

TEST REPORT

Report No.

F-1101018

1. Applicant

- Client Name : Solar Tech CO., LTD
- Address : 1008, Cheomdan Venture Valley #958 Gosaek-dong, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea
- Date of Receipt : 2010. 12. 23

2. Purpose of Report : Use For Quality Control

3. Test Standard/Item : Standards at the client's request/ Thermal shock test etc.

4. Test Period : 2010. 12. 24 ~ 2011. 01. 06

5. Test Environment

- Ambient Temp. : (24 ± 3) °C
- Relative Humidity : (45 ± 20) % R.H.

6. Test Result : Refer to attachment

Test Item

Name of Product :

Solar Landscape Lighting

Model/Rating :

Model : SLL-12210R

Rating : -

Confirmation	Test by Name : Kim Jin Sheon (Sign)	Technical manager Name : Lee Young Joo (Sign)
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2011. 01. 06

KOREA INSTITUTE OF LIGHTING TECHNOLOGY



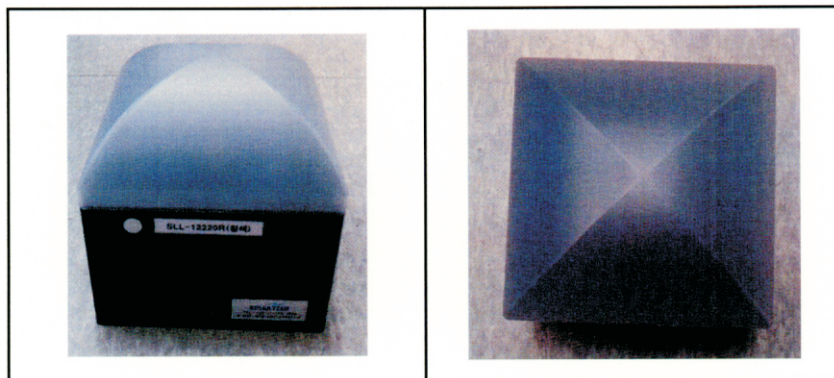
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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TEST RESULT

Report No.	F-1101018	Sample NO.	n1 ~ n5	Product	Solar Landscape Lighting	Test Standard	Standards at the client's request
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Test Item	Test Method	Unit.	Test Result	Remarks
Thermal shock test	(70 ± 2) °C for 1 hour, (-40 ± 2) °C for 1 hour, 10 Cycles	-	Pass	
High Temp. High Humidity	(70 ± 2) °C, Relative Humidity 90 ± 5 % for 24 hours	-	Pass	
Impact Test	1 kg weights falling from a height of 1.5 m	-	Pass	
Distribution of Luminous Intensity	Refer to separate attachment (3 Page~6 Page)			
Luminous Flux.	-	lm	2	
Lux	Red	Distance : 25 cm	lx	2.3
	Green	Distance : 25 cm	lx	1.9
	Blue	Distance : 25 cm	lx	0.7
	Yellow	Distance : 25 cm	lx	2.7
	White	Distance : 25 cm	lx	5.0
Resistance to heat	The test shall be made in a heating canbinet (Temperature of 125 °C.). The surface of the part to be tested shall be placed in the horizontal position and a steel ball of 5 mm diameter pressed against this surface with a force of 20 N. The diameter of the impression shall be measured and shall not exceed 2 mm.	mm	0.98	
Resistance to flame and ignition	The test flame being applied to the sample for 10 s. The duration of burning shall not exceed 30 s after remove of 속 test flam, and any burning drop from the sample shall not ignite the underlying parts or tissue paper specified in 6.86 of ISO 4046, spread out horizontally 200 mm ± 5 mm below the sample.	-	pass	

< Picture >



Luminaire: -

Type:

Lamp: LEDs

No. of lamps: 1

Lamp flux (lm): 2.0420

Output ratio (%): 100.0

Comment:

Report:

Name: SOLAR TECH

Date: 05-01-2011

File naSLL-12220R (WHITE)

