Derungs

MEDICAL LIGHTING

D$^{med®}$ oculux / D$^{med®}$ halux LED

LED EXAMINATION LIGHTS

LIGHTING THAT MEETS CHALLENGES

LED EXAMINATION LIGHTS

Often, rooms normally used for examinations have a general lighting. An additional lamp (installed on a pedestal base with castors, mounted on the wall or directly on the examination bed) then provides the luminosity necessary for the examination and thus contributes to the diagnosis.

Multi-purpose lighting

The term body examination (or clinical examination) is often used in medicine for describing the visual examination of a patient using simple equipment. The complete physical examination is considered an essential aspect of the diagnosis. The inspection (visual observation), the palpation (touching), the percussion (tapping) and the auscultation (listening through a stethoscope) are the essential parts of an examination.

The extent of examination required depends here on the anamnesis. The practitioner often rapidly detects the symptoms influencing diagnosis and the therapy. In some rare cases, when the clinical picture is not clear, a detailed examination may even last up to one hour. In practice, the examination is often brief and focused on specifics. If these examinations are not sufficient for providing a clear clinical picture, the physician then uses modern medical equipment (such as NMR, tomography and PET) for identifying the medical condition.

Only a summary diagnostic table (enables to compare text and data) can allow the physician to establish an appropriate therapeutic chart.

The specialist requires the assistance of professional lighting for examinations and minor interventions. The visual faculties of the medical personnel are subjected to extreme stress in this situation. Generally, the principle applied with regard to lighting is that it should be optimal for the physician and the nursing personnel, agreeable for the patient.

Minor interventions (considerably, administering perfusions) require lower lighting levels than those for classic surgical procedures. It is however important to be able to obtain different lighting levels for these domains (for example, for surveillance of anesthesia for mini-invasive procedures).

Often, examination rooms have only general lighting. An additional lamp (in-stalled on a pedestal base with castors, mounted on the wall or directly on the examination bed) then provides the luminosity (lighting) necessary for the examination and thus contributes to the diagnosis.

Derungs® lights are designed specifically for medical personnel. Our lamps are versatile and multi-purpose, allowing a usage depending on the type of examination or treatment and the method used. We offer solutions!

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LIGHTING IN A NEW DIMENSION

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LIGHTING SOLUTIONS

GENERAL MEDICINE / DERMATOLOGY / GYNECOLOGY

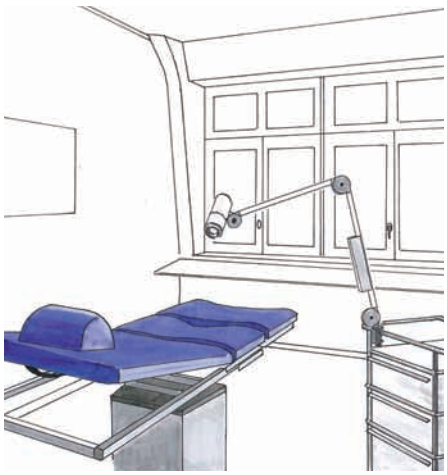
The eye of the physician is constantly subjected to extreme stress. It should be capable of reacting rapidly and in a focused manner to all types of situations. The patient is at the core of all activities of the physician. Modern technology and advanced luminous sources (LED) guarantee the best possible results.

A clean view – clear advantages

The light here is an indispensable auxiliary and a dependable work tool. A physician's work requires intense concentration and precision. He must always remain calm. Reduced heat release from the surface of the luminous source allows him to concentrate on his work and helps improve ergonomics.

Thanks to very low radiation of heat (infrared radiation) from the light, tissues do not dry up as rapidly during the intervention. Simple ergonomic control directly on the head of the lamp and the compact design almost make it an optical instrument. Since the LEDs have a very long life cycle, the lamp is maintenance free and thus saves costs.

