

SPARTAN HID TECHNICAL INFORMATION

LIGHT LOSS FACTORS

	LLF =	LLD x	LDD x	BF x	HFLA
HPS	.77	.90	.9	.95	1
MH	.59	.69	.9	.95	1
PSMH	.68	.80	.9	.95	1
Electronic – PSMH	.85	.90	.9	1	1.05

LLF – Light loss factor: A factor used in calculating illuminance after a given period of time and under given conditions. It takes into account lamp depreciation (LLD), dirt accumulation (LDD), ballast factor (BF) and high frequency lumen adjustment (HFLA).

LLD – Lamp lumen depreciation: The multiplier to be used in illumination calculations to relate the initial rated output of light sources to the anticipated minimum rated output based on the relamping program to be used.

LDD – Luminaire dirt depreciation factor: The multiplier to be used in illuminance calculations to relate the initial illuminance provided by clean, new luminaries to the reduced illumination that they will provide due to dirt collection on the luminaries at the time at which it is anticipated that cleaning procedures will be instituted.

BF – Ballast Factor: Measure of light output from lamp operated by commercial ballast as compared to a laboratory standard reference ballast.

HFLA – High frequency lumen adjustment factor: The multiplier used for compensating the electronic ballast lumen maintenance on the lamp.

LAMP DESIGNATIONS & WATTAGES AVAILABLE

	WATTAGE	13	18	26	32	35	42	50	57	70	100	125	150	175	200	250	300	320	350	400	450	600	750	875	1000	1500	
MXP (2) PROTECTED METAL HALIDE														x	x					x						x	
FL (3) FLUORESCENT		x	x	x	x		x		x																		
MH (4) METAL HALIDE														x	x					x						x	x
HPS (5) HIGH PRESSURE SODIUM						x	x	x	x	x		x				x				x		x	x		x		
SMH (7) SUPER METAL HALIDE														x	x					x						x	
PS (8) PULSE START MH							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	
PSP (9) PROTECTED PULSE START MH							x	x	x	x	x	x			x	x	x	x	x	x	x			x			

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Amperes	Microamperes	1 x 10 ⁶
	Milliamperes	1000
	Statamperes	2.99793 x 10 ⁹
Btu	Joules	0.999331
Cu feet	Acre-feet	2.296 x 10 ⁵
	Cu centimeters	28316.8
	Cu meters	0.02832
	Cu yards	0.03704
Cubic inches	Cu cm	16.3871
	Cu feet	0.000579
	Cu meters	1.639 x 10 ⁵
	Cu yards	2.143 x 10 ⁵
	Liters	0.01639
Cu yards	Cu cm	764554.9
	Cu feet	27
	Cu inches	46656
	Cu meters	0.76455
	Gallons (US dry)	173.569
	Gallons (US liq)	201.974
	Liters	764.5549
	Quarts (US dry)	694.279
	Quarts (US liq)	807.896
Feet	Centimeters	30.48
	Feet (US Survey)	0.999998
	Inches	12
	Meters	0.3048
	Yards	0.333333
Inches	Feet	0.08333
	Meters	0.0254
	Millimeters	25.40
	Yards	0.0278
Joules (abs)	Btu	0.0009485
	Kw-hrs.	2.78 x 10 ⁻⁷
	Watt-hrs. (abs)	0.0002778
Kilograms	Ounces (avdp)	35.27396
	Pounds (avdp)	2.20462
	Quarters (Us long)	0.003937
	Tons (short)	0.001102
Kilowatts	Btu/hr	3414.4
	Horsepower	1.341
	Horsepower (ele)	1.34
Kilowatt-hrs.	Btu (mean)	3409.5
	Hp-hrs	1.341
	Watt-hrs.	1000
Lumens/sq ft	Foot-candles	1
	Foot-lamberts	1
	Lumens.sq meter	10.76391
	Lux	10.76391
Lumens/sq meter	Foot-candles	0.0929
	Lumens/sq ft	0.0929
	Lux	1

Lux	Footcandles	0.0929
	Lumens/sq meter	1
Meter	Centimeters	100
	Feet	3.28084
	Inches	39.3701
	Kilometers	0.001
	Miles (Statute)	0.000621
	Millimeters	1000
	Yards	1.0936
Meter-candles	Lux	1
Miles (Statute)	Centimeters	160934
	Feet	5280
	Inches	63360
	Kilometers	1.609344
	Light years	1.701 x 10 ¹³
	Meters	1609.344
	Miles (Naut,Int)	0.86898
	Yards	1760
Millivolts	Volts	0.001
Sq feet	Acres	2.2957 x 10 ⁵
	Sq cm	929.03
	Sq feet (US Survey)	0.999996
	Sq inches	144
	Sq meters	0.0929
	Sq miles	3.58701 x 10 ⁻⁸
	Sq millimeters	9.290 x 10 ⁴
	Sq yards	0.1111
Sq miles	Acres	640
	Hectares	258.999
	Sq feet	2.78784 x 10 ⁷
	Sq kilometers	2.58999
	Sq meters	2589988
	Sq yards	3.098 x 10 ⁶
Sq yards	Acres	0.000207
	Hectares	8.3613 x 10 ⁻⁵
	Sq cm	8361.37
	Sq feet	9
	Sq inches	1296
	Sq meters	0.8361
	Sq miles	3.228 x 10 ⁻⁷
	Sq millimeters	8.361 x 10 ⁵
Watts	Btu/hr	3.41214
	Horsepower	0.00134
	Kilowatts	0.001
Watt-hours	Btu	3.4144
Yards	Centimeters	91.44
	Fathoms	0.5
	Feet	3
	Inches	36
	Kilometers	9.144 x 10 ⁻⁴
	Meters	0.9144
	Millimeters	914.4

$^{\circ}\text{C} = 5/9 (^{\circ}\text{F}-32)$ $0^{\circ}\text{C} = 32^{\circ}\text{F}$
 $^{\circ}\text{F} = 9/5 (^{\circ}\text{F}+32)$ $100^{\circ}\text{C} = 212^{\circ}\text{F}$