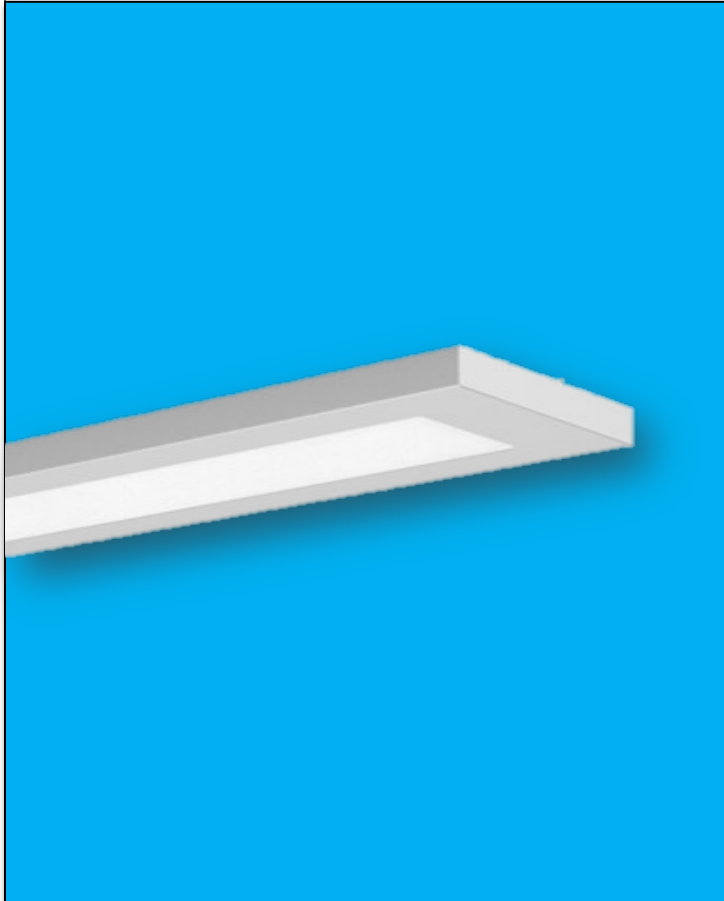


# Stail LED Product introduction

## Nov 2014



**STAIL**  
RMEP Series

## ➤ Breadth of Line

- Pendant: 4', 8', and continuous rows

## ➤ Light Engine Choices

- Four Lumen Package Options
- 3 CCTs: (3000K, 3500K, 4000K)
- 83+ CRI
- Binning: 3-step
- L85 at 60,000 hours

## ➤ High Efficacy (4ft)

- Up to 121 LPW
- Ease of Installation
- Quick-Grip field adjustable suspension system

## ➤ Control Flexibility

- Standard 0-10V Dimming Driver
- Occupancy sensor
- Button PC Daylight sense
- Motion sensor
- DALI protocol

## ➤ New warranty

- 5 year Warranty

**NEW**

## ➤ Listings/Compliances

- cULus – 1598
- cULus - Damp Location
- IC Rated
- DLC pending

Ideal for Office, Education, Healthcare

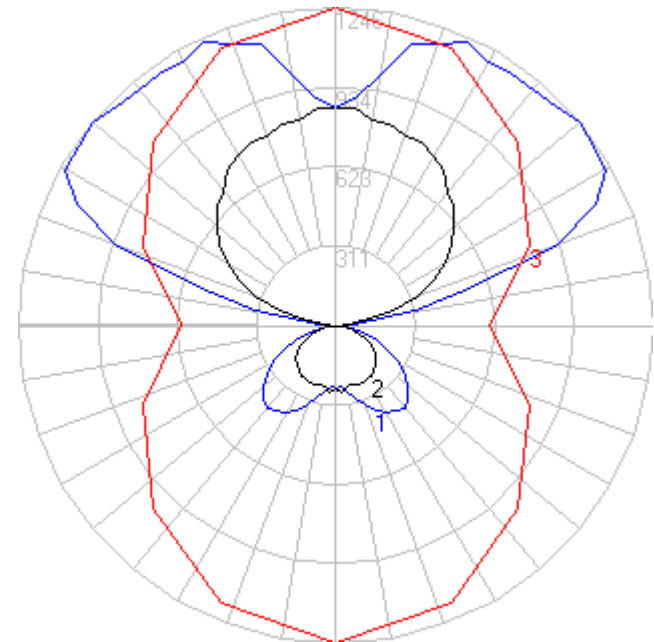
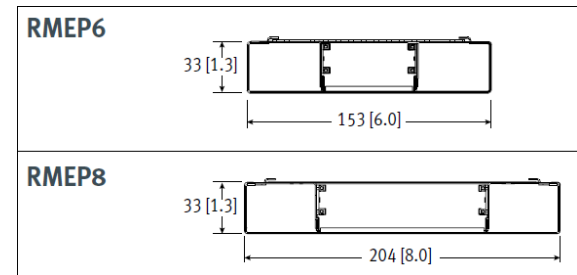
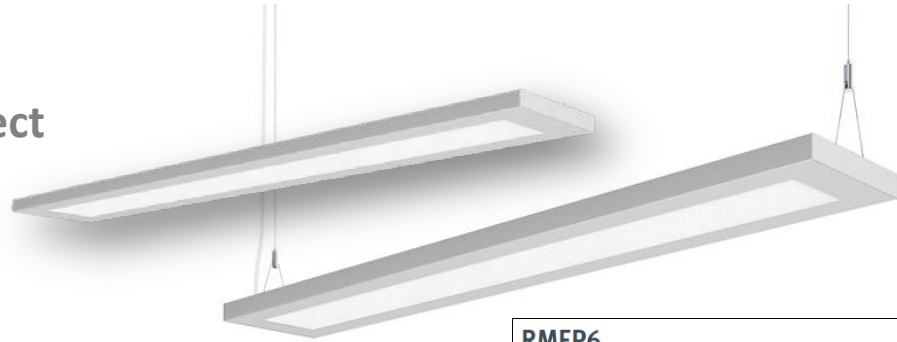


