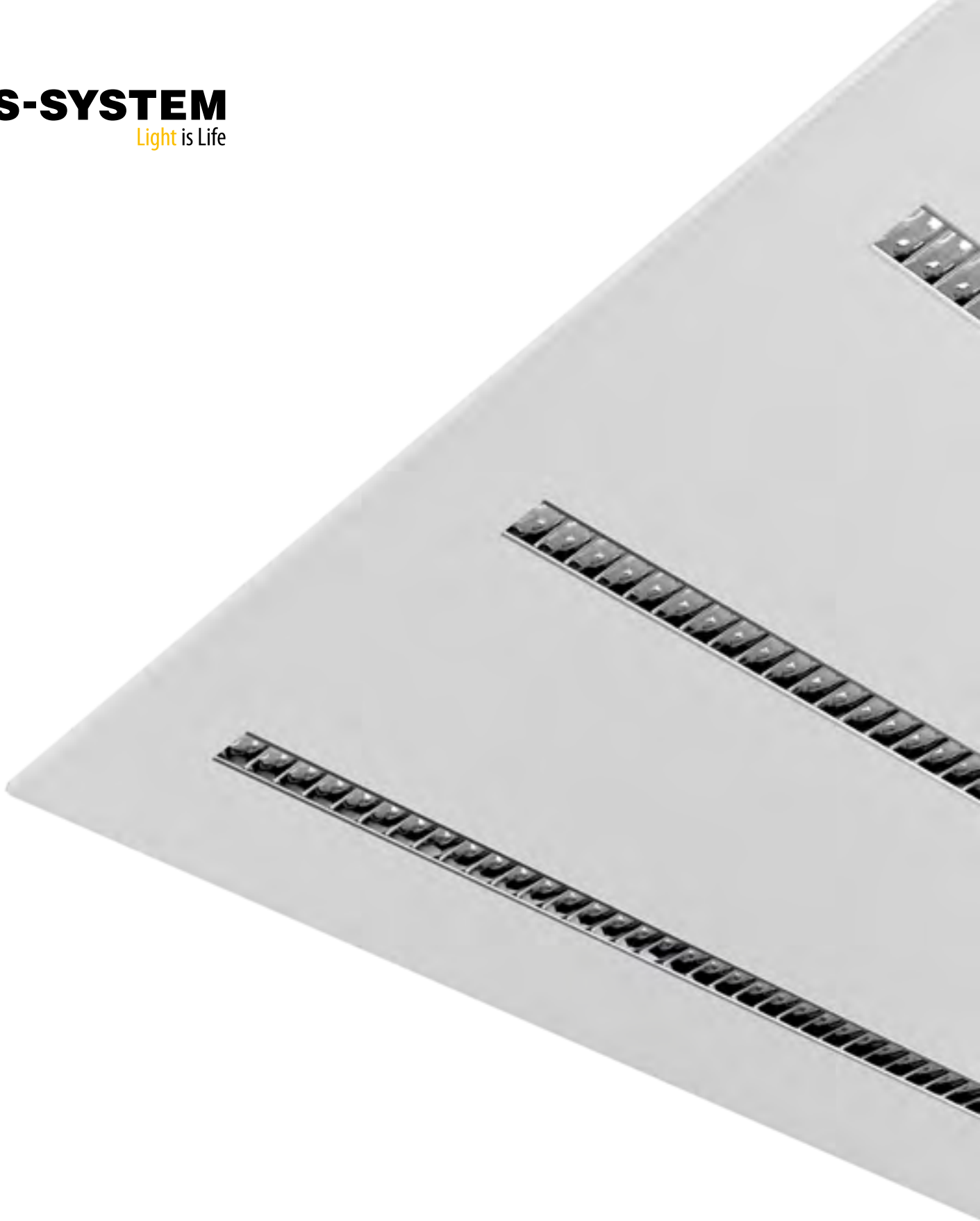


ES-SYSTEM
Light is Life



MODERNA
Providing a comfortable workstation



ES-SYSTEM Light is Life

For years, ES-SYSTEM has been satisfying the needs of customers across the globe. We offer lighting solutions for public interiors such as: office buildings, educational, cultural, entertainment, sports, dining, industrial and medical facilities, but also homes and private apartments. Thanks to such a comprehensive product offer, we are able to meet the expectations of customers from various parts of the world.

