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Nata

LumCAT: 4-2275-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.1000
Test No: GC2018071909	Current(A): 0.3000
LampCAT: BRIDGELUX V9 HD	Power (W): 10.2300
Lamp flux(lm): 1166.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1056.11
Efficiency(%): 90.58%
Lumens(lm)/Power(W): 103.80
Central intensity(cd): 6231.833
Maximum intensity(cd): 6231.833
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=18.1
[C90/270]Total=18.1
Field angle(10%Imax): [C0/180]Total=36.1
[C90/270]Total=36.1
Maximum s/h(1/2): C0_180=0.31 C90_270=0.31
Maximum s/h(1/4): C0_180=0.30 C90_270=0.30
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.07%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.127%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6231.834	5.964	5.964	.511%	.565%
2.0	6149.456	47.067	53.031	4.037%	5.021%
4.0	5795.374	88.661	141.692	7.604%	13.416%
6.0	4969.872	113.932	255.624	9.771%	24.204%
8.0	3784.715	115.519	371.143	9.907%	35.142%
10.0	2497.771	95.124	466.266	8.158%	44.149%
12.0	1582.452	72.156	538.423	6.188%	50.982%
14.0	1089.539	57.807	596.23	4.958%	56.455%
16.0	821.407	49.655	645.885	4.259%	61.157%
18.0	625.702	42.405	688.29	3.637%	65.172%
20.0	491.791	36.889	725.179	3.164%	68.665%
22.0	422.331	34.697	759.876	2.976%	71.950%
24.0	394.293	35.172	795.048	3.016%	75.281%
26.0	381.045	36.634	831.682	3.142%	78.750%
28.0	370.894	38.188	869.87	3.275%	82.365%
30.0	358.988	39.365	909.235	3.376%	86.093%
32.0	347.743	40.414	949.649	3.466%	89.920%
34.0	332.025	40.719	990.368	3.492%	93.775%
36.0	242.331	31.239	1021.607	2.679%	96.733%
38.0	71.443	9.646	1031.253	.827%	97.646%
40.0	11.252	1.586	1032.839	.136%	97.797%
42.0	8.245	1.210	1034.049	.104%	97.911%
44.0	6.173	0.940	1034.99	.081%	98.000%
46.0	5.478	0.864	1035.854	.074%	98.082%
48.0	5.285	0.861	1036.716	.074%	98.164%
50.0	5.155	0.866	1037.582	.074%	98.246%
52.0	5.058	0.874	1038.456	.075%	98.328%
54.0	4.955	0.879	1039.335	.075%	98.412%
56.0	4.886	0.888	1040.223	.076%	98.496%
58.0	4.817	0.896	1041.119	.077%	98.581%
60.0	4.776	0.907	1042.026	.078%	98.666%
62.0	4.755	0.921	1042.947	.079%	98.754%
64.0	4.721	0.931	1043.878	.080%	98.842%
66.0	4.680	0.938	1044.815	.080%	98.931%
68.0	4.666	0.949	1045.764	.081%	99.020%
70.0	4.645	0.957	1046.722	.082%	99.111%
72.0	4.632	0.966	1047.688	.083%	99.203%
74.0	4.618	0.974	1048.661	.083%	99.295%

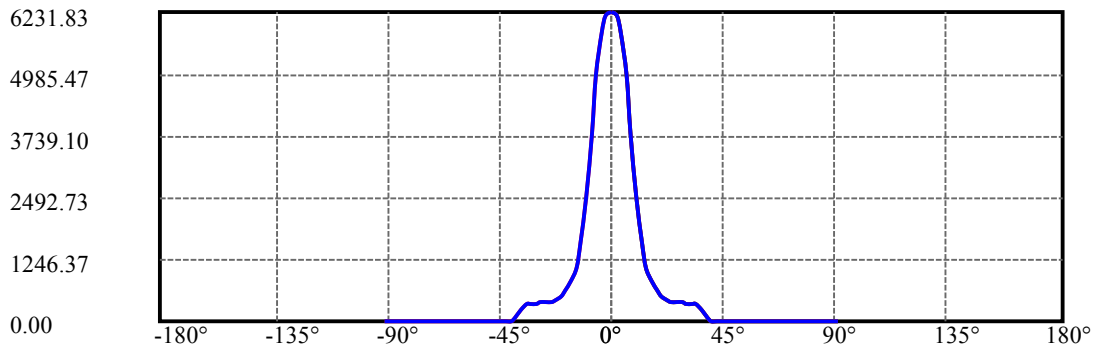
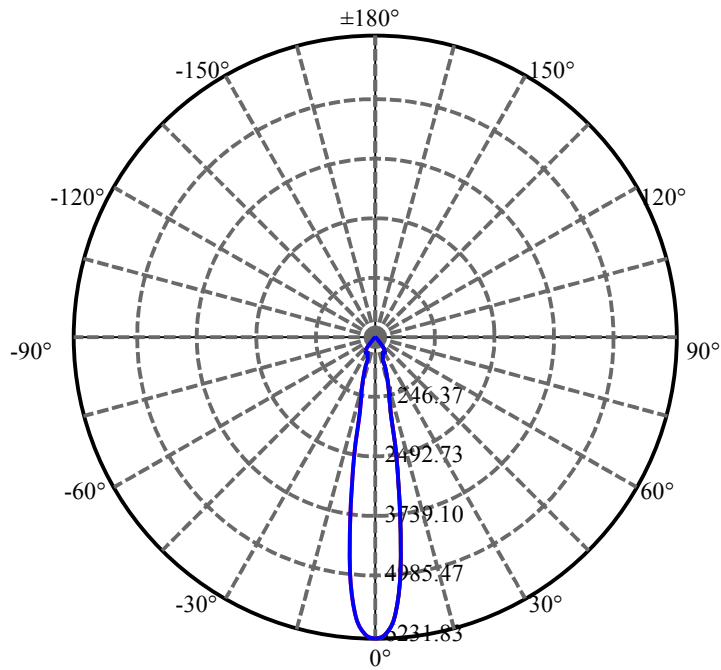
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.604	0.980	1049.641	.084%	99.387%
78.0	4.604	0.988	1050.629	.085%	99.481%
80.0	4.590	0.991	1051.62	.085%	99.575%
82.0	4.597	0.998	1052.619	.086%	99.669%
84.0	4.590	1.001	1053.62	.086%	99.764%
86.0	4.556	0.997	1054.616	.085%	99.859%
88.0	4.542	0.996	1055.612	.085%	99.953%
90.0	4.542	0.498	1056.11	.043%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	909.24	77.98%	86.09%
0-40	1032.84	88.58%	97.80%
0-60	1042.03	89.37%	98.67%
0-90	1055.61	90.53%	99.95%
0-120	1055.61	90.53%	99.95%
0-180	1056.11	90.58%	100.00%
60-90	14.49	1.24%	1.37%
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%
0-26.69	844.89	72.46%	80.00%

