## **PHILIPS**

### CoreLine Family



Innovative

Easy to install



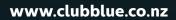


## In a state or state-of-the-art?

Real professionals choose Philips CoreLine products

Over







CoreLine Family

## Lower standards or raise the bar?

Smart Kiwi installers never say "no" to saving time and money. And with Philips CoreLine, you will never have to. Because Philips CoreLine offers a full range of LED and connected lighting solutions that keep installation time to a minimum, while saving a maximum of energy. Whether old or new, optimal lighting can transform a building into something truly special and turn it into a place where people enjoy working and living. Give your customers that "wow" moment with Philips CoreLine: the complete range of high quality LED and connected lighting that's setting the reference in the market. Because when light really matters, you don't want to take a chance.

## CoreLine. The complete range



CoreLine **Highbay IP65** 



CoreLine Panel



CoreLine **Highbay IP40** 



CoreLine Batten



CoreLine Downlight



CoreLine Waterproof





CoreLine Tango Floodlight

## Innovative

With Philips CoreLine you get much more than high quality and easy-to-install lighting solutions – you get LED lighting that's setting **the reference** in the industry. That's why CoreLine luminaires are the first Interact Ready LED luminaires and work seamlessly with the intuitive Interact Pro app and dashboard. It has never been easier to bring the power of connected lighting to small and medium-sized enterprises.

## Easy-to-install

The efficient design of the CoreLine fixtures enables replacement of existing lights, with **no** need for expensive re-wiring or new ceiling configurations.

## **High quality**

At the heart of CoreLine's high-quality light is LED technology. Lasting up to 50,000 hours @ L70, its long lifetime enables you to meet every demand and provide the best lighting solution for every customer.









## Lighting New Zealand for over 75 years

The Philips brand stands for quality and energy-efficiency in light. For over 127 years, Philips products have been at the forefront of innovation. As the world's leader in lighting, Philips is driving the switch to energy-efficient and connected lighting solutions.

That same principle has been at work here in **New Zealand** for over 75 years, with thousands of lighting solutions across every sector.

Today, Philips Lighting is an integral part of the Kiwi landscape. And just as that landscape is forever changing, so we'll continue to provide the cutting-edge solutions that will take New Zealand industry into the future.

### A heritage of taking light beyond illumination





1891-2014 Conventional

0

2012 Connected lighting





Sports Eden Park



Façade



Street Lighting Hamilton







### 2018 Lighting as a language (Analytics, LiFi)

### Innovation continues



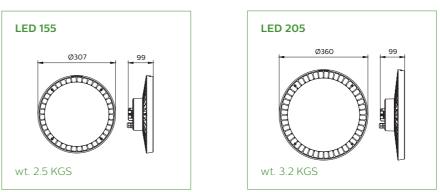
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REAL **PROs** 

### Simple installation and different mounting options

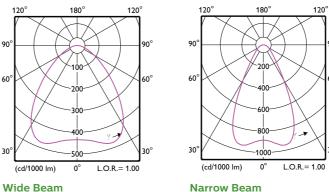
Installing the new CoreLine Highbay IP65 is as simple as ever and can be done three ways: hook mounting, pipe mounting and bracket mounting.

### **Dimensions**



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in producton.

### **Polar intensity**



Narrow Beam (available on request)

### Order codes for the CoreLine Highbay IP65

Part Number		Shortcode
911401518661 BY	698P LED155/840 PSU WB CAU G2 CL	BY698P1584PWF
911401518961 BY	698P LED155/850 PSU WB CAU G2 CL	BY698P1684PN3
911401518761 BY	698P LED205/840 PSU WB CAU G2 CL	BY698P2084PWF
911401519061 BY	698P LED205/850 PSU WB CAU G2 CL	BY698P2084DN3
911401518861 BY	698P LED265/840 PSU WB CAU G2 CL	BY698P2084PIRN3
911401519161 BY	698P LED265/850 PSU WB CAU G2 CL	BY698P2084PIRW3
	911401518661 BY 911401518961 BY 911401518761 BY 911401519061 BY 911401518861 BY	911401518661 BY698P LED155/840 PSU WB CAU G2 CL   911401518961 BY698P LED155/850 PSU WB CAU G2 CL   911401518761 BY698P LED205/840 PSU WB CAU G2 CL   911401519061 BY698P LED205/850 PSU WB CAU G2 CL   911401518861 BY698P LED265/840 PSU WB CAU G2 CL

\*Note: All the above options come with 3M Flex and Plug and a wide beam distribution. Other options available on request.

