

Lamp Data - General

Edition: 2.2 - (1999)

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These tables provide data for common (and not so common) lamps used for architectural, stage and studio lighting applications. Lamps are arranged first by TYPE then by WATTS. This data is intended to assist the lighting designer or technician, in specifying and comparing lamp products.

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STAGE AND STUDIO LAMPS

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SECTION 1: PAR LAMPS (PAR 16-20-30) INCAND. - 120 Volt

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	BEAM	FIELD	C.P.	LUMEN	MFR
50PAR20/CAP/NSP	20	50W	MED	NSP	-	2000	12	-	4,600	- S	*
50PAR20/CAP/NFL	20	50W	MED	NFL	-	2000	32	-	1,250	- S	*
50PAR30/CAP/NSP	30	50W	MED	NSP	-	2000	12	-	6,500	- S	*
50PAR30/CAP/NFL	30	50W	MED	NFL	-	2000	32	-	1,750	- S	*
55PAR16/CAP/NSP	16	55W	MED	SP	-	2000	12	-	5,000	- S	*
55PAR16/CAP/NFL	16	55W	MED	NFL	-	2000	30	-	1,300	- S	*
75PAR16/CAP/NSP	16	75W	MED	NSP	-	2000	12	-	7,500	- S	*
75PAR16/CAP/NFL	16	75W	MED	NFL	-	2000	30	-	2,000	- S	*

SECTION 2: PAR LAMPS (PAR 38-46-56-64) INCAND. - 120 Volt

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	BEAM	FIELD	C.P.	LUMEN	MFR
45PAR38/CAP/NSP	38	45W	M.SKT	NSP	3000K	2000	9	-	11,500	-	S *
45PAR38/CAP/SP	38	45W	M.SKT	SP	3000K	2000	15	-	4,500	-	S *
45PAR38/CAP/FL	38	45W	M.SKT	FL	3000K	2000	32	-	1,800	-	S *
45PAR38/CAP/WFL	38	45W	M.SKT	WFL	3000K	2000	55	-	1,200	-	S *
55PAR/SP/SS	38	55W	M.SKT	SP	-	3000	-	-	3,000	520	S *
55PAR/FL/SS	38	55W	M.SKT	FL	-	3000	-	-	1,200	520	S *
60PAR/SP/HIR	38	60W			-	2500	13	-	13,000		G *
60PAR/FL/HIR	38	60W			-	2500	32	-	3,200		G *
75PAR/SP	38	75W	M.SKT	SP	-	2000	14	27	4,500	765	G(S) *
75PAR/3SP	38	75W	MSP	SP	-	2000	14	27	4,500	765	G(S) *
75PAR/FL	38	75W	M.SKT	FL	-	2000	30	57	1,750	765	G(S) *
75PAR/3FL	38	75W	MSP	FL	-	2000	30	57	1,750	765	G(S) *
75PAR38/VWFL	38	75W	M.SKT	VWFL	-	2000	70	125	550	765	S *
75PAR38/2FL	38	75W	M.SKT	COOL	-	2000	32	61	1,850	900	G(S) *
90PAR38/CAP/NSP	38	90W	M.SKT	NSP	3000K	2000	9	-	22,500	-	S *
90PAR38/CAP/SP	38	90W	M.SKT	SP	3000K	2000	15	30	11,500	-	S *
90PAR38/CAP/FL	38	90W	M.SKT	FL	3000K	2000	30	54	4,000	-	S *
90PAR38/CAP/WFL	38	90W	M.SKT	WFL	3000K	2000	55	-	2,500	-	S *
100PAR/SP	38	100W	M.SKT	SP	-	2000	15	30	6,600	1200	S
100PAR/FL	38	100W	M.SKT	FL	-	2000	30	60	2,400	1200	S
100PAR/SP/HIR	30	100W			-	2500	13	-	25,000	-	G *
100PAR/FL/HIR	30	100W			-	2500	32	-	5,000	-	G *
120PAR/SP/SS	38	120W	M.SKT	SP	-	2000	14	30	12,000	1420	S
120PAR/FL/SS	38	120W	M.SKT	FL	-	2000	27	54	4,250	1420	S
150PAR38CAP/NSP	38	150W	M.SKT	NSP	3000K	3000	9	20	37,500	-	S *
150PAR38CAP/SP	38	150W	M.SKT	SP	3000K	3000	10	30	25,000	-	S *
150PAR38CAP/FL	38	150W	M.SKT	FL	3000K	3000	30	45	7,500	-	S *
150PAR/SP	38	150W	M.SKT	SP	-	2000	14	28	11,500	1740	G(S) *
150PAR/3SP	38	150W	MSP	SP	-	2000	14	28	11,500	1740	G(S) *
150PAR/FL	38	150W	M.SKT	FL	-	2000	31	60	4,000	1740	G(S) *
150PAR/3FL	38	150W	MSP	FL	-	2000	30	60	4,000	1740	S(G) *
150PAR38VWFL	38	150W	M.SKT	VWFL	-	2000	70	125	1,100	1740	S(G) *
150PAR38/2SP	38	150W	M.SKT	COOL	-	2000	17	30	12,500	2000	G(S) *
150PAR38/2FL	38	150W	M.SKT	COOL	-	2000	33	63	4,150	2000	G(S) *
200PAR46/NSP	46	200W	MSP	NSP	-	2000	8X12	19X23	31,000	2300	G *
200PAR46/3MFL	46	200W	MSP	MFL	-	2000	13X27	23X38	11,500	2300	G *
Q250PAR38SP	38	250W	M.SKT	SP	-	4000	10	24	28,000	3220	G *
Q250PAR38FL	38	250W	M.SKT	FL	-	4000	35	60	6,500	3220	G *
300PAR56/NSP	56	300W	MEP	NSP	-	2000	8X10	14X20	68,000	3840	G(S) *
300PAR56/MFL	56	300W	MEP	MFL	-	2000	11X23	19X34	24,000	3840	G(S) *
300PAR56/WFL	56	300W	MEP	WFL	-	2000	18X37	27X52	11,000	3840	G(S) *
300PAR56/2NSP	56	300W	EMEP	COOL	-	2000	8X11	14X22	78,000	3840	G *
300PAR56/2MFL	56	300W	EMEP	COOL	-	2000	10X21	17X30	32,000	3840	G(S) *
300PAR56/2WFL	56	300W	EMEP	COOL	-	2000	19X37	28X53	11,400	3840	G *
Q500PAR56NSP	56	500W	MEP	NSP	2950K	4000	8x13	15x32	96,000	8000	G(S) *
Q500PAR56MFL	56	500W	MEP	MFL	2950K	4000	10x26	20x42	43,000	8000	G(S) *
Q500PAR56WFL	56	500W	MEP	WFL	2950K	4000	20x44	34x66	19,000	8000	G(S) *

