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(54) Luminaire

(57) The luminaire has a housing (1) in which a first asymmetric reflector (3) and a second symmetric reflector (6) are disposed. The reflectors (3,6) have a light emission window (2) resp. a light window (7) in a plane P. The first reflector (3) has an auxiliary reflector (5)

opposite means (4) for holding a tubular lamp, which extends through the light emission window (2). The luminaire is able to illuminate a wall evenly from the ceiling to which or in which it is mounted.

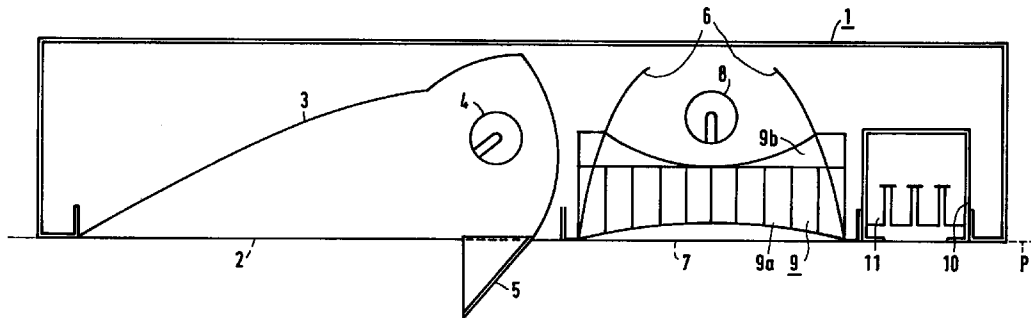


FIG.1

EP 0 833 100 A2

Description

The invention relates to a luminaire comprising:

a housing with a light emission window in a plane P; 5
 a concave asymmetrical reflector in the housing;
 means in the housing for accommodating a tubular electric lamp alongside the light emission window;
 and

an auxiliary reflector which projects through the 10
 light emission window to the exterior and which is positioned opposite the means for accommodating the lamp.

Such a luminaire is known from JP-A-800 76 22. 15

The known luminaire is designed for illuminating a wall. The auxiliary reflector here serves to illuminate also portions of the wall which are comparatively high and which would otherwise not be illuminated.

It is a disadvantage of the luminaire, however, that 20
 low portions of a wall are comparatively dark, especially when the luminaire is used in a comparatively high space such as, for example, a shop or showroom.

It is an object of the invention to provide a luminaire of the kind described in the opening paragraph with which a wall can be illuminated comparatively brightly with a high degree of homogeneity over its full height. 25

According to the invention, this object is achieved in that a second, concave, substantially symmetrical reflector with a light window substantially in the plane P 30
 is present in the housing next to the asymmetrical reflector, and in that second means for accommodating a tubular electric lamp are present.

The light formed into a beam by the second reflector is added to the light illuminating the wall from some 35
 distance away from the ceiling up to a large distance therefrom, so that the wall is illuminated more evenly and with a higher brightness. An attractive feature of the luminaire is that objects which are positioned at a comparatively small distance opposite the illuminated wall 40
 also have their sides facing this wall illuminated by the luminaire, whereas these sides would otherwise be dark.

In a favorable embodiment, the luminaire comprises several parallel slats in the light window which 45
 extend in the second reflector, transversely thereto. This embodiment has the advantage that the luminaire is incapable, at a comparatively small distance from the wall already, of radiating light in the longitudinal direction of the lamp at small angles to the ceiling, which could cause glare. Such slats are not necessary for a lamp in the asymmetrical reflector because the reflector itself together with the auxiliary reflector screens off the lamp from locations centrally below the luminaire. 50

It is favorable when the housing comprises a recess 55
 with an opening in the plane P, in which recess a power rail is arranged. The luminaire then offers the possibility of accommodating light sources for the creation of

accent lighting through the connection of holders or luminaires for, for example, incandescent lamps, for example reflector lamps. The luminaire may be fastened to or against a ceiling. It is also possible to incorporate the luminaire in a false ceiling.

The electric lamp may be, for example, a fluorescent lamp, for example a straight, double-ended lamp, or a single-ended lamp with mutually parallel tube portions.

The asymmetrical reflector may be formed by one or several parts. The auxiliary reflector may or may not be integral therewith. The auxiliary reflector may also be adjustable. The symmetrical reflector may also comprise one or several parts, for example two parts which, 10
 positioned opposite one another, each extend laterally of an accommodated lamp. It is also possible for a portion of the housing to have a reflecting function. The reflectors may be given a metal finish, of high, medium, or low specularity. Alternatively, they may have a painted reflecting surface. 20

The luminaire may be used on its own, in a row with similar luminaires, or alternatively in a continuous line illumination.

An embodiment of the luminaire according to the invention is shown in the drawing, in which 25

Fig. 1 is a cross-section through the luminaire; and Fig. 2 is a graph showing illumination diagrams.

