DataSheet

LED109056	Voltage = 120 V	PPF = 380.70 µmol/sec	YPF= 337.80 µmol/sec	PSS = 0.87
LED	Power = 302.4 W	PPF/W= 1.26 µmol/J	YPF/W = 1.12 µmol/J	RCR= 325537.80
Unknown	PF = 2.52	PPF% = 0.90%		
$100.00	THD = 12.00%			

Simple Payback Calculations

Summary (assuming target PPFD of 300 µmol/sec m^2)	1000 W HPS	600 W HPS	LED
Quantity	20	44	84
Initial cost	$10500	$20240	$8400
Power demand (W/m^2)	1380.0	3036.0	2540.2
Total energy use per year (kWh/m^2 year)	6044	13298	11126
Total energy cost per year ($/m^2$ year)	$633	$1394	$1166
Annual energy savings for LED compared to 1000 W HPS			$-533.
Annual energy savings for LED compared to 600 W HPS			$228.
Simple payback compared to 1000 W HPS (years)			No Payback
Simple payback compared to 600 W HPS (years)			37

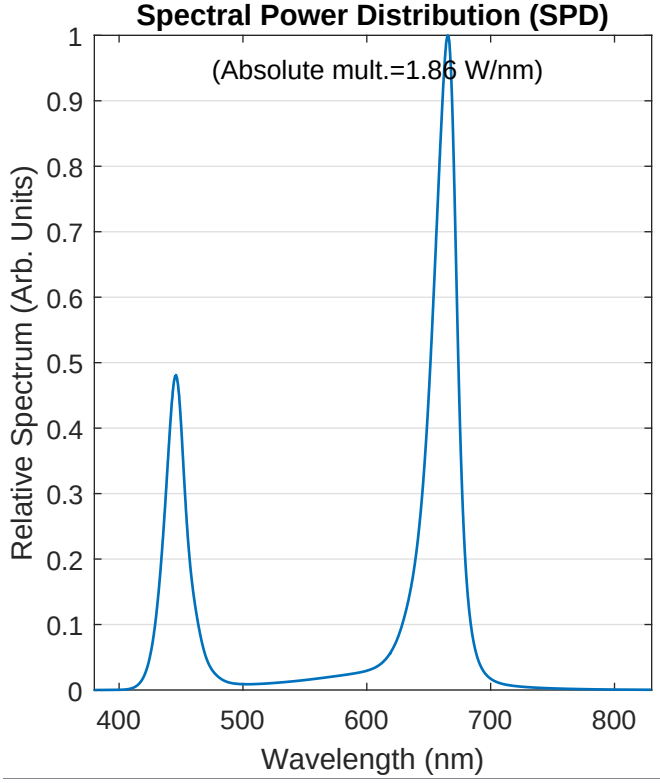
Note: Assuming a $0.1048 per kWh. Lamps are used for 12 hours per day.

Note: All calculations use a 10mX10m growing area.

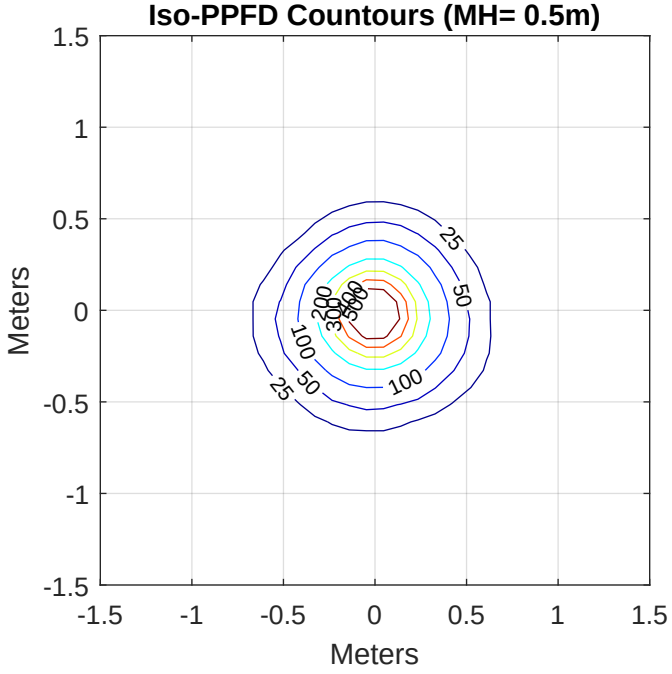
An incentive of at least $100 per luminaire is required to have equal engergy cost as the 1000 W HPS system.

An incentive of 92 would reduce the payback period to less than 3 years compaired to the 600W HPS.

Spectral Power Distribution (SPD)



Iso-PPFD Countours (MH= 0.5m)



Luminaire System Application Efficiency (LSAE)

Mounting Height	100 PPFD		200 PPFD		300 PPFD		400 PPFD		500 PPFD	
(m)	µmol/J	Qty	µmol/J	Qty	µmol/J	Qty	µmol/J	Qty	µmol/J	Qty
0.5	0.56	28	0.68	55	1.11	84	1.14	112	**1.17**	140
1	1.06	30	1.08	60	1.09	90	1.08	121	1.05	152
1.5	1.00	32	1.01	64	0.97	98	0.94	132	0.94	165
2	0.88	35	0.92	70	0.93	105	0.85	143	0.82	180
2.5	0.63	40	0.86	75	0.82	114	0.83	152	0.81	192
3	0.82	40	0.79	81	0.69	126	0.74	165	0.73	207
3.5	0.68	44	0.70	88	0.71	132	0.71	176	0.70	221
4	0.61	48	0.63	95	0.63	143	0.65	189	0.64	238

Note: LSAE is for a 10mX10m growing area with an average:minimum < 4:1;