

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： 106 年 11 月 08 日

測試日期： 106 年 11 月 08 日 至 106 年 11 月 10 日

1. 報告發行日期：106 年 11 月 15 日
2. 報告編號：17110809
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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

燈具廠牌或商標：CooLED

燈具型號：S3175C-001

測試電壓 (V)：220

額定頻率 (Hz)：50/60

額定輸入功率 (W)：150

光源控制器廠牌/型號：明緯/ELG-150-36A

光源廠牌/型號/色溫：CooLED/ZA120C-002/5000K

LED 晶片廠牌/型號：Lumileds/LUXEON 3030 2D

燈具尺寸：長 631.7 mm 、 寬 215 mm 、 高 89.8 mm

重量：5100 公克

- 以下空白 -

試驗內容

試驗條件

環境溫度 (°C)	25.1
環境濕度(%)	55.4
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)	0.690
功率(W)	149.9
頻率(Hz)	60
功率因數	0.987

配光量測

試驗項目	試驗結果
燈具全光通量 (lm)	17580.3
燈具發光效率 (lm/W)	117.3
中心光強度 (cd)	5040.7
最大光強度 (cd)	7895.7
最大光強度角度 (°)	C : 10.0 γ : 60.0
半峰邊角(50%Imax)	C0_180 Left=70.7 Right=69.2
	C90_270 Left=20.3 Right=52.5

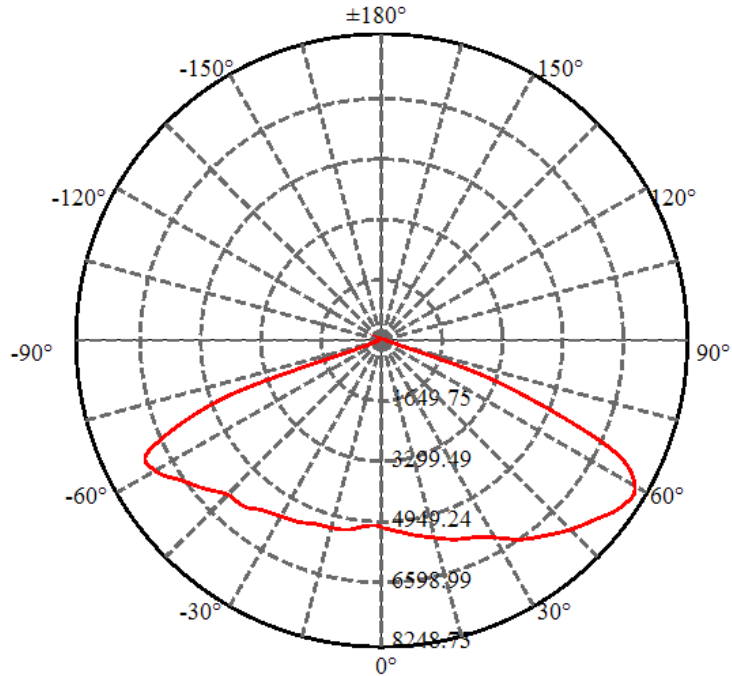
光色量測

試驗項目	試驗結果
色溫 (K)	5118
x 色座標	0.3425
y 色座標	0.3576
演色性	83.4

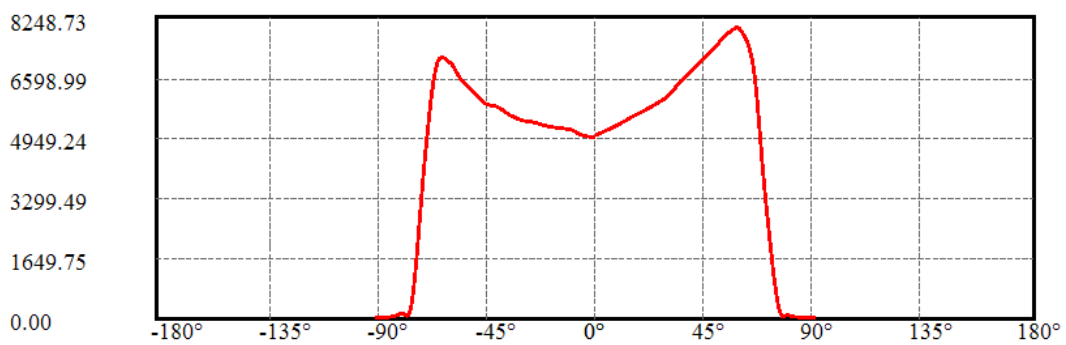
- 以下空白 -

配光曲線圖(一)

