
LumCAT: 4-2109-A
Luminaire: 92.76.323.00
Report No: NATA0100
Test No: GC2019061808
LampCAT: PHILIPS SLM 1208 G7
Lamp flux(lm): 948.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 32.6100
Current(A): 0.1970
Power (W): 6.4200
PF: 0.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 842.98
Efficiency(%): 88.92%
Lumens(lm)/Power(W): 131.31
Central intensity(cd): 3221.719
Maximum intensity(cd): 3221.719
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.7
 [C90/270]Total=23.7
Field angle(10%Imax): [C0/180]Total=58.7
 [C90/270]Total=58.7
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
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(%): 88.92%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.301%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3221.719	0.000	0	.000%	.000%
1.0	3212.719	3.079	3.079	.325%	.365%
2.0	3179.883	9.175	12.254	.968%	1.454%
3.0	3116.391	15.059	27.313	1.588%	3.240%
4.0	3025.969	20.560	47.873	2.169%	5.679%
5.0	2897.156	25.481	73.354	2.688%	8.702%
6.0	2756.742	29.713	103.067	3.134%	12.226%
7.0	2591.016	33.193	136.26	3.501%	16.164%
8.0	2407.570	35.774	172.034	3.774%	20.408%
9.0	2206.617	37.395	209.43	3.945%	24.844%
10.0	1999.828	38.067	247.496	4.015%	29.360%
11.0	1787.484	37.843	285.339	3.992%	33.849%
12.0	1584.563	36.861	322.201	3.888%	38.222%
13.0	1349.037	34.814	357.015	3.672%	42.352%
14.0	1160.775	32.125	389.141	3.389%	46.162%
15.0	1017.014	29.898	419.038	3.154%	49.709%
16.0	868.275	27.625	446.663	2.914%	52.986%
17.0	744.363	25.113	471.776	2.649%	55.965%
18.0	643.908	22.890	494.666	2.415%	58.681%
19.0	569.841	21.117	515.782	2.228%	61.186%
20.0	506.524	19.700	535.483	2.078%	63.523%
21.0	459.591	18.551	554.034	1.957%	65.723%
22.0	426.248	17.801	571.836	1.878%	67.835%
23.0	399.909	17.335	589.171	1.829%	69.891%
24.0	379.526	17.041	606.212	1.798%	71.913%
25.0	363.698	16.899	623.111	1.783%	73.918%
26.0	351.352	16.879	639.99	1.780%	75.920%
27.0	341.262	16.945	656.935	1.787%	77.930%
28.0	332.585	17.060	673.995	1.800%	79.954%
29.0	324.802	17.199	691.194	1.814%	81.994%
30.0	317.524	17.343	708.537	1.829%	84.051%
31.0	310.134	17.467	726.004	1.842%	86.123%
32.0	297.105	17.397	743.401	1.835%	88.187%
33.0	278.634	16.962	760.362	1.789%	90.199%
34.0	243.415	15.799	776.161	1.667%	92.073%
35.0	197.916	13.706	789.867	1.446%	93.699%
36.0	150.026	11.079	800.945	1.169%	95.014%
37.0	108.281	8.425	809.37	.889%	96.013%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	65.412	5.798	815.168	.612%	96.701%
39.0	32.906	3.356	818.523	.354%	97.099%
40.0	16.552	1.725	820.248	.182%	97.303%
41.0	11.243	0.990	821.238	.104%	97.421%
42.0	9.457	0.752	821.99	.079%	97.510%
43.0	7.622	0.633	822.623	.067%	97.585%
44.0	5.843	0.508	823.131	.054%	97.645%
45.0	4.570	0.400	823.531	.042%	97.693%
46.0	4.310	0.347	823.879	.037%	97.734%
47.0	4.198	0.338	824.217	.036%	97.774%
48.0	4.134	0.337	824.554	.036%	97.814%
49.0	4.071	0.337	824.891	.036%	97.854%
50.0	4.008	0.337	825.228	.036%	97.894%
51.0	3.959	0.337	825.565	.036%	97.934%
52.0	3.923	0.338	825.903	.036%	97.974%
53.0	3.881	0.340	826.242	.036%	98.014%
54.0	3.853	0.341	826.583	.036%	98.055%
55.0	3.797	0.341	826.925	.036%	98.095%
56.0	3.776	0.342	827.267	.036%	98.136%
57.0	3.741	0.344	827.611	.036%	98.177%
58.0	3.734	0.346	827.956	.036%	98.218%
59.0	3.705	0.348	828.304	.037%	98.259%
60.0	3.713	0.350	828.654	.037%	98.301%
61.0	3.741	0.356	829.01	.038%	98.343%
62.0	3.797	0.363	829.373	.038%	98.386%
63.0	3.902	0.374	829.748	.039%	98.430%
64.0	4.043	0.390	830.138	.041%	98.477%
65.0	4.212	0.409	830.546	.043%	98.525%
66.0	4.486	0.434	830.98	.046%	98.576%
67.0	4.746	0.464	831.444	.049%	98.632%
68.0	5.309	0.509	831.954	.054%	98.692%
69.0	6.075	0.581	832.534	.061%	98.761%
70.0	6.497	0.646	833.18	.068%	98.837%
71.0	6.673	0.681	833.861	.072%	98.918%
72.0	6.750	0.698	834.559	.074%	99.001%
73.0	6.659	0.701	835.26	.074%	99.084%
74.0	6.300	0.681	835.941	.072%	99.165%
75.0	5.604	0.629	836.57	.066%	99.240%