ZONAL LUMEN SUMMARY

0-10	466.27
10-20	258.91
20-30	184.06
30-40	123.60
40-50	4.74
50-60	4.44
60-70	4.70
70-80	4.90
80-90	3.99
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:

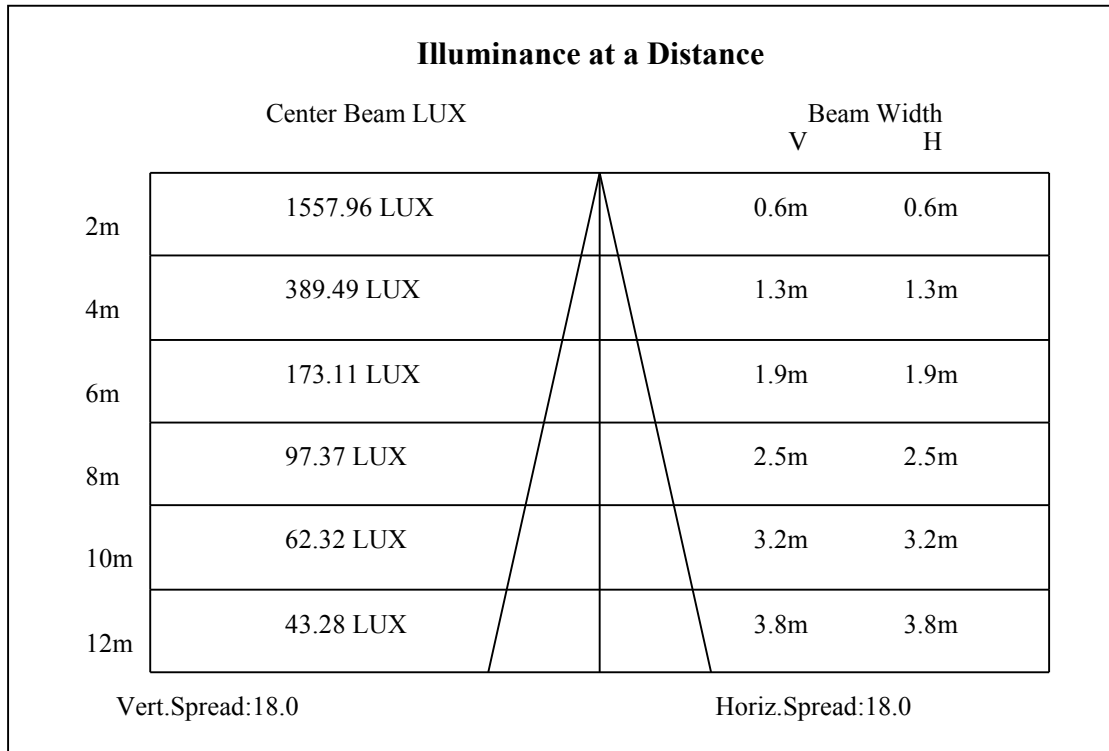
C90/C270:

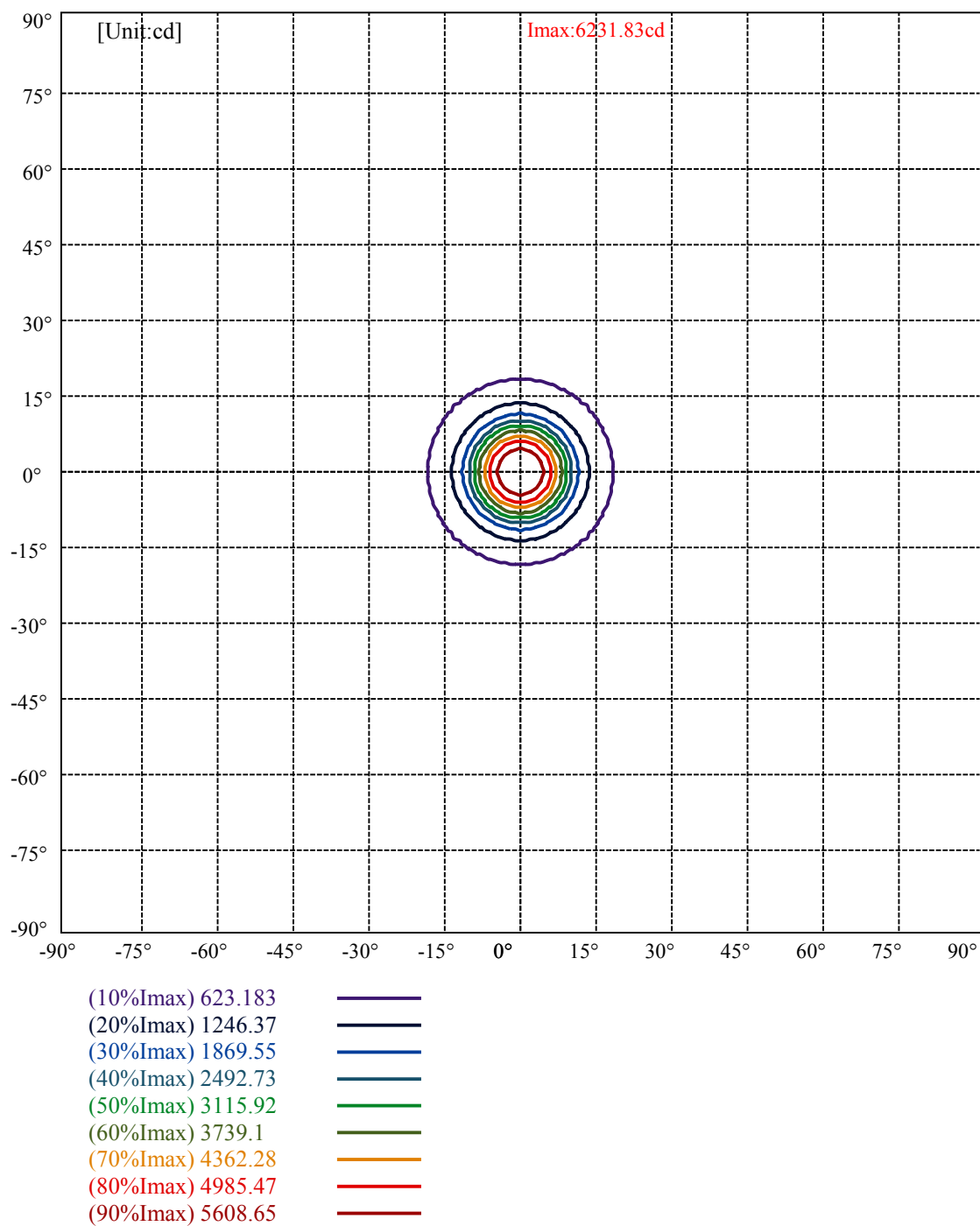
Field angle(10%Imax):C0/180Left:18.0 Right:18.0

