

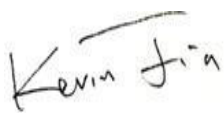
## Test Report

Applicant & Address			
Applicant Name	GREEN CREATIVE LTD		
Address	ROOM 1206-07 NEW VICTORY HOUSE 93-103 WING LOK STREET, CENTRAL HONGKONG		
Contact	Jianmei Hu		
Telephone	13361837826	Fax/ E-mail Address	jianmei.h@greencreative.com

Product Description	Lamp type:	Four-Foot Linear Replacement Lamps (T5 replacements) - Replacement Lamps ("Plug and Play") (UL Type A)
	Manufacturer of Light Source: ShenZhen JuFei Optoelectronics Co., Ltd. Model Number of Light Source: 2835 White SMD LED	
Model Number	15T5HE/4F/830/DIR/R	
Electrical Specification	Rated Voltage: 120-277Vac	
	Frequency: 60 Hz	
	Wattage: 19W	
	Nominal CCT: 3000K	
Test Laboratory & Address		
Test Laboratory	Deliver Co., Ltd.	
Address	Block 11, 78 Keling Road, SSTP, Suzhou, China, 215000	

Telephone	0512-6680 1969	Fax	0512-6680 1916
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Receipt Date of Test Samples	2017/3/28	Test Period	See individual test page
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Test by	Approved by
 /Wangzun Zhu	 /Kevin Jia
Test Personnel Name & Signatory	Approved Name & Signatory

## Test Results

### Statement of Results

Test No.	Test Method	Sample No.	Sample Serial No.	Result (Pass/Fail/NA)
1	Integrating Sphere	A1	DLF1704107	Evaluated by Customer
2	Goniophotometer	A1	DLF1704107	Evaluated by Customer
3	Total Harmonic Distortion Test	A1	DLF1704107	Evaluated by Customer

### Deviation from Test Method (if any)

N/A

### Remark (if any)

This report shall not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the US government.

*The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.*

## Test Report

Test No.1: Integrating Sphere Test

### Environmental Conditions

Temperature (°C)	25.0	Relative Humidity (%)	58
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### Test Equipment

Equipment ID	Equipment Name	Date	Calibration Due Date
DLF107	Integrating Sphere System	2016/12/28	2017/12/27
DLF108	Auxiliary Lamp	2016/12/28	2017/12/27
DLF122	Measurement Standard Lamp	2016/12/28	2017/12/27
	Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-directional		
DLF116	AC Power Source	2016/12/28	2017/12/27
DLF113	Power Meter	2016/12/28	2017/12/27
DLF112	Temperature Recorder	2016/12/28	2017/12/27
DLF114	Temperature & Humidity Datalogger	2016/12/28	2017/12/27
Test Sample	A1		
Test Date	2017/3/28		

### Test Method

The samples were tested according to the IES LM-79-2008.

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 voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

The sample was measured using  $4\pi$  geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

The sample is operated off ballast Model B228PUNV-C .

### Test Results

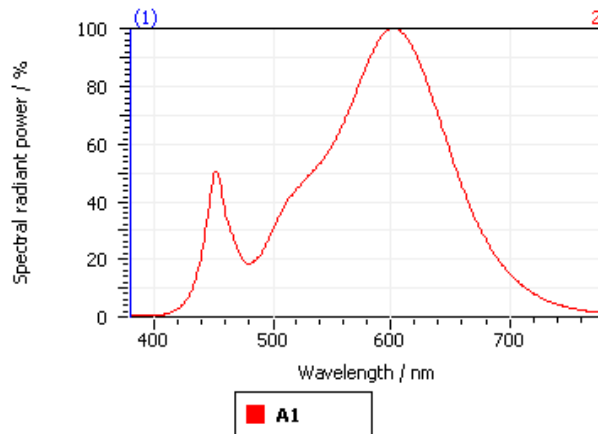
Test Type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation	Operate time (Min.)	Stabilization time (Min.)
Input	120.01	60.00	0.151	18.04	0.996	Light Down	60	30

