U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

Discipline :- Photometry Testing
Test Report No.: HTPL/19050-01/01
Name of Group :- Luminaries

Certificate Number-TC-7634

Test Report

Electrical and Photometric Measurements (IES LM-79-08 / IS 16106:2012)

Model: HLSLD-09-30-CWL-R-P , Make : HALONIX
Test Report Number: HTPL/19050-01/01, Release Date: 30/09/2019

- The results of testing in this report apply only to the sample product/item, which was tested. Other similar equipment/ Product/ Model will not necessarily produce the same results due to production tolerance, measurement uncertainties or any subsequent changes in the same model by the manufacturer.
- This test report is not to be reproduced except in full, without written approval of the laboratory.
- Parameters Marked with * in a report having NABL Symbol means Parameters are not covered in the scope of Accreditation.
- Test Report Issued without NABL Symbol means parameters in report are not covered in the scope of accreditation.
- Verdict wherever marked with P defines "Pass", F defines "Fail", NA Defines "Not Applicable".

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

TEST REPORT AS PER: IES LM-79-08 / IS 16106:2012 Test Report No.: HTPL/19050-01/01

Name & Address of Customer:	Test Report No.: HTPL/19050-01/01 Date of Issue: 30/09/2019		
Halonix Technologies Pvt. Ltd. B-31 Phase-2 ,Gautam Buddha Nagar , Noida(U.P.)-201305	Customer Ref. & Date:		
	Date of Sample Receipt: 30/09/2019	Start of Test Date; 30/09/2019	End of Test Date: 30/09/2019
Testing laboratory and its address:	HTPL Laboratory , Plot No.-5, Sector -12, IIE, SIDCUL, Haridwar, Uttarakhand-249403		

PART A – PARTICULARS OF THE SAMPLE SUBMITTED

Sample description:	Luminaires for Road and Street Lights
Grade/variety/type/class/size etc.	240Vac, 50Hz, 30W,5700K, P.F>0.95,IP 66, -10°C to + 50°C
Declared values, if any	Rated Voltage: 240Vac, Test Voltage: 240Vac, Rated Wattage: 30W, Rated Frequency: 50Hz, Rated Colour Temperature: 5700K,Operating Temperature : -10°C to +50°C
Brand Name and Model	HALONIX HLSLD-09-30-CWL-R-P
Quantity	1 No.
Condition of the sample	OK
Reference specification (s)	IES LM-79-08 / IS 16106:2012 (Tests have been carried out as per customer's request)
Environmental conditions:	Temperature: (25±1)°C & Relative Humidity <65%

Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

Test Report No.: HTPL/19050-01/01

PART B – TEST RESULT

Test Equipment:

S.No.	Equipment ID	Equipment Name	Make	Traceability	Calibration Valid Upto
1	HTPL/67-1	Digital Power meter PF2010	EVERFINE	ERTL(N)/90(4)-2018-19/A0721	11/01/2020
2	HTPL/68-1	AC Power Source	EVERFINE	C&IJ/CAL/18-07/028	11/01/2020
3	HTPL/71-1	Total Spectral Radiant Flux Standard Lamp	EVERFINE	NPL	22/07/2020

Test Results:

S. No	TESTS WITH CLAUSE REFERENCE		SPECIFIED REQUIREMENT	RESULTS
1.	Photometric Results (IES LM-79-08)	i)	Total Luminous Flux	3306.75lm
		ii)	Luminous Efficacy	113.69 lm/W
		iii)	Luminous intensity	2200 cd
		iv)	Luminous intensity distribution	Graph Attached
		v)	Chromaticity Co-ordinates	x= 0.3263 y= 0.3402
		vi)	Correlated Colour Temperature	5775 K
		vii)	Color Rendering Index	74.2
2.	Electrical Results (IES LM-79-08)	i)	Input Power	29.087W
		ii)	Input Voltage	240.10Vac
		iii)	Input Current (Amps)	0.1228 A
		iv)	Power Factor	0.9865
		v)	Input Frequency (Hertz)	50Hz
3.	Additional Parameters	i)	Stabilization time	60 Minutes
		ii)	Photometric Method Used	IES LM-79-08 Using C type- Gonio photometer

