



Standard Table for Reference Solar Spectral Distributions: Direct and Diffuse on 20° Tilted and Vertical Surfaces¹

This standard is issued under the fixed designation G 197; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

INTRODUCTION

This table of solar spectral irradiance distributions has been developed to meet the need for weighting functions to be used in evaluating the broadband transmittance of fenestration systems or the performance of technologies such as building-integrated photovoltaic devices. To compare the relative optical performance of spectrally sensitive products by theoretical simulation, or to compare the performance of products by actual testing under laboratory conditions, separate reference standard solar spectral distributions for direct and diffuse irradiance are required. This table was prepared using version 2.9.2 of the Simple Model of the Atmospheric Radiative Transfer of Sunshine (SMARTS) atmospheric transmission code (1, 2).² SMARTS uses parameterizations of version 4.0 of the Air Force Geophysical Laboratory (AFGL) Moderate Resolution Transmission model, MODTRAN (3, 4). An extraterrestrial spectrum differing only slightly from the extraterrestrial spectrum in ASTM E 490 is used to calculate the resultant spectra. The directional beam and diffuse hemispherical (2π steradian acceptance angle) spectral irradiances on planes tilted 20° (representative of a pitched roof slope) and 90° (tilt of a typical wall) to the horizontal are tabulated. The wavelength range for the spectra extends from 280 nm to 4000 nm, covering the spectral range for which windows or solar collectors respond to shortwave energy. The input parameters used in conjunction with SMARTS for each set of conditions are tabulated. The SMARTS model and documentation are available as an adjunct to this standard.

1. Scope

1.1 This table provides terrestrial solar spectral irradiance distributions that may be employed as weighting functions to (1) calculate the broadband solar or light transmittance of fenestration from its spectral properties; or (2) evaluate the performance of building-integrated technologies such as photovoltaic electricity generators. Most of these systems are installed on vertical walls, but some are also installed on pitched roofs or on other tilted structures, such as sunspaces. Glazing transmittance calculations or measurements require information on both the direct and diffuse components of irradiance. The table provides separate information for direct and diffuse irradiance, and for two different tilt angles, 20° and 90° relative to the horizontal. All distributions are provided at 2002 wavelengths within the spectral range 280–4000 nm. The

data contained in this table reflect reference spectra with uniform wavelength interval (0.5 nanometer (nm) below 400 nm, 1 nm between 400 and 1700 nm, an intermediate wavelength at 1702 nm, and 5 nm intervals from 1705 to 4000 nm). The data table represents reasonable cloudless atmospheric conditions favorable for the computerized simulation, comparative rating, or experimental testing of fenestration systems.

1.2 The data contained in this table were generated using the SMARTS version 2.9.2 atmospheric transmission model developed by Gueymard (1, 2).

1.3 The selection of the SMARTS radiative model to generate the spectral distributions is chosen for compatibility with previous standards (ASTM G 173 and G 177). The atmospheric and climatic conditions are identical to those in ASTM G 173. The environmental conditions are also identical, with only one exception (see sections 4.3 and X1.2).

1.4 The table defines four solar spectral irradiance distributions:

1.4.1 Separate direct and diffuse solar spectral irradiance incident on a sun-facing, 20° tilted surface in the wavelength region from 280–4000 nm for air mass 1.5, at sea level.

¹ These tables are under the jurisdiction of ASTM Committee G03 on Weathering and Durability and is the direct responsibility of Subcommittee G03.09 on Radiometry.

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² The boldface numbers in parentheses refer to the list of references at the end of this standard.

1.4.2 Separate direct and diffuse solar spectral irradiance incident on a sun-facing, 90° (vertical) tilted surface in the wavelength region from 280–4000 nm for air mass 1.5, at sea level.

1.5 The diffuse spectral distribution on a vertical surface facing away from the sun (i.e., shaded), or at any prescribed azimuth away from the sun, may be computed using the model to obtain representative results (i.e., results that fall within an acceptable range of variance).

1.6 The climatic, atmospheric, and geometric parameters selected reflect the conditions to provide a realistic set of spectral distributions appropriate for building applications under very clear-sky conditions, representative of near-maximum solar heat gains in buildings.

1.7 A wide variety of orientations or local environmental conditions is possible for exposed surfaces. The availability of the SMARTS model (as an adjunct to this standard) used to generate the standard spectra allows users to evaluate spectral differences relative to the spectra specified here.

2. Referenced Documents

2.1 ASTM Standards:³

E 490 Standard Solar Constant and Zero Air Mass Solar Spectral Irradiance Tables

E 772 Terminology Relating to Solar Energy Conversion

G 173 Tables for Reference Solar Spectral Irradiances: Direct Normal and Hemispherical on 37° Tilted Surface

G 177 Tables for Reference Solar Ultraviolet Spectral Distributions: Hemispherical on 37° Tilted Surface

2.2 ASTM Adjuncts:

ADJG173CD—SMARTS, Simple Model of the Atmospheric Radiative Transfer of Sunshine, Terrestrial Solar Spectral Modeling Code⁴

3. Terminology

3.1 *Definitions*—Definitions of terms used in this specification not otherwise described below may be found in Terminology **E 772**.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *aerosol optical depth (AOD)*—the wavelength-dependent total extinction (scattering and absorption) by aerosols in the atmosphere. This optical depth (also called “optical thickness”) is defined here at 500 nm.

3.2.2 *air mass zero (AM0)*—describes solar radiation quantities outside the Earth’s atmosphere at the mean Earth-Sun distance (1 Astronomical Unit). See ASTM **E 490**.

3.2.3 *albedo*—also called reflectance, a measure of the reflective characteristics of a surface relative to incident irradiance.

3.2.3.1 *Discussion*—For this standard, the albedo refers to the spectral reflectance of the ground relative to hemispherical irradiance. Two different albedos are considered by the model,

and both only affect diffuse irradiance. The first albedo corresponds to the average surface reflectance of the far-field area around the site, within a radius of 5–50 km. The second albedo is that of the foreground (or near-field) immediately adjacent to the tilted surface, to a distance of 10–100 m. The two albedos can be identical or different, but the foreground albedo’s effect significantly increases with tilt angle, whereas the far-field albedo’s effect on diffuse irradiance decreases with tilt angle.

3.2.4 *integrated irradiance* $E_{\lambda_1-\lambda_2}$ —spectral irradiance integrated over a specific wavelength interval from λ_1 to λ_2 , measured in $\text{W}\cdot\text{m}^{-2}$; mathematically:

$$E_{\lambda_1-\lambda_2} = \int_{\lambda_1}^{\lambda_2} E_{\lambda} d\lambda \quad (1)$$

3.2.5 *shading*—condition that results in partial obscuration of the sky, including the sun or not.

3.2.5.1 *Discussion*—For this standard, no shading of the sky is considered. However, the standard also applies to cases when the 20° or 90° tilted surfaces are shaded from the sun only, due to their relative geometry or other circumstances. This cancels the direct irradiance component, so that the total hemispherical irradiance reduces to the diffuse component.

3.2.6 *solar irradiance, spectral* E_{λ} —solar irradiance E per unit wavelength interval at a given wavelength λ (unit: Watts per square meter per nanometer, $\text{W}\cdot\text{m}^{-2}\cdot\text{nm}^{-1}$)

$$E_{\lambda} = \frac{dE}{d\lambda} \quad (2)$$

3.2.7 *spectral interval*—the distance in wavelength units between adjacent spectral irradiance data points.

3.2.8 *spectral passband*—the effective wavelength interval within which spectral irradiance is allowed to pass, as through a filter or monochromator. The convolution integral of the *spectral passband* (normalized to unity at maximum) and the incident spectral irradiance produces the effective transmitted irradiance.

3.2.8.1 *Discussion*—Spectral passband may also be referred to as the *spectral bandwidth* of a filter or device. Passbands are usually specified as the interval between wavelengths at which one half of the maximum transmission of the filter or device occurs, or as *full-width at half-maximum*, FWHM.

3.2.9 *spectral resolution*—the minimum wavelength difference between two wavelengths that can be identified unambiguously.

3.2.9.1 *Discussion*—In the context of this standard, the spectral resolution is simply the interval, $\Delta\lambda$, between spectral data points, or the *spectral interval*.

3.2.10 *spectral solar irradiance, diffuse* $E_{d\lambda}$ —on a given plane, the solar radiant flux at wavelength λ received from within the 2π steradian field of view of a tilted plane from the portion of the sky dome and the foreground included in the plane’s field of view, excluding direct solar radiation.

3.2.11 *spectral solar irradiance, direct* $E_{D\lambda}$ —on a given plane, the solar radiant flux at wavelength λ received directly from the sun, excluding diffuse solar radiation.

3.2.11.1 *Discussion*—In practice, instruments measuring direct solar irradiance have a larger acceptance angle than the apparent diameter of the sun. Consequently, it is virtually

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

⁴ Available on CD-ROM from ASTM International Headquarters. Order Adjunct No. ADJG173CD.

impossible to measure $E_{D\lambda}$ without the contribution of diffuse radiation emanating from the sun's aureole. This contribution is referred to as "circumsolar radiation." Contrarily to ASTM G 173, the data in Table 3 use the ideal definition of direct irradiance, and therefore ignore the circumsolar contribution. The sum of direct and diffuse irradiance is the hemispherical solar irradiance, $E_{H\lambda}$.

3.2.12 *total ozone*—the depth of a column of pure ozone equivalent to the total of the ozone in a vertical column from the ground to the top of the atmosphere. (unit: atmosphere-cm)

3.2.13 *total precipitable water*—the depth of a column of water (with a section of 1 cm²) equivalent to the condensed water vapor in a vertical column from the ground to the top of the atmosphere. (unit: cm or g/cm²)

3.2.14 *wavenumber*—a unit of frequency, $\tilde{\nu}$, in units of reciprocal centimeters (symbol cm⁻¹) commonly used in place of wavelength, λ (units of length, typically nanometers). To convert wavenumbers to nanometers, $\lambda \text{ nm} = 1 \cdot 10^7 / \tilde{\nu} \text{ cm}^{-1}$.

4. Technical Bases for the Tables

4.1 These tables are modeled data generated using an air mass zero (AM0) spectrum based on the extraterrestrial spectrum of Gueymard (1, 2) derived from Kurucz (5), the United States Standard Atmosphere of 1976 (USSA) reference Atmosphere (6), the Shettle and Fenn rural aerosol profile (7), and the SMARTS version 2.9.2 radiative transfer code. Further details are provided in ASTM G 173.

4.2 The 20° tilted surface closely represents the geometry of pitched roofs or tilted glazed structures, which are common elements of buildings. The 90° (vertical) surface represents the norm for building walls.

4.3 The tabulated diffuse irradiance is a combination of scattered irradiance from the sky and reflected irradiance from far-field and near-field ground surfaces. Dry soil conditions have been chosen for both surfaces. This is a darker, less reflective surface than what was used in ASTM G 173 or G 177.

4.4 The documented USSA atmospheric profiles utilized in the MODTRAN spectral transmission model (6) have been used to provide atmospheric properties and concentrations of absorbers.

4.5 To provide spectral data with a uniform spectral step size, the AM0 spectrum used in conjunction with SMARTS to generate the terrestrial spectrum is slightly different from the ASTM extraterrestrial spectrum, ASTM E 490. Because ASTM E 490 and SMARTS both use the data of Kurucz (5), the SMARTS and E 490 spectra are in excellent agreement although they do not have the same spectral resolution.

4.6 The current spectra reflect improved knowledge of atmospheric aerosol optical properties, transmission properties, and radiative transfer modeling (8).

4.7 The terrestrial solar spectral in the tables have been computed with a spectral bandwidth equivalent to the spectral resolution of the tables, namely 0.5 nm to 5 nm (see 1.1).

4.8 The SMARTS model code and documentation is available as an adjunct standard. Request ASTM Stock number ADJG173CD.

5. Significance and Use

5.1 This standard does not purport to address the mean spectral irradiance incident on tilted or vertical fenestration or building-integrated systems over a day, a season, or a year. The spectral irradiance distributions have been chosen to represent a reasonable near-upper limit for solar radiation when these systems are exposed to clear-sky conditions similar to those used to calculate solar heat loads of buildings. The diffuse spectral irradiance distributions can also be used to represent conditions when these systems are shaded from the direct sun.

5.2 Absorptance, reflectance, and transmittance of solar radiation are important factors in studies of light transmission through semi-transparent plates. These properties are normally functions of wavelength, which require that the spectral distribution of the solar flux be known before the solar-weighted property can be calculated.

5.3 To compare the relative performance of competitive products by computerized simulations, or to compare the performance of products subjected to experimental tests in laboratory conditions, a reference standard solar spectral distribution for both direct and diffuse irradiance is desirable.

5.4 The table provides appropriate standard spectral irradiance distributions for determining the relative optical performance of semi-transparent materials and other systems. The table may be used to evaluate components and materials for the purpose of solar simulation where the direct and the diffuse spectral solar irradiances are needed separately.

5.5 The selected air mass value of 1.5 for a plane-parallel atmosphere above a flat earth corresponds to a zenith angle of 48.19°. The SMARTS2 computation of air mass accounts for atmospheric curvature and the vertical density profile of molecules, which results in a solar zenith angle of 48.236°, or an equivalent plane-parallel-atmosphere air mass of 1.50136. The angle of incidence computed by SMARTS for the direct beam irradiance incident on a 20°-tilted plane facing the sun is thus 28.236°. It is 41.764° for a 90°-tilted surface facing the sun.

5.6 A plot of the SMARTS model output for the reference direct radiation on a 20° and 90° tilted surfaces is shown in Fig. 1. A similar plot, but for diffuse radiation, is shown in Fig. 2.

5.7 The input needed by SMARTS to generate the spectra for the prescribed conditions and the 20°-tilted surface is provided in Table 1. The input file for the 90°-tilted surface differs only by one line. This modified line appears in Table 2.

5.8 The total irradiance, integrated over the spectral range 280–4000 nm, is 791.07 and 97.96 W·m⁻² for direct and diffuse radiation incident on the 20° tilted surface, respectively. It is 669.74 and 140.56 W·m⁻² for direct and diffuse radiation incident on the 90° tilted surface, respectively.

5.9 The availability of the adjunct standard computer software for SMARTS allows one to (a) reproduce the reference spectra, using the above input parameters; (b) compute test spectra to attempt to match measured data at a specified FWHM, and evaluate atmospheric conditions; (c) compute test spectra representing specific conditions for analysis vis-à-vis any one or all of the reference spectra; (d) obtain the sky diffuse and the ground-reflected diffuse spectra (whose sum appears in the table) separately; and (e) smooth the spectral

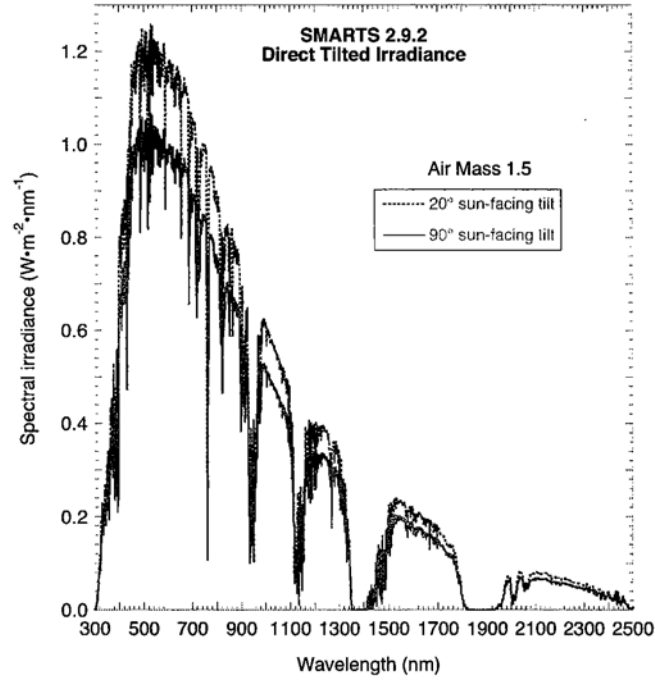


FIG. 1 Plot of Direct Spectral Irradiance on 20° Tilted Sun-Facing Surface (Dotted Line) and 90° Tilted Sun-Facing Surface (Solid Line) Computed Using SMARTS Version 2.9.2 Model with Input File in [Tables 1 and 2](#)

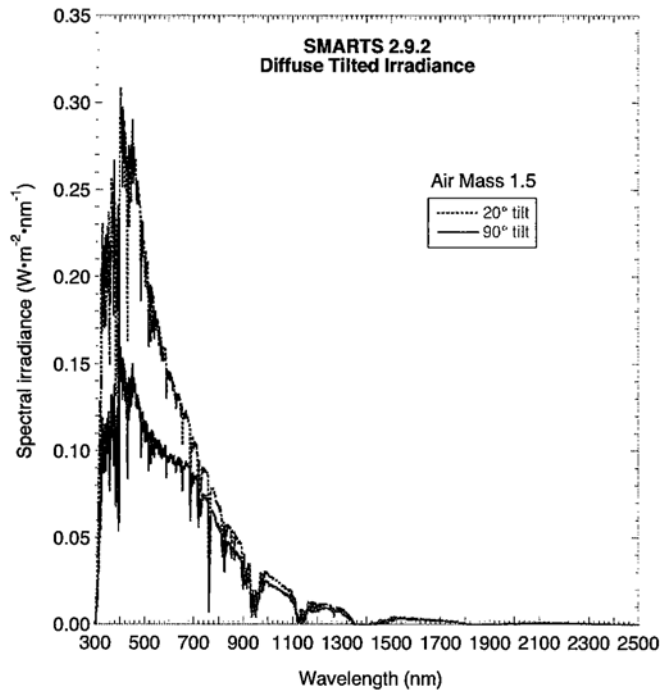


FIG. 2 Plot of Diffuse Spectral Irradiance on 20° Tilted Sun-Facing Surface (Dotted Line) and 90° Tilted Sun-Facing Surface (Solid Line) Computed Using SMARTS Version 2.9.2 Model with Input File in [Tables 1 and 2](#)

TABLE 1 SMARTS Version 2.9.2 Input File to Generate the Reference Spectra for a 20° Tilt

Card ID	Value	Parameter/Description/Variable Name
1	'ASTM_Tilted_Std_Spectra'	Header
2	1	Pressure input mode (1 = pressure and altitude): ISPR
2a	1013.25 0.0.	Station Pressure (mb) & altitude (km): SPR, ALT
3	1	Standard Atmosphere Profile Selection (1 = use default atmosphere): IATM1
3a	'USSA'	Default Standard Atmosphere Profile: ATM
4	1	Water Vapor Input (1 = default from Atmospheric Profile): IH2O
5	1	Ozone Calculation (1 = default from Atmospheric Profile): IO3
6	1	Pollution level mode (1 = standard conditions/no pollution): IGAS (see Appendix C)
7	370	Carbon Dioxide volume mixing ratio (ppm): qCO2 (see Appendix C)
7a	1	Extraterrestrial Spectrum (1 = SMARTS/Gueymard): ISPCTR
8	'S&F_RURAL'	Aerosol Profile to Use: AEROS
9	0	Specification for aerosol optical depth/turbidity input (0 = AOD at 500 nm): ITURB
9a	0.084	Aerosol Optical Depth @ 500 nm: TAU5
10	37	Far field Spectral Albedo file to use (38= Light Sandy Soil): IALBDX
10b	1	Specify tilt calculation (1 = yes): ITILT
10c	37 20 180	Albedo and Tilt variables—Albedo file to use for near field, Tilt, and Azimuth: IALBDG, TILT, WAZIM
11	280 4000 1.0 1367.0	Wavelength Range—start, stop, mean radius vector correction, integrated solar spectrum irradiance: WLMN, WLMX, SUNCOR, SOLARC
12	2	Separate spectral output file print mode (2 = yes): IPRT
12a	280 4000 0.5	Output file wavelength—Print limits, start, stop, minimum step size: WPMN, WPMX, INTVL
12b	2	Number of output variables to print: IOTOT
12c	6 7	Code relating output variables to print [6 = Direct tilt, OUT(6); 7 = Diffuse tilt, OUT(7)]
13	0	Circumsolar calculation mode (1 = yes): ICIRC
14	0	Smooth function mode (0 = none): ISCAN
15	0	Illuminance calculation mode (0 = none): ILLUM
16	0	UV calculation mode (0 = none): IUUV
17	2	Solar Geometry mode (2 = Air Mass): IMASS
17a	1.5	Air mass value: AMASS

TABLE 2 Modification to Table 1 to Generate the Reference Spectra for a 90° Tilt

Card ID	Value	Parameter/Description/Variable Name
10c	37 90 180	Albedo and Tilt variables—Albedo file to use for near field, Tilt, and Azimuth: IALBDG, TILT, WAZIM

results to different resolution and wavelength step by using the postprocessing options.

