

Report No	:		Voltage	:	V
Test No	:	A2407287C001	Current	:	A
LumCAT	:	LIT by CARDI	Power	:	100.000 W
Luminaire	:	0017440203 100W 4000K 16000lm	PF	:	
LampCAT	:		Ballast type	:	
Lamp flux	:	16000.0 lm	Width	:	137 mm
Number of Lamps	:	1	Length	:	267 mm
Phm Type	:	C	Height	:	0 mm

Photometric Results

Lumens(lm)	:	16000.00	Central intensity(cd)	:	5642.411
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	10789.700
Luminous Efficacy(lm/W)	:	160.00	Angle of maximum intensity	:	C=180.0 γ =40.5
IES Classification	:	TypeI	Max Cd(At 90°Vert)	:	5.423
Longitudinal Classification	:	VeryShort	Max Cd(80 to 90°Vert)	:	161.451
Cut Off Classification	:	FullCutoff			
Beam Angle(50%Imax)	:	[C0/180]Total=59.1 [C90/270]Total=101.1			
Field angle(10%Imax)	:	[C0/180]Total=120.2 [C90/270]Total=139.6			
Street Side UpWard Lumens	:	- -of Lamp 0.00%of Luminaire			
Street Side DownWard Lumens	:	49.63%of Lamp 49.63%of Luminaire			
House Side UpWard Lumens	:	- -of lamp 0.00%of Luminaire			
House Side DownWard Lumens	:	50.37%of Lamp 50.37%of Luminaire			
SLI: 6.187 (C Flash Area: 0.009), Throw: 114.2 (long), Spread: 0.0 (narrow), Control: 6.187 (tight)					

Zonal flux distribution table

Appendix Page: 2 Total:18

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5642.411	0.000	0	0.00%	0.00%
0.5	5642.065	1.350	1.35	0.01%	0.01%
1.0	5643.303	4.050	5.4	0.03%	0.03%
1.5	5643.770	6.750	12.15	0.04%	0.08%
2.0	5645.103	9.451	21.602	0.06%	0.14%
2.5	5646.956	12.154	33.755	0.08%	0.21%
3.0	5649.319	14.858	48.614	0.09%	0.30%
3.5	5650.964	17.564	66.178	0.11%	0.41%
4.0	5653.086	20.269	86.446	0.13%	0.54%
4.5	5655.077	22.975	109.421	0.14%	0.68%
5.0	5659.925	25.688	135.109	0.16%	0.84%
5.5	5663.647	28.406	163.515	0.18%	1.02%
6.0	5668.339	31.126	194.641	0.19%	1.22%
6.5	5672.556	33.848	228.489	0.21%	1.43%
7.0	5677.603	36.574	265.063	0.23%	1.66%
7.5	5682.018	39.302	304.365	0.25%	1.90%
8.0	5685.429	42.025	346.391	0.26%	2.16%
8.5	5690.121	44.750	391.141	0.28%	2.44%
9.0	5694.536	47.480	438.621	0.30%	2.74%
9.5	5698.302	50.206	488.828	0.31%	3.06%
10.0	5702.778	52.933	541.761	0.33%	3.39%
10.5	5706.916	55.661	597.422	0.35%	3.73%
11.0	5709.712	58.381	655.802	0.36%	4.10%
11.5	5713.461	61.097	716.899	0.38%	4.48%
12.0	5716.136	63.811	780.71	0.40%	4.88%
12.5	5718.629	66.515	847.225	0.42%	5.30%
13.0	5721.140	69.217	916.442	0.43%	5.73%
13.5	5722.707	71.909	988.351	0.45%	6.18%
14.0	5725.339	74.599	1062.95	0.47%	6.64%
14.5	5726.611	77.282	1140.232	0.48%	7.13%
15.0	5727.607	79.951	1220.183	0.50%	7.63%
15.5	5728.932	82.615	1302.797	0.52%	8.14%
16.0	5728.533	85.263	1388.06	0.53%	8.68%
16.5	5728.654	87.896	1475.956	0.55%	9.22%
17.0	5727.226	90.513	1566.469	0.57%	9.79%
17.5	5726.040	93.113	1659.582	0.58%	10.37%
18.0	5723.365	95.694	1755.276	0.60%	10.97%
18.5	5720.084	98.248	1853.524	0.61%	11.58%

Zonal flux distribution table

Appendix Page: 3 Total:18

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
19.0	5716.275	100.782	1954.306	0.63%	12.21%
19.5	5712.093	103.297	2057.603	0.65%	12.86%
20.0	5707.323	105.791	2163.394	0.66%	13.52%
20.5	5702.977	108.272	2271.666	0.68%	14.20%
21.0	5697.116	110.730	2382.396	0.69%	14.89%
21.5	5692.043	113.167	2495.563	0.71%	15.60%
22.0	5686.130	115.591	2611.154	0.72%	16.32%
22.5	5680.157	117.992	2729.146	0.74%	17.06%
23.0	5673.828	120.373	2849.519	0.75%	17.81%
23.5	5667.500	122.737	2972.256	0.77%	18.58%
24.0	5660.730	125.081	3097.337	0.78%	19.36%
24.5	5652.748	127.390	3224.727	0.80%	20.15%
25.0	5645.605	129.680	3354.407	0.81%	20.97%
25.5	5637.762	131.954	3486.361	0.82%	21.79%
26.0	5629.460	134.199	3620.56	0.84%	22.63%
26.5	5620.621	136.413	3756.973	0.85%	23.48%
27.0	5611.557	138.601	3895.575	0.87%	24.35%
27.5	5601.748	140.759	4036.333	0.88%	25.23%
28.0	5592.242	142.892	4179.225	0.89%	26.12%
28.5	5581.023	144.987	4324.213	0.91%	27.03%
29.0	5568.928	147.029	4471.242	0.92%	27.95%
29.5	5555.640	149.022	4620.264	0.93%	28.88%
30.0	5540.853	150.957	4771.221	0.94%	29.82%
30.5	5526.551	152.854	4924.075	0.96%	30.78%
31.0	5511.410	154.723	5078.798	0.97%	31.74%
31.5	5494.718	156.534	5235.332	0.98%	32.72%
32.0	5479.118	158.313	5393.645	0.99%	33.71%
32.5	5462.020	160.061	5553.706	1.00%	34.71%
33.0	5443.892	161.746	5715.452	1.01%	35.72%
33.5	5422.941	163.347	5878.8	1.02%	36.74%
34.0	5403.133	164.894	6043.694	1.03%	37.77%
34.5	5382.659	166.420	6210.114	1.04%	38.81%
35.0	5361.726	167.900	6378.014	1.05%	39.86%
35.5	5342.039	169.363	6547.376	1.06%	40.92%
36.0	5322.976	170.827	6718.203	1.07%	41.99%
36.5	5303.151	172.261	6890.464	1.08%	43.07%
37.0	5283.516	173.657	7064.12	1.09%	44.15%
37.5	5262.349	175.003	7239.123	1.09%	45.24%

