



TEST REPORT

Of IES LM-79-08

Kunde: <i>Client:</i>	ARTIKA FOR LIVING INC.
Adresse: <i>Address:</i>	1756 50th avenue, Lachine, Qc, Canada H8T 2V5
Hersteller: <i>Manufacturer:</i>	HIFLY ILLUMINATION CO., LIMITED
Adresse: <i>Address:</i>	No.2-2, Nanfeng Second Street, Guzhen Town, ZHONGSHAN CITY, Guangdong 528421
Name der Marke: <i>Brand Name:</i>	HIFLY ARTIKA
Beschreibung des Produkts: <i>Product Description:</i>	Zephyr 1LT Pendant 3CCT
Modelle: <i>Models:</i>	PDT1-ZEC-CRJ
Bewertung: <i>Rating:</i>	AC120V, 60Hz, 12W
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:*Date of Test:*

2022-03-24-2022-03-25

Datum der Emission:*Date of Issue:*

2022-04-01

Klassifizierung:*Classification:*

Commission Test

Gegenstand der Prüfung:*Test item:*

IES LM-79-08

Prüflabor (Testlabor) / Testing Laboratory:

Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

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Zero Huang/ Project Engineer

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Ian Luo/ Director

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Jesse Liu

Jesse Liu/ Manager

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1. Test Method

Test Item.....	Integrating Sphere Test
Ambient Condition.....	24.9℃
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℃
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 parameters 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.....	Zephyr 1LT Pendant 3CCT
Model Number.....	PDT1-ZEC-CRJ
Rated Inputs.....	AC120V
Rated Power.....	12W
Declared CCT.....	3000K
LED Manufacturer.....	Lumileds Holding B.V.
LED Model.....	L128-AABBRA3500DDD
LED Package, Array or Module.....	13S8P *2
Forward current of the LED chip.....	60mA
Date of Receipt Samples.....	March 21, 2022
Quantity of Receipt Samples.....	1 unit
Remark.....	PDT1-ZEC-XXXXXX ("XXXXXX" can be A to Z and/or 0 to 9 and/or blank (commercial code))

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



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4. Integrating Sphere Test Results

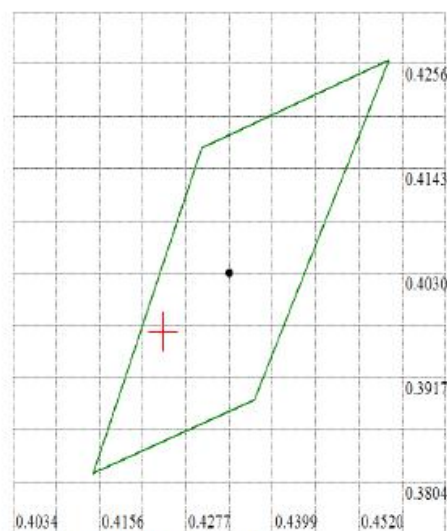
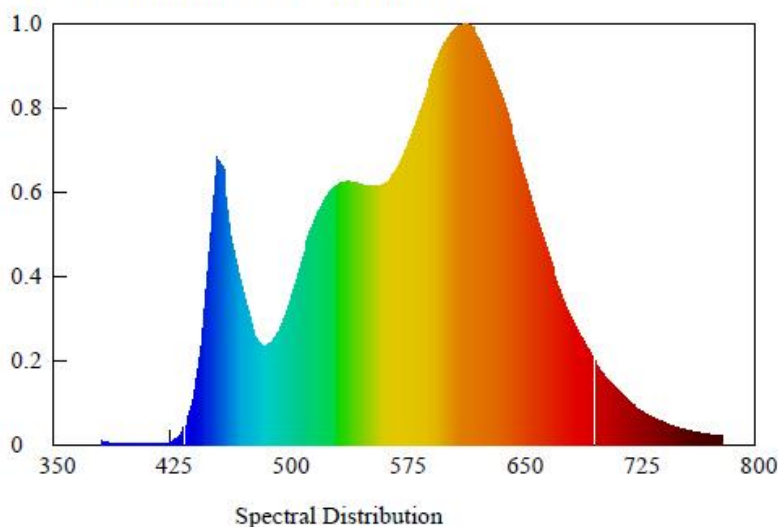
4.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	120.06	60.0	0.1083	0.9750	12.68

