

**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 (>45)
Base Up	P-50353-1	120.0	0.096	9.4	0.812	729	3076	82.7	19.7	24.7	0.4302	0.3991	0.2483	0.5184	-0.0010	PASS	78.0
	P-50353-2	120.0	0.096	9.3	0.810	720	3088	82.3	21.8	24.7	0.4279	0.3955	0.2484	0.5166	-0.0022	PASS	77.2
	P-50353-3	120.0	0.095	9.3	0.813	723	3051	83.2	21.5	24.7	0.4303	0.3963	0.2496	0.5173	-0.0022	PASS	77.7
	P-50353-4	120.0	0.096	9.3	0.812	713	3068	83.0	20.7	24.7	0.4300	0.3977	0.2488	0.5178	-0.0016	PASS	76.4
	P-50353-5	120.0	0.095	9.3	0.810	735	3055	82.7	19.7	24.8	0.4311	0.3986	0.2492	0.5183	-0.0014	PASS	79.4

	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 (>45)
Base Down	P-50353-6	120.0	0.097	9.4	0.813	723	3081	83.1	21.5	24.8	0.4280	0.3950	0.2487	0.5164	-0.0024	PASS	76.7
	P-50353-7	120.0	0.096	9.3	0.810	699	3065	82.9	20.6	24.8	0.4300	0.3973	0.2490	0.5177	-0.0017	PASS	75.1
	P-50353-8	120.0	0.096	9.4	0.810	723	3053	82.5	19.2	24.8	0.4314	0.3990	0.2492	0.5185	-0.0013	PASS	77.2
	P-50353-9	120.0	0.096	9.3	0.810	722	3055	82.8	20.5	24.8	0.4301	0.3965	0.2494	0.5173	-0.0021	PASS	77.7
	P-50353-10	120.0	0.096	9.3	0.810	694	3051	82.7	19.7	24.8	0.4314	0.3987	0.2493	0.5184	-0.0014	PASS	74.4
Grand AVG.		120.01	0.0958	9.33	0.811	718	3064	83	20	24.8	0.4300	0.3974	0.2490	0.5177	-0.0017		77.0
Compliance					Complies	TBD	Complies	Complies	Complies						Complies	Complies	Complies

**LUMEN & COLOR MAINTENANCE**

**LIFE TESTING**

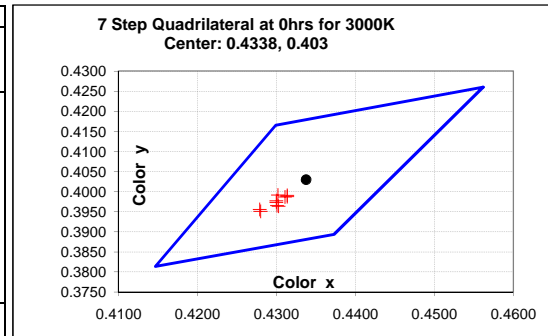
	Date:	N-N													N-N		
	Lp. #	1000 Hr. Lumens	1000 Hr. Lumen Maint.	1000 Hr. u' Color Maint.	1000 Hr. v' Color Maint.	3000 Hr. Lumens	3000 Hr. Lumen Maint.	3000 Hr. u' Color Maint.	3000 Hr. v' Color Maint.	6000 Hr. Lumens	6000 Hr. Lumen Maint.	6000 Hr. u' Color Maint.	6000 Hr. v' Color Maint.	N-N	N-N	Failure before 6000hours	Failure before Rated Life
Base Up	P-50353-1																
	P-50353-2																
	P-50353-3																
	P-50353-4																
	P-50353-5																
Base Down	P-50353-6																
	P-50353-7																
	P-50353-8																
	P-50353-9																
	P-50353-10																
Grand AVG.																	
Compliance		TBD	TBD	TBD		TBD	TBD	TBD		TBD	TBD	TBD		TBD			

Date:	
Lp. #	* Transient Protection PASS/FAIL
T-50353-1	
T-50353-2	
T-50353-3	
T-50353-4	
T-50353-5	
Compliance	TBD

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

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

Date:	
Lp. #	Rapid Cycles Endured
R-50353-1	
R-50353-2	
R-50353-3	
R-50353-4	
R-50353-5	
R-50353-6	
R-50353-7	
R-50353-8	
R-50353-9	
R-50353-10	
Compliance	TBD



