

Testing Laboratory
1126



## **LUMINOUS INTENSITY DISTRIBUTION TEST REPORT**

Report number: LUR20110250

**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** 



#### Taiwan Electric Research & Testing Center

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#### 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-PI2072M02

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 :  $265 \text{mm}(L) \times 240 \text{mm}(W) \times 40 \text{mm}(H)$ 

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

志莊明某

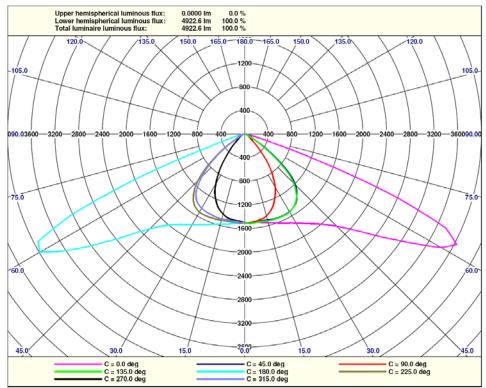
Signatory of the report

unit: cd

Report No.: LUR20110250

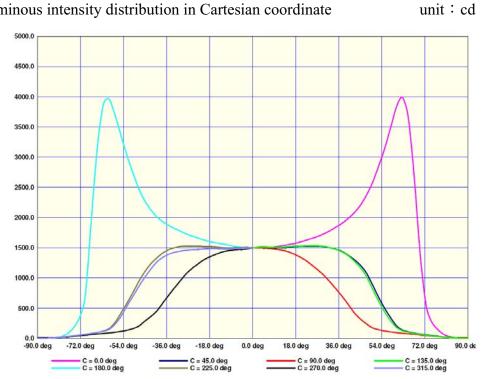
#### 1.TEST RESULT:

(1) Luminous intensity distribution in polar coordinate



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



(3) Bear	m side	e inte	nsity	sumn	nary								unit	: cd
γ \ 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	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
2.5	1500	1500	1500	1490	1510	1500	1500	1510	1500	1500	1500	1510	1500	
5.0	1500	1510	1500	1500	1510	1500	1510	1510	1500	1500	1500	1500	1490	
7.5	1500	1510	1510	1510	1510	1510	1510	1510	1500	1500	1500	1490	1490	
10.0	1520	1520	1520	1520	1520	1510	1520	1510	1510	1500	1500	1480	1490	
12.5	1530	1540	1540	1540	1530	1530	1530	1520	1510	1500	1500	1480	1490	
15.0	1550	1560	1560	1550	1550	1540	1540	1530	1520	1500	1500	1480	1470	
17.5	1570	1580	1580	1570	1570	1550	1550	1540	1530	1520	1500	1480	1460	
20.0	1600	1600	1600	1590	1590	1570	1560	1560	1540	1520	1500	1470	1440	
22.5	1630	1630	1630	1620	1620	1600	1590	1580	1550	1530	1490	1460	1410	
25.0	1660	1660	1660	1660	1650	1640	1610	1600	1560	1530	1480	1440	1380	
27.5	1690	1700	1710	1690	1690	1680	1650	1620	1570	1520	1460	1410	1340	
30.0	1730	1740	1740	1730	1720	1720	1670	1630	1580	1510	1440	1370	1290	
32.5	1780	1790	1790	1790	1760	1760	1700	1650	1580	1500	1420	1320	1230	
35.0	1840	1850	1840	1840	1810	1790	1730	1650	1570	1480	1380	1270	1160	
37.5	1910	1920	1900	1900	1850	1830	1750	1650	1560	1440	1330	1200	1080	
40.0	1980	1990	1980	1980	1910	1860	1760	1640	1530	1380	1260	1090	965	
42.5	2080	2070	2060	2050	1970	1880	1760	1620	1480	1300	1150	973	817	
45.0	2200	2170	2170	2130	2030	1910	1760	1590	1410	1210	1010	829	659	
47.5	2360	2350	2340	2240	2100	1930	1750	1550	1320	1090	856	654	501	
50.0 52.5	2560 2830 3110	2550 2780 3060	2530 2730 2960	2390 2530 2670	2200 2290 2360	1960 1980 1980	1730 1690 1610	1480 1360 1190	1190 1010	898 691 507	668 477 330	470 334 217	367 244 161	
55.0 57.5 60.0	3460 3830	3410 3680	3190 3350	2810 2890	2410 2410	1960 1860	1480 1250	932 707	775 579 412	353 207	207 133	141 117	129 113	
62.5	4040	3850	3430	2900	2330	1660	951	503	250	134	113	103	97.8	
65.0	3740	3580	3200	2760	2160	1380	717	344	152	107	95.4	88.7	83.5	
67.5	2740	2680	2470	2210	1670	934	481	194	109	86.8	79.2	76.3	70.6	
70.0	1380	1520	1540	1470	1040	495	225	117	83.9	70.6	66.8	63.0	59.1	
72.5	491	510	486	487	374	204	135	90.6	65.3	57.7	52.9	52.9	48.6	
75.0	250	279	248	220	184	134	99.2	64.4	50.6	44.2	42.4	41.5	40.3	
77.5	138	147	149	120	104	89.2	66.3	45.2	36.3	34.4	31.2	29.6	29.2	
80.0	57.2	66.8	66.8	61.5	59.6	44.5	35.1	26.0	23.1	21.2	21.6	21.1	20.7	
82.5	22.9	27.7	29.1	27.0	21.7	17.2	16.3	14.3	13.8	13.4	14.3	12.9	16.9	
85.0	9.5	9.5	9.5	8.6	8.6	7.6	8.1	8.1	7.6	7.6	8.6	8.1	12.9	
