

Report No	:		Voltage	:	V
Test No	:	A2407287A001	Current	:	A
LumCAT	:	LIT by CARDI	Power	:	200.000 W
Luminaire	:	0017440205 200W 4000K 32000lm	PF	:	
LampCAT	:		Ballast type	:	
Lamp flux	:	32000.0 lm	Width	:	187 mm
Number of Lamps	:	1	Length	:	342 mm
Phm Type	:	C	Height	:	0 mm

Photometric Results

Lumens(lm)	:	32000.00	Central intensity(cd)	:	11345.940
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	21249.980
Luminous Efficacy(lm/W)	:	160.00	Angle of maximum intensity	:	C=180.0 γ =39.5
IES Classification	:	TypeI	Max Cd(At 90°Vert)	:	12.666
Longitudinal Classification	:	VeryShort	Max Cd(80 to 90°Vert)	:	317.227
Cut Off Classification	:	FullCutoff			
Beam Angle(50%Imax)	:	[C0/180]Total=59.4 [C90/270]Total=101.4			
Field angle(10%Imax)	:	[C0/180]Total=121.1 [C90/270]Total=139.5			
Street Side UpWard Lumens	:	- -of Lamp 0.00%of Luminaire			
Street Side DownWard Lumens	:	50.94%of Lamp 50.94%of Luminaire			
House Side UpWard Lumens	:	- -of lamp 0.00%of Luminaire			
House Side DownWard Lumens	:	49.06%of Lamp 49.06%of Luminaire			

SLI: 5.353 (C Flash Area: 0.015), Throw: 114.0 (long), Spread: 0.0 (narrow), Control: 5.353 (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	11345.938	0.000	0	0.00%	0.00%
0.5	11345.762	2.714	2.714	0.01%	0.01%
1.0	11346.114	8.143	10.858	0.03%	0.03%
1.5	11348.140	13.573	24.43	0.04%	0.08%
2.0	11350.431	19.004	43.434	0.06%	0.14%
2.5	11351.488	24.435	67.869	0.08%	0.21%
3.0	11355.188	29.867	97.736	0.09%	0.31%
3.5	11357.126	35.301	133.037	0.11%	0.42%
4.0	11359.478	40.732	173.769	0.13%	0.54%
4.5	11362.817	46.165	219.934	0.14%	0.69%
5.0	11365.178	51.598	271.532	0.16%	0.85%
5.5	11368.093	57.028	328.56	0.18%	1.03%
6.0	11373.335	62.464	391.024	0.20%	1.22%
6.5	11381.290	67.914	458.938	0.21%	1.43%
7.0	11386.496	73.366	532.304	0.23%	1.66%
7.5	11392.011	78.809	611.113	0.25%	1.91%
8.0	11398.776	84.258	695.371	0.26%	2.17%
8.5	11406.361	89.714	785.084	0.28%	2.45%
9.0	11413.954	95.173	880.257	0.30%	2.75%
9.5	11420.050	100.626	980.883	0.31%	3.07%
10.0	11426.234	106.071	1086.954	0.33%	3.40%
10.5	11435.017	111.527	1198.48	0.35%	3.75%
11.0	11441.060	116.980	1315.46	0.37%	4.11%
11.5	11446.469	122.414	1437.874	0.38%	4.49%
12.0	11449.420	127.826	1565.7	0.40%	4.89%
12.5	11451.746	133.215	1698.915	0.42%	5.31%
13.0	11455.754	138.602	1837.518	0.43%	5.74%
13.5	11457.886	143.981	1981.499	0.45%	6.19%
14.0	11459.524	149.336	2130.835	0.47%	6.66%
14.5	11459.842	154.669	2285.504	0.48%	7.14%
15.0	11460.546	159.985	2445.489	0.50%	7.64%
15.5	11459.489	165.279	2610.769	0.52%	8.16%
16.0	11456.697	170.535	2781.303	0.53%	8.69%
16.5	11455.243	175.772	2957.076	0.55%	9.24%
17.0	11451.076	180.984	3138.059	0.57%	9.81%
17.5	11446.751	186.155	3324.215	0.58%	10.39%
18.0	11440.285	191.290	3515.505	0.60%	10.99%
18.5	11433.934	196.387	3711.892	0.61%	11.60%

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	11426.481	201.456	3913.348	0.63%	12.23%
19.5	11418.694	206.489	4119.837	0.65%	12.87%
20.0	11410.281	211.491	4331.328	0.66%	13.54%
20.5	11401.604	216.461	4547.789	0.68%	14.21%
21.0	11392.980	221.405	4769.194	0.69%	14.90%
21.5	11382.047	226.302	4995.496	0.71%	15.61%
22.0	11372.269	231.161	5226.657	0.72%	16.33%
22.5	11360.112	235.981	5462.639	0.74%	17.07%
23.0	11347.726	240.745	5703.384	0.75%	17.82%
23.5	11335.217	245.477	5948.861	0.77%	18.59%
24.0	11321.237	250.161	6199.022	0.78%	19.37%
24.5	11310.358	254.833	6453.855	0.80%	20.17%
25.0	11294.730	259.456	6713.311	0.81%	20.98%
25.5	11279.798	264.000	6977.311	0.82%	21.80%
26.0	11262.206	268.487	7245.798	0.84%	22.64%
26.5	11245.883	272.923	7518.721	0.85%	23.50%
27.0	11230.837	277.355	7796.076	0.87%	24.36%
27.5	11213.042	281.734	8077.81	0.88%	25.24%
28.0	11193.618	286.022	8363.832	0.89%	26.14%
28.5	11172.370	290.227	8654.06	0.91%	27.04%
29.0	11149.968	294.354	8948.414	0.92%	27.96%
29.5	11125.866	298.402	9246.816	0.93%	28.90%
30.0	11097.861	302.332	9549.148	0.94%	29.84%
30.5	11068.941	306.150	9855.298	0.96%	30.80%
31.0	11040.786	309.920	10165.218	0.97%	31.77%
31.5	11010.535	313.623	10478.841	0.98%	32.75%
32.0	10980.928	317.258	10796.099	0.99%	33.74%
32.5	10950.069	320.835	11116.934	1.00%	34.74%
33.0	10915.334	324.287	11441.222	1.01%	35.75%
33.5	10881.868	327.649	11768.871	1.02%	36.78%
34.0	10844.164	330.914	12099.785	1.03%	37.81%
34.5	10803.598	334.016	12433.801	1.04%	38.86%
35.0	10761.225	336.988	12770.789	1.05%	39.91%
35.5	10719.699	339.886	13110.675	1.06%	40.97%
36.0	10675.917	342.704	13453.379	1.07%	42.04%
36.5	10634.011	345.456	13798.835	1.08%	43.12%
37.0	10590.872	348.159	14146.994	1.09%	44.21%
37.5	10548.720	350.799	14497.794	1.10%	45.31%

