ATCC TEST LABS

ULR No. : TL110423000000424

DOC No.	:	ATCC/23120401
Telephone	:	+91 9891606632
FAX	:	-
E-Mail	:	info@atncc.in
BO Code	:	NA

KHASRA NO. 45/6, SITUATED IN THE AREA, VILLAGE PRAHLADPUR BANGER,, North West Delhi, Delhi, 110042, Delhi, North West, Delhi, India - 110042

Test REPORT AS PER : IS 10322 : PART 5 : SEC 3 (2012)

QR Code/Barcode : 172157CRS

REPORT NO : SC23EPI15810_1

DATE : 21 Dec, 2023

PART A. PARTICULARS OF SAMPLE SUBMITTED

a) Customer Name & Address	:	PRIME ELECTRIC CONTROL SYSTEM C 27, WEST PATEL NAGAR, PATEL NAGAR, NEW DELHI, CENTRAL, DELHI 110008, NA, DELHI, India - 110008
b) Nature of sample	:	-
c) Grade/Variety/Type/Class Size etc	:	NA
d) Declare values, if any	:	-
e) Batch No. & Date of Manufacture	:	/
f) Quantity	:	1
g) Date of Receipt	:	04 Dec, 2023
h) BIS Seal	:	Verified by Sample Cell
i) IO's Signature	:	Verified by Sample Cell
j) Any other Information / Expiry Date, If any	:	/
k) Date of Commencement of Testing	:	04 Dec, 2023
l) Date of Completion of Testing	:	21 Dec, 2023
m) Section Code	:	23ED615N
n) Section Report No.	:	23ED615N_1
o) Report Type	:	New
p) Reference Report No.	:	
q) Remarks	:	

Rajiv Jadon
OIC SAMPLE CELL
(Authorized Signatory)
Authorized on: 21 Dec, 2023 16:47 PM

1.

This is a Computer Generated Report.

PART B. SUPPLEMENTARY INFORMATION

1.	Reference to sampling procedure, wherever applicable.	Not Applicable
2.	Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any.	Yes
3.	Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any.	Not Applicable
3.	NABL Report required ?	-

Ravi Kumar Kushwaha
OIC Electrical
(Authorized Signatory)
Authorized on: 21 Dec, 2023 16:24 PM

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Conformity	Result/ Observation
1	17.0	Photometric Test	-	-	-	-	Conforms	In Compliance (Referred test report)
2	16.0	Resistance to Heat , fire and tracking	-	-	-	-	-	Test Not Applicable
3	15.0	Insulation Resistance and Electric Strength	-	-	-	-	Conforms	In Compliance (Referred test report)
4	14.0	Resistance to Dust & Moisture	-	-	-	-	Conforms	In Compliance (Referred test report)
5	13.0	Endurance Tests and Thermal Tests	-	-	-	-	Conforms	In Compliance (Referred test report)
6	12.0	Protection against electric shock	-	-	-	-	Conforms	In Compliance (Referred test report)
7	11.0	External & Internal Wiring	-	-	-	-	Conforms	In Compliance (Referred test report)
8	10.0	Terminals	-	-	-	-	-	Test Not Applicable
9	9.0	Provision for earthing	-	-	-	-	Conforms	In Compliance (Referred test report)
10	8.0	Creepage Distance and Clearances	-	-	-	-	Conforms	In Compliance (Referred test report)
11	7.0	Construction	-	-	-	-	Conforms	In Compliance (Referred test report)
12	6.0	Marking	-	-	-	-	Conforms	In Compliance (Referred test report)
13	5	Classification of Luminaires'	-	-	-	-	Conforms	In Compliance (Referred test report)
14	4	General Test Requireements	-	-	-	-	Conforms	In Compliance (Referred test report)

Ravi Kumar Kushwaha
OIC Electrical
(Authorized Signatory)
Authorized on: 21 Dec, 2023 16:24 PM

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PART D. REMARKS

Ravi Kumar Kushwaha
OIC Electrical
(Authorized Signatory)
Authorized on: 21 Dec, 2023 16:24 PM

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ATCC TEST LABS
Khasra No. 45/6, Prahaladpur Bangar Industrial Area, Rohini, Delhi-110042, INDIA
Phone: +91-9891606632 Email : atcctestlabs@gmail.com
Website : www.atcctestlabs.com
TL-1104

TEST REPORT

SUMMARY OF TEST REPORT

TEST REPORT NO: SC23EPI15810_1 **DATE: 21.12.2023**

ULR:- B-TL110423000000424

(Number of Pages in Test Report: Page No. 1 to 46)

TEST FORMAT AS PER IS 10322 (Part 5/ Sec 3):2012+A1:2015

1. **Name of the Manufacturer:** PRIME ELECTRIC CONTROL SYSTEM
2. **Product: LED Street Lights** (LED Luminaire For Road And Street lighting)
3. **Model:**

Sr. No.	Model name	BRAND / TRADE MARK
1.	PE_18 (Lead Model)	PRIME ELECTRIC
2.	PE_17	
3.	PE_16	
4.	PE_15	
5.	PE_14	
6.	PE_13	
7.	PE_12	
8.	PE_11	
9.	PE_10	
10.	PE_09	
11.	PE_08	
12.	PE_07	
13.	PE_06	
14.	PE_05	
15.	PE_04	
16.	PE_03	
17.	PE_02	
18.	PE_01	

4. **Model differences provided (if applicable): YES**
5. **Model differences verified as per MEITY Guidelines for series formulation: YES**
6. **Test Results: Refer below**

PARTA: GENERAL

SL. NO.	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Marking	6	P
2.	Construction	7	P
3.	Creepage Distances And Clearances	8	P
4.	Provision For Earthing	9	P
5.	Terminals	10	N/A
6.	External And Internal Wiring	11	P
7.	Protection Against Electric Shock	12	P
8.	Endurance Tests And Thermal Tests	13	P
9.	Resistance To Dust And Moisture	14	P

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

TEST REPORT NO: SC23EPI15810_1 **DATE: 21.12.2023**

ULR:- B-TL110423000000424

10.	Insulation Resistance And Electric Strength	15	P
11.	Resistance to Heat, Fire And Tracking	16	N/A
12.	Photometric Tests	17	P

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**: PE_18** only.

CONCLUSION:

1.) Sample meets all relevant requirements of IS 10322 (Part 5/ Sec 3):2012+ A1:2015
2.) ~~Sample fails to meet the following test requirements~~.

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 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.

Date: 21.12.2023 **(Signature of Authorized person with Stamp)**

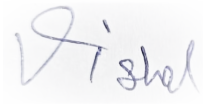
ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

ATCC TEST LABS
Khasra No. 45/6, Prahaladpur Bangar Industrial Area, Rohini, Delhi-110042, INDIA
Phone: +91-9891606632 Email : atcctestlabs@gmail.com
Website : www.atcctestlabs.com
TL-1104

TEST REPORT

Test Report No. SC23EPI15810_1	**Page No. 1 of 46**
ULR:- B-TL110423000000424	**Issue Date:** 21.12.2023

Manufacturer:	**PRIME ELECTRIC CONTROL SYSTEM** C 27, WEST PATEL NAGAR, PATEL NAGAR, NEW DELHI, CENTRAL, DELHI 110008, DELHI 110008.
Test item:	**LED Street Lights** (LED Luminaire For Road And Street lighting)
BIS TEST Request No:	**SC23EPI15810**
Identification:	**See page no. 08-09** *Serial No: Nil*
Receipt/Job No.:	**23120401** *Date of receipt: 04.12.2023*
Testing laboratory and its address:	**ATCC TEST LABS** 45/6, Village Prahaladpur Bangar, Industrial Area, Rohini, Delhi 110042
Test specification:	*IS 10322 (Part 5/ Sec 3):2012 + A1:2015*
Test Result:	*The test item passed the test specification(s).*
Other Aspects:	This report consists of 46 pages and the attachment.

