

Series truncated at n= 10
Refractive index: (1.3660000000000001 , 5.000000000000001E-003)
Downward recursion begun at ndown= 0
QEXT= 2.2798833806440126
QSCA= 2.2149784689537464
QABS= 6.4904911690266243E-002
QABS= 6.4904911690266423E-002 from direct expansion.
albedo= 0.97153147733726097
<cos>= 0.78591367711224203

Theta	n	tau1(n)	tau2(n)
0	1	-1.0000000000000000	1.0000000000000000
0	2	-3.0000000000000000	3.0000000000000000
0	3	-6.0000000000000000	6.0000000000000000
0	4	-10.0000000000000000	10.0000000000000000
0	5	-15.0000000000000000	15.0000000000000000
0	6	-21.0000000000000000	21.0000000000000000
0	7	-28.0000000000000000	28.0000000000000000
0	8	-36.0000000000000000	36.0000000000000000
0	9	-45.0000000000000000	45.0000000000000000
0	10	-55.0000000000000000	55.0000000000000000
10	1	-0.98480775301220802	1.0000000000000000
10	2	-2.8190778623577248	2.9544232590366239
10	3	-5.2406958036670392	5.7738473279471547
10	4	-7.8775046532734265	9.3284047522505844
10	5	-10.271349375302819	13.452732817383733
10	6	-11.908235347769377	17.952296568374081
10	7	-12.253080515042029	22.610860210355685
10	8	-10.787290664616847	27.198840573501464
10	9	-7.0472163494728761	31.482244036520257
10	10	-0.66146617073582092	35.231866271483099
20	1	-0.93969262078590843	1.0000000000000000
20	2	-2.2981333293569346	2.8190778623577253
20	3	-3.1648847327947180	5.1226666616961687
20	4	-2.4769771084843661	7.4732709919207370
20	5	0.68597735313935715	9.3974662824227195
20	6	6.8089582181904120	10.459680192984544
20	7	15.713761968938499	10.332205305617716
20	8	26.449929015011335	8.8512878125904759
20	9	37.338707873233901	6.0509349453100398
20	10	46.177848930590905	2.1690534773778207
30	1	-0.86602540378443871	1.0000000000000000
30	2	-1.5000000000000000	2.5980762113533160
30	3	-0.32475952641916628	4.1250000000000009
30	4	3.7499999999999929	4.8713928962874702
30	5	10.453197256616850	4.3359375000000044
30	6	17.800781249999993	2.4153989777425435
30	7	22.514123314595256	-0.52636718749999023
30	8	21.155273437500021	-3.7372717376205316
30	9	11.618319629841906	-6.2855529785156179
30	10	-5.5817413330077201	-7.3392005769018462
40	1	-0.76604444311897812	1.0000000000000000
40	2	-0.52094453300079202	2.2981333293569346
40	3	2.525233338303821	2.9011806662509896
40	4	8.0052502097930329	2.1214999925442539
40	5	12.613551128470599	3.0141548008590924E-002
40	6	11.678687673602123	-2.4950025072633375
40	7	2.4344812155823057	-4.1762778862335175
40	8	-13.048392942377056	-4.0040281367058803
40	9	-27.495077235109129	-1.8196223244453913
40	10	-31.554144461616502	1.5062179481047586
50	1	-0.64278760968653936	1.0000000000000000

50	2	0.52094453300079069	1.9283628290596182
50	3	4.6303475426550147	1.5988193337490118
50	4	8.4393706539603617	-0.17318083707013443
50	5	6.1890320284330524	-2.2489907838698726
50	6	-4.2786082849130747	-2.9725544978915366
50	7	-16.958843816622750	-1.5160733529376054
50	8	-20.375739911263473	1.3089626404955692
50	9	-7.1207281880002498	3.4935255766177029
50	10	17.304868026996537	3.2862975261921195
60	1	-0.50000000000000011	1.0000000000000000
60	2	1.4999999999999991	1.5000000000000004
60	3	5.4375000000000000	0.3750000000000089
60	4	5.0000000000000036	-1.562499999999993
60	5	-3.8085937499999929	-2.2265625000000009
60	6	-13.863281250000000	-0.57421875000000222
60	7	-11.508300781250014	1.9755859374999987
60	8	6.6884765624999805	2.7729492187500018
60	9	24.472732543945312	0.72372436523437900
60	10	19.546585083007848	-2.3171234130859353
70	1	-0.34202014332566882	1.0000000000000000
70	2	2.2981333293569337	1.0260604299770064
70	3	4.7431353425403424	-0.62266666169616713
70	4	-0.56186600068691472	-1.8649978353500323
70	5	-10.066678227358587	-0.65686703351387155
70	6	-8.1764376173175073	1.7437415371337317
70	7	9.0215129456353189	2.0585334550818857
70	8	19.851507138380377	-0.48414766955042721
70	9	3.3702650388467879	-2.6677251795442758
70	10	-24.596816773252705	-1.3882691690510083
80	1	-0.17364817766693041	1.0000000000000000
80	2	2.8190778623577248	0.52094453300079124
80	3	2.7473819333749021	-1.2738473279471563
80	4	-5.5282731013086712	-1.2107290006235170
80	5	-8.2361675253312381	1.1192671695686958
80	6	5.8756353582074601	1.8804639502478802
80	7	15.770979972106220	-0.59831023188419141
80	8	-2.0900126351342418	-2.3717348319536522
80	9	-23.401535936578821	-0.20207678102089688
80	10	-6.6702895519822487	2.5611814765386707
90	1	-6.1232339957367660E-017	1.0000000000000000
90	2	3.0000000000000000	1.8369701987210297E-016
90	3	1.0103336092965664E-015	-1.5000000000000000
90	4	-7.5000000000000000	-4.5924254968025740E-016
90	5	-3.3295084851818662E-015	1.8750000000000000
90	6	13.125000000000000	8.0367446194045040E-016
90	7	7.3670159011207949E-015	-2.1875000000000000
90	8	-19.687500000000000	-1.2055116929106755E-015
90	9	-1.3411317583631265E-014	2.4609375000000000
90	10	27.070312500000000	1.6575785777521790E-015
100	1	0.17364817766693030	1.0000000000000000
100	2	2.8190778623577253	-0.52094453300079091
100	3	-2.7473819333749003	-1.2738473279471565
100	4	-5.5282731013086730	1.2107290006235165
100	5	8.2361675253312345	1.1192671695686967
100	6	5.8756353582074681	-1.8804639502478797
100	7	-15.770979972106218	-0.59831023188419319
100	8	-2.0900126351342596	2.3717348319536522
100	9	23.401535936578824	-0.20207678102089421
100	10	-6.6702895519822185	-2.5611814765386720
110	1	0.34202014332566871	1.0000000000000000
110	2	2.2981333293569342	-1.0260604299770062
110	3	-4.7431353425403415	-0.62266666169616769

