



TEST REPORT

Of IES LM-79-08

Kunde: <i>Client:</i>	PCI Green Technologies Pty Ltd
Adresse: <i>Address:</i>	[REDACTED]
Hersteller: <i>Manufacturer:</i>	Shenzhen Karming Technologies Co.Ltd
Adresse: <i>Address:</i>	1A401 R401,1A Bld. Shenzhen Software Industry Base, Yuehai St.Nanshan Dist. Shenzhen, China
Name der Marke: <i>Brand Name:</i>	PCI Green Light
Beschreibung des Produkts: <i>Product Description:</i>	LED street lamp
Modelle: <i>Models:</i>	JML-150
Bewertung: <i>Rating:</i>	AC220-240V, 50/60Hz, 150W
Verfahren: <i>Method:</i>	IES LM-79-08: Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products
Prüfergebnis*: <i>Test result*:</i>	Please see the following test data

Datum der Prüfung: <i>Date of Test:</i>	Datum der Emission: <i>Date of Issue:</i>	Klassifizierung: <i>Classification:</i>	Gegenstand der Prüfung: <i>Test item:</i>
2022-02-16-2022-02-18	2023-01-07	Commission Test	IES LM-79-08

Prüflabor (Testlabor) / Testing Laboratory:
Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Compiled von/Compiled by:	Check von/Check by:	Genehmigt von/Approved by:
Zero Huang	Jian Luo	Jesse Liu
Zero Huang/ Project Engineer	Ian Luo/ Director	Jesse Liu/ Manager

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This report can be used by the customer to claim product certification, approval or endorsement by NVLAP,NIST,or any agency of the Federal Government.





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1. Test Method

Test Item.....	: Integrating Sphere Test
Ambient Condition	: 24.9°C
Stabilization time	(h): 0.5h
Orientation(burning position) of SSL product during test	down
Test Method	: The sample was tested according to the IES LM-79-2008. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.
Test Item.....	: Goniophotometer Test
Ambient Condition.....	: 24.9°C
Total operated time of the product for measurements including stabilization.....	(h): 1.0h
Orientation(burning position) of SSL product during test	down
Test Method.....	: The sample was tested according to the IES LM-79-2008. Photometric paramters were measured using a type C goniophotometer and software. The sample reference plane was located at the center of the sample goniometer at a test distance of 26m from the detectors. The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, Luminous efficacy, zonal flux were calculated from the software taken at 1° vertical intervals and 22.5°horizontal intervals.





2. Product Information

Product description.....	LED street lamp
Model Number.....	JML-150
Rated Inputs.....	AC220-240V, 50/60Hz
Rated Power.....	150W
Declared CCT.....	4000K
LED Manufacturer.....	N/A
LED Model.....	N/A
Forward current of the LED chip.....	N/A
Date of Receipt Samples.....	February 14, 2022
Quantity of Receipt Samples.....	1 unit

3. Test equipment list

Manufacturer	Description	Equipment ID	Model	Calibration Date	Calibration Due Date
EVERFINE	Full-field Speed Goniophotometer	SLCS-S-112	GO-R5000	2021/06/21	2022/06/20
EVERFINE	Digital Power Meter	SLCS-S-103	PF2010	2021/06/21	2022/06/20
EVERFINE	AC Testing Power Source	SLCS-S-115	DPS1060	2021/06/21	2022/06/20
EVERFINE	Total Spectral Radiant Flux Standard Lamp	SLCS-S-143	D908S	2021/07/02	2022/07/01
SENSING	2 Meter Integrating Sphere	SLCS-S-038	SPR-3000	2021/06/21	2022/06/20
YOKOGAWA	Digital Power Meter	SLCS-S-058	WT310	2021/06/21	2022/06/20
ALL POWER ELECTRONIC	AC Testing Power Source	SLCS-S-111	APW-105N	2021/06/21	2022/06/20
SENSING	Standard Lamp	SLCS-S-118	S11010017	2021/07/02	2022/07/01





