

ESL-TR-00/06-01

**COMPILATION OF DIVERSITY FACTORS AND SCHEDULES FOR
ENERGY AND COOLING LOAD CALCULATIONS**

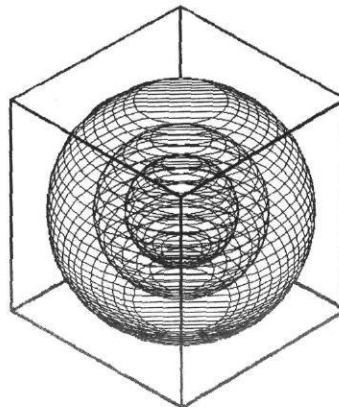
ASHRAE Research Project 1093

Phase III Draft Report

COMPILATION OF DIVERSITY FACTORS AND LOAD SHAPES

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PREFACE

This is a draft of the Final Report in the ASHRAE RP-1093 project that, first summarizes the work completed during the scheduled *Phase I* and *Phase II* (presented to the PMSC in Seattle - June 1999, and Dallas February 2000), and reports on the progress during the scheduled *Phase III* effort (Table 1, below). It should be noted that the PMSC approved a one-year extension after the May-2000-Completion-date noted in Table 1. Tables 2 and 3, below, show the buildings that were approved by the PMSC in previous meetings.

During this phase of the project, we finalized the daytyping method to be followed, and started processing the data sets previously approved by the PMSC. So far, we processed a total of 23 buildings (ESL). The final product will include typical load shapes and diversity factors from:

- 27 Office Buildings monitored by ESL
- 9 Office Buildings provided by LBNL (Energy-Edge Buildings).

If time allows we will process 28 additional buildings provided to us by PNNL. These additional buildings were monitored under the ELCAP project.

We prepared typical templates (with Microsoft Word) to describe each building along with the corresponding results of the analysis.

Mr. Micheal Witte, from Gard Analytics, helped us in writing the BLAST input files, and he also automated the procedure of copying the results from EXCEL to the WORD templates.

Table 4, below, shows the final set of building that are currently analysed.

Daytyping Method

We developed a daytyping method based on the percentile analysis. The 50th percentile was adopted to be used for the diversity factors and the typical load shapes. While other statistics were also calculated, such as the:

- Mean
- Mean + 1 Standard Deviation
- Mean - 1 Standard Deviation
- 10th Percentile
- 25th Percentile
- 75th Percentile
- 90th Percentile.

These additional statistics provides a clearer representation of the variation in the derived typical load shape. A clear codification of the method will be provided in the Final Report.

Generally one yearlong clean data set was identified and the data was daytyped into Weekends and Weekdays. Holidays were removed from the Weekdays from each data set.

Holidays schedules will be treated like Weekends by the user of these diversity factor. This decision is reflected in the way we developed the sample DOE-2 and BLAST input files. We also calculated the EUI's of each building within the buildings descriptions. This will allow the user to clearly identify a building from the whole library we will provide in this project, according to his specific needs.

Phase	Task	Activity / Deliverable	1999												2000				
			2	3	4	5	6	7	8	9	10	11	12	1	2	3	4*	5	
1	1	Literature Review and Database search			■														
	2	Preliminary Report																	
2	3.a	Identification of relevant existing Data sets (energy consumption and Demand)				■	■												
	3.b	Identification of methods for the Classification of buildings					■	■											
	3.c	Identification and use of relevant Statistical procedures for daytyping						■	■										
	4	Identification of robust uncertainty Analysis methodologies							■	■									
	5	Report on list of derived diversity Factors and schedules based on 3.a, 3.b, and 3.c.								■	■								
3	6.a	Compilation of the diversity Factors and load shapes											■	■					
	6.b	Development of a Tool-Kit for deriving New diversity factors, and General Guidelines for their use											■	■					
	6.c	Development of illustrative examples of the use of the diversity factors in the DOE-2 and BLAST simulation Programs											■	■					
	7.a	Draft Final Report											■	■	■				
	7.b	Final Project Report														■	■		
	7.c	Quarterly Reports	■			■			■				■			■			
	7.d	Technical Research Papers															■	■	

* Completion date of the project

Table 1. Phases and Tasks of ASHRAE RP-1093 project.

No.	Category	Bldg ID#	Building	Location	Start Date	End Date	Retrofit Date	Building Area (sqft)	WBE	L&R	Data Format	Cost	Data Quality
1	Large	904	Federal Office 904	Washington D.C	1/1/94	12/31/94	N/A	1,200,000	NWD		Hourly	Free	Good
2	Large	209	State Office 209	AUSTIN	1/1/97	12/31/97	6/1/92 - 8/1/93	491,000	NWD	LITEQ	Hourly	Free	Good
3	Large	146	State Office 146	Dallas, TX	1/1/95	12/31/95	6/30/92 - N/A	473,800	WD	MCC	Hourly	Free	Good
4	Large	708	State Office 708	Capitol Complex	-	-	6/13/94 - 12/28/94	378,100	NWD		15min	Free	Bad
5	Large	710	State Office 710	Capitol Complex	1/1/98	12/31/98	7/1/94 - 12/28/94	366,805	NWD		15min	Free	Good
6	Large	952	County Office 952	Dallas County	1/1/98	12/31/98	N/A	323,232			Hourly	Free	OK
7	Large	711	State Office 711	Capitol Complex	1/1/98	12/31/98	5/6/94 - 9/9/94	317,286	NWD		15min	Free	Good
8	Large	210	State Office 210	AUSTIN	1/1/97	12/31/97	1/1/94 - 5/1/94	308,080	NWD	LIGHT, LITEQ	Hourly	Free	Good
9	Large	200	State Office 200	AUSTIN	7/1/97	7/1/98	N/A	282,499	NWD		Hourly	Free	OK
10	Large	707	State Office 707	Capitol Complex	1/1/98	12/31/98	6/13/94 - 12/28/94	281,850	NWD		15min	Free	Good
11	Large	704	State Office 704	Capitol Complex	1/1/98	12/31/98	7/22/94 - 6/23/95	200,829	NWD		15min	Free	Good
12	Large	201	State Office 201	AUSTIN	1/1/93	1/1/94	2/1/94 - N/A	182,961	NWD		Hourly	Free	OK
13	Large	203	State Office 203	AUSTIN	1/1/97	12/31/97	4/1/92 - 8/1/92	169,746	WD	LIGHT	Hourly	Free	Good
14	Large	228	State Office 208	AUSTIN	1/1/98	12/31/98	2/1/94 - N/A	151,620	NWD		Hourly	Free	Good
15	Large	229	State Office 229	AUSTIN	1/1/98	12/31/98	2/1/94 - N/A	121,654	NWD		Hourly	Free	Good
16	Large	208	State Office 208	AUSTIN	1/1/97	12/31/97	4/1/92 - 8/1/92	120,000	NWD	LITEQ	Hourly	Free	Good
17	Large	206	State Office 206	AUSTIN	1/1/96	12/31/96	4/1/92 - 9/1/92	102,000	NWD	LITEQ	Hourly	Free	Good
18	Large	963	Court 963	Butte, MT	7/1/98	7/1/99	N/A	100,000			Hourly	Free	OK
19	Large	975	Court 975	Bryan, TX	7/1/98	7/1/99	N/A	100,000	WD	MCC	Hourly	Free	Good
20	Large	984	Private Office 984	Dallas, TX	1/1/98	12/31/98	N/A	100,000		MCC	Hourly	Free	Bad (MCC)
21	Large	985	Private Office 985	Dallas, TX	10/1/98	10/1/99	N/A	100,000	WD	MCC	Hourly	Free	OK
22	Medium	226	State Office 226	AUSTIN	1/1/96	12/31/96	2/1/94 - N/A	97,030	NWD		Hourly	Free	Good
23	Medium	709	State Office 709	Capitol Complex	3/1/96	3/1/97	9/24/94 - 4/5/95	87,664	NWD		15min	Free	Good
24	Medium	205	State Office 205	AUSTIN	1/1/94	12/31/94	4/1/92 - 8/1/92	80,000	WD	LITEQ	Hourly	Free	OK
25	Medium	712	State Office 712	Capitol Complex	1/1/98	12/31/98	7/11/94 - 6/23/95	77,630	NWD		15min	Free	Good
26	Medium	227	State Court 227	AUSTIN	1/1/98	12/31/98	2/1/94 - N/A	72,737	NWD		Hourly	Free	Good
27	Medium	207	State Office 207	AUSTIN	1/1/93	12/31/93	4/1/94 - N/A	62,000	WD	MCC	Hourly	Free	Good
28	Medium	706	State Office 706	Capitol Complex	1/1/98	12/31/98	9/2/94 - 4/5/95	57,047	NWD		15min	Free	Good
29	Medium	951	County Office 591	Dallas County	1/1/98	12/31/98	N/A	42,385			Hourly	Free	OK

Table 2 All Office Buildings monitored at ESL and relevant to the ASHRAE RP-1093 project.

No.	Category	Building Name	Location	Start Date	End Date	Retrofit Date	Building Area (ft2)	L&R	Source	Data Format	Cost	Data Quality
1	Large Office	Bellevue	Bellevue, WA	Oct-90	Sep-91		389,000	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
2	Large Office	160 Sansome	San Francisco, CA	May-98	Jun-99		100,000	Light, Recep	LBNL	Hourly	Free	OK
3	Medium Office	Director	Portland, OR	Jan-91	Aug-92		79,700	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
4	Medium Office	EPUD	Eugene, OR	Nov-88	Sep-92		24,838	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
5	Medium Office	East Gate	Bellevue, WA	Aug-90	Jun-92		23,728	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
6	Medium Office	West Yakima	Yakima, WA	Nov-88	Apr-90		16,221	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
7	Small Office	Dubal	Portland, OR	Dec-87	Aug-89		8,512	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
8	Small Office	East Idaho	Idaho Falls, ID	Jun-88	Mar-90		5,300	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK
9	Small Office	STS	Ellensburg, WA	Jan-89	Apr-92		4,266	Light, Recep	Energy Edge, LBNL	Hourly	Free	OK

Table 3 Energy-Edge Office Buildings provided by LBNL for the ASHRAE RP-1093 project.

Category	No.	Bldg I.D.	Site ID.	Building	Location	Building Area (sqft)	Data Type	Max Load (W/sqft)	Source	EUI (kWh/sqft. year)	Start Date	End Date	Retrofit Date	WBE	Data Format	Cost	Data Quality
L	1		CAL001	160 Sansome	San Francisco, CA	100,000	LIGHT		LBNL		5/1/98	6/1/99					
							RECEP				5/1/98	6/1/99					
L	2	904	DCL001	USDOE Forrester Building	Washington D.C.	1,200,000	WBE	3.93	ESL	19.99	1/1/94	12/31/94	N/A	NWD			Good
S	3		IDS001	East Idaho	Idaho Falls, ID	6,300	LIGHT		LBNL	13.00	12/1/87	8/1/89					Good
							RECEP				12/1/87	8/1/89					Good
L	4	704	MNL001	Judicial Building	Minneapolis, MN	200,829	WBE	1.11	ESL	4.59	1/1/98	12/31/98	7/22/94 - 5/23/95	NWD	15min		Good
L	5	707	MNL002	State Office Bldg.	Minneapolis, MN	281,850	WBE	0.92	ESL	4.04	1/1/98	12/31/98	8/13/94 - 12/28/94	NWD	15min		Good
L	6	710	MNL003	Capitol Building	Minneapolis, MN	366,806	WBE	0.75	ESL	3.38	1/1/98	12/31/98	7/1/94 - 12/28/94	NWD	15min		Good
L	7	711	MNL004	Centennial Building	Minneapolis, MN	317,268	WBE	1.09	ESL	7.40	1/1/98	12/31/98	5/8/94 - 9/9/94	NWD	15min		Good
M	8	706	MNM001	Ford Building	Minneapolis, MN	67,047			ESL		1/1/98	12/31/98	9/2/94 - 4/5/95	NWD	15min		Good
M	9	709	MNM002	Veterans Building	Minneapolis, MN	87,964	WBE	0.69	ESL	2.89	3/1/98	3/1/97	9/24/94 - 4/5/95	NWD	15min		Good
M	10	712	MNM003	Criminal Apprehension Bldg.	Minneapolis, MN	77,830			ESL		1/1/98	12/31/98	7/11/94 - 6/23/95	NWD	15min		Good
L	11	983	MTL001	Bulte Courthouse	Bulte, MI	100,000	WBE	1.13	ESL	4.19	7/1/98	7/1/99	N/A	NWD			Good
M	12		ORM001	Director	Portland, OR	79,700	LIGHT	1.15	LBNL	5.58	1/1/91	8/1/92					Good
							RECEP				1/1/91	8/1/92					Good
M	13		ORM002	EPUD	Eugene, OR	24,800	LIGHT		LBNL		11/1/88	9/1/92					Good
							RECEP				11/1/88	9/1/92					Good
S	14		ORS001	Dubel	Portland, OR	6,500	LIGHT		LBNL		12/1/87	8/1/89					Good
							RECEP				12/1/87	8/1/89					Good
L	15	148	TXL001	Government Center	Dallas, TX	473,800	WBE-MCC	2.61	ESL	10.61	1/1/95	12/31/95	6/30/92 - N/A	WD			Good
L	16	203	TXL002	John H. Reagan	Austin, TX	169,748	WBE-MCC	4.38	ESL	24.73	1/1/97	12/31/97	4/1/92 - 8/1/92	WD			Good
L	17	206	TXL003	Insurance Building	Austin, TX	102,000	WBE-MCC	3.54	ESL	19.73	1/1/96	12/31/96	4/1/92 - 9/1/92	NWD			Good
L	18	208	TXL004	Archives Building	Austin, TX	120,000	WBE-MCC	1.83	ESL	7.59	1/1/97	12/31/97	4/1/92 - 8/1/92	NWD			Good
L	19	209	TXL005	W.B. Travis	Austin, TX	491,000	WBE-MCC	3.13	ESL	16.46	1/1/97	12/31/97	6/1/92 - 8/1/93	NWD			Good
L	20	210	TXL006	L.B. Johnson	Austin, TX	308,080	WBE-MCC-AHU	5.17	ESL	33.79	1/1/97	12/31/97	1/1/94 - 5/1/94	NWD			Good
L	21	228	TXL007	Price Daniels Building	Austin, TX	151,620	WBE	2.76	ESL	15.95	1/1/98	12/31/98	2/1/94 - N/A	NWD			Good
L	22	229	TXL008	Tom C. Clark Building	Austin, TX	121,654	WBE	1.75	ESL	12.32	1/1/98	12/31/98	2/1/94 - N/A	NWD			Good
L	23	985	TXL009	Pitman Atrium	Dallas, TX	100,000	WBE-MCC		ESL		10/1/98	10/1/99	N/A	WD			OK
L	24	975	TXL010	Brazos County Courthouse	Bryan, TX	100,000	WBE-MCC		ESL		7/1/98	7/1/99	N/A	WD			Good
L	25	200	TXL011	Capitol Building	Austin, TX	282,499	WBE	3.39	ESL	21.17	7/1/97	7/1/98	N/A	NWD			OK
L	26	201	TXL012	Sam Houston Building	Austin, TX	182,961	WBE	5.39	ESL	30.18	1/1/93	12/31/94	N/A	NWD			OK
L	27	952	TXL013	Records Complex	Dallas, TX	323,232	WBE		ESL		1/1/98	12/31/98	N/A				OK
M	28	205	TXM001	James E. Rudder	Austin, TX	80,000	WBE-MCC	5.22	ESL	34.42	1/1/94	12/31/94	4/1/92 - 8/1/92	WD			OK
M	29	207	TXM002	Insurance Annex	Austin, TX	62,000	WBE-MCC-Chill	2.21	ESL	11.63	1/1/93	12/31/93	4/1/94 - N/A	WD			Good
M	30	228	TXM003	Central Services Building	Austin, TX	97,030	WBE - Chill	3.76	ESL	13.49	1/1/96	12/31/96	2/1/94 - N/A	NWD			Good
M	31	227	TXM004	Supreme Court Building	Austin, TX	72,737	WBE	2.22	ESL	11.64	1/1/98	12/31/98	2/1/94 - N/A	NWD			Good
M	32	951	TXM005	Administration Building	Dallas, TX	42,385	WBE	4.87	ESL	20.82	1/1/98	12/31/98	N/A				OK
L	33		WAL001	Bellevue	Bellevue, WA	389,000	LIGHT		LBNL	22.00	10/1/90	9/1/91					Good
							RECEP				10/1/90	9/1/91					
M	34		WAM001	East Gate	Bellevue, WA	25,100	LIGHT		LBNL	21.00	8/1/90	8/1/92					Good
							RECEP				8/1/90	8/1/92					
M	35		WAM002	West Yakima	Yakima, WA	16,200	LIGHT		LBNL	11.00	11/1/88	4/1/90					Good
							RECEP				11/1/88	4/1/90					
S	36		WAS001	STS	Ellensburg, WA	4,300	LIGHT		LBNL	10.00	1/1/89	4/1/92					Good
							RECEP				1/1/89	4/1/92					

Table 4 The Final set of the RP-1093 buildings.

Further Data from PNNL

Mr. Todd Taylor, from PNNL, provided us with 28 ELCAP office buildings data. These ELCAP buildings are in Seattle (WA), Oregon, and Idaho, and were monitored by the Bonneville Power Administration, and the Pacific Northwest National Laboratory. We will process these buildings in addition to the ESL and LBNL buildings (agreed upon in previous PMSC meetings) as time allows. Table 5, below, shows a description of these 28 sites.

Category	No.	Bldg. I.D.	Location	floor.area	Data Type
M	1	2	Seattle, WA	15,732	LIGHT
					RECEP
	2	273	Olympia, WA	NA	LIGHT
					RECEP
S	3	283	Seattle, WA	3,425	LIGHT
					RECEP
S	4	286	Eugene, OR	6,883	LIGHT
					RECEP
M	5	290	Eugene, OR	56,200	LIGHT
					RECEP
S	6	298	Seattle, WA	9,959	LIGHT
					RECEP
S	7	299	Seattle, WA	5,128	LIGHT
					RECEP
S	8	444	Seattle, WA	3,157	LIGHT
					RECEP
M	9	451	Everett, WA	15,781	LIGHT
					RECEP
S	10	453	Idaho Falls, ID	4,845	LIGHT
					RECEP
M	11	456	Seattle, WA	11,318	LIGHT
					RECEP
S	12	458	Seattle, WA	7,811	LIGHT
					RECEP
M	13	538	Seattle, WA	12,130	LIGHT
					RECEP
S	14	547	Seattle, WA	3,015	LIGHT
					RECEP
M	15	548	Seattle, WA	16,372	LIGHT
					RECEP
S	16	555	Seattle, WA	2,821	LIGHT
					RECEP
	17	583	Seattle, WA	NA	LIGHT
					RECEP
S	18	595	Seattle, WA	4,800	LIGHT
					RECEP
S	19	600	Seattle, WA	6,423	LIGHT
					RECEP
S	20	601	Seattle, WA	2,508	LIGHT
					RECEP
M	21	602	Seattle, WA	28,649	LIGHT
					RECEP
M	22	607	Richland, WA	51,022	LIGHT
					RECEP
L	23	697	Seattle, WA	127,590	LIGHT
					RECEP
M	24	714	Richland, WA	25,678	LIGHT
					RECEP
M	25	717	Seattle, WA	31,691	LIGHT
					RECEP
M	26	731	Seattle, WA	38,766	LIGHT
					RECEP
M	27	738	Seattle, WA	59,831	LIGHT
					RECEP
	28	747	Everett, WA	NA	LIGHT
					RECEP

Table 5 The ELCAP Commercial Buildings provided by PNNL for the ASHRAE 1093-RP project.

Final Templates of the Processed Buildings

We present, below, the final templates of the RP-1093 project. Templates are for individual buildings, and include all the descriptions available for the building considered, together with the derived diversity factors in a table format, and the typical load shapes. Also, a sample input file for the DOE-2 and BLAST simulation programs are included. These input files are ready to be "cut and pasted" by the user when he/she is writing a DOE-2 or BLAST input code. The final templates shown in the Appendix, below, consist of the following:

- Page 1 - Building Description, includes:
 - The Site I.D.
 - Building Name
 - Source of Data
 - Building Location
 - Building Category
 - Square Footage
 - Lighting / Receptacles EUI's
 - Lighting Type
 - Length of the Processed Data Set (Dates)
 - Data Type (Lighting, Receptacles, Lighting+Receptacles, etc...)
 - Maximum kW

- Page 2 - Typical Load Shapes of the Daytypes, includes:
 - The Typical Load Shapes for the Weekdays daytype
 - The Typical Load Shapes for the Weekends daytype
 - The days excluded from the Weekdays daytype for having extreme values usually lying within the 10th and the 90th percentiles. These days are mostly Holidays.

- Page 3 - Diversity Factors and Statistics, includes:
 - For the Weekdays daytype, the Diversity Factors (Hourly) of the building considered. The 50th percentile values are the values to be used by the analysts, while the rest of the statistics (Mean, Mean+1 Standard Deviation, etc..) are useful in shedding more light into the derived diversity factors. Two "Daily" values are also included for each statistic. *Daily Values* is the statistic applied on the daily total values of the monitored data set, while the *Daily Sum from Hourly* is the daily aggregated value as the statistic is applied on the hourly (hour-of-day) data. A comparison between these two daily values provides an idea of how much the derived typical load shapes (hourly diversity factors) deviate from a typical day.
 - Similar analysis is provided for the Weekends daytype.

- Page 4 - DOE-2 Input Sample, includes:
 - A ready-to-use example of the Lighting/Receptacle schedule within the DOE-2 simulation program. The example includes also the Heat Gain from light to space (equipment to space) and the Names (can be changed by the user) of: (1) Building Zone(s) where this schedule is to be applied, (2) Lighting/Receptacle schedule. These comments will be included by the user in the LOADS part of the DOE-2 input file.

- Page 5 - BLAST Input Sample, includes:
 - A ready-to-use example of the Lighting/Receptacle schedule within the BLAST simulation program. The example includes also the Heat Gain from light to space (equipment to space) and the Names (can be changed by the user) of Lighting/Receptacle schedule.

APPENDIX

Site	Page
TXL001.....	12
TXL002.....	18
TXL003.....	24
TXL004.....	30
TXL005.....	36
TXL006.....	42
TXL007.....	48
TXL008.....	54
TXL010.....	60
TXL011.....	66
TXL012.....	72
TXM001.....	78
TXM002.....	84
TXM003.....	90
TXM004.....	96
TXM005.....	102
DCL001.....	108
MTL001.....	114
MNL001.....	120
MNL002.....	126
MNL003.....	132
MNL004.....	138
MNM002.....	144

TXL001

(Page 1) Building Descriptions: (TXL001)

(This section depends on the extent of information available on each building).

Building 16:

Building Name: Government Center Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Dallas, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Fourteen story, 473,800 ft² .

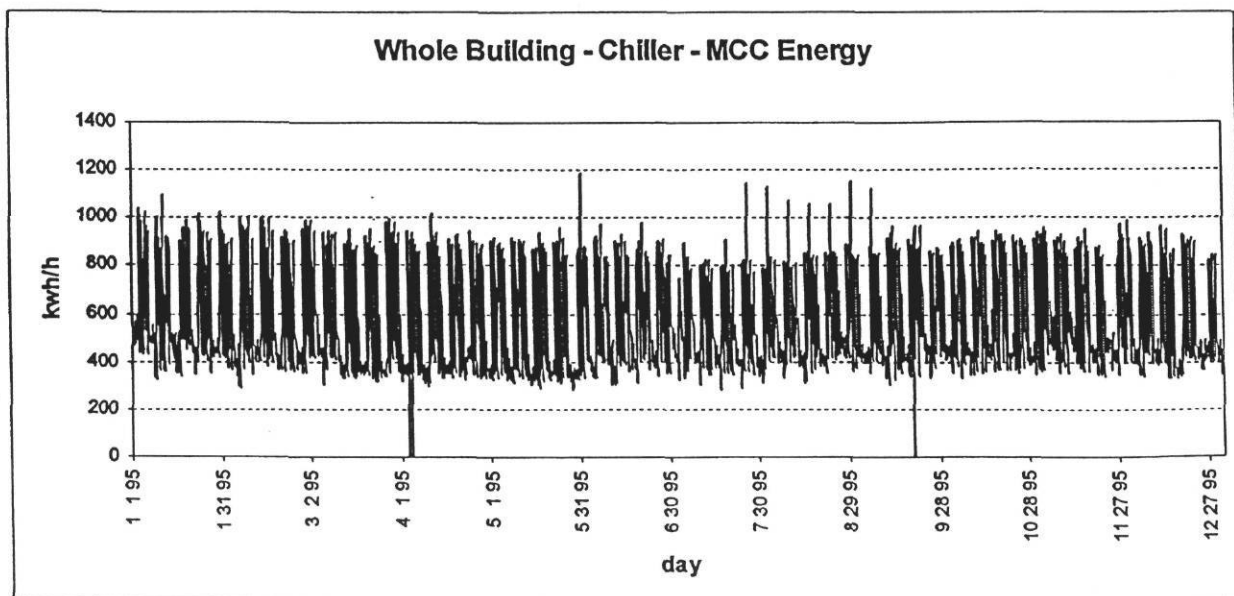
Lighting EUI: $[(12.93 \times 5) + (8.34 \times 2)] \times 52 \times 2.51 = 10.61 \text{ kWh/ft}^2 \cdot \text{year}$

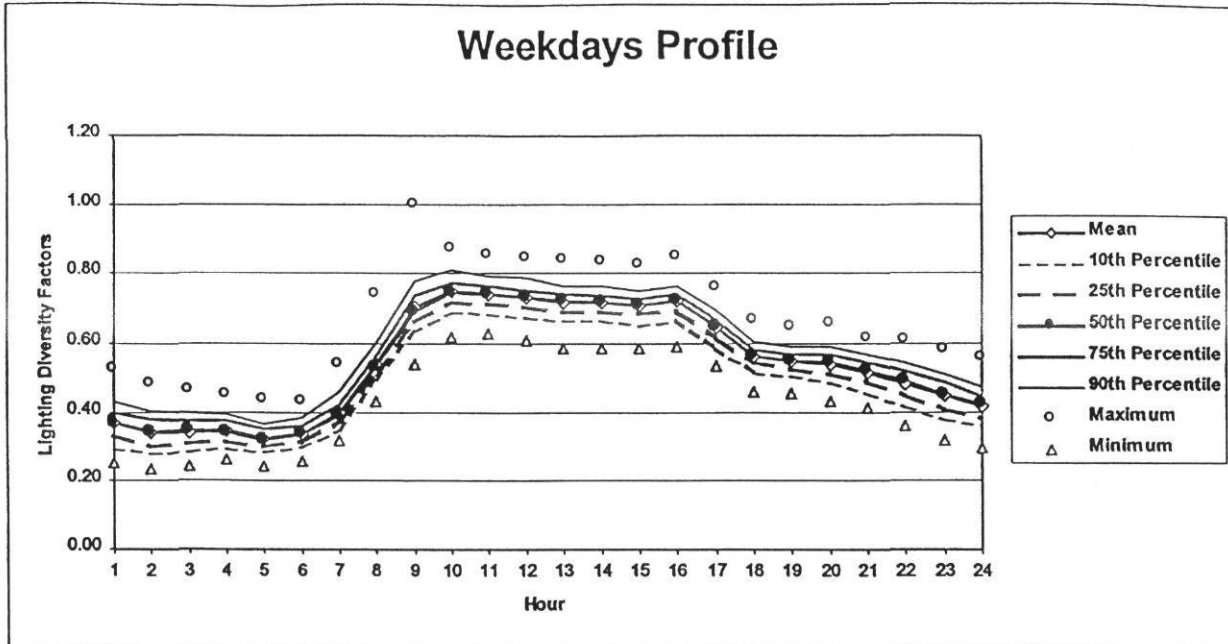
Lighting Type: mixture of 34-W fluorescent (5,422 lamps) and incandescent lamps.

Dates: 1/1/95 - 12/31/95

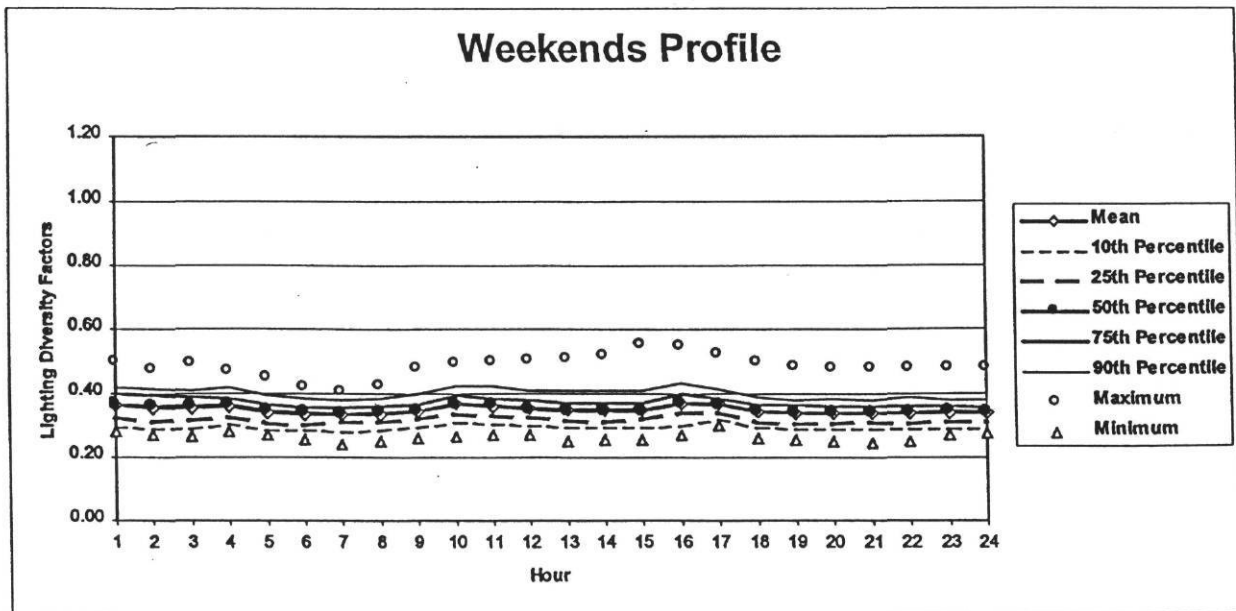
Data Type: Lighting + Receptacles = WBE - MCC - Chillers = ch1016 - (ch1010 + ch1011 + ch1012 + ch1013 + ch1526) - (ch1000 + ch1001 + ch1002 + ch1004 + ch1005 + ch1006 + ch1007 + ch1008 + ch1009 + ch1014 + ch1015 + ch1022)

Maximum kW: 1,189 kW





*The dates that are excluded from the weekday profile are as follow: 01/02/95, 01/16/95, 05/29/95, 07/04/95, 09/04/95, 11/23/95, 11/24/95, 12/25/95, and 12/26/95.



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1St D	Mean-1StD	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.37	0.42	0.32	0.30	0.33	0.37	0.40	0.43	0.52	0.25
2.00	0.34	0.39	0.29	0.28	0.30	0.34	0.38	0.40	0.48	0.24
3.00	0.34	0.39	0.30	0.29	0.31	0.35	0.38	0.40	0.46	0.24
4.00	0.35	0.39	0.31	0.30	0.32	0.34	0.38	0.40	0.45	0.26
5.00	0.32	0.36	0.29	0.28	0.30	0.32	0.35	0.37	0.44	0.24
6.00	0.34	0.37	0.31	0.30	0.31	0.34	0.36	0.38	0.43	0.26
7.00	0.40	0.43	0.36	0.35	0.37	0.39	0.42	0.46	0.54	0.32
8.00	0.54	0.58	0.49	0.49	0.51	0.53	0.56	0.60	0.74	0.43
9.00	0.70	0.77	0.63	0.63	0.66	0.69	0.73	0.78	1.00	0.54
10.00	0.75	0.80	0.70	0.69	0.72	0.75	0.77	0.81	0.87	0.62
11.00	0.74	0.78	0.70	0.68	0.71	0.74	0.76	0.79	0.85	0.63
12.00	0.73	0.77	0.69	0.68	0.70	0.73	0.75	0.79	0.84	0.61
13.00	0.72	0.76	0.68	0.66	0.69	0.72	0.74	0.77	0.84	0.58
14.00	0.72	0.76	0.67	0.66	0.69	0.72	0.74	0.76	0.84	0.59
15.00	0.71	0.75	0.67	0.65	0.68	0.71	0.73	0.75	0.82	0.59
16.00	0.72	0.76	0.68	0.66	0.69	0.72	0.74	0.77	0.85	0.59
17.00	0.65	0.69	0.60	0.59	0.62	0.64	0.67	0.69	0.76	0.53
18.00	0.56	0.60	0.53	0.51	0.54	0.56	0.58	0.60	0.67	0.46
19.00	0.55	0.58	0.51	0.50	0.53	0.55	0.57	0.59	0.64	0.45
20.00	0.54	0.58	0.50	0.49	0.51	0.54	0.57	0.59	0.66	0.43
21.00	0.52	0.56	0.48	0.45	0.49	0.52	0.55	0.57	0.62	0.41
22.00	0.48	0.53	0.44	0.42	0.45	0.49	0.52	0.54	0.61	0.36
23.00	0.45	0.50	0.40	0.38	0.41	0.45	0.49	0.51	0.58	0.32
24.00	0.42	0.46	0.37	0.36	0.38	0.42	0.45	0.47	0.56	0.30
Daily Values	12.93	13.54	12.32	12.20	12.56	12.93	13.27	13.68	14.83	11.34
Daily Sum from Hourly	12.94	13.98	11.90	11.62	12.23	12.92	13.59	14.22	16.08	10.26

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1StD	Mean-1StD	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.36	0.41	0.31	0.30	0.32	0.36	0.40	0.42	0.50	0.28
2.00	0.35	0.40	0.31	0.29	0.31	0.36	0.39	0.41	0.47	0.27
3.00	0.35	0.40	0.31	0.29	0.31	0.36	0.39	0.41	0.49	0.26
4.00	0.36	0.40	0.32	0.30	0.33	0.37	0.38	0.42	0.47	0.28
5.00	0.34	0.38	0.30	0.29	0.31	0.34	0.36	0.39	0.45	0.27
6.00	0.33	0.37	0.30	0.28	0.30	0.34	0.36	0.38	0.42	0.26
7.00	0.33	0.37	0.30	0.28	0.31	0.33	0.35	0.38	0.40	0.24
8.00	0.33	0.37	0.30	0.28	0.31	0.34	0.36	0.38	0.42	0.25
9.00	0.34	0.38	0.30	0.29	0.32	0.34	0.37	0.40	0.48	0.26
10.00	0.37	0.41	0.32	0.31	0.33	0.36	0.39	0.42	0.49	0.27
11.00	0.36	0.41	0.31	0.30	0.33	0.36	0.38	0.42	0.50	0.27
12.00	0.35	0.40	0.31	0.30	0.32	0.35	0.38	0.41	0.50	0.27
13.00	0.35	0.39	0.30	0.29	0.31	0.34	0.37	0.41	0.51	0.25
14.00	0.35	0.39	0.30	0.29	0.31	0.34	0.37	0.41	0.52	0.25
15.00	0.35	0.40	0.30	0.30	0.32	0.34	0.37	0.41	0.55	0.25
16.00	0.37	0.42	0.32	0.30	0.34	0.37	0.40	0.43	0.55	0.27
17.00	0.37	0.41	0.32	0.32	0.34	0.36	0.39	0.41	0.52	0.30
18.00	0.35	0.39	0.30	0.30	0.31	0.35	0.37	0.39	0.50	0.26
19.00	0.34	0.38	0.30	0.29	0.30	0.34	0.36	0.38	0.48	0.25
20.00	0.34	0.38	0.30	0.29	0.30	0.34	0.36	0.38	0.48	0.25
21.00	0.34	0.38	0.30	0.29	0.31	0.34	0.36	0.38	0.48	0.25
22.00	0.34	0.38	0.30	0.29	0.31	0.34	0.36	0.39	0.48	0.25
23.00	0.34	0.38	0.30	0.29	0.31	0.34	0.36	0.38	0.48	0.27
24.00	0.34	0.38	0.30	0.29	0.31	0.34	0.36	0.38	0.48	0.27
Daily Values	8.34	9.24	7.43	7.18	7.75	8.34	8.86	9.47	11.22	6.71
Daily Sum from Hourly	8.34	9.37	7.31	7.03	7.56	8.36	8.92	9.59	11.62	6.30

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Dallas Government Center Bldg., Dallas, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.37) (2) (0.34) (3) (0.35) (4) (0.34) (5) (0.32) (6) (0.34)
(7) (0.39) (8) (0.53) (9) (0.69) (10) (0.75) (11) (0.74) (12) (0.73)
(13) (0.72) (14) (0.72) (15) (0.71) (16) (0.72) (17) (0.64) (18) (0.56)
(19) (0.55) (20) (0.54) (21) (0.52) (22) (0.49) (23) (0.45) (24) (0.42) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.36) (2) (0.36) (3) (0.36) (4) (0.37) (5) (0.34) (6) (0.34)
(7) (0.33) (8) (0.34) (9) (0.34) (10) (0.36) (11) (0.36) (12) (0.35)
(13) (0.34) (14) (0.34) (15) (0.34) (16) (0.37) (17) (0.36) (18) (0.35)
(19) (0.34) (20) (0.34) (21) (0.34) (22) (0.34) (23) (0.34) (24) (0.34) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 2.51 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan. 1 - Dec. 31 1995.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL002

(Page 1) Building Descriptions: (TXL002)

(This section depends on the extent of information available on each building).

Building 17:

Building Name: John H. Reagan Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Five story, 169,746 ft² .

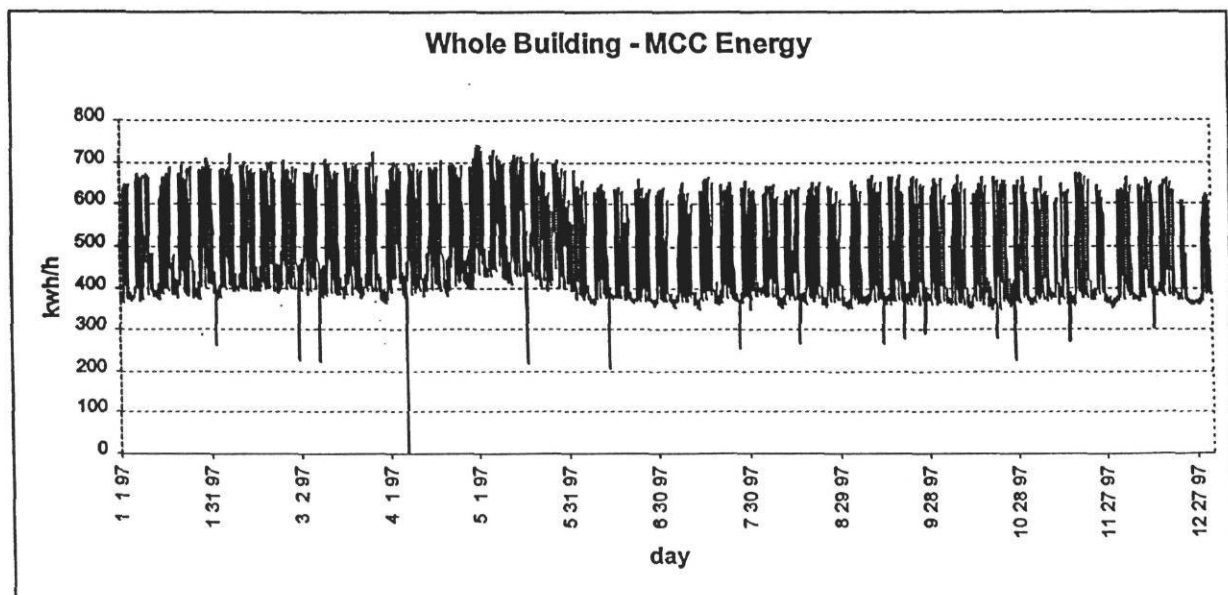
Lighting EUI: $[(16.68 \times 5) + (12.79 \times 3)] \times 52 \times 4.36 = 24.73 \text{ kWh/ft}^2 \cdot \text{year}$

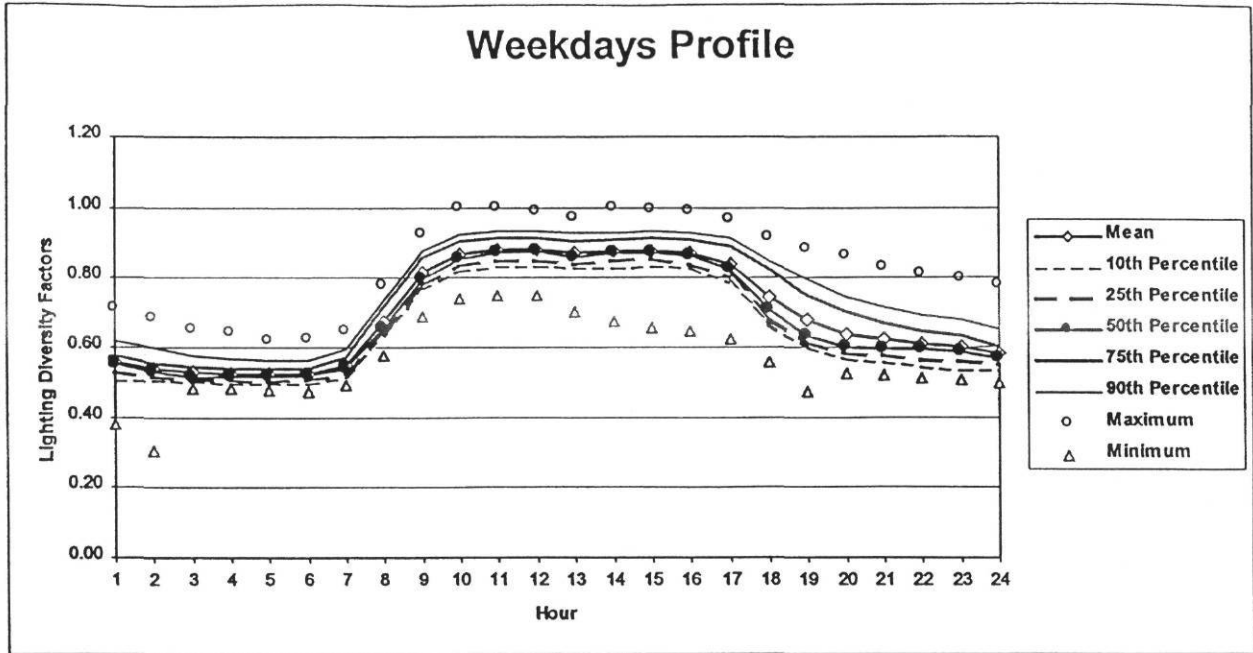
Lighting Type: 100 % Fluorescent (34-W)

Dates: 1/1/97 - 12/31/97

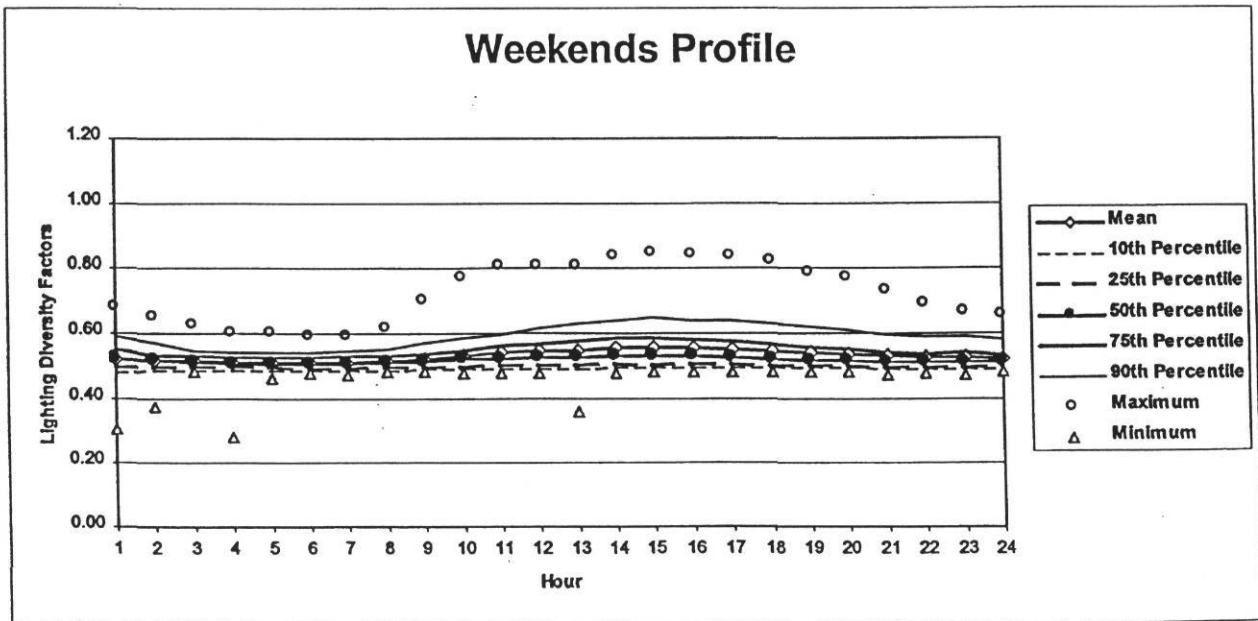
Data Type: Lighting + Receptacles = WBE - MCC = ch0211 - (ch0199 + ch0200 + ch0201 + ch0202)

