
LumCAT: 4-2109-A
Luminaire: 92.76.323.00
Report No: NATA0100
Test No: GC2019061807
LampCAT: PHILIPS SLM 1205 G7
Lamp flux(lm): 1233.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 33.4100
Current(A): 0.2470
Power (W): 8.2500
PF: 0.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 1091.20
Efficiency(%): 88.50%
Lumens(lm)/Power(W): 132.27
Central intensity(cd): 4325.484
Maximum intensity(cd): 4325.484
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.6
 [C90/270]Total=23.6
Field angle(10%Imax): [C0/180]Total=53.5
 [C90/270]Total=53.5
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.39 C90_270=0.39
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.50%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.605%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4325.484	0.000	0	.000%	.000%
1.0	4314.305	4.134	4.134	.335%	.379%
2.0	4274.156	12.327	16.461	1.000%	1.509%
3.0	4190.344	20.244	36.705	1.642%	3.364%
4.0	4068.492	27.645	64.35	2.242%	5.897%
5.0	3907.758	34.313	98.664	2.783%	9.042%
6.0	3706.523	40.015	138.679	3.245%	12.709%
7.0	3478.078	44.595	183.273	3.617%	16.796%
8.0	3250.547	48.155	231.429	3.906%	21.209%
9.0	2968.031	50.398	281.827	4.087%	25.827%
10.0	2667.164	50.996	332.824	4.136%	30.501%
11.0	2391.188	50.543	383.367	4.099%	35.133%
12.0	2098.406	49.078	432.445	3.980%	39.630%
13.0	1797.328	46.233	478.677	3.750%	43.867%
14.0	1536.469	42.672	521.349	3.461%	47.778%
15.0	1292.498	38.837	560.187	3.150%	51.337%
16.0	1081.891	34.791	594.978	2.822%	54.525%
17.0	937.589	31.449	626.427	2.551%	57.407%
18.0	802.181	28.685	655.112	2.326%	60.036%
19.0	701.740	26.165	681.277	2.122%	62.434%
20.0	628.573	24.348	705.626	1.975%	64.665%
21.0	572.681	23.067	728.692	1.871%	66.779%
22.0	530.051	22.160	750.852	1.797%	68.810%
23.0	501.237	21.639	772.491	1.755%	70.793%
24.0	477.738	21.404	793.895	1.736%	72.754%
25.0	457.566	21.267	815.162	1.725%	74.703%
26.0	442.554	21.247	836.409	1.723%	76.650%
27.0	429.328	21.331	857.74	1.730%	78.605%
28.0	416.651	21.418	879.158	1.737%	80.568%
29.0	406.463	21.535	900.693	1.747%	82.542%
30.0	397.294	21.701	922.395	1.760%	84.530%
31.0	387.148	21.830	944.224	1.770%	86.531%
32.0	377.571	21.908	966.133	1.777%	88.539%
33.0	359.184	21.705	987.838	1.760%	90.528%
34.0	314.494	20.387	1008.225	1.653%	92.396%
35.0	267.834	18.085	1026.31	1.467%	94.053%
36.0	201.410	14.941	1041.251	1.212%	95.423%
37.0	138.101	11.073	1052.324	.898%	96.437%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	81.401	7.327	1059.651	.594%	97.109%
39.0	38.707	4.100	1063.75	.332%	97.485%
40.0	17.923	1.975	1065.725	.160%	97.666%
41.0	13.219	1.109	1066.834	.090%	97.767%
42.0	10.680	0.868	1067.703	.070%	97.847%
43.0	8.761	0.720	1068.423	.058%	97.913%
44.0	7.031	0.596	1069.019	.048%	97.967%
45.0	5.829	0.494	1069.513	.040%	98.013%
46.0	5.470	0.442	1069.955	.036%	98.053%
47.0	5.330	0.430	1070.385	.035%	98.093%
48.0	5.245	0.427	1070.812	.035%	98.132%
49.0	5.154	0.427	1071.239	.035%	98.171%
50.0	5.077	0.427	1071.666	.035%	98.210%
51.0	5.013	0.427	1072.092	.035%	98.249%
52.0	4.936	0.427	1072.519	.035%	98.288%
53.0	4.880	0.427	1072.946	.035%	98.327%
54.0	4.823	0.428	1073.374	.035%	98.366%
55.0	4.781	0.429	1073.803	.035%	98.406%
56.0	4.739	0.430	1074.233	.035%	98.445%
57.0	4.711	0.432	1074.665	.035%	98.485%
58.0	4.669	0.434	1075.099	.035%	98.525%
59.0	4.641	0.435	1075.534	.035%	98.564%
60.0	4.627	0.438	1075.972	.036%	98.605%
61.0	4.605	0.441	1076.412	.036%	98.645%
62.0	4.605	0.444	1076.856	.036%	98.686%
63.0	4.591	0.447	1077.304	.036%	98.727%
64.0	4.605	0.451	1077.755	.037%	98.768%
65.0	4.669	0.459	1078.214	.037%	98.810%
66.0	4.774	0.471	1078.685	.038%	98.853%
67.0	4.873	0.485	1079.17	.039%	98.898%
68.0	4.950	0.498	1079.668	.040%	98.943%
69.0	5.020	0.509	1080.176	.041%	98.990%
70.0	5.098	0.520	1080.696	.042%	99.037%
71.0	5.203	0.532	1081.228	.043%	99.086%
72.0	5.505	0.557	1081.785	.045%	99.137%
73.0	5.794	0.591	1082.376	.048%	99.191%
74.0	5.794	0.609	1082.985	.049%	99.247%
75.0	5.505	0.597	1083.582	.048%	99.302%