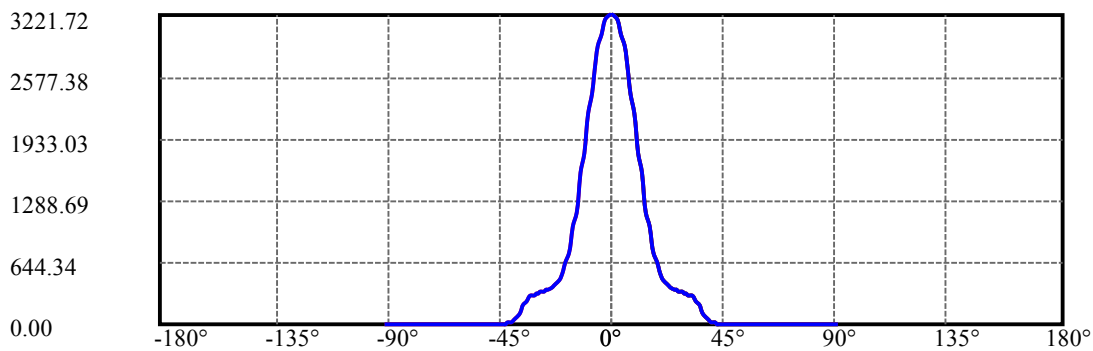
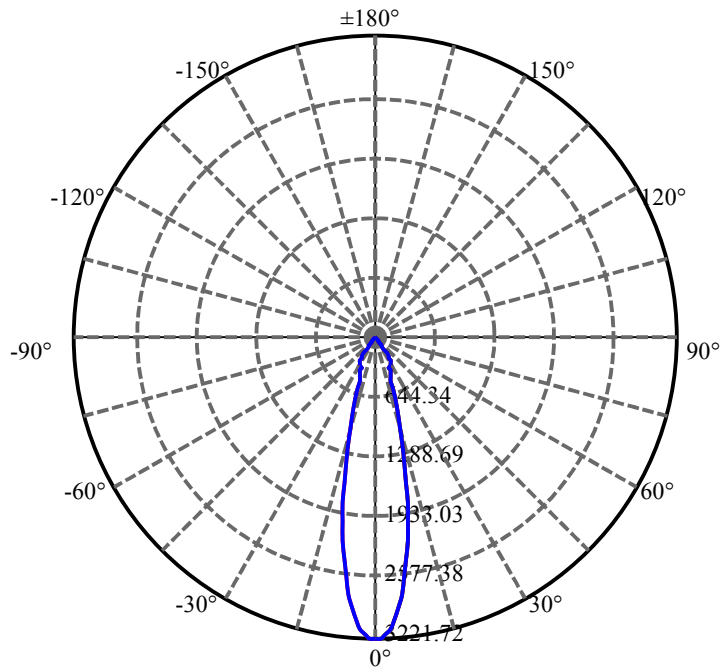
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.077	0.567	837.137	.060%	99.307%
77.0	4.634	0.518	837.655	.055%	99.368%
78.0	4.282	0.477	838.132	.050%	99.425%
79.0	4.001	0.445	838.577	.047%	99.478%
80.0	3.874	0.425	839.002	.045%	99.528%
81.0	3.853	0.418	839.419	.044%	99.578%
82.0	3.853	0.418	839.837	.044%	99.627%
83.0	3.790	0.415	840.253	.044%	99.676%
84.0	3.691	0.408	840.66	.043%	99.725%
85.0	3.684	0.403	841.063	.042%	99.773%
86.0	3.656	0.401	841.464	.042%	99.820%
87.0	3.635	0.399	841.863	.042%	99.867%
88.0	3.480	0.390	842.253	.041%	99.914%
89.0	3.284	0.371	842.624	.039%	99.958%
90.0	3.220	0.357	842.98	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	708.54	74.74%	84.05%
0-40	820.25	86.52%	97.30%
0-60	828.65	87.41%	98.30%
0-90	842.62	88.88%	99.96%
0-120	842.62	88.88%	99.96%
0-180	842.98	88.92%	100.00%
60-90	14.32	1.51%	1.70%
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%
0-28.02	674.38	71.14%	80.00%

ZONAL LUMEN SUMMARY

0-10	247.50
10-20	287.99
20-30	173.05
30-40	111.71
40-50	4.98
50-60	3.43
60-70	4.53
70-80	5.82
80-90	3.62
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



