
LumCAT: 4-2108-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): 854.64
Efficiency(%): 90.15%
Lumens(lm)/Power(W): 133.12
Central intensity(cd): 9224.297
Maximum intensity(cd): 9224.297
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=11.8
 [C90/270]Total=11.8
Field angle(10%Imax): [C0/180]Total=22.7
 [C90/270]Total=22.7
Maximum s/h(1/2): C0_180=0.20 C90_270=0.20
Maximum s/h(1/4): C0_180=0.20 C90_270=0.20
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.15%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.669%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9224.297	0.000	0	.000%	.000%
1.0	9051.820	8.745	8.745	.922%	1.023%
2.0	8531.016	25.237	33.981	2.662%	3.976%
3.0	7735.711	38.905	72.886	4.104%	8.528%
4.0	6737.977	48.448	121.334	5.111%	14.197%
5.0	5677.453	53.411	174.745	5.634%	20.447%
6.0	4509.703	53.536	228.281	5.647%	26.711%
7.0	3420.422	49.222	277.503	5.192%	32.470%
8.0	2558.883	42.793	320.296	4.514%	37.477%
9.0	1824.469	35.525	355.82	3.747%	41.634%
10.0	1256.780	27.884	383.705	2.941%	44.897%
11.0	998.487	22.535	406.239	2.377%	47.534%
12.0	791.346	19.565	425.805	2.064%	49.823%
13.0	661.922	17.247	443.051	1.819%	51.841%
14.0	576.696	15.854	458.906	1.672%	53.696%
15.0	522.900	15.096	474.001	1.592%	55.462%
16.0	482.639	14.734	488.735	1.554%	57.186%
17.0	449.304	14.513	503.248	1.531%	58.884%
18.0	427.627	14.459	517.707	1.525%	60.576%
19.0	414.949	14.659	532.366	1.546%	62.292%
20.0	404.002	14.989	547.355	1.581%	64.045%
21.0	395.733	15.357	562.711	1.620%	65.842%
22.0	389.060	15.771	578.482	1.664%	67.688%
23.0	382.521	16.190	594.672	1.708%	69.582%
24.0	375.469	16.572	611.244	1.748%	71.521%
25.0	369.281	16.934	628.178	1.786%	73.502%
26.0	362.187	17.266	645.445	1.821%	75.523%
27.0	354.867	17.543	662.988	1.851%	77.575%
28.0	348.202	17.800	680.788	1.878%	79.658%
29.0	340.172	18.010	698.798	1.900%	81.766%
30.0	331.988	18.148	716.946	1.914%	83.889%
31.0	322.980	18.227	735.173	1.923%	86.022%
32.0	311.941	18.190	753.362	1.919%	88.150%
33.0	289.856	17.729	771.092	1.870%	90.225%
34.0	265.247	16.799	787.891	1.772%	92.190%
35.0	206.923	14.664	802.555	1.547%	93.906%
36.0	160.868	11.711	814.265	1.235%	95.276%
37.0	116.866	9.058	823.323	.955%	96.336%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	71.501	6.287	829.611	.663%	97.072%
39.0	36.703	3.693	833.304	.390%	97.504%
40.0	16.186	1.845	835.149	.195%	97.720%
41.0	11.503	0.986	836.135	.104%	97.835%
42.0	9.696	0.770	836.905	.081%	97.925%
43.0	8.072	0.658	837.563	.069%	98.002%
44.0	6.040	0.533	838.096	.056%	98.065%
45.0	4.430	0.402	838.498	.042%	98.112%
46.0	4.001	0.330	838.828	.035%	98.150%
47.0	3.909	0.315	839.142	.033%	98.187%
48.0	3.853	0.314	839.456	.033%	98.224%
49.0	3.776	0.313	839.769	.033%	98.260%
50.0	3.727	0.313	840.082	.033%	98.297%
51.0	3.677	0.313	840.395	.033%	98.334%
52.0	3.635	0.314	840.709	.033%	98.370%
53.0	3.600	0.315	841.024	.033%	98.407%
54.0	3.558	0.315	841.339	.033%	98.444%
55.0	3.537	0.317	841.656	.033%	98.481%
56.0	3.495	0.318	841.974	.034%	98.518%
57.0	3.480	0.319	842.293	.034%	98.556%
58.0	3.459	0.321	842.614	.034%	98.593%
59.0	3.445	0.323	842.936	.034%	98.631%
60.0	3.431	0.325	843.261	.034%	98.669%
61.0	3.417	0.327	843.588	.034%	98.707%
62.0	3.403	0.329	843.917	.035%	98.746%
63.0	3.396	0.331	844.247	.035%	98.784%
64.0	3.382	0.333	844.58	.035%	98.823%
65.0	3.375	0.334	844.914	.035%	98.862%
66.0	3.375	0.337	845.251	.036%	98.902%
67.0	3.375	0.339	845.591	.036%	98.942%
68.0	3.389	0.343	845.933	.036%	98.982%
69.0	3.473	0.350	846.283	.037%	99.023%
70.0	3.684	0.368	846.651	.039%	99.066%
71.0	4.191	0.407	847.058	.043%	99.113%
72.0	4.416	0.447	847.505	.047%	99.166%
73.0	4.289	0.455	847.961	.048%	99.219%
74.0	4.015	0.437	848.397	.046%	99.270%
75.0	3.804	0.413	848.81	.044%	99.318%