# STAIL RMEP8 LED

LED . Surface. Pendant . Indirect/Direct



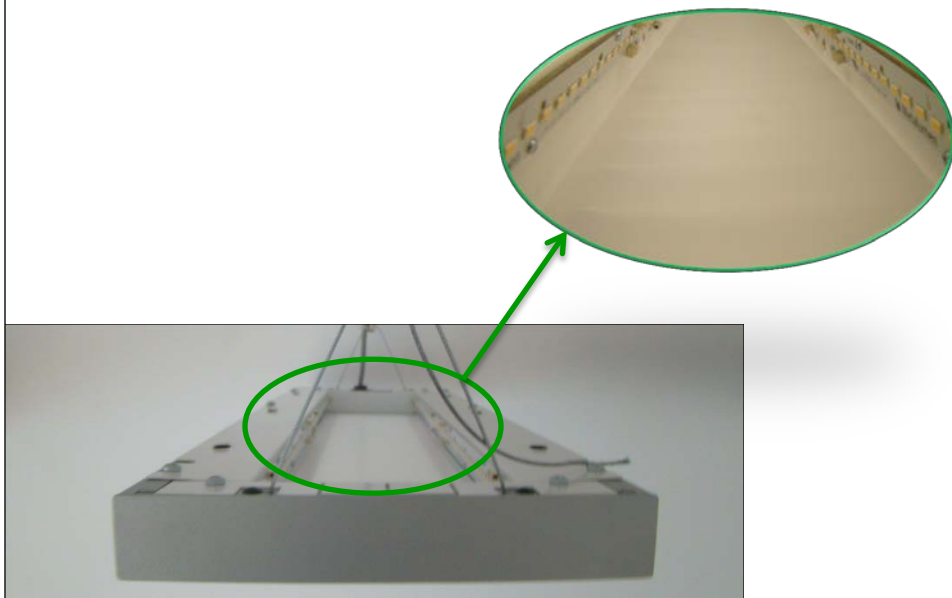
- Architectural Commercial application
- Slim sleek profile
- MetaLED Optical System
- 4', 8' or continuous row.
- 83+ CRI
- Silver finish (custom finish available)
- 3000, 3500K & 4000K CCT
- Four lumen packages
- Up to 121 L/W
- Pendant application
- 120-277V or 347V
- Class 2 Standard 0-10V Dimming (Down to 10%)
- LM79 & LM80 compliant.
- L85 @ 60,000h By TM21
- cULus certified
- Suitable for dry locations.



RMEP8L35K-4-ODCM-SG-L3

Luminaire Lumens:	5801
Input Watts:	48W
Efficacy (LPW):	121

# Stail LED Series Suspended, Integral Driver



- 4', 8' and Continuous
- Efficacy
  - Up to 113 LPW
- Lumen Packages
  - RMEP6: 3064, 3904, 5596, 10727
  - RMEP8: 3172, 4047, 5801, 11120
- Integral Controls

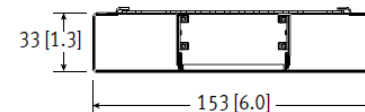
**Up to 50%  
Energy  
Savings**

4' Stail RMEP Suspended LED light Level Outputs

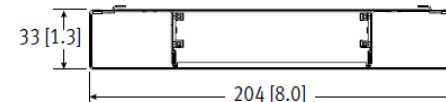
Light Level	Wattage	Lumens Delivered		Efficacy (LPW)		Fluorescent Equivalent	Energy Savings*
		RMEP6	RMEP8	RMEP6	RMEP8		
L1	27	3064	3172	112	116	2T8/T5	48%
L2	35	3904	4047	112	116	2T8/T5HO	36%
L3	48	5596	5801	117	121	3T8/2T5/T5HO	50%
L4	96	10727	11120	112	116	3T5HO	46%

\* Energy Savings based upon standard lamp/ballast combination using an equivalent RMEP series

