
LumCAT: 1657-S
Luminaire: 92.70.124.00
Report No: NATA0100
Test No: GC2019062815
LampCAT: TRIDONIC SLE 9MM G7
Lamp flux(lm): 1073.0
Number of Lamps: 1
Length(mm): 47
Phm Type: C

Voltage(V): 34.8500
Current(A): 0.2490
Power (W): 8.6780
PF: 0.0000
Ballast type: DC
Width(mm): 47
Height(mm): 0

Photometric Results

Lumens(lm): 945.26
Efficiency(%): 88.10%
Lumens(lm)/Power(W): 108.93
Central intensity(cd): 3778.031
Maximum intensity(cd): 3778.031
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.0
 [C90/270]Total=23.0
Field angle(10%Imax): [C0/180]Total=52.3
 [C90/270]Total=52.3
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
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(%): 88.10%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.540%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3778.031	0.000	0	.000%	.000%
1.0	3760.805	3.607	3.607	.336%	.382%
2.0	3707.297	10.719	14.326	.999%	1.516%
3.0	3620.461	17.526	31.852	1.633%	3.370%
4.0	3503.672	23.847	55.698	2.222%	5.892%
5.0	3341.391	29.447	85.146	2.744%	9.008%
6.0	3166.805	34.202	119.348	3.188%	12.626%
7.0	2961.492	38.038	157.386	3.545%	16.650%
8.0	2735.297	40.771	198.157	3.800%	20.963%
9.0	2496.656	42.402	240.559	3.952%	25.449%
10.0	2241.773	42.881	283.44	3.996%	29.985%
11.0	1997.156	42.356	325.796	3.947%	34.466%
12.0	1772.016	41.202	366.998	3.840%	38.825%
13.0	1548.492	39.406	406.404	3.673%	42.994%
14.0	1313.487	36.633	443.037	3.414%	46.869%
15.0	1155.347	33.893	476.931	3.159%	50.455%
16.0	1006.186	31.673	508.603	2.952%	53.805%
17.0	861.490	29.085	537.688	2.711%	56.882%
18.0	750.614	26.580	564.268	2.477%	59.694%
19.0	658.343	24.513	588.781	2.285%	62.287%
20.0	577.884	22.626	611.407	2.109%	64.681%
21.0	515.665	20.998	632.406	1.957%	66.902%
22.0	472.380	19.855	652.261	1.850%	69.003%
23.0	437.738	19.097	671.358	1.780%	71.023%
24.0	411.764	18.573	689.931	1.731%	72.988%
25.0	394.165	18.325	708.256	1.708%	74.927%
26.0	379.526	18.263	726.519	1.702%	76.859%
27.0	368.044	18.289	744.808	1.705%	78.794%
28.0	359.522	18.420	763.229	1.717%	80.742%
29.0	352.238	18.622	781.85	1.735%	82.712%
30.0	344.180	18.803	800.653	1.752%	84.702%
31.0	330.553	18.777	819.43	1.750%	86.688%
32.0	302.372	18.133	837.563	1.690%	88.606%
33.0	274.177	16.985	854.548	1.583%	90.403%
34.0	236.749	15.462	870.01	1.441%	92.039%
35.0	193.282	13.355	883.365	1.245%	93.452%
36.0	151.741	10.986	894.351	1.024%	94.614%
37.0	116.859	8.760	903.111	.816%	95.541%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	80.072	6.573	909.685	.613%	96.236%
39.0	48.185	4.378	914.062	.408%	96.699%
40.0	28.589	2.678	916.74	.250%	96.982%
41.0	19.005	1.695	918.435	.158%	97.162%
42.0	15.602	1.257	919.692	.117%	97.295%
43.0	13.106	1.063	920.756	.099%	97.407%
44.0	10.673	0.898	921.653	.084%	97.502%
45.0	9.014	0.757	922.41	.071%	97.582%
46.0	8.606	0.689	923.099	.064%	97.655%
47.0	8.332	0.674	923.773	.063%	97.726%
48.0	8.030	0.661	924.434	.062%	97.796%
49.0	7.784	0.649	925.083	.061%	97.865%
50.0	7.502	0.637	925.721	.059%	97.932%
51.0	7.242	0.624	926.344	.058%	97.998%
52.0	7.024	0.612	926.957	.057%	98.063%
53.0	6.799	0.601	927.558	.056%	98.127%
54.0	6.595	0.590	928.148	.055%	98.189%
55.0	6.405	0.580	928.729	.054%	98.251%
56.0	6.173	0.568	929.297	.053%	98.311%
57.0	6.019	0.557	929.855	.052%	98.370%
58.0	5.829	0.548	930.402	.051%	98.428%
59.0	5.632	0.536	930.938	.050%	98.484%
60.0	5.498	0.526	931.464	.049%	98.540%
61.0	5.337	0.517	931.981	.048%	98.595%
62.0	5.224	0.509	932.49	.047%	98.649%
63.0	5.133	0.504	932.994	.047%	98.702%
64.0	4.992	0.497	933.491	.046%	98.754%
65.0	4.915	0.490	933.981	.046%	98.806%
66.0	4.816	0.486	934.466	.045%	98.858%
67.0	4.732	0.480	934.947	.045%	98.908%
68.0	4.690	0.477	935.424	.044%	98.959%
69.0	4.598	0.474	935.898	.044%	99.009%
70.0	4.549	0.470	936.367	.044%	99.059%
71.0	4.500	0.468	936.835	.044%	99.108%
72.0	4.437	0.465	937.3	.043%	99.157%
73.0	4.388	0.461	937.761	.043%	99.206%
74.0	4.352	0.459	938.221	.043%	99.255%
75.0	4.296	0.457	938.678	.043%	99.303%