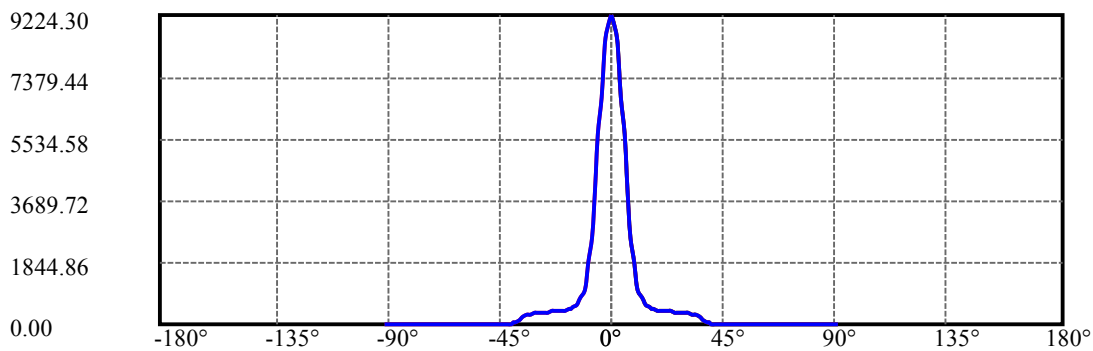
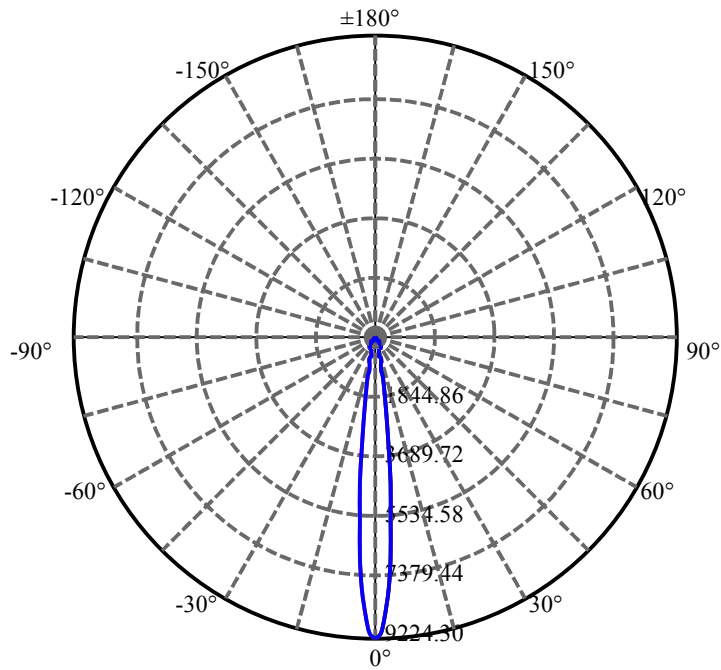
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.748	0.401	849.211	.042%	99.365%
77.0	3.776	0.401	849.612	.042%	99.412%
78.0	3.804	0.406	850.018	.043%	99.460%
79.0	3.846	0.411	850.429	.043%	99.508%
80.0	3.832	0.414	850.843	.044%	99.556%
81.0	3.797	0.413	851.256	.044%	99.604%
82.0	3.670	0.405	851.661	.043%	99.652%
83.0	3.530	0.391	852.052	.041%	99.698%
84.0	3.495	0.383	852.435	.040%	99.742%
85.0	3.488	0.381	852.816	.040%	99.787%
86.0	3.459	0.380	853.195	.040%	99.831%
87.0	3.389	0.375	853.57	.040%	99.875%
88.0	3.284	0.366	853.936	.039%	99.918%
89.0	3.171	0.354	854.289	.037%	99.959%
90.0	3.150	0.347	854.636	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	716.95	75.63%	83.89%
0-40	835.15	88.10%	97.72%
0-60	843.26	88.95%	98.67%
0-90	854.29	90.11%	99.96%
0-120	854.29	90.11%	99.96%
0-180	854.64	90.15%	100.00%
60-90	11.35	1.20%	1.33%
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%
0-28.16	683.71	72.12%	80.00%

ZONAL LUMEN SUMMARY

0-10	383.70
10-20	163.65
20-30	169.59
30-40	118.20
40-50	4.93
50-60	3.18
60-70	3.39
70-80	4.19
80-90	3.45
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



