



NVLAP LAB CODE 201011-0

Report No.: GZE151276-G

LM-79-08 Test Report

For

Beyond LED Technology (Brand Name: Beyond LED)

1939 Parker Ct Suite C
Stone Mountain, GA 30087

Outdoor Pole/Arm-mounted Area and Roadway Luminaires

Model name(s): 107912

Remark: The last X can be 1, 2 or 3, represents the different Pole Mounting Bracket.

Representative (Tested) Model: SNC-SB-480W-1111-1601 4000K
SNC-SB-480W-1111-1601 5700K

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Date: 2016-01-06

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-S/2

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Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
SNC-SB-480W-1111-1601 4000K	4000K	60853	469.6	129.58
SNC-SB-480W-1111-1601 5000K	5000K	61428* ¹	469.4* ²	130.86* ³
SNC-SB-480W-1111-1601 5700K	5700K	62003	469.2	132.15

*1: This value is calculated and the calculation formula is as below:

$$61428 = (62003 - 60853) / 3 + 60853$$

*2: This value is calculated and the calculation formula is as below:

$$469.4 = (469.2 + 469.6) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$130.86 = 61428 / 469.4$$

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	2016-01-06
Test Report No.	GZE151276-G
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	Beyond LED Technology	
Brand Name	Beyond LED	
Model Number	107912	
SKU (if available)	150033	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-mounted Area and Roadway Luminaires	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	

Electrical Measurements:	Integrating Sphere	Goniophotometer	
	Output	Output	
Input Wattage	--	469.6	W
Input Current	--	3.933	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9951	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	60853	lm
Initial Lumen Efficacy	--	129.58	lm/w
Correlated color temperature / CCT	4082	--	K
Color rendering index / CRI	75.4	--	
R9 Value	0	--	
Duv	-0.0033	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		14813	cd
Beam angle (if applicable)		119.7	°
Zonal lumens in the 0°-60° zone		70.7	%
Zonal lumens in the 60°-90° zone	---	29.1	%
Zonal lumens in the 90°-120° zone		0.1	%
Zonal lumens in the 120°-180° zone		0.1	%

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Product Information:

Organization Name	Beyond LED Technology	
Brand Name	Beyond LED	
Model Number	107912	
SKU (if available)	150033	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-mounted Area and Roadway 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	469.2	--	W
Input Current	3.931	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9947	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	62003	--	lm
Initial Lumen Efficacy	132.15	--	lm/w
Correlated color temperature / CCT	5997	--	K
Color rendering index / CRI	76.4	--	
R9 Value	0	--	
Duv	-0.0018	--	
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	: 2016-01-02
Date of Test	: 2016-01-04
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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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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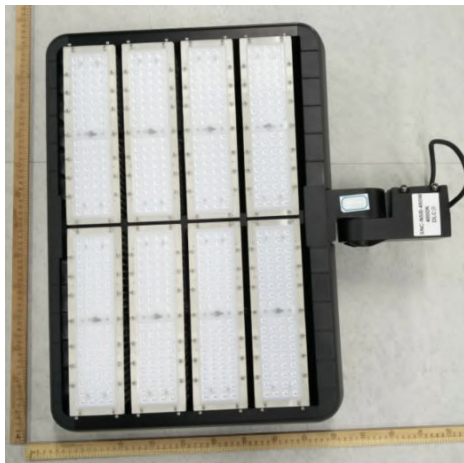
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1. Product Information:

Brand Name	Beyond LED
Model Number	107912
Luminaire Type	Outdoor Pole/Arm-mounted Area and Roadway Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	480W
Rated Initial Lamp Lumen	--
Declared CCT	4000K, 5000K,5700K
LED Manufacturer	Philips Lumileds
LED Model	L130-4070003000W21(for 4000K),L130-5770003000W21(for 5700K)
Sample Receipt Date	2016-01-02
Sample Number	GZE151276-G1(4000K),D2(5700K)

Photo



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

Test date	2016-01-04	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	107912 4000K		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151276	120.0	60	3.933	469.6	0.9951	6.85
-G1	277.1	60	1.732	448.9	0.9354	9.72

