völlner® lighting

...the future

400W LED FLOOD LIGHT- VOL-FL-400-CW

| | | |
|---|---|---|
| Input | Voltage | AC100~305V |
| | Alternating Current | 1.0A/277VAC |
| | Frequency | 47~63Hz |
| | Power Factor | PF≧0.92/277VAC |
| | Total hamornical distortion | THD<20% （@electrical load≧50%/115VC，230VAC；@electrical load≧75%/277VAC) |
| Electrical Performance | Compression resistance | O/P-FG:1.5KVAC |
| | Surge Immunity | Line to grounding： 6KV，Line to line：4KV I/P-O/P,I/P-FG,O/P-FG |
| | Leakage Current | Under AC 277V normal condition lighting <2.5mA/277VAC |
| | Insulation Resistance | ACline L+N，with earth wire G ≧100mΩ/500V，I/P-FG,O/P-FG: ≧100M Ohms/500VDC/25℃/70%RH |
| | Ground Resistance | The ground resistance is less than 75mΩ |
| Optical parameters | Luminous flux | 150 lm/W |
| | Color rendering index(CRI) | 5500K-6500K： RA≥80 |
| | Beam Angle | 120º |
| | Color temperature | 5500-6500K |
| | Wavelength | RED 620-625nm，GREEN 515-525nm，BLUE 460-470nm， |
| | | |

# Product safety and performance

**1.Cable**

Rubber cable : DC copper core is 0.75mm$^2$, AC copper core is 1 .0mm$^2$.The insulation resistance of core can be as high as 50MΩKM with the cable working at temperature of 20℃ with good flexibility,
fire-resistant , cold-resistant,heat-resistant and UV-resistant.able to bear large external mechanical forces .

**Wiring regulations**

| Brown wire | Blue wire | Green and Yellow wire |
|---|---|---|
| Connect with AC170-250V Live Line（L） | Connect with AC170-250V Neutral Line（N） | Connect with Grounding Line(G) |

**2. PCB board**

PCB thinkness 1.5MM , thermal conductivity: 2.0 W/(mK) clearance of creepage distance is 5mm insulation voltage;3000V

**3. Thermal Silicone Grease**

Thermal conductivity:3.4 W/(mK) . It has good resistance to weather and chemical ,also high insulation ,
without solidification,no corrosion to substates, it can be used in temperature between -40℃～150℃ for long term .

| Test Item: | Test Condition： | Qualification Evaluation: |
|---|---|---|
| Cable tension | | |
| Heating test | The light is applied to be pressured one hour with 20N by a 5mm steel ball and soak in cold water 10s when lt is horizontal | Diameter of indentation ≤2mm |
| Hanging Strength | Putting permanent load of fourfold light's weight on the loading direction of lamp for 1hour. | No deformation |
| Endurance Test | Ambient temperature: (35 ± 2) °C, Test time: 240h, continuous cycle 10 times, each cycle is 24h. | light cannot be deformed ,cracked and scorched.It must be safe ,the marking should be clear |
| Temperature Test | Ambient temperature:25℃±1℃ It should be measured when the ratio of temperature changing less than or equal to 1℃/h. Testing voltage is 1.06U (U=rate voltage) | The temperature of each test point meets the relevant requirements. |
| Vibration Test | 10~500HZ，5G12 Minute/Cycle,Each axis 72minutes, X,Y,Z | No parts are loose or deformed |