### Accessories

Specification	Part Number	
Mounting Bracket	911401523461	BY698Z PSU MB
Spare Hook	911401565101	MOUNTING HOOI

## CoreLine Highbay IP65 Instant frustration or easy installation?

### Real professionals count on the new Philips CoreLine Highbay IP65.

Designed as a replacement for conventional 250 or 400W metal halide luminaires. It comes complete with a Flex and Plug and single point suspension, making connection quick and easy to install. The Highbay also features a new round dedicated optic, providing a softer more natural light.

### **Key Features and Benefits**

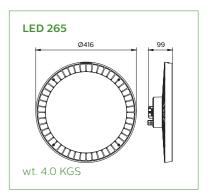
- ✓ Strong energy saving credientials system efficacy @135lm/W.
- ✓ Round exit window design for easy alignment when installing multiple highbays in a row.
- Excellent glare control for narrow beam with an additional reflector.
- ✓ High quality aluminium die cast heatsink ensuring a long life in harsh environments.





- Applications ✓ Warehouses
- ✓ Distribution centres
- ✓ General manufacturing areas
- ✓ Exhibition halls
- ✓ High ceiling applications





Shortcode

G2 K\_RR



REAL PROS REAL QUALITY

## CoreLine Highbay IP40

# ow achiever or **high performer?**

### Real professionals count on the new **Philips CoreLine Highbay IP40**.

This replaces traditional Philips 400W metal halide and T5 highbays.

The IP40 CoreLine Highbay has an attractive high quality design with an assortment of different optics including a high rack option. With advanced options, such as a ZigBee Actilume wireless control, system energy savings can reach up to 88% when compared to traditional highbay luminaires.

### **Key Features and Benefits**

- System efficacy of up to 140lm/W offers up to 73% energy savings compared to traditional HID systems.
- Three different distributions to precisely illuminate space efficiently.
- Robust aluminium extrusion body and quality Xitanium drivers ensuring luminaire longevity.



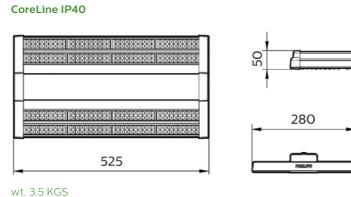
### Applications

- ✓ Warehouses
- ✓ Distribution centres
- ✓ General high ceiling applications
- ✓ Factories
- ✓ Production lines
- ✓ Large format retail stores

### Simple installation

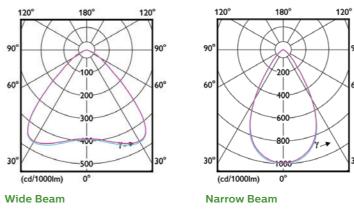
Installing the new CoreLine Highbay IP40 is as simple as ever, using the standard A frame hangers, providing a self leveling two point installation.

### Dimensions



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in production.

### **Polar intensity**



### Order codes for the CoreLine Highbay IP40

Specification	Part Number	Shortcode
153W, 21000lm, 4000K	911401540661 BY560P LED210/NW PSU WB CAU CL	BY560P21084PWF
153W, 21000lm, 6500K	911401540761 BY560P LED210/NW PSU WB CAU CL	BY560P21086PWF

\*Note: All the above options come with 3M Flex and Plug and a wide beam distribution. Other options available on request.



0°

50°

80°



### Real professionals count on the new **Philips** CoreLine Downlight.

This commercial LED downlight range combines light efficiency and comfort making it a perfect replacement for traditional compact fluorescent downlights.

The CoreLine Downlight is available in a wide range of lumen packages, sizes and two IP ratings to suit all applications.

### **Key Features and Benefits**

- ✓ IP20 or IP54, ensuring suitability for most environments.
- ✓ Two reflectors; high gloss white or aluminium.
- ✓ Multiple lumen outputs providing design flexibility.
- ✓ Options available for Interact Pro connected lighting system.



### Applications

- ✓ Offices
- ✓ Meeting rooms
- ✓ Shopping malls
- ✓ Hotels

### Simple installation

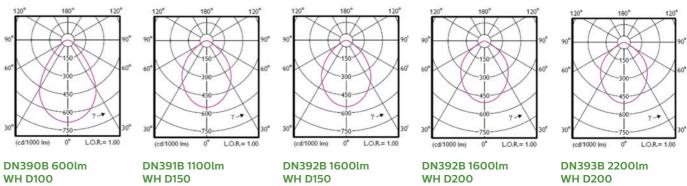
Installing the new CoreLine Downlight is as simple as ever. Standard spring-clip installation, three cut out sizes, 100, 150 and 200mm. Fitting comes complete with Flex and Plug.

### **Dimensions**



Dimensions show above are nominal measurement. Slight variation in dimension may occur in production.

