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## Nata

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LumCAT: 1-0914-S	
Luminaire: 92.70.188.00	
Report No: 220526-B006	Voltage(V): 35.6400
Test No: 220526-C006	Current(A): 0.3710
LampCAT: PHILIPS CentaFlux SLM 1204	Power (W): 13.5670
Lamp flux(lm): 1408.6	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1087.78  
Efficiency(%): 77.22%  
Lumens(lm)/Power(W): 80.18  
Central intensity(cd): 2660.498  
Maximum intensity(cd): 2660.498  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=37.0  
                                  [C90/270]Total=37.0  
Field angle(10%Imax): [C0/180]Total=60.0  
                                  [C90/270]Total=60.0  
Maximum s/h(1/2): C0\_180=0.61 C90\_270=0.61  
Maximum s/h(1/4): C0\_180=0.59 C90\_270=0.59  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 77.22%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.033%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2660.498	0.000	0	.000%	.000%
1.0	2658.033	2.545	2.545	.181%	.234%
2.0	2640.929	7.606	10.15	.540%	.933%
3.0	2619.194	12.580	22.731	.893%	2.090%
4.0	2588.047	17.430	40.161	1.237%	3.692%
5.0	2548.461	22.097	62.258	1.569%	5.723%
6.0	2500.211	26.532	88.79	1.884%	8.163%
7.0	2444.566	30.692	119.482	2.179%	10.984%
8.0	2382.796	34.549	154.031	2.453%	14.160%
9.0	2310.421	38.036	192.067	2.700%	17.657%
10.0	2232.144	41.109	233.175	2.918%	21.436%
11.0	2147.146	43.758	276.934	3.106%	25.459%
12.0	2055.052	45.936	322.87	3.261%	29.681%
13.0	1956.385	47.606	370.475	3.380%	34.058%
14.0	1854.730	48.782	419.257	3.463%	38.542%
15.0	1748.818	49.471	468.728	3.512%	43.090%
16.0	1633.644	49.563	518.291	3.519%	47.647%
17.0	1520.188	49.114	567.404	3.487%	52.162%
18.0	1385.214	47.904	615.308	3.401%	56.565%
19.0	1279.526	46.361	661.669	3.291%	60.827%
20.0	1139.548	44.276	705.945	3.143%	64.898%
21.0	1034.748	41.751	747.696	2.964%	68.736%
22.0	932.377	39.530	787.226	2.806%	72.370%
23.0	827.727	36.932	824.158	2.622%	75.765%
24.0	735.058	34.168	858.326	2.426%	78.906%
25.0	647.609	31.439	889.765	2.232%	81.796%
26.0	562.028	28.554	918.318	2.027%	84.421%
27.0	477.269	25.427	943.745	1.805%	86.759%
28.0	400.636	22.227	965.972	1.578%	88.802%
29.0	326.721	19.030	985.001	1.351%	90.551%
30.0	266.968	16.030	1001.031	1.138%	92.025%
31.0	201.576	13.039	1014.07	.926%	93.224%
32.0	148.366	10.025	1024.095	.712%	94.145%
33.0	107.092	7.526	1031.621	.534%	94.837%
34.0	71.651	5.409	1037.031	.384%	95.334%
35.0	49.886	3.775	1040.805	.268%	95.681%
36.0	35.232	2.710	1043.515	.192%	95.931%
37.0	27.285	2.039	1045.554	.145%	96.118%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	21.728	1.636	1047.19	.116%	96.268%
39.0	18.643	1.378	1048.568	.098%	96.395%
40.0	15.155	1.179	1049.747	.084%	96.503%
41.0	14.005	1.038	1050.785	.074%	96.599%
42.0	13.056	0.983	1051.768	.070%	96.689%
43.0	12.257	0.938	1052.706	.067%	96.775%
44.0	11.667	0.903	1053.609	.064%	96.858%
45.0	11.122	0.876	1054.485	.062%	96.939%
46.0	10.696	0.853	1055.338	.061%	97.017%
47.0	10.300	0.835	1056.173	.059%	97.094%
48.0	9.979	0.820	1056.993	.058%	97.170%
49.0	9.702	0.808	1057.801	.057%	97.244%
50.0	9.471	0.799	1058.6	.057%	97.317%
51.0	9.292	0.794	1059.394	.056%	97.390%
52.0	9.112	0.790	1060.184	.056%	97.463%
53.0	8.948	0.786	1060.97	.056%	97.535%
54.0	8.799	0.782	1061.752	.056%	97.607%
55.0	8.634	0.778	1062.53	.055%	97.679%
56.0	8.507	0.775	1063.305	.055%	97.750%
57.0	8.410	0.774	1064.078	.055%	97.821%
58.0	8.283	0.772	1064.85	.055%	97.892%
59.0	8.164	0.769	1065.619	.055%	97.963%
60.0	8.052	0.766	1066.385	.054%	98.033%
61.0	7.962	0.764	1067.149	.054%	98.103%
62.0	7.887	0.764	1067.913	.054%	98.173%
63.0	7.805	0.763	1068.676	.054%	98.244%
64.0	7.738	0.763	1069.439	.054%	98.314%
65.0	7.648	0.761	1070.2	.054%	98.384%
66.0	7.581	0.760	1070.96	.054%	98.454%
67.0	7.506	0.759	1071.719	.054%	98.523%
68.0	7.432	0.757	1072.475	.054%	98.593%
69.0	7.394	0.756	1073.232	.054%	98.662%
70.0	7.342	0.757	1073.989	.054%	98.732%
71.0	7.275	0.755	1074.744	.054%	98.801%
72.0	7.223	0.754	1075.498	.054%	98.871%
73.0	7.155	0.752	1076.25	.053%	98.940%
74.0	7.111	0.750	1077	.053%	99.009%
75.0	7.051	0.748	1077.748	.053%	99.078%