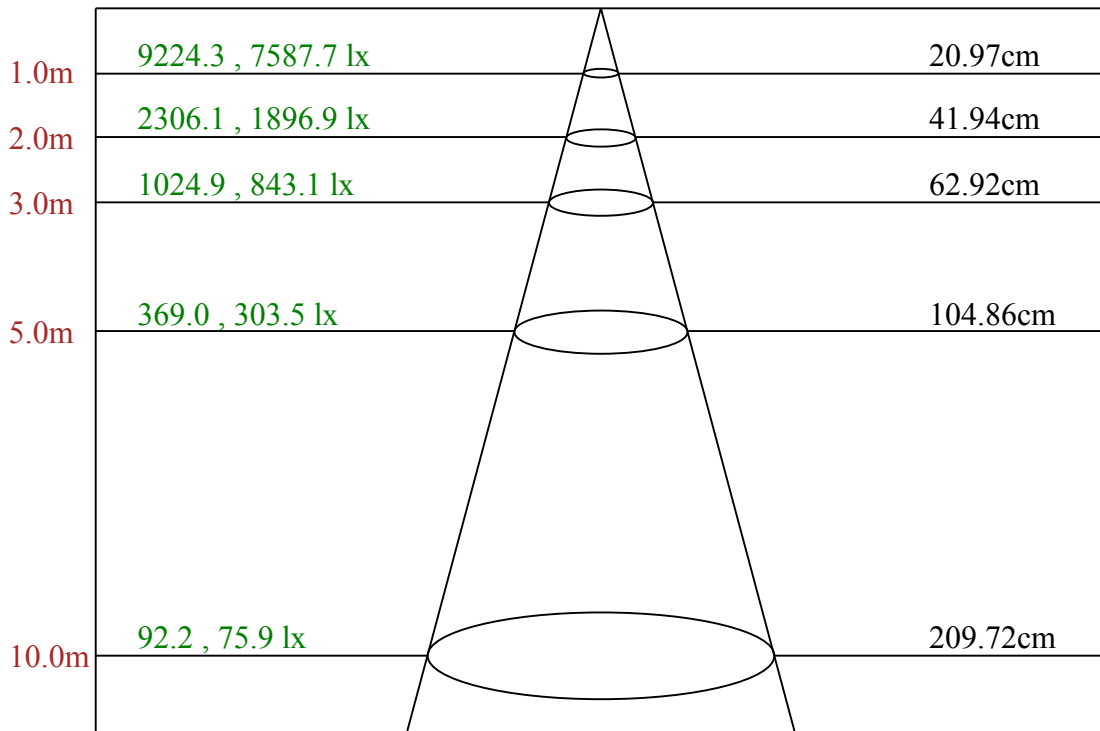
C0(Max): —————

C0/C180: —————

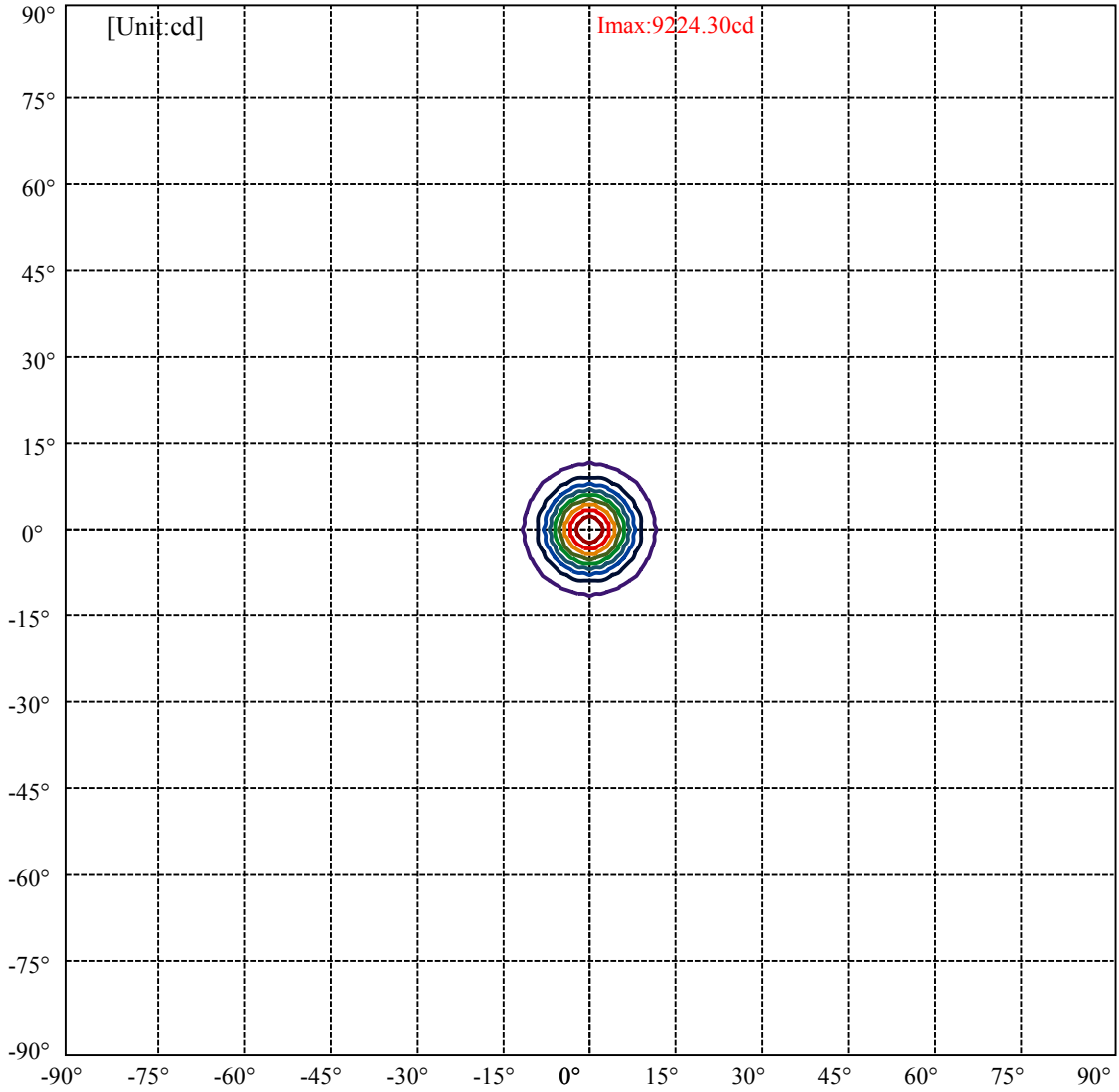
C90/C270: —————

Field angle(10%Imax):C0/180Left:11.4 Right:11.4
:C90/270Left:11.4 Right:11.4

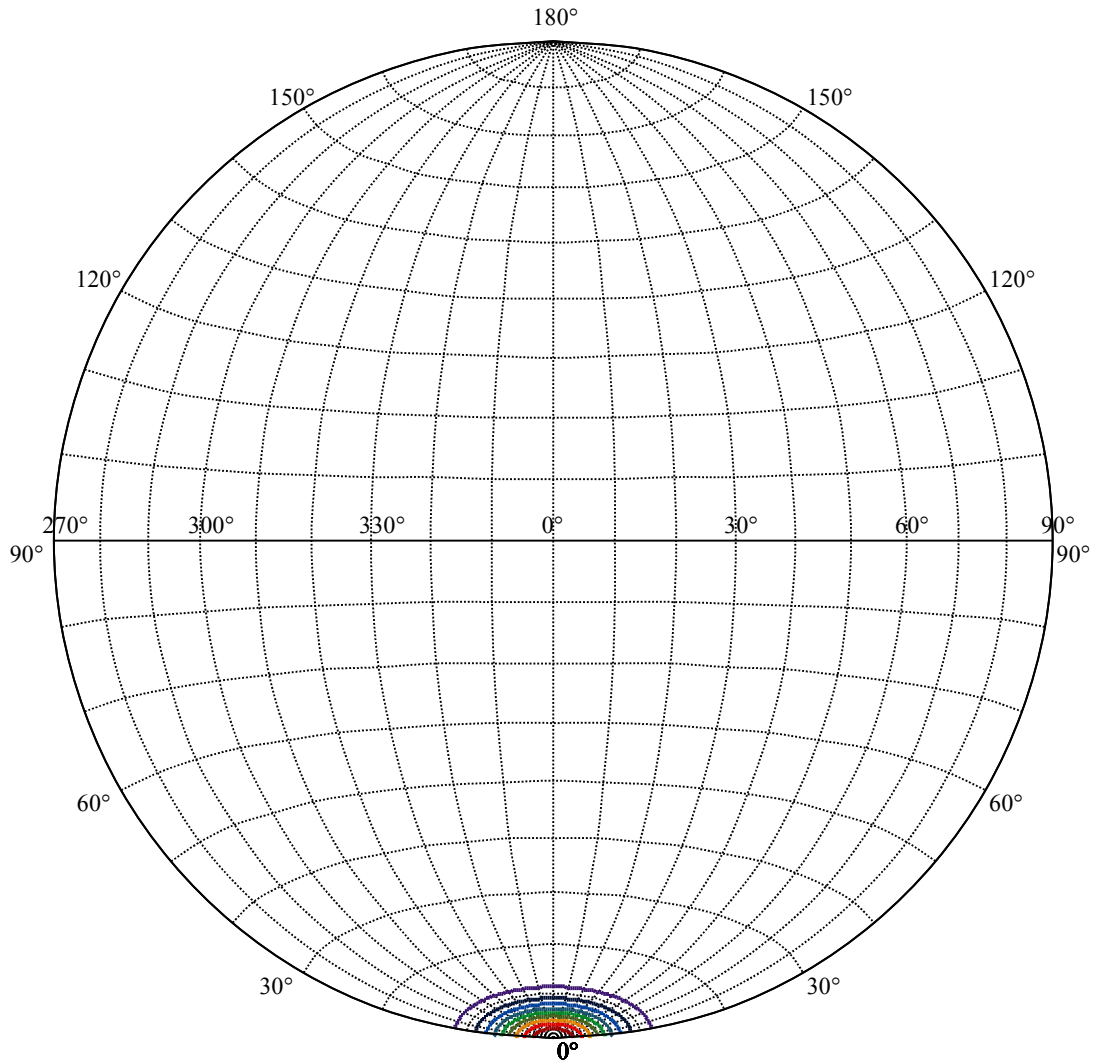
Beam Angle(50%Imax):C0/180Left:5.9 Right:5.9
:C90/270Left:5.9 Right:5.9