### Polar intensity



WH D100

### Order codes for the CoreLine Downlight

**CoreLine Downlight** 

Specification	Part Number		Shortcode
6W, 600lm, 4000K, 100mm cut-out	911401541361	DN390B LED6/840 PSU D100 WH CAU CL	DN39B684P100WF
10W, 1100lm, 4000K, 150mm cut-out	911401541461	DN391B LED11/840 PSU D150 WH CAU CL	DN39B1184P15WF
15W, 1600lm, 4000K, 150mm cut-out	911401542361	DN392B LED16/840 PSU D150 WH CAU CL	DN39B1684P15WF
15W, 1600lm, 4000K, IP54, 150mm cut-out	911401542461	DN392B LED16/840 PSU D150 WH WP CAU CL	DN39B1684P15WPF
15W, 1600lm, 4000K, 200mm cut-out	911401541561	DN392B LED16/840 PSU D200 WH CAU CL	DN39B1684P20WF
19W, 2200lm, 4000K, 200mm cut-out	911401541661	DN393B LED22/840 PSU D200 WH CAU CL	DN39B1684P220WF
19W, 2200lm, 4000K, IP54, 200mm cut-out	911401541761	DN393B LED22/840 PSU D200 WH WP CAU CL	DN39B1684P22WWF

### **CoreLine Downlight Interact Ready**

Specification	Part Number		Sh	ortcode
19W,2200lm, 4000K, 200mm cut-out, IAR	911401570641	DN393B LED22/840 IAR WH CAU	DN	139B1684I220WF

\*Note: All the above options come with White reflector and Flex and Plug, Other options available on request.





### **CoreLine Troffer**

# Fading light or **leading light?**

### Real professionals count on the new **Philips CoreLine Troffer.**

Designed for retrofit projects replacing traditional florescent troffer packs, it features the latest in LED technology and offers high light quality and efficiency gains.

### **Key Features and Benefits**

- ✓ 60% more energy-efficient compared to conventional troffer packs.
- Available in recessed, suspended and surface mounting options, ensuring consistent look and feel.
- ✓ Slim design with overall height of less than 46mm.
- Options available for Interact Pro connected lighting system.



### Applications

- $\checkmark$  Offices
- ✓ Schools
- ✓ Meeting rooms
- ✓ Hallways & corridors

## 50,000<br/>hours<br/>@L70Up to<br/>125<br/>Im/wIP205<br/>year<br/>warrantyinteract<br/>ready.

### Simple installation

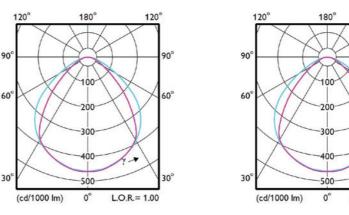
The installation of the recessed troffer is quick and simple, slotting into standard T rails systems. Comes complete with Flex and Plug.

### **Dimensions**



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in production.

### **Polar intensity**



600mm x 1200mm

600mm x 600mm

### Order codes for the CoreLine Troffer

### CoreLine Troffer

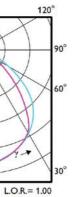
Specification	Part Number	Shortcode
32W,3700lm, 4000K, 1200x300	911401540861 RC100B LED37S 840 W30L120 PSU CAU CL	RC10B3784312PNF
32W,3700lm, 4000K, 600x600	911401540961 RC100B LED37S 840 W60L60 PSU CAU CL	RC10B378466PNF
32W,3700lm, 4000K, 1200x600	911401541061 RC100B LED37S 840 W60L120 PSU CAU CL	RC10B3784612PNF

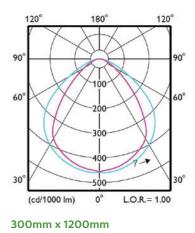
### **CoreLine Troffer Interact Ready**

Specification	Part Number		Shortcode
32W, 3700lm, 4000K, 1200x300, IAR	911401543751	RC100X LED37S 840 W30L120 IAR CAU	RC10B378431IPNF
32W, 3700lm, 4000K, 600x600, IAR	911401543651	RC100X LED37S 840 W60L60 IAR CAU	RC10B378466INF
32W, 3700lm, 4000K, 1200x600, IAR	911401543851	RC100X LED37S 840 W60L120 IAR CAU	RC10B3784612INF
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\*Note: All the above options come with Flex and Plug.







### **CoreLine Panel UGR19**

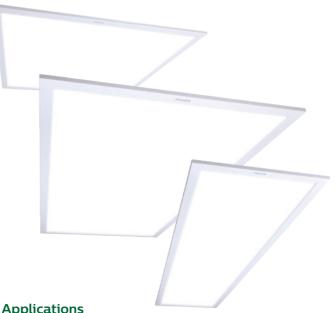
# Panel rejection or panel perfection?

### Real professionals count on the new **Philips** CoreLine Panel UGR19.

Our slimmest panel is clearly the next step in recessed luminaires for the design and build market. It not only offers increased energy efficiency and excellent glare control, but is also visually appealing without being intrusive.