87.5	2.9	4.3	4.3	3.8	3.9	3.8	4.2	4.2	4.8	5.2	5.7	5.7	7.2	
90.0	2.9	2.9	2.9	2.6	2.9	3.1	3.2	3.6	4.1	4.5	4.8	5.7	5.7	
γ \ C 0.0	65.0 1500	70.0 1500	75.0 1500	80.0 1500	85.0 1500	90.0 1500	95.0 1500	100.0	105.0 1500	110.0 1500	115.0 1500	120.0 1500	125.0 1500	
2.5	1500	1500	1500	1500	1490	1500	1490	1500	1500	1500	1500	1500	1490	
5.0	1510	1500	1490	1490	1490	1500	1490	1490	1500	1500	1500	1490	1500	
7.5	1500	1480	1490	1480	1470	1490	1480	1480	1490	1490	1490	1490	1500	
10.0	1480	1470	1480	1470	1460	1470	1470	1470	1470	1480	1480	1480	1490	
12.5	1470	1460	1470	1450	1440	1460	1460	1460	1460	1470	1470	1480	1490	
15.0	1450	1440	1440	1430	1420	1430	1430	1430	1430	1440	1460	1470	1480	
17.5	1440	1410	1410	1390	1380	1390	1390	1400	1400	1420	1440	1460	1470	
20.0	1410	1390	1360	1350	1350	1340	1350	1360	1360	1380	1410	1440	1460	
22.5	1380	1340	1320	1300	1290	1280	1290	1310	1310	1340	1380	1420	1440	
25.0	1340	1300	1260	1230	1220	1200	1210	1240	1260	1300	1340	1380	1420	
27.5	1290	1240	1180	1160	1150	1120	1130	1160	1190	1230	1290	1350	1400	
30.0	1230	1160	1110	1080	1050	1040	1040	1070	1110	1160	1220	1290	1370	
32.5	1150	1070	1020	977	941	926	930	976	1010	1080	1140	1230	1330	
35.0	1050	967	900	850	824	812	816	849	901	984	1050	1150	1280	
37.5	948	853	779	727	703	690	695	728	778	850	926	1060	1210	
40.0	823	721	647	595	549	559	562	593	645	717	801	949	1090	
42.5	685	559	510	448	425	418	421	461	485	550	658	796	958	
45.0	513	427	374	341	324	319	320	337	367	416	507	633	800	
47.5	386	320	280	258	244	240	240	254	275	311	363	476	615	
50.0	281	233	202	184	169	171	171	181	188	225	262	346	436	
52.5	200	166	160	151	146	144	145	149	151	163	180	222	301	
55.0	142	134	129	126	123	121	122	125	126	130	138	147	186	
57.5	122	117	114	112	107	107	108	112	112	114	118	124	129	
60.0	109	103	101	101	96.3	94.9	96.8	99.7	97.8	101	104	107	111	
62.5	94.9	88.7	91.6	90.6	87.8	83.0	87.3	90.1	88.2	86.8	88.2	92.5	96.8	
65.0	79.6	78.7	82.5	81.6	78.7	74.9	75.8	78.2	80.6	75.8	74.4	78.2	83.9	
67.5	69.2	68.2	68.7	68.2	65.8	67.7	64.4	65.8	64.4	65.8	64.4	67.7	71.5	
70.0	58.2	56.8	57.7	58.2	55.8	54.8	53.9	55.8	54.4	55.3	54.8	54.8	58.2	
72.5	50.1	48.2	47.4	46.5	45.4	43.9	43.8	43.9	45.7	47.7	48.6	45.4	47.7	
75.0	44.6	40.0	38.9	37.3	35.0	34.8	33.4	35.0	36.2	39.3	41.5	36.3	36.6	
77.5	34.2	30.8	29.3	28.0	25.7	25.1	25.4	26.3	27.8	28.9	28.5	25.9	25.9	
80.0	23.1	21.7	20.7	19.5	17.9	18.2	17.6	18.1	19.1	18.6	17.6	16.3	15.9	
82.5	14.9	14.3	13.8	12.9	12.4	12.4	11.4	11.9	11.4	11.0	11.0	13.4	9.1	
85.0	9.5	9.1	9.5	9.1	8.6	8.6	7.6	7.6	7.2	6.7	6.2	7.6	5.2	
87.5	7.2	7.2	7.2	7.2	7.2	6.7	6.2	5.7	5.2	4.8	4.3	3.9	3.3	
90.0	6.2	6.2	6.7	6.7	6.2	6.2	5.7	5.2	4.8	4.3	3.9	3.6	3.1	

