



NVLAP LAB CODE 201011-0

Report No.: STD160203NB-L

LM-79-08 Test Report

For

CEA GROUP INTERNATIONAL CO.,LTD

(Brand Name:CEA EAEC)

Sanjiali Industrial Zone Zhucheng Road Panshi North baixiang Yueqing Zhejiang China

Outdoor Full-Cutoff Wall-mounted Area Luminaires

Model name(s): LWP6-100
LWP6-100P

Remark: The letter “P” on the model name represents the product with photocell.

Representative (Tested) Model: LWP6-100(2700K)
LWP6-100(5700K)

Model Difference: All construction and rating are the same, except CCT.

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Date: Jun.01,2016

Review By:

Tommy Liang

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4909-H/2

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

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U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template
Laboratory Information:

Name of Test Laboratory	Standard-Tech Co., Ltd.
Date of Test Report	Jun.01,2016
Test Report No.	STD160203NB-L
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-100(2700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff Wall-mounted Area Luminaires	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	--	96.20	W
Input Current	--	0.8098	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9899	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	10085	lm
Initial Lumen Efficacy	--	104.83	lm/w
Correlated color temperature / CCT	2735	--	K
Color rendering index / CRI	70.0	--	
R9 Value	0	--	
Duv	0.0012	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		4053	cd
Beam angle (if applicable)		85.6	°
Zonal lumens in the 0°-60° zone		85	%
Zonal lumens in the 60°-90° zone	---	14.8	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0.2	%

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Test Report No.	STD160203NB-L
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-100(5700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff Wall-mounted Area Luminaires	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	

Electrical Measurements:	Integrating Sphere Output	Goniophotometer Output	
Input Wattage	96.43	--	W
Input Current	0.8137	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9876	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	10287	--	lm
Initial Lumen Efficacy	106.68	--	lm/w
Correlated color temperature / CCT	5765	--	K
Color rendering index / CRI	74.9	--	
R9 Value	0	--	
Duv	-0.0034	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)			cd
Beam angle (if applicable)			°
Zonal lumens in the 0 °-60 °zone	-----		%
Zonal lumens in the 60 °-90 °zone			%
Zonal lumens in the 90 °-120 °zone			%
Zonal lumens in the 120 °-180 °zone			%

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Date of Receipt	:May.25,2016
Date of Test	: May.27,2016
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

Test Methods

1. Photometric and Electrical measurements – Light Distribution Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1 ° vertical intervals and 22.5 ° horizontal intervals.

2. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

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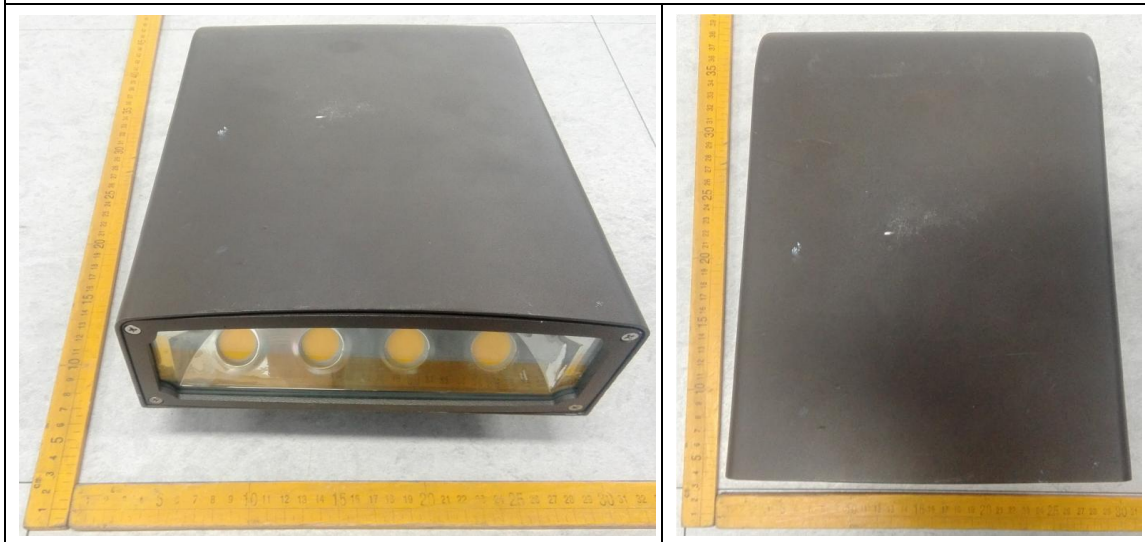
Fax: 8620-32290422

