

Test Report Of ANSI/IES LM-79-19

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

Report Number..... : N02A23080352L00301

Client..... : ROYALUX EXPORTS PRIVATE LIMITED

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

Test Model..... : 2302Y0200W35L[Blank, BS], 2302Y0200W40L[Blank, BS],
2302Y0200W50L[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: 2302Y0200W35L[Blank, BS], 2302Y0200W40L[Blank, BS],
2302Y0200W50L[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: 200W

Rated luminous flux: 28000lm

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)
2302Y0200W35L [Blank, BS]	120.15	60	1.645	197.5	0.9986	27323	138.33	3315
2302Y0200W40L [Blank, BS]	120.16	60	1.602	192.2	0.9985	29856	155.36	3899
2302Y0200W50L [Blank, BS]	120.09	60	1.634	195.9	0.9987	28915	147.58	4831

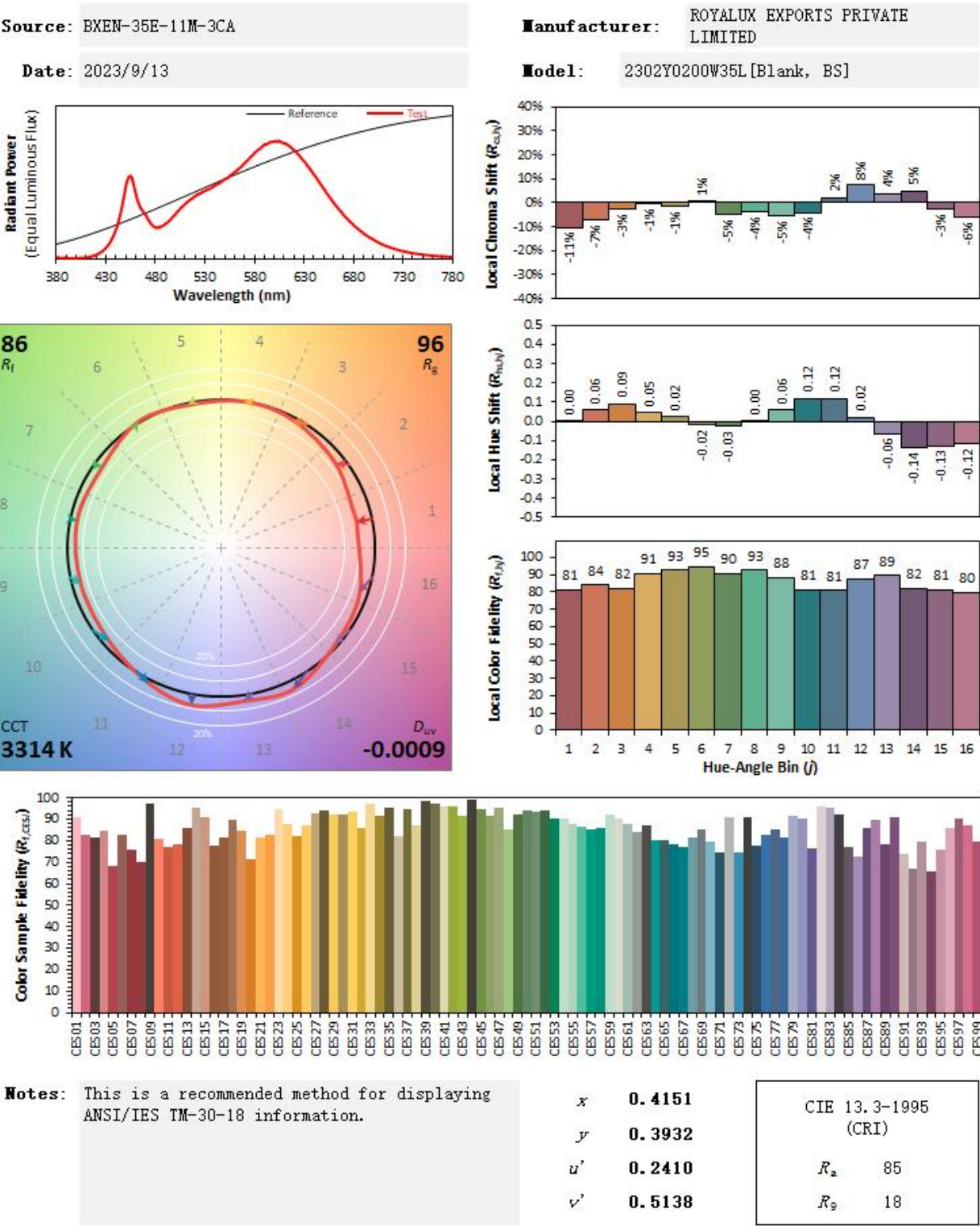
Model	Ra	R9	Rf	Rg	x	y	u'	v'	Duv
2302Y0200W35L [Blank, BS]	85.1	18	86	96	0.4151	0.3934	0.241	0.5138	-8.66E-04
2302Y0200W40L [Blank, BS]	86.1	23	86	96	0.3839	0.3757	0.2278	0.5016	-1.48E-03
2302Y0200W50L [Blank, BS]	85	21	85	98	0.3501	0.3563	0.213	0.4877	3.73E-04