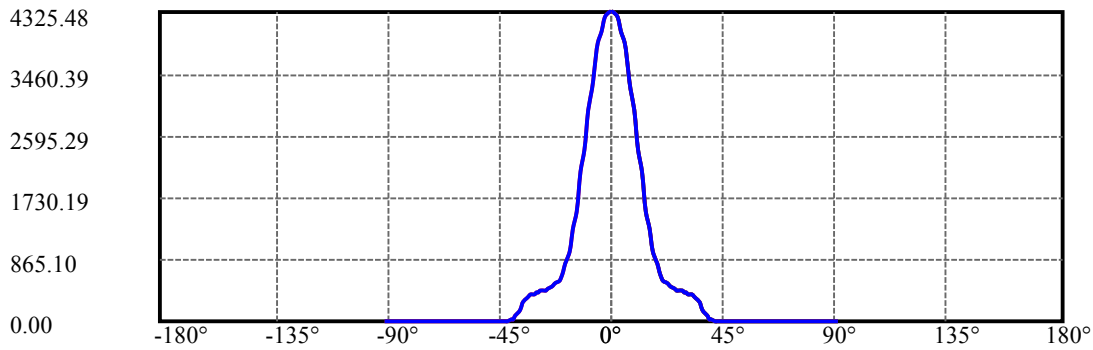
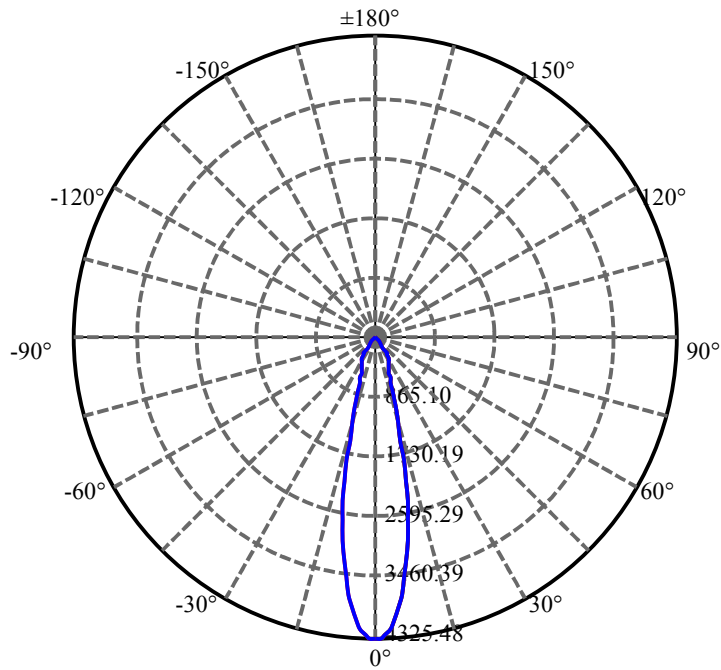
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.175	0.567	1084.149	.046%	99.354%
77.0	5.063	0.546	1084.695	.044%	99.404%
78.0	4.922	0.534	1085.229	.043%	99.453%
79.0	4.852	0.525	1085.755	.043%	99.501%
80.0	4.788	0.520	1086.274	.042%	99.549%
81.0	4.620	0.509	1086.783	.041%	99.595%
82.0	4.549	0.497	1087.28	.040%	99.641%
83.0	4.521	0.493	1087.773	.040%	99.686%
84.0	4.535	0.493	1088.267	.040%	99.731%
85.0	4.570	0.497	1088.764	.040%	99.777%
86.0	4.591	0.501	1089.264	.041%	99.823%
87.0	4.577	0.502	1089.766	.041%	99.869%
88.0	4.444	0.494	1090.26	.040%	99.914%
89.0	4.240	0.476	1090.736	.039%	99.958%
90.0	4.198	0.463	1091.199	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	922.39	74.81%	84.53%
0-40	1065.73	86.43%	97.67%
0-60	1075.97	87.26%	98.60%
0-90	1090.74	88.46%	99.96%
0-120	1090.74	88.46%	99.96%
0-180	1091.20	88.50%	100.00%
60-90	15.20	1.23%	1.39%
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%
0-27.71	872.96	70.80%	80.00%

ZONAL LUMEN SUMMARY

0-10	332.82
10-20	372.80
20-30	216.77
30-40	143.33
40-50	5.94
50-60	4.31
60-70	4.72
70-80	5.58
80-90	4.46
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: —————