### **Key Features and Benefits**

- ✓ 60% more engergy efficient compared to conventional TL Solutions.
- ✓ UGR19 office compliant.
- ✓ Options available for Interact Pro connected lighting system.



### Applications

- ✓ Offices
- ✓ Schools
- ✓ Meeting rooms
- ✓ Lunch rooms
- ✓ Hallways & corridors

### interact ready.

### Simple installation and different mounting options

Simple and flexible installation: Comes with a plug-in connector for the driver and a Flex and Plug. Suitable for T-rail ceiling installations. For recessed and surface mounting in plaster ceilings, a proprietary kit is necessary.

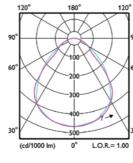
### **Dimensions**

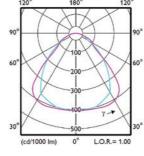
REAL **PROs** 



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in production.

### **Polar intensity**





LED40S 840 W30L120

LED40S 840 W60L60

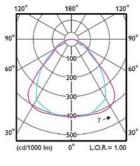
### Order codes for the CoreLine Panel UGR19 CoreLine Panel UGR19

Specification	Part Number		Shortcode
36W, 4000lm, 4000K, 1200X300	911401761042	RC160V LED40S 840 W30L120 PSU OC CAU	RC16V484312POF
36W, 4000lm, 4000K, 600X600	911401761052	RC160V LED40S 840 W60L60 PSU OC CAU	RC16V48466POF
36W, 4000lm, 4000K, 1200X600	911401761062	RC160V LED40S 840 W60L120 PSU OC CAU	RC16V484612POF
55W, 6000lm, 4000K, 1200X600	911401761072	RC160V LED60S 840 W60L120 PSU OC CAU	RC16V684612POF

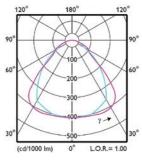
CoreLine Panel UGR19 Inteact Ready					
Specification	Part Number		Shortcode		
36W, 4000lm, 4000K, 1200X300, IAR	911401755052	RC160X LED40S 840 W30L120 IAP OC CAU	RC16V484312IOF		
36W, 4000lm, 4000K, 600X600, IAR	911401755032	RC160X LED40S 840 W60L60 IAP OC CAU	RC16V48466IOF		
36W, 4000lm, 4000K, 1200X600, IAR	911401767682	RC160X LED40S 840 W60L120 IAP OC CAU	RC16V84612IOF		

\*Note: All the above options come with Flex and Plug.









LED60S 840 W60L120

### Simple installation and different mounting options

Simple and flexible installation: Comes with a Flex and Plug. Suitable for T-rail ceiling installations. For recessed and surface mounting in plaster ceilings, a proprietary kit is necessary.

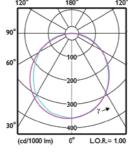
### **Dimensions**

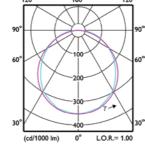
REAL PROs



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in production.

### **Polar intensity**





LED40S 840 W30L120

LED40S 840 W60L60

### Order codes for the CoreLine Panel

Specification	Part Number		Shortcode
40W, 4000lm, 4000K, 300X1200	911401767902	RC160V LED40S 840 W30L120 PSU CAU CL	RC16V484312PNF
40W, 4000lm, 4000K, 600X600	911401767892	RC160V LED40S 840 W60L60 PSU CAU CL	RC16V48466PNF
48W, 4800lm, 4000K, 600X1200	911401808480	RC091V LED48S/840 PSU W60L120 CL	RC91V484612PNF
48W, 4800lm, 6500K, 600X1200	911401808580	RC091V LED48S/865 PSU W60L120 CL	RC91V486612PNF

\*Note: All the above options come with Flex and Plug.

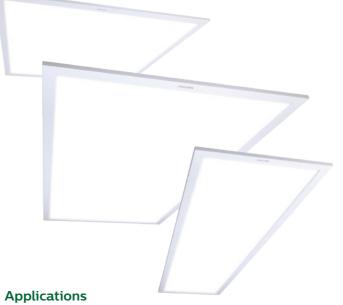
### CoreLine Panel lue 2 $\bigcirc$ add value?

### Real professionals count on the new **Philips** CoreLine Panel.

This functional, edge-lit LED panel is suitable for general lighting applications. This affordable light panel delivers high efficacy and uniform light output in an economical package.

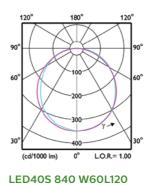
### **Key Features and Benefits**

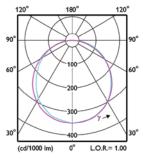
- Energy efficient edge-lit panel.
- ✓ Delivers comfortable light with excellent uniformity.
- ✓ Visually appealing without being intrusive.



