LIA Laboratories Limited

Certificate of Test Reference LH1014C

This is to confirm that:

S Lilley & Son Ltd
80 Alcester Street
Birmingham
West Midlands
B12 0QE

Model Reference(s): 7707E/**AB123** (Refer to General product information in Test Report for details)

Product Description(s): Heavy Duty Batten Earthed Custom Brass Lampholder

Conforms to IEC 60238 (Eighth Edition): 2004 + A1: 2008 + A2:2011.

Date on test	:	01/10/2015
Date of Issue	:	21/03/2018
Date of Expiry	:	20/03/2023

Tested by	:	**A. BOROVY**
Title	:	Technical Lead – Product Safety

Approved by	:	**T. MALIK**
Title	:	Operations Manager

1286

This Certificate is only valid when used in conjunction with the accompanying test report.

Registered Office: Stafford Park 7, Telford, Shropshire, TF3 3BQ, United Kingdom
Tel: +44 (0) 1952 290907 **Fax:** +44 (0) 1952 290908 **Email:** lab@thelia.org.uk
Web: www.lialab.org.uk
Web: www.lialabcert.org.uk

Test Report issued under the responsibility of:

LIA Laboratories Limited, Stafford Park 7, Telford, Shropshire, TF3 3BQ

TEST REPORT
Edison screw lampholders

Report Number. .....:	**LH1014C**
Date of issue .....:	**2018 March 21**
Total number of pages.....	**22 (Test report – 20 pages, Engineering drawing – 1 page, National differences – 1 page)**
Applicant's name.....:	**S Lilley & Son Ltd**
Address .....:	**80 Alcester Street Birmingham West Midlands B12 0QE**
Test specification:	
Standard.....:	IEC 60238 (Eighth Edition): 2004 + A1: 2008 + A2:2011
Non-standard test method……..:	N/A

Test item description .....:	Heavy Duty Batten Earthed Custom Brass Lampholder
Trade Mark .....:	S.LILLEY
Manufacturer.....:	S.LILLEY
Model/Type reference .....:	7707E/**AB123** (Refer to General product information for details)
Ratings .....:	250V, 4A

Registered Office: Stafford Park 7, Telford, Shropshire, TF3 3BQ, United Kingdom
Tel: +44 (0) 1952 290907 **Fax:** +44 (0) 1952 290908 **Email:** lab@thelia.org.uk
Web: www.lialab.org.uk
Web: www.lialabcert.org.uk

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	LIA Laboratories Limited	
Testing location/ address .....:		Stafford Park 7, Telford, Shropshire, TF3 3BQ	
☐	**Associated CB Laboratory:**		
Testing location/ address .....:			
	Tested by (name + signature) .....:	Anton Borovy	
	Approved by (name + signature) ..:	Tariq Malik	
☐	**Testing procedure: TMP**		
Testing location/ address .....:			
	Tested by (name + signature) .....:		
	Approved by (name + signature) ..:		
☐	**Testing procedure: WMT**		
Testing location/ address .....:			
	Tested by (name + signature) .....:		
	Witnessed by (name + signature) .:		
	Approved by (name + signature) ..:		
☐	**Testing procedure: SMT**		
Testing location/ address .....:			
	Tested by (name + signature) .....:		
	Approved by (name + signature) ..:		
	Supervised by (name + signature) :		
☐	**Testing procedure: RMT**		
Testing location/ address .....:			
	Tested by (name + signature) .....:		
	Approved by (name + signature) ..:		
	Supervised by (name + signature) :		

List of Attachments (including a total number of pages in each attachment):

Attachment 1:Equipment (1 page)

Attachment 2:Photographs (3 page)

Attachment 3:Engineering drawing (1 page)

Attachment 4:National Differences (1 page)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
8 Dimensions 9 Protection against electric shock 12 Construction 14 Moisture resistance, insulation resistance and electric strength 21 Resistance to excessive residual stresses (season cracking) and to rusting Annex A (normative) season cracking/corrosion test National differences Clauses 1, 2, 7, 10, 11, 15, 16, 17, 18, 19 and 20 assessed under original report LH1012K. Family variants assessed by testing the largest and the smallest sizes.	LIA Laboratories Limited Stafford Park 7 Telford Shropshire TF3 3BQ

Summary of compliance with National Differences

List of countries addressed:

UK
Australia
New Zealand

☒ **The product fulfils the requirements of IEC 60238 (Eighth Edition): 2004 + A1: 2008 + A2:2011 and BS EN 60238:2004+A2:2011**

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Test item particulars.....:	Heavy Duty Batten Earthed Custom Brass Lampholder
Type of lampholder:	
- insulated lampholder:	No
- metal lampholder:	Yes
- ordinary lampholder:	Yes
- drip-proof lampholder:	No
- threaded entry lampholder:	Yes
- cord-grip lampholder:	No
- backplate lampholder:	No
- other lampholder:	No
- E5 lampholder:	No
- E10 lampholder:	No
- E14 lampholder:	No
- E27 lampholder:	Yes
- E40 lampholder:	No
- switched lampholder:	No
- unenclosed lampholder:	No
- enclose lampholder:	Yes
- independent lampholder:	Yes
- partly reinforced insulated lampholder:	No
- enclosed reinforced insulated lampholder:	No
Rated operating temperature (°C) (T marked lampholder)……:	T170
Classification of installation and use.....:	**Class I**
Supply Connection.....:	**4A/250V**
.....:	
Possible test case verdicts:	
- test case does not apply to the test object .....:	**N/A**
- test object does meet the requirement.....:	**P (Pass)**
- test object does not meet the requirement .....:	**F (Fail)**
Testing.....:	
Date of receipt of test item.....:	**2015-10-01**
Date (s) of performance of tests .....:	**2015-10-01 - 2018-03-16**
General remarks:	

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... : S.Lilley & Son Ltd.,
80 Alcester Street,
Birmingham,
B12 0Q

General product information:

E27 lamp holder
250V, 4A
T170

Family variants:

7707E/**AB123**

AB – Unique client reference
123 - Specific design criteria – maximum outer diameter, outer surface design and colour.

Colour variations are achieved by chemical treatment of the brass, no coatings are applied.

Engineering drawings and design criteria will be held by the manufacturer for every variant however maximum and minimum dimensions apply, please refer to Attachment 3 for dimensional limits assessed under this report.

