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Nata

LumCAT: 1-1061-N	
Luminaire: 92.361.000	
Report No: 220519-B009	Voltage(V): 38.1500
Test No: 220519-C009	Current(A): 0.3610
LampCAT: CREE CXA1507	Power (W): 13.7720
Lamp flux(lm): 1272.8	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1085.33
Efficiency(%): 85.27%
Lumens(lm)/Power(W): 78.81
Central intensity(cd): 4917.065
Maximum intensity(cd): 4917.065
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.3
 [C90/270]Total=22.3
Field angle(10%Imax): [C0/180]Total=49.3
 [C90/270]Total=49.3
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 85.27%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.195%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4917.066	0.000	0	.000%	.000%
1.0	4888.609	4.692	4.692	.369%	.432%
2.0	4813.245	13.925	18.617	1.094%	1.715%
3.0	4676.635	22.697	41.314	1.783%	3.807%
4.0	4500.066	30.717	72.031	2.413%	6.637%
5.0	4289.959	37.814	109.845	2.971%	10.121%
6.0	3998.365	43.557	153.402	3.422%	14.134%
7.0	3709.908	47.845	201.248	3.759%	18.543%
8.0	3427.874	51.084	252.331	4.014%	23.249%
9.0	3101.773	52.919	305.251	4.158%	28.125%
10.0	2777.240	53.203	358.453	4.180%	33.027%
11.0	2497.895	52.709	411.163	4.141%	37.884%
12.0	2213.696	51.504	462.667	4.047%	42.629%
13.0	1922.475	49.086	511.753	3.857%	47.152%
14.0	1700.119	46.369	558.122	3.643%	51.424%
15.0	1481.767	43.682	601.805	3.432%	55.449%
16.0	1310.896	40.920	642.725	3.215%	59.220%
17.0	1157.645	38.442	681.167	3.020%	62.761%
18.0	1039.880	36.232	717.399	2.847%	66.100%
19.0	934.707	34.354	751.753	2.699%	69.265%
20.0	841.418	32.508	784.261	2.554%	72.260%
21.0	751.706	30.591	814.852	2.404%	75.079%
22.0	670.816	28.586	843.438	2.246%	77.713%
23.0	602.750	26.723	870.161	2.100%	80.175%
24.0	534.161	24.857	895.018	1.953%	82.465%
25.0	469.284	22.816	917.834	1.793%	84.568%
26.0	409.696	20.748	938.583	1.630%	86.479%
27.0	350.570	18.600	957.183	1.461%	88.193%
28.0	297.667	16.412	973.595	1.289%	89.705%
29.0	240.378	14.077	987.672	1.106%	91.002%
30.0	192.927	11.699	999.371	.919%	92.080%
31.0	141.383	9.303	1008.674	.731%	92.937%
32.0	103.895	7.027	1015.701	.552%	93.585%
33.0	78.792	5.382	1021.083	.423%	94.081%
34.0	60.515	4.216	1025.299	.331%	94.469%
35.0	51.619	3.482	1028.781	.274%	94.790%
36.0	46.002	3.108	1031.89	.244%	95.076%
37.0	40.841	2.832	1034.722	.223%	95.337%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	36.718	2.589	1037.311	.203%	95.576%
39.0	32.939	2.378	1039.688	.187%	95.795%
40.0	29.496	2.177	1041.866	.171%	95.996%
41.0	26.851	2.006	1043.872	.158%	96.181%
42.0	24.431	1.863	1045.736	.146%	96.352%
43.0	22.026	1.721	1047.456	.135%	96.511%
44.0	20.234	1.595	1049.051	.125%	96.658%
45.0	18.665	1.495	1050.546	.117%	96.795%
46.0	16.977	1.394	1051.94	.110%	96.924%
47.0	15.685	1.299	1053.239	.102%	97.044%
48.0	14.602	1.224	1054.464	.096%	97.156%
49.0	13.564	1.157	1055.62	.091%	97.263%
50.0	12.638	1.092	1056.713	.086%	97.364%
51.0	11.913	1.039	1057.752	.082%	97.459%
52.0	11.248	0.994	1058.745	.078%	97.551%
53.0	10.688	0.954	1059.7	.075%	97.639%
54.0	10.218	0.921	1060.621	.072%	97.724%
55.0	9.814	0.894	1061.515	.070%	97.806%
56.0	9.486	0.872	1062.387	.069%	97.886%
57.0	9.217	0.855	1063.243	.067%	97.965%
58.0	8.985	0.842	1064.084	.066%	98.043%
59.0	8.776	0.830	1064.915	.065%	98.119%
60.0	8.612	0.821	1065.736	.065%	98.195%
61.0	8.418	0.813	1066.549	.064%	98.270%
62.0	8.268	0.804	1067.353	.063%	98.344%
63.0	8.082	0.795	1068.148	.062%	98.417%
64.0	7.880	0.783	1068.931	.062%	98.489%
65.0	7.671	0.770	1069.701	.060%	98.560%
66.0	7.492	0.757	1070.457	.059%	98.630%
67.0	7.305	0.744	1071.201	.058%	98.699%
68.0	7.111	0.730	1071.932	.057%	98.766%
69.0	6.931	0.716	1072.648	.056%	98.832%
70.0	6.760	0.703	1073.351	.055%	98.897%
71.0	6.603	0.691	1074.042	.054%	98.960%
72.0	6.453	0.679	1074.721	.053%	99.023%
73.0	6.319	0.668	1075.389	.052%	99.084%
74.0	6.192	0.658	1076.046	.052%	99.145%
75.0	6.072	0.648	1076.694	.051%	99.205%