6. Solar Spectral Irradiance

6.1 Table 3 presents the reference direct and diffuse solar irradiance on two sun-facing planes, tilted at 20° and 90° from the horizontal, for the conditions specified in Tables 1 and 2.

6.2 The table contains:

6.2.1 Direct and diffuse solar spectral irradiance incident on a sun-facing plane tilted to 20° from the horizontal in the wavelength range from 280 nm to 4000 nm.

6.2.2 Direct and diffuse solar spectral irradiance incident on a sun-facing plane tilted to 90° from the horizontal in the wavelength range from 280 nm to 4000 nm.

6.2.3 The columns in each table contain:

6.2.3.1 Column 1: wavelength in nanometers (nm).

6.2.3.2 Column 2: direct spectral irradiance incident on a sun-facing surface tilted 20°. $E_{D\lambda}$, $W \cdot m^{-2} \cdot nm^{-1}$.

6.2.3.3 Column 3: diffuse spectral irradiance incident on a sun-facing surface tilted 20°. $E_{d\lambda}$, $W \cdot m^{-2} \cdot nm^{-1}$.

6.2.3.4 Column 4: direct spectral irradiance incident on a sun-facing surface tilted 90°. $E_{D\lambda}$, $W \cdot m^{-2} \cdot nm^{-1}$.

6.2.3.5 Column 5: direct spectral irradiance incident on a sun-facing surface tilted 90°. $E_{d\lambda}$, $W \cdot m^{-2} \cdot nm^{-1}$.

7. Validation

7.1 In part of the spectral region of interest (280–4000 nm), the SMARTS model has been verified against experimental data. SMARTS performance is adequate for the region from 295–2500 nm. No reliable experimental data has been found to verify performance below 295 nm or above 2500 nm.

7.2 Comparisons of the SMARTS computer model with advanced radiative transfer models such as MODTRAN and measured spectral data, including measured spectra on tilted and vertical surfaces, are reported in (1, 2, 11).

7.3 Comparison of these reference spectra with clear sky solar spectral irradiance data from various spectrometers under various atmospheric conditions approximating those chosen for this data shows reasonable agreement (8, 11).

8. Keywords

8.1 albedo; building; collector; daylight; diffuse radiation; direct radiation; fenestration; glazing; photovoltaic; reflectance; skylight; solar energy; solar spectral irradiance; terrestrial; transmittance; window

TABLE 3 Standard Direct and Diffuse Spectral Solar Irradiance for 20° and 90° Sun-Facing Tilted Surfaces

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
280.0	2.20E-26	5.09E-23	1.86E-26	2.62E-23	1161.0	0.2919	0.0092	0.2471	0.0076
280.5	9.47E-25	1.32E-21	8.02E-25	6.82E-22	1162.0	0.2940	0.0092	0.2489	0.0076
281.0	5.31E-24	6.12E-21	4.50E-24	3.15E-21	1163.0	0.3929	0.0128	0.3326	0.0105
281.5	2.38E-22	1.68E-19	2.02E-22	8.68E-20	1164.0	0.3373	0.0107	0.2856	0.0088
282.0	2.46E-21	1.28E-18	2.08E-21	6.61E-19	1165.0	0.3263	0.0103	0.2763	0.0085
282.5	1.15E-20	4.88E-18	9.75E-21	2.51E-18	1166.0	0.3149	0.0099	0.2666	0.0081
283.0	5.87E-20	1.98E-17	4.97E-20	1.02E-17	1167.0	0.3441	0.0109	0.2914	0.0090
283.5	1.27E-19	3.79E-17	1.07E-19	1.95E-17	1168.0	0.3522	0.0111	0.2982	0.0092
284.0	4.33E-18	7.77E-16	3.66E-18	4.01E-16	1169.0	0.3551	0.0113	0.3006	0.0093
284.5	1.88E-17	2.65E-15	1.59E-17	1.37E-15	1170.0	0.3848	0.0123	0.3258	0.0101
285.0	7.82E-17	8.54E-15	6.62E-17	4.40E-15	1171.0	0.3762	0.0119	0.3185	0.0098
285.5	5.60E-16	4.52E-14	4.74E-16	2.33E-14	1172.0	0.3817	0.0121	0.3231	0.0100
286.0	2.04E-15	1.45E-13	1.73E-15	7.47E-14	1173.0	0.3830	0.0121	0.3243	0.0100
286.5	1.60E-14	8.83E-13	1.36E-14	4.55E-13	1174.0	0.2833	0.0086	0.2399	0.0071
287.0	6.30E-14	2.87E-12	5.34E-14	1.48E-12	1175.0	0.3797	0.0120	0.3214	0.0099
287.5	3.18E-13	1.14E-11	2.69E-13	5.86E-12	1176.0	0.4000	0.0128	0.3386	0.0105
288.0	2.44E-12	6.42E-11	2.06E-12	3.31E-11	1177.0	0.3964	0.0125	0.3356	0.0103
288.5	7.88E-12	1.75E-10	6.67E-12	9.04E-11	1178.0	0.3027	0.0092	0.2562	0.0076
289.0	3.04E-11	5.69E-10	2.57E-11	2.94E-10	1179.0	0.4058	0.0129	0.3436	0.0106
289.5	1.34E-10	2.07E-09	1.13E-10	1.07E-09	1180.0	0.3701	0.0115	0.3133	0.0095
290.0	4.47E-10	5.94E-09	3.79E-10	3.06E-09	1181.0	0.3821	0.0119	0.3235	0.0098
290.5	1.16E-09	1.35E-08	9.79E-10	6.94E-09	1182.0	0.2720	0.0081	0.2303	0.0067
291.0	3.39E-09	3.37E-08	2.87E-09	1.74E-08	1183.0	0.3683	0.0115	0.3118	0.0095
291.5	1.25E-08	1.03E-07	1.06E-08	5.28E-08	1184.0	0.3528	0.0109	0.2987	0.0089
292.0	3.55E-08	2.46E-07	3.00E-08	1.27E-07	1185.0	0.3424	0.0105	0.2899	0.0086
292.5	6.12E-08	3.86E-07	5.19E-08	1.99E-07	1186.0	0.4006	0.0125	0.3391	0.0103
293.0	1.37E-07	7.67E-07	1.16E-07	3.95E-07	1187.0	0.3828	0.0118	0.3241	0.0098
293.5	4.10E-07	1.95E-06	3.47E-07	1.01E-06	1188.0	0.2820	0.0084	0.2387	0.0069
294.0	8.23E-07	3.51E-06	6.96E-07	1.81E-06	1189.0	0.3493	0.0107	0.2957	0.0088
294.5	1.39E-06	5.43E-06	1.18E-06	2.80E-06	1190.0	0.3883	0.0120	0.3288	0.0099
295.0	2.81E-06	9.87E-06	2.38E-06	5.09E-06	1191.0	0.3752	0.0115	0.3177	0.0095
295.5	6.98E-06	2.16E-05	5.91E-06	1.11E-05	1192.0	0.3975	0.0123	0.3366	0.0101
296.0	1.28E-05	3.62E-05	1.09E-05	1.87E-05	1193.0	0.3817	0.0117	0.3232	0.0097
296.5	2.03E-05	5.25E-05	1.72E-05	2.71E-05	1194.0	0.3938	0.0121	0.3334	0.0100
297.0	2.89E-05	6.96E-05	2.45E-05	3.59E-05	1195.0	0.3755	0.0115	0.3179	0.0095
297.5	5.91E-05	1.30E-04	5.01E-05	6.68E-05	1196.0	0.3625	0.0110	0.3069	0.0091
298.0	9.69E-05	1.96E-04	8.20E-05	1.01E-04	1197.0	0.4007	0.0123	0.3392	0.0102
298.5	1.24E-04	2.37E-04	1.05E-04	1.22E-04	1198.0	0.3646	0.0111	0.3087	0.0091
299.0	1.77E-04	3.18E-04	1.50E-04	1.64E-04	1199.0	0.3069	0.0091	0.2598	0.0075
299.5	3.26E-04	5.37E-04	2.76E-04	2.77E-04	1200.0	0.3766	0.0114	0.3188	0.0094
300.0	3.97E-04	6.23E-04	3.36E-04	3.21E-04	1201.0	0.3673	0.0111	0.3110	0.0091
300.5	4.98E-04	7.43E-04	4.22E-04	3.83E-04	1202.0	0.3674	0.0110	0.3110	0.0091
301.0	8.01E-04	1.12E-03	6.78E-04	5.76E-04	1203.0	0.3647	0.0110	0.3088	0.0091
301.5	1.15E-03	1.52E-03	9.73E-04	7.83E-04	1204.0	0.3049	0.0089	0.2581	0.0074
302.0	1.27E-03	1.62E-03	1.07E-03	8.36E-04	1205.0	0.3671	0.0110	0.3108	0.0091
302.5	1.91E-03	2.32E-03	1.62E-03	1.20E-03	1206.0	0.4037	0.0123	0.3418	0.0101
303.0	3.25E-03	3.74E-03	2.75E-03	1.93E-03	1207.0	0.3612	0.0108	0.3058	0.0089
303.5	4.19E-03	4.64E-03	3.54E-03	2.39E-03	1208.0	0.3642	0.0109	0.3083	0.0090
304.0	4.44E-03	4.87E-03	3.76E-03	2.51E-03	1209.0	0.3480	0.0104	0.2947	0.0086
304.5	5.64E-03	6.11E-03	4.77E-03	3.15E-03	1210.0	0.3808	0.0114	0.3224	0.0094
305.0	7.78E-03	8.38E-03	6.59E-03	4.32E-03	1211.0	0.3548	0.0106	0.3004	0.0087
305.5	8.88E-03	9.50E-03	7.52E-03	4.90E-03	1212.0	0.3571	0.0106	0.3023	0.0087
306.0	8.85E-03	9.39E-03	7.49E-03	4.84E-03	1213.0	0.3943	0.0118	0.3338	0.0098
306.5	1.01E-02	1.06E-02	8.54E-03	5.48E-03	1214.0	0.3647	0.0108	0.3088	0.0089
307.0	1.33E-02	1.40E-02	1.13E-02	7.24E-03	1215.0	0.3595	0.0106	0.3044	0.0087
307.5	1.70E-02	1.80E-02	1.44E-02	9.28E-03	1216.0	0.3917	0.0117	0.3316	0.0097
308.0	1.81E-02	1.90E-02	1.53E-02	9.81E-03	1217.0	0.3825	0.0114	0.3238	0.0094
308.5	0.0198	0.0208	0.0168	0.0107	1218.0	0.3858	0.0115	0.3267	0.0095
309.0	0.0194	0.0203	0.0165	0.0105	1219.0	0.3753	0.0111	0.3177	0.0092
309.5	0.0206	0.0219	0.0175	0.0113	1220.0	0.3848	0.0114	0.3258	0.0094
310.0	0.0243	0.0257	0.0205	0.0133	1221.0	0.3909	0.0116	0.3309	0.0096
310.5	0.0313	0.0330	0.0265	0.0170	1222.0	0.3793	0.0112	0.3211	0.0092
311.0	0.0396	0.0418	0.0335	0.0215	1223.0	0.3732	0.0110	0.3159	0.0091
311.5	0.0403	0.0422	0.0341	0.0218	1224.0	0.3766	0.0111	0.3188	0.0091
312.0	0.0444	0.0473	0.0376	0.0244	1225.0	0.3885	0.0115	0.3289	0.0095
312.5	0.0469	0.0503	0.0397	0.0259	1226.0	0.3934	0.0116	0.3330	0.0096
313.0	0.0509	0.0545	0.0431	0.0281	1227.0	0.3640	0.0106	0.3082	0.0088
313.5	0.0515	0.0541	0.0436	0.0279	1228.0	0.3920	0.0116	0.3319	0.0095
314.0	0.0569	0.0605	0.0482	0.0312	1229.0	0.3926	0.0116	0.3324	0.0095
314.5	0.0615	0.0668	0.0521	0.0345	1230.0	0.3866	0.0113	0.3273	0.0093

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
315.0	0.0643	0.0696	0.0544	0.0359	1231.0	0.3966	0.0117	0.3358	0.0096
315.5	0.0566	0.0596	0.0479	0.0307	1232.0	0.3919	0.0115	0.3318	0.0095
316.0	0.0585	0.0627	0.0496	0.0323	1233.0	0.3816	0.0111	0.3231	0.0092
316.5	0.0708	0.0769	0.0599	0.0397	1234.0	0.3951	0.0116	0.3345	0.0096
317.0	0.0812	0.0872	0.0687	0.0450	1235.0	0.3908	0.0114	0.3309	0.0094
317.5	0.0870	0.0919	0.0737	0.0474	1236.0	0.3942	0.0115	0.3338	0.0095
318.0	0.0836	0.0889	0.0708	0.0458	1237.0	0.3895	0.0113	0.3298	0.0094
318.5	0.0873	0.0951	0.0739	0.0490	1238.0	0.3933	0.0115	0.3330	0.0094
319.0	0.0958	0.1052	0.0811	0.0542	1239.0	0.3889	0.0113	0.3293	0.0093
319.5	0.0933	0.0986	0.0790	0.0508	1240.0	0.3873	0.0112	0.3279	0.0093
320.0	0.0984	0.1024	0.0833	0.0528	1241.0	0.3884	0.0112	0.3288	0.0093
320.5	0.1161	0.1241	0.0983	0.0640	1242.0	0.3888	0.0113	0.3292	0.0093
321.0	0.1171	0.1282	0.0991	0.0661	1243.0	0.3847	0.0111	0.3257	0.0092
321.5	0.1119	0.1217	0.0947	0.0628	1244.0	0.3828	0.0110	0.3241	0.0091
322.0	0.1065	0.1105	0.0902	0.0570	1245.0	0.3839	0.0111	0.3250	0.0091
322.5	0.1045	0.1076	0.0885	0.0555	1246.0	0.3864	0.0111	0.3271	0.0092
323.0	0.1015	0.1060	0.0859	0.0546	1247.0	0.3847	0.0110	0.3257	0.0091
323.5	0.1169	0.1263	0.0990	0.0651	1248.0	0.3857	0.0110	0.3266	0.0091
324.0	0.1297	0.1396	0.1098	0.0720	1249.0	0.3866	0.0111	0.3273	0.0091
324.5	0.1351	0.1415	0.1143	0.0730	1250.0	0.3845	0.0110	0.3255	0.0091
325.0	0.1354	0.1365	0.1146	0.0704	1251.0	0.3807	0.0108	0.3223	0.0089
325.5	0.1566	0.1596	0.1326	0.0823	1252.0	0.3794	0.0108	0.3212	0.0089
326.0	0.1822	0.1896	0.1543	0.0978	1253.0	0.3767	0.0107	0.3189	0.0088
326.5	0.1935	0.2038	0.1639	0.1051	1254.0	0.3733	0.0105	0.3161	0.0087
327.0	0.1907	0.1973	0.1615	0.1017	1255.0	0.3792	0.0107	0.3211	0.0089
327.5	0.1859	0.1886	0.1574	0.0972	1256.0	0.3705	0.0104	0.3137	0.0086
328.0	0.1727	0.1685	0.1462	0.0869	1257.0	0.3664	0.0103	0.3102	0.0085
328.5	0.1806	0.1809	0.1529	0.0932	1258.0	0.3745	0.0105	0.3170	0.0087
329.0	0.2035	0.2075	0.1723	0.1070	1259.0	0.3597	0.0100	0.3045	0.0083
329.5	0.2259	0.2301	0.1913	0.1186	1260.0	0.3629	0.0101	0.3073	0.0083
330.0	0.2288	0.2294	0.1937	0.1182	1261.0	0.3465	0.0096	0.2934	0.0079
330.5	0.2106	0.2047	0.1783	0.1056	1262.0	0.3333	0.0091	0.2822	0.0075
331.0	0.1995	0.1908	0.1689	0.0984	1263.0	0.3371	0.0092	0.2854	0.0076
331.5	0.2065	0.1988	0.1748	0.1025	1264.0	0.3130	0.0085	0.2650	0.0070
332.0	0.2141	0.2089	0.1813	0.1077	1265.0	0.3333	0.0091	0.2822	0.0075
332.5	0.2154	0.2104	0.1824	0.1085	1266.0	0.3246	0.0088	0.2748	0.0072
333.0	0.2120	0.2040	0.1795	0.1052	1267.0	0.3270	0.0089	0.2769	0.0073
333.5	0.2033	0.1907	0.1721	0.0983	1268.0	0.3122	0.0084	0.2643	0.0069
334.0	0.2082	0.1930	0.1762	0.0995	1269.0	0.2082	0.0053	0.1763	0.0044
334.5	0.2223	0.2081	0.1882	0.1073	1270.0	0.3264	0.0088	0.2763	0.0073
335.0	0.2314	0.2170	0.1959	0.1119	1271.0	0.3438	0.0093	0.2911	0.0077
335.5	0.2263	0.2116	0.1916	0.1091	1272.0	0.3442	0.0093	0.2914	0.0077
336.0	0.2081	0.1928	0.1762	0.0994	1273.0	0.3421	0.0093	0.2897	0.0076
336.5	0.1931	0.1755	0.1635	0.0905	1274.0	0.3420	0.0093	0.2896	0.0076
337.0	0.1902	0.1700	0.1611	0.0876	1275.0	0.3472	0.0094	0.2940	0.0077
337.5	0.2048	0.1809	0.1734	0.0933	1276.0	0.3511	0.0095	0.2973	0.0078
338.0	0.2213	0.1968	0.1874	0.1015	1277.0	0.3537	0.0096	0.2995	0.0079
338.5	0.2321	0.2063	0.1965	0.1064	1278.0	0.3601	0.0098	0.3049	0.0080
339.0	0.2369	0.2093	0.2005	0.1079	1279.0	3.58E-01	9.66E-03	3.03E-01	7.97E-03
339.5	0.2434	0.2129	0.2061	0.1097	1280.0	3.55E-01	9.59E-03	3.01E-01	7.91E-03
340.0	0.2593	0.2228	0.2195	0.1149	1281.0	3.48E-01	9.39E-03	2.95E-01	7.75E-03
340.5	0.2594	0.2214	0.2196	0.1141	1282.0	3.14E-01	8.49E-03	2.66E-01	7.00E-03
341.0	0.2442	0.2084	0.2067	0.1074	1283.0	3.43E-01	9.25E-03	2.90E-01	7.62E-03
341.5	0.2435	0.2069	0.2062	0.1067	1284.0	3.54E-01	9.53E-03	3.00E-01	7.86E-03
342.0	0.2546	0.2147	0.2156	0.1107	1285.0	3.57E-01	9.59E-03	3.02E-01	7.91E-03
342.5	0.2649	0.2218	0.2243	0.1143	1286.0	3.60E-01	9.66E-03	3.05E-01	7.97E-03
343.0	0.2698	0.2235	0.2284	0.1152	1287.0	3.56E-01	9.50E-03	3.01E-01	7.84E-03
343.5	0.2557	0.2096	0.2165	0.1081	1288.0	3.54E-01	9.44E-03	2.99E-01	7.79E-03
344.0	0.2217	0.1785	0.1877	0.0920	1289.0	3.45E-01	9.15E-03	2.92E-01	7.54E-03
344.5	0.2137	0.1717	0.1809	0.0885	1290.0	3.48E-01	9.26E-03	2.94E-01	7.64E-03
345.0	0.2436	0.1951	0.2062	0.1006	1291.0	3.52E-01	9.36E-03	2.98E-01	7.72E-03
345.5	0.2602	0.2072	0.2203	0.1068	1292.0	3.34E-01	8.78E-03	2.83E-01	7.24E-03
346.0	0.2548	0.2015	0.2157	0.1039	1293.0	3.48E-01	9.19E-03	2.94E-01	7.58E-03
346.5	0.2601	0.2042	0.2202	0.1053	1294.0	3.41E-01	8.98E-03	2.88E-01	7.41E-03
347.0	0.2651	0.2060	0.2245	0.1062	1295.0	3.41E-01	8.98E-03	2.89E-01	7.40E-03
347.5	0.2567	0.1977	0.2173	0.1019	1296.0	3.28E-01	8.56E-03	2.78E-01	7.06E-03
348.0	0.2563	0.1964	0.2170	0.1012	1297.0	3.13E-01	8.09E-03	2.65E-01	6.67E-03
348.5	0.2614	0.1989	0.2213	0.1026	1298.0	3.30E-01	8.61E-03	2.80E-01	7.10E-03
349.0	0.2524	0.1908	0.2137	0.0983	1299.0	3.44E-01	9.02E-03	2.92E-01	7.44E-03
349.5	0.2599	0.1948	0.2201	0.1004	1300.0	2.98E-01	7.60E-03	2.52E-01	6.27E-03

