TEST REPORT
Portable Electric Luminaires
UL 153

Report Number.....:	PTC26081408701S-UL01
Tested by (name + signature)..... :	Li shoulong Engineer
Approved by(name + signature)....:	Rocky Mao Manager
Date of issue.....:	September 05, 2026
Total number of pages.....	109

Name of Testing Laboratory preparing the Report..... :	Precise Testing & Certification (Guangdong) Co.,Ltd.
Testing location/ address.....:	Building1,No.6,TongxinRoad,Dongcheng Street,Dongguan, Guangdong,China
Applicant's name.....:	Jianbian Lighting Technology (Zhongshan) Co.,Ltd
Address.....:	4th Floor, Building B2,No.6 Hengfu Road, Guzhen Town, Zhongshan City, Guangdong Province
Manufacturer's name.....:	Bazhi Lighting Technology (Zhongshan) Co., Ltd.
Address.....:	4th Floor, Building B1,No.6 Hengfu Road, Guzhen Town, Zhongshan City, Guangdong Province
Name of factory (ies)..... :	Bazhi Lighting Technology (Zhongshan) Co., Ltd.
Address.....:	4th Floor, Building B1,No.6 Hengfu Road, Guzhen Town, Zhongshan City, Guangdong Province
Test specification:	
Standard..... :	UL 153:Ed13+R:24Feb2025
Non-standard test method.....:	N/A
Test Report Form(s) Originator.....:	PTC
Master TRF.....:	Dated 2026-01

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description.....:	Portable table lamp
Trade Mark.....:	jianbian
Model/Type reference.....:	See page 4
Ratings.....:	Input:100-120V~, 60Hz,8W.

Summary of testing:

All tests were conducted on model JB-G1,after tests,the product complied with the requirements of the UL 153:Ed13+R:24Feb2025.

Copy of marking plate:

Model:JB-G1
Input:100-120V~, 60Hz,8W.
Bazhi Lighting Technology (Zhongshan) Co., Ltd.

WWYY MADE IN CHINA

Form B-1(minimum letter height:1.6mm)

CAUTION (TO REDUCE THE) RISK OF FIRE
ATTENTION – RISQUE D'INCENDIE
- USE MAX(IMUM) _8_ WATT Type_A19 SELF- BALLASTED LED LAMP

Form A-3

IMPORTANT SAFETY INSTRUCTIONS
This portable luminaire has a polarized plug (one blade is wider than the other) as a feature to reduce the risk of electric shock. This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not alter the plug.

MESURES DE SÉCURITÉ À RESPECTER
Ce luminaire portable est équipé d'un connecteur polarisé (l'une des lames est plus large que l'autre) pour réduire le risque de choc électrique. Ce connecteur ne peut s'insérer dans une prise polarisée qu'en une seule orientation. Si le connecteur ne s'insère pas complètement dans la prise, inversez-le. Si cela ne fonctionne toujours pas, contactez un électricien qualifié. Ne l'utilisez jamais avec un câble de rallonge à moins que le connecteur ne puisse s'insérer complètement. Ne modifiez pas le connecteur.

Form C-5

Remarks:

Where WWYY means date code,WW is week,yy is year(last two number)i.e. 0526 means the 5th week of the year 2026

"IMPORTANT SAFETY INSTRUCTIONS" in letters not less than 3/16 inch (4.8 mm) high.The others letters shall be not less than 1.6mm in height.

Table 198.1
Form designations for location of marking

Form letter of marking	Type	Minimum letter height, Inch (mm)
A[a,b,d]	Paint-stenciled, die-stamped, indelibly stamped lettering, or indelibly printed label.	1/8 (3.2)
B[a]	Pressure-sensitive label, decalcomania transfer, paper label, paint or ink or die-stamped lettering. A tie-on tag, stuffer sheet, or equivalent does not meet the intent of the requirement.	1/16 (1.6)
C[c]	In the form of instructions on or with the portable luminaire. A tie-on tag, stuffer sheet, or equivalent meets the intent of the requirements.	1/16 (1.6)

[a] This marking shall be on a portion of the portable luminaire that:

1) Is not removed during replacement of the lamp, and

2) Serves other than a purely decorative function. (For example, a marking on a removable lampholder sleeve shall be repeated on the lampholder itself and a marking on a fabric shade does not meet the intent of the requirement).

[b] See also 198.2.3.

[c] See also 198.1.3.

[d] Flag, tag, and wrap-around labels, per 198.3.2, that comply with UL 969A and have a limited slippage rating are considered qualified for Form A (permanent) applications.

Form no. of marking	Location of marking
1	On an exterior surface that is normally visible. Marking is determined to be normally visible when a lamp or glassware is required to be removed to make the marking visible.
2	Adjacent to a user-replaceable interior component and readily visible before and during component replacement.

Form no. of marking	Location of marking
3	At a point where visible during relamping.[a]
4	On the smallest unit packaging carton.
5	At a point visible during mounting.

[a] A marking is considered visible during relamping when it can be seen without removal of a part not associated with the relamping activity. If a shade or lens must first be removed to access the lamp, a marking that is visible only after removal of that shade or lens is permitted.

Test item particulars.....	See this report
Classification of installation and use.....	Dry location use only
Supply Connection.....	Power cord with plug
.....	
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.....	August 14,2026
Date (s) of performance of tests.....	August 14,2026 to August 28,2026

General remarks:

"(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.

Modification history:

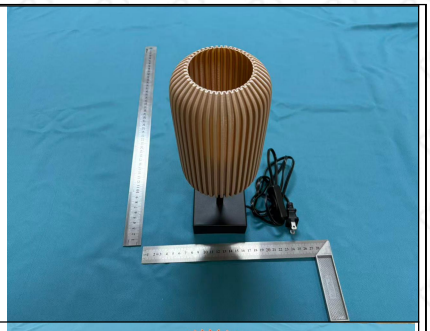
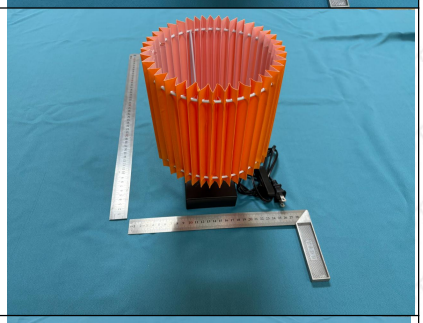
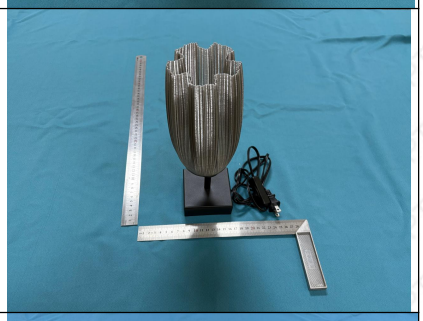
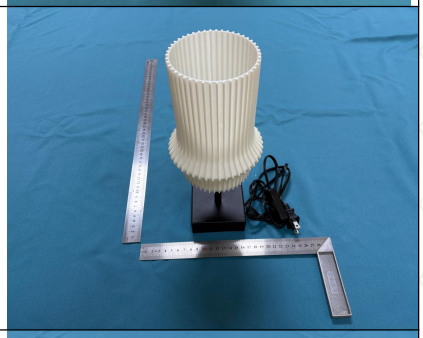
No.	Test report	Modification	Remarks
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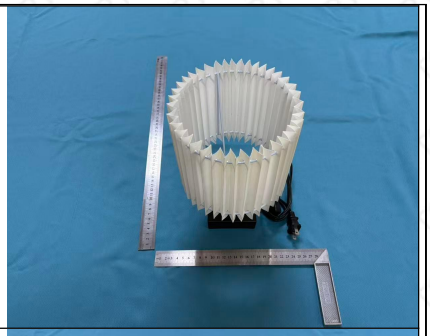
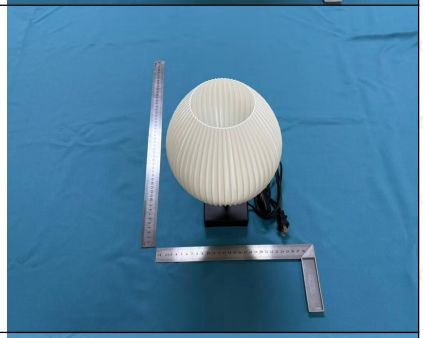
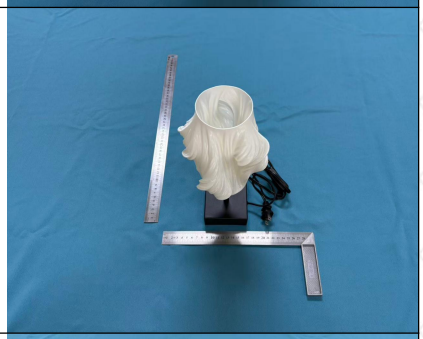
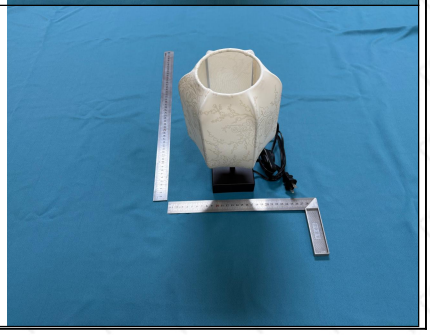
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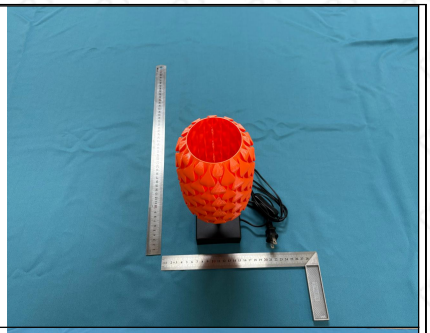
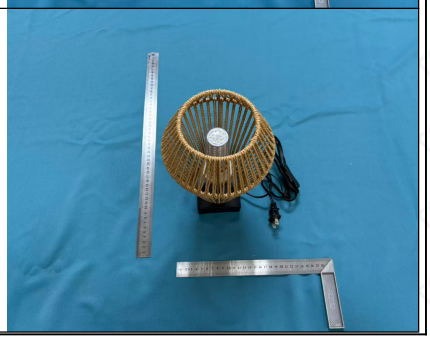
Model Differences:
Main model:JB-G1, Covered model:JB-G2;JB-G3;JB-G4;JB-G5;JB-G6;JB-G7;JB-G8;JB-G9;JB-G10;JB-G11;JB-G12;JB-G13;JB-G14;JB-G15;JB-G16;JB-G17;JB-G18;JB-G19;JB-G20;JB-G21;JB-G22;JB-G23;JB-G24;JB-G25;JB-G26;JB-G27;JB-G28;JB-G29;JB-G30.
The covered models share identical internal electrical components, base assembly, power cord, lamp holder and maximum lamp wattage rating with the primary test model. The only difference lies in the lampshade, which is available in fabric, rope-woven and plastic materials with varied shape and opening ratio.
The primary test sample adopts closed fabric lampshade, which represents the worst-case condition for temperature rise with highest thermal resistance and minimum ventilation area. Covered models with rope-woven lampshades feature large hollow openings, and plastic lampshades have lower heat-storage property. All covered configurations provide superior heat dissipation and cannot produce higher component temperature than primary sample. Internal electrical clearances, creepage distances and lamp stability performance remain unchanged. All safety test results obtained from primary sample are representative for these covered models, therefore model coverage is acceptable.

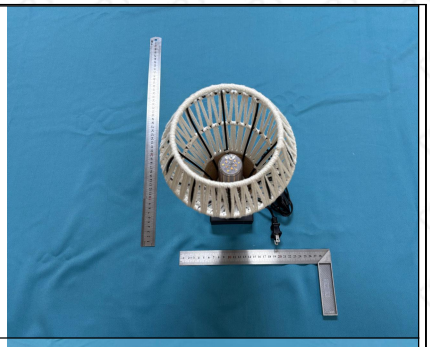
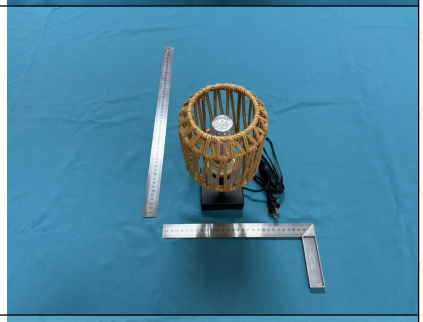
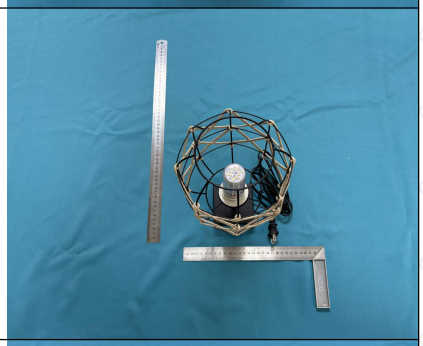
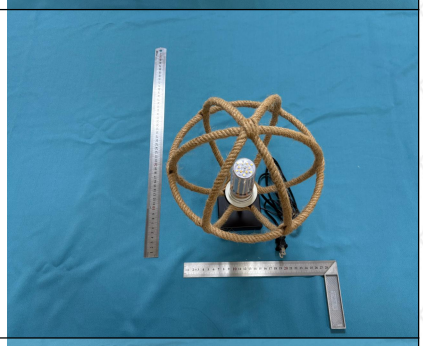
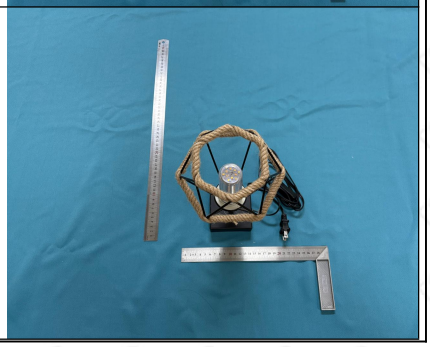
Model list

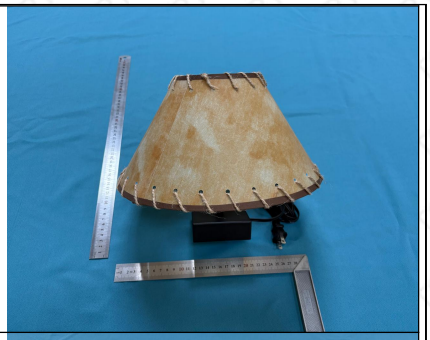
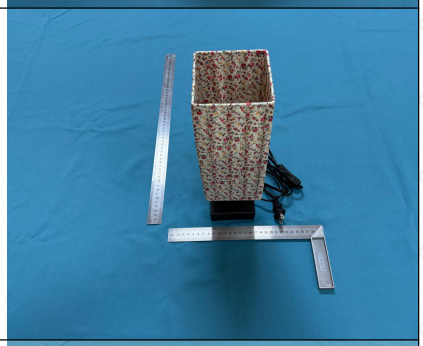
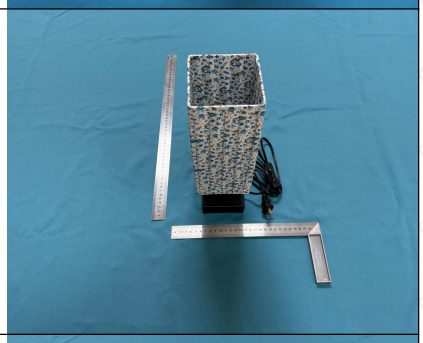
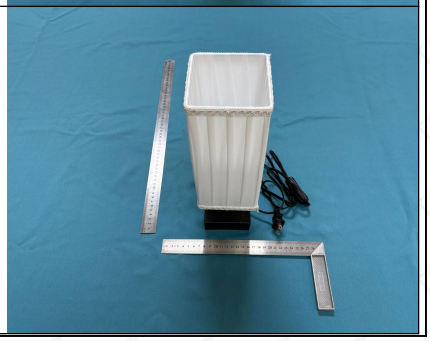
No.	Model	Rating	Photo
1	JB-G1	Input:100-120V~, 60Hz,8W.	

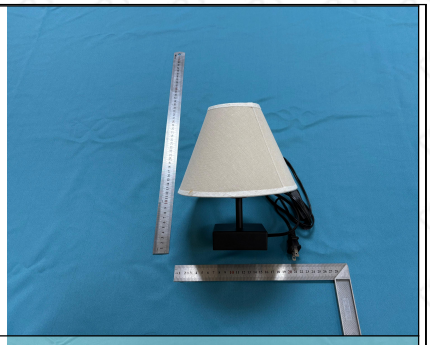
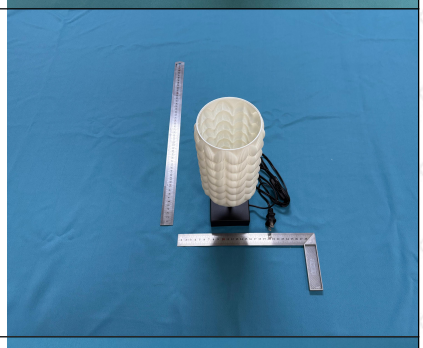
2	JB-G2	Input:100-120V~, 60Hz,8W.	
3	JB-G3	Input:100-120V~, 60Hz,8W.	
4	JB-G4	Input:100-120V~, 60Hz,8W.	
5	JB-G5	Input:100-120V~, 60Hz,8W.	
6	JB-G6	Input:100-120V~, 60Hz,8W.	

7	JB-G7	Input:100-120V~, 60Hz,8W.	
8	JB-G8	Input:100-120V~, 60Hz,8W.	
9	JB-G9	Input:100-120V~, 60Hz,8W.	
10	JB-G10	Input:100-120V~, 60Hz,8W.	
11	JB-G11	Input:100-120V~, 60Hz,8W.	

12	JB-G12	Input:100-120V~, 60Hz,8W.	
13	JB-G13	Input:100-120V~, 60Hz,8W.	
14	JB-G14	Input:100-120V~, 60Hz,8W.	
15	JB-G15	Input:100-120V~, 60Hz,8W.	
16	JB-G16	Input:100-120V~, 60Hz,8W.	

17	JB-G17	Input:100-120V~, 60Hz,8W.	
18	JB-G18	Input:100-120V~, 60Hz,8W.	
19	JB-G19	Input:100-120V~, 60Hz,8W.	
20	JB-G20	Input:100-120V~, 60Hz,8W.	
21	JB-G21	Input:100-120V~, 60Hz,8W.	

22	JB-G22	Input:100-120V~, 60Hz,8W.	
23	JB-G23	Input:100-120V~, 60Hz,8W.	
24	JB-G24	Input:100-120V~, 60Hz,8W.	
25	JB-G25	Input:100-120V~, 60Hz,8W.	
26	JB-G26	Input:100-120V~, 60Hz,8W.	

27	JB-G27	Input:100-120V~, 60Hz,8W.	
28	JB-G28	Input:100-120V~, 60Hz,8W.	
29	JB-G29	Input:100-120V~, 60Hz,8W.	
30	JB-G30	Input:100-120V~, 60Hz,8W.	

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
	PART I		P
	CONSTRUCTION		—
	MECHANICAL CONSTRUCTION – GENERAL		—
7	**General**		—
7.1	These requirements apply to all portable luminaires and shall be used in conjunction with the applicable supplementary requirements in this standard		P
8	**Assembly and Packaging**		P
8.1	Any portion of a portable luminaire that is detachable, for shipping purposes or otherwise, shall be constructed such that it is only able to be assembled in the intended manner		P
8.2	A portable luminaire shall be shipped from the factory in a carton or as an unpackaged complete assembly. Unassembled parts, such as glassware, chains, and similar components, when required elsewhere in the standard to accompany the product, shall be included. Decorative glassware is not required to be mounted in a frame or holder and is able to be separately wrapped to protect it from breakage during shipment.		P
8.3	A portable luminaire is not required to be completely mechanically assembled when: a) All parts required to assemble the product, other than an ordinary tool, are provided with the unit; b) Splices or electrical connections are not exposed nor require completion in the assembly; c) The integrity of the strain relief at all wiring terminations is intact (see Strain Relief Test, Section 133); d) Assembly instructions are provided in accordance with 183.2; and e) When assembled in accordance with the manufacturer's instructions, the unit complies with the requirements in this standard.		P
8.4	When wires pass through a joint between sections of a portable luminaire that are separable for packing purposes, the joint shall be such that rotation of one section with respect to the other during the assembly of the sections is limited to not more that 360 degrees. Friction alone does not meet the intent of the requirement to prevent rotation.		P
8.4.1	When fiberglass sleeving is provided for reducing the risk of cutting or abrasion of wiring between sections of a portable luminaire separable for packing purposes as noted in 8.3 and 8.4, the sleeving shall be secured in place by means other than friction. Unless the assembly is obvious between potential pinch points, the sleeving should not require careful positioning by the user to avoid damage to the wiring.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
8.5	When a splice or an electrical connection is located in a section of a portable luminaire that is separable for packing purposes, as noted in 8.3 and 8.4, the unit shall be provided with strain relief to reduce the risk of stress being transmitted to the splice or electrical connection during unpackaging and assembly of the luminaire. The strain relief shall be reliable and not easily defeated by the user. See the Strain Relief Test, Section 133.		N/A
8.6	When in any position of adjustment, a spring-loaded or adjustable section of a pole unit shall not transmit stress to a splice or wiring within any section of the unit either during assembly or when completely assembled. For example, the stem of an adjustable height floor unit shall raise and lower without binding or crimping the wiring of the unit.		N/A
9	**Enclosures**		P
9.1	A portable luminaire shall be constructed so that it has the mechanical strength required to resist the abuses to which it is subjected, without resulting in a risk of fire, electric shock, or injury to persons due to total or partial collapse of any part with resulting reduction of spacings (electrical or thermal), loosening or displacement of parts, or other serious defects.		P
9.2	A portable luminaire shall be constructed so that all user servicing is completed without subjecting any wiring, component, or part to mechanical damage, or reducing electrical spacings.		P
9.3	A portable luminaire shall be constructed of material such as glass, metal, urea, porcelain, phenolic composition, plastic or wood.		P
9.4	A decorative part is able to be constructed of any material.		N/A
9.5	A part such as a splice, a tap, a wire, a transformer, a capacitor, a ballast, a current-carrying part, or a device with an exposed live part shall be contained in an enclosure constructed of metal, glass, ceramic, porcelain, or polymerical material during normal maintenance and use.		N/A
10	**Metal Thickness for Enclosures**		P
10.1	The thickness of sheet metal used in a portable luminaire shall not be less than specified in Table 10.1.		P

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
10.2	Table 10.1 applies to any single surface or single flat sheet. Values for the thickness of sheet steel are based on uncoated material. Rigid members consisting of 1/2 by 1/2 inch (12.7 by 12.7 mm), 90 degree angle strips formed of sheet steel not less than 0.031 inch (0.79 mm) thick, or flat steel bars not less than 3/8 inch (9.5 mm) wide and 1/8 inch (3.2 mm) thick shall be used to reinforce and divide a larger area into sections for which lighter metal is able to be used. Such reinforcement, unless along the greater dimension of the surface, shall also be secured to the adjacent sides of the enclosure. A single sheet of metal having a bent corner that forms an angle of not more than 120 degrees is determined to be reinforced at that corner, and the thickness is based on the length and area of the maximum flat surface involved.		P
10.3	The minimum thickness of cast metal shall be in accordance with Table 10.2.		P
10.4	Metallic tubing shall not be less than 0.040 inch (1.02 mm) thick when cut threads are employed.		—
10.5	Unthreaded metallic tubing or metallic tubing having rolled threads shall not be less than 0.025 inch (0.64 mm) thick.		—
10.6	The thickness of tubing is to be measured with a round-nose micrometer.		—
10.7	An enclosure, a frame, a guard, a handle, or similar part shall not be sufficiently sharp to constitute a risk of injury to persons in normal maintenance and use.		—
11	**Corrosion Protection**		P
11.1	Each external iron or steel surface of a portable luminaire enclosure or wireway shall be protected from corrosion.		P
12	**Polymeric Enclosures**		N/A
12.1	A polymeric material, used as a part or all of the enclosure of a portable luminaire as specified in Enclosures, Section 9, shall have: a) Mechanical temperature indexes (including impact) as a result of long term aging as described in the Standard for Polymeric Materials – Long Term Property evaluations, UL 746B;and b) Been evaluated for use in portable luminaires in accordance with the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A
12.2	A polymeric material is relied upon to provide all or a portion of the strain relief, shall comply with the requirements of the Strain Relief Test, Section 133, after the Mold Stress Relief Distortion Test in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A
13	**Polymeric Decorative Parts**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
13.1	A decorative part of polymeric material located near a lamp or other component that generates heat shall: a) Be present on the portable luminaire when it is temperature tested in accordance with the Normal Temperature Test, Sections 124 – 128; and b) Not melt or deform in any way that interferes with the normal operation of the unit or results in a risk of fire or electric shock during the temperature test.		N/A
14	**Enclosure Openings**		N/A
14.1	An opening in a portable luminaire enclosure described in Enclosures, Section 9, shall comply with the requirements for the Accessibility of Live Parts, Section 23.		N/A
14.2	An enclosure containing an open core-and-coil device shall not contain open holes or open seams.		N/A
15	**Wireways and Tubing**		P
15.1	A portable luminaire shall be constructed so that when wires are pulled through, or the unit otherwise wired, the covering or insulation on the conductors are not damaged against any surface they are able to contact. Also see Protection of Wiring, Section 30 for additional requirements.		P
15.2	Wireways shall be free from burrs and fins.		P
15.3	Tubing that is used as a wireway shall be free from kinks and cracks.		P
15.4	Screw threads of sheet metal screws and self-tapping screws shall not be exposed for a distance of more than 3/16 inch (4.8 mm) in a wireway		N/A
16	**Shade Construction**		P
16.1	A portable luminaire shall be shipped with a shade unless: a) The shade functions only as a decorative part; and b) Instructions are provided in accordance with 184.1.		P
16.1.1	A portable wall, table or floor type luminaire having a shade with one or more of the following features shall comply with the General – Abnormal Operation Tests, Section 129: a) The adjustable or flexible shade is able to be adjusted against the supporting surface so as to block the air flow to the lamp; b) There are multiple shades such that one shade directs light onto another; or c) The shade is able to fold up so as to block the air flow to the lamp.		N/A
16.2	A portable luminaire complying with the Temperature Test-Exempt Units requirements of Sections 47 or 60 is able to have a shade constructed of any material.		N/A
16.3	A shade shall reliably maintain its dimensions. For example, a breeze shall not be able to blow the cloth of a cloth shade closer to the lamp		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
16.4	A dust cover is able to be provided over a shade only when instructions for removal are provided in accordance with 170.3.		N/A
17	**Strain Relief**		P
17.1	A portable luminaire shall be provided with strain relief so that a pull exerted on the power supply cord is not transmitted directly to a terminal splice, or interior wiring of the unit. See Strain Relief Test,Section 133.		P
17.2	A metal strain-relief clamp or band used with Type SP-2 or lighter general-use, rubber-insulated cord shall be provided with auxiliary insulation over the cord for mechanical protection		N/A
17.3	A clamp of any material (metal or otherwise) shall not be used with Type SPE-2, SPT-2, SVT, or SVTO cord.		P
17.4	Auxiliary insulation is not required for a clamp used for strain relief of thermoplastic-insulated cord heavier than type SPT-2, SVT, or SVTO when tested in accordance with Section 133, Strain Relief Test, with no damage to the cord insulation.		P
17.5	When a knot in a flexible cord serves as strain relief, any surface against which the knot is able to bear or with which it is able to come in contact shall be free from projections, sharp edges, burrs, fins and similar conditions, that are capable of damaging the insulation on the conductors.		N/A
18	**Portable Luminaires Having Play Value**		N/A
18.1	A portion of a portable luminaire that has play value for children eight years or less in age and is intended to be removed from the unit and played with (for example a plush doll not integral with the luminaire) shall comply with ASTM F963, Standard Consumer Safety Specification for Toy Safety. It is not possible to specify the conditions of tests for all constructions; however, the tests shall include evaluation of impact, bite, flexure, torque, tension, compression, sharp point, sharp edge, and small parts.		N/A
18.2	The portable luminaire shall not overturn when tested in accordance with the Stability Test, Section 132, with a 15 degree inclined plane.		N/A
18.3	A toy or stuffed animal suspended from a unit shall be designed for unexpected, forceful removal and shall comply with the requirements in the Test for Suspended Toys, Section 158.		N/A
18.4	The portable luminaire shall be marked in accordance with the requirements in 169.11.		N/A
19	**Resistance to Liquid Damage**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	19.1 When a portable luminaire is intended to be used where the deterioration or breakage of a liquid container, seal, or similar component increases the risk of electric shock or liquid spillage, the container,seal, or similar component shall be resistant to deterioration from the liquid intended to be used in contact with that component. The liquid shall be evaluated with respect to its toxic, acid, alkaline, flame and conductive properties. The determination of resistance to deterioration is based upon the material comprising the container, seal, or similar component, its size and shape, the mode of application, and other factors.		N/A
19.2	A portable luminaire (such as a plant lamp) using insulating material that is capable of being adversely affected by moisture under its intended operating conditions shall be investigated in accordance with the Resistance to Moisture Test, Section 140.		N/A
20	**Portable Luminaire Containing Hazardous Substance**		N/A
20.1	A portable luminaire containing a hazardous substance, such as the mixture of chemicals used as decorative fluid in lava-type lamps, shall be evaluated with respect to ease of ignition, and whether the substance is toxic. The risk of injury shall be assessed on the basis of the amount of the substance or concentration and a one time exp osure due to an accidental spill. Inhalation of vapors, contact with skin or eyes, and ingestion are to be considered as probable events. Chemical changes due to exposure to light (UV) and heat (operating temperature) also are to be determined.		N/A
20.2	A container of a hazardous substance shall not be adversely affected by the substance. Gaskets, seals, and caps shall not be adversely affected by the substance.		N/A
20.3	Soft glass shall not be used as a container of a hazardous substance.		—
20.4	The unit shall comply with the marking in 169.12.		N/A
	ELECTRICAL CONSTRUCTION – GENERAL		P
21	**General**		—
21.1	These requirements apply to all portable luminaires and shall be used in conjunction with the applicable supplementary requirements in this Standard.		P
22	**Assembly and Packaging**		P
22.1	A portable luminaire shall be completely wired with each electrical component mounted in place and with each splice and connection completed.		P
23	**Accessibility of Live Parts**		P
23.1	Each part or device that is required by Enclosures, Section 9, to be enclosed shall be located or shielded so that it is not accessible to unintentional contact by persons during normal use, including relamping, replacement of an automatic starter, or other user maintenance services.		P

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Clause	Requirement + Test	Result - Remark	Verdict
23.2	A live part is determined to be inaccessible when a probe as illustrated in Figure 23.1 is unable to be manipulated such that it touches any part. The probe is to be articulated into any configuration and rotated or angled to any capable position before, during, or after inserting into the opening.		P
23.3	All parts that are removable without the use of tools shall be removed when determining accessibility in accordance with 23.2.		P
24	**Electrical Spacings**		P
24.1	The spacing between uninsulated live parts of opposite polarity, and between uninsulated live parts and metal that is capable of being grounded shall not be less than 1/4 inch (6.4 mm) through air or 3/8inch (9.5 mm) over surface. The outer wrap of an open core and coil ballast is determined to be an uninsulated live part with respect to this requirement.		P
24.1.1	As an alternate to 24.1, the Standard for Insulation Coordination Including Clearances and Creepage Distances for Electrical Equipment, UL 840, may be used to determine electrical spacing. This only applies to conductive parts that are rigidly held in place and reliably spaced in production such as conductors and components on a printed wiring board. The spacing requirements in UL 840 shall not be used for spacing to a dead metal enclosure, or to uncontrolled components such as wiring device terminals, transformers, and ballasts. Creepage distances shall not be less than clearances. When using the requirements specified in UL 840, the following conditions apply:		P
	a) A portable luminaire marked for wet locations or requiring the humidity conditioning test shall be considered exposed to environmental pollution degree 3 and over voltage category of II. b) A portable luminaire other than (a) shall be considered exposed to environmental pollution degree 2 and over voltage category of II. c) The portion of a printed wiring board covered with a potting compound or a conformal coating that complies with the requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluation, UL 746C, shall be considered exposed to environmental pollution degree 1 and over voltage category of II.		N/A
24.2	When an uninsulated live part is not rigidly fixed in position by means other than friction between surfaces, or when a movable dead metal part is in proximity to an uninsulated live part, the construction shall be such that the required minimum spacing is maintained.		N/A
25	**Insulating Materials**		N/A
25.1	A polymeric material used as an electrical insulator, or as direct or indirect support of a live part,shall comply with the requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.2	An insulating lining or barrier of vulcanized fiber or similar materials used where spacing does not otherwise comply with the requirement shall not be less than 1/32 inch (0.8 mm) thick, and shall be so located that it is not adversely affected by arcing, except that vulcanized fiber not less than 1/64 inch (0.4mm) thick is able to be used in addition to an air spacing of not less than 50 percent of the spacing required for air alone.		N/A
26	**Electrical Ratings**		P
26.1	Each electrical device and insulated conductor shall have a voltage rating at least equal to the voltage applied to it in normal use.		P
26.1.1	The maximum ampere rating of a portable luminaire shall not exceed: a) 12 amperes for a unit provided with an attachment plug with a 15 ampere, 125 volt configuration; b) 16 amperes for a unit provided with an attachment plug with a 20 ampere, 125 volt configuration; or c) 80 percent of the branch circuit rating for a unit provided with an attachment plug intended for use on standard power systems other than a nominal 120 volt, 15- or 20-amperes.		P
26.2	Each electrical device shall have an ampere rating and each insulated conductor shall have an ampacity rating for the maximum current to which it is subjected in normal use.		P
26.3	The ampere rating of the portable luminaire shall be calculated by adding the ratings of all of the following that are provided on the unit: a) Fifteen amperes for one or two single receptacles or for each duplex receptacle; b) The ampere rating of each ballast; c) The calculated load of each line voltage incandescent lampholder is to be determined by dividing the marked wattage rating by 120 volts; d) The ampere rating of each transformer; and e) The ampere rating of any other line-voltage parts, such as a clock, a motor, and similar parts.		P
26.4	The ampacity rating of an insulated conductor shall be as specified in Table 26.1.		P
27	**Wiring and Conductors**		P
27.1	**Conductor size**		P
27.1.1	A conductor of a wire or cord shall be 18 AWG (0.82 mm^2) or larger. See Electrical Ratings,Section 26.		P
27.1.2	A conductor smaller than 18 AWG (0.82 mm^2) is able to be used for internal wiring when it is investigated and found to meet the requirements for the intended application; for example, consideration is to be given for internal fusing, lead routing, and degree of enclosure required under any condition of loading, including short circuit and abnormal operation.		P