Tested by:	**Approved by / Authorized Signatory:**	**Issued by:**
		
Vishal **(Testing Engineer)**	**Ravi Prakash Kushavaha** **(Technical Manager)**	**Rohit** **(Customer Officer)**
Date: 21.12.2023	**Date: 21.12.2023**	**Date: 21.12.2023**

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 2 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

TEST REPORT
IS 10322 (Part 5/Sec 3): 2012 + A1:2015
Luminaires
Part 5: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number. ..... :	**SC23EPI15810_1**
Date of issue..... :	**21.12.2023**
Total number of pages	**46**
Applicant's name..... :	**PRIME ELECTRIC CONTROL SYSTEM**
Address ..... :	C 27, WEST PATEL NAGAR, PATEL NAGAR, NEW DELHI, CENTRAL, DELHI 110008, DELHI 110008.
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/LAE28_IS10322-5-3_V1.0
Test Report Form(s) Originator :	Bureau of Indian Standards
Master TRF..... :	23/11/2017
Test item description..... :	**LED Street Lights** (LED Luminaire For Road And Street lighting)
Trade Mark.....:	PRIME ELECTRIC
Manufacturer.....:	**PRIME ELECTRIC CONTROL SYSTEM.**
Model/Type Reference.....:	**See page no. 08-09**
Rating.....:	**LEAD MODEL:** 220-240V~, 50Hz, 1.435A, 300W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India **SERIES MODEL:** See copy of marking plate on page no.4-6

Tested by:	Approved by / Authorized Signatory:	Issued by:
Vishal (Testing Engineer)	Ravi Prakash Kushavaha (Technical Manager)	Rohit (Customer Officer)
Date: 21.12.2023	Date: 21.12.2023	Date: 21.12.2023

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 3 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

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 6(3)	28	15	15	11-12
EL 2401	**Construction**	Construction 7 (4)	127	21	21	13-18
EL 2402	**Creepage Distances And Clearances**	Creepage Distances And Clearances 8 (11)	10	07	07	19
EL 2403	**Provision For Earthing**	Provision For Earthing 9 (7)	19	11	11	20
EL 244	**Terminals**	Screw Terminals 10 (14)	02	00	N/A	21
EL 2404	**Terminals**	Screw less Terminals 10 (15)	02	00	N/A	22
EL 2405	**External And Internal Wiring**	External And Internal Wiring 11 (5)	72	26	26	23-26
EL 2406	**Protection Against Electric Shock**	Protection Against Electric Shock 12 (8)	18	03	03	27-28
EL 2407	**Endurance Tests And Thermal Tests**	Endurance Tests And Thermal Tests 13 (12)	08	03	03	29-31
EL 2408	**Resistance To Dust And Moisture**	Resistance To Dust And Moisture 14 (9)	12	06	06	32
EL 2409	**Insulation Resistance And Electric Strength**	Insulation Resistance And Electric Strength 15 (10)	07	05	05	33-34
EL 2410	**Resistance to Heat, Fire And Tracking**	Resistance to Heat, Fire And Tracking 16 (13)	04	00	N/A	35
EL 2411	**Photometric Tests**	Photometric Tests (17)	01	01	01	36

Certificate: It is certified that the above tests were performed and found to be passing in the requirement test

.....
(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

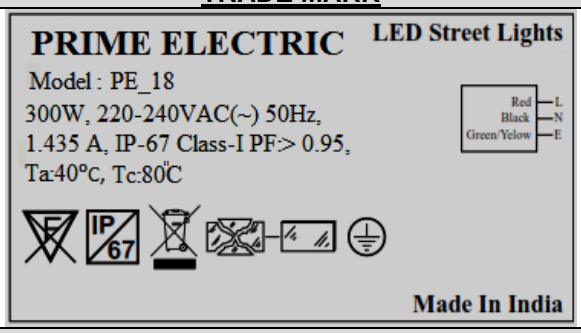
TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 4 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

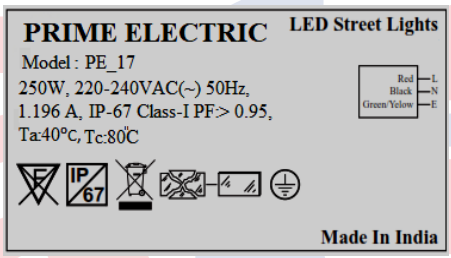
Copy of marking plate:

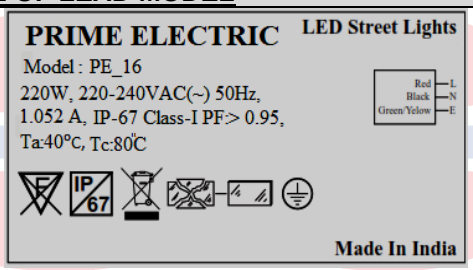
PRIME ELECTRIC

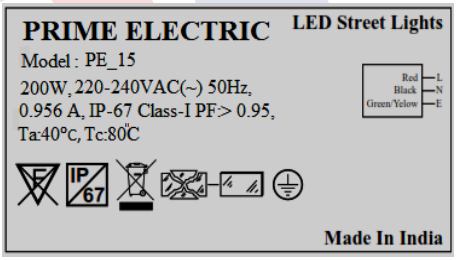
TRADE MARK

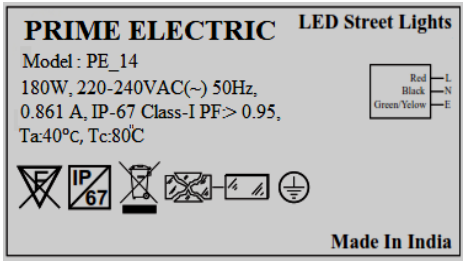


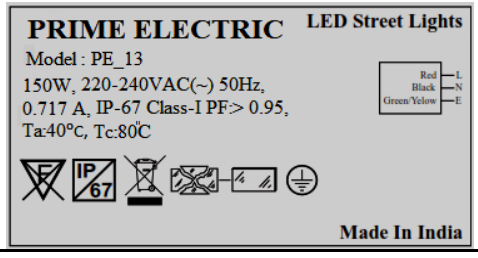
MARKING PLATE OF LEAD MODEL

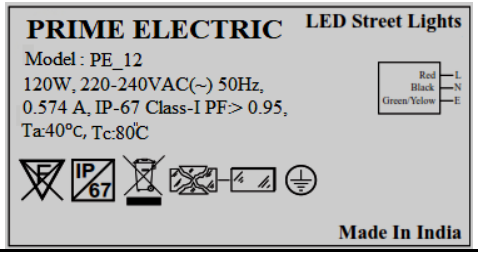








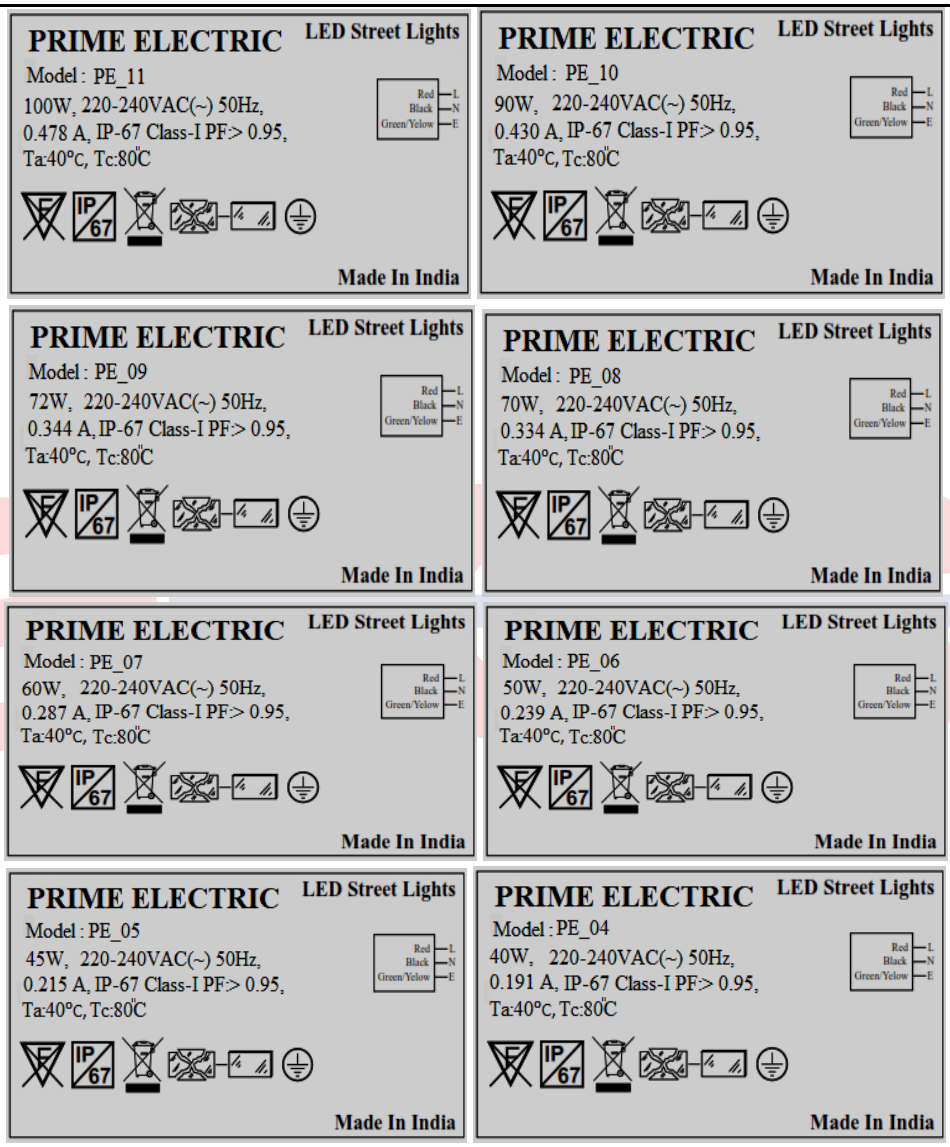




ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

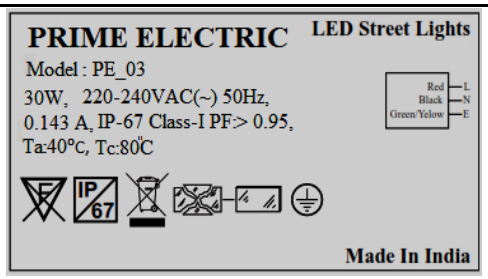
Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 5 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

