



在线的光

飞利浦照明大中华区
系统架构
张硕

DANCE TOGETHER
舞动未来

2018思科大中华区生态系统与合作联盟高峰会
Cisco Greater China Ecosystem and Alliance Forum 2018





Lighting beyond
Illumination
光超乎所见

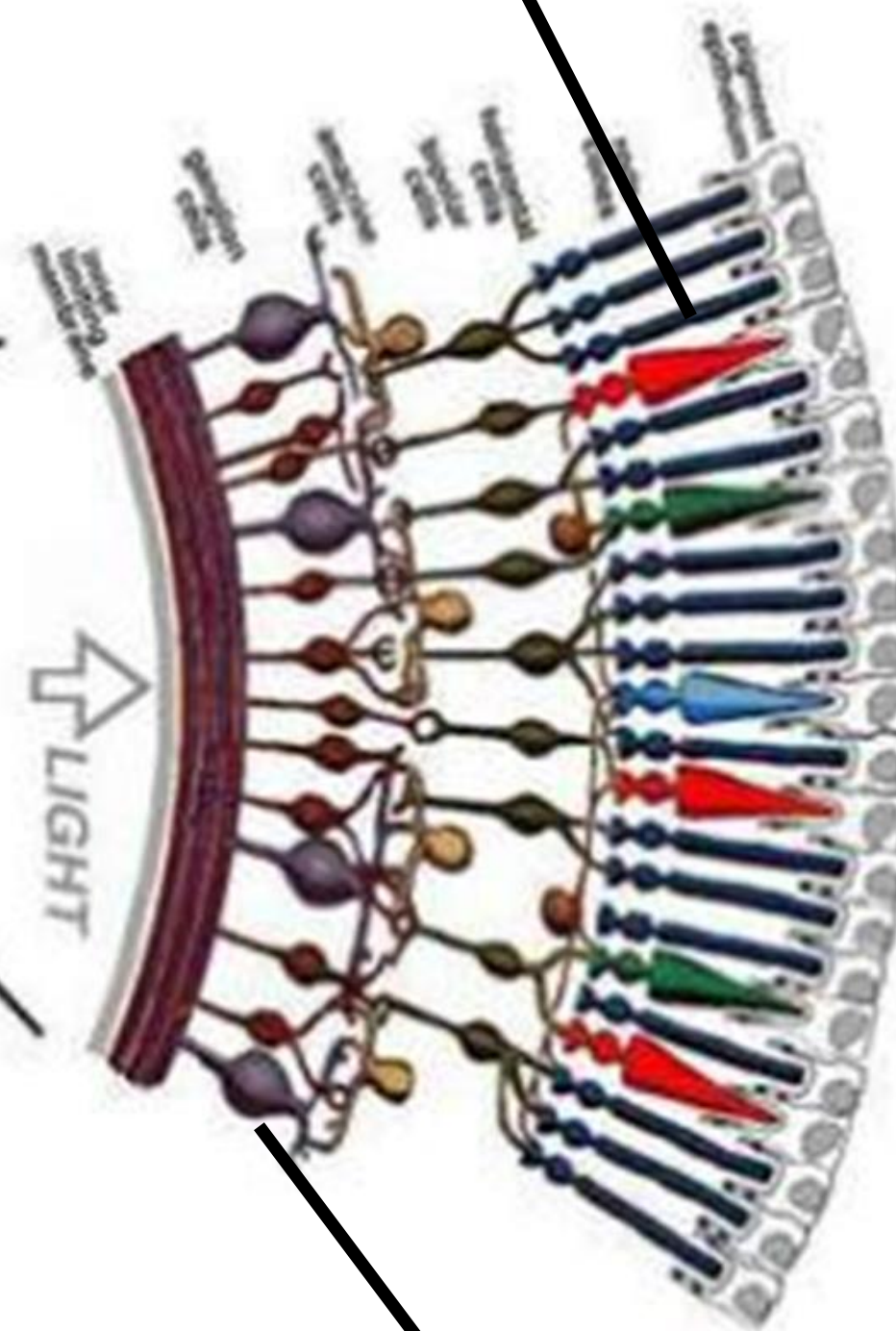
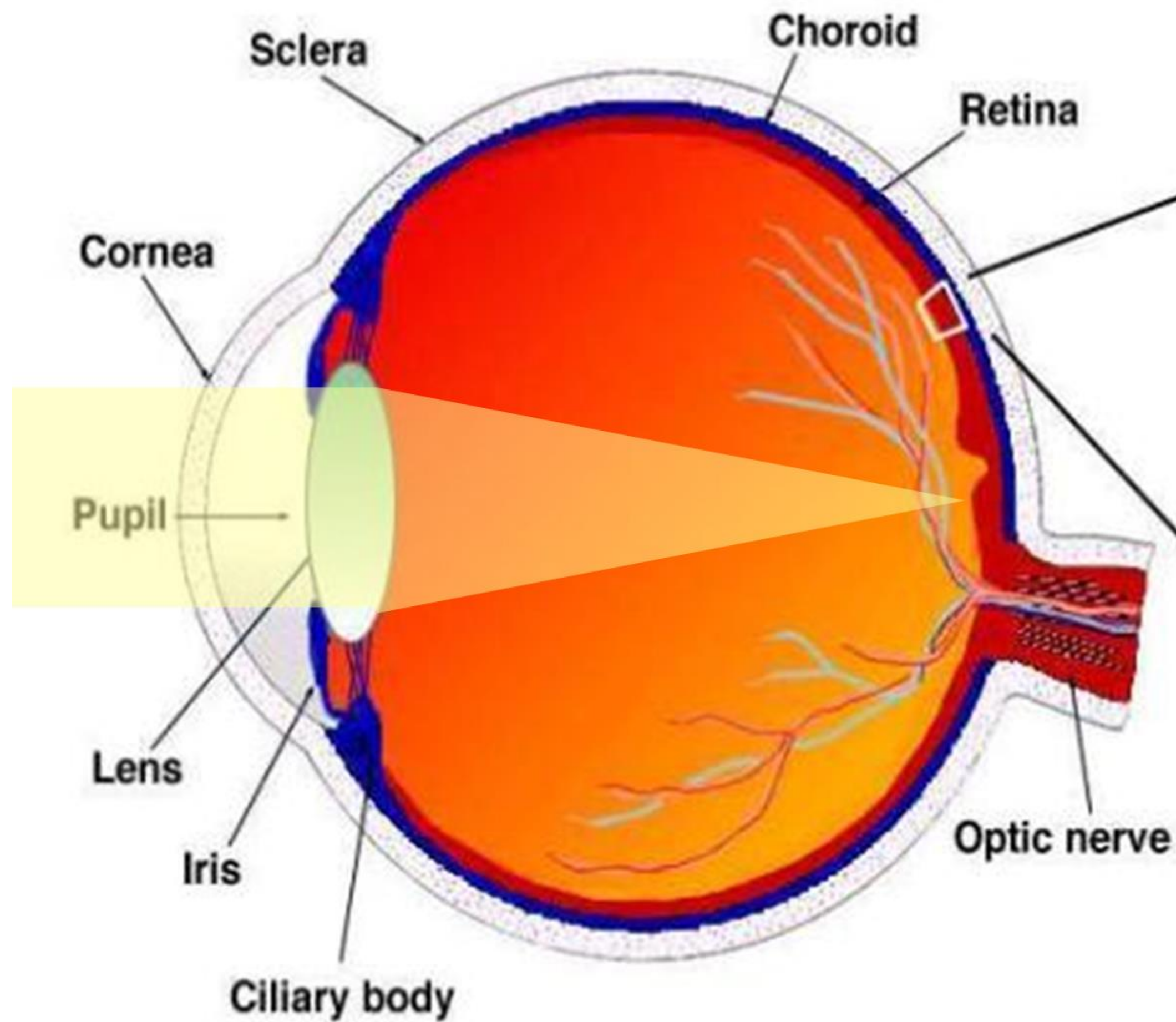
Connected Lighting
互联照明



