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Nata

LumCAT: 2-1563-M	
Luminaire: BJB47.319.6105	
Report No: NT2017072705	Voltage(V): 38.0000
Test No:	Current(A): 0.3500
LampCAT: CXA1512	Power (W): 13.3000
Lamp flux(lm): 1488.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 68	Width(mm): 68
Phm Type: C	Height(mm): 45

Photometric Results

Lumens(lm): 1336.52
Efficiency(%): 89.82%
Lumens(lm)/Power(W): 100.49
Central intensity(cd): 4669.726
Maximum intensity(cd): 4669.726
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.4
 [C90/270]Total=25.4
Field angle(10%Imax): [C0/180]Total=60.8
 [C90/270]Total=60.8
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
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(%): 89.89%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.638%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.46

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4669.726	1.117	1.117	.075%	.084%
1.0	4662.839	8.924	10.041	.600%	.751%
2.0	4641.900	17.765	27.806	1.194%	2.080%
3.0	4606.422	26.437	54.243	1.777%	4.059%
4.0	4552.370	34.824	89.067	2.340%	6.664%
5.0	4460.337	42.630	131.697	2.865%	9.854%
6.0	4321.555	49.537	181.234	3.329%	13.560%
7.0	4132.410	55.227	236.46	3.711%	17.692%
8.0	3902.638	59.561	296.022	4.003%	22.149%
9.0	3620.902	62.116	358.138	4.174%	26.796%
10.0	3283.931	62.534	420.671	4.203%	31.475%
11.0	2942.996	61.580	482.252	4.138%	36.083%
12.0	2601.156	59.306	541.557	3.986%	40.520%
13.0	2220.290	54.771	596.328	3.681%	44.618%
14.0	1879.146	49.853	646.181	3.350%	48.348%
15.0	1585.027	44.987	691.167	3.023%	51.714%
16.0	1284.154	38.816	729.983	2.609%	54.618%
17.0	1087.759	34.875	764.859	2.344%	57.228%
18.0	918.571	31.128	795.986	2.092%	59.557%
19.0	795.414	28.398	824.384	1.908%	61.681%
20.0	697.669	26.167	850.551	1.759%	63.639%
21.0	632.884	24.872	875.423	1.671%	65.500%
22.0	589.183	24.203	899.626	1.627%	67.311%
23.0	557.316	23.880	923.506	1.605%	69.098%
24.0	533.434	23.793	947.299	1.599%	70.878%
25.0	516.315	23.928	971.227	1.608%	72.668%
26.0	503.988	24.228	995.455	1.628%	74.481%
27.0	493.678	24.578	1020.033	1.652%	76.320%
28.0	484.990	24.969	1045.002	1.678%	78.188%
29.0	477.066	25.363	1070.365	1.705%	80.086%
30.0	469.999	25.770	1096.135	1.732%	82.014%
31.0	462.284	26.110	1122.244	1.755%	83.968%
32.0	454.646	26.420	1148.665	1.776%	85.944%
33.0	446.590	26.673	1175.337	1.793%	87.940%
34.0	437.909	26.853	1202.191	1.805%	89.949%
35.0	416.504	26.198	1228.388	1.761%	91.909%
36.0	365.228	23.541	1251.93	1.582%	93.671%
37.0	299.413	19.760	1271.69	1.328%	95.149%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	244.311	16.494	1288.184	1.108%	96.383%
39.0	140.541	9.699	1297.883	.652%	97.109%
40.0	77.516	5.464	1303.347	.367%	97.518%
41.0	34.372	2.473	1305.82	.166%	97.703%
42.0	17.969	1.318	1307.138	.089%	97.801%
43.0	14.692	1.099	1308.237	.074%	97.884%
44.0	12.619	0.961	1309.198	.065%	97.956%
45.0	10.956	0.850	1310.048	.057%	98.019%
46.0	9.760	0.770	1310.818	.052%	98.077%
47.0	8.828	0.708	1311.526	.048%	98.130%
48.0	8.153	0.664	1312.19	.045%	98.179%
49.0	7.666	0.634	1312.825	.043%	98.227%
50.0	7.374	0.619	1313.444	.042%	98.273%
51.0	7.123	0.607	1314.051	.041%	98.319%
52.0	6.998	0.605	1314.656	.041%	98.364%
53.0	6.838	0.599	1315.255	.040%	98.409%
54.0	6.727	0.597	1315.852	.040%	98.453%
55.0	6.616	0.594	1316.446	.040%	98.498%
56.0	6.511	0.592	1317.038	.040%	98.542%
57.0	6.393	0.588	1317.626	.040%	98.586%
58.0	6.275	0.584	1318.209	.039%	98.630%
59.0	6.184	0.581	1318.791	.039%	98.673%
60.0	6.080	0.577	1319.368	.039%	98.717%
61.0	6.017	0.577	1319.945	.039%	98.760%
62.0	5.955	0.577	1320.522	.039%	98.803%
63.0	5.899	0.576	1321.098	.039%	98.846%
64.0	5.843	0.576	1321.674	.039%	98.889%
65.0	5.788	0.575	1322.249	.039%	98.932%
66.0	5.739	0.575	1322.824	.039%	98.975%
67.0	5.670	0.572	1323.397	.038%	99.018%
68.0	5.642	0.574	1323.97	.039%	99.061%
69.0	5.628	0.576	1324.546	.039%	99.104%
70.0	5.600	0.577	1325.123	.039%	99.147%
71.0	5.586	0.579	1325.703	.039%	99.190%
72.0	5.544	0.578	1326.281	.039%	99.234%
73.0	5.523	0.579	1326.86	.039%	99.277%
74.0	5.503	0.580	1327.44	.039%	99.320%
75.0	5.454	0.578	1328.018	.039%	99.364%