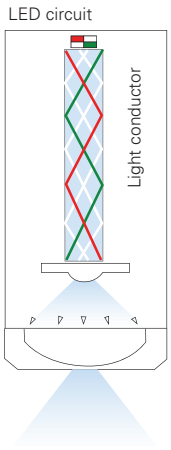
Uniform lighting of the examination field, without shadows, natural rendering of tissue colors (surface and deep structures) and the possibility of individually adjusting the lighting and the diameter of the illuminated field for each examination situation → these are some of the demands from the physician with regard to lighting of today and tomorrow.

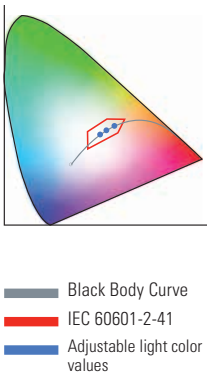


BRIGHT SIGHTS OF THE D$^{med®}$ **oculux**

PRODUCT ADVANTAGES

Color mixing and rendering





Uniform light

The light emitted by the LEDs of different colors is mixed in the head of the lamp (by multiple total reflections in the glass conductor). Result: the light is white at its source and is uniformly dispersed over the treatment field.

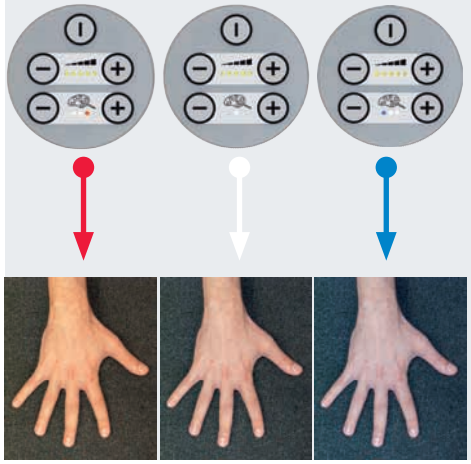
Through this innovative lighting concept, the entire illuminated field can be used as the work area. This type of color mixture prevents the formation of colored shadows due to the hands or instruments.

Excellent color rendering

Thanks to an excellent color rendering index, R_a = 93 and R_9(red) > 90, the color of the examination field can be recognized by the eye with more precision.

This signifies for the physician an improved recognition of details of the most subtle tones in tissues. The illuminated region appears natural and contrasted. The light is significantly more agreeable to the eye and the colors are rendered accurately.

Three light color shades, with possibility of dimming



The use of LEDs of different colors is a great innovation in the domain of medical examination. The light color (light temperature in Kelvin) can be modified according to the type of intervention.

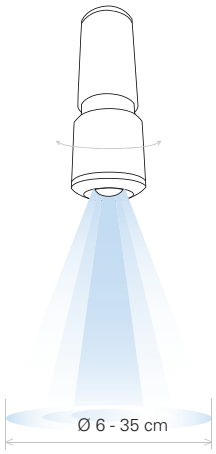
The physician can select the optimum lighting for the examination depending on the skin area and the type of tissue or wound.

Adjustments can be made from a simple and clear control unit directly on the head of the lamp. It is also possible to select the luminous intensity and personalize it using five dimming levels.

Three color shades:

3500 K (warm white)	Ideal for differentiating the superficial composition of skin
4300 K (neutral white)	Ideal for general examinations
5100 K (cold white)	Ideal for the recognition of the different vessels

Varibale adjustment of the illuminated field



Focusing on the illuminated field

The size of the illuminated field can be infintely set by a slight rotation of the focusing ring.

This function allows an exact adaptation of the illuminated field to the field of examination. Thus, a large illuminated field allows better viewing of a larger “work area” at a glance whereas focusing at 6 cm allows precise diagnosis.

LIGHTING SOLUTIONS

GENERAL MEDICINE / INTENSIVE CARE / NEONATOLOGY

Constant and immediate availability, assistance, instant response times, control and surveillance as well as alertness – all these are required during medical interventions. Optimum conditions of vision and work, the most modern technology and advanced luminous sources (LED) contribute to the performance of the demanding visual tasks in this field of activity.

