

**0hr HOUR RESULTS**

	Lp. #	Volts	Amps	Watts	pf (≥.7)	0hr Hr. Lumens	CCT	CRI (≥80)	R9 (>0)	Sph Temp	x Value	y Value	u' Value	v' Value	Duv	7-Step Color Compliance	LPW (>40)
Base Up	P-50307-1	120.1	0.116	12.1	0.874	875	2766	83.3	20.8	25.7	0.4520	0.4048	0.2600	0.5239	-0.0015	PASS	72.2
	P-50307-2	120.0	0.117	12.3	0.872	907	2751	83.2	20.8	24.8	0.4526	0.4038	0.2608	0.5236	-0.0019	PASS	74.0
	P-50307-3	120.0	0.116	12.2	0.874	893	2763	83.2	20.6	24.7	0.4518	0.4040	0.2603	0.5236	-0.0018	PASS	73.4
	P-50307-4	120.0	0.116	12.2	0.873	909	2739	83.4	21.4	24.7	0.4534	0.4039	0.2613	0.5238	-0.0019	PASS	74.7
	P-50307-5	120.0	0.115	12.1	0.875	899	2761	83.2	20.8	24.7	0.4512	0.4025	0.2605	0.5229	-0.0023	PASS	74.4

	Lp. #	Volts	Amps	Watts	pf (≥.7)	0hr Hr. Lumens	CCT	CRI (≥80)	R9 (>0)	Sph Temp	x Value	y Value	u' Value	v' Value	Duv	7-Step Color Compliance	LPW (>40)
Base Down	P-50307-6	120.0	0.115	12.1	0.877	883	2763	83.1	20.4	25.2	0.4521	0.4043	0.2603	0.5238	-0.0017	PASS	72.9
	P-50307-7	120.0	0.116	12.2	0.877	899	2748	83.3	20.8	24.8	0.4530	0.4043	0.2609	0.5239	-0.0018	PASS	73.7
	P-50307-8	120.0	0.117	12.3	0.878	903	2766	83.4	21.4	24.9	0.4515	0.4038	0.2602	0.5235	-0.0018	PASS	73.4
	P-50307-9	120.0	0.114	11.9	0.876	900	2753	83.2	20.4	25.1	0.4530	0.4048	0.2606	0.5241	-0.0016	PASS	75.5
	P-50307-10	120.0	0.115	12.1	0.874	892	2736	83.5	21.9	24.9	0.4533	0.4033	0.2615	0.5235	-0.0022	PASS	74.0
Grand AVG.	119.99	0.1157	12.14	0.875	896	2755	83	21	25.0	0.4524	0.4040	0.2606	0.5237	-0.0018		73.8	
Compliance					Complies	TBD	Complies	Complies	Complies						Complies	Complies	Complies

**LUMEN & COLOR MAINTENANCE**

**LIFE TESTING**

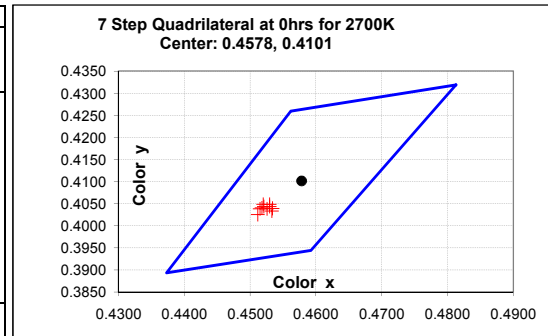
Date:		N-N												N-N		N-N	
	Lp. #	1000 Hr. Lumens	1000 Hr. Lumen Maint.	1000 Hr. u' Color Maint.	1000 Hr. v' Color Maint.	3000 Hr. Lumens	3000 Hr. Lumen Maint.	3000 Hr. u' Color Maint.	3000 Hr. v' Color Maint.	6000 Hr. Lumens	6000 Hr. Lumen Maint.	6000 Hr. u' Color Maint.	6000 Hr. v' Color Maint.	N-N	N-N	Failure before 6000hours	Failure before Rated Life
Base Up	P-50307-1																
	P-50307-2																
	P-50307-3																
	P-50307-4																
	P-50307-5																
Base Down	P-50307-6																
	P-50307-7																
	P-50307-8																
	P-50307-9																
	P-50307-10																
Grand AVG.																	
Compliance		TBD	TBD	TBD			TBD	TBD	TBD			TBD	TBD	TBD		TBD	

