



Explanation to the Lighting Plan (drawing and computer calculation)

The diagram and computer calculation as drafted by Agrilight b.v. are based on the following assumptions:

The computer calculation which is being drafted, is based on a calibrated and exactly tuned fixture. For the calculation value, a luminous flux (= light output) of 54.500 Lumen is taken with respect to the 400 Watt High Pressure Sodium (HPS) bulb, 36.750 lumen for the 400 Watt Metal Halide (MH) bulb, 32.000 Lumen for the 250 Watt HPS bulb, 22.250 lumen for the 250 Watt MH bulb, 17.000 Lumen for the 150 Watt HPS bulb, 10.300 Lumen for the 100 Watt HPS bulb and 5.000 Lumen for the 70 Watt PL bulb (see the entry value in the computer calculation).

Since a lighting plan (drawing and computer calculation) is drafted on the basis of measurement data obtained from a calibrated and exactly tuned fixture which is installed in a free room, the technical illumination values will always deviate in actual practice.

If only a computer calculation is made, this is done on the basis of an optimum situation. It has turned out in actual practice that the lamp efficiency will be approx. 5% to 10% less than the computer calculation values as a result of various aspects (lamp tolerances, reflector / lamp position in reflector, etc.).

Other influences:

A: Loss of Voltage and quality of the power supply.

The computer calculation is based on the fact that there is nominal voltage at the fixtures. Fixtures are available for nominal voltage values of 230V/240, 50 Hz (other versions available on request).

Obviously, the loss of voltage depends on the cable installation. The rule of thumb is that 1% of loss of voltage equals 5% of loss of illumination.

The quality of the power supply affects the light output of the lamp. Factors which affect the light output adversely include, among others: electric supply pollution and voltage distortion.

B: Barn construction / Position of the fixture / Shade of obstacles.

We define this as the presence of disturbing objects in the illumination trajectory of the fixtures, including the barn construction. In order to reduce disturbance to a minimum, the position of the fixtures with respect to the obstacles is indicated. If the mutual positions are changed, this will affect the entire situation. If necessary, the lighting plan as drafted must be reviewed.

C: Installation in the barn.

Mounting / installing the fixtures according to the lighting plan as drafted by Agrilight b.v.. Deviations in dimensions will obviously affect the illumination values and uniformity. In addition, it is essential that the fixtures are mounted horizontally and in a straight line to realise an equal and optimum uniformity. By means of the Lighting Plan Agrilight b.v. provides a theoretical recommendation for the installation of the fixtures. This recommendation is based on an ideal situation for installation without any obstacles. For exact details concerning practical mounting and installation of the fixtures in the specific situation of your barn, please contact your qualified installer.



D: Tolerances and reduction in the efficiency of the lamps used.

According to the manufacturer's specifications, the 400, 250, 150 and 100 Watt HPS and 70 Watt PL bulbs yield a nominal initial output value of respectively 56.500, 33.000, 17.500 and 10.700 Lumen*. 5.200 for the 70 watt PL bulb and 38.000 and 23.000 lumen for respectively the 400 and 250 Watt Metal Halide bulb (light output for approx. 100 burning hours) and an expected nominal light output after 10.000 burning hours of -10% to -15% for HPS bulbs, -15% to -30% for Metal Halide bulbs and -15% to -20% for the 70 Watt energy saving bulbs.

The computer calculation as drafted by Agrilight b.v. is based on the on page 1 mentioned calculation values (the calculation value is the value used for the calculation program for the illumination and is based on the expected light output after 500 burning hours). When being used, the lamp will wear and the amount of light emitted will decrease as the number of burning hours increases. Decrease of the light output is also intensified by voltages which exceed the nominal value.

E: Pollution in time.

The technical illumination efficiency will decrease in the course of time as a result of atmospheric influences on the outside and reflector. This is caused by dust / aggressive agents / detergents / chalk / vapours etc. in the air. By working carefully and cleaning at regular intervals, the technical illumination efficiency will remain at the best possible level.

Agrilight b.v. shall not be liable for any deviations in the technical illumination values as a consequence of the causes as referred to above under A to E.

All deliveries are made by application of the Metalunion Conditions and supplementary guarantee provisions of Agrilight b.v..

To conclude with, we would explicitly like to point out to you that the lighting plan (drawing and computer calculation) is inextricably bound up with the selected Agrilight® fixtures. If you use a different brand of fixtures according to this illumination plan, no rights may be derived from this at all and this may entail serious consequences. The lighting plan is the intellectual property of Agrilight b.v.

With kind regards,

Agrilight b.v.

* * In accordance with CIE standards, these values may show a deviation of plus or minus 5%.
Explanation Lighting plan