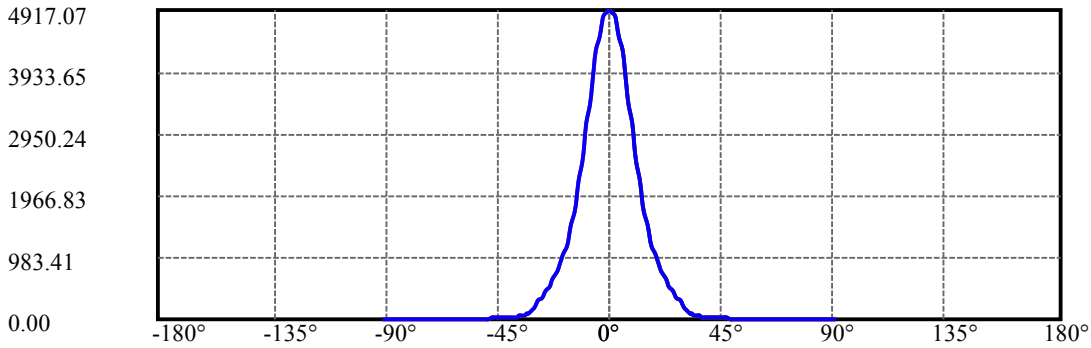
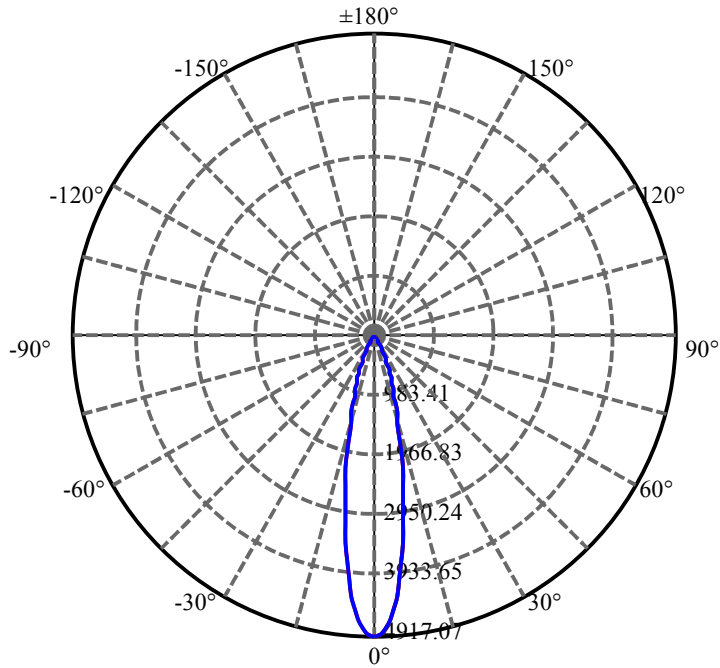
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.945	0.638	1077.332	.050%	99.263%
77.0	5.841	0.628	1077.961	.049%	99.321%
78.0	5.751	0.621	1078.581	.049%	99.379%
79.0	5.617	0.611	1079.192	.048%	99.435%
80.0	5.527	0.601	1079.793	.047%	99.490%
81.0	5.452	0.594	1080.386	.047%	99.545%
82.0	5.363	0.586	1080.973	.046%	99.599%
83.0	5.258	0.577	1081.55	.045%	99.652%
84.0	5.184	0.569	1082.119	.045%	99.705%
85.0	5.079	0.560	1082.679	.044%	99.756%
86.0	4.952	0.548	1083.228	.043%	99.807%
87.0	4.870	0.538	1083.765	.042%	99.856%
88.0	4.780	0.529	1084.294	.042%	99.905%
89.0	4.698	0.520	1084.813	.041%	99.953%
90.0	4.653	0.513	1085.326	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	999.37	78.52%	92.08%
0-40	1041.87	81.86%	96.00%
0-60	1065.74	83.73%	98.20%
0-90	1084.81	85.23%	99.95%
0-120	1084.81	85.23%	99.95%
0-180	1085.33	85.27%	100.00%
60-90	19.90	1.56%	1.83%
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%
0-22.93	868.26	68.22%	80.00%

ZONAL LUMEN SUMMARY

0-10	358.45
10-20	425.81
20-30	215.11
30-40	42.50
40-50	14.85
50-60	9.02
60-70	7.61
70-80	6.44
80-90	5.02
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: —————