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1. Product Information:

Brand Name	CEA EAEC
Model Number	LWP6-100
Luminaire Type	Outdoor Full-Cutoff Wall-mounted Area Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	100W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Guangzhou Hongli Opto-Electronic Co., Ltd.
LED Model	HL-LM004H384W-40B18C12(Ra2)
Sample Receipt Date	May.25,2016
Sample Number	STD160203NB-L1(2700K),L2(5700K)

Photo



2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
--	-----------------------

Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-100(2700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.8098	96.20	0.9899	9.08
NB-L1	277.0	60	0.3785	95.00	0.9062	14.72

Color Data:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.0
R9	0
CCT (K)	2735
Chromaticity (x, y)	x=0.4591 y=0.4137
Chromaticity (u', v')	u'=0.2606 v'=0.5284
Duv	0.0012

Special Color Rendering Indices			
R1	66	R9	0
R2	81	R10	54
R3	93	R11	54
R4	63	R12	40
R5	63	R13	68
R6	72	R14	96
R7	79	R15	60
R8	43	--	--

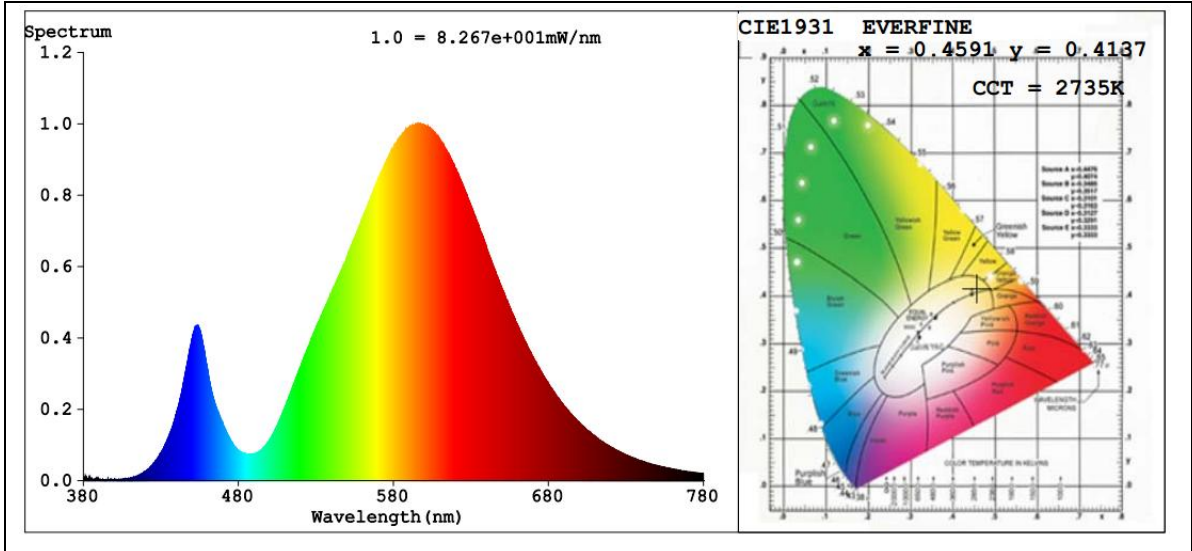
Goniophotometer Method :

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	10085
Luminous Efficacy (lm/W)	104.83
Beam Angle °	85.6
Center Beam Candle Power (cd)	4053

Goniophotometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	9853.0
Luminous Efficacy (lm/W)	103.72

Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	3,123.0	31%
0-40	5,019.2	49.8%
0-60	8,573.4	85%
60-90	1,491.6	14.8%
70-100	368.5	3.7%
90-120	3.0	0%
0-90	10,065.0	99.8%
90-180	18.7	0.2%
0-180	10,083.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	384.8	3.8%	90-100	0.1	0%
10-20	1,101.0	10.9%	100-110	0.9	0%
20-30	1,637.2	16.2%	110-120	2.1	0%
30-40	1,896.1	18.8%	120-130	3.0	0%
40-50	1,898.3	18.8%	130-140	3.6	0%
50-60	1,656.0	16.4%	140-150	3.5	0%
60-70	1,123.2	11.1%	150-160	2.9	0%
70-80	350.1	3.5%	160-170	1.9	0%
80-90	18.3	0.2%	170-180	0.8	0%

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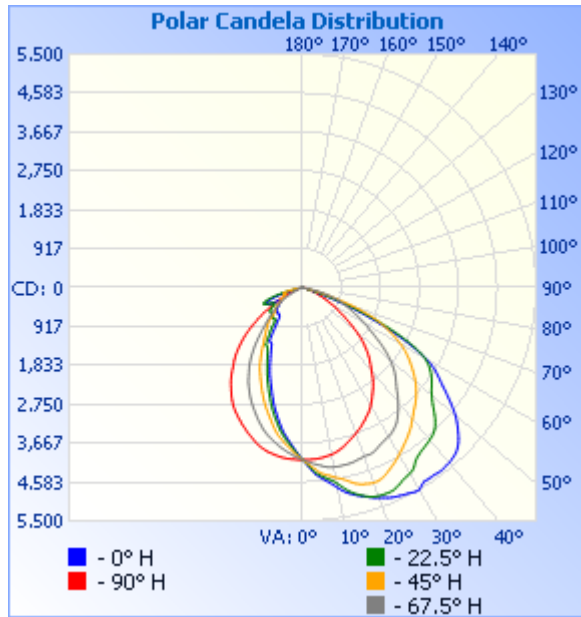
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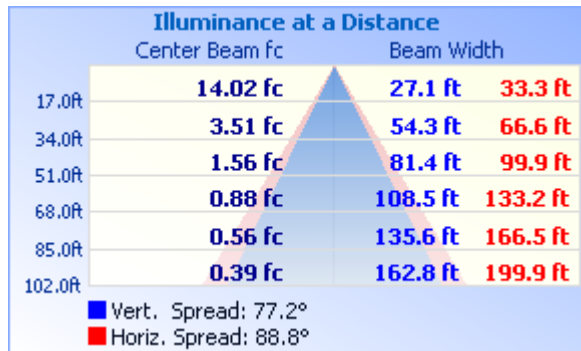
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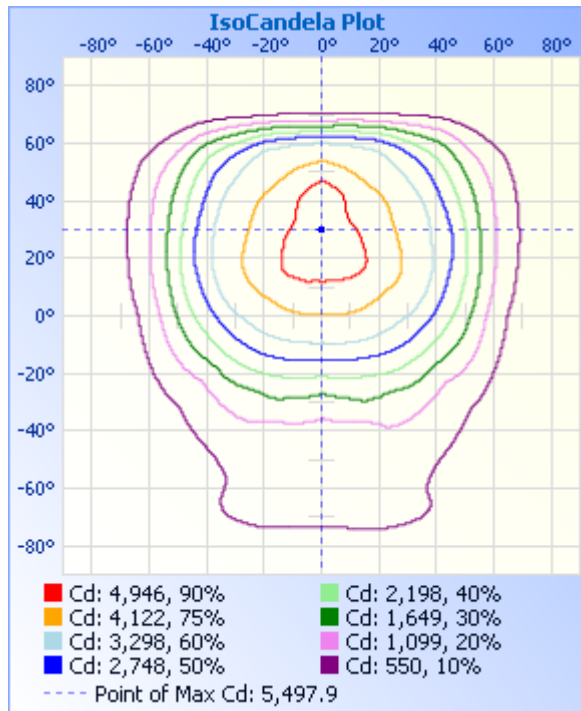
Photometric Data