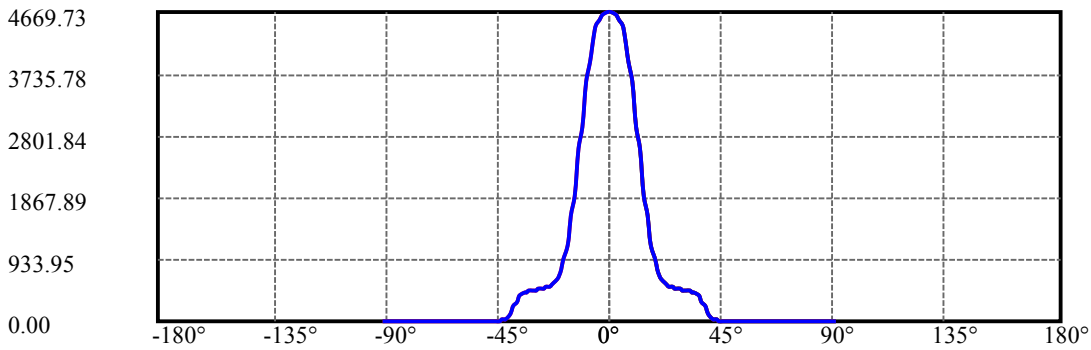
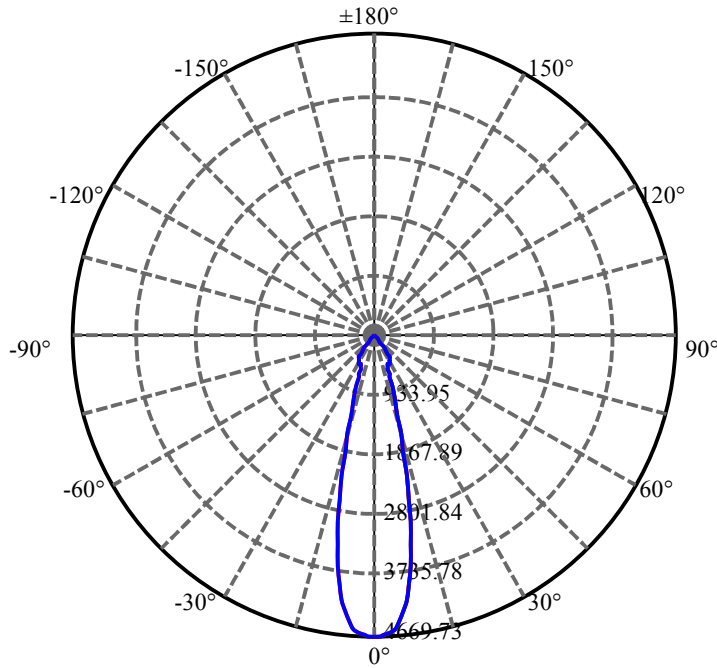
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.475	0.583	1328.6	.039%	99.407%
77.0	5.503	0.588	1329.188	.040%	99.451%
78.0	5.489	0.589	1329.777	.040%	99.495%
79.0	5.440	0.586	1330.363	.039%	99.539%
80.0	5.440	0.587	1330.95	.039%	99.583%
81.0	5.433	0.588	1331.539	.040%	99.627%
82.0	5.426	0.589	1332.128	.040%	99.671%
83.0	5.426	0.591	1332.718	.040%	99.715%
84.0	5.398	0.589	1333.307	.040%	99.759%
85.0	5.363	0.586	1333.893	.039%	99.803%
86.0	5.370	0.587	1334.481	.039%	99.847%
87.0	5.350	0.586	1335.066	.039%	99.891%
88.0	5.315	0.582	1335.649	.039%	99.935%
89.0	5.308	0.582	1336.231	.039%	99.978%
90.0	5.308	0.291	1336.522	.020%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1096.13	73.66%	82.01%
0-40	1303.35	87.59%	97.52%
0-60	1319.37	88.67%	98.72%
0-90	1336.23	89.80%	99.98%
0-120	1336.23	89.80%	99.98%
0-180	1336.52	89.82%	100.00%
60-90	17.44	1.17%	1.30%
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%
0-28.95	1069.22	71.86%	80.00%

ZONAL LUMEN SUMMARY

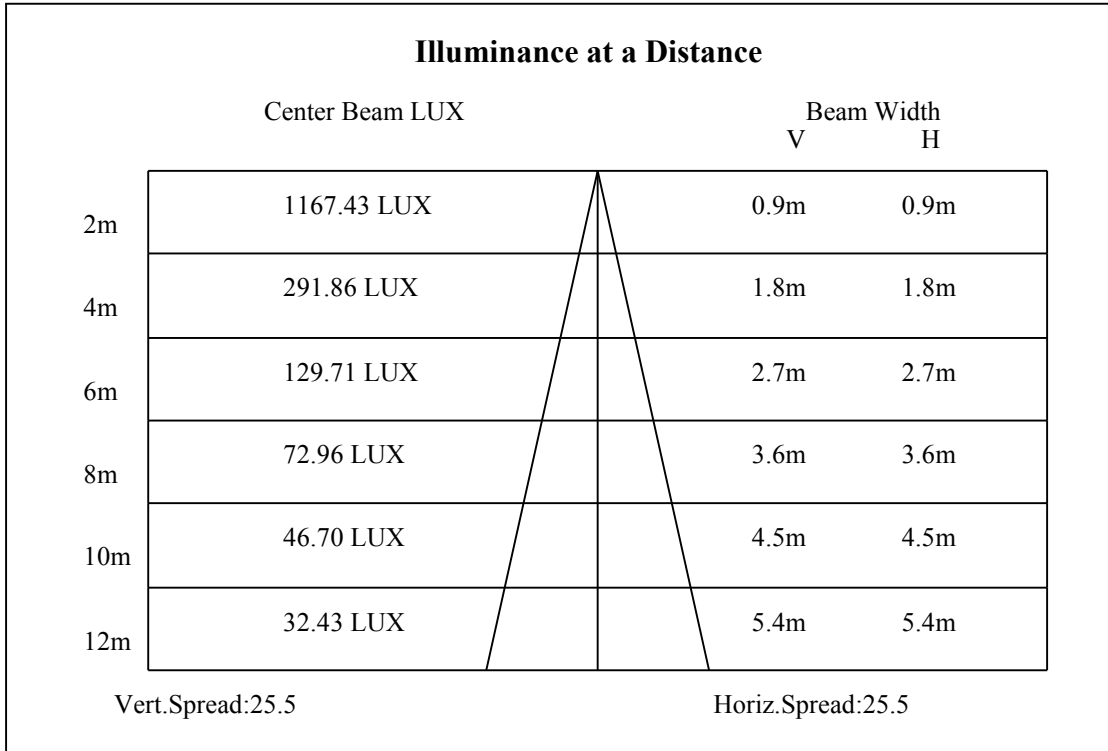
0-10	420.67
10-20	429.88
20-30	245.58
30-40	207.21
40-50	10.10
50-60	5.92
60-70	5.76
70-80	5.83
80-90	5.28
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