Precise vision– clear advantages

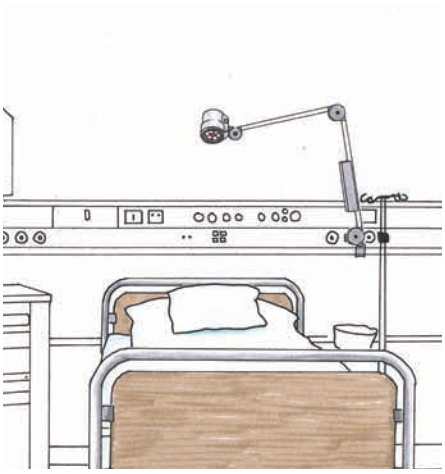
A high illumination level (lux) for clear lighting of the examination field, natural rendering of colors for the detection of modifications in tissue pigmentation or structure, adjustable light for better contrast vision → these are some of the performance requirements expected from latest generation lighting.

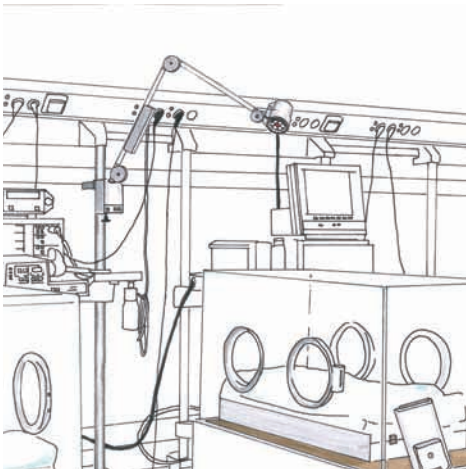
Physicians respond to demands for care and expectations for cure. The lighting helps them face these challenges every day. For them it is a work instrument that they must be able to rely on completely.

A wide field intensely illuminated allows them to see the regions to be examined at a glance. Reduced heat release from the surface of the luminous source allows them to concentrate better and it helps to improve ergonomics.

Simple, ergonomic controls placed directly on the head of the lamp guarantee instant reaction times. Since the LEDs have a very long life cycle, the lamp is maintenance free and thus saves costs.

High quality components, a newly patented arm system made of a strong light alloy that guarantees a firm holding to a set position, as well as multiple adaption possibilities make this lamp an indispensable auxiliary instrument.





BRIGHT SIGHTS OF THE D^med® **halux** LED

PRODUCT ADVANTAGES

50 000 lux illumination

High quality examination lamp

Seven powerful LEDs (about 50,000 lux / 0.5 m) guarantee adequate lighting of the examination field.

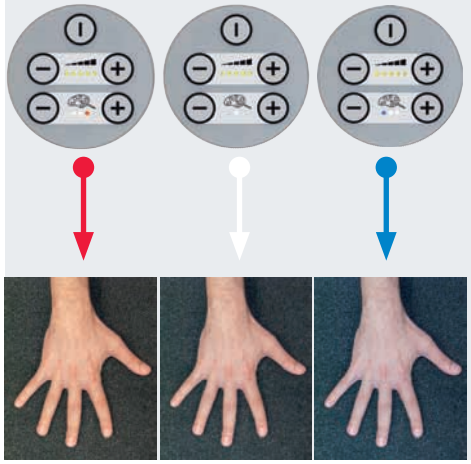
Based on the most recent technology, this LED lamp provides lighting equivalent to that of halogen lamps. The temperature of its light allows a natural rendering of colors – characteristics of the skin (superficial and deep structure) can thus be recognized in full detail.

Excellent color rendering

Thanks to an excellent color rendering index, R_a = 95 and R_9(red) ≥ 95, the color of the examination field can be recognized by the eye with more precision.

This signifies for the physician an improved recognition of details of the most subtle color tones in tissues. The illuminated region appears natural and contrasted. The light is significantly more agreeable to the eye and the colors are rendered accurately.

Three light color shades, with possibility of dimming



Mixing LEDs of different colors is a great innovation in the domain of medical examination. The light color (light temperature in Kelvin) can be modified according to the type of intervention.

