

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-50361-1	120.0	0.118	10.5	0.744	673	2740	81.6	3.9	24.7	0.4525	0.4024	0.2614	0.5231	-0.0024	PASS	63.9
	P-50361-2	120.0	0.117	10.5	0.747	628	2747	81.6	4.2	24.6	0.4508	0.4001	0.2614	0.5219	-0.0032	PASS	59.9
	P-50361-3	120.0	0.117	10.5	0.744	660	2734	81.5	3.6	24.7	0.4527	0.4020	0.2617	0.5229	-0.0026	PASS	62.9
	P-50361-4	120.0	0.116	10.5	0.758	666	2737	81.6	4.1	24.8	0.4523	0.4016	0.2616	0.5227	-0.0027	PASS	63.4
	P-50361-5	120.0	0.114	10.4	0.763	657	2769	81.8	4.3	24.8	0.4503	0.4018	0.2602	0.5225	-0.0025	PASS	62.9

	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-50361-6	120.0	0.119	10.5	0.737	632	2774	81.6	4.3	24.9	0.4514	0.4008	0.2614	0.5222	-0.0029	PASS	60.0
	P-50361-7	120.0	0.114	10.4	0.759	632	2744	81.6	3.6	24.9	0.4530	0.4039	0.2611	0.5237	-0.0019	PASS	60.9
	P-50361-8	120.0	0.113	10.4	0.765	640	2757	81.7	4.4	24.9	0.4508	0.4015	0.2608	0.5224	-0.0026	PASS	61.5
	P-50361-9	120.0	0.114	10.5	0.763	645	2743	81.6	3.9	24.8	0.4523	0.4024	0.2613	0.5231	-0.0024	PASS	61.7
	P-50361-10	120.0	0.114	10.4	0.761	629	2749	81.6	3.9	24.8	0.4519	0.4023	0.2611	0.5229	-0.0024	PASS	60.4
Grand AVG.	120.02	0.1156	10.46	0.754	646	2749	82	4	24.8	0.4518	0.4019	0.2612	0.5227	-0.0026		61.8	
Compliance					Complies	TBD	Complies	Complies	Complies						Complies	Complies	Complies

LUMEN & COLOR MAINTENANCE

LIFE TESTING

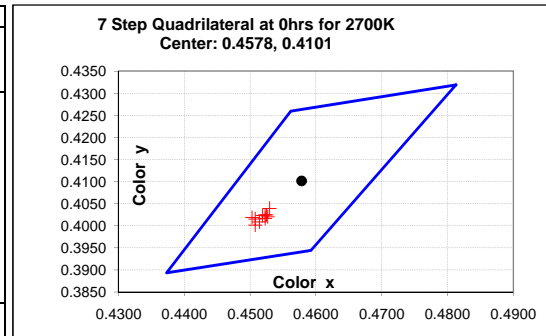
	Date:	N-N													N-N		
	Lp. #	1000 Hr. Lumens	1000 Hr. Lumen Maint.	1000 Hr. u' Color Maint.	1000 Hr. v' Color Maint.	3000 Hr. Lumens	3000 Hr. Lumen Maint.	3000 Hr. u' Color Maint.	3000 Hr. v' Color Maint.	6000 Hr. Lumens	6000 Hr. Lumen Maint.	6000 Hr. u' Color Maint.	6000 Hr. v' Color Maint.	N-N	N-N	Failure before 6000hours	Failure before Rated Life
Base Up	P-50361-1																
	P-50361-2																
	P-50361-3																
	P-50361-4																
	P-50361-5																
Base Down	P-50361-6																
	P-50361-7																
	P-50361-8																
	P-50361-9																
	P-50361-10																
Grand AVG.																	
Compliance		TBD	TBD	TBD		TBD	TBD	TBD		TBD	TBD	TBD		TBD			

Date:	
Lp. #	* Transient Protection PASS/FAIL
T-50361-1	
T-50361-2	
T-50361-3	
T-50361-4	
T-50361-5	
Compliance	TBD

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

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

Date:	
Lp. #	Rapid Cycles Endured
R-50361-1	
R-50361-2	
R-50361-3	
R-50361-4	
R-50361-5	
R-50361-6	
R-50361-7	
R-50361-8	
R-50361-9	
R-50361-10	
Compliance	TBD



Technician: Zhu Qingqing

Date: 2013-08-01

Reviewed by: Liao Bingjing

Date: 2013-08-12

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

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TEST REPORT

PO Number:LED0361

Model Number:LED10P2027KNFL

Light Intensity & Color Distribution Tests

Electrical Characteristics:

LP#	Volt	Ampere	pf	Watts
D-50361-01	120.0	0.1210	0.710	10.3

Zonal Lumen Flux:

γ angle (°)	Φ zonal(lm)	Φ Cumulative(lm)	% Cumulative Lumen
0-5	38	37.7	5.5%
5-10	102	139.8	20.5%
10-15	129	268.6	39.3%
15-20	111	379.8	55.6%
20-25	84	464.0	67.9%
25-30	63	527.0	77.2%
30-35	44	570.9	83.6%
35-40	28	599.0	87.7%
40-45	18	617.0	90.3%
45-50	13	630.4	92.3%
50-55	11	640.9	93.8%
55-60	8	649.1	95.0%
60-65	7	655.7	96.0%
65-70	6	661.3	96.8%
70-75	4	665.8	97.5%
75-80	3	669.1	98.0%
80-85	2	671.3	98.3%
85-90	1	672.7	98.5%
90-95	1	673.8	98.7%
95-100	1	674.8	98.8%
100-105	1	675.6	98.9%
105-110	1	676.4	99.0%
110-115	1	677.1	99.1%
115-120	1	677.8	99.2%
120-125	1	678.5	99.3%
125-130	1	679.1	99.4%
130-135	1	679.8	99.5%
135-140	1	680.4	99.6%
140-145	1	681.0	99.7%
145-150	1	681.5	99.8%
150-155	0	681.9	99.8%
155-160	0	682.3	99.9%
160-165	0	682.7	100.0%
165-170	0	682.9	100.0%
170-175	0	683.0	100.0%
175-180	0	683.0	100.0%

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TEST REPORT

PO Number:LED0361

Model Number:LED10P2027KNFL

Light Intensity & Color Distribution Tests

Light Intensity Distribution Data Table (Type C)

LP#:D-50361-01

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	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606	1606					
5	1533	1538	1538	1538	1535	1534	1533	1536	1539	1547	1552	1555	1554	1557	1556	1558	1562	1563	1566	1556	1553	1553	1556	1556	1557	1552	1548	1544	1544	1540	1536	1533	1533	1532	1532	1532	1532	1532	1532	1532			
10	1240	1247	1249	1254	1253	1267	1277	1292	1297	1312	1317	1327	1334	1345	1346	1347	1346	1349	1350	1343	1343	1343	1339	1328	1327	1314	1311	1296	1287	1276	1276	1269	1266	1253	1253	1251	1246	1246	1246				
15	800	807	803	817	823	838	840	855	864	880	884	904	916	934	939	951	953	963	970	960	959	954	952	936	925	907	897	874	867	852	847	831	833	819	815	810	810	810	810				
20	479	481	477	487	487	495	497	501	500	510	515	525	526	531	531	538	538	546	557	552	555	557	553	542	542	532	524	515	513	501	499	492	484	486	489	483	483	483	483				
25	304	306	300	303	298	303	299	304	298	308	305	313	309	314	310	317	316	322	331	327	332	332	338	333	337	330	329	324	330	319	319	311	315	310	314	309	309	309	309				
30	190	193	188	185	183	184	180	183	186	188	182	188	188	190	187	189	192	195	195	197	202	198	201	200	202	201	206	206	207	202	201	196	198	198	198	194	194	194	194				
35	109	111	109	107	104	107	102	105	113	112	103	106	110	111	110	110	112	111	112	113	117	110	113	112	116	111	118	122	118	113	116	115	117	115	115	111	111	111	111				
40	60	63	60	60	60	61	59	62	64	65	63	64	66	66	64	64	64	63	64	62	63	62	62	61	64	61	63	67	63	60	64	63	63	63	63	65	61	61	61				
45	37	39	39	40	39	40	40	40	40	40	39	39	40	39	39	39	39	39	39	39	40	39	39	38	38	38	39	38	37	36	37	36	37	36	37	37	37	37	37	37			
50	27	28	29	31	30	30	31	32	32	33	33	32	30	29	30	30	29	29	30	30	32	32	31	29	30	28	28	28	27	26	26	26	26	26	26	28	27	27	27				
55	20	20	21	21	21	21	22	21	21	21	21	21	20	21	20	21	21	21	22	21	22	21	22	22	21	20	20	19	19	18	19	18	19	19	19	19	19	19	19	19			
60	15	16	16	16	16	16	16	16	16	16	15	15	15	15	15	15	15	15	16	16	16	16	16	16	16	15	15	15	14	14	14	14	14	14	14	14	15	15	15	15			
65	13	13	13	13	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	12	12	12	12	11	12	12	12	12	12	12	12	12	12	12	12		
70	10	10	10	11	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	10	10	10	10		
75	7	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
80	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	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
85	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
90	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	2	2	2	
95	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	2	2	2	
100	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	2	2	2	
105	2	2	2	2	2	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	
110	2	2	2	2	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	
115	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	1	1	1	
120	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	1	1	1	
125	2	2	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	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
130	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	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	2	2	2	2
140	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	2	2	2	2
145	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	2	2	2	2
150	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	2	2	2	2
155	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	2	2	2	2
160	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	2	2	2	2
165	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	2	2	2	2
170	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	2	2	2	2
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	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	0	0	0	

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TEST REPORT

PO Number:LED0361

Model Number:LED10P2027KNFL

Light Intensity & Color Distribution Tests

Weighted average u':	0.2600
Weighted average v':	0.5219
Rated Beam angle(°):	N/A
Actual Beam Angle Tested(°):	31.7

