MARKET TRANSFORMATION PROGRAMME
Supporting UK Government policy on sustainable products

2008/2009 Energy Label Market Picture Testing – **Household Electric Lamps**

Contents

Executive Summary

This summary report outlines the results of energy efficiency label tests carried out on a selection of household lamps for Defra's Sustainable Consumption and Production (SCP) Programme through the Market Transformation Programme (MTP).

Lamps products for testing were selected from ranges of lamps available on the market and purchased over the Internet and retails.

All tests were carried out between December 2008 and March 2009 in a UKAS accredited test laboratory.

263 sets of lamps were tested consisting of 5 samples in each set, totalling 1,315 lamps. These were distributed amongst the types of household lamps as follows

- 113 Compact Fluorescents (CFLs) sets
- 89 Tungsten Filament sets
- 61 Tungsten Halogen sets

Of the 263 lamp sets assessed, 166 sets (63%) achieved the declared Energy Efficiency Classification and the rated values for luminous flux output and input; 15 of these sets (6%) achieved an Energy Efficiency Classification higher than the declared class.

85 sets (32%) did not achieve the declared Energy Efficiency Classification or the rated values for luminous flux and wattage within the tolerances required by the measurement standard BS EN 50285:1999.

12 sets of one Brand of Halogen lamps (4.5%) were supplied without labels so it was not possible to compare results with any declarations. Details have been passed to Trading Standards Officers and the National Measurement Office to follow up. Measurements of Luminous flux and input wattage were made and the results have been included in the statistics of our findings.

Compact Fluorescent Lamps (CFLs)

- 28 out of 113 sets of CFLs tested (25%) did not perform in accordance with one or more of the declarations on their labels.
- 9 out of the 113 sets tested (8%) did not achieve the energy efficiency class declared on the label. Of these 3 sets had no energy efficiency class declared on the label. .
- 23 out of 113 sets tested (20%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.
- 5 out of the 113 sets tested (4%) did not achieve their input wattage rating declarations due to their measured input wattages being above the declared level by more than the amount allowed by the measurement tolerances in the standard.

Tungsten Filament Lamps

- 38 out of 89 sets of tungsten filament lamps tested (43%) did not perform in accordance with one or more of the declarations on their labels.
- 17 out of the 89 sets tested (19%) did not achieve the energy efficiency class declared on the label.
- 28 sets of the 89 sets tested (31%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.
- 11 sets of the 89 sets tested (12%) did not achieve their input wattage rating declarations due to their measured input wattages being above the declared level by more than the amount allowed by the measurement tolerances in the standard. In addition, 1 of these sets had no energy efficiency class declared on the label.

Tungsten Halogen Lamps

- Of 61 sets of tungsten halogen lamps tested, 12 sets of one Brand (20%) were supplied without labels so it was not possible to verify any declarations.
- 19 out of 61 sets of tungsten halogen lamps tested (31%) did not perform in accordance with one or more of the declarations on their labels.
- 15 out of the 61 sets tested (25%) did not achieve the energy efficiency class declared on the label.
- 17 out of 61 sets of tungsten halogen lamps tested (28%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.

1. Selection and Purchase of Test Samples

This testing programme was initially based on testing five samples each of 40 Tungsten filament, 40 Tungsten Halogen and 60 compact fluorescents (CFLs) with integrated ballast models, representing 700 lamps. These were spread equally between the top four manufacturers, Philips, GE, Osram and SLI (Sylvania) who represent 95% of the market based on 2006 data. (This position is unlikely to have changed significantly).

CFLs without integrated ballasts and linear halogen lamps were not considered significant in terms of numbers sold for domestic use and were not included in the initial targeted types although some linear halogen types were included in the final programme.

Subsequently the number of test samples was doubled in the same ratio of types. Although this could have been done easily by doubling the number of samples of each model selected to 10, it was considered that this would add little to an understanding of the performance level in the marketplace, rather an indication of the production Tolerances in a model. It was decided to double the number of models in each type to 80 Tungsten filament, 80 Tungsten halogen and 120 CFLs and spread this across a much wider range of manufacturers and brands, including specialist suppliers and own brand suppliers such as the supermarkets and DIY outlets.

The models chosen from each brand were selected from on-line catalogues with the aim of representing the range of models offered within each type. Also a survey was carried out looking at availability of the branded and own brand models available from the major supermarkets and DIY outlets. Within each model, a range of wattages and styles were chosen with the emphasis on 100W, 60W and 40W in the tungsten filament types, equivalent wattages in the CFL types and higher wattages in the halogen as this was felt to most represent current usage. On-line purchasing sources were identified and added to the product list.

Tungsten filament lamps were readily available both on-line and at the outlets, including branded and own brand, as were CFLs, marketed as energy savers or “eco” lamps. Halogen lamps were more difficult to find when moving away from the top four and specialists, with almost no own brands other than reflectors and linear types. It was not possible within the timescales required to identify a further 40 halogen models so the numbers were made up by increasing the tungsten filament models. The final number of samples tested was 1315, made up of 5 samples each of 89 tungsten

filament, 61 tungsten halogen and 113 CFL models. Of these 700 were spread evenly over the top 4 manufacturers.

1.1Sampling Plan

For the purposes of compliance with the labelling requirements of the Energy Information (Lamps) Regulations 1999 transposing Commission Directive 98/11/EC, the specified measurement standard EN 50285:1999 requires 20 samples of the lamp model to be tested. If the average of these 20 results show the model to be achieving its declared performance, then the model is considered compliant. The Defra testing however, was carried out to gain a market picture of the current status of energy labelling, not for the purposes of legal enforcement, so only 5 samples of each lamp model was measured. If the average of these 5 measurements fell outside the tolerances allowed by the standard, then the model was considered not to have achieved the performance declared on the energy label for the purpose of this market picture testing exercise.

In this event, manufacturers were offered the opportunity to carry out testing on up to 20 further samples of the lamp model at their own cost and if considered valid and appropriate these results were to be published alongside the Defra results. These samples were to be purchased from a retail outlet and tested at an accredited laboratory. If the average measurements of the performance parameters from 20 such samples are within the allowed tolerances then, contrary to the Defra results, the model is considered to have achieved the performance declared on the energy label for the purpose of this market picture testing exercise (See Section 3). Average measurements of less than 20 samples will not be considered to show that the Defra results may be discounted.

2. Selection of Test Laboratory

2.1 Defining the Measurement Standards to be used

The testing of appliances to determine and verify energy label parameters for household electric lamps is governed by Commission Directive 98/11/EC implementing Council Directive 92/75/EEC as transposed into UK law by the Energy Information (Lamps) Regulations 1999 SI No 1517. Testing to determine energy label parameters in the UK is carried out in accordance with the UK regulations and to measure the parameters, the regulations require the use of harmonized standards, which are published in the Official Journal of the European Communities for this purpose,

The standard currently referenced in a Commission Communication of January 2001 and published in Journal entry 2002/C 49/05 is EN 50285:1999.

On this basis, tests were carried out according to the following standards:

- BS EN 50285:1999: Published reference in Official Journal of the European Communities under Commission Communication (2002/C 49/05) (Used for Tolerance Limits)

The following standards referenced in BS EN 50285:1999, were used for measurement purposes

- BS EN 60064: 1995 + A4: 2007 Tungsten Filament for domestic and similar general lighting purposes
- BS EN 60357:2003 Tungsten Halogen (Non-vehicle)
- BS EN 60969: 1993 Self-ballasted lamps for general lighting purposes
- CIE 84:1989 “The measurement of luminous flux” Section 6, Measurement with an integrating sphere

2.2 The Tender Specifications and Selection Criteria

It is essential that laboratories selected for this testing programme should be able to demonstrate the highest possible level of confidence in the validity of their results. It was decided that the best way of achieving this was to seek laboratories within the EU that were accredited by their national accreditation body against the test and calibration laboratory competence and management system standard ISO 17025:2005 and who had the required energy labelling performance test standards listed on their accreditation schedule. This would mean that the laboratory had been assessed for competence in carrying out the actual tests and measurements required in addition to having had its quality system audited. It was recognised early on that finding a large number of such laboratories

would be difficult so having such an accreditation was not made an absolute requirement. Laboratories with less appropriate levels of third party accreditation such as to the ISO 9001 or ISO 14001 standards would also be considered in exceptional circumstances and this was reflected in the tender specification.

All tests were carried out between January and February 2009 in an accredited test laboratory selected according to the above criteria.

3. Assessment Criteria for Household Electric Lamps

The label requires four performance parameters to be declared. These are energy efficiency class, luminous flux output in Lumens, input power in Watts and average rated life in hours. The timescales of this test program precluded the measurement of average rated life so this performance parameter was excluded. Of the remaining parameters, luminous flux and wattage are directly measurable according to the standard and the energy efficiency class is calculated from the measured Lumens and Watts.

3.1 Assessment Criteria of Measured Parameters

The standard allows tolerances in the measurement of these parameters compared to the declared values.
Measured values that fall within these tolerances are considered to have achieved the declared performance.
Measured values that fall outside these tolerances are considered not to have achieved the declared performance.

3.2 Assessment Criteria of Energy Efficiency Class

Where the class calculated from the measured luminous flux and input wattage is the same as or better than that declared and the measured luminous flux and input wattage is within the tolerances allowed by the standard, the declared energy efficiency class is considered to have been achieved.

