TEST REPORT OF ANSI/IES LM-79-19

APPROVED METHOD FOR OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS

Client……..	:	ROYALUX EXPORTS
Address…….….....	:	150-B, NOIDA SPECIAL ECONOMIC ZONE, NOIDA, GAUTAM BUDHHA NAGAR, UTTAR PRADESH, 201305, INDIA
Test Model.....	:	401Y0100W30L70AY,401Y0100W57L70AY
Brand Name.....…..…	:	Rlux
Testing Laboratory.....	:	Guangdong Meide Testing Technology Co., Ltd.
Address…….....	:	1st floor, B Area, Jinbaisheng Industrial Park, Headquarters 2 Road,Songshan Lake Hi-tech Industrial Development Zone,Dongguan City,Guangdong Pr., China.
Testing location.....	:	As above
Report No.....….....	:	C02A21070284L01001
Test Date…….....	:	July 19, 2021 – July 23, 2021
Report Date……..….....	:	July 23, 2021

Tested by:	**Checked by:**	**Approved by:**
Tim Qian/ Test Engineer	Ken Mo / Project Engineer	Jessie Li/ Technical Manager

Note 1: The test data was only valid for the test sample(s).This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Guangdong Meide Testing Technology Co., Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP,NIST, or any agency of the Federal Government.
Note 2: This report does not imply product certification, approval, or endorsement by NVLAP, NIST,or any agency of the Federal Government.

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1.Product Description for Equipment under Test(EUT)

Model Tested:	401Y0100W30L70AY,401Y0100W57L70AY
Manufacturer:	Same as client
Address:	Same as client
Product Type:	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Rated Voltage/Frequency:	100-277V AC 50/60Hz
Rated Power:	100W
Nominal CCT:	3000K, 5700K
LED Driver Manufacturer:	MEAN WELL ENTERPRISES CO., LTD
LED Driver Model No:	HLG-100H-48AB
LED Manufacturer:	CREE Venture LED Company Limited
LED Model No:	JK3030AWT-00-0000-000B0HH422E

Model Similarity:

Model nomenclature: 4XXDyyyyWCVRXY

"4" denotes SHOEBOX Series;
"XX" can be 01 or 02, which denotes luminaires shell Shape and Overall dimension, where 01= L370mm X W310mm X H85mm or 02= L580mm X W310mm X H90mm;
"D" can be Y or N, which denotes Dimmable or Non-dimmable;
"yyyy" denotes the wattage of luminaires, can be from 0100 to 0300; each 5W gradually increase max. 300W, for example 0100=100W;
"C" can be two arbitrary numbers, which denotes LED Color Temperature, for example 50=5000K;
"V" can be L or H, which denotes range of input voltage; where L=Low voltage range, H=High voltage range or same as LED Driver input;
"R" can be two arbitrary numbers, which denotes CRI, for example 80=80CRI;
"X" can be A, B, C or D, which denotes Light Distribution, where A = T3, B = T4FT, C = 5WQ or D = Other;
"Y" can be an arbitrary number, letter or blank, which denote the company's internal information.

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2.Standards Used

- ANSI/IES LM-79-19:APPROVED METHOD:OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS
- IES TM-30-18 IES Method for Evaluating Light Source Color Rendition (This Method is not in Nvlap accreditation scope)
- ANSI C82.77-10:2014 Harmonic Emission Limits – Related Power Quality Requirements for Lighting Equipment-Solid State

3.Test equipment list

Test Equipment	Serial No	Model No	Calibration due date
Full-field Speed Goniophotometer	MD-E028	GO-R5000	2021/09/29
Digital Power Meter	MD-E001	PF2010	2021/09/29
AC Testing Power Source	MD-E002	DPS1060	2021/09/29
Total Spectral Radiant Flux Standard Lamp	MD-E007	D908S	2021/09/29
Integrating Sphere System	MD-E029	2M	2021/09/29
High Accuracy Array Spectroradio Meter	MD-E011	HAAS-3000	2021/09/29
Digital Power Meter	MD-E008	PF310	2021/09/29
AC Testing Power Source	MD-E010	DPS1010	2021/09/29
Standard Lamp	MD-E012	D204	2022/05/18

Statement of Traceability: Guangdong Meide Testing Technology Co., Ltd.attested that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit(SI).

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4.Test Method

Requirements of Ambient Condition

Product was tested with no seasoning. All stabilization and measurements were made in compliance with ANSI/IES LM-79-19. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1.2°C during measurement. And relative humidity between 10% and 65%.

Goniophotometer System

The sample was tested according to the ANSI/IES LM-79-19.

Photometric paramters were measured using a type C goniophotometer and software. 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.Photometric distance was more than five times of the Largest dimension of the test SSL product.

Integrating Sphere System

The sample was tested according to the ANSI/IES LM-79-19.

The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.Coating reflectance of the integrating sphere was 90% to 98%. Photometric measurement conditions was using 4 π geometry.The self-absorption factor is applied in the final test result. 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.

