COMMITTEE ACTIVITIES

REPORT OF THE THEATER LIGHTING COMMITTEE*

In a previous report the theoretical aspects of good illumination in theaters were discussed. These included visual acuity and comfortable vision. The former is improved by higher screen brightness and lower auditorium and screen illumination levels, and the latter by low contrasts between the picture and its surroundings and a higher order of room brightness. Since the committee's previous report, brightness and illumination tests have been made in a group of theaters especially selected for poor and good lighting conditions, for the purpose of combining visual observations with measurements, so that such measurements could later be interpreted for the benefit of theater managements, architects, and others. A test procedure was drawn up, covering the essential points reported on previously and other considerations developed later by the committee. Briefly the survey program covered the following points:

1. An estimated quality of the projected picture by a number of observers with especial reference to visual acuity and comfortable viewing over an appreciable period of time.
2. Brightness and illumination measurements of the screen, its surroundings, and various parts of the auditorium, noting the placement of light sources and their effect on visibility of the picture.

About thirty theaters were given a preliminary survey and of these seven were given a thorough study. An analysis of the data obtained shows that with the screen brightness ranging from 2.5 to 10 millilamberts, there is no evidence of discomfort due to too great contrasts, even in houses almost totally dark. Brightness below about 3.0 millilamberts was unsatisfactory due to the reduction of visual acuity. In one theater having a screen brightness of about 9 millilamberts an impression of too high illumination was obtained. This seemed reasonable on account of the smallness of the house—800 seats capacity. In the other 800-seat houses, in which visual acuity was satisfactory, the screen brightness was only about 3 millilamberts.

* Presented at the Fall 1930 Meeting, New York, N. Y.

In none of the theaters was there sufficient stray light to appreciably affect the picture. Measured values were less than 0.01 millilamberts, and in none of the seven were the contrasts in the picture too great. While black velvet was used to surround the screen in some of the theaters where good visual comfort was obtained, these houses were relatively narrow; where gold, yellow, or similar hangings were employed, with higher brightnesses of about 0.05 millilamberts, the conditions were quite comfortable.

In this connection it is interesting to note that it is common practice to "screen" the pictures at the producers' studios with relatively high screen brightness and short observation distances, and to judge the contrasts and densities of the printed film by observations made in this manner. Such conditions do not represent those obtaining in the theater, and more comfortable lighting conditions, comparable with those encountered in the field, should be established in the screening rooms.

When theaters operate on the two-performance-a-day schedule, and people do not enter and leave during the performance, auditoriums almost totally dark have commendable visibility characteristics. For the houses running continuous performances, intensity values of about 0.1 foot-candle were found satisfactory for taking seats easily, provided the eyes had gradually accommodated themselves to that intensity in passing from the high intensities existing at the entrances. One of the most outstanding criticisms of nearly all the houses examined was the relatively high intensities in the lobbies compared with the values inside the auditorium. The intensities encountered, varying from 6 to 20 foot-candles to daylight values, should be somewhat lower to prepare the eyes for intensities of 0.5 to 2 foot-candles at the entrances of the auditorium.

It is probably desirable that patrons find their seats without the aid of ushers' flashlights, so that, bearing in mind the fact that the entrance and foyer intensities may be as high as 20 foot-candles or more, the gradation from 20 millilamberts to the very low values suitable for auditoriums requires carefully graded illumination intensities for the intermediate points.

The Screen Illumination Committee of the Academy of Motion Picture Arts and Sciences requested this committee to submit recommendations for screen illumination tests and a detailed description of the procedure outlined above was furnished to the Academy group for use in their work.

ILLUMINATION DATA OBTAINED IN SELECTED THEATERS[1]