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	10501.741	353.316	14851.11	1.10%	46.41%
38.5	10455.915	355.709	15206.819	1.11%	47.52%
39.0	10404.663	357.967	15564.786	1.12%	48.64%
39.5	10351.182	360.029	15924.815	1.13%	49.77%
40.0	10296.221	361.960	16286.775	1.13%	50.90%
40.5	10236.662	363.715	16650.49	1.14%	52.03%
41.0	10174.249	365.268	17015.758	1.14%	53.17%
41.5	10109.184	366.649	17382.407	1.15%	54.32%
42.0	10038.076	367.798	17750.205	1.15%	55.47%
42.5	9962.034	368.667	18118.872	1.15%	56.62%
43.0	9880.144	369.256	18488.128	1.15%	57.78%
43.5	9791.417	369.523	18857.651	1.15%	58.93%
44.0	9698.171	369.487	19227.138	1.15%	60.08%
44.5	9597.570	369.133	19596.27	1.15%	61.24%
45.0	9492.617	368.458	19964.728	1.15%	62.39%
45.5	9380.273	367.457	20332.185	1.15%	63.54%
46.0	9265.806	366.167	20698.352	1.14%	64.68%
46.5	9142.872	364.565	21062.916	1.14%	65.82%
47.0	9010.972	362.508	21425.424	1.13%	66.95%
47.5	8872.535	360.027	21785.451	1.13%	68.08%
48.0	8725.271	357.120	22142.571	1.12%	69.20%
48.5	8570.898	353.768	22496.339	1.11%	70.30%
49.0	8407.002	349.949	22846.288	1.09%	71.39%
49.5	8243.177	345.808	23192.096	1.08%	72.48%
50.0	8075.079	341.449	23533.545	1.07%	73.54%
50.5	7898.392	336.692	23870.237	1.05%	74.59%
51.0	7710.932	331.391	24201.628	1.04%	75.63%
51.5	7515.420	325.553	24527.181	1.02%	76.65%
52.0	7304.791	319.077	24846.258	1.00%	77.64%
52.5	7083.107	311.888	25158.146	0.97%	78.62%
53.0	6866.981	304.430	25462.576	0.95%	79.57%
53.5	6653.498	297.001	25759.577	0.93%	80.50%
54.0	6433.215	289.335	26048.912	0.90%	81.40%
54.5	6218.578	281.498	26330.411	0.88%	82.28%
55.0	6003.720	273.640	26604.051	0.86%	83.14%
55.5	5785.586	265.564	26869.615	0.83%	83.97%
56.0	5569.390	257.319	27126.934	0.80%	84.77%
56.5	5358.850	249.111	27376.045	0.78%	85.55%

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	5148.749	240.910	27616.955	0.75%	86.30%
57.5	4936.588	232.543	27849.497	0.73%	87.03%
58.0	4728.743	224.101	28073.598	0.70%	87.73%
58.5	4527.108	215.780	28289.378	0.67%	88.40%
59.0	4330.565	207.605	28496.982	0.65%	89.05%
59.5	4140.427	199.585	28696.568	0.62%	89.68%
60.0	3957.125	191.770	28888.338	0.60%	90.28%
60.5	3779.381	184.145	29072.483	0.58%	90.85%
61.0	3604.474	176.621	29249.104	0.55%	91.40%
61.5	3432.200	169.133	29418.236	0.53%	91.93%
62.0	3263.063	161.691	29579.927	0.51%	92.44%
62.5	3101.916	154.429	29734.357	0.48%	92.92%
63.0	2952.978	147.575	29881.932	0.46%	93.38%
63.5	2811.096	141.113	30023.044	0.44%	93.82%
64.0	2671.153	134.799	30157.843	0.42%	94.24%
64.5	2531.077	128.459	30286.302	0.40%	94.64%
65.0	2388.535	121.987	30408.289	0.38%	95.03%
65.5	2245.500	115.374	30523.663	0.36%	95.39%
66.0	2106.271	108.779	30632.442	0.34%	95.73%
66.5	1971.536	102.327	30734.769	0.32%	96.05%
67.0	1844.118	96.113	30830.882	0.30%	96.35%
67.5	1723.224	90.192	30921.074	0.28%	96.63%
68.0	1607.519	84.515	31005.589	0.26%	96.89%
68.5	1494.499	78.989	31084.578	0.25%	97.14%
69.0	1386.814	73.622	31158.199	0.23%	97.37%
69.5	1283.235	68.453	31226.652	0.21%	97.58%
70.0	1183.181	63.439	31290.09	0.20%	97.78%
70.5	1088.417	58.614	31348.704	0.18%	97.96%
71.0	1002.642	54.122	31402.826	0.17%	98.13%
71.5	922.642	49.981	31452.807	0.16%	98.29%
72.0	850.483	46.166	31498.973	0.14%	98.43%
72.5	786.397	42.740	31541.713	0.13%	98.57%
73.0	728.790	39.671	31581.384	0.12%	98.69%
73.5	675.662	36.870	31618.254	0.12%	98.81%
74.0	627.424	34.298	31652.552	0.11%	98.91%
74.5	582.765	31.932	31684.484	0.10%	99.01%
75.0	540.282	29.705	31714.189	0.09%	99.11%
75.5	500.150	27.584	31741.773	0.09%	99.19%

Zonal flux distribution table

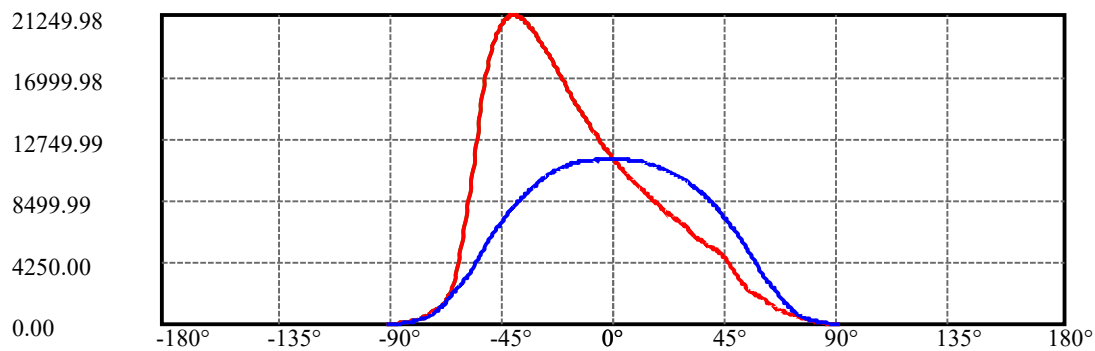
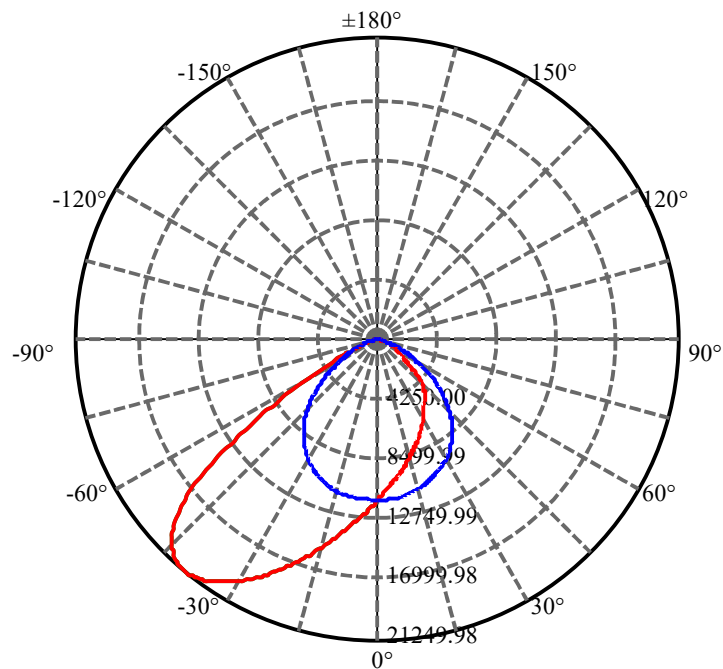
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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	463.603	25.609	31767.381	0.08%	99.27%
76.5	428.921	23.768	31791.149	0.07%	99.35%
77.0	396.012	22.014	31813.163	0.07%	99.42%
77.5	365.132	20.353	31833.516	0.06%	99.48%
78.0	335.449	18.769	31852.285	0.06%	99.54%
78.5	307.056	17.245	31869.531	0.05%	99.59%
79.0	279.725	15.778	31885.308	0.05%	99.64%
79.5	253.593	14.365	31899.673	0.04%	99.69%
80.0	229.288	13.027	31912.7	0.04%	99.73%
80.5	206.206	11.767	31924.467	0.04%	99.76%
81.0	184.783	10.580	31935.047	0.03%	99.80%
81.5	164.604	9.467	31944.514	0.03%	99.83%
82.0	145.595	8.416	31952.93	0.03%	99.85%
82.5	128.120	7.435	31960.365	0.02%	99.88%
83.0	112.027	6.531	31966.897	0.02%	99.90%
83.5	97.045	5.692	31972.589	0.02%	99.91%
84.0	83.412	4.918	31977.507	0.02%	99.93%
84.5	71.061	4.214	31981.72	0.01%	99.94%
85.0	59.937	3.576	31985.297	0.01%	99.95%
85.5	50.179	3.009	31988.305	0.01%	99.96%
86.0	41.699	2.512	31990.817	0.01%	99.97%
86.5	34.449	2.083	31992.9	0.01%	99.98%
87.0	28.347	1.719	31994.619	0.01%	99.98%
87.5	23.210	1.412	31996.031	0.00%	99.99%
88.0	18.952	1.155	31997.186	0.00%	99.99%
88.5	15.412	0.942	31998.127	0.00%	99.99%
89.0	12.440	0.763	31998.891	0.00%	100.00%
89.5	9.973	0.614	31999.505	0.00%	100.00%
90.0	8.039	0.494	31999.999	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	9549.15	29.84%	29.84%
0-40	16286.78	50.90%	50.90%
0-60	28888.34	90.28%	90.28%
0-90	31999.51	100.00%	100.00%
0-120	31999.51	100.00%	100.00%
0-180	32000.00	100.00%	100.00%
60-90	3111.17	9.72%	9.72%
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%
0-53.23	25600.00	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1086.95
10-20	3244.37
20-30	5217.82
30-40	6737.63
40-50	7246.77
50-60	5354.79
60-70	2401.75
70-80	622.61
80-90	86.81
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



