

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：16062436
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報告簽署人：



報告簽署人
黃錫偉



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：25000Lm LED 戶外投射燈

燈具型號：F3250C-001

額定輸入電壓 (V)：100~277

額定頻率 (Hz)：50/60

額定輸入功率 (W)：200

樣品尺寸：長 365 mm × 寬 298 mm × 高 187 mm

- 以下空白 -

試驗內容

試驗條件

環境溫度 (°C)	24.1
環境濕度(%)	56.9
γ 軸取樣步距	5°
C 軸取樣步距	5°

電氣測試

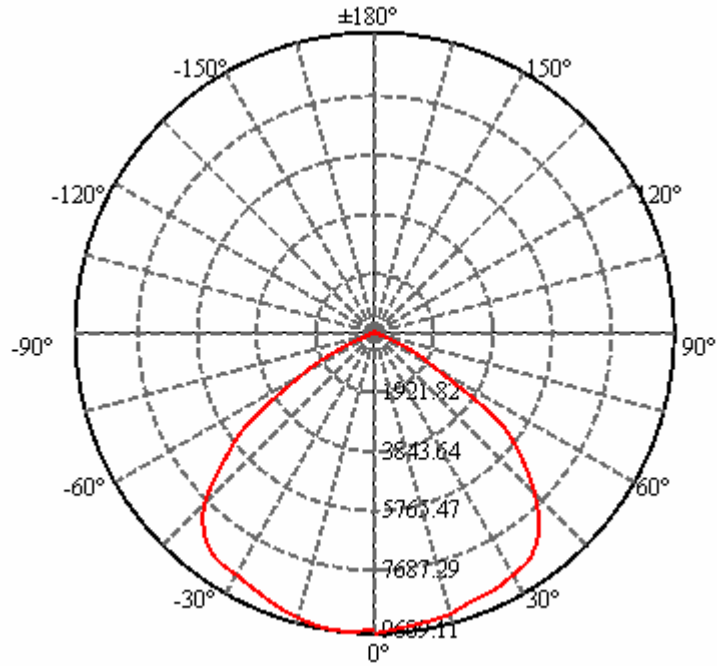
試驗項目	試驗結果
電壓(V)	220.0
電流(A)	0.962
功率(W)	207.0
頻率(Hz)	60
功率因數	0.978

配光量測

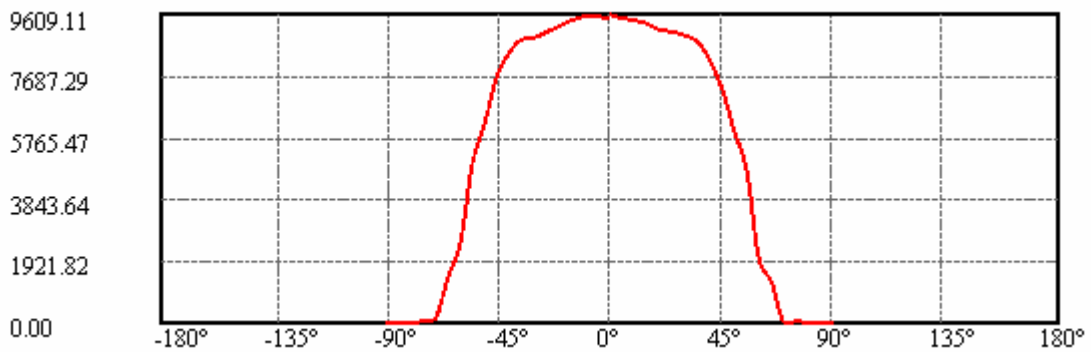
試驗項目	試驗結果
燈具全光通量 (lm)	25071.2
燈具發光效率 (lm/W)	121.1
中心光強度 (cd)	9609.1
最大光強度 (cd)	9609.1
最大光強度角度 (°)	C : 0.0 γ : 0.0
半峰邊角(50%Imax)	C0_180 Left=55.3 Right=54.6
	C90_270 Left=52.4 Right=54.1
色溫 (K)	5296
演色指數 (Ra)	82.7
色座標	x : 0.3373 y : 0.3461

配光曲線圖(一)