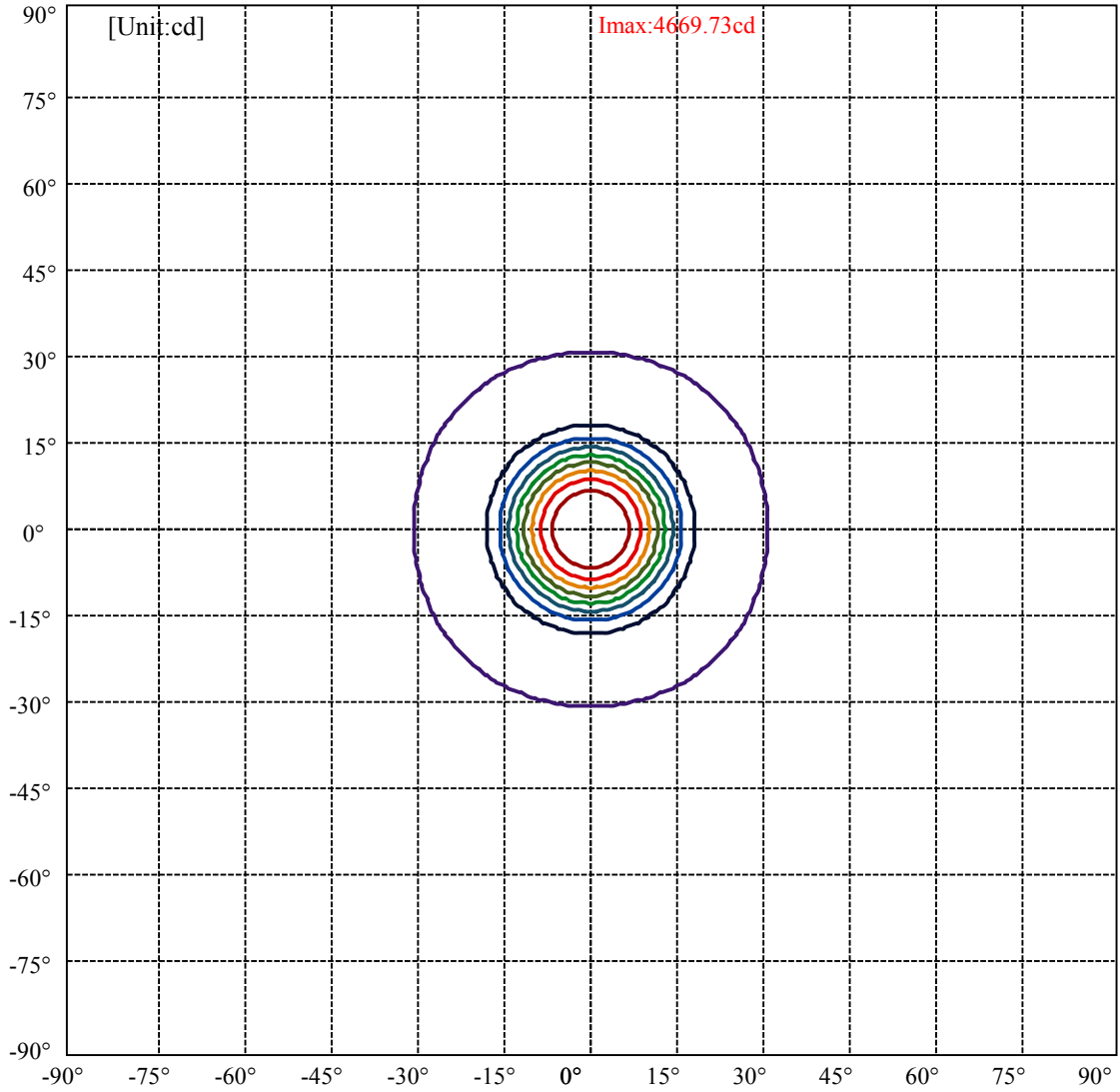


C0(Max): —————
C0/C180: —————
C90/C270: —————

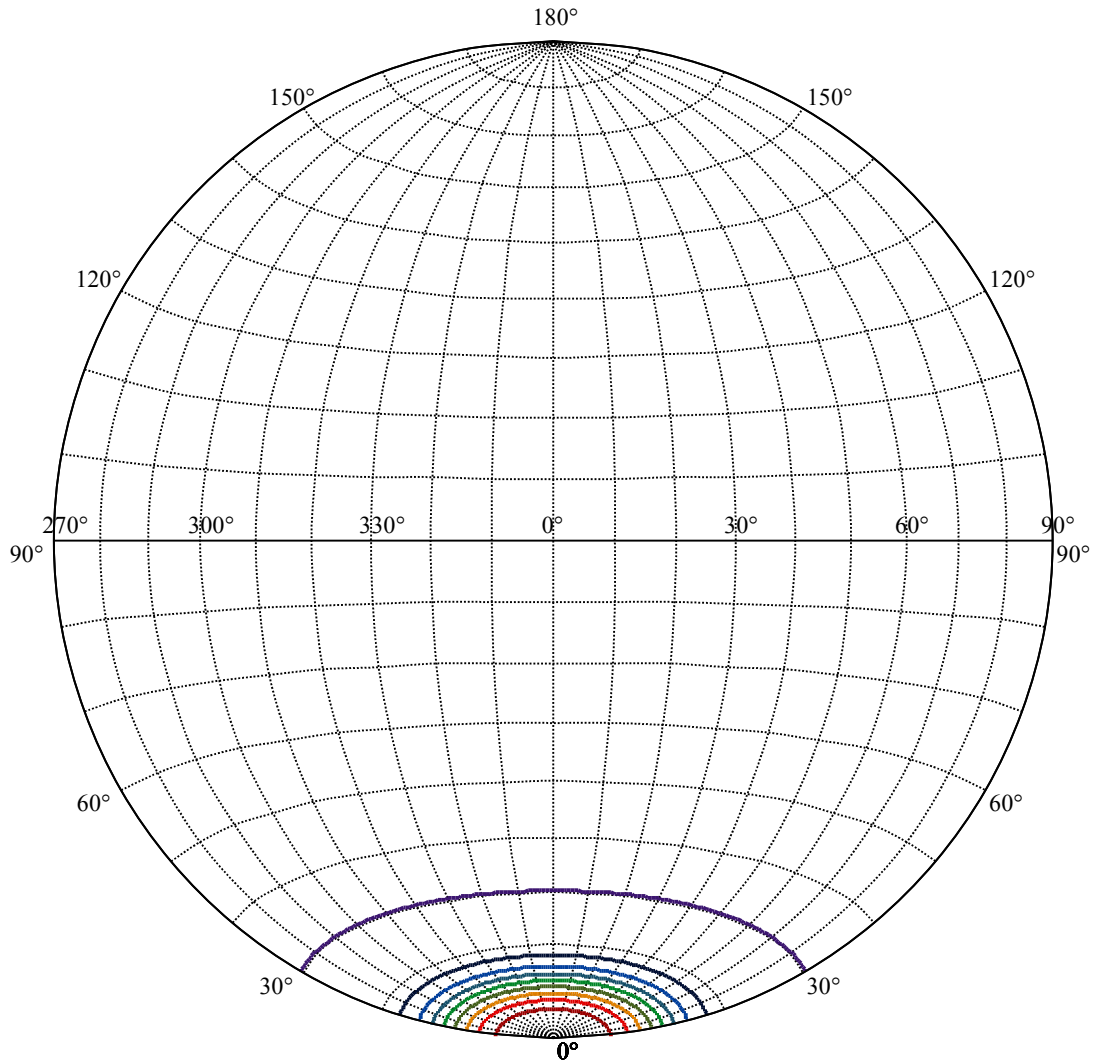
Field angle(10%Imax):C0/180Left:30.4 Right:30.4
:C90/270Left:30.4 Right:30.4