極座標圖 C0 / 180

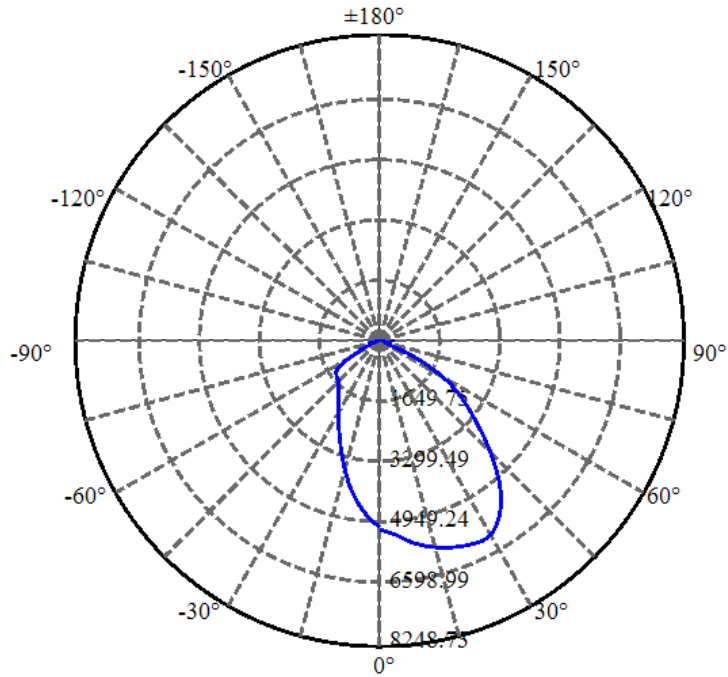


直角座標圖 C0 / 180

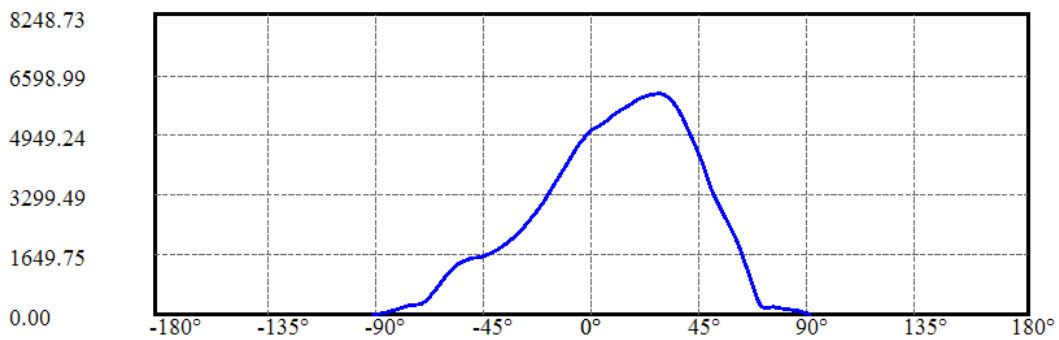


配光曲線圖(二)