極座標圖 C0 / 180

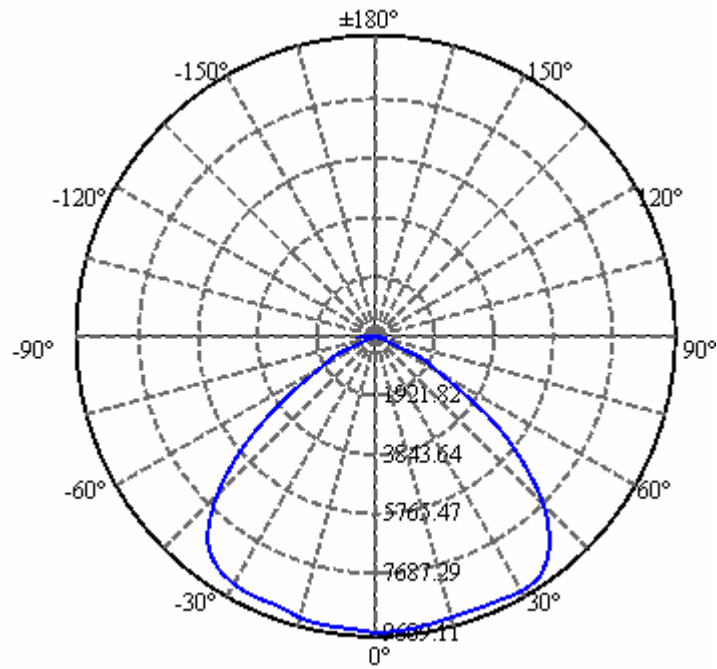


直角座標圖 C0 / 180

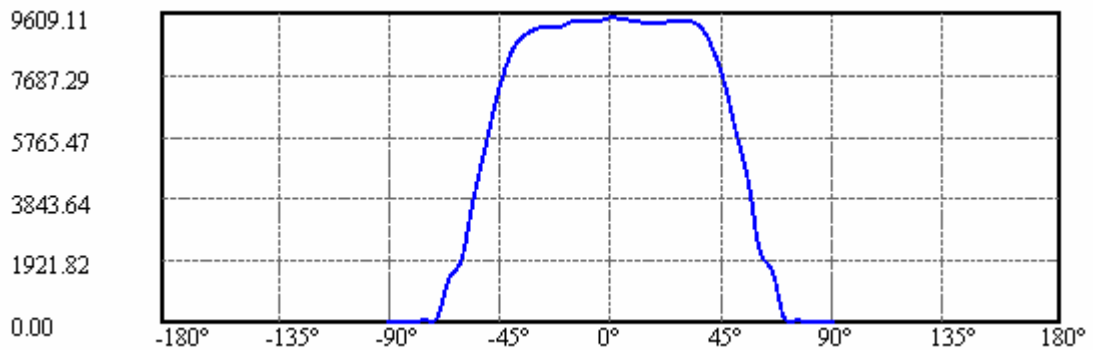


配光曲線圖(二)