Zonal flux distribution table

Appendix Page: 4 Total:18

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	5240.360	176.280	7415.403	1.10%	46.35%
38.5	5217.323	177.496	7592.899	1.11%	47.46%
39.0	5193.239	178.645	7771.544	1.12%	48.57%
39.5	5167.553	179.717	7951.261	1.12%	49.70%
40.0	5140.724	180.710	8131.971	1.13%	50.82%
40.5	5112.042	181.615	8313.586	1.14%	51.96%
41.0	5083.040	182.448	8496.035	1.14%	53.10%
41.5	5051.312	183.191	8679.226	1.14%	54.25%
42.0	5017.851	183.817	8863.043	1.15%	55.39%
42.5	4981.110	184.313	9047.357	1.15%	56.55%
43.0	4942.438	184.674	9232.03	1.15%	57.70%
43.5	4899.758	184.882	9416.912	1.16%	58.86%
44.0	4854.818	184.929	9601.841	1.16%	60.01%
44.5	4806.537	184.824	9786.665	1.16%	61.17%
45.0	4755.468	184.555	9971.221	1.15%	62.32%
45.5	4701.014	184.118	10155.339	1.15%	63.47%
46.0	4642.049	183.477	10338.816	1.15%	64.62%
46.5	4579.561	182.624	10521.44	1.14%	65.76%
47.0	4513.723	181.581	10703.021	1.13%	66.89%
47.5	4444.188	180.339	10883.36	1.13%	68.02%
48.0	4372.004	178.911	11062.27	1.12%	69.14%
48.5	4295.915	177.289	11239.56	1.11%	70.25%
49.0	4216.026	175.449	11415.008	1.10%	71.34%
49.5	4132.371	173.388	11588.396	1.08%	72.43%
50.0	4044.838	171.103	11759.499	1.07%	73.50%
50.5	3953.080	168.581	11928.081	1.05%	74.55%
51.0	3858.248	165.837	12093.918	1.04%	75.59%
51.5	3761.555	162.918	12256.836	1.02%	76.61%
52.0	3661.252	159.812	12416.648	1.00%	77.60%
52.5	3558.759	156.509	12573.157	0.98%	78.58%
53.0	3453.617	153.030	12726.187	0.96%	79.54%
53.5	3346.432	149.375	12875.562	0.93%	80.47%
54.0	3239.013	145.598	13021.16	0.91%	81.38%
54.5	3131.879	141.750	13162.91	0.89%	82.27%
55.0	3024.400	137.831	13300.741	0.86%	83.13%
55.5	2914.946	133.789	13434.53	0.84%	83.97%
56.0	2806.046	129.645	13564.175	0.81%	84.78%
56.5	2699.766	125.506	13689.681	0.78%	85.56%

Zonal flux distribution table

Appendix Page: 5 Total:18

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
57.0	2594.337	121.379	13811.06	0.76%	86.32%
57.5	2490.034	117.233	13928.293	0.73%	87.05%
58.0	2384.795	113.028	14041.32	0.71%	87.76%
58.5	2282.227	108.801	14150.122	0.68%	88.44%
59.0	2186.443	104.736	14254.858	0.65%	89.09%
59.5	2091.853	100.801	14355.659	0.63%	89.72%
60.0	1998.978	96.881	14452.54	0.61%	90.33%
60.5	1904.882	92.920	14545.46	0.58%	90.91%
61.0	1811.220	88.889	14634.349	0.56%	91.46%
61.5	1719.778	84.871	14719.219	0.53%	92.00%
62.0	1633.450	80.981	14800.2	0.51%	92.50%
62.5	1551.066	77.264	14877.464	0.48%	92.98%
63.0	1472.023	73.681	14951.145	0.46%	93.44%
63.5	1397.382	70.247	15021.392	0.44%	93.88%
64.0	1324.396	66.924	15088.316	0.42%	94.30%
64.5	1251.999	63.619	15151.935	0.40%	94.70%
65.0	1182.069	60.355	15212.29	0.38%	95.08%
65.5	1112.988	57.140	15269.431	0.36%	95.43%
66.0	1045.093	53.944	15323.375	0.34%	95.77%
66.5	977.627	50.758	15374.132	0.32%	96.09%
67.0	913.350	47.632	15421.765	0.30%	96.39%
67.5	852.428	44.643	15466.408	0.28%	96.67%
68.0	792.114	41.729	15508.137	0.26%	96.93%
68.5	733.992	38.860	15546.997	0.24%	97.17%
69.0	678.970	36.103	15583.1	0.23%	97.39%
69.5	627.494	33.494	15616.594	0.21%	97.60%
70.0	580.723	31.077	15647.671	0.19%	97.80%
70.5	537.910	28.864	15676.535	0.18%	97.98%
71.0	497.020	26.787	15703.322	0.17%	98.15%
71.5	458.682	24.811	15728.132	0.16%	98.30%
72.0	424.789	23.002	15751.134	0.14%	98.44%
72.5	392.791	21.347	15772.482	0.13%	98.58%
73.0	362.858	19.785	15792.266	0.12%	98.70%
73.5	334.800	18.315	15810.582	0.11%	98.82%
74.0	310.289	16.979	15827.56	0.11%	98.92%
74.5	287.337	15.769	15843.33	0.10%	99.02%
75.0	265.580	14.625	15857.954	0.09%	99.11%
75.5	245.873	13.560	15871.514	0.08%	99.20%