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
350.0	0.2879	0.2141	0.2437	0.1104	1301.0	3.06E-01	7.82E-03	2.59E-01	6.45E-03
350.5	0.3103	0.2290	0.2627	0.1180	1302.0	3.30E-01	8.56E-03	2.80E-01	7.06E-03
351.0	0.3027	0.2214	0.2563	0.1141	1303.0	2.92E-01	7.41E-03	2.47E-01	6.11E-03
351.5	0.2921	0.2112	0.2473	0.1089	1304.0	2.54E-01	6.29E-03	2.15E-01	5.19E-03
352.0	0.2858	0.2056	0.2420	0.1060	1305.0	3.24E-01	8.30E-03	2.74E-01	6.84E-03
352.5	0.2708	0.1936	0.2292	0.0998	1306.0	3.24E-01	8.30E-03	2.75E-01	6.84E-03
353.0	0.2885	0.2049	0.2442	0.1056	1307.0	2.58E-01	6.37E-03	2.19E-01	5.26E-03
353.5	0.3180	0.2243	0.2692	0.1156	1308.0	2.93E-01	7.35E-03	2.48E-01	6.06E-03
354.0	0.3370	0.2360	0.2853	0.1217	1309.0	3.24E-01	8.24E-03	2.74E-01	6.79E-03
354.5	0.3416	0.2374	0.2892	0.1224	1310.0	2.54E-01	6.23E-03	2.15E-01	5.14E-03
355.0	0.3424	0.2361	0.2899	0.1217	1311.0	2.82E-01	6.99E-03	2.39E-01	5.76E-03
355.5	0.3314	0.2269	0.2806	0.1170	1312.0	2.82E-01	6.97E-03	2.38E-01	5.75E-03
356.0	0.3117	0.2119	0.2639	0.1092	1313.0	2.65E-01	6.51E-03	2.24E-01	5.37E-03
356.5	0.2931	0.1978	0.2481	0.1020	1314.0	2.44E-01	5.89E-03	2.06E-01	4.86E-03
357.0	0.2584	0.1730	0.2187	0.0892	1315.0	2.42E-01	5.84E-03	2.05E-01	4.82E-03
357.5	0.2621	0.1743	0.2219	0.0898	1316.0	2.74E-01	6.72E-03	2.32E-01	5.54E-03
358.0	0.2444	0.1614	0.2070	0.0832	1317.0	2.64E-01	6.41E-03	2.23E-01	5.28E-03
358.5	0.2275	0.1491	0.1926	0.0769	1318.0	2.81E-01	6.90E-03	2.38E-01	5.69E-03
359.0	0.2682	0.1745	0.2271	0.0900	1319.0	2.27E-01	5.39E-03	1.92E-01	4.44E-03
359.5	0.3239	0.2090	0.2742	0.1078	1320.0	2.19E-01	5.17E-03	1.85E-01	4.26E-03
360.0	0.3434	0.2201	0.2907	0.1135	1321.0	2.52E-01	6.06E-03	2.14E-01	4.99E-03
360.5	0.3252	0.2071	0.2754	0.1067	1322.0	2.55E-01	6.12E-03	2.16E-01	5.05E-03
361.0	0.3000	0.1897	0.2540	0.0978	1323.0	1.97E-01	4.57E-03	1.67E-01	3.77E-03
361.5	0.2945	0.1849	0.2493	0.0953	1324.0	2.22E-01	5.21E-03	1.88E-01	4.30E-03
362.0	0.3094	0.1930	0.2619	0.0995	1325.0	2.72E-01	6.55E-03	2.31E-01	5.40E-03
362.5	0.3396	0.2104	0.2875	0.1085	1326.0	2.37E-01	5.59E-03	2.01E-01	4.61E-03
363.0	0.3501	0.2154	0.2964	0.1111	1327.0	2.25E-01	5.27E-03	1.91E-01	4.35E-03
363.5	0.3413	0.2085	0.2889	0.1075	1328.0	1.99E-01	4.57E-03	1.68E-01	3.77E-03
364.0	0.3542	0.2150	0.2999	0.1108	1329.0	1.50E-01	3.38E-03	1.27E-01	2.79E-03
364.5	0.3517	0.2119	0.2977	0.1093	1330.0	1.94E-01	4.44E-03	1.64E-01	3.66E-03
365.0	0.3659	0.2190	0.3098	0.1129	1331.0	1.23E-01	2.70E-03	1.04E-01	2.23E-03
365.5	0.4036	0.2399	0.3417	0.1237	1332.0	1.24E-01	2.72E-03	1.05E-01	2.25E-03
366.0	0.4333	0.2559	0.3669	0.1319	1333.0	1.72E-01	3.87E-03	1.46E-01	3.19E-03
366.5	0.4350	0.2552	0.3683	0.1315	1334.0	1.43E-01	3.18E-03	1.21E-01	2.62E-03
367.0	0.4278	0.2492	0.3622	0.1285	1335.0	1.96E-01	4.44E-03	1.66E-01	3.66E-03
367.5	0.4205	0.2434	0.3560	0.1255	1336.0	1.56E-01	3.45E-03	1.32E-01	2.85E-03
368.0	0.3967	0.2281	0.3359	0.1176	1337.0	1.40E-01	3.07E-03	1.18E-01	2.53E-03
368.5	0.3949	0.2255	0.3343	0.1162	1338.0	1.51E-01	3.33E-03	1.28E-01	2.75E-03
369.0	0.4136	0.2346	0.3501	0.1210	1339.0	1.50E-01	3.31E-03	1.27E-01	2.73E-03
369.5	0.4452	0.2509	0.3769	0.1294	1340.0	1.43E-01	3.13E-03	1.21E-01	2.58E-03
370.0	0.4523	0.2533	0.3829	0.1306	1341.0	1.45E-01	3.16E-03	1.22E-01	2.61E-03
370.5	0.4097	0.2279	0.3469	0.1175	1342.0	1.51E-01	3.31E-03	1.28E-01	2.73E-03
371.0	0.4170	0.2305	0.3530	0.1188	1343.0	1.08E-01	2.31E-03	9.13E-02	1.90E-03
371.5	0.4341	0.2384	0.3675	0.1229	1344.0	6.43E-02	1.34E-03	5.44E-02	1.11E-03
372.0	0.4072	0.2221	0.3447	0.1145	1345.0	9.26E-02	1.96E-03	7.84E-02	1.62E-03
372.5	0.3886	0.2107	0.3290	0.1086	1346.0	4.95E-02	1.02E-03	4.19E-02	8.44E-04
373.0	0.3750	0.2020	0.3175	0.1041	1347.0	5.11E-02	1.06E-03	4.33E-02	8.71E-04
373.5	0.3387	0.1813	0.2867	0.0934	1348.0	4.04E-03	8.16E-05	3.42E-03	6.73E-05
374.0	0.3384	0.1800	0.2865	0.0928	1349.0	1.37E-02	2.78E-04	1.16E-02	2.30E-04
374.5	0.3365	0.1778	0.2849	0.0917	1350.0	1.36E-02	2.76E-04	1.15E-02	2.27E-04
375.0	0.3598	0.1889	0.3046	0.0974	1351.0	3.94E-03	7.92E-05	3.34E-03	6.54E-05
375.5	0.3985	0.2079	0.3374	0.1072	1352.0	1.29E-03	2.59E-05	1.09E-03	2.14E-05
376.0	0.4134	0.2144	0.3500	0.1105	1353.0	8.18E-05	1.64E-06	6.92E-05	1.35E-06
376.5	0.4075	0.2100	0.3450	0.1083	1354.0	2.47E-04	4.94E-06	2.09E-04	4.07E-06
377.0	0.4379	0.2243	0.3708	0.1156	1355.0	3.07E-06	6.12E-08	2.60E-06	5.05E-08
377.5	0.4894	0.2491	0.4143	0.1284	1356.0	4.09E-05	8.16E-07	3.46E-05	6.73E-07
378.0	0.5282	0.2671	0.4472	0.1377	1357.0	6.11E-05	1.22E-06	5.17E-05	1.00E-06
378.5	0.5157	0.2592	0.4366	0.1336	1358.0	3.57E-06	7.10E-08	3.02E-06	5.85E-08
379.0	0.4608	0.2302	0.3901	0.1187	1359.0	6.25E-07	1.24E-08	5.29E-07	1.02E-08
379.5	0.4138	0.2055	0.3504	0.1059	1360.0	1.82E-06	3.61E-08	1.54E-06	2.98E-08
380.0	0.4357	0.2150	0.3689	0.1108	1361.0	4.10E-09	8.11E-11	3.47E-09	6.69E-11
380.5	0.4676	0.2294	0.3959	0.1182	1362.0	1.54E-11	3.04E-13	1.30E-11	2.51E-13
381.0	0.4766	0.2324	0.4035	0.1198	1363.0	2.69E-06	5.30E-08	2.28E-06	4.37E-08
381.5	0.4303	0.2085	0.3643	0.1075	1364.0	1.16E-06	2.28E-08	9.80E-07	1.88E-08
382.0	0.3675	0.1770	0.3111	0.0913	1365.0	7.73E-12	1.52E-13	6.54E-12	1.25E-13
382.5	0.3185	0.1525	0.2696	0.0786	1366.0	1.09E-05	2.14E-07	9.22E-06	1.77E-07
383.0	0.2859	0.1361	0.2421	0.0702	1367.0	4.24E-06	8.32E-08	3.59E-06	6.86E-08
383.5	0.2773	0.1312	0.2347	0.0676	1368.0	1.26E-13	2.47E-15	1.07E-13	2.03E-15
384.0	0.3213	0.1511	0.2721	0.0779	1369.0	4.40E-07	8.61E-09	3.73E-07	7.10E-09
384.5	0.3875	0.1812	0.3280	0.0934	1370.0	2.49E-07	4.86E-09	2.11E-07	4.01E-09

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
385.0	0.4260	0.1980	0.3607	0.1021	1371.0	1.68E-08	3.28E-10	1.42E-08	2.70E-10
385.5	0.4077	0.1884	0.3452	0.0971	1372.0	2.34E-06	4.56E-08	1.98E-06	3.76E-08
386.0	0.3940	0.1810	0.3336	0.0933	1373.0	3.78E-05	7.36E-07	3.20E-05	6.07E-07
386.5	0.4103	0.1874	0.3474	0.0966	1374.0	1.53E-04	2.97E-06	1.29E-04	2.45E-06
387.0	0.4147	0.1883	0.3511	0.0971	1375.0	2.76E-04	5.34E-06	2.33E-04	4.41E-06
387.5	0.4093	0.1848	0.3466	0.0953	1376.0	2.19E-04	4.25E-06	1.86E-04	3.50E-06
388.0	0.4060	0.1822	0.3437	0.0940	1377.0	1.05E-04	2.02E-06	8.86E-05	1.67E-06
388.5	0.4038	0.1802	0.3419	0.0929	1378.0	9.45E-04	1.83E-05	8.00E-04	1.51E-05
389.0	0.4390	0.1948	0.3717	0.1004	1379.0	4.45E-05	8.57E-07	3.77E-05	7.07E-07
389.5	0.4874	0.2150	0.4126	0.1109	1380.0	6.96E-05	1.34E-06	5.89E-05	1.10E-06
390.0	0.5121	0.2246	0.4335	0.1158	1381.0	2.02E-06	3.89E-08	1.71E-06	3.21E-08
390.5	0.5172	0.2256	0.4379	0.1163	1382.0	2.19E-06	4.20E-08	1.85E-06	3.47E-08
391.0	0.5487	0.2380	0.4645	0.1227	1383.0	3.75E-08	7.20E-10	3.18E-08	5.93E-10
391.5	0.5573	0.2404	0.4718	0.1239	1384.0	5.26E-07	1.01E-08	4.45E-07	8.31E-09
392.0	0.5139	0.2204	0.4350	0.1136	1385.0	1.78E-06	3.41E-08	1.51E-06	2.81E-08
392.5	0.4289	0.1830	0.3631	0.0943	1386.0	2.15E-06	4.11E-08	1.82E-06	3.39E-08
393.0	0.3110	0.1320	0.2633	0.0680	1387.0	1.70E-04	3.24E-06	1.44E-04	2.67E-06
393.5	0.2477	0.1045	0.2097	0.0539	1388.0	3.44E-06	6.54E-08	2.91E-06	5.39E-08
394.0	0.3222	0.1352	0.2728	0.0697	1389.0	4.96E-04	9.42E-06	4.20E-04	7.77E-06
394.5	0.4452	0.1858	0.3769	0.0958	1390.0	4.21E-04	7.99E-06	3.56E-04	6.59E-06
395.0	0.5265	0.2185	0.4458	0.1127	1391.0	2.93E-04	5.56E-06	2.48E-04	4.59E-06
395.5	0.5616	0.2318	0.4755	0.1195	1392.0	2.03E-05	3.84E-07	1.72E-05	3.17E-07
396.0	0.4945	0.2030	0.4187	0.1047	1393.0	9.89E-05	1.87E-06	8.37E-05	1.54E-06
396.5	0.3601	0.1471	0.3049	0.0758	1394.0	6.45E-05	1.22E-06	5.46E-05	1.00E-06
397.0	0.2793	0.1135	0.2365	0.0585	1395.0	5.73E-07	1.08E-08	4.85E-07	8.91E-09
397.5	0.4131	0.1669	0.3498	0.0861	1396.0	5.40E-09	1.02E-10	4.57E-09	8.38E-11
398.0	0.5603	0.2251	0.4743	0.1161	1397.0	4.19E-05	7.87E-07	3.55E-05	6.49E-07
398.5	0.6626	0.2649	0.5610	0.1365	1398.0	1.09E-03	2.04E-05	9.19E-04	1.68E-05
399.0	0.7045	0.2801	0.5965	0.1444	1399.0	6.94E-04	1.30E-05	5.87E-04	1.07E-05
399.5	0.7271	0.2876	0.6156	0.1483	1400.0	2.77E-09	5.19E-11	2.35E-09	4.28E-11
400.0	0.7359	0.2895	0.6231	0.1493	1401.0	8.99E-09	1.68E-10	7.62E-09	1.39E-10
401.0	0.7684	0.2991	0.6505	0.1542	1402.0	1.57E-03	2.93E-05	1.33E-03	2.41E-05
402.0	0.8008	0.3085	0.6780	0.1590	1403.0	2.03E-03	3.79E-05	1.72E-03	3.13E-05
403.0	0.7730	0.2947	0.6544	0.1519	1404.0	6.32E-04	1.18E-05	5.35E-04	9.69E-06
404.0	0.7874	0.2971	0.6666	0.1532	1405.0	3.12E-07	5.79E-09	2.64E-07	4.77E-09
405.0	0.7698	0.2875	0.6518	0.1482	1406.0	1.75E-03	3.25E-05	1.48E-03	2.68E-05
406.0	0.7526	0.2782	0.6372	0.1434	1407.0	1.49E-04	2.77E-06	1.26E-04	2.28E-06
407.0	0.7409	0.2711	0.6273	0.1398	1408.0	1.41E-03	2.61E-05	1.19E-03	2.15E-05
408.0	0.7755	0.2809	0.6566	0.1448	1409.0	5.29E-04	9.79E-06	4.48E-04	8.07E-06
409.0	0.8301	0.2976	0.7028	0.1534	1410.0	3.99E-04	7.36E-06	3.38E-04	6.07E-06
410.0	0.7091	0.2517	0.6004	0.1298	1411.0	1.81E-03	3.33E-05	1.53E-03	2.75E-05
411.0	0.7956	0.2796	0.6735	0.1442	1412.0	2.26E-03	4.16E-05	1.91E-03	3.43E-05
412.0	0.8474	0.2950	0.7175	0.1521	1413.0	2.00E-02	3.70E-04	1.69E-02	3.05E-04
413.0	0.8147	0.2809	0.6898	0.1448	1414.0	3.11E-04	5.71E-06	2.63E-04	4.71E-06
414.0	0.8076	0.2758	0.6837	0.1422	1415.0	1.57E-04	2.88E-06	1.33E-04	2.38E-06
415.0	0.8377	0.2833	0.7092	0.1461	1416.0	3.04E-02	5.63E-04	2.58E-02	4.64E-04
416.0	0.8645	0.2896	0.7319	0.1493	1417.0	1.01E-02	1.84E-04	8.52E-03	1.52E-04
417.0	0.8449	0.2804	0.7154	0.1445	1418.0	1.16E-02	2.13E-04	9.82E-03	1.75E-04
418.0	0.8099	0.2662	0.6857	0.1372	1419.0	1.84E-03	3.35E-05	1.55E-03	2.76E-05
419.0	0.8446	0.2751	0.7151	0.1418	1420.0	7.08E-03	1.29E-04	5.99E-03	1.07E-04
420.0	0.7755	0.2502	0.6566	0.1290	1421.0	7.84E-03	1.43E-04	6.64E-03	1.18E-04
421.0	0.8825	0.2821	0.7472	0.1454	1422.0	3.96E-02	7.30E-04	3.36E-02	6.02E-04
422.0	0.8722	0.2762	0.7385	0.1424	1423.0	7.89E-03	1.43E-04	6.68E-03	1.18E-04
423.0	0.8462	0.2654	0.7165	0.1368	1424.0	1.45E-02	2.64E-04	1.23E-02	2.18E-04
424.0	0.8432	0.2620	0.7139	0.1351	1425.0	2.21E-02	4.03E-04	1.87E-02	3.32E-04
425.0	0.8707	0.2680	0.7371	0.1382	1426.0	2.38E-02	4.33E-04	2.01E-02	3.57E-04
426.0	0.8475	0.2585	0.7175	0.1333	1427.0	4.24E-02	7.77E-04	3.59E-02	6.41E-04
427.0	0.8202	0.2480	0.6944	0.1278	1428.0	3.90E-03	7.04E-05	3.31E-03	5.80E-05
428.0	0.8296	0.2486	0.7024	0.1282	1429.0	3.26E-02	5.92E-04	2.76E-02	4.89E-04
429.0	0.7695	0.2285	0.6515	0.1178	1430.0	5.27E-02	9.66E-04	4.46E-02	7.97E-04
430.0	0.6149	0.1810	0.5206	0.0933	1431.0	4.29E-02	7.82E-04	3.64E-02	6.45E-04
431.0	0.5592	0.1632	0.4734	0.0841	1432.0	2.16E-03	3.87E-05	1.83E-03	3.19E-05
432.0	0.9318	0.2695	0.7889	0.1390	1433.0	3.07E-02	5.55E-04	2.60E-02	4.58E-04
433.0	0.8685	0.2490	0.7353	0.1284	1434.0	1.80E-02	3.23E-04	1.52E-02	2.66E-04
434.0	0.8036	0.2285	0.6804	0.1178	1435.0	1.83E-02	3.29E-04	1.55E-02	2.72E-04
435.0	0.8830	0.2489	0.7475	0.1283	1436.0	3.29E-02	5.92E-04	2.78E-02	4.88E-04
436.0	0.9699	0.2711	0.8211	0.1398	1437.0	2.56E-02	4.59E-04	2.17E-02	3.79E-04
437.0	0.9914	0.2748	0.8393	0.1417	1438.0	1.14E-02	2.03E-04	9.62E-03	1.67E-04
438.0	0.8713	0.2395	0.7377	0.1235	1439.0	4.37E-02	7.88E-04	3.70E-02	6.50E-04
439.0	0.8397	0.2288	0.7109	0.1179	1440.0	3.39E-02	6.09E-04	2.87E-02	5.02E-04