Test Type	CCT (K)	Color Rendering Index Ra	R9	Luminous Flux (lm)	Luminous Efficacy (lm/W)
Output	2958	81.4	2.2	2205.0	122.2

## Spectroradiometric Parameters

### Results



### Spectral values

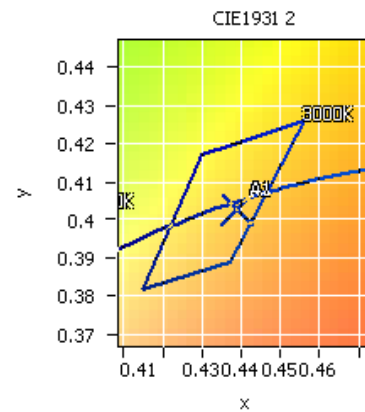
DominantWavelength	583.25 nm
Purity	0.527
PeakWavelength	603.03 nm
Width50%:	123.03 nm

### Color Coordinates

Correlated Color Temperature 2958 K

x: 0.4389 u: 0.2523 u': 0.2523  
y: 0.4030 v: 0.3475 v': 0.5213

ResultsCRICRI01	79.7	ResultsCRICRI09	2.2
ResultsCRICRI02	90.8	ResultsCRICRI10	79.2
ResultsCRICRI03	95.5	ResultsCRICRI11	77.8
ResultsCRICRI04	78.7	ResultsCRICRI12	71.5
ResultsCRICRI05	80.0	ResultsCRICRI13	82.3
ResultsCRICRI06	89.0	ResultsCRICRI14	98.3
ResultsCRICRI07	81.1	ResultsCRICRI15	71.9
ResultsCRICRI08	56.1	ResultsCRICRI16	69.3
ResultsCRI	81.4		



Nominal CCT:3000K

PlanckDistance -7.0E-004

## Test Report

Test No.2: Goniophotometer Test

### Environmental Conditions

Temperature (°C)	25.0	Relative Humidity (%)	58
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### Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF101	Goniophotometer	2016/12/28	2017/12/27
DLF125	Standard Lamp	2016/12/28	2017/12/27
	Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-directional		
DLF104	AC Power Source	2016/12/28	2017/12/27
DLF507	DC Power Source	2016/12/28	2017/12/27
DLF102	Power Meter	2016/12/28	2017/12/27
DLF111	Temperature & Humidity Datalogger	2016/12/28	2017/12/27

Test Sample	A1
Test Date	2017/5/12

### Test Method

The samples were tested according to the IES LM-79-2008.

Photometric parameters were measured using a type C 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 voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

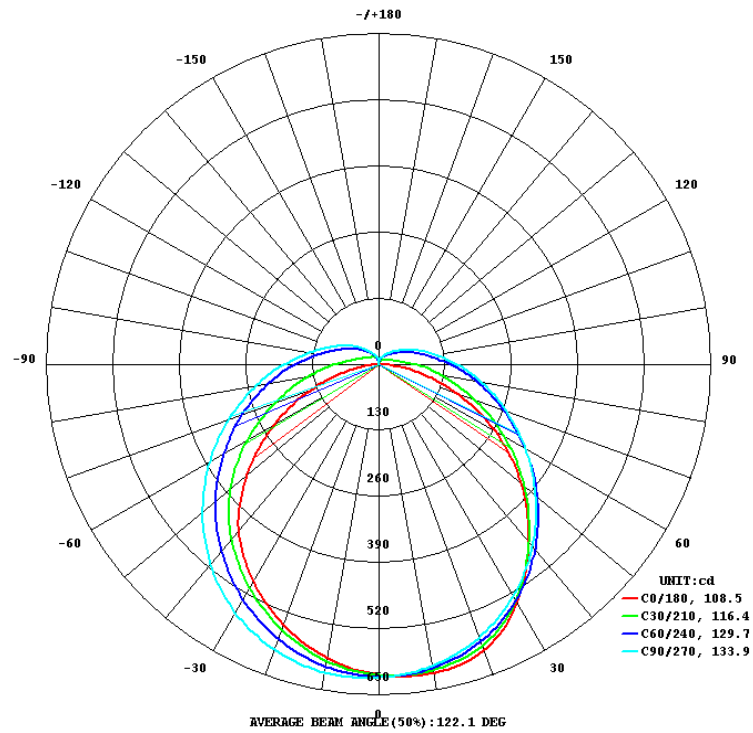
The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $0.5^{\circ}$  vertical intervals and  $10^{\circ}$  horizontal intervals.