500PAR64/NSP	64	500W	EMEP	NSP	2800K	2000	7x12	14x19	110,000	6500	G(S) *
500PAR64/MFL	64	500W	EMEP	MFL	2800K	2000	11x23	19x35	37,000	6500	G(S) *
500PAR64/WFL	64	500W	EMEP	WFL	2800K	2000	27x42	32x55	13,000	6500	G(S) *

Q1000PAR64/NSP	64	1 KW	EMEP	NSP	2950K	4000	8x15	14x31	200,000	7600	G(S) * 1
Q1000PAR64/MFL	64	1 KW	EMEP	MFL	2950K	4000	12x28	22x45	80,000	11400	G(S) * 1
Q1000PAR64/WFL	64	1 KW	EMEP	WFL	2950K	4000	24x48	45x72	33,000	15400	G(S) * 1
Q1000PAR64/1	FFN	1 KW	EMEP	VNSP	3200K	800	6x12	10x24	400,000	11000	S(G)
Q1000PAR64/2	FFP	1 KW	EMEP	NSP	3200K	800	7x14	14x26	330,000	12000	S(G)
Q1000PAR64/5	FFR	1 KW	EMEP	MFL	3200K	800	12x28	21x44	125,000	14000	S(G)
Q1000PAR64/6	FFS	1 KW	EMEP	WFL	3200K	800	24x48	45x71	40,000	19000	S(G)
Q1000PAR64/3D	FGM	1 KW	EMEP	NSP	5200K	200	6x13	12X24	200,000	7000	G
Q1000PAR64/7D	FGN	1 KW	EMEP	MFL	5200K	200	11x27	20X43	70,000	8200	G