Beam Angle(50%Imax):C0/180Left:12.7 Right:12.7
:C90/270Left:12.7 Right:12.7





(10%Imax) 466.973	—
(20%Imax) 933.945	—
(30%Imax) 1400.92	—
(40%Imax) 1867.89	—
(50%Imax) 2334.86	—
(60%Imax) 2801.84	—
(70%Imax) 3268.81	—
(80%Imax) 3735.78	—
(90%Imax) 4202.75	—



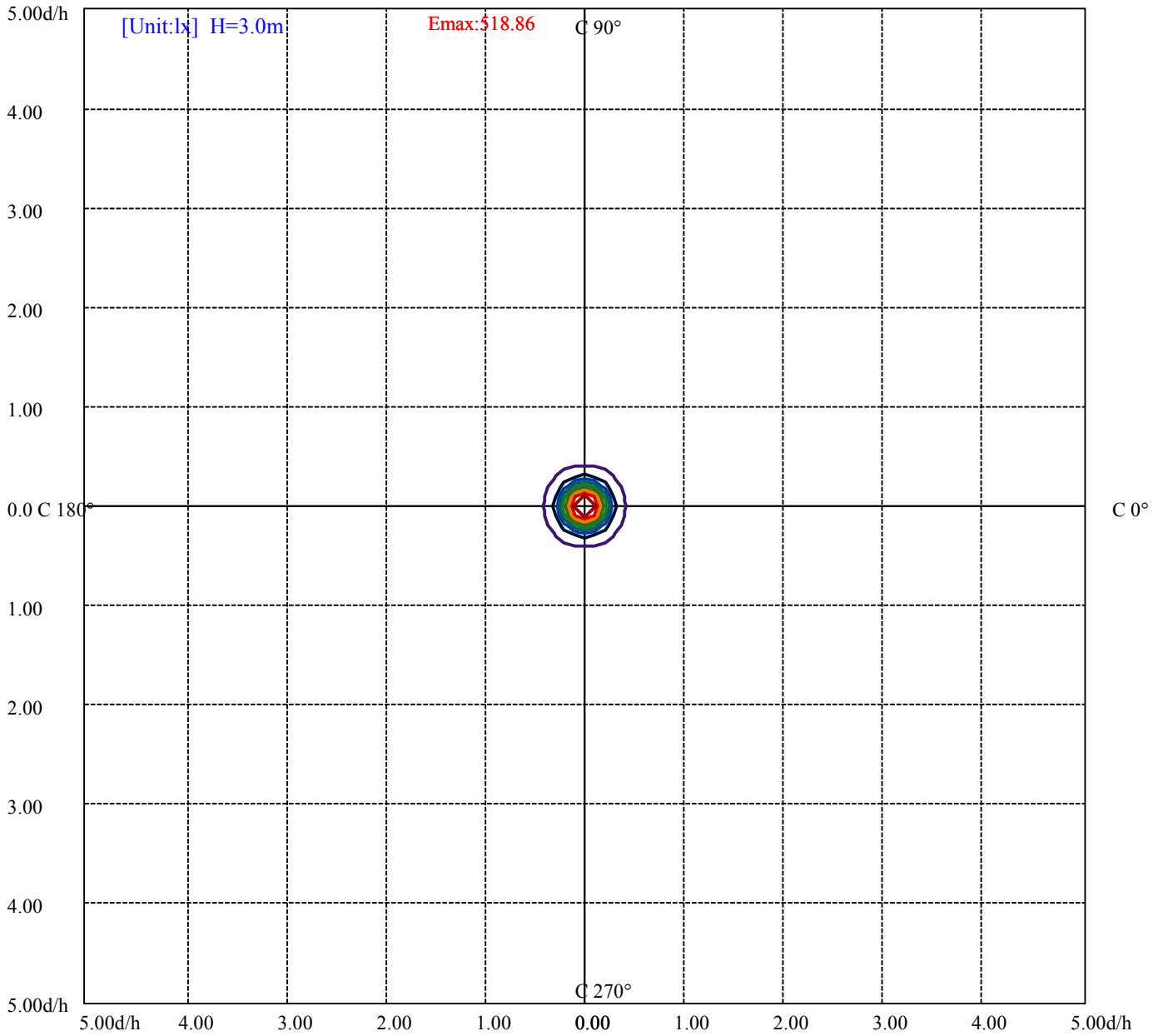
House

[Unit:cd]

