

Test Report Of ANSI/IES LM-79-19


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

Report Number..... : N02A23080352L00601

Client..... : ROYALUX EXPORTS PRIVATE LIMITED

Address..... : 150-B, NOIDA SPECIAL ECONOMIC ZONE, NOIDA, GAUTAM BUDDHA
NAGAR, UTTAR PRADESH, 201305, INDIA

Test Model..... : 2303Y0300W35L[Blank, BS], 2303Y0300W40L[Blank, BS],
2303Y0300W50L[Blank, BS]

Brand Name..... : 

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

Date of receipt..... : Aug. 21, 2023

Date of test : Sep. 06, 2023 – Sep. 13, 2023

Date of report..... : Sep. 13, 2023

Tested by:



Jarvis Zhang/ Test Engineer

Checked by:



Sandy Chen/ Project Engineer

Approved by:



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.

Note 3: This report contains data that are not covered by the NVLAP accreditation. It is marked * in the title.

1. Product Description for Equipment under Test(EUT)

Representative (Tested) Model:	2303Y0300W35L[Blank, BS], 2303Y0300W40L[Blank, BS], 2303Y0300W50L[Blank, BS]
Manufacturer:	ROYALUX EXPORTS PRIVATE LIMITED
Product Type:	High Bay Luminaires (Commercial and Industrial)
Rated Voltage/Frequency:	100-277V AC, 50/60Hz
Rated Power:	300W
Rated luminous flux:	42000lm
Nominal CCT:	3500K/4000K/5000K
LED Manufacturer:	Bridgelux Inc.
LED Model No.:	BXEN-35E-11M-3CA, BXEN-50E-11M-3CA

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	2023/09/17
Digital Power Meter	MD-E001	PF2010	2023/09/17
AC Testing Power Source	MD-E002	DPS1060	2023/09/17
Total Spectral Radiant Flux Standard Lamp	MD-E007	D908S	2023/10/13
Integrating Sphere System	MD-E029	2M	2023/09/17
High Accuracy Array Spectroradio Meter	MD-E011	HAAS-3000	2023/09/17
Digital Power Meter	MD-E008	PF310	2023/09/17
AC Testing Power Source	MD-E010	DPS1010	2023/09/17
Standard Lamp	MD-E036	D204	2023/10/13

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).

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 $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$ during measurement. And relative humidity between 10% and 65%.

Goniophotometer System

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

Photometric parameters 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 4π 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 R_f , R_g 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.

5. Integrating Sphere Test Results

5.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.3℃	Test orientation	Downward
Operate time(Min.)	60	stabilization time(Min.)	30

Optical and Electrical Measurement Result

Model	Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)	CCT (K)
2303Y0300W35L [Blank, BS]	120.12	60	1.998	239.8	0.9991	33329	138.99	3329
2303Y0300W40L [Blank, BS]	120.12	60	1.948	233.9	0.999	34936	149.38	3856
2303Y0300W50L [Blank, BS]	120.09	60	2.007	240.9	0.999	34143	141.74	4891

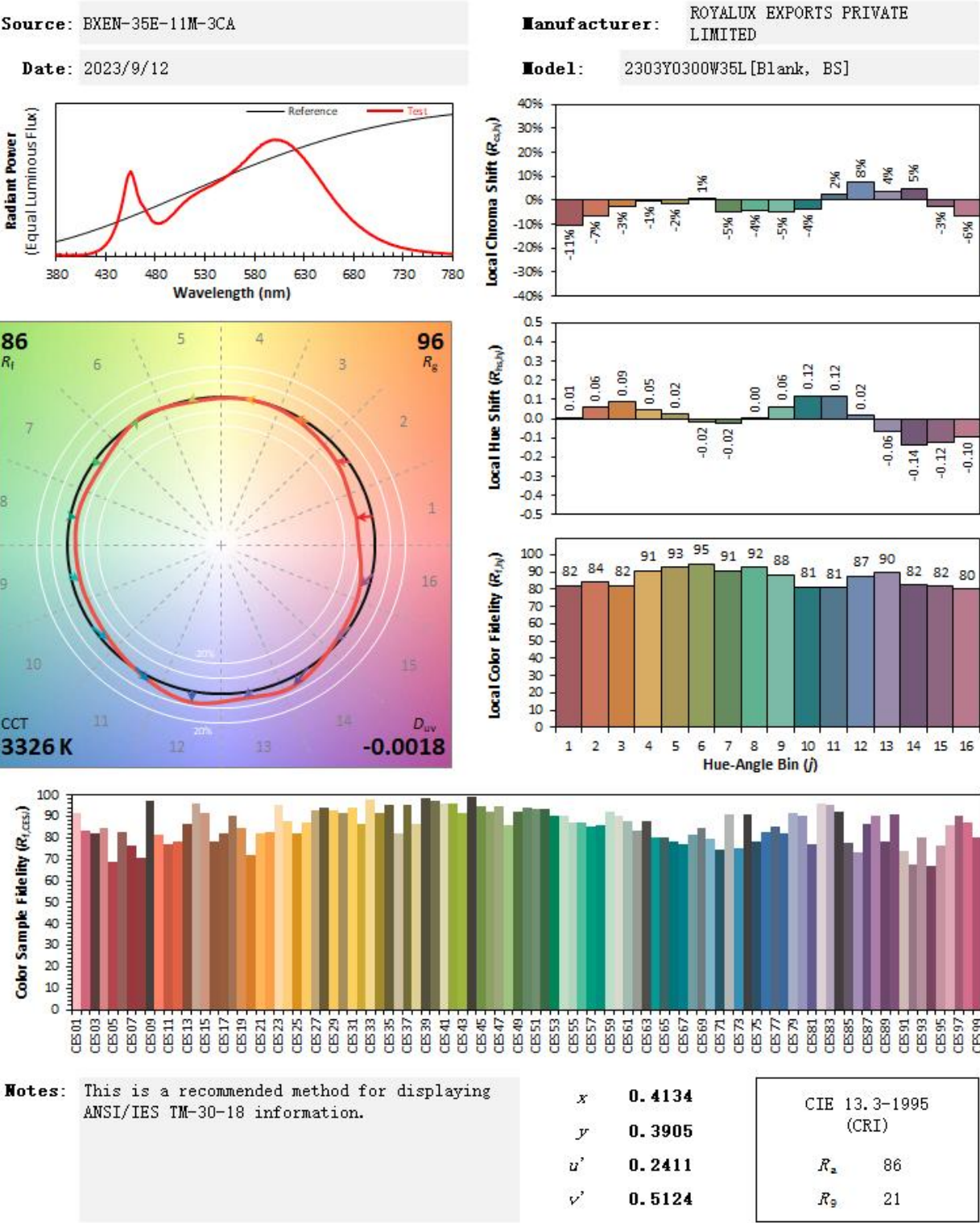
Model	Ra	R9	Rf	Rg	x	y	u'	v'	Duv
2303Y0300W35L [Blank, BS]	85.6	21	86	96	0.4142	0.3928	0.2406	0.5134	-9.48E-04
2303Y0300W40L [Blank, BS]	86.5	26	86	97	0.3858	0.3767	0.2287	0.5023	-1.57E-03
2303Y0300W50L [Blank, BS]	85.5	23	85	98	0.3483	0.3546	0.2124	0.4866	2.24E-04

