IMPARTIALITY SERVICE INNOVATION EFFICIENCY





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



Taiwan Electric Research & Testing Center

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Page 1 of 10



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

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



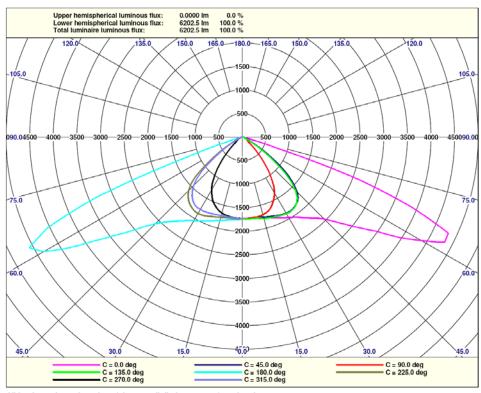
Signatory of the report



1.TEST RESULT :

(1) Luminous intensity distribution in polar coordinate

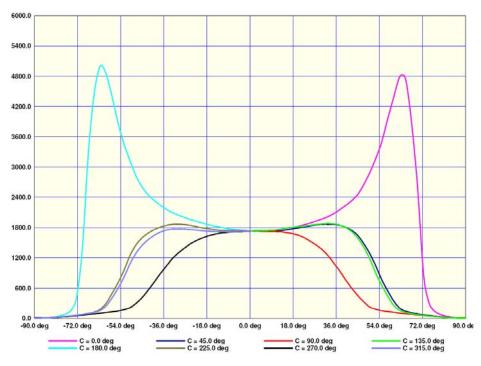
unit : cd



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

unit : cd





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(3) Bear	m side	e inte	nsity	sumr	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	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 10.0	1730 1740	1740 1750	1730 1730	1730 1740	1740 1750	1730 1730	1740 1750	1730 1730	1730 1740	1730 1730	1730 1730	1730 1730	1720 1730 1730	
5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5	1770	1770	1760	1760	1770	1760	1760	1750	1750	1740	1730	1730	1730 1730 1730 1730 1730 1720	
15.0	1780	1790	1780	1780	1790	1780	1780	1770	1770	1750 1770	1740	1740	1730	
17.5	1800	1810	1800	1800	1810	1800	1800	1790	1790	1770	1760	1740	1730	
20.0	1820 1850	1840 1870	1820 1860	1820 1850	1830 1860	1820 1850	1820 1850	1820 1850	1810 1830	1790 1810	1770 1790	1750 1760	1730	
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	1830 1850	1810	1750	1690	
30.0	1970	1990	1980	1990	1980	1980	1960	1940	1910	1860	1800	1730	1660 1610	
32.5 35.0	2010 2070	2050 2100	2030 2090	2040 2100	2030 2080	2030 2090	2010 2050	1980 2000	1930 1940	1870 1860	1800 1790	1710 1680	1610 1550	
37.5	2150	2100	2090	2100	2150	2090	2050	2000	1940	1840	1750	1620	1450	
40.0	2240	2260	2250	2270	2240	2200	2130	2040	1940	1810	1660	1520	1450 1320	
37.5 40.0 42.5 45.0 47.5 50.0 52.5 55.0 57.5	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 2880	2620 2880	2650 2870	2600 2770	2490 2630	2360 2420	2200 2210	2030 1970	1770 1630	1480 1290	1170 945	939 697	731 535	
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 4930	4340 4640	3980 4150	3530	3070	2470	1730	1060	630 390	338	176	151	142	
60.0 62.5 65.0 67.5	4830 4820	4640 4530	4150 4060	3610 3600	3030 2880	2210 1970	1370 1090	765 573	390 222	192 138	147 122	130 112	125 107	
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	897 238	734	657	278	159	107	76.8	70.1	66.8	69.6	65.3 52.5	
75.0 77.5	240 119	250 119	238 134	251 124	215 111	149 94.9	109 71.5	74.9 51.5	57.7 43.4	55.3 43.8	54.8 41.6	56.8 40.0	52.5 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 90.0	9.5 4.3	9.5 4.3	9.5 4.3	9.5 4.3	7.2 3.5	6.7 3.9	6.2 4.1	6.7 4.5	6.7 5.2	7.2 5.7	7.6 6.2	8.1 6.7	8.1 7.2	
50.0	4.0	4.0	4.0	4.5	0.0	0.0	4.1	4.0	0.2	0.1	0.2	0.1		
	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	
γ∖C 0.0	1730	1730	1730	1730	1730	90.0 1730	95.0 1730	1730	1730	1730	1730	1730	125.0	
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	
5.0 7.5 10.0	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 15.0	1720 1720	1710 1710	1720 1710	1710 1700	1710 1690	1720 1700	1710 1690	1720 1700	1720 1710	1730 1720	1720 1720	1730 1740	1750 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 30.0	1630 1580	1580 1510	1520 1450	1490 1410	1490 1400	1460 1370	1470 1380	1500 1420	1530 1450	1580 1520	1640 1590	1710 1660	1760 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	969 707	938	963	998	1070	1170	1280	1440	1620	
40.0 42.5	1140 937	1010 795	900 718	815 621	787 595	756 593	780 587	813 610	894 678	996 769	1120 901	1280 1100	1490 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 55.0	258	214	203	196 163	187 157	180	183	191	196 158	197	225	295 182	429 250	