RMEP6



RMEP8

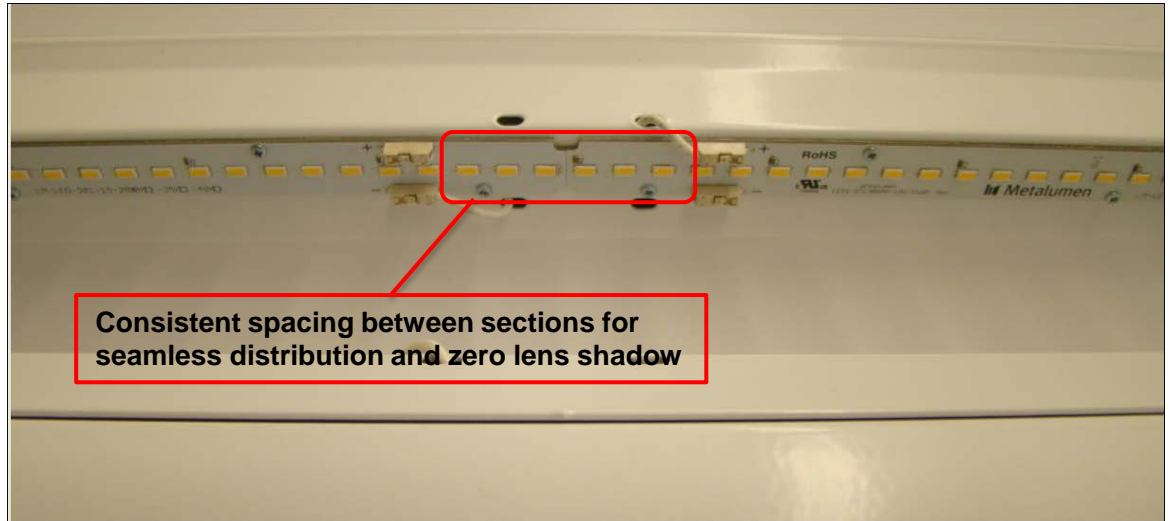


# Metalumen's *NEW* LED Light Engine

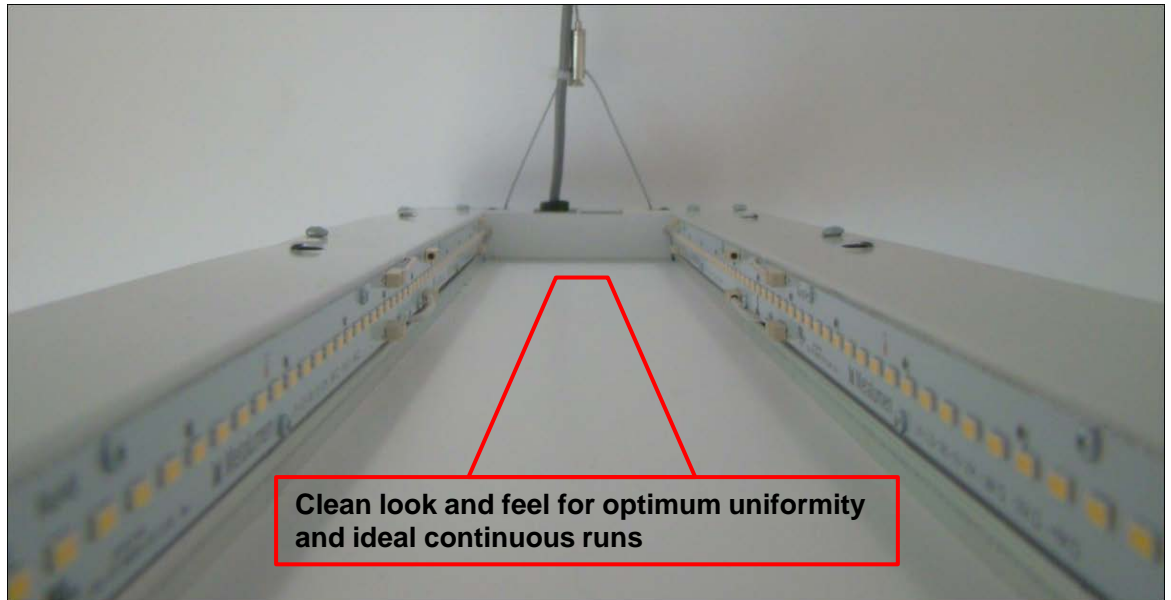


**New Boards with individual metal backing for better thermal management**

**Identification # for exact match of size and function**

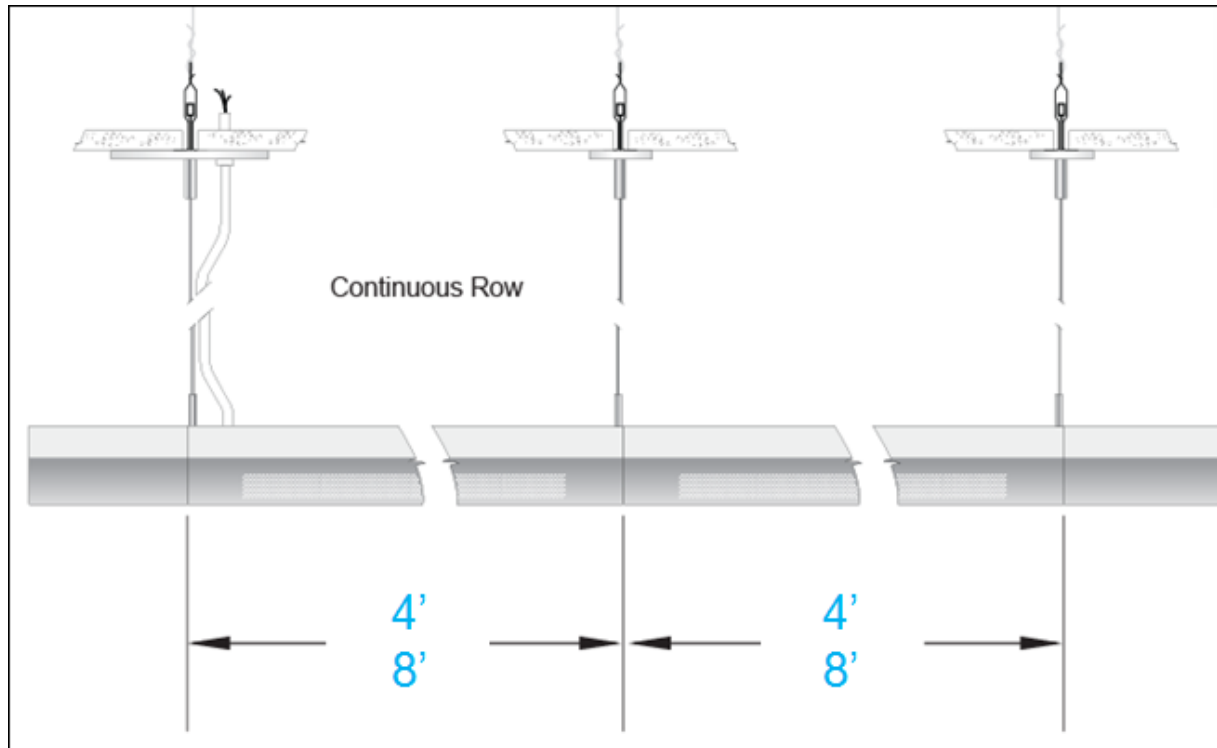
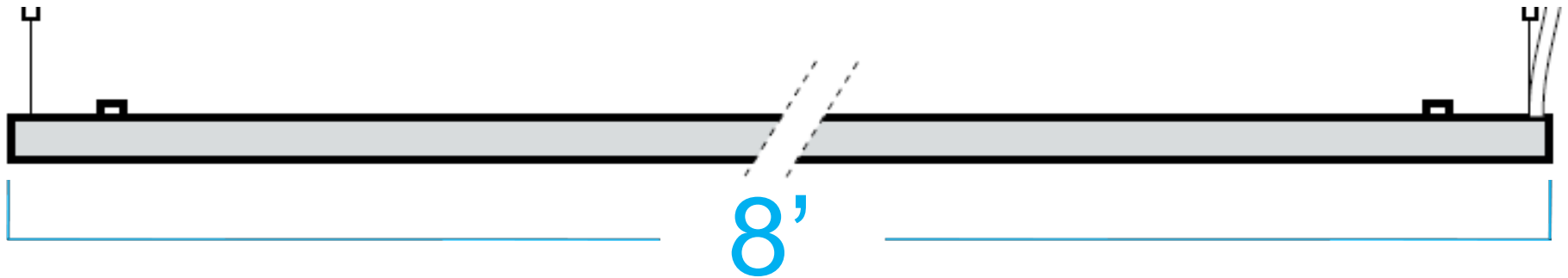


**Consistent spacing between sections for seamless distribution and zero lens shadow**



**Clean look and feel for optimum uniformity and ideal continuous runs**

# Simple for the Contractor – Modular for Client

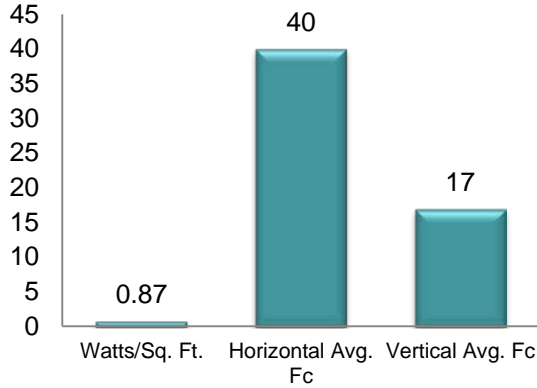


# Stail LED/FL Comparison

Room Size: 26' x 44'  
 Ceiling Height: 10'  
 Work Plane: 2.5'  
 Reflectance: 80/50/20  
 # of fixtures: 15

