71946
LED Linear Shoplight

Model：		71946
OVERALL LAMP PARAMETERS	Input Voltage	120VAC 60HZ
	Input Current	.4A@120V
	Input Power	40W
	Power Factor	PF≥0.95
	Luminance	4400 LM
	Luminous Efficiency	110 LM/W
	CRI	›80
	Beam Angle	H: 124° V: 141°
	SDCM	<6
	LED Manufacturer	Everlight 2835
	LED Type	2835 SMD
	Lifespan	50,000+ Hrs.
	Warranty	5 Years
	Housing Color	White
	Main Structure	Aluminium Frame + Polystyrene Lens

TEST REPORT

Job No. 160701525SHA Date: July 20, 2016

REPORT NO. 160701525SHA-001

TEST OF ONE LED LAMP
MODEL NO. 71946

RENDERED TO
Morris Products Inc

TEST:	Electrical and Photometric as required to the IESNA LM-79 test standard.
LABORATORY NOTE:	The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for Luminaires by NVLAP program.
AUTHORIZATION:	The testing performed was authorized by signed quote number QSH160517064.
STANDARDS USED:	The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:
NEMA ANSLG C78.377: 2008	Specifications of the Chromaticity of Solid State Lighting Products
IESNA LM-79: 2008	Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
DESCRIPTION OF SAMPLE:	The client submitted one sample of model 71946. The sample was received by Intertek on Oct 08, 2015, in undamaged condition, and one sample was tested as received. The sample designations was 0151008-21-001. .
DATES OF TESTS:	Oct 12, 2015 through Oct 15, 2015
ISSUED BY:	Intertek Testing Services Shanghai
TEST LOCATION:	7 floor, No.51, 1089 Qinzhou Road (North),Shanghai, China 200233

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SUMMARY

Model Number :	71946 LED
Description :	Luminaire

Test Condition: 120V 60Hz for 71946

Criteria	Result
Total Lumen Output	4399.29lm
Total Power	39.44W
Luminaire Efficacy	111.54lm/W
Power Factor	0.9563
Correlated Color Temperature (CCT)	4231K
Color Rendering Index (CRI)	85.2
Chromaticity Coordinate (x)	0.3706
Chromaticity Coordinate (y)	0.3698
Chromaticity Coordinate (u')	0.2214
Chromaticity Coordinate (v')	0.4970

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EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Fluke Temperature Meter	52	EC2357
Everfine- DC Power Supply	WY12010	EC4753-7
Everfine- AC power source for Integrating Sphere System	VPS1010 PWM	EC4760-12
Everfine - AC power source for Goniophotometer System	VPS1060 PWM	EC4753-8
Two meter integrating sphere unit	Everfine – 2M	EC4760
Everfine - Digital Power Meter	PF2010A	EC4760-10
YOKOGAWA - Digital Power Meter	WT210	EC4553
Everfine – Goniophotometer	Go-R5000	EC4753

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TEST METHOD

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79

Light Distribution and Output Measurements

Light Distribution and totel light output (luminous flux) were measured using a Go-R5000 Type-C Rotating Mirror Goniophotometer. Temperature 25ºC and relative humidity of 60% was measured at a position in the testing laboratory.

The lamp rotates only around the fixed vertical axle in the prescribed burning position. The lamp and mirror permit the measurement of luminous intensity at the direction of any horizontal or vertical angle without tilting the lamp. The lamp was allowed to stabilize before measurements were made.

Chromaticity Measurements

Chromaticity was measured using a 2 meters integrating sphere spectral lamp measurement system. Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer attached to the detector port of the integrating sphere. Each lamp was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to National Institute of Metrology P.R. CHINA. Lamp efficacy (lumens per watt) for each lamp model was then computed based on the luminous flux result. Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter., model WT210.

Standard lamp used:
Model: Labsphere SCL-1400
Current: 2.679A

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RESULTS OF TESTS

Test Condition: 120V 60Hz for 71946

Total operation burning time: 71 min
Stabilization time: 61 min

Photometric Measurements at 25°C

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
			71946				
0151008-21-001	N/A	4231	85.2	0.3706	0.3698	0.2214	0.4970

Photometric and Electrical Measurements at 25°C

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
			71946				
0151008-21-001	N/A	120	343.5	39.44	0.9563	4399.29	111.54

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
	71946	
0-30	955.16	21.71
0-40	1606.39	36.51
0-60	3057.63	69.50
0-135	4397.57	99.96
0-180	4399.29	100.00

Beam Angle

	Horizontal Spread (^{o})	Vertical Spread (^{o})
	TP-SH01-E1-4000K	
Beam (50%)	123.6	141.2

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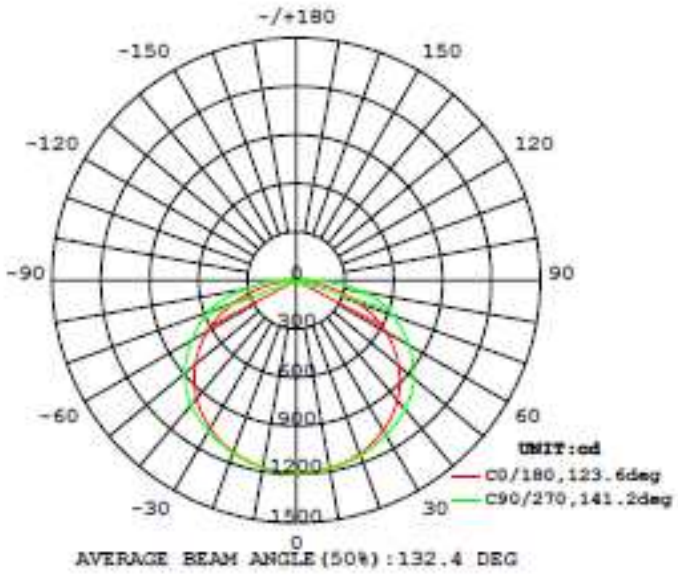
RESULTS OF TESTS (cont'd)

Intensity (Candlepower) Summary at 25°C – Candelas

Test Condition: 120V 60Hz for 71946

V \ H(°)	0	22.5	45	67.5	90
0	1190	1190	1190	1190	1189
5	1186	1186	1186	1188	1188
10	1174	1175	1177	1179	1179
15	1157	1158	1160	1163	1163
20	1136	1138	1138	1140	1141
25	1111	1111	1110	1110	1110
30	1080	1081	1076	1072	1072
35	1045	1045	1038	1028	1024
40	1004	1004	993	975	967
45	957.0	957.0	942.4	914.2	900.2
50	896.5	900.4	886.9	846.2	823.0
55	823.6	829.5	824.1	770.9	735.2
60	744.1	749.9	747.5	689.1	635.7
65	662.6	665.3	659.0	601.5	526.3
70	576.8	580.6	566.5	509.7	408.3
75	462.2	476.4	472.5	401.6	284.4
80	326.1	339.6	351.5	289.8	160.2
85	196.7	203.7	204.2	166.2	52.4
90	0.3	0.3	0.3	0.3	1.2



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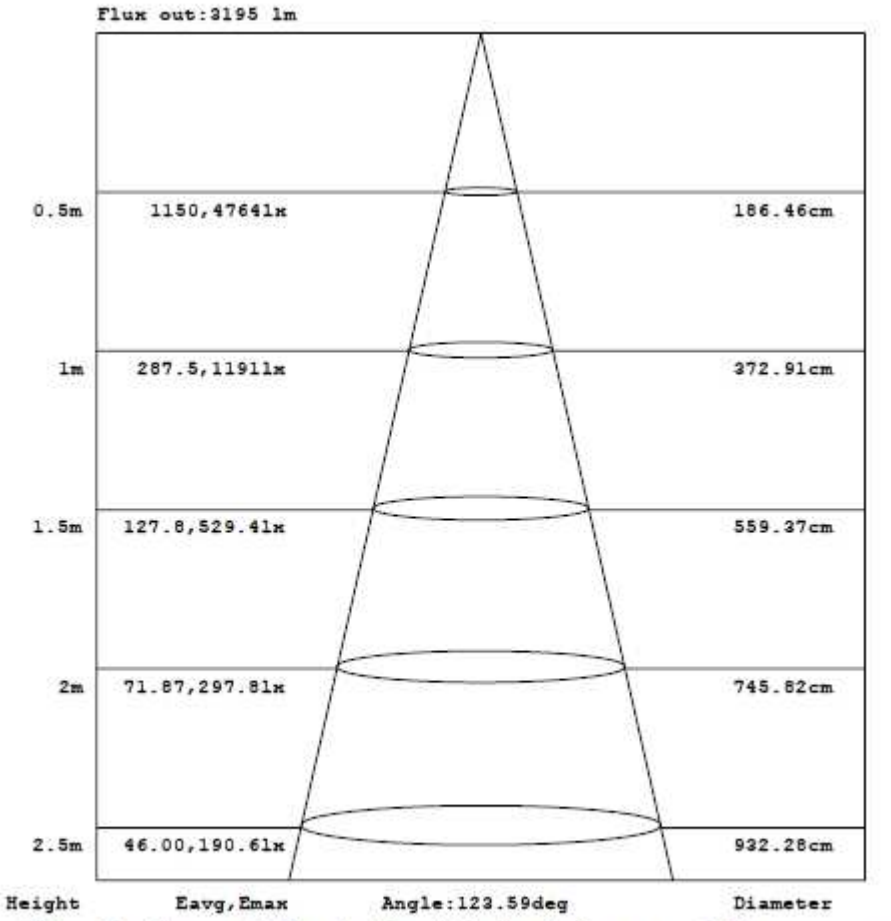
RESULTS OF TESTS (cont'd)

