



LED Upgrade Guide

When specifying LED replacements for your traditional flood and bay luminaires, the most important factor is 'delivered lumens' i.e. the amount of useable light discounting losses and wasted light. Ex luminaires using traditional technology, such as High Pressure Sodium, often only quote lumens at source but are typically only around 60% efficient in transmitting useable light out of the luminaire. This means the delivered lumens can often be up to 40% less than quoted. In addition, consumption is usually quoted without considering gear losses. You'll often find the 'true' consumption of your traditional Ex luminaire to be up to 15% more.

Raytec LED luminaires are 90%+ efficient, delivering more lumens per watt and achieving significant power savings over traditional Ex fittings. They also have a much higher CRI than traditional luminaires, and deliver a highly directional beam of light with minimum wastage. This gives the appearance or perception that the illuminated area is in fact much brighter.

Our recommendations are based on 'lux for lux' on the ground, but many Raytec customers enjoy further energy saving benefits by using a lower lumen LED fitting due to its perceived brightness.

LED Flood/Bay Light Upgrade Guide

Traditional Luminaire	Quoted Consumption	Total Consumption inc. gear loss	Initial Lumens	Delivered Lumens
High Pressure Sodium	400W	460W	48,000	28,800
	250W	288W	27,000	16,200
	150W	173W	15,000	9,000
	100W	115W	10,000	6,000
	70W	81W	6,000	3,600
	50W	58W	3,500	2,100
Metal Halide	400W	460W	38,000	22,800
	250W	288W	21,000	12,600
	150W	173W	13,000	7,800
	70W	81W	6,000	3,600
Mercury Vapour	400W	460W	22,000	13,200
	250W	288W	13,000	7,800
	125W	144W	6,300	3,780
	80W	92W	3,800	2,280
	50W	58W	2,100	1,260

Replace
with

Replacement Raytec LED Luminaire	Raytec Delivered Lumens	Raytec Wattage inc. gear loss	Raytec % Power Savings
SPARTAN High Power Flood / Bay HP 25K	28,713	250W	46%
SPARTAN Mid Power Flood / Bay 15K or FL48 Flood	15,325/18,600	120/136W	58/53%
SPARTAN Mid Power Flood / Bay 10K	10,289	80W	54%
SPARTAN Mid Power Flood / Bay 5K or BL24 Flood HO	5,149/4,650	40/24W	65%/79%
SPARTAN BL24 Flood HO	4,650	24W	70%
SPARTAN BL24 Flood	2,750	20W	66%
SPARTAN High Power Flood / Bay 20K	22,971	200W	57%
SPARTAN Mid Power Flood / Bay 12.5K	12,873	100W	65%
SPARTAN Mid Power Flood / Bay 7.5K or FL24 Flood	7,663/9,600	60/68W	65/61%
SPARTAN BL24 Flood HO	4,650	24W	70%
SPARTAN Mid Power Flood / Bay 12.5K	12,873	100W	78%
SPARTAN Mid Power Flood / Bay 7.5K or FL24 Flood	7,663/9,600	60/68W	79%
SPARTAN BL24 Flood HO	4,650	24W	83%
SPARTAN BL24 Flood	2,750	20W	78%
SPARTAN BL24 Flood	2,750	20W	71%

* Recommendations based on lux for lux. Gear loss and lumen output based on manufacturers' data.



BL24



FL24



FL48



MP Flood/Bay 15K/12.5K/10K/7.5K/5K



HP Flood/Bay 25K/20K



Ask us for a free LED lighting design for a visual representation of your final installation

rayTEC[®]

LED Linear/Bay Light Upgrade Guide

When replacing traditional bay luminaires you should also consider the use of LED Linear luminaires. SPARTAN Linear High Output provides a significant power upgrades compared to standard Linear, and represent a cost-effective alternative to a traditional Bay. WL84-HO variants are also available with emergency battery backup.



WL168-HO

Delivered Lumens	Raytec Wattage inc. gear loss
14,096	96

Replaces

	Quoted Consumption	Total Consumption inc. gear loss	Initial Lumens	Delivered Lumens	Raytec % Power Savings
High Pressure Sodium	250W	288W	27,000	16,200	67%
Metal Halide	250W	288W	21,000	12,600	67%
Mercury Vapor	400W	460W	22,000	13,200	79%

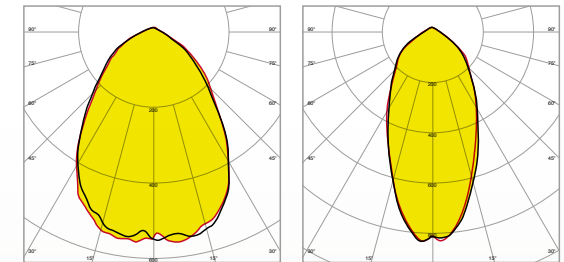
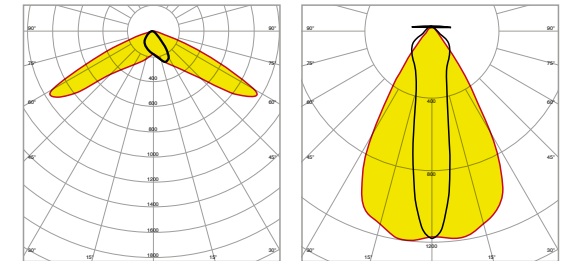


WL84-HO

Delivered Lumens	Raytec Wattage inc. gear loss
7,048	48

Replaces

	Quoted Consumption	Total Consumption inc. gear loss	Initial Lumens	Delivered Lumens	Raytec % Power Savings
High Pressure Sodium	100W	115W	10,000	6,000	58%
Metal Halide	150W	173W	13,000	7,800	72%
Mercury Vapor	250W	288W	13,000	7,800	83%
Fluorescent	72W (2x36W)	80W	6,700	4,265	40%



SPARTAN Linear is also available with a choice of optics which can be used for different applications, such as aisle, corridor or perimeter schemes.

The use of optics play an important role in targeting the light where it's needed and making full use of the delivered lumen figures stated above.

Ask us for a free LED lighting design for a visual representation of your final installation