Zonal flux distribution table

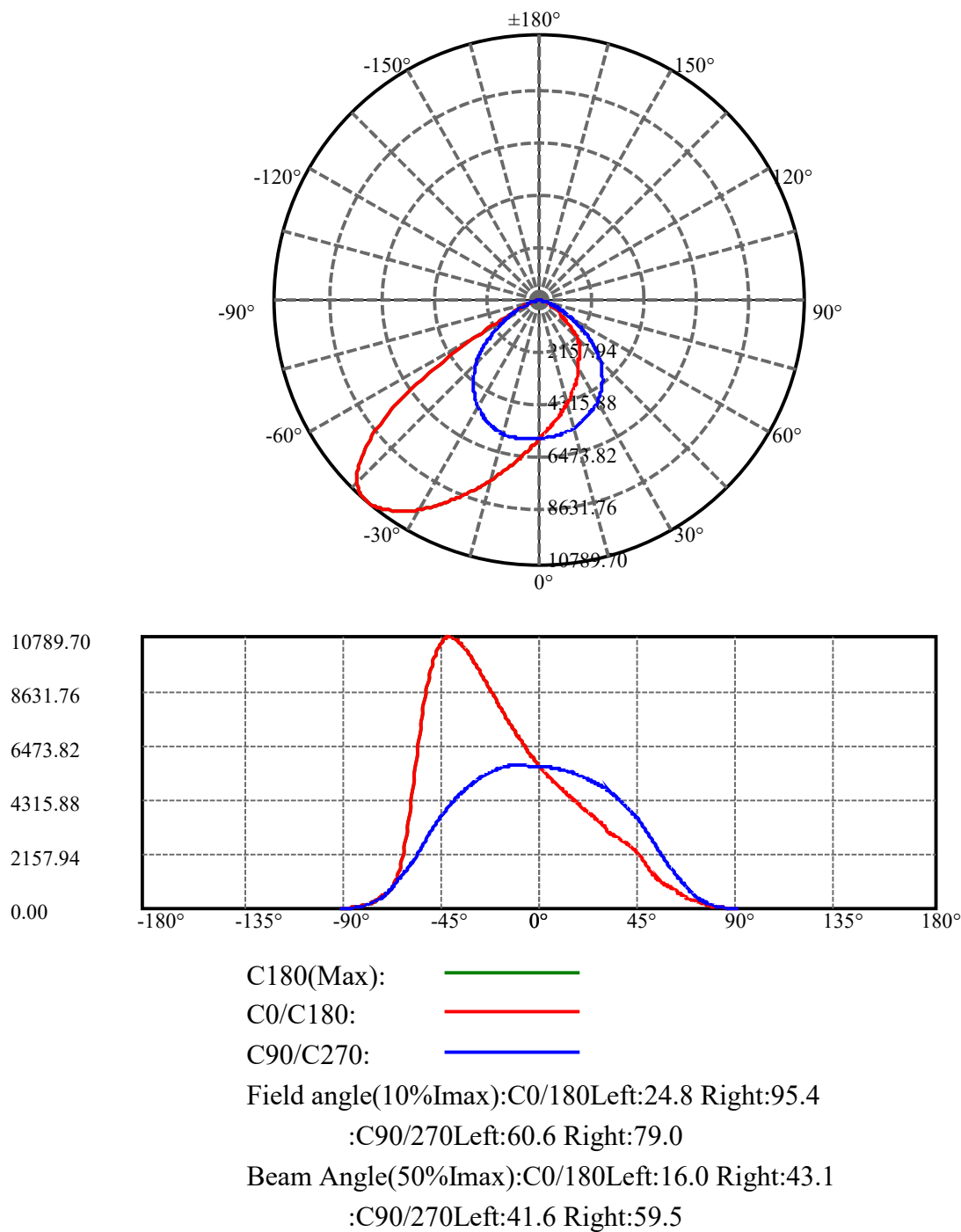
Appendix Page: 6 Total:18

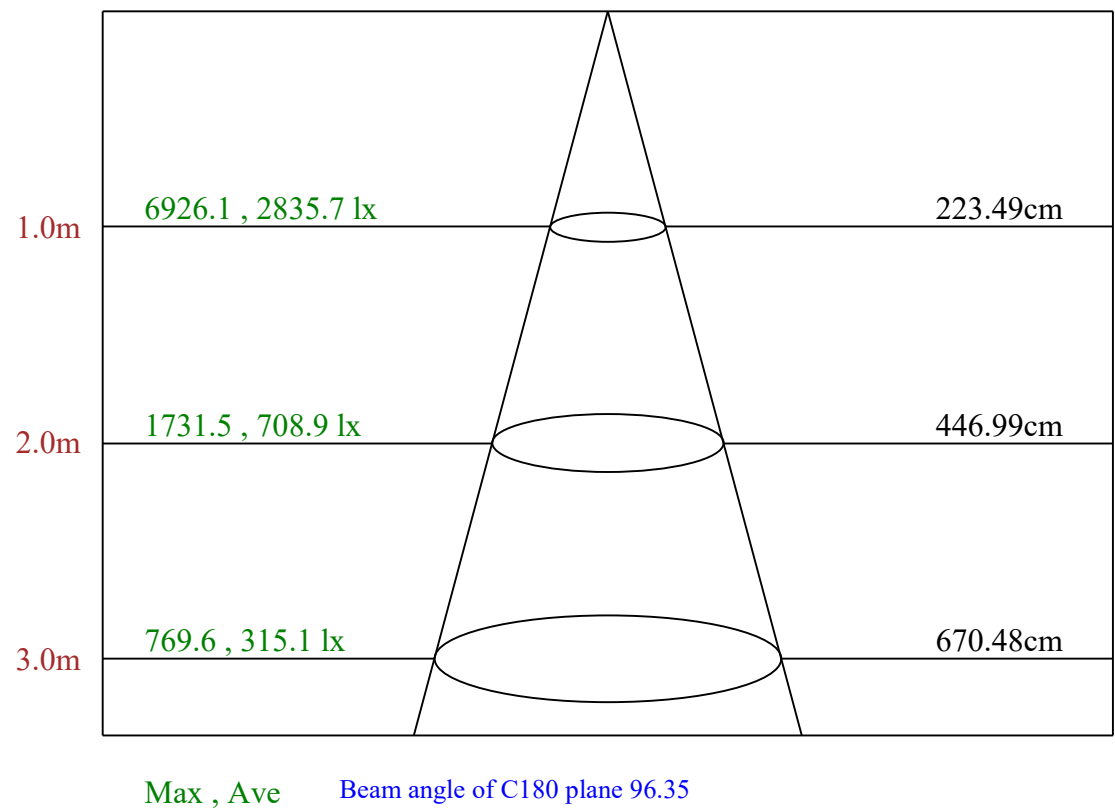
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	227.736	12.585	15884.099	0.08%	99.28%
76.5	210.560	11.672	15895.77	0.07%	99.35%
77.0	194.457	10.808	15906.578	0.07%	99.42%
77.5	178.939	9.984	15916.563	0.06%	99.48%
78.0	164.454	9.200	15925.763	0.06%	99.54%
78.5	150.579	8.456	15934.219	0.05%	99.59%
79.0	137.473	7.745	15941.964	0.05%	99.64%
79.5	124.991	7.069	15949.033	0.04%	99.68%
80.0	113.204	6.426	15955.459	0.04%	99.72%
80.5	102.093	5.817	15961.276	0.04%	99.76%
81.0	91.711	5.244	15966.52	0.03%	99.79%
81.5	82.059	4.709	15971.229	0.03%	99.82%
82.0	72.990	4.207	15975.436	0.03%	99.85%
82.5	64.623	3.738	15979.174	0.02%	99.87%
83.0	56.825	3.303	15982.477	0.02%	99.89%
83.5	49.616	2.898	15985.375	0.02%	99.91%
84.0	42.974	2.523	15987.898	0.02%	99.92%
84.5	37.048	2.183	15990.081	0.01%	99.94%
85.0	31.665	1.876	15991.957	0.01%	99.95%
85.5	26.957	1.602	15993.559	0.01%	99.96%
86.0	22.752	1.359	15994.918	0.01%	99.97%
86.5	19.039	1.143	15996.061	0.01%	99.98%
87.0	15.785	0.953	15997.014	0.01%	99.98%
87.5	12.983	0.788	15997.802	0.00%	99.99%
88.0	10.589	0.646	15998.448	0.00%	99.99%
88.5	8.601	0.526	15998.973	0.00%	99.99%
89.0	6.985	0.427	15999.401	0.00%	100.00%
89.5	5.493	0.342	15999.743	0.00%	100.00%
90.0	3.877	0.257	16000	0.00%	100.00%

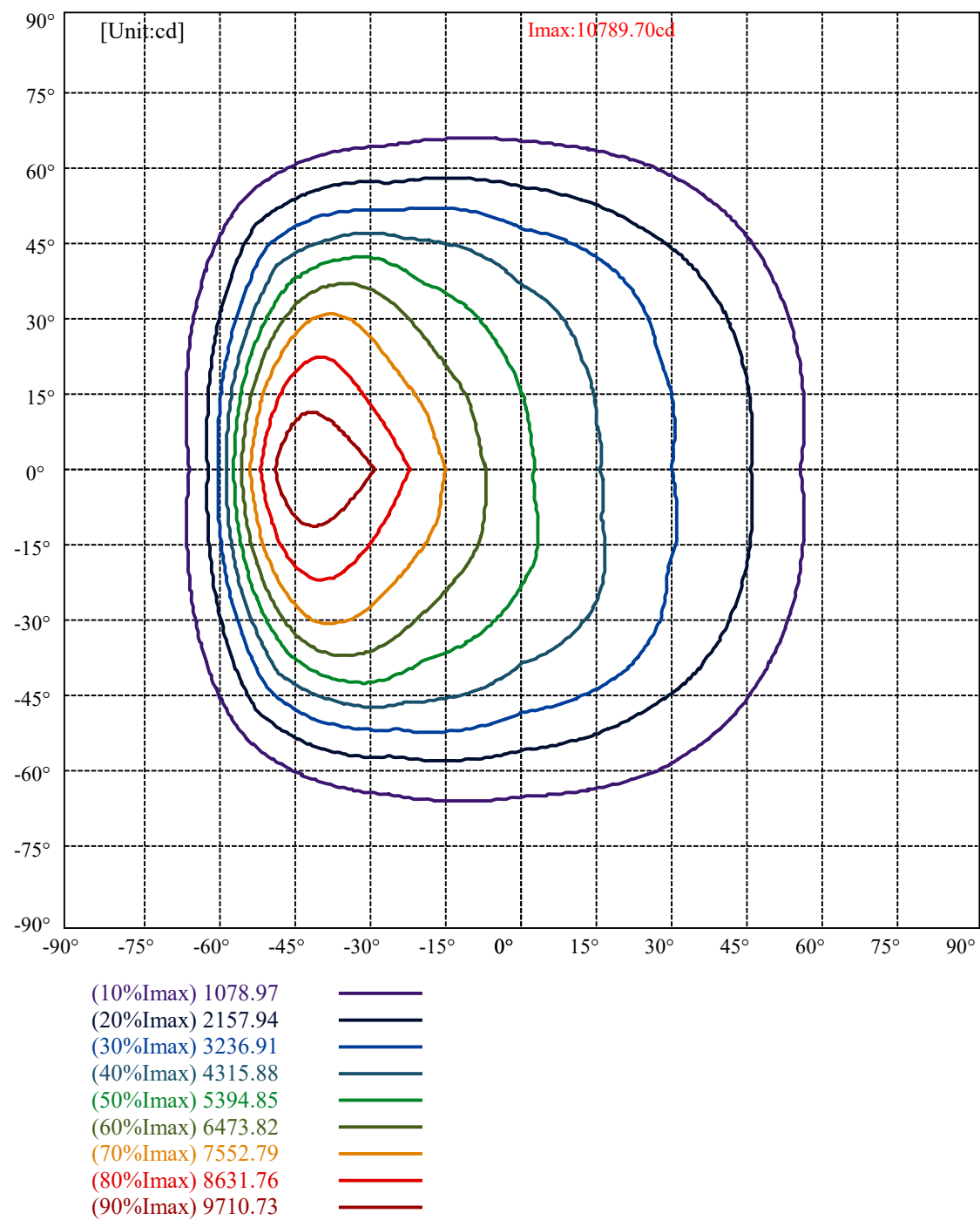
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	4771.22	29.82%	29.82%
0-40	8131.97	50.82%	50.82%
0-60	14452.54	90.33%	90.33%
0-90	15999.74	100.00%	100.00%
0-120	15999.74	100.00%	100.00%
0-180	16000.00	100.00%	100.00%
60-90	1547.20	9.67%	9.67%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-53.25	12800.00	80.00%	80.00%