57.5	182 155	169 148	162 143	163 144	157 140	151 134	155 138	160 142	158 139	161 141	169 148	182 151	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 70.0	89.7 74.9	85.8 73.9	86.8 73.4	84.9 70.6	82.5 68.7	82.0 66.3	81.6 68.2	80.6 67.7	80.6 67.7	80.6 68.2	80.1 67.2	81.1 68.2	88.2 71.5	
70.0	74.9 65.8	73.9 63.4	60.6	70.6 58.2	55.8	53.9	68.2 54.4	55.3	56.3	68.2 59.1	61.0	68.2 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 85.0	20.4 13.4	18.8 11.9	18.6 12.4	16.9 11.9	16.6 11.4	15.5 11.0	15.5 10.5	14.7 10.0	14.9 9.5	13.4 8.6	14.3 9.1	17.4 8.1	12.4 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 7.5	1740 1730	1740 1740	1730 1720	1730 1740	1740 1730	1730 1740	1730 1740	1740 1740	1740 1750	1730 1740	1750 1760	1740 1750	1740 1760
10.0 12.5	1730	1750	1730	1750	1750	1760	1760	1760	1770	1770	1780	1780	1780
12.5 15.0	1750	1760	1750	1770	1770	1780	1780	1790	1800	1790	1810	1800	1800 1810
17.5	1760 1780	1790 1800	1780 1800	1800 1820	1790 1820	1800 1830	1800 1830	1800 1830	1810 1830	1810 1830	1830 1860	1810 1840	1830
20.0	1790	1810	1820	1850	1860	1870	1860	1870	1870	1870	1890	1870	1870
22.5 25.0	1810 1820	1820 1840	1850 1880	1870 1910	1890 1930	1910 1950	1900 1950	1920 1950	1910 1950	1910 1950	1920 1960	1910 1950	1900
27.5	1820	1860	1900	1940	1930	1990	1990	1990	2000	1990	2000	1990	1950 1990
30.0	1810	1870	1930	1970	2000	2040	2040	2040	2060	2040	2050	2040	2040
32.5 35.0	1800 1790	1880 1870	1940 1950	2000 2020	2050 2090	2090 2150	2100 2160	2110 2180	2110 2180	2110 2180	2100 2160	2090 2170	2100 2170
37.5	1750	1850	1960	2040	2130	2200	2240	2250	2270	2260	2240	2250	2240
40.0	1660 1510	1800 1720	1940 1910	2060 2060	2160 2180	2250 2300	2310 2390	2350 2430	2350 2450	2360 2470	2330 2440	2340 2440	2320 2430
42.5 45.0	1330	1600	1850	2060	2180	2300	2390	2550	2450	2630	2590	2440	2580
47.5	1120	1420	1720	2000	2210	2390	2570	2700	2820	2850	2800	2820	2790
50.0 52.5	850 626	1180 895	1530 1280	1910 1740	2220 2180	2440 2500	2680 2810	2900 3090	3060 3310	3110 3480	3110 3430	3090 3410	3040 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 62.5	155 130	248 149	477 288	871 617	1470 1160	2250 2010	2980 2870	3520 3560	4070 4160	4560 4650	4860 5080	4700 4880	4300 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 72.5	68.7 55.8	74.4 57.2	83.5 59.1	118 80.1	197 114	479 170	1120 250	1710 346	1760 341	1380 317	1290 328	1400 298	1470 312
75.0	43.1	43.8	43.8	54.4	80.1	107	136	152	162	138	129	138	146
77.5 80.0	31.1 20.8	33.2 20.9	30.8 20.4	36.2 23.1	46.5 25.6	59.6 33.8	70.1 35.5	82.5 44.5	81.1 46.3	81.1 43.4	76.3 42.0	76.3 43.4	76.3 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 90.0	4.3 3.9	4.2 3.5	3.6 3.2	3.5 2.8	3.3 2.8	3.6 2.6	3.3 2.8	3.6 2.8	2.9 2.9	2.9 2.9	2.9 2.9	2.9 2.9	4.3 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
				21010									
0.0	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730	1730
2.5	1730	1740	1730 1730	1730 1740	1730 1740	1750	1740	1730	1740	1730 1740	1730 1720	1730 1730	1730
2.5 5.0 7.5	1730 1730 1750	1740 1740 1750	1730 1730 1730 1740	1730 1740 1740 1740	1730	1750 1740 1740	1740 1740 1740	1730 1730 1740	1740 1730 1730	1730 1740 1740 1730	1730 1720 1720 1730	1730 1730 1720 1720	1730 1720 1710
2.5 5.0 7.5	1730 1730 1750 1770	1740 1740 1750 1770	1730 1730 1730 1740 1760	1730 1740 1740 1740 1750	1730 1740 1730 1740 1750	1750 1740 1740 1740	1740 1740 1740 1740	1730 1730 1740 1740	1740 1730 1730 1730	1730 1740 1740 1730 1720	1730 1720 1720 1730 1720	1730 1730 1720 1720 1720	1730 1720 1710 1710