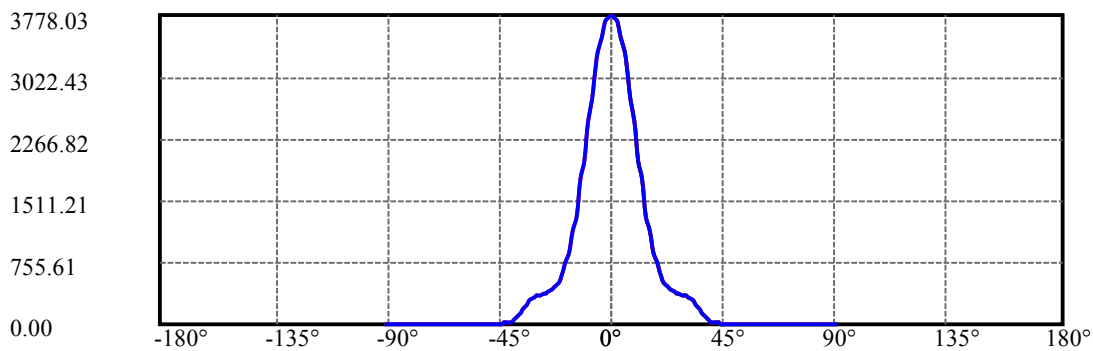
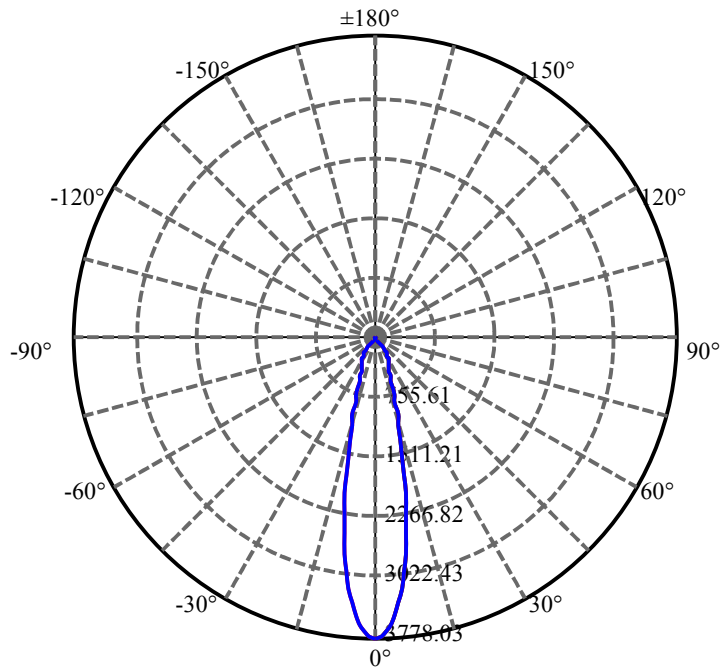
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.247	0.453	939.131	.042%	99.351%
77.0	4.240	0.452	939.584	.042%	99.399%
78.0	4.191	0.451	940.035	.042%	99.447%
79.0	4.163	0.449	940.484	.042%	99.494%
80.0	4.127	0.447	940.931	.042%	99.542%
81.0	4.120	0.446	941.377	.042%	99.589%
82.0	4.071	0.444	941.821	.041%	99.636%
83.0	4.043	0.441	942.262	.041%	99.682%
84.0	4.001	0.438	942.7	.041%	99.729%
85.0	3.987	0.436	943.136	.041%	99.775%
86.0	3.938	0.433	943.569	.040%	99.821%
87.0	3.902	0.429	943.998	.040%	99.866%
88.0	3.860	0.425	944.424	.040%	99.911%
89.0	3.839	0.422	944.846	.039%	99.956%
90.0	3.804	0.419	945.265	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	800.65	74.62%	84.70%
0-40	916.74	85.44%	96.98%
0-60	931.46	86.81%	98.54%
0-90	944.85	88.06%	99.96%
0-120	944.85	88.06%	99.96%
0-180	945.26	88.10%	100.00%
60-90	13.91	1.30%	1.47%
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%
0-27.62	756.21	70.48%	80.00%

ZONAL LUMEN SUMMARY

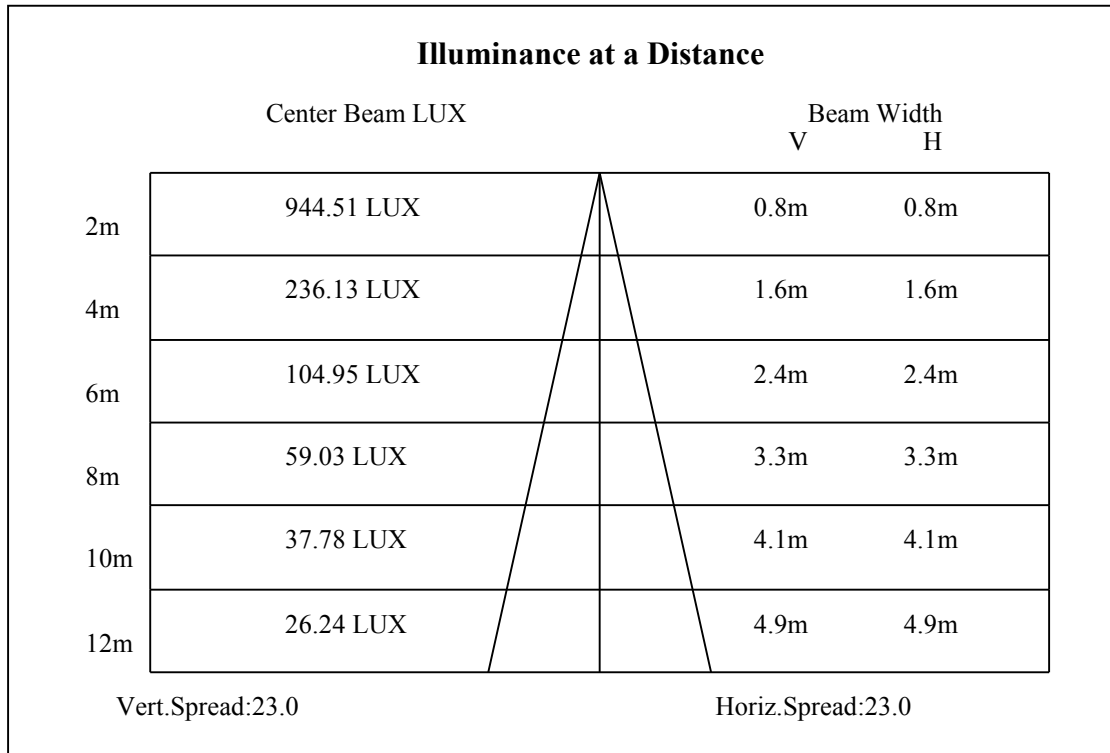
0-10	283.44
10-20	327.97
20-30	189.25
30-40	116.09
40-50	8.98
50-60	5.74
60-70	4.90
70-80	4.56
80-90	3.91
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