A RELIABLE PARTNER

- ❖ 26 years on the market
- ❖ Care about products, people and the environment
- ❖ Products of the highest quality delivered to every corner of the world
- ❖ An extensive assortment - 40,000 designs
- ❖ 2 modern production plants
- ❖ Our own measurement laboratory
(awarded the SMT status as one of only two in Poland)
- ❖ Tests and certificates - all products have been certified
for photobiological safety
- ❖ Experience in carrying out non-standard projects and delivering customized
products made to order
- ❖ A dedicated team specializing in lighting design and project management
- ❖ 14 sales branches and representative offices - in Poland and worldwide



The rapid development of technology and science which began in the 1950s has significantly changed almost every aspect of human life. We currently spend a minimum of 8 hours a day working in offices with artificial light, mostly looking at computer screens, which emit very bright light. As a result, our eyes are at risk of developing symptoms of increased sensitivity or blurred vision, and progressing visual impairment.

Inadequate lighting in the workplace significantly affects the employees' concentration and consequently, results in lower quality work.



Lighting in the office should fulfill a number of conditions, which are regulated by the Central Institute for Labor Protection:

The lighting intensity at the workstation should amount to **at least 500 lux**

The unified glare rating (UGR) in the workplace should be **no higher than 19**

The illumination uniformity should reach a value of **at least 0.6** on the work area

The color rendering index at workstations must be **greater than 80**





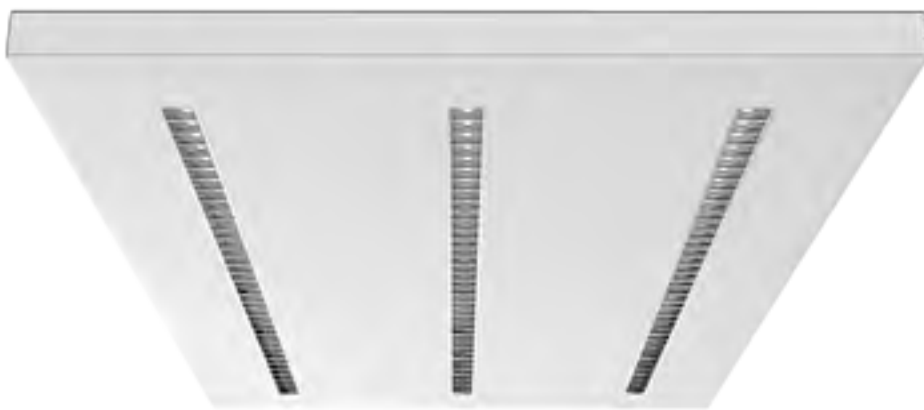
The MODERNA 2 system has a low glare rating (**UGR 15-19**), thereby protecting against excessive fatigue and gradual deterioration of vision. It uses efficient, energy-saving LED light with a warm tone. It is in no way hazardous to the eyes, as confirmed by a photobiological safety certificate.

The specially designed optics provide a highly uniform illumination and exceptional working comfort. The luminaire's minimalist design fits seamlessly in modern, austere interiors without dominating their décor. The long service life of the LED modules and the 70% decrease in energy consumption compared to fluorescent lighting allow for a significant reduction of fixed costs.