The user can select the optimum lighting for the examination depending on the skin area and the type of tissue or the wound.

Adjustments can be made from a simple and clear control unit directly on the head of the lamp. It is also possible to select the luminous intensity and personalize it using five dimming levels.

Three color shades:

3500 K (warm white)	Ideal for different types of skin examination
4100 K (neutral white)	Ideal for general examinations
4700 K (cold light)	Ideal for the recognition of different vessels → for post operative treatment and small interventions

Ergonomics

A fixed position is maintained thanks to the latest innovation from Derungs®: DLC (Directional Load Compensation).

This innovative articulated arm system makes arm handling significantly easier. The directional load compensation (DLC) ensures easy movement and positioning of the lamp. A precisely set holding position is maintained thus satisfying the most demanding requirements of ergonomics.

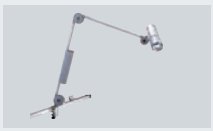
Arm lengths of up to 1.20 m provide a flexible operating range. Thanks to the permanent friction setting of the articulating joints, any manual adjustment (friction screws) become unnecessary.

The use of strong light alloys in the articulated arm system further emphasizes the high quality of the lamp.

PRODUCT FAMILY AT A GLANCE

LED EXAMINATION LIGHTS

D^med® **oculux**

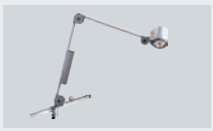


12 P LX

Gyn 12 P S6

- 20 000 lux / 0.5 m
- Uniform field illumination
- 5 light dimming levels
- Adjustable color temperature (three color shades)
- Continuously adjustable illuminated field size
- Simple control unit on the head
- LED technology reduces maintenance costs to a minimum while providing high energy efficiency
- No radiation of heat in the light (dehydration of tissues is reduced to the minimum)

D^med® **halux** LED



20 P LX

20 C L1

- 50 000 lux / 0.5 m
- 5 light dimming levels
- Adjustable color temperature (three color shades allow personalized viewing of contrasts)
- Simple control on the head
- No heat (infrared) radiation
- High energy efficiency and luminous efficiency
- Optimized cooling of the lamp head
- LED technology reduces maintenance costs to a minimum while providing high energy efficiency


NUFER·MEDICAL
Air-Shields
C400

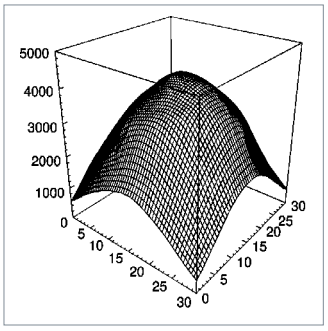
Dmed® **oculux** 12 P LX

TECHNICAL DATA — EXAMINATION LIGHTS

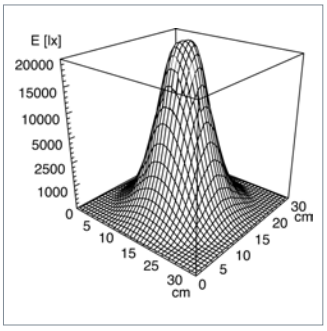
FITTED WITH	1 x LED lamp LE ACWWV H2A
LUMINOUS POWER	20 000 Lux / 0,5 m
ILLUMINANCEFIELD 0,5 M	Ø 6-35 cm
COLOUR TEMPERATURE	approx. 3500 K / 4300 K / 5100 K
WORK EQUIPMENT	electronic converter
CONNECTED LOAD	100-240 V; 50/60 Hz
MAINS LEAD	approx. 2 m
LUMINAIRE BODY	aluminium / plastic
WEIGHT (NET)	approx. 1.7 kg
POWER CONSUMPTION	approx. 15 W
USAGE	touch panel, rocker switch (I/0)
BALANCE OF ARTICULATION JOINTS	directional load compensation (DLC)
CLASS OF PROTECTION	I
NORMS	EN 60601-1, EN 60601-2-41
SPECIAL FEATURES	3 color shades, 5 dimming levels, maintenance free, variable illumination field size
FASTENING	pin (16 mm W), rail, roller stand, table, wall
ORDER NUMBER	D14.944.000 - pure white - Schuko D14.964.000 - pure white - CH D14.948.000 - pure white - UK