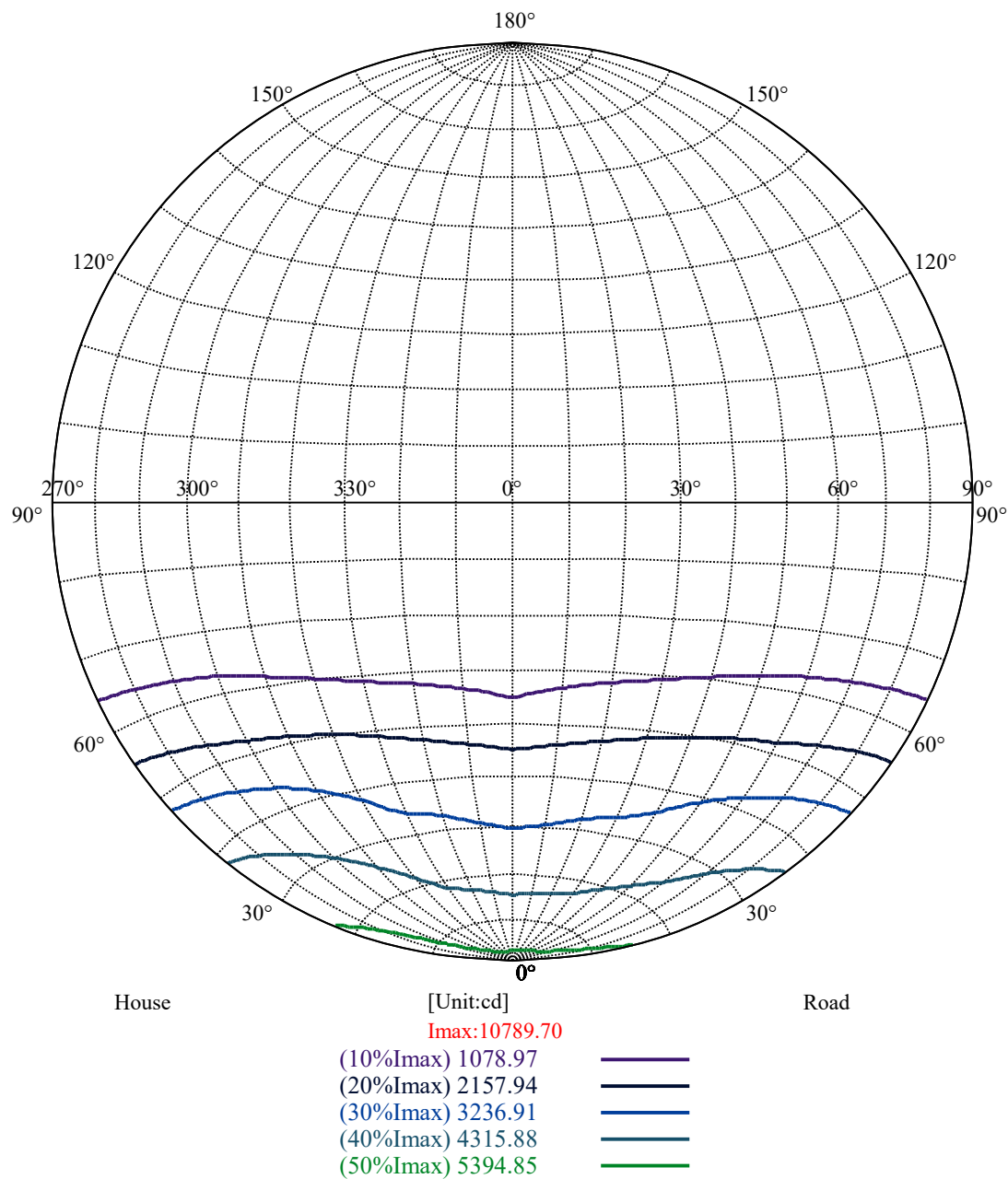
ZONAL LUMEN SUMMARY

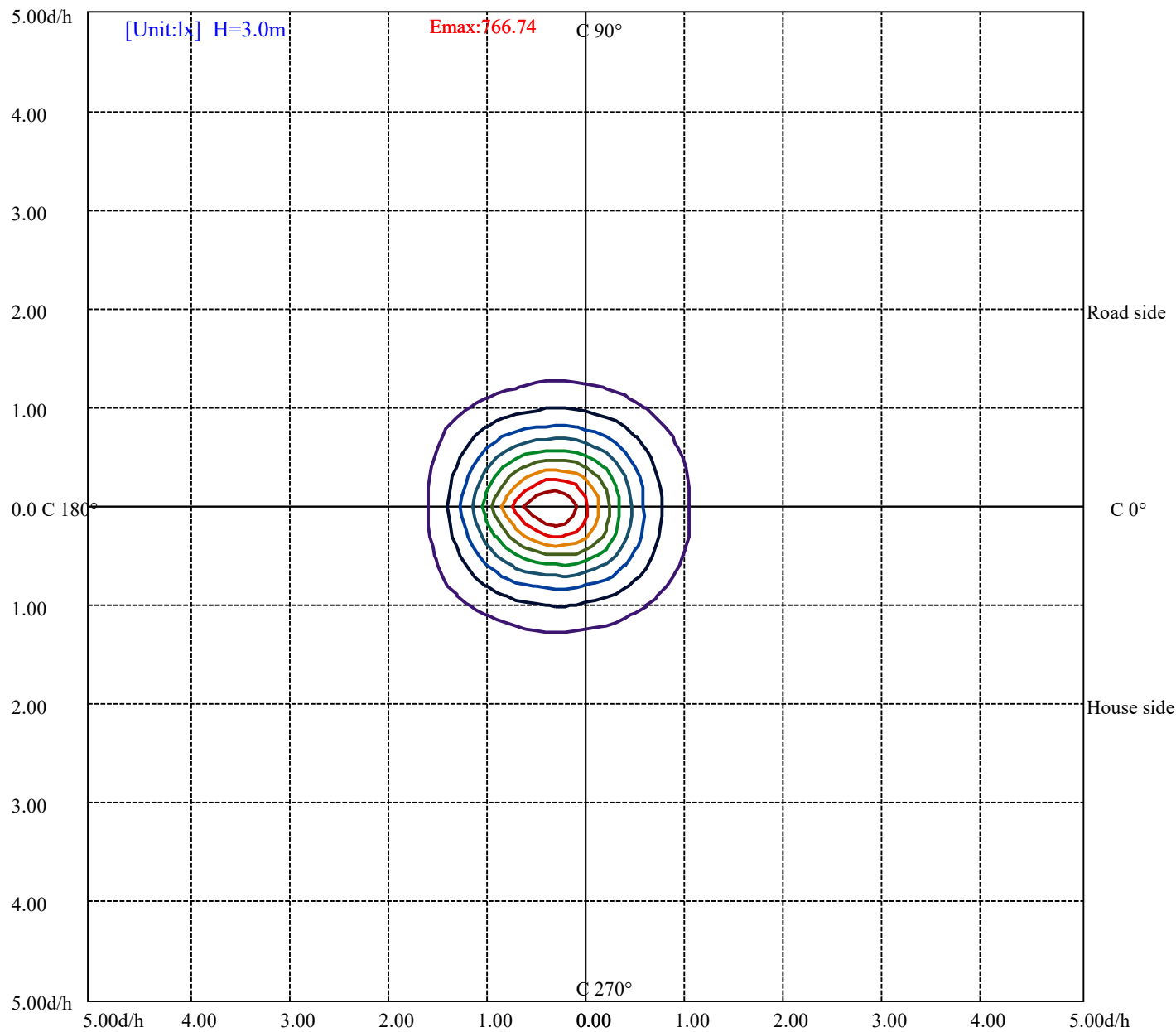
0-10	541.76
10-20	1621.63
20-30	2607.83
30-40	3360.75
40-50	3627.53
50-60	2693.04
60-70	1195.13
70-80	307.79
80-90	44.28
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00