5.2 Color Rendering Index for Model # 2303Y0300W35L[Blank, BS]

Ra 85.6				
R1 85	R2 93	R3 97	R4 84	R5 85
R6 91	R7 85	R8 66	R9 21	R10 83
R11 83	R12 72	R13 87	R14 99	R15 79

*5.3.1 ANSI/IES TM-30-18 Color Rendition Report for Model # 2303Y0300W35L[Blank, BS]

ANSI/IES TM-30-18 Color Rendition Report



*5.3.2 ANSI/IES TM-30-18 Color Rendition Report for Model # 2303Y0300W40L[Blank, BS]

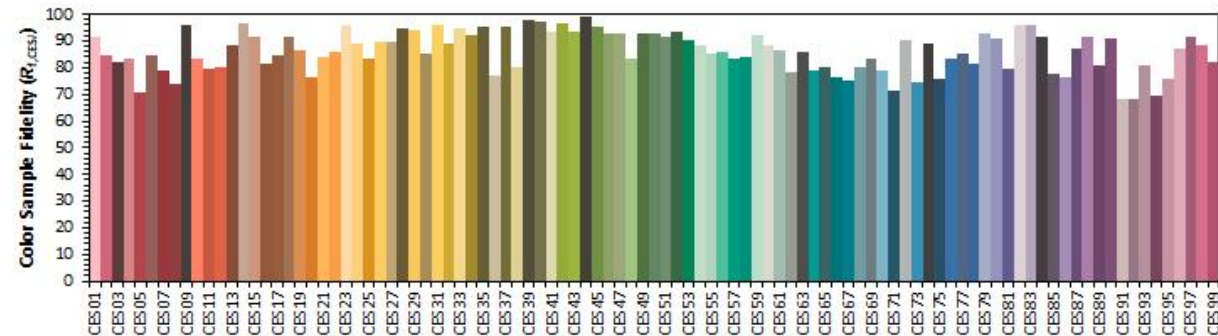
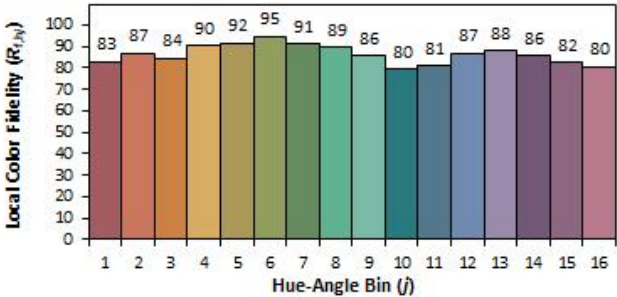
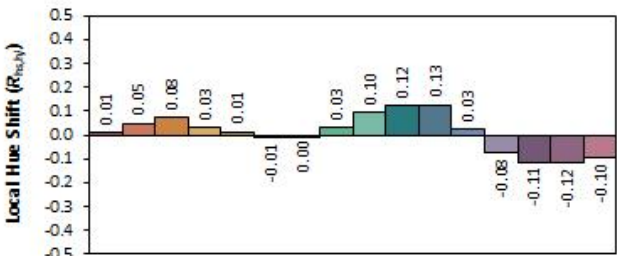
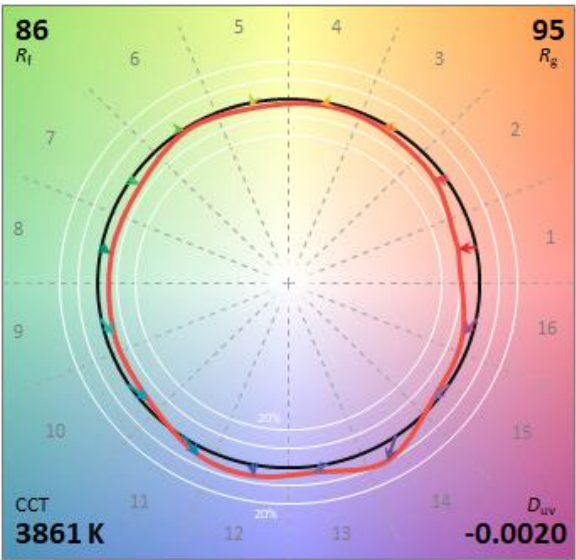
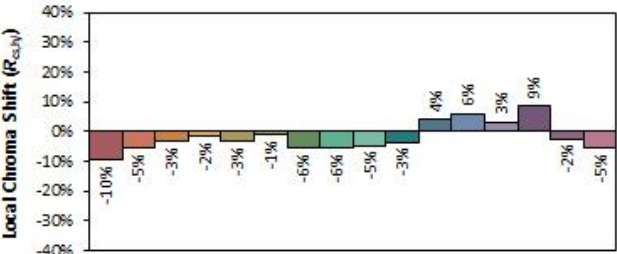
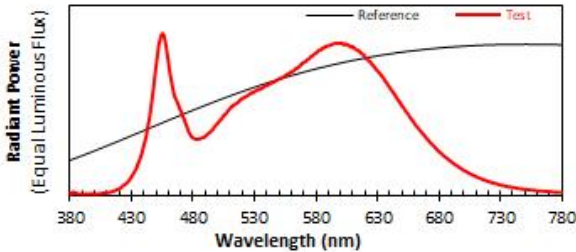
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-35E-11M-3CA, BXEN-50E-11M-3CA