Color Data:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	74	R9	0
Frequency (Hz)	60	R2	82	R10	55
Color Rendering Index (CRI)	75.4	R3	86	R11	69
R9	0	R4	74	R12	44
CCT (K)	4082	R5	73	R13	75
Chromaticity (x, y)	x=0.3748 y=0.3664	R6	73	R14	92
Chromaticity (u', v')	u'=0.2255 v'=0.4961	R7	83	R15	70
Duv	-0.0033	R8	59	--	--

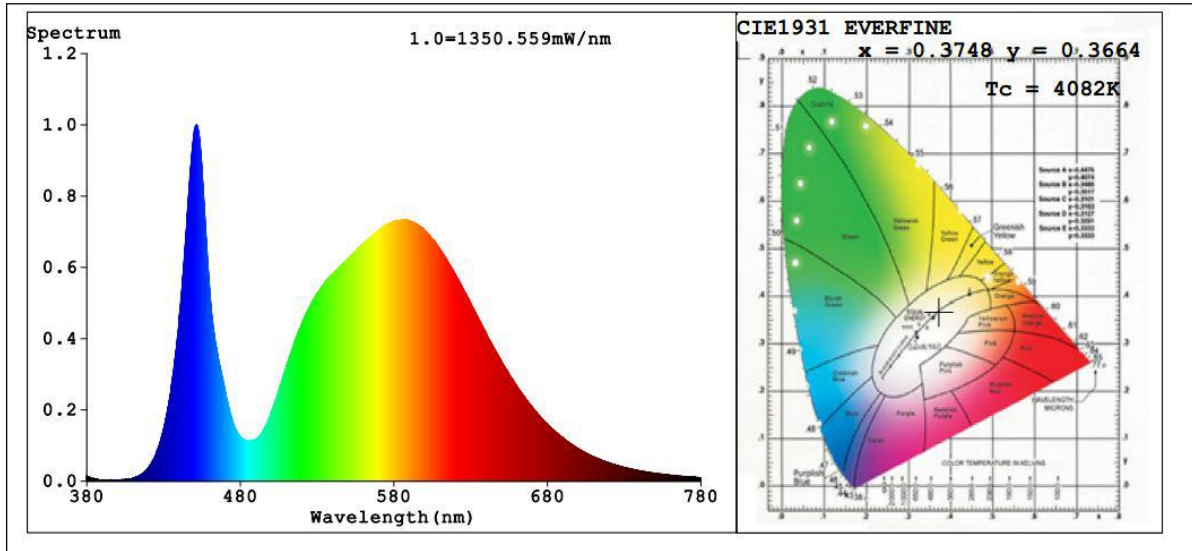
Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	60853
Luminous Efficacy (lm/W)	129.58
Beam Angle°	119.7
Center Beam Candle Power (cd)	14813

Goniophotometer Method :

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	59596
Luminous Efficacy (lm/W)	132.75

Spectral Power Distribution & Chromaticity Diagram



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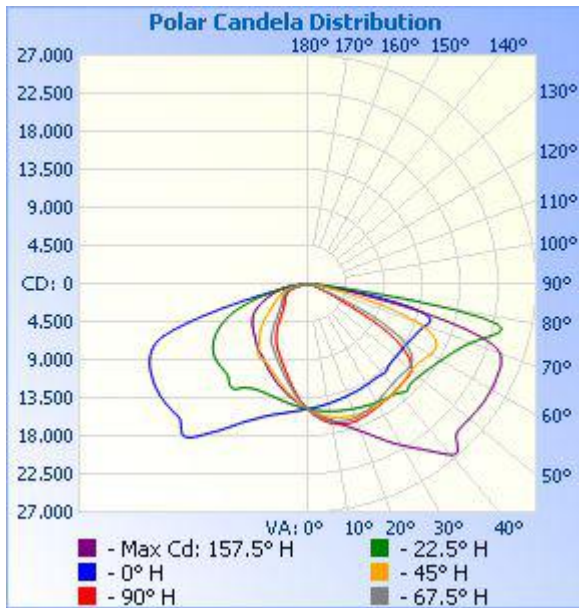
Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

