



Testing Laboratory  
1126



## **LUMINOUS INTENSITY DISTRIBUTION TEST REPORT**

**Report number : LUR20110251**

**Issued date : May 26, 2011**

**Laboratory : PHOTOVOLTAIC and LIGHTING LABORATORY**  
**Address: No. 6-6, Ronggong S. Rd., Caota Village, Guanyin Township,**  
**Taoyuan Couty 328, TAIWAN, R.O.C.**

**Laboratory Accreditation No. : 1126**



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台灣大電力研究試驗中心

Taiwan Electric Research & Testing Center

PHOTOVOLTAIC and LIGHTING Laboratory

Report No. : LUR20110251

## LUMINOUS INTENSITY DISTRIBUTION TEST REPORT

Applicant : Top Win Optoelectronics Corp.

Applicant's address : 2F., No.148, Jian 1st Rd., Zhonghe City, Taipei County 235, Taiwan (R.O.C.)

Product : LED Street Light

Brand /Model No. : Slite/ TW-PI2072W02

Standard :

- 1.CIE 70: 1987 The Measurement of Absolute Luminous Intensity Distributions.
- 2.CIE 84:1989 The Measurement of Luminous Flux.
- 3.Illuminating engineering society of north America "Lighting Handbook"8th ed. 1995.

Sampling procedure : Sent by applicant

Product dimension : 265mm(L) × 240mm(W) × 40mm(H)