(10%Emax)	76.67389	
(20%Emax)	153.3478	
(30%Emax)	230.0211	
(40%Emax)	306.6956	
(50%Emax)	383.3689	
(60%Emax)	460.0433	
(70%Emax)	536.7167	
(80%Emax)	613.3911	
(90%Emax)	690.0645	

C/γ(°)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
0.0	5642.41	5613.95	5558.37	5506.53	5459.47	5406.48	5357.03	5305.71	5257.93
30.0	5642.41	5628.70	5584.55	5540.39	5496.24	5452.09	5408.04	5367.32	5322.75
60.0	5642.41	5612.39	5585.48	5552.96	5523.15	5497.49	5467.78	5438.38	5408.56
90.0	5642.41	5628.91	5622.36	5622.15	5618.31	5615.50	5612.70	5609.79	5602.93
120.0	5642.41	5648.13	5671.08	5694.98	5720.85	5742.56	5767.49	5792.32	5814.24
150.0	5642.41	5656.44	5703.91	5749.00	5794.92	5840.11	5886.55	5930.80	5980.04
180.0	5642.41	5723.86	5785.46	5839.28	5890.70	5949.29	6005.81	6062.32	6119.04
210.0	5642.41	5726.35	5775.70	5823.80	5870.44	5921.35	5974.85	6023.68	6073.96
240.0	5642.41	5672.64	5703.70	5733.21	5764.27	5794.61	5826.81	5855.59	5887.17
270.0	5642.41	5631.61	5635.55	5636.70	5640.44	5645.22	5646.26	5650.83	5654.77
300.0	5642.41	5597.32	5572.39	5550.47	5530.11	5509.75	5489.28	5468.92	5448.56
330.0	5642.41	5564.50	5521.07	5475.78	5432.35	5389.03	5349.24	5305.92	5267.07
360.0	5642.41	5613.95	5558.37	5506.53	5459.47	5406.48	5357.03	5305.71	5257.93

C/γ(°)	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
0.0	5211.90	5169.52	5132.53	5093.37	5055.24	5017.43	4978.37	4935.98	4898.37
30.0	5279.85	5240.06	5199.96	5163.70	5128.48	5093.68	5059.09	5025.95	4990.11
60.0	5384.67	5357.24	5332.00	5304.05	5275.59	5247.95	5221.36	5192.68	5164.43
90.0	5597.43	5596.29	5590.57	5584.55	5576.34	5570.52	5561.69	5549.54	5541.43
120.0	5838.65	5859.64	5878.55	5902.13	5919.48	5940.36	5957.19	5974.12	5991.89
150.0	6022.33	6068.14	6116.66	6159.35	6208.39	6257.53	6303.86	6351.02	6398.92
180.0	6175.66	6238.51	6297.31	6361.00	6419.69	6482.03	6543.53	6604.20	6672.45
210.0	6124.03	6177.33	6228.96	6282.77	6336.27	6389.88	6444.00	6499.48	6554.12
240.0	5914.28	5948.88	5979.11	6009.55	6039.47	6068.56	6099.10	6125.38	6152.91
270.0	5658.62	5665.99	5668.18	5671.92	5675.86	5679.60	5682.62	5688.12	5686.56
300.0	5427.78	5407.63	5386.23	5364.72	5343.74	5323.17	5304.26	5285.98	5269.56
330.0	5225.72	5189.88	5153.73	5122.98	5092.12	5060.54	5029.17	4992.70	4960.71
360.0	5211.90	5169.52	5132.53	5093.37	5055.24	5017.43	4978.37	4935.98	4898.37

C/γ(°)	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0
0.0	4858.38	4818.90	4777.76	4734.23	4690.70	4648.53	4605.93	4561.26	4519.29
30.0	4951.25	4915.10	4876.35	4839.78	4799.06	4759.37	4716.57	4675.43	4635.02
60.0	5140.01	5111.96	5084.95	5056.39	5028.34	5001.64	4974.52	4948.24	4917.07
90.0	5533.02	5526.16	5516.81	5506.32	5496.97	5487.62	5478.27	5468.82	5458.74
120.0	6007.99	6024.61	6043.42	6058.58	6070.63	6087.36	6099.72	6112.50	6128.19
150.0	6448.89	6494.70	6547.99	6592.67	6644.19	6692.92	6741.54	6788.91	6839.50
180.0	6737.90	6802.31	6868.28	6941.21	7007.69	7078.54	7149.29	7223.36	7294.94
210.0	6608.98	6664.76	6718.58	6773.95	6825.06	6881.78	6932.69	6986.81	7038.44
240.0	6180.03	6204.23	6230.72	6257.53	6280.59	6304.38	6323.08	6344.58	6362.24
270.0	5688.33	5687.19	5686.15	5685.01	5683.86	5682.72	5680.85	5676.17	5672.33
300.0	5250.65	5233.51	5220.01	5204.53	5188.32	5167.86	5152.58	5134.61	5119.76
330.0	4929.02	4896.19	4862.32	4832.82	4801.14	4768.83	4738.60	4702.86	4668.16
360.0	4858.38	4818.90	4777.76	4734.23	4690.70	4648.53	4605.93	4561.26	4519.29

C/γ(°)	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5
0.0	4479.09	4437.74	4398.88	4360.65	4319.62	4279.83	4239.00	4200.46	4163.37
30.0	4593.26	4552.64	4514.61	4475.97	4440.75	4403.66	4366.68	4331.46	4295.52
60.0	4890.89	4866.69	4838.12	4811.63	4787.94	4760.20	4735.27	4707.53	4686.03
90.0	5445.03	5434.43	5417.81	5402.64	5388.10	5373.86	5355.27	5338.13	5322.44
120.0	6139.51	6149.07	6157.79	6171.40	6178.16	6183.77	6188.75	6191.66	6194.47
150.0	6884.69	6938.40	6987.54	7034.18	7078.23	7120.83	7164.67	7208.40	7252.04
180.0	7370.47	7446.30	7520.58	7593.72	7672.88	7742.17	7818.01	7888.65	7965.63
210.0	7087.37	7138.80	7187.63	7233.86	7282.37	7326.11	7370.99	7416.59	7453.68
240.0	6380.22	6394.66	6408.99	6420.11	6430.08	6440.06	6451.17	6455.12	6460.83
270.0	5667.34	5658.93	5653.11	5642.83	5634.10	5624.23	5615.92	5602.10	5587.04
300.0	5099.08	5083.60	5063.55	5048.39	5031.87	5016.49	5000.29	4981.38	4961.74
330.0	4635.54	4602.81	4570.71	4535.91	4503.08	4471.19	4437.84	4405.22	4369.69
360.0	4479.09	4437.74	4398.88	4360.65	4319.62	4279.83	4239.00	4200.46	4163.37