Where the class calculated from the measured luminous flux and input wattage is the same as or better than that declared but the measured luminous flux and/or input wattage is outside the tolerances allowed by the standard, the declared energy efficiency class is considered to have been achieved.

Where the class calculated from the measured luminous flux and input wattage is lower than that declared and the measured luminous flux and input wattage is within the tolerances allowed by the standard, the declared energy efficiency class is considered to have been achieved.

Where the class calculated from the measured luminous flux and input wattage is lower than that declared but the measured luminous flux or input wattage is outside the tolerances allowed by the standard, the declared energy efficiency class is considered to have been achieved.

Where the class has been incorrectly calculated from the rated luminous flux and input wattage and declared at a **higher** level than that correctly calculated

- If the measured class is the **same or higher** than the incorrectly declared class the declared energy efficiency class is considered to have been achieved, whether or not the measured luminous flux and input wattage is within the tolerances allowed by the standard

- If the measured class is the **lower** than the incorrectly declared class the declared energy efficiency class is considered not to have been achieved, whether or not the measured luminous flux and input wattage is within the tolerances allowed by the standard

Where the class has been incorrectly calculated from the rated luminous flux and input wattage and declared at a **lower** level than that correctly calculated

- If the measured class is the same or higher than the incorrectly declared class the declared energy efficiency class is considered to have been achieved, whether or not the measured luminous flux and input wattage is within the tolerances allowed by the standard.

- If the measured class is lower than the incorrectly declared class and the measured luminous flux and input wattage is within the tolerances allowed by the standard the declared energy efficiency class is considered to have been achieved.

- If the measured class is lower than the incorrectly declared class and the measured luminous flux or input wattage is outside the tolerances allowed by the standard the declared energy efficiency class is considered not to have been achieved.

4. Test Results and Tables

4.1 Overall Summary of Test Results by Type

Table 1. Numbers of Product Sets Tested Performing/Not Performing in Accordance with Declarations on the Label

Label Declaration	Number of Product Sets Tested **Performing** to Declarations			Number of Product Sets Tested **Not Performing** to Declarations			% of Product Sets Tested Not Performing to Declarations		
	CFLs	***Filament***	**Halogen**	**CFLs**	**Filament**	**Halogen***	**CFLs**	**Filament**	Halogen**
Energy Efficiency Class	*104*	*72*	34	9	17	15	8	19	25
Luminous Flux (Lumens)	*90*	*61*	32	23	28	17	20	31	28
Input Wattage	*108*	*78*	49	5	11	0	4	12	0
All Declarations	*85*	*51*	30	28	38	19	25	43	31

***12 Halogen sets of one Brand were supplied with no labels. Measurements of Luminous Flux and wattage were made but no comparison with declared values was possible.
** Percentage of 61 sets tested not performing to declarations

The summary table above indicates that:

Compact Fluorescent Lamps (CFLs)

- 28 out of 113 sets of CFLs tested (25%) did not perform in accordance with one or more of the declarations on their labels.
- 9 out of the 113 sets tested (8%) did not achieve the energy efficiency class declared on the label. Of these 3 sets had no energy efficiency class declared on the label. .
- 23 out of 113 sets tested (20%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.
- 5 out of the 113 sets tested (4%) did not achieve their input wattage rating declarations due to their measured input wattages being above the declared level by more than the amount allowed by the measurement tolerances in the standard.

Tungsten Filament Lamps

- 38 out of 89 sets of tungsten filament lamps tested (43%) did not perform in accordance with one or more of the declarations on their labels.
- 17 out of the 89 sets tested (19%) did not achieve the energy efficiency class declared on the label.
- 28 sets of the 89 sets tested (31%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.
- 11 sets of the 89 sets tested (12%) did not achieve their input wattage rating declarations due to their measured input wattages being above the declared level by more than the amount allowed by the measurement tolerances in the standard. In addition, 1 of these sets had no energy efficiency class declared on the label.

Tungsten Halogen Lamps

- Of 61 sets of tungsten halogen lamps tested, 12 sets of one Brand (20%) were supplied without labels so it was not possible to verify any declarations.
- 19 out of 61 sets of tungsten halogen lamps tested (31%) did not perform in accordance with one or more of the declarations on their labels.
- 15 out of the 61 sets tested (25%) did not achieve the energy efficiency class declared on the label.
- 17 out of 61 sets of tungsten halogen lamps tested (28%) did not achieve their luminous flux rating declarations due to their measured lumens being below the declared levels by more than the amount allowed by the measurement tolerances in the standard.

4.2 Results by Brand and Lamp Type

4.2.1 Results by Brand for CFLs

Red Italics **indicate that the product has not achieved the performance values and/or energy efficiency class declared on the label**