Test Condition: 120V 60Hz for 71946

Illumination Plots

Model No.: 71946
Mount Height: 2.5 m

Illuminance - Cone of Light



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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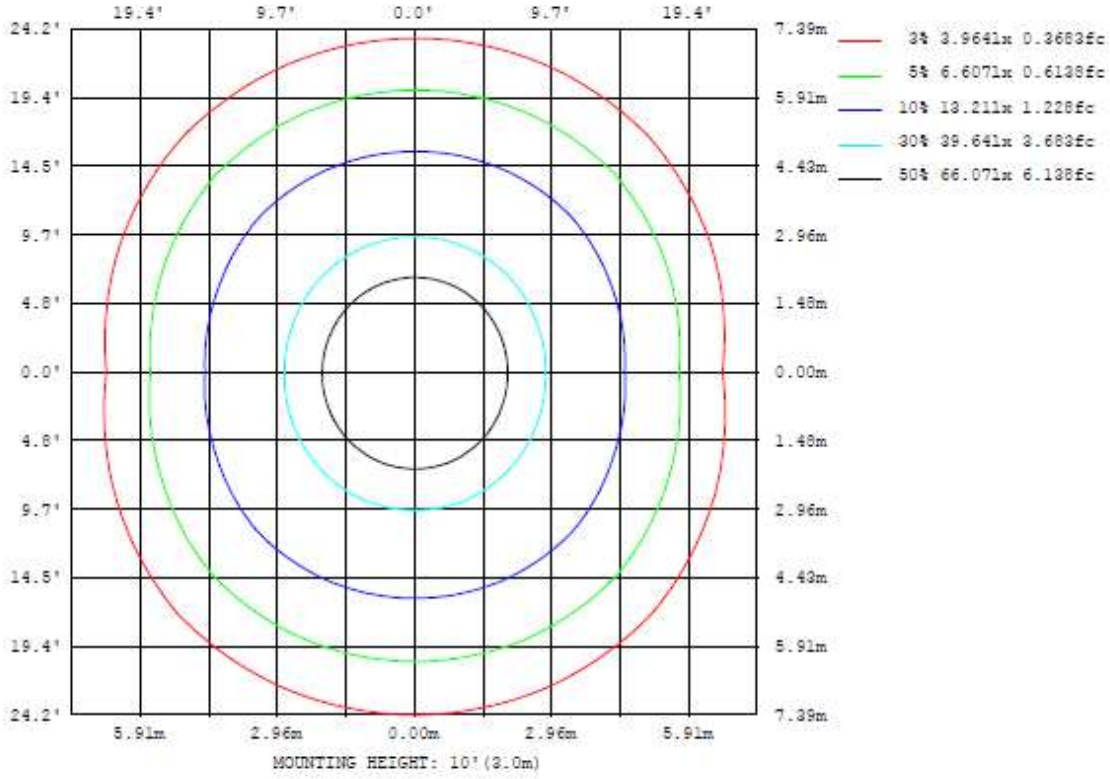
RESULTS OF TESTS (cont'd)

Test Condition: 120V 60Hz for 71946

Model No.: 71946
Mount Height: 3 m
Isoillumination Plot



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RESULTS OF TESTS (cont'd)

Product Picture (not to scale)

External view

In Charge Of Tests:

Jordan Rao
Project Engineer

Report Reviewed By:

Jimmy Wang
Reviewer

Attachment: None

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