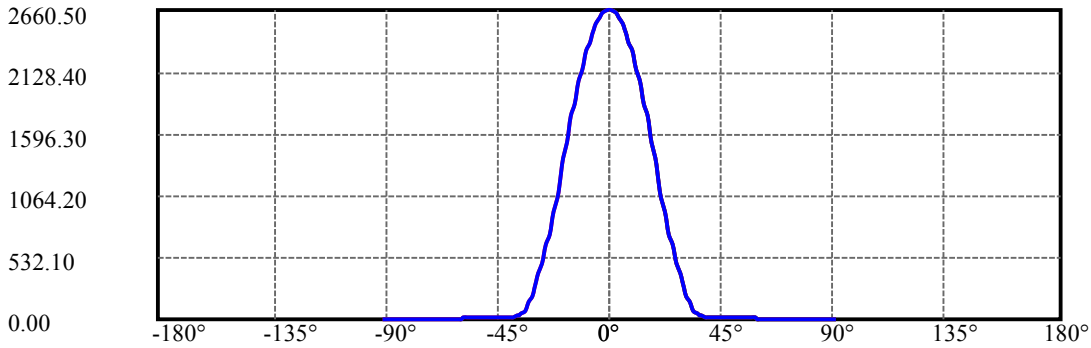
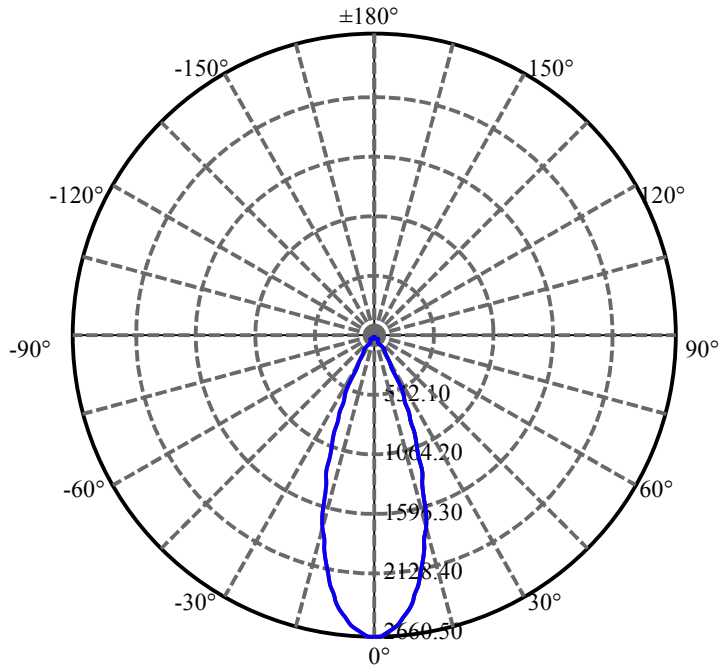
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.991	0.745	1078.494	.053%	99.146%
77.0	6.939	0.743	1079.236	.053%	99.214%
78.0	6.872	0.739	1079.975	.052%	99.282%
79.0	6.804	0.735	1080.71	.052%	99.350%
80.0	6.730	0.730	1081.44	.052%	99.417%
81.0	6.655	0.724	1082.164	.051%	99.483%
82.0	6.588	0.718	1082.882	.051%	99.549%
83.0	6.491	0.711	1083.593	.050%	99.615%
84.0	6.394	0.702	1084.295	.050%	99.679%
85.0	5.938	0.673	1084.968	.048%	99.741%
86.0	5.602	0.631	1085.599	.045%	99.799%
87.0	5.012	0.581	1086.179	.041%	99.853%
88.0	4.900	0.543	1086.722	.039%	99.903%
89.0	4.818	0.533	1087.255	.038%	99.952%
90.0	4.803	0.527	1087.782	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1001.03	71.06%	92.02%
0-40	1049.75	74.52%	96.50%
0-60	1066.38	75.70%	98.03%
0-90	1087.25	77.19%	99.95%
0-120	1087.25	77.19%	99.95%
0-180	1087.78	77.22%	100.00%
60-90	21.64	1.54%	1.99%
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%
0-24.38	870.23	61.78%	80.00%

ZONAL LUMEN SUMMARY

0-10	233.18
10-20	472.77
20-30	295.09
30-40	48.72
40-50	8.85
50-60	7.78
60-70	7.60
70-80	7.45
80-90	5.82
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



