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Nata

LumCAT: 1-0941-N	
Luminaire: 92.70.360.00	
Report No: 220511-B008	Voltage(V):
Test No: 220511-C008	Current(A):
LampCAT: LUMILEDS 1202 LES6.5	Power (W): 7.2070
Lamp flux(lm): 910.1	PF:
Number of Lamps: 1	Ballast type:
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 732.82
Efficiency(%): 80.52%
Lumens(lm)/Power(W): 101.68
Central intensity(cd): 3331.299
Maximum intensity(cd): 3331.299
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.6
 [C90/270]Total=22.6
Field angle(10%Imax): [C0/180]Total=48.9
 [C90/270]Total=48.9
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(%): 80.52%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.221%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3331.299	0.000	0	.000%	.000%
1.0	3312.850	3.179	3.179	.349%	.434%
2.0	3255.786	9.428	12.607	1.036%	1.720%
3.0	3158.165	15.340	27.947	1.686%	3.814%
4.0	3035.895	20.733	48.681	2.278%	6.643%
5.0	2897.567	25.525	74.206	2.805%	10.126%
6.0	2707.927	29.458	103.664	3.237%	14.146%
7.0	2524.411	32.477	136.141	3.569%	18.578%
8.0	2345.675	34.854	170.996	3.830%	23.334%
9.0	2133.029	36.297	207.293	3.988%	28.287%
10.0	1913.885	36.623	243.916	4.024%	33.285%
11.0	1728.651	36.396	280.313	3.999%	38.251%
12.0	1527.591	35.595	315.908	3.911%	43.109%
13.0	1340.900	34.042	349.95	3.740%	47.754%
14.0	1164.159	32.065	382.014	3.523%	52.129%
15.0	1047.805	30.367	412.381	3.337%	56.273%
16.0	919.978	28.834	441.215	3.168%	60.208%
17.0	811.041	26.957	468.171	2.962%	63.886%
18.0	715.026	25.162	493.333	2.765%	67.320%
19.0	636.092	23.507	516.84	2.583%	70.527%
20.0	567.996	22.038	538.878	2.422%	73.535%
21.0	502.992	20.565	559.443	2.260%	76.341%
22.0	447.094	19.092	578.535	2.098%	78.946%
23.0	399.321	17.760	596.295	1.951%	81.370%
24.0	350.301	16.389	612.685	1.801%	83.606%
25.0	310.633	15.028	627.713	1.651%	85.657%
26.0	263.734	13.558	641.271	1.490%	87.507%
27.0	228.017	12.031	653.302	1.322%	89.149%
28.0	183.060	10.408	663.709	1.144%	90.569%
29.0	148.098	8.664	672.373	.952%	91.751%
30.0	117.280	7.165	679.539	.787%	92.729%
31.0	87.150	5.689	685.227	.625%	93.505%
32.0	63.435	4.314	689.542	.474%	94.094%
33.0	47.018	3.254	692.796	.358%	94.538%
34.0	34.784	2.476	695.271	.272%	94.876%
35.0	28.039	1.951	697.222	.214%	95.142%
36.0	24.543	1.674	698.896	.184%	95.371%
37.0	22.295	1.528	700.424	.168%	95.579%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	20.488	1.428	701.852	.157%	95.774%
39.0	18.792	1.341	703.193	.147%	95.957%
40.0	17.269	1.258	704.45	.138%	96.129%
41.0	16.036	1.186	705.636	.130%	96.290%
42.0	14.849	1.122	706.759	.123%	96.444%
43.0	13.684	1.057	707.815	.116%	96.588%
44.0	12.772	0.999	708.814	.110%	96.724%
45.0	11.906	0.948	709.762	.104%	96.853%
46.0	11.054	0.898	710.66	.099%	96.976%
47.0	10.322	0.850	711.51	.093%	97.092%
48.0	9.672	0.808	712.319	.089%	97.202%
49.0	9.053	0.769	713.088	.084%	97.307%
50.0	8.470	0.731	713.818	.080%	97.407%
51.0	7.999	0.697	714.515	.077%	97.502%
52.0	7.536	0.667	715.182	.073%	97.593%
53.0	7.133	0.638	715.82	.070%	97.680%
54.0	6.797	0.614	716.434	.067%	97.764%
55.0	6.506	0.594	717.028	.065%	97.845%
56.0	6.237	0.576	717.603	.063%	97.923%
57.0	6.020	0.560	718.164	.062%	98.000%
58.0	5.841	0.549	718.712	.060%	98.075%
59.0	5.684	0.539	719.251	.059%	98.148%
60.0	5.542	0.530	719.782	.058%	98.221%
61.0	5.415	0.523	720.304	.057%	98.292%
62.0	5.296	0.516	720.821	.057%	98.362%
63.0	5.199	0.510	721.331	.056%	98.432%
64.0	5.094	0.505	721.836	.055%	98.501%
65.0	4.997	0.499	722.335	.055%	98.569%
66.0	4.900	0.494	722.829	.054%	98.637%
67.0	4.803	0.488	723.317	.054%	98.703%
68.0	4.698	0.481	723.798	.053%	98.769%
69.0	4.601	0.474	724.273	.052%	98.834%
70.0	4.511	0.468	724.741	.051%	98.897%
71.0	4.399	0.461	725.201	.051%	98.960%
72.0	4.302	0.452	725.654	.050%	99.022%
73.0	4.205	0.445	726.098	.049%	99.083%
74.0	4.130	0.438	726.537	.048%	99.142%
75.0	4.041	0.432	726.968	.047%	99.201%