Sampling date : May 19, 2011

Testing date : May 19, 2011~May 24, 2011

Testing engineers : Chen-Lung Hsieh, Young-Tsan Lin

Result of test : Refer to page 3~10

Signatory of the report \_\_\_\_\_

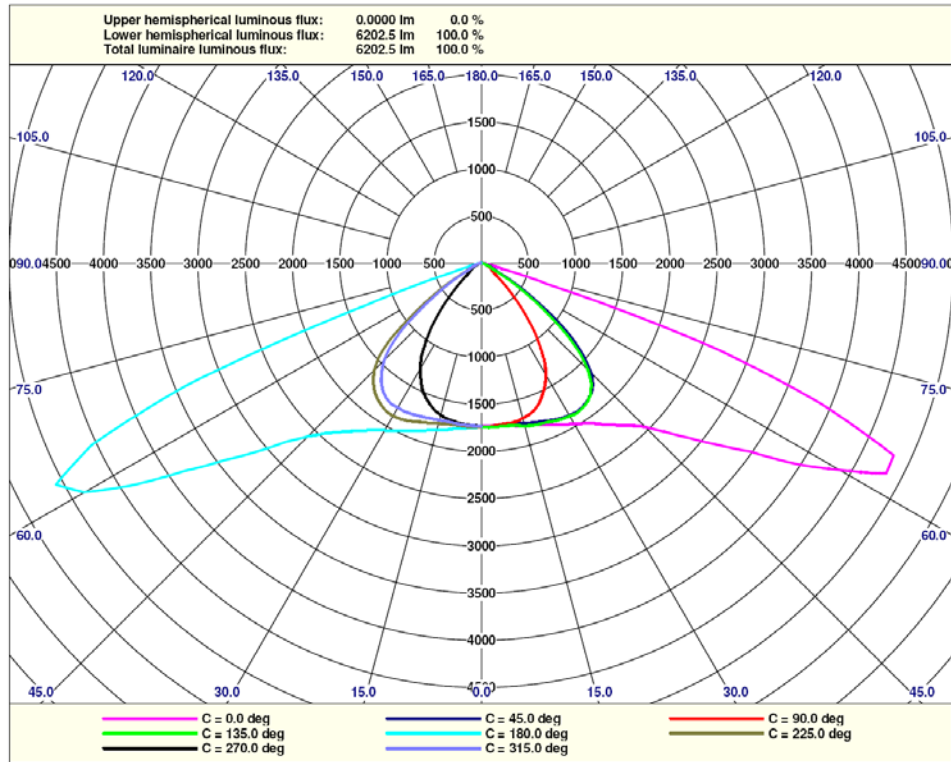




1. TEST RESULT :

(1) Luminous intensity distribution in polar coordinate

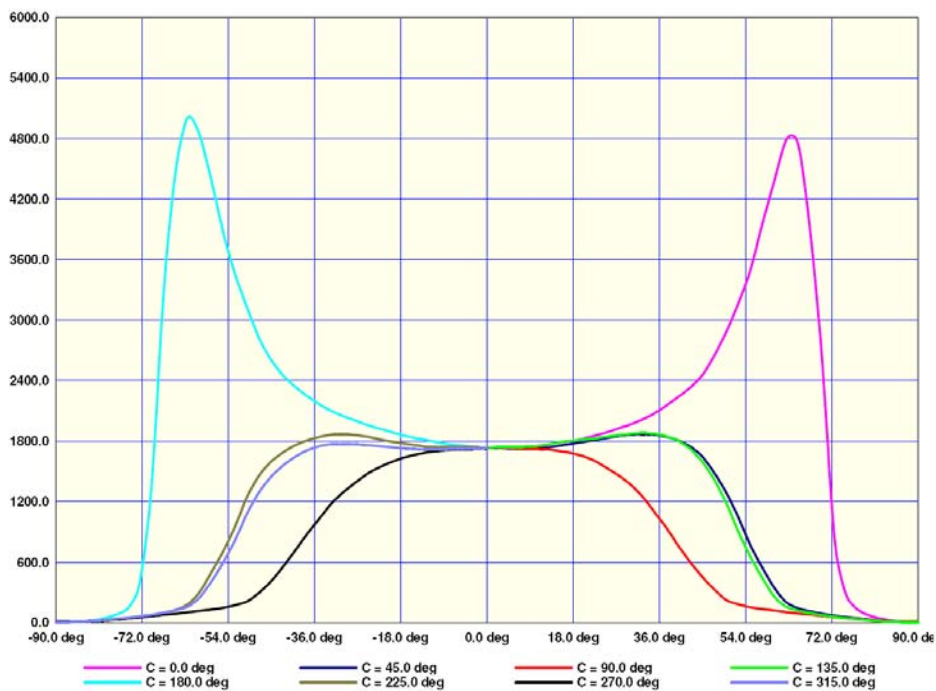
unit : cd



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

(2) Luminous intensity distribution in Cartesian coordinate

unit : cd





(3) Beam side intensity summary

unit : cd

$\gamma \setminus C$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1730	1740	1730	1730	1750	1730	1730	1740	1730	1740	1740	1730	1730
5.0	1730	1730	1720	1730	1740	1730	1730	1740	1730	1740	1730	1730	1720
7.5	1730	1740	1730	1730	1740	1730	1740	1730	1730	1730	1730	1730	1730
10.0	1740	1750	1730	1740	1750	1730	1750	1730	1740	1730	1730	1730	1730
12.5	1770	1770	1760	1760	1770	1760	1760	1750	1750	1740	1730	1730	1730
15.0	1780	1790	1780	1780	1790	1780	1780	1770	1770	1750	1740	1740	1730
17.5	1800	1810	1800	1800	1810	1800	1800	1790	1790	1770	1760	1740	1730
20.0	1820	1840	1820	1820	1830	1820	1820	1820	1810	1790	1770	1750	1730
22.5	1850	1870	1860	1850	1860	1850	1850	1850	1830	1810	1790	1760	1720
25.0	1880	1900	1890	1890	1900	1890	1880	1880	1860	1830	1800	1760	1710
27.5	1930	1950	1940	1940	1940	1940	1920	1920	1880	1850	1810	1750	1690
30.0	1970	1990	1980	1990	1980	1980	1960	1940	1910	1860	1800	1730	1660
32.5	2010	2050	2030	2040	2030	2030	2010	1980	1930	1870	1800	1710	1610
35.0	2070	2100	2090	2100	2080	2090	2050	2000	1940	1860	1790	1680	1550
37.5	2150	2190	2170	2190	2150	2150	2100	2030	1950	1840	1750	1620	1450
40.0	2240	2260	2250	2270	2240	2200	2130	2040	1940	1810	1660	1520	1320
42.5	2330	2350	2340	2350	2310	2250	2160	2050	1910	1750	1550	1350	1130
45.0	2450	2460	2480	2450	2390	2310	2190	2050	1850	1650	1390	1160	933
47.5	2650	2620	2650	2600	2490	2360	2200	2030	1770	1480	1170	939	731
50.0	2880	2880	2870	2770	2630	2420	2210	1970	1630	1290	945	697	535
52.5	3160	3180	3140	2960	2760	2470	2200	1830	1410	1040	729	494	337
55.0	3480	3530	3460	3170	2900	2540	2130	1630	1130	759	509	309	206
57.5	3960	4000	3740	3390	3010	2560	1960	1350	863	541	288	185	163
60.0	4380	4340	3980	3530	3070	2470	1730	1060	630	338	176	151	142
62.5	4830	4640	4150	3610	3030	2210	1370	765	390	192	147	130	125
65.0	4820	4530	4060	3600	2880	1970	1090	573	222	138	122	112	107
67.5	3900	3700	3450	3090	2390	1590	834	349	141	112	97.8	99.2	94.0
70.0	2640	2570	2630	2380	1680	951	335	158	104	88.7	82.5	82.5	77.7
72.5	720	644	897	734	657	278	159	107	76.8	70.1	66.8	69.6	65.3
75.0	240	250	238	251	215	149	109	74.9	57.7	55.3	54.8	56.8	52.5
77.5	119	119	134	124	111	94.9	71.5	51.5	43.4	43.8	41.6	40.0	40.6
80.0	66.8	66.8	71.5	71.5	63.0	57.2	43.5	34.4	30.3	30.3	30.0	29.9	28.9
82.5	36.2	36.2	37.7	39.1	31.7	28.8	24.1	22.3	19.9	19.5	20.2	18.9	23.0
85.0	17.2	17.2	18.6	15.7	15.5	14.7	13.4	13.4	11.4	11.9	11.4	12.4	14.6
87.5	9.5	9.5	9.5	9.5	7.2	6.7	6.2	6.7	6.7	7.2	7.6	8.1	8.1
90.0	4.3	4.3	4.3	4.3	3.5	3.9	4.1	4.5	5.2	5.7	6.2	6.7	7.2

