

燈具配光曲線試驗報告

測試標準： CIE 70 (1987 年版) 、 CIE 84 (1989 年版)

收件日期： 105 年 06 月 24 日

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2. 報告編號：16062433
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報告簽署人：





試驗報告

測試樣品基本資料表

委測廠商：昶旭能源股份有限公司

委測廠商地址：新竹市東區公道五路二段 83 號 5F-3

製造廠商：昶旭能源股份有限公司

製造廠商地址：新竹市東區公道五路二段 83 號 5F-3

廠牌或商標：CooLED

產品名稱：7000Lm LED 戶外投射燈

燈具型號：F3070C-001

額定輸入電壓 (V)：100~240

額定頻率 (Hz)：50/60

額定輸入功率 (W)：60

樣品尺寸：長 282 mm × 寬 221 mm × 高 113 mm

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試驗內容

試驗條件

環境溫度 (°C)	25.5
環境濕度(%)	56.2
γ 軸取樣步距	5°
C 軸取樣步距	5°

電氣測試

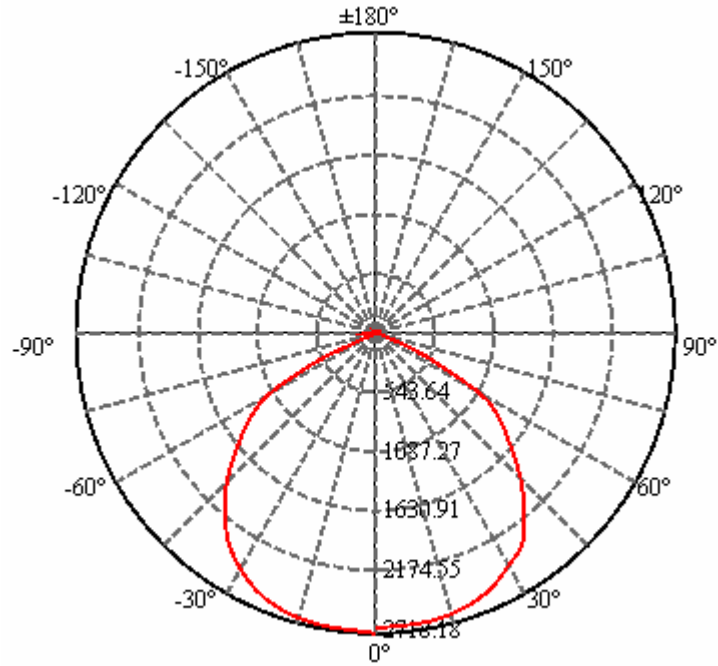
試驗項目	試驗結果
電壓(V)	220.0
電流(A)	0.287
功率(W)	62.4
頻率(Hz)	60
功率因數	0.988

配光量測

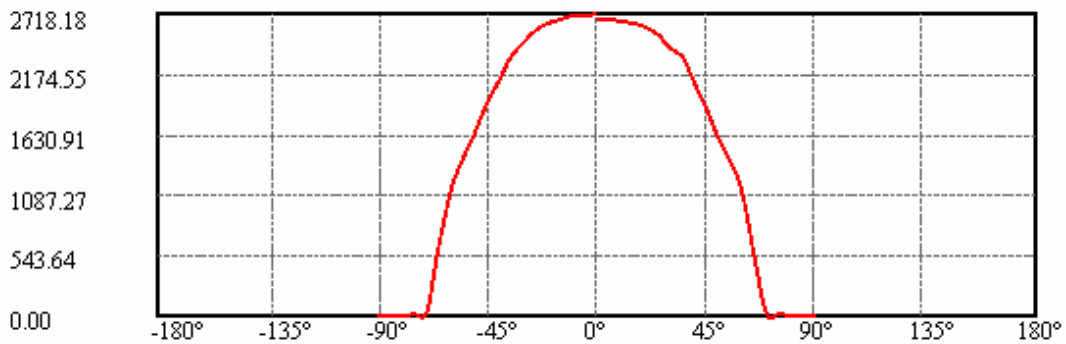
試驗項目	試驗結果
燈具全光通量 (lm)	7117.6
燈具發光效率 (lm/W)	114.1
中心光強度 (cd)	2671.6
最大光強度 (cd)	2718.2
最大光強度角度 (°)	C : 80.0 γ : 0.0
半峰邊角(50%Imax)	C0_180 Left=55.9 Right=55.3
	C90_270 Left=55.8 Right=55.6
色溫 (K)	5268
演色指數 (Ra)	82.4
色座標	x : 0.3381 y : 0.3480