Technician: Xu Hui  
 Date: 2013/07/27  
 Reviewed by: Liao Bingjing  
 Date: 2013/07/29

\* 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:LED0353**

**Model Number:LED10BR3030K**

**Light Intensity & Color Distribution Tests**

**Electrical Characteristics:**

LP#	Volt	Ampere	pf	Watts
D-50353-01	120.0	0.0962	0.805	9.3

**Zonal Lumen Flux:**

$\gamma$ angle (°)	$\Phi$ zonal(lm)	$\Phi$ Cumulative(lm)	% Cumulative Lumen
0-5	6	5.6	0.8%
5-10	16	22.0	3.0%
10-15	27	48.9	6.6%
15-20	36	85.1	11.5%
20-25	44	129.4	17.5%
25-30	51	180.2	24.3%
30-35	56	235.8	31.8%
35-40	58	294.3	39.7%
40-45	59	353.6	47.7%
45-50	58	412.1	55.6%
50-55	56	468.0	63.1%
55-60	52	519.8	70.1%
60-65	47	566.4	76.4%
65-70	40	606.8	81.9%
70-75	34	640.7	86.4%
75-80	27	668.0	90.1%
80-85	21	689.0	93.0%
85-90	16	704.6	95.1%
90-95	11	715.7	96.6%
95-100	8	723.3	97.6%
100-105	5	728.5	98.3%
105-110	4	732.2	98.8%
110-115	3	734.9	99.1%
115-120	2	736.9	99.4%
120-125	1	738.4	99.6%
125-130	1	739.4	99.8%
130-135	1	740.2	99.9%
135-140	0	740.6	99.9%
140-145	0	740.9	100.0%
145-150	0	741.1	100.0%
150-155	0	741.2	100.0%
155-160	0	741.2	100.0%
160-165	0	741.2	100.0%
165-170	0	741.2	100.0%
170-175	0	741.2	100.0%
175-180	0	741.2	100.0%

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**TEST REPORT**

PO Number:LED0353

Model Number:LED10BR3030K

**Light Intensity & Color Distribution Tests**

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

LP#:D-50353-01

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	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233		
5	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	
10	228	228	228	228	228	228	228	229	229	229	229	229	229	230	230	230	230	230	230	230	229	229	229	229	229	229	229	229	228	228	228	228	228	228	228	228	228	228	228
15	222	222	222	223	223	223	223	223	223	224	224	224	224	225	225	225	225	225	225	225	224	224	224	224	223	223	223	223	223	223	223	223	223	222	222	222	222	222	
20	214	215	214	215	215	215	215	216	216	216	216	217	217	218	217	218	218	218	218	218	217	217	217	217	216	216	216	215	215	215	215	215	214	214	214	214	214	214	
25	205	205	205	205	205	206	206	206	206	207	207	208	208	208	208	209	209	209	209	208	208	208	208	207	206	206	206	206	205	205	205	205	205	205	205	204	205	204	
30	193	194	193	194	194	194	194	195	195	196	196	197	197	197	197	198	198	198	198	197	197	197	197	196	196	195	195	194	194	194	194	193	193	193	193	193	193	193	
35	180	181	180	181	181	182	181	182	182	183	183	184	184	185	185	185	185	185	185	185	184	184	183	183	182	182	181	181	180	181	180	180	180	180	180	180	180	180	
40	166	166	166	167	167	167	167	168	168	169	169	170	170	171	170	171	171	171	171	170	170	169	169	168	168	168	168	167	167	166	166	165	166	165	166	165	166	165	
45	150	151	151	152	151	152	152	153	153	154	153	154	154	155	155	156	156	156	156	155	155	154	154	153	153	152	152	151	151	151	151	150	150	150	150	150	150	150	
50	134	135	135	136	135	136	136	137	137	138	138	139	138	139	139	140	139	140	140	139	139	138	138	137	137	136	136	135	135	134	135	134	134	134	134	134	134	134	
55	118	119	119	119	119	120	120	121	121	122	121	122	122	123	123	123	123	123	123	122	122	121	121	121	120	120	119	119	118	118	118	118	117	118	117	118	118	118	
60	102	102	102	103	103	104	104	105	105	105	105	106	106	106	106	107	106	106	106	106	105	105	104	104	103	104	103	103	102	102	101	102	101	102	101	102	102	102	
65	86	86	86	87	87	88	88	89	89	89	89	89	90	89	90	90	90	90	90	89	89	88	88	88	87	87	87	87	86	86	85	86	85	86	85	86	86	86	
70	70	71	71	72	72	73	73	74	74	74	74	74	74	74	74	74	74	74	74	73	73	73	73	72	72	72	71	71	70	70	70	70	70	70	71	71	70		
75	56	57	57	57	57	58	58	59	58	59	59	59	59	59	59	59	59	59	58	58	58	58	57	58	57	57	57	56	56	56	56	56	56	56	56	56	56		
80	43	44	44	44	44	45	45	45	45	46	45	46	46	46	46	46	45	45	46	45	45	45	44	45	44	44	44	43	44	43	43	43	43	43	44	43			
85	32	33	33	33	34	34	34	34	34	35	34	35	34	34	34	34	34	34	34	34	34	33	34	33	33	33	33	32	33	32	33	32	33	32	33	32	32		
90	23	24	23	24	24	24	24	24	24	25	24	25	25	25	25	24	25	24	24	24	24	24	24	24	24	24	23	24	23	23	23	23	23	23	24	23			
95	16	17	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	16	17	16	17	16	16	16	16	16	16	16	16	16	16		
100	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
105	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
110	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	6	6	6	6	6	6	6	6	6	
115	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
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	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	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	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	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	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	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	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	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	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	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	0