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
440.0	0.9640	0.2604	0.8161	0.1343	1441.0	2.72E-02	4.87E-04	2.31E-02	4.01E-04
441.0	0.9522	0.2551	0.8062	0.1315	1442.0	3.11E-02	5.56E-04	2.63E-02	4.59E-04
442.0	1.0208	0.2712	0.8642	0.1398	1443.0	3.86E-02	6.91E-04	3.27E-02	5.70E-04
443.0	1.0368	0.2732	0.8778	0.1409	1444.0	5.29E-02	9.51E-04	4.48E-02	7.84E-04
444.0	1.0117	0.2646	0.8566	0.1364	1445.0	4.26E-02	7.62E-04	3.61E-02	6.28E-04
445.0	1.0516	0.2729	0.8904	0.1407	1446.0	1.98E-02	3.50E-04	1.68E-02	2.89E-04
446.0	0.9442	0.2432	0.7994	0.1254	1447.0	3.10E-02	5.51E-04	2.63E-02	4.54E-04
447.0	1.0750	0.2747	0.9101	0.1416	1448.0	9.91E-02	1.80E-03	8.39E-02	1.49E-03
448.0	1.0894	0.2762	0.9224	0.1424	1449.0	8.75E-02	1.58E-03	7.41E-02	1.30E-03
449.0	1.0883	0.2737	0.9214	0.1411	1450.0	2.35E-02	4.14E-04	1.99E-02	3.42E-04
450.0	1.1297	0.2819	0.9565	0.1453	1451.0	9.66E-03	1.69E-04	8.18E-03	1.40E-04
451.0	1.1732	0.2905	0.9933	0.1498	1452.0	5.34E-02	9.50E-04	4.52E-02	7.84E-04
452.0	1.1246	0.2764	0.9521	0.1425	1453.0	7.02E-02	1.26E-03	5.95E-02	1.04E-03
453.0	1.0397	0.2537	0.8803	0.1308	1454.0	1.18E-01	2.14E-03	9.97E-02	1.77E-03
454.0	1.1165	0.2704	0.9453	0.1394	1455.0	5.67E-02	1.01E-03	4.80E-02	8.30E-04
455.0	1.1100	0.2667	0.9397	0.1375	1456.0	7.58E-02	1.35E-03	6.42E-02	1.12E-03
456.0	1.1479	0.2738	0.9719	0.1412	1457.0	1.00E-01	1.80E-03	8.48E-02	1.49E-03
457.0	1.1589	0.2743	0.9812	0.1414	1458.0	1.17E-01	2.11E-03	9.89E-02	1.74E-03
458.0	1.1356	0.2666	0.9614	0.1374	1459.0	1.40E-01	2.54E-03	1.18E-01	2.10E-03
459.0	1.1279	0.2627	0.9550	0.1355	1460.0	7.32E-02	1.30E-03	6.20E-02	1.07E-03
460.0	1.1220	0.2593	0.9499	0.1337	1461.0	7.74E-02	1.37E-03	6.55E-02	1.13E-03
461.0	1.1627	0.2667	0.9844	0.1375	1462.0	1.12E-01	2.01E-03	9.47E-02	1.66E-03
462.0	1.1748	0.2676	0.9946	0.1380	1463.0	3.71E-02	6.46E-04	3.14E-02	5.33E-04
463.0	1.1800	0.2670	0.9990	0.1376	1464.0	1.30E-01	2.35E-03	1.10E-01	1.93E-03
464.0	1.1452	0.2575	0.9696	0.1327	1465.0	8.00E-02	1.41E-03	6.77E-02	1.17E-03
465.0	1.1321	0.2529	0.9585	0.1304	1466.0	5.59E-02	9.77E-04	4.73E-02	8.05E-04
466.0	1.1571	0.2568	0.9796	0.1324	1467.0	3.09E-02	5.34E-04	2.62E-02	4.41E-04
467.0	1.1068	0.2439	0.9370	0.1257	1468.0	6.59E-02	1.15E-03	5.58E-02	9.52E-04
468.0	1.1560	0.2529	0.9787	0.1304	1469.0	8.13E-02	1.43E-03	6.88E-02	1.18E-03
469.0	1.1621	0.2524	0.9839	0.1301	1470.0	4.26E-02	7.36E-04	3.61E-02	6.07E-04
470.0	1.1184	0.2412	0.9469	0.1244	1471.0	1.53E-02	2.62E-04	1.30E-02	2.16E-04
471.0	1.1383	0.2438	0.9637	0.1257	1472.0	4.01E-02	6.91E-04	3.40E-02	5.70E-04
472.0	1.1985	0.2550	1.0147	0.1315	1473.0	6.02E-02	1.04E-03	5.09E-02	8.61E-04
473.0	1.1531	0.2437	0.9763	0.1256	1474.0	8.34E-02	1.46E-03	7.06E-02	1.20E-03
474.0	1.1672	0.2450	0.9882	0.1263	1475.0	1.58E-01	2.84E-03	1.34E-01	2.34E-03
475.0	1.2068	0.2514	1.0217	0.1296	1476.0	5.90E-02	1.02E-03	4.99E-02	8.40E-04
476.0	1.1668	0.2413	0.9878	0.1244	1477.0	5.98E-02	1.03E-03	5.06E-02	8.50E-04
477.0	1.1750	0.2412	0.9948	0.1243	1478.0	5.44E-02	9.36E-04	4.61E-02	7.72E-04
478.0	1.2142	0.2474	1.0280	0.1275	1479.0	1.03E-01	1.80E-03	8.70E-02	1.48E-03
479.0	1.1920	0.2411	1.0092	0.1243	1480.0	5.20E-02	8.91E-04	4.40E-02	7.34E-04
480.0	1.2130	0.2435	1.0269	0.1255	1481.0	9.88E-02	1.72E-03	8.36E-02	1.42E-03
481.0	1.2140	0.2419	1.0278	0.1247	1482.0	5.01E-02	8.56E-04	4.25E-02	7.06E-04
482.0	1.2195	0.2415	1.0325	0.1245	1483.0	1.27E-01	2.24E-03	1.08E-01	1.84E-03
483.0	1.2057	0.2373	1.0208	0.1224	1484.0	1.18E-01	2.06E-03	9.97E-02	1.70E-03
484.0	1.1838	0.2317	1.0023	0.1196	1485.0	1.07E-01	1.86E-03	9.07E-02	1.53E-03
485.0	1.1808	0.2300	0.9997	0.1190	1486.0	1.06E-01	1.83E-03	8.95E-02	1.51E-03
486.0	0.9580	0.1857	0.8111	0.0963	1487.0	5.20E-02	8.82E-04	4.40E-02	7.28E-04
487.0	1.0736	0.2071	0.9089	0.1076	1488.0	8.07E-02	1.39E-03	6.83E-02	1.15E-03
488.0	1.1628	0.2230	0.9845	0.1162	1489.0	1.62E-01	2.87E-03	1.37E-01	2.36E-03
489.0	1.0962	0.2091	0.9281	0.1092	1490.0	1.50E-01	2.63E-03	1.27E-01	2.17E-03
490.0	1.2257	0.2324	1.0377	0.1216	1491.0	1.69E-01	2.99E-03	1.43E-01	2.46E-03
491.0	1.1789	0.2223	0.9981	0.1166	1492.0	1.41E-01	2.45E-03	1.19E-01	2.02E-03
492.0	1.1248	0.2109	0.9523	0.1109	1493.0	1.55E-01	2.72E-03	1.32E-01	2.24E-03
493.0	1.2039	0.2246	1.0193	0.1183	1494.0	1.74E-01	3.07E-03	1.48E-01	2.53E-03
494.0	1.1760	0.2182	0.9957	0.1153	1495.0	1.56E-01	2.73E-03	1.32E-01	2.25E-03
495.0	1.2495	0.2306	1.0578	0.1221	1496.0	1.44E-01	2.51E-03	1.22E-01	2.07E-03
496.0	1.1889	0.2182	1.0066	0.1158	1497.0	1.95E-01	3.46E-03	1.65E-01	2.85E-03
497.0	1.2100	0.2208	1.0244	0.1174	1498.0	1.62E-01	2.83E-03	1.37E-01	2.34E-03
498.0	1.1777	0.2136	0.9971	0.1139	1499.0	1.86E-01	3.27E-03	1.58E-01	2.70E-03
499.0	1.1785	0.2124	0.9978	0.1135	1500.0	2.14E-01	3.80E-03	1.81E-01	3.13E-03
500.0	1.1752	0.2105	0.9949	0.1128	1501.0	2.27E-01	4.04E-03	1.92E-01	3.33E-03
501.0	1.1400	0.2029	0.9652	0.1090	1502.0	2.00E-01	3.52E-03	1.69E-01	2.90E-03
502.0	1.1401	0.2017	0.9652	0.1085	1503.0	1.58E-01	2.76E-03	1.34E-01	2.27E-03
503.0	1.1933	0.2098	1.0103	0.1132	1504.0	1.37E-01	2.36E-03	1.16E-01	1.95E-03
504.0	1.1130	0.1944	0.9423	0.1051	1505.0	1.57E-01	2.73E-03	1.33E-01	2.26E-03
505.0	1.1934	0.2075	1.0104	0.1125	1506.0	2.20E-01	3.91E-03	1.86E-01	3.22E-03
506.0	1.2421	0.2149	1.0516	0.1167	1507.0	2.18E-01	3.85E-03	1.85E-01	3.18E-03
507.0	1.1890	0.2047	1.0067	0.1115	1508.0	2.08E-01	3.65E-03	1.76E-01	3.01E-03
508.0	1.1594	0.1988	0.9816	0.1085	1509.0	1.60E-01	2.76E-03	1.35E-01	2.27E-03
509.0	1.2155	0.2076	1.0291	0.1136	1510.0	2.31E-01	4.09E-03	1.96E-01	3.37E-03

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
510.0	1.1845	0.2014	1.0029	0.1105	1511.0	2.26E-01	3.99E-03	1.92E-01	3.29E-03
511.0	1.2071	0.2044	1.0220	0.1123	1512.0	2.23E-01	3.93E-03	1.89E-01	3.24E-03
512.0	1.2397	0.2089	1.0496	0.1151	1513.0	2.07E-01	3.63E-03	1.75E-01	2.99E-03
513.0	1.1653	0.1954	0.9866	0.1079	1514.0	1.93E-01	3.36E-03	1.63E-01	2.77E-03
514.0	1.1413	0.1904	0.9662	0.1054	1515.0	2.27E-01	4.00E-03	1.92E-01	3.29E-03
515.0	1.1748	0.1951	0.9946	0.1082	1516.0	2.20E-01	3.85E-03	1.86E-01	3.17E-03
516.0	1.1861	0.1960	1.0042	0.1090	1517.0	2.13E-01	3.72E-03	1.80E-01	3.07E-03
517.0	0.9670	0.1590	0.8187	0.0886	1518.0	2.16E-01	3.76E-03	1.82E-01	3.10E-03
518.0	1.1064	0.1811	0.9367	0.1012	1519.0	2.09E-01	3.64E-03	1.77E-01	3.00E-03
519.0	1.0727	0.1747	0.9082	0.0979	1520.0	2.26E-01	3.95E-03	1.91E-01	3.26E-03
520.0	1.1717	0.1899	0.9920	0.1066	1521.0	2.35E-01	4.13E-03	1.99E-01	3.41E-03
521.0	1.1808	0.1905	0.9997	0.1072	1522.0	2.25E-01	3.94E-03	1.91E-01	3.25E-03
522.0	1.2078	0.1939	1.0226	0.1094	1523.0	2.39E-01	4.20E-03	2.03E-01	3.46E-03
523.0	1.1390	0.1820	0.9643	0.1029	1524.0	2.35E-01	4.12E-03	1.99E-01	3.40E-03
524.0	1.2255	0.1949	1.0376	0.1104	1525.0	2.21E-01	3.85E-03	1.87E-01	3.18E-03
525.0	1.2165	0.1925	1.0300	0.1093	1526.0	2.29E-01	3.98E-03	1.94E-01	3.28E-03
526.0	1.1831	0.1863	1.0017	0.1061	1527.0	2.24E-01	3.89E-03	1.90E-01	3.21E-03
527.0	1.0354	0.1622	0.8766	0.0925	1528.0	2.39E-01	4.16E-03	2.02E-01	3.43E-03
528.0	1.1857	0.1848	1.0039	0.1057	1529.0	2.33E-01	4.05E-03	1.97E-01	3.34E-03
529.0	1.2414	0.1925	1.0510	0.1104	1530.0	2.18E-01	3.79E-03	1.85E-01	3.12E-03
530.0	1.1936	0.1843	1.0106	0.1059	1531.0	2.31E-01	4.00E-03	1.95E-01	3.30E-03
531.0	1.2595	0.1935	1.0663	0.1115	1532.0	2.38E-01	4.14E-03	2.01E-01	3.41E-03
532.0	1.2372	0.1893	1.0475	0.1093	1533.0	2.37E-01	4.11E-03	2.01E-01	3.39E-03
533.0	1.1052	0.1684	0.9357	0.0975	1534.0	2.30E-01	3.98E-03	1.95E-01	3.28E-03
534.0	1.1843	0.1798	1.0026	0.1043	1535.0	2.28E-01	3.94E-03	1.93E-01	3.25E-03
535.0	1.2027	0.1819	1.0183	0.1058	1536.0	2.35E-01	4.06E-03	1.99E-01	3.35E-03
536.0	1.2546	0.1891	1.0622	0.1102	1537.0	2.34E-01	4.03E-03	1.98E-01	3.33E-03
537.0	1.1613	0.1744	0.9832	0.1019	1538.0	2.33E-01	4.02E-03	1.97E-01	3.31E-03
538.0	1.2199	0.1825	1.0328	0.1068	1539.0	2.33E-01	4.02E-03	1.98E-01	3.31E-03
539.0	1.1902	0.1774	1.0077	0.1041	1540.0	2.27E-01	3.90E-03	1.92E-01	3.21E-03
540.0	1.1497	0.1706	0.9734	0.1004	1541.0	2.30E-01	3.95E-03	1.95E-01	3.26E-03
541.0	1.1057	0.1635	0.9361	0.0964	1542.0	2.30E-01	3.95E-03	1.95E-01	3.26E-03
542.0	1.2040	0.1774	1.0193	0.1049	1543.0	2.33E-01	3.99E-03	1.97E-01	3.29E-03
543.0	1.1846	0.1740	1.0029	0.1031	1544.0	2.33E-01	3.98E-03	1.97E-01	3.28E-03
544.0	1.2265	0.1796	1.0384	0.1066	1545.0	2.37E-01	4.05E-03	2.01E-01	3.34E-03
545.0	1.1990	0.1750	1.0151	0.1041	1546.0	2.35E-01	4.01E-03	1.99E-01	3.31E-03
546.0	1.1883	0.1728	1.0061	0.1031	1547.0	2.34E-01	3.98E-03	1.98E-01	3.29E-03
547.0	1.2042	0.1746	1.0195	0.1044	1548.0	2.28E-01	3.89E-03	1.93E-01	3.21E-03
548.0	1.1704	0.1692	0.9909	0.1014	1549.0	2.34E-01	3.98E-03	1.98E-01	3.28E-03
549.0	1.2073	0.1741	1.0222	0.1046	1550.0	2.31E-01	3.92E-03	1.95E-01	3.23E-03
550.0	1.1982	0.1723	1.0145	0.1038	1551.0	2.31E-01	3.93E-03	1.96E-01	3.24E-03
551.0	1.1974	0.1719	1.0138	0.1037	1552.0	2.33E-01	3.94E-03	1.97E-01	3.25E-03
552.0	1.2224	0.1752	1.0349	0.1060	1553.0	2.32E-01	3.93E-03	1.96E-01	3.24E-03
553.0	1.1881	0.1700	1.0059	0.1030	1554.0	2.26E-01	3.83E-03	1.92E-01	3.16E-03
554.0	1.2118	0.1731	1.0260	0.1051	1555.0	2.29E-01	3.87E-03	1.94E-01	3.19E-03
555.0	1.2189	0.1738	1.0320	0.1058	1556.0	2.25E-01	3.80E-03	1.91E-01	3.14E-03
556.0	1.1985	0.1706	1.0147	0.1040	1557.0	2.31E-01	3.91E-03	1.96E-01	3.22E-03
557.0	1.1696	0.1661	0.9902	0.1015	1558.0	2.30E-01	3.87E-03	1.94E-01	3.19E-03
558.0	1.1953	0.1694	1.0120	0.1037	1559.0	2.29E-01	3.86E-03	1.94E-01	3.19E-03
559.0	1.1313	0.1600	0.9578	0.0982	1560.0	2.27E-01	3.82E-03	1.92E-01	3.15E-03
560.0	1.1518	0.1625	0.9752	0.1000	1561.0	2.31E-01	3.88E-03	1.96E-01	3.20E-03
561.0	1.2192	0.1713	1.0322	0.1056	1562.0	2.29E-01	3.84E-03	1.94E-01	3.17E-03
562.0	1.1612	0.1625	0.9832	0.1004	1563.0	2.28E-01	3.83E-03	1.93E-01	3.16E-03
563.0	1.2056	0.1680	1.0207	0.1040	1564.0	2.25E-01	3.77E-03	1.90E-01	3.11E-03
564.0	1.1824	0.1642	1.0011	0.1018	1565.0	2.29E-01	3.83E-03	1.94E-01	3.16E-03
565.0	1.1903	0.1646	1.0077	0.1023	1566.0	2.25E-01	3.76E-03	1.90E-01	3.10E-03
566.0	1.1260	0.1551	0.9533	0.0966	1567.0	2.25E-01	3.76E-03	1.91E-01	3.10E-03
567.0	1.2006	0.1648	1.0165	0.1028	1568.0	2.20E-01	3.67E-03	1.86E-01	3.03E-03
568.0	1.1902	0.1626	1.0076	0.1017	1569.0	2.18E-01	3.62E-03	1.84E-01	2.99E-03
569.0	1.1615	0.1579	0.9834	0.0990	1570.0	2.07E-01	3.42E-03	1.75E-01	2.82E-03
570.0	1.1626	0.1576	0.9843	0.0989	1571.0	2.01E-01	3.30E-03	1.70E-01	2.73E-03
571.0	1.1249	0.1520	0.9523	0.0956	1572.0	2.03E-01	3.34E-03	1.72E-01	2.76E-03
572.0	1.1885	0.1599	1.0062	0.1008	1573.0	2.00E-01	3.29E-03	1.70E-01	2.71E-03
573.0	1.1938	0.1600	1.0107	0.1011	1574.0	2.07E-01	3.40E-03	1.75E-01	2.80E-03
574.0	1.1879	0.1587	1.0057	0.1005	1575.0	2.05E-01	3.39E-03	1.74E-01	2.80E-03
575.0	1.1613	0.1546	0.9832	0.0981	1576.0	2.11E-01	3.48E-03	1.79E-01	2.87E-03
576.0	1.1520	0.1529	0.9753	0.0972	1577.0	1.85E-01	3.03E-03	1.56E-01	2.50E-03
577.0	1.1813	0.1564	1.0001	0.0996	1578.0	2.01E-01	3.29E-03	1.70E-01	2.72E-03
578.0	1.1451	0.1512	0.9695	0.0966	1579.0	2.02E-01	3.31E-03	1.71E-01	2.73E-03
579.0	1.1618	0.1531	0.9836	0.0980	1580.0	2.09E-01	3.43E-03	1.77E-01	2.83E-03