Zonal Lumen Tabulation

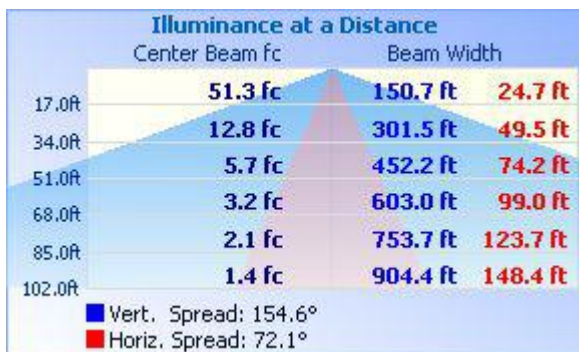
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	12,059.3	19.8%
0-40	21,011.4	34.5%
0-60	43,015.3	70.7%
60-90	17,703.6	29.1%
70-100	7,251.3	11.9%
90-120	61.6	0.1%
0-90	60,719.0	99.8%
90-180	133.3	0.2%
0-180	60,852.3	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,403.7	2.3%	90-100	15.5	0%
10-20	4,083.9	6.7%	100-110	21.6	0%
20-30	6,571.7	10.8%	110-120	24.4	0%
30-40	8,952.1	14.7%	120-130	24.4	0%
40-50	10,542.6	17.3%	130-140	18.6	0%
50-60	11,461.3	18.8%	140-150	12.6	0%
60-70	10,467.8	17.2%	150-160	8.9	0%
70-80	6,493.0	10.7%	160-170	5.3	0%
80-90	742.8	1.2%	170-180	2.0	0%

Photometric Data



Illuminance Plots



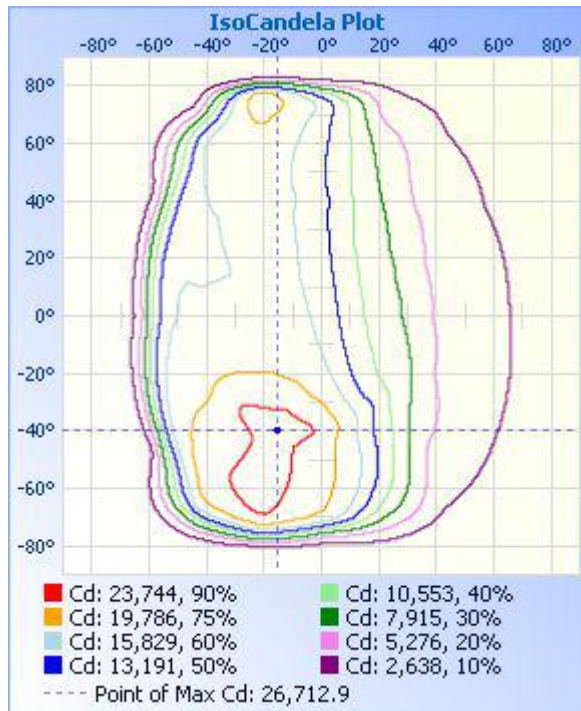
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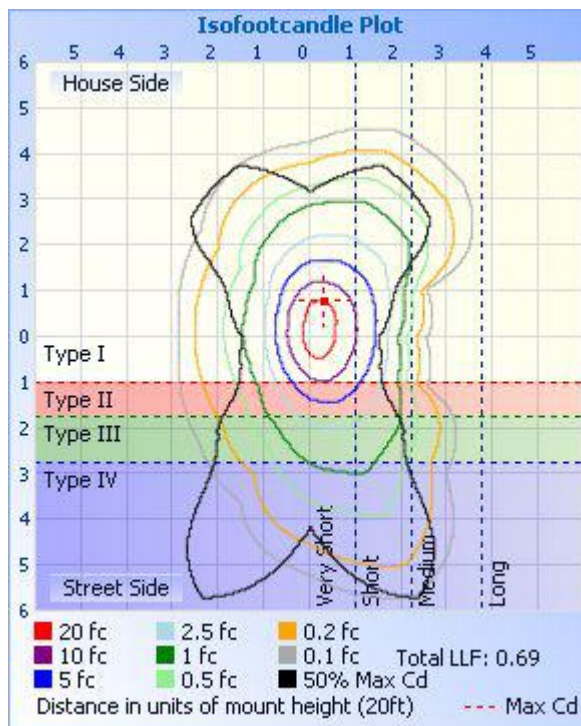
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ISOCANDELA DIAGRAM