PHILIPS

上海新总部办公楼

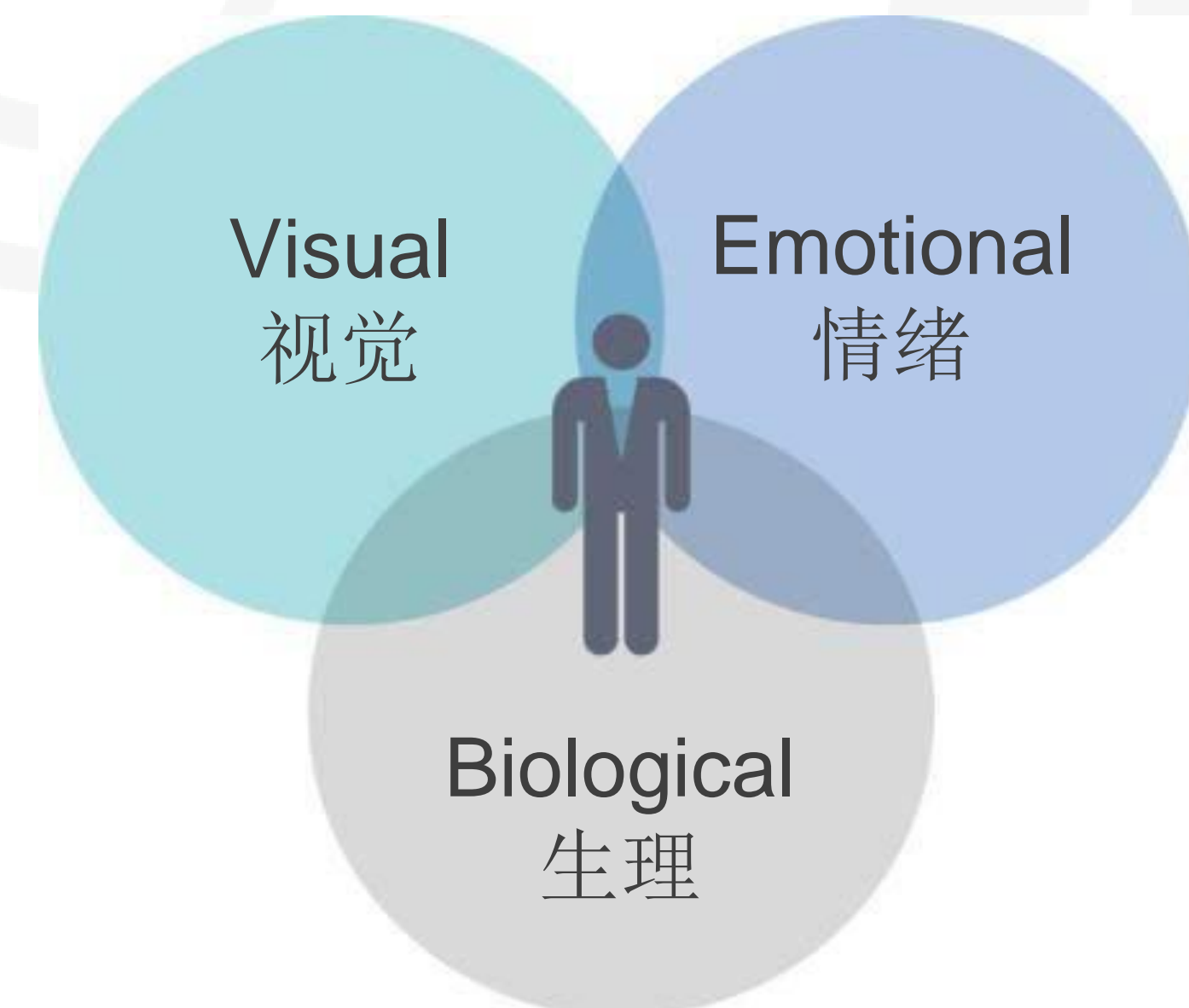


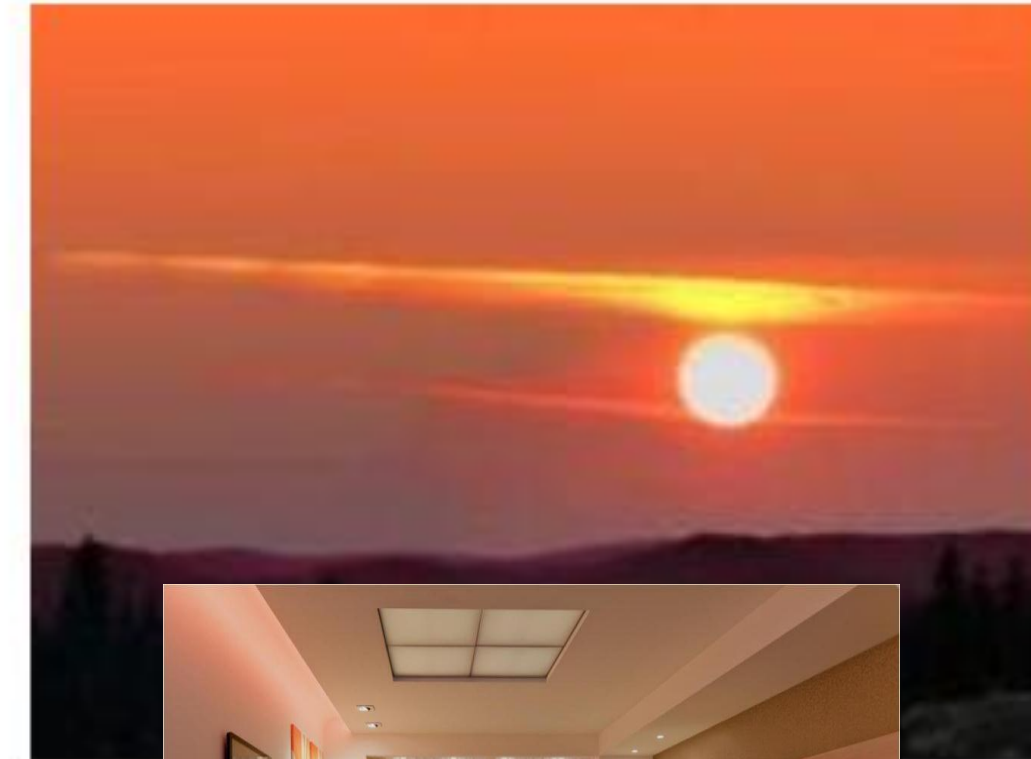
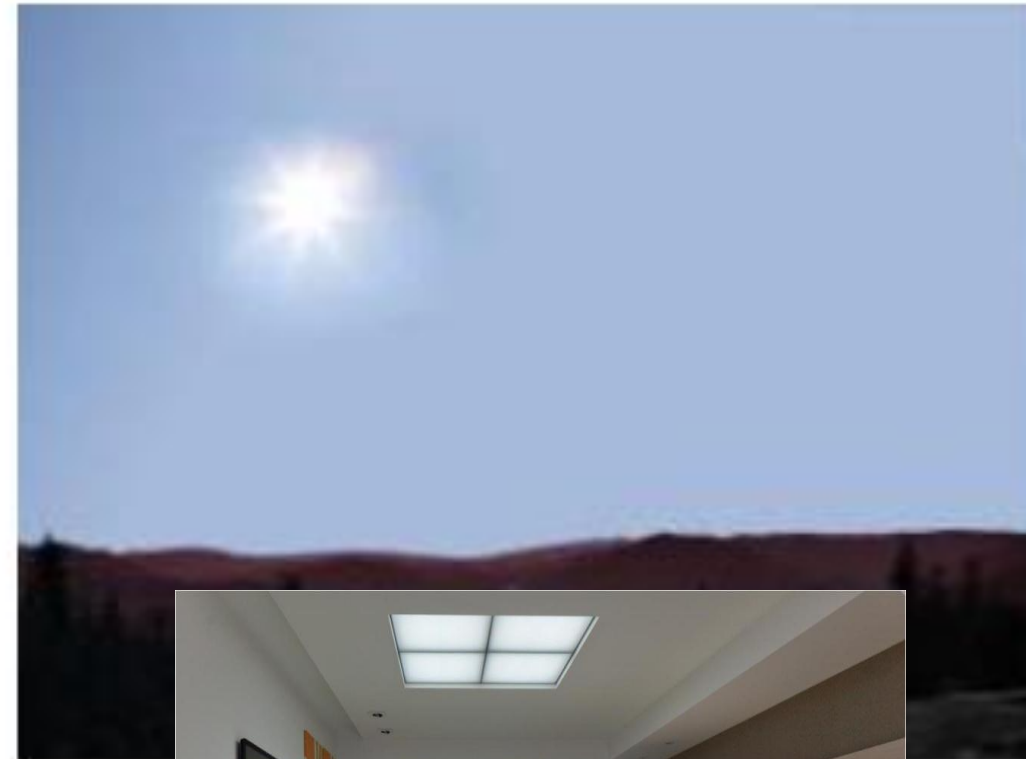
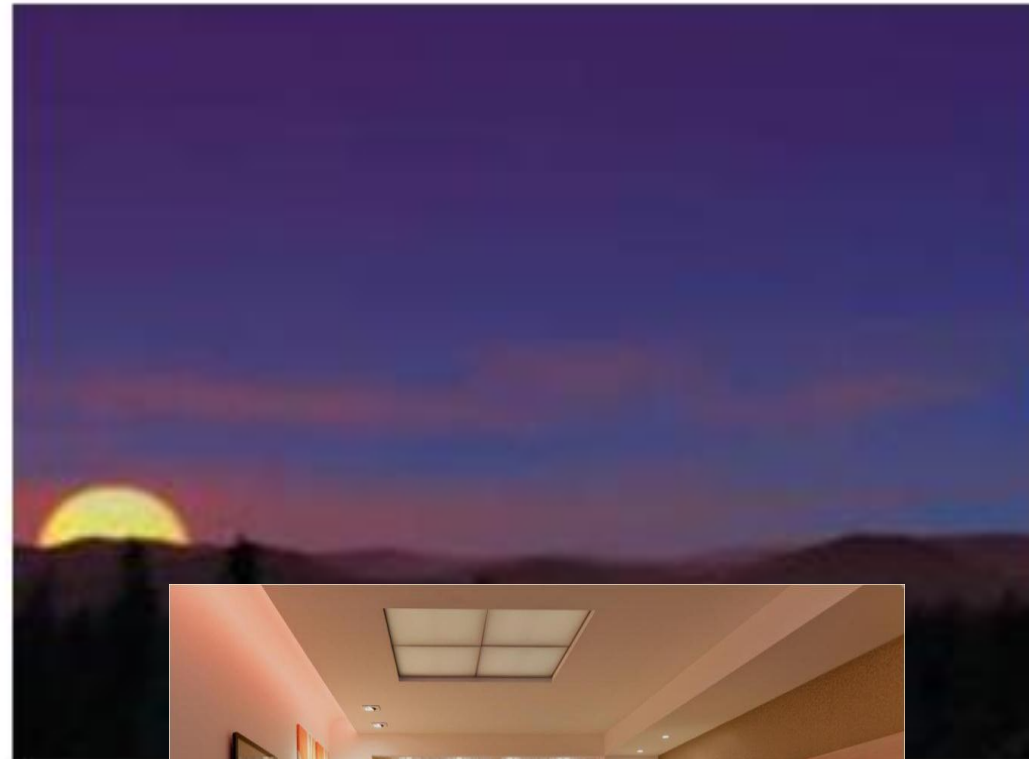


视锥细胞
充足光线
黄斑区
色觉

视杆细胞
暗光线

第三受体-黑视蛋白:
褪黑激素
皮质醇





■ Cortisol
皮质醇

■ Melatonin