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Clause	Requirement + Test	Result - Remark	Verdict
27.1.3	A conductor smaller than 18 AWG (0.82 mm2) and not smaller than 24 AWG (0.21 mm2) is usable as a permanently attached lead for a clock motor or a transformer when: a) The lead is completely enclosed; b) The lead is not more than 6 inches (152 mm) long; and c) Stalling of the clock motor, or any load on the secondary of the transformer, including a short circuit, does not result in a risk of fire.		N/A
27.1.4	A conductor smaller than 18 AWG (0.82 mm2) and not smaller than 24 AWG (0.21 mm2) is usable in a low voltage Class 2 power limited circuit.		P
27.1.5	A conductor smaller than 18 AWG (0.82 mm2) is able to be used internally in a portable luminaire which has a series or series/parallel string of non-replaceable lights located within a rigid housing which prevents moving or flexing of the conductors, providing the unit complies with the Conductor Short Circuit and Abnormal Operation Test, Section 131A.		N/A
27.2	**Temperature rating**		P
27.2.1	The temperature ratings of commonly used flexible cords and fixture wires are specified in Table 27.1.		P
27.2.2	Appliance wiring material (AWM) which is suitable for internal wiring and accessible wiring, but not power supply cord is described in Figure 27.1.		P
27.2.3	Wire or cord other than those specified in Table 27.1 is usable when: a) The insulation of the wire or cord is rated for the maximum temperature involved; b) The temperature for which the wire or cord is rated is: 1) Identified by a colored thread or a colored stripe as described in 27.2.4; or 2) Printed on the surface of the insulation; c) The insulation of the wire or cord is: 1) Rated for the maximum voltage involved and not less than 300 volts; and 2) When of rubber or thermoplastic, provided with an overall braid;		N/A
27.2.4	With reference to 27.2.3(b)(1) when a colored thread or stripe is used to identify the temperature rating of a wire or cord: a) For a rubber-insulated wire or cord, green indicates a 75°C (167°F) rating. b) For a thermoplastic-insulated wire or cord: 1) No identification is required for 80°C (176°F), and when identification is provided, blue is used; 2) Red indicates a 90°C (194°F) rating; 3) Yellow indicates a 105°C (221°F) rating; 4) Brown indicates a 125°C (257°F) rating; 5) Orange indicates a 150°C (302°F) rating; and 6) Black indicates a 200°C (392°F) rating.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
27.2.5	Wiring or cord rated minimum 90°C (194°F) usable at 150°C (302°F) when each individual conductor is provided with sleeving: a) Consisting of snug fitting: 1) Woven-glass sleeving not less than 0.010 inch (0.25 mm) thick; or 2) Woven-glass tape applied in two or more layers having a total thickness of not less than 0.010 inch; and b) Extending from the terminals of the lampholder to the point where the wire emerges from the shade or at least 3 inches (76 mm).		N/A
28	**Splices and Connections**		N/A
28.1	Stranded conductors of cord or wire intended for connection to a screw terminal shall be twisted and solder-dipped or otherwise treated so as to bind all strands for at least 1/8 inch (3.2 mm) from the end of the stripped conductor prior to connection of the conductor to the terminal so that the strands do not splay during the assembly operation.		N/A
28.2	A splice shall be mechanically and electrically secure and, unless a wire connector is used that meets the intent of this requirement shall be soldered. A wire soldered inside an eyelet terminal or similar movement confining part is determined to be mechanically and electrically secure.		N/A
28.3	A soldered splice and a splice made with an uninsulated wire connector shall be covered with insulation that has a temperature rating and thickness equivalent to that required on the conductors.		N/A
28.4	In determining compliance with 28.3, general-use insulating tape is determined to be rated 80°C (176°F), and usable for 150 volts when wrapped at least once on itself.		N/A
28.5	An insulated wire connector shall be rated for the required temperature and voltage of the conductors involved.		N/A
28.6	A splice shall not be located in an arm or a stem.		N/A
28.7	Quick-connect terminals shall be nominally 0.110 (2.80 mm), 0.125 (3.18 mm), 0.187 (4.75 mm),0.205 (5.21 mm), or 0.250 (6.35 mm) inch wide and shall comply with the Standard for Electrical Quick-Connect Terminals, UL 310. Other sizes of quick-connect terminals shall be investigated with respect to crimp pullout, engagement-disengagement forces of the connector and tab, and temperature rise; all tests shall be conducted in accordance with UL 310.		N/A
29	**Wiring Attached to Movable or Flexible Parts**		N/A
29.1	Internal wiring attached to a movable or a flexible part that is capable of being bent shall be: a) Stranded; and b) Secured so that: 1) The wiring is not cut or abraded; and 2) There is no strain or motion at the connections.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
29.2	The requirement in 29.1 applies only to constructions in which the wire or cord is capable of being bent, as in an enclosed swivel joint, or where a sharp bend occurs in a wire or cord between two points of restraint that are 6 inches (152 mm) or less apart.		N/A
29.3	Type SV, SVO, SVOO, SVT, SVTO, or SVTOO cord shall not be attached to a movable or a flexible part in such a way that the cord is capable of being sharply bent.		N/A
30	**Protection of Wiring**		P
30.1	A power-supply cord shall exit the portable luminaire through an opening that is free from sharp edges, burrs, and fins that are able to damage the conductor insulation.		P
30.2	The power-supply cord shall be provided with mechanical means that prevent the cord being pushed inside the enclosure and contacting: a) A lamp or heated surface, where the surface temperature may exceed the temperature rating of the cord; b) a sharp edge; or c) moving part.		P
30.3	An insulating bushing shall be provided where the flexible cord or wiring enters a pendant lampholder or the base or stem of a portable luminaire, and at the ends of metal tubing where the cord or wiring are pulled during the adjustment of the unit.		P
30.4	Cord or wiring that passes through tubing or contacts the edge of a sheet-metal wall 0.042 inch (1.07mm) or less thick shall be reliably held away from the edges of the metal or shall be protected by a nonrubber bushing or a grommet or by rolling the edge of the metal not less than 120 degrees.		P
30.5	When cords or wires pass through or contact the edges of sheet metal thicker than 0.042 inch (1.07mm), the metal shall be treated by reaming or the equivalent to remove burrs, fins, or sharp edges that are able to damage insulation		P
30.6	When the material through which the cord or wiring passes is wood, porcelain, phenolic composition,or other insulating material, not less tan 3/64 inch (1.2 mm) thick, a smoothly rounded surface is determined to be equivalent to a bushing.		N/A
30.7	Ceramic materials and molded urea, phenolic, and melamine compositions are determined to meet the intent of the requirement for insulating bushings; a bushing of wood or rubber is not usable. Other compositions are able to be used when they have been investigated and found usable for the application.		N/A
30.8	A hard-fiber bushing is able to be employed when the bushing is not less than 3/64 inch (1.2 mm)thick.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
30.9	An insulated metal grommet is usable in place of an insulating bushing when the insulating material used is not less than 1/32 inch (0.8 mm) thick and completely fills the space between the grommet and the metal in which it is mounted.		P
30.10	Polymeric sleeving shall not be used for reducing the risk of cutting or abrasion of wiring. Fiberglass sleeving not less than 0.010 inch (0.25 mm) thick is capable of being used.		N/A
30.11	A bushing shall be securely held in place.		P
31	**Power-Supply Cords**		P
31.1	A portable luminaire shall be provided with a power supply cord consisting of one of the types of flexible cords specified in Table 31.1 and an attachment plug rated as required for the application		P
31.2	A power-supply cord shall not be smaller than 18 AWG (0.82 mm^2).		P
31.3	A power-supply cord shall be at least 5 feet (1.5 m) long measured from the point where the cord emerges from the body of the lamp to the face of the attachment plug or connector.		P
31.4	The conductors of the power supply cord shall be identified in accordance with Section 35,Polarization and Identification.		P
31.5	Integral Type SP-1, SPT-1, or SPE-1 flexible cord or appliance wiring material in accordance with Figure 27.1, that is located inside a portable luminaire is able to split a maximum of 3 inches (76 mm).		N/A
31.6	Flexible cord types C, HPN, PD, SP-1, SPE-1, SPT-1, and appliance wiring material complying with Figure 27.1 are usable only as internal wiring and shall not be used as power supply cord.		N/A
31.7	Integral Type SP, SPE-2, or SPT-2 flexible cord located outside the unit may be split as necessary,but not more than 3 inches (76 mm), providing that the length of split cord is minimized so as to reduce the risk of being inadvertently snagged.		N/A
32	**Attachment Plugs**		P
32.1	A portable luminaire shall be provided with a polarized attachment plug of the 2-wire, parallel-blade or a 3-wire grounded type and see Figure 32.1. The plug shall be of a 15 ampere, 125 volt configuration (NEMA Style Nos. 1-15 P and 5-15P) and shall comply with the requirements in the Standard for Attachment Plugs and Receptacles, UL 498 and/or the Standard for Cord Sets and Power-Supply Cords,UL 817.		P
32.2	The attachment plug shall have electrical ratings as required for the ratings of the portable luminaire. See Electrical Ratings, Section 26.		P

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Clause	Requirement + Test	Result - Remark	Verdict
32.3	For an attachment plug that is assembled to a flexible cord by a manufacturer of the portable luminaire the conductors of the flexible cord shall be fastened securely and in a workmanlike manner to the terminals of the attachment plug. All connections shall be made so that no stray strands of any conductor contacts live parts of opposite polarity or dead metal parts.		N/A
32.4	When the intended mounting means of a portable luminaire precludes factory connection of the attachment plug to the flexible cord, a pin-type (screwless) polarized attachment plug (one in which a pin terminal pierces the conductor insulation to establish contact) is able to be provided. Instructions shall be provided in accordance with 183.5.		N/A
33	**Interconnected Units**		N/A
33.1	Only portable luminaires for use in cabinets, under cabinets (under shelves), office furnishings, work lights, and wet location luminaires, are able to be equipped such that one unit provides power for adjacent units.		N/A
33.2	When the supplementary requirements elsewhere in the Standard specify overcurrent protection for the power supply cord, the protection shall either be a circuit breaker or a replaceable fuse.		N/A
33.3	Interconnected units that do not have a NEMA Style 1-15, 1-15P, 5-15 or 5-15P plug and are intended to connect to a unit which has overcurrent protection, do not require overcurrent protection		N/A
33.4	Interconnected units, where a ballast or transformer of one portable luminaire powers one or more adjacent units, do not require overcurrent protection.		N/A
33.4.1	The plugs, receptacles, and cord used for nterconnection shall have a rating consistent with the voltage and the load. The load and supply receptacles shall have different configurations to prevent inadvertent connection of the supply end cord set to the load receptacle.		N/A
33.4.2	The interconnection plugs and receptacles shall comply with Section 23, Accessibility of Live Parts, and Section 24, Electrical Spacings, when inserted and when removed.		N/A
33.4.3	Attachment plugs, connectors and receptacles shall comply with the requirements in the Standard for Attachment Plugs and Receptacles, UL 498, and/or the Standard for Cord Sets and Power Supply Cords, UL 817.		N/A
33.5	A fuseholder shall be of the lock out type and prevent insertion of a fuse larger than that specified by the manufacturer.		N/A
33.6	The ground connection when required by Grounding and Bonding, Section 36, shall make first and break last.		N/A
33.7	An interconnected unit shall be provided with markings in accordance with 169.9.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
33.8	An interconnected unit shall be provided with instructions in accordance with 183.4.		N/A
33.9	An interconnected unit with a shortened power supply cord in accordance with 34.3 shall be marked in accordance with 169.9.1 and instructions in accordance with 183.6.		N/A
34	**Alternate Power-Supply Connections**		N/A
34.1	For a portable luminaire that is intended to be used in countries other than the United States, the configuration of the attachment plug shall conform with the standards of the country in which the product is intended to be used and shall be provided with instructions in accordance with 183.8.		N/A
34.2	A proprietary connector provided in place of an ttachment plug or an attachment plug and cord shall be investigated and determined usable for the purpose for which it is intended and shall be provided with markings and instructions in accordance with 183.7.		N/A
34.3	When the intended means of mounting or other features or constructions of any portable luminaire warrants other than the required length of power supply cord, a shorter cord (or no cord) is able to be provided. Instructions shall be provided in accordance with 183.6		N/A
35	**Polarization and Identification**		P
35.1	A supply-circuit conductor that is connected to the grounded supply conductor (neutral) shall be marked in accordance with Table 35.1 and shall be connected to the wide blade of a 2-wire attachment plug, or the left-hand blade of a 3-wire attachment plug when looking at the face of the plug with the grounding pin up. See Figure 32.1.		P
35.2	The screwshell or screwshell contact of each Edison-base lampholder shall be connected to the grounded supply conductor of the supply cord.		P
35.3	A switch or a fuse or other protective device shall not be connected to the grounded supply conductor of the attachment plug.		P
35.4	Any portion of a portable luminaire that is capable of being detached thereby breaking electrical connections – such as a detachable power-supply cord, interlocking connectors, or cord connector– shall be constructed such that it is only able to be assembled in the manner which is required to maintain polarity.		P
36	**Grounding and Bonding**		N/A
36.1	When a 3-conductor cord-and-plug assembly is provided on a portable luminaire, all conductive parts of a portable luminaire not intended to be electrically live, that are accessible to persons including during any user maintenance and that have the potential to inadvertently become energized shall be grounded by being conductively bonded together to the equipment grounding means. Exception: Chain links of a swag type unit are not required to be bonded.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
36.2	When the reliability of a grounding connection is questioned, it shall be subjected to the Grounding Continuity Test, Section 136.		N/A
36.3	A part is determined to be accessible when it is capable of being touched by the probe illustrated in Figure 23.1.		N/A
36.4	A conductive part that is required to be grounded or bonded in accordance with 36.1 shall not be coated with vitreous enamel, paint, or similar coating		N/A
36.5	The continuity of the grounding or bonding system shall not rely on solder alone or on the dimensional integrity of a thermoplastic material		N/A
36.6	The grounding terminal of a convenience receptacle provided on a portable luminaire with a metal enclosure shall be bonded to the grounded metal of the unit by one of the following: a) Riveting, bolting, or welding the metal mounting yoke or strap, when provided, of the receptacle to the metal unit enclosure. b) A 16 AWG (1.3 mm^2) or larger copper bonding jumper from the receptacle grounding terminal to the unit enclosure, the connection to the lamp enclosure being made by riveting, bolting, or welding.		N/A
36.7	A bonding or grounding wire or jumper connector shall be secured by: a) A machine screw and nut; b) A machine screw that threads into metal when there are at least two full threads in the metal; or c) A rivet. A sheet-metal screw shall not be used to secure a bonding or grounding wire or jumper connector.		N/A
36.8	A bonding or grounding wire or jumper connector shall not be terminated by a screw, rivet, or equivalent device that is also used to secure another device or part that is intended to be removed during replacement of any electrical device or component other than the power-supply cord.		N/A
37	**Electronic Circuits**		N/A
37.1	A printed wiring board, including coatings, when provided shall comply with the requirements in the Standard for Printed-Wiring Boards, UL 796, and shall be classified V-0, V-1, or V-2 in accordance with the Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances, UL 94.		N/A
37.2	A resistor, capacitor, inductor, transformer, or other part that is mounted on a printed wiring board to form a printed-wiring assembly shall be secured so that the risk of displacement by any force exerted on it is minimized.		N/A
37.3	A circuit involving a capacitor, rectifier, transistor, or similar component is to be subjected to analysis to determine whether there is a risk of fire or electric shock when the component is opened or shorted.The possible effect of one component on another, encapsulation, and similar factors are to be determined. When a risk is determined to exist, the Component Fault Test, Section 131 is to be conducted.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
38	**Secondary Low Voltage Circuits**		N/A
38.1	Each secondary circuit exceeding Class 2 limits shall be investigated as though it were a primary circuit with respect to enclosure and accessibility requirements.		N/A
38.2	The enclosure and accessibility of a Class 2 circuit is not specified.		N/A
38.3	A printed wiring assembly and subsequent circuitry used in an isolated, low-voltage circuit exceeding Class 2 limits shall comply with the requirements of Electronic Circuits, Section 37.		N/A
38.4	An isolated, low-voltage circuit is able to use the frame of the portable luminaire to carry current to one side of the load when hinges or other moveable parts are not used as current-carrying means.		N/A
39	**Separation of Secondary Circuit Conductors**		N/A
39.1	All uninsulated live parts connected to different circuits shall be spaced from one another as though they were parts of opposite polarity, in accordance with the requirements in 24.1 and shall be judged on the basis of the highest voltage involved.		N/A
39.2	The wiring in an isolated, low-voltage circuit shall be routed away from the wiring of primary circuits or shall be provided with insulation that is rated for use at the ighest of the voltages in the circuits.		N/A
39.3	Wires that are part of an isolated low-voltage circuit shall be maintained away from uninsulated live parts of the primary circuit.		N/A
39A	**Separation of Communication Circuit Conductors**		N/A
39A.1	The wiring of communication circuits (telephone jacks) or data conductors that are part of a lighting control system shall be separated by a permanent barrier or a 2 inch (50.8 mm) spacing from the wiring of primary circuits.		N/A
40	**Component Mounting**		N/A
40.1	Uninsulated live parts shall be secured to the base or mounting surface so that they are restrained from turning or shifting in position, when such motion results in a reduction of spacing below the minimum required value.		N/A
40.2	A joint between metal parts or between fastening arms and supports, shall be strong and rigid and shall not turn when such turning results in movement of a wire or a wiring device after the assembly is completed.		N/A
40.3	A switch other than a through-cord switch, a ballast other than a through-cord ballast, a lampholder,convenience receptacle, an attachment-plug receptacle, or similar component shall be mounted securely and shall be restrained from turning.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
40.4	The means for preventing the turning or shifting indicated in this section is to consist of more than friction between surfaces. For example: a) A properly applied lock washer that cuts into the surfaces it is placed between; b) An irregularly shaped opening that prevents rotation by physical fit; c) A tab that contacts another tab or obstruction that prevents further rotation; or d) A set screw.		N/A
40.5	A sheet-metal or self-threading screw is able to be used to secure or support a part, such as a ballast, transformer, lampholder, starter holder, or a similar component, that weighs more than 7-1/2 pounds (3.4 kg), to a sheet steel luminaire part. A sheet-metal or self-threading screw in accordance with Security of Screws Test, Section 135, is not prohibited from securing or supporting a part, such as a ballast, transformer, lampholder, starter holder, or a similar component to other than a sheet steel luminaire part.		N/A
41	**Lampholders**		P
41.1	**General**		P
41.1.1	A lampholder with exposed terminals shall have the terminals located behind a permanent barrier or similar construction to comply with the requirements for Enclosures, Section 9, and the requirements for Accessibility of Live Parts, Section 23.		N/A
41.1.2	A lamp-supported lampholder shall be provided with stranded wiring.		N/A
41.2	**Incandescent lampholders**		P
41.2.1	A lampholder, constructed with exposed terminals, that is intended to be provided with a fiber husk and/or outer sleeve (thereby resembling a candle) to prevent inadvertent contact of the terminals shall not be used in a portable luminaire unless evaluated for compliance with 41.2.2 or 41.2.3, as applicable.		P
41.2.2	The use of a thermoplastic sleeve: a) Complying with the Polymeric Decorative Parts, Section 13, and Polymeric Enclosure, Section 12, requirements; b) Secured in place; and c) Not removable without the use of tools; Meets the intent of the requirement when, with the sleeve in place, the construction complies with the accessibility requirements in Accessibility of Live Parts, Section 23. See 41.2.1.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
41.2.3	The use of a fiber husk: a) Complying with the 1/32 inch (0.8 mm) minimum treated cellulosic fiber for the fiber husk; b) Secured in place; and c) Not removable without the use of tools; Meets the intent of the requirement when, with the sleeve in place, the construction complies with the accessibility requirements in Accessibility of Live Parts, Section 23. See 41.2.1		N/A
41.2.4	A porcelain lampholder mounted by means of a screw ring shall be used only with the gasket usually supplied with this type of lampholder.		P
41.2.5	A lampholder of the 3-way switch type shall be installed in only the base down position.		N/A
42	**Switches and Dimmers**		—
42.1	A switch provided for the control of a portable luminaire shall have a current rating for the load it controls in accordance with Figure 42.1.		P
42.2	A switch shall not be connected in the load side of a ballast		N/A
42.3	A portable luminaire is not required to be provided with a switch		N/A
42.4	A switch provided for the control of a motor load shall be investigated to determine that it is intended for the purpose.		N/A
43	**Receptacles**		N/A
43.1	A convenience receptacle provided on a portable luminaire shall be of the same type and configuration as the attachment plug of the unit, and shall be wired such that it provides the same polarized supply as the attachment plug of the unit. See Figure 32.1.		N/A
43.2	A portable luminaire shall not be provided with more than two single or one duplex receptacle. The electrical rating shall be marked in accordance with 169.6.3.		N/A
43.3	When the face of a receptacle is less than 5/8 inch (15.9 mm) wide or less than 7/8 inch (22.2 mm) long, the face of the receptacle shall project not more than 3/16 inch (4.8 mm) from the part of the mounting surface that is within a rectangle 7/8 inch (15.9 mm) long and 5/8 inch (15.9 mm) wide symmetrically located about the receptacle contacts; and when the mounting surface is conductive, the face of the receptacle shall project not less than 3/32 inch (2.4 mm) from that part of the mounting surface.		N/A
43.4	The area surrounding a convenience receptacle shall be free of any projection that prevents full insertion of the blades of an attachment plug having a face diameter of 1-15/16 inches (49.2 mm) and rectangular attachment plug having a face of 1-1/2 by 1-5/8 inch (38.1 by 41.3 mm).		N/A
44	**Transformers**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
44.1	Transformers used in portable luminaires shall comply with the requirements in one of the following standards: a) Standard for Class 2 Power Units, UL 1310; b) Standard for Transformers and Motor Transformers for Use In Audio-, Radio-, and Television-Type Appliances, UL 1411; c) Standard for Low Voltage Transformers – Part 1: General Requirements, UL 5085-1 and the Standard for Low Voltage Transformers – Part 3: Class 2 and Class 3 Transformers, UL 5085-3; or d) Standard for Safety of Information Technology Equipment, UL 60950-1, Section 2.5, “limited power source” (LPS) requirements.		N/A
44.2	Compliance of the limited power source requirements of item (d) of 44.1 shall be considered equivalent to Class 2 with respect to application of requirements of this standard.		N/A
45	**Motors**		N/A
45.1	Each motor shall be of a type that is intended for its application and shall operate at its maximumnormal load during the Normal Temperature Test, Sections 124 – 128, without resulting in a risk of fire,electric shock, or injury to persons.		N/A
45.2	A motor winding shall resist the absorption of moisture.		N/A
45.3	Each motor shall be protected from overheating as the result of any condition of load, up to and including stalled rotor.		N/A
45.4	The protection against overheating required by 45.3 shall be accomplished by one of the following: a) Thermal impedance protection complying with the requirements in the Standard for Overheating Protection for Motors, UL 2111; or b) Other protection that is found by test to be equivalent to the protection specified in (a).		N/A
	INCANDESCENT UNITS – SUPPLEMENTARY		N/A
46	**General**		N/A
46.1	The requirements specified in Sections 46 – 50 apply to portable luminaires using incandescent lamps.		N/A
46.2	These requirements do not apply to portable luminaires intended for use with tungsten-halogen lamps which are covered by Sections 51 – 56.		—
47	**Temperature Test-Exempt Units**		N/A
48	**Tests**		N/A
48.1	**Normal temperature test**		N/A
48.1.1	An incandescent type unit shall be temperature tested in accordance with the Normal Temperature Test, Section 124, General, and Section 125, Test Method – General, except as exempted by Section 47, Temperature Test-Exempt Units.		N/A
48.2	**Incandescent torchiere abnormal operation tests**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
48.2.1	An incandescent torchiere style unit having the following features shall be subjected to the Tungsten-Halogen Torchiere Abnormal Operation Test of Section 145 and the torchiere vertical wall test of Section 146: a) Has more than 2 lamps in a lamp compartment; or b) Has greater than a 150 W lamp replacement rating per lampholder.		N/A
48.2.2	For the abnormal operations test described in Section 48.2.1, the test procedure described in Section 145 shall be modified as follows: a) The test shall be conducted three times with a new cheesecloth pad; and b) The criteria for non-compliance shall only be ignition (flaming) of the cheesecloth.		N/A
48.3	**Torchiere input test**		N/A
48.3.1	An incandescent torchiere having a construction which permits the insertion of lamps rated greater than 190 watts total for the torchiere portion of the unit shall be subjected to the Torchiere Input Test,Section 140A.		N/A
49	**Markings**		N/A
49.1	An incandescent type unit shall comply with the marking specified in Section 170, Incandescent Units.		N/A
49.2	An incandescent torchiere style unit tested in accordance with 48.2 shall be marked in accordance with the marking specified in 171.3.6.		N/A
50	**Instructions**		N/A
50.1	An incandescent type unit shall comply with the instructions specified in Section 184, Incandescent Units.		N/A
	TUNGSTEN HALOGEN UNITS – SUPPLEMENTARY		N/A
51	**General**		N/A
51.1	The requirements specified in Sections 51 – 56 apply to portable luminaires using tungsten-halogen type lamps.		N/A
51.2	These requirements are supplementary to other pplicable requirements in this standard.		N/A
52	**Construction – Mechanical**		N/A
52.1	**General**		N/A
52.1.1	The lampholder voltage for a tungsten-halogen unit employing a lamp with a lamp base configuration shown in Table 52.0 shall be 30 V rms, 42.4 V peak, or less, regardless of the nominal unit's input voltage.		N/A
52.1.1.1	The lampholder voltage for a tungsten-halogen unit employing a lamp with a lamp base configuration shown in Table 52.0.1 shall be a nominal operating voltage of 120 V.		N/A
52.1.2	A guard, lamp containment barrier, and UV filter is able to be fabricated as a single part.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
52.1.3	A guard, lamp containment barrier, or UV filter shall be secured in position by: a) A mechanical means that produces an interference fit; b) A twist and lock means; c) Spring clips; or d) Other mechanical means.		N/A
52.1.4	An adhesive used to secure a guard, lamp containment barrier, or UV filter shall be investigated in accordance with the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL746C..		N/A
52.1.5	Any part required for compliance with the Tungsten Halogen Lamp Adjacent Surfaces and Overlamping Abnormal Operation Test of Section 143, including guards, lamp containment barriers, UV filters, and spacers or similar projections, shall be factory installed and require the use of a tool for removal		N/A
52.1.6	A tungsten-halogen torchiere style floor unit that complies with the Heat Flux Density Measurement Test specified in Section 152 shall be shipped from the factory with the tungsten-halogen lamp of the type and wattage for which the unit is designed and rated.		N/A
52.2	**Guard**		N/A
52.2.1	A tungsten-halogen type unit shall be provided with a lamp compartment or a guard such that the lamp is inaccessible to inadvertent contact during normal use (see 52.2.2). the evaluation is done for each position that is attainable by an adjustment means		N/A
52.2.2	With respect to 52.2.1, a lamp is determined to be inaccessible to inadvertent contact when a 1-1/2 inch (38 mm) diameter probe of any convenient length with a 3/4 inch (19 mm) radius rounded (hemispherical) end (see Figure 52.1) is unable to be made to contact any part of the lamp with the guard in place as intended. The probe is to be rotated or angled to any position before, during, or after insertion into an opening, and the penetration is to be to any depth attainable by the opening.		N/A
52.2.3	A guard shall be constructed of: a) Metal, minimum 0.016 inch (0.41 mm) thick; b) Heat resistant glass such as tempered, annealed or borosilicate glass; 1) Minimum 1/8 inch (3.2 mm) (3.0 mm metric trade size) thick when used with lamps rated 100 W or greater; or 2) Minimum 3/32 inch (2.4 mm) thick when used with lamps rated less than 100 W; c) Porcelain or ceramic; or d) A polymeric material, minimum 3/32 inch (2.4 mm) thick.		N/A
52.2.4	A guard constructed of a polymeric material shall meet the intent of the requirement for the service temperature involved and, when not flat, comply with the mold stress relief requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
52.3	**Guards for torchiere style units**		N/A
52.3.1	The following requirements apply to the guard over the lamp compartment of a torchiere style floor unit.		N/A
52.3.2	A guard shall be provided over the lamp compartment of a torchiere style floor unit.		—
52.3.3	A guard shall be constructed of: a) Plated or painted wire nominal 0.06 inch (1.5 mm) diameter wire; b) Metal, minimum 0.016 inch (0.41 mm) thick; c) Heat resistant glass such as tempered, annealed, or borosilicate glass: 1) Minimum 1/8 inch (3.2 mm) (3.0 mm metric trade size) thick, when used with lamps rated 100 W or greater; or 2) Minimum 3/32 inch (2.4 mm) thick, when used with lamps rated less than 100 W; or d) Porcelain or ceramic.		N/A
	52.3.4 As depicted in Figure 52.2, the minimum guard-to-lamp containment barrier spacing shall be: a) 3 inches (76 mm) when measured from the center of the lamp containment barrier; and b) 2-3/8 inches (60 mm) when measured from the ends of the lamp containment barrier.		N/A
52.3.5	The minimum guard-to-lamp envelope spacing, when there is no independent lamp containment barrier, shall be: a) 3-1/2 inches (88.9 mm) measured at the center of the lamp containment barrier; and b) 2-7/8 inches (73 mm) measured at the ends of the lamp containment barrier.		N/A
52.3.6	The minimum guard-to-lamp containment barrier spacing of 52.3.4 or guard-to-lamp envelope spacing of 52.3.5 is not required to be met when the torchiere complies with the Heat Flux Density Measurement Test in Section 152.		N/A
52.3.7	The guard shall prevent the probes specified below from contacting the lamp containment barrier or the lamp envelope under the following conditions: a) A 1-1/2 inch (38.1 mm) diameter spherical probe inserted through the guard in any orientation; and b) A 0.4 inch (10 mm) thick, 1-3/8 inches (35 mm) wide and any convenient length flat plate probe, inserted vertically 45 degrees through the guard.		N/AN/A
52.3.8	The guard shall be installed at the factory.		N/A
52.3.9	Any guard that is required to be moved to relamp shall be attached to the unit on one side by means of a hinge, tether, swivel, or similar device.		N/A
52.3.10	Any guard that does not require the use of tools to remove it shall have the guard removed during the abnormal operations tests of Sections 143 – 146.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
52.3.11	A torchiere design that complies with the abnormal operations tests of Sections 143 – 146 with the guard removed shall be exempt from the requirement in 52.3.10.		N/A
52.3.12	A torchiere designed for a single-ended tungsten-halogen lamp shall be exempt from the guard requirements in 52.3.2 when: a) The lamp is provided with an integral outer envelope for which the lamp manufacturer does not require a lamp containment barrier; b) The unit complies with the Heat Flux Density Measurement Test in Section 152 and the abnormal operations test of Sections 143 – 146; c) The lamp is provided with the unit as specified in 52.1.6; and d) The unit is marked in accordance with 171.1.2 and provided with instructions in accordance with 185.2.		N/A
52.4	**Lamp containment barrier**		N/A
52.4.1	A tungsten-halogen type unit shall be provided with a lamp containment barrier (as defined in 2.21) that complies with the requirements in this Section, unless: a) The lamp manufacturer declares on the lamp package that the lamp is suitable for use in an open luminaire; or b) The portable luminaire is intended t o be used with a lamp provided with an integral outer glass envelope, and the lamp manufacturer does not provide a caution requiring an additional lamp containment barrier		N/A
52.4.2	A lamp containment barrier shall not have any holes greater than 1/8 inch (3.2 mm) diagonally or in diameter.		N/A
52.4.3	A lamp containment barrier shall be constructed of: a) Metal, minimum 0.016 inch (0.41 mm) thick; b) Heat resistant glass such as tempered, annealed or borosilicate glass; 1) Minimum 1/8 inch (3.2 mm) (3.0 mm metric trade size) thick when used with lamps rated 100 W or greater; or 2) Minimum 3/32 inch (2.4 mm) thick when used with lamps rated less than 100 W; c) Porcelain or ceramic; or d) A polymeric material, minimum 3/32 inch (2.4 mm) thick.		N/A
52.4.4	A polymeric lamp containment barrier shall comply with the Polymeric Lamp Containment Barrier Test, Section 150, for the service temperature involved. When not flat, it shall comply with the mold stress relief requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C		N/A
52.5	**Ultraviolet (UV) filter**		N/A
52.5.1	A portable luminaire intended for use with only double envelope tungsten-halogen type lamps and that is marked in accordance with 171.2.2 is determined to comply with the UV filter requirements in this Section.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
52.5.2	A portable luminaire that is able to be used with single envelope tungsten-halogen type lamps –lamps not provided with an integral outer glass envelope shall be provided with a UV filter.		N/A
52.5.3	A downlight diffuser provided on a portable luminaire that is constructed as described in the Exceptions No. 1 and No. 2 to 52.5.2 shall comply with the UV filter requirements of this Section.		N/A
52.5.4	A UV filter shall be constructed of: a) Sodalime glass, or glass with transmission characteristics in accordance with Table 52.1. Either type shall be minimum 1/8 inch (3.2 mm) (3.0 mm metric trade size) thick for over 100 W or 3/32 inch (2.4 mm) thick for 100 watts or less; or b) A polymeric material with transmission characteristics in accordance with Table 52.1 and minimum 3/32 inch (2.4 mm) thick.		N/A
52.5.5	A polymeric UV filter shall be: a) Resistant to UV radiation in compliance with the requirements in the Standard for Polymeric Materials – Use In Electrical Equipment Evaluations, UL 746C; b) Meet the intent of the requirement for the service temperature; c) Rated HB minimum; and d) When not flat, comply with the mold stress relief requirements in UL 746C.		N/A
52.5.6	Any open holes in the UV filter shall be provided with a barrier complying with 52.5.4 or constructed of metal to prevent the emission of direct light from the lamp. The evaluation is done for each position that is attainable by an adjustment means.		N/A
52.5.7	The portable luminaire shall be marked in accordance with 171.3.2 when not provided with an interlock switch specified in Interlock Switch, 53.2 that de-energizes the lamp when the unit is opened for lamp replacement.		N/A
52.6	**Flexible or articulated arms**		N/A
52.6.1	A floor mounted tungsten-halogen torchiere style portable luminaire with a flexible or articulated arm that employs end-stops to limit arm adjustment shall comply with the following: a) The end-stops shall be factory installed; b) The end-stops shall not be easily defeatable nor removable without the use of tools; and c) The unit shall be subjected to the Tungsten-Halogen Torchiere Flexible or Articulated Arm Stop Test described in Section 148		N/A
53	**Construction – Electrical**		N/A
53.1	**Switches**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
53.1.1	A switch in a tungsten-halogen type unit provided with double ended lamps shall be a double pole switch that simultaneously opens both conductors. The switch shall be clearly marked with an indication of the off position either adjacent to the switch or on the switch. The switch or dimmer is able to be the electronic (no air gap contacts) or mechanical type that complies with the Standard for Solid State Controls for Appliances,		N/A
53.2	**Interlock switch**		N/A
53.2.1	An interlock switch that de-energizes the lamp when a portable luminaire is opened for lamp replacement shall be either: a) Rated for the load it controls and comply with the Standard for Special-Use Switches, UL1054, the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1;or b) Comply with the requirements in 53.2.2 and 53.2.3 and the tests in 54.5.		N/A
53.2.2	Current-carrying parts shall be copper or copper alloy.		N/A
53.2.3	Electrical spacings shall comply with Electrical Spacings, Section 24.		N/A
53.2.4	A portable luminaire provided with an interlock that de-energizes the lamp when the unit is opened for lamp replacement is not required to be marked as specified in 171.3.2.		N/A
53.3	**Automatic temperature-regulating or limiting control**		N/A
53.3.1	An automatic temperature-regulating or limiting control or similar device shall be used only as supplementary protection and, when employed, shall be used in combination with a guard that complies with 52.3.		N/A
53.4	**Tipover switch**		N/A
53.4.1	A tungsten-halogen torchiere style floor unit that has a flexible or articulated arm shall be provided with a tipover switch in accordance with 53.4.		N/A
53.4.2	When a tipover switch is provided, the Severe Condition Test, 143.3, and the Tungsten-Halogen Torchiere Vertical Wall Test, Section 146, are not required.		N/A
53.4.3	A tipover switch shall de-energize the unit when tipped over in any direction..		N/A
53.4.4	A tipover switch used with a tungsten-halogen torchiere shall de-energize the unit when tipped beyond the angle that the unit would right itself		N/A
54	**Tests**		N/A
54.1	**Normal temperature test**		N/A
54.1.1	A tungsten-halogen type unit is to be subjected to the Normal Temperature Test in Section 124,General, and Section 125, Test Method – General, except as provided for in 54.1.2.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
54.1.2	A tungsten-halogen type unit that: a) Uses an Edison base, double envelope tungsten-halogen lamp similar in shape to a Type A incandescent lamp; b) Is rated 100 watts or less; c) Complies with the shade dimension requirements of Section 47 for Temperature Test Exempt Units employing a 100 watt lamp and a medium base; and d) Is marked in accordance with 171.2.2; is not required to be subjected to the Temperature Test.		N/A
54.2	**Tungsten-halogen lamp adjacent surfaces and overlamping abnormal operation tests**		N/A
54.2.1	A tungsten-halogen type unit is to be subjected to the Tungsten-Halogen Lamp Adjacent Surfaces and Overlamping Abnormal Operation Tests in Section 143.		N/A
54.3	**Tungsten-halogen torchiere abnormal operation tests**		N/A
54.3.1	A tungsten-halogen portable floor unit having an open top design with the lamp facing upward,such as a torchiere style, shall not be rated in excess of 190 W and shall comply with the Tungsten-Halogen Torchiere Abnormal Operation Test, Section 145, the Tungsten-Halogen Torchiere Vertical Wall Test, Section 146, and shall be marked in accordance with 171.3.6.		N/A
54.3.2	If the tungsten-halogen portion of the unit emits 90 to 100 percent of its light upward, it shall: a) Not be capable of operating with lamps that total more than 190 W; and b) Shall be subjected to the Torchiere Input Test, Section 140A.		N/A
54.3.3	If photometric tests are required to make the determination of the percent of the light upward in 54.3.2, the test method should be in accordance with Method for Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps, IESNA LM-46.		N/A
54.4	**Guard, lamp containment barrier & UV filter security tests**		N/A
54.4.1	A tungsten-halogen type unit provided with a guard, lamp containment barrier and UV filter is to be subjected to the Tungsten-Halogen Lamp Guard, Lamp Containment Barrier and UV Filter Security Test in Section 144.		N/A
54.5	**Polymeric lamp containment test**		N/A
54.5.1	A tungsten-halogen type unit provided with a polymeric lamp containment barrier as described in 52.4.4 is to be subjected to the Polymeric Lamp Containment Barrier Test in Section 150.		N/A
54.6	**Interlock switch tests**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
54.6.1	An interlock switch shall comply with the Normal Temperature Test, Section 124, General, and Section 125, Test Method – General, Dielectric Voltage-Withstand Test, Section 137, and the Interlock Switch Endurance Test, Section 151		N/A
54.7	**Torchiere input test**		N/A
54.7.1	A tungsten-halogen torchiere having a construction which permits the insertion of lamps rated greater than 190 W total for the torchiere portion of the unit shall be subjected to the Torchiere Input Test,Section 140A.		N/A
55	**Marking**		N/A
55.1	A tungsten-halogen type unit shall comply with the markings specified in Section 171, Tungsten Halogen Units.		N/A
56	**Instructions**		N/A
56.1	A tungsten-halogen type unit shall comply with the instructions specified in Section 185,Tungsten-Halogen Units		N/A
	SURFACE MOUNTED UNITS FOR WALL, UNDER-CABINET OR APPLIANCE MOUNTING –SUPPLEMENTARY		N/A
67	**General**		N/A
67.1	These requirements specified in Sections 67 – 70 apply to surface mounted products with the following mounting means: a) Wall Mounted Units – as specified in Section 68; b) Under-Shelf Units – as specified in Section 69; and c) Appliance Mounted Units – as specified in Section 70.		N/A
67.2	These requirements are supplementary to other applicable requirements in this Standard.		N/A
67.3	These requirements do not apply to the following products and mounting means: a) Free standing units; b) Cord and chain suspended units– as specified in Sections 71 – 76; c) Clamp-on mounted units – as specified in Sections 77 – 80; d) Portable cabinet lights covered in Sections 81 – 86; and e) Track-style type units covered in Sections 101 – 106		N/A
68	**Wall Mounted Units**		N/A
68.1	**General**		N/A
68.1.1	These requirements apply to portable luminaires intended to be mounted to a wall, or to a similar structural surface.		N/A
68.2	**Construction – mechanical**		N/A
68.2.1	A wall mounted unit shall comply with the conditions specified in Table 68.1 to determine the mounting means requirements.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
68.2.2	In determining compliance with 68.2.1, the weight of the portable luminaire shall be determined by weighing the complete unit with the exception of the mounting hardware. When the lamp shade is not provided, 1/4 pound (113 g) shall be added for each lampholder to reflect the weight of the shade. When a shelf, bowl, hook or any means of support of any object, other than a shade, is provided, the weight of the intended object shall be included.		N/A
68.2.3	A wall mounted unit is able to be provided with a separable bracket used to secure the product to a vertical mounting surface in accordance with 68.2.1.		N/A
68.3	**Construction – electrical**		N/A
68.3.1	The wall mounted unit shall comply with the requirements for Enclosure, Section 9, and the requirements for Accessibility of Live Parts, Section 23, without dependence on the intended mounting surface or any separable bracket.		N/A
68.3.2	The power supply cord shall exit the portable luminaire from a surface other than the one abutting the vertical wall.		N/A
68.3.3	A wall mounted unit that has accessible metal parts shall be provided with a grounding attachment plug and comply with the requirements in Grounding and Bonding, Section 36.		N/A
68.4	**Tests**		N/A
68.4.1	Mounting means		N/A
68.4.1.1	A surface mounted unit required to be tested as specified in Table 68.1, Condition F shall be subjected to the Mounting Means Test – Surface Mounted Unit, Section 156.		N/A
68.5	**Instructions**		N/A
68.5.1	. A surface mounted unit shall be provided with installation instructions as specified in Section 186, Surface Mounted Units.		N/A
69	**Under-Shelf Mounted Units**		N/A
69.1	**General**		N/A
69.1.1	These requirements apply to portable luminaires intended to be mounted under a shelf, cabinet, or similar structural surface		N/A
69.2	**Mounting means**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
69.2.1	An under-shelf mounted unit shall be provided with a means for mounting in accordance with Section 68, Wall Mounted Units, except as follows: a) Only Conditions C and F from Table 68.1 are applicable. The keyhole slots in Condition C are able to be open to facilitate mounting in place and tightening of mounting screws; b) Each term wall mounted shall be replaced with under-shelf mounted and each term vertical that references the mounting surface shall be replaced with horizontal ; and c) The Exception to 156.2.1 does not apply and the surface mounted instructions in Section 186, Surface Mounted Units, shall specify the intended mounting surface.		N/A
69.3	**Construction – electrical**		N/A
69.3.1	Attachment plugs and receptacles		N/A
69.3.2	Wiring		N/A
69.3.2.1	An interconnecting cord for under-shelf mounted units shall be in accordance with Table 27.1and rated 105°C minimum.		N/A
69.3.2.2	Low voltage wiring shall have an ampacity rating in accordance with Table 26.1. Overcurrent protection for low voltage wiring is not required.		N/A
69.3.3	Insulating barriers for fluorescent lamp components		N/A
69.3.3.1	A fluorescent under-shelf unit shall be provided with insulating material not less than 1/32 inch (0.8 mm) thick between a metal enclosure and: a) The enclosure of a ballast; b) A splice or fixture-type wire connector; and c) A dead metal part – including a mounting screw, rivet, yoke, clamp, and similar parts – of an electrical component, such as a lamp holder, switch, or receptacle.		N/A
69.3.4	Grounding		N/A
69.3.4.1	A under-shelf mounted unit shall be grounded and bonded in accordance with 68.3.3.		N/A
69.4	**Tests**		N/A
69.4.1	Mounting means test		N/A
69.4.1.1	An under-shelf mounted unit required to be tested as specified in Table 68.1, Condition F shall be subjected to the Mounting Means Test – Surface Mounted Unit, Section 156, and as modified in 69.2.		N/A
69.5	**Markings**		N/A
69.5.1	An under-shelf mounted unit shall comply with the installation instructions specified in 186.1 andas modified in 69.2.		N/A
70	**Appliance Mounted Units**		N/A
70.1	**General**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
70.1.1	A portable luminaire that is intended to be mounted on a cord-connected appliance, such as a sewing machine, or on a portable nonelectrical product, such as a picture, music stand, or portable furnishing, is able to have provision for permanent or semipermanent mounting.		N/A
70.2	**Instructions**		N/A
70.2.1	An appliance mounted unit shall comply with the installation instructions specified in 186.2.		N/A
	CORD AND CHAIN SUSPENDED UNITS – SUPPLEMENTARY		N/A
71	**General**		N/A
71.1	The requirements specified in Sections 71 – 76 apply to a portable luminaire that is intended for suspension from the ceiling. Such a lamp is able to be provided with a chain.		N/A
71.2	These requirements are supplementary to other applicable requirements in this Standard.		N/A
71.3	For the purposes of this Section, the following definitions apply: a) Swag type unit – A chain-suspended portable luminaire. b) Hanging type unit – A power-supply cord-suspended portable luminaire not provided with a chain. c) Portable luminaire or unit – Either a swag or a hanging type portable luminaire.		N/A
71.4	A portable luminaire suspended from a wire, cable, or equivalent means shall comply with the chain-suspended requirements except as noted in 72.1.1.		N/A
72	**Construction – Mechanical**		N/A
72.1	**Chains**		N/A
72.1.1	A swag type unit shall be provided with not more than 15 feet (4.6 m) of metal chain, and not less than 9 feet (2.7 m) of metal chain.		N/A
72.1.2	When there are supplementary chain segments attached to an extended arm, a splice compartment, and similar components, the length of the chain is determined to be the length of the principal segment plus the length of the longest supplementary segment, plus the length of any other segment over 12 inches (305 mm) long. When all supplementary segments are the same length and not more than 12 inches (305 mm) long, the length of the chain is determined to be the length of the principal segment plus the length of only one supplementary segment		N/A
72.2	**Support hardware**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
72.2.1	The support hardware for a portable luminaire shall consist of: a) At least two metal hooks, each with a No. 10-24 threaded hole that engages the bolt threads; b) Two wing bolts, each consisting of a No. 10-24 bolt, 2-7/8 inches (73 mm) long with two tapered wings 1 by 5/16 inch (25.4 by 7.9 mm); and c) Two studs – combination wood screw-machine screw – measuring 1-3/4 inches (44.4 mm) overall and having 1-1/4 inches (31.8 mm) of wood screw threads on one end and at least six No. 10-24 machine screw threads on the other end.		N/A
72.2.2	In addition to the hardware specified in 72.2.1, a hanging type unit provided with metal hooks shall also be provided with insulators to protect the cord.		N/A
72.3	**Maximum weight**		N/A
72.3.1	The weight of a swag type unit, including the shade, glassware, 4 feet (1.2 m) of chain, and any anticipated additional loading shall not exceed 30 pounds (13.6 kg).		N/A
72.3.2	A swag type unit that is provided with a bowl, a shelf, or a hook intended for the support of any object that is not part of the portable luminaire itself, other than the shade, shall be investigated to determine that provision for the support of the additional weight does not result in the total weight exceeding the 30 pounds (13.6 k) specified in 72.3.1. It is not possible to specify the conditions of mechanical loading for all forms of constructions; however, the most severe conditions of anticipated use and abuse shall be evaluated – for example, a bowl is to be filled to capacity with dry sand and additionally filled with water.		N/A
72.3.3	The weight of a hanging type unit (cord suspended), including the shade, glassware, and any anticipated additional loading shall not exceed the cord specifications in Table 72.1.		N/A
72.3.4	A hanging type unit (cord suspended) shall not be provided with a bowl, shelf, or hook intended to support any object that is not part of the hanging lamp.		N/A
72.3.5	A hanging unit having play value in accordance with Section 18, Portable Luminaires Having Play Value, shall be tested in accordance with the Tests for Suspended Toys, Section 158.		N/A
73	**Construction – Electrical**		N/A
73.1	**Internal wiring protection**		N/A
73.1.1	Wiring and splices within a metal enclosure shall be provided with supplementary insulation having a minimum temperature rating of 105°C (220°F), or the wiring and splices shall be kept from contacting the metal of an enclosure.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
73.1.2	With reference to the requirement in 73.1.1, the supplementary insulation is to consist of not less than 0.01 inch (0.3 mm) thick: a) Woven glass tape; or b) Snug-fitting woven glass sleeving or insulating tape or tubing.		N/A
73.1.3	Flexible cord that has had the outer jacket removed is regarded as internal wiring and shall comply with the requirements in 73.1.1.		N/A
73.1.4	Flexible cord that has been split is regarded as internal wiring and shall comply with the requirements in 73.1.1.		N/A
73.2	**Power-supply cord**		N/A
73.2.1	The power supply cord for a swag type unit shall: a) Be at least 15 feet (4.6 m) long from the point where the cord emerges from the body of the lamp to the face of the attachment plug or connector, and extend not less than 1 foot (0.3 m) nor more than 6 feet (1.8 m) beyond the end of the chain; and b) Have insulation rated for 105°C (221°F).		N/A
73.2.2	The flexible cord for a hanging type unit shall: a) Be at least 15 feet (4.6 m) long from the point where the cord emerges from the body of the unit to the face of the attachment plug or connector; b) Have insulation rated for 105°C (221°F); and c) Be of a type specified in Table 72.1.		N/A
73.3	**Lampholders and switches**		N/A
73.3.1	Dead metal parts of a lampholder or a switch (such as a mounting bracket, nipple, or pull chain) shall be: a) Inaccessible in accordance with Accessibility of Live Parts, Section 23; and b) Enclosed in metal, glass, marble, porcelain, or phenolic, or spaced at least 3/64 inch (1.2mm) from accessible dead metal of the lamp.		N/A
73.3.2	A lampholder shall have a body and base (or cap) of insulating material. Metal shell lampholders and/or lampholders with exposed terminals shall not be used.		N/A
73.3.3	When the insulating body of an incandescent lampholder is provided with an integral metal nipple or tube, the inner end of the nipple or tube shall not extend inward beyond the inner surface of the lampholder body.		N/A
73.3.4	A through-cord switch shall be located at least 1-1/2 inches (38 mm) from accessible dead metal of the portable luminaire.		N/A
74	**Tests**		N/A
74.1	**Mounting means test**		N/A
74.1.1	A cord and chain suspended unit required to be tested as specified in the Exception 1 to 72.2.1 shall be subjected to the Mounting Means Test – Chain and Suspended Units, Section 157.		N/A
74.2	**Tests for suspended toys**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
74.2.1	A cord and chain suspended unit having play value in accordance with Portable Luminaires Having Play Value, Section 18, shall be subjected to the Tests for Suspended Toys, Section 158.		N/A
75	**Markings**.		N/A
75.1	A cord and chain suspended unit not provided with the lengths of cord and chain required by 72.1.1 shall be provided with markings as specified in Section 174, Cord and Chain Suspended Units		—
76	**Instructions**		N/A
76.1	A cord and chain suspended unit shall be provided with instructions as specified in Section 187,Cord and Chain Suspended Units		—
	CLAMP-ON MOUNTED UNITS – SUPPLEMENTARY		—
77	**General**		—
77.1	These requirements specified in Sections 77 – 80 apply to portable luminaires that are provided with clamps as the mounting means.		—
77.2	These requirements are supplementary to other applicable requirements in this Standard.		—
78	**Construction – Mechanical**		—
78.1	**Clamp**		N/A
78.1.1	A clamp relying on a spring-actuated clip for securement shall hold the portable luminaire to surfaces from 1/16 inch (1.6 mm) thick to 1-1/2 inches (38 mm) thick.		N/A
78.1.2	A clamp shall not require the use of tools to adjust the clamp		N/A
78.1.3	A thumb screw knob provided to tighten a clamp shall be at least 7/8 inch (22.2 mm) in diameter		N/A
78.1.4	When a spring-actuated clamp employs a friction-type material secured by an adhesive, the adhesive bond shall comply with the requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A
79	**Construction – Electrical**		N/A
79.1	**Power-supply cords**		N/A
79.1.1	The power supply cord for an incandescent clamp-on unit shall be rated 105°C (221°F) and secured directly to the lampholder.		—
79.2	**Lampholders and switches**		—
79.2.1	Dead metal parts of a lampholder or a switch (such as a mounting bracket, nipple, or pull chain) shall be: a) Inaccessible in accordance with Accessibility of Live Parts, Section 23; and b) Enclosed in metal, glass, marble, porcelain, or phenolic, or spaced at least 3/64 inch (1.2mm) from accessible dead metal of the portable luminaire.		N/A
79.2.2	A lampholder shall have a body and base (or cap) of insulating material. Metal shell lampholders and/or lampholders with exposed terminals shall not be used.		—