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SECTION 3: PAR LAMPS - Low Voltage
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NOMENCLATURE ANSI VOLT WATT BASE TYPE C.TEMP HOURS BEAM FIELD C.P. MFR.
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PAR 36 - 6 VOLT
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25PAR36	PAR36	5.5	25	ST	VNSP	3000K	1000	5.5X5	-	30,000	G
4515	PAR36	6.0	27	-	VNSP	-	250	5X5	-	44,000	G
H4515	PAR36	6.0	27	-	VNSP	-	250	5X5	-	52,000	G

PAR-36 12 VOLT
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25PAR36NSP	PAR36	12	25	-	NSP	-	2000	11X11	17X19	4,500	G
50PAR36NSP	PAR36	12	50	-	NSP	-	2000	10X9	17X20	9,200	G
50PAR36VNSP	PAR36	12	50	-	VNSP	-	2000	5X8	-	20,000	G
4405	PAR36	12	27	-	VNSP	-	250	6X5	-	40,000	G
4415	PAR36	12	32	-	VNSP	-	750	40X5	-	7,200	G
H7616	PAR36	12	34	-	VNSP	-	750	7X4	-	56,000	G
H7604	PAR36	12	45	-	VNSP	-	250	7X5	-	90,000	G
4509X	PAR36	12	88	-	NSP	-	70	12X6	-	84,000	G
4595	PAR36	12	88	-	NSP	-	840	14X6	-	46,000	G

PAR-36 24 VOLT
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4591	PAR36	24	80	-	NSP	-	100	12X6	-	54,000	G
4505	PAR36	24	40	-	NSP	-	1600	11X5	-	27,000	G
4594	PAR36	24	80	-	NSP	-	1200	13X7	-	42,000	G
4596	PAR36	24	200	-	NSP	-	100	11X12	-	90,000	G

PAR-46 6 VOLT
=====

25PAR46	PAR46	5.5	25	-	VNSP	-	1000	4.5X4.5	-	55,000	G
4535	PAR46	6.0	27	-	VNSP	-	250	5.5X4.0	-	76,000	G

PAR-46 12 VOLT
=====

4436	PAR46	12	32	-	NSP	-	750	10X4	-	48,000	G
4435	PAR46	12	27	-	VNSP	-	250	5X5	-	60,000	G
H7635	PAR46	12	45	-	VNSP	-	250	6.5X4	-	128,000	G

PAR-46 28 VOLT
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4553	PAR46	28	250W	ST	ACL	-	25	-	11x12	300,000	G
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PAR-56 12 VOLT
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4545	PAR56	12	100	-	VNSP	-	100	9X5	-	225,000	G
4543	PAR56	12	94	-	VNSP	-	85	9X5	-	220,000	G
120PAR56VNSP	PAR56	12	120	-	VNSP	-	2000	7.5X7	-	62,000	G
240PAR56VNSP	PAR56	12	240	-	VNSP	-	2000	9.5X6.5	-	110,000	G

 PAR-56 24 VOLT
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4541	PAR56	24	360	-	SP	-	100	15X11	-	280,000	G
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 PAR-64 6 VOLT
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120PAR	PAR64	6.0	120W	ST	VNSP	-	3000	5x9		180,000	G
120PAR/1	PAR64	6.0	120W	ST	VNSP	-	1000	5x9		220,000	x
120PAR64VNSP	PAR64	6.0	120W	ST	VNSP	-	2000	4.5X7		210,000	x

 PAR-64 24 VOLT
 =====

4552	PAR64	28	250W	ST	ACL	-	25	7x8	-	300,000	G
Q4559	PAR64	24	480W		NSP	-	400	12X8		360,000	G
Q4559X	PAR64	24	480W		NSP	-	400	11X7.5		460,000	G

 NOTES FOR PAR LAMPS:

LUMENS : Lumens shown are Total Lumens for lamps to 1000 watts and Initial Beam Lumens for lamps of 1000 watts. Initial Beam Lumens are measured within the field angle.

BEAM SPREAD: For asymmetric beam, the vertical spread is listed before the horizontal angle.

C.P. : Candle power: AVERAGE MAX. initial c.p. within central 5 degree cone for spot lamps, 10 degree cone for flood lamps.

 SECTION 4: R LAMPS
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NOMENCLATURE	ANSI	VOLT	WATT	BASE	NOTES	HOURS	BEAM	FIELD	CANDLEPOWER
30R20	R20	120	30W	MED	FL 205 L.	2000	-	85	290 *1
50R20	R20	120	50W	MED	FL 435 L.	2000	-	90	550 *1
75R30/SP	R30	120	75W	MED	FL 850 L.	2000	20	50	1,730 *1
75R30/FL	R30	120	75W	MED	FL 850 L.	2000	50	130	430 *1
150R/SP	R40	120	150W	MED	FL 1825 L.	2000	18	37	7,000 *1
150W/FL (DWC)	R40	120	150W	MED	FL 1825 L.	2000	75	110	1,200 *1
300R/SP	R40	120	300W	MED	FL -	2000	20	35	13,500 *1
300R/FL	R40	120	300W	MED	FL -	2000	80	115	2,200 *1

 NOTES FOR R LAMPS:

LUMENS : Lumens shown are Total Lumens for lamps to 1000 watts and Initial Beam Lumens for lamps of 1000 watts. Initial Beam Lumens are measured within the field angle.

C.P. : Candle power: AVERAGE MAX. initial c.p. within central 5 degree cone for spot lamps, 10 degree cone for flood lamps.

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 SECTION 5: MR16 LAMPS - 12 volt (and 24 volt)
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NORTH AMERICAN (see also EUROPEAN)

NOMENCLATURE	ANSI	VOLT	WATT	BASE	NOTES	HOURS	BEAM	FIELD	CANDLEPOWER	
Q20MR16/VNSP	EZX	12	20W	MR16	VNSP 2925 K.	3000	6x 6	-	9,000 G	
Q20MR16/NSP	ESX	12	20W	MR16	NSP 2925 K.	3000	13x10	15X15	3,300 G,S	
Q20MR16/FL	BAB	12	20W	MR16	FL 2925 K.	3000	36x27	41X42	460 G,S	
Q42MR16/VNSP	EZY	12	42W	MR16	VNSP 3050 K.	3000	8x 8	-	12,000 G	
Q42MR16/NFL	EYS	12	42W	MR16	NFL 3050 K.	3000	20x20	-	2,800 G,S	
Q42MR16/SP	EYR	12	42W	MR16	spot	2500	11x11	-	7,077 S	
Q42MR16/WFL	EYP	12	42W	MR16	flood	2500	36x36	-	991 S	
Q50MR16/NSP	EXT	12	50W	MR16	NSP 3050 K.	3000	13x11	15X15	9,150 G,S	
Q50MR16/NFL	EXZ	12	50W	MR16	NFL 3050 K.	3000	27x22	34X37	3,000 G,S	
Q50MR16//FL	EXN	12	50W	MR16	FL 3050 K.	3000	39x37	40X30	1,500 G,S	
-	EPZ	12	50W	MR16	VNS	-	2500	15X15	-	-,--- ?
-	ENL	12	50W	MR16	-	3050 K.	3000	31x30	-	2,200 ?
Q75MR16/NSP	EYF	12	75W	MR16	NSP 3050 K.	3500	15x14	16X16	11,500 G	
THE 338 as:	EYF	+24	75W	50mm	SP	-	2500	12	-	17,000 T*
Q75MR16/FL	EYC	12	75W	MR16	FL 3050 K.	3500	38x40	46X45	2,000 G,S	
THE 339 as:	EYC	+24	75W	50mm	WF	-	2500	38	-	2,300 T*
other mr16s reported by Altman(94)	ENZ	30	50	MR16	-	24	-	-	G	
	EBL	30	80	MR16	-	18	-	-	G	
	DDS	21	80	MR16	-	500	-	-	G	

* The 24v THE was developed by Larry Nelson for 10x24 lamps in series.
 (European market, 240V.) Ref. Aug/94. (Manfr: Thorn England).