褪黑激素

8:00
am

noon

6:00
pm

夜晚
良好睡眠

- 最低照度
- 睡眠不受干扰

黎明
良好的开始

- 高色温，照度水平提高
- 提高人的活力

中午
休息、放松

- 从冷色调到暖色调，
调低照度

黄昏
放松歇息

- 暖色调，降低照度水平
- 开始分泌褪黑激素



Light beyond illumination

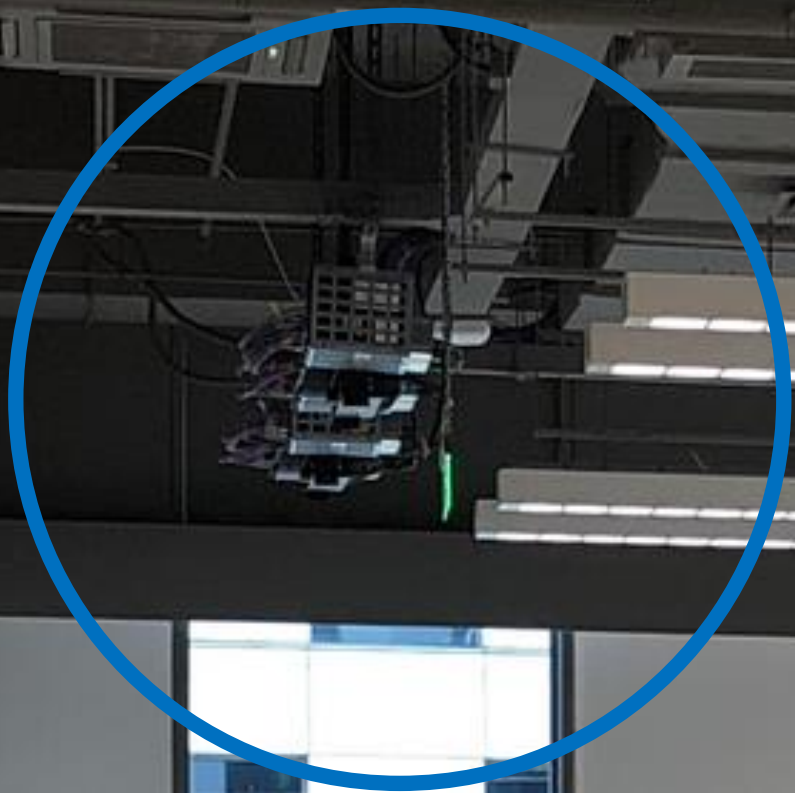
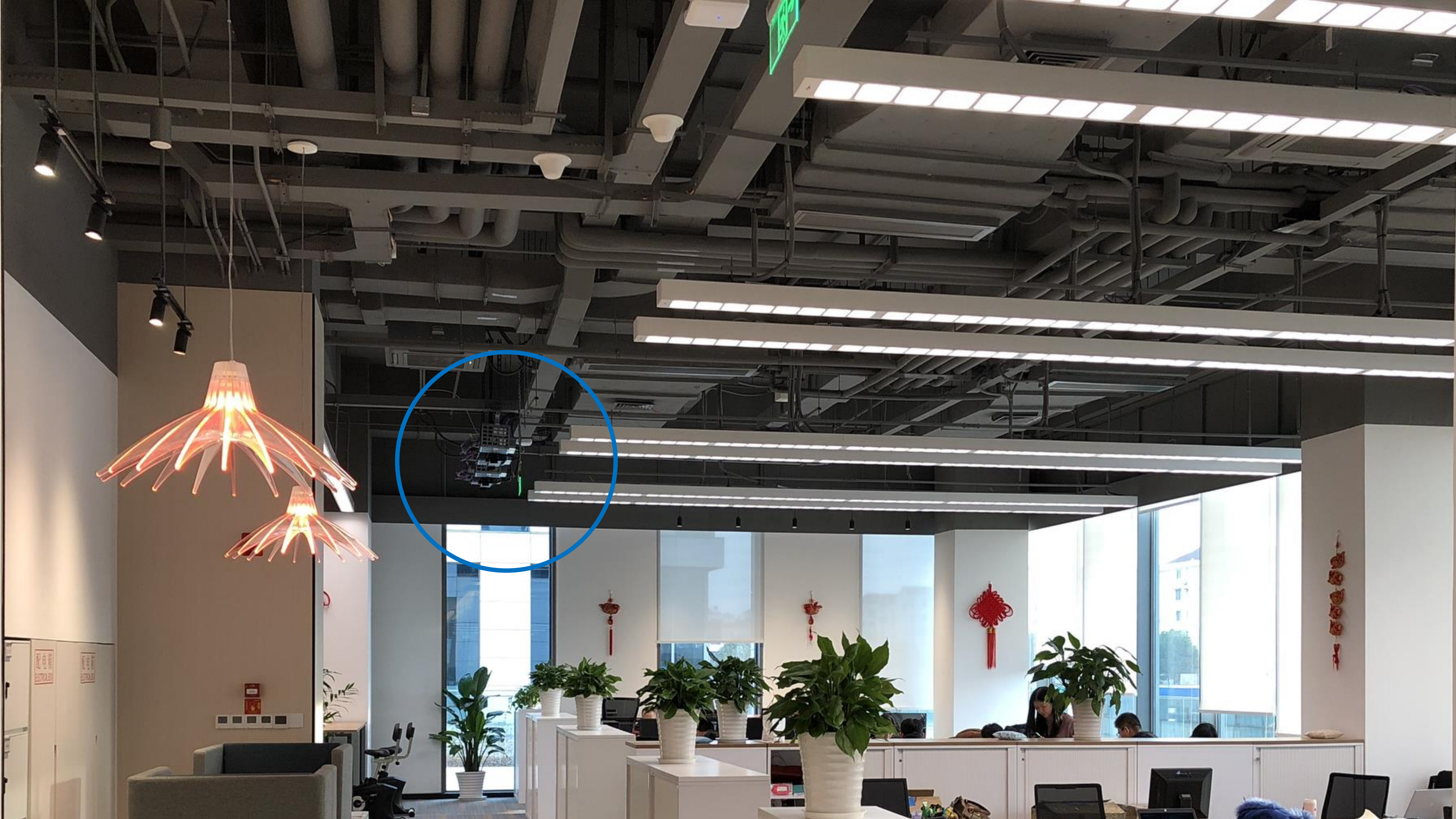