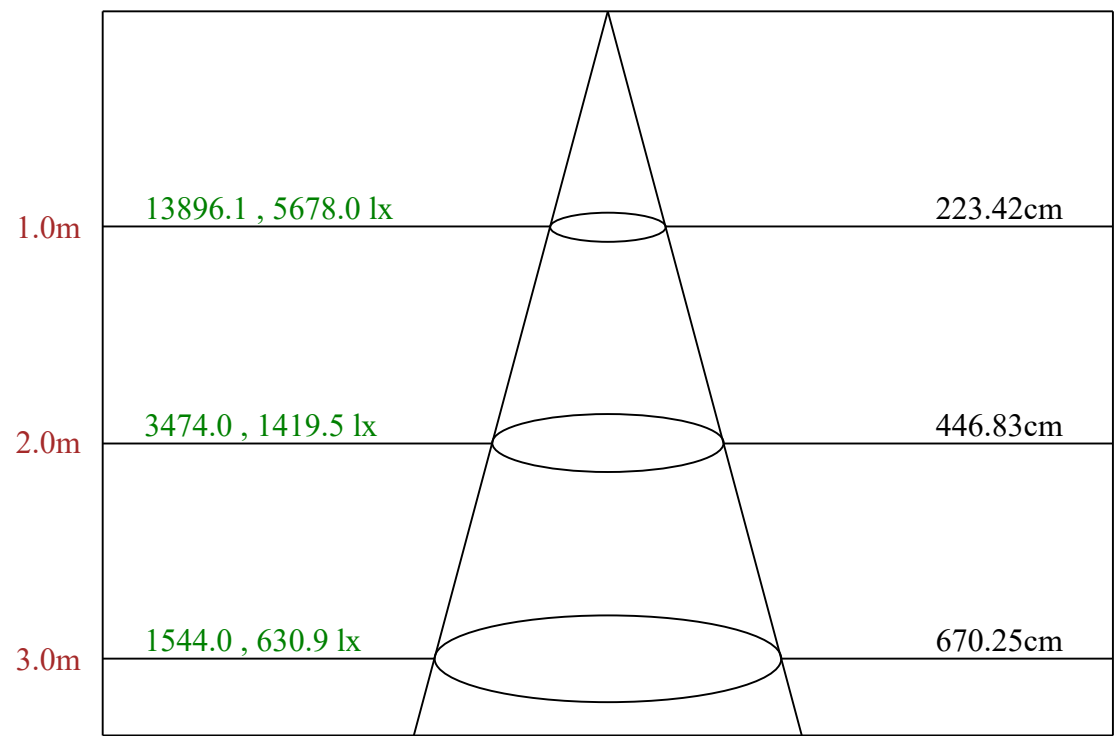
C180(Max): —————

C0/C180: —————

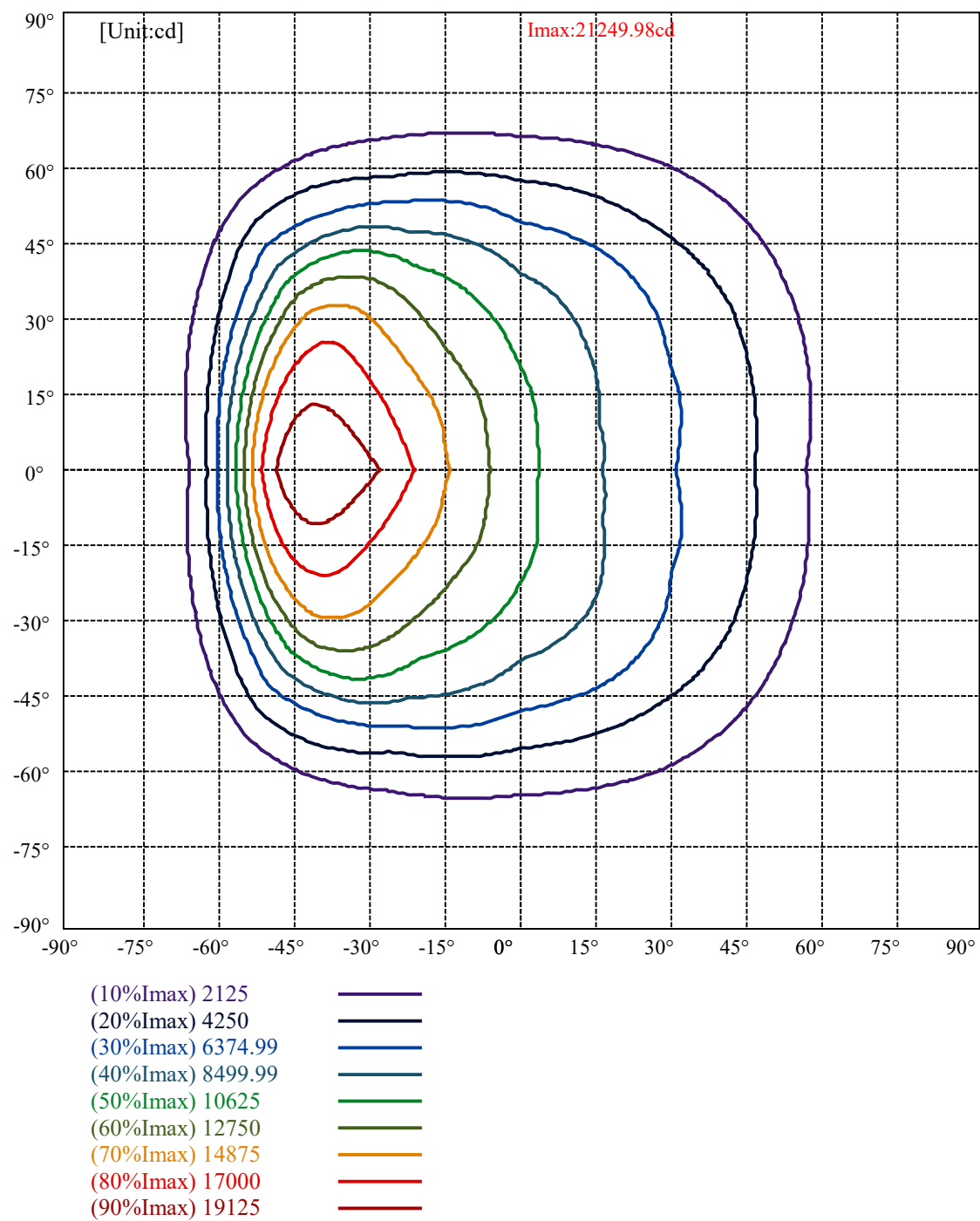
C90/C270: —————

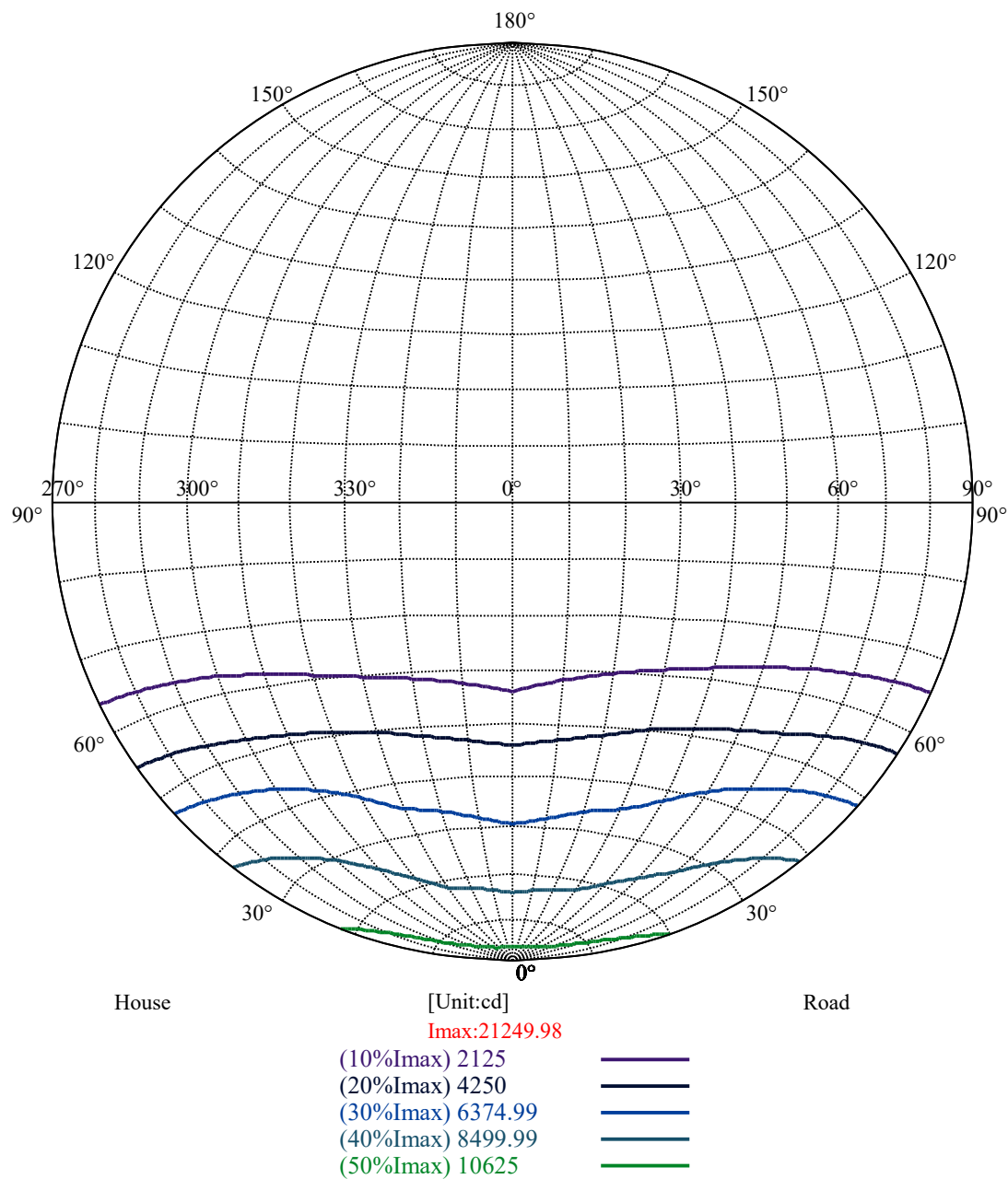