5.2 Color Rendering Index for Model # 2302Y0200W35L[Blank, BS]

Ra 85.1				
R1 84	R2 93	R3 96	R4 83	R5 84
R6 91	R7 85	R8 65	R9 18	R10 83
R11 82	R12 72	R13 87	R14 99	R15 78

*5.3.1 ANSI/IES TM-30-18 Color Rendition Report for Model # 2302Y0200W35L[Blank, BS]

ANSI/IES TM-30-18 Color Rendition Report



*5.3.2 ANSI/IES TM-30-18 Color Rendition Report for Model # 2302Y0200W40L[Blank, BS]

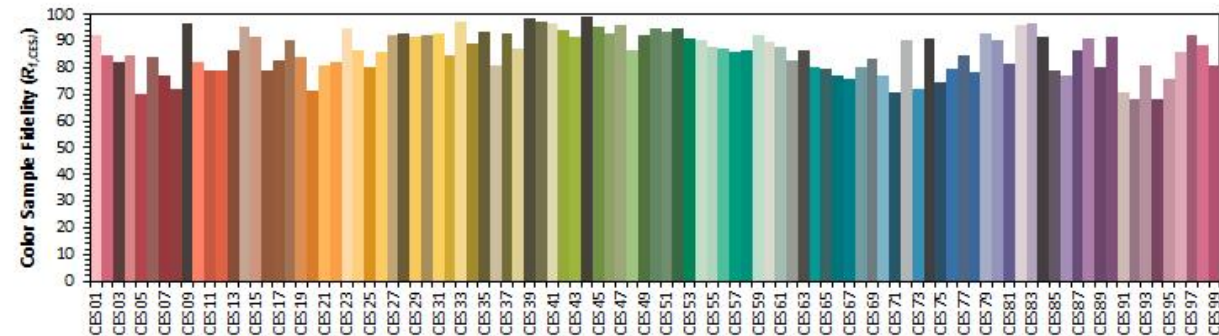
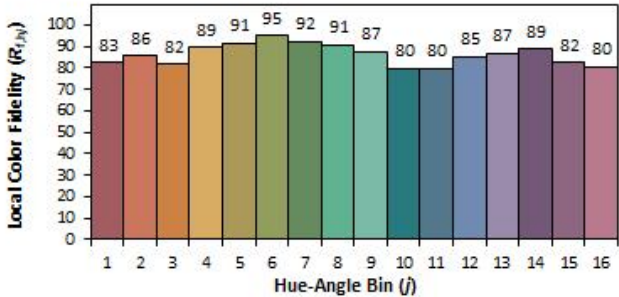
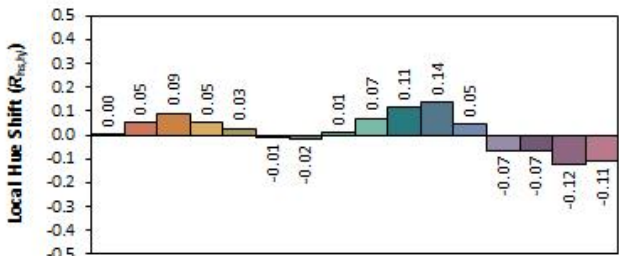
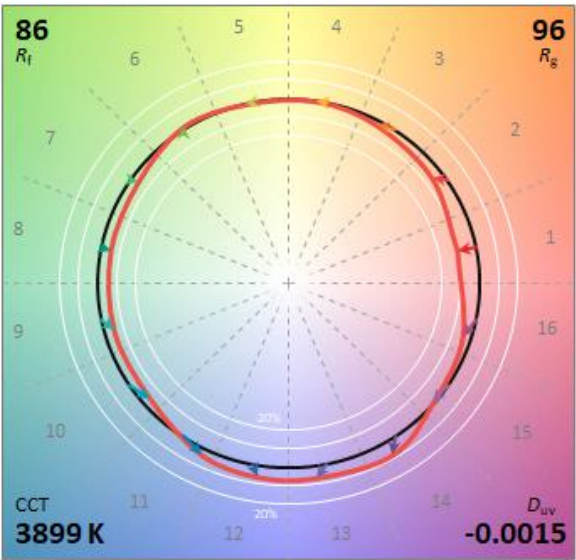
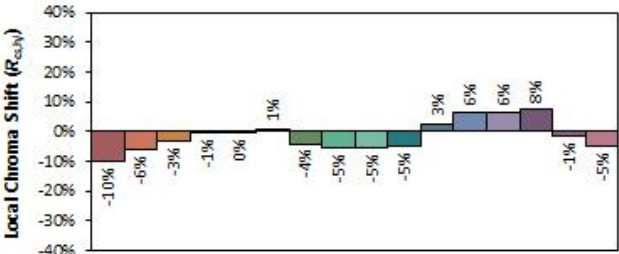
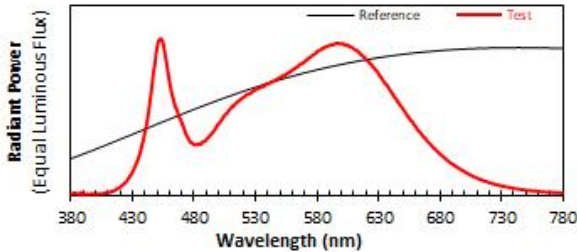
ANSI/IES TM-30-18 Color Rendition Report