4. Integrating Sphere Test Results

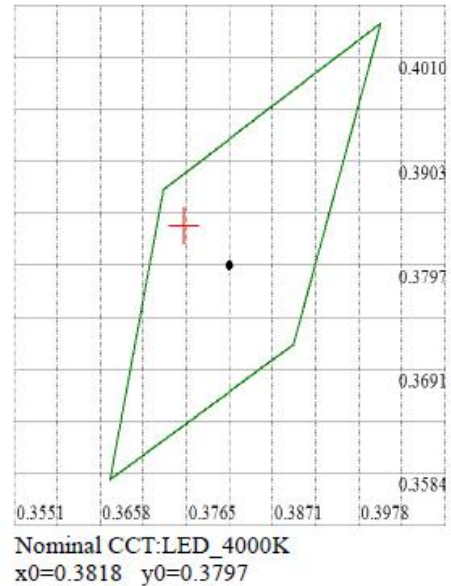
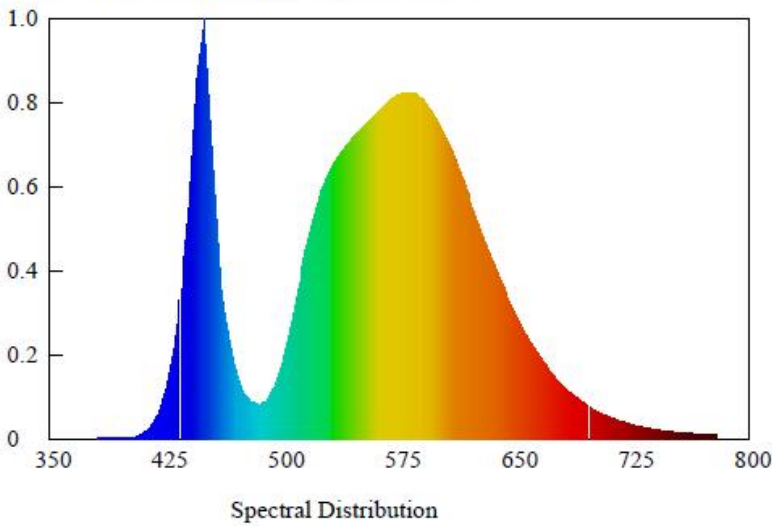
4.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	230.01	50.0	0.6547	0.9870	148.62

Test type	CCT (K)	CRI	Duv	Luminous flux (lm)	Luminaire efficacy(lm/W)
Output	4166	68.5	+0.0045	24106.16	162.2

4.2 Spectrum

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.3761$ $y=0.3837$ $u'=0.2196$ $v'=0.504$

Correlated Color Temperature: 4166 K

Colour Fidelity Index: $R_f=68$

Luminous Flux: 24106.16 lm

Chromaticity Difference: +0.0045Duv

Color Ratio: $K_r=35.7\%$ $K_g=57.8\%$ $K_b=6.5\%$

Bandwidth: 17.9nm

Rendering Index: $R_a=68.5$

$R_1=65$ $R_2=75$ $R_3=82$ $R_4=68$ $R_5=64$ $R_6=64$ $R_7=80$ $R_8=49$

$R_9=-44$ $R_{10}=40$ $R_{11}=63$ $R_{12}=32$ $R_{13}=67$ $R_{14}=90$ $R_{15}=59$ $R_e=57$

Dominant Wavelength: 575.0 nm(E)