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	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813	14813
1	14763	14862	14969	15034	15063	15086	15033	14964	14862	14760	14656	14573	14530	14542	14587	14665	14763
2	14713	14916	15112	15240	15322	15341	15251	15118	14915	14702	14496	14332	14257	14265	14352	14520	14713
3	14665	14971	15247	15446	15566	15582	15469	15265	14974	14648	14328	14078	13958	13978	14115	14372	14665
4	14625	15020	15380	15624	15770	15813	15679	15419	15031	14590	14160	13827	13663	13700	13878	14228	14625
5	14582	15073	15506	15793	15975	16026	15888	15574	15098	14528	13987	13569	13370	13402	13652	14083	14582
6	14546	15127	15623	15953	16160	16233	16094	15729	15174	14468	13810	13295	13051	13108	13416	13938	14546
7	14510	15178	15729	16095	16335	16416	16297	15893	15249	14408	13624	13033	12744	12818	13177	13787	14510
8	14464	15224	15831	16225	16492	16586	16498	16068	15332	14357	13438	12761	12444	12519	12933	13640	14464
9	14422	15266	15920	16338	16622	16762	16690	16247	15421	14307	13257	12487	12122	12238	12687	13495	14422
10	14381	15308	16002	16449	16745	16930	16872	16436	15512	14257	13078	12225	11824	11927	12442	13338	14381
11	14339	15353	16077	16542	16844	17087	17053	16617	15609	14206	12904	11955	11522	11629	12194	13185	14339
12	14299	15391	16147	16611	16932	17226	17237	16786	15710	14165	12727	11702	11226	11347	11946	13035	14299
13	14259	15444	16206	16677	17024	17361	17413	16984	15805	14123	12544	11447	10942	11051	11695	12883	14259
14	14223	15495	16266	16731	17095	17482	17577	17186	15914	14072	12371	11203	10668	10785	11447	12730	14223
15	14194	15533	16318	16772	17149	17581	17749	17386	16046	14025	12200	10977	10431	10524	11214	12578	14194
16	14164	15564	16374	16805	17191	17679	17931	17598	16189	13978	12031	10750	10191	10278	10984	12426	14164
17	14129	15610	16425	16830	17210	17759	18103	17822	16340	13944	11862	10536	9958	10047	10760	12279	14129
18	14105	15658	16465	16840	17221	17821	18278	18073	16507	13919	11701	10330	9748	9817	10538	12124	14105
19	14086	15715	16494	16835	17211	17880	18452	18325	16699	13895	11558	10135	9538	9617	10328	11976	14086
20	14055	15754	16524	16814	17180	17924	18636	18587	16906	13869	11416	9954	9345	9407	10119	11826	14055
21	14025	15782	16555	16779	17139	17970	18834	18863	17119	13858	11278	9766	9157	9211	9925	11666	14025
22	13999	15832	16561	16730	17094	18004	19035	19167	17335	13855	11148	9604	8972	9034	9749	11522	13999
23	13977	15885	16568	16676	17061	18041	19222	19489	17564	13858	11025	9441	8795	8848	9564	11367	13977
24	13961	15929	16580	16628	17023	18074	19410	19823	17807	13867	10903	9281	8612	8664	9389	11216	13961
25	13949	15972	16593	16585	16973	18097	19599	20165	18074	13877	10782	9132	8422	8479	9221	11067	13949
26	13927	16020	16605	16508	16898	18115	19795	20534	18385	13910	10671	8967	8234	8292	9061	10907	13927
27	13904	16072	16606	16432	16844	18139	20003	20917	18708	13963	10569	8818	8035	8110	8899	10766	13904
28	13871	16118	16585	16357	16796	18164	20220	21300	19082	14028	10484	8665	7835	7908	8746	10621	13871
29	13853	16179	16571	16286	16750	18191	20446	21675	19472	14105	10417	8515	7612	7712	8590	10492	13853