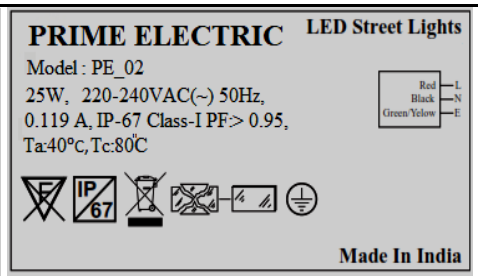


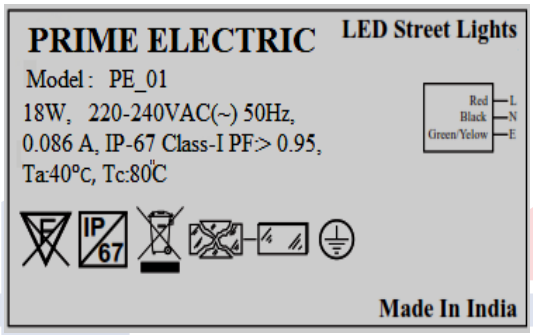
ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

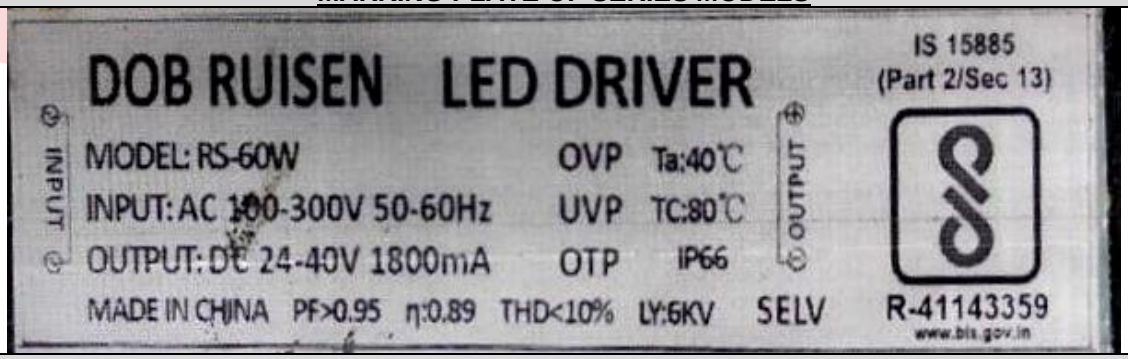
Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 6 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424







MARKING PLATE OF SERIES MODELS



6 DRIVER OF LEAD MODEL

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 7 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Table – List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment – 1	Light Distributive Curve Document	Page no.44
Attachment – 2	Photo Document	Page no.45-46

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	:	04.12.2023
Date(s) of performance of tests	:	From 04.12.2023 to 21.12.2023
Laboratory conditions	:	
Ambient Temperature	:	27±2^{0}C
Ambient Humidity	:	50±5%Rh

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 8 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

General product information:
Product Description: LED Street Lights (LED Luminaire For Road And Street lighting)

Model Tested:

Sr.No.	Product description	Model	Specifications
1	**LED Street Lights** (LED Luminaire For Road And Street lighting)	**PE_18 (Lead Model)**	220-240V~, 50Hz, 1.435A, 300W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.

SERIES MODEL:

Sr. No.	Product description	Models	Specifications	Variation From Family Representative
1	**LED Street Lights** (LED Luminaire for Road and Street lighting)	PE_17	220-240V~, 50Hz, 1.196A, 250W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	Model name, Current, Wattage, Driver used. (See annex:1)
2		PE_16	220-240V~, 50Hz, 1.052A, 220W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
3		PE_15	220-240V~, 50Hz, 0.956A, 200W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
4		PE_14	220-240V~, 50Hz, 0.861A, 180W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
5		PE_13	220-240V~, 50Hz, 0.717A, 150W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
6		PE_12	220-240V~, 50Hz, 0.574A, 120W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
7		PE_11	220-240V~, 50Hz, 0.478A, 100W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
8		PE_10	220-240V~, 50Hz, 0.430A, 90W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
9		PE_09	220-240V~, 50Hz, 0.344A, 72W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
10		PE_08	220-240V~, 50Hz, 0.344A, 70W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
11		PE_07	220-240V~, 50Hz, 0.287A, 60W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
12		PE_06	220-240V~, 50Hz, 0.239A, 50W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
13		PE_05	220-240V~, 50Hz, 0.215A, 45W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 9 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

14		PE_04	220-240V~, 50Hz, 0.191A, 40W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
15		PE_03	220-240V~, 50Hz, 0.143A, 30W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
16		PE_02	220-240V~, 50Hz, 0.119A, 25W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	
17		PE_01	220-240V~, 50Hz, 0.086A, 18W, PF:>0.95, Ta: 40°C, Tc:80°C, IP67, Class I, Made in India.	

Supply connections: AC mains supply

Representative Models: PE_18

Technical Considerations:

Similarities Between the model: - Same class of construction of luminaire, Same AC input voltage of registered electronic control gear having R. No. Same material for enclosure, Same ambient temperature rating, Same IP category

Report Summary:

All applicable tests according to the referenced standard(s) have been carried out.

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 10 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Discipline: ELECTRICAL **Group:** LAMPS, LUMINAIRES & ACCESSORIES

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
4 (1)	**GENERAL TEST REQUIREMENTS**			P
4 (1.1)	Information for luminaire design considered……...:		Standard Yes ✓ No	P
4 (1.3)	More sections applicable……..…..:		Yes No ✓	N/A

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
5 (2)	**CLASSIFICATION OF LUMINAIRES**			P
5 (2.2)	Type of protection ……..:		Class I	P
5 (2.3)	Degree of protection……...:		IP67	P
5 (2.4)	Luminaire suitable for mounting on normally flammable surfaces……:		Yes No ✓	N/A
	Luminaire suitable for mounting on non-combustible materials only……:		Yes ✓ No	P
5 (2.5)	Luminaire for normal use ……..:		Yes ✓ No	P
	Luminaire for rough service ……..…..:		Yes No ✓	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 11 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
6 (3)	**MARKING**			P
6 (3.2)	Mandatory markings*	EL 2400-00	See below	P
	Position of the marking*	EL 2400-01	Marking on outer enclosure of luminaire	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 luminaires	N/A
6 (3.3.2)	Nominal frequency in Hz*	EL 2400-06	50Hz	P
6 (3.3.3)	Operating temperature*	EL 2400-07	Ta: 40°C	P
6 (3.3.4)	Symbol or warning notice*	EL 2400-08	Luminaire suitable for mounting on normally flammable surfaces	N/A
6 (3.3.5)	Wiring diagram*	EL 2400-09	Directly connected to main supply	N/A
6 (3.3.6)	Special conditions*	EL 2400-10	Not suitable for looping-in	N/A
6 (3.3.7)	Metal halide lamp luminaire – warning*	EL 2400-11	No such type of construction	N/A
6 (3.3.8)	Limitation for semi-luminaires*	EL 2400-12	Not a semi-luminaires	N/A
6 (3.3.9)	Power factor and supply current*	EL 2400-13	PF>0.95, Current:1.435A	P
6 (3.3.10)	Suitability for use indoors*	EL 2400-14	Not for indoor use only	N/A
6 (3.3.11)	Luminaires with remote control*	EL 2400-15	No remote control luminaire	N/A
6 (3.3.12)	Clip-mounted luminaire – warning*	EL 2400-16	No such type of construction	N/A
6 (3.3.13)	Specifications of protective shields*	EL 2400-17	Symbol marked	P
6 (3.3.14)	Symbol for nature of supply*	EL 2400-18	Symbol Marked	P
6 (3.3.15)	Rated current of socket outlet*	EL 2400-19	No such type of construction	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	Rubber Cable Used	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
	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	Not Marked	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 12 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

*Total number of Requirements to be observed / inspected = 26
Total No. of Applicable Requirement = 13
No of Requirements for which the sample passed = 13

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 in the requirement tested.

