

REPORT# 81263-1
DATE OF TEST: 5-6-98

PHILIPS CONSUMER ELECTRONICS COMPANY
EMI LAB
P.O. 14810
KNOXVILLE, TN 37914-1810

RADIATED RF LEVEL

MANUFACTURER: PHILIPS LIGHTING
MODEL: HFL-120-2/40 RS
SUPPORT EQUIPMENT:

FREQUENCY (Mhz)	DbuV/M <u>HORIZ.</u>	DbuV/M <u>VERT.</u>	DbuV/M <u>LIMIT</u>	DbuV/M <u>DELTA</u>
--------------------	-------------------------	------------------------	------------------------	------------------------

THE SPECTRUM WAS SCANNED FROM 30 -1000 MHz AND NO SIGNIFICANT EMISSIONS WERE FOUND

QP= QUASI PEAK READING AT THAT FREQUENCY

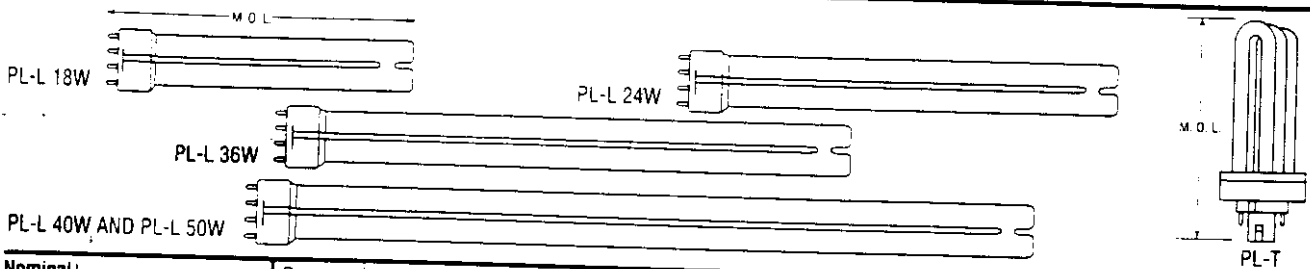
DELTA REFERS TO THE DB DIFFERENCE BETWEEN THE HIGHER OF THE HORIZONTAL AND THE VERTICAL READINGS AND THE DB LIMIT AT THAT FREQUENCY.

ABOVE READINGS ARE PEAK READINGS WITH CABLE AND ANTENNA FACTORS INCLUDED EXCEPT AS NOTED QUASI-PEAK READINGS.

TEST DISTANCE BETWEEN DEVICE UNDER TEST AND RECEIVING ANTENNA WAS 10 METERS.

NOTE: AN '*' INDICATES THAT THE DEVICE UNDER TEST EXCEEDS THE FCC CLASS B LIMIT AT THAT FREQUENCY.

Compact Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	Generic Designation	Pkg. Qty.	Description	M.O.L. (In.)	Avg. Life. Hrs. (202)	Approx. Initial(203) Lumens(204)	Design Lumens (208)	CRI
--------------------	------	------	------------------------	---------------	---------------------	-----------	-------------	--------------	-----------------------	----------------------------------	---------------------	-----

PL Long Fluorescent Lamps

High color rendering, high efficacy lamps feature 4 pin base for use with preheat, rapid start, electronic and dimming circuits.

18	PL-L	2G11	SSS	34500-9	PL-L 18W/30	FT18W/2G11/30	25	3000K	8 ¹ / ₈	12,000	1250	1125	82
				34501-7	PL-L 18W/41	FT18W/2G11/41	25	4100K	8 ¹ / ₈	12,000	1250	1125	82
24	PL-L	2G11	SSS	34505-8	PL-L 24W/30	FT24W/2G11/30	25	3000K	12 ¹ / ₈	12,000	1800	1620	82
				34508-2	PL-L 24W/41	FT24W/2G11/41	25	4100K	12 ¹ / ₈	12,000	1800	1620	82
36	PL-L	2G11	SSS	34511-6	PL-L 36W/30	FT36W/2G11/30	25	3000K	16 ¹ / ₈	12,000	2900	2610	82
				34842-3	PL-L 36W/35	FT36W/2G11/35	25	3500K	16 ¹ / ₈	12,000	2900	2610	82
				34513-2	PL-L 36W/41	FT36W/2G11/41	25	4100K	16 ¹ / ₈	12,000	2900	2610	82
38	PL-L	2G11	SSS	30042-6	PL-L 38W/RS	FT40W/2G11/RS/30	25	3000K	22 ¹ / ₈	20,000	3300	2970	82
				30043-4	PL-L 38W/RS	FT40W/2G11/RS/35	25	3500K	22 ¹ / ₈	20,000	3300	2970	82
				30044-2	PL-L 38W/RS	FT40W/2G11/RS/41	25	4100K	22 ¹ / ₈	20,000	3300	2970	82
50	PL-L	2G11	SSS	34747-6	PL-L 50W/30/RS	FT50W/2G11/RS/30	25	3000K	22 ¹ / ₈	14,000	4300	3870	82
				34753-4	PL-L 50W/35/RS	FT50W/2G11/RS/35	25	3500K	22 ¹ / ₈	14,000	4300	3870	82