Date: 2023/9/12

Manufacturer: ROYALUX EXPORTS PRIVATE LIMITED

Model: 2303Y0300W40L[Blank, BS]



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

x 0.3852
 y 0.3755
 u' 0.2288
 v' 0.5017

CIE 13.3-1995 (CRI)
 Ra 87
 R9 29

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

*5.3.3 ANSI/IES TM-30-18 Color Rendition Report for for Model # 2303Y0300W50L[Blank, BS]

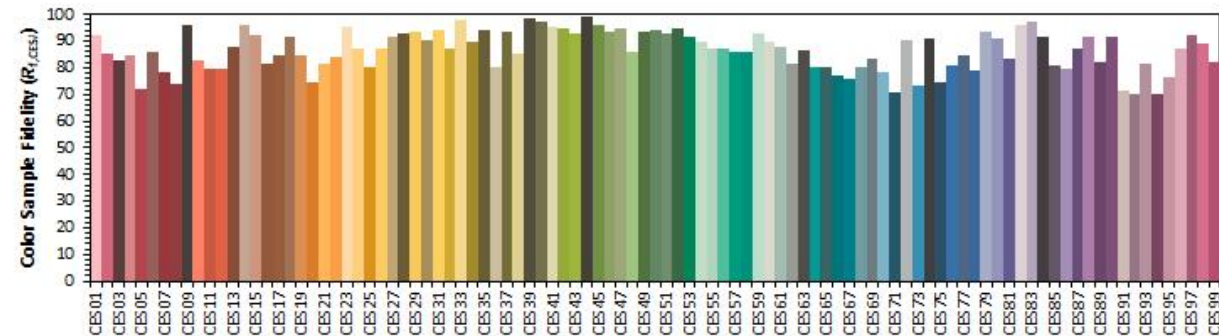
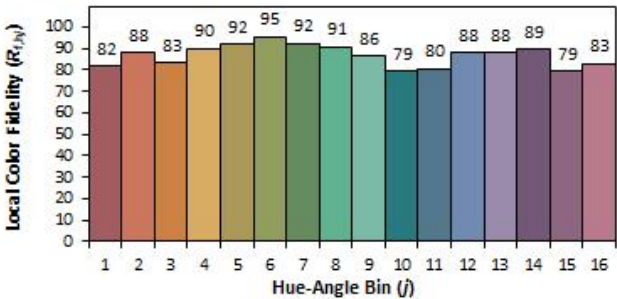
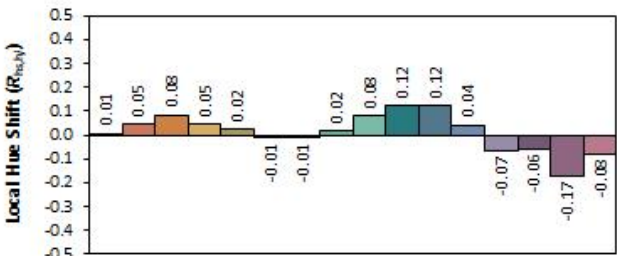
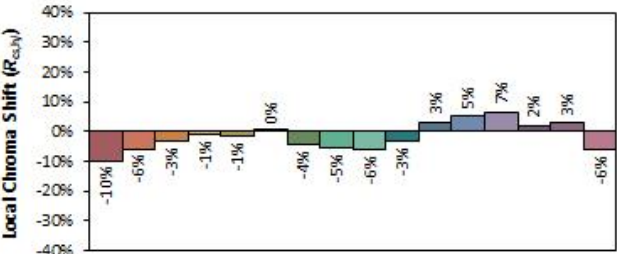
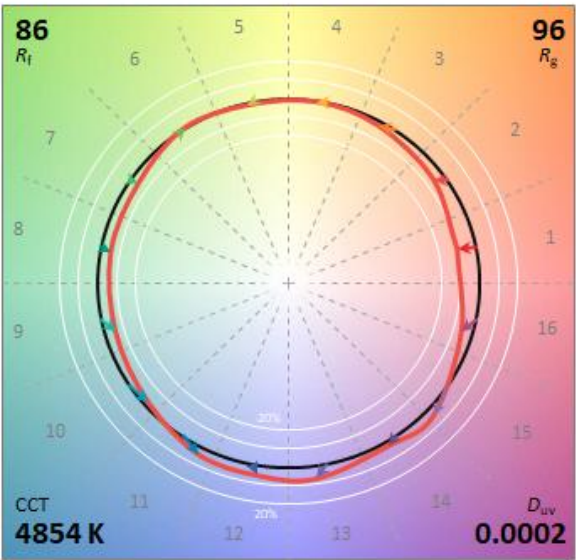
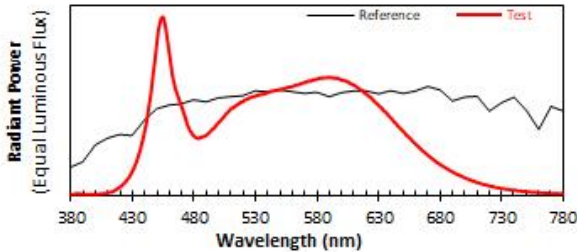
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-50E-11M-3CA