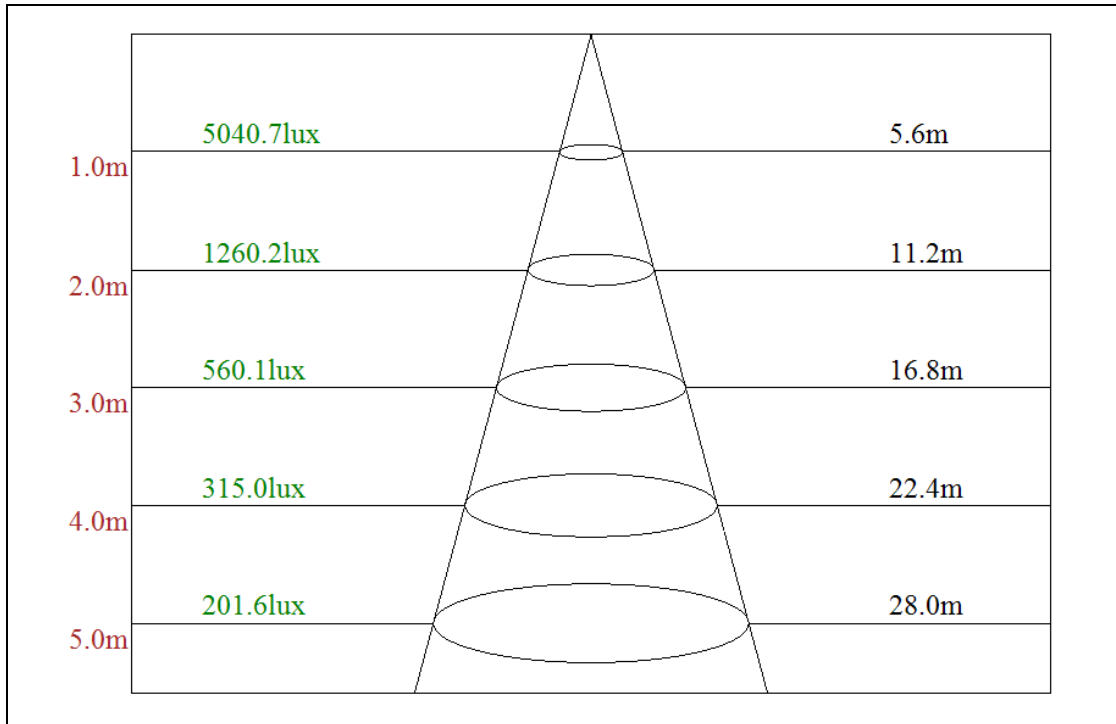
極座標圖 C90 / 270



直角座標圖 C90 / 270



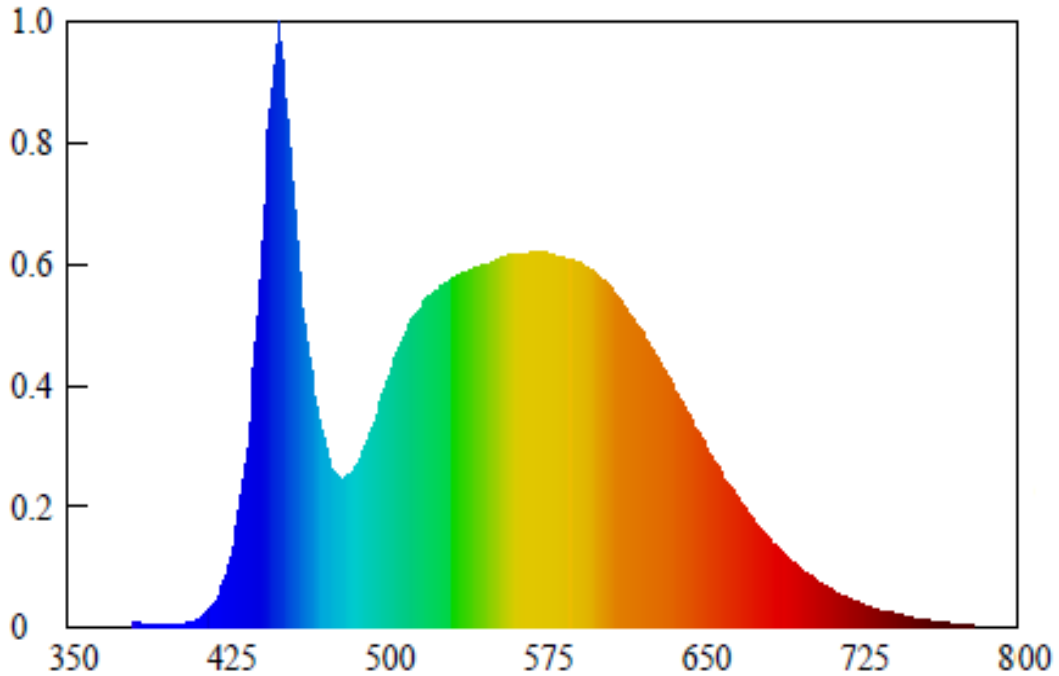
照度距離表



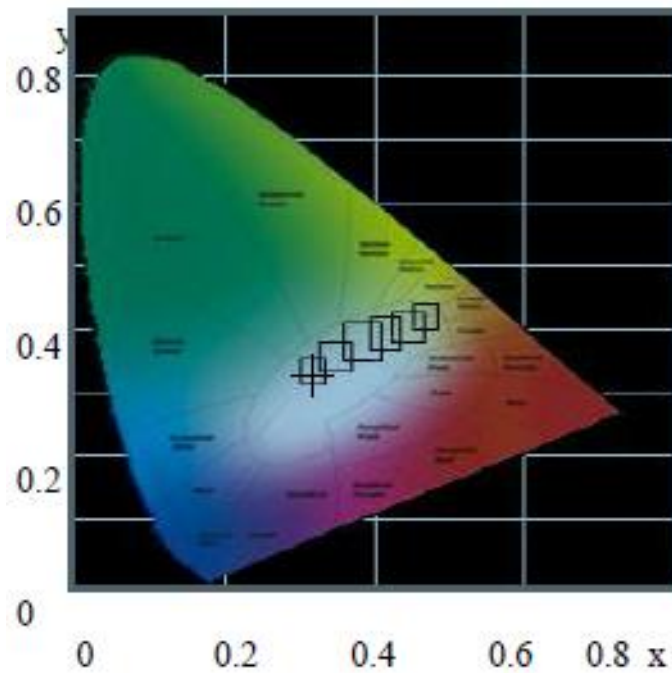
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光譜分布圖及色座標