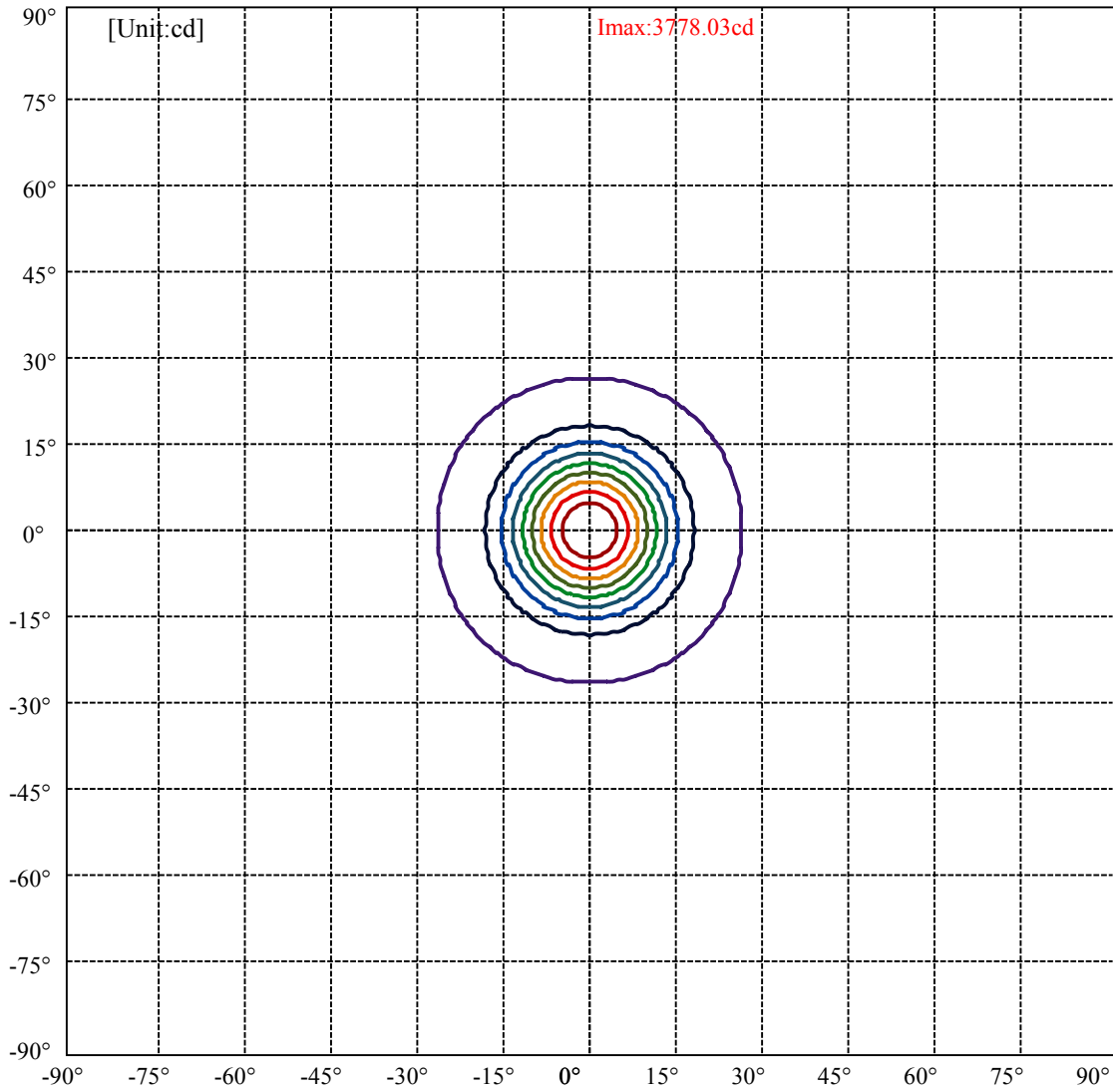


C0(Max): —————
 C0/C180: —————
 C90/C270: —————

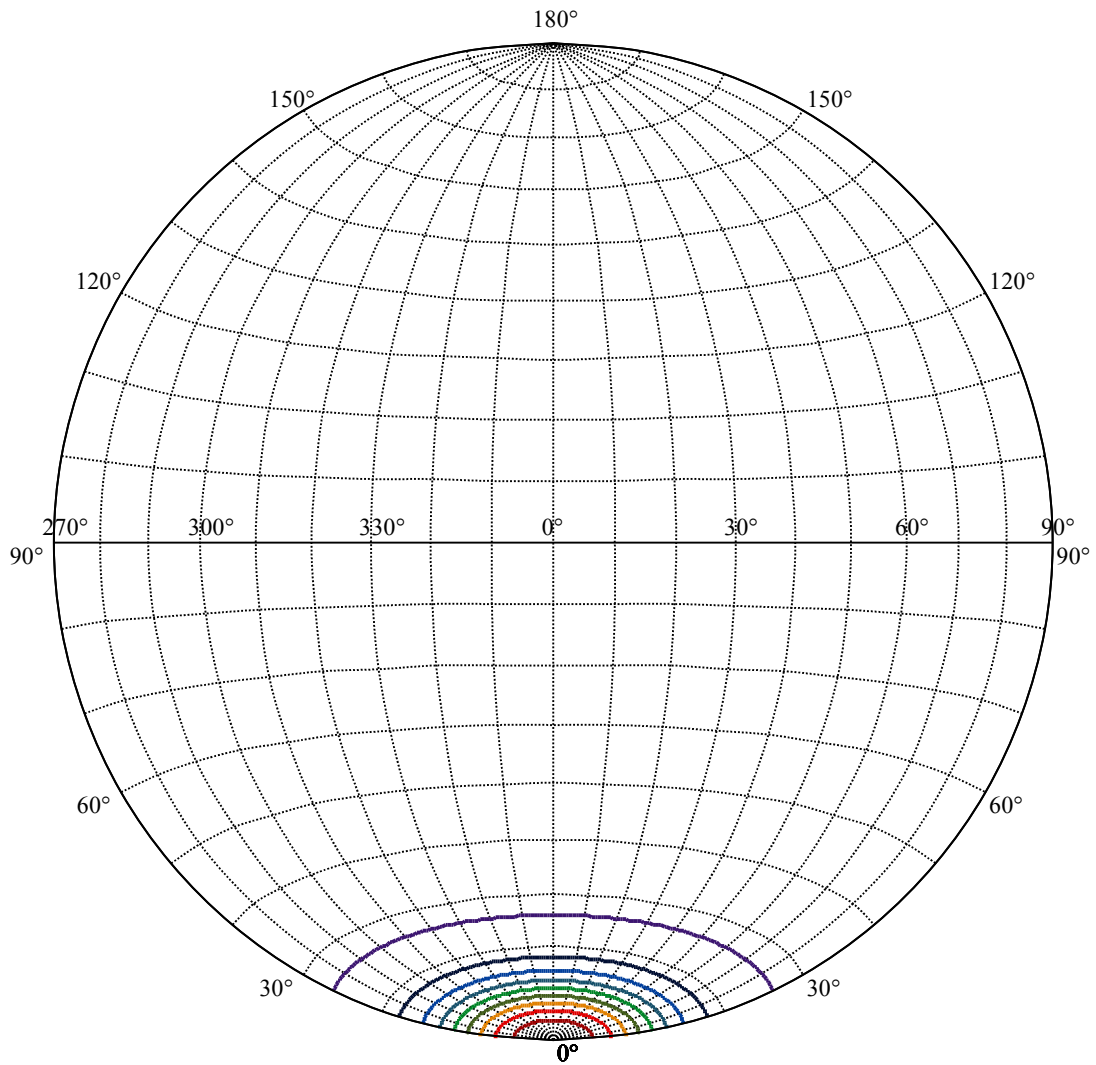
Field angle(10%Imax):C0/180Left:26.2 Right:26.2
 :C90/270Left:26.2 Right:26.2