PL Triple 4 pin Fluorescent Lamps

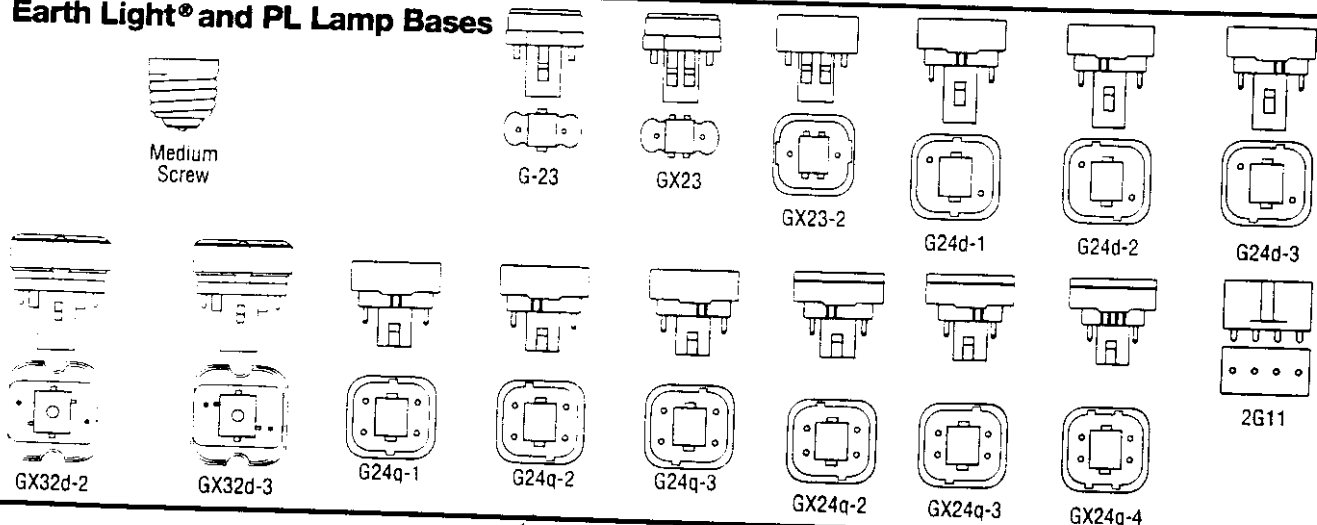
High color rendering, high efficacy lamps feature 4 pin base for use with preheat, rapid start, electronic and dimming circuits.

18	PL-T	GX24q-2	SSS	22224-0	PL-T 18W/30/4P	FM18W/GX24q/30	24	3000K	4 ⁵ / ₈	10,000	1200	960	82
				22231-5	PL-T 18W/35/4P	FM18W/GX24q/35	24	3500K	4 ⁵ / ₈	10,000	1200	960	82
				22233-7	PL-T 18W/41/4P	FM18W/GX24q/41	24	4100K	4 ⁵ / ₈	10,000	1200	960	82
26	PL-T	GX24q-3	SSS	34741-9	PL-T 26W/30/4P	FM26W/GX24q/30	24	3000K	4 ⁷ / ₈	10,000	1800	1440	82
				34742-7	PL-T 26W/35/4P	FM26W/GX24q/35	24	3500K	4 ⁷ / ₈	10,000	1800	1440	82
				35366-4	PL-T 26W/41/4P	FM26W/GX24q/41	24	4100K	4 ⁷ / ₈	10,000	1800	1440	82
32	PL-T	GX24q-3	SSS	34743-5	PL-T 32W/30/4P	FM32W/GX24q/30	24	3000K	5 ¹ / ₂	10,000	2400	1920	82
				34744-3	PL-T 32W/35/4P	FM32W/GX24q/35	24	3500K	5 ¹ / ₂	10,000	2400	1920	82
				35367-2	PL-T 32W/41/4P	FM32W/GX24q/41	24	4100K	5 ¹ / ₂	10,000	2400	1920	82
42	PL-T	GX24q-4	SSS	22125-9	PL-T 42W/30/4P	FM42W/GX24q/30	24	3000K	6 ¹ / ₈	10,000	3200	2560	82
				22126-7	PL-T 42W/35/4P	FM42W/GX24q/35	24	3500K	6 ¹ / ₈	10,000	3200	2560	82
				22134-1	PL-T 42W/41/4P	FM42W/GX24q/41	24	4100K	6 ¹ / ₈	10,000	3200	2560	82

SSS — Energy Saving Product

High Color Rendering Lamps

Earth Light® and PL Lamp Bases



SUMMARY OF RESULTS
(ANSI C63.4 - 1992)

PCEC REPORT #81263-1
FCC ID: EWOHFL120240RS

The measurement data (Report #81263-1) indicates the Philips Lighting model HFL-120-2/40 **MEETS** the requirements as set forth by the FCC for Class B RF Lighting Devices with the following modifications.