Gamut Index: $R_g=92$

Purity: 0.2803

Peak Wavelength: 450.0 nm

Radiant Flux: 78.675 W





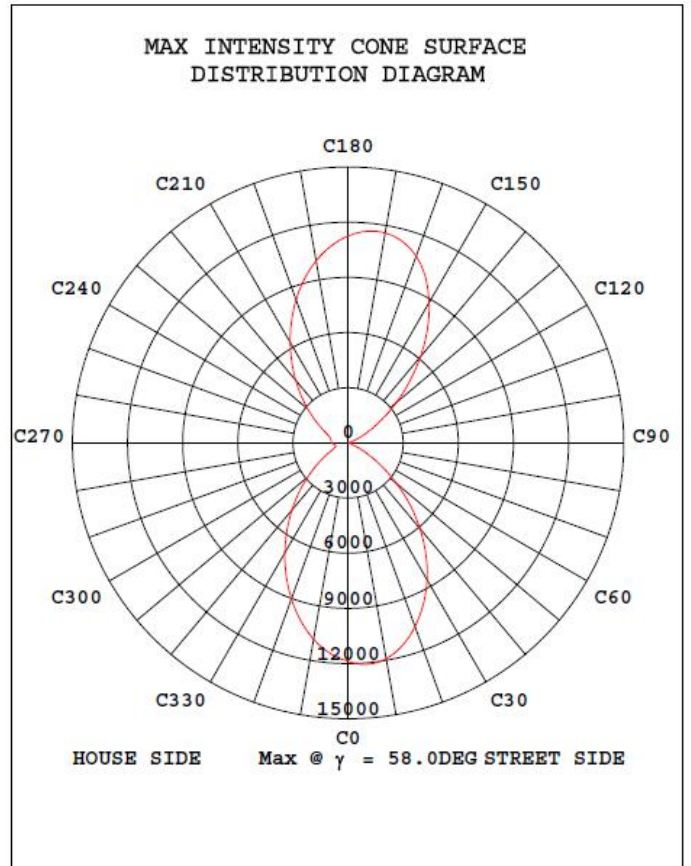
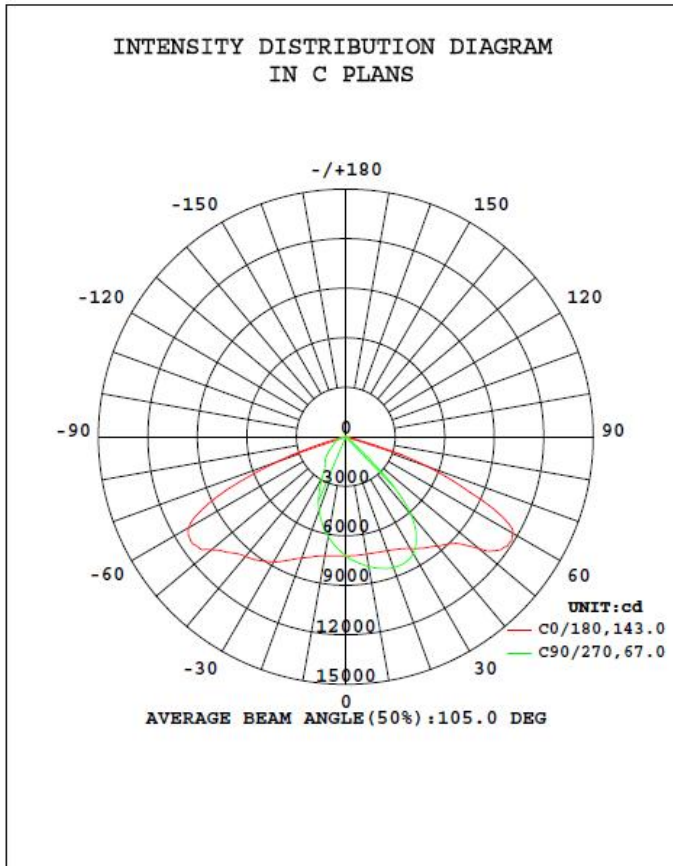
5. Goniophotometer Test results

5.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	230.0	50.01	0.6537	0.9873	148.5

Test type	Total Flux (lm)	Luminaire efficacy(lm/W)	ZL (0~90°)	ZL (80~90°)
Output	24098.4	162.32	99.7%	0.4%