Maximum kW: 741 kW





**The dates that are excluded from the weekday profile are as follow: 01/01/97, 01/13/97, 03/28/97, 07/04/97, 09/01/97, 11/11/97, 11/27/97, 11/28/97, and 12/24 - 26/97.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.56	0.60	0.51	0.51	0.53	0.55	0.58	0.62	0.71	0.38
2.00	0.54	0.58	0.50	0.50	0.52	0.53	0.55	0.60	0.68	0.31
3.00	0.53	0.56	0.50	0.50	0.51	0.52	0.54	0.58	0.65	0.48
4.00	0.53	0.56	0.50	0.50	0.50	0.52	0.54	0.57	0.64	0.48
5.00	0.52	0.55	0.50	0.50	0.50	0.52	0.54	0.56	0.62	0.48
6.00	0.53	0.55	0.50	0.50	0.51	0.52	0.54	0.56	0.63	0.47
7.00	0.55	0.58	0.52	0.52	0.53	0.54	0.57	0.59	0.65	0.49
8.00	0.68	0.72	0.63	0.63	0.64	0.66	0.72	0.74	0.78	0.58
9.00	0.81	0.86	0.77	0.77	0.78	0.80	0.86	0.88	0.92	0.69
10.00	0.87	0.91	0.82	0.82	0.83	0.85	0.91	0.92	1.00	0.74
11.00	0.88	0.92	0.84	0.83	0.85	0.87	0.91	0.93	1.00	0.75
12.00	0.88	0.92	0.84	0.84	0.85	0.88	0.91	0.93	0.99	0.75
13.00	0.87	0.91	0.83	0.83	0.84	0.86	0.91	0.93	0.97	0.70
14.00	0.88	0.92	0.83	0.83	0.85	0.87	0.91	0.93	1.00	0.67
15.00	0.88	0.92	0.83	0.83	0.85	0.87	0.91	0.93	0.99	0.66
16.00	0.87	0.92	0.82	0.83	0.84	0.86	0.91	0.93	0.99	0.65
17.00	0.84	0.90	0.78	0.79	0.80	0.82	0.89	0.91	0.97	0.62
18.00	0.75	0.82	0.67	0.67	0.68	0.71	0.82	0.85	0.91	0.56
19.00	0.68	0.76	0.60	0.60	0.62	0.63	0.75	0.80	0.88	0.47
20.00	0.64	0.72	0.56	0.57	0.58	0.60	0.70	0.75	0.86	0.52
21.00	0.62	0.69	0.56	0.56	0.57	0.59	0.67	0.72	0.83	0.52
22.00	0.61	0.67	0.55	0.54	0.56	0.59	0.65	0.69	0.81	0.51
23.00	0.60	0.65	0.54	0.54	0.56	0.59	0.63	0.68	0.80	0.50
24.00	0.58	0.63	0.53	0.53	0.55	0.57	0.60	0.65	0.78	0.50
Daily Values	16.68	17.75	15.62	15.65	15.89	16.17	17.54	18.13	19.45	14.50
Daily Sum from Hourly	16.68	17.84	15.53	15.52	15.85	16.33	17.53	18.26	20.06	13.48
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.52	0.58	0.46	0.48	0.50	0.52	0.55	0.59	0.68	0.30
2.00	0.52	0.56	0.47	0.49	0.50	0.52	0.53	0.57	0.65	0.37
3.00	0.52	0.55	0.49	0.49	0.50	0.51	0.53	0.55	0.63	0.48
4.00	0.51	0.55	0.47	0.49	0.50	0.51	0.53	0.54	0.60	0.28
5.00	0.51	0.54	0.49	0.49	0.50	0.51	0.53	0.54	0.60	0.46
6.00	0.51	0.54	0.49	0.49	0.49	0.51	0.53	0.54	0.59	0.48
7.00	0.51	0.54	0.49	0.49	0.49	0.51	0.53	0.55	0.59	0.47
8.00	0.52	0.55	0.49	0.49	0.50	0.51	0.53	0.55	0.62	0.48
9.00	0.52	0.56	0.49	0.49	0.50	0.51	0.54	0.57	0.70	0.48
10.00	0.53	0.59	0.48	0.49	0.50	0.52	0.55	0.59	0.77	0.48
11.00	0.54	0.60	0.48	0.49	0.50	0.52	0.56	0.60	0.81	0.48
12.00	0.55	0.61	0.48	0.50	0.50	0.53	0.57	0.62	0.81	0.48
13.00	0.55	0.62	0.48	0.50	0.51	0.53	0.58	0.63	0.81	0.36
14.00	0.56	0.63	0.48	0.50	0.51	0.53	0.59	0.64	0.83	0.48
15.00	0.56	0.63	0.48	0.50	0.50	0.53	0.59	0.65	0.84	0.48
16.00	0.56	0.63	0.48	0.50	0.51	0.53	0.58	0.64	0.84	0.48
17.00	0.55	0.62	0.48	0.50	0.51	0.53	0.58	0.64	0.83	0.48
18.00	0.55	0.61	0.48	0.50	0.50	0.52	0.57	0.63	0.82	0.49
19.00	0.54	0.60	0.48	0.50	0.50	0.52	0.56	0.62	0.78	0.48
20.00	0.54	0.60	0.48	0.50	0.50	0.52	0.55	0.61	0.77	0.48
21.00	0.53	0.58	0.48	0.49	0.50	0.52	0.54	0.60	0.73	0.47
22.00	0.53	0.57	0.48	0.49	0.50	0.51	0.54	0.59	0.69	0.48
23.00	0.53	0.57	0.49	0.49	0.50	0.51	0.54	0.59	0.67	0.47
24.00	0.52	0.56	0.49	0.49	0.50	0.51	0.54	0.58	0.66	0.48
Daily Values	12.79	13.87	11.71	11.87	12.04	12.37	13.28	14.26	16.56	11.67
Daily Sum from Hourly	12.79	14.00	11.57	11.83	12.01	12.45	13.24	14.26	17.35	10.89
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (John H. Reagan Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.55) (2) (0.53) (3) (0.52) (4) (0.52) (5) (0.52) (6) (0.52)
(7) (0.54) (8) (0.66) (9) (0.80) (10) (0.85) (11) (0.87) (12) (0.88)
(13) (0.86) (14) (0.87) (15) (0.87) (16) (0.86) (17) (0.82) (18) (0.71)
(19) (0.63) (20) (0.60) (21) (0.59) (22) (0.59) (23) (0.59) (24) (0.57) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.52) (2) (0.52) (3) (0.51) (4) (0.51) (5) (0.51) (6) (0.51)
(7) (0.51) (8) (0.51) (9) (0.51) (10) (0.52) (11) (0.52) (12) (0.53)
(13) (0.53) (14) (0.53) (15) (0.53) (16) (0.53) (17) (0.53) (18) (0.52)
(19) (0.52) (20) (0.52) (21) (0.52) (22) (0.51) (23) (0.51) (24) (0.51) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = BLE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 4.36 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan. 1 - Dec. 31, 1997.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL003

(Page 1) Building Descriptions: (TXL003)

(This section depends on the extent of information available on each building).

Building 206:

Building Name: Insurance Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Four story, 102,000 ft² .

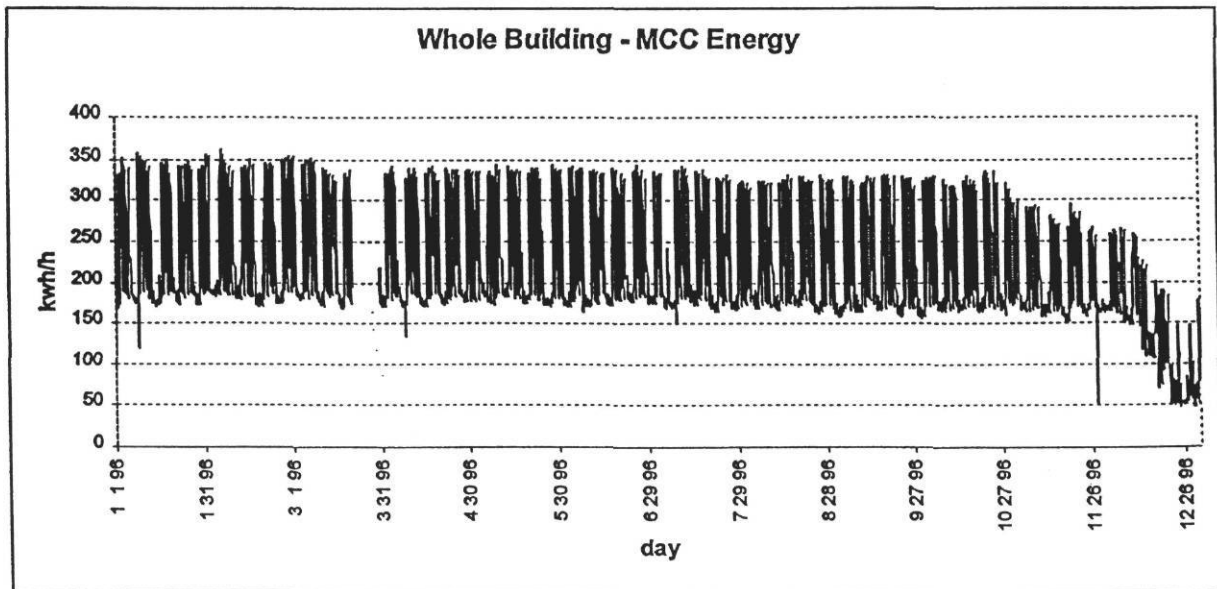
Lighting EUI: $[(16.92 \times 5) + (11.34 \times 2)] \times 52 \times 3.54 = 19.73 \text{ kWh/ft}^2 \cdot \text{year}$

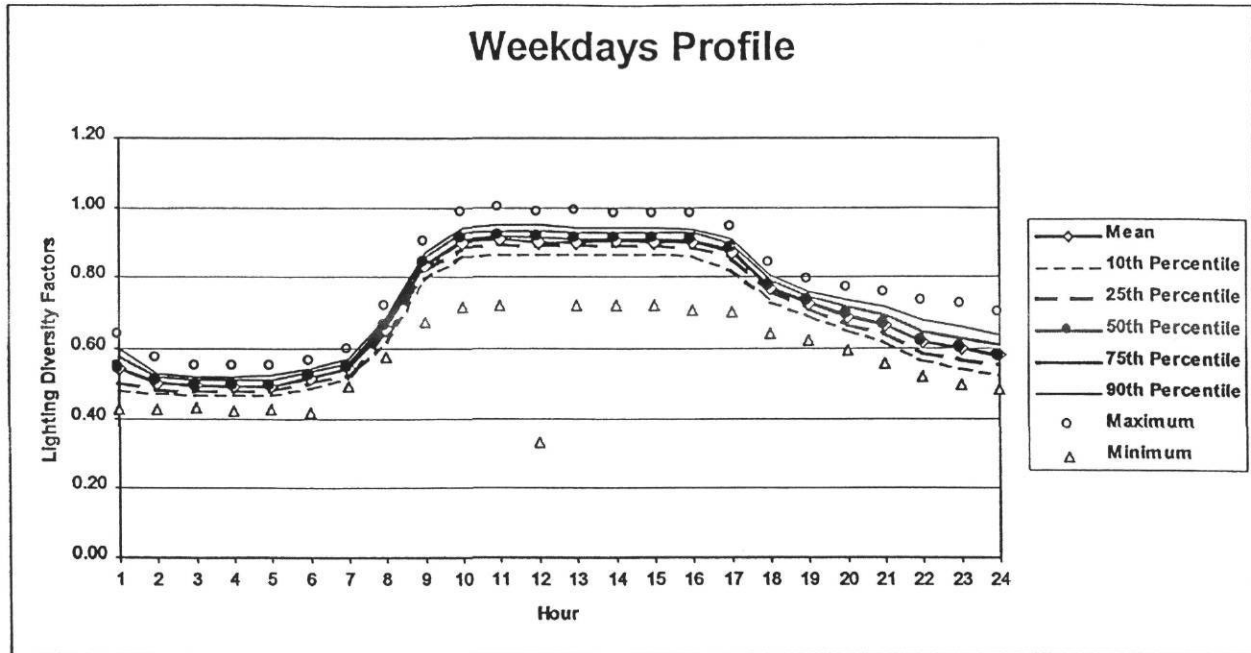
Lighting Type: 100% fluorescent

Dates: 1/1/96 - 12/31/96

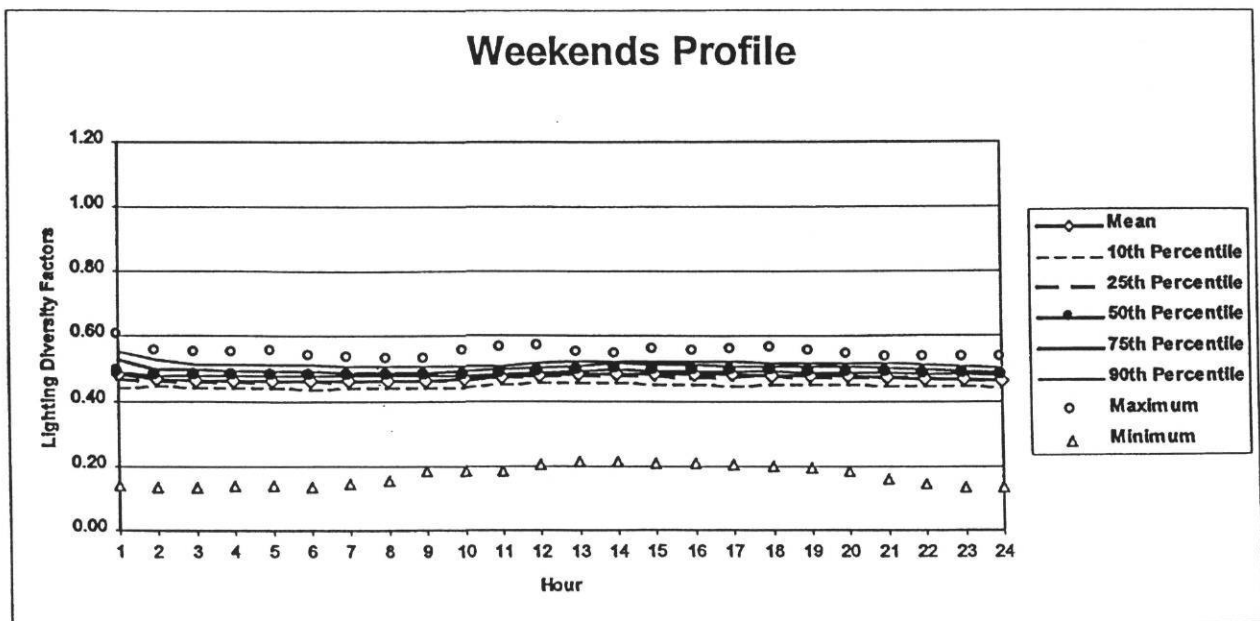
Data Type: Light + Equipment = WBE - MCC = ch0215 - ch0214

Maximum kW: 361 kW





*The dates that are excluded from the weekday profile are as follow: 1/1/96, 1/15/96, 2/2/96, 2/19/96, 5/27/96, 7/4/96, 7/5/96, 9/2/96, 11/11/96, and 11/27 - 12/31/96.



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.54	0.59	0.50	0.48	0.50	0.54	0.58	0.60	0.64	0.43
2.00	0.50	0.53	0.48	0.47	0.48	0.50	0.52	0.53	0.57	0.43
3.00	0.49	0.52	0.47	0.47	0.48	0.49	0.51	0.52	0.55	0.43
4.00	0.49	0.52	0.47	0.47	0.48	0.49	0.51	0.52	0.55	0.42
5.00	0.49	0.52	0.47	0.47	0.48	0.49	0.51	0.52	0.55	0.43
6.00	0.52	0.54	0.50	0.49	0.50	0.52	0.53	0.54	0.56	0.42
7.00	0.54	0.56	0.52	0.52	0.53	0.54	0.56	0.57	0.59	0.49
8.00	0.66	0.68	0.63	0.62	0.64	0.66	0.68	0.69	0.72	0.57
9.00	0.83	0.87	0.79	0.79	0.82	0.84	0.86	0.87	0.90	0.68
10.00	0.90	0.95	0.85	0.86	0.89	0.91	0.93	0.94	0.99	0.72
11.00	0.91	0.96	0.86	0.87	0.89	0.92	0.93	0.95	1.00	0.72
12.00	0.90	0.96	0.84	0.87	0.89	0.91	0.93	0.95	0.99	0.33
13.00	0.90	0.95	0.85	0.87	0.89	0.91	0.93	0.94	0.99	0.72
14.00	0.90	0.95	0.86	0.87	0.89	0.91	0.93	0.94	0.98	0.72
15.00	0.90	0.95	0.85	0.87	0.89	0.91	0.93	0.94	0.98	0.72
16.00	0.90	0.95	0.85	0.86	0.89	0.91	0.93	0.94	0.98	0.71
17.00	0.87	0.91	0.83	0.82	0.86	0.88	0.90	0.91	0.94	0.70
18.00	0.77	0.81	0.74	0.73	0.76	0.77	0.79	0.81	0.84	0.64
19.00	0.73	0.76	0.70	0.70	0.71	0.73	0.75	0.76	0.79	0.62
20.00	0.69	0.73	0.66	0.65	0.67	0.69	0.72	0.74	0.77	0.60
21.00	0.67	0.71	0.63	0.62	0.64	0.67	0.69	0.72	0.75	0.56
22.00	0.62	0.66	0.57	0.57	0.59	0.62	0.64	0.68	0.73	0.52
23.00	0.60	0.65	0.56	0.54	0.57	0.60	0.63	0.66	0.72	0.50
24.00	0.58	0.62	0.54	0.53	0.55	0.58	0.61	0.64	0.70	0.48

Daily Values	16.92	17.66	16.17	16.19	16.52	17.06	17.41	17.67	18.34	14.35
Daily Sum from Hourly	16.92	17.83	16.01	15.99	16.48	17.02	17.50	17.88	18.78	13.57

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.48	0.57	0.40	0.44	0.47	0.49	0.53	0.56	0.60	0.14
2.00	0.47	0.54	0.39	0.45	0.46	0.48	0.50	0.53	0.55	0.14
3.00	0.46	0.54	0.39	0.44	0.46	0.48	0.50	0.51	0.55	0.13
4.00	0.46	0.54	0.39	0.44	0.46	0.48	0.50	0.51	0.55	0.14
5.00	0.46	0.54	0.39	0.44	0.46	0.48	0.49	0.51	0.55	0.14
6.00	0.46	0.53	0.39	0.44	0.46	0.48	0.49	0.51	0.54	0.13
7.00	0.46	0.53	0.39	0.44	0.46	0.48	0.49	0.51	0.53	0.14
8.00	0.46	0.53	0.40	0.44	0.46	0.48	0.49	0.51	0.53	0.15
9.00	0.47	0.52	0.41	0.44	0.46	0.48	0.49	0.51	0.53	0.18
10.00	0.47	0.53	0.41	0.44	0.47	0.48	0.49	0.51	0.55	0.18
11.00	0.47	0.53	0.42	0.45	0.47	0.48	0.50	0.51	0.56	0.19
12.00	0.48	0.53	0.42	0.46	0.47	0.49	0.50	0.52	0.57	0.20
13.00	0.48	0.54	0.43	0.46	0.48	0.49	0.51	0.52	0.55	0.21
14.00	0.49	0.54	0.43	0.46	0.48	0.50	0.52	0.52	0.54	0.21
15.00	0.48	0.54	0.43	0.45	0.48	0.49	0.51	0.52	0.56	0.21
16.00	0.48	0.54	0.43	0.45	0.48	0.49	0.51	0.52	0.55	0.21
17.00	0.48	0.54	0.42	0.45	0.47	0.49	0.51	0.53	0.56	0.21
18.00	0.48	0.54	0.42	0.45	0.48	0.49	0.51	0.52	0.56	0.20
19.00	0.48	0.54	0.42	0.45	0.48	0.49	0.51	0.52	0.55	0.20
20.00	0.48	0.54	0.41	0.45	0.47	0.49	0.51	0.52	0.54	0.18
21.00	0.47	0.54	0.40	0.45	0.47	0.49	0.50	0.52	0.54	0.16
22.00	0.47	0.54	0.40	0.45	0.47	0.48	0.50	0.51	0.53	0.14
23.00	0.47	0.54	0.39	0.45	0.47	0.48	0.49	0.51	0.53	0.14
24.00	0.46	0.53	0.39	0.44	0.46	0.48	0.49	0.50	0.53	0.13

Daily Values	11.34	12.87	9.80	10.74	11.28	11.67	12.00	12.32	12.76	4.23
Daily Sum from Hourly	11.34	12.90	9.78	10.76	11.25	11.64	12.03	12.40	13.16	4.08

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Insurance Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.54) (2) (0.50) (3) (0.49) (4) (0.49) (5) (0.49) (6) (0.52)
(7) (0.54) (8) (0.66) (9) (0.84) (10) (0.91) (11) (0.92) (12) (0.91)
(13) (0.91) (14) (0.91) (15) (0.91) (16) (0.91) (17) (0.88) (18) (0.77)
(19) (0.73) (20) (0.69) (21) (0.67) (22) (0.62) (23) (0.60) (24) (0.58) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.49) (2) (0.48) (3) (0.48) (4) (0.48) (5) (0.48) (6) (0.48)
(7) (0.48) (8) (0.48) (9) (0.48) (10) (0.48) (11) (0.48) (12) (0.49)
(13) (0.49) (14) (0.50) (15) (0.49) (16) (0.49) (17) (0.49) (18) (0.49)
(19) (0.49) (20) (0.49) (21) (0.49) (22) (0.48) (23) (0.48) (24) (0.48) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 3.54 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan. 1 - Dec. 31, 1996.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL004

(Page 1) Building Descriptions: (TXL004)

(This section depends on the extent of information available on each building).

Building 208:

Building Name: Lorenzo De Zavala Archives & Library Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Five story, 120,000 ft².

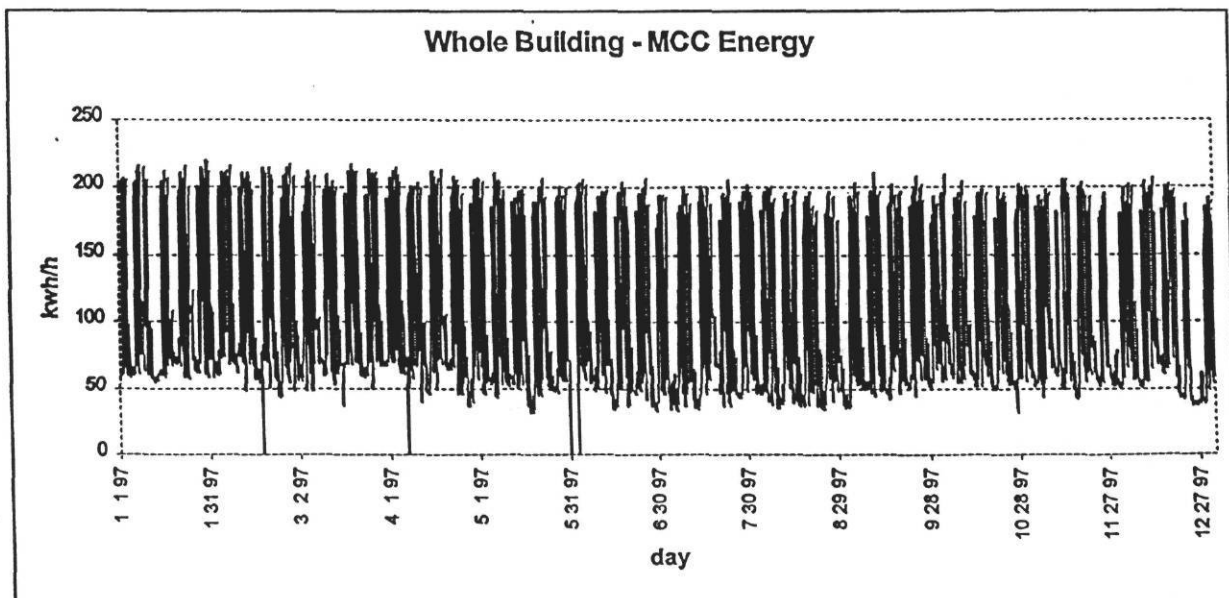
Lighting EUI: $[(13.39 \times 5) + (6.53 \times 2)] \times 52 \times 1.83 = 7.59 \text{ kWh/ft}^2 \cdot \text{year}$

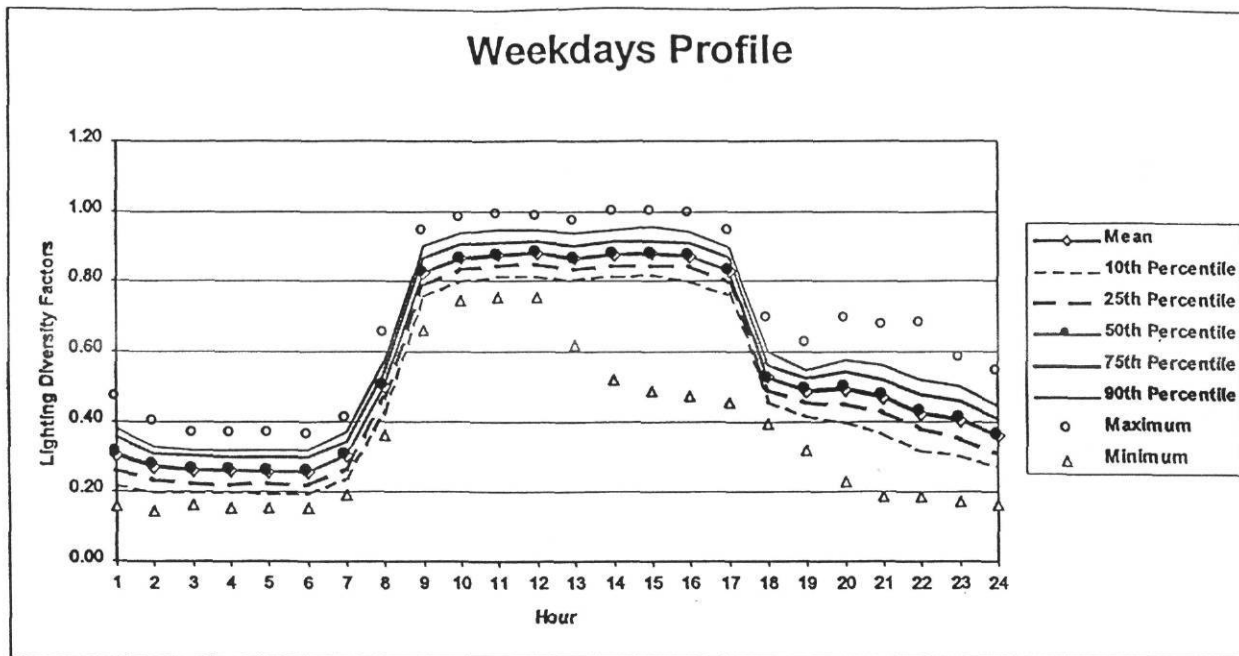
Lighting Type: 100% fluorescent (34-W)

Dates: 1/1/97 - 12/31/97

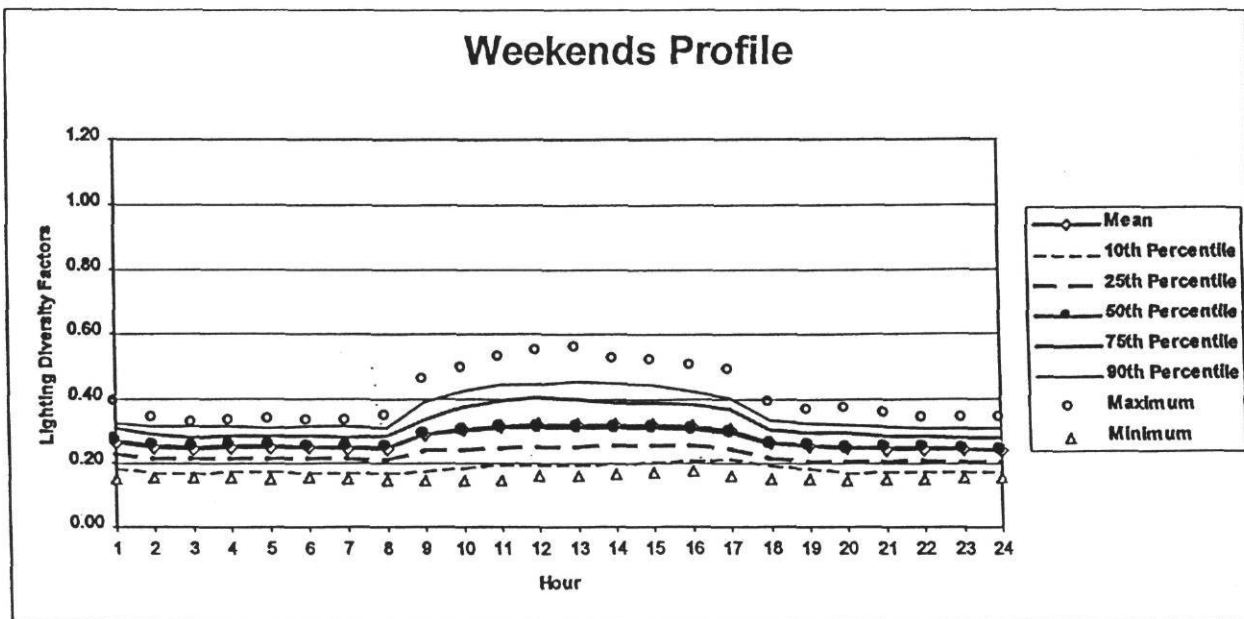
Data Type: Light + Equipment = WBE - MCC = (ch0221 + ch0222) - ch0220

Maximum kW: 219 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/97, 1/13/97, 1/14/97, 1/20/97, 5/26/97, 7/4/97, 9/1/97, 11/11/97, 11/27/97, 11/28/97, and 12/24 - 12/26/97.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.31	0.37	0.24	0.22	0.26	0.31	0.36	0.38	0.47	0.16
2.00	0.27	0.32	0.22	0.20	0.23	0.28	0.31	0.33	0.40	0.14
3.00	0.26	0.31	0.21	0.20	0.23	0.26	0.30	0.32	0.37	0.16
4.00	0.26	0.31	0.21	0.20	0.22	0.26	0.30	0.32	0.36	0.15
5.00	0.26	0.31	0.21	0.20	0.22	0.26	0.30	0.32	0.36	0.16
6.00	0.26	0.31	0.21	0.20	0.22	0.26	0.30	0.32	0.36	0.16
7.00	0.31	0.36	0.26	0.24	0.27	0.31	0.34	0.37	0.41	0.19
8.00	0.50	0.56	0.44	0.43	0.46	0.50	0.54	0.57	0.65	0.36
9.00	0.83	0.88	0.77	0.76	0.79	0.83	0.87	0.90	0.94	0.66
10.00	0.87	0.92	0.82	0.80	0.83	0.86	0.91	0.94	0.98	0.75
11.00	0.88	0.93	0.83	0.81	0.84	0.87	0.91	0.95	0.99	0.75
12.00	0.88	0.93	0.83	0.82	0.85	0.88	0.91	0.95	0.99	0.76
13.00	0.87	0.92	0.82	0.81	0.83	0.86	0.90	0.94	0.97	0.62
14.00	0.88	0.93	0.82	0.82	0.84	0.88	0.91	0.95	1.00	0.52
15.00	0.88	0.94	0.82	0.82	0.84	0.88	0.91	0.95	1.00	0.49
16.00	0.87	0.93	0.82	0.80	0.84	0.87	0.91	0.94	0.99	0.47
17.00	0.83	0.88	0.77	0.76	0.79	0.83	0.87	0.90	0.94	0.45
18.00	0.53	0.58	0.48	0.46	0.49	0.53	0.56	0.60	0.70	0.40
19.00	0.49	0.54	0.43	0.42	0.45	0.49	0.52	0.55	0.62	0.32
20.00	0.49	0.56	0.42	0.40	0.45	0.50	0.55	0.57	0.69	0.23
21.00	0.47	0.54	0.39	0.36	0.43	0.47	0.52	0.56	0.68	0.19
22.00	0.42	0.50	0.35	0.32	0.38	0.43	0.48	0.52	0.68	0.19
23.00	0.40	0.48	0.33	0.31	0.35	0.41	0.46	0.50	0.58	0.17
24.00	0.36	0.43	0.29	0.28	0.31	0.36	0.41	0.45	0.55	0.16

Daily Values	13.36	14.25	12.48	12.27	12.71	13.36	14.01	14.51	15.39	11.13
Daily Sum from Hourly	13.36	14.72	12.01	11.63	12.45	13.38	14.34	15.08	16.68	8.62

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.26	0.32	0.21	0.18	0.23	0.27	0.31	0.33	0.39	0.15
2.00	0.25	0.30	0.20	0.17	0.22	0.26	0.29	0.31	0.34	0.16
3.00	0.25	0.30	0.20	0.17	0.21	0.25	0.28	0.31	0.33	0.16
4.00	0.25	0.30	0.20	0.17	0.22	0.25	0.28	0.31	0.33	0.15
5.00	0.25	0.30	0.20	0.17	0.22	0.25	0.28	0.31	0.33	0.15
6.00	0.25	0.30	0.20	0.17	0.21	0.25	0.28	0.31	0.33	0.15
7.00	0.25	0.30	0.20	0.17	0.21	0.25	0.28	0.31	0.33	0.15
8.00	0.24	0.30	0.19	0.17	0.21	0.25	0.28	0.31	0.35	0.14
9.00	0.29	0.36	0.21	0.18	0.24	0.29	0.34	0.39	0.46	0.15
10.00	0.30	0.39	0.22	0.19	0.24	0.30	0.37	0.43	0.49	0.15
11.00	0.32	0.41	0.22	0.20	0.24	0.31	0.40	0.44	0.53	0.15
12.00	0.32	0.41	0.23	0.20	0.25	0.31	0.41	0.44	0.55	0.16
13.00	0.32	0.42	0.23	0.19	0.25	0.31	0.40	0.45	0.56	0.16
14.00	0.32	0.41	0.23	0.20	0.26	0.31	0.39	0.45	0.52	0.16
15.00	0.32	0.40	0.23	0.20	0.25	0.31	0.39	0.44	0.52	0.17
16.00	0.31	0.39	0.23	0.21	0.25	0.30	0.38	0.42	0.50	0.17
17.00	0.31	0.38	0.23	0.21	0.25	0.30	0.37	0.40	0.49	0.16
18.00	0.26	0.32	0.21	0.19	0.22	0.26	0.30	0.33	0.39	0.15
19.00	0.25	0.31	0.20	0.18	0.20	0.25	0.29	0.33	0.37	0.15
20.00	0.25	0.30	0.19	0.17	0.20	0.25	0.29	0.32	0.37	0.15
21.00	0.25	0.30	0.19	0.18	0.21	0.25	0.29	0.31	0.35	0.15
22.00	0.24	0.29	0.20	0.17	0.21	0.25	0.28	0.31	0.34	0.15
23.00	0.24	0.29	0.19	0.17	0.21	0.25	0.28	0.31	0.34	0.15
24.00	0.24	0.29	0.19	0.17	0.20	0.24	0.28	0.31	0.34	0.15

Daily Values	6.53	7.91	5.15	4.76	5.52	6.51	7.51	8.47	9.51	3.93
Daily Sum from Hourly	6.53	8.07	5.00	4.39	5.40	6.50	7.74	8.59	9.83	3.69

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Archives Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```
$ ***** LIGHTING SCHEDULES ***** $
```

```
$ WEEKDAY SCHEDULE $
```

```
WKDAY = DAY-SCHEDULE
```

```
(1) (0.31) (2) (0.28) (3) (0.26) (4) (0.26) (5) (0.26) (6) (0.26)
(7) (0.31) (8) (0.50) (9) (0.83) (10) (0.86) (11) (0.87) (12) (0.88)
(13) (0.86) (14) (0.88) (15) (0.88) (16) (0.87) (17) (0.83) (18) (0.53)
(19) (0.49) (20) (0.50) (21) (0.47) (22) (0.43) (23) (0.41) (24) (0.36) ..
```

```
$ WEEKEND SCHEDULE $
```

```
WKEND = DAY-SCHEDULE
```

```
(1) (0.27) (2) (0.26) (3) (0.25) (4) (0.25) (5) (0.25) (6) (0.25)
(7) (0.25) (8) (0.25) (9) (0.29) (10) (0.30) (11) (0.31) (12) (0.31)
(13) (0.31) (14) (0.31) (15) (0.31) (16) (0.30) (17) (0.30) (18) (0.26)
(19) (0.25) (20) (0.25) (21) (0.25) (22) (0.25) (23) (0.25) (24) (0.24) ..
```

```
WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..
```

```
ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK
                          THRU JUL 4 VAC      THRU NOV 22 WORK
                          THRU NOV 24 VAC     THRU DEC 24 WORK
                          THRU DEC 25 VAC     THRU DEC 30 WORK
                          THRU DEC 31 VAC ..
```