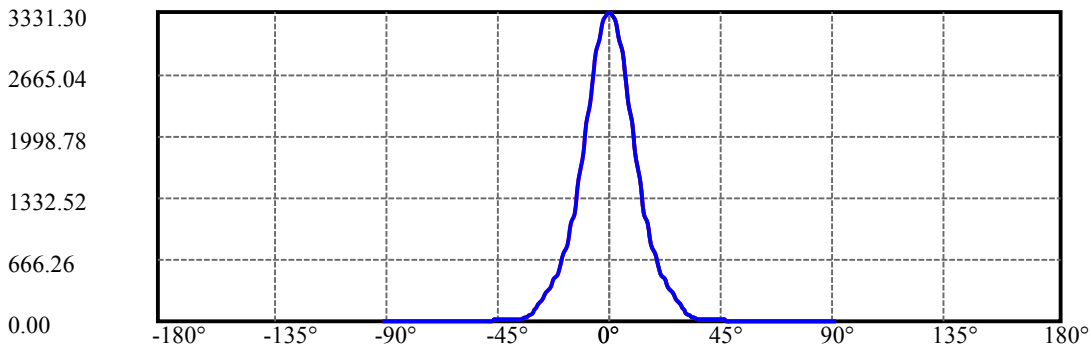
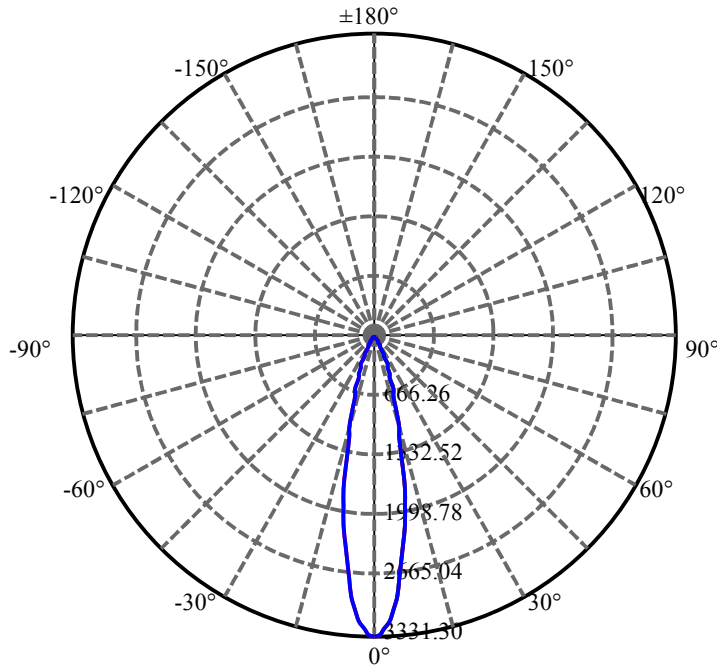
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.981	0.426	727.394	.047%	99.260%
77.0	3.906	0.421	727.815	.046%	99.317%
78.0	3.832	0.414	728.229	.046%	99.373%
79.0	3.765	0.408	728.637	.045%	99.429%
80.0	3.712	0.403	729.04	.044%	99.484%
81.0	3.697	0.401	729.441	.044%	99.539%
82.0	3.750	0.404	729.845	.044%	99.594%
83.0	3.832	0.412	730.257	.045%	99.650%
84.0	3.652	0.408	730.665	.045%	99.706%
85.0	3.540	0.393	731.057	.043%	99.759%
86.0	3.361	0.377	731.434	.041%	99.811%
87.0	3.197	0.359	731.793	.039%	99.860%
88.0	3.130	0.347	732.14	.038%	99.907%
89.0	3.107	0.342	732.482	.038%	99.954%
90.0	3.077	0.339	732.821	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	679.54	74.67%	92.73%
0-40	704.45	77.40%	96.13%
0-60	719.78	79.09%	98.22%
0-90	732.48	80.48%	99.95%
0-120	732.48	80.48%	99.95%
0-180	732.82	80.52%	100.00%
60-90	13.23	1.45%	1.81%
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%
0-22.43	586.26	64.42%	80.00%

ZONAL LUMEN SUMMARY

0-10	243.92
10-20	294.96
20-30	140.66
30-40	24.91
40-50	9.37
50-60	5.96
60-70	4.96
70-80	4.30
80-90	3.44
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: ———

