

WZ-407/B-1, Basai Dara Pur,
Near Ramesh Nagar Metro Station,
New Delhi-110015 (India)

Mob.: +91-98219 74769 / 99719 32901
E-mail : planetelectrolabs@gmail.com
Website : www.planetelectrolabs.com

TEST CERTIFICATE

SUMMARY OF TEST REPORT

TEST REPORT NO: PEL/ED/07700721

DATE: 08/04/2021
ULR-TC527221000001170F

(Number of Pages in Test Report: Page No. 1 to 45)
TEST FORMAT AS PER IS 10322 (Part 5/Sec 3): 2012+A1:2015

1. **Name of the Manufacturer:** ZIYA ENERGY SOLUTIONS
2. **Product:** LED STREET LIGHT (Led Luminaires For Road And Street Lighting)
3. **Lead Model:** ZESSL200, **Series Models:** ZESSL180, ZESSL170, ZESSL160, ZESSL150, ZESSL140, ZESSL130, ZESSL120, ZESSL100, ZESSL090, ZESSL080, ZESSL072, ZESSL060, ZESSL050, ZESSL045, ZESSL036, ZESSL030, ZESSL020, ZESSL018, ZESSL015
4. **Model differences provided (if applicable):** Yes/No
5. **Model differences verified as per MEITY Guidelines for series formulation:** Yes/No
6. **Test Result:** Refer below

PART A: GENERAL

SL. NO.	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Marking	6(3)	P
2.	Construction	7(4)	P
3.	Creepage Distances And Clearances	8(11)	P
4.	Provision For Earthing	9(7)	P
5.	Terminals	10(14)	P
6.	External And Internal Wiring	11(5)	P
7.	Protection Against Electric Shock	12(8)	P
8.	Endurance Tests And Thermal Tests	13(12)	P
9.	Resistance To Dust And Moisture	14(9)	P
10.	Insulation Resistance And Electric Strength	15(10)	P
11.	Resistance to Heat, Fire And Tracking	16(13)	P
12.	Photometric Tests	17	P

For Planet Electro Labs

Authorised Signatory

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GENERAL INFORMATION:

1. The conformity certificates of critical components are verified to ensure complete testing of apparatus under test and details regarding harmonized IEC standards (where IEC standards are not available) are also provided in the list of critical components
2. All tests have been performed on Model: ZESSL200 only.

CONCLUSION:

1. Sample meets all relevant requirements of IS 10322 (Part 5/ Sec 3):2012+A1:2015 Yes
2. ~~Sample fails to meet the following test requirements.~~
3. I, hereby undertake that the verdict stated in the test reports for all the test matches with the test results. The sample meets all relevant requirements of IS 10322 (Part 5/ Sec 3):2012+A1:2015 does ~~not meet the requirements.~~ If any deviation found, suitable punitive action may be taken by BIS

For Planet Electro Labs

Authorised Signatory

Date: 08/04/2021

(Signature of Authorized Person with Stamp)

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Report No: PEL/ED/07700721	Issue Date: 08/04/2021 Page No: 1 of 45
Test Item:	LED STREET LIGHT (Led Luminaires For Road And Street Lighting)
Manufacturer:	ZIYA ENERGY SOLUTIONS G-301, SECTOR - 63, G BLOCK, NOIDA, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, India, 201301
Identification:	Lead Model: ZESSL200 Serial No.: Nil Series Models: ZESSL180, ZESSL170, ZESSL160, ZESSL150, ZESSL140, ZESSL130, ZESSL120, ZESSL100, ZESSL090, ZESSL080, ZESSL072, ZESSL060, ZESSL050, ZESSL045, ZESSL036, ZESSL030, ZESSL020, ZESSL018, ZESSL015
Receipt Job No.:	180321/007 Date: 18/03/2021
Testing Laboratory:	Planet Electro Labs WZ-407/B-1, BASAI DARAPUR, NEW DELHI, DELHI-110015 (INDIA)
Test Specification:	IS 10322 (Part 5/ Sec 3):2012+A1:2015
Test Result:	The test item Passed the test specification
Other Aspects:	This test report consists of 45 pages.

Tested By	Approved By	Issued By
	For Planet Electro Labs  Authorised Signatory	
Testing Engineer : Mr. Ranjan Kumar Date: 08/04/2021	Quality Manager: Mr. Sandeep Singh Date: 08/04/2021	Quality Manager: Mr. Sandeep Singh Date: 08/04/2021

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Report No: PEL/ED/07700721

Issue Date: 08/04/2021

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TEST REPORT IS 10322 (Part 5/Sec 3) Luminaires Part 5: Particular Requirements Section 3: Luminaires for road and street lighting					
Report Number	PEL/ED/07700721				
Date of issue	08/04/2021				
Total number of pages	45				
Applicant's name	ZIYA ENERGY SOLUTIONS				
Address	G-301, SECTOR - 63, G BLOCK, NOIDA, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, India, 201301				
Test specification:					
Standard	IS 10322 (Part 5/ Sec 3):2012+A1:2015				
Test procedure	Compliance Report				
Non-standard test method	N/A				
Test Report Form No.	BIS_LUM/LRSL_IS10322-5-3_V1.0				
Test Report Form(s) Originator	Bureau of Indian Standards				
Master TRF	23/11/2017				
Test item description	LED STREET LIGHT (Led Luminaires For Road And Street Lighting)				
Trade Mark					
Manufacturer	ZIYA ENERGY SOLUTIONS				
Model/Type Reference	Lead Model: ZESSL200 Series Models: ZESSL180, ZESSL170, ZESSL160, ZESSL150, ZESSL140, ZESSL130, ZESSL120, ZESSL100, ZESSL090, ZESSL080, ZESSL072, ZESSL060, ZESSL050, ZESSL045, ZESSL036, ZESSL030, ZESSL020, ZESSL018, ZESSL015				
Rating	<table border="1"> <tr> <th>Lead Model</th> <th>Rating</th> </tr> <tr> <td>ZESSL200</td> <td>220-240Vac, 50Hz, 200W, 0.92A, PF: 0.9, Ta: 45°C, Tc: 75°C, IP66</td> </tr> </table>	Lead Model	Rating	ZESSL200	220-240Vac, 50Hz, 200W, 0.92A, PF: 0.9, Ta: 45°C, Tc: 75°C, IP66
Lead Model	Rating				
ZESSL200	220-240Vac, 50Hz, 200W, 0.92A, PF: 0.9, Ta: 45°C, Tc: 75°C, IP66				
Rating for series Model: See copy of marking plate on page no. 5-8 of 45.					

Tested By	Approved By	Issued By
	 For Planet Electro Labs	
Testing Engineer : Mr. Ranjan Kumar Date: 08/04/2021	Quality Manager: Mr. Sandeep Singh Date: 08/04/2021	Quality Manager: Mr. Sandeep Singh Date: 08/04/2021

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Test Code	Description	Measurement/ testing	Total No. of tests	Total no. of applicable tests/ Req.	No. of tests/ Req. passed	Page No.
EL 2400	Marking	Marking Cl.6(3)	28	15	15	12
EL 2401	Construction	Construction Cl. 7(4)	127	25	25	14
EL 2402	Creepage Distances And Clearances	Creepage Distances And Clearances Cl. 8(11)	10	05	05	21
EL 2403	Provision For Earthing	Provision For Earthing Cl. 9(7)	19	14	14	22
EL 2404	Terminals	Terminals Cl. 10(14)	02	02	02	23
			02	00	N/A	24
EL 2405	External And Internal Wiring	External And Internal Wiring Cl. 11(5)	73	29	29	25
EL 2406	Protection Against Electric Shock	Protection Against Electric Shock Cl. 12(8)	18	04	04	29
EL 2407	Endurance Tests And Thermal Tests	Endurance Tests And Thermal Tests Cl. 13(12)	08	03	03	31
EL 2408	Resistance To Dust And Moisture	Resistance To Dust And Moisture Cl. 14 (9)	12	06	06	33
EL 2409	Insulation Resistance And Electric Strength	Insulation Resistance And Electric Strength Cl. 15 (10)	07	05	05	34
EL 2410	Resistance to Heat, Fire And Tracking	Resistance to Heat, Fire And Tracking Cl. 16(13)	04	03	03	36
EL 2411	Photometric Tests	Photometric Tests Cl. 17	04	04	04	37

