



Guangdong Meide Testing Technology Co., Ltd.



TEST REPORT OF ANSI/IES LM-79-19

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

Client..... : ROYALUX EXPORTS

Address..... : SDF BLOCK M-13, M-14, M-15 & M-16,NOIDA SPECIAL ECONOMIC ZONE,NOIDA
DADRI ROAD, PHASE-II,NOIDA, DSTT. GAUTAM BUDH NAGAR, UP-201305

Test Model..... : 601Y0048W30L70DY,601Y0048W57L70DY

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

Report No..... : CA2008348L 01001

Test Date..... : August.26,2020-August.28,2020

Report Date..... : August.31,2020

Tested by:

Tim Qian/ Test Engineer

Checked by:

Luke Lei/ 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.



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1. Product Description for Equipment under Test(EUT)

The client submitted 2 sample of model 601Y0048W30L70DY,601Y0048W57L70DY. Sample 601Y0048W30L70DY was numbered CA2008348L 01001-S01. Sample 601Y0048W57L70DY was numbered CA2008348L 01001-S02. The sample was received on 2020-08-26, is undamaged condition.

Model Tested:	601Y0048W30L70DY,601Y0048W57L70DY
Manufacturer:	Same as client
Address:	Same as client
Product Type:	Outdoor Non-Cutoff and Semi-Cutoff Wall-Mounted Area Luminaires
Rated Voltage/Frequency:	100-277V AC,50/60Hz
Rated Power:	48W
Nominal CCT:	3000K,5700K
LED Manufacturer:	Shenzhen Smalite Semiconductor Co.,Ltd
LED Model No:	SL-IB3030YEA-21EAI
LED Driver Manufacturer:	SHENZHEN SOSEN ELECTRONICS CO., LTD
LED Driver Model:	SS-75E-58B

Model Similarity:

Model designation: 6XXDyyyyWCVRXY

"6" denotes Wallpack Series;

"XX" can be 01 or 02, which denotes luminaires shell Shape and Overall dimension, where 01= L361mm X W235mm X H180mm or 02= L320mm X W130mm X H175mm;

"D" can be Y or N, which denotes Dimmable or Non-dimmable;

"yyyy" denotes the wattage of luminaires, can be from 0048 to 0070; each 1W gradually increase max. 70W, from 0070 to 0130, each 5 W gradually increase, max. 130W, for example 0048=48W;

"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	2020/10/06
Digital Power Meter	MD-E001	PF2010	2020/10/06
AC Testing Power Source	MD-E002	DPS1060	2020/10/06
Total Spectral Radiant Flux Standard Lamp	MD-E007	D908S	2020/10/06
Integrating Sphere System	MD-E029	2M	2020/10/06
High Accuracy Array Spectroradio Meter	MD-E011	HAAS-3000	2020/10/06
Digital Power Meter	MD-E008	PF310	2020/10/06
AC Testing Power Source	MD-E010	DPS1010	2020/10/06
Standard Lamp	MD-E012	D204	2021/06/09

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 $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$ 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 for Model # 601Y0048W30L70DY

Test Ambient Temperature	25.1℃	Test orientation	Downward
Operate time(Min.)	100	stabilization time(Min.)	90

Optical and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)	CCT (K)
120.0	60	0.4028	47.90	0.9909	5550.3	115.87	2949