**UGR:
15-19**



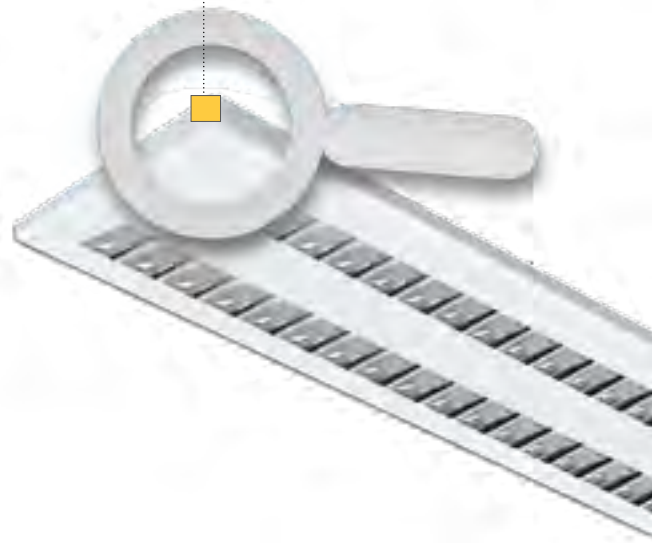
MODERNA 2 CEILING-RECESSED



a housing height of **only 15 mm**



MODERNA 3Z PENDANT



MODERNA 2N CEILING-MOUNTED

MODERNA SYSTEM FEATURES

▶ a ceiling-recessed luminaire for installation in suspended and plasterboard ceilings

▶ white powder-coated steel sheet housing

▶ provides excellent glare protection (UGR 15-19) and a high lighting uniformity

▶ two color temperatures available: 3000K and 4000K

▶ energy class A+

▶ a reduction in energy consumption by up to 70% compared to solutions using fluorescent lamps

▶ first class fire protection

▶ a housing height of only 15 mm (Moderna 3Z)

▶ designed for use in modern office spaces, conference rooms, studies and schools

▶ a high quality louvre made of MIRO aluminum sheet

▶ a luminous efficacy of up to 120 lm/W

▶ dimming with DALI technology

▶ quick and intuitive installation

▶ very long LED module service life of up to 211 000 h, L70B50

▶ power supply unit inside the luminaire

▶ carefully selected LEDs within a 3-step MacAdam ellipse to ensure uniform color temperature

TECHNICAL DATA

Luminous flux: 2650-5400 lm

Power: 24-47 W

Maximum luminous efficacy:
114-117 lm/W

Tpc: 3000K, 4000K

CRI: > 80

UGR: 15-19

Ingress protection rating: IP20

Power supply voltage: 230 V AC

CASE STUDY

Luminaire: **MODERNA 2**
Floor space: **99 m²**

Energy consumption:
525 W

Energy consumption using
conventional light sources:
1620 W

Energy savings compared to
conventional luminaires:

68%

Number of luminaires: **15**

Energy demand:
1.06 W/m²/100lx

Energy demand using
conventional light sources:
3.02 W/m²/100lx



MODERNA 2

An office lighting fixture for recessed installation in modular and plasterboard ceilings. A perfect fit for modern offices with open space setups. Assembly is extremely quick and takes less than a minute, which translates to a significantly lower installation costs. It's a great replacement for conventional 3x18W, 4x18W, 3x14W and 4x14W luminaires with fluorescent lamps.

SYSTEM MODERNA 2



Recessed luminaire for false ceilings
or modular T-bar ceilings
BODY: white painted steel sheet
LOUVRE: parabolic MIRO aluminum
POWER SUPPLY: integral electronic driver
OTHER: accessories to be ordered separately

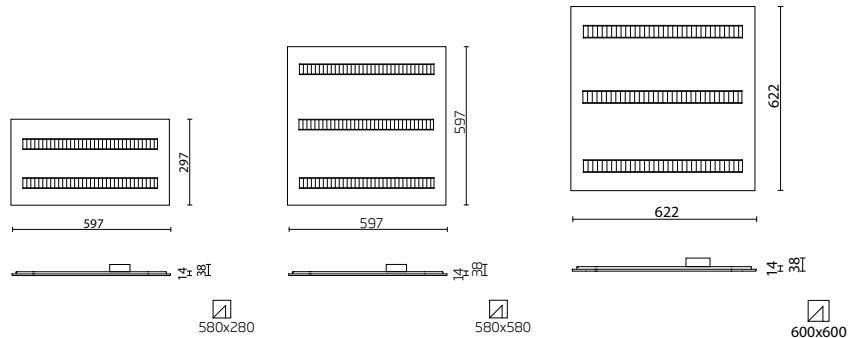
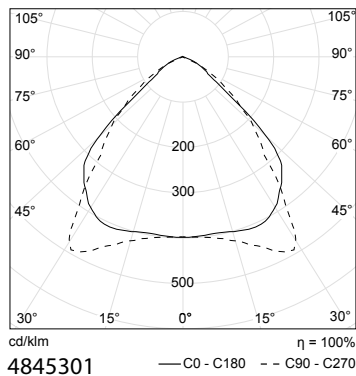


