



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOU Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 1-0941-N	
Luminaire: 92.70.259.00	
Report No: 200923-B032	Voltage(V): 230.6000
Test No: 200923-C032	Current(A): 0.0940
LampCAT: SEOUL SAWx06	Power (W): 11.7900
Lamp flux(lm): 1012.7	PF: 0.5420
Number of Lamps: 1	Ballast type: AC
Length(feet)(ft.):0.000	Width(feet)(ft.):0.000
Phm Type: C	Height(feet)(ft.):0.000

Photometric Results

Lumens(lm): 782.65
Efficiency(%): 77.29%
Lumens(lm)/Power(W): 66.38
Central intensity(cd): 3662.500
Maximum intensity(cd): 3662.500
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.3
 [C90/270]Total=22.3
Field angle(10%Imax): [C0/180]Total=48.9
 [C90/270]Total=48.9
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
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(%): 77.37%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.301%

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3662.500	0.876	0.876	.087%	.112%
1.0	3638.776	6.964	7.84	.688%	1.002%
2.0	3567.199	13.652	21.492	1.348%	2.746%
3.0	3458.615	19.850	41.342	1.960%	5.282%
4.0	3315.751	25.364	66.706	2.505%	8.523%
5.0	3166.970	30.269	96.975	2.989%	12.391%
6.0	2955.023	33.872	130.847	3.345%	16.719%
7.0	2764.943	36.952	167.799	3.649%	21.440%
8.0	2541.685	38.791	206.589	3.831%	26.396%
9.0	2305.086	39.543	246.133	3.905%	31.449%
10.0	2080.610	39.620	285.752	3.912%	36.511%
11.0	1867.445	39.075	324.827	3.859%	41.504%
12.0	1659.964	37.847	362.674	3.737%	46.340%
13.0	1456.137	35.920	398.595	3.547%	50.929%
14.0	1271.829	33.741	432.335	3.332%	55.240%
15.0	1093.878	31.047	463.382	3.066%	59.207%
16.0	963.362	29.119	492.501	2.875%	62.928%
17.0	873.473	28.005	520.507	2.765%	66.506%
18.0	775.893	26.293	546.799	2.596%	69.866%
19.0	688.278	24.573	571.372	2.427%	73.005%
20.0	613.696	23.017	594.39	2.273%	75.946%
21.0	547.565	21.519	615.908	2.125%	78.696%
22.0	487.821	20.040	635.948	1.979%	81.256%
23.0	435.101	18.643	654.591	1.841%	83.638%
24.0	383.895	17.123	671.714	1.691%	85.826%
25.0	343.362	15.913	687.627	1.571%	87.859%
26.0	302.701	14.551	702.178	1.437%	89.719%
27.0	259.035	12.896	715.075	1.273%	91.366%
28.0	228.687	11.773	726.848	1.163%	92.871%
29.0	190.555	10.131	736.979	1.000%	94.165%
30.0	146.321	8.023	745.002	.792%	95.190%
31.0	113.224	6.395	751.396	.631%	96.007%
32.0	78.375	4.554	755.951	.450%	96.589%
33.0	54.002	3.225	759.176	.318%	97.001%
34.0	36.247	2.223	761.399	.219%	97.285%
35.0	27.094	1.704	763.103	.168%	97.503%
36.0	21.873	1.410	764.513	.139%	97.683%
37.0	19.130	1.262	765.775	.125%	97.844%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	16.897	1.141	766.916	.113%	97.990%
39.0	15.011	1.036	767.952	.102%	98.123%
40.0	13.422	0.946	768.898	.093%	98.244%
41.0	12.175	0.876	769.774	.086%	98.355%
42.0	10.853	0.796	770.571	.079%	98.457%
43.0	9.913	0.741	771.312	.073%	98.552%
44.0	8.944	0.681	771.993	.067%	98.639%
45.0	8.144	0.631	772.625	.062%	98.720%
46.0	7.349	0.580	773.205	.057%	98.794%
47.0	6.676	0.535	773.74	.053%	98.862%
48.0	6.032	0.492	774.232	.049%	98.925%
49.0	5.464	0.452	774.684	.045%	98.983%
50.0	5.000	0.420	775.104	.041%	99.036%
51.0	4.548	0.388	775.491	.038%	99.086%
52.0	4.124	0.356	775.848	.035%	99.131%
53.0	3.799	0.333	776.18	.033%	99.174%
54.0	3.480	0.309	776.489	.030%	99.213%
55.0	3.184	0.286	776.775	.028%	99.250%
56.0	2.987	0.272	777.047	.027%	99.285%
57.0	2.784	0.256	777.303	.025%	99.317%
58.0	2.639	0.245	777.548	.024%	99.349%
59.0	2.512	0.236	777.784	.023%	99.379%
60.0	2.413	0.229	778.014	.023%	99.408%
61.0	2.326	0.223	778.237	.022%	99.437%
62.0	2.216	0.215	778.451	.021%	99.464%
63.0	2.140	0.209	778.66	.021%	99.491%
64.0	2.071	0.204	778.864	.020%	99.517%
65.0	2.007	0.199	779.064	.020%	99.542%
66.0	1.920	0.192	779.256	.019%	99.567%
67.0	1.874	0.189	779.445	.019%	99.591%
68.0	1.804	0.183	779.629	.018%	99.615%
69.0	1.723	0.176	779.805	.017%	99.637%
70.0	1.624	0.167	779.973	.017%	99.658%
71.0	1.589	0.165	780.137	.016%	99.680%
72.0	1.526	0.159	780.296	.016%	99.700%
73.0	1.462	0.153	780.45	.015%	99.719%
74.0	1.398	0.147	780.597	.015%	99.738%
75.0	1.340	0.142	780.739	.014%	99.756%