Ra	R9	Rf	Rg	x	y	u'	v'	Duv
74.1	-18	75	97	0.4390	0.4022	0.2528	0.5209	-0.00151

Color Rendering Index

Ra				
74.1				
R1	R2	R3	R4	R5
72	83	92	71	70
R6	R7	R8	R9	R10
76	80	49	-18	60
R11	R12	R13	R14	R15
66	51	74	95	65



ANSI/IES TM-30-18 Color Rendition Report

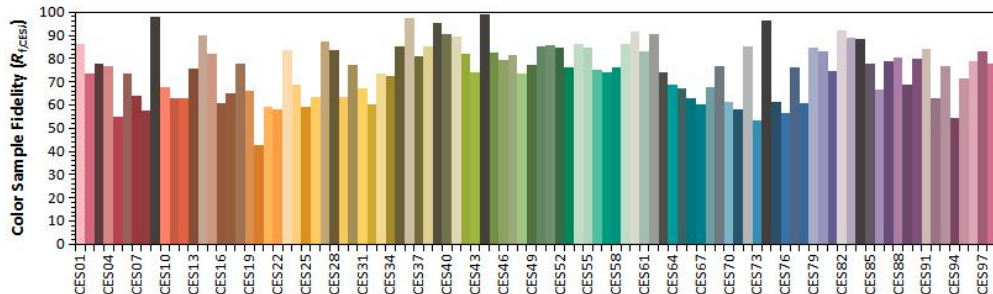
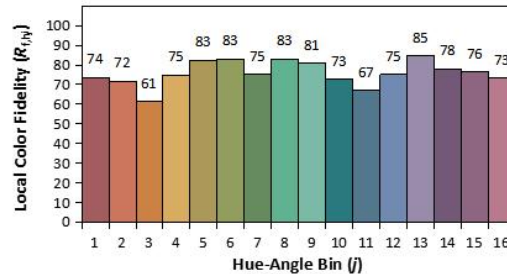
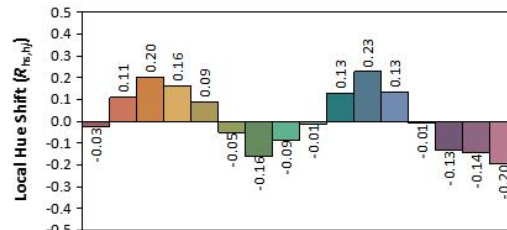
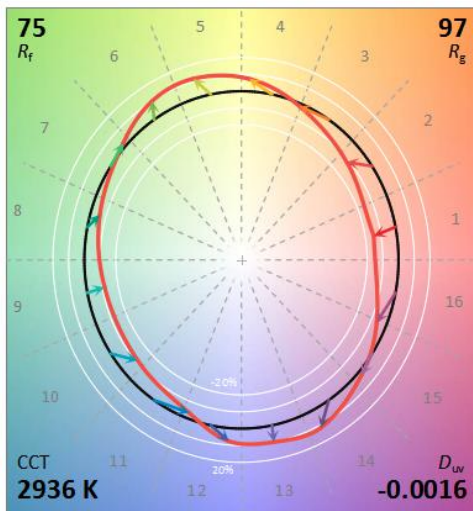
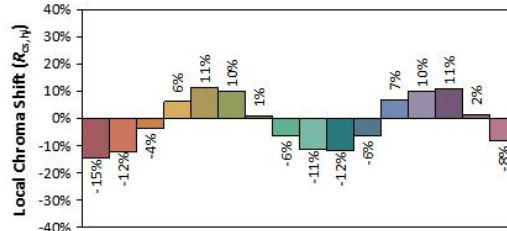
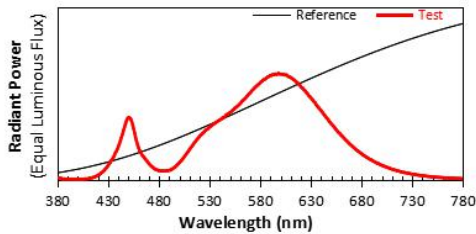
ANSI/IES TM-30-18 Color Rendition Report

Source: SL-IB3030YEA-21EAI

Manufacturer: ROYALUX EXPORTS

Date: 2020/8/31

Model: 601Y0048W30L70DY



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

x 0.4392
 y 0.4009
 u' 0.2534
 v' 0.5205

CIE 13.3-1995
 (CRI)
 R_a 74
 R_g -18

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



5.2 Test Data for Model # 601Y0048W57L70DY

Test Ambient Temperature	25.1°C	Test orientation	Downward
Operate time(Min.)	100	stabilization time(Min.)	90

