





# PHOTOMETRIC SENSORS

SE-100, SE-200 Series, & SE-421



# **Response Graphs**



Cosine response of four photometric sensors. These data are the average of the AM and PM response.



Spectral response of photometric sensors (green) compared to the CIE 1931 photopic curve.

#### SE-100-SS SE-202-SS SE-205-SS SE-212-SS SE-215-SS SE-421-SS 5 to 24 V DC 5.5 to 24 V DC 5 to 24 V DC 5.5 to 24 V DC Power Supply 1.4 mA (quiescent); Current Draw Maximum of 10 $\mu$ A 1.8 mA (active) Output (sensitivity) 0.001 mV per lux 0.5 mV per lux 1 mV per lux 0.0167 mV per lux 0.033 mV per lux Custom for each 1000 lux per mV **Calibration Factor** 2 lux per mV 1 lux per mV 60 lux per mV 30 lux per mV sensor and stored in the firmware ±5% **Calibration Uncertainty** 0 to 2500 mV **Output Range** 0 to 200 mV 0 to 5000 mV 0 to 2500 mV 0 to 5000 mV SDI-12 Measurement Range 0 to 150000 lux 0 to 5000 lux 0 to 150000 lux Measurement Repeatability Less than 0.5 % Less than 2 % per year Long-term Drift Non-linearity Less than 1 % **Response Time** Less than 1 ms Spectral Range CIE 1931 luminous efficiency function 180° Field of View **Directional** (Cosine) ± 2 % at 45°; ± 5 % at 75° Response **Temperature Response** Less than 0.1 % per C -40 to 70 C; 0 to 100 % relative humidity **Operating Environment** Dimensions 30.5 mm diameter, 37 mm height 140 g Mass (with 5 m of cable) Cable 5 m of shielded, twisted-pair wire with TPR jacket and stainless steel connector Warranty 4 years against defects in materials and workmanship

# **Product Specifications**





## Overview

Apogee photometric sensors use a photodetector with a spectral response that closely matches the sensitivity of the human eye to light; sensors include a diffuser to properly weight light incident from any angle. Apogee photometric sensors provide highly accurate illuminance measurements (lux or footcandles) at an affordable price.



### Features

#### RUGGED, SELF-CLEANING HOUSING

Sensor features an anodized aluminum body with fully-potted electronics. The dome-shaped sensor head minimizes errors by shedding dust and water for a self-cleaning performance.

### **CALIBRATION TRACEABILITY**

Apogee SE photometric sensors are calibrated through side-by-side comparison to the mean of two transfer standard sensors under a reference lamp. The reference sensors are verified with a quartz halogen lamp traceable to the National Institute of Standards and Technology (NIST).





