

DataSheet

LED109056	Voltage = 120 V	PPF = 380.70 $\mu\text{mol}/\text{sec}$	YPF = 337.80 $\mu\text{mol}/\text{sec}$	RSS = 0.87
LED	Power = 302.40 W	PPF/W = 1.26 $\mu\text{mol}/\text{J}$	YPF/W = 1.12 $\mu\text{mol}/\text{J}$	RCR = 325537.80
Unknown	PF = 2.52	PPF% = 0.90%		
\$100.00	THD = 0.15%			



Simple Payback Calculations

Summary (assuming target PPFD of 300 $\mu\text{mol}/\text{sec}$)	1000 W HPS	600 W HPS	LED
Quantity	21	45	84
Initial cost	\$11025	\$20700	\$8400
Power demand (W/m^2)	1449.0	3105.0	2540.2
Total energy use per year (kWh/m^2 year)	6347	13600	11126
Total energy cost per year ($\$/\text{m}^2$ year)	\$665	\$1425	\$1166
Annual energy savings for LED compared to 1000 W HPS			\$-501.
Annual energy savings for LED compared to 600 W HPS			\$259.
Simple payback compared to 1000 W HPS (years)			No Payback
Simple payback compared to 600 W HPS (years)			32

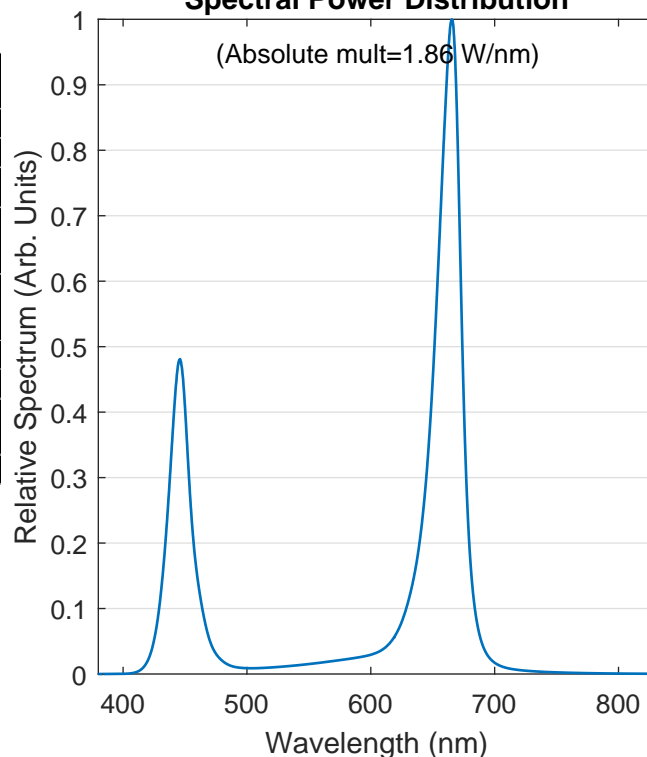
Note: Assuming a \$0.1048 per kWh. Lamps are used for 12 hours per day.

Note: All calculations use a 10mX10m growing area.

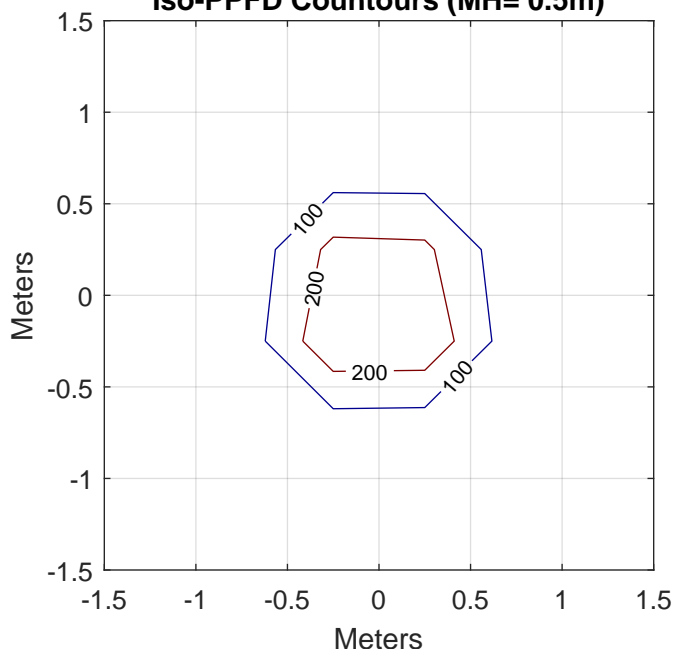
An incentive of 100 would allow the grower to maintain their expenditure compared to the 1000W HPS.

An incentive of 91 would reduce the payback period to less than 3 years compared 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)	$\mu\text{mol}/\text{J}$	Qty	$\mu\text{mol}/\text{J}$	Qty	$\mu\text{mol}/\text{J}$	Qty	$\mu\text{mol}/\text{J}$	Qty	$\mu\text{mol}/\text{J}$	Qty
0.5	0.33	30	1.13	56	1.16	84	1.16	112	1.10	144
1	1.05	30	1.08	60	1.08	90	1.07	121	1.03	152
1.5	1.00	32	1.01	64	0.96	98	0.95	132	0.93	165
2	0.88	35	0.92	70	0.93	105	0.84	143	0.87	180
2.5	0.64	40	0.86	75	0.82	114	0.83	152	0.80	192
3	0.81	40	0.79	81	0.68	126	0.74	165	0.73	207
3.5	0.70	44	0.70	88	0.71	132	0.71	176	0.69	221
4	0.61	48	0.63	95	0.63	143	0.65	189	0.63	240

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