Optical and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)	CCT (K)
120.0	60	0.4012	47.69	0.9905	5809.4	121.82	5649

Ra	R9	Rf	Rg	x	y	u'	v'	Duv
75.8	-11	75	95	0.3291	0.3396	0.2052	0.4763	0.000463

Color Rendering Index

Ra				
75.8				
R1	R2	R3	R4	R5
75	80	81	77	75
R6	R7	R8	R9	R10
71	84	65	-11	49
R11	R12	R13	R14	R15
74	46	75	89	71



ANSI/IES TM-30-18 Color Rendition Report

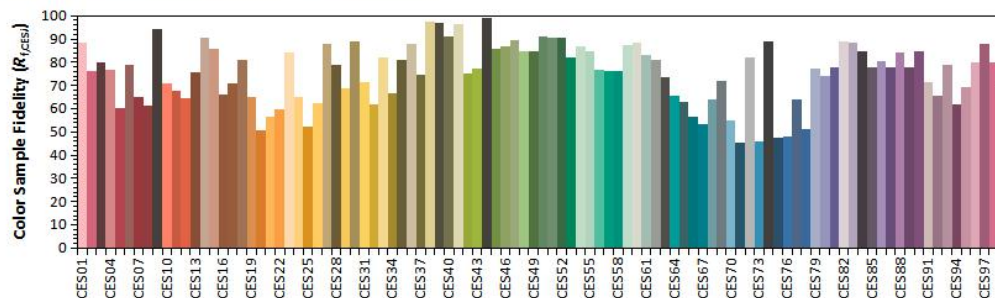
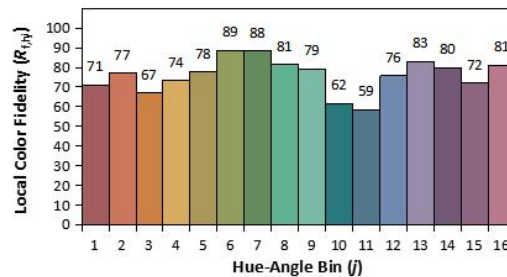
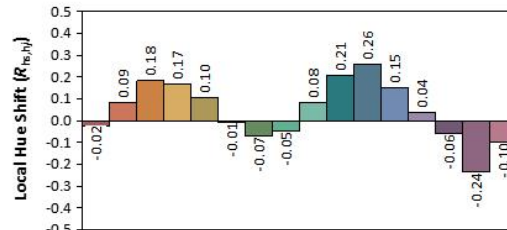
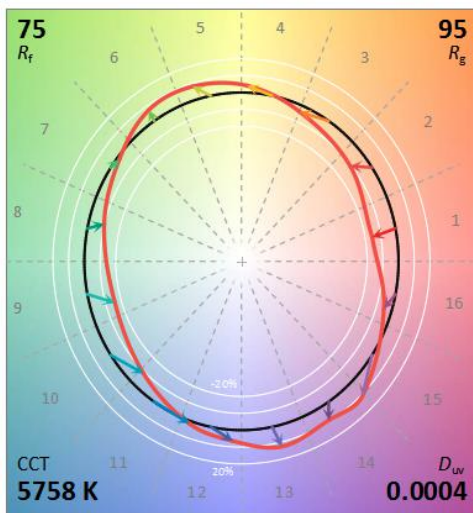
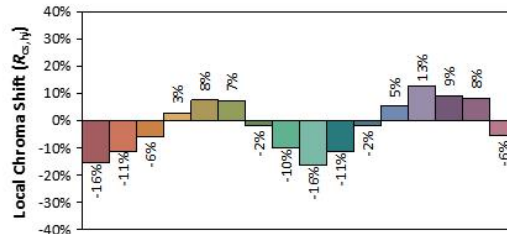
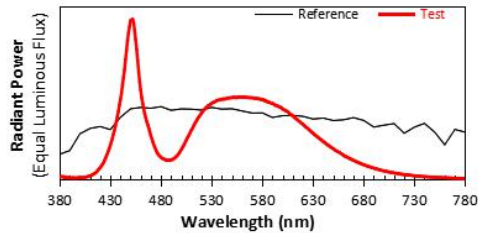
ANSI/IES TM-30-18 Color Rendition Report