$\gamma \setminus C$	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1740	1730	1720	1720	1720	1740	1730	1730	1730	1730	1740	1740	1730
5.0	1740	1730	1720	1720	1720	1730	1720	1740	1730	1730	1730	1740	1740
7.5	1730	1720	1720	1720	1720	1720	1720	1730	1730	1730	1720	1730	1740
10.0	1730	1710	1720	1720	1710	1720	1710	1730	1730	1730	1730	1730	1740
12.5	1720	1710	1720	1710	1710	1720	1710	1720	1720	1730	1720	1730	1750
15.0	1720	1710	1710	1700	1690	1700	1690	1700	1710	1720	1720	1740	1750
17.5	1720	1700	1700	1680	1670	1680	1680	1690	1690	1710	1720	1740	1750
20.0	1710	1700	1680	1660	1650	1650	1660	1660	1670	1700	1720	1740	1760
22.5	1700	1680	1640	1620	1610	1600	1610	1620	1630	1670	1710	1750	1770
25.0	1670	1630	1590	1560	1550	1530	1550	1570	1590	1630	1680	1740	1770
27.5	1630	1580	1520	1490	1490	1460	1470	1500	1530	1580	1640	1710	1760
30.0	1580	1510	1450	1410	1400	1370	1380	1420	1450	1520	1590	1660	1740
32.5	1520	1430	1350	1290	1270	1250	1250	1290	1360	1430	1520	1610	1720
35.0	1410	1310	1240	1150	1130	1090	1110	1150	1220	1300	1400	1540	1690
37.5	1290	1170	1070	995	969	938	963	998	1070	1170	1280	1440	1620
40.0	1140	1010	900	815	787	756	780	813	894	996	1120	1280	1490
42.5	937	795	718	621	595	593	587	610	678	769	901	1100	1330
45.0	741	616	561	486	462	448	457	476	523	586	697	890	1120
47.5	564	462	396	361	341	325	333	350	381	430	521	682	879
50.0	403	325	271	241	217	216	214	235	244	297	364	462	629
52.5	258	214	203	196	187	180	183	191	196	197	225	295	429
55.0	182	169	162	163	157	151	155	160	158	161	169	182	250
57.5	155	148	143	144	140	134	138	142	139	141	148	151	166
60.0	137	130	127	126	125	121	125	124	123	124	130	133	138
62.5	119	113	114	114	113	104	113	113	111	104	108	115	118
65.0	103	99.2	104	100	98.3	92.0	93.5	94.4	97.3	92.0	92.5	96.8	101
67.5	89.7	85.8	86.8	84.9	82.5	82.0	81.6	80.6	80.6	80.6	80.1	81.1	88.2
70.0	74.9	73.9	73.4	70.6	68.7	66.3	68.2	67.7	67.7	68.2	67.2	68.2	71.5
72.5	65.8	63.4	60.6	58.2	55.8	53.9	54.4	55.3	56.3	59.1	61.0	57.7	58.7
75.0	57.7	52.9	50.1	46.1	45.1	43.8	43.5	43.4	45.8	47.7	50.1	43.8	44.1
77.5	44.6	39.9	38.7	35.7	33.0	32.2	32.8	32.7	33.7	35.5	35.1	30.2	30.0
80.0	30.6	28.6	28.2	25.1	24.3	22.8	22.8	22.7	24.4	23.3	22.0	21.8	21.2
82.5	20.4	18.8	18.6	16.9	16.6	15.5	15.5	14.7	14.9	13.4	14.3	17.4	12.4
85.0	13.4	11.9	12.4	11.9	11.4	11.0	10.5	10.0	9.5	8.6	9.1	8.1	7.2
87.5	8.6	9.1	9.5	9.1	9.1	8.6	8.6	7.6	7.2	6.7	6.2	5.7	5.2
90.0	7.6	8.1	8.6	8.6	8.1	8.1	7.6	7.2	6.7	5.7	5.7	4.8	4.3



$\gamma \setminus C$	130.0	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0	180.0	185.0	190.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1740	1740	1730	1740	1740	1740	1740	1740	1730	1730	1740	1730	1730
5.0	1740	1740	1730	1730	1740	1730	1730	1740	1740	1730	1750	1740	1740
7.5	1730	1740	1720	1740	1730	1740	1740	1740	1750	1740	1760	1750	1760
10.0	1730	1750	1730	1750	1750	1760	1760	1760	1770	1770	1780	1780	1780
12.5	1750	1760	1750	1770	1770	1780	1780	1790	1800	1790	1810	1810	1800
15.0	1760	1790	1780	1800	1790	1800	1800	1800	1810	1810	1830	1810	1810
17.5	1780	1800	1800	1820	1820	1830	1830	1830	1830	1830	1860	1840	1830
20.0	1790	1810	1820	1850	1860	1870	1860	1870	1870	1870	1890	1870	1870
22.5	1810	1820	1850	1870	1890	1910	1900	1920	1910	1910	1920	1910	1900
25.0	1820	1840	1880	1910	1930	1950	1950	1950	1950	1950	1960	1950	1950
27.5	1820	1860	1900	1940	1970	1990	1990	1990	2000	1990	2000	1990	1990
30.0	1810	1870	1930	1970	2000	2040	2040	2040	2060	2040	2050	2040	2040
32.5	1800	1880	1940	2000	2050	2090	2100	2110	2110	2110	2100	2090	2100
35.0	1790	1870	1950	2020	2090	2150	2160	2180	2180	2180	2160	2170	2170
37.5	1750	1850	1960	2040	2130	2200	2240	2250	2270	2260	2240	2250	2240
40.0	1660	1800	1940	2060	2160	2250	2310	2350	2350	2360	2330	2340	2320
42.5	1510	1720	1910	2060	2180	2300	2390	2430	2450	2470	2440	2440	2430
45.0	1330	1600	1850	2040	2200	2340	2470	2550	2600	2630	2590	2610	2580
47.5	1120	1420	1720	2000	2210	2390	2570	2700	2820	2850	2800	2820	2790
50.0	850	1180	1530	1910	2220	2440	2680	2900	3060	3110	3110	3090	3040
52.5	626	895	1280	1740	2180	2500	2810	3090	3310	3480	3430	3410	3350
55.0	410	646	982	1460	2020	2520	2920	3280	3580	3840	3840	3870	3730
57.5	208	439	728	1140	1780	2450	2990	3430	3870	4180	4380	4290	4020
60.0	155	248	477	871	1470	2250	2980	3520	4070	4560	4860	4700	4300
62.5	130	149	288	617	1160	2010	2870	3560	4160	4650	5080	4880	4370
65.0	105	119	152	440	937	1720	2600	3380	3860	4150	4540	4250	3910
67.5	84.9	94.9	112	196	529	1190	2040	2690	3050	3290	3370	3300	2990
70.0	68.7	74.4	83.5	118	197	479	1120	1710	1760	1380	1290	1400	1470
72.5	55.8	57.2	59.1	80.1	114	170	250	346	341	317	328	298	312
75.0	43.1	43.8	43.8	54.4	80.1	107	136	152	162	138	129	138	146
77.5	31.1	33.2	30.8	36.2	46.5	59.6	70.1	82.5	81.1	81.1	76.3	76.3	76.3
80.0	20.8	20.9	20.4	23.1	25.6	33.8	35.5	44.5	46.3	43.4	42.0	43.4	40.5
82.5	12.4	12.4	11.9	13.4	14.3	16.2	17.6	22.3	21.5	21.5	20.0	20.0	20.0
85.0	7.6	6.7	6.2	7.2	6.2	7.2	8.1	8.6	9.5	9.5	9.5	9.5	9.5
87.5	4.3	4.2	3.6	3.5	3.3	3.6	3.3	3.6	2.9	2.9	2.9	2.9	4.3
90.0	3.9	3.5	3.2	2.8	2.8	2.6	2.8	2.8	2.9	2.9	2.9	2.9	2.9