5	STANDARD RATINGS (Sample 1, 2 and 3)		P
5.1	Rated voltage in accordance with required values	250V	P
5.2 & 5.3	Rated current in accordance with required values	4A	P
5.4	Rated operating temperature for T marked lampholders not less than minimum values	170°C	P

6	CLASSIFICATION (See front page) (Sample 1, 2 and 3)	P

8	DIMENSIONS (Sample 1, 2 and 3)		P
8.1	Distance from outer end of screwed shell to central contact, measured according to Standard Sheet 7005-20		P
	Compliance with gauges according to IEC 60061:		P
	- for E10, E14, and E40 ("Go"-gauge, 7006-25)		N/A
	- for E27 ("Go"-gauge, 7006-25A)		P
	- for E10, E14, E27, and E40 ("Not go"-gauge, 7006-26)		P
	- Lampholders designed with a barrel thread for shade holder rings and shade holder rings comply with IEC 60399		N/A
8.2	Lampholders shall allow insertion of all corresponding lamps so as to make contact. Compliance with gauges according to IEC 60061-3:		P
	- for E14, 7006-30 and 7006-31		N/A
	- for E14, candle, 7006-30A and 7006-31		N/A
	- for E27, 7006-21 and 7006-22A		P
	- for E40, 7006-23 and 7006-24		N/A
	E5 and E10 lampholders checked by means of the corresponding lamp delivered by the manufacturer		N/A
	For lampholders use in appliances other than luminaries only:		N/A
	Check maximum lamp outlines according to IEC 60630		N/A
	Following this checking, the contact-making gauge applied		N/A
8.3	Minimum thickness of screwed shell according to table 1:		P
	- unsupported		N/A
	- supported		N/A
	Minimum thickness of resilient side or central contacts	0.49mm	P
8.4	Minimum length of screw engagement of shell and dome according to table 2 (not applicable for lampholders E5 and E10):		P
	- metal lampholder: rolled thread	8.21mm>7.0mm	P
	- metal lampholder: cut thread		N/A
	- lampholder of insulating material		N/A

	- or at least two turns and complying with the test of 15.3		P
8.5	Threaded entry lampholder provided with the following screw threads (fig. 1a or 1b) (not applicable for lampholders E5 and E10):		P
	- for E14: M10x1		N/A
	- for E27: M10x1, M13x1 or M16x1		P
	- for E40: M13x1, M16x1 (or G3/8A)		N/A
	Compliance with gauges according to fig. 2a or 2b.		P
8.6	Dimensions of threaded entries and set screws in accordance with table 3 (not applicable for lampholders E5 and E10):		P
	- length of thread, metal		N/A
	- length of thread, insulating material		P
	- diameter of set screw with head		N/A
	- diameter of set screw without head: one screw		N/A
	- diameter of set screw without head: two or more screws		N/A
8.7	The lampholder does not interfere with proper engagement or disengagement of lamps, the contacts do not present a cutting edge to the lamp cap:		P
	- for E27, compliance with gauge 7006-22B		P
	- other lampholders checked by inspection		N/A

9	PROTECTION AGAINST ELECTRIC SHOCK (Sample 1, 2 and 3)		P
9.1	Lamp caps not accessible during insertion in lampholders E5, E10, E14, and E27. Lamp cap not accessible when fully inserted in lampholder E40: (T4-T6)		P
	- for E10, compliance checked by means of corresponding lamp and standard test finger		N/A
	- for E14, compliance with gauge 7006-31		N/A
	- for E27, compliance with gauge 7006-22A		P
	- for E40, compliance with gauge 7006-24		N/A
9.2	External parts of enclosed and independent lampholders so designed that live parts are not accessible		P
	Candle lampholder tested with/without decorative cover		N/A
	Compliance checked with standard test finger		P
9.3	Parts providing protection against accidental contact reliably secured so that they will not become detached when a tightly fitting lamp is removed or when a shade is rotated		P
	Torque test with test cap according to fig. 13 (test cap B) or fig. 14 :		P
	- E14 with a torque of 1 Nm		N/A
	- E27 with a torque of 2 Nm		P

	Not possible to dismantle lampholders E5 and E10 without the aid of a tool		N/A
9.4	Provisions for attaching a shade to the lampholder, e.g. a shade ring		N/A
	The shade not to be fixed between parts providing protection against electric shock		N/A
9.5	External parts made of insulating material for:		N/A
	- drip-proof lampholders		N/A
	- lampholders with a rated voltage of more than 250 V		N/A
	- switched lampholders		N/A
	- E5 and E10 lampholders		N/A
	If not of insulating material, these parts cannot become live even in the event of a fault		N/A
	Lacquer or enamel not used to provide adequate protection		N/A

12	CONSTRUCTION (Sample 1, 2 and 3)		P
12.1	The lampholder provided with a screw thread of Edison form for holding the lamp		P
	Screw shell made of metal	Plastic	N/A
	Metal thread is continuous over a length not less than specified in Standard Sheet 7005-20 of IEC60061-2		N/A
	Screw shell made of other material and so designed and with such tolerances that proper engagement with relevant gauges is ensured throughout the life of the holder		P
	Terminal/contact assembly and the screw shell are so constructed and located as to prevent canting or rotation which may impair the use of the lampholder		P
	Deviation from the requirement for a continuous thread is made to provide a technical advantage		P
	The lampholder complies with the feeler gauge of 0,08 x 5,0 mm		P
	The lampholder does not score the neck of the bulb of a normal standard lamp		P
	The male screw thread of an adapter is of the same size or larger than its female screw thread		N/A
12.2	The space in the dome is ample for fitting a flexible cable or cord with specified cross-sectional area		P
	No sharp edges or a shape likely to damage the insulation of the conductors		P
	Test with lampholder screwed onto a conduit of 10 cm length		N/A
	After dismantling, cables or cord not damaged		P

	The threaded entry provided with means to prevent the conduit from entering too far		N/A
	The dome screwed onto a steel conduit with the specified torque		N/A
	The conduit does not enter the space for the supply wires in the dome		N/A
	The lampholder does not show any change impairing its further use		P
12.3	Accessible parts of switched lampholders made of insulating material unless a loose wire or screw cannot bridge accessible parts and live parts	No switch	N/A
12.4	Contact between metal screw shell and metal outer shell is prevented by an insulating ring which cannot be separated by hand	Plastic screw shell	N/A
12.5	It is possible to lock the threaded entry on the conduit		N/A
	It is possible to operate the locking device from the inside, if provided as part of the lampholder (except for E5 and E10 lampholders)		N/A
	For lampsholders having an integral locking device, by the test of 15.4		N/A
12.6	Cord anchorage relieves the conductor from strain and prevents twisting	No cord anchorage	N/A
	The outer covering of the cord is gripped in the lampholder		N/A
	The outer covering of the cord is protected from abrasion		N/A
	It is clear how relief from strain and prevention from twisting shall be effected		N/A
	Not possible to push the cord into the lampholder to such an extent that the cord is subjected to undue mechanical or thermal stress		N/A
	Methods such as tying the cord into a knot or tying the ends with strings are not permissible		N/A
	Cord anchorage made of insulating material or provided with a fixed insulating lining if an insulation fault on the cord can make accessible metal parts live		N/A
	Cord anchorage is so designed that:		N/A
	- at least one part is fixed to or integral with the lampholder		N/A
	- it is suitable for the different types of flexible cord which may be connected to the lampholder		N/A
	- it does not exert excessive pressure on the cord		N/A
	- it is unlikely to be damaged when tightened or loosened as in normal use		N/A
	Cord anchorage suitable for flexible cords of the following types:		N/A