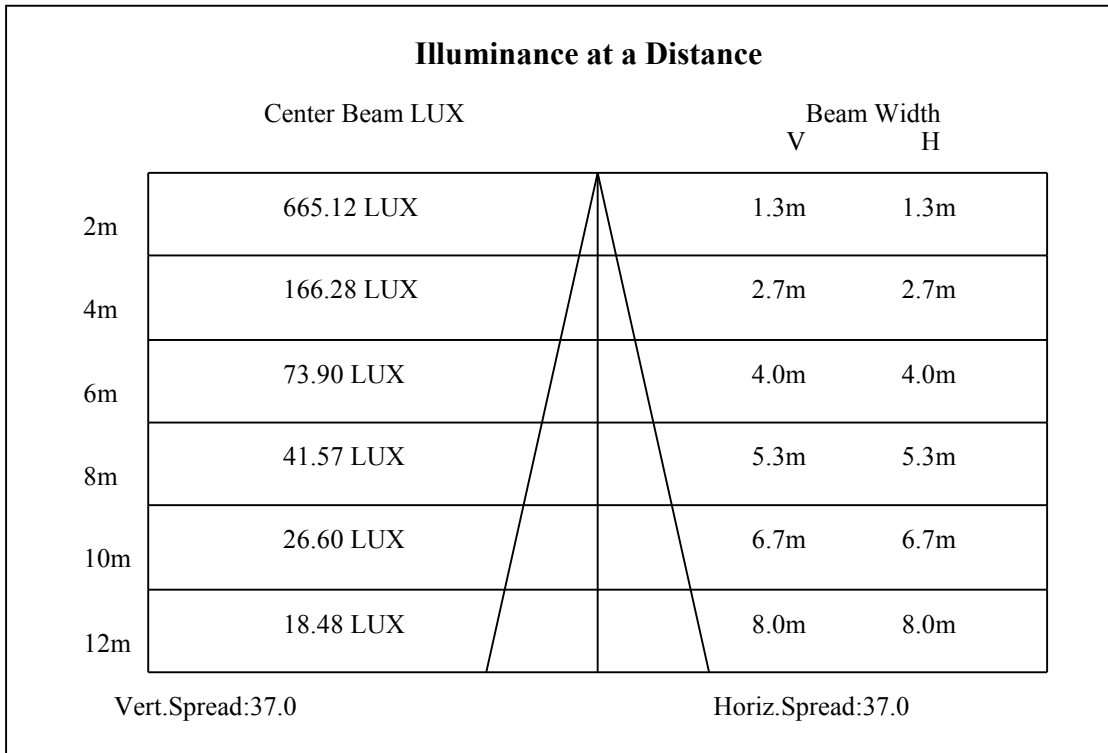
C0(Max): —————

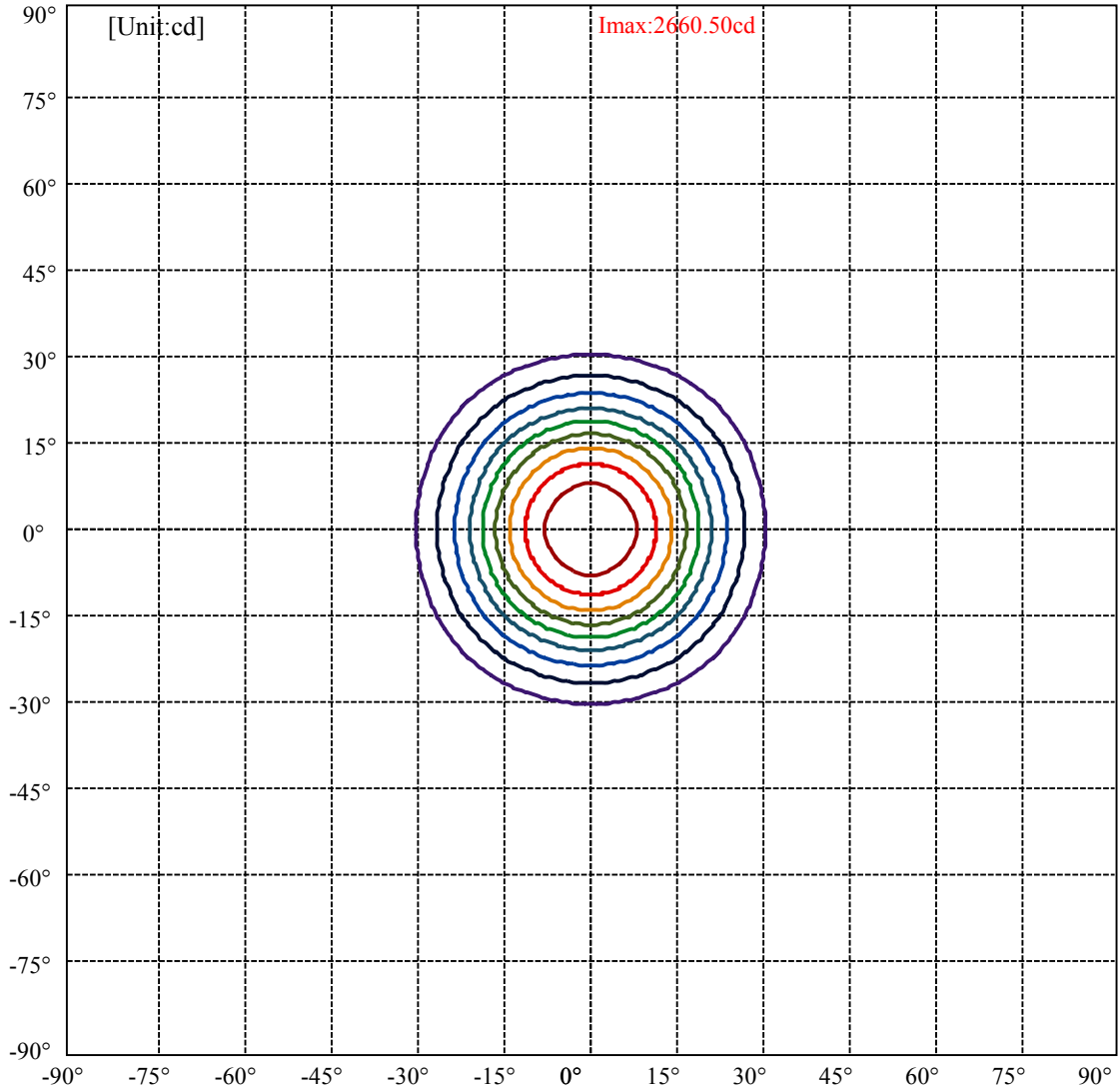
C0/C180: —————










C90/C270: —————

Field angle(10%Imax):C0/180Left:30.0 Right:30.0  
:C90/270Left:30.0 Right:30.0

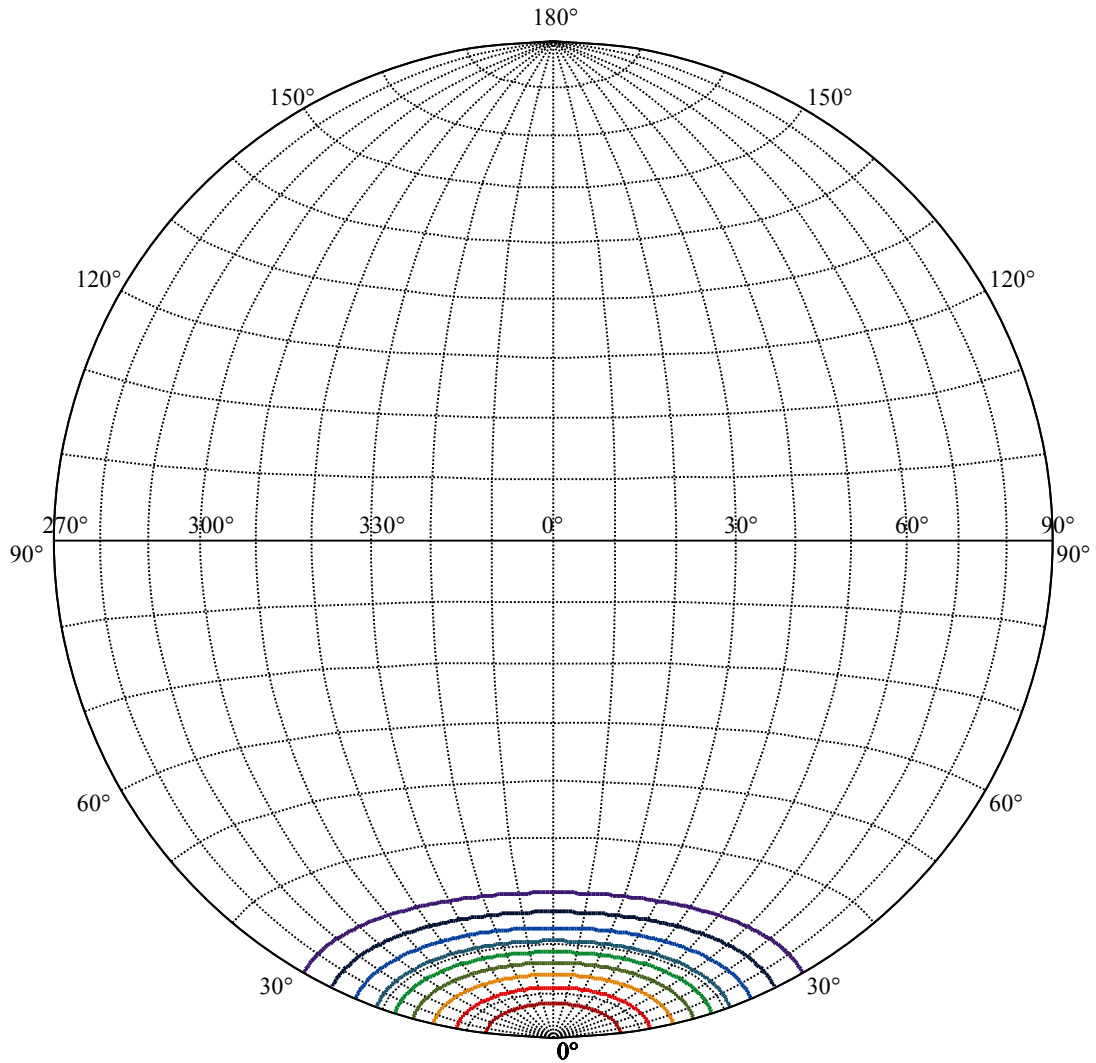
Beam Angle(50%Imax):C0/180Left:18.5 Right:18.5  