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	B&Q									
Lamp Type	CFL									
Set 1	7W Candle CFL E14 SES (equivalent 35W)	286	387.5	>95	7	7.1	<110	A	A	
Set 2	9W GLS B22 BC(equivalent 40W)	380	450.8	>95	9	9.6	<110	B	A	
Set 3	9W GLS (CFL) E27	380	438.9	>95	9	9.7	<110	B	B	
Set 4	12W Spiral (CFL) E27	700	810	>95	12	11.5	<110	A	A	
Set 5	12W Stick (CFL) B22	1200	1257.9	>95	20	19.3	<110	A	A	
Set 6	11W Stick (CFL) E27	600	621.5	>95	11	10.6	<110	A	A	
Set 7	11W Stick (CFL) B22	600	597.9	>95	11	10.4	<110	A	A	
Set 8	5W Candle (CFL) E14	177	259.6	>95	5	5.5	110	A	A	
Measured Performance	All of the sample sets tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	GE									
Lamp Type	CFL									
Set 1	9W Small Size Stick (CFL) B22	430	504.2	>95	9	8.9	<110	A	A	
Set 2	9W Décor (CFL) B22	405	530.4	>95	9	9.4	<110	A	A	
Set 4	15W Electronic Sensor (CFL) B22	800	926.5	>95	15	15.7	<110	A	A	
Set 5	20W Stick (CFL) B22	1152	1239.6	>95	20	19.5	<110	A	A	
Set 15	11W Biax Electronic Extra Mini (CFL) B22	600	623.4	>95	11	11.7	<110	A	A	
Set 16	11W Start Stick (CFL) E14	600	585.6	>95	11	9.8	<110	A	A	
Set 17	9W Small Size Stick (CFL) B22	430	489.7	>95	9	9	<110	A	A	
Set 18	11W Biax Electronic Extra Mini (CFL) E14	600	630.3	>95	11	11.7	<110	A	A	
Set 19	*20W GLS (CFL) E27*	1152	*1084.9*	94.2	20	19.8	<110	A	*B*	
Set 20	9W Elegance GLS (CFL) B22	405	421.5	>95	9	9	<110	A	A	
Set 21	9W Décor (CFL) B22	405	505.9	>95	9	9.2	<110	A	A	
Set 22	11W Biax Electronic Tech Extra Mini (CFL) B22	600	640.7	>95	11	11.9	<110	A	A	
Set 23	15W Biax Electronic Tech Extra Mini (CFL) B22	900	894	>95	15	15.8	<110	A	A	
Set 24	*20W Biax Electronic Elegance GLS (CFL) B22*	1080	*1001.2*	92.6	20	20	<110	B	B	
Set 40	11W Eco Stick (CFL) B22	600	595	>95	11	9.9	<110	A	A	
Set 41	*11W Eco Stick (CFL) E14*	600	*562.4*	93.7	11	9.9	<110	A	A	
Set 43	15W Biax Electronic Elegance GLS (CFL) B22	750	773.8	>95	15	16.5	<110	B	B	
Measured Performance	14 of the 17 CFL sample sets (82%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. 3 sets failed to achieve the luminous flux output within the tolerances required in accordance with Table 1 of BS EN 50285:1999 and of these 1 set did not achieve its declared energy class.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	GET									
Lamp Type	CFL									
Set 2	*7W Pearl GLS (CFL) B22*	320	*300.8*	94	7	6.4	<110	A	A	
Set 3	*7W Mini Spiral (CFL) B22*	420	*279.4*	66.5	7	6.3	<110	A	A	
Set 4	5W Mini Stick (CFL) B22	250	258.3	>95	5	5.2	<110	A	A	
Set 5	*11W Spiral (CFL) B22*	540	*507.6*	94	11	9.8	<110	A	A	
Set 6	25 W Spiral (CFL) E27	1300	1462.3	>95	25	23.4	<110	B	A	
Set 7	*4W Pearl Golfball (CFL) E27*	200	*121.5*	60.75	4	3.1	<110	A	A	
Measured Performance	Of the 6 CFL sample sets tested, 2 sets (33%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; 6 sets achieved the declared Energy Efficiency Classification but of these, 4 sets (71%) were unable to achieve the rated luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999.									
Manufacturer's Response	The manufacturer declined to re-test.									
Manufacturer's Comments	In all sets there is no conflict in the Energy Efficiency Class declarations. There is also no conflict in the printed equivalence guidance to the related incandescent lamps on the packaging, which is more likely to be used by consumers for guidance. Sets 2 and 5 exhibit only conditional non-compliance for the Lumens claims and, had a normal uncertainty of measurement tolerance been taken into account, would have passed. Finally, all the CFL lamp types listed were withdrawn from distribution in the marketplace in December 2008.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	IKEA									
Lamp Type	CFL									
Set 13	*8W Sparsam Stick (CFL) B22*	420	533.3	>95	8	*9*	112.5	A	A	
Set 14	11W Sparsam Stick (CFL) B22	600	621.3	>95	11	10.8	<110	A	A	
Set 15	8W Sparsam GLS (CFL) B22	380	371.7	>95	8	8.3	<110	A	A	
Set 16	7W Sparsam Golfball (CFL) E14	260	293.2	>95	7	7.1	<110	B	B	
Set 17	11W Sparsam GLS (CFL) E14	550	572.2	>95	11	11.7	<110	A	B	
Set 18	7W Sparsam Golfball (CFL) E27	260	281.4	>95	7	7	<110	B	B	
Set 19	11W Sparsam GLS (CFL) E27	550	586.8	>95	11	11.8	<110	A	A	
Set 20	*20W Sparsam Globe (CFL) E27*	1200	*1123.2*	93.6	20	21.1	<110	A	*B*	
Measured Performance	6 of the 8 CFL sample sets (75%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. 1 set was unable to achieve its declared Luminous Flux output and energy class and one set was unable to achieve its declared wattage input.									
Manufacturer's Response	The manufacturer challenged the results for sets 13 and 20 on the basis that they had followed and complied with the IEC60969 standard where the tolerance for Wattage is <115% and Lumen output >90%. The manufacturer declined to re-test.									
Comments	The over-riding standard as published in the Official Journal of the European Communities is EN 50285:1999 which has tighter tolerances. It is the tolerances in this standard that must be met in order to show the sample has achieved its declared performance. The manufacturer has stated they will make it a requirement that all products shall comply with the more stringent EN 50285 standard.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Megaman									
Lamp Type	CFL									
Set 1	9W Ingenium Ultra Compact Classic (CFL) B22	405	427.6	>95	9	9.5	<110	A	B	
Set 2	7W Ingenium Ultra Compact Classic (CFL) B22	286	286.4	>95	7	7.2	<110	A	B	
Set 3	11W Ingenium Liliput (CFL) E27	600	641.2	>95	11	11.6	<110	A	A	
Set 4	7W Ingenium Ultra Compact Candle (CFL) B22	286	298.9	>95	7	7.1	<110	A	A	
Set 5	9W Ingenium Ultra Compact Classic (CFL) B22	405	431	>95	9	9.3	<110	A	A	
Set 7	7W Ingenium Ping Pong (CFL) E14	286	304.2	>95	7	7	<110	A	A	
Set 8	7W Ingenium Ping Pong (CFL) E14	286	272.5	>95	7	7	<110	A	B	
Set 10	5W Ultra Compact Candle (CFL) B22	180	180.6	>95	5	5	<110	A	A	
Set 11	*11W Ingenium Ultra Compact Classic (CFL) B22*	570	560.5	>95	11	*12.2*	110.9	A	*B*	
Set 12	*11W Ingenium Ultra Compact Classic (CFL) E27*	570	551.9	>95	11	*12.2*	110.9	A	*B*	
Set 13	7W Ingenium Ultra Compact Candle (CFL) E14	286	298.2	>95	7	7.3	<110	A	B	
Measured Performance	Of the 11 CFL sample sets tested, 9 sets (81%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; 2 sets (15%) were unable to achieve the declared Energy Efficiency Classification and rated wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Manufacturer's Response	The manufacturer challenged the results on the basis that only 5 samples of each type were tested whereas the standard requires 20 samples to be tested for legal compliance purposes. The manufacturer declined to re-test and did not supply any test results to support their challenge.									
Defra Comments	The Defra testing was carried out to get a snap- shot picture of the market not to ascertain legal compliance. Therefore the testing was carried out on a selection of 5 samples of each type rather than the 20 samples required by the standard for legal compliance. The Defra results show that on the basis of testing and averaging the results for 5 samples, obtained from retail outlets, the models selected did not achieve their declared performance. A larger sample size may show a different picture but no evidence was offered by the manufacturer to confirm this. Two lamp types originally tested were found on further discussion with the manufacturer to be reflector types and were removed from the results.									
Manufacturer's Comments	"Megaman is one of the world's largest manufacturers of compact fluorescent lamps, and we are recognised as a global leader in innovative lamp design. All of our products are extensively tested to ensure that they meet all relevant international standards, and the rigorous Quality Assurance Systems within our manufacturing environments do ensure that our products come to market with exceptionally high quality and reliability. We successfully supply product to demanding markets in over 80 countries. We believe that this DEFRA Market Transformation Programme testing report is an over-simplification which reflects misunderstandings of agreed testing procedures, and as such could be regarded as painting a misleading picture. The "market picture testing" and sampling procedures adopted by DEFRA were not, in our opinion, carried out to the strict criteria laid down by the agreed European Standards EN 50285: 1999 and EN 60969: 1999. For example, only 5 lamps per batch were selected, not 20 as the agreed EN procedures require. There was also some misunderstanding of how we define "reflector lamps" in our product portfolio. Our own testing procedures have confirmed that our products do comply with EU energy label criteria."									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Omicrom									
Lamp Type	CFL									
Set 1	*11W T2 Globe (CFL) B22*	500	*182.4*	36.5	11	7.3	<110	A*	*B*	*Rated B*
Set 2	*7W Classic GLS (CFL) E27*	420	*252.8*	60.2	7	6	<110	B*	A	Rated A
Set 3	*11W Compact GLS (CFL) B22*	500	*400.8*	80.2	11	10.7	<110	A*	*B*	*Rated B*
Set 4	*11W Classic GLS (CFL) B22*	660	*508.6*	77.1	11	9.4	<110	B	A	
Set 5	*9W T2 Mini Spiral (CFL) E27*	540	*407.4*	75.4	9	7.7	<110	A	A	
