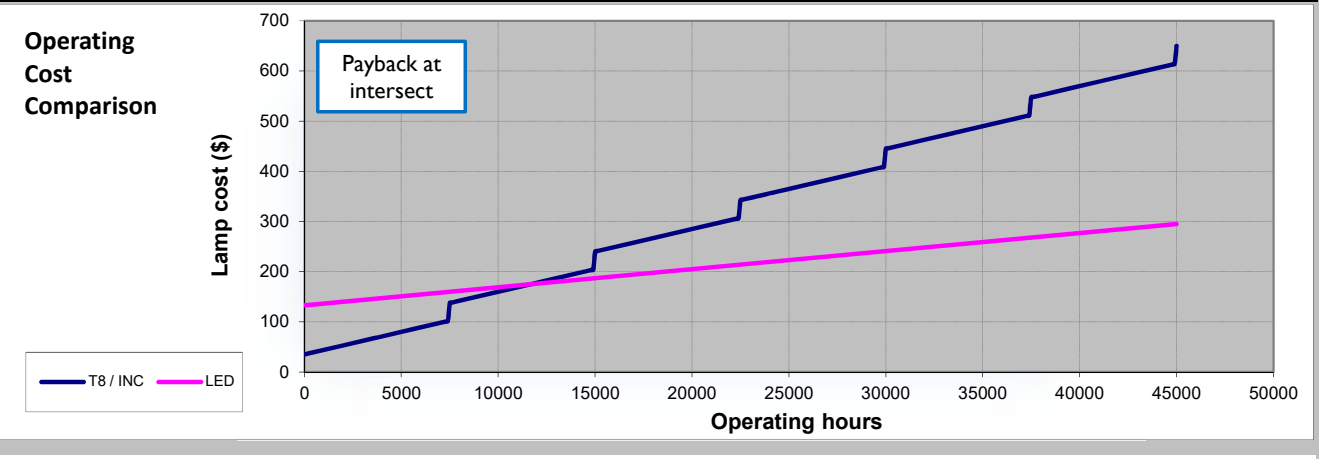
Total Cost of Ownership

Investment Analysis

General Input			
Operation hours / day	15	hrs/day	Operation hours / year
Operation days / week	7	days/week	5,460
Energy Cost per kWh	$0.09	Can $	
Lamp Replacement Costs *(labour per lamp)*	$0.00	Can $	

Lamp Specific Input	Present Lamp	New Lamp	
Lamp name	T8 / INC	LED	
Lumens / MBCP	6000	6000	
Energy consumption	100	40	Watt
Quantity of Lamps	2935	2935	Lamps
Average lamp life	7,500	65,000	Hours
Lamp price	$35.00	$133.00	Can $

Annual Energy Savings			
Annual Energy Cost (Total)	$144,226	$57,690	Can $
Annual Energy Savings - Total New Lamps *(excl. investment)*		$86,536	Can $
Annual Kilowatt Hours Saved		961,506	kWh



Graph Explanation

At zero hours = initial purchase cost of lamp

Increase = energy costs to operate lamps + any required replacement lamps + any lamp replacement costs (over life of new lamp)

Savings - Over New Lamp Life of:		65,000	Hours	
Lamp Type	Purchase Value[4]	Energy Cost	Replacement Cost	Total Cost
T8 / INC	$280.00	$585.00	$0.00	$865.00
LED	$133.00	$234.00	$0.00	$367.00
SAVINGS (per lamp)	$147.00	$351.00	$0.00	$498.00
SAVINGS (TOTAL lamps)	**$431,445**	**$1,030,185**	**$0**	**$1,461,630**

ROI and Payback						
LED	Total Purchase Value	Energy Savings	Replacement Cost Savings[1]	NET Savings	Payback[2] (years)	ROI[3]
1st Year	$873,454	$86,536	$74,784	-$712,135	5.41	9.91%
Over Life	$873,454	$1,030,185	$890,283	$1,047,014		

1 **Replacement Cost Savings** = (Present lamp price x # of annual lamps) + (annual maintenance to change the present lamps) x # of lamps

2 **Payback** = Total purchase value / (Annual Energy Savings + Annual Replacement Cost Savings)

3 **ROI (%)** = Annual Energy Savings / Total Purchase Value 1st Year X 100

4 **Purchase Value (Present Lamp)** = Avg. Lamp life NEW / Avg Lamp Life PRESENT X PRESENT Lamp Price ($)