$\gamma \setminus C$	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	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
2.5	1500	1510	1490	1510	1490	1500	1500	1500	1500	1500	1500	1500	1500
5.0	1500	1510	1500	1500	1500	1500	1500	1500	1500	1500	1510	1510	1510
7.5	1490	1510	1500	1500	1510	1500	1510	1510	1510	1520	1520	1520	1520
10.0	1490	1500	1510	1510	1520	1510	1530	1530	1530	1530	1540	1540	1540
12.5	1490	1510	1520	1520	1540	1530	1550	1550	1540	1560	1560	1560	1560
15.0	1490	1520	1530	1540	1550	1550	1560	1570	1560	1570	1580	1580	1570
17.5 20.0	1500 1500	1520 1530	1530 1530	1550 1570	1560 1580	1560 1600	1580 1610	1590 1620	1580 1620	1590 1620	1600 1620	1600 1630	1600 1620
22.5	1480	1530	1540	1590	1600	1630	1630	1650	1650	1650	1650	1660	1660
25.0	1480	1530	1550	1610	1630	1660	1660	1680	1680	1680	1690	1690	1680
27.5	1470	1530	1560	1630	1650	1700	1700	1710	1720	1730	1720	1730	1730
30.0	1460	1520	1570	1640	1670	1740	1740	1760	1760	1770	1770	1770	1770
32.5	1430	1500	1570	1640	1700	1770	1780	1810	1810	1820	1810	1820	1820
35.0	1380	1470	1560	1650	1730	1800	1840	1860	1870	1870	1860	1870	1880
37.5	1310	1430	1550	1640	1750	1830	1890	1930	1940	1940	1930	1940	1950
40.0	1230	1370	1510	1630	1760	1870	1950	2010	2020	2020	2000	2020	2030 2120
42.5 45.0	1130 970	1280 1180	1470 1390	1600 1570	1760 1750	1890 1920	2000 2080	2090 2190	2120 2260	2120 2260	2120 2260	2120 2260	2240
47.5	805	1040	1290	1510	1730	1940	2150	2320	2430	2470	2450	2470	2440
50.0	618	829	1150	1420	1690	1960	2210	2470	2630	2690	2720	2700	2640
52.5	430	626	926	1300	1630	1980	2290	2610	2840	2950	3000	2960	2860
55.0	285	445	695	1090	1540	1950	2350	2740	3090	3260	3350	3290	3100
57.5	172	297	504	810	1370	1880	2370	2830	3250	3570	3690	3560	3310
60.0	128	181	323	602	1090	1740	2320	2870	3360	3780	3990	3820	3440
62.5	106	123	204	439	856	1520	2210	2810	3280	3710	3930	3730	3350
65.0	88.7	100	132	291	641	1210	1930	2410	2800	3140	3210	3100	2810
67.5	73.9	80.1 64.9	102	148	360	719	1390 638	1810	2080	2100 749	1980 625	2000	1940 715
70.0 72.5	61.0 47.4	52.0	75.8 58.2	107 79.6	167 118	327 159	219	861 271	880 290	341	322	677 317	268
75.0	37.3	38.0	42.9	53.4	83.5	111	141	162	181	192	165	182	169
77.5	27.3	28.2	28.2	32.8	51.5	62.5	79.2	80.1	88.2	76.3	71.5	71.5	76.3
80.0	18.1	17.5	18.4	19.5	24.1	26.0	28.5	36.3	34.2	30.5	26.2	27.7	76.3 30.5
82.5	10.0	9.1	9.5	10.0	10.5	10.5	11.4	12.9	14.6	14.3	9.5	14.3	14.3
85.0	5.2	4.8	4.5	4.8	4.8	4.1	4.8	4.8	5.7	4.8	4.8	4.8	4.8
87.5	3.2	2.8	2.6	2.3	2.3	2.3	2.5	2.5	2.8	2.9	2.9	2.9	2.9
90.0	2.8	2.5	2.3	2.0	2.0	2.0	2.0	2.0	2.1	2.9	2.9	1.4	2.9
γ \ 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
γ \ C 0.0	195.0 1500	200.0 1500	205.0 1500	210.0 1500	215.0 1500	220.0 1500	225.0 1500	230.0 1500	235.0 1500	240.0 1500	245.0 1500	250.0 1500	255.0 1500
0.0 2.5	1500 1490	1500 1510	1500 1490	1500 1510	1500 1500	1500 1500	1500 1500	1500 1500	1500 1500	1500 1490	1500 1500	1500 1490	1500 1490
0.0 2.5 5.0	1500 1490 1500	1500 1510 1510	1500 1490 1500	1500 1510 1510	1500 1500 1510	1500 1500 1500	1500 1500 1500	1500 1500 1500	1500 1500 1490	1500 1490 1490	1500 1500 1490	1500 1490 1490	1500 1490 1490
0.0 2.5 5.0 7.5	1500 1490 1500 1510	1500 1510 1510 1510	1500 1490 1500 1510	1500 1510 1510 1510	1500 1500 1510 1510	1500 1500 1500 1510	1500 1500 1500 1500	1500 1500 1500 1500	1500 1500 1490 1490	1500 1490 1490 1490	1500 1500 1490 1480	1500 1490 1490 1480	1500 1490 1490 1480
0.0 2.5 5.0 7.5 10.0	1500 1490 1500 1510 1530	1500 1510 1510 1510 1530	1500 1490 1500 1510 1530	1500 1510 1510 1510 1520	1500 1500 1510 1510 1510	1500 1500 1500 1510 1510	1500 1500 1500 1500 1490	1500 1500 1500 1500 1500	1500 1500 1490 1490 1480	1500 1490 1490 1490 1480	1500 1500 1490 1480 1470	1500 1490 1490 1480 1470	1500 1490 1490 1480 1470