Test type	CCT (K)	CRI	Duv	Luminous flux (lm)	Luminous efficacy(lm/W)
Output	3159	93.4	-0.00115	720.22	56.8

4.2 Spectrum

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.4245$ $y=0.3967$ $u'=0.2457$ $v'=0.5166$

Correlated Color Temperature: 3159 K

Colour Fidelity Index: $R_f=87$

Luminous Flux: 720.22 lm

Chromaticity Difference: -0.00115Duv

Color Ratio: $K_r=43.6\%$ $K_g=48.1\%$ $K_b=8.4\%$

Bandwidth: 146.3nm

Rendering Index: $R_a=93.4$

$R_1=96$ $R_2=99$ $R_3=98$ $R_4=95$ $R_5=95$ $R_6=96$ $R_7=90$ $R_8=79$

$R_9=54$ $R_{10}=94$ $R_{11}=97$ $R_{12}=74$ $R_{13}=99$ $R_{14}=98$ $R_{15}=90$ $R_e=90$

Dominant Wavelength: 581.0 nm(E)

Gamut Index: $R_g=97$

Purity: 0.4667

Peak Wavelength: 615.0 nm

Radiant Flux: 2.018 W



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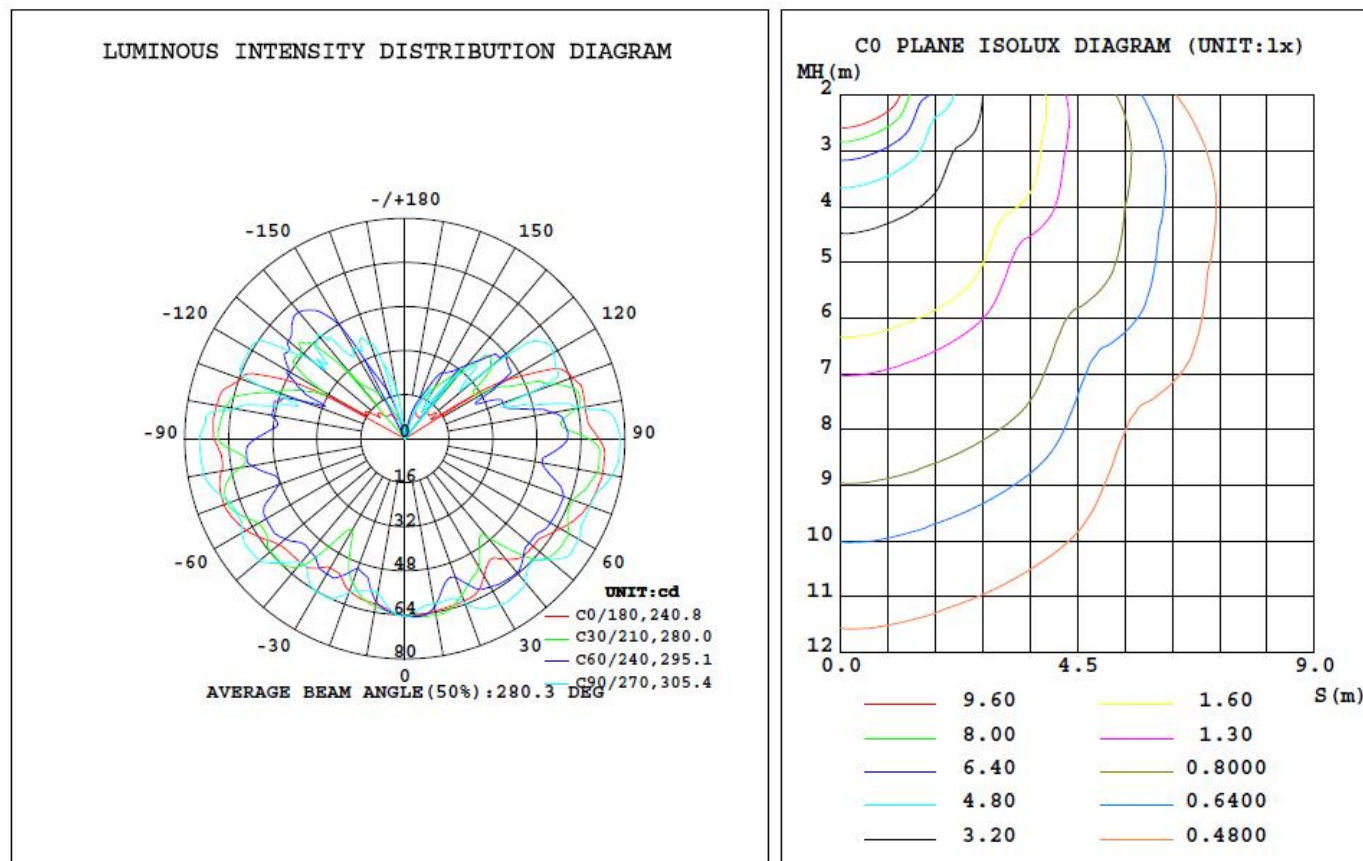
5. Goniophotometer Test results