```
G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 1.83 ..
```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan. 1 - Dec. 31, 1997.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL005

(Page 1) **Building Descriptions: (TXL005)**

(This section depends on the extent of information available on each building).

Building 209:

Building Name: William B. Travis Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Twelve story, 491,000 ft².

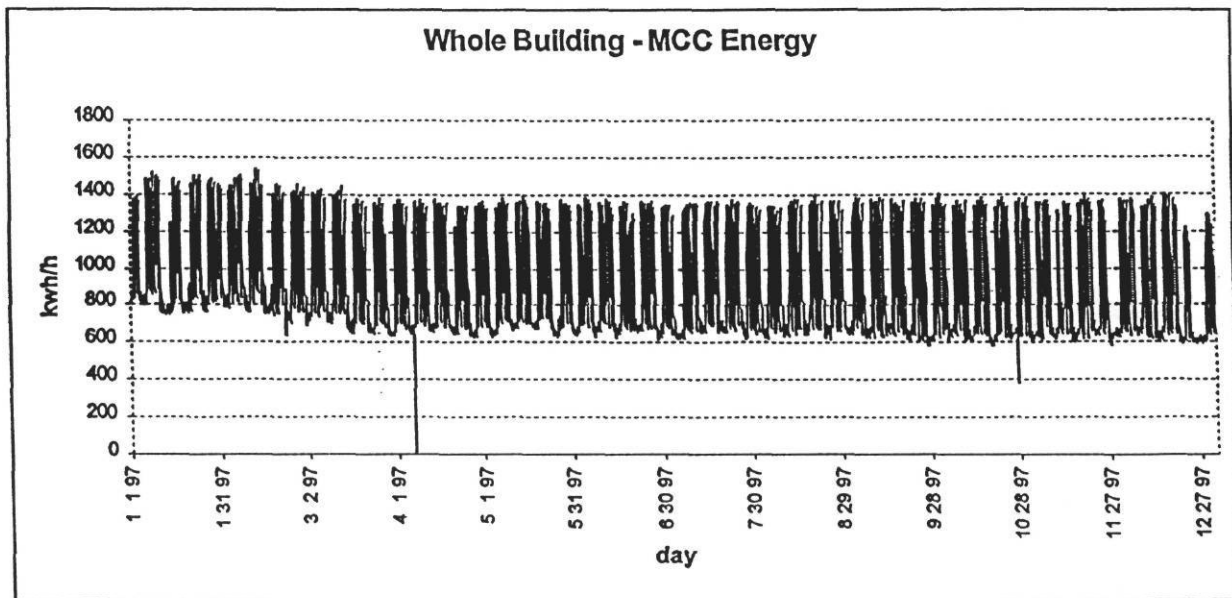
Lighting EUI: $[(15.95 \times 5) + (10.67 \times 2)] \times 52 \times 3.13 = 16.46 \text{ kWh/ft}^2 \cdot \text{year}$

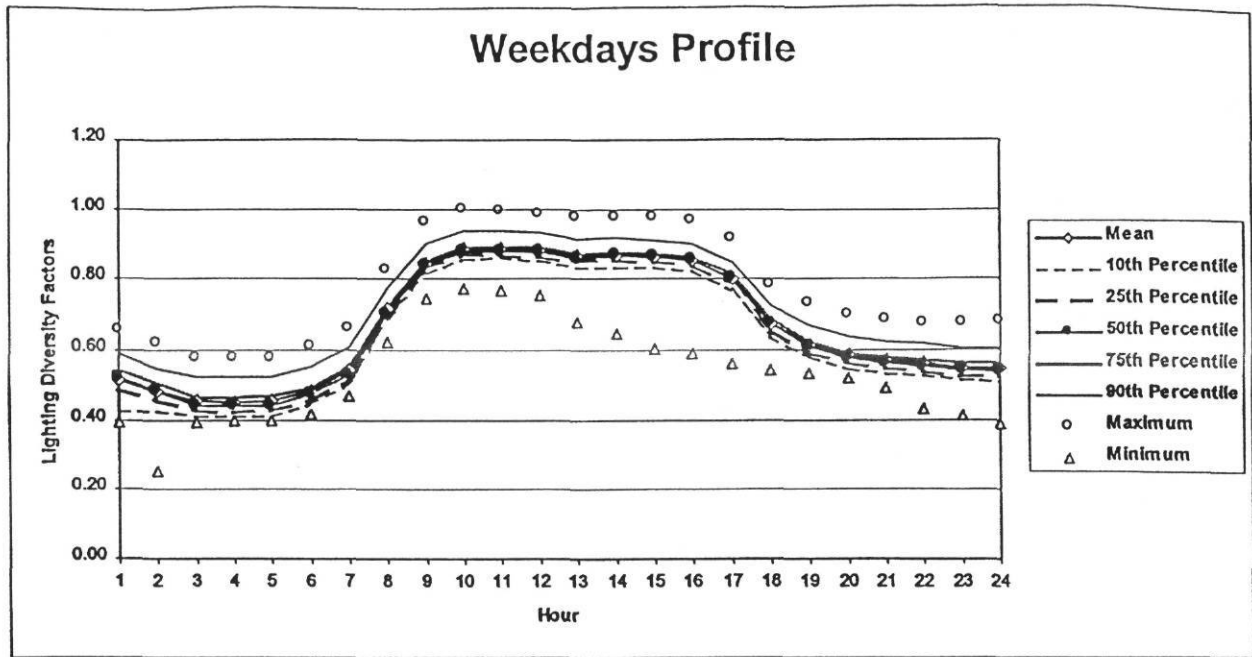
Lighting Type: 100% fluorescent (34-W)

Dates: 1/1/97 - 12/31/97

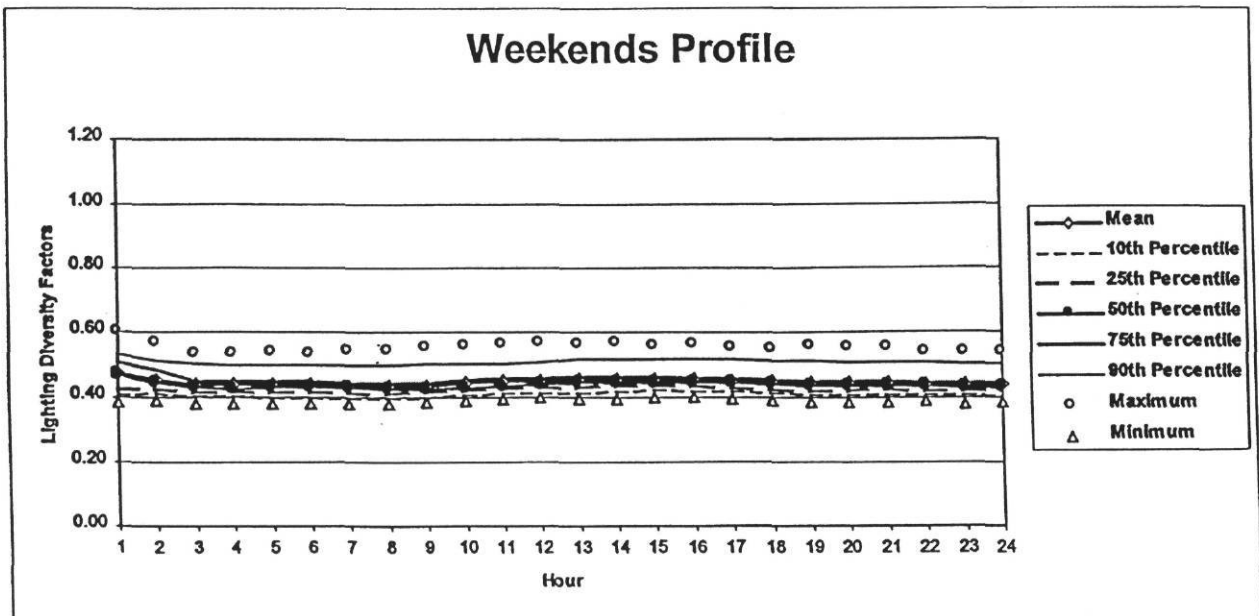
Data Type: Light + Equipment = WBE - MCC = ch0224 - ch0225

Maximum kW: 1,538 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/97, 1/13/97, 1/14/97, 1/20/97, 2/17/97, 5/26/97, 7/4/97, 9/1/97, 11/11/97, 11/27/97, 11/28/97, and 12/22 - 12/26/97.*



(Page 3) Diversity Factors and Statistics

WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.52	0.57	0.46	0.43	0.49	0.52	0.54	0.59	0.66	0.39
2.00	0.48	0.53	0.43	0.43	0.45	0.48	0.51	0.55	0.62	0.25
3.00	0.45	0.49	0.41	0.41	0.42	0.44	0.46	0.53	0.58	0.40
4.00	0.45	0.49	0.41	0.41	0.42	0.44	0.46	0.52	0.58	0.40
5.00	0.45	0.50	0.41	0.41	0.42	0.44	0.47	0.53	0.58	0.40
6.00	0.48	0.52	0.44	0.44	0.45	0.47	0.49	0.55	0.61	0.42
7.00	0.54	0.58	0.50	0.51	0.52	0.53	0.55	0.61	0.66	0.47
8.00	0.72	0.75	0.68	0.69	0.70	0.71	0.72	0.77	0.83	0.63
9.00	0.85	0.88	0.81	0.82	0.83	0.84	0.85	0.90	0.96	0.75
10.00	0.88	0.92	0.85	0.86	0.87	0.88	0.89	0.94	1.00	0.77
11.00	0.89	0.92	0.85	0.86	0.87	0.88	0.89	0.94	0.99	0.77
12.00	0.88	0.91	0.85	0.85	0.86	0.88	0.89	0.93	0.98	0.75
13.00	0.87	0.90	0.83	0.84	0.85	0.86	0.87	0.92	0.97	0.68
14.00	0.87	0.91	0.83	0.84	0.85	0.86	0.88	0.92	0.97	0.65
15.00	0.86	0.90	0.82	0.83	0.85	0.86	0.87	0.91	0.97	0.61
16.00	0.85	0.89	0.81	0.83	0.84	0.85	0.86	0.90	0.97	0.59
17.00	0.80	0.84	0.76	0.77	0.79	0.80	0.81	0.85	0.91	0.56
18.00	0.68	0.71	0.64	0.64	0.65	0.67	0.69	0.73	0.78	0.54
19.00	0.61	0.65	0.58	0.58	0.59	0.61	0.62	0.67	0.73	0.53
20.00	0.58	0.62	0.55	0.55	0.56	0.58	0.59	0.64	0.70	0.52
21.00	0.57	0.61	0.54	0.54	0.55	0.56	0.58	0.63	0.68	0.49
22.00	0.56	0.60	0.52	0.53	0.54	0.55	0.57	0.62	0.67	0.43
23.00	0.55	0.59	0.51	0.52	0.53	0.54	0.56	0.61	0.67	0.41
24.00	0.55	0.59	0.50	0.51	0.52	0.54	0.56	0.61	0.68	0.39

Daily Values	15.95	16.79	15.11	15.26	15.50	15.73	16.07	17.23	18.63	13.64
Daily Sum from Hourly	15.95	16.89	15.01	15.07	15.44	15.80	16.22	17.35	18.77	12.80

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.47	0.52	0.42	0.41	0.42	0.47	0.51	0.53	0.60	0.38
2.00	0.45	0.49	0.41	0.41	0.42	0.44	0.48	0.51	0.57	0.39
3.00	0.44	0.47	0.40	0.40	0.41	0.43	0.45	0.50	0.53	0.38
4.00	0.44	0.47	0.40	0.40	0.42	0.43	0.45	0.50	0.53	0.38
5.00	0.44	0.47	0.40	0.40	0.41	0.43	0.45	0.50	0.54	0.38
6.00	0.44	0.47	0.40	0.40	0.41	0.43	0.45	0.50	0.54	0.38
7.00	0.44	0.47	0.40	0.40	0.41	0.43	0.44	0.50	0.54	0.38
8.00	0.43	0.47	0.40	0.40	0.41	0.42	0.45	0.50	0.54	0.38
9.00	0.44	0.47	0.40	0.40	0.41	0.42	0.44	0.50	0.55	0.38
10.00	0.44	0.48	0.40	0.41	0.42	0.43	0.45	0.50	0.56	0.39
11.00	0.45	0.48	0.41	0.41	0.42	0.43	0.46	0.50	0.56	0.39
12.00	0.45	0.49	0.41	0.42	0.43	0.44	0.46	0.51	0.57	0.40
13.00	0.45	0.49	0.41	0.42	0.43	0.44	0.46	0.52	0.56	0.39
14.00	0.45	0.49	0.42	0.42	0.43	0.44	0.46	0.52	0.57	0.39
15.00	0.45	0.49	0.42	0.42	0.43	0.44	0.46	0.52	0.56	0.40
16.00	0.45	0.49	0.42	0.42	0.43	0.44	0.46	0.52	0.56	0.40
17.00	0.45	0.49	0.41	0.42	0.43	0.44	0.46	0.52	0.55	0.39
18.00	0.45	0.48	0.41	0.41	0.42	0.44	0.45	0.51	0.55	0.39
19.00	0.45	0.48	0.41	0.41	0.42	0.44	0.45	0.51	0.56	0.38
20.00	0.44	0.48	0.41	0.41	0.42	0.43	0.45	0.51	0.55	0.38
21.00	0.44	0.48	0.41	0.41	0.42	0.43	0.45	0.51	0.55	0.39
22.00	0.44	0.48	0.41	0.41	0.42	0.43	0.44	0.51	0.54	0.39
23.00	0.44	0.47	0.40	0.41	0.42	0.43	0.44	0.50	0.54	0.38
24.00	0.44	0.47	0.40	0.41	0.42	0.43	0.44	0.50	0.54	0.39

Daily Values	10.66	11.53	9.80	9.92	10.12	10.43	10.76	12.32	13.12	9.48
Daily Sum from Hourly	10.67	11.57	9.77	9.81	10.10	10.44	10.90	12.20	13.28	9.27

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (William B. Travis Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.52) (2) (0.48) (3) (0.44) (4) (0.44) (5) (0.44) (6) (0.47)
(7) (0.53) (8) (0.71) (9) (0.84) (10) (0.88) (11) (0.88) (12) (0.88)
(13) (0.86) (14) (0.86) (15) (0.86) (16) (0.85) (17) (0.80) (18) (0.67)
(19) (0.61) (20) (0.58) (21) (0.56) (22) (0.55) (23) (0.54) (24) (0.54) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.47) (2) (0.44) (3) (0.43) (4) (0.43) (5) (0.43) (6) (0.43)
(7) (0.43) (8) (0.42) (9) (0.42) (10) (0.43) (11) (0.43) (12) (0.44)
(13) (0.44) (14) (0.44) (15) (0.44) (16) (0.44) (17) (0.44) (18) (0.44)
(19) (0.44) (20) (0.33) (21) (0.43) (22) (0.43) (23) (0.43) (24) (0.43) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = BLE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 3.13 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan. 1 - Dec. 31, 1997.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL006

(This section depends on the extent of information available on each building).

Building 210:

Building Name: Lyndon B. Johnson Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Twelve story, 308,080 ft² .

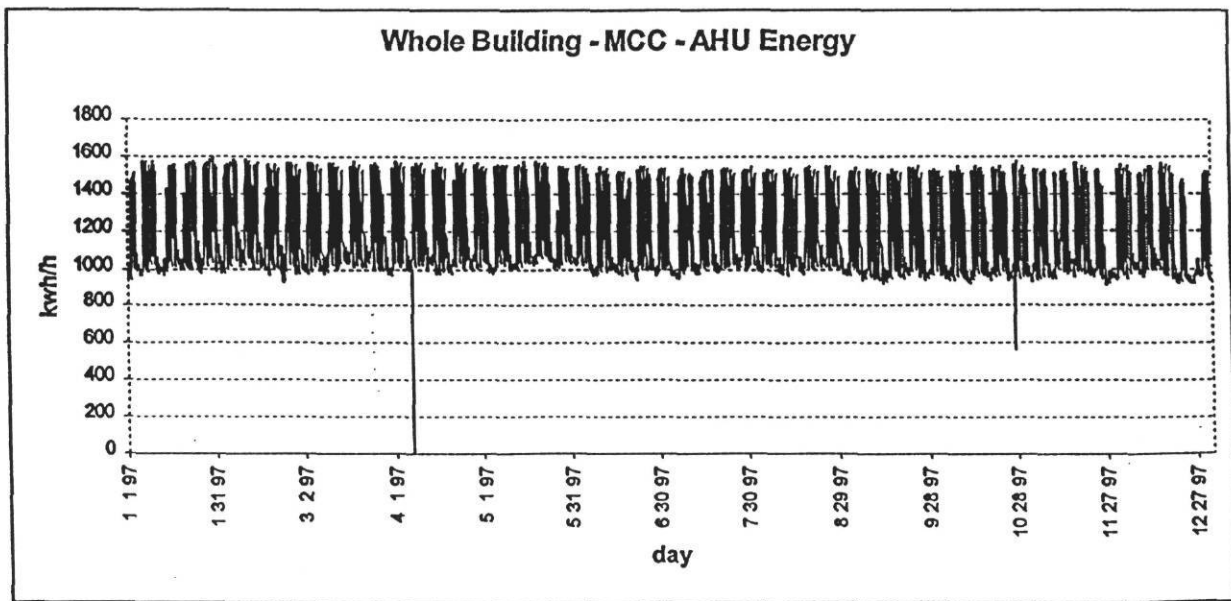
Lighting EUI: $[(19.04 \times 5) + (15.26 \times 2)] \times 52 \times 5.17 = 33.79 \text{ kWh/ft}^2 \cdot \text{year}$

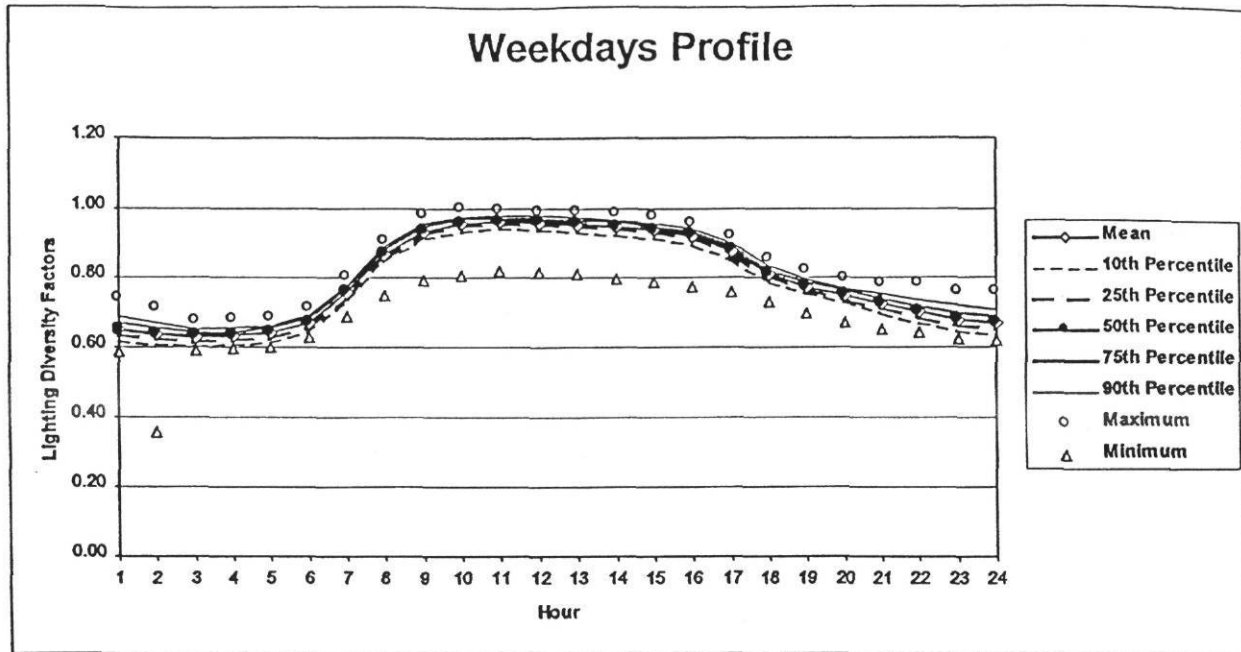
Lighting Type: Mixture of fluorescent and incandescent

Dates: 1/1/97 - 12/31/97

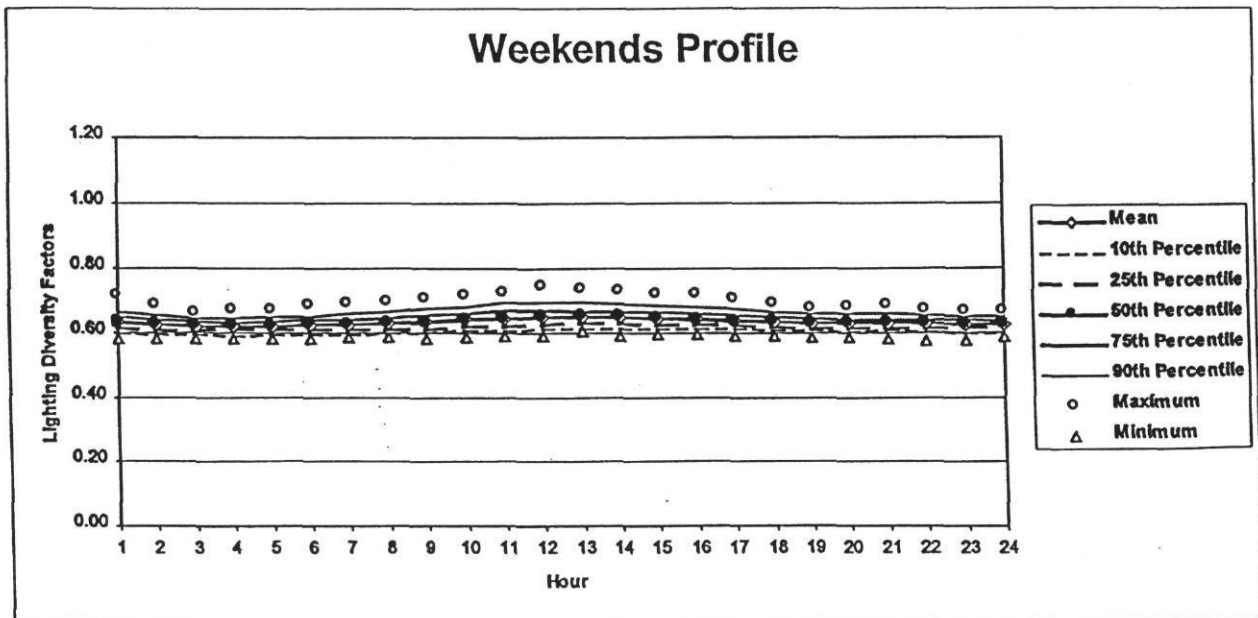
Data Type: Light + Equipment = WBE - MCC - AHU = ch0227 - ch0230 - ch0231

Maximum kW: 1,592 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/97, 1/13/97, 1/14/97, 7/4/97, 9/1/97, 11/11/97, 11/27/97, 11/28/97, and 12/24 - 12/26/97.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.69	0.74	0.58
2.00	0.64	0.67	0.61	0.61	0.62	0.64	0.65	0.67	0.71	0.36
3.00	0.63	0.65	0.61	0.60	0.62	0.63	0.64	0.65	0.67	0.59
4.00	0.63	0.65	0.61	0.61	0.62	0.63	0.64	0.65	0.68	0.59
5.00	0.64	0.66	0.62	0.62	0.63	0.64	0.66	0.66	0.68	0.60
6.00	0.67	0.69	0.65	0.64	0.66	0.67	0.69	0.69	0.71	0.63
7.00	0.76	0.78	0.74	0.74	0.75	0.76	0.77	0.78	0.80	0.69
8.00	0.87	0.89	0.85	0.85	0.85	0.87	0.88	0.89	0.91	0.75
9.00	0.93	0.95	0.91	0.91	0.92	0.93	0.95	0.96	0.98	0.79
10.00	0.95	0.97	0.93	0.93	0.95	0.96	0.97	0.98	1.00	0.81
11.00	0.96	0.98	0.94	0.94	0.95	0.96	0.97	0.98	0.99	0.82
12.00	0.96	0.98	0.94	0.94	0.95	0.96	0.97	0.98	0.99	0.82
13.00	0.95	0.98	0.93	0.93	0.95	0.96	0.97	0.97	0.99	0.81
14.00	0.95	0.97	0.92	0.92	0.94	0.95	0.96	0.97	0.98	0.80
15.00	0.94	0.96	0.91	0.91	0.93	0.94	0.95	0.96	0.97	0.79
16.00	0.92	0.94	0.90	0.90	0.91	0.92	0.93	0.94	0.96	0.77
17.00	0.88	0.90	0.85	0.85	0.87	0.88	0.89	0.90	0.92	0.76
18.00	0.81	0.83	0.79	0.79	0.80	0.81	0.82	0.83	0.85	0.73
19.00	0.77	0.79	0.76	0.75	0.76	0.77	0.79	0.79	0.82	0.70
20.00	0.75	0.77	0.73	0.73	0.74	0.75	0.76	0.77	0.80	0.67
21.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.78	0.65
22.00	0.70	0.73	0.68	0.67	0.68	0.70	0.72	0.74	0.78	0.64
23.00	0.68	0.71	0.65	0.65	0.66	0.68	0.70	0.72	0.76	0.62
24.00	0.67	0.70	0.64	0.64	0.65	0.67	0.69	0.71	0.76	0.62

Daily Values	19.04	19.45	18.63	18.57	18.76	19.06	19.35	19.53	19.97	17.21
Daily Sum from Hourly	19.04	19.56	18.52	18.46	18.75	19.06	19.38	19.64	20.25	16.60

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.64	0.66	0.61	0.60	0.62	0.63	0.65	0.67	0.72	0.58
2.00	0.63	0.65	0.61	0.60	0.61	0.63	0.64	0.65	0.69	0.58
3.00	0.62	0.64	0.60	0.60	0.61	0.62	0.64	0.65	0.66	0.58
4.00	0.62	0.64	0.60	0.59	0.61	0.62	0.63	0.65	0.67	0.58
5.00	0.62	0.64	0.60	0.60	0.61	0.62	0.64	0.65	0.67	0.58
6.00	0.63	0.65	0.60	0.60	0.61	0.63	0.64	0.65	0.69	0.58
7.00	0.63	0.65	0.61	0.60	0.61	0.63	0.64	0.66	0.69	0.59
8.00	0.63	0.66	0.61	0.60	0.61	0.63	0.65	0.67	0.70	0.59
9.00	0.64	0.67	0.61	0.60	0.61	0.63	0.66	0.68	0.71	0.58
10.00	0.64	0.67	0.62	0.61	0.62	0.64	0.66	0.68	0.72	0.59
11.00	0.65	0.68	0.62	0.61	0.62	0.65	0.67	0.70	0.73	0.59
12.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.70	0.75	0.59
13.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.70	0.74	0.61
14.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.69	0.73	0.59
15.00	0.65	0.67	0.62	0.62	0.63	0.65	0.67	0.69	0.72	0.60
16.00	0.65	0.67	0.62	0.62	0.63	0.64	0.66	0.68	0.72	0.60
17.00	0.64	0.67	0.62	0.62	0.63	0.64	0.66	0.68	0.71	0.59
18.00	0.64	0.66	0.62	0.61	0.62	0.64	0.65	0.67	0.69	0.59
19.00	0.63	0.65	0.61	0.61	0.62	0.63	0.65	0.66	0.68	0.59
20.00	0.63	0.65	0.61	0.61	0.62	0.63	0.64	0.66	0.68	0.59
21.00	0.63	0.65	0.61	0.61	0.62	0.63	0.64	0.66	0.69	0.58
22.00	0.63	0.65	0.61	0.61	0.62	0.63	0.64	0.66	0.67	0.58
23.00	0.63	0.65	0.61	0.60	0.62	0.63	0.64	0.65	0.67	0.58
24.00	0.63	0.64	0.61	0.60	0.62	0.63	0.64	0.65	0.67	0.59

Daily Values	15.26	15.78	14.74	14.60	14.88	15.21	15.66	15.99	16.49	14.16
Daily Sum from Hourly	15.27	15.83	14.71	14.57	14.86	15.25	15.63	16.05	16.76	14.10

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Lyndon B. Johnson Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.65) (2) (0.64) (3) (0.63) (4) (0.64) (5) (0.64) (6) (0.67)
(7) (0.76) (8) (0.87) (9) (0.93) (10) (0.96) (11) (0.96) (12) (0.96)
(13) (0.96) (14) (0.95) (15) (0.94) (16) (0.92) (17) (0.88) (18) (0.81)
(19) (0.77) (20) (0.75) (21) (0.73) (22) (0.70) (23) (0.68) (24) (0.67) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.63) (2) (0.63) (3) (0.62) (4) (0.62) (5) (0.62) (6) (0.63)
(7) (0.63) (8) (0.63) (9) (0.64) (10) (0.64) (11) (0.65) (12) (0.65)
(13) (0.65) (14) (0.65) (15) (0.65) (16) (0.64) (17) (0.64) (18) (0.64)
(19) (0.63) (20) (0.63) (21) (0.63) (22) (0.63) (23) (0.63) (24) (0.63) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 5.17 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan. 1 - Dec. 31, 1997.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" commend of the "LOADS" input file.

2. BLAST Input Sample

TXL007

(This section depends on the extent of information available on each building).

Building 228:

Building Name: Price Daniels, Sr. Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Eight story, 151,620 ft² .

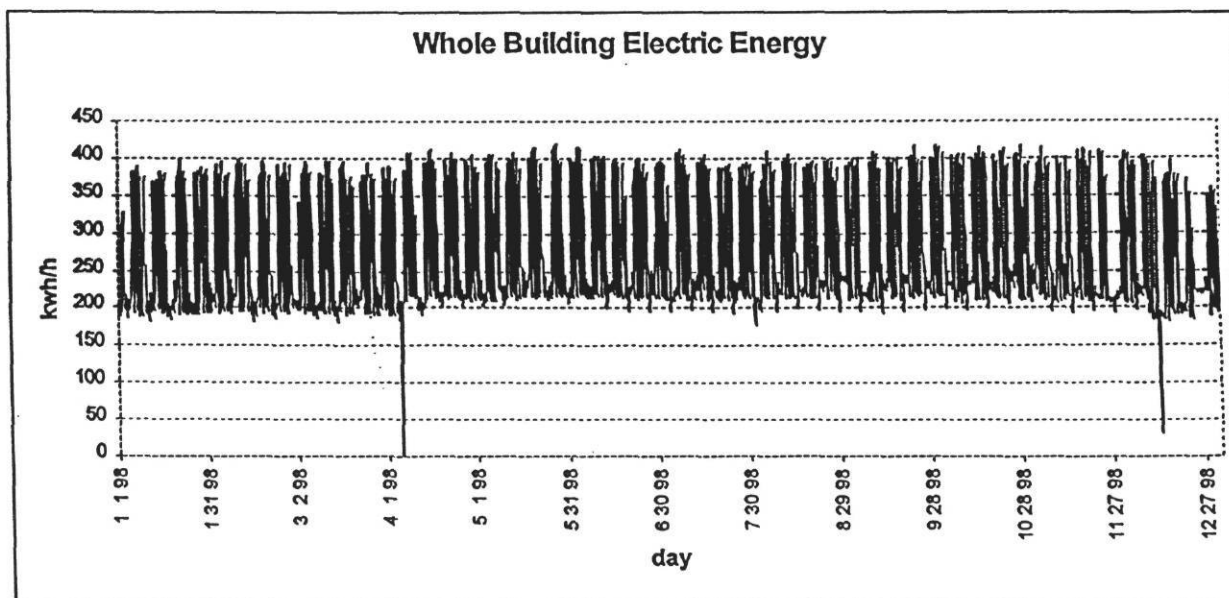
Lighting EUI: $[(17.20 \times 5) + (12.48 \times 2)] \times 52 \times 2.76 = 15.95 \text{ kWh/ft}^2 \cdot \text{year}$

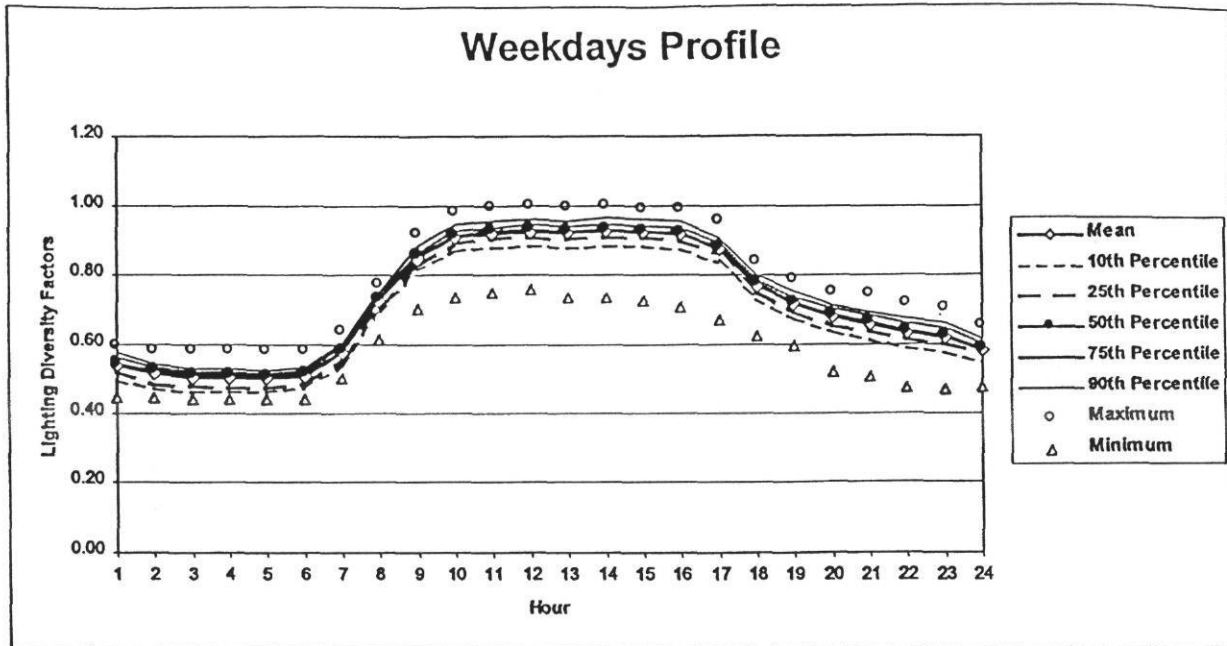
Lighting Type: Mixture of fluorescent and incandescent

Dates: 1/1/98 - 12/31/98

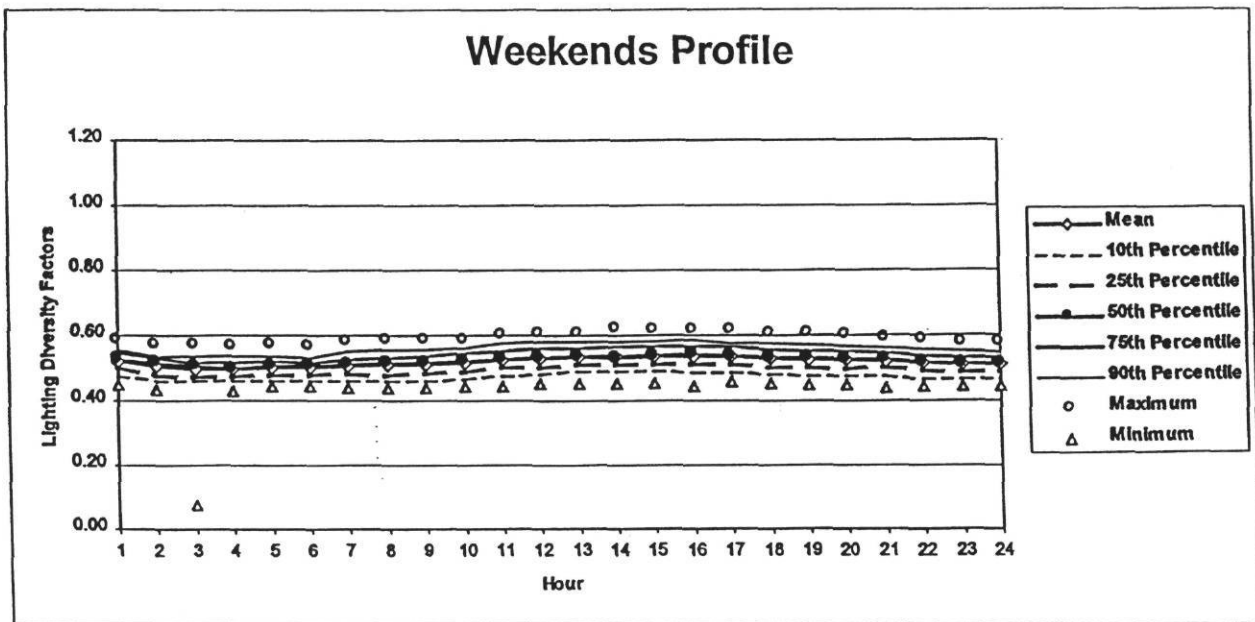
Data Type: WBE = ch2255

Maximum kW: 419 kW





*The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/07/98, 11/11/98, 11/26/98, 11/27/98, and 12/23 - 12/25/98.



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.54	0.57	0.51	0.49	0.52	0.55	0.56	0.58	0.60	0.45
2.00	0.51	0.54	0.49	0.48	0.48	0.52	0.53	0.54	0.58	0.44
3.00	0.50	0.53	0.48	0.47	0.48	0.51	0.52	0.53	0.58	0.44
4.00	0.50	0.53	0.48	0.46	0.47	0.51	0.52	0.53	0.58	0.44
5.00	0.50	0.53	0.47	0.46	0.47	0.51	0.52	0.53	0.58	0.44
6.00	0.51	0.53	0.48	0.47	0.48	0.52	0.52	0.53	0.58	0.44
7.00	0.58	0.60	0.55	0.54	0.56	0.58	0.59	0.60	0.64	0.50
8.00	0.73	0.75	0.70	0.69	0.71	0.73	0.74	0.75	0.77	0.62
9.00	0.85	0.88	0.82	0.81	0.83	0.86	0.87	0.89	0.92	0.70
10.00	0.91	0.94	0.87	0.87	0.89	0.91	0.93	0.95	0.98	0.73
11.00	0.92	0.96	0.89	0.88	0.90	0.93	0.94	0.96	0.99	0.75
12.00	0.93	0.96	0.89	0.89	0.91	0.93	0.95	0.96	1.00	0.76
13.00	0.92	0.96	0.89	0.88	0.90	0.93	0.94	0.96	0.99	0.73
14.00	0.93	0.96	0.89	0.89	0.91	0.93	0.95	0.97	1.00	0.73
15.00	0.92	0.96	0.89	0.89	0.91	0.93	0.94	0.96	0.99	0.73
16.00	0.92	0.95	0.88	0.88	0.90	0.92	0.94	0.95	0.99	0.71
17.00	0.88	0.91	0.84	0.84	0.86	0.88	0.90	0.91	0.96	0.67
18.00	0.77	0.80	0.74	0.73	0.75	0.78	0.79	0.80	0.84	0.62
19.00	0.72	0.75	0.68	0.67	0.69	0.72	0.73	0.75	0.79	0.59
20.00	0.68	0.71	0.65	0.64	0.65	0.68	0.70	0.71	0.75	0.52
21.00	0.66	0.69	0.62	0.62	0.64	0.67	0.68	0.69	0.74	0.51
22.00	0.63	0.67	0.60	0.59	0.61	0.64	0.66	0.67	0.72	0.47
23.00	0.62	0.66	0.58	0.58	0.60	0.62	0.64	0.66	0.70	0.47
24.00	0.58	0.61	0.55	0.55	0.57	0.58	0.60	0.62	0.65	0.47

Daily Values	17.20	17.84	16.55	16.37	16.70	17.40	17.64	17.86	18.39	14.51
Daily Sum from Hourly	17.20	17.97	16.42	16.27	16.71	17.35	17.67	18.01	18.92	13.95
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.52	0.56	0.49	0.48	0.50	0.53	0.55	0.56	0.59	0.45
2.00	0.51	0.54	0.47	0.46	0.48	0.52	0.53	0.54	0.57	0.44
3.00	0.50	0.55	0.45	0.46	0.47	0.51	0.52	0.54	0.57	0.07
4.00	0.50	0.53	0.47	0.46	0.47	0.50	0.52	0.54	0.57	0.43
5.00	0.50	0.53	0.48	0.46	0.48	0.51	0.52	0.54	0.57	0.44
6.00	0.50	0.53	0.48	0.46	0.48	0.51	0.52	0.54	0.57	0.44
7.00	0.51	0.54	0.48	0.46	0.48	0.51	0.53	0.55	0.58	0.44
8.00	0.51	0.55	0.48	0.46	0.48	0.52	0.54	0.56	0.59	0.44
9.00	0.51	0.55	0.48	0.46	0.48	0.52	0.54	0.56	0.59	0.44
10.00	0.52	0.55	0.48	0.47	0.49	0.52	0.55	0.56	0.59	0.44
11.00	0.53	0.56	0.49	0.48	0.50	0.53	0.55	0.58	0.60	0.44
12.00	0.53	0.57	0.50	0.48	0.50	0.53	0.56	0.58	0.61	0.45
13.00	0.54	0.57	0.50	0.49	0.51	0.54	0.56	0.58	0.61	0.45
14.00	0.54	0.58	0.50	0.49	0.51	0.53	0.57	0.58	0.62	0.45
15.00	0.54	0.58	0.50	0.49	0.51	0.54	0.57	0.58	0.62	0.45
16.00	0.54	0.58	0.50	0.49	0.51	0.54	0.57	0.59	0.62	0.45
17.00	0.54	0.57	0.50	0.49	0.51	0.54	0.57	0.58	0.62	0.46
18.00	0.53	0.57	0.50	0.48	0.50	0.53	0.56	0.58	0.61	0.45
19.00	0.53	0.56	0.49	0.48	0.50	0.53	0.55	0.57	0.61	0.45
20.00	0.53	0.56	0.49	0.48	0.50	0.53	0.55	0.57	0.60	0.45
21.00	0.52	0.56	0.49	0.48	0.50	0.53	0.55	0.56	0.59	0.44
22.00	0.52	0.55	0.49	0.47	0.49	0.52	0.54	0.56	0.59	0.44
23.00	0.51	0.54	0.48	0.47	0.49	0.51	0.53	0.55	0.58	0.44
24.00	0.51	0.54	0.48	0.47	0.49	0.51	0.53	0.55	0.58	0.44

Daily Values	12.48	13.26	11.70	11.45	11.79	12.60	13.09	13.36	14.01	10.10
Daily Sum from Hourly	12.49	13.32	11.66	11.38	11.86	12.54	13.07	13.49	14.24	10.31
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Price Daniels Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```
$ ***** LIGHTING SCHEDULES ***** $  
  
$ WEEKDAY SCHEDULE $  
WKDAY = DAY-SCHEDULE  
(1) (0.55) (2) (0.52) (3) (0.51) (4) (0.51) (5) (0.51) (6) (0.52)  
(7) (0.58) (8) (0.73) (9) (0.86) (10) (0.91) (11) (0.93) (12) (0.93)  
(13) (0.93) (14) (0.93) (15) (0.93) (16) (0.92) (17) (0.88) (18) (0.78)  
(19) (0.72) (20) (0.68) (21) (0.67) (22) (0.64) (23) (0.62) (24) (0.58) ..  
  
$ WEEKEND SCHEDULE $  
WKEND = DAY-SCHEDULE  
(1) (0.53) (2) (0.52) (3) (0.51) (4) (0.50) (5) (0.51) (6) (0.51)  
(7) (0.52) (8) (0.52) (9) (0.52) (10) (0.52) (11) (0.53) (12) (0.53)  
(13) (0.54) (14) (0.53) (15) (0.54) (16) (0.54) (17) (0.54) (18) (0.53)  
(19) (0.53) (20) (0.53) (21) (0.53) (22) (0.52) (23) (0.51) (24) (0.51) ..  
  
WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..  
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..  
  
ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK  
                          THRU JUL 4 VAC      THRU NOV 22 WORK  
                          THRU NOV 24 VAC     THRU DEC 24 WORK  
                          THRU DEC 25 VAC     THRU DEC 30 WORK  
                          THRU DEC 31 VAC ..  
  
G-ZONE = SPACE-CONDITIONS  
LIGHTING-SCHEDULE = ELE-SCH  
LIGHTING-TYPE   = REC-FLUOR-RV  
LIGHT-TO-SPACE  = 0.8  
LIGHTING-W/SQFT = 2.76 ..
```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan. 1 - Dec. 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample

TXL008

(This section depends on the extent of information available on each building).

Building 229:

Building Name: Tom C. Clark Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Seven story, 121,654 ft².

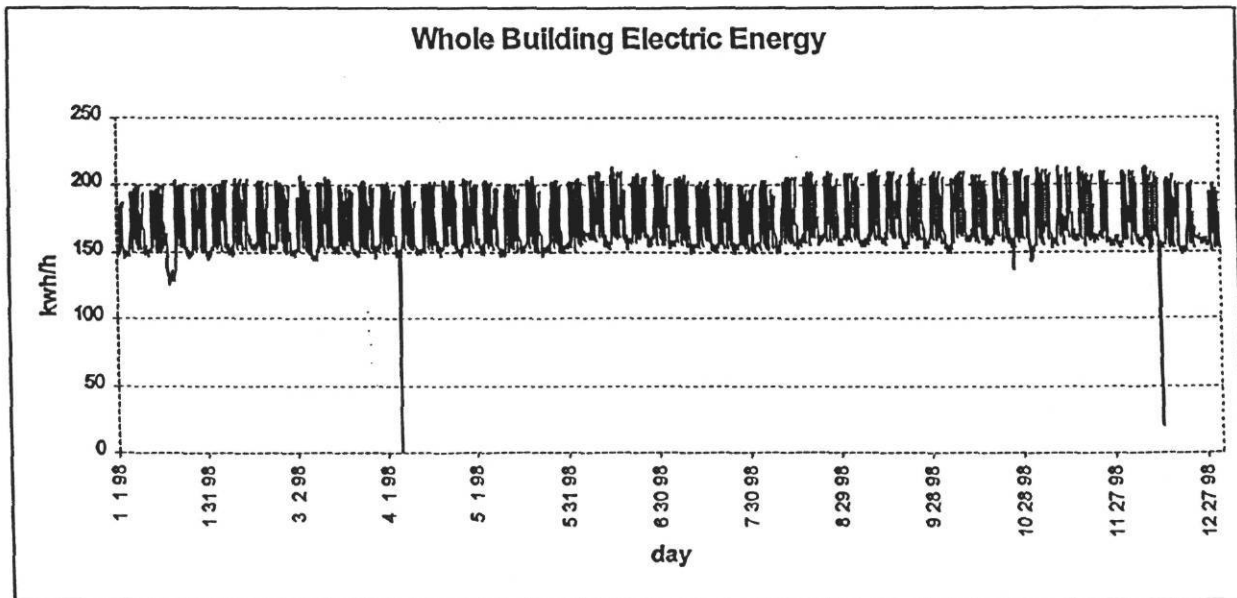
Lighting EUI: $[(20.09 \times 5) + (17.37 \times 2)] \times 52 \times 1.75 = 12.32 \text{ kWh/ft}^2 \cdot \text{year}$

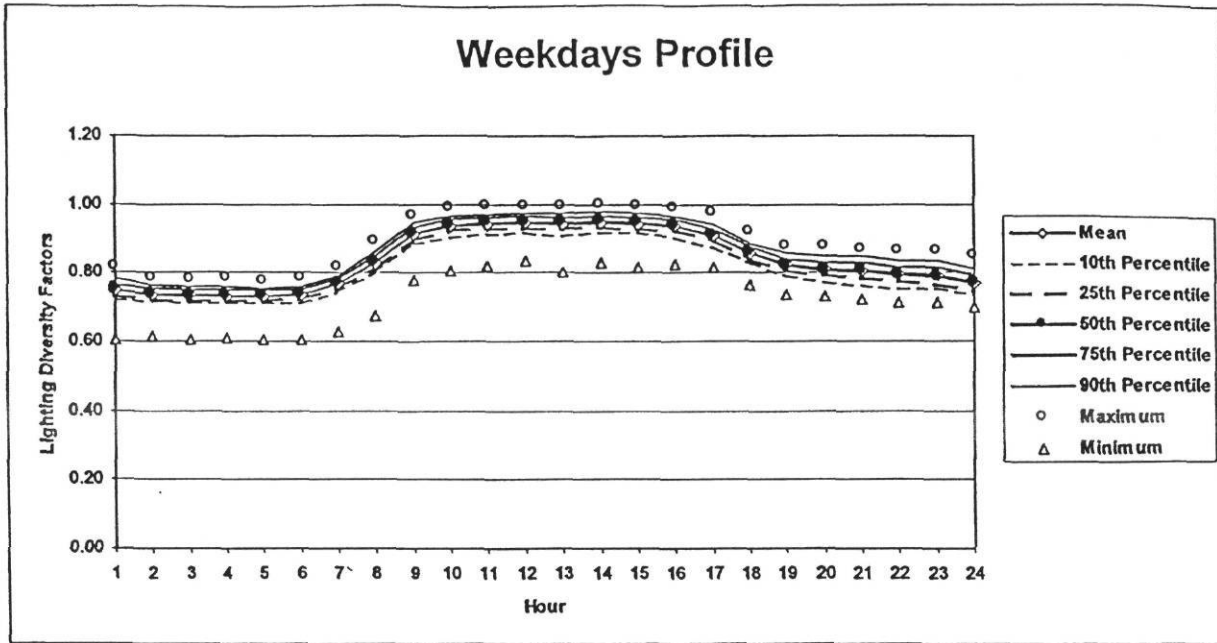
Lighting Type: Mixture of fluorescent, incandescent, and PL lamps

Dates: 1/1/98 - 12/31/98

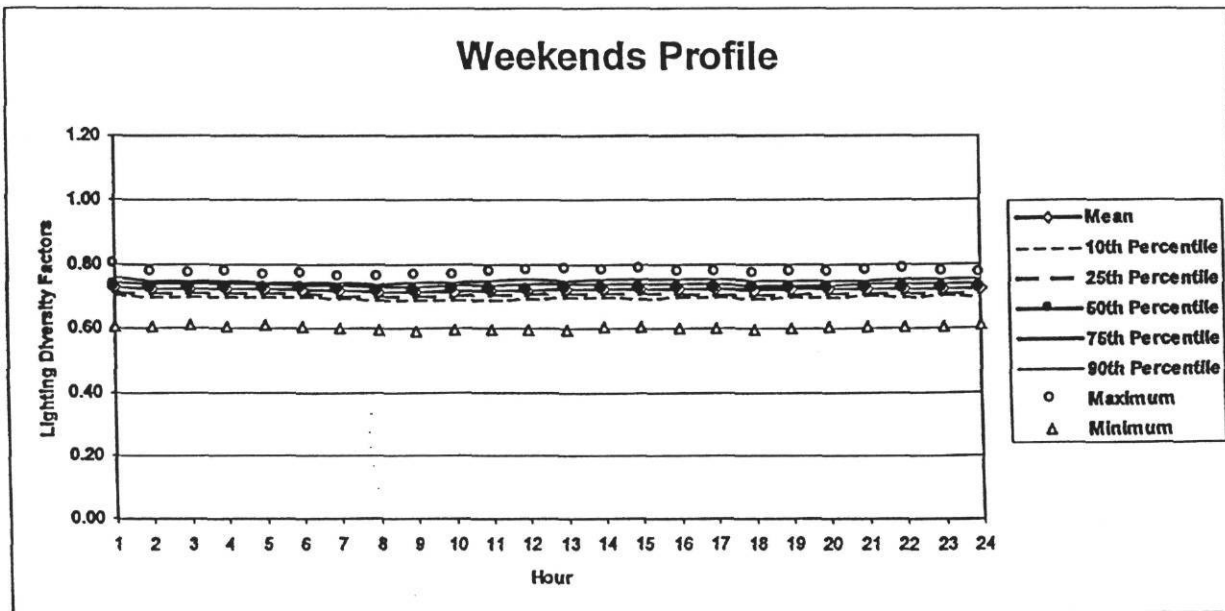
Data Type: WBE = ch2256

Maximum kW: 213 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/07/98, 11/11/98, 11/26/98, 11/27/98, and 12/23 - 12/25/98.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.75	0.77	0.72	0.72	0.73	0.75	0.77	0.78	0.81	0.61
2.00	0.74	0.76	0.72	0.72	0.72	0.74	0.75	0.76	0.78	0.61
3.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.78	0.61
4.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.78	0.61
5.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.77	0.61
6.00	0.73	0.75	0.72	0.71	0.72	0.73	0.75	0.76	0.78	0.60
7.00	0.77	0.79	0.75	0.74	0.75	0.77	0.78	0.79	0.82	0.63
8.00	0.83	0.86	0.81	0.80	0.81	0.83	0.85	0.86	0.89	0.68
9.00	0.91	0.94	0.89	0.88	0.90	0.91	0.93	0.95	0.96	0.78
10.00	0.94	0.96	0.91	0.91	0.92	0.94	0.96	0.97	0.99	0.80
11.00	0.94	0.97	0.92	0.92	0.93	0.94	0.96	0.97	0.99	0.82
12.00	0.95	0.97	0.92	0.92	0.93	0.95	0.96	0.98	0.99	0.83
13.00	0.94	0.97	0.92	0.91	0.93	0.94	0.96	0.97	0.99	0.80
14.00	0.95	0.97	0.92	0.92	0.93	0.95	0.97	0.98	1.00	0.83
15.00	0.94	0.97	0.92	0.92	0.93	0.94	0.96	0.97	0.99	0.82
16.00	0.94	0.96	0.91	0.91	0.92	0.94	0.96	0.97	0.99	0.83
17.00	0.91	0.94	0.88	0.88	0.90	0.91	0.93	0.94	0.97	0.81
18.00	0.86	0.88	0.83	0.83	0.84	0.86	0.88	0.89	0.92	0.77
19.00	0.82	0.85	0.80	0.79	0.80	0.82	0.84	0.86	0.88	0.74
20.00	0.81	0.84	0.78	0.78	0.79	0.81	0.83	0.85	0.88	0.73
21.00	0.80	0.84	0.77	0.77	0.78	0.80	0.83	0.85	0.87	0.72
22.00	0.79	0.83	0.76	0.76	0.77	0.79	0.82	0.84	0.86	0.71
23.00	0.79	0.82	0.76	0.75	0.77	0.79	0.81	0.83	0.86	0.71
24.00	0.77	0.80	0.74	0.73	0.75	0.77	0.79	0.81	0.85	0.70

Daily Values	20.09	20.59	19.59	19.53	19.72	20.03	20.53	20.77	21.20	18.60
Daily Sum from Hourly	20.09	20.69	19.49	19.39	19.68	20.08	20.54	20.86	21.43	17.35

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.73	0.76	0.71	0.71	0.72	0.73	0.75	0.76	0.80	0.61
2.00	0.73	0.75	0.71	0.70	0.71	0.73	0.74	0.75	0.78	0.61
3.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
4.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
5.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
6.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
7.00	0.72	0.74	0.70	0.70	0.70	0.72	0.74	0.75	0.76	0.60
8.00	0.72	0.74	0.69	0.69	0.70	0.72	0.73	0.74	0.76	0.60
9.00	0.72	0.74	0.69	0.69	0.70	0.72	0.73	0.75	0.77	0.60
10.00	0.72	0.74	0.70	0.69	0.70	0.72	0.74	0.75	0.77	0.60
11.00	0.72	0.75	0.70	0.69	0.71	0.72	0.74	0.75	0.78	0.60
12.00	0.72	0.75	0.70	0.70	0.71	0.72	0.74	0.76	0.78	0.60
13.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.79	0.60
14.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.61
15.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.79	0.61
16.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.60
17.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.60
18.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.60
19.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.78	0.60
20.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.78	0.61
21.00	0.73	0.75	0.70	0.71	0.71	0.73	0.74	0.75	0.78	0.61
22.00	0.73	0.75	0.71	0.70	0.71	0.73	0.74	0.76	0.79	0.61
23.00	0.73	0.75	0.70	0.71	0.71	0.73	0.74	0.75	0.78	0.61
24.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.77	0.61

Daily Values	17.37	17.94	16.80	16.85	17.02	17.39	17.77	18.00	18.35	14.50
Daily Sum from Hourly	17.39	17.96	16.83	16.81	17.03	17.41	17.76	18.05	18.63	14.50

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Tom C. Clark Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.75) (2) (0.74) (3) (0.73) (4) (0.73) (5) (0.73) (6) (0.73)
(7) (0.77) (8) (0.83) (9) (0.91) (10) (0.94) (11) (0.94) (12) (0.95)
(13) (0.94) (14) (0.95) (15) (0.94) (16) (0.94) (17) (0.91) (18) (0.86)
(19) (0.82) (20) (0.81) (21) (0.80) (22) (0.79) (23) (0.79) (24) (0.77) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.73) (2) (0.73) (3) (0.73) (4) (0.73) (5) (0.73) (6) (0.73)
(7) (0.72) (8) (0.72) (9) (0.72) (10) (0.72) (11) (0.72) (12) (0.72)
(13) (0.73) (14) (0.73) (15) (0.73) (16) (0.73) (17) (0.73) (18) (0.73)
(19) (0.73) (20) (0.73) (21) (0.73) (22) (0.73) (23) (0.73) (24) (0.73) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 1.75 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan. 1 - Dec. 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample

TXL010

(Page 1) Building Descriptions: (TXL010)

(This section depends on the extent of information available on each building).