配光曲線圖(一)

極座標圖 C0 / 180

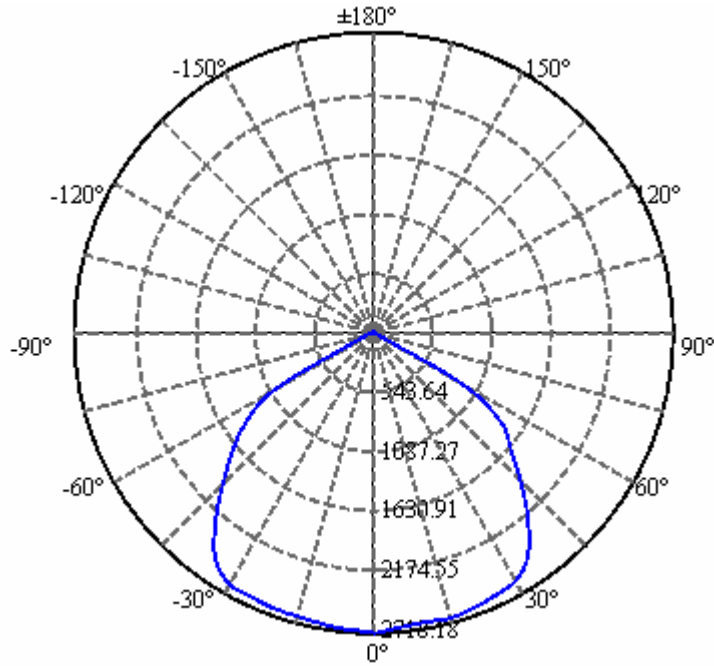


直角座標圖 C0 / 180

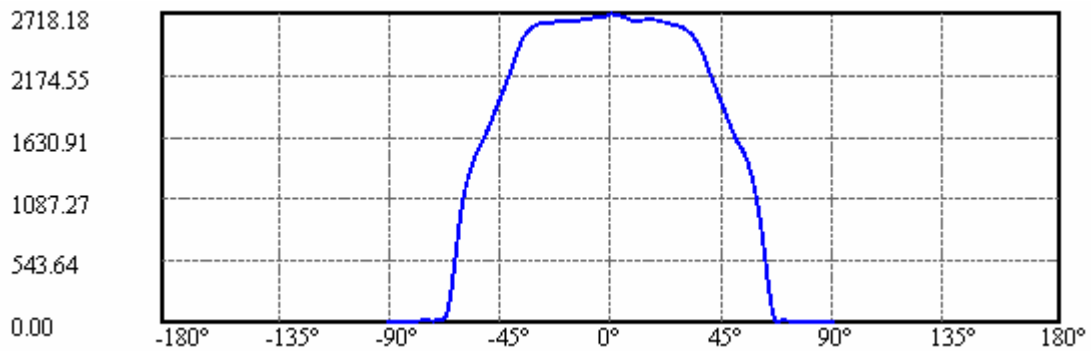


配光曲線圖(二)

