

SERIES LED LIGHTING TYPE „ORION “

Series include following types of products:

Orion 8W28-230, Orion 15W28-230, Orion 20W28-230 and Orion 30W28-230;

Name of Producer: “INDUSTRIAL LIGHTING” LTD

Purpose:

The Series LED lighting type ORION is created as high class lightning designed to satisfy highest requirements for efficiency, durability and quality.



In the production of the product are used only high quality elements of european producers, as follows:

LEDs: Duris S5 – “Osram GmbH” Germany

Power supply: ELEMENT LD – “Osram GmbH” Germany;

Diffusor and cover: Dow Chemical – USA;

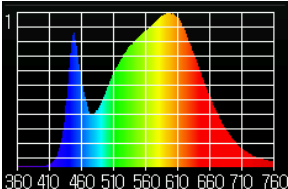
Fasteners: Only stainless steel according DIN 933;

Technical parameters according producers documentation:

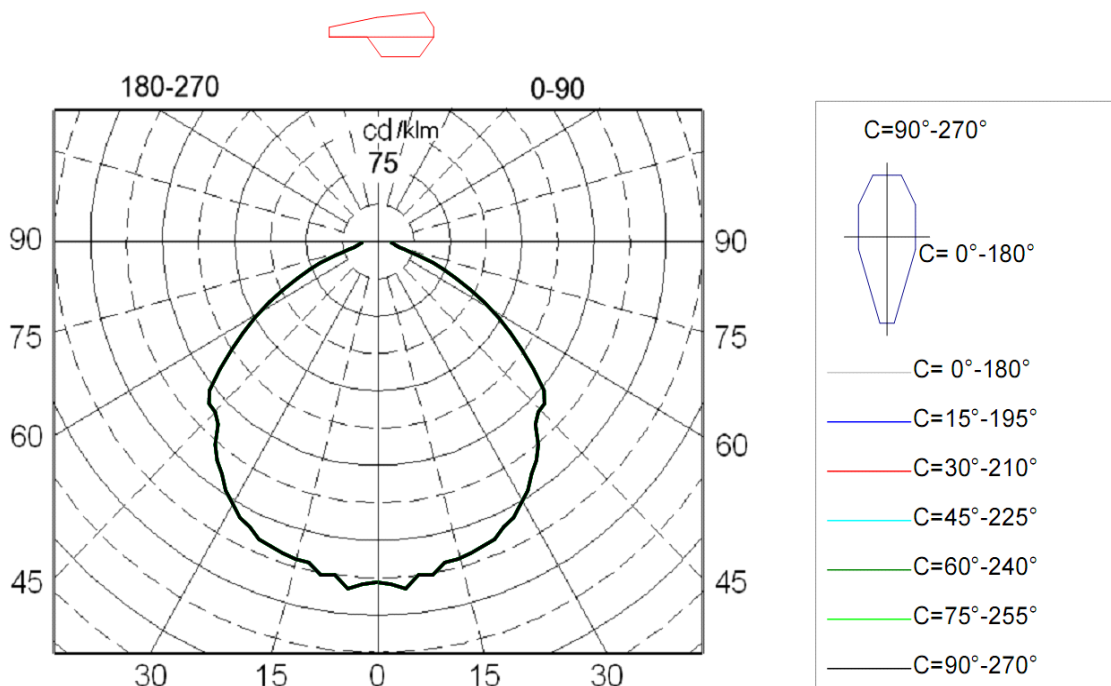
LED light for indoor and outdoor use with dimensions 200/60 mm. and weight of 1.5kg

Test results:

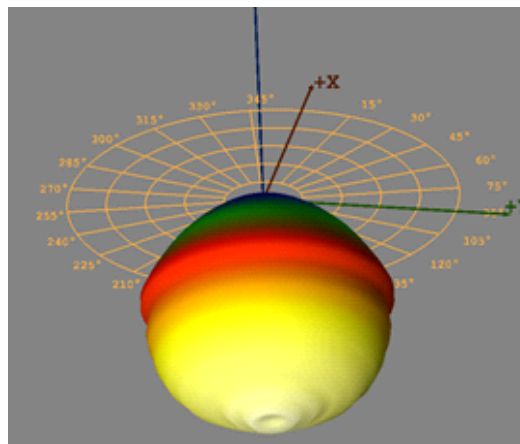
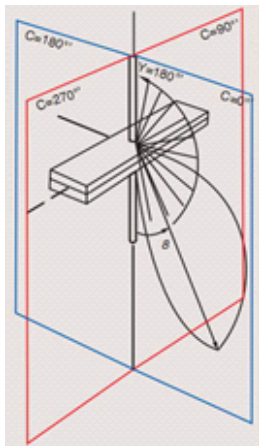
| | | | | |
|--------------------------------------|----------------------|--------------|--------------|---------------|
| Product name Orion | 30W28-230 | 20W28-230 | 15W28-230 | 8W28-230 |
| Operating voltage | AC 230 V | | | |
| Operating Current | AC 0.134A | AC 0.107A | AC 0.107A | AC 0.043 A |
| Wattage including ballast (watts) | 30.1 W | 24.1 W | 16.72 W | 8.32 W |
| Power factor | 0.98 | | | |
| color temperature | 3995 K | | | |
| Color rendering index CRI | 84 | | | |
| color coordinates CIE 1931 | x=0.3831, y=0.3860 | | | |
| color coordinates CIE 1976 | u'=0.2232, v'=0.5060 | | | |
| Luminous flux emitted by a luminaire | 3552 lm | 2887 lm | 2159 lm | 1119.8 lm |
| Light output of the luminaire | 118.0 lm /W | 119.7 lm /W | 129.1 lm/W | 134.7 lm/W |



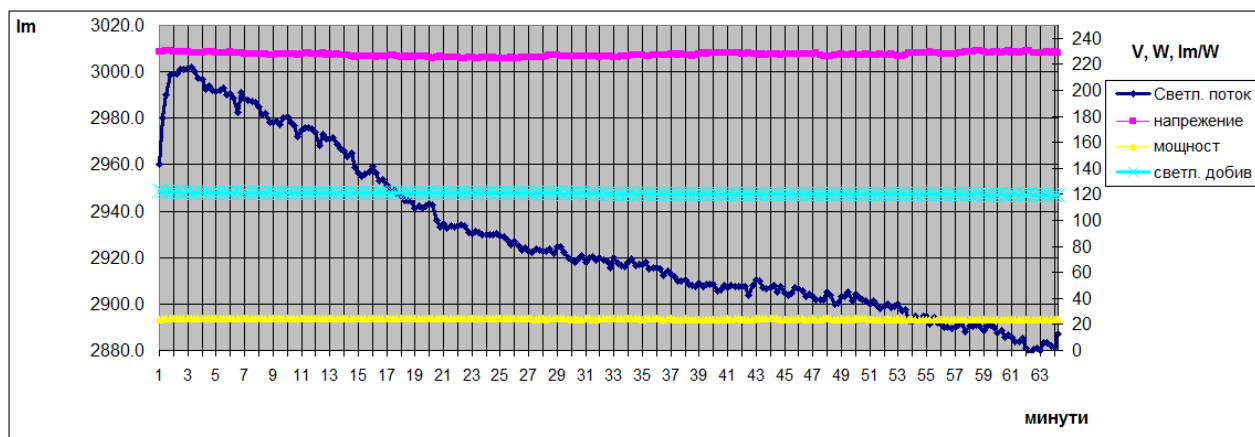
Light specter
Pulsation of light = 23.2%



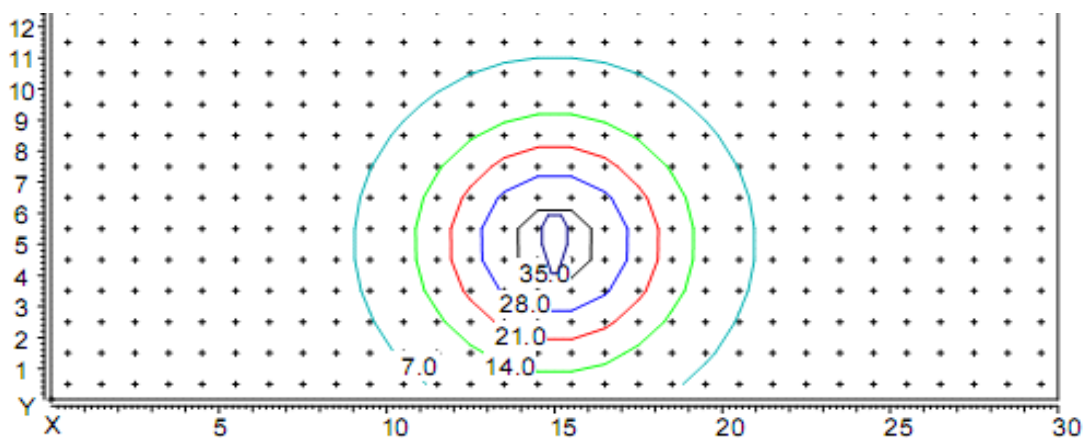
Luminaire light distribution of polar coordinates in the conditional flux 1000lm



