CLAIMS

1. A LED lighting source to improve cognitive performance and with sun-light properties with 90% balance of maxima and minima in distribution of light energy in range 460 to 660 nm comprising at least one white LED chip (1) emitting light with wavelength from 380 nm to 700, and at least one monochromatic blue LED chip (2) emitting light with wavelength from 470 nm to 480 nm, and said LED chips are connected to an electric current source characterised by the fact that the LED lighting source also comprises at least one monochromatic turquoise LED chip (3) emitting light with wavelength from 490 nm to 500 nm, and the white LED chip has correlated colour temperature 3800 to 4200 K and CRI 90 to 98, and the blue LED chip(s) (2) and turquoise LED chip(s) (3) each generate(s) 3 to 7% of a total emitted power of the LED lighting source or a light flux from the blue LED chips (2) amount to 1 to 4% of a total light flux of the LED lighting source and a light flux of the turquoise LED chips (3) amount to 4 to 7% of a total light flux of the LED lighting source and the white LED chips provide for a main emitted power and a main light flux.

2. The LED lighting source according to claim 1 characterised by the fact that it comprises at least one PC lime LED chip (11) with radiation in range of green-yellow wavelengths 500 to 650 nm, with share 6 to 9% in a total emitted power or 10 to 15% of a total light output of the source.

3. The LED lighting source according to claim 2 characterised by the fact that the PC lime LED chip (11) comprises of blue LED chip (2) excited in range 420 ± 5 nm covered with a luminophore.

4. The LED lighting source according to claim 1 characterised by the fact that the white LED chip (1) consists of blue LED chip (2) covered with luminophores.

5. The LED lighting source according to claim 20 characterised by the fact that a ratio of output of blue LED chips (2) and turquoise LED chips (3) is 1:1.

6. The LED lighting source according to claim 2 characterised by the fact that a ratio of light output of blue LED chips (2) and turquoise LED chips (3) and PC lime LED chips (11) is 1:2:3.

7. The LED lighting source according to claim 2 characterised by the fact that the total intensity of radiation of the LED lighting source is provided from 4.5 to 7% from blue LED chips (2), from 4.5 to 8% from turquoise LED chips (3), from 6 to 10% from PC lime LED chips (11) and from 78 to 88% from white LED chips (1).

8. The LED lighting source according to claim 1 characterised by the fact that the total output of blue LED chips (2) and the total output of turquoise LED chips (3), each generate 5% of the total output of white LED chips (1).

9. The LED lighting source according to claim 1 characterised by the fact that four white LED chips (1), one blue LED chip (2) and one turquoise LED chip (3) are positioned on 1.25 cm of printed circuit (4, 7).

10. The LED lighting source according to claim 1 characterised by the fact that four white LED chips (1), two blue LED chips (2) and one turquoise LED chip (3) are positioned on 1.25 cm of printed circuit (4, 7) and the blue LED chip (2) has half the output of the turquoise LED chip (3).

11. The LED lighting source according to claim 1 characterised by the fact that four white LED chips (1), one blue LED chip (2) and two turquoise LED chips (3) are positioned on 1.25 cm of printed circuit (4, 7), and the turquoise LED chip (3) has half the power of the blue LED chip (2).

12. The LED lighting source according to claim 2 characterised by the fact that a light output of the blue LED chip (2) amounts to 27 to 32 lm/W, a light output of the turquoise LED chip (3) amounts to 63 to 66 lm/W, light output of the PC lime LED chip (11) amounts to 85 to 100 lm/W and a light output of white LED chip (1) amounts to 70 to 90 lm/W.

13. The LED lighting source according to claim 2 characterised by the fact that the LED lighting source contains LED chips connected in two channels comprising I channel and II channel, wherein the I channel comprises 20 to 80 white LED chips (1) and the II channel contains one to eight groups of blue-turquoise-PC lime LED chips, wherein each group of LED chips contains one blue LED chip (2), one turquoise LED (3) chip and one PC lime LED chip (11).

14. The LED lighting source according to claim 13 characterised by the fact that the I channel contains 40 to 60 white LED chips and the II channel contains four groups of blue-turquoise-PC lime LED chips.