Max , Ave Beam angle of C0 plane 11.97



(10%I _{max}) 922.43	—
(20%I _{max}) 1844.86	—
(30%I _{max}) 2767.29	—
(40%I _{max}) 3689.72	—
(50%I _{max}) 4612.15	—
(60%I _{max}) 5534.58	—
(70%I _{max}) 6457.01	—
(80%I _{max}) 7379.44	—
(90%I _{max}) 8301.87	—



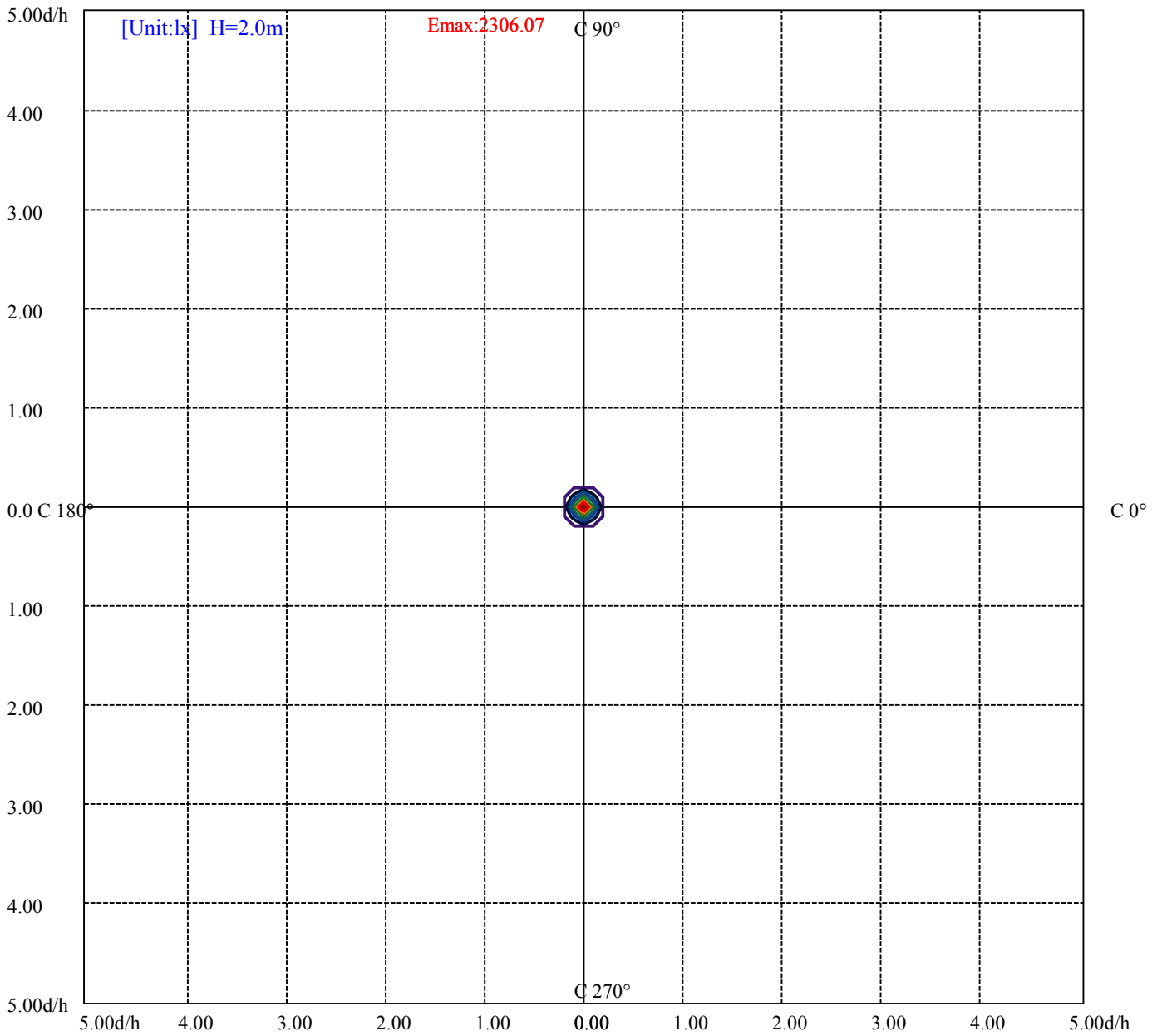
House

[Unit:cd]