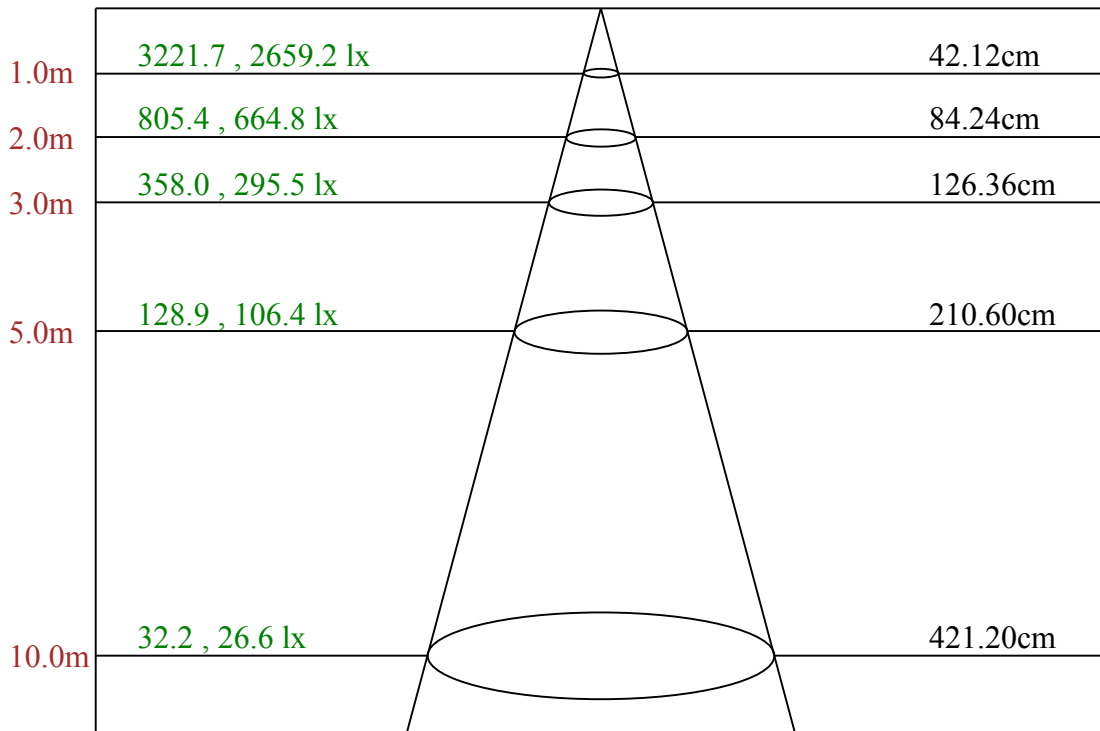
C0(Max): —————

C0/C180: —————

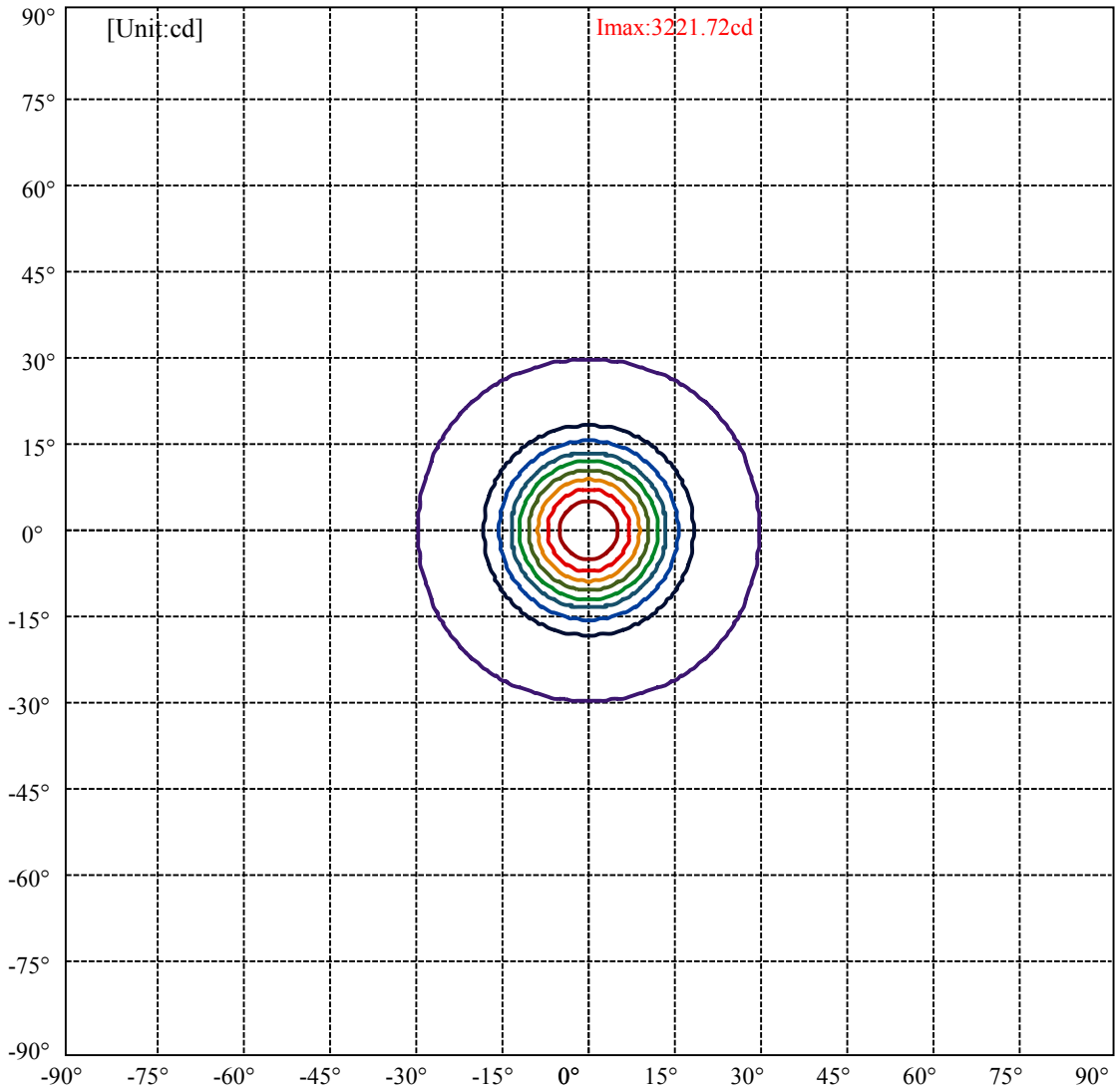
C90/C270: —————

Field angle(10%Imax):C0/180Left:29.4 Right:29.4
:C90/270Left:29.4 Right:29.4

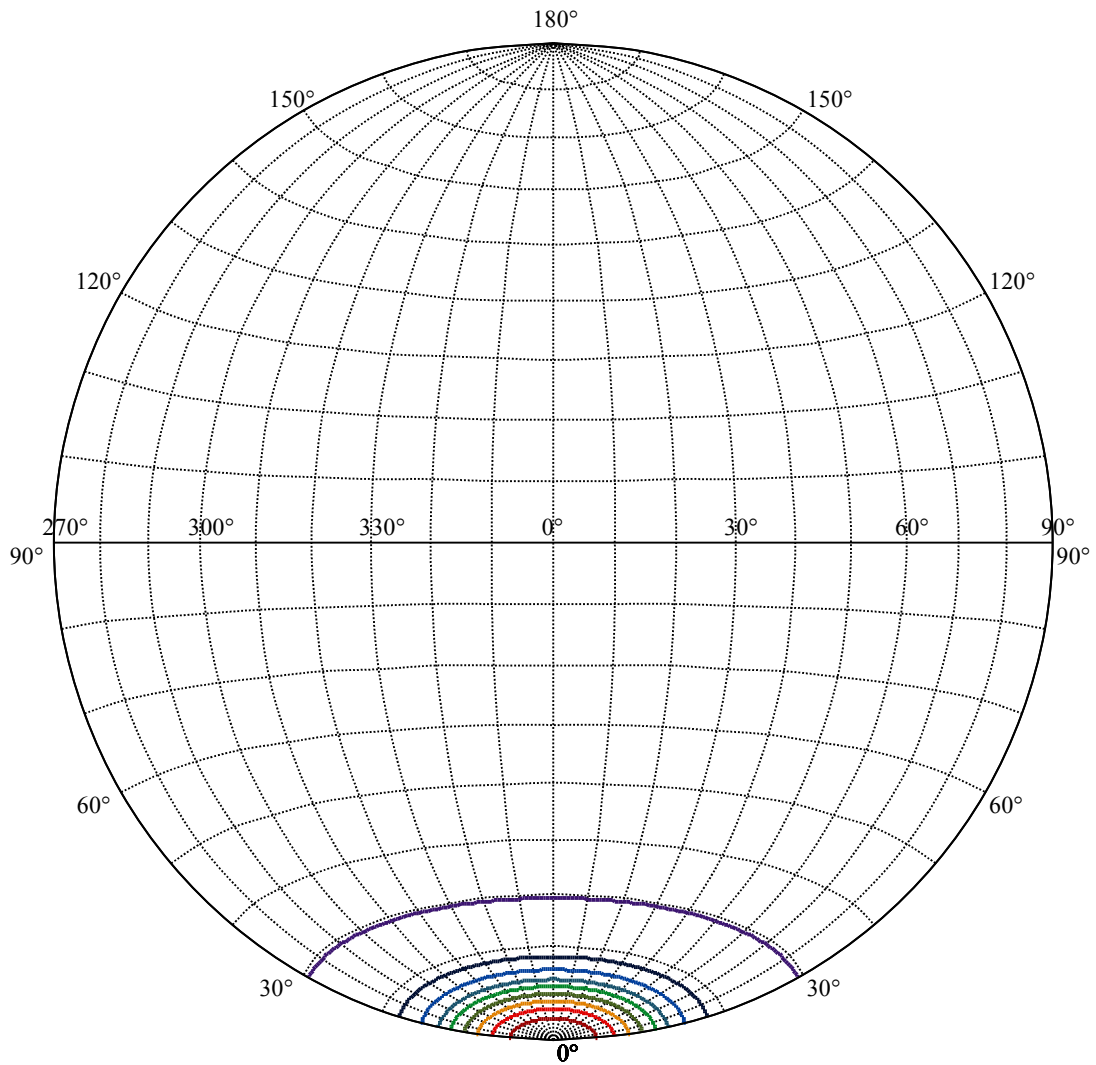
Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9
:C90/270Left:11.9 Right:11.9