2.5 5.0 7.5 10.0 12.5	1730 1730 1750 1770 1790	1740 1740 1750 1770 1800	1730 1730 1730 1740 1760 1790	1730 1740 1740 1740 1750 1770	1730 1740 1730 1740 1750 1780	1750 1740 1740 1740 1760	1740 1740 1740 1740 1740	1730 1730 1740 1740 1740	1740 1730 1730 1730 1730	1730 1740 1740 1730 1720 1720	1730 1720 1720 1730 1720 1730	1730 1730 1720 1720 1720 1720	1730 1720 1710 1710 1700
2.5 5.0 7.5 10.0 12.5 15.0 17.5	1730 1730 1750 1770 1790 1810 1820	1740 1740 1750 1770 1800 1820 1840	1730 1730 1730 1740 1760 1790 1810 1820	1730 1740 1740 1740 1750 1770 1800 1820	1730 1740 1730 1740 1750 1780 1800 1810	1750 1740 1740 1740 1760 1780 1800	1740 1740 1740 1740 1740 1760 1780	1730 1730 1740 1740 1740 1760 1770	1740 1730 1730 1730 1730 1730 1740 1750	1730 1740 1740 1730 1720 1720 1730 1730	1730 1720 1720 1730 1720 1730 1720 1720 1710	1730 1730 1720 1720 1720 1720 1720 1710 1690	1730 1720 1710 1710 1700 1690 1680
2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0	1730 1730 1750 1770 1790 1810 1820 1860	1740 1740 1750 1770 1800 1820 1840 1880	1730 1730 1730 1740 1760 1790 1810 1820 1850	1730 1740 1740 1750 1750 1770 1800 1820 1850	1730 1740 1730 1740 1750 1780 1800 1810 1830	1750 1740 1740 1740 1760 1780 1800 1830	1740 1740 1740 1740 1740 1760 1780 1780 1790	1730 1730 1740 1740 1740 1760 1770	1740 1730 1730 1730 1730 1740 1750 1760	1730 1740 1740 1730 1720 1720 1730 1730 1730	1730 1720 1720 1730 1720 1730 1720 1720 1710 1700	1730 1720 1720 1720 1720 1720 1720 1710 1690 1670	1730 1720 1710 1710 1700 1690 1680
2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0	1730 1730 1750 1770 1790 1810 1820 1860 1900 1940	1740 1740 1750 1770 1800 1820 1840 1880 1910 1940	1730 1730 1740 1760 1790 1810 1820 1850 1890 1920	1730 1740 1740 1750 1750 1800 1820 1850 1890 1920	1730 1740 1730 1740 1750 1780 1800 1810	1750 1740 1740 1760 1780 1800 1830 1830 1850 1880	1740 1740 1740 1740 1740 1760 1780	1730 1730 1740 1740 1740 1760 1770 1770 1770 1780 1790	1740 1730 1730 1730 1730 1730 1740 1750	1730 1740 1740 1730 1720 1720 1730 1730	1730 1720 1720 1730 1720 1730 1720 1710 1700 1680 1640	1730 1730 1720 1720 1720 1720 1720 1710 1690	1730 1720 1710 1710 1700 1690 1680 1650 1610 1550
2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5	1730 1730 1750 1770 1810 1820 1860 1900 1940 1990	1740 1740 1750 1800 1820 1840 1880 1910 1940 1980	1730 1730 1740 1760 1790 1810 1820 1850 1850 1890 1920 1970	1730 1740 1740 1750 1770 1800 1820 1850 1850 1890 1920 1960	1730 1740 1730 1740 1750 1780 1800 1810 1830 1860 1900 1930	1750 1740 1740 1760 1780 1800 1830 1830 1850 1880 1900	1740 1740 1740 1740 1760 1760 1780 1790 1820 1820 1840 1860	1730 1730 1740 1740 1740 1760 1770 1770 1780 1790 1800	1740 1730 1730 1730 1730 1740 1750 1760 1760 1760 1760 1740	1730 1740 1740 1730 1720 1720 1730 1730 1730 1730 1730 1730 1730	1730 1720 1720 1730 1720 1730 1720 1710 1710 1680 1640 1600	1730 1720 1720 1720 1720 1720 1710 1690 1670 1640 1590 1530	1730 1720 1710 1710 1700 1690 1680 1650 1610 1550 1490
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$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 37.5\\ 35.0\\ 37.5\\ 45.0\\ 42.5\\ 45.0\\ 47.5\\ 55.0\\ 57.5\\ 55.0\\ 57.5\\ 55.0\\ 57.5\\ 60.0\\ 62.5\\ 65.0\\ 67.5\\ 70.0\\ 72.5\\ \end{array}$	1730 1730 1770 1770 1810 1820 1940 1940 2030 2090 2160 2240 2340 2340 2430 2580 2750 3160 3370 3560 3670 3670 3710 3360 2700 3600 2700 305	1740 1740 1770 1800 1820 1840 1940 1940 2080 2080 2150 2290 2370 2470 2590 2720 2870 2720 2870 2720 2870 2800 3070 3020 2800 2110 264	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2070 2130 2190 2250 2340 2400 2400 2520 2560 2540 2560 2560 2560 2560 2560 2560 2560 256	1730 1740 1740 1750 1750 1800 1820 1850 1920 1960 2030 2070 2110 2130 2170 2180 2200 2170 2180 2200 2140 2010 17360 1360 1360 1300	1730 