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Nata

LumCAT: 1-0927-M	
Luminaire: 92.70.124.00	
Report No: NATA0100	Voltage(V): 34.5000
Test No: GC20190924010	Current(A): 0.2470
LampCAT: TRIDONIC SLE G7 9MM	Power (W): 8.5200
Lamp flux(lm): 1288.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 961.08
Efficiency(%): 74.62%
Lumens(lm)/Power(W): 112.80
Central intensity(cd): 5174.578
Maximum intensity(cd): 5174.578
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.6
 [C90/270]Total=24.6
Field angle(10%Imax): [C0/180]Total=41.0
 [C90/270]Total=41.0
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
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(%): 74.62%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.543%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5174.578	0.000	0	.000%	.000%
1.0	5158.125	4.944	4.944	.384%	.514%
2.0	5101.594	14.726	19.67	1.143%	2.047%
3.0	5003.719	24.169	43.838	1.876%	4.561%
4.0	4867.805	33.043	76.881	2.565%	8.000%
5.0	4680.633	41.077	117.958	3.189%	12.274%
6.0	4467.656	48.077	166.035	3.733%	17.276%
7.0	4210.102	53.863	219.898	4.182%	22.880%
8.0	3938.484	58.318	278.216	4.528%	28.948%
9.0	3639.305	61.414	339.629	4.768%	35.338%
10.0	3325.570	63.030	402.659	4.894%	41.897%
11.0	3006.914	63.275	465.934	4.913%	48.480%
12.0	2684.883	62.219	528.153	4.831%	54.954%
13.0	2348.859	59.738	587.891	4.638%	61.170%
14.0	2025.984	55.998	643.889	4.348%	66.997%
15.0	1737.211	51.663	695.551	4.011%	72.372%
16.0	1439.191	46.543	742.095	3.614%	77.215%
17.0	1192.134	40.977	783.071	3.181%	81.479%
18.0	988.903	35.961	819.032	2.792%	85.220%
19.0	792.127	30.986	850.018	2.406%	88.444%
20.0	600.673	25.492	875.51	1.979%	91.097%
21.0	429.131	19.774	895.285	1.535%	93.154%
22.0	288.534	14.422	909.706	1.120%	94.655%
23.0	214.017	10.545	920.251	.819%	95.752%
24.0	89.768	6.642	926.893	.516%	96.443%
25.0	38.433	2.915	929.808	.226%	96.746%
26.0	19.920	1.377	931.186	.107%	96.890%
27.0	14.252	0.836	932.022	.065%	96.977%
28.0	12.361	0.674	932.695	.052%	97.047%
29.0	11.081	0.613	933.309	.048%	97.111%
30.0	10.146	0.573	933.882	.044%	97.170%
31.0	9.352	0.543	934.424	.042%	97.227%
32.0	8.663	0.516	934.94	.040%	97.280%
33.0	8.128	0.495	935.435	.038%	97.332%
34.0	7.636	0.477	935.912	.037%	97.382%
35.0	7.249	0.462	936.374	.036%	97.430%
36.0	6.912	0.451	936.825	.035%	97.477%
37.0	6.630	0.442	937.267	.034%	97.523%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.391	0.435	937.702	.034%	97.568%
39.0	6.173	0.429	938.131	.033%	97.612%
40.0	6.012	0.425	938.556	.033%	97.657%
41.0	5.829	0.422	938.977	.033%	97.700%
42.0	5.709	0.419	939.396	.033%	97.744%
43.0	5.590	0.419	939.815	.032%	97.788%
44.0	5.491	0.418	940.233	.032%	97.831%
45.0	5.372	0.417	940.651	.032%	97.875%
46.0	5.302	0.417	941.068	.032%	97.918%
47.0	5.217	0.418	941.486	.032%	97.962%
48.0	5.161	0.420	941.906	.033%	98.005%
49.0	5.091	0.421	942.327	.033%	98.049%
50.0	5.041	0.422	942.749	.033%	98.093%
51.0	4.978	0.424	943.173	.033%	98.137%
52.0	4.943	0.426	943.599	.033%	98.181%
53.0	4.887	0.428	944.027	.033%	98.226%
54.0	4.845	0.429	944.456	.033%	98.271%
55.0	4.809	0.431	944.886	.033%	98.315%
56.0	4.781	0.433	945.32	.034%	98.360%
57.0	4.746	0.436	945.755	.034%	98.406%
58.0	4.711	0.437	946.193	.034%	98.451%
59.0	4.690	0.439	946.632	.034%	98.497%
60.0	4.662	0.442	947.074	.034%	98.543%
61.0	4.634	0.444	947.518	.034%	98.589%
62.0	4.605	0.445	947.963	.035%	98.635%
63.0	4.598	0.448	948.41	.035%	98.682%
64.0	4.563	0.450	948.86	.035%	98.729%
65.0	4.549	0.451	949.311	.035%	98.776%
66.0	4.535	0.453	949.764	.035%	98.823%
67.0	4.507	0.455	950.219	.035%	98.870%
68.0	4.486	0.456	950.674	.035%	98.918%
69.0	4.493	0.458	951.133	.036%	98.965%
70.0	4.472	0.460	951.593	.036%	99.013%
71.0	4.472	0.462	952.055	.036%	99.061%
72.0	4.458	0.464	952.52	.036%	99.110%
73.0	4.451	0.466	952.985	.036%	99.158%
74.0	4.423	0.466	953.452	.036%	99.207%
75.0	4.430	0.468	953.92	.036%	99.255%