$\gamma \setminus C$	195.0	200.0	205.0	210.0	215.0	220.0	225.0	230.0	235.0	240.0	245.0	250.0	255.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1730	1740	1730	1740	1740	1750	1740	1730	1740	1740	1720	1730	1730
5.0	1730	1740	1730	1740	1730	1740	1740	1730	1730	1740	1720	1720	1720
7.5	1750	1750	1740	1740	1740	1740	1740	1740	1730	1730	1730	1720	1710
10.0	1770	1770	1760	1750	1750	1740	1740	1740	1730	1720	1720	1720	1710
12.5	1790	1800	1790	1770	1780	1760	1740	1740	1730	1720	1730	1720	1700
15.0	1810	1820	1810	1800	1800	1780	1760	1760	1740	1730	1720	1710	1690
17.5	1820	1840	1820	1820	1810	1800	1780	1770	1750	1730	1710	1690	1680
20.0	1860	1880	1850	1850	1830	1830	1790	1770	1760	1730	1700	1670	1650
22.5	1900	1910	1890	1890	1860	1850	1820	1780	1760	1730	1680	1640	1610
25.0	1940	1940	1920	1920	1900	1880	1840	1790	1760	1710	1640	1590	1550
27.5	1990	1980	1970	1960	1930	1900	1860	1800	1740	1670	1600	1530	1490
30.0	2030	2020	2010	1990	1960	1920	1870	1790	1720	1630	1550	1460	1410
32.5	2090	2080	2070	2030	1990	1920	1870	1780	1690	1570	1470	1380	1300
35.0	2160	2150	2130	2070	2020	1930	1840	1760	1650	1510	1380	1260	1180
37.5	2240	2220	2190	2110	2030	1920	1810	1690	1580	1410	1270	1130	1040
40.0	2340	2290	2250	2150	2040	1900	1760	1620	1490	1290	1120	974	860
42.5	2430	2370	2290	2170	2040	1860	1690	1520	1350	1130	925	765	684
45.0	2580	2470	2340	2180	2020	1820	1600	1370	1140	925	722	583	516
47.5	2750	2590	2400	2200	1980	1750	1470	1180	902	676	534	422	371
50.0	2950	2720	2460	2210	1920	1630	1270	895	677	478	352	278	246
52.5	3160	2870	2520	2190	1810	1430	963	667	454	314	235	195	185
55.0	3370	2990	2560	2140	1620	1070	712	460	284	192	167	157	155
57.5	3560	3060	2540	2010	1310	813	505	263	172	150	145	137	136
60.0	3670	3070	2460	1730	983	585	297	164	142	131	125	120	118
62.5	3710	3020	2260	1360	749	371	174	131	117	114	107	103	105
65.0	3360	2800	1940	1100	568	216	124	103	99.2	96.3	92.0	90.6	97.3
67.5	2700	2190	1280	720	242	124	99.2	84.4	87.8	80.6	79.6	80.1	80.6
70.0	1630	1210	602	235	130	90.6	73.4	70.1	70.6	67.7	66.3	67.7	66.3
72.5	305	264	190	130	91.1	62.0	57.7	54.8	56.3	56.3	58.2	59.1	56.3
75.0	143	141	110	86.8	59.6	45.7	44.5	43.6	45.7	43.8	50.6	48.6	46.3
77.5	81.1	73.9	62.0	49.6	36.4	33.1	31.4	31.7	32.5	32.2	33.8	35.5	33.8
80.0	43.4	42.2	35.7	30.3	24.4	22.3	22.1	22.8	22.1	22.3	22.8	23.6	24.8
82.5	20.0	19.6	17.1	16.3	14.5	13.8	13.8	13.8	13.8	18.2	15.7	14.9	16.0
85.0	9.5	8.6	8.1	8.1	7.6	8.6	8.6	8.6	9.5	10.5	10.5	10.5	11.0
87.5	2.9	4.3	4.5	4.8	5.2	5.7	6.2	6.7	7.2	7.6	8.6	8.6	9.1
90.0	2.9	3.6	3.8	4.2	4.5	5.2	5.7	6.2	6.7	7.2	7.6	8.1	8.6



