



ClearFlood

BVP650 LED-HB/740 II DRM2 27782 lm

Introduction

ClearFlood is a range of floodlights that enables you to choose the exact lumen rating that you need for your specific application. Designed around state-of-the-art LEDs and extremely high-efficiency optics, this very competitive solution offers an industry-leading lux per euro ratio and significant energy savings. The choice of different optics in the ClearFlood range opens new application possibilities for LEDs. ClearFlood BVP650 is also easy to install and to maintain.

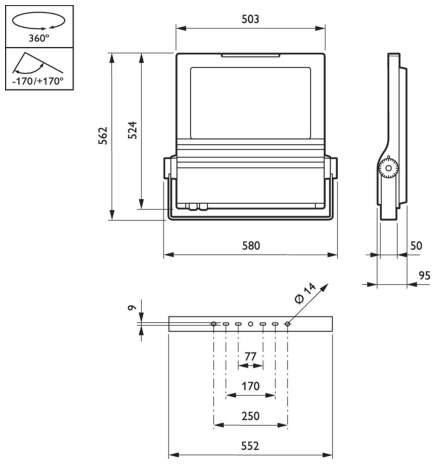
Product Information

Product Family Code	BVP650
Mechanical and Housing	
Housing Material	Aluminum die cast
Fixation material	Steel
Ingress protection code	IP66
Mech. impact protection code	IK09
Corrosion resistance	500 hours Salt Spray Test for standard version, 1.000 hours. Salt Spray Test optional Marine Salt Protection (MSP)
Certification	
CE mark	CE mark
ENEC mark	ENEC mark
RoHS mark	-
WEEE mark	WEEE mark
Protection class IEC	II
Service	
Warranty period	5 years
Serviceability	Class A, luminaire is equipped with serviceable parts (when applicable): LED board, driver, control units, surge protection device, optics, front cover and mechanical parts
Light source replaceable	Yes
Operating ambient temperature range Tamb	-40 to +50 °C
Performance ambient temperature (Tq)	25 °C
L-Value	L90
Lifetime	100000 h
Surge protection	6KV in Common or Differential mode as standard, 10KV with optional Surge Protector Device (SPD)

IPEA - Energy classification

Road		Large area		Historical centers		Green areas		Cycle & pedestrian	
IPEA	Class	IPEA	Class	IPEA	Class	IPEA	Class	IPEA	Class
1.62	A5+	2.03	A9+	2.25	A11+	1.66	A5+	1.66	A5+

Dimensional drawing(s) - mm



Light technical Report

Drivers

Description	Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt
12NC	929002128706
Number of driver(s)	2
Number of driver per MCB 16A	8
Inrush current	53 A
Inrush time	300 μ s
Input Voltage	220V-240V
Input Frequency	50/60 Hz
Current	686 mA
System power (minimum)	174 W
System power (maximum)	174 W
System power (average)	174 W
Power consumption tolerance	+/-10%
Power Factor (100%)	0.99
Power Factor (50%)	0.97
Connectivity	No connectivity
Dimming	No dimming