Set 6	*11W T2 Mini Tube (CFL) B22*	550	*514.9*	93.6	11	9.9	<110	A	A	
Set 7	*11W T3 Candle Pearl (CFL) B22*	500	*353.4*	70.7	11	10.9	<110	A*	*B*	*Rated B*
Set 8	*5W T3 Golfball Pearl (CFL) B22*	230	*165.6*	72.0	5	4.5	<110	A	A	
Set 9	11W T4 Spiral (CFL) B22	500	661.5	>95	11	10.1	<110	A*	A	Rated B
Set 10	*7W Universal Candle (CFL) E27*	260	*207.6*	79.8	7	5.6	<110	B	B	
Set 11	*11W Universal GLS (CFL) B22*	560	*429.9*	76.8	11	9.6	<110	B*	B	*Rated A
Set 12	11W Universal Mini Tube (CFL) B22	600	620.9	>95	11	10.8	<110	A	A	
Measured Performance	Of the 12 CFL sample sets tested, 2 sets (8%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. 10 sets (92%) did not achieve the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; 6 sets had a declared energy efficiency class that had been incorrectly calculated from the rated luminous flux and wattage. The 3 sets that are considered to have failed to achieve the declared energy efficiency class, had classes that had been incorrectly declared at a higher level than that available from their rated values of luminous flux and wattage and had failed to achieve this level.									
Manufacturer's Response	The manufacturer stated that 7 of the models that failed to achieve their declared performance had been supplied by factories that were found to have quality inconsistencies and these had now been alternatively sourced.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
	The manufacturer declined to re-test									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	OSRAM									
Lamp Type	CFL									
Set 10	20W Dulux EL Longlife Globe (CFL) E27	1100	1153.5	>95	20	19.8	<110	B	A	
Set 17	5W Dulux EL Classic B Candle (CFL) E14	160	189.1	>95	5	5.5	<110	B	B	
Set 19	15W Dulux EL Longlife Stick (CFL) E27	900	882.6	>95	15	15.6	<110	A	A	
Set 20	9W Dulux EL Classic B Candle (CFL) E14	340	354.4	>95	9	8.9	<110	B	B	
Set 21	21W Dulux EL Globe (CFL) E27	1100	1168	>95	21	19.8	<110	B	A	
Set 22	15W Dulux EL Sensor Stick (CFL) E27	900	878	>95	15	15.7	<110	A	A	
Set 23	7W Duluxstar Classic A GLS (CFL) B22	350	340.1	>95	7	7.2	<110	A	A	
Set 24	8W Duluxstar Stick (CFL) B22	400	475.1	>95	8	8.2	<110	A	A	
Set 25	11W Duluxstar Stick (CFL) B22	600	635.5	>95	11	10.9	<110	A	A	
Set 29	11W Dulux EL Longlife Stick (CFL) E27	660	655.5	>95	11	11.9	<110	A	A	
Set 30	14W Duluxstar Stick (CFL) B22	769	807.7	>95	14	13.1	<110	A	A	
Set 31	16W Dulux EL Stick (CFL) B22	900	921.6	>95	16	16.1	<110	A	A	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Set 33	16W Dulux EL Globe (CFL) E27	870	930.9	>95	16	16.3	<110	A	A	
Set 34	15W Dulux EL Longlife Globe (CFL) E27	870	944	>95	15	15.8	<110	A	A	
Measured Performance	All of the CFL sample sets (14 sets) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; Sets 10 and 21 were higher than the class declared.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	PHILIPS									
Lamp Type	CFL									
Set 1	*8W T60 Softone GLS (CFL) B22*	380	*343.1*	90.3	8	8.2	<110	A	*B*	
Set 6	*5W Eco Candle (CFL) E14*	190	276.3	>95	5	*5.7*	114.0	A	A	
Set 7	8W Eco Candle (CFL) E27	370	408.9	>95	8	8.7	<110	A	A	
Set 15	5W Eco Lustre (CFL) B22	190	223.7	>95	5	5.1	<110	A	A	
Set 16	8W Eco Lustre (CFL) B22	370	445.7	>95	8	8.2	<110	A	A	
Set 18	8W Genie (CFL) B22	420	484.1	>95	8	8.5	<110	A	A	
Set 19	11W Genie (CFL) B22	600	596.1	>95	11	11.3	<110	A	A	
Set 20	*14W Genie (CFL) B22*	800	*747.5*	93.4	14	13.9	<110	A	A	
Set 21	18WGenie (CFL) B22	1100	1145.7	>95	18	18.6	<110	A	A	
Set 29	9W PL-Electronic Ambiance (CFL) E27	420	428.9	>95	9	9.4	<110	A	B	
Set 30	16W PL-Electronic Ambiance (CFL) E27	900	859	>95	16	16.8	<110	A	B	
Set 36	12W T60 Softone (CFL) B22	610	664.4	>95	12	12.5	<110	A	A	
Set 37	*16W T60 Softone (CFL) E27*	815	*746.2*	91.6	16	14.7	<110	B	B	
Set 38	20W T65 Softone (CFL) E27	1160	1146.3	>95	20	21.2	<110	A	B	
Set 40	12W Tornado Turbo Energy Saver (CFL) B22	725	693.3	>95	12	11.6	<110	A	A	
Set 41	20W Tornado Turbo Energy Saver (CFL) B22	1350	1395	>95	20	19.7	<110	A	A	
Set 45	*5W Tornado Turbo Energy Saver (CFL) B22*	300	342.1	>95	5	*5.8*	116.0	A	A	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Set 46	8W Tornado Turbo Energy Saver (CFL) B22	500	511.5	>95	8	8.4	<110	A	A	
Measured Performance	13 of the 18 CFL sample sets (72%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. 3 sets failed to achieve their declared luminous flux outputs within the tolerances required in accordance with Table 1 of BS EN 50285:1999 and of these 1 set failed to achieve its declared energy efficiency class. 1 set failed to achieve its wattage input value within the tolerances required in accordance with Table 1 of BS EN 50285:1999									
Manufacturer's Response	The manufacturer challenged the results and offered previously obtained factory measurements for consideration. The results supplied were for tests on the lamp model in sets 1, 6, 20, 37 and 45.									
Manufacturer's Results										
Set 1	8W T60 Softone GLS (CFL) B22	380	416	109.5	8	8.8	110	A	A	
Set 6	5w ECO Candle (CFL) E14	200	215.6	107.8	5	5.08	101.6	A	A	
Set 20	14w Genie (CFL) B22	810	836	103.2	14	13.6	92.8	A	A	
Set 37	16W T60 Softone (CFLi) E27	815	780	95.7	16	14.8	92.5	B	B	
Set 37 Improved Design	16W T60 Softone (CFLi) E27 In production since July 2009	870	837	96.2	16	15.3	95.6	A	A	
Set 45	5w Tornado Turbo Energy Saver (CFL) B22	300	325	108.3	5	5.27	105.4	A	A	
Defra Comments	The tests on the models in sets 1, 6, 20, 37 and 45 were carried out previously over a long period of time on unspecified numbers of factory samples not purchased from retail outlets and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									
Manufacturer's Comments	For the Market Picture Testing - Household Electric Lamps, the specified measurement standard for compliance of BS EN 50285; 1999 was not used for sampling. BS EN 50285: 1999, Clause 5 Verification requires that "The minimum sample size shall be twenty lamps. The sample shall be representative of a manufacturer's production. This can be achieved by randomly selecting lamps from at least four different points of sale. If these results do not comply with the requirements, the manufacturer's test results shall be requested." "The results supplied by Philips were the manufacturers test records, representative of the manufacturers production, as required for the verification of the declared values to the BS EN 50285: 1999 "									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Sylvania									
Lamp Type	CFL									
Set 2	15W Mini-Lynx Long Life (CFL) E27	900	974.6	>95	15	15.3	<110	A	A	
Set 3	20W Mini-Lynx Ambience (CFL) E27	1100	1048.6	>95	20	17.9	<110	B	A	
Set 4	7W Mini-Lynx Ambience (CFL) E27	350	383.1	>95	7	7.3	<110	A	A	
Set 5	9W Mini-Lynx Fast-Start (CFL) E27	450	437.3	>95	9	9.4	<110	A	A	
Set 6	15W Mini-Lynx Fast-Start (CFL) B22	850	926.3	>95	15	15	<110	A	A	
Set 7	20W Mini-Lynx Fast-Start (CFL) B22	1200	1254.3	>95	20	19	<110	A	A	
Set 8	20W Mini-Lynx Spiral (CFL) B22	950	1051.2	>95	20	19.8	<110	B	B	
Measured Performance	All of the 7 sample sets achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; Sets 3 and 4 were higher than the class declared.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	TESCO									
Lamp Type	CFL									
Set 1	9W GLS (CFL) B22	405	485.4	>95	9	8.8	<110	A	A	
Set 2	11W GLS (CFL) B22	580	642.8	>95	11	10.9	<110	A	A	
Set 3	11W GLS (CFL) E27	580	613.5	>95	11	10.5	<110	A	A	
Set 4	20W GLS (CFL) B22	1152	1195.6	>95	20	19.9	<110	A	A	
Set 5	11W Longlife Stick (CFL) B22	600	647	>95	11	11.6	<110	A	A	
Set 6	11W Longlife Stick (CFL) E27	600	646.5	>95	11	11.7	<110	A	A	
Set 7	20W Longlife Stick (CFL) B22	1200	1298.1	>95	20	20.8	<110	A	A	
Measured Performance	All of the 7 sample sets achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. All of the sample sets achieved higher energy efficiency performance than declared.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	TP 24									
Lamp Type	CFL									
Set 1	*9W L1 Candle (CFL)*	405	*298.2*	73.6	9	8.5	<110	A	*B*	
Set 2	15W L1 GLS (CFL)	820	816.1	>95	15	14.5	<110	A	A	
Set 3	9W L1 Micro (CFL)	405	429.5	>95	9	9	<110	A	A	
Set 4	*9W L1 Tube (CFL)*	450	*412.9*	91.8	9	8.5	<110	A	A	
Measured Performance	2 of the 4 sets tested (50%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999. 2 sets failed to achieve their declared luminous flux output within the tolerances required in accordance with Table 1 of BS EN 50285:1999. Of these 1 set failed to achieve its declared energy efficiency class.									
Manufacturer's Comments	Our own quality control measures had identified deficiencies in these lamps prior to the testing carried out by DEFRA. We have already improved the quality and output of these lamps such that they are now in compliance with the relevant labelling and efficiency requirements. The testing carried out by DEFRA was on the older less efficient lamps.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Varilight									
Lamp Type	CFL									
Set 1	20W DigiFlux DIMMABLE (CFL) B22	1300	1389.8	>95	20	20.3	<110%	A	A	
Measured Performance	The single sample set tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999.									