5.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	120.0	60.01	0.1079	0.9751	12.63

Test type	Total Flux (lm)	Luminous efficacy(lm/W)	I _{max} (cd)	Spacing Criteria (0~180°)	Spacing Criteria (90~270°)
Output	718.387	56.90	82.90	1.36	1.45

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





5.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	63.49	62.14	60.84	62.46	60.98	60.11	56.93	60.83	0- 10	5.941	5.941	0.83,0.83
20	62.74	53.50	63.46	60.70	58.80	50.06	59.62	60.48	10- 20	16.91	22.86	3.18,3.18
30	57.54	62.30	69.64	62.27	54.27	56.72	64.02	59.62	20- 30	27.70	50.55	7.04,7.04
40	57.19	63.50	68.07	67.26	58.80	53.45	58.73	63.79	30- 40	37.77	88.33	12.3,12.3
50	60.80	58.99	68.25	77.45	59.90	56.67	68.97	71.07	40- 50	49.92	138.2	19.2,19.2
60	65.26	61.09	72.92	81.24	66.50	58.25	68.24	78.06	50- 60	61.22	199.5	27.8,27.8
70	71.06	61.42	71.66	82.15	69.95	48.85	67.97	78.79	60- 70	69.37	268.8	37.4,37.4
80	72.96	50.56	76.41	82.15	67.67	56.59	74.19	78.46	70- 80	74.40	343.2	47.8,47.8
90	70.58	59.14	78.11	82.03	69.47	54.28	74.62	77.06	80- 90	76.25	419.5	58.4,58.4
100	66.38	54.64	64.96	81.37	69.57	49.25	63.04	72.47	90-100	73.89	493.4	68.7,68.7
110	64.89	37.88	48.18	60.20	63.57	40.69	56.55	65.20	100-110	61.50	554.9	77.2,77.2
120	42.47	38.35	62.39	67.99	21.87	49.25	65.07	50.45	110-120	53.72	608.6	84.7,84.7
130	14.75	46.59	39.56	66.23	11.97	55.19	42.28	61.87	120-130	44.64	653.2	90.9,90.9
140	12.96	34.85	30.14	53.62	10.36	59.93	49.56	55.69	130-140	33.34	686.6	95.6,95.6
150	9.236	27.99	17.67	25.09	10.17	47.83	37.94	36.24	140-150	19.26	705.8	98.3,98.3
160	9.705	15.04	9.170	2.756	7.472	18.39	36.67	32.31	150-160	9.422	715.3	99.6,99.6
170	3.199	1.484	0.7233	2.698	1.297	3.058	18.67	8.708	160-170	2.854	718.1	100,100
180	0.3987	0.1962	0.0994	0.2995	0.1993	0.4670	0.1721	0.2858	170-180	0.2639	718.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