0.0 2.5 5.0 7.5 10.0 12.5	1500 1490 1500 1510 1530 1550	1500 1510 1510 1510 1530 1540	1500 1490 1500 1510 1530 1540	1500 1510 1510 1510 1520 1540	1500 1500 1510 1510 1510 1520	1500 1500 1500 1510 1510 1520	1500 1500 1500 1500 1490 1500	1500 1500 1500 1500 1500 1500	1500 1500 1490 1490 1480 1480	1500 1490 1490 1490 1480 1480	1500 1500 1490 1480 1470 1460	1500 1490 1490 1480 1470 1460	1500 1490 1490 1480 1470 1450
0.0 2.5 5.0 7.5 10.0 12.5 15.0	1500 1490 1500 1510 1530 1550 1560	1500 1510 1510 1510 1530 1540 1560	1500 1490 1500 1510 1530 1540 1550	1500 1510 1510 1510 1510 1520 1540 1550	1500 1500 1510 1510 1510 1520 1530	1500 1500 1500 1510 1510 1520 1530	1500 1500 1500 1500 1500 1490 1500	1500 1500 1500 1500 1500 1500 1510	1500 1500 1490 1490 1480 1480 1480	1500 1490 1490 1490 1480 1480 1470	1500 1500 1490 1480 1470 1460 1440	1500 1490 1490 1480 1470 1460 1430	1500 1490 1490 1480 1470 1450 1420
0.0 2.5 5.0 7.5 10.0 12.5	1500 1490 1500 1510 1530 1550	1500 1510 1510 1510 1530 1540	1500 1490 1500 1510 1530 1540	1500 1510 1510 1510 1520 1540	1500 1500 1510 1510 1510 1520	1500 1500 1500 1510 1510 1520	1500 1500 1500 1500 1490 1500	1500 1500 1500 1500 1500 1500	1500 1500 1490 1490 1480 1480	1500 1490 1490 1490 1480 1480	1500 1500 1490 1480 1470 1460	1500 1490 1490 1480 1470 1460	1500 1490 1490 1480 1470 1450
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5	1500 1490 1500 1510 1530 1550 1560 1580 1600 1640	1500 1510 1510 1510 1530 1540 1560 1580 1610 1650	1500 1490 1500 1510 1530 1540 1550 1560 1580 1620	1500 1510 1510 1510 1510 1520 1540 1550 1560 1580 1610	1500 1500 1510 1510 1510 1520 1530 1540 1560 1580	1500 1500 1500 1510 1510 1520 1530 1540 1540 1550	1500 1500 1500 1500 1490 1500 1510 1520 1520 1520	1500 1500 1500 1500 1500 1500 1510 1500 1490 1480	1500 1500 1490 1490 1480 1480 1480 1470 1470 1460	1500 1490 1490 1490 1480 1480 1470 1460 1440 1410	1500 1500 1490 1480 1470 1460 1440 1430 1410 1380	1500 1490 1490 1480 1470 1460 1430 1400 1370 1330	1500 1490 1490 1480 1470 1450 1420 1380 1350 1310
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0	1500 1490 1500 1510 1530 1550 1560 1580 1600 1640 1670	1500 1510 1510 1510 1530 1540 1560 1580 1610 1650 1680	1500 1490 1500 1510 1530 1540 1550 1560 1580 1620 1650	1500 1510 1510 1510 1510 1520 1540 1550 1560 1580 1610 1640	1500 1500 1510 1510 1510 1510 1520 1530 1540 1560 1580 1610	1500 1500 1500 1510 1510 1510 1520 1530 1540 1540 1550 1570	1500 1500 1500 1500 1490 1500 1510 1520 1520 1520 1530	1500 1500 1500 1500 1500 1500 1510 1500 1490 1480 1470	1500 1500 1490 1490 1480 1480 1480 1470 1470 1460 1440	1500 1490 1490 1490 1480 1480 1470 1460 1440 1410 1380	1500 1500 1490 1480 1470 1460 1440 1430 1410 1380 1340	1500 1490 1490 1480 1470 1460 1430 1400 1370 1330 1280	1500 1490 1490 1480 1470 1450 1420 1380 1350 1310 1240
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2.5	1500	1480	1480	1490	1490	1480	1490	1500	1500	1490	1500	1490	1490
5.0	1490	1480	1470	1490	1480	1480	1480	1490	1490	1490	1490	1490	1490
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12.5	1440	1440	1430	1430	1420	1440	1440	1440	1450	1460	1460	1480	1490
15.0	1410	1410	1400	1390	1390	1400	1410	1420	1430	1440	1460	1490	1490
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32.5	900	878	847	863	869	915	974	1060	1140	1250	1330	1430	1500
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40.0	488	476	454	463	470	530	593	674	779	947	1110	1270	1420
42.5	389	369	364	372	377	409	453	540	638	813	958	1150	1350
45.0 47.5	306 226	291 209	289 203	287 201	299 220	324 245	357 273	410 315	504 389	643 504	813 657	1020 869	1260 1130
50.0	167	165	160	160	163	170	187	232	275	381	497	703	948
52.5	141	137	133	135	139	143	147	160	182	247	362	544	765