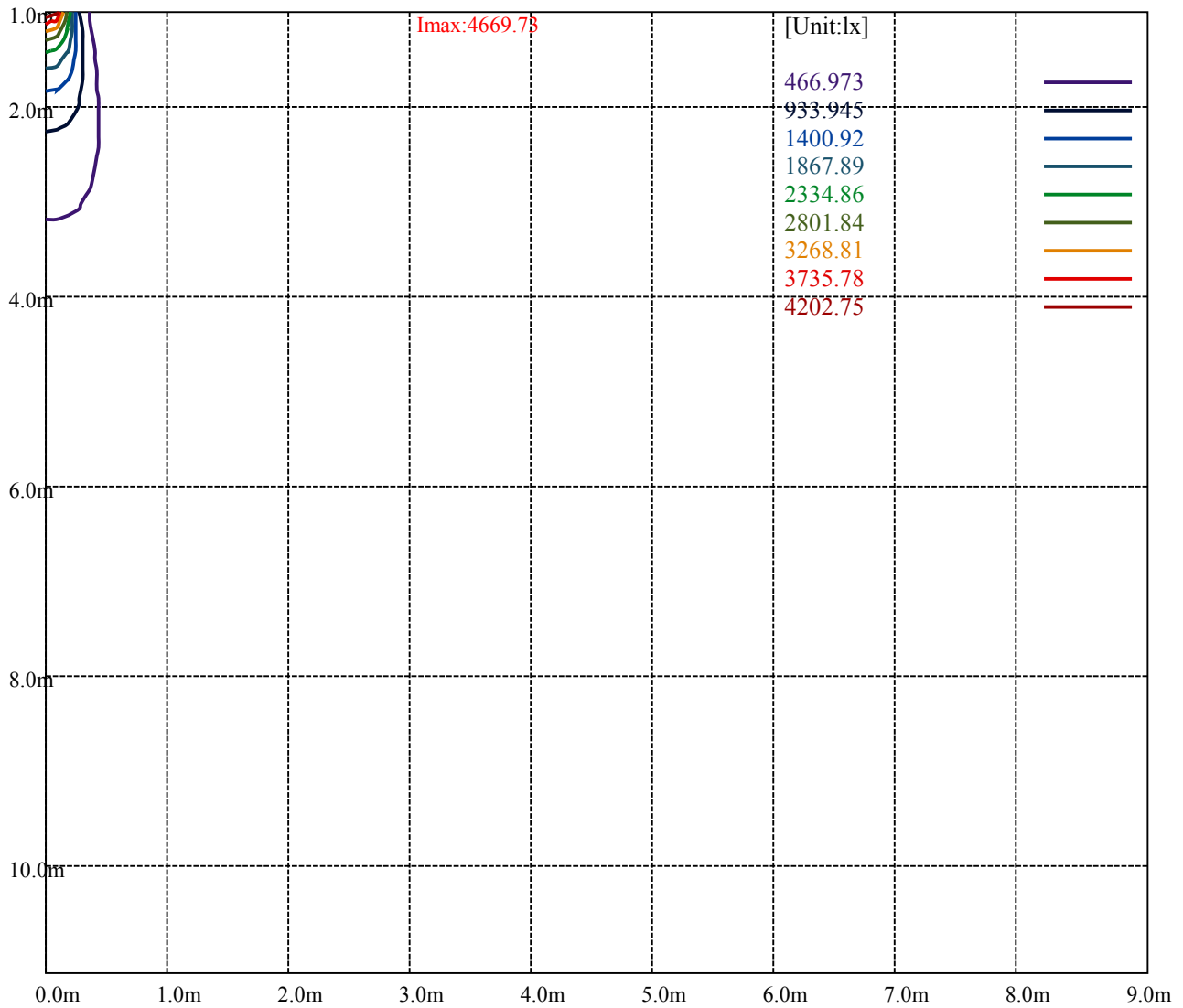
Road

Imax:4669.73

(10%Imax)	466.973	—
(20%Imax)	933.945	—
(30%Imax)	1400.92	—
(40%Imax)	1867.89	—
(50%Imax)	2334.86	—
(60%Imax)	2801.84	—
(70%Imax)	3268.81	—
(80%Imax)	3735.78	—
(90%Imax)	4202.75	—



(10%Emax) 51.88578	—
(20%Emax) 103.7717	—
(30%Emax) 155.6578	—
(40%Emax) 207.5433	—
(50%Emax) 259.4289	—
(60%Emax) 311.3145	—
(70%Emax) 363.2011	—
(80%Emax) 415.0867	—
(90%Emax) 466.9722	—



Luminance Table

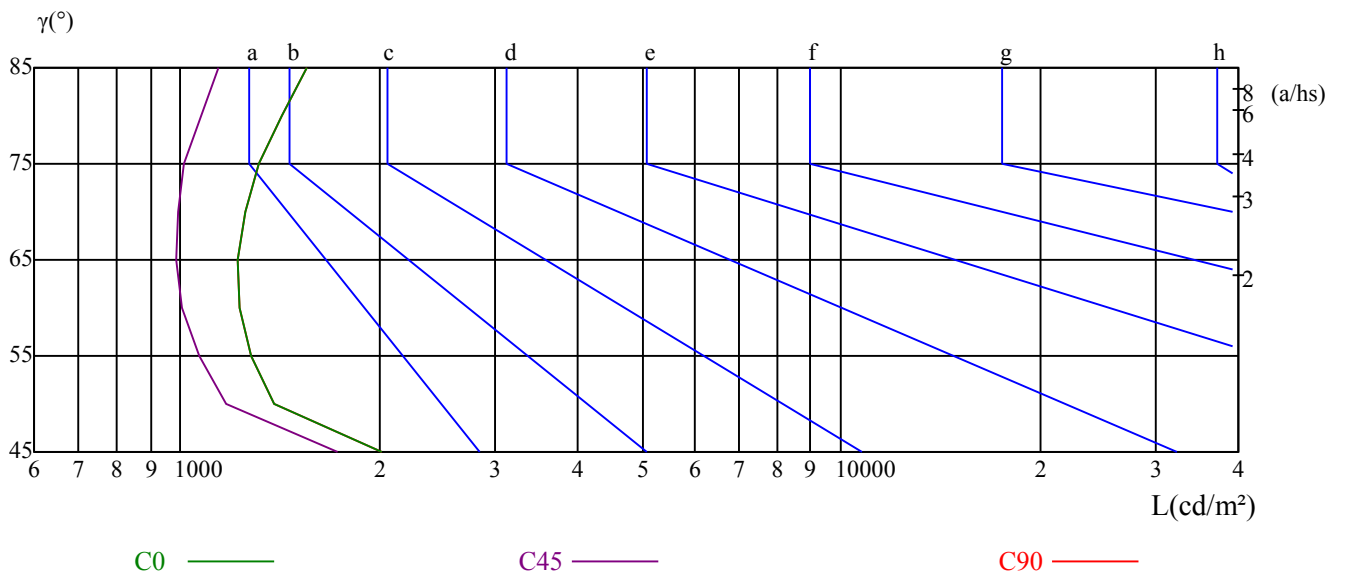
γ	45	50	55	60	65	70	75	80	85
C0	2016	1387	1282	1225	1224	1256	1313	1425	1554
C45	1731	1173	1068	1003	985	991	1014	1074	1138
C90	2016	1387	1282	1225	1224	1256	1313	1425	1554