The sample is operated off ballast Model B228PUNV-C.

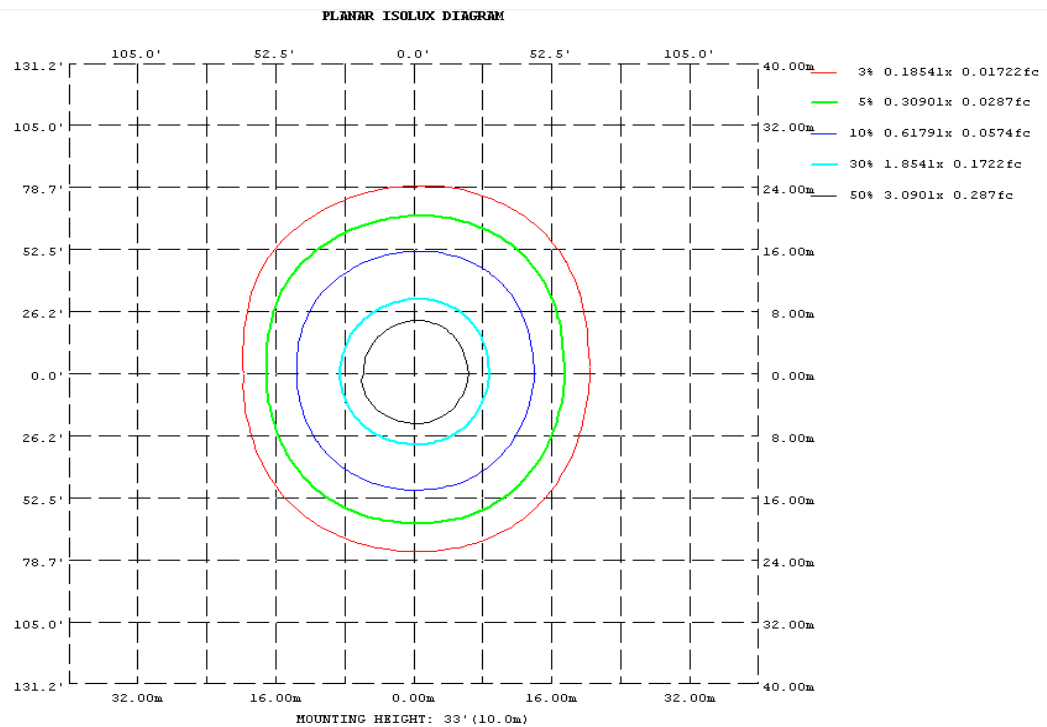
### Test Results

Test Type	Voltage (V AC)		Frequen- cy (Hz )	Current (A)	Power (W)	Power Factor	Orientatio n	Operate time (Min.)	Stabilization time (Min.)
Input	120.02		60.00	0.154	18.35	0.996	Light Down	120	60
Test Type	Total Flux (lm)	Field angle (10%)		Beam angle (50%)		Zonal Lumen Result	Spacing Criteria		Luminous Efficacy (lm/W)
		C90-270	C0-180	C90-270	C0-180	0º-60º	0º-180º	90º-270º	
Output	2348	245.7	157.9	133.9	108.5	61.5%	1.21	1.36	127.9

Light Distrubtion Curve



Isolux Plot



**PlotZonal Lumen Tabulation**

Deg	LUMINOUS INTENSITY:cd										°	Φ zone	Φ total	lum, lamp
	C0	C45	C90	C135	C180	C225	C270	C315	C315	C315				
10	616.2	610.0	601.3	604.0	586.2	597.8	615.0	608.9	608.9	608.9	0- 10	58.14	58.14	2.48,2.48
20	598.7	586.0	571.9	572.5	545.5	566.3	596.7	586.8	586.8	586.8	10- 20	167.6	225.7	9.61,9.61
30	540.9	539.6	526.3	517.8	492.2	521.3	563.5	550.0	550.0	550.0	20- 30	256.4	482.1	20.5,20.5
40	457.9	470.8	467.8	447.5	427.6	465.1	512.5	497.9	497.9	497.9	30- 40	313.3	795.4	33.9,33.9
50	364.0	391.4	401.4	370.2	336.8	401.2	450.9	428.0	428.0	428.0	40- 50	332.8	1128	48.1,48.1
60	262.8	308.9	331.9	291.8	236.9	331.1	382.2	349.4	349.4	349.4	50- 60	315.4	1444	61.5,61.5
70	159.0	231.1	264.6	218.4	135.9	258.7	312.2	272.2	272.2	272.2	60- 70	269.2	1713	73,73
80	61.95	165.1	204.4	156.2	44.29	192.0	244.7	202.6	202.6	202.6	70- 80	206.9	1920	81.8,81.8
90	1.763	112.2	153.7	107.2	0.7573	137.5	186.7	143.6	143.6	143.6	80- 90	144.9	2065	87.9,87.9
100	0.2627	75.84	114.1	73.23	1.487	95.58	139.3	98.85	98.85	98.85	90-100	98.32	2163	92.1,92.1
110	0.7524	52.00	83.53	50.90	2.546	67.40	102.6	67.63	67.63	67.63	100-110	67.17	2230	95,95
120	1.242	36.06	60.07	35.87	2.383	48.84	76.00	47.47	47.47	47.47	110-120	45.56	2276	96.9,96.9
130	1.425	26.43	42.46	26.85	2.077	35.80	55.06	33.94	33.94	33.94	120-130	30.35	2306	98.2,98.2
140	1.792	20.09	30.26	20.48	1.975	27.15	38.41	25.61	25.61	25.61	130-140	19.66	2326	99.1,99.1
150	2.097	15.80	21.46	15.87	1.792	21.32	27.30	20.65	20.65	20.65	140-150	12.17	2338	99.6,99.6
160	2.080	10.87	15.02	10.33	1.788	15.07	19.89	17.16	17.16	17.16	150-160	6.787	2345	99.9,99.9
170	2.258	0.9409	5.076	1.453	1.980	11.12	13.75	12.89	12.89	12.89	160-170	2.717	2347	100,100
180	2.362	0.3784	0.8700	1.081	2.281	2.014	1.399	2.189	2.189	2.189	170-180	0.4962	2348	100,100
DEG												UNIT:lm		



Intensity Data(cd)