Theater	A	B	C	D	E	F	G
Average foot-candles on screen[2]	8.3	8.2	3.8	2.6	3.4[3]	10.0	6.9
Average millilamberts brightness	6.3	9.3	3.0	2.4	3.1	10.0	5.6
Stray light on screen—ML.	0.0025	0.0027	0.0050	..	Negligible		
Brightness of screen surroundings—ML.	0 (?)	0.054	0.0064	..	..	..	..
Brightness on front wall—ML.	0.003	0.017	0.009	..	..	..	..
Foot-candles, front row center	0.17	0.16	0.33	0.02	..	..	0.02
Foot-candles, middle row center	0.012	0.35	0.51	0.02	..	..	..
Foot-candles, back row center	0.016	0.25	0.37	..	..	..	0.31
Foot candles, center lobby	6.0	..	7.3	..	Daylight intensities		..
Maximum light source brightness in field of vision—ML.	2280[4]	35.3	..	0.04	0	0	0.05
Observed visual comfort	Comfortable	Uncomfortable	Comfortable	..	Comfortable	Comfortable	Very comfortable
Visual acuity	Very good	Fair to good	Fair to very good	Poor	Good	Good	Good

[1] Abridged.
[2] No film in projector.
[3] Wide film.
[4] Bare lamp, visible only from upper balcony.

The committee has found this quite an extensive undertaking. Although progress has been slow we believe it will ultimately furnish a fund of information of great value to non-technical as well as technical workers.

F. M. FALGE
R. E. FARNHAM
EMERY HUSE
L. A. JONES
C. E. EGELER, *Chairman*
J. C. AALBERG
F. A. BENFORD
A. C. DOWNES

DISCUSSION

MR. FRIEBUS: In discussing the illumination necessary to permit patrons to pass into and out of the theater during the performance, the matter of the color to be used for lighting and the minimum amount required was neglected. I suggest that it be considered. I believe that the contraction of the pupil is greater for the same intensity of illumination at the red end of the spectrum than at the blue. Perhaps better illumination could be obtained with blue light, which affects the eye less in viewing the screen than if red light were used.

MR. FARNHAM: In our survey, we found that theater owners are quite prone to use red in winter to suggest warmth, and blue or green in summer to suggest the idea of coolness. This is a feature with which the committee has had to contend.

PRESIDENT CRABTREE: I believe that in many cases the level of illumination in the theater is too high for comfortable vision, so that it is difficult to concentrate on the picture. To me, the picture becomes more real the darker the surrounding parts of the theater. Of course, it is admitted that absolutely dark theaters are out of the question nowadays. There is no doubt, however, that in the future, the dark condition must be approached more and more.

REPORT OF THE MEMBERSHIP AND SUBSCRIPTION COMMITTEE*

The membership of our Society has continued to grow until we now have 756 active, associate, honorary, and sustaining members. There have been very few losses through delinquency or otherwise during the year. Sixty-two members were reported as delinquent, of which number this committee succeeded in holding in the Society all but twelve, while practically all of those who dropped out did so because they left the industry.

Your committee has tried to bring the Society to the attention of all technicians in the motion picture industry. It has been a booster committee, having members in all large cities and foreign countries where motion pictures are produced. Once each year the committee invites all members of the Society to recommend those whom they know to be eligible for membership. Occasionally, applications have been held up for some time by the Board of Governors pending an investigation of the classification of the applicant; this delay is generally caused by the diffidence of the applicant to record his own accomplishments and qualifications on the application form.

The relatively high entrance fee and annual dues charged by the S. M. P. E., as compared with other similar organizations, prevents many of the younger technicians from applying for membership. The committee, after considerable deliberation, unanimously recommends that the entrance fee and dues be reduced at the earliest date consistent with our ability to maintain the high standard of the JOURNAL and semi-annual meetings of the Society.

This committee has made a special effort to secure subscriptions for the JOURNAL. Nearly 200 subscribers have been added to the

* Presented at the Fall 1930 Meeting, New York, N. Y.

circulation this year and we might well expect an equal increase for the coming year with equal effort. With 800 subscribers the JOURNAL could be made self-supporting.

In conclusion, your committee requests continued effort on the part of all members in assisting the committee in its work of increasing the membership of the Society and the list of subscribers to the JOURNAL.

C. BARRELL
J. W. BOYLE
W. H. CARSON
W. CLARK
L. W. DAVEE
J. DEFRENES
E. R. GEIB
D. E. HYNDMAN
H. T. COWLING, *Chairman*
J. KLENKE
M. L. MISTRY
B. E. NORRISH
I. ROSEMAN
E. C. SCHMITZ
J. L. SPENCE
F. ZUCKER

IMPORTANT ANNOUNCEMENT REGARDING PAPERS FOR SPRING CONVENTION

The Papers Committee is planning a papers program of unusual interest for the Spring Convention in Hollywood and is arranging this program with unusual care, so that members attending the convention will secure maximum value from the papers sessions. In working toward this end, several changes in the procedure for handling contributed papers have been made, and members planning to submit papers for presentation are asked to note these changes carefully. The committee earnestly requests the coöperation of all members to enable it to carry out its plans effectively.

