



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: 1436-N	
Luminaire: 92.70.064.00	
Report No: 200406-B035	Voltage(V): 220.4000
Test No: 200406-C035	Current(A): 0.0410
LampCAT: LUMINUS CXM-9-AC40	Power (W): 8.1400
Lamp flux(lm): 734.0	PF: 0.8960
Number of Lamps: 1	Ballast type: AC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 571.79
Efficiency(%): 77.90%
Lumens(lm)/Power(W): 70.24
Central intensity(cd): 1734.719
Maximum intensity(cd): 1734.719
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.1
 [C90/270]Total=25.1
Field angle(10%Imax): [C0/180]Total=56.2
 [C90/270]Total=56.2
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.90%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.845%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1734.719	0.000	0	.000%	.000%
1.0	1727.063	1.656	1.656	.226%	.290%
2.0	1703.513	4.924	6.58	.671%	1.151%
3.0	1665.288	8.057	14.637	1.098%	2.560%
4.0	1617.319	10.988	25.625	1.497%	4.482%
5.0	1547.888	13.617	39.242	1.855%	6.863%
6.0	1469.988	15.860	55.102	2.161%	9.637%
7.0	1392.089	17.765	72.866	2.420%	12.744%
8.0	1294.468	19.227	92.094	2.620%	16.106%
9.0	1203.169	20.242	112.336	2.758%	19.646%
10.0	1068.147	20.555	132.89	2.800%	23.241%
11.0	1002.196	20.687	153.577	2.818%	26.859%
12.0	916.773	20.977	174.554	2.858%	30.528%
13.0	824.901	20.669	195.224	2.816%	34.143%
14.0	742.274	20.060	215.283	2.733%	37.651%
15.0	669.101	19.376	234.659	2.640%	41.040%
16.0	592.727	18.489	253.149	2.519%	44.273%
17.0	524.578	17.399	270.548	2.370%	47.316%
18.0	467.525	16.358	286.906	2.229%	50.177%
19.0	413.657	15.331	302.236	2.089%	52.858%
20.0	367.950	14.306	316.542	1.949%	55.360%
21.0	327.503	13.354	329.896	1.819%	57.696%
22.0	293.397	12.477	342.373	1.700%	59.878%
23.0	264.957	11.716	354.089	1.596%	61.927%
24.0	243.038	11.107	365.196	1.513%	63.869%
25.0	224.842	10.639	375.834	1.449%	65.730%
26.0	207.585	10.207	386.042	1.391%	67.515%
27.0	195.312	9.857	395.899	1.343%	69.239%
28.0	174.778	9.370	405.269	1.277%	70.878%
29.0	160.683	8.777	414.045	1.196%	72.413%
30.0	150.034	8.389	422.434	1.143%	73.880%
31.0	139.181	8.048	430.483	1.097%	75.287%
32.0	128.711	7.675	438.158	1.046%	76.630%
33.0	120.666	7.347	445.504	1.001%	77.915%
34.0	111.606	7.029	452.534	.958%	79.144%
35.0	104.408	6.709	459.242	.914%	80.317%
36.0	97.459	6.427	465.67	.876%	81.441%
37.0	90.365	6.126	471.795	.835%	82.513%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	84.802	5.847	477.642	.797%	83.535%
39.0	79.199	5.598	483.24	.763%	84.514%
40.0	74.100	5.347	488.587	.728%	85.449%
41.0	68.172	5.066	493.653	.690%	86.335%
42.0	63.004	4.766	498.419	.649%	87.169%
43.0	58.694	4.508	502.927	.614%	87.957%
44.0	53.892	4.249	507.176	.579%	88.700%
45.0	50.232	4.002	511.178	.545%	89.400%
46.0	46.247	3.773	514.951	.514%	90.060%
47.0	42.610	3.534	518.485	.481%	90.678%
48.0	39.385	3.315	521.8	.452%	91.258%
49.0	36.247	3.106	524.905	.423%	91.801%
50.0	33.492	2.908	527.813	.396%	92.309%
51.0	30.893	2.724	530.537	.371%	92.786%
52.0	28.590	2.552	533.089	.348%	93.232%
53.0	26.258	2.386	535.475	.325%	93.650%
54.0	24.368	2.231	537.707	.304%	94.040%
55.0	22.088	2.074	539.78	.283%	94.402%
56.0	20.301	1.915	541.696	.261%	94.737%
57.0	18.625	1.780	543.476	.242%	95.049%
58.0	16.937	1.645	545.12	.224%	95.336%
59.0	15.435	1.513	546.634	.206%	95.601%
60.0	14.101	1.395	548.029	.190%	95.845%
61.0	12.952	1.291	549.32	.176%	96.071%
62.0	11.868	1.196	550.516	.163%	96.280%
63.0	10.951	1.110	551.626	.151%	96.474%
64.0	10.249	1.040	552.666	.142%	96.656%
65.0	9.588	0.982	553.648	.134%	96.828%
66.0	9.136	0.934	554.582	.127%	96.991%
67.0	8.770	0.900	555.482	.123%	97.149%
68.0	8.469	0.873	556.356	.119%	97.301%
69.0	8.196	0.850	557.206	.116%	97.450%
70.0	7.952	0.829	558.035	.113%	97.595%
71.0	7.732	0.811	558.846	.110%	97.737%
72.0	7.506	0.792	559.638	.108%	97.875%
73.0	7.326	0.776	560.414	.106%	98.011%
74.0	7.158	0.761	561.175	.104%	98.144%
75.0	6.990	0.747	561.923	.102%	98.275%