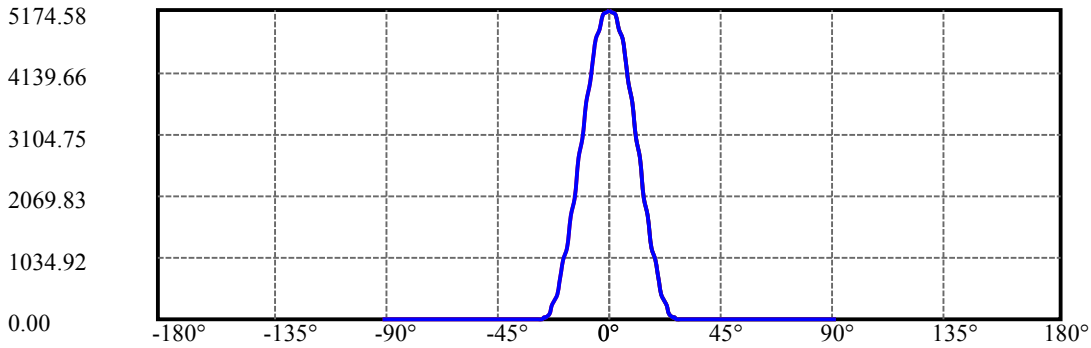
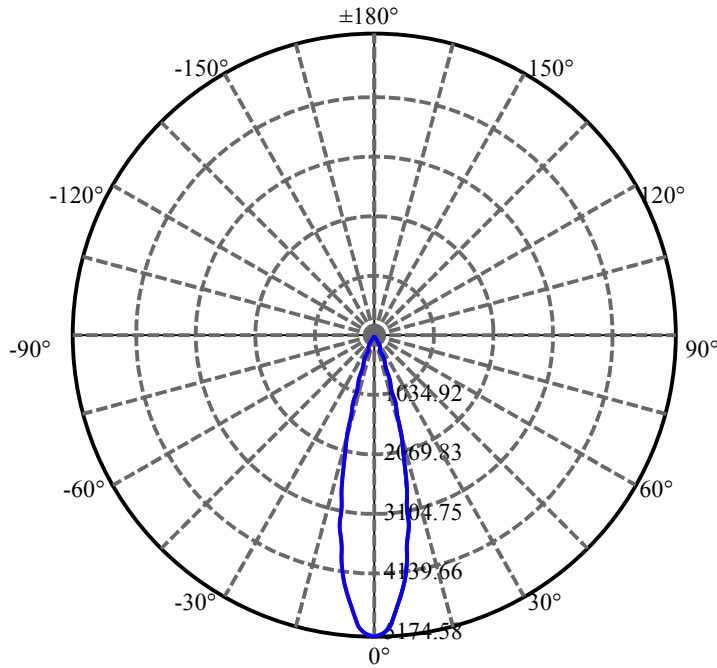
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.430	0.470	954.39	.037%	99.304%
77.0	4.416	0.472	954.862	.037%	99.353%
78.0	4.416	0.473	955.334	.037%	99.402%
79.0	4.409	0.474	955.808	.037%	99.452%
80.0	4.409	0.475	956.284	.037%	99.501%
81.0	4.409	0.477	956.761	.037%	99.551%
82.0	4.409	0.478	957.239	.037%	99.601%
83.0	4.423	0.480	957.719	.037%	99.651%
84.0	4.423	0.482	958.201	.037%	99.701%
85.0	4.430	0.483	958.684	.038%	99.751%
86.0	4.388	0.482	959.166	.037%	99.801%
87.0	4.352	0.478	959.644	.037%	99.851%
88.0	4.366	0.478	960.122	.037%	99.901%
89.0	4.359	0.478	960.6	.037%	99.950%
90.0	4.345	0.477	961.077	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	933.88	72.51%	97.17%
0-40	938.56	72.87%	97.66%
0-60	947.07	73.53%	98.54%
0-90	960.60	74.58%	99.95%
0-120	960.60	74.58%	99.95%
0-180	961.08	74.62%	100.00%
60-90	13.97	1.08%	1.45%
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%
0-16.65	768.86	59.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	402.66
10-20	472.85
20-30	58.37
30-40	4.67
40-50	4.19
50-60	4.32
60-70	4.52
70-80	4.69
80-90	4.32
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: ———