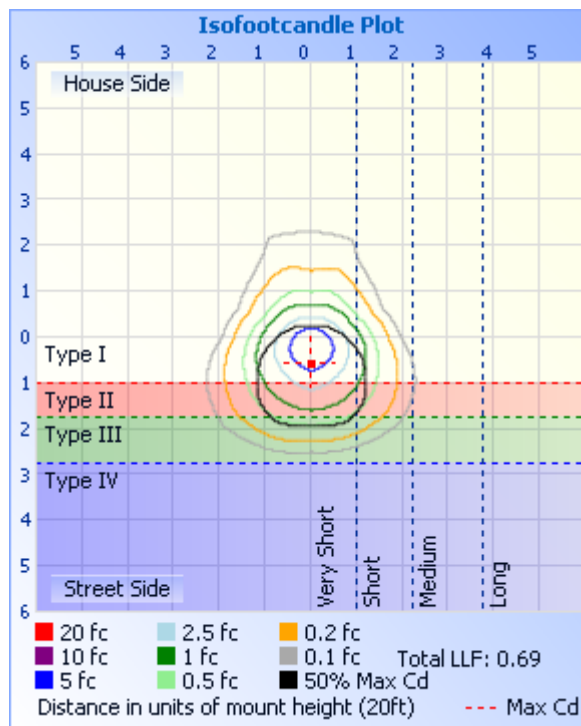
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053
1	4138	4127	4112	4084	4055	4020	3996	3980	3971	3983	4001	4028	4055	4086	4113	4131	4138
2	4227	4199	4168	4110	4054	3982	3935	3904	3885	3909	3943	3995	4053	4119	4171	4202	4227
3	4320	4276	4226	4140	4051	3948	3873	3826	3800	3832	3883	3963	4050	4153	4233	4279	4320
4	4411	4364	4288	4169	4050	3911	3813	3747	3715	3759	3826	3929	4047	4185	4291	4364	4411
5	4474	4423	4357	4193	4045	3874	3757	3670	3633	3687	3771	3897	4044	4215	4360	4427	4474
6	4529	4472	4406	4217	4035	3838	3699	3593	3555	3615	3717	3862	4036	4247	4420	4476	4529
7	4590	4517	4439	4249	4027	3807	3632	3519	3481	3545	3659	3828	4028	4283	4454	4520	4590
8	4650	4567	4471	4267	4014	3767	3564	3442	3394	3471	3605	3792	4014	4303	4482	4572	4650
9	4714	4619	4505	4279	3999	3729	3498	3359	3298	3389	3551	3751	4000	4313	4509	4628	4714
10	4788	4689	4548	4289	3988	3689	3431	3268	3202	3301	3485	3708	3984	4318	4537	4692	4788
11	4866	4766	4576	4294	3967	3650	3371	3177	3106	3212	3413	3665	3965	4329	4568	4770	4866
12	4930	4852	4616	4293	3941	3608	3307	3086	3008	3124	3331	3626	3950	4330	4604	4851	4930
13	4979	4930	4665	4289	3913	3562	3235	2998	2916	3036	3249	3583	3929	4326	4650	4923	4979
14	5028	4993	4720	4292	3881	3508	3163	2918	2816	2951	3166	3539	3902	4314	4695	4979	5028
15	5073	5046	4776	4287	3845	3455	3090	2834	2712	2855	3094	3489	3872	4300	4750	5041	5073
16	5113	5098	4811	4280	3803	3409	3022	2737	2609	2760	3023	3435	3840	4293	4794	5096	5113
17	5152	5141	4841	4269	3765	3357	2958	2636	2499	2664	2953	3376	3801	4280	4831	5142	5152
18	5194	5180	4860	4255	3728	3303	2896	2540	2410	2569	2877	3322	3762	4268	4863	5181	5194
19	5234	5208	4880	4244	3697	3250	2826	2453	2321	2476	2801	3259	3721	4249	4873	5213	5234
20	5268	5224	4894	4232	3661	3196	2752	2380	2237	2397	2726	3196	3679	4232	4880	5242	5268
21	5303	5232	4892	4227	3621	3143	2672	2297	2154	2317	2648	3133	3641	4214	4890	5264	5303
22	5341	5236	4879	4236	3583	3082	2587	2231	2050	2227	2571	3075	3599	4191	4895	5272	5341
23	5370	5239	4852	4224	3542	3017	2505	2137	1964	2142	2493	3018	3553	4169	4887	5275	5370
24	5391	5232	4816	4200	3494	2951	2433	2056	1874	2051	2417	2957	3515	4149	4858	5267	5391
25	5411	5205	4774	4167	3450	2885	2361	1978	1794	1974	2350	2895	3468	4134	4830	5251	5411
26	5431	5171	4730	4135	3403	2813	2290	1904	1714	1901	2279	2827	3428	4123	4786	5213	5431
27	5445	5132	4688	4112	3361	2737	2210	1834	1632	1832	2214	2761	3385	4109	4739	5169	5445
28	5470	5100	4642	4089	3317	2662	2130	1761	1564	1762	2140	2696	3338	4081	4684	5134	5470
29	5498	5072	4595	4064	3266	2589	2050	1692	1509	1701	2070	2627	3294	4062	4625	5102	5498

