



## **Maxolid Highbay Range Extension (BY415P, BY416P)**



# Maxolid Highbay (415P, 416P)



## Unique Selling Points:

- Excellent quality assures high performance in harsh industrial environments
- System efficacy > 125lm/W offers up to 65% energy savings compared to HID systems
- Available in multiple lumen packages 23000/ 24500/ 26000/ 28000/ 28500lm for different application requirements
- 1 to 1 replacement to HID for both new install & retrofit applications
- Lifetime of 50,000 hrs. (L70B50) @ Ta45°C;
- BIS approbations – Safe and Reliable performance
- Tempered glass cover provides protection against high pollution
- Precision optics ensures efficient light distribution
- Robust aluminum die-casting housing provides excellent thermal efficiency and ensures higher quality of light over life time
- IP65 rated; effectively prevents dust & moisture ingress into luminaire for greater performance over long term
- Operating voltage range of 140-270V with High Voltage cut off and auto restart feature @325V, Phase to phase 440V protection for 8 hrs.

# Features and Benefits

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<b>Robust and Durable</b>	<ul style="list-style-type: none"><li>• Efficient heat dissipation ensures longer life in high temperature applications</li><li>• Designed for operations under diverse environment from -10°C to 50°C</li><li>• IP65 rated to prevent dusts &amp; moisture ingress to ensure higher performance over long duration</li><li>• 50,000 hrs. (L70B50) @ T<sub>a</sub> 45°C</li><li>• Philips Xitanium LED driver; provision for 10KV Series SPD</li><li>• High voltage cutoff @ 325 ± 15V &amp; Auto Restart</li><li>• 440V Protection for 8 Hrs. (Phase to Phase)</li></ul>
<b>High-quality materials and design</b>	<ul style="list-style-type: none"><li>• Tempered glass cover provides strong protection from high pollution</li><li>• Pressure die-cast housing offers excellent corrosion-resistance and robustness</li></ul>
<b>Outstanding Energy Efficiency</b>	<ul style="list-style-type: none"><li>• Incorporates extremely efficient, state-of-the-art LED technology</li><li>• System efficiency &gt;125 lm/W</li><li>• ~65% energy savings against conventional HID system</li></ul>
<b>1:1 retrofit / HID replacement</b>	<ul style="list-style-type: none"><li>• New range is ideal solution for both new installation &amp; retrofit applications</li><li>• Point to point replacement for a HPI 400W High-bay</li></ul>
<b>Versatile applications</b>	<ul style="list-style-type: none"><li>• Five lumen choices with four optics: Suitable for 15 to 30 meter height of installation</li><li>• Wide Beam (WB) brings high uniformity to the whole area</li><li>• Narrow Beam (NB) delivers high efficient light to make a brighter world</li><li>• Extra Narrow Beam (ENB) delivers desired lux level for higher mounting heights</li></ul>

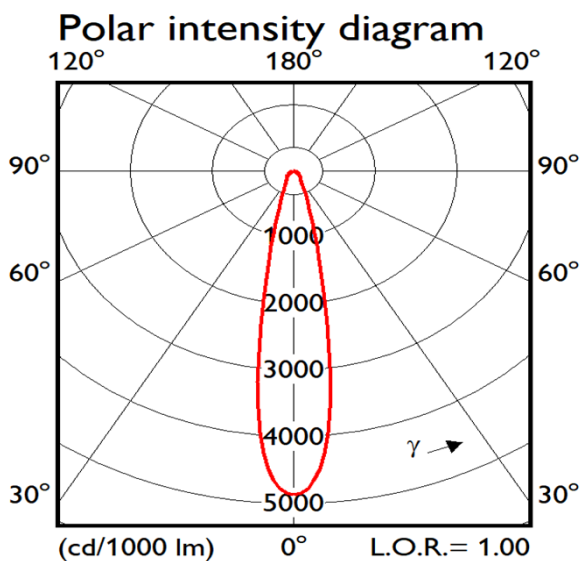
# Precision Optics

Lighting comfort improves productivity

- New designed optic module helps achieve  $UGR < 25$  for lighting system
- Professional Lens structure to realize accurate light distribution results in dramatically improved uniformity and lux level

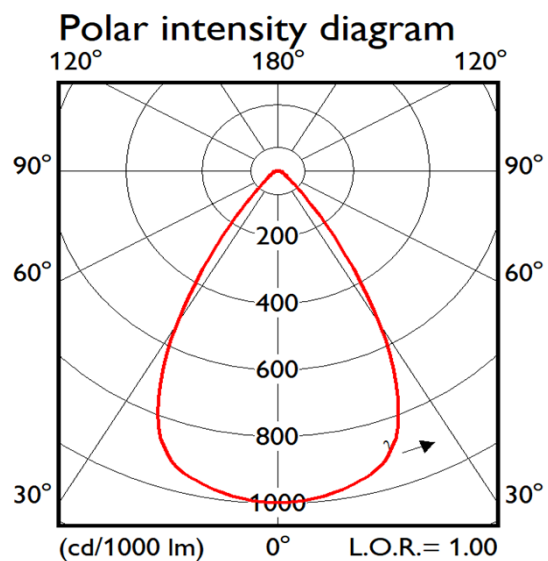


**SY20° (ENB)**



- *Extra Narrow beam*
- *FWHM 20°*
- *Rotational symmetry*
- *Centralized beam fit for high ceiling*

**SK60° (NB)**

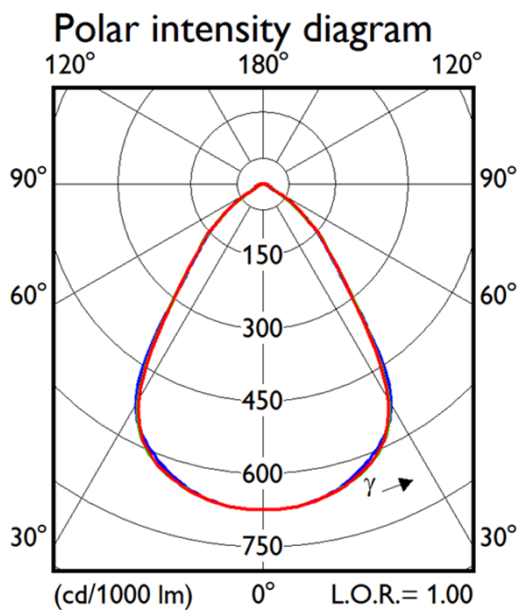


- *Narrow beam*
- *FWHM 60°*
- *Rotational symmetry*
- *Fit for low ceiling and general lighting*

# Precision Optics

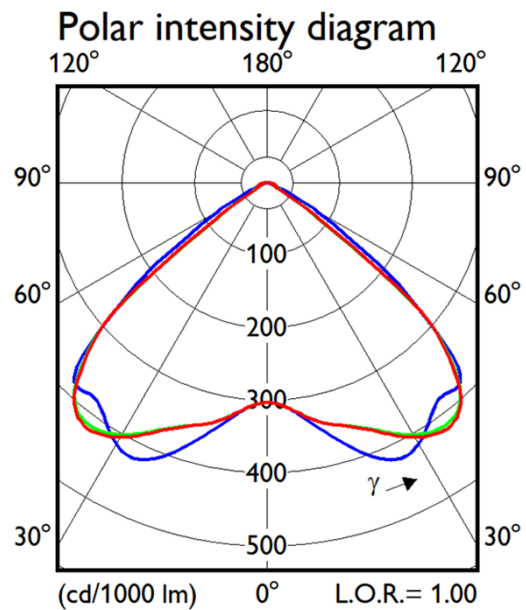
Lighting comfort improves productivity

**NB**



- *Narrow beam*
- *FWHM 60°*
- *Rotational symmetry*
- *Centralized beam fit for high ceiling*