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

Date: 2023/9/13

Manufacturer: ROYALUX EXPORTS PRIVATE LIMITED

Model: 2302Y0200W40L[Blank, BS]



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

x 0.3839
y 0.3755
u' 0.2278
v' 0.5016

CIE 13.3-1995 (CRI)	
R _a	86
R _g	23

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 # 2302Y0200W50L[Blank, BS]

ANSI/IES TM-30-18 Color Rendition Report

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

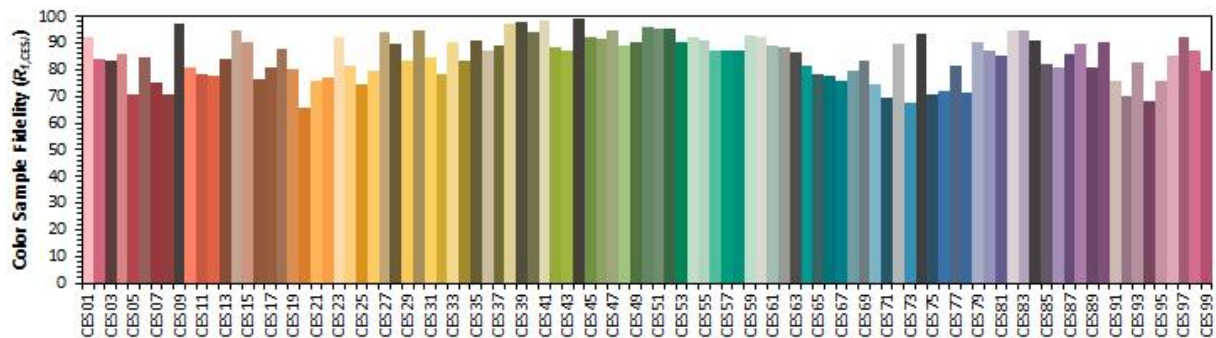
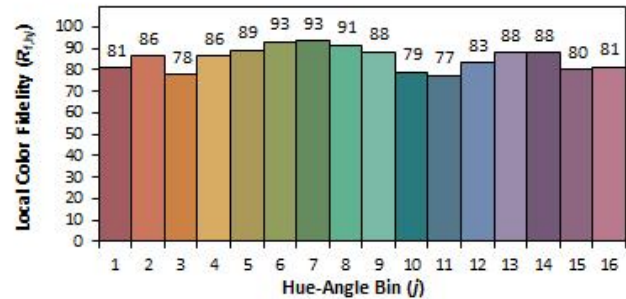
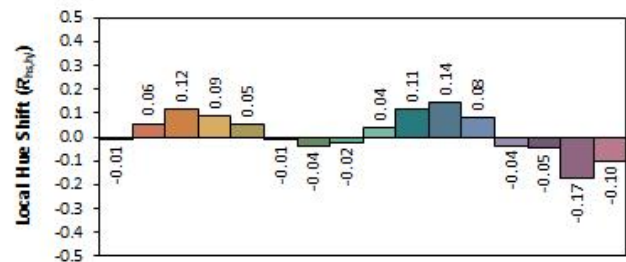
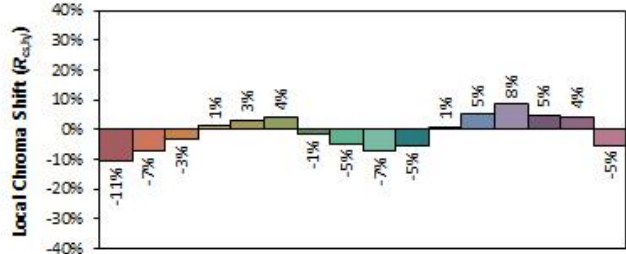
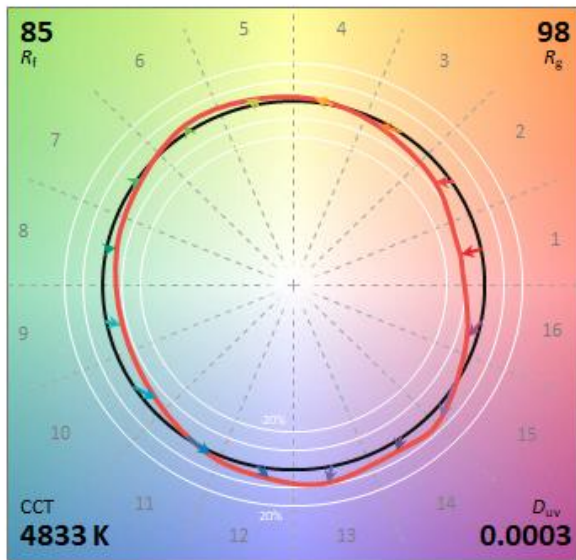
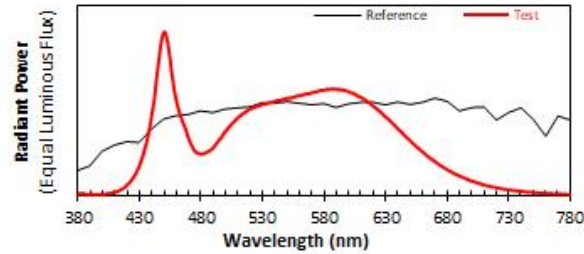
Date: 2023/9/13

