

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	4	7	F
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Discipline :- Photometry Testing  
Name of Group :- Luminaries

Test Report No.: HTPL/19034-01/01



Certificate Number-TC-7634

# Test Report

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

Model: HLSD-15-60-CWL-R-SH-P, Make : HALONIX

Test Report Number: HTPL/19034-01/01, Release Date: 05/09/2019

- 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".

HTPL LABORATORY  
(NABL Accredited Laboratory)

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	4	7	F
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TEST REPORT AS PER: IES LM-79-08 / IS 16106:2012

Test Report No.: HTPL/19034-01/01

Name & Address of Customer:  Halonix Technologies Pvt. Ltd. B-31 Phase-2 ,Gautam Buddha Nagar , Noida(U.P.)-201305	Test Report No.: HTPL/19034-01/01		
	Date of Issue: 05/09/2019		
	Customer Ref. & Date:		
	Date of Sample Receipt: 05/09/2019	Start of Test Date; 05/09/2019	End of Test Date: 05/09/2019
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:	Luminaries for Road and Street Lighting
Grade/variety/type/class/size etc.	240Vac, 50Hz, 60W, 5700K, P.F>0.95,IP 66, -10°C to + 50°C
Declared values, if any	Rated Voltage: 240Vac, Test Voltage: 240Vac, Rated Wattage: 60W, Rated Frequency: 50Hz, Rated Colour Temperature: 5700K,Operation Temperature : -10°C to +50°C
Brand Name and Model no.	<b>HALONIX</b> HLSLD-15-60-CWL-R-SH-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( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019



**HTPL LABORATORY**  
(NABL Accredited Laboratory)

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

**PART B – TEST RESULT**


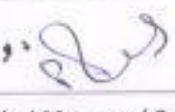

Test Report No.: HTPL/19034-01/01

**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	26/07/2019

**Test Results:**

S. No	TESTS WITH CLAUSE REFERENCE		SPECIFIED REQUIREMENT	RESULTS
1.	Photometric Results (IES LM-79-08)	i)	Total Luminous Flux	6458.6lm
		ii)	Luminous Efficacy	108.27 lm/W
		iii)	Luminous intensity	4779 cd
		iv)	Luminous intensity distribution	Graph Attached
		v)	Chromaticity Co-ordinates	x= 0.3276 y= 0.3435
		vi)	Correlated Colour Temperature	5712 K
		vii)	Color Rendering Index	81.3
2.	Electrical Results (IES LM-79-08)	i)	Input Power	59.65W
		ii)	Input Voltage	240Vac
		iii)	Input Current (Amps)	0.252 A
		iv)	Power Factor	0.988
		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

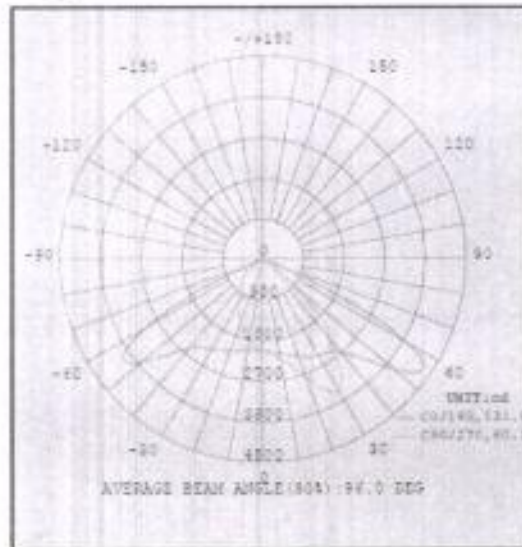
Tested by:	Issued by:	Approved by :
		
Test Engineer( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019

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

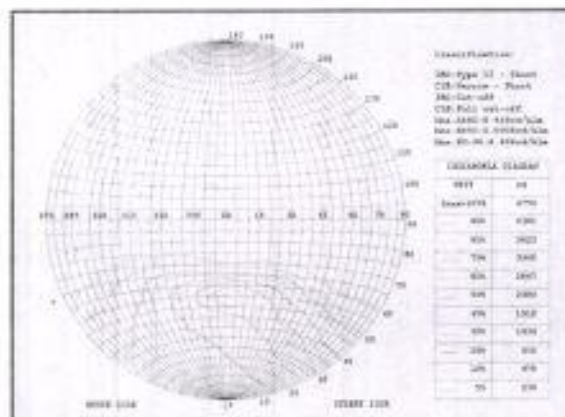
**PART B – TEST RESULT**




Test Report No.: HTPL/19034-01/01

Intensity Distribution Graph



Streetlight Isocandela Diagram



Tested by:	Issued by:	Approved by :
		