Building 975:

Building Name: Brazos County Courthouse Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Bryan, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Five story, 100,000 ft².

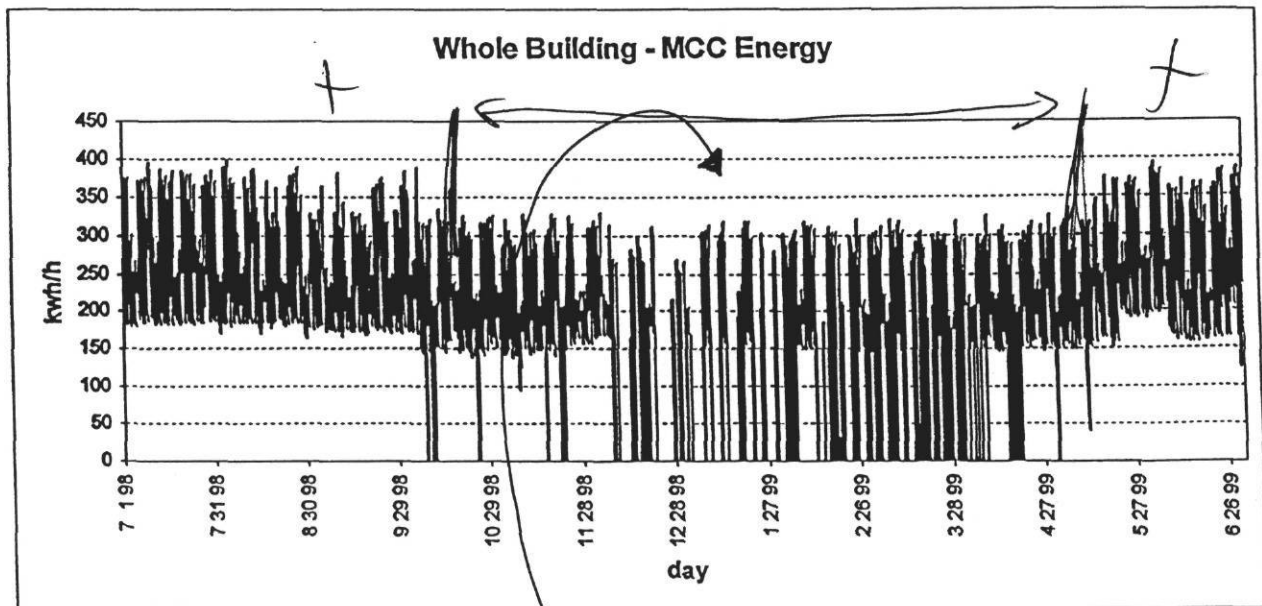
Lighting EUI: $[(x 5) + (x 2)] \times 52 \times = \text{kWh/ft}^2 \cdot \text{year}$

Lighting Type: Mixture of fluorescent and incandescent

Dates: 7/1/98 - 7/1/99

Data Type: Lighting + receptacles = WBE - MCC - Chillers = ch3496 - (ch3840 + ch3841 + ch3846 + ch3847) - (ch3842 + ch3843 + ch3844 + ch3845)

Maximum kW: 398 kW



period considered
in the analysis

**The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/07/98, 11/11/98, 11/26/98, 11/27/98, and 12/23 - 12/25/98.*

(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.75	0.77	0.72	0.72	0.73	0.75	0.77	0.78	0.81	0.61
2.00	0.74	0.76	0.72	0.72	0.72	0.74	0.75	0.76	0.78	0.61
3.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.78	0.61
4.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.78	0.61
5.00	0.73	0.75	0.71	0.71	0.72	0.73	0.75	0.76	0.77	0.61
6.00	0.73	0.75	0.72	0.71	0.72	0.73	0.75	0.76	0.78	0.60
7.00	0.77	0.79	0.75	0.74	0.75	0.77	0.78	0.79	0.82	0.63
8.00	0.83	0.86	0.81	0.80	0.81	0.83	0.85	0.86	0.89	0.68
9.00	0.91	0.94	0.89	0.88	0.90	0.91	0.93	0.95	0.96	0.78
10.00	0.94	0.96	0.91	0.91	0.92	0.94	0.96	0.97	0.99	0.80
11.00	0.94	0.97	0.92	0.92	0.93	0.94	0.96	0.97	0.99	0.82
12.00	0.95	0.97	0.92	0.92	0.93	0.95	0.96	0.98	0.99	0.83
13.00	0.94	0.97	0.92	0.91	0.93	0.94	0.96	0.97	0.99	0.80
14.00	0.95	0.97	0.92	0.92	0.93	0.95	0.97	0.98	1.00	0.83
15.00	0.94	0.97	0.92	0.92	0.93	0.94	0.96	0.97	0.99	0.82
16.00	0.94	0.96	0.91	0.91	0.92	0.94	0.96	0.97	0.99	0.83
17.00	0.91	0.94	0.88	0.88	0.90	0.91	0.93	0.94	0.97	0.81
18.00	0.86	0.88	0.83	0.83	0.84	0.86	0.88	0.89	0.92	0.77
19.00	0.82	0.85	0.80	0.79	0.80	0.82	0.84	0.86	0.88	0.74
20.00	0.81	0.84	0.78	0.78	0.79	0.81	0.83	0.85	0.88	0.73
21.00	0.80	0.84	0.77	0.77	0.78	0.80	0.83	0.85	0.87	0.72
22.00	0.79	0.83	0.76	0.76	0.77	0.79	0.82	0.84	0.86	0.71
23.00	0.79	0.82	0.76	0.75	0.77	0.79	0.81	0.83	0.86	0.71
24.00	0.77	0.80	0.74	0.73	0.75	0.77	0.79	0.81	0.85	0.70

Daily Values	20.09	20.59	19.59	19.53	19.72	20.03	20.53	20.77	21.20	18.60
Daily Sum from Hourly	20.09	20.69	19.49	19.39	19.68	20.08	20.54	20.86	21.43	17.35
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.73	0.76	0.71	0.71	0.72	0.73	0.75	0.76	0.80	0.61
2.00	0.73	0.75	0.71	0.70	0.71	0.73	0.74	0.75	0.78	0.61
3.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
4.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
5.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
6.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.61
7.00	0.72	0.74	0.70	0.70	0.70	0.72	0.74	0.75	0.76	0.60
8.00	0.72	0.74	0.69	0.69	0.70	0.72	0.73	0.74	0.76	0.60
9.00	0.72	0.74	0.69	0.69	0.70	0.72	0.73	0.75	0.77	0.60
10.00	0.72	0.74	0.70	0.69	0.70	0.72	0.74	0.75	0.77	0.60
11.00	0.72	0.75	0.70	0.69	0.71	0.72	0.74	0.75	0.78	0.60
12.00	0.72	0.75	0.70	0.70	0.71	0.72	0.74	0.76	0.78	0.60
13.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.79	0.60
14.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.61
15.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.79	0.61
16.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.60
17.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.78	0.60
18.00	0.72	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.77	0.60
19.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.78	0.60
20.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.75	0.78	0.61
21.00	0.73	0.75	0.70	0.71	0.71	0.73	0.74	0.75	0.78	0.61
22.00	0.73	0.75	0.71	0.70	0.71	0.73	0.74	0.76	0.79	0.61
23.00	0.73	0.75	0.70	0.71	0.71	0.73	0.74	0.75	0.78	0.61
24.00	0.73	0.75	0.70	0.70	0.71	0.73	0.74	0.76	0.77	0.61

Daily Values	17.37	17.94	16.80	16.85	17.02	17.39	17.77	18.00	18.35	14.60
Daily Sum from Hourly	17.39	17.96	16.83	16.81	17.03	17.41	17.76	18.05	18.63	14.60
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input **Lighting diversity factors** for a Large Office Building (Brazos County Courthouse Bldg., Bryan, TX) into the DOE-2 program. The calculated **50th Percentile** values are used in these schedules.

```
$ ***** LIGHTING SCHEDULES ***** $
$ WEEKDAY SCHEDULE $
WKDAY = DAY-SCHEDULE
(1) (0.75) (2) (0.74) (3) (0.73) (4) (0.73) (5) (0.73) (6) (0.73)
(7) (0.77) (8) (0.83) (9) (0.91) (10) (0.94) (11) (0.94) (12) (0.95)
(13) (0.94) (14) (0.95) (15) (0.94) (16) (0.94) (17) (0.91) (18) (0.86)
(19) (0.82) (20) (0.81) (21) (0.80) (22) (0.79) (23) (0.79) (24) (0.77) ..
$ WEEKEND SCHEDULE $
WKEND = DAY-SCHEDULE
(1) (0.73) (2) (0.73) (3) (0.73) (4) (0.73) (5) (0.73) (6) (0.73)
(7) (0.72) (8) (0.72) (9) (0.72) (10) (0.72) (11) (0.72) (12) (0.72)
(13) (0.73) (14) (0.73) (15) (0.73) (16) (0.73) (17) (0.73) (18) (0.73)
(19) (0.73) (20) (0.73) (21) (0.73) (22) (0.73) (23) (0.73) (24) (0.73) ..
WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..
ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK
                          THRU JUL 4 VAC      THRU NOV 22 WORK
                          THRU NOV 24 VAC     THRU DEC 24 WORK
                          THRU DEC 25 VAC     THRU DEC 30 WORK
                          THRU DEC 31 VAC ..
G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 3.98 ..
```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jul 1, 1998 - Jul 1, 1999.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

TXL011

(Page 1) Building Descriptions: (TXL011)

(This section depends on the extent of information available on each building).

Building 200:

Building Name: Capitol Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, TX.

Category: Large Office Building, based on the CBECS classification.

Square footage: 282,499 ft² .

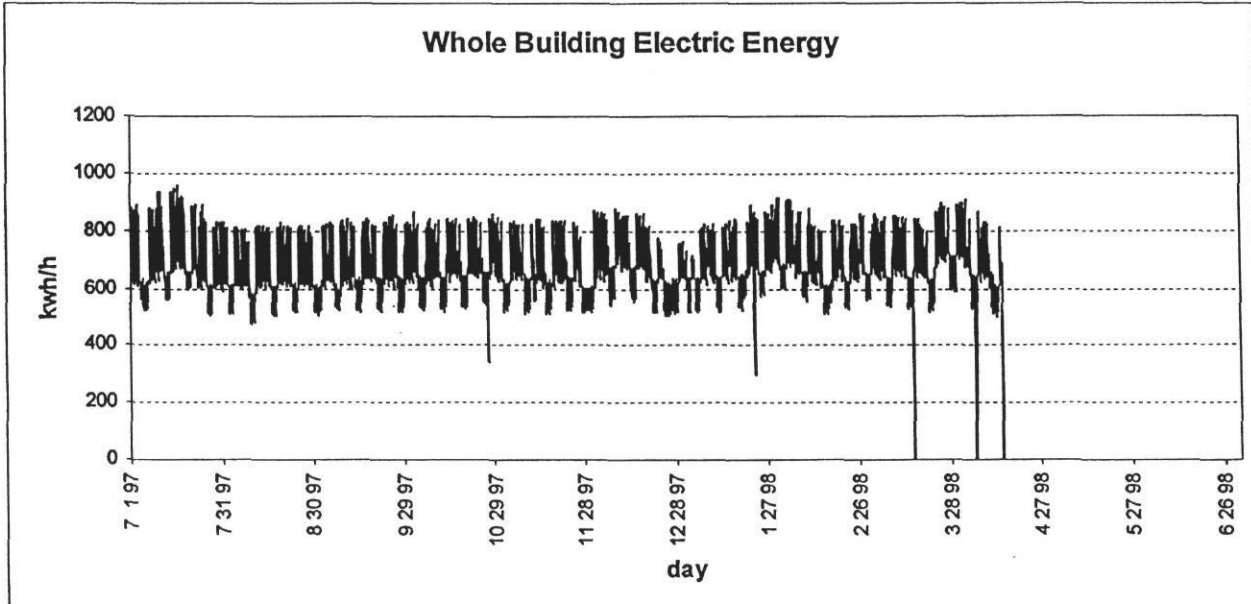
Lighting EUI: $[(18.06 \times 5) + (14.80 \times 2)] \times 52 \times 3.39 = 21.17 \text{ kWh/ft}^2 \cdot \text{year}$

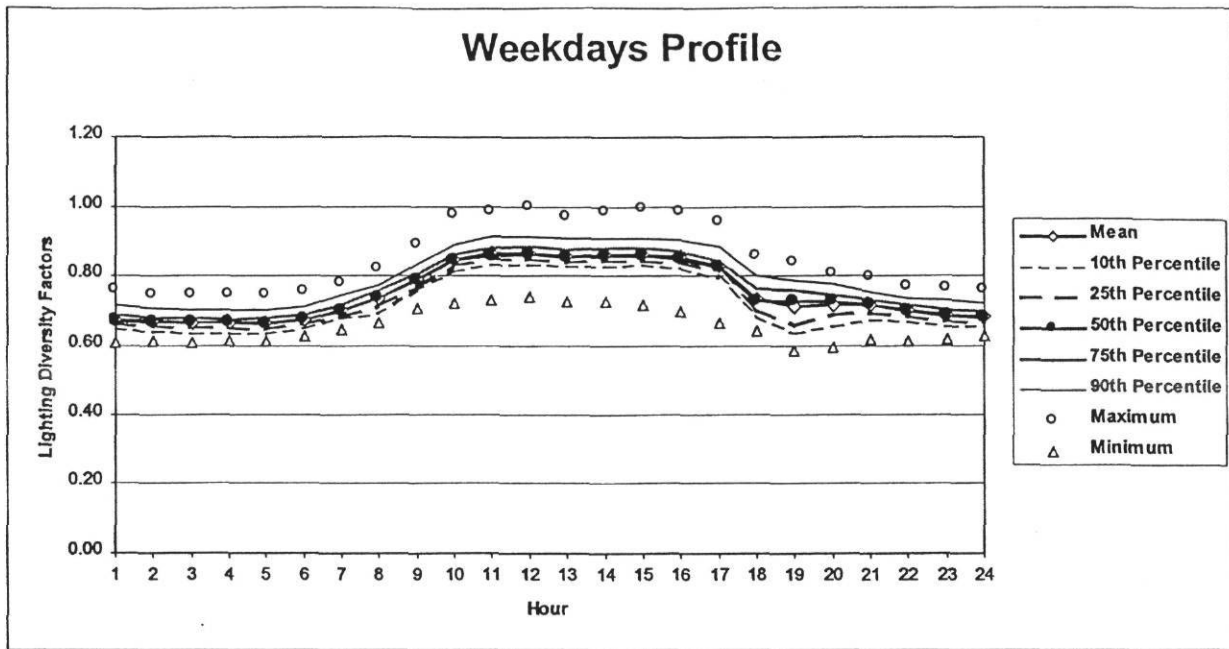
Lighting Type: N/A

Dates: 7/1/97 - 7/1/98

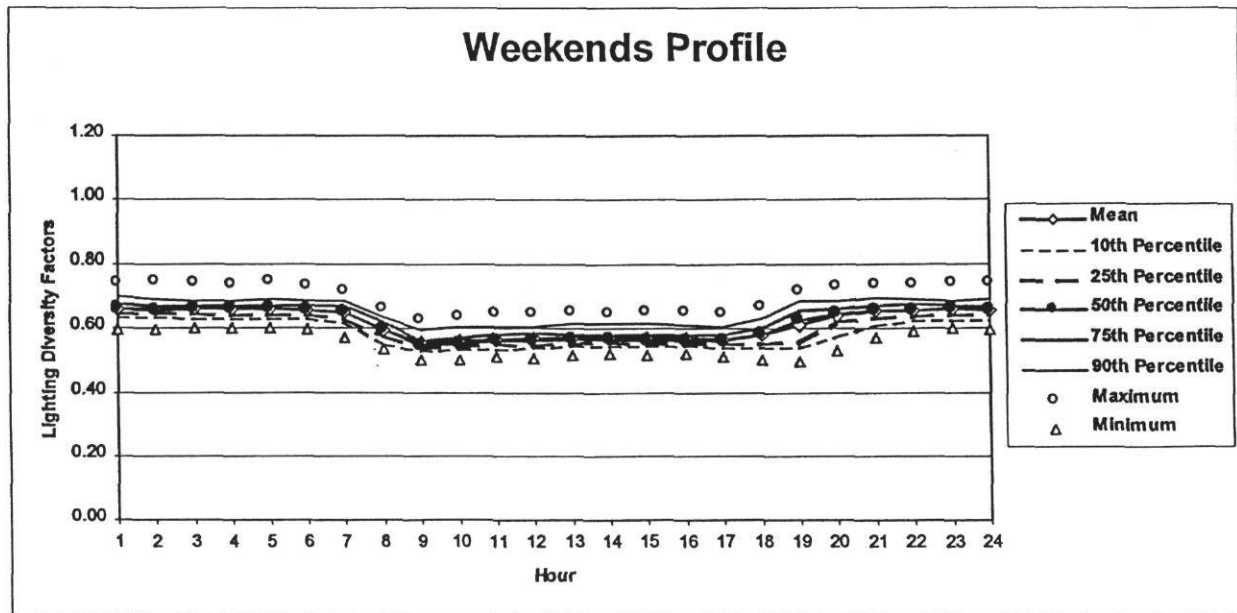
Data Type: WBE = ch1492

Maximum kW: 959 kW





**The dates that are excluded from the weekday profile are as follow: 7/4/97, 9/1/97, 11/11/97, 11/27/97, 11/28/97, 12/24 -12/26/97, 12/31/97, 1/1/98, 1/19/98, 2/16/98, 4/10/98, and 4/14/98 - 6/30/98.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.68	0.70	0.65	0.65	0.66	0.67	0.69	0.72	0.76	0.61
2.00	0.67	0.70	0.65	0.64	0.65	0.67	0.68	0.71	0.75	0.61
3.00	0.67	0.69	0.64	0.64	0.65	0.66	0.68	0.70	0.74	0.61
4.00	0.67	0.69	0.64	0.64	0.65	0.67	0.68	0.70	0.74	0.61
5.00	0.67	0.69	0.64	0.64	0.65	0.66	0.68	0.70	0.75	0.61
6.00	0.68	0.70	0.65	0.65	0.66	0.67	0.69	0.71	0.75	0.63
7.00	0.70	0.73	0.68	0.68	0.69	0.70	0.72	0.74	0.78	0.65
8.00	0.73	0.77	0.70	0.69	0.71	0.73	0.76	0.77	0.82	0.67
9.00	0.79	0.82	0.76	0.76	0.77	0.79	0.81	0.83	0.89	0.71
10.00	0.85	0.88	0.81	0.81	0.83	0.84	0.86	0.89	0.97	0.72
11.00	0.87	0.90	0.83	0.84	0.85	0.86	0.88	0.91	0.98	0.73
12.00	0.87	0.90	0.83	0.84	0.85	0.86	0.89	0.91	1.00	0.74
13.00	0.86	0.90	0.82	0.83	0.84	0.86	0.88	0.91	0.97	0.73
14.00	0.86	0.90	0.83	0.83	0.84	0.86	0.88	0.91	0.99	0.72
15.00	0.86	0.90	0.83	0.84	0.84	0.86	0.88	0.91	0.99	0.72
16.00	0.86	0.90	0.82	0.82	0.84	0.85	0.87	0.91	0.98	0.70
17.00	0.83	0.87	0.79	0.80	0.81	0.82	0.84	0.89	0.96	0.67
18.00	0.74	0.78	0.69	0.69	0.71	0.73	0.76	0.80	0.86	0.64
19.00	0.71	0.77	0.66	0.64	0.66	0.73	0.76	0.79	0.84	0.59
20.00	0.72	0.76	0.68	0.66	0.69	0.73	0.75	0.78	0.81	0.59
21.00	0.71	0.75	0.68	0.67	0.69	0.72	0.73	0.75	0.80	0.62
22.00	0.70	0.73	0.67	0.67	0.68	0.70	0.72	0.74	0.77	0.62
23.00	0.69	0.72	0.66	0.66	0.67	0.69	0.71	0.73	0.76	0.62
24.00	0.68	0.71	0.66	0.65	0.66	0.68	0.70	0.72	0.76	0.63
Daily Values	18.06	18.72	17.40	17.36	17.64	17.94	18.33	19.03	19.93	16.51
Daily Sum from Hourly	18.07	18.86	17.28	17.23	17.56	17.99	18.47	19.15	20.42	15.75

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.66	0.69	0.64	0.64	0.65	0.66	0.68	0.70	0.74	0.60
2.00	0.66	0.69	0.64	0.64	0.65	0.66	0.67	0.69	0.74	0.60
3.00	0.66	0.69	0.64	0.63	0.65	0.66	0.67	0.69	0.74	0.60
4.00	0.66	0.69	0.64	0.63	0.64	0.66	0.67	0.69	0.74	0.60
5.00	0.66	0.69	0.64	0.63	0.64	0.66	0.67	0.69	0.74	0.60
6.00	0.66	0.68	0.63	0.63	0.64	0.66	0.67	0.69	0.73	0.60
7.00	0.65	0.68	0.63	0.62	0.63	0.65	0.67	0.68	0.72	0.57
8.00	0.60	0.63	0.57	0.55	0.58	0.60	0.62	0.64	0.66	0.54
9.00	0.56	0.58	0.53	0.53	0.54	0.55	0.56	0.60	0.63	0.50
10.00	0.56	0.59	0.53	0.54	0.54	0.55	0.57	0.61	0.64	0.50
11.00	0.57	0.60	0.54	0.54	0.55	0.56	0.58	0.61	0.65	0.51
12.00	0.57	0.60	0.54	0.54	0.55	0.56	0.59	0.61	0.65	0.51
13.00	0.57	0.60	0.54	0.55	0.55	0.57	0.58	0.62	0.65	0.52
14.00	0.57	0.60	0.54	0.55	0.56	0.57	0.58	0.62	0.65	0.52
15.00	0.57	0.60	0.54	0.55	0.55	0.56	0.58	0.62	0.65	0.52
16.00	0.57	0.60	0.54	0.55	0.55	0.56	0.58	0.61	0.65	0.52
17.00	0.57	0.60	0.54	0.54	0.55	0.56	0.58	0.61	0.65	0.51
18.00	0.58	0.62	0.55	0.54	0.55	0.58	0.60	0.63	0.67	0.50
19.00	0.61	0.67	0.56	0.54	0.56	0.63	0.66	0.69	0.72	0.50
20.00	0.64	0.68	0.60	0.58	0.62	0.65	0.66	0.69	0.73	0.53
21.00	0.66	0.69	0.62	0.61	0.63	0.66	0.67	0.69	0.74	0.57
22.00	0.66	0.69	0.63	0.63	0.64	0.66	0.68	0.69	0.74	0.59
23.00	0.66	0.69	0.63	0.63	0.64	0.66	0.67	0.69	0.74	0.60
24.00	0.66	0.69	0.63	0.63	0.64	0.66	0.67	0.69	0.74	0.60
Daily Values	14.80	15.44	14.15	14.08	14.37	14.74	15.09	15.73	16.53	13.35
Daily Sum from Hourly	14.81	15.52	14.10	14.02	14.32	14.75	15.17	15.74	16.71	13.22

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Capitol Building, Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```
$ ***** LIGHTING SCHEDULES ***** $  
  
$ WEEKDAY SCHEDULE $  
WKDAY = DAY-SCHEDULE  
(1) (0.67) (2) (0.67) (3) (0.66) (4) (0.67) (5) (0.66) (6) (0.67)  
(7) (0.70) (8) (0.73) (9) (0.79) (10) (0.84) (11) (0.86) (12) (0.86)  
(13) (0.86) (14) (0.86) (15) (0.86) (16) (0.85) (17) (0.82) (18) (0.73)  
(19) (0.73) (20) (0.73) (21) (0.72) (22) (0.70) (23) (0.69) (24) (0.68) ..  
  
$ WEEKEND SCHEDULE $  
WKEND = DAY-SCHEDULE  
(1) (0.66) (2) (0.66) (3) (0.66) (4) (0.66) (5) (0.66) (6) (0.66)  
(7) (0.65) (8) (0.60) (9) (0.55) (10) (0.55) (11) (0.56) (12) (0.56)  
(13) (0.57) (14) (0.57) (15) (0.56) (16) (0.56) (17) (0.56) (18) (0.58)  
(19) (0.63) (20) (0.65) (21) (0.66) (22) (0.66) (23) (0.66) (24) (0.66) ..  
  
WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..  
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..  
  
ELE-SCH = SCHEDULE      THRU JAN 1 VAC      THRU JUL 3 WORK  
                        THRU JUL 4 VAC      THRU NOV 22 WORK  
                        THRU NOV 24 VAC     THRU DEC 24 WORK  
                        THRU DEC 25 VAC     THRU DEC 30 WORK  
                        THRU DEC 31 VAC ..  
  
G-ZONE = SPACE-CONDITIONS  
LIGHTING-SCHEDULE = ELE-SCH  
LIGHTING-TYPE = REC-FLUOR-RV  
LIGHT-TO-SPACE = 0.8  
LIGHTING-W/SQFT = 3.39 ..
```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of July 1, 1997 - June 30, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample

TXL012

(Page 1) Building Descriptions: (TXL012)

(This section depends on the extent of information available on each building).

Building 201:

Building Name: Sam Houston Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Large Office Building, based on the CBECS classification.

Square footage: Ten story, 182,961 ft² .

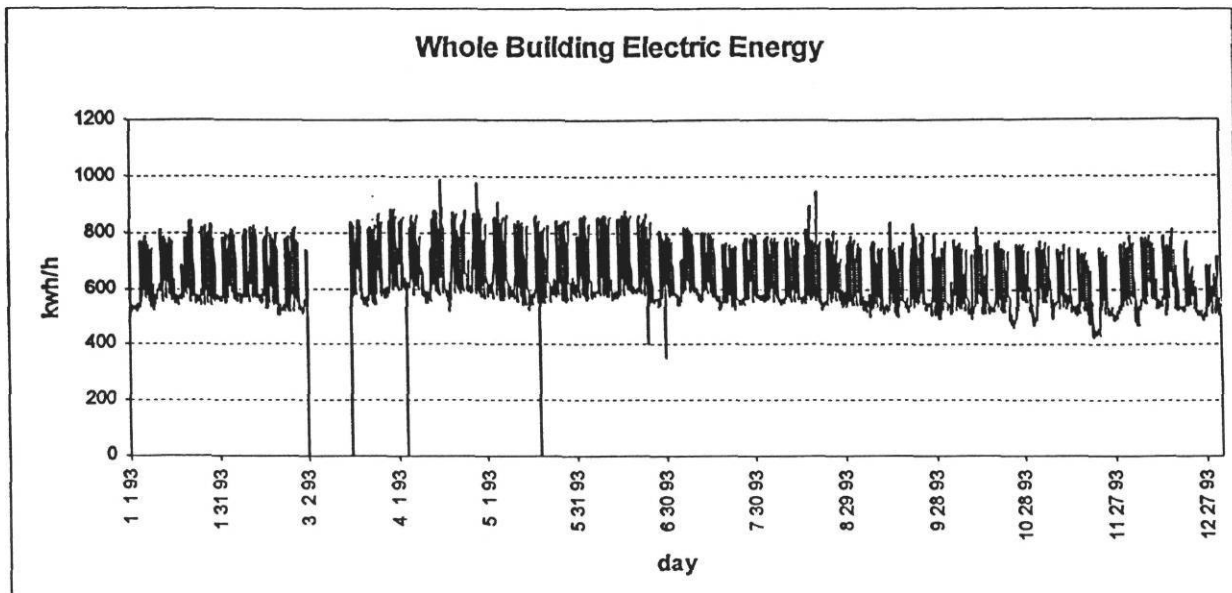
Lighting EUI: $[(16.15 \times 5) + (13.43 \times 2)] \times 52 \times 5.39 = 30.18 \text{ kWh/ft}^2\text{.year}$

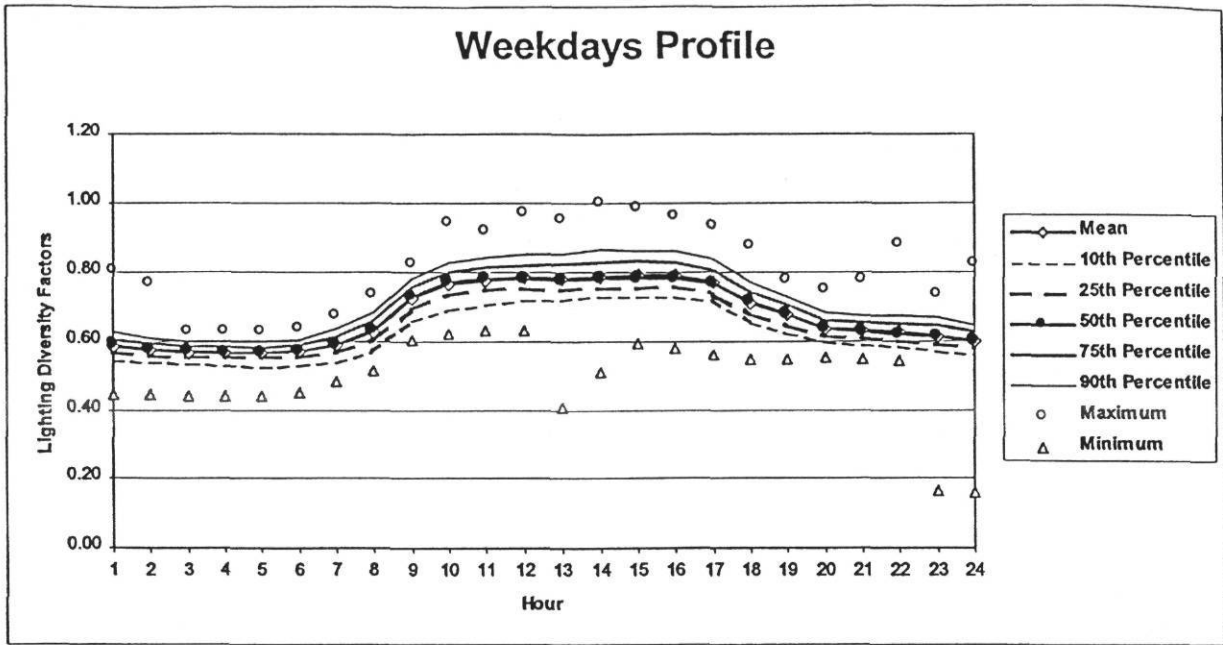
Lighting Type: Mixture of fluorescent and incandescent

Dates: 1/1/93 - 12/31/93

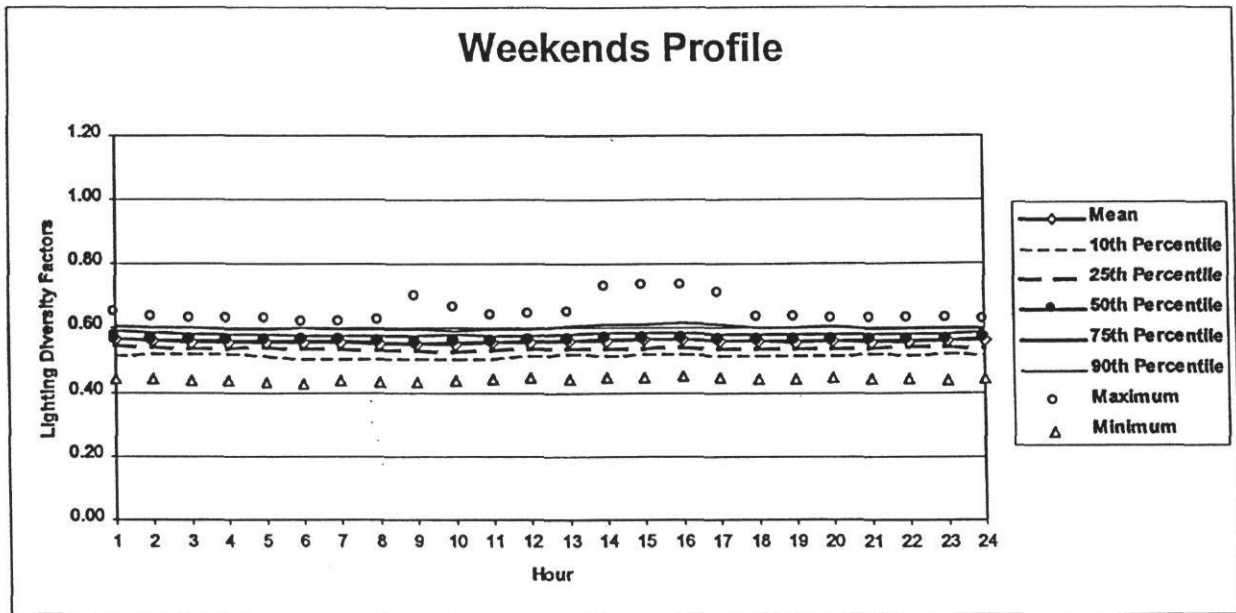
Data Type: $\text{WBE} = (\text{ch0565} + \text{ch0566} + \text{ch0575} + \text{ch0576} + \text{ch0579} + \text{ch0580}) - (\text{ch0573} + \text{ch0574} + \text{ch0571} + \text{ch0572} + \text{ch0577} + \text{ch0578}) - (\text{ch2940} + \text{ch2941} + \text{ch2942} + \text{ch2943}) - (\text{ch0567} + \text{ch0568})$

Maximum kW: 987 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/93, 1/18/93, 3/2/93 - 3/16/93, 4/9/93, 9/6/93, 11/11/93, 11/25/93, 11/26/93, 12/24/93, and 12/31/93.*



(Page 3) Diversity Factors and Statistics

WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.59	0.62	0.55	0.55	0.57	0.59	0.61	0.63	0.80	0.44
2.00	0.58	0.61	0.54	0.54	0.56	0.58	0.60	0.61	0.77	0.44
3.00	0.57	0.60	0.54	0.53	0.55	0.57	0.59	0.60	0.63	0.44
4.00	0.57	0.60	0.54	0.53	0.55	0.57	0.59	0.60	0.63	0.44
5.00	0.57	0.59	0.54	0.53	0.55	0.57	0.58	0.60	0.63	0.44
6.00	0.57	0.60	0.54	0.53	0.55	0.57	0.59	0.60	0.64	0.45
7.00	0.59	0.63	0.55	0.54	0.57	0.59	0.62	0.64	0.68	0.48
8.00	0.63	0.67	0.59	0.57	0.60	0.63	0.66	0.69	0.73	0.51
9.00	0.73	0.77	0.68	0.66	0.69	0.73	0.76	0.78	0.83	0.61
10.00	0.77	0.82	0.72	0.70	0.74	0.77	0.80	0.83	0.94	0.62
11.00	0.78	0.83	0.73	0.71	0.75	0.78	0.82	0.84	0.92	0.63
12.00	0.79	0.84	0.74	0.72	0.76	0.78	0.82	0.85	0.97	0.63
13.00	0.78	0.84	0.72	0.72	0.75	0.78	0.82	0.86	0.95	0.41
14.00	0.79	0.85	0.73	0.73	0.75	0.78	0.83	0.87	1.00	0.51
15.00	0.79	0.85	0.74	0.73	0.76	0.78	0.83	0.86	0.99	0.60
16.00	0.79	0.84	0.74	0.73	0.76	0.78	0.83	0.86	0.96	0.58
17.00	0.77	0.82	0.72	0.72	0.74	0.77	0.81	0.84	0.93	0.56
18.00	0.71	0.76	0.66	0.66	0.68	0.72	0.75	0.77	0.88	0.55
19.00	0.68	0.72	0.64	0.62	0.65	0.68	0.71	0.73	0.78	0.55
20.00	0.64	0.68	0.60	0.60	0.62	0.64	0.66	0.68	0.75	0.55
21.00	0.63	0.67	0.60	0.59	0.61	0.63	0.66	0.68	0.78	0.55
22.00	0.63	0.67	0.59	0.58	0.60	0.62	0.65	0.67	0.88	0.54
23.00	0.61	0.68	0.55	0.57	0.59	0.61	0.65	0.67	0.74	0.16
24.00	0.60	0.66	0.54	0.56	0.58	0.60	0.63	0.65	0.82	0.16

Daily Values	16.15	17.03	15.27	15.04	15.55	16.12	16.80	17.32	18.26	13.67
Daily Sum from Hourly	16.15	17.22	15.08	14.92	15.52	16.14	16.85	17.42	19.62	11.88

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.57	0.60	0.53	0.52	0.55	0.57	0.59	0.61	0.65	0.44
2.00	0.56	0.60	0.53	0.52	0.54	0.56	0.59	0.60	0.63	0.44
3.00	0.56	0.59	0.52	0.52	0.54	0.56	0.58	0.60	0.63	0.44
4.00	0.56	0.59	0.52	0.52	0.54	0.56	0.58	0.60	0.63	0.44
5.00	0.56	0.59	0.52	0.52	0.54	0.56	0.58	0.60	0.63	0.43
6.00	0.56	0.59	0.52	0.51	0.54	0.56	0.58	0.60	0.62	0.43
7.00	0.56	0.59	0.52	0.51	0.54	0.56	0.58	0.60	0.62	0.44
8.00	0.55	0.59	0.52	0.51	0.53	0.56	0.58	0.60	0.62	0.43
9.00	0.55	0.59	0.51	0.51	0.53	0.55	0.58	0.60	0.70	0.43
10.00	0.55	0.59	0.52	0.51	0.53	0.56	0.58	0.59	0.66	0.44
11.00	0.56	0.59	0.52	0.51	0.53	0.56	0.58	0.60	0.64	0.44
12.00	0.56	0.59	0.52	0.52	0.54	0.56	0.58	0.60	0.64	0.45
13.00	0.56	0.60	0.52	0.52	0.54	0.56	0.58	0.61	0.65	0.44
14.00	0.56	0.61	0.52	0.52	0.54	0.57	0.59	0.61	0.73	0.45
15.00	0.57	0.61	0.52	0.52	0.54	0.57	0.59	0.61	0.73	0.45
16.00	0.57	0.61	0.53	0.52	0.54	0.57	0.59	0.62	0.73	0.45
17.00	0.56	0.60	0.53	0.52	0.54	0.56	0.58	0.61	0.71	0.45
18.00	0.56	0.60	0.53	0.52	0.54	0.56	0.58	0.60	0.63	0.44
19.00	0.56	0.59	0.53	0.52	0.54	0.56	0.58	0.60	0.63	0.44
20.00	0.56	0.60	0.53	0.52	0.54	0.56	0.58	0.61	0.63	0.45
21.00	0.56	0.59	0.53	0.52	0.54	0.56	0.58	0.60	0.63	0.44
22.00	0.56	0.59	0.53	0.52	0.54	0.56	0.58	0.60	0.63	0.44
23.00	0.56	0.60	0.53	0.52	0.54	0.56	0.58	0.60	0.63	0.44
24.00	0.56	0.60	0.53	0.52	0.54	0.57	0.59	0.60	0.62	0.44

Daily Values	13.43	14.24	12.62	12.46	12.90	13.54	14.00	14.43	14.99	10.68
Daily Sum from Hourly	13.44	14.31	12.56	12.41	12.92	13.51	13.99	14.45	15.60	10.61

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Sam Houston Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.59) (2) (0.58) (3) (0.57) (4) (0.57) (5) (0.57) (6) (0.57)
(7) (0.59) (8) (0.63) (9) (0.73) (10) (0.77) (11) (0.78) (12) (0.78)
(13) (0.78) (14) (0.78) (15) (0.78) (16) (0.78) (17) (0.77) (18) (0.72)
(19) (0.68) (20) (0.64) (21) (0.63) (22) (0.62) (23) (0.61) (24) (0.60) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.57) (2) (0.56) (3) (0.56) (4) (0.56) (5) (0.56) (6) (0.56)
(7) (0.56) (8) (0.56) (9) (0.56) (10) (0.56) (11) (0.56) (12) (0.56)
(13) (0.56) (14) (0.57) (15) (0.57) (16) (0.57) (17) (0.56) (18) (0.56)
(19) (0.56) (20) (0.56) (21) (0.56) (22) (0.56) (23) (0.56) (24) (0.57) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 5.39 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan 1, 1993 - Dec 31, 1993.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" commend of the "LOADS" input file.

2. BLAST Input Sample

TXM001

(Page 1) Building Descriptions: (TXM001)

(This section depends on the extent of information available on each building).

Building 205:

Building Name: James E. Rudder Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Medium Office Building, based on the CBECS classification.

Square footage: Six story, 80,000 ft² .

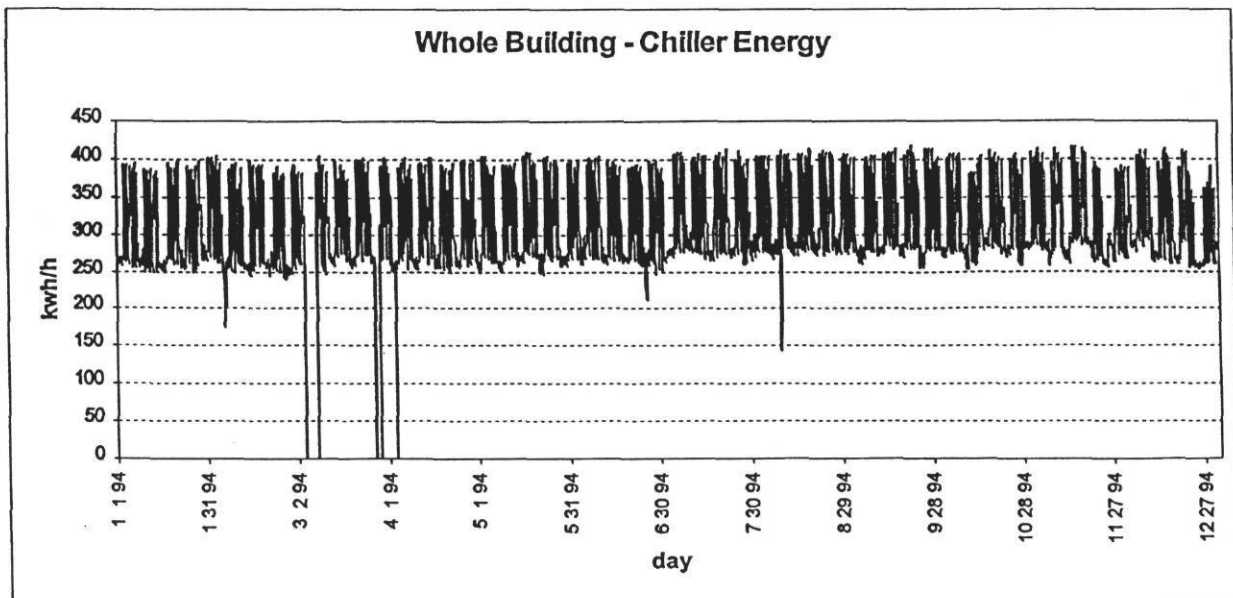
Lighting EUI: $[(19.14 \times 5) + (15.59 \times 2)] \times 52 \times 5.22 = 34.42 \text{ kWh/ft}^2 \cdot \text{year}$

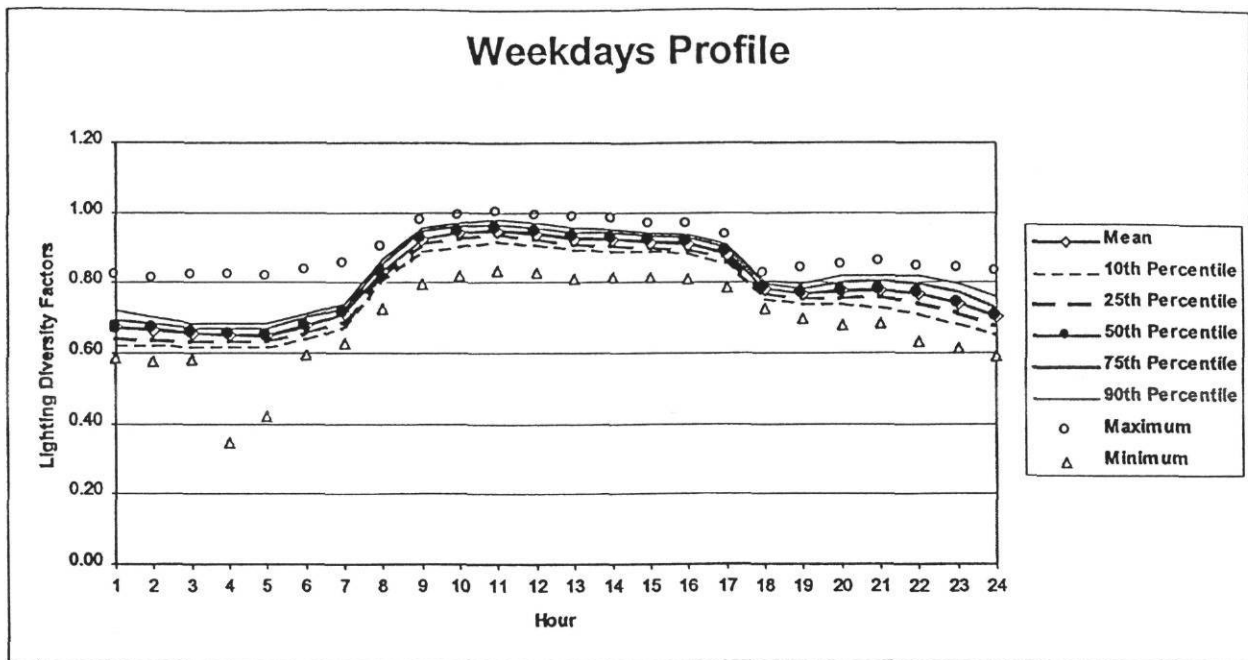
Lighting Type: 100% fluorescent (34-W)

Dates: 1/1/94 - 12/31/94

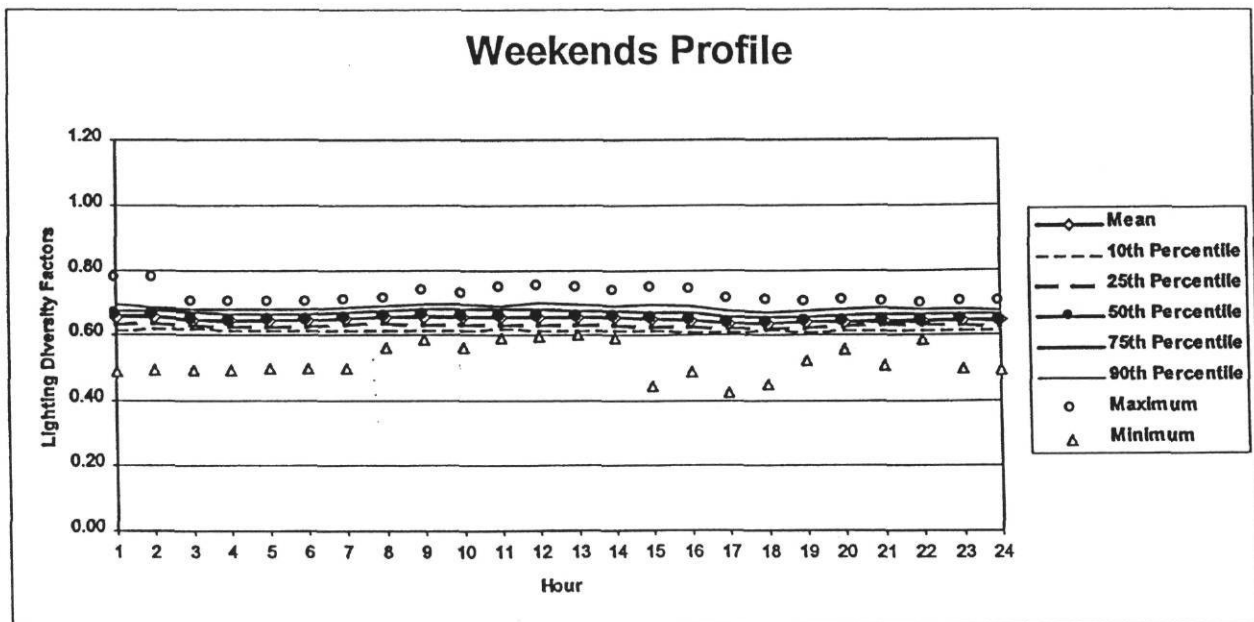
Data Type: Lighting + receptacles = WBE - Chillers = ch0213 - ch0212

Maximum kW: 417 kW





*The dates that are excluded from the weekday profile are as follow: 1/17/94, 2/21/94, 5/30/94, 7/4/94, 9/5/94, 11/11/94, 11/24/94, 11/25/94, and 12/26/94.



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.67	0.72	0.63	0.62	0.64	0.67	0.69	0.72	0.82	0.59
2.00	0.67	0.70	0.63	0.62	0.64	0.67	0.68	0.70	0.81	0.58
3.00	0.65	0.68	0.62	0.62	0.63	0.66	0.67	0.69	0.82	0.58
4.00	0.65	0.69	0.61	0.62	0.63	0.65	0.67	0.68	0.82	0.35
5.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.69	0.81	0.42
6.00	0.68	0.71	0.65	0.64	0.66	0.67	0.70	0.71	0.83	0.59
7.00	0.71	0.74	0.68	0.68	0.69	0.71	0.73	0.74	0.85	0.63
8.00	0.83	0.86	0.81	0.80	0.81	0.83	0.85	0.87	0.90	0.72
9.00	0.92	0.95	0.90	0.89	0.91	0.92	0.95	0.96	0.98	0.79
10.00	0.94	0.97	0.91	0.91	0.93	0.94	0.96	0.97	0.99	0.82
11.00	0.95	0.98	0.92	0.92	0.94	0.95	0.97	0.98	1.00	0.84
12.00	0.94	0.97	0.91	0.91	0.92	0.94	0.96	0.97	0.99	0.83
13.00	0.93	0.95	0.90	0.90	0.91	0.93	0.94	0.95	0.98	0.81
14.00	0.92	0.95	0.90	0.89	0.91	0.92	0.94	0.95	0.98	0.81
15.00	0.92	0.94	0.89	0.89	0.90	0.92	0.93	0.94	0.97	0.82
16.00	0.91	0.93	0.89	0.88	0.90	0.91	0.93	0.94	0.97	0.81
17.00	0.88	0.91	0.86	0.86	0.87	0.88	0.90	0.91	0.93	0.79
18.00	0.78	0.80	0.76	0.76	0.77	0.78	0.80	0.81	0.83	0.72
19.00	0.77	0.79	0.75	0.74	0.75	0.77	0.78	0.80	0.84	0.70
20.00	0.78	0.81	0.75	0.74	0.75	0.78	0.80	0.82	0.85	0.68
21.00	0.78	0.81	0.74	0.73	0.76	0.78	0.81	0.82	0.86	0.68
22.00	0.77	0.81	0.73	0.71	0.74	0.77	0.80	0.82	0.84	0.63
23.00	0.74	0.78	0.70	0.68	0.71	0.74	0.77	0.80	0.84	0.61
24.00	0.70	0.74	0.66	0.65	0.68	0.70	0.73	0.76	0.83	0.59

Daily Values	19.14	19.66	18.62	18.48	18.79	19.15	19.50	19.76	21.04	17.39
Daily Sum from Hourly	19.14	19.87	18.42	18.27	18.68	19.15	19.63	19.99	21.33	16.41

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.66	0.70	0.62	0.62	0.63	0.66	0.68	0.70	0.78	0.49
2.00	0.66	0.69	0.62	0.62	0.64	0.66	0.68	0.69	0.78	0.49
3.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.68	0.70	0.49
4.00	0.65	0.68	0.62	0.62	0.63	0.64	0.67	0.68	0.70	0.49
5.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.68	0.70	0.50
6.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.68	0.70	0.50
7.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.69	0.71	0.50
8.00	0.66	0.68	0.63	0.62	0.64	0.66	0.68	0.69	0.71	0.56
9.00	0.66	0.69	0.63	0.62	0.63	0.66	0.68	0.70	0.74	0.59
10.00	0.66	0.69	0.63	0.62	0.63	0.66	0.68	0.70	0.73	0.56
11.00	0.66	0.69	0.63	0.62	0.63	0.66	0.68	0.69	0.75	0.59
12.00	0.66	0.69	0.63	0.62	0.63	0.66	0.68	0.70	0.75	0.60
13.00	0.66	0.69	0.63	0.62	0.63	0.66	0.68	0.70	0.75	0.60
14.00	0.66	0.69	0.62	0.62	0.63	0.66	0.68	0.69	0.74	0.59
15.00	0.65	0.69	0.61	0.62	0.63	0.65	0.67	0.70	0.75	0.44
16.00	0.65	0.68	0.62	0.61	0.63	0.65	0.67	0.69	0.74	0.49
17.00	0.64	0.67	0.61	0.61	0.62	0.64	0.66	0.68	0.71	0.42
18.00	0.64	0.67	0.61	0.61	0.62	0.64	0.66	0.67	0.71	0.45
19.00	0.64	0.67	0.61	0.61	0.62	0.64	0.66	0.68	0.70	0.52
20.00	0.64	0.67	0.62	0.62	0.63	0.64	0.66	0.68	0.70	0.56
21.00	0.65	0.67	0.62	0.62	0.63	0.64	0.67	0.69	0.70	0.51
22.00	0.65	0.67	0.62	0.62	0.63	0.64	0.67	0.68	0.70	0.59
23.00	0.65	0.68	0.62	0.62	0.63	0.65	0.67	0.68	0.70	0.50
24.00	0.65	0.68	0.62	0.62	0.63	0.64	0.67	0.68	0.70	0.49

Daily Values	15.59	16.24	14.94	14.80	15.22	15.60	16.02	16.43	16.80	13.60
Daily Sum from Hourly	15.61	16.35	14.87	14.81	15.12	15.60	16.10	16.49	17.35	12.52

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input **Lighting diversity factors** for a Large Office Building (James E. Rudder Bldg., Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```
$ ***** LIGHTING SCHEDULES ***** $  
  
$ WEEKDAY SCHEDULE $  
WKDAY = DAY-SCHEDULE  
(1) (0.67) (2) (0.67) (3) (0.66) (4) (0.65) (5) (0.65) (6) (0.67)  
(7) (0.71) (8) (0.83) (9) (0.92) (10) (0.94) (11) (0.95) (12) (0.94)  
(13) (0.93) (14) (0.92) (15) (0.92) (16) (0.91) (17) (0.88) (18) (0.78)  
(19) (0.77) (20) (0.78) (21) (0.78) (22) (0.77) (23) (0.74) (24) (0.70) ..  
  
$ WEEKEND SCHEDULE $  
WKEND = DAY-SCHEDULE  
(1) (0.66) (2) (0.66) (3) (0.65) (4) (0.64) (5) (0.65) (6) (0.65)  
(7) (0.65) (8) (0.66) (9) (0.66) (10) (0.66) (11) (0.66) (12) (0.66)  
(13) (0.66) (14) (0.66) (15) (0.65) (16) (0.65) (17) (0.64) (18) (0.64)  
(19) (0.64) (20) (0.64) (21) (0.64) (22) (0.64) (23) (0.65) (24) (0.64) ..  
  
WORK = WEEK-SCHEDULE      (WD) WKDAY      (WE) WKEND      (HOL) WKEND ..  
VAC = WEEK-SCHEDULE       (WD) WKEND      (WE) WKEND      (HOL) WKEND ..  
  
ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK  
                          THRU JUL 4 VAC      THRU NOV 22 WORK  
                          THRU NOV 24 VAC     THRU DEC 24 WORK  
                          THRU DEC 25 VAC     THRU DEC 30 WORK  
                          THRU DEC 31 VAC ..  
  
G-ZONE = SPACE-CONDITIONS  
LIGHTING-SCHEDULE = ELE-SCH  
LIGHTING-TYPE = REC-FLUOR-RV  
LIGHT-TO-SPACE = 0.8  
LIGHTING-W/SQFT = 5.22 ..
```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/f^2) in the building for the period of Jan 1- Dec 31, 1994.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