4.2.2 Results by Brand for Tungsten Filament Lamps

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 104% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	B&Q									
Lamp Type	Tungsten Filament									
Set 9	40W Soft Candle (Filament) B22	360	352.6	>95	40	38.6	<104	F	F	
Set 10	60W Soft Candle (Filament) B22	600	649.7	>95	60	60.2	<104	F	F	
Set 11	60WClear Candle (Filament) B22	660	655.6	>95	60	60.9	<104	F	F	
Set 13	40W Clear Candle (Filament) B22	400	401.3	>95	40	40.6	<104	E	E	
Set 18	*60W Pearl GLS (Filament) E27*	700	*625.9*	89	60	59.4	<104	E	*F*	
Measured Performance	4 of the 5 filament sample sets (80%) achieved the declared Energy Efficiency Classification. 1 set failed to achieve the declared luminous output within the tolerance required in Table 1 of BS EN 50285:1999 and did not achieve its declared energy efficiency class.									
Manufacturer's Response	The manufacturer declined to re-test but offered previously obtained factory measurements for consideration.									
Manufacturer's Results Set 18	60W Pearl GLS (Filament) E27	700	693.3	99	60	60.37	<104	E	E	
Defra Comments	The manufacturer's tests were carried out previously over a long period of time on unspecified numbers of factory samples not purchased from retail outlets and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									
Manufacturer's Comments	"DEFRA tested 15 different light bulbs from B&Q. Three older style halogen and incandescent bulbs, that we have already discontinued to make way for energy efficient alternatives, were found not to meet certain claims on the packaging. As a responsible retailer we have tests in place to ensure the claims we make on our products comply with legislation and do not mislead our customers. Although the three bulbs identified have already been discontinued, B&Q is disappointed that DEFRA's research is based on an unrepresentative sample of bulbs, which could skew their findings. As the largest seller of light bulbs, B&Q is committed to phasing out traditional light bulbs ahead of legislation, to help customers save energy and money within their homes. We recently doubled our range of energy efficient bulbs and are working with the third parties, including the Energy Saving Trust, to test our bulbs and ensure the claims on all our products are accurate and do not mislead."									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Bell									
Lamp Type	Tungsten Filament									
Set 1	*40W Opal Candle (Filament) B22*	330	*271.3*	82.2	40	38.6	<104	F	*G*	
Set 2	*60W Opal Candle (Filament) B22*	580	*491.1*	84.7	60	57.5	<104	F	*G*	
Set 3	*40W Clear Candle (Filament) B22*	350	*308.6*	88	40	38.7	<104	F	F	
Measured Performance	Of the 3 sets tested, only 1 set (33%) achieved the declared energy Efficiency classification. None of the sample sets tested achieved the rated luminous flux value within the tolerances required in Table 1 of BS EN 50285:1999.									
Manufacturer's Response	The manufacturer opted to carry out re-testing at an accredited laboratory based on a sample size of 20. The results below are average values for 20 samples of each type									
Manufacturer's Results										
Set 1	40W Opal Candle (Filament) B22	330	328.6	99.6	40	40	100	F	F	
Set 2	60W Opal Candle (Filament) B22	580	617.1	106.4	60	60.2	100.3	F	F	
Set 3	40W Clear Candle (Filament) B22	350	386.7	110.5	40	40	100	F	F	
Comments	On the basis of the sample size of 20, the results show that the lamp models tested achieved the energy efficiency classification, luminous flux and wattage values declared on their labels.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Crompton Lighting									
Lamp Type	Tungsten Filament									
Set 1	*40W GLS Pearl (Filament) B22*	410	*378.1*	92.2	40	40.3	<104	E	*F*	
Set 2	60W GLS Pearl (Filament) E27	700	675.5	>95	60	62.2	<104	E	F	
Set 3	*60W Round Bulb Opal (Filament) E27*	600	*534.8*	89.1	60	59.8	<104	F	F	
Measured Performance	1 of the 3 filament sample sets (33%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999. 2 sets (67%), did not achieve the declared luminous flux output within the tolerances required and of these 1 set did not achieve the declared energy efficiency class.									
Manufacturer's Response	The manufacturer opted to re-test using 5 samples for each model. The manufacturer has reported that these three models are obsolete and will no longer be manufactured or imported into the UK after 1st September 2009.									
Manufacturer's Results										
Set 1	40W GLS Pearl (Filament) B22	410	*384*	93.8	40	40.4	101	E	*F*	
Set 2	60W GLS Pearl (Filament) E27	700	713	101.8	60	60.1	100.1	E	E	
Set 3	60W Round Bulb Opal (Filament) E27	Not retested. No stock available								
Defra Comments	The manufacturers' results for the two sets tested confirmed the Defra results.									
Manufacturer's Comments	Crompton Lamps has been manufacturing and distributing light bulbs for more than 80 years. All published information for our lamps is derived from long-term manufacturing data and the lamps are manufactured to comply with EN60064. Crompton Lamps feel that a more appropriate test for checking the energy classification would be 'Market Surveillance Sampling' as defined by Standard EN50285 where 20 samples are tested from 4 retail outlets.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	GE									
Lamp Type	Tungsten Filament									
Set 3	*15W Pygmy (Filament) B22*	90	*81.5*	90.5	15	15.2	<104	F	F	
Set 6	25W Elegance Soft Candle (Filament) B22	180	182.1	>95	25	24.7	<104	F	F	
Set 7	25W Elegance Soft Golfball (Filament) B22	180	174.8	>95	25	25	<104	F	F	
Set 8	40W Frosted Smaller GLS (Filament) B22	410	393.2	>95	40	40.3	<104	E	E	
Set 9	40W Décor (Filament) E14	400	416.9	>95	40	38.3	<104	E	E	
Set 10	40W Elegance Soft GLS (Filament) B22	360	359.9	>95	40	39.8	<104	F	F	
Set 11	60W Enrich Soft GLS (Filament) B22	510	564.8	>95	60	61.2	<104	G	F	
Set 12	*60W Frosted Smaller GLS (Filament) E27*	700	*652.2*	93.2	60	60.5	<104	*E*	*F*	
Set 13	*60W Frosted Smaller GLS (Filament) E27*	700	*652.7*	93.2	60	61.2	<104	*E*	*F*	
Set 14	100W Enrich Soft GLS (Filament) B22	960	983.3	>95	100	102.5	<104	G	G	
Set 42	*12W Nightlight GLS (Filament) B22*	*None*	*64.5*		*12*	*14.2*	*118*	*None*	*G*	
Set 44	60W Elegance Soft GLS (Filament) E27	490	526	>95	60	60.2	<104	G	G	
Set 45	60W Frosted Smaller GLS (Filament) B22	700	687.6	>95	60	60.2	<104	G	E	
Set 46	60W Frosted Longlife Smaller GLS (Filament) B22	630	620.8	>95	60	60	<104	F	F	
Set 47	*100W Clear Smaller GLS (Filament) B22*	1330	*1232.6*	92.7	100	99.7	<104	E	E	
Set 48	60W Clear Classic Candle (Filament) E14	660	701.1	>95	60	60.1	<104	E	E	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Measured Performance	11 of the 16 filament sample sets (69%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; Set 11 had a measured class higher than the class declared; 4 sets did not achieve the declared luminous flux output values within the tolerances required in Table 1 of BS EN 50285:1999 and of these, 2 sets did not achieve the declared energy efficiency class. Set 42 did not display a declared class so it was not possible to compare with any measured results.									
Manufacturer's Response	The manufacturer declined to re-test.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Homebase									
Lamp Type	Tungsten Filament									
Set 1	*15W Clear Sewing Machine Bulbs (Filament) B15*	82	119.9	>95	15	*15.9*	106	F	E	
Set 2	*40W Clear Cookerhood Bulbs (Filament) E14*	420	463	>95	40	*42.4*	106	E	E	
Set 3	*60W Fireglow Standard Bulbs (Filament) E27*	180	*154.1*	85.6	60	60.5	<104	G	G	
Set 5	40W Softlight Candle Bulbs (Filament) B22	345	343.4	>95	40	39.9	<104	F	F	
Set 6	40W Softlight Round Bulbs (Filament) B15	360	360.9	>95	40	39.6	<104	F	F	
Set 7	60W Softlight Round Bulbs (Filament) B15	575	592.4	>95	60	59.3	<104	F	F	
Set 8	*40W Softlight Candle Bulbs (Filament) E27*	345	*311.2*	90.2	40	40.1	<104	F	*G*	
Set 9	25W Softlight Candle Bulbs (Filament) E14	190	195.5	>95	25	24.9	<104	F	F	
Set 10	*60WPearl Standard Bulbs (Filament) E27*	630	643.3	>95	60	61.4	<104	E*	*F*	**Rated F*
Set 11	100W Softlight Globe Bulb (Filament) B22	1150	1292.7	>95	100	102.5	<104	F	E	
Set 12	*60W Clear Standard Bulbs (Filament) B22*	660	*617.6*	93.6	60	61.7	<104	E	*F*	
Set 13	*60W VALUE Clear Candle Bulbs (Filament) B22*	630	*573.4*	91.0	60	58.6	<104	F	F	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Measured Performance	5 of the 12 filament sample sets (42%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; Set 11 was higher than the class declared. 2 sets did not achieve the declared input wattage values within the tolerances required in Table 1 of BS EN 50285:1999; 4 sets did not achieve the declared luminous flux value within the tolerances required in Table 1 of BS EN 50285:1999 and of these 2 sets did not achieve the declared energy efficiency class; 1 set did not achieve its declared energy efficiency class as it had a declared classification that had been incorrectly calculated at a higher class than that available from its rated values of luminous flux and wattage and had failed to achieve this level.									
Manufacturer's Response	The manufacturer declined to re-test.									
Manufacturer's Comments	The above Homebase range is sourced from more than 1 manufacturer. In relation to sets 10, 11 and 12 only, the manufacturer's response is as follows: The packaging for set 10 had a misprint, which should have shown 655 lumens, which supports the Energy Efficiency Class of "E" as declared on the packaging. Set 11 measured values are better than the Lumens claim and the Energy Efficiency Class rating declared on the packaging. Set 12 exhibits only conditional non-compliance for the Lumens claim and had a normal uncertainty of measurement tolerance been taken into account, would have passed. Finally, Sets 10 and 11 are non-clear lamps and therefore distribution has ceased under the EuP legislation effective from September 1st 2009.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	IKEA									
Lamp Type	Tungsten Filament									
Set 1	40W Gloda Frosted Candle (Filament) E14	390	422.3	>95	40	41.6	104	E	E	
Set 2	*25W Gloda Frosted Candle (Filament) E14*	200	236.8	>95	25	*26.8*	107.2	F	E	
Set 3	40W Gloda Frosted Globe (Filament) E14	390	425	>95	40	41.4	<104	E	E	
Set 4	*25W Gloda Clear Sign (Filament) E14*	190	188	>95	25	*26.6*	106.4	F	F	
Set 5	25W Gloda Frosted Chandelier Curved (Filament) E14	190	215.3	>95	25	25.7	<104	F	E	
Set 6	*25W Gloda Frosted Globe (Filament) E14*	200	218.9	>95	25	*26.3*	105.2	F	F	
Set 7	*40W Gloda Frosted GLS (Filament) E27*	415	452.1	>95	40	*43.3*	108.3	E	E	
Set 8	*60W Gloda Frosted GLS (Filament) E27*	710	770.7	>95	60	*64.5*	107.5	E	E	
Set 9	*75W Gloda Frosted GLS (Filament) E27*	935	1034.6	>95	75	*81.7*	108.9	E	E	
Set 10	*100W Gloda Frosted GLS (Filament) E27*	1340	1427.3	>95	100	*106.4*	106.4	E	E	
Measured Performance	3 of the 10 filament sample sets (30%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999.7 sets did not achieve their declared input wattage values within the tolerances required in Table 1 of BS EN 50285:1999.									
Manufacturer's Response	The manufacturer challenged the results on the basis that the lamps are rated at 230V and should be tested at this voltage not at the UK supply voltage of 240V. Results of models tested at 230V were supplied. All these models will no									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
	longer be supplied after September 2009.									