:C90/270Left:18.5 Right:18.5





(10%Imax) 266.05	
(20%Imax) 532.1	
(30%Imax) 798.149	
(40%Imax) 1064.2	
(50%Imax) 1330.25	
(60%Imax) 1596.3	
(70%Imax) 1862.35	
(80%Imax) 2128.4	
(90%Imax) 2394.45	





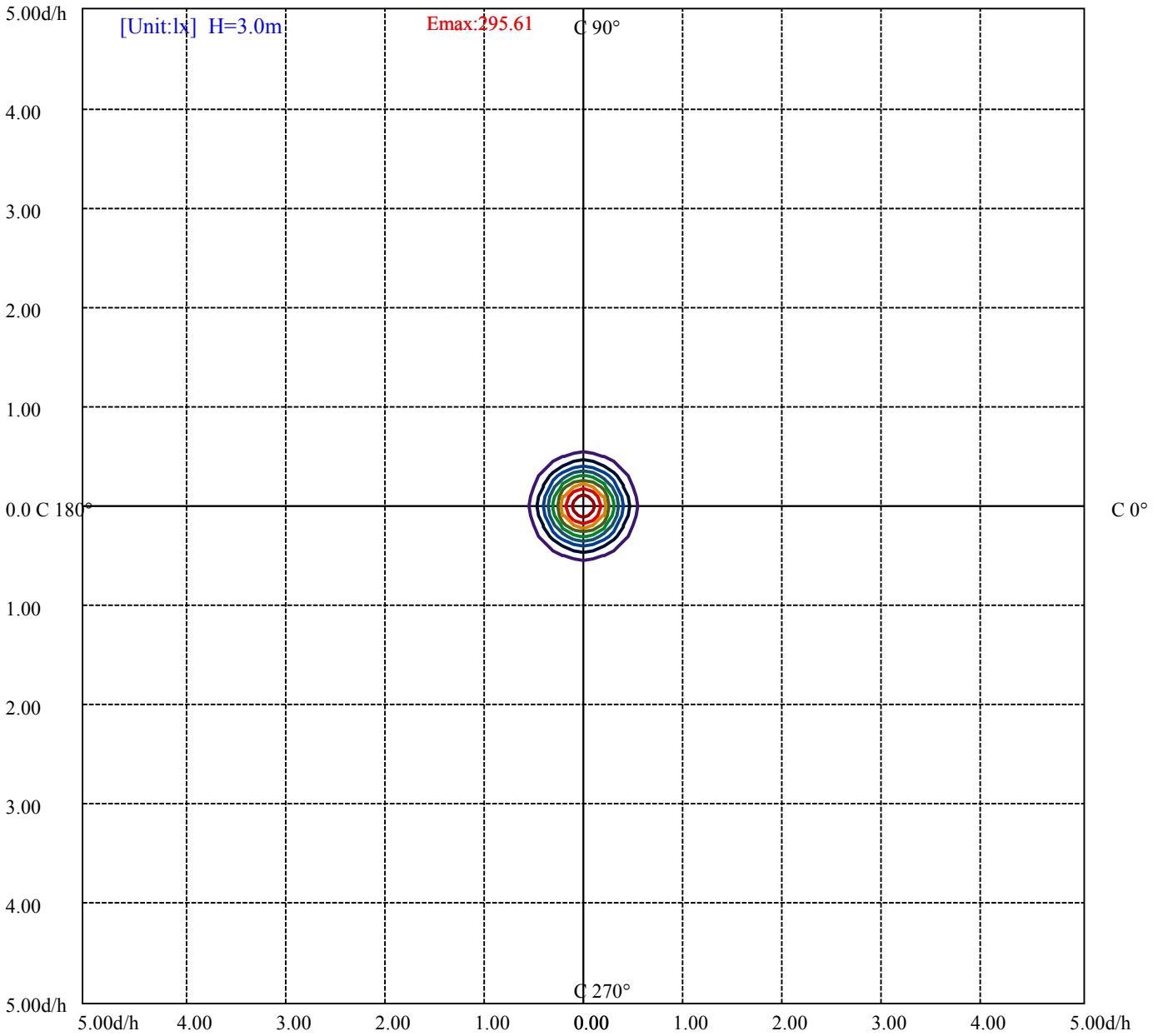
House

[Unit:cd]