Power (W): 0.0

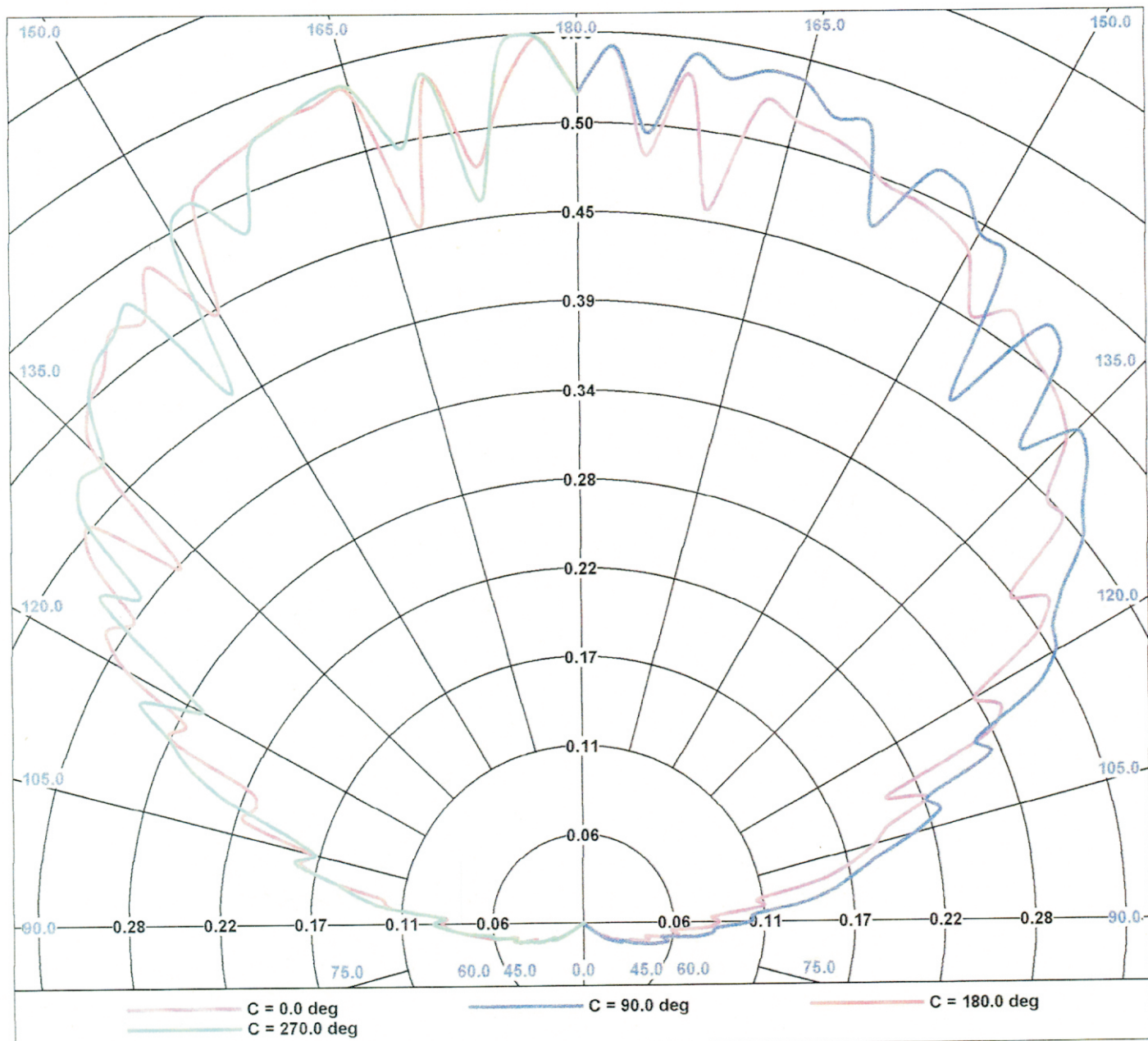
Tilt angle (deg):

Length (m): 0.125

Width (m): 0.125

Height (m): 0.125

Polar Luminous Intensity Distribution



All luminous intensity values (shown radially from centre) are in cd.
Elevation angle values are shown around the outside of the graph.