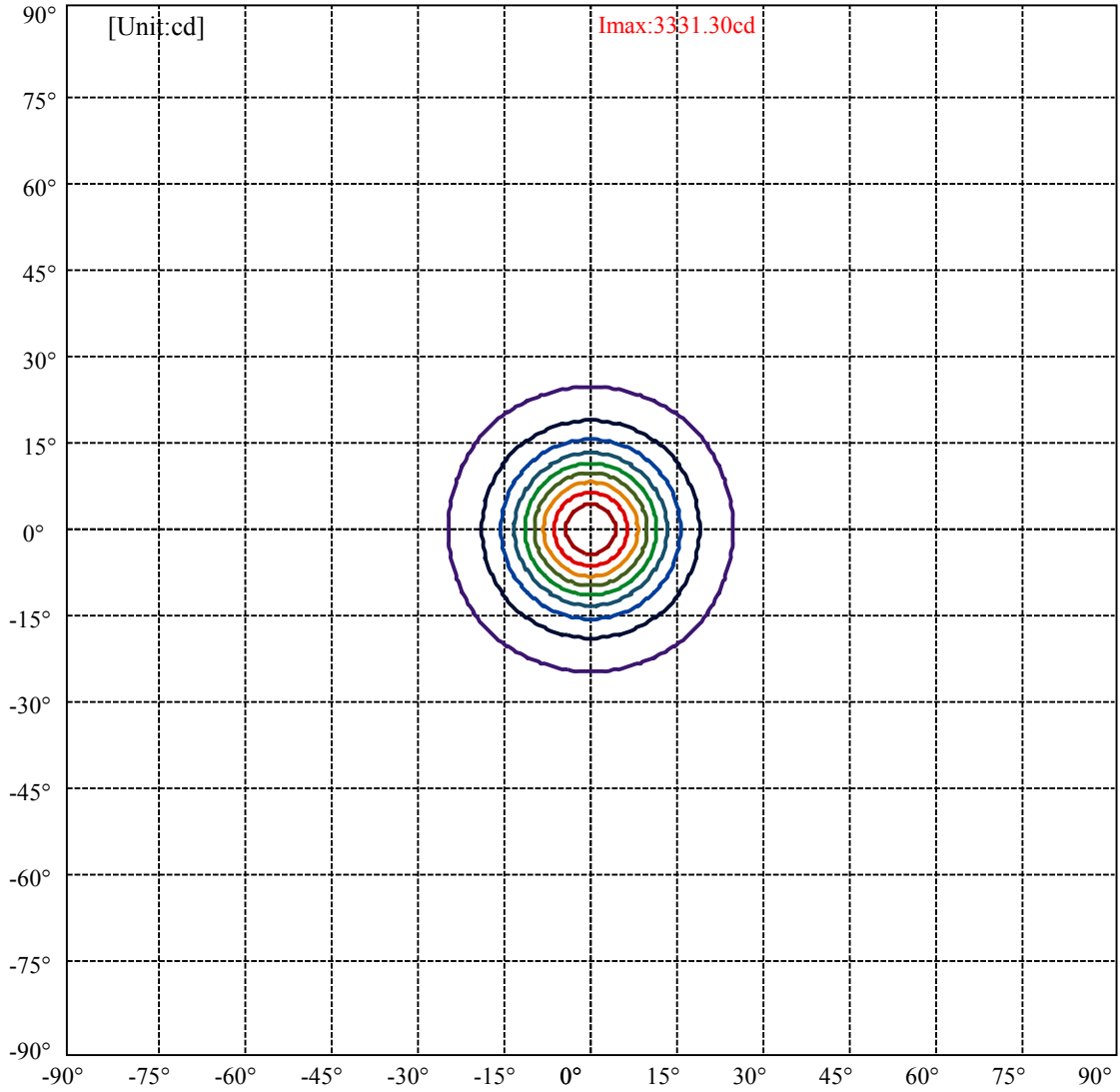
C90/C270: ———

Field angle(10%Imax):C0/180Left:24.4 Right:24.4

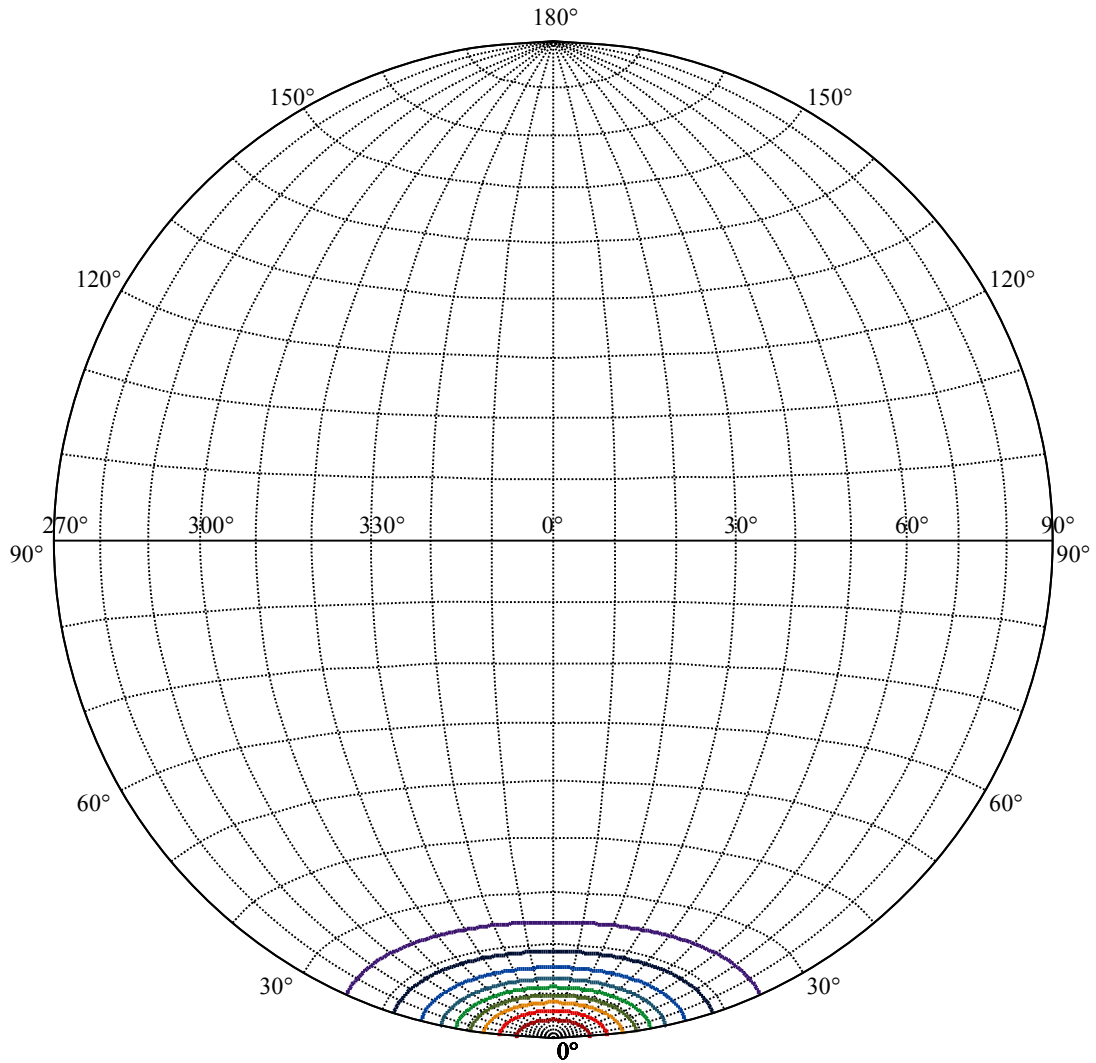
:C90/270Left:24.4 Right:24.4

Beam Angle(50%Imax):C0/180Left:11.3 Right:11.3

:C90/270Left:11.3 Right:11.3



(10%Imax) 333.13	—
(20%Imax) 666.26	—
(30%Imax) 999.39	—
(40%Imax) 1332.52	—
(50%Imax) 1665.65	—
(60%Imax) 1998.78	—
(70%Imax) 2331.91	—
(80%Imax) 2665.04	—
(90%Imax) 2998.17	—