極座標圖 C90 / 270

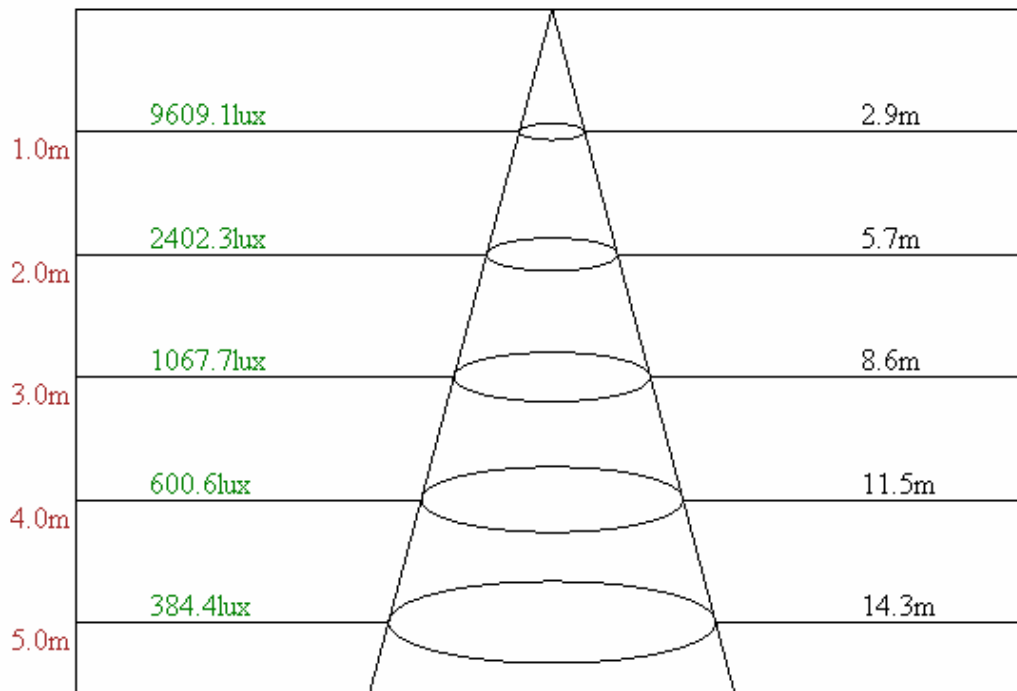


直角座標圖 C90 / 270



照度距離表

照度距離圖表



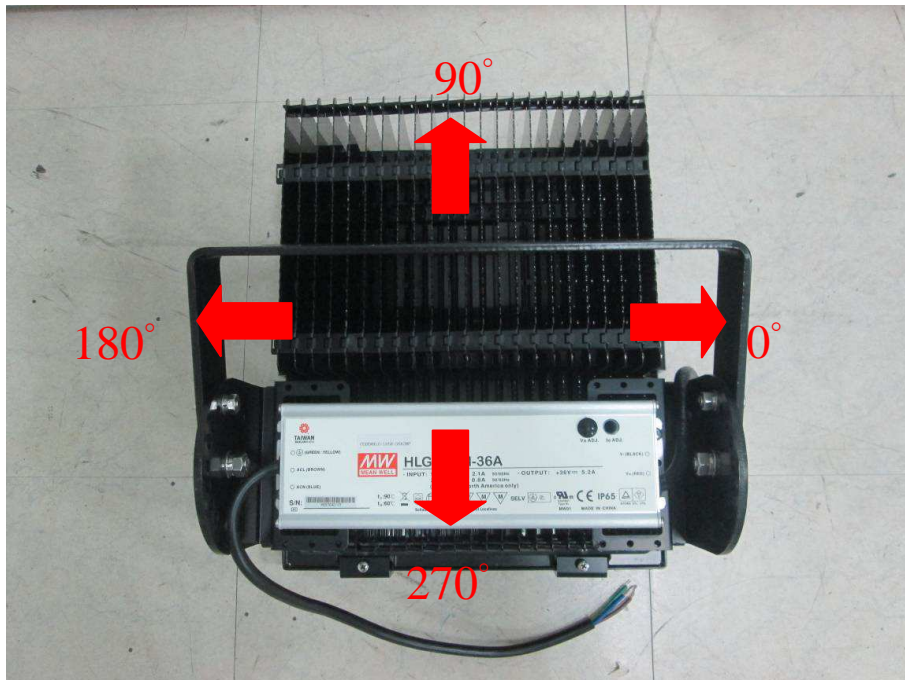
C0面光束角110.17

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	9609.109	9578.062	9593.585	9581.943	9550.896	9527.609	9578.062	9562.538
5	9481.039	9488.802	9492.682	9500.443	9500.443	9539.253	9504.324	9543.134
10	9403.421	9391.779	9391.779	9407.302	9438.35	9453.873	9446.111	9461.635
15	9294.757	9310.279	9360.731	9318.042	9333.564	9333.564	9372.374	9360.731
20	9135.64	9170.567	9186.091	9170.567	9209.376	9228.781	9224.9	9263.709
25	9054.141	9038.617	9050.26	9096.83	9077.426	9046.378	9112.354	9104.592
30	8933.833	8953.236	8968.761	8933.833	8933.833	8879.499	8883.381	8867.857
35	8770.835	8747.55	8732.025	8708.74	8693.217	8697.098	8654.407	8642.765
40	8208.104	8223.628	8227.509	8246.913	8297.364	8285.723	8312.889	8320.65
45	7265.045	7272.807	7311.616	7369.83	7447.448	7532.827	7622.088	7750.158
50	6034.8	6023.157	6073.609	6124.061	6201.678	6360.795	6558.721	6838.146
55	4688.127	4726.937	4754.103	4765.746	4785.15	4905.458	5130.55	5448.784
60	2113.926	2177.573	2288.955	2470.969	2732.154	3252.582	3700.051	3965.116
65	1277.204	1308.251	1307.087	1321.447	1356.763	1407.603	1484.832	1533.344
70	76.45374	86.15599	97.41059	126.1293	187.0594	434.6608	590.673	518.1002
75	31.0472	31.43529	30.65911	29.49484	28.71866	28.71866	28.33057	29.49484
80	14.35933	15.13551	14.74742	13.97124	13.58315	13.19506	13.19506	12.41888
85	4.26899	4.65708	4.65708	4.65708	4.65708	4.65708	4.26899	4.26899
90	0	0.38809	0.7761801	0.38809	0.7761801	0.7761801	0.7761801	0.7761801