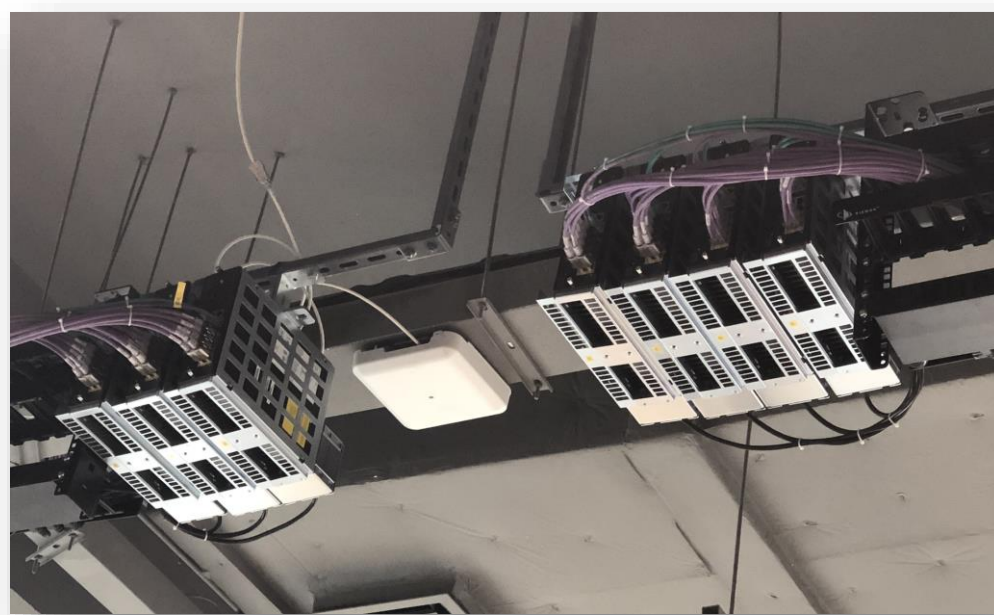




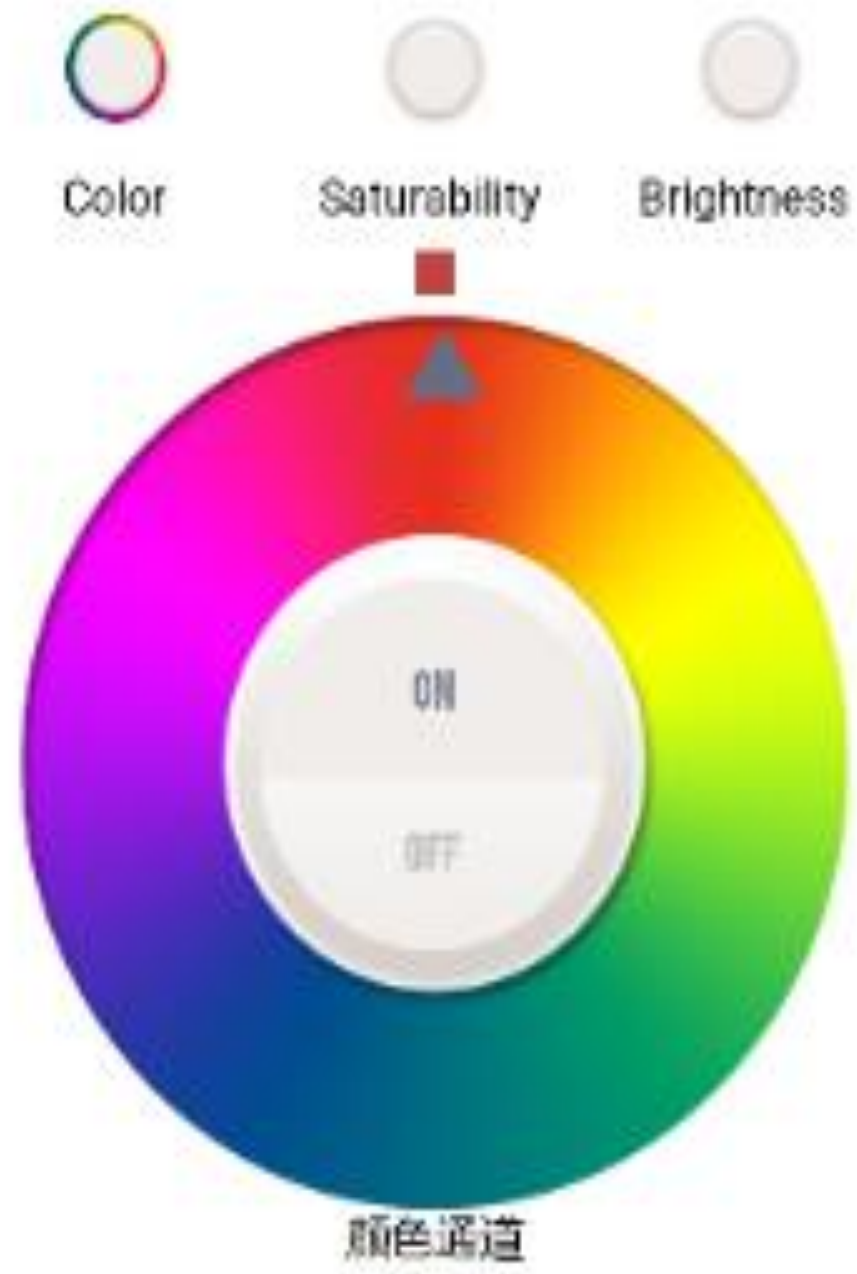
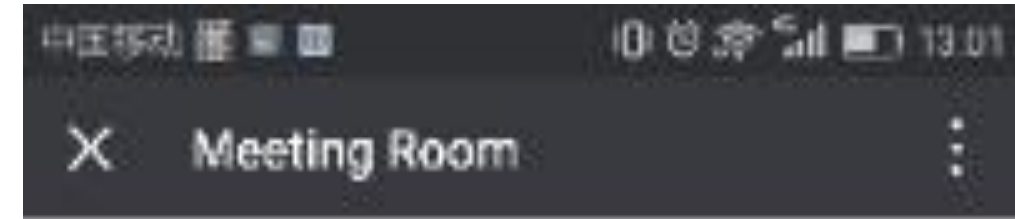
消火栓
FIRE HYDRANT