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30	5496	5054	4544	4045	3205	2514	1966	1632	1493	1653	1994	2556	3246	4048	4562	5073	5496
31	5440	5025	4497	4025	3144	2441	1886	1589	1485	1624	1916	2479	3191	4028	4498	5048	5440
32	5392	4964	4449	3996	3083	2365	1807	1571	1463	1608	1838	2399	3134	4000	4437	4995	5392
33	5396	4879	4397	3958	3017	2290	1730	1565	1348	1587	1762	2320	3072	3947	4379	4914	5396
34	5396	4826	4351	3918	2953	2216	1655	1529	1228	1502	1684	2248	3007	3896	4320	4821	5396
35	5391	4789	4302	3864	2892	2133	1572	1439	1121	1394	1607	2168	2939	3845	4261	4763	5391
36	5402	4759	4252	3800	2829	2041	1496	1355	1059	1313	1543	2088	2873	3787	4211	4706	5402
37	5409	4734	4203	3731	2759	1950	1436	1261	967	1252	1491	1999	2808	3715	4173	4667	5409
38	5400	4714	4150	3659	2681	1859	1391	1199	889	1169	1446	1907	2743	3650	4119	4634	5400
39	5390	4691	4084	3581	2596	1763	1352	1079	860	1055	1392	1810	2668	3575	4062	4614	5390
40	5378	4667	4028	3503	2518	1662	1306	997	853	1007	1345	1713	2593	3495	3997	4596	5378
41	5360	4643	3969	3421	2447	1565	1262	976	844	989	1296	1616	2511	3417	3945	4572	5360
42	5336	4611	3907	3330	2378	1468	1211	962	834	991	1248	1521	2434	3333	3883	4545	5336
43	5302	4563	3866	3248	2311	1377	1167	966	836	1011	1207	1432	2368	3256	3825	4513	5302
44	5251	4500	3819	3175	2239	1290	1123	968	836	1012	1175	1345	2302	3176	3763	4462	5251
45	5188	4420	3768	3109	2162	1213	1069	965	833	1005	1132	1266	2228	3108	3724	4400	5188
46	5108	4326	3721	3044	2082	1136	991	961	832	993	1034	1189	2145	3049	3668	4316	5108
47	5014	4227	3664	2975	1996	1066	873	958	835	974	961	1123	2060	2989	3616	4210	5014
48	4920	4128	3604	2900	1914	998	810	954	832	967	909	1065	1972	2929	3565	4099	4920
49	4816	4043	3541	2818	1826	928	780	955	823	964	872	1007	1877	2864	3504	3995	4816
50	4704	3972	3477	2727	1715	859	758	957	806	959	848	947	1784	2798	3436	3906	4704
51	4579	3909	3405	2631	1613	798	734	946	781	954	828	883	1687	2723	3366	3837	4579
52	4436	3857	3330	2522	1510	742	713	933	748	952	809	818	1585	2637	3292	3777	4436
53	4298	3810	3255	2409	1405	689	686	916	718	946	788	762	1483	2547	3215	3725	4298
54	4160	3762	3182	2302	1309	650	660	898	691	948	763	718	1381	2437	3141	3673	4160
55	4030	3709	3105	2185	1219	614	632	866	668	929	728	675	1283	2320	3066	3624	4030
56	3911	3652	3028	2074	1127	580	599	854	644	894	694	637	1186	2208	2993	3567	3911
57	3798	3588	2947	1969	1040	537	572	818	629	860	663	601	1094	2099	2916	3510	3798
58	3689	3520	2866	1871	958	494	559	774	620	826	638	552	998	1985	2834	3444	3689
59	3549	3435	2776	1781	885	444	543	742	613	800	614	507	914	1879	2749	3375	3549
60	3369	3333	2674	1693	808	389	525	720	611	767	594	457	834	1779	2659	3285	3369
61	3148	3180	2566	1606	737	340	508	702	618	755	573	392	761	1684	2555	3179	3148