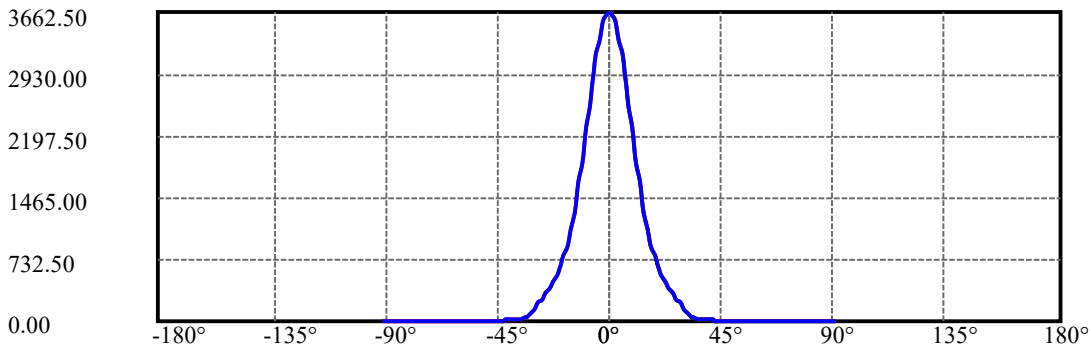
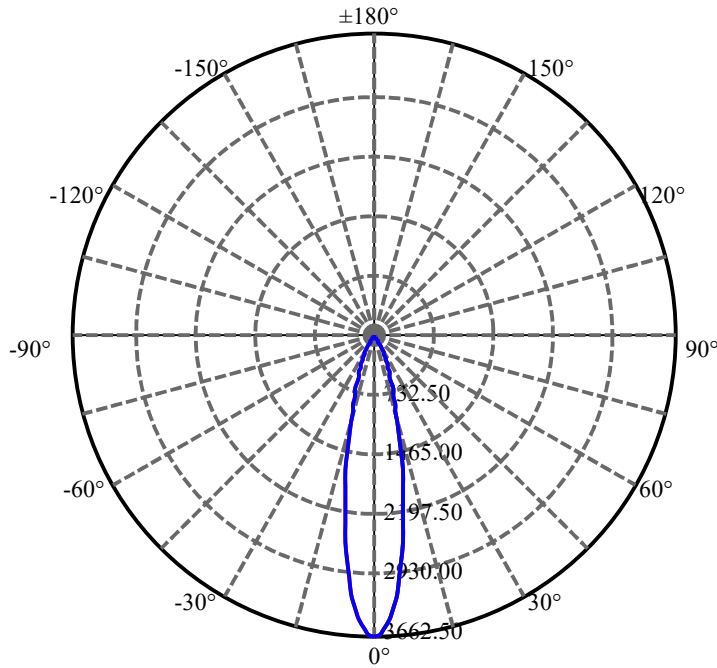
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.288	0.137	780.876	.014%	99.774%
77.0	1.247	0.133	781.009	.013%	99.791%
78.0	1.206	0.129	781.139	.013%	99.807%
79.0	1.160	0.125	781.264	.012%	99.823%
80.0	1.143	0.123	781.387	.012%	99.839%
81.0	1.096	0.119	781.506	.012%	99.854%
82.0	1.085	0.118	781.623	.012%	99.869%
83.0	1.212	0.132	781.755	.013%	99.886%
84.0	1.380	0.151	781.906	.015%	99.906%
85.0	1.404	0.153	782.059	.015%	99.925%
86.0	1.363	0.149	782.208	.015%	99.944%
87.0	1.317	0.144	782.353	.014%	99.963%
88.0	1.206	0.132	782.485	.013%	99.979%
89.0	1.038	0.114	782.599	.011%	99.994%
90.0	0.853	0.047	782.645	.005%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	745.00	73.57%	95.19%
0-40	768.90	75.93%	98.24%
0-60	778.01	76.83%	99.41%
0-90	782.60	77.28%	99.99%
0-120	782.60	77.28%	99.99%
0-180	782.65	77.29%	100.00%
60-90	4.81	0.48%	0.62%
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%
0-21.51	626.12	61.83%	80.00%

ZONAL LUMEN SUMMARY

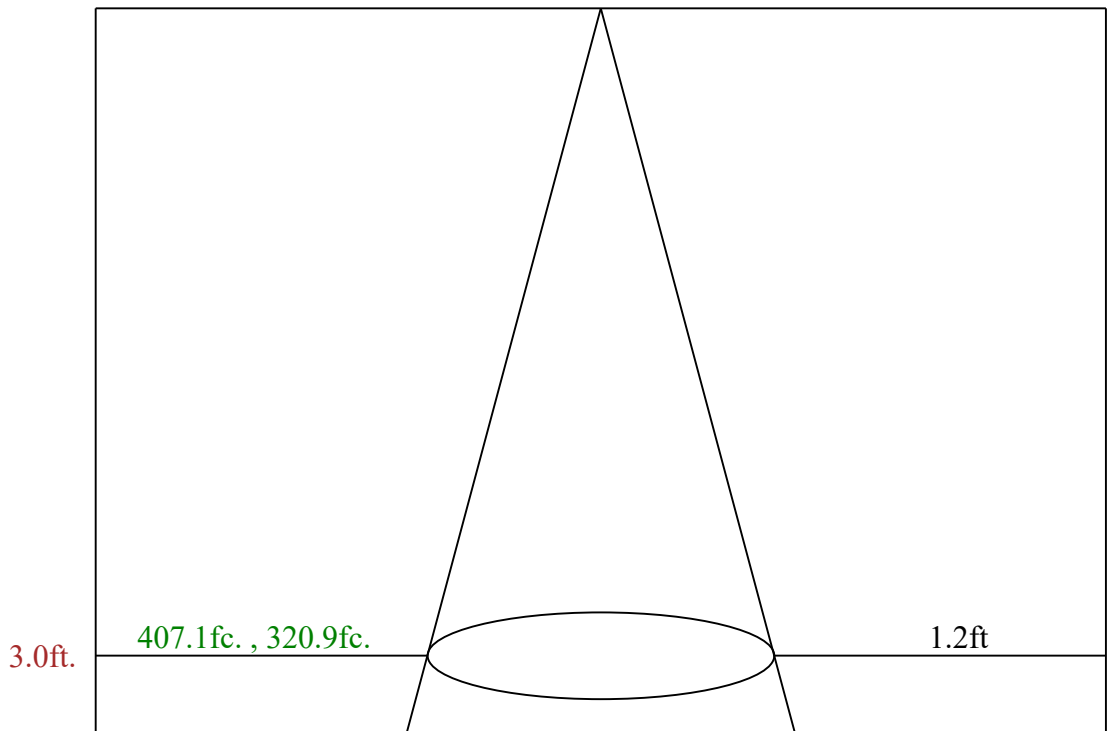
0-10	285.75
10-20	308.64
20-30	150.61
30-40	23.90
40-50	6.21
50-60	2.91
60-70	1.96
70-80	1.41
80-90	1.21
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