## 2T5 FL

(2) 28W F28T5 lamps,  
 15 Fixtures, Electronic Ballast  
 66 watts per fixture

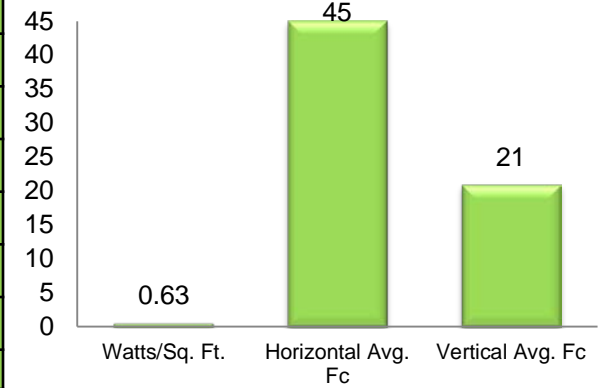


4782	Delivered Lumens	5799
66	Input Power (Watts)	48
72	Delivered LPW	121
0.87	Watts/Sq. Ft.	0.63
40	Horizontal Avg. Fc	45
53	Horizontal Max Fc	61
16	Horizontal Min Fc	20
3.31	Max/Min	3.05
17	Vertical Avg. Fc	21
80	CRI	83

27%  
 Energy  
 Savings

## Stail RMEP8 LED

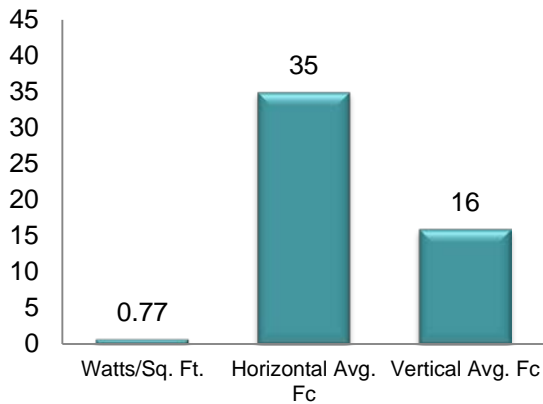
RMEP8L35K-4-CSBO-L3  
 15 Fixtures, Dimming Driver,  
 48 watts per fixture



- All calculations are based on 4' fixtures -

## 1T5HO FL

(1) 54W F54T5HO lamps  
 15 Fixtures, Electronic Ballast,  
 59 watts per fixture

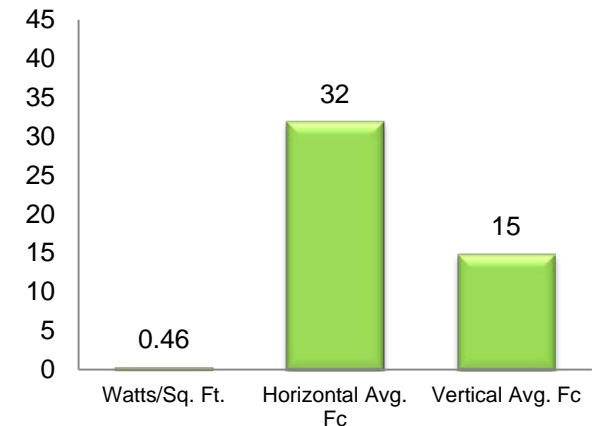


4144	Delivered Lumens	3905
59	Input Power (Watts)	35
70	Delivered LPW	112
0.77	Watts/Sq. Ft.	0.46
35	Horizontal Avg. Fc	32
47	Horizontal Max Fc	43
15	Horizontal Min Fc	14
3.13	Max/Min	3.07
16	Vertical Avg. Fc	15
80	CRI	83

41%  
 Energy  
 Savings

## Stail RMEP6 LED

RMEP6L35K-4-CSBO-L2  
 15 Fixtures, Dimming  
 Driver, 35 watts per fixture



# System energy Analysis

Insert Logo Here

## Lighting System Energy Analysis

*Ideas brought to light*

Input  
Output

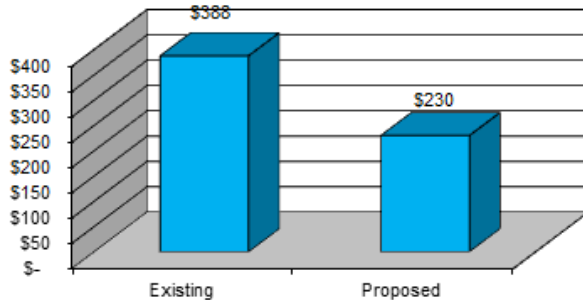
### Customer Information Facility Information

Project Name: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Cost Per kWh \$ 0.120  
 Annual Operating Hrs 3,650

### System Information Existing Proposed

	Existing	Proposed
Luminaire Description	(1) 54W T5HO	RMEP8L35K-4-L2
Input Watts Per Luminaire	59	35
Quantity	15	15
System Watts	885	525
System kW	0.885	0.525
Annual kWh	3,230	1,916
Annual Energy Costs	\$ 388	\$ 230
Monthly Costs	\$ 32	\$ 19
Annual Energy Savings (\$)		\$ 158
Annual Energy Savings (%)		41%
Cost of Waiting (Monthly)		\$ 13

Annual Energy Costs per Lighting Systems



Note: These are estimated savings only. These annual and monthly savings are based on a number of variables and assumptions that could change over time. The actual savings derived by your firm may be higher or lower.