MODIFICATIONS:

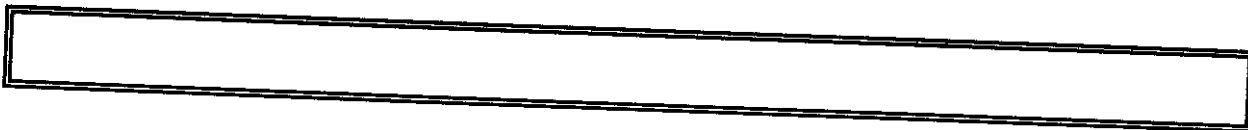
NONE

Mass production of final instrument systems utilizing the exact electrical/ mechanical components, lead dress, and RF ground paths as tested by PCEC will not likely cause harmful interference to any radio communication, radio navigation or safety services. Any deviation in design from the system tested by our facility will require further verification of FCC Compliance by PCEC.

PHILIPS CONSUMER ELECTRONICS COMPANY


Fred A. Fisher

Manager Regulatory FCC/DOC



TEST PROCEDURE (ANSI C63.4 - 1992)

PCEC REPORT #81263-1

FCC ID: EWOHFL120240RS

ACRONYMS

(E.M.I.) Electromagnetic Interference
(E.U.T.) Equipment Under Test
(L.I.S.N.) Line Impedance Stabilizing Network

PROCEDURE-CONDUCTED LINE EMISSIONS

The EUT was placed in an RF Shield room on a wooden table 80 cm above the (2) 50 ohm/250 microhenry LISN's. The AC power leads were connected to two (2) 50 ohm/250 microhenry L.I.S.N.s. The system was energized and placed into its normal operating mode. The 50 ohm output of the L.I.S.N., was connected to the HP8568B RF Spectrum Analyzer. The spectrum was observed from 450 KHz to 30 MHz to identify the frequency of the emission that had the highest amplitude relative to the limit. For each mode of operation and for each current carrying conductor, cable and/or wire manipulation was performed while observing the spectrum analyzer. For this series of tests the emission that had the highest amplitude relative to the limit was recorded.

Based on the preliminary tests, the EUT, and the cable and/or wire configuration and mode of operation which produced the highest emission relative to the limit was selected for the final AC powerline conducted emissions test. The final test on all current carrying conductors of the power cords that comprise the EUT was performed without variation of the configuration determined during the preliminary tests.

The X-Y plots of EMI generated by the E.U.T. were taken. The 6 highest readings from 450 KHz - 30 MHz for each side of the line are recorded. Unless otherwise specified, all Conducted Emissions are recorded as "PEAK" spectrum analyzer readings.

PROCEDURE-SPURIOUS RADIATION

The EUT was placed on a wooden table 80 cm above the floor of an RF screen cage. A receiving Bicon antenna was placed 1 meter away from the EUT on a wooden tri-pod 1 meter above the floor of the RF screen cage. The receiving antenna was connected to the 50 Ω input of the HP8568B spectrum analyzer. The EUT was powered by a 120 VAC supply, and was configured into it's normal operational mode.

TEST PROCEDURES CONT'D

The 30 to 40 MHz band was observed on the spectrum analyzer while the EUT power and control leads were adjusted to maximize emissions. The peak frequencies for this band were recorded. This search for emissions continued from 40 MHz up to the upper frequency required per FCC 15.33 (b) (1). Upon completion of the pre-scan, the EUT was placed on a wooden table 80 cm above a rotatable wooden turntable mounted level with the metal ground plane of the 3 meter test site.

The EUT was booted up into its normal operational mode. The worst case cable configuration determined by the pre-scan was duplicated and re-maximized at the worst case frequency. Based on this configuration all frequencies located during the 1 meter pre-scan were measured at the 3 meter test distance. The receiving antennas were varied in height from 1 to 4 meters and the remote turntable was rotated 360° to find the maximum emissions. This test was performed for all modes of operation.

For all measured frequencies above 999MHz the Conical Log Spiral antenna and/or the Double Ridged Guide Antenna was placed 3-meters away from the system on a 4-meter fiberglass mast. The receiving antenna was connected to an HP8566B spectrum analyzer via 60 ft. of 50ohm Heliax (wave guide) cable.

All significant emissions are reported on the attached data report. To verify that the E.M.I. emissions measured were generated by the E.U.T., the system power was interrupted at peak reading while observing the Spectrum Analyzer. Unless otherwise specified, all Radiated Emissions are recorded as "PEAK" spectrum analyzer readings. The Radiated Field Strength was calculated as follows: Maximum Emission Received (dB) + Antenna Factor (dB) + Cable Loss (dB) = Field Strength dBuv/Meter.