2. BLAST Input Sample

TXM002

(Page 1) Building Descriptions: (TXM002)

(This section depends on the extent of information available on each building).

Building 207:

Building Name: Insurance Annex.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Medium Office Building, based on the CBECS classification.

Square footage: Four story, 62,000 ft² .

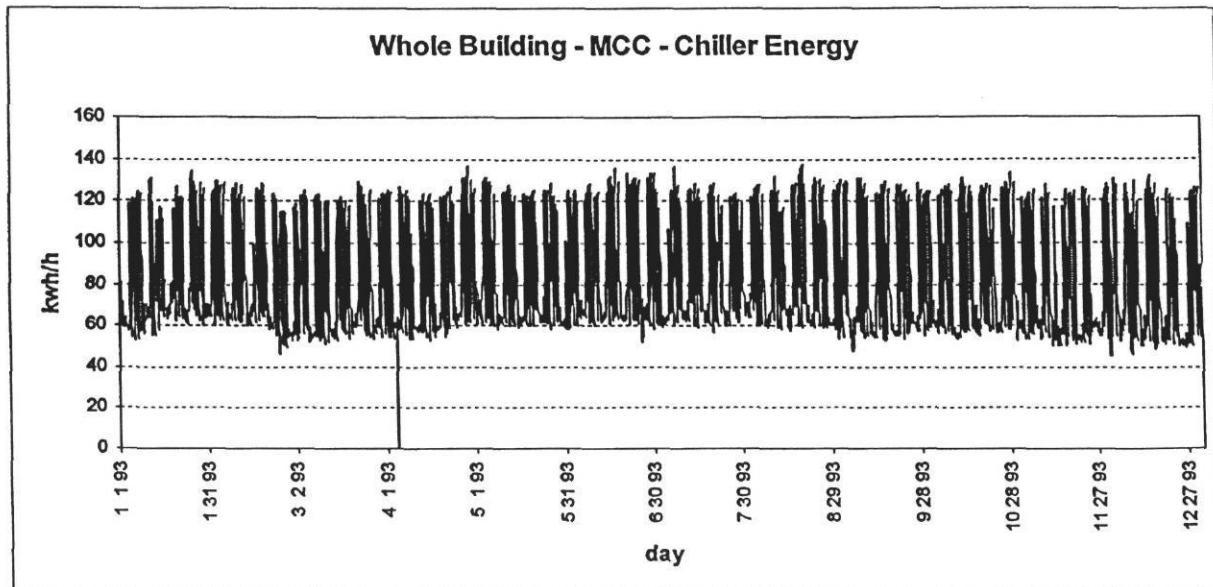
Lighting EUI: $[(15.92 \times 5) + (10.74 \times 2)] \times 52 \times 2.21 = 11.63 \text{ kWh/ft}^2 \cdot \text{year}$

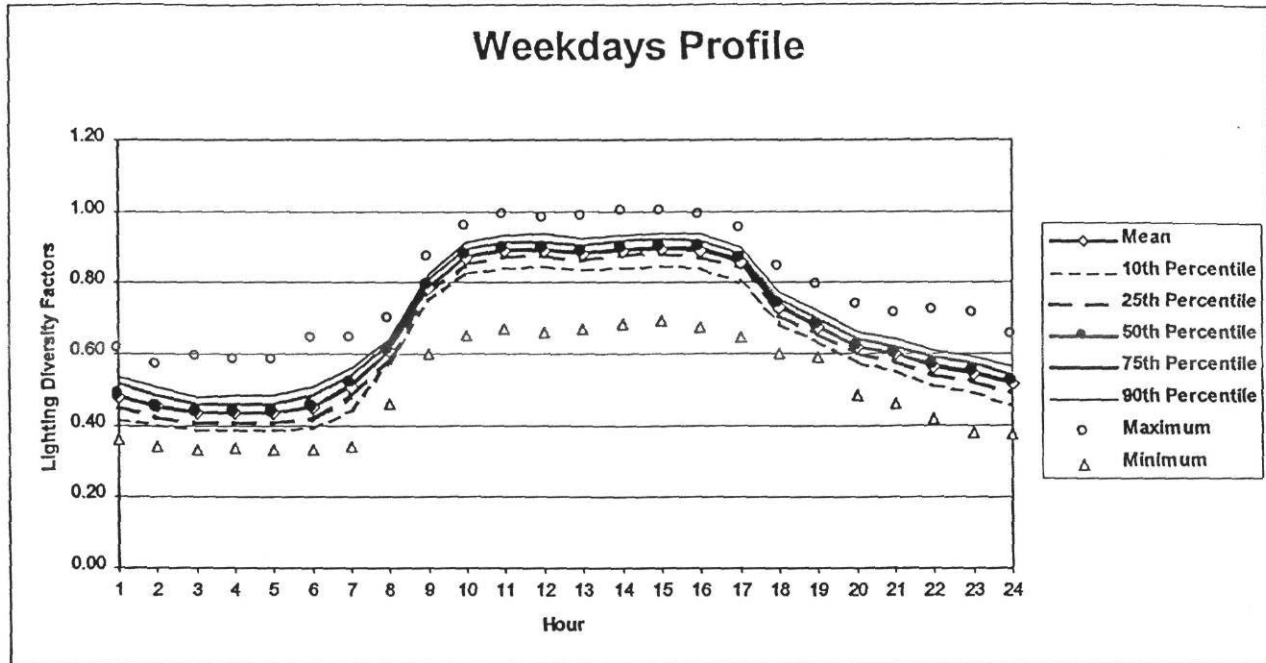
Lighting Type: 100% fluorescent.

Dates: 1/1/93 - 12/31/93

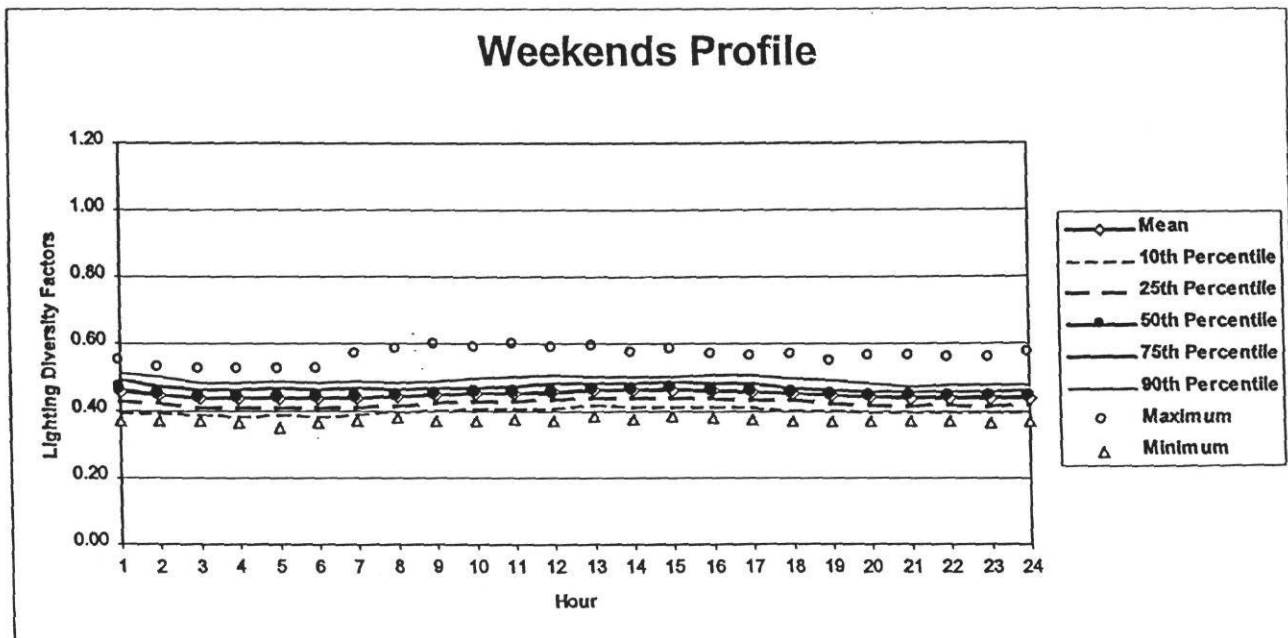
Data Type: Lighting + receptacles = WBE - MCC - Chiller = ch0218 - ch0217 - ch0216

Maximum kW: 137 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/93, 1/18/93, 9/6/93, 5/31/93, 11/11/93, 11/11/93, 11/25/93, 11/26/93, 12/24/93, and 12/31/93.*



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.48	0.53	0.43	0.42	0.45	0.48	0.51	0.54	0.62	0.36
2.00	0.45	0.49	0.41	0.40	0.42	0.45	0.48	0.51	0.57	0.34
3.00	0.43	0.47	0.40	0.39	0.41	0.44	0.46	0.48	0.59	0.33
4.00	0.43	0.47	0.40	0.39	0.41	0.44	0.46	0.48	0.58	0.34
5.00	0.43	0.47	0.40	0.39	0.41	0.44	0.46	0.48	0.58	0.33
6.00	0.45	0.50	0.41	0.40	0.42	0.45	0.48	0.51	0.64	0.33
7.00	0.51	0.55	0.46	0.44	0.48	0.51	0.54	0.56	0.64	0.34
8.00	0.61	0.64	0.58	0.57	0.59	0.61	0.63	0.64	0.70	0.46
9.00	0.79	0.82	0.75	0.75	0.77	0.79	0.81	0.82	0.87	0.60
10.00	0.87	0.91	0.83	0.83	0.85	0.88	0.90	0.91	0.96	0.65
11.00	0.89	0.93	0.85	0.84	0.87	0.89	0.91	0.94	0.99	0.67
12.00	0.89	0.93	0.85	0.85	0.88	0.90	0.92	0.94	0.98	0.66
13.00	0.88	0.92	0.84	0.84	0.86	0.88	0.91	0.92	0.99	0.67
14.00	0.89	0.93	0.85	0.84	0.88	0.89	0.92	0.93	1.00	0.69
15.00	0.90	0.94	0.85	0.85	0.88	0.90	0.92	0.94	1.00	0.70
16.00	0.89	0.94	0.85	0.84	0.87	0.90	0.92	0.94	0.99	0.68
17.00	0.86	0.90	0.81	0.80	0.84	0.87	0.88	0.90	0.95	0.65
18.00	0.73	0.77	0.70	0.68	0.71	0.74	0.76	0.77	0.84	0.60
19.00	0.68	0.71	0.64	0.64	0.66	0.68	0.70	0.72	0.79	0.59
20.00	0.62	0.66	0.59	0.58	0.60	0.62	0.64	0.66	0.73	0.48
21.00	0.60	0.64	0.56	0.55	0.58	0.60	0.62	0.64	0.71	0.46
22.00	0.56	0.61	0.52	0.51	0.54	0.57	0.59	0.61	0.72	0.42
23.00	0.54	0.59	0.50	0.49	0.52	0.55	0.57	0.59	0.71	0.38
24.00	0.51	0.56	0.47	0.46	0.49	0.52	0.54	0.56	0.65	0.38
Daily Values	15.92	16.61	15.23	15.15	15.57	15.99	16.39	16.65	17.84	13.38
Daily Sum from Hourly	15.92	16.89	14.94	14.76	15.38	15.99	16.53	17.00	18.80	12.10
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.46	0.50	0.42	0.39	0.43	0.46	0.49	0.51	0.55	0.37
2.00	0.45	0.49	0.41	0.39	0.42	0.45	0.48	0.50	0.53	0.37
3.00	0.44	0.47	0.40	0.39	0.41	0.44	0.46	0.48	0.52	0.37
4.00	0.44	0.47	0.40	0.38	0.41	0.44	0.46	0.48	0.52	0.36
5.00	0.44	0.48	0.40	0.39	0.41	0.44	0.47	0.49	0.52	0.35
6.00	0.44	0.48	0.40	0.39	0.41	0.44	0.46	0.49	0.52	0.36
7.00	0.44	0.48	0.40	0.39	0.41	0.44	0.47	0.49	0.57	0.37
8.00	0.44	0.48	0.41	0.40	0.42	0.44	0.46	0.48	0.58	0.38
9.00	0.45	0.48	0.41	0.40	0.42	0.45	0.47	0.49	0.60	0.37
10.00	0.45	0.49	0.41	0.41	0.43	0.45	0.47	0.50	0.59	0.37
11.00	0.45	0.49	0.42	0.41	0.43	0.45	0.47	0.50	0.60	0.37
12.00	0.46	0.50	0.42	0.41	0.43	0.45	0.48	0.51	0.59	0.37
13.00	0.46	0.50	0.43	0.42	0.44	0.46	0.48	0.50	0.59	0.38
14.00	0.46	0.50	0.43	0.42	0.44	0.46	0.49	0.50	0.57	0.38
15.00	0.46	0.50	0.43	0.41	0.44	0.47	0.49	0.51	0.58	0.38
16.00	0.46	0.50	0.43	0.41	0.44	0.46	0.48	0.51	0.57	0.38
17.00	0.46	0.50	0.42	0.41	0.43	0.46	0.48	0.51	0.56	0.37
18.00	0.45	0.49	0.42	0.40	0.43	0.45	0.47	0.50	0.57	0.37
19.00	0.45	0.48	0.41	0.40	0.43	0.45	0.46	0.49	0.55	0.37
20.00	0.44	0.48	0.41	0.40	0.42	0.45	0.46	0.48	0.56	0.37
21.00	0.44	0.47	0.41	0.40	0.42	0.44	0.46	0.47	0.56	0.37
22.00	0.44	0.47	0.41	0.40	0.42	0.44	0.46	0.48	0.56	0.37
23.00	0.44	0.47	0.41	0.40	0.42	0.44	0.46	0.48	0.56	0.36
24.00	0.44	0.48	0.41	0.40	0.42	0.44	0.46	0.48	0.57	0.37
Daily Values	10.74	11.51	9.97	9.73	10.20	10.81	11.25	11.61	12.89	8.92
Daily Sum from Hourly	10.76	11.63	9.88	9.60	10.15	10.78	11.29	11.83	13.50	8.87
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Insurance Annex, Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```

$ ***** LIGHTING SCHEDULES ***** $

$ WEEKDAY SCHEDULE $
WKDAY = DAY-SCHEDULE
(1) (0.48) (2) (0.45) (3) (0.44) (4) (0.44) (5) (0.44) (6) (0.45)
(7) (0.51) (8) (0.61) (9) (0.79) (10) (0.88) (11) (0.89) (12) (0.90)
(13) (0.88) (14) (0.89) (15) (0.90) (16) (0.90) (17) (0.87) (18) (0.74)
(19) (0.68) (20) (0.62) (21) (0.60) (22) (0.57) (23) (0.55) (24) (0.52) ..

$ WEEKEND SCHEDULE $
WKEND = DAY-SCHEDULE
(1) (0.46) (2) (0.45) (3) (0.44) (4) (0.44) (5) (0.44) (6) (0.44)
(7) (0.44) (8) (0.44) (9) (0.45) (10) (0.45) (11) (0.45) (12) (0.45)
(13) (0.46) (14) (0.46) (15) (0.47) (16) (0.46) (17) (0.46) (18) (0.45)
(19) (0.45) (20) (0.45) (21) (0.44) (22) (0.44) (23) (0.44) (24) (0.44) ..

WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..

ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK
                           THRU JUL 4 VAC      THRU NOV 22 WORK
                           THRU NOV 24 VAC     THRU DEC 24 WORK
                           THRU DEC 25 VAC     THRU DEC 30 WORK
                           THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 2.21 ..

```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1- Dec 31, 1993.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

2. BLAST Input Sample

TXM003

(This section depends on the extent of information available on each building).

Building 226:

Building Name: Central Services Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Medium Office Building, based on the CBECS classification.

Square footage: Four story, 97,030 ft² .

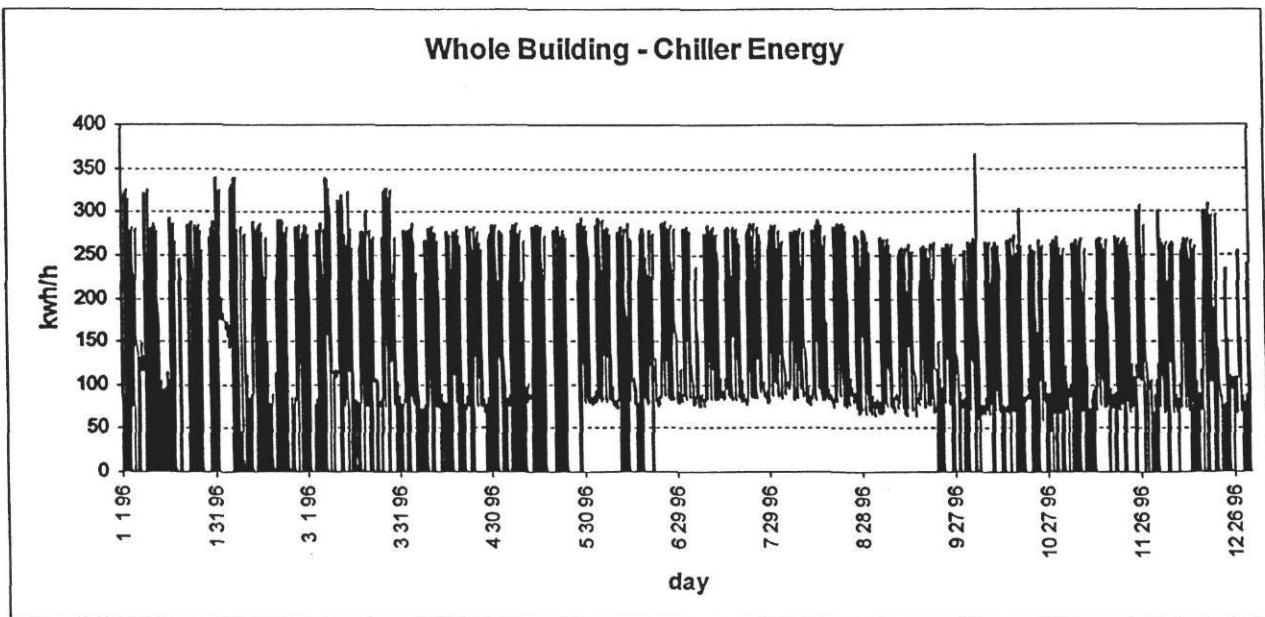
Lighting EUI: $[(11.54 \times 5) + (5.68 \times 2)] \times 52 \times 3.76 = 13.49 \text{ kWh/ft}^2 \cdot \text{year}$

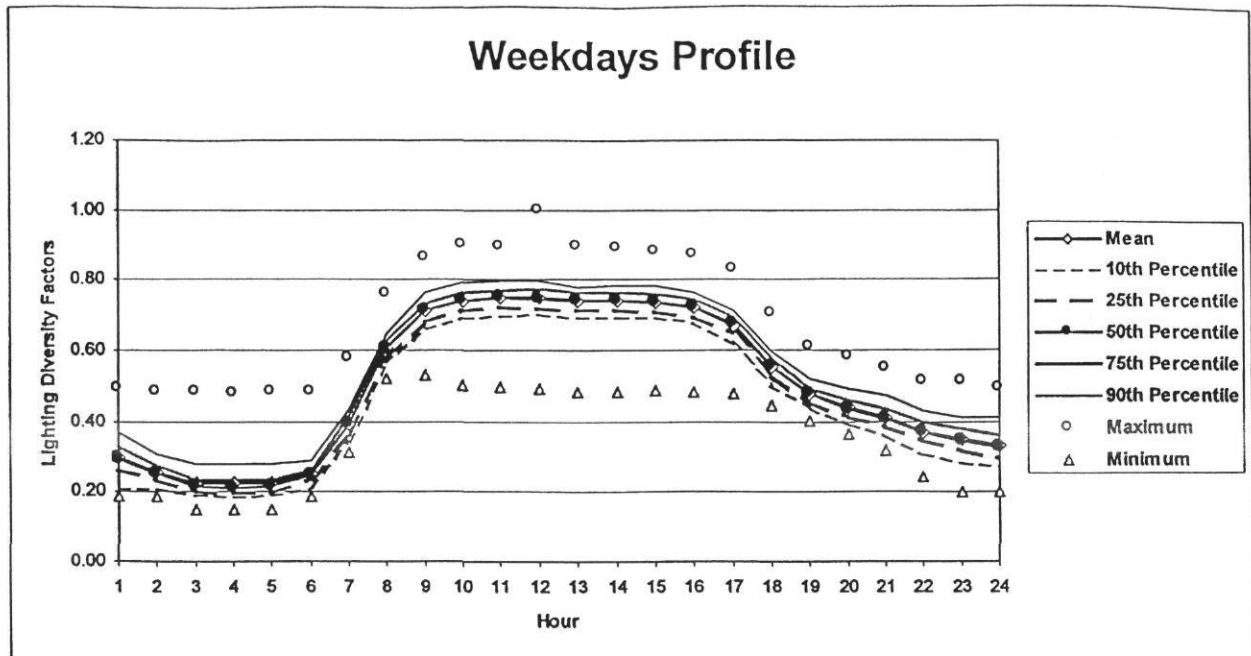
Lighting Type: 100% fluorescent.

Dates: 1/1/96 - 12/31/96

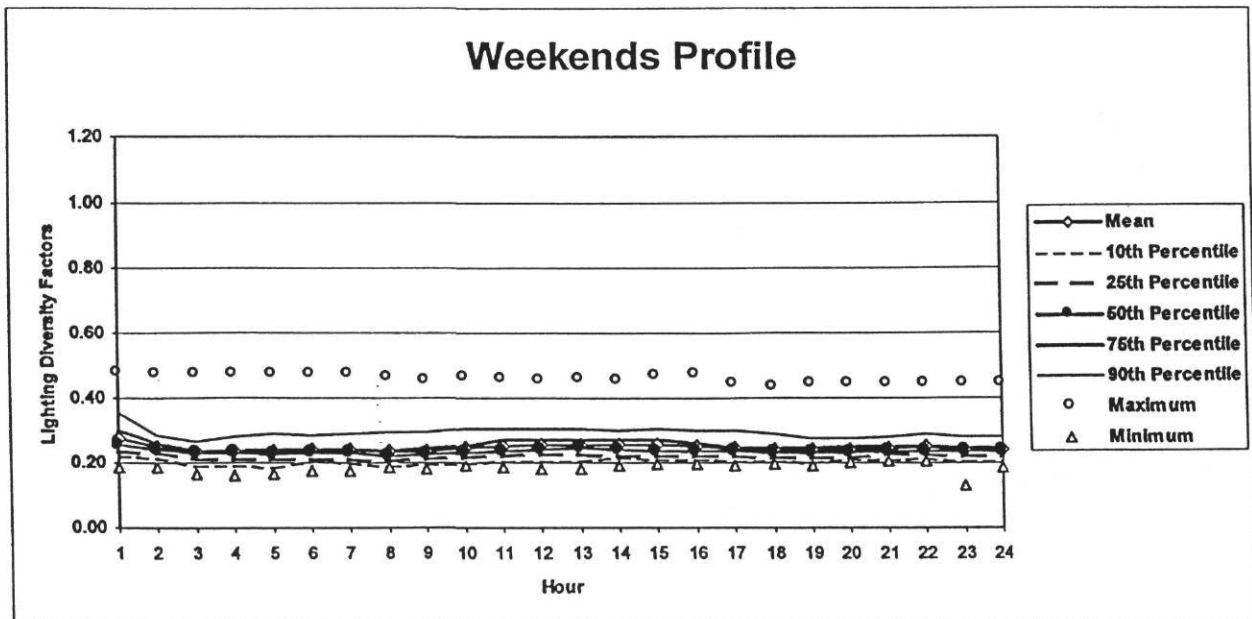
Data Type: WBE - Chillers = ch2209 - (ch2205 + ch2206 + ch2207 + ch2208)

Maximum kW: 365 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/96, 1/15/96, 2/2/96, 2/2/96, 2/19/96, 5/27/96/, 7/4/96, 9/2/96, 11/28/96, 11/29/96, and 12/23 - 26/96.*



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.30	0.36	0.24	0.21	0.26	0.30	0.33	0.37	0.49	0.19
2.00	0.26	0.30	0.21	0.21	0.23	0.25	0.27	0.31	0.48	0.19
3.00	0.22	0.27	0.18	0.19	0.20	0.21	0.23	0.28	0.48	0.15
4.00	0.22	0.27	0.18	0.19	0.20	0.21	0.23	0.28	0.48	0.15
5.00	0.22	0.27	0.18	0.19	0.20	0.22	0.23	0.28	0.48	0.15
6.00	0.25	0.29	0.21	0.21	0.23	0.25	0.26	0.29	0.48	0.19
7.00	0.39	0.44	0.35	0.34	0.36	0.39	0.42	0.44	0.58	0.31
8.00	0.61	0.65	0.57	0.56	0.58	0.61	0.63	0.65	0.76	0.52
9.00	0.71	0.76	0.66	0.66	0.68	0.71	0.73	0.76	0.86	0.53
10.00	0.74	0.79	0.69	0.69	0.71	0.74	0.76	0.79	0.90	0.50
11.00	0.75	0.80	0.70	0.70	0.72	0.75	0.77	0.80	0.89	0.50
12.00	0.75	0.80	0.70	0.70	0.72	0.75	0.77	0.80	1.00	0.49
13.00	0.74	0.79	0.69	0.69	0.71	0.74	0.76	0.78	0.89	0.48
14.00	0.74	0.79	0.69	0.70	0.71	0.74	0.76	0.78	0.89	0.48
15.00	0.74	0.78	0.69	0.69	0.71	0.74	0.76	0.78	0.88	0.49
16.00	0.72	0.77	0.67	0.68	0.69	0.72	0.74	0.76	0.87	0.48
17.00	0.67	0.72	0.62	0.62	0.64	0.67	0.70	0.71	0.83	0.48
18.00	0.55	0.60	0.51	0.50	0.53	0.55	0.58	0.60	0.71	0.44
19.00	0.48	0.51	0.44	0.44	0.46	0.48	0.49	0.52	0.61	0.40
20.00	0.44	0.48	0.40	0.39	0.41	0.44	0.46	0.49	0.58	0.37
21.00	0.41	0.46	0.37	0.36	0.38	0.41	0.43	0.47	0.55	0.32
22.00	0.37	0.42	0.32	0.31	0.35	0.37	0.40	0.43	0.51	0.24
23.00	0.35	0.40	0.30	0.29	0.32	0.35	0.38	0.41	0.51	0.20
24.00	0.34	0.39	0.28	0.28	0.30	0.33	0.36	0.41	0.49	0.20
Daily Values	11.54	12.73	10.35	9.93	10.96	11.68	12.35	12.65	13.98	5.29
Daily Sum from Hourly	11.98	13.09	10.87	10.81	11.31	11.91	12.48	13.21	16.22	8.46
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.27	0.33	0.21	0.22	0.23	0.25	0.30	0.36	0.48	0.18
2.00	0.25	0.30	0.20	0.22	0.23	0.24	0.26	0.28	0.47	0.18
3.00	0.23	0.29	0.18	0.19	0.21	0.23	0.24	0.27	0.47	0.16
4.00	0.23	0.29	0.18	0.19	0.21	0.23	0.24	0.28	0.47	0.16
5.00	0.23	0.29	0.18	0.19	0.21	0.23	0.24	0.29	0.47	0.16
6.00	0.24	0.29	0.19	0.20	0.21	0.23	0.24	0.29	0.47	0.17
7.00	0.24	0.29	0.19	0.20	0.21	0.23	0.24	0.29	0.47	0.17
8.00	0.23	0.29	0.18	0.19	0.20	0.22	0.24	0.29	0.46	0.18
9.00	0.24	0.29	0.18	0.19	0.21	0.22	0.24	0.29	0.45	0.18
10.00	0.24	0.30	0.19	0.19	0.21	0.23	0.25	0.30	0.46	0.19
11.00	0.25	0.30	0.20	0.21	0.22	0.24	0.27	0.30	0.46	0.19
12.00	0.25	0.31	0.20	0.20	0.22	0.24	0.27	0.31	0.45	0.18
13.00	0.25	0.31	0.20	0.21	0.22	0.24	0.27	0.30	0.46	0.18
14.00	0.25	0.30	0.20	0.21	0.22	0.24	0.27	0.30	0.45	0.19
15.00	0.25	0.31	0.20	0.21	0.22	0.23	0.27	0.30	0.47	0.19
16.00	0.25	0.30	0.20	0.21	0.22	0.23	0.26	0.30	0.47	0.19
17.00	0.24	0.29	0.20	0.20	0.22	0.23	0.25	0.30	0.44	0.19
18.00	0.24	0.28	0.20	0.21	0.21	0.23	0.25	0.29	0.43	0.19
19.00	0.24	0.29	0.19	0.20	0.21	0.23	0.24	0.27	0.44	0.19
20.00	0.24	0.29	0.19	0.21	0.21	0.23	0.25	0.27	0.44	0.20
21.00	0.24	0.29	0.20	0.21	0.22	0.23	0.25	0.28	0.44	0.20
22.00	0.25	0.29	0.20	0.21	0.22	0.23	0.25	0.29	0.44	0.20
23.00	0.24	0.29	0.19	0.20	0.22	0.23	0.24	0.28	0.44	0.13
24.00	0.24	0.29	0.20	0.21	0.22	0.23	0.24	0.28	0.44	0.18
Daily Values	5.68	6.95	4.41	4.58	5.21	5.53	5.93	6.47	10.98	3.35
Daily Sum from Hourly	5.87	7.09	4.64	4.87	5.20	5.57	6.06	7.02	10.99	4.36
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Central Services Building, Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.30) (2) (0.25) (3) (0.21) (4) (0.21) (5) (0.22) (6) (0.25)
(7) (0.39) (8) (0.61) (9) (0.71) (10) (0.74) (11) (0.75) (12) (0.75)
(13) (0.74) (14) (0.74) (15) (0.74) (16) (0.72) (17) (0.67) (18) (0.55)
(19) (0.48) (20) (0.44) (21) (0.41) (22) (0.37) (23) (0.35) (24) (0.33) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.25) (2) (0.24) (3) (0.23) (4) (0.23) (5) (0.23) (6) (0.23)
(7) (0.23) (8) (0.22) (9) (0.22) (10) (0.23) (11) (0.24) (12) (0.24)
(13) (0.24) (14) (0.24) (15) (0.23) (16) (0.23) (17) (0.23) (18) (0.23)
(19) (0.23) (20) (0.23) (21) (0.23) (22) (0.23) (23) (0.23) (24) (0.23) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 3.76 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1- Dec 31, 1996.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" commend of the "LOADS" input file.

2. BLAST Input Sample

TXM004

(This section depends on the extent of information available on each building).

Building 227:

Building Name: Supreme Court Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Austin, Texas.

Category: Medium Office Building, based on the CBECS classification.

Square footage: Five story, 72,737 ft² .

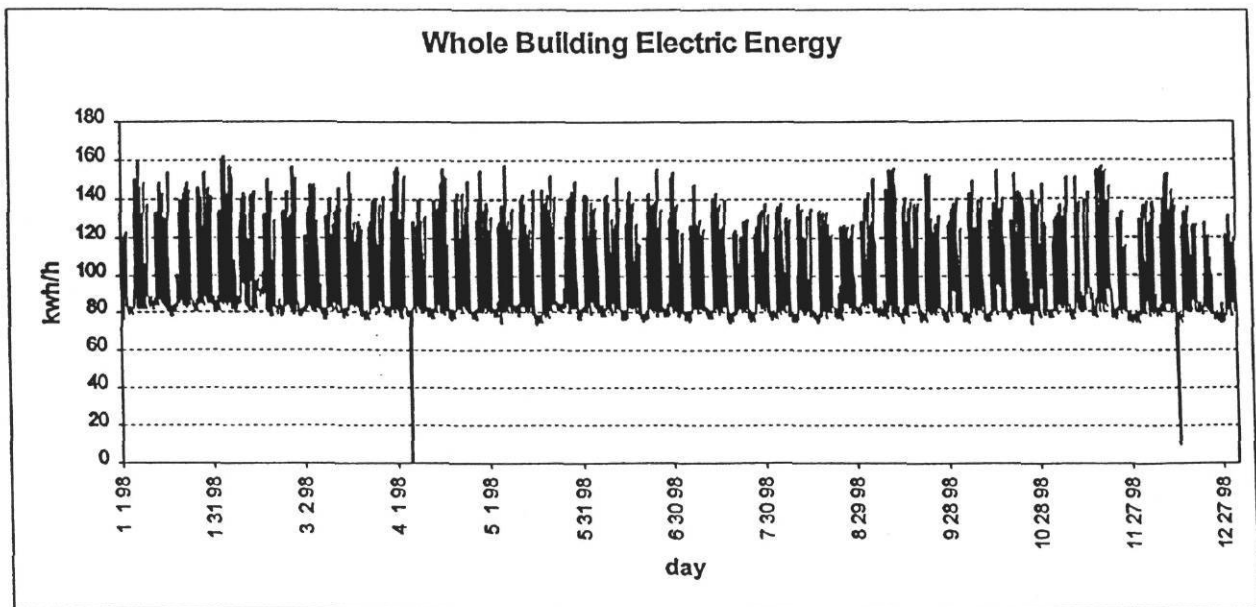
Lighting EUI: $[(15.35 \times 5) + (11.96 \times 2)] \times 52 \times 2.22 = 11.64 \text{ kWh/ft}^2 \cdot \text{year}$

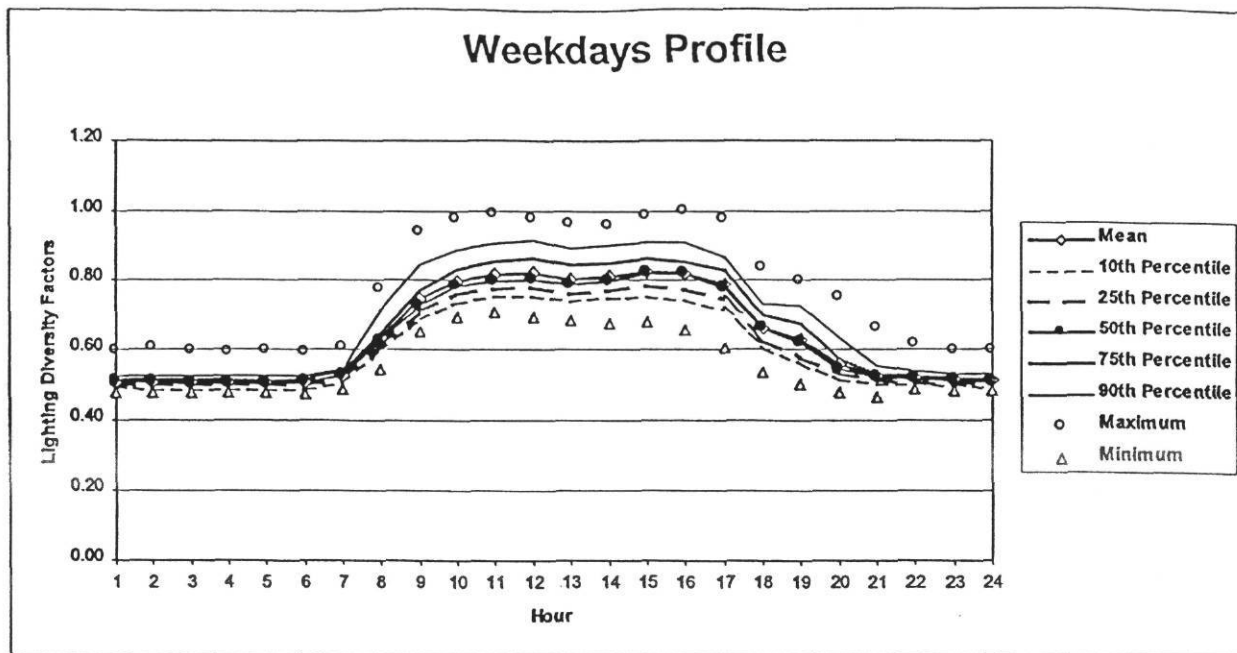
Lighting Type: Mixture of fluorescent and incandescent

Dates: 1/1/98 - 12/31/98

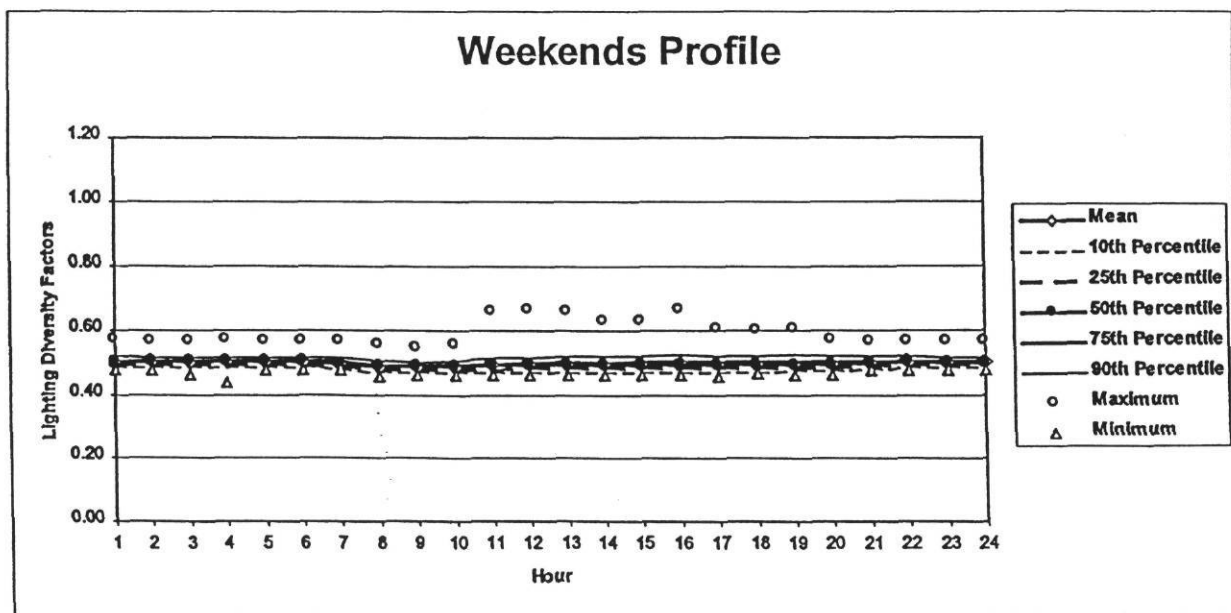
Data Type: WBE = ch2257

Maximum kW: 162 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/7/98, 11/11/98, 11/26/98, 11/27/98, and 12/23 - 25/98.*



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.51	0.52	0.49	0.49	0.50	0.51	0.52	0.53	0.59	0.48
2.00	0.51	0.52	0.49	0.49	0.50	0.51	0.52	0.52	0.60	0.48
3.00	0.51	0.52	0.49	0.49	0.50	0.50	0.51	0.52	0.60	0.48
4.00	0.51	0.52	0.49	0.49	0.50	0.50	0.51	0.52	0.59	0.48
5.00	0.51	0.52	0.49	0.49	0.50	0.50	0.51	0.52	0.59	0.48
6.00	0.51	0.52	0.49	0.49	0.50	0.51	0.51	0.52	0.59	0.47
7.00	0.53	0.55	0.51	0.51	0.51	0.53	0.54	0.55	0.61	0.49
8.00	0.63	0.68	0.59	0.59	0.61	0.62	0.65	0.71	0.77	0.55
9.00	0.75	0.80	0.69	0.69	0.71	0.73	0.77	0.84	0.94	0.65
10.00	0.80	0.86	0.74	0.74	0.76	0.78	0.83	0.89	0.98	0.69
11.00	0.82	0.88	0.76	0.75	0.77	0.80	0.85	0.91	0.99	0.71
12.00	0.82	0.88	0.76	0.75	0.78	0.80	0.86	0.91	0.97	0.69
13.00	0.80	0.86	0.74	0.74	0.76	0.79	0.84	0.89	0.96	0.68
14.00	0.81	0.87	0.75	0.75	0.77	0.80	0.85	0.90	0.96	0.67
15.00	0.83	0.89	0.77	0.76	0.78	0.82	0.86	0.91	0.99	0.68
16.00	0.82	0.88	0.76	0.75	0.77	0.82	0.85	0.91	1.00	0.66
17.00	0.79	0.85	0.73	0.72	0.74	0.78	0.83	0.87	0.98	0.60
18.00	0.66	0.72	0.61	0.60	0.62	0.66	0.70	0.73	0.84	0.53
19.00	0.63	0.69	0.57	0.56	0.58	0.62	0.68	0.73	0.80	0.50
20.00	0.56	0.60	0.51	0.51	0.53	0.55	0.57	0.63	0.75	0.48
21.00	0.52	0.55	0.50	0.50	0.51	0.52	0.53	0.55	0.66	0.47
22.00	0.52	0.54	0.50	0.50	0.51	0.52	0.52	0.54	0.62	0.49
23.00	0.51	0.53	0.50	0.50	0.50	0.51	0.52	0.53	0.59	0.48
24.00	0.51	0.53	0.49	0.49	0.50	0.51	0.52	0.53	0.59	0.48

Daily Values	15.35	16.02	14.67	14.53	14.85	15.23	15.71	16.36	17.43	13.64
Daily Sum from Hourly	15.35	16.29	14.40	14.35	14.70	15.16	15.86	16.67	18.55	13.38

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
2.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
3.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.46
4.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.44
5.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
6.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
7.00	0.50	0.52	0.48	0.48	0.49	0.49	0.51	0.52	0.57	0.48
8.00	0.49	0.51	0.47	0.47	0.48	0.49	0.50	0.51	0.56	0.46
9.00	0.49	0.50	0.47	0.47	0.48	0.49	0.49	0.51	0.55	0.46
10.00	0.49	0.51	0.47	0.47	0.48	0.49	0.50	0.51	0.56	0.46
11.00	0.50	0.52	0.47	0.47	0.48	0.49	0.50	0.52	0.66	0.46
12.00	0.50	0.53	0.47	0.47	0.48	0.49	0.50	0.52	0.67	0.46
13.00	0.50	0.53	0.47	0.47	0.48	0.49	0.51	0.52	0.66	0.46
14.00	0.50	0.53	0.47	0.47	0.48	0.49	0.51	0.52	0.63	0.46
15.00	0.50	0.53	0.47	0.47	0.48	0.49	0.51	0.52	0.63	0.46
16.00	0.50	0.53	0.47	0.47	0.48	0.49	0.51	0.53	0.67	0.46
17.00	0.50	0.52	0.47	0.47	0.48	0.49	0.51	0.52	0.61	0.46
18.00	0.50	0.52	0.47	0.47	0.48	0.49	0.51	0.52	0.60	0.47
19.00	0.50	0.52	0.47	0.48	0.48	0.49	0.51	0.53	0.61	0.46
20.00	0.50	0.52	0.48	0.48	0.48	0.49	0.51	0.52	0.57	0.46
21.00	0.50	0.52	0.48	0.48	0.49	0.50	0.51	0.52	0.57	0.48
22.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
23.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48
24.00	0.50	0.52	0.49	0.49	0.49	0.50	0.51	0.52	0.57	0.48

Daily Values	11.96	12.40	11.51	11.55	11.69	11.90	12.13	12.43	13.51	10.29
Daily Sum from Hourly	11.97	12.46	11.49	11.51	11.67	11.88	12.15	12.47	14.23	11.22

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Supreme Court Building, Austin, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.51) (2) (0.51) (3) (0.50) (4) (0.50) (5) (0.50) (6) (0.51)
(7) (0.53) (8) (0.62) (9) (0.73) (10) (0.78) (11) (0.80) (12) (0.80)
(13) (0.79) (14) (0.80) (15) (0.82) (16) (0.82) (17) (0.78) (18) (0.66)
(19) (0.62) (20) (0.55) (21) (0.52) (22) (0.52) (23) (0.51) (24) (0.51) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.50) (2) (0.50) (3) (0.50) (4) (0.50) (5) (0.50) (6) (0.50)
(7) (0.49) (8) (0.49) (9) (0.49) (10) (0.49) (11) (0.49) (12) (0.49)
(13) (0.49) (14) (0.49) (15) (0.49) (16) (0.49) (17) (0.49) (18) (0.49)
(19) (0.49) (20) (0.49) (21) (0.50) (22) (0.50) (23) (0.50) (24) (0.50) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 2.22 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1- Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample

TXM005

(This section depends on the extent of information available on each building).

Building 951:

Building Name: Administration Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Dallas, Texas.

Category: Medium Office Building, based on the CBECS classification.

Square footage: 42,385 ft².

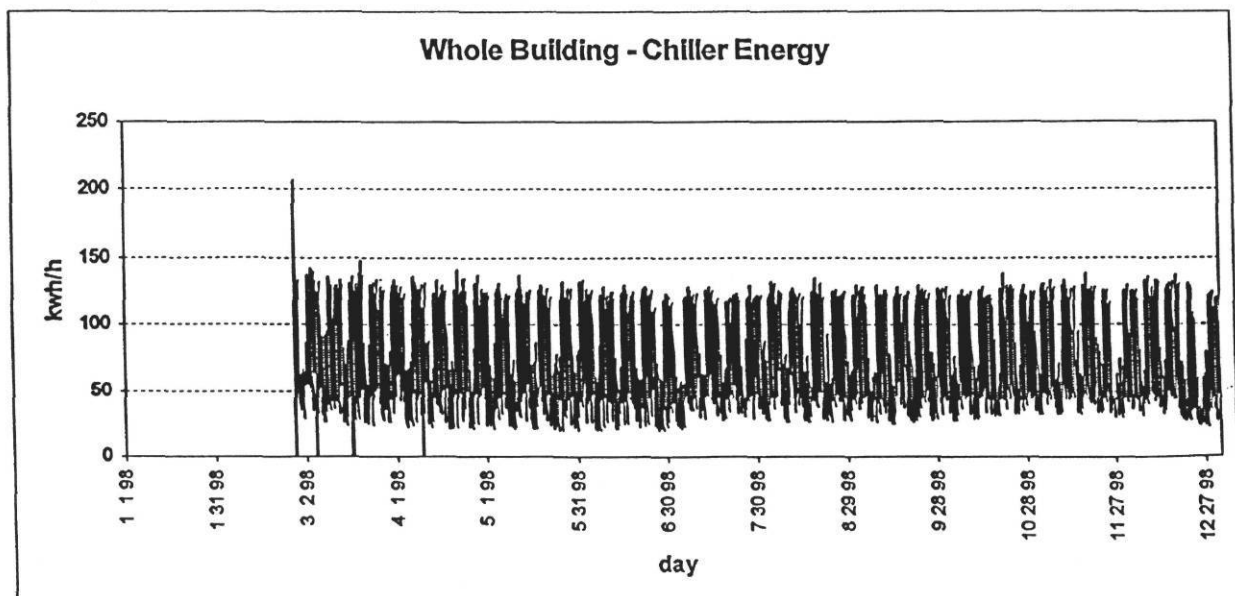
Lighting EUI: $[(13.41 \times 5) + (7.56 \times 2)] \times 52 \times 4.87 = 20.82 \text{ kWh/ft}^2 \cdot \text{year}$

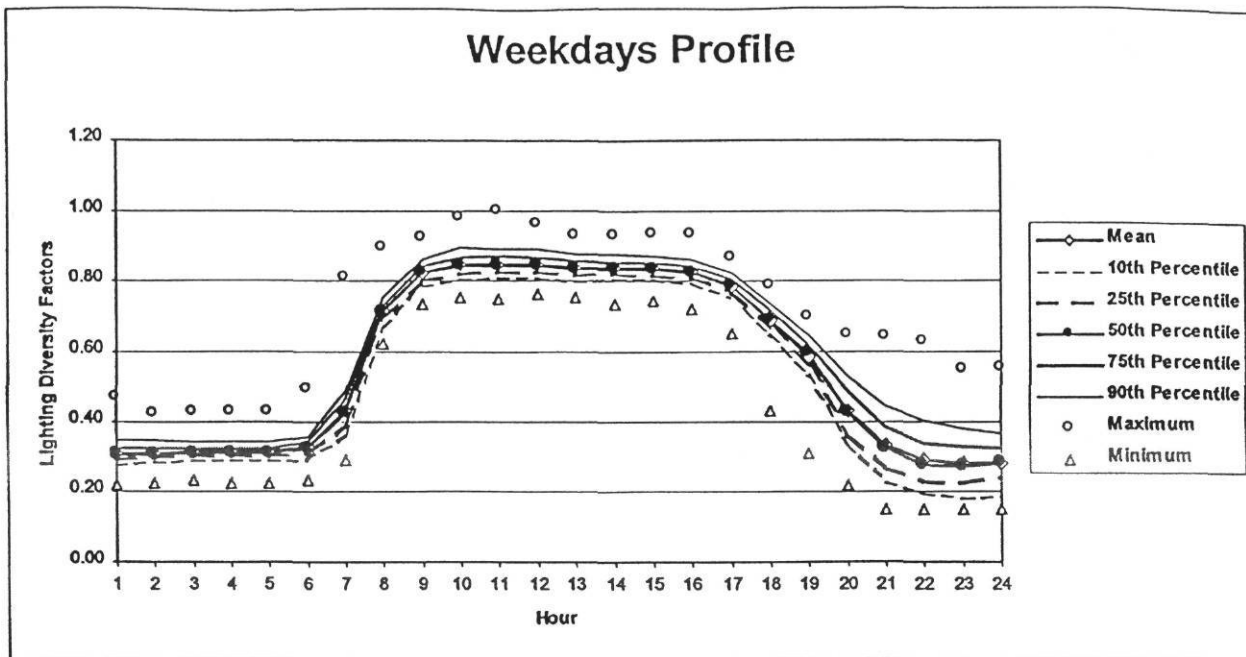
Lighting Type: Fluorescent

Dates: 1/1/98 - 12/31/98

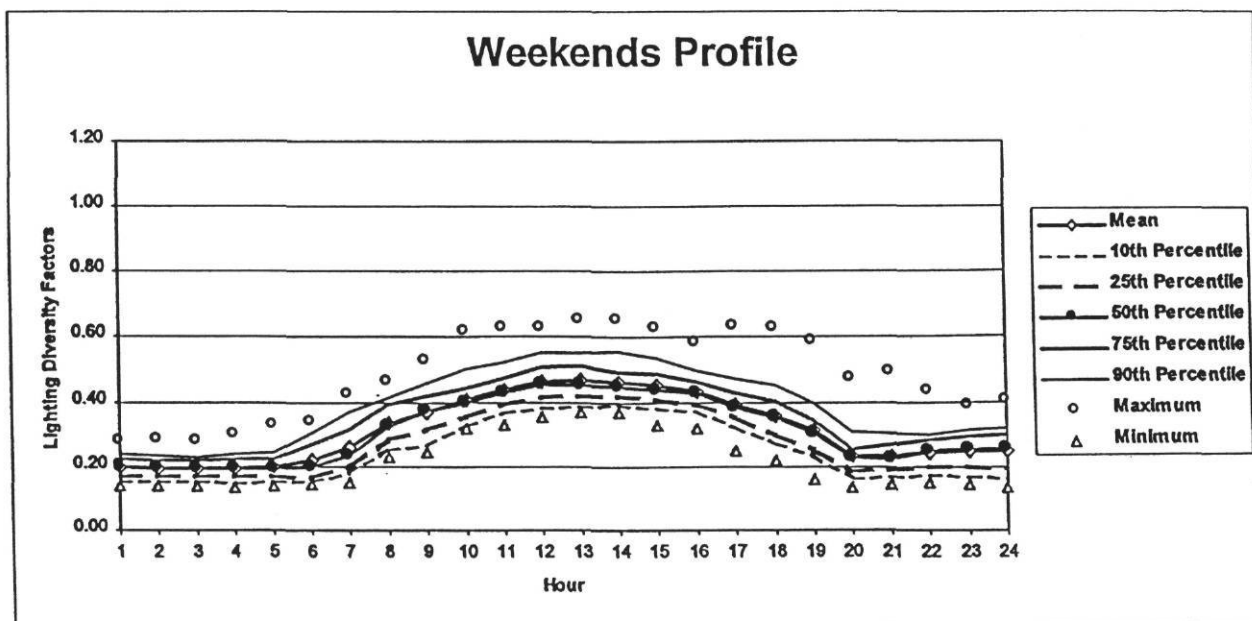
Data Type: WBE - Chillers = ch3592 - (ch3586+ch3587+ch3588) - (ch3589+ch3590+ch3591)

Maximum kW: 206 kW





*The dates that are excluded from the weekday profile are as follow: 3/10/98, 7/3/98, 9/7/98, 11/26/98, 11/27/98, and 12/23/98 - 12/25/98.



(Page 3) Diversity Factors and Statistics

WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.31	0.34	0.27	0.28	0.29	0.30	0.32	0.34	0.47	0.22
2.00	0.31	0.34	0.28	0.29	0.29	0.31	0.32	0.35	0.42	0.23
3.00	0.31	0.34	0.29	0.29	0.30	0.31	0.33	0.34	0.43	0.23
4.00	0.31	0.34	0.29	0.29	0.30	0.31	0.33	0.34	0.43	0.23
5.00	0.31	0.34	0.29	0.29	0.30	0.31	0.32	0.34	0.43	0.23
6.00	0.33	0.36	0.29	0.29	0.31	0.32	0.34	0.36	0.49	0.24
7.00	0.43	0.50	0.36	0.36	0.39	0.42	0.47	0.49	0.81	0.29
8.00	0.72	0.76	0.67	0.67	0.69	0.71	0.73	0.76	0.89	0.62
9.00	0.82	0.86	0.79	0.79	0.80	0.82	0.84	0.86	0.93	0.74
10.00	0.85	0.88	0.81	0.81	0.82	0.85	0.87	0.89	0.98	0.75
11.00	0.85	0.88	0.81	0.81	0.82	0.84	0.87	0.89	1.00	0.75
12.00	0.85	0.88	0.81	0.81	0.83	0.85	0.87	0.89	0.96	0.76
13.00	0.84	0.87	0.81	0.80	0.82	0.84	0.86	0.88	0.93	0.75
14.00	0.84	0.87	0.81	0.81	0.82	0.83	0.85	0.88	0.93	0.74
15.00	0.84	0.87	0.81	0.81	0.82	0.83	0.85	0.87	0.93	0.75
16.00	0.83	0.86	0.80	0.80	0.81	0.83	0.84	0.86	0.93	0.72
17.00	0.79	0.82	0.76	0.76	0.77	0.79	0.81	0.83	0.87	0.65
18.00	0.69	0.73	0.65	0.64	0.67	0.69	0.72	0.74	0.79	0.43
19.00	0.59	0.64	0.53	0.53	0.56	0.60	0.62	0.65	0.70	0.31
20.00	0.43	0.51	0.35	0.33	0.37	0.43	0.49	0.53	0.65	0.22
21.00	0.33	0.42	0.25	0.23	0.27	0.32	0.38	0.45	0.64	0.15
22.00	0.29	0.37	0.21	0.20	0.23	0.27	0.34	0.40	0.63	0.15
23.00	0.28	0.36	0.20	0.18	0.22	0.27	0.33	0.38	0.55	0.15
24.00	0.28	0.35	0.21	0.19	0.24	0.28	0.32	0.36	0.55	0.15

Daily Values	13.41	13.96	12.86	12.77	13.05	13.40	13.73	14.07	15.14	11.98
Daily Sum from Hourly	13.42	14.49	12.35	12.24	12.74	13.35	14.01	14.68	17.33	10.46

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.20	0.23	0.17	0.15	0.17	0.20	0.23	0.24	0.28	0.14
2.00	0.20	0.23	0.16	0.16	0.17	0.20	0.22	0.24	0.28	0.14
3.00	0.19	0.23	0.16	0.15	0.17	0.19	0.22	0.23	0.28	0.14
4.00	0.20	0.23	0.16	0.15	0.17	0.19	0.22	0.24	0.30	0.14
5.00	0.20	0.24	0.16	0.15	0.17	0.20	0.23	0.24	0.33	0.14
6.00	0.22	0.27	0.16	0.15	0.17	0.20	0.27	0.30	0.34	0.14
7.00	0.26	0.33	0.18	0.18	0.20	0.23	0.32	0.37	0.42	0.15
8.00	0.33	0.40	0.27	0.25	0.28	0.32	0.40	0.41	0.46	0.23
9.00	0.37	0.44	0.30	0.27	0.31	0.38	0.42	0.46	0.53	0.24
10.00	0.41	0.48	0.34	0.33	0.35	0.40	0.44	0.50	0.62	0.32
11.00	0.44	0.50	0.37	0.37	0.39	0.43	0.47	0.52	0.63	0.33
12.00	0.46	0.53	0.40	0.38	0.41	0.45	0.51	0.55	0.63	0.35
13.00	0.47	0.53	0.40	0.39	0.42	0.45	0.52	0.55	0.65	0.37
14.00	0.46	0.53	0.40	0.39	0.42	0.45	0.49	0.56	0.65	0.37
15.00	0.45	0.52	0.39	0.38	0.41	0.44	0.49	0.54	0.63	0.33
16.00	0.43	0.49	0.38	0.37	0.39	0.43	0.47	0.50	0.58	0.32
17.00	0.39	0.46	0.33	0.32	0.35	0.38	0.43	0.47	0.63	0.25
18.00	0.36	0.43	0.28	0.27	0.30	0.35	0.40	0.45	0.63	0.22
19.00	0.31	0.39	0.24	0.23	0.25	0.30	0.34	0.40	0.59	0.16
20.00	0.23	0.30	0.17	0.16	0.18	0.23	0.25	0.31	0.47	0.13
21.00	0.23	0.29	0.17	0.17	0.19	0.23	0.27	0.30	0.49	0.14
22.00	0.24	0.30	0.19	0.17	0.20	0.25	0.28	0.30	0.43	0.15
23.00	0.25	0.30	0.19	0.17	0.20	0.26	0.29	0.31	0.39	0.15
24.00	0.25	0.31	0.19	0.16	0.20	0.25	0.30	0.32	0.40	0.13

Daily Values	7.56	8.37	6.75	6.64	6.96	7.60	8.07	8.58	9.58	5.81
Daily Sum from Hourly	7.56	8.96	6.16	5.91	6.47	7.41	8.47	9.33	11.63	5.17

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Administration Bldg., Dallas, TX) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.30) (2) (0.31) (3) (0.31) (4) (0.31) (5) (0.31) (6) (0.32)
(7) (0.42) (8) (0.71) (9) (0.82) (10) (0.85) (11) (0.84) (12) (0.85)
(13) (0.84) (14) (0.83) (15) (0.83) (16) (0.83) (17) (0.79) (18) (0.69)
(19) (0.60) (20) (0.43) (21) (0.32) (22) (0.27) (23) (0.27) (24) (0.28) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.20) (2) (0.20) (3) (0.19) (4) (0.19) (5) (0.20) (6) (0.20)
(7) (0.23) (8) (0.32) (9) (0.38) (10) (0.40) (11) (0.43) (12) (0.45)
(13) (0.45) (14) (0.45) (15) (0.44) (16) (0.43) (17) (0.38) (18) (0.35)
(19) (0.30) (20) (0.23) (21) (0.23) (22) (0.25) (23) (0.26) (24) (0.25) ..

WORK = WEEK-SCHEDULE

(WD) WKDAY (WE) WKEND (HOL) WKEND ..

VAC = WEEK-SCHEDULE

(WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE

THRU JAN 1 VAC THRU JUL 3 WORK
THRU JUL 4 VAC THRU NOV 22 WORK
THRU NOV 24 VAC THRU DEC 24 WORK
THRU DEC 25 VAC THRU DEC 30 WORK
THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS

LIGHTING-SCHEDULE = BLE-SCH

LIGHTING-TYPE = REC-FLUOR-RV

LIGHT-TO-SPACE = 0.8

LIGHTING-W/SQFT = 4.87 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

2. BLAST Input Sample

DCL001

(This section depends on the extent of information available on each building).

Building 904:

Building Name: USDOE Forrestal Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Washington, DC.

Category: Large Office Building, based on the CBECS classification.

Square footage: 1,200,000 ft² .

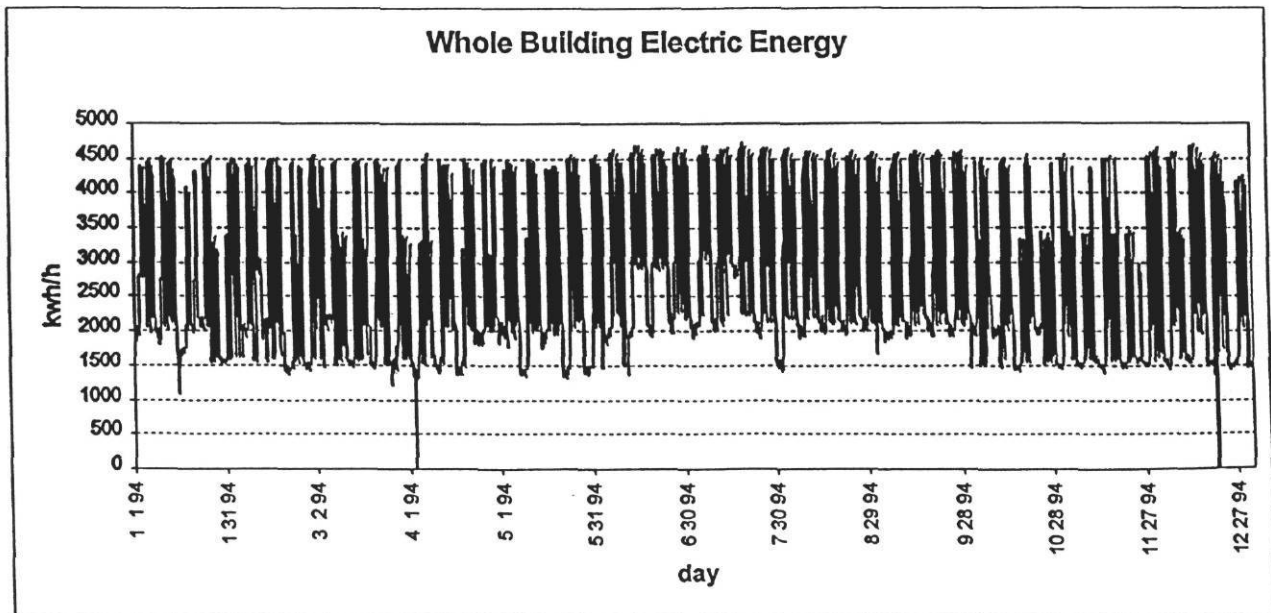
Lighting EUI: $[(15.78 \times 5) + (9.18 \times 2)] \times 52 \times 3.93 = 19.99 \text{ kWh/ft}^2 \cdot \text{year}$

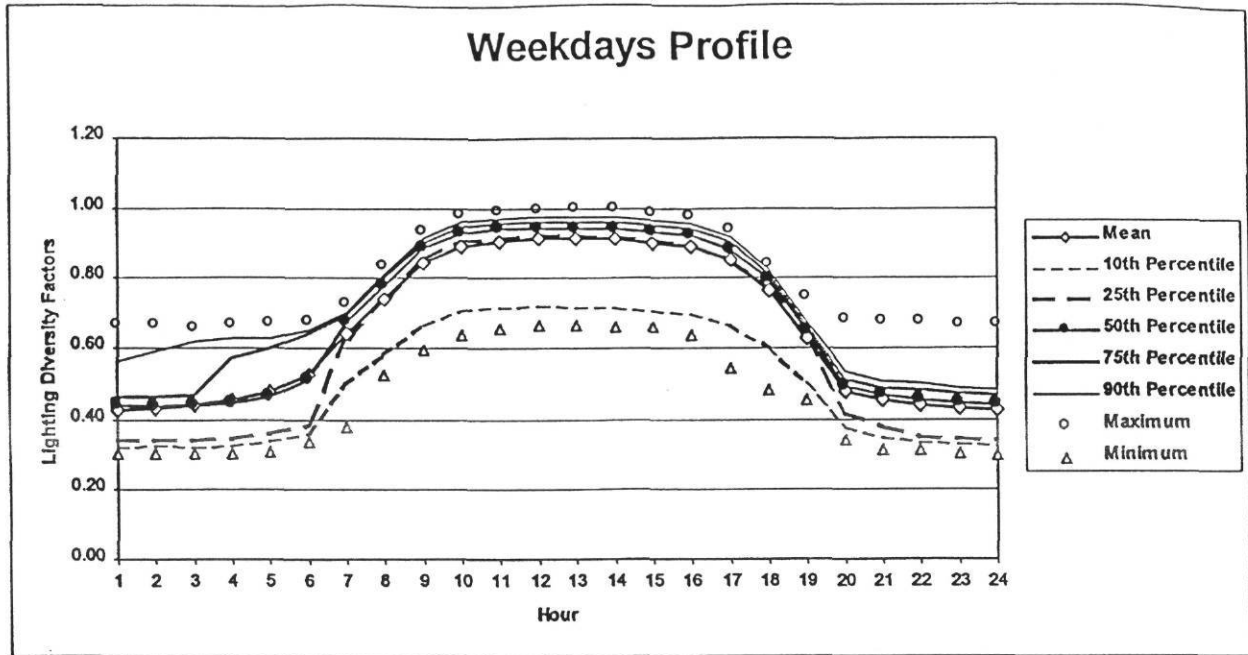
Lighting Type: N/A

Dates: 1/1/94 - 12/31/94

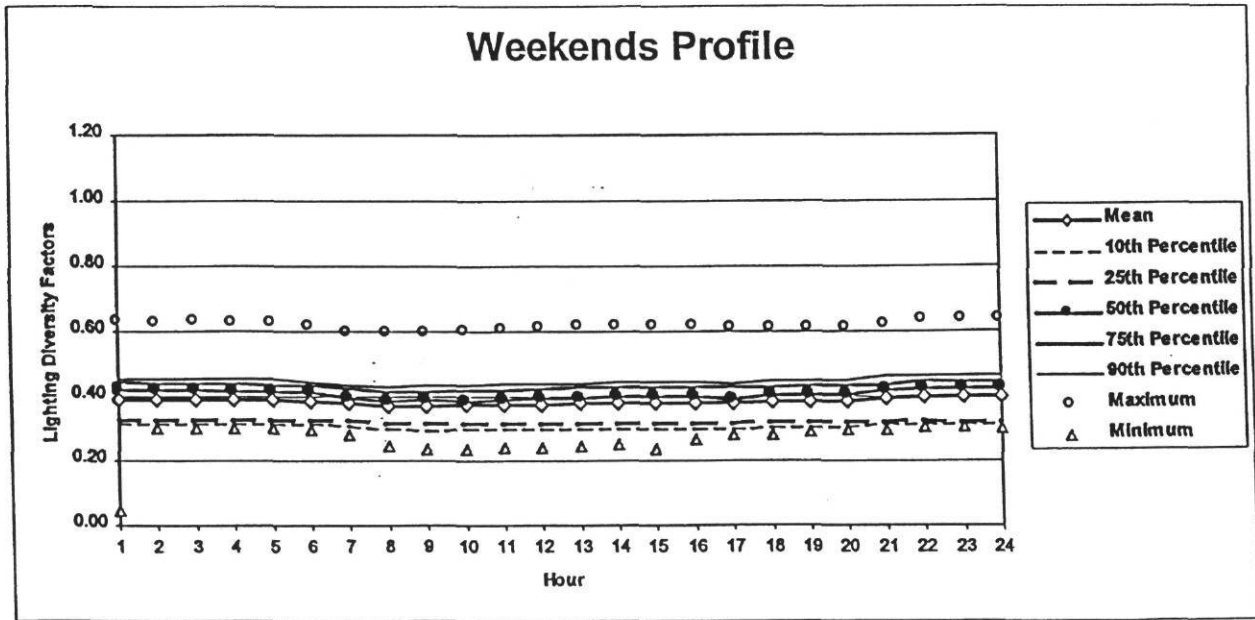
Data Type: WBE = ch0299

Maximum kW: 4,720 kW





**The dates that are excluded from the weekday profile are as follow: 1/17/94, 1/20/94, 2/11/94, 2/21/94, 5/9/94, 5/30/94, 7/4/94, 9/5/94, 10/10/94, 11/11/94, 11/24/94, 11/25/94, and 12/26/94.*



Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.43	0.52	0.34	0.32	0.34	0.44	0.46	0.56	0.66	0.30
2.00	0.43	0.52	0.34	0.33	0.34	0.44	0.46	0.59	0.66	0.31
3.00	0.44	0.54	0.34	0.33	0.34	0.44	0.47	0.62	0.66	0.31
4.00	0.46	0.56	0.35	0.33	0.35	0.45	0.57	0.63	0.66	0.30
5.00	0.48	0.59	0.37	0.34	0.36	0.46	0.60	0.63	0.67	0.31
6.00	0.52	0.64	0.41	0.36	0.38	0.51	0.64	0.65	0.67	0.34
7.00	0.64	0.72	0.56	0.50	0.63	0.68	0.69	0.70	0.73	0.38
8.00	0.74	0.83	0.65	0.58	0.73	0.78	0.80	0.81	0.83	0.53
9.00	0.85	0.94	0.76	0.67	0.85	0.88	0.90	0.91	0.94	0.60
10.00	0.89	0.98	0.80	0.71	0.91	0.93	0.94	0.96	0.98	0.64
11.00	0.91	1.00	0.82	0.72	0.92	0.94	0.96	0.97	0.99	0.66
12.00	0.91	1.00	0.83	0.72	0.92	0.94	0.96	0.97	0.99	0.67
13.00	0.91	1.00	0.83	0.72	0.92	0.94	0.96	0.97	1.00	0.66
14.00	0.91	1.00	0.83	0.72	0.92	0.94	0.96	0.97	1.00	0.66
15.00	0.90	0.99	0.81	0.71	0.91	0.93	0.95	0.97	0.99	0.66
16.00	0.89	0.98	0.80	0.70	0.90	0.92	0.94	0.95	0.97	0.64
17.00	0.85	0.94	0.77	0.67	0.85	0.88	0.91	0.92	0.94	0.54
18.00	0.77	0.85	0.69	0.60	0.77	0.79	0.81	0.82	0.84	0.48
19.00	0.63	0.69	0.56	0.50	0.62	0.65	0.66	0.68	0.75	0.45
20.00	0.48	0.55	0.41	0.38	0.42	0.49	0.51	0.53	0.68	0.34
21.00	0.45	0.53	0.38	0.35	0.38	0.47	0.49	0.51	0.67	0.31
22.00	0.44	0.52	0.36	0.34	0.35	0.45	0.48	0.50	0.67	0.31
23.00	0.43	0.51	0.35	0.33	0.34	0.45	0.47	0.49	0.67	0.30
24.00	0.43	0.50	0.35	0.33	0.34	0.44	0.47	0.48	0.66	0.30

Daily Values: 15.78 17.51 14.06 12.47 15.05 16.09 16.95 17.62 19.08 11.53

Daily Sum from Hourly: 15.80 17.90 13.70 12.23 14.81 16.26 17.09 17.81 19.29 11.00

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percd	25th Percd	50th Percd	75th Percd	90th Percd	Maximum	Minimum
1.00	0.39	0.46	0.31	0.32	0.32	0.42	0.44	0.45	0.63	0.04
2.00	0.39	0.46	0.32	0.32	0.32	0.42	0.44	0.45	0.63	0.30
3.00	0.39	0.46	0.32	0.31	0.33	0.42	0.44	0.45	0.63	0.30
4.00	0.39	0.46	0.32	0.31	0.32	0.41	0.44	0.45	0.63	0.30
5.00	0.39	0.45	0.32	0.31	0.32	0.41	0.43	0.45	0.63	0.30
6.00	0.39	0.45	0.32	0.31	0.32	0.41	0.43	0.44	0.62	0.30
7.00	0.38	0.44	0.31	0.31	0.32	0.39	0.42	0.43	0.60	0.28
8.00	0.37	0.43	0.30	0.30	0.32	0.38	0.41	0.43	0.60	0.24
9.00	0.37	0.43	0.30	0.30	0.31	0.39	0.41	0.43	0.60	0.23
10.00	0.37	0.44	0.30	0.30	0.31	0.38	0.42	0.44	0.60	0.23
11.00	0.37	0.44	0.30	0.30	0.31	0.39	0.42	0.44	0.61	0.24
12.00	0.38	0.45	0.31	0.30	0.31	0.39	0.42	0.44	0.61	0.24
13.00	0.38	0.45	0.31	0.30	0.31	0.40	0.43	0.44	0.62	0.25
14.00	0.38	0.45	0.31	0.30	0.31	0.40	0.43	0.44	0.62	0.25
15.00	0.38	0.45	0.31	0.30	0.31	0.40	0.43	0.44	0.62	0.23
16.00	0.38	0.45	0.31	0.30	0.31	0.40	0.43	0.44	0.62	0.26
17.00	0.38	0.45	0.31	0.30	0.31	0.39	0.43	0.44	0.61	0.28
18.00	0.38	0.45	0.31	0.30	0.32	0.40	0.43	0.45	0.61	0.28
19.00	0.38	0.45	0.31	0.30	0.32	0.40	0.43	0.45	0.61	0.29
20.00	0.38	0.45	0.31	0.31	0.32	0.40	0.43	0.45	0.61	0.29
21.00	0.39	0.47	0.31	0.31	0.32	0.42	0.44	0.46	0.62	0.29
22.00	0.40	0.48	0.31	0.31	0.32	0.42	0.45	0.46	0.64	0.30
23.00	0.40	0.48	0.31	0.31	0.32	0.42	0.44	0.47	0.64	0.30
24.00	0.40	0.48	0.31	0.31	0.32	0.42	0.44	0.46	0.64	0.30

Daily Values: 9.18 10.81 7.54 7.38 7.67 9.59 10.31 10.76 14.70 6.78

Daily Sum from Hourly: 9.18 10.88 7.48 7.34 7.65 9.69 10.34 10.72 14.83 6.33

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (USDOE Forrestal Building, Washington, DC) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.44) (2) (0.44) (3) (0.44) (4) (0.45) (5) (0.46) (6) (0.51)
(7) (0.68) (8) (0.78) (9) (0.88) (10) (0.93) (11) (0.94) (12) (0.94)
(13) (0.94) (14) (0.94) (15) (0.93) (16) (0.92) (17) (0.88) (18) (0.79)
(19) (0.65) (20) (0.49) (21) (0.47) (22) (0.45) (23) (0.45) (24) (0.44) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.42) (2) (0.42) (3) (0.42) (4) (0.41) (5) (0.41) (6) (0.41)
(7) (0.39) (8) (0.38) (9) (0.39) (10) (0.38) (11) (0.39) (12) (0.39)
(13) (0.40) (14) (0.40) (15) (0.40) (16) (0.40) (17) (0.39) (18) (0.40)
(19) (0.40) (20) (0.40) (21) (0.42) (22) (0.42) (23) (0.42) (24) (0.42) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 3.93 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1- Dec 31, 1994.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

2. BLAST Input Sample

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MTL001

(Page 1) Building Descriptions: (MTL001)

(This section depends on the extent of information available on each building).

Building 963:

Building Name: Butte Courthouse Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Butte, MT.

Category: Large Office Building, based on the CBECS classification.

Square footage: 100,000 ft² .

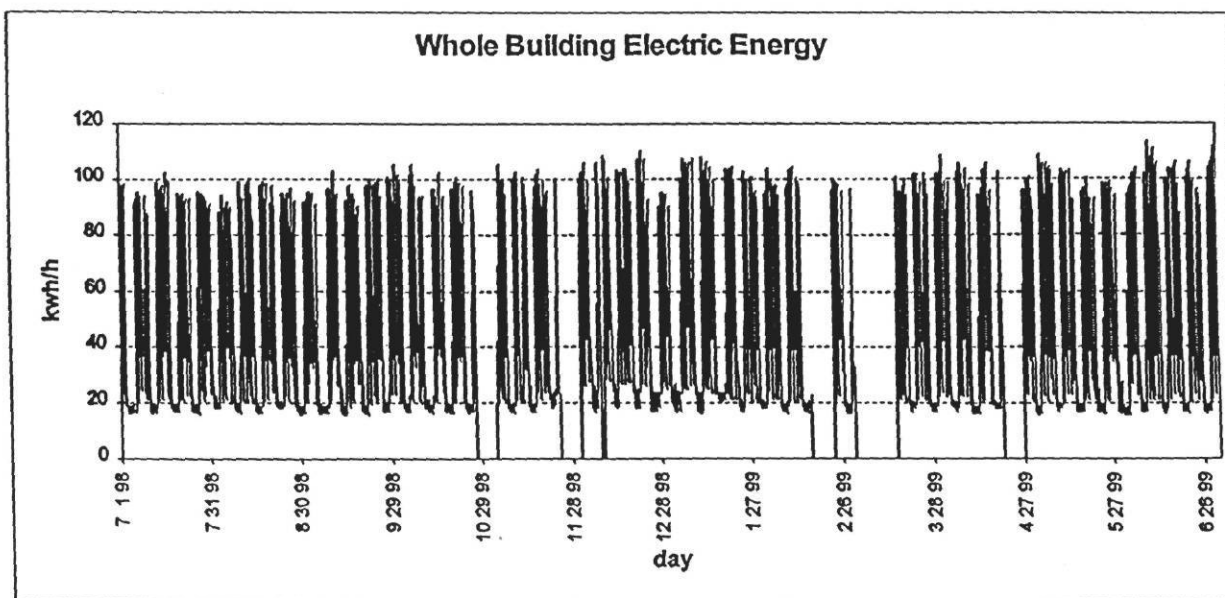
Lighting EUI: $[(12.64 \times 5) + (4.07 \times 2)] \times 52 \times 1.13 = 4.19 \text{ kWh/ft}^2 \cdot \text{year}$

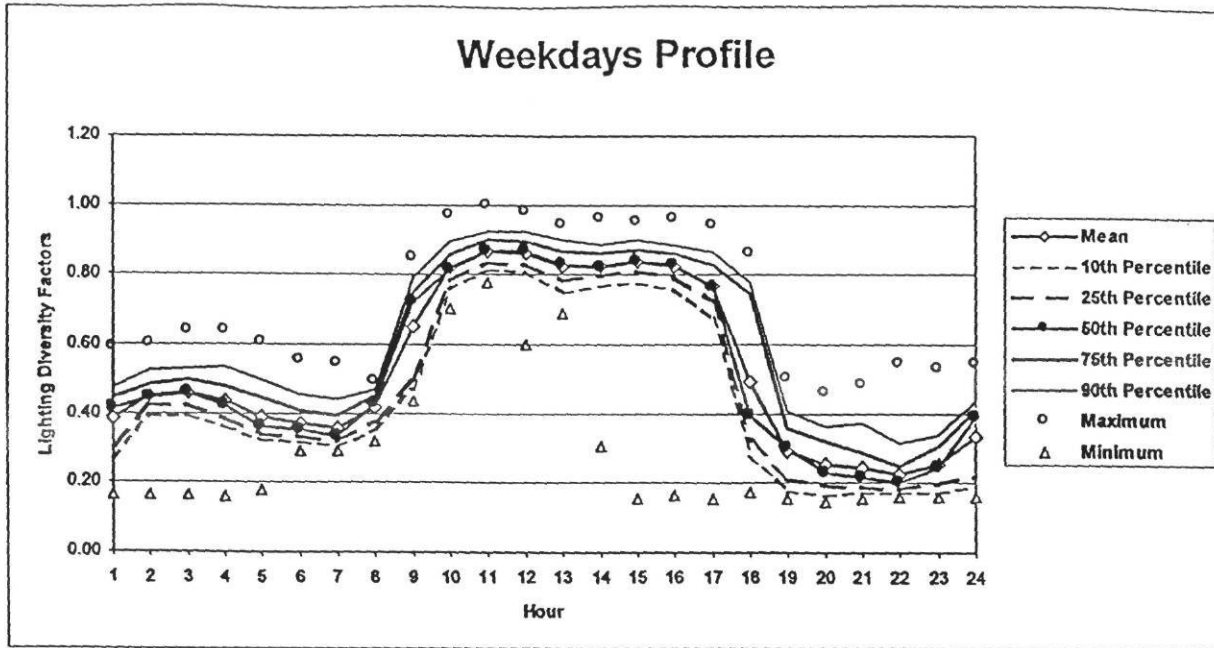
Lighting Type: Fluorescent

Dates: 7/1/98 - 7/1/99

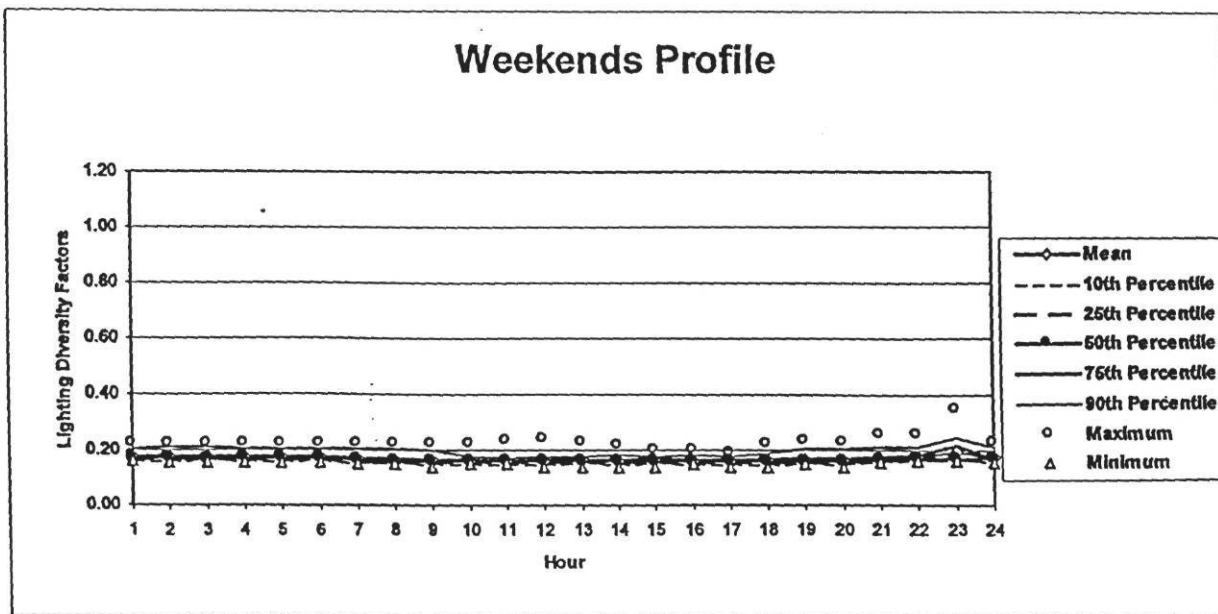
Data Type: WBE = ch4058

Maximum kW: 113 kW





*The dates that are excluded from the weekday profile are as follow: 7/3/98, 9/7/98, 10/12/98, 11/11/98, 12/25/98, 12/31/98, 1/1/99, 1/18/99, and 5/31/99.



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.38	0.47	0.30	0.27	0.31	0.41	0.45	0.47	0.59	0.17
2.00	0.45	0.51	0.39	0.39	0.42	0.45	0.48	0.52	0.60	0.17
3.00	0.46	0.52	0.40	0.39	0.42	0.46	0.50	0.53	0.64	0.17
4.00	0.44	0.51	0.36	0.36	0.38	0.42	0.48	0.54	0.64	0.16
5.00	0.39	0.46	0.32	0.32	0.34	0.36	0.44	0.50	0.61	0.18
6.00	0.37	0.43	0.32	0.32	0.33	0.35	0.41	0.46	0.55	0.29
7.00	0.36	0.41	0.30	0.31	0.32	0.33	0.39	0.44	0.54	0.29
8.00	0.42	0.46	0.37	0.35	0.38	0.43	0.45	0.47	0.49	0.32
9.00	0.65	0.78	0.52	0.47	0.50	0.72	0.75	0.79	0.85	0.43
10.00	0.82	0.87	0.77	0.76	0.78	0.82	0.86	0.89	0.97	0.70
11.00	0.87	0.91	0.83	0.82	0.83	0.87	0.90	0.92	1.00	0.78
12.00	0.86	0.91	0.81	0.81	0.83	0.87	0.90	0.92	0.98	0.60
13.00	0.83	0.88	0.77	0.75	0.78	0.83	0.87	0.90	0.94	0.69
14.00	0.82	0.88	0.77	0.77	0.80	0.82	0.86	0.89	0.96	0.31
15.00	0.84	0.90	0.77	0.78	0.81	0.84	0.87	0.90	0.95	0.15
16.00	0.82	0.89	0.76	0.76	0.80	0.83	0.86	0.89	0.96	0.17
17.00	0.77	0.85	0.69	0.68	0.73	0.76	0.83	0.87	0.94	0.15
18.00	0.49	0.70	0.28	0.27	0.32	0.39	0.75	0.78	0.86	0.17
19.00	0.29	0.38	0.20	0.18	0.21	0.30	0.36	0.41	0.50	0.15
20.00	0.25	0.33	0.18	0.16	0.19	0.23	0.32	0.36	0.46	0.15
21.00	0.24	0.32	0.17	0.17	0.19	0.22	0.29	0.37	0.48	0.15
22.00	0.23	0.29	0.17	0.17	0.18	0.20	0.25	0.31	0.54	0.16
23.00	0.25	0.32	0.19	0.17	0.20	0.24	0.31	0.34	0.53	0.16
24.00	0.33	0.44	0.23	0.19	0.22	0.39	0.41	0.44	0.54	0.16

Daily Values	12.64	13.42	11.86	11.67	12.15	12.65	13.15	13.56	14.37	8.85
Daily Sum from Hourly	12.64	14.43	10.85	10.63	11.26	12.54	13.97	14.89	17.13	6.82

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.18	0.19	0.16	0.16	0.17	0.17	0.18	0.20	0.22	0.16
2.00	0.17	0.19	0.16	0.16	0.17	0.17	0.17	0.21	0.22	0.15
3.00	0.17	0.19	0.16	0.17	0.17	0.17	0.17	0.21	0.22	0.15
4.00	0.17	0.19	0.16	0.16	0.17	0.17	0.18	0.20	0.22	0.15
5.00	0.18	0.19	0.16	0.16	0.17	0.17	0.17	0.20	0.22	0.15
6.00	0.18	0.19	0.16	0.17	0.17	0.17	0.18	0.20	0.22	0.15
7.00	0.17	0.19	0.15	0.15	0.16	0.17	0.17	0.20	0.22	0.15
8.00	0.17	0.19	0.15	0.15	0.15	0.16	0.17	0.20	0.22	0.15
9.00	0.16	0.18	0.14	0.15	0.15	0.16	0.17	0.20	0.22	0.14
10.00	0.16	0.17	0.15	0.15	0.15	0.16	0.17	0.18	0.22	0.15
11.00	0.16	0.17	0.15	0.15	0.15	0.16	0.16	0.17	0.24	0.15
12.00	0.16	0.18	0.15	0.15	0.15	0.16	0.17	0.18	0.24	0.14
13.00	0.16	0.18	0.15	0.15	0.15	0.16	0.17	0.18	0.23	0.14
14.00	0.16	0.18	0.15	0.15	0.15	0.16	0.17	0.18	0.22	0.14
15.00	0.16	0.18	0.15	0.15	0.15	0.16	0.17	0.18	0.20	0.14
16.00	0.16	0.17	0.15	0.15	0.15	0.16	0.17	0.18	0.20	0.15
17.00	0.16	0.17	0.15	0.15	0.15	0.16	0.17	0.18	0.19	0.14
18.00	0.16	0.18	0.15	0.15	0.15	0.16	0.17	0.19	0.22	0.14
19.00	0.17	0.19	0.15	0.15	0.15	0.16	0.17	0.20	0.24	0.15
20.00	0.17	0.19	0.15	0.15	0.15	0.16	0.17	0.20	0.23	0.14
21.00	0.17	0.19	0.15	0.16	0.16	0.17	0.18	0.21	0.25	0.15
22.00	0.18	0.20	0.16	0.17	0.17	0.17	0.18	0.21	0.25	0.16
23.00	0.19	0.23	0.16	0.17	0.17	0.17	0.22	0.25	0.35	0.16
24.00	0.17	0.19	0.16	0.16	0.17	0.17	0.17	0.21	0.23	0.15

Daily Values	4.07	4.40	3.74	3.77	3.86	3.95	4.11	4.71	5.02	3.64
Daily Sum from Hourly	4.07	4.49	3.65	3.71	3.80	3.94	4.15	4.75	5.52	3.55

Daily Values: The Daily results as the statistics are applied on daily data.

Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Butte Courthouse Bldg., Butte, MT) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