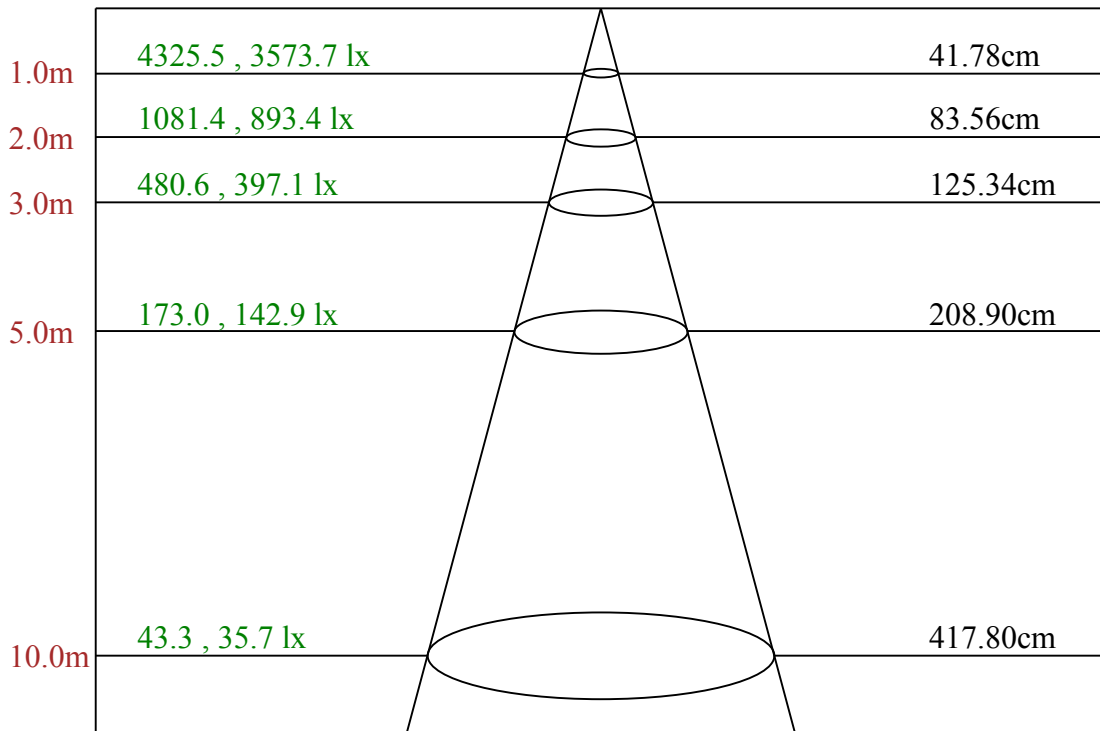
C90/C270: —————

Field angle(10%Imax):C0/180Left:26.8 Right:26.8

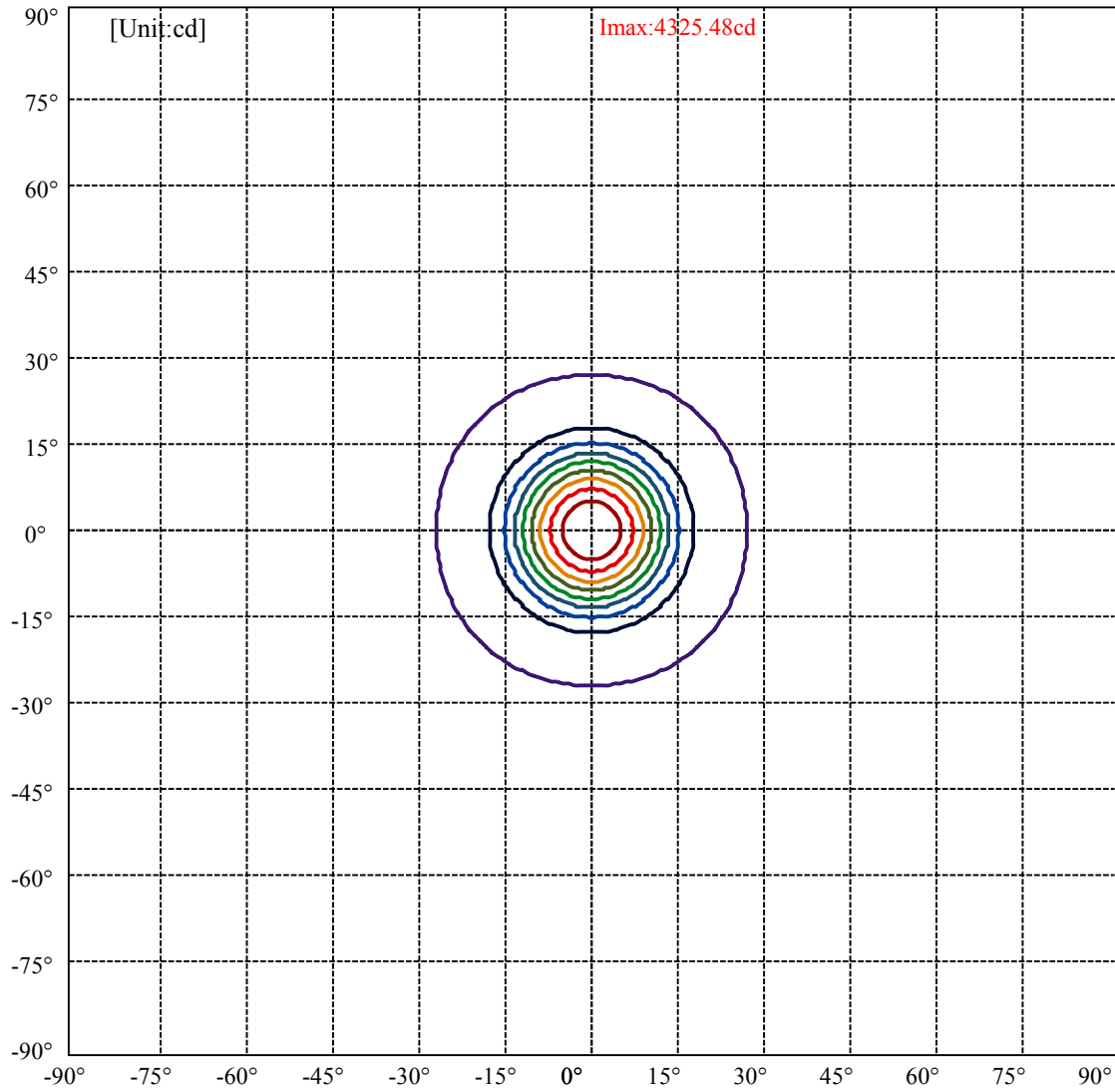
:C90/270Left:26.8 Right:26.8

Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8

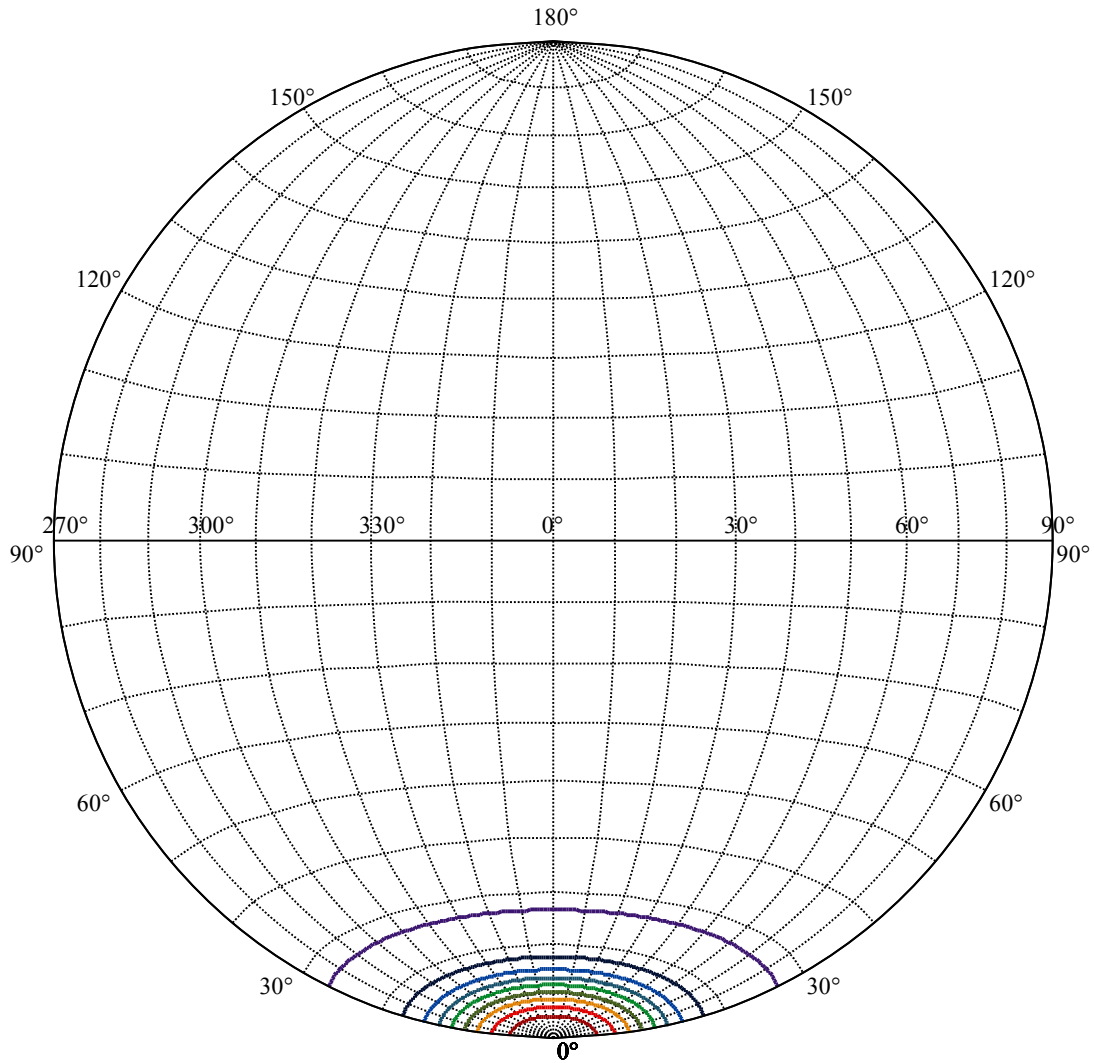
:C90/270Left:11.8 Right:11.8