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Luminaire: -

Type:

Lamp: LEDs

No. of lamps: 1

Lamp flux (lm): 2.0420

Output ratio (%): 100.0

Comment:

Report:

Name: SOLAR TECH

Date: 05-01-2011

File name: L-12220R (WHITE)

Power (W): 0.0

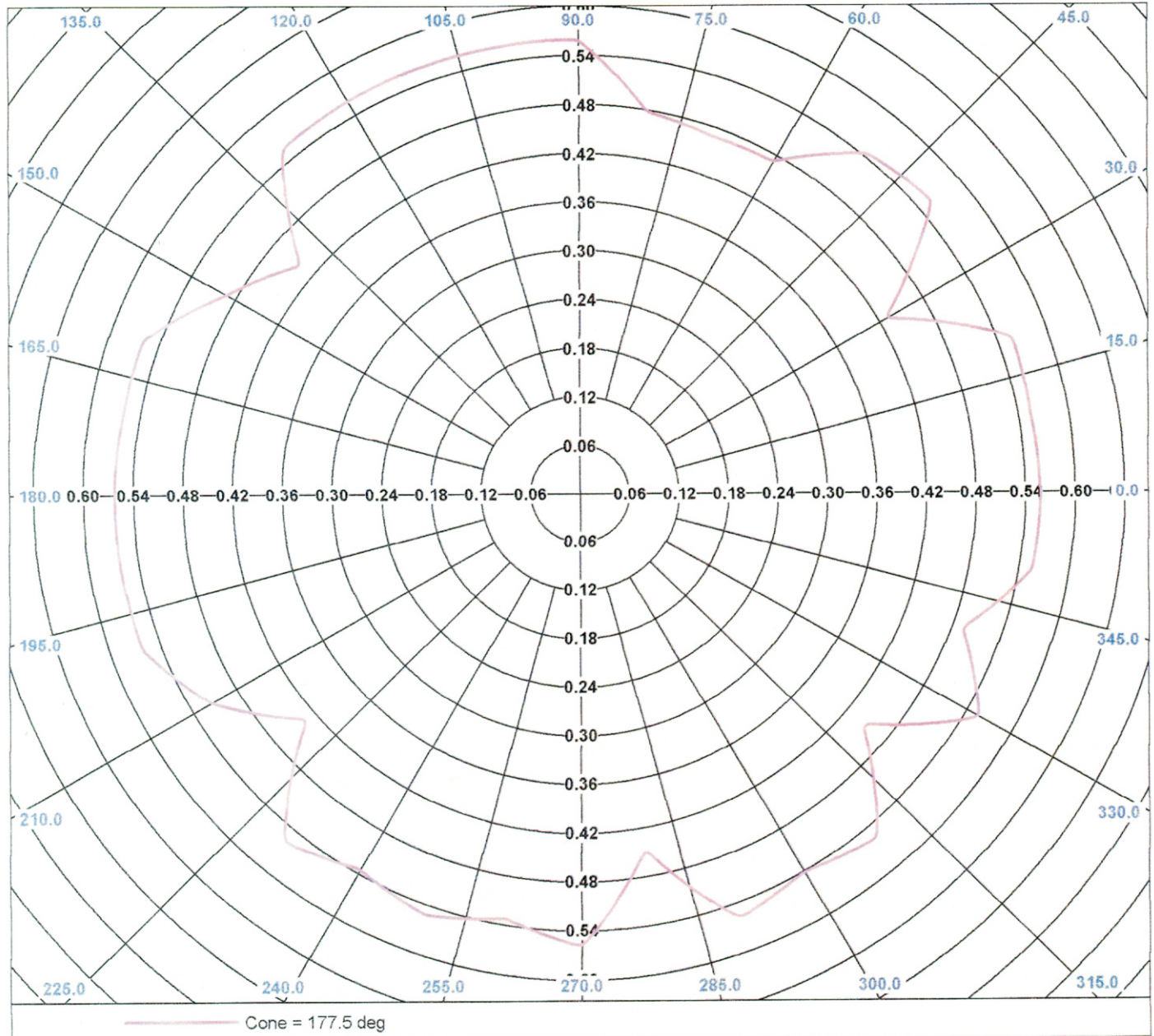
Tilt angle (deg):

Length (m): 0.125

Width (m): 0.125

Height (m): 0.125

Cone Intensity Distribution



All luminous intensity values (shown radially from centre) are in cd.
C-Plane angle values are shown around the outside of the graph.