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
580.0	1.1816	0.1555	1.0003	0.0997	1581.0	2.13E-01	3.48E-03	1.80E-01	2.87E-03
581.0	1.1872	0.1559	1.0051	0.1002	1582.0	2.07E-01	3.39E-03	1.75E-01	2.80E-03
582.0	1.2056	0.1580	1.0207	0.1017	1583.0	2.12E-01	3.47E-03	1.79E-01	2.86E-03
583.0	1.2182	0.1594	1.0314	0.1028	1584.0	2.13E-01	3.50E-03	1.80E-01	2.88E-03
584.0	1.2159	0.1587	1.0294	0.1026	1585.0	2.21E-01	3.63E-03	1.87E-01	3.00E-03
585.0	1.2064	0.1570	1.0214	0.1017	1586.0	2.19E-01	3.59E-03	1.85E-01	2.96E-03
586.0	1.1776	0.1528	0.9970	0.0992	1587.0	2.16E-01	3.55E-03	1.83E-01	2.93E-03
587.0	1.2039	0.1557	1.0193	0.1013	1588.0	2.15E-01	3.52E-03	1.82E-01	2.90E-03
588.0	1.1771	0.1514	0.9966	0.0987	1589.0	1.99E-01	3.26E-03	1.68E-01	2.68E-03
589.0	1.0172	0.1298	0.8612	0.0847	1590.0	2.07E-01	3.38E-03	1.75E-01	2.79E-03
590.0	1.0817	0.1376	0.9158	0.0901	1591.0	2.07E-01	3.38E-03	1.75E-01	2.79E-03
591.0	1.1567	0.1471	0.9793	0.0965	1592.0	2.16E-01	3.52E-03	1.83E-01	2.90E-03
592.0	1.1329	0.1434	0.9592	0.0942	1593.0	2.21E-01	3.61E-03	1.87E-01	2.97E-03
593.0	1.1493	0.1453	0.9731	0.0956	1594.0	2.19E-01	3.57E-03	1.85E-01	2.95E-03
594.0	1.1443	0.1441	0.9688	0.0950	1595.0	2.21E-01	3.60E-03	1.87E-01	2.97E-03
595.0	1.1303	0.1417	0.9570	0.0936	1596.0	2.09E-01	3.40E-03	1.77E-01	2.81E-03
596.0	1.1646	0.1460	0.9860	0.0967	1597.0	2.11E-01	3.43E-03	1.79E-01	2.83E-03
597.0	1.1684	0.1459	0.9892	0.0968	1598.0	2.17E-01	3.53E-03	1.84E-01	2.91E-03
598.0	1.1543	0.1438	0.9773	0.0956	1599.0	2.07E-01	3.35E-03	1.75E-01	2.76E-03
599.0	1.1545	0.1435	0.9775	0.0956	1600.0	2.04E-01	3.28E-03	1.72E-01	2.70E-03
600.0	1.1662	0.1447	0.9874	0.0966	1601.0	1.91E-01	3.06E-03	1.62E-01	2.52E-03
601.0	1.1527	0.1427	0.9759	0.0954	1602.0	1.92E-01	3.06E-03	1.62E-01	2.53E-03
602.0	1.1355	0.1402	0.9614	0.0939	1603.0	1.92E-01	3.06E-03	1.62E-01	2.52E-03
603.0	1.1598	0.1428	0.9820	0.0959	1604.0	1.95E-01	3.12E-03	1.65E-01	2.57E-03
604.0	1.1804	0.1450	0.9994	0.0976	1605.0	2.03E-01	3.25E-03	1.71E-01	2.68E-03
605.0	1.1785	0.1445	0.9978	0.0974	1606.0	2.06E-01	3.32E-03	1.75E-01	2.73E-03
606.0	1.1729	0.1435	0.9930	0.0970	1607.0	1.99E-01	3.19E-03	1.69E-01	2.63E-03
607.0	1.1800	0.1442	0.9990	0.0976	1608.0	1.97E-01	3.13E-03	1.67E-01	2.58E-03
608.0	1.1763	0.1435	0.9959	0.0974	1609.0	1.94E-01	3.09E-03	1.65E-01	2.55E-03
609.0	1.1676	0.1422	0.9885	0.0967	1610.0	1.86E-01	2.96E-03	1.58E-01	2.44E-03
610.0	1.1627	0.1414	0.9844	0.0963	1611.0	1.94E-01	3.08E-03	1.64E-01	2.54E-03
611.0	1.1569	0.1403	0.9795	0.0958	1612.0	1.97E-01	3.14E-03	1.67E-01	2.59E-03
612.0	1.1744	0.1421	0.9943	0.0972	1613.0	2.03E-01	3.23E-03	1.72E-01	2.66E-03
613.0	1.1580	0.1398	0.9804	0.0958	1614.0	2.04E-01	3.25E-03	1.73E-01	2.68E-03
614.0	1.1229	0.1353	0.9507	0.0929	1615.0	2.06E-01	3.28E-03	1.75E-01	2.71E-03
615.0	1.1643	0.1400	0.9857	0.0963	1616.0	1.97E-01	3.14E-03	1.67E-01	2.59E-03
616.0	1.1337	0.1360	0.9598	0.0938	1617.0	2.01E-01	3.19E-03	1.70E-01	2.63E-03
617.0	1.1194	0.1340	0.9478	0.0926	1618.0	2.08E-01	3.31E-03	1.76E-01	2.73E-03
618.0	1.1620	0.1388	0.9838	0.0960	1619.0	2.06E-01	3.27E-03	1.75E-01	2.70E-03
619.0	1.1676	0.1391	0.9886	0.0965	1620.0	2.01E-01	3.18E-03	1.70E-01	2.63E-03
620.0	1.1682	0.1388	0.9891	0.0964	1621.0	2.00E-01	3.18E-03	1.70E-01	2.62E-03
621.0	1.1735	0.1389	0.9935	0.0967	1622.0	2.03E-01	3.22E-03	1.72E-01	2.65E-03
622.0	1.1316	0.1334	0.9581	0.0930	1623.0	2.07E-01	3.28E-03	1.76E-01	2.70E-03
623.0	1.1238	0.1319	0.9515	0.0922	1624.0	2.08E-01	3.28E-03	1.76E-01	2.70E-03
624.0	1.1201	0.1312	0.9484	0.0919	1625.0	2.03E-01	3.21E-03	1.72E-01	2.65E-03
625.0	1.1128	0.1302	0.9421	0.0914	1626.0	2.05E-01	3.23E-03	1.74E-01	2.66E-03
626.0	1.1117	0.1298	0.9412	0.0913	1627.0	2.06E-01	3.24E-03	1.74E-01	2.67E-03
627.0	1.1440	0.1331	0.9686	0.0938	1628.0	2.06E-01	3.24E-03	1.75E-01	2.67E-03
628.0	1.0830	0.1244	0.9170	0.0878	1629.0	2.06E-01	3.24E-03	1.75E-01	2.67E-03
629.0	1.1208	0.1293	0.9489	0.0915	1630.0	2.02E-01	3.17E-03	1.71E-01	2.61E-03
630.0	1.1059	0.1273	0.9363	0.0902	1631.0	2.04E-01	3.18E-03	1.72E-01	2.63E-03
631.0	1.1244	0.1296	0.9520	0.0920	1632.0	2.04E-01	3.18E-03	1.73E-01	2.62E-03
632.0	1.0829	0.1246	0.9168	0.0887	1633.0	1.99E-01	3.10E-03	1.69E-01	2.56E-03
633.0	1.1518	0.1325	0.9751	0.0945	1634.0	1.99E-01	3.10E-03	1.69E-01	2.56E-03
634.0	1.1339	0.1303	0.9600	0.0931	1635.0	2.00E-01	3.10E-03	1.69E-01	2.56E-03
635.0	1.1479	0.1317	0.9718	0.0943	1636.0	2.01E-01	3.13E-03	1.71E-01	2.58E-03
636.0	1.1217	0.1285	0.9497	0.0922	1637.0	1.94E-01	3.01E-03	1.64E-01	2.49E-03
637.0	1.1600	0.1326	0.9821	0.0953	1638.0	1.88E-01	2.91E-03	1.59E-01	2.40E-03
638.0	1.1678	0.1333	0.9887	0.0960	1639.0	1.88E-01	2.91E-03	1.60E-01	2.40E-03
639.0	1.1630	0.1326	0.9846	0.0957	1640.0	1.84E-01	2.83E-03	1.56E-01	2.33E-03
640.0	1.1388	0.1296	0.9642	0.0937	1641.0	1.88E-01	2.89E-03	1.59E-01	2.39E-03
641.0	1.1395	0.1295	0.9648	0.0938	1642.0	1.89E-01	2.91E-03	1.60E-01	2.40E-03
642.0	1.1418	0.1295	0.9667	0.0939	1643.0	1.84E-01	2.81E-03	1.56E-01	2.32E-03
643.0	1.1536	0.1305	0.9767	0.0949	1644.0	1.91E-01	2.94E-03	1.62E-01	2.42E-03
644.0	1.1486	0.1297	0.9725	0.0945	1645.0	1.87E-01	2.86E-03	1.58E-01	2.36E-03
645.0	1.1571	0.1303	0.9797	0.0951	1646.0	1.86E-01	2.84E-03	1.58E-01	2.34E-03
646.0	1.1243	0.1261	0.9519	0.0922	1647.0	1.95E-01	2.98E-03	1.65E-01	2.46E-03
647.0	1.1197	0.1249	0.9480	0.0915	1648.0	1.85E-01	2.81E-03	1.57E-01	2.32E-03
648.0	1.1092	0.1233	0.9391	0.0905	1649.0	1.87E-01	2.85E-03	1.58E-01	2.35E-03
649.0	1.0749	0.1192	0.9101	0.0877	1650.0	1.93E-01	2.94E-03	1.63E-01	2.42E-03

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
650.0	1.0806	0.1200	0.9149	0.0885	1651.0	1.79E-01	2.69E-03	1.51E-01	2.22E-03
651.0	1.1485	0.1274	0.9723	0.0941	1652.0	1.92E-01	2.91E-03	1.62E-01	2.40E-03
652.0	1.1034	0.1215	0.9342	0.0899	1653.0	1.91E-01	2.89E-03	1.61E-01	2.39E-03
653.0	1.1378	0.1257	0.9633	0.0932	1654.0	1.85E-01	2.78E-03	1.56E-01	2.30E-03
654.0	1.1253	0.1241	0.9527	0.0922	1655.0	1.90E-01	2.88E-03	1.61E-01	2.37E-03
655.0	1.0737	0.1178	0.9091	0.0877	1656.0	1.89E-01	2.85E-03	1.60E-01	2.35E-03
656.0	0.9426	0.1034	0.7980	0.0771	1657.0	1.90E-01	2.87E-03	1.61E-01	2.36E-03
657.0	0.9857	0.1079	0.8345	0.0806	1658.0	1.93E-01	2.90E-03	1.63E-01	2.39E-03
658.0	1.1018	0.1205	0.9329	0.0902	1659.0	1.89E-01	2.85E-03	1.60E-01	2.35E-03
659.0	1.1059	0.1207	0.9363	0.0905	1660.0	1.91E-01	2.87E-03	1.62E-01	2.37E-03
660.0	1.1131	0.1211	0.9424	0.0910	1661.0	1.92E-01	2.88E-03	1.62E-01	2.37E-03
661.0	1.1087	0.1202	0.9387	0.0905	1662.0	1.88E-01	2.80E-03	1.59E-01	2.31E-03
662.0	1.0999	0.1187	0.9312	0.0895	1663.0	1.90E-01	2.85E-03	1.61E-01	2.35E-03
663.0	1.1018	0.1188	0.9328	0.0897	1664.0	1.89E-01	2.83E-03	1.60E-01	2.33E-03
664.0	1.1113	0.1199	0.9409	0.0908	1665.0	1.81E-01	2.69E-03	1.54E-01	2.22E-03
665.0	1.1309	0.1220	0.9575	0.0925	1666.0	1.53E-01	2.23E-03	1.30E-01	1.84E-03
666.0	1.1300	0.1218	0.9567	0.0925	1667.0	1.80E-01	2.67E-03	1.53E-01	2.20E-03
667.0	1.1219	0.1208	0.9498	0.0920	1668.0	1.84E-01	2.73E-03	1.56E-01	2.25E-03
668.0	1.1257	0.1210	0.9530	0.0923	1669.0	1.84E-01	2.73E-03	1.56E-01	2.25E-03
669.0	1.1452	0.1229	0.9696	0.0939	1670.0	1.90E-01	2.81E-03	1.61E-01	2.32E-03
670.0	1.1295	0.1210	0.9563	0.0926	1671.0	1.87E-01	2.77E-03	1.59E-01	2.28E-03
671.0	1.1274	0.1206	0.9545	0.0925	1672.0	1.81E-01	2.68E-03	1.53E-01	2.21E-03
672.0	1.1116	0.1187	0.9412	0.0912	1673.0	1.85E-01	2.73E-03	1.57E-01	2.25E-03
673.0	1.1213	0.1195	0.9493	0.0920	1674.0	1.85E-01	2.72E-03	1.57E-01	2.24E-03
674.0	1.1197	0.1191	0.9480	0.0918	1675.0	1.83E-01	2.69E-03	1.55E-01	2.22E-03
675.0	1.1106	0.1179	0.9403	0.0911	1676.0	1.81E-01	2.66E-03	1.53E-01	2.19E-03
676.0	1.1236	0.1190	0.9513	0.0921	1677.0	1.82E-01	2.66E-03	1.54E-01	2.20E-03
677.0	1.1133	0.1177	0.9426	0.0913	1678.0	1.79E-01	2.61E-03	1.52E-01	2.16E-03
678.0	1.1192	0.1181	0.9476	0.0918	1679.0	1.83E-01	2.67E-03	1.55E-01	2.20E-03
679.0	1.1098	0.1169	0.9396	0.0910	1680.0	1.76E-01	2.57E-03	1.49E-01	2.12E-03
680.0	1.1116	0.1168	0.9411	0.0911	1681.0	1.67E-01	2.42E-03	1.41E-01	2.00E-03
681.0	1.1074	0.1162	0.9376	0.0907	1682.0	1.75E-01	2.54E-03	1.48E-01	2.10E-03
682.0	1.1127	0.1165	0.9421	0.0912	1683.0	1.79E-01	2.60E-03	1.52E-01	2.15E-03
683.0	1.1008	0.1150	0.9320	0.0902	1684.0	1.70E-01	2.44E-03	1.44E-01	2.01E-03
684.0	1.0937	0.1140	0.9259	0.0896	1685.0	1.83E-01	2.65E-03	1.55E-01	2.18E-03
685.0	1.0945	0.1139	0.9266	0.0896	1686.0	1.80E-01	2.61E-03	1.53E-01	2.15E-03
686.0	1.0699	0.1111	0.9058	0.0876	1687.0	1.76E-01	2.53E-03	1.49E-01	2.08E-03
687.0	0.7759	0.0754	0.6569	0.0596	1688.0	1.80E-01	2.60E-03	1.53E-01	2.14E-03
688.0	0.8959	0.0890	0.7585	0.0704	1689.0	1.78E-01	2.56E-03	1.50E-01	2.11E-03
689.0	0.9017	0.0894	0.7634	0.0709	1690.0	1.76E-01	2.53E-03	1.49E-01	2.08E-03
690.0	0.9444	0.0943	0.7996	0.0748	1691.0	1.66E-01	2.35E-03	1.40E-01	1.94E-03
691.0	0.9844	0.0990	0.8334	0.0787	1692.0	1.78E-01	2.54E-03	1.50E-01	2.09E-03
692.0	1.0121	0.1023	0.8569	0.0815	1693.0	1.81E-01	2.60E-03	1.53E-01	2.14E-03
693.0	1.0059	0.1013	0.8516	0.0808	1694.0	1.76E-01	2.50E-03	1.49E-01	2.06E-03
694.0	0.9947	0.0998	0.8421	0.0798	1695.0	1.80E-01	2.57E-03	1.52E-01	2.12E-03
695.0	1.0140	0.1022	0.8585	0.0818	1696.0	1.79E-01	2.56E-03	1.52E-01	2.11E-03
696.0	1.0118	0.1016	0.8566	0.0815	1697.0	1.55E-01	2.18E-03	1.32E-01	1.79E-03
697.0	1.0679	0.1083	0.9041	0.0870	1698.0	1.78E-01	2.53E-03	1.51E-01	2.08E-03
698.0	1.0512	0.1064	0.8900	0.0856	1699.0	1.76E-01	2.50E-03	1.49E-01	2.06E-03
699.0	1.0301	0.1033	0.8721	0.0833	1700.0	1.71E-01	2.42E-03	1.45E-01	2.00E-03
700.0	1.0227	0.1024	0.8658	0.0827	1702.0	1.75E-01	2.47E-03	1.48E-01	2.04E-03
701.0	1.0098	0.1007	0.8549	0.0815	1705.0	1.70E-01	2.38E-03	1.44E-01	1.96E-03
702.0	1.0107	0.1008	0.8557	0.0817	1710.0	1.61E-01	2.24E-03	1.37E-01	1.84E-03
703.0	1.0166	0.1012	0.8607	0.0821	1715.0	1.63E-01	2.24E-03	1.38E-01	1.85E-03
704.0	1.0427	0.1040	0.8828	0.0845	1720.0	1.61E-01	2.19E-03	1.36E-01	1.81E-03
705.0	1.0537	0.1048	0.8921	0.0853	1725.0	1.53E-01	2.07E-03	1.29E-01	1.70E-03
706.0	1.0481	0.1042	0.8873	0.0850	1730.0	1.49E-01	2.00E-03	1.27E-01	1.65E-03
707.0	1.0437	0.1036	0.8837	0.0846	1735.0	1.39E-01	1.84E-03	1.17E-01	1.52E-03
708.0	1.0405	0.1031	0.8810	0.0843	1740.0	1.44E-01	1.91E-03	1.22E-01	1.57E-03
709.0	1.0442	0.1034	0.8840	0.0848	1745.0	1.33E-01	1.73E-03	1.13E-01	1.43E-03
710.0	1.0507	0.1038	0.8896	0.0852	1750.0	1.42E-01	1.85E-03	1.20E-01	1.53E-03
711.0	1.0489	0.1034	0.8881	0.0850	1755.0	1.31E-01	1.69E-03	1.11E-01	1.39E-03
712.0	1.0420	0.1026	0.8822	0.0845	1760.0	1.37E-01	1.77E-03	1.16E-01	1.46E-03
713.0	1.0300	0.1011	0.8720	0.0834	1765.0	1.14E-01	1.44E-03	9.66E-02	1.19E-03
714.0	1.0392	0.1017	0.8798	0.0839	1770.0	1.22E-01	1.53E-03	1.03E-01	1.26E-03
715.0	1.0045	0.0978	0.8504	0.0806	1775.0	9.87E-02	1.22E-03	8.36E-02	1.00E-03
716.0	1.0150	0.0984	0.8593	0.0812	1780.0	8.64E-02	1.05E-03	7.32E-02	8.68E-04
717.0	0.8861	0.0834	0.7502	0.0688	1785.0	6.62E-02	7.91E-04	5.61E-02	6.52E-04
718.0	0.8251	0.0766	0.6986	0.0632	1790.0	7.64E-02	9.15E-04	6.47E-02	7.55E-04
719.0	0.7407	0.0678	0.6271	0.0559	1795.0	4.04E-02	4.69E-04	3.42E-02	3.87E-04