1740 1730 1740 1750 1800 1810 1830 1900 1930 1900 1930 2020 2030 2040 2020 2040 2020 1980 1920 1810 1620 1310 1620 1310 1620 1310 983 749 568 242 130 91.1	1750 1740 1740 1760 1780 1880 1850 1850 1850 1920 1920 1920 1920 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1760 1780 1820 1840 1870 1840 1870 1870 1870 1870 1870 1870 1870 187	1730 1740 1740 1740 1760 1770 1790 1790 1790 1790 1790 1790 179	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1760 176	1730 1740 1740 1720 1720 1730 1730 1730 1730 1730 1730 1730 1510 1510 1510 1510 1410 1290 1130 925 676 478 314 192 150 1314 192 150 1314 192 56,3	1730 1720 1720 1720 1720 1710 1700 1700 1600 1600 1600 1600 1470 1380 1270 1120 925 722 534 352 235 167 145 125 107 92.0 79.6 66.3 58.2	1730 1720 1720 1720 1720 1720 1710 1690 1670 1530 1530 1530 1260 1130 974 765 583 422 278 195 157 137 120 103 90.6 80.1 67.7 59.1	1730 1710 1710 1710 1690 1690 1650 1610 1550 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 141
$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.5\\ 25.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 32.5\\ 35.0\\ 37.5\\ 40.0\\ 42.5\\ 50.0\\ 52.5\\ 55.0\\ 57.5\\ 60.0\\ 52.5\\ 55.0\\ 57.5\\ 60.0\\ 62.5\\ 65.0\\ 67.5\\ 70.0\\ 72.5\\ 75.0\\ \end{array}$	1730 1730 1770 1770 1810 1860 1900 2030 2090 2030 2090 2240 2340 2340 2430 2580 2750 2950 3160 3370 33560 3370 33560 3370 3360 2700 1630 343	1740 1740 1750 1800 1820 1840 1910 1940 1980 2020 2020 2020 2290 2290 2290 2290 2	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2010 2010 2130 2190 2250 2250 2250 2340 2460 2540 2460 2560 2540 2460 2560 2540 2460 2560 2540 2460 2560 2540 2190 2190 2190 2190 2110 2110 2110 211	1730 1740 1740 1750 1750 1800 1820 1850 1990 2030 2070 2110 2150 2170 2180 2200 2210 2140 2010 1730 1360 1100 720 235 130 86.8	1730 1740 1750 1760 1800 1800 1800 1900 1930 1960 1930 2020 2030 2040 2020 2030 2040 2020 1980 1920 1810 1620 1310 983 749 568 242 130 91.1	1750 1740 1740 1760 1780 1830 1850 1830 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1780 1820 1820 1820 1870 1870 1870 1870 1870 1870 1870 187	1730 1730 1740 1740 1740 1760 1770 1780 1790 1780 1790 1780 1780 1780 1620 1620 1620 1620 1620 1620 1620 162	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1760 176	1730 1740 1720 1720 1730 1730 1730 1730 1730 1730 1730 173	$\begin{array}{c} 1730\\ 1720\\ 1720\\ 1730\\ 1720\\ 1720\\ 1710\\ 1700\\ 1600\\ 1600\\ 1600\\ 1550\\ 1470\\ 1120\\ 925\\ 722\\ 534\\ 355\\ 235\\ 167\\ 145\\ 125\\ 107\\ 92.0\\ 79.6\\ 66.3\\ 58.2\\ 50.6 \end{array}$	1730 1720 1720 1720 1720 1710 1690 1670 1590 1530 1460 1590 1260 1130 974 765 583 422 278 1974 765 583 422 278 1974 767 137 120 103 90.6 80.1 67.7 59.1 48.6	1730 1720 1710 1710 1680 1650 1650 1610 1550 1490 1410 1300 1180 860 684 516 371 246 185 155 136 118 105 136 66.3 80.6 66.3 56.3 56.3
$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 37.5\\ 40.0\\ 42.5\\ 45.0\\ 47.5\\ 55.0\\ 57.5\\ 55.0\\ 57.5\\ 60.0\\ 62.5\\ 65.0\\ 62.5\\ 65.0\\ 67.5\\ 75.0\\ 72.5\\ 75.0\\ 77.5\\ 80.0\\ \end{array}$	1730 1730 1770 1770 1810 1860 1900 1940 2030 2090 2160 2340 2340 2340 2340 2350 3160 3370 3560 3670 3560 3670 3710 360 2750 3160 3570 3670 3670 3560 2750 3160 3670 3560 2750 3670 3670 3670 3670 3670 3710 360 3710 360 3710 360 3710 360 3710 360 3710 360 3710 360 3710 360 3710 360 3710 3700 3700 3700 3700 3700 3700 370	1740 1740 1770 1800 1820 1820 1840 1910 1940 2020 2080 2150 2290 2370 2470 2590 2470 2590 2470 2590 3060 3070 3020 2870 2190 1210 264 141 73.9 42.2	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2070 2130 2190 2250 2340 2400 2400 2520 2560 2540 2560 2560 2560 2560 2560 2560 2560 