

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 or FL72 | 15,000 | 180/204W | 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.



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



LED Flood/Bay Light Upgrade Guide

| Traditional Luminaire | Quoted Consumption | Total Consumption inc. gear loss | Initial Lumens | Delivered Lumens |
|-----------------------|--------------------|----------------------------------|----------------|------------------|
| 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 |
| Tungsten Halogen | 1500W | N/A | 33,000 | 19,800 |
| | 1000W | N/A | 22,000 | 13,200 |
| | 750W | N/A | 15,000 | 9,000 |
| | 500W | N/A | 9,000 | 5,400 |
| | 300W | N/A | 5,000 | 3,000 |
| | 200W | N/A | 3,000 | 1,800 |

Replace with

| Replacement Raytec LED Luminaire | Raytec Delivered Lumens | Raytec Wattage inc. gear loss | Raytec % Power Savings |
|---|-------------------------|-------------------------------|------------------------|
| SPARTAN High Power Flood / Bay HP 15K or FL72 | 15,000 | 180/204W | 61/56% |
| SPARTAN High Power Flood / Bay HP 10K or FL48 | 10,000 | 120/136W | 58/53% |
| SPARTAN Flood FL24 | 5,000 | 71W | 51% |
| SPARTAN Flood FL12 | 2,500 | 34W | 63% |
| SPARTAN Flood FL12 | 2,500 | 34W | 41% |
| SPARTAN High Power Flood / Bay HP 20K | 20,000 | 240W | 84% |
| SPARTAN High Power Flood / Bay HP 15K or FL72 | 15,000 | 180/204W | 82/80% |
| SPARTAN High Power Flood / Bay HP 10K or FL48 | 10,000 | 120/136W | 84/82% |
| SPARTAN Flood FL24 | 5,000 | 71W | 86% |
| SPARTAN Flood FL12 | 2,500 | 34W | 89% |
| SPARTAN Flood FL12 | 2,500 | 34W | 83% |

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.