光譜分布圖

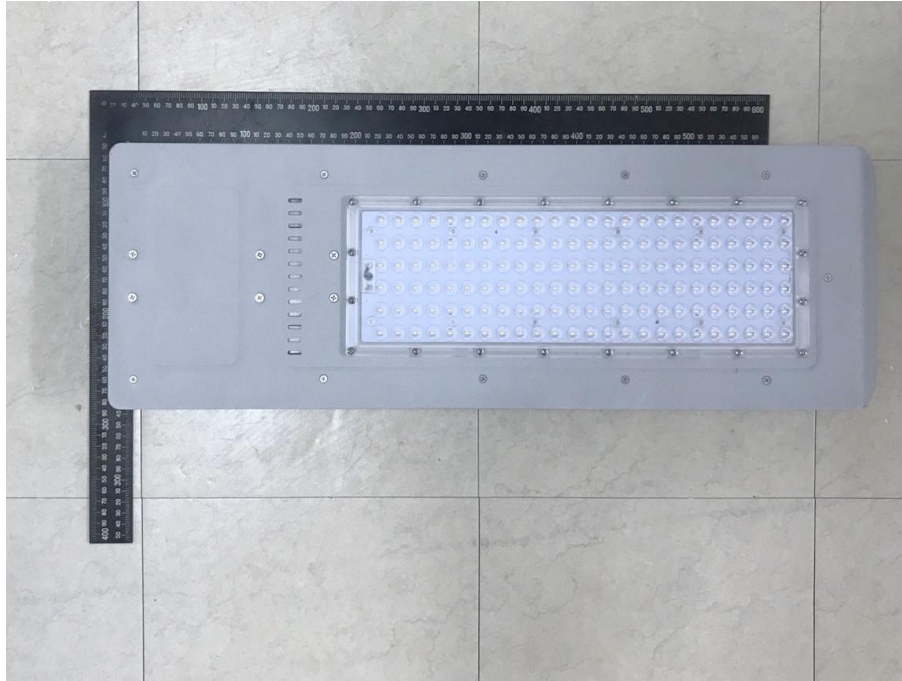


色座標

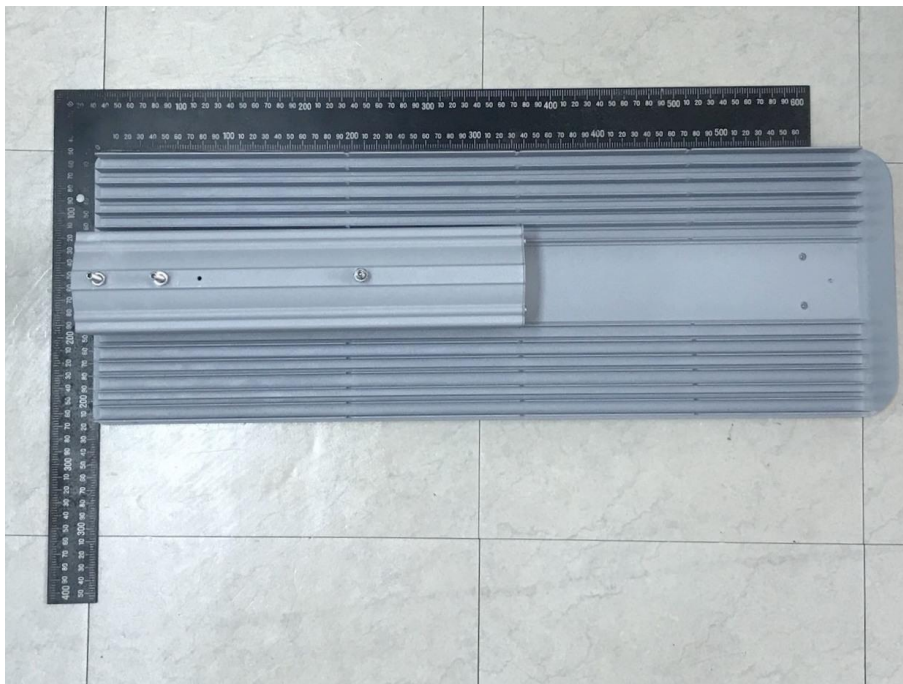


測試樣品照片

測試樣品外觀

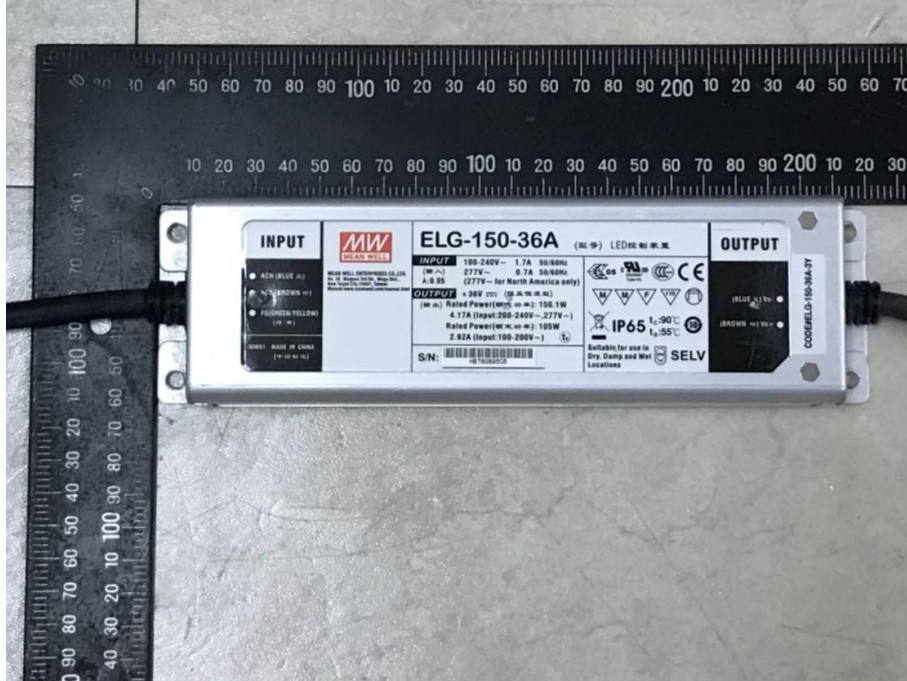


測試樣品外觀

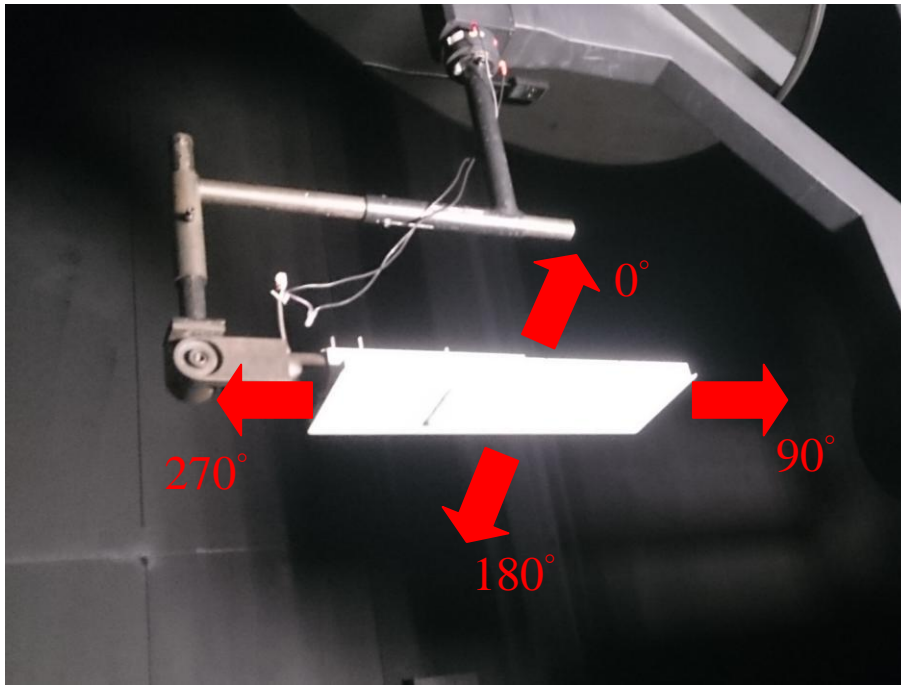


測試樣品照片

測試樣品搭配之變壓器



測試樣品架設方向





光強數據表(一)

Intensity data(cd)

$\gamma/C(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0
0	5040.658	5042.78	5036.412	5037.827	5051.979	5056.224	5056.931	5060.469
5	5151.037	5185	5205.519	5231.699	5250.803	5267.077	5288.303	5302.455
10	5317.313	5369.673	5399.39	5441.136	5465.901	5494.911	5517.553	5526.043
15	5518.26	5570.62	5633.593	5688.782	5717.085	5746.802	5770.151	5785.718
20	5702.934	5779.35	5871.333	5943.504	6005.062	6020.628	6026.996	6024.874
25	5881.239	6053.176	6146.574	6216.623	6261.906	6285.256	6283.84	6266.151
30	6104.828	6335.493	6475.589	6547.76	6571.817	6558.374	6548.468	6510.967
35	6517.335	6687.857	6827.247	6914.984	6910.739	6884.559	6818.756	6745.169
40	6837.859	7074.892	7191.64	7254.613	7222.065	7153.431	7022.533	6918.521
45	7185.271	7434.333	7544.004	7548.25	7457.682	7321.831	7171.121	6968.758
50	7494.476	7741.414	7804.387	7717.356	7585.75	7367.114	7154.139	6894.465
55	7846.133	8062.646	8083.873	7906.983	7661.459	7388.342	7127.252	6823.001
60	7895.662	8240.244	8248.734	7979.861	7575.138	7182.441	6860.502	6388.56
65	6795.406	7311.925	7415.229	7170.413	6642.573	6099.875	5578.403	4809.993
70	3435.911	4254.558	4526.261	4286.398	3672.944	3227.889	2564.905	1717.248
75	416.5406	537.8871	698.574	812.4204	684.5643	564.9866	430.2672	354.2753
80	126.2995	138.1865	155.3802	156.0877	157.2198	155.3802	152.5499	137.4789
85	61.48697	62.90208	70.89751	78.75143	76.84101	76.84101	82.07696	69.76542
90	29.50525	35.94405	38.49126	34.52893	30.28357	28.23165	26.03821	24.97687