	- 60245 IEC 51		N/A
	- 60245 IEC 53 or the like		N/A
	- 60227 IEC 52		N/A
	Not possible to push the cord further into the lampholder after connection		N/A
	Pull test 100 times and torque test according to table 6		N/A
	Test repeated with specified types of cord and cross-sectional area		N/A
	Pull test 50 times, 30 N for lampholders designed for chain connection		N/A
	No damage to the flexible cord during the test		N/A
	After the test:		PP
	- no displacement of cord by more than 2 mm		N/A
	- no noticeable movement at the end of the conductors in the terminals		N/A
12.7	Suspending devices shall have no accessible metal parts which can become alive, even in the event of a fault in the lampholder		N/A
	Suspending devices intended to be screwed into a threaded entry lampholder comply with the requirements of 12.2		N/A
12.8	Backplate lampholder not specifically intended for building-in provided with a recess for supply wires	Building-in	N/A
	This recess have following minimum dimensions (not applicable for lampholders E5 and E10)		N/A
	- height 7mm;		N/A
	- length equal to diameter or width of the base;		N/A
	- width 16mm enlarged to a circular space 23mm in diameter in the centre.		N/A
12.9	Backplate lampholder, other than those intended for building-in provided with holes for fixing screws (not applicable for lampholders E5 and E10)	Building-in	N/A
	Holes for the fixing screws comply with gauge (fig. 3)		N/A
	The bush enters the recess for the screw head		N/A
12.10	Backplate lampholder provided with cable entries on accessible external surface		N/A
	The cable entries allow the introduction of cable covering, conduit or trunking etc. so far as to afford complete mechanical protection for a distance of min. 1 mm		N/A
12.11	The contacts so designed and constructed so as to ensure effective and reliable electrical contact		P

	The function of the contacts independent of the function of an optional locking device between dome and outer shell		P
	E40 lampholder of the contact-making shell type		N/A
12.12	The lampholder not fitted with a socket-outlet		P
12.13	Device for bridging the lamp filament not integral with the lampholder		N/A
12.14	Lampholders with a retention device can withstand a certain unscrewing torque.		N/A
	Removal torque……:		N/A

14	MOISTURE RESISTANCE, INSULATION RESISTANCE AND ELECTRIC STRENGTH (Sample 1, 2 and 3)		P
14.1	Drip-proof construction provides the necessary degree of protection against ingress of water	Not drip proof	N/A
	Electric strength test as specified in 14.4		N/A
	Inspection shows that no water has entered to an appreciable extent		N/A
14.2	Inlet openings of drip-proof lampholders allow connections such that they prevent drops of water from reaching the inside of the lampholder		N/A
14.3	Humidity treatment:		P
	- 48 h for ordinary lampholders		P
	- 168 h for IPX1 drip-proof lampholders		N/A
	No damage to the lampholder		P
14.4	a) Minimum insulation resistance at 500 V d.c.: between live parts of different polarity (2 MΩ):		P
	- with test cap (fig. 11)	586MΩ	P
	- on the empty lampholder	156MΩ	P
	b) Minimum insulation resistance at 500 V d.c.: between live parts connected together and the body (4 MΩ):		P
	- with test cap (fig. 11)	122MΩ	P
	- on the empty lampholder	53MΩ	P
	c) Minimum insulation resistance at 500 V d.c.: between accessible metal parts and metal foil on the inside of insulating lining, if any (4 MΩ)	53MΩ	P
	Electric strength test for 1 min:		P
	- between live parts of different polarity (2U + 1000 V or 500 V for E5 and E10)		N/A
	- between live parts connected together and the body (2U + 1000 V)	1500V	P
	- between accessible metal parts and metal foil on the inside of insulating lining, if any (2U + 1000 V)	1500V	P

	- between live parts and other metal parts in switched lampholders (switch closed and open) (2U + 1000 V)		N/A
	For enclosed and unenclosed reinforced insulated lampholders, the test voltage is determined from Table 10.2 of IEC 60598-1		N/A
	- between live parts of different polarity (2U + 1000 V)		N/A
	- between live parts connected together and the body (4U + 2750 V)		N/A
	- between accessible metal parts and metal foil on the inside of insulating lining, if any (4U + 2750 V)		N/A
	- between live parts and other metal parts in switched lampholders (switch closed and open) (4U + 2750 V)		N/A
	No flashover or breakdown occurs		P

21	RESISTANCE TO SEASON CRACKING AND TO RUSTING (Sample 9)		P
21.1	Contacts and other parts of copper or copper alloy do not show any cracks after the test in ammonium chloride solution, inspected at 8 x optical magnification		P
21.2	No signs of rust after the prescribed test		N/A

	ANNEX: screwless terminals (test made on separate samples)	N/A

(15)	SCREWLESS TERMINALS	N/A
	No screwless terminals on lampholder	—

Attachment 1: Test equipment

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)
8 Dimensions	Distances/ Dimensions	Go–gauge 372H Not go gauge 372D Gauge for testing protection against bulb-neck damage 372B Micrometer 218 Caliper 08 Gauge for detecting side-contacts with cutting-edges in lampholder 372C Force gauge 187 Power meter 146
9 Protection against electric shock	Lamp cap accessibility	Gauge for testing contact-making and protection against accidental contact during insertion of lamps in lampholder 372I Test finger 13 Gauge 372E Torque driver 305
14 Moisture resistance, insulation resistance and electric strength	Moisture resistance, insulation resistance and electric strength	Humidity chamber 47 Electric strength tester 140 Insulation resistance tester 186
21 Resistance to residual stresses and to rusting	Resistance to season cracking	PH meter 171 Environmental chamber 310