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62	2897	2987	2454	1519	671	285	492	703	673	782	551	322	690	1595	2446	3027	2897
63	2617	2761	2337	1426	611	236	476	732	800	803	532	278	622	1506	2329	2827	2617
64	2323	2499	2222	1338	555	197	454	779	880	840	507	253	559	1417	2212	2598	2323
65	2024	2232	2102	1262	500	163	428	839	920	892	479	226	505	1331	2091	2341	2024
66	1718	1947	1973	1192	451	136	402	905	937	950	448	208	454	1252	1971	2077	1718
67	1441	1664	1816	1129	410	112	384	947	927	992	429	193	412	1178	1846	1801	1441
68	1164	1395	1624	1066	364	97	385	962	905	990	436	171	368	1109	1707	1534	1164
69	887	1126	1431	1003	321	82	392	952	859	966	458	139	329	1043	1540	1268	887
70	653	873	1238	938	280	74	390	918	801	932	462	114	292	975	1372	1001	653
71	451	646	1034	867	243	71	388	866	720	873	458	94	258	905	1205	760	451
72	290	453	841	787	208	67	392	791	638	795	457	76	225	834	1026	546	290
73	178	298	661	700	181	62	400	695	539	721	470	66	194	755	852	374	178
74	124	193	497	610	158	56	400	583	433	624	459	60	170	671	679	242	124
75	105	143	347	524	139	48	387	471	326	524	434	53	149	586	521	158	105
76	87	116	224	440	121	42	351	356	210	424	399	47	130	505	372	123	87
77	60	83	135	354	102	38	301	230	116	306	349	44	113	430	249	100	60
78	36	48	90	271	83	35	238	127	73	190	288	41	97	363	154	70	36
79	23	29	63	191	66	31	166	98	70	122	244	37	81	295	92	40	23
80	15	18	37	120	50	27	83	86	72	92	182	33	65	224	62	25	15
81	11	12	20	70	32	23	51	73	51	84	110	30	50	153	40	15	11
82	8	9	12	38	20	19	40	25	21	42	69	25	35	97	22	11	8
83	6	6	8	18	13	14	17	17	17	24	43	21	25	57	13	8	6
84	4	4	6	9	8	10	11	14	14	16	20	17	17	30	9	6	4
85	3	3	4	6	5	7	8	10	10	13	12	13	12	14	6	4	3
86	2	2	2	3	3	4	5	6	6	8	9	9	7	7	4	2	2
87	1	1	1	2	1	2	3	4	5	5	6	5	4	4	2	1	1
88	0	0	1	0	0	0	1	2	2	3	3	3	3	2	1	1	0
89	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
101	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
102	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0
103	0	0	0	0	0	1	2	2	1	1	1	1	0	0	0	0
104	0	0	0	0	0	1	2	2	1	2	2	1	0	0	0	0
105	1	0	0	0	0	1	2	2	2	2	2	1	0	0	0	1
106	1	0	0	0	0	1	2	2	2	2	2	1	0	0	0	1
107	1	0	0	0	0	2	3	3	2	3	2	1	0	0	0	1
108	1	0	0	0	0	2	3	3	3	3	3	2	0	0	0	1
109	1	0	0	0	0	2	3	3	3	3	3	2	0	0	0	1
110	1	0	0	0	0	2	3	3	3	3	3	2	0	0	0	1
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114	1	0	0	0	1	3	4	4	5	4	4	3	1	0	0	1
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119	1	1	0	0	2	4	5	6	7	6	5	4	2	0	0	1
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122	1	1	1	1	2	4	5	6	7	5	6	4	3	1	0	1
123	1	1	1	1	3	4	6	6	7	6	6	4	3	1	1	1
124	1	1	1	1	3	4	6	6	7	6	6	5	3	1	1	1
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126	1	1	1	2	3	5	6	7	7	7	6	5	3	2	1	1	1
127	1	1	1	2	3	5	6	7	7	7	6	5	4	2	1	1	1
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129	1	1	1	2	3	5	6	8	9	7	6	5	4	2	1	1	1
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140	1	2	2	4	5	6	7	10	10	10	7	6	5	4	2	2	1
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150	3	3	3	4	6	7	8	9	10	10	9	7	6	4	3	3	3
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156	4	4	5	5	6	7	8	9	9	9	9	8	6	5	5	4	4
157	4	4	5	6	6	7	8	9	9	9	9	8	6	5	5	4	4