Max , Ave Beam angle of C0 plane 23.79



(10%Imax) 322.172	—
(20%Imax) 644.344	—
(30%Imax) 966.516	—
(40%Imax) 1288.69	—
(50%Imax) 1610.86	—
(60%Imax) 1933.03	—
(70%Imax) 2255.2	—
(80%Imax) 2577.38	—
(90%Imax) 2899.55	—



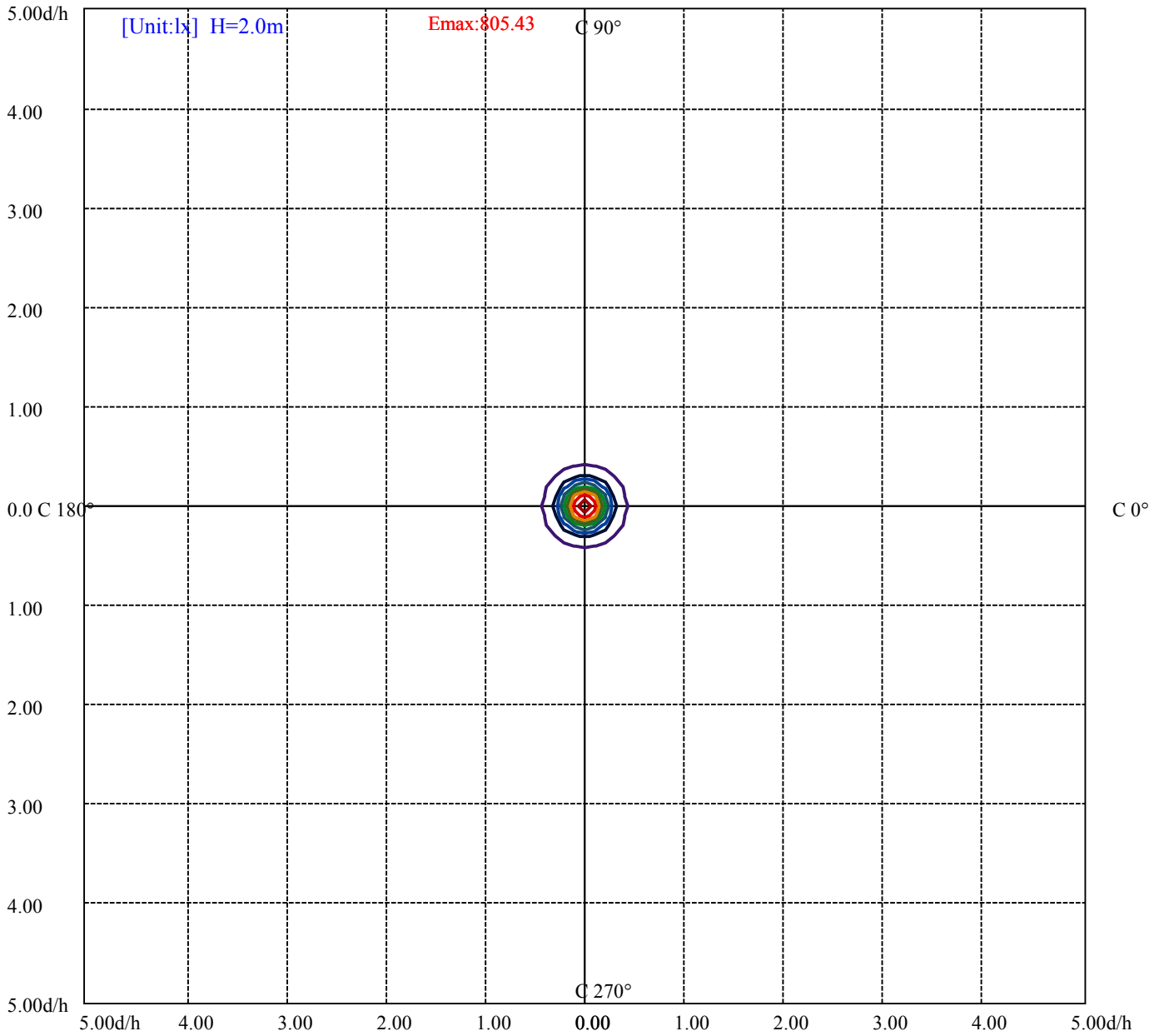
House

[Unit:cd]