256	1730 1740 1740 1740 1770 1800 1820 1850 1920 1960 1920 2070 2110 2150 2170 2180 2210 2140 2140 2140 2140 2140 2140 2135 130 86.8 49.6 30.3	1730 1740 1730 1740 1750 1800 1810 1860 1930 1930 1930 2020 2040 2020 2040 2020 1980 2040 2020 1980 1920 1810 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1310 1620 1300 1620 1300 1620 1930 1620 1930 1930 1930 1930 1930 1930 1930 193	1750 1740 1740 1760 1780 1830 1850 1850 1830 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1760 1820 1840 1840 1870 1870 1870 1870 1870 1870 1870 187	1730 1740 1740 1740 1760 1770 1780 1790 1790 1790 1790 1790 1790 1790 179	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1720 1690 1690 1650 1580 1490 1350 1490 1350 1490 1350 1490 2677 454 284 177 99.2 87.8 70.6 56.3 45.7 32.5 22.1	1730 1740 1740 1730 1720 1730 1730 1730 1730 1730 1710 1670 1510 1510 1510 1510 1510 1510 1410 1290 1530 1311 114 925 676 478 314 192 150 1311 114 96.3 80.6 67.7 56.3 43.8 32.2 22.3	1730 1720 1720 1730 1720 1710 1700 1710 1680 1640 1600 1550 1270 1120 1270 1380 1270 1380 1270 1470 1380 1270 145 125 722 534 352 235 167 145 125 107 92.0 79.6 66.3 58.2 50.6 33.8 22.8	1730 1720 1720 1720 1720 1720 1710 1690 1670 1530 1530 1530 1260 1130 974 765 583 422 278 195 157 137 120 103 90.6 80.1 67.7 59.1	1730 1720 1710 1700 1690 1650 1610 1550 1410 1300 1410 1300 1410 1300 1410 1300 1410 141
$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 37.5\\ 35.0\\ 37.5\\ 45.0\\ 47.5\\ 55.0\\ 57.5\\ 58.0\\ 80.0\\ 82.5\\ 80.0\\ 80$	1730 1730 1770 1770 1810 1820 1940 1940 2030 2090 2160 2240 2340 2430 2580 2750 3370 3560 3670 3370 3670 3670 3670 3670 3670 36	1740 1740 1750 1800 1820 1840 1940 1940 1940 2080 2150 2290 2370 2470 2290 2370 2470 2590 2370 2470 2590 2370 2470 2590 2470 2590 2470 2590 2110 264 141 73.9 42.2 19.6	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2070 2130 2190 2250 2340 2400 2400 2520 2540 2540 2560 2540 2560 2540 2660 1940 1280 260 1940 1280 2557 110 602 190	1730 1740 1740 1750 1750 1800 1820 1850 1920 1960 2030 2070 2110 2130 2210 2140 2200 2140 2210 2140 2140 2010 17360 1100 720 366 1100 730 86.8 49.6 30.3 16.3	1730 1740 1730 1740 1750 1800 1810 1830 1900 1930 1900 2020 2030 2040 2020 2030 2040 2020 1980 1920 1810 1620 1310 983 749 568 242 130 91.1 59.6 36.4 24.4 24.4	1750 1740 1740 1760 1780 1830 1850 1850 1850 1920 1920 1920 1920 1920 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1760 1820 1840 1840 1870 1870 1870 1870 1870 1870 1870 187	1730 1740 1740 1740 1760 1770 1780 1790 1790 1790 1790 1780 1790 1780 1760 1620 1520 1370 1520 1520 1520 1520 1520 1520 1520 152	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1760 176	1730 1740 1720 1720 1730 1730 1730 1730 1730 1730 1730 1510 1410 1570 1510 1410 1290 1510 1410 1290 1314 192 5676 478 314 192 150 1314 192 56.3 43.8 32.2 22.3 43.8 32.2 22.3 18.2	1730 1720 1720 1730 1720 1710 1700 1700 1600 1600 1600 1470 1270 1270 1270 1225 722 534 352 235 167 145 125 107 92.0 79.6 66.3 58.2 50.6 33.8 22.8 15.7	1730 1720 1720 1720 1720 1720 1710 1690 1670 1530 1530 1460 1380 1260 1130 974 765 583 422 278 195 157 137 120 103 90.6 80.1 67.1 48.6 35.5 23.6 14.9	1730 1710 1710 1710 1690 1690 1650 1610 1550 1490 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1400 140