Date: 2023/9/12

Manufacturer: ROYALUX EXPORTS PRIVATE LIMITED

Model: 2303Y0300W50L [Blank, BS]



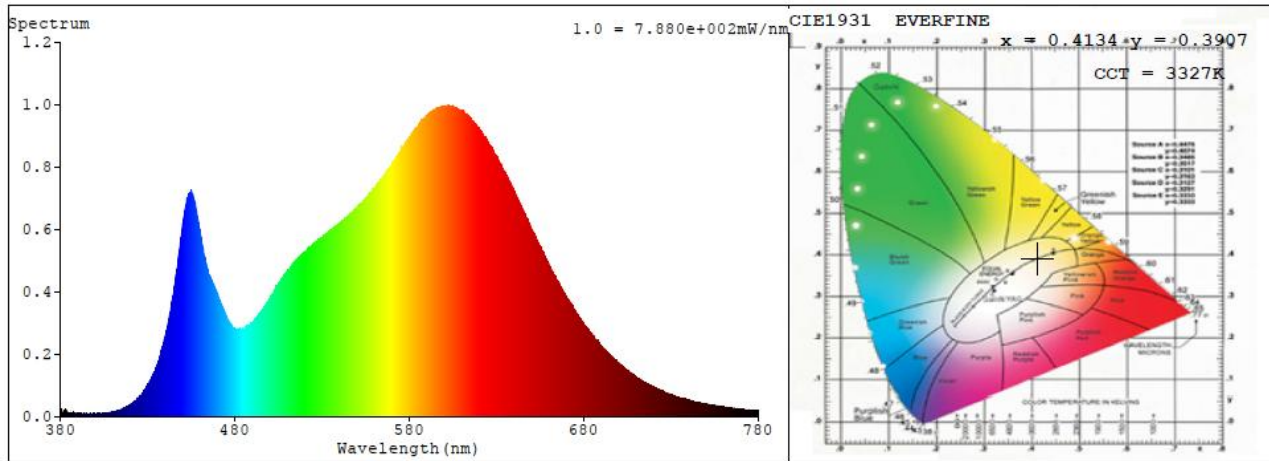
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3494
y 0.3553
u' 0.2129
v' 0.4871

CIE 13.3-1995 (CRI)
Ra 87
R9 30

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

5.4 Relative Spectral Power Distribution for Model # 2303Y0300W35L[Blank, BS]



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0134	414	0.0201	448	0.5213	482	0.2805	516	0.5044
381	0.001	415	0.0218	449	0.5612	483	0.2768	517	0.5132
382	0.0092	416	0.0253	450	0.6066	484	0.2785	518	0.5144
383	0.0168	417	0.0288	451	0.6457	485	0.281	519	0.5233
384	0.0135	418	0.0307	452	0.6763	486	0.2799	520	0.526
385	0.0085	419	0.0361	453	0.6967	487	0.2891	521	0.5306
386	0.0086	420	0.0368	454	0.7093	488	0.2933	522	0.5415
387	0.0079	421	0.0428	455	0.7244	489	0.295	523	0.5407
388	0	422	0.0436	456	0.708	490	0.2987	524	0.5484
389	0.0081	423	0.0506	457	0.6856	491	0.3059	525	0.5531
390	0.0107	424	0.056	458	0.6598	492	0.3126	526	0.5578
391	0.0088	425	0.059	459	0.6244	493	0.321	527	0.5623
392	0.009	426	0.0654	460	0.5964	494	0.3273	528	0.5674
393	0.0033	427	0.0748	461	0.5563	495	0.3365	529	0.5706
394	0.0036	428	0.0824	462	0.5244	496	0.344	530	0.5756
395	0.0115	429	0.0891	463	0.5045	497	0.351	531	0.5799
396	0.0088	430	0.0987	464	0.4801	498	0.3601	532	0.5852
397	0.0106	431	0.1108	465	0.456	499	0.3668	533	0.5878
398	0.0076	432	0.1202	466	0.4473	500	0.3762	534	0.5928
399	0.0098	433	0.1311	467	0.4313	501	0.3907	535	0.5974
400	0.0051	434	0.1441	468	0.4226	502	0.3955	536	0.5992
401	0.0048	435	0.1567	469	0.4085	503	0.4065	537	0.6017
402	0.0081	436	0.176	470	0.3926	504	0.4167	538	0.6082
403	0.0054	437	0.1929	471	0.3773	505	0.4238	539	0.6149
404	0.0098	438	0.2149	472	0.3615	506	0.4316	540	0.6186
405	0.0112	439	0.2342	473	0.3499	507	0.4412	541	0.6207
406	0.0086	440	0.2545	474	0.3387	508	0.451	542	0.6303
407	0.0084	441	0.2755	475	0.324	509	0.4577	543	0.6337
408	0.0117	442	0.3043	476	0.305	510	0.4672	544	0.6384
409	0.0131	443	0.3361	477	0.2979	511	0.4685	545	0.645
410	0.0135	444	0.3691	478	0.2952	512	0.4769	546	0.6483
411	0.0139	445	0.3982	479	0.2859	513	0.4906	547	0.6501
412	0.016	446	0.4398	480	0.2811	514	0.492	548	0.656
413	0.0194	447	0.4755	481	0.2789	515	0.5005	549	0.666