Manufacturer:

ROYALUX EXPORTS PRIVATE
LIMITED

Model:

2302Y0200W50L[Blank, BS]

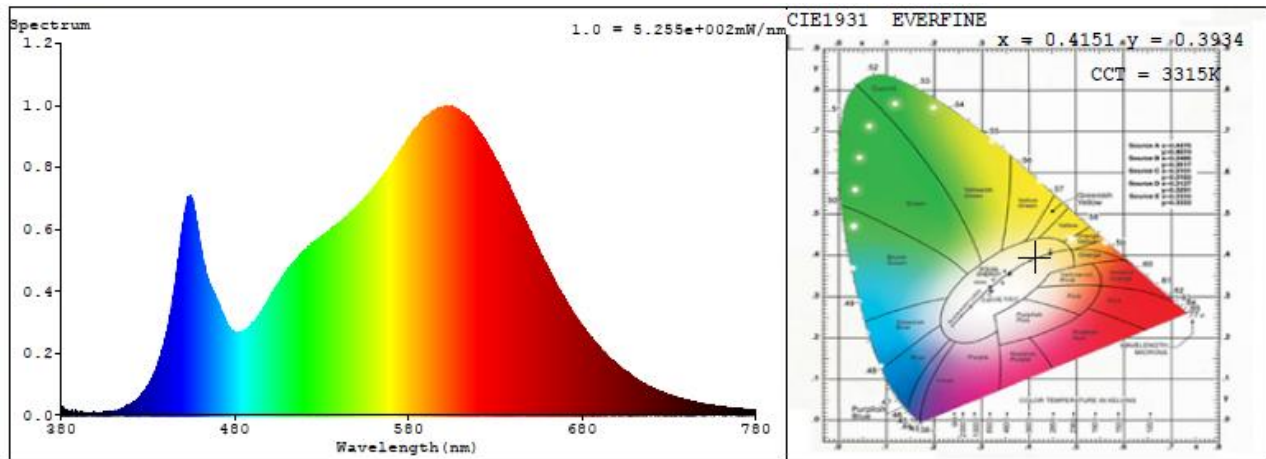


Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

 x 0.3500 y 0.3561 u' 0.2130 v' 0.4876CIE 13.3-1995
(CRI) R_a 85 R_g 21

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 # 2302Y0200W35L[Blank, BS]



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0145	414	0.0158	448	0.5186	482	0.2646	516	0.5053
381	0.0123	415	0.0207	449	0.5698	483	0.2702	517	0.511
382	0.0154	416	0.023	450	0.6121	484	0.2638	518	0.5162
383	0.0074	417	0.0253	451	0.6492	485	0.2743	519	0.5263
384	0.0038	418	0.0296	452	0.6716	486	0.2724	520	0.528
385	0.0089	419	0.0329	453	0.6932	487	0.2797	521	0.5366
386	0.0078	420	0.0357	454	0.6994	488	0.2836	522	0.5431
387	0.008	421	0.0355	455	0.7009	489	0.2881	523	0.5428
388	0.0141	422	0.0448	456	0.6895	490	0.2982	524	0.5517
389	0.0091	423	0.0452	457	0.6607	491	0.2992	525	0.5548
390	0.0054	424	0.0533	458	0.623	492	0.3088	526	0.555
391	0.0091	425	0.0587	459	0.5913	493	0.3155	527	0.5645
392	0.0099	426	0.0629	460	0.5554	494	0.3203	528	0.5673
393	0.007	427	0.0709	461	0.5204	495	0.3325	529	0.5707
394	0.0072	428	0.0783	462	0.4955	496	0.338	530	0.5748
395	0.0051	429	0.0871	463	0.4685	497	0.3509	531	0.5787
396	0.0085	430	0.0962	464	0.4481	498	0.3599	532	0.585
397	0.0063	431	0.1054	465	0.4291	499	0.3654	533	0.5859
398	0.0064	432	0.1156	466	0.4213	500	0.3774	534	0.5923
399	0.01	433	0.1274	467	0.4068	501	0.3883	535	0.5954
400	0.0082	434	0.1377	468	0.3945	502	0.3968	536	0.5966
401	0.0058	435	0.1533	469	0.3859	503	0.4055	537	0.6022
402	0.0077	436	0.1706	470	0.375	504	0.4152	538	0.611
403	0.0075	437	0.1864	471	0.3594	505	0.4257	539	0.6142
404	0.0068	438	0.2069	472	0.3412	506	0.4325	540	0.62
405	0.0108	439	0.2275	473	0.3275	507	0.4415	541	0.6255
406	0.0094	440	0.2468	474	0.3182	508	0.449	542	0.6295
407	0.0083	441	0.2658	475	0.3012	509	0.4562	543	0.6351
408	0.0118	442	0.2952	476	0.2916	510	0.4658	544	0.6386
409	0.011	443	0.3289	477	0.2846	511	0.4732	545	0.6408
410	0.0134	444	0.3638	478	0.2764	512	0.4827	546	0.6492
411	0.014	445	0.3983	479	0.2685	513	0.4854	547	0.6538
412	0.0135	446	0.4356	480	0.2681	514	0.4938	548	0.6629
413	0.0171	447	0.479	481	0.2619	515	0.5004	549	0.666