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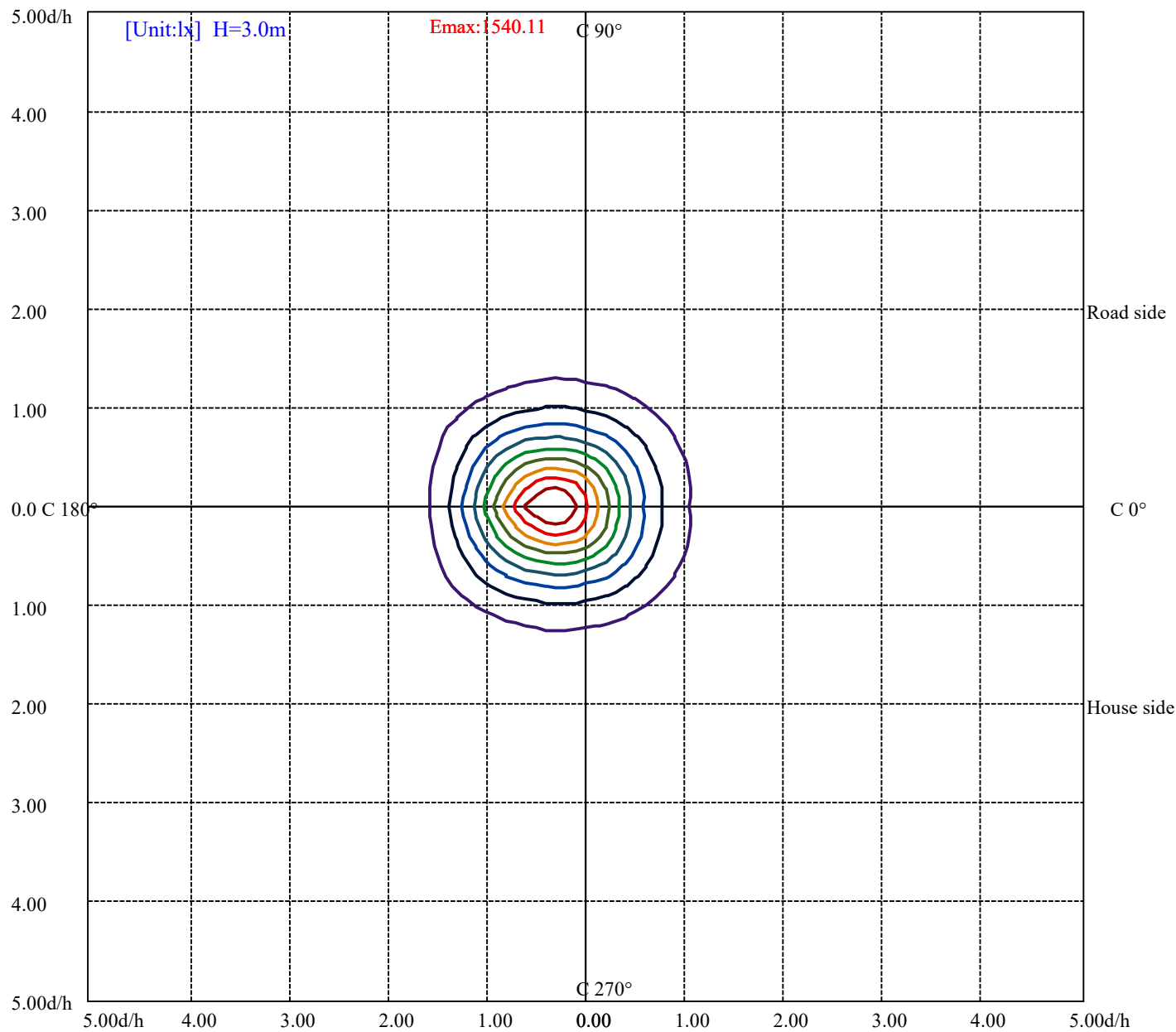
Beam Angle(50%Imax):C0/180Left:16.4 Right:43.0
:C90/270Left:49.8 Right:51.6