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
720.0	0.7905	0.0725	0.6693	0.0598	1800.0	2.74E-02	3.14E-04	2.32E-02	2.59E-04
721.0	0.8699	0.0809	0.7365	0.0667	1805.0	1.28E-02	1.44E-04	1.08E-02	1.19E-04
722.0	0.9916	0.0941	0.8395	0.0776	1810.0	8.34E-03	9.35E-05	7.06E-03	7.71E-05
723.0	0.9162	0.0855	0.7757	0.0705	1815.0	2.83E-03	3.14E-05	2.39E-03	2.59E-05
724.0	0.8465	0.0775	0.7167	0.0639	1820.0	8.50E-04	9.39E-06	7.20E-04	7.75E-06
725.0	0.8328	0.0759	0.7051	0.0626	1825.0	1.10E-03	1.21E-05	9.29E-04	9.95E-06
726.0	0.8670	0.0794	0.7341	0.0655	1830.0	4.48E-06	4.90E-08	3.79E-06	4.04E-08
727.0	0.8701	0.0795	0.7367	0.0656	1835.0	5.53E-06	6.02E-08	4.68E-06	4.96E-08
728.0	0.8348	0.0756	0.7068	0.0623	1840.0	5.40E-08	5.85E-10	4.57E-08	4.83E-10
729.0	0.8395	0.0765	0.7107	0.0631	1845.0	5.40E-06	5.82E-08	4.57E-06	4.80E-08
730.0	0.9049	0.0827	0.7661	0.0682	1850.0	2.58E-06	2.78E-08	2.19E-06	2.29E-08
731.0	0.8588	0.0777	0.7271	0.0641	1855.0	2.45E-07	2.62E-09	2.07E-07	2.16E-09
732.0	0.9247	0.0844	0.7829	0.0696	1860.0	9.61E-06	1.02E-07	8.14E-06	8.44E-08
733.0	0.9583	0.0881	0.8113	0.0727	1865.0	1.47E-05	1.55E-07	1.24E-05	1.28E-07
734.0	0.9899	0.0910	0.8381	0.0750	1870.0	2.30E-10	2.43E-12	1.95E-10	2.01E-12
735.0	0.9758	0.0893	0.8262	0.0736	1875.0	3.90E-10	4.10E-12	3.30E-10	3.38E-12
736.0	0.9664	0.0882	0.8182	0.0728	1880.0	6.70E-05	7.02E-07	5.67E-05	5.79E-07
737.0	0.9650	0.0878	0.8170	0.0724	1885.0	3.80E-05	3.96E-07	3.21E-05	3.27E-07
738.0	0.9831	0.0897	0.8324	0.0740	1890.0	1.93E-04	2.01E-06	1.64E-04	1.66E-06
739.0	0.9542	0.0868	0.8078	0.0716	1895.0	1.12E-04	1.16E-06	9.50E-05	9.57E-07
740.0	0.9775	0.0888	0.8276	0.0732	1900.0	7.48E-07	7.71E-09	6.33E-07	6.35E-09
741.0	0.9738	0.0883	0.8244	0.0728	1905.0	4.91E-07	5.04E-09	4.16E-07	4.16E-09
742.0	0.9743	0.0882	0.8249	0.0727	1910.0	2.00E-05	2.05E-07	1.69E-05	1.69E-07
743.0	0.9948	0.0898	0.8422	0.0741	1915.0	1.73E-05	1.76E-07	1.47E-05	1.46E-07
744.0	1.0028	0.0903	0.8490	0.0745	1920.0	3.91E-04	3.97E-06	3.31E-04	3.28E-06
745.0	1.0025	0.0901	0.8488	0.0743	1925.0	8.13E-04	8.22E-06	6.88E-04	6.78E-06
746.0	1.0005	0.0897	0.8471	0.0739	1930.0	4.80E-04	4.83E-06	4.06E-04	3.99E-06
747.0	1.0012	0.0895	0.8477	0.0738	1935.0	3.12E-03	3.13E-05	2.64E-03	2.58E-05
748.0	0.9954	0.0887	0.8427	0.0732	1940.0	2.85E-03	2.85E-05	2.41E-03	2.35E-05
749.0	0.9921	0.0882	0.8400	0.0727	1945.0	9.43E-03	9.42E-05	7.98E-03	7.77E-05
750.0	0.9910	0.0878	0.8390	0.0724	1950.0	1.45E-02	1.45E-04	1.23E-02	1.19E-04
751.0	0.9867	0.0872	0.8354	0.0719	1955.0	8.70E-03	8.63E-05	7.37E-03	7.12E-05
752.0	0.9904	0.0873	0.8385	0.0720	1960.0	1.90E-02	1.88E-04	1.61E-02	1.55E-04
753.0	0.9855	0.0867	0.8343	0.0715	1965.0	2.48E-02	2.45E-04	2.10E-02	2.02E-04
754.0	0.9981	0.0876	0.8450	0.0722	1970.0	4.23E-02	4.19E-04	3.58E-02	3.46E-04
755.0	0.9953	0.0871	0.8426	0.0718	1975.0	5.88E-02	5.83E-04	4.97E-02	4.81E-04
756.0	0.9833	0.0858	0.8325	0.0708	1980.0	6.54E-02	6.48E-04	5.53E-02	5.35E-04
757.0	0.9825	0.0855	0.8318	0.0705	1985.0	7.19E-02	7.15E-04	6.08E-02	5.89E-04
758.0	0.9887	0.0858	0.8371	0.0708	1990.0	7.41E-02	7.37E-04	6.27E-02	6.08E-04
759.0	0.9611	0.0829	0.8137	0.0684	1995.0	7.03E-02	6.98E-04	5.95E-02	5.76E-04
760.0	0.2173	0.0156	0.1840	0.0129	2000.0	3.30E-02	3.54E-04	2.79E-02	2.92E-04
761.0	0.1260	0.0088	0.1066	0.0073	2005.0	1.30E-02	1.38E-04	1.10E-02	1.13E-04
762.0	0.5582	0.0434	0.4726	0.0358	2010.0	3.44E-02	3.68E-04	2.91E-02	3.03E-04
763.0	0.3096	0.0226	0.2621	0.0186	2015.0	2.31E-02	2.44E-04	1.95E-02	2.02E-04
764.0	0.4386	0.0329	0.3713	0.0271	2020.0	3.90E-02	4.16E-04	3.30E-02	3.43E-04
765.0	0.5572	0.0429	0.4717	0.0354	2025.0	6.41E-02	6.94E-04	5.43E-02	5.73E-04
766.0	0.6601	0.0523	0.5589	0.0431	2030.0	7.35E-02	8.00E-04	6.22E-02	6.60E-04
767.0	0.7875	0.0641	0.6667	0.0529	2035.0	8.35E-02	9.12E-04	7.07E-02	7.52E-04
768.0	0.8987	0.0747	0.7609	0.0616	2040.0	7.78E-02	8.44E-04	6.59E-02	6.96E-04
769.0	0.9097	0.0759	0.7702	0.0626	2045.0	7.89E-02	8.54E-04	6.68E-02	7.04E-04
770.0	0.9360	0.0783	0.7924	0.0646	2050.0	5.89E-02	6.26E-04	4.99E-02	5.16E-04
771.0	0.9421	0.0788	0.7976	0.0650	2055.0	4.76E-02	5.00E-04	4.03E-02	4.12E-04
772.0	0.9497	0.0793	0.8040	0.0654	2060.0	6.00E-02	6.34E-04	5.08E-02	5.23E-04
773.0	0.9493	0.0791	0.8037	0.0652	2065.0	5.37E-02	5.63E-04	4.54E-02	4.64E-04
774.0	0.9495	0.0789	0.8039	0.0651	2070.0	5.70E-02	5.97E-04	4.82E-02	4.92E-04
775.0	0.9496	0.0787	0.8040	0.0649	2075.0	6.72E-02	7.07E-04	5.69E-02	5.83E-04
776.0	0.9519	0.0787	0.8059	0.0649	2080.0	7.53E-02	7.95E-04	6.38E-02	6.55E-04
777.0	0.9464	0.0780	0.8012	0.0643	2085.0	7.38E-02	7.75E-04	6.25E-02	6.39E-04
778.0	0.9455	0.0777	0.8005	0.0641	2090.0	7.73E-02	8.11E-04	6.54E-02	6.68E-04
779.0	0.9499	0.0778	0.8042	0.0642	2095.0	7.79E-02	8.14E-04	6.59E-02	6.71E-04
780.0	0.9396	0.0768	0.7955	0.0633	2100.0	7.47E-02	7.76E-04	6.33E-02	6.40E-04
781.0	0.9375	0.0764	0.7937	0.0630	2105.0	8.08E-02	8.39E-04	6.84E-02	6.92E-04
782.0	0.9420	0.0766	0.7975	0.0632	2110.0	7.78E-02	8.02E-04	6.58E-02	6.61E-04
783.0	0.9383	0.0761	0.7944	0.0628	2115.0	7.95E-02	8.17E-04	6.73E-02	6.74E-04
784.0	0.9321	0.0754	0.7892	0.0622	2120.0	7.60E-02	7.75E-04	6.43E-02	6.39E-04
785.0	0.9363	0.0756	0.7927	0.0623	2125.0	7.69E-02	7.81E-04	6.51E-02	6.44E-04
786.0	0.9370	0.0754	0.7933	0.0622	2130.0	7.79E-02	7.87E-04	6.59E-02	6.49E-04
787.0	0.9259	0.0741	0.7839	0.0612	2135.0	7.81E-02	7.86E-04	6.61E-02	6.48E-04
788.0	0.9144	0.0729	0.7741	0.0602	2140.0	7.87E-02	7.88E-04	6.66E-02	6.50E-04
789.0	0.9108	0.0724	0.7711	0.0597	2145.0	7.76E-02	7.73E-04	6.57E-02	6.38E-04

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
790.0	0.8832	0.0697	0.7478	0.0575	2150.0	7.34E-02	7.26E-04	6.21E-02	5.99E-04
791.0	0.8950	0.0707	0.7577	0.0583	2155.0	7.36E-02	7.25E-04	6.23E-02	5.98E-04
792.0	0.8866	0.0699	0.7506	0.0576	2160.0	7.30E-02	7.16E-04	6.18E-02	5.91E-04
793.0	0.8806	0.0692	0.7455	0.0571	2165.0	6.62E-02	6.46E-04	5.60E-02	5.32E-04
794.0	0.8881	0.0700	0.7519	0.0577	2170.0	7.11E-02	6.92E-04	6.02E-02	5.70E-04
795.0	0.8851	0.0695	0.7494	0.0573	2175.0	6.98E-02	6.75E-04	5.91E-02	5.57E-04
796.0	0.8704	0.0677	0.7369	0.0558	2180.0	7.10E-02	6.84E-04	6.01E-02	5.64E-04
797.0	0.8843	0.0686	0.7486	0.0566	2185.0	6.47E-02	6.18E-04	5.48E-02	5.10E-04
798.0	0.9008	0.0701	0.7627	0.0578	2190.0	6.86E-02	6.55E-04	5.81E-02	5.40E-04
799.0	0.8836	0.0685	0.7480	0.0565	2195.0	6.85E-02	6.51E-04	5.80E-02	5.37E-04
800.0	0.8693	0.0671	0.7360	0.0553	2200.0	6.18E-02	5.82E-04	5.23E-02	4.80E-04
801.0	0.8791	0.0676	0.7443	0.0557	2205.0	6.42E-02	6.04E-04	5.44E-02	4.98E-04
802.0	0.8803	0.0675	0.7453	0.0557	2210.0	6.88E-02	6.47E-04	5.83E-02	5.33E-04
803.0	0.8643	0.0660	0.7317	0.0545	2215.0	6.62E-02	6.19E-04	5.61E-02	5.10E-04
804.0	0.8745	0.0667	0.7404	0.0550	2220.0	6.75E-02	6.28E-04	5.71E-02	5.18E-04
805.0	0.8553	0.0651	0.7241	0.0537	2225.0	6.55E-02	6.07E-04	5.55E-02	5.01E-04
806.0	0.8901	0.0678	0.7536	0.0559	2230.0	6.58E-02	6.07E-04	5.57E-02	5.01E-04
807.0	0.8809	0.0668	0.7458	0.0551	2235.0	6.45E-02	5.93E-04	5.46E-02	4.89E-04
808.0	0.8780	0.0664	0.7433	0.0548	2240.0	6.35E-02	5.81E-04	5.38E-02	4.79E-04
809.0	0.8561	0.0644	0.7248	0.0531	2245.0	6.16E-02	5.60E-04	5.21E-02	4.62E-04
810.0	0.8573	0.0642	0.7258	0.0529	2250.0	6.25E-02	5.67E-04	5.30E-02	4.68E-04
811.0	0.8554	0.0638	0.7242	0.0526	2255.0	5.89E-02	5.30E-04	4.98E-02	4.37E-04
812.0	0.8343	0.0616	0.7064	0.0508	2260.0	5.82E-02	5.22E-04	4.93E-02	4.31E-04
813.0	0.8199	0.0602	0.6941	0.0496	2265.0	5.93E-02	5.30E-04	5.02E-02	4.37E-04
814.0	0.7359	0.0527	0.6230	0.0434	2270.0	5.65E-02	5.01E-04	4.78E-02	4.13E-04
815.0	0.7292	0.0520	0.6174	0.0429	2275.0	5.57E-02	4.92E-04	4.72E-02	4.06E-04
816.0	0.6786	0.0477	0.5745	0.0393	2280.0	5.77E-02	5.08E-04	4.89E-02	4.19E-04
817.0	0.6946	0.0488	0.5880	0.0403	2285.0	5.49E-02	4.80E-04	4.65E-02	3.96E-04
818.0	0.6709	0.0469	0.5681	0.0387	2290.0	5.51E-02	4.79E-04	4.66E-02	3.95E-04
819.0	0.7373	0.0525	0.6242	0.0433	2295.0	5.34E-02	4.62E-04	4.52E-02	3.81E-04
820.0	0.7026	0.0494	0.5949	0.0407	2300.0	5.12E-02	4.41E-04	4.34E-02	3.64E-04
821.0	0.8116	0.0586	0.6871	0.0483	2305.0	5.16E-02	4.41E-04	4.36E-02	3.64E-04
822.0	0.7746	0.0554	0.6558	0.0457	2310.0	5.56E-02	4.75E-04	4.71E-02	3.92E-04
823.0	0.5503	0.0368	0.4659	0.0304	2315.0	5.07E-02	4.29E-04	4.29E-02	3.54E-04
824.0	0.7617	0.0539	0.6449	0.0444	2320.0	4.53E-02	3.80E-04	3.84E-02	3.14E-04
825.0	0.7893	0.0561	0.6682	0.0463	2325.0	4.90E-02	4.10E-04	4.15E-02	3.38E-04
826.0	0.7609	0.0535	0.6442	0.0441	2330.0	4.95E-02	4.12E-04	4.19E-02	3.40E-04
827.0	0.8018	0.0568	0.6788	0.0469	2335.0	5.05E-02	4.18E-04	4.28E-02	3.45E-04
828.0	0.6936	0.0476	0.5872	0.0393	2340.0	3.99E-02	3.27E-04	3.38E-02	2.70E-04
829.0	0.7575	0.0529	0.6413	0.0437	2345.0	4.48E-02	3.66E-04	3.79E-02	3.02E-04
830.0	0.7469	0.0520	0.6323	0.0429	2350.0	3.62E-02	2.93E-04	3.07E-02	2.41E-04
831.0	0.7534	0.0524	0.6378	0.0432	2355.0	4.14E-02	3.34E-04	3.50E-02	2.75E-04
832.0	0.7296	0.0503	0.6177	0.0414	2360.0	4.38E-02	3.52E-04	3.71E-02	2.90E-04
833.0	0.7794	0.0545	0.6598	0.0450	2365.0	4.31E-02	3.44E-04	3.65E-02	2.84E-04
834.0	0.7616	0.0527	0.6448	0.0435	2370.0	2.69E-02	2.12E-04	2.28E-02	1.75E-04
835.0	0.8171	0.0573	0.6918	0.0472	2375.0	3.85E-02	3.04E-04	3.26E-02	2.50E-04
836.0	0.7927	0.0549	0.6711	0.0453	2380.0	3.71E-02	2.91E-04	3.14E-02	2.40E-04
837.0	0.8222	0.0573	0.6961	0.0473	2385.0	2.69E-02	2.08E-04	2.28E-02	1.72E-04
838.0	0.8142	0.0564	0.6893	0.0465	2390.0	3.24E-02	2.50E-04	2.74E-02	2.06E-04
839.0	0.8160	0.0566	0.6908	0.0467	2395.0	3.54E-02	2.73E-04	3.00E-02	2.25E-04
840.0	0.8278	0.0573	0.7008	0.0473	2400.0	3.85E-02	2.95E-04	3.26E-02	2.44E-04
841.0	0.8234	0.0568	0.6971	0.0468	2405.0	2.93E-02	2.23E-04	2.48E-02	1.84E-04
842.0	0.8127	0.0560	0.6881	0.0462	2410.0	2.95E-02	2.23E-04	2.50E-02	1.84E-04
843.0	0.8194	0.0565	0.6937	0.0466	2415.0	2.38E-02	1.79E-04	2.02E-02	1.47E-04
844.0	0.8041	0.0552	0.6808	0.0455	2420.0	2.32E-02	1.73E-04	1.97E-02	1.43E-04
845.0	0.8287	0.0568	0.7016	0.0469	2425.0	2.89E-02	2.15E-04	2.45E-02	1.77E-04
846.0	0.8306	0.0568	0.7032	0.0469	2430.0	3.94E-02	2.92E-04	3.33E-02	2.41E-04
847.0	0.8086	0.0552	0.6846	0.0455	2435.0	1.30E-02	9.48E-05	1.10E-02	7.82E-05
848.0	0.8092	0.0550	0.6851	0.0454	2440.0	3.78E-02	2.77E-04	3.20E-02	2.29E-04
849.0	0.8042	0.0546	0.6809	0.0450	2445.0	1.82E-02	1.32E-04	1.54E-02	1.08E-04
850.0	0.7291	0.0493	0.6173	0.0407	2450.0	1.19E-02	8.54E-05	1.01E-02	7.04E-05
851.0	0.7955	0.0536	0.6735	0.0442	2455.0	2.17E-02	1.56E-04	1.84E-02	1.28E-04
852.0	0.7910	0.0532	0.6697	0.0439	2460.0	2.92E-02	2.09E-04	2.47E-02	1.72E-04
853.0	0.7875	0.0528	0.6667	0.0436	2465.0	2.11E-02	1.50E-04	1.79E-02	1.23E-04
854.0	0.6948	0.0464	0.5882	0.0383	2470.0	1.46E-02	1.03E-04	1.24E-02	8.48E-05
855.0	0.7453	0.0498	0.6310	0.0410	2475.0	1.44E-02	1.01E-04	1.22E-02	8.29E-05
856.0	0.7946	0.0529	0.6727	0.0436	2480.0	7.04E-03	4.90E-05	5.96E-03	4.04E-05
857.0	0.8096	0.0538	0.6855	0.0444	2485.0	4.92E-03	3.39E-05	4.16E-03	2.80E-05
858.0	0.8100	0.0537	0.6857	0.0442	2490.0	3.08E-03	2.11E-05	2.61E-03	1.74E-05
859.0	0.8098	0.0535	0.6856	0.0441	2495.0	2.52E-03	1.72E-05	2.14E-03	1.42E-05

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
860.0	0.8071	0.0532	0.6833	0.0439	2500.0	6.19E-03	4.19E-05	5.24E-03	3.46E-05
861.0	0.8060	0.0530	0.6824	0.0437	2505.0	1.33E-03	8.98E-06	1.13E-03	7.41E-06
862.0	0.8124	0.0533	0.6878	0.0440	2510.0	1.94E-03	1.31E-05	1.65E-03	1.08E-05
863.0	0.8174	0.0535	0.6920	0.0441	2515.0	4.55E-04	3.05E-06	3.85E-04	2.52E-06
864.0	0.8000	0.0522	0.6773	0.0431	2520.0	3.25E-04	2.18E-06	2.75E-04	1.79E-06
865.0	0.7870	0.0513	0.6663	0.0423	2525.0	3.63E-05	2.43E-07	3.07E-05	2.00E-07
866.0	0.6938	0.0451	0.5874	0.0372	2530.0	5.57E-07	3.72E-09	4.72E-07	3.07E-09
867.0	0.7482	0.0485	0.6334	0.0400	2535.0	1.53E-07	1.02E-09	1.30E-07	8.43E-10
868.0	0.7840	0.0507	0.6638	0.0418	2540.0	3.30E-07	2.20E-09	2.80E-07	1.81E-09
869.0	0.7762	0.0501	0.6572	0.0413	2545.0	4.71E-11	3.13E-13	3.99E-11	2.58E-13
870.0	0.7910	0.0509	0.6697	0.0420	2550.0	2.47E-13	1.64E-15	2.09E-13	1.35E-15
871.0	0.7799	0.0501	0.6603	0.0413	2555.0	9.14E-10	6.05E-12	7.74E-10	4.99E-12
872.0	0.7906	0.0506	0.6693	0.0417	2560.0	2.72E-11	1.80E-13	2.30E-11	1.48E-13
873.0	0.7828	0.0500	0.6627	0.0412	2565.0	1.40E-14	9.22E-17	1.18E-14	7.60E-17
874.0	0.7692	0.0490	0.6512	0.0404	2570.0	1.33E-18	8.80E-21	1.13E-18	7.26E-21
875.0	0.7582	0.0482	0.6419	0.0397	2575.0	9.43E-28	6.21E-30	7.98E-28	5.12E-30
876.0	0.7795	0.0494	0.6599	0.0407	2580.0	3.34E-22	2.20E-24	2.83E-22	1.81E-24
877.0	0.7823	0.0494	0.6624	0.0408	2585.0	1.50E-34	9.86E-37	1.27E-34	8.13E-37
878.0	0.7793	0.0491	0.6598	0.0405	2590.0	4.79E-31	3.14E-33	4.05E-31	2.59E-33
879.0	0.7665	0.0482	0.6489	0.0397	2595.0	2.00E-33	1.31E-35	1.69E-33	1.08E-35
880.0	0.7690	0.0482	0.6511	0.0398	2600.0	3.92E-28	2.56E-30	3.32E-28	2.11E-30
881.0	0.7438	0.0465	0.6297	0.0383	2605.0	5.07E-35	3.31E-37	4.29E-35	2.73E-37
882.0	0.7633	0.0476	0.6463	0.0392	2610.0	5.19E-34	3.38E-36	4.40E-34	2.79E-36
883.0	0.7608	0.0473	0.6441	0.0390	2615.0	9.78E-38	6.36E-40	8.28E-38	5.25E-40
884.0	0.7640	0.0474	0.6468	0.0391	2620.0	4.94E-29	3.21E-31	4.18E-29	2.64E-31
885.0	0.7733	0.0478	0.6547	0.0395	2625.0	3.38E-28	2.19E-30	2.86E-28	1.81E-30
886.0	0.7434	0.0458	0.6294	0.0378	2630.0	1.40E-45	0.00E+00	1.40E-45	0.00E+00
887.0	0.7459	0.0459	0.6315	0.0378	2635.0	3.41E-16	2.21E-18	2.89E-16	1.82E-18
888.0	0.7556	0.0463	0.6397	0.0382	2640.0	1.03E-16	6.63E-19	8.69E-17	5.47E-19
889.0	0.7656	0.0469	0.6482	0.0387	2645.0	7.86E-19	5.07E-21	6.66E-19	4.18E-21
890.0	0.7571	0.0462	0.6410	0.0381	2650.0	1.25E-19	8.05E-22	1.06E-19	6.64E-22
891.0	0.7587	0.0462	0.6423	0.0381	2655.0	1.15E-27	7.39E-30	9.72E-28	6.09E-30
892.0	0.7449	0.0451	0.6307	0.0372	2660.0	2.28E-25	1.46E-27	1.93E-25	1.21E-27
893.0	0.7161	0.0430	0.6063	0.0355	2665.0	9.73E-38	6.24E-40	8.24E-38	5.15E-40
894.0	0.6985	0.0416	0.5914	0.0343	2670.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
895.0	0.6681	0.0393	0.5656	0.0324	2675.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
896.0	0.6268	0.0363	0.5307	0.0299	2680.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
897.0	0.5481	0.0309	0.4640	0.0255	2685.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
898.0	0.5905	0.0337	0.5000	0.0278	2690.0	8.96E-30	5.72E-32	7.59E-30	4.72E-32
899.0	0.4527	0.0247	0.3832	0.0204	2695.0	6.25E-33	4.00E-35	5.29E-33	3.30E-35
900.0	0.6107	0.0349	0.5170	0.0288	2700.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
901.0	0.4940	0.0273	0.4183	0.0225	2705.0	2.58E-42	1.68E-44	2.18E-42	1.40E-44
902.0	0.5498	0.0310	0.4655	0.0255	2710.0	9.90E-36	6.28E-38	8.38E-36	5.18E-38
903.0	0.5672	0.0317	0.4802	0.0262	2715.0	3.39E-26	2.14E-28	2.87E-26	1.77E-28
904.0	0.6937	0.0402	0.5873	0.0332	2720.0	5.61E-45	0.00E+00	4.20E-45	0.00E+00
905.0	0.6715	0.0386	0.5685	0.0319	2725.0	6.44E-22	4.04E-24	5.45E-22	3.33E-24
906.0	0.6377	0.0363	0.5399	0.0300	2730.0	5.37E-19	3.35E-21	4.54E-19	2.77E-21
907.0	0.5263	0.0289	0.4456	0.0238	2735.0	4.85E-21	3.02E-23	4.11E-21	2.49E-23
908.0	0.5374	0.0296	0.4550	0.0244	2740.0	2.06E-27	1.28E-29	1.75E-27	1.06E-29
909.0	0.5798	0.0324	0.4909	0.0267	2745.0	1.16E-23	7.21E-26	9.86E-24	5.94E-26
910.0	0.5151	0.0280	0.4361	0.0231	2750.0	1.48E-28	9.11E-31	1.25E-28	7.51E-31
911.0	0.5505	0.0302	0.4661	0.0249	2755.0	5.89E-44	0.00E+00	5.04E-44	0.00E+00
912.0	0.5674	0.0313	0.4804	0.0258	2760.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
913.0	0.5182	0.0280	0.4387	0.0231	2765.0	2.38E-27	1.46E-29	2.01E-27	1.20E-29
914.0	0.5167	0.0279	0.4375	0.0230	2770.0	7.44E-24	4.55E-26	6.30E-24	3.75E-26
915.0	0.5590	0.0305	0.4733	0.0252	2775.0	3.55E-38	2.17E-40	3.01E-38	1.79E-40
916.0	0.4759	0.0252	0.4029	0.0208	2780.0	4.27E-34	2.60E-36	3.62E-34	2.14E-36
917.0	0.6012	0.0331	0.5090	0.0273	2785.0	3.46E-27	2.10E-29	2.93E-27	1.73E-29
918.0	0.4892	0.0260	0.4142	0.0214	2790.0	1.08E-16	6.56E-19	9.17E-17	5.41E-19
919.0	0.6084	0.0334	0.5151	0.0275	2795.0	3.22E-16	1.95E-18	2.73E-16	1.61E-18
920.0	0.6128	0.0337	0.5188	0.0278	2800.0	1.47E-12	8.86E-15	1.24E-12	7.31E-15
921.0	0.6422	0.0356	0.5437	0.0294	2805.0	6.01E-14	3.62E-16	5.09E-14	2.99E-16
922.0	0.5769	0.0313	0.4884	0.0258	2810.0	3.58E-10	2.16E-12	3.03E-10	1.78E-12
923.0	0.6131	0.0338	0.5191	0.0279	2815.0	2.56E-10	1.54E-12	2.16E-10	1.27E-12
924.0	0.5944	0.0322	0.5032	0.0266	2820.0	1.83E-11	1.10E-13	1.55E-11	9.06E-14
925.0	0.5860	0.0316	0.4962	0.0260	2825.0	1.57E-07	9.41E-10	1.33E-07	7.76E-10
926.0	0.5795	0.0313	0.4906	0.0258	2830.0	3.48E-06	2.08E-08	2.94E-06	1.72E-08
927.0	0.6482	0.0354	0.5488	0.0292	2835.0	1.90E-10	1.14E-12	1.61E-10	9.36E-13
928.0	0.4870	0.0253	0.4123	0.0208	2840.0	1.75E-07	1.05E-09	1.48E-07	8.62E-10
929.0	0.4556	0.0234	0.3857	0.0193	2845.0	3.62E-05	2.16E-07	3.06E-05	1.78E-07

