



GE Lighting

How to Conduct a Body Shop Survey





Body Shop Survey

GE Lighting

• What do I use for a Survey?

- We have developed a Lighting Survey Form for you to use.

[Web Link Here](#)

SHERWIN-WILLIAMS
Automotive Finishes

GE Lighting

Lighting Survey

Body Shop Name: _____ Energy Rate: \$ 0.10 \$ per kWh @ _____ Prepared by: _____
 Body Shop Contact: _____ Present: _____ Industrial State: _____ Date: _____
 Address: _____ Universal State: _____
 City/Province, Postal Code: _____ Universal State: _____
 Phone Number: _____ Local (Area): _____
 Client Use: _____ Shaded Areas are Auto-Care

Existing Lighting	Notes / Fixture Product, No.	Fixture	Lamp	Total	Wattage	Length	Lamp	Color	Current Lamp			Electricity Consumption				
									Wattage	Hours	Cost	Watt	Hours	Cost	Watt	Hours
Booth A				0												
Booth B																
Booth C																
Prep Station A																
Prep Station B																
Prep Station B																
Inspection Area																
Detailing Area																
Wax Room																
Storage																
Sending Area																
Shop																
Lunch Room																
Office																
Hallway																
Conf. Room																
Bathroom/Shower																
Other																
Special Needs																

Note for Use: Calculation for Electricity Consumption is an estimate only. If Ballasts are changed, use GE Energy Estimator Guide to ensure "Ballast Factor" is included.



Body Shop Survey

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• What is on the Survey Form?

Shop Information

Locations

Lighting Information

Lighting Survey											
Body Shop Name			Energy Panel #			Inspected by			Date		
Body Shop Contact			Present			Revised/Added			Disposal Method		
Address			Current Method			Current Rate (\$/KWH)			Disposal Method		
City/Province, Postal Code			Current Rate (\$/KWH)			Disposal Method			Disposal Method		
Phone Number			Current Rate (\$/KWH)			Disposal Method			Disposal Method		
Shaded Areas are Auto Calc											
Existing Lighting											
Location	Notes / Fixture Product, Qty	Fixture	Lamp	Total Lumens	Wattage	Length	Lamp Type	Color	Current Lamp Watts	Current Lamp Qty	Electricity Consumption
Booth A				0							0.00
Booth B											0.00
Booth C											0.00
Prep Station A											0.00
Prep Station B											0.00
Prep Station C											0.00
Inspection Area											0.00
Detailing Area											0.00
Wax Room											0.00
Storage											0.00
Sanding Area											0.00
Shop											0.00
Lunch Room											0.00
Office											0.00
Hallway											0.00
Conf. Room											0.00
Bathroom/Shower											0.00
Other											0.00
Special Notes											

Current Electric Rate (\$/KWHR)

Current Disposal Method

Your Name

Current Lighting Characteristics
(After Site Survey- Generally found on Web)





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- **What are you looking for?**
 - Existing Lighting by Location
 - Number of Fixtures
 - Number of lamps per fixture
 - Physical Characteristics
 - Type, Wattage, etc.
 - Lighting Needs- Color Critical or General
 - Existing lights have information encoded





Locations: Typical Areas of a Body Shop

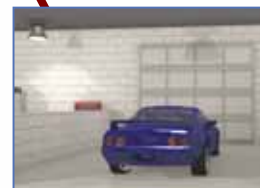
Record information by Area- Keep notes so you remember where each light is.



Paint Booth



Production Area



Final Inspection



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- As an Example for a Spray Booth

Fixtures	22
<u>Lamps/Fixture</u>	<u>x 4</u>
Total Lamps	88





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- Sample Lamp in a Spray Booth

Size (Diameter)	T12
Wattage	40
Color Temp	4200 K
CRI	70
Lumens- Avg	2295
Rated Life	20,000 hours
Pin	Bi-Pin

F40CW/SS/ECO



Key details via
Web Search or
Call Gexpro





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Your information

Use Shop's Electricity Rate
(National Avg: \$0.10)

How does Shop
dispose of old lamps?