極座標圖 C90 / 270

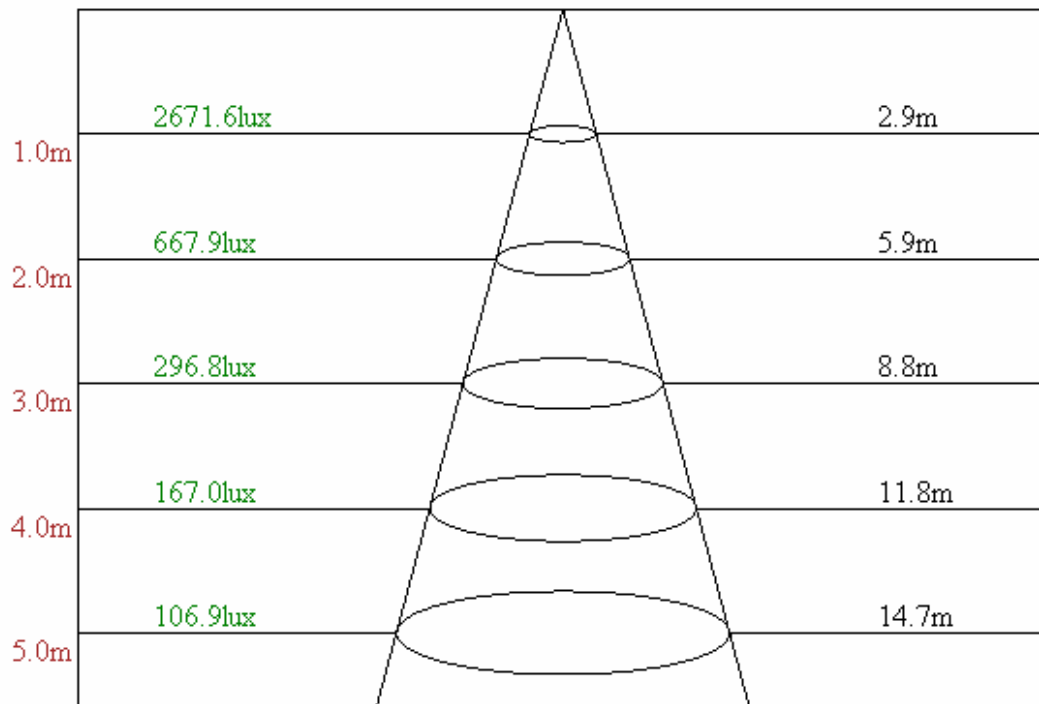


直角座標圖 C90 / 270



照度距離表

照度距離圖表



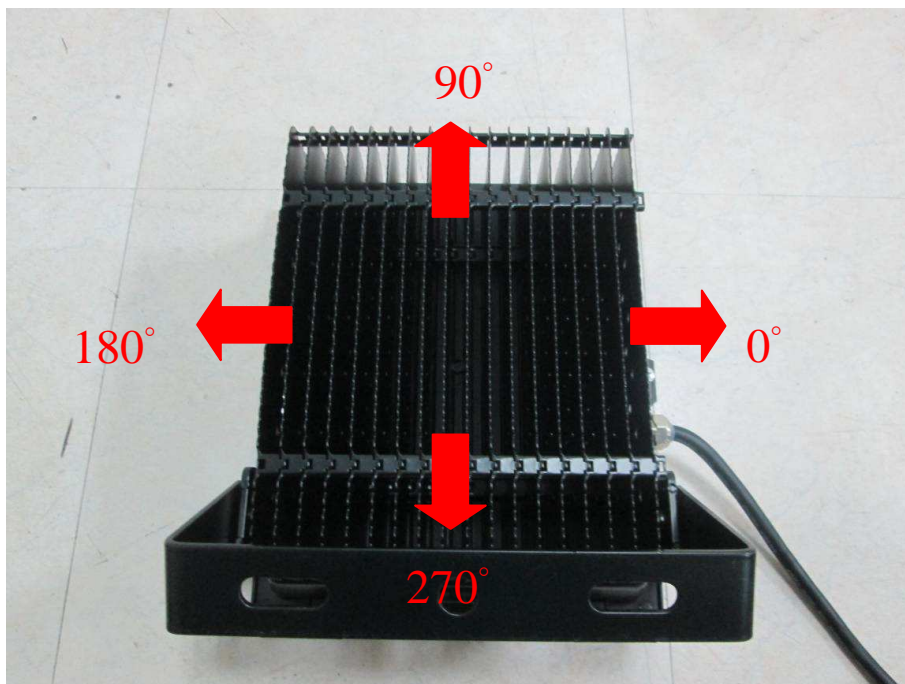
C80面光束角111.67

測試樣品照片

測試樣品外觀



測試樣品架設方向



光強數據表(一)