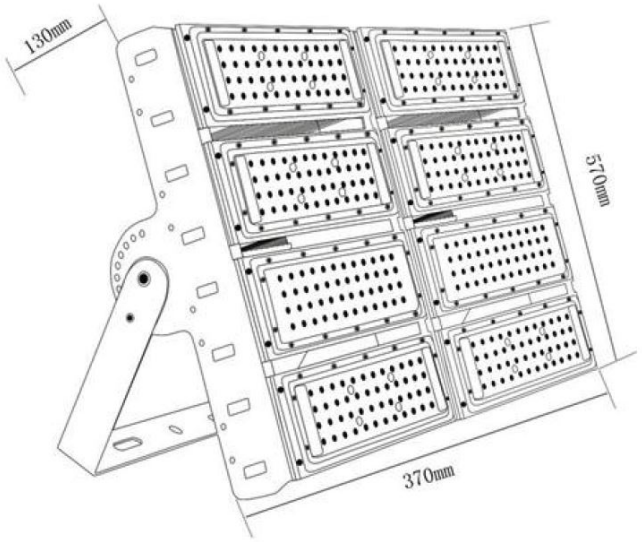
| | | |
|---|---|---|
| IP65 | Sand&Dust test （IP initial characteristic digital is 6） | No dust no sediment as qualified |
| | 1.50-75μm talc powder dosage:2.1kg turn on the light for 30minutes before test . then put it into testing box for 3hours under floating dust state after finished blowing dust for 3 minutes | |
| | Sand&Dust test （IP The second characteristic digital is 5） | No water no hydrops as qualified |
| | Light is subjected to a water jet of 6.3m from all practicable directions by means of a hose having a nozzle, the nozzle shall be held 2.5-3m away the sample, the water pressure at the nozzle shall be adjusted to achieve a water delivery rate of 12.5L/min, spraying time 1minute per square at least for 10minutes, all parts should be tested which requests to be sprayed. | |

| **Test Item:** | **Test Condition：** | **Qualification Evaluation:** |
|---|---|---|
| Ground Resistance | 10A | The ground resistance is less than 75mΩ |
| Hi-pot Test | AC wire L+N，with earth wire G，I/P-O/P,I/P-FG,O/P-FG，pass high voltage1500v， | No ARC and phenomenon of leakage of electricity |
| Leakage Current | under AC 277V normal condition lighting | ≤2.5mA/277VAC |
| Insulation Resistance | AC wire L+N，with earth wire G，pass voltage 500V，I/P-O/P,I/P-FG,O/P-FG: | 100M Ohms/500VDC/25℃/70%RH |

I/P-O/P,I/P-FG,O/P-FG:100M Ohms/500VDC/25℃/70%RH

| | |
|---|---|
| Operating Temperature Range (Ambient temp25℃，Humidity30%RH) | Tcase=-40~+90℃ |
| Max. rated temperature of housing (Ambient temp25℃，Humidity30%RH) | Tcase=+70℃ |
| Working Humidity | 20~95%RH，non-condensing |
| Storage Temperature and Humidity | -40~+90℃，10~95%RH |

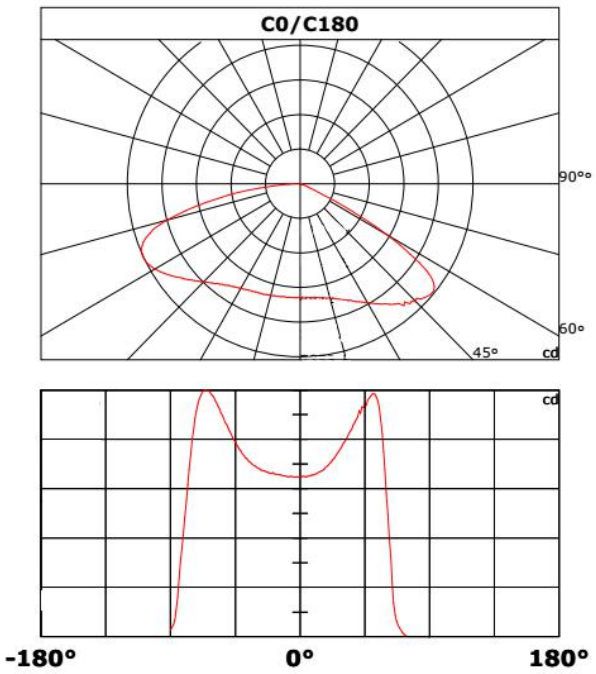
Product structure drawing and specification

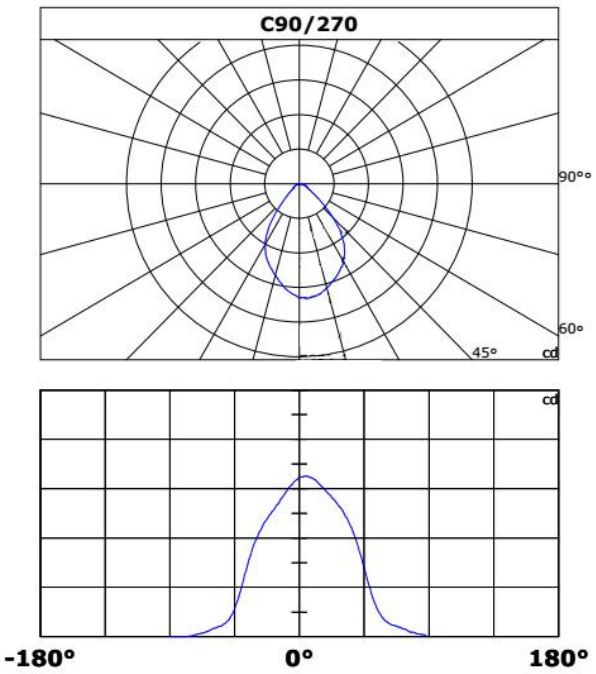



Light distribution curve and illumination diagram

.

## Light Distribution Curve [Unit: cd]

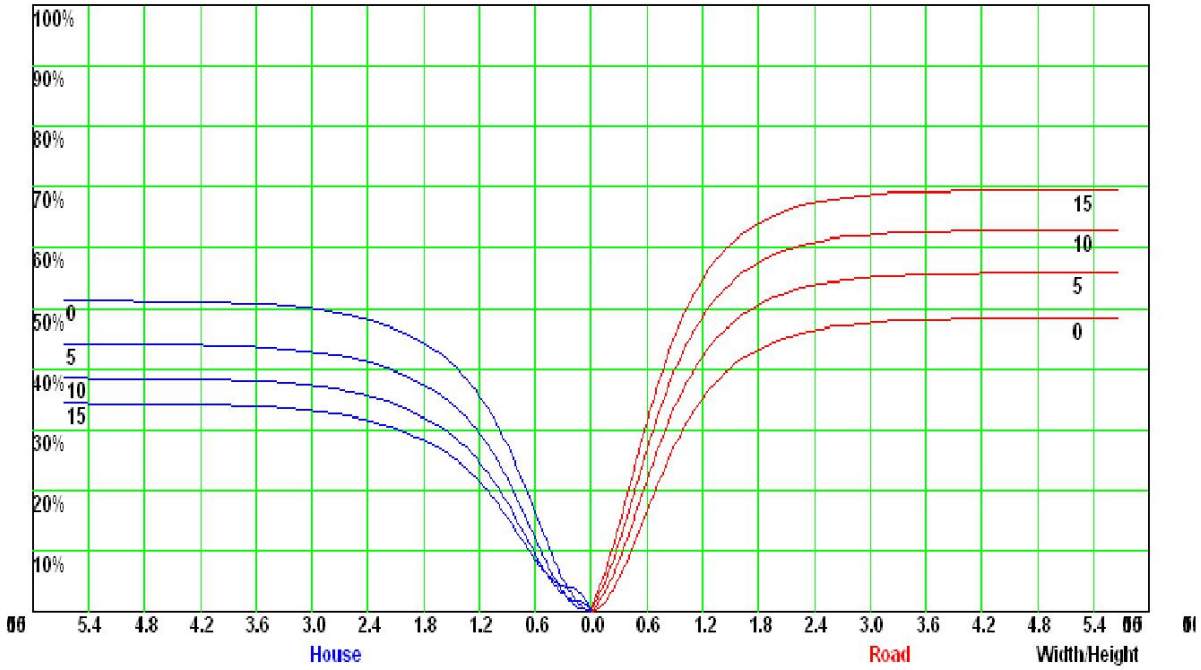


völlner lighting

...the future

# Coefficient Utilization Curve



völlner lighting ...the future

## Packing Information：






## Installation Instruction：

1.The capacity of the installation fixture should match the weight of lights.

2.Working Temperature-30℃～+70℃

3.Ensure these connections of wire are sealed to prevent leakage when you install.

4.Take measures when wiring the light

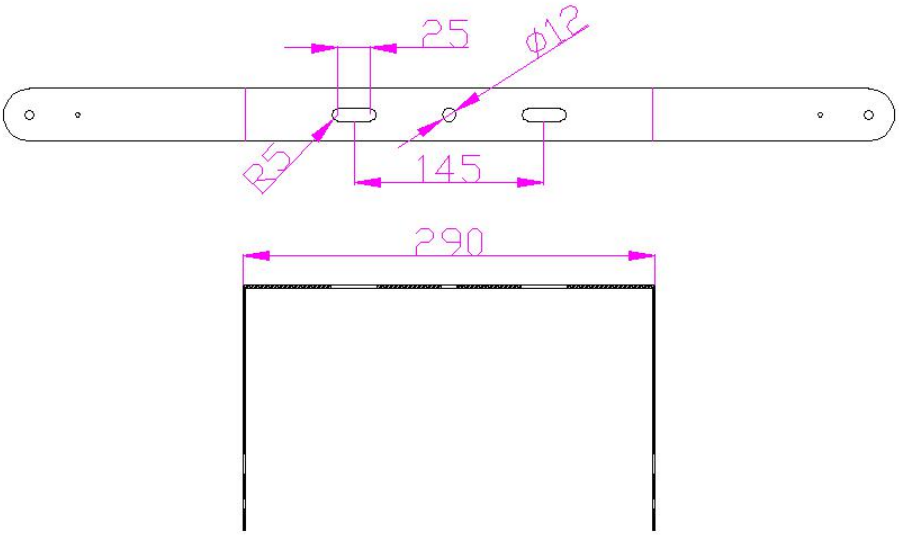
5. Do not use the lamp against of fire regulation.

6.This product should be installed by a qualified electrician, the correct connection way of three-core cable : Brown wire - Live wire , Blue wire - Neutral wire ,Yellow wire - Grounding wire .

7.The operating voltage is AC 100-277V 50/60Hz do not exceed this range of voltage & frequency .

## Installation Instruction

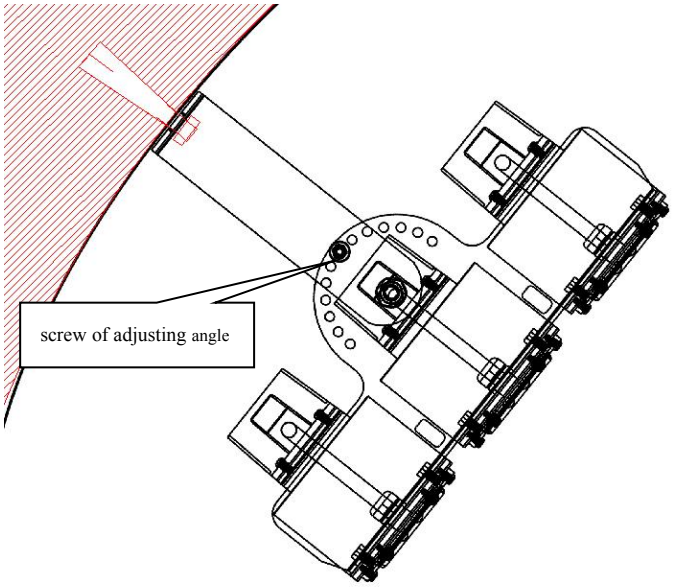
1.As figure below showing two holes (dia12mm/depth60-80mm) had been punched on the symmetrical position of tunnel wall according to the cut-out size.




►

**Picture 1: Hole punching figure**

**2.Tunnel wall**




**Picture 2:Installation figure**

3. Above installation figure's direction to install bracket into tunnel wall with M10*100 expansion bolt, the torque applied to the bolt is 7N·M.

4.The lamp wiring should be followed below wiring diagrams of power input to connect with AC220V

**Wiring diagrams of power input**

| Brown wire | Blue wire | Green and Yellow wire |
|---|---|---|
| Connect with AC170-250V Live Line（L） | Connect with AC170-250V Neutral Line（N） | Connect with Grounding Line(G) |

5.You can remove the bracket ( M4*16 ) screws for adjusting the angle and reinstall it back using tools to tightening bolt after selected angles according to actual demand on site.