- ✓ Offices
- ✓ Meeting rooms
- ✓ Lunch rooms
- ✓ Hallways & corridors







LED60S 840 W60L120

### **CoreLine Batten**

# Lower standards or raise the bar?

### Real professionals count on the new **Philips CoreLine Batten**.

These battens deliver superior performance, output and energy efficiency in an affordable package. It is the perfect retrofit solution for conventional battens.

With a wider base and no visible mounting brackets, replacement of an existing batten has never been so easy.

### **Key Features and Benefits**

- ✓ Excellent replacement for T8 and older battens.
- ✓ Surface mount with no visible brackets.
- ✓ Emergency options available (AS2293 compliant).

# Sft

REAL PROs

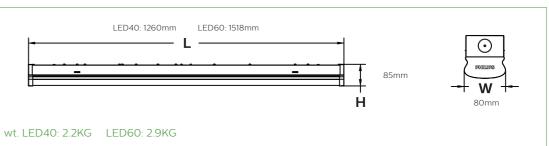
### Applications

- ✓ Warehouses
- 🗸 Retail
- ✓ Stairwells
- ✓ General industrial applications

### Simple installation

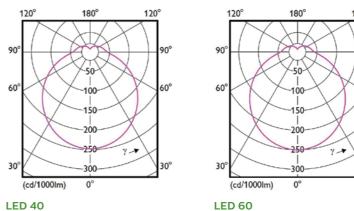
Speed and ease of install is key with features such as large terminal block, central feed as well as multiple knock outs for through wiring.

### **Dimensions**



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in producton.

### Polar intensity



### Order codes for the CoreLine Batten

Specification	Part Number		Shortcode
40W, 4100lm, 4000K, 4ft	911401761112	BN008C LED40/NW L1200 PSU CL	BN840NW12P
40W, 4100lm, 6500K, 4ft	911401761102	BN008C LED40/CW L1200 PSU CL	BN840CW12P
60W, 6000lm, 4000K, 5ft	911401761152	BN008C LED60/NW L1500 PSU CL	BN860NW15P
60W, 6000lm, 6500K, 5ft	911401761142	BN008C LED60/CW L1500 PSU CL	BN860CW15P

\*Note: Emergency options also available on request.





### REAL PROs

### **CoreLine Widebody Waterproof Batten**

## Soggy mess or waterproof success?

### Real professionals count on the new Philips **CoreLine Widebody** Waterproof Batten.

It's the suitable retrofit solution for conventional waterproof fittings. With a wider base, sturdy and robust finish, multiple knock-outs and the ability for through wiring, installation is hassle-free and simple.

### **Key Features and Benefits**

- ✓ Wide base for direct replacement of T8 luminaires.
- ✓ Emergency options available (AS2293 compliant).



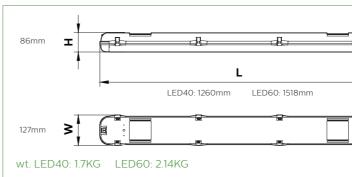
### Applications

- ✓ Warehouses
- ✓ Wet areas
- ✓ Carparks
- ✓ Factories

### Simple installation

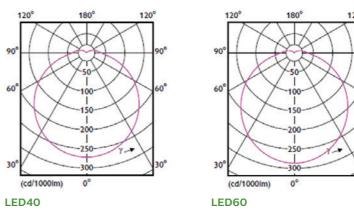
Speed and ease of install is key with features such as large terminal block, central feed as well as multiple knock-outs for through wiring.

### **Dimensions**



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in producton.

### **Polar intensity**



### Order codes for the CoreLine Widebody Waterproof Batten

Specification	Part Number		Shortcode
40W, 4000lm, 4000K, 4ft, IP65	911401761162	WT008C L1200 NW 4000lm NZ CL	WT81284P
40W, 4000lm, 6500K, 4ft, IP65	911401761172	WT008C L1200 CW 4000lm NZ CL	WT81286P
60W, 6000lm, 4000K, 5ft, IP65	911401761202	WT008C L1500 NW 6000lm NZ CL	WT81584P
60W, 6000lm, 6500K, 5ft, IP65	911401761212	WT008C L1500 CW 6000lm NZ CL	WT81586P

\*Note: Emergency options available on request.







### Real professionals count on the new Philips CoreLine Waterproof Batten.

The new CoreLine Waterproof Batten builds on the reputation of the current model, offering higher performance and a wider range of options, making it the perfect choice for almost any environment. New features include an exceptional 140 lumens per watt, multiple optical options and higher lumen packages.