光強數據表(cd)

$\gamma/C(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0
0	2671.612	2688.688	2696.062	2673.552	2674.328	2676.657	2687.135	2683.254
5	2666.566	2665.014	2666.955	2664.626	2667.343	2679.374	2686.747	2677.433
10	2651.431	2647.162	2662.686	2647.162	2659.193	2647.55	2639.788	2672.388
15	2636.684	2635.907	2634.743	2651.431	2621.936	2640.953	2649.491	2646.774
20	2606.413	2602.532	2602.144	2589.725	2599.427	2607.965	2643.281	2632.415
25	2524.138	2533.063	2548.975	2552.468	2557.513	2574.978	2574.978	2584.292
30	2420.129	2487.657	2465.924	2458.162	2472.91	2496.195	2504.733	2523.749
35	2326.212	2331.645	2337.854	2355.707	2396.844	2398.396	2446.52	2456.222
40	2107.717	2143.033	2132.943	2157.781	2187.664	2230.354	2278.088	2306.419
45	1856.235	1863.996	1860.504	1895.432	1931.524	1941.226	2005.649	2126.345
50	1603.2	1605.917	1610.574	1629.59	1633.471	1654.428	1720.403	1785.99
55	1372.286	1372.674	1374.615	1373.451	1371.51	1381.6	1381.212	1421.574
60	1107.609	1109.937	1104.504	1112.654	1103.728	1110.714	1102.952	1119.252
65	492.8743	499.4718	556.133	630.2582	715.2499	792.8679	815.7653	815.3772
70	22.12113	21.73304	22.50922	23.67349	26.39012	34.15192	73.34901	169.2072
75	9.70225	9.31416	8.92607	9.31416	8.92607	8.53798	8.53798	8.149891
80	4.26899	3.8809	4.26899	3.8809	3.8809	3.49281	3.10472	3.10472
85	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427
90	0	0	0	0	0	0	0	0

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光強數據表(二)

光強數據表(cd)

第 2 頁 共 10 頁

$\gamma/C(^{\circ})$	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0
0	2682.09	2700.331	2688.688	2696.062	2693.345	2698.778	2687.523	2701.107
5	2672.388	2680.15	2667.731	2656.088	2662.298	2677.821	2680.926	2656.476
10	2654.148	2640.953	2644.446	2655.312	2675.104	2662.298	2642.893	2643.669
15	2652.983	2654.924	2665.79	2664.626	2659.969	2652.983	2652.207	2638.236
20	2647.162	2625.817	2646.774	2661.133	2661.521	2643.281	2647.162	2665.402
25	2625.041	2595.158	2637.072	2628.534	2626.205	2620.384	2622.324	2620.384
30	2558.29	2580.411	2577.694	2578.47	2576.918	2581.963	2580.799	2599.039
35	2482.224	2494.255	2506.674	2478.343	2476.403	2451.565	2480.283	2469.029
40	2347.168	2357.259	2325.047	2298.657	2269.551	2245.101	2222.203	2203.963
45	2152.735	2126.733	2062.698	2012.247	1952.481	1947.436	1922.21	1913.284
50	1793.752	1767.362	1723.12	1663.354	1670.728	1663.742	1656.756	1659.473
55	1422.738	1416.917	1402.945	1394.019	1392.079	1383.541	1399.841	1383.153
60	1111.102	1121.58	1117.311	1124.685	1104.892	1077.338	1016.408	957.03
65	818.8699	811.1081	718.7427	551.864	420.6896	313.9648	205.6877	144.7576
70	209.1805	139.3243	43.85417	22.89731	20.56877	20.56877	20.18068	19.79259
75	8.149891	7.7618	7.7618	7.7618	8.149891	8.92607	8.92607	8.53798
80	3.10472	3.10472	3.10472	3.10472	3.10472	3.49281	3.8809	3.8809
85	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	1.16427	1.16427	1.16427
90	0	0	0	0	0	0	0	0

