

## 燈具配光曲線試驗報告

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

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2. 報告編號：19011508
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報告簽署人：



## 試驗報告

### 測試樣品基本資料表

委試公司：昶旭能源股份有限公司

委試公司地址：新竹市東區埔頂里公道五路二段 83 號 5 樓之 3

製造廠商：昶旭能源股份有限公司

製造廠商地址：新竹市東區埔頂里公道五路二段 83 號 5 樓之 3

產品名稱：8500LM LED 天井燈

產品商標：CooLED

產品型號：C3085C-601

額定電壓 (V)：100~277

額定頻率 (Hz)：50/60

額定功率 (W)：60

光源控制器廠牌/型號：明緯/HBG-60-1400

外觀尺寸：直徑 271 mm 、 高 236 mm

-以下空白-

## 試驗內容

### 試驗條件

環境溫度 (°C)	24.7
環境濕度 (% RH)	59.6
$\gamma$ 軸取樣步距 (°)	5
C 軸取樣步距 (°)	5

### 電氣量測

試驗項目	試驗結果
電壓 (V)	220.0
頻率 (Hz)	60
電流 (A)	0.279
功率 (W)	59.7
功率因數	0.973

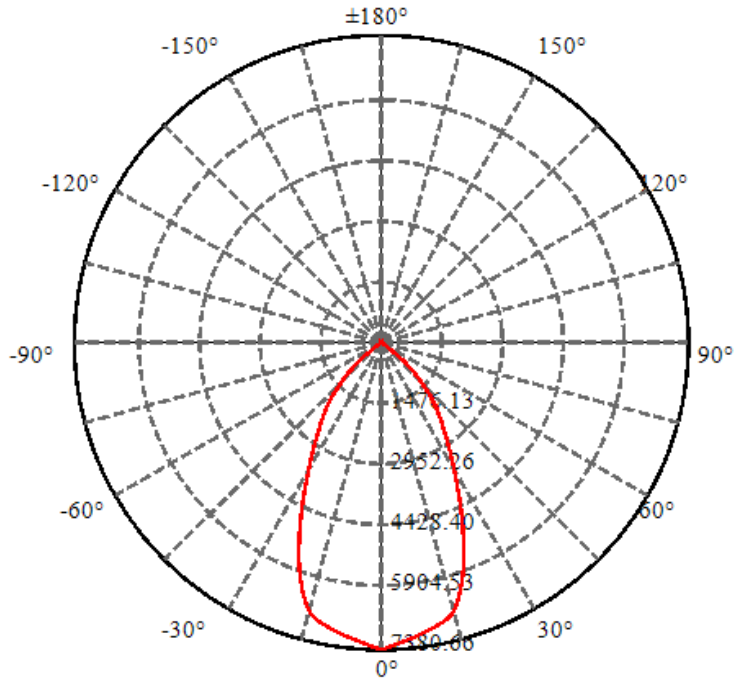
### 配光量測

試驗項目	試驗結果
燈具光通量 (lm)	7677.5
燈具發光效率 (lm/W)	128.6
中心光強度 (cd)	7411.0
最大光強度 (cd)	7430.1
最大光強度角度 (°)	C : 325.0 $\gamma$ : 0.0
半峰邊角(50%Imax)	C0_180    Left=28.4    Right=29.3
	C90_270    Left=28.6    Right=28.8
色溫 (K)	5040
色座標	x : 0.3445      y : 0.3569
演色性(Ra)	82.3
R9	4
統一眩光指數 (UGR, Unified Glare Rating)	橫向觀察方向
	19.4
	縱向觀察方向
	19.4