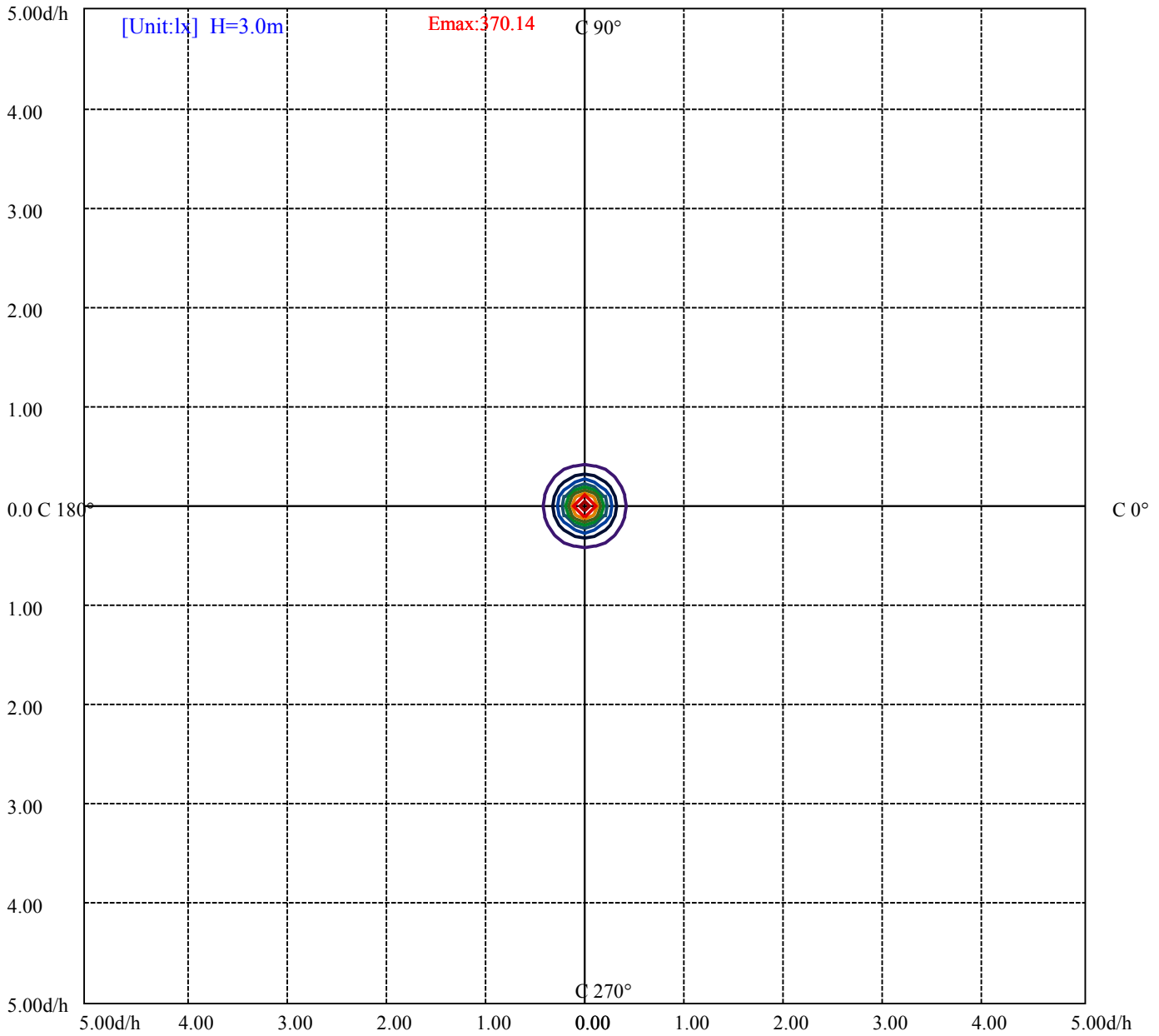
House

[Unit:cd]