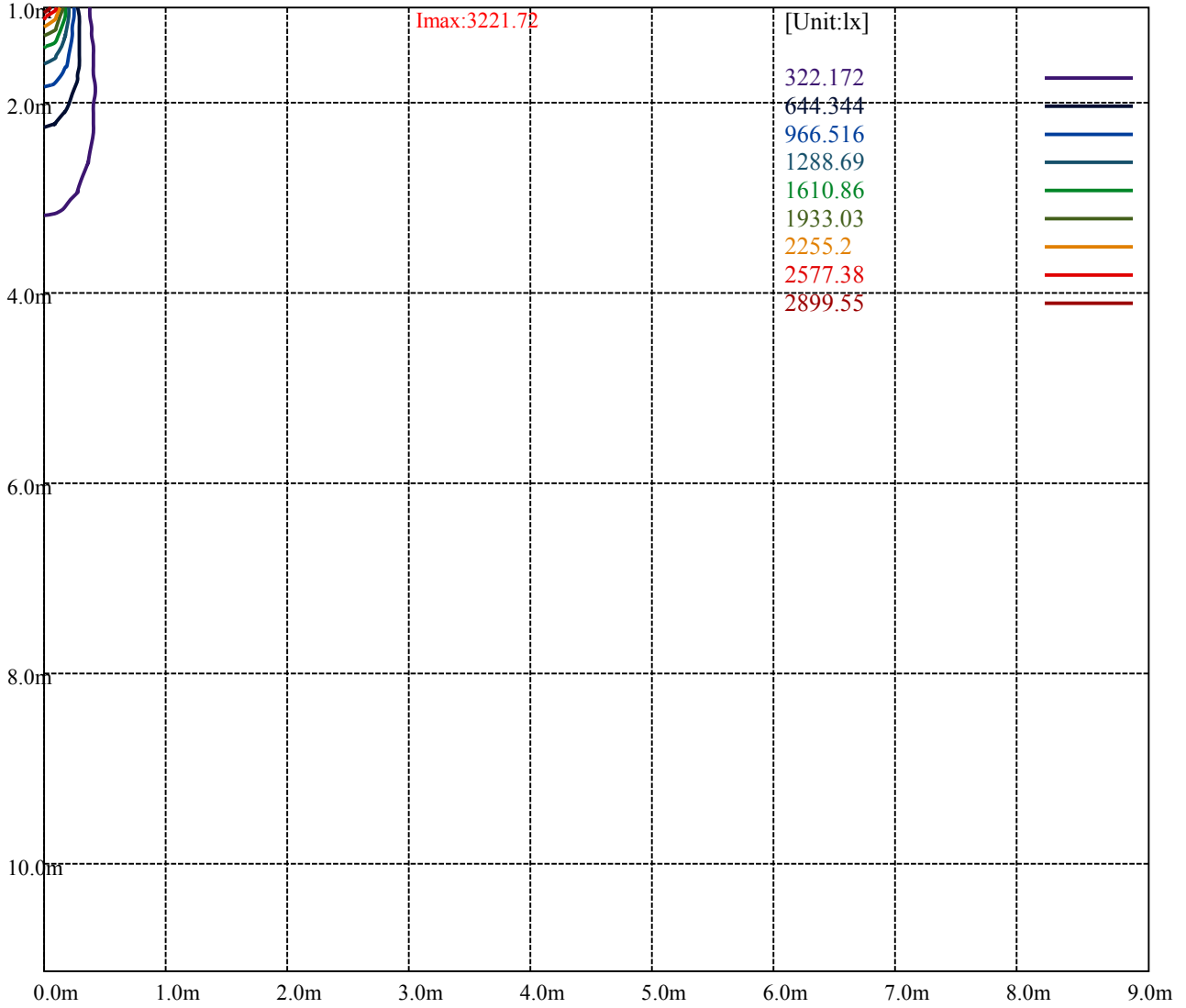
Road

Imax:3221.72

(10%Imax)	322.172	—
(20%Imax)	644.344	—
(30%Imax)	966.516	—
(40%Imax)	1288.69	—
(50%Imax)	1610.86	—
(60%Imax)	1933.03	—
(70%Imax)	2255.2	—
(80%Imax)	2577.38	—
(90%Imax)	2899.55	—



(10%Emax) 80.543	—
(20%Emax) 161.0858	—
(30%Emax) 241.6288	—
(40%Emax) 322.1725	—
(50%Emax) 402.715	—
(60%Emax) 483.2575	—
(70%Emax) 563.8	—
(80%Emax) 644.3425	—
(90%Emax) 724.8875	—



Luminance Table

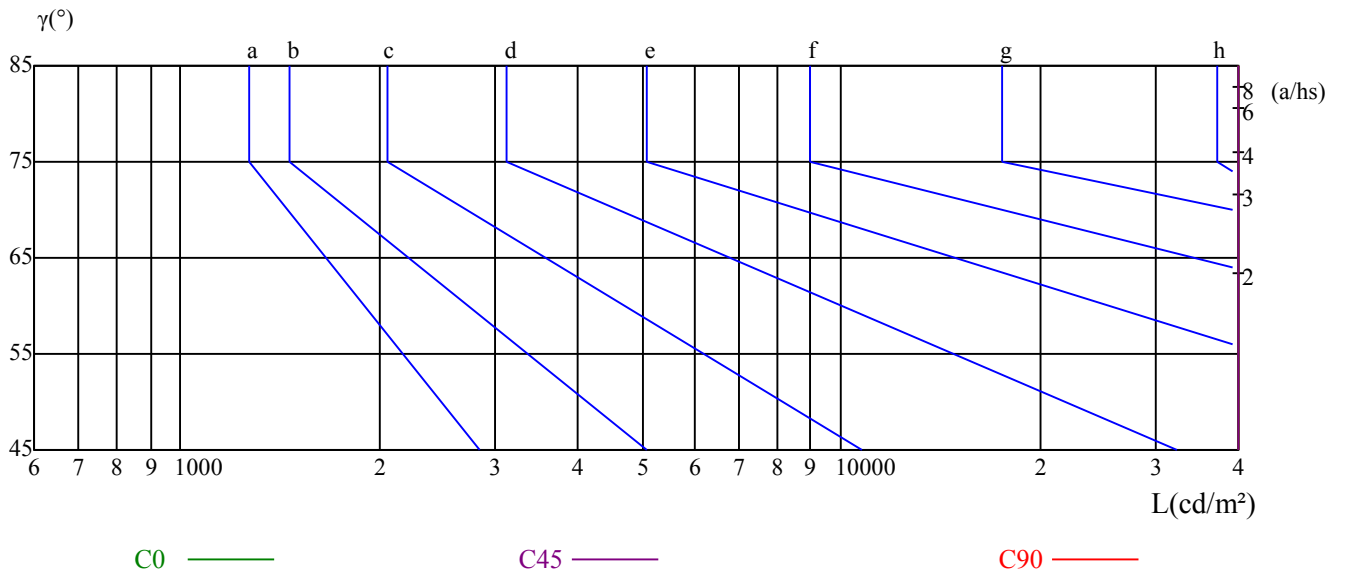
γ	45	50	55	60	65	70	75	80	85
C0	64634	62350	66197	74250	99658	189956	216518	223107	422735
C45	64634	62350	66197	74250	99658	189956	216518	223107	422735
C90	64634	62350	66197	74250	99658	189956	216518	223107	422735