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

(Tested by/ Approving Authority)

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Copy of marking plate



TRADE MARK

LED STREET LIGHT Model: ZESSL200 0.92A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 200W Ta: 45°C Tc: 75°C    MADE IN INDIA	ZS ZIYA ENERGY SOLUTIONS	L(R) N(B) E(G/Y)
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MARKING PLATE OF LEAD MODEL

LED STREET LIGHT Model: ZESSL180 0.83A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 180W Ta: 45°C Tc: 75°C    MADE IN INDIA	ZS ZIYA ENERGY SOLUTIONS	L(R) N(B) E(G/Y)
LED STREET LIGHT Model: ZESSL170 0.78A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 170W Ta: 45°C Tc: 75°C    MADE IN INDIA	ZS ZIYA ENERGY SOLUTIONS	L(R) N(B) E(G/Y)

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LED STREET LIGHT Model: ZESSL160 0.74A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 160W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL150 0.69A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 150W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)
LED STREET LIGHT Model: ZESSL140 0.64A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 140W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL130 0.60A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 130W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)
LED STREET LIGHT Model: ZESSL120 0.55A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 120W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL100 0.46A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 100W Ta: 45°C Tc: 75°C    MADE IN INDIA L(R) N(B) E(G/Y)

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LED STREET LIGHT Model: ZESSL090 0.41A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 90W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL080 0.37A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 80W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)
LED STREET LIGHT Model: ZESSL072 0.33A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 72W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL060 0.27A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 60W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)
LED STREET LIGHT Model: ZESSL050 0.23A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 50W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)	LED STREET LIGHT Model: ZESSL045 0.20A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 45W Ta: 45°C Tc: 75°C    MADE IN INDIA ZS ZIYA ENERGY SOLUTIONS L(R) N(B) E(G/Y)

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LED STREET LIGHT Model: ZESSL036 0.16A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 36W Ta: 45°C Tc: 75°C L(R) N(B) E(G/Y) MADE IN INDIA	LED STREET LIGHT Model: ZESSL030 0.13A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 30W Ta: 45°C Tc: 75°C L(R) N(B) E(G/Y) MADE IN INDIA
LED STREET LIGHT Model: ZESSL020 0.09A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 20W Ta: 45°C Tc: 75°C L(R) N(B) E(G/Y) MADE IN INDIA	LED STREET LIGHT Model: ZESSL018 0.08A IP 66 PF: 0.9 Input Voltage: 220-240Vac 50Hz 18W Ta: 45°C Tc: 75°C L(R) N(B) E(G/Y) MADE IN INDIA

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LED STREET LIGHT

Model: ZESSL015

0.06A IP 66 PF: 0.9

Input Voltage: 220-240Vac

50Hz 15W

Ta: 45°C Tc: 75°C



MADE IN INDIA



L(R)

N(B)

E(G/Y)

MARKING PLATE OF SERIES MODELS

For Planet Electro Labs

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Table – List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment-I	Photometric Measurement	Page 1 (page no. 44 of 45)
Attachment-II	Photo Document	Page 1 (page no. 45 of 45)

General Remarks:

- The test results presented in this report relate only to the object tested.
- This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

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 : 18/03/2021

Date (s) of performance of tests : 18/03/2021 to 08/04/2021

Laboratory conditions

Ambient Temperature : (25±3)°C

Ambient Humidity : (60±15)%RH

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General product information:

Product Description

Model Tested:

Sr.No.	Product description	Model	Specifications
1.	LED STREET LIGHT (Led Luminaires For Road And Street Lighting)	ZESSL200	220-240Vac, 0.92A, 200W, IP66, 50Hz, Ta:45°C, Tc:75°C

Representative Models:

Sr.No.	Product description	Model	Specifications	Variation From Family Representative
1.	LED STREET LIGHT (Led Luminaires For Road And Street Lighting)	ZESSL180	220-240Vac, 0.83A, 180W, IP66, 50Hz, Ta:45°C, Tc:75°C	Model designation, current and wattage
2.		ZESSL170	220-240Vac, 0.78A, 170W, IP66, 50Hz, Ta:45°C, Tc:75°C	
3.		ZESSL160	220-240Vac, 0.74A, 160W, IP66, 50Hz, Ta:45°C, Tc:75°C	
4.		ZESSL150	220-240Vac, 0.69A, 150W, IP66, 50Hz, Ta:45°C, Tc:75°C	
5.		ZESSL140	220-240Vac, 0.64A, 140W, IP66, 50Hz, Ta:45°C, Tc:75°C	
6.		ZESSL130	220-240Vac, 0.60A, 130W, IP66, 50Hz, Ta:45°C, Tc:75°C	
7.		ZESSL120	220-240Vac, 0.55A, 120W, IP66, 50Hz, Ta:45°C, Tc:75°C	
8.		ZESSL100	220-240Vac, 0.46A, 100W, IP66, 50Hz, Ta:45°C, Tc:75°C	
9.		ZESSL090	220-240Vac, 0.41A, 90W, IP66, 50Hz, Ta:45°C, Tc:75°C	
10.		ZESSL080	220-240Vac, 0.37A, 80W, IP66, 50Hz, Ta:45°C, Tc:75°C	
11.		ZESSL072	220-240Vac, 0.33A, 72W, IP66, 50Hz, Ta:45°C, Tc:75°C	
12.		ZESSL060	220-240Vac, 0.27A, 60W, IP66, 50Hz, Ta:45°C, Tc:75°C	
13.		ZESSL050	220-240Vac, 0.23A, 50W, IP66, 50Hz, Ta:45°C, Tc:75°C	
14.		ZESSL045	220-240Vac, 0.20A, 45W, IP66, 50Hz, Ta:45°C, Tc:75°C	
15.		ZESSL036	220-240Vac, 0.16A, 36W, IP66, 50Hz, Ta:45°C, Tc:75°C	
16.		ZESSL030	220-240Vac, 0.13A, 30W, IP66, 50Hz, Ta:45°C, Tc:75°C	
17.		ZESSL020	220-240Vac, 0.09A, 20W, IP66, 50Hz, Ta:45°C, Tc:75°C	
18.		ZESSL018	220-240Vac, 0.08A, 18W, IP66, 50Hz, Ta:45°C, Tc:75°C	
19.		ZESSL015	220-240Vac, 0.06A, 15W, IP66, 50Hz, Ta:45°C, Tc:75°C	

Supply connections: The product connected to AC Supply.

Technical considerations: Same class of construction of luminaire
Same input rated voltage
Same material for enclosure.
Same ambient temperature rating
Same IP Category

Report Summary: All applicable tests according to the reference standards (s) have been considered

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
4 (1)	GENERAL TEST REQUIREMENTS		See below	P
4 (1.1)	Information for luminaire design considered.....		Standard Yes ☒ No ☐	--
4 (1.3)	More sections applicable.....		Yes ☐ No ☒	--

Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
5 (2)	CLASSIFICATION OF LUMINAIRES		See below	P
5 (2.2)	Type of protection		Class- I	--
5 (2.3)	Degree of protection.....		IP66	--
5 (2.4)	Luminaire suitable for mounting on normally flammable surfaces.....		Yes ☐ No ☒	--
	Luminaire suitable for mounting on non-combustible materials.....		Yes ☒ No ☐	--
5 (2.5)	Luminaire for normal use		Yes ☒ No ☐	--
	Luminaire for rough service		Yes ☐ No ☒	--

