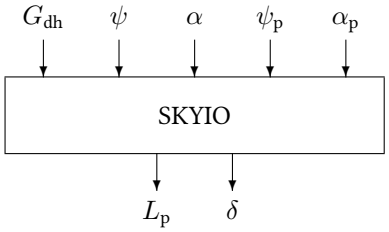
Block SKYIO

The SKYIO block simulates an intermediate overcast sky.





Name	SKYIO
Function	em0027
Inputs	5
Outputs	2
Parameters	0
Strings	0
Group	S

Inputs

1 Total horizontal diffuse radiation G_{dh} / W m^{-2}
2 Solar azimuth ψ / °
3 Solar elevation α / °
4 Point azimuth ψ_p / °
5 Point elevation α_p / °

Outputs

1 Point luminance L_p / cd m^{-2}
2 Angle between point and Sun δ / °

Parameters

None

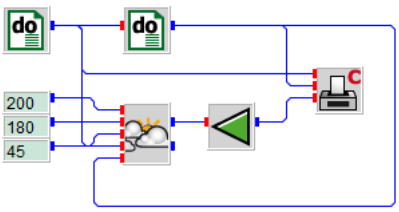
Strings

None

Remarks

The equations and coefficients are taken from the source “Daylighting in Architecture – A European Reference Book” pages 3.6 and 3.7 published for the Commission of the European Communities by James and James (Science Publishers) Ltd. 1993 Brussels and Luxembourg

skyio.vseit



Two nested DO blocks vary elevation between zero and ninety degrees in steps of one (inner DO block) and azimuth between zero and 360 degrees in steps of 1 (outer DO block).

The diffuse radiation is assumed constant with 200 W/m^2. The position of the Sun is assumed at south (azimuth 180 degrees) at an altitude of 45 degrees. The luminance output of the SKYIO block is attenuated by a factor 1000.

Hence, the PLOTPMC block displays the clear sky luminance distribution over the sky dome in kcd / m^2.