Fidelity Index (R_f) and Gamut Index (R_g) Calculation

The Rf, Rg was calculated according to IES TM-30-18 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

THD and PF Test

The sample was tested according to the ANSI C82.77-10:2014.

The sample was operated at rated voltage and was stabilized before measurement.The total harmonic distortion were calculated from the digital power meter.

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5.Integrating Sphere Test Results

5.1 Test Data

Test Ambient Temperature	25.1℃	Test orientation	Downward
Operate time(Min.)	75	stabilization time(Min.)	60

Optical and Electrical Measurement Result

Model Number	Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)	CCT (K)
401Y0100W30L70AY	119.97	60	0.8344	99.38	0.9928	14541	146.32	3000
401Y0100W57L70AY	119.97	60	0.8246	98.19	0.9925	14778	150.5	5582

Model Number	Ra	R9	Rf	Rg	x	y	u'	v'	Duv
401Y0100W30L70AY	73.3	-22	74	97	0.4347	0.3995	0.2511	0.5192	-1.54E-03
401Y0100W57L70AY	74.2	-16	74	95	0.3306	0.3433	0.2047	0.4784	1.98E-03

5.2 Model # 401Y0100W30L70AY Color Rendering Index

Ra
73.3

R1	R2	R3	R4	R5
71	82	92	70	69

R6	R7	R8	R9	R10
75	79	48	-22	59

R11	R12	R13	R14	R15
66	50	72	95	64

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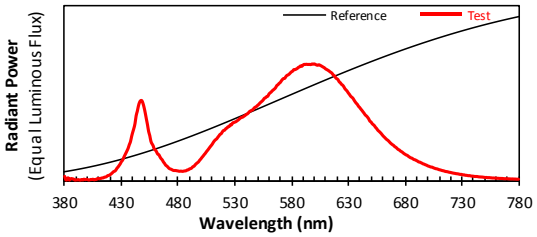
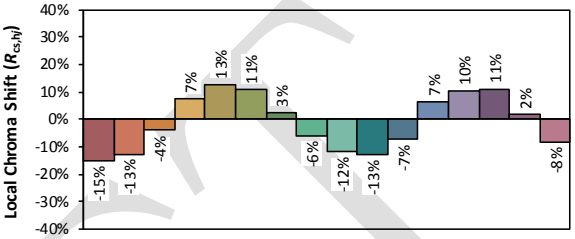
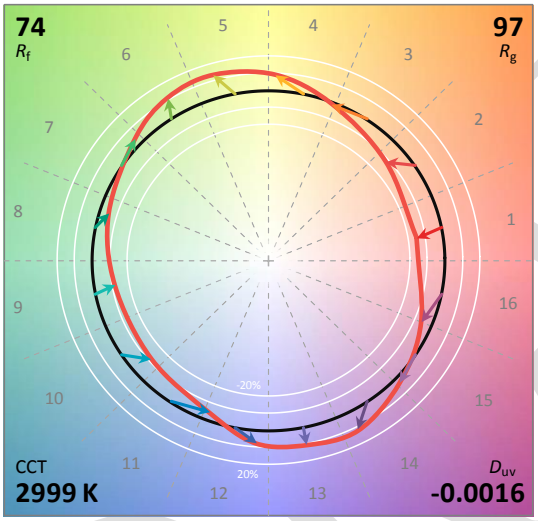
5.3.1 Model # 401Y0100W30L70AY ANSI/IES TM-30-18 Color Rendition Report

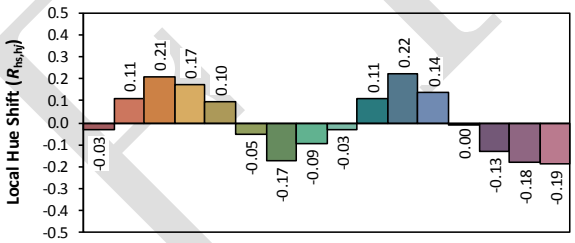
ANSI/IES TM-30-18 Color Rendition Report

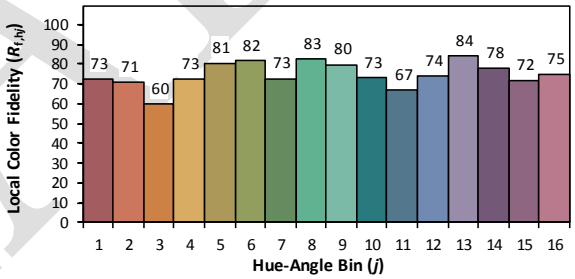
Source:	JK3030AWT-00-0000-000B0HH422E	Manufacturer:	ROYALUX EXPORTS
Date:	2021/7/23	Model:	401Y0100W30L70AY