Luminaire light distribution of the 3D



Changing the light flux



Distribution of illumination in height hanging lamp 5 м
 Coordinates of the luminaire X=15m, Y=5m.

Part color: RAL 7035 or any other color according to RAL specification by customer requirements. Minimum 100 pc.

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| RAL 1000 | RAL 1001 | RAL 1002 | RAL 1003 | RAL 1004 | RAL 1005 | RAL 1006 | RAL 1007 |
| RAL 1011 | RAL 1012 | RAL 1013 | RAL 1014 | RAL 1015 | RAL 1016 | RAL 1017 | RAL 1018 |
| RAL 1019 | RAL 1020 | RAL 1021 | RAL 1023 | RAL 1024 | RAL 1027 | RAL 1028 | RAL 1032 |
| RAL 1033 | RAL 1034 | RAL 2000 | RAL 2001 | RAL 2002 | RAL 2003 | RAL 2004 | RAL 2008 |
| RAL 2009 | RAL 2010 | RAL 2011 | RAL 2012 | RAL 3000 | RAL 3001 | RAL 3002 | RAL 3003 |
| RAL 3004 | RAL 3005 | RAL 3007 | RAL 3009 | RAL 3011 | RAL 3012 | RAL 3013 | RAL 3014 |
| RAL 3015 | RAL 3016 | RAL 3017 | RAL 3018 | RAL 3020 | RAL 3022 | RAL 3027 | RAL 3031 |
| RAL 4001 | RAL 4002 | RAL 4003 | RAL 4004 | RAL 4005 | RAL 4006 | RAL 4007 | RAL 4008 |
| RAL 4009 | RAL 5000 | RAL 5001 | RAL 5002 | RAL 5003 | RAL 5004 | RAL 5005 | RAL 5007 |
| RAL 5008 | RAL 5009 | RAL 5010 | RAL 5011 | RAL 5012 | RAL 5013 | RAL 5014 | RAL 5015 |
| RAL 5017 | RAL 5018 | RAL 5019 | RAL 5020 | RAL 5021 | RAL 5022 | RAL 5023 | RAL 5024 |
| RAL 6000 | RAL 6001 | RAL 6002 | RAL 6003 | RAL 6004 | RAL 6005 | RAL 6006 | RAL 6007 |
| RAL 6008 | RAL 6009 | RAL 6010 | RAL 6011 | RAL 6012 | RAL 6013 | RAL 6014 | RAL 6015 |
| RAL 6016 | RAL 6017 | RAL 6018 | RAL 6019 | RAL 6020 | RAL 6021 | RAL 6022 | RAL 6024 |
| RAL 6025 | RAL 6026 | RAL 6027 | RAL 6028 | RAL 6029 | RAL 6032 | RAL 6033 | RAL 6034 |
| RAL 7000 | RAL 7001 | RAL 7001 | RAL 7002 | RAL 7003 | RAL 7004 | RAL 7005 | RAL 7006 |
| RAL 7008 | RAL 7009 | RAL 7010 | RAL 7011 | RAL 7012 | RAL 7013 | RAL 7015 | RAL 7016 |
| RAL 7021 | RAL 7022 | RAL 7023 | RAL 7024 | RAL 7026 | RAL 7030 | RAL 7031 | RAL 7032 |
| RAL 7033 | RAL 7034 | RAL 7035 | RAL 7036 | RAL 7037 | RAL 7038 | RAL 7039 | RAL 7040 |
| RAL 7042 | RAL 7043 | RAL 7044 | RAL 8000 | RAL 8001 | RAL 8002 | RAL 8003 | RAL 8004 |
| RAL 8007 | RAL 8008 | RAL 8011 | RAL 8012 | RAL 8014 | RAL 8015 | RAL 8016 | RAL 8017 |
| RAL 8019 | RAL 8022 | RAL 8023 | RAL 8024 | RAL 8025 | RAL 8028 | RAL 9001 | RAL 9002 |
| RAL 9003 | RAL 9004 | RAL 9005 | RAL 9010 | RAL 9011 | RAL 9016 | RAL 9017 | RAL 9018 |

Die casting Aluminium body produces with aluminium alloy with encenced heat exachange

Color temreture of LEDs standar production 4000 K.