Spatial non-uniformity of chromaticity: **0.0023** (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	0.2586	0.5212	0.2586	0.5212	0	0.2586	0.5212	0.2586	0.5212
-1	0.2587	0.5213	0.2590	0.5219	1	0.2583	0.5207	0.2584	0.5206
-2	0.2590	0.5215	0.2593	0.5221	2	0.2585	0.5212	0.2585	0.5210
-3	0.2591	0.5215	0.2590	0.5218	3	0.2585	0.5212	0.2586	0.5214
-4	0.2588	0.5215	0.2589	0.5217	4	0.2583	0.5209	0.2585	0.5209
-5	0.2587	0.5212	0.2586	0.5213	5	0.2584	0.5209	0.2585	0.5207
-6	0.2588	0.5212	0.2584	0.5210	6	0.2586	0.5207	0.2587	0.5211
-7	0.2586	0.5211	0.2583	0.5210	7	0.2584	0.5206	0.2584	0.5207
-8	0.2587	0.5213	0.2584	0.5209	8	0.2583	0.5205	0.2581	0.5207
-9	0.2585	0.5210	0.2585	0.5211	9	0.2585	0.5207	0.2583	0.5208
-10	0.2585	0.5209	0.2586	0.5212	10	0.2583	0.5203	0.2583	0.5208
-11	0.2584	0.5212	0.2586	0.5211	11	0.2583	0.5202	0.2586	0.5208
-12	0.2590	0.5216	0.2587	0.5210	12	0.2586	0.5201	0.2586	0.5211
-13	0.2596	0.5220	0.2591	0.5215	13	0.2589	0.5203	0.2589	0.5213
-14	0.2599	0.5225	0.2599	0.5221	14	0.2592	0.5205	0.2593	0.5214
-15	0.2603	0.5224	0.2607	0.5226	15	0.2596	0.5209	0.2597	0.5217
-16	0.2605	0.5226	0.2610	0.5229	16	0.2600	0.5210	0.2600	0.5218
-17	0.2606	0.5227	0.2610	0.5229	17	0.2608	0.5217	0.2604	0.5220
-18	0.2602	0.5226	0.2609	0.5229	18	0.2609	0.5218	0.2607	0.5220
-19	0.2606	0.5225	0.2609	0.5230	19	0.2611	0.5220	0.2602	0.5219
-20	0.2610	0.5228	0.2611	0.5231	20	0.2613	0.5221	0.2604	0.5220
-21	0.2610	0.5229	0.2613	0.5235	21	0.2613	0.5221	0.2607	0.5222
-22	0.2609	0.5227	0.2614	0.5234	22	0.2615	0.5220	0.2609	0.5224
-23	0.2612	0.5228	0.2615	0.5235	23	0.2618	0.5224	0.2612	0.5228
-24	0.2617	0.5231	0.2616	0.5236	24	0.2614	0.5219	0.2614	0.5229
-25	0.2619	0.5234	0.2618	0.5239	25	0.2617	0.5220	0.2616	0.5229
-26	0.2611	0.5231	0.2619	0.5238	26	0.2621	0.5225	0.2611	0.5228
-27	0.2610	0.5229	0.2620	0.5240	27	0.2627	0.5231	0.2610	0.5226
-28	0.2614	0.5230	0.2621	0.5241	28	0.2631	0.5235	0.2611	0.5229
-29	0.2617	0.5234	0.2621	0.5243	29	0.2632	0.5235	0.2615	0.5233
-30	0.2618	0.5235	0.2623	0.5246	30	0.2635	0.5237	0.2616	0.5234
-31	0.2619	0.5235	0.2620	0.5245	31	0.2636	0.5240	0.2617	0.5233
-32	0.2624	0.5239	0.2619	0.5247	32	0.2638	0.5242	0.2619	0.5235
-33	0.2631	0.5242	0.2620	0.5249	33	0.2637	0.5238	0.2615	0.5236
-34	0.2635	0.5245	0.2618	0.5250	34	0.2638	0.5241	0.2618	0.5240
-35	0.2635	0.5247	0.2618	0.5250	35	0.2638	0.5244	0.2619	0.5241
-36	0.2635	0.5246	0.2621	0.5254	36	0.2638	0.5245	0.2622	0.5243
-37	0.2639	0.5251	0.2622	0.5254	37	0.2639	0.5245	0.2622	0.5243
-38	0.2643	0.5253	0.2617	0.5251	38	0.2644	0.5249	0.2622	0.5242
-39	0.2644	0.5252	0.2617	0.5254	39	0.2647	0.5252	0.2618	0.5241
-40	0.2641	0.5248	0.2618	0.5256	40	0.2644	0.5249	0.2620	0.5242
-41					41				
-42					42				
-43					43				
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TEST REPORT

PO Number:LED0361

Model Number:LED10P2027KNFL

Light Intensity & Color Distribution Tests

Directional Lamps

Test Results:

Average Beam Angle(50%):

Directional Lamps - Definition:

The luminous flux within a solid angle of π sr- Φ 1(lumens):

The total luminous flux- Φ (lumens):

Φ 1/ Φ (%):

Energy Star Integral LED lamps Specification V1.4:**Directional lamp means a lamp having at least 80% light output within a solid angle of π 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:

