

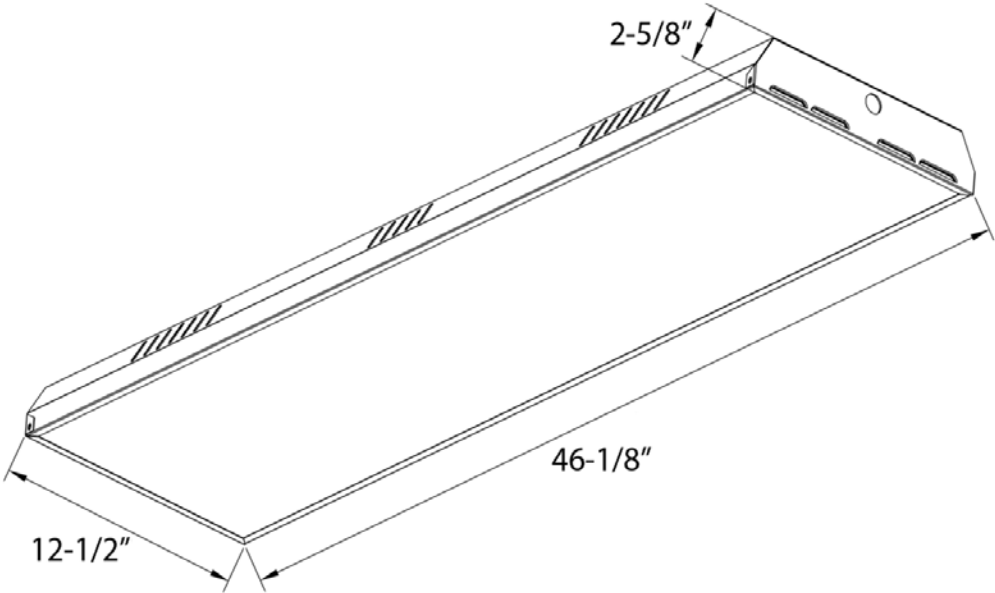


Cat# 71722
LED Linear High Bay
180W



Model :		71722
OVERALL LAMP PARAMETERS	Input Voltage	100-277VAC
	Input Current	1.5305A
	Input Power	182 W
	Power Factor	PF≥0.99
	Luminance	22903 LM
	Luminous Efficiency	125 LM/W
	CRI	≥82
	Beam Angle	120°
	Main Structure	Heavy Gauge Steel Housing
	Surface	White Powder Coat Finish
	Lens	Clear Polycarbonate
LED DRIVER	Output Voltage	40-66V
	Output Current	1150mA
	Driver Efficiency	92%
	LED Manufacturer	Towin
	LED Efficacy	128 lm/W
	Color Temperature	5000K
LIFESPAN & ENVIRONMENT	Lifespan	50000 Hrs.
	Warranty	5 Years
	Operating Temperature	-22°F— +104°F
OTHERS	Dimension	Pls refer to attached dimension drawing
	Net Weight(Kg)	4.3
	Gross Weight(Kg)	6
	Box Size	--
	Carton Size(mm)	68.5*50*10
	Q'ty / Carton	1

Dimension: 71722





NVLAP LAB CODE:201045-0



Shenzhen Anbotek Compliance Laboratory Limited

IES LM-79-08 TEST REPORT For Morris Products Inc.

Report Number: R011507021L

Product Type: High-bay Luminaires for Commercial and Industrial Buildings

Date of Receipt: 2015-10-14

Date of Test: 2015-10-15 to 2015-10-21

Date of Report: 2015-10-22

Product Model: 71722

Product Description: AC100-277V 50/60Hz 180W 5000K

Product Criteria: IES LM-79-08: Electrical and Photometric Measurements of Solid-State Lighting Products

Prepared By: Shenzhen Anbotek Compliance Laboratory Limited
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Tested By: Rain chen

Reviewed By: Vic zhou/Energy Lab Manager

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen Anbotek Compliance Laboratory Limited. This report must not be used by the customer to claim product certification, approval, or endorsement By NVLAP,NIST, or any agency of the Federal Government.

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1 – GENERAL

1.1 Product description

General Information

Applicant	Morris Products Inc.
Applicant Address	53 Carey Rd, Queensbury, NY 12804
Manufacturer	Morris Products Inc.
Manufacturer Address	53 Carey Rd, Queensbury, NY 12804
Brand name	Morris
Test Model Number	71722
Burning time before test	0 Hours (For new products)

Rated Values

Rated Inputs	AC100-277V 50/60Hz
Rated Power	180W
Nominal CCT	5000K

1.2 Standard of method

- ANSI C78.377-2011: Specifications for the Chromaticity of Solid State Lighting Products
- ANSI C82.77-2002: Harmonic Emission Limits-Related Power Quality Requirements for Lighting Equipment
- CIE Publication No.13.3-1995: Method of Measuring and Specifying Color Rendering of Light Sources
- IESNA LM-79-08 Approved Method: Electric & Photometric Measurement of Solid-state Lighting Products

1.3 Test Facility

The test facility used by Shenzhen Anbotek Compliance Laboratory Limited is located at 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China.

2 – Test Equipment List and Details

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
Goniophotometric System	SENSING	GMS-3000	-	-	2015-03-16	2016-03-15
AC Power Source	Ainuo	AN97001W	-	0-300V, 1000VA	2015-03-16	2016-03-15
Digital Power Meter	YOKOGAWA	WT310		0-600V/0-10A/0-100Hz	2015-03-16	2016-03-15
Temperature & Humidity meter	XINIXI	CTH-608	-	0°C~50°C, 10% to 90%RH	2015-03-16	2016-03-15
Total Luminous Flux Standard Lamp	SENSING	220V/500W	S135009	220V/500W	2015-03-16	2016-03-15
Total Luminous Flux Standard Lamp	SENSING	220V/500W	S1350014	220V/500W	2015-03-16	2016-03-15
1.5m Integral Sphere	SENSING	SPR-600M	-	380nm-780nm,0.011m ² ~6.00×10 ⁵ lm	2015-03-16	2016-03-15
Spectrum analyzer	SENSING	SPR-3000	-	380nm-780nm,0.011m ² ~6.00×10 ⁵ lm	2015-03-16	2016-03-15
AC Power Source	ALL POWER	APW-110N	997079	0-300V, 0-1000VA	2015-07-15	2016-07-14
Digital Power Meter	YOKOGAWA	WT210	-	0-600V/0-10A/0-100Hz	2015-03-16	2016-03-15
DC Power Supply	Link Color	Link Color	-	DC 30V, 5A	2015-03-16	2016-03-15
Total Luminous Flux Standard Lamp	SENSING	110 V / 100 W	S13100190	Refer specification	2015-03-16	2016-03-15
Total Luminous Flux Standard Lamp	SENSING	110 V / 100 W	S1310034	Refer specification	2015-03-16	2016-03-15
Temperature & Humidity meter	XINIXI	CTH-608	-	0°C~50°C, 10% to 90%RH	2015-03-16	2016-03-15

Statement of Traceability:Shenzhen Anbotek Compliance Laboratory Limited attests that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit (SI).

3 - Test Method

3.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, the air flow around the sample(s) being tested did not affect the performance.

3.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within ± 0.2 percent under load.

3.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

3.4 Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards. 4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

3.5 Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The method according to IESNA LM-79-08 following chapter.

4-Test Result

4.1 Photometric test with Integrating Sphere System

4.1.1 Model: 71722

Electrical data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
119.99	60	1.5305	182.91	0.996

Photometric data

Luminous Flux (lm)	Radiant Flux (W)	Efficacy (lm/W)	CCT (K)	Duv
22903.130	37.192	125.215	5218	0.0019

Chromaticity Coordinate

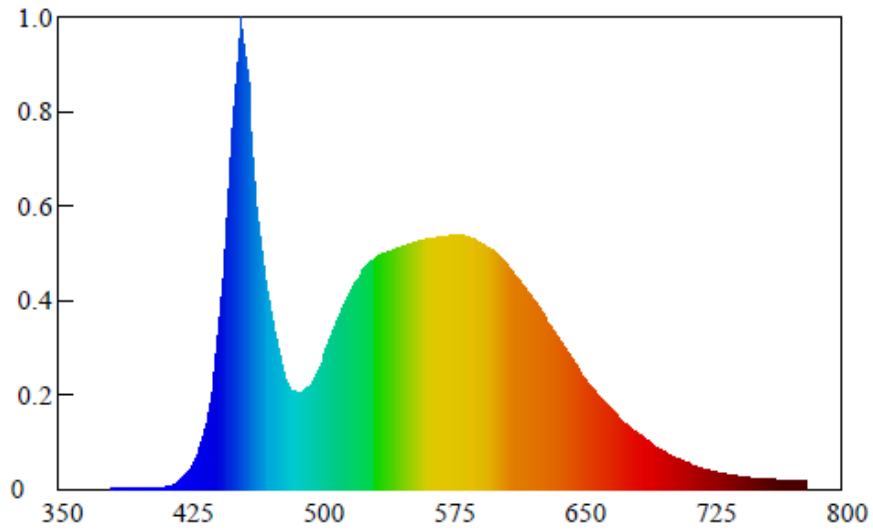
x	y	u	v	u'	v'
0.3395	0.3508	0.2079	0.3223	0.2079	0.4835

Color Rendering Details

Ra
82.3

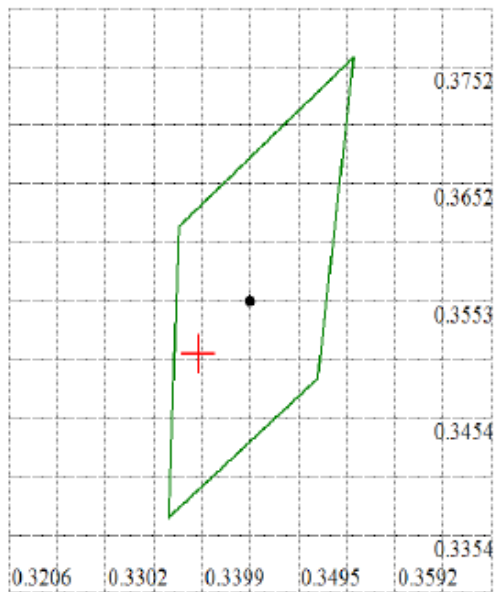
R1	R2	R3	R4	R5
81	89	92	80	80
R6	R7	R8	R9	R10
82	87	68	10	71
R11	R12	R13	R14	R15
77	53	84	95	77

Spectral Distribution



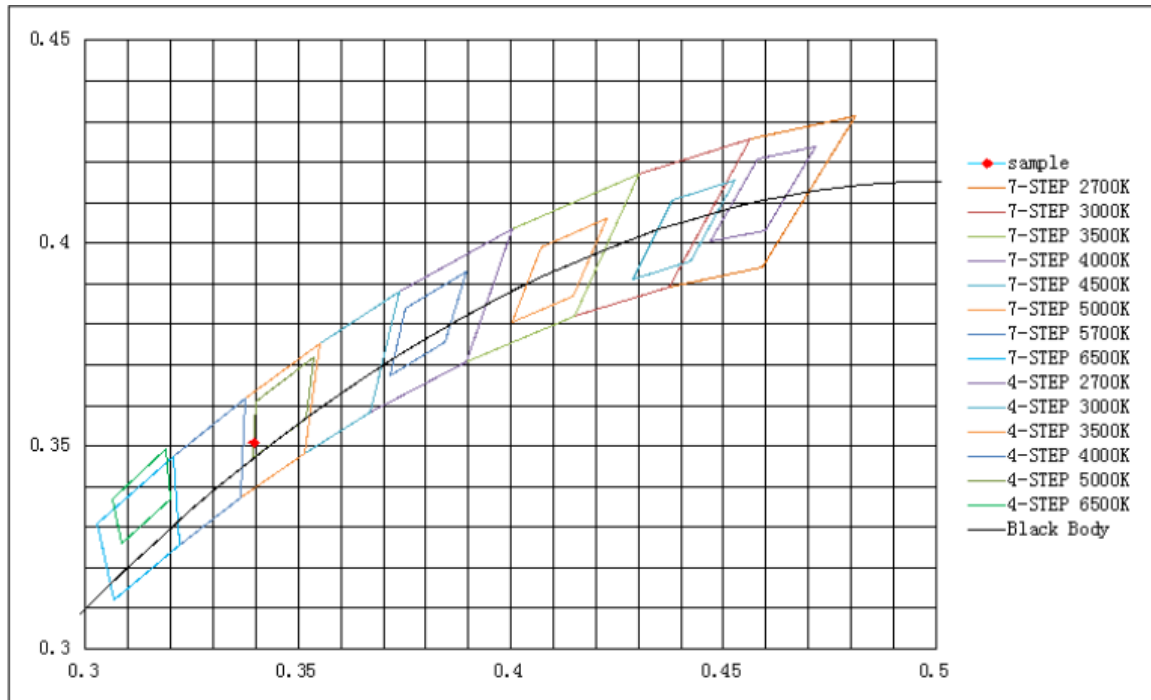
光谱分布 Spectral Distribution

Chromaticity Diagram (CIE 1931)



Nominal CCT:LED_5000K

ANSI Chromaticity Quadrangles Diagram



4.2 Photometric test with Goniophotometer System

4.2.1 Model: 71722

Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
119.79	60	1.5350	182.98	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	CBCP (cd)	Zonal Lumen Density(20~50°)
22907.28	125.19	8184.745	57.708%

Zonal Lumen Summary

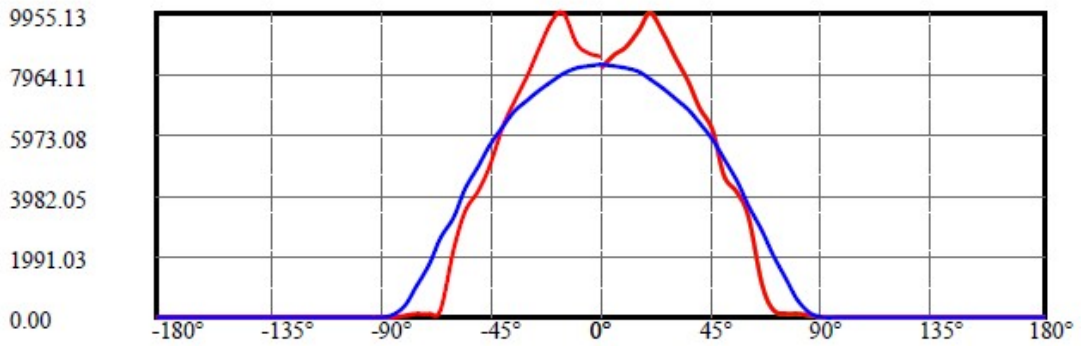
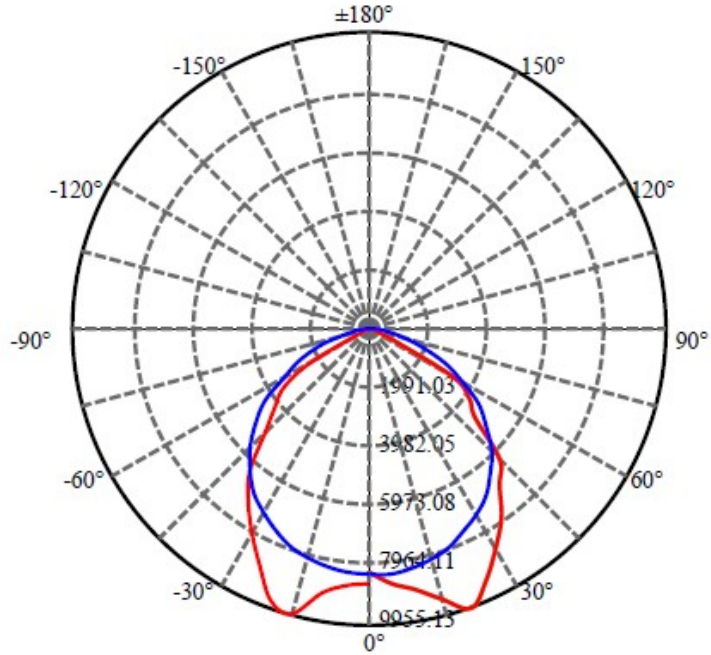
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	7179.13	31.34%
0-40	11849.63	51.73%
0-60	20196.51	88.17%
0-90	22872.69	99.85%
0-120	22883.07	99.89%
0-180	22907.28	100.00%
60-90	4388.87	19.16%
90-120	25.29	0.11%
90-130	30.58	0.13%
90-150	41.77	0.18%
90-180	49.28	0.22%
0-54.61	18325.82	80.00%