Luminaire: -

Type:

Lamp: LEDs

No. of lamps: 1

Lamp flux (lm): 2.0420

Output ratio (%): 100.0

Comment:

Report:

Name: SOLAR TECH

Date: 05-01-2011

File name: 841-12220R (WHITE)

Power (W): 0.0

Tilt angle (deg):

Length (m): 0.125

Width (m): 0.125

Height (m): 0.125

Luminous Flux Table

Lumen Summary

Zone	Lumens (lm)	Lamp %	Luminaire %
0-30 deg	0.000	0.0	0.0
0-40 deg	0.001	0.0	0.0
0-60 deg	0.008	0.4	0.4
0-90 deg	0.156	7.6	7.6
40-90 deg	0.155	7.6	7.6
60-90 deg	0.148	7.2	7.2
80-90 deg	0.079	3.9	3.9
90-100 deg	0.134	6.6	6.6
90-180 deg	1.886	92.4	92.4
0-180 deg	2.042	100.0	100.0

Luminaire Summary

Total Luminaire Lumens:	2.042 lm
Downward Lumens:	0.156 lm
Upward Lumens:	1.886 lm
Light Output Ratio (LOR):	100.0%
Downward LOR (DLOR):	7.6%
Upward LOR (ULOR):	92.4%

Complete Zonal Lumen Analysis

Elevation	Cone	Lumens (lm)	Cumulative	Lamp %	Luminaire %
0 deg	0.00 - 1.25	0.0	0.0	0.0	0.0
2.5 deg	1.25 - 3.75	0.0	0.0	0.0	0.0
5 deg	3.75 - 6.25	0.0	0.0	0.0	0.0
7.5 deg	6.25 - 8.75	0.0	0.0	0.0	0.0
10 deg	8.75 - 11.25	0.0	0.0	0.0	0.0
12.5 deg	11.25 - 13.75	0.0	0.0	0.0	0.0
15 deg	13.75 - 16.25	0.0	0.0	0.0	0.0
17.5 deg	16.25 - 18.75	0.0	0.0	0.0	0.0
20 deg	18.75 - 21.25	0.0	0.0	0.0	0.0
22.5 deg	21.25 - 23.75	0.0	0.0	0.0	0.0
25 deg	23.75 - 26.25	0.0	0.0	0.0	0.0
27.5 deg	26.25 - 28.75	0.0	0.0	0.0	0.0
30 deg	28.75 - 31.25	0.0	0.0	0.0	0.0
32.5 deg	31.25 - 33.75	0.0	0.0	0.0	0.0
35 deg	33.75 - 36.25	0.0	0.0	0.0	0.0
37.5 deg	36.25 - 38.75	0.0	0.0	0.0	0.0
40 deg	38.75 - 41.25	0.0	0.0	0.0	0.0
42.5 deg	41.25 - 43.75	0.0	0.0	0.0	0.0
45 deg	43.75 - 46.25	0.0	0.0	0.0	0.0
47.5 deg	46.25 - 48.75	0.0	0.0	0.0	0.0
50 deg	48.75 - 51.25	0.0	0.0	0.1	0.1
52.5 deg	51.25 - 53.75	0.0	0.0	0.1	0.1
55 deg	53.75 - 56.25	0.0	0.0	0.2	0.2
57.5 deg	56.25 - 58.75	0.0	0.0	0.3	0.3
60 deg	58.75 - 61.25	0.0	0.0	0.5	0.5
62.5 deg	61.25 - 63.75	0.0	0.0	0.7	0.7
65 deg	63.75 - 66.25	0.0	0.0	1.0	1.0
67.5 deg	66.25 - 68.75	0.0	0.0	1.4	1.4
70 deg	68.75 - 71.25	0.0	0.0	1.8	1.8
72.5 deg	71.25 - 73.75	0.0	0.0	2.3	2.3
75 deg	73.75 - 76.25	0.0	0.1	2.8	2.8
77.5 deg	76.25 - 78.75	0.0	0.1	3.4	3.4
80 deg	78.75 - 81.25	0.0	0.1	4.1	4.1
82.5 deg	81.25 - 83.75	0.0	0.1	5.0	5.0
85 deg	83.75 - 86.25	0.0	0.1	5.9	5.9