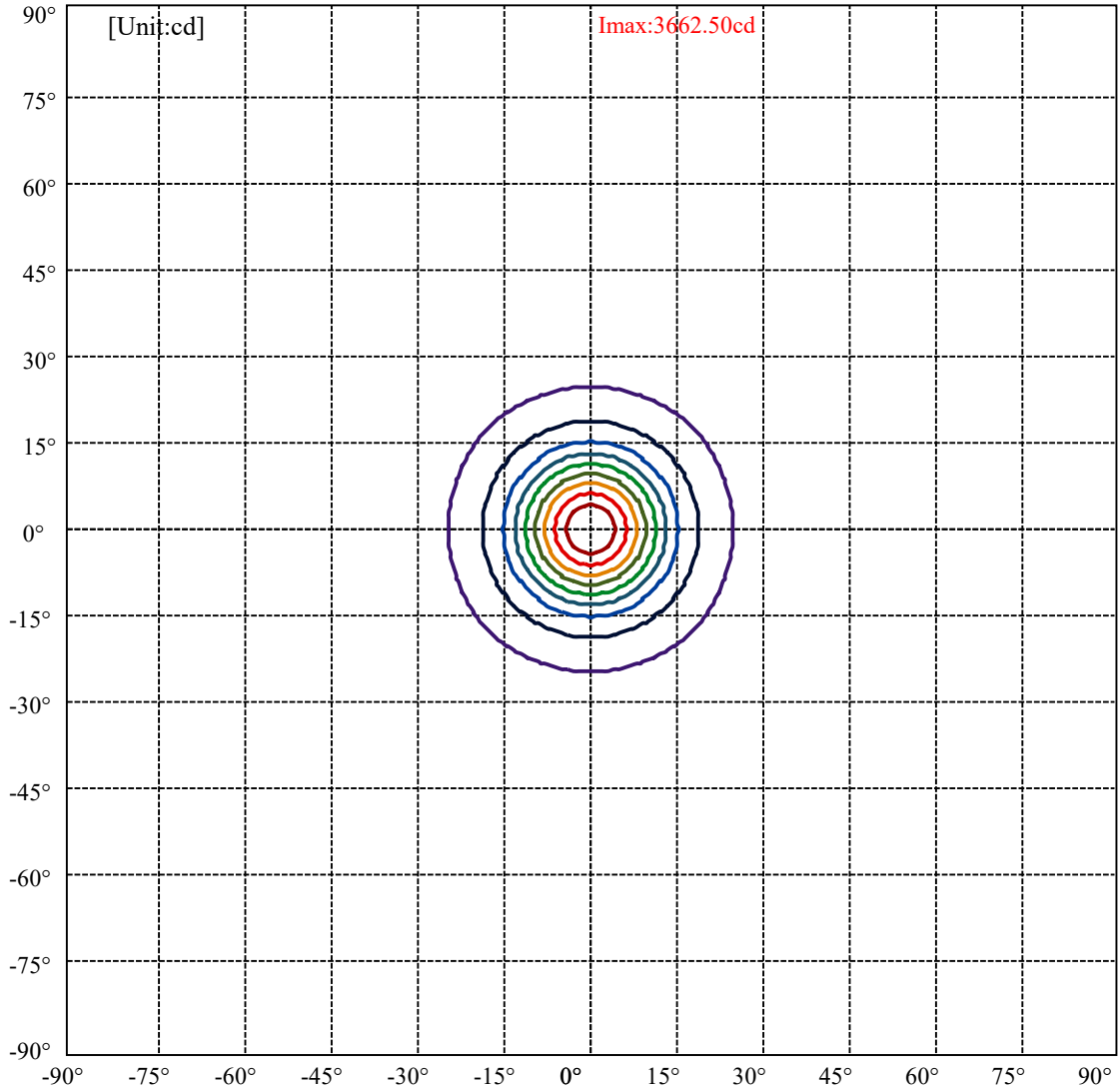
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:24.4 Right:24.4
:C90/270Left:24.4 Right:24.4