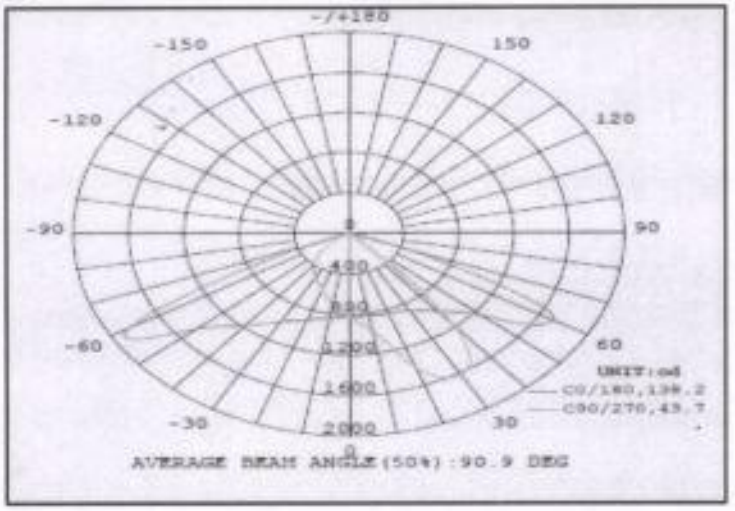
Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

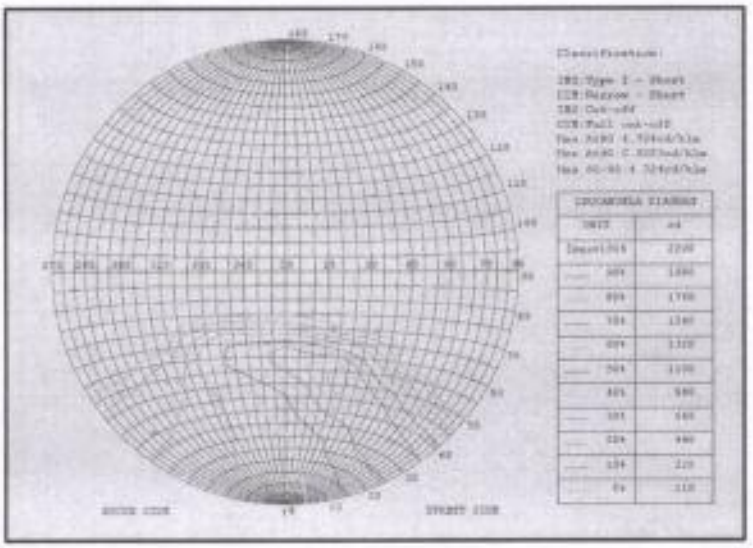
PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