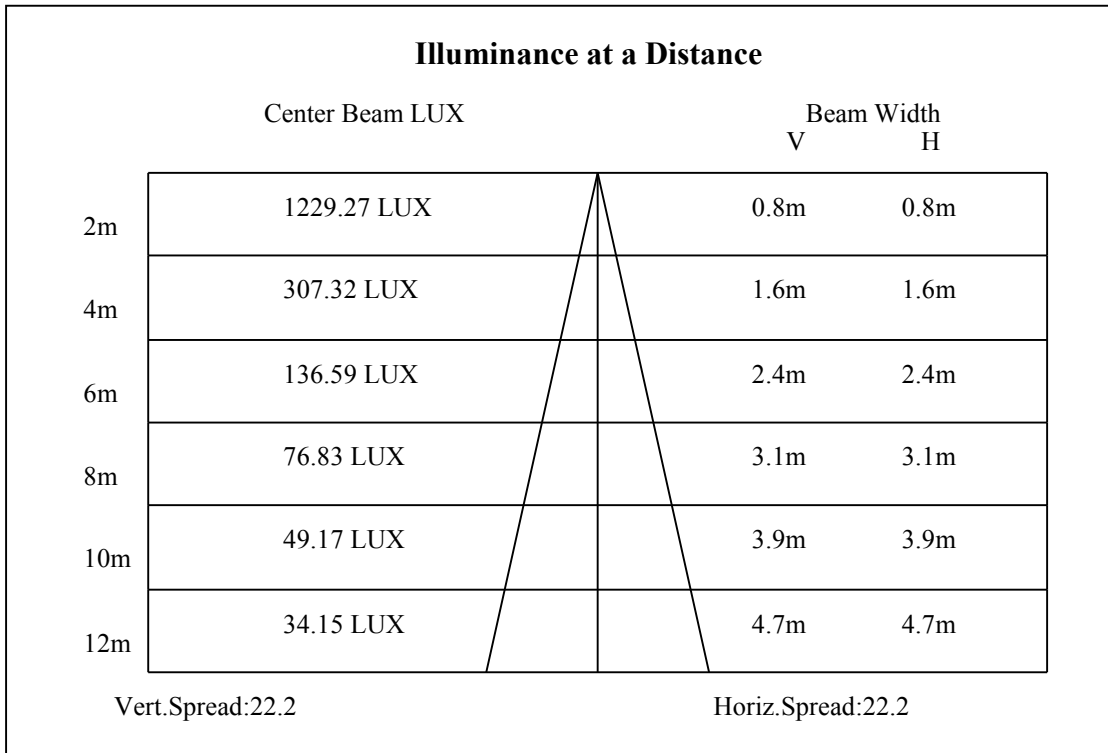
C90/C270: —————

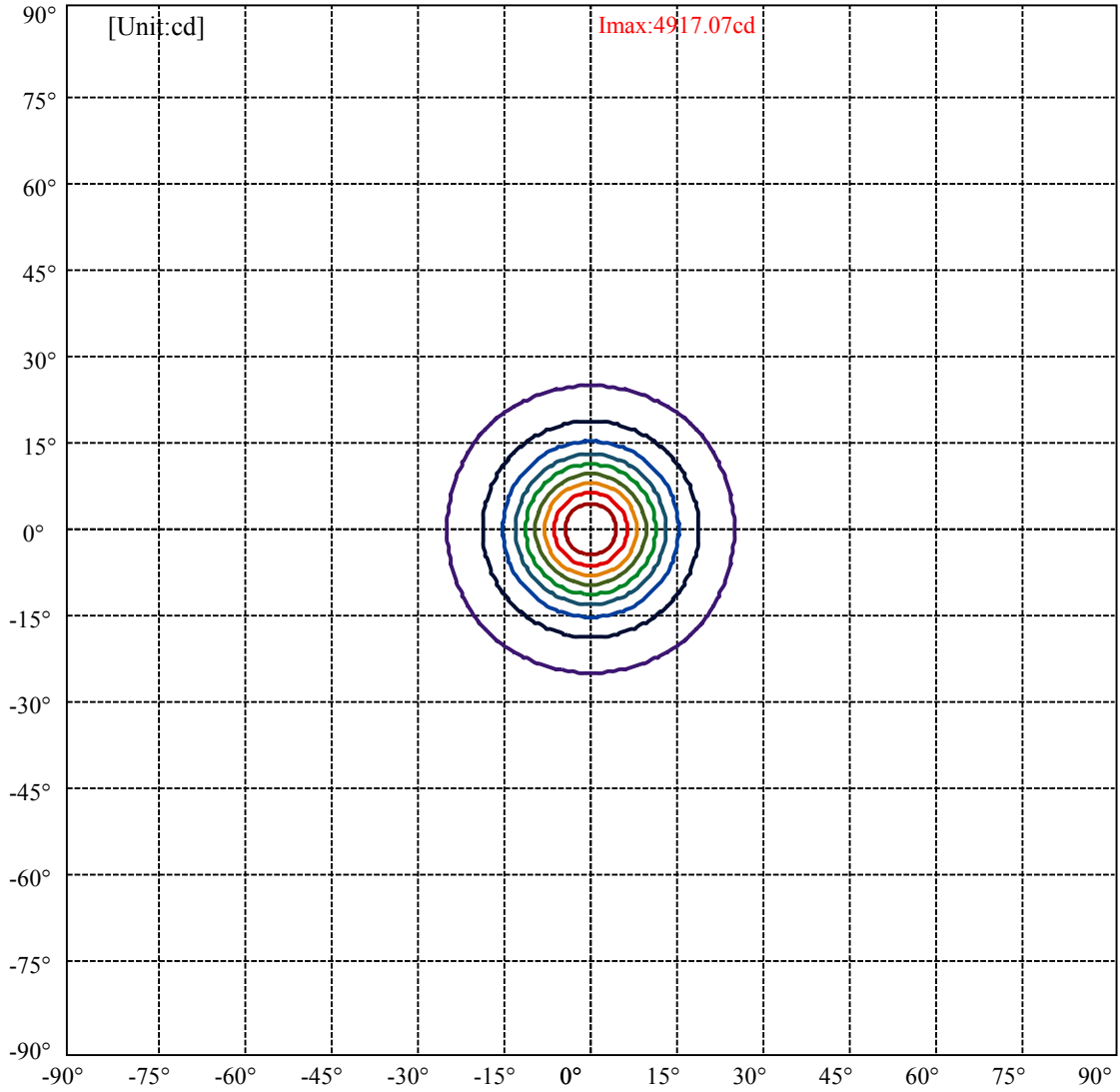
Field angle(10%Imax):C0/180Left:24.7 Right:24.7

:C90/270Left:24.7 Right:24.7

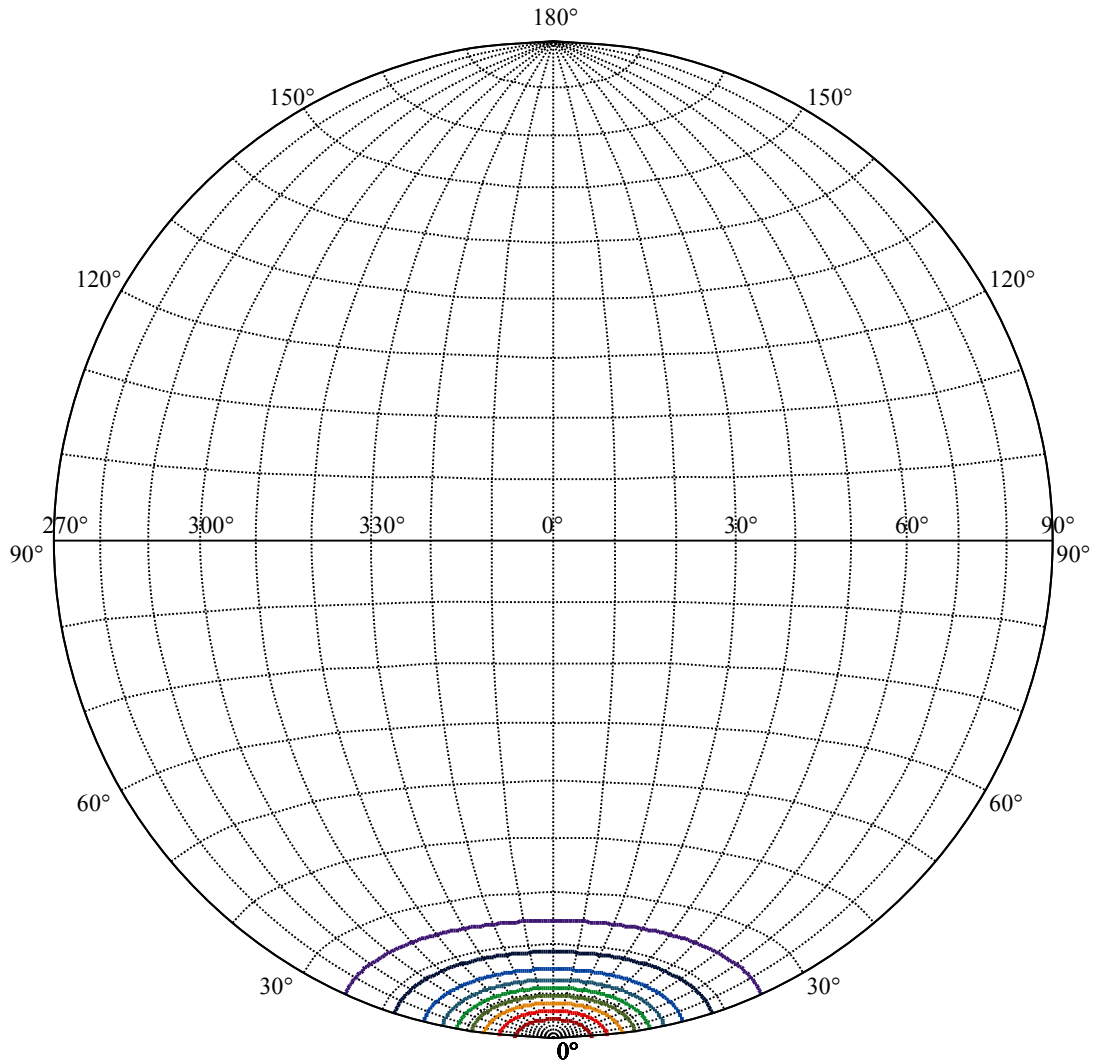
Beam Angle(50%Imax):C0/180Left:11.1 Right:11.1