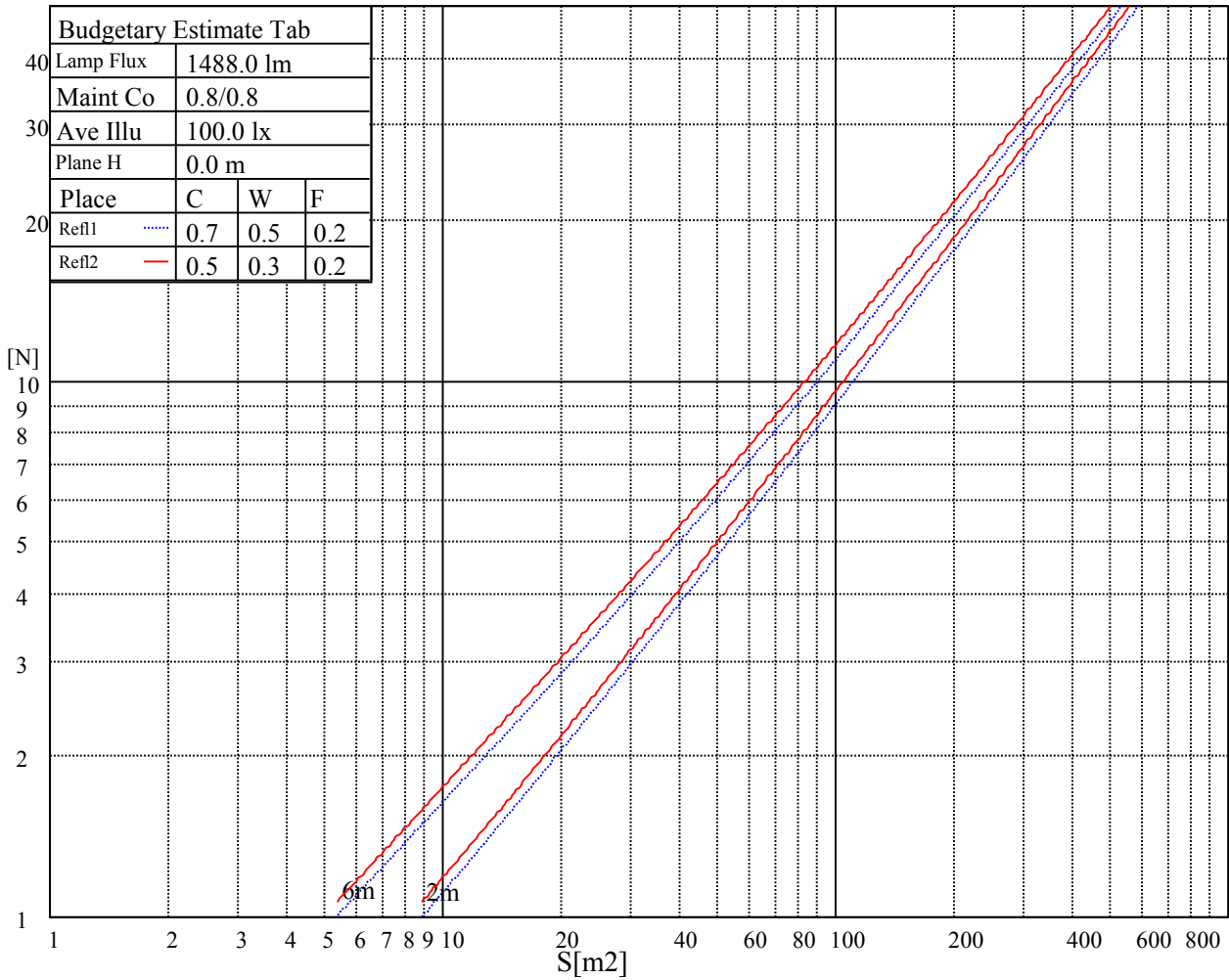
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2962	2962	2962	4557	4557	4557	13308	13308	13308