Beam Angle(50%Imax):C0/180Left:11.5 Right:11.5
 :C90/270Left:11.5 Right:11.5





(10%Imax) 377.803	—
(20%Imax) 755.606	—
(30%Imax) 1133.41	—
(40%Imax) 1511.21	—
(50%Imax) 1889.02	—
(60%Imax) 2266.82	—
(70%Imax) 2644.62	—
(80%Imax) 3022.43	—
(90%Imax) 3400.23	—












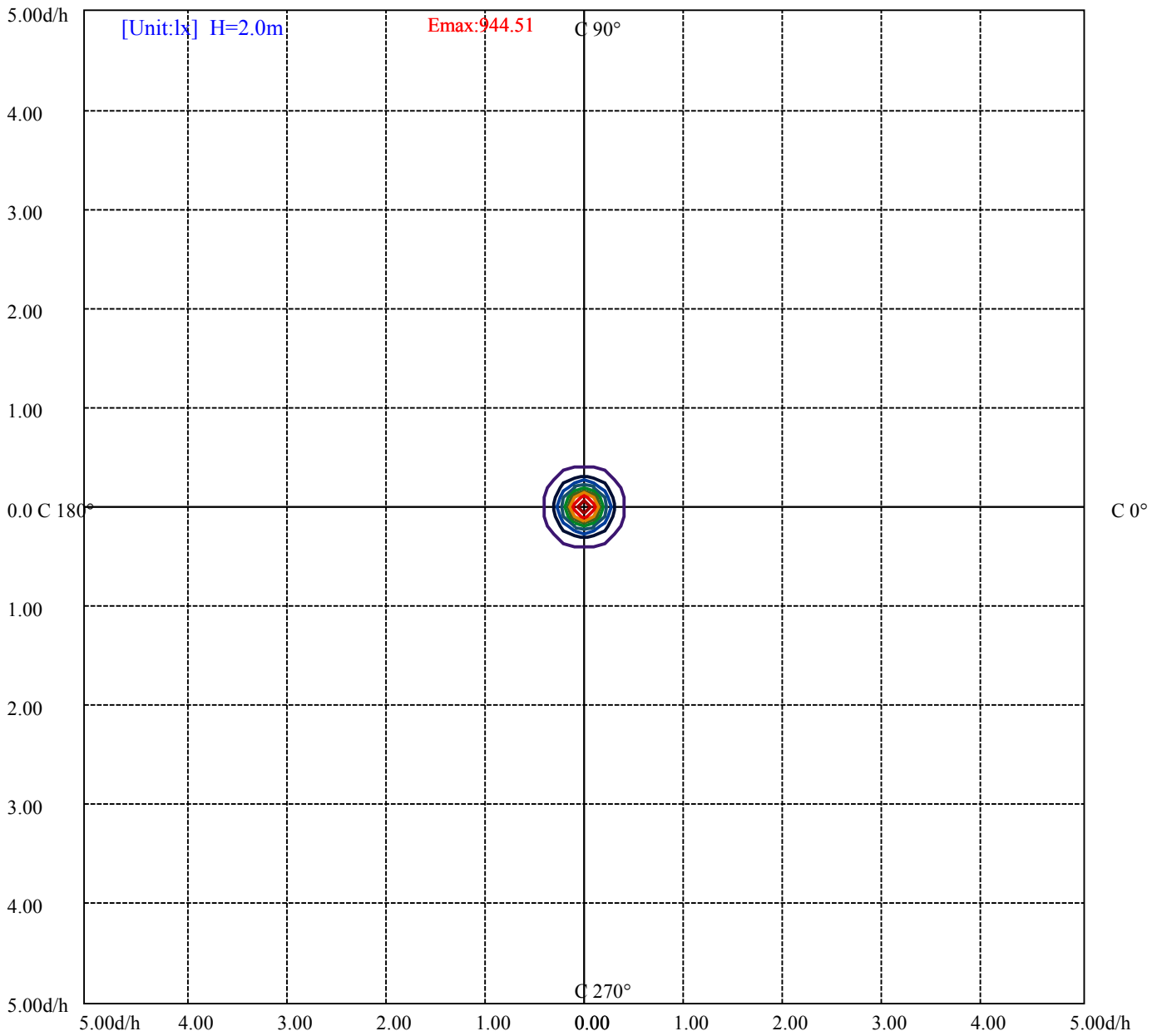
House

[Unit:cd]