Attachment 2: Photographs

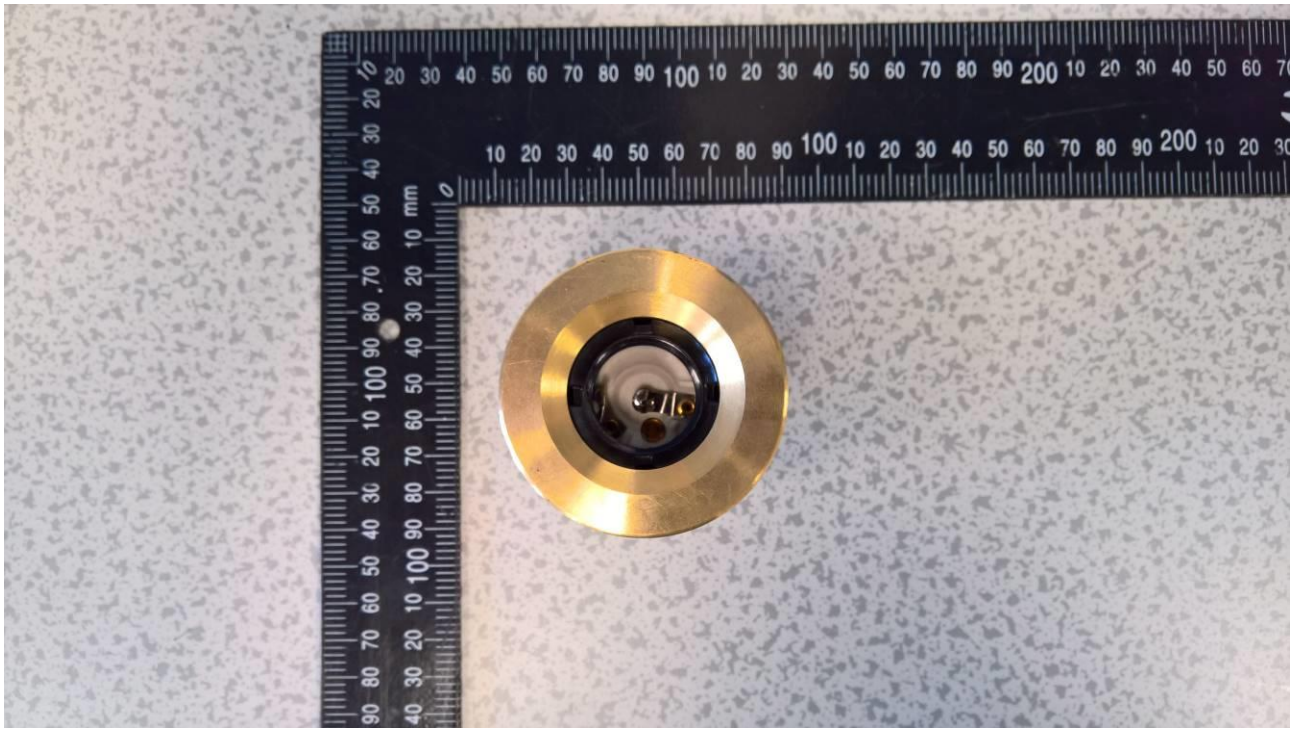


Illustration 1: Lampholder model 7700E maximum outer diameter

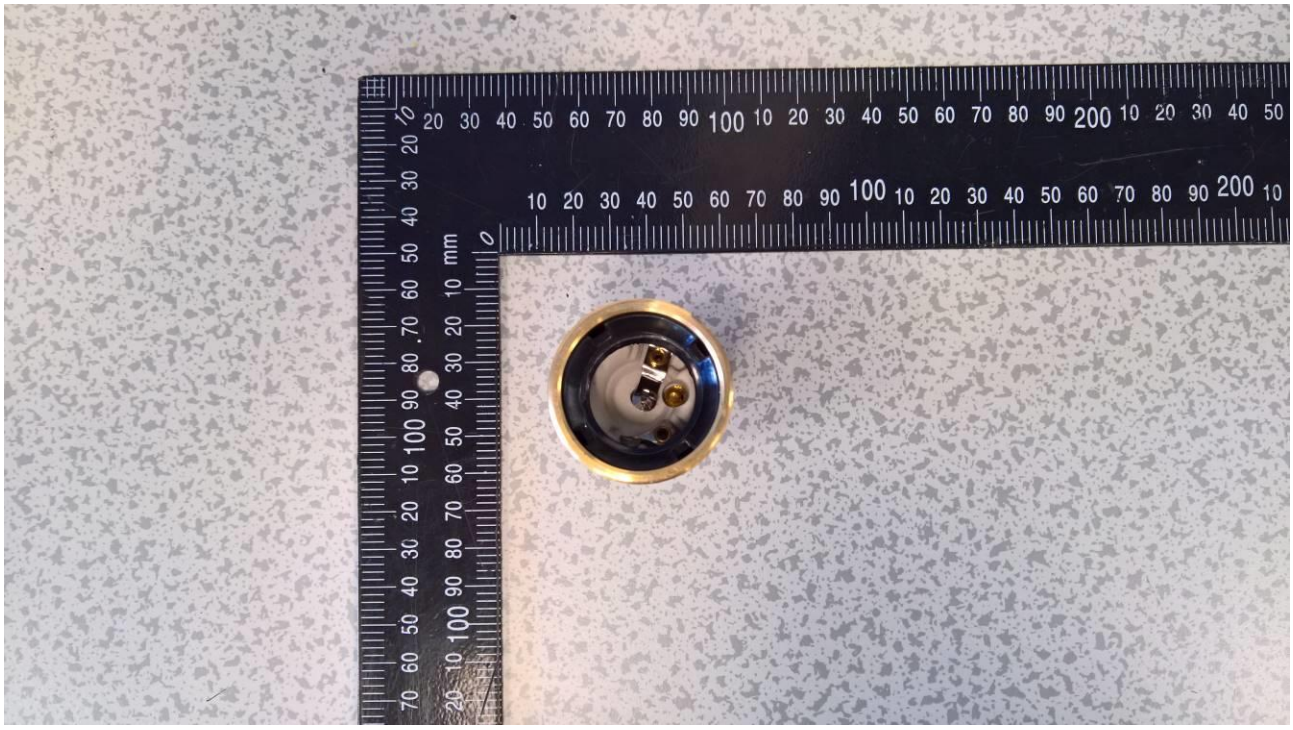


Illustration 2: Lampholder model 7700E minimum outer diameter

Illustration 3: Lampholder components (minimum outer diameter)

Illustration 4: Lampholder model 7707E assembled (view from cable entry)