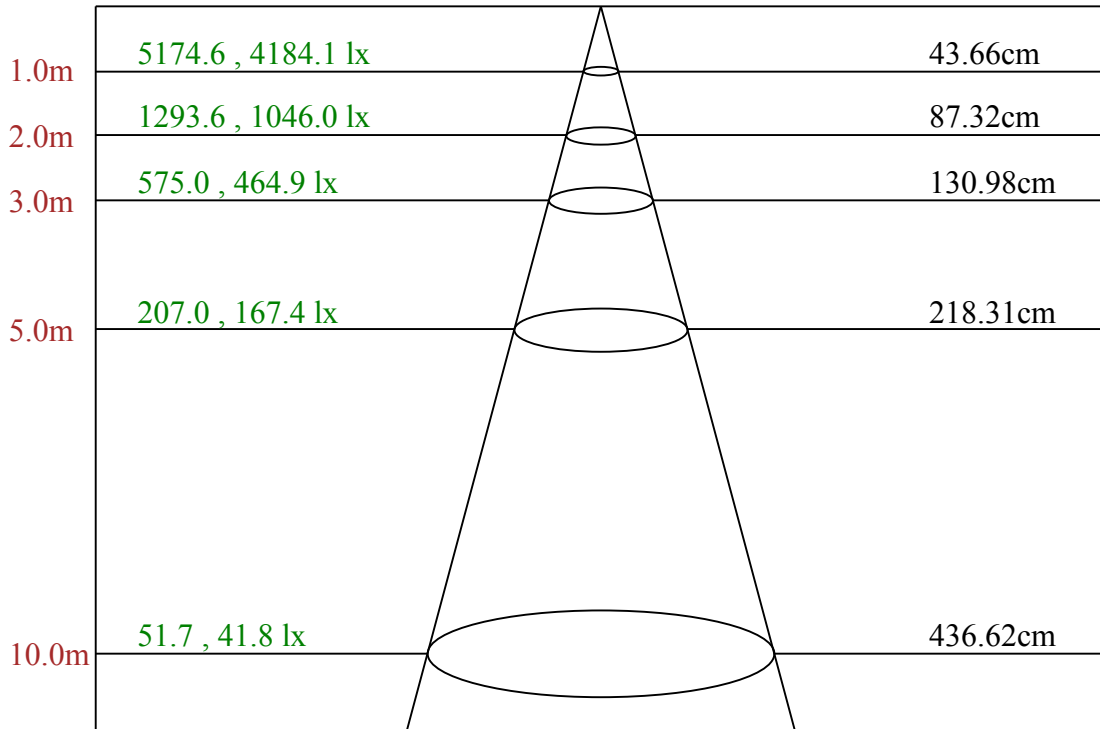
C90/C270: ———

Field angle(10%Imax):C0/180Left:20.5 Right:20.5

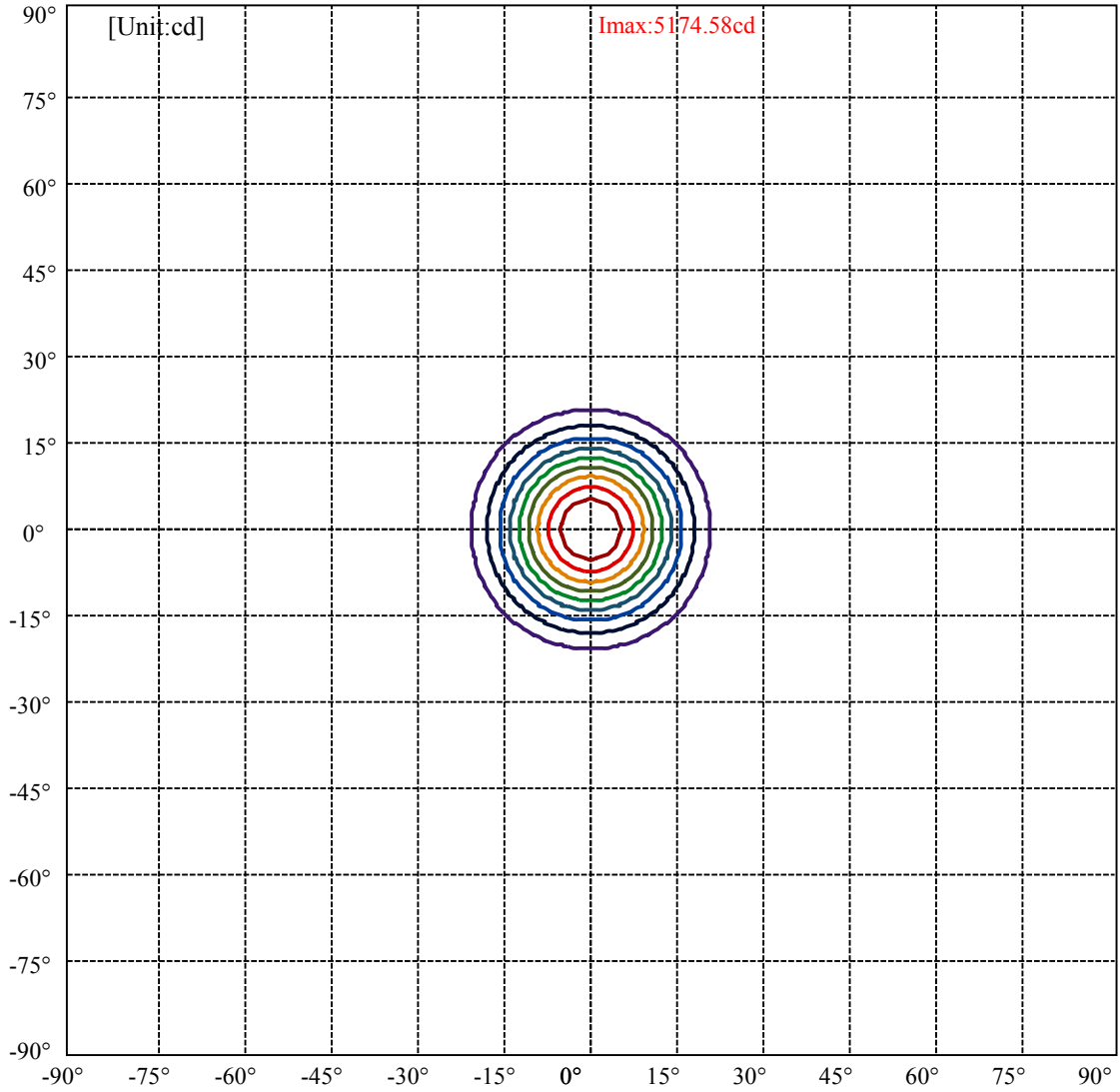
:C90/270Left:20.5 Right:20.5

Beam Angle(50%Imax):C0/180Left:12.3 Right:12.3

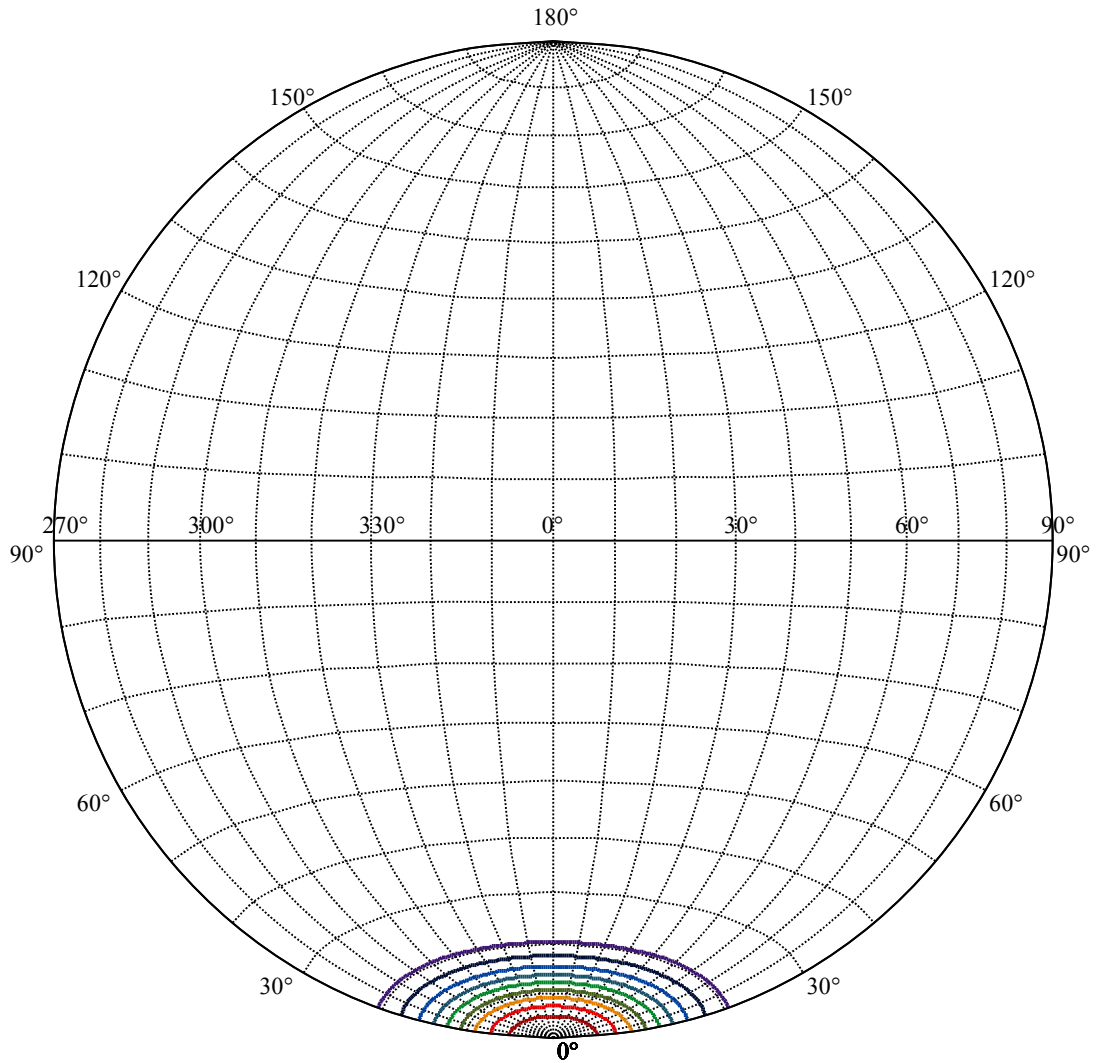
:C90/270Left:12.3 Right:12.3