ZONAL LUMEN SUMMARY

0-10	799.81
10-20	2460.44
20-30	3918.88
30-40	4670.51
40-50	4629.83
50-60	3717.05
60-70	2061.49
70-80	542.60
80-90	72.09
90-100	3.45
100-110	2.80
110-120	4.14
120-130	5.28
130-140	5.79
140-150	5.40
150-160	4.26
160-170	2.61
170-180	0.65

Light Distribution Curve [Unit: cd]



C0(Max): —————

C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:83.2 Right:45.8

:C90/270Left:76.3 Right:77.9

Beam Angle(50%Imax):C0/180Left:65.0 Right:28.9

:C90/270Left:55.6 Right:57.1

Luminous Intensity (cd) Distribution Data

<i>C/γ</i> (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	8184.75	8589.36	8855.25	9401.89	9955.13	9273.07	8503.48	7702.51	6833.83
22.5	8206.21	8245.85	8407.69	8756.16	9431.61	9088.10	8229.34	7496.08	6736.40
45.0	8201.26	8207.87	8272.27	8384.57	8592.66	8985.71	8711.57	7869.31	7117.89
67.5	8211.17	8186.40	8150.06	8069.14	7925.46	7771.87	7595.17	7539.02	7484.52
90.0	8257.41	8244.20	8171.53	8016.29	7809.86	7481.21	7195.51	6820.62	6361.51
112.5	8293.74	8303.65	8293.74	8255.76	8204.56	8097.22	8193.00	8145.11	7677.74
135.0	8381.27	8435.77	8604.22	8817.26	9406.84	9220.22	8399.44	7623.24	6736.40
157.5	8480.36	8577.80	8827.17	9634.75	9672.73	8813.96	8006.38	7218.63	6280.59
180.0	8546.42	8660.37	8985.71	9941.92	9689.24	8767.72	7908.95	7040.27	6247.56
202.5	8206.21	8298.70	8526.60	9335.83	9360.60	8501.83	7687.65	6914.76	6077.45
225.0	8201.26	8252.46	8374.67	8559.63	9102.97	8964.24	8176.49	7406.90	6529.96
247.5	8211.17	8227.68	8169.88	8093.91	7994.82	7826.37	7867.66	7854.45	7436.62
270.0	8257.41	8237.59	8136.85	7968.40	7728.94	7434.97	7124.49	6719.88	6217.83
292.5	8293.74	8262.36	8199.61	8103.82	7960.14	7847.84	7699.21	7735.54	7537.36
315.0	8381.27	8379.62	8419.26	8566.24	8837.08	9190.50	8790.84	7884.18	7119.54
337.5	8480.36	8505.13	8686.80	9098.01	9718.97	9317.66	8420.91	7648.01	6881.73
360.0	8184.75	8589.36	8855.25	9401.89	9955.13	9273.07	8503.48	7702.51	6833.83
<i>C/γ</i> (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6150.12	4648.92	4092.37	3274.89	1136.72	234.84	125.18	100.74	44.76