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(Approving Authority)

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 13 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4)	**CONSTRUCTION**			P
7 (4.2)	Components replaceable without difficulty*	EL 2401-00	Components Are Replaceable Without Difficulty	P
7 (4.3)	Wire ways smooth and free from sharp edges*	EL 2401-01	Wire ways are smooth and free from edges	P
7 (4.4)	Lamp holders			N/A
7 (4.4.1)	Integral lamp holder*	EL 2401-02	No lampholder	N/A
7 (4.4.2)	Wiring connection*	EL 2401-03	See above	N/A
7 (4.4.3)	Lamp holder for end-to-end mounting*	EL 2401-04	See above	N/A
7 (4.4.4)	Positioning		See above	N/A
	- Pressure test (N) ……:	EL 2401-05	See above	N/A
	After test the lamp holder comply with relevant standard sheets and show no damage	EL 2401-06	See above	N/A
	After test on single-capped lamp holder the lamp holder have not moved from its position and show no permanent deformation	EL 2401-07	See above	N/A
	- bending test (N) ……:	EL 2401-08	See above	N/A
	After test the lamp holder have not moved from its position and show no permanent deformation	EL 2401-09	See above	N/A
7 (4.4.5)	Peak pulse voltage	EL 2401-10	See above	N/A
7 (4.4.6)	Centre contact*	EL 2401-11	See above	N/A
7 (4.4.7)	Parts in rough service luminaires resistant to tracking	EL 2401-12	See above	N/A
7 (4.4.8)	Lamp connectors*	EL 2401-13	See above	N/A
7 (4.5)	Starter holders			N/A
	Starter holder in luminaires other than class II*	EL 2401-14	No starter holder	N/A
	Starter holder class II construction*	EL 2401-15	See above	N/A
	Starter can be touched with the standard test finger in class II luminaires*	EL 2401-16	See above	N/A
7 (4.6)	Terminal blocks			N/A
	Tails	EL 2401-17	No Terminal blocks used	N/A
	Unsecured blocks	EL 2401-18	See above	N/A
7 (4.7)	Terminals and supply connections			N/A
7 (4.7.1)	Contact to metal parts*	EL 2401-19	See above	N/A
7 (4.7.2)	Test 8 mm live conductor	EL 2401-20	See above	N/A
	Test 8 mm earth conductor	EL 2401-21	See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 14 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.7.3)	Terminals for supply conductors	EL 2401-22	See above	N/A
7 (4.7.4)	Terminals other than supply connection*	EL 2401-23	See above	N/A
7 (4.7.5)	Heat-resistant wiring/sleeves*	EL 2401-24	Temperature not exceeds cable surroundings inside the luminaire	N/A
7 (4.7.6)	Multi-pole plug*	EL 2401-25	No such construction	N/A
7 (4.8)	Switches			N/A
	- adequate rating*	EL 2401-26	No switches	N/A
	- adequate fixing*	EL 2401-27	See above	N/A
	- polarized supply*	EL 2401-28	See above	N/A
7 (4.9)	Insulating lining and sleeves			N/A
7 (4.9.1)	Retainment*	EL 2401-29	No such construction	N/A
	Method of fixing……..:	EL 2401-30	No such construction	N/A
7 (4.9.2)	Insulated linings and sleeves:			N/A
	Resistant to a temperature > 20 □C to the wire temperature or	EL 2401-31	No such construction	N/A
	a) & c) Insulation resistance and electric strength	EL 2401-32	See above	N/A
	b) Ageing test. Temperature (ºC)……..:	EL 2401-33	See above	N/A
7 (4.10)	Double or reinforced insulation			N/A
7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation*	EL 2401-34	CLASS-I	N/A
	Safe installation fixed luminaires*	EL 2401-35	See above	N/A
	Capacitors and switches*	EL 2401-36	See above	N/A
	Interference suppression capacitors according to ISQC 302400*	EL 2401-37	See above	N/A
7 (4.10.2)	Assembly gaps:			N/A
	- not coincidental*	EL 2401-38	No assembly gaps	N/A
	- no straight access with test probe	EL 2401-39	See above	N/A
7 (4.10.3)	Retainment of insulation:			N/A
	- fixed*	EL 2401-40	CLASS-I	N/A
	- unable to be replaced; luminaire inoperative*	EL 2401-41	See above	N/A
	- sleeves retained in position*	EL 2401-42	See above	N/A
	- tube of insulating material*	EL 2401-43	See above	N/A

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 15 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.11)	**Electrical connections and current-carrying parts**			P
7 (4.11.1)	Contact pressure*	EL 2401-44	Complies	P
7 (4.11.2)	Screws:			P
	- self-tapping screws*	EL 2401-45	Complies	P
	- thread-cutting screws*	EL 2401-46	Complies	P
7 (4.11.3)	Screw locking:			N/A
	- spring washer*	EL 2401-47	No such construction	N/A
	- rivets*	EL 2401-48	No such construction	N/A
7 (4.11.4)	Material of current-carrying parts*	EL 2401-49	Complies	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 such type of construction	N/A
7 (4.12)	Screws and connections (mechanical) and glands			P
7 (4.12.1)	Screws not made of soft metal*	EL 2401-52	Complies	P
	Screws of insulating material*	EL 2401-53	Metal screw used	N/A
	Torque test: torque (Nm); part……..:	EL 2401-54	Enclosure screw at 0.80Nm	P
	Torque test: torque (Nm); part……..:	EL 2401-55		N/A
	Torque test: torque (Nm); part……..:	EL 2401-56		N/A
7 (4.12.2)	Screws with diameter < 3 mm screwed into metal*	EL 2401-57	No such screws used	N/A
7 (4.12.4)	Locked connections:			N/A
	- fixed arms; torque (Nm)……..:	EL 2401-58	No Such Construction	N/A
	- Lamp holder; torque (Nm)……..:	EL 2401-59	No such type of construction	N/A
	- Push-button switches; torque 0,8 Nm……..:	EL 2401-60	No such type of construction	N/A
7 (4.12.5)	Screwed glands; force (Nm)……..:	EL 2401-61	No such type of construction	N/A
7 (4.13)	Mechanical strength			P
7 (4.13.1)	Impact tests:			P
	- Fragile parts; energy (Nm)……..:	EL 2401-62	0.5 Nm impact with 20mm compression applied, no damage observed	P
	- Other parts; energy (Nm)……..:	EL 2401-63	0.70 Nm impact with 24mm compression, applied, no damage observed	P
	1) live parts	EL 2401-64	Complies	P
	2) linings	EL 2401-65	No such lining	N/A
	3) protection	EL 2401-66	Adequate protection	P
	4) covers	EL 2401-67	Complies	P