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
6 (3)	MARKING		See below	P
6 (3.2)	Mandatory markings*	EL 2400-00	Complies	P
	Position of the marking*	EL 2400-01	Marked on outer surface	P
	Format of symbols/text	EL 2400-02	Complies	P
6 (3.3)	Additional information*	EL 2400-03	See below	P
	Language of instructions*	EL 2400-04	English	P
6 (3.3.1)	Combination luminaires*	EL 2400-05	Not a combination luminaire	N/A
6 (3.3.2)	Nominal frequency in Hz*	EL 2400-06	50Hz	P
6 (3.3.3)	Operating temperature*	EL 2400-07	Marked	P
6 (3.3.4)	Symbol or warning notice*	EL 2400-08	Marked	P
6 (3.3.5)	Wiring diagram*	EL 2400-09	Marked	P
6 (3.3.6)	Special conditions*	EL 2400-10		N/A
6 (3.3.7)	Metal halide lamp luminaire – warning*	EL 2400-11	Not a metal halide luminaire	N/A
6 (3.3.8)	Limitation for semi-luminaires*	EL 2400-12	Not a semi-luminaire	N/A
6 (3.3.9)	Power factor and supply current*	EL 2400-13	0.9 & 0.92A	P
6 (3.3.10)	Suitability for use indoors*	EL 2400-14		N/A
6 (3.3.11)	Luminaires with remote control*	EL 2400-15	Not a remote control luminaire	N/A
6 (3.3.12)	Clip-mounted luminaire – warning*	EL 2400-16	Not a clip mounted luminaire	N/A
6 (3.3.13)	Specifications of protective shields*	EL 2400-17	No protective shields used	N/A
6 (3.3.14)	Symbol for nature of supply*	EL 2400-18		N/A
6 (3.3.15)	Rated current of socket outlet*	EL 2400-19	No socket outlet used	N/A
6 (3.3.16)	Rough service luminaire*	EL 2400-20	Not a rough service luminaire	N/A
6 (3.3.17)	Mounting instruction for type X, type Y and type Z attachments*	EL 2400-21	Type-Y attachment	P
6 (3.3.18)	Non-ordinary luminaires with PVC cable*	EL 2400-22	Ordinary luminaire	N/A
6 (3.4)	Test with water	EL 2400-23	Complies	P
	Test with hexane	EL 2400-24	Complies	P
	Legible after test	EL 2400-25	Marking is legible after test	P

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	Label attached	EL 2400-26	Complies	P
6 (3.5.1)	Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986*	EL 2400-27		N/A

Total number of Requirements to be observed / inspected = 23
Total No. of Applicable Requirement = 10
No. of Requirements for which the sample passed = 10

Total number of tests to be conducted = 05
Total No. of Applicable Tests = 05
No. of tests for which the sample passed = 05

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

Authorised Signatory

(Tested by/ Approving Authority)

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4)	CONSTRUCTION		See below	P
7 (4.2)	Components replaceable without difficulty*	EL 2401-00	No replaceable component used	N/A
7 (4.3)	Wireways smooth and free from sharp edges*	EL 2401-01	Wire ways are smooth and free from sharp edges	P
7 (4.4)	Lampholders		No lamp holder used	N/A
7 (4.4.1)	Integral lampholder*	EL 2401-02		N/A
7 (4.4.2)	Wiring connection*	EL 2401-03		N/A
7 (4.4.3)	Lampholder for end-to-end mounting*	EL 2401-04		N/A
7 (4.4.4)	Positioning			N/A
	- pressure test (N)	EL 2401-05		N/A
	After test the lampholder comply with relevant standard sheets and show no damage	EL 2401-06		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation	EL 2401-07		N/A
	- bending test (N)	EL 2401-08		N/A
	After test the lampholder have not moved from its position and show no permanent deformation	EL 2401-09		N/A
7 (4.4.5)	Peak pulse voltage	EL 2401-10		N/A
7 (4.4.6)	Centre contact*	EL 2401-11		N/A
7 (4.4.7)	Parts in rough service luminaires resistant to tracking	EL 2401-12		N/A
7 (4.4.8)	Lamp connectors*	EL 2401-13		N/A
7 (4.5)	Starter holders		No starter holders used	N/A
	Starter holder in luminaires other than class II*	EL 2401-14		N/A
	Starter holder class II construction*	EL 2401-15		N/A
	Starter can be touched with the standard test finger in class II luminaires*	EL 2401-16		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.6)	Terminal blocks		Certified screw terminal used	P
	Tails	EL 2401-17		P
	Unsecured blocks	EL 2401-18		N/A
7 (4.7)	Terminals and supply connections		Adequate protection provided	P
7 (4.7.1)	Contact to metal parts*	EL 2401-19	Complies	P
7 (4.7.2)	Test 8 mm live conductor	EL 2401-20	Complies	P
	Test 8 mm earth conductor	EL 2401-21	See below	P
7 (4.7.3)	Terminals for supply conductors	EL 2401-22	Complies	P
7 (4.7.4)	Terminals other than supply connection*	EL 2401-23		N/A
7 (4.7.5)	Heat-resistant wiring/sleeves*	EL 2401-24	Complies	P
7 (4.7.6)	Multi-pole plug*	EL 2401-25	No multi-pole plug used	N/A
7 (4.8)	Switches		No switches used	N/A
	- adequate rating*	EL 2401-26		N/A
	- adequate fixing*	EL 2401-27		N/A
	- polarized supply*	EL 2401-28		N/A
7 (4.9)	Insulating lining and sleeves		See below	P
7 (4.9.1)	Retainment*	EL 2401-29	Complies	P
	Method of fixing.....	EL 2401-30	Adequate method	P
7 (4.9.2)	Insulated linings and sleeves:		See below	P
	Resistant to a temperature > 20 °C to the wire temperature or	EL 2401-31	Complies	P
	a) & c) Insulation resistance and electric strength	EL 2401-32		N/A
	b) Ageing test. Temperature (°C).....	EL 2401-33		N/A
7 (4.10)	Double or reinforced insulation		Class I Luminaires	N/A
7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation*	EL 2401-34		N/A
	Safe installation fixed luminaires*	EL 2401-35	For Planet Electro Labs	N/A
	Capacitors and switches*	EL 2401-36		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	Interference suppression capacitors according to ISQC 302400*	EL 2401-37		N/A
7 (4.10.2)	Assembly gaps:		No such assembly gaps	N/A
	- not coincidental*	EL 2401-38		N/A
	- no straight access with test probe	EL 2401-39		N/A
7 (4.10.3)	Retention of insulation:			N/A
	- fixed*	EL 2401-40		N/A
	- unable to be replaced; luminaire inoperative*	EL 2401-41		N/A
	- sleeves retained in position*	EL 2401-42		N/A
	- tube of insulating material*	EL 2401-43		N/A
7 (4.11)	Electrical connections and current-carrying parts		See below	P
7 (4.11.1)	Contact pressure*	EL 2401-44	No contact pressure transmitted through insulated material	P
7 (4.11.2)	Screws:		See below	P
	- self-tapping screws*	EL 2401-45	Complies	P
	- thread-cutting screws*	EL 2401-46		N/A
7 (4.11.3)	Screw locking:			N/A
	- spring washer*	EL 2401-47		N/A
	- rivets*	EL 2401-48		N/A
7 (4.11.4)	Material of current-carrying parts*	EL 2401-49	Copper wire used	P
7 (4.11.5)	No contact to wood or mounting surface*	EL 2401-50	Complies	P
7 (4.11.6)	Electro-mechanical contact systems	EL 2401-51	No electro-mechanical contact system	N/A
7 (4.12)	Screws and connections (mechanical) and glands		See below	P
7 (4.12.1)	Screws not made of soft metal*	EL 2401-52	Complies	P
	Screws of insulating material*	EL 2401-53		N/A
	Torque test: torque (Nm); part.....:	EL 2401-54	0.80Nm applied(Withstood) on Enclosure metal Screws	P
	Torque test: torque (Nm); part.....:	EL 2401-55	2.00Nm applied to mounting screws	P
	Torque test: torque (Nm); part.....:	EL 2401-56	For Planet Electro Labs	N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.12.2)	Screws with diameter < 3 mm screwed into metal*	EL 2401-57		N/A
7 (4.12.4)	Locked connections:		No locked connection	N/A
	- fixed arms; torque (Nm).....:	EL 2401-58		N/A
	- lampholder; torque (Nm).....:	EL 2401-59		N/A
	- push-button switches; torque 0,8 Nm....:	EL 2401-60		N/A
7 (4.12.5)	Screwed glands; force (Nm).....:	EL 2401-61		N/A
7 (4.13)	Mechanical strength		See below	P
7 (4.13.1)	Impact tests:		See below	P
	-fragile parts; energy (Nm).....:	EL 2401-62	0.5Nm applied, No damage observed	P
	-other parts; energy (Nm).....:	EL 2401-63	0.7Nm applied, No damage observed	P
	1) live parts	EL 2401-64	No live part become accessible	P
	2) linings	EL 2401-65	No such linings	N/A
	3) protection	EL 2401-66	Adequate protection provided	P
	4) covers	EL 2401-67	Complies	P
7 (4.13.3)	Straight test finger	EL 2401-68	30N force applied, No damage, No hazards	P
7 (4.13.4)	Rough service luminaires		Not a rough service luminaires	N/A
	- IP54 or higher	EL 2401-69		N/A
	a) fixed	EL 2401-70		N/A
	b) hand-held	EL 2401-71		N/A
	c) delivered with a stand	EL 2401-72		N/A
	d) for temporary installations and suitable for mounting on a stand	EL 2401-73		N/A
7 (4.13.6)	Tumbling barrel	EL 2401-74		N/A
7 (4.14)	Suspensions, fixings and means of adjusting			N/A
7 (4.14.1)	Mechanical load:			N/A
	A) four times the weight	EL 2401-75		N/A
	B) torque 2,5 Nm	EL 2401-76		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	C) bracket arm; bending moment (Nm).....:	EL 2401-77		N/A
	D) load track-mounted luminaires	EL 2401-78		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	EL 2401-79		N/A
	Metal rod. diameter (mm)	EL 2401-80		N/A
7 (4.14.2)	Load to flexible cables			N/A
	Mass (kg)	EL 2401-81		N/A
	Stress in conductors (N/mm ²)	EL 2401-82		N/A
	Mass (kg) of semi-luminaire	EL 2401-83		N/A
	Bending moment (Nm) of semi-luminaire	EL 2401-84		N/A
7 (4.14.3)	Adjusting devices:			N/A
	- flexing test; number of cycles.....:	EL 2401-85		N/A
	-strands broken.....:	EL 2401-86		N/A
	- electric strength test afterwards	EL 2401-87		N/A
7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors*	EL 2401-88		N/A
7 (4.14.5)	Guide pulleys*	EL 2401-89		N/A
7 (4.14.6)	Strain on socket-outlets*	EL 2401-90		N/A
7 (4.15)	Flammable materials		See below	P
	-glow-wire test 650°C.....:	EL 2401-91	Withstood	P
	- spacing ≥30 mm	EL 2401-92		N/A
	- screen withstanding test of 13.3.1	EL 2401-93		N/A
	- screen dimensions	EL 2401-94		N/A
	- no fiercely burning material	EL 2401-95	Complies	P
	- thermal protection	EL 2401-96		N/A
	- electronic circuits exempted	EL 2401-97		N/A
	Luminaires made of thermoplastic material with lamp control gear			N/A
	a) construction*	EL 2401-98		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	b) temperature sensing control	EL 2401-99		N/A
	c) surface temperature	EL 2401-100		N/A
7 (4.16)	Luminaires marked with  symbol		No such symbol marked	N/A
	No lamp control gear.....:	EL 2401-101		N/A
	Lamp control gear spacing:			N/A
	- spacing 10 mm	EL 2401-102		N/A
	- spacing 35 mm	EL 2401-103		N/A
7 (4.16.2)	Thermal protection:			N/A
	- in lamp control gear	EL 2401-104		N/A
	- external	EL 2401-105		N/A
	- fixed position	EL 2401-106		N/A
	- temperature marked lamp control gear	EL 2401-107		N/A
7 (4.16.3)	Design to satisfy the test of 12.6	EL 2401-108		N/A
7 (4.17)	Drain holes		No drain holes	N/A
	Clearance at least 5 mm	EL2401-109		N/A
7 (4.18)	Resistance to corrosion		See below	P
7 (4.18.1)	- rust-resistance	EL 2401-110	No rusting observed	P
7 (4.18.2)	- season cracking in copper	EL 2401-111	No copper	N/A
7 (4.18.3)	- corrosion of aluminium	EL 2401-112	No corrosion observed	P
7 (4.19)	Igniters compatible with ballast*	EL 2401-113	No igniters used	N/A
7 (4.20)	Rough service vibration	EL 2401-114	Not a rough service luminaires	N/A
7 (4.21)	Protective shield			N/A
7 (4.21.1)	Shield fitted if tungsten halogen lamps	EL 2401-115		N/A
7 (4.21.2)	Particles from a shattering lamp not impair safety	EL 2401-116		N/A
7 (4.21.3)	No direct path	EL 2401-117		N/A
7 (4.21.4)	Impact test on shield	EL 2401-118		N/A
	Glow-wire test on lamp compartment.....:	EL 2401-119		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.22)	Attachments to lamps not cause overheating or damage*	EL 2401-120		N/A
7 (4.23)	Semi-luminaires comply Class II*	EL 2401-121		N/A
7 (4.24)	UV Radiation			N/A
	UV radiation for metal halide lamps (Annex P)	EL 2401-122		N/A
7 (4.25)	Mechanical hazard		See below	P
	No sharp point or edges*	EL 2401-123	Complies	P
7 (4.26)	Short-circuit protection			N/A
7 (4.26.1)	Adequate means of uninsulated accessible SELV parts	EL 2401-124		N/A
7 (4.26.2)	Short-circuit test	EL 2401-125		N/A
7 (4.26.3)	Test chain according to Fig. 29	EL 2401-126		N/A
7.1	IP rating for column integrated luminaire			N/A
7.2	Luminaire for suspension on span wires			N/A
7.3	Static Load test		Complies	P
7.4	For Adjustable lampholder and optical parts			N/A
7.5	Glass shatter test		Complies	P
7.6	The connection compartment of column integrated luminaires			N/A
7.7	Load calculation			N/A
7.8	Impact energy test of 5 Nm			N/A
7	Cable entry for column integrated luminaires			N/A