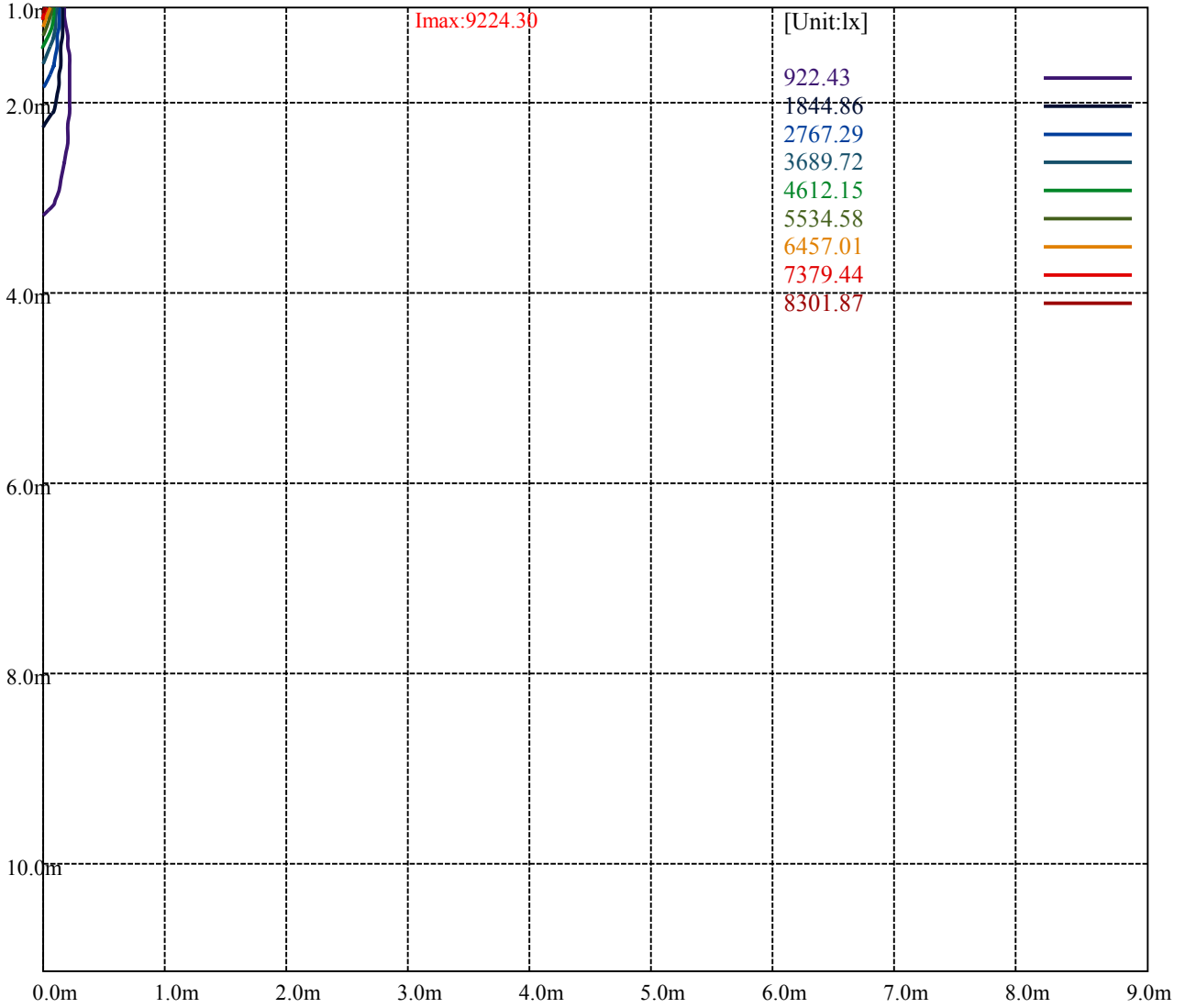
Road

Imax:9224.30

(10%Imax)	922.43	—
(20%Imax)	1844.86	—
(30%Imax)	2767.29	—
(40%Imax)	3689.72	—
(50%Imax)	4612.15	—
(60%Imax)	5534.58	—
(70%Imax)	6457.01	—
(80%Imax)	7379.44	—
(90%Imax)	8301.87	—



(10%Emax) 230.6068	—
(20%Emax) 461.2125	—
(30%Emax) 691.82	—
(40%Emax) 922.4275	—
(50%Emax) 1153.035	—
(60%Emax) 1383.64	—
(70%Emax) 1614.248	—
(80%Emax) 1844.855	—
(90%Emax) 2075.46	—



Luminance Table

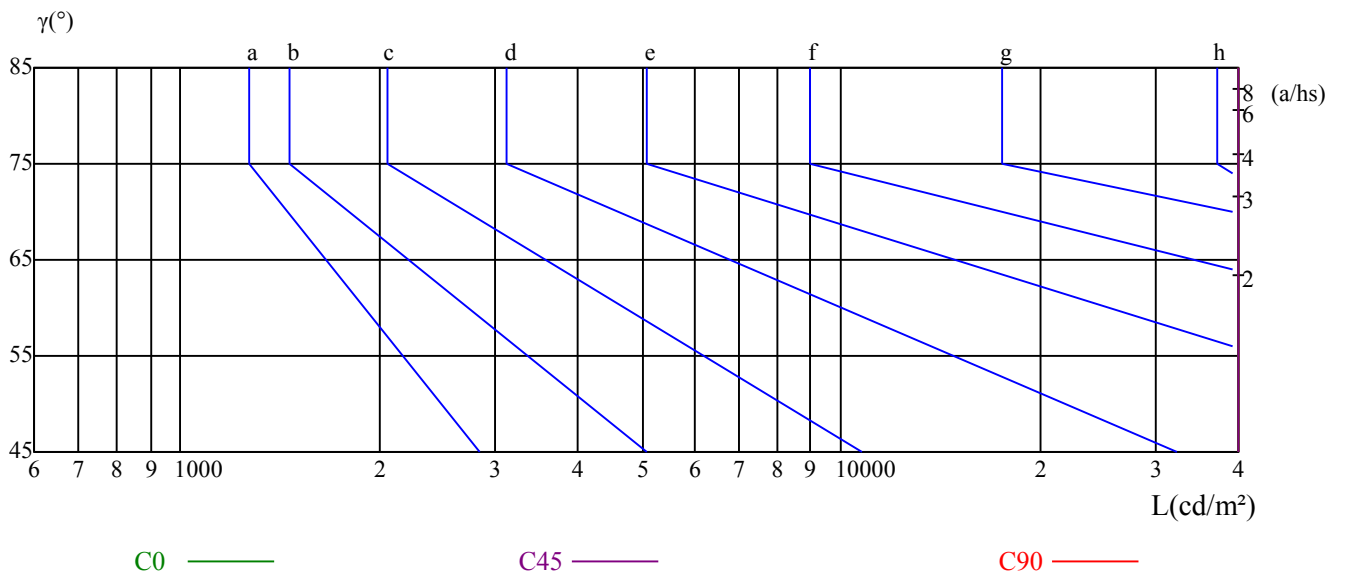
γ	45	50	55	60	65	70	75	80	85
C0	62645	57975	61661	68625	79859	107724	146972	220678	400146
C45	62645	57975	61661	68625	79859	107724	146972	220678	400146
C90	62645	57975	61661	68625	79859	107724	146972	220678	400146