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光強數據表(三)

光強數據表(cd)

第 3 頁 共 10 頁

$\gamma/C(^{\circ})$	80.0	85.0	90.0	95.0	100.0	105.0	110.0	115.0
0	2718.183	2689.076	2710.809	2683.254	2702.271	2677.045	2682.09	2677.045
5	2670.835	2671.224	2679.762	2667.343	2674.717	2688.3	2670.059	2673.552
10	2666.566	2668.119	2656.865	2673.552	2656.088	2652.207	2662.298	2661.91
15	2660.745	2663.074	2668.507	2672	2672	2675.104	2652.207	2670.448
20	2672.776	2649.103	2647.162	2634.743	2646.386	2655.7	2650.267	2652.983
25	2622.324	2628.534	2614.563	2633.967	2618.444	2617.667	2652.983	2640.564
30	2576.53	2576.53	2582.351	2569.156	2577.306	2566.051	2576.53	2595.546
35	2448.46	2439.146	2448.072	2465.536	2465.536	2464.76	2449.236	2463.595
40	2198.918	2186.499	2186.499	2193.097	2215.606	2217.158	2241.996	2271.879
45	1909.403	1888.058	1883.789	1911.344	1916	1917.165	1937.734	1962.959
50	1648.995	1629.978	1635.023	1638.128	1653.652	1662.19	1671.504	1669.175
55	1402.945	1361.032	1409.155	1413.812	1388.974	1416.141	1413.036	1416.917
60	930.2518	921.7138	937.2374	947.7158	988.0772	1047.067	1122.744	1139.82
65	100.5153	83.05127	78.0061	88.87262	112.158	171.1477	256.1394	380.7163
70	18.62832	17.85214	17.07596	16.68787	16.68787	17.07596	17.85214	19.4045
75	8.53798	7.7618	7.7618	7.37371	6.98562	7.37371	6.98562	7.7618
80	3.49281	3.49281	3.10472	3.10472	3.10472	2.71663	3.10472	3.10472
85	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801
90	0	0	0	0	0	0	0	0

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光強數據表(四)

Intensity data(cd)

Page: 4 Total:10

$\gamma/C(^{\circ})$	120.0	125.0	130.0	135.0	140.0	145.0	150.0	155.0
0	2679.762	2694.509	2688.3	2693.733	2704.599	2663.462	2673.552	2688.3
5	2677.045	2683.254	2675.881	2668.507	2679.374	2675.104	2673.94	2679.374
10	2649.103	2679.762	2668.119	2672.388	2675.881	2678.985	2655.7	2684.807
15	2654.924	2657.641	2645.61	2665.79	2666.566	2665.014	2643.281	2656.476
20	2670.059	2670.835	2635.131	2639.788	2625.429	2658.805	2616.115	2612.234
25	2641.729	2644.833	2625.817	2621.936	2593.218	2572.26	2587.396	2571.873
30	2595.158	2610.682	2579.246	2581.963	2538.885	2530.735	2527.63	2500.852
35	2478.343	2488.821	2492.702	2477.567	2475.238	2442.639	2433.712	2401.501
40	2282.357	2326.212	2313.405	2323.495	2339.019	2316.509	2273.043	2222.98
45	2000.992	2030.487	2069.684	2133.719	2136.048	2088.313	2035.532	1978.095
50	1676.937	1711.477	1761.929	1813.933	1830.621	1808.111	1757.272	1692.461
55	1419.633	1427.783	1424.678	1430.5	1446.411	1456.502	1447.964	1424.678
60	1138.656	1160.001	1140.208	1140.985	1128.566	1135.163	1133.223	1155.732
65	466.8723	615.1227	761.8207	840.9911	841.3792	841.3792	843.3196	837.8864
70	20.56877	24.06158	65.58721	209.9567	268.9464	220.8232	122.2484	42.6899
75	7.7618	8.149891	8.53798	8.149891	8.149891	8.149891	8.92607	9.31416
80	2.71663	3.10472	3.10472	3.10472	3.49281	3.49281	3.49281	3.8809
85	0.7761801	0.7761801	0.7761801	1.55236	1.16427	1.16427	1.16427	1.16427
90	0	0	0	0	0	0	0	0