灭火器

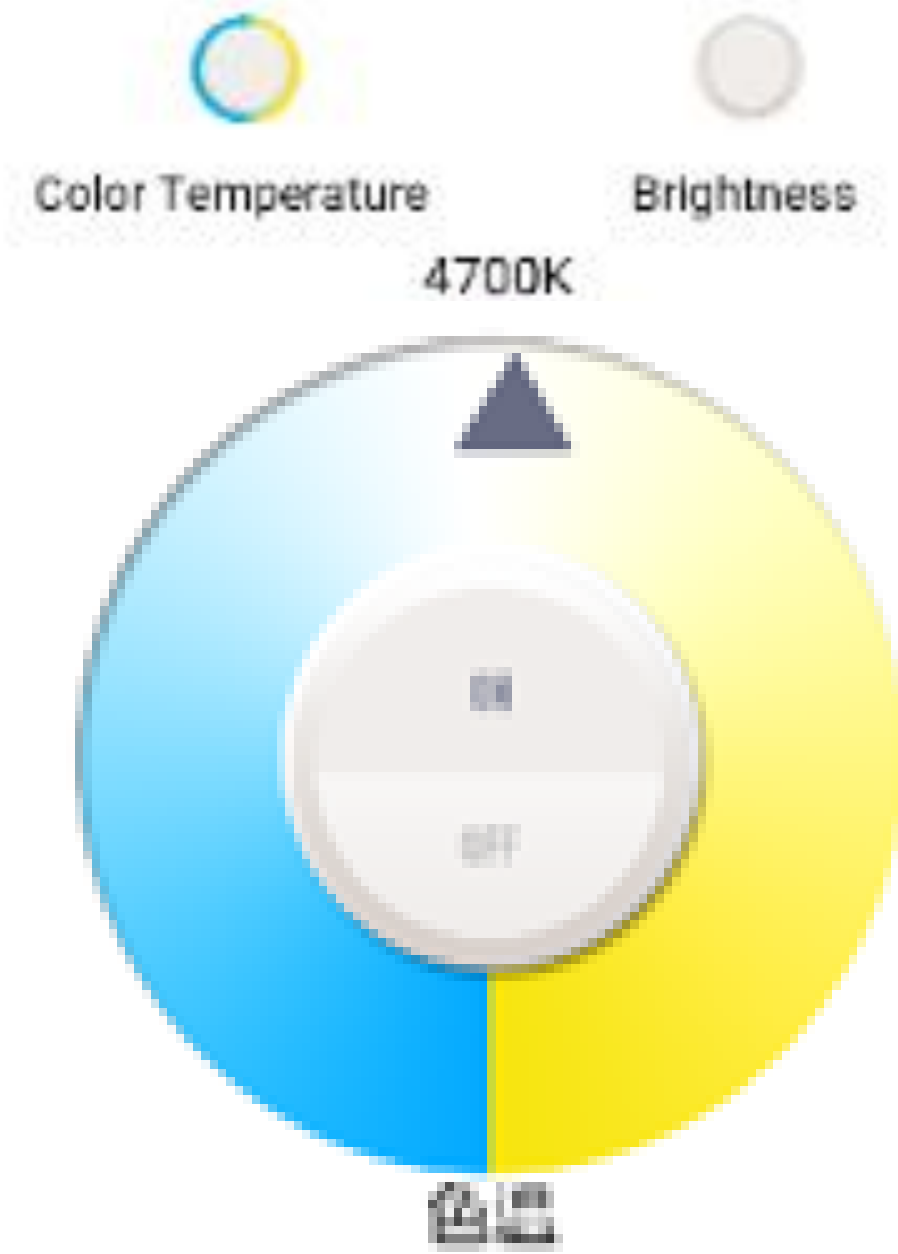
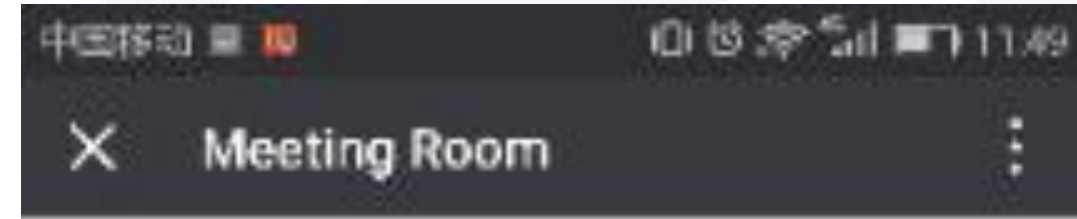




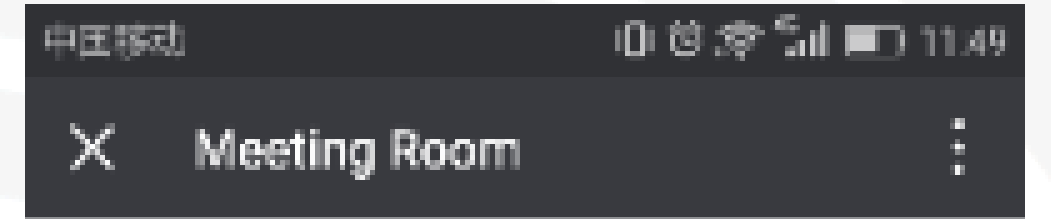
**Cisco catalyst digital
building switch
CBD-8P 13
CBD-8U 37**