Source: SL-IB3030YEA-21EAI

Manufacturer: ROYALUX EXPORTS

Date: 2020/8/31

Model: 601Y0048W57L70DY



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

x 0.3268, y 0.3369, u' 0.2046, v' 0.4746

CIE 13.3-1995 (CRI) Ra 76, Rg -10

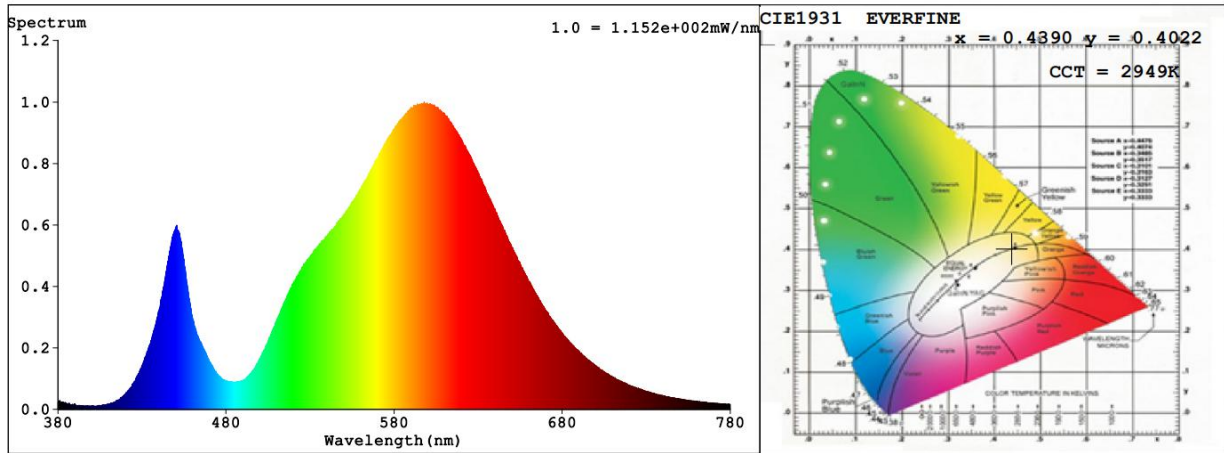
Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.



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5.3 Model # 601Y0048W30L70DY Relative Spectral Power Distribution