Fill in Shop
Information



Lighting Survey																
Body Shop Name				Electricity Rate	\$ 0.10	\$ per KW-HRS	Prepared by									
Body Shop Contact				Present		Hazardous Waste	Date									
Address				Disposal		Universal Waste										
City/Province, Postal Code				Method		Local Landfill										
Phone Number				<i>Check One</i>			Shaded Areas are AutoCalc									
Existing Lighting									Current Lamp Specs			Electricity Consumption				
Location	Notes / Fixture Product Nbr	Fixtures	Lamps/ Fixture	Total Lamps	Wattage/ Lamp	Length	Lamp Type	Color Critical?	Temp K	CRI	Rated Lumen	KW/ Hou	Hours / Day	Days / Year	KW/ Year	\$/ Year
Booth A	F40CW/SS/ECO	22	4	88	40	48	T12	Yes	4200	62	2295	0.00	6	260	0	\$ -

Fill out information here on what shop is using today

Found on Web or Gexpro

Ask Shop

Typical Booth: 6 hours/day for 260 days per year
Exterior Light: 12 hours/day for 365 days per year





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- How do you calculate energy cost?
 - Assuming that you change lamp and not ballast

Example: Spray booth with 22 fixtures & 4 lamps/fixture → 88 lamps

88 lamps x 40 watts/ lamp x 1 kilowatt/1000 watts= 3.52 Kilowatts

6 hours/day x 260 days/year= 1560 Hours/year

Shop electrical rate of \$0.10/KwHr \$0.10/KwHr

3.52 Kilowatts x 1560 Hours/Year x \$0.10/KwHr= \$549.12/Year





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What are Key Variables for Fluorescent Lamps?

Diameter

T12 = 12÷8 or 1.5 inches

T10 = 10÷8 or 1.25 inches

T8 = 8÷8 or 1.0 inches

T5 = 5÷8 or 0.625 inches

Length

Many lengths available

Spray booths are typically 48 inches

General work areas are typically 48 or 96 inches

Shape

Many available but “Linear Fluorescents” most common



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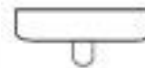
What are Key Variables for Fluorescent Lamps?

Pin Type

Bi-Pin



Single Pin



Bi-Pin Recessed





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What are Key Variables for Fluorescent Lamps?

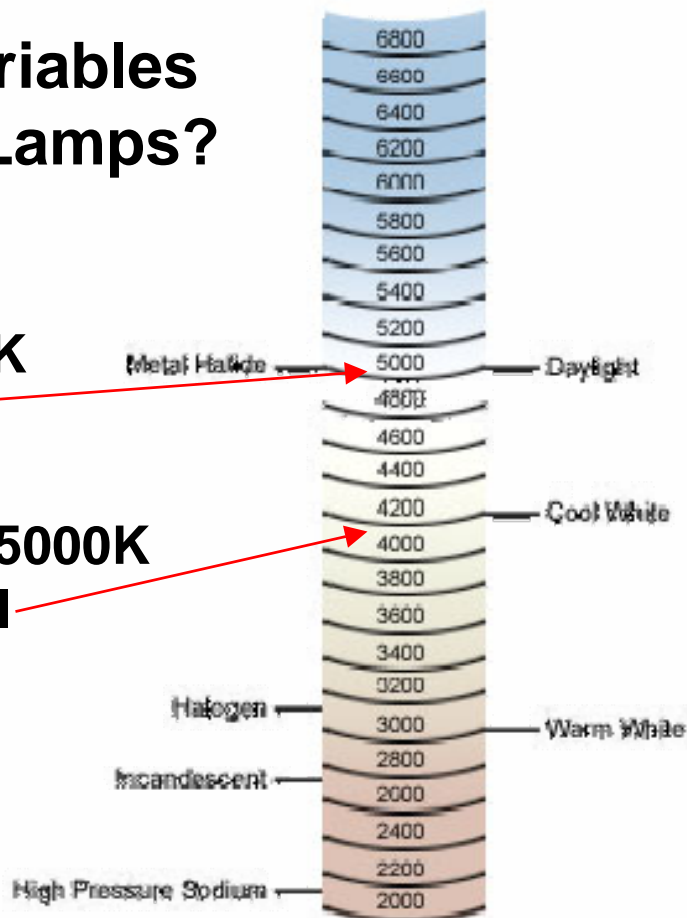
Temperature

Color Critical $\geq 5000\text{K}$

Daylight!

Non-Color Critical $< 5000\text{K}$

Cool White is typical





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What are Key Variables for Fluorescent Lamps?