Test Engineer( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019

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

**PART B – TEST RESULT**

Test Report No.: HTPL/19034-01/01

Zonal Flux Diagram

Y	00	045	090	0135	0180	0225	0270	0315	Y	Φ <sub>zone</sub>	Φ <sub>total</sub>	κ <sub>zone, lamp</sub>
10	2093	2009	2242	3127	3039	1874	1825	1932	0-10	183.7	183.7	2.66, 2.66
20	2263	2677	2741	2472	2144	1470	1507	1848	10-20	599.4	790.2	10.4, 10.4
30	2452	3560	3358	3115	3099	1360	1152	1702	20-30	1053	1843	25.3, 25.3
40	2492	3585	2296	3807	2558	989.3	821.9	1459	30-40	1497	3340	41.4, 41.4
50	3794	2764	407.2	3130	3523	688.9	559.9	1160	40-50	1892	4492	64.1, 64.1
60	3497	378.1	171.9	1511	2973	422.1	193.0	773.2	50-60	1551	6313	82.4, 82.4
70	241.3	144.0	77.04	201.8	359.3	242.2	84.18	377.9	60-70	458.2	7164	94.4, 94.4
80	27.11	29.49	19.47	20.13	20.80	16.82	23.82	27.96	70-80	110.3	7379	99.8, 99.8
90	0.0061	0.0000	0	0	0	0	0	0	80-90	8.117	7297	100, 100
100	0	0	0	0	0.0018	0	0	0	90-100	0.0005	7387	100, 100
110	0.0197	0	0	0	0.0430	0	0	0.0029	100-110	0.0034	7387	100, 100
120	0.0935	0	0	0.0217	0.1131	0.0056	0	0.0544	110-120	0.0278	7297	100, 100
130	0.1007	0.0157	0.0135	0.0279	0.1030	0.0892	0.0034	0.1079	120-130	0.0399	7299	100, 100
140	0.0302	0.0367	0.1324	0.0574	0.0870	0.0560	0.3063	0.1262	130-140	0.0432	7288	100, 100
150	0.0458	0.0094	0.0027	0.0318	0.0731	0.0311	0.3511	0.0890	140-150	0.0396	7288	100, 100
160	0.0190	0.0023	0.0178	0.0044	0.0104	0.0000	0.0938	0.0420	150-160	0.0143	7288	100, 100
170	0.0069	0.0102	0.0115	0.0042	0.0202	0.0190	0.0322	0.0460	160-170	0.0043	7288	100, 100
180	0	0	0	0	0	0	0	0	170-180	0.0018	7288	100, 100
000	LUMINOUS INTENSITY: cd									UNIT: lm		

Tested by:	Issued by:	Approved by :
		
Test Engineer( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019



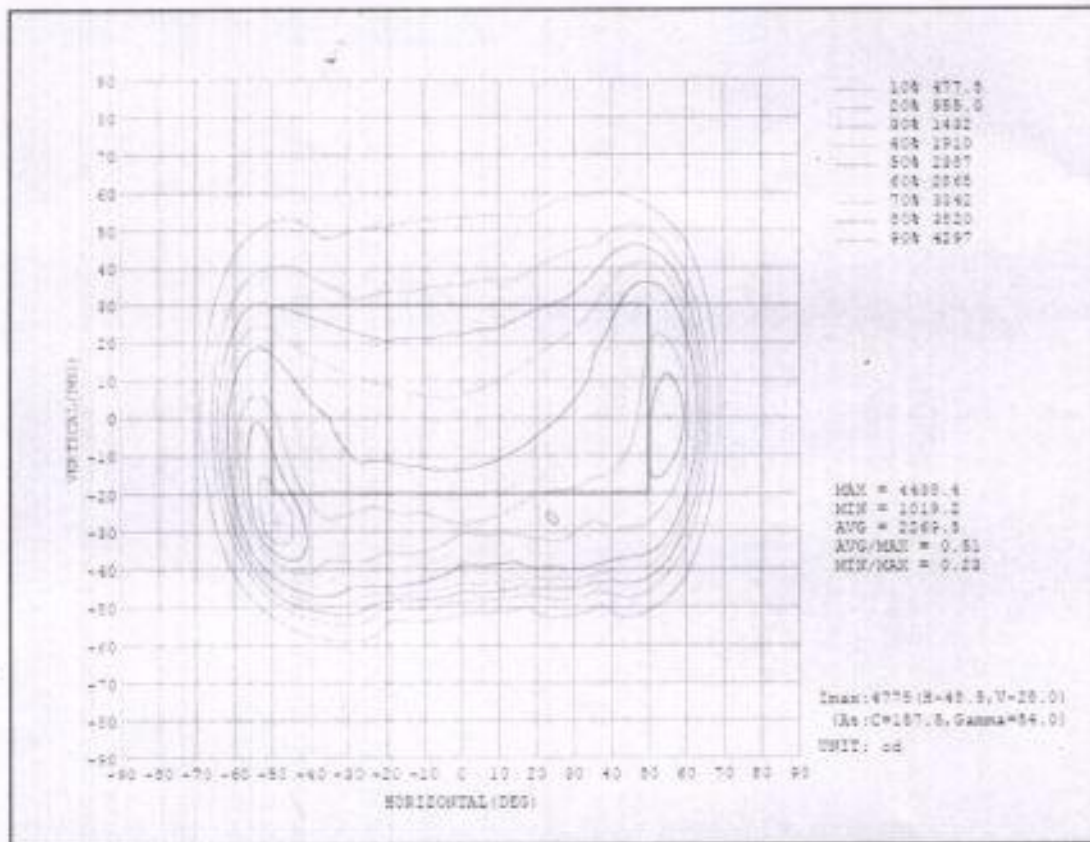
**HTPL LABORATORY**  
(NABL Accredited Laboratory)



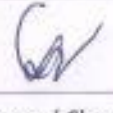
U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	4	7	F
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**PART B – TEST RESULT**

Test Report No.: HTPL/19034-01/01

Isocandela Diagram



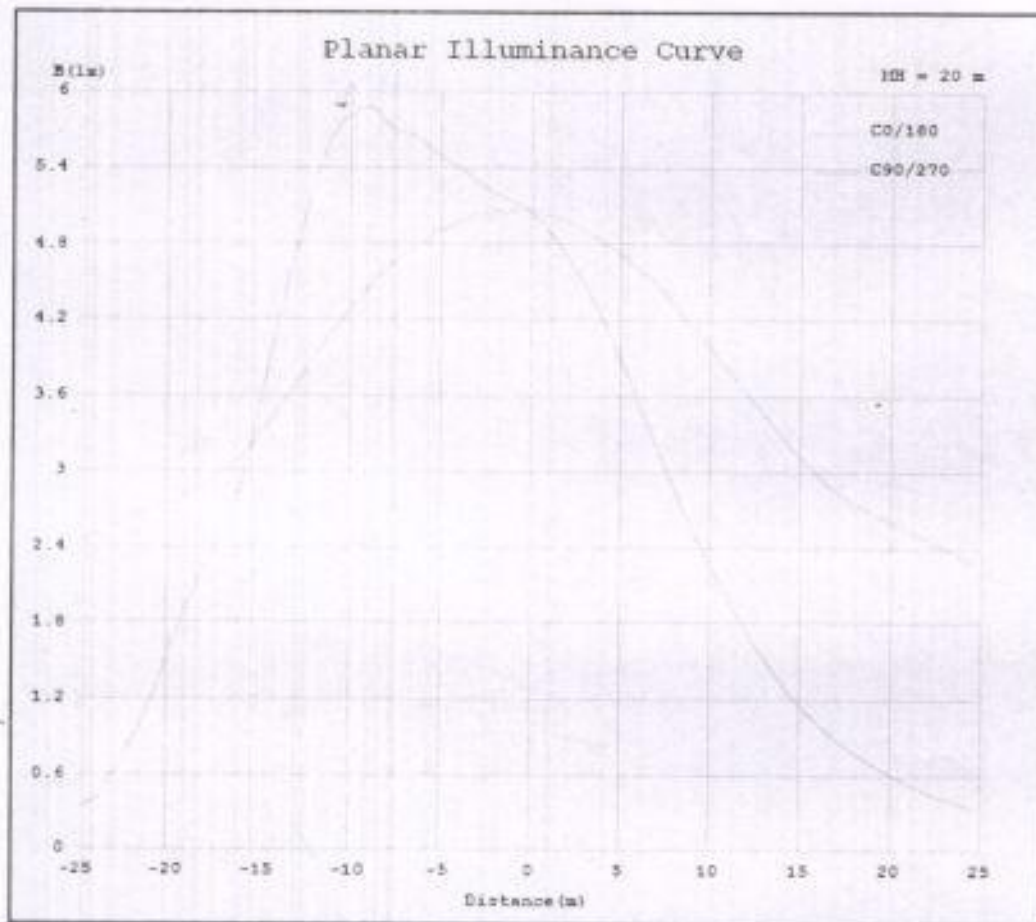
Tested by:	Issued by:	Approved by :
		
