CMC(1,1)
The function is coded in VBA.

```
Function CMCOneOne(L1, A1, B1, L2, A2, B2)
Dim C1 As Variant, C2 As Variant, Da As Variant, Db As Variant,
DL As Variant, DC As Variant, DH As Variant
Dim k1 As Variant, k2 As Variant, SL As Variant, Sc As Variant,
Sh As Variant, check As Variant
Dim kL As Variant, kC As Variant, kH As Variant, H1 As Variant, f
As Variant, T As Variant
'set sl,k1,k2,kL, kC and kH
****************************************
Application.ScreenUpdating = False
kL = 1#: kC = 1#
radians = Application.WorksheetFunction.Pi() / 180
Degrees = 1 / radians
'Compute color differences
****************************************
C1 = Sqr(A1 ^ 2 + B1 ^ 2)
C2 = Sqr(A2 ^ 2 + B2 ^ 2)
DL = L1 - L2
DC = C1 - C2
Da = A1 - A2
Db = B1 - B2
check = Da ^ 2 + Db ^ 2 - DC ^ 2
If check < 0 Then
check = 0
End If
DH = Sqr(check)
If (B1 = 0 And A1 = 0) Then
   H1 = 0
Else
   H1 = Degrees * (Application.WorksheetFunction.Atan2(A1, B1))
   If H1 < 0 Then
      H1 = H1 + 360
   End If
End If
f = Sqr(C1 ^ 4 / (C1 ^ 4 + 1900))
```

```
If ((H1 >= 164) And (H1 <= 345)) Then
   T = 0.56 + Abs(0.2 * Cos(radians * (H1 + 168)))
Else
   T = 0.36 + Abs(0.4 * Cos(radians * (H1 + 35)))
End If
Sc = 0.0638 * C1 / (1 + 0.0131 * C1) + 0.638
Sh = Sc * (f * T + 1 - f)
If L1 < 16 Then
   SL = 0.511
Else
   SL = 0.040975 * L1 / (1 + 0.01765 * C1)
End If
CMCOneOne = Sqr((DL / (kL * SL)) ^ 2 + (DC / (kC * Sc)) ^ 2 + (DH /
Sh) ^ 2)
End Function
```