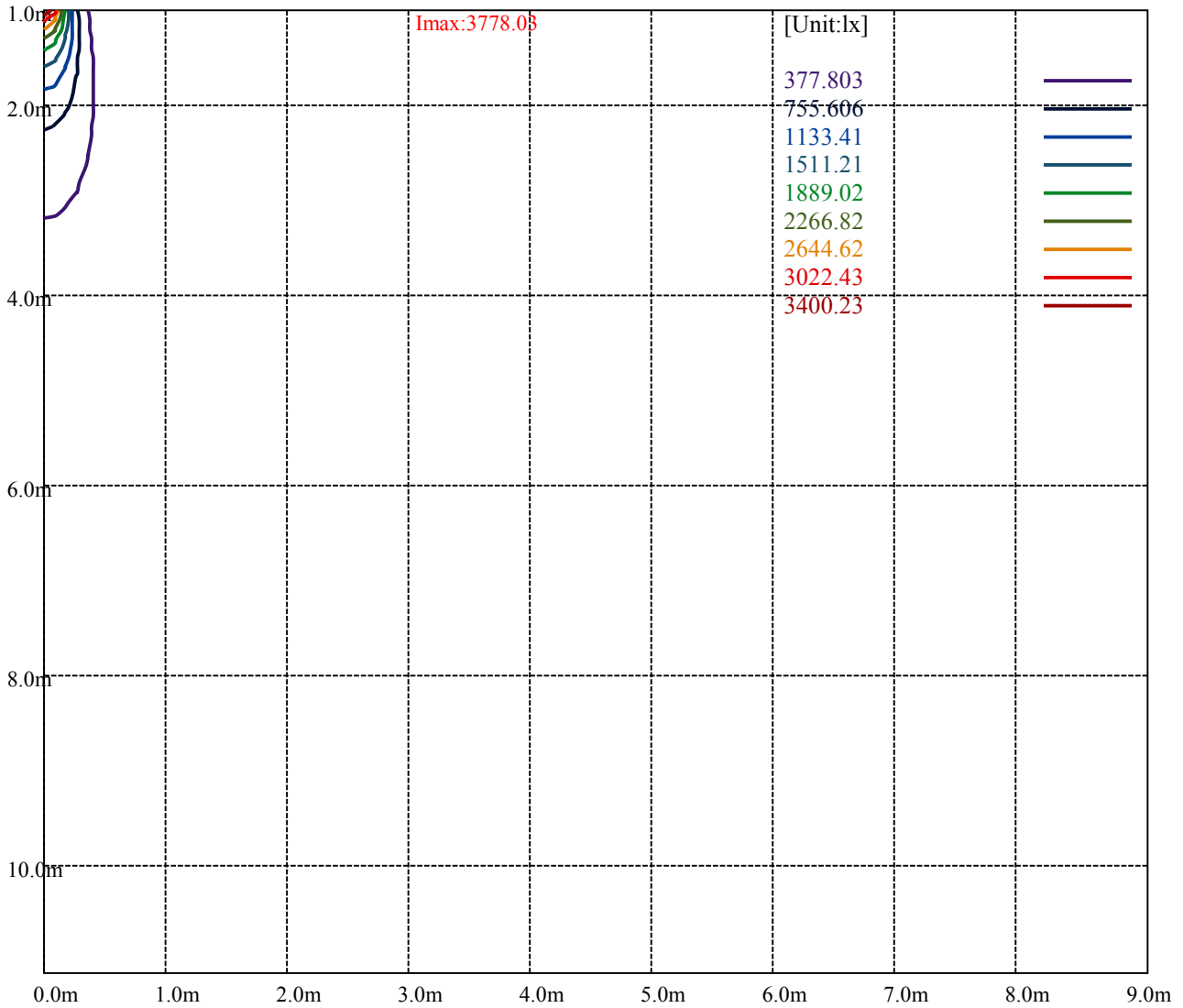
Road

Imax:3778.03

(10%Imax)	377.803	
(20%Imax)	755.606	
(30%Imax)	1133.41	
(40%Imax)	1511.21	
(50%Imax)	1889.02	
(60%Imax)	2266.82	
(70%Imax)	2644.62	
(80%Imax)	3022.43	
(90%Imax)	3400.23	



(10%Emax) 94.45075	—
(20%Emax) 188.9015	—
(30%Emax) 283.3525	—
(40%Emax) 377.8025	—
(50%Emax) 472.2525	—
(60%Emax) 566.705	—
(70%Emax) 661.155	—
(80%Emax) 755.605	—
(90%Emax) 850.0575	—



Luminance Table

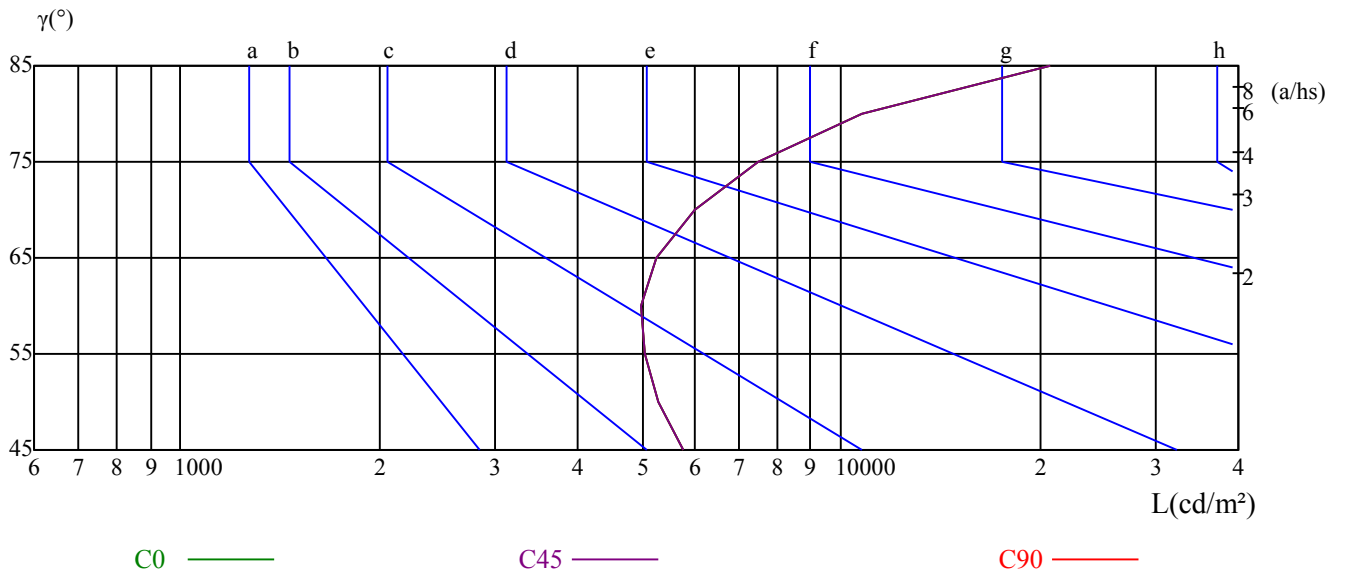
γ	45	50	55	60	65	70	75	80	85
C0	5771	5284	5055	4978	5265	6021	7514	10760	20707
C45	5771	5284	5055	4978	5265	6021	7514	10760	20707
C90	5771	5284	5055	4978	5265	6021	7514	10760	20707