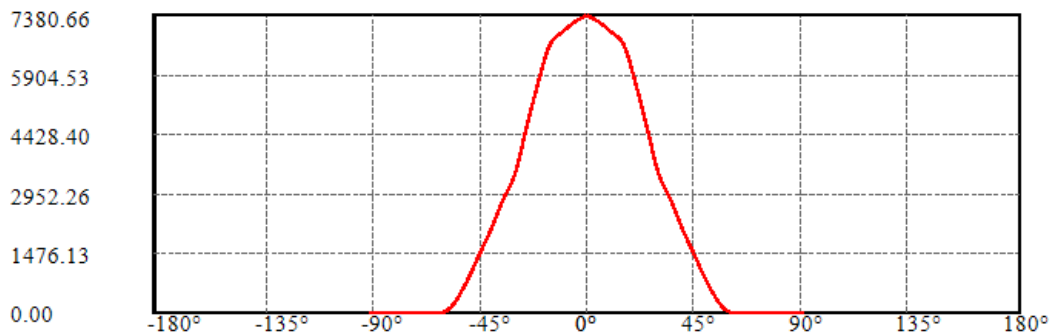
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**配光曲線圖(一)**

極座標圖 C0 / 180

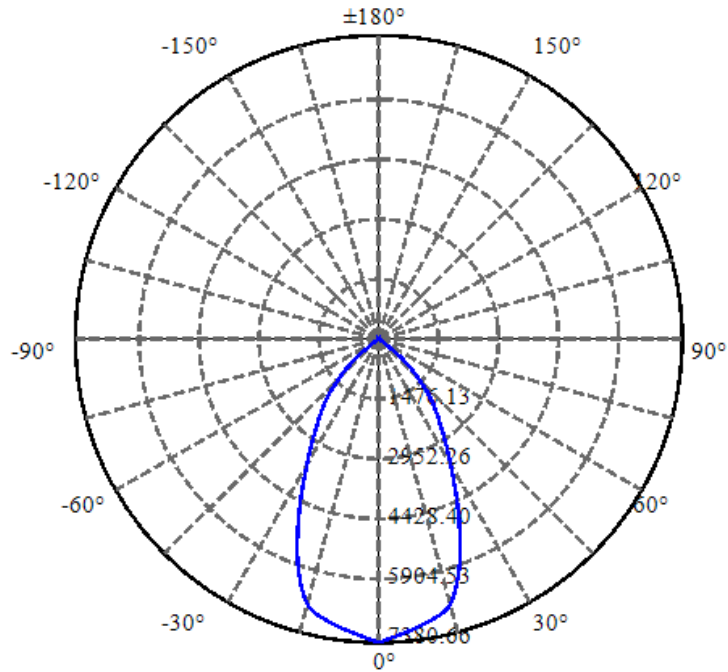