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30	13839	16223	16549	16233	16713	18242	20676	22036	19845	14223	10377	8378	7392	7501	8447	10370	13839
31	13833	16263	16552	16167	16654	18301	20924	22402	20227	14345	10391	8251	7175	7295	8290	10250	13833
32	13809	16292	16544	16074	16603	18375	21190	22776	20593	14520	10431	8131	6932	7085	8145	10138	13809
33	13793	16341	16534	15971	16565	18476	21494	23150	20987	14752	10444	7963	6686	6858	8013	10042	13793
34	13777	16388	16531	15883	16550	18586	21815	23547	21406	14999	10343	7730	6406	6633	7883	9958	13777
35	13770	16445	16504	15814	16535	18674	22194	23955	21853	15178	10179	7469	6121	6389	7727	9889	13770
36	13773	16493	16478	15751	16496	18718	22576	24412	22329	15227	9977	7177	5847	6141	7570	9816	13773
37	13792	16554	16454	15700	16460	18737	22883	24907	22766	15188	9725	6878	5567	5891	7410	9718	13792
38	13819	16618	16427	15648	16422	18741	23217	25400	23073	15012	9424	6580	5308	5629	7241	9626	13819
39	13855	16728	16393	15605	16372	18760	23545	25924	23211	14779	9120	6277	5058	5379	7068	9509	13855
40	13895	16867	16388	15558	16331	18763	23832	26440	23117	14562	8876	5997	4825	5136	6889	9376	13895
41	13915	17056	16386	15518	16286	18757	24030	26713	22787	14398	8668	5729	4624	4898	6714	9257	13915
42	13881	17207	16363	15471	16252	18733	24060	26569	22389	14312	8476	5462	4429	4682	6525	9141	13881
43	13779	17278	16316	15448	16231	18670	23896	25935	22074	14275	8281	5238	4275	4480	6342	9028	13779
44	13682	17140	16249	15430	16222	18577	23619	25241	21940	14240	8085	5021	4131	4305	6153	8938	13682
45	13617	16989	16178	15443	16210	18466	23335	24933	21908	14218	7875	4837	4002	4144	5955	8839	13617
46	13570	16958	16105	15458	16207	18385	23010	24859	21925	14210	7655	4673	3891	4003	5751	8743	13570
47	13551	16969	16029	15473	16182	18335	22778	24824	21940	14195	7416	4518	3784	3880	5551	8657	13551
48	13553	16993	15988	15509	16155	18330	22660	24842	21926	14175	7173	4392	3692	3765	5348	8571	13553
49	13555	17059	15956	15548	16094	18327	22604	24869	21932	14127	6916	4266	3604	3660	5139	8486	13555
50	13550	17112	15955	15577	15993	18364	22612	24897	21952	14097	6663	4153	3527	3566	4941	8408	13550
51	13538	17180	15958	15591	15808	18406	22598	24925	21942	14045	6391	4050	3462	3476	4746	8325	13538
52	13543	17256	15986	15559	15534	18440	22628	24944	21910	13985	6124	3950	3400	3394	4568	8247	13543
53	13551	17332	16030	15462	15200	18424	22657	25001	21891	13896	5865	3861	3355	3313	4393	8157	13551
54	13581	17429	16087	15290	14744	18380	22714	25019	21827	13779	5619	3780	3322	3232	4233	8067	13581
55	13591	17527	16176	15062	14211	18249	22752	25042	21785	13649	5391	3700	3294	3160	4090	7976	13591
56	13616	17632	16267	14746	13560	18048	22825	25071	21724	13510	5187	3625	3264	3087	3963	7870	13616
57	13637	17754	16381	14332	12767	17739	22892	25073	21659	13338	5003	3553	3222	3017	3846	7773	13637
58	13663	17877	16499	13831	11881	17362	22965	25053	21557	13149	4839	3491	3162	2954	3733	7657	13663
59	13726	18006	16636	13208	10695	16863	23028	25066	21462	12929	4680	3428	3090	2899	3631	7530	13726
60	13785	18158	16764	12465	9375	16192	23074	25058	21350	12696	4536	3370	3014	2847	3536	7404	13785
61	13852	18326	16869	11531	7849	15360	23079	25041	21244	12422	4389	3309	2944	2795	3447	7257	13852