**WB**



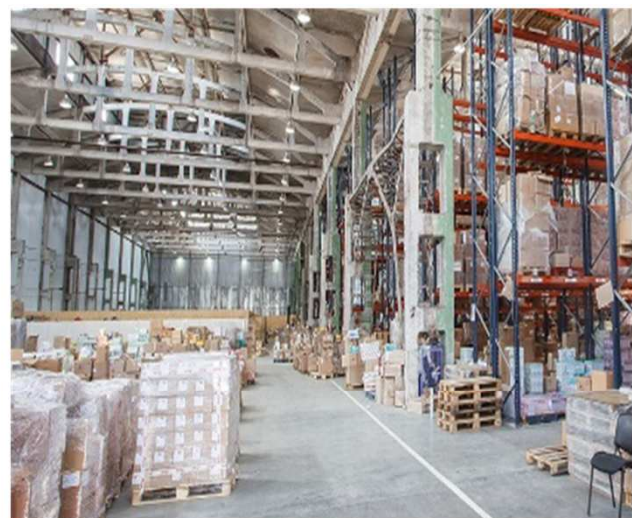
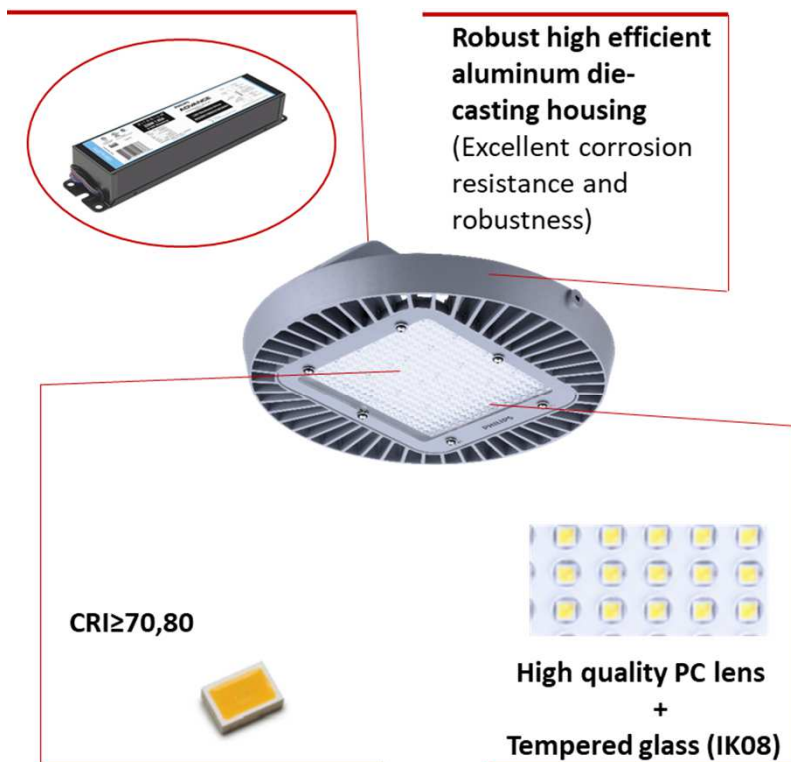
- *Wide beam*
- *FWHM 110°*
- *Rotational symmetry*
- *Fit for low ceiling and general lighting*



# Long Lasting Performance

**All Philips key components and production assure long lasting performance**

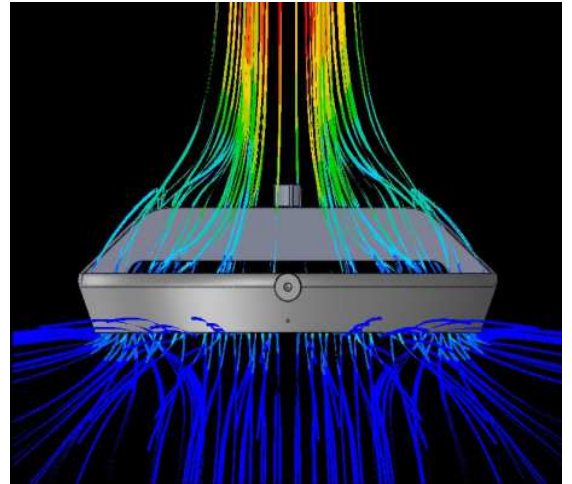
- 440V Phase to Phase Protection for 8 Hrs.
- High cut off @  $325\pm 15V$  and auto Restart
- Future Proof Drivers (Comes with 1-10V Dimming )
- 4KV internal surge protection