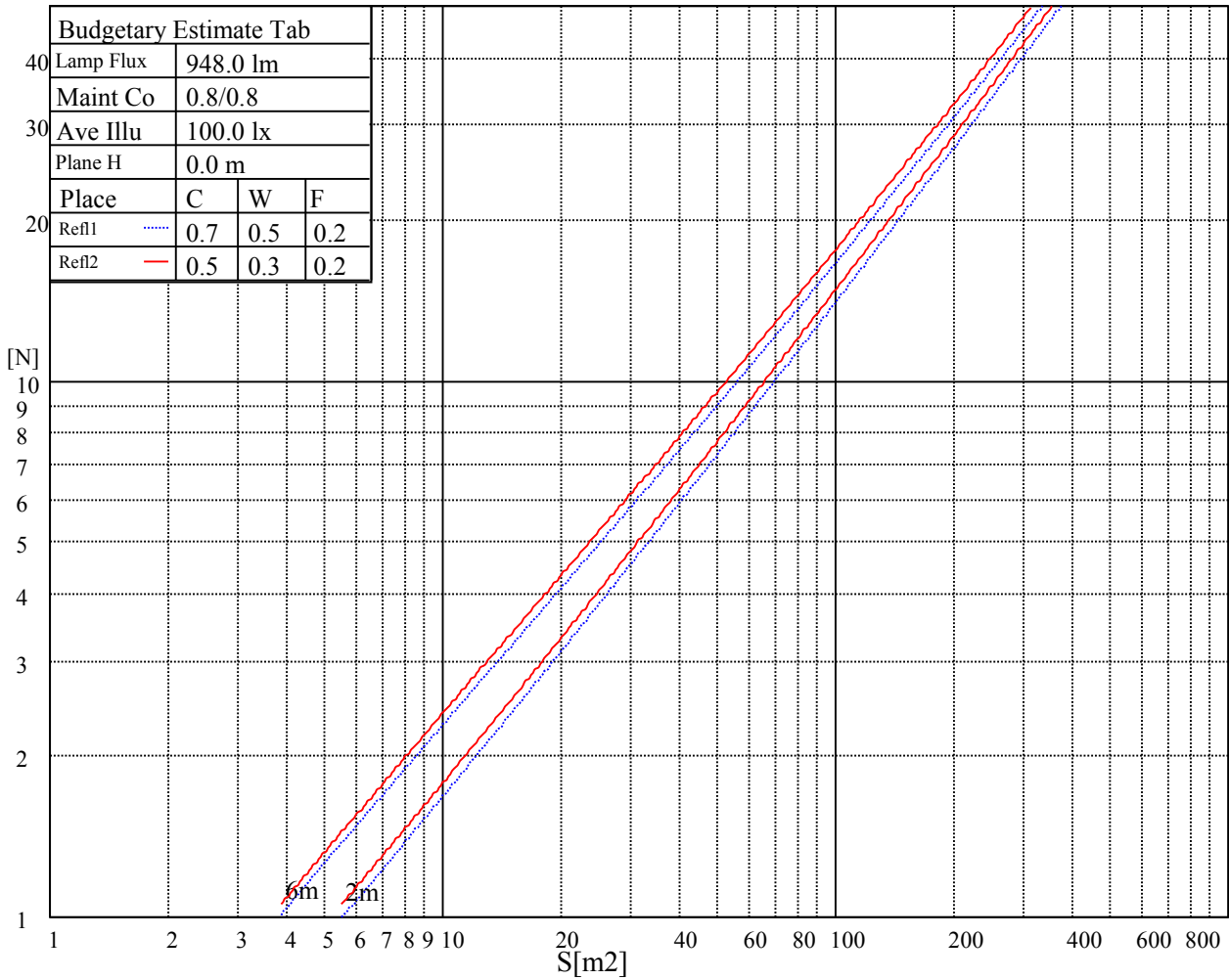
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
79859	79859	79859	146972	146972	146972	400146	400146	400146