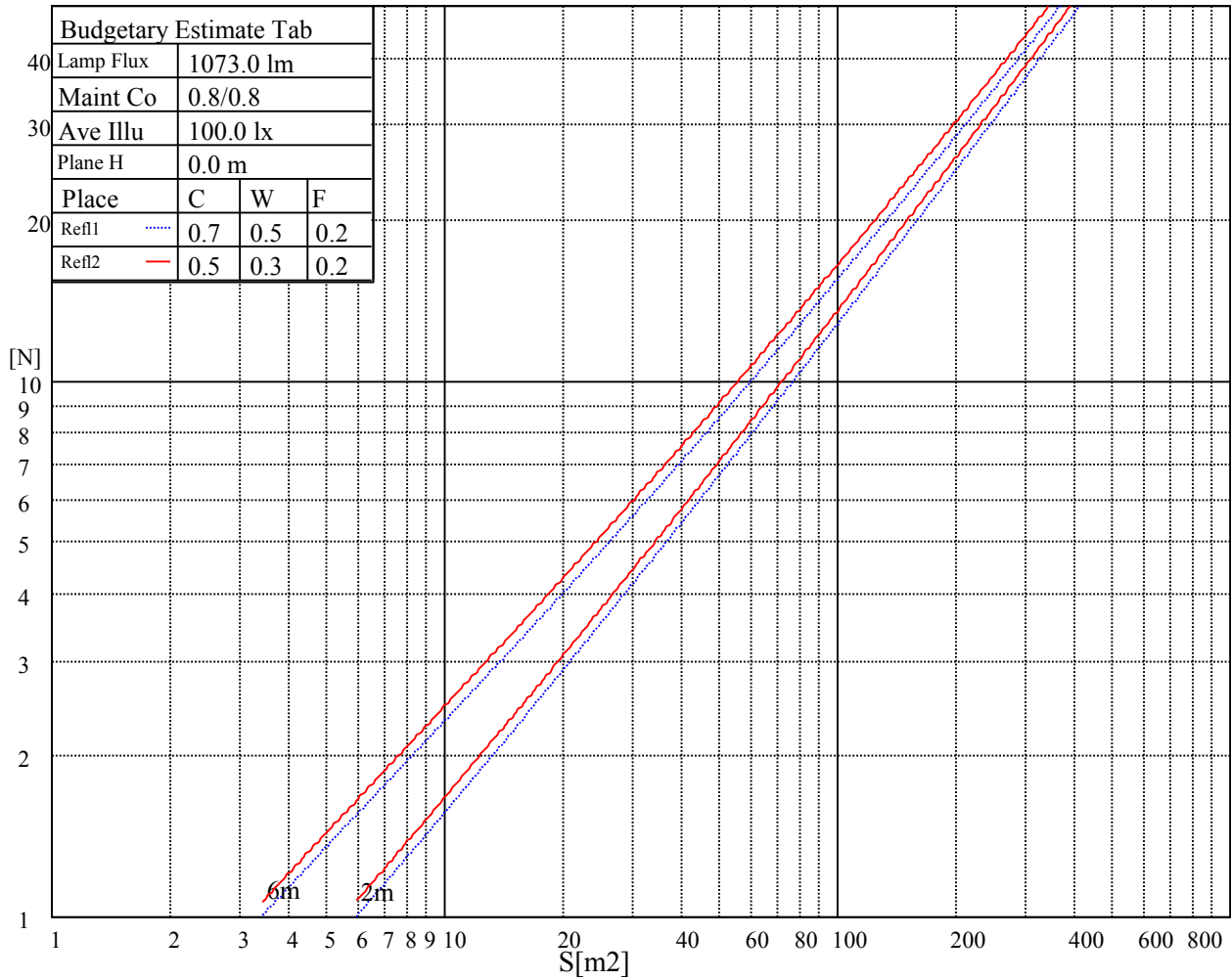
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5265	5265	5265	7514	7514	7514	20707	20707	20707

