**Step 1: Calculate the “diffuser fraction” *f***

Where *DR* is the “diffuse to total” ratio, *f* is the fraction of an artificial diffuser (here clouds), *c* indicates under clear-sky and *d* indicates diffuser above.

Assuming , we get

Integrate from wavelength to

Where *DR* is the “diffuse to total” ratio from SPN1 and *DRc* is the “diffuse to total” ratio from model calculation.

**Step 2: Calculate the “diffuser fraction” *f***