$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 37.5\\ 40.0\\ 42.5\\ 35.0\\ 37.5\\ 40.0\\ 42.5\\ 55.0\\ 57.5\\ 60.0\\ 52.5\\ 55.0\\ 57.5\\ 60.0\\ 62.5\\ 70.0\\ 72.5\\ 75.0\\ 77.5\\ 80.0\\ 82.5\\ 85.0 \end{array}$	1730 1730 1750 1770 1810 1860 1900 1940 1900 2030 2090 2160 2240 2340 2430 2240 2340 2430 2240 2340 2430 3670 3670 3670 3670 3670 3670 3670 36	1740 1740 1750 1800 1820 1840 1910 1940 1980 2020 2080 2150 2220 2290 2370 2470 2590 2590 2590 2590 2590 2590 2590 259	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2010 2010 2130 2190 2250 2250 2250 22400 2460 2540 2460 2560 2540 2460 2560 2540 2460 2560 2540 2460 2560 2540 2460 2540 2190 2190 2190 211 2190 211 2190 211 2190 2110 2190 2110 2190 219	1730 1740 1740 1750 1750 1800 1820 1850 1920 1960 1990 2070 2110 2150 2100 2110 2150 2210 2140 2200 2210 2140 2010 1730 1360 1100 720 235 130 86.8 49.6 30.3 8.1	1730 1740 1750 1760 1800 1810 1830 1900 1930 1960 1930 2020 2030 2040 2020 2030 2040 2020 1980 1920 1810 1620 1310 983 749 568 242 130 91.1 59.6 36.4 24.4 14.5 7.6	1750 1740 1740 1760 1780 1830 1850 1850 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1780 1820 1820 1820 1870 1870 1870 1870 1870 1870 1870 187	1730 1740 1740 1740 1760 1770 1780 1790 1780 1790 1780 1790 1620 1520 1620 1620 1620 1620 1620 1620 1620 16	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1760 176	1730 1740 1720 1720 1730 1730 1730 1730 1730 1730 1730 173	$\begin{array}{c} 1730\\ 1720\\ 1720\\ 1730\\ 1720\\ 1720\\ 1710\\ 1700\\ 1600\\ 1600\\ 1600\\ 1550\\ 1470\\ 1120\\ 925\\ 534\\ 352\\ 235\\ 167\\ 145\\ 125\\ 107\\ 92.0\\ 79.6\\ 66.3\\ 58.2\\ 28.\\ 15.7\\ 10.5\\ \end{array}$	1730 1720 1720 1720 1720 1720 1690 1670 1690 1590 1530 1460 1380 1260 1130 974 765 583 422 278 195 583 422 278 197 137 120 103 90.6 80.1 67.7 59.1 137 120 103 90.6 80.1 67.7 59.1 137 103 103 103 103 103 103 103 103 103 103	1730 1720 1710 1710 1690 1650 1650 1610 1550 1410 1300 1440 860 684 516 371 246 185 155 136 118 105 136 66.3 36.3 66.3 33.8 24.8 16.3 33.8
$\begin{array}{c} 2.5\\ 5.0\\ 7.5\\ 10.0\\ 12.5\\ 15.0\\ 22.5\\ 25.0\\ 27.5\\ 30.0\\ 32.5\\ 35.0\\ 37.5\\ 35.0\\ 37.5\\ 45.0\\ 47.5\\ 55.0\\ 57.5\\ 58.0\\ 80.0\\ 82.5\\ 80.0\\ 80$	1730 1730 1770 1770 1810 1820 1940 1940 2030 2090 2160 2240 2340 2340 2430 2430 2580 2750 3160 3370 3670 3670 3670 3670 3670 3670 36	1740 1740 1750 1800 1820 1840 1940 1940 1940 2080 2150 2290 2370 2470 2290 2370 2470 2590 2370 2470 2590 2370 2470 2590 2470 2590 2470 2590 2110 264 141 73.9 42.2 19.6	1730 1730 1740 1760 1760 1810 1820 1850 1920 1970 2010 2070 2130 2190 2250 2340 2400 2400 2520 2540 2540 2560 2540 2560 2540 2660 1940 1280 260 1940 1280 2557 110 602 190	1730 1740 1740 1750 1750 1800 1820 1850 1920 1960 2030 2070 2110 2130 2210 2140 2200 2140 2210 2140 2140 2010 17360 1100 720 366 1100 730 86.8 49.6 30.3 16.3	1730 1740 1730 1740 1750 1800 1810 1830 1900 1930 1900 2020 2030 2040 2020 2030 2040 2020 1980 1920 1810 1620 1310 983 749 568 242 130 91.1 59.6 36.4 24.4 24.4	1750 1740 1740 1760 1780 1830 1850 1850 1850 1920 1920 1920 1920 1920 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1930 1920 1920 1920 1920 1920 1920 1920 192	1740 1740 1740 1740 1760 1760 1820 1840 1840 1870 1870 1870 1870 1870 1870 1870 187	1730 1740 1740 1740 1760 1770 1780 1790 1790 1790 1790 1780 1790 1780 1760 1620 1520 1370 1520 1520 1520 1520 1520 1520 1520 152	1740 1730 1730 1730 1740 1760 1760 1760 1760 1760 1760 1760 176	1730 1740 1720 1720 1730 1730 1730 1730 1730 1730 1730 1510 1410 1570 1510 1410 1290 1510 1410 1290 1314 192 5676 478 314 192 150 1314 192 56.3 80.6 67.7 56.3 43.8 32.2 22.3 43.8 32.2 22.3 18.2	1730 1720 1720 1720 1720 1710 1700 1600 1600 1600 1470 1270 1270 1270 1225 722 534 352 235 167 145 125 107 92.0 79.6 66.3 58.2 50.6 33.8 22.8 15.7	1730 1720 1720 1720 1720 1720 1710 1690 1670 1530 1530 1460 1380 1260 1130 974 765 583 422 278 195 157 137 120 103 90.6 80.1 67.1 48.6 35.5 23.6 14.9	1730 1710 1710 1710 1690 1690 1650 1610 1550 1490 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1300 1410 1400 140