C/γ(°)	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0
0.0	4125.35	4085.15	4047.33	4009.83	3974.09	3937.11	3903.76	3867.30	3833.84
30.0	4259.47	4220.82	4188.31	4152.78	4117.46	4082.24	4049.41	4016.89	3984.90
60.0	4662.45	4637.72	4612.48	4587.02	4560.01	4532.69	4504.95	4479.19	4449.58
90.0	5300.73	5280.05	5257.61	5237.77	5212.53	5193.72	5169.62	5151.44	5127.24
120.0	6196.44	6196.54	6190.83	6191.66	6185.43	6177.43	6170.68	6163.40	6153.02
150.0	7287.88	7330.16	7368.18	7405.89	7440.07	7476.22	7511.13	7538.76	7572.22
180.0	8039.81	8119.08	8193.67	8266.70	8346.69	8424.30	8494.73	8573.06	8653.57
210.0	7495.03	7530.14	7564.01	7598.81	7632.57	7669.76	7698.23	7733.45	7756.41
240.0	6465.72	6464.88	6464.05	6463.22	6462.39	6461.56	6454.70	6449.61	6442.13
270.0	5571.35	5556.91	5539.88	5523.56	5503.51	5483.05	5466.32	5444.40	5426.85
300.0	4939.30	4914.89	4894.95	4869.91	4847.88	4822.12	4797.71	4774.12	4750.75
330.0	4336.86	4304.66	4274.01	4237.96	4205.24	4175.53	4144.15	4112.88	4083.07
360.0	4125.35	4085.15	4047.33	4009.83	3974.09	3937.11	3903.76	3867.30	3833.84
C/γ(°)	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5
0.0	3796.96	3760.50	3725.59	3688.82	3655.57	3617.24	3581.81	3546.91	3512.31
30.0	3954.04	3922.15	3891.19	3861.89	3828.13	3797.90	3769.64	3739.83	3707.10
60.0	4421.95	4394.73	4372.71	4346.42	4318.37	4294.06	4267.88	4240.04	4211.47
90.0	5106.67	5084.85	5066.57	5044.65	5021.38	5000.39	4977.95	4956.45	4933.69
120.0	6142.11	6134.52	6120.71	6108.14	6097.54	6084.97	6075.00	6063.67	6049.23
150.0	7603.59	7635.79	7664.78	7689.40	7712.57	7735.32	7765.34	7784.66	7807.10
180.0	8727.65	8804.52	8879.94	8964.51	9040.24	9122.83	9199.92	9279.18	9358.03
210.0	7789.34	7816.97	7843.88	7864.76	7890.42	7919.72	7943.09	7965.74	7988.91
240.0	6437.35	6424.89	6412.53	6402.97	6392.99	6380.11	6361.93	6349.26	6336.48
270.0	5404.61	5383.42	5364.10	5341.76	5315.58	5289.40	5261.04	5234.03	5203.39
300.0	4726.44	4704.00	4680.21	4655.80	4630.66	4604.37	4579.44	4551.18	4525.73
330.0	4051.18	4019.59	3987.80	3959.65	3929.52	3900.95	3870.10	3842.57	3814.00
360.0	3796.96	3760.50	3725.59	3688.82	3655.57	3617.24	3581.81	3546.91	3512.31
C/γ(°)	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0
0.0	3475.95	3438.55	3401.36	3361.16	3311.19	3253.53	3192.03	3134.58	3079.31
30.0	3680.20	3650.69	3623.89	3595.42	3566.54	3537.87	3508.05	3476.89	3446.66
60.0	4183.53	4155.58	4128.36	4100.21	4074.65	4046.19	4019.59	3990.82	3959.24
90.0	4910.94	4887.88	4865.75	4841.13	4816.72	4787.73	4761.97	4731.84	4701.61
120.0	6036.77	6030.33	6018.59	6008.41	5996.77	5982.64	5968.20	5956.46	5937.24
150.0	7827.88	7845.85	7867.57	7884.50	7904.55	7926.99	7940.39	7960.13	7978.72
180.0	9431.17	9504.82	9583.99	9655.88	9729.01	9800.90	9868.84	9936.47	10006.39
210.0	8014.15	8033.78	8051.76	8070.77	8089.99	8108.79	8125.52	8139.75	8157.31
240.0	6319.23	6301.78	6285.37	6267.40	6247.14	6228.96	6206.52	6184.81	6162.47
270.0	5176.58	5143.96	5113.52	5080.80	5044.65	5011.09	4976.39	4942.53	4910.63
300.0	4496.85	4470.36	4438.67	4409.59	4378.94	4347.15	4315.46	4286.89	4252.30
330.0	3785.43	3757.38	3728.09	3697.02	3667.00	3635.84	3607.27	3577.45	3545.04
360.0	3475.95	3438.55	3401.36	3361.16	3311.19	3253.53	3192.03	3134.58	3079.31
C/γ(°)	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5
0.0	3032.36	2996.41	2968.57	2943.22	2915.28	2892.11	2865.62	2839.96	2813.99
30.0	3412.69	3374.87	3329.68	3277.22	3221.01	3164.92	3112.14	3060.41	3019.58
60.0	3931.50	3903.34	3873.94	3844.44	3812.44	3783.15	3753.23	3726.01	3691.62
90.0	4668.37	4635.75	4600.94	4569.57	4529.68	4497.58	4461.11	4422.99	4385.59
120.0	5919.06	5905.76	5890.29	5866.18	5845.30	5825.04	5800.94	5774.76	5748.06
150.0	7995.35	8011.03	8029.94	8051.45	8068.28	8086.14	8106.19	8120.01	8145.26
180.0	10068.72	10133.24	10191.20	10247.62	10303.40	10351.81	10405.32	10457.26	10506.09
210.0	8170.08	8184.52	8201.98	8215.90	8228.99	8242.08	8254.44	8264.41	8276.88
240.0	6136.91	6109.28	6083.31	6052.97	6023.05	5991.78	5958.23	5924.46	5887.69
270.0	4873.02	4841.65	4806.43	4768.93	4729.25	4689.66	4653.82	4611.23	4569.05
300.0	4221.55	4187.06	4152.26	4120.05	4086.50	4054.40	4016.89	3982.92	3943.96
330.0	3507.02	3466.50	3415.70	3369.16	3312.12	3258.93	3203.98	3156.29	3116.71
360.0	3032.36	2996.41	2968.57	2943.22	2915.28	2892.11	2865.62	2839.96	2813.99

Intensity data(cd)

Appendix Page: 15 Total:18

C/γ(°)	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0
0.0	2787.91	2759.86	2731.40	2703.97	2675.40	2647.97	2620.44	2593.33	2564.35
30.0	2986.54	2958.49	2932.94	2908.42	2881.93	2855.23	2829.26	2801.62	2773.89
60.0	3662.85	3630.12	3595.01	3560.00	3526.23	3491.64	3454.45	3418.50	3384.01
90.0	4345.38	4305.91	4268.40	4226.54	4186.44	4143.12	4096.47	4053.46	4008.06
120.0	5720.02	5689.06	5658.83	5626.93	5598.47	5561.48	5526.58	5489.49	5451.88
150.0	8158.45	8174.86	8190.13	8203.33	8215.69	8230.55	8239.07	8248.00	8259.22
180.0	10549.72	10589.20	10632.83	10667.11	10698.28	10726.33	10751.26	10765.80	10781.39
210.0	8281.66	8292.57	8299.01	8306.49	8308.57	8311.27	8315.11	8314.38	8309.71
240.0	5860.99	5825.46	5790.14	5756.06	5718.98	5684.80	5645.74	5604.70	5559.20
270.0	4526.77	4482.93	4438.47	4390.37	4342.16	4295.31	4246.27	4196.62	4146.86
300.0	3911.24	3873.32	3836.75	3798.42	3759.56	3716.76	3676.35	3635.63	3590.13
330.0	3084.20	3056.04	3028.30	3000.57	2972.62	2943.43	2917.87	2889.10	2860.01
360.0	2787.91	2759.86	2731.40	2703.97	2675.40	2647.97	2620.44	2593.33	2564.35