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光強數據表(二)

Intensity data(cd)									
Page: 2 Total:10									
$\gamma/C(^{\circ})$	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	
0	5064.714	5071.79	5044.903	5061.884	5066.837	5068.252	5062.592	5066.129	
5	5315.191	5337.125	5312.36	5331.464	5332.88	5331.464	5319.436	5329.342	
10	5545.147	5560.006	5544.44	5560.006	5563.544	5560.714	5556.469	5566.375	
15	5794.209	5799.869	5784.303	5787.841	5792.794	5795.624	5786.426	5806.945	
20	6032.657	6014.968	6004.354	5996.571	6004.354	6009.307	6013.552	6012.137	
25	6235.019	6203.179	6213.792	6187.612	6184.782	6156.479	6157.187	6164.971	
30	6457.193	6424.645	6373.701	6303.652	6273.934	6234.311	6187.612	6180.536	
35	6641.866	6554.836	6449.409	6341.86	6193.273	6081.479	5956.24	5921.57	
40	6768.519	6575.355	6360.257	6136.668	5948.457	5728.406	5538.072	5395.853	
45	6776.302	6460.73	6169.923	5778.643	5408.589	5157.405	4845.371	4659.283	
50	6531.486	6198.226	5690.905	5242.312	4793.719	4347.956	4076.961	3798.182	
55	6338.323	5721.331	5246.557	4596.31	4117.292	3660.208	3273.173	3051.706	
60	5808.36	5040.658	4302.672	3773.417	3304.305	2871.986	2514.668	2265.607	
65	4171.066	3360.91	2685.898	2244.38	1860.175	1633.756	1400.969	1260.164	
70	1409.459	1075.845	896.4785	747.5371	658.5969	574.3972	515.5989	483.8295	
75	294.6987	277.0097	285.4297	298.3073	275.3824	313.2368	292.4345	240.5704	
80	131.4646	153.399	176.324	226.0654	222.3154	252.0329	264.6274	214.8152	
85	67.99652	71.39281	94.24699	135.993	150.4272	167.0549	153.116	142.5026	
90	27.17031	30.56659	31.41566	33.39683	36.5101	39.41109	39.48185	34.88271	

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光強數據表(三)