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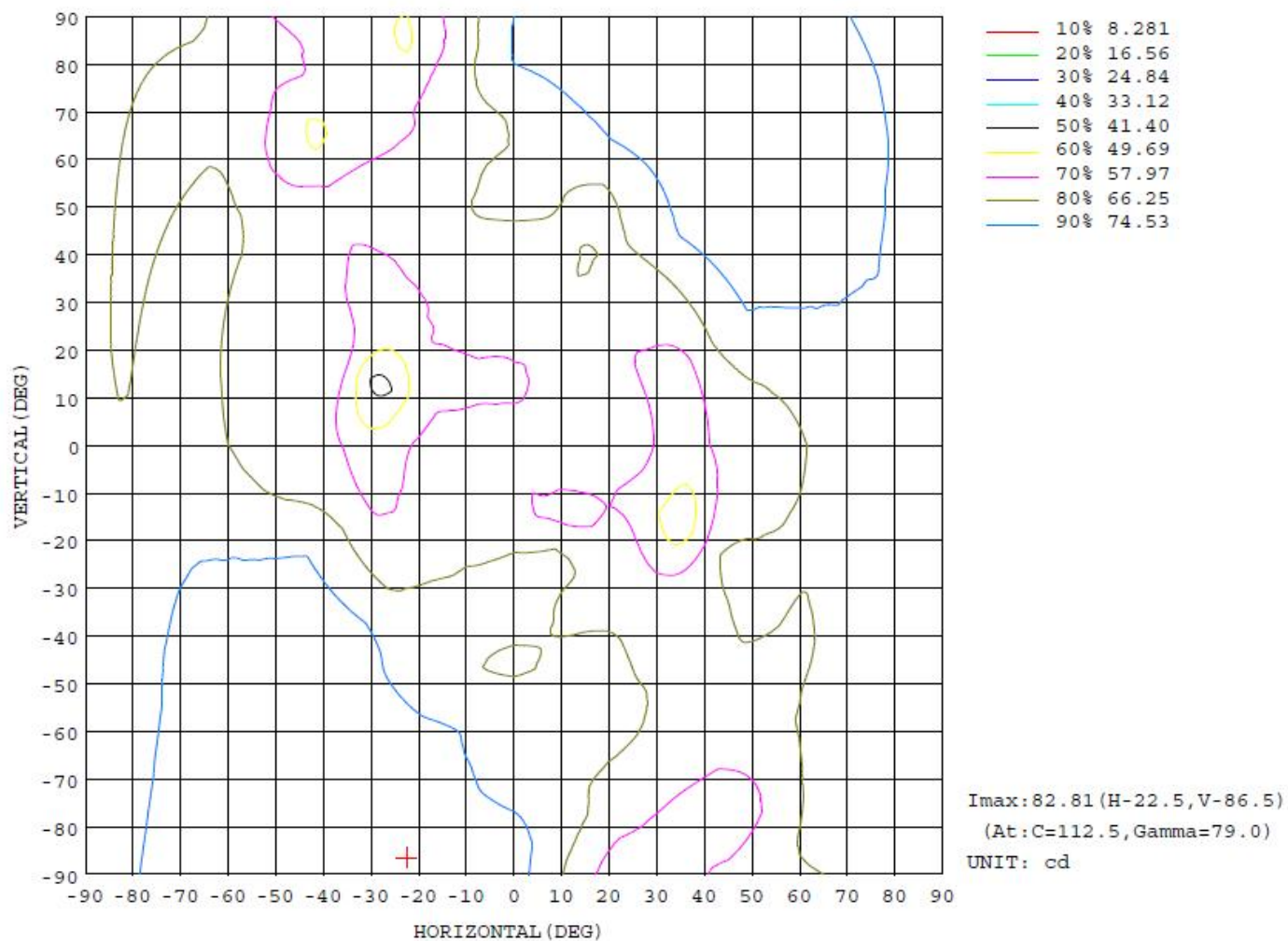
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5.4 Isocandela Diagram