$\gamma \setminus C$	260.0	265.0	270.0	275.0	280.0	285.0	290.0	295.0	300.0	305.0	310.0	315.0	320.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1720	1720	1720	1720	1730	1730	1730	1720	1720	1730	1720	1730	1730
5.0	1720	1720	1720	1710	1720	1710	1720	1720	1720	1720	1720	1720	1720
7.5	1710	1720	1710	1710	1710	1700	1710	1720	1720	1710	1720	1720	1720
10.0	1710	1710	1700	1700	1700	1700	1700	1710	1710	1700	1710	1720	1720
12.5	1700	1700	1690	1680	1680	1690	1700	1700	1710	1690	1700	1720	1720
15.0	1690	1670	1660	1660	1660	1680	1680	1690	1690	1690	1700	1720	1740
17.5	1670	1640	1640	1630	1630	1650	1660	1670	1680	1690	1710	1730	1760
20.0	1630	1610	1590	1600	1600	1620	1630	1640	1670	1680	1710	1740	1770
22.5	1580	1550	1540	1530	1540	1560	1590	1610	1640	1690	1720	1750	1780
25.0	1510	1490	1480	1460	1490	1500	1530	1570	1620	1680	1720	1760	1800
27.5	1440	1410	1390	1390	1400	1430	1470	1510	1580	1650	1710	1770	1810
30.0	1350	1320	1300	1280	1310	1340	1390	1450	1520	1620	1700	1770	1820
32.5	1230	1200	1180	1170	1190	1230	1290	1370	1460	1570	1680	1770	1820
35.0	1110	1060	1030	1040	1050	1100	1190	1280	1390	1520	1650	1750	1820
37.5	964	890	885	896	910	965	1060	1160	1280	1450	1600	1710	1800
40.0	780	722	719	711	751	814	895	1010	1150	1340	1530	1650	1780
42.5	616	563	559	551	567	622	716	815	990	1210	1390	1560	1740
45.0	470	429	412	420	436	482	547	627	798	1020	1230	1460	1670
47.5	344	297	299	307	323	358	405	467	581	804	1030	1310	1590
50.0	229	215	207	204	223	234	273	333	416	573	770	1100	1450
52.5	187	179	174	172	183	186	194	213	278	397	573	826	1190
55.0	158	153	148	147	157	158	161	166	182	245	383	600	920
57.5	137	137	130	131	139	140	142	145	151	167	212	410	649
60.0	122	122	117	118	123	123	125	127	134	141	155	244	446
62.5	110	109	104	107	112	112	107	109	117	122	131	152	274
65.0	95.4	93.5	89.2	90.6	94.0	97.8	95.4	94.4	99.7	105	111	123	164
67.5	80.1	78.7	79.2	77.7	80.6	82.0	83.5	83.0	84.9	92.0	91.6	99.7	116
70.0	66.8	65.8	65.3	64.4	65.8	67.2	68.7	70.6	72.0	74.4	75.8	78.7	89.7
72.5	54.8	52.0	52.9	52.5	53.4	55.8	58.2	63.0	60.1	62.0	60.1	64.4	67.7
75.0	44.1	41.5	40.4	40.3	42.8	44.4	48.6	53.4	47.7	49.1	48.6	50.1	51.0
77.5	31.8	30.2	30.3	29.2	30.6	33.7	36.2	39.4	36.9	33.8	36.0	39.0	37.2
80.0	22.6	20.9	21.1	20.4	22.1	23.8	24.8	25.3	24.4	23.7	25.1	25.7	26.1
82.5	16.0	15.0	14.7	14.5	15.0	15.0	15.0	15.9	18.6	15.2	15.7	15.7	16.0
85.0	11.0	10.5	11.0	10.5	10.5	9.5	9.5	9.5	11.0	8.6	9.1	8.6	8.1
87.5	9.1	9.1	8.6	8.1	8.1	7.2	6.7	6.2	5.7	5.2	4.6	4.5	3.9
90.0	8.6	8.6	8.1	7.6	7.2	6.7	6.2	5.7	4.8	4.3	3.8	3.5	3.1

$\gamma \setminus C$	325.0	330.0	335.0	340.0	345.0	350.0	355.0	360.0
0.0	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1730	1730	1730	1720	1730	1730	1730	1730
5.0	1710	1720	1720	1720	1720	1730	1730	1730
7.5	1720	1720	1720	1720	1720	1740	1730	1730
10.0	1720	1720	1720	1730	1730	1750	1750	1740
12.5	1730	1740	1740	1750	1750	1770	1770	1770
15.0	1750	1760	1760	1770	1770	1780	1780	1780
17.5	1770	1780	1780	1790	1780	1800	1800	1800
20.0	1780	1790	1800	1820	1820	1830	1830	1820
22.5	1800	1820	1830	1850	1850	1860	1860	1850
25.0	1820	1860	1860	1880	1890	1900	1890	1880
27.5	1850	1890	1900	1920	1930	1940	1930	1930
30.0	1880	1920	1940	1970	1970	1990	1980	1970
32.5	1900	1960	1980	2020	2020	2040	2030	2010
35.0	1920	1990	2020	2080	2080	2090	2090	2070
37.5	1920	2020	2070	2140	2150	2170	2160	2150
40.0	1920	2030	2110	2210	2230	2250	2240	2240
42.5	1900	2050	2150	2270	2330	2330	2340	2330
45.0	1870	2040	2180	2330	2410	2440	2450	2450
47.5	1820	2020	2220	2400	2530	2620	2620	2650
50.0	1740	1990	2240	2460	2670	2810	2850	2880
52.5	1600	1950	2260	2550	2840	3060	3160	3160
55.0	1370	1870	2260	2630	3010	3320	3510	3480
57.5	1080	1680	2240	2710	3150	3610	3890	3960
60.0	792	1380	2130	2700	3250	3800	4210	4380
62.5	572	1090	1880	2640	3280	3940	4530	4830
65.0	409	844	1610	2480	3210	3830	4380	4820
67.5	227	598	1240	2060	2770	3160	3550	3900
70.0	127	243	691	1370	1960	2320	2400	2640
72.5	87.3	125	203	397	697	687	720	720
75.0	60.6	89.2	124	168	224	241	247	240
77.5	43.5	57.7	83.0	106	128	129	114	119
80.0	27.5	34.2	48.6	56.3	70.6	66.8	62.0	66.8
82.5	17.8	20.1	23.8	26.5	34.0	37.7	34.8	36.2
85.0	9.5	9.1	11.4	11.4	15.5	17.2	15.7	17.2
87.5	3.9	3.9	4.6	4.8	5.7	4.8	4.8	9.5
90.0	2.9	2.6	2.8	2.6	2.8	2.9	4.3	4.3