110	4	-0.56186600068691872	1.8649978353500323
110	5	10.066678227358590	-0.65686703351387032
110	6	-8.1764376173175002	-1.7437415371337330
110	7	-9.0215129456353331	2.0585334550818848
110	8	19.851507138380377	0.48414766955043009
110	9	-3.3702650388467603	-2.6677251795442771
110	10	-24.596816773252730	1.3882691690510054
120	1	0.49999999999999978	1.0000000000000000
120	2	1.5000000000000013	-1.4999999999999993
120	3	-5.4375000000000000	0.37499999999999845
120	4	4.9999999999999929	1.5625000000000011
120	5	3.8085937500000124	-2.2265624999999987
120	6	-13.863281250000004	0.57421874999999600
120	7	11.508300781249975	1.9755859375000033
120	8	6.6884765625000409	-2.7729492187499982
120	9	-24.472732543945327	0.72372436523436834
120	10	19.546585083007763	2.3171234130859428
130	1	0.64278760968653925	1.0000000000000000
130	2	0.52094453300079158	-1.9283628290596178
130	3	-4.6303475426550165	1.5988193337490104
130	4	8.4393706539603599	0.17318083707013665
130	5	-6.1890320284330427	-2.2489907838698739
130	6	-4.2786082849130924	2.9725544978915353
130	7	16.958843816622764	-1.5160733529376000
130	8	-20.375739911263452	-1.3089626404955754
130	9	7.1207281880001929	3.4935255766177047
130	10	17.304868026996587	-3.2862975261921141
140	1	0.76604444311897790	1.0000000000000000
140	2	-0.52094453300078980	-2.2981333293569337
140	3	-2.525233338303874	2.9011806662509869
140	4	8.0052502097930383	-2.1214999925442477
140	5	-12.613551128470592	3.0141548008582930E-002
140	6	11.678687673602091	2.4950025072633437
140	7	-2.4344812155822488	-4.1762778862335175
140	8	-13.048392942377117	4.0040281367058714
140	9	27.495077235109157	-1.8196223244453744
140	10	-31.554144461616453	-1.5062179481047773
150	1	0.86602540378443871	1.0000000000000000
150	2	-1.5000000000000000	-2.5980762113533160
150	3	0.32475952641916628	4.1250000000000009
150	4	3.7499999999999929	-4.8713928962874702
150	5	-10.453197256616850	4.3359375000000044
150	6	17.800781249999993	-2.4153989777425435
150	7	-22.514123314595256	-0.52636718749999023
150	8	21.155273437500021	3.7372717376205316
150	9	-11.618319629841906	-6.2855529785156179
150	10	-5.5817413330077201	7.3392005769018462
160	1	0.93969262078590832	1.0000000000000000
160	2	-2.2981333293569328	-2.8190778623577248
160	3	3.1648847327947127	5.1226666616961669
160	4	-2.4769771084843661	-7.4732709919207343
160	5	-0.68597735313936425	9.3974662824227142
160	6	6.8089582181904333	-10.459680192984537
160	7	-15.713761968938499	10.332205305617709
160	8	26.449929015011321	-8.8512878125904688
160	9	-37.338707873233915	6.0509349453100310
160	10	46.177848930590940	-2.1690534773778083
170	1	0.98480775301220813	1.0000000000000000
170	2	-2.8190778623577257	-2.9544232590366244
170	3	5.2406958036670481	5.7738473279471574
170	4	-7.8775046532734478	-9.3284047522505915
170	5	10.271349375302876	13.452732817383751

170	6	-11.908235347769420	-17.952296568374109
170	7	12.253080515042143	22.610860210355735
170	8	-10.787290664617018	-27.198840573501538
170	9	7.0472163494732172	31.482244036520374
170	10	-0.66146617073633251	-35.231866271483270
180	1	1.0000000000000000	1.0000000000000000
180	2	-3.0000000000000000	-3.0000000000000000
180	3	6.0000000000000000	6.0000000000000000
180	4	-10.000000000000000	-10.000000000000000
180	5	15.000000000000000	15.000000000000000
180	6	-21.000000000000000	-21.000000000000000
180	7	28.000000000000000	28.000000000000000
180	8	-36.000000000000000	-36.000000000000000
180	9	45.000000000000000	45.000000000000000
180	10	-55.000000000000000	-55.000000000000000

QBACK= 0.16734297155045535 from direct expansion.
 QREFL= 2.3933807563834186E-002 (normal incidence reflectance)