DataSheet

LED109056	Voltage = 120 V	PPF = 380.70 µmol/sec	YPF= 337.80 µmol/sec	RSS = 0.87
LED	Power = 690.00 W	PPF/W= 0.55 µmol/J	YPF/W = 0.49 µmol/J	RCR= 325537.80
Unknown	PF = 5.75	PPF% = 0.90%		
$100.00	THD = 0.15%			

Simple Payback Calculations

Summary (assuming target 300µmol/sec)	1000 W HPS	600 W HPS	LED
Quantity	1000	800	42
Initial cost	-	-	$4200
Power demand (W/m^2)	99800.0	48000.0	2898.0
Total energy use per year (kWh/m^2 year)	437124	210240	12693
Total energy cost per year ($/m^2 year)	$45811	$22033	$5530
Annual energy savings for LED compared to 1000 W HPS			$40280.
Annual energy savings for LED compared to 600 W HPS			$16503.
Simple payback compared to 1000 W HPS (years)			7
Simple payback compared to 600 W HPS (years)			3

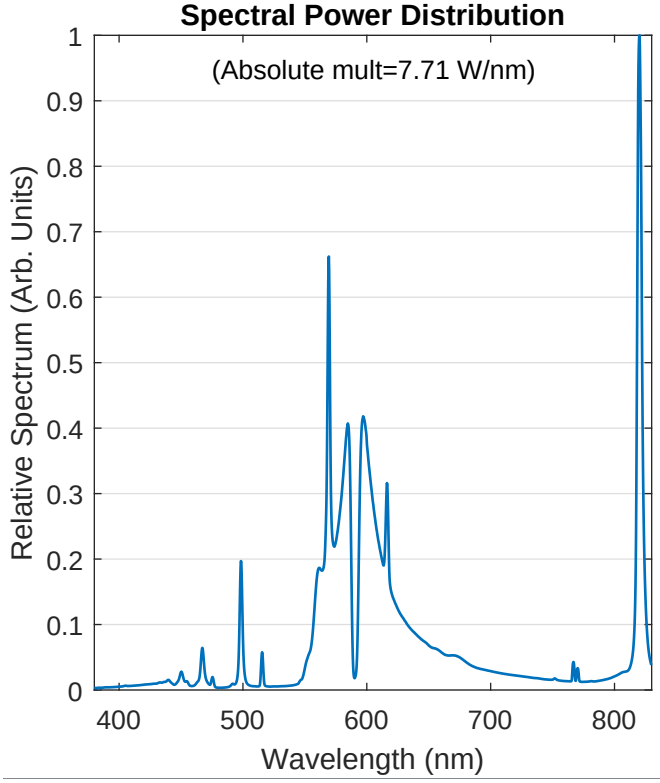
Note: Assuming a $0.1048 per kWh. Lamps are used for 12 hours per day.

Note: All calculations were done with a 10mX10m growing area.

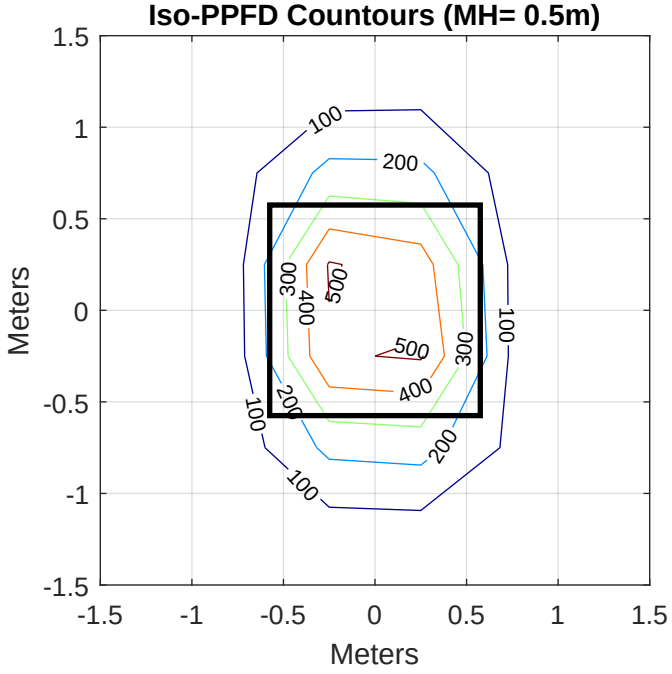
An incentive of 140 would reduce the payback period to less than 3 years compaired to the 1000W HPS.

No additional incentive is needed when compaired to the 600W HPS.

Spectral Power Distribution



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	0.47	12	0.70	21	0.52	32	**1.37**	42	1.27	55
1	0.54	12	1.09	24	1.20	35	1.09	48	1.09	60
1.5	1.15	12	0.88	27	0.96	40	0.95	54	1.06	66
2	0.97	14	0.99	28	0.84	45	0.85	60	0.84	75
2.5	0.82	16	0.87	32	0.83	49	0.84	65	0.75	84
3	0.72	18	0.76	36	0.76	54	0.65	75	0.74	91
3.5	0.63	20	0.68	40	0.69	60	0.66	81	0.64	102
4	0.43	24	0.60	44	0.50	70	0.59	90	0.60	112

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