Max , Ave Beam angle of C0 plane 23.60



(10%Imax) 432.548	—
(20%Imax) 865.097	—
(30%Imax) 1297.65	—
(40%Imax) 1730.19	—
(50%Imax) 2162.74	—
(60%Imax) 2595.29	—
(70%Imax) 3027.84	—
(80%Imax) 3460.39	—
(90%Imax) 3892.94	—



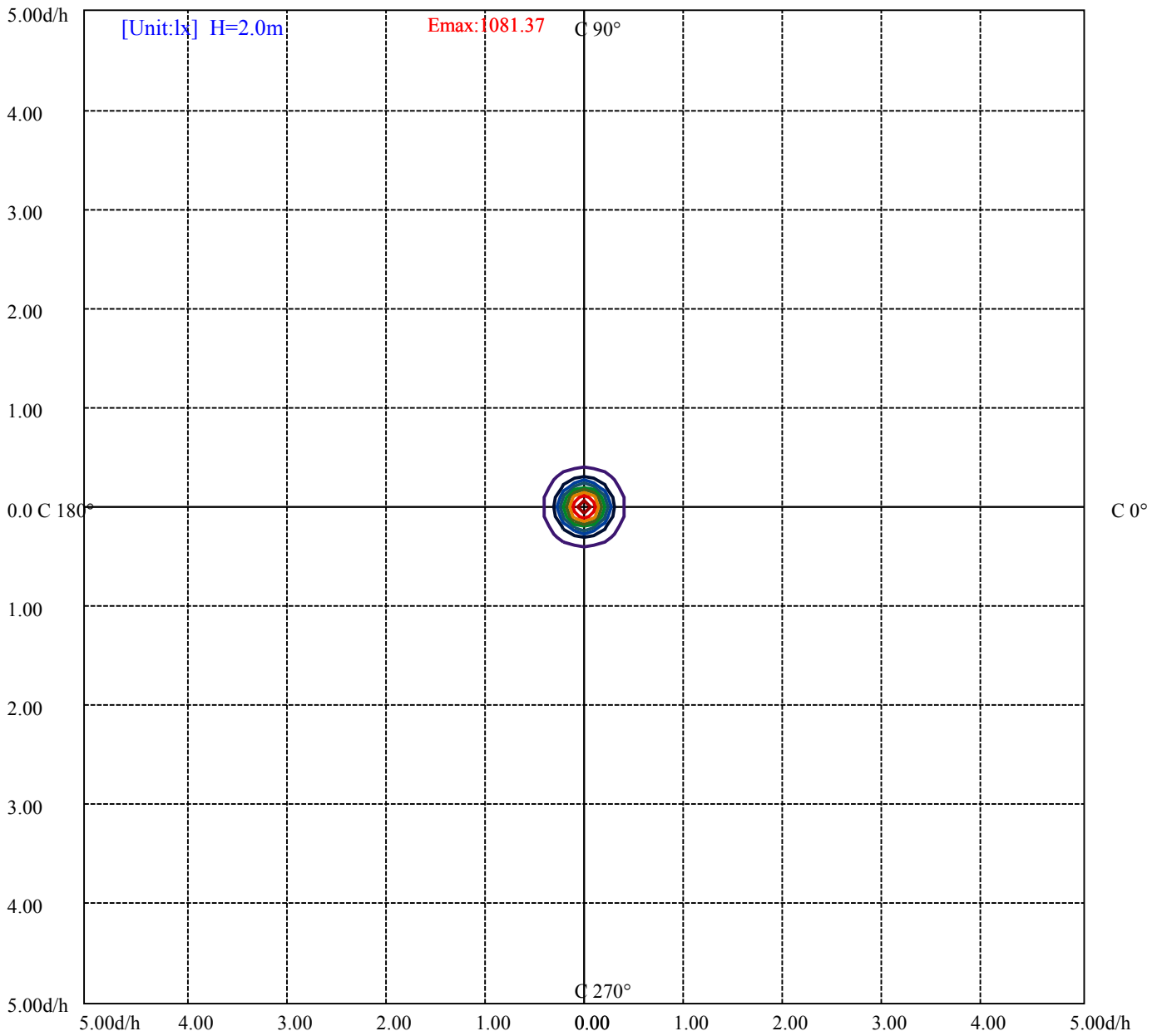
House

[Unit:cd]