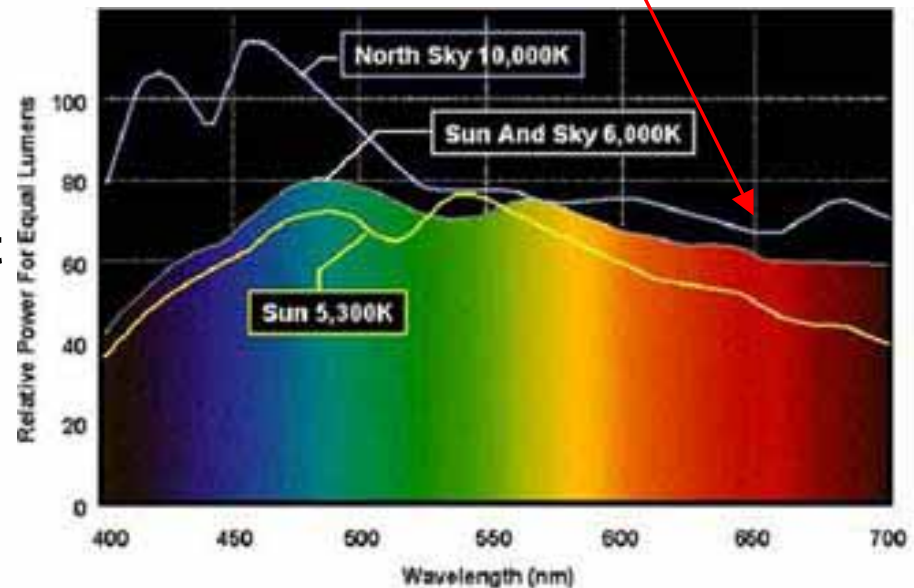
Color Rendering Index

0-100 with 100 as perfect daylight

Color Critical ≥ 85

Non-Color Critical < 85

High CRI- Spectrum at all wavelengths resembles Sun. Most low CRI lamps are Low in Red wavelength





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What are Key Variables for Fluorescent Lamps?

Lumens

Measurement for quantity of light- Should match what is existing.

Wattage

Measurement on how much energy is used- Use as low as possible. Make sure Temperature/CRI are correct for application, match lumens and then use lowest wattage as possible (Lowest operating cost).





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Recommendation for “Example Spray Booth”

	<u>Existing Lamp T12</u>	<u>Recommended Lamp T12</u>
Temperature	4200K- Too low	5000K- Daylight temperature
CRI	62- Too low (Color critical area!)	90- High color rendering
Lumens	2295	1870- Set Temperature & CRI first then review lumens
Wattage	40 watts	40 watts
Replacement Nbr	GE23010	GE80096
RN Cost	\$2.24 USD	\$4.24 USD

GE23010 is a match to what shop uses today but it does *not* have correct temperature and CRI. GE80096 is a better recommendation based on what is being done in spray booth. GE23010 may be less cost (\$197.12 for re-lamping spray booth vs. \$373.12 → \$176.00 difference.). But GE80096 has the potential to reduce color match complaints by avoiding or catching color miss-match within the booth. A typical re-do for color alone can run well over \$176 cost difference.

If a 32 watt could be used, energy savings would be 15% (40 watt – 32 watt = ↓8 watts or ↓15%). From our energy usage calculation in our example, \$549.12 per year, a 15% reduction is a \$82.37 savings per year, every year (Or equivalent to a 22% price discount.). Our recommendation then would be GE80092, temperature of 5000K & 90 CRI but uses 32 watts of energy.





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What Other Lighting do we Support?

We have 60 sku's supporting lighting- Key sku's for Shop Lighting

- Linear Fluorescents
- Compact Fluorescents- For replacing incandescent light bulbs
- High Intensity Discharge
 - Metal Halide- Interior or Exterior
 - High Pressure Sodium- Primarily Exterior
- Ballasts- For replacement or New/Retrofitted Facilities

We have access to GE Lighting's entire line- You will need to process new part number request through POS





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What else do I need to know?

- T12's & T10's use Magnetic Ballasts. T5's & T8's require Electronic Ballasts. You cannot use Ballasts that are not recommended for the lamp.
- Should I look at switching Ballasts as well as Lamps. GE has form that will show how switching ballasts will decrease energy costs, Electronic Ballasts are more efficient. The key issues are you will need to switch all ballasts & lamps and show a pay back in energy savings to offset up front costs. Unless energy is extremely high, pay back will be several years. With shop's with weak sales, this up front cost may not be right for his business.
- Magnetic Ballasts will be discontinued in 2010 with T12 lamps in 2011. At some point, customers will need to review their options. Even though pay back may not be fast, availability of lamps may force the issue. If a customer wants to review, contact Gexpro for working through a recommendation.
- What do I do if I find a lamp that I cannot a replacement recommendation? Contact Gexpro Customer Service at 216-778-6467.
- Do we offer a lighting recommendation for new facilities? If your customer used Collision Repair Design Services where a CAD drawing is developed, we can send CAD drawing to GE for a lighting recommendation. They will give lamp recommendations based on specifications and locations of work areas.
- Is GE Lighting DSC stocked? No- We have chosen not to stock due to a couple of factors. Gexpro pays for freight and insurance so if lamps are broken, they pay for that cost. If we take into DSC, we would need to pay that cost. In addition, we require use of our pallets, 30"x42", so ensuring 96" lamps are not broken would be difficult. We also do not know what is being used in shops today. Once we have history, we will re-evaluate that decision.