Glare Table

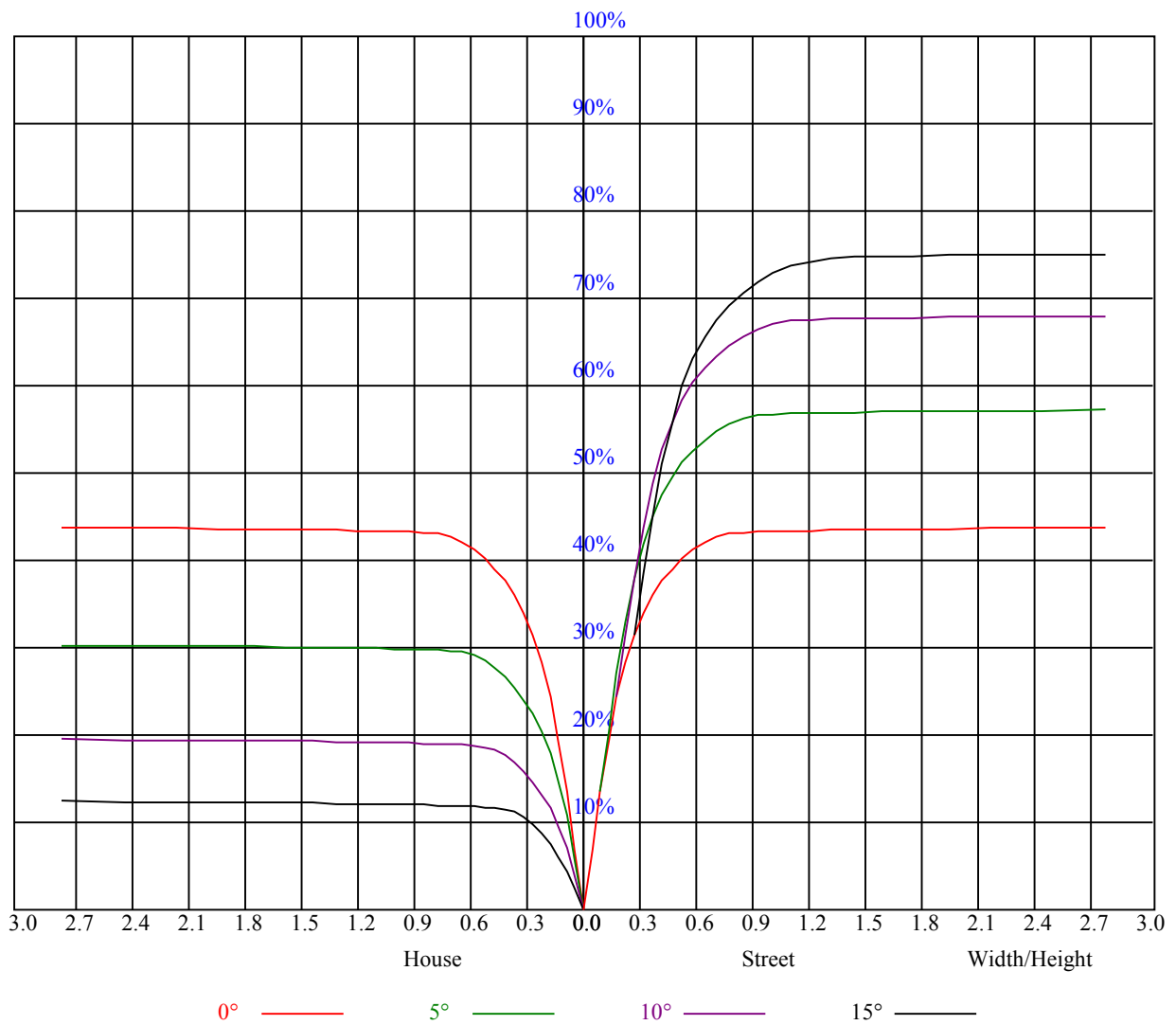
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.84	0.83	0.84	0.82	0.81	0.80
3	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.76
4	0.84	0.80	0.77	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	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	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
8	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
9	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.61	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	0.59	0.65	0.62	0.59	0.65	0.61	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	3767.63	3773.25	3729.94	3665.81	3542.63	3383.44	3216.94	3004.31	2797.31
45.0	3780.00	3771.00	3727.69	3650.63	3538.13	3360.94	3201.19	3014.44	2771.44
90.0	3781.13	3751.31	3681.56	3587.63	3466.69	3279.38	3123.56	2896.88	2633.06
135.0	3783.38	3763.69	3720.94	3657.94	3540.94	3407.63	3233.25	3035.81	2834.44
180.0	3767.63	3742.31	3691.69	3571.88	3450.38	3319.31	3130.31	2910.94	2705.63
225.0	3780.00	3749.63	3692.81	3596.63	3485.81	3313.69	3144.38	2932.88	2695.50
270.0	3781.13	3773.25	3710.81	3642.75	3540.38	3349.69	3192.75	3011.63	2770.88
315.0	3783.38	3762.00	3702.94	3590.44	3464.44	3317.06	3092.06	2885.06	2674.13
360.0	3767.63	3773.25	3729.94	3665.81	3542.63	3383.44	3216.94	3004.31	2797.31
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2554.88	2294.44	2073.38	1859.63	1603.13	1422.00	1246.50	1053.00	918.00
45.0	2509.31	2267.44	2008.13	1753.88	1548.00	1330.31	1157.06	987.19	845.44
90.0	2430.56	2173.50	1894.50	1715.06	1509.19	1224.00	1115.55	974.08	829.91
135.0	2595.38	2329.88	2094.75	1864.69	1609.31	1414.13	1238.06	1085.63	918.56
180.0	2457.56	2205.00	1978.88	1735.88	1537.31	1329.75	1103.96	996.30	858.83
225.0	2477.81	2215.69	1955.81	1740.38	1536.75	1308.94	1105.88	993.94	844.09
270.0	2530.69	2301.75	2049.75	1830.94	1598.63	1375.88	1192.50	1014.75	862.31
315.0	2417.06	2146.50	1922.06	1675.69	1445.63	1102.89	1083.26	944.61	814.78
360.0	2554.88	2294.44	2073.38	1859.63	1603.13	1422.00	1246.50	1053.00	918.00
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	806.63	700.31	621.56	561.94	512.44	477.56	445.50	421.88	405.56
45.0	736.31	643.50	556.88	501.19	464.06	428.63	410.06	394.88	380.81
90.0	709.82	620.38	550.58	488.59	448.31	412.54	390.04	374.01	358.48
135.0	806.63	704.81	604.69	541.69	490.50	450.56	421.88	401.63	386.44
180.0	744.98	654.92	580.84	507.43	465.02	432.73	405.00	389.42	376.65
225.0	743.01	660.83	583.31	519.75	477.00	441.28	417.26	398.98	384.75
270.0	749.25	655.88	562.50	501.75	452.81	416.81	387.56	369.56	352.13
315.0	708.30	626.12	562.73	502.99	468.90	441.79	416.81	402.98	391.39
360.0	806.63	700.31	621.56	561.94	512.44	477.56	445.50	421.88	405.56
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	390.94	379.69	370.69	362.25	351.00	329.06	300.94	286.88	219.88
45.0	371.25	366.75	361.69	354.38	345.38	318.94	288.00	244.91	209.53
90.0	343.29	335.19	331.31	322.59	309.04	282.54	249.75	216.62	179.83
135.0	375.75	364.50	354.94	348.75	335.81	306.56	287.44	236.53	191.59
180.0	364.67	357.24	349.31	337.73	317.87	284.18	244.29	210.83	175.39
225.0	374.79	366.02	357.24	349.43	332.94	297.79	263.14	227.14	184.67
270.0	342.00	335.25	329.63	324.00	311.06	290.81	285.19	234.39	190.80
315.0	381.66	371.53	363.09	354.32	341.33	309.09	274.67	236.70	194.57
360.0	390.94	379.69	370.69	362.25	351.00	329.06	300.94	286.88	219.88
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	182.36	149.18	96.92	66.38	41.63	21.49	16.54	14.46	11.03
45.0	168.41	131.74	94.28	58.61	34.82	23.85	17.33	14.85	12.54
90.0	134.38	101.42	73.69	42.75	27.11	19.58	16.65	13.89	11.81
135.0	156.26	119.59	81.39	49.67	27.11	17.04	14.12	11.70	9.23
180.0	125.10	94.61	65.48	36.45	18.96	14.18	11.81	9.06	7.03
225.0	142.09	106.59	70.93	37.07	22.11	16.59	14.34	11.76	9.56
270.0	152.78	116.10	78.13	50.96	31.28	20.53	17.94	15.69	13.11
315.0	152.55	115.65	79.76	43.59	25.71	18.79	16.09	13.44	11.08
360.0	182.36	149.18	96.92	66.38	41.63	21.49	16.54	14.46	11.03

