



ENDEAVOR
for stairwells



Luminaire *Led*

ENDEAVOR

Economic Stairwell Fixture

Energy Code Compliant

Energy Savings Technology

Vandal Resistant



Compact Design

Wet Location Option

Integral Battery Option

Integral Occupancy Sensor

Meets ASHRAE 90.1-2010

California Title 24 Compliant



ESF SERIES

STAIRWELL CHALLENGES

The stairwell represents a very specific, and sometimes conflicting, set of challenges to the lighting designer. Fixtures within this environment must be extremely reliable for life safety, efficient for energy codes, and economical to meet the needs of building owners. Additionally, these fixtures must be designed for very low maintenance and must be able to withstand deliberate tampering or vandalism found in unattended areas. The Endeavor Stairwell Fixture has been designed specifically to meet these challenges.

CODE COMPLIANCE

NFPA 101: Life Safety Code requires specific footcandle levels to be met measured at the walking surfaces: 10 fc minimum when the stairwell is occupied and 1 fc minimum when the stairwell is unoccupied.

ASHRAE 90.1 – 2010 requires the lighting to be reduced by at least 50% within 30 minutes of the space becoming unoccupied.

Our highly efficacious LED sources, precise optics, and an integral occupancy sensor were parameters considered to achieve lighting success in a minimally reflective stairwell environment. The Endeavor Stairwell Fixture is compliant with current building codes and energy codes when mounting the fixture on the wall or ceiling.

LIFETIME WARRANTY

Luminaire LED has brought over 40 years of experience in designing Vandal Resistant fixtures to the Endeavor Stairwell Fixture. Stairways are among the most vandalism-prone areas of a building, and are also some of the areas that can least tolerate inoperative lighting. While there have been fixtures that have been designed for this environment, many of them are not vandal resistant. The Endeavor Stairwell Fixture carries our lifetime warranty against vandalism, ensuring safety within the stairwell.

EFFICIENCY

The Endeavor Stairwell Fixture utilizes the latest LED chips from Samsung as well as programmable electronic drivers to achieve both high efficacy and minimal energy cost. The exclusive use of LED sources also allows for a smaller fixture footprint, contributing to reduced acquisition costs. The sensor can also be operated with an optional Integrated Daylight Sensor to further reduce operating expenses.

STAIRWELL EFFICIENCY

The Endeavor Stairwell Fixtures utilizes a micro-optic diffuser to minimize LED imaging and to provide even illumination in the stairwell environment.



INTERIOR TRAPEZOIDAL DESIGN

The highly efficacious LED sources are strategically placed on the sides of the trapezoidal reflector to reduce glare in one's face.



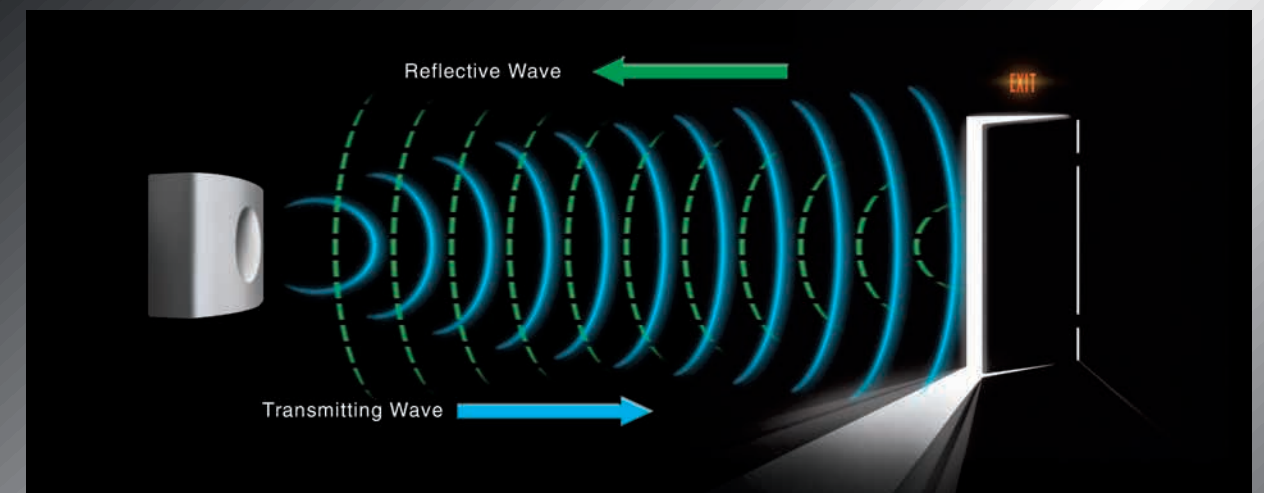
OCCUPANCY SENSOR

Most existing stairwell fixtures expose the occupancy sensor to the environment, inviting tampering, abuse, and unwarranted adjustment. The ESF utilizes a High-Frequency Microwave based sensor that allows placement of the sensor behind the lens, where it is protected from the environment and is inaccessible by the public.

The High-Frequency Microwave sensor allows for a sealed fixture that is suitable for wet location installations. Accordingly, the ESF will carry the U.L. wet location label when specified with the WET option.

The sensor has the capability to allow for multiple low level dimming options, as well as the ability to daisy chain fixtures from one sensor, allowing operation of multiple fixtures from a single sensor if desired. An optional integral battery pack and included facilities for conduit entry further contribute to the utility of the Endeavor Stairwell Fixture.

High-Frequency Microwave Based Sensor



Typical Stairwell Photometrics



Catalog No. ESF18 - 50W - M7 - CP - 4000K
Mounting Height 6' 6" on each landing.

Highly efficacious LED source strategically placed to minimize glare used in conjunction with micro-optics diffuser to provide even illumination.

ESF Calculation Summary

Surface	Units	Avg	Max	Min	Avg/Min	Max/Min
Stair 1	Fc	16.31	23	12	1.36	1.92
Stair 2	Fc	17.28	25	13	1.33	1.92
Stair 3	Fc	21.03	24	17	1.24	1.41
Stair 4	Fc	23.44	27	20	1.17	1.35
NFPA 101	Fc			10		

Surface	Units	Avg	Max	Min	Avg/Min	Max/Min
Landing 1	Fc	16.20	21	10	1.62	2.10
Landing 2	Fc	20.89	26	13	1.61	2.00
Landing 3	Fc	15.75	20	10	1.58	2.00
Landing 4	Fc	22.80	29	12	1.90	2.42

I L L U M I N A T I N G



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