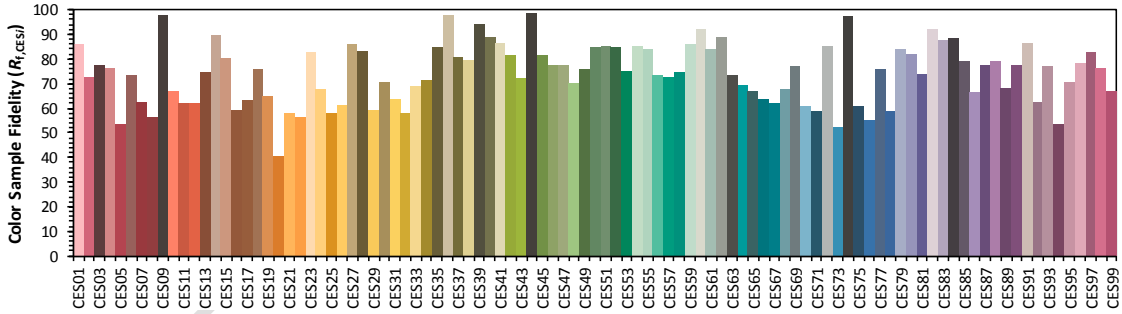












Notes:	This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4347
y	0.3993
u'	0.2512
v'	0.5192

CIE 13.3-1995 (CRI)	
R_a	73
R_9	-22

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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5.3.3 Model # 401Y0100W57L70AY ANSI/IES TM-30-18 Color Rendition Report

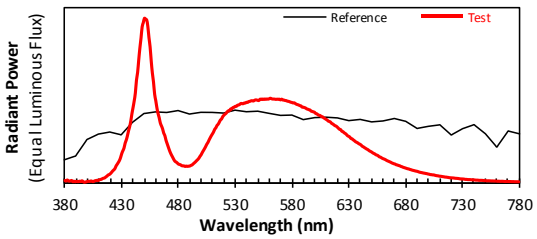
ANSI/IES TM-30-18 Color Rendition Report

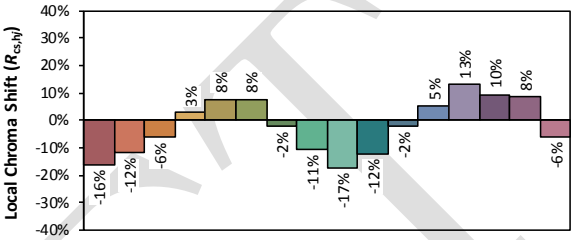
Source: JK3030AWT-00-0000-000B0HH422E

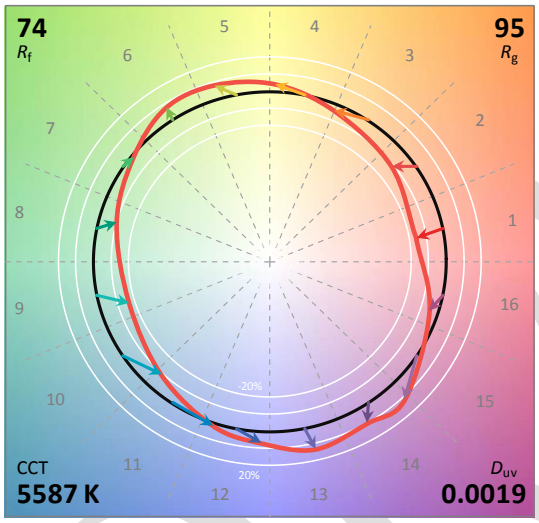
Manufacturer: ROYALUX EXPORTS

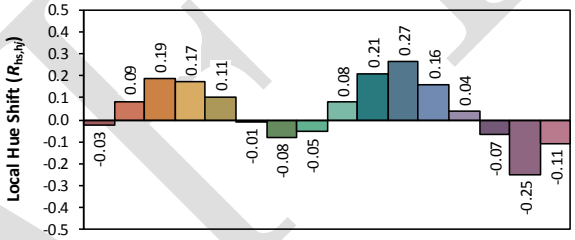
Date: 2021/7/23

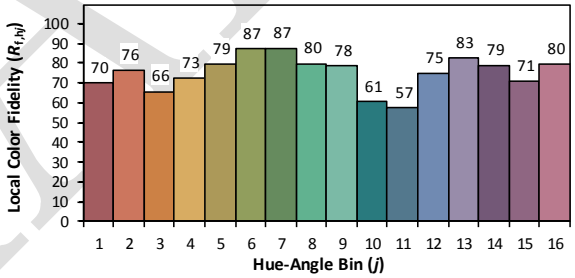
Model: 401Y0100W57L70AY

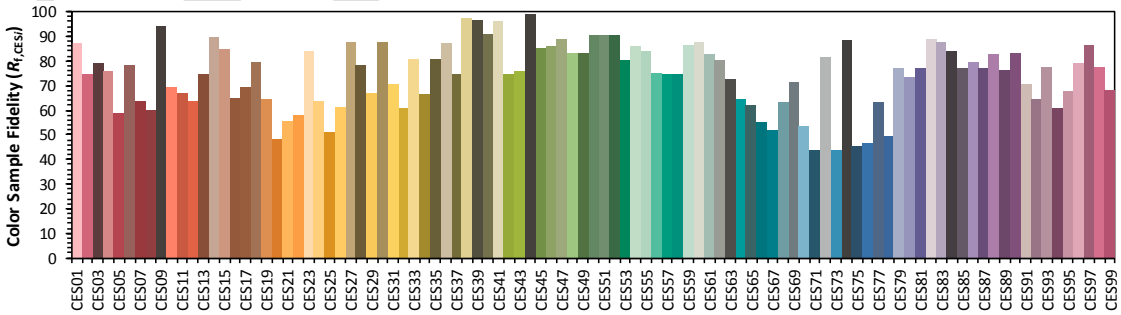












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3305
y	0.3431
u'	0.2047
v'	0.4783