:C90/270Left:11.1 Right:11.1





(10%Imax) 491.707	—
(20%Imax) 983.413	—
(30%Imax) 1475.12	—
(40%Imax) 1966.83	—
(50%Imax) 2458.53	—
(60%Imax) 2950.24	—
(70%Imax) 3441.95	—
(80%Imax) 3933.65	—
(90%Imax) 4425.36	—



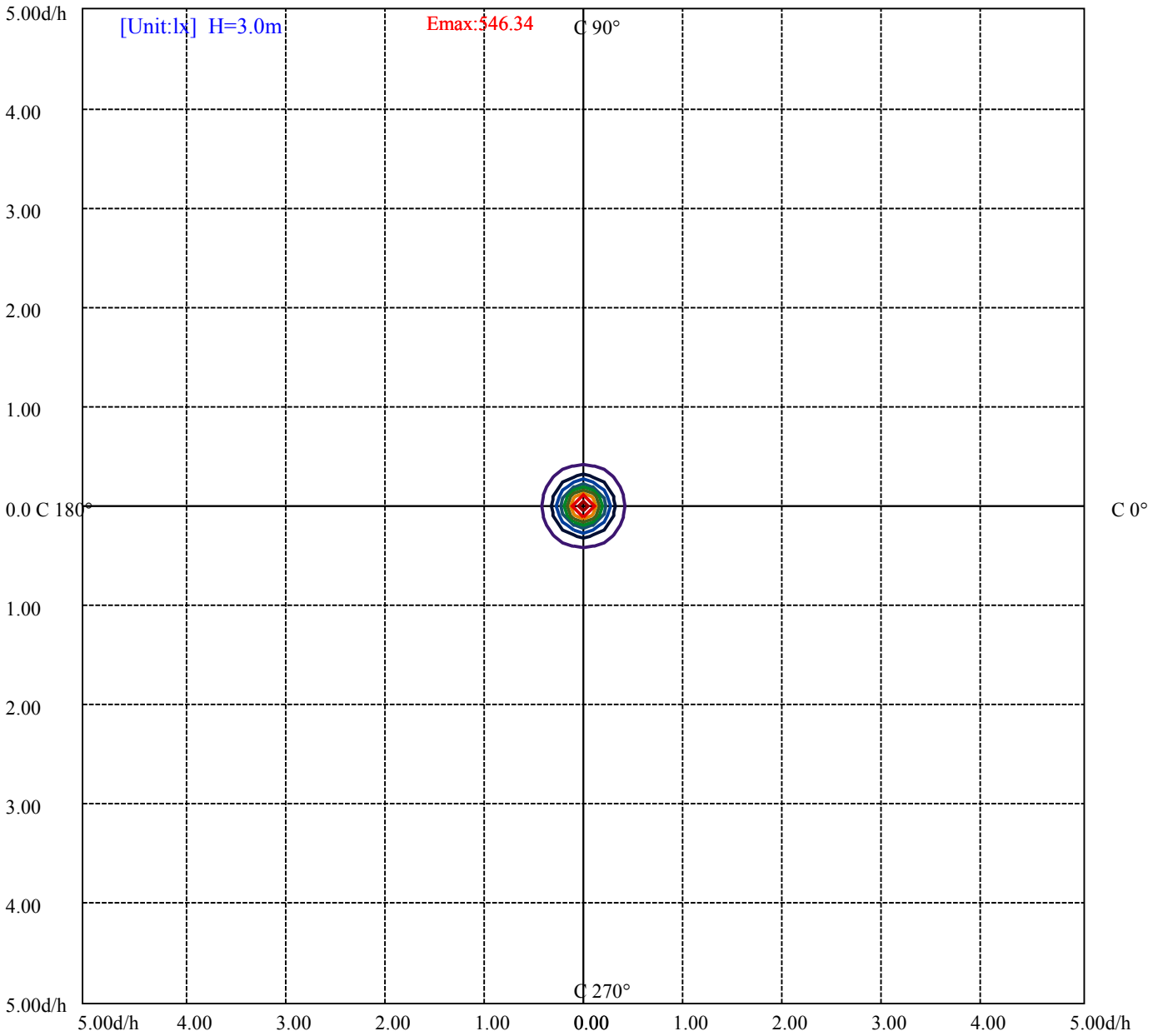
House

[Unit:cd]