- 以下空白 -

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	9543.134	9562.538	9554.776	9558.657	9539.253	9547.015	9527.609	9523.729
5	9523.729	9523.729	9543.134	9512.087	9519.849	9504.324	9492.682	9465.516
10	9430.587	9434.469	9418.945	9426.707	9415.064	9395.659	9364.612	9387.898
15	9337.446	9360.731	9345.208	9368.493	9391.779	9364.612	9372.374	9349.089
20	9228.781	9248.186	9259.828	9252.066	9267.59	9279.232	9283.113	9302.518
25	9061.902	9054.141	9077.426	9089.068	9162.806	9166.687	9240.423	9294.757
30	8879.499	8856.214	8891.143	9030.855	9100.712	9205.495	9252.066	9298.637
35	8650.527	8685.454	8794.12	8910.547	9019.212	9065.783	9135.64	9189.972
40	8347.816	8417.673	8510.814	8631.122	8662.169	8708.74	8700.979	8732.025
45	7924.798	7955.846	8052.868	8045.106	7959.727	7893.751	7800.61	7746.276
50	7071	7210.713	7117.571	6911.883	6644.102	6500.508	6329.748	6201.678
55	5786.422	5755.375	5534.164	5293.548	5111.146	5045.17	4909.339	4765.746
60	3911.171	3868.869	3929.8	3575.085	3204.459	2701.883	2409.263	2271.879
65	1694.789	1699.058	1544.598	1526.746	1506.953	1490.654	1473.966	1471.637
70	453.2892	460.2748	506.4575	594.1658	539.8333	329.8765	172.7001	143.9814
75	32.21147	35.31619	36.48046	32.21147	33.76383	34.15192	32.59956	32.98765
80	12.41888	12.41888	12.80697	12.80697	12.80697	13.58315	13.58315	13.97124
85	4.65708	4.26899	4.65708	4.26899	4.26899	4.65708	5.04517	5.04517
90	0.7761801	0.7761801	0.7761801	0.7761801	0.38809	0.38809	0.7761801	0.38809

- 以下空白 -

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	9523.729	9481.039	9477.158	9484.921	9465.516	9477.158	9465.516	9504.324
5	9430.587	9426.707	9446.111	9449.992	9449.992	9457.754	9461.635	9481.039
10	9376.255	9372.374	9395.659	9384.017	9391.779	9395.659	9426.707	9426.707
15	9349.089	9333.564	9321.923	9337.446	9356.851	9387.898	9384.017	9360.731
20	9314.16	9298.637	9306.398	9306.398	9321.923	9283.113	9263.709	9255.947
25	9294.757	9329.685	9345.208	9356.851	9321.923	9275.352	9244.305	9189.972
30	9352.97	9368.493	9391.779	9399.54	9364.612	9321.923	9279.232	9205.495
35	9228.781	9232.662	9236.542	9193.853	9189.972	9139.52	9116.234	9069.664
40	8732.025	8720.383	8685.454	8658.288	8677.693	8693.217	8642.765	8662.169
45	7676.421	7610.446	7598.803	7591.041	7614.327	7653.135	7750.158	7882.108
50	6116.299	6050.324	6058.085	6046.442	6096.895	6201.678	6364.676	6508.27
55	4575.582	4482.44	4439.75	4478.559	4594.986	4765.746	4967.552	5052.932
60	2245.489	2243.937	2241.22	2263.341	2289.731	2374.335	2513.659	2815.593
65	1479.787	1518.984	1535.284	1557.405	1544.986	1544.986	1549.255	1607.469
70	142.429	142.8171	145.5338	152.1313	165.3264	169.9834	200.6425	421.8539
75	34.54001	36.09237	37.25664	37.64473	37.64473	37.25664	36.86855	39.58518
80	14.74742	15.5236	15.91169	15.91169	16.29978	15.91169	15.91169	16.29978
85	5.43326	5.43326	5.82135	5.82135	6.209441	5.82135	6.209441	6.209441
90	0.7761801	0.38809	0.38809	0.7761801	0.7761801	0.38809	1.16427	1.16427