## (4) Luminous Flux Table

Lumen Summary				Luminaire Summary	
Zone	Lumens (lm)	Lamp %	Luminaire %	Total Lumens (0 - 180 deg):	6202 lm
0-30 deg	1480	23.9	23.9	Downward Lumens (0 - 90 deg):	6202 lm
0-40 deg	2551	41.1	41.1	Upward Lumens (90 - 180 deg):	-
0-60 deg	4956	79.9	79.9	Light Output Ratio (LOR):	100.0%
0-70 deg	6025	97.1	97.1	Downward LOR (DLOR):	100.0%
40-90 deg	3651	58.9	58.9	Upward LOR (ULOR):	0.0%
60-90 deg	1247	20.1	20.1		
80-90 deg	15.10	0.2	0.2		
90-100 deg	0.000	0.0	0.0		

## Complete Zonal Lumen Analysis

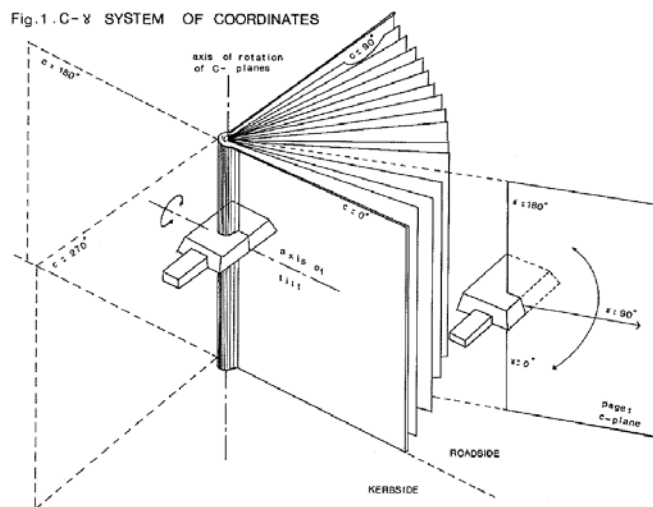
Elevation	Cone	Lumens (lm)	Cumulative	Lamp %	Luminaire %
0 deg	0.00 - 1.25	2.6	2.6	0.0	0.0
2.5 deg	1.25 - 3.75	20.7	23.3	0.4	0.4
5 deg	3.75 - 6.25	41.3	64.6	1.0	1.0
7.5 deg	6.25 - 8.75	61.9	126.5	2.0	2.0
10 deg	8.75 - 11.25	82.5	209.0	3.4	3.4
12.5 deg	11.25 - 13.75	103.4	312.4	5.0	5.0
15 deg	13.75 - 16.25	124.1	436.4	7.0	7.0
17.5 deg	16.25 - 18.75	144.6	581.0	9.4	9.4
20 deg	18.75 - 21.25	165.2	746.2	12.0	12.0
22.5 deg	21.25 - 23.75	185.3	931.5	15.0	15.0
25 deg	23.75 - 26.25	204.7	1136.2	18.3	18.3
27.5 deg	26.25 - 28.75	223.2	1359.4	21.9	21.9
30 deg	28.75 - 31.25	240.5	1599.9	25.8	25.8
32.5 deg	31.25 - 33.75	256.1	1856.0	29.9	29.9
35 deg	33.75 - 36.25	269.8	2125.8	34.3	34.3
37.5 deg	36.25 - 38.75	281.0	2406.9	38.8	38.8
40 deg	38.75 - 41.25	288.3	2695.2	43.5	43.5
42.5 deg	41.25 - 43.75	291.4	2986.6	48.2	48.2
45 deg	43.75 - 46.25	294.1	3280.7	52.9	52.9
47.5 deg	46.25 - 48.75	296.1	3576.7	57.7	57.7
50 deg	48.75 - 51.25	297.7	3874.4	62.5	62.5
52.5 deg	51.25 - 53.75	301.8	4176.2	67.3	67.3
55 deg	53.75 - 56.25	307.2	4483.5	72.3	72.3
57.5 deg	56.25 - 58.75	313.7	4797.1	77.3	77.3
60 deg	58.75 - 61.25	316.8	5114.0	82.5	82.5
62.5 deg	61.25 - 63.75	313.6	5427.6	87.5	87.5
65 deg	63.75 - 66.25	291.4	5719.0	92.2	92.2
67.5 deg	66.25 - 68.75	233.8	5952.8	96.0	96.0
70 deg	68.75 - 71.25	144.0	6096.8	98.3	98.3
72.5 deg	71.25 - 73.75	47.6	6144.4	99.1	99.1
75 deg	73.75 - 76.25	23.8	6168.2	99.4	99.4
77.5 deg	76.25 - 78.75	14.7	6182.8	99.7	99.7
80 deg	78.75 - 81.25	9.0	6191.9	99.8	99.8
82.5 deg	81.25 - 83.75	5.3	6197.1	99.9	99.9
85 deg	83.75 - 86.25	2.9	6200.0	100.0	100.0
87.5 deg	86.25 - 88.75	1.7	6201.8	100.0	100.0
90 deg	88.75 - 90.00	0.7	6202.5	100.0	100.0