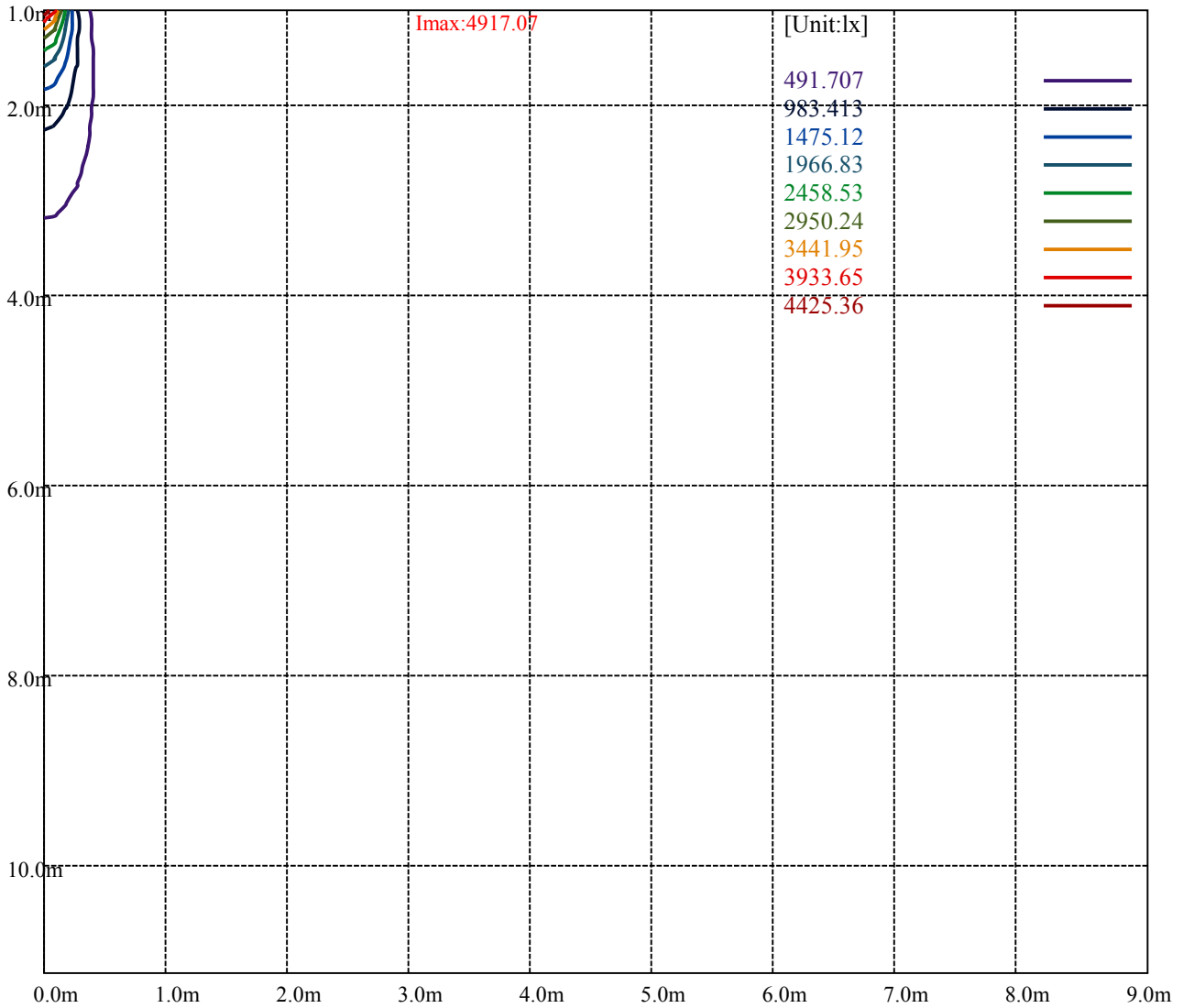
Road

Imax:4917.07

(10%Imax) 491.707	—
(20%Imax) 983.413	—
(30%Imax) 1475.12	—
(40%Imax) 1966.83	—
(50%Imax) 2458.53	—
(60%Imax) 2950.24	—
(70%Imax) 3441.95	—
(80%Imax) 3933.65	—
(90%Imax) 4425.36	—



- (10%Emax) 54.634
- (20%Emax) 109.268
- (30%Emax) 163.9022
- (40%Emax) 218.5356
- (50%Emax) 273.17
- (60%Emax) 327.8044
- (70%Emax) 382.4378
- (80%Emax) 437.0722
- (90%Emax) 491.7056



Luminance Table

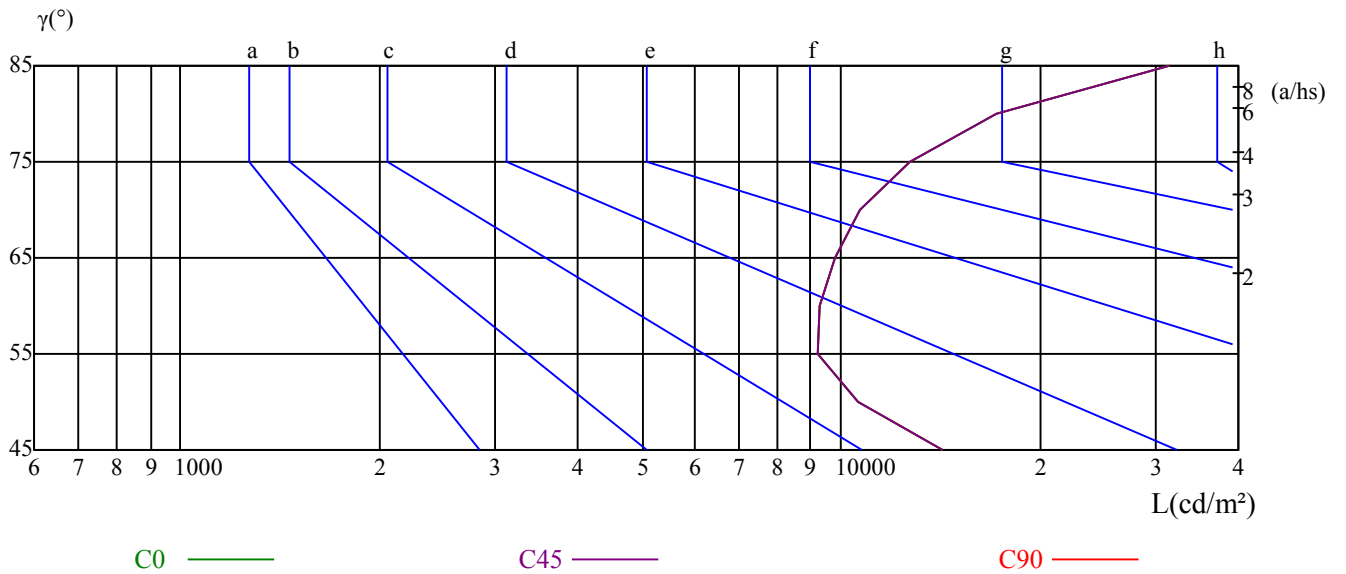
γ	45	50	55	60	65	70	75	80	85
C0	14276	10633	9254	9315	9816	10689	12689	17214	31517
C45	14276	10633	9254	9315	9816	10689	12689	17214	31517
C90	14276	10633	9254	9315	9816	10689	12689	17214	31517

