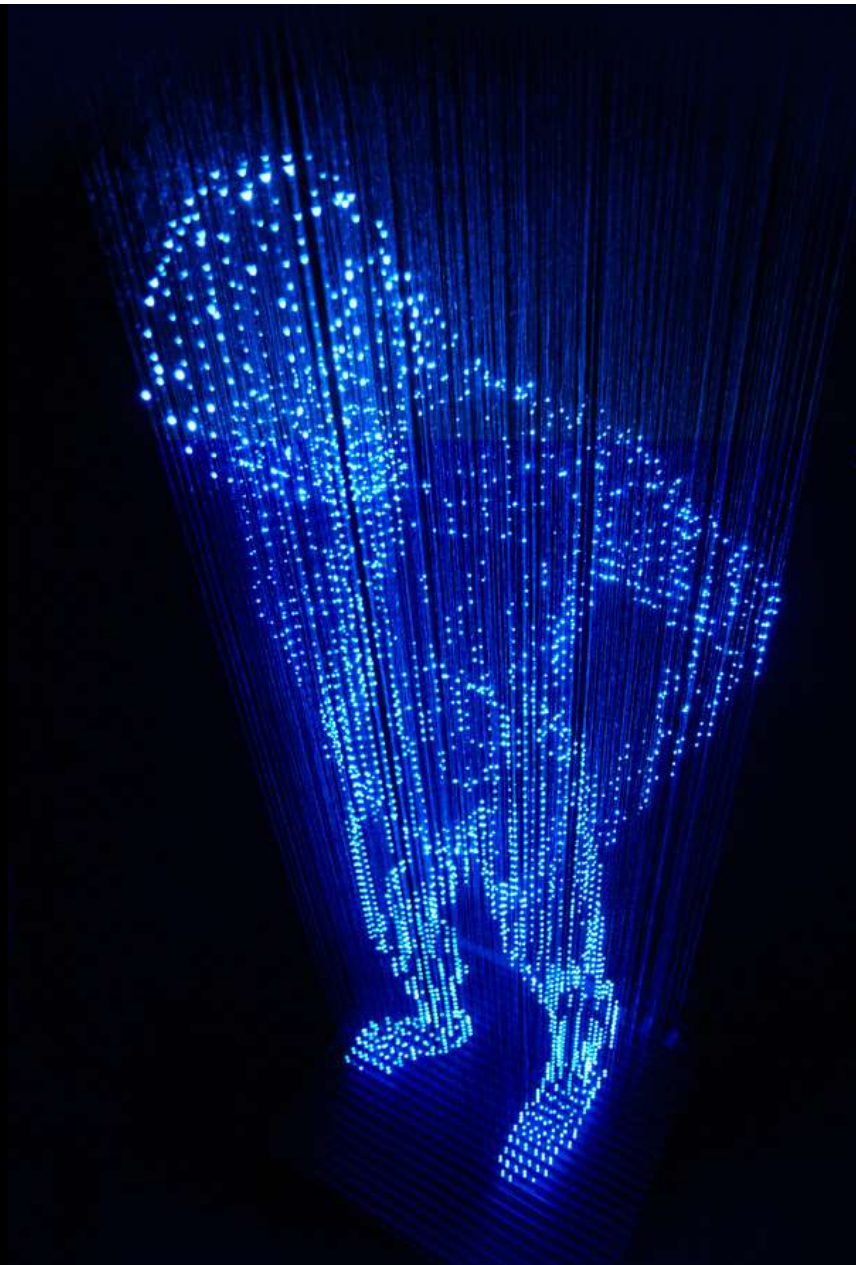
LIGHT



ART



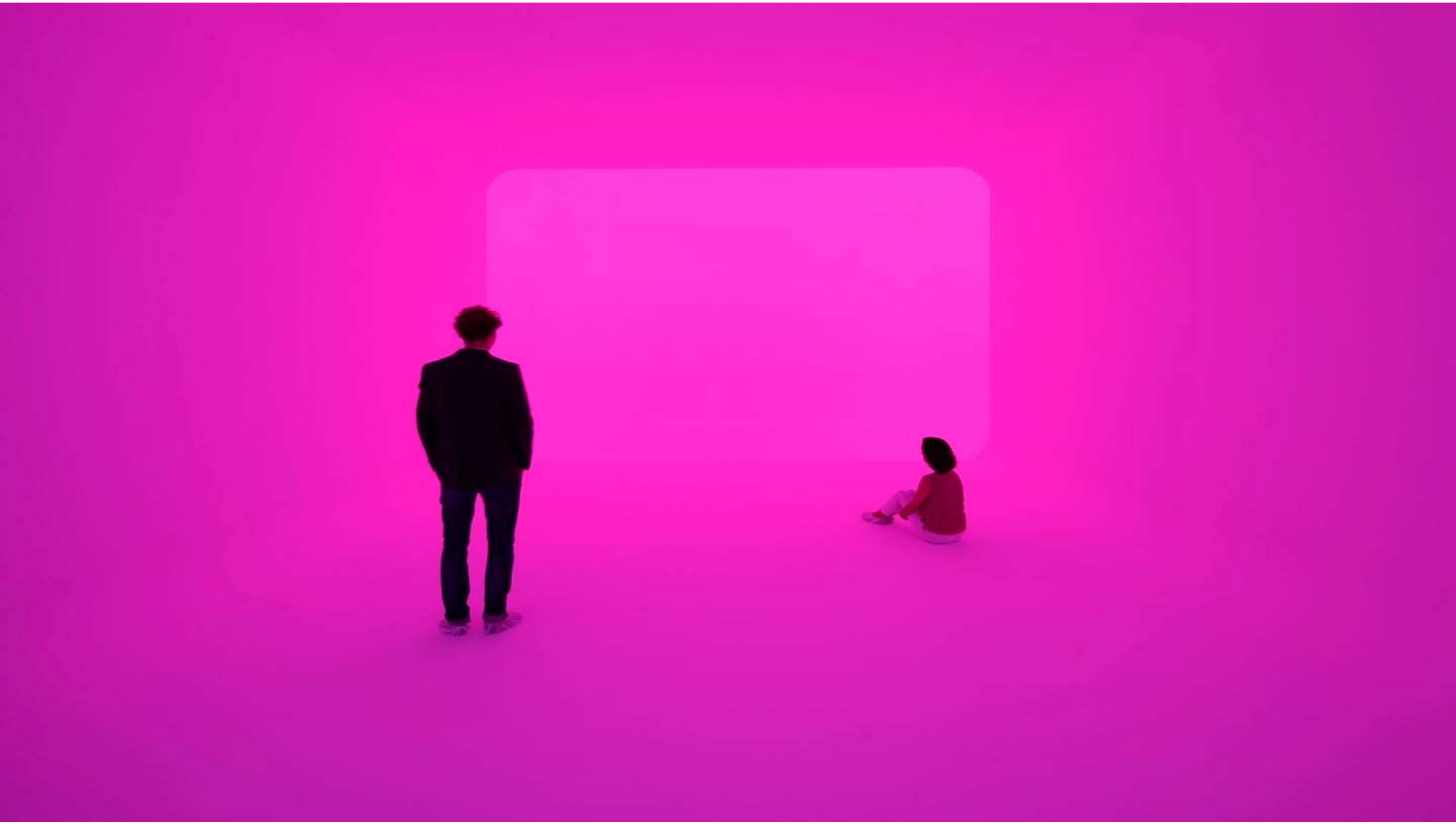