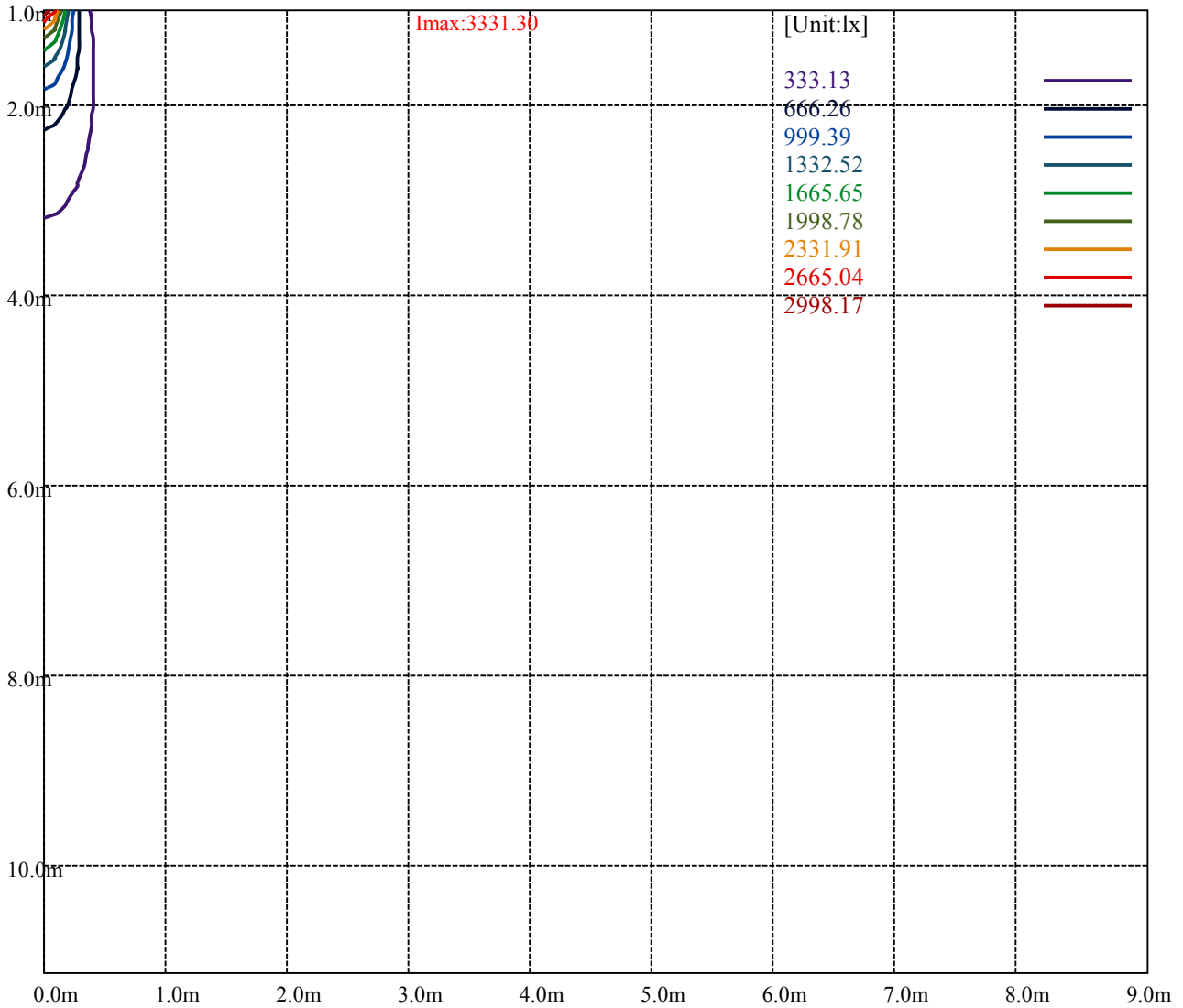
Road

Imax:3331.30

(10%Imax) 333.13	—
(20%Imax) 666.26	—
(30%Imax) 999.39	—
(40%Imax) 1332.52	—
(50%Imax) 1665.65	—
(60%Imax) 1998.78	—
(70%Imax) 2331.91	—
(80%Imax) 2665.04	—
(90%Imax) 2998.17	—



(10%Emax) 37.01445	—
(20%Emax) 74.02878	—
(30%Emax) 111.0432	—
(40%Emax) 148.0578	—
(50%Emax) 185.0722	—
(60%Emax) 222.0867	—
(70%Emax) 259.1011	—
(80%Emax) 296.1156	—
(90%Emax) 333.13	—



Luminance Table

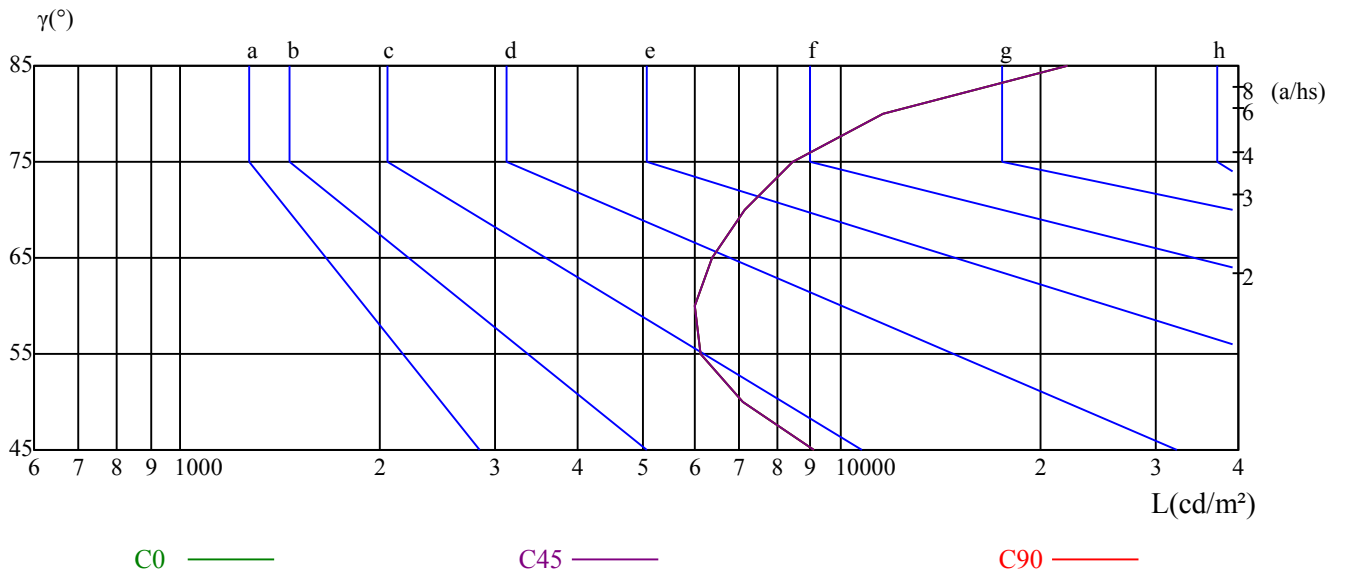
γ	45	50	55	60	65	70	75	80	85
C0	9106	7127	6134	5995	6395	7134	8444	11561	21969
C45	9106	7127	6134	5995	6395	7134	8444	11561	21969
C90	9106	7127	6134	5995	6395	7134	8444	11561	21969