5.2 Luminous Intensity Distribution Diagram and C0 Plane Isolux Diagram (Unit : lx)





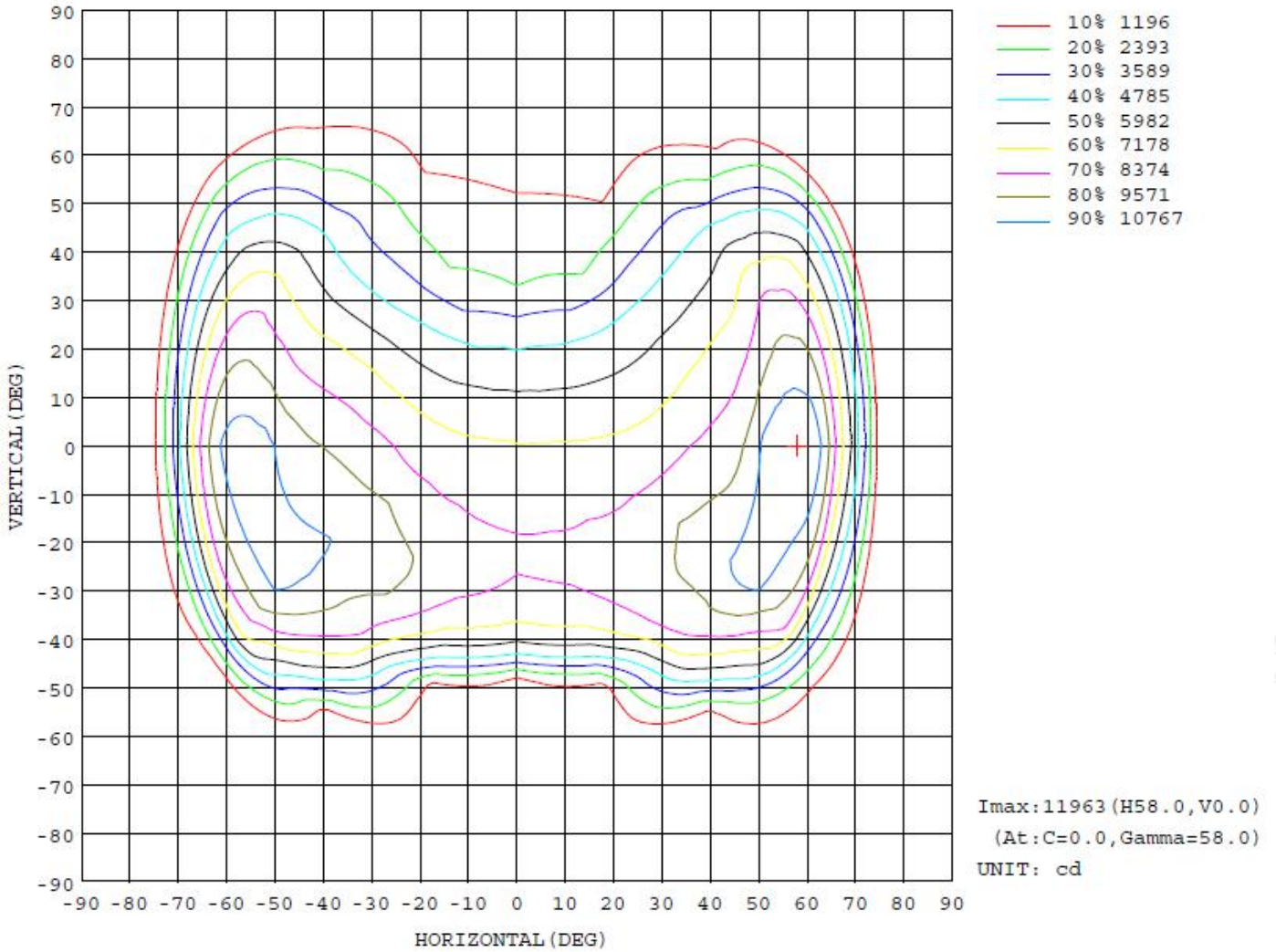
5.3 Zonal Flux Diagram

y	C0	C45	C90	C135	C180	C225	C270	C315	y	Φ zone	Φ total	lum, lamp
10	721.7	775.4	797.9	788.0	732.2	653.5	613.5	649.6	0- 10	686.3	686.3	2.85,2.85
20	734.5	827.4	843.4	869.5	781.6	583.7	476.6	581.8	10- 20	2025	2711	11.3,11.3
30	781.3	889.3	816.6	958.4	874.7	529.4	290.4	528.6	20- 30	3294	6005	24.9,24.9
40	864.6	905.3	613.0	965.0	946.7	461.6	196.8	495.5	30- 40	4375	10380	43.1,43.1
50	1051	802.9	61.78	816.0	1065	405.2	134.3	465.3	40- 50	4875	15255	63.3,63.3
60	1170	357.2	22.57	353.8	1100	327.0	83.38	325.4	50- 60	4788	20043	83.2,83.2
70	525.8	19.02	14.03	15.86	445.8	154.8	56.59	102.7	60- 70	3224	23268	96.6,96.6
80	30.44	9.636	5.538	7.831	26.22	18.15	6.854	18.01	70- 80	655.2	23923	99.3,99.3
90	10.89	5.954	2.209	6.615	11.15	6.972	3.198	6.624	80- 90	106.3	24029	99.7,99.7
100	0.6013	0.3361	0.1241	0.2866	0.5147	0.0820	0.0331	0.0834	90-100	19.76	24049	99.8,99.8
110	1.442	0.6063	0.1406	0.3500	1.264	0.3041	0.0414	0.3173	100-110	4.352	24053	99.8,99.8
120	1.817	0.7789	0.1737	0.5340	1.613	0.8369	0.1001	0.7593	110-120	7.005	24060	99.8,99.8
130	2.078	0.8597	0.2647	0.6417	1.580	1.074	0.3316	0.9935	120-130	8.009	24068	99.9,99.9
140	2.037	0.9347	0.5121	0.7591	1.320	1.148	1.036	1.227	130-140	8.097	24077	99.9,99.9
150	1.955	1.310	0.9096	1.159	1.418	1.493	1.564	1.645	140-150	7.931	24084	99.9,99.9
160	1.874	1.484	1.232	1.359	1.670	1.763	2.010	2.003	150-160	7.128	24092	100,100
170	1.930	1.869	1.661	1.718	1.793	1.853	2.002	2.053	160-170	4.924	24097	100,100
180	2.167	2.099	1.902	1.944	2.126	2.107	1.986	1.952	170-180	1.859	24098	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		