Illustration 5: Ceramic base

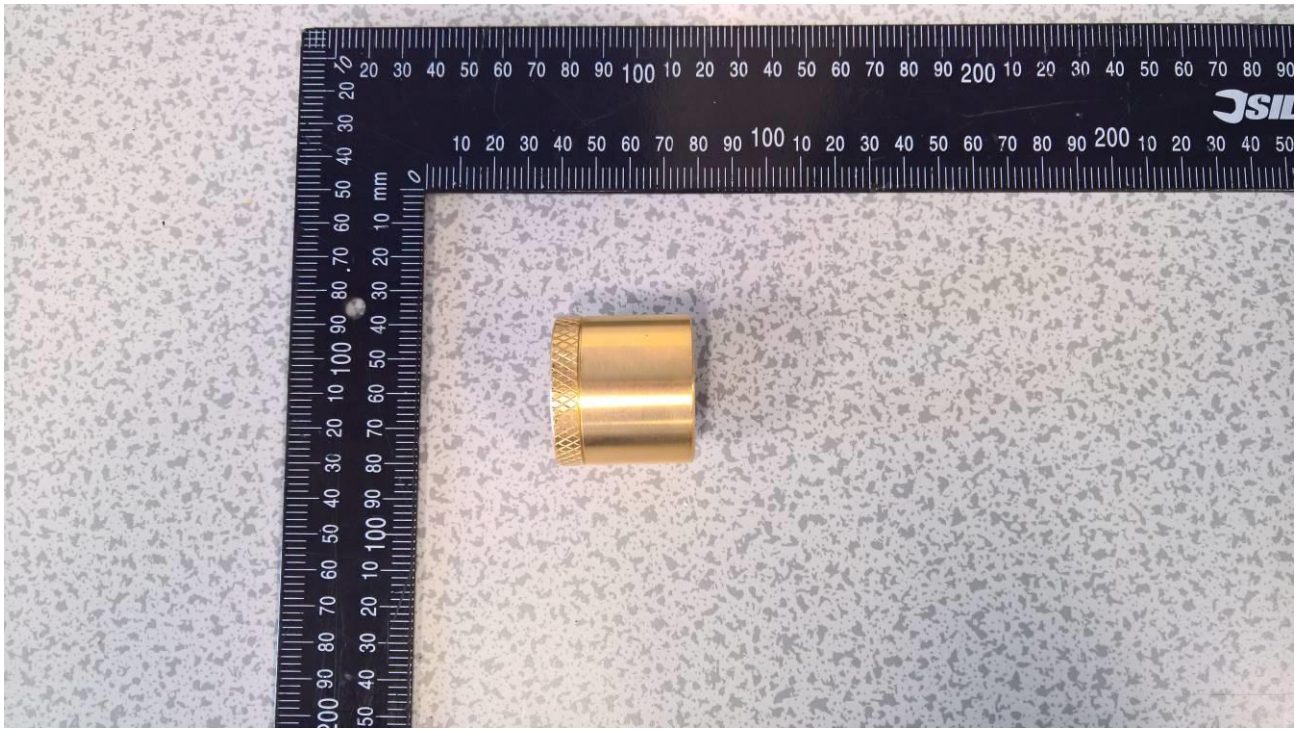


Illustration 6: Example of design on outer surface

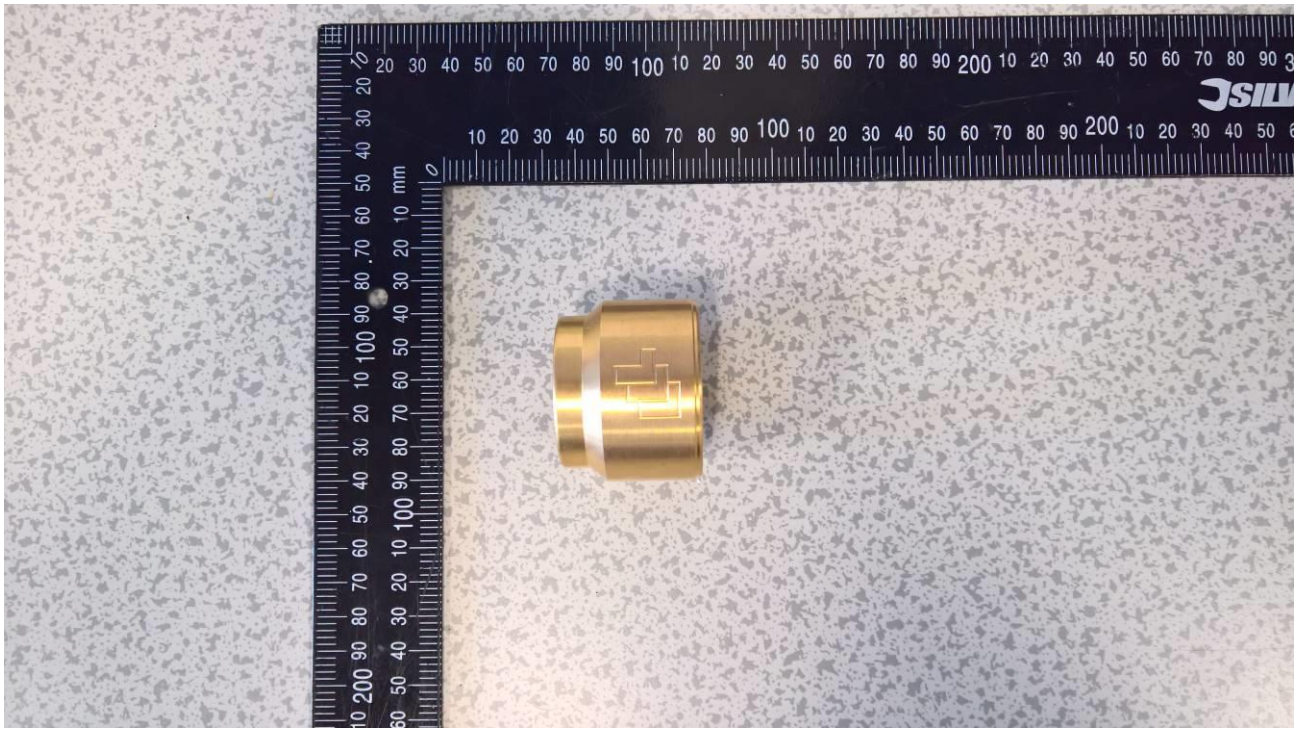


Illustration 7: Example of design on outer surface

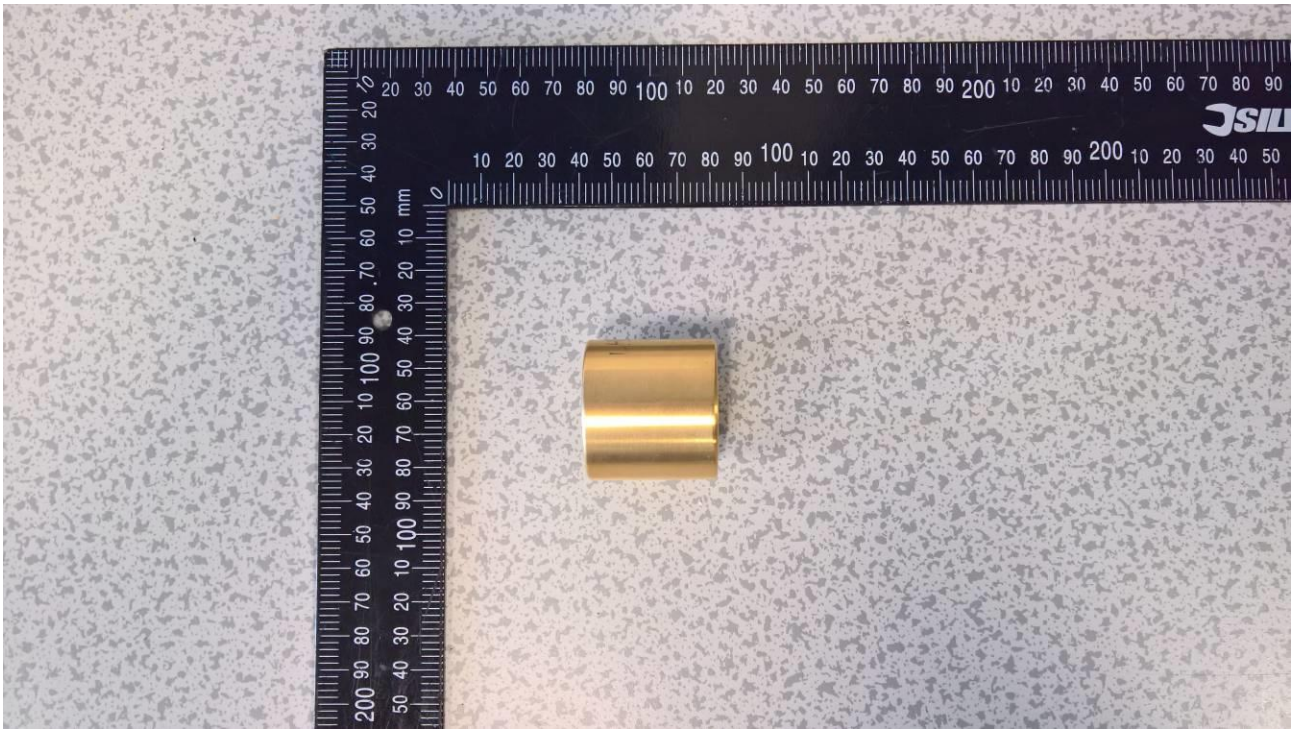