Max , Ave Beam angle of C180 plane 96.33







(10%Emax)	154.01	
(20%Emax)	308.0211	
(30%Emax)	462.0311	
(40%Emax)	616.0411	
(50%Emax)	770.0511	
(60%Emax)	924.0611	
(70%Emax)	1078.072	
(80%Emax)	1232.078	
(90%Emax)	1386.089	

Intensity data(cd)

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C/γ(°)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
0.0	11345.94	11261.37	11142.97	11044.66	10938.95	10833.24	10727.53	10631.33	10535.88
30.0	11345.94	11283.57	11192.66	11098.58	11003.44	10908.30	10823.73	10738.10	10653.53
60.0	11345.94	11278.28	11226.49	11171.52	11117.60	11062.63	11007.66	10956.92	10905.12
90.0	11345.94	11331.14	11333.25	11332.20	11333.25	11327.97	11333.25	11324.80	11325.85
120.0	11345.94	11389.28	11447.42	11506.62	11562.65	11614.44	11674.70	11728.61	11784.64
150.0	11345.94	11417.82	11517.19	11610.22	11707.47	11804.72	11909.38	12005.57	12101.77
180.0	11345.94	11488.65	11599.64	11715.93	11834.32	11946.38	12057.37	12172.60	12284.65
210.0	11345.94	11478.08	11573.22	11673.64	11766.67	11874.49	11972.80	12061.60	12153.57
240.0	11345.94	11390.34	11446.36	11494.99	11555.25	11610.22	11666.24	11709.58	11763.50
270.0	11345.94	11333.25	11324.80	11327.97	11326.91	11324.80	11320.57	11321.63	11312.11
300.0	11345.94	11277.23	11222.26	11168.34	11115.49	11057.35	11003.44	10952.69	10905.12
330.0	11345.94	11220.14	11127.12	11033.03	10943.18	10853.33	10765.59	10682.07	10587.99
360.0	11345.94	11261.37	11142.97	11044.66	10938.95	10833.24	10727.53	10631.33	10535.88

C/γ(°)	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
0.0	10440.84	10346.44	10258.60	10173.71	10091.05	10004.89	9916.31	9836.71	9754.46
30.0	10561.88	10481.33	10395.81	10320.02	10246.12	10173.08	10089.99	10019.37	9946.64
60.0	10849.10	10794.13	10737.04	10684.19	10637.68	10583.76	10527.95	10474.14	10419.60
90.0	11319.51	11310.00	11303.65	11290.97	11279.34	11267.71	11263.48	11249.74	11239.17
120.0	11843.84	11888.23	11940.03	11982.32	12029.89	12073.23	12120.80	12168.37	12210.65
150.0	12202.20	12299.45	12408.33	12501.36	12616.58	12709.61	12822.72	12910.46	13020.40
180.0	12400.93	12521.44	12637.72	12765.63	12892.49	13013.00	13135.62	13263.53	13394.61
210.0	12253.99	12353.36	12442.16	12547.87	12646.18	12755.06	12850.20	12954.86	13061.62
240.0	11817.41	11862.86	11910.43	11961.18	12012.97	12056.32	12111.28	12158.85	12205.37
270.0	11310.00	11306.83	11293.08	11288.85	11283.57	11285.68	11274.06	11273.00	11265.60
300.0	10850.16	10793.07	10740.22	10691.59	10644.02	10591.16	10537.57	10495.18	10444.54
330.0	10503.95	10424.99	10350.04	10272.34	10195.59	10124.45	10054.15	9981.11	9913.66
360.0	10440.84	10346.44	10258.60	10173.71	10091.05	10004.89	9916.31	9836.71	9754.46

C/γ(°)	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0
0.0	9680.25	9597.80	9516.40	9435.74	9347.90	9263.01	9180.98	9092.29	9007.93
30.0	9873.07	9793.47	9722.96	9638.71	9568.62	9486.91	9404.67	9325.38	9245.99
60.0	10368.96	10314.73	10262.93	10207.22	10152.78	10096.86	10045.38	9992.42	9938.82
90.0	11226.49	11215.91	11203.23	11190.54	11174.69	11165.17	11136.63	11119.72	11090.12
120.0	12248.71	12292.05	12337.51	12387.19	12430.53	12474.93	12514.04	12548.93	12582.75
150.0	13125.05	13224.42	13325.90	13444.30	13546.84	13645.15	13752.97	13854.46	13966.51
180.0	13528.87	13665.23	13795.26	13927.40	14067.99	14207.53	14343.90	14483.43	14634.60
210.0	13164.16	13262.48	13368.19	13465.44	13569.04	13658.89	13750.86	13847.06	13946.42
240.0	12256.11	12295.22	12335.39	12379.79	12416.79	12458.02	12497.13	12527.79	12556.33
270.0	11256.08	11253.97	11237.06	11240.23	11224.37	11219.09	11208.51	11189.49	11179.97
300.0	10396.13	10350.57	10308.28	10270.23	10229.21	10190.20	10144.64	10098.66	10053.94
330.0	9843.58	9774.76	9701.71	9633.42	9563.97	9491.88	9413.33	9341.35	9265.66
360.0	9680.25	9597.80	9516.40	9435.74	9347.90	9263.01	9180.98	9092.29	9007.93

C/γ(°)	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5
0.0	8918.40	8832.98	8752.43	8671.46	8586.04	8505.81	8433.50	8359.29	8279.27
30.0	9166.82	9087.11	9015.12	8939.96	8857.19	8784.88	8705.07	8636.15	8567.01
60.0	9891.57	9839.03	9789.66	9733.21	9683.53	9630.57	9580.57	9525.07	9480.67
90.0	11062.63	11039.38	11009.78	10978.07	10946.35	10916.75	10881.87	10850.16	10814.21
120.0	12608.13	12640.90	12656.75	12678.95	12694.81	12704.32	12718.06	12719.12	12722.29
150.0	14064.82	14168.42	14264.61	14369.27	14467.58	14566.95	14657.86	14744.54	14832.28
180.0	14778.37	14928.48	15069.07	15218.12	15367.18	15507.77	15669.51	15816.45	15968.67
210.0	14044.73	14127.19	14219.16	14301.61	14391.47	14473.92	14553.20	14625.09	14709.66
240.0	12585.93	12608.13	12634.55	12651.47	12667.32	12678.95	12689.52	12712.78	12695.87
270.0	11163.06	11147.20	11122.89	11108.09	11082.72	11049.95	11021.41	10985.46	10955.87
300.0	10015.36	9974.34	9937.45	9895.48	9857.32	9815.88	9774.55	9731.63	9692.94
330.0	9194.83	9121.15	9046.62	8980.87	8912.37	8844.61	8777.80	8707.19	8642.28
360.0	8918.40	8832.98	8752.43	8671.46	8586.04	8505.81	8433.50	8359.29	8279.27

Intensity data(cd)

Appendix Page: 14 Total:18

C/γ(°)	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0
0.0	8206.96	8128.74	8055.48	7983.49	7910.13	7838.67	7774.39	7700.61	7633.38
30.0	8497.46	8425.78	8356.12	8286.99	8221.97	8159.60	8092.27	8027.25	7966.58
60.0	9423.48	9369.36	9317.77	9273.48	9215.34	9157.83	9105.29	9054.45	9002.96
90.0	10782.50	10753.96	10708.50	10666.22	10624.99	10595.39	10551.52	10502.37	10459.55
120.0	12728.64	12723.35	12713.84	12711.72	12701.15	12681.07	12674.72	12656.75	12646.18
150.0	14921.08	15000.36	15088.10	15166.33	15249.84	15325.95	15406.29	15480.29	15550.06
180.0	16114.55	16281.57	16432.74	16590.25	16746.70	16908.44	17064.89	17223.46	17379.91
210.0	14773.08	14843.91	14916.85	14986.62	15051.10	15114.53	15176.90	15240.32	15293.18
240.0	12697.98	12690.58	12688.47	12676.84	12667.32	12652.52	12636.67	12619.75	12600.73
270.0	10915.70	10881.87	10845.93	10808.93	10769.81	10728.59	10693.70	10656.70	10620.76
300.0	9647.80	9600.13	9554.25	9501.29	9454.88	9406.04	9355.30	9306.25	9255.30
330.0	8574.20	8507.60	8439.74	8372.19	8310.14	8250.62	8183.81	8116.37	8058.65
360.0	8206.96	8128.74	8055.48	7983.49	7910.13	7838.67	7774.39	7700.61	7633.38