CANDELA TABULATION

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
0	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604
5	609.950	609.900	610.360	610.410	611.280	612.070	613.280	613.760	614.050	600.720
10	601.280	600.510	601.240	600.910	602.850	605.060	606.860	608.770	609.400	586.210
15	588.590	587.050	587.610	587.150	589.630	592.520	594.530	597.500	599.430	567.830
20	571.950	570.210	569.230	568.750	570.890	574.040	575.430	577.080	579.460	545.480
25	551.060	548.480	547.840	545.970	547.240	548.660	548.320	547.830	549.770	520.320
30	526.260	524.030	522.320	519.040	518.320	517.370	514.340	512.190	513.900	492.150
35	498.210	496.990	493.140	488.970	486.190	481.890	477.010	472.690	473.760	462.170
40	467.750	466.460	461.880	457.010	451.180	443.830	436.390	430.290	430.250	427.600
45	435.340	432.500	428.860	422.930	414.670	404.730	394.220	386.440	384.620	385.080
50	401.440	397.480	394.200	387.230	376.530	363.890	350.620	340.910	337.380	336.810
55	366.650	362.370	358.340	351.260	338.470	323.260	307.380	294.380	289.000	287.380
60	331.930	326.580	322.490	314.850	301.010	282.590	264.540	248.670	240.700	236.860
65	297.630	291.740	287.210	279.010	264.060	244.150	223.280	204.040	192.270	185.980
70	264.610	259.310	253.600	245.570	229.320	207.510	184.090	161.590	145.660	135.900
75	233.490	228.260	222.020	213.920	197.260	173.960	148.460	122.620	101.670	87.770
80	204.430	199.920	193.420	184.590	168.120	144.290	117.190	88.500	62.690	44.290
85	177.670	173.230	167.080	157.920	142.150	118.250	90.640	60.910	31.940	11.620
90	153.730	150.060	144.240	135.450	119.130	95.170	67.890	39.460	13.010	0.760
95	132.660	128.970	123.210	115.090	99.540	76.920	51.470	26.170	6.460	0.960
100	114.060	110.610	105.530	97.620	83.540	62.860	40.270	18.900	4.720	1.490
105	97.690	94.910	90.120	82.540	70.030	51.750	32.130	14.970	4.450	2.220
110	83.530	81.180	76.810	69.610	58.900	42.860	26.460	12.840	4.520	2.550
115	70.940	68.980	65.130	58.630	49.260	35.540	22.680	11.760	4.860	2.550
120	60.070	58.570	55.020	49.090	40.760	30.960	20.050	11.340	5.050	2.380
125	50.430	49.090	45.780	41.280	34.970	26.990	18.260	10.740	5.420	2.360
130	42.460	41.540	39.060	35.000	29.830	23.860	16.730	10.640	4.940	2.080
135	35.660	35.070	33.080	29.890	25.740	21.130	15.560	10.650	4.740	2.010
140	30.260	29.650	28.090	25.560	22.290	18.650	14.190	10.720	3.710	1.980
145	25.650	25.130	23.910	21.850	19.360	16.580	13.530	9.420	2.760	1.920
150	21.460	21.140	20.310	18.460	16.700	15.030	12.950	7.530	2.020	1.790
155	17.730	17.540	16.810	15.850	14.440	13.270	9.000	4.600	1.480	1.780
160	15.020	14.710	14.090	13.430	12.380	8.270	4.970	1.430	1.120	1.790
165	11.770	11.240	10.670	8.330	5.900	3.700	1.510	0.820	1.020	1.870
170	5.080	4.840	3.690	2.600	1.540	1.370	1.170	1.930	1.980	1.980
175	0.790	1.080	0.880	1.260	1.840	1.640	2.220	2.560	2.130	2.080
180	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880

Vert. Horizontal Angles  
Angles

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>
0	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604
5	600.960	602.420	603.930	606.150	607.980	610.990	612.870	614.000	617.130	617.890
10	586.830	589.490	592.430	596.840	598.760	603.240	606.670	610.020	614.970	615.450
15	569.580	571.840	576.250	581.910	585.400	590.940	596.330	601.390	607.950	608.460
20	547.910	550.740	555.960	563.380	569.100	575.200	581.630	588.140	596.710	596.570
25	523.230	526.690	533.020	541.730	548.510	555.390	563.130	570.750	582.300	580.470
30	495.650	499.630	507.330	517.330	525.210	533.160	541.790	549.930	563.540	560.700
35	466.090	470.180	479.230	490.190	499.000	507.570	517.470	526.150	540.110	538.970
40	432.400	438.420	449.010	460.430	469.700	479.640	490.930	499.530	512.530	513.860
45	392.200	402.810	416.260	428.480	439.010	449.570	461.440	470.460	482.790	484.940
50	346.760	361.780	380.000	395.290	406.950	417.320	430.070	439.670	450.870	452.310
55	297.620	316.050	340.150	360.450	372.840	384.800	397.700	407.410	417.020	419.470
60	247.990	269.840	297.340	323.890	338.200	351.110	364.590	374.540	382.240	386.620
65	198.860	223.220	254.700	286.270	303.580	317.500	330.230	340.020	347.570	352.370
70	150.850	179.050	213.740	247.680	269.690	284.130	296.790	305.970	312.230	315.180
75	105.140	137.730	175.180	211.440	237.080	251.290	263.750	272.460	277.950	281.040
80	64.600	101.490	141.040	178.340	205.570	220.360	232.390	240.770	244.680	247.730
85	33.580	71.790	111.970	149.040	176.900	191.600	203.370	210.630	214.380	214.770