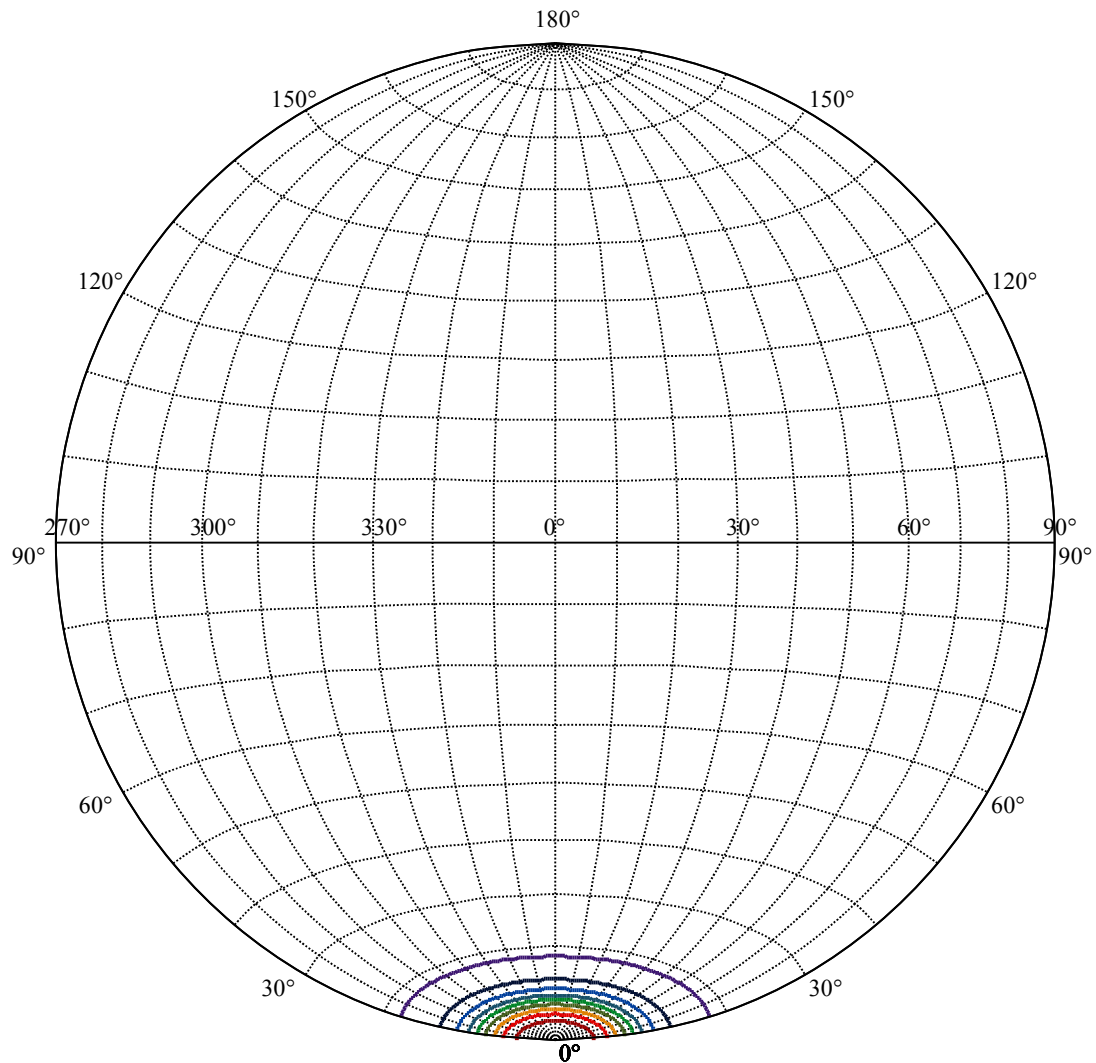
:C90/270Left:18.0 Right:18.0

Beam Angle(50%Imax):C0/180Left:9.0 Right:9.0

:C90/270Left:9.0 Right:9.0







House

[Unit:cd]