直角座標圖 C0 / 180

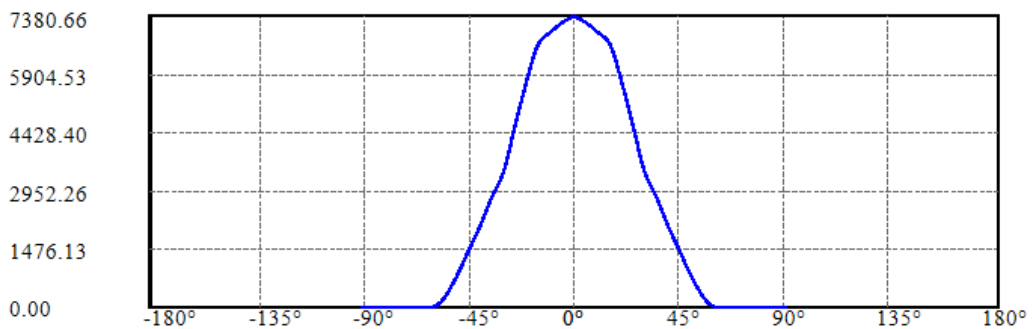


**配光曲線圖(二)**

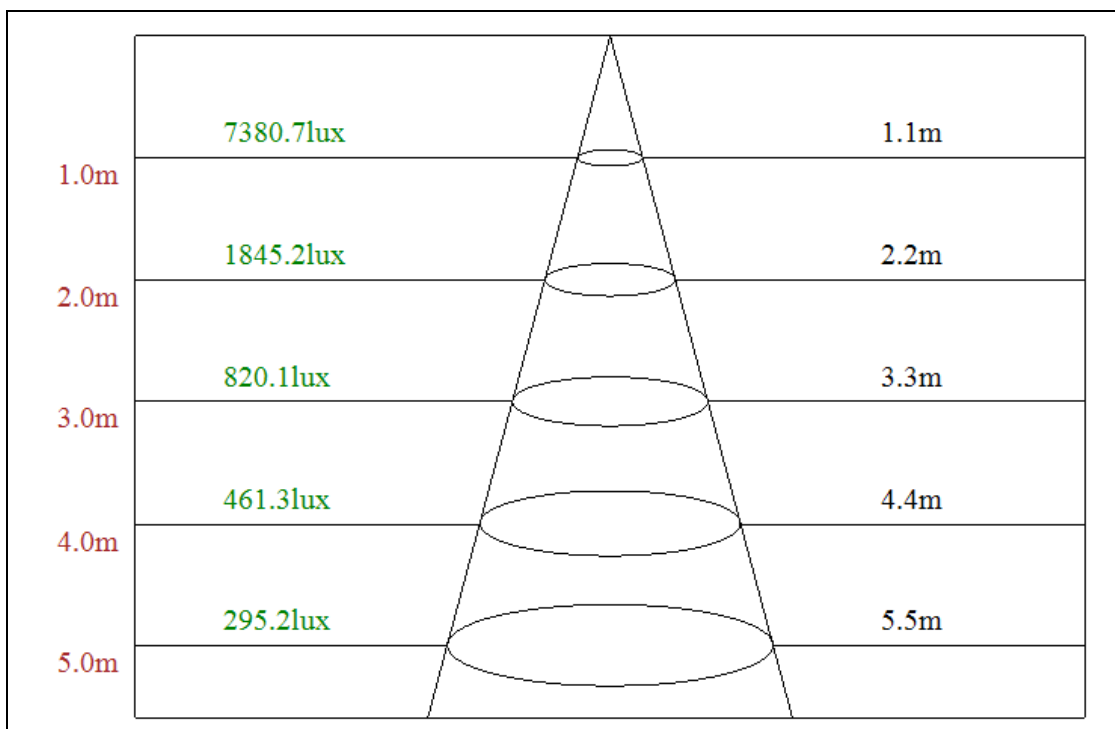
極座標圖 C90 / 270



直角座標圖 C90 / 270