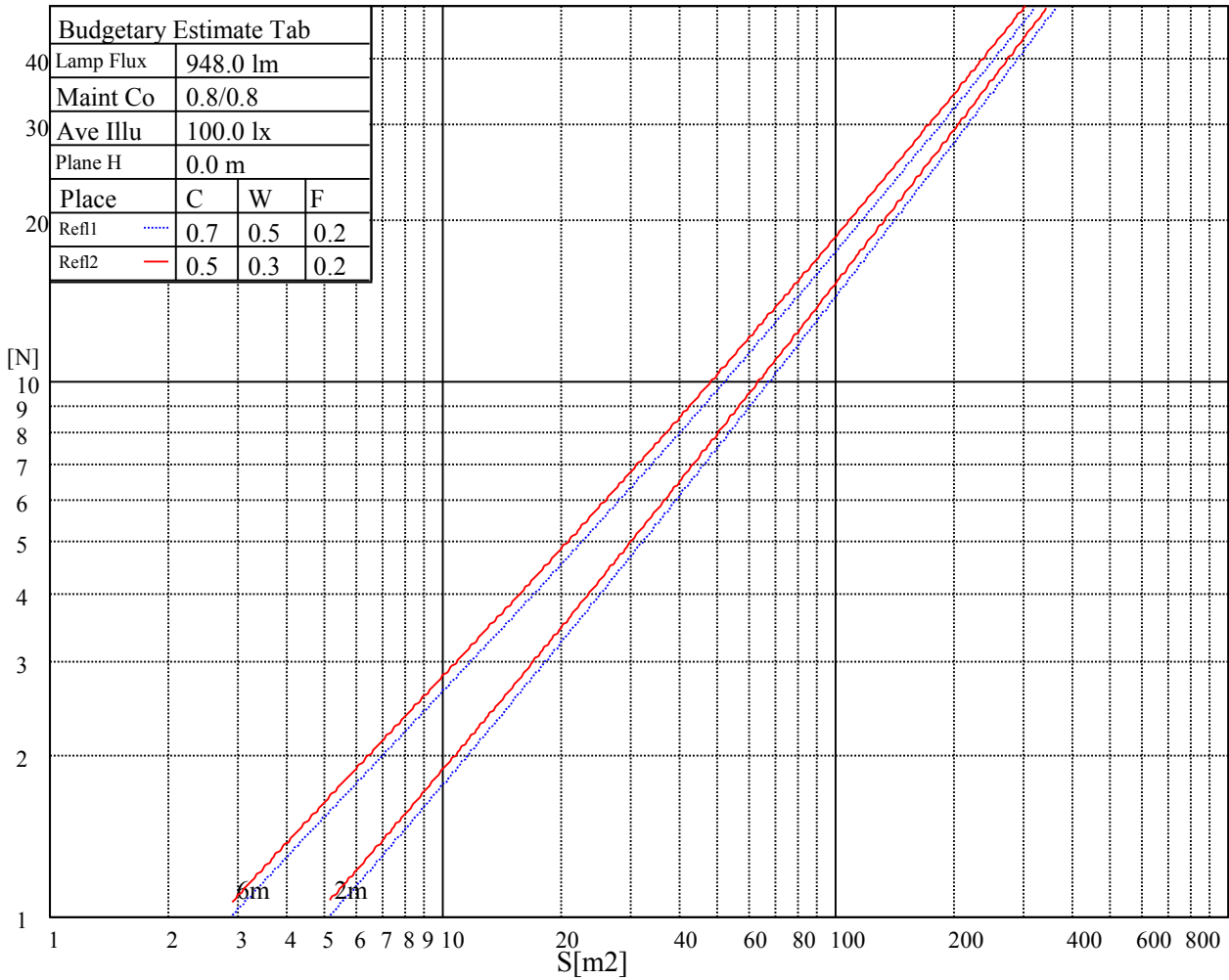
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
99658	99658	99658	216518	216518	216518	422735	422735	422735