TRFNo.BIS_LUM/LRSL_IS10322-5-3_V1.0

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 16 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.13.3)	Straight test finger	EL 2401-68	30N force applied with test finger, no contact with live parts	P
7 (4.13.4)	Rough service luminaires			N/A
	- IP54 or higher	EL 2401-69	Not a rough service luminaire	N/A
	a) fixed	EL 2401-70	See above	N/A
	b) hand-held	EL 2401-71	See above	N/A
	c) delivered with a stand	EL 2401-72	See above	N/A
	d) for temporary installations and suitable for mounting on a stand	EL 2401-73	See above	N/A
7 (4.13.6)	Tumbling barrel	EL 2401-74	No such type of construction	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	No such type of suspension luminaire	N/A
	B) torque 2,5 Nm	EL 2401-76	See above	N/A
	C) Bracket arm; bending moment (Nm)……:	EL 2401-77	See above	N/A
	D) load track-mounted luminaires	EL 2401-78	See above	N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ……..:	EL 2401-79	See above	N/A
	Metal rod. Diameter (mm) ……..:	EL 2401-80	See above	N/A
7 (4.14.2)	Load to flexible cables			N/A
	Mass (kg) ……..:	EL 2401-81	No such type of construction	N/A
	Stress in conductors (N/mm²) …:	EL 2401-82	See above	N/A
	Mass (kg) of semi-luminaire ….:	EL 2401-83	See above	N/A
	Bending moment (Nm) of semi-luminaire ……..:	EL 2401-84	See above	N/A
7 (4.14.3)	Adjusting devices:			N/A
	- flexing test; number of cycles…..:	EL 2401-85	No such type of construction	N/A
	- Strands broken……:	EL 2401-86	See above	N/A
	- electric strength test afterwards	EL 2401-87	See above	N/A
7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors*	EL 2401-88	No such type of construction	N/A
7 (4.14.5)	Guide pulleys*	EL 2401-89	No such type of construction	N/A
7 (4.14.6)	Strain on socket-outlets*	EL 2401-90	No such type of construction	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 17 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.15)	Flammable materials			N/A
	- Glow-wire test 650 ºC ……:	EL 2401-91	No such part used	N/A
	- spacing ≥30 mm	EL 2401-92	See above	N/A
	- screen withstanding test of 13.3.1	EL 2401-93	See above	N/A
	- screen dimensions	EL 2401-94	See above	N/A
	- no fiercely burning material	EL 2401-95	See above	N/A
	- thermal protection	EL 2401-96	See above	N/A
	- electronic circuits exempted	EL 2401-97	See above	N/A
	Luminaires made of thermoplastic material with lamp control gear			N/A
	a) construction*	EL 2401-98	Luminaires not made of thermoplastic material with lamp control gear	N/A
	b) temperature sensing control	EL 2401-99	See above	N/A
	c) surface temperature	EL 2401-100	See above	N/A
7 (4.16)	Luminaires marked with (F) symbol			N/A
	No lamp control gear……..:	EL 2401-101	Electronic Control gear used	N/A
7 (4.16.1)	Lamp control gear spacing:			N/A
	- spacing 10 mm	EL 2401-102	No such type of construction	N/A
	- spacing 35 mm	EL 2401-103	No such type of construction	N/A
7 (4.16.2)	Thermal protection:			N/A
	- in lamp control gear	EL 2401-104	Temperature sensing control gear not used	N/A
	- external	EL 2401-105	See above	N/A
	- fixed position	EL 2401-106	See above	N/A
	- temperature marked lamp control gear	EL 2401-107	See above	N/A
7 (4.16.3)	Design to satisfy the test of 12.6	EL 2401-108	Electronic lamp control gear used	N/A
7 (4.17)	Drain holes			N/A
	Clearance at least 5 mm	EL 2401-109	No drain holes	N/A
7 (4.18)	Resistance to corrosion			P
7 (4.18.1)	- rust-resistance	EL 2401-110	Non ferrous material used	N/A
7 (4.18.2)	- season cracking in copper	EL 2401-111	No such material used	N/A
7 (4.18.3)	- corrosion of aluminium	EL 2401-112	Complies	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	No tungsten halogen lamps used	N/A
7 (4.21.2)	Particles from a shattering lamp not impair safety	EL 2401-116	See above	N/A
7 (4.21.3)	No direct path	EL 2401-117	See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 18 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
7 (4.21.4)	Impact test on shield	EL 2401-118	No tungsten halogen lamps used	N/A
	Glow-wire test on lamp compartment……..:	EL 2401-119	See above	N/A
7 (4.22)	Attachments to lamps not cause overheating or damage*	EL 2401-120	No such attachment	N/A
7 (4.23)	Semi-luminaires comply Class II*	EL 2401-121	See above	N/A
7 (4.24)	UV Radiation			N/A
	UV radiation for metal halide lamps (Annex P)	EL 2401-122	No UV radiations	N/A
7 (4.25)	Mechanical hazard			P
	No sharp point or edges*	EL 2401-123	No sharp point or edges	P
7 (4.26)	Short-circuit protection			N/A
7 (4.26.1)	Adequate means of uninsulated accessible SELV parts	EL 2401-124	No uninsulated accessible SELV parts	N/A
7 (4.26.2)	Short-circuit test	EL 2401-125	See above	N/A
7 (4.26.3)	Test chain according to Fig. 29	EL 2401-126	See above	N/A
7.1	IP rating for column integrated luminaire	---	Not a column integrated luminaire	N/A
7.2	Luminaire for suspension on span wires	---	Luminaire is not for suspension on span wires	N/A
7.3.1	Static Load Test	---	Complies	P
7.4	For Adjustable lampholder and optical parts	---	No such construction	N/A
7.5	Glass Shatter test	---	Complies	P
7.6	The Connection compartment of column- integrated luminaires	---	Not a column integrated luminaire	N/A
7.7	Load calculation	---	See above	N/A
7.8	Impact energy Test of 5 Nm	---	See above	N/A
7.9	Cable entry for column integrated luminaires	---	See above	N/A

*Total number of Requirements to be observed / inspected = 44
Total No. of Applicable Requirement = 09
No of Requirements for which the sample passed = 09

Total number of tests to be conducted = 83
Total No. of Applicable Tests = 12
No. of tests for which the sample passed = 12

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

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(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TRFNo.BIS_LUM/LRSL_IS10322-5-3_V1.0

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 19 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**			P
8 (11.2)	Working voltage (V)……:	EL 2402-00	220-240VAC~	P
	Voltage form……..:	EL 2402-01	Sinusoidal	P
	PTI……..:	EL 2402-02	< 600V	P
	Impulse withstand category (Normal category II) (Category III Annex U)	EL 2402-03	Category II	P
	Rated pulse voltage (Kv)……:	EL 2402-04	No pulse voltage	P
	(1) Current-carrying parts of different polarity: cr(mm); cl(mm)…… ……:	EL 2402-05	Certified driver used	P
	(2) Current-carrying parts and accessible parts: cr(mm); cl(mm)… …	EL 2402-06	Certified driver used	P
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm)…….:	EL 2402-07	Class I luminaires	N/A
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm):	EL 2402-08	Class I luminaires	N/A
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)……..:	EL 2402-09	Certified driver used	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 = 10
Total No. of Applicable Tests = 07
No. of tests for which the sample passed = 07

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

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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

Report No.: SC23EPI15810_1	TEST REPORT IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 20 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

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	Complies	P
	Metal parts in contact with supporting surface*	EL 2403-01	Complies	P
	Resistance<0,5Ω.....	EL 2403-02	0.032Ω	P
	Self-tapping screws used*	EL 2403-03	No Self-tapping screws used	N/A
	Thread-forming screws*	EL 2403-04	No such screw	N/A
	Thread-forming screw used in a grove*	EL 2403-05	No such screw	N/A
	Earth makes contact first*	EL 2403-06	No detachable part	N/A
9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc. *	EL 2403-07	Not an adjustable luminaire	N/A
9 (7.2.4)	Compliance with 4.7.3	EL 2403-08	See below	P
	Connections adequately locked	EL 2403-09	Complies	P
9 (7.2.5)	Earth terminal integral part of connector socket*	EL 2403-10	No connector socket	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	Complies	P
9 (7.2.8)	Material of earth terminal*	EL 2403-13	Brass	P
	Contact surface bare metal*	EL 2403-14	Complies	P
9 (7.2.10)	Class II luminaire for looping-in*	EL 2403-15	Class I luminaires	N/A
	Double or reinforced insulation to functional earth*	EL 2403-16	See above	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
9.1	The attachment of fixed part of terminal			N/A

*Total number of Requirements to be observed / inspected = 14
Total No. of Applicable Requirement = 07
No of Requirements for which the sample passed = 07

Total number of tests to be conducted = 05
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 in the requirement tested.

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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TRFNo.BIS_LUM/LRSL_IS10322-5-3_V1.0

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 21 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
10 (14)	**SCREW TERMINALS**			N/A
	Separately approved; component list….....	EL 2404-00	No screw terminal used	N/A
	Part of the luminaire ….....	EL 2404-01	See above	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 in the requirement tested.

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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 22 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

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	No screw less terminals used	N/A
	Part of the luminaire ….....	EL 2404-03	See above	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 in the requirement tested.

……
(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 23 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5)	**EXTERNAL AND INTERNAL WIRING**			P
11 (5.2)	Supply connection and external wiring			P
11 (5.2.1)	Means of connection*	EL 2405-00	Non detachable flexible cable (Via terminal block)	P
11 (5.2.2)	Type of cable*	EL 2405-01	Flexible cable used	P
	Nominal cross-sectional area (mm^2)*	EL 2405-02	3 x 1.0mm^2	P
	Cables equal to IS 694 and IS 9968 (Part 1) *	EL 2405-03	IS 9968-1	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	Type-Y attachment	N/A
11 (5.2.6)	Cable entries:			P
	- suitable for introduction	EL 2405-07	Complies	P
	- adequate degree of protection	EL 2405-08	Adequate 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 bushings:			P
	- suitably fixed*	EL 2405-10	No insulating bushings used	N/A
	- material in bushings*	EL 2405-11	See above	N/A
	- material not likely to deteriorate*	EL 2405-12	See above	N/A
	- tubes or guards made of insulating material*	EL 2405-12	Complies	P
11 (5.2.9)	Locking of screwed bushings*	EL 2405-13	No such bushings used	N/A
11 (5.2.10)	Cord anchorage:			P
	- covering protected from abrasion	EL 2405-14	Complies	P
	- clear how to be effective	EL 2405-15	Complies	P
	- no mechanical or thermal stress	EL 2405-16	Complies	P
	- no tying of cables into knots etc.	EL 2405-17	Complies	P
	- insulating material or lining	EL 2405-18	Complies	P