CIE 13.3-1995 (CRI)

R_a	74
R_9	-16

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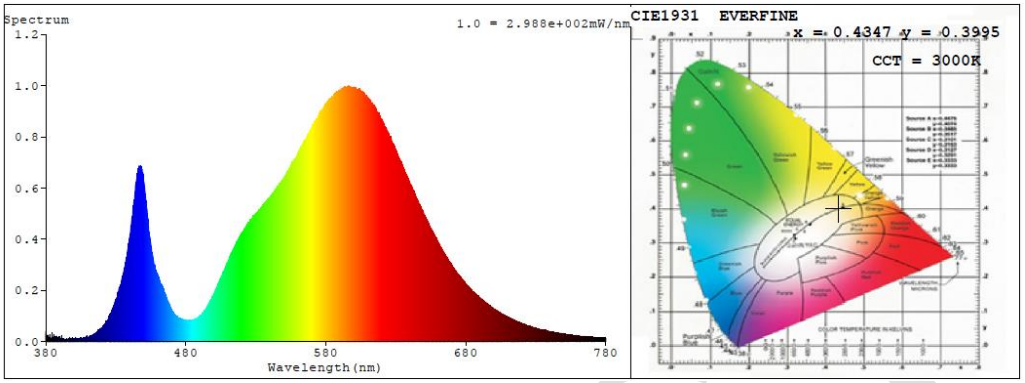
5.4 Model # 401Y0100W30L70AY Relative Spectral Power Distribution



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0379	414	0.0251	448	0.6807	482	0.0821	516	0.3822
381	0.0089	415	0.0308	449	0.6585	483	0.0818	517	0.3951
382	0.0083	416	0.032	450	0.6225	484	0.0804	518	0.4004
383	0.0259	417	0.0366	451	0.5775	485	0.0826	519	0.416
384	0.0058	418	0.0443	452	0.5258	486	0.0842	520	0.4273
385	0.0158	419	0.0462	453	0.4764	487	0.0855	521	0.4302
386	0.0191	420	0.0519	454	0.4192	488	0.0922	522	0.4424
387	0.0163	421	0.0591	455	0.3845	489	0.0932	523	0.4484
388	0.0145	422	0.0677	456	0.3364	490	0.101	524	0.4595
389	0.0058	423	0.0773	457	0.3143	491	0.1037	525	0.4611
390	0.0081	424	0.0817	458	0.2978	492	0.1093	526	0.4759
391	0.0076	425	0.0897	459	0.269	493	0.12	527	0.4749
392	0.0104	426	0.1055	460	0.2616	494	0.1236	528	0.4908
393	0.0067	427	0.1169	461	0.2458	495	0.1357	529	0.4949
394	0.0065	428	0.1305	462	0.2272	496	0.1454	530	0.4988
395	0.0118	429	0.1446	463	0.2221	497	0.1535	531	0.5028
396	0.007	430	0.163	464	0.2036	498	0.1615	532	0.5102
397	0.0142	431	0.1747	465	0.1883	499	0.175	533	0.5167
398	0.0097	432	0.1961	466	0.1782	500	0.1856	534	0.5254
399	0.0122	433	0.2167	467	0.1606	501	0.1988	535	0.5339
400	0.0115	434	0.2364	468	0.1486	502	0.2098	536	0.5384
401	0.0073	435	0.2562	469	0.1333	503	0.2228	537	0.5416
402	0.008	436	0.2781	470	0.1261	504	0.2339	538	0.5486
403	0.0117	437	0.3079	471	0.1166	505	0.248	539	0.5549
404	0.0105	438	0.3325	472	0.106	506	0.2595	540	0.5636
405	0.0138	439	0.3765	473	0.1012	507	0.2724	541	0.5682
406	0.0081	440	0.4129	474	0.0975	508	0.2858	542	0.5779
407	0.0121	441	0.446	475	0.0922	509	0.2979	543	0.5886
408	0.0119	442	0.4867	476	0.0879	510	0.3101	544	0.5944
409	0.0197	443	0.553	477	0.0878	511	0.326	545	0.5999
410	0.0169	444	0.59	478	0.0873	512	0.3396	546	0.6049
411	0.0206	445	0.6355	479	0.0852	513	0.3493	547	0.618
412	0.0208	446	0.6667	480	0.0837	514	0.3567	548	0.6254
413	0.0247	447	0.6808	481	0.0812	515	0.37	549	0.6308