Defra Comments	The results supplied by the manufacturer were summaries of tests carried out on an undisclosed number of samples with no laboratory accreditation indicated. However a review of these results indicated that when tested at 230V, the declared wattage input ratings would be achieved. It should be noted that lamps rated at 230V supplied for use in the UK at 240V will not perform in accordance with the rated input wattage values on their energy labels. It should also be noted that the manufacturer will no longer supply these lamps after September 2009.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	OSRAM									
Lamp Type	Tungsten Filament									
Set 1	*60W Mini Globes (Filament) B22*	640	*560.4*	87.6	60	58.7	<104	F	F	
Set 8	*60W Bellalux Soft White Globe (Filament) B22*	650	*614.7*	94.6	60	*63.2*	105.3	F	F	
Set 9	60W Bellalux Soft White GLS (Filament) B22	610	629.7	>95	60	60.1	<104	F	F	
Set 11	60W Clear Classic A GLS (Filament) E27	700	692.1	>95	60	60.5	<104	E	E	
Set 12	60W Clear Classic B Candle (Filament) E14	640	680.3	>95	60	59.4	<104	F	E	
Set 13	*25W Clear Classic B Candle (Filament) B22*	190	*177.7*	93.5	25	24.8	<104	F	F	
Set 14	40W Frosted Classic A GLS (Filament) B22	410	424.7	>95	40	40.1	<104	E	E	
Set 15	40W Clear Classic B Candle (Filament) E14	390	438.7	>95	40	40.7	<104	E	E	
Set 16	40W Clear Classic B Candle (Filament) B15	390	406.2	>95	40	39.2	<104	E	E	
Set 18	*60W Frosted Classic P Golfball (Filament) E14*	600	*537*	89.5	60	59.2	<104	F	F	
Set 32	40W Mini Globes (Filament) E14	365	398.3	>95	40	41.3	<104	F	F	
Set 35	100W Clear Classic A GLS (Filament) E27	1330	1285.3	>95	100	103.4	<104	E	E	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Measured Performance	All 12 of the sets tested achieved the declared energy efficiency class; Set 12 was measured higher than the class declared; 8 of the 12 filament sample sets (67%) achieved the declared luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; 4 sets did not achieve the declared luminous flux values and of these 1 set also did not achieve the declared wattage input value within the tolerances required in Table 1 of BS EN 50285:1999.									
Manufacturer's Response	The manufacturer challenged the results and supplied test results from an accredited laboratory. Of these results only Set 18 was re-tested using 20 samples of the type.									
Manufacturer's Results										
Set 1	60W Mini Globes (Filament) B22	600	605	101%	60	59.5	99%	F	F	
Set 8	60W Bellalux Soft White Globe (Filament) B22	610	683	112%	60	60.8	101%	F	F	
Set 13	25W Clear Classic B Candle (Filament) B22	190	194	102%	25	24.9	100%	F	F	
Set 18	60W Frosted Classic P Golfball (Filament) E14	560	639	114%	60	58.5	97%	F	F	
Defra Comments	On the basis of the sample size of 20, the results for lamp type Set 18 show that the model achieved the energy efficiency classification, luminous flux and wattage values declared on their labels. Sets 1, 8 and 13 were re-tested using sample sizes of 5, 10 and 5 respectively and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Philips									
Lamp Type	Tungsten Filament									
Set 2	*40W Clear Classictone Candle (Filament) E14*	405	*384*	94.8	40	40	<104	E	*F*	
Set 4	40W Clear BW35 Classictone Candle (Filament) E14	400	395	>95	40	39.6	<104	E	E	
Set 31	40W Soft Deco BXS35 Candle (Filament) B22	370	352.2	>95	40	40.5	<104	F	F	
Set 32	40W Softone T55 GLS (Filament) E27	360	346.7	>95	40	39.8	<104	F	F	
Set 33	60W Softone T55 GLS (Filament) B22	620	645	>95	60	60.3	<104	F	F	
Set 34	40W Apricot Softone T45 GLS (Filament) E14	340	343.8	>95	40	40.1	<104	F	F	
Set 35	40W Apricot Softone B35 Candle (Filament) E14	340	358.6	>95	40	40.2	<104	F	F	
Set 39	40W Softone Golfball (Filament) E14	360	351.4	>95	40	40.2	<104	F	F	
Set 42	40W Softone T55 GLS (Filament) B22	360	385.7	>95	40	39.9	<104	F	F	
Set 43	60W Softone T55 GLS (Filament) B22	620	638.8	>95	60	60.2	<104	F	F	
Measured Performance	9 of the 10 filament sample sets (90%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; 1 set did not achieve its declared luminous flux value within the tolerances required in Table 1 of BS EN 50285:1999 and consequently failed to achieve its declared energy efficiency class.									
Manufacturer's Response	The manufacturer challenged the results and offered previously obtained factory measurements for consideration. The results supplied were for tests on the lamp model in set 2.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Manufacturer's Results										
Set 2	40W E14 240V B35 CL	405	411	101.5	40	40.8	102	E	E	
Defra Comments	The tests on the model in set 2 were carried out previously over a long period of time on unspecified numbers of factory samples not purchased from retail outlets and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									
Manufacturer's Comments	For the Market Picture Testing - Household Electric Lamps, the specified measurement standard for compliance of BS EN 50285; 1999 was not used for sampling. BS EN 50285: 1999, Clause 5 Verification requires that "The minimum sample size shall be twenty lamps. The sample shall be representative of a manufacturer's production. This can be achieved by randomly selecting lamps from at least four different points of sale. If these results do not comply with the requirements, the manufacturer's test results shall be requested. The results supplied by Philips were the manufacturer's test records, representative of the manufacturer's production, as required for the verification of the declared values to the BS EN 50285: 1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Ring									
Lamp Type	Tungsten Filament									
Set 1	*40W Pearl 45mm Globe (Filament) B22*	360	*306.6*	85.2	40	39.8	<104	F	*G*	
Set 2	40W Clear 45mm Globe (Filament) E14	360	365.3	>95	40	40.1	<104	F	F	
Set 3	60W Clear Candle Bulb (Filament) B22	600	615.7	>95	60	61.1	<104	F	F	
Set 4	*60W Pearl Candle Bulb (Filament) B22*	540	*443.1*	82.1	60	52.8	<104	F	*G*	
Set 5	*100W Pearl Classic Light Bulb (Filament) B22*	1330	*1198.8*	90.1	100	96.6	<104	E	E	
Measured Performance	Of the 5 Filament sample sets tested, 2 sets (40%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; 3 sets (60%) did not achieve the rated luminous flux values within the tolerances required in accordance with Table 1 of BS EN 50285:1999 and of these, 2 sets did not achieve the declared Energy Efficiency Classification.									
Manufacturer's Response	The manufacturer elected to re-test.									
Manufacturer's Results										
Set 1	40W Pearl 45mm Globe (Filament) B22	360	349.4	97	40	40.8	102		F	
Set 4	60W Pearl Candle Bulb (Filament) B22	540	609.5	112.8	60	52.4	87.3		E	
Set 5	100W Pearl Classic Light Bulb (Filament) B22	1330	1365.3	102.6	100	100.6	100.6		E	
Defra Comments	Sets 1, 4 and 5 were re-tested using sample sizes of 5 and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Sainsburys									
Lamp Type	Tungsten Filament									
Set 1	60W Basics Pearl GLS (Filament) B22	700	687.7	>95	60	60.7	<104	E	E	
Measured Performance	The single set tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Status									
Lamp Type	Tungsten Filament									
Set 1	40W Clear Round Bulbs (Filament) B22	385	384.3	>95	40	40.1	<104	F	F	
Set 2	40W Pearl Candle Bulbs (Filament) B22	385	386.3	>95	40	40.9	<104	F	F	
Set 3	60W Clear Candle Bulbs (Filament) B22	630	609.8	>95	60	60.5	<104	F	F	
Measured Performance	All of the 3 filament sample sets tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Tesco									
Lamp Type	Tungsten Filament									
Set 8	*40W Clear Value Candle (Filament) B22*	400	*365.7*	91.4	40	38.9	<104	E	*F*	
Set 9	*40W Pearl GLS (Filament) B22*	400	*360.8*	90.2	40	39	<104	E	*F*	
Set 10	*60W Pearl GLS (Filament) B22*	700	*631.5*	90.2	60	59	<104	E	*F*	
Set 11	60W Pearl GLS (Filament) E27	700	685.1	>95	60	60.5	<104	E	E	
Set 12	100W Pearl GLS (Filament) B22	1330	1278.7	>95	100	99.9	<104	E	E	
Set 13	60W Pearl Longlife GLS (Filament) B22	555	611.6	>95	60	59.7	<104	F	F	
Set 14	60W Pearl Longlife GLS (Filament) B22	1120	1087.6	>95	100	97.6	<104	F	F	
Measured Performance	4 of the 7 filament sample sets (57%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999. 3 of the sample sets failed to achieve the declared values of luminous flux within the tolerances required in Table 1 of BS EN 50285:1999 and consequently failed to achieve the declared Energy Efficiency Classification.									
Manufacturer's Response	The manufacturer challenged the results and submitted re-test results from an accredited laboratory based on testing 20 samples of each model. The 40W Pearl GLS (Filament) B22 set 9 and the 60W Pearl GLS (Filament B22) set 10 lamps will be discontinued by September 2009.									
Manufacturer's Results										
Set 8	40W Clear Value Candle (Filament) B22	400	404.0	>95	40	40.5	<104	E	E	
Set 9	40W Pearl GLS (Filament) B22	400	420.2	>95	40	40.2	<104	E	E	
Set 10	60W Pearl GLS (Filament) B22	700	700.1	>95	60	60.4	<104	E	E	
Defra Comments	On the basis of the sample size of 20 tested, the results show that the lamp models in Sets 8, 9 and 10 achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999.									
Manufacturer's Comments	We are pleased that the Lighting Association, being a fully accredited Test Laboratory based here in the UK, has been able to confirm that our products comply with the Energy Labeling Directive following retests carried out in conformance with EN50285. This does highlight the need to follow the prescribed sampling technique as laid out in EN50285 when									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
	acquiring samples in order to obtain a statistically representative result. Our light-bulb manufacturing facilities operate under Third Party Registered ISO9001:2000 Quality Management Systems, employing Statistical Process Control methodology involving rigorous measurement and monitoring to ensure full compliance with the relevant product performance standards. In addition to this, the facilities are also subjected to an annual BRC Non-food audit to ensure the Quality Management Systems remain effective and fully implemented.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	TP24									
Lamp Type	Tungsten Filament									
Set 5	*25W G9 Capsule (Filament)*	530	*118.3*	22.3	25	25.7	<104	F	*G*	
Set 6	*40W G9 Capsule (Filament)*	530	*349.4*	65.9	40	39.2	<104	F*	F	*Rated D
Measured Performance	Neither of the sets tested achieved the rated luminous flux values within the tolerances required in Table 1 of BS EN 50285:1999 and 1 set failed to achieve the declared Energy Efficiency Classification; I set had its declared energy efficiency class incorrectly calculated from its rated lumens and wattage values but as this was 2 classes lower than the rated class, it was considered to have achieved its declared class									
Manufacturer's Response	The manufacturer declined to re-test.									
Manufacturer's Comments	Having investigated the findings of the testing carried out by DEFRA we have determined that there were errors on the packaging for this item (in the case of the 25W Capsule this is clearly the case). The information on the packaging was generated by our supplier and accepted in good faith by TP24. It was not the intention of TP24 to make false claims or deceive our customers. We supply these items as an OEM replacement part for our light fittings as such they are typically purchased as a like- for- like product based on format and wattage, not on the Lumen output or efficacy. We have now changed supplier and the packaging errors have also been corrected.									