*Total number of Requirements to be observed / inspected = 45
Total No. of Applicable Requirement = 08
No. of Requirements for which the sample passed = 08

Total number of tests to be conducted = 82
Total No. of Applicable Tests = 17
No. of tests for which the sample passed = 17

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
8 (11)	CREEPAGE DISTANCES AND CLEARANCES		See below	P
8 (11.2)	Working voltage (V).....	EL 2402-00	240VAC	P
	Voltage form.....	EL 2402-01	Sinusoidal[√] Non-sinusoidal []	P
	PTI.....	EL 2402-02	< 600 [√] >600 []	P
	Impulse withstand category (Normal category II) (Category III Annex U)	EL 2402-03	Category II [√] Category III []	P
	Rated pulse voltage (kV).....	EL 2402-04	No ignitors used	N/A
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm).....	EL 2402-05	Cr: 3.75mm (Limit:3.2mm) Cl: 3.75mm (Limit: 3.0mm)	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm).....	EL 2402-06		N/A
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm).....	EL 2402-07		N/A
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm).....	EL 2402-08		N/A
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm).....	EL 2402-09		N/A

*Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 10
Total No. of Applicable Tests = 05
No. of tests for which the sample passed = 05

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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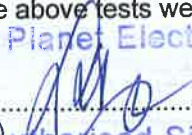
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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
9 (7)	PROVISION FOR EARTHING			P
9 (7.2.1 + 7.2.3)	Accessible metal parts	EL 2403-00	Metals parts permanently and reliably connected to the earthing terminal	P
	Metal parts in contact with supporting surface*	EL 2403-01	Complies	P
	Resistance < 0,5 Ω	EL 2403-02	Earthing resistance 0.21 Ω	P
	Self-tapping screws used*	EL 2403-03	Complies	P
	Thread-forming screws*	EL 2403-04		N/A
	Thread-forming screw used in a groove*	EL 2403-05		N/A
	Earth makes contact first*	EL 2403-06	Complies	P
9 (7.2.2+7.2.3)	Earth continuity in joints, etc. *	EL 2403-07	Complies	P
9 (7.2.4)	Compliance with 4.7.3	EL 2403-08	Complies with 4.7.3	P
	Connections adequately locked	EL 2403-09	Connections are adequately locked	P
9 (7.2.5)	Earth terminal integral part of connector socket*	EL 2403-10		N/A
9 (7.2.6)	Earth terminal adjacent to mains terminals*	EL 2403-11	Complies	P
9 (7.2.7)	Electrolytic corrosion of the earth terminal*	EL 2403-12	No Electrolytic corrosion of the earth terminal	P
9 (7.2.8)	Material of earth terminal*	EL 2403-13	Adequate material used	P
	Contact surface bare metal*	EL 2403-14		P
9 (7.2.10)	Class II luminaire for looping-in*	EL 2403-15	Class I luminaire	N/A
	Double or reinforced insulation to functional earth*	EL 2403-16		N/A
9 (7.2.11)	Earthing core coloured green-yellow*	EL 2403-17	Complies	P
	Length of earth conductor*	EL 2403-18	Complies	P