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nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.6406	599	0.9904	648	0.5264	697	0.1412	746	0.0333
551	0.6486	600	0.9929	649	0.5071	698	0.136	747	0.0324
552	0.6596	601	0.9885	650	0.5002	699	0.133	748	0.0321
553	0.6685	602	0.9843	651	0.4862	700	0.1271	749	0.0307
554	0.6769	603	0.9813	652	0.4773	701	0.124	750	0.0293
555	0.6868	604	0.9857	653	0.4685	702	0.12	751	0.028
556	0.7008	605	0.982	654	0.4542	703	0.117	752	0.0286
557	0.7053	606	0.9768	655	0.444	704	0.1157	753	0.0266
558	0.7151	607	0.9711	656	0.4299	705	0.1106	754	0.0274
559	0.7181	608	0.9652	657	0.4213	706	0.1071	755	0.026
560	0.7357	609	0.9596	658	0.4121	707	0.1034	756	0.0253
561	0.7463	610	0.9506	659	0.4018	708	0.1021	757	0.024
562	0.7541	611	0.9454	660	0.3895	709	0.0988	758	0.0242
563	0.7648	612	0.9395	661	0.3782	710	0.095	759	0.0232
564	0.773	613	0.9334	662	0.3692	711	0.0927	760	0.0223
565	0.7811	614	0.9251	663	0.3589	712	0.0897	761	0.0217
566	0.7917	615	0.9191	664	0.35	713	0.0867	762	0.0217
567	0.8095	616	0.909	665	0.3432	714	0.085	763	0.0205
568	0.8159	617	0.8966	666	0.3332	715	0.0815	764	0.0205
569	0.8276	618	0.8906	667	0.3229	716	0.079	765	0.02
570	0.8349	619	0.8734	668	0.3141	717	0.078	766	0.0199
571	0.849	620	0.8669	669	0.3066	718	0.0756	767	0.0185
572	0.8613	621	0.8583	670	0.3002	719	0.0728	768	0.018
573	0.869	622	0.8408	671	0.2898	720	0.0714	769	0.0181
574	0.8705	623	0.8329	672	0.2844	721	0.0689	770	0.0177
575	0.8854	624	0.8197	673	0.275	722	0.0667	771	0.0172
576	0.8955	625	0.8126	674	0.2664	723	0.0647	772	0.0168
577	0.8999	626	0.8002	675	0.2618	724	0.0632	773	0.0161
578	0.9072	627	0.783	676	0.2528	725	0.0611	774	0.0157
579	0.9174	628	0.7721	677	0.2474	726	0.0599	775	0.016
580	0.9263	629	0.7615	678	0.2404	727	0.0585	776	0.0149
581	0.932	630	0.7466	679	0.232	728	0.0559	777	0.0151
582	0.9449	631	0.7345	680	0.226	729	0.0546	778	0.0142
583	0.9443	632	0.7199	681	0.2199	730	0.0541	779	0.0139
584	0.9491	633	0.7109	682	0.2161	731	0.0502	780	0.0136
585	0.9542	634	0.7024	683	0.2081	732	0.0511		
586	0.9635	635	0.6871	684	0.2016	733	0.0474		
587	0.9674	636	0.6719	685	0.1954	734	0.047		
588	0.9764	637	0.6593	686	0.1927	735	0.0452		
589	0.9728	638	0.6488	687	0.1862	736	0.0436		
590	0.9819	639	0.6332	688	0.1804	737	0.0442		
591	0.9887	640	0.6233	689	0.178	738	0.0411		
592	0.9881	641	0.6102	690	0.1726	739	0.0402		
593	0.9898	642	0.5987	691	0.1677	740	0.0394		
594	0.9884	643	0.5856	692	0.1607	741	0.0375		
595	0.9884	644	0.573	693	0.1589	742	0.0368		
596	0.9886	645	0.5591	694	0.154	743	0.0367		
597	0.9873	646	0.5511	695	0.1495	744	0.0359		
598	0.9924	647	0.5398	696	0.1438	745	0.0337		

Laboratory:Guangdong Meide Testing Technology Co., Ltd.
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6. Goniophotometer Test results for model # 401Y0100W30L70AY

6.1 Test Data

Test Ambient Temperature	25.1℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	60