EUROPEAN - MR 16

NOMENCLATURE	ANSI	VOLT	WATT	TYPE	NOTES	HOURS	BEAM	FIELD	CANDLEPOWER
13717	PHILIPS	-	12	20W GU5.3	50MM 3200 K.	3000	8	-	9,300 P
13668	PHILIPS	-	12	20W GU5.3	50MM 3200 K.	3000	12	-	4,000 P
13672	PHILIPS	-	12	20W GU5.3	50MM 3200 K.	3000	24	-	1,600 P
M94	THORN	-	12	20W	50MM	-	24	-	- T
13676	PHILIPS	-	12	20W GU5.3	50MM 3200 K.	3000	38	-	790 P
M69	THORN	-	12	20W	50MM	-	36	-	- T
13720	PHILIPS	-	12	35W GU5.3	50MM 3200 K.	3000	8	-	16,000 P
13669	PHILIPS	-	12	35W GU5.3	50MM 3200 K.	3000	12	-	7,700 P
M70	THORN	-	12	35W	50MM	-	18	-	- T
13673	PHILIPS	-	12	35W GU5.3	50MM 3200 K.	3000	24	-	3,000 P
13677	PHILIPS	-	12	35W GU5.3	50MM 3200 K.	3000	38	-	1,450 P
M81	THORN	-	12	35W	50MM	-	38	-	- T
13737	PHILIPS	-	12	50W GU5.3	50MM 3200 K.	3000	8	-	19,050 P
13640	PHILIPS	-	12	50W GU5.3	50MM 3200 K.	3000	12	-	11,000 PQ-
M50	THORN	-	12	50W	50MM	-	21	-	- T
M56*	THORN	-	12	50W	50MM	-	21	-	- T
13674	PHILIPS	-	12	50W GU5.3	50MM 3200 K.	3000	24	-	4,200 P
13678	PHILIPS	-	12	50W GU5.3	50MM 3200 K.	3000	38	-	2,250 P
M58	THORN	-	12	50W	50MM	-	38	-	- T
M80	THORN	-	12	50W	50MM	-	60	-	- T

13764	PHILIPS	-	12	65W GU5.3	50MM	3200 K.	3000	8	-	20,000	P
13769	PHILIPS	-	12	65W GU5.3	50MM	3200 K.	3000	12	-	15,000	P
13784	PHILIPS	-	12	65W GU5.3	50MM	3200 K.	3000	24	-	5,000	P
13787	PHILIPS	-	12	65W GU5.3	50MM	3200 K.	3000	38	-	2,700	P

M82	THORN	-	12	75W	-	50MM	-	-	18	-	T
M61	THORN	-	12	75W	-	50MM	-	-	38	-	T
M98	THORN	-	12	75W	-	50MM	-	-	60	-	T

NOTE 1: PHILIPS ARE: LAMPARAS HALOGEBAS DICROICAS - MASTER LINE/PHILIPS/90
 NOTE 2: ALL WITH PROTECTIVE GLASS
 NOTE 3: ALL WITH GU5.3 BASE (2 PIN)
 NOTE 4: CP IS MAXIMUM CENTRAL INTENSITY (REF: PHILIPS SPAIN/90)
 NOTE 5: THORN: IN HIGH LEVEL DISPLAY LIGHTING APPLICATIONS, LIMIT
 EXPOSURE to: CONT.4000 LUX, 6HR/5500, 4HR/8000, 2HR/16000, 1HR/320

TABLE 1 MEDIUM PREFOCUS BASE 120 volt

Fixtures: Many common Ellipsoidal Reflector spotlights. L.C.L: 3.50"

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	FIL.	MOLin.	INT	LUMEN	MFR
EGE-Q500CL/P	T4	500	MPF	CL	2850K	2000	CC8	6.0	10,450	- G *	
EGC-Q500/5CL/P	T4	500	MPF	CL	3150K	500	CC8	6.0	12,700	- G *	
EGG-Q750CL/P	T6	750	MPF	CL	3000K	2000	CC8	6.0	15,750	- G *	
EGF-Q750/4CLP	T6	750	MPF	CL	3200K	500	CC8	6.0	20,400	- G *	
EGJ-Q1000/4/CLP	T6	1000	MPF	CL	3200K	500	CC8	6.0	27,500	- G *	
EGK-Q1000/4P	T6	1000	MPF	FR	3200K	500	CC8	6.0	26,500	- G *	
EGM-Q1000CL/P	T6	1000	MPF	CL	3000K	2000	CC8	6.0	21,500	- G *	
DEB-500T12/8	T12	500	MPF	CL	2850K	800	C13D	6.125	9,000	- G *	
DNS-500T12/9	T12	500	MPF	CL	2950K	200	C13D	6.125	11,000	- G *	
DNT-750T12/9	T12	750	MPF	CL	3000K	200	C13D	6.125	17,000	- G *	
DNV-1MT12/2	T12	1000	MPF	CL	3050K	200	C13D	6.125	25,000	- G *	