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62	13931	18515	16930	10365	6222	14240	23070	25036	21110	12130	4251	3244	2877	2741	3362	7082	13931
63	14000	18660	16954	9053	4901	12879	23008	24972	20958	11824	4102	3175	2805	2694	3278	6874	14000
64	14079	18874	16918	7606	4000	11290	22887	24945	20799	11489	3971	3106	2736	2645	3201	6660	14079
65	14149	19069	16803	6065	3100	9294	22714	24888	20579	11131	3832	3036	2659	2594	3121	6438	14149
66	14228	19308	16593	4646	2205	7311	22442	24876	20292	10747	3700	2953	2572	2548	3044	6197	14228
67	14322	19557	16272	3412	1637	5360	22084	24812	19988	10323	3574	2852	2461	2489	2968	5948	14322
68	14430	19814	15778	2522	1269	4089	21599	24678	19591	9847	3446	2724	2332	2424	2894	5702	14430
69	14570	20129	15143	1820	1069	2818	20986	24487	19089	9328	3298	2583	2191	2340	2825	5468	14570
70	14729	20496	14292	1533	969	1551	20212	24270	18182	8757	3150	2405	1928	2236	2757	5222	14729
71	14920	20918	13209	1255	895	1186	19229	23710	16709	8114	3001	2210	1560	2109	2701	4970	14920
72	15074	21407	11886	978	822	1018	18043	22805	14832	7448	2821	1982	1192	1957	2646	4720	15074
73	15160	21907	10366	868	754	902	16603	21325	12630	6754	2606	1744	823	1780	2580	4484	15160
74	15074	22471	8742	778	689	824	14944	19364	10316	6051	2369	1474	666	1443	2494	4258	15074
75	14695	23015	7084	698	634	753	13024	16868	8040	5300	2116	1125	554	1106	2384	4050	14695
76	13921	23452	5503	627	594	690	10895	14075	6065	4560	1842	818	492	770	2247	3845	13921
77	12679	23544	4071	566	549	632	8749	11162	4711	3848	1558	588	452	509	2061	3657	12679
78	10840	22875	2883	514	502	578	6706	8282	3357	3136	1072	440	422	397	1805	3419	10840
79	8774	20912	1991	474	458	535	5139	6166	2019	2428	549	362	398	342	1336	3161	8774
80	6658	17333	1593	445	413	497	3573	4049	1310	1868	356	309	374	299	867	2879	6658
81	4795	12476	1205	412	368	454	2021	1960	833	1423	304	272	346	259	398	2530	4795
82	3209	7764	817	365	326	398	1151	1111	542	1075	261	239	302	227	305	2174	3209
83	2037	4232	673	311	288	335	715	681	369	757	220	211	245	199	245	1835	2037
84	1480	2140	565	267	251	286	523	495	266	287	180	187	205	172	200	1285	1480
85	947	1610	470	230	209	244	401	396	193	169	142	157	160	145	161	727	947
86	415	1108	384	195	168	202	311	320	143	127	102	125	120	112	124	169	415
87	224	605	300	150	116	144	230	245	102	94	66	78	75	72	84	116	224
88	121	408	202	91	69	82	134	161	64	60	30	32	32	36	48	79	121
89	49	182	82	31	19	23	43	43	29	28	7	2	3	4	16	38	49
90	20	29	12	3	3	7	16	21	23	26	8	2	2	2	12	21	20
91	19	22	10	3	2	6	15	20	23	28	8	2	1	2	14	22	19
92	20	20	9	3	2	6	14	18	24	30	10	2	1	2	16	24	20
93	21	19	8	2	2	5	13	17	25	31	11	2	1	2	18	27	21