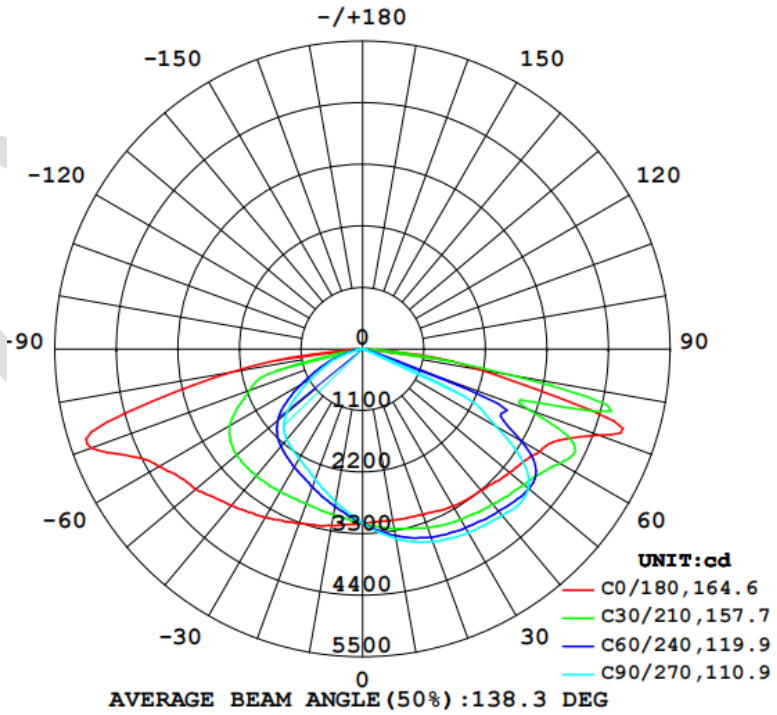
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
120.0	60	0.8306	0.9939	99.09

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	ZL (0-90°)	ZL (80-90°)
14351	144.84	100%	2.3%

6.2 Luminous Intensity Distribution



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6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3109	3334	3435	3387	3206	2931	2777	2852	0- 10	297.7	297.7	2.07,2.07
20	3151	3502	3665	3621	3318	2780	2483	2669	10- 20	889.3	1187	8.27,8.27
30	3241	3618	3789	3771	3471	2659	2268	2513	20- 30	1460	2647	18.4,18.4
40	3304	3726	3884	3905	3649	2546	2118	2365	30- 40	1995	4642	32.3,32.3
50	3431	3879	3865	4041	3898	2340	1768	2140	40- 50	2467	7108	49.5,49.5
60	3663	3875	2751	3930	4198	1768	1056	1575	50- 60	2724	9832	68.5,68.5
70	4510	3094	217.4	2973	5166	870.7	509.4	793.9	60- 70	2506	12338	86,86
80	2131	340.0	38.96	188.2	2356	184.6	94.32	184.5	70- 80	1687	14025	97.7,97.7
90	0	0	0	0	0	0	0	0	80- 90	326.0	14351	100,100
100	0	0	0	0	0	0	0	0	90-100	0	14351	100,100
110	0	0	0	0	0	0	0	0	100-110	0	14351	100,100
120	0	0	0	0	0	0	0	0	110-120	0	14351	100,100
130	0	0	0	0	0	0	0	0	120-130	0	14351	100,100
140	0	0	0	0	0	0	0	0	130-140	0	14351	100,100
150	0	0	0	0	0	0	0	0	140-150	0	14351	100,100
160	0	0	0	0	0	0	0	0	150-160	0	14351	100,100
170	0	0	0	0	0	0	0	0	160-170	0	14351	100,100
180	0	0	0	0	0	0	0	0	170-180	0	14351	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

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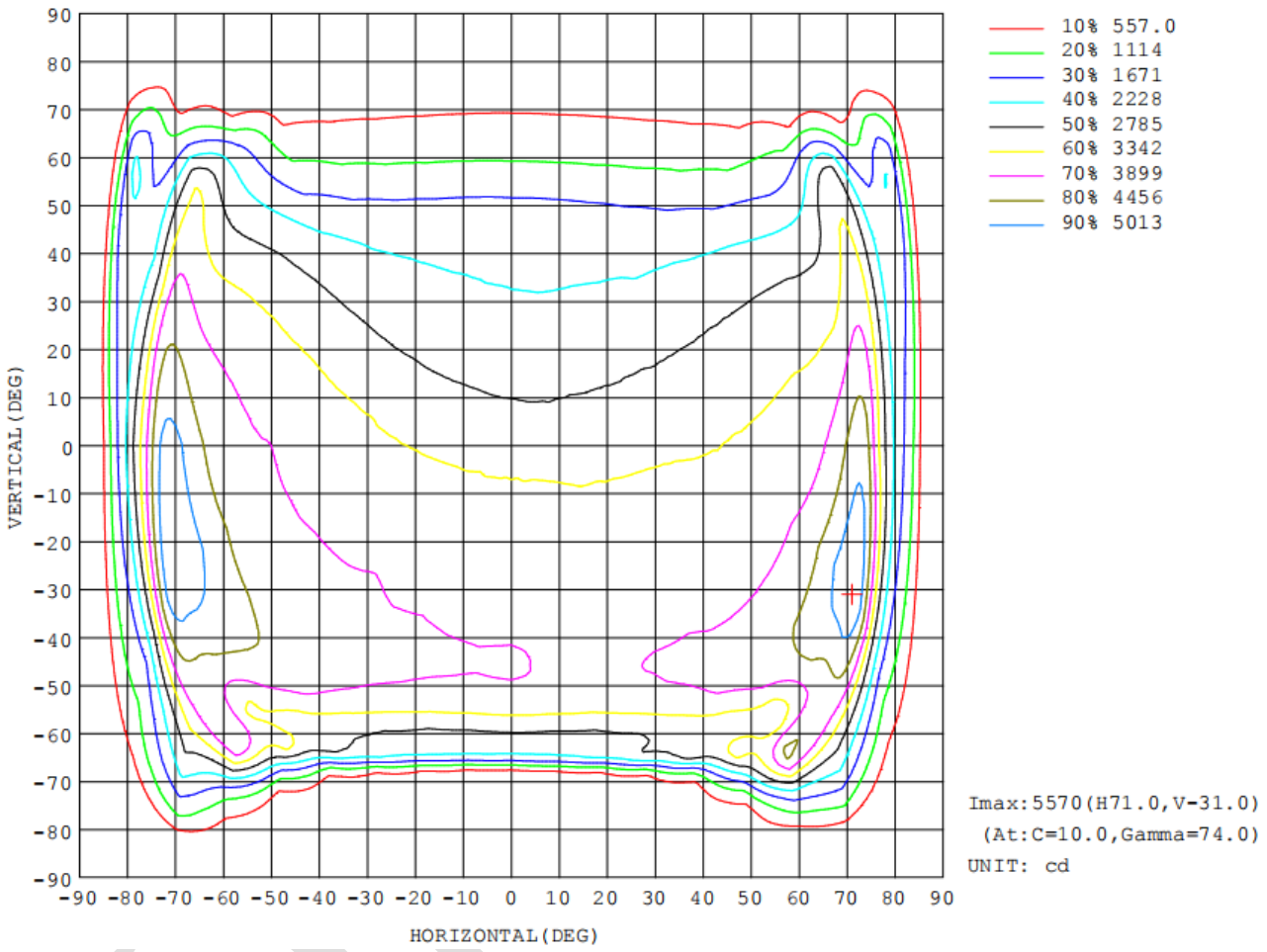
6.4 Isocandela Diagram