Date:	
Lp. #	* Transient Protection PASS/FAIL
T-50307-1	
T-50307-2	
T-50307-3	
T-50307-4	
T-50307-5	
Compliance	TBD

Date:	
Lp. #	* Ballast Freq (≥120 Hz)
N-N	
Compliance	

Date:	
Lp. #	* Noise (dbA)
N-N	

Date:	
Lp. #	Rapid Cycles Endured
R-50307-1	
R-50307-2	
R-50307-3	
R-50307-4	
R-50307-5	
R-50307-6	
R-50307-7	
R-50307-8	
R-50307-9	
R-50307-10	
Compliance	TBD



Technician: Lin Shuangyan

Date: 2013-06-21

Reviewed by: Liao Bingjing

Date: 2013-06-25

\* THIS REPORT CONTAINS DATA THAT IS NOT COVERED BY THE NVLAP ACCREDITATION

No.61, Kaijiang Road(E) Sijing Songjiang Shanghai Tel: (86-21) 57613930 Fax: (86-21) 57619961

**TEST REPORT**

**PO Number:LED0307**

**Model Number:LED12BR30D27K**

**Light Intensity & Color Distribution Tests**

**Electrical Characteristics:**

LP#	Volt	Ampere	pf	Watts
D-50307-01	120.0	0.1162	0.874	12.2

**Zonal Lumen Flux:**

$\gamma$ angle (°)	$\Phi$ zonal(lm)	$\Phi$ Cumulative(lm)	% Cumulative Lumen
0-5	7	6.7	0.7%
5-10	20	26.7	3.0%
10-15	32	59.2	6.6%
15-20	44	103.0	11.5%
20-25	54	156.7	17.4%
25-30	62	218.4	24.3%
30-35	67	285.8	31.8%
35-40	71	356.8	39.7%
40-45	72	428.9	47.7%
45-50	71	499.8	55.6%
50-55	68	567.6	63.2%
55-60	63	630.4	70.2%
60-65	56	686.7	76.5%
65-70	49	735.7	81.9%
70-75	41	776.6	86.5%
75-80	33	809.5	90.1%
80-85	25	834.9	93.0%
85-90	19	853.8	95.1%
90-95	13	867.2	96.5%
95-100	9	876.5	97.6%
100-105	6	882.8	98.3%
105-110	4	887.3	98.8%
110-115	3	890.7	99.2%
115-120	2	893.1	99.4%
120-125	2	894.9	99.6%
125-130	1	896.2	99.8%
130-135	1	897.0	99.9%
135-140	1	897.6	99.9%
140-145	0	897.9	100.0%
145-150	0	898.1	100.0%
150-155	0	898.2	100.0%
155-160	0	898.3	100.0%
160-165	0	898.3	100.0%
165-170	0	898.3	100.0%
170-175	0	898.3	100.0%
175-180	0	898.3	100.0%

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No.61, Kaijiang Road(E) Sijing Songjiang Shanghai Tel: (86-21) 57613930 Fax: (86-21) 57619961