22.5	5935.43	4982.52	3933.83	3268.28	2295.56	246.57	131.95	101.40	50.21
45.0	6316.92	5428.42	4634.06	3291.40	2597.78	1765.43	200.66	95.62	69.36
67.5	7023.75	6189.75	5122.90	4080.81	3101.48	2108.94	1103.19	421.46	55.32
90.0	5818.17	5170.79	4472.21	3664.64	2858.72	2026.37	1228.70	530.13	116.10
112.5	6772.73	5811.57	4855.36	3854.56	2749.72	1611.85	908.32	127.49	59.45
135.0	5867.72	5022.16	3811.62	2919.82	2193.17	876.94	135.59	92.65	33.36
157.5	5545.68	4143.57	3520.96	2782.75	855.47	163.99	111.48	91.99	28.74
180.0	4975.92	4122.10	3461.51	2255.92	267.71	152.93	111.97	82.41	26.75
202.5	5321.08	3970.16	3283.64	2626.19	386.12	149.13	109.49	75.64	23.62
225.0	5687.70	4789.30	3284.96	2754.34	1977.82	339.05	108.01	97.60	27.41
247.5	6604.28	5544.03	4602.68	3451.60	2521.81	1421.93	714.76	95.46	30.55
270.0	5639.81	4969.31	4232.75	3294.05	2603.07	1726.29	977.02	382.65	54.50
292.5	6916.41	5837.99	4888.39	3834.74	2771.35	1735.71	912.11	114.78	58.46
315.0	6265.72	5349.15	4536.62	3197.93	2501.17	1241.25	165.81	91.99	43.10
337.5	6059.29	4794.25	3985.03	3281.33	2064.52	246.57	122.21	100.08	42.94
360.0	6150.12	4648.92	4092.37	3274.89	1136.72	234.84	125.18	100.74	44.76
<i>C/γ</i> (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	7.93	1.49	1.32	1.32	1.98	2.64	3.30	3.80	4.79
22.5	12.55	2.15	1.82	1.98	2.64	3.30	3.96	4.79	5.62
45.0	15.19	2.48	2.31	2.48	3.30	3.80	5.62	6.28	6.61
67.5	14.70	3.14	2.81	3.14	4.13	4.62	5.95	7.27	8.26
90.0	11.23	3.14	3.47	3.96	4.95	5.95	6.77	7.76	9.08
112.5	5.28	2.48	2.81	3.63	4.79	5.95	6.77	8.09	9.08
135.0	4.95	2.15	2.31	3.30	3.96	5.62	6.11	7.10	7.93
157.5	3.63	1.98	1.98	2.64	3.47	4.29	4.95	5.95	6.61
180.0	1.82	1.49	1.65	2.15	2.64	3.30	4.13	4.95	5.78
202.5	2.48	1.16	1.32	2.15	2.81	3.63	4.46	5.12	6.11
225.0	2.31	1.49	1.98	2.64	3.47	4.29	4.95	5.95	6.77
247.5	1.98	1.65	2.15	2.97	3.80	4.79	5.62	6.28	7.10
270.0	1.82	1.82	2.15	2.81	3.80	4.46	5.45	6.44	7.10
292.5	4.46	1.65	1.98	2.48	3.14	3.80	4.79	5.62	6.61
315.0	7.76	1.49	1.49	1.98	2.64	3.30	3.96	4.95	5.95
337.5	8.59	1.49	1.32	1.82	2.31	2.81	3.47	4.13	5.12
360.0	7.93	1.49	1.32	1.32	1.98	2.64	3.30	3.80	4.79