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.6693	599	0.9932	648	0.6287	697	0.1886	746	0.0437
551	0.6765	600	0.9915	649	0.6191	698	0.1801	747	0.0432
552	0.6839	601	0.9958	650	0.6059	699	0.1776	748	0.0415
553	0.6858	602	0.9931	651	0.591	700	0.1734	749	0.0414
554	0.6912	603	0.9889	652	0.5793	701	0.1665	750	0.039
555	0.7023	604	0.993	653	0.5689	702	0.1631	751	0.0388
556	0.7034	605	0.9914	654	0.5558	703	0.1572	752	0.0375
557	0.7131	606	0.9899	655	0.5469	704	0.1517	753	0.036
558	0.717	607	0.9903	656	0.5335	705	0.1474	754	0.0352
559	0.7321	608	0.9828	657	0.5225	706	0.1431	755	0.0354
560	0.7282	609	0.98	658	0.5155	707	0.1404	756	0.0339
561	0.7424	610	0.9799	659	0.4975	708	0.1345	757	0.0336
562	0.747	611	0.9762	660	0.4866	709	0.1312	758	0.0322
563	0.7533	612	0.969	661	0.4787	710	0.1275	759	0.0308
564	0.7623	613	0.9682	662	0.4658	711	0.1229	760	0.0299
565	0.7663	614	0.9654	663	0.4545	712	0.1214	761	0.0287
566	0.7721	615	0.9555	664	0.4459	713	0.1172	762	0.028
567	0.7891	616	0.9472	665	0.4341	714	0.1136	763	0.0283
568	0.7925	617	0.9461	666	0.4274	715	0.1091	764	0.0267
569	0.8	618	0.9403	667	0.4155	716	0.1046	765	0.027
570	0.8073	619	0.9311	668	0.4046	717	0.1035	766	0.0256
571	0.8147	620	0.9218	669	0.3936	718	0.0985	767	0.0249
572	0.8236	621	0.9133	670	0.3847	719	0.0955	768	0.0248
573	0.8361	622	0.9034	671	0.3769	720	0.0954	769	0.0239
574	0.8413	623	0.8957	672	0.3698	721	0.0904	770	0.0226
575	0.8503	624	0.895	673	0.3603	722	0.0883	771	0.0225
576	0.8655	625	0.8797	674	0.3484	723	0.0872	772	0.0214
577	0.8686	626	0.8712	675	0.3408	724	0.0838	773	0.0213
578	0.8763	627	0.8641	676	0.3309	725	0.082	774	0.0209
579	0.8863	628	0.8535	677	0.3247	726	0.0792	775	0.0213
580	0.8958	629	0.842	678	0.3124	727	0.0764	776	0.02
581	0.9008	630	0.8377	679	0.305	728	0.0733	777	0.0192
582	0.9107	631	0.8241	680	0.2976	729	0.0725	778	0.0184
583	0.9195	632	0.8119	681	0.2905	730	0.0698	779	0.0185
584	0.9253	633	0.8034	682	0.2839	731	0.0682	780	0.0186
585	0.9281	634	0.7912	683	0.2764	732	0.0669		
586	0.9364	635	0.7813	684	0.2685	733	0.0638		
587	0.9515	636	0.7682	685	0.2622	734	0.0633		
588	0.953	637	0.7564	686	0.252	735	0.0603		
589	0.9553	638	0.7491	687	0.2469	736	0.0595		
590	0.9653	639	0.7368	688	0.2434	737	0.0561		
591	0.9704	640	0.7235	689	0.238	738	0.0557		
592	0.9708	641	0.7115	690	0.2281	739	0.0537		
593	0.9782	642	0.6995	691	0.2201	740	0.0526		
594	0.9767	643	0.6887	692	0.2164	741	0.0508		
595	0.9838	644	0.6776	693	0.2108	742	0.0504		
596	0.9867	645	0.6664	694	0.2037	743	0.0486		
597	0.9875	646	0.6539	695	0.1984	744	0.0475		
598	0.9928	647	0.6412	696	0.1914	745	0.0455		

6. Goniophotometer Test results for Model # 2303Y0300W35L[Blank, BS]

6.1 Test Data

Test Ambient Temperature	25.2°C	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

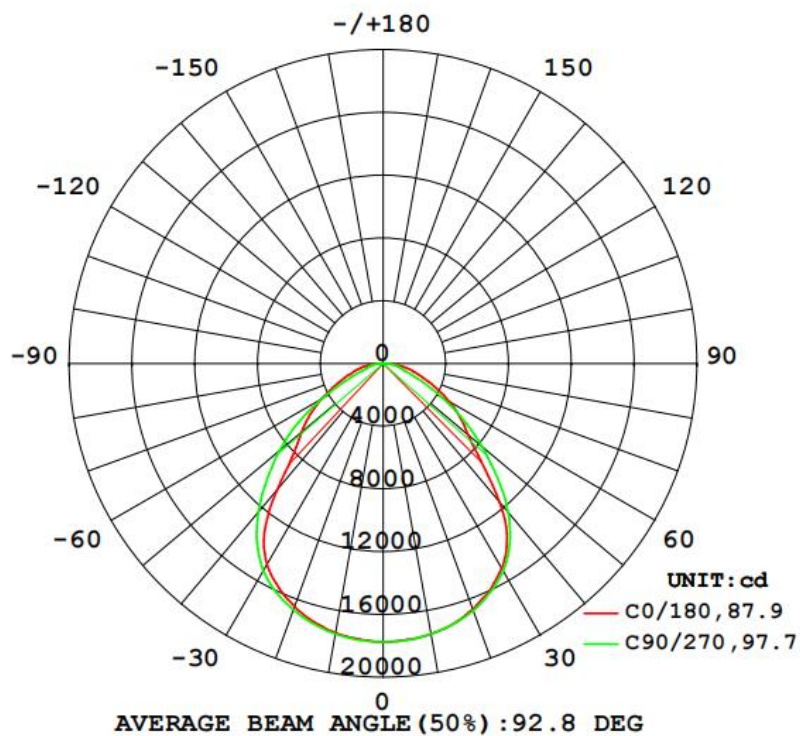
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
120	60	2.4886	0.9984	298.1