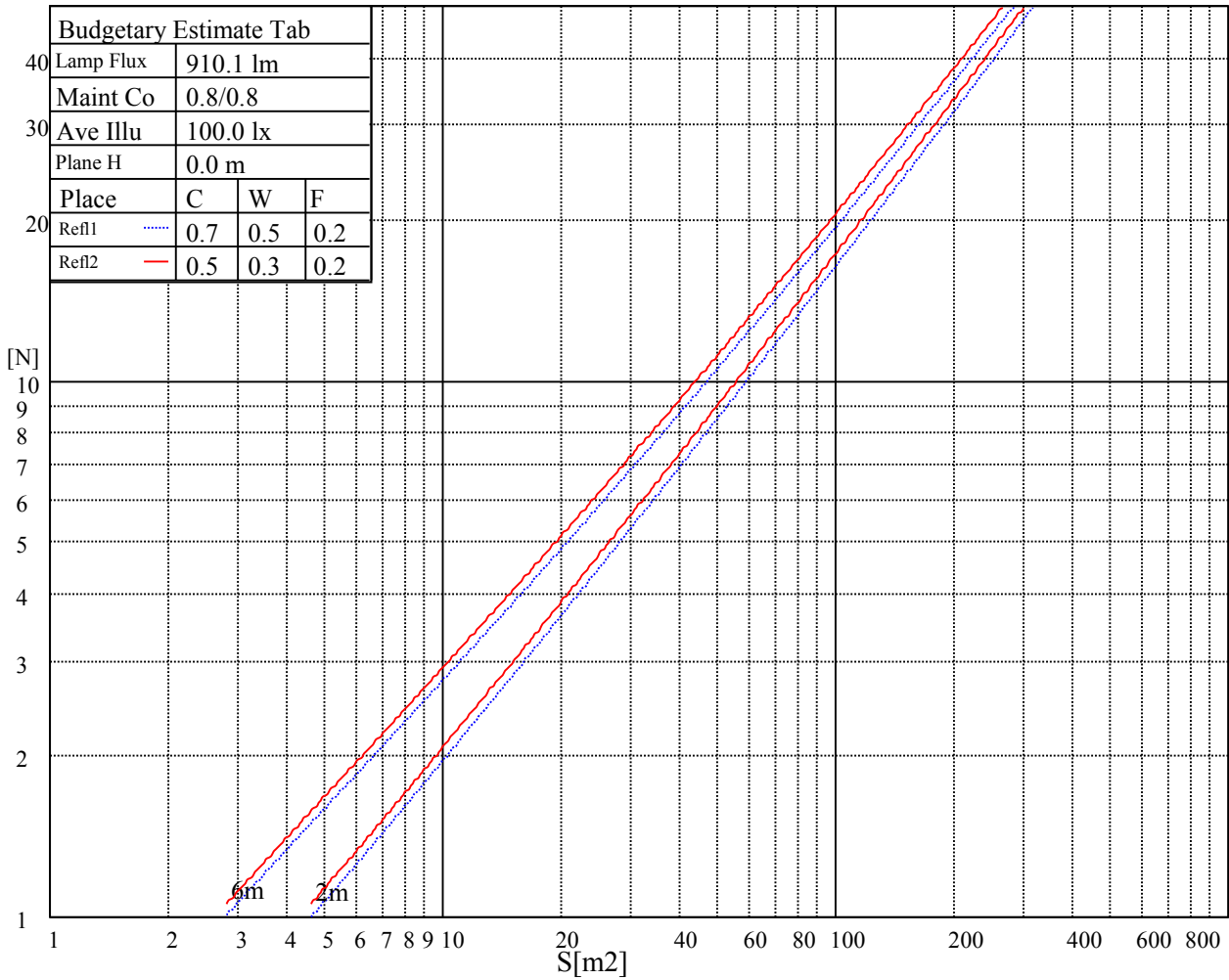
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6395	6395	6395	8444	8444	8444	21969	21969	21969