Glare Table

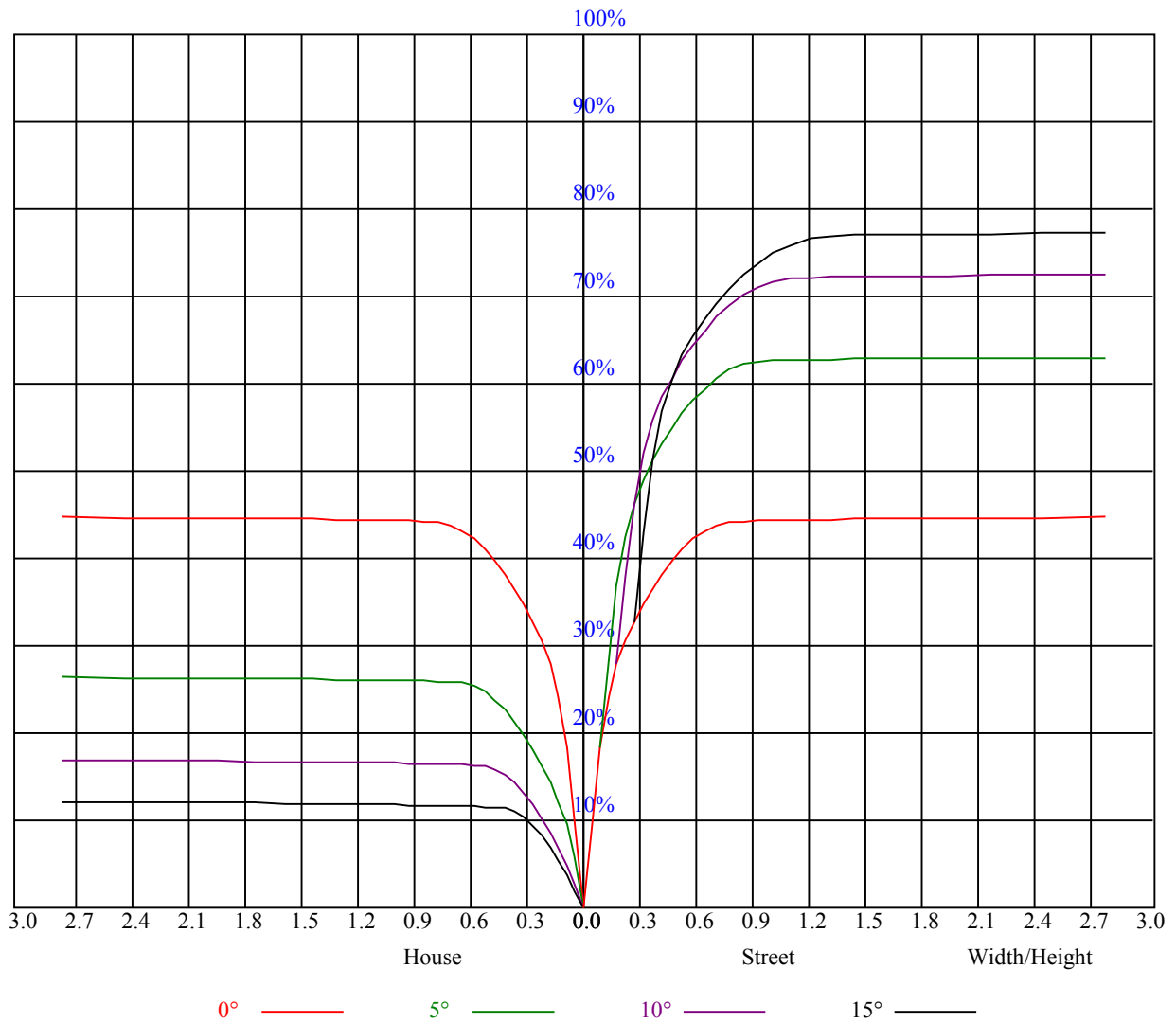
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.98	0.99	0.98	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.86
2	0.96	0.93	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.87	0.86	0.87	0.85	0.84	0.83
3	0.92	0.88	0.85	0.90	0.87	0.85	0.88	0.85	0.83	0.86	0.84	0.82	0.84	0.82	0.81	0.80
4	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.80	0.83	0.81	0.79	0.82	0.80	0.78	0.77
5	0.84	0.80	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.79	0.77	0.75	0.74
6	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.75	0.73	0.72
7	0.78	0.74	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
9	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
10	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.64



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	9231.75	9073.13	8470.13	7736.63	6808.50	5643.00	4466.25	3512.81	2559.38
45.0	9233.44	9150.19	8696.25	7929.56	7038.56	6042.38	4746.94	3723.19	2811.94
90.0	9232.31	8952.19	8416.69	7534.13	6445.69	5419.13	4380.19	3021.75	2311.88
135.0	9199.69	9186.75	8856.00	8077.50	7184.81	6193.69	4885.31	3841.88	2895.19
180.0	9231.75	9084.94	8499.38	7737.19	6779.81	5623.88	4445.44	3437.44	2454.75
225.0	9233.44	8976.38	8348.63	7543.69	6315.75	5379.19	4227.19	3049.88	2340.56
270.0	9232.31	9153.56	8704.69	7946.44	7029.00	5870.25	4692.38	3709.69	2819.25
315.0	9199.69	8837.44	8256.38	7380.56	6301.69	5248.13	4233.94	3066.75	2278.13
360.0	9231.75	9073.13	8470.13	7736.63	6808.50	5643.00	4466.25	3512.81	2559.38

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1897.88	1359.00	1014.19	810.56	672.19	579.38	524.81	481.50	444.94
45.0	1930.50	1436.06	1090.13	834.75	680.06	597.38	532.69	492.19	452.81
90.0	1691.44	1093.78	910.07	741.32	640.74	550.46	505.58	466.71	437.68
135.0	1971.00	1451.25	1094.06	837.56	687.94	608.63	546.19	500.63	464.63
180.0	1788.75	1116.11	955.29	774.06	658.74	570.21	521.49	483.47	448.88
225.0	1703.25	1054.29	904.05	734.29	623.81	551.14	509.23	474.75	441.96
270.0	1928.81	1434.38	1095.19	848.25	692.44	607.50	541.13	497.25	465.75
315.0	1684.13	1109.36	924.92	749.98	639.45	548.89	502.09	464.63	437.79
360.0	1897.88	1359.00	1014.19	810.56	672.19	579.38	524.81	481.50	444.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	426.38	415.13	405.00	397.13	391.50	385.88	379.13	373.50	366.19
45.0	429.19	416.25	405.00	397.13	390.38	384.19	375.19	371.25	365.06
90.0	419.74	406.58	395.38	386.61	379.91	373.22	366.98	360.11	353.42
135.0	434.81	419.63	407.25	399.94	393.19	387.00	379.13	374.63	367.31
180.0	424.80	412.93	403.31	395.83	388.46	381.09	374.18	365.57	357.13
225.0	427.33	416.53	404.72	395.33	389.31	382.56	376.14	368.89	362.03
270.0	438.75	424.69	413.44	405.00	398.25	392.06	384.75	378.56	371.81
315.0	420.02	407.87	397.91	388.91	381.49	374.18	368.27	361.74	354.54
360.0	426.38	415.13	405.00	397.13	391.50	385.88	379.13	373.50	366.19