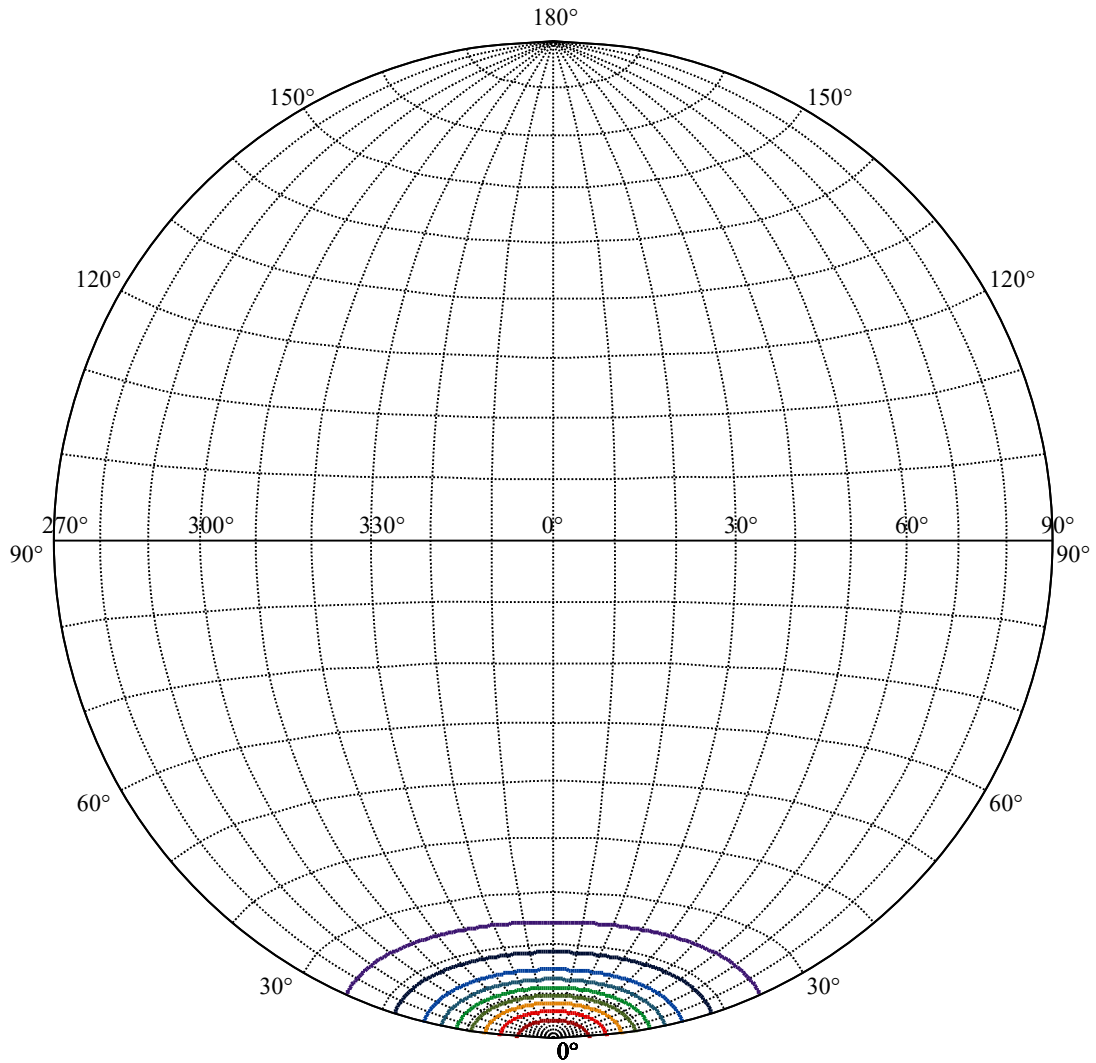
Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2
:C90/270Left:11.2 Right:11.2



Max , Ave Beam angle of C0 plane 22.46



(10%Imax) 366.25	—
(20%Imax) 732.5	—
(30%Imax) 1098.75	—
(40%Imax) 1465	—
(50%Imax) 1831.25	—
(60%Imax) 2197.5	—
(70%Imax) 2563.75	—
(80%Imax) 2930	—
(90%Imax) 3296.25	—