TABLE 2 MEDIUM PREFOCUS BASE 120 volt

Fixtures: Many common Fresnel spotlights. L.C.L: 2-3/16"

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	FIL.	MOLin.	INT	LUMEN	MFR
250T20/47	T20	250	MPF	CL	2900K	200	C13	5.75	4,600	- G *	
DLC	T14	250	MPF	CL	3050K	50	C13	5.75	5,500	- G *	
BTL-Q500T6/CL/P	T6	500	MPF	CL	3050K	500	C13D	4.50	11,000	- G *	
BTM-Q500T6/4CL2P	6	500	MPF	CL	3200K	100	C13D	4.50	13,000	- G *	
DNW-Q500T20/64	T20	500	MPF	CL	2900K	500	C13	5.75	10,000	- G *	
DMX-500T20P	T20	500	MPF	CL	3200K	50	C13	5.75	13,200	- G *	
500T20/48	T20	500	MPF	CL	3000K	200	C13	5.75	11,000	- G *	
BTN-Q750T7/CL2P	T7	750	MPF	CL	3050K	500	C13D	4.50	17,600	- G *	
BTP-Q750T7/4CL2P	7	750	MPF	CL	3200K	200	C13D	4.50	21,000	- G *	
750T20/SP	T20	750	MPF	CL	3000K	200	C13	5.75	17,000	- G *	
BFL/BFK	T20	750	MPF	CL	3050K	200	C13	5.75	13,500	- G *	
DPJ-750T20P	T20	750	MPF	CL	3250K	25	C13D	5.75	19,000	- G *	

BTR-Q1000T7/4CL/2P	1000	MPF	CL	3200K	250	C13D	4.50	28,500	- G *
1M/T20/SP	T20	1000	MPF	CL	3050K	200	C13D	5.75	23,400 - G *
DRC	T20	1000	MPF	CL	3250K	50	C13	5.75	30,000 - G *
DRS	T20	1000	MPF	CL	3325K	25	C13D	5.75	28,500 - G *
DRB	T20	1000	MPF	CL	3350K	25	C13	5.75	32,000 - G *
DWK (230 volt)	T20	1000	MPF	CL	3100K	50	CC13	5.75	23,500 - G *

TABLE 3 MEDIUM 2 PIN BASE 120 & 240 volt

Fixtures: Many common Ellipsoidal Reflector spotlights. L.C.L.: 2-3/8"

Base: (G9.5), (TP22), (M2P) all identical

115-120 VOLT:

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	FIL.	MOLin.	NOM LUMEN	MFR
HX400	-	400W	G9.5	CL	3200K	300	-	-	10,000	-
HX401	-	400W	G9.5	CL	3050K	2000	-	-	8,500	-
FLK (Q575T6)115	T6	575	G9.5	CL	3200K	300	-	-	16,500	- G
HX-600 (115V)	T6	575	G9.5	CL	3200K	300	CC8	-	16,500	- T
HX-601 (115V)	-	575	G9.5	CL	33050	2000	-	-	12,800	- T
HX-602 (115V)	-	575	G9.5	CL	3250K	250	-	-	16,500	- T
GLC	-	575	-	-	3200K	400	-	-	-	-
CLA	-	575	-	-	3100K	1500	-	-	-	-

EHB-500Q/5CL	T4	500W	M2P	CL	3200K	200	CC8	3.75	13,000	- S
EHC-500Q/5CL]	T4	500W	M2P	CL	3200K	200	CC8	3.75	13,000	- S
EHD-500Q/1CL	T4	500W	M2P	CL	3000K	2000	CC8	3.75	10,600	- S
EHF-750Q/4CL	T6	750W	M2P	CL	3200K	300	CC8	4.00	20,400	- S
EHG-750Q/CL	T6	750W	M2P	CL	3000K	2000	CC8	4.00	15,400	- S
FEL-1000Q/4CL	T6	1000W	M2P	CL	3200K	300	CC8	4.00	27,500	- S
FCV-1000Q/4	T6	1000W	M2P	FR	3200K	300	CC8	4.00	26,500	- S
JVC120-1200WC	T6	1200W	M2P	CL	3200K	580	CC8	4.00	32,000	- U