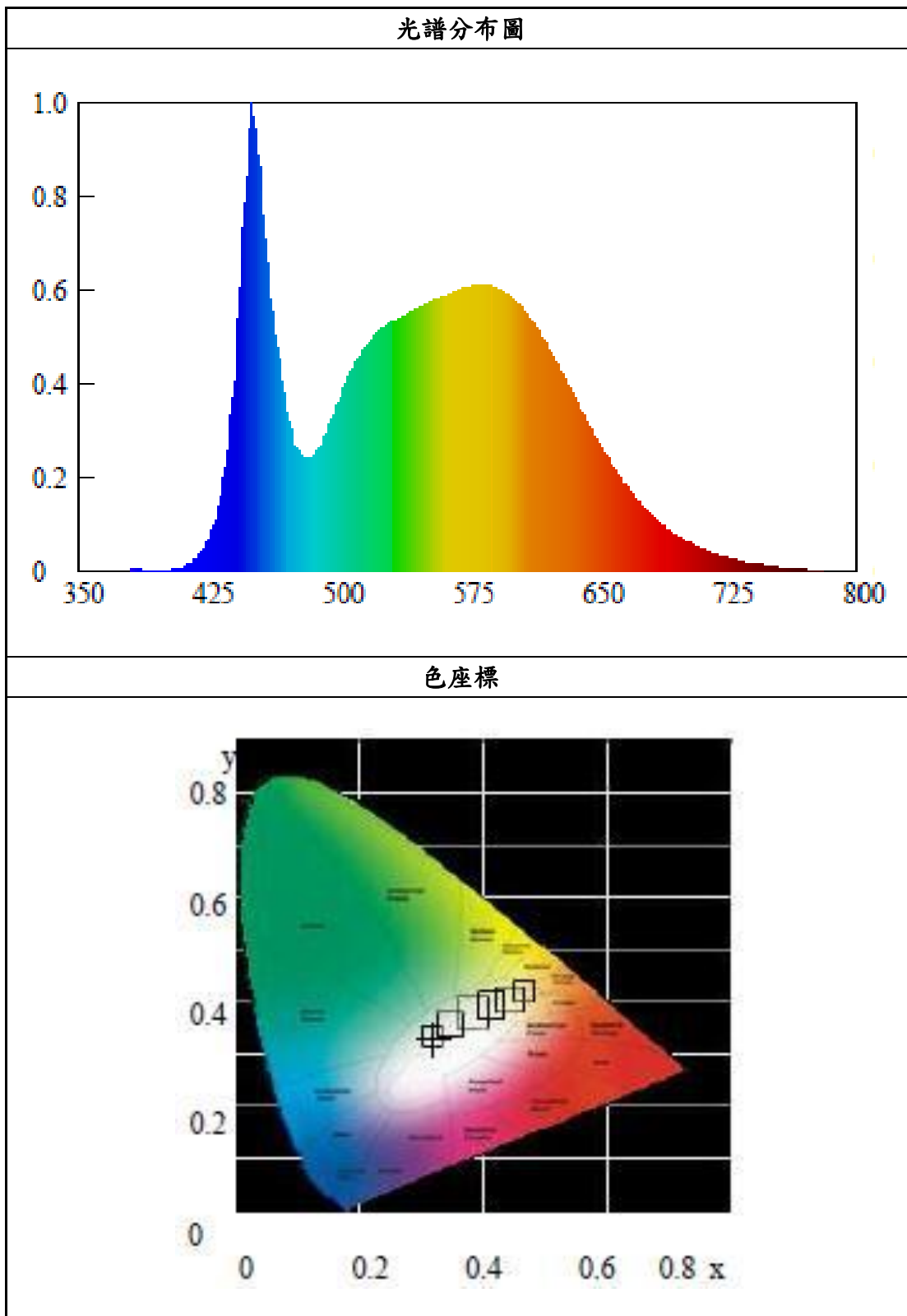


### 照度距離表



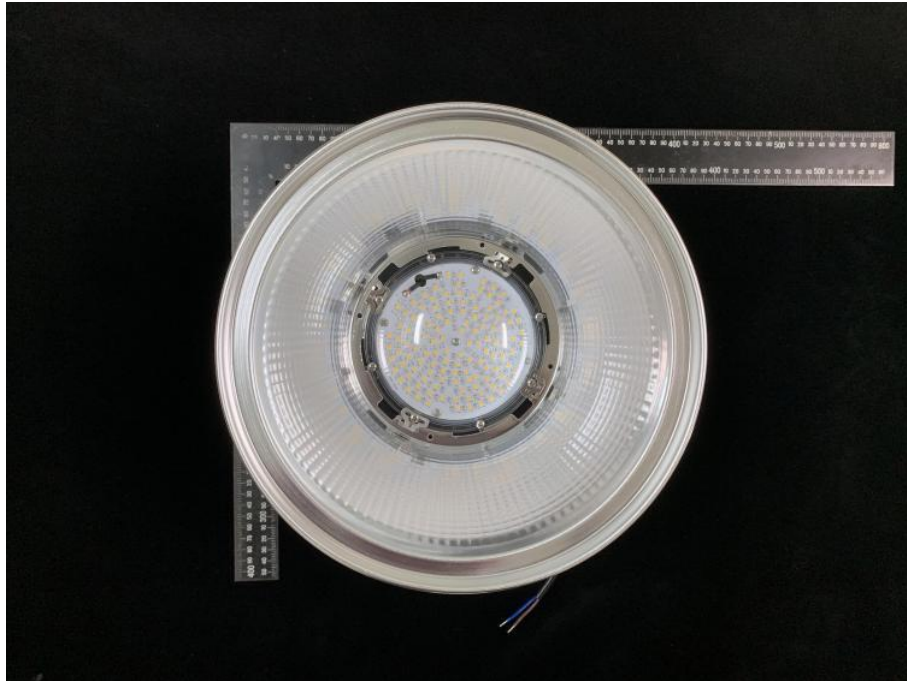
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### 光譜分布圖及色座標