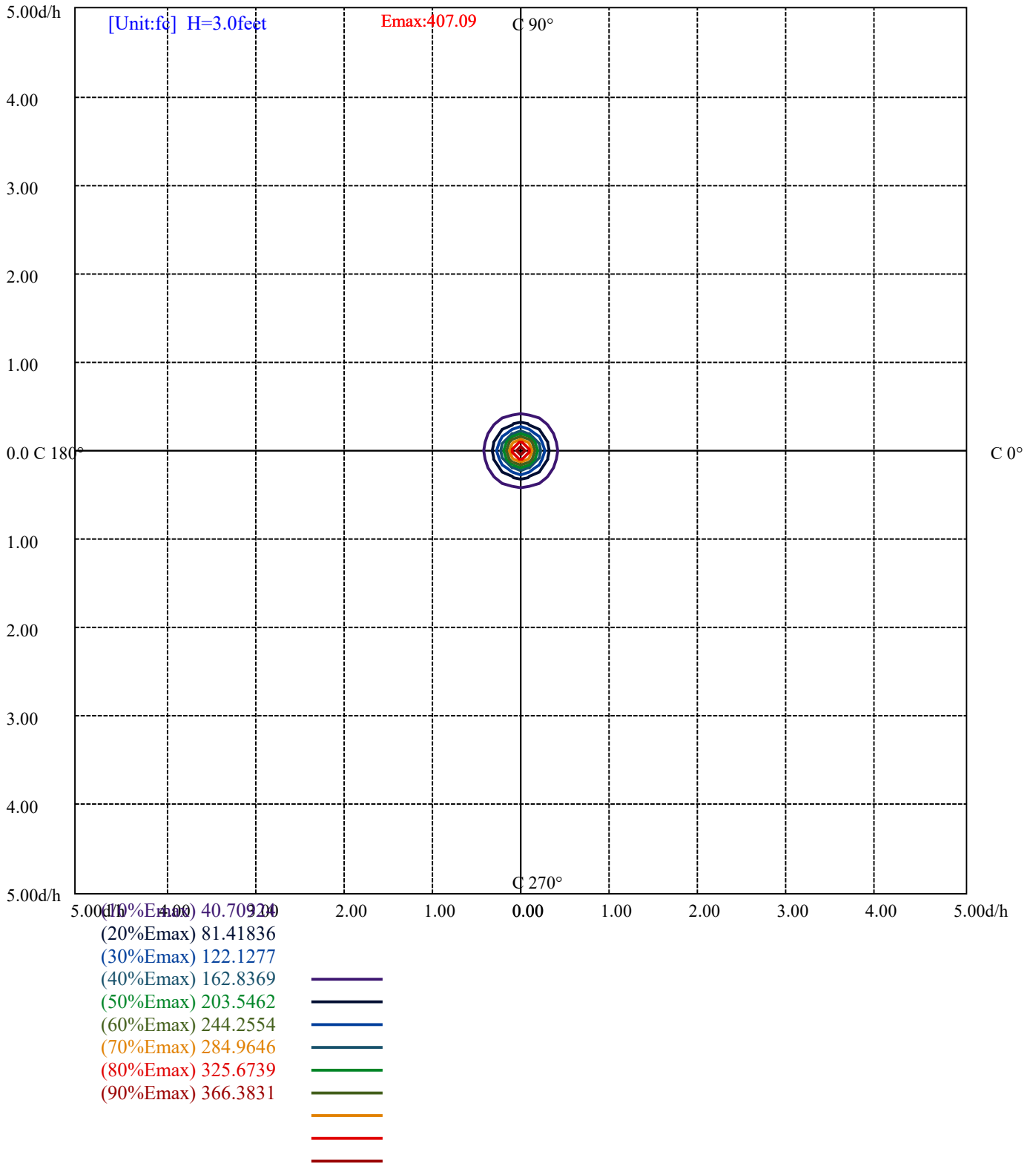
House

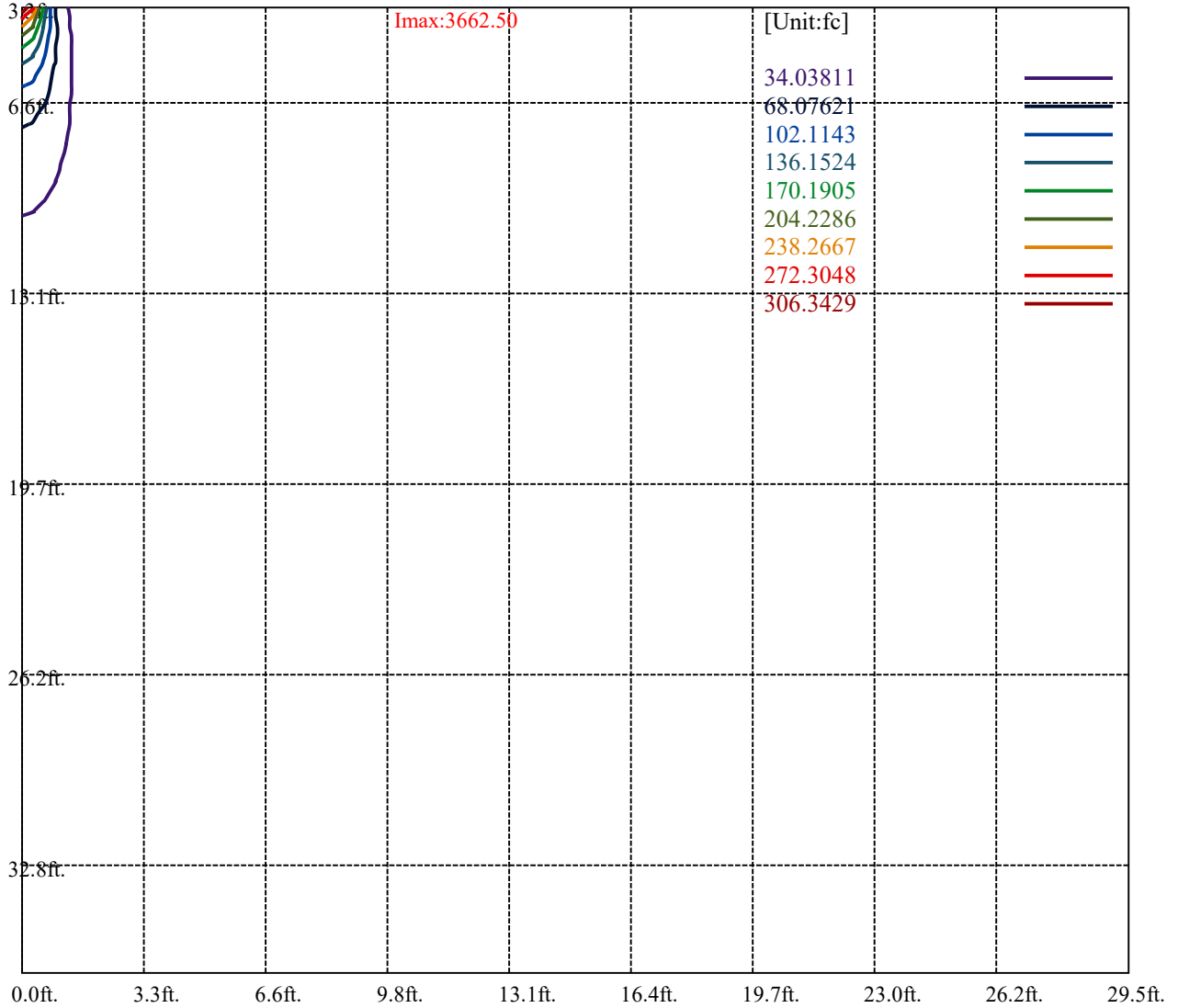
[Unit:cd]

Road

Imax:3662.50

(10%Imax) 366.25	—
(20%Imax) 732.5	—
(30%Imax) 1098.75	—
(40%Imax) 1465	—
(50%Imax) 1831.25	—
(60%Imax) 2197.5	—
(70%Imax) 2563.75	—
(80%Imax) 2930	—
(90%Imax) 3296.25	—





Luminance Table

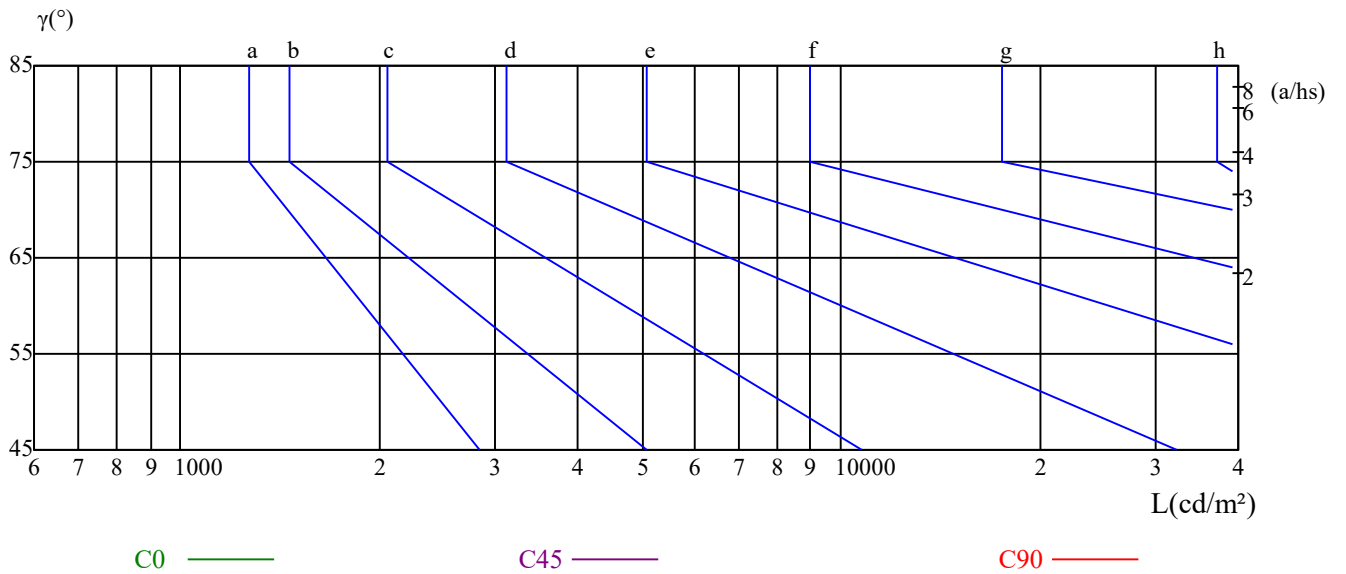
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