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0222	414	0.0237	448	0.5574	482	0.0892	516	0.3623
381	0.0243	415	0.0289	449	0.5755	483	0.0878	517	0.3762
382	0.0218	416	0.0302	450	0.5869	484	0.0875	518	0.387
383	0.023	417	0.0335	451	0.5831	485	0.0879	519	0.3971
384	0.0111	418	0.0389	452	0.574	486	0.0882	520	0.4104
385	0.0144	419	0.0438	453	0.5503	487	0.0899	521	0.4194
386	0.0122	420	0.0501	454	0.5199	488	0.0898	522	0.4281
387	0.0147	421	0.0527	455	0.4819	489	0.0922	523	0.4383
388	0.0104	422	0.0606	456	0.4402	490	0.094	524	0.4462
389	0.0127	423	0.0701	457	0.3953	491	0.0957	525	0.4564
390	0.0098	424	0.075	458	0.3597	492	0.0998	526	0.4661
391	0.013	425	0.086	459	0.3299	493	0.1068	527	0.4737
392	0.0113	426	0.0931	460	0.2995	494	0.1124	528	0.4781
393	0.01	427	0.1062	461	0.2781	495	0.1186	529	0.4896
394	0.0104	428	0.1156	462	0.2592	496	0.126	530	0.4968
395	0.0094	429	0.128	463	0.2404	497	0.1334	531	0.5048
396	0.0093	430	0.1421	464	0.2292	498	0.1462	532	0.5096
397	0.0102	431	0.1565	465	0.2178	499	0.1522	533	0.5193
398	0.0085	432	0.1667	466	0.2048	500	0.1639	534	0.5262
399	0.0101	433	0.1865	467	0.1933	501	0.1746	535	0.5323
400	0.0112	434	0.1992	468	0.1822	502	0.1851	536	0.5393
401	0.0112	435	0.2143	469	0.1691	503	0.1948	537	0.544
402	0.0088	436	0.2339	470	0.1578	504	0.2082	538	0.5515
403	0.0101	437	0.2566	471	0.1463	505	0.2197	539	0.5575
404	0.0115	438	0.2725	472	0.1369	506	0.2347	540	0.5632
405	0.0106	439	0.2932	473	0.1275	507	0.2461	541	0.5681
406	0.0119	440	0.3186	474	0.1217	508	0.2594	542	0.5742
407	0.0144	441	0.3435	475	0.1139	509	0.2711	543	0.5846
408	0.0142	442	0.3706	476	0.1055	510	0.2869	544	0.5878
409	0.014	443	0.402	477	0.1018	511	0.2996	545	0.593
410	0.0139	444	0.4308	478	0.0982	512	0.3117	546	0.6074
411	0.0185	445	0.4665	479	0.0949	513	0.3247	547	0.6132
412	0.0202	446	0.4984	480	0.09	514	0.3392	548	0.6202
413	0.0213	447	0.5272	481	0.0883	515	0.3503	549	0.6244



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nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.6319	599	0.9911	648	0.5482	697	0.1543	746	0.0367
551	0.6374	600	0.9902	649	0.54	698	0.1483	747	0.036
552	0.6461	601	0.988	650	0.5268	699	0.1435	748	0.0349
553	0.6571	602	0.9901	651	0.5174	700	0.1404	749	0.034
554	0.6622	603	0.9887	652	0.5059	701	0.1369	750	0.0338
555	0.6756	604	0.9816	653	0.4974	702	0.1335	751	0.0318
556	0.6799	605	0.9831	654	0.4813	703	0.1287	752	0.0312
557	0.6881	606	0.9819	655	0.471	704	0.1264	753	0.0303
558	0.6962	607	0.9718	656	0.4588	705	0.1213	754	0.0306
559	0.7048	608	0.9675	657	0.4473	706	0.1186	755	0.0285
560	0.7143	609	0.9604	658	0.4405	707	0.1149	756	0.0275
561	0.7256	610	0.9598	659	0.4323	708	0.1116	757	0.0277
562	0.7378	611	0.9507	660	0.4166	709	0.107	758	0.0271
563	0.7456	612	0.9465	661	0.4116	710	0.1048	759	0.0261
564	0.7543	613	0.9377	662	0.3996	711	0.1018	760	0.0261
565	0.7623	614	0.9318	663	0.3897	712	0.0984	761	0.0249
566	0.7747	615	0.9217	664	0.3791	713	0.0962	762	0.0238
567	0.7855	616	0.9141	665	0.3698	714	0.0938	763	0.0229
568	0.7963	617	0.9071	666	0.3619	715	0.0904	764	0.0234
569	0.8073	618	0.8948	667	0.3507	716	0.087	765	0.0223
570	0.8159	619	0.8878	668	0.3415	717	0.0858	766	0.0227
571	0.8275	620	0.8724	669	0.3329	718	0.0823	767	0.0211
572	0.8396	621	0.8625	670	0.3243	719	0.0797	768	0.021
573	0.8476	622	0.8584	671	0.3171	720	0.0766	769	0.0207
574	0.8601	623	0.8448	672	0.3071	721	0.0756	770	0.02
575	0.8659	624	0.8368	673	0.2999	722	0.0734	771	0.0197
576	0.878	625	0.8231	674	0.2898	723	0.0718	772	0.0186
577	0.8839	626	0.8142	675	0.2822	724	0.0704	773	0.0185
578	0.8938	627	0.8019	676	0.276	725	0.0684	774	0.0181
579	0.9007	628	0.7866	677	0.269	726	0.0658	775	0.0185
580	0.9116	629	0.7796	678	0.2605	727	0.0643	776	0.017
581	0.9204	630	0.7679	679	0.255	728	0.0626	777	0.0173
582	0.9271	631	0.7564	680	0.2486	729	0.0593	778	0.0164
583	0.9364	632	0.7465	681	0.2388	730	0.0579	779	0.0162
584	0.9398	633	0.7324	682	0.2341	731	0.0569	780	0.0158
585	0.946	634	0.7247	683	0.2281	732	0.0559		
586	0.954	635	0.7072	684	0.2209	733	0.0538		
587	0.9615	636	0.6931	685	0.2145	734	0.0522		
588	0.9654	637	0.6846	686	0.2095	735	0.0499		
589	0.972	638	0.6715	687	0.2031	736	0.0496		
590	0.9796	639	0.6607	688	0.1977	737	0.0475		
591	0.9779	640	0.6494	689	0.1935	738	0.0458		
592	0.9847	641	0.638	690	0.1895	739	0.0459		
593	0.9861	642	0.6228	691	0.1814	740	0.0443		
594	0.9883	643	0.6113	692	0.1767	741	0.0427		
595	0.9911	644	0.6016	693	0.1723	742	0.0412		
596	0.9865	645	0.5861	694	0.1662	743	0.0401		
597	0.9913	646	0.577	695	0.1611	744	0.0397		
598	0.998	647	0.5657	696	0.1594	745	0.0379		



