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# BRAZZAVILLE/MAYA-M, Congo

WMO#: **644500**

Lat: **4.25S** Long: **15.25E** Elev: **319** StdP: **97.55** Time Zone: **1.00 (AFW)** Period: **86-10** WBAN: **99999**

## Annual Heating and Humidification Design Conditions

| | Coldest Month | Heating DB | | Humidification DP/MCDB and HR | | | | | | Coldest month WS/MCDB | | | | MCWS/PCWD to 99.6% DB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 99.6% | | | 99% | | | 0.4% | | 1% | | | | |
| | | 99.6% | 99% | DP | HR | MCDB | DP | HR | MCDB | WS | MCDB | WS | MCDB | MCWS | PCWD | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | |
| (1) | **7** | **18.0** | **18.9** | **16.0** | **11.8** | **22.2** | **16.8** | **12.4** | **22.8** | **5.5** | **25.1** | **5.2** | **25.2** | **1.2** | **260** | (1) |

## Annual Cooling, Dehumidification, and Enthalpy Design Conditions

| | Hottest Month | Hottest Month DB Range | Cooling DB/MCWB | | | | | | Evaporation WB/MCDB | | | | | | MCWS/PCWD to 0.4% DB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.4% | | 1% | | 2% | | 0.4% | | 1% | | 2% | | | | |
| | | | DB | MCWB | DB | MCWB | DB | MCWB | WB | MCDB | WB | MCDB | WB | MCDB | MCWS | PCWD | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| (2) | **4** | **9.2** | **34.2** | **24.6** | **33.3** | **24.5** | **32.9** | **24.5** | **26.1** | **31.0** | **25.7** | **30.6** | **25.5** | **30.3** | **2.3** | **220** | (2) |

| | Dehumidification DP/MCDB and HR | | | | | | | | | Enthalpy/MCDB | | | | | | Hours 8 to 4 & 12.8/20.6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.4% | | | 1% | | | 2% | | | 0.4% | | 1% | | 2% | | | |
| | DP | HR | MCDB | DP | HR | MCDB | DP | HR | MCDB | Enth | MCDB | Enth | MCDB | Enth | MCDB | | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| (3) | **24.9** | **20.8** | **28.2** | **24.2** | **19.9** | **27.6** | **24.1** | **19.8** | **27.5** | **83.1** | **31.3** | **81.4** | **31.0** | **80.1** | **30.6** | **28** | (3) |

## Extreme Annual Design Conditions

| | Extreme Annual WS | | | Extreme Max WB | Extreme Annual DB | | | | n-Year Return Period Values of Extreme DB | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mean | | Standard deviation | | n=5 years | | n=10 years | | n=20 years | | n=50 years | | |
| | 1% | 2.5% | 5% | | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| (4) | **5.9** | **5.0** | **4.4** | **31.2** | **16.4** | **36.0** | **1.2** | **0.7** | **15.5** | **36.5** | **14.9** | **37.0** | **14.2** | **37.4** | **13.4** | **37.9** | (4) |