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 24 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5.2.10.1)	**Cord anchorage for type X attachment:**			N/A
	a) at least one part fixed	EL 2405-19	Type-Y attachment	N/A
	b) types of cable	EL 2405-20	See above	N/A
	c) no damaging of the cable	EL 2405-21	See above	N/A
	d) whole cable can be mounted	EL 2405-22	See above	N/A
	e) no touching of clamping screws	EL 2405-23	See above	N/A
	f) metal screw not directly on cable	EL 2405-24	See above	N/A
	g) replacement without special tool	EL 2405-25	See above	N/A
	Glands not used as anchorage	EL 2405-26	See above	N/A
	Labyrinth type anchorages	EL 2405-27	See above	N/A
11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	EL 2405-28	Type Y attachment	P
11 (5.2.10.3)	Tests:			P
	- impossible to push cable; unsafe	EL 2405-29	Not possible to push cable inside	P
	- pull test: 25 times; pull (N) ….....	EL 2405-30	Tested at 60N	P
	- torque test: torque (Nm) ….....	EL 2405-31	0.25Nm	P
	- displacement ≤2 mm	EL 2405-32	Displacement observed =0.85mm	P
	- no movement of conductors	EL 2405-33	Complies	P
	- no damage of cable or cord	EL 2405-34	Complies	P
11 (5.2.11)	External wiring passing into luminaire	EL 2405-35	Complies	P
11 (5.2.12)	Looping-in terminals*	EL 2405-36	No such type of construction	N/A
11 (5.2.13)	Wire ends not tinned*	EL 2405-37	No spring terminals	N/A
	Wire ends tinned: no cold flow*	EL 2405-38	See above	N/A
11 (5.2.14)	Mains plug same protection*	EL 2405-39	No plug used	N/A
	Class III luminaire plug*	EL 2405-40	See above	N/A
11 (5.2.15)	Colour coded red and black*	EL 2405-41	Not a fluorescent luminaire	N/A
11 (5.2.16)	Appliance inlets *	EL 2405-42	No appliance inlet	N/A
	Appliance couplers *	EL 2405-43	No appliance coupler	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 25 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5.3)	**Internal wiring**			P
11 (5.3.1)	Internal wiring of suitable size and type*	EL 2405-44	Suitable sizes of internal wiring used	P
	Through wiring			N/A
	- not delivered/ mounting instruction	EL 2405-45	No through wiring	N/A
	- factory assembled	EL 2405-46	See above	N/A
	- socket outlet loaded (A)……	EL 2405-47	See above	N/A
	- temperatures……	EL 2405-48	See above	N/A
	Green-yellow for earth only	EL 2405-49	See above	N/A
11 (5.3.1.1)	Internal wiring connected directly to fixed wiring*			N/A
	Cross-sectional area (mm²) ……	EL 2405-50	No Internal wiring connected directly to fixed wiring	N/A
	Insulation thickness	EL 2405-51	See above	N/A
	Extra insulation added where necessary	EL 2405-52	See above	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 2405-53	No Internal wiring connected directly to fixed wiring	N/A
11 (5.3.1.3)	Double or reinforced insulation for class II*	EL 2405-54	Class I	N/A
11 (5.3.1.4)	Conductors without insulation*	EL 2405-55	No such type of construction	N/A
11 (5.3.1.5)	SELV current-carrying parts*	EL 2405-56		N/A
11 (5.3.1.6)	Insulation thickness other than PVC or rubber*	EL 2405-57	No such insulation	N/A
11 (5.3.2)	Sharp edges etc.*	EL 2405-58	No sharp edges	P
	No moving parts of switches etc.*	EL 2405-59	No switches used	N/A
	Joints, raising/lowering devices*	EL 2405-60	No such type of construction	N/A
	Telescopic tubes etc.*	EL 2405-61	No telescopic tube used	N/A
	No twisting over 360º	EL 2405-62	Complies	P

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 26 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
11 (5.3.3)	**Insulating bushings:**			N/A
	- suitable fixed*	EL 2405-63	Not an adjustable luminaire	N/A
	- material in bushings*	EL 2405-64	See above	N/A
	- material not likely to deteriorate*	EL 2405-65	See above	N/A
	- cables with protective sheath*	EL 2405-66	See above	N/A
11 (5.3.4)	Joints and junctions effectively insulated*	EL 2405-67	Adequate insulation covering provided	P
11 (5.3.5)	Strain on internal wiring*	EL 2405-68	No internal wire coming out from luminaire	N/A
11 (5.3.6)	Wire carriers*	EL 2405-69	Not an adjusting luminaire	N/A
11 (5.3.7)	Wire ends not tinned*	EL 2405-70	Spring terminals is not used	N/A
	Wire ends tinned: no cold flow*	EL 2405-71	See above	N/A
11.1	Cord anchorage test for street light, Pull of 60 N, torque of 0.25 Nm		Complies	P

*Total number of Requirements to be observed / inspected = 37
Total No. of Applicable Requirement = 10
No of Requirements for which the sample passed = 10

Total number of tests to be conducted = 35
Total No. of Applicable Tests = 16
No. of tests for which the sample passed = 16

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

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(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 27 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**			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	No removable part	N/A
	Supply conductors held by screw less terminals with push-button*	EL 2406-02	No such type of construction	N/A
	Tubular filament lamps having a cap/base at each end*	EL 2406-03	LED luminaires	N/A
	Insulating properties of lacquer, enamel, paper and similar materials*	EL 2406-04	No such type of insulation used	N/A
	Luminaires with ignitors	EL 2406-05	No ignitors used	N/A
12 (8.2.2)	Portable luminaire adjusted in most unfavourable position*	EL 2406-06	Not a portable luminaire	N/A
12 (8.2.3.a)	Class II luminaire:			N/A
	- basic insulated metal parts not accessible during starter or lamp replacement*	EL 2406-07	CLASS I	N/A
	- glass protective shields not used as supplementary insulation*	EL 2406-08	See Above	N/A
12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed*	EL 2406-09	No such lamp holder	N/A
12 (8.2.4)	Portable luminaire have protection independent of supporting surface*	EL 2406-10	Not a portable luminaire	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 > 0,5 µF	EL 2406-13	Certified driver used	N/A
	Portable plug connected luminaire with capacitor	EL 2406-14	See Above	N/A
	Other plug connected luminaire with capacitor	EL 2406-15	See Above	N/A
	Discharge device on or within capacitor	EL 2406-16	See Above	N/A
	Discharge device mounted separately	EL 2406-17	See Above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 28 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

*Total number of Requirements to be observed / inspected = 11
Total No. of Applicable Requirement = 02
No of Requirements for which the sample passed = 02

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 in the requirement tested.

.....
(Approving Authority)

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 29 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
13 (12)	**ENDURANCE TEST AND THERMAL TEST**			P
13 (12.3)	Endurance test:	EL 2407-00	Complies	P
	- mounting-position….....		Normal operating position	P
	- test temperature (ºC) ….....		50°C(40°C+10°C)	P
	- total duration (h)….....		240h	P
	- supply voltage: Un factor; calculated voltage(V)….....		264V (240V*1.1)	P
	- lamp used….....		LED module	P
13 (12.3.2)	After endurance test:	EL 2407-01	See below	P
	- no part unserviceable*		In compliance	P
	- plastic ES lampholder not deformed*		No lamp holder	N/A
	- luminaire not unsafe*		Complies	P
	- no damage to track system*		No track system	N/A
	- marking legible*		Marking is legible	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	Certified driver used	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	No such Construction	N/A
	- case of abnormal conditions ….....		See above	N/A
	- electronic lamp control gear		See above	N/A
	- measured winding temperature (ºC): at 1,1 Un .		See above	N/A
	- measured mounting surface temperature (ºC) at 1,1 Un….....		See above	N/A
	- calculated mounting surface temperature (ºC) ..		See above	N/A
	- track-mounted luminaires		See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 30 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
13 (12.6.2)	Temperature sensing control	EL 2407-05	Electronic lamp control gear used	N/A
	- case of abnormal conditions		See above	N/A
	- thermal link		See above	N/A
	- manual reset cut-out		See above	N/A
	- auto reset cut-out		See above	N/A
	- measured mounting surface temperature (ºC) …		See above	N/A
	- track-mounted luminaires		See above	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	Luminaire consist of metallic housing	N/A
	- case of abnormal conditions		See above	N/A
	- measured winding temperature (ºC): at 1,1 Un ..		See above	N/A
	- measured temperature of fixing point/exposed part (ºC): at 1,1 Un		See above	N/A
	- calculated temperature of fixing point/exposed part (ºC).....		See above	N/A
13 (12.7.2)	Luminaire with temperature sensing control	EL 2407-07	Luminaire consist of metallic housing	N/A
	- thermal link.....		See above	N/A
	- manual reset cut-out		See above	N/A
	- auto reset cut-out		See above	N/A
	- case of abnormal conditions.....		See above	N/A
	- highest measured temperature of fixing point/ exposed part (ºC):		See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 31 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

*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 in the requirement tested.