Glare Table

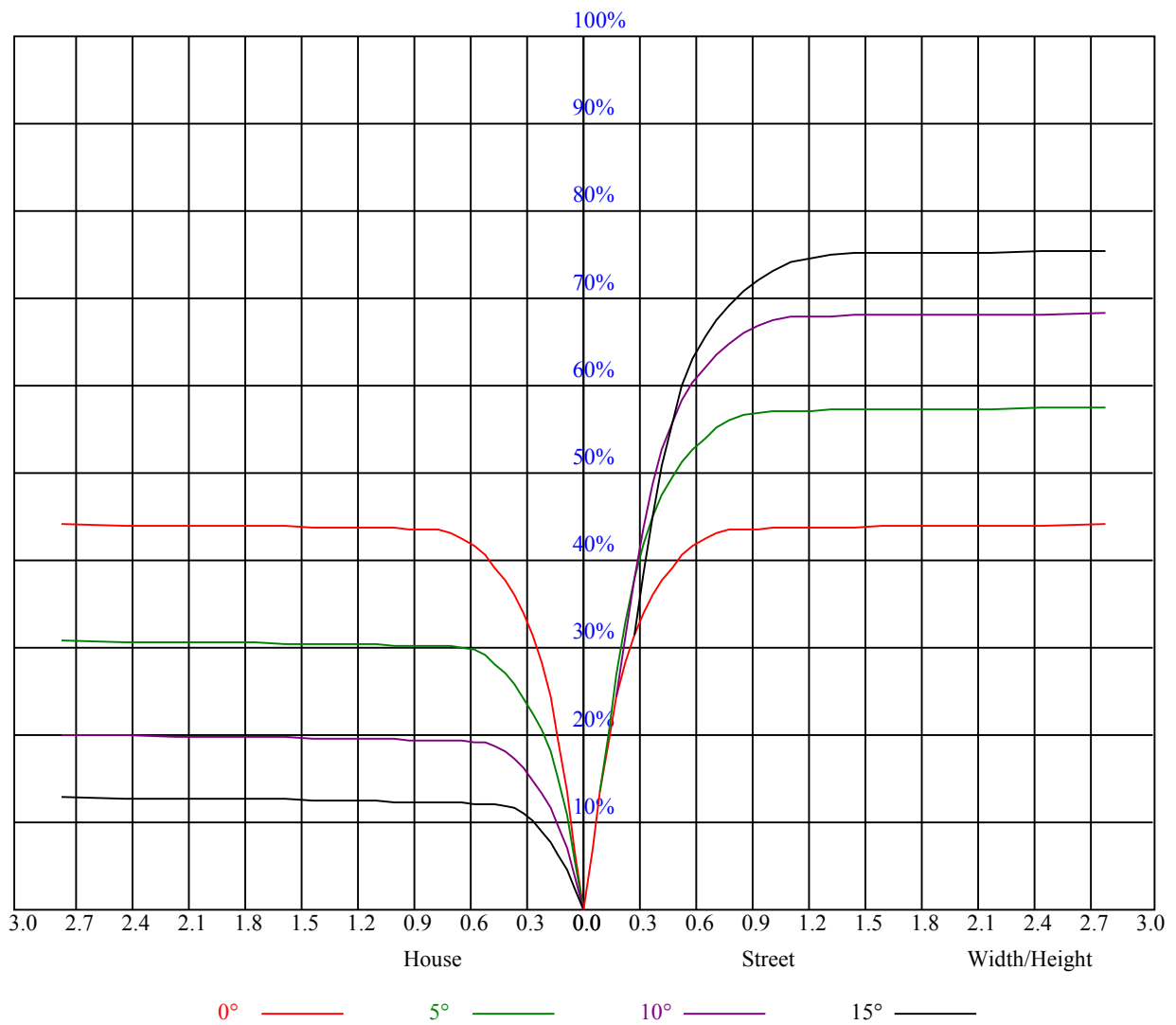
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.97	0.96	0.97	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.94	0.91	0.88	0.92	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.82	0.86	0.83	0.80	0.83	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.75	0.79	0.76	0.75	0.73
5	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.67
7	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58



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	3222.56	3224.81	3206.81	3170.81	3093.75	2981.25	2847.94	2686.50	2529.00
45.0	3220.31	3217.50	3193.88	3150.56	3078.56	2940.75	2808.00	2654.44	2468.25
90.0	3219.19	3198.38	3154.50	3072.94	2961.00	2810.25	2656.69	2470.50	2267.44
135.0	3224.81	3212.44	3171.38	3103.88	2993.06	2853.00	2709.00	2526.75	2351.25
180.0	3222.56	3199.50	3152.81	3055.50	2948.06	2820.38	2658.94	2475.56	2292.75
225.0	3220.31	3206.25	3157.88	3076.88	2975.06	2836.69	2704.50	2528.44	2329.88
270.0	3219.19	3221.44	3201.19	3159.00	3092.06	2972.81	2853.56	2733.75	2534.63
315.0	3224.81	3221.44	3200.63	3141.56	3066.19	2962.13	2815.31	2652.19	2487.38
360.0	3222.56	3224.81	3206.81	3170.81	3093.75	2981.25	2847.94	2686.50	2529.00
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2330.44	2125.69	1938.38	1744.31	1503.56	1317.94	1147.50	956.25	826.88
45.0	2270.25	2085.19	1866.94	1671.75	1461.38	1257.75	1094.06	929.25	783.56
90.0	2077.88	1861.31	1644.19	1454.63	1218.38	1069.71	926.78	803.36	701.78
135.0	2148.19	1929.38	1729.13	1530.00	1294.31	1123.88	971.44	809.44	699.75
180.0	2076.19	1853.44	1652.06	1432.13	1118.98	1059.86	896.63	774.68	672.81
225.0	2136.94	1909.69	1682.44	1482.19	1230.19	1059.08	931.95	805.50	688.50
270.0	2329.88	2165.63	1915.88	1715.06	1514.81	1278.00	1106.44	952.31	790.88
315.0	2283.19	2068.31	1870.88	1646.44	1450.69	1119.99	1061.33	915.41	790.76
360.0	2330.44	2125.69	1938.38	1744.31	1503.56	1317.94	1147.50	956.25	826.88
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	721.13	624.94	550.13	498.38	453.38	423.00	396.00	376.88	361.69
45.0	685.13	602.44	522.56	475.88	438.19	405.00	381.94	365.06	350.44
90.0	598.22	535.05	486.56	438.02	407.81	385.54	366.92	351.34	339.53
135.0	617.06	550.13	484.31	447.75	417.38	391.50	370.69	354.38	342.56
180.0	574.71	515.19	470.70	427.22	403.03	383.68	369.45	355.39	344.81
225.0	601.14	539.04	485.61	443.59	415.86	393.19	377.16	363.38	352.69
270.0	687.94	605.81	527.63	478.69	441.56	410.63	388.13	372.38	358.88
315.0	665.94	586.13	524.70	467.21	432.79	406.74	385.93	370.80	360.23
360.0	721.13	624.94	550.13	498.38	453.38	423.00	396.00	376.88	361.69
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	349.31	339.19	330.19	324.00	316.13	309.38	300.38	289.69	227.42
45.0	339.19	329.63	321.75	314.44	307.13	300.38	285.19	247.16	211.56
90.0	329.46	321.13	314.94	306.90	300.94	281.64	246.54	207.84	167.01
135.0	333.00	325.13	318.38	312.19	305.44	288.00	285.19	214.76	169.14
180.0	336.38	327.21	319.22	311.63	303.58	282.49	251.27	209.31	169.09
225.0	344.36	338.01	329.23	321.30	314.21	296.27	267.30	231.41	188.38
270.0	348.19	339.75	331.88	325.69	317.81	310.50	300.94	285.19	227.08
315.0	350.21	340.65	332.83	324.06	315.84	308.19	292.28	261.96	223.65
360.0	349.31	339.19	330.19	324.00	316.13	309.38	300.38	289.69	227.42
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	184.39	141.36	89.04	53.21	23.06	12.83	11.31	9.90	8.49
45.0	163.18	122.23	72.51	41.46	18.51	10.80	8.72	7.26	6.30
90.0	115.31	77.40	44.21	16.43	11.03	9.51	7.99	6.41	4.50
135.0	126.00	86.06	43.26	19.69	11.76	10.13	8.44	6.58	4.95
180.0	122.06	78.19	43.93	17.61	11.76	9.84	8.27	6.13	4.78
225.0	133.09	91.69	55.24	20.48	12.71	11.08	9.00	6.02	4.56
270.0	185.74	141.58	88.43	51.24	23.12	12.15	10.18	8.21	5.63
315.0	170.44	127.74	86.68	43.14	20.48	13.61	11.76	10.46	7.54
360.0	184.39	141.36	89.04	53.21	23.06	12.83	11.31	9.90	8.49