LIGHT



TECHNOLOGY

L. E. D.

Candela

Lux

Lumens

Luminance

Illuminance

CCT
CRI
DISTRIBUTION
GLARE



8-14 Anni

I LOVS
teen

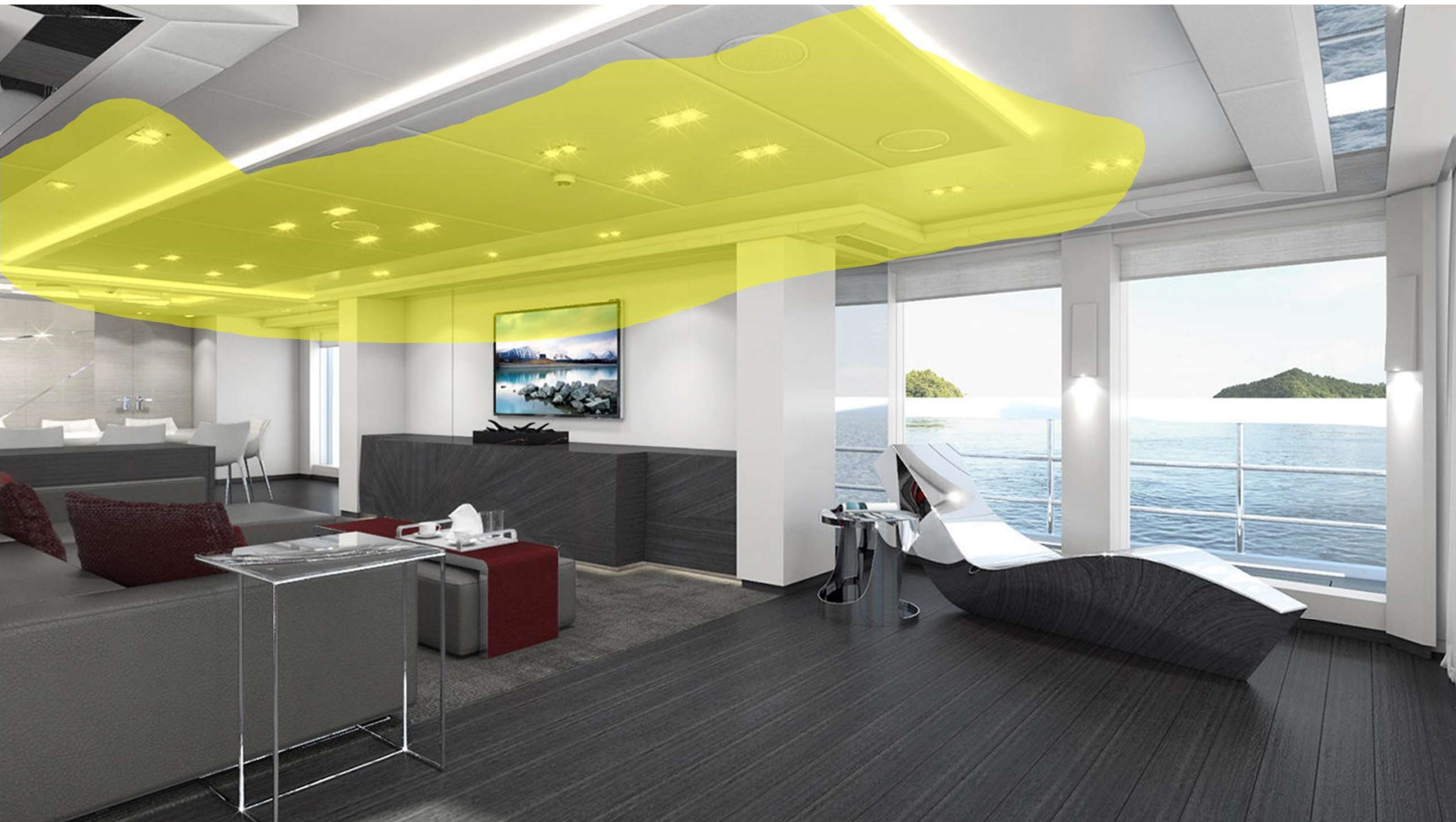


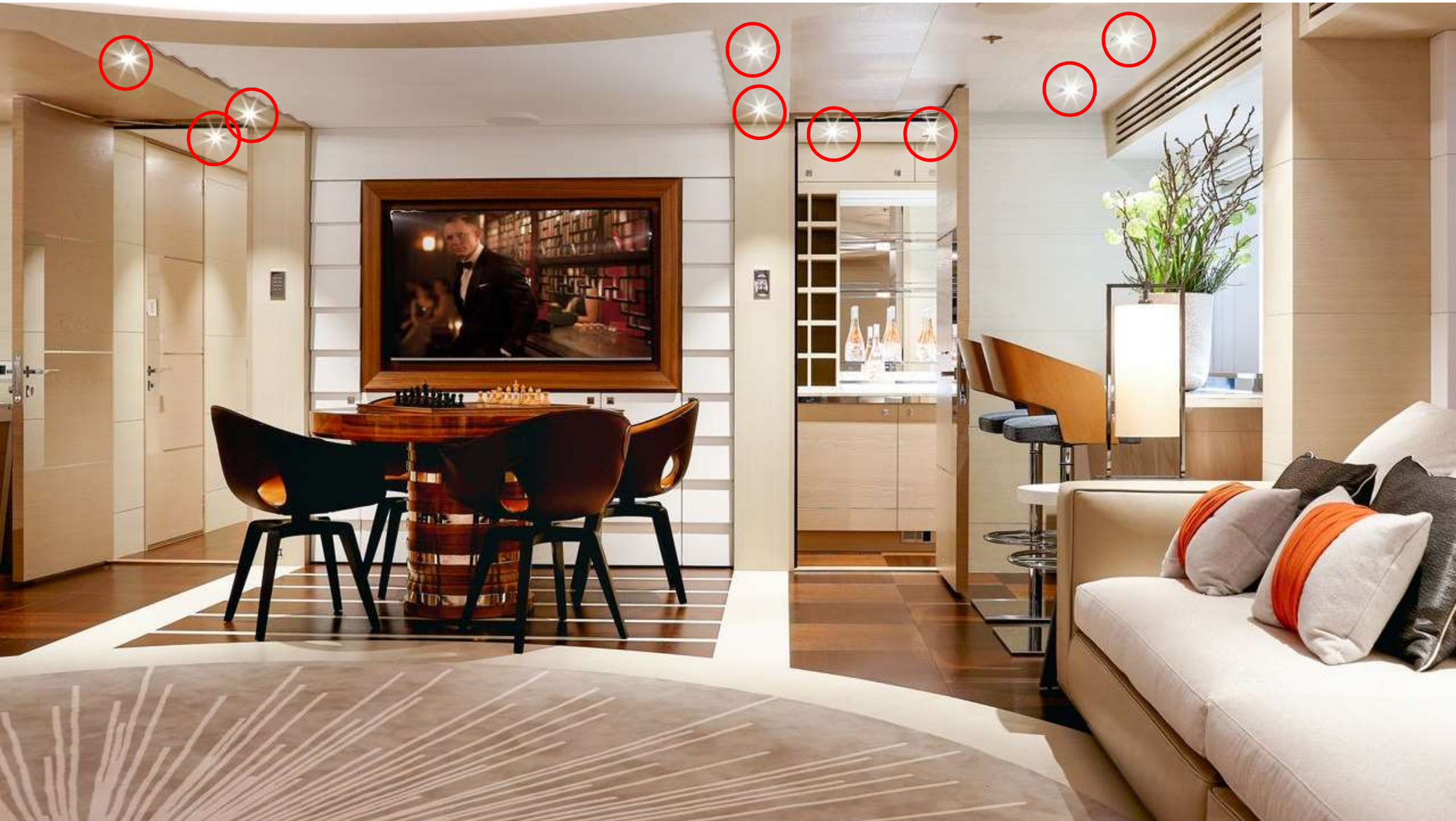


HIGH CRI



