ProMetric® Software provides equipment control, data acquisition, and image analysis when used with ProMetric Imaging Photometers and Colorimeters. A ProMetric solution provides rapid and accurate measurement of luminance and color for a broad range of light sources, displays, and optical materials.

PM-HL™, the headlamp evaluation module for ProMetric Software, enables accurate evaluation of headlamp beam patterns. The module also permits conversion of headlamp beam patterns into roadway illumination distributions. Includes pre-configured point-of-interest sets for testing to US and ECE standards, including:

- Illuminance (ECE Reg. 20)
- Intensity (FMVSS108, R112, R123)

A typical PM-HL system consists of:

- ProMetric Imaging Colorimeter or Photometer
- PM-AC4001 Metal Halide Illumination Calibration Lamp
- PM-HL software module
PM-HL System
Requirements
- Windows® 7 to 10, 64 bit
- 3.0 GHz and 8 cores
- 16-32 GB RAM
- Dual-monitor video output
- Ethernet 100/1000 port
- USB 2.0 interface

Key Features
- Point-of-interest set that contains both US and ECE POIs
- Conversion between illuminance distribution, luminous intensity distribution, and roadway illumination distribution
- Representation of a road overlaid on the measurement bitmap
- Automatic determination of the “beam elbow” datum position and alignment of camera image to that position
- Evaluation of ECE Reg 20 test points for left- or right-hand drive
- Headlamp cut-off gradient calculation per regulation
- Multiple data analysis functions, including bitmaps, isoplots, cross-sections, gradient lines, and more
- Simplified pass / fail testing
- Headlamp Analysis Report to document results of evaluations

Examples of PM-HL analyses:

Derived distributions include Luminous Intensity Distribution and Illuminance Measurement on the Road.

The Gradient Line POI is a line analysis sampling tool with 3 parameters: Start Point, End Point, and Detector Size. The value, Lv, of maximum gradient along the line is displayed.

The 2D Isometric plot can be used to display the Road Illumination plot, overlaid here with a representation of the road.

A PM-HL analysis form used to evaluate ECE Reg. 20 test points or Custom test points. Shown here is the ECE Reg. 20 Left-Hand Traffic Test.