- 3D lens build accurate optic
- High Power robust LED system with controlled lighting technology

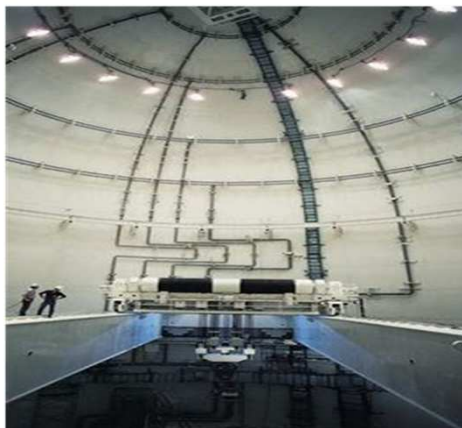
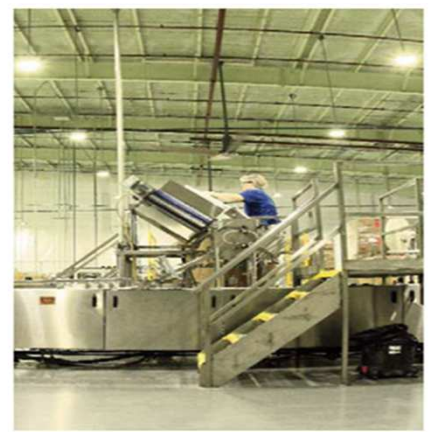
# Highly Efficient Thermal Design

- Excellent Efficient heat dissipation feature, without being influenced by dirt and installation angle, keeps it cool in high temperature environment
- Innovative heat-sink design creates an airflow through the product to prevent dirt from accumulating on the surface, suitable for eye bolt installation
- In higher lumen variant (High power LED's) separate gear unit designed to prevent driver from heat interaction as it has been found to be more sensitive to heat than the LEDs themselves
- Stable operation between  $-10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ , ensuring durable and reliable performance at  $T_a$   $45^{\circ}\text{C}$



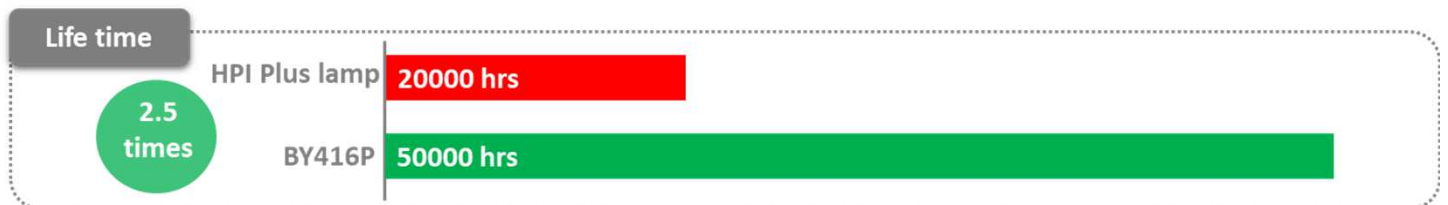
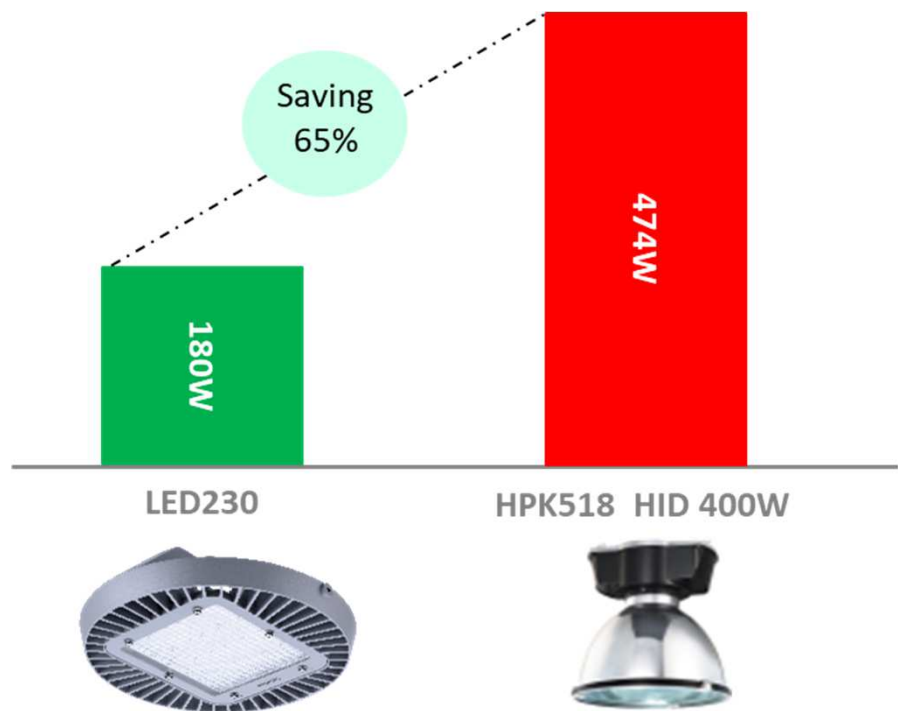
# Applications