Max , Ave Beam angle of C0 plane 24.63



(10%I _{max}) 517.458	—
(20%I _{max}) 1034.92	—
(30%I _{max}) 1552.37	—
(40%I _{max}) 2069.83	—
(50%I _{max}) 2587.29	—
(60%I _{max}) 3104.75	—
(70%I _{max}) 3622.2	—
(80%I _{max}) 4139.66	—
(90%I _{max}) 4657.12	—



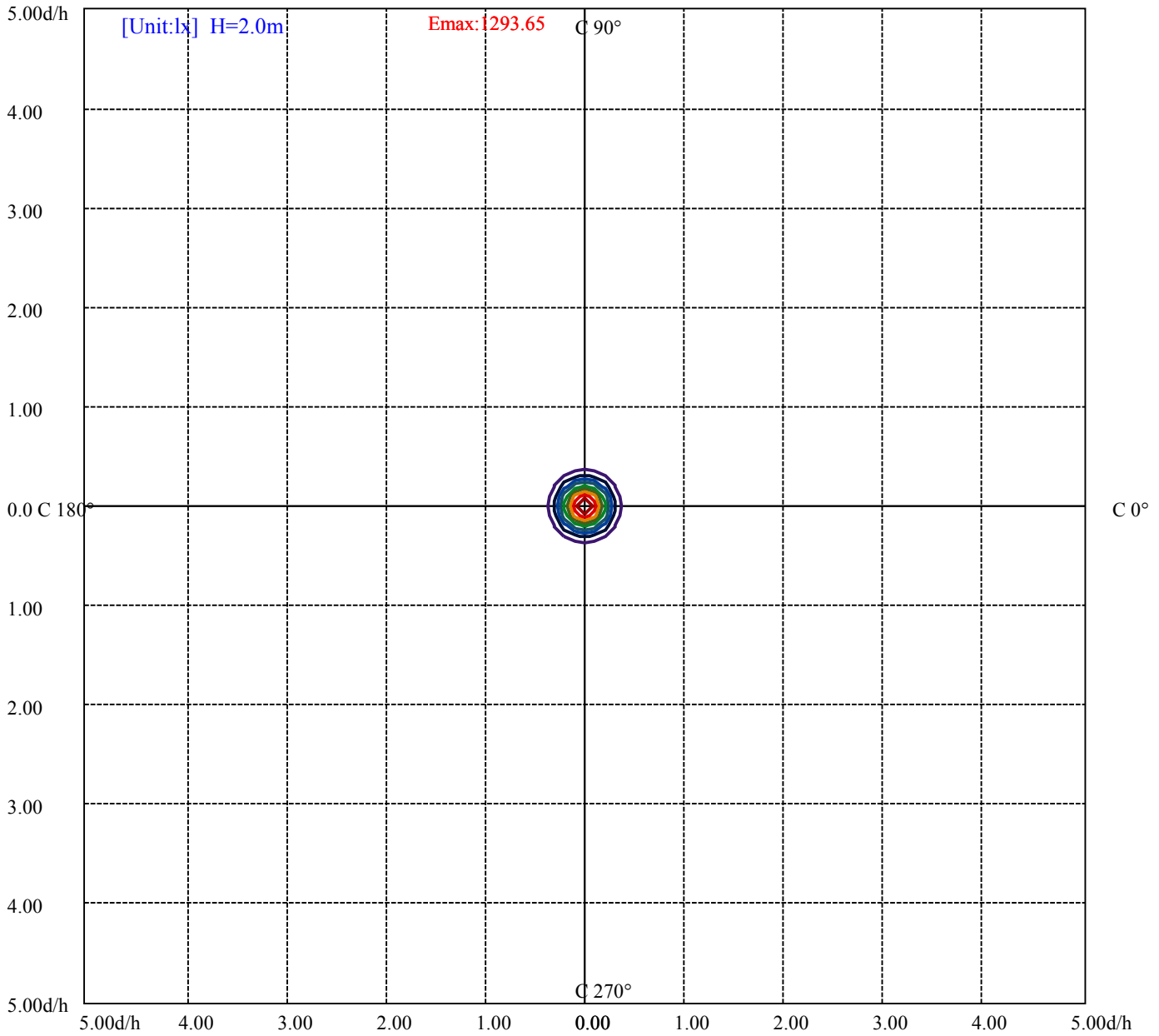
House

[Unit:cd]