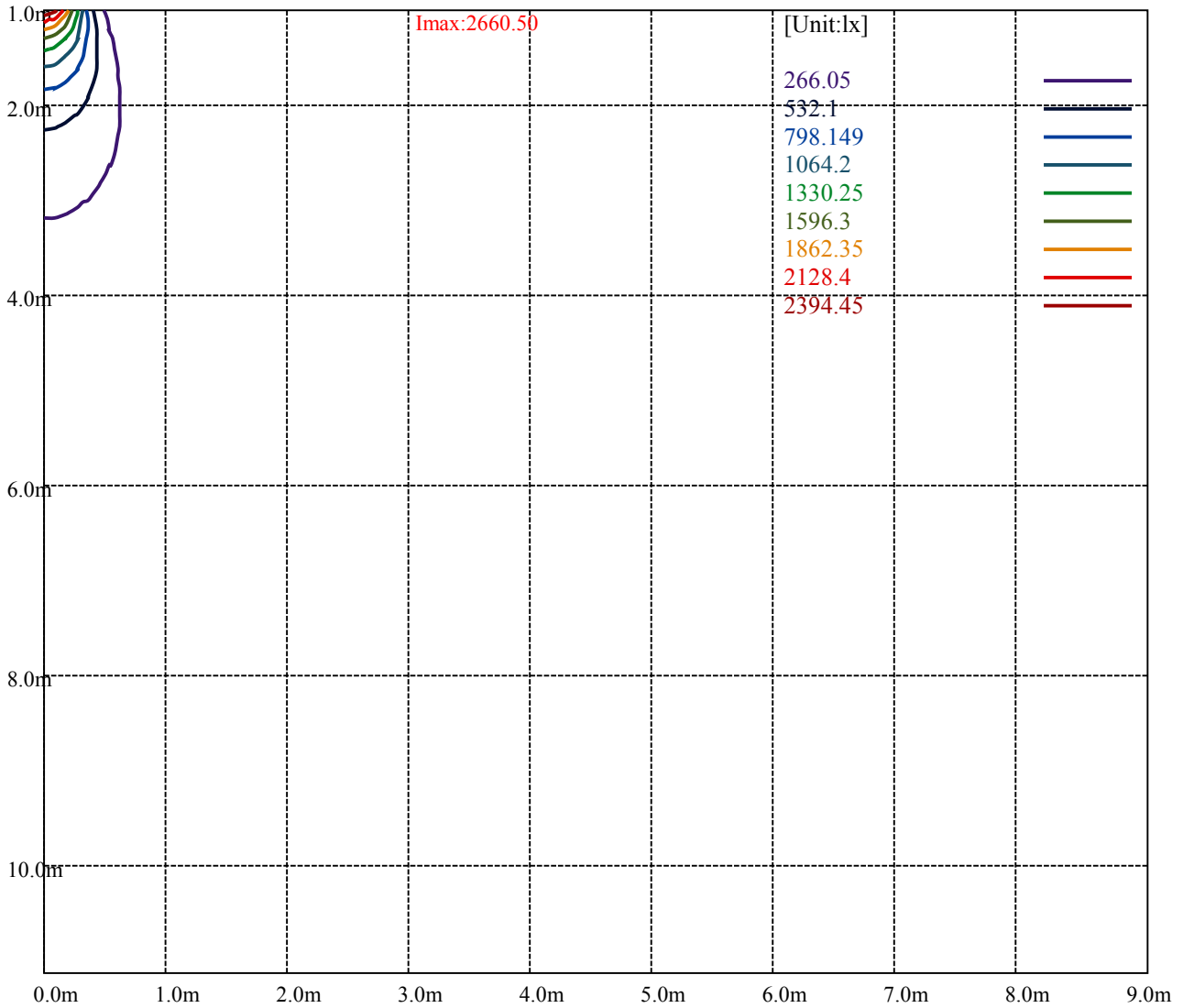
Road

**Imax:2660.50**

(10%Imax) 266.05	—
(20%Imax) 532.1	—
(30%Imax) 798.149	—
(40%Imax) 1064.2	—
(50%Imax) 1330.25	—
(60%Imax) 1596.3	—
(70%Imax) 1862.35	—
(80%Imax) 2128.4	—
(90%Imax) 2394.45	—



- (10%Emax) 29.56111 —
- (20%Emax) 59.12211 —
- (30%Emax) 88.68322 —
- (40%Emax) 118.2444 —
- (50%Emax) 147.8056 —
- (60%Emax) 177.3667 —
- (70%Emax) 206.9278 —
- (80%Emax) 236.4889 —
- (90%Emax) 266.05 —



Luminance Table

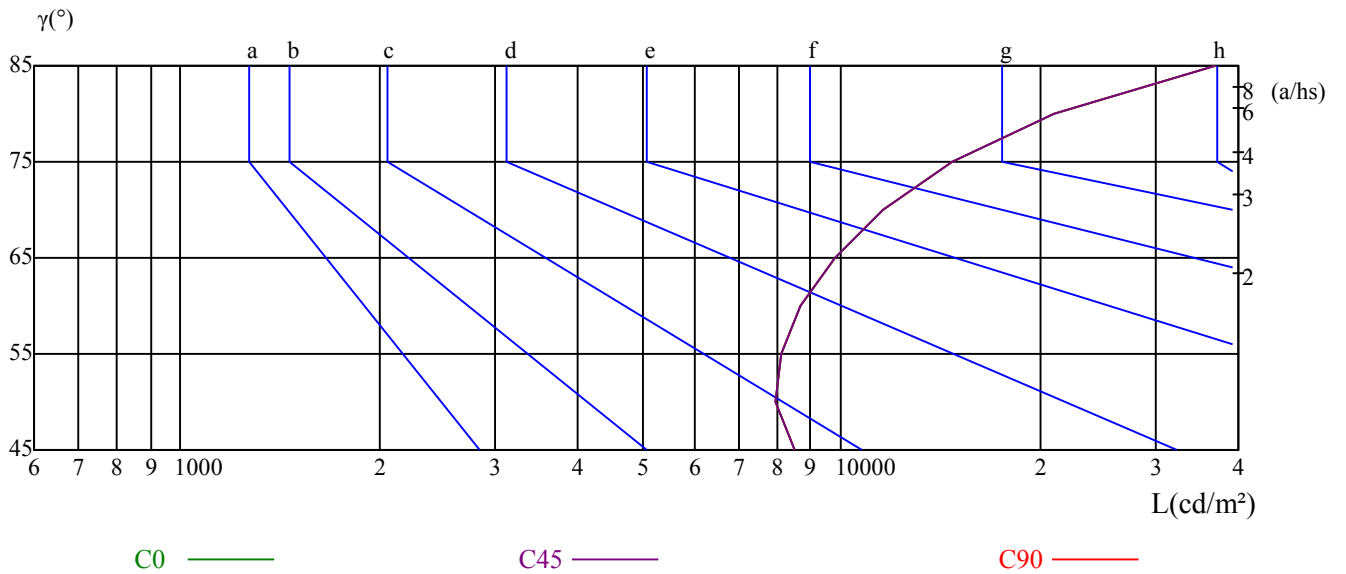
$\gamma$	45	50	55	60	65	70	75	80	85
C0	8506	7969	8141	8709	9788	11610	14734	20960	36847
C45	8506	7969	8141	8709	9788	11610	14734	20960	36847
C90	8506	7969	8141	8709	9788	11610	14734	20960	36847