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	ZL (20-50°)
40640.8	136.35	17748	57.1%

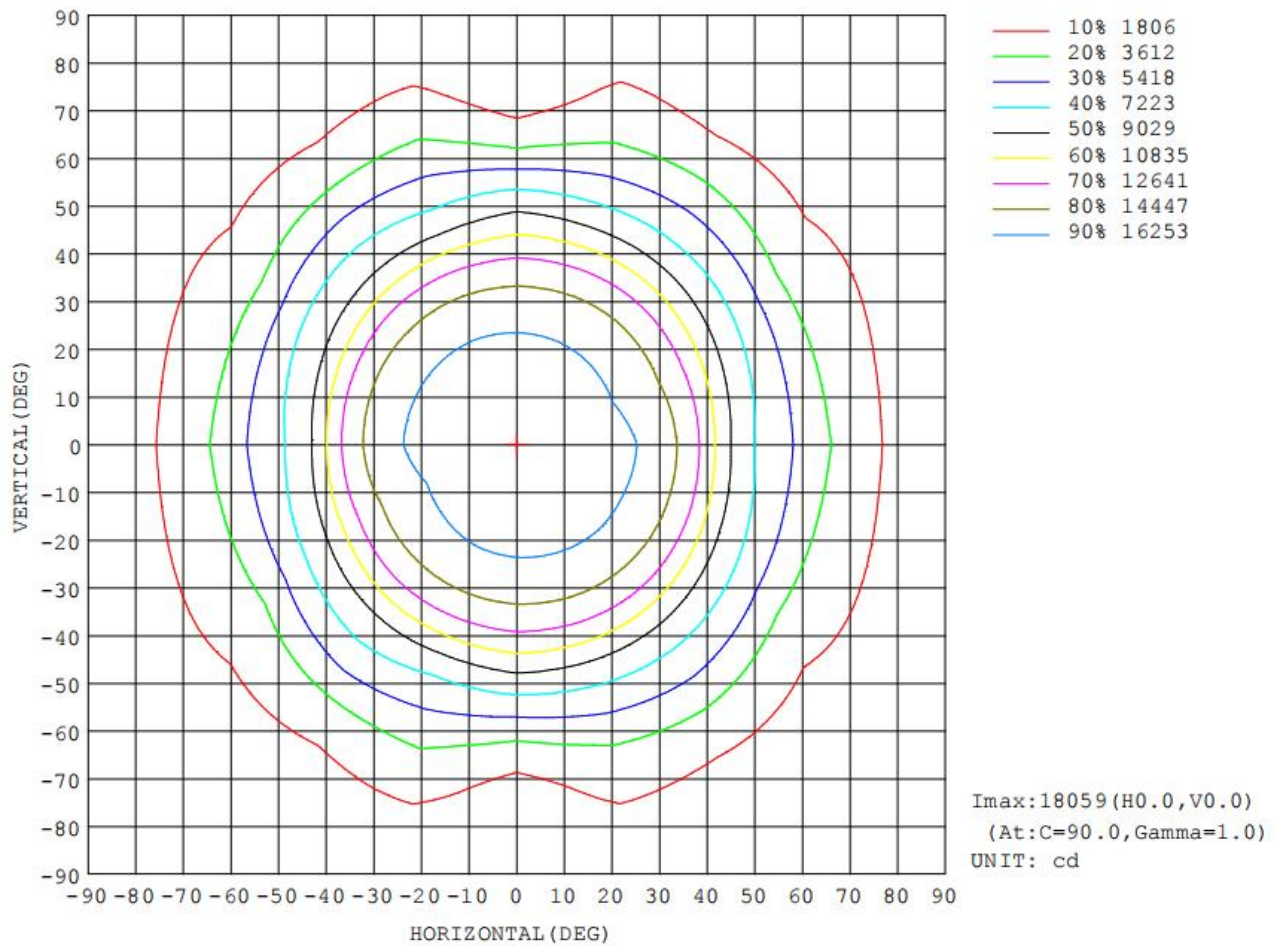
6.2 Luminous Intensity Distribution



6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
10	1751	1751	1750	1743	1744	1746	1751	1750	0- 10	1680	1680	4.13,4.13
20	1667	1676	1676	1659	1651	1663	1672	1675	10- 20	4843	6523	16.1,16.1
30	1509	1520	1529	1496	1480	1494	1525	1519	20- 30	7364	13887	34.2,34.2
40	1158	1207	1239	1144	1056	1143	1238	1204	30- 40	8530	22417	55.2,55.2
50	708.7	778.2	822.6	754.4	679.4	756.2	863.8	786.1	40- 50	7330	29747	73.2,73.2
60	487.3	485.4	433.5	438.3	453.5	443.5	446.8	482.8	50- 60	5423	35170	86.5,86.5
70	278.3	211.6	158.9	185.3	254.3	186.4	149.9	207.6	60- 70	3159	38328	94.3,94.3
80	136.6	115.4	82.85	106.4	129.1	110.0	75.34	114.4	70- 80	1680	40008	98.4,98.4
90	0.5962	0.1225	7.800	0.1514	0.2534	0.2322	4.622	0.3551	80- 90	583.2	40592	99.9,99.9
100	0.2288	0.2384	0.2458	0.2503	0.3957	0.4071	0.4554	0.3658	90-100	4.369	40596	99.9,99.9
110	0.3360	0.3319	0.3559	0.3539	0.4909	0.5044	0.5073	0.4474	100-110	3.919	40600	99.9,99.9
120	0.4882	0.5656	0.5241	0.5363	0.5514	0.5910	0.5374	0.5876	110-120	4.722	40605	99.9,99.9
130	0.8274	0.8029	0.7837	0.8010	0.8404	0.8719	0.8243	0.8400	120-130	6.127	40611	99.9,99.9
140	1.066	1.043	1.029	1.129	1.357	1.380	1.167	1.255	130-140	7.660	40618	99.9,99.9
150	1.175	1.186	1.190	1.243	1.867	1.892	1.549	1.595	140-150	8.394	40627	100,100
160	1.262	1.445	1.460	1.502	1.987	2.106	1.886	1.936	150-160	7.370	40634	100,100
170	1.574	1.574	1.655	1.619	2.065	2.079	1.899	1.876	160-170	4.938	40639	100,100
180	1.932	1.856	1.893	1.927	1.918	1.877	1.867	1.914	170-180	1.746	40641	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

6.4 Isocandela Diagram



6.5 Luminous Distribution Intensity Data

Table--1 UNIT: X10cd

C (DEG) γ (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	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775	1775			
5	1768	1768	1767	1768	1769	1766	1764	1763	1764	1764	1764	1766	1769	1766	1764	1766			
10	1751	1754	1751	1750	1750	1745	1743	1743	1744	1746	1746	1747	1751	1748	1750	1753			
15	1719	1721	1721	1718	1721	1714	1712	1705	1704	1708	1712	1716	1718	1718	1721	1719			
20	1667	1668	1676	1673	1676	1671	1659	1654	1651	1654	1663	1670	1672	1674	1675	1670			
25	1601	1602	1610	1612	1612	1604	1590	1580	1576	1579	1590	1603	1611	1613	1611	1603			
30	1509	1514	1520	1529	1529	1513	1496	1482	1480	1486	1494	1513	1525	1523	1519	1516			
