



US009411078B2

(12) **United States Patent**  
**Harris**

(10) **Patent No.:** **US 9,411,078 B2**  
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **LENS SYSTEM FOR REDIRECTING LIGHT RAYS WITHIN A FIELD OF VIEW TOWARD A FOCAL PLANE**

USPC ..... 359/648, 708, 733, 725, 668; 352/69  
See application file for complete search history.

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 318 days.

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(21) Appl. No.: **14/223,720**

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(22) Filed: **Mar. 24, 2014**

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(65) **Prior Publication Data**

US 2014/0268370 A1 Sep. 18, 2014

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**Related U.S. Application Data**

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(62) Division of application No. 12/671,867, filed as application No. PCT/US2008/072719 on Aug. 8, 2008, now Pat. No. 8,678,598.

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(60) Provisional application No. 60/954,627, filed on Aug. 8, 2007, provisional application No. 60/954,636, filed on Aug. 8, 2007.

(57) **ABSTRACT**

A system for displaying an anamorphic image on a viewing surface comprises a screen having a viewing surface and an image source configured to display the anamorphic image on the viewing surface such that an image viewed on the viewing surface appears undistorted from a viewing point. In addition, the system may also include a reflective lens having a convex exterior surface and a refractive lens having a plurality of surfaces to redirect light toward an image capture device. Further, the system may include an image conversion module for converting a non-anamorphic image into the anamorphic image suitable for displaying on the viewing surface and a selected portion of the anamorphic image into at least one non-anamorphic image.

(51) **Int. Cl.**  
**G03B 13/02** (2006.01)  
**G02B 3/02** (2006.01)  
**G02B 13/06** (2006.01)  
**G02B 13/08** (2006.01)  
**G02B 17/08** (2006.01)

(52) **U.S. Cl.**  
CPC **G02B 3/02** (2013.01); **G02B 13/06** (2013.01);  
**G02B 13/08** (2013.01); **G02B 17/0856** (2013.01)

(58) **Field of Classification Search**  
CPC .... **G02B 13/08**; **G02B 13/06**; **G02B 17/0856**;  
**G02B 17/088**; **G02B 3/02**; **G02B 3/0081**

**13 Claims, 21 Drawing Sheets**