Road

Imax:6231.83

(10%Imax) 623.183

(20%Imax) 1246.37

(30%Imax) 1869.55

(40%Imax) 2492.73

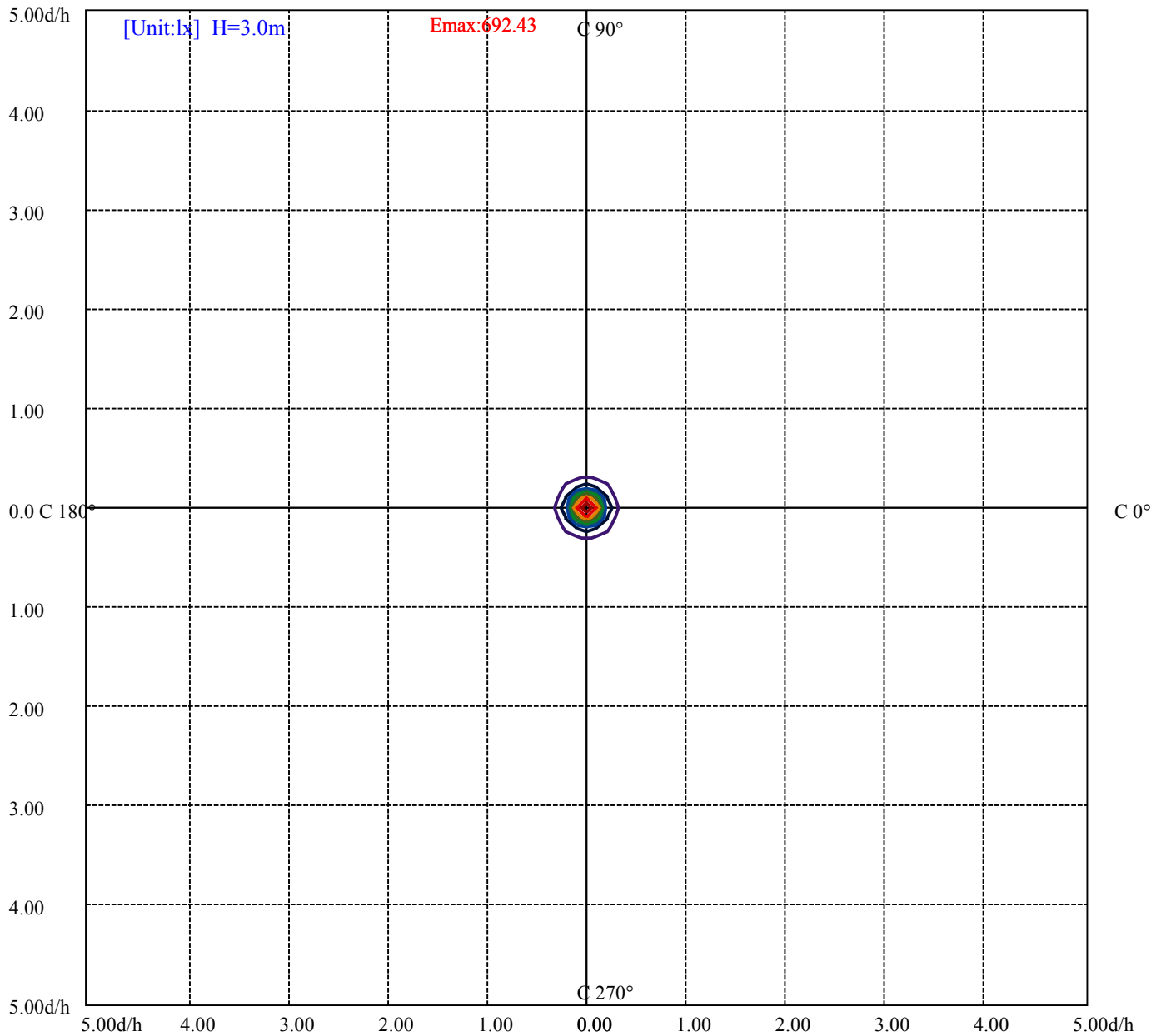
(50%Imax) 3115.92

(60%Imax) 3739.1

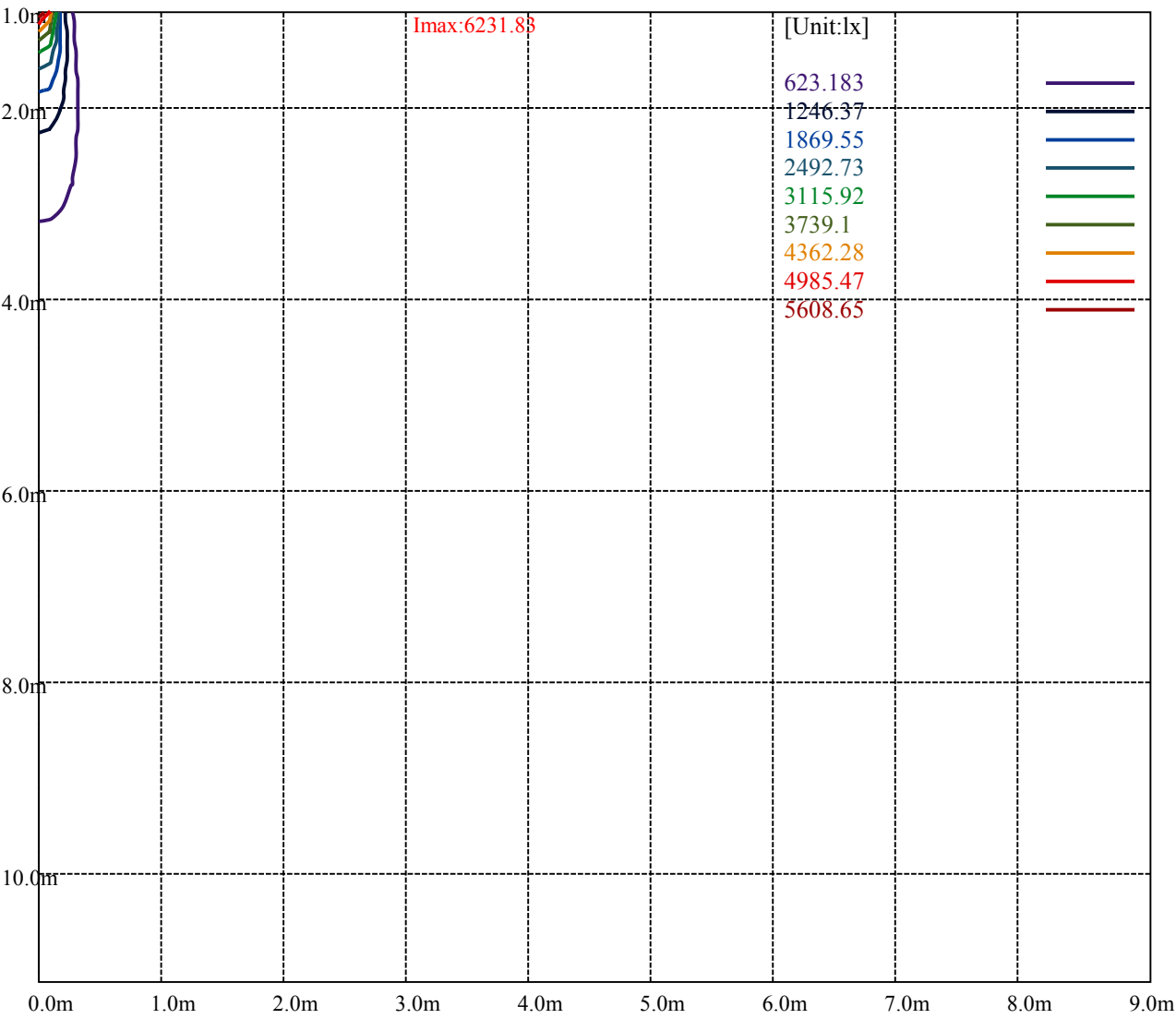
(70%Imax) 4362.28

(80%Imax) 4985.47

(90%Imax) 5608.65



(10%Emax)	69.24255	—
(20%Emax)	138.4855	—
(30%Emax)	207.7278	—
(40%Emax)	276.97	—
(50%Emax)	346.2122	—
(60%Emax)	415.4556	—
(70%Emax)	484.6978	—
(80%Emax)	553.94	—
(90%Emax)	623.1823	—