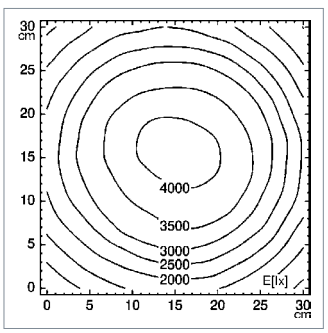
LIGHT DISTRIBUTION — TECHNICAL DRAWING

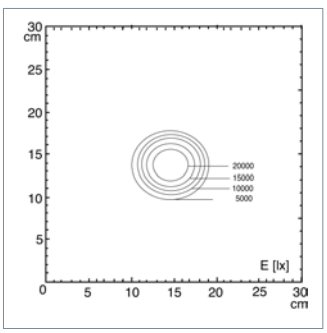
illuminancefield 35 cm

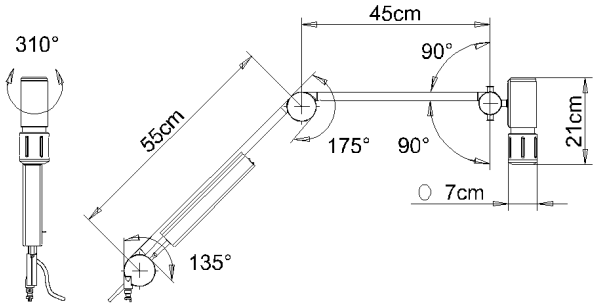


illuminancefield 6 cm





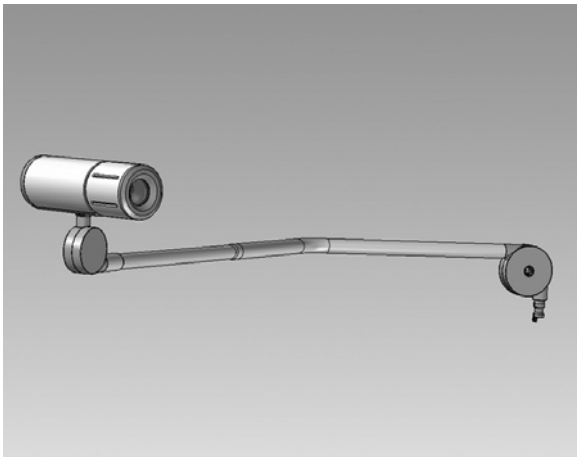




Dmed® **oculux** Gyn 12 P S6

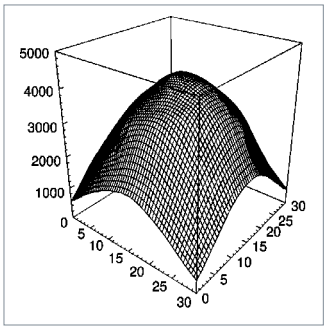
TECHNICAL DATA — EXAMINATION LIGHTS

FITTED WITH	1 x LED lamp LE ACWWV H2A
LUMINOUS POWER	20 000 Lux / 0,5 m
ILLUMINANCEFIELD 0,5 M	Ø 6-35 cm
COLOUR TEMPERATURE	approx. 3500 K / 4300 K / 5100 K
WORK EQUIPMENT	electronic plug-in transformer
CONNECTED LOAD	100-240 V; 50/60 Hz
MAINS LEAD	approx. 2 m
LUMINAIRE BODY	aluminium / plastic
WEIGHT (NET)	approx. 3.0 kg
POWER CONSUMPTION	approx. 15 W
USAGE	touch panel
BALANCE OF ARTICULATION JOINTS	directional load compensation (DLC)
CLASS OF PROTECTION	III
NORMS	EN 60601-1, EN 60601-2-41
SPECIAL FEATURES	3 color shades, 5 dimming levels, maintenance free, variable illumination field size
FASTENING	arm system for gynaecology stool
ORDER NUMBER	D14.945.000 - pure white - Schuko D14.968.000 - pure white - CH D14.949.000 - pure white - UK