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**TEST REPORT**

PO Number:LED0353

Model Number:LED10BR3030K

**Light Intensity & Color Distribution Tests**

Weighted average u':	<b>0.2500</b>
Weighted average v':	<b>0.5174</b>
Rated Beam angle(°):	<b>N/A</b>
Actual Beam Angle Tested(°):	<b>112.3</b>

**Spatial non-uniformity of chromaticity:** **0.0006** (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	0.2498	0.5168	0.2498	0.5168	0	0.2498	0.5168	0.2498	0.5168
-1	0.2498	0.5168	0.2498	0.5168	1	0.2498	0.5168	0.2498	0.5168
-2	0.2498	0.5168	0.2498	0.5168	2	0.2498	0.5168	0.2498	0.5168
-3	0.2498	0.5168	0.2498	0.5168	3	0.2498	0.5168	0.2498	0.5168
-4	0.2498	0.5168	0.2498	0.5168	4	0.2499	0.5168	0.2498	0.5168
-5	0.2498	0.5168	0.2498	0.5168	5	0.2498	0.5168	0.2498	0.5168
-6	0.2498	0.5168	0.2498	0.5169	6	0.2498	0.5168	0.2499	0.5168
-7	0.2499	0.5169	0.2498	0.5169	7	0.2499	0.5168	0.2498	0.5168
-8	0.2499	0.5168	0.2498	0.5169	8	0.2498	0.5168	0.2499	0.5169
-9	0.2498	0.5169	0.2498	0.5169	9	0.2498	0.5169	0.2499	0.5169
-10	0.2499	0.5169	0.2498	0.5169	10	0.2498	0.5169	0.2499	0.5169
-11	0.2499	0.5169	0.2498	0.5169	11	0.2499	0.5169	0.2499	0.5169
-12	0.2499	0.5169	0.2498	0.5169	12	0.2499	0.5169	0.2499	0.5169
-13	0.2498	0.5169	0.2499	0.5170	13	0.2499	0.5169	0.2499	0.5169
-14	0.2499	0.5169	0.2499	0.5170	14	0.2499	0.5169	0.2499	0.5170
-15	0.2499	0.5169	0.2499	0.5169	15	0.2499	0.5170	0.2499	0.5170
-16	0.2499	0.5170	0.2499	0.5170	16	0.2499	0.5170	0.2499	0.5170
-17	0.2499	0.5170	0.2499	0.5170	17	0.2499	0.5170	0.2499	0.5170
-18	0.2499	0.5170	0.2499	0.5170	18	0.2499	0.5170	0.2499	0.5171
-19	0.2499	0.5170	0.2499	0.5170	19	0.2499	0.5171	0.2500	0.5170
-20	0.2499	0.5171	0.2499	0.5171	20	0.2499	0.5171	0.2500	0.5171
-21	0.2499	0.5170	0.2499	0.5171	21	0.2500	0.5171	0.2500	0.5171
-22	0.2499	0.5171	0.2499	0.5171	22	0.2500	0.5171	0.2500	0.5171
-23	0.2499	0.5171	0.2499	0.5171	23	0.2500	0.5171	0.2500	0.5172
-24	0.2500	0.5172	0.2499	0.5172	24	0.2500	0.5172	0.2500	0.5172
-25	0.2500	0.5172	0.2500	0.5172	25	0.2500	0.5172	0.2500	0.5172
-26	0.2500	0.5172	0.2500	0.5172	26	0.2500	0.5172	0.2500	0.5172
-27	0.2500	0.5172	0.2500	0.5172	27	0.2500	0.5172	0.2500	0.5173
-28	0.2500	0.5172	0.2500	0.5173	28	0.2501	0.5173	0.2500	0.5173