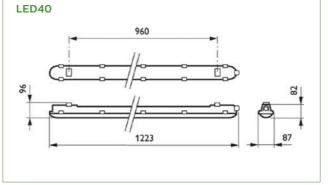
### **Key Features and Benefits**

- ✓ Two optic choices: Wide Beam (Prismatic) for superior glare control; Lambertain (Opal) for general lighting applications.
- ✓ Control options featuring DALI and Interact Pro for greater active energy efficiency and control.
- ✓ High lumen output options available on request (up to 8000 lumens) for higher or elevated ceilings.
- ✓ Easy openable housing and driver replaceable
- ✓ Emergency options available (AS2293 compliant).



### Applications

- ✓ Warehouses
- ✓ Wet areas
- ✓ Carparks
- ✓ Factories
- ✓ Cool stores

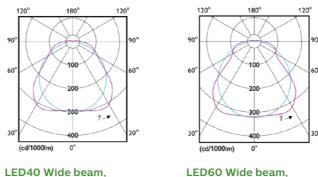


Dimensions shown above are nominal measurement. Slight variation in dimension may occur in producton.

### Polar intensity

Simple installation

**Dimensions** 



Standard Option



### Order codes for the CoreLine Waterproof Batten

**CoreLine Waterproof Batten** 

Specification	Part Number	Shortcode
29W, 4000lm, 4000K, 4ft, IP65	911401552261 WT198C LED40S/840 PSU L1200	WT194084P12
43W, 6000lm, 4000K, 5ft, IP65	911401552361 WT198C LED60S/840 PSU L1500	WT196084P15

\*Note: 8000 lumen variants available on request

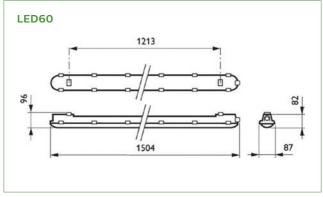
### CoreLine Waterproof Batten Inteact Ready

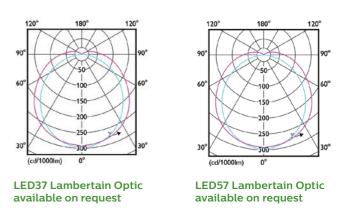
Specification	Part Number	
37W, 4100lm, 4000K, 4ft, IP65, IAR	910500465266 WT120C LED40S/840 IA1 L1200	WT194084I12
50W, 6000lm, 4000K, 5ft, IP65, IAR	910500465267 WT120C LED60S/840 IA1 L1500	WT196084I15

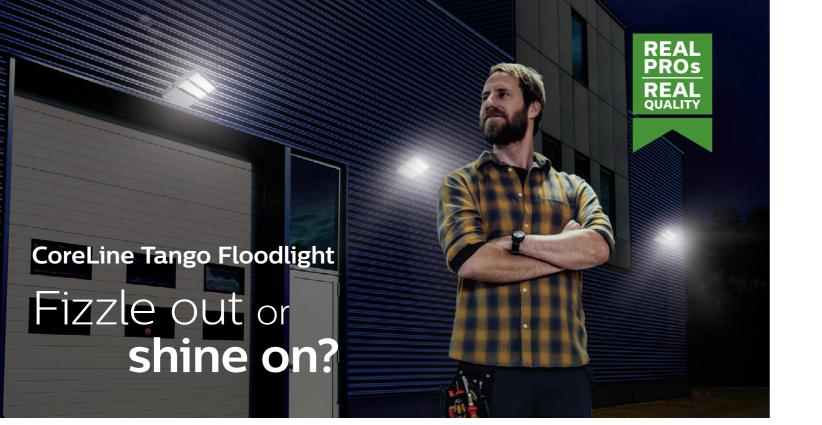
\*Note: Other options available on request, including DALI, Interact Pro and Lambertain optic (wide beam as standard).



Speed and ease of installation is key with features such as a large loop in/out terminal block, central and end knockouts making it suitable for any configuration. In addition to the standard surface mount installation, the CoreLine Waterproof can also be suspended, using the supplied kit as standard.







### Real professionals count on the new Philips CoreLine Tango Floodlight.

Building on the established Tango reputation, this is the perfect solution for a wide range of area lighting applications and replaces traditional HID floodlights.

Incorporating integrated heat sink and driver into one compact and robust housing makes it suitable for a wide range of environments.

### **Key Features and Benefits**

- ✓ Up to 50% energy savings compared to conventional floodlights.
- ✓ Supplied standard with symmetric wide beam optic. Other options and wattages are available to suit most applications.
- ✓ 15KV/KA surge protection, non-corrosive die-cast aluminum housing and galvanised bracket make it ideal for harsh environments.