Intensity Distribution Graph



Street light Isocandela Diagram



Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

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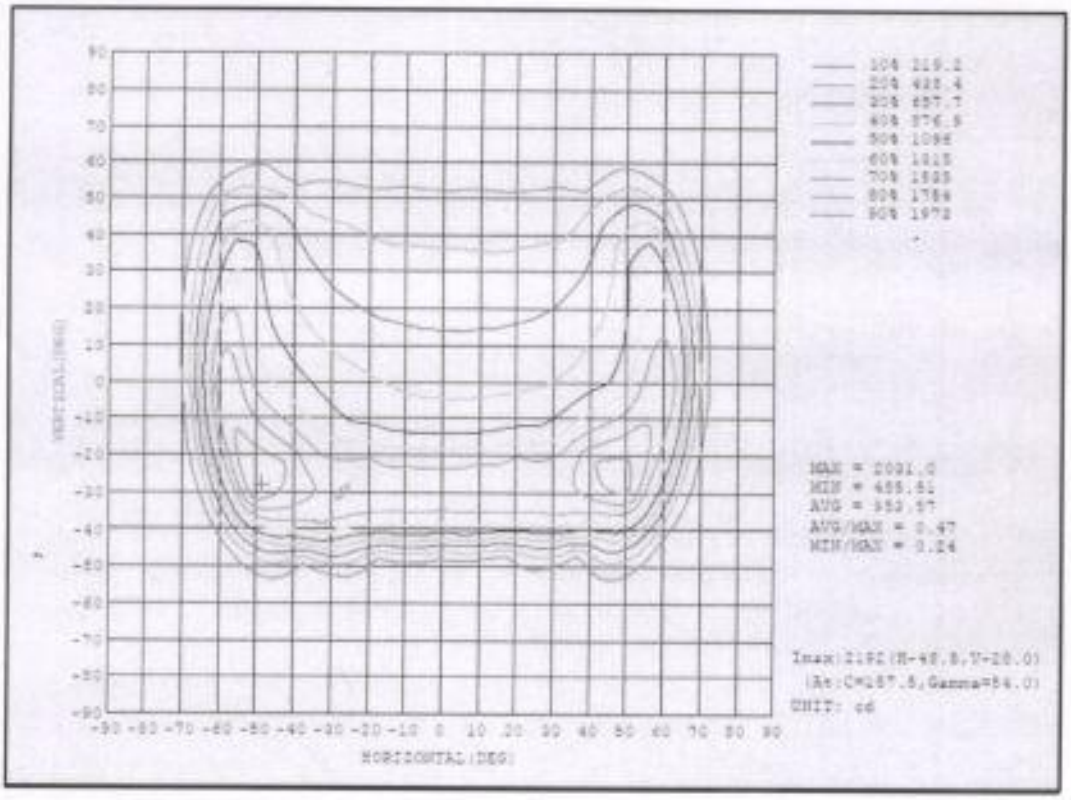
PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

ISOLUX DIAGRAM



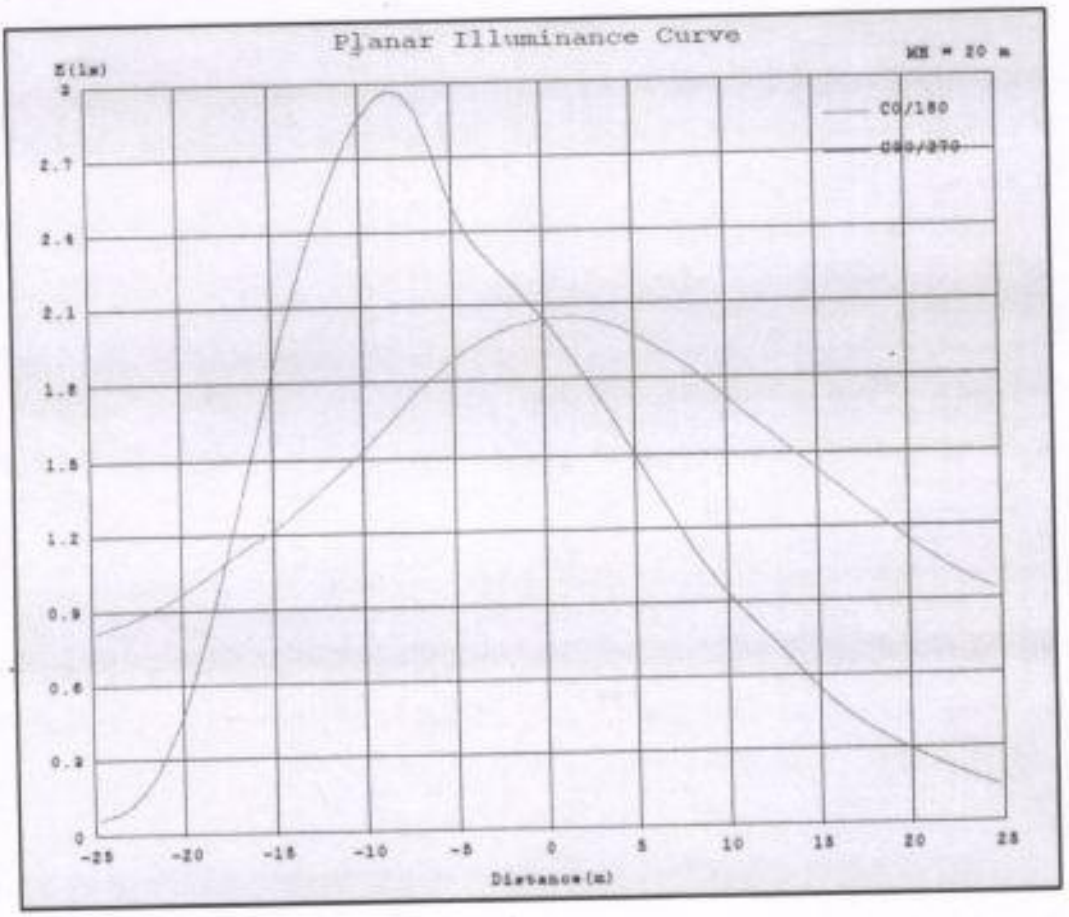
Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