Luminance Table

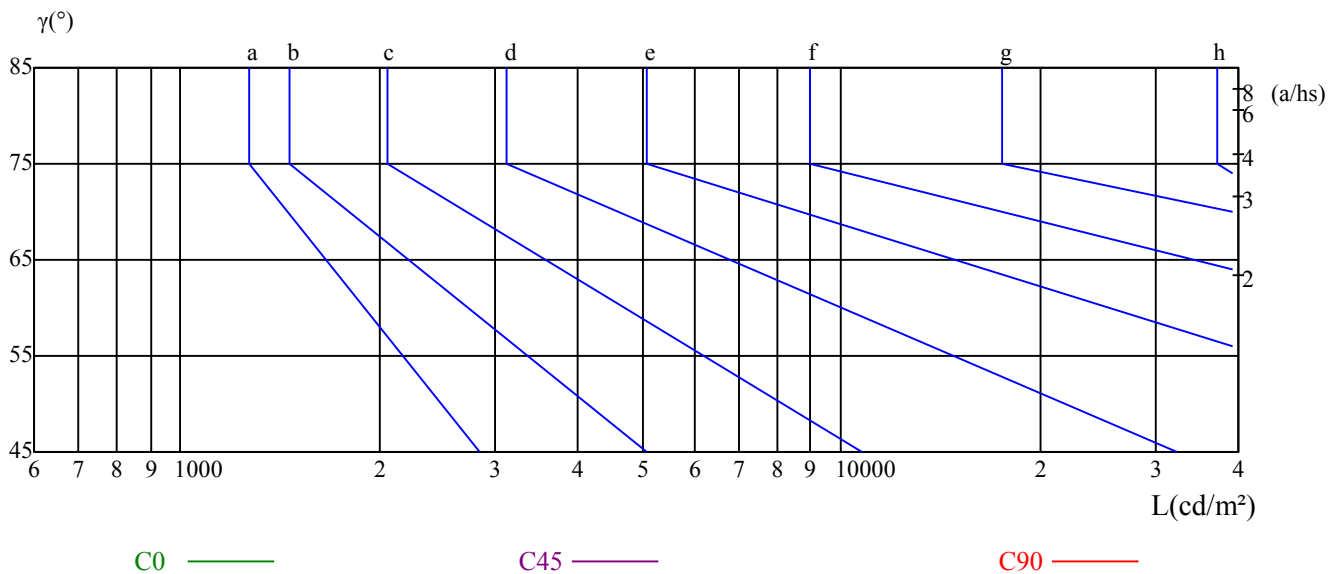
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

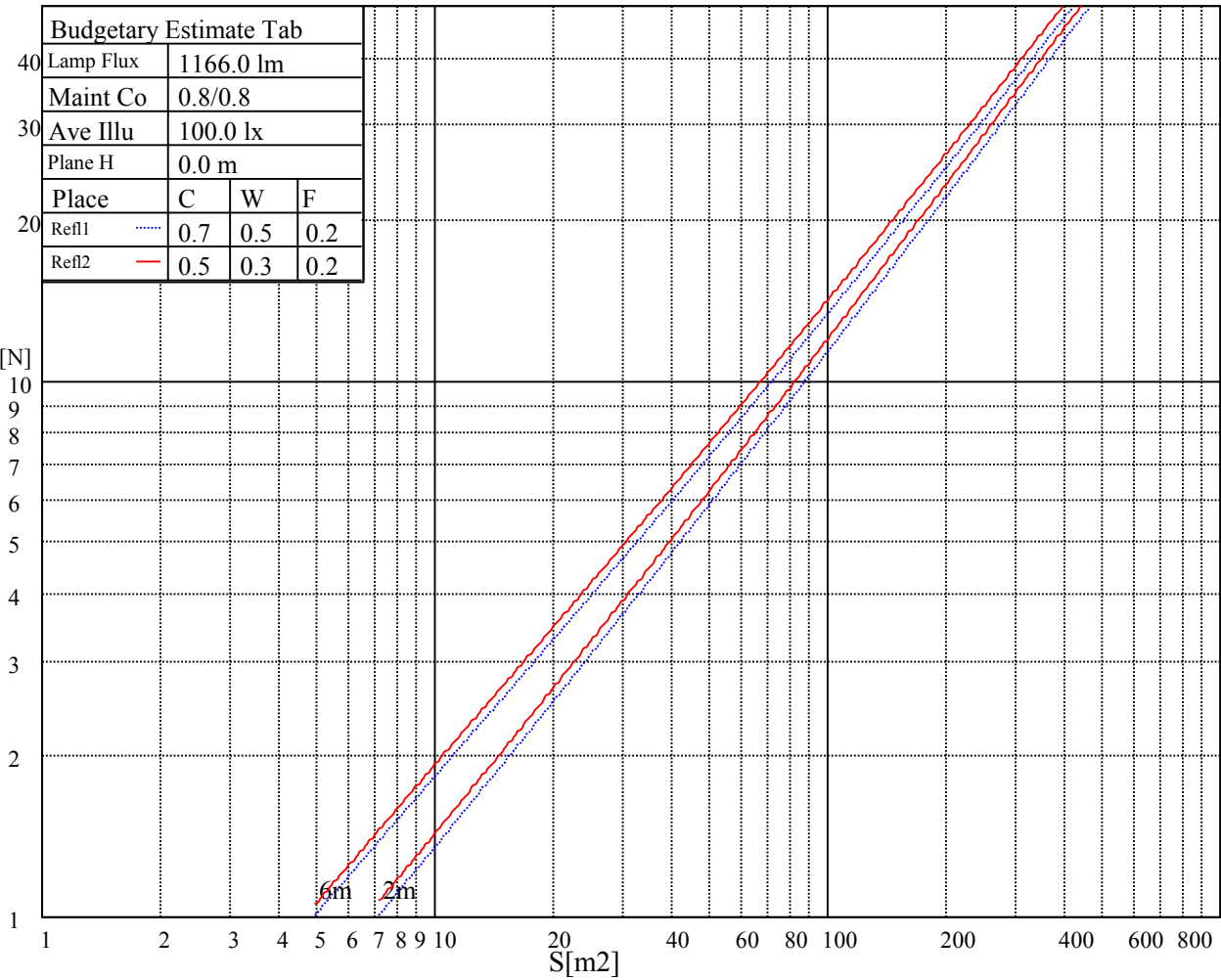
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