Test Engineer( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019




U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	0	4	7	F
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PART B - TEST RESULT

Test Report No.: HTPL/19034-01/01

Planer Illuminance Curve



Tested by:	Issued by:	Approved by :
		
Test Engineer( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019

**HTPL LABORATORY**  
(NABL Accredited Laboratory)

U	L	R	-	T	C	7	6	3	4	1	9	0	0	0	0	0	0	4	7	F
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**PART B – TEST RESULT**

Test Report No.: HTPL/19034-01/01

**Luminous Distribution Intensity Data**

Table--1																	UNIT: cd	
C(DDG)																		
θ (DDG)	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	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023		
5	2049	2074	2092	2102	2099	2087	2067	2041	2021	1985	1951	1933	1927	1948	1975	2019		
10	2093	2149	2209	2244	2242	2209	2137	2080	2039	1953	1874	1829	1825	1871	1932	2037		
15	2173	2282	2399	2456	2456	2397	2284	2155	2003	1929	1785	1693	1680	1749	1901	2069		
20	2243	2452	2677	2742	2741	2697	2472	2251	2144	1915	1670	1525	1507	1616	1848	2122		
25	2342	2632	3049	3174	3142	3154	2736	2339	2208	1892	1526	1349	1327	1445	1786	2187		
30	2452	2842	3560	3421	3358	3416	3117	2405	2289	1859	1360	1170	1152	1270	1702	2244		
35	2519	3131	3881	3132	3005	3700	3556	2477	2396	1825	1179	984	971	1092	1589	2305		
40	2682	3462	3585	2411	2294	3108	3807	2701	2558	1780	990	826	821	918	1459	2413		
45	3114	3665	2901	1895	1724	2643	3645	3294	2961	1700	824	687	686	768	1314	2601		
50	3786	3681	2344	743	607	1587	3130	4278	3523	1589	669	554	554	630	1160	2879		
55	4300	3336	1107	340	346	534	2707	4766	3775	1470	530	443	423	502	980	3001		
60	3697	2442	378	229	172	270	1511	3538	2973	1206	422	201	193	397	773	2544		
65	1466	935	244	121	111	172	552	1047	1259	821	332	135	157	280	583	1438		
70	241	312	144	81.3	77.1	88.5	202	206	359	407	242	75.1	86.2	156	378	480		
75	87.5	130	73.2	56.5	49.4	50.7	59.3	97.4	134	142	99.3	45.0	50.2	67.1	125	230		
80	27.1	39.1	28.5	24.7	19.5	23.1	20.2	27.8	28.8	26.7	19.8	22.4	25.8	21.2	28.0	61.7		
85	6.96	6.49	4.17	3.32	1.61	3.49	3.76	4.62	5.73	3.22	2.64	2.65	3.26	3.47	4.91	6.41		
90	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.02	0.04	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	0.01	0.02	0.01	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	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.03	0.00	0.00	0.00	0.00	0.13		
115	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.10	0.06	0.00	0.00	0.00	0.00	0.03	0.09		
120	0.08	0.02	0.00	0.00	0.00	0.00	0.02	0.07	0.11	0.08	0.01	0.00	0.00	0.00	0.06	0.12		
125	0.11	0.03	0.00	0.00	0.00	0.01	0.03	0.10	0.12	0.09	0.02	0.00	0.00	0.02	0.09	0.13		
130	0.10	0.03	0.02	0.00	0.01	0.02	0.03	0.09	0.10	0.07	0.04	0.00	0.00	0.05	0.11	0.11		
135	0.08	0.05	0.03	0.02	0.03	0.04	0.05	0.07	0.07	0.07	0.05	0.00	0.03	0.08	0.13	0.09		
140	0.09	0.04	0.04	0.03	0.03	0.04	0.06	0.08	0.09	0.09	0.06	0.02	0.06	0.08	0.13	0.09		
145	0.09	0.05	0.03	0.02	0.03	0.02	0.05	0.07	0.09	0.08	0.05	0.02	0.05	0.04	0.12	0.09		
150	0.07	0.04	0.01	0.02	0.02	0.01	0.03	0.05	0.07	0.07	0.03	0.03	0.05	0.05	0.09	0.08		
155	0.05	0.02	0.00	0.01	0.02	0.01	0.01	0.03	0.06	0.05	0.01	0.03	0.05	0.07	0.04	0.05		
160	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.00	0.03	0.05	0.06	0.04	0.01		
165	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.04	0.05	0.05	0.05	0.02		
170	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.02	0.02	0.02	0.03	0.03	0.04	0.05	0.04		
175	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.03	0.03	0.02	0.01	0.01	0.03	0.04	0.05		
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( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019