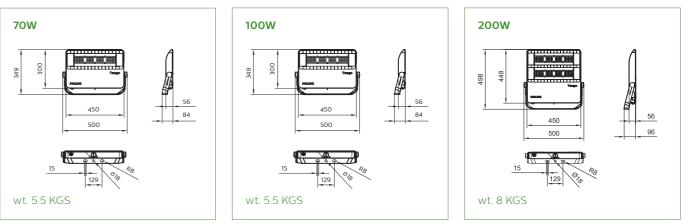
### Applications

- ✓ Area lighting
- ✓ Industrial areas
- ✓ Facades and billboards
- ✓ Parking lots
- ✓ Ports
- ✓ Airports

### Simple installation

Easy to install, and maintain, complete with a galvanised mounting bracket for harsh environments. Complete with 600mm flying lead to make installation easy. Built in protractor ensures accurate aiming.

### **Dimensions**



Dimensions shown above are nominal measurement. Slight variation in dimension may occur in producton.

### Order codes for the CoreLine Tango Floodlight

Specification	Part Number	Shortcode
70W, 8400lm, 4000K	911401692105 BVP381 LED91/NW 70W 220-240V SWB CL	BVP381918470SB
100W, 12000lm, 4000K	911401692005 BVP381 LED130/NW 100W 220-240V SWB CL	BVP3811384100SB
200W, 24000lm, 4000K	911401691905 BVP382 LED260/NW 200W 220-240V SWB CL	BVP3822684200SB

\*Note: All the above options come with a symmetrical wide beam optic. Other options available on request.

## **PHILIPS**

Interact Ready lighting

# Slow business or grow business?

Real professionals boost their business with **Philips CoreLine connected** luminaires that work with the Interact Pro dashboard and app. 6

- ✓ World class connected lighting for small- and medium-sized businesses.
- Easy to install no need for separate antennas, radio boxes or signal cables.
- ✓ Speedy set up with the intuitive Interact Pro app.
- ✓ Get invaluable data from the Interact Pro dashboard and become a trusted advisor.
- ✓ Interact Pro seamlessly works with our Interact Ready CoreLine luminaires.



## interact Pro

It's now possible to bring the power of IoT connected lighting to small and medium-sized businesses with up to 200 light points. Meet Interact Pro: an intuitive app and dashboard that work with Philips Interact Ready CoreLine luminaires. Wherever you work, it works!

## Get connected in 5 simple steps

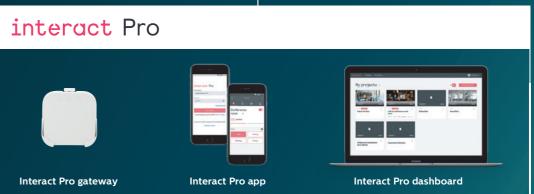


Unbox

2. Install Interact Pro gateway and Interact Ready lighting

interact PHILIPS ready. Smart luminaires

## interact Pro



Discover the possibilities. Get certified today. Go to www.clubblue.co.nz





**3**. Download Interact Pro app

**4**. Configure system with Interact Pro app



**5** Manage monitor and modify via Interact Pro dashboarc



## What is Ingress Protection (IP) rating?

IP ratings describe the environmental protection that a product has from particles and liquids.



### Digit O

Non protected.



Protected against a solid object greater than 50mm, such as a hand.



**2** Protected against a solid object greater than 12.5mm, such as a finger.



**3** Protected against a solid object greater than 2.5mm, such as a wire.



**4** Protected against a solid object greater than 1.0mm, such as a thin strap.



**5** Dust protected. Protects ingress of dust sufficient to cause harm.



**6** Dust tight. No ingress of dust.

### Usage and common application

- IP20 suitable for most indoor applications.
- IP44 suitable for under canopy and bathroom.
- IP54 suitable for under canopy in outdoor areas, industrial
- application etc. IP65 – suitable for industrial application and outdoor areas.
- IP68 suitable for underwater and in-ground applications.

The above information serves as a reference only. Always check with product manufacturer for suitability.





1



**2** Protected against dripping water when tilted up to 15 degrees.

Protected against dripping water.

**3** Protected against spraying water at an angle of up to 60 degrees.



**4** Protected against splashing water from any direction.



**5** Protected against jets of water from any direction.



7

6 Protected against the effects of temporary immersion. Up to 30mins, between 15cm to 1m.



Protected against the effects of temporary immersion in water.



8 Protected against the effects of continuous immersion in water.

## What are **IK (Impact Protection)** ratings?





## Common LED myths

There are many benefits to using LED lighting, but there are also numerous misconceptions about it. We help to separate the facts from fiction by busting some of the common myths. Myth 5

### Myth 1

### LEDs last forever

LEDs have a long source life but they do still slowly fade over time. Ambient temperatures, electrical drive currents, and the effectiveness of cooling systems are all factors that contribute to this phenomenon called lumen depreciation. While LEDs typically do not catastrophically fail. lumen depreciation is a critical factor in determining useful lifetimes.