2. Basic characteristics :

Item		Test Value	Note
Input electrical characteristics	Voltage (Vac)	220	
	Frequency(Hz)	60	
	Current (A)	0.3701	
	Power (W)	75.35	
	Power factor ( p.f.)	0.9254	
Output optical characteristics	Total luminous flux (lm)	6202.4	
	Luminous efficacy (lm/W)	82.31	
	Correlated Color Temp. (K)	6644.0	
	Color Rendering Index(CRI),Ra	76.4	

3.Note :

- (1) Horizontal alignment follows with the lighting plane of luminaire.
- (2) The light source : LED.
- (3) The test data are measured while the output is stable after operating about 60 minutes.
- (4) Ambient conditions of test:  $(25 \pm 1)^\circ\text{C}$ ,  $(60 \pm 10)\%$  R. H.
- (5) Test C-plane is as the diagram (Lighting plane is in the rear).



4. Test equipment

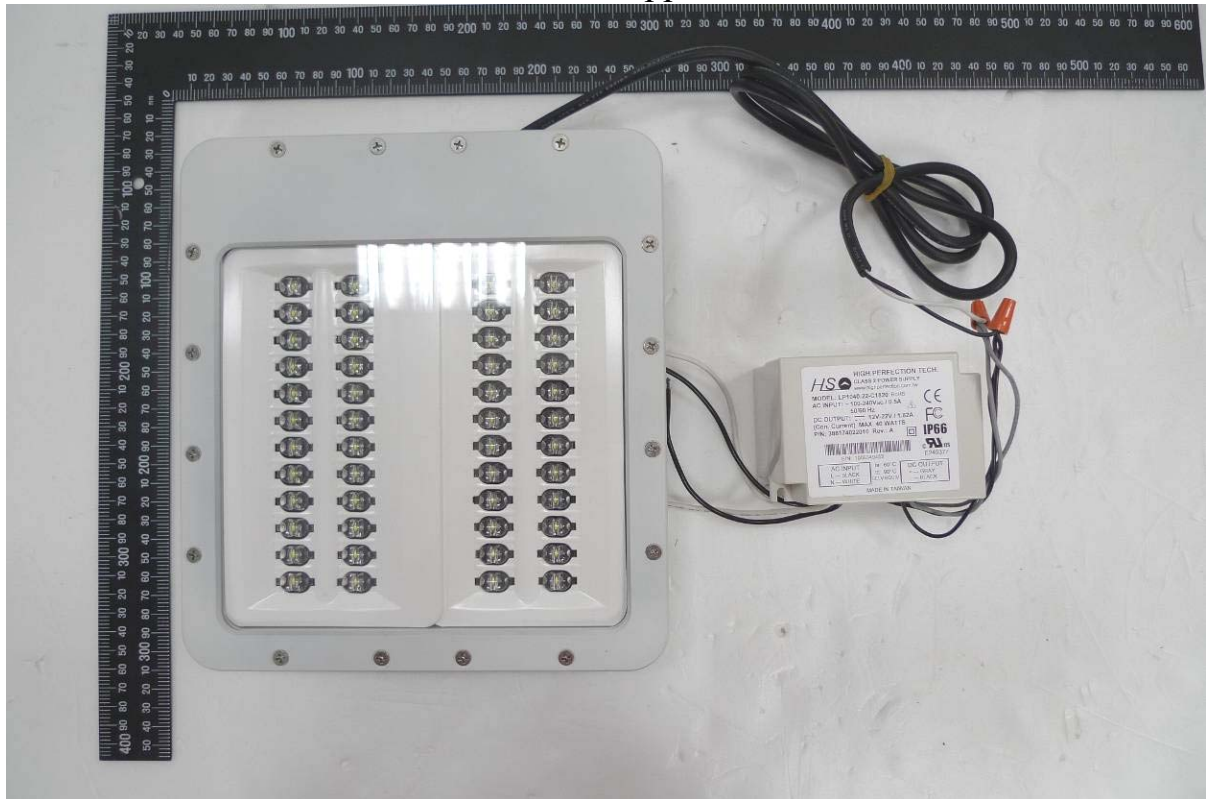
Item	Test equipment	Test equipment brand/ Model
Input electrical characteristics	Power meter	YOKOGAWA/ WT210
Output optical characteristics	Mirror swinging gonio-photometer, gonio-spectrometer	PSI/ LG 2.0



