A Market-Weighted Description of Low-Beam Headlighting Patterns in the U.S.

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This study was designed to provide photometric information about current U.S. low-beam headlamps. The sample included 35 low-beam headlamps manufactured for use on the 23 best-selling passenger cars, light trucks, and vans for model year 1997. These 23 vehicles represent 45% of all vehicles sold in the U.S. The lamps were purchased directly from vehicle dealerships, and photometered in 0.5° steps from 45° left to 45° right, and from 5° down to 7° up. The photometric information for each lamp was weighted by 1997 sales figures for the corresponding vehicle. The results are presented both in tabular form for the 25th-percentile, the median (50th-percentile), and the 75th-percentile luminous intensities, as well as in graphical form (for the median luminous intensities, and median illuminance values reaching the road surface). The information is presented in aggregate form, as well as broken down by vehicle type and light source.