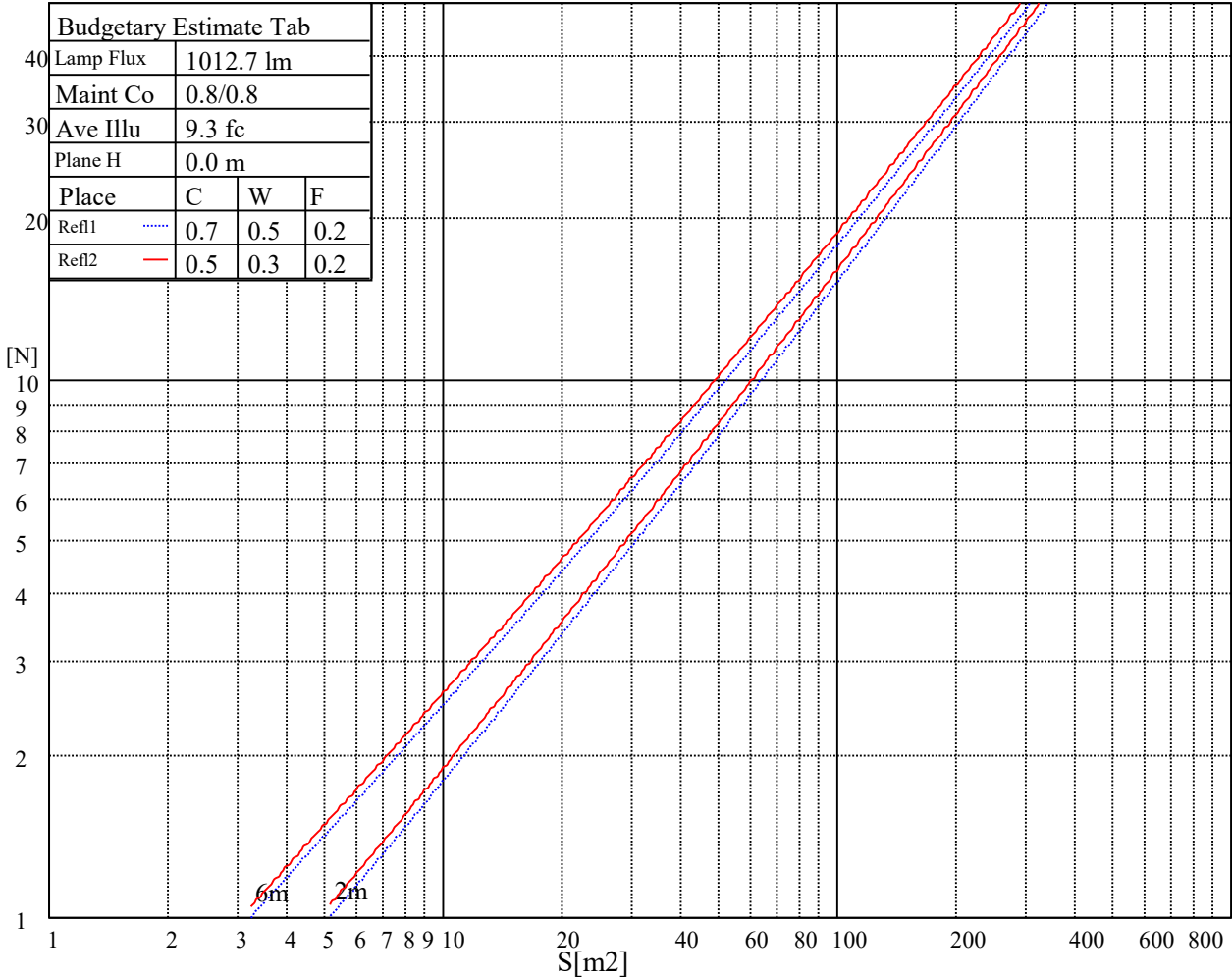
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