Light engine

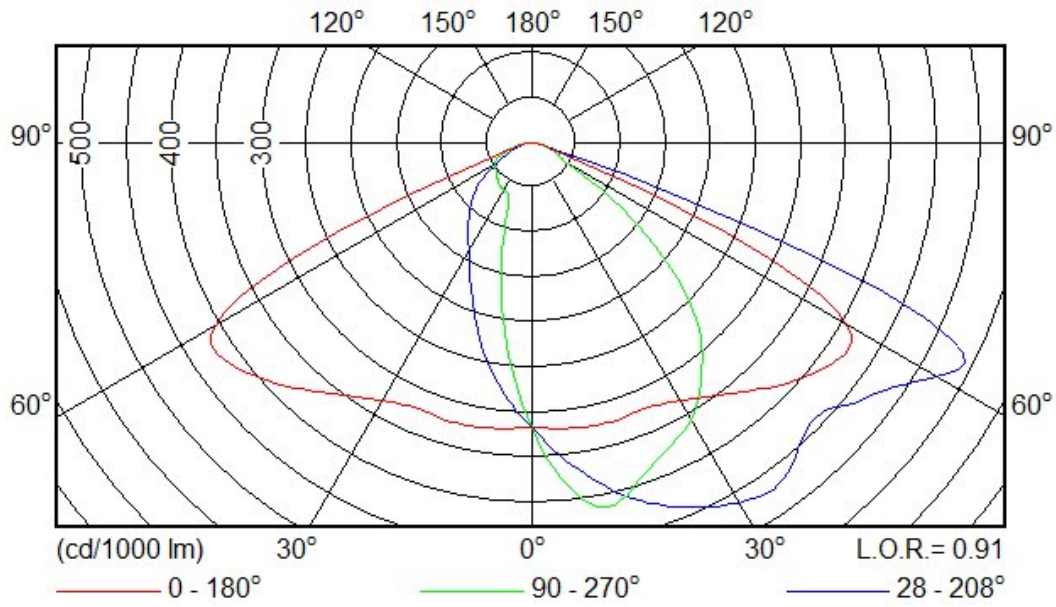
Light source engine type	LED
Number of LED	82
Initial LED luminaire efficacy (source)	160 lm/W
Initial LED luminaire efficacy (system)	146 lm/W
Light source colour	740 (Neutral White)
Init. colour Rendering Index	70
Init. CRI tolerance	+/-2
Init. Corr. colour Temperature	4000 K
Initial tolerance	+/- 180 K (5 SDCM)
End of life tolerance	+/- 255 K
Initial luminous flux (source)	27782 lm
Luminous flux tolerance	+/-7%
Initial luminous flux (system)	25396 lm
Photobiological risk	Risk group 0 (exempt) according to EN IEC 62471

Optics

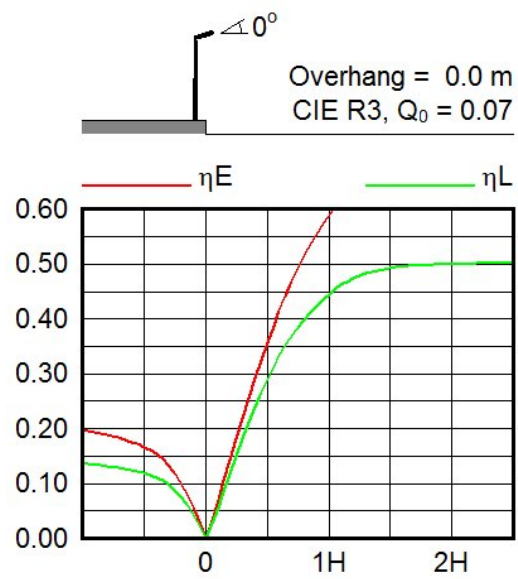
Optical configuration	DRM2
LOR	0.91
ULR at tilt=0°	0.00%
G* at tilt=0°	G*6
Imax (at 90° and above)	0 cd/klm
CIE code	47 85 99 100 91

Photometric Graphs

Polar intensity diagram



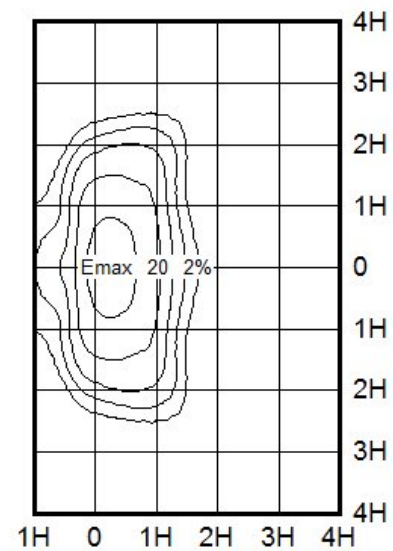
Utilisation factor curve and luminance yield diagram Relative isolux diagram