35	1379	1390	1399	1407	1407	1380	1358	1334	1320	1337	1358	1379	1401	1401	1393	1390			
40	1158	1184	1207	1228	1239	1188	1144	1091	1056	1094	1143	1191	1238	1223	1204	1189			
45	885	926	967	1006	1031	957	910	867	803	865	913	964	1049	1013	982	950			
50	709	748	778	804	823	749	754	701	679	720	756	769	864	815	786	766			
55	600	592	630	642	625	606	610	524	570	545	603	629	662	646	629	612			
60	487	421	485	492	433	490	438	357	454	373	443	499	447	497	483	433			
65	376	270	331	356	271	374	283	246	344	243	294	379	269	366	330	279			
70	278	180	212	254	159	273	185	180	254	173	186	273	150	265	208	190			
75	201	134	149	195	117	201	139	135	185	132	137	197	102	203	146	144			
80	137	98.7	115	135	82.9	132	106	95.1	129	93.9	110	133	75.3	142	114	103			
85	66.1	50.1	63.8	61.8	38.4	54.9	51.8	38.3	47.0	38.7	56.8	57.4	38.2	69.0	65.1	54.9			
90	0.60	3.47	0.12	0.12	7.80	5.21	0.15	0.13	0.25	0.22	0.23	0.24	4.62	11.2	0.36	0.29			
95	0.19	0.19	0.16	0.20	0.18	0.17	0.19	0.18	0.33	0.30	0.31	0.32	0.35	0.32	0.29	0.28			
100	0.23	0.25	0.24	0.23	0.25	0.21	0.25	0.24	0.40	0.39	0.41	0.38	0.46	0.38	0.37	0.35			
105	0.28	0.31	0.28	0.29	0.30	0.27	0.30	0.31	0.46	0.46	0.47	0.44	0.51	0.44	0.42	0.43			
110	0.34	0.36	0.33	0.36	0.36	0.32	0.35	0.37	0.49	0.50	0.50	0.48	0.51	0.51	0.45	0.47			
115	0.40	0.42	0.40	0.43	0.44	0.42	0.43	0.44	0.51	0.54	0.54	0.53	0.56	0.53	0.47	0.50			
120	0.49	0.51	0.57	0.52	0.52	0.56	0.54	0.54	0.55	0.58	0.59	0.61	0.54	0.57	0.59	0.54			
125	0.64	0.69	0.69	0.66	0.66	0.69	0.66	0.68	0.66	0.70	0.70	0.71	0.71	0.68	0.70	0.70			
130	0.83	0.84	0.80	0.81	0.78	0.84	0.80	0.84	0.84	0.87	0.87	0.85	0.82	0.82	0.84	0.90			
135	0.96	0.94	0.91	0.89	0.91	0.87	0.95	0.97	1.08	1.10	1.12	0.97	0.99	0.98	1.03	1.10			
140	1.07	1.05	1.04	0.99	1.03	0.99	1.13	1.13	1.36	1.38	1.38	1.21	1.17	1.16	1.25	1.33			
145	1.16	1.16	1.11	1.08	1.11	1.15	1.24	1.28	1.68	1.70	1.66	1.48	1.36	1.43	1.48	1.57			
150	1.17	1.17	1.19	1.18	1.19	1.26	1.24	1.33	1.87	1.93	1.89	1.73	1.55	1.60	1.59	1.73			
155	1.26	1.28	1.27	1.34	1.33	1.40	1.31	1.42	2.04	2.10	1.97	1.96	1.70	1.64	1.81	1.89			
160	1.26	1.31	1.45	1.40	1.46	1.48	1.50	1.35	1.99	2.03	2.11	2.09	1.89	1.82	1.94	1.96			
165	1.41	1.48	1.54	1.47	1.53	1.55	1.57	1.47	2.08	2.07	2.16	2.11	1.93	1.83	1.86	2.02			
170	1.57	1.58	1.57	1.59	1.66	1.67	1.62	1.57	2.07	2.06	2.08	2.00	1.90	1.83	1.88	1.96			
175	1.66	1.70	1.75	1.77	1.81	1.85	1.87	1.78	1.93	1.93	1.99	2.03	1.98	1.96	1.98	1.99			
180	1.93	1.87	1.86	1.87	1.89	1.92	1.93	1.92	1.92	1.92	1.88	1.87	1.87	1.89	1.91	1.93			

