

TABLE OF CONTENTS

LIST OF TABLES
LIST OF FIGURES
LIST OF PLATES

CHAPTER	PAGE NO.
I INTRODUCTION	
1.0 Statement of the problem	6
2.0 Objectives of the study	10
3.0 Assumptions of the study	11
4.0 Hypotheses	11
5.0 Delimitations of the study	12
II REVIEW OF LITERATURE	
1.0 Characteristics of the eye	15
2.0 Characteristics of the visual task	19
3.0 Characteristics of the light	22
4.0 Visual comfort	34
5.0 Photobiological effects of light	37
6.0 Daylighting	39
7.0 Researches related to residential lighting	41
III METHODOLOGY	
1.0 Model showing hypothesised relation among the variables in the study of artificial lighting in the kitchen	47
2.0 Operational definitions	50

3.0	Assessment of artificial lighting in residential kitchens	
3.1	Tools for data collection	60
3.2	Pilot study	64
3.3	Data collection procedure and scoring of the instruments	68
3.4	Analysis of data	75
4.0	Laboratory estimation in a simulated kitchen	
4.1	Experimental setting	79
4.2	Lighting conditions	82
4.3	Experimental design	84
4.4	Experimental tasks	86
4.5	Scoring of the tests	91
4.6	Subjects	92
4.7	Experimental procedure	93
4.8	Analysis of data	95

IV FINDINGS AND DISCUSSION

Section I

1.0	Description of the sample	98
2.0	Values, Goals, Preferences and Knowledge	104
3.0	Housewife's involvement in performance of kitchen related activities and discomfort experienced	110
4.0	Sources of information regarding lighting products and involvement of family in its installation plan and purchase	114
5.0	Description of kitchens and kitchen lighting	116
6.0	Quantitative and qualitative measures of artificial lighting	134
7.0	Daylighting in kitchens	144
8.0	Profiles of respondents having kitchens with high and low average ambient general illuminances	153
9.0	Hypotheses testing	159

Section II		
1.0	Accuracy factor in relation to visual performance of subjects on visual acuity test	177
2.0	Level of visual performance of subjects on visual acuity test against different brightness contrasts under varying illuminances	186
3.0	Level of visual performance of subjects on brownness discrimination test under varying illuminances	190
4.0	Perceived level of visual comfort of subjects under varying illuminances	191
5.0	Hypotheses testing	193
6.0	Recommended illuminances and lighting (lamp) installations for residential kitchens of average Indian family	214
7.0	Comparative economics of selected lighting installations against incandescent lighting installations	219
V	SUMMARY AND CONCLUSION	
1.0	Summary	229
2.0	Conclusion	241
3.0	Implications of the study	246

BIBLIOGRAPHY

APPENDICES