Luminaire: -

Type:

Lamp: LEDs

No. of lamps: 1

Lamp flux (lm): 2.0420

Output ratio (%): 100.0

Comment:

Report:

Name: SOLAR TECH

Date: 05-01-2011

File name: L-12220R (WHITE)

Power (W): 0.0

Tilt angle (deg):

Length (m): 0.125

Width (m): 0.125

Height (m): 0.125

Luminous Flux Table (Continued)

Complete Zonal Lumen Analysis

Elevation	Cone	Lumens (lm)	Cumulative	Lamp %	Luminaire %
85 deg	83.75 - 86.25	0.0	0.1	5.9	5.9
87.5 deg	86.25 - 88.75	0.0	0.1	7.0	7.0
90 deg	88.75 - 91.25	0.0	0.2	8.3	8.3
92.5 deg	91.25 - 93.75	0.0	0.2	9.7	9.7
95 deg	93.75 - 96.25	0.0	0.2	11.4	11.4
97.5 deg	96.25 - 98.75	0.0	0.3	13.2	13.2
100 deg	98.75 - 101.25	0.0	0.3	15.3	15.3
102.5 deg	101.25 - 103.75	0.0	0.4	17.5	17.5
105 deg	103.75 - 106.25	0.1	0.4	19.9	19.9
107.5 deg	106.25 - 108.75	0.1	0.5	22.6	22.6
110 deg	108.75 - 111.25	0.1	0.5	25.3	25.3
112.5 deg	111.25 - 113.75	0.1	0.6	28.3	28.3
115 deg	113.75 - 116.25	0.1	0.6	31.5	31.5
117.5 deg	116.25 - 118.75	0.1	0.7	34.8	34.8
120 deg	118.75 - 121.25	0.1	0.8	38.3	38.3
122.5 deg	121.25 - 123.75	0.1	0.9	41.8	41.8
125 deg	123.75 - 126.25	0.1	0.9	45.4	45.4
127.5 deg	126.25 - 128.75	0.1	1.0	49.2	49.2
130 deg	128.75 - 131.25	0.1	1.1	52.9	52.9
132.5 deg	131.25 - 133.75	0.1	1.2	56.6	56.6
135 deg	133.75 - 136.25	0.1	1.2	60.3	60.3
137.5 deg	136.25 - 138.75	0.1	1.3	64.0	64.0
140 deg	138.75 - 141.25	0.1	1.4	67.7	67.7
142.5 deg	141.25 - 143.75	0.1	1.5	71.3	71.3
145 deg	143.75 - 146.25	0.1	1.5	74.6	74.6
147.5 deg	146.25 - 148.75	0.1	1.6	77.9	78.0
150 deg	148.75 - 151.25	0.1	1.7	81.1	81.1
152.5 deg	151.25 - 153.75	0.1	1.7	84.0	84.0
155 deg	153.75 - 156.25	0.1	1.8	86.8	86.8
157.5 deg	156.25 - 158.75	0.1	1.8	89.3	89.3
160 deg	158.75 - 161.25	0.0	1.9	91.6	91.6
162.5 deg	161.25 - 163.75	0.0	1.9	93.6	93.7
165 deg	163.75 - 166.25	0.0	1.9	95.4	95.4
167.5 deg	166.25 - 168.75	0.0	2.0	96.9	96.9
170 deg	168.75 - 171.25	0.0	2.0	98.1	98.1
172.5 deg	171.25 - 173.75	0.0	2.0	99.0	99.0
175 deg	173.75 - 176.25	0.0	2.0	99.6	99.7
177.5 deg	176.25 - 178.75	0.0	2.0	100.0	100.0
180 deg	178.75 - 180.00	0.0	2.0	100.0	100.0