Icon 1	Icon 2	Icon 3	Icon 4	Icon 5	Icon 6	Icon 7
version with 2 louvres 600 x 300 mm ceilings						
48453?1	MODERNA 2 597	LED 840	2700lm	24W	230V AC	4,00
48454?1	MODERNA 2 597	LED 830	2650lm	24W	230V AC	4,00
version with 3 louvres 600 x 600 mm ceilings						
48451?1	MODERNA 2 597	LED 840	4100lm	35W	230V AC	6,00
48452?1	MODERNA 2 597	LED 830	4000lm	35W	230V AC	6,00
version with 3 louvres for 625x625 mm ceilings						
48461?1	MODERNA 2 622	LED 840	4100lm	35W	230V AC	6,30
48462?1	MODERNA 2 622	LED 830	4000lm	35W	230V AC	6,30

.....? 0 - ON/OFF • 6 - DALI

LED lifetime

L70B50	L80B50	L90B50
211000h	130000h	59000h



Accessories

- 9724201 mounting springs for 12.5 mm plasterboard ceilings and installation in a surface mounting frame
- 9725001 680x680x75 frame for surface mounting on ceilings for MODERNA 2 597



MODERNA 2N

The MODERNA 2N was created for use in rooms where there are no suspended ceilings or the ceiling void is too small for the MODERNA 2. Thanks to its low height of only 4 cm, it is also suitable for use in stairwells and in low corridors. Click-on technology and using special securing cables guarantees safe and easy installation.

SYSTEM MODERNA 2N



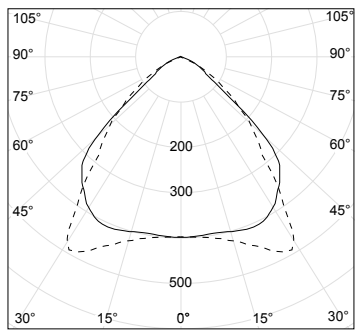
Ceiling-mounted luminaire
 BODY: white painted steel sheet
 LOUVRE: parabolic MIRO aluminum
 POWER SUPPLY: integral electronic driver



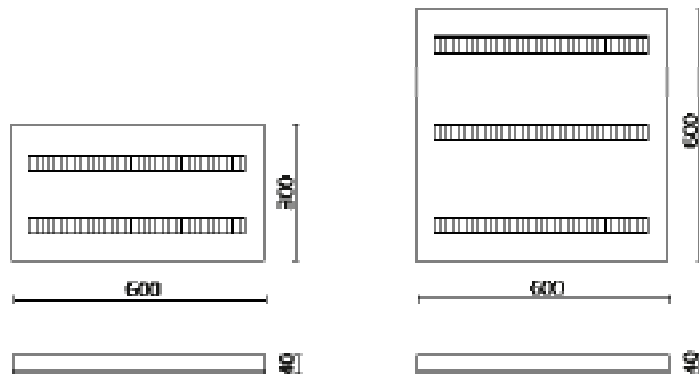
Icon	Icon	Icon	Icon	Icon	Icon	Icon
version with 2 louvres						
48443?1	MODERNA 2N 600	LED 840	2700lm	24W	230V AC	5,00
48444?1	MODERNA 2N 600	LED 830	2650lm	24W	230V AC	5,00
version with 3 louvres						
48441?1	MODERNA 2N 600	LED 840	4100lm	35W	230V AC	7,00
48442?1	MODERNA 2N 600	LED 830	4000lm	35W	230V AC	7,00
.....?	0 - ON/OFF • 6 - DALI					

LED lifetime

L70B50	L80B50	L90B50
211000h	130000h	59000h



4844101 — C0 - C180 - - C90 - C270





MODERNA 3Z

The pendant office luminaire MODERNA 3Z was designed using the latest available technology with ultra-flat power supply units. It has a height of only 15 mm. The specialist louvre optics provide comfort during long work hours. The DALI control system ensures maximum energy savings and makes it easier to obtain BREEAM and LEED certificates.