55.0 57.5	122 107	119 107	114 101	114 103	120 108	122 109	123 109	128 114	134 117	151 124	227 141	366 233	576 412
60.0	95.9	95.4	89.7	92.5	95.4	95.4	94.4	101	104	109	118	143	252
62.5	87.3	85.8	79.6	83.9	86.8	86.3	82.0	84.4	90.1	94.0	102	117	153
65.0 67.5	75.4 62.0	73.9 63.4	71.5 63.4	72.0 63.4	74.4 62.5	76.3 63.4	73.4 62.0	73.4 63.4	76.8 64.4	81.6 71.5	86.3 71.5	95.9 79.6	115 93.0
70.0	52.5	52.9	51.5	52.5	52.0	52.5	52.0	55.3	54.8	58.2	59.6	65.3	73.4
72.5	42.9	42.1	41.8	41.4	42.1 32.5	43.2	44.5	47.6	44.8	46.0	48.2 37.2	52.0	57.7
75.0 77.5	33.4 23.7	32.8 23.0	31.8 23.3	32.1 23.3	23.0	35.0 26.0	36.9 25.9	41.1 29.0	36.9 24.6	36.4 25.6	27.8	39.9 30.5	43.1 30.3
80.0	17.2	16.5	15.7	15.9	15.3	17.6	17.9	18.2	16.9	16.8	18.5	18.6	19.4
82.5 85.0	11.0 8.1	11.0 7.6	10.5 7.2	10.5 7.2	10.0 6.7	10.5 6.7	10.0 6.2	10.5 6.2	13.8 7.2	9.1 5.2	10.0 5.7	10.5 4.8	10.5 4.6
87.5	6.7	6.7	6.2	5.7	5.2	4.8	4.5	4.1	3.6	3.3	2.9	2.8	2.5
90.0	6.7	6.2	5.7	5.7	5.2	4.6	4.3	3.8	3.3	3.1	2.6	2.3	2.0
$\gamma \setminus C$	325.0	330.0	335.0	340.0	345.0	350.0	355.0	360.0					
0.0	1500	1500	1500	1500	1500	1500	1500	1500					
2.5	1500	1490	1490	1500	1490	1500	1500	1500					
5.0 7.5	1490 1480	1490 1490	1490 1480	1500 1500	1500 1500	1500 1510	1500 1500	1500 1500					
10.0	1490	1500	1490	1510	1510	1520	1520	1520					
12.5 15.0	1490 1500	1510	1500	1510	1520	1530							
17.5	1510		4540	4520			1540	1530					
20.0		1520 1530	1510 1520	1530 1540	1540	1540	1550	1550					
	1530	1530 1540	1520 1540	1540 1560	1540 1550 1570	1540 1550 1580	1550 1570 1590	1550 1570 1600					
22.5	1530 1540	1530 1540 1560	1520 1540 1570	1540 1560 1600	1540 1550 1570 1600	1540 1550 1580 1610	1550 1570 1590 1620	1550 1570 1600 1630					
25.0 27.5	1530	1530 1540	1520 1540	1540 1560	1540 1550 1570	1540 1550 1580	1550 1570 1590	1550 1570 1600					
25.0 27.5 30.0	1530 1540 1550 1560 1570	1530 1540 1560 1580 1600 1630	1520 1540 1570 1600 1630 1660	1540 1560 1600 1630 1670 1700	1540 1550 1570 1600 1640 1670 1720	1540 1550 1580 1610 1650 1690 1730	1550 1570 1590 1620 1660 1690 1730	1550 1570 1600 1630 1660 1690 1730					
25.0 27.5 30.0 32.5	1530 1540 1550 1560 1570 1580	1530 1540 1560 1580 1600 1630 1650	1520 1540 1570 1600 1630 1660 1690	1540 1560 1600 1630 1670 1700 1750	1540 1550 1570 1600 1640 1670 1720	1540 1550 1580 1610 1650 1690 1730 1780	1550 1570 1590 1620 1660 1690 1730 1770	1550 1570 1600 1630 1660 1690 1730 1780					
25.0 27.5 30.0 32.5 35.0 37.5	1530 1540 1550 1560 1570 1580 1580 1570	1530 1540 1560 1580 1600 1630 1650 1670 1690	1520 1540 1570 1600 1630 1660 1690 1720 1750	1540 1560 1600 1630 1670 1700 1750 1790 1830	1540 1550 1570 1600 1640 1670 1720 1770 1820 1880	1540 1550 1580 1610 1650 1690 1730 1780 1830 1900	1550 1570 1590 1620 1660 1690 1730 1770 1840 1900	1550 1570 1600 1630 1660 1690 1730 1780 1840 1910					
25.0 27.5 30.0 32.5 35.0 37.5 40.0	1530 1540 1550 1560 1570 1580 1580 1570 1550	1530 1540 1560 1580 1600 1630 1650 1670 1690	1520 1540 1570 1600 1630 1660 1690 1720 1750 1780	1540 1560 1600 1630 1670 1700 1750 1790 1830 1870	1540 1550 1570 1600 1640 1670 1720 1770 1820 1880 1940	1540 1550 1580 1610 1650 1690 1730 1780 1830 1900	1550 1570 1590 1620 1660 1690 1730 1770 1840 1900	1550 1570 1600 1630 1660 1690 1730 1780 1840 1910					
25.0 27.5 30.0 32.5 35.0 37.5 40.0 42.5	1530 1540 1550 1560 1570 1580 1570 1550 1530	1530 1540 1560 1580 1600 1630 1650 1670 1690 1690	1520 1540 1570 1600 1630 1660 1690 1720 1750 1780 1800	1540 1560 1600 1630 1670 1700 1750 1790 1830 1870 1910	1540 1550 1570 1600 1640 1670 1720 1770 1820 1880 1940 2000	1540 1550 1580 1610 1650 1690 1730 1780 1830 1900 1960 2030	1550 1570 1590 1620 1660 1690 1730 1770 1840 1900 1970 2040	1550 1570 1600 1630 1660 1690 1730 1780 1840 1910 1980 2080					
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Report No.: LUR20110250