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	4.73	4.39	4.16	4.11	4.05	3.99	3.88	3.83	3.77
45.0	4.89	4.28	4.16	4.11	4.05	3.94	3.94	3.88	3.83
90.0	4.28	4.22	4.16	4.05	3.99	3.94	3.94	3.88	3.88
135.0	4.50	4.44	4.33	4.33	4.28	4.22	4.22	4.16	4.16
180.0	4.50	4.44	4.39	4.33	4.28	4.22	4.16	4.16	4.11
225.0	4.33	4.22	4.11	4.05	3.99	3.94	3.88	3.88	3.83
270.0	4.95	4.28	4.16	4.05	3.99	3.94	3.88	3.83	3.77
315.0	4.39	4.22	4.11	4.05	3.94	3.88	3.77	3.77	3.71
360.0	4.73	4.39	4.16	4.11	4.05	3.99	3.88	3.83	3.77
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.77	3.71	3.66	3.60	3.60	3.54	3.54	3.54	3.49
45.0	3.83	3.77	3.71	3.71	3.71	3.66	3.71	3.71	3.71
90.0	3.88	3.83	3.83	3.77	3.77	3.77	3.77	3.77	3.71
135.0	4.11	4.05	4.05	3.99	3.99	3.99	4.05	4.11	4.22
180.0	4.11	4.05	4.05	4.05	3.99	3.99	3.99	4.22	4.73
225.0	3.77	3.71	3.71	3.66	3.66	3.66	3.66	3.66	3.60
270.0	3.71	3.66	3.66	3.60	3.60	3.54	3.49	3.49	3.49
315.0	3.66	3.60	3.54	3.54	3.54	3.49	3.49	3.43	3.43
360.0	3.77	3.71	3.66	3.60	3.60	3.54	3.54	3.54	3.49
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.49	3.49	3.43	3.49	3.43	3.43	3.43	3.43	3.43
45.0	3.71	3.71	3.66	3.66	3.71	3.77	4.05	4.44	4.61
90.0	3.71	3.77	3.77	3.88	4.39	5.12	6.08	6.69	6.98
135.0	4.39	4.67	6.02	8.21	10.24	13.28	16.03	16.88	16.88
180.0	5.46	6.24	6.30	5.91	5.34	6.02	8.16	9.51	10.13
225.0	3.60	3.60	3.66	3.83	3.94	3.94	3.88	3.88	4.05
270.0	3.49	3.49	3.49	3.49	3.49	3.54	3.60	3.77	3.94
315.0	3.38	3.38	3.38	3.43	3.43	3.38	3.38	3.38	3.38
360.0	3.49	3.49	3.43	3.49	3.43	3.43	3.43	3.43	3.43
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.43	3.43	3.43	3.38	3.38	3.38	3.43	3.43	3.43
45.0	4.50	4.28	4.11	3.99	3.99	3.94	4.33	4.67	5.01
90.0	6.81	6.41	5.91	4.50	3.83	3.60	3.60	3.54	3.54
135.0	16.65	16.37	15.24	13.28	11.59	9.00	6.64	4.95	4.16
180.0	10.80	11.14	10.24	8.78	7.20	6.53	5.74	4.89	4.44
225.0	4.39	4.11	4.16	3.83	3.60	3.54	3.49	3.49	3.49
270.0	4.05	4.16	3.94	3.77	3.71	3.71	3.66	3.66	3.60
315.0	3.38	3.38	3.38	3.32	3.32	3.38	3.38	3.38	3.32
360.0	3.43	3.43	3.43	3.38	3.38	3.38	3.43	3.43	3.43
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.38	3.43	3.43	3.38	3.38	3.38	3.38	3.38	3.26
45.0	5.12	5.01	4.44	3.77	3.77	3.77	3.77	3.32	3.26
90.0	3.49	3.49	3.54	3.49	3.54	3.49	3.54	3.49	3.21
135.0	4.11	4.11	4.11	4.05	4.05	3.99	3.99	3.88	3.60
180.0	4.33	4.39	4.39	4.39	4.33	4.22	4.05	3.66	3.32
225.0	3.49	3.49	3.49	3.54	3.49	3.49	3.43	3.43	3.21
270.0	3.60	3.54	3.54	3.54	3.54	3.54	3.54	3.38	3.21
315.0	3.32	3.38	3.38	3.38	3.38	3.38	3.38	3.32	3.21
360.0	3.38	3.43	3.43	3.38	3.38	3.38	3.38	3.38	3.26

Intensity data(cd)

C/γ(°)	90.0
0.0	3.26
45.0	3.21
90.0	3.21
135.0	3.21
180.0	3.26
225.0	3.21
270.0	3.21
315.0	3.21
360.0	3.26