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Clause	Requirement + Test	Result - Remark	Verdict
79.2.3	When the insulating body of an incandescent lampholder is provided with an integral metal nipple or tube, the inner end of the nipple or tube shall not extend inward beyond the inner surface of the lampholder body.		N/A
79.2.4	A through-cord switch shall be located at least 1-1/2 inches (38 mm) from accessible dead metal of the portable luminaire.		N/A
80	**Tests**		N/A
80.1	**Mounting means test**		—
80.1.1	A clamp relying on a spring-actuated clip for securement shall comply with the Mounting Means Test – Clamp-On Unit, Section 159.		N/A
81	**General**		N/A
81.1	The requirements specified in Sections 81 – 86 apply to portable luminaires intended for final installation into a cabinet (Open or Enclosed) such as a china hutch, bookcase, bar, console, bed headboard or similar items.		N/A
81.2	A surface mounted portable cabinet light is also suitable for installation under a shelf or kitchen cabinet when the line voltage power supply cord is not concealed.		N/A
81.3	A recessed mounted portable cabinet light connected to a Class 2 power supply is suitable for installation in a kitchen cabinet or other built-in furnishing, when the power supply and the line voltage power supply cord is not concealed.		N/A
81.4	These requirements are supplementary to other applicable requirements in this Standard.		N/A
82	**Construction – Mechanical**		N/A
82.1	**Mounting flange**		N/A
82.1.1	A pot style portable cabinet light shall have the mounting flange secured by means other than friction alone such as clamping with mechanical stop to limit adjustment, twist and lock, mechanical fasteners, or multiple spring clips that hook over the mounting surface. A strain relief bushing, bent tabs, or raised dimples in combination with a clamp meets the intent of the requirement.		N/A
82.1.2	Portable cabinet lights other than pot style shall have a mounting means that complies with 71.2.		N/A
83	Tests		N/A
83.1	Mounting means test		N/A
83.1.1	A clamp relying on a spring-actuated clip for securement Shall comply with the mounting means test-clamp-on unit,section 181.		N/A
	Portable cabinet lights-supplementary		N/A
84	General		N/A
84.1	The requirements specified in sections 84-89 apply to portable luminaire installation into a open or enclosed cabinet such as a chin hutch, bookcase,bed headboard,or kitchen cabinet		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
84.2	A portable cabinet light shall be installed so that the line voltage power supply cord is not concealed.		N/A
84.3	These requirements are supplementary to other applicable requirements in this standard.		N/A
85	**Construction – Mechanical**		N/A
85.1	**Mounting means**		N/A
85.1.1	A pot style portable cabinet light shall have the mounting flange secured by means other than friction alone such as clamping with mechanical stop to limit adjustment, twist and lock, mechanical fasteners, or multiple spring clips that hook over the mounting surface. A strain relief bushing, bent tabs, or raised dimples in combination with a clamp meets the intent of the requirement.		N/A
85.1.2	Portable cabinet lights other than pot style shall have a mounting means that complies with 71.2.		N/A
86	**Construction – Electrical**		—
86.1	**Power-supply cords**		—
86.1.1	The power supply cord shall be at least 10 feet (3.05 m) in length, measured from the plug to the entrance into the fifirst portable luminaire or accessory (switch, dimmer, power supply, or similar equipment).		—
86.1.2	Means shall be provided to prevent cord contact with the portable cabinet light at a location other than the cord exit, unless the cord is rated for the maximum temperature of any location it may contact.		N/A
86.2	**Interconnecting cord**		—
86.2.1	A length of Type SPT-2 or SPE-2 105°C (221°F) flflexible cord is to be provided as an interconnection between two or more portable cabinet lights intended for use in a single cabinet.		—
86.2.2	An interconnecting cord for portable cabinet lights shall be in accordance with Table 27.1 and rated 105°C minimum.		—
86.3	**Attachment plugs and receptacles**		—
86.3.1	A portable cabinet light intended for interconnection shall be provided with: a) A receptacle of the same type and confifiguration as the attachment plug of the portable unit, as illustrated in Figure 32.1, and marked in accordance with 207.3; or b) A non-NEMA standard receptacle.		N/A
86.4	**Lampholders**		N/A
86.4.1	Lampholders shall have all wiring terminations and connections enclosed within the insulating body of the lampholder.		—
86.5	**Low voltage portable cabinet lights**		N/A
86.5.1	The cord between a low voltage portable cabinet light and remote mounted low voltage transformer or power supply shall be no less than 18 inches (457.2 mm) long.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
86.5.2	Proprietary plugs and receptacles used for secondary circuit or low voltage connections shall not be NEMA Styles 1 – 15, 1 – 15P, 5 – 15, or 5 – 20.		N/A
86.5.3	Low voltage wiring shall have an ampacity rating in accordance with Table 26.1. Overcurrent protection for low voltage wiring is not required.		—
86.6	**Portable cabinet light accessories**		—
86.6.1	A portable cabinet light accessory shall make all electrical connections with interconnecting plug and receptacles where the means of maintaining polarity and strain relief are provided. The accessories shall comply with the applicable requirements in Sections 84 – 86 and elsewhere in the standard.		—
86.6.2	A portable cabinet light accessory incorporating a power supply cord shall comply with 86.1.1 when assembled to the intended mating portable cabinet light.		—
86.6.3	The portable cabinet light accessory shall be marked in accordance with 207.4 and provided with installation instructions in accordance with Section 224		—
87	**Tests**		N/A
87.1	**Normal temperature test**		N/A
87.1.1	A portable cabinet light shall be subjected to the Normal Temperature Test – General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Portable Cabinet Lights, Section 146.		N/A
88	**Markings**		N/A
88.1	A portable cabinet light shall comply with the markings specifified in Portable Cabinet Lights, Section 207.		—
88.2	A ten foot detachable cord set provided for use as an accessory with the portable cabinet light shall be marked in accordance with 207.2.		—
89	**Instructions**		—
89.1	A portable cabinet light shall comply with the instructions specifified in Section 223, Portable Cabinet Lights.		—
	UNITS FOR USE WITH OFFICE FURNISHINGS – SUPPLEMENTARY		N/A
90	**General**		N/A
90.1	The requirements specifified in this section apply to portable luminaires used with office furnishing		N/A
90.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
90.3	A portable luminaire intended for use with roprietary mounting systems shall be evaluated based upon the manufacturer's instructions.		N/A
91	**Construction – Mechanical**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
91.1	An office furnishing shall not be used to complete any portion of an electrical enclosure.		N/A
92	**Construction – Electrical**		N/A
92.1	**Power-supply cords**		N/A
92.1.1	A power supply cord shall be at least hard usage, Type SJ, SJE, SJEO, SJO, SJOO, SJT, SJTO, SJTOO, S, SE, SEO, SO, SOO, ST, STO, or STOO as defifined in the Standard for Flexible Cords and Cables, UL 62.		N/A
92.1.2	A power supply cord shall not exceed 9 feet (2.74 m) in length as measured from the back surface of the attachment plug to the point of cord entry on the portable luminaire.		N/A
92.1.3	A power supply cord shall be 18 AWG minimum, shall contain an equipment grounding conductor, and have a grounding type attachment plug.		N/A
92.2	**Plugs and receptacles**		N/A
92.2.1	A plug or receptacle provided for interconnection shall be the grounded type and rated not less than 15 A, 125 V, and shall not be NEMA Styles 1 – 15, 1 – 15P, 5 – 15 or 5 – 20.		N/A
92.2.2	A convenience receptacle shall not be provided in a portable luminaire for use with office furnishings.		—
92.3	**Interconnecting cord**		—
92.3.1	An interconnecting cord shall be the hard usage type rated 105°C in accordance with 92.1.3.		N/A
92.3.2	An office furnishing unit with provision for interconnection and equipped with a 18 AWG power supply cord shall be provided with overcurrent protection rated to protect the cord, plug, and receptacle.		N/A
92.3.3	An office furnishing unit with provision for interconnection and equipped with a 16 AWG power supply cord shall either be provided with suitably rated overcurrent protection or shall be marked in accordance with 198.9.4		N/A
92.3.4	Overcurrent protection in the form of fuses shall have a marking in accordance with 198.9.3.		N/A
93	**Markings**		N/A
93.1	An office furnishing type unit shall comply with the markings specifified in Units for Use with Office Furnishings, Section 208.		N/A
94	**Instructions**		N/A
94.1	An office furnishing type unit shall comply with the instructions specifified in Units for Use with Office Furnishings, Section 225.		N/A
	CONVERTIBLE UNITS – SUPPLEMENTARY		N/A
95	**General**		N/A
95.1	The requirements specifified in Sections 95 – 99 apply to portable luminaires intended to be convertible to fifixed units (lighting fifixtures).		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
95.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
95.3	A convertible unit shall be mounted in accordance with the instructions provided by the manufacturer and evaluated as a portable luminaire in accordance with the requirements in this standard and as a fifixed unit (luminaire) in accordance with the Standard for Luminaires, UL 1598.		N/A
96	**Construction – Mechanical**		N/A
96.1	**Swag-to-chandelier conversion kits**		N/A
96.1.1	A convertible swag type unit shall be provided with a separately packaged conversion kit, consisting of a canopy, crossbar, wire connectors, and all the required mounting hardware to enable the portable luminaire to be converted to a chain-suspended, outlet box-mounted unit.		N/A
96.2	**Surface mount conversion kits**		N/A
96.2.1	A convertible surface-mount unit shall be provided with a separately packaged conversion kit, consisting of wire connectors and all the mounting hardware required, to enabled the portable luminaire to be converted to a surface-mount unit.		N/A
	CONVERTIBLE UNITS – SUPPLEMENTARY		N/A
95	**General**		N/A
95.1	The requirements specifiied in Sections 95 – 99 apply to portable luminaires intended to be convertible to fifixed units (lighting fifixtures).		N/A
95.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
95.3	A convertible unit shall be mounted in accordance with the instructions provided by the manufacturer and evaluated as a portable luminaire in accordance with the requirements in this standard and as a fifixed unit (luminaire) in accordance with the Standard for Luminaires, UL 1598.		N/A
96	**Construction – Mechanical**		N/A
96.1	**Swag-to-chandelier conversion kits**		N/A
96.1.1	A convertible swag type unit shall be provided with a separately packaged conversion kit, consisting of a canopy, crossbar, wire connectors, and all the required mounting hardware to enable the portable luminaire to be converted to a chain-suspended, outlet box-mounted unit.		N/A
96.2 S	**urface mount conversion kits**		N/A
96.2.1	A convertible surface-mount unit shall be provided with a separately packaged conversion kit, consisting of wire connectors and all the mounting hardware required, to enabled the portable luminaire to be converted to a surface-mount unit.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
97.2 97.2.1	**General** An under-shelf mounted system that is convertible to a fifixed wiring means shall comply with the following: a) All components of the system shall comply with the Standard for Luminaires, UL 1598; and b) The interconnected cords shall be provided with a grounding conductor and a grounding means if grounding is required for the luminaire in accordance with UL 1598.		N/A
97.3	**Polarity**		N/A
97.3.1	A convertible unit shall be wired so that the conductor connected to the screw-shell or to the identifified neutral of the ballast is identifified for proper connection to the power supply in accordance with Polarization and Identifification, Section 35.		N/A
97.4	**Power – supply cord**		N/A
97.4.1	A convertible unit shall be provided with a power supply cord connected to the unit, or provided with a detachable power supply cord as long as it is packaged with the product.		N/A
98	**Markings**		N/A
98.1	A convertible unit shall comply with the markings specifified in Convertible Units, Section 209.		N/A
99 99.1	**Instructions** A convertible unit shall comply with the instructions specifified in Convertible Units, Section 226.		N/A
	INTERCHANGEABLE UNITS – SUPPLEMENTARY REQUIREMENTS		N/A
100 100.1	**General** The requirements specifified in Sections 100 – 103 apply to residential units which utilize one or more replaceable or interchangeable lighting assemblies fifitted to a base which is to be weighted or confifigured for pin-up mounting.		N/A
100.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
100.3	The base, adapter, and lighting assembly shall comply with the applicable requirements of the Standard for Track Lighting Systems, UL 1574		N/A
101	**Construction – Mechanical**		N/A
101.1	**Mounting**		N/A
101.1.1	The base shall not be provided with means for permanent mounting to a building structure. This does not preclude the provision of clips or separable mounting brackets which are intended to be permanently attached to a building structure and to which the base is connected. Exception: Means for mounting in accordance with Surface Mounted Units – General, Section 70, and Wall Mounted Units, Section 71, is to be provided.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
101.1.2	It shall not be required to use a tool to remove the base from clips or separable mounting brackets.		N/A
102	**Construction – Electrical** .		N/A
102.1	**Power-supply cords**		N/A
102.1.1	The power supply cord and attachment plug cap shall be rated in accordance with Electrical Ratings, 198.6, based on the maximum current rating of the lighting assemblies intended to be applied to the base, in accordance with the marking specifiified in 210.1.		N/A
102.2	**Polarization**		N/A
102.2.1	Polarity shall be maintained electrically through all components (power supply cord, base, adapter and lighting assembly). The screw shell of an Edison-base lampholder and an identifiified (neutral) conductor of a ballast shall be connected to the grounded (neutral) conductor of the lighting assembly and the base.		N/A
102.2.2	The mechanical means required in 102.2.1 for maintaining polarity of the components (for example, a keying ridge or protrusion) shall comply with the Mechanical Means of Polarity Test, Section 182.		N/A
102.3	**Adapter**		N/A
102.3.1	The base shall be provided with a fifixed number of locations for attachment of adapters.		N/A
102.3.2	An adapter shall not be provided with a general purpose receptacle		N/A
103	**Markings**		N/A
103.1	An interchangeable type unit shall comply with the marking specifiied in Interchangeable Units, Section 210.		N/A
	TRACK-STYLE UNITS – SUPPLEMENTARY		N/A
104	**General**		N/A
104.1	The requirements specifiied in this section apply to portable luminaires that utilize one or more replaceable or interchangeable lighting assemblies fifitted to a track or portion thereof intended to facilitate adjustment.		N/A
104.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
104.3	A track-style type unit shall comply with the applicable requirements in this standard. The track and adapter shall comply with the applicable requirements in the Standard for Track Lighting Systems, UL 1574. A lighting assembly complying with the applicable requirements in UL 1574 need not be subjected to further evaluation. .		N/A
105	**Construction – Mechanical**		N/A
105.1	**Track**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
105.1.1	The track shall be provided in fifixed, one piece, lengths with a maximum length of 8 feet (2.4 m) and with the power-supply cord fifitter and end cap attached.		N/A
105.2	**Securement of cord and end cap**		N/A
105.2.1	The power-supply cord fifitter and the end cap shall be permanently secured in place.		N/A
105.2.2	With respect to 105.2.1, an end cap or power-supply cord fifitter is determined to be permanently secured in place when it is secured in such a manner that it is not removable: a) Without the use of tools; or b) With ordinary tools such as a flflat or cross blade screwdriver, common pliers, or a hex head driver.		N/A
105.3	**Mounting means**		N/A
105.3.1	Mounting means shall be provided with each track. The mounting means shall consist of: a) Screws or bolts for mounting the track; or b) Clips for mounting the track along with screws or bolts for mounting of the clips. Exception: A different mounting means is to be provided when it complies with the Track Clip Securement Test, Section 183, and is investigated and found to be equivalent to the mounting means described in 105.3.1.		N/A
105.3.2	Mounting clips, when provided, shall comply with the Track Clip Securement Test, Section 183.		N/A
106	**Construction – Electrical**		N/A
106.1	**Power-supply cords**		N/A
106.1.1	The power-supply cord attachment plug and overcurrent protection shall be sized in accordance with Table 106.1. Overcurrent protection shall be provided in the power-supply cord.		N/A
106.2	**Polarity**		N/A
106.2.1	Polarity shall be maintained electrically through all components (power-supply cord, power-supply fifitter, track, adapter, and lighting assembly) of a track-style type unit.		N/A
106.3	**Receptacles**		N/A
106.3.1	A general purpose receptacle shall not be provided.		N/A
107	**Tests**		N/A
107.1	**Mechanical means of polarity test**		N/A
107.1.1	The mechanical means required in 106.2.1 for maintaining polarity of the components in a track-style type unit (for example, a keying ridge or protrusion) shall comply with the Mechanical Means of Polarity Test, Section 182		N/A
107.2	**Track clip securement test**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
107.2.1	Mounting clips and the exception to 106.2.1 shall be evaluated by complying with the Track Clip Securement Test, Section 183.		N/A
108	**Markings**		N/A
108.1	A track style unit shall comply with the markings specifiied in Track-Style Units, Section 211.		N/A
109	**Instructions**		N/A
109.1	A track style unit shall comply with the instructions specifiied in Track-Style Units, Section 227.		N/A
	PORTABLE LUMINAIRE KIT – SUPPLEMENTARY		N/A
110	**General**		N/A
110.1	The requirements specifiied in Sections 110 – 115 apply to portable luminaire kits. A portable luminaire kit consists of all the parts to a portable luminaire in an easy to assemble form either for “building” a unit such as a craft kit. They are intended to be assembled by a person presumed to possess a little or no knowledge of electrical circuitry. The assembled units shall comply with the applicable requirements elsewhere in this standard independent of any materials not included in the kit. Only ordinary tools shall be required for assembly unless specifific tools are provided.		N/A
110.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
111	**Construction – Mechanical**		
111.1	**General**		N/A
111.1.1	The complete portable luminaire kit shall be packaged in a single carton or container. This does not preclude shipping cartons holding many of the individually packaged products.		
111.2	**Shade**		N/A
111.2.1	When a shade is not provided, then instructions detailing shade dimensions shall be provided in accordance with Incandescent Units Shipped without Lampshade, 219.1.		N/A
112	**Construction – Electrical**		N/A
112.1	**General**		N/A
112.1.1	A portable luminaire kit shall consist of all electrical parts and screws for mounting components when required and either: a) The required mechanical support or enclosure parts; and/or b) Complete instructions for “building” or “fifinding” parts that meet the intent of the requirement.		N/A
112.1.2	The electrical assembly shall be completely factory wired.		N/A
112.2	**Mounting of components**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
112.2.1	A flfluorescent unit subassembly is to include a means for supporting the ballast(s) unless the means of support is integral with the lampholder(s).		N/A
112.2.2	A cork or plug mounted on a stem connected to the lampholder is an intended means for mounting the lampholder to a bottle, vase, jar, or similar support.		N/A
113	**Tests**		N/A
113.1	**Assembly and installation test**		N/A
113.1.1	The portable luminaire kits required assembly and installation instructions shall be evaluated by conducting the Assembly and Installation Test, Section 184.		N/A
114	**Markings**		N/A
114.1	Portable luminaire kits and subassemblies shall comply with the markings specifiied in Portable Luminaire Kits and Subassemblies, Section 212.		N/A
115	**Instructions**		N/A
115.1	A portable luminaire kit and subassembly shall comply with the installation instructions specifiied in Portable Luminaire Kits and Subassemblies, Section 228.		N/A
115.2	All parts provided shall be detailed in the assembly instruction		N/A
	PORTABLE LUMINAIRE SUBASSEMBLIES – SUPPLEMENTARY		N/A
116	**General**		N/A
116.1	The requirements specifiied in Sections 116 – 120 apply to portable luminaire subassemblies. Portable luminaire subassemblies are parts of portable luminaries intended for either factory assembly or fifield assembly for rewiring a unit by persons familiar with the knowledge and hazards of electrical circuitry. Only ordinary tools shall be required for assembly unless specifific tools are provided.		N/A
116.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
117	**Construction – Electrical**		N/A
117.1	**General**		N/A
117.1.1	A portable luminaire subassembly shall consist of all electrical parts (including wire nuts, pre-stripped and tinned wires, and screws for mounting components when required.		N/A
117.1.2	The electrical assembly shall be completely factory wired and the lampholder shall have integral leads or an integral shell that encloses the wiring terminations.		N/A
117.2	**Power-supply cord**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
117.2.1	For a unit rewiring subassembly, the minimum power supply cord length shall be such that when the unit is rewired, the external portion of the cord is at least 5 feet (1.5 m) long.		N/A
117.3	**Mounting of components**		N/A
117.3.1	A flfluorescent unit subassembly is to include a means for supporting the ballast(s) unless the means of support is integral with the lampholder(s).		N/A
118	**Assembly and Installation Test**		N/A
118.1	The portable luminaire subassembly's required assembly and installation instructions shall be evaluated by conducting the Assembly and Installation Test, Section 184.		N/A
119	**Markings**		N/A
119.1	A portable luminaire subassembly shall comply with the markings specifiied in Portable Luminaire Kits and Subassemblies, Section 212.		N/A
120	**Instructions** .		N/A
120.1	A portable luminaire subassembly shall comply with the installation instructions specifiied in Portable Luminaire Kits and Subassemblies, Section 228.		N/A
120.2	All parts provided shall be detailed in the assembly instructions.		N/A
	PORTABLE LUMINAIRE ACCESSORIES – SUPPLEMENTARY		N/A
121	**General**		N/A
121.1	A portable luminaire accessory consists of components such as interconnecting cord sets, dimmers, and switch assemblies.		N/A
121.2	A portable luminaire accessory intended for use as a conversion kit to enable a portable luminaire to be converted to a fifixed unit (luminaire) shall comply with the requirements for Convertible Units – Supplementary, Sections 95 – 99.		N/A
121.3	These requirements are supplementary to other applicable requirements in this standard.		N/A
122	**Construction**		N/A
122.1	The interconnecting means between the portable luminaire accessory and the portable luminaire shall comply with the requirements for Interconnected Units, Section 33.		N/A
123	**Markings**		N/A
123.1	The portable luminaire accessory shall comply with the markings specifiied in Section 213.		N/A
124	**Instructions**		N/A
124.1	The portable luminaire accessory shall comply with the installations instructions specifiied in Section 229		N/A
	WORK LIGHTS – SUPPLEMENTARY		N/A
125	**General**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
125.1	The requirements specifiied in Sections 125 – 129 apply to work lights defifined in accordance with 2.66.		N/A
125.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
125.3	A work light with a tungsten halogen lamp shall additionally comply with the requirements in Tungsten Halogen Units, Sections 54 – 59, unless superseded by requirements herein		N/A
125.4	A work light with a high intensity discharge lamp shall additionally comply with the requirements in High Intensity Discharge Units, Sections 65 – 69, unless superseded by requirements herein.		N/A
125.5	A work light with a flfluorescent lamp shall additionally comply with the requirements in Fluorescent Units, Sections 60 – 64, unless superseded by requirements herein.		N/A
125.6	A work light with an LED light source shall additionally comply with the applicable requirements from the Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, UL 8750, unless superseded by requirements herein.		N/A
125.7	A work light marked for outdoor use, in accordance with 214.4, or for wet location use, in accordance with 215.1, shall additionally comply with the requirements in Wet Location Use, Sections 130 – 135, unless superseded by the requirements herein.		N/A
125.8	A work light provided with an integral generator shall comply with the wet location requirements and be marked in accordance with 214.4.		N/A
126	**Construction – Mechanical**		N/A
126.1	**Assembly**		N/A
126.1.1	A work light is able to be unassembled when the subassemblies comply with Assembly and Packaging, Section 8.		N/A
126.1.2	A guard for a work light, when not factory attached, is to be shipped only as a single unattached subassembly when it is able to be attached by common household tools and is marked in accordance with 214.6.		N/A
126.2	**Guards**		N/A
126.2.1	A work light shall be provided with a guard that complies with this section.		N/A
126.2.2	A guard shall be fabricated from nominal 0.06 inch (1.5 mm) minimum diameter plated or painted wire.		N/A
126.2.3	For areas other than at the exposed lamp or diffuser, the guard shall prevent a 2 inch (51 mm) diameter sphere from contacting any housing surfaces which require guarding. See Figure 126.1 for sphere probe		N/A
126.2.4	A guard for the lens or diffuser is not required for a work light complying with Exception No. 1 or Exception No. 2 to 128.2.1.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
126.2.5	A work light guard shall be attached so that it either: a) Requires the use of tools for removal; or b) Requires two separate actions to disengage the securing means (i.e. push and turn) and complies with the Guard Securement Test in Section 185.		N/A
126.3	**Handles**		N/A
126.3.1	A work light with external enclosure surface temperatures exceeding 90°C (194°F) during the Normal Temperature Test – General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Work Lights, Section 147, shall be provided with a handle for positioning the light. The surface temperature of the handle shall not exceed the limits in Table 144.1, item 1(b).		N/A
126.4	**Bases and stands**		N/A
126.4.1	Work lights have the option of being reestanding, clamp on, or employing similar portable mounting means, or being provided with a means for mounting to a tool, machine, wall, or similar object.		N/A
126.4.2	A stand that telescopes and extends 5 feet (1.5 m) or more above the ground shall be arranged to prevent sudden collapse when aiming or adjusting the work light. This is to be accomplished by a detent, positive latching or locking feature.		N/A
126.4.3	The telescoping portion of a stand shall either have a mechanical stop to prevent separation or have an alignment mark. The product shall be marked in accordance with 214.7 describing the purpose of the alignment mark.		N/A
126.4.4	A base or stand that has casters or wheels shall have an integral locking device.		N/A
126.4.5	A base or stand of a wet location type unit that has casters or wheels shall have provision for storing the power supply cord.		N/A
126.4.6	Stability of a work light shall not rely on a compartment or a base or stand intended to be fifilled with liquid, sand, or other material by the user or operator.		N/A
126.4.7	A base or stand having a liquid fueled motor driven generator shall comply with the Standard for Industrial Control Equipment, UL 508, and the Standard for Engine-Generator Assemblies for Use in Recreational Vehicles, UL 1248.		N/A
127	**Construction – Electrical**		N/A
127.1	**Power-supply cords**		N/A
127.1.1	A work light rated 1800 W or less shall be provided with a junior hard service cord Type SJ, SJO, SJT or equivalent rated for the current in accordance with Table 26.1.		N/A
127.1.2	A work light rating exceeding 1800 W shall be provided with a hard service cord Type S, SO, ST or equivalent rated for the current in accordance with Table 26.1.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
127.1.3	A power supply cord shall not exceed 50 feet (15 m) in length.		N/A
127.1.4	A work light power supply cord shall be routed or secured such that normal adjustment of the light does not result in the power supply cord resting on a surface having a temperature greater than the cord rating.		N/A
127.2	**Grounding type attachment plug**		N/A
127.2.1	A work light having accessible metal surfaces that becomes energized due to electrical fault shall have a grounding type attachment plug.		N/A
127.2.2	A work light provided with a receptacle shall have a grounding type attachment plug.		N/A
127.3	**Receptacles**		N/A
127.3.1	A work light receptacle shall: a) Be of the grounding type; and b) Comply with applicable receptacle requirements in Receptacles, Section 44.		N/A
127.3.2	A single or duplex receptacle is rated 15 amperes for the purposes of determining the AWG of the power supply cord and rating of the attachment plug. Alternatively, the marked maximum current rating is able to be used. See 198.6.2.		N/A
127.4	**Tipover switches**		N/A
127.4.1	When a tipover switch is provided, the Severe Condition Test, 165.3 is not required.		N/A
127.4.2	A tipover switch shall comply with Switches and Dimmers, Section 43.		N/A
127.4.3	A tipover switch shall de-energize the work light when tipped over in any direction.		N/A
127.4.4	A tipover switch shall be arranged such that the trip mechanism is not able to be externally defeated or result in nuisance tripping. A plunger activated switch where the weight of the work light activates the light source does not meet the intent of the above equipment.		N/A
128	**Tests**		N/A
128.1	**Normal temperature test**		N/A
128.1.1	A work light shall be subjected to the Normal Temperature Test – General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Work Lights, Section 147.		N/A
128.2	**Abnormal operation tests**		N/A
128.2.1	A work light is to be subjected to the following tests in Sections 165 – 173: a) Severe Condition, 165.2, 165.3, and 165.8; b) (Tungsten-halogen and HID work lights only:) Tungsten-Halogen Lamp Guard, Lamp Containment Barrier, and UV Filter Security Tests, Section 166; and c) (Tungsten-halogen and HID work lights only:) Polymeric Lamp Containment Barrier Test, Section 172		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
128.3	**Stability tests**		P
28.3.1	1A work light is to be subjected to the Stability Test, Section 153, at an incline of 8 degrees for any possible use adjustment.		P
128.3.2	A work light complying with Exception No. 2 of 128.2.1 is to be subjected to the Stability Test, Section 153, at an incline of 33 degrees.		N/A
128.3.3	The stability test in 128.3.1 and 128.3.2 is to be conducted with any fuel and integral storage compartments empty. .		N/A
129	**Markings**		N/A
129.1	A work light shall comply with the markings specifiied in Work Light, Section 214.		N/A
	WET LOCATION USE – SUPPLEMENTARY		N/A
130	**General**		N/A
130.1	The requirements specifiied in Sections 130 – 135 apply to surface-mounted, free standing, or stake mounted units marked “Suitable for wet locations.” Such portable luminaires are suitable for locations subject to rain, vehicle washing areas, locations subject to spray of a noncorrosive and nonflflammable liquid, and similar conditions.		N/A
130.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
130.3	The requirements do not cover portable luminaires for use under water (such as in a decorative fountain or a swimming pool) nor in areas that contain flflammable or corrosive liquids or gases.		N/A
131	**Construction – Mechanical**		N/A
131.1	**Enclosure**		N/A
131.1.1	A portable luminaire shall be constructed to prevent the accumulation of water on live parts, electrical components, or conductors not identifiied for use in contact with water.		N/A
131.1.2	A polymeric material used as an enclosure for wet location use units shall have an ultraviolet light (UV) resistance rating in accordance with the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C		N/A
131.3	**Corrosion protection**		N/A
131.3.1	Copper, aluminum, and alloys of copper and aluminum, stainless steel, and similar materials having inherent resistance to atmospheric corrosion may be used without additional corrosion protection.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
131.3.2	All exposed, exterior and interior, surfaces of ferrous metal parts shall be protected by one of the following: a) A coating of nonferrous metal applied by the hot dip process method; b) A plating of nonferrous metal applied either by electro-deposition or by chemical means; c) A coating of vitreous enamel; d) Baked paint, or similar type of coating; or e) Air-dry paint that complies with the Paint Adhesion Test of Section 190.		N/A
131.3.3	The requirements of 131.3.2 shall not apply to the following: a) Bearings, sliding surfaces of a hinge or shaft, hinge pins, and similar parts located on the exterior of enclosures where such protection is not practical; and b) Decorative parts.		N/A
131.3.4	Edges, punched holes, and spot-welds in prefifinished steel, and hanger locations for painting or plating in ferrous metal, do not require any corrosion protection		N/A
131.3.5	Welds in ferrous metals shall be painted with at least one coat of outdoor paint, and spot-welds in galvanized steel shall be painted with at least one coat of paint.		N/A
131.3.6	Vitreous enamels are able to be used as a protective coating for ferrous sheet metal having a minimum thickness of 0.025 inch (0.6 mm)		N/A
131.4	**Drain openings**		N/A
131.4.1	A portable luminaire that permits water to enter the unit during the Rain and Sprinkler Tests, Section 186, shall be provided with a drain hole.		N/A
131.4.2	Drain holes, if provided, shall be located in the surface likely to prevent the accumulation of water.		N/A
131.4.3	Drain holes shall permit the insertion of a 0.125 inch (3.2 mm) diameter rod.		N/A
131.5	**Gaskets**		N/A
131.5.1	A gasket or bushing required to prevent water from entering the enclosure shall be secured to prevent its loosening during user maintenance by a clip, clamping ring, adhesion, or other mechanical means.		N/A
131.5.2	A gasket shall be made of material as shown in Table 144.1, Items 24 – 29, and shall have a temperature rating suitable for the operating temperature as determined by the Normal Temperature Test of 144.1, or shall withstand the: a) Gasket Accelerated Aging Test of Section 188, Test Method A, for the gasket or bushing only; or b) Gasket Accelerated Aging Test of Section 188, Test Method B, with the gasket or bushing installed as intended in the portable luminaire.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
131.5.3	The adhesive used to secure a gasket or bushing that is required to prevent water from entering the enclosure, and which is likely to be exposed or not compressed as intended during user maintenance, shall comply with the: a) Gasket Adhesion Test of Section 189, method A for the gasket adhesive combination only; or b) Gasket Adhesion Test of Section 189, method B, with the gasket installed in the portable luminaire.		N/A
131.6	**Mounting stakes**		N/A
131.6.1	Mounting stakes for wet location type units shall be a minimum 5 inches (12.7 cm) long. Shorter stakes or multiple stakes are permitted when the portable luminaire is provided with a stabilizing plate 3 inches (7.6 cm) minimum in diameter perpendicular to the stake.		N/A
131.6.2	Mounting stakes shall be provided with at least one reinforcing angle running the length of the stake.		N/A
131.6.3	Mounting stakes shall be: a) 0.056 inch (1.42 mm) thick minimum zinc coated steel; b) 0.1 inch (2.5 mm) thick minimum diecast aluminum or zinc, or sheet aluminum; or c) 0.1 inch (2.5 mm) thick minimum rigid plastic complying with the requirements in Polymeric Enclosures, Section 12.		N/A
132	**Construction – Electrical**		N/A
132.1	**Power-supply cords**		N/A
132.1.1	Any cord exposed outside of a portable luminaire shall be type SJ, SJO, SJT, or equivalent and be marked “W” following the type designation.		N/A
132.1.2	The maximum cord length shall be 50 feet (15.2 m).		N/A
132.2	**Grounding type attachment plug**		N/A
132.2.1	Wet location units having accessible metal surfaces that become energized due to electrical fault shall have a grounding type attachment plug.		N/A
132.3	**Receptacles**		N/A
132.3.1	A portable luminaire provided with a convenience receptacle shall be provided with a self-closing cover.		N/A
132.3.2	A portable luminaire provided with a connector or convenience receptacle shall comply with the applicable wet location tests of Section 186 with or without an attachment plug in place.		N/A
132.4	**Lampholders**		N/A
	132.4.1 The screw shell in a screw shell-type lampholder shall not be constructed of unplated aluminum.		N/A
132.5	**Switches**		N/A
132.5.1	A switch shall be arranged to prevent water from entering the switch or enclosure.		N/A
132.6	**Electrical insulation**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
132.6.1	Nonabsorptive electrical insulation shall be used in the construction of electrical components where it is relied upon to provide electrical spacings or sole support of live electrical parts or to provide electrical insulation. Untreated fifiber and similar material shall not be used; while treated cellulosic fifiber, phenolic, urea, porcelain, and similar material, are examples of materials that meet the intent of the requirement.		N/A
133	**Tests**		N/A
133.1	**Wet location tests**		N/A
133.1.1	A wet location type unit shall be subjected to the Wet Location Use Tests, Sections 186 – 190, as applicable.		N/A
134	**Markings**		N/A
134. 1	A wet location type unit shall comply with the markings specifified in Wet Location Use, Section 215.		N/A
135	**Instructions**		N/A
135.1	A wet location type unit shall comply with the instructions specifified in Wet Location Use, Section 230.		N/A
	PORTABLE HAND LIGHTS – SUPPLEMENTARY		N/A
136	**General**		N/A
136.1	The requirements specifified in Sections 136 – 142 apply to portable hand lights and hand light accessories.		N/A
136.2	These requirements are supplementary to other applicable requirements in this standard.		N/A
136.3	A portable hand light provided with a light source other than an incandescent medium or candelabra base lamp shall additionally comply with the requirements of the applicable Sections of this standard unless uperseded by requirements herein.		N/A
136.4	A portable hand light marked for wet location use, in accordance with 215.1 shall additionally comply with the requirements in Wet Location Use, Sections 130 – 135.		N/A
137	**Construction – Mechanical**		N/A
137.1	**General**		N/A
137.1.1	The overall length of the assembled portable hand light, when provided with a cord, shall not be less than 6 feet (1.83 m) when measured as described in 137.1.2.		N/A
137.1.2	The minimum length mentioned in 137.1.1 is to be taken as the overall length of the complete assembly, including the guard and line fifitting, but not including the blades of an attachment plug.		N/A
137.1.3	An edge, a projection, and a corner of an enclosure, frame, guard, handle, or a similar object, shall be smooth and well rounded and not so sharp as to constitute a risk of personal injury.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
137.1.4	A polymeric material used as part or all of the enclosure of a portable hand light shall comply with Polymeric Enclosures, Section 12, and have a minimum flflame rating of V2.		N/A
137.2	**Assembly and packaging**		N/A
137.2.1	A portable hand light is to be fully assembled when packaged and shipped.		N/A
137.3	**Lamp guard**		N/A
137.3.1	A portable hand light shall be provided with a lamp guard such that the lamp is inaccessible to inadvertent contact during normal use and is located and secured to protect the lamp.		N/A
137.3.2	With respect to 137.3.1, a lamp is determined to be inaccessible to inadvertent contact when a 1-1/2 inch (38 mm) diameter probe of any convenient length with a 3/4 inch (19 mm) radius rounded (hemispherical) end as described in Figure 55.1 is unable to be made to contact any part of the lamp with the guard in place as intended. The probe is to be rotated or angled to any position before, during, or after insertion into an opening, and the penetration is to be to any depth attainable by the opening.		N/A
137.3.3	The lamp guard may be provided with a hook or equivalent means intended for the temporary support of the hand light. No means for permanent mounting shall be provided.		N/A
137.3.4	A metallic lamp guard (reflflector), with or without an insulating coating, shall be used only in conjunction with a three conductor cord and shall be grounded by connection to the grounding conductor.		N/A
137.3.5	A lamp guard (reflflector) made of non-conductive polymeric material shall be evaluated to the requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C, and shall be employed on portable hand lights having two-wire cords. A three-wire cord shall only be used with a polymeric guard when other dead metal is used in the construction.		N/A
137.3.6	A guard constructed of a polymeric material shall comply with the requirement for the service temperature involved and, shall comply with the mold stress relief requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		N/A
137.3.7	A Portable Hand Light guard shall be attached so that it either: a) Requires the use of tools for removal; or b) Requires two separate actions to disengage the securing means (i.e. push and turn) and complies with the Guard Securement Test in Section 196.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
137.4 137.4.1	**Corrosion protection** All ferrous-metal parts, including hinges, bolts, and fasteners, exposed after assembly shall be protected against corrosion by painting, coating or plating. Copper, aluminum, alloys of copper and aluminum, stainless steel and similar materials having inherent resistance to atmospheric corrosion are not required to be provided with additional corrosion protection.		N/A
138	**Construction – Electrical**		N/A
138.1	**General**		N/A
138.1.1	A portable hand light not provided with a cord shall be constructed such that no live parts are accessible when extension cord or cord reel are attached by the user.		N/A
138.1.2	A soldered connection shall be mechanically secured before soldering unless the conductor in question, when disconnected at its termination, is: a) Prevented from contacting live parts of opposite polarity; b) Prevented from contacting accessible dead metal parts or grounded parts; c) Does not present a risk of fifire or shock due to arcing; and d) Not accessible to contact by the user.		N/A
138.2	**Assembly**		N/A
138.2.1	A portable hand light shall be completely wired with each electrical component mounted in place and with each splice and connection completed.		N/A
138.3	**Wiring and conductors**		N/A
138.3.1	A conductor of a wire or cord shall be 18 AWG (0.82 mm^2) minimum.		N/A
138.3.2	Conductors shall be fastened securely to the terminals of the respective hand light component.		N/A
138.3.3	The insulation on any individual conductor shall be removed only to the extent necessary to make proper connection at a wiring terminal.		N/A
138.4	**Protection of wiring**		N/A
138.4.1	A power-supply cord shall exit the portable hand light through an opening that is free from sharp edges, burrs, and fifins that are able to damage the conductor insulation.		N/A
138.4.2	Means shall be provided to keep the flflexible cord from being pushed into the hand light through the cord-entry hole, when such displacement: a) Exposes the cord to mechanical damage or to a temperature higher than that for which the cord is rated; b) Reduces spacing (such as to a metal strain-relief clamp) below the acceptable minimum values; or c) Contacts sharp edges.		N/A
138.5	**Power-supply cords**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
138.5.1	The power-supply cord shall have Type SJT, its equivalent, or heavier flflexible cord. Rubber jacketed flflexible cords, which are not oil resistant, shall not be used.		N/A
138.5.3	A power-supply cord intended for use on a portable hand light shall not be smaller than 18 AWG (0.82 mm^2).		N/A
138.5.4	A power-supply cord intended for use on a portable hand light provided with a receptacle shall not be smaller than 16 AWG (0.82 mm^2).		N/A
138.6	**Grounding type attachment plug**		N/A
138.6.1	A portable hand light having accessible metal surfaces that may become energized due to electrical fault shall have a grounding type attachment plug.		N/A
138.6.2	A portable hand light provided with a receptacle shall have a grounding type attachment plug.		N/A
138.6.3	The grounding conductor of a portable hand light shall be contained within the overall assembly, connected to the grounding terminal and inaccessible while in use.		N/A
138.7	**Incandescent lampholders**		N/A
138.7.1	For the medium and candelabra base lampholders, the maximum-depth requirement described in the Standard for Lampholders, UL 496, does not apply to a construction in which the outer enclosure (insulating material) is flflared or in which a non-rigid body is employed and extends beyond the specifified limit to provide further protection against contact with live parts as long as the said construction does not prevent the bulb from being fully seated in the lampholder.		N/A
138.7.2	When the method of mounting a lampholder affects the depth of the lamp cavity, the determination of the lampholders suitability is to be made with the device mounted as intended.		N/A
138.7.3	The screwshell or screwshell contact of each lampholder or neutral lead of receptacle outlets shall be connected to the neutral supply conductor of the supply cord.		N/A
138.7.4	Metal-shell lampholders with paper liners shall not be used.		N/A
138.8	**Switches**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
138.8.1	A switch may be provided to control a receptacle outlet, when the switch: a) Has a voltage and current rating not less than the load it is intended to control; b) Complies with the requirements of the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1, and is rated for use with other than resistive (Res), AC tungsten fifilament lamp (L), or AC and DC tungsten fifilament lamp (T) loads; c) The switch indicates to the user when its associated receptacle is energized. See 216.6; and d) The receptacle is provided with supplementary overcurrent protection, in accordance with 139.		N/A
138.8.2	When a switch opens a conductor identifified as a grounded conductor, it shall simultaneously open all ungrounded conductors.		N/A
138.8.3	A switch shall not open the grounding conductor of a portable hand light.		N/A
138.8.4	A portable hand light shall not include a through-cord or pendant switch.		N/A
138.9	**Receptacles**		N/A
138.9.1	A portable hand light assembled to Type SVT, SVTO, SVTOO, SVO, or SVOO flflexible cord shall not have receptacle outlets.		N/A
138.9.2	A portable hand light provided with a receptacle shall: a) Be of the grounding type; and b) Comply with applicable receptacle requirements in Receptacles, Section 44.		N/A
138.9.3	A single or duplex receptacle shall be determined to have a 15 ampere load. Alternately, the marked maximum current rating shall be used for test purposes and markings. Also see Markings, 216.5.		N/A
139	**Supplementary Protection**		N/A
139.1	A portable hand lamp that requires supplementary overcurrent protection in accordance with 138.8.1(d) for a switched receptacle shall have a supplementary overcurrent protective device connected between the power-supply cord and the switched receptacle.		N/A
139.2	A supplementary overcurrent protection device shall be capable of clearing a fault current of not less than 1000A and shall comply with the requirements in the Standard for Supplementary Protectors for Use in Electrical Equipment, UL 1077. The supplementary overcurrent protection device shall have been subjected to the Overload Test in UL 1077, tested for motor starting at 6 times the AC full load current rating		N/A
139.3	The overcurrent protective device shall be a supplementary protector of the automatic-trip-free, manual-reset type or a replaceable fuse installed in an extractor type fuse holder. A unit that is provided with fuses that are intended to be replaced in the fifield shall be marked in accordance with the requirements in 216.7.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
139.4	A single-pole supplementary protection device shall be connected in the ungrounded (line) conductor of the supply circuit only. A double-pole device shall be connected on both the ungrounded and grounded (neutral) conductors such that when it operates, it opens both ungrounded and grounded conductors.		N/A
139.5	A supplementary protection device shall not open during the Temperature Tests in Sections 143, 144, and 148.		N/A
139.6	A supplementary protection device shall not be connected in the grounding conductor.		N/A
139.7	The ampere rating of the overcurrent protective device of 139.1 shall not be greater than the ampacity of: a) The confifiguration of the receptacle it is to protect; b) That of the power-supply cord; or c) The switch controlling the receptacle, whichever is lower.		N/A
139.8	Thermal cutoff devices, thermal relays, and similar devices, shall not be used as supplementary overcurrent protection devices.		N/A
140	**Tests**		N/A
140.1	**Normal temperature test**		N/A
140.1.1	An incandescent type portable hand light shall be temperature tested in accordance with the Normal Temperature Test – General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Portable Hand Lights, Section 148.		N/A
140.1.2	A portable hand light using a light source other than incandescent, shall be subjected to the tests specifified in 140.1.1, except that the test lamp restrictions of 148.1.1 and 148.1.3 shall not apply and the test lamps shall be as specifified in Section 144.		N/A
140.2	**Abnormal operation tests**		N/A
140.2.1	A incandescent type portable hand light shall be subjected to the Abnormal Operations Tests, Section 191.1 through 191.4.		N/A
140.3	**Mechanical tests**		N/A
140.3.1	A portable hand light shall be subjected to the Crush Test, Section 192, Guard Securement Test, Section 185, Drop Test, Section 193, Conductor Securement Test, Section 194, and the Strain Relief Test, Section 154.		N/A
140.4	**Electrical tests**		N/A
140.4.1	A portable hand light shall be subjected to the Dielectric Voltage-Withstand Test, Section 195.		N/A
141	**Markings**		N/A
141.1	A portable hand light shall comply with the markings specifified in Section 216.		N/A
142	**Instructions**		N/A
142.1	A portable hand light accessory shall comply with the instructions specifified in Section 231.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
	PERFORMANCE GENERAL – NORMAL TEMPERATURE TEST		P
143	**General**		P
143.1	A portable luminaire shall be subjected to a normal temperature test in accordance with the following: a) Freestanding and Surface Mounted Units – Shall be tested in accordance with Sections 143 – 145. b) Portable Cabinet Lights – Shall be tested in accordance with General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Portable Cabinet Lights, Section146. c) Work Lights – Shall be tested in accordance with General, Section 143, Test Method – General, Section 144, and Specifific Test Conditions – Work Lights, Section 147. .		P
143.2	A temperature test is not required for portable luminaires that comply with the temperature test exempt requirements for: a) Incandescent units specifified in Temperature Test-Exempt Units, Section 49, b) Tungsten-halogen units using medium base Type A lamps specifified in 57.1.2, and c) Fluorescent units specifified in Temperature Test-Exempt Units, Section 63.		N/A
143.3	A portable luminaire that requires evaluation under any other part of this standard requires temperature testing in accordance with the particular part.		P
143.4	A temperature test conducted with an aluminum shade shall not be used to represent a steel shade. A temperature test conducted with a light colored or reflflective shade shall not be used to represent a dark colored or nonreflflective shade. A temperature test conducted with a phenolic or porcelain lampholder in the base-up position shall not be used to represent a metal shell lampholder		N/A
144	**Test Method – General**		P
144.1	**Temperature limits**		P
144.1.1	The temperature limits specifified in Table 144.1 are based on an ambient temperature of 25°C (77°F). The temperature test is to be conducted at any ambient temperature between 20 and 30°C (68 and 96°F) and corrected to an ambient of 25°C (77°F).		P
144.1.2	A polymeric material used as a decorative trim or part shall not melt or deform in such a way as to interfere with the normal operation of the lamp.		P
144.2	**Test duration**		P