- 以下空白 -

光強數據表(四)

光強數據表(cd)

第 4 頁 共 10 頁

$\gamma/C(^{\circ})$	120.0	125.0	130.0	135.0	140.0	145.0	150.0	155.0
0	9512.087	9484.921	9527.609	9515.968	9492.682	9515.968	9531.491	9539.253
5	9492.682	9496.563	9473.277	9508.206	9504.324	9488.802	9484.921	9508.206
10	9426.707	9434.469	9415.064	9422.826	9415.064	9422.826	9508.206	9407.302
15	9387.898	9376.255	9352.97	9352.97	9329.685	9329.685	9387.898	9395.659
20	9232.662	9236.542	9197.734	9201.614	9224.9	9193.853	9236.542	9263.709
25	9158.925	9131.759	9061.902	9026.974	9042.497	9061.902	9081.307	9104.592
30	9127.878	9007.569	8902.785	8817.405	8794.12	8790.239	8821.286	8883.381
35	8992.046	8883.381	8747.55	8642.765	8580.671	8623.36	8677.693	8716.502
40	8638.884	8607.837	8580.671	8460.362	8402.149	8433.196	8483.648	8479.768
45	7983.012	8060.63	8130.486	8165.415	8114.962	8118.843	8048.987	7951.964
50	6733.362	6985.621	7350.425	7521.185	7536.708	7462.971	7133.094	6849.789
55	5146.074	5429.379	5856.279	6213.321	6240.488	6034.8	5588.496	5297.429
60	3247.926	3880.9	4284.902	4263.169	4271.319	4276.752	4228.629	3846.36
65	1665.294	1728.165	1791.424	2099.567	2222.592	1922.986	1661.025	1562.839
70	797.1369	888.3381	720.295	508.3979	475.4103	634.9153	795.1965	865.0527
75	42.6899	39.19709	45.40653	57.04923	55.49688	41.52563	36.86855	35.31619
80	15.91169	16.29978	16.29978	15.91169	15.5236	15.91169	15.91169	16.68787
85	6.209441	6.209441	6.209441	6.209441	6.209441	5.82135	5.82135	6.209441
90	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427	1.16427

- 以下空白 -

光強數據表(五)

光強數據表(cd)

第 5 頁 共 10 頁

$\gamma/C(^{\circ})$	160.0	165.0	170.0	175.0	180.0	185.0	190.0	195.0
0	9523.729	9535.372	9527.609	9504.324	9512.087	9512.087	9527.609	9519.849
5	9519.849	9531.491	9543.134	9562.538	9562.538	9527.609	9515.968	9504.324
10	9481.039	9469.396	9547.015	9547.015	9562.538	9570.3	9508.206	9481.039
15	9399.54	9426.707	9442.23	9418.945	9430.587	9387.898	9376.255	9376.255
20	9306.398	9306.398	9255.947	9259.828	9244.305	9259.828	9201.614	9205.495
25	9104.592	9092.949	9096.83	9077.426	9058.021	9034.736	9019.212	9050.26
30	8926.07	8968.761	8933.833	8933.833	8910.547	8918.309	8879.499	8879.499
35	8735.906	8766.954	8790.239	8832.929	8840.691	8809.644	8770.835	8732.025
40	8534.1	8499.172	8506.934	8534.1	8503.053	8468.124	8475.887	8437.077
45	7866.585	7804.491	7738.515	7730.753	7691.944	7660.897	7703.587	7695.825
50	6686.791	6543.198	6450.057	6376.319	6345.272	6333.629	6318.106	6395.724
55	5130.55	4990.837	4979.195	4967.552	4963.671	4932.624	4909.339	4913.22
60	3458.27	3076.39	2822.579	2668.507	2588.948	2600.591	2675.104	2803.95
65	1454.95	1405.662	1389.362	1396.736	1387.81	1384.705	1350.165	1320.67
70	677.9933	450.9606	270.4987	206.4639	170.7596	168.043	194.8212	264.6774
75	35.31619	36.09237	37.64473	39.19709	41.13754	42.30181	44.63035	49.28743
80	17.46405	17.46405	19.01641	19.79259	20.95686	21.34495	22.89731	25.22585
85	6.209441	6.597531	6.98562	6.98562	7.37371	7.7618	8.149891	9.31416
90	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801	0.7761801