Illustration 8: Example of design on outer surface

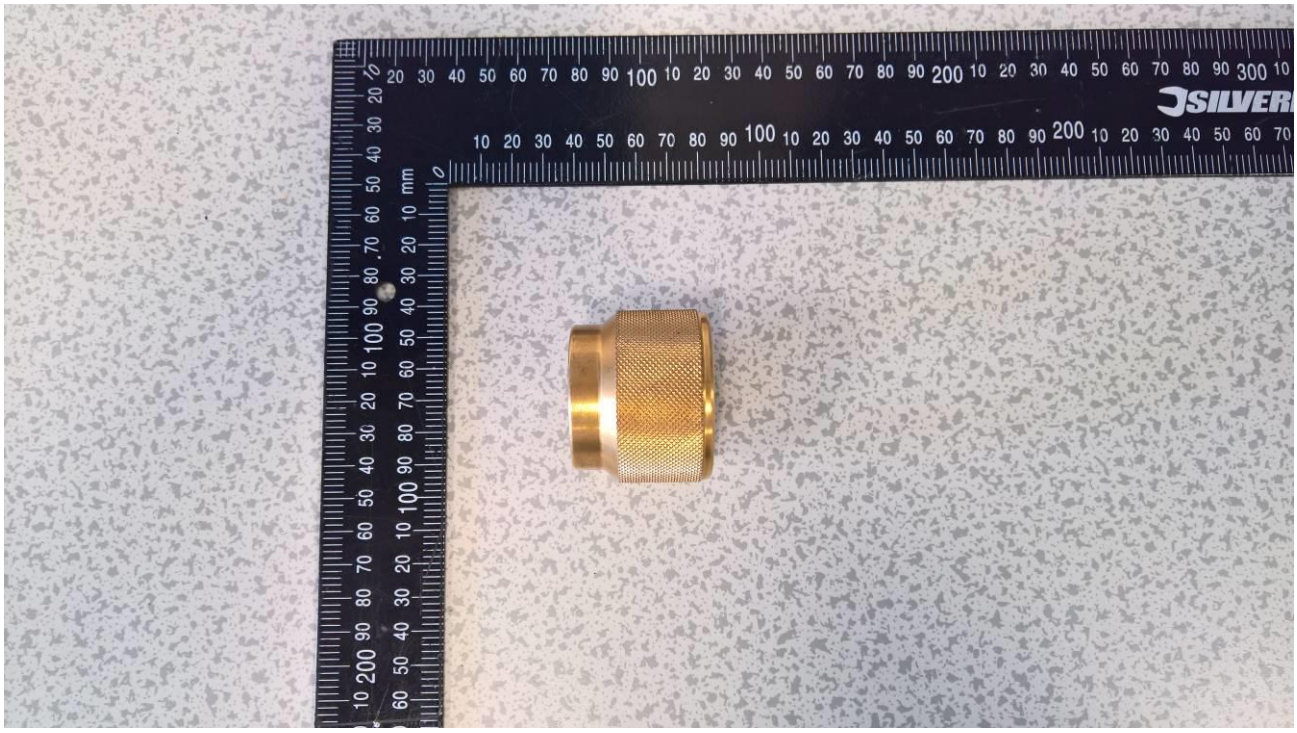


Illustration 9: Example of design on outer surface

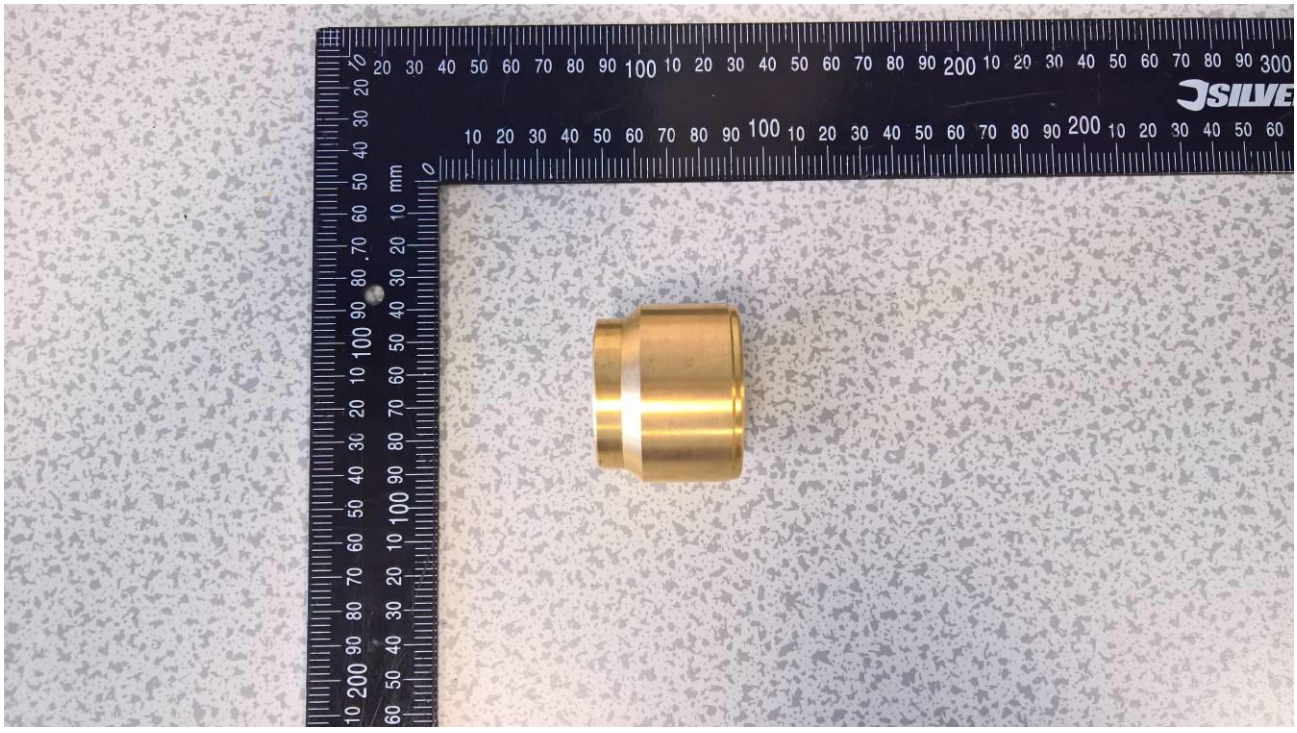


Illustration 10: Example of design on outer surface