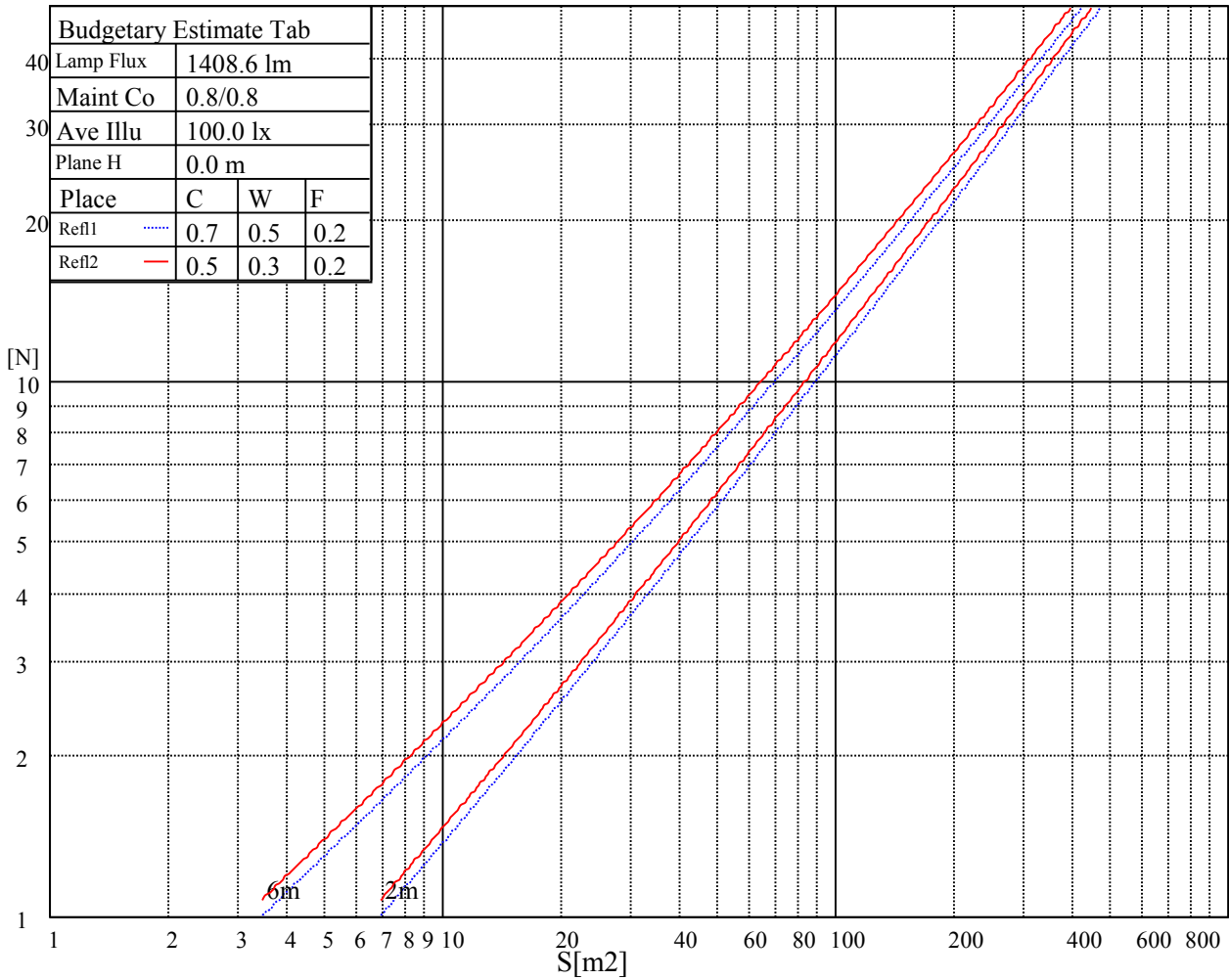
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9788	9788	9788	14734	14734	14734	36847	36847	36847