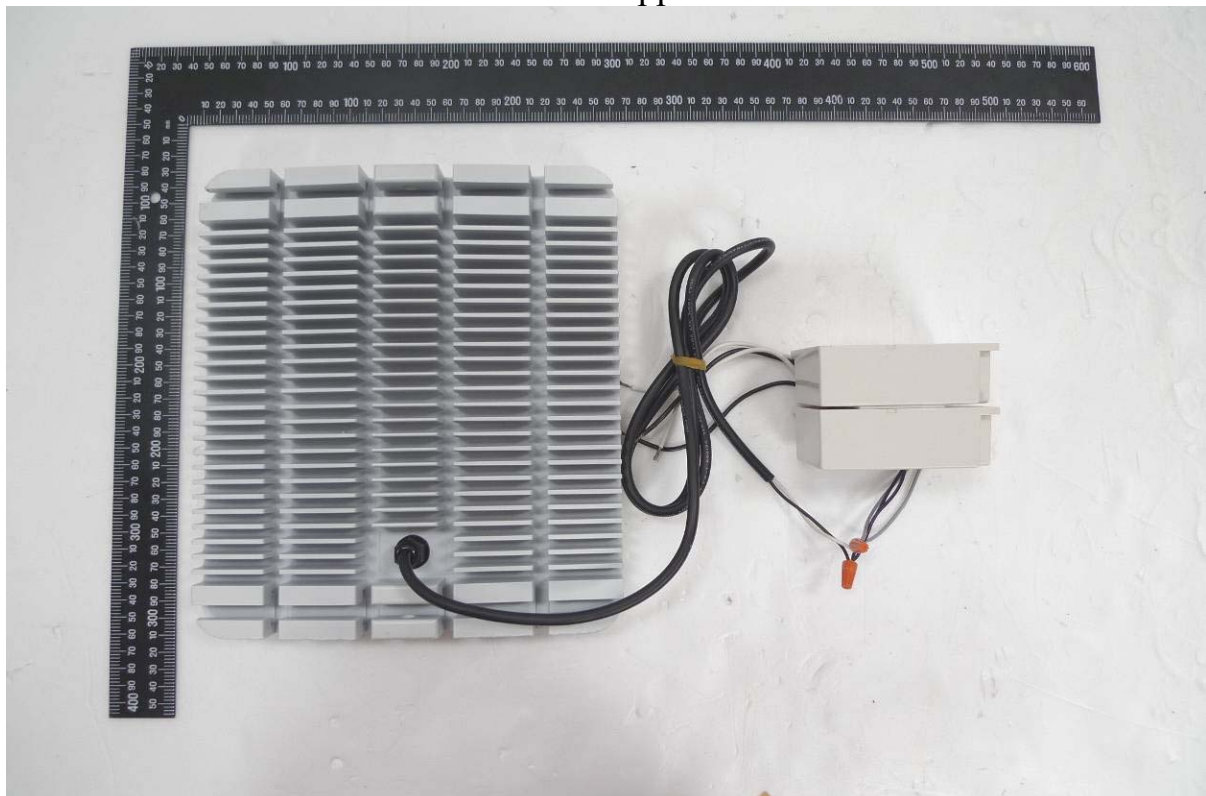


4.PHOTO :

Front view of appearance



Side view of appearance





財團法人

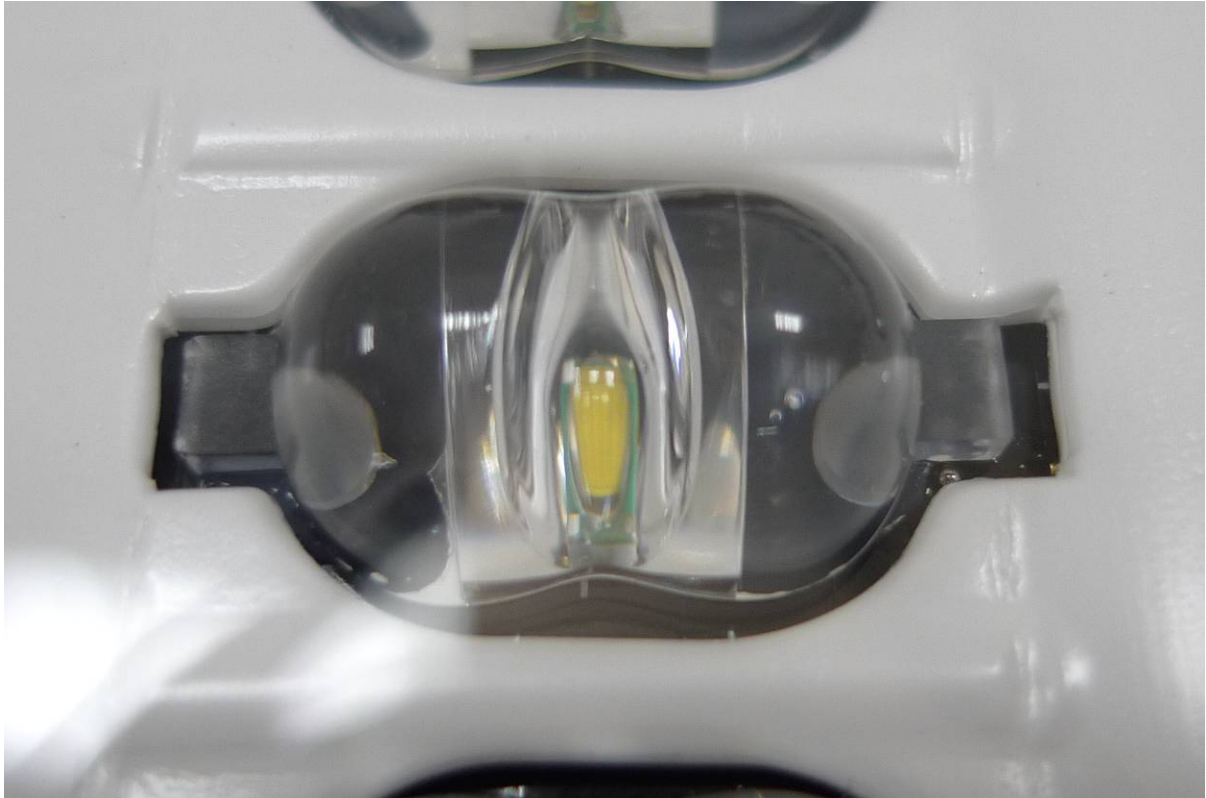
台灣大電力研究試驗中心

Taiwan Electric Research & Testing Center

PHOTOVOLTAIC and LIGHTING Laboratory

Report No. : LUR20110251

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