220-240 VOLT:

HX600HV220		575W	G.95	-	3200	300	-	-	14,500	-
HX600HV230		575W	G.95	-	3200	300	-	-	14,500	-
HX600HV240		575W	G.95	-	3200	300	-	-	14,500	-
FRK (220)		650W	G.95	CL	3100K	300	-	-	15,000	-
FEP-1000Q4CL/HV	T6	1000W	M2P	CL	3200K	150	2CC8	4.00	25,000	- S

NOTES:

The HX-600 is a 600W replacement for the FEL. Although it provides fewer lumens, it will provide more usable light out of most modern fixtures. Lamp developed by L.E. Nelson Corp. Las Vegas. Ref. Aug./94. data from: Larry Nelson.

TABLE 4 HPL - 2 PIN BASE 64-240 volt

Fixtures: E.T.C. Ellipsoidal Reflector spotlights. (L.C.L.: 60.3 mm)

NORTH AMERICA: (115-120 VOLT)

NOMENCLATURE	BULB	WATT	BASE	TYPE	C.TEMP	HOURS	FIL.	MOLin.	NOM LUMEN	MFR
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HPL-375/115V	-	375	-	-	3200K	300	-	104mm	10,540	- U
HPL-375/115X	-	375	-	-	3000K	2000	-	104mm	8,060	- U
HPL-575/115V	-	575	-	-	3200K	300	-	104mm	16,520	- U/O
HPL-575/115X	-	575	-	-	3000K	2000	-	104mm	12,360	- U/O
HPL-575/120V *	-	575	-	-	3200K	300	-	104mm	16,460	- U/O
HPL-550/77V	-	550	-	-	3200K	300	-	104mm	16,170	- U/O
HPL-550/77X	-	550	-	-	3000K	2000	-	104mm	12,160	- U/O
HPL-750/77V	-	750	-	-	3200K	300	-	104mm	22,950	- U
HPL-750/115V	-	750	-	-	3200K	300	-	104mm	21,900	- U/O

JAPAN:

HPL-300/100X	-	300	-	-	3000K	1000	-	104mm	6,300	- U
HPL-500/100X	-	500	-	-	3000K	1000	-	104mm	10,750	- U
HPL-500/100V	-	500	-	-	3100K	500	-	104mm	12,000	- U
HPL-550/64V	-	550	-	-	3200K	300	-	104mm	16,340	- U
HPL-575/95V	-	575	-	-	3250K	300	-	104mm	16,730	- O
HPL-575/100V	-	575	-	-	3250K	300	-	104mm	16,520	- U
HPL-650/100V	-	650	-	-	3250K	300	-	104mm	17,550	- U
HPL-750/100V	-	750	-	-	3250K	150	-	104mm	20,250	- U
HPL-750/77V	-	750	-	-	3250K	300	-	104mm	22,950	- U

INTERNATIONAL: (220-240 VOLT)

HPL-375/230X	-	375	-	-	3050K	1000	-	104mm	11,780	-
HPL-375/240X	-	375	-	-	3050K	1000	-	104mm	11,780	-
HPL-575/220V	-	575	-	-	3175K	400	-	104mm	15,000	- U
HPL-575/230V	-	575	-	-	3200K	300	-	104mm	14,900	-
HPL-575/240V	-	575	-	-	3175K	400	-	104mm	15,000	- U
HPL-575/230X	-	575	-	-	3050K	1500	-	104mm	11,780	-
HPL-575/240X	-	575	-	-	3050K	1500	-	104mm	11,780	-

*= 575w lamp in common usage in North America.

NOTES

MFR : G=General Electric, S=Sylvania, U=Ushio, P=Philips, T=Thorn
1st. initial, indicates actual Mfr. for data listed.
2nd. initial(), indicates Mfr. with close equal.

* : Denotes data re-confirmed, 1999

N* : Denotes data not confirmed. Data has been determined from
mfr. cp curve. Actual figure has (or can not) be confirmed
by any manufacturer.

END OF FILE (05/99)