6. Goniophotometer Test results for model # 601Y0048W30L70DY

6.1 Test Data

Test Ambient Temperature	25.1℃	Test orientation	Downward
Operate time(Min.)	120	stabilization time(Min.)	90

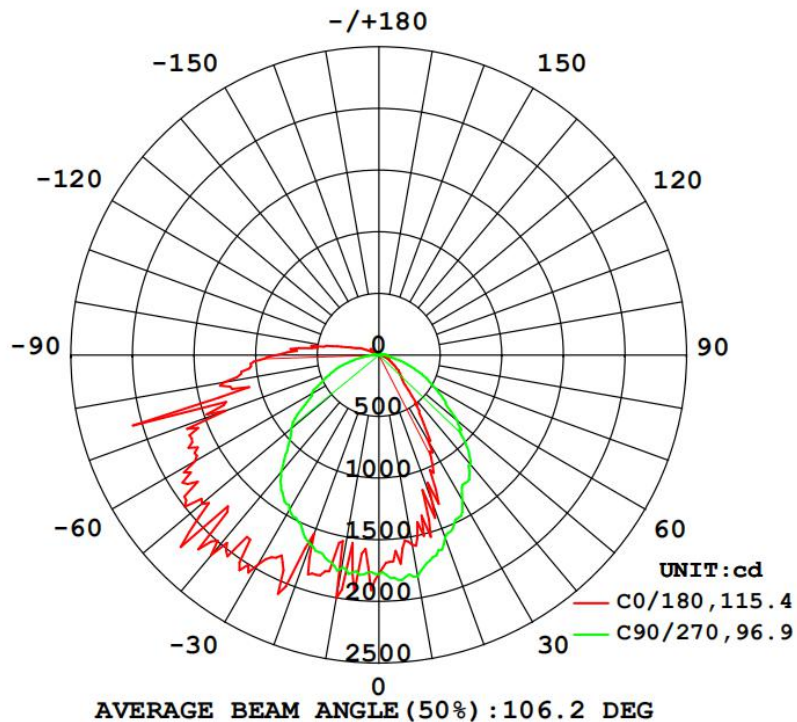
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
120.0	60	0.4029	0.9912	47.92