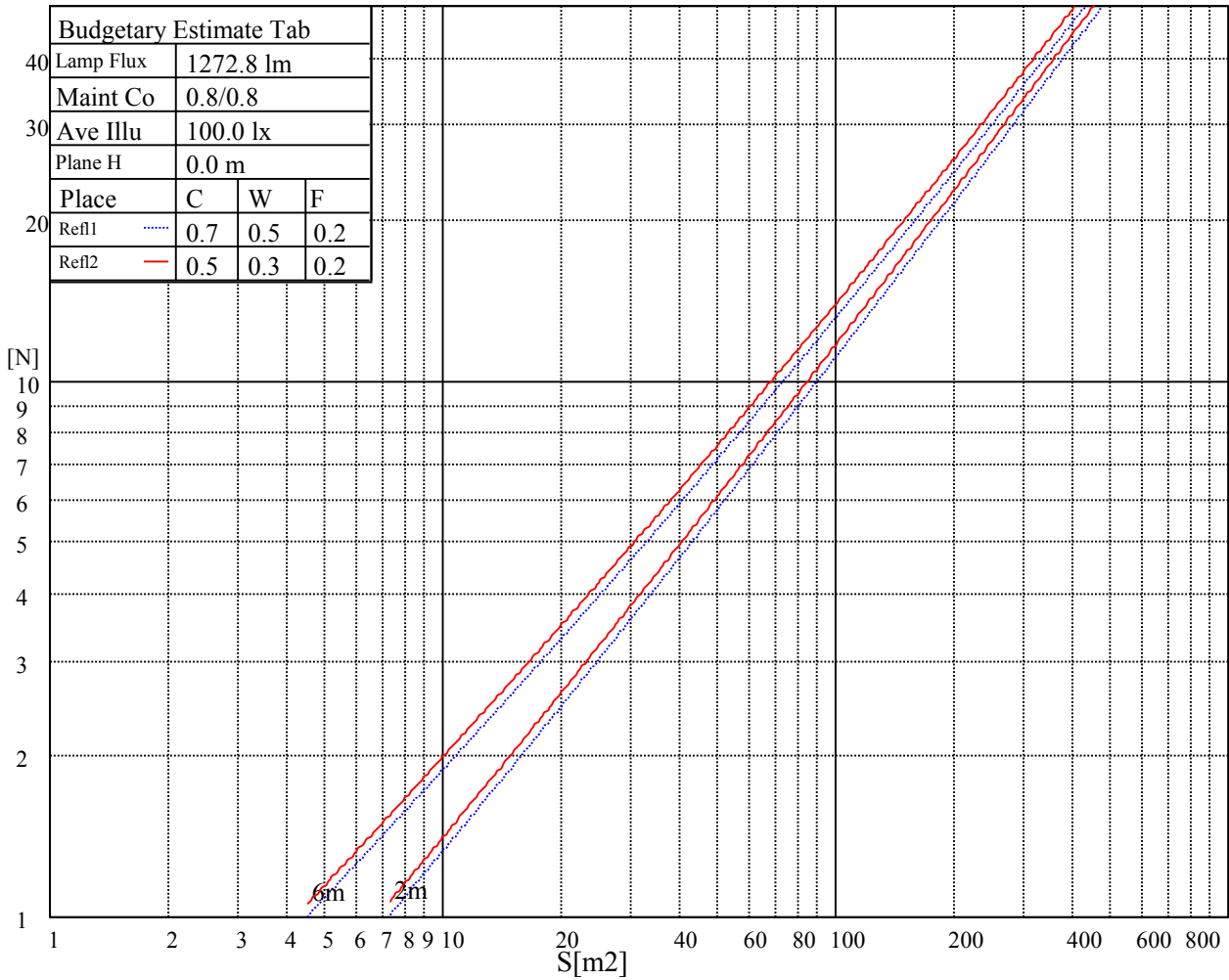
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9816	9816	9816	12689	12689	12689	31517	31517	31517