-29	0.2500	0.5173	0.2500	0.5173	29	0.2501	0.5173	0.2500	0.5173
-30	0.2500	0.5173	0.2500	0.5173	30	0.2501	0.5173	0.2501	0.5174
-31	0.2500	0.5173	0.2500	0.5173	31	0.2501	0.5173	0.2501	0.5174
-32	0.2500	0.5174	0.2500	0.5174	32	0.2501	0.5174	0.2500	0.5174
-33	0.2500	0.5174	0.2500	0.5174	33	0.2501	0.5174	0.2501	0.5174
-34	0.2500	0.5174	0.2501	0.5174	34	0.2501	0.5174	0.2501	0.5174
-35	0.2500	0.5174	0.2500	0.5174	35	0.2501	0.5174	0.2501	0.5175
-36	0.2501	0.5174	0.2500	0.5174	36	0.2501	0.5175	0.2501	0.5175
-37	0.2500	0.5175	0.2500	0.5174	37	0.2501	0.5175	0.2501	0.5175
-38	0.2500	0.5175	0.2500	0.5175	38	0.2501	0.5175	0.2501	0.5175
-39	0.2500	0.5175	0.2500	0.5175	39	0.2501	0.5175	0.2501	0.5175
-40	0.2500	0.5175	0.2501	0.5175	40	0.2501	0.5175	0.2497	0.5174
-41	0.2500	0.5175	0.2500	0.5175	41	0.2501	0.5176	0.2497	0.5174
-42	0.2500	0.5176	0.2501	0.5175	42	0.2501	0.5176	0.2497	0.5174
-43	0.2500	0.5176	0.2500	0.5175	43	0.2501	0.5176	0.2497	0.5175
-44	0.2500	0.5176	0.2501	0.5176	44	0.2501	0.5176	0.2497	0.5175
-45	0.2500	0.5176	0.2500	0.5176	45	0.2501	0.5176	0.2497	0.5175
-46	0.2500	0.5176	0.2500	0.5176	46	0.2501	0.5176	0.2497	0.5175
-47	0.2500	0.5176	0.2501	0.5176	47	0.2501	0.5176	0.2497	0.5175
-48	0.2500	0.5176	0.2500	0.5176	48	0.2501	0.5176	0.2497	0.5175
-49	0.2500	0.5176	0.2500	0.5176	49	0.2501	0.5176	0.2497	0.5176
-50	0.2500	0.5176	0.2500	0.5176	50	0.2501	0.5176	0.2497	0.5176
-51	0.2499	0.5176	0.2500	0.5176	51	0.2500	0.5176	0.2497	0.5176
-52	0.2499	0.5176	0.2500	0.5176	52	0.2500	0.5176	0.2498	0.5176
-53	0.2499	0.5176	0.2499	0.5176	53	0.2500	0.5176	0.2498	0.5176
-54	0.2499	0.5176	0.2499	0.5176	54	0.2500	0.5176	0.2497	0.5176
-55	0.2498	0.5176	0.2499	0.5176	55	0.2500	0.5176	0.2497	0.5176
-56	0.2498	0.5176	0.2498	0.5176	56	0.2500	0.5176	0.2497	0.5176
-57	0.2498	0.5176	0.2498	0.5176	57	0.2499	0.5176	0.2497	0.5176
-58	0.2498	0.5176	0.2498	0.5176	58	0.2499	0.5176	0.2497	0.5176
-59	0.2498	0.5176	0.2498	0.5175	59	0.2498	0.5175	0.2497	0.5176
-60	0.2497	0.5176	0.2497	0.5175	60	0.2498	0.5176	0.2497	0.5176

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**TEST REPORT**

PO Number:LED0353

Model Number:LED10BR3030K

**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:**

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:**