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
144.2.1	A portable luminaire is to be operated continuously at rated lamp wattage until constant temperatures are attained. A motor or other component is to be on and operating at maximum load during the temperature test. A temperature is determined to be constant when: a) The test has been running for a minimum of 7.5 hours; or b) The test has been running for at least 3 hours; and three successive readings, taken at 30 minute intervals, are within 1°C of one another and are still not rising		P
144.6	**Test voltage, current, and wattage**		P
144.6.1	A portable luminaire that uses a lamp rated for other than the voltage it operates at in the product is to be tested in the manner that results in a maximum temperature rise, either at rated voltage or rated wattage. For example, a nominal 120 volt, 60 watt product intended for use with a lamp rated for 130 volts, 60 watts usually operates hotter at rated wattage. Conversely, a nominal 120 volt, 60 watt product intended for use with a lamp rated for 110 volts, 60 watts usually operates hotter at rated voltage.		P
144.6.2	A portable luminaire provided with a transformer, a ballast, a power supply, or another device that alters the characteristics of the power supply prior to the lamp is to be tested at rated voltage.		N/A
144.6.3	For a portable luminaire not otherwise exempt from temperature testing per 143.2, a convenience receptacle shall be resistively loaded to the current rating marked in accordance with 198.6.2. An output connector for an interconnected portable luminaire shall be loaded to the maximum current rating derived from the marking of 198.6.1.		N/A
144.8	**Incandescent test lamps**		N/A
144.8.1	An incandescent type unit is to be tested with a test lamp of the wattage and type marked. When intended for a three-way lamp holder, a three-way lamp is to be used and operated at the highest wattage setting whether marked otherwise or not.		N/A
144.8.2	When the marked lamp replacement is of a wattage and type other than specifiied in Table 144.2 and is a candelabra-, intermediate-, or medium-base type, the test is to repeated with a test lamp from Table 144.2 that most closely approaches the marked lamp.		N/A
144.9	**Tungsten-halogen test lamps**		N/A
144.9.1	A tungsten-halogen type unit is to be tested with a test lamp of the wattage and type marked		N/A
	GENERAL – ABNORMAL OPERATION TESTS		N/A
149	**Adjustable Position or Multiple Shade Abnormal Operation Test**		N/A
149.6	**Test results**		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
149.6.1	There shall be no: a) Emission of flflame or molten metal; b) Combustion, glowing or flflaming or disintegration of the material on which the unit is resting or of material placed on or near the unit; c) Exposure of parts involving a risk of electric shock; or d) Dielectric breakdown when subjected to the Dielectric Voltage-Withstand Test, Section 159, during any of these tests.		N/A
1 50	**Transformer Short-Circuited Test**		N/A
150.1	General		N/A
150.1.1	A portable luminaire using a transformer in accordance with Transformers, Section 45 shall be tested as described in 150.2. Compliance criteria is described in 150.3.		N/A
150.2	**Test method**		N/A
150.2. 1	The portable luminaire is to be placed in its normal operating position on white tissue paper on a softwood surface, connected to a supply circuit of maximum rated voltage, and operated continuously. It is required to operate the unit continuously for 7 hours to determine that the ultimate result has been obtained.		N/A
150.2.2	The portable luminaire is to be operated at all voltage settings with each of the following loads, using a new transformer for each test: a) The intended lamp b) A load that draws 25 percent c)A load that draws 50 percent d) A load that draws 75 percent		N/A
150.2.3	The short-circuit current is to be determined by shorting the secondary of the portable luminaire through an ammeter and determining the current after 1 minute of operation of the unit at rated voltage. Any overcurrent-protective device is to be by-passed while the value of the short-circuit current is determined.		N/A
150.2.4	The tissue paper used in the abnormal test is to be untreated white paper, nominally 0.001 inches (0.025 mm) thick, commonly used for gift wrapping		N/A
	GENERAL – MECHANICAL TESTS		P
153	**Stability Test**		N/A
153.1	**General**		N/A
153.1.1	Freestanding units and units intended for both wall and table support shall be tested as described in 153.2 and as modifified in 153.3 when provided with a flflexible or articulated arm, or as modifified in 153.4 when provided with provisions for loading. Compliance criteria is described in 153.5.		N/A
154	**Strain Relief Test**		P