Glare Table

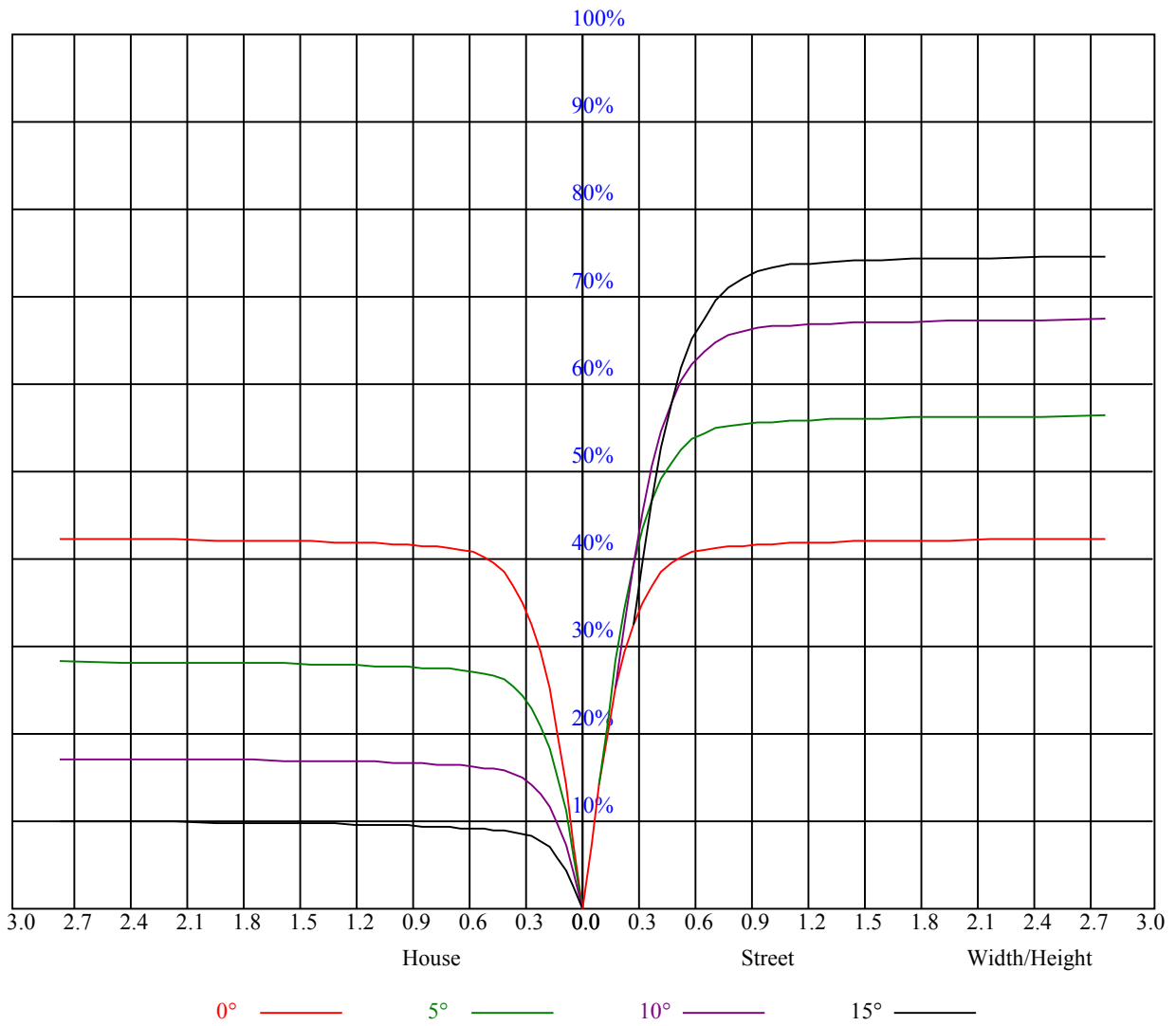
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.96	0.94	0.92	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.81
2	0.91	0.88	0.86	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.82	0.81	0.82	0.80	0.79	0.78
3	0.86	0.83	0.80	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.79	0.78	0.76	0.75
4	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.77	0.75	0.73	0.72
5	0.79	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.70
6	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
7	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.66	0.71	0.68	0.66	0.65
8	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.69	0.66	0.64	0.63
9	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.60	0.60



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	4885.99	4921.25	4915.87	4847.16	4734.22	4556.16	4323.12	4087.70	3831.36
45.0	4934.99	4888.38	4784.41	4645.79	4441.43	4219.15	3925.77	3607.88	3320.47
90.0	4918.86	4850.14	4734.82	4541.82	4338.66	4104.43	3717.23	3463.28	3167.50
135.0	4928.42	4881.21	4770.67	4609.94	4425.30	4200.03	3869.60	3586.37	3300.15
180.0	4885.99	4789.19	4657.14	4462.94	4216.76	3967.59	3685.56	3318.08	3026.48
225.0	4934.99	4918.86	4870.46	4739.60	4587.23	4391.24	4095.46	3832.55	3550.52
270.0	4918.86	4936.78	4898.54	4806.52	4664.31	4483.26	4236.48	3946.68	3667.63
315.0	4928.42	4923.04	4874.04	4759.32	4592.61	4397.81	4133.71	3836.73	3558.88
360.0	4885.99	4921.25	4915.87	4847.16	4734.22	4556.16	4323.12	4087.70	3831.36
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3474.03	3180.65	2891.44	2567.58	2252.68	1998.73	1738.81	1508.16	1334.28
45.0	2988.24	2657.21	2374.58	2112.86	1810.51	1603.17	1420.33	1248.84	1104.83
90.0	2841.85	2525.16	2261.05	1980.81	1726.86	1528.48	1340.86	1180.06	1062.53
135.0	2939.25	2650.64	2379.36	2088.36	1822.46	1612.73	1410.17	1257.80	1113.20
180.0	2739.07	2389.52	2132.58	1891.78	1648.58	1438.85	1178.69	1117.98	1021.66
225.0	3220.08	2895.03	2607.02	2295.71	2008.89	1780.64	1552.98	1377.90	1192.19
270.0	3343.17	3017.52	2725.93	2441.50	2106.29	1866.08	1647.39	1432.87	1256.01
315.0	3268.48	2902.20	2611.20	2330.96	2003.51	1772.27	1564.93	1363.56	1176.47
360.0	3474.03	3180.65	2891.44	2567.58	2252.68	1998.73	1738.81	1508.16	1334.28
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1172.35	1055.83	942.90	847.89	768.42	691.94	604.10	547.93	491.77
45.0	998.47	896.89	801.88	721.82	635.77	576.62	514.47	448.15	385.41
90.0	961.36	862.53	783.00	696.00	614.02	557.32	493.44	426.64	368.02
135.0	996.08	902.27	800.69	711.06	639.95	573.63	503.12	439.78	384.81
180.0	915.24	821.84	740.64	653.94	580.74	524.87	465.06	389.71	333.12
225.0	1075.97	974.21	885.42	783.12	705.02	628.42	554.69	495.77	433.21
270.0	1128.73	1008.63	905.85	819.21	727.79	650.11	579.60	517.46	454.72
315.0	1070.83	955.45	870.96	780.61	694.81	619.10	558.81	488.84	426.52
360.0	1172.35	1055.83	942.90	847.89	768.42	691.94	604.10	547.93	491.77
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	415.88	356.13	302.95	272.23	193.78	151.23	117.95	76.66	59.75
45.0	331.63	308.32	220.31	175.85	126.62	90.59	67.52	55.15	47.20
90.0	313.82	250.07	201.49	157.69	115.20	80.85	63.28	54.32	48.04
135.0	326.85	305.93	210.57	166.59	116.94	82.88	64.77	54.73	48.64
180.0	280.60	226.70	174.24	130.62	92.44	65.97	54.97	49.24	44.58
225.0	372.20	304.56	257.30	210.93	160.26	115.32	83.77	63.04	54.26
270.0	394.97	322.67	303.54	222.88	167.67	128.65	94.41	67.82	56.23
315.0	368.62	306.95	252.64	206.63	158.17	115.68	83.65	63.16	54.26
360.0	415.88	356.13	302.95	272.23	193.78	151.23	117.95	76.66	59.75
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	52.46	45.47	40.03	36.39	31.97	29.10	26.59	23.78	21.81
45.0	42.01	37.64	33.46	29.88	27.31	24.50	22.23	20.44	18.64
90.0	42.54	38.30	34.60	30.83	27.61	25.16	22.89	20.55	18.94
135.0	43.92	39.26	35.55	31.97	28.80	26.23	23.66	21.45	19.72
180.0	39.86	35.67	32.39	29.16	26.23	23.96	21.93	19.72	18.22
225.0	48.46	42.96	38.72	34.54	31.01	28.32	25.93	23.24	21.33
270.0	50.67	44.87	40.51	36.03	32.27	29.52	26.65	24.14	22.23
315.0	48.10	42.54	38.48	34.72	30.77	28.02	25.57	22.89	20.97
360.0	52.46	45.47	40.03	36.39	31.97	29.10	26.59	23.78	21.81