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Luminous Flux(lm) (0-90°)	Efficacy(lm/W) (0-90°)	BUG	ZL (80-90°)
5569.41	116.22	5254	109.64	B3-U3-G3	6.1%

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	ξ lum, lamp
10	1563	1503	1823	1831	2002	1637	1753	1777	0- 10	165.4	165.4	2.97,2.97
20	1284	1383	1576	1828	1544	1850	1635	1499	10- 20	465.6	631.0	11.3,11.3
30	785.4	1042	1357	1708	1961	1872	1452	1110	20- 30	689.4	1320	23.7,23.7
40	377.6	580.0	1161	1658	2118	1738	1238	693.2	30- 40	810.7	2131	38.3,38.3
50	213.7	272.1	830.1	1541	1879	1604	935.2	327.8	40- 50	819.0	2950	53,53
60	118.4	165.5	520.0	1429	1727	1531	632.6	182.1	50- 60	770.9	3721	66.8,66.8
70	64.15	85.45	287.7	1109	1325	1222	398.7	105.5	60- 70	669.4	4390	78.8,78.8
80	25.63	31.97	94.68	738.6	1279	858.9	170.4	45.27	70- 80	519.3	4910	88.2,88.2
90	1.173	7.159	56.66	384.4	832.3	496.3	59.52	11.79	80- 90	344.4	5254	94.3,94.3
100	1.688	3.847	36.06	175.8	434.1	227.0	42.98	6.517	90-100	185.7	5440	97.7,97.7
110	1.933	1.519	19.05	15.79	175.2	41.96	25.87	1.869	100-110	75.85	5516	99,99
120	1.990	1.650	9.540	39.86	19.27	53.54	12.35	1.996	110-120	24.81	5540	99.5,99.5
130	1.917	1.582	4.855	18.88	66.22	31.18	6.356	1.325	120-130	17.78	5558	99.8,99.8
140	1.688	1.599	2.077	2.510	25.10	5.106	1.661	1.607	130-140	8.052	5566	99.9,99.9
150	1.422	1.464	1.331	1.225	1.407	1.474	1.835	1.882	140-150	1.827	5568	100,100
160	1.338	1.450	1.462	1.301	1.661	1.724	1.774	1.909	150-160	0.7036	5569	100,100
170	1.290	1.414	1.488	1.419	1.702	1.740	1.827	1.865	160-170	0.4468	5569	100,100
180	1.574	1.617	1.720	1.696	1.592	1.572	1.679	1.720	170-180	0.1525	5569	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