The luminaire in Fig. 1 has a housing 1 with a light emission window 2 in a plane P and a concave, asymmetrical reflector 3 in the housing. Means 4 for accommodating a tubular electric lamp, a linear fluorescent lamp in the Figure, alongside the light emission window 2 are present in the housing. An auxiliary reflector 5 projects through the light emission window 2 to the exterior and is arranged opposite the means 4 for accommodating the lamp. The reflector 3 and the auxiliary reflector 5 already screen off the lamp to the extent that it is not visible from locations centrally below the luminaire. 30

Next to the asymmetrical reflector 3, a second, concave, substantially symmetrical reflector 6 with a light window 7 substantially in plane P is present in the housing 1. The housing in addition has second means 8 for accommodating a tubular electric lamp, again a linear fluorescent lamp in the Figure, for the second reflector 6. The reflectors are made of aluminum with a semi-specular finish. The housing is painted and has a reflecting function for the lamp which is to be accommodated in the second means 8. The second reflector 6 is formed by two parts in the Figure. These parts are positioned so as to face one another, on either side of a lamp to be accommodated. 40

Several parallel slats 9 are present in the light window 7, extending in the second reflector and transversely thereto and situated in front of and behind the slat drawn in the Figure. The slats 9 have an interspac- 55

ing of approximately 3 cm in the Figure. They are substantially V-shaped in cross-section with a concave, for example parabolic outer surface 9a. Parallel lines in the slats indicate this curvature. The slats 9 have substantially parallel surfaces 9b remote from the light window 7.

The housing 1 has a recess 10 with an opening in the plane P defined by the light emission window 7, in which recess a power rail 11 is accommodated.

Fig. 2 shows the illuminance on a wall as a function of the distance d to a ceiling in which a luminaire is accommodated. The Figure shows the illuminance (curve a) obtained with a conventional luminaire having only the asymmetrical reflector of Fig. 1 and a 35 W fluorescent lamp of approximately 15 mm diameter. Curve a/s indicates the illuminance achieved with the luminaire according to the invention which contains two such fluorescent lamps.

It is evident from Fig. 2 that the lamp in the symmetrical reflector adds substantially no illuminance to the uppermost 30 cm of the wall. A substantial increase in the illuminance is not obtained until approximately one meter down from the ceiling, and the illuminance is more than doubled at a great distance from the ceiling. It can be derived from the curves that the lamp in the symmetrical reflector evenly illuminates also a vertical plane facing the wall and positioned at a comparatively low level.

Claims

1. A luminaire comprising:

a housing (1) with a light emission window (2) in a plane P;
 a concave asymmetrical reflector (3) in the housing;
 means (4) in the housing for accommodating a tubular electric lamp alongside the light emission window (2); and
 an auxiliary reflector (5) which projects through the light emission window (2) to the exterior and which is positioned opposite the means (4) for accommodating the lamp, characterized in that a second, concave, substantially symmetrical reflector (6) with a light window (7) substantially in the plane P is present in the housing (1) next to the asymmetrical reflector (3), and in that second means (8) for accommodating a tubular electric lamp are present.

2. A luminaire as claimed in Claim 1, characterized in that several parallel slats (9) extending transversely to the second reflector (6) are present in the light window (7).

3. A luminaire as claimed in Claim 1 or 2, characterized in that the housing (1) comprises a recess (10)

with an opening in the plane P, in which recess a power rail (11) is arranged.

