Contents

| PROLOGUE | 6 |
|--|-----|
| THE LIGHT OF OUR DAY | 12 |
| THE ONTOLOGY OF LIGHT— | |
| RETHINKING LIGHT AS A MATERIAL | 22 |
| The Real Qualities of Light— | |
| A View of the Relationship between Light, Art and Architecture | 28 |
| The Sensual Qualities of Light— | |
| Examining the Pattern of Relationships between Light and Space | 38 |
| HOW ARTIFICIAL LIGHTING AND ART MUSEUMS INTERACT | 42 |
| Historical Development of Artificial Lighting in Art Museums | 44 |
| History of the White Cube | 46 |
| Artificial Light—A Matter of Zeitgeist | 48 |
| Specifications for Lighting in Art Museums | 54 |
| Status of Research | 60 |
| THE POTENTIAL FOR DYNAMIC LIGHTING IN MUSEUMS | 66 |
| Perception of Dynamic Lighting | 68 |
| Dynamic Artificial Lighting with Intelligent Control Systems | 72 |
| Quality Characteristics of White Light | 76 |
| Manufacturing Process of Artificial White LED Light | 84 |
| Light Measurement | 90 |
| MEASUREMENT OF ESTABLISHED MUSEUMS | 92 |
| Measurement Method | 94 |
| Metering Location and Orientation | 96 |
| Overview of Surveyed Museums | 98 |
| Evaluation of the Measurements | 118 |
| WHITE CUBE TELEPORTER— | |
| A THREE-PHASE RESEARCH PROJECT | 122 |
| Design of the Research Space—White Cube | 128 |
| Selection of Lighting Technology—PiLED | 129 |
| Process of the Research Project | 130 |

| PHASE 01: | |
|--|-----|
| TRIAL RUN A, CASE STUDY 01, TRIAL RUN B | 136 |
| Setting up the Research Space—Raumlabor S3T14 | 138 |
| Development and Conception of the Lighting System | 142 |
| Selection of Artworks for Phase 01 | 146 |
| Trial Run A | 150 |
| Case Study 01 | 158 |
| Trial Run B: One Artist / Two White Cubes / Five Museums | 164 |
| PHASE 02—CASE STUDY 02: | |
| FIVE ARTISTS × FIVE MUSEUMS | 170 |
| Research Space—Exhibition Space AIL, Basement | 172 |
| Artificial Lighting | 174 |
| Artwork | 176 |
| Test Process / Methods of Implementation | 178 |
| Outcomes and Insight | 182 |
| Synopsis | 188 |
| PHASE 03-CASE STUDY 03: | |
| LIGHTHOUSE, AIL | 190 |
| Experimental Setup | 192 |
| Lighting | 194 |
| Sculpture and Exhibition Design | 194 |
| Graphic Design of Walls | 195 |
| Dynamic Artificial Lighting—The Lighting "Script" | 200 |
| EPILOGUE | 204 |
| APPENDIX | 210 |
| Standards and Guidelines | 211 |
| Glossary of Terms and Abbreviations | 212 |
| Bibliography | 214 |
| Biographies | 220 |
| Acknowledgments | 222 |
| Imprint | 224 |