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
930.0	0.3578	0.0177	0.3030	0.0146	2850.0	1.03E-06	6.16E-09	8.73E-07	5.08E-09
931.0	0.3390	0.0167	0.2870	0.0137	2855.0	4.00E-07	2.39E-09	3.39E-07	1.97E-09
932.0	0.2497	0.0119	0.2114	0.0098	2860.0	2.26E-05	1.35E-07	1.91E-05	1.11E-07
933.0	0.2064	0.0097	0.1747	0.0080	2865.0	1.49E-04	8.93E-07	1.27E-04	7.37E-07
934.0	0.1197	0.0054	0.1013	0.0045	2870.0	5.63E-06	3.36E-08	4.77E-06	2.77E-08
935.0	0.2084	0.0097	0.1764	0.0080	2875.0	3.49E-04	2.09E-06	2.96E-04	1.72E-06
936.0	0.1343	0.0061	0.1137	0.0050	2880.0	2.21E-04	1.32E-06	1.87E-04	1.09E-06
937.0	0.1359	0.0062	0.1151	0.0051	2885.0	4.04E-04	2.42E-06	3.42E-04	2.00E-06
938.0	0.1668	0.0076	0.1412	0.0063	2890.0	1.66E-04	9.95E-07	1.41E-04	8.20E-07
939.0	0.3307	0.0159	0.2800	0.0131	2895.0	2.38E-03	1.43E-05	2.01E-03	1.18E-05
940.0	0.3907	0.0192	0.3308	0.0158	2900.0	7.24E-04	4.34E-06	6.13E-04	3.58E-06
941.0	0.3085	0.0147	0.2612	0.0122	2905.0	9.90E-05	5.94E-07	8.38E-05	4.90E-07
942.0	0.3360	0.0162	0.2845	0.0134	2910.0	2.43E-03	1.46E-05	2.06E-03	1.21E-05
943.0	0.2313	0.0107	0.1958	0.0088	2915.0	1.12E-03	6.76E-06	9.50E-04	5.58E-06
944.0	0.2374	0.0110	0.2010	0.0091	2920.0	2.58E-03	1.56E-05	2.19E-03	1.29E-05
945.0	0.3055	0.0145	0.2587	0.0119	2925.0	9.66E-04	5.84E-06	8.18E-04	4.82E-06
946.0	0.1620	0.0073	0.1371	0.0060	2930.0	5.25E-03	3.19E-05	4.44E-03	2.63E-05
947.0	0.3080	0.0145	0.2608	0.0120	2935.0	5.79E-03	3.52E-05	4.90E-03	2.91E-05
948.0	0.2280	0.0104	0.1930	0.0086	2940.0	1.45E-03	8.82E-06	1.23E-03	7.27E-06
949.0	0.4092	0.0198	0.3464	0.0164	2945.0	1.29E-03	7.87E-06	1.09E-03	6.49E-06
950.0	0.1227	0.0054	0.1039	0.0044	2950.0	4.66E-03	2.85E-05	3.95E-03	2.35E-05
951.0	0.4008	0.0193	0.3394	0.0159	2955.0	2.08E-03	1.28E-05	1.76E-03	1.05E-05
952.0	0.2236	0.0101	0.1893	0.0084	2960.0	4.10E-03	2.52E-05	3.47E-03	2.08E-05
953.0	0.2854	0.0132	0.2416	0.0109	2965.0	6.63E-03	4.09E-05	5.62E-03	3.38E-05
954.0	0.3518	0.0166	0.2978	0.0137	2970.0	3.14E-04	1.93E-06	2.66E-04	1.60E-06
955.0	0.2833	0.0131	0.2399	0.0108	2975.0	7.62E-04	4.70E-06	6.45E-04	3.88E-06
956.0	0.2727	0.0125	0.2309	0.0103	2980.0	1.19E-03	7.39E-06	1.01E-03	6.10E-06
957.0	0.2251	0.0101	0.1906	0.0083	2985.0	6.21E-03	3.87E-05	5.26E-03	3.19E-05
958.0	0.3823	0.0181	0.3237	0.0149	2990.0	9.17E-03	5.75E-05	7.76E-03	4.74E-05
959.0	0.3105	0.0143	0.2629	0.0118	2995.0	3.81E-03	2.39E-05	3.23E-03	1.97E-05
960.0	0.3491	0.0163	0.2956	0.0134	3000.0	7.00E-03	4.41E-05	5.92E-03	3.64E-05
961.0	0.3825	0.0180	0.3239	0.0149	3005.0	2.58E-03	1.62E-05	2.18E-03	1.33E-05
962.0	0.3665	0.0171	0.3103	0.0141	3010.0	6.10E-03	3.84E-05	5.17E-03	3.17E-05
963.0	0.4186	0.0199	0.3544	0.0164	3015.0	4.95E-03	3.11E-05	4.19E-03	2.57E-05
964.0	0.3804	0.0178	0.3221	0.0147	3020.0	5.65E-04	3.54E-06	4.78E-04	2.92E-06
965.0	0.4176	0.0197	0.3536	0.0163	3025.0	6.69E-03	4.21E-05	5.66E-03	3.47E-05
966.0	0.4168	0.0197	0.3529	0.0162	3030.0	5.42E-03	3.40E-05	4.58E-03	2.81E-05
967.0	0.4166	0.0196	0.3527	0.0162	3035.0	2.23E-03	1.40E-05	1.89E-03	1.15E-05
968.0	0.5393	0.0265	0.4566	0.0218	3040.0	1.80E-03	1.13E-05	1.53E-03	9.33E-06
969.0	0.5673	0.0280	0.4803	0.0231	3045.0	3.75E-03	2.36E-05	3.18E-03	1.94E-05
970.0	0.5251	0.0255	0.4446	0.0210	3050.0	9.20E-04	5.77E-06	7.79E-04	4.76E-06
971.0	0.5900	0.0293	0.4995	0.0242	3055.0	2.58E-04	1.62E-06	2.18E-04	1.33E-06
972.0	0.5686	0.0279	0.4814	0.0230	3060.0	5.62E-03	3.54E-05	4.75E-03	2.92E-05
973.0	0.5022	0.0241	0.4252	0.0199	3065.0	2.59E-03	1.63E-05	2.20E-03	1.34E-05
974.0	0.4766	0.0227	0.4035	0.0187	3070.0	1.56E-03	9.79E-06	1.32E-03	8.08E-06
975.0	0.4886	0.0233	0.4137	0.0192	3075.0	5.37E-03	3.39E-05	4.54E-03	2.79E-05
976.0	0.4740	0.0224	0.4013	0.0185	3080.0	3.23E-03	2.03E-05	2.73E-03	1.68E-05
977.0	0.5286	0.0254	0.4475	0.0210	3085.0	1.57E-03	9.91E-06	1.33E-03	8.17E-06
978.0	0.5094	0.0243	0.4313	0.0200	3090.0	2.12E-03	1.34E-05	1.80E-03	1.10E-05
979.0	0.5283	0.0253	0.4473	0.0209	3095.0	5.84E-04	3.68E-06	4.94E-04	3.03E-06
980.0	0.5010	0.0237	0.4241	0.0195	3100.0	3.92E-03	2.48E-05	3.32E-03	2.04E-05
981.0	0.5900	0.0287	0.4995	0.0237	3105.0	8.21E-04	5.18E-06	6.95E-04	4.27E-06
982.0	0.5728	0.0276	0.4849	0.0228	3110.0	7.53E-04	4.76E-06	6.38E-04	3.92E-06
983.0	0.5535	0.0265	0.4686	0.0219	3115.0	2.02E-03	1.28E-05	1.71E-03	1.05E-05
984.0	0.6096	0.0297	0.5161	0.0245	3120.0	8.74E-03	5.58E-05	7.40E-03	4.60E-05
985.0	0.5695	0.0273	0.4822	0.0225	3125.0	2.70E-03	1.72E-05	2.28E-03	1.42E-05
986.0	0.6207	0.0303	0.5255	0.0250	3130.0	5.13E-03	3.28E-05	4.34E-03	2.71E-05
987.0	0.6114	0.0297	0.5176	0.0245	3135.0	1.02E-02	6.54E-05	8.63E-03	5.39E-05
988.0	0.6076	0.0294	0.5144	0.0243	3140.0	2.96E-03	1.89E-05	2.51E-03	1.56E-05
989.0	0.6193	0.0301	0.5243	0.0249	3145.0	2.89E-03	1.85E-05	2.45E-03	1.53E-05
990.0	0.6057	0.0292	0.5128	0.0241	3150.0	5.94E-03	3.81E-05	5.03E-03	3.14E-05
991.0	0.6232	0.0302	0.5276	0.0249	3155.0	5.02E-03	3.22E-05	4.25E-03	2.65E-05
992.0	0.6211	0.0300	0.5259	0.0248	3160.0	8.22E-03	5.29E-05	6.96E-03	4.36E-05
993.0	0.6099	0.0293	0.5164	0.0242	3165.0	1.25E-02	8.08E-05	1.06E-02	6.66E-05
994.0	0.6237	0.0300	0.5281	0.0248	3170.0	1.11E-02	7.21E-05	9.43E-03	5.94E-05
995.0	0.6218	0.0299	0.5264	0.0247	3175.0	8.21E-03	5.30E-05	6.95E-03	4.37E-05
996.0	0.6195	0.0297	0.5245	0.0245	3180.0	9.45E-03	6.12E-05	8.00E-03	5.04E-05
997.0	0.6120	0.0293	0.5181	0.0242	3185.0	7.19E-03	4.65E-05	6.09E-03	3.83E-05
998.0	0.6113	0.0292	0.5176	0.0241	3190.0	3.77E-03	2.43E-05	3.19E-03	2.00E-05
999.0	0.6111	0.0292	0.5174	0.0240	3195.0	2.40E-03	1.54E-05	2.03E-03	1.27E-05

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
1000.0	0.6085	0.0289	0.5152	0.0239	3200.0	3.90E-04	2.51E-06	3.30E-04	2.07E-06
1001.0	0.6160	0.0293	0.5215	0.0242	3205.0	2.75E-04	1.78E-06	2.33E-04	1.46E-06
1002.0	0.6027	0.0285	0.5102	0.0235	3210.0	1.21E-04	7.82E-07	1.03E-04	6.45E-07
1003.0	0.6079	0.0288	0.5146	0.0237	3215.0	4.42E-04	2.86E-06	3.75E-04	2.36E-06
1004.0	0.5988	0.0283	0.5070	0.0233	3220.0	1.43E-03	9.26E-06	1.21E-03	7.63E-06
1005.0	0.5643	0.0266	0.4778	0.0220	3225.0	1.77E-04	1.14E-06	1.50E-04	9.43E-07
1006.0	0.5899	0.0278	0.4994	0.0229	3230.0	3.03E-04	1.97E-06	2.57E-04	1.62E-06
1007.0	0.6024	0.0283	0.5100	0.0233	3235.0	6.48E-03	4.24E-05	5.49E-03	3.49E-05
1008.0	0.6019	0.0282	0.5096	0.0233	3240.0	3.33E-03	2.17E-05	2.82E-03	1.79E-05
1009.0	0.5960	0.0278	0.5046	0.0230	3245.0	6.53E-04	4.24E-06	5.52E-04	3.50E-06
1010.0	0.5956	0.0278	0.5043	0.0229	3250.0	2.32E-03	1.51E-05	1.96E-03	1.25E-05
1011.0	0.5986	0.0279	0.5068	0.0230	3255.0	8.83E-03	5.81E-05	7.48E-03	4.79E-05
1012.0	0.5954	0.0277	0.5041	0.0228	3260.0	1.09E-03	7.10E-06	9.22E-04	5.85E-06
1013.0	0.5944	0.0276	0.5032	0.0228	3265.0	2.17E-03	1.42E-05	1.84E-03	1.17E-05
1014.0	0.5970	0.0277	0.5054	0.0228	3270.0	1.08E-03	7.38E-06	9.16E-04	6.09E-06
1015.0	0.5867	0.0272	0.4967	0.0224	3275.0	5.26E-03	3.77E-05	4.46E-03	3.11E-05
1016.0	0.5893	0.0272	0.4989	0.0225	3280.0	2.54E-03	1.73E-05	2.15E-03	1.43E-05
1017.0	0.5828	0.0269	0.4934	0.0222	3285.0	9.88E-03	6.70E-05	8.37E-03	5.53E-05
1018.0	0.5918	0.0273	0.5011	0.0225	3290.0	7.78E-03	5.30E-05	6.58E-03	4.37E-05
1019.0	0.5709	0.0262	0.4833	0.0216	3295.0	1.09E-03	7.38E-06	9.20E-04	6.08E-06
1020.0	0.5793	0.0266	0.4905	0.0219	3300.0	1.58E-03	1.07E-05	1.34E-03	8.86E-06
1021.0	0.5817	0.0266	0.4925	0.0220	3305.0	3.50E-03	2.37E-05	2.96E-03	1.96E-05
1022.0	0.5717	0.0261	0.4841	0.0215	3310.0	3.48E-03	2.35E-05	2.95E-03	1.94E-05
1023.0	0.5762	0.0263	0.4879	0.0217	3315.0	1.43E-05	9.59E-08	1.21E-05	7.91E-08
1024.0	0.5726	0.0260	0.4848	0.0215	3320.0	5.33E-05	3.55E-07	4.51E-05	2.92E-07
1025.0	0.5783	0.0263	0.4896	0.0217	3325.0	3.13E-03	2.08E-05	2.65E-03	1.72E-05
1026.0	0.5774	0.0262	0.4889	0.0216	3330.0	4.14E-03	2.76E-05	3.51E-03	2.27E-05
1027.0	0.5747	0.0260	0.4866	0.0215	3335.0	8.06E-03	5.38E-05	6.82E-03	4.44E-05
1028.0	0.5754	0.0260	0.4872	0.0215	3340.0	3.07E-03	2.04E-05	2.60E-03	1.68E-05
1029.0	0.5692	0.0257	0.4819	0.0212	3345.0	3.15E-03	2.08E-05	2.66E-03	1.72E-05
1030.0	0.5728	0.0258	0.4849	0.0213	3350.0	7.13E-03	4.75E-05	6.04E-03	3.92E-05
1031.0	0.5702	0.0257	0.4827	0.0212	3355.0	3.23E-03	2.14E-05	2.73E-03	1.76E-05
1032.0	0.5706	0.0256	0.4831	0.0211	3360.0	4.66E-03	3.09E-05	3.94E-03	2.55E-05
1033.0	0.5609	0.0252	0.4749	0.0207	3365.0	6.39E-03	4.26E-05	5.41E-03	3.51E-05
1034.0	0.5643	0.0253	0.4778	0.0208	3370.0	3.50E-03	2.32E-05	2.97E-03	1.92E-05
1035.0	0.5662	0.0253	0.4794	0.0209	3375.0	7.52E-03	5.02E-05	6.37E-03	4.14E-05
1036.0	0.5660	0.0252	0.4792	0.0208	3380.0	4.55E-03	3.02E-05	3.85E-03	2.49E-05
1037.0	0.5602	0.0249	0.4743	0.0206	3385.0	6.66E-03	4.44E-05	5.64E-03	3.67E-05
1038.0	0.5575	0.0248	0.4720	0.0204	3390.0	8.77E-03	5.87E-05	7.42E-03	4.84E-05
1039.0	0.5614	0.0249	0.4753	0.0205	3395.0	8.49E-03	5.69E-05	7.19E-03	4.69E-05
1040.0	0.5576	0.0247	0.4721	0.0204	3400.0	1.11E-02	7.49E-05	9.42E-03	6.18E-05
1041.0	0.5577	0.0246	0.4722	0.0203	3405.0	3.97E-03	2.64E-05	3.36E-03	2.18E-05
1042.0	0.5579	0.0246	0.4724	0.0203	3410.0	6.30E-03	4.22E-05	5.33E-03	3.48E-05
1043.0	0.5524	0.0243	0.4676	0.0201	3415.0	6.48E-03	4.34E-05	5.48E-03	3.58E-05
1044.0	0.5549	0.0244	0.4698	0.0201	3420.0	1.17E-02	7.93E-05	9.92E-03	6.54E-05
1045.0	0.5518	0.0242	0.4672	0.0200	3425.0	8.91E-03	6.00E-05	7.54E-03	4.95E-05
1046.0	0.5374	0.0235	0.4550	0.0194	3430.0	7.73E-03	5.21E-05	6.55E-03	4.30E-05
1047.0	0.5456	0.0238	0.4619	0.0197	3435.0	1.03E-02	6.96E-05	8.70E-03	5.74E-05
1048.0	0.5505	0.0240	0.4661	0.0198	3440.0	7.15E-03	4.82E-05	6.05E-03	3.98E-05
1049.0	0.5474	0.0238	0.4634	0.0196	3445.0	1.01E-02	6.83E-05	8.53E-03	5.63E-05
1050.0	0.5438	0.0236	0.4604	0.0195	3450.0	9.92E-03	6.73E-05	8.40E-03	5.55E-05
1051.0	0.5443	0.0236	0.4609	0.0195	3455.0	7.39E-03	5.00E-05	6.26E-03	4.12E-05
1052.0	0.5410	0.0234	0.4581	0.0193	3460.0	1.11E-02	7.59E-05	9.44E-03	6.26E-05
1053.0	0.5394	0.0233	0.4567	0.0192	3465.0	8.73E-03	5.93E-05	7.39E-03	4.89E-05
1054.0	0.5372	0.0231	0.4548	0.0191	3470.0	1.09E-02	7.44E-05	9.24E-03	6.14E-05
1055.0	0.5389	0.0231	0.4563	0.0191	3475.0	9.73E-03	6.63E-05	8.24E-03	5.47E-05
1056.0	0.5373	0.0230	0.4549	0.0190	3480.0	9.98E-03	6.81E-05	8.45E-03	5.62E-05
1057.0	0.5360	0.0229	0.4538	0.0189	3485.0	1.08E-02	7.35E-05	9.11E-03	6.06E-05
1058.0	0.5305	0.0226	0.4491	0.0187	3490.0	9.26E-03	6.32E-05	7.84E-03	5.21E-05
1059.0	0.5144	0.0219	0.4355	0.0181	3495.0	1.09E-02	7.47E-05	9.23E-03	6.16E-05
1060.0	0.5286	0.0225	0.4475	0.0185	3500.0	1.06E-02	7.25E-05	8.97E-03	5.98E-05
1061.0	0.5165	0.0219	0.4373	0.0181	3505.0	1.05E-02	7.19E-05	8.89E-03	5.93E-05
1062.0	0.5261	0.0222	0.4454	0.0183	3510.0	1.06E-02	7.29E-05	9.00E-03	6.01E-05
1063.0	0.5175	0.0218	0.4382	0.0180	3515.0	1.02E-02	7.00E-05	8.65E-03	5.77E-05
1064.0	0.5255	0.0221	0.4449	0.0182	3520.0	1.08E-02	7.39E-05	9.12E-03	6.09E-05
1065.0	0.5232	0.0220	0.4430	0.0181	3525.0	1.01E-02	6.96E-05	8.59E-03	5.74E-05
1066.0	0.5133	0.0215	0.4346	0.0177	3530.0	9.88E-03	6.78E-05	8.36E-03	5.59E-05
1067.0	0.5160	0.0216	0.4369	0.0178	3535.0	8.39E-03	5.74E-05	7.11E-03	4.74E-05
1068.0	0.5153	0.0215	0.4363	0.0177	3540.0	8.01E-03	5.48E-05	6.79E-03	4.52E-05
1069.0	0.4877	0.0203	0.4129	0.0167	3545.0	8.47E-03	5.80E-05	7.17E-03	4.78E-05