Glare Table

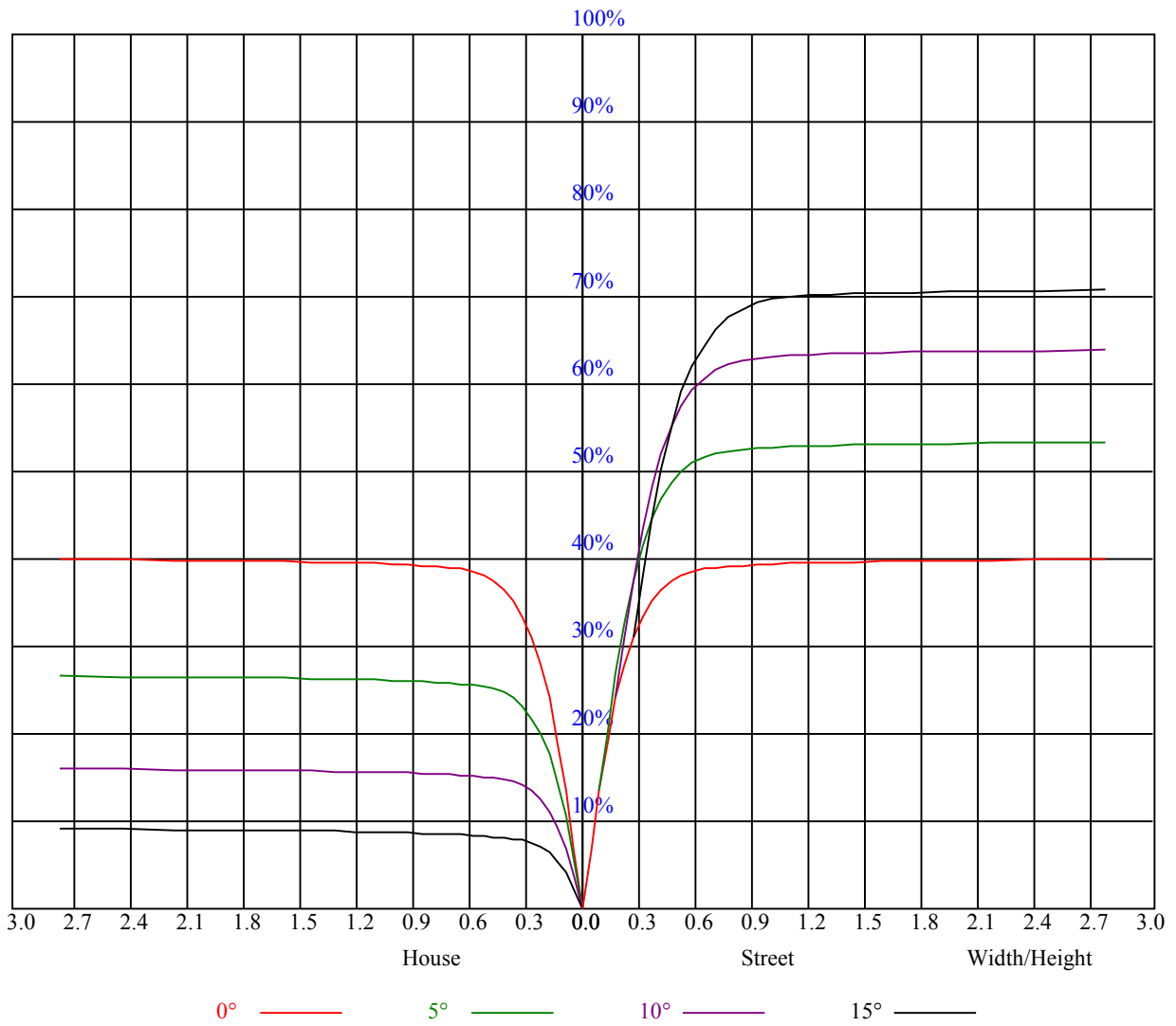
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.90	0.89	0.87	0.89	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.78	0.77
2	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.79	0.78	0.77	0.77	0.76	0.75	0.74
3	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.69	0.68
5	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.66
6	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
7	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
8	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60
9	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
10	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.59	0.58	0.62	0.59	0.57	0.57



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	3329.43	3355.72	3333.02	3281.03	3174.67	3033.66	2884.87	2702.03	2528.15
45.0	3338.99	3283.42	3184.23	3068.31	2913.55	2759.99	2563.40	2351.28	2159.47
90.0	3311.51	3226.66	3126.27	2985.85	2819.74	2657.81	2436.72	2246.11	2051.92
135.0	3343.18	3292.39	3199.77	3074.88	2944.03	2812.57	2581.92	2403.26	2239.54
180.0	3329.43	3275.06	3184.23	3038.44	2900.41	2745.65	2555.63	2349.48	2158.87
225.0	3343.18	3361.10	3337.20	3257.73	3162.72	3037.84	2855.59	2699.64	2526.95
270.0	3311.51	3353.33	3352.74	3303.74	3229.64	3115.52	2941.04	2787.47	2620.76
315.0	3343.18	3355.13	3328.83	3255.34	3142.41	3017.52	2844.24	2656.02	2479.75
360.0	3329.43	3355.72	3333.02	3281.03	3174.67	3033.66	2884.87	2702.03	2528.15
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2318.41	2100.31	1906.12	1717.90	1490.24	1324.72	1174.74	1007.43	892.71
45.0	1941.37	1726.26	1542.22	1393.44	1186.10	1051.05	947.08	818.62	720.62
90.0	1860.11	1627.67	1455.58	1186.75	1118.63	992.91	882.67	776.13	682.14
135.0	1977.82	1787.81	1627.07	1411.36	1238.08	1116.18	960.83	855.06	761.85
180.0	1940.18	1730.44	1549.39	1361.77	1190.58	1056.85	909.50	820.71	731.50
225.0	2341.12	2095.53	1900.14	1710.73	1484.26	1187.11	1169.54	1022.85	892.95
270.0	2394.30	2203.09	2006.50	1787.81	1574.49	1398.22	1221.35	1083.32	942.90
315.0	2290.93	2039.96	1842.18	1650.97	1444.83	1186.22	1116.72	975.71	863.67
360.0	2318.41	2100.31	1906.12	1717.90	1490.24	1324.72	1174.74	1007.43	892.71
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	794.12	701.50	624.42	562.87	501.33	443.37	396.76	350.15	308.33
45.0	650.71	572.43	506.11	459.50	399.75	356.73	313.70	275.70	237.72
90.0	610.14	539.39	481.61	422.99	371.96	330.85	282.93	238.83	202.62
135.0	657.88	592.15	528.81	458.90	409.91	366.29	311.91	306.53	227.96
180.0	627.76	570.52	511.01	435.66	393.41	352.78	304.86	259.03	222.28
225.0	795.25	702.75	632.07	562.10	498.28	445.64	392.58	346.57	305.04
270.0	825.79	738.55	654.89	583.19	524.63	472.05	417.08	370.47	328.64
315.0	758.56	671.44	605.06	538.73	477.49	426.88	382.60	337.78	291.30
360.0	794.12	701.50	624.42	562.87	501.33	443.37	396.76	350.15	308.33
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	276.24	220.73	180.33	148.67	113.47	83.24	59.87	39.38	28.68
45.0	187.86	146.75	113.95	86.94	57.54	41.11	30.95	24.44	22.23
90.0	169.34	130.08	100.68	75.17	49.83	36.57	29.28	25.46	23.42
135.0	187.27	152.55	120.64	87.18	62.02	44.64	32.86	28.14	25.51
180.0	182.78	146.28	115.68	85.51	62.74	43.38	32.51	27.79	25.34
225.0	265.42	217.68	181.65	148.67	114.19	83.83	62.32	43.92	33.40
270.0	301.75	234.47	199.10	165.64	126.80	97.76	72.60	49.77	36.15
315.0	253.47	215.95	172.75	140.48	110.60	76.96	55.75	39.38	29.58
360.0	276.24	220.73	180.33	148.67	113.47	83.24	59.87	39.38	28.68
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	24.56	22.83	20.50	19.00	17.87	16.43	15.30	14.34	13.27
45.0	20.56	18.82	17.51	16.25	15.06	14.10	13.09	12.13	11.41
90.0	21.51	19.36	18.05	16.61	15.12	14.22	13.27	12.01	11.41
135.0	23.12	21.09	19.42	17.57	16.25	15.06	13.80	12.85	12.01
180.0	22.71	20.91	19.30	17.69	16.25	15.12	13.86	12.79	11.95
225.0	28.50	25.57	23.48	21.39	19.54	18.11	16.79	15.30	14.22
270.0	29.52	26.29	23.96	21.75	19.78	18.23	16.85	15.48	14.40
315.0	25.87	23.48	21.69	20.08	18.28	17.03	15.84	14.58	13.50
360.0	24.56	22.83	20.50	19.00	17.87	16.43	15.30	14.34	13.27