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光強數據表(五)

Intensity data(cd)

Page: 5 Total:10

$\gamma/C(^{\circ})$	160.0	165.0	170.0	175.0	180.0	185.0	190.0	195.0
0	2691.016	2699.554	2691.016	2688.3	2710.421	2703.435	2684.031	2690.24
5	2687.523	2654.148	2691.792	2699.554	2694.121	2679.762	2697.614	2669.283
10	2666.178	2672.776	2692.957	2670.059	2693.733	2672.776	2681.314	2683.643
15	2678.209	2649.879	2659.193	2663.462	2672.388	2682.09	2681.702	2667.731
20	2599.427	2635.519	2608.353	2604.86	2635.519	2623.1	2626.593	2652.983
25	2556.737	2563.723	2583.515	2541.99	2566.439	2562.947	2566.827	2570.708
30	2500.076	2476.791	2498.524	2469.029	2464.372	2481.448	2477.955	2482.612
35	2390.635	2348.333	2352.602	2320.002	2327.376	2356.094	2339.019	2371.23
40	2195.813	2187.664	2159.333	2128.674	2134.495	2153.124	2161.662	2201.247
45	1933.076	1909.403	1895.82	1898.148	1900.089	1887.67	1896.596	1917.941
50	1657.532	1662.578	1641.233	1628.814	1650.935	1636.188	1652.875	1652.875
55	1425.067	1397.512	1390.915	1404.886	1406.438	1424.678	1404.886	1423.514
60	1148.358	1143.313	1139.432	1129.73	1133.999	1146.03	1160.777	1144.089
65	775.0157	688.8598	651.6031	607.3609	596.4943	622.4964	670.6196	743.1924
70	32.21147	28.71866	26.77821	27.55439	27.94248	28.33057	29.10675	35.31619
75	9.70225	10.09034	10.47843	11.25461	11.6427	11.6427	12.03079	12.80697
80	3.8809	4.26899	4.26899	5.04517	5.04517	5.04517	5.43326	6.209441
85	1.16427	1.55236	1.55236	1.55236	1.55236	1.55236	1.94045	1.94045
90	0	0	0	0	0	0	0	0

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光強數據表(六)

Intensity data(cd)

Page: 6 Total:10

$\gamma/C(^{\circ})$	200.0	205.0	210.0	215.0	220.0	225.0	230.0	235.0
0	2702.659	2674.717	2685.195	2686.747	2689.464	2695.285	2680.15	2676.657
5	2683.643	2668.119	2685.195	2677.821	2689.076	2698.39	2684.807	2680.15
10	2679.762	2693.345	2681.702	2688.3	2701.883	2712.361	2675.493	2674.328
15	2675.881	2682.866	2675.104	2684.807	2672.388	2689.076	2680.15	2677.045
20	2653.76	2651.043	2669.283	2686.747	2668.507	2675.104	2689.852	2697.614
25	2579.246	2588.172	2608.741	2628.922	2635.907	2662.298	2669.283	2669.671
30	2523.749	2538.497	2570.708	2579.634	2593.606	2617.667	2632.415	2647.938
35	2417.801	2426.727	2452.341	2504.733	2515.211	2527.63	2534.616	2519.869
40	2209.784	2252.863	2304.09	2354.154	2399.949	2387.53	2384.037	2385.201
45	1936.569	1983.916	2058.042	2132.555	2183.006	2181.066	2127.51	2080.163
50	1661.025	1702.939	1746.405	1820.53	1869.042	1831.785	1789.871	1757.272
55	1419.245	1437.097	1430.112	1479.399	1483.28	1461.935	1466.98	1461.159
60	1146.03	1133.611	1136.716	1166.599	1177.853	1184.451	1170.479	1165.046
65	818.0938	868.5455	864.6646	869.3217	882.5167	849.5291	831.6769	700.1144
70	42.30181	82.27509	164.1621	301.9341	361.3118	281.7534	131.1744	52.78025
75	13.97124	14.74742	14.35933	13.97124	14.35933	14.74742	15.13551	15.13551
80	6.209441	6.597531	6.209441	6.597531	6.597531	6.98562	6.98562	7.37371
85	2.32854	2.32854	2.32854	2.32854	2.71663	2.71663	3.10472	3.10472
90	0	0	0	0.38809	0	0.38809	0	0