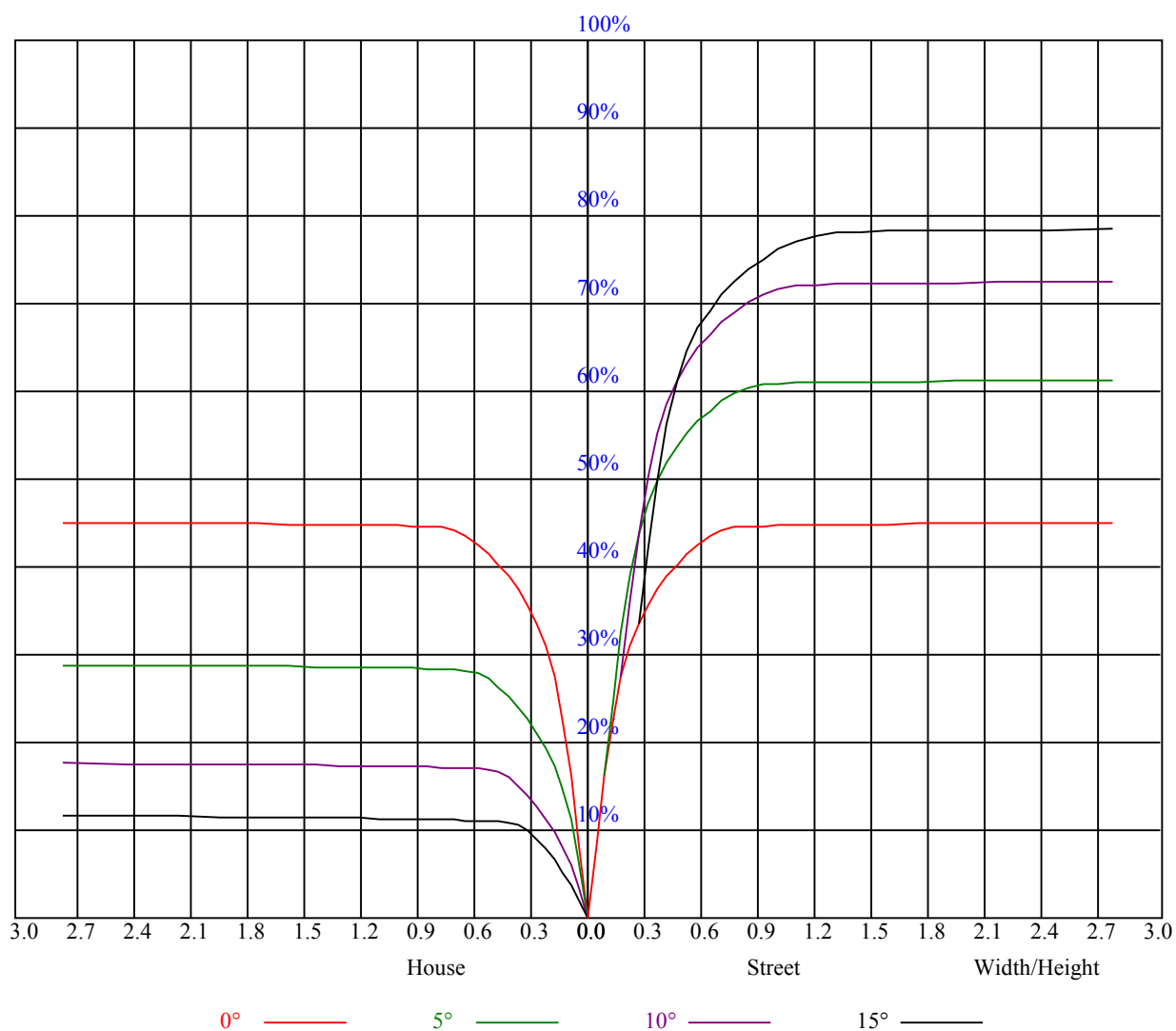
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.82	0.85	0.83	0.81	0.80
4	0.88	0.84	0.81	0.87	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.80	0.78	0.76	0.75
6	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.71	0.69	0.74	0.71	0.69	0.68
9	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
10	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.65