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	12.31	11.65	10.76	10.10	9.50	8.78	8.31	7.89	7.35
45.0	10.70	9.92	9.38	8.84	8.31	7.83	7.41	6.99	6.63
90.0	10.70	9.80	9.32	8.78	8.19	7.77	7.35	6.99	6.63
135.0	11.17	10.40	9.80	9.08	8.55	8.07	7.65	7.23	6.93
180.0	11.11	10.40	9.62	8.96	8.43	7.89	7.41	6.99	6.69
225.0	13.21	12.13	11.35	10.58	9.80	9.14	8.55	7.95	7.53
270.0	13.44	12.31	11.47	10.82	10.04	9.38	8.84	8.31	7.77
315.0	12.61	11.83	10.88	10.22	9.62	8.90	8.49	7.95	7.53
360.0	12.31	11.65	10.76	10.10	9.50	8.78	8.31	7.89	7.35

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.99	6.75	6.39	6.16	5.98	5.80	5.62	5.50	5.38
45.0	6.39	6.16	5.92	5.80	5.62	5.44	5.26	5.20	5.08
90.0	6.39	6.16	5.92	5.74	5.62	5.50	5.38	5.32	5.20
135.0	6.57	6.33	6.10	5.92	5.74	5.62	5.50	5.38	5.26
180.0	6.33	6.10	5.92	5.74	5.62	5.44	5.38	5.26	5.14
225.0	7.11	6.69	6.45	6.16	5.92	5.80	5.62	5.44	5.38
270.0	7.41	7.05	6.69	6.39	6.21	6.04	5.86	5.68	5.50
315.0	7.17	6.81	6.51	6.27	6.04	5.86	5.74	5.56	5.44
360.0	6.99	6.75	6.39	6.16	5.98	5.80	5.62	5.50	5.38

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.26	5.20	5.14	5.02	4.96	4.84	4.72	4.66	4.54
45.0	4.96	4.90	4.84	4.72	4.66	4.54	4.42	4.36	4.24
90.0	5.08	4.90	4.84	4.72	4.60	4.54	4.48	4.42	4.30
135.0	5.20	5.02	4.96	4.84	4.72	4.60	4.54	4.42	4.30
180.0	5.08	4.96	4.84	4.78	4.66	4.54	4.42	4.36	4.24
225.0	5.26	5.20	5.08	4.96	4.90	4.78	4.66	4.54	4.42
270.0	5.44	5.32	5.20	5.14	5.02	4.90	4.84	4.72	4.60
315.0	5.32	5.26	5.08	5.02	4.90	4.84	4.72	4.60	4.54
360.0	5.26	5.20	5.14	5.02	4.96	4.84	4.72	4.66	4.54

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.42	4.30	4.24	4.12	4.06	4.00	3.88	3.82	3.76
45.0	4.18	4.12	4.00	3.94	3.88	3.82	3.71	3.65	3.59
90.0	4.24	4.12	4.06	4.00	4.00	3.94	3.88	3.88	3.82
135.0	4.18	4.12	4.06	3.94	3.88	3.82	3.76	3.71	3.71
180.0	4.18	4.06	4.00	3.88	3.82	3.71	3.65	3.59	3.53
225.0	4.30	4.24	4.12	4.06	3.94	3.88	3.82	3.71	3.65
270.0	4.48	4.36	4.30	4.24	4.18	4.06	4.00	3.94	3.88
315.0	4.42	4.30	4.24	4.12	4.06	4.00	3.94	3.82	3.76
360.0	4.42	4.30	4.24	4.12	4.06	4.00	3.88	3.82	3.76

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.71	3.65	3.59	3.53	3.47	3.41	3.29	3.17	3.17
45.0	3.53	3.47	3.41	3.35	3.29	3.17	3.11	3.05	3.11
90.0	4.12	4.90	5.62	3.53	3.23	3.17	3.11	3.11	3.05
135.0	3.59	3.59	3.59	3.47	3.29	3.23	3.17	3.11	3.05
180.0	3.47	3.41	3.35	3.29	3.23	3.17	3.11	3.05	3.05
225.0	3.59	3.53	3.47	3.41	3.35	3.29	3.23	3.17	3.11
270.0	3.88	3.82	4.00	5.14	5.02	4.12	3.29	3.23	3.17
315.0	3.71	3.65	3.65	3.53	3.47	3.35	3.29	3.17	3.17
360.0	3.71	3.65	3.59	3.53	3.47	3.41	3.29	3.17	3.17

Intensity data(cd)

C/γ(°)	90.0
0.0	3.11
45.0	3.05
90.0	3.11
135.0	3.05
180.0	3.05
225.0	3.05
270.0	3.11
315.0	3.11
360.0	3.11