SYSTEM MODERNA 3Z



Pendant luminaire
BODY: white painted steel sheet
LOUVRE: parabolic MIRO aluminum
POWER SUPPLY: integral electronic driver
OTHER: power supply cable, ceiling canopy and 1.5 m long suspension cables included



version with 3 louvres

4861161	MODERNA 3Z 600	LED 830	4000lm	35W	230V AC	7,00
4861261	MODERNA 3Z 600	LED 840	4100lm	35W	230V AC	7,00

version with 2 louvres

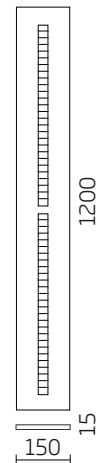
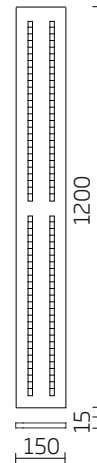
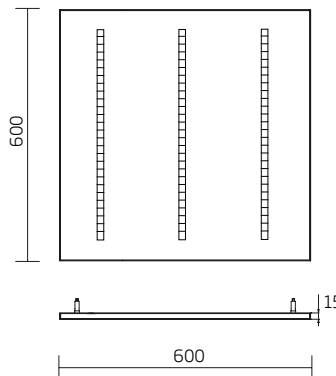
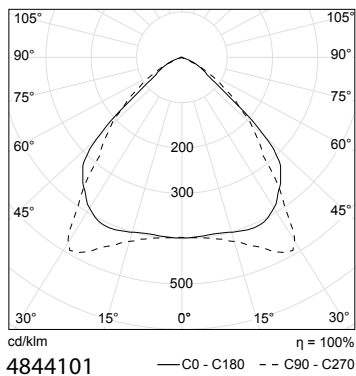
4861361	MODERNA 3Z 1200	LED 830	5300lm	24W	230V AC	7,00
4861461	MODERNA 3Z 1200	LED 840	5400lm	24W	230V AC	7,00

version with 1 louvres

4861561	MODERNA 3Z 1200	LED 830	2650lm	24W	230V AC	7,00
4861661	MODERNA 3Z 1200	LED 840	2700lm	24W	230V AC	7,00

LED lifetime

L70B50	L80B50	L90B50
211000h	130000h	59000h





LIGHTING MODERNIZATION

The priority objectives of a lighting modernization include adapting the quality of light to the given space, lowering energy costs, and creating environmentally friendly lighting. The most important argument for considering an upgrade is often the money that can be saved.

A lighting upgrade can consist of the following activities:

- ❖ replacing luminaires with more efficient, energy-saving substitutes
- ❖ installing the new luminaires
- ❖ installing intelligent lighting control systems

It should be noted that the upgraded lighting must be compliant with the applicable regulations and standards. The lighting should be safe and comfortable for its users. During a lighting modernization, the new lighting scheme must be adapted to suit the working conditions. Furthermore, energy-intensive lighting users know best, which places require special attention when performing a lighting upgrade, so as to improve user comfort.

HOW WE WORK

A lighting upgrade is a multistage process. The first step is a thorough assessment carried out by ES-SYSTEM experts. The evaluated aspects should include the infrastructure, the way the area is managed, and the needs of the people who will be using the lighting. Then, based on the collected data, the cost analysis of the investment, the existing funds and the user expectations, a modernization project is developed. A well-devised project and its methodical execution allow us to carry out the lighting installation modernization tasks professionally and in full.

- ❖ comprehensive lighting replacement with energy-saving LED products
- ❖ achieving savings by lowering electricity consumption and costs
- ❖ execution, service, consulting

BENEFITS

Interior lighting upgrade benefits include:

- ❖ reducing the operating costs of lighting systems
- ❖ achieving higher lighting quality
 - improving working comfort (brighter light depending on user expectations and existing parameters)
 - contributing to the reduction of CO2 emissions into the atmosphere
 - fulfilling the requirements of national legislation and European directives
- ❖ reducing electricity consumption and costs
- ❖ adjusting the light output to the individual parameters of each building or facility
- ❖ more efficient lighting control

100% of the funds spent on lighting upgrades pay back within a year and a half to a few years' time. It's a simple calculation based on each individual investment. In addition to the financial benefits, it's important to keep in mind the huge social and environmental gains achieved as a result of the upgrade.