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	5.78	6.61	7.27	7.60	7.76	7.93	7.93	8.09	8.75
22.5	6.44	7.43	8.09	8.59	8.59	8.75	8.42	8.42	8.42
45.0	7.60	8.59	9.08	9.25	9.41	9.58	9.08	8.92	8.92
67.5	8.75	9.08	9.58	9.91	10.24	10.24	9.74	9.58	9.08
90.0	9.91	9.91	10.40	10.73	11.06	10.90	10.57	9.74	9.25
112.5	9.25	9.74	10.24	10.73	10.90	11.06	10.73	10.07	9.41
135.0	8.75	9.41	9.74	9.91	10.24	10.57	10.24	9.74	9.58
157.5	7.60	8.42	8.92	8.92	9.08	9.08	9.08	9.25	9.41
180.0	6.77	7.76	8.26	8.59	8.75	8.75	8.59	8.75	9.08
202.5	6.61	7.43	7.93	8.09	8.09	8.09	8.26	8.59	8.92
225.0	7.27	7.76	7.93	8.42	8.92	9.25	9.25	9.08	8.92
247.5	7.60	7.93	8.42	9.08	9.58	9.58	9.41	9.25	9.08
270.0	7.60	8.26	8.75	9.08	9.41	9.58	9.58	9.25	9.25
292.5	7.27	7.76	8.09	8.59	9.08	9.25	9.25	9.25	9.25
315.0	6.77	7.43	7.93	8.59	8.59	8.92	8.75	8.75	9.08
337.5	6.11	6.94	7.76	7.93	8.09	8.09	8.09	8.42	8.75
360.0	5.78	6.61	7.27	7.60	7.76	7.93	7.93	8.09	8.75

C/γ(°)	180.0
0.0	9.25
22.5	8.92
45.0	9.08
67.5	9.25
90.0	9.41
112.5	9.41
135.0	9.58
157.5	9.41
180.0	9.25
202.5	8.92
225.0	9.08
247.5	9.25
270.0	9.41
292.5	9.41
315.0	9.58
337.5	9.41
360.0	9.25

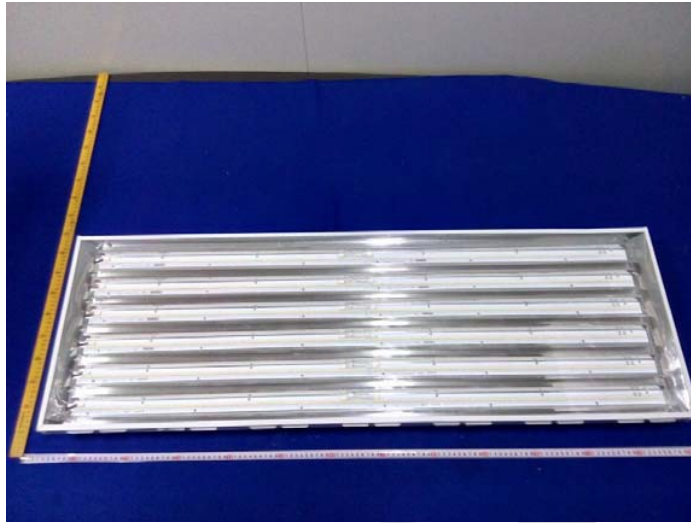
5-Additional Test

Test item	Test Voltage (V)	Frequency(Hz)	Test Result
Power Factor	277	60	0.935
Total harmonic Distortion	277	60	16.26%
Off State Power (W)	120	60	0

The test data was only good for the test sample. It may have deviation for other test sample.

Attachment A – Product PHOTO

FRONT PHOTO



REVERSE PHOTO



PHOTO

-----End of Report-----