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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 32 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

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	IP 67	P
14 (9.2)	Tests for ingress of dust, solid objects and moisture:	EL 2408-01	See below	P
	- classification according to IP…….		IP 67	P
	- mounting position during test …….		Normal mounting position	P
	- fixing screws tightened; torque (Nm) …….		Complies	P
	- tests according to clauses…		9.2.2, 9.2.8	P
	- electric strength test afterwards		Complies	P
	a) no deposit in dust-proof luminaire	EL 2408-02	No such type of construction	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	No such type of construction	N/A
	e) no water in watertight luminaire	EL 2408-07	No such type of construction	N/A
	f) no contact with live parts (IP 2X)	EL 2408-08	No such type of construction	N/A
	g) no entry into enclosure (IP 3X and IP 4X)	EL 2408-09	No such type of construction	N/A
	h) no contact with live parts (IP3X and IP4X)	EL 2408-10	No such type of construction	N/A
14 (9.3)	Humidity test 48 h	EL 2408-11	Humidity test carried out at 27°C 93% RH for 48 h	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 in the requirement tested.

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(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 33 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

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		Metal foil wrapped on the cable	P
	Insulation resistance……:		See Below	P
	SELV	EL 2409-01	No SELV circuit	N/A
	- between current-carrying parts of different polarity….....		See above	N/A
	- between current-carrying parts and mounting surface ……....		See above	N/A
	- between current-carrying parts and metal parts of the luminaire….....		See above	N/A
	Other than SELV	EL 2409-02	See below	P
	- between live parts of different polarity ….....		No switch used	N/A
	- between live parts and mounting surface (Limit≥2MΩ)…….....:		1.0x 10^2MΩ	P
	- between live parts and metal parts (Limit≥2MΩ)…….....:		1.0x 10^2 MΩ	P
	- between live parts of different polarity through action of a switch….....		No switch provided	N/A
15 (10.2.2)	Electric strength test	EL 2409-03	See below	P
	Dummy lamp		No dummy lamp	N/A
	Luminaires with ignitors after 24 h test		No ignitors used	N/A
	Luminaires with manual ignitors		See above	N/A
	Test voltage (V) …....		See below	P
	SELV	EL 2409-04	No SELV circuit	N/A
	- between current-carrying parts of different polarity….....		See above	N/A
	- between current-carrying parts and mounting surface….....		See above	N/A
	- between current-carrying parts and metal parts of the luminaire…...		See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 34 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

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		No switch used	N/A
	- between live parts and mounting surface		Test conducted at 1480V.No flashover or breakdown observed.	P
	- between live parts and metal parts		Test conducted at 1480V.No flashover or breakdown observed.	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	0.17mA Limit:- 1mA	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 in the requirement tested.

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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 35 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
16 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		See below	N/A
16 (13.2.1)	Ball-pressure test ….....	EL 2410-00	See below	N/A
	- part tested; temperature (ºC) Allow dia of impression 2mm(max)		No such parts used	N/A
	- part tested; temperature (ºC) Allow dia of impression 2mm(max)		No such parts used	N/A
16 (13.3.1)	Needle-flame test (10 s)….....	EL 2410-01	No such parts used	N/A
	- part tested ….....		See above	N/A
	- part tested ….....			N/A
16 (13.3.2)	Glow-wire test (650 ºC) ….....	EL 2410-02	No such parts used	N/A
	- part tested ….....		See above	N/A
	- part tested ….....			N/A
16 (13.4.1)	Tracking test ….....	EL 2410-03	Certified PCB Used	N/A
	- part tested ….....		See above	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 = 04
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 in the requirement tested.

…….
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ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 36 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

SS

Clause No	Test / Requirement name	Code	Test result/ observation	Verdict
17	**PHOTOMETRIC TESTS**			P
	The photometric performance	EL 2411-00	Complies (See ANNEX 5)	P
17.1	Luminous Intensity			P
17.2	C-gamma system			P
17.3	The general guidance regarding the photometric data to be provided by the manufacturers			P
17.4	Light Controlling Components			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 = 01
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 in the requirement tested.

.....
(Approving Authority)

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 37 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

ANNEX 1	**TABLE: Critical components information**					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Supply cable	B	K.E. Plugs & Wire	Rubber	3C x 1.00mm^2, 1100V	IS 9968 (Part 1): 1988	CM/L-8500009307
Internal Wire	B	POLYCAB WIRE PVT LTD	PVC Insulated cable	1C x 1.00mm^2, 1100V	IS 694: 2010	CM/L-2832257
LED Driver						
LED driver used in models. PE_18 (6 Driver) PE_17 (5 Driver) PE_16 (5 Driver) PE_15 (4 Driver) PE_14 (4 Driver) PE_13 (3 Driver) PE_12 (3 Driver) PE_11 (2 Driver) PE_10 (2 Driver) PE_09 (2 Driver) PE_08 (2 Driver) PE_07 (2 Driver) PE_06, PE_05 (1 Driver)	B	ZHONGSHAN RUISHENG ELECTRONIC TECHNOLOGY CO., LTD.	RS-60W	Input: 100V-300V~, 50-60Hz Output: DC 24V-40V, 1800mA	IS 15885 (PART 2/SEC 13): 2012	BIS R-41143359
LED driver used in models. PE_04 (1 Driver)	B	ZHONGSHAN RUISHENG ELECTRONIC TECHNOLOGY CO., LTD.	RS-50W	Input: 100V-300V~, 50-60Hz Output: DC 24V-40V, 1500mA	IS 15885 (PART 2/SEC 13): 2012	BIS R-41143359
LED driver used in models. PE_03, PE_02 (1 Driver)	B	ZHONGSHAN RUISHENG ELECTRONIC TECHNOLOGY CO., LTD.	RS-30W	Input: 100V-300V~, 50-60Hz Output: DC 24V-40V, 900mA	IS 15885 (PART 2/SEC 13): 2012	BIS R-41143359
LED driver used in models. PE_01 (1 Driver)	B	ZHONGSHAN RUISHENG ELECTRONIC TECHNOLOGY CO., LTD.	RS-20W	Input: 100V-300V~, 50-60Hz Output: DC 24V-40V, 600mA	IS 15885 (PART 2/SEC 13): 2012	BIS R-41143359
LED Module						
LED PCB	A	EPITOME Components Ltd	EP-4	V-0, 130°C	UL 796 (No equivalent to IEC Standard)	UL E212855

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 38 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

LED PACKAGE	A	OSRAM OPTO SEMICONDUCTOR	GW P9LR34.PM	10mA to 300mA	IEC 62471:2006	Report No.: 719118423 6-EEC18-CMF

Supplementary information:

1. Evidences provided by the manufacturer for the listed components are verified by us and the evidences are conforming to the requirements of the relevant standard.
2. Metallic enclosure used.

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 authorized by the test house
C - Integrated component tested together with the appliance
D - Alternative component

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 39 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

ANNEX 2	**TABLE: Temperature measurements, thermal tests of Section 12**			P
	Type reference	:	LED Luminaires for road and street lighting	P
	Lamp used	:	LED module	P
	Lamp control gear used	:	Certified LED driver used	P
	Mounting position of luminaire	:	Normal operating position	P
	Supply wattage (W)	:	299.75W	P
	Supply current (A)	:	1.300A	P
	Calculated power factor	:	0.971	P
	Table: measured temperatures corrected for ta = 40°C			P
	- abnormal operating mode	:	N/A	N/A
	- test 1: rated voltage	:	240V	P
	- test 2: 1.06 times rated voltage or 1,05 times rated wattage :		254.4V	P
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	:	N/A	N/A
	- test 4: 1.1 times rated voltage or 1,05 times rated wattage:		N/A	N/A

Temperature measurements, (°C)

Part	Clause 12.4 – normal				Clause 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	Limit
Internal wiring	65°C	66°C	-	90°C	-	-
Enclosure (metallic)	54°C	56°C	-	70°C	-	-
LED DRIVER 1	68°C	70°C	-	80°C	-	-
LED DRIVER 2	67°C	69°C	-	80°C	-	-
LED DRIVER 3	68°C	70°C	-	80°C	-	-
LED DRIVER 4	69°C	71°C	-	80°C	-	-
LED DRIVER 5	66°C	68°C	-	80°C	-	-
LED DRIVER 6	68°C	70°C	-	80°C	-	-
Led PCB	74°C	75°C	-	130°C	-	-
Supply cable	62˚C	63˚C	-	90°C	-	-

SUPPLEMENTARY INFORMATION: NIL

ANNEX 3	**Screw terminals (part of the luminaire)**			N/A
(14)	**SCREW TERMINALS**			N/A
(14.2)	Type of terminal	:	No screw terminal used	N/A
	Rated current (A)	:	See above	N/A
(14.3.2.1)	One or more conductors		See above	N/A
(14.3.2.2)	Special preparation		See above	N/A
(14.3.2.3)	Terminal size		See above	N/A
	Cross-sectional area (mm²)	:	See above	N/A
(14.3.3)	Conductor space (mm)	:	See above	N/A
(14.4)	Mechanical tests			N/A
(14.4.1)	Minimum distance		See above	N/A
(14.4.2)	Cannot slip out		See above	N/A