场景

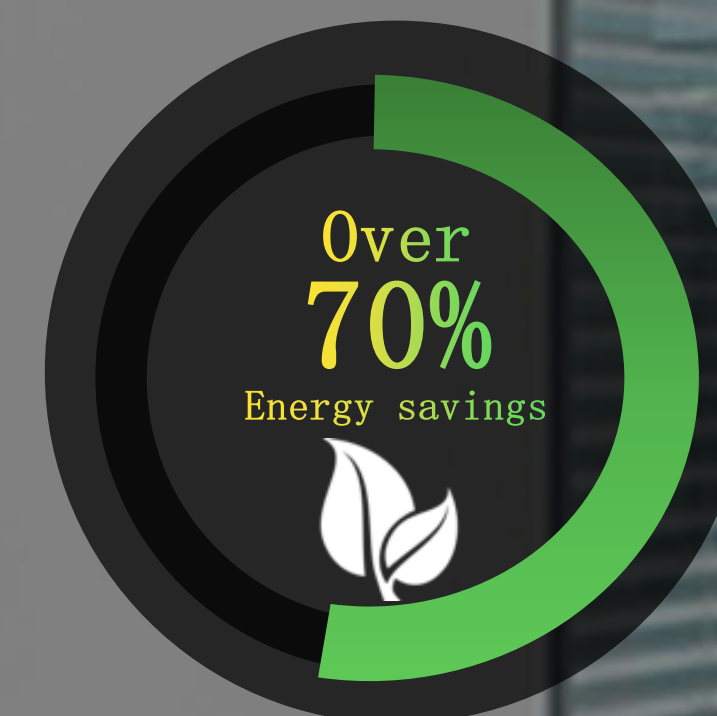


色温

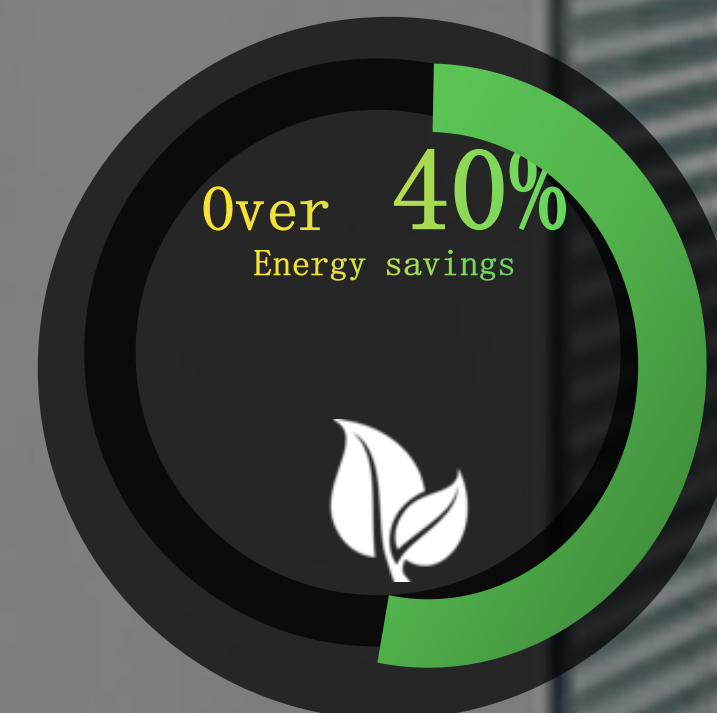


亮度





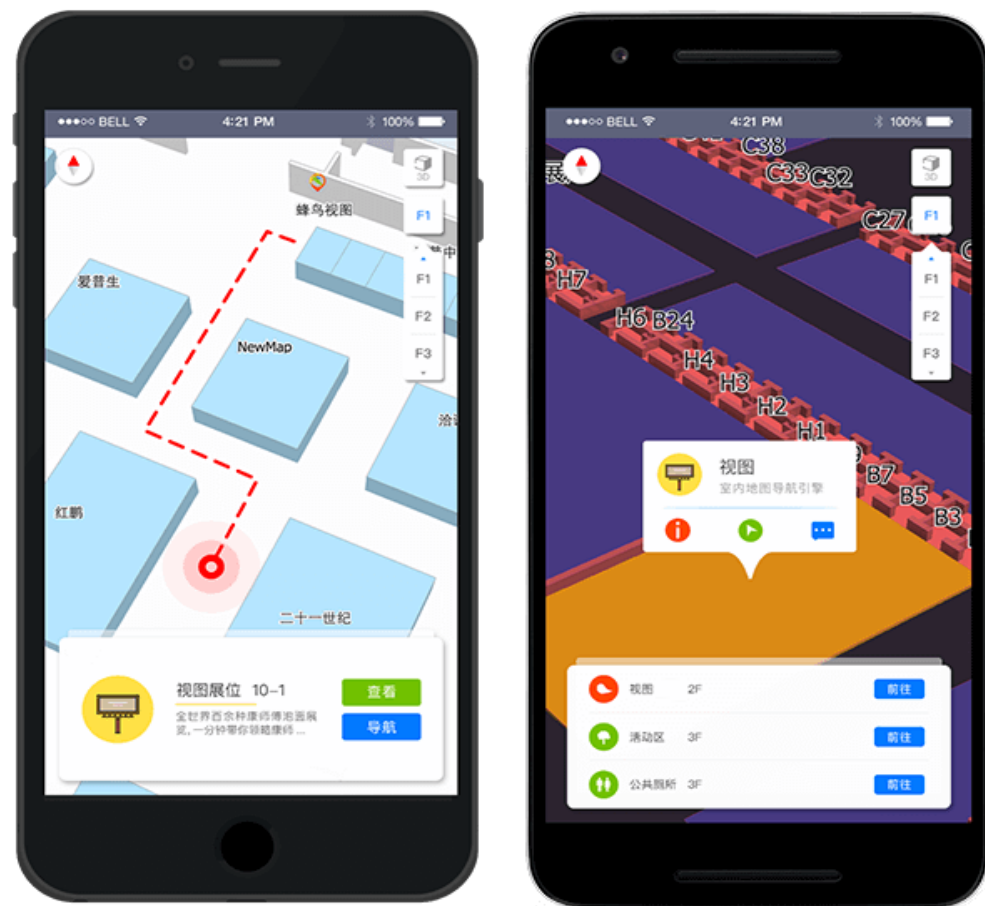
照明



空调



基于可见光的 室内定位导航应用







工位



照明



环境

illumination intensity



299 Kwh



299.0 Kwh

PM2.5 ($\mu\text{g}/\text{m}^3$)



Indoor: 32 $\mu\text{g}/\text{m}^3$ Outdoor: 260 $\mu\text{g}/\text{m}^3$

Humidity (%)



Compare with Yesterday \downarrow 114.2%

TVOC (mg/m^3)



0.299 mg/m^3

Target: TVOC ≤ 0.5 (mg/m^3)