C/γ(°)	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5
0.0	2532.24	2501.81	2471.37	2440.30	2407.58	2368.83	2321.35	2273.36	2225.26
30.0	2749.26	2721.42	2694.83	2666.15	2637.48	2610.37	2581.28	2549.49	2516.87
60.0	3348.80	3311.29	3273.89	3230.57	3190.26	3149.96	3109.13	3061.86	3017.92
90.0	3961.52	3916.33	3869.06	3821.59	3776.91	3727.78	3683.62	3634.38	3585.45
120.0	5406.69	5363.27	5314.23	5261.04	5206.29	5153.42	5093.47	5036.34	4974.21
150.0	8270.44	8279.06	8280.72	8278.85	8270.34	8264.41	8243.53	8219.22	8188.26
180.0	10789.70	10789.70	10780.35	10769.96	10743.99	10708.67	10666.07	10619.32	10548.68
210.0	8298.59	8294.44	8284.98	8269.92	8249.56	8226.39	8200.94	8167.18	8132.48
240.0	5513.80	5468.40	5423.21	5384.67	5330.65	5273.41	5216.79	5154.35	5090.67
270.0	4097.51	4045.25	3994.97	3939.08	3888.49	3834.78	3776.91	3721.75	3666.07
300.0	3545.14	3502.65	3456.42	3411.54	3362.51	3314.20	3262.78	3211.67	3159.20
330.0	2830.82	2802.87	2771.70	2740.54	2709.27	2677.06	2641.22	2608.91	2573.38
360.0	2532.24	2501.81	2471.37	2440.30	2407.58	2368.83	2321.35	2273.36	2225.26

C/γ(°)	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0
0.0	2177.26	2129.27	2070.99	2013.02	1953.49	1892.40	1829.86	1762.44	1686.50
30.0	2482.38	2444.36	2407.48	2366.23	2320.00	2275.12	2225.36	2177.89	2126.98
60.0	2973.66	2926.50	2875.80	2823.65	2768.69	2708.54	2643.51	2579.41	2512.30
90.0	3538.49	3483.64	3421.10	3354.20	3286.57	3223.40	3163.88	3102.17	3043.16
120.0	4910.01	4846.22	4780.25	4714.81	4650.71	4584.63	4516.59	4451.45	4380.60
150.0	8145.77	8099.13	8044.28	7976.96	7909.43	7823.21	7734.59	7638.18	7534.30
180.0	10481.15	10401.16	10305.58	10208.55	10084.72	9957.15	9818.77	9659.93	9497.76
210.0	8086.04	8036.80	7985.58	7923.56	7857.28	7784.77	7704.57	7616.16	7509.99
240.0	5023.25	4953.75	4882.69	4810.90	4746.59	4676.47	4602.81	4528.95	4452.28
270.0	3610.28	3550.13	3487.28	3418.61	3349.00	3275.56	3207.20	3135.41	3069.65
300.0	3102.38	3047.11	2992.98	2939.07	2884.11	2823.54	2759.86	2690.46	2618.78
330.0	2534.95	2494.12	2450.59	2405.19	2354.08	2305.46	2257.05	2208.53	2160.02
360.0	2177.26	2129.27	2070.99	2013.02	1953.49	1892.40	1829.86	1762.44	1686.50

C/γ(°)	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5
0.0	1605.16	1533.79	1475.51	1418.16	1363.10	1309.81	1261.40	1218.91	1178.81
30.0	2078.78	2029.02	1977.80	1926.27	1874.33	1819.68	1754.75	1681.10	1603.08
60.0	2445.91	2381.19	2318.96	2256.74	2194.51	2132.38	2070.16	2019.04	1970.53
90.0	2979.89	2911.12	2837.88	2767.34	2702.41	2639.35	2574.63	2510.74	2444.77
120.0	4293.44	4200.67	4106.55	4015.75	3931.39	3843.92	3754.06	3659.11	3550.96
150.0	7420.54	7305.23	7166.64	7023.17	6869.73	6714.63	6546.33	6377.00	6209.22
180.0	9327.07	9143.40	8941.13	8725.88	8493.90	8234.29	7978.62	7695.01	7397.17
210.0	7410.98	7289.54	7167.37	7023.80	6876.17	6718.99	6552.56	6382.29	6212.85
240.0	4371.87	4285.34	4192.98	4097.72	4000.06	3899.29	3800.39	3704.30	3603.53
270.0	3001.19	2932.42	2855.13	2775.96	2698.78	2620.96	2549.07	2474.17	2403.01
300.0	2545.75	2471.37	2395.53	2320.73	2243.23	2170.41	2102.57	2039.82	1982.89
330.0	2107.87	2054.99	2001.49	1947.46	1891.05	1831.32	1760.57	1681.93	1600.38
360.0	1605.16	1533.79	1475.51	1418.16	1363.10	1309.81	1261.40	1218.91	1178.81

C/γ(°)	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0
0.0	1142.24	1107.23	1075.13	1047.70	1021.20	995.50	970.76	946.03	919.72
30.0	1535.14	1482.78	1436.76	1391.36	1347.21	1303.99	1262.95	1221.92	1180.78
60.0	1918.17	1862.49	1806.59	1755.07	1704.68	1655.85	1609.42	1561.21	1512.80
90.0	2375.69	2308.06	2238.97	2168.22	2096.96	2029.02	1958.48	1888.98	1821.14
120.0	3433.15	3316.07	3206.26	3096.87	2983.43	2871.23	2758.82	2641.85	2531.62
150.0	6036.14	5866.18	5696.12	5526.06	5356.10	5186.14	5019.40	4859.52	4697.98
180.0	7095.69	6782.88	6458.65	6103.36	5748.06	5392.77	5037.48	4681.87	4308.40
210.0	6036.97	5859.95	5680.12	5501.96	5321.09	5149.57	4975.35	4810.28	4641.15
240.0	3496.73	3378.09	3253.95	3129.28	3012.20	2895.33	2780.33	2667.09	2555.41
270.0	2338.29	2265.05	2191.39	2117.63	2043.98	1976.86	1910.17	1841.92	1778.86
300.0	1927.21	1873.60	1816.26	1758.39	1703.75	1652.32	1603.70	1557.16	1510.72
330.0	1532.75	1480.18	1432.60	1383.46	1333.91	1288.61	1245.19	1202.60	1158.96
360.0	1142.24	1107.23	1075.13	1047.70	1021.20	995.50	970.76	946.03	919.72
C/γ(°)	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5
0.0	892.55	866.68	838.92	811.79	785.23	758.09	732.59	705.58	678.07
30.0	1139.54	1099.75	1061.41	1023.41	986.19	948.75	911.61	874.01	837.45
60.0	1465.95	1418.58	1370.17	1326.22	1281.65	1236.88	1194.08	1148.37	1102.45
90.0	1757.14	1692.32	1633.62	1574.93	1518.72	1455.35	1397.90	1347.41	1293.50
120.0	2427.21	2354.70	2258.81	2161.58	2064.44	1967.20	1885.65	1812.83	1742.60
150.0	4540.90	4388.50	4234.02	4074.34	3906.05	3731.72	3547.84	3363.86	3187.87
180.0	3941.37	3606.54	3297.68	3007.53	2721.53	2456.10	2206.04	1979.67	1784.67
210.0	4476.18	4308.92	4141.25	3968.27	3780.76	3587.22	3382.97	3198.89	3016.05
240.0	2447.16	2349.82	2256.11	2165.42	2076.39	1992.24	1915.78	1843.27	1771.48
270.0	1720.16	1664.27	1610.04	1558.41	1505.32	1453.17	1397.90	1343.36	1291.83
300.0	1464.18	1417.02	1372.14	1328.19	1283.73	1239.68	1195.53	1152.63	1111.49
330.0	1114.40	1070.24	1028.07	987.64	948.58	908.24	869.44	831.53	795.34
360.0	892.55	866.68	838.92	811.79	785.23	758.09	732.59	705.58	678.07
C/γ(°)	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0
0.0	628.59	595.43	571.60	546.09	518.01	492.65	468.64	447.32	427.30
30.0	802.21	767.54	734.19	700.71	667.59	631.45	595.29	559.15	523.19
60.0	1058.71	1016.11	972.41	928.70	885.10	838.94	788.09	732.94	684.10
90.0	1236.98	1184.93	1136.94	1084.48	1035.12	985.64	938.61	890.59	841.29
120.0	1675.80	1604.12	1516.54	1425.33	1337.96	1246.02	1163.64	1094.14	1025.77
150.0	3021.76	2861.67	2702.10	2543.46	2396.88	2253.10	2119.81	1986.21	1851.37
180.0	1620.22	1474.57	1346.48	1231.27	1128.84	1037.27	953.04	874.65	802.86
210.0	2846.40	2693.17	2539.93	2388.26	2249.15	2110.36	1971.67	1832.88	1698.24
240.0	1704.99	1634.97	1565.47	1489.95	1403.82	1318.85	1232.31	1137.25	1056.22
270.0	1234.28	1174.44	1115.43	1062.66	1008.34	955.53	901.94	851.73	804.15
300.0	1072.43	1031.36	993.71	956.35	918.04	881.18	843.33	792.97	738.72
330.0	761.92	730.28	697.94	666.74	635.99	604.88	564.75	531.70	507.02
360.0	628.59	595.43	571.60	546.09	518.01	492.65	468.64	447.32	427.30
C/γ(°)	67.5	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5
0.0	408.13	390.52	374.99	359.29	343.75	328.70	314.14	299.74	284.10
30.0	498.19	473.55	449.99	427.67	406.71	385.84	365.89	345.65	324.61
60.0	640.30	596.15	550.79	508.99	473.26	443.63	417.35	389.20	362.56
90.0	794.83	747.79	697.55	652.57	611.23	569.89	528.57	487.34	451.06
120.0	963.75	902.84	849.16	798.70	751.43	705.60	661.67	619.16	577.65
150.0	1711.85	1566.41	1414.11	1266.90	1126.45	999.65	889.84	791.53	701.84
180.0	737.68	683.02	640.59	607.77	583.10	558.43	533.76	509.10	484.52
210.0	1560.07	1415.46	1275.21	1140.47	1013.94	900.75	799.71	709.27	630.91
240.0	986.12	920.78	862.21	806.93	755.10	709.81	668.01	625.37	582.72
270.0	757.23	710.12	664.87	619.98	574.73	534.90	495.53	457.65	422.89
300.0	686.93	638.06	589.21	540.34	491.71	453.07	421.92	391.49	363.80
330.0	484.06	460.68	439.23	418.02	398.54	378.40	358.54	338.76	317.53
360.0	408.13	390.52	374.99	359.29	343.75	328.70	314.14	299.74	284.10