## (4) Luminous Flux Table

## **Lumen Summary**

#### **Luminaire Summary**

c Guillillai y	Lummane Ou	Edition Califficaty					
leg): 4923 l	Total Lumens (0 - 180 deg):	Luminaire %	Lamp %	Lumens (Im)	Zone		
leg): 4923 l	Downward Lumens (0 - 90 deg):	25.3	25.3	1247	0-30 deg		
leg): -	Upward Lumens (90 - 180 deg):	42.9	42.9	2111	0-40 deg		
OR): 100.0°	Light Output Ratio (LOR):	81.7	81.7	4022	0-60 deg		
OR): 100.0°	Downward LOR (DLOR):	97.4	97.4	4795	0-70 deg		
OR): 0.0%	Upward LOR (ULOR):	57.1	57.1	2812	40-90 deg		
		18.3	18.3	900.6	60-90 deg		
		0.2	0.2	10.96	80-90 deg		
		0.0	0.0	0.000	90-100 deg		

#### **Complete Zonal Lumen Analysis**

	Complete Zonai Edinen Analysis							
Elevation	Cone	Lumens (Im)	Cumulative	Lamp %	Luminaire %			
0 deg	0.00 - 1.25	2.2	2.2	0.0	0.0			
2.5 deg	1.25 - 3.75	17.9	20.1	0.4	0.4			
5 deg	3.75 - 6.25	35.8	55.9	1.1	1.1			
7.5 deg	6.25 - 8.75	53.5	109.4	2.2	2.2			
10 deg	8.75 - 11.25	71.1	180.5	3.7	3.7			
12.5 deg	11.25 - 13.75	88.7	269.2	5.5	5.5			
15 deg	13.75 - 16.25	105.9	375.2	7.6	7.6			
17.5 deg	16.25 - 18.75	122.8	497.9	10.1	10.1			
20 deg	18.75 - 21.25	139.4	637.3	12.9	12.9			
22.5 deg	21.25 - 23.75	155.4	792.8	16.1	16.1			
25 deg	23.75 - 26.25	170.6	963.4	19.6	19.6			
27.5 deg	26.25 - 28.75	184.8	1148.2	23.3	23.3			
30 deg	28.75 - 31.25	197.6	1345.8	27.3	27.3			
32.5 deg	31.25 - 33.75	208.6	1554.4	31.6	31.6			
35 deg	33.75 - 36.25	217.6	1772.0	36.0	36.0			
37.5 deg	36.25 - 38.75	224.5	1996.4	40.6	40.6			
40 deg	38.75 - 41.25	228.7	2225.1	45.2	45.2			
42.5 deg	41.25 - 43.75	230.9	2456.0	49.9	49.9			
45 deg	43.75 - 46.25	232.8	2688.8	54.6	54.6			
47.5 deg	46.25 - 48.75	235.5	2924.3	59.4	59.4			
50 deg	48.75 - 51.25	237.8	3162.1	64.2	64.2			
52.5 deg	51.25 - 53.75	241.3	3403.4	69.1	69.1			
55 deg	53.75 - 56.25	245.2	3648.6	74.1	74.1			
57.5 deg	56.25 - 58.75	248.9	3897.5	79.2	79.2			
60 deg	58.75 - 61.25	249.0	4146.5	84.2	84.2			
62.5 deg	61.25 - 63.75	241.0	4387.5	89.1	89.1			
65 deg	63.75 - 66.25	211.1	4598.6	93.4	93.4			
67.5 deg	66.25 - 68.75	154.8	4753.3	96.6	96.6			
70 deg	68.75 - 71.25	82.8	4836.1	98.2	98.2			
72.5 deg	71.25 - 73.75	35.7	4871.8	99.0	99.0			
75 deg	73.75 - 76.25	22.6	4894.4	99.4	99.4			
77.5 deg	76.25 - 78.75	13.6	4908.0	99.7	99.7			
80 deg	78.75 - 81.25	7.3	4915.3	99.9	99.9			
82.5 deg	81.25 - 83.75	3.7	4919.0	99.9	99.9			
85 deg	83.75 - 86.25	1.9	4920.9	100.0	100.0			
87.5 deg	86.25 - 88.75	1.2	4922.1	100.0	100.0			
90 deg	88.75 - 90.00	0.5	4922.6	100.0	100.0			