*Total number of Requirements to be observed / inspected = 15
Total No. of Applicable Requirement = 10
No. of Requirements for which the sample passed = 10

Total number of tests to be conducted = 04
Total No. of Applicable Tests = 04
No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
10 (14)	SCREW TERMINALS		Certified screw terminal used	P
	Separately approved; component list.....	EL 2404-00	See annex-1	P
	Part of the luminaire	EL 2404-01	Supply connection	P

Total number of Requirements to be observed / inspected = 00
 Total No. of Applicable Requirement = 00
 No. of Requirements for which the sample passed = N/A
 Total number of tests to be conducted = 02
 Total No. of Applicable Tests = 02
 No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS			N/A
	Separately approved; component list.....	EL 2404-02		N/A
	Part of the luminaire	EL 2404-03		N/A

* Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 02
Total No. of Applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

Authorised Signatory

.....
(Tested by/ Approving Authority)

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5)	EXTERNAL AND INTERNAL WIRING		Complies	P
11 (5.2)	Supply connection and external wiring		See below	P
11 (5.2.1)	Means of connection*	EL 2405-00	Non-Detachable flexible cord used	P
11 (5.2.2)	Type of cable*	EL 2405-01	Flexible cord used	P
	Nominal cross-sectional area (mm ²)*...	EL 2405-02	3x1.5mm ²	P
	Cables equal to IS 694 and IS 9968 (Part 1) *	EL 2405-03	Complies with IS 9968: PART 1: 1988	P
	Luminaire provided with socket-outlet*	EL 2405-04	No socket outlet used	N/A
11 (5.2.3)	Type of attachment, X, Y or Z*	EL 2405-05	Type-Y attachment	P
11 (5.2.5)	Type Z not connected to screws	EL 2405-06		N/A
11 (5.2.6)	Cable entries:		See below	P
	- suitable for introduction	EL 2405-07	Complies	P
	- adequate degree of protection	EL 2405-08	Adequate degree of protection provided	P
11 (5.2.7)	Cable entries through rigid material have rounded edges*	EL 2405-09	Complies	P
11 (5.2.8)	Insulating bushing		No insulating bushing	N/A
	- suitably fixed*	EL 2405-10		N/A
	- material in bushings*	EL 2405-11		N/A
	- material not likely to deteriorate*	EL 2405-12		N/A
	- tubes or guards made of insulating material*	EL 2405-13		N/A
11 (5.2.9)	Locking of screwed bushings*	EL 2405-14		N/A
11 (5.2.10)	Cord anchorage:		Complies	P
	- covering protected from abrasion	EL 2405-15	Complies	P
	- clear how to be effective	EL 2405-16	Complies	P
	- no mechanical or thermal stress	EL 2405-17	Complies	P
	- no tying of cables into knots etc.	EL 2405-18	Complies	P
	- insulating material or lining	EL 2405-19	Complies	P

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5.2.10.1)	Cord anchorage for type X attachment:		Type-Y attachment	N/A
	a) at least one part fixed	EL 2405-20		N/A
	b) types of cable	EL 2405-21		N/A
	c) no damaging of the cable	EL 2405-22		N/A
	d) whole cable can be mounted	EL 2405-23		N/A
	e) no touching of clamping screws	EL 2405-24		N/A
	f) metal screw not directly on cable	EL 2405-25		N/A
	g) replacement without special tool	EL 2405-26		N/A
	Glands not used as anchorage	EL 2405-27		N/A
	Labyrinth type anchorages	EL 2405-28		N/A
11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	EL 2405-29	Type-Y attachment (Complies)	P
11(5.2.10.3)	Tests:		See below	P
	- impossible to push cable; unsafe	EL 2405-30	Not possible to push cable inside	P
	- pull test: 25 times; pull (N)	EL 2405-31	Tested at 60N	P
	- torque test: torque (Nm).....	EL 2405-32	0.35Nm	P
	- displacement ≤ 2 mm	EL 2405-33	Displacement: 1.14mm	P
	- no movement of conductors	EL 2405-34	Complies	P
	- no damage of cable or cord	EL 2405-35	Complies	P
11 (5.2.11)	External wiring passing into luminaire	EL 2405-36	Complies	P
11 (5.2.12)	Looping-in terminals*	EL 2405-37		N/A
11 (5.2.13)	Wire ends not tinned*	EL 2405-38	Complies	P
	Wire ends tinned: no cold flow*	EL 2405-39		N/A
11 (5.2.14)	Mains plug same protection*	EL 2405-40	No main plug used	N/A
	Class III luminaire plug*	EL 2405-41	Class- I luminaries	N/A
11 (5.2.15)	Colour coded red and black*	EL 2405-42		N/A
11 (5.2.16)	Appliance inlets *	EL 2405-43		N/A
	Appliance couplers *	EL 2405-44		N/A
11 (5.3)	Internal wiring		See below	P

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5.3.1)	Internal wiring of suitable size and type*	EL 2405-45	Internal wiring of suitable sizes used	P
	Through wiring			N/A
	- not delivered/ mounting instruction	EL 2405-46		N/A
	- factory assembled	EL 2405-47		N/A
	- socket outlet loaded (A)	EL 2405-48		N/A
	- temperatures	EL 2405-49		N/A
	Green-yellow for earth only	EL 2405-50	Complies	P
11 (5.3.1.1)	Internal wiring connected directly to fixed wiring*			N/A
	Cross-sectional area (mm ²).....	EL 2405-51	Internal wiring not directly connected fixed wiring	N/A
	Insulation thickness	EL 2405-52		N/A
	Extra insulation added where necessary	EL 2405-53		N/A
11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device*			N/A
	Adequate cross-sectional area and insulation thickness	EL 2405-54	No current-limiting device used	N/A
11 (5.3.1.3)	Double or reinforced insulation for class II*	EL 2405-55	Class- I	N/A
11 (5.3.1.4)	Conductors without insulation*	EL 2405-56		N/A
11 (5.3.1.5)	SELV current-carrying parts*	EL 2405-57		N/A
11 (5.3.1.6)	Insulation thickness other than PVC or rubber*	EL 2405-58		N/A
11 (5.3.2)	Sharp edges etc.*	EL 2405-59	No sharp edges	P
	No moving parts of switches etc.*	EL 2405-60		N/A
	Joints, raising/lowering devices*	EL 2405-61		N/A
	Telescopic tubes etc.*	EL 2405-62		N/A
	No twisting over 360°	EL 2405-63	Complies	P
11 (5.3.3)	Insulating bushings:		No such bushing used	N/A
	- suitable fixed*	EL 2405-64		N/A
	- material in bushings*	EL 2405-65		N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	- material not likely to deteriorate*	EL 2405-66		N/A
	- cables with protective sheath*	EL 2405-67		N/A
11 (5.3.4)	Joints and junctions effectively insulated*	EL 2405-68		N/A
11 (5.3.5)	Strain on internal wiring*	EL 2405-69	No strain on internal wiring	P
11 (5.3.6)	Wire carriers*	EL 2405-70		N/A
11 (5.3.7)	Wire ends not tinned*	EL 2405-71	Complies	P
	Wire ends tinned: no cold flow*	EL 2405-72		N/A
11.1	Cord anchorage test for street light, Pull of 60N, Torque of 0.25Nm		Complies	P

*Total number of Requirements to be observed / inspected = 38
Total No. of Applicable Requirement = 12
No. of Requirements for which the sample passed = 12

Total number of tests to be conducted = 35
Total No. of Applicable Tests = 17
No. of tests for which the sample passed = 17