C/γ(°)	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5
0.0	7556.10	7487.50	7412.23	7338.55	7273.33	7207.68	7138.33	7072.58	7001.12
30.0	7906.74	7845.85	7781.48	7713.82	7657.16	7594.90	7536.76	7479.25	7421.11
60.0	8951.27	8893.87	8848.31	8796.09	8747.57	8701.05	8648.52	8591.22	8536.99
90.0	10418.43	10375.20	10325.62	10281.85	10251.20	10201.83	10156.27	10118.11	10078.36
120.0	12626.10	12608.13	12591.21	12577.47	12545.76	12522.50	12506.64	12479.16	12453.79
150.0	15621.94	15685.37	15753.02	15818.56	15884.10	15931.67	15995.10	16046.90	16096.58
180.0	17545.88	17689.64	17851.38	17997.26	18159.00	18310.16	18460.27	18605.10	18755.21
210.0	15343.92	15392.55	15446.46	15487.69	15534.20	15579.66	15614.54	15648.37	15693.82
240.0	12578.53	12562.67	12538.36	12515.10	12493.96	12468.59	12440.05	12411.50	12385.08
270.0	10577.42	10535.88	10496.24	10453.32	10407.12	10352.05	10299.30	10244.12	10184.81
300.0	9203.92	9162.38	9111.21	9065.76	9020.94	8977.07	8930.66	8875.16	8826.53
330.0	7991.10	7933.70	7867.10	7809.38	7749.97	7689.61	7631.16	7575.02	7517.20
360.0	7556.10	7487.50	7412.23	7338.55	7273.33	7207.68	7138.33	7072.58	7001.12

C/γ(°)	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0
0.0	6937.90	6873.63	6809.78	6743.40	6670.35	6590.64	6492.97	6385.78	6286.83
30.0	7367.94	7310.54	7258.84	7204.93	7153.34	7098.27	7043.93	6988.43	6936.95
60.0	8486.78	8433.18	8384.56	8327.37	8274.30	8214.05	8161.30	8108.97	8056.64
90.0	10038.19	9992.42	9944.11	9894.32	9841.78	9788.29	9723.91	9668.52	9602.24
120.0	12438.99	12415.73	12396.70	12364.99	12342.79	12325.88	12297.34	12270.91	12257.17
150.0	16149.44	16193.84	16240.35	16280.52	16317.52	16365.09	16398.91	16445.43	16488.77
180.0	18904.26	19044.85	19183.34	19318.65	19456.07	19591.38	19705.55	19829.23	19942.34
210.0	15735.05	15777.33	15801.65	15847.10	15878.82	15909.47	15946.47	15963.39	15986.64
240.0	12352.31	12322.71	12292.05	12260.34	12223.34	12173.65	12137.71	12090.14	12044.69
270.0	10124.77	10061.55	9994.21	9919.69	9850.77	9783.11	9709.43	9634.06	9556.57
300.0	8771.67	8723.68	8663.32	8606.02	8543.55	8484.45	8425.04	8368.49	8309.40
330.0	7462.76	7407.05	7354.51	7301.13	7247.00	7186.11	7131.78	7073.95	7021.20
360.0	6937.90	6873.63	6809.78	6743.40	6670.35	6590.64	6492.97	6385.78	6286.83

C/γ(°)	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5
0.0	6187.46	6098.88	6025.73	5964.63	5907.96	5852.78	5800.67	5746.97	5695.80
30.0	6887.48	6840.02	6782.19	6724.26	6655.45	6574.79	6476.79	6380.17	6284.19
60.0	7999.35	7947.87	7892.68	7836.13	7778.31	7717.31	7660.97	7594.90	7534.54
90.0	9536.17	9472.64	9409.42	9340.50	9270.94	9200.22	9135.31	9061.63	8990.07
120.0	12217.00	12191.62	12159.91	12116.57	12076.40	12042.57	11995.00	11952.72	11903.03
150.0	16523.65	16568.05	16606.11	16640.99	16687.50	16720.27	16757.27	16800.61	16834.44
180.0	20064.96	20175.96	20279.56	20383.15	20498.38	20594.57	20690.77	20783.80	20866.25
210.0	16013.07	16027.87	16055.35	16075.44	16100.81	16128.29	16155.78	16168.46	16192.78
240.0	11996.06	11943.20	11882.95	11821.64	11753.98	11691.61	11623.96	11556.30	11488.65
270.0	9486.70	9409.21	9337.43	9248.64	9175.70	9098.21	9004.97	8919.66	8836.05
300.0	8249.67	8188.99	8122.08	8057.70	7986.77	7917.95	7844.48	7774.39	7705.37
330.0	6964.86	6906.83	6847.42	6774.37	6690.22	6591.38	6497.20	6395.08	6305.23
360.0	6187.46	6098.88	6025.73	5964.63	5907.96	5852.78	5800.67	5746.97	5695.80