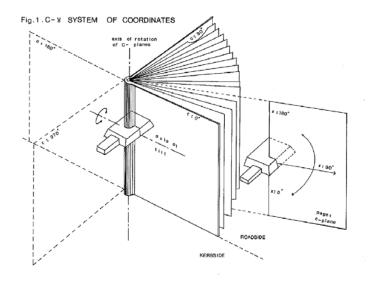
Report No.: LUR20110250

#### 2. Basic characteristics:

	Item	Test Value	Note
Input electrical	Voltage (Vac)	220	
characteristics	Frequency(Hz)	60	
	Current (A)	0.3639	
	Power (W)	73.71	
	Power factor ( p.f.)	0.9207	
Output optical	Total luminous flux (lm)	4922.6	
characteristics	Luminous efficacy (lm/W)	66.78	
	Correlated Color Temp. (K)	3148.0	
	Color Rendering Index(CRI),Ra	80.1	

### 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:  $(25\pm1)^{\circ}$ C,  $(60\pm10)$ % R. H.
- (5) Test C-plane is as the diagram (Lighting plane is in the rear).



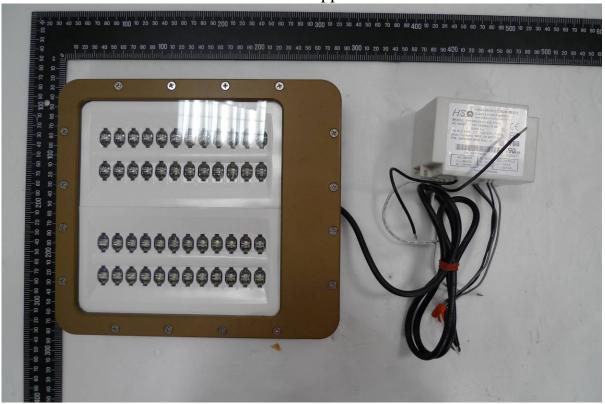
### 4. Test equipment

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

Report No.: LUR20110250

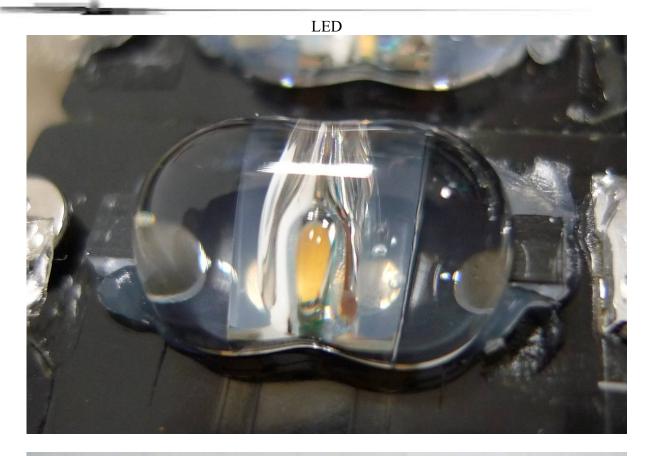
#### 4.PHOTO:

# Front view of appearance



Side view of appearance







Control gear