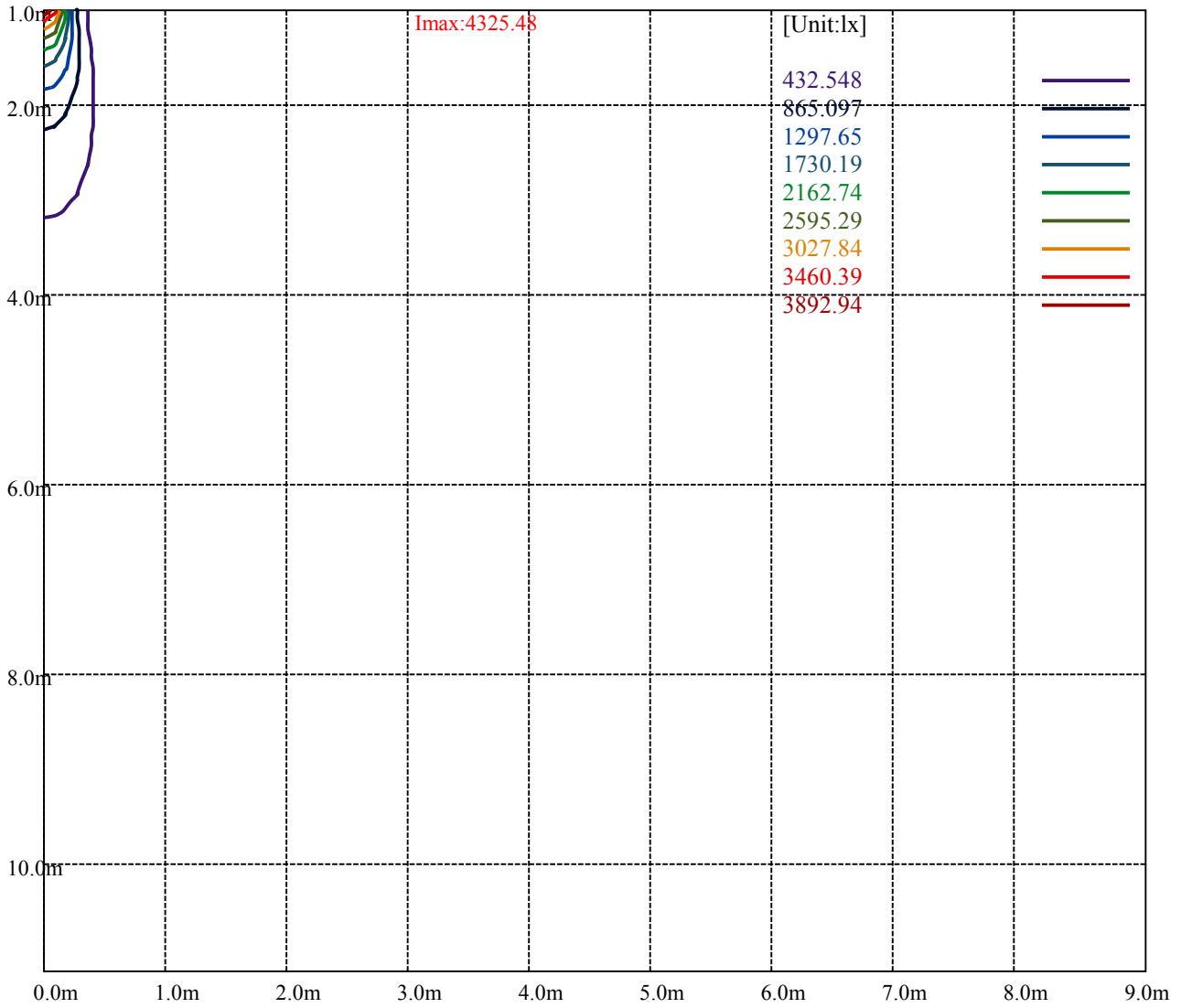
Road

Imax:4325.48

(10%Imax) 432.548	—
(20%Imax) 865.097	—
(30%Imax) 1297.65	—
(40%Imax) 1730.19	—
(50%Imax) 2162.74	—
(60%Imax) 2595.29	—
(70%Imax) 3027.84	—
(80%Imax) 3460.39	—
(90%Imax) 3892.94	—



- (10%Emax) 108.137
- (20%Emax) 216.2742
- (30%Emax) 324.41
- (40%Emax) 432.5475
- (50%Emax) 540.685
- (60%Emax) 648.8225
- (70%Emax) 756.96
- (80%Emax) 865.0975
- (90%Emax) 973.2325



Luminance Table

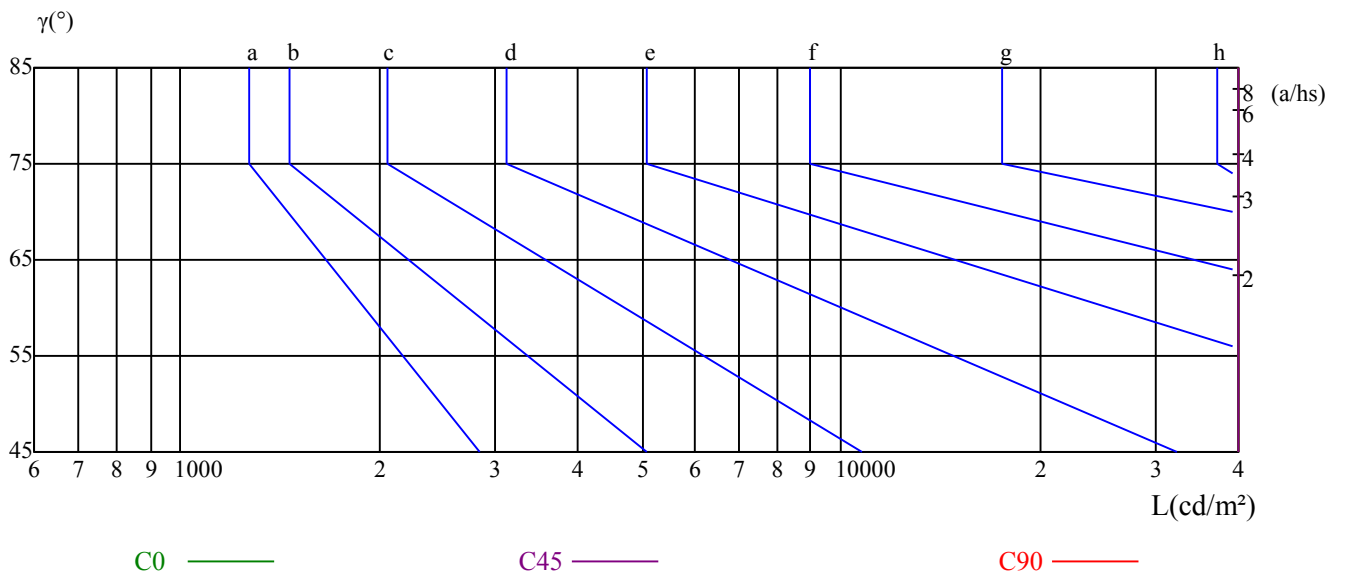
γ	45	50	55	60	65	70	75	80	85
C0	82433	78977	83359	92531	110472	149046	212715	275746	524384
C45	82433	78977	83359	92531	110472	149046	212715	275746	524384
C90	82433	78977	83359	92531	110472	149046	212715	275746	524384