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	6254.41	6224.68	6023.72	5432.97	4448.56	3202.63	2096.00	1343.93	972.30
45.0	6225.78	6153.10	6021.52	5382.31	4402.86	2992.32	1913.21	1265.75	904.58
90.0	6209.26	6134.38	5892.14	5169.25	3909.55	2511.12	1651.14	1080.98	829.48
135.0	6237.89	6159.71	5845.34	4990.86	3946.44	2521.03	1591.13	1098.38	814.28
180.0	6254.41	6054.55	5449.48	4337.89	2952.12	1871.92	1088.96	876.28	700.32
225.0	6225.78	6092.54	5560.15	4558.67	3204.28	1990.29	1224.45	913.61	712.15
270.0	6209.26	6191.64	5788.08	4894.51	3700.89	2399.91	1517.35	1055.98	789.51
315.0	6237.89	6185.04	5782.57	4992.51	3713.00	2492.95	1577.37	1081.42	848.64
360.0	6254.41	6224.68	6023.72	5432.97	4448.56	3202.63	2096.00	1343.93	972.30
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	751.52	578.09	463.02	409.62	393.65	381.54	369.98	356.77	343.55
45.0	689.31	530.19	434.39	396.41	383.74	373.28	360.62	350.16	337.50
90.0	608.26	480.37	413.36	387.27	373.28	363.54	352.09	340.96	331.77
135.0	612.78	483.95	414.02	387.60	375.48	365.02	353.46	343.00	332.54
180.0	522.71	433.51	400.76	384.73	372.57	362.05	352.58	339.97	303.14
225.0	551.89	447.06	405.33	389.80	376.64	367.34	356.66	346.30	323.95
270.0	618.83	486.15	422.28	398.06	386.50	377.14	364.47	354.01	343.55
315.0	650.33	495.01	425.48	400.87	386.50	377.25	362.05	350.76	340.19
360.0	751.52	578.09	463.02	409.62	393.65	381.54	369.98	356.77	343.55
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	318.78	171.50	17.84	10.08	7.71	5.67	5.45	5.29	5.18
45.0	290.70	125.69	11.95	9.69	6.99	5.56	5.34	5.23	5.12
90.0	243.84	75.48	10.68	8.53	5.78	5.45	5.29	5.18	5.07
135.0	282.99	62.87	10.68	8.09	6.11	5.45	5.23	5.18	5.07
180.0	128.72	11.95	9.52	6.83	5.56	5.40	5.23	5.12	5.01
225.0	162.53	19.21	9.58	7.10	5.62	5.40	5.23	5.07	5.01
270.0	285.19	48.84	9.69	7.54	5.95	5.45	5.29	5.12	5.01
315.0	225.90	55.99	10.08	8.09	5.67	5.45	5.23	5.07	5.01
360.0	318.78	171.50	17.84	10.08	7.71	5.67	5.45	5.29	5.18
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	5.01	4.96	4.84	4.79	4.79	4.73	4.68	4.68	4.68
45.0	5.07	4.96	4.90	4.84	4.79	4.73	4.73	4.68	4.68
90.0	4.96	4.90	4.84	4.79	4.79	4.73	4.68	4.68	4.68
135.0	4.96	4.90	4.79	4.79	4.79	4.73	4.68	4.68	4.62
180.0	4.90	4.84	4.79	4.73	4.73	4.73	4.68	4.68	4.62
225.0	4.90	4.84	4.79	4.73	4.73	4.68	4.68	4.62	4.62
270.0	4.96	4.84	4.79	4.79	4.73	4.73	4.68	4.68	4.68
315.0	4.90	4.84	4.79	4.73	4.68	4.68	4.62	4.62	4.57
360.0	5.01	4.96	4.84	4.79	4.79	4.73	4.68	4.68	4.68
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.62	4.62	4.62	4.62	4.57	4.57	4.57	4.57	4.57
45.0	4.68	4.62	4.62	4.62	4.62	4.62	4.62	4.57	4.57
90.0	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.57	4.57
135.0	4.62	4.62	4.57	4.57	4.57	4.57	4.51	4.51	4.51
180.0	4.62	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.51
225.0	4.62	4.62	4.62	4.62	4.57	4.57	4.57	4.57	4.57
270.0	4.68	4.68	4.62	4.62	4.62	4.68	4.73	4.57	4.51
315.0	4.57	4.57	4.57	4.57	4.57	4.57	4.51	4.51	4.51
360.0	4.62	4.62	4.62	4.62	4.57	4.57	4.57	4.57	4.57

Intensity data(cd)

Appendix Page: 16 Total:16

C/ γ (°)	90.0
0.0	4.57
45.0	4.57
90.0	4.57
135.0	4.51
180.0	4.51
225.0	4.57
270.0	4.51
315.0	4.51
360.0	4.57