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		See below	P
12 (8.2.1)	Live parts not accessible*	EL 2406-00	Complies	P
	Protection shall be maintained after removal of all parts*	EL 2406-01		N/A
	Supply conductors held by screw less terminals with push-button*	EL 2406-02		N/A
	Tubular filament lamps having a cap/base at each end*	EL 2406-03		N/A
	Insulating properties of lacquer, enamel, paper and similar materials*	EL 2406-04	Complies	P
	Luminaires with ignitors	EL 2406-05		N/A
12(8.2.2)	Portable luminaire adjusted in most unfavourable position*	EL 2406-06		N/A
12 (8.2.3.a)	Class II luminaire:Class- I luminaires			N/A
	- basic insulated metal parts not accessible during starter or lamp replacement*	EL 2406-07		N/A
	- glass protective shields not used as supplementary insulation*	EL 2406-08		N/A
12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed*	EL 2406-09		N/A
12 (8.2.4)	Portable luminaire have protection independent of supporting surface*	EL 2406-10		N/A
12 (8.2.5)	Compliance with the standard test finger or relevant probe	EL 2406-11	Complies	P
12 (8.2.6)	Covers reliably secured*	EL 2406-12	Complies	P
12 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu F$	EL 2406-13	Capacitance < 0.5 μF	N/A
	Portable plug connected luminaire with capacitor	EL 2406-14		N/A
	Other plug connected luminaire with capacitor	EL 2406-15		N/A
	Discharge device on or within capacitor	EL 2406-16		N/A
	Discharge device mounted separately	EL 2406-17		N/A

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*Total number of Requirements to be observed / inspected = 11
Total No. of Applicable Requirement = 03
No. of Requirements for which the sample passed = 03

Total number of tests to be conducted = 07
Total No. of Applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

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(Tested by/ Approving Authority)

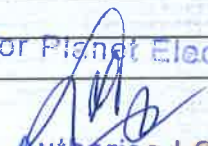
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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
13 (12)	ENDURANCE TEST AND THERMAL TEST		See below	P
13 (12.3)	Endurance test:	EL 2407-00	LED STREET LIGHT (Led Luminaires For Road And Street Lighting)	P
	- mounting-position.....		Normal mounting position	P
	- test temperature (°C)		55°C	P
	- total duration (h).....		240 hours	P
	- supply voltage: Un factor; calculated voltage (V).....		264VAC	P
	- lamp used.....		LED module	P
13 (12.3.2)	After endurance test:	EL 2407-01	See below	P
	- no part unserviceable*		Complies	P
	- plastic ES lampholder not deformed*			N/A
	- luminaire not unsafe*		Complies	P
	- no damage to track system*			N/A
	- marking legible*		Complies	P
	- no cracks, deformation etc.*		Complies	P
13 (12.4)	Thermal test (normal operation)	EL 2407-02	(see Annex 2)	P
13 (12.5)	Thermal test (abnormal operation)	EL 2407-03		N/A
13 (12.6)	Thermal test (failed lamp control gear condition):			N/A
13 (12.6.1)	Without Thermal Cut-Outs	EL 2407-04		N/A
	- case of abnormal conditions			N/A
	- electronic lamp control gear			N/A
	- measured winding temperature (°C): at 1,1 Un			N/A
	- measured mounting surface temperature (°C) at 1,1 Un.....			N/A
	- calculated mounting surface temperature (°C)			N/A
	- track-mounted luminaires			N/A
13 (12.6.2)	Temperature sensing control	EL 2407-05		N/A
	- case of abnormal conditions			N/A
	- thermal link			N/A
	- manual reset cut-out			N/A
	- auto reset cut-out			N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	- measured mounting surface temperature (°C)			N/A
	- track-mounted luminaires			N/A
13 (12.7)	Thermal test (fault conditions in lamp control gear or electronic devices in plastic luminaires):			N/A
13 (12.7.1)	Luminaire without temperature sensing control	EL 2407-06		N/A
	- case of abnormal conditions			N/A
	- measured winding temperature (°C): at 1,1 Un			N/A
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un			N/A
	- calculated temperature of fixing point/exposed part (°C)			N/A
13 (12.7.2)	Luminaire with temperature sensing control	EL 2407-07		N/A
	- thermal link		Yes [] No [✓]	N/A
	- manual reset cut-out		Yes [] No [✓]	N/A
	- auto reset cut-out		Yes [] No [✓]	N/A
	- case of abnormal conditions			N/A
	- highest measured temperature of fixing point/ exposed part (°C):			N/A

Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 08
Total No. of Applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
14 (9)	RESISTANCE TO DUST AND MOISTURE			P
14 (-)	If IP > IP 20 the order of tests as specified in clause 9.2	EL 2408-00	IP66	P
14 (9.2)	Tests for ingress of dust, solid objects and moisture:	EL 2408-01	See below	P
	- classification according to IP		IP66	P
	- mounting position during test		Normal operating position	P
	- fixing screws tightened; torque (Nm)		0.80Nm applied on enclosure fixing screws (Withstood)	P
	- tests according to clauses		Cl. 9.2.2 & 9.2.7	P
	- electric strength test afterwards		Withstood	P
	a) no deposit in dust-proof luminaire	EL 2408-02		N/A
	b) no talcum in dust-tight luminaire	EL 2408-03	Complies	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	EL 2408-04	Complies	P
	d) i) For luminaires without drain holes – no water entry	EL 2408-05	Complies	P
	d) ii) For luminaires with drain holes – no hazardous water entry	EL 2408-06		N/A
	e) no water in watertight luminaire	EL 2408-07		N/A
	f) no contact with live parts (IP 2X)	EL 2408-08		N/A
	g) no entry into enclosure (IP 3X and IP4X)	EL 2408-09		N/A
	h) no contact with live parts (IP3X and IP4X)	EL 2408-10		N/A
14 (9.3)	Humidity test 48 h	EL 2408-11	Humidity test carried out at 25°C and 92% RH for 48 hours	P

*Total number of Requirements to be observed / inspected = 00
 Total No. of Applicable Requirement = 00
 No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 12
 Total No. of Applicable Tests = 06
 No. of tests for which the sample passed = 06

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH			P
15 (10.2.1)	Insulation resistance test	EL 2409-00	See below	P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		Complies	P
	Insulation resistance (MΩ)		>200MΩ	P
	SELV	EL 2409-01		N/A
	- between current-carrying parts of different polarity			N/A
	- between current-carrying parts and mounting surface			N/A
	- between current-carrying parts and metal parts of the luminaire			N/A
	Other than SELV	EL 2409-02	See below	P
	- between live parts of different polarity		>200MΩ	P
	- between live parts and mounting surface		>200MΩ	P
	- between live parts and metal parts		>200MΩ	P
	- between live parts of different polarity through action of a switch			N/A
(10.2.2)	Electric strength test	EL 2409-03	See below	P
	Dummy lamp			N/A
	Luminaires with ignitors after 24 h test			N/A
	Luminaires with manual ignitors			N/A
	Test voltage (V)			P
	SELV	EL 2409-04		N/A
	- between current-carrying parts of different polarity			N/A
	- between current-carrying parts and mounting surface			N/A
	- between current-carrying parts and metal parts of the luminaire			N/A

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
	Other than SELV	EL 2409-05	See below	P
	- between live parts of different polarity		Test conducted at 1480V.No flashover or breakdown occurred	P
	-between live parts and mounting surface.....		Test conducted at 1480V.No flashover or breakdown occurred	P
	- between live parts and metal parts		Test conducted at 1480V.No flashover or breakdown occurred	P
	- between live parts of different polarity through action of a switch		No switch provided	N/A
15 (10.3)	Touch current or protective conductor current (mA)	EL 2409-06	0.22mA (Limit: 1.0mA)	P

*Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 07
Total No. of Applicable Tests = 05
No. of tests for which the sample passed = 05