- Steel Factory
- Long (continuous) operations
- Tobacco Factories
- Warehouse
- Distribution Centre
- Airport
- Harsh Industrial Environments







# Energy saving – New installation



HPI Plus lamp				Maxolid Range			Saving %
Lamp	Lamp Lumen	Power	System Lumen	Product	Power	System Lumen	
HPI P 400W	32500lm	<b>474W</b>	20760lm	BY416P	<b>180W</b>	23000lm	<b>65%</b>

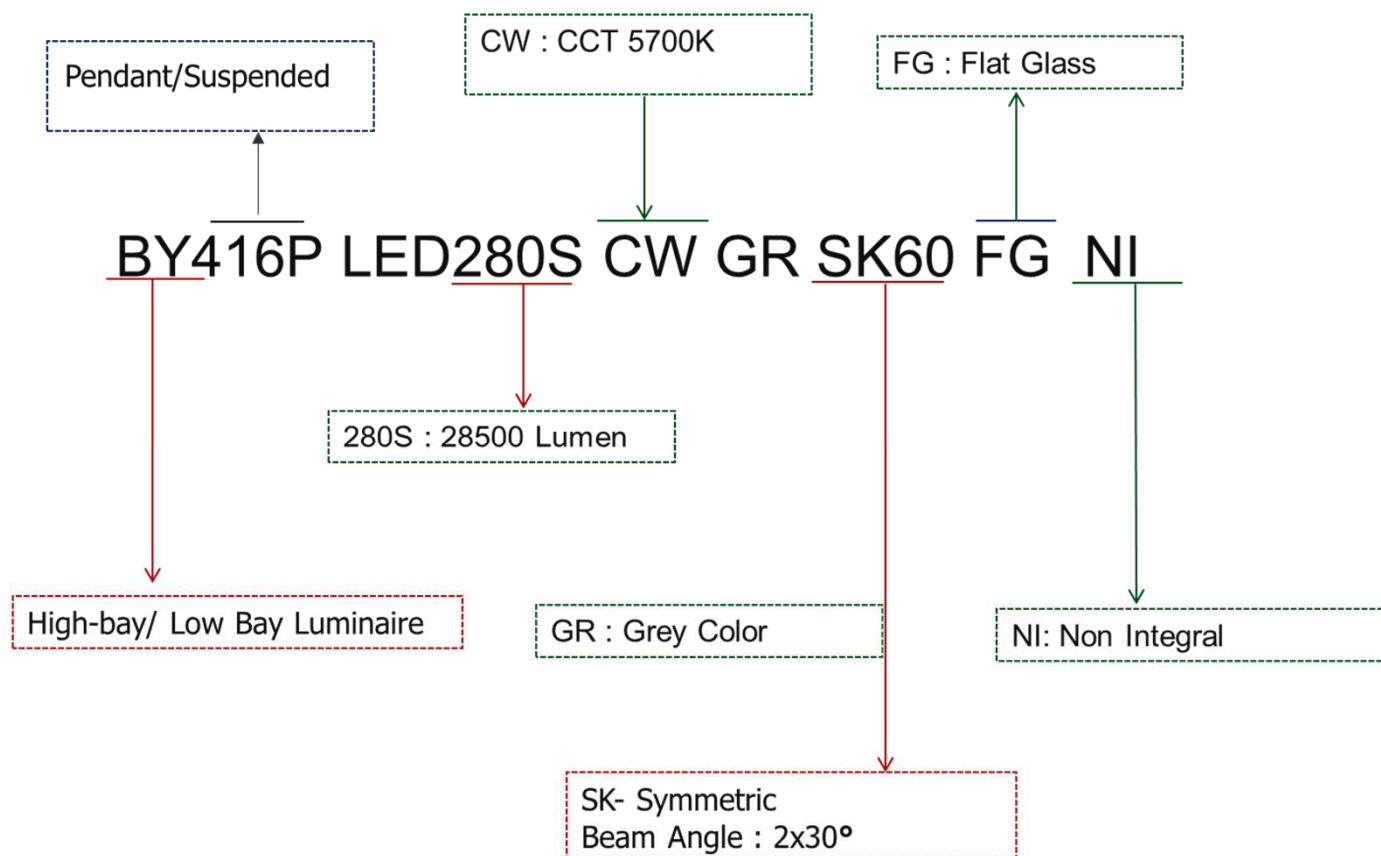
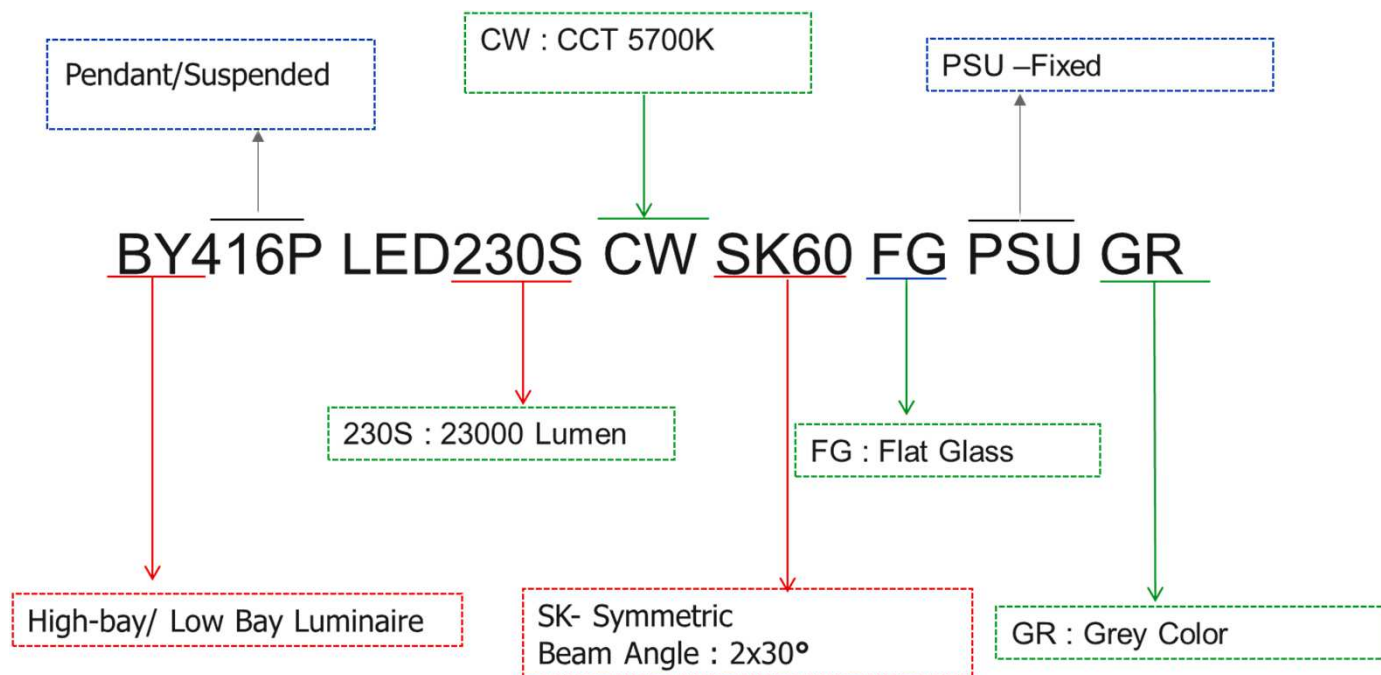
# Energy saving – Retrofit installation