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
154.2.2	A 35 pound (16 kg) weight is to be suspended from the cord for 1 minute so that the force is applied in any direction that will most likely result in stressing the cord opening or bushing. When the lamp surface that supports the strain relief is fragile, care is to be taken to properly support that surface during the test. For instance, when the strain relief consists of a knot in the cord bearing against the side of a ceramic fifigurine, the surface under the fifigurine is to be padded such that the pull exerted on the cord is the only strain on the area providing the strain relief.		P
154.2.3	The strain-relief device required by Exception No. 5 of 9.5 shall comply with the requirements specifified in this section except that a weight of 20 pounds (9.1 kg) is to be used.		P
154.3	**Test results**		P
154.3.1	The results of the test do not meet the intent of the requirement when any of the following conditions occur: a) The insulation or covering on the flflexible cord or wiring is cut or torn. b) The bushing slides through the hole in the chassis or enclosure. c) A cemented-on bushing slides on the cord. d) For a cord or wiring that is not severed at the terminals, strain is placed on internal conductors. e) For a cord or wiring that is severed at the terminals, there is movement of the cord of more than 1/16 inch (1.6 mm) at the points where the connections are made or where the conductors are permanently assembled to the terminals.		P
155	**Drop Test**		P
155.1	**General**		P
155.1.1	The Drop Test described in 155.2 is conducted on freestanding units not evaluated for Stability per 153.1. Compliance criteria is described in 155.3.		P
155.2	**Test method**		P
155.2.1	One sample of a shelf mounted unit shall be dropped 3 feet (91.4 cm) onto a tissue paper covered nominal 1/2 inch (12.7 mm) thick trade size, knot-free softwood including plywood sheet supported by a concrete flfloor. The tissue paper is to be untreated white paper, nominally 0.001 inches (0.025 mm) thick, commonly used for gift wrapping. The unit shall be energized for this test.		P
155.2.2	The unit shall remain energized for 1 hour.		P
155.3	**Test results**		P

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
155.3.1	There shall be no: a) Emission of flflame or molten metal; b) Combustion of unit or test surface; c) Exposure of parts involving a risk of electric shock; or d) Dielectric breakdown when subjected to the Dielectric Voltage-Withstand Test, Section 159.		P
156	**Security**		N/A
156.2	**Test method**		N/A
156.2.1	A self-threading or sheet metal screw used to join two or more sheets of material other than sheet steel, with a No. 6 or smaller screw shall be subjected to a tightening torque of 20 inch-pounds (2.2 N·m) and a No. 7 or larger screw shall be subjected to a tightening torque of 30 inch-pounds (3.4 N·m).		N/A
156.2.2	A self-threading or sheet-metal screw used to mount or support a part that weighs more than 7-1/2 pounds (3.4 kg) shall be subjected to a force equal to four times the weight of the part applied in a direction coincident with the longitudinal axis of the screw.		N/A
156.3	**Test results**		N/A
156.3.1	Test results meet the intent of the requirement when the threads of the screw do not strip or pull out of the sheet metal.		N/A
158	GENERAL – ELECTRICAL TESTS **Grounding Continuity Test**		N/A
158.2	**Test method**		N/A
158.2.1	The impedance between the point of connection of the equipment-grounding means and any other accessible metal part required to be grounded, shall be determined by applying a current of 25 amperes – derived from a 60 hertz source with a no-load voltage not exceeding 6 volts – between the grounding connection and the metal part in question. The resulting impedance is calculated by dividing the value of the measured voltage by the applied current (25 A).		N/A
158.2.2	If the unit is provided with a non-detachable power supply cord, the cord/plug shall not be included in the test circuit unless it is reliably established that its presence will not affect the results of this test. In most cases, the use of a nominal 6 inches (152.4 mm) section of power supply cord from the point where the cord emerges from the body of the portable luminaire will not adversely affect the test results.		N/A
158.3	**Test results**		N/A
158.3.1	The results meet the intent of the requirement when the impedance between the point of connection of the equipment-grounding means and any other metal part that is required to be grounded does not exceed 0.1 ohm.		N/A
159	**Dielectric Voltage-Withstand Test**		P

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
159.2	**Test method**		P
159.2.1	A 1200 volt, 40 – 70 hertz potential shall be applied for 1 minute between: a) Primary wiring, including connected components, and accessible dead metal parts, including those parts that are accessible only during relamping; and b) Primary wiring and accessible low-voltage metal parts, including terminals. Alternatively, the test is permitted to be conducted with a DC potential at 1.414 times the AC potential.		P
159.3	**Test results**		P
159.3.1	The results meet the intent of the requirement when there is no electrical breakdown.		P
161	**Resistance to Moisture Test**		N/A
161.2	**Test method**		N/A
161.2.1	The portable luminaire shall be conditioned for 24 hours in moist air having a relative humidity of 88 2 percent at a temperature of 32.0 2°C (89.6 3.6°F). After conditioning, the leakage current shall be measured as described in this section.		N/A
161.2.2	Unless otherwise specifiied, the test is to be conducted with the portable luminaire connected to a source of supply of rated frequency and of maximum rated voltage except that the voltage is to be 120 volts for a lamp rated between 110 and 120 volts.		N/A
161.2.3	Leakage current refers to all currents, including capacitively coupled currents, that are able to be conveyed between exposed conductive surfaces of a lamp.		N/A
161.3	**Test results**		N/A
161.3.1	The results meet the intent of the requirement when the leakage current does not exceed 0.5 milliampere.		N/A
186	WET LOCATION USE TESTS **Rain and Sprinkler Tests**		N/A
186.2	**Test method – general**		N/A
186.2.1	A portable luminaire shall be positioned in the most severe position permitted by its base and any adjustment means.		N/A
186.2.2	A portable luminaire provided with a gasketed joint in the lamp compartment that is opened for relamping shall have the joint opened and reclosed prior to the rain and sprinkler tests. The unit shall be operated a minimum of 1/2-hour prior to opening the gasketed joint.		N/A
186.2.3	A portable luminaire with a connector or receptacle intended for interconnection of additional lighting units in accordance with 132.3 shall have a cord set plugged into the connector for the duration of the test.		N/A
186.2.4	The rain and sprinkler tests are to be conducted in the operating sequence illustrated in Table 186.1.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict
186.2.5	Immediately following the rain or sprinkler test, when there are accessible dead metal parts, the portable luminaire shall be subjected to the Dielectric Voltage-Withstand Test, Section 159.		N/A
186.3	**Test method – rain test**		N/A
186.3.1	The rain test apparatus is to consist of three spray heads mounted in a water supply pipe rack as shown in Figure 186.1. Spray heads are to be constructed in accordance with the details shown in Figure 186.2. The portable luminaire is to be set up as in a normal installation when so intended. The enclosure is to be positioned in the focal area of the spray heads so that the greatest quantity of water enters the enclosure. The water pressure is to be maintained at 5 pounds per square inch (34.5 kPa) at each spray head.		N/A
186.4	**Test method – sprinkler test**		N/A
186.4.1	A portable luminaire is to be turned about its vertical axis to each of four positions 90 degrees from each other, each for 30 minutes during the 2 hour portion of the test described in 186.4.2, with adjustable parts arranged for maximum vulnerability to the water spray.		N/A
186.4.2	The portable luminaire is to be positioned, as shown in Figure 186.3 in front of the standard water spray head of the type shown in Figure 186.2 to which the water pressure is maintained at a gauge pressure of 20 pounds per square inch (137.9 kPa).		N/A
186.5	**Test results**		N/A
186.5.1	Test results meet the intent of the requirements when after the rain, or sprinkler tests no water has entered the portable luminaire and the unit passes the dielectric voltage withstand test. The GFCI, when provided, shall not function.		N/A

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	**TABLE: Critical components information**			P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Mark(s) of conformity[1)]**
Power supply cable	Shunde Jiaheng Industrial Co., Ltd	SPT-1	18AWG 105℃ 300V	E249623
Plug	Guangdong Detong Electric Wire Co., Ltd.	DT-51	Rated voltage: 125 V, copper conductor, PVC insulation	E517421
Lampholder	Various	Various	E26 MAX 60W LED Bulb Only	cUL(ETL)us
Switch	Guangdong Ojun Technology Co., Ltd	OJ-304	250V~ 3A/125VAC	E354212

UL 153			
Clause	Requirement + Test	Result - Remark	Verdict

	Thermal tests		P
	Type reference.....:	JB-G1	—
Temperature measurements (°C)			
Part			limit
Input wire		26.1	105
Lead wire to lampholder		31.1	105
lamp base contact		42.2	200
Switch		25.3	55
Lampshade exterior		27.4	90
Hand holding part		26.1	55
Mounting surface		26.2	90
Ambient temperature		25	--
Supplementary information:/			

Photo

Model:JB-G1



Photo 1 Overall view



Photo 2 Overall view

Photo



Photo 3 strain relief view

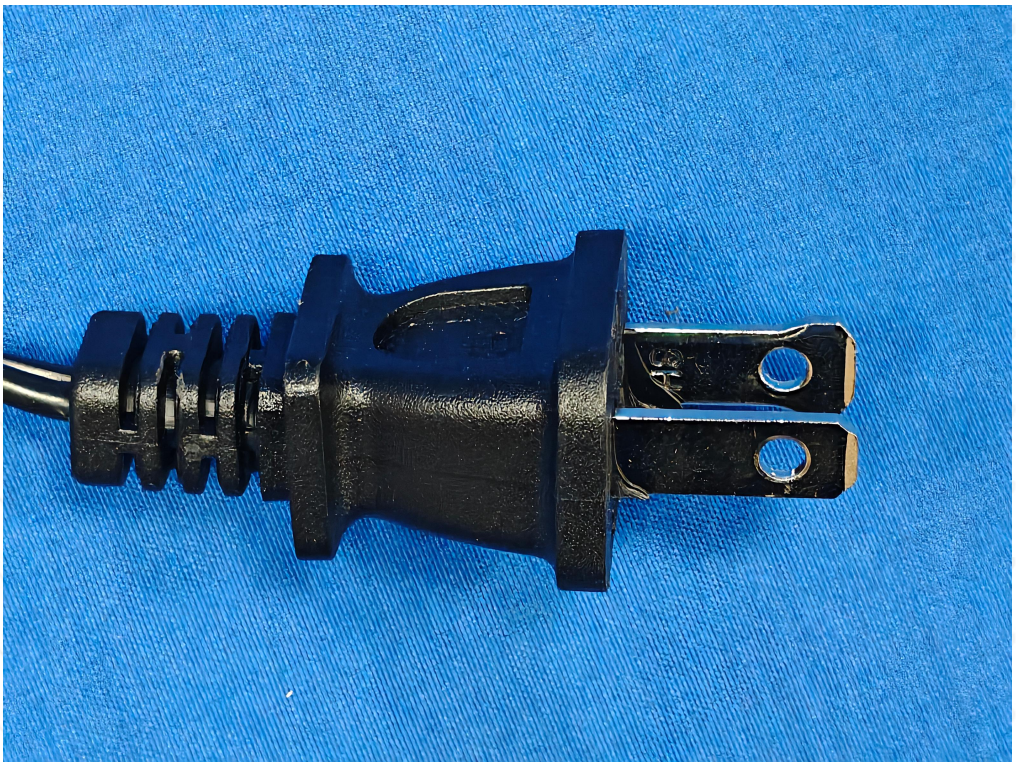


Photo 4 Plug view

Photo

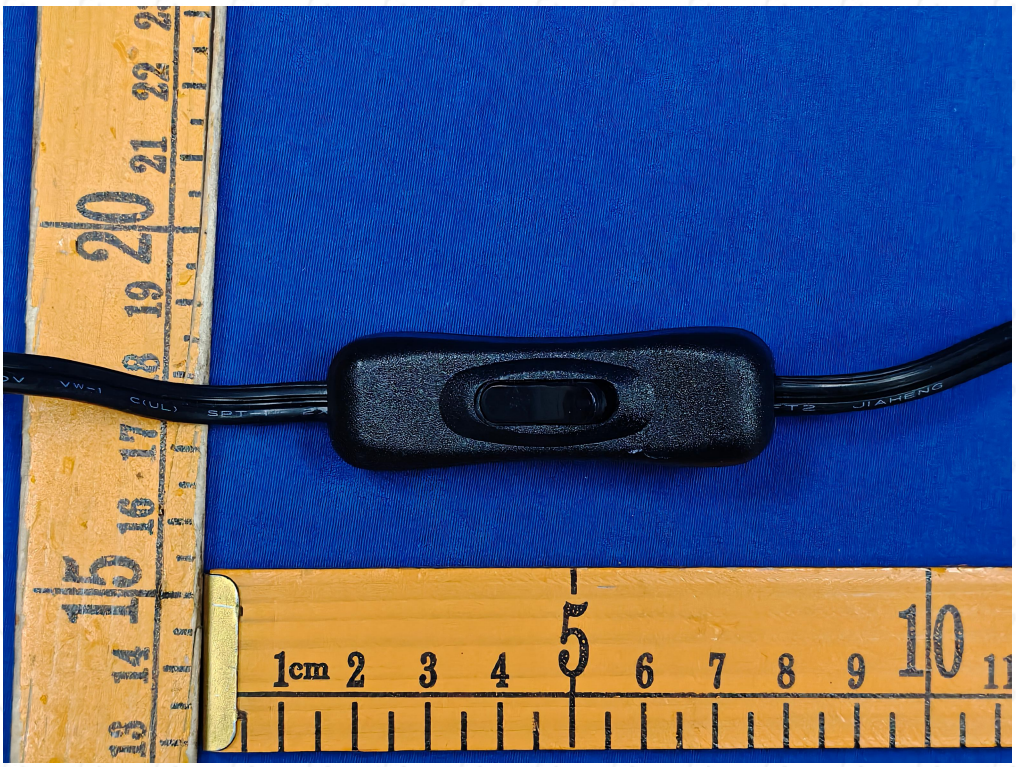


Photo 5 Switch view

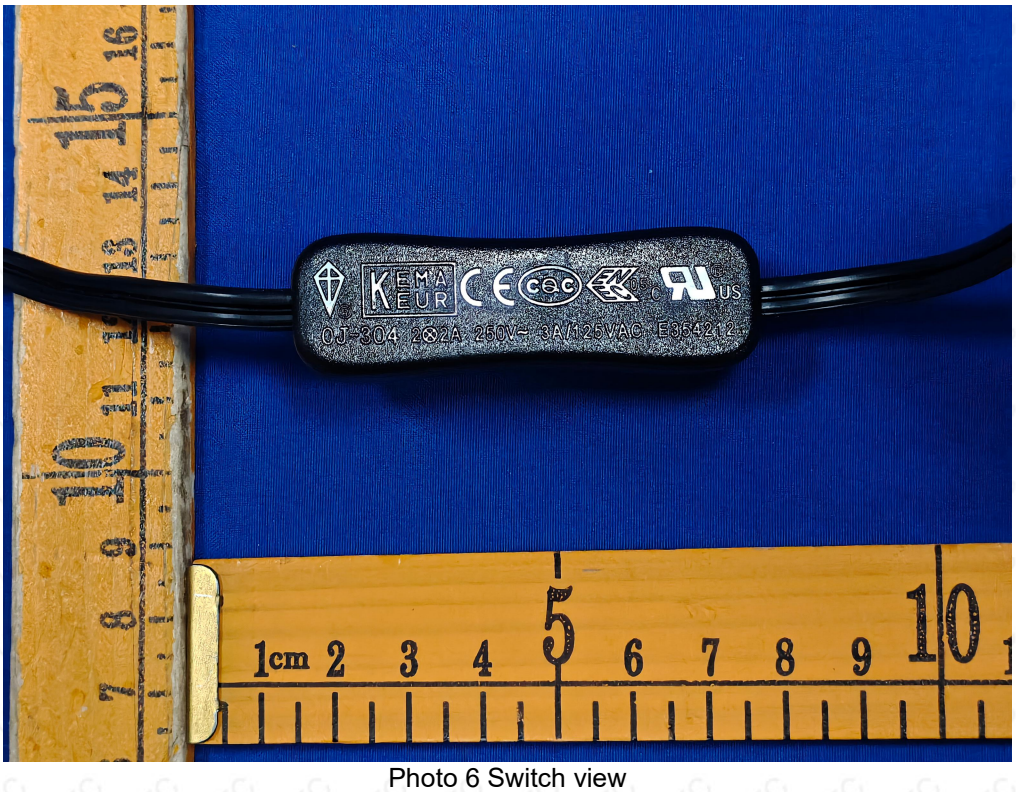


Photo 6 Switch view

Photo



Photo 7 Disassembly view

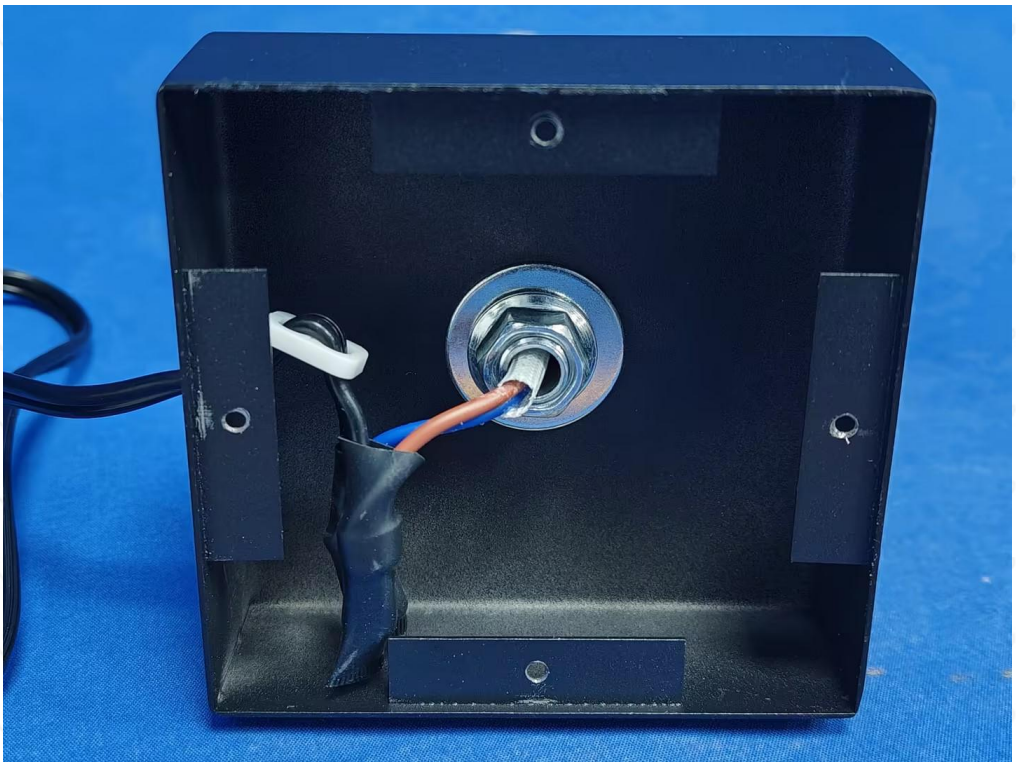


Photo 8 Interior view

Photo

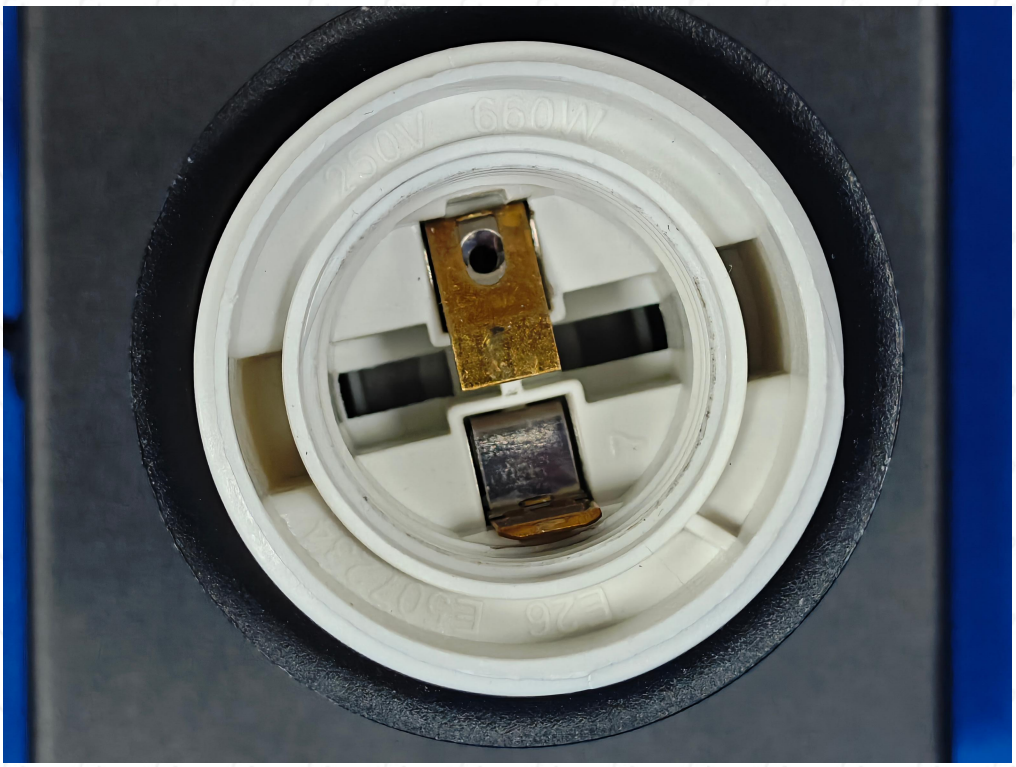


Photo 9 lampholder view

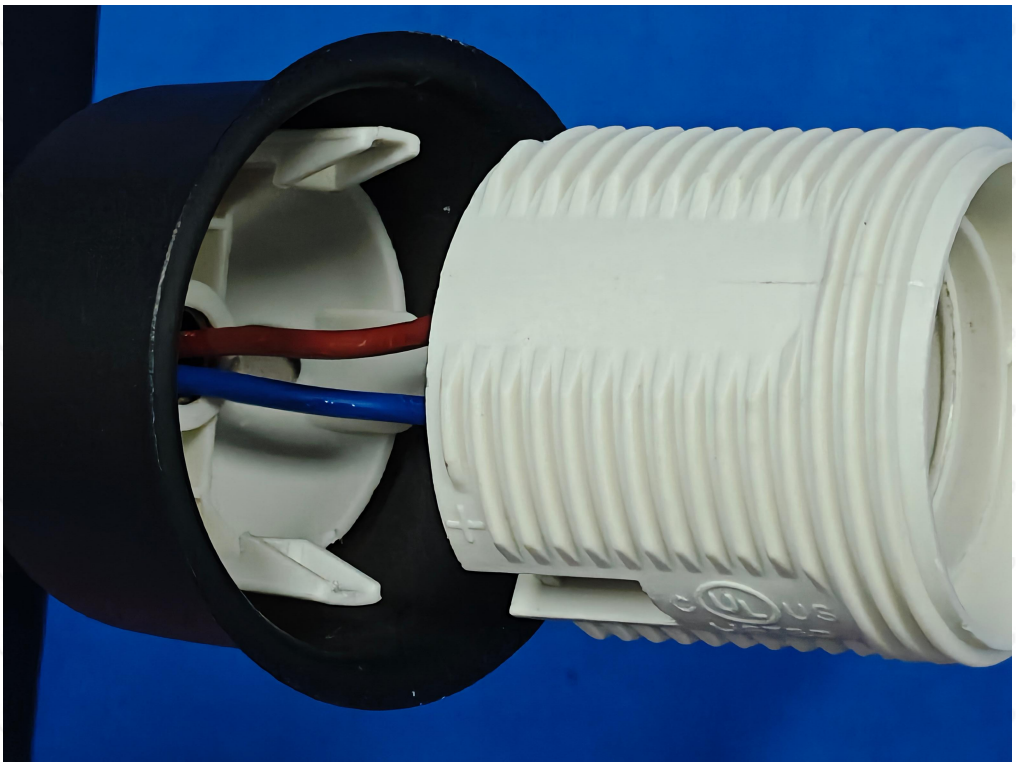


Photo 10 Internal wiring of the lamp base view

Photo

Covered models:JB-G2

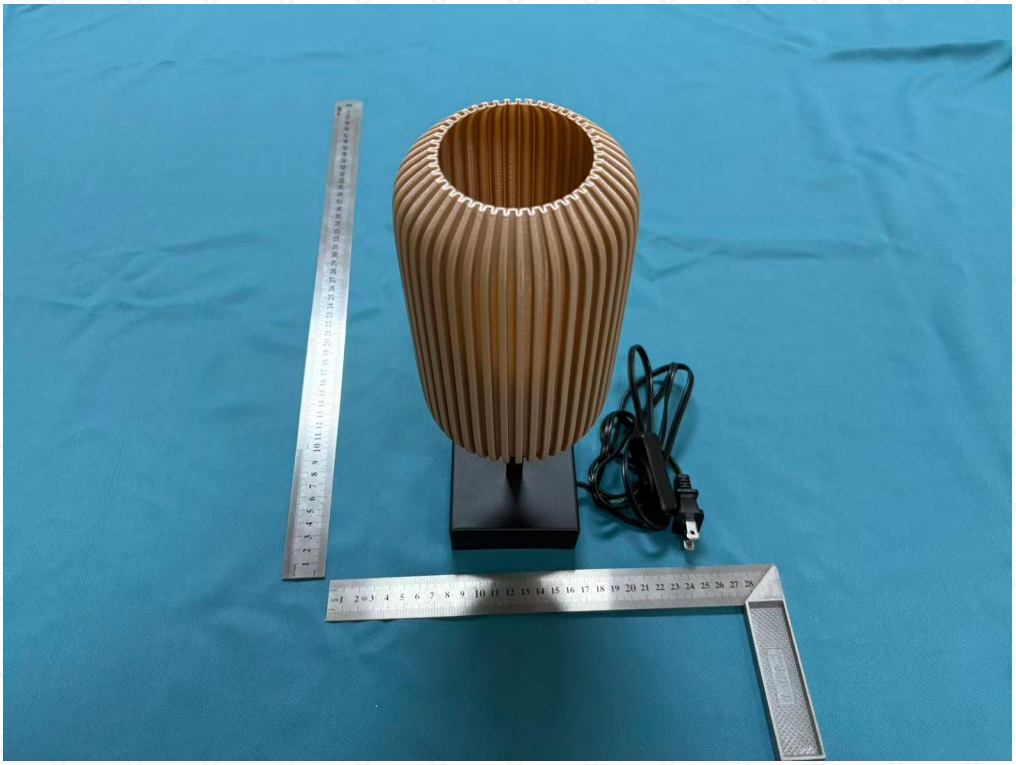


Photo 11 Overall view



Photo 12 Overall view

Photo

Covered models:JB-G3

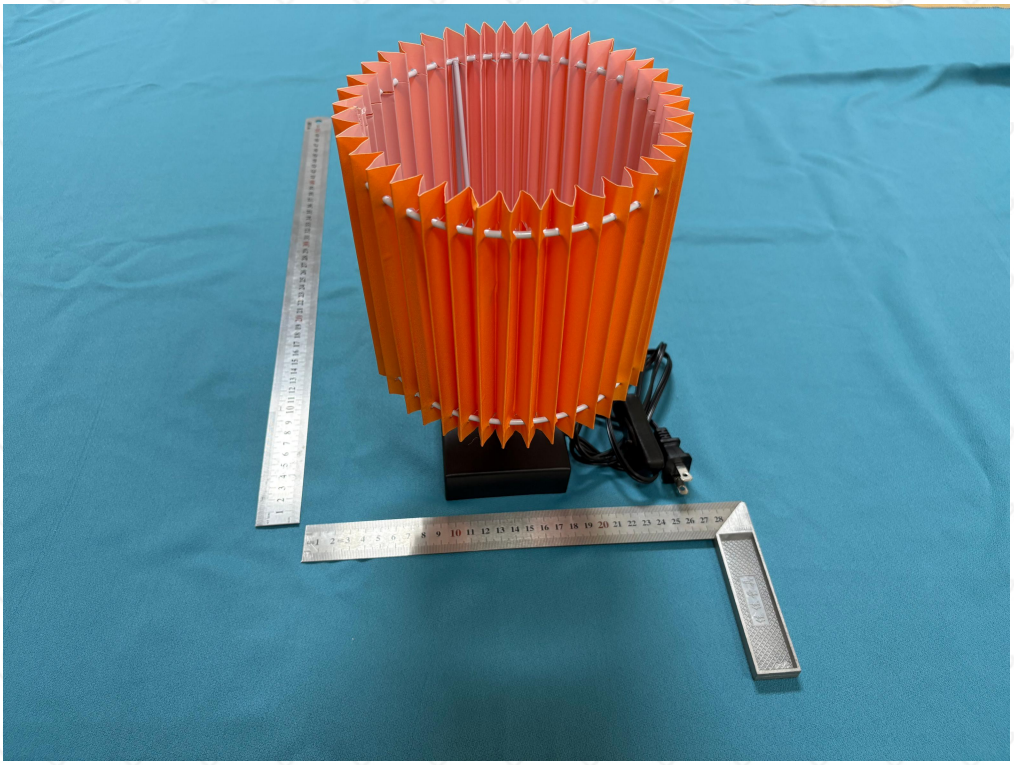


Photo 13 Overall view



Photo 14 Overall view

Photo

Covered models:JB-G4

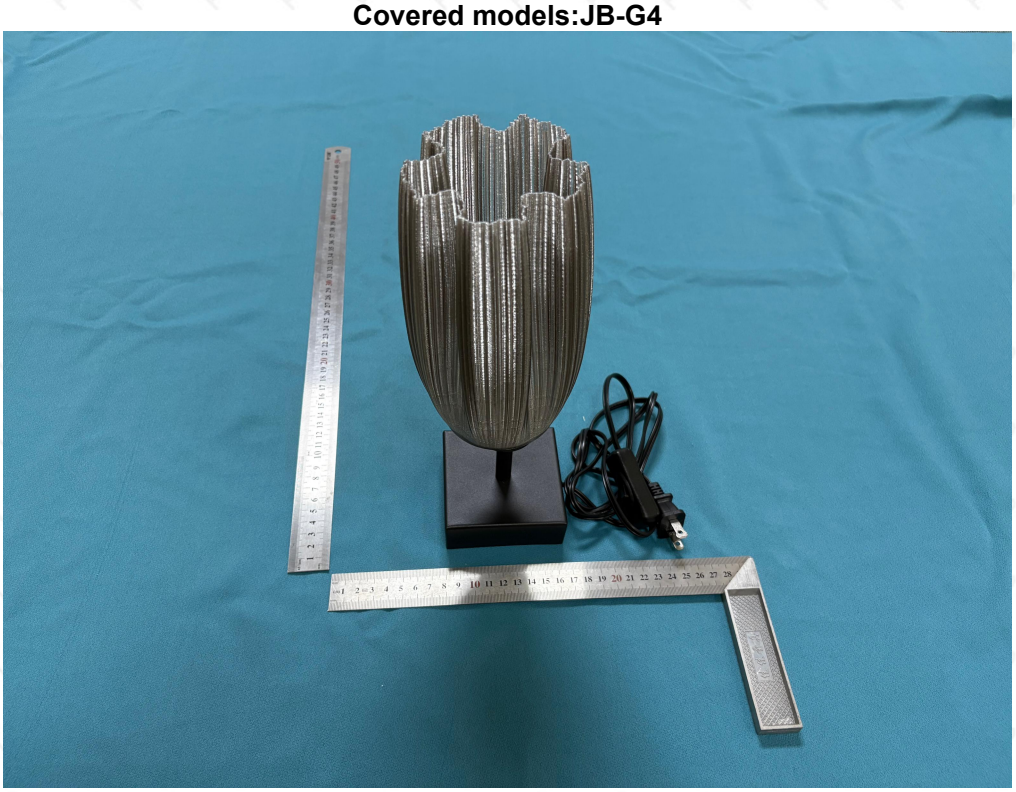


Photo 15 Overall view



Photo 16 Overall view

Photo

Covered models:JB-G5

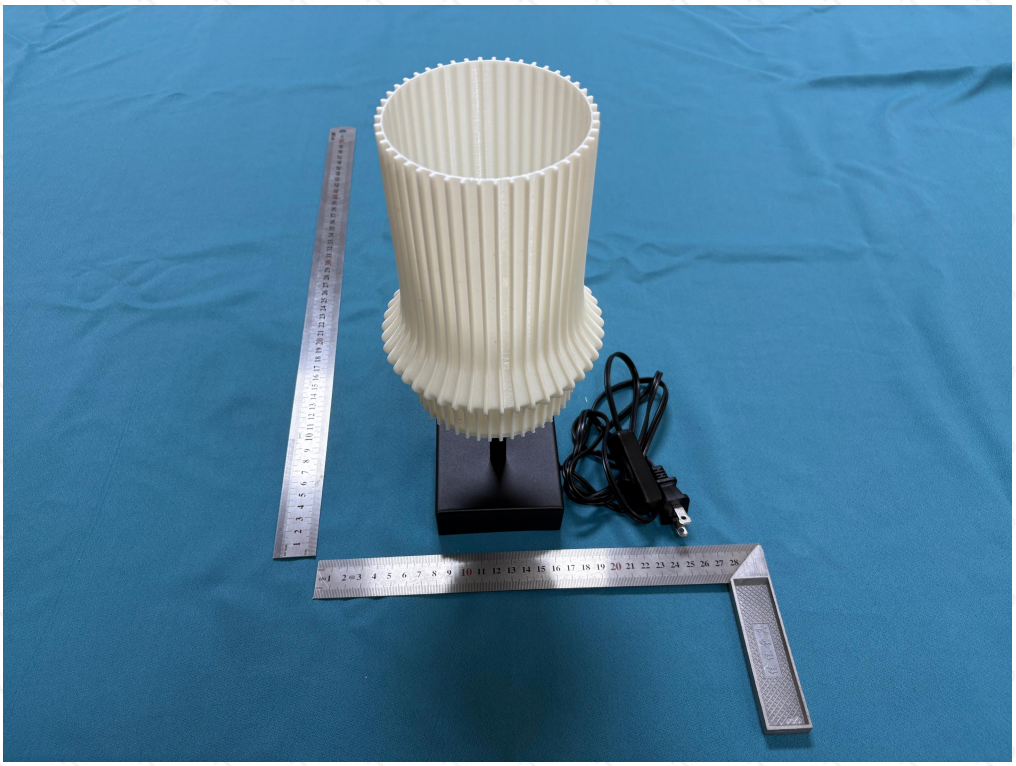


Photo 17 Overall view



Photo 18 Overall view

Photo

Covered models:JB-G6



Photo 19 Overall view



Photo 20 Overall view

Photo

Covered models:JB-G7

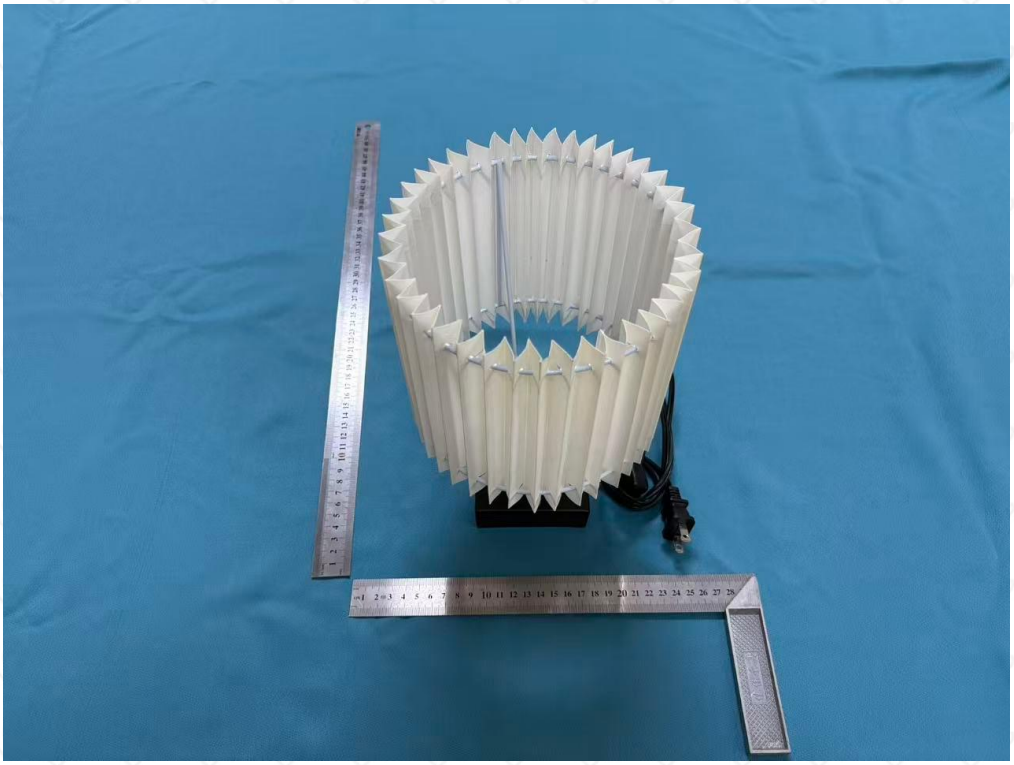


Photo 21 Overall view

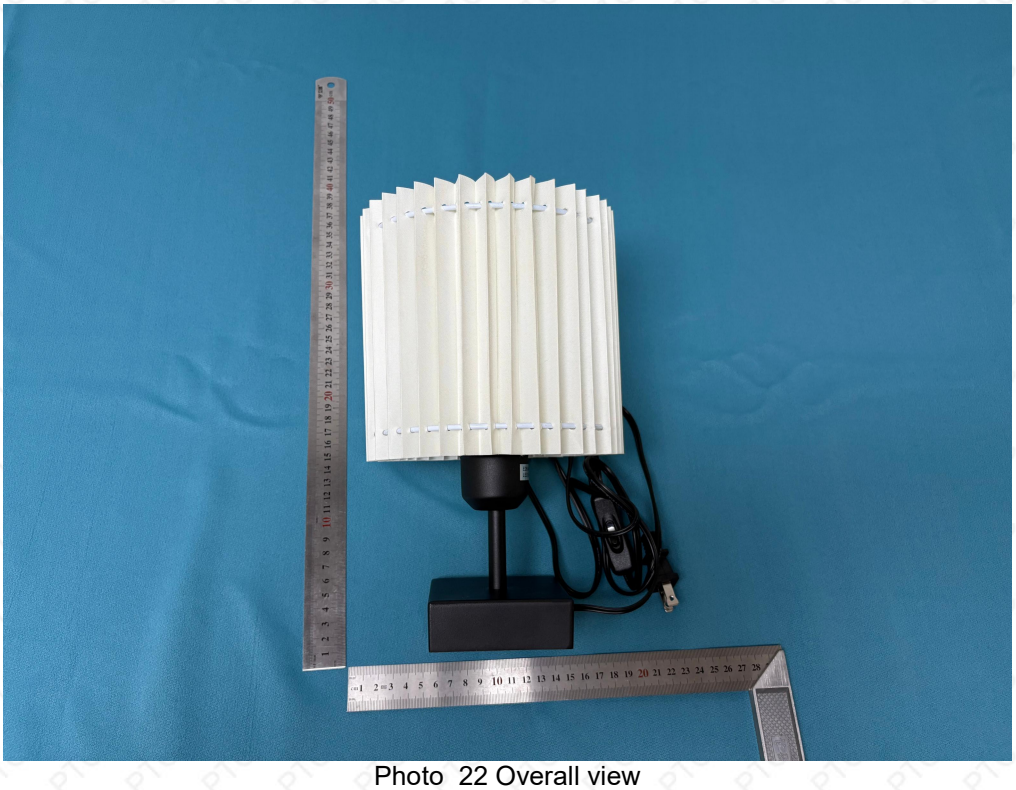


Photo 22 Overall view

Photo

Covered models:JB-G8

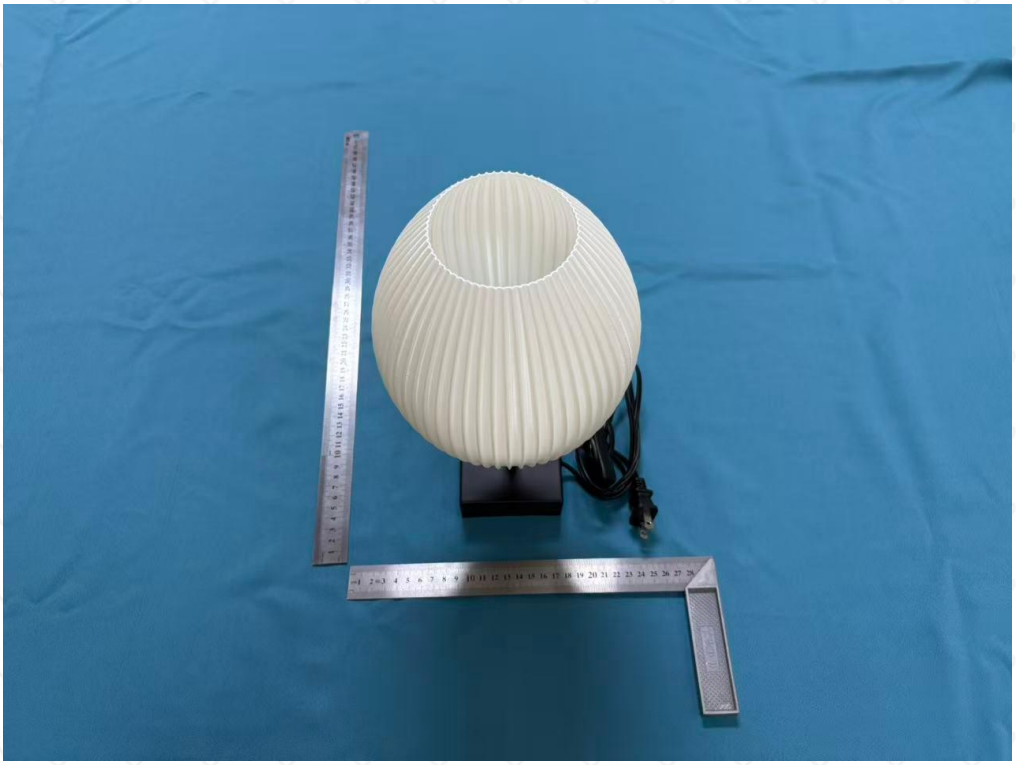


Photo 23 Overall view

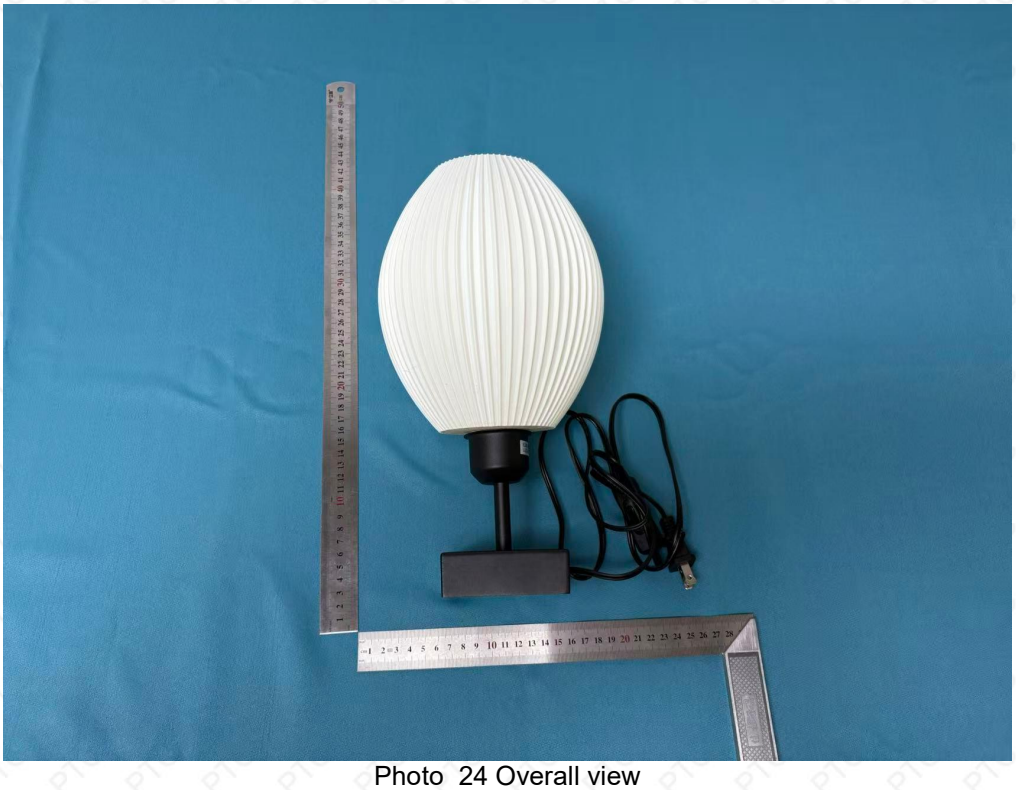


Photo 24 Overall view

Photo

Covered models:JB-G9



Photo 25 Overall view