Philips designs our white light LED products to sustain 70% of initial lumen output (L70). 70% of initial lumen output (L70).

### Myth 2

### White LEDs produce over 180 lumens per watt

These results are often obtained in labs where LED chips are tested at room temperature conditions with short "pulse" tests that produce a high lumen output. While the results are not necessarily "wrong," they do not reflect the typical expected output of LEDs in practical use. When used in lighting fixtures, LED output often decrease by 30-40%

Philips does not use raw LED specifications or "instant on" output testing. Instead, we use independent testing labs to validate the output of our fixtures at constant, realistic thermally-stable operating temperatures in rated ambient environments.

### Myth 3

### 3 Watt LEDs are brighter than 1 Watt LEDs

The wattage of a LED is not directly comparable to the wattage of a traditional light source or even from one LED to another. Two different LEDs can consume the same power but differ noticeably in light output. Thus, when selecting LEDs or LED fixtures, it is more about a quality and consistent light output rather than absolute power

Philips develops solutions based on the light output, distribution and quality needed for the application and distribution and quality needed for the application and not based on the particular wattage of LEDs.

### Myth 4

### LED light quality is poor

The Colour Rendering Index (CRI) is the prevalent method used to judge light quality, though there are known deficiencies and limitations associated with it, especially for LED-based light sources. Research in at least one study found participants preferring LED sources over halogen and incandescent because of overall colour appearance, not a CRI value. The International Commission on Illumination (CIE) has proposed a new metric called Colour Quality Scale (CQS), which will incorporate colour rendering, chromatic discrimination and observer preferences into the measure of Colour Quality

Output. We measure our selection of the output. We measure our colour consistency in SDCM (Standard Deviation of Colour Matching).

### LEDs generate no heat

When used in lighting applications, LEDs do not radiate infrared heat, only visible light. However, waste heat is produced during the conversion of electricity into light. If not properly removed from the lighting system, this may potentially damage the LEDs. Heat removal can be accomplished through heat sinks that draws heat away from the LED and dissipate it into the surrounding air.

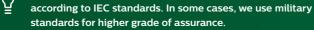
' Philips designs, simulates and tests our products for high thermal efficiency to ensure optimal performance and thermal efficiency to ensure optimal performance and maximise the lifetime of our LEDs.

### Myth 6

### LEDs are not resistant to vibration

There are no moving parts, filaments or fragile glass enclosures with LED lighting. LEDs are therefore very suitable for use in a wide range of applications.

Philips designs products that must pass vibration tests



### Myth 7

### LED systems cost too much

The initial investment of LED systems is higher than that of conventional systems, but due to the long life of the LED and energy savings ranging between 50%-70% compared to conventional light sources, the economic payback can typically be seen in less than two years. Additionally, the upfront cost of LED systems is also dropping rapidly.

Philips provides cost-effective solutions that have a proven and compelling return on investment (ROI).

### Myth 8

### LEDs are not bright enough

LED traffic lights are already common and are certainly a sign that LEDs are bright enough to be seen even in daylight. Outdoor roads, tunnels and entire building façades are being lit entirely with LEDs today. By any measure, LEDs have enough light output for use even in very large outdoor daylight-visible installations.



### Myth 9

### LED lights are dangerous to our eyes

There is a small amount of blue light generated by LED but it is a tiny fraction of the emissions from natural daylight, and similar to emissions from other artificial light sources like incandescent, halogen and energy savers or fluorescent lamps. Typical daily exposure to natural blue light is at least 1,000 times stronger compared to artificial light indoors

Philips LED products comply with all the relevant regulations and legislation, ensuring products are safe to use. This means that being exposed to a LED light is as safe as being exposed to any other artificial light source, and safer than being exposed to natural lighting conditions - such as walking in the open air.

## Real Pros, **Real Quality**

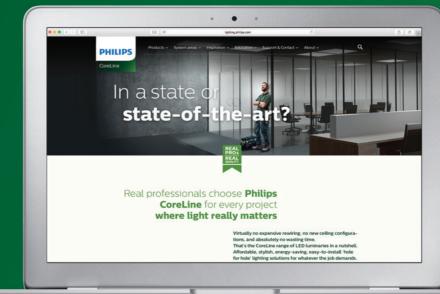
When you need to get the job done right, you can count on Philips LED technology. With the widest range of LED lamps, fixtures and controls, we can satisfy every customer need.

LED technologies are rapidly changing, creating plenty of new opportunities. As a trusted name in lighting, we understand your challenges and can help you build your business.

You're no handyman - you're a real professional. Someone who can be relied on to get the job done. Someone who plans well, executes fast and works efficiently. Real professionals count on Philips Lighting.

For more information visit www.clubblue.co.nz

## CoreLine. Just the beginning







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