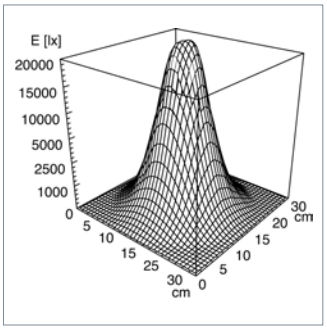


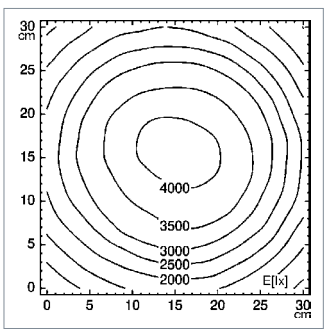
LIGHT DISTRIBUTION — TECHNICAL DRAWING

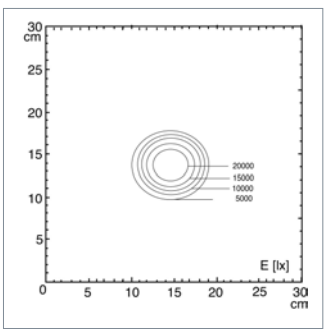
illuminancefield 35 cm

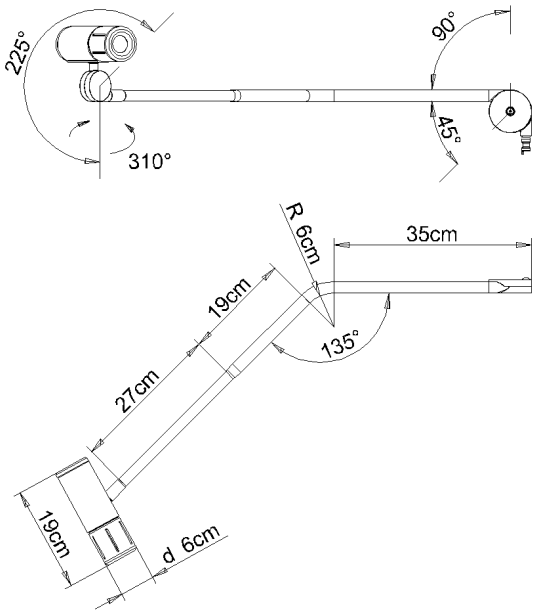


illuminancefield 6 cm









Dmed® **halux** LED 20 P LX

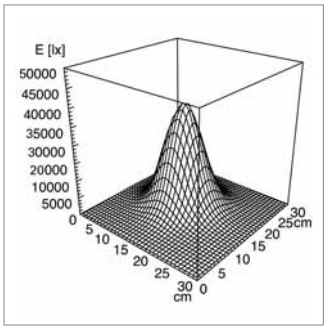
TECHNICAL DATA

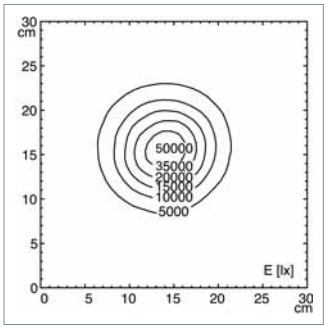
EXAMINATION LIGHTS

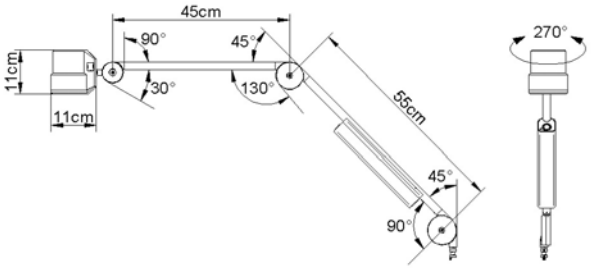
FITTED WITH	1 x LED lamp FB 68 OPT
LUMINOUS POWER	50 000 Lux / 0,5 m
ILLUMINANCEFIELD 0,5 M	Ø 17 cm
COLOUR TEMPERATURE	approx. 3500 K / 4100 K / 4700 K
WORK EQUIPMENT	electronic converter
CONNECTED LOAD	100-240 V; 50/60 Hz
MAINS LEAD	approx. 2 m
LUMINAIRE BODY	polycarbonate (PC)
WEIGHT (NET)	approx. 1.5 kg
POWER CONSUMPTION	approx. 25 W
USAGE	touch panel, rocker switch (I/0)
BALANCE OF ARTICULATION JOINTS	directional load compensation (DLC)
CLASS OF PROTECTION	I
NORMS	EN 60601-1, EN 60601-2-41
SPECIAL FEATURES	3 color shades, 5 dimming levels, maintenance free
FASTENING	pin (16 mm W), rail, roller stand, table, wall