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.6726	599	0.9931	648	0.6206	697	0.179	746	0.0418
551	0.6786	600	0.993	649	0.6071	698	0.1749	747	0.0401
552	0.6807	601	0.9967	650	0.593	699	0.1707	748	0.0398
553	0.6847	602	0.993	651	0.5876	700	0.1636	749	0.0392
554	0.6918	603	0.9909	652	0.5699	701	0.1604	750	0.0364
555	0.7017	604	0.9946	653	0.556	702	0.1566	751	0.0359
556	0.708	605	0.9996	654	0.5463	703	0.15	752	0.0343
557	0.7107	606	0.9909	655	0.5358	704	0.1455	753	0.0344
558	0.7201	607	0.985	656	0.5214	705	0.1417	754	0.0334
559	0.729	608	0.9838	657	0.5134	706	0.138	755	0.0326
560	0.7342	609	0.981	658	0.4982	707	0.1311	756	0.0327
561	0.7391	610	0.9781	659	0.4905	708	0.1282	757	0.0299
562	0.7473	611	0.9756	660	0.4751	709	0.1249	758	0.0307
563	0.7536	612	0.9756	661	0.4685	710	0.1206	759	0.0292
564	0.7621	613	0.9642	662	0.4532	711	0.118	760	0.0279
565	0.7685	614	0.9636	663	0.4472	712	0.1133	761	0.0271
566	0.7738	615	0.9566	664	0.4348	713	0.1109	762	0.0267
567	0.783	616	0.948	665	0.4257	714	0.1074	763	0.0256
568	0.7891	617	0.9412	666	0.4138	715	0.1043	764	0.0258
569	0.8021	618	0.9356	667	0.4055	716	0.1018	765	0.0251
570	0.8083	619	0.9271	668	0.394	717	0.0989	766	0.0234
571	0.8159	620	0.9203	669	0.3865	718	0.0949	767	0.0235
572	0.8263	621	0.9108	670	0.3721	719	0.0927	768	0.0232
573	0.8314	622	0.9064	671	0.3632	720	0.0896	769	0.0227
574	0.8417	623	0.8946	672	0.3543	721	0.0873	770	0.0211
575	0.8512	624	0.8883	673	0.3481	722	0.0841	771	0.021
576	0.8604	625	0.878	674	0.3383	723	0.0818	772	0.02
577	0.8696	626	0.8687	675	0.3296	724	0.0784	773	0.0194
578	0.8748	627	0.8565	676	0.3206	725	0.0782	774	0.0188
579	0.8846	628	0.8467	677	0.3128	726	0.074	775	0.0189
580	0.8957	629	0.8358	678	0.3064	727	0.0717	776	0.0185
581	0.9009	630	0.8281	679	0.2976	728	0.0705	777	0.0181
582	0.9106	631	0.8201	680	0.288	729	0.068	778	0.0176
583	0.9165	632	0.8066	681	0.2818	730	0.0672	779	0.0171
584	0.9252	633	0.7959	682	0.2722	731	0.0643	780	0.0171
585	0.9285	634	0.7806	683	0.2665	732	0.0627		
586	0.935	635	0.777	684	0.2594	733	0.0607		
587	0.9418	636	0.7618	685	0.2532	734	0.0597		
588	0.9524	637	0.7508	686	0.2462	735	0.0576		
589	0.956	638	0.7408	687	0.2382	736	0.0561		
590	0.9679	639	0.727	688	0.2337	737	0.0542		
591	0.9666	640	0.7148	689	0.226	738	0.0525		
592	0.9679	641	0.7044	690	0.2194	739	0.0504		
593	0.97	642	0.6937	691	0.212	740	0.0505		
594	0.9811	643	0.6806	692	0.2072	741	0.0478		
595	0.9806	644	0.6684	693	0.2003	742	0.0463		
596	0.9878	645	0.6553	694	0.1948	743	0.045		
597	0.9895	646	0.6434	695	0.1891	744	0.0443		
598	0.9881	647	0.6301	696	0.1837	745	0.0428		