## Annual Maintenance Cost Estimator: 5 Year Breakdown

  
*Ideas brought to light*

Input  
Output

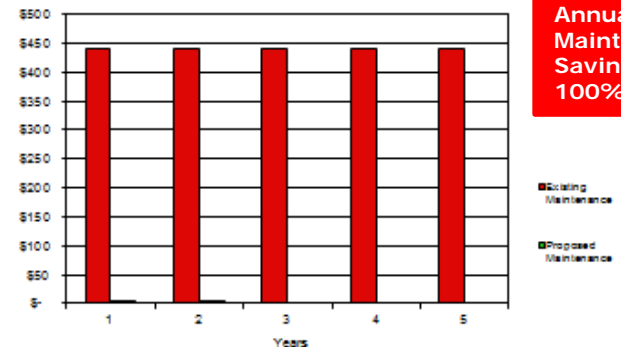
### Customer Information Facility Information

Project Name: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Annual Operating Hours 3,650

### System Information Existing System Proposed System

	Existing System	Proposed System
Description of System	(1) 54W T5HO	RMEP8L35K-4-L2
Quantity	15	15
Type of Lamp	Fluorescent, T8	LED
Lamp Life (hrs)	20000	60000
Cost of Lamp	\$ 6.00	\$ -
Number of Lamps Per Fixture	2	8
Labor Cost to Spot Relamp per Lamp	\$ 10.00	\$ -
Annual Lamp Maintenance Cost	\$ 112.00	\$ -
Quantity of Lamps Replaced Annually	7	0
Ballast Type	High Reactance	High Reactance
Ballast Life (hrs)	60000	100000
Cost of Ballast	\$ 45.00	\$ 30.00
Number of Ballasts Per Fixture	1	1
Labor Cost Change a Ballast	\$ 10.00	\$ 10.00
Annual Ballast Maintenance Cost	\$ 330.00	\$ -
Quantity of Ballasts Replaced Annually	6	0
Annual Maintenance Cost of System at Maturity	\$ 442.00	\$ -
Summarized 5 Year Cost	\$ 2,210.00	\$ -
5 Year Savings Summary		\$ 2,210.00
5 Year Average Annual Savings		\$ 442.00

5 Year Maintenance Cost

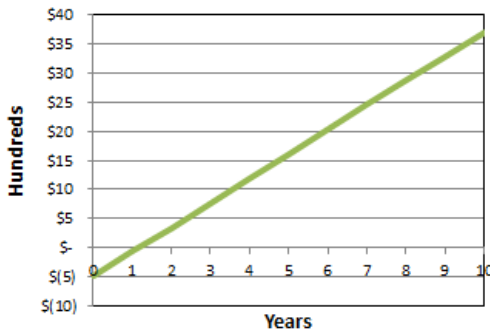


**Annual Maintenance Savings of 100%**



# System Energy & Maintenance Savings

**LED Payback (Years)**



**Payback = 1.18 Years**

**System Energy & Maintenance Cost Summary**

	LED	Traditional
Total Initial Fixture/Installation Cost	\$4,320	\$3,825
Total System kW	0.53	0.89
Annual kWh	1,916	3,230
Cost of Energy per kWh	\$0.120	\$0.120
kWh Inflation Rate (%/yr)	0.00%	0.00%
Average Annual Energy Cost	\$230	\$388
Average Annual Maintenance Cost	\$0	\$263
Average Annual Energy + Maintenance Costs	\$230	\$650
Average Annual Energy & Maintenance Savings	\$420	

	Savings		Cost/Year	
	Annual	Cumulative	LED	Traditional
1st Year	\$158	\$158	\$230	\$388
5th Year	\$333	\$1,169	\$230	\$563
10th Year	\$420	\$3,710	\$230	\$650

10 Year Total	Savings	Cost	
	\$4,205	LED	Traditional
		\$2,300	\$6,504

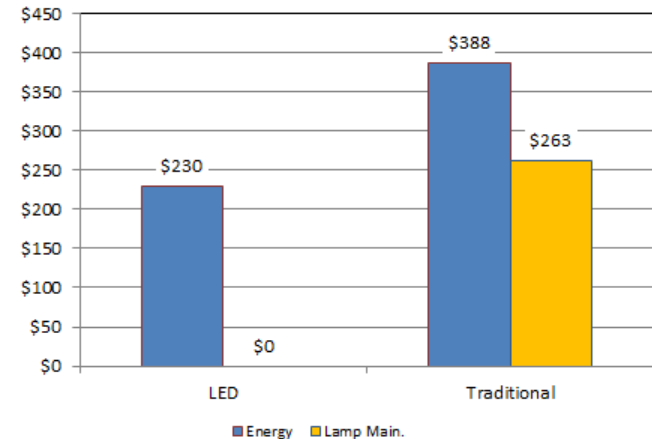
**+59% Savings including Energy & maintenance over 5 years**