**Light Distrubtion Curve (Cont'd)****CANDELA TABULATION - (Cont.)**

90	16.310	50.640	88.380	123.870	151.020	165.510	176.360	183.220	186.730	185.680
95	9.240	35.340	68.830	101.550	128.240	142.910	153.170	159.340	161.650	160.550
100	7.180	27.110	54.350	83.470	107.570	120.800	131.870	137.250	139.340	137.700
105	6.880	22.140	44.710	69.290	89.930	102.710	111.750	117.930	119.740	117.470
110	7.350	19.100	37.510	58.780	75.920	87.070	95.370	101.000	102.610	100.480
115	7.840	17.180	32.060	50.110	64.560	74.440	81.630	86.170	88.270	86.020
120	8.930	16.330	28.090	42.770	54.850	63.410	69.960	73.670	76.000	73.570
125	9.440	16.110	25.190	36.800	46.550	53.950	59.680	62.810	64.940	62.660
130	10.530	15.900	23.040	32.010	39.540	45.700	50.610	53.330	55.060	53.160
135	11.300	15.680	21.650	28.130	33.810	38.700	42.730	44.870	46.070	44.770
140	11.930	15.840	20.800	25.060	29.210	32.930	35.940	37.810	38.410	37.600
145	12.010	15.080	18.780	22.230	25.570	28.270	30.420	31.810	32.220	31.570
150	11.870	15.640	18.160	20.310	22.320	24.490	26.070	26.950	27.300	26.780
155	9.930	13.980	15.650	18.160	19.730	21.180	22.340	23.050	22.990	22.930
160	5.810	11.420	13.840	13.770	16.360	17.890	19.170	19.730	19.890	19.760
165	2.250	9.470	12.270	12.450	10.580	12.900	15.340	15.950	16.650	16.700
170	2.390	6.510	10.520	11.640	10.600	9.090	9.040	11.950	13.750	13.710
175	2.330	3.850	6.550	8.070	8.390	9.330	8.010	6.060	6.840	11.180
180	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880