Glare Table

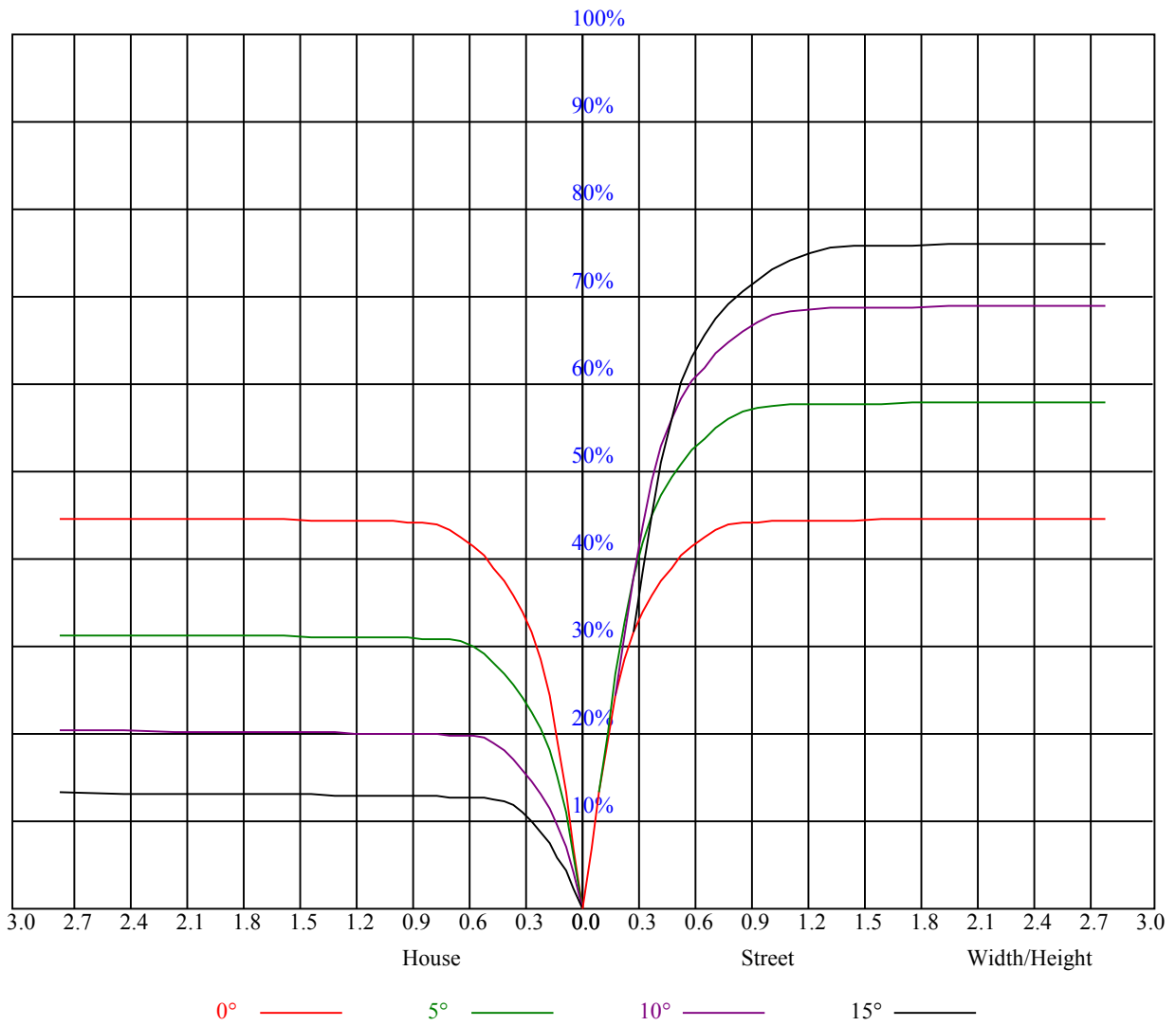
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.00	0.98	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.95	0.92	0.89	0.93	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.86	0.83	0.89	0.85	0.83	0.87	0.84	0.81	0.84	0.82	0.80	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.68
7	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66
8	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.64	0.63
9	0.70	0.66	0.63	0.69	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.63	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	4674.18	4643.57	4609.07	4561.21	4486.08	4395.36	4252.34	4044.20	3824.38
45.0	4673.06	4646.35	4585.69	4533.38	4480.51	4385.90	4252.90	4084.27	3838.29
90.0	4661.93	4639.12	4601.27	4538.94	4475.50	4394.25	4260.69	4063.68	3834.95
135.0	4671.40	4673.62	4665.83	4641.34	4593.48	4511.68	4406.49	4246.77	4059.23
180.0	4670.84	4683.64	4678.63	4661.38	4612.96	4528.37	4389.80	4192.24	3973.52
225.0	4673.06	4689.76	4690.32	4673.06	4630.21	4532.82	4380.89	4201.70	3952.93
270.0	4661.93	4674.73	4675.85	4664.72	4631.88	4532.27	4400.37	4226.18	3985.77
315.0	4671.40	4651.92	4628.54	4577.34	4508.34	4402.04	4228.97	4000.24	3752.03
360.0	4674.18	4643.57	4609.07	4561.21	4486.08	4395.36	4252.34	4044.20	3824.38
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3595.65	3186.61	2860.49	2572.22	2157.06	1807.56	1570.49	1275.53	1067.40
45.0	3543.34	3240.59	2872.18	2528.81	2153.72	1809.23	1538.21	1307.26	1073.52
90.0	3524.97	3179.38	2848.25	2465.92	2133.13	1784.75	1478.11	1095.78	1052.15
135.0	3799.33	3478.23	3161.01	2823.76	2399.70	2068.57	1756.36	1421.34	1197.62
180.0	3680.80	3348.56	3019.66	2678.51	2266.13	1939.46	1640.61	1341.76	1092.94
225.0	3690.81	3354.12	2989.60	2652.36	2269.47	1944.47	1611.67	1346.77	1094.39
270.0	3704.17	3413.11	3054.72	2723.59	2348.50	1983.42	1682.35	1378.49	1127.50
315.0	3428.14	3070.86	2738.06	2364.08	2034.62	1695.70	1402.42	1106.30	996.55
360.0	3595.65	3186.61	2860.49	2572.22	2157.06	1807.56	1570.49	1275.53	1067.40
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	937.73	799.16	714.57	653.91	601.59	569.32	547.61	523.68	509.21
45.0	923.82	806.39	700.65	640.55	596.03	559.30	530.92	511.99	498.08
90.0	866.16	757.81	679.56	614.45	577.72	550.51	527.86	511.33	499.25
135.0	1011.75	866.50	739.05	665.59	606.60	567.09	541.49	520.34	506.99
180.0	921.87	782.02	684.13	623.80	578.67	549.28	526.24	509.66	499.97
225.0	907.07	783.18	693.98	619.12	580.22	552.95	528.47	514.78	504.31
270.0	953.31	838.11	709.56	645.56	604.93	565.98	542.05	528.13	513.11
315.0	826.87	730.15	659.86	600.09	567.70	544.11	522.85	510.60	500.98
360.0	937.73	799.16	714.57	653.91	601.59	569.32	547.61	523.68	509.21
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	499.75	489.73	481.39	474.71	466.92	460.24	451.89	442.43	420.73
45.0	488.06	478.05	469.14	462.46	453.56	445.21	437.42	429.07	404.59
90.0	488.73	479.33	471.76	463.19	456.18	447.55	438.37	429.35	408.43
135.0	494.19	484.73	475.82	469.70	460.24	453.00	445.21	435.20	423.51
180.0	490.74	481.05	475.04	469.42	460.02	453.73	447.55	439.37	418.33
225.0	494.52	486.51	479.66	472.70	466.25	458.51	450.72	443.04	421.67
270.0	502.53	495.86	486.39	479.16	472.48	464.13	456.90	449.11	431.30
315.0	490.90	484.67	477.32	468.64	462.63	454.78	444.66	435.70	403.47
360.0	499.75	489.73	481.39	474.71	466.92	460.24	451.89	442.43	420.73
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	372.87	296.62	287.72	136.79	69.06	31.67	18.03	13.97	12.08
45.0	357.28	294.40	242.86	135.34	75.96	30.44	16.53	13.69	11.97
90.0	345.49	281.99	211.53	125.27	66.95	29.66	16.97	14.02	12.02
135.0	389.56	333.91	284.38	177.70	110.47	48.86	20.87	16.53	14.14
180.0	373.26	303.30	223.89	152.15	80.42	36.28	18.03	14.75	12.52
225.0	366.63	302.19	230.06	139.30	77.58	36.01	17.81	14.64	12.74
270.0	386.22	323.34	287.72	155.94	89.88	38.90	19.14	16.14	13.58
315.0	330.51	259.56	186.32	101.84	49.81	23.15	16.36	13.80	11.91
360.0	372.87	296.62	287.72	136.79	69.06	31.67	18.03	13.97	12.08