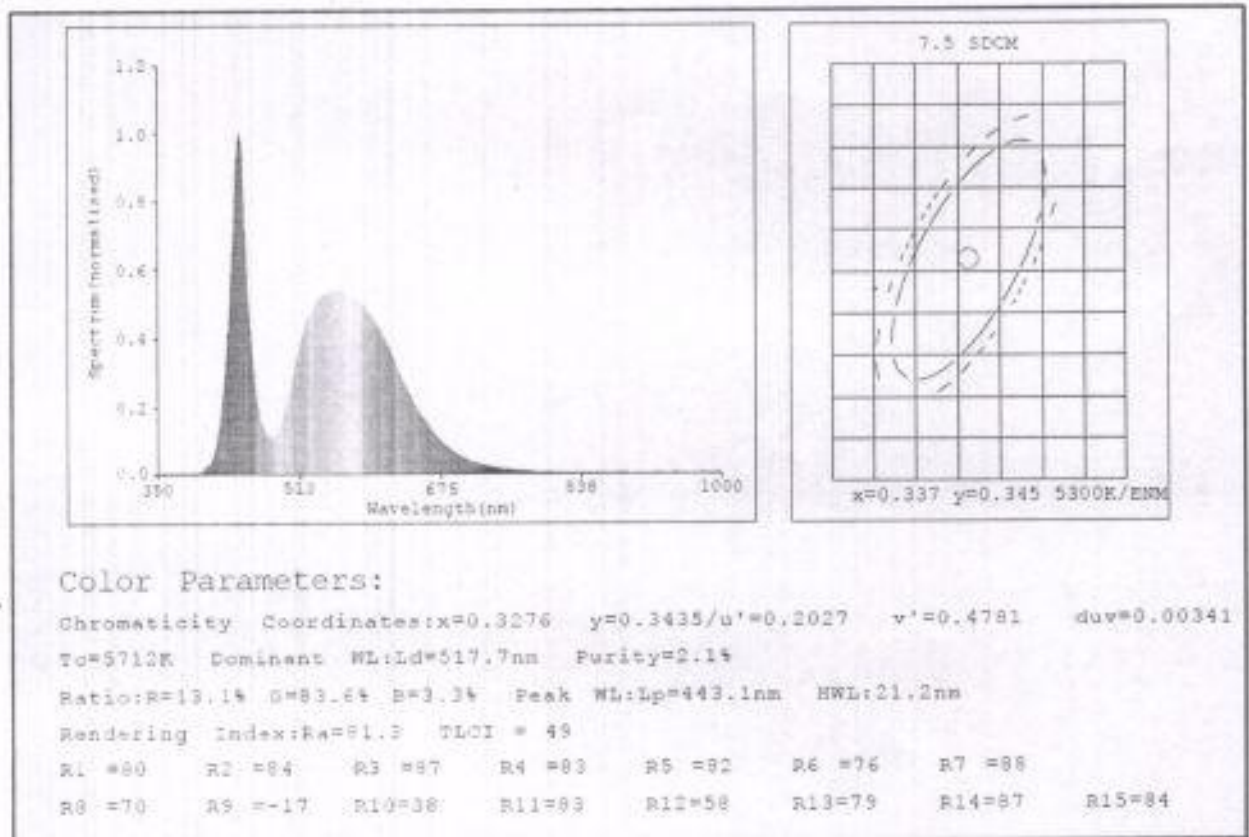


U L R - T C 7 6 3 4 1 9 0 0 0 0 0 0 4 7 F

**PART B – TEST RESULT**

Test Report No.: HTPL/19034-01/01

Spectral Parameter



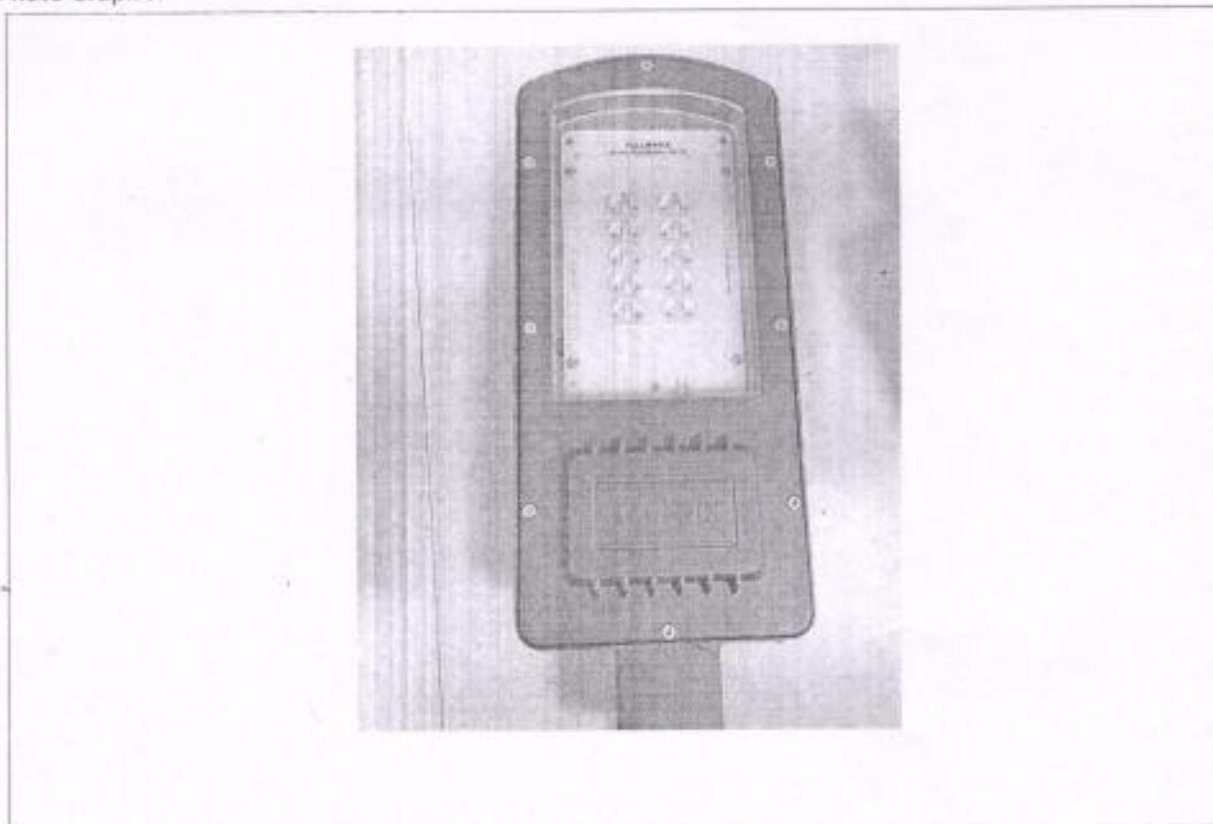
Tested by:	Issued by:	Approved by:
Test Engineer ( Ajay Dhiman )	Technical Manager ( Pradeep Rawat )	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019

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

**PART B – TEST RESULT**




Test Report No.: HTPL/19034-01/01

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( Ajay Dhiman )	Technical Manager ( Pradeep Rawat)	Quality Manager ( Chandra Kishore )
Dated : 05/09/2019	Dated : 05/09/2019	Dated : 05/09/2019