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94	22	18	8	2	2	5	12	17	26	32	13	2	1	2	21	30	22
95	24	18	7	2	2	4	11	16	26	34	15	2	1	2	24	32	24
96	26	18	7	2	2	4	10	16	27	35	17	2	1	3	26	35	26
97	28	17	7	3	2	4	10	15	28	35	20	3	1	4	28	37	28
98	30	17	7	3	2	4	9	15	28	36	21	4	1	5	31	39	30
99	32	17	7	3	2	4	9	15	29	36	23	4	2	7	33	41	32
100	33	17	7	3	3	4	8	16	30	36	25	5	2	9	35	43	33
101	34	18	7	3	3	4	8	16	30	35	26	6	3	11	37	44	34
102	35	18	7	4	3	4	7	16	31	35	28	7	4	13	38	44	35
103	36	18	7	4	3	4	7	16	31	35	29	9	5	15	39	45	36
104	37	19	7	4	4	4	7	16	31	36	30	10	6	17	40	45	37
105	37	20	7	5	4	4	7	17	32	37	31	12	7	19	41	47	37
106	40	21	8	5	4	4	7	17	32	38	31	14	9	21	42	48	40
107	42	22	8	5	4	4	7	18	33	39	31	15	10	23	43	49	42
108	43	23	8	5	5	4	7	18	34	40	31	17	12	25	43	50	43
109	44	24	9	5	5	4	7	18	35	40	31	18	13	26	43	51	44
110	45	24	9	5	5	4	7	18	35	40	31	19	15	28	43	51	45
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112	46	25	10	6	5	5	7	18	34	41	30	21	18	30	44	52	46
113	46	26	10	6	5	5	8	18	34	41	30	22	19	30	44	52	46
114	46	26	11	6	5	5	8	17	34	40	30	23	20	31	45	52	46
115	47	26	12	7	5	5	8	16	34	38	30	23	21	31	45	50	47
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121	49	28	14	8	6	6	9	18	31	38	32	24	27	33	49	56	49
122	53	29	15	8	6	6	9	18	33	38	31	25	27	34	49	57	53
123	55	30	15	8	7	6	9	18	34	38	29	25	28	35	48	57	55
124	56	31	15	9	7	6	9	18	34	38	28	26	29	36	47	57	56
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126	53	31	15	10	7	7	9	17	33	38	27	27	29	37	45	55	53
127	51	31	15	10	8	7	9	17	32	37	27	27	30	38	45	53	51
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158	21	16	19	15	14	15	14	18	19	20	20	21	21	21	26	18	21
159	20	15	19	15	14	15	14	19	18	19	19	20	21	21	26	18	20
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180	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-01-06	Test Ambient:	25.2 ° C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	107912 5700K		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151276	120.0	60	3.931	469.2	0.9947	6.92
-G2	277.0	60	1.737	448.5	0.9321	9.84

Sphere-Spectroradiometer Method:

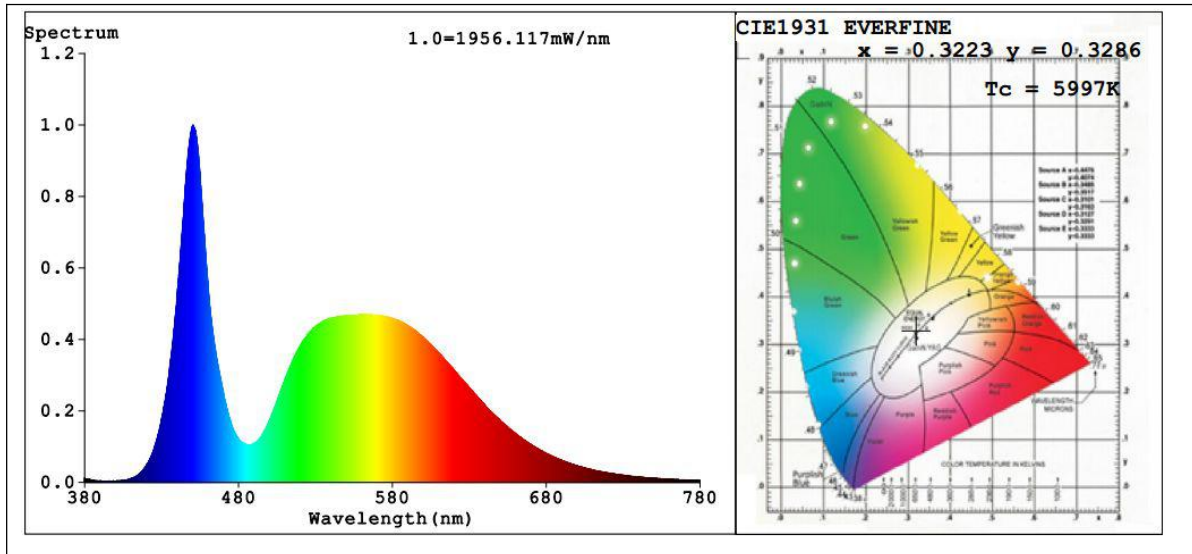
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	76.4
R9	0
CCT (K)	5997
Chromaticity (x, y)	x=0.3223 y=0.3286
Chromaticity (u', v')	u'=0.2047 v'=0.4696
Duv	-0.0018
Total Initial Lumen Output(lm)	62003
Initial Lumen Efficacy(lm/w)	132.15

Special Color Rendering Indices			
R1	76	R9	0
R2	80	R10	50
R3	80	R11	75
R4	78	R12	45
R5	76	R13	76
R6	71	R14	88
R7	84	R15	73
R8	66	--	--

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	61869
Initial Lumen Efficacy(lm/w)	137.95

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 *******