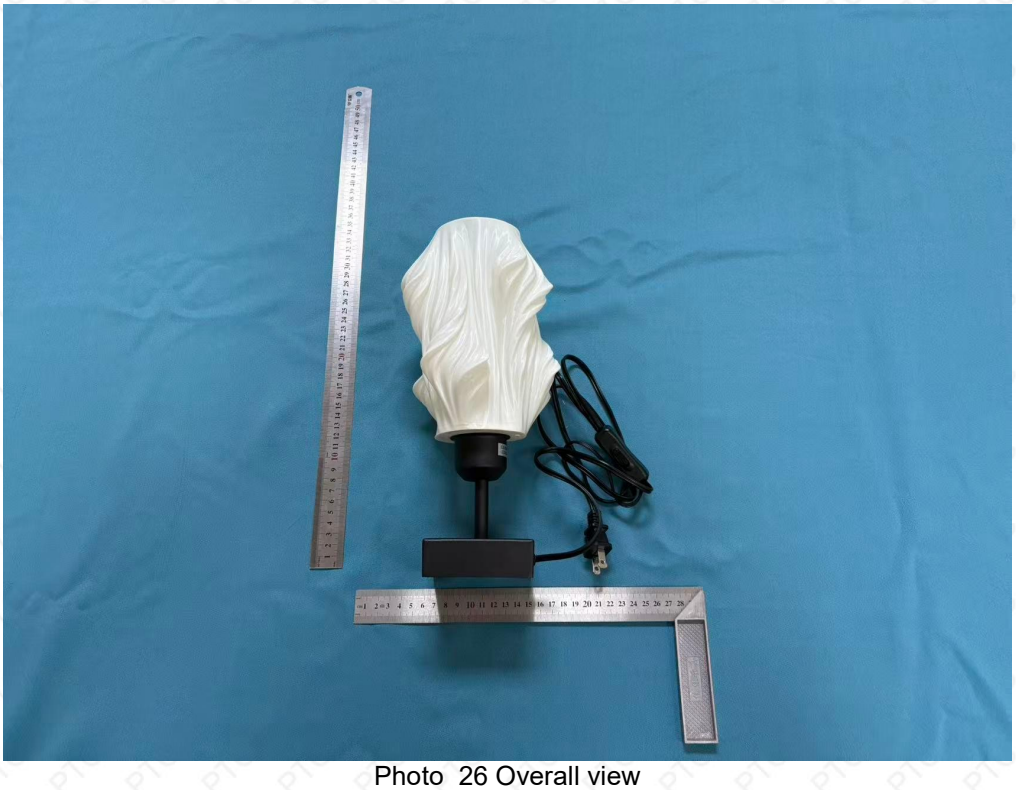


Photo 26 Overall view

Photo

Covered models:JB-G10



Photo 27 Overall view



Photo 28 Overall view

Photo

Covered models:JB-G11

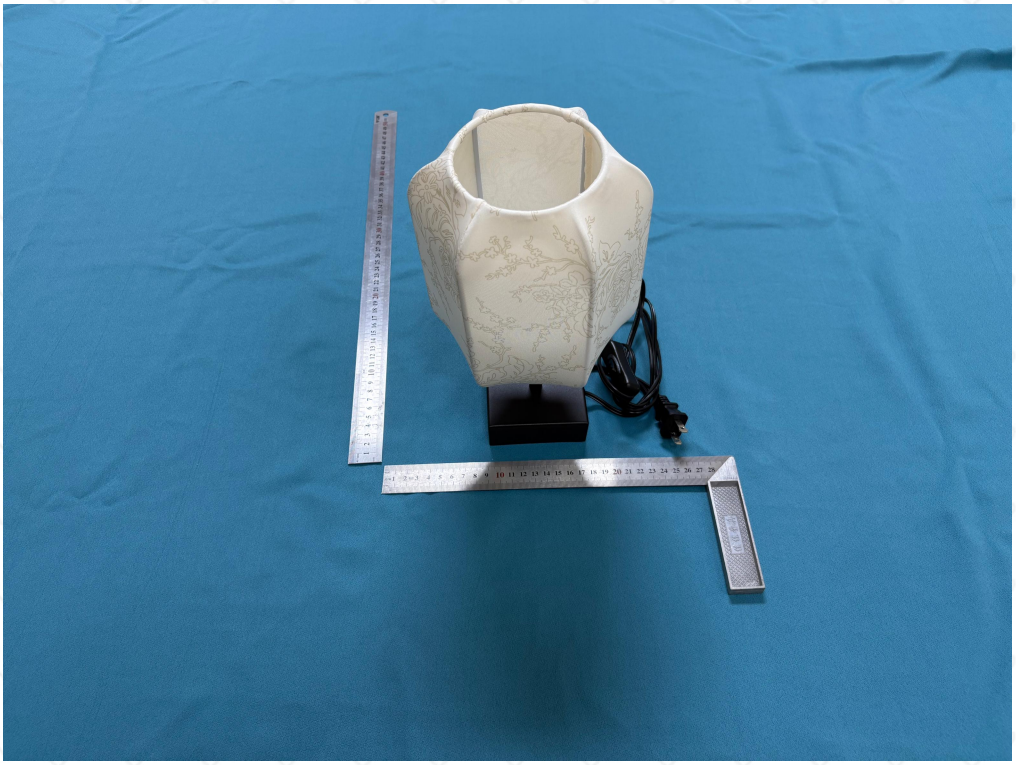


Photo 29 Overall view

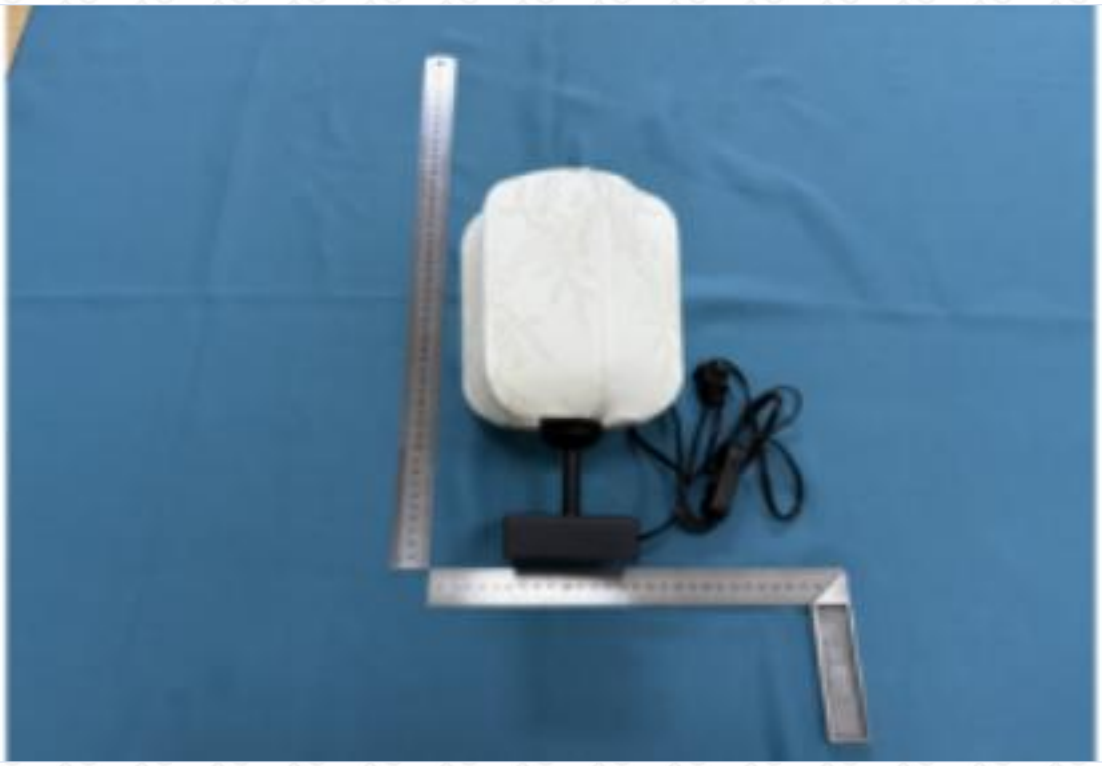


Photo 30 Overall view

Photo

Covered models:JB-G12

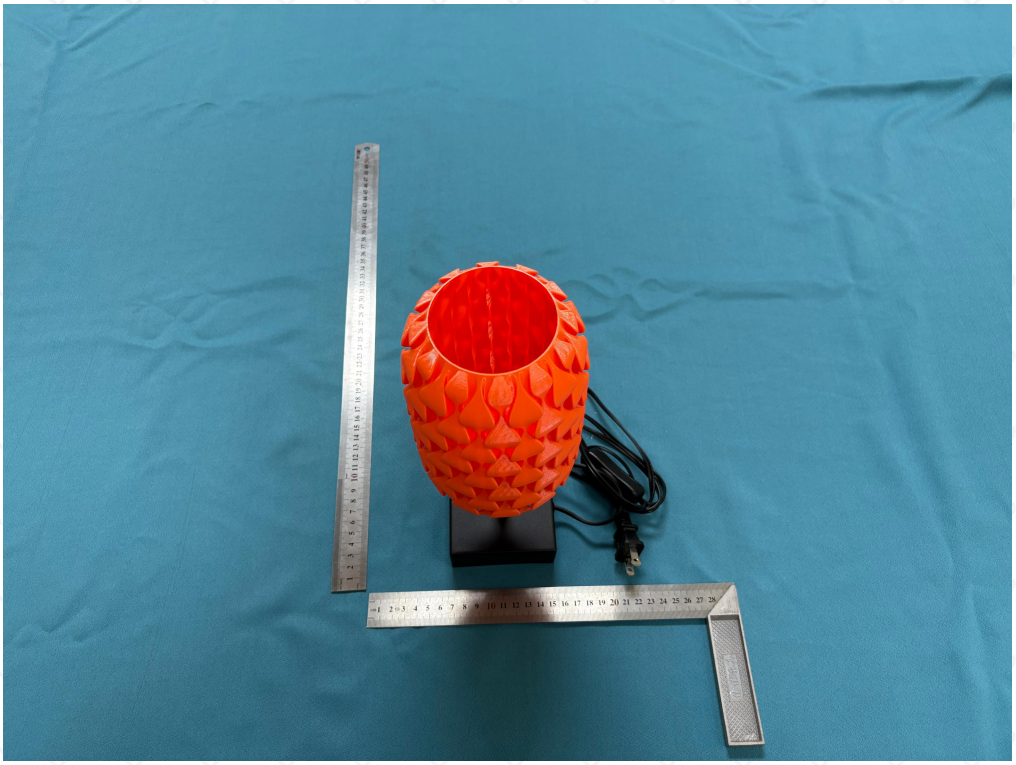


Photo 31 Overall view



Photo 32 Overall view

Photo

Covered models:JB-G13



Photo 33 Overall view



Photo 34 Overall view

Photo

Covered models:JB-G14

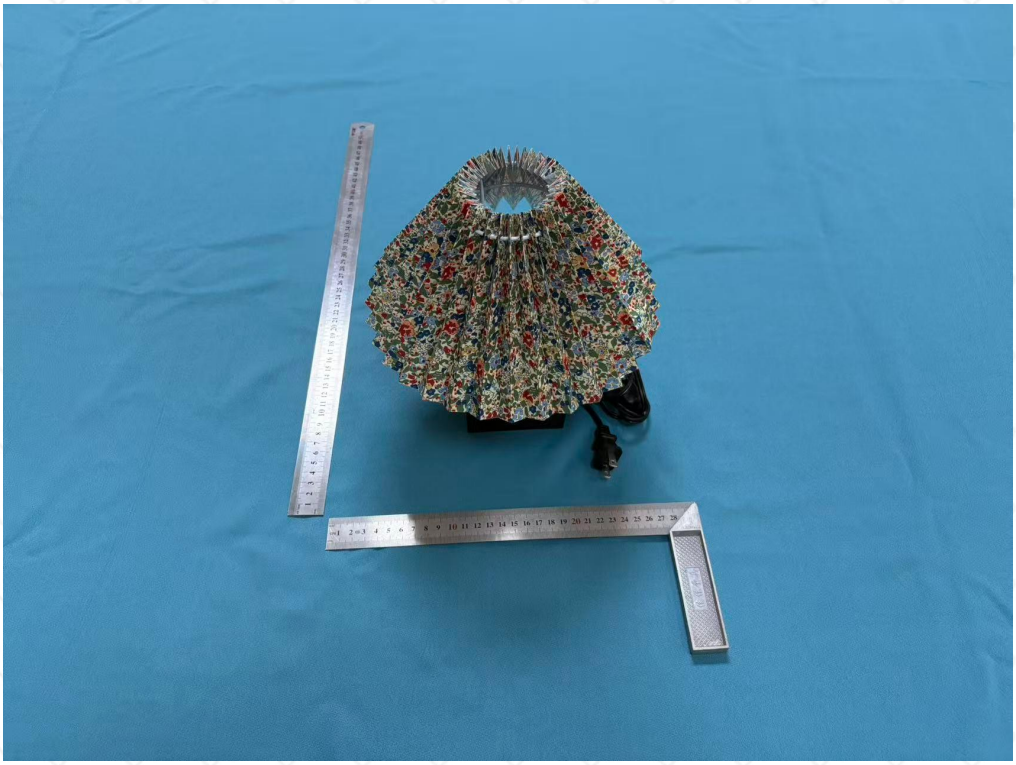


Photo 35 Overall view



Photo 36 Overall view

Photo

Covered models:JB-G15

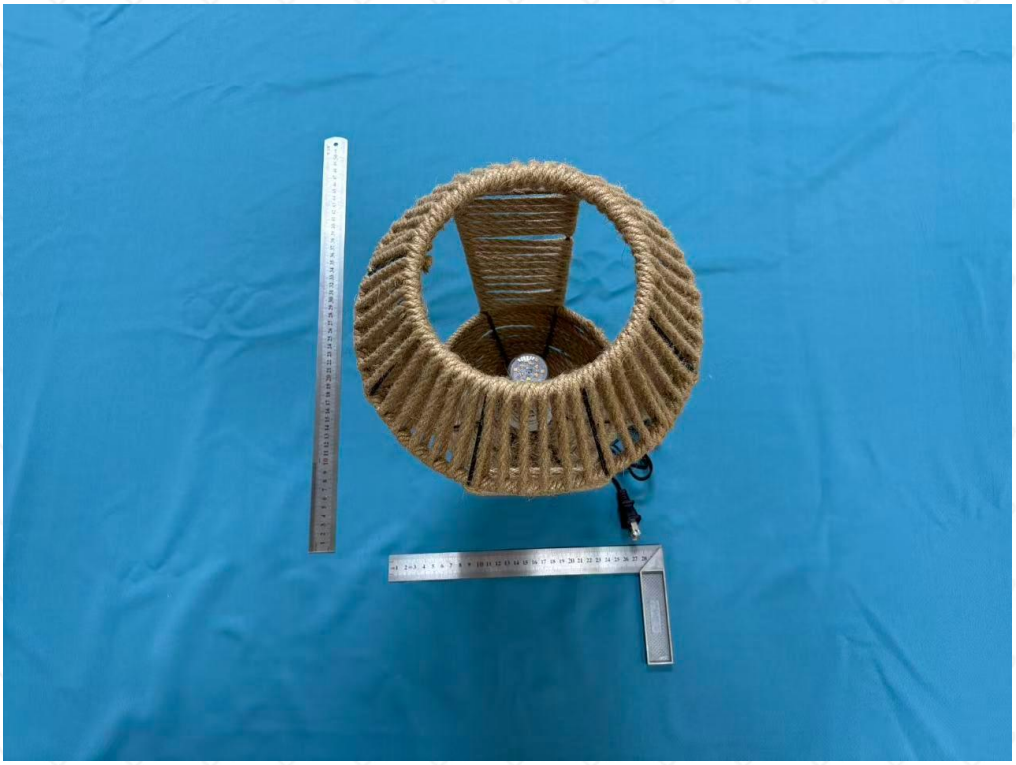


Photo 37 Overall view



Photo 38 Overall view

Photo

Covered models:JB-G16



Photo 39 Overall view

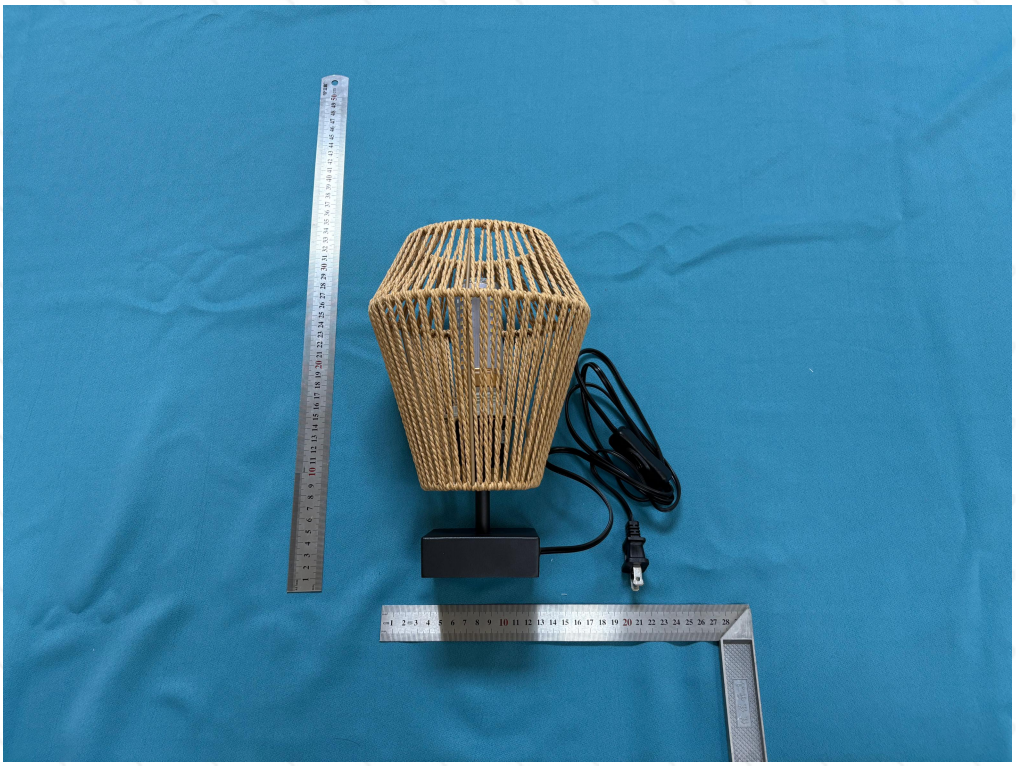


Photo 40 Overall view

Photo

Covered models:JB-G17

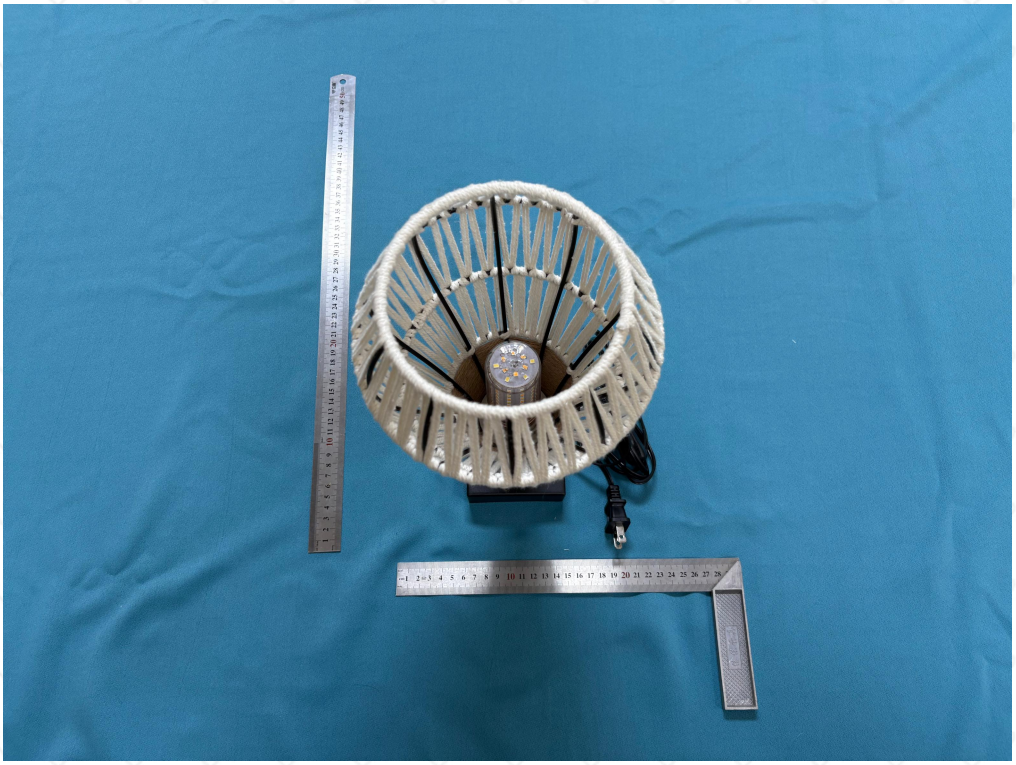


Photo 41 Overall view

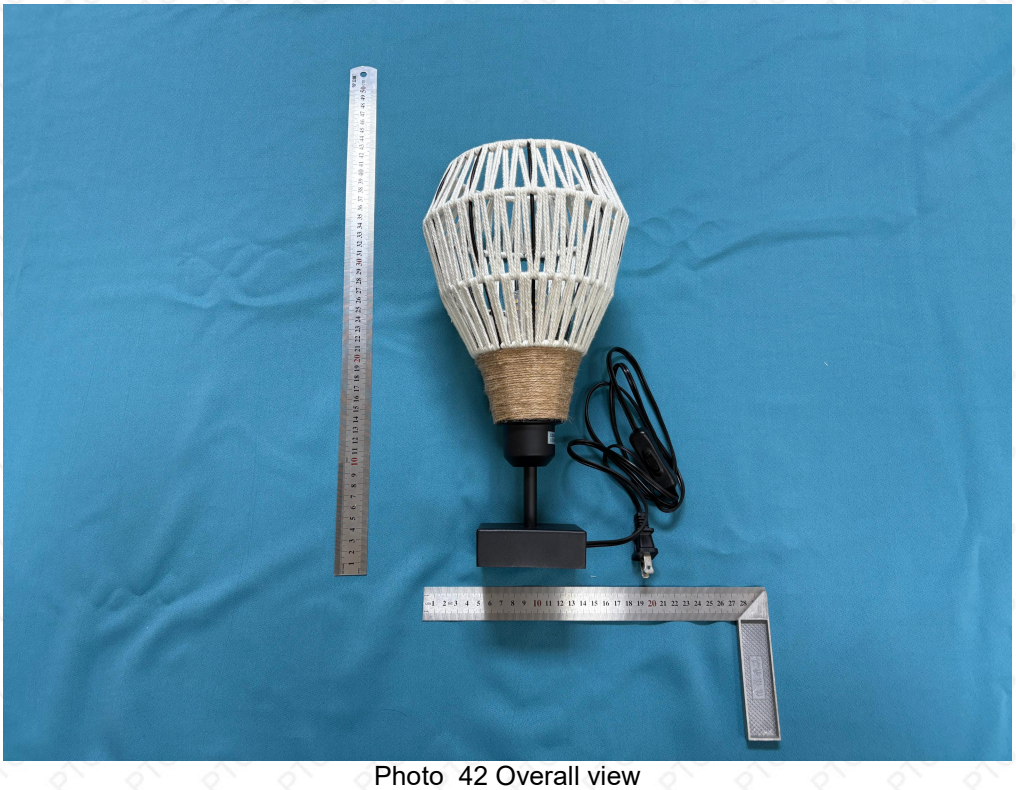


Photo 42 Overall view

Photo

Covered models:JB-G18

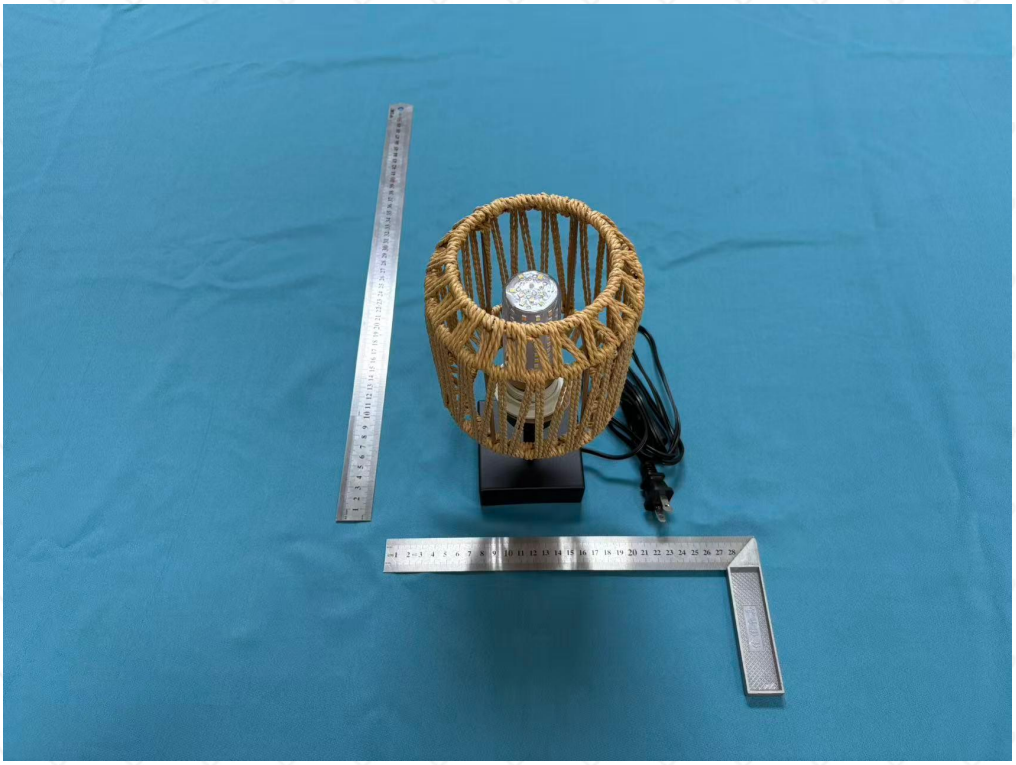


Photo 43 Overall view

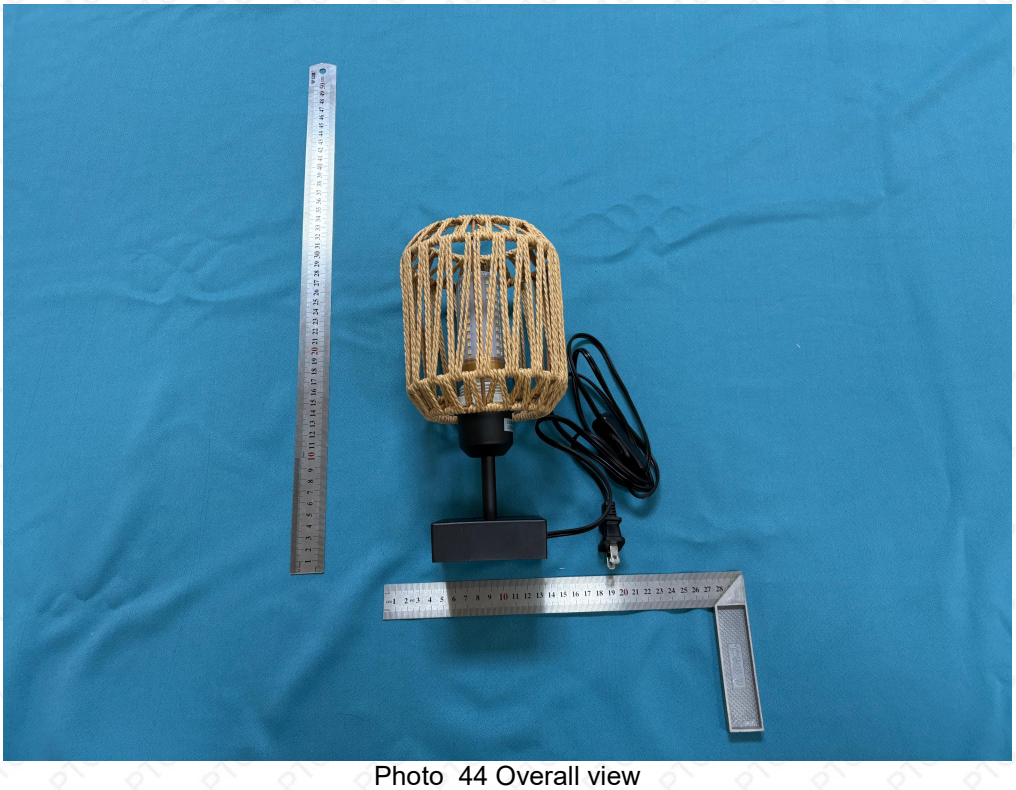


Photo 44 Overall view

Photo

Covered models:JB-G19

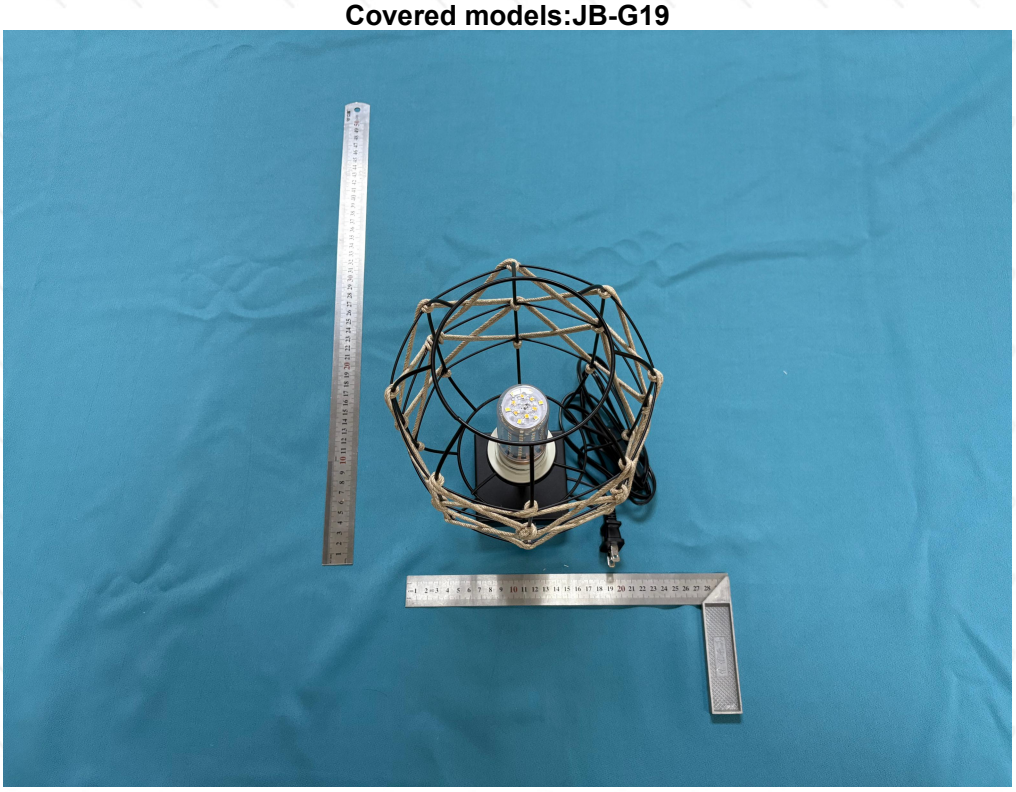


Photo 45 Overall view

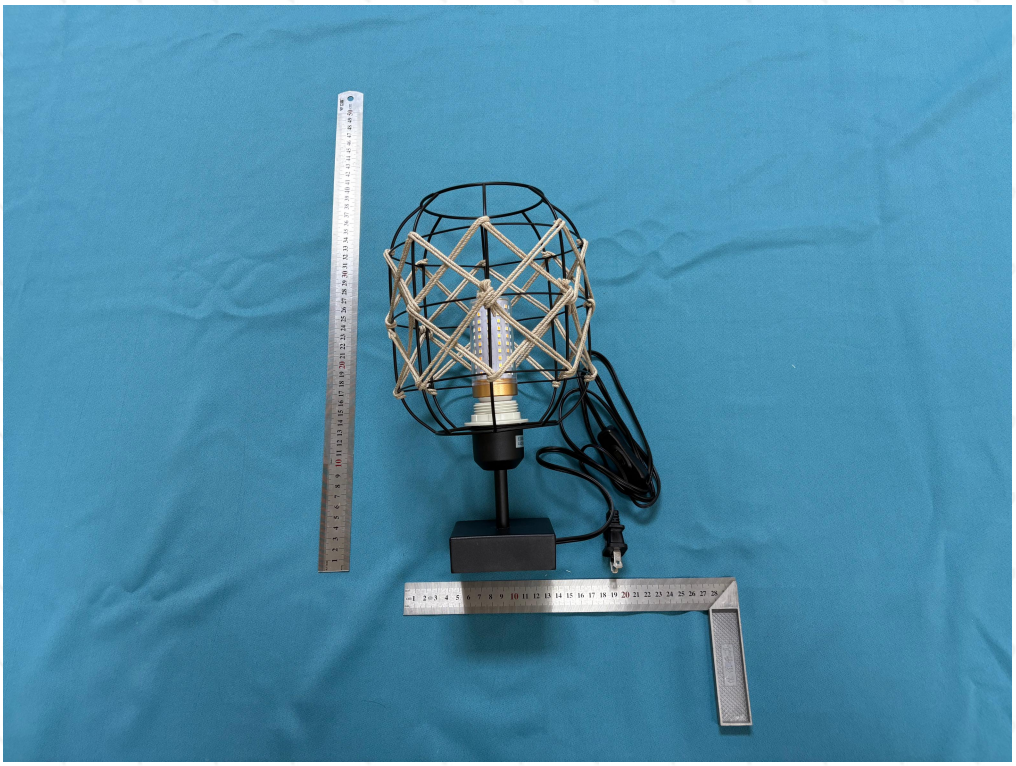


Photo 46 Overall view

Photo

Covered models:JB-G20

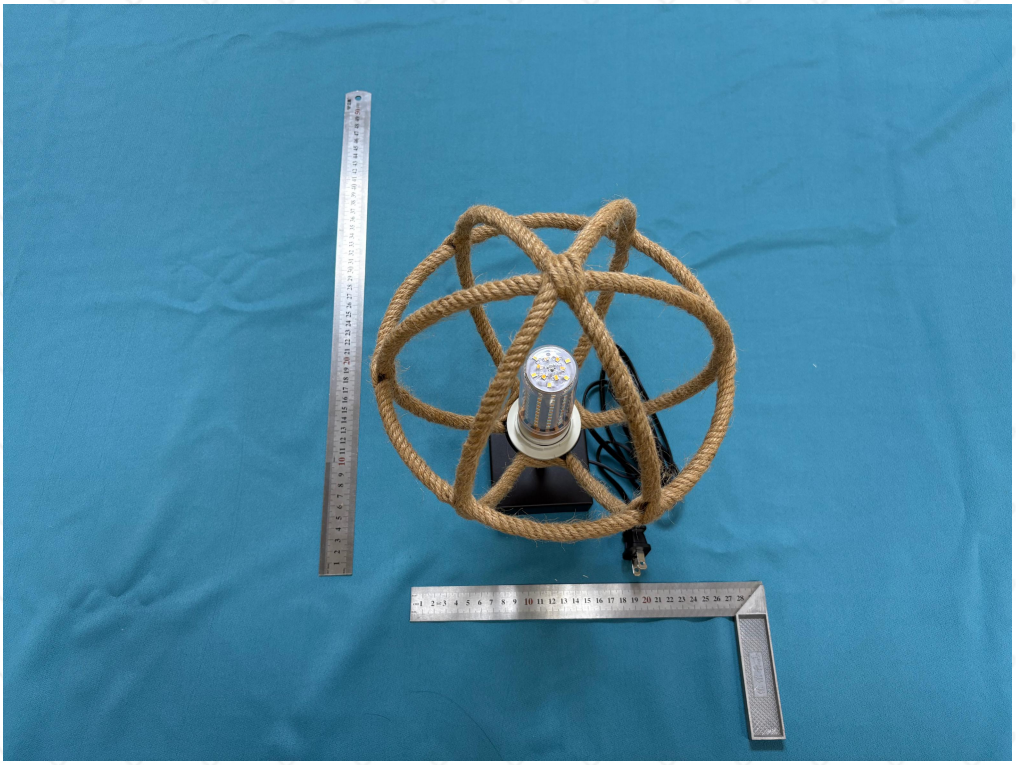


Photo 47 Overall view

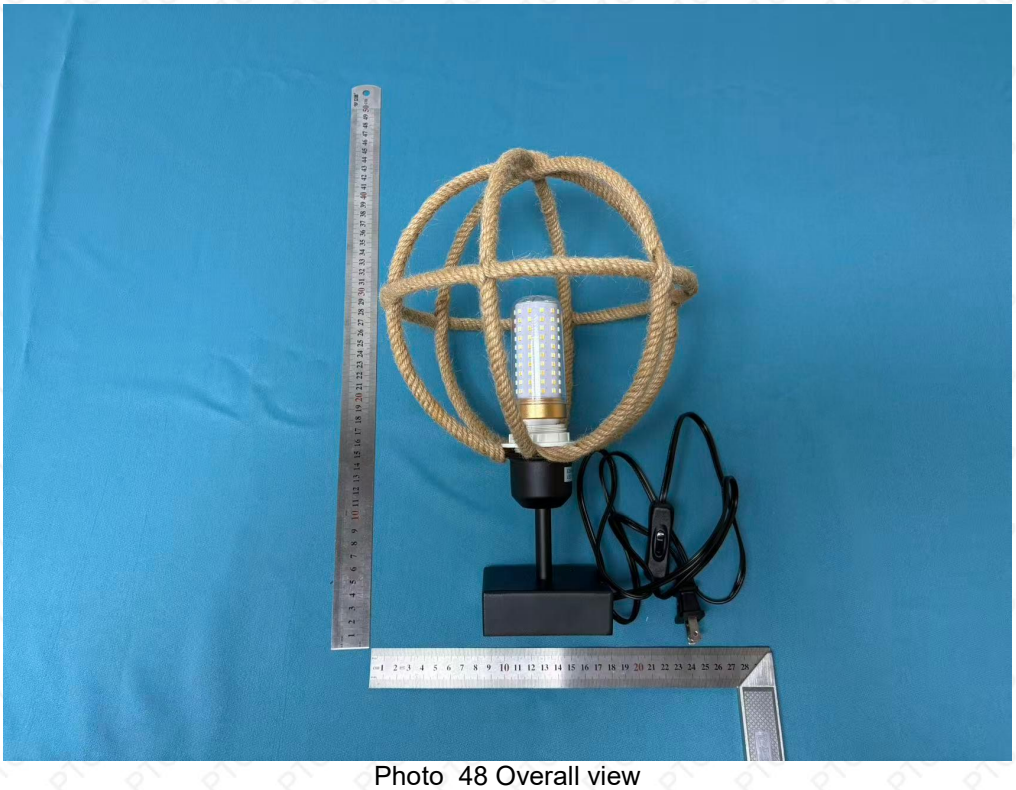