5.4 Isocandela Diagram





5.5 Luminous Distribution Intensity Data

Table--1

UNIT: x10cd

C (DEG) \ y (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	722	722	722	722	722	722	722	722	722	722	722	722	722	722	722	722			
5	722	738	750	759	763	762	755	743	725	706	690	676	671	674	686	703			
10	722	753	775	791	798	796	788	768	732	693	653	625	614	624	650	685			
15	725	770	801	819	826	829	826	804	751	687	617	565	549	569	615	673			
20	735	791	827	839	843	856	870	850	782	693	584	502	477	510	582	667			
25	751	824	856	847	844	874	917	912	825	705	555	433	391	441	551	665			
30	781	877	889	839	817	868	958	981	875	725	529	355	290	359	529	673			
35	824	933	906	796	746	820	980	1037	915	746	498	280	221	274	515	691			
40	865	989	905	701	613	715	965	1069	947	751	462	233	197	222	496	714			
45	914	1024	877	518	338	532	896	1108	993	744	430	201	168	186	480	735			
50	1051	1091	803	193	61.8	197	816	1127	1065	752	405	167	134	140	465	753			
55	1168	1091	633	45.5	27.2	48.5	629	1108	1132	773	391	138	104	104	430	824			
60	1170	955	357	29.5	22.6	32.5	354	967	1100	755	327	112	83.4	80.0	325	823			
65	910	686	52.2	18.4	18.5	18.9	43.1	711	864	616	245	92.4	68.6	63.7	205	687			
70	526	232	19.0	12.6	14.0	15.0	15.9	168	446	409	155	68.2	56.6	55.6	103	431			
75	61.6	20.6	11.9	8.45	8.62	8.39	12.5	13.6	99.0	139	73.6	35.6	28.1	32.6	49.1	79.5			
80	30.4	12.3	9.64	4.62	5.54	4.41	7.83	9.95	26.2	25.7	18.2	8.91	6.85	9.61	18.0	22.7			
85	24.4	11.6	6.65	2.25	2.96	2.45	6.56	9.77	21.3	15.8	9.00	5.93	4.02	5.74	8.57	16.5			
90	10.9	8.31	5.95	1.59	2.21	1.47	6.61	9.88	11.2	11.9	6.97	4.06	3.20	3.80	6.62	8.40			
95	1.17	1.23	0.35	0.14	0.12	0.13	0.23	0.51	0.83	0.47	0.11	0.12	0.10	0.17	0.09	0.55			
100	0.60	0.68	0.34	0.14	0.12	0.13	0.29	0.51	0.51	0.30	0.08	0.04	0.03	0.04	0.08	0.30			
105	1.08	0.98	0.51	0.16	0.14	0.13	0.27	0.83	0.90	0.58	0.12	0.04	0.03	0.04	0.13	0.57			
110	1.44	1.18	0.61	0.21	0.14	0.15	0.35	1.09	1.26	0.92	0.30	0.06	0.04	0.06	0.32	0.93			
115	1.68	1.32	0.70	0.24	0.17	0.17	0.45	1.27	1.59	1.25	0.59	0.09	0.06	0.09	0.55	1.19			
120	1.82	1.42	0.78	0.25	0.17	0.18	0.53	1.33	1.61	1.54	0.84	0.23	0.10	0.20	0.76	1.41			
125	1.94	1.44	0.80	0.27	0.20	0.26	0.55	1.37	1.60	1.59	0.93	0.41	0.20	0.28	0.85	1.48			
130	2.08	1.49	0.86	0.35	0.26	0.35	0.64	1.43	1.58	1.49	1.07	0.64	0.33	0.51	0.99	1.48			
135	2.08	1.54	0.93	0.45	0.34	0.46	0.66	1.35	1.37	1.33	1.12	0.92	0.71	0.77	1.13	1.45			
140	2.04	1.54	0.93	0.59	0.51	0.62	0.76	1.43	1.32	1.33	1.15	1.17	1.04	1.08	1.23	1.48			
145	2.02	1.56	1.07	0.75	0.65	0.77	0.93	1.39	1.33	1.36	1.28	1.38	1.33	1.37	1.38	1.52			
150	1.96	1.62	1.31	0.98	0.91	0.95	1.16	1.36	1.42	1.47	1.49	1.61	1.56	1.62	1.64	1.63			
155	1.94	1.69	1.40	1.17	1.06	1.10	1.27	1.38	1.54	1.58	1.69	1.79	1.83	1.83	1.78	1.77			
160	1.87	1.70	1.48	1.36	1.23	1.26	1.36	1.46	1.67	1.66	1.76	1.89	2.01	2.06	2.00	1.85			
165	1.90	1.76	1.61	1.54	1.45	1.41	1.51	1.61	1.67	1.68	1.76	1.88	2.00	2.05	2.05	1.92			
170	1.93	1.90	1.87	1.81	1.66	1.61	1.72	1.73	1.79	1.79	1.85	2.02	2.00	2.03	2.05	2.03			
175	2.15	2.08	2.07	1.98	1.84	1.81	1.88	1.92	2.04	2.03	2.04	2.12	2.00	2.01	2.02	2.04			
180	2.17	2.08	2.10	2.02	1.90	1.88	1.94	1.94	2.13	2.19	2.11	2.11	1.99	1.95	1.95	1.97			