According to customers requirments temperature can be produce in the range from 2000K to 6500K, as follows: 2000K, 2200K, 2700K, 3000K, 3500K, 4000K, 4500, 5000K, 5700K and 6500K.

Index of color rendering:

Color rendering of light sources is indicator of their capability to dispalay realistcly the colors of certain object. According to CIE (International Lighting Commission) index vary from 0 to 100, where 0 is worst and 100 is best.

| Group | Ra | Significance | Typical Application |
|-------|---------|--|--|
| 1A | 90..100 | Exact color match | Galleries, medical examination, color processing |
| 1B | 80...90 | Colors can be properly defined | Houses, hotels, offices, schools |
| 2 | 60...80 | Fair color rendering | Industry, office, schools |
| 3 | 40...60 | Color rendering is not a of big significance | Industry, sport arenas |
| 4 | 20...40 | Color rendering is not important | Street lighting |

Standard lighting Eridan are with index of color rendering CRI min 80.
 According to customer specification lamp can be produced with LED index CRI min 90.

Color emission of the LEDs: Orion luminaries are standardly offered with white light.

As an option customers can choose from following colors

-amber, dark blue, red, green, white

Back covers over power supply as well can be ordered in different colors.

According customer needs as addition of the LEDs, guidance optics with different angles (different of standard angle of 120 degrees) can be mounted.

Operating temperature of the lamp is from -30 °C to +45 °C.

Degree of protection IP 67:

The degree of protection of LED lighting bodies, which the corpus provides against penetration of foreign particles, dust, dirt and water

Luminaries Orion provides:

Full protection against dust and protection during water submerging for 30 min on 1 meter depth.

Degree of protection IK 10:

One of the key parameter of outdoor mounted luminaries is the high resistance of mechanical interference-defined in two digit code IK.

- From 0-lack of protection

- From 10-protection of interference equivalent of 20J energy

The degree of IK 10 is equivalent on hits with steel hammer with 5kg weight, falling on luminary body from 40 centimeters height

High degree of resistance of mechanical interference is highly important in case where luminaries are used on streets, roads, sidewalks, in general when used in areas with concentrated vandalism activities.

Certification:

Luminaries Orion has full CE certification.

Motion detectors:

To all version of Orion lamps motion and light detectors can be mounted.

Description of the electrical connection assembly:

Connection of the product to the electricity network is performed by qualified and pre instructed personal, qualified in the safety procedures. The cable coming out from the lamp has to be connected to the electricity network 230V-50Hz in the following order-brown cable is connected to L(phase), blue cable is connected to N(zero), yellowgreen cable has to be connected to ground.

Description of the mechanical connection:

Installation to be performed only by qualified and pre instructed personnel, trained in safety procedures. Installation is completed by 3 bolts M4x20.

Working conditions, transportation and storage:

Storage to be done in covered facilities with air temperature from -30 °C to +55 °C (up to 24 hours to +70 °C) with humidity 80%(with 86-106 Kpa) without the presence of any harmful agents, causing corrosion of the aluminum body. The lamp to be transport in the original packing provided by the producer.

Working condition of the luminary

- Power supply voltage- 198V to 264V
- Temperature interval—30 °C to +60 °C, with air humidity 80%(86-106Kpa)

Quality control:

The device is controlled from the authorities of quality control and reply to the technical requirements. Replacing of components of the luminary has to be performed only with original parts supplied by the producer. Repair is performed only from authorized representative of the producer.

Warranty conditions:

LED luminaries from the series Orion have 60 months warranty from the date of sale. All eventual malfunction during warranty period is 60 months from date of purchase. All eventual malfunction in this period is repaired free of change in the conditions of:

- All conditions for installation, operation, transport and storage of the device
- There are no signs of attempts of opening the device and/or repair by non-authorized personal of Industrial lighting LTD.

Producer's address:

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1839 Sofia, 15 Kremikovsko shose Str.,

e-mail: office@industrialighting.eu

web site: www.industrialighting.eu