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	8.61	7.71	7.26	6.92	6.64	6.30	6.19	5.96	5.79
45.0	9.96	9.39	9.17	8.83	8.44	8.16	7.76	7.48	7.14
90.0	10.46	10.24	9.90	9.56	9.28	8.83	8.44	8.10	7.82
135.0	7.82	7.31	7.20	7.09	6.92	6.81	6.69	6.64	6.47
180.0	5.96	5.74	5.57	5.40	5.29	5.23	5.12	5.06	5.01
225.0	8.49	8.38	8.21	7.99	7.82	7.65	7.43	7.31	7.14
270.0	11.25	10.80	10.41	9.96	9.62	9.17	8.78	8.38	7.99
315.0	9.56	9.28	8.94	8.49	8.27	7.88	7.54	7.26	7.03
360.0	8.61	7.71	7.26	6.92	6.64	6.30	6.19	5.96	5.79
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.63	5.51	5.34	5.29	5.18	5.06	4.95	4.89	4.84
45.0	6.86	6.64	6.36	6.08	5.85	5.63	5.46	5.29	5.18
90.0	7.43	7.09	6.75	6.58	6.30	5.96	5.85	5.63	5.46
135.0	6.41	6.36	6.24	6.13	5.96	5.85	5.68	5.51	5.34
180.0	5.01	4.95	4.89	4.89	4.84	4.78	4.78	4.78	4.78
225.0	7.03	6.86	6.64	6.47	6.24	6.02	5.85	5.63	5.51
270.0	7.65	7.31	6.86	6.69	6.41	6.08	5.91	5.68	5.46
315.0	6.75	6.53	6.30	6.02	5.85	5.68	5.51	5.29	5.23
360.0	5.63	5.51	5.34	5.29	5.18	5.06	4.95	4.89	4.84
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.78	4.73	4.67	4.56	4.56	4.50	4.44	4.44	4.39
45.0	5.06	4.89	4.84	4.73	4.61	4.61	4.50	4.44	4.39
90.0	5.40	5.18	5.12	5.01	4.89	4.84	4.73	4.67	4.67
135.0	5.23	5.12	5.01	4.95	4.84	4.78	4.67	4.61	4.56
180.0	4.73	4.67	4.67	4.56	4.50	4.50	4.44	4.44	4.39
225.0	5.40	5.23	5.12	5.01	4.95	4.89	4.73	4.67	4.67
270.0	5.40	5.18	5.06	4.95	4.84	4.78	4.73	4.67	4.56
315.0	5.06	4.95	4.84	4.78	4.67	4.61	4.56	4.44	4.39
360.0	4.78	4.73	4.67	4.56	4.56	4.50	4.44	4.44	4.39
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.33	4.33	4.28	4.22	4.16	4.16	4.16	4.11	4.05
45.0	4.33	4.28	4.22	4.16	4.16	4.16	4.11	4.05	4.05
90.0	4.61	4.56	4.56	4.50	4.44	4.44	4.39	4.33	4.33
135.0	4.50	4.44	4.39	4.28	4.22	4.22	4.16	4.16	4.11
180.0	4.33	4.28	4.28	4.22	4.16	4.16	4.11	4.11	4.05
225.0	4.56	4.50	4.44	4.39	4.33	4.33	4.22	4.22	4.16
270.0	4.50	4.44	4.44	4.39	4.33	4.33	4.28	4.28	4.22
315.0	4.33	4.28	4.22	4.22	4.16	4.11	4.11	4.05	4.05
360.0	4.33	4.33	4.28	4.22	4.16	4.16	4.16	4.11	4.05
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.05	4.05	3.99	3.99	3.99	3.94	3.88	3.88	3.83
45.0	4.05	3.99	3.99	3.94	3.94	3.88	3.88	3.83	3.83
90.0	4.28	4.22	4.16	4.11	4.05	3.94	3.88	3.83	3.83
135.0	4.11	4.05	4.05	3.99	3.99	3.94	3.94	3.88	3.83
180.0	4.05	3.99	3.99	3.94	3.94	3.94	3.94	3.94	3.88
225.0	4.16	4.11	4.05	3.99	3.99	3.99	3.94	3.88	3.88
270.0	4.22	4.16	4.11	4.11	4.05	3.99	3.88	3.83	3.83
315.0	4.05	3.99	3.99	3.94	3.94	3.88	3.88	3.83	3.83
360.0	4.05	4.05	3.99	3.99	3.99	3.94	3.88	3.88	3.83

Intensity data(cd)

C/γ(°)	90.0
0.0	3.83
45.0	3.83
90.0	3.77
135.0	3.83
180.0	3.77
225.0	3.83
270.0	3.77
315.0	3.83
360.0	3.83