Intensity data(cd)									Page: 3 Total:10
$\gamma/C(^{\circ})$	80.0	85.0	90.0	95.0	100.0	105.0	110.0	115.0	
0	5051.979	5054.101	5073.913	5070.375	5065.422	5063.299	5044.903	5063.299	
5	5294.671	5287.596	5298.209	5287.596	5273.445	5267.784	5242.312	5252.218	
10	5528.167	5525.336	5540.902	5519.676	5504.817	5501.279	5470.854	5474.392	
15	5770.859	5742.557	5739.727	5729.821	5709.302	5694.443	5646.329	5634.3	
20	5996.571	5973.222	5932.183	5891.145	5846.568	5825.341	5788.548	5778.643	
25	6153.649	6113.319	6057.421	5997.278	5930.768	5890.437	5855.767	5868.502	
30	6157.187	6097.044	6037.609	5927.938	5876.286	5845.861	5893.975	5922.985	
35	5865.672	5802.7	5688.075	5644.206	5580.526	5617.319	5701.518	5813.313	
40	5305.993	5206.934	5094.432	5010.232	5007.402	5109.999	5301.04	5487.128	
45	4502.204	4369.183	4232.624	4193	4257.389	4411.637	4616.829	4877.211	
50	3607.141	3491.809	3401.241	3350.297	3424.591	3609.971	3854.787	4097.48	
55	2853.589	2744.625	2665.378	2637.784	2705.709	2835.9	3076.471	3392.043	
60	2148.86	2074.566	2030.697	2005.933	2047.679	2156.643	2312.306	2582.594	
65	1177.38	1139.172	1094.595	1103.794	1162.521	1274.316	1371.959	1574.321	
70	325.0531	283.8731	269.0143	278.5664	375.7144	492.4617	554.0195	629.7284	
75	222.8107	227.9051	214.1784	211.702	224.2258	257.3396	322.9304	332.5532	
80	178.2344	178.8004	165.286	163.2341	177.8806	205.9707	238.66	235.8297	
85	116.7474	105.9925	95.37909	100.049	118.5871	134.0119	152.2669	161.819	
90	25.4014	16.98144	14.50498	19.4579	27.52408	37.00539	39.48185	37.1469	

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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	5062.592	5073.205	5062.592	5056.931	5043.487	5051.979	5046.318	5025.799	
5	5251.51	5253.633	5233.114	5218.962	5198.443	5182.169	5172.264	5136.886	
10	5458.826	5454.58	5443.259	5436.891	5423.447	5408.589	5390.192	5364.72	
15	5622.979	5627.225	5630.763	5614.489	5622.272	5598.922	5566.375	5504.817	
20	5775.813	5782.18	5775.813	5770.151	5764.492	5738.312	5706.471	5642.083	
25	5896.098	5894.683	5915.201	5886.192	5865.672	5854.352	5843.738	5821.803	
30	5954.117	5995.156	5985.958	6001.524	6019.921	6023.458	6021.336	6014.968	
35	5883.361	5977.467	6044.685	6109.073	6143.743	6165.678	6178.414	6188.32	
40	5665.433	5856.475	5989.496	6121.81	6231.481	6287.378	6346.105	6378.654	
45	5195.613	5517.553	5775.104	5987.373	6165.678	6305.067	6423.229	6513.797	
50	4481.685	4921.08	5267.077	5687.367	5940.674	6246.34	6431.721	6623.469	
55	3791.106	4113.754	4587.819	5119.904	5616.611	5988.788	6301.529	6588.091	
60	2939.912	3324.824	3748.653	4379.796	5046.318	5663.31	6157.895	6523.703	
65	1857.345	2205.465	2755.239	3261.144	4081.206	4967.071	5714.962	6486.202	
70	719.5885	850.4871	1081.859	1427.148	1945.79	2670.331	3692.756	4787.351	
75	316.3501	362.6953	365.101	365.101	428.7814	554.0195	731.6171	955.206	
80	236.9618	229.8155	196.1356	166.4181	138.5403	152.6207	183.6118	189.343	
85	146.8187	150.5688	97.00647	74.57683	70.82676	77.69009	90.2139	93.2564	
90	36.43934	35.02422	32.477	32.26474	27.38257	28.65618	30.56659	32.68927	

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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	5037.12	5033.582	5027.921	5013.063	4984.76	5030.751	5033.582	5038.535	
5	5125.564	5105.753	5075.328	5036.412	5000.327	5005.279	4974.147	4957.166	
10	5340.663	5319.436	5255.756	5188.538	5155.282	5091.602	5031.459	4960.703	
15	5481.467	5451.042	5383.824	5279.813	5223.916	5112.121	5015.893	4897.023	
20	5601.752	5538.78	5480.76	5356.229	5277.69	5124.857	4970.609	4855.277	
25	5783.595	5743.264	5643.499	5536.657	5400.805	5181.462	4988.298	4745.605	
30	5980.297	5939.259	5838.078	5695.858	5445.382	5260.708	4947.26	4657.868	
35	6192.565	6114.026	6039.732	5864.257	5593.969	5287.596	4879.333	4566.592	
40	6388.56	6358.842	6235.726	6064.497	5801.992	5366.135	4858.107	4360.692	
45	6577.478	6586.676	6500.354	6312.85	5894.683	5498.449	4875.796	4277.2	
50	6791.868	6847.766	6827.954	6566.864	6220.867	5521.798	4944.429	4239.7	
55	6895.88	7115.931	7166.168	6978.664	6572.524	5767.322	4824.852	4211.397	
60	7023.24	7466.173	7648.016	7528.438	7033.854	6020.628	4765.417	3837.098	
65	7091.874	7842.595	8206.988	7952.267	6904.371	5625.81	3855.494	2698.634	
70	5787.133	6689.272	6977.249	6195.395	4487.346	1359.789	1359.789	784.4718	
75	1265.117	1381.086	1054.406	670.9084	508.6649	355.2659	287.6231	261.9387	
80	188.0694	189.4846	167.1257	150.0735	138.611	142.6441	150.0027	139.7431	
85	93.53944	95.52061	75.63816	67.35971	62.83133	69.97768	72.10036	60.7794	
90	36.0148	40.6847	40.96772	35.66102	29.85903	30.14206	29.85903	30.35432	