- 以下空白 -

光強數據表(六)

光強數據表(cd)

第 6 頁 共 10 頁

$\gamma/C(^{\circ})$	200.0	205.0	210.0	215.0	220.0	225.0	230.0	235.0
0	9527.609	9558.657	9523.729	9566.419	9543.134	9550.896	9566.419	9562.538
5	9477.158	9481.039	9457.754	9500.443	9484.921	9488.802	9508.206	9504.324
10	9453.873	9418.945	9418.945	9426.707	9415.064	9442.23	9461.635	9430.587
15	9391.779	9341.327	9325.804	9302.518	9321.923	9329.685	9325.804	9325.804
20	9189.972	9209.376	9236.542	9221.02	9224.9	9178.329	9228.781	9193.853
25	9011.45	9042.497	9054.141	9077.426	9034.736	9065.783	9050.26	9127.878
30	8840.691	8821.286	8805.763	8798.001	8821.286	8871.738	8922.189	9011.45
35	8658.288	8662.169	8654.407	8623.36	8658.288	8704.859	8821.286	8879.499
40	8421.554	8464.243	8440.958	8444.839	8437.077	8464.243	8510.814	8619.479
45	7742.396	7854.942	7967.488	8010.178	8064.511	8056.749	8072.272	7917.037
50	6438.414	6632.458	6803.218	7102.047	7195.189	7202.951	7074.881	6694.553
55	4967.552	5095.622	5297.429	5600.139	5782.541	5685.519	5441.022	5095.622
60	3075.614	3444.687	3800.566	3950.757	3910.783	3789.699	3729.933	3490.482
65	1328.044	1358.703	1392.467	1470.473	1640.845	1623.769	1454.173	1416.141
70	387.7019	631.0344	687.3074	544.1022	440.0941	396.628	428.0633	502.5766
75	54.3326	58.98968	64.03486	68.69193	71.02048	76.45374	74.1252	66.3634
80	27.55439	28.71866	31.0472	32.59956	32.98765	34.15192	32.98765	30.65911
85	10.47843	11.25461	12.03079	12.80697	12.80697	12.80697	12.41888	12.03079
90	0.7761801	1.16427	1.16427	1.16427	1.16427	0.7761801	0.7761801	0.7761801

- 以下空白 -

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	9543.134	9519.849	9512.087	9508.206	9442.23	9461.635	9461.635	9484.921
5	9492.682	9508.206	9484.921	9457.754	9473.277	9422.826	9399.54	9407.302
10	9449.992	9411.184	9387.898	9407.302	9415.064	9411.184	9399.54	9368.493
15	9314.16	9333.564	9321.923	9337.446	9349.089	9352.97	9345.208	9341.327
20	9201.614	9224.9	9236.542	9228.781	9252.066	9228.781	9205.495	9209.376
25	9186.091	9193.853	9193.853	9193.853	9186.091	9189.972	9201.614	9209.376
30	9085.188	9123.997	9139.52	9147.282	9155.044	9123.997	9135.64	9151.163
35	8914.428	8926.07	8949.355	8949.355	8949.355	8929.951	8922.189	8922.189
40	8553.505	8483.648	8425.435	8429.315	8374.982	8382.745	8390.507	8409.911
45	7827.776	7680.302	7478.495	7334.901	7233.998	7199.07	7171.903	7199.07
50	6422.89	6166.75	5968.825	5790.303	5658.353	5615.663	5584.616	5619.543
55	4847.244	4688.127	4474.678	4230.181	4032.256	3861.496	3814.925	3849.853
60	3073.285	2548.975	2198.142	2093.746	2052.608	2029.323	1996.723	1974.214
65	1345.896	1272.159	1259.352	1253.919	1253.919	1260.516	1292.728	1316.013
70	412.5397	258.468	174.6405	139.3243	128.0697	123.8007	122.2484	119.9198
75	62.87059	57.82542	49.67553	45.01844	42.6899	40.36136	37.64473	34.54001
80	29.10675	26.39012	23.2854	21.34495	19.4045	18.24023	17.07596	15.5236
85	10.86652	9.31416	8.149891	7.7618	6.98562	6.209441	5.43326	5.43326
90	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0