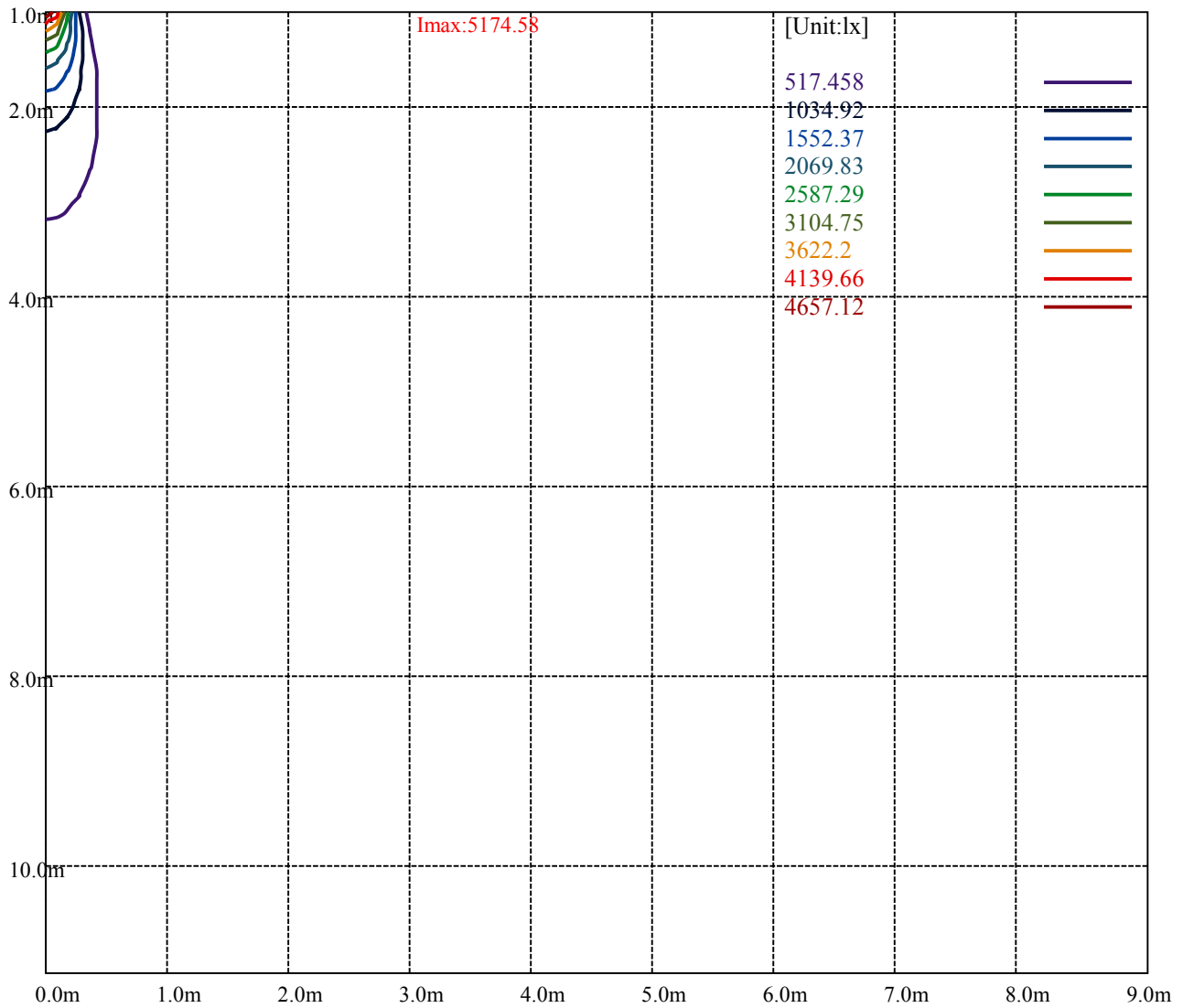
Road

Imax:5174.58

(10%Imax) 517.458	—
(20%Imax) 1034.92	—
(30%Imax) 1552.37	—
(40%Imax) 2069.83	—
(50%Imax) 2587.29	—
(60%Imax) 3104.75	—
(70%Imax) 3622.2	—
(80%Imax) 4139.66	—
(90%Imax) 4657.12	—



(10%Emax) 129.3645	—
(20%Emax) 258.73	—
(30%Emax) 388.0925	—
(40%Emax) 517.4575	—
(50%Emax) 646.8225	—
(60%Emax) 776.1875	—
(70%Emax) 905.55	—
(80%Emax) 1034.915	—
(90%Emax) 1164.28	—



Luminance Table

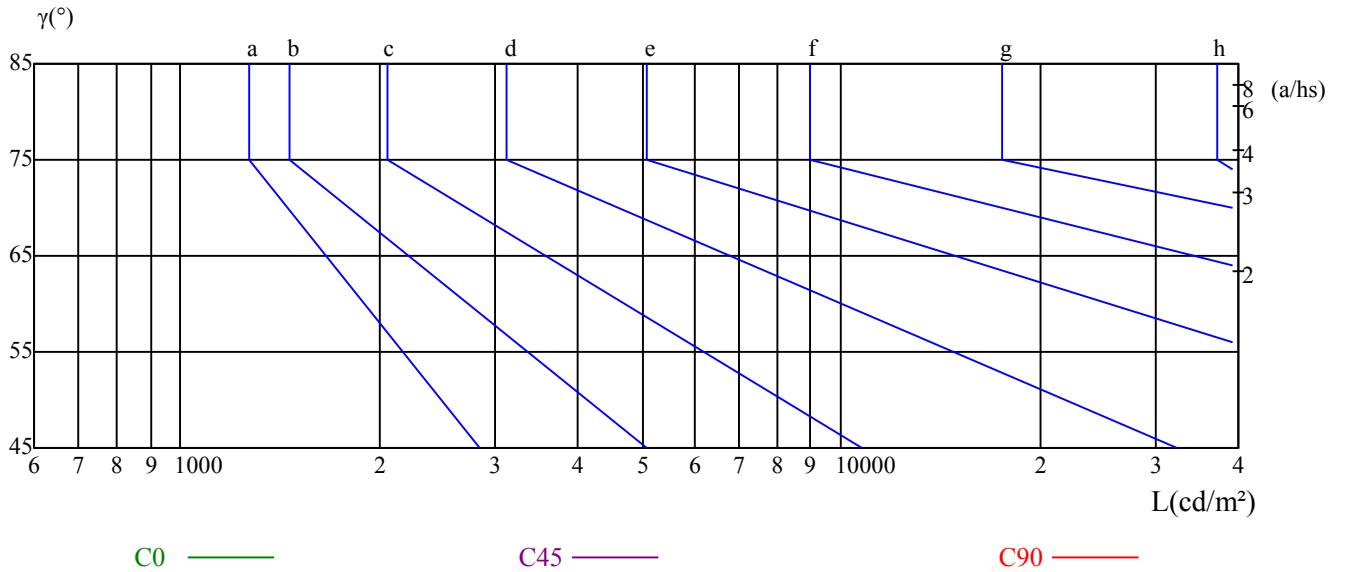
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