LOW CRI

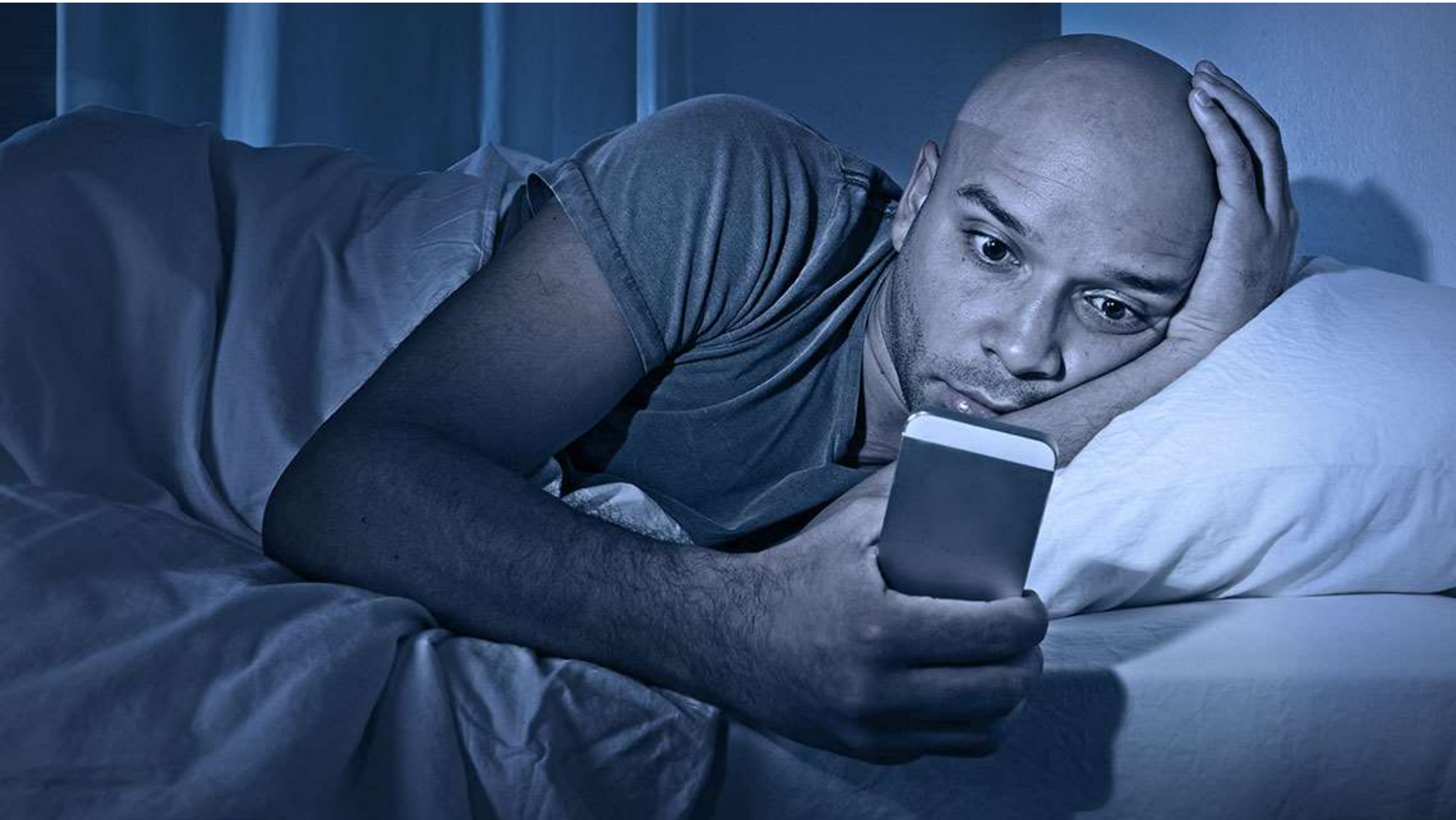






ONE MORE THING

CIRCADIAN CYCLE





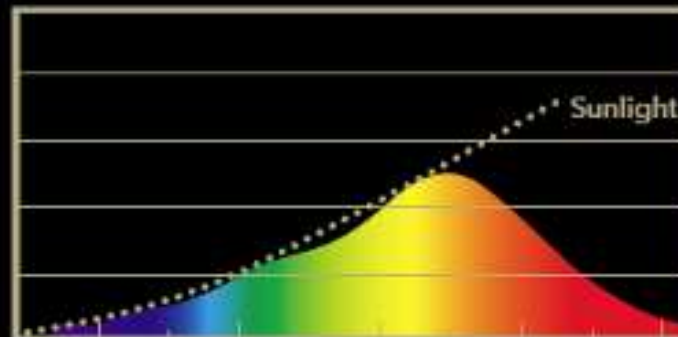