Glare Table

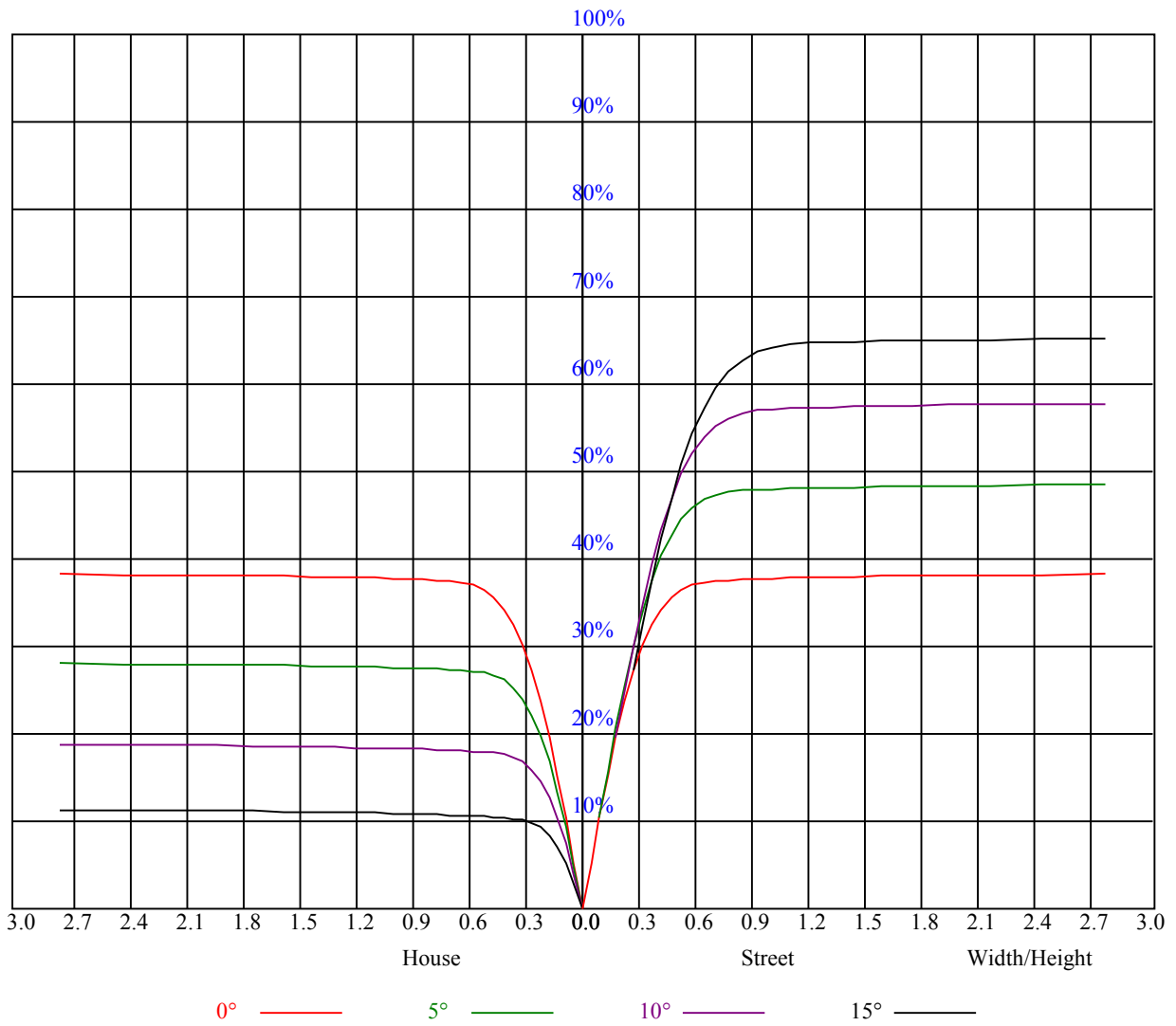
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.86	0.84	0.83	0.85	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.73
2	0.81	0.79	0.76	0.80	0.78	0.76	0.78	0.76	0.74	0.75	0.74	0.72	0.73	0.72	0.71	0.70
3	0.77	0.74	0.71	0.76	0.73	0.71	0.74	0.72	0.70	0.72	0.70	0.69	0.71	0.69	0.67	0.66
4	0.73	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
6	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.59	0.58
7	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
8	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54
9	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.54	0.53	0.52
10	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.51	0.50



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	2653.63	2664.38	2666.77	2656.02	2642.27	2616.58	2574.15	2539.50	2485.12
45.0	2669.16	2661.99	2638.69	2617.18	2578.34	2533.52	2476.16	2424.18	2362.63
90.0	2654.22	2644.07	2620.76	2588.50	2543.68	2494.68	2442.70	2358.45	2287.94
135.0	2664.98	2647.05	2624.35	2597.46	2554.44	2501.85	2453.45	2393.70	2326.78
180.0	2653.63	2633.91	2605.23	2565.19	2528.15	2474.97	2423.58	2363.23	2282.56
225.0	2669.16	2669.76	2651.83	2635.10	2608.21	2575.35	2527.55	2468.39	2417.60
270.0	2654.22	2672.15	2660.80	2651.83	2626.74	2603.43	2551.45	2504.84	2463.01
315.0	2664.98	2670.95	2659.00	2642.27	2622.55	2587.30	2552.64	2504.24	2436.72
360.0	2653.63	2664.38	2666.77	2656.02	2642.27	2616.58	2574.15	2539.50	2485.12
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2430.75	2374.58	2297.50	2223.41	2131.98	2038.77	1944.96	1838.60	1725.07
45.0	2275.39	2198.31	2114.06	2018.45	1910.30	1816.49	1702.96	1583.45	1475.90
90.0	2206.67	2106.29	2013.08	1916.28	1793.78	1693.99	1586.44	1450.80	1351.01
135.0	2241.33	2164.25	2078.80	1970.05	1869.07	1779.44	1662.33	1538.64	1423.31
180.0	2212.65	2123.62	2022.64	1930.62	1840.99	1714.91	1608.55	1499.80	1364.76
225.0	2356.06	2260.45	2182.77	2099.12	1999.33	1891.18	1794.98	1685.03	1579.27
270.0	2379.36	2322.00	2243.12	2142.14	2047.13	1953.92	1838.00	1721.48	1611.54
315.0	2381.15	2307.66	2225.20	2140.35	2058.49	1949.14	1852.34	1751.36	1630.66
360.0	2430.75	2374.58	2297.50	2223.41	2131.98	2038.77	1944.96	1838.60	1725.07
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1616.91	1502.79	1353.40	1238.08	1124.55	1002.65	882.55	793.52	701.50
45.0	1347.43	1236.29	1110.81	983.53	886.14	785.15	697.32	614.26	535.98
90.0	1187.05	1090.55	982.16	866.12	772.07	686.98	607.45	525.35	436.61
135.0	1297.83	1185.50	1066.59	946.49	852.08	761.85	671.62	589.16	521.05
180.0	1183.88	1115.47	984.85	883.63	794.59	693.97	622.74	531.02	433.81
225.0	1453.19	1326.51	1185.80	1094.97	978.45	881.42	796.33	700.36	617.84
270.0	1483.07	1377.30	1249.43	1121.56	1009.82	887.93	777.98	693.13	608.28
315.0	1512.35	1401.80	1183.35	1143.61	1041.31	921.87	824.47	734.06	641.15
360.0	1616.91	1502.79	1353.40	1238.08	1124.55	1002.65	882.55	793.52	701.50
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	609.48	527.62	439.78	371.07	302.95	232.74	172.09	120.28	83.53
45.0	443.96	375.85	302.95	264.47	172.69	126.26	87.66	46.49	30.65
90.0	370.23	303.90	232.80	180.45	134.62	89.75	59.10	38.90	28.56
135.0	416.48	346.57	302.95	210.63	156.07	110.06	70.45	44.75	32.39
180.0	373.52	305.10	221.74	174.54	127.51	76.36	51.87	36.03	30.18
225.0	538.85	437.81	368.14	302.53	229.39	176.21	130.44	80.07	55.69
270.0	503.72	425.44	354.33	307.73	225.99	183.32	141.38	106.42	75.05
315.0	561.92	482.80	391.08	324.34	263.39	192.23	143.77	100.27	63.04
360.0	609.48	527.62	439.78	371.07	302.95	232.74	172.09	120.28	83.53
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	49.24	32.15	27.01	22.83	15.66	14.04	12.97	12.25	11.71
45.0	26.23	21.63	15.60	14.04	12.91	12.13	11.53	10.93	10.46
90.0	25.10	21.09	15.77	14.52	13.56	12.67	12.07	11.47	10.93
135.0	27.55	24.02	15.66	14.40	13.44	12.73	11.89	11.29	10.88
180.0	25.57	18.94	15.00	14.04	13.15	12.43	11.83	11.29	10.88
225.0	37.64	30.77	27.07	19.72	16.79	15.72	14.64	13.38	12.79
270.0	50.79	38.54	31.07	27.96	20.32	18.11	16.13	14.94	13.92
315.0	39.74	31.13	26.65	21.63	15.42	14.22	13.38	12.49	11.77
360.0	49.24	32.15	27.01	22.83	15.66	14.04	12.97	12.25	11.71



Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	10.99	10.64	10.28	9.92	9.62	9.44	9.20	9.08	8.96
45.0	10.10	9.68	9.38	9.20	9.02	8.90	8.78	8.66	8.54
90.0	10.58	10.28	9.98	9.68	9.44	9.26	9.08	8.90	8.72
135.0	10.40	10.04	9.74	9.38	9.20	8.96	8.78	8.60	8.43
180.0	10.58	10.34	9.98	9.80	9.62	9.44	9.32	9.14	9.02
225.0	12.13	11.53	10.99	10.64	10.28	9.98	9.80	9.62	9.50
270.0	13.03	12.37	11.83	11.35	10.88	10.52	10.28	9.98	9.74
315.0	11.17	10.70	10.22	9.86	9.56	9.26	9.08	8.90	8.66
360.0	10.99	10.64	10.28	9.92	9.62	9.44	9.20	9.08	8.96
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.84	8.66	8.60	8.54	8.43	8.37	8.25	8.19	8.13
45.0	8.48	8.37	8.25	8.19	8.13	8.07	7.95	7.89	7.83
90.0	8.48	8.31	8.19	8.07	7.95	7.71	7.59	7.47	7.41
135.0	8.31	8.19	8.07	7.95	7.83	7.77	7.71	7.59	7.59
180.0	8.90	8.78	8.66	8.54	8.43	8.31	8.25	8.19	8.07
225.0	9.32	9.14	9.02	8.96	8.84	8.72	8.60	8.48	8.43
270.0	9.50	9.26	9.02	8.90	8.66	8.48	8.31	8.19	8.01
315.0	8.54	8.37	8.25	8.13	8.01	7.89	7.77	7.71	7.65
360.0	8.84	8.66	8.60	8.54	8.43	8.37	8.25	8.19	8.13
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.01	7.95	7.89	7.83	7.77	7.65	7.65	7.53	7.47
45.0	7.77	7.77	7.65	7.59	7.59	7.47	7.47	7.41	7.29
90.0	7.35	7.23	7.23	7.11	6.93	6.99	6.93	6.99	6.93
135.0	7.53	7.47	7.35	7.29	7.29	7.17	7.17	7.11	7.05
180.0	7.95	7.89	7.77	7.71	7.65	7.59	7.47	7.47	7.41
225.0	8.37	8.31	8.19	8.13	8.01	7.95	7.89	7.83	7.71
270.0	7.89	7.77	7.65	7.59	7.47	7.35	7.35	7.23	7.17
315.0	7.59	7.53	7.47	7.41	7.35	7.29	7.23	7.17	7.17
360.0	8.01	7.95	7.89	7.83	7.77	7.65	7.65	7.53	7.47
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.41	7.35	7.29	7.23	7.17	7.11	7.05	6.93	6.87
45.0	7.23	7.17	7.11	7.05	6.99	6.87	6.81	6.75	6.69
90.0	6.93	6.87	6.87	6.81	6.81	6.81	6.75	6.69	6.57
135.0	6.99	6.93	6.93	6.81	6.75	6.75	6.63	6.57	6.57
180.0	7.29	7.23	7.17	7.11	7.05	6.99	6.87	6.81	6.75
225.0	7.65	7.53	7.47	7.41	7.35	7.23	7.17	7.17	6.99
270.0	7.17	7.11	7.11	7.05	6.99	6.99	6.93	6.87	6.81
315.0	7.11	7.05	6.93	6.93	6.81	6.75	6.75	6.63	6.57
360.0	7.41	7.35	7.29	7.23	7.17	7.11	7.05	6.93	6.87
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.75	6.75	6.63	6.51	6.39	6.33	5.20	5.02	5.02
45.0	6.63	6.57	6.45	6.39	5.14	5.02	4.96	4.90	4.78
90.0	6.51	6.45	6.33	6.21	5.02	4.90	4.78	4.78	4.72
135.0	6.45	6.39	6.33	6.27	6.15	5.02	4.90	4.84	4.72
180.0	6.63	6.57	6.45	6.33	5.68	5.02	4.96	4.90	4.72
225.0	6.99	6.87	6.81	6.75	6.63	6.57	5.14	4.96	4.90
270.0	6.75	6.63	6.51	6.39	6.33	6.15	5.14	4.90	4.84
315.0	6.51	6.45	6.39	6.27	6.15	5.80	5.02	4.90	4.84
360.0	6.75	6.75	6.63	6.51	6.39	6.33	5.20	5.02	5.02

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	5.02
45.0	4.72
90.0	4.72
135.0	4.72
180.0	4.78
225.0	4.84
270.0	4.78
315.0	4.84
360.0	5.02