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	5635.34	5581.53	5522.01	5471.06	5415.14	5359.22	5305.10	5251.39	5198.22
30.0	6195.29	6117.59	6049.83	5993.17	5937.35	5887.03	5827.62	5777.41	5724.87
60.0	7469.84	7404.83	7342.67	7278.72	7206.52	7135.58	7069.30	6997.63	6924.16
90.0	8913.00	8839.54	8757.08	8675.58	8594.39	8504.43	8414.90	8320.39	8233.60
120.0	11855.46	11806.84	11753.98	11701.13	11648.27	11596.47	11527.76	11464.33	11387.17
150.0	16862.98	16888.35	16924.30	16941.21	16964.47	16986.67	17014.15	17020.49	17044.81
180.0	20939.19	21027.99	21087.19	21142.16	21178.10	21227.78	21237.30	21249.98	21249.98
210.0	16217.09	16223.43	16226.61	16246.69	16239.29	16248.80	16249.86	16250.92	16236.12
240.0	11418.88	11348.05	11279.34	11205.34	11127.12	11041.49	10957.98	10861.78	10763.47
270.0	8747.46	8656.87	8565.43	8479.49	8388.15	8299.88	8208.02	8115.52	8025.25
300.0	7631.05	7553.04	7478.19	7401.45	7328.82	7246.90	7162.65	7080.30	6995.09
330.0	6225.41	6160.08	6103.85	6048.67	5993.27	5936.72	5881.33	5824.03	5771.91
360.0	5635.34	5581.53	5522.01	5471.06	5415.14	5359.22	5305.10	5251.39	5198.22
C/γ(°)	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5
0.0	5144.20	5089.55	5035.22	4970.63	4907.20	4840.18	4761.53	4676.12	4582.77
30.0	5671.60	5618.32	5565.04	5511.76	5458.38	5402.67	5342.41	5278.46	5216.72
60.0	6852.17	6779.23	6705.66	6632.19	6554.49	6480.60	6395.93	6319.39	6234.61
90.0	8146.50	8058.12	7958.86	7869.01	7768.37	7671.54	7561.60	7445.00	7323.96
120.0	11307.88	11225.43	11140.86	11046.78	10942.12	10833.24	10725.42	10613.36	10486.72
150.0	17043.75	17044.81	17042.69	17032.12	17023.66	16983.49	16934.87	16877.78	16806.96
180.0	21232.01	21207.70	21174.93	21113.61	21048.07	20960.33	20868.37	20747.86	20607.26
210.0	16221.32	16195.95	16162.12	16116.67	16052.18	15987.70	15907.36	15820.68	15720.25
240.0	10670.45	10562.20	10451.63	10343.27	10227.73	10112.29	9992.52	9863.56	9736.17
270.0	7927.46	7824.08	7731.16	7624.92	7515.09	7393.84	7264.76	7147.00	7024.06
300.0	6910.84	6824.16	6740.33	6653.01	6561.47	6471.40	6379.75	6290.21	6200.15
330.0	5711.77	5661.45	5601.72	5542.95	5485.65	5424.44	5362.50	5298.65	5231.20
360.0	5144.20	5089.55	5035.22	4970.63	4907.20	4840.18	4761.53	4676.12	4582.77
C/γ(°)	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0
0.0	4476.32	4363.21	4244.39	4122.09	3999.46	3866.06	3714.25	3547.65	3393.00
30.0	5152.24	5088.60	5020.10	4943.88	4858.79	4772.42	4686.27	4597.05	4502.22
60.0	6148.88	6059.87	5974.56	5884.07	5793.16	5695.80	5594.85	5483.11	5365.35
90.0	7207.78	7090.76	6972.05	6862.00	6752.07	6651.85	6533.88	6410.73	6276.58
120.0	10359.76	10223.40	10093.16	9951.82	9802.67	9635.75	9467.56	9305.19	9134.79
150.0	16725.56	16615.62	16490.88	16355.57	16200.18	16023.64	15850.27	15649.42	15439.06
180.0	20451.87	20283.79	20097.73	19889.48	19646.35	19394.76	19111.45	18814.41	18471.90
210.0	15620.88	15496.14	15373.52	15235.04	15088.10	14944.33	14770.97	14583.86	14380.90
240.0	9602.56	9470.10	9335.11	9194.62	9047.36	8892.71	8730.23	8567.75	8408.13
270.0	6904.61	6787.58	6679.23	6566.86	6438.32	6295.08	6156.60	6021.50	5887.14
300.0	6099.72	5998.88	5904.58	5790.63	5676.78	5562.92	5448.97	5334.48	5195.05
330.0	5161.22	5085.32	5004.35	4918.41	4828.45	4735.10	4637.96	4535.63	4429.92
360.0	4476.32	4363.21	4244.39	4122.09	3999.46	3866.06	3714.25	3547.65	3393.00
C/γ(°)	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5
0.0	3265.72	3156.10	3044.26	2932.10	2819.52	2711.90	2606.62	2509.47	2426.80
30.0	4408.35	4309.51	4206.34	4104.01	3997.45	3876.73	3733.07	3589.09	3453.78
60.0	5239.24	5119.57	4985.74	4853.92	4725.70	4594.83	4460.47	4337.21	4222.93
90.0	6162.83	6044.12	5928.79	5809.76	5690.83	5571.80	5452.88	5333.85	5205.94
120.0	8968.50	8807.40	8654.54	8490.58	8325.04	8134.55	7925.67	7731.69	7544.47
150.0	15210.72	14962.30	14701.20	14410.49	14119.79	13804.77	13452.75	13108.14	12757.18
180.0	18111.43	17732.98	17318.60	16868.27	16389.40	15836.53	15221.30	14595.49	13935.85
210.0	14164.19	13934.80	13665.23	13382.99	13072.20	12749.78	12412.56	12080.63	11744.47
240.0	8255.06	8099.56	7931.69	7730.95	7526.71	7312.33	7103.02	6897.73	6691.92
270.0	5758.17	5617.58	5479.52	5338.08	5194.63	5043.57	4897.16	4744.19	4594.93
300.0	5047.69	4901.28	4762.27	4625.27	4479.18	4335.52	4198.09	4073.99	3964.37
330.0	4326.21	4215.75	4102.53	3984.77	3844.60	3685.18	3533.70	3402.30	3299.34
360.0	3265.72	3156.10	3044.26	2932.10	2819.52	2711.90	2606.62	2509.47	2426.80

Intensity data(cd)

Appendix Page: 16 Total:18

C/γ(°)	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0
0.0	2366.12	2305.55	2244.98	2184.41	2123.73	2072.88	2023.20	1972.99	1921.19
30.0	3343.32	3252.40	3162.66	3074.07	2983.90	2892.25	2807.57	2720.57	2636.11
60.0	4116.17	4018.60	3918.80	3817.96	3722.92	3628.95	3533.38	3435.81	3337.08
90.0	5067.99	4932.04	4791.13	4644.83	4496.62	4350.21	4197.67	4031.07	3867.96
120.0	7344.57	7155.25	6965.28	6762.00	6543.92	6319.71	6095.28	5855.64	5622.12
150.0	12351.25	11981.26	11591.19	11214.86	10822.67	10453.11	10059.33	9643.57	9238.81
180.0	13236.05	12539.41	11845.95	11142.97	10501.94	9884.70	9290.29	8720.61	8150.83
210.0	11408.31	11058.41	10723.30	10356.91	9989.67	9635.54	9248.11	8861.74	8486.46
240.0	6464.85	6236.09	6000.78	5765.47	5530.15	5294.84	5080.35	4865.87	4668.19
270.0	4446.83	4296.93	4157.92	4025.68	3885.51	3743.11	3610.24	3486.76	3360.76
300.0	3854.43	3748.19	3642.90	3540.68	3433.49	3329.15	3229.78	3125.76	3027.77
330.0	3198.70	3098.81	2999.76	2897.22	2798.16	2701.76	2609.79	2518.67	2427.65
360.0	2366.12	2305.55	2244.98	2184.41	2123.73	2072.88	2023.20	1972.99	1921.19

C/γ(°)	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5
0.0	1871.72	1819.49	1766.96	1714.63	1661.46	1602.36	1515.68	1437.14	1383.23
30.0	2549.43	2465.07	2383.36	2298.05	2214.96	2127.64	2041.17	1960.51	1877.74
60.0	3244.16	3146.16	3047.43	2945.31	2840.13	2731.04	2620.47	2519.72	2422.05
90.0	3720.17	3578.84	3431.90	3285.49	3162.13	3050.50	2947.43	2846.05	2746.68
120.0	5386.07	5158.58	4929.08	4715.86	4510.15	4301.80	4104.22	3926.84	3745.86
150.0	8865.44	8491.01	8150.20	7819.96	7511.70	7219.94	6944.88	6665.17	6379.86
180.0	7590.88	7034.00	6506.82	5979.64	5452.46	4925.59	4422.09	3915.84	3478.31
210.0	8113.30	7767.21	7422.27	7116.03	6828.81	6548.04	6265.58	5979.85	5692.84
240.0	4474.95	4292.39	4119.23	3956.33	3795.55	3649.67	3502.52	3349.98	3210.01
270.0	3230.10	3112.02	3001.45	2904.72	2808.10	2703.34	2602.28	2502.49	2401.75
300.0	2936.33	2843.94	2753.03	2660.74	2563.06	2469.51	2377.96	2288.00	2195.08
330.0	2342.76	2258.09	2173.41	2088.74	2004.07	1924.25	1842.12	1765.16	1689.58
360.0	1871.72	1819.49	1766.96	1714.63	1661.46	1602.36	1515.68	1437.14	1383.23

C/γ(°)	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0
0.0	1334.60	1281.43	1227.51	1172.44	1114.93	1057.85	1005.53	962.96	926.68
30.0	1796.45	1719.17	1641.48	1561.88	1477.20	1379.31	1306.90	1241.26	1180.68
60.0	2329.34	2236.73	2144.03	2051.42	1969.50	1889.37	1801.21	1711.99	1611.98
90.0	2652.18	2556.72	2453.23	2346.36	2240.01	2130.60	2021.30	1909.88	1802.16
120.0	3567.42	3416.04	3276.40	3134.11	2986.33	2839.39	2688.97	2526.70	2381.35
150.0	6106.81	5833.65	5560.49	5287.02	5004.88	4694.19	4370.72	4049.99	3741.63
180.0	3120.58	2829.03	2571.20	2352.81	2150.37	1976.79	1816.64	1670.34	1531.33
210.0	5416.73	5141.14	4869.14	4589.12	4275.37	3955.91	3645.33	3360.55	3095.64
240.0	3082.32	2936.33	2780.41	2616.98	2450.06	2287.16	2137.47	2001.00	1875.63
270.0	2299.84	2198.04	2096.14	1994.34	1886.94	1781.12	1676.15	1568.75	1471.39
300.0	2114.22	2042.65	1965.16	1888.42	1803.53	1710.82	1621.18	1526.89	1432.59
330.0	1615.26	1542.22	1468.64	1378.05	1303.31	1243.48	1183.86	1128.15	1078.36
360.0	1334.60	1281.43	1227.51	1172.44	1114.93	1057.85	1005.53	962.96	926.68