6. Goniophotometer Test results for Model # 2302Y0200W35L[Blank, BS]

6.1 Test Data

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

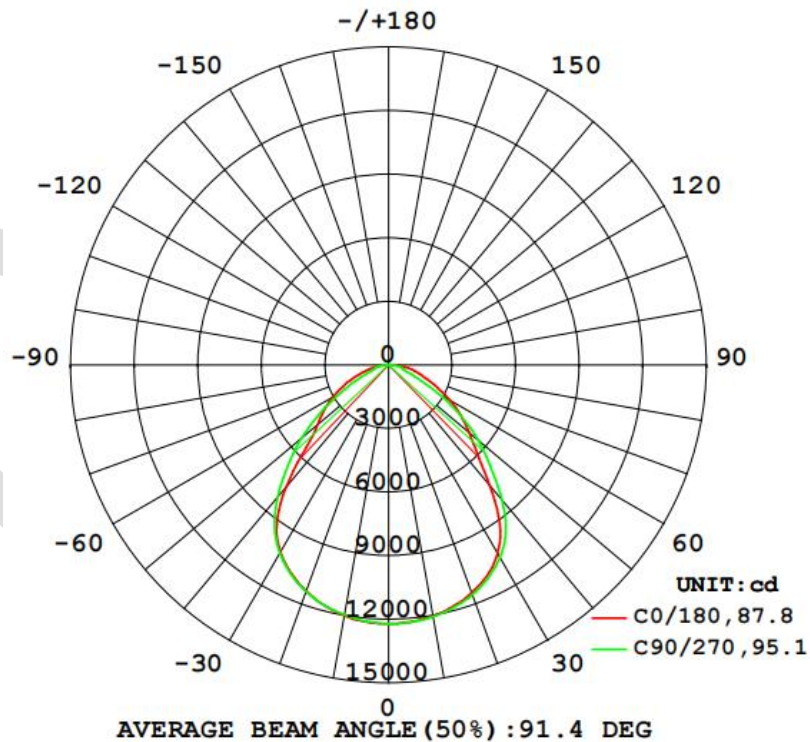
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
120	60	1.6541	0.9988	198.3

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	ZL (20-50°)
27211.7	137.24	12212	57.8%

