

PACKAGE ID - 000441IBMPC00 CONTROLITE 1.0

KWIC TITLE - Lighting Control Energy Savings

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LIMITATION CODE -UNL **AUDIENCE CODE** - UNL

COMPLETION DATE - 11/01/1985 **PUBLICATION DATE** - 11/01/1985

DESCRIPTION - CONTROLITE 1.0 is a lighting energy analysis program designed to calculate the energy savings and cost benefits obtainable using lighting controls in buildings. The program can compute the lighting energy reductions that result from using daylighting, scheduling, and other control strategies. When modeling daylight control systems, the program uses QUICKLITE to compute the daylight illuminances at specified points 5 times a day, 12 days a year (the 21st of each month), and for two sky conditions (clear and overcast skies). Fourier series techniques are used to fit a continuous curve through the computed illuminance points. The energy use for each of the 12 days is then computed given user-specified power-in/light-out characteristics of the modeled control system. The monthly and annual energy usage for overcast and clear conditions are found separately by fitting two long-term Fourier series curves to the energy use computed for each of the 12 days. Finally, the monthly energy use is calculated by taking a weighted average for the monthly energy use computed for the overcast and clear sky conditions. The program only treats the energy use directly attributable to lighting. The impact of lighting control strategies on building thermal loads is not computed. The program allows input of different control schedules (i.e., on/off times for the lighting system) for each day of the week, but every week of the year is treated the same; thus, holidays cannot be modeled explicitly. When used for daylighting purposes, CONTROLITE1.0 understands only clear and overcast conditions. User-supplied values for the proportion of clear and overcast hours for each month of the year are required to accommodate different climatic conditions.

PACKAGE CONTENTS - Media Directory; Software Abstract; LBL-17444 REV.;
Media Includes Executable, Sample Problem, Auxiliary Information,
Control Information;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 2 5.25 Diskettes

COMPUTER - IBM PC

OPERATING SYSTEMS - DOS 2.0

PROGRAMMING LANGUAGES - FORTRAN

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SOURCE CODE AVAILABLE (Y/N) - Y

OTHER PROG/OPER SYS INFO - The CONTROLITE1.0 program is distributed in executable form only because the Lighting Technologies user interface incorporated in this edition of the program is proprietary.

HARDWARE REQS - 256K with two floppy disk drives or hard disk.

REFERENCES - CONTROLITE1.0 Lighting Control Systems and Daylighting Analysis Program: User's Manual, LBL-17444 Rev., January 1985, revised July 1985.

ABSTRACT STATUS - Abstract first distributed September 1985. IBM PC version of CONTROLITE1.0 submitted June 1985, replaced July 1985.

SUBJECT CLASS CODE - T

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
C CODES
LIGHTING SYSTEMS
ENERGY ANALYSIS
COMPUTERIZED CONTROL SYSTEMS

EDB SUBJECT CATEGORIES -

990200 320106 420200

SPONSOR - DOE/CE

PACKAGE TYPE - SCREENED