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6.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

γ (DEG) \ C (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	3117	3128	3124	3119	3114	3122	3119	3113	3117	3114	3122	3112	3107	3109	3114	3110	3113	3107	3117
5	3094	3144	3160	3192	3213	3237	3252	3250	3282	3282	3278	3283	3262	3255	3248	3220	3190	3156	3147
10	3109	3170	3218	3261	3314	3354	3382	3396	3429	3435	3438	3426	3410	3390	3384	3326	3289	3239	3206
15	3121	3211	3269	3324	3399	3449	3496	3511	3550	3565	3570	3562	3543	3515	3498	3446	3399	3321	3257
20	3151	3262	3336	3394	3477	3527	3576	3607	3644	3665	3672	3659	3647	3629	3614	3553	3482	3404	3318
25	3191	3309	3393	3459	3549	3582	3638	3672	3713	3730	3739	3745	3736	3701	3708	3649	3567	3484	3388
30	3241	3366	3446	3518	3601	3634	3689	3722	3754	3789	3795	3789	3806	3768	3774	3716	3655	3556	3471
35	3280	3413	3496	3569	3648	3697	3737	3765	3802	3834	3832	3836	3855	3822	3842	3783	3731	3636	3564
40	3304	3456	3543	3621	3709	3742	3782	3803	3836	3884	3879	3881	3905	3889	3921	3872	3823	3738	3649
45	3361	3520	3610	3697	3781	3805	3843	3838	3868	3939	3915	3934	3959	3958	3990	3955	3916	3846	3750
50	3431	3609	3692	3771	3868	3889	3881	3829	3827	3865	3848	3898	3958	4009	4074	4053	4014	3971	3898
55	3513	3713	3815	3885	3962	3919	3791	3607	3507	3495	3493	3621	3819	4004	4155	4183	4175	4126	3997
60	3663	3914	4023	4077	4031	3719	3270	2908	2767	2751	2737	2864	3221	3697	4163	4355	4428	4403	4198
65	3865	4331	4389	4191	3609	2991	2732	2542	2188	1997	2116	2432	2669	2928	3560	4242	4704	4843	4544
70	4510	5107	4576	3162	3076	3111	1256	354	240	217	232	310	942	2566	3381	3268	4487	5416	5166
75	4210	5378	4126	4323	2586	427	191	134	106	101	103	128	183	299	1771	4467	4057	4847	4344
80	2131	2222	2898	2698	562	118	74.3	49.1	40.6	39.0	39.5	46.7	71.6	106	271	1852	2909	1742	2356
85	617	455	1044	423	34.3	4.48	2.52	1.65	1.31	0.94	0.73	0.97	1.59	5.55	22.8	295	1377	646	516
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	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	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	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	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	0.00	0.00	0.00
115	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	0.00	0.00	0.00
120	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	0.00	0.00	0.00
125	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	0.00	0.00	0.00
130	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	0.00	0.00	0.00
135	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	0.00	0.00	0.00
140	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	0.00	0.00	0.00
145	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	0.00	0.00	0.00
150	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	0.00	0.00	0.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	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	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	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	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	0.00	0.00	0.00

