



3rd
INTERNATIONAL WORKSHOP
ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Comparative Environmental Assessment for Public Luminaires

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Abstract

A comparative analysis was performed to compare the design of two distinct products, ie, luminaires manufactured by different processes (manufacturers) to obtain sensitivity and validate the technique of LCA for product redesign. Following recommendations of ISO 14040, was defined the scope of study to ensure that its breadth, depth and degree of detail to attend the established objective. The inputs and outputs relevant to all stages of life were recorded. With the support of software GaBi 4.0, the environmental impacts were obtained from environmental surveys. The functional unit was customized in order to promote a gain in sensitivity when comparing the environmental performance of both products. The products were then compared according to the environmental impacts considered. From the strategies prescribed by the ecodesign approach, we identified the main points to be improved in the redesign of products to mitigate the potential environmental impacts associated with its life cycle and improve on their environmental performance. Thus there was the potential of technology as a development tool for this type of product.

Keywords: *acv of lighting products, acv of luminaires, environmental assessment of lighting products, products redesigning by acv; ecodesign of lighting products.*