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	20.08	18.16	16.79	15.60	14.34	13.38	12.61	11.77	11.17
45.0	17.33	15.89	14.70	13.74	12.85	12.01	11.35	10.82	10.28
90.0	17.39	15.83	14.70	13.74	12.79	11.95	11.29	10.70	10.28
135.0	18.22	16.55	15.30	14.28	13.27	12.37	11.71	10.99	10.46
180.0	16.85	15.54	14.22	13.32	12.49	11.65	11.05	10.52	10.04
225.0	19.66	17.75	16.43	15.24	14.10	13.15	12.37	11.65	11.05
270.0	20.50	18.46	17.15	15.89	14.76	13.62	12.73	12.07	11.29
315.0	19.30	17.63	16.19	15.00	13.92	12.97	12.19	11.47	10.93
360.0	20.08	18.16	16.79	15.60	14.34	13.38	12.61	11.77	11.17
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.64	10.16	9.80	9.50	9.14	8.90	8.72	8.54	8.43
45.0	9.86	9.56	9.20	8.96	8.84	8.60	8.43	8.31	8.13
90.0	9.80	9.44	9.20	8.96	8.78	8.54	8.48	8.25	8.13
135.0	10.04	9.68	9.38	9.14	8.96	8.72	8.60	8.37	8.25
180.0	9.68	9.38	9.02	8.90	8.66	8.54	8.43	8.25	8.07
225.0	10.52	10.04	9.74	9.38	9.14	8.96	8.78	8.60	8.43
270.0	10.82	10.28	9.92	9.56	9.26	9.08	8.78	8.60	8.43
315.0	10.40	9.98	9.62	9.32	9.08	8.84	8.66	8.43	8.31
360.0	10.64	10.16	9.80	9.50	9.14	8.90	8.72	8.54	8.43
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.25	8.01	7.83	7.65	7.47	7.29	7.11	6.93	6.75
45.0	7.95	7.83	7.53	7.41	7.23	6.99	6.81	6.69	6.57
90.0	7.95	7.71	7.47	7.35	7.17	6.99	6.81	6.63	6.45
135.0	8.13	7.89	7.71	7.53	7.29	7.11	6.93	6.69	6.57
180.0	7.89	7.71	7.47	7.23	7.05	6.93	6.69	6.57	6.39
225.0	8.19	8.01	7.77	7.65	7.41	7.17	7.05	6.87	6.69
270.0	8.19	8.01	7.83	7.59	7.47	7.23	7.05	6.87	6.69
315.0	8.13	7.89	7.77	7.53	7.35	7.17	6.99	6.81	6.69
360.0	8.25	8.01	7.83	7.65	7.47	7.29	7.11	6.93	6.75
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.63	6.45	6.27	6.21	6.04	5.92	5.80	5.68	5.56
45.0	6.45	6.27	6.15	6.04	5.86	5.80	5.68	5.56	5.44
90.0	6.33	6.21	6.09	5.98	5.86	5.74	5.68	5.50	5.38
135.0	6.39	6.27	6.15	6.04	5.92	5.86	5.74	5.62	5.56
180.0	6.21	6.09	6.04	5.92	5.80	5.68	5.62	5.50	5.44
225.0	6.57	6.39	6.27	6.15	6.04	5.92	5.86	5.68	5.62
270.0	6.51	6.45	6.27	6.09	6.04	5.92	5.80	5.68	5.56
315.0	6.51	6.39	6.27	6.15	6.04	5.92	5.86	5.74	5.68
360.0	6.63	6.45	6.27	6.21	6.04	5.92	5.80	5.68	5.56
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.44	5.32	5.26	5.14	5.08	4.96	4.90	4.84	4.78
45.0	5.38	5.26	5.14	5.08	4.96	4.90	4.84	4.78	4.66
90.0	5.38	5.26	5.14	5.08	5.02	4.90	4.84	4.72	4.66
135.0	5.50	5.44	5.32	5.26	5.08	4.96	4.84	4.72	4.66
180.0	5.38	5.32	5.20	5.14	5.02	4.84	4.78	4.66	4.60
225.0	5.50	5.44	5.32	5.26	5.20	5.14	4.96	4.90	4.78
270.0	5.50	5.44	5.32	5.20	5.08	5.02	4.96	4.84	4.72
315.0	5.56	5.44	5.38	5.32	5.20	4.90	4.84	4.78	4.72
360.0	5.44	5.32	5.26	5.14	5.08	4.96	4.90	4.84	4.78

Intensity data(cd)

C/γ(°)	90.0
0.0	4.72
45.0	4.66
90.0	4.66
135.0	4.60
180.0	4.60
225.0	4.72
270.0	4.66
315.0	4.60
360.0	4.72