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	359.44	353.25	345.38	337.50	330.19	319.50	302.06	287.44	218.64
45.0	357.75	350.44	343.69	335.81	325.13	316.69	296.44	285.19	220.95
90.0	347.40	341.27	332.72	325.91	317.81	304.37	278.21	243.06	197.33
135.0	358.31	351.56	344.81	335.25	324.56	313.88	293.06	285.19	216.17
180.0	349.20	341.72	331.65	323.27	313.59	301.78	277.43	241.71	189.11
225.0	355.22	347.34	338.46	329.63	321.41	308.81	281.98	243.84	189.45
270.0	362.25	356.06	348.75	339.75	330.19	320.63	303.75	285.75	223.31
315.0	349.37	343.97	335.93	328.78	320.96	309.88	285.92	249.81	200.42
360.0	359.44	353.25	345.38	337.50	330.19	319.50	302.06	287.44	218.64

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	174.99	131.06	82.80	42.30	18.51	12.38	10.29	8.78	6.41
45.0	185.57	129.99	84.71	52.20	19.13	12.43	10.74	8.89	6.30
90.0	148.84	107.44	63.34	28.58	13.11	10.29	8.44	6.64	5.46
135.0	163.18	122.12	76.95	39.54	17.49	11.31	9.23	7.93	7.03
180.0	146.70	105.98	59.63	30.15	13.67	10.01	8.49	7.09	4.78
225.0	143.61	101.70	59.40	28.01	13.61	10.80	8.94	7.09	5.46
270.0	172.07	127.35	80.55	42.75	19.41	12.94	11.14	9.79	7.37
315.0	151.99	109.29	64.63	30.09	14.57	11.87	10.29	8.38	5.51
360.0	174.99	131.06	82.80	42.30	18.51	12.38	10.29	8.78	6.41

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	4.67	4.05	3.99	3.88	3.83	3.77	3.71	3.71	3.66
45.0	4.50	4.05	3.94	3.88	3.77	3.77	3.71	3.66	3.60
90.0	4.50	4.05	3.94	3.88	3.83	3.77	3.71	3.71	3.66
135.0	4.61	3.99	3.88	3.83	3.77	3.71	3.71	3.66	3.60
180.0	4.16	3.88	3.77	3.77	3.71	3.66	3.60	3.54	3.54
225.0	4.39	3.94	3.88	3.83	3.71	3.66	3.60	3.54	3.54
270.0	4.39	4.05	3.99	3.94	3.83	3.77	3.71	3.66	3.60
315.0	4.22	3.99	3.88	3.83	3.77	3.71	3.66	3.60	3.60
360.0	4.67	4.05	3.99	3.88	3.83	3.77	3.71	3.71	3.66
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.60	3.60	3.54	3.54	3.54	3.54	3.49	3.49	3.49
45.0	3.60	3.54	3.54	3.49	3.49	3.49	3.43	3.43	3.43
90.0	3.60	3.60	3.54	3.54	3.49	3.49	3.49	3.49	3.43
135.0	3.54	3.54	3.49	3.49	3.49	3.43	3.43	3.43	3.43
180.0	3.49	3.43	3.43	3.43	3.38	3.38	3.38	3.38	3.32
225.0	3.49	3.49	3.43	3.43	3.38	3.38	3.38	3.38	3.38
270.0	3.60	3.54	3.49	3.43	3.43	3.43	3.43	3.38	3.38
315.0	3.54	3.54	3.49	3.49	3.49	3.43	3.43	3.38	3.38
360.0	3.60	3.60	3.54	3.54	3.54	3.54	3.49	3.49	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	3.43	3.43	3.43	3.43	3.54	3.99	4.11	4.11
45.0	3.38	3.38	3.38	3.38	3.38	3.38	3.38	3.32	3.38
90.0	3.43	3.43	3.43	3.43	3.43	3.49	3.60	3.88	5.40
135.0	3.43	3.43	3.38	3.38	3.38	3.38	3.38	3.49	3.77
180.0	3.32	3.32	3.32	3.26	3.26	3.26	3.32	3.32	3.32
225.0	3.38	3.38	3.43	3.43	3.43	3.43	3.43	3.43	3.43
270.0	3.38	3.32	3.32	3.32	3.32	3.26	3.26	3.26	3.32
315.0	3.38	3.38	3.32	3.38	3.38	3.38	3.43	4.67	6.81
360.0	3.49	3.43	3.43	3.43	3.43	3.54	3.99	4.11	4.11
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.28	4.44	4.44	4.50	4.67	4.67	4.67	4.61	4.39
45.0	3.66	3.54	3.32	3.32	3.32	3.32	3.32	3.32	3.32
90.0	6.58	6.41	5.91	5.18	5.12	5.12	5.06	5.01	4.78
135.0	4.16	4.22	3.94	3.60	3.49	3.49	3.43	3.43	3.38
180.0	3.32	3.26	3.26	3.32	3.26	3.26	3.26	3.32	3.26
225.0	3.43	3.43	3.43	3.43	3.43	3.66	4.05	4.50	4.89
270.0	3.26	3.32	3.32	3.32	3.32	3.32	3.26	3.26	3.26
315.0	6.64	5.68	4.50	3.77	3.38	3.38	3.38	3.32	3.38
360.0	4.28	4.44	4.44	4.50	4.67	4.67	4.67	4.61	4.39
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.94	3.66	3.71	3.71	3.71	3.71	3.66	3.32	3.21
45.0	3.32	3.26	3.32	3.32	3.32	3.32	3.26	3.26	3.21
90.0	4.61	4.44	4.28	4.11	3.94	3.77	3.60	3.32	3.15
135.0	3.38	3.43	3.38	3.38	3.38	3.38	3.38	3.32	3.21
180.0	3.32	3.26	3.26	3.26	3.26	3.26	3.32	3.26	3.15
225.0	5.12	4.67	3.54	3.54	3.60	3.60	3.26	3.21	3.15
270.0	3.32	3.26	3.32	3.26	3.26	3.26	3.26	3.26	3.15
315.0	3.38	3.38	3.43	3.38	3.43	3.38	3.38	3.32	3.15
360.0	3.94	3.66	3.71	3.71	3.71	3.71	3.66	3.32	3.21

Intensity data(cd)

C/γ(°)	90.0
0.0	3.15
45.0	3.15
90.0	3.15
135.0	3.15
180.0	3.15
225.0	3.15
270.0	3.15
315.0	3.15
360.0	3.15