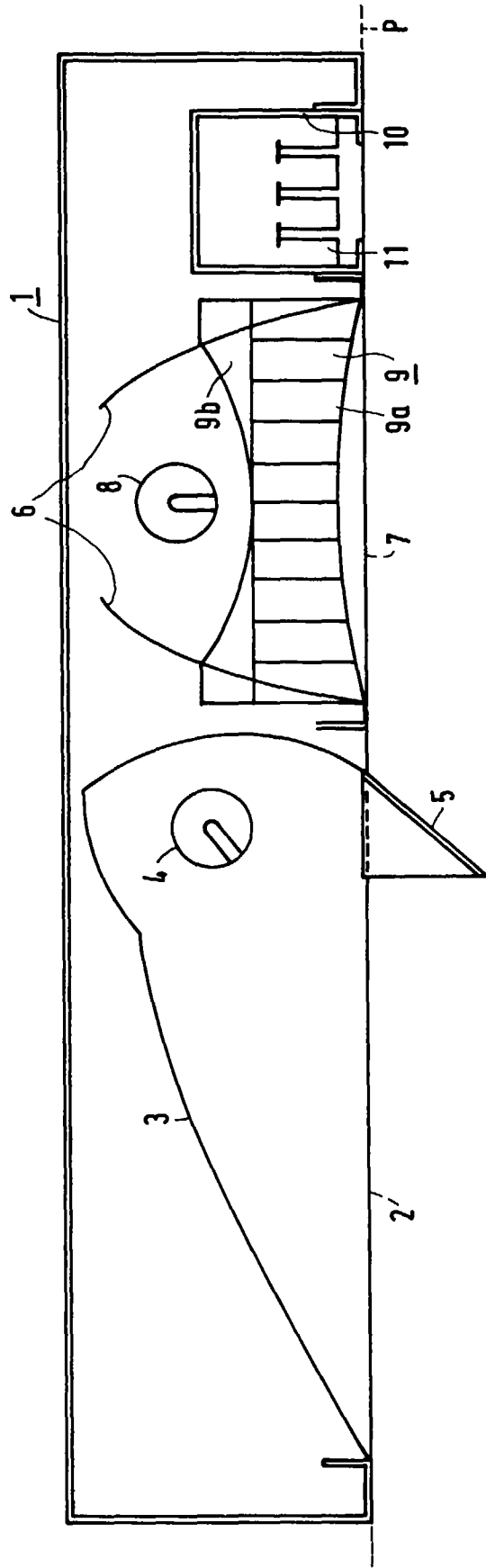


FIG.1

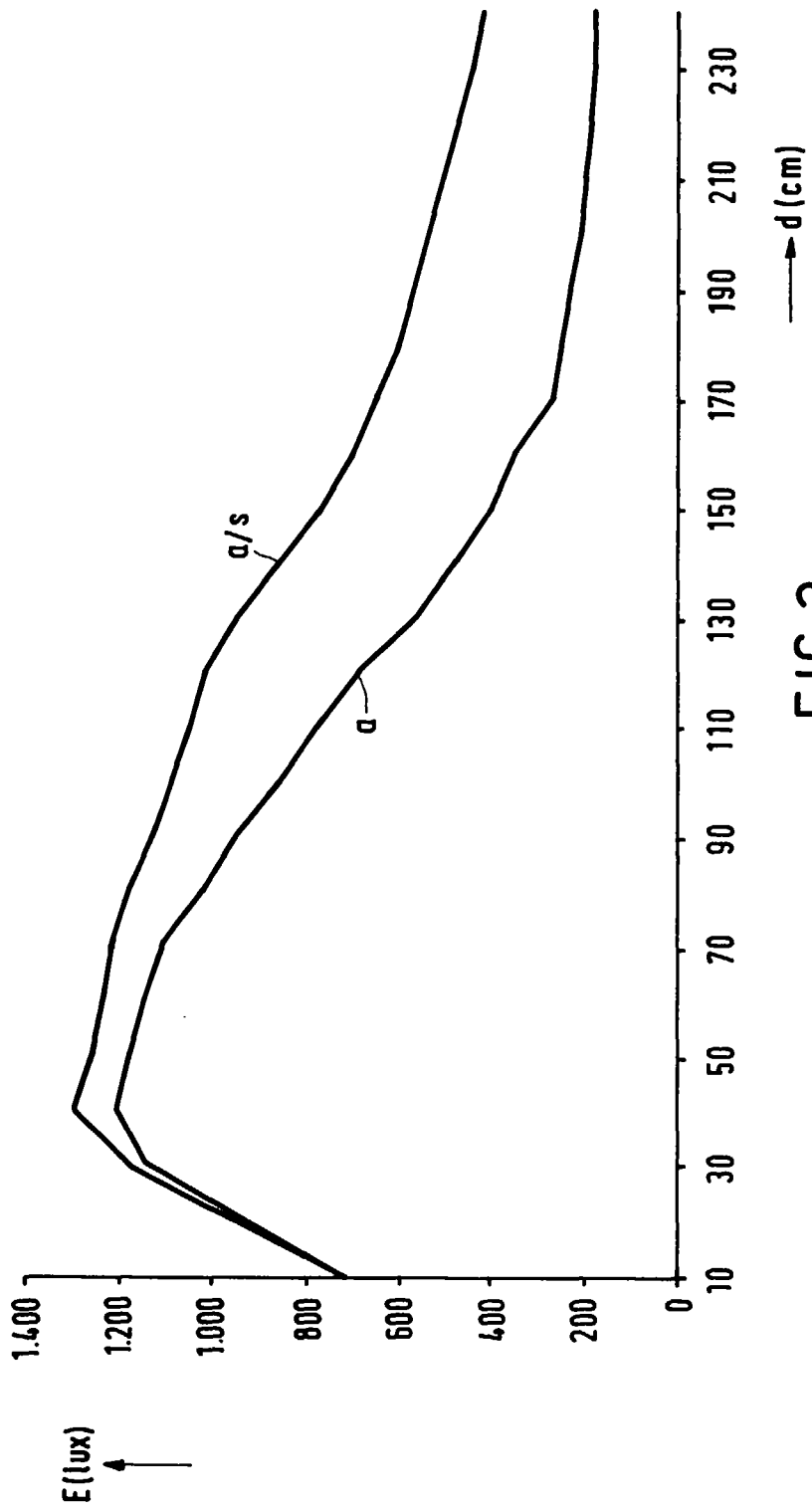


FIG.2