7. THD and PF Test

Model	Voltage (V AC)	Frequency (Hz)	Power Factor	THD (%)
2303Y0300W35L[Blank, BS]	100.0	60	0.997	2.17
	120.0	60	0.998	2.23
	277.0	60	0.959	6.21
2303Y0300W40L[Blank, BS]	277.0	60	0.956	6.33
2303Y0300W50L[Blank, BS]	277.0	60	0.962	6.23

8. Photo of sample

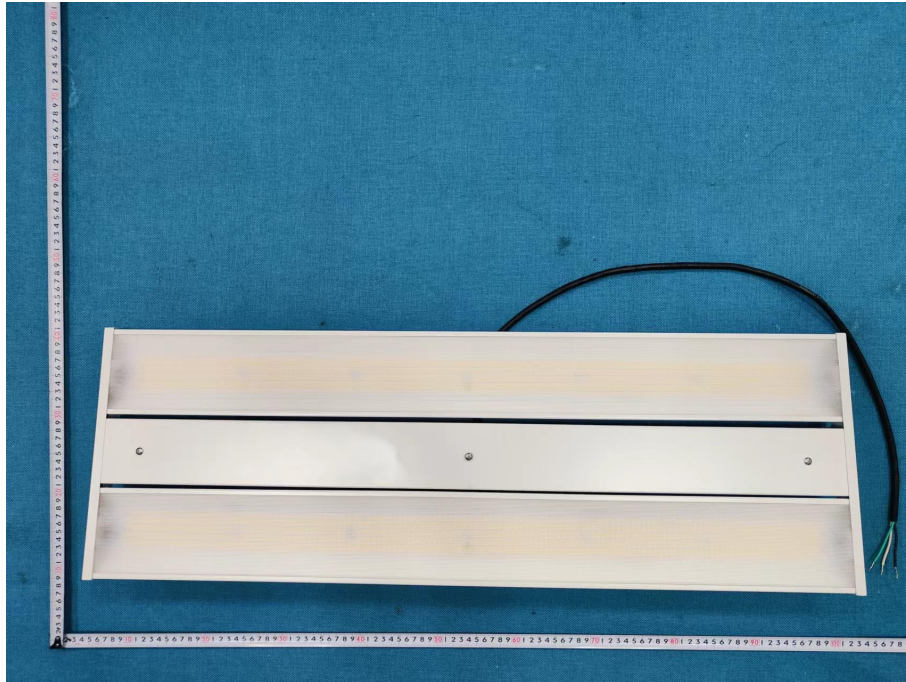


Figure 1

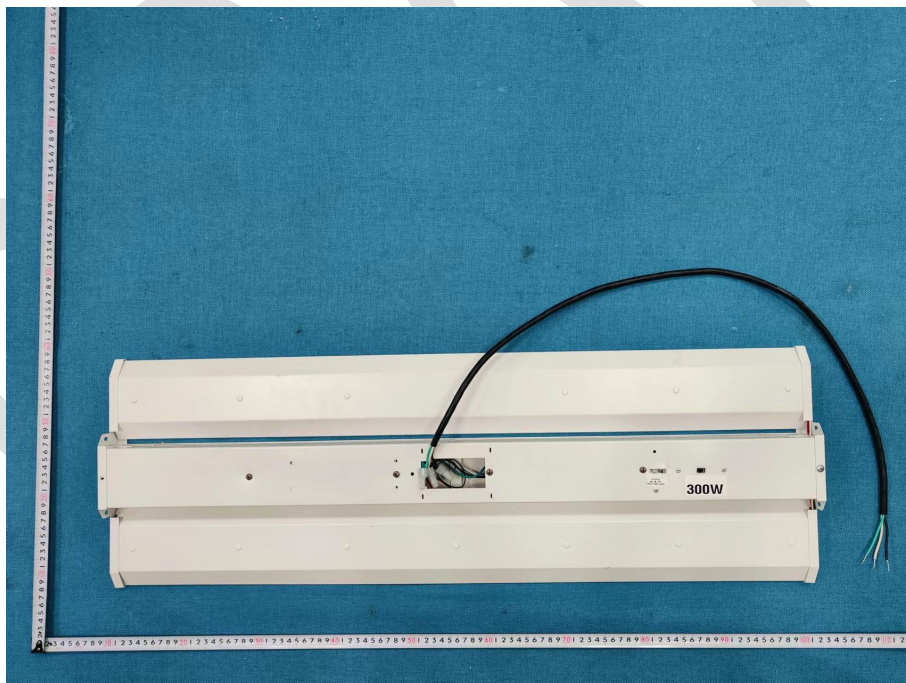


Figure 2

---End of Report---