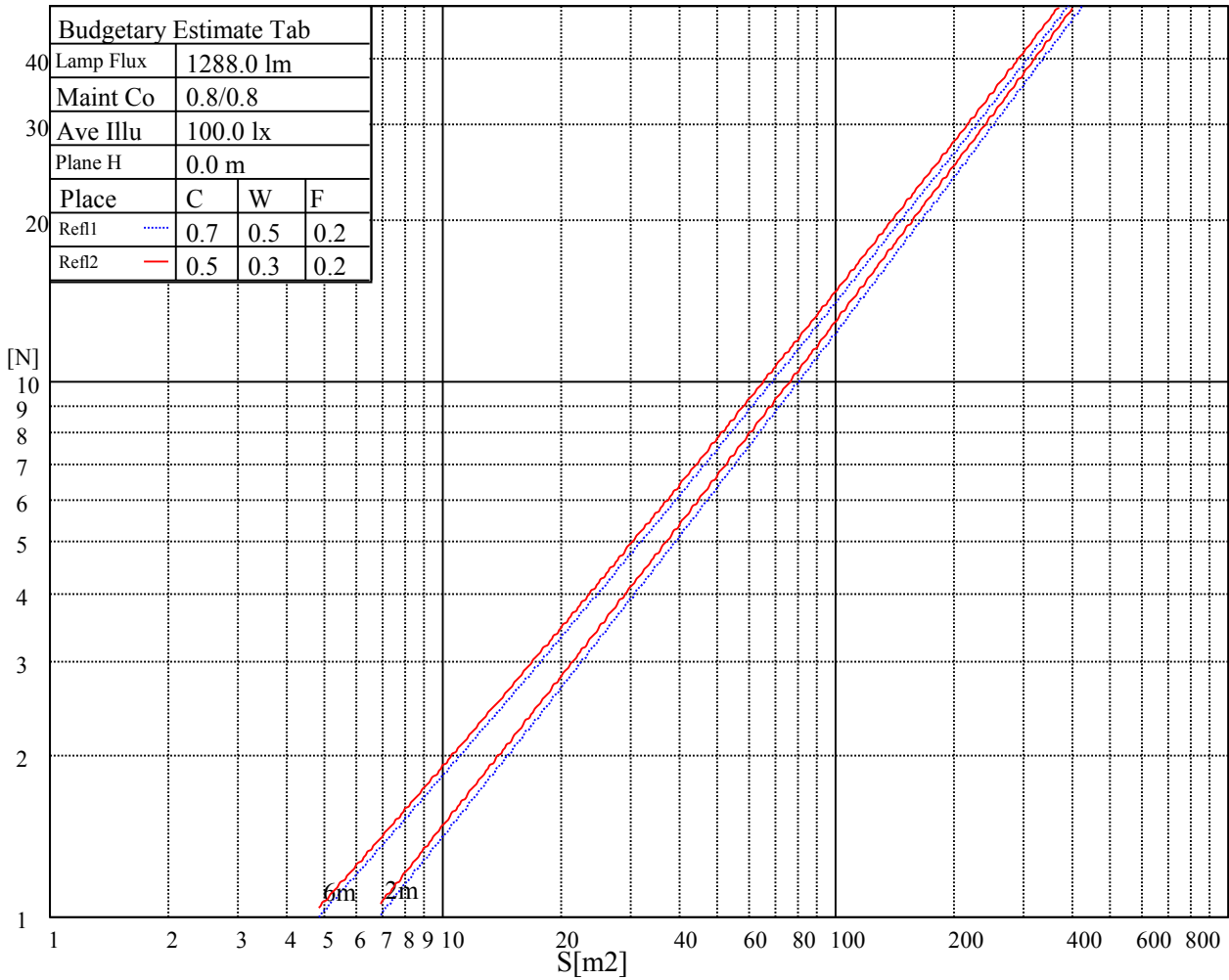
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