5.5 Luminous Distribution Intensity Data

Table--1

UNIT: cd

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	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4			
5	64.3	64.9	64.8	63.1	62.0	62.0	62.2	62.5	62.7	63.2	63.2	62.4	62.2	62.0	62.7	63.2			
10	63.5	65.0	62.1	58.2	60.8	62.0	62.5	62.1	61.0	61.8	60.1	56.4	56.9	59.1	60.8	61.5			
15	63.1	64.1	55.0	57.7	60.6	62.1	63.3	62.9	60.5	59.9	52.2	53.1	57.2	59.0	61.3	61.4			
20	62.7	60.4	53.5	62.2	63.5	61.1	60.7	63.2	58.8	55.6	50.1	58.2	59.6	58.7	60.5	62.2			
25	61.8	56.7	59.8	66.5	68.1	65.1	60.1	58.5	55.2	48.0	55.0	61.1	64.2	61.9	58.9	62.0			
30	57.5	53.7	62.3	66.0	69.6	67.4	62.3	57.9	54.3	38.6	56.7	58.8	64.0	64.6	59.6	57.4			
35	53.8	47.0	63.2	63.8	69.6	70.2	64.3	60.4	57.4	47.1	55.4	59.8	61.3	65.8	62.9	54.9			
40	57.2	46.5	63.5	64.2	68.1	70.6	67.3	67.0	58.8	60.8	53.5	64.0	58.7	66.6	63.8	57.4			
45	60.6	59.5	60.9	69.4	64.4	70.0	72.9	72.5	58.9	63.8	53.4	64.9	63.9	66.2	65.4	64.9			
50	60.8	67.4	59.0	71.5	68.2	69.2	77.5	75.6	59.9	63.7	56.7	63.2	69.0	64.0	71.1	70.9			
55	62.0	68.9	59.5	71.3	73.3	71.4	79.7	77.7	63.2	61.0	58.5	60.7	69.5	64.9	76.0	74.8			
60	65.3	68.8	61.1	69.6	72.9	75.3	81.2	78.8	66.5	61.5	58.3	59.2	68.2	69.6	78.1	76.6			
65	68.7	65.2	61.4	67.0	71.5	77.9	81.7	80.0	68.8	65.7	55.8	58.3	66.7	74.2	78.6	77.8			
70	71.1	65.0	61.4	64.8	71.7	80.2	82.1	80.4	69.9	68.6	48.9	57.6	68.0	77.1	78.8	77.8			
75	72.2	68.5	56.0	63.2	73.0	82.3	82.2	80.3	69.7	67.7	50.2	55.5	71.9	77.9	79.0	77.8			
80	73.0	70.8	50.6	60.3	76.4	82.9	82.2	80.2	67.7	60.8	56.6	51.8	74.2	78.0	78.5	77.6			
85	72.9	71.0	54.5	55.4	78.2	82.9	82.2	79.9	67.0	60.6	58.0	48.4	74.5	78.1	77.9	76.6			
90	70.6	66.9	59.1	51.3	78.1	82.6	82.0	80.0	69.5	68.0	54.3	49.1	74.6	77.8	77.1	75.3			
95	66.8	57.1	58.5	48.7	76.7	81.3	81.7	80.1	70.0	67.4	47.3	51.6	72.7	77.0	74.8	73.9			
100	66.4	63.2	54.6	45.6	65.0	71.0	81.4	80.2	69.6	66.2	49.3	47.8	63.0	67.3	72.5	73.3			
105	66.9	65.3	42.2	34.6	46.8	61.8	69.2	77.4	68.4	61.3	49.3	39.2	47.1	58.7	67.2	72.8			
110	64.9	58.0	37.9	41.5	48.2	63.6	60.2	68.4	63.6	49.0	40.7	52.6	56.5	54.6	65.2	65.7			
115	60.4	46.9	30.7	51.7	60.7	68.3	49.5	61.2	53.1	41.7	40.7	61.3	65.1	71.8	49.6	59.7			
120	42.5	34.8	38.4	53.5	62.4	63.3	68.0	39.7	21.9	34.3	49.3	64.2	65.1	69.3	50.4	50.5			
125	12.4	30.3	45.9	53.8	61.2	57.4	69.6	61.8	17.3	49.5	53.7	65.0	61.2	59.5	63.3	31.9			
130	14.8	41.1	46.6	47.1	39.6	50.6	66.2	54.5	12.0	49.3	55.2	65.4	42.3	58.6	61.9	49.7			
135	12.3	42.9	41.6	40.2	37.1	45.3	58.2	49.9	13.4	49.5	58.2	40.3	43.8	54.3	62.5	46.1			
140	13.0	33.4	34.8	30.9	30.1	37.8	53.6	37.0	10.4	29.8	59.9	47.4	49.6	45.6	55.7	40.3			
145	9.77	26.0	29.9	23.0	16.5	23.3	39.5	30.1	10.3	22.2	57.0	34.6	39.4	38.7	45.5	29.0			
150	9.24	21.1	28.0	14.6	17.7	15.5	25.1	18.1	10.2	18.7	47.8	33.4	37.9	40.4	36.2	25.8			
155	9.76	16.1	21.1	11.7	18.1	16.8	10.5	13.4	8.27	13.0	26.3	30.7	39.1	39.6	30.5	25.4			
160	9.70	13.0	15.0	1.12	9.17	7.20	2.76	6.19	7.47	8.91	18.4	20.1	36.7	22.8	32.3	11.6			
165	5.99	9.53	10.3	2.14	1.19	1.57	4.69	3.78	4.77	5.22	8.06	20.8	26.9	16.2	20.7	15.1			
170	3.20	1.60	1.48	3.95	0.72	1.61	2.70	1.59	1.30	0.65	3.06	12.4	18.7	17.0	8.71	5.17			
175	2.35	1.49	1.19	0.60	0.35	0.76	1.40	1.30	2.79	2.69	0.91	0.99	3.35	2.96	0.50	0.30			
180	0.40	0.10	0.20	0.30	0.10	0.20	0.30	0.00	0.20	0.01	0.47	2.95	0.17	0.09	0.29	0.20			