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		See Below	P
16 (13.2.1)	Ball-pressure test	EL 2410-00		N/A
	- part tested; temperature (°C)			N/A
	- part tested; temperature (°C)			N/A
	- part tested; temperature (°C)			N/A
	- part tested; temperature (°C)			N/A
16 (13.3.1)	Needle-flame test (10 s)	EL 2410-01	See Below	P
	- part tested		Certified PCB used (See annex-1)	P
	- part tested; temperature (°C)			P
16 (13.3.2)	Glow-wire test (650°C)	EL 2410-02	See below	P
	- part tested		Thermoplastic Part (Terminal Block) at 650°C	P
	- part tested; temperature (°C)			P
16 (13.4.1)	Tracking test	EL 2410-03	See Below	P
	- part tested		Certified PCB used (See annex-1)	P

*Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04
Total No. of Applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Clause No.	Test / Requirement name	Code	Test result/ observation	Verdict
17	PHOTOMETRIC TESTS			P
	The photometric performance	---	See Below	P
	The general guidance regarding the photometric data to be provided by the manufacturers of luminaires is given in Annex 17	---	Provided by manufacture	P
17.2	Light Controlling Components	---	Complies	P
17.3	Photometric tests	---	Refer Attachment II	P

*Total number of Requirements to be observed / inspected = 00
Total No. of Applicable Requirement = 00
No. of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04
Total No. of Applicable Tests = 04
No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

For Planet Electro Labs

(Tested by/ Approving Authority)

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ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹
LED Package	A	Shenzhen Diranda Optoelectronics Co., Ltd	SMD3030	DC6.5V	EN 62471:2008 (Equivalent to IEC 62471:2006)	Report No. AGC0756117 0202SS01
Alternate	D	Philips Lumileds Lighting Co LLC	LUXEON_3030_2D LED	6.836 V, 0.240 A, 1.641 W	IEC 62471 : 2006	Report No. JM10462
Fusing Resistor	A	Dong Guan DEEHO Electronic Co Ltd	FKN 1W	39Ω, 1W	UL 1412 (No equivalent to IEC standard)	UL E501735
PCB	A	KINGBOARD LAMINATES HOLDINGS LTD	KB-5150	V-0, 130°C	UL 796 (No equivalent to IEC standard)	UL E123995
X- Capacitor	A	DONGGUAN CHENG DONG ELECTRONIC TECHNOLOGY CO LTD	MPX	0.1uF, 275V AC	UL/IEC 60384-14	UL E495826
Y-Capacitor	A	JYA-NAY CO LTD	JY	250Vac, 2.2nF	UL/IEC 60384-14	UL E201384
Varistor	A	LITTELFUSE INC	V420LA10&P(k)	420V~, 85°C	UL1449 (No equivalent to IEC standard)	UL E320116
Supply wire	A	POWERAGE	PVC Insulated Wire/Cable	1100 V	IS 694: 2010	CM/L-8257380
Transformer	C	CRESCENT OPTO ELECTRONICS	ABQ	105V, 700mA	IS 10322 (Part 5/Sec 3): 2012	Tested with appliance
Bobbin	A	CHANG CHUNG PLASTIC CO LTD	T385J	V-0, 150°C	UL 94 (No equivalent to IEC standard)	UL E59481
Magnetic Wire	A	G K WINDING WIRES LTD	GEEKAY 200	200°C	UL 1446 (No equivalent to IEC standard)	UL E205855
Insulation Tape	A	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT-280B	130°C	UL 510 (No equivalent to IEC standard)	UL E165111
Internal Wire	A	POLYCAB INDIA LIMITED	PVC INSULATION	0.5SQMM 1100V	IS694:2010	CM/L NO 2858679

For Planet Electro Labs

Authorised Signatory

TRF No. BIS LUM/PSL IS10322-5-3 V1.0

Terms & Conditions: 1) This report will not be valid for judicial purpose. 2) Total liability of our laboratory is limited to invoice amount.
3) Test reports are valid only for the sample tested in our laboratory. 4) Samples tested are Non-Returnable until specified at time of sample submission.

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LED PCB	A	SHOGINI TECHNOARTS PVT LTD	MC1	V-0, 130 °C	UL 796 (No Equipment IEC Standard)	UL E207626
Supply Wire	A	U.K.B. ELECTRONICS PVT LTD, (UNIT-II)	Rubber Cable	3x1.5mm ²	IS 9968: PART 1: 1988	CML 8700008917
Terminal Block	A	ANYTEK TECHNOLOGY CORP	TCA(@1)	250V, 16A	UL 1059 (No Equipment IEC Standard)	UL E202113

Supplementary information:

¹ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

For Planet Electro Labs

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ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference	ZESSL200	--
	Lamp used.....	LED Module	--
	Lamp control gear used	used	--
	Mounting position of luminaire	Normal operating position	--
	Supply wattage (W).....	200.36W	--
	Supply current (A)	0.92A	--
	Calculated power factor	0.9	--
	Table: measured temperatures corrected for ta = :	45°C	--
	- abnormal operating mode		--
	- test 1: rated voltage	240VAC	--
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	254.4VAC	--
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage		--
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage		--

Temperature measurements, (°C)

Part	Clause 12.4 – normal				Clause 12.5 – abnormal	
	test 1	test 2	test 3	Limit	test 4	Limit
Supply Wire	13	15	-	90	-	-
Metal Enclosure	11	12	-	70	-	-

Supplementary information:

For Planet Electro Labs

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ANNEX 3	Screw terminals (part of the luminaire)	P
(14)	SCREW TERMINALS	Certified screw terminal used P
(14.2)	Type of terminal	P
	Rated current (A)	P
(14.3.2.1)	One or more conductors	P
(14.3.2.2)	Special preparation	P
(14.3.2.3)	Terminal size	P
	Cross-sectional area (mm ²)	P
(14.3.3)	Conductor space (mm)	P
(14.4)	Mechanical tests	P
(14.4.1)	Minimum distance	P
(14.4.2)	Cannot slip out	P
(14.4.3)	Special preparation	P
(14.4.4)	Nominal diameter of thread (metric ISO thread)	P
	External wiring	P
	No soft metal	P
(14.4.5)	Corrosion	P
(14.4.6)	Nominal diameter of thread (mm)	P
	Torque (Nm)	P
(14.4.7)	Between metal surfaces	P
	Lug terminal	P
	Mantle terminal	P
	Pull test, pull (N)	P
(14.4.8)	Without undue damage	P

For Planet Electro Labs

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ANNEX 4	Screwless terminals (part of the luminaire)	N/A
(15)	SCREWLESS TERMINALS	No screw less terminals used
(15.2)	Type of terminal	N/A
	Rated current (A)	N/A
(15.3.1)	Material	N/A
(15.3.2)	Clamping	N/A
(15.3.3)	Stop	N/A
(15.3.4)	Unprepared conductors	N/A
(15.3.5)	Pressure on insulating material	N/A
(15.3.6)	Clear connection method	N/A
(15.3.7)	Clamping independently	N/A
(15.3.8)	Fixed in position	N/A
(15.3.10)	Conductor size	N/A
	Type of conductor	N/A
(15.5.1)	Terminals internal wiring	N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples).....	N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples).....	N/A
	Insertion force not exceeding 50 N	N/A
(15.5.2)	Permanent connections: pull-off test (20 N)	N/A
(15.6)	Electrical tests	N/A
	Voltage drop (mV) after 1 h (4 samples).....	N/A
	Voltage drop of two inseparable joints	N/A
	Number of cycles	N/A
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....	N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....	N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)	N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)	N/A

For Planet Electro Labs

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(15.7)	Terminals external wiring										N/A
	Terminal size and rating										N/A
(15.8.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)										N/A
	Pull test pin or tab terminals (4 samples); pull (N)										N/A
(15.9)	Contact resistance test										N/A
	Voltage drop (mV) after 1 h										N/A
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	
	Voltage drop of two inseparable joints										N/A
	Voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed voltage drop (mV)										---
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	
	Voltage drop after 50th alt. 100th cycle										N/A
	Max. allowed voltage drop (mV)										---
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	
	Continued ageing: voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed voltage drop (mV)										---
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	
	Continued ageing: voltage drop after 50th alt. 100th cycle										N/A
	Max. allowed voltage drop (mV)										---
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	