ORDER NUMBER	D14.946.000 - pure white - Schuko D14.972.000 - pure white - CH D14.950.000 - pure white - UK

LIGHT DISTRIBUTION

TECHNICAL DRAWING







Dmed® **halux** LED 20 C L1

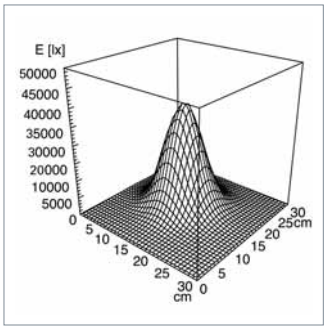
TECHNICAL DATA

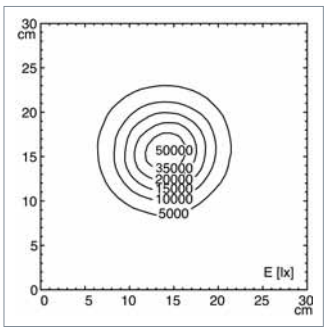
EXAMINATION LIGHTS

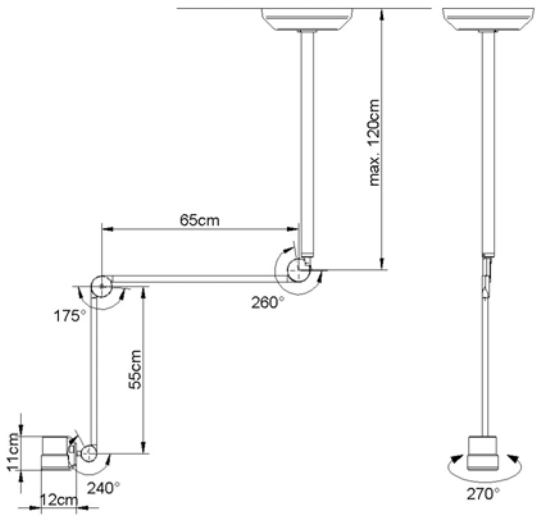
FITTED WITH	1 x LED lamp FB 68 OPT
LUMINOUS POWER	50 000 Lux / 0,5 m
ILLUMINANCEFIELD 0,5 M	Ø 17 cm
COLOUR TEMPERATURE	approx. 3500 K / 4100 K / 4700 K
WORK EQUIPMENT	electronic converter
CONNECTED LOAD	100-240 V; 50/60 Hz
MAINS LEAD	approx. 2 m
LUMINAIRE BODY	polycarbonate (PC)
WEIGHT (NET)	approx. 7.5 kg
POWER CONSUMPTION	approx. 25 W
USAGE	touch panel
BALANCE OF ARTICULATION JOINTS	directional load compensation (DLC)
CLASS OF PROTECTION	I
NORMS	EN 60601-1, EN 60601-2-41
SPECIAL FEATURES	3 color shades, 5 dimming levels, maintenance free
FASTENING	ceiling mount
ORDER NUMBER	D14.947.000 - pure white - direct power supply

LIGHT DISTRIBUTION

TECHNICAL DRAWING







Notes

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