- 以下空白 -

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	9492.682	9508.206	9539.253	9531.491	9531.491	9585.824	9547.015	9562.538
5	9395.659	9422.826	9469.396	9449.992	9461.635	9492.682	9484.921	9488.802
10	9364.612	9384.017	9407.302	9430.587	9426.707	9411.184	9418.945	9426.707
15	9306.398	9294.757	9318.042	9306.398	9333.564	9345.208	9368.493	9329.685
20	9236.542	9213.257	9205.495	9201.614	9197.734	9213.257	9244.305	9221.02
25	9193.853	9221.02	9178.329	9127.878	9081.307	9050.26	9023.093	9011.45
30	9139.52	9143.4	9143.4	9073.545	8988.165	8906.666	8805.763	8763.073
35	8949.355	8926.07	8910.547	8887.262	8836.811	8739.787	8631.122	8561.266
40	8429.315	8409.911	8386.626	8425.435	8390.507	8394.387	8347.816	8227.509
45	7237.879	7311.616	7385.354	7575.518	7684.182	7754.039	7761.801	7742.396
50	5662.233	5739.852	5906.73	6112.418	6263.773	6473.342	6826.503	6931.288
55	3966.28	4133.159	4385.417	4660.961	4738.579	4870.53	5161.598	5409.975
60	1965.676	1960.243	1990.902	2173.304	2557.513	3030.983	3446.24	3593.714
65	1303.594	1278.757	1279.921	1296.221	1316.013	1318.342	1345.508	1385.481
70	112.5461	105.9486	116.427	147.4742	206.852	358.2071	415.2563	386.1496
75	32.21147	30.65911	30.65911	31.0472	31.82338	31.0472	29.88293	29.88293
80	14.35933	13.58315	13.58315	13.19506	13.19506	13.19506	12.80697	12.41888
85	4.65708	4.65708	4.65708	4.65708	4.65708	4.65708	4.65708	4.26899
90	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0.7761801

- 以下空白 -

光強數據表(九)

光強數據表(cd)

第 9 頁 共 10 頁

$\gamma/C(^{\circ})$	320.0	325.0	330.0	335.0	340.0	345.0	350.0	355.0
0	9578.062	9539.253	9547.015	9578.062	9535.372	9574.181	9597.466	9593.585
5	9500.443	9473.277	9438.35	9477.158	9469.396	9512.087	9496.563	9504.324
10	9438.35	9446.111	9438.35	9399.54	9380.136	9384.017	9391.779	9384.017
15	9345.208	9341.327	9325.804	9302.518	9302.518	9232.662	9283.113	9283.113
20	9224.9	9217.138	9189.972	9201.614	9166.687	9158.925	9135.64	9135.64
25	9015.331	9007.569	8999.808	9011.45	9042.497	8995.927	9042.497	9030.855
30	8712.621	8735.906	8778.597	8801.882	8809.644	8863.977	8891.143	8988.165
35	8518.576	8541.861	8534.1	8572.909	8584.552	8615.599	8677.693	8720.383
40	8196.462	8126.605	8149.891	8142.128	8142.128	8180.938	8161.534	8177.057
45	7695.825	7556.113	7424.162	7346.544	7241.76	7237.879	7237.879	7245.641
50	6908.002	6776.051	6434.533	6155.108	6019.276	5933.896	5926.135	5953.301
55	5468.188	5309.072	4990.837	4742.46	4660.961	4602.748	4591.105	4653.199
60	3609.237	3679.093	3465.644	3058.149	2588.561	2258.684	2130.614	2099.567
65	1397.512	1374.615	1352.882	1328.82	1283.414	1257.024	1269.442	1261.293
70	384.5972	402.0613	390.8066	245.2729	124.965	98.57487	83.05127	74.90137
75	29.10675	27.94248	28.33057	27.94248	27.94248	28.71866	29.49484	30.65911
80	12.80697	12.41888	12.80697	12.41888	12.80697	13.58315	13.97124	13.97124
85	4.26899	4.26899	4.26899	3.8809	4.26899	4.26899	4.26899	4.26899
90	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809	0.38809

- 以下空白 -

光強數據表(十)

光強數據表(cd)

第 10 頁 共 10 頁

$\gamma/C(^{\circ})$	360.0
0	9609.109
5	9481.039
10	9403.421
15	9294.757
20	9135.64
25	9054.141
30	8933.833
35	8770.835
40	8208.104
45	7265.045
50	6034.8
55	4688.127
60	2113.926
65	1277.204
70	76.45374
75	31.0472
80	14.35933
85	4.26899
90	0

- 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 -