## Monthly Climatic Design Conditions

| | | | | Annual (d) | Jan (e) | Feb (f) | Mar (g) | Apr (h) | May (i) | Jun (j) | Jul (k) | Aug (l) | Sep (m) | Oct (n) | Nov (o) | Dec (p) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (5) | Temperatures, Degree-Days and Degree-Hours | Tavg | | **26.1** | **26.8** | **27.0** | **27.3** | **27.5** | **26.8** | **24.5** | **23.5** | **24.5** | **26.2** | **26.5** | **26.4** | **26.3** | (5) |
| (6) | | Sd | | | **1.28** | **1.49** | **1.37** | **1.29** | **1.29** | **1.37** | **1.34** | **1.52** | **1.41** | **1.45** | **1.33** | **1.36** | (6) |
| (7) | | HDD10.0 | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | (7) |
| (8) | | HDD18.3 | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | (8) |
| (9) | | CDD10.0 | | **5879** | **520** | **475** | **537** | **524** | **521** | **436** | **419** | **451** | **484** | **512** | **493** | **507** | (9) |
| (10) | | CDD18.3 | | **2837** | **262** | **242** | **278** | **274** | **263** | **186** | **161** | **192** | **234** | **254** | **243** | **248** | (10) |
| (11) | | CDH23.3 | | **22624** | **2230** | **2123** | **2527** | **2457** | **2187** | **1106** | **863** | **1287** | **1941** | **2125** | **1881** | **1898** | (11) |
| (12) | | CDH26.7 | | **7993** | **794** | **809** | **1028** | **993** | **780** | **268** | **186** | **379** | **701** | **771** | **659** | **626** | (12) |
| (13) | Precipitation | PrecAvg | | **1394** | **160** | **137** | **167** | **191** | **118** | **8** | **3** | **4** | **34** | **139** | **261** | **172** | (13) |
| (14) | | PrecMax | | **1752** | **281** | **281** | **312** | **364** | **274** | **64** | **28** | **36** | **105** | **298** | **369** | **256** | (14) |
| (15) | | PrecMin | | **1044** | **68** | **43** | **75** | **97** | **28** | **0** | **0** | **0** | **6** | **54** | **117** | **96** | (15) |
| (16) | | PrecSD | | **167.1** | **49.0** | **47.2** | **48.7** | **57.1** | **46.6** | **13.6** | **5.3** | **8.8** | **22.9** | **50.5** | **61.2** | **42.5** | (16) |
| (17) | Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures | 0.4% | DB | | **34.1** | **34.7** | **35.2** | **35.0** | **34.0** | **32.1** | **31.1** | **32.8** | **34.2** | **34.2** | **33.9** | **33.2** | (17) |
| (18) | | | MCWB | | **24.8** | **24.7** | **24.4** | **25.0** | **24.7** | **23.2** | **22.3** | **22.8** | **23.4** | **23.8** | **24.2** | **24.7** | (18) |
| (19) | | 2% | DB | | **32.9** | **33.2** | **33.9** | **33.9** | **32.9** | **30.6** | **29.9** | **31.2** | **33.0** | **33.0** | **32.6** | **32.2** | (19) |
| (20) | | | MCWB | | **24.7** | **24.9** | **24.9** | **25.1** | **24.9** | **23.3** | **22.2** | **22.4** | **23.3** | **23.9** | **24.2** | **24.6** | (20) |
| (21) | | 5% | DB | | **31.9** | **32.1** | **32.9** | **32.8** | **31.9** | **29.2** | **28.8** | **30.1** | **31.9** | **31.9** | **31.7** | **31.1** | (21) |
| (22) | | | MCWB | | **24.6** | **24.8** | **24.9** | **25.0** | **24.8** | **23.1** | **21.9** | **22.1** | **22.9** | **23.7** | **24.2** | **24.5** | (22) |
| (23) | | 10% | DB | | **30.8** | **31.1** | **31.7** | **31.8** | **30.8** | **28.1** | **27.6** | **29.0** | **30.6** | **30.8** | **30.3** | **30.1** | (23) |
| (24) | | | MCWB | | **24.5** | **24.7** | **24.7** | **24.8** | **24.7** | **22.9** | **21.6** | **21.7** | **22.8** | **23.7** | **24.2** | **24.5** | (24) |
| (25) | Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures | 0.4% | WB | | **26.1** | **26.2** | **26.3** | **26.3** | **26.3** | **25.0** | **23.4** | **23.7** | **24.4** | **25.3** | **25.7** | **25.7** | (25) |
| (26) | | | MCDB | | **30.7** | **31.2** | **31.8** | **31.6** | **30.8** | **29.2** | **28.8** | **30.4** | **31.5** | **30.9** | **30.4** | **30.2** | (26) |
| (27) | | 2% | WB | | **25.6** | **25.7** | **25.8** | **25.9** | **25.7** | **24.2** | **22.7** | **23.0** | **23.8** | **24.7** | **25.1** | **25.4** | (27) |
| (28) | | | MCDB | | **30.2** | **30.6** | **31.1** | **31.2** | **30.2** | **28.4** | **28.0** | **30.0** | **30.6** | **30.3** | **30.1** | **29.9** | (28) |
| (29) | | 5% | WB | | **25.2** | **25.4** | **25.4** | **25.5** | **25.3** | **23.7** | **22.2** | **22.4** | **23.3** | **24.3** | **24.7** | **25.0** | (29) |
| (30) | | | MCDB | | **29.8** | **30.2** | **30.6** | **30.7** | **29.8** | **27.7** | **27.2** | **28.8** | **30.0** | **29.7** | **29.6** | **29.7** | (30) |
| (31) | | 10% | WB | | **24.9** | **25.0** | **25.0** | **25.1** | **25.0** | **23.2** | **21.9** | **21.9** | **22.9** | **23.9** | **24.4** | **24.7** | (31) |
| (32) | | | MCDB | | **29.2** | **29.7** | **30.0** | **30.2** | **29.5** | **27.0** | **26.5** | **27.8** | **29.4** | **29.2** | **29.0** | **28.9** | (32) |
| (33) | Mean Daily Temperature Range | | MDBR | | **8.2** | **8.7** | **9.3** | **9.2** | **8.4** | **8.1** | **8.6** | **8.6** | **9.0** | **8.6** | **8.4** | **7.9** | (33) |
| (34) | | 5% DB | MCDBR | | **9.9** | **10.1** | **10.8** | **10.7** | **9.9** | **9.8** | **10.5** | **11.0** | **11.3** | **10.5** | **10.1** | **9.4** | (34) |
| (35) | | | MCWBR | | **3.3** | **3.3** | **3.5** | **3.5** | **3.4** | **3.6** | **4.0** | **3.9** | **3.5** | **3.3** | **3.2** | **3.3** | (35) |
| (36) | | 5% WB | MCDBR | | **8.8** | **9.4** | **9.9** | **9.8** | **9.0** | **8.4** | **9.3** | **10.0** | **9.9** | **9.5** | **9.0** | **8.6** | (36) |
| (37) | | | MCWBR | | **3.4** | **3.6** | **3.7** | **3.6** | **3.6** | **3.4** | **3.9** | **3.8** | **3.4** | **3.4** | **3.3** | **3.4** | (37) |
| (38) | Clear Sky Solar Irradiance | taub | | | **0.547** | **0.570** | **0.522** | **0.461** | **0.491** | **0.520** | **0.650** | **0.669** | **0.650** | **0.481** | **0.496** | **0.559** | (38) |
| (39) | | taud | | | **2.092** | **2.004** | **2.110** | **2.240** | **2.056** | **1.866** | **1.551** | **1.566** | **1.688** | **2.226** | **2.246** | **2.065** | (39) |
| (40) | | Ebn,noon | | | **804** | **788** | **817** | **843** | **789** | **748** | **656** | **670** | **708** | **851** | **841** | **788** | (40) |
| (41) | | Edh,noon | | | **171** | **188** | **167** | **141** | **163** | **192** | **267** | **274** | **251** | **148** | **145** | **174** | (41) |

Nomenclature: See separate page