**TEST REPORT**

PO Number:LED0307

Model Number:LED12BR30D27K

**Light Intensity & Color Distribution Tests**

**Light Intensity Distribution Data Table (Type C)**

LP#:D-50307-01

γ Angle (°)	C Planes																																					
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	
5	280	280	280	280	280	280	280	280	281	281	281	281	281	282	282	282	282	282	282	282	282	282	282	281	281	281	281	281	280	280	280	280	280	280	280	280	280	280
10	275	275	275	275	275	276	276	276	277	277	277	278	278	278	279	279	279	279	279	279	279	279	279	278	278	278	277	277	276	276	275	275	275	275	275	275	274	274
15	267	267	267	268	268	269	269	270	270	271	271	272	272	273	273	273	273	274	274	273	274	273	273	273	272	272	271	271	270	269	269	268	268	268	267	267	267	267
20	257	258	258	258	258	259	260	261	261	262	262	263	263	264	264	265	265	266	266	265	266	265	265	265	265	264	263	263	262	261	260	260	259	258	258	258	257	257
25	245	246	246	247	248	248	249	249	251	251	252	252	253	253	254	254	255	255	255	255	255	255	254	253	252	251	250	249	248	247	247	246	246	245	245	245	245	245
30	231	231	231	232	232	234	234	235	236	237	237	239	239	240	240	241	241	242	242	242	242	242	241	241	239	239	237	237	235	235	233	233	232	232	231	231	231	231
35	215	215	215	216	216	218	218	220	220	221	222	223	223	224	225	226	226	227	227	227	227	227	226	226	224	224	222	221	220	219	217	217	216	216	215	215	215	215
40	197	198	198	199	199	200	201	202	203	204	204	206	206	207	207	209	209	210	210	210	209	210	209	209	207	205	204	203	202	200	198	198	197	197	197	197	197	
45	179	179	179	180	180	181	182	183	184	185	185	187	187	188	189	190	190	191	191	191	191	191	190	189	188	187	186	184	183	182	181	180	180	179	179	179	179	
50	159	160	159	160	160	162	162	164	164	165	166	167	167	169	169	170	170	172	172	171	172	171	172	171	169	169	167	167	165	164	162	162	161	161	159	159	159	159
55	139	140	140	141	141	142	142	144	144	145	145	147	147	149	149	150	150	151	152	151	152	151	151	150	149	149	148	147	145	144	143	142	141	141	140	140	140	
60	120	120	120	121	121	122	122	124	124	125	125	127	127	128	129	130	130	131	132	131	132	131	131	130	129	129	127	127	125	125	123	123	122	121	120	120	120	120
65	101	101	100	101	101	103	103	104	104	105	105	107	107	108	109	110	110	111	112	111	112	111	111	110	109	109	108	107	106	105	104	104	102	102	101	101	101	101
70	82	83	82	83	83	84	84	85	85	86	86	88	88	89	89	91	91	92	92	92	92	91	92	91	90	90	89	88	87	86	85	85	84	84	83	83	83	83
75	65	66	65	66	66	67	67	67	69	69	70	70	71	71	73	73	73	74	73	74	73	74	73	73	72	72	71	70	69	68	68	67	67	66	66	66	66	
80	50	50	50	51	51	52	52	53	53	54	54	55	55	56	56	57	58	57	58	57	57	57	57	57	56	56	55	55	53	53	52	52	51	51	51	51	51	51
85	37	38	37	38	37	38	38	39	39	39	39	40	40	41	41	42	42	43	43	43	43	43	42	43	42	42	41	41	40	40	39	39	38	38	38	38	38	
90	27	27	27	27	27	27	27	28	28	28	28	29	29	30	30	31	31	31	32	31	32	31	31	31	30	30	30	29	29	28	28	27	27	27	27	27	27	
95	19	19	19	19	19	19	19	19	19	20	20	20	20	21	21	22	21	22	22	22	22	22	22	21	21	21	20	20	20	20	19	19	19	19	19	19	19	
100	13	13	13	13	13	13	13	13	13	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	14	14	14	14	14	13	13	13	13	
105	9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	
110	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
115	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
120	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
125	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
130	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
135	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
140	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
145	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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**TEST REPORT**

PO Number:LED0307

Model Number:LED12BR30D27K

**Light Intensity & Color Distribution Tests**

Weighted average u':	<b>0.2598</b>
Weighted average v':	<b>0.5228</b>
Rated Beam angle(°):	<b>n/a</b>
Actual Beam Angle Tested(°):	<b>112.4</b>