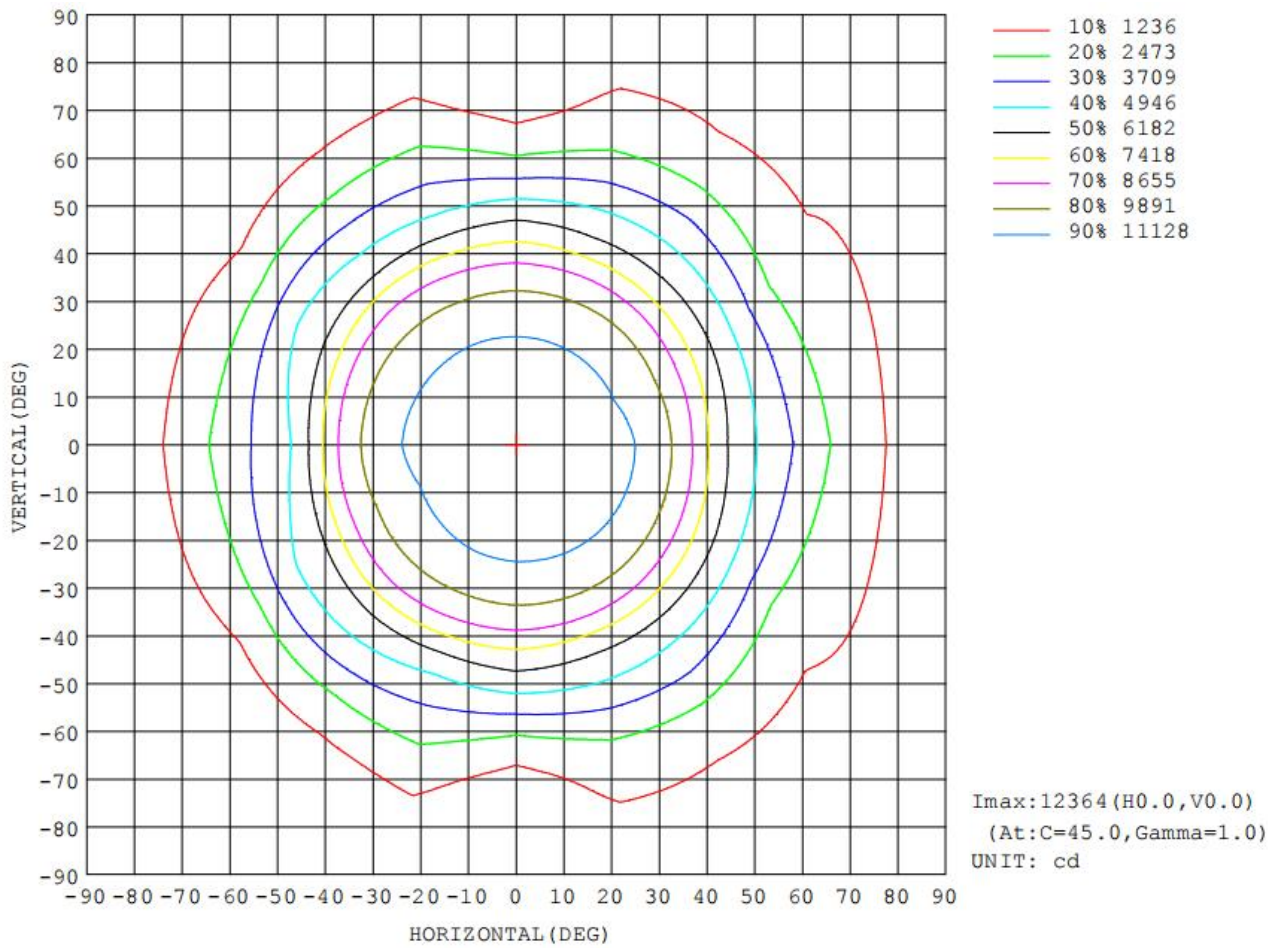
6.2 Luminous Intensity Distribution



6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1202	1207	1207	1205	1202	1200	1198	1201	0~ 10	1157	1157	4.25,4.25
20	1145	1153	1155	1146	1136	1135	1139	1142	10~ 20	3327	4484	16.5,16.5
30	1029	1045	1050	1033	1020	1018	1027	1029	20~ 30	5044	9528	35,35
40	744.3	796.6	834.5	808.4	753.4	790.4	814.8	772.2	30~ 40	5794	15322	56.3,56.3
50	496.2	512.4	553.9	513.3	437.2	487.5	536.4	514.3	40~ 50	4885	20207	74.3,74.3
60	334.3	308.6	269.6	278.6	304.8	271.9	258.9	303.0	50~ 60	3555	23762	87.3,87.3
70	190.5	137.7	89.28	102.6	169.4	111.1	91.11	136.0	60~ 70	1974	25736	94.6,94.6
80	102.7	86.87	53.00	59.48	70.57	61.60	51.24	86.50	70~ 80	1052	26788	98.4,98.4
90	4.365	7.131	5.670	3.414	0.2044	0.2269	3.874	0.3652	80~ 90	374.4	27162	99.8,99.8
100	0.3652	0.4392	0.5753	0.3304	0.4003	0.2970	0.2916	0.2503	90~100	5.074	27167	99.8,99.8
110	0.4475	0.5917	0.9145	0.5373	0.5038	0.4140	0.3796	0.3583	100~110	4.519	27172	99.9,99.9
120	0.5958	0.8083	1.075	0.7713	0.5734	0.6092	0.5199	0.5788	110~120	5.734	27177	99.9,99.9
130	0.7812	1.026	1.268	0.9876	0.8111	0.8247	0.6114	0.8504	120~130	6.921	27184	99.9,99.9
140	0.9870	1.093	1.313	1.082	1.156	1.113	1.210	1.155	130~140	7.732	27192	99.9,99.9
150	1.029	1.069	1.302	1.073	1.444	1.631	1.573	1.429	140~150	7.754	27200	100,100
160	1.203	1.342	1.001	1.276	1.643	1.678	1.793	1.680	150~160	6.288	27206	100,100
170	1.408	1.175	1.130	1.410	1.724	1.664	1.738	1.666	160~170	4.194	27210	100,100
180	1.610	1.750	1.774	1.789	1.526	1.631	1.734	1.776	170~180	1.460	27212	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	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221	1221			
5	1216	1217	1217	1218	1218	1219	1219	1218	1217	1216	1216	1215	1214	1215	1214	1215			
10	1202	1205	1207	1207	1207	1207	1205	1203	1202	1201	1200	1200	1198	1198	1201	1201			
15	1179	1182	1185	1185	1186	1186	1182	1178	1175	1173	1173	1174	1173	1175	1176	1178			
20	1145	1149	1153	1154	1155	1153	1146	1139	1136	1134	1135	1137	1139	1140	1142	1144			
25	1098	1104	1108	1110	1110	1106	1096	1090	1087	1083	1083	1087	1091	1092	1093	1097			
30	1029	1037	1045	1049	1050	1042	1033	1026	1020	1017	1018	1020	1027	1027	1029	1031			
35	915	932	949	959	965	954	947	935	920	926	929	931	938	935	929	923			
40	744	775	797	814	834	817	808	779	753	771	790	799	815	791	772	765			
45	593	620	634	648	682	643	634	604	552	602	612	637	673	639	625	622			
50	496	495	512	537	554	504	513	515	437	510	487	501	536	529	514	495			
