

# RAMI THERMOSHIELD NIGHT BLIND EFFECTIVENESS AND PAYBACK ANALYSIS

PREPARED FOR: Mr. John Doe | General Manager



## 1. Commercial End-Use Primary Energy Consumption and Equipment Efficiencies

based on U.S. Department of Energy, National Energy Technology Laboratory figures (2000)  
 (http://www.netl.doe.gov/business/solicit/ see program solicitation DE-PS26-01NT41092)

Type	Typical New Efficiency
1. refrigerated display case: reach-in	3,800 kWh/year - ft
2. freezer display case: reach-in	4,900 kWh/year - ft
3. beverage display case: reach-in	5,900 kWh/year - ft

## 2. Annual Energy Calculation / SQFT

based on \$  kWh

1.	-	per kWh x 3,800 / yr - ft = \$	-	/ ft / year (refrigerated)
2.	-	per kWh x 4,900 / yr - ft = \$	-	/ ft / year (frozen)
3.	-	per kWh x 5,900 / yr - ft = \$	-	/ ft / year (beverage)

## 3. Annual Energy Cost / Total Display Case Footage

1.	-	per ft / year x 72 feet = \$	-	/ year (refrigerated)
2.	-	per ft / year x 216 feet = \$	-	/ year (frozen)
3.	-	per ft / year x 120 feet = \$	-	/ year (beverage)
		<b>Total: 408 feet (A)</b>		

## 4. Payback Ratio Chart

ex.  $1/24 \times 10\% = 0.004$

$6/24 \times 40\% = 0.096$

		Hours Closed per day											
		1	2	3	4	5	6	7	8	9	10	11	12
Energy Savings	10%	0.004	0.008	0.012	0.016	0.020	0.024	0.028	0.032	0.036	0.040	0.044	0.048
	20%	0.008	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088	0.096
	30%	0.012	0.024	0.036	0.048	0.060	0.072	0.084	0.096	0.108	0.120	0.132	0.144
	40%	<b>0.016</b>	<b>0.032</b>	<b>0.048</b>	<b>0.064</b>	<b>0.080</b>	<b>0.096</b>	<b>0.112</b>	<b>0.128</b>	<b>0.144</b>	<b>0.160</b>	<b>0.176</b>	<b>0.192</b>
	50%	0.020	0.040	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.240

OEM Test Results: Tasselli: 41-47%, Hussmann: 35-40%; variation due to humidity at time of test.

## 5. Energy Savings Estimate

based on:  ratio

1.	-	annual energy cost x ratio	0.16 = \$	-	savings (refrigerated)
2.	-	annual energy cost x ratio	0.16 = \$	-	savings (frozen)
3.	-	annual energy cost x ratio	0.16 = \$	-	savings (beverage)
		<b>Total: = \$</b>	-	<b>(B)</b>	savings (store)

## 6. Estimated Payback Period

Rami Cost/foot	Total Footage (A)	Annual Savings (B)	Payback (C) (months)
\$ - x	- /	\$ - =	