Horizontal Illuminance $\triangle 0^\circ$

H	E_{max}
(m)	(lux)
4.0	679
6.0	302
8.0	170

M.F. = 1.0



Lab Information & Certification

Lab Information

Test standards

EN 13032-4:2015	Light and lighting. Measurement and presentation of photometric data of lamps and luminaires. Part 4: LED lamps, modules and luminaires
EN 13032-1:2014	Light and lighting. Measurement and presentation of photometric data of lamps and luminaires. Part 1: Measurement and file format
IEC 62717:2014+AMD1:2015	LED modules for general lighting - performance requirements
IES LM-79-08	IES Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products
IEC / EN 62722-1:2014	Luminaire performance - Part 1: General requirements
IEC / EN 62722-2-1:2014	Luminaire performance - Part 2-1: Particular requirements for LED luminaires

Test equipment

LMT GO-DS 2000 Goniometer (C/G)	<input type="checkbox"/>
Yokogawa WT3000 power analyzer	<input type="checkbox"/>
Chroma 6415 programmable AC source	<input type="checkbox"/>
Agilent 6675A system DC power supply	<input type="checkbox"/>
Integrating sphere U-101-A	<input type="checkbox"/>
EM TEST NetWave3 AC/DC source	<input type="checkbox"/>
FLUKE Norma 4000 power analyzer	<input type="checkbox"/>
Sonopan L-100 luxmeter	<input type="checkbox"/>
Gigahertz X1-3 hazard lightmeter	<input type="checkbox"/>
Gigahertz XD-45-HB-4 Head	<input type="checkbox"/>
Gigahertz XD-45-HUV-4 head	<input type="checkbox"/>

MEASUREMENT UNCERTAINTIES

Type of test	Uncertainties
Luminous flux	+/- 2.2 %
Power	+/- 0.5 %
Imax	+/- 2.2 %
Beam angle of Imax	+/- 0.1°
Ambient temperature 0-50°C	+/- 0.1°C

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Signed-off by
Dariusz Pierzchanowski

DISCLAIMER: This photometry report is compiled based on real measurement done in Signify Laboratories during development and release of new products and calculation data pulled from PPS web-based tool and internal data. The values present in this report may differ from real values measured for specific product, but not more than +/-10 % on power and +/- 7% on lumen.

Certification



APPENDIX TO CERTIFICATE

SMT/CTF-3/0001/3/2018

Supervised Manufacturers' Testing SMT Customer's Testing Facility CTF - Stage 3

List of products

for which the Laboratory of Quality Philips Lighting Poland Sp. z o.o. Pila O/Kętrzyn
is authorized to perform testing
for ITE PREDOM Division as a certification body in the framework
ENEC an CCA agreements and IECEE CB Scheme

CATEGORY	PRODUCTS*)	STANDARDS**)		
		For ENEC and CCA	For IECEE CB Scheme	For national certification
LITE	Fixed general purpose luminaires	EN 60598-1 EN 60598-2-1	IEC 60598-1 IEC 60598-2-1	EN 60598-1 EN 60598-2-1
LITE	Recessed luminaires	EN 60598-1 EN 60598-2-2	IEC 60598-1 IEC 60598-2-2	EN 60598-1 EN 60598-2-2
LITE	Luminaires for road and street lighting	EN 60598-1 EN 60598-2-3	IEC 60598-1 IEC 60598-2-3	EN 60598-1 EN 60598-2-3
LITE	Floodlights	EN 60598-1 EN 60598-2-5	IEC 60598-1 IEC 60598-2-5	EN 60598-1 EN 60598-2-5
LITE	Luminaires for emergency lighting	EN 60598-1 EN 60598-2-22	IEC 60598-1 IEC 60598-2-22	EN 60598-1 EN 60598-2-22
LITE	Luminaires with limited surface temperatures	EN 60598-1 EN 60598-2-24	IEC 60598-1 IEC 60598-2-24	EN 60598-1 EN 60598-2-24
LITE	LED modules for general lighting	EN 62031	IEC 62031	EN 62031
LITE (ENEC+)	LED modules for general lighting	EPRS 001/ IEC 62717	-	-
LITE (ENEC+)	Luminaires	EPRS 002 / IEC 62722-1	-	-
LITE (ENEC+)	LED Luminaires	EPRS 003/ IEC 62722-2-1	-	-
LITE	Lamp and luminaires	-	-	EN 13032-1
LITE	Lamp and luminaires	-	-	EN 13032-2
LITE	Lamp and luminaires	-	-	EN 13032-3
LITE	LED lamps, modules and luminaires	-	-	EN 13032-4
LITE	Solid-State Lighting Products	-	-	LM-79