**Spatial non-uniformity of chromaticity:** 0.0009 (Within actual beam angle tested)

**Color Distribution Data Table:**

LP#:D-50001-01

γ angle (°)	C0 plane		C90 plane		γ (°)	C0 plane		C90 plane	
	u'	v'	u'	v'		u'	v'	u'	v'
0	0.2595	0.5219	0.2594	0.5219	0	0.2595	0.5219	0.2594	0.5219
-1	0.2594	0.5219	0.2594	0.5219	1	0.2594	0.5219	0.2594	0.5219
-2	0.2594	0.5219	0.2595	0.5219	2	0.2594	0.5219	0.2594	0.5219
-3	0.2594	0.5219	0.2594	0.5219	3	0.2594	0.5219	0.2594	0.5220
-4	0.2594	0.5219	0.2595	0.5219	4	0.2595	0.5219	0.2595	0.5219
-5	0.2595	0.5219	0.2595	0.5219	5	0.2595	0.5219	0.2594	0.5219
-6	0.2594	0.5220	0.2595	0.5220	6	0.2595	0.5219	0.2595	0.5220
-7	0.2595	0.5220	0.2595	0.5220	7	0.2595	0.5220	0.2595	0.5220
-8	0.2595	0.5220	0.2595	0.5220	8	0.2595	0.5220	0.2595	0.5220
-9	0.2595	0.5220	0.2595	0.5220	9	0.2595	0.5220	0.2595	0.5220
-10	0.2595	0.5220	0.2595	0.5220	10	0.2595	0.5220	0.2595	0.5220
-11	0.2595	0.5221	0.2595	0.5220	11	0.2595	0.5220	0.2595	0.5220
-12	0.2595	0.5221	0.2595	0.5221	12	0.2595	0.5220	0.2595	0.5220
-13	0.2595	0.5221	0.2595	0.5221	13	0.2595	0.5221	0.2595	0.5221
-14	0.2595	0.5221	0.2596	0.5221	14	0.2595	0.5221	0.2595	0.5221
-15	0.2595	0.5222	0.2596	0.5221	15	0.2596	0.5221	0.2596	0.5221
-16	0.2596	0.5222	0.2596	0.5222	16	0.2596	0.5221	0.2596	0.5221
-17	0.2596	0.5222	0.2596	0.5222	17	0.2596	0.5222	0.2596	0.5222
-18	0.2596	0.5222	0.2596	0.5222	18	0.2596	0.5222	0.2596	0.5222
-19	0.2596	0.5223	0.2596	0.5223	19	0.2596	0.5222	0.2596	0.5222
-20	0.2596	0.5223	0.2597	0.5223	20	0.2596	0.5223	0.2596	0.5223
-21	0.2596	0.5223	0.2597	0.5223	21	0.2597	0.5223	0.2596	0.5223
-22	0.2597	0.5224	0.2597	0.5224	22	0.2597	0.5223	0.2597	0.5223
-23	0.2597	0.5224	0.2597	0.5224	23	0.2597	0.5224	0.2597	0.5223
-24	0.2597	0.5224	0.2597	0.5224	24	0.2597	0.5224	0.2597	0.5224
-25	0.2597	0.5225	0.2598	0.5225	25	0.2597	0.5224	0.2597	0.5224
-26	0.2597	0.5225	0.2598	0.5225	26	0.2598	0.5224	0.2597	0.5225
-27	0.2597	0.5225	0.2598	0.5226	27	0.2598	0.5225	0.2598	0.5225
-28	0.2597	0.5226	0.2598	0.5226	28	0.2598	0.5225	0.2598	0.5225
-29	0.2598	0.5226	0.2598	0.5226	29	0.2598	0.5226	0.2598	0.5226
-30	0.2598	0.5227	0.2599	0.5227	30	0.2598	0.5226	0.2598	0.5226
-31	0.2598	0.5227	0.2599	0.5227	31	0.2598	0.5226	0.2598	0.5226
-32	0.2598	0.5227	0.2599	0.5227	32	0.2599	0.5227	0.2599	0.5227
-33	0.2598	0.5228	0.2599	0.5228	33	0.2599	0.5227	0.2599	0.5227
-34	0.2599	0.5228	0.2599	0.5229	34	0.2599	0.5227	0.2599	0.5228
-35	0.2599	0.5228	0.2599	0.5229	35	0.2599	0.5228	0.2599	0.5228
-36	0.2599	0.5229	0.2600	0.5229	36	0.2599	0.5228	0.2599	0.5228
-37	0.2599	0.5229	0.2600	0.5230	37	0.2599	0.5228	0.2599	0.5229
-38	0.2599	0.5229	0.2600	0.5230	38	0.2600	0.5229	0.2599	0.5229
-39	0.2599	0.5230	0.2600	0.5230	39	0.2600	0.5229	0.2599	0.5229
-40	0.2599	0.5230	0.2600	0.5230	40	0.2600	0.5229	0.2599	0.5230
-41	0.2599	0.5230	0.2600	0.5231	41	0.2600	0.5230	0.2600	0.5230
-42	0.2599	0.5231	0.2600	0.5231	42	0.2600	0.5230	0.2599	0.5230
-43	0.2599	0.5231	0.2600	0.5231	43	0.2600	0.5230	0.2599	0.5230
-44	0.2599	0.5231	0.2600	0.5232	44	0.2600	0.5231	0.2599	0.5231
-45	0.2600	0.5231	0.2600	0.5232	45	0.2600	0.5231	0.2600	0.5231
-46	0.2600	0.5232	0.2601	0.5232	46	0.2600	0.5231	0.2600	0.5231
-47	0.2600	0.5232	0.2601	0.5233	47	0.2600	0.5232	0.2600	0.5231
-48	0.2599	0.5232	0.2600	0.5233	48	0.2601	0.5232	0.2599	0.5232
-49	0.2600	0.5232	0.2601	0.5233	49	0.2601	0.5232	0.2599	0.5232
-50	0.2600	0.5232	0.2600	0.5234	50	0.2600	0.5232	0.2599	0.5232
-51	0.2600	0.5233	0.2601	0.5234	51	0.2600	0.5232	0.2599	0.5232
-52	0.2599	0.5232	0.2600	0.5234	52	0.2600	0.5232	0.2594	0.5231
-53	0.2599	0.5233	0.2600	0.5234	53	0.2600	0.5233	0.2594	0.5231
-54	0.2599	0.5233	0.2600	0.5234	54	0.2600	0.5233	0.2594	0.5232
-55	0.2599	0.5233	0.2600	0.5234	55	0.2600	0.5233	0.2594	0.5232
-56	0.2599	0.5233	0.2600	0.5235	56	0.2600	0.5233	0.2595	0.5232
-57	0.2599	0.5233	0.2599	0.5234	57	0.2599	0.5233	0.2595	0.5232
-58	0.2598	0.5233	0.2599	0.5234	58	0.2599	0.5233	0.2594	0.5232
-59	0.2598	0.5233	0.2599	0.5235	59	0.2599	0.5233	0.2594	0.5232
-60	0.2597	0.5234	0.2599	0.5235	60	0.2599	0.5233	0.2594	0.5232