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158	4	4	5	6	5	7	8	9	9	9	9	7	6	5	5	5	4
159	4	4	5	6	5	7	8	9	9	9	9	7	6	5	5	5	4
160	5	5	5	6	5	7	8	8	9	8	9	7	6	6	6	5	5
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162	5	5	6	6	6	6	8	8	9	8	8	7	5	6	6	5	5
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169	6	6	7	7	7	7	8	9	9	10	9	9	7	7	7	6	6
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171	7	7	8	7	7	7	9	10	10	11	10	10	7	7	8	7	7
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178	9	8	9	8	6	6	8	9	9	10	9	9	7	8	9	9	9
179	9	8	9	8	6	6	8	9	9	10	8	9	7	8	9	8	9
180	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-100(5700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.8137	96.43	0.9876	9.02
NB-L2	277.0	60	0.3803	95.23	0.9041	14.66

Sphere-Spectroradiometer Method :

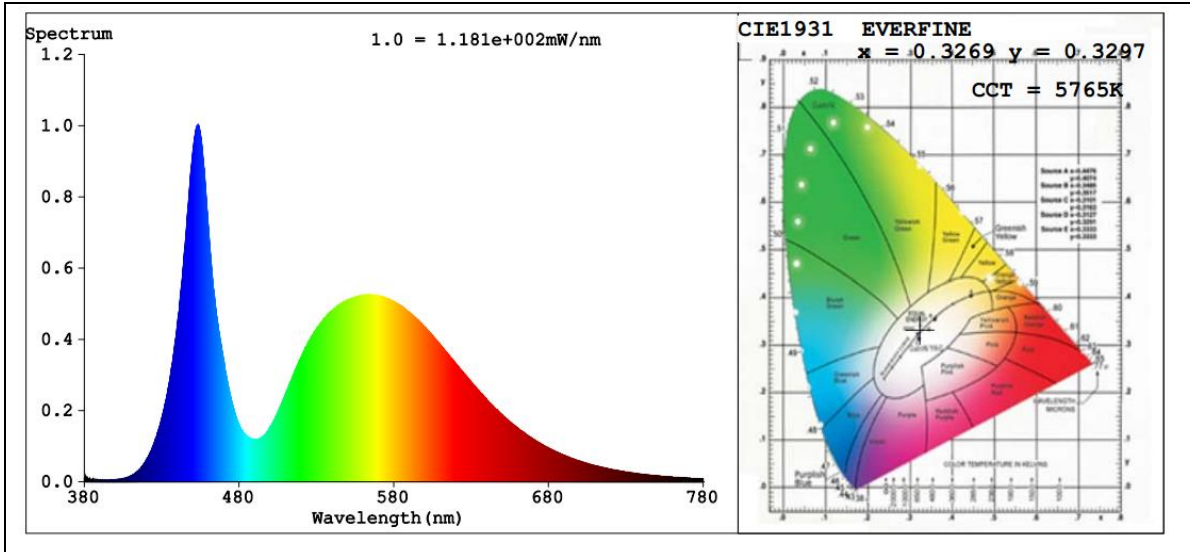
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	74.9
R9	0
CCT (K)	5765
Chromaticity (x, y)	x=0.3269 y=0.3297
Chromaticity (u', v')	u'=0.2075 v'=0.4708
Duv	-0.0034
Total Initial Lumen Output(lm)	10287
Initial Lumen Efficacy(lm/w)	106.68

Special Color Rendering Indices			
R1	73	R9	0
R2	81	R10	50
R3	81	R11	68
R4	74	R12	43
R5	73	R13	75
R6	70	R14	89
R7	84	R15	72
R8	63	--	--

Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	10051
Initial Lumen Efficacy(lm/w)	105.54

Spectral Power Distribution & Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******* END OF DATASHEET PACKAGE *******