

**PHILIPS**

**Lighting**



# **The essential lighting for road and street**

## **EssentialForce Plus**

With a measured efficacy of up to 165 lm/W, great optical performance and robustness, EssentialForce Plus ensures great return on investment and compliance to application standards.

### **Benefits**

- Presenting great optical performance and a measured efficacy of up to 165lm/W combined with its installation versatility, with an embedded tilt angle adjustment system (-5° / 0° / +5°), EssentialForce Plus provides a great flexibility to comply with most of projects in Roadlighting while achieving great energy savings
- Thanks to its optimized thermal system, EssentialForce Plus can deliver up to 20400 lumens with a compact design, achieving a great return on investment for municipalities
- Designed for robustness with state of the art techniques, EssentialForce Plus has 102000 hours lifetime, bolts with special treatment to endure harsh environment, 3000 hours salt spray painting, 3G vibration approval and and mechanical impact protection IK09.

# EssentialForce Plus

## Features

- Efficacy up to 165 lm/W
- Die cast aluminium body, Grey Munsel N6.5 painting with high resistance to corrosion, tested for 3.000 hours salt spray
- lifetime of 102khours
- IK09
- Standard surge protection: 10kV/12kA.
- Light distribution compliant with NBR 5101
- Integrated tilt(5 degrees)
- CISPR15 compliant dimmable driver.
- NEMA socket, allowing for remote lighting management.
- High transparency UV resistant polycarbonate (PC) lenses.
- Easy connection to tele management systems such as Interact City, with a standard 7-pin

## Application

- Traffic routes: highways, streets, and avenues.
- Urban areas: parks and plazas, pedestrian crossings, bike paths, parking areas.
- Large open areas: industrial yards, harbours, airports, canals, railway terminals.

## Warnings and Safety

- Follow the mounting instructions provided by the manufacturer.

General Information	
Driver included	Yes
Light source replaceable	Yes
Light Technical	
Correlated Color Temperature (Nom)	4000 K
Color rendering index (CRI)	70
Operating and Electrical	
Surge Protection (Common/Differential)	Surge protection level until 10 kV
Controls and Dimming	
Dimmable	Yes
Maximum dim level	1%
Mechanical and Housing	
Housing Color	Gray
Mech. impact protection code	IK09
Ingress protection code	IP66
Standard tilt angle side entry	0°+5°-5°
Standard tilt angle posttop	0°
Overall height	135 mm
Overall length	304 mm
Overall width	277 mm
Approval and Application	
Ambient temperature range	-5 to +50 °C

## General Information

Order Code	Full Product Name	Lamp family code
919306038111	BRP231 LED110 NW 69W DML P7 0-10	LED110
919306038121	BRP231 LED140 NW 87W DML P7 0-10	LED140
919306038131	BRP231 LED160 NW 97W DML P7 0-10	LED160S
919306038141	BRP231 LED182 NW 114W DML P7 0-10	LED185-4S
919306038151	BRP231 LED204 NW 136W DML P7 0-10	LED204-4S

# EssentialForce Plus

## Light Technical

Order Code	Full Product Name	Luminous		
		Luminaire light beam spread	Efficacy (rated) (Nom)	Luminous Flux
919306038111	BRP231 LED110 NW 69W DML P7 0-10	151° x 88°	159 lm/W	11,000 lm
919306038121	BRP231 LED140 NW 87W DML P7 0-10	151° x 88°	161 lm/W	14,000 lm
919306038131	BRP231 LED160 NW 97W DML P7 0-10	151° x 88°	165 lm/W	16,000 lm

Order Code	Full Product Name	Luminous		
		Luminaire light beam spread	Efficacy (rated) (Nom)	Luminous Flux
919306038141	BRP231 LED182 NW 114W DML P7 0-10	142° x 73°	162 lm/W	18,500 lm
919306038151	BRP231 LED204 NW 136W DML P7 0-10	144° x 74°	150 lm/W	20,400 lm

## Operating and Electrical

Order Code	Full Product Name	Power Consumption
919306038111	BRP231 LED110 NW 69W DML P7 0-10	69 W
919306038121	BRP231 LED140 NW 87W DML P7 0-10	87 W
919306038131	BRP231 LED160 NW 97W DML P7 0-10	97 W

Order Code	Full Product Name	Power Consumption
919306038141	BRP231 LED182 NW 114W DML P7 0-10	114 W
919306038151	BRP231 LED204 NW 136W DML P7 0-10	136 W