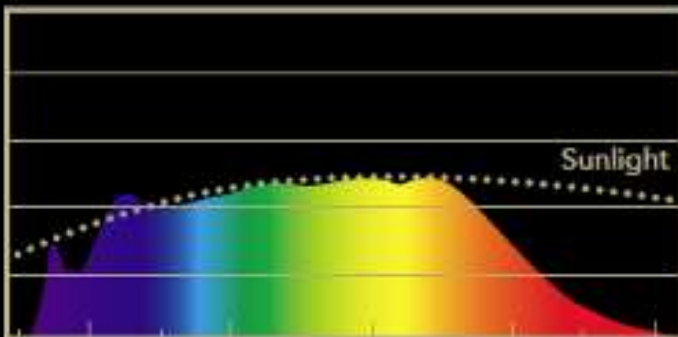
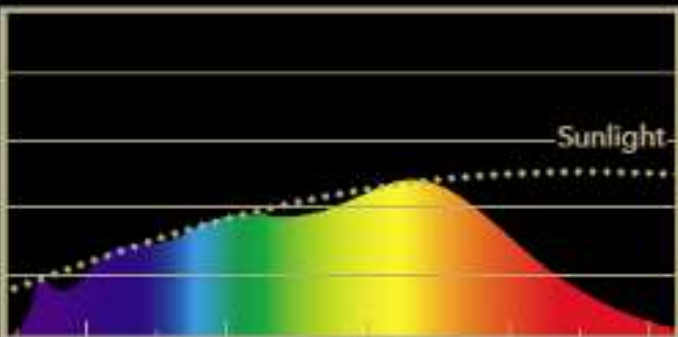
Dawn 4000K