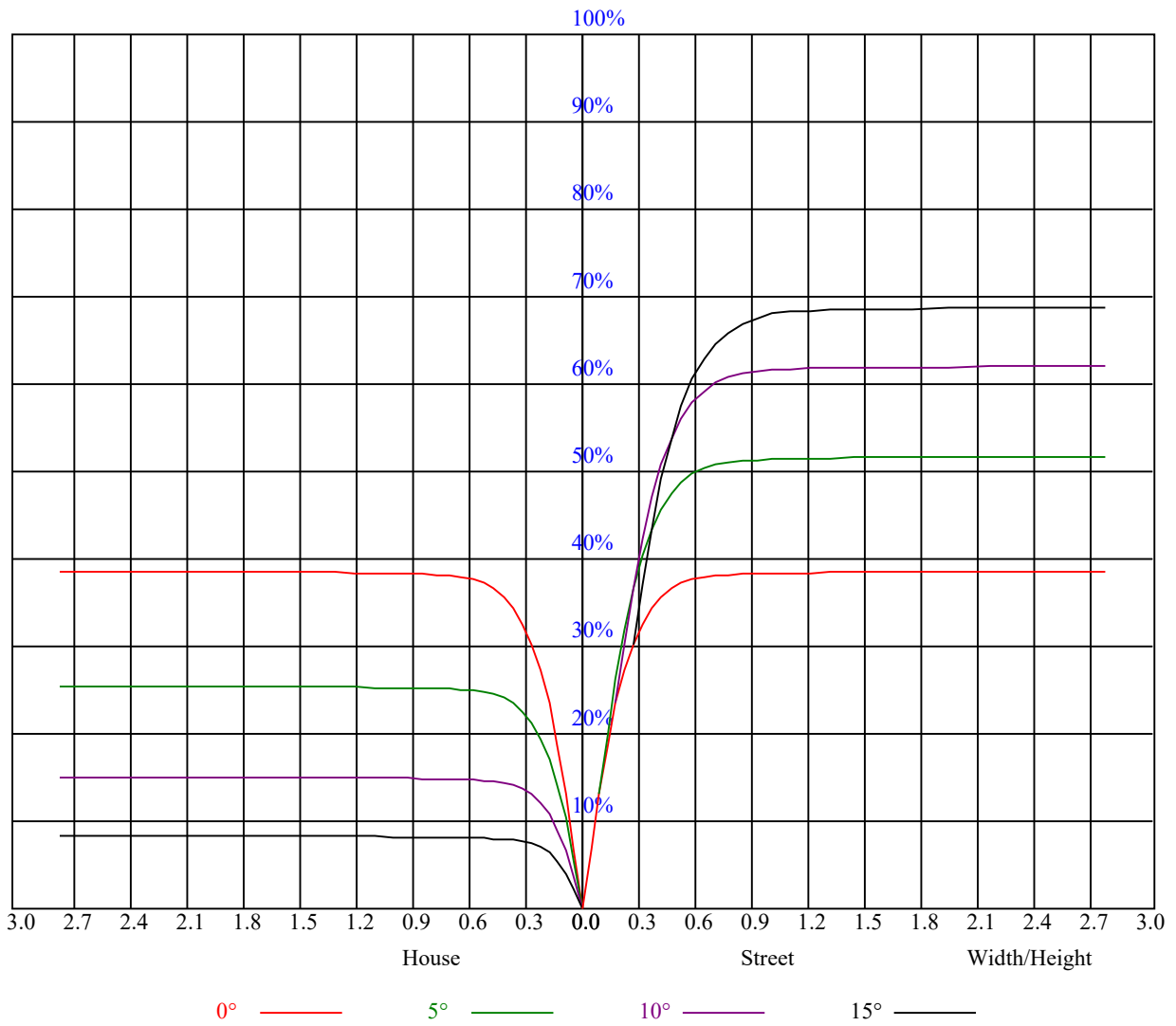
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.87	0.86	0.84	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.76	0.76	0.74
2	0.83	0.81	0.79	0.82	0.80	0.78	0.79	0.78	0.76	0.77	0.76	0.74	0.75	0.74	0.73	0.72
3	0.79	0.76	0.74	0.78	0.76	0.74	0.76	0.74	0.72	0.75	0.73	0.71	0.73	0.72	0.70	0.69
4	0.76	0.73	0.71	0.75	0.73	0.70	0.74	0.71	0.70	0.72	0.70	0.69	0.71	0.69	0.68	0.67
5	0.73	0.70	0.68	0.73	0.70	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
6	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
7	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.64	0.62	0.61
8	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.60	0.64	0.62	0.60	0.59
9	0.64	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.59	0.62	0.60	0.58	0.58
10	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.61	0.59	0.57	0.56



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	3686.98	3664.24	3589.07	3490.23	3348.23	3172.83	2971.90	2760.77	2530.14
45.0	3627.58	3702.75	3707.40	3686.05	3601.60	3550.09	3356.12	3248.00	3055.89
90.0	3677.23	3680.48	3639.18	3549.16	3430.83	3273.99	3085.13	2881.42	2655.43
135.0	3658.21	3657.28	3618.30	3528.74	3413.20	3262.39	3073.53	2871.21	2657.75
180.0	3686.98	3658.67	3578.39	3464.24	3316.68	3176.08	2977.47	2761.23	2530.61
225.0	3627.58	3515.75	3374.22	3191.39	2990.46	2776.54	2552.42	2324.58	2090.24
270.0	3677.23	3635.47	3539.42	3402.99	3228.98	3121.32	2832.23	2698.59	2471.67
315.0	3658.21	3595.56	3491.62	3356.12	3196.03	3002.53	2791.39	2573.76	2341.74
360.0	3686.98	3664.24	3589.07	3490.23	3348.23	3172.83	2971.90	2760.77	2530.14
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2294.41	2061.93	1835.95	1621.10	1426.21	1248.02	918.18	895.63	895.63
45.0	2840.12	2609.49	2360.31	2124.11	1897.66	1673.54	1467.51	1283.75	1121.80
90.0	2414.13	2171.44	1936.64	1712.98	1506.48	1318.55	1185.84	872.29	872.29
135.0	2471.67	2185.37	1953.35	1771.91	1566.34	1374.24	1202.08	1048.48	820.87
180.0	2299.98	2068.43	1846.62	1639.20	1439.20	1259.15	1098.60	964.49	847.09
225.0	1864.72	1652.66	1456.83	1346.39	1050.80	887.23	887.23	781.53	692.20
270.0	2144.53	2012.28	1795.58	1591.40	1399.76	1222.96	1069.83	938.97	826.68
315.0	2111.12	1883.28	1754.28	1472.61	1362.63	1190.94	921.76	921.76	811.22
360.0	2294.41	2061.93	1835.95	1621.10	1426.21	1248.02	918.18	895.63	895.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	791.64	702.45	627.84	561.25	500.97	444.54	394.99	352.67	309.56
45.0	983.98	863.33	763.57	679.58	609.51	542.22	474.47	422.50	389.09
90.0	810.30	721.39	644.36	577.44	507.88	448.35	404.50	363.11	318.23
135.0	809.51	718.56	640.60	572.85	507.88	449.42	402.55	360.32	316.70
180.0	746.40	663.80	593.27	529.23	472.62	419.72	371.92	329.23	303.71
225.0	617.81	550.99	490.16	436.56	388.30	344.27	301.06	256.47	213.32
270.0	728.76	646.17	577.95	515.31	460.55	429.46	363.11	338.05	296.75
315.0	718.74	639.53	571.83	508.30	454.85	402.83	358.56	324.54	274.24
360.0	791.64	702.45	627.84	561.25	500.97	444.54	394.99	352.67	309.56
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	265.15	223.71	183.43	143.85	105.15	73.50	50.16	37.22	26.45
45.0	340.37	309.74	269.84	242.46	242.46	141.53	102.37	66.08	43.48
90.0	274.20	233.78	192.25	148.03	108.72	87.38	58.14	32.95	28.03
135.0	273.55	232.25	232.25	194.48	123.94	89.65	61.48	41.21	29.61
180.0	261.02	244.78	235.50	133.22	100.65	72.02	48.03	31.74	23.39
225.0	172.81	132.95	95.59	68.17	47.80	38.42	27.93	21.39	20.00
270.0	254.52	254.52	158.24	121.02	90.39	63.90	43.11	31.04	24.41
315.0	230.67	197.77	157.35	119.35	86.68	60.60	40.79	28.35	21.39
360.0	265.15	223.71	183.43	143.85	105.15	73.50	50.16	37.22	26.45
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	20.37	17.96	15.78	14.06	12.58	11.23	10.07	9.10	8.21
45.0	29.47	24.27	21.39	18.93	16.52	15.41	13.27	12.34	11.18
90.0	24.41	21.39	18.65	16.29	14.48	13.09	11.69	10.63	9.56
135.0	24.27	21.16	18.56	16.24	14.48	12.90	11.60	10.44	9.42
180.0	19.54	17.68	15.73	14.06	12.71	11.83	10.53	9.51	8.82
225.0	17.91	15.87	14.29	12.90	11.65	10.49	9.51	8.58	7.80
270.0	21.02	18.75	16.61	14.85	13.46	12.06	10.81	10.16	8.82
315.0	18.00	15.96	14.15	12.76	11.51	10.39	9.33	8.54	7.75
360.0	20.37	17.96	15.78	14.06	12.58	11.23	10.07	9.10	8.21