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光強數據表(七)

光強數據表(cd)

第 7 頁 共 10 頁

$\gamma/C(^{\circ})$	240.0	245.0	250.0	255.0	260.0	265.0	270.0	275.0
0	2688.3	2689.464	2673.94	2699.166	2692.569	2705.764	2701.495	2692.18
5	2688.688	2715.854	2681.314	2685.195	2678.985	2667.731	2692.569	2689.464
10	2670.448	2680.538	2678.597	2678.597	2671.612	2676.657	2670.835	2666.955
15	2703.047	2687.912	2689.852	2699.166	2675.493	2681.702	2657.641	2669.671
20	2694.897	2692.957	2703.047	2686.359	2701.495	2687.523	2649.491	2666.955
25	2670.835	2691.404	2687.135	2691.792	2687.523	2678.597	2641.341	2674.717
30	2636.296	2642.893	2642.505	2647.162	2624.653	2638.624	2623.489	2621.16
35	2529.183	2521.809	2503.957	2502.016	2502.016	2513.659	2495.419	2486.493
40	2330.869	2296.329	2274.984	2247.041	2238.115	2244.713	2227.637	2236.563
45	2030.099	1988.573	1993.23	1955.974	1935.405	1942.779	1927.643	1933.464
50	1725.836	1711.477	1706.044	1689.356	1688.58	1676.549	1668.399	1673.444
55	1452.233	1455.726	1425.843	1424.678	1426.619	1425.843	1419.245	1406.826
60	1148.358	1139.82	1128.954	1074.233	1047.455	1028.05	1015.243	1026.498
65	588.3445	427.2871	306.203	232.4659	182.4023	149.8027	137.772	146.698
70	34.9281	31.0472	27.55439	24.44967	22.89731	21.73304	20.95686	20.18068
75	14.74742	14.35933	13.19506	12.03079	11.25461	10.86652	10.09034	9.70225
80	6.98562	6.98562	6.209441	5.82135	5.43326	5.04517	4.65708	4.65708
85	2.71663	2.32854	2.32854	1.94045	1.94045	1.94045	1.55236	1.94045
90	0	0	0	0	0	0	0	0

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光強數據表(八)

光強數據表(cd)

第 8 頁 共 10 頁

$\gamma/C(^{\circ})$	280.0	285.0	290.0	295.0	300.0	305.0	310.0	315.0
0	2687.135	2669.283	2684.807	2679.374	2697.614	2690.24	2651.431	2686.359
5	2686.359	2678.597	2685.195	2687.135	2682.09	2682.478	2666.178	2671.224
10	2650.655	2665.014	2678.597	2651.819	2664.626	2666.955	2668.895	2669.283
15	2666.178	2674.328	2672	2652.595	2668.507	2672	2664.626	2644.057
20	2661.91	2666.566	2679.762	2647.55	2653.372	2644.833	2641.729	2656.476
25	2641.341	2655.7	2650.655	2635.907	2639.788	2639.788	2630.474	2602.532
30	2593.606	2604.084	2595.158	2601.756	2611.458	2586.232	2601.756	2567.604
35	2485.328	2495.807	2480.283	2500.852	2496.971	2498.135	2500.852	2497.747
40	2255.191	2257.52	2280.029	2299.434	2331.645	2333.585	2334.75	2354.93
45	1945.883	1939.674	1953.645	1980.423	2014.963	2052.608	2114.702	2158.945
50	1672.668	1661.802	1668.787	1695.565	1701.387	1720.403	1749.122	1829.068
55	1419.245	1435.933	1416.917	1414.976	1422.738	1412.26	1432.44	1440.59
60	1065.307	1095.966	1147.194	1160.389	1142.149	1144.866	1139.432	1126.625
65	169.5953	231.3017	312.8006	427.6752	610.4656	717.9666	827.4079	828.1841
70	19.4045	20.18068	21.73304	24.06158	28.33057	37.64473	117.9794	212.2852
75	9.70225	9.31416	10.09034	10.47843	10.47843	10.47843	10.47843	10.86652
80	4.65708	4.65708	4.65708	5.04517	5.04517	4.65708	4.65708	5.04517
85	1.55236	1.94045	1.55236	1.94045	1.94045	1.94045	1.94045	1.94045
90	0	0	0	0	0	0	0	0