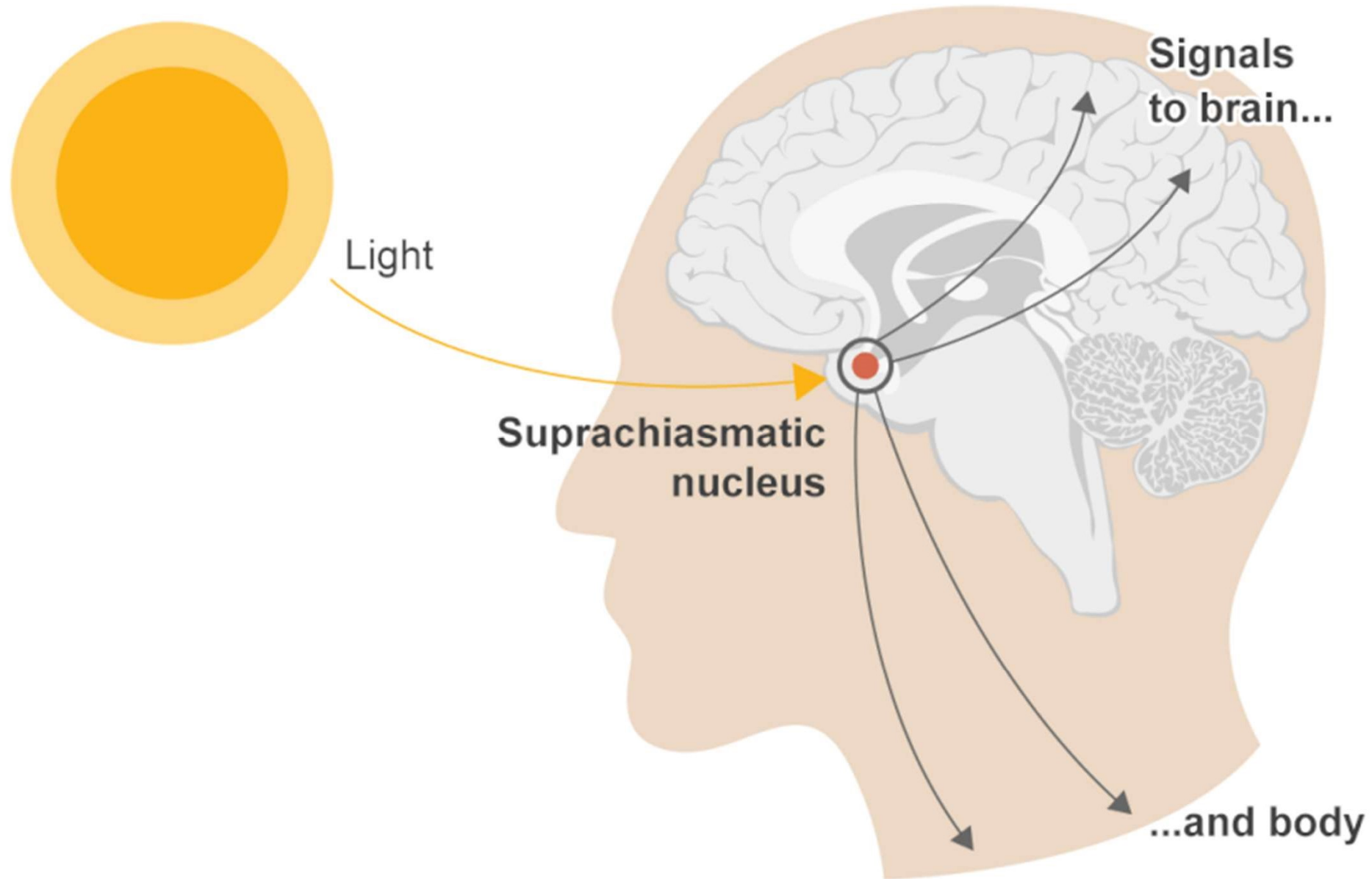


Midday 5000K



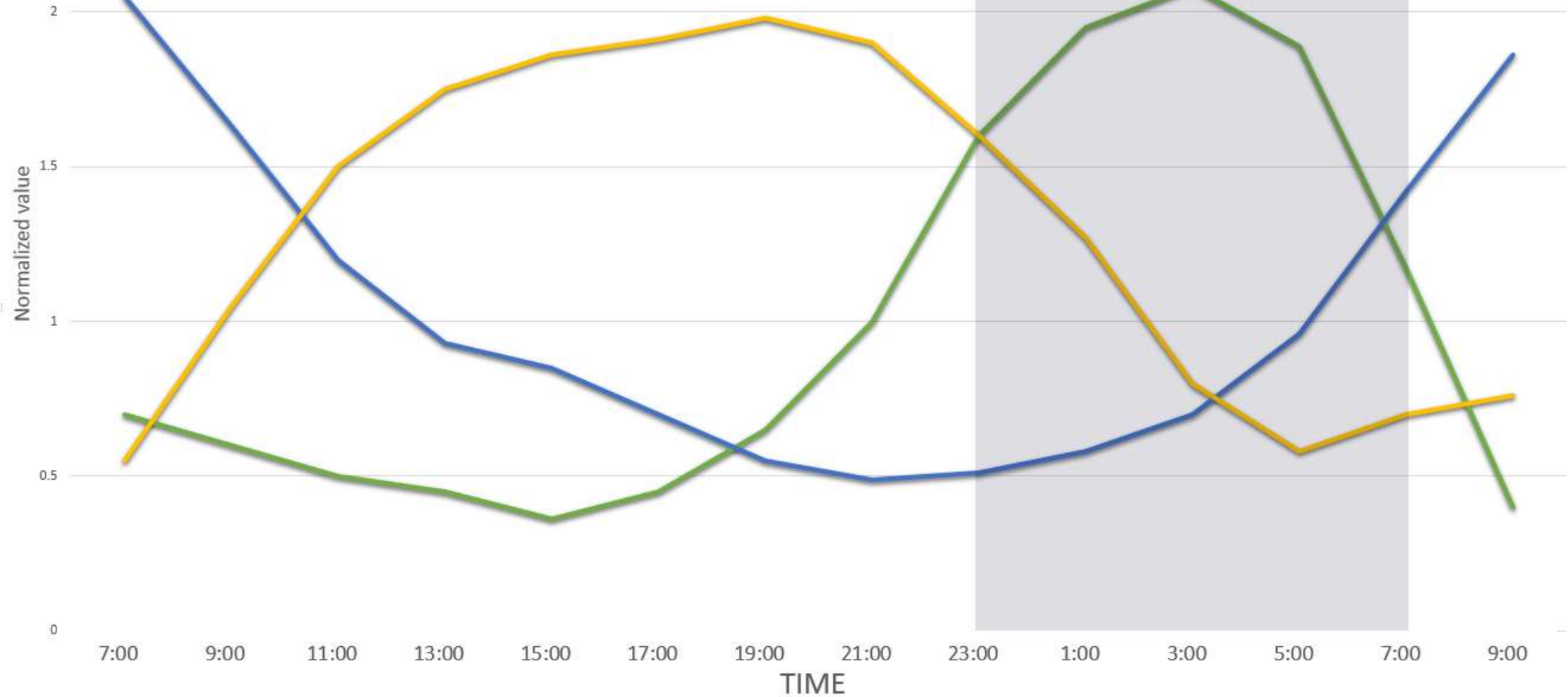
Dusk 2700K





WAKE

SLEEP



— Melatonin — Cortisol — Core Body Temp



circadian rhythm

stress

anxiety

insomnia

frustration

sleep

depression

pillow

noise

loud

bed

airport

lonely