*) - Name and address of manufacturing place of the products: Philips Lighting Poland Sp. z o.o. Pila, ul. Kossaka 150, O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland

**) - newest edition of the standards/documents

Manager of Certification Office
ITE PREDOM Division

Joanna Walczak- Zlotkowska

Deputy Director of ITE PREDOM Division

Aleksander Piotrowski

Warsaw, 2018-11-28



Instytut Technologii Elektronowej Oddział PREDOM
Institute of Electron Technology PREDOM Division
ul. Krakowiaków 53, 02-255 WARSZAWA, POLSKA - POLAND

POLSKIE CENTRUM AKREDYTACJI
POLISH CENTRE FOR ACCREDITATION



Sygnatariusz EA MLA
EA MLA Signatory

CERTYFIKAT AKREDYTACJI
LABORATORIUM BADAWCZEGO
ACCREDITATION CERTIFICATE OF TESTING LABORATORY
Nr AB 003

Potwierdza się, że: / This is to confirm that:

INSTYTUT TECHNOLOGII ELEKTRONOWEJ
Al. Lotników 32/46, 02-668 Warszawa
INSTYTUT TECHNOLOGII ELEKTRONOWEJ ODDZIAŁ PREDOM
LABORATORIUM BADAWCZE
ul. Krakowiaków 53, 02-255 Warszawa

spełnia wymagania normy PN-EN ISO/IEC 17025:2005
meets requirements of the PN-EN ISO/IEC 17025:2005 standard

Akredytowana działalność jest określona w Zakresie Akredytacji Nr AB 003
Accredited activity is defined in the Scope of Accreditation No AB 003

Akredytacja pozostaje w mocy pod warunkiem przestrzegania
wymagań jednostki akredytującej określonych w kontrakcie Nr AB 003
This accreditation remains in force provided the Laboratory observes
the requirements of Accreditation Body defined in the Contract No AB 003

Akredytacji udzielono dnia 27.04.1993 r.
Accreditation was granted on 27.04.1993



DYREKTOR
POLSKIEGO CENTRUM AKREDYTACJI

LUCYNA OLBORSKA

Warszawa, 10 grudnia 2018 roku

Intensity Table

FORMAT=PHILLUM
VERSION=2.0
STATUS=R
MCOD=LVE171115F
DATE=2018-03-15
TXTS="L-TUNE 2022-08-08"
ORIG=WLD
BRAND=PHILIPS
FAMILY=Clearflood
FAMCOD=BVP650
HOUSING=BVP650 T25
OPTICS=DRM2
BLID=-
LAMP=LED-HB 27782 lm-4S L90@100kh
LAFLUX=27782
NLPS=1
LAMPOL=740
INPW=174
INVO=230
GEOTYPE=3
GEOL1=0.095
GEOL2=0.58
GEOL3=0.562
OPTTYPE=3
OPTL1=0
OPTL2=0.407
OPTL3=0.243
SURF76=0.024
SURF85=0.009
PTYP=C
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TLME=0.00
LUBA=1000
CORR=1
SYMCON=4
SYMPANE=2
NCON=64
NPLA=73
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57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
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