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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	5051.271	5039.95	5038.535	5056.931	5038.535	5052.686	5064.714	5064.714
5	4921.787	4891.362	4846.079	4831.927	4787.351	4768.247	4743.482	4716.595
10	4885.702	4816.361	4715.18	4642.301	4551.026	4490.883	4413.052	4345.126
15	4778.86	4685.462	4529.092	4398.193	4270.125	4147.717	4062.81	3955.968
20	4667.066	4465.411	4297.719	4121.537	3995.591	3830.73	3654.547	3535.677
25	4538.998	4281.446	4049.366	3859.032	3660.208	3462.091	3302.182	3137.321
30	4333.098	4028.846	3826.484	3604.311	3375.769	3142.981	2944.865	2811.844
35	4178.142	3889.458	3586.622	3309.966	3121.047	2879.769	2687.313	2499.81
40	4029.554	3689.926	3376.476	3083.546	2820.334	2622.218	2429.761	2234.474
45	3839.221	3490.394	3191.803	2884.722	2586.132	2371.741	2201.927	2025.744
50	3756.436	3297.937	2915.855	2671.747	2377.402	2171.502	1982.583	1853.807
55	3615.632	3085.669	2673.162	2381.647	2133.293	1949.328	1770.315	1645.077
60	3221.521	2605.944	2176.455	1832.58	1618.897	1478.8	1330.92	1238.23
65	1875.034	1383.987	1156.861	927.6111	808.0335	714.6356	671.4744	636.0964
70	545.5287	437.2721	380.8088	352.6479	340.3364	331.7749	314.8642	315.7133
75	248.4951	280.4768	235.476	238.66	250.0517	251.8206	235.2637	222.0323
80	161.6067	159.3425	141.4412	141.8658	139.5308	161.3237	192.8809	204.5556
85	67.57198	72.24187	88.02046	68.42105	70.68524	70.11919	70.82676	77.19479
90	30.21281	30.56659	28.9392	25.75518	24.62309	23.70326	21.58058	18.60883

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光強數據表(七)

Intensity data(cd)		Page: 7 Total:10							
$\gamma/C(^{\circ})$	240.0	245.0	250.0	255.0	260.0	265.0	270.0	275.0	
0	5068.252	5066.129	5058.347	5068.96	5072.498	5072.498	5059.054	5051.271	
5	4697.491	4673.434	4652.915	4643.009	4644.424	4647.254	4643.716	4646.546	
10	4283.568	4236.162	4200.784	4163.283	4157.623	4157.623	4155.5	4171.773	
15	3841.343	3755.729	3677.897	3626.952	3612.801	3608.556	3602.896	3640.396	
20	3413.269	3277.418	3174.114	3080.009	3041.093	3046.753	3058.782	3101.943	
25	2999.347	2853.589	2726.936	2654.058	2594.623	2575.519	2615.142	2636.369	
30	2681.652	2532.357	2405.704	2307.353	2255.701	2237.305	2249.333	2309.476	
35	2338.486	2235.89	2112.774	2037.773	1972.677	1954.988	1954.988	2005.933	
40	2075.981	1963.479	1868.666	1795.08	1741.305	1725.031	1749.796	1772.438	
45	1874.326	1762.532	1683.993	1633.049	1584.934	1578.566	1587.765	1636.586	
50	1735.645	1644.369	1589.18	1543.896	1523.377	1512.056	1526.914	1558.755	
55	1561.585	1505.688	1469.602	1429.271	1400.261	1393.186	1393.893	1411.582	
60	1175.965	1134.926	1117.945	1093.888	1079.029	1067.708	1057.802	1059.217	
65	620.5301	617.6999	615.5772	616.2847	614.8696	606.3789	594.3504	602.8411	
70	322.6474	331.5626	335.2419	302.4111	302.6942	308.0716	306.3735	301.4913	
75	224.2258	230.0278	230.9476	235.9005	248.3536	262.151	261.7972	249.4149	
80	171.5125	160.6869	163.0218	164.9322	169.8851	179.7202	174.4135	164.7907	
85	76.69951	78.18538	80.44957	85.4025	70.756	66.65215	69.41164	65.02477	
90	18.11353	16.48615	15.00027	12.59457	11.17945	11.81625	14.57574	10.47189	

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光強數據表(八)