γ\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
-	1700	1700	1700	1700	1700	1700	1700	1700	1700	4700	1700	1700	4700
0.0 2.5	1730 1720	1730 1720	1730 1720	1730 1720	1730 1730	1730 1730	1730 1730	1730 1720	1730 1720	1730 1730	1730 1720	1730 1730	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 17.5	1690 1670	1670 1640	1660 1640	1660 1630	1660 1630	1680 1650	1680 1660	1690 1670	1690 1680	1690 1690	1700 1710	1720 1730	1740 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 30.0	1440 1350	1410 1320	1390 1300	1390 1280	1400 1310	1430 1340	1470 1390	1510 1450	1580 1520	1650 1620	1710 1700	1770 1770	1810 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 42.5	780 616	722 563	719 559	711 551	751 567	814 622	895 716	1010 815	1150 990	1340 1210	1530 1390	1650 1560	1780 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 55.0	187 158	179 153	174 148	172 147	183 157	186 158	194 161	213 166	278 182	397 245	573 383	826 600	1190 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 67.5	95.4 80.1	93.5 78.7	89.2 79.2	90.6 77.7	94.0 80.6	97.8 82.0	95.4 83.5	94.4 83.0	99.7 84.9	105 92.0	111 91.6	123 99.7	164 116
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 80.0	31.8 22.6	30.2 20.9	30.3 21.1	29.2 20.4	30.6 22.1	33.7 23.8	36.2 24.8	39.4 25.3	36.9 24.4	33.8 23.7	36.0 25.1	39.0 25.7	37.2 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
γ\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 7.5	1710 1720	1720 1720	1720 1720	1720 1720	1720 1720	1730 1740	1730 1730	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 20.0	1770 1780	1780 1790	1780 1800	1790 1820	1780 1820	1800 1830	1800 1830	1800 1820					
22.5	1800	1820	1830	1850	1850	1860	1860	1850					
25.0	1820	1860	1860	1880	1890	1900	1890	1880					
27.5 30.0	1850 1880	1890 1920	1900 1940	1920 1970	1930 1970	1940 1990	1930 1980	1930 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 42.5	1920 1900	2030 2050	2110 2150	2210 2270	2230 2330	2250 2330	2240 2340	2240 2330					
45.0	1870	2040	2180	2330	2410	2440	2450	2450					
47.5	1820	2020	2220	2400	2530	2620	2620	2650					
50.0 52.5	1740 1600	1990 1950	2240 2260	2460 2550	2670 2840	2810 3060	2850 3160	2880 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 65.0	572 409	1090 844	1880 1610	2640 2480	3280 3210	3940 3830	4530 4380	4830 4820					
67.5	227	598	1240	2060	2770	3160	3550	3900					
70.0	127	243	691	1370	1960	2320	2400	2640					
72.5 75.0	87.3 60.6	125 89.2	203 124	397 168	697 224	692 241	687 247	720 240					
75.0 77.5	43.5	89.2 57.7	83.0	108	128	241 129	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 87.5	9.5 3.9	9.1 3.9	11.4 4.6	11.4 4.8	15.5 5.7	17.2 4.8	15.7 4.8	17.2 9.5					
90.0	2.9	2.6	2.8	2.6	2.8	2.9	4.3	4.3					
0010													