```

$ ***** LIGHTING SCHEDULES ***** $

$ WEEKDAY SCHEDULE $
WKDAY = DAY-SCHEDULE
(1) (0.41) (2) (0.45) (3) (0.46) (4) (0.42) (5) (0.36) (6) (0.35)
(7) (0.33) (8) (0.43) (9) (0.72) (10) (0.82) (11) (0.87) (12) (0.87)
(13) (0.83) (14) (0.82) (15) (0.84) (16) (0.83) (17) (0.76) (18) (0.39)
(19) (0.30) (20) (0.23) (21) (0.22) (22) (0.20) (23) (0.24) (24) (0.39) ..

$ WEEKEND SCHEDULE $
WKEND = DAY-SCHEDULE
(1) (0.17) (2) (0.17) (3) (0.17) (4) (0.17) (5) (0.17) (6) (0.17)
(7) (0.17) (8) (0.16) (9) (0.16) (10) (0.16) (11) (0.16) (12) (0.16)
(13) (0.16) (14) (0.16) (15) (0.16) (16) (0.16) (17) (0.16) (18) (0.16)
(19) (0.16) (20) (0.16) (21) (0.17) (22) (0.17) (23) (0.17) (24) (0.17) ..

WORK = WEEK-SCHEDULE      (WD) WKDAY   (WE) WKEND   (HOL) WKEND ..
VAC = WEEK-SCHEDULE      (WD) WKEND   (WE) WKEND   (HOL) WKEND ..

