CITY OF LOS ANGELES

CALIFORNIA

DEPARTMENT OF
PUBLIC WORKS

BUREAU OF
STREET LIGHTING

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To Whom It May Concern:

FULL CUTOFF LUMINAIRES AND IES RP-8-2000 IN LOS ANGELES

The City of Los Angeles has specified full cutoff luminaires on nearly all street lighting plans for new streetlight installations and conversions of existing installations since 1990. We had previously specified full cutoff luminaires at traffic signal intersections and in hillside areas for several years. We now have about 70,000 full cutoff luminaires in our system. In 2001, Los Angeles adopted IES RP-8-2000 as our street lighting standard, using the illuminance method. We have reviewed the benefits of full cutoff luminaires related to that standard in response to several inquires.

Regarding energy use, our conclusion is that essentially no extra energy is used due to specification of full cutoff luminaires with the 2000 standard, for new installations and conversions on major, collectors, and local streets.

Major streets have experienced no cost increase for installation nor maintenance and no need for additional streetlights to meet the 2000 standard, due to the increased use of 40 foot and 50 foot poles, with longer spacings than for the previously specified 31 foot poles. There is some overall energy increase involved in either the old or the new standards when using taller poles with higher wattages, but the total cost is the same or less due to fewer streetlights.

Local streets with lower average illumination requirements have a minor increase in energy use and cost for new installations with full cutoff luminaires. For the higher average illumination locations the energy use is decreased. Therefore, local streets have no energy increase, overall.

Conversion of less efficient mercury vapor luminaires to full cutoff, high-pressure sodium luminaries has resulted in significant maintenance cost and energy savings on all street types.

Overall we see no energy increase due to the use of full cutoff luminaries and RP-8-2000.

At the same time, the primary purpose of our change to specifying full cutoff luminaires from semi-cutoff luminaires was to reduce light trespass (a residential comfort impact), glare (a detriment to driver and pedestrian visibility) and light pollution or sky glow (an impact on everyone's enjoyment of the sky at night). These benefits are not quantifiable, but are very significant to our life experience. They are certainly part of what the public pays for in street lighting. We believe that our specification of full-cutoff luminaires has been quite beneficial both in controlling costs and energy use, and in the more intangible areas mentioned.

If you have any questions regarding this letter, please call me at (213) 847-6400.

Sincerely,

(Original signed copy on file)
Phil Reed, Director
Bureau of Street Lighting

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