Photo 48 Overall view

Photo

Covered models:JB-G21

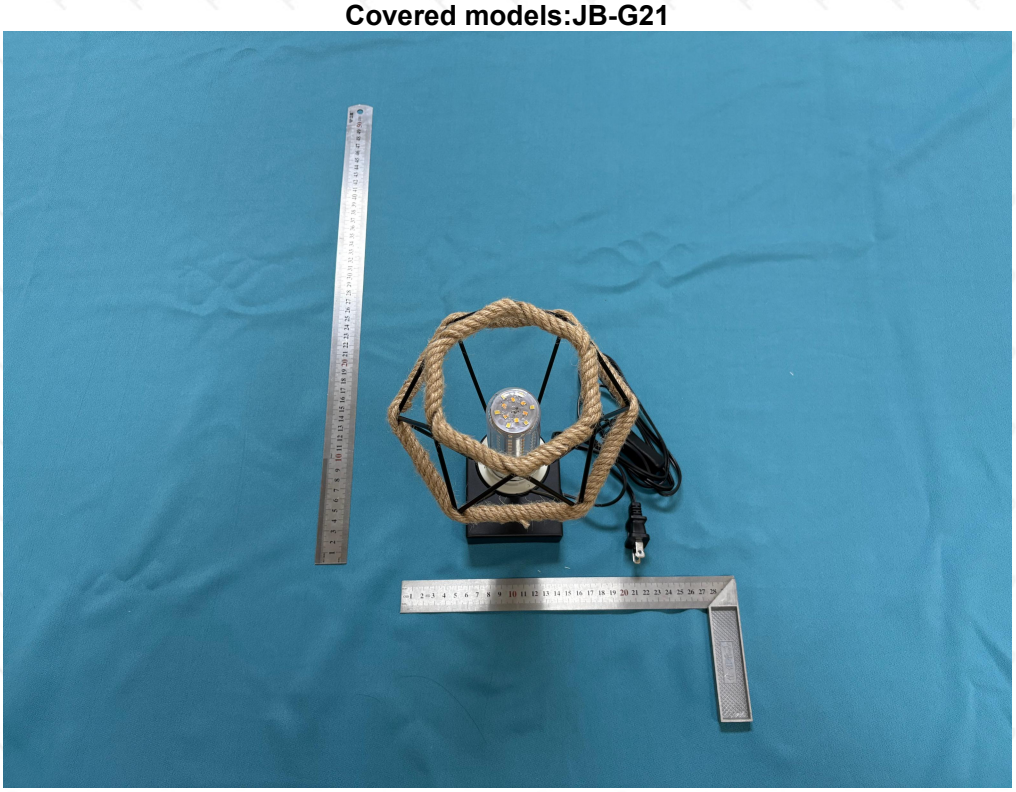


Photo 49 Overall view

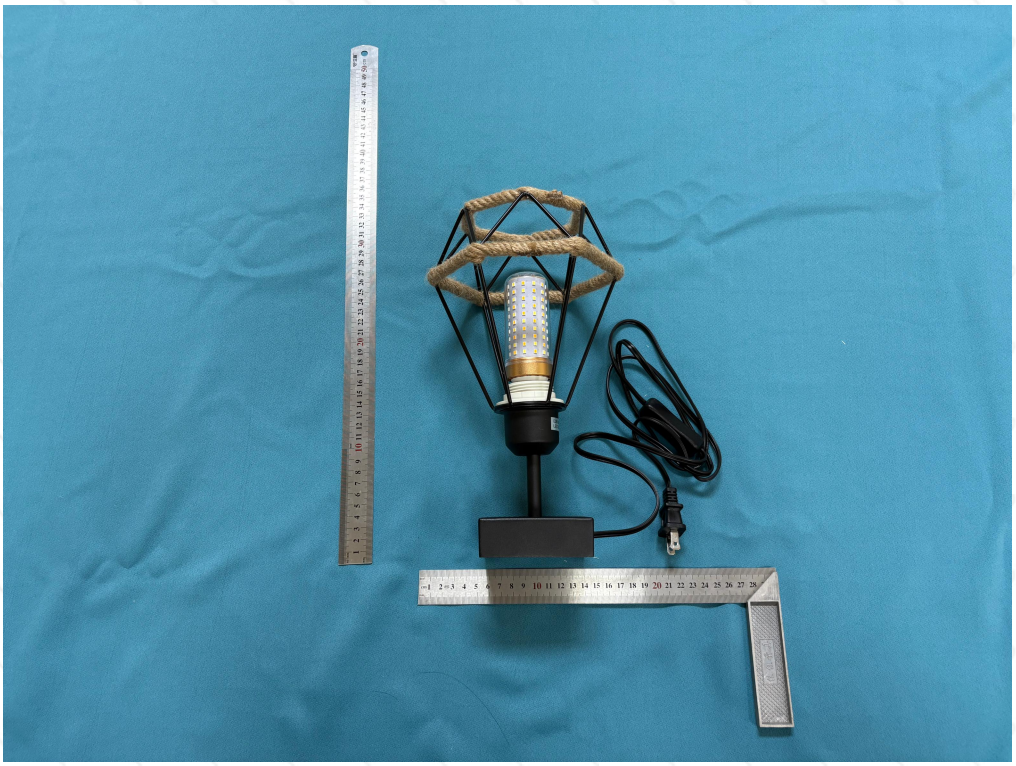


Photo 50 Overall view

Photo

Covered models:JB-G22

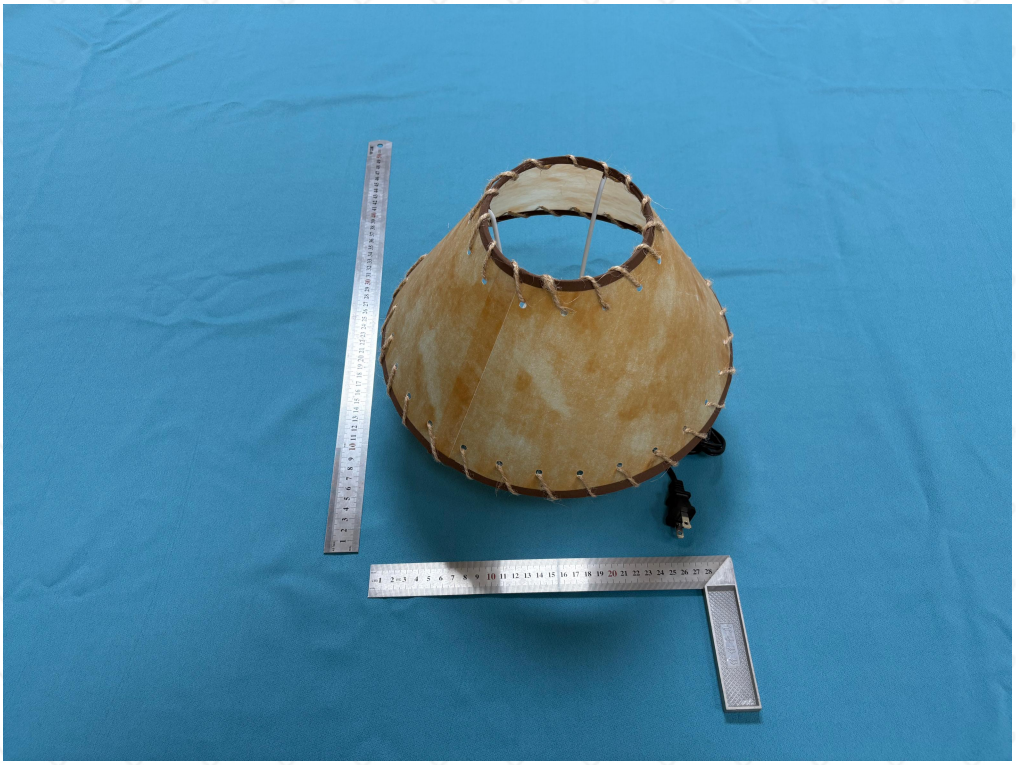


Photo 51 Overall view

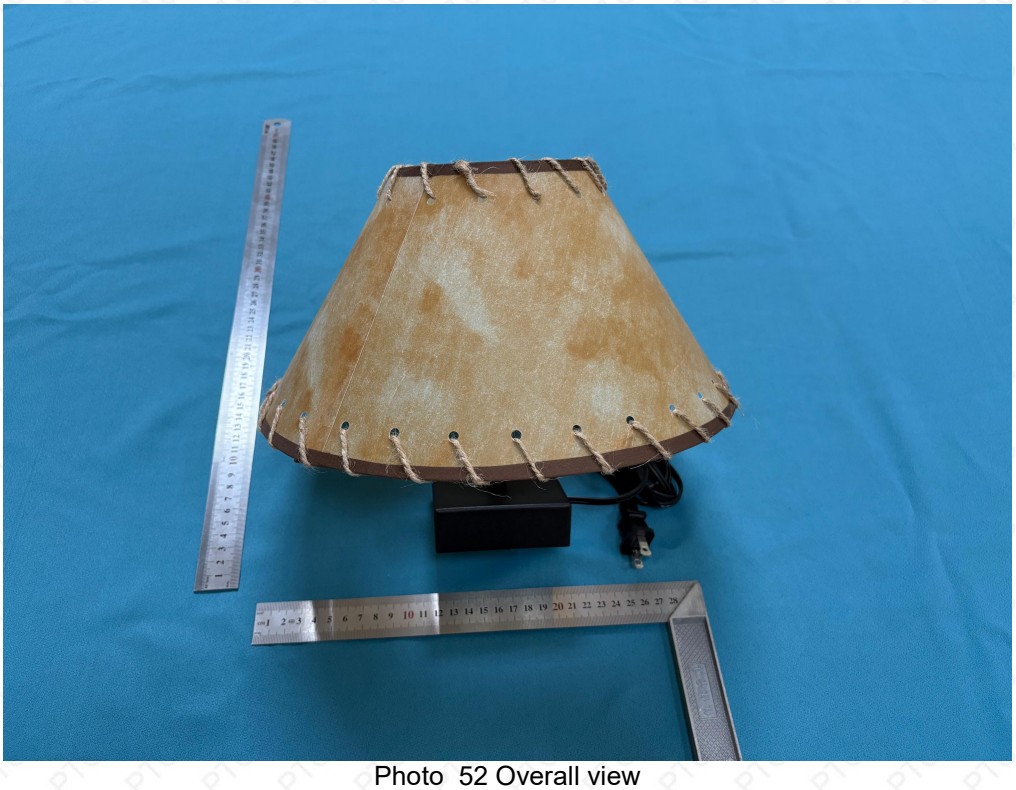


Photo 52 Overall view

Photo

Covered models:JB-G23



Photo 53 Overall view

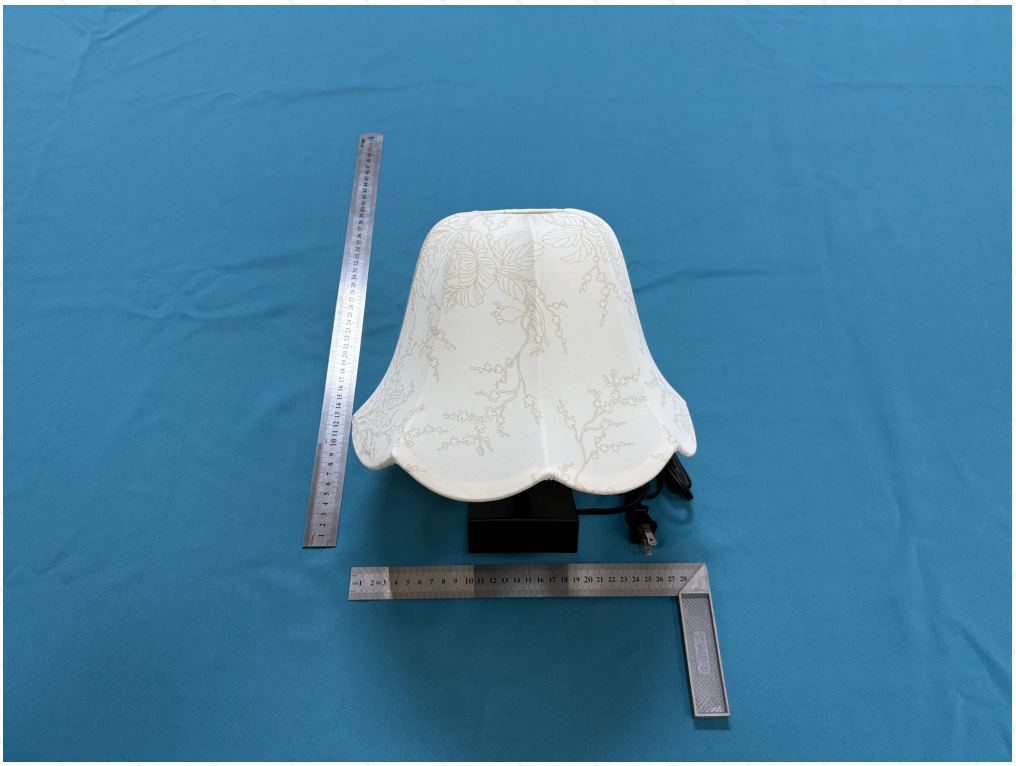


Photo 54 Overall view

Photo

Covered models:JB-G24

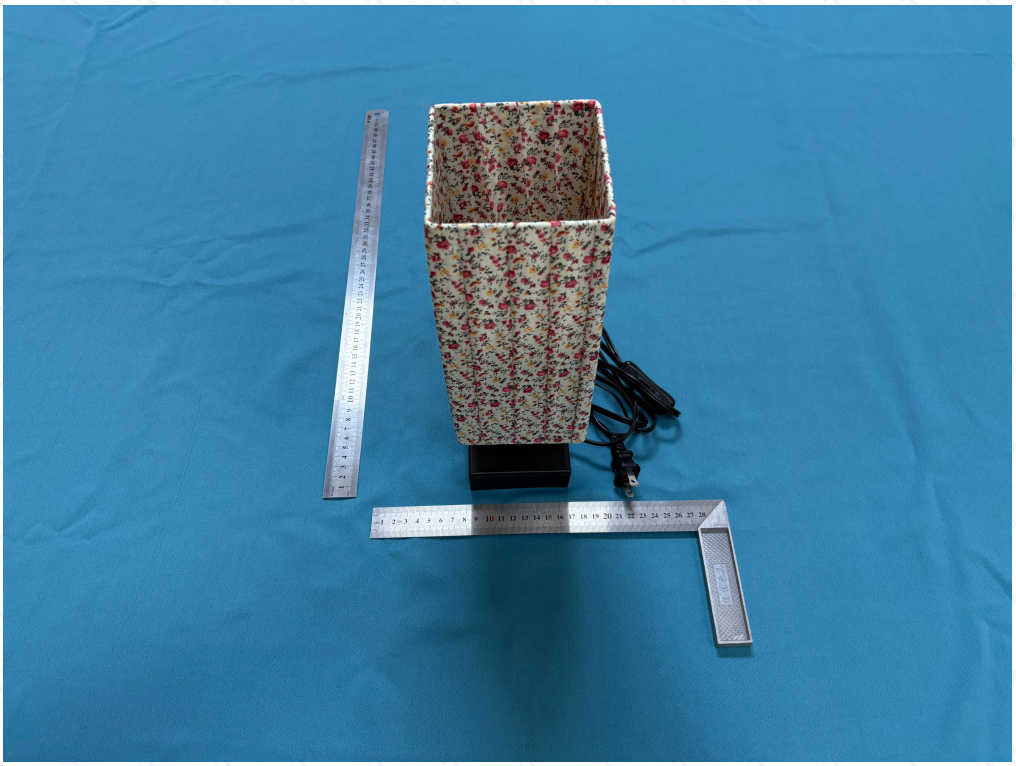


Photo 55 Overall view

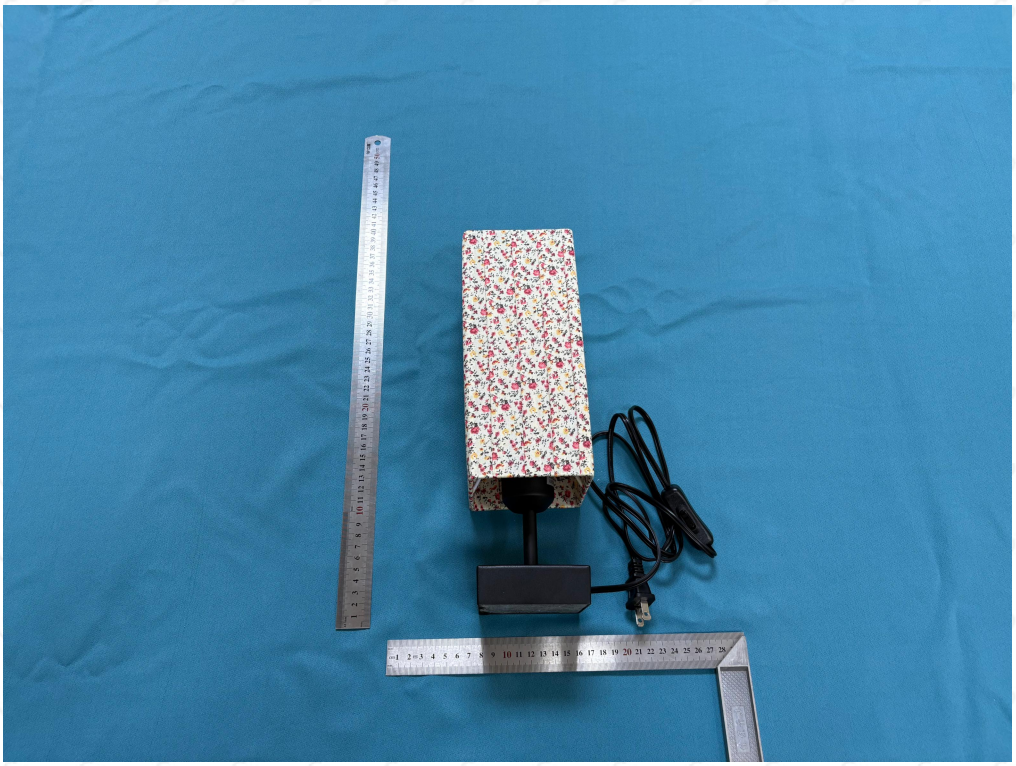


Photo 56 Overall view

Photo

Covered models:JB-G25

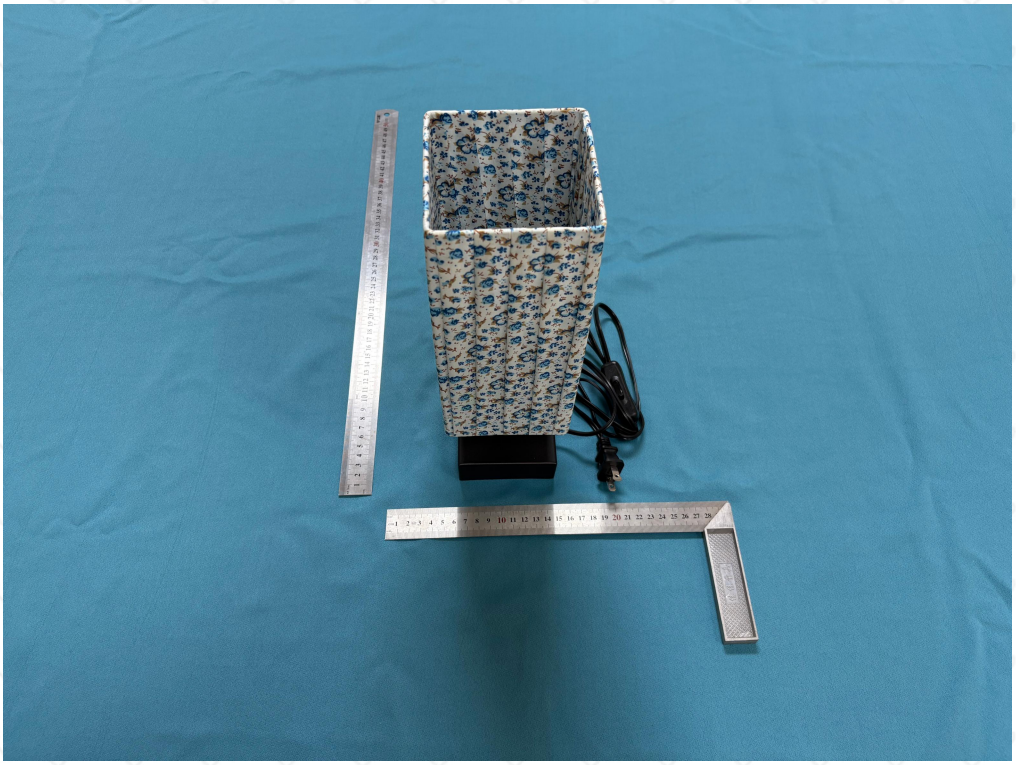


Photo 57 Overall view

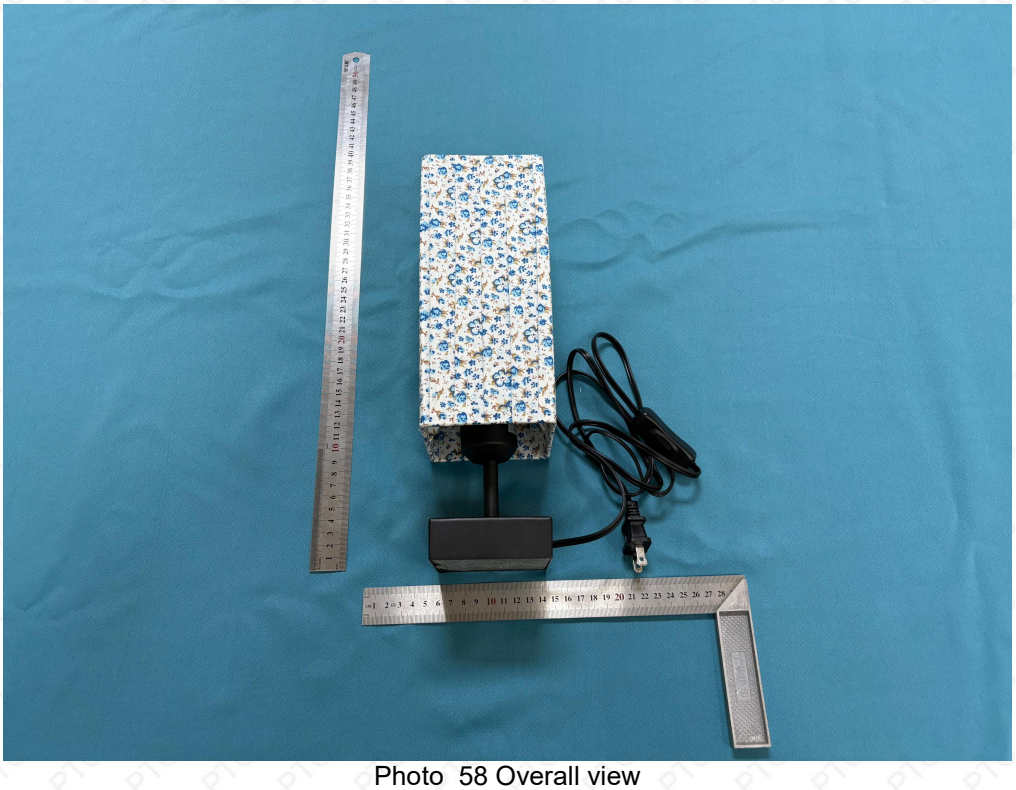


Photo 58 Overall view

Photo

Covered models:JB-G26

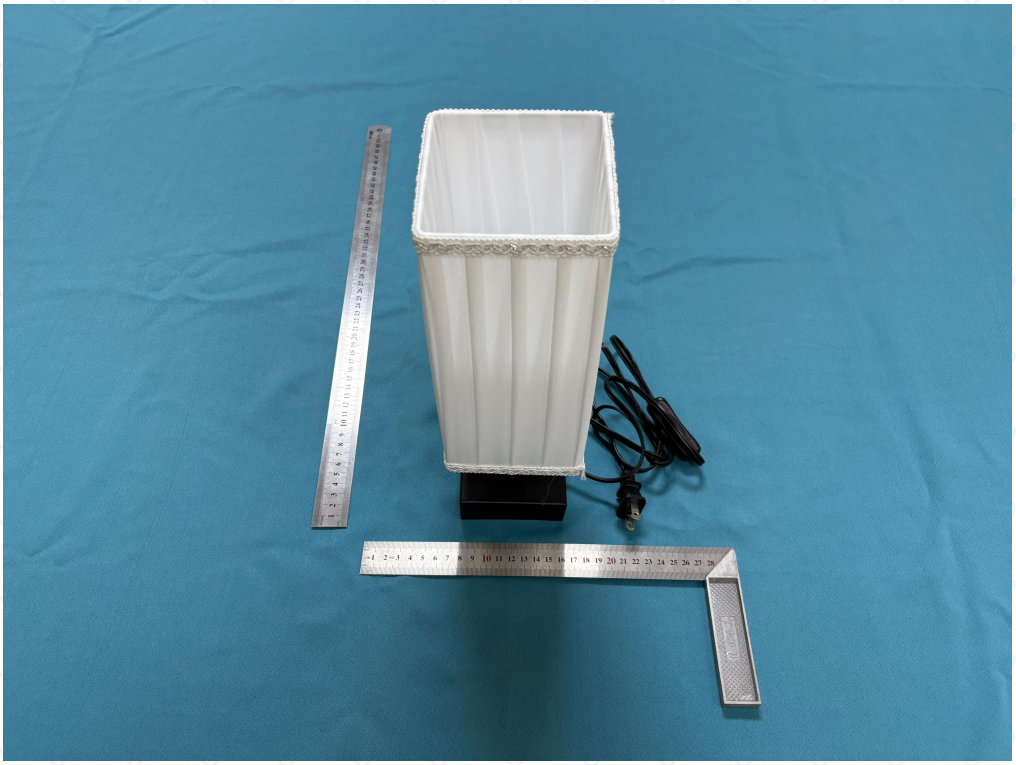


Photo 59 Overall view

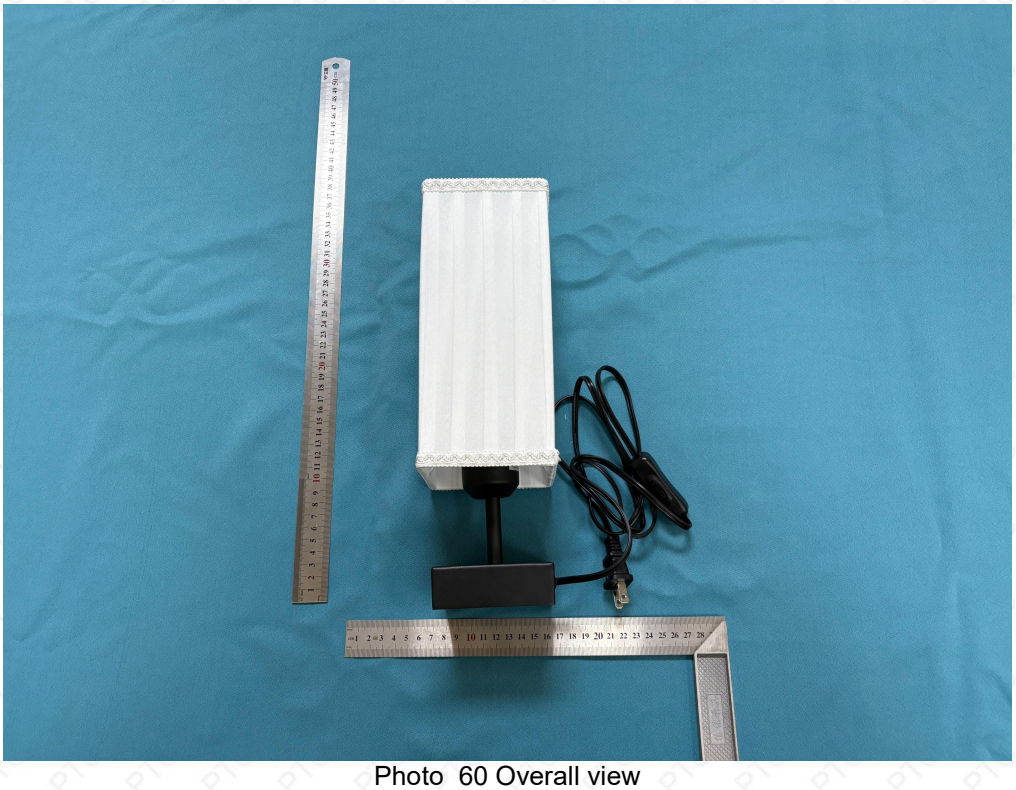


Photo 60 Overall view

Photo

Covered models:JB-G27

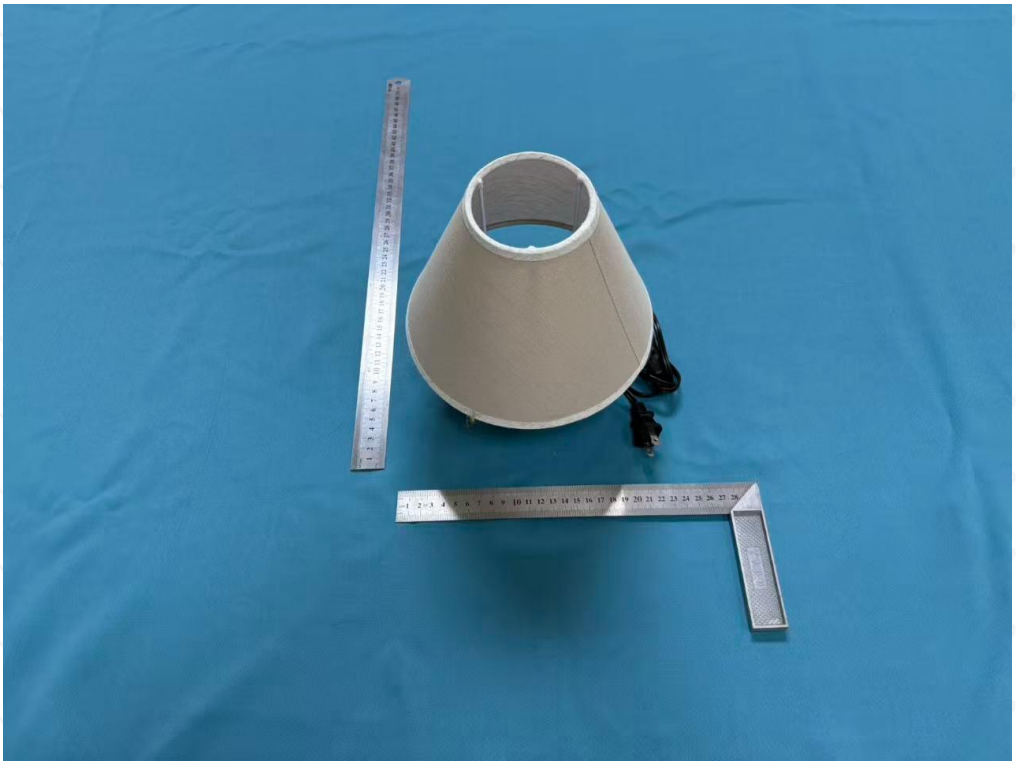


Photo 61 Overall view

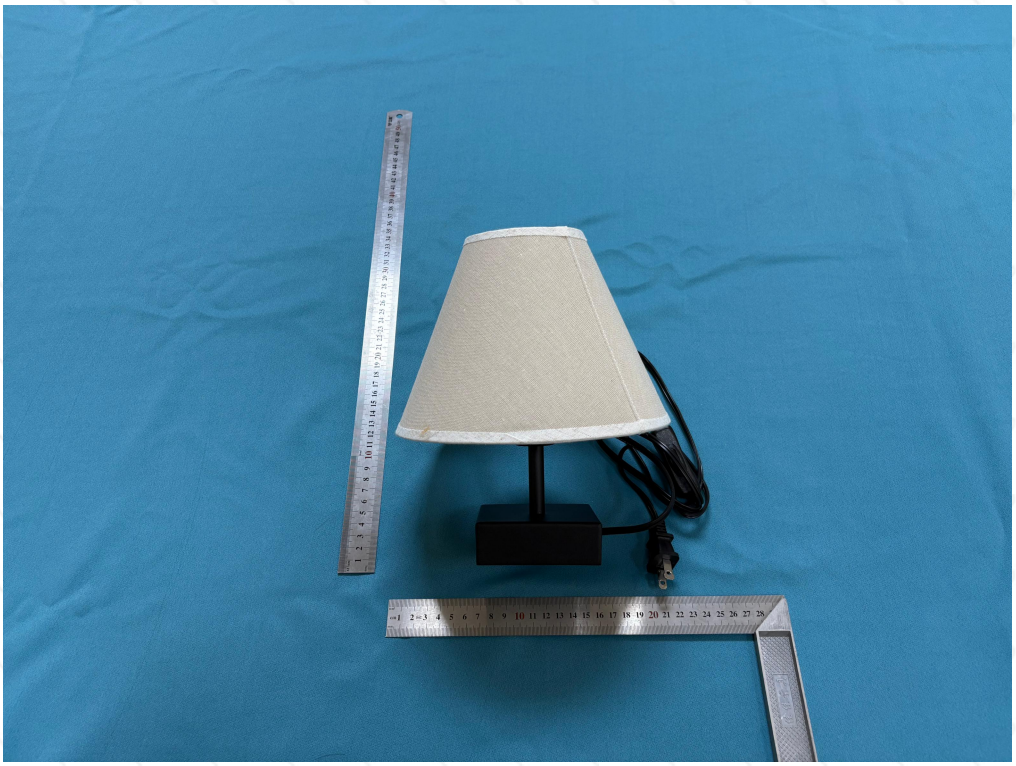


Photo 62 Overall view

Photo

Covered models:JB-G28



Photo 63 Overall view



Photo 64 Overall view

Photo

Covered models:JB-G29

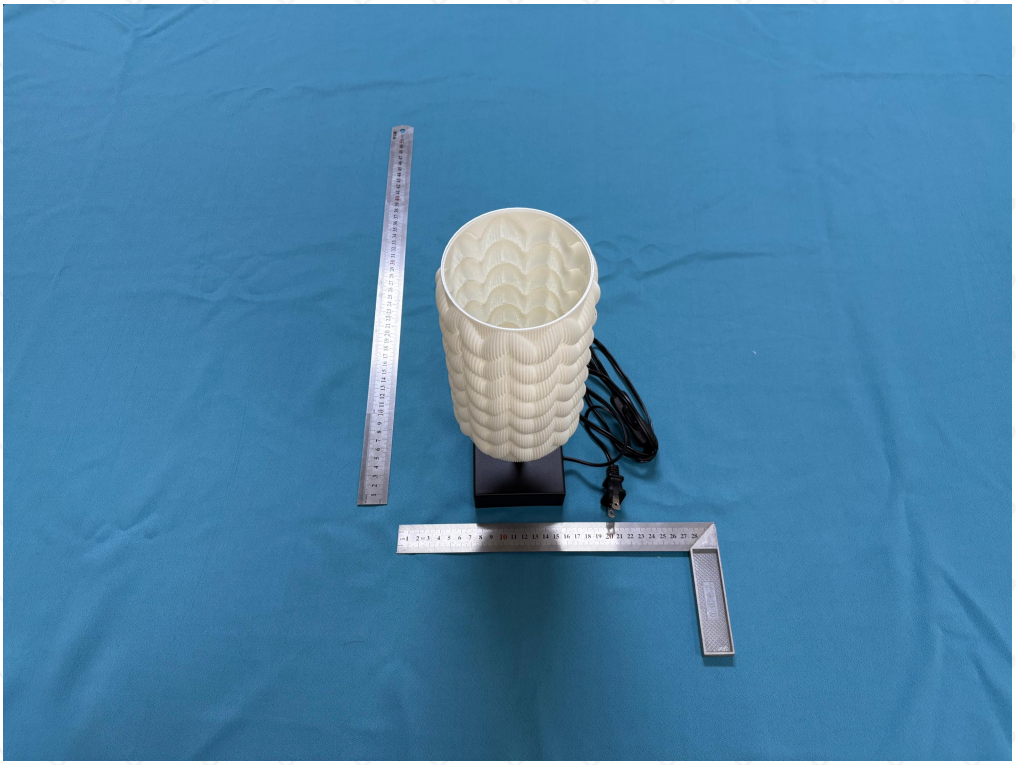


Photo 65 Overall view

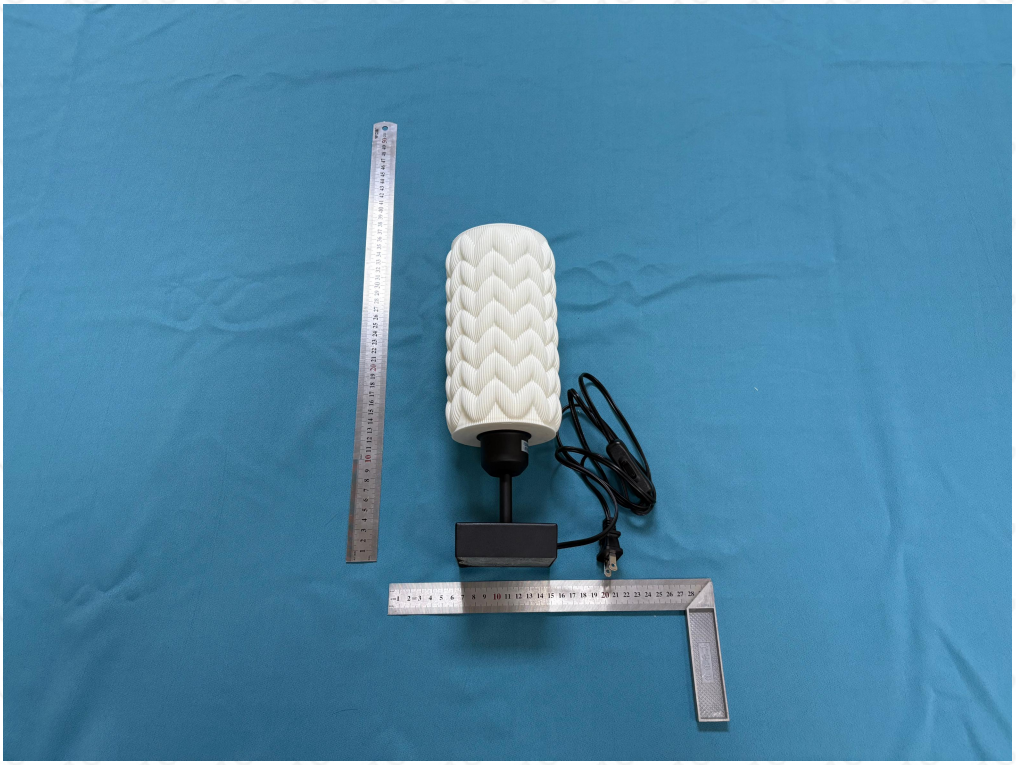


Photo 66 Overall view

Covered models:JB-G30

Photo

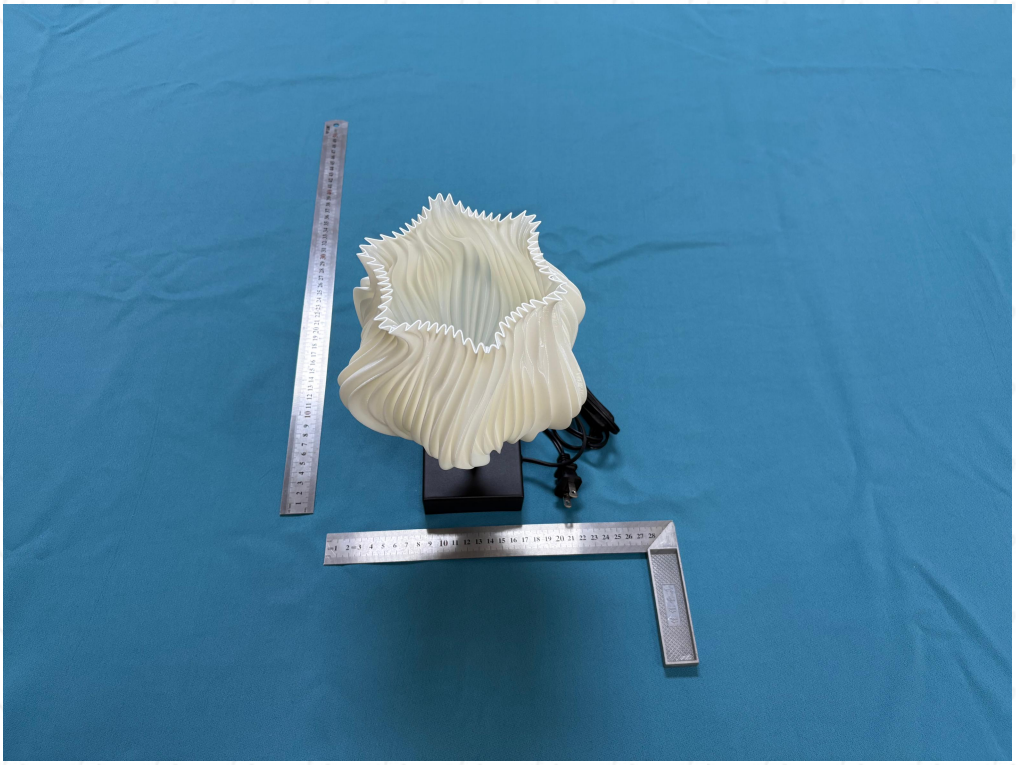


Photo 67 Overall view



Photo 68 Overall view

==========End of the report==========