C/γ(°)	67.5	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5
0.0	893.57	860.32	829.20	798.43	767.95	734.46	699.43	668.81	639.55
30.0	1124.55	1069.79	1019.00	970.57	924.53	877.38	828.58	785.43	742.95
60.0	1513.78	1422.44	1328.05	1228.99	1128.46	1034.73	954.09	897.22	839.05
90.0	1690.63	1583.87	1492.85	1399.51	1309.02	1220.96	1134.49	1051.15	972.14
120.0	2250.16	2119.18	1988.21	1857.34	1728.48	1598.24	1480.06	1383.86	1285.02
150.0	3455.47	3190.88	2927.55	2664.34	2396.25	2128.59	1866.64	1622.66	1398.45
180.0	1400.14	1291.26	1203.41	1131.95	1087.55	1049.47	1014.54	978.78	940.93
210.0	2846.26	2595.31	2337.69	2108.30	1879.86	1651.41	1440.73	1252.14	1089.77
240.0	1760.51	1653.11	1542.53	1437.24	1338.62	1252.36	1170.43	1091.46	1015.44
270.0	1381.96	1296.23	1210.49	1129.10	1046.67	968.88	892.45	820.14	755.99
300.0	1331.22	1223.18	1115.67	1020.32	941.29	876.81	815.66	757.12	707.03
330.0	1030.44	984.68	939.34	895.68	850.15	804.89	763.90	722.94	685.40
360.0	893.57	860.32	829.20	798.43	767.95	734.46	699.43	668.81	639.55

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	610.54	582.78	554.03	525.14	495.53	467.79	437.92	408.04	377.63
30.0	702.28	664.59	626.59	587.62	548.65	509.81	477.06	446.70	416.42
60.0	779.53	724.66	674.59	631.42	590.42	552.58	516.45	481.14	445.50
90.0	893.49	826.55	765.77	708.04	656.06	611.05	566.03	521.18	484.39
120.0	1191.68	1105.52	1021.94	942.97	869.02	802.13	739.85	683.68	633.18
150.0	1217.79	1070.11	959.03	877.00	814.45	758.06	704.70	654.74	610.51
180.0	891.79	835.82	773.60	708.97	651.90	594.84	537.76	481.21	440.75
210.0	964.96	869.79	799.76	740.31	686.05	633.73	584.99	544.05	506.94
240.0	946.48	877.70	812.55	751.93	695.99	645.62	600.71	555.81	510.95
270.0	697.99	646.63	599.63	555.66	516.11	478.41	444.50	413.50	383.66
300.0	661.20	622.73	584.26	545.80	507.40	473.04	438.52	408.00	380.99
330.0	648.07	609.88	573.74	533.09	497.52	466.13	434.88	403.75	372.32
360.0	610.54	582.78	554.03	525.14	495.53	467.79	437.92	408.04	377.63
C/γ(°)	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5
0.0	348.88	320.86	293.57	265.36	239.38	213.45	190.81	170.89	152.39
30.0	384.50	354.10	326.48	299.24	272.32	246.84	223.22	200.69	178.73
60.0	413.32	384.10	357.63	330.55	304.48	278.83	255.06	231.33	207.61
90.0	450.29	417.17	385.18	355.78	327.39	300.43	274.85	250.88	228.10
120.0	584.95	540.86	500.01	460.59	422.91	387.77	351.84	317.23	284.61
150.0	566.28	522.14	483.12	446.95	412.74	379.63	346.21	315.38	286.55
180.0	404.97	373.19	343.56	315.95	289.69	265.64	242.74	221.31	200.45
210.0	469.40	433.78	401.11	370.02	339.66	310.06	283.27	258.48	233.77
240.0	471.71	435.25	400.73	366.77	334.33	302.94	272.66	244.25	218.40
270.0	354.37	327.19	301.00	275.63	253.32	231.00	208.67	188.36	169.08
300.0	354.85	328.60	302.52	277.32	252.59	229.58	206.54	185.50	166.24
330.0	343.53	314.90	286.68	261.24	235.88	210.53	187.25	167.17	148.56
360.0	348.88	320.86	293.57	265.36	239.38	213.45	190.81	170.89	152.39
C/γ(°)	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	85.0
0.0	135.14	119.46	104.69	91.17	79.84	69.57	60.10	51.75	44.22
30.0	159.27	141.25	124.67	108.86	93.85	79.95	68.32	58.10	49.63
60.0	186.68	166.99	148.28	131.16	114.37	99.36	85.27	72.17	60.28
90.0	206.16	185.68	165.93	147.22	130.20	113.79	98.17	84.21	71.33
120.0	257.03	229.61	202.20	177.87	156.49	136.66	118.53	101.89	87.00
150.0	258.88	232.83	209.05	186.37	165.47	145.49	126.82	109.49	93.72
180.0	181.20	162.87	146.62	131.42	117.19	103.56	91.54	80.21	68.98
210.0	209.05	187.07	165.97	147.28	129.25	112.37	96.75	82.47	69.42
240.0	193.51	170.61	149.31	130.09	112.72	96.38	81.74	68.28	56.35
270.0	150.62	133.05	116.50	101.45	87.05	73.80	61.81	51.00	41.60
300.0	148.57	130.68	114.03	98.84	84.59	71.35	59.01	48.29	38.93
330.0	131.29	115.15	99.89	85.71	73.31	62.27	52.88	44.87	37.79
360.0	135.14	119.46	104.69	91.17	79.84	69.57	60.10	51.75	44.22
C/γ(°)	85.5	86.0	86.5	87.0	87.5	88.0	88.5	89.0	89.5
0.0	37.56	31.71	26.76	22.42	18.80	15.85	13.58	11.65	9.72
30.0	42.22	35.71	30.16	25.23	21.15	17.73	14.99	12.81	10.91
60.0	49.75	40.72	33.12	27.18	22.50	18.77	15.85	13.28	11.02
90.0	59.52	49.28	40.57	33.20	27.03	21.89	17.62	14.04	11.62
120.0	73.38	61.09	50.15	41.05	33.91	28.04	23.23	19.12	15.66
150.0	79.34	66.96	56.62	47.43	39.22	32.11	25.90	20.53	16.23
180.0	59.05	49.96	41.66	34.41	28.00	22.41	17.64	13.61	10.31
210.0	58.61	48.97	40.45	33.03	26.53	21.12	16.53	12.80	9.53
240.0	46.03	37.30	30.09	24.57	19.84	15.96	12.58	9.81	7.34
270.0	33.62	27.12	21.73	17.24	13.44	10.38	8.13	6.47	5.17
300.0	31.44	25.34	20.54	16.72	13.63	11.14	8.86	6.93	5.59
330.0	31.62	26.25	21.55	17.68	14.47	12.02	10.05	8.24	6.59
360.0	37.56	31.71	26.76	22.42	18.80	15.85	13.58	11.65	9.72

Intensity data(cd)

Appendix Page: 18 Total:18

C/γ(°)	90.0
0.0	8.37
30.0	8.75
60.0	9.08
90.0	9.57
120.0	12.51
150.0	12.67
180.0	6.91
210.0	6.15
240.0	5.85
270.0	4.87
300.0	5.33
330.0	6.40
360.0	8.37