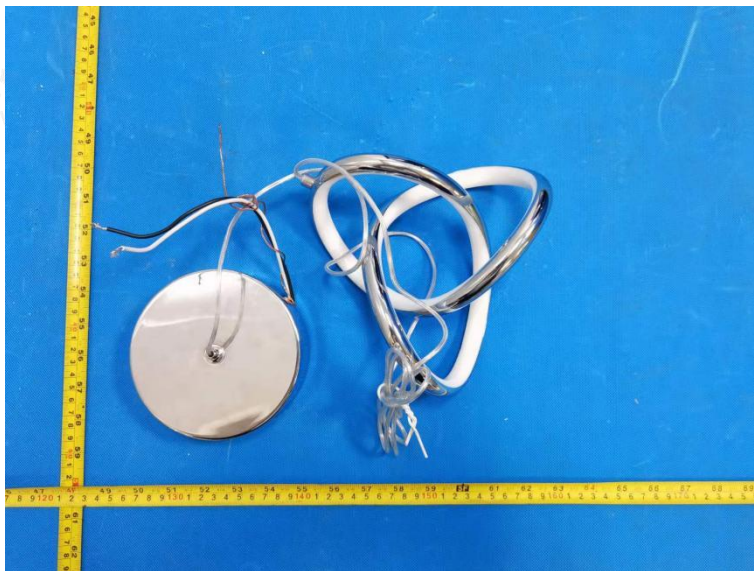




6. Photo of sample

Photo document

Photos of PDT1-ZEC-CRJ



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