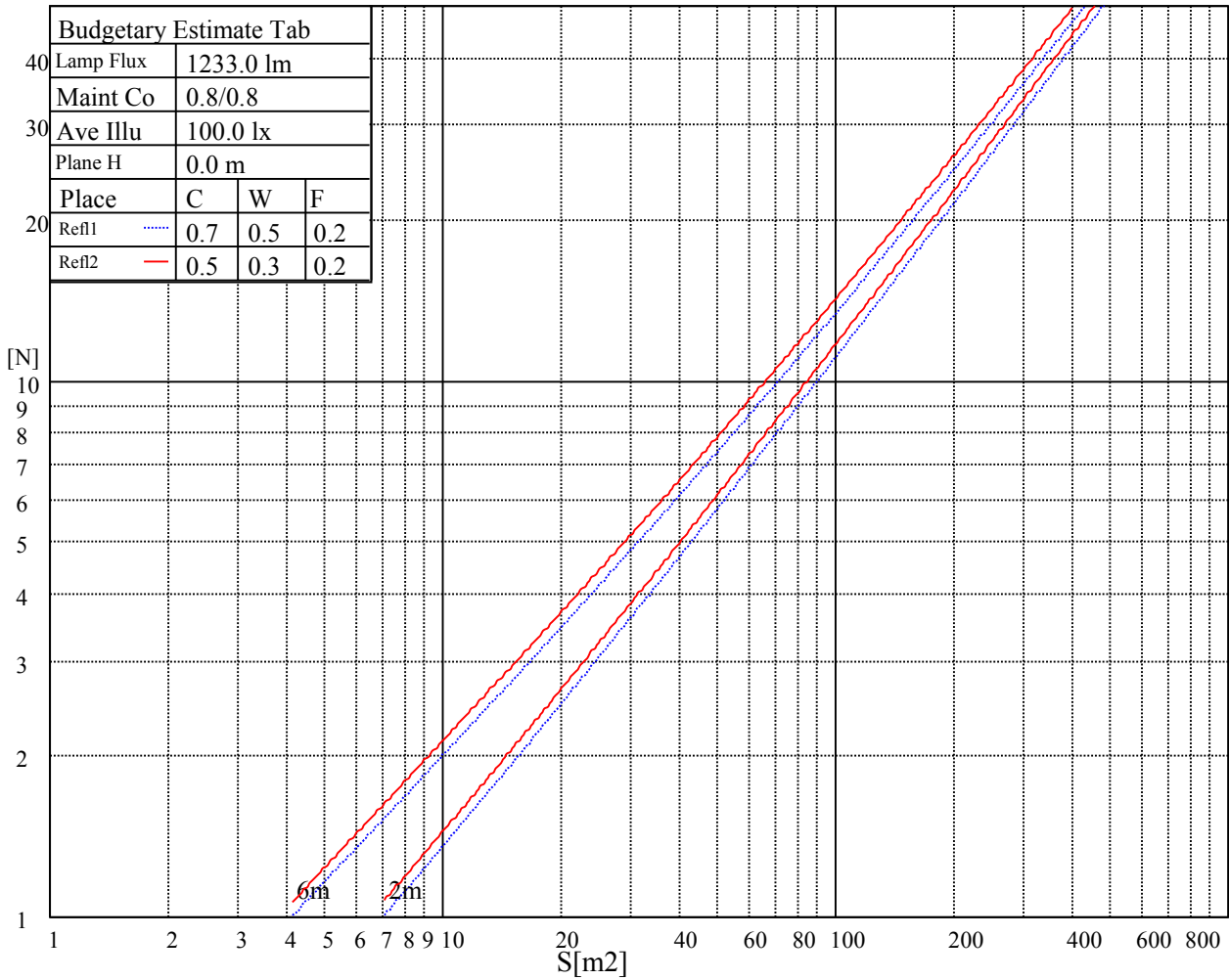
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
110472	110472	110472	212715	212715	212715	524384	524384	524384