TABLE 3 *Continued*

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
1070.0	0.5031	0.0209	0.4260	0.0172	3550.0	9.35E-03	6.42E-05	7.92E-03	5.29E-05
1071.0	0.5131	0.0213	0.4344	0.0176	3555.0	8.04E-03	5.50E-05	6.80E-03	4.54E-05
1072.0	0.5121	0.0212	0.4336	0.0175	3560.0	9.57E-03	6.58E-05	8.11E-03	5.43E-05
1073.0	0.5023	0.0207	0.4253	0.0171	3565.0	9.62E-03	6.62E-05	8.15E-03	5.46E-05
1074.0	0.5172	0.0214	0.4379	0.0176	3570.0	7.39E-03	5.11E-05	6.26E-03	4.21E-05
1075.0	0.4933	0.0202	0.4176	0.0167	3575.0	7.66E-03	5.33E-05	6.49E-03	4.39E-05
1076.0	0.5116	0.0210	0.4332	0.0173	3580.0	9.03E-03	6.27E-05	7.65E-03	5.17E-05
1077.0	0.5031	0.0206	0.4260	0.0170	3585.0	8.13E-03	5.60E-05	6.88E-03	4.62E-05
1078.0	0.5023	0.0205	0.4252	0.0169	3590.0	8.38E-03	5.80E-05	7.09E-03	4.78E-05
1079.0	0.5034	0.0206	0.4262	0.0170	3595.0	8.57E-03	5.92E-05	7.26E-03	4.88E-05
1080.0	0.4974	0.0202	0.4211	0.0166	3600.0	9.10E-03	6.29E-05	7.70E-03	5.19E-05
1081.0	0.4838	0.0196	0.4096	0.0161	3605.0	9.18E-03	6.36E-05	7.77E-03	5.25E-05
1082.0	0.4908	0.0199	0.4155	0.0164	3610.0	8.40E-03	5.81E-05	7.11E-03	4.79E-05
1083.0	4.98E-01	2.02E-02	4.22E-01	1.66E-02	3615.0	8.39E-03	5.80E-05	7.11E-03	4.79E-05
1084.0	4.82E-01	1.93E-02	4.08E-01	1.59E-02	3620.0	1.03E-02	7.13E-05	8.71E-03	5.88E-05
1085.0	4.94E-01	1.99E-02	4.18E-01	1.64E-02	3625.0	9.07E-03	6.27E-05	7.68E-03	5.17E-05
1086.0	4.62E-01	1.82E-02	3.91E-01	1.50E-02	3630.0	8.82E-03	6.08E-05	7.47E-03	5.02E-05
1087.0	4.72E-01	1.89E-02	4.00E-01	1.56E-02	3635.0	9.13E-03	6.29E-05	7.73E-03	5.19E-05
1088.0	4.94E-01	1.98E-02	4.18E-01	1.63E-02	3640.0	1.02E-02	7.02E-05	8.61E-03	5.79E-05
1089.0	4.83E-01	1.92E-02	4.09E-01	1.58E-02	3645.0	9.39E-03	6.47E-05	7.95E-03	5.34E-05
1090.0	4.63E-01	1.82E-02	3.92E-01	1.50E-02	3650.0	8.97E-03	6.17E-05	7.59E-03	5.09E-05
1091.0	4.90E-01	1.95E-02	4.15E-01	1.60E-02	3655.0	9.72E-03	6.71E-05	8.23E-03	5.54E-05
1092.0	4.84E-01	1.92E-02	4.10E-01	1.58E-02	3660.0	9.67E-03	6.66E-05	8.19E-03	5.49E-05
1093.0	4.26E-01	1.64E-02	3.61E-01	1.36E-02	3665.0	9.08E-03	6.25E-05	7.69E-03	5.15E-05
1094.0	4.50E-01	1.77E-02	3.81E-01	1.46E-02	3670.0	7.00E-03	4.79E-05	5.92E-03	3.95E-05
1095.0	4.34E-01	1.68E-02	3.68E-01	1.39E-02	3675.0	4.28E-03	2.91E-05	3.62E-03	2.40E-05
1096.0	4.20E-01	1.61E-02	3.56E-01	1.33E-02	3680.0	7.38E-03	5.06E-05	6.25E-03	4.17E-05
1097.0	4.82E-01	1.89E-02	4.08E-01	1.56E-02	3685.0	8.36E-03	5.74E-05	7.08E-03	4.73E-05
1098.0	4.20E-01	1.60E-02	3.55E-01	1.32E-02	3690.0	8.58E-03	5.89E-05	7.27E-03	4.86E-05
1099.0	4.24E-01	1.62E-02	3.59E-01	1.33E-02	3695.0	8.97E-03	6.17E-05	7.60E-03	5.09E-05
1100.0	4.06E-01	1.52E-02	3.44E-01	1.26E-02	3700.0	9.63E-03	6.63E-05	8.15E-03	5.47E-05
1101.0	4.15E-01	1.56E-02	3.51E-01	1.29E-02	3705.0	9.53E-03	6.56E-05	8.07E-03	5.41E-05
1102.0	3.92E-01	1.46E-02	3.32E-01	1.21E-02	3710.0	8.29E-03	5.69E-05	7.02E-03	4.69E-05
1103.0	3.90E-01	1.45E-02	3.30E-01	1.19E-02	3715.0	8.17E-03	5.60E-05	6.91E-03	4.62E-05
1104.0	3.91E-01	1.45E-02	3.31E-01	1.19E-02	3720.0	9.18E-03	6.31E-05	7.78E-03	5.20E-05
1105.0	4.23E-01	1.59E-02	3.58E-01	1.31E-02	3725.0	9.47E-03	6.50E-05	8.02E-03	5.36E-05
1106.0	3.33E-01	1.20E-02	2.82E-01	9.86E-03	3730.0	8.20E-03	5.62E-05	6.95E-03	4.63E-05
1107.0	4.04E-01	1.50E-02	3.42E-01	1.23E-02	3735.0	7.60E-03	5.19E-05	6.43E-03	4.28E-05
1108.0	3.48E-01	1.25E-02	2.94E-01	1.03E-02	3740.0	7.83E-03	5.36E-05	6.63E-03	4.42E-05
1109.0	3.45E-01	1.24E-02	2.92E-01	1.02E-02	3745.0	9.14E-03	6.27E-05	7.74E-03	5.17E-05
1110.0	4.00E-01	1.47E-02	3.39E-01	1.21E-02	3750.0	8.22E-03	5.62E-05	6.96E-03	4.64E-05
1111.0	2.78E-01	9.64E-03	2.35E-01	7.95E-03	3755.0	7.96E-03	5.44E-05	6.74E-03	4.49E-05
1112.0	3.46E-01	1.24E-02	2.93E-01	1.02E-02	3760.0	7.84E-03	5.36E-05	6.64E-03	4.42E-05
1113.0	2.25E-01	7.59E-03	1.91E-01	6.26E-03	3765.0	7.56E-03	5.17E-05	6.40E-03	4.26E-05
1114.0	2.51E-01	8.55E-03	2.13E-01	7.05E-03	3770.0	8.07E-03	5.52E-05	6.83E-03	4.55E-05
1115.0	2.10E-01	6.98E-03	1.78E-01	5.76E-03	3775.0	8.01E-03	5.47E-05	6.78E-03	4.51E-05
1116.0	1.69E-01	5.51E-03	1.43E-01	4.55E-03	3780.0	8.47E-03	5.80E-05	7.17E-03	4.78E-05
1117.0	6.70E-02	2.07E-03	5.67E-02	1.71E-03	3785.0	7.79E-03	5.33E-05	6.60E-03	4.39E-05
1118.0	1.83E-01	5.97E-03	1.55E-01	4.92E-03	3790.0	6.86E-03	4.68E-05	5.81E-03	3.86E-05
1119.0	9.52E-02	2.98E-03	8.06E-02	2.46E-03	3795.0	7.84E-03	5.36E-05	6.64E-03	4.42E-05
1120.0	1.19E-01	3.77E-03	1.01E-01	3.11E-03	3800.0	8.72E-03	5.97E-05	7.38E-03	4.92E-05
1121.0	1.56E-01	5.00E-03	1.32E-01	4.13E-03	3805.0	8.23E-03	5.63E-05	6.96E-03	4.64E-05
1122.0	6.88E-02	2.11E-03	5.82E-02	1.74E-03	3810.0	7.29E-03	4.97E-05	6.17E-03	4.10E-05
1123.0	1.08E-01	3.36E-03	9.13E-02	2.77E-03	3815.0	6.86E-03	4.67E-05	5.81E-03	3.85E-05
1124.0	9.15E-02	2.83E-03	7.75E-02	2.33E-03	3820.0	8.53E-03	5.84E-05	7.23E-03	4.82E-05
1125.0	1.21E-01	3.79E-03	1.03E-01	3.13E-03	3825.0	8.40E-03	5.75E-05	7.11E-03	4.74E-05
1126.0	4.35E-02	1.31E-03	3.68E-02	1.08E-03	3830.0	8.48E-03	5.80E-05	7.18E-03	4.78E-05
1127.0	1.32E-01	4.14E-03	1.12E-01	3.42E-03	3835.0	6.80E-03	4.63E-05	5.76E-03	3.82E-05
1128.0	8.36E-02	2.55E-03	7.07E-02	2.10E-03	3840.0	7.93E-03	5.42E-05	6.72E-03	4.47E-05
1129.0	8.92E-02	2.72E-03	7.55E-02	2.25E-03	3845.0	7.76E-03	5.29E-05	6.57E-03	4.37E-05
1130.0	5.95E-02	1.79E-03	5.03E-02	1.47E-03	3850.0	7.80E-03	5.32E-05	6.60E-03	4.39E-05
1131.0	2.48E-01	8.11E-03	2.10E-01	6.69E-03	3855.0	7.52E-03	5.13E-05	6.36E-03	4.23E-05
1132.0	1.97E-01	6.27E-03	1.67E-01	5.17E-03	3860.0	7.06E-03	4.81E-05	5.98E-03	3.97E-05
1133.0	1.29E-01	3.98E-03	1.09E-01	3.28E-03	3865.0	7.16E-03	4.87E-05	6.06E-03	4.02E-05
1134.0	3.52E-02	1.04E-03	2.98E-02	8.56E-04	3870.0	6.50E-03	4.42E-05	5.51E-03	3.65E-05
1135.0	1.30E-02	3.80E-04	1.10E-02	3.14E-04	3875.0	5.97E-03	4.05E-05	5.06E-03	3.34E-05
1136.0	1.08E-01	3.29E-03	9.18E-02	2.71E-03	3880.0	5.77E-03	3.91E-05	4.89E-03	3.23E-05
1137.0	2.42E-01	7.79E-03	2.05E-01	6.43E-03	3885.0	5.98E-03	4.06E-05	5.06E-03	3.35E-05
1138.0	1.71E-01	5.34E-03	1.45E-01	4.40E-03	3890.0	6.08E-03	4.12E-05	5.15E-03	3.40E-05
1139.0	2.51E-01	8.09E-03	2.12E-01	6.67E-03	3895.0	6.60E-03	4.48E-05	5.59E-03	3.70E-05

TABLE 3 Continued

Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹	Wavelength, nm	Direct 20°, W·m ⁻² ·nm ⁻¹	Diffuse 20°, W·m ⁻² ·nm ⁻¹	Direct 90°, W·m ⁻² ·nm ⁻¹	Diffuse 90°, W·m ⁻² ·nm ⁻¹
λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$	λ	$E_{D\lambda}$	$E_{d\lambda}$	$E_{D\lambda}$	$E_{d\lambda}$
1	2	3	4	5	1	2	3	4	5
1140.0	2.15E-01	6.81E-03	1.82E-01	5.62E-03	3900.0	7.00E-03	4.76E-05	5.93E-03	3.92E-05
1141.0	1.63E-01	5.03E-03	1.38E-01	4.14E-03	3905.0	7.00E-03	4.76E-05	5.93E-03	3.92E-05
1142.0	1.89E-01	5.89E-03	1.60E-01	4.86E-03	3910.0	6.30E-03	4.27E-05	5.34E-03	3.52E-05
1143.0	2.62E-01	8.41E-03	2.22E-01	6.94E-03	3915.0	6.17E-03	4.18E-05	5.22E-03	3.45E-05
1144.0	9.54E-02	2.84E-03	8.08E-02	2.34E-03	3920.0	6.14E-03	4.16E-05	5.19E-03	3.43E-05
1145.0	1.23E-01	3.69E-03	1.04E-01	3.05E-03	3925.0	6.05E-03	4.10E-05	5.12E-03	3.38E-05
1146.0	1.33E-01	3.99E-03	1.12E-01	3.29E-03	3930.0	6.23E-03	4.22E-05	5.27E-03	3.48E-05
1147.0	4.99E-02	1.44E-03	4.23E-02	1.19E-03	3935.0	6.49E-03	4.40E-05	5.50E-03	3.63E-05
1148.0	2.28E-01	7.13E-03	1.93E-01	5.88E-03	3940.0	6.54E-03	4.43E-05	5.53E-03	3.65E-05
1149.0	1.84E-01	5.63E-03	1.56E-01	4.64E-03	3945.0	6.66E-03	4.51E-05	5.64E-03	3.72E-05
1150.0	1.03E-01	3.02E-03	8.68E-02	2.49E-03	3950.0	6.73E-03	4.56E-05	5.70E-03	3.76E-05
1151.0	1.71E-01	5.19E-03	1.45E-01	4.28E-03	3955.0	6.82E-03	4.62E-05	5.77E-03	3.81E-05
1152.0	2.08E-01	6.41E-03	1.76E-01	5.29E-03	3960.0	6.84E-03	4.63E-05	5.79E-03	3.82E-05
1153.0	2.00E-01	6.13E-03	1.70E-01	5.06E-03	3965.0	6.89E-03	4.67E-05	5.83E-03	3.85E-05
1154.0	1.20E-01	3.53E-03	1.02E-01	2.91E-03	3970.0	6.78E-03	4.59E-05	5.74E-03	3.79E-05
1155.0	2.63E-01	8.23E-03	2.23E-01	6.79E-03	3975.0	6.63E-03	4.48E-05	5.61E-03	3.70E-05
1156.0	2.36E-01	7.30E-03	2.00E-01	6.02E-03	3980.0	6.52E-03	4.41E-05	5.52E-03	3.64E-05
1157.0	2.64E-01	8.24E-03	2.24E-01	6.80E-03	3985.0	6.56E-03	4.44E-05	5.55E-03	3.66E-05
1158.0	2.62E-01	8.14E-03	2.22E-01	6.72E-03	3990.0	6.51E-03	4.40E-05	5.51E-03	3.63E-05
1159.0	2.83E-01	8.87E-03	2.40E-01	7.32E-03	3995.0	6.36E-03	4.30E-05	5.39E-03	3.54E-05
1160.0	2.41E-01	7.41E-03	2.04E-01	6.11E-03	4000.0	6.27E-03	4.23E-05	5.31E-03	3.49E-05

APPENDIX

(Nonmandatory Information)

X1.

X1.1 *Atmospheric Conditions*—All atmospheric conditions are the same as in ASTM G 173, and are discussed in its Appendix.

X1.2 *Spectral Reflectance*—To generate the spectra, the present standards utilize wavelength-dependent values of ground reflectance, representative of a dry soil, combined with a slightly forward-enhanced reflectance pattern. Fig. X1.1 is a plot of the data, which have been slightly modified from the Jet Propulsion Laboratory ASTER Spectral Library (12).

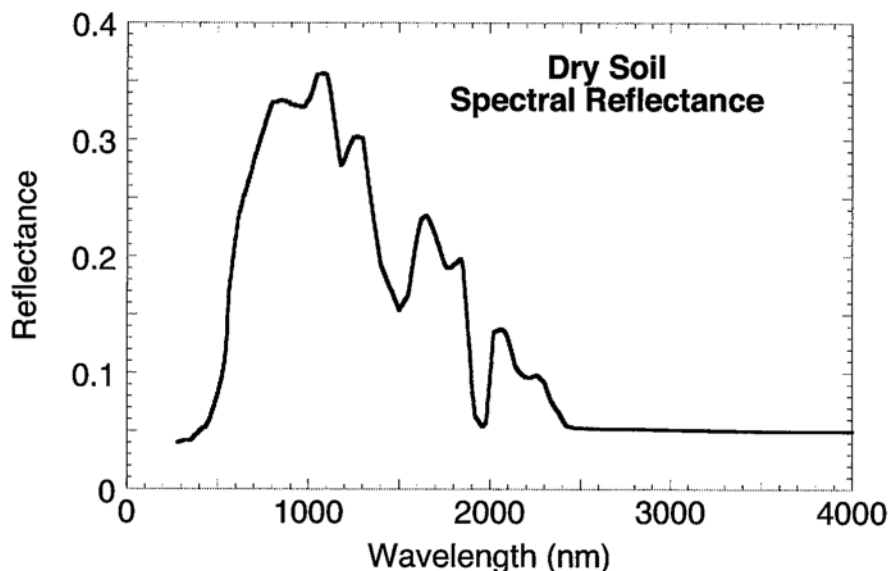


FIG. X1.1 Plot of the Data in the Albedo File (DRYSOIL.DAT) Used to Compute the Standard Spectra

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