4.2.3 Results by Brand for Tungsten Halogen Lamps

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 90% of rated value			Measured value < 108% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	B&Q									
Lamp Type	Tungsten Halogen									
Set 15	*150W Linear R7 (Halogen)*	2200	*1301.7*	59	150	153.4	<108	F	*G*	
Set 16	*300W Linear R7 (Halogen)*	5000	*3877.3*	77.5	300	302.7	<108	F*	F	*Rated E
Measured Performance	1 of the 2 halogen sample sets (50%) achieved the declared Energy Efficiency Classification. However, neither of the lamps achieved the rated luminous flux value within the tolerances required in Table 1 of BS EN 50285:1999.									
Manufacturer's Response	The manufacturer declined to re-test.									
Manufacturer's Comments	DEFRA tested 15 different light bulbs from B&Q. Three older style halogen and incandescent bulbs, that we have already discontinued to make way for energy efficient alternatives, were found not to meet certain claims on the packaging. As a responsible retailer we have tests in place to ensure the claims we make on our products comply with legislation and do not mislead our customers. Although the three bulbs identified have already been discontinued, B&Q is disappointed that DEFRA's research is based on an unrepresentative sample of bulbs, which could skew their findings. As the largest seller of light bulbs, B&Q is committed to phasing out traditional light bulbs ahead of legislation, to help customers save energy and money within their homes. We recently doubled our range of energy efficient bulbs and are working with the third parties, including the Energy Saving Trust, to test our bulbs and ensure the claims on all our products are accurate and do not mislead.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Crompton Lighting									
Lamp Type	Tungsten Halogen									
Set 4	*40W G9 Capsule Frosted (Halogen)*	340	*267.1*	78.6	40	39.9	<108	E	*G*	*Rated F*
Set 5	*60W G9 Capsule Frosted (Halogen)*	570	586.2	>90	60	60.3	<108	E	*F*	*Rated F*
Measured Performance	Neither of the halogen sample sets tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999.; Set 4 was more than one class lower than the declared Energy Efficiency Classification. Both set 4 and set 5 had a declared classification that had been incorrectly calculated at a higher class than that available from its rated values of luminous flux and wattage and had failed to achieve these levels.									
Manufacturer's Response	The manufacturer opted to retest the set 4 model using 5 samples. Re-testing of the set 5 model was declined as they agree with the Defra findings. The rating should be 'F' and the artwork has been changed. The manufacturer has reported that both these models are obsolete and will no longer be manufactured or imported into the UK after 1st September 2009.									
Manufacturer's Results										
Set 4	40W G9 Capsule Frosted (Halogen	340	424	125	40	*44.9*	112.2			
Defra Comments	The manufacturers' results for the set re-tested did not agree with the Defra results. However the results showed that the model did not achieve its rated wattage.									
Manufacturer's Comments	Crompton Lamps feel that a more appropriate test for checking the energy classification would be 'Market Surveillance Sampling' as defined by Standard EN50285 where 20 samples are tested from 4 retail outlets.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	GE									
Lamp Type	Tungsten Halogen									
Set 26	40W Halo CANDLE (Halogen) E14	490	556	>90	40	41.8	<108	D	D	
Set 27	225W Tech K9 Linear R7 (Halogen)	5000	4894.3	>90	225	235.4	<108	C	C	
Set 29	60WFrosted Tech Mini G9 (Halogen)	780	781.4	>90	60	62.8	<108	E	E	
Set 30	40WFrosted Tech Mini G9 (Halogen)	460	489.5	>90	40	42.6	<108	E	E	
Set 34	60W HaloBTT (Halogen) E27	820	821.9	>90	60	62.3	<108	D	E	
Set 35	*300W Start K9 Linear R7 (Halogen)*	5100	*4033.4*	79	300	304	<108	E	*F*	
Set 36	40W Clear Cooker hood (Halogen) E14	470	513.1	>90	40	41.5	<108	D	D	
Set 37	*200W Start K11 Linear R7 (Halogen)*	3100	*2509.9*	81	200	203.6	<108	E	*F*	
Set 39	150W Start K12 Linear R7 (Halogen)	2600	2503.4	>90	150	154	<108	D	D	
Set 49	25W Clear Tech G9 (Halogen)	260	241.3	>90	25	24.2	<108	D	D	
Measured Performance	8 of the 10 halogen sample sets tested (73%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; 2 sets failed to achieve their declared values of luminous flux within the tolerances required in Table 1 of BS EN 50285:1999 and also failed to achieve their declared energy efficiency classes.									
Manufacturer's Response	The manufacturer declined to re-test.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Homebase									
Lamp Type	Tungsten Halogen									
Set 4	*40W G9 Capsule Clear (Halogen)*	490	*318.9*	65.1	40	39.2	<104	E*	*F*	**Rated D*
Measured Performance	The single set tested did not achieve the declared Energy Efficiency Classification and/or the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; this set had a declared energy efficiency class that had been incorrectly calculated from the rated luminous flux and wattage and declared at a lower level than that available from its rated values of luminous flux and wattage. However it had failed to achieve this level and so is considered to have failed to achieve the declared energy efficiency class.									
Manufacturer's Response	The manufacturer declined to re-test.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	IKEA									
Lamp Type	Tungsten Halogen									
Set 12	40W Frosted G9 Capsule (Halogen)	370	418.4	>90	40	40.7	<108	F	E	
Measured Performance	The single set tested achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999.; Set 12 had a measured energy class higher than the class declared.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	One Brand tested failed to provide a label for any of the light bulbs purchased therefore their details have been passed to Trading Standards Officers and the National Measurement Office to follow up. The results are included below for information and have been included in the statistics of our findings.									
Lamp Type	Tungsten Halogen									
Set 1	*250W Single Ended (Halogen) E11*	*none*			*none*			*none*	*D*	
Set 2	*100w Single Ended (Halogen) E11*	*none*			*none*			*none*	*F*	
Set 3	*150w Single Ended (Halogen) E11*	*none*			*none*			*none*	*F*	
Set 4	*100w Single Ended (Halogen) E27*	*none*			*none*			*none*	*F*	
Set 5	*75W Double Envelope Single Ended (Halogen) E27*	*none*			*none*			*none*	*F*	
Set 6	*150W Single Ended (Halogen) E14*	*none*			*none*			*none*	*E*	
Set 7	*250W Single Ended (Halogen) E14*	*none*			*none*			*none*	*D*	
Set 8	*150W Single Ended (Halogen) B15*	*none*			*none*			*none*	*F*	
Set 9	*250W Single Ended (Halogen) B15*	*none*			*none*			*none*	*D*	
Set 10	*100W Single Ended (Halogen) E14*	*none*			*none*			*none*	*E*	
Set 11	*150W Double Envelope Single Ended (Halogen) E27*	*none*			*none*			*none*	*F*	
Set 12	*250W Double Envelope Single Ended (Halogen) E27*	*none*			*none*			*none*	*E*	
Measured Performance	12 Halogen lamp sets and their packaging were examined and none were found to have labels. Measurements of Luminous Flux and wattage were made but no comparison with declared values was possible.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	OSRAM									
Lamp Type	Tungsten Halogen									
Set 4	28W Clear Classic A ES (Halogen) B22	345	318.1	>90	28	28.9	<108	D	D	
Set 5	*42W Clear Classic A ES (Halogen) E27*	630	*543.6*	86.3	42	43.2	<108	C	*D*	
Set 6	*230W Haloline ES R7 (Halogen)*	5060	*4419*	87.3	230	233.2	<108	C	*D*	
Set 7	25W Frosted Halopin G9 Capsule (Halogen)	210	228	>90	25	25.4	<108	E	E	
Set 26	40W Halolux Ceram (Halogen) B15	460	523	>90	40	42.5	<108	E	D	
Set 27	40W Frosted Halopin G9 Capsule (Halogen)	370	427.8	>90	40	40	<108	F	E	
Set 36	25W Halolux Ceram (Halogen) B15	230	270.4	>90	25	26.9	<108	E	E	
Set 37	*33W Clear Halopin ES G9 Capsule (Halogen)*	460	*380.1*	82.6	33	33.6	<108	C	*D*	
Set 38	40W Frosted Halopin G9 Capsule (Halogen)	460	417.1	>90	40	40.6	<108	E	E	
Set 39	70W Frosted Classic A ES GLS (Halogen) E27	1240	1153.1	>90	70	75	<108	C	D	
Set 40	28W Clear Classic B ES Candle (Halogen) E27	345	343.9	>90	28	28.9	<108	D	D	
Set 41	60W Clear Halopin G9 Capsule (Halogen)	820	765	>90	60	60.8	<108	D	E	
Measured Performance	9 of the 12 halogen sample sets (75%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; Sets 26 and 27 had measured energy efficiency classes higher than the class declared; 3 sets failed to achieve their rated values of luminous flux and wattage values inside the tolerances required in Table 1 of BS EN 50285:1999 and failed to achieve their declared energy efficiency classes.									
Manufacturer's Response	The manufacturer elected to re-test.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Manufacturer's Results										
Set 5	42W Clear Classic A ES (Halogen) E27	630	594	94%	42	44.4	106%	C	C	
Set 6	230W Haloline ES R7 (Halogen)	5060	4901	97%	230	236	102%	C	C	
Set 37	33W Clear Halopin ES G9 Capsule (Halogen)	460	450	98%	33	34.4	104%	C	C	
Defra Comments	The re-tests on Sets 5,6 and 37 were carried out on 10, 5 and 5 samples of each model respectively so do not necessarily show that the Defra results may be discounted.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Philips									
Lamp Type	Tungsten Halogen									
Set 3	*60W Clickline Frosted G9 Capsule (Halogen)*	780	780	>90	60	61.3	<108	D*	*E*	**Rated E*
Set 5	*20W Edore A55 Ivory GLS (Halogen) B22*	310	*276.9*	89.3	20	20.5	<108	C	C	
Set 8	40W Clear Brilliant G9 Capsule (Halogen)	300	306.7	>90	40	40.3	<108	G	G	
Set 9	*42W EcoClassic A60 Pearl GLS (Halogen) E27*	*630*	*544.2*	86.4	42	42.8	<108	D*	D	*Rated C
Set 10	*70W EcoClassic30 A60 Pearl GLS (Halogen) E27*	*1200*	*1061.2*	88.4	70	73.7	<108	C	*D*	
Set 11	28W EcoClassic30 B35 Frosted Candle (Halogen) E14	340	333.6	>90	28	28.8	<108	D	D	
Set 12	28W EcoHalo Clear G9 (Halogen)	340	330.4	>90	28	28.5	<108	D	D	
Set 14	*42W EcoHalo Clear G9 (Halogen)*	630	*566.1*	88.3	42	43.2	<108	C	*D*	
Set 17	20W EcoClassic B35 Brilliant Candle (Halogen) B22	370	340.2	>90	20	19.9	<108	B	C	
Set 24	25W Frosted Brilliant G9 Capsule (Halogen)	150	151.5	>90	25	25	<108	G	G	
Set 26	*100W Clear Brilliant K7 Linear R7 (Halogen*	1600	*1439.1*	89.9	100	103.9	<108	D	*E*	
Set 27	300W Clear Brilliant F7 Linear R7	4480	6053.8	>90	300	323.9	<108	E	D	