## PAYBACK ANALYSIS

### AVERAGE ANNUALIZED SAVINGS PER YEAR

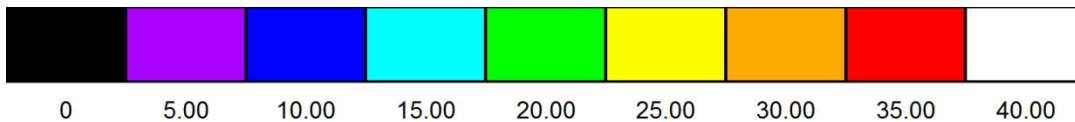
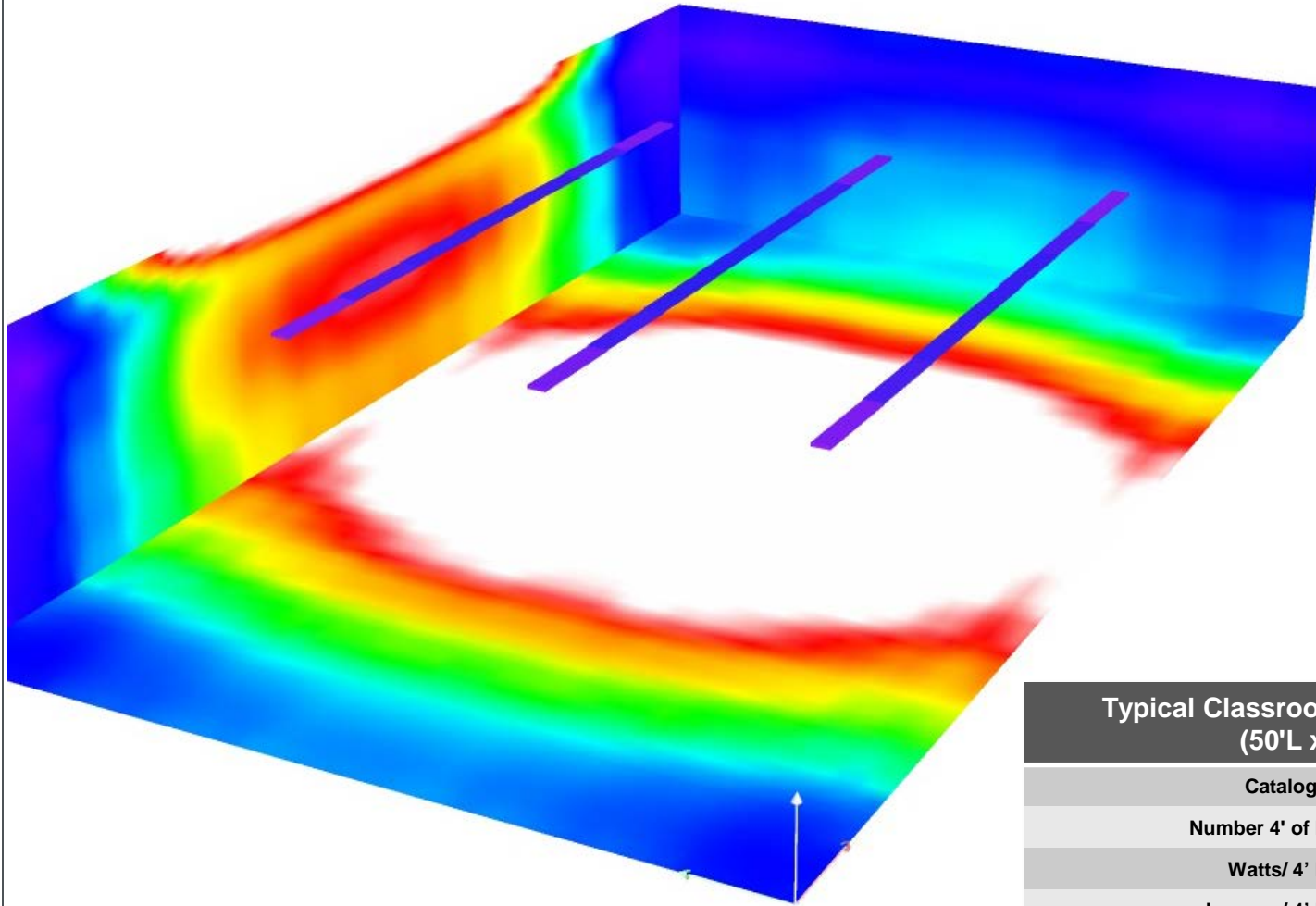
Annual Energy Savings	\$ 158
Annual Lamp Maintenance Savings	\$ 263
Annual Combined Savings	\$ 420
Cost of Waiting (Monthly)	\$ 35
Simple Payback (years)	1.18
IRR (%)	85%
10 Year Cash Flow (Energy & Lamp Main.)	\$ 3,710

**Annual Operating Cost: Energy & Lamp Maintenance**



\*\*\* Calculation is based on actual LED fixture used in comparison to a 1-T5HO FL fixture. Assumptions are \$0.12 per kWh and 10 operating Hours/day (10h @ full power). These are estimated savings only. Annual and monthly savings are based on a number of variables and assumptions that could change over time. The actual savings derived by our firm may be higher or lower. Metalumen's business does not imply a warranty of performance or savings as calculated and shown within this document.