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Table--2 UNIT: cd

γ (DEG) \ C(DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	3128	3124	3119	3114	3122	3119	3113	3117	3114	3122	3112	3107	3109	3114	3110	3113	3107		
5	3129	3095	3052	3039	3008	2988	2959	2949	2937	2939	2934	2954	2952	3000	3010	3030	3051		
10	3145	3078	3009	2961	2902	2861	2809	2787	2777	2768	2771	2796	2820	2883	2927	2985	3027		
15	3181	3076	2976	2901	2817	2738	2679	2642	2619	2621	2630	2675	2718	2793	2870	2942	3013		
20	3215	3088	2943	2841	2719	2632	2546	2506	2483	2480	2491	2556	2616	2722	2820	2941	3035		
25	3268	3110	2941	2794	2634	2523	2434	2382	2361	2361	2382	2449	2515	2661	2777	2944	3052		
30	3356	3152	2944	2752	2565	2440	2347	2299	2268	2264	2291	2360	2431	2595	2750	2926	3057		
35	3428	3215	2953	2707	2498	2358	2270	2222	2188	2186	2220	2275	2362	2531	2718	2915	3086		
40	3501	3267	2962	2669	2422	2271	2185	2141	2118	2110	2133	2189	2279	2452	2682	2926	3112		
45	3594	3322	2961	2598	2310	2161	2064	2021	1999	1994	2013	2068	2161	2377	2644	2933	3163		
50	3689	3348	2943	2503	2176	1979	1862	1803	1768	1774	1800	1887	2015	2265	2601	2943	3205		
55	3770	3383	2885	2321	1918	1674	1526	1462	1432	1440	1489	1590	1759	2062	2488	2930	3256		
60	3840	3355	2745	2001	1534	1287	1146	1086	1056	1066	1115	1221	1404	1747	2311	2877	3300		
65	3923	3242	2460	1528	1104	902	809	775	763	762	791	864	1013	1339	1984	2734	3292		
70	4132	3158	2146	1020	721	601	546	519	509	512	539	585	680	908	1567	2568	3363		
75	3539	3433	1763	507	364	307	272	226	184	210	263	304	354	478	1080	3114	3658		
80	1819	1602	329	189	180	169	118	95.9	94.3	94.6	103	159	179	190	255	1450	2080		
85	1828	140	89.5	63.3	66.5	52.0	33.4	31.0	26.0	28.6	30.9	41.3	64.6	62.7	76.4	113	1575		
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	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	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	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	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	0.00		
115	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	0.00		
120	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	0.00		
125	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	0.00		
130	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	0.00		
135	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	0.00		
140	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	0.00		
145	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	0.00		
150	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	0.00		
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	0.00	0.00	0.00	0.00	0.00		
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	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	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	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	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	0.00		

6. THD and PF Test

Model Number	Voltage (V AC)	Frequency (Hz)	Power Factor	THD (%)
401Y0100W30L70AY	100.0	60	0.995	7.9
401Y0100W30L70AY	120.0	60	0.993	8.3
401Y0100W30L70AY	277.0	60	0.947	19.5

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7. Photo of sample

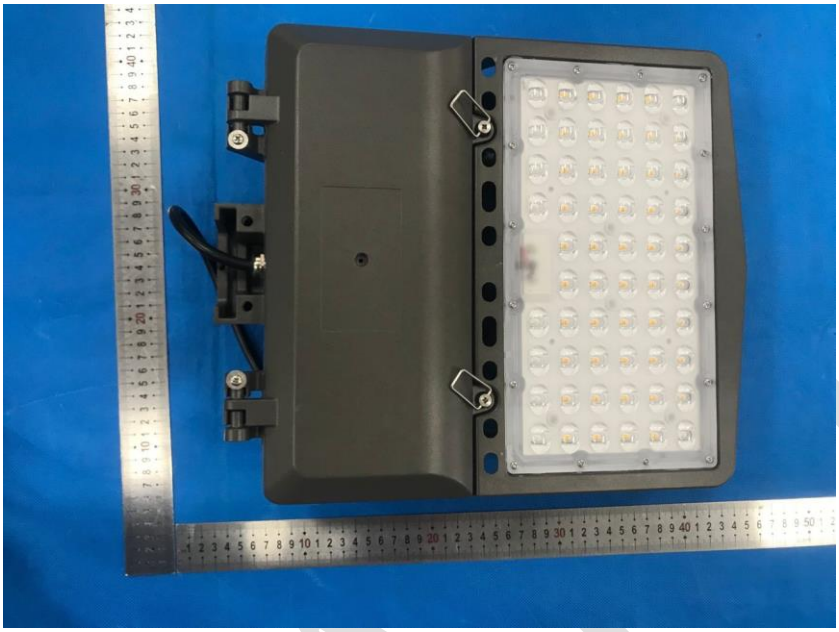

Figure 1

Figure 2

****** END OF THE TEST REPORT******

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