(4) Luminous Flux Table

PHOTOVOLTAIC and LIGHTING Laboratory Report No. : LUR20110251

Luminaire Summary

	Lumen Su	ummary	Luminaire Summary		
Zone	Lumens (Im)	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 (Im)	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

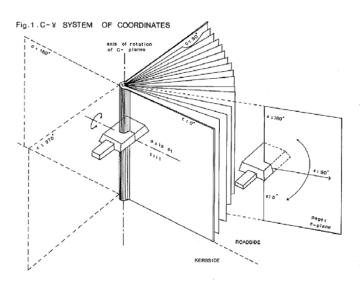


2.	Basic	characteristics	:
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	Test Value	Note	
Input electrical	Voltage (Vac)	220	
characteristics	Frequency(Hz)	60	
	Current (A)	0.3701	
	Power (W)	75.35	
	Power factor (p.f.)	0.9254	
Output optical	Total luminous flux (lm)	6202.4	
characteristics	Luminous 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: $(25\pm1)^{\circ}$ C, $(60\pm10)^{\circ}$ 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

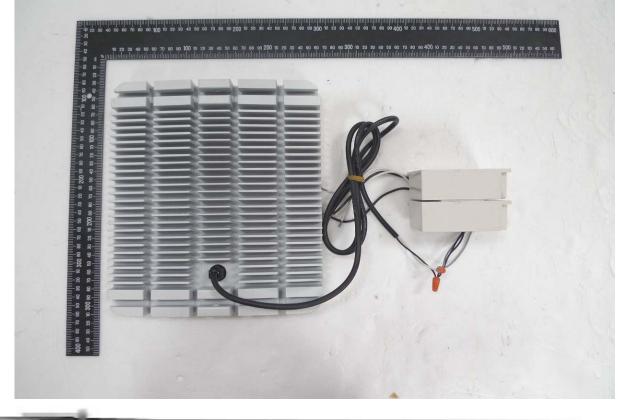


4.PHOTO :

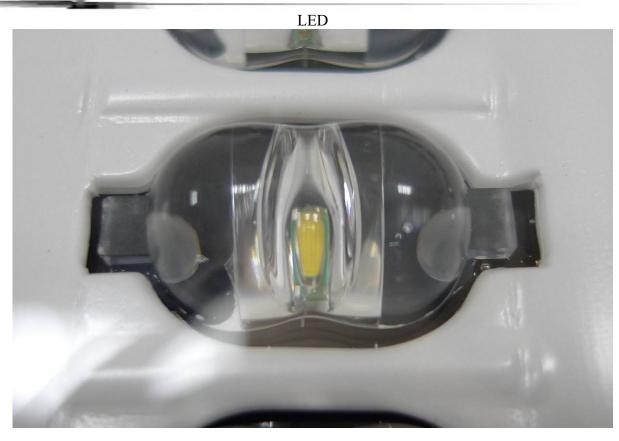
Front view of appearance



Side view of appearance









Contril gear