Planer Illuminance Curve



Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

Luminous Distribution Intensity Data

Table--1 UNIT: cd

γ (DEG) \ C (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816			
5	815	837	860	876	883	881	865	846	828	801	779	763	756	761	774	799			
10	818	870	918	956	973	963	928	883	846	795	746	714	702	710	738	783			
15	828	906	996	1097	1143	1092	1006	923	870	788	714	663	644	655	699	772			
20	839	951	1142	1358	1406	1347	1136	976	905	786	679	612	586	601	660	758			
25	849	1014	1393	1557	1568	1542	1374	1057	950	791	645	562	535	550	618	744			
30	878	1124	1609	1646	1620	1627	1585	1169	1005	801	614	521	502	502	574	732			
35	924	1346	1730	1613	1529	1599	1723	1328	1081	816	584	481	454	459	534	740			
40	1005	1656	1729	1364	1180	1386	1766	1598	1178	850	554	431	388	407	497	761			
45	1094	1924	1575	790	547	871	1680	1876	1288	901	526	383	334	355	464	793			
50	1259	2124	1170	175	124	243	1399	2121	1458	981	491	324	259	294	422	875			
55	1562	2089	453	80.5	72.9	85.1	746	2191	1791	1131	439	206	147	168	363	1029			
60	1712	1533	97.7	59.4	54.9	61.7	151	1642	1847	1229	313	80.3	63.0	78.3	249	1155			
65	1221	659	56.8	45.5	40.3	45.7	62.2	827	941	1005	193	45.7	45.2	44.8	86.3	1032			
70	424	95.9	37.3	32.3	26.0	30.9	36.4	95.3	218	570	38.8	31.9	31.1	31.9	36.7	492			
75	101	29.0	22.0	16.6	13.0	15.6	19.7	26.8	36.6	85.9	17.8	18.4	17.3	19.7	17.0	78.8			
80	10.4	8.49	11.4	4.77	3.73	4.52	8.60	8.08	9.16	13.7	6.58	6.83	6.42	6.96	6.34	15.6			
85	2.37	2.13	1.99	0.55	0.39	0.51	0.96	1.88	2.38	2.57	1.38	1.12	0.97	1.12	1.28	1.96			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01			
125	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.03			
130	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.03			
135	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.02			
140	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.00	0.00	0.00	0.02	0.02			
145	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.02	0.03			
150	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.02			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