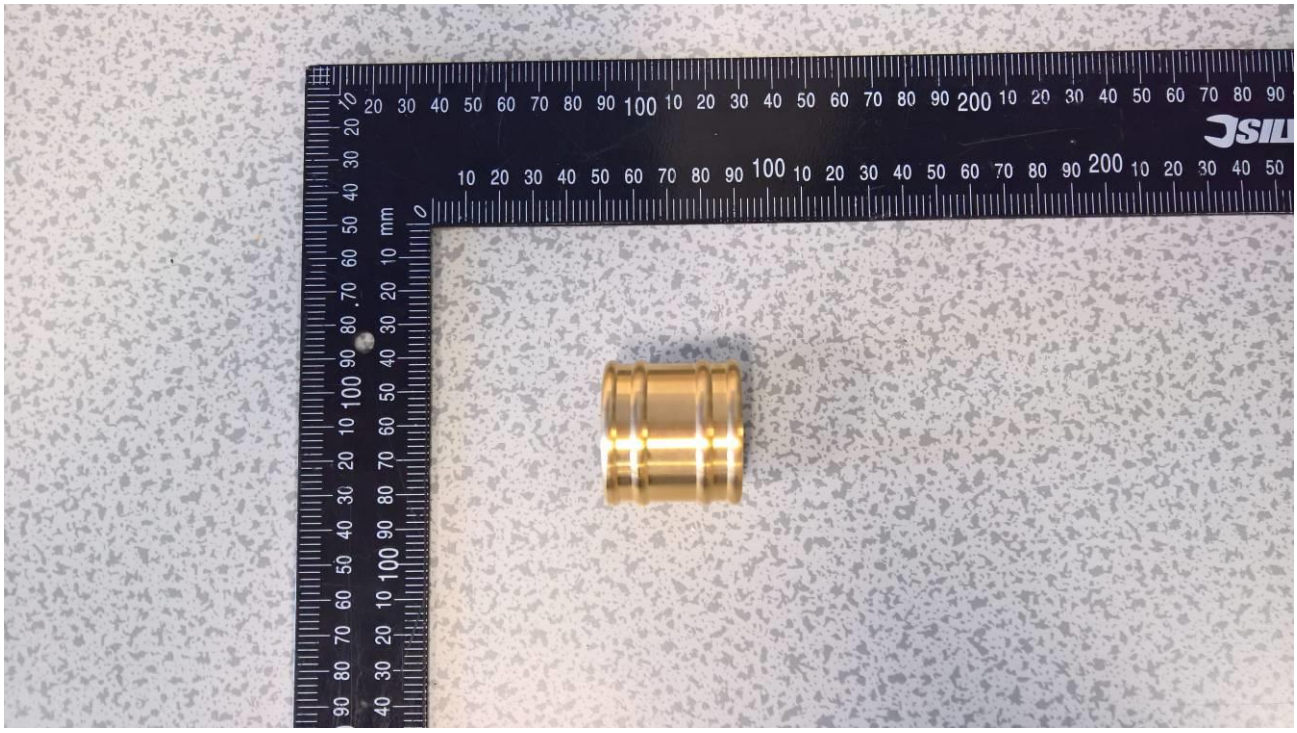


Illustration 11: Example of design on outer surface

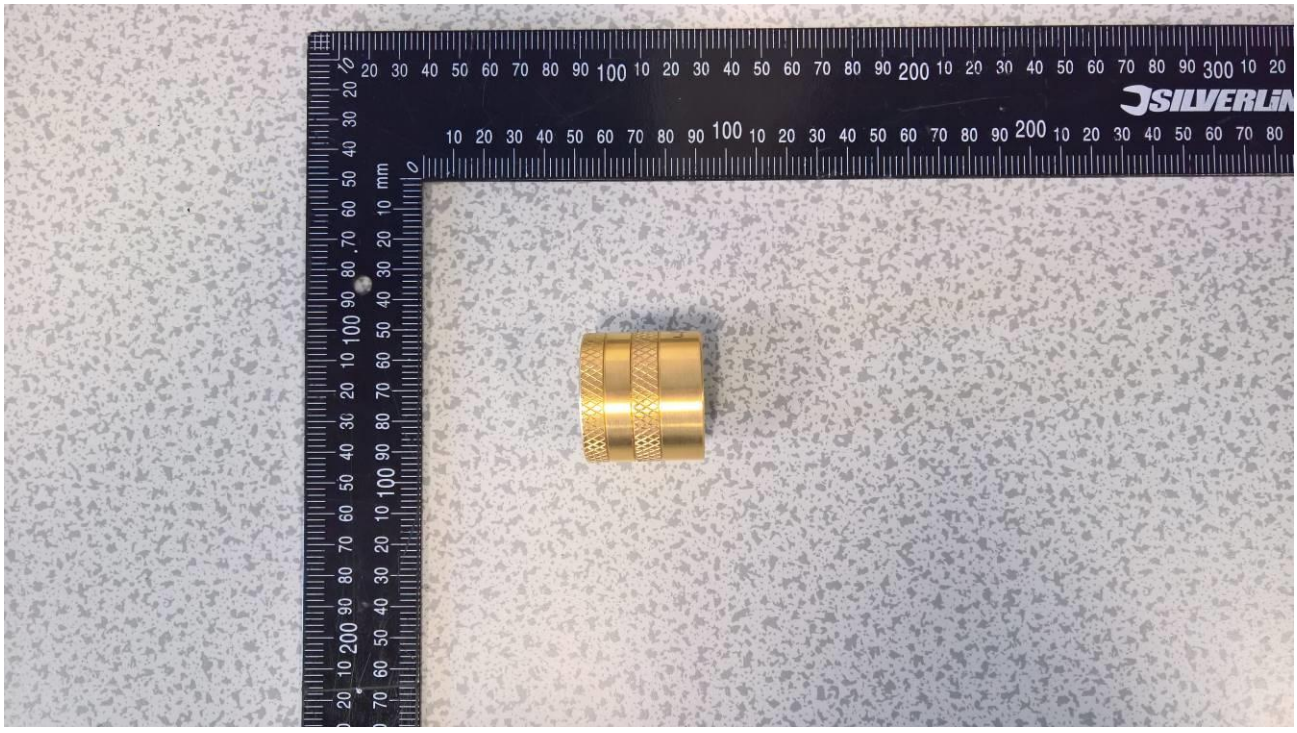
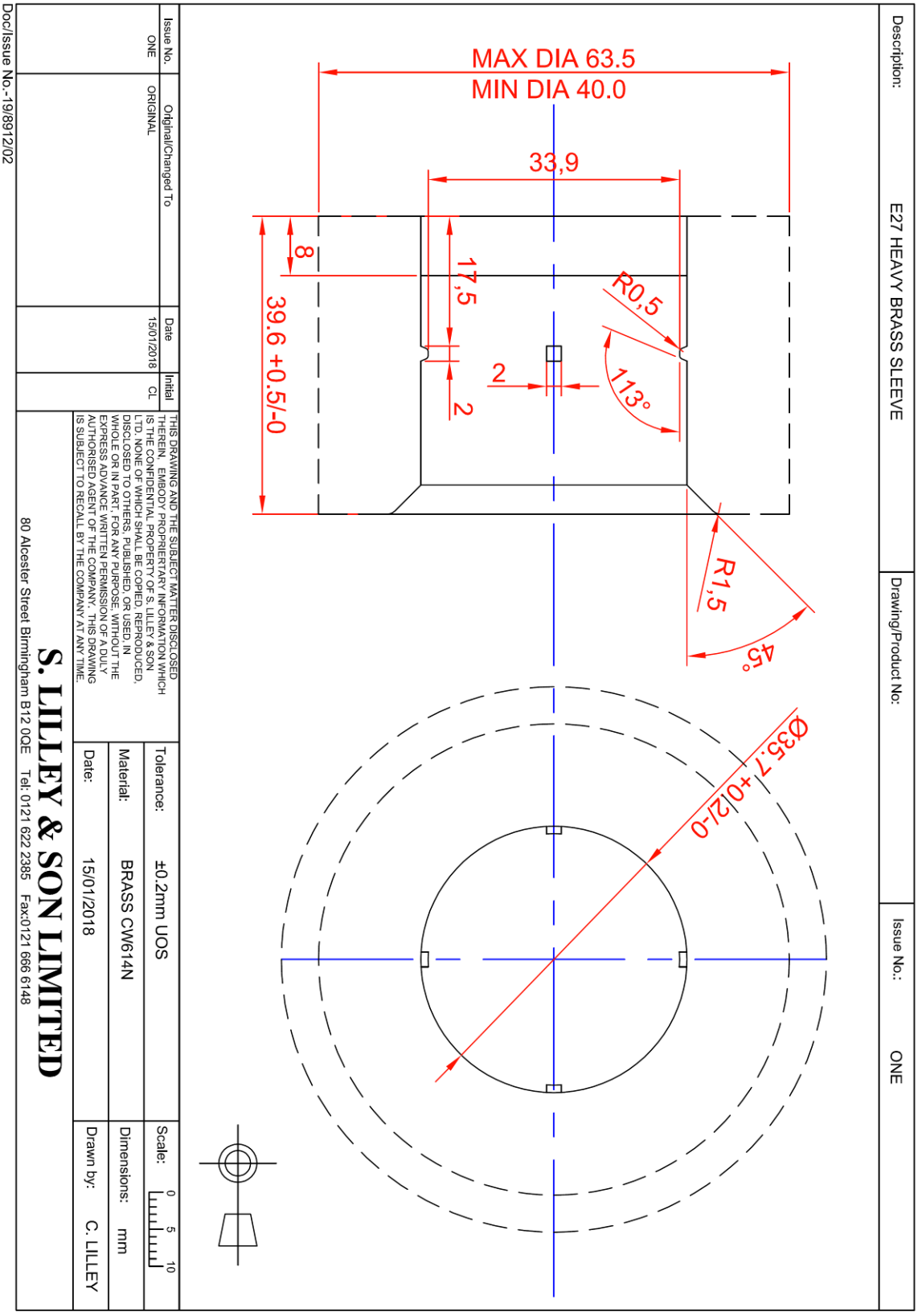


Illustration 12: Example of design on outer surface

Attachment 3: Engineering Drawing



Attachment 4: National Differences

	NATIONAL DIFFERENCES	Verdict
	Assessment of Australia and New Zealand to IEC 60238 (Eighth Edition): 2004 + A1: 2008 + A2:2011 No applicable national differences	P