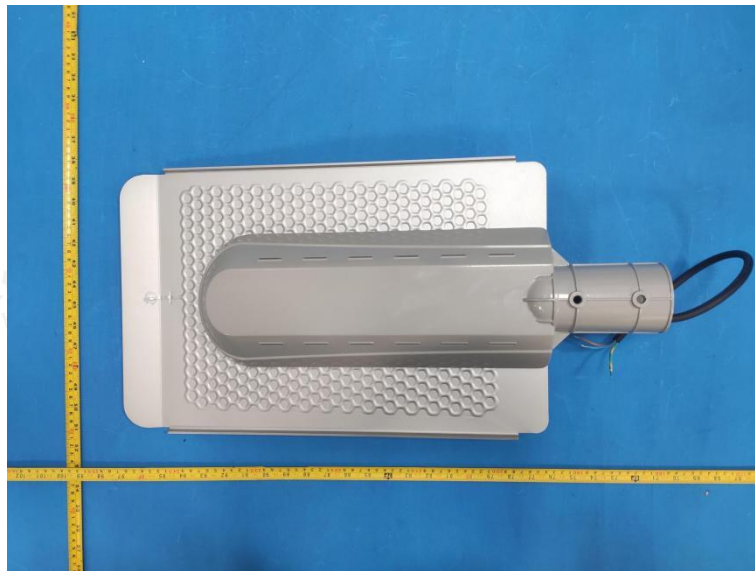
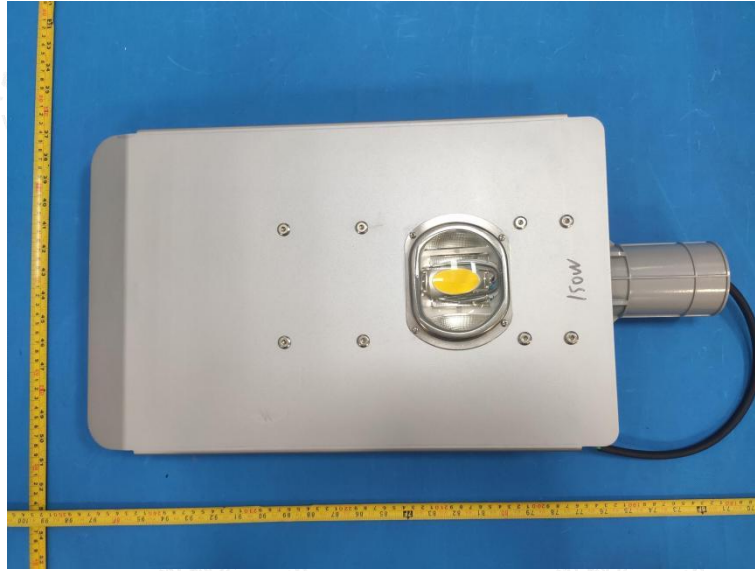




6. Photo of sample

Photo document

Photos of JML-150





Revision History

Revision	Issue Date	Revision Content	Revised By
001	January 07, 2023	At the request of the customer, Change the original report Luminous efficacy to Luminaire efficacy, other information remains unchanged, the original report is invalid.	Zero Huang

----- End of test report -----