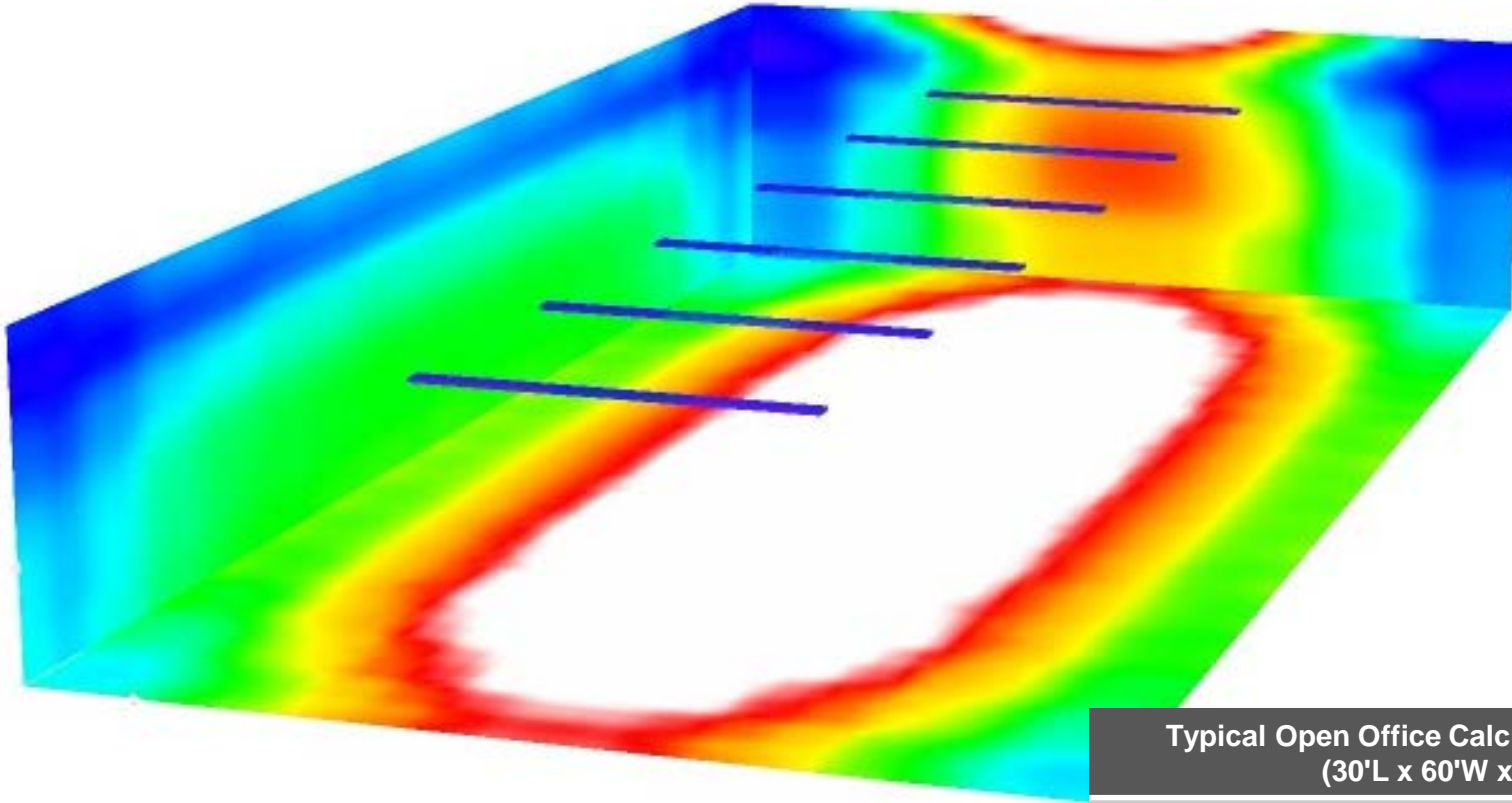
# Typical Classroom Calculation



## Typical Classroom Calculation Summary (50'L x 30'W x 10'H)

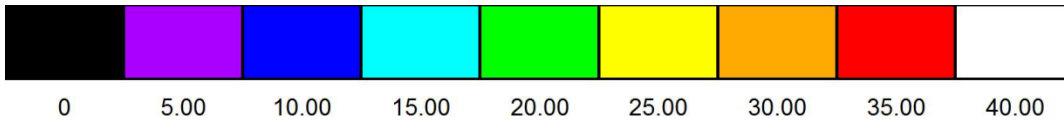
Catalogue Number	RMEP8L35k-4-L2
Number 4' of Luminaires	21
Watts/ 4' Luminaires	35W
Lumens/ 4' Luminaires	4046
Horizontal Light Level	35 FC
Vertical Light Level	16 FC
Spacing	28' Runs / 10' Spacing
Lighting Power Density	0.49 W/SF
% Better Than IECC 2012	51 %

# Typical Open Office Calculation



**Typical Open Office Calculation Summary**  
(30'L x 60'W x 10'H)

Catalogue Number	RMEP8L35k-4-L3
Number 4' of Luminaires	18
Watts/ 4' Luminaires	48W
Lumens/ 4' Luminaires	5799
Horizontal Light Level	38 FC
Vertical Light Level	17 FC
Spacing	12' Runs / 8' Spacing
Lighting Power Density	0.48 W/SF
% Better Than IECC 2012	52 %



**Standard Lead time:**  
Ships in 4-6 weeks

**First 4 months of production:**  
Ships in min 8 weeks