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	10.80	9.63	8.90	8.29	7.62	7.29	7.12	7.01	6.85
45.0	10.69	9.63	8.68	7.96	7.46	7.18	7.07	6.96	6.73
90.0	10.18	8.96	8.01	7.62	7.35	7.18	7.01	6.85	6.79
135.0	11.80	10.46	9.29	8.57	8.01	7.74	7.07	6.96	6.73
180.0	11.13	9.91	9.13	8.35	7.51	7.18	7.07	6.96	6.79
225.0	11.30	10.24	9.24	8.18	7.62	7.40	7.23	7.07	6.96
270.0	11.52	10.13	9.02	8.46	8.18	7.68	7.29	7.18	7.01
315.0	10.24	9.13	8.35	7.79	7.57	7.35	7.12	7.01	6.85
360.0	10.80	9.63	8.90	8.29	7.62	7.29	7.12	7.01	6.85
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.79	6.68	6.57	6.46	6.29	6.18	6.07	6.07	5.95
45.0	6.62	6.51	6.46	6.34	6.29	6.12	6.07	5.95	5.95
90.0	6.68	6.57	6.46	6.29	6.18	6.07	6.01	5.95	5.90
135.0	6.62	6.51	6.46	6.34	6.23	6.18	6.01	5.95	5.90
180.0	6.68	6.51	6.51	6.34	6.23	6.12	6.07	5.95	5.95
225.0	6.73	6.68	6.51	6.46	6.34	6.29	6.12	6.07	5.95
270.0	6.90	6.79	6.57	6.51	6.40	6.34	6.23	6.12	6.01
315.0	6.79	6.68	6.57	6.40	6.23	6.18	6.07	6.07	6.01
360.0	6.79	6.68	6.57	6.46	6.29	6.18	6.07	6.07	5.95
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.90	5.90	5.84	5.79	5.68	5.62	5.62	5.62	5.57
45.0	5.95	5.90	5.73	5.73	5.68	5.68	5.62	5.62	5.62
90.0	5.84	5.79	5.73	5.68	5.62	5.57	5.57	5.57	5.57
135.0	5.84	5.79	5.79	5.73	5.68	5.62	5.62	5.57	5.57
180.0	5.84	5.73	5.73	5.68	5.62	5.57	5.57	5.57	5.57
225.0	5.95	5.90	5.84	5.73	5.68	5.73	5.68	5.62	5.57
270.0	5.95	5.90	5.90	5.84	5.73	5.68	5.68	5.62	5.62
315.0	5.90	5.84	5.73	5.73	5.68	5.68	5.68	5.62	5.62
360.0	5.90	5.90	5.84	5.79	5.68	5.62	5.62	5.62	5.57
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.57	5.57	5.51	5.51	5.62	5.79	5.73	5.51	5.45
45.0	5.57	5.57	5.57	5.45	5.45	5.45	5.40	5.45	5.45
90.0	5.45	5.45	5.45	5.40	5.40	5.40	5.40	5.40	5.40
135.0	5.51	5.51	5.51	5.45	5.45	5.40	5.40	5.40	5.40
180.0	5.57	5.51	5.45	5.40	5.45	5.57	5.57	5.45	5.45
225.0	5.57	5.51	5.51	5.45	5.45	5.40	5.45	5.45	5.45
270.0	5.62	5.57	5.51	5.51	5.51	5.51	5.51	5.45	5.51
315.0	5.51	5.51	5.51	5.45	5.45	5.51	5.45	5.40	5.40
360.0	5.57	5.57	5.51	5.51	5.62	5.79	5.73	5.51	5.45
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.45	5.40	5.40	5.34	5.29	5.40	5.34	5.29	5.29
45.0	5.40	5.40	5.40	5.40	5.34	5.34	5.29	5.29	5.34
90.0	5.40	5.40	5.40	5.45	5.40	5.40	5.29	5.23	5.34
135.0	5.45	5.40	5.40	5.34	5.34	5.34	5.34	5.34	5.29
180.0	5.40	5.40	5.40	5.34	5.34	5.34	5.34	5.34	5.29
225.0	5.40	5.40	5.45	5.45	5.40	5.34	5.34	5.34	5.29
270.0	5.57	5.57	5.57	5.51	5.45	5.51	5.45	5.45	5.29
315.0	5.40	5.45	5.40	5.34	5.34	5.29	5.40	5.23	5.34
360.0	5.45	5.40	5.40	5.34	5.29	5.40	5.34	5.29	5.29

Intensity data(cd)

C/γ(°)	90.0
0.0	5.29
45.0	5.34
90.0	5.34
135.0	5.29
180.0	5.29
225.0	5.29
270.0	5.29
315.0	5.34
360.0	5.29