Glare Table

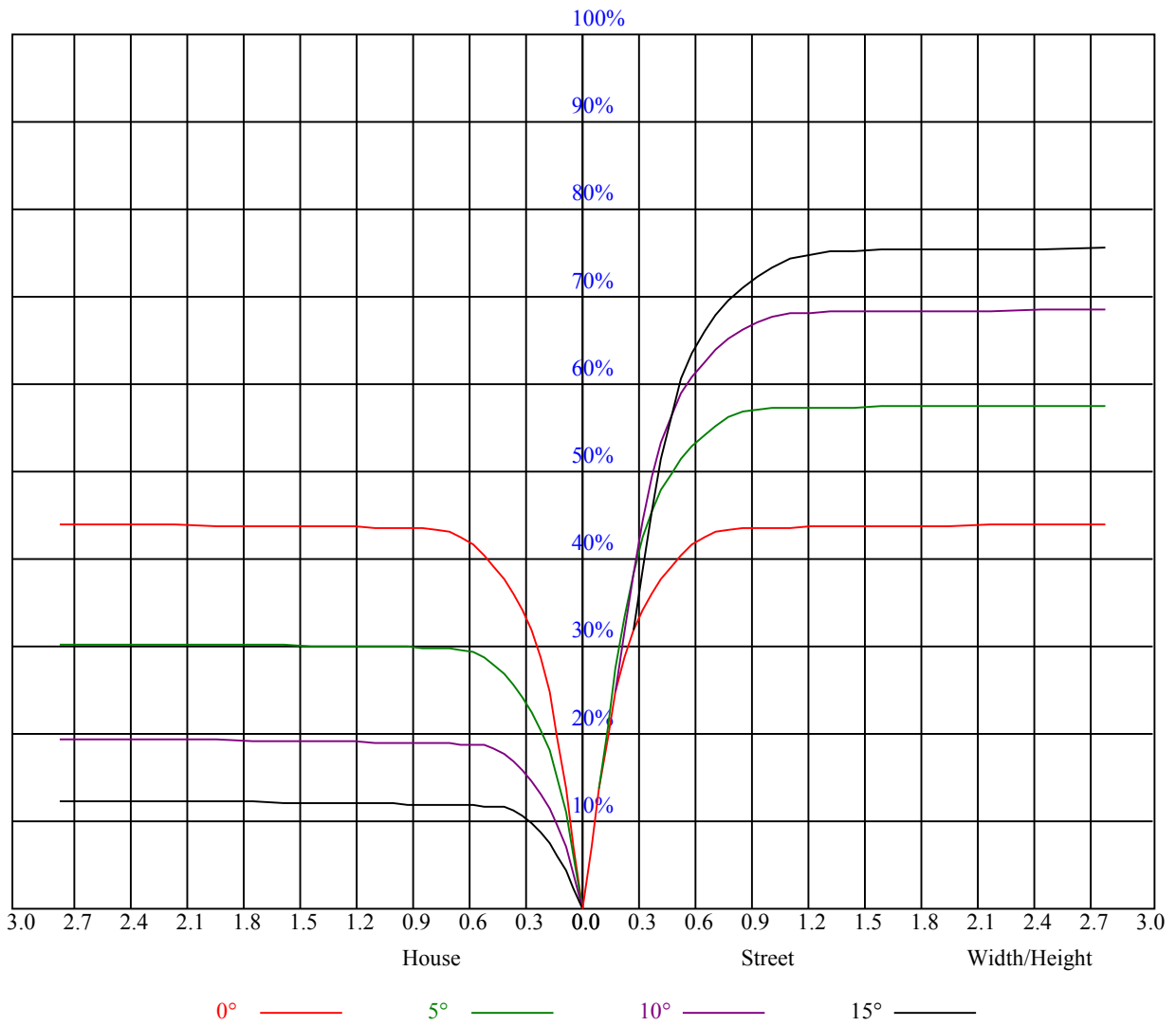
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	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	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.94	0.91	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.82	0.85	0.83	0.80	0.83	0.81	0.79	0.81	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	0.74	0.72	0.70
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.68
7	0.75	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	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59



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	4326.75	4313.81	4270.50	4195.13	4079.25	3893.63	3672.00	3461.63	3233.25
45.0	4327.88	4302.00	4244.63	4154.63	4004.44	3830.06	3613.50	3368.81	3129.19
90.0	4320.56	4286.25	4217.06	4075.31	3912.19	3726.56	3476.25	3248.44	2999.81
135.0	4326.75	4318.88	4280.06	4203.56	4072.50	3901.50	3722.06	3495.38	3270.94
180.0	4326.75	4319.44	4285.13	4202.44	4080.38	3932.44	3757.50	3502.13	3268.69
225.0	4327.88	4332.38	4309.31	4241.81	4145.63	4017.94	3825.00	3605.63	3395.25
270.0	4320.56	4329.56	4317.75	4272.75	4188.38	4055.63	3895.31	3684.38	3479.63
315.0	4326.75	4312.13	4268.81	4177.13	4065.19	3904.31	3690.56	3458.25	3227.63
360.0	4326.75	4313.81	4270.50	4195.13	4079.25	3893.63	3672.00	3461.63	3233.25
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2921.06	2651.63	2378.81	2068.31	1767.94	1522.13	1277.44	1068.75	919.13
45.0	2836.69	2527.88	2246.63	1965.38	1638.56	1402.31	1194.75	1005.19	853.31
90.0	2661.75	2387.25	2113.31	1780.88	1564.88	1316.25	1101.49	944.94	819.62
135.0	2989.69	2689.88	2408.63	2161.13	1792.13	1542.94	1346.06	1084.50	933.75
180.0	3011.63	2673.56	2395.13	2117.25	1812.94	1535.63	1243.13	1098.51	940.33
225.0	3120.19	2826.56	2549.81	2242.13	1964.81	1676.25	1414.69	1112.40	1028.36
270.0	3225.38	2941.88	2673.56	2399.63	2055.38	1789.31	1542.38	1263.38	1081.13
315.0	2977.88	2638.69	2363.63	2052.56	1782.00	1506.94	1220.06	1077.47	925.09
360.0	2921.06	2651.63	2378.81	2068.31	1767.94	1522.13	1277.44	1068.75	919.13
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	789.19	702.56	629.44	574.88	538.31	509.63	482.06	462.94	446.06
45.0	740.81	655.88	591.19	548.44	510.75	486.56	464.06	444.38	429.19
90.0	697.50	626.63	574.03	524.08	496.29	475.93	461.42	443.98	431.61
135.0	819.56	700.88	626.06	578.81	525.94	497.81	474.19	454.50	440.44
180.0	798.02	691.59	620.61	563.01	520.65	492.69	471.09	451.01	437.18
225.0	855.96	750.66	668.25	595.58	552.15	520.31	492.36	470.98	456.08
270.0	929.25	797.63	695.81	629.44	572.06	529.88	500.06	475.31	456.75
315.0	787.16	688.11	623.19	567.23	524.25	497.08	476.66	457.43	443.14
360.0	789.19	702.56	629.44	574.88	538.31	509.63	482.06	462.94	446.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	428.63	417.94	408.38	398.81	388.13	381.94	363.94	311.63	285.75
45.0	418.50	406.69	397.69	388.69	379.69	369.00	338.63	287.44	216.45
90.0	418.95	407.08	395.27	385.71	377.27	357.98	318.66	261.11	205.20
135.0	429.19	416.25	406.69	398.25	387.56	379.69	364.50	311.06	284.06
180.0	426.04	411.58	402.58	392.85	382.39	375.98	360.96	316.58	266.96
225.0	442.13	430.71	419.06	408.32	396.90	385.76	378.39	347.79	299.81
270.0	440.44	426.38	416.25	408.38	398.25	389.81	383.63	361.13	318.38
315.0	430.76	416.59	405.79	397.35	387.00	380.42	364.78	319.22	266.06
360.0	428.63	417.94	408.38	398.81	388.13	381.94	363.94	311.63	285.75
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	195.53	129.32	70.65	34.82	15.19	13.28	10.18	8.94	5.96
45.0	157.22	106.09	52.26	18.34	13.56	10.63	8.78	7.48	6.36
90.0	140.51	83.87	41.57	17.44	14.46	10.80	9.45	6.98	5.79
135.0	196.88	136.29	75.71	35.89	14.85	12.99	10.97	9.11	6.24
180.0	204.58	139.73	86.57	38.25	14.46	12.49	10.69	8.33	6.75
225.0	230.46	171.11	114.69	54.28	22.67	15.30	11.76	10.18	8.83
270.0	286.88	205.31	129.26	76.44	31.44	16.31	13.16	9.96	9.06
315.0	199.24	133.09	80.49	34.20	16.76	13.95	10.46	9.11	7.26
360.0	195.53	129.32	70.65	34.82	15.19	13.28	10.18	8.94	5.96