headache

body

wake

pillows

sadness

bored

silent

adult

caution

sleepwear

unhappy

arrival

migraine

bedroom

cacophony

problem

nightmare

morning

night

relaxed

clock

depression

pillow

worried

expression

concept

uncomfortable

mouth

warning

restless

tearing

snore

face

dream

man

asleep

emotional

disorder

time

lack

person

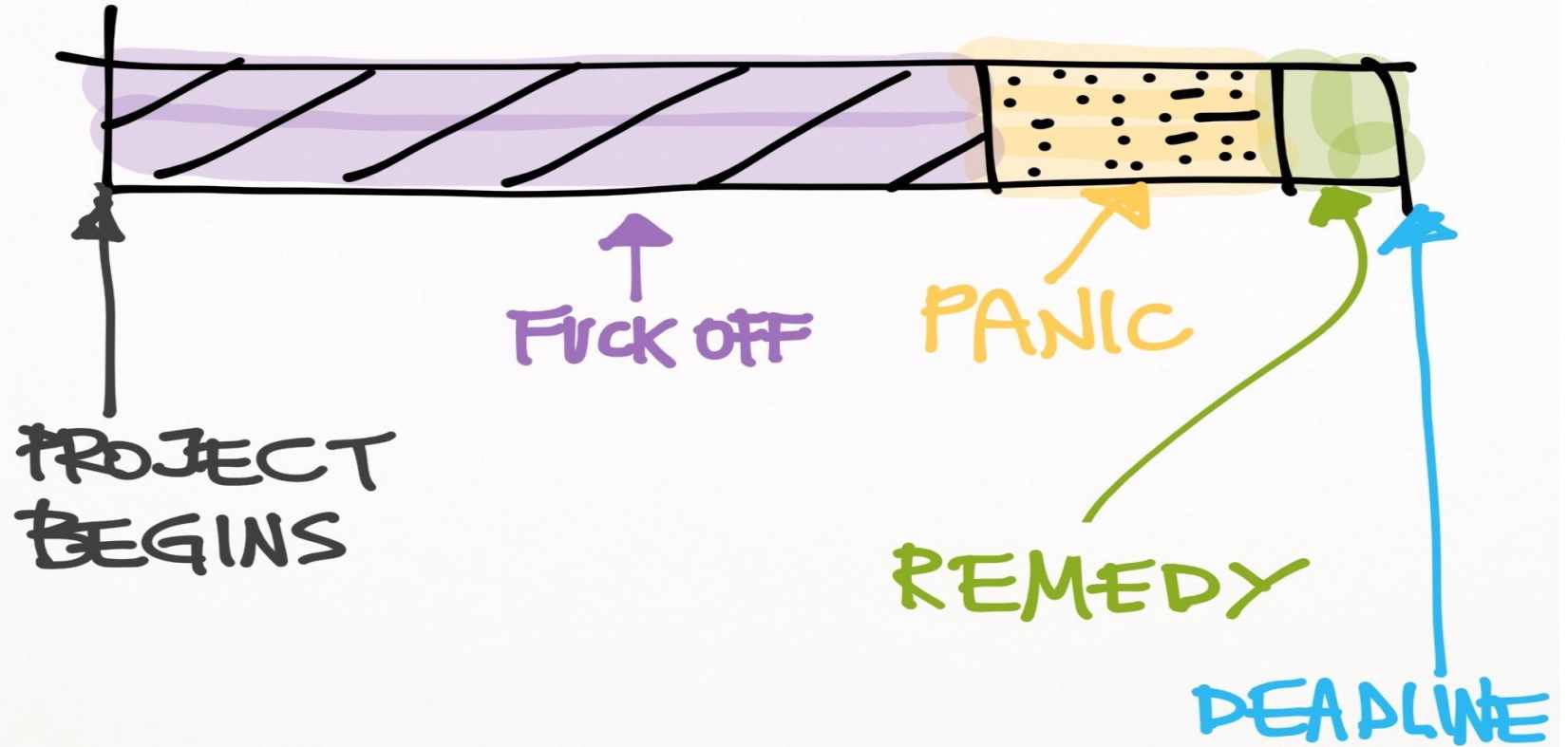
alert

NOW...

...DO YOU CARE?



THE LIGHTING PROCESS



COMPROMISE

AN AGREEMENT WHEREBY BOTH PARTIES
GET WHAT NEITHER OF THEM WANTED

LIGHT...DO WE CARE?

YES, WE DO !

THANK YOU