

# CC-3 Series Cosine-corrected Irradiance Probes Instructions

## Overview

The CC-3 Cosine-corrected Irradiance Probes are spectroradiometric sampling optics designed to collect radiation (light) from approximately a 180° field of view, thus eliminating light collection interface problems inherent to other sampling devices.



The following models are available:

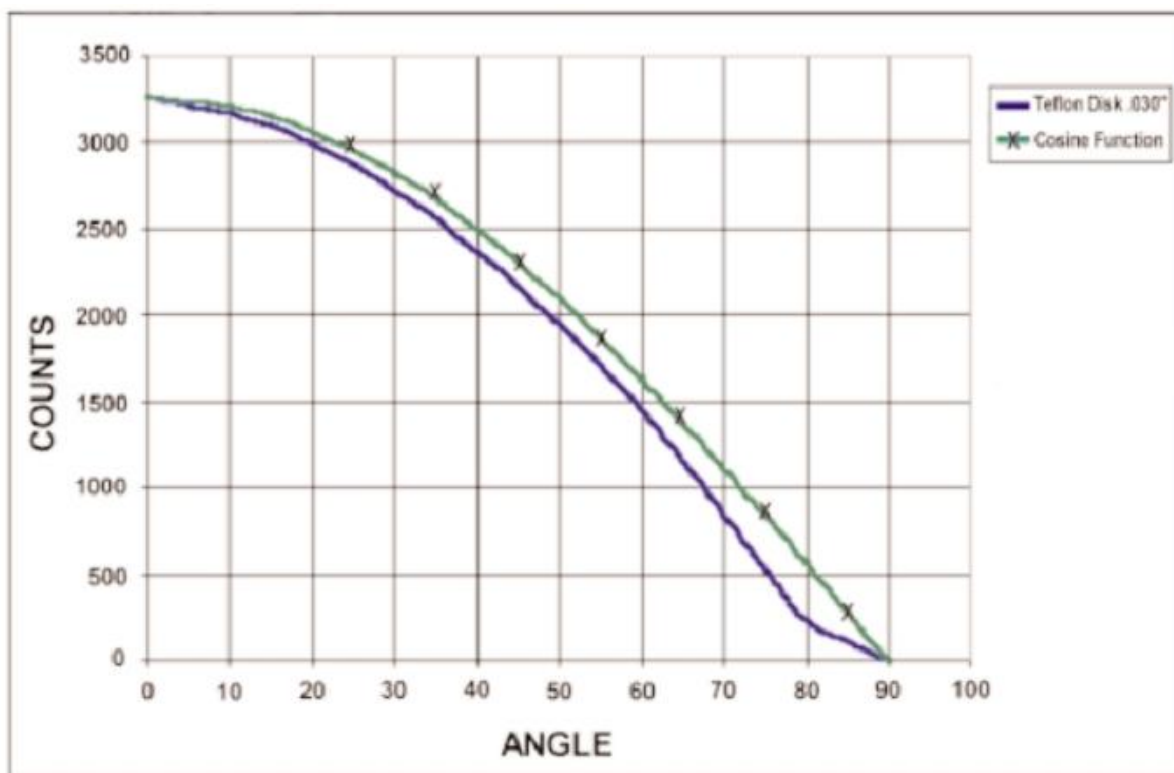
- CC-3 – Has Opaline glass-diffusing for a wavelength range of 350 – 1000 nm
- CC-3-UV-S – Has Spectralon™ material for a wavelength of 200–2500 nm
- CC-3-UV-T – Has PTFE material for a wavelength of 200 –750 nm
- CC-3-DA – Has Spectralon material for a wavelength of 200–2500 nm

## Operation

The CC-3-UV-T Cosine Corrector's Teflon™ diffusing material is a thin disk that sits at the end of the barrel (the Teflon material is 0.030" thick), while the CC-3-UV-S and CC-3-DA (Spectralon diffuser) have a much thinner material (0.007" thick) which is substantially more dense than the Teflon. Both cosine corrector types have a 0.25" OD barrel with a smooth yet rugged black oxide finish. Both the CC-3 and the CC-3-UV models are screwed onto the end of an optical fiber, making an irradiance probe. The probe couples to a spectrometer to measure the intensity of light normal to the probe surface. When coupled to a spectrometer, these irradiance probes can be used to measure UV-A and UV-B solar radiation, environmental light fields, lamps and other emission sources.

The CC-3-DA screws directly onto the SMA 905 connector of a spectrometer, creating a complete spectroradiometric system and eliminating the need for an optical fiber.

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CC-3-UV-T Cosine Corrector Function Test

## Specifications

| Specification                 | CC-3          | CC-3-UV-S     | CC-3-UV-T    | CC-3-DA       |
|-------------------------------|---------------|---------------|--------------|---------------|
| Diffusing Material            | Opaline glass | Spectralon    | PTFE         | Spectralon    |
| Wavelength range              | 350 – 1000 nm | 200 – 2500 nm | 200 – 750 nm | 200 – 2500 nm |
| Dimensions                    | 6.35 mm OD    | 6.35 mm OD    | 6.35 mm OD   | 12.7 mm OD    |
| Field of View (approximately) | 180°          | 180°          | 180°         | 180°          |