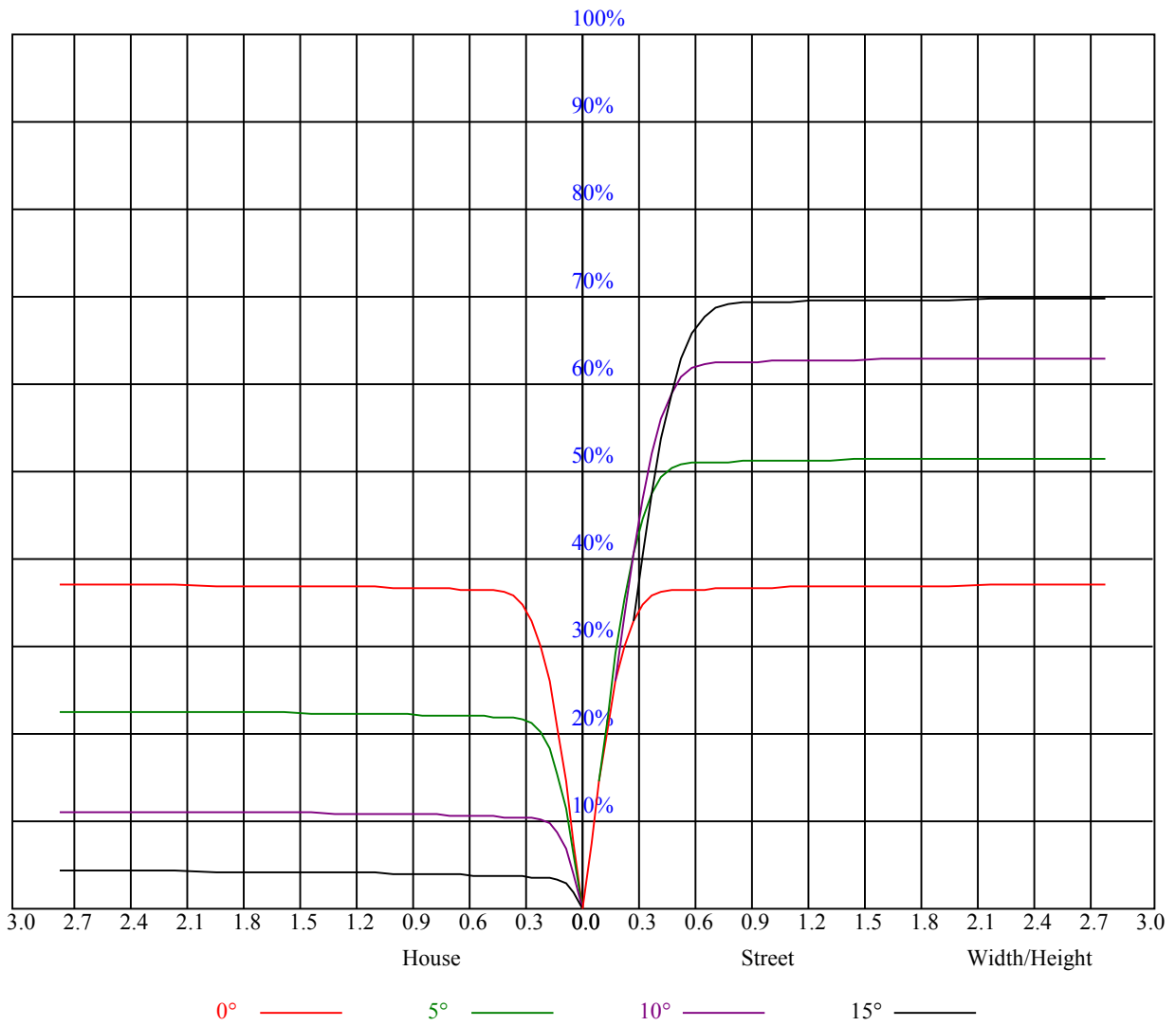
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.89	0.89	0.89	0.87	0.87	0.87	0.83	0.83	0.83	0.79	0.79	0.79	0.76	0.76	0.76	0.75
1	0.84	0.83	0.82	0.83	0.81	0.80	0.80	0.79	0.78	0.77	0.76	0.76	0.74	0.74	0.73	0.72
2	0.81	0.78	0.77	0.79	0.77	0.76	0.77	0.75	0.74	0.75	0.74	0.73	0.73	0.72	0.71	0.70
3	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.71	0.70	0.69	0.68
4	0.75	0.72	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.70	0.69	0.67	0.66
5	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
6	0.70	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.65	0.67	0.66	0.64	0.63
7	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.63	0.67	0.65	0.63	0.66	0.64	0.63	0.62
8	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.62	0.65	0.63	0.61	0.61
9	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.60	0.64	0.62	0.60	0.63	0.62	0.60	0.59
10	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.62	0.60	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	5173.31	5167.69	5115.94	5031.00	4911.19	4711.50	4516.31	4293.56	3987.00
45.0	5175.00	5176.69	5143.50	5066.44	4961.81	4801.50	4594.50	4371.19	4127.63
90.0	5175.00	5150.25	5093.44	4988.81	4838.63	4662.00	4451.63	4145.63	3879.56
135.0	5175.00	5166.56	5115.94	5034.38	4909.50	4729.50	4502.81	4269.38	4019.63
180.0	5173.31	5149.69	5081.63	4968.00	4824.00	4619.25	4403.25	4129.31	3830.63
225.0	5175.00	5134.50	5063.63	4942.69	4766.06	4569.19	4349.81	4039.88	3771.56
270.0	5175.00	5167.13	5115.94	5025.38	4894.31	4712.06	4484.25	4253.06	4006.13
315.0	5175.00	5152.50	5082.75	4973.06	4836.94	4640.06	4438.69	4178.81	3885.75
360.0	5173.31	5167.69	5115.94	5031.00	4911.19	4711.50	4516.31	4293.56	3987.00
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3719.81	3435.19	3103.31	2761.88	2452.50	2107.69	1823.06	1528.88	1261.69
45.0	3797.44	3506.63	3207.94	2866.50	2509.31	2196.00	1882.69	1603.13	1365.19
90.0	3596.63	3228.19	2919.38	2619.00	2239.88	1948.50	1690.31	1424.25	1113.30
135.0	3681.56	3390.75	3089.25	2744.44	2392.31	2080.13	1778.63	1508.06	1272.94
180.0	3544.31	3247.31	2874.94	2573.44	2269.69	1937.25	1638.56	1395.00	1083.15
225.0	3489.19	3119.63	2815.88	2510.44	2170.13	1850.63	1586.25	1105.03	1079.38
270.0	3675.94	3393.00	3099.94	2764.69	2423.81	2117.81	1798.31	1505.25	1264.50
315.0	3609.56	3283.88	2944.69	2638.69	2333.25	1969.88	1699.88	1443.94	1096.93
360.0	3719.81	3435.19	3103.31	2761.88	2452.50	2107.69	1823.06	1528.88	1261.69
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1046.25	833.06	635.63	476.44	336.38	289.13	107.21	47.48	23.91
45.0	1112.06	917.44	704.81	512.44	363.38	284.06	131.79	58.89	25.20
90.0	968.40	780.41	585.96	410.46	275.29	160.88	84.49	30.66	16.65
135.0	1038.38	851.06	650.81	461.81	318.38	289.13	98.72	45.17	21.09
180.0	912.83	727.31	540.90	389.31	247.05	130.05	74.81	32.96	16.48
225.0	862.43	635.79	493.59	334.97	191.59	114.08	52.43	21.15	16.09
270.0	1020.94	832.50	629.44	452.25	308.81	293.63	90.84	40.33	21.26
315.0	949.95	759.43	564.24	395.38	267.41	151.20	77.85	30.83	18.68
360.0	1046.25	833.06	635.63	476.44	336.38	289.13	107.21	47.48	23.91
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	15.30	13.05	11.70	10.46	9.68	9.00	8.33	7.76	7.43
45.0	14.91	12.38	11.03	10.24	9.17	8.55	8.16	7.54	7.14
90.0	13.16	11.64	10.41	9.62	9.00	8.27	7.82	7.43	7.09
135.0	14.01	12.38	11.19	10.24	9.45	8.89	8.33	7.82	7.43
180.0	13.44	11.87	10.52	9.84	9.17	8.49	7.99	7.59	7.20
225.0	13.33	11.76	10.63	9.79	9.06	8.38	7.93	7.43	7.09
270.0	15.08	13.05	11.76	10.58	9.68	8.94	8.27	7.76	7.37
315.0	14.79	12.77	11.42	10.41	9.62	8.78	8.21	7.76	7.26
360.0	15.30	13.05	11.70	10.46	9.68	9.00	8.33	7.76	7.43
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	6.98	6.69	6.41	6.19	6.02	5.85	5.68	5.57	5.51
45.0	6.92	6.58	6.36	6.13	5.96	5.79	5.68	5.57	5.46
90.0	6.75	6.53	6.30	6.08	5.96	5.79	5.68	5.57	5.46
135.0	7.09	6.81	6.58	6.36	6.19	5.96	5.85	5.74	5.63
180.0	6.92	6.64	6.41	6.19	6.08	5.85	5.74	5.63	5.51
225.0	6.75	6.47	6.30	6.08	5.91	5.74	5.63	5.51	5.40
270.0	6.98	6.69	6.41	6.24	6.02	5.85	5.74	5.63	5.51
315.0	6.92	6.64	6.36	6.13	5.96	5.79	5.68	5.51	5.46
360.0	6.98	6.69	6.41	6.19	6.02	5.85	5.68	5.57	5.51