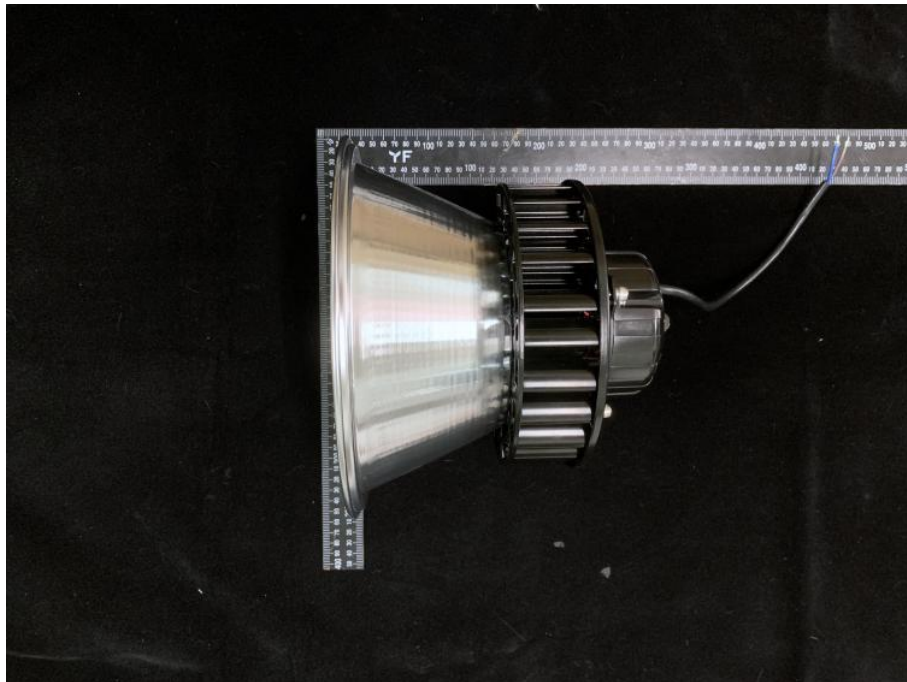


### 測試樣品照片

測試樣品外觀



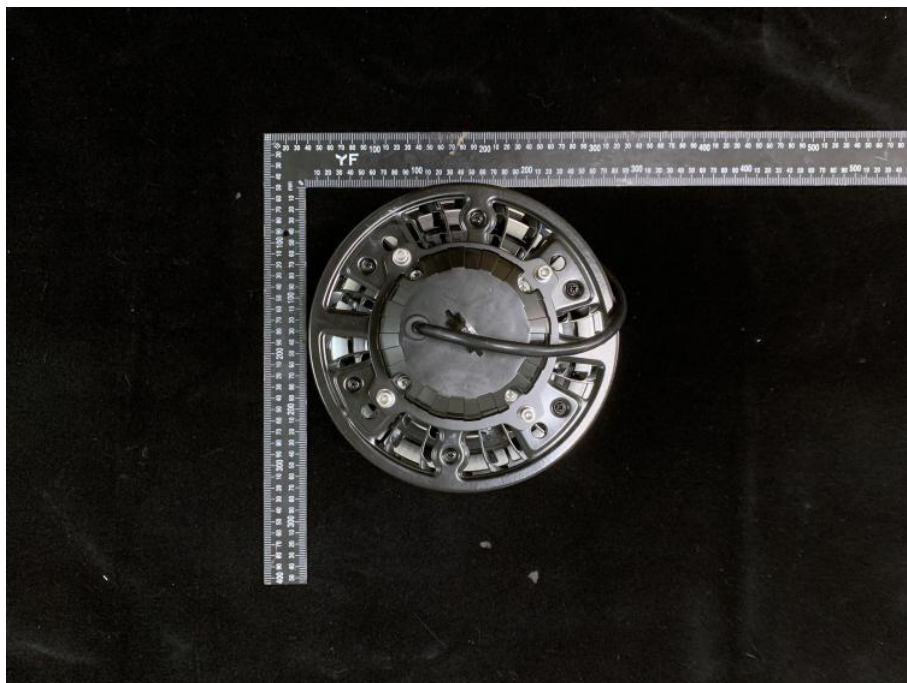
測試樣品外觀



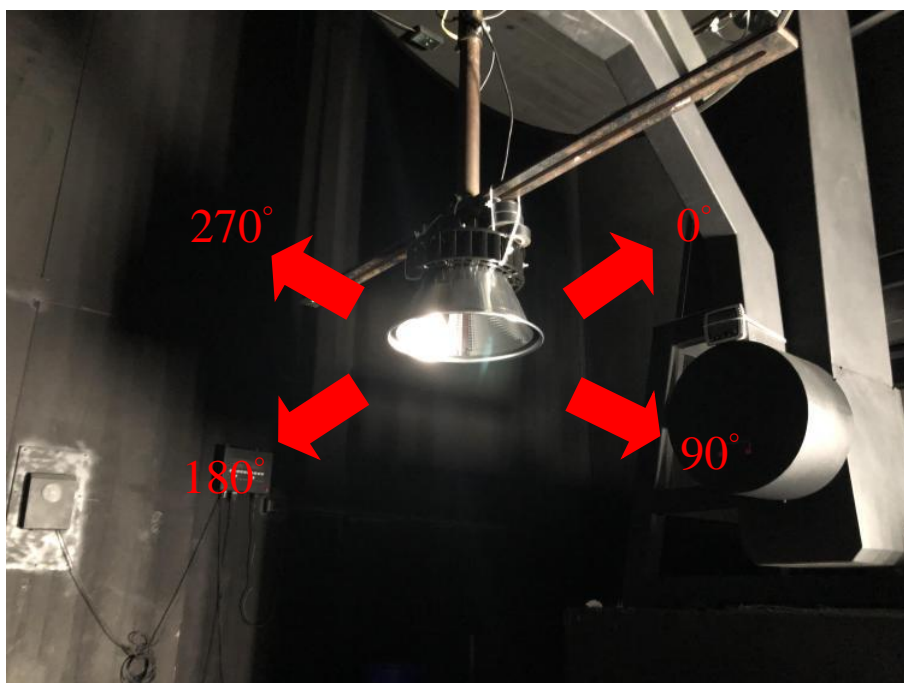


### 測試樣品照片

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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0

-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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0

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### 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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0

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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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0

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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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0

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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	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657	7380.657
5	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846	7176.846
10	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898	6971.898
15	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335	6667.335
20	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82	5763.82
25	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093	4541.093
30	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891	3460.891
35	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621	2742.621
40	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827	2043.827
45	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076	1384.076
50	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137	772.2137
55	237.288	237.288	237.288	237.288	237.288	237.288	237.288	237.288
60	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801	13.21801
65	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002	7.449002
70	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001	3.970001
75	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001	1.926001
80	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
85	0	0	0	0	0	0	0	0
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)

第 10 頁 共 10 頁

$\gamma/C(^{\circ})$	360.0
0	7380.657
5	7176.846
10	6971.898
15	6667.335
20	5763.82
25	4541.093
30	3460.891
35	2742.621
40	2043.827
45	1384.076
50	772.2137
55	237.288
60	13.21801
65	7.449002
70	3.970001
75	1.926001
80	0.757
85	0
90	0

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### 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	107A-01	角度規	ACUANGLE A-300
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	990-22	快速光譜輻射分析儀	浙大三色 SPR-3000
7	990-23	2 $\pi$ 積分球	浙大三色
8	1040-29	測光標準燈 110V/300W	浙大三色(S11030003)
9	103T-14	數字型溫濕度記錄器	TANDD(TR-72UI/F8043A00)
			測試人員：劉醇澤

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