	 <b>HPI P 400W Conventional High-bay</b>	 <b>BY416P LED High-bay</b>
<b>Lamp Wattage</b>	400W	-
<b>System Wattage</b>	474W	180W
<b>Initial Light Output</b>	32,500lm	23,000lm
<b>Light Output Ratio (LOR)</b>	60%	100%
<b>Average System Light output (10,000 hrs.)</b>	19,500lm	23,000lm
<b>Total Energy Savings (with 15% higher light output)</b>		<b>~62%</b>

# Specifications

Specification	BY416P LED230S	BY416P LED260S	BY416P LED280S NI	BY415P LED240S	BY415P LED275S
Light output	23000lm	26000lm	28500lm	24500 lm	28000 lm
System wattage	180W	205W	225W	190W	220W
System efficacy (typical)	127lm/W	127lm/W	127lm/W	130 lm/W	127 lm/W
CCT	5700K			6500K	
CRI	≥ 70			≥ 80	
SDCM	<5				
Optics	SY20° / SK60°			NB (60°)/ WB(110°)	
Lens	PC				
Optical cover	High Transmittance Tempered Glass				
Input voltage	140~270V				
Power Factor	> 0.95				
THD	< 10%				
Driver	Fixed; 1-10V Dimming				
Surge protection	4kV; 10kV on demand				
Electrical Class	Class 1				
Life (L70B50)	50,000 hrs. @T <sub>a</sub> 45°C				
Operating temperature	- 10 <sup>0</sup> C < Ta < 50 <sup>0</sup> C				
IP Rating	IP65				
IK Rating	IK08				
Mounting	Eye Bolt mounted				
Housing material	Aluminum Die-casting				
Approbation	BIS				
Sustainability	RoHS				

# How to read the Cat ref





## Ordering Codes

12 NC	Description	Spare Driver 12NC
919515813040	BY416P LED260S CW SK60 FG PSU GR	929002194206
919515813041	BY416P LED260S CW SY20 FG PSU GR	929002194206
919515813042	BY416P LED230S CW SK60 FG PSU GR	929002194206
919515813043	BY416P LED230S CW SY20 FG PSU GR	929002194206
919515813185	BY416P LED280S CW GR SY20 FG NI	929002194206
919515813186	BY416P LED280S CW GR SK60 FG NI	929002194206
919515813261	BY415P LED275S CW PSU GR FG NB XTFCL V1	929002194206
919515813262	BY415P LED275S CW PSU GR FG WB XTFCL V1	929002194206
919515813263	BY415P LED240S CW PSU GR FG NB XTFCL V1	929002194206
919515813264	BY415P LED240S CW PSU GR FG WB XTFCL V1	929002194206

### Gear Box – IP65

12NC	Description	Spare Driver 12NC
919515813172	ZVX431 1X220W PSU LED DRIVER	929002194206