

Light, Comfort and Joy

User experience of light and darkness in Swedish homes

Kiran Maini Gerhardsson



LUND
UNIVERSITY

DOCTORAL DISSERTATION

by due permission of the Faculty of Engineering, Lund University, Sweden.

To be defended at Lund School of Architecture A:C, 25th May, 13:00.


Faculty opponent

Wendy A. Rogers

Department of Kinesiology & Community Health,
University of Illinois Urbana-Champaign, United States

Organization LUND UNIVERSITY		Document name Doctoral dissertation	
Faculty of Engineering Department of Architecture and Built Environment		Date of issue 25 May 2020	
Author(s) Kiran Maini Gerhardsson		Sponsoring organization	
Title and subtitle Light, comfort and joy: User experience of light and darkness in Swedish homes			
Abstract <p>The thesis examines user experience and behaviour relating to lighting, luminaires and window openings during day and night, in Swedish homes. Applying a mixed methods strategy of inquiry, both quantitative and qualitative data were collected in the field and in a full-scale model of an apartment. The thesis has identified multiple motivations behind residents' lighting behaviour and choices, enablers and inhibitors to the desired conditions of light and darkness. The findings suggest that researchers and practitioners must consider the following key points, of which the first might seem obvious but still is not:</p> <ul style="list-style-type: none"> • user needs and experiences when developing new lighting technologies, • wearable comfort when lighting systems involve body-worn devices, • window openings need multiple layers for shading, daylight distribution and privacy control, • rethinking what is looked upon as wasted light in the home. <p>The conclusion is that the physical environment can be more supportive of residents' need for a regular 24-hour exposure to light and darkness, and dwelling comfort. In Swedish homes, where residents choose and mount most of their luminaires, responsibility for home lighting also lies with housing developers and lighting producers. In future research, the scope of indoor residential lighting should be expanded to include its effect on the outdoor environment after daylight hours.</p>			
Key words Residential, lighting, window openings, user experience, technology acceptance, mixed methods			
Classification system and/or index terms (if any)			
Supplementary bibliographical information		Language English	
ISSN and key title		ISBN 978-91-7740-122-3	
Recipient's notes	Number of pages 261	Price	
	Security classification		

I, the undersigned, being the copyright owner of the abstract of the above-mentioned dissertation, hereby grant to all reference sources permission to publish and disseminate the abstract of the above-mentioned dissertation.

Signature  Date 30 Mars 2020