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	5.63	5.34	5.23	5.18	5.06	5.01	4.89	4.84	4.78
45.0	5.46	5.29	5.18	5.12	5.06	4.95	4.95	4.89	4.78
90.0	5.46	5.40	5.23	5.18	5.12	5.06	5.01	4.89	4.89
135.0	5.74	5.51	5.40	5.34	5.23	5.18	5.12	5.01	4.95
180.0	6.08	5.46	5.34	5.29	5.18	5.12	5.01	5.01	4.95
225.0	5.85	5.63	5.46	5.29	5.23	5.12	5.06	5.01	4.95
270.0	6.64	5.74	5.51	5.40	5.29	5.18	5.12	5.01	4.95
315.0	5.79	5.40	5.29	5.18	5.06	5.01	4.95	4.84	4.78
360.0	5.63	5.34	5.23	5.18	5.06	5.01	4.89	4.84	4.78
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.73	4.67	4.61	4.61	4.56	4.56	4.56	4.50	4.56
45.0	4.73	4.73	4.67	4.67	4.61	4.61	4.56	4.56	4.50
90.0	4.84	4.78	4.78	4.73	4.73	4.67	4.67	4.61	4.61
135.0	4.95	4.89	4.84	4.84	4.78	4.73	4.73	4.78	4.73
180.0	4.89	4.84	4.84	4.84	4.78	4.73	4.73	4.73	4.78
225.0	4.84	4.84	4.78	4.73	4.67	4.67	4.67	4.61	4.61
270.0	4.89	4.84	4.73	4.67	4.67	4.67	4.61	4.56	4.56
315.0	4.73	4.67	4.67	4.61	4.56	4.50	4.50	4.50	4.50
360.0	4.73	4.67	4.61	4.61	4.56	4.56	4.56	4.50	4.56
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.50	4.50	4.50	4.50	4.50	4.50	4.44	4.44	4.44
45.0	4.50	4.50	4.50	4.50	4.56	4.78	5.29	5.34	5.01
90.0	4.61	4.73	4.95	5.40	5.79	5.74	5.51	5.18	5.01
135.0	4.73	4.73	4.73	4.73	4.67	4.73	5.18	5.96	7.09
180.0	4.84	4.89	5.18	5.57	5.85	5.79	5.57	6.02	6.64
225.0	4.56	4.56	4.61	4.61	4.78	5.23	5.29	5.01	4.61
270.0	4.56	4.50	4.50	4.50	4.44	4.44	4.44	4.44	4.44
315.0	4.44	4.44	4.39	4.39	4.39	4.39	4.44	4.39	4.39
360.0	4.50	4.50	4.50	4.50	4.50	4.50	4.44	4.44	4.44
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	4.50	4.50	4.61	4.67	4.67	4.73
45.0	4.56	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.44
90.0	5.29	5.29	4.84	4.61	4.50	4.56	4.56	4.56	4.56
135.0	8.49	9.84	10.29	10.41	9.79	9.11	7.99	7.48	6.81
180.0	7.93	9.11	9.11	6.86	5.01	4.61	4.56	4.56	4.56
225.0	4.50	4.50	4.50	4.56	4.50	4.50	4.50	4.44	4.50
270.0	4.44	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39
315.0	4.39	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33
360.0	4.44	4.44	4.44	4.50	4.50	4.61	4.67	4.67	4.73
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.78	4.78	4.67	4.56	4.67	4.78	4.67	4.39	4.28
45.0	4.39	4.44	4.44	4.44	4.44	4.44	4.39	4.39	4.28
90.0	4.56	4.61	4.56	4.56	4.61	4.56	4.56	4.44	4.22
135.0	5.51	4.73	4.73	4.84	4.89	5.01	4.95	4.56	4.28
180.0	4.56	4.56	4.56	4.61	4.61	4.56	4.56	4.56	4.22
225.0	4.44	4.50	4.50	4.50	4.56	4.61	4.73	4.50	4.16
270.0	4.39	4.44	4.39	4.44	4.44	4.44	4.44	4.39	4.28
315.0	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.22
360.0	4.78	4.78	4.67	4.56	4.67	4.78	4.67	4.39	4.28

Intensity data(cd)

C/γ(°)	90.0
0.0	4.22
45.0	4.16
90.0	4.16
135.0	4.22
180.0	4.22
225.0	4.22
270.0	4.16
315.0	4.22
360.0	4.22