Compare with Yesterday \uparrow 143.2%

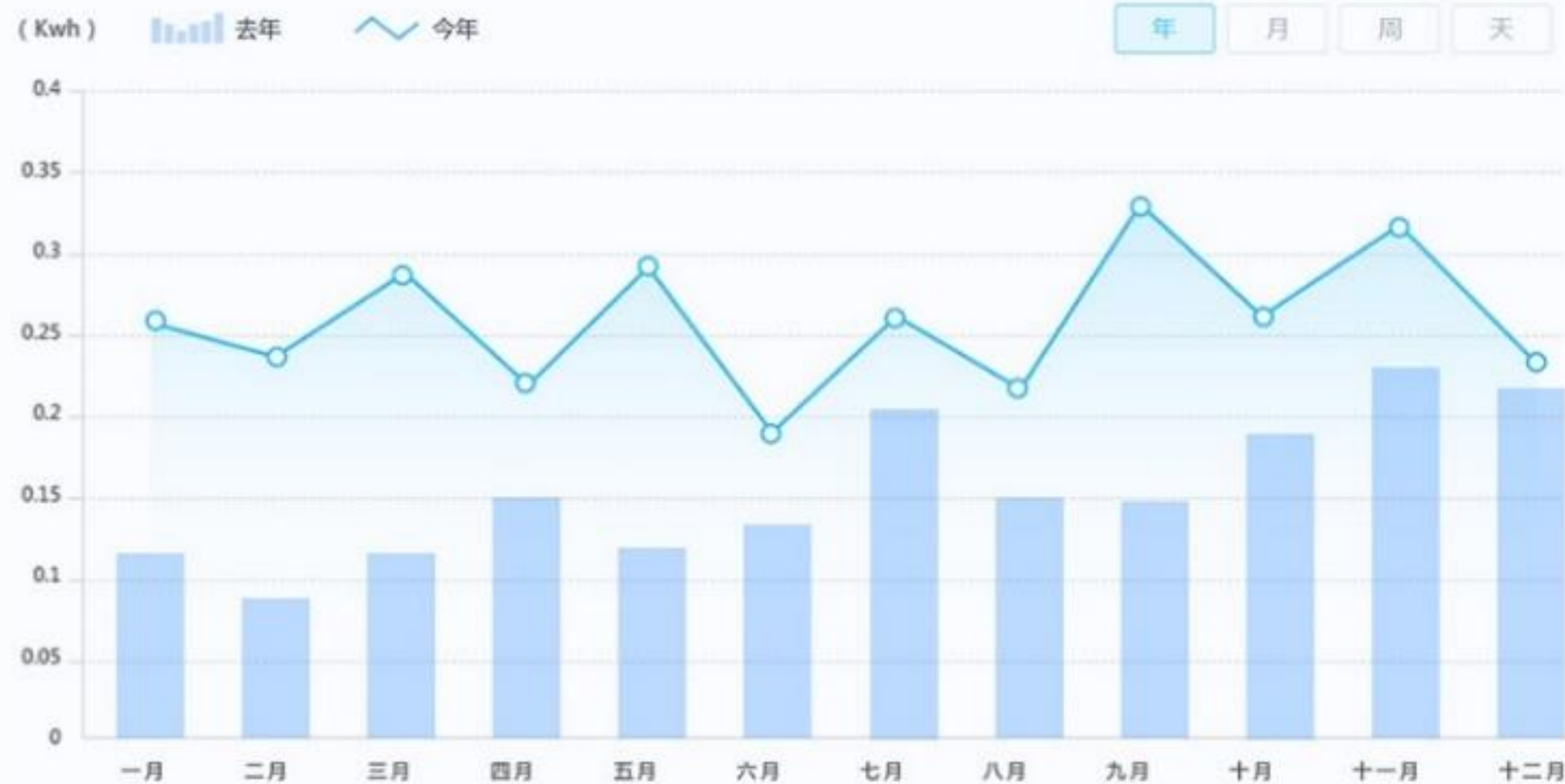
Electricity



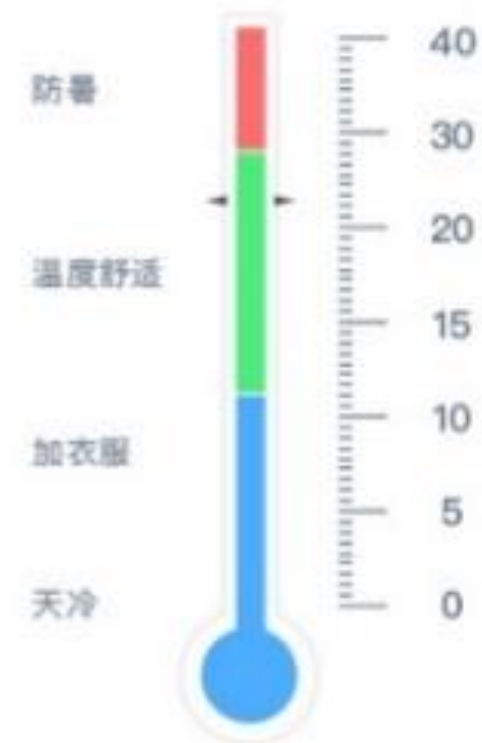
2.5 Kwh

\uparrow 143.2%
Compare with Yesterday

Lighting Energy consumption



Temperature ($^{\circ}\text{C}$)



24 $^{\circ}\text{C}$
indoor temperature



32 / 25 $^{\circ}\text{C}$

CO2 (PPM)