For Planet Electro Labs

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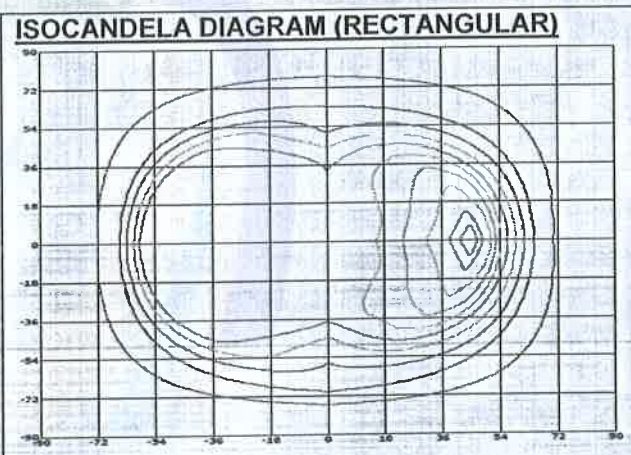
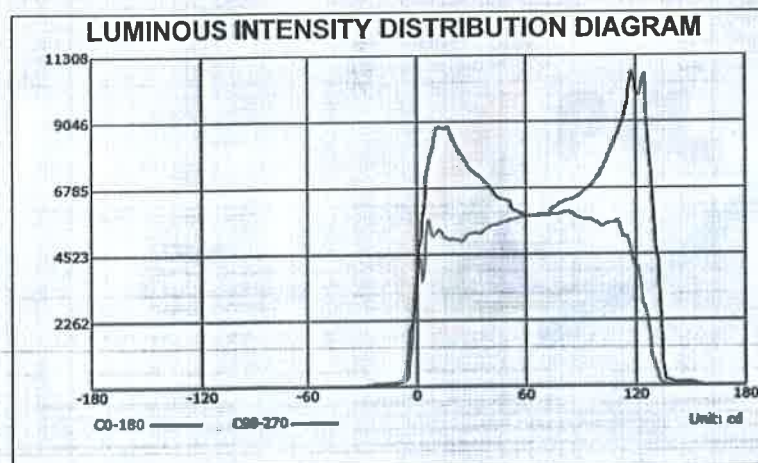
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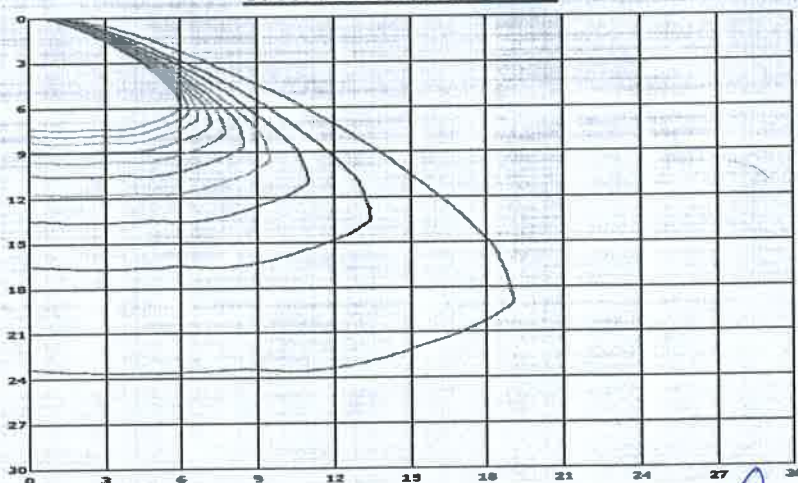
Photometric Measurement

Attachment-I

Parameters	Measured value
Power	199.08W
Luminous Flux	20363.89lm
Peak Intensity Value	10904.22 cd
Beam Angle Value	51.2deg
Efficacy	102.29 lm/W
LED Module temperature	25°C



SPACE ISOLX DIAGRAM



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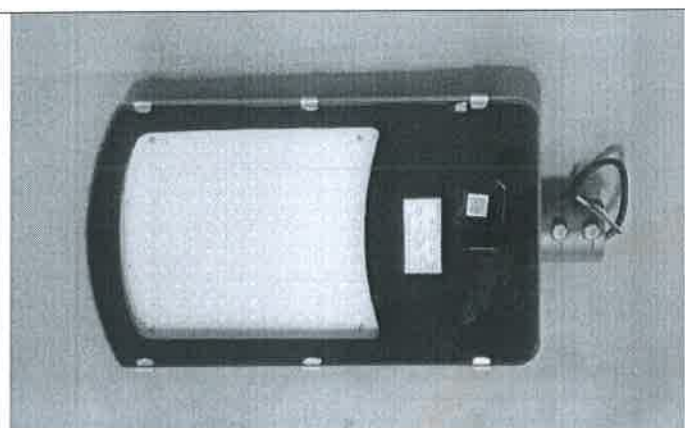
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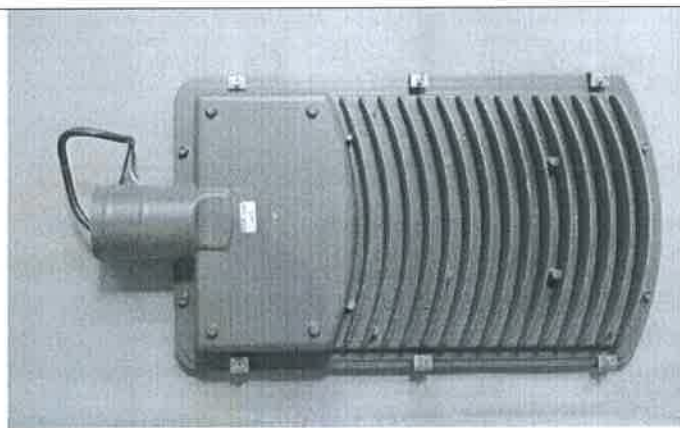
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ATTACHMENT-II

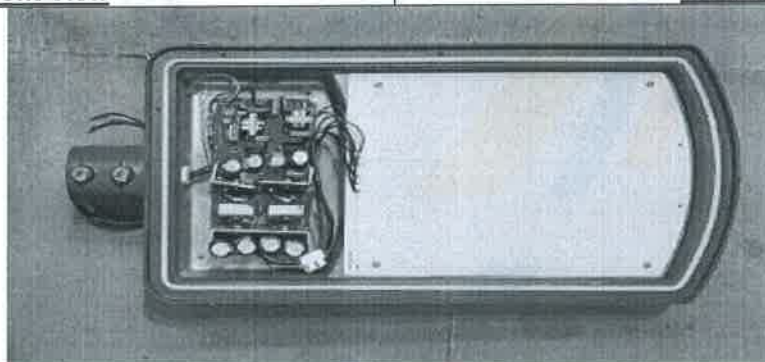
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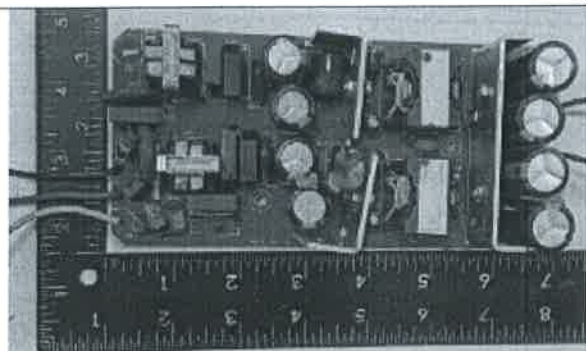
Front View



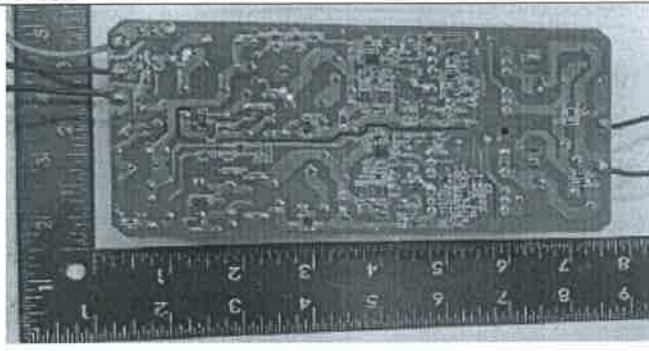
Rear View



Internal View



Front View PCB



Rear View PCB

****END OF TEST REPORT****

For Planet Electro Labs