55	416	368	413	427	413	402	407	411	373	388	380	399	391	419	412	363			
60	334	249	309	317	270	323	279	263	305	253	272	318	259	312	303	244			
65	256	167	207	225	156	241	173	149	236	142	179	235	159	225	202	163			
70	191	126	138	166	89.3	166	103	80.9	169	77.7	111	159	91.1	164	136	129			
75	142	103	113	130	70.5	122	72.7	51.8	113	51.5	77.8	116	68.1	129	115	108			
80	103	73.5	86.9	94.3	53.0	81.6	59.5	39.0	70.6	40.4	61.6	80.4	51.2	92.5	86.5	75.6			
85	46.9	36.6	40.4	39.8	25.8	31.4	28.1	21.8	26.4	22.3	32.4	34.3	26.3	42.3	41.9	38.4			
90	4.37	4.92	7.13	6.04	5.67	0.24	3.41	0.12	0.20	0.19	0.23	0.18	3.87	4.91	0.37	0.24			
95	0.24	0.24	0.33	0.44	0.48	0.28	0.26	0.20	0.31	0.23	0.23	0.24	0.21	0.22	0.18	0.19			
100	0.37	0.38	0.44	0.52	0.58	0.34	0.33	0.28	0.40	0.32	0.30	0.27	0.29	0.25	0.25	0.28			
105	0.40	0.44	0.51	0.59	0.73	0.53	0.43	0.35	0.46	0.39	0.35	0.32	0.35	0.29	0.30	0.40			
110	0.45	0.53	0.59	0.72	0.91	0.64	0.54	0.45	0.50	0.45	0.41	0.37	0.38	0.32	0.36	0.50			
115	0.51	0.62	0.69	0.83	0.29	0.75	0.65	0.57	0.54	0.53	0.50	0.40	0.34	0.38	0.45	0.55			
120	0.60	0.71	0.81	0.87	1.07	0.73	0.77	0.68	0.57	0.61	0.61	0.49	0.52	0.48	0.58	0.62			
125	0.68	0.83	0.93	0.94	1.18	0.88	0.87	0.79	0.66	0.72	0.69	0.65	0.72	0.64	0.71	0.72			
130	0.78	0.92	1.03	1.08	1.27	0.91	0.99	0.90	0.81	0.87	0.82	0.90	0.61	0.86	0.85	0.85			
135	0.89	1.00	1.06	1.12	0.61	1.07	1.00	0.97	0.98	1.02	0.97	1.01	1.10	1.01	1.04	1.01			
140	0.99	1.09	1.09	1.08	1.31	0.89	1.08	1.05	1.16	1.20	1.11	1.13	1.21	1.10	1.15	1.20			
145	1.03	1.09	1.23	1.23	1.38	1.13	1.22	1.11	1.34	1.32	1.28	1.31	1.43	1.27	1.46	1.32			
150	1.03	1.13	1.07	1.11	1.30	1.12	1.07	1.14	1.44	1.49	1.63	1.47	1.57	1.38	1.43	1.50			
155	1.22	1.38	1.01	1.10	0.96	1.12	1.00	1.31	1.64	1.64	1.68	1.64	1.32	1.24	1.59	1.68			
160	1.20	1.31	1.34	0.99	1.00	1.02	1.28	1.21	1.64	1.63	1.68	1.71	1.79	1.79	1.68	1.66			
165	1.30	1.42	1.43	1.17	1.05	1.35	1.41	1.32	1.67	1.66	1.65	1.73	1.77	1.78	1.63	1.66			
170	1.41	1.27	1.18	1.09	1.13	1.42	1.41	1.46	1.72	1.72	1.66	1.64	1.74	1.76	1.67	1.62			
175	1.36	1.31	1.23	1.27	1.29	1.41	1.49	1.52	1.60	1.60	1.71	1.75	1.74	1.74	1.76	1.68			
180	1.61	1.55	1.75	1.74	1.77	1.78	1.79	1.74	1.53	1.54	1.63	1.73	1.73	1.77	1.78	1.78			

7. THD and PF Test

Model	Voltage (V AC)	Frequency (Hz)	Power Factor	THD (%)
2302Y0200W35L[Blank, BS]	100.0	60	0.999	3.22
	120.0	60	0.998	3.67
	277.0	60	0.953	11.47
2302Y0200W40L[Blank, BS]	277.0	60	0.952	11.71
2302Y0200W50L[Blank, BS]	277.0	60	0.953	11.65

8. Photo of sample



Figure 1



Figure 2

---End of Report---