Intensity data(cd)									Appendix Page: 17 Total:18
C/γ(°)	72.0	72.5	73.0	73.5	74.0	74.5	75.0	75.5	76.0
0.0	266.95	252.45	238.01	223.57	209.87	196.44	182.54	169.08	156.32
30.0	306.13	287.59	270.59	253.65	237.39	222.15	205.46	189.98	176.33
60.0	337.82	316.07	295.82	277.87	260.63	243.40	226.16	209.46	193.83
90.0	415.68	382.95	353.68	325.82	301.80	280.00	258.98	239.79	221.71
120.0	534.54	495.60	456.50	422.35	390.42	361.14	334.33	308.97	286.49
150.0	643.36	584.87	526.39	467.97	431.25	397.10	365.12	338.34	314.46
180.0	457.77	426.55	392.94	358.75	326.90	297.51	271.65	249.60	229.98
210.0	566.75	512.97	469.34	430.80	397.35	365.22	334.93	309.39	286.25
240.0	540.07	497.50	458.36	423.37	390.71	361.41	335.19	310.56	287.76
270.0	390.21	360.59	333.49	308.99	286.55	265.83	248.31	230.82	213.32
300.0	338.98	316.17	295.66	277.25	259.70	243.24	227.38	212.45	197.48
330.0	299.21	280.18	263.52	247.21	230.91	214.61	196.91	182.05	168.92
360.0	266.95	252.45	238.01	223.57	209.87	196.44	182.54	169.08	156.32
C/γ(°)	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5
0.0	143.82	132.07	120.82	110.10	99.53	89.71	80.64	72.68	65.57
30.0	162.87	149.99	136.69	125.37	114.18	103.72	92.88	83.44	74.58
60.0	180.13	167.59	155.35	143.25	130.91	118.99	108.12	97.93	88.42
90.0	204.20	188.37	173.71	159.59	146.40	134.33	122.08	110.76	100.08
120.0	265.28	245.12	224.97	204.81	186.85	170.30	154.68	139.35	124.81
150.0	291.38	268.96	248.78	230.01	211.38	193.37	176.95	161.45	146.70
180.0	212.14	195.63	179.75	164.97	151.62	139.33	127.65	116.37	106.04
210.0	264.50	244.92	225.38	208.34	191.00	175.23	160.71	146.54	132.88
240.0	266.79	247.10	227.92	209.30	191.96	175.63	159.97	144.95	129.99
270.0	197.86	183.29	169.23	155.93	143.36	131.03	119.77	108.87	98.50
300.0	181.63	167.20	154.68	143.21	132.03	120.67	109.30	98.26	88.31
330.0	156.12	143.25	129.99	118.57	107.72	97.37	87.16	77.80	69.23
360.0	143.82	132.07	120.82	110.10	99.53	89.71	80.64	72.68	65.57
C/γ(°)	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	85.0
0.0	59.04	53.01	47.57	42.52	38.00	33.73	29.81	26.12	22.83
30.0	66.58	59.05	52.25	46.34	41.09	36.42	32.12	28.16	24.57
60.0	79.21	70.64	62.74	54.98	47.90	41.63	35.93	30.67	25.90
90.0	89.74	80.20	70.92	62.37	54.29	46.70	39.86	33.72	28.40
120.0	111.45	99.27	87.41	76.54	67.36	58.84	50.85	43.59	36.86
150.0	132.68	120.01	107.18	95.43	84.46	74.25	64.46	55.93	48.29
180.0	95.95	86.88	78.63	70.75	63.07	55.69	48.94	42.56	36.78
210.0	120.37	108.22	96.97	86.39	76.33	66.90	58.04	50.46	43.61
240.0	116.30	103.52	91.98	81.16	70.62	61.22	52.52	45.26	38.34
270.0	88.66	79.21	70.28	61.97	54.00	46.54	39.86	34.02	28.80
300.0	79.21	70.58	62.43	55.10	47.92	41.07	34.99	29.61	24.60
330.0	61.34	54.11	47.54	41.94	36.86	32.40	28.31	24.48	20.99
360.0	59.04	53.01	47.57	42.52	38.00	33.73	29.81	26.12	22.83
C/γ(°)	85.5	86.0	86.5	87.0	87.5	88.0	88.5	89.0	89.5
0.0	19.83	17.13	14.70	12.63	10.84	9.29	8.04	6.93	5.90
30.0	21.29	18.42	15.84	13.53	11.60	9.90	8.48	7.23	5.94
60.0	21.85	18.44	15.59	13.04	10.96	9.20	7.73	6.36	4.94
90.0	23.90	19.88	16.37	13.21	10.30	7.83	5.92	4.94	4.14
120.0	31.30	26.13	21.67	17.92	14.84	12.27	10.03	8.19	6.63
150.0	41.37	35.16	29.53	24.49	20.01	16.23	13.01	10.32	7.96
180.0	31.49	26.55	22.13	18.16	14.67	11.63	9.02	6.85	4.72
210.0	37.47	31.84	26.66	22.11	18.10	14.53	11.55	9.02	6.65
240.0	32.37	27.10	22.58	18.72	15.45	12.61	10.20	8.17	6.35
270.0	24.18	20.10	16.42	13.18	10.47	8.29	6.64	5.51	4.55
300.0	20.64	17.26	14.40	11.95	9.82	7.96	6.35	5.06	4.05
330.0	17.81	15.03	12.57	10.50	8.73	7.33	6.23	5.25	4.08
360.0	19.83	17.13	14.70	12.63	10.84	9.29	8.04	6.93	5.90

Intensity data(cd)

Appendix Page: 18 Total:18

C/γ(°)	90.0
0.0	4.56
30.0	4.25
60.0	3.81
90.0	3.45
120.0	4.94
150.0	5.42
180.0	2.60
210.0	4.01
240.0	4.24
270.0	3.40
300.0	2.91
330.0	2.93
360.0	4.56