**Vert. Angles**      **Horizontal Angles**

	<b>200</b>	<b>210</b>	<b>220</b>	<b>230</b>	<b>240</b>	<b>250</b>	<b>260</b>	<b>270</b>	<b>280</b>	<b>290</b>
0	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604	613.604
5	617.140	615.800	614.900	612.710	610.240	608.200	606.940	615.800	615.130	614.570
10	615.470	613.160	610.770	607.010	602.620	598.770	596.060	616.210	614.750	613.400
15	609.250	606.580	602.140	597.130	590.770	585.240	580.770	611.240	609.290	606.080
20	598.810	596.190	590.380	583.200	575.410	567.770	561.890	598.740	596.260	591.980
25	584.370	581.890	574.580	565.220	556.240	546.580	539.640	575.360	572.090	569.110
30	565.730	564.230	555.370	544.560	533.670	522.800	514.360	540.930	537.780	535.970
35	543.860	541.650	532.300	520.390	506.540	494.340	484.710	500.950	498.930	497.240
40	518.140	515.780	504.920	490.940	474.590	459.780	449.330	457.920	455.150	453.960
45	488.760	486.540	473.460	456.190	436.010	417.960	405.650	411.710	409.430	408.710
50	457.060	453.580	438.800	417.120	394.330	373.100	358.540	363.970	360.510	361.800
55	421.600	417.740	401.040	377.220	351.180	327.430	309.800	314.000	310.900	314.730
60	385.410	380.520	362.300	336.460	307.820	280.830	260.190	262.790	260.130	266.610
65	349.950	343.550	324.600	295.810	265.280	234.830	211.000	210.650	208.850	220.130
70	312.560	305.150	287.530	256.820	223.560	190.100	162.670	158.980	158.700	175.440
75	277.050	270.030	251.800	220.530	184.940	148.190	115.990	108.710	112.190	133.410
80	243.840	234.000	218.610	186.530	150.170	110.960	74.400	61.950	70.150	95.950
85	212.390	202.460	187.990	157.170	120.490	80.550	41.670	22.840	36.770	66.110
90	181.110	171.500	156.820	130.370	95.490	57.440	21.590	1.760	14.790	41.720
95	155.640	145.650	131.530	107.780	75.430	40.970	11.970	0.250	6.290	26.910
100	132.700	122.820	108.980	88.670	59.780	30.960	8.670	0.260	4.270	19.050
105	112.860	103.540	90.370	72.730	48.840	24.770	7.880	0.650	4.060	14.470
110	95.610	87.270	75.230	59.980	40.870	20.870	8.160	0.750	4.160	12.480
115	81.620	73.720	63.020	50.020	34.350	18.550	8.960	0.960	4.550	11.440
120	69.640	62.580	53.170	41.740	28.990	17.290	9.830	1.240	4.840	10.710
125	59.200	52.990	44.830	35.140	25.100	16.580	10.650	1.320	5.440	10.430
130	50.040	44.760	37.790	30.070	22.420	16.000	10.670	1.430	4.830	10.440
135	42.160	37.670	32.220	26.220	20.500	15.620	11.000	1.610	3.960	10.310
140	35.470	31.900	27.830	23.380	19.100	15.500	11.340	1.790	2.310	10.270
145	29.960	27.400	24.470	21.230	18.090	15.040	12.170	1.950	1.970	8.440
150	25.660	23.880	21.770	19.530	17.290	14.070	12.200	2.100	1.940	7.240
155	22.190	20.970	19.620	18.150	16.190	13.940	12.220	2.140	1.660	4.390
160	19.390	18.650	17.740	16.570	14.950	13.750	12.230	2.080	2.070	1.140
165	16.550	15.770	15.160	14.410	13.800	13.330	11.510	2.010	1.220	0.730
170	13.690	13.460	12.810	12.980	12.490	12.160	10.100	2.260	2.590	2.640
175	11.180	10.490	10.600	10.570	9.690	8.740	7.250	2.360	2.170	3.050
180	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880

Light Distrubtion Curve (Cont'd)

CANDELA TABULATION - (Cont.)