ELE-SCH = SCHEDULE        THRU JAN 1 VAC      THRU JUL 3 WORK
                          THRU JUL 4 VAC      THRU NOV 22 WORK
                          THRU NOV 24 VAC     THRU DEC 24 WORK
                          THRU DEC 25 VAC     THRU DEC 30 WORK
                          THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 1.13 ..

```

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/f^2) in the building for the period of Jul 1, 1998 - Jul 1, 1999.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

MINL001

(This section depends on the extent of information available on each building).

Building 704:

Building Name: Judicial Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Minnesota, MN.

Category: Large Office Building, based on the CBECS classification.

Square footage: 200,829 ft².

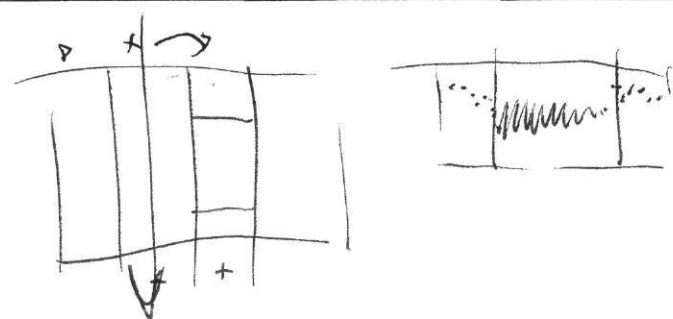
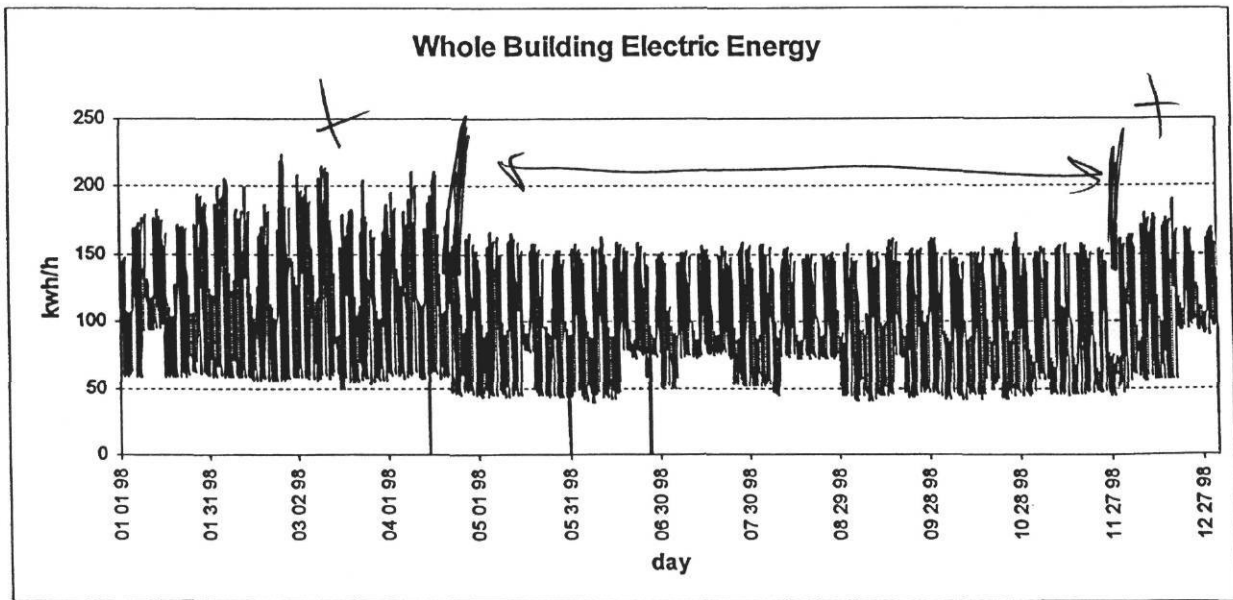
Lighting EUI: $[(12.54 \times 5) + (8.47 \times 2)] \times 52 \times 1.11 = 4.59 \text{ kWh/ft}^2 \cdot \text{year}$

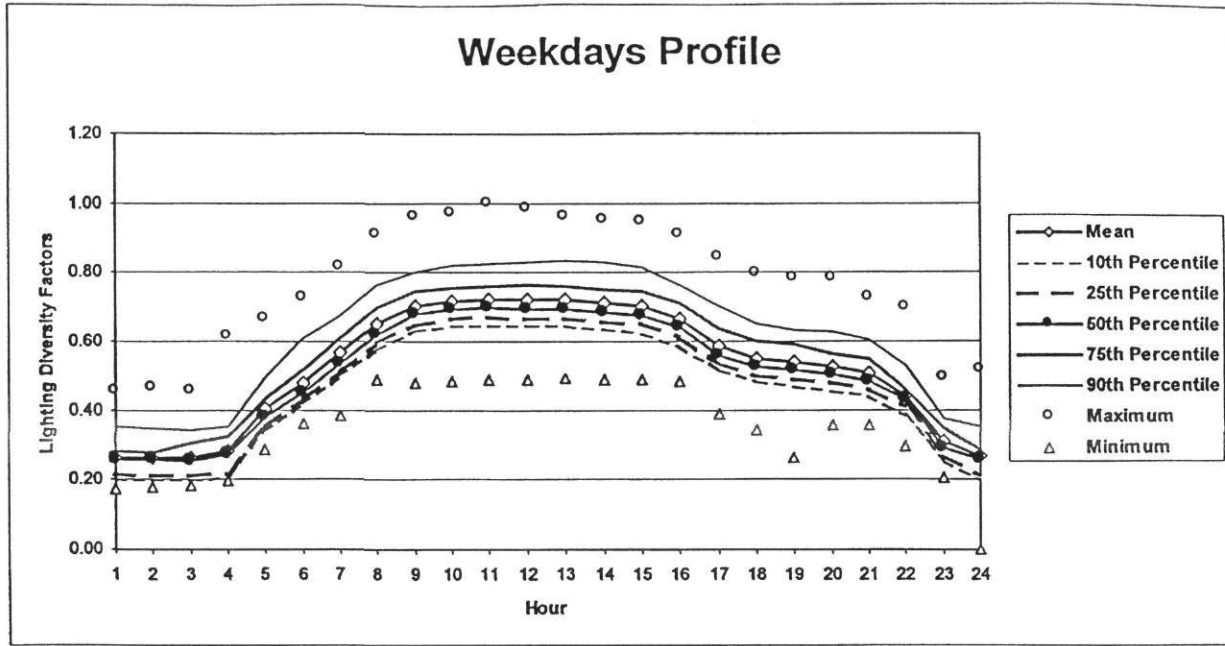
Lighting Type: Fluorescent

Dates: 1/1/98 - 12/31/98

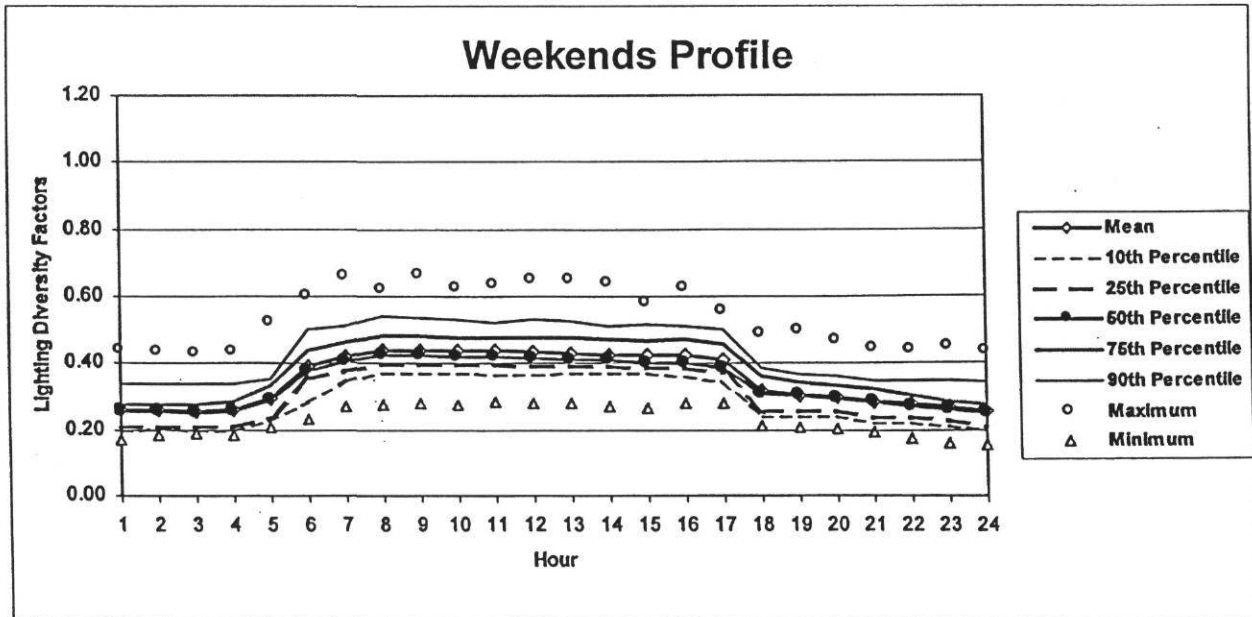
Data Type: WBE = ch2484

Maximum kW: 223 kW





*The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/7/98, 11/11/98, 11/26/98, 11/27/98, and 12/25/98.



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percil	25th Percil	50th Percil	75th Percil	90th Percil	Maximum	Minimum
1.00	0.26	0.33	0.20	0.20	0.21	0.26	0.28	0.35	0.45	0.17
2.00	0.26	0.33	0.20	0.20	0.21	0.26	0.28	0.35	0.46	0.18
3.00	0.26	0.33	0.20	0.20	0.21	0.25	0.30	0.34	0.46	0.18
4.00	0.28	0.35	0.21	0.20	0.22	0.27	0.32	0.35	0.61	0.20
5.00	0.40	0.47	0.33	0.34	0.35	0.38	0.43	0.49	0.67	0.28
6.00	0.48	0.56	0.40	0.42	0.43	0.45	0.51	0.61	0.73	0.36
7.00	0.57	0.64	0.49	0.50	0.51	0.53	0.61	0.68	0.82	0.38
8.00	0.65	0.73	0.58	0.58	0.60	0.62	0.70	0.76	0.91	0.49
9.00	0.70	0.78	0.63	0.63	0.65	0.68	0.75	0.80	0.96	0.48
10.00	0.72	0.79	0.64	0.65	0.67	0.69	0.76	0.82	0.97	0.48
11.00	0.72	0.80	0.65	0.65	0.67	0.70	0.76	0.83	1.00	0.49
12.00	0.72	0.80	0.64	0.65	0.67	0.69	0.76	0.83	0.98	0.49
13.00	0.72	0.80	0.64	0.65	0.67	0.69	0.76	0.84	0.96	0.49
14.00	0.71	0.79	0.63	0.64	0.66	0.68	0.75	0.83	0.95	0.49
15.00	0.70	0.78	0.62	0.62	0.65	0.68	0.75	0.82	0.94	0.49
16.00	0.66	0.74	0.59	0.59	0.61	0.64	0.71	0.77	0.91	0.48
17.00	0.59	0.66	0.51	0.51	0.54	0.56	0.64	0.70	0.84	0.39
18.00	0.55	0.63	0.47	0.48	0.50	0.52	0.60	0.65	0.80	0.34
19.00	0.54	0.61	0.46	0.47	0.49	0.52	0.59	0.63	0.78	0.26
20.00	0.52	0.59	0.46	0.45	0.48	0.50	0.56	0.63	0.78	0.36
21.00	0.51	0.57	0.44	0.44	0.46	0.48	0.55	0.61	0.72	0.35
22.00	0.44	0.50	0.38	0.38	0.41	0.43	0.46	0.53	0.70	0.29
23.00	0.31	0.37	0.25	0.25	0.27	0.29	0.35	0.37	0.49	0.21
24.00	0.27	0.33	0.20	0.20	0.21	0.26	0.28	0.35	0.52	0.00

Daily Values	12.54	13.90	11.19	11.14	11.63	12.04	13.50	14.55	16.40	9.08
Daily Sum from Hourly	12.55	14.26	10.84	10.91	11.33	12.04	13.46	14.94	18.43	8.35

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percil	25th Percil	50th Percil	75th Percil	90th Percil	Maximum	Minimum
1.00	0.26	0.32	0.20	0.20	0.21	0.25	0.28	0.34	0.44	0.17
2.00	0.26	0.32	0.20	0.20	0.21	0.25	0.27	0.34	0.44	0.18
3.00	0.26	0.32	0.20	0.20	0.21	0.25	0.28	0.34	0.43	0.19
4.00	0.26	0.32	0.20	0.20	0.21	0.26	0.28	0.34	0.43	0.19
5.00	0.29	0.36	0.23	0.23	0.24	0.29	0.33	0.36	0.52	0.21
6.00	0.39	0.47	0.32	0.29	0.35	0.38	0.44	0.50	0.60	0.23
7.00	0.42	0.50	0.35	0.35	0.38	0.41	0.47	0.51	0.66	0.27
8.00	0.44	0.51	0.37	0.37	0.40	0.43	0.48	0.54	0.62	0.28
9.00	0.44	0.51	0.36	0.37	0.40	0.42	0.48	0.54	0.66	0.28
10.00	0.44	0.51	0.37	0.37	0.40	0.42	0.48	0.53	0.62	0.28
11.00	0.44	0.51	0.37	0.37	0.40	0.42	0.48	0.52	0.63	0.28
12.00	0.44	0.51	0.36	0.37	0.39	0.41	0.48	0.53	0.65	0.28
13.00	0.43	0.50	0.36	0.37	0.39	0.41	0.48	0.53	0.65	0.28
14.00	0.43	0.50	0.36	0.37	0.39	0.41	0.47	0.51	0.64	0.27
15.00	0.43	0.49	0.36	0.37	0.39	0.40	0.47	0.52	0.58	0.27
16.00	0.42	0.49	0.36	0.36	0.39	0.40	0.47	0.51	0.63	0.28
17.00	0.41	0.48	0.34	0.34	0.37	0.39	0.46	0.50	0.55	0.28
18.00	0.32	0.38	0.25	0.24	0.26	0.31	0.36	0.39	0.49	0.21
19.00	0.31	0.37	0.25	0.24	0.26	0.30	0.34	0.37	0.50	0.21
20.00	0.30	0.36	0.24	0.24	0.26	0.30	0.33	0.36	0.47	0.20
21.00	0.29	0.34	0.23	0.22	0.24	0.28	0.33	0.35	0.44	0.19
22.00	0.28	0.34	0.22	0.22	0.24	0.27	0.31	0.35	0.44	0.17
23.00	0.27	0.33	0.21	0.21	0.23	0.26	0.29	0.35	0.45	0.16
24.00	0.26	0.32	0.19	0.20	0.21	0.25	0.27	0.34	0.44	0.15

Daily Values	8.47	9.79	7.16	7.00	7.48	8.43	9.24	10.43	11.95	6.14
Daily Sum from Hourly	8.48	10.06	6.89	6.93	7.39	8.20	9.34	10.48	12.99	5.53

Daily Values: The Daily results as the statistics are applied on daily data.
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input **Lighting diversity factors** for a Large Office Building (Judicial Bldg., Minnesota, MN) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.26) (2) (0.26) (3) (0.25) (4) (0.27) (5) (0.38) (6) (0.45)
(7) (0.53) (8) (0.62) (9) (0.68) (10) (0.69) (11) (0.70) (12) (0.69)
(13) (0.69) (14) (0.68) (15) (0.68) (16) (0.64) (17) (0.56) (18) (0.52)
(19) (0.52) (20) (0.50) (21) (0.48) (22) (0.43) (23) (0.29) (24) (0.26) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.25) (2) (0.25) (3) (0.25) (4) (0.26) (5) (0.29) (6) (0.38)
(7) (0.41) (8) (0.43) (9) (0.42) (10) (0.42) (11) (0.42) (12) (0.41)
(13) (0.41) (14) (0.41) (15) (0.40) (16) (0.40) (17) (0.39) (18) (0.31)
(19) (0.30) (20) (0.30) (21) (0.28) (22) (0.27) (23) (0.26) (24) (0.25) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 1.11 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" command of the "LOADS" input file.

2. BLAST Input Sample

MINL002

(This section depends on the extent of information available on each building).

Building 707:

Building Name: State Office Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Minnesota, MN.

Category: Large Office Building, based on the CBECS classification.

Square footage: 285,850 ft².

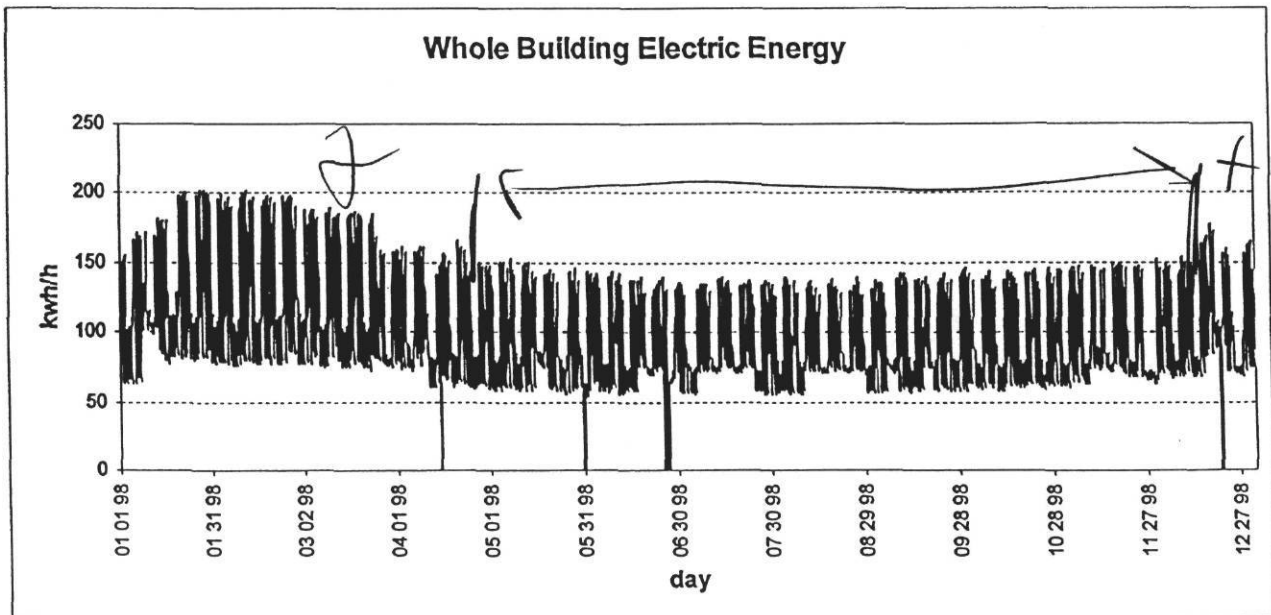
Lighting EUI: $[(13.22 \times 5) + (9.03 \times 2)] \times 52 \times 0.92 = 4.04 \text{ kWh/ft}^2.\text{year}$

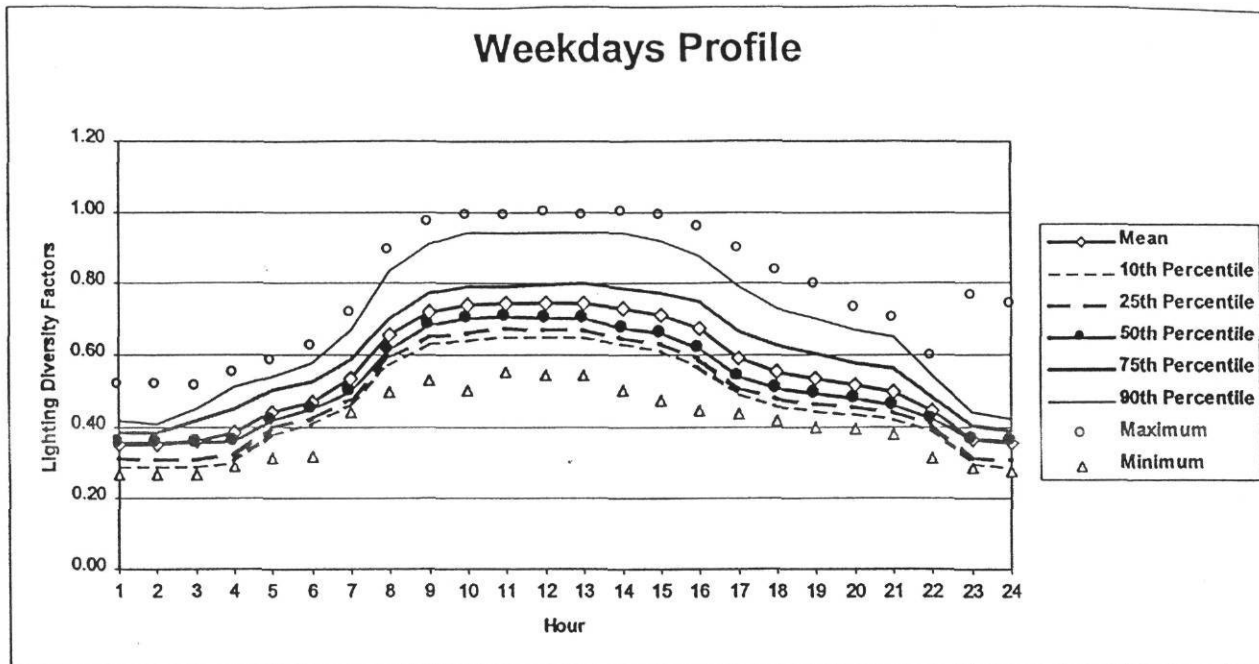
Lighting Type: N/A

Dates: 1/1/98 - 12/31/98

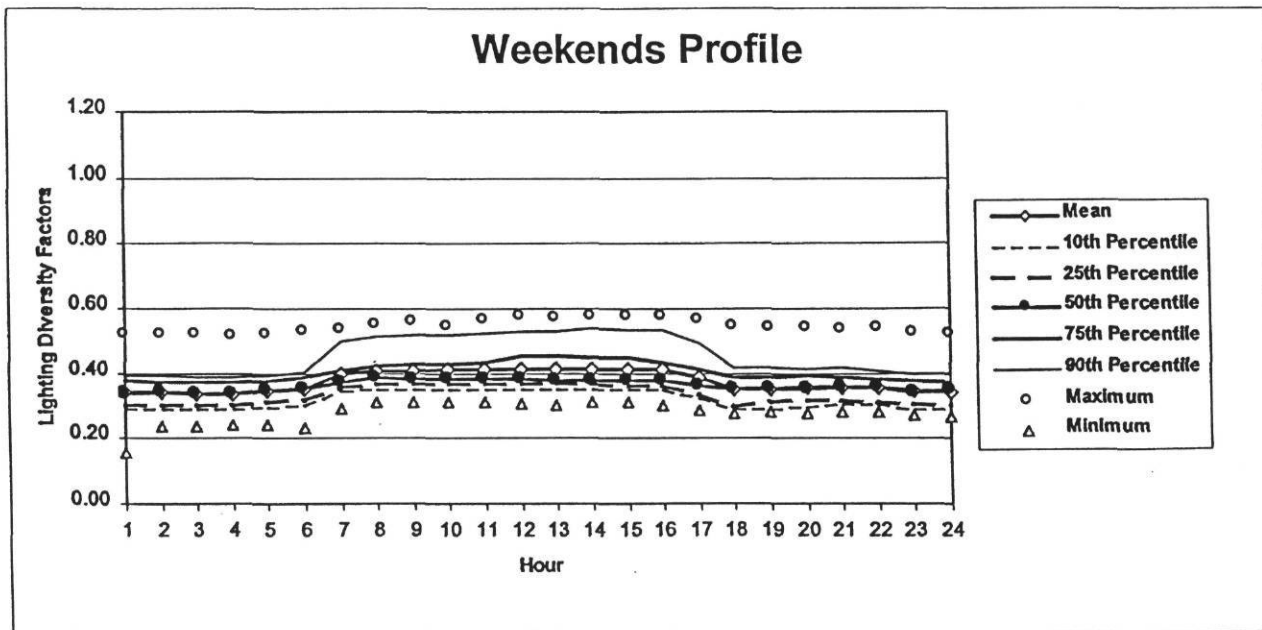
Data Type: WBE = ch2515 + ch2516

Maximum kW: 202 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 7/3/98, 9/7/98, 11/11/98, 11/26/98, 11/27/98, and 12/25/98.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.35	0.40	0.30	0.29	0.31	0.35	0.38	0.42	0.52	0.27
2.00	0.35	0.40	0.30	0.29	0.31	0.35	0.38	0.41	0.52	0.27
3.00	0.36	0.42	0.30	0.29	0.31	0.35	0.42	0.45	0.51	0.27
4.00	0.38	0.46	0.31	0.30	0.32	0.36	0.45	0.51	0.55	0.29
5.00	0.44	0.50	0.38	0.38	0.40	0.42	0.50	0.54	0.58	0.31
6.00	0.47	0.54	0.41	0.41	0.42	0.45	0.52	0.58	0.62	0.32
7.00	0.53	0.61	0.46	0.47	0.48	0.50	0.59	0.67	0.72	0.44
8.00	0.66	0.75	0.56	0.57	0.59	0.62	0.70	0.83	0.89	0.50
9.00	0.72	0.82	0.62	0.63	0.65	0.68	0.78	0.91	0.97	0.53
10.00	0.74	0.85	0.63	0.64	0.66	0.71	0.79	0.94	0.99	0.50
11.00	0.75	0.85	0.64	0.65	0.67	0.71	0.79	0.94	0.99	0.56
12.00	0.75	0.85	0.64	0.65	0.67	0.70	0.79	0.94	1.00	0.54
13.00	0.75	0.85	0.64	0.65	0.67	0.70	0.80	0.94	0.99	0.54
14.00	0.73	0.85	0.61	0.63	0.65	0.68	0.79	0.94	1.00	0.50
15.00	0.71	0.83	0.60	0.62	0.63	0.66	0.77	0.92	0.99	0.47
16.00	0.68	0.80	0.56	0.57	0.59	0.62	0.75	0.88	0.96	0.44
17.00	0.59	0.71	0.47	0.49	0.51	0.54	0.67	0.79	0.89	0.44
18.00	0.55	0.66	0.45	0.46	0.48	0.50	0.63	0.73	0.83	0.42
19.00	0.53	0.63	0.44	0.44	0.47	0.49	0.61	0.70	0.80	0.40
20.00	0.52	0.61	0.43	0.44	0.45	0.48	0.57	0.67	0.73	0.39
21.00	0.50	0.58	0.42	0.42	0.44	0.46	0.56	0.65	0.71	0.38
22.00	0.45	0.50	0.39	0.39	0.41	0.42	0.48	0.54	0.59	0.32
23.00	0.37	0.43	0.31	0.30	0.31	0.36	0.40	0.44	0.76	0.28
24.00	0.36	0.41	0.30	0.29	0.31	0.36	0.39	0.42	0.74	0.28

Daily Values	13.22	15.18	11.26	11.53	11.80	12.27	14.44	16.70	17.62	10.13
Daily Sum from Hourly	13.23	15.31	11.15	11.28	11.71	12.48	14.53	16.77	18.85	9.65
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.34	0.39	0.29	0.29	0.30	0.34	0.38	0.39	0.52	0.15
2.00	0.34	0.39	0.29	0.29	0.30	0.34	0.37	0.39	0.52	0.24
3.00	0.34	0.39	0.29	0.29	0.30	0.34	0.37	0.39	0.52	0.24
4.00	0.34	0.39	0.29	0.29	0.30	0.34	0.37	0.39	0.51	0.24
5.00	0.35	0.39	0.30	0.30	0.31	0.35	0.38	0.39	0.52	0.24
6.00	0.35	0.40	0.31	0.30	0.32	0.35	0.39	0.40	0.53	0.23
7.00	0.40	0.46	0.34	0.35	0.36	0.37	0.41	0.50	0.53	0.29
8.00	0.41	0.47	0.35	0.35	0.37	0.39	0.42	0.51	0.55	0.31
9.00	0.41	0.47	0.35	0.35	0.37	0.38	0.43	0.52	0.56	0.31
10.00	0.41	0.48	0.35	0.35	0.37	0.38	0.43	0.52	0.55	0.31
11.00	0.41	0.48	0.35	0.35	0.37	0.38	0.44	0.53	0.56	0.31
12.00	0.41	0.48	0.35	0.35	0.37	0.38	0.45	0.53	0.57	0.31
13.00	0.41	0.48	0.34	0.35	0.37	0.38	0.45	0.53	0.57	0.30
14.00	0.41	0.49	0.34	0.35	0.37	0.38	0.45	0.54	0.57	0.31
15.00	0.41	0.48	0.34	0.35	0.36	0.38	0.45	0.53	0.57	0.31
16.00	0.41	0.48	0.34	0.35	0.36	0.38	0.44	0.53	0.57	0.30
17.00	0.39	0.45	0.32	0.33	0.34	0.36	0.41	0.50	0.56	0.29
18.00	0.35	0.41	0.30	0.29	0.30	0.35	0.39	0.42	0.55	0.28
19.00	0.35	0.41	0.30	0.29	0.31	0.35	0.39	0.42	0.54	0.28
20.00	0.36	0.41	0.31	0.30	0.32	0.35	0.39	0.41	0.54	0.28
21.00	0.36	0.41	0.31	0.31	0.32	0.36	0.39	0.42	0.53	0.28
22.00	0.36	0.40	0.31	0.31	0.31	0.36	0.38	0.41	0.54	0.28
23.00	0.35	0.39	0.30	0.29	0.31	0.34	0.38	0.40	0.52	0.27
24.00	0.34	0.39	0.30	0.29	0.30	0.35	0.37	0.40	0.52	0.27

Daily Values	9.03	10.28	7.78	7.90	8.17	8.63	9.63	10.95	13.00	6.68
Daily Sum from Hourly	9.03	10.40	7.66	7.72	8.00	8.71	9.73	10.97	13.04	6.66
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (State Office Bldg., Minnesota, MN) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.35) (2) (0.35) (3) (0.35) (4) (0.36) (5) (0.42) (6) (0.45)
(7) (0.50) (8) (0.62) (9) (0.68) (10) (0.71) (11) (0.71) (12) (0.70)
(13) (0.70) (14) (0.68) (15) (0.66) (16) (0.62) (17) (0.54) (18) (0.50)
(19) (0.49) (20) (0.48) (21) (0.46) (22) (0.42) (23) (0.36) (24) (0.36) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.34) (2) (0.34) (3) (0.34) (4) (0.34) (5) (0.35) (6) (0.35)
(7) (0.37) (8) (0.39) (9) (0.38) (10) (0.38) (11) (0.38) (12) (0.38)
(13) (0.38) (14) (0.38) (15) (0.38) (16) (0.38) (17) (0.36) (18) (0.35)
(19) (0.35) (20) (0.35) (21) (0.36) (22) (0.36) (23) (0.34) (24) (0.35) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 0.92 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" commend of the "LOADS" input file.

2. BLAST Input Sample

MINL003

(This section depends on the extent of information available on each building).

Building 710:

Building Name: Capitol Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Minnesota, MN.

Category: Large Office Building, based on the CBECS classification.

Square footage: 366,805 ft² .

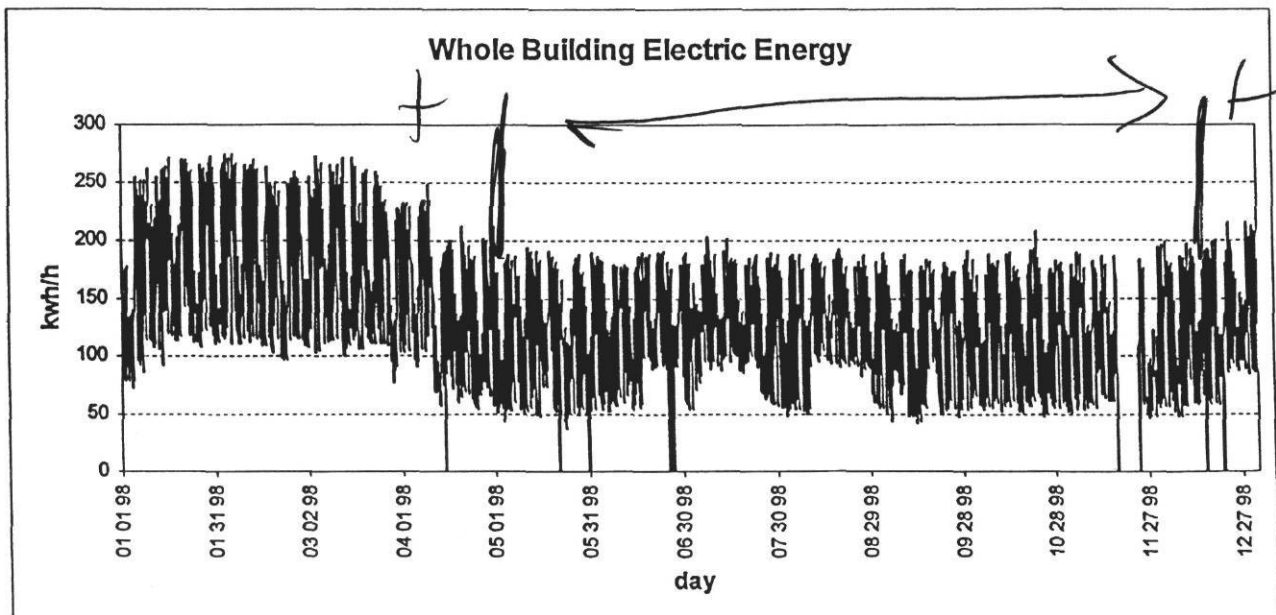
Lighting EUI: $[(13.54 \times 5) + (9.37 \times 2)] \times 52 \times 0.75 = 3.36 \text{ kWh/ft}^2 \cdot \text{year}$

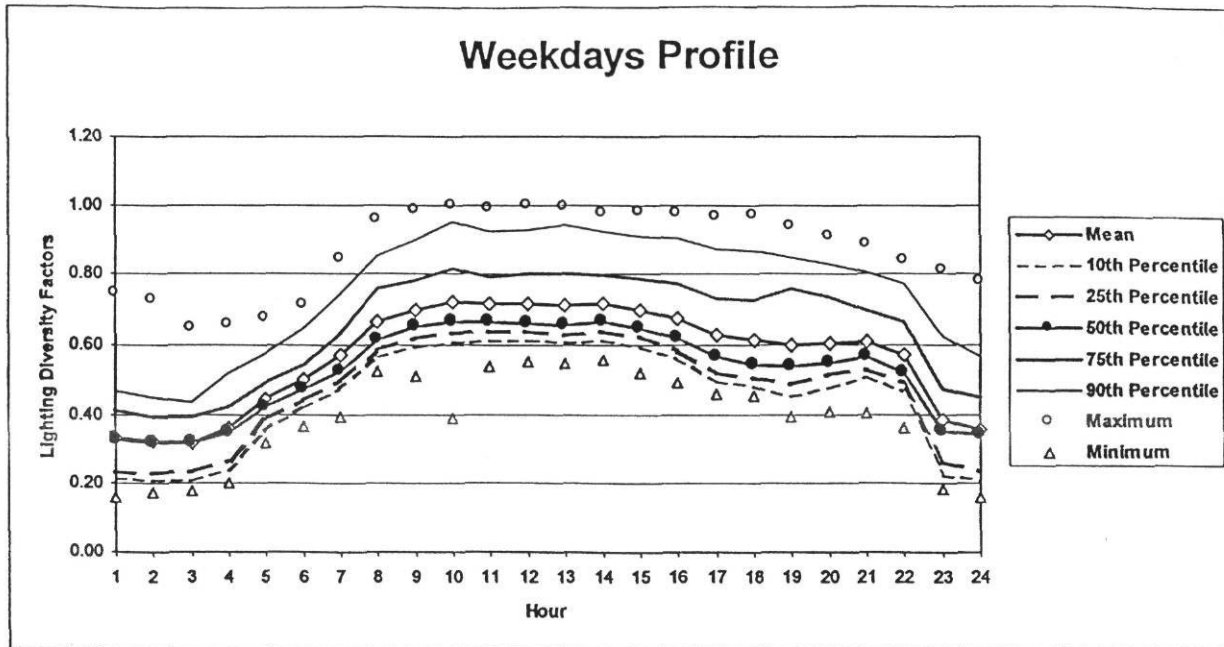
Lighting Type: N/A

Dates: 1/1/98 - 12/31/98

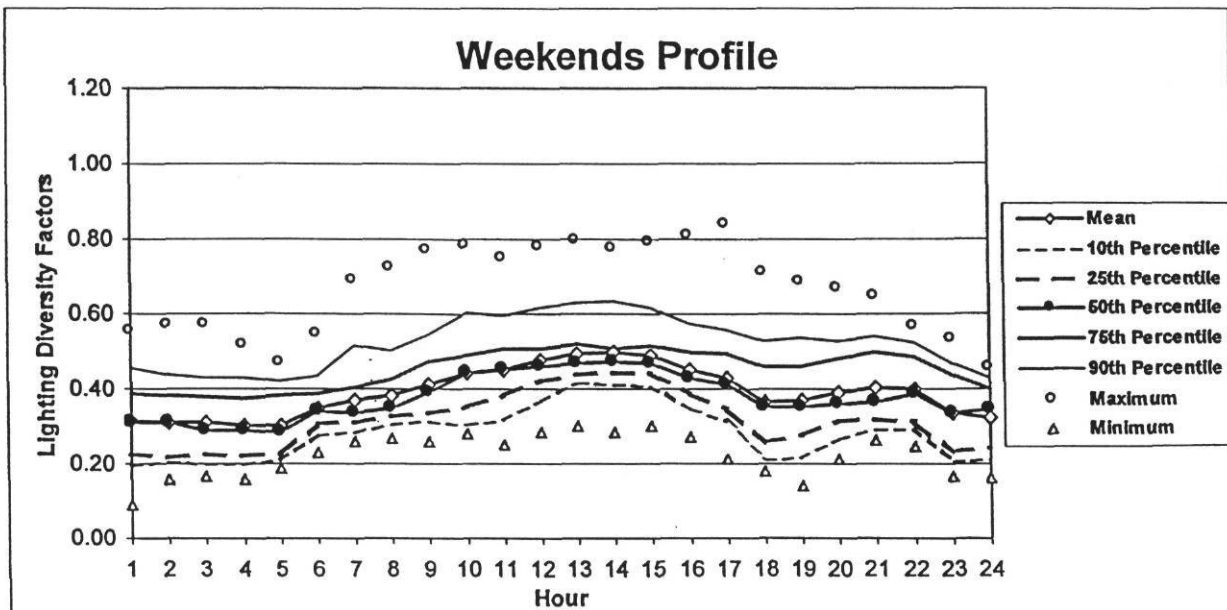
Data Type: WBE = ch2539 + ch2540 + ch2541 + ch2542

Maximum kW: 274 kW





*The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 7/3/98, 9/7/98, 11/11/98, 11/26/98, 11/27/98, and 12/25/98.



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.33	0.44	0.22	0.21	0.23	0.33	0.41	0.47	0.75	0.16
2.00	0.32	0.42	0.22	0.21	0.23	0.32	0.39	0.45	0.73	0.18
3.00	0.32	0.42	0.23	0.21	0.23	0.32	0.40	0.44	0.64	0.18
4.00	0.36	0.47	0.25	0.24	0.27	0.35	0.42	0.52	0.66	0.20
5.00	0.45	0.53	0.36	0.35	0.38	0.42	0.49	0.58	0.68	0.32
6.00	0.50	0.59	0.42	0.42	0.44	0.47	0.54	0.65	0.71	0.37
7.00	0.57	0.68	0.47	0.47	0.50	0.53	0.63	0.75	0.84	0.40
8.00	0.66	0.77	0.55	0.57	0.59	0.61	0.76	0.85	0.95	0.52
9.00	0.70	0.82	0.58	0.60	0.62	0.65	0.78	0.90	0.98	0.51
10.00	0.72	0.85	0.59	0.61	0.63	0.67	0.82	0.95	1.00	0.39
11.00	0.72	0.83	0.60	0.61	0.64	0.67	0.79	0.92	0.99	0.54
12.00	0.72	0.84	0.59	0.61	0.64	0.66	0.80	0.93	1.00	0.55
13.00	0.71	0.84	0.59	0.61	0.63	0.65	0.80	0.94	0.99	0.55
14.00	0.72	0.83	0.60	0.61	0.64	0.67	0.80	0.92	0.97	0.56
15.00	0.70	0.82	0.58	0.60	0.62	0.65	0.79	0.91	0.98	0.52
16.00	0.68	0.81	0.55	0.56	0.59	0.62	0.77	0.90	0.98	0.49
17.00	0.63	0.77	0.49	0.50	0.52	0.57	0.73	0.87	0.97	0.46
18.00	0.62	0.77	0.46	0.48	0.51	0.54	0.73	0.87	0.97	0.45
19.00	0.60	0.75	0.45	0.46	0.49	0.54	0.76	0.85	0.94	0.39
20.00	0.61	0.74	0.47	0.48	0.51	0.55	0.73	0.83	0.91	0.41
21.00	0.61	0.72	0.50	0.51	0.53	0.57	0.70	0.81	0.88	0.40
22.00	0.57	0.69	0.45	0.47	0.49	0.52	0.66	0.77	0.84	0.36
23.00	0.39	0.53	0.24	0.22	0.26	0.35	0.47	0.63	0.81	0.18
24.00	0.36	0.49	0.22	0.21	0.23	0.34	0.45	0.57	0.78	0.16
Daily Values	13.54	16.19	10.88	11.31	11.60	12.32	15.88	18.16	19.43	10.06
Daily Sum from Hourly	13.55	16.41	10.70	10.83	11.43	12.55	15.63	18.27	20.95	9.26
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.31	0.42	0.21	0.20	0.22	0.31	0.39	0.46	0.55	0.09
2.00	0.31	0.41	0.22	0.21	0.22	0.31	0.38	0.44	0.57	0.16
3.00	0.31	0.40	0.22	0.20	0.23	0.29	0.38	0.43	0.57	0.16
4.00	0.30	0.40	0.21	0.20	0.22	0.29	0.38	0.43	0.52	0.16
5.00	0.30	0.39	0.22	0.21	0.23	0.28	0.38	0.42	0.47	0.19
6.00	0.35	0.41	0.29	0.28	0.30	0.34	0.39	0.43	0.55	0.23
7.00	0.37	0.46	0.28	0.29	0.31	0.34	0.40	0.51	0.69	0.26
8.00	0.38	0.47	0.30	0.31	0.33	0.35	0.42	0.50	0.72	0.27
9.00	0.41	0.51	0.32	0.31	0.34	0.39	0.47	0.55	0.77	0.26
10.00	0.44	0.55	0.34	0.31	0.35	0.44	0.49	0.61	0.78	0.28
11.00	0.45	0.55	0.35	0.32	0.38	0.45	0.50	0.60	0.75	0.25
12.00	0.47	0.57	0.38	0.37	0.42	0.46	0.51	0.62	0.78	0.28
13.00	0.50	0.59	0.40	0.42	0.44	0.47	0.52	0.63	0.79	0.30
14.00	0.50	0.59	0.41	0.41	0.44	0.47	0.51	0.64	0.78	0.29
15.00	0.49	0.58	0.40	0.41	0.44	0.47	0.52	0.62	0.79	0.30
16.00	0.45	0.55	0.35	0.35	0.39	0.43	0.50	0.58	0.81	0.27
17.00	0.43	0.54	0.32	0.31	0.35	0.41	0.49	0.56	0.84	0.21
18.00	0.36	0.49	0.24	0.21	0.26	0.35	0.46	0.53	0.71	0.18
19.00	0.37	0.49	0.25	0.22	0.28	0.35	0.46	0.54	0.69	0.14
20.00	0.39	0.50	0.28	0.27	0.31	0.36	0.48	0.53	0.67	0.21
21.00	0.40	0.51	0.30	0.29	0.32	0.37	0.50	0.54	0.65	0.26
22.00	0.40	0.49	0.31	0.29	0.32	0.39	0.49	0.52	0.57	0.25
23.00	0.34	0.44	0.24	0.21	0.23	0.33	0.44	0.47	0.53	0.17
24.00	0.32	0.41	0.24	0.21	0.24	0.34	0.40	0.43	0.46	0.16
Daily Values	9.37	11.42	7.33	7.17	7.95	8.73	10.47	12.55	15.40	6.42
Daily Sum from Hourly	9.37	11.69	7.05	6.80	7.57	9.00	10.85	12.56	15.98	5.33
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Capitol Bldg., Minnesota, MN) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.33) (2) (0.32) (3) (0.32) (4) (0.35) (5) (0.42) (6) (0.47)
(7) (0.53) (8) (0.61) (9) (0.65) (10) (0.67) (11) (0.67) (12) (0.66)
(13) (0.65) (14) (0.67) (15) (0.65) (16) (0.62) (17) (0.57) (18) (0.54)
(19) (0.54) (20) (0.55) (21) (0.57) (22) (0.52) (23) (0.35) (24) (0.34) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.31) (2) (0.31) (3) (0.29) (4) (0.29) (5) (0.28) (6) (0.24)
(7) (0.34) (8) (0.35) (9) (0.39) (10) (0.44) (11) (0.45) (12) (0.46)
(13) (0.47) (14) (0.47) (15) (0.47) (16) (0.43) (17) (0.41) (18) (0.35)
(19) (0.35) (20) (0.36) (21) (0.37) (22) (0.39) (23) (0.33) (24) (0.34) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = BLE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 0.75 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample

MINL004

(This section depends on the extent of information available on each building).

Building 711:

Building Name: Centennial Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Minnesota, MN.

Category: Large Office Building, based on the CBECS classification.

Square footage: 317,286 ft².

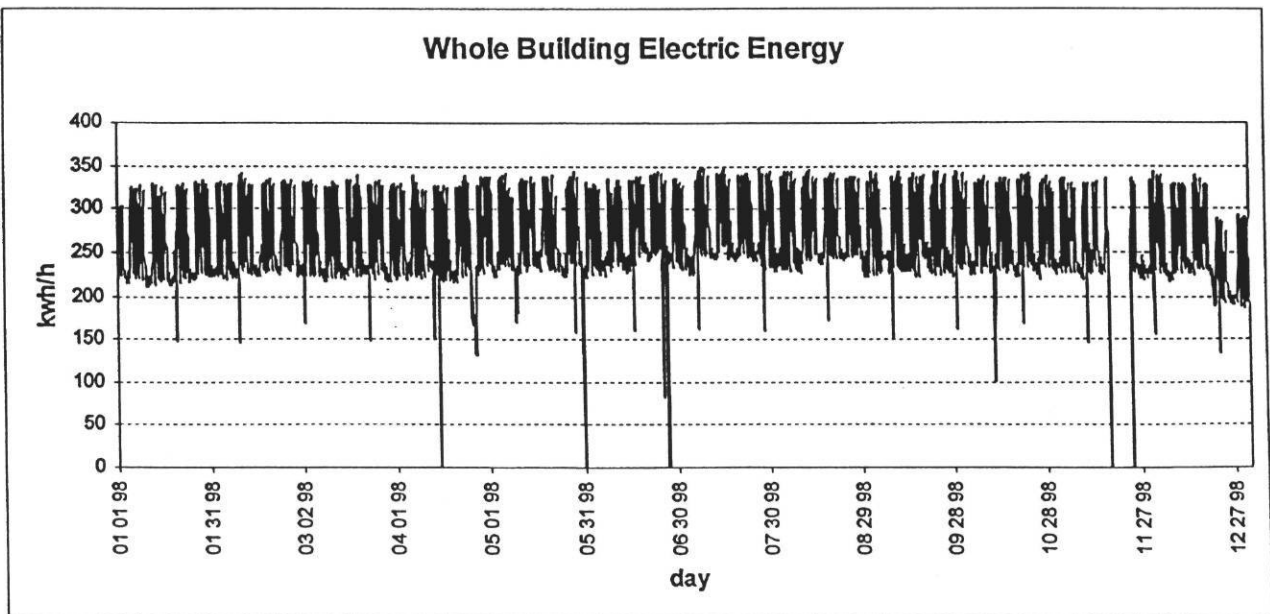
Lighting EUI: $[(19.43 \times 5) + (16.08 \times 2)] \times 52 \times 1.09 = 7.40 \text{ kWh/ft}^2 \cdot \text{year}$

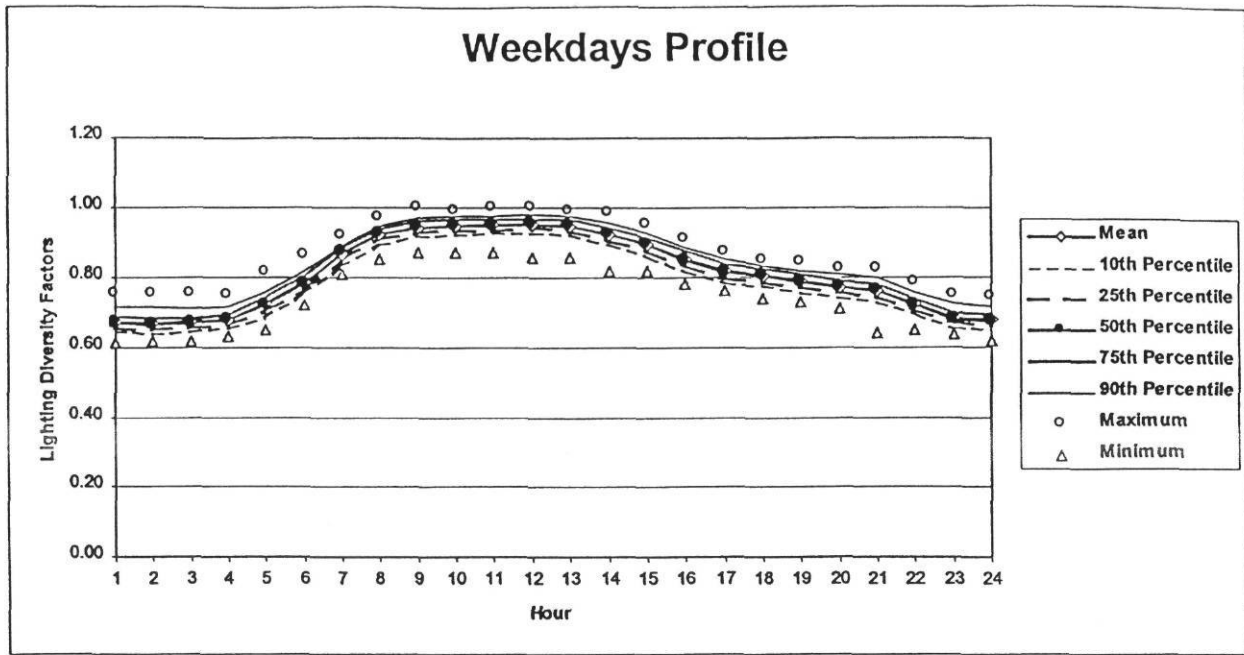
Lighting Type: N/A

Dates: 1/1/98 - 12/31/98

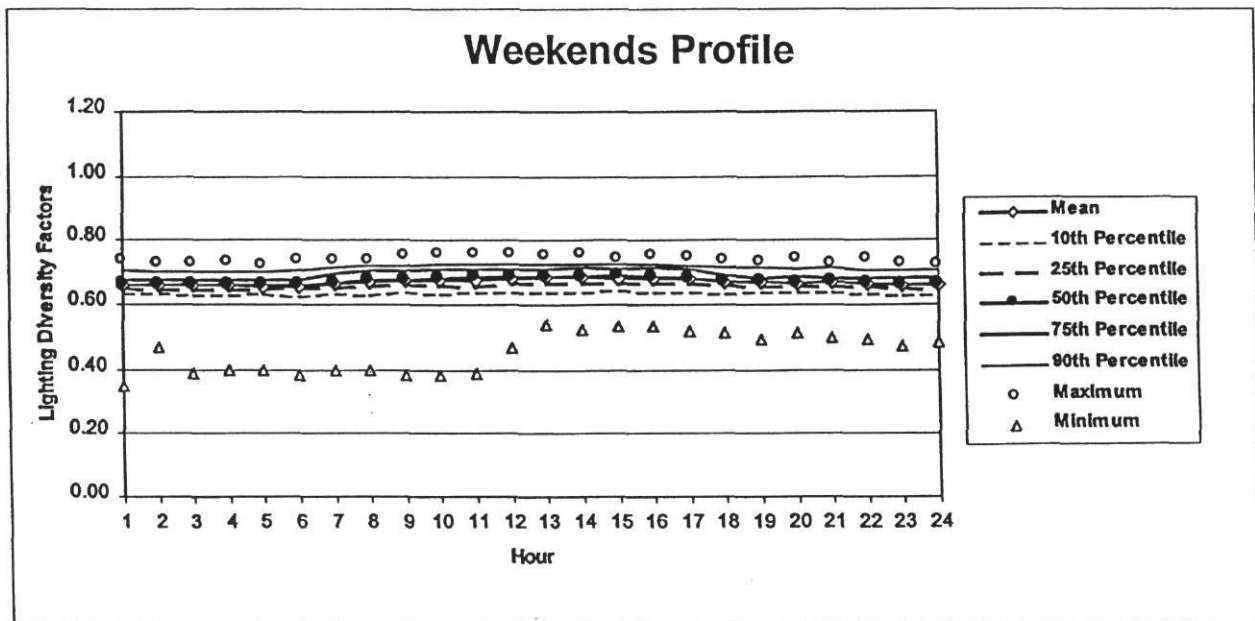
Data Type: WBE = ch2545 + ch2546

Maximum kW: 347 kW





**The dates that are excluded from the weekday profile are as follow: 1/1/98, 1/19/98, 2/16/98, 5/25/98, 9/7/98, 7/3/98, 11/11/98, 11/26/98, 11/27/98, and 12/21 - 12/31/98.*



(Page 3) Diversity Factors and Statistics
WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.67	0.70	0.65	0.65	0.66	0.67	0.69	0.72	0.76	0.61
2.00	0.67	0.70	0.64	0.64	0.65	0.67	0.68	0.72	0.75	0.62
3.00	0.67	0.70	0.65	0.65	0.65	0.67	0.69	0.71	0.76	0.62
4.00	0.68	0.71	0.66	0.65	0.67	0.68	0.69	0.72	0.75	0.63
5.00	0.72	0.75	0.69	0.69	0.70	0.72	0.75	0.76	0.82	0.65
6.00	0.79	0.81	0.76	0.75	0.77	0.78	0.81	0.82	0.86	0.72
7.00	0.87	0.89	0.85	0.83	0.85	0.87	0.88	0.89	0.92	0.81
8.00	0.92	0.94	0.90	0.90	0.91	0.92	0.94	0.95	0.97	0.85
9.00	0.94	0.96	0.92	0.92	0.93	0.94	0.96	0.97	1.00	0.87
10.00	0.95	0.97	0.93	0.92	0.93	0.95	0.96	0.98	0.99	0.87
11.00	0.95	0.97	0.93	0.93	0.93	0.95	0.97	0.98	1.00	0.87
12.00	0.95	0.97	0.93	0.93	0.94	0.95	0.97	0.98	1.00	0.86
13.00	0.95	0.97	0.93	0.92	0.93	0.95	0.96	0.97	0.99	0.86
14.00	0.92	0.95	0.90	0.90	0.90	0.92	0.94	0.95	0.98	0.82
15.00	0.89	0.92	0.87	0.86	0.88	0.90	0.91	0.93	0.95	0.82
16.00	0.85	0.88	0.83	0.82	0.83	0.85	0.88	0.88	0.91	0.78
17.00	0.82	0.84	0.79	0.79	0.80	0.82	0.84	0.85	0.87	0.76
18.00	0.81	0.83	0.78	0.78	0.79	0.80	0.83	0.83	0.85	0.74
19.00	0.79	0.81	0.77	0.76	0.77	0.79	0.81	0.82	0.85	0.73
20.00	0.77	0.80	0.75	0.75	0.76	0.77	0.79	0.81	0.83	0.71
21.00	0.76	0.79	0.74	0.73	0.75	0.76	0.78	0.80	0.83	0.64
22.00	0.73	0.75	0.70	0.70	0.71	0.72	0.74	0.76	0.79	0.65
23.00	0.69	0.71	0.66	0.66	0.67	0.68	0.70	0.72	0.75	0.64
24.00	0.68	0.70	0.65	0.65	0.66	0.68	0.69	0.72	0.74	0.62

Daily Values	19.43	19.89	18.96	18.85	19.13	19.38	19.73	20.07	20.62	18.20
Daily Sum from Hourly	19.46	20.04	18.88	18.77	19.05	19.41	19.86	20.25	20.91	17.77
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.66	0.71	0.61	0.63	0.65	0.66	0.68	0.70	0.74	0.35
2.00	0.66	0.69	0.63	0.64	0.65	0.66	0.68	0.70	0.72	0.47
3.00	0.66	0.70	0.62	0.63	0.65	0.66	0.67	0.70	0.73	0.39
4.00	0.66	0.70	0.62	0.63	0.65	0.66	0.68	0.70	0.73	0.40
5.00	0.66	0.70	0.61	0.63	0.65	0.66	0.68	0.70	0.72	0.40
6.00	0.66	0.70	0.61	0.63	0.65	0.66	0.68	0.71	0.74	0.39
7.00	0.67	0.72	0.62	0.64	0.65	0.67	0.70	0.72	0.73	0.40
8.00	0.67	0.72	0.62	0.63	0.65	0.68	0.71	0.72	0.74	0.40
9.00	0.67	0.73	0.62	0.64	0.66	0.68	0.70	0.72	0.75	0.38
10.00	0.68	0.73	0.62	0.64	0.66	0.68	0.71	0.72	0.75	0.38
11.00	0.68	0.73	0.63	0.64	0.66	0.68	0.71	0.72	0.75	0.39
12.00	0.68	0.73	0.64	0.64	0.66	0.69	0.71	0.73	0.76	0.47
13.00	0.68	0.73	0.64	0.64	0.67	0.69	0.71	0.72	0.75	0.54
14.00	0.68	0.73	0.64	0.64	0.66	0.69	0.71	0.72	0.75	0.52
15.00	0.68	0.72	0.64	0.65	0.67	0.69	0.71	0.72	0.74	0.54
16.00	0.68	0.72	0.64	0.64	0.66	0.68	0.71	0.73	0.75	0.54
17.00	0.68	0.72	0.64	0.64	0.66	0.68	0.71	0.72	0.75	0.52
18.00	0.67	0.71	0.64	0.64	0.66	0.67	0.69	0.71	0.74	0.51
19.00	0.67	0.70	0.63	0.64	0.66	0.67	0.68	0.71	0.73	0.50
20.00	0.67	0.70	0.63	0.64	0.66	0.67	0.68	0.71	0.74	0.51
21.00	0.67	0.70	0.63	0.64	0.66	0.67	0.68	0.71	0.73	0.50
22.00	0.66	0.70	0.63	0.63	0.65	0.67	0.68	0.71	0.74	0.49
23.00	0.66	0.70	0.63	0.63	0.65	0.66	0.68	0.71	0.73	0.48
24.00	0.66	0.70	0.63	0.63	0.65	0.66	0.68	0.71	0.72	0.48

Daily Values	16.08	16.96	15.20	15.26	15.74	16.17	16.64	17.00	17.59	12.89
Daily Sum from Hourly	16.08	17.09	15.07	15.29	15.73	16.13	16.63	17.15	17.73	10.93
Daily Values: The Daily results as the statistics are applied on daily data.										
Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.										

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Centennial Bldg., Minnesota, MN) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

\$ ***** LIGHTING SCHEDULES ***** \$

\$ WEEKDAY SCHEDULE \$

WKDAY = DAY-SCHEDULE

(1) (0.67) (2) (0.67) (3) (0.67) (4) (0.68) (5) (0.72) (6) (0.78)
(7) (0.87) (8) (0.92) (9) (0.94) (10) (0.95) (11) (0.95) (12) (0.95)
(13) (0.95) (14) (0.95) (15) (0.90) (16) (0.85) (17) (0.82) (18) (0.80)
(19) (0.79) (20) (0.77) (21) (0.76) (22) (0.72) (23) (0.68) (24) (0.68) ..

\$ WEEKEND SCHEDULE \$

WKEND = DAY-SCHEDULE

(1) (0.66) (2) (0.66) (3) (0.66) (4) (0.66) (5) (0.66) (6) (0.66)
(7) (0.67) (8) (0.68) (9) (0.68) (10) (0.68) (11) (0.68) (12) (0.69)
(13) (0.69) (14) (0.69) (15) (0.69) (16) (0.68) (17) (0.68) (18) (0.67)
(19) (0.67) (20) (0.67) (21) (0.67) (22) (0.67) (23) (0.66) (24) (0.66) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
THRU JUL 4 VAC THRU NOV 22 WORK
THRU NOV 24 VAC THRU DEC 24 WORK
THRU DEC 25 VAC THRU DEC 30 WORK
THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 1.09 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft²) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-command "HOLIDAY = NO" in the "BUILDING LOCATION" commend of the "LOADS" input file.

(Page 5)

2. BLAST Input Sample

MINM002

(This section depends on the extent of information available on each building).

Building 709:

Building Name: Veterans Building.

Source of Data: The Energy Systems Laboratory, Texas A&M University.

Location: Minnesota, MN.

Category: Medium Office Building, based on the CBECS classification.

Square footage: 87,664 ft² .

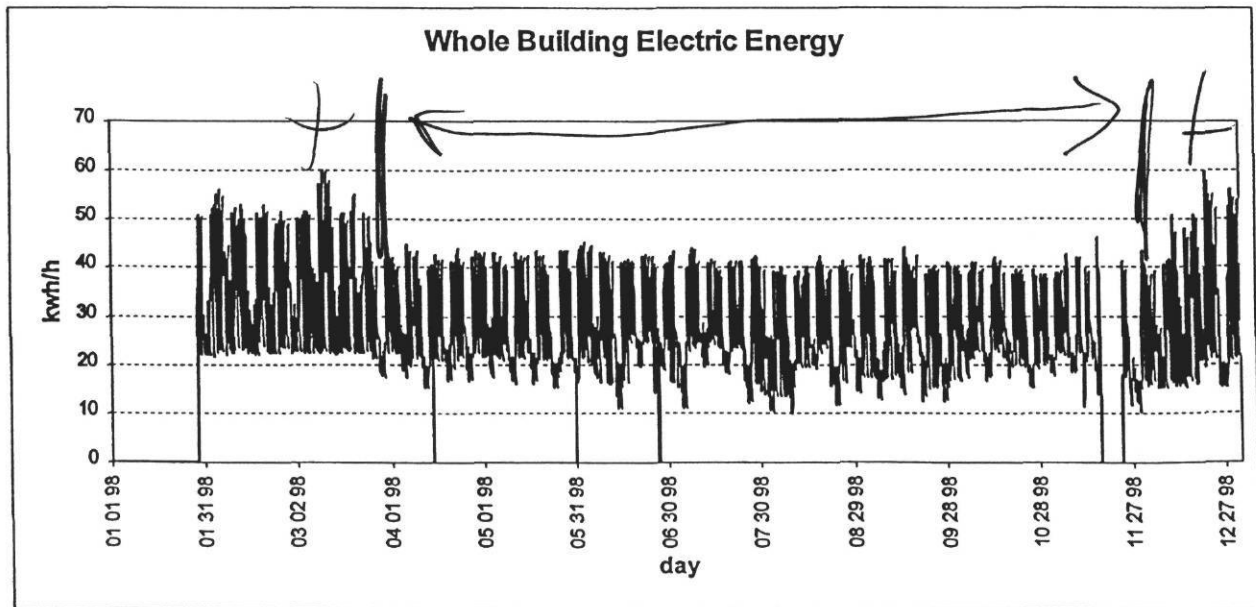
Lighting EUI: $[(12.81 \times 5) + (8.50 \times 2)] \times 52 \times 0.69 = 2.89 \text{ kWh/ft}^2 \cdot \text{year}$

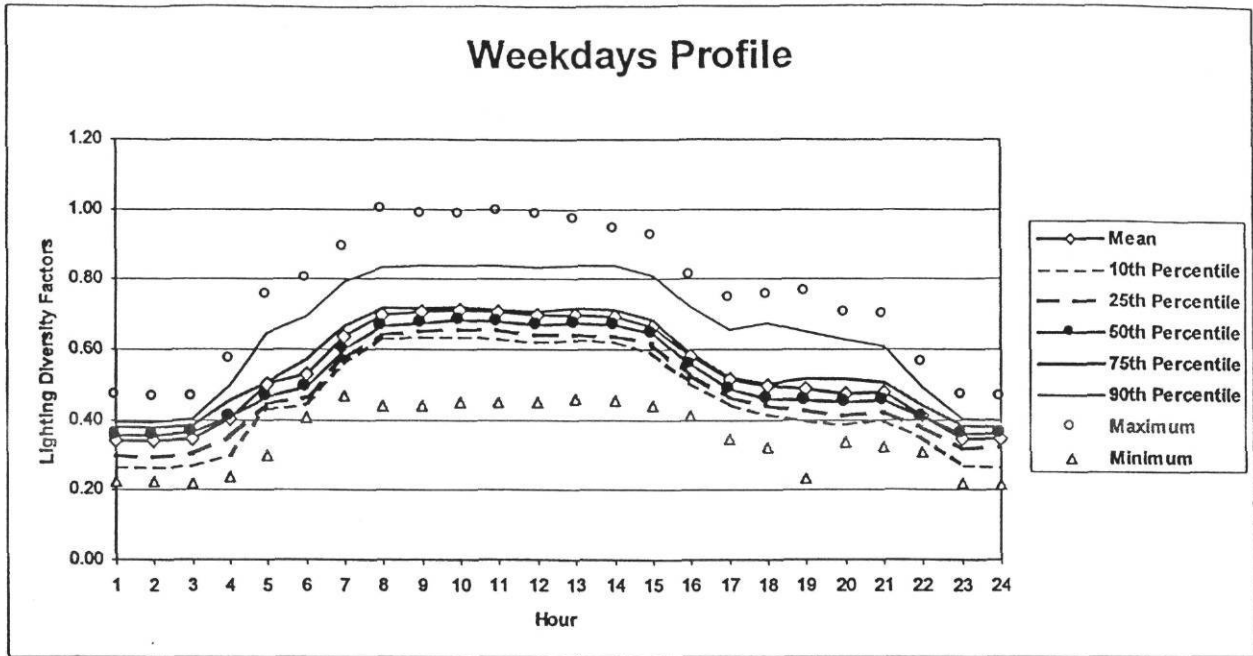
Lighting Type: N/A

Dates: 1/1/98 - 12/31/98

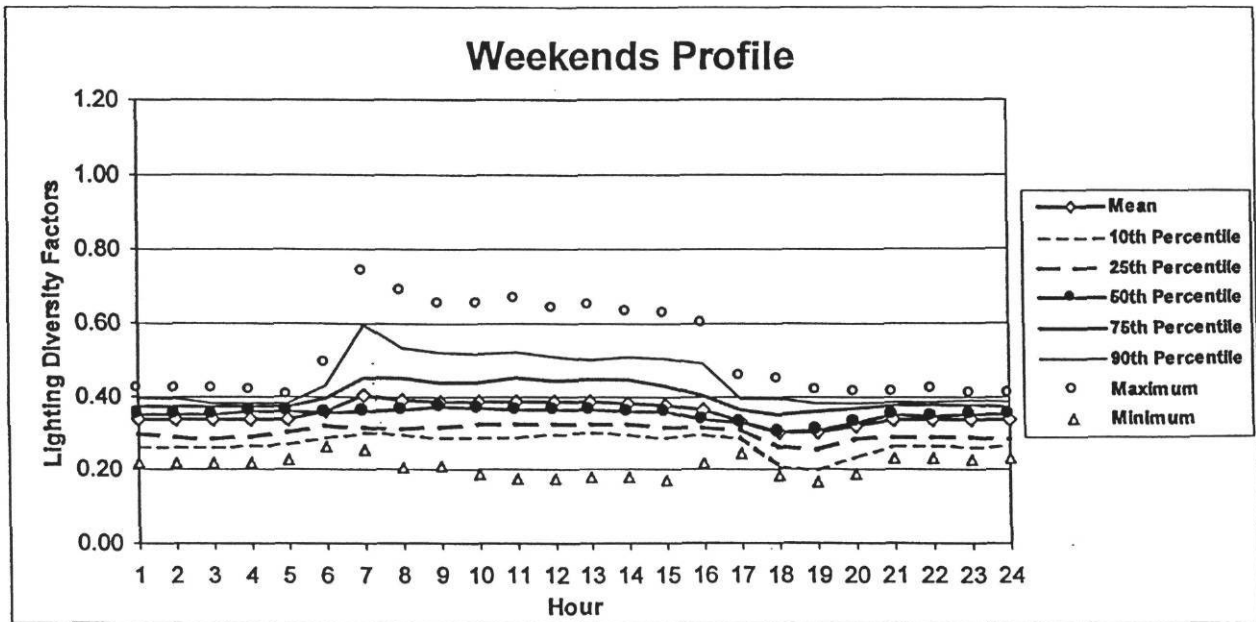
Data Type: WBE = ch2532

Maximum kW: 60 kW





**The dates that are excluded from the weekday profile are as follow: 5/25/98, 7/3/98, 9/7/98, 11/11/98, 11/26/98, 11/27/98, and 12/25/98.*



WEEKDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.34	0.39	0.29	0.27	0.30	0.36	0.38	0.39	0.47	0.23
2.00	0.34	0.39	0.29	0.27	0.30	0.36	0.38	0.39	0.47	0.23
3.00	0.35	0.40	0.30	0.27	0.30	0.37	0.38	0.40	0.47	0.22
4.00	0.41	0.48	0.33	0.30	0.35	0.41	0.46	0.50	0.57	0.24
5.00	0.50	0.59	0.41	0.43	0.44	0.47	0.50	0.65	0.76	0.30
6.00	0.53	0.62	0.43	0.44	0.47	0.49	0.57	0.69	0.80	0.41
7.00	0.64	0.73	0.54	0.56	0.58	0.60	0.66	0.79	0.89	0.47
8.00	0.70	0.79	0.61	0.63	0.64	0.66	0.72	0.84	1.00	0.44
9.00	0.71	0.79	0.62	0.64	0.65	0.67	0.72	0.84	0.99	0.44
10.00	0.71	0.80	0.63	0.64	0.66	0.68	0.72	0.84	0.99	0.45
11.00	0.71	0.79	0.62	0.63	0.66	0.68	0.71	0.84	0.99	0.45
12.00	0.70	0.78	0.61	0.63	0.64	0.67	0.71	0.84	0.98	0.45
13.00	0.70	0.78	0.61	0.63	0.64	0.67	0.72	0.84	0.97	0.46
14.00	0.69	0.78	0.61	0.62	0.64	0.67	0.71	0.84	0.94	0.46
15.00	0.67	0.75	0.58	0.59	0.62	0.65	0.68	0.81	0.92	0.44
16.00	0.58	0.66	0.50	0.51	0.53	0.56	0.59	0.72	0.81	0.41
17.00	0.51	0.60	0.43	0.44	0.47	0.49	0.52	0.66	0.74	0.35
18.00	0.50	0.59	0.40	0.42	0.44	0.46	0.50	0.67	0.76	0.33
19.00	0.49	0.58	0.39	0.40	0.43	0.46	0.51	0.65	0.77	0.23
20.00	0.47	0.56	0.39	0.39	0.41	0.45	0.52	0.63	0.70	0.34
21.00	0.48	0.56	0.40	0.40	0.42	0.46	0.50	0.61	0.70	0.32
22.00	0.41	0.47	0.36	0.35	0.38	0.41	0.44	0.49	0.56	0.31
23.00	0.35	0.40	0.30	0.27	0.32	0.36	0.38	0.40	0.47	0.22
24.00	0.35	0.40	0.30	0.27	0.32	0.36	0.38	0.40	0.47	0.22

Daily Values	12.81	14.41	11.21	11.37	11.79	12.32	12.94	15.59	17.48	9.86
Daily Sum from Hourly	12.83	14.68	10.98	11.00	11.61	12.40	13.38	15.73	18.18	8.40

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

WEEKENDS/HOLIDAYS

Hour	Mean	Mean+1Std	Mean-1Std	10th Percnt	25th Percnt	50th Percnt	75th Percnt	90th Percnt	Maximum	Minimum
1.00	0.34	0.39	0.29	0.26	0.30	0.35	0.37	0.39	0.42	0.22
2.00	0.34	0.39	0.29	0.26	0.29	0.35	0.37	0.39	0.42	0.22
3.00	0.34	0.39	0.29	0.26	0.29	0.35	0.37	0.38	0.42	0.22
4.00	0.34	0.39	0.29	0.27	0.29	0.36	0.37	0.38	0.42	0.22
5.00	0.34	0.39	0.29	0.27	0.30	0.36	0.37	0.38	0.40	0.23
6.00	0.36	0.41	0.31	0.29	0.32	0.35	0.40	0.43	0.49	0.26
7.00	0.40	0.52	0.29	0.30	0.32	0.36	0.45	0.60	0.74	0.26
8.00	0.39	0.49	0.29	0.30	0.31	0.37	0.45	0.53	0.69	0.20
9.00	0.39	0.48	0.29	0.29	0.32	0.37	0.44	0.52	0.65	0.21
10.00	0.39	0.48	0.29	0.29	0.32	0.37	0.44	0.52	0.65	0.19
11.00	0.39	0.48	0.29	0.29	0.32	0.37	0.45	0.52	0.66	0.17
12.00	0.38	0.48	0.29	0.30	0.32	0.36	0.44	0.51	0.64	0.17
13.00	0.38	0.48	0.29	0.30	0.32	0.37	0.45	0.50	0.65	0.18
14.00	0.38	0.47	0.29	0.30	0.32	0.36	0.45	0.51	0.63	0.18
15.00	0.38	0.46	0.29	0.29	0.32	0.36	0.43	0.50	0.63	0.17
16.00	0.36	0.44	0.29	0.30	0.32	0.34	0.40	0.49	0.60	0.22
17.00	0.33	0.38	0.29	0.29	0.31	0.33	0.36	0.39	0.46	0.24
18.00	0.30	0.37	0.24	0.21	0.26	0.30	0.35	0.39	0.45	0.18
19.00	0.30	0.37	0.24	0.20	0.26	0.31	0.36	0.38	0.42	0.16
20.00	0.32	0.38	0.26	0.24	0.29	0.33	0.37	0.38	0.41	0.19
21.00	0.34	0.39	0.29	0.27	0.29	0.35	0.38	0.39	0.41	0.23
22.00	0.34	0.39	0.29	0.27	0.29	0.35	0.38	0.39	0.42	0.23
23.00	0.34	0.39	0.29	0.26	0.29	0.35	0.38	0.39	0.41	0.23
24.00	0.34	0.39	0.29	0.27	0.29	0.35	0.37	0.39	0.41	0.23

Daily Values	8.50	9.88	7.12	6.96	7.40	8.28	9.43	10.39	12.17	5.75
Daily Sum from Hourly	8.50	10.17	6.83	6.55	7.24	8.41	9.61	10.65	12.50	5.02

Daily Values: The Daily results as the statistics are applied on daily data.
 Daily Sum from Hourly: The aggregated Daily results as the statistics are applied on Hour-of-Day data.

1. DOE-2 Input Sample

This is an example of how to input Lighting diversity factors for a Large Office Building (Veterans Bldg., Minnesota, MN) into the DOE-2 program. The calculated 50th Percentile values are used in these schedules.

§ ***** LIGHTING SCHEDULES ***** §

§ WEEKDAY SCHEDULE §

WKDAY = DAY-SCHEDULE

(1) (0.36) (2) (0.36) (3) (0.37) (4) (0.41) (5) (0.47) (6) (0.49)
(7) (0.60) (8) (0.66) (9) (0.67) (10) (0.68) (11) (0.68) (12) (0.67)
(13) (0.67) (14) (0.67) (15) (0.65) (16) (0.56) (17) (0.49) (18) (0.46)
(19) (0.46) (20) (0.45) (21) (0.46) (22) (0.41) (23) (0.36) (24) (0.36) ..

§ WEEKEND SCHEDULE §

WKEND = DAY-SCHEDULE

(1) (0.35) (2) (0.35) (3) (0.35) (4) (0.36) (5) (0.36) (6) (0.35)
(7) (0.36) (8) (0.37) (9) (0.37) (10) (0.37) (11) (0.37) (12) (0.36)
(13) (0.37) (14) (0.36) (15) (0.36) (16) (0.34) (17) (0.33) (18) (0.30)
(19) (0.31) (20) (0.33) (21) (0.35) (22) (0.35) (23) (0.35) (24) (0.35) ..

WORK = WEEK-SCHEDULE (WD) WKDAY (WE) WKEND (HOL) WKEND ..
VAC = WEEK-SCHEDULE (WD) WKEND (WE) WKEND (HOL) WKEND ..

ELE-SCH = SCHEDULE THRU JAN 1 VAC THRU JUL 3 WORK
 THRU JUL 4 VAC THRU NOV 22 WORK
 THRU NOV 24 VAC THRU DEC 24 WORK
 THRU DEC 25 VAC THRU DEC 30 WORK
 THRU DEC 31 VAC ..

G-ZONE = SPACE-CONDITIONS
LIGHTING-SCHEDULE = ELE-SCH
LIGHTING-TYPE = REC-FLUOR-RV
LIGHT-TO-SPACE = 0.8
LIGHTING-W/SQFT = 0.69 ..

The "LIGHT-TO-SPACE" and "LIGHTING-TYPE" values shown above are for illustrative purpose. Normally, the user would select these values based on the observed characteristics (or design) for the building considered.

The "LIGHTING-W/SQFT" value shown scales, the diversity factor to maximum observed value (W/ft^2) in the building for the period of Jan 1, 1998 - Dec 31, 1998.

The input file shown uses Weekends schedules for Holidays.

The Holidays shown in the input file are: New Year's Day, U.S. Independence Day, Thanksgiving, and Christmas. This assumes the user has selected the sub-comment "HOLIDAY = NO" in the "BUILDING LOCATION" comment of the "LOADS" input file.

2. BLAST Input Sample