

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

Replace with

Replacement Raytec LED Luminaire	Raytec Delivered Lumens	Raytec Wattage inc. gear loss	Raytec % Power Savings
SPARTAN High Power Flood / Bay HP 25K	25,000	300W	35%
SPARTAN High Power Flood / Bay HP 15K	15,000	180W	38/29%
SPARTAN High Power Flood / Bay HP 10K or FL48	10,000	120/136W	31/21%
SPARTAN Flood FL24	5,000	71W	38%
SPARTAN Flood FL12	2,500	34W	58%
SPARTAN Flood FL12	2,500	34W	41%
SPARTAN High Power Flood / Bay HP 20K	20,000	240W	48%
SPARTAN High Power Flood / Bay HP 10K or FL48	10,000	120/136W	58/53%
SPARTAN Flood FL48 or FL24	10,000/5,000	136/71W	21/59%
SPARTAN Flood FL24 or FL12	5,000/2,500	71/34W	12/58%

See Mercury Vapour and Tungsten Halogen on pg.2

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



FL12



FL24



FL48



HP Flood/Bay 25K/20K/15K/10K



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

rayTEC[®]

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Traditional Luminaire	Quoted Consumption	Total Consumption inc. gear loss	Initial Lumens	Delivered Lumens	Replacement Raytec LED Luminaire	Raytec Delivered Lumens	Raytec Wattage inc. gear loss	Raytec % Power Savings
Mercury Vapour	400W	460W	22,000	13,200	SPARTAN High Power Flood / Bay HP 15K	15,000	180W	61/56%
	250W	288W	13,000	7,800	SPARTAN High Power Flood / Bay HP 10K or FL48	10,000	120/136W	58/53%
	125W	144W	6,300	3,780	SPARTAN Flood FL24	5,000	71W	51%
	80W	92W	3,800	2,280	SPARTAN Flood FL12	2,500	34W	63%
	50W	58W	2,100	1,260	SPARTAN Flood FL12	2,500	34W	41%
Tungsten Halogen	1500W	N/A	33,000	19,800	SPARTAN High Power Flood / Bay HP 20K	20,000	240W	84%
	1000W	N/A	22,000	13,200	SPARTAN High Power Flood / Bay HP 15K	15,000	180W	82/80%
	750W	N/A	15,000	9,000	SPARTAN High Power Flood / Bay HP 10K or FL48	10,000	120/136W	84/82%
	500W	N/A	9,000	5,400	SPARTAN Flood FL24	5,000	71W	86%
	300W	N/A	5,000	3,000	SPARTAN Flood FL12	2,500	34W	89%
	200W	N/A	3,000	1,800	SPARTAN Flood FL12	2,500	34W	83%

Replace with

See High Pressure Sodium and Metal Halide on pg.1

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

When specifying LED replacements for your traditional flood and bay luminaires, the most important factor to consider and compare is 'delivered lumens' i.e. the amount of useable light, discounting losses and wasted light.

Traditional Ex luminaire manufacturers often only quote lumens at source, i.e. lumens at the bulb before it's travelled through any lensing. But traditional Ex light fittings are typically only around 60% efficient in transmitting useable light out of the luminaire, meaning that the delivered lumens can often be up to 40% less than quoted. In addition, consumption is usually quoted without considering gear losses, so you'll often find the 'true' consumption of your traditional Ex luminaire to be up to 15% more.

Raytec Ex LED White-Light 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 (or true colour representation) 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.