Vert. Angles	Horizontal Angles						
	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0	613.604	613.604	613.604	613.604	613.604	613.604	613.604
5	612.540	614.100	613.200	612.130	612.390	610.860	609.950
10	610.100	611.180	608.760	605.950	605.140	601.660	601.280
15	603.280	602.300	598.610	595.530	593.440	588.760	588.590
20	589.230	587.580	584.470	580.120	577.660	572.580	571.950
25	567.670	567.430	564.840	560.120	558.240	552.680	551.060
30	535.990	540.090	539.110	536.110	534.510	529.040	526.260
35	498.440	505.890	508.440	507.950	506.660	502.100	498.210
40	457.900	467.930	473.680	476.090	477.010	472.020	467.750
45	415.630	427.980	435.810	441.890	444.030	439.940	435.340
50	372.390	386.590	396.220	405.830	410.080	405.570	401.440
55	328.320	344.010	355.800	368.340	372.710	370.470	366.650
60	283.840	301.380	316.360	330.570	337.210	334.710	331.930
65	239.460	259.690	277.930	293.350	300.430	299.480	297.630
70	197.510	220.820	241.230	257.860	265.850	265.860	264.610
75	159.390	185.560	207.330	225.160	233.120	233.930	233.490
80	125.820	153.590	176.420	194.330	202.520	203.730	204.430
85	96.810	125.240	148.510	166.480	174.090	176.670	177.670
90	71.220	100.020	124.250	141.990	150.020	153.170	153.730
95	53.720	80.620	103.080	119.160	127.590	131.460	132.660
100	41.560	65.280	86.290	101.000	108.540	112.440	114.060
105	32.850	53.380	71.960	84.940	92.330	95.950	97.690
110	26.440	43.980	59.930	71.060	78.230	82.080	83.530
115	22.630	36.380	49.680	59.460	66.110	69.520	70.940
120	19.850	31.030	41.030	49.540	55.620	58.710	60.070
125	18.100	26.710	34.700	41.430	46.420	49.420	50.430
130	16.540	23.340	29.490	34.890	39.190	41.560	42.460
135	15.070	20.560	25.420	29.710	33.130	35.110	35.660
140	14.080	18.170	21.990	25.380	28.050	29.740	30.260
145	13.240	16.290	19.150	21.730	23.880	25.140	25.650
150	12.600	14.940	16.650	18.350	20.200	21.150	21.460
155	8.960	13.460	14.660	15.890	16.840	17.570	17.730
160	5.560	9.120	12.600	13.640	14.240	14.730	15.020
165	0.850	4.690	7.280	8.940	10.680	11.370	11.770
170	0.970	0.810	1.070	3.430	4.410	4.960	5.080
175	2.010	1.700	1.820	0.930	0.830	1.370	0.790
180	0.880	0.880	0.880	0.880	0.880	0.880	0.880

## Test Report

Test No.3: Total Harmonic Distortion Test -277V

### Environmental Conditions

Temperature (°C)	25	Relative Humidity (%)	58
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### Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF119	Power Meter	2016/12/28	2017/12/27
DLF116	AC Power Supply	2016/12/28	2017/12/27
DLF114	Temperature & Humidity Datalogger	2016/12/28	2017/12/27

Test Sample	A1
Test Date	2017/5/12

### Test Method

The samples were tested according to the ANSI C82.77:2002.

The total harmonic distortion shall be measured to the 40th order.

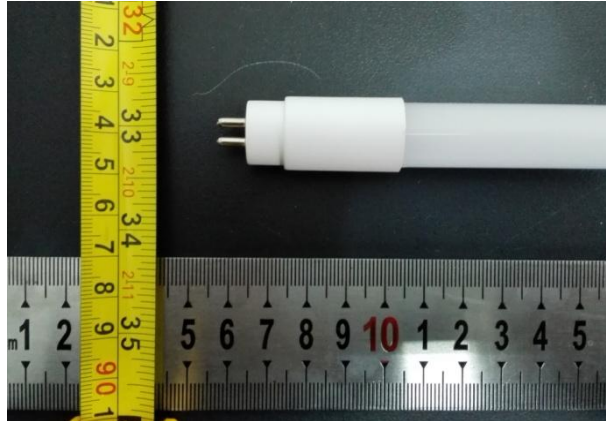
The ambient temperature condition was maintained at 25° C ± 1° C. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated.

The sample is operated off ballast Model B228PUNV-C .

### Test Results

Test Type	Voltage (V AC)	Frequency (Hz )	Current (A)	Power (W)	Power Factor	Current THD (%)	Operate time (Min.)	Stabilization time (Min.)
Input	277.05	60	0.072	18.77	0.942	12.24	40	30

Test Report	
Test Sample	A1
Photos of Sample	



\*\*\*\*\* End of Test Report\*\*\*\*\*