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
	(Halogen)									
Set 28	60W Clear Brilliant Krypton E60H 14040 (Halogen) E27	840	757.3	>90	60	59.3	<108	D	E	
Measured Performance	8 of the 13 halogen sample sets (57%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in Table 1 of BS EN 50285:1999; Set 27 had a measured energy efficiency class higher than the class declared; 5 sets failed to achieve their declared values for luminous flux within the tolerances required in Table 1 of BS EN 50285:1999 and of these 3 sets failed to achieve their declared energy efficiency classes; 2 sets had declared energy efficiency classes that had been incorrectly calculated from their rated values of luminous flux and wattage and of these, 1 set had a declared value higher than that correctly calculated and had failed to achieve this level. This set (set 3) was considered to have failed to achieve its declared energy efficiency class									
Manufacturer's Response	Sets 3, 5, 9 and 10 lamps are to be phased out in September 2009; set 14 has had design improvement to improve luminous flux to >90% The manufacturer challenged the results and offered previously obtained factory measurements for consideration. The results supplied were for tests on the lamp model in sets 5, 9, 10, 14 and 26.									
Manufacturer's Results										
Set 5	20W EcoClassic 50 A55 240V B22 IV	310	306	107	20	21.3	106.5	C	C	
Set 9	EcoClassic30 A60 42W 240V FR	630	579	91.9	42	44.5	105	C	C	
Set 10	EcoClassic30 A60 70W 240V FR	1200	1100.4	91.7	70	74	105.7	C	C	
Set 14	42W ClickLine 240V EcoHalo G9	630	571	90.6	42	43.1	102.6	C	C	
Set 26	100W Compact Linear R7 240V	1600	1516	94.8	100	100.7	100.7	D	D	
Defra Comments	The tests on the models in sets 5, 9, 10, 14 and 26 were carried out previously over a long period of time on unspecified numbers of factory samples not purchased from retail outlets and so the manufacturer's results do not necessarily show that the Defra results may be discounted.									
Manufacturer's Comments	For the Market Picture Testing - Household Electric Lamps, the specified measurement standard for compliance of BS EN 50285; 1999 was not used for sampling. BS EN 50285: 1999, Clause 5 Verification requires that "The minimum sample size shall be twenty lamps. The sample shall be representative of a manufacturer's production. This can be achieved by randomly selecting lamps from at least four different points of sale. If these results do not comply with the requirements, the manufacturer's test results shall be requested. The results supplied by Philips were the manufacturers test records, representative of the manufacturer's production, as required for the verification of the declared values to the BS EN 50285: 1999.									

Energy Label Requirement		Luminous Flux (Lumens)			Input Power (Watts)			Energy Efficiency Class		
Tolerances allowed in Standard (EN 50285:1999)		Measured value > 95% of rated value			Measured value < 110% of rated value			Not Defined		
		Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured (Average of set)	Tolerances (% of rated value)	Level/Value Declared	Level/Value Measured	
Brand	Sylvania									
Lamp Type	Tungsten Halogen									
Set 1	60W Frosted Hi-pin G9 Capsule (Halogen)	720	652.6	>90	60	59.6	<108	E	E	
Set 9	40W Clear Hi-pin G9 Capsule (Halogen	440	410.9	>90	40	39.2	<108	E	E	
Set 10	*40W Frosted Hi-pin G9 Capsule (Halogen)*	420	*372.2*	88.6	40	40.5	<108	E	*F*	
Set 11	*60W Clear Hi-pin G9 Capsule (Halogen)*	740	*659.8*	89.2	60	60	<108	E	E	
Set 12	75W Frosted Hi-pin G9 Capsule (Halogen)	950	907.8	>90	75	75.2	<108	E	E	
Set 13	25W Clear Hi-pin G9 Capsule (Halogen)	240	256.5	>90	25	26	<108	E	E	
Set 14	*25W Frosted Hi-pin G9 Capsule (Halogen)*	210	*160.4*	76.4	25	25.2	<108	E	*G*	
Set 15	75W Clear Hi-pin G9 Capsule (Halogen	1000	920.6	>90	75	76	<108	E	E	
Measured Performance	5 of the 8 halogen sample sets (63%) achieved the declared Energy Efficiency Classification and the luminous flux and wattage values within the tolerances required in accordance with Table 1 of BS EN 50285:1999; 3 sets failed to achieve their declared values for luminous flux within the tolerances required in Table 1 of BS EN 50285:1999 and of these 2 sets failed to achieve their declared energy efficiency classes Of the 2 sets that failed to achieve the declared Energy Efficiency Classification, set 14 was more than one class lower than the declared Energy Efficiency Classification.									
Manufacturer's Response										

The manufacturer accepted the Defra results and indicated that changes had been made so that lamps manufactured after December 2008 meet all the performance requirements declared on the label. In addition, Following the EuP directive of September 1st 2009, they no longer manufacture Frosted Hi-Pin G9 lamps but now supply Hi-Pin G9 Clear as an energy saver version, offering 30% energy savings.