

# LED PAYBACK ANALYSIS CALCULATOR

Project Information			
Project Name:			
Date:			
(A)	Area (Sq. ft.)		
(COE)	Cost of Electricity ( per kWh )		
(AOH)	Annual Operating Hours		
Energy and Material Cost		Existing	Proposed
(IW)	Input Watts per Luminaire		
(NF)	Number of Luminaires		
(TSW)	Total System Watts = ( NF * IW )		
(TskW)	Total System kW = ( TSW / 1000 )		
(AkWh)	Annual kWh = ( TskW * AOH )		
(AEC)	Annual Energy Cost = ( AkWh * COE )		
(MC)	Monthly Energy Cost = ( AEC / 12 months )		
(PLC)	Proposed Luminaire Cost ( per Luminaire )		
(COL)	Cost of Lamp per existing Luminaire		
(LOL)	Life of lamp in Hours for Existing Luminaire		
(RPL)	Rebate per Luminaire		
(TSR)	Total System Rebate = ( RPL * NF )		
(PSMC)	Proposed Luminaire Initial Material Cost = ( PLC * NF )		
(LRMC)	Annual Lamp replacement Material Cost = ( AOH / LOL ) * ( COL * NF )		
Maintenance and Installation Costs		Existing	Proposed
(LCR)	Labor Cost to Relamp one Existing Fixture		
(LCI)	Labor Cost to Install one Proposed Luminaire		
(LMC)	Annual Lamp Maintenance Cost = ( AOH / LOL ) * ( NF * LCR )		
(PSIC)	Proposed System Total Installaion Cost = ( NF * LCI )		
Combined Material, Maintenance and Installation Cost		Existing	Proposed
(TESC)	Annual Existing System Cost = ( LRMC + LMC )		
(TPSC)	Proposed System Initial Cost = ( PSIC + PSMC )		
System Analysis		Existing	Proposed
(WSF)	Watts per Square Foot = ( TSW / A )		
(AES)	Annual Energy Savings = ( Existing AEC - Proposed AEC )		
(AMS2)	Annual Maintenance and Material Savings after payback = ( TESC )		
<b>Total Savings after 50,000 Hours = ( ( 50,000 Hours / AOH ) * ( TESC + AES ) - TPSC )</b>			
<b>Payback in years = ( TPSC / ( AES + TESC )</b>			