(1) The new plan requires that all manuscripts of papers for the Convention be submitted by April 1st. The dates for the Convention are May 25th to 28th, inclusive. This will allow a period of one month for review of papers by members of the committee and by special experts within the Society. The necessity for such careful review is obvious if a uniform standard is to hold for all papers accepted.

(2) It is also planned, during the interval after April 1st, as a special feature of the next Convention, to prepare rather full abstracts of papers and to distribute preprints of the abstracts to members at the Convention. This will permit those attending the Convention to know the general character of papers before they are presented, so

that they may not miss sessions in which papers of particular interest to them are offered. It is also expected that these extended abstracts will stimulate discussion of papers presented and thus make the sessions more interesting and instructive.

(3) Each prospective author is asked to submit, in addition to his manuscript, (*a*) a short abstract of about 100 words summarizing his paper, which can be used for program purposes and for press releases, and (*b*) a short biographical sketch (see page 259, this issue of JOURNAL) for JOURNAL publication. Since the program and the press releases are the usual means by which members and guests obtain a detailed list of papers, authors will help to insure a full audience for their papers by providing the short abstract requested.

(4) All manuscripts should be sent to the Editor of the JOURNAL, Sylvan Harris, 33 West 42nd Street, New York City. Each manuscript should be accompanied by such diagrams and photographs as are proposed to be included in it. Detailed instructions to authors are contained in a pamphlet entitled, "Instructions to Authors" which may be obtained upon application to the Editor.

The committee is anxious to obtain a well-rounded program, and requests that all prospective authors send the titles of their proposed papers to the Editor as early as possible. If titles and authors of prospective papers can be obtained in this manner it will assist the committee in planning.

The committee believes that members will agree that the features of the new plan as outlined are desirable and will do their utmost to coöperate with the committee.

O. M. GLUNT, *Chairman*

PROGRESS COMMITTEE WORK

The principal work of the Progress Committee for many years has been the compilation of data giving the results of scientific experimentation, descriptions of new apparatus, and the discussion of practices in the industry. This information has been obtained from the trade, from technical journals published in various parts of the world, and from personal reports by committee members. A general report, summarizing the collected data, is presented at each of the semi-annual meetings of the Society. Later, this information is published in the Society's JOURNAL, thus making it accessible for all members and others receiving the JOURNAL.

The files of the committee contain much useful information which may be consulted at any time by writing the chairman. It seems as if more use should be made of this information, which has been compiled at considerable personal expense by the members of the committee.

As to the semi-annual report, the present chairman has made a conscientious effort to arrange the report in the most useful way possible for easy reading. There are eight general divisions as follows: (1) Production, (2) Distribution, (3) Exhibition, (4) Applications of Motion Pictures, (5) Color Photography, (6) Amateur Cinematography, (7) Statistics, (8) Publications and New Books. A comprehensive bibliography of references is also included. It is thought that this arrangement is a logical one. Few people ever read all of the material in a progress report but almost everyone is interested in certain sections of the report.

There may be other ways of arranging the material, however, which will make it more accessible. It may be considered by some members that one of the semi-annual reports ought to be shorter, giving only a generalized rather than a specific survey. The chairman has worked on the basis that a progress review should be current, and should contain enough detailed information about most of the items to acquaint the reader with the essential facts about each subject.

It is the aim of your committee to make this report the most accurate and complete review of conditions in the industry published in the world. Any suggestions which you may have toward this end will be appreciated.

GLENN E. MATTHEWS, *Chairman*

STUDIO LIGHTING COMMITTEE

The Committee on Studio Lighting is preparing a questionnaire for submission to studios throughout the world, so as to be able to formulate a comprehensive report as to what is being done throughout the entire industry. The committee would be very glad to receive suggestions from any member on the questionnaire or on any subject related to Studio Lighting. Please address M. W. Palmer, in care of the New York Office of the Society.

M. W. PALMER, *Chairman*