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	7.38	6.68	6.08	5.48	4.97	4.50	4.08	3.71	3.53
45.0	10.12	9.10	8.17	7.38	6.77	6.13	5.48	4.97	4.55
90.0	8.68	7.75	7.05	6.36	5.80	5.20	4.69	4.32	3.94
135.0	8.68	7.61	6.91	6.40	5.66	5.20	4.69	4.27	3.90
180.0	7.93	7.33	6.64	6.03	5.48	5.06	4.55	4.13	3.81
225.0	7.10	6.50	5.80	5.24	4.83	4.45	4.22	3.71	3.53
270.0	8.26	7.47	6.77	6.17	5.52	5.06	4.64	4.22	3.81
315.0	7.01	6.36	5.99	5.20	4.69	4.41	4.04	3.67	3.34
360.0	7.38	6.68	6.08	5.48	4.97	4.50	4.08	3.71	3.53
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.11	2.88	2.74	2.46	2.37	2.27	2.23	2.13	2.00
45.0	4.13	3.76	3.43	3.20	3.06	2.83	2.64	2.55	2.51
90.0	3.67	3.29	3.11	2.92	2.74	2.64	2.51	2.46	2.27
135.0	3.57	3.20	3.02	2.83	2.64	2.51	2.46	2.32	2.23
180.0	3.53	3.25	2.97	2.83	2.69	2.55	2.41	2.37	2.27
225.0	3.29	3.02	2.92	2.74	2.60	2.55	2.51	2.37	2.27
270.0	3.48	3.25	3.06	2.83	2.64	2.51	2.41	2.37	2.18
315.0	3.06	2.83	2.64	2.46	2.37	2.23	2.13	2.04	2.00
360.0	3.11	2.88	2.74	2.46	2.37	2.27	2.23	2.13	2.00
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	1.95	1.95	1.86	1.76	1.72	1.67	1.62	1.48	1.44
45.0	2.41	2.27	2.18	2.13	2.09	2.00	1.90	1.81	1.76
90.0	2.18	2.09	2.09	1.95	1.86	1.76	1.72	1.62	1.53
135.0	2.13	2.04	2.00	1.95	1.90	1.81	1.76	1.62	1.62
180.0	2.18	2.09	2.04	2.00	1.95	1.90	1.76	1.67	1.62
225.0	2.23	2.23	2.13	2.00	1.95	1.90	1.81	1.72	1.72
270.0	2.13	2.04	2.00	1.86	1.86	1.76	1.67	1.62	1.58
315.0	1.90	1.86	1.76	1.72	1.67	1.62	1.53	1.44	1.44
360.0	1.95	1.95	1.86	1.76	1.72	1.67	1.62	1.48	1.44
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.39	1.35	1.30	1.21	1.16	1.11	1.07	1.07	0.97
45.0	1.72	1.62	1.53	1.48	1.48	1.39	1.30	1.25	1.30
90.0	1.48	1.44	1.35	1.30	1.21	1.11	1.07	1.02	0.97
135.0	1.53	1.44	1.39	1.35	1.30	1.25	1.21	1.11	1.07
180.0	1.62	1.53	1.44	1.39	1.35	1.30	1.25	1.21	1.21
225.0	1.67	1.62	1.53	1.53	1.53	1.58	1.58	1.58	1.67
270.0	1.44	1.44	1.39	1.35	1.21	1.16	1.16	1.11	1.02
315.0	1.35	1.25	1.25	1.11	1.07	1.07	1.02	0.93	0.93
360.0	1.39	1.35	1.30	1.21	1.16	1.11	1.07	1.07	0.97
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	0.97	0.88	0.84	0.88	0.79	0.79	0.70	0.65	0.60
45.0	1.25	1.21	1.25	1.25	1.44	2.55	4.27	4.36	3.67
90.0	0.93	0.88	0.79	0.79	0.70	0.65	0.60	0.56	0.51
135.0	0.97	0.97	0.93	0.84	0.84	0.74	0.70	0.65	0.60
180.0	1.16	1.07	1.11	1.02	0.97	0.97	0.93	0.65	0.46
225.0	1.62	1.90	3.06	4.73	4.97	3.76	2.09	1.62	1.48
270.0	0.97	0.97	0.88	0.84	0.84	0.79	0.65	0.65	0.51
315.0	0.88	0.79	0.84	0.70	0.70	0.65	0.60	0.51	0.46
360.0	0.97	0.88	0.84	0.88	0.79	0.79	0.70	0.65	0.60

Intensity data(cd)

C/γ(°)	90.0
0.0	0.56
45.0	2.51
90.0	0.51
135.0	0.56
180.0	0.37
225.0	1.44
270.0	0.46
315.0	0.42
360.0	0.56