224.3

Target : 1000PPM



trees seeding grown for 10 years

Compare with Yesterday \uparrow 143.2%



总楼宇



一层



二层



三层



四层



五层

PHILIPS Smart Lighting

2018/02/07 16:19

工位

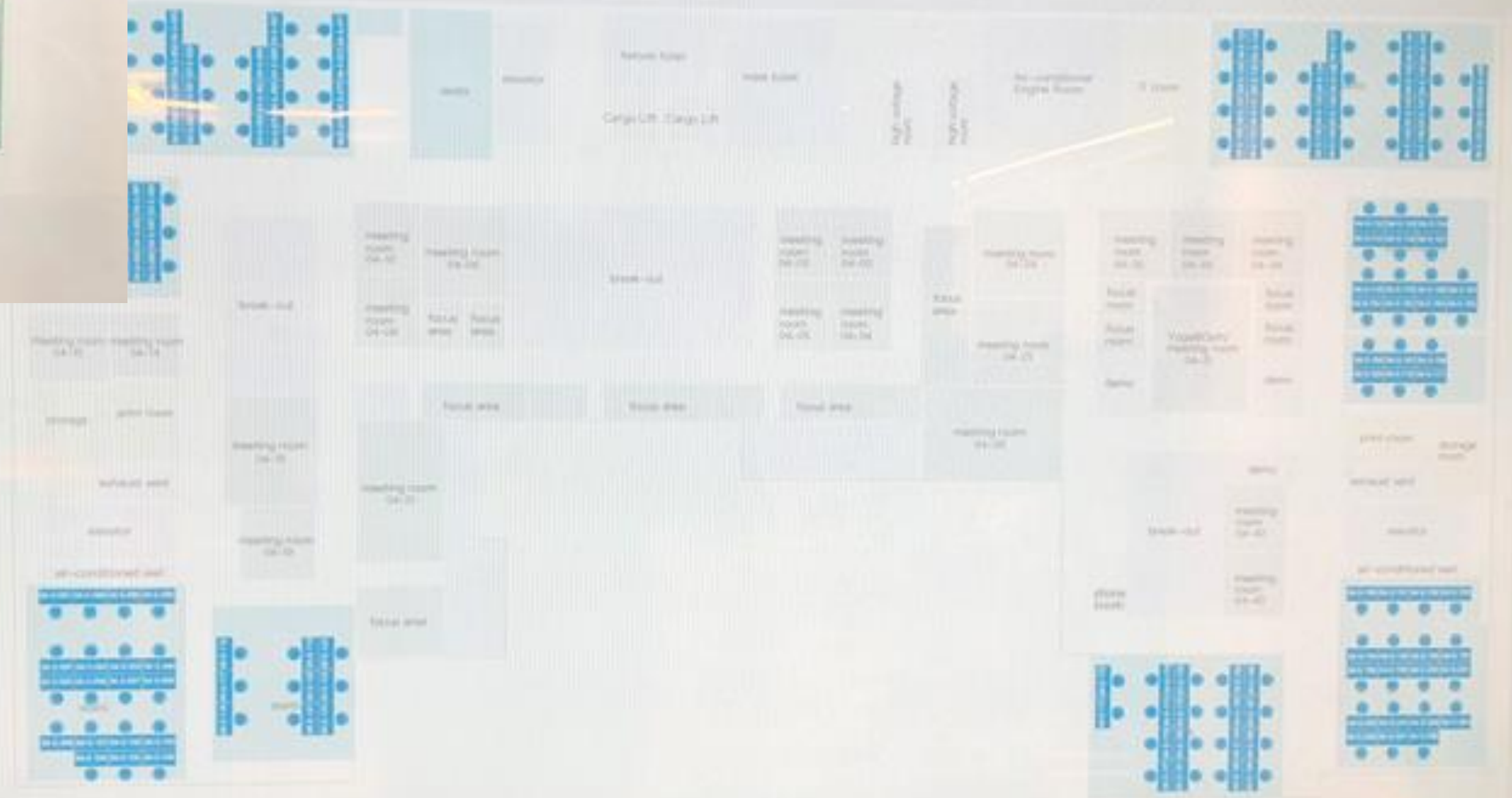
照明

环境



Lighting

2018/02/07 16:18



■ 未使用
■ 已使用



Envision Manager
平台管理软件



API

OPC

支持第三方软件整合
数据调用
远程控制



TCP/IP

PoE交换机

EG网关

EG网关

负载控制器

485

接口网关

230V
AC

LTP

54V
DC

IP灯具

开关量灯具

可调光灯具

传感器

DMX/RGB

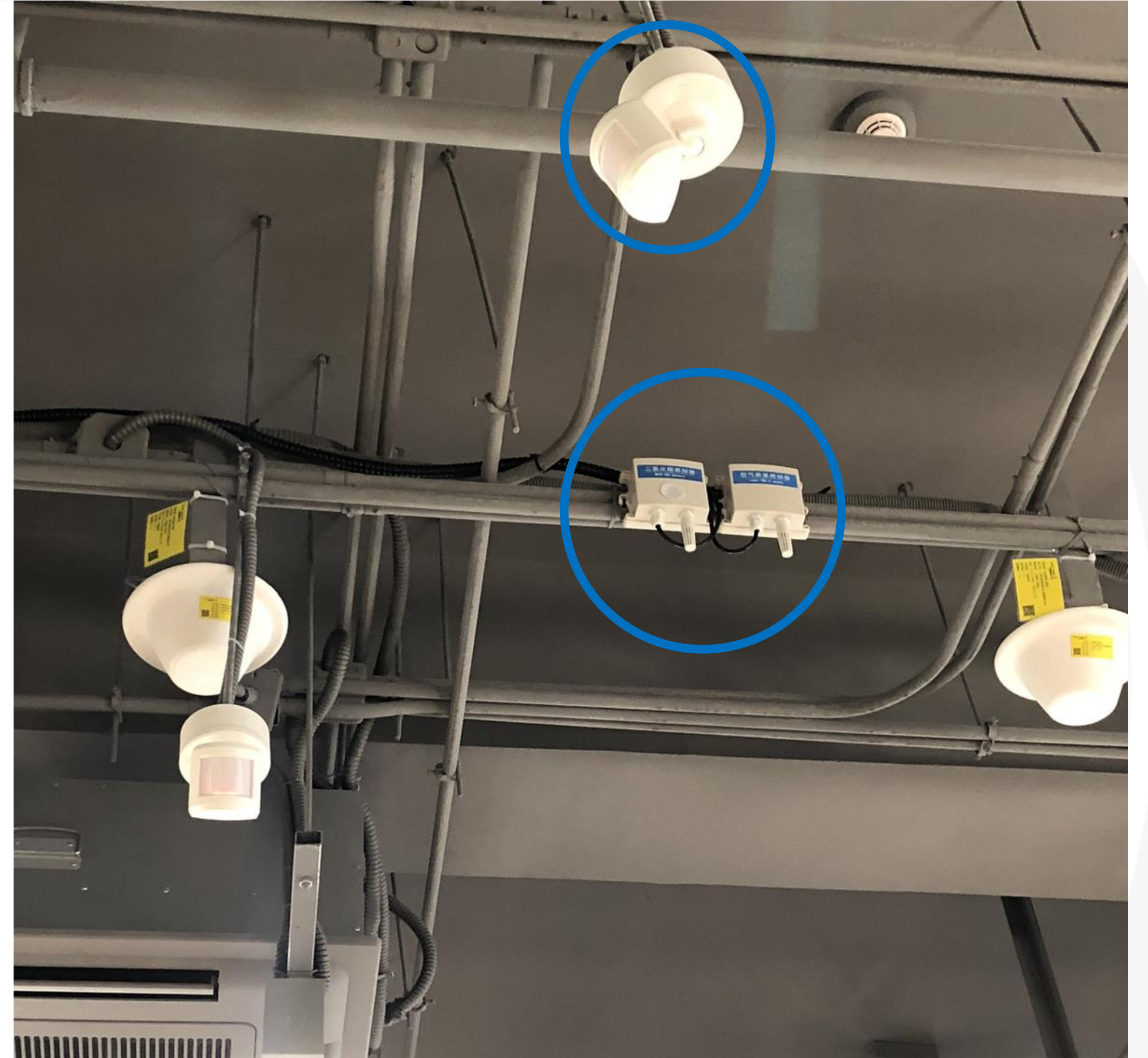
情绪照明应用

编码照明应用
IPS应用

传感器
人感&光感



12V
DC





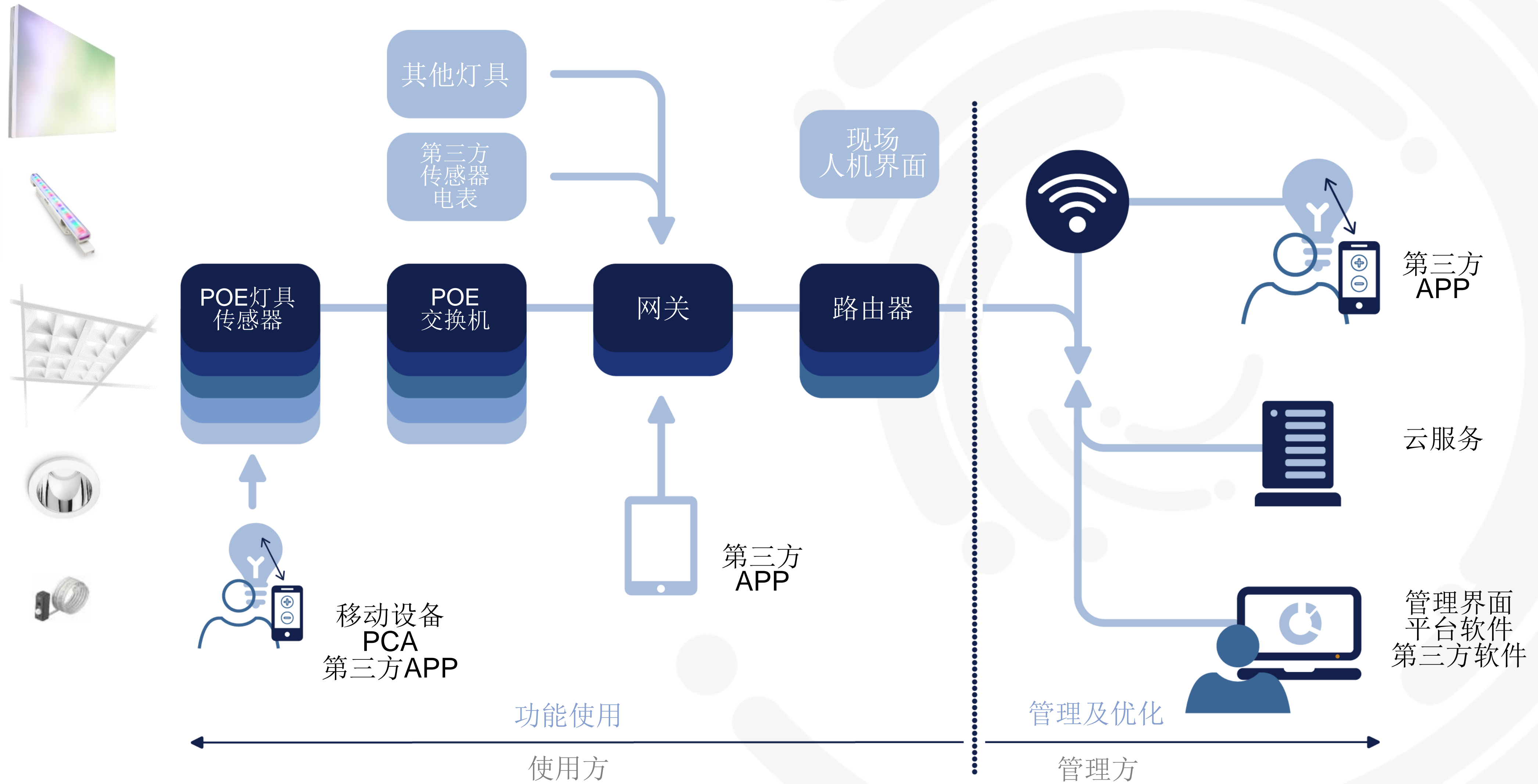








飞利浦互联照明系统架构示意





合作共赢 谢谢

DANCE TOGETHER
舞动未来

2018思科大中华区生态系统与合作联盟高峰会
Cisco Greater China Ecosystem and Alliance Forum 2018