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	5.40	5.29	5.23	5.18	5.12	5.06	5.01	4.95	4.89
45.0	5.40	5.29	5.23	5.18	5.12	5.06	5.01	4.95	4.89
90.0	5.34	5.29	5.18	5.18	5.06	5.01	4.95	4.95	4.89
135.0	5.46	5.40	5.29	5.23	5.18	5.12	5.06	5.01	4.95
180.0	5.40	5.34	5.23	5.18	5.12	5.06	5.01	4.95	4.89
225.0	5.29	5.23	5.18	5.06	5.01	4.95	4.89	4.89	4.84
270.0	5.34	5.29	5.23	5.18	5.06	5.06	4.95	4.95	4.89
315.0	5.34	5.29	5.18	5.12	5.06	5.01	4.95	4.89	4.84
360.0	5.40	5.29	5.23	5.18	5.12	5.06	5.01	4.95	4.89

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.84	4.84	4.84	4.78	4.73	4.73	4.67	4.67	4.61
45.0	4.84	4.84	4.84	4.73	4.73	4.73	4.67	4.67	4.61
90.0	4.84	4.78	4.73	4.73	4.73	4.67	4.67	4.61	4.61
135.0	4.89	4.84	4.84	4.78	4.73	4.73	4.67	4.61	4.61
180.0	4.89	4.84	4.78	4.78	4.73	4.73	4.67	4.61	4.61
225.0	4.78	4.78	4.73	4.73	4.67	4.61	4.61	4.61	4.56
270.0	4.84	4.78	4.78	4.73	4.73	4.67	4.67	4.67	4.61
315.0	4.84	4.78	4.73	4.73	4.67	4.67	4.67	4.61	4.61
360.0	4.84	4.84	4.84	4.78	4.73	4.73	4.67	4.67	4.61

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.61	4.56	4.56	4.56	4.50	4.50	4.50	4.50	4.50
45.0	4.61	4.56	4.56	4.56	4.56	4.50	4.50	4.50	4.44
90.0	4.61	4.61	4.56	4.56	4.56	4.56	4.56	4.50	4.50
135.0	4.61	4.56	4.56	4.56	4.50	4.50	4.50	4.44	4.50
180.0	4.61	4.56	4.56	4.50	4.50	4.44	4.50	4.44	4.50
225.0	4.56	4.56	4.56	4.50	4.44	4.44	4.44	4.44	4.44
270.0	4.61	4.56	4.56	4.56	4.50	4.50	4.50	4.50	4.44
315.0	4.56	4.56	4.50	4.50	4.50	4.44	4.44	4.44	4.44
360.0	4.61	4.56	4.56	4.56	4.50	4.50	4.50	4.50	4.50

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.44	4.44	4.44	4.44	4.44	4.44	4.39	4.39	4.39
45.0	4.50	4.44	4.44	4.44	4.44	4.39	4.44	4.39	4.39
90.0	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
135.0	4.44	4.44	4.39	4.44	4.39	4.39	4.39	4.39	4.39
180.0	4.44	4.44	4.39	4.39	4.44	4.39	4.39	4.39	4.39
225.0	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39
270.0	4.50	4.50	4.44	4.44	4.44	4.44	4.44	4.44	4.44
315.0	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.39	4.39
360.0	4.44	4.44	4.44	4.44	4.44	4.44	4.39	4.39	4.39

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.39	4.39	4.39	4.33	4.39	4.39	4.39	4.39	4.39
45.0	4.39	4.39	4.39	4.33	4.39	4.39	4.33	4.39	4.33
90.0	4.50	4.56	4.67	4.73	4.73	4.50	4.33	4.33	4.33
135.0	4.39	4.39	4.39	4.39	4.39	4.39	4.33	4.33	4.39
180.0	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39
225.0	4.39	4.33	4.33	4.39	4.33	4.39	4.33	4.33	4.39
270.0	4.44	4.44	4.44	4.44	4.44	4.33	4.39	4.39	4.33
315.0	4.39	4.39	4.39	4.39	4.39	4.33	4.33	4.39	4.33
360.0	4.39	4.39	4.39	4.33	4.39	4.39	4.39	4.39	4.39

Intensity data(cd)

C/ γ ($^{\circ}$)	90.0
0.0	4.39
45.0	4.33
90.0	4.39
135.0	4.33
180.0	4.33
225.0	4.33
270.0	4.33
315.0	4.33
360.0	4.39