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**TEST REPORT**

PO Number:LED0307

Model Number:LED12BR30D27K

**Light Intensity & Color Distribution Tests**

**Directional Lamps**

**Test Results:**

**Average Beam Angle(50%):**

**Directional Lamps - Definition:**

The luminous flux within a solid angle of  $\pi$  sr- $\Phi_1$ (lumens):

The total luminous flux- $\Phi$ (lumens):

$\Phi_1/\Phi$ (%):

Energy Star Integral LED lamps Specification V1.4:[Directional lamp means a lamp having at least 80% light output within a solid angle of  \$\pi\$  sr \(corresponding to a cone with angle of 120°\)](#)

Complies / Does not comply:

**Minimum Center Beam Intensity - PAR/MR16 Lamps:**

0

Minimum Center Beam Intensity (cd):

Center Beam Intensity tested (cd):

Complies / Does not comply:

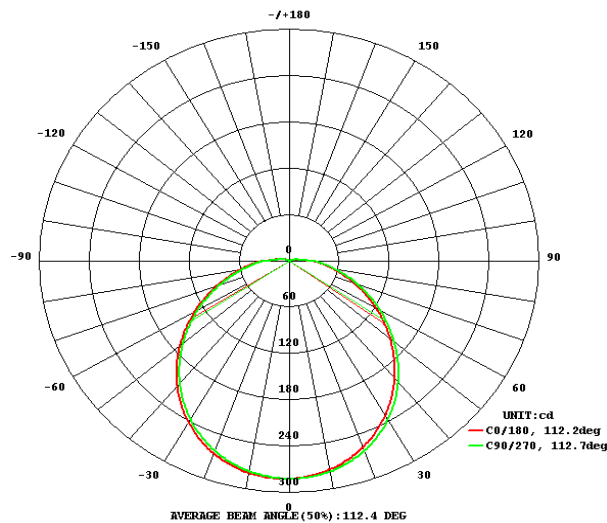
**Color Spatial Uniformity:**

Spatial non-uniformity of chromaticity:

Energy Star Integral LED lamps Specification V1.4:[The variation of chromaticity within the beam angle shall be within 0.006 from the weighted average point on the CIE 1976 \(u',v'\) diagram](#)

Complies/ Does not Comply:

**Light Distribution Polar Diagram:**



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