Intensity data(cd)		Page: 8 Total:10							
$\gamma/C(^{\circ})$	280.0	285.0	290.0	295.0	300.0	305.0	310.0	315.0	
0	5061.884	5054.101	5065.422	5057.639	5072.498	5077.451	5075.328	5073.913	
5	4674.141	4681.925	4710.227	4733.577	4773.2	4809.285	4846.786	4872.258	
10	4199.369	4232.624	4290.644	4340.881	4410.929	4483.1	4570.13	4659.283	
15	3694.878	3741.577	3839.928	3925.543	4053.611	4170.359	4259.511	4385.457	
20	3184.02	3300.767	3402.656	3526.479	3682.85	3843.466	3999.129	4123.66	
25	2732.597	2849.344	2997.224	3164.916	3302.89	3500.299	3672.236	3864.693	
30	2374.571	2477.875	2637.076	2819.626	3011.375	3154.302	3355.25	3591.575	
35	2085.887	2215.37	2331.41	2491.319	2678.822	2892.505	3128.123	3314.918	
40	1848.147	1959.941	2106.406	2252.871	2402.166	2632.831	2874.109	3102.651	
45	1691.068	1783.051	1908.289	2048.386	2238.72	2404.289	2622.218	2897.458	
50	1618.19	1674.795	1764.655	1875.742	2025.744	2214.663	2363.25	2605.236	
55	1443.422	1475.97	1539.651	1598.378	1695.314	1830.458	1961.356	2142.492	
60	1068.416	1076.199	1098.841	1120.067	1153.323	1213.465	1288.467	1425.026	
65	600.7184	599.3033	598.5958	600.0109	607.0865	616.9923	646.7098	694.1163	
70	297.812	323.2134	334.1806	330.7136	325.4776	324.204	337.0816	359.582	
75	232.0089	224.9333	229.0372	226.9145	221.6786	226.6315	254.0848	254.3678	
80	160.4038	159.5548	154.8141	157.4321	173.423	171.5833	144.0592	126.5117	
85	77.12404	78.32689	75.4259	72.24187	68.91634	69.19937	63.82191	63.53889	
90	11.53323	13.0191	14.22196	15.42481	16.69842	18.53807	20.23622	21.72209	

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光強數據表(九)

Intensity data(cd)									Page: 9 Total:10
$\gamma/C(^{\circ})$	320.0	325.0	330.0	335.0	340.0	345.0	350.0	355.0	
0	5058.347	5052.686	5044.903	5042.78	5044.903	5034.997	5044.903	5044.903	
5	4896.315	4932.401	4958.581	4989.006	5014.478	5052.686	5093.724	5109.999	
10	4730.039	4814.238	4891.362	4976.977	5064.714	5109.999	5186.415	5230.991	
15	4519.186	4643.009	4798.672	4906.929	5033.582	5180.047	5302.455	5370.38	
20	4268.002	4430.741	4630.273	4814.946	5018.723	5203.396	5387.362	5541.61	
25	4054.319	4205.029	4414.467	4664.235	4972.024	5269.907	5480.76	5668.263	
30	3825.777	4028.846	4262.341	4522.724	4882.164	5284.058	5612.366	5850.106	
35	3585.914	3832.852	4112.338	4476.025	4819.898	5258.586	5756.708	6186.197	
40	3347.466	3632.613	3981.44	4381.211	4835.465	5368.258	5927.23	6460.023	
45	3185.435	3539.923	3834.268	4289.937	4802.917	5528.167	6085.724	6749.415	
50	2884.722	3286.616	3735.209	4144.179	4831.927	5554.346	6442.333	7003.429	
55	2395.798	2790.617	3285.909	3840.636	4424.373	5407.881	6498.231	7377.021	
60	1640.124	1890.6	2317.259	2849.344	3723.181	4604.8	5990.203	7256.735	
65	762.7496	907.0919	1048.604	1367.006	1960.649	2845.099	4158.33	5547.978	
70	368.6388	373.5917	425.2436	458.4989	563.9253	785.3916	1473.14	2631.416	
75	247.5752	230.523	240.5704	265.2643	247.0092	254.9339	274.1087	327.1757	
80	124.2475	125.8749	129.2712	144.6253	133.3751	121.4881	127.3608	123.257	
85	64.24645	80.09579	72.5249	59.57655	56.25102	60.35487	62.19452	58.23219	
90	21.29756	24.90611	26.25047	26.67501	26.5335	26.88728	27.94862	28.72694	

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光強數據表(十)

Intensity data(cd)

Page: 10 Total:10

$\gamma/C(^{\circ})$	360.0
0	5040.658
5	5151.037
10	5317.313
15	5518.26
20	5702.934
25	5881.239
30	6104.828
35	6517.335
40	6837.859
45	7185.271
50	7494.476
55	7846.133
60	7895.662
65	6795.406
70	3435.911
75	416.5406
80	126.2995
85	61.48697
90	29.50525

- 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	Nigata Seiki/LM-90
2	99E-05	數位電力計	YOKOGAWA WT210 (91K116100)
3	99E-08	數位電力計	YOKOGAWA WT210 (91K539455)
4	99E-12	AC Power Source	APC AFC-5KW
5	99E-17	AC Power Source	APC AFC-5KW
6	990-01	立式大型分佈光度計	浙大三色 GMS-2000
7	990-22	快速光譜輻射分析儀	浙大三色 SPR-3000
8	990-23	2 π 積分球	浙大三色
9	1040-31	測光標準燈 110V/100W	浙大三色(S13100197)
10	103T-14	數字型溫濕度計	TANDD(TR-72UI/F8043A00)
11	103T-15	數字型溫濕度計	TANDD(TR-72UI/F8043A01)
			測試人員：劉醇澤

- 以下空白 -