6.4 Luminous Distribution Intensity Data

Table--1 UNIT: cd

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	1593	1614	1680	1729	1831	1950	1682	1596	1618	1580	1616	1894	1790	1741	1744	1715			
10	1563	1600	1503	1718	1823	1694	1831	1639	2002	2112	1637	1565	1753	1691	1777	1588			
15	1349	1488	1613	1667	1699	1649	1800	1872	1849	1858	1523	1943	1700	1602	1552	1482			
20	1284	1350	1383	1490	1576	1858	1828	1839	1544	1779	1850	1652	1635	1516	1499	1174			
25	1056	1019	1370	1341	1476	1511	1729	2081	1854	1995	1749	1568	1509	1403	1287	1189			
30	785	844	1042	1262	1357	1575	1708	1875	1961	1877	1872	1549	1452	1314	1110	944			
35	575	635	820	1024	1255	1326	1716	2008	1828	2033	1724	1549	1367	1170	896	702			
40	378	441	580	861	1161	1291	1658	1897	2118	1947	1738	1408	1238	1022	693	491			
45	264	278	391	661	985	1249	1646	1990	1737	2014	1700	1301	1044	782	478	300			
50	214	223	272	483	830	1122	1541	1705	1879	1788	1604	1239	935	594	328	243			
55	164	173	211	340	662	952	1477	1833	1796	1942	1604	1132	774	446	239	190			
60	118	127	166	225	520	815	1429	1691	1727	1766	1531	961	633	304	182	142			
65	86.0	90.9	124	157	400	689	1197	1608	1674	1609	1290	839	501	206	142	100			
70	64.1	65.3	85.5	123	288	595	1109	1354	1325	1504	1222	725	399	145	106	69.6			
75	42.8	44.8	54.6	89.7	168	451	892	1267	1347	1673	1073	584	285	115	72.9	47.9			
80	25.6	24.6	32.0	62.3	94.7	346	739	1131	1279	1189	859	479	170	82.1	45.3	28.9			
85	9.04	6.93	14.1	41.0	67.3	239	547	897	1043	941	678	331	89.3	58.4	24.0	11.0			
90	1.17	1.17	7.16	27.1	56.7	149	384	687	832	758	496	222	59.5	41.1	11.8	1.65			
95	1.38	1.33	5.04	20.2	47.0	100	265	480	660	560	331	146	49.0	30.0	8.63	1.74			
100	1.69	1.61	3.85	14.6	36.1	58.8	176	314	434	369	227	79.6	43.0	22.8	6.52	1.93			
105	1.87	1.79	2.95	1.31	10.6	20.2	135	204	254	233	166	40.9	13.2	1.60	4.82	1.97			
110	1.93	1.88	1.52	7.55	19.0	38.2	15.8	143	175	152	42.0	60.1	25.9	11.3	1.87	1.89			
115	1.94	1.90	1.71	5.25	13.5	23.9	36.7	29.3	69.8	40.8	57.8	41.9	18.9	7.19	2.44	1.75			
120	1.99	1.96	1.65	3.57	9.54	14.7	39.9	46.7	19.3	39.3	53.5	25.5	12.3	6.04	2.00	1.62			
125	1.97	1.95	1.61	2.85	6.49	9.74	31.3	64.3	79.6	67.2	45.3	13.5	8.53	4.30	1.55	1.58			
130	1.92	1.89	1.58	2.33	4.86	6.60	18.9	48.5	66.2	51.3	31.2	8.96	6.36	3.28	1.33	1.61			
135	1.72	1.72	1.66	1.86	2.39	4.74	6.46	30.4	45.6	34.9	14.4	6.22	1.52	2.62	1.52	1.56			
140	1.69	1.66	1.60	1.52	2.08	2.97	2.51	13.7	25.1	19.3	5.11	3.21	1.66	1.56	1.61	1.81			
145	1.61	1.58	1.56	1.52	1.70	1.29	1.24	2.80	9.59	6.82	1.62	1.38	2.21	1.77	1.78	1.87			
150	1.42	1.39	1.46	1.27	1.33	1.26	1.22	0.98	1.41	1.42	1.47	1.51	1.83	1.71	1.88	1.91			
155	1.36	1.38	1.45	1.43	1.39	1.37	1.25	1.08	1.57	1.59	1.63	1.66	1.70	1.76	1.92	1.97			
160	1.34	1.42	1.45	1.46	1.46	1.40	1.30	1.18	1.66	1.66	1.72	1.73	1.77	1.85	1.91	1.97			
165	1.26	1.37	1.42	1.47	1.42	1.43	1.35	1.25	1.71	1.69	1.72	1.76	1.80	1.83	1.86	1.86			
170	1.29	1.34	1.41	1.47	1.49	1.50	1.42	1.29	1.70	1.70	1.74	1.75	1.83	1.83	1.87	1.81			
175	1.40	1.45	1.49	1.55	1.61	1.61	1.54	1.45	1.64	1.65	1.68	1.72	1.77	1.80	1.78	1.71			
180	1.57	1.56	1.62	1.68	1.72	1.72	1.70	1.58	1.59	1.60	1.57	1.62	1.68	1.72	1.72	1.67			

7. THD and PF Test for model # 601Y0048W30L70DY

Voltage (V AC)	Frequency (Hz)	Power Factor	THD (%)
100.0	60	0.9949	6.03
120.0	60	0.9912	7.15
277.0	60	0.9018	17.95



8.Photo of sample



Figure 1



Figure 2

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