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 40 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

(14.4.3)	Special preparation	See above	N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) :	See above	N/A
	External wiring	See above	N/A
	No soft metal	See above	N/A
(14.4.5)	Corrosion	See above	N/A
(14.4.6)	Nominal diameter of thread (mm) :	See above	N/A
	Torque (Nm) :	See above	N/A
(14.4.7)	Between metal surfaces	See above	N/A
	Lug terminal	See above	N/A
	Mantle terminal	See above	N/A
	Pull test; pull (N) :	See above	N/A
(14.4.8)	Without undue damage	See above	N/A

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

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 41 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples):					See above				N/A
(15.7)	Terminals external wiring					See above				N/A
	Terminal size and rating					See above				N/A
(15.8.1)	Pull test spring-type terminals or welded connections (4 samples); pull(N) :					See above				N/A
	Pull test pin or tab terminals (4 samples); pull (N) :					See above				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									
	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)										

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 42 of 46
Dated: 21.12.2023		**ULR:- B-TL110423000000424**

Annex 5

Photometric test

Sr. No.	Tests	Test / Requirement name	Test result/ observation	Verdict
1.	Photometric Results (IS 16107-2-1:2012 & Customer's Specifications)	Total Luminous flux: The luminous flux shall not be less than 90 %of the rated lumen. (Declared Value: 30000lm)	30509lm	P
		Luminaire Efficacy: It shall not be less than 90% of the rated luminaire efficacy (Declared Value:100 lm/W)	101.78lm/W	P
		Luminous Intensity Distribution	Graph Attached	----
		Peak Intensity: It shall not be less than 75 percent of the rated intensity. (Declared Value:16000cd)	16005cd	P
		Beam Angle: It shall not deviate by more than 25 % of the rated value. (Declared Value: 85°)	85.6°	P
		Correlated Colour Temperature (CCT) (Declared Value:5700±500K)	5880K	P
		Chromaticity Coordinates	x=0.3295, y=0.3407	P
		Colour Rendering Index (CRI) (Declared Value: >70)	72.3	P
2.	Electrical Results (IS 16107-2-1:2012 & Customer's Specifications)	Input Power: It shall not exceed the rated power by more than 10%. (Rated Power: 300W)	299.75W	P
		Current	1.300A	P
		Power factor	0.971	P

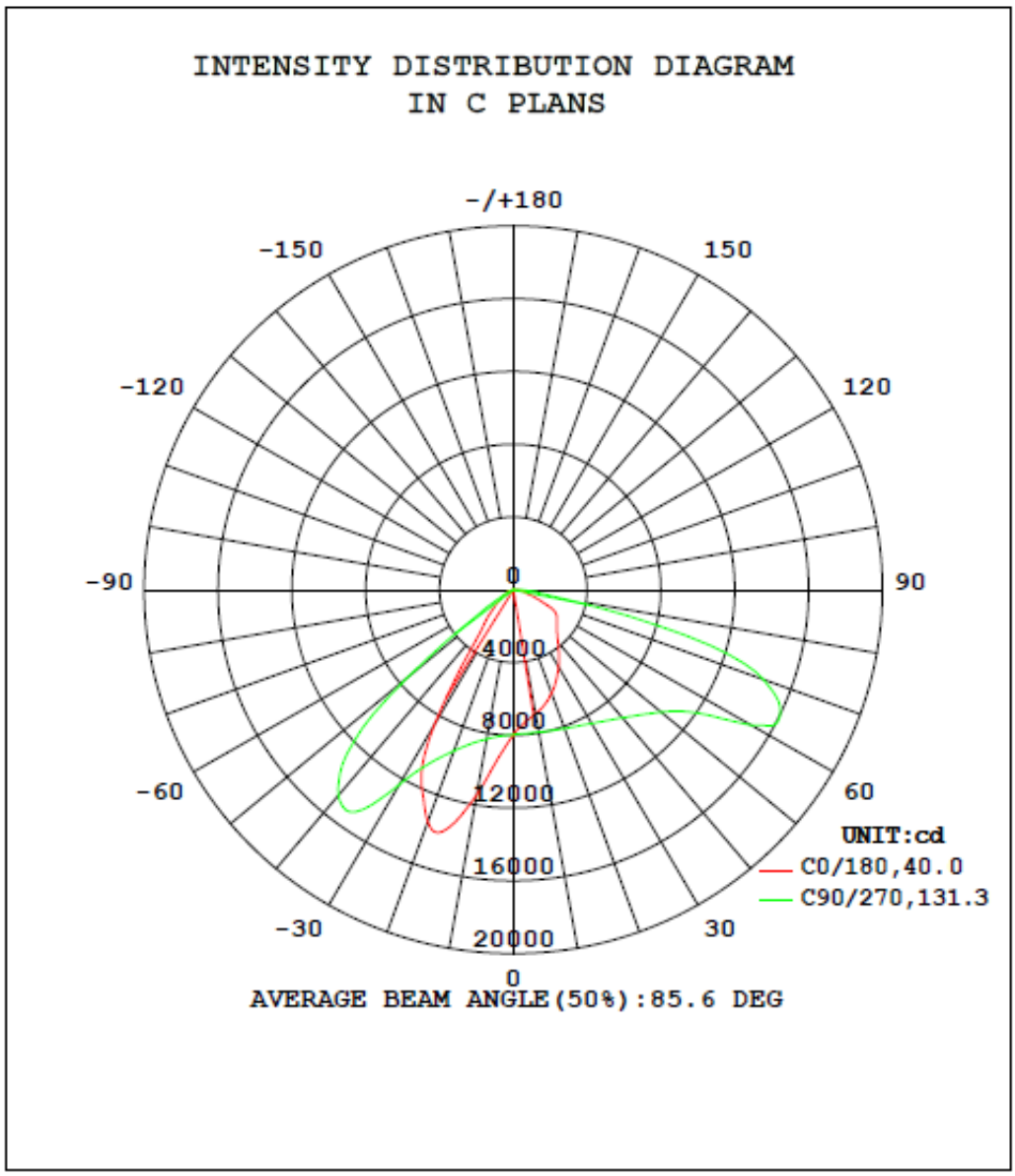
ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 43 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Attachment- 1

LIGHT DISTRIBUTIVE CURVE



TRFNo.BIS_LUM/LRSL_IS10322-5-3_V1.0

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

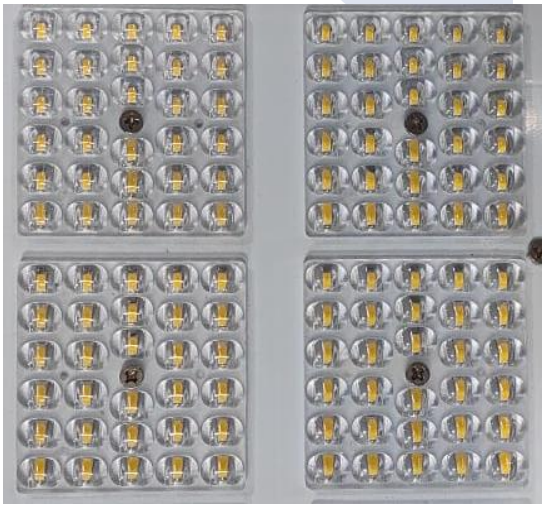
Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 44 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

Attachment: 2

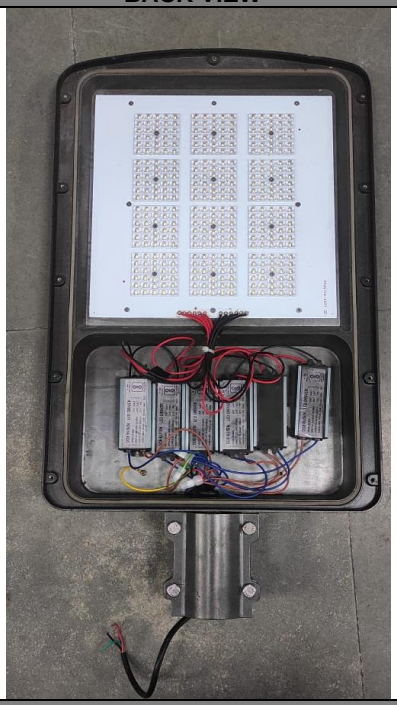
PHOTO DOCUMENT:

FRONT VIEW

BACK VIEW



LED PCB VIEW



INTERNAL VIEW

TRFNo.BIS_LUM/LRSL_IS10322-5-3_V1.0

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

TEST REPORT

Report No.: SC23EPI15810_1	IS 10322 (Part 5/Sec 3): 2012 + A1:2015	Page 45 of 46
Dated: 21.12.2023		ULR:- B-TL110423000000424

DRIVER VIEW (6 Nos)

XXXX END OF TEST REPORT XXXX

ATCC TEST LABS 45/6 Prahalad Pur Bangar Delhi-110042

End of Report