- 以下空白 -

光強數據表(九)

光強數據表(cd)

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$\gamma/C(^{\circ})$	320.0	325.0	330.0	335.0	340.0	345.0	350.0	355.0
0	2660.357	2687.912	2686.359	2683.643	2681.314	2678.209	2691.404	2692.957
5	2665.014	2692.957	2665.402	2677.433	2672	2665.79	2671.612	2689.852
10	2648.714	2654.148	2658.417	2640.564	2643.281	2645.61	2669.283	2646.774
15	2636.684	2654.536	2632.027	2641.729	2625.429	2643.669	2632.415	2652.983
20	2648.326	2643.669	2624.653	2600.591	2598.263	2617.279	2599.427	2607.577
25	2624.265	2601.756	2557.513	2576.53	2548.975	2544.706	2529.183	2549.363
30	2570.32	2526.854	2522.585	2502.016	2491.926	2460.103	2451.953	2449.236
35	2489.986	2454.281	2420.518	2415.472	2380.544	2358.423	2332.033	2323.883
40	2352.602	2323.495	2257.52	2226.472	2185.335	2160.885	2139.928	2127.51
45	2163.99	2105	2021.561	1943.555	1911.344	1871.37	1873.311	1863.608
50	1878.356	1796.081	1713.029	1653.264	1631.919	1614.066	1610.574	1616.007
55	1460.383	1466.592	1428.559	1402.945	1386.646	1378.884	1371.51	1373.451
60	1130.894	1125.461	1131.282	1122.356	1114.207	1111.878	1111.102	1121.192
65	818.0938	823.527	829.3484	816.1533	737.371	655.0959	572.0447	511.8907
70	279.0367	209.1805	104.7843	37.64473	29.88293	24.83776	23.2854	22.50922
75	10.86652	10.86652	10.47843	10.09034	9.70225	9.70225	9.70225	9.70225
80	5.04517	4.65708	4.65708	4.26899	4.26899	4.26899	4.65708	4.26899
85	1.55236	1.94045	1.55236	1.55236	1.16427	1.16427	1.16427	1.16427
90	0	0	0	0	0	0	0	0

- 以下空白 -

光強數據表(十)

光強數據表(cd)

$\gamma/C(^{\circ})$	360.0
0	2671.612
5	2666.566
10	2651.431
15	2636.684
20	2606.413
25	2524.138
30	2420.129
35	2326.212
40	2107.717
45	1856.235
50	1603.2
55	1372.286
60	1107.609
65	492.8743
70	22.12113
75	9.70225
80	4.26899
85	1.16427
90	0

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- 以下空白 -

測試設備列表及人員

項次	儀器 編號	量儀名稱	廠牌 / 型號 / 序號
1	99A-01	角度規	Johnson
2	99E-05	數位電力計	YOKOGAWA WT210 (91K116100)
3	99E-08	數位電力計	YOKOGAWA WT210 (91K539455)
4	99E-17	AC Power Source	APC AFC-5KW
5	990-01	立式大型分佈光度計	浙大三色 GMS-2000
6	990-02	快速光譜輻射分析儀	浙大三色 SPR-3000
7	990-04	恆溫積分球	浙大三色
8	1040-31	測光標準燈 110V/100W	浙大三色(S13100197)
9	99T-06	溫濕度記錄器	YOKOGAWA - SR16000 (S5K910111)
10	99T-07	溫濕度記錄器	YOKOGAWA - SR16000 (S5K910112)
			測試人員：劉峻廷

- 以下空白 -