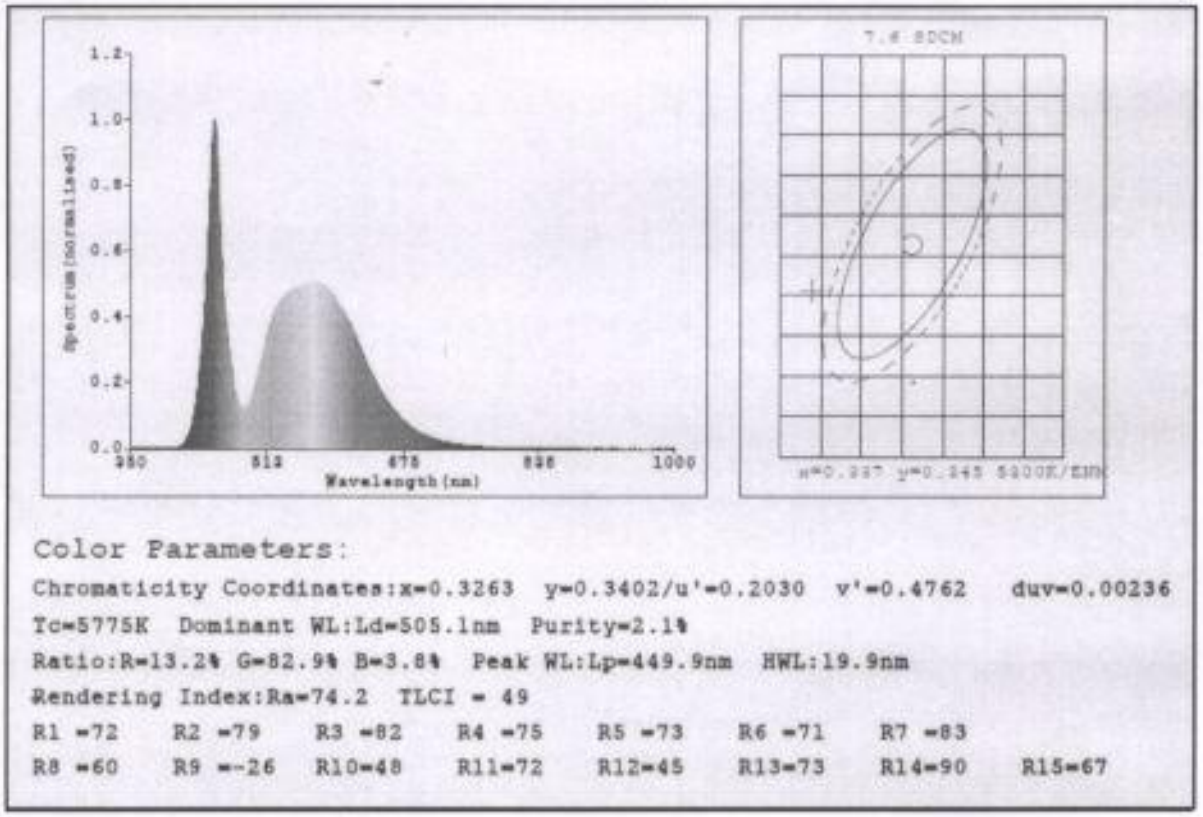
Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

Spectral Parameter



Color Parameters:

Chromaticity Coordinates:x=0.3263 y=0.3402/u'=0.2030 v'=0.4762 duv=0.00236

Tc=5775K Dominant WL:Ld=505.1nm Purity=2.1%

Ratio:R=13.2% G=82.9% B=3.8% Peak WL:Lp=449.9nm HWL:19.9nm

Rendering Index:Ra=74.2 TLCI = 49

R1 =72	R2 =79	R3 =82	R4 =75	R5 =73	R6 =71	R7 =83
R8 =60	R9 =-26	R10=48	R11=72	R12=45	R13=73	R14=90	R15=67

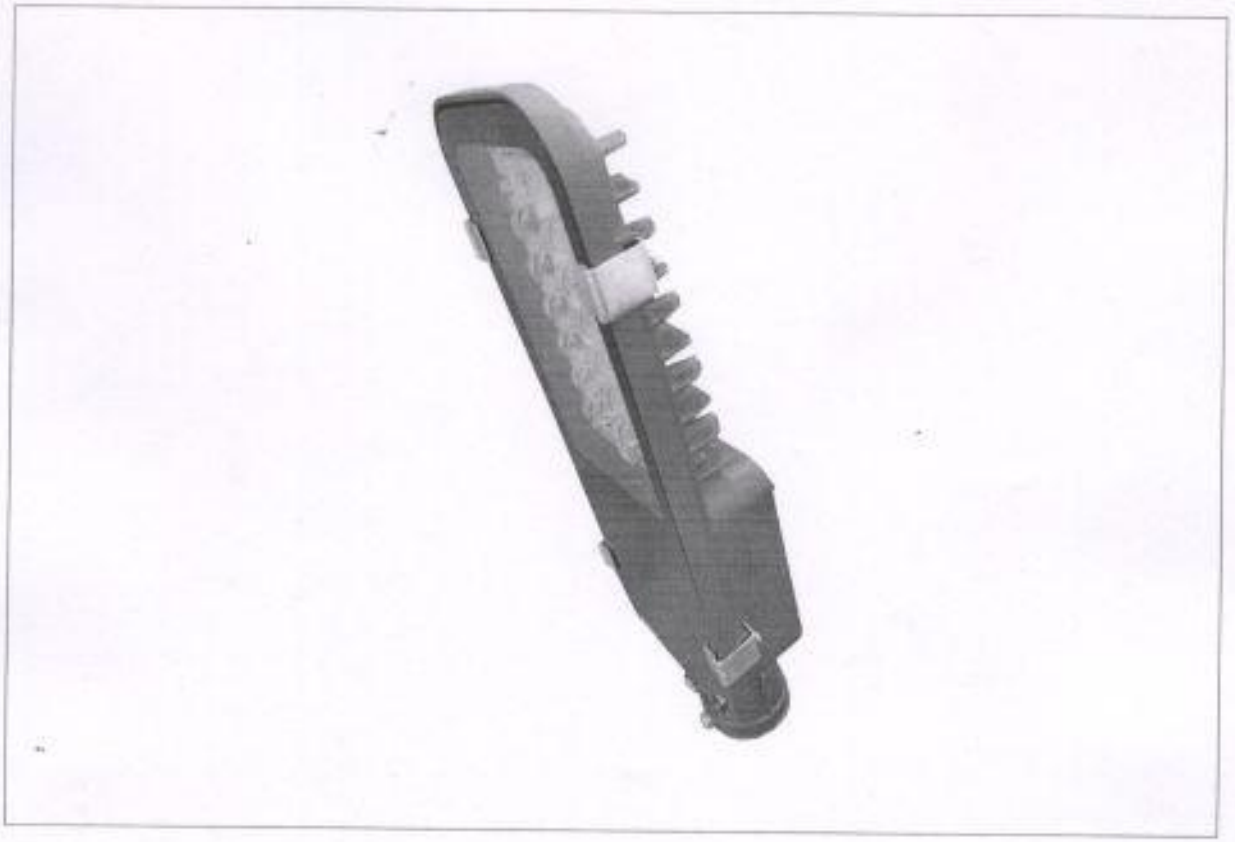
Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	6	3	F

PART B – TEST RESULT

Test Report No.: HTPL/19050-01/01

Photo Graph :



PART C:

Remarks: 1. The observations given in part A of the cover page of the test report are taken from the marking on the sample given by customer.

Tested by:	Issued by:	Approved by:
Test Engineer(Sanjay Pant)	Technical Manager (Pradeep Rawat)	Quality Manager (Chandra Kishore)
Dated : 30/09/2019	Dated : 30/09/2019	Dated : 30/09/2019