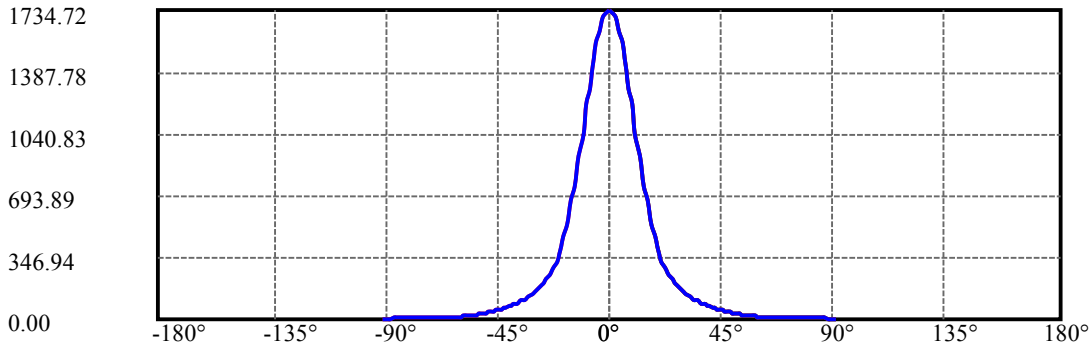
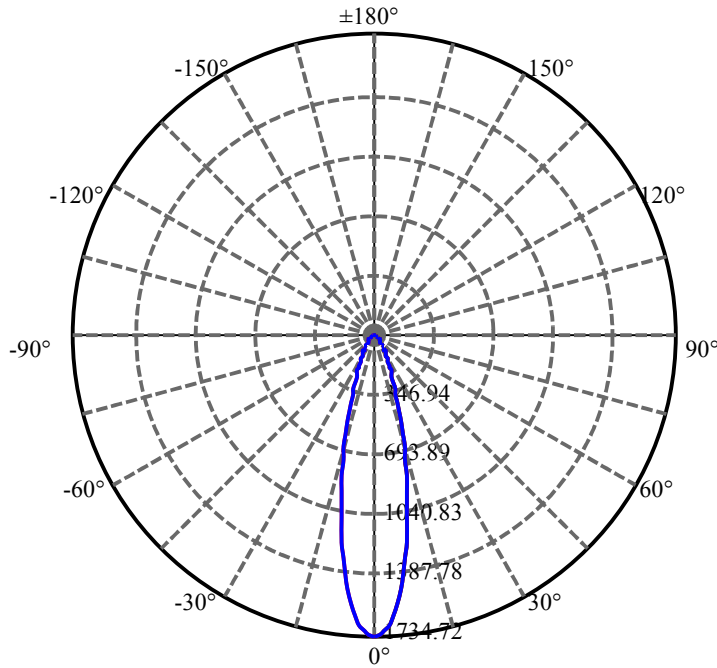
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.879	0.736	562.659	.100%	98.404%
77.0	6.786	0.729	563.388	.099%	98.531%
78.0	6.734	0.724	564.111	.099%	98.658%
79.0	6.659	0.720	564.831	.098%	98.784%
80.0	6.624	0.716	565.547	.098%	98.909%
81.0	6.659	0.718	566.265	.098%	99.034%
82.0	6.723	0.726	566.991	.099%	99.161%
83.0	6.653	0.727	567.718	.099%	99.289%
84.0	6.369	0.709	568.428	.097%	99.413%
85.0	6.061	0.678	569.106	.092%	99.531%
86.0	5.418	0.627	569.733	.085%	99.641%
87.0	4.872	0.563	570.297	.077%	99.739%
88.0	4.588	0.518	570.815	.071%	99.830%
89.0	4.484	0.497	571.312	.068%	99.917%
90.0	4.165	0.474	571.786	.065%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	422.43	57.55%	73.88%
0-40	488.59	66.56%	85.45%
0-60	548.03	74.66%	95.85%
0-90	571.31	77.84%	99.92%
0-120	571.31	77.84%	99.92%
0-180	571.79	77.90%	100.00%
60-90	24.68	3.36%	4.32%
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%
0-34.73	457.43	62.32%	80.00%

ZONAL LUMEN SUMMARY

0-10	132.89
10-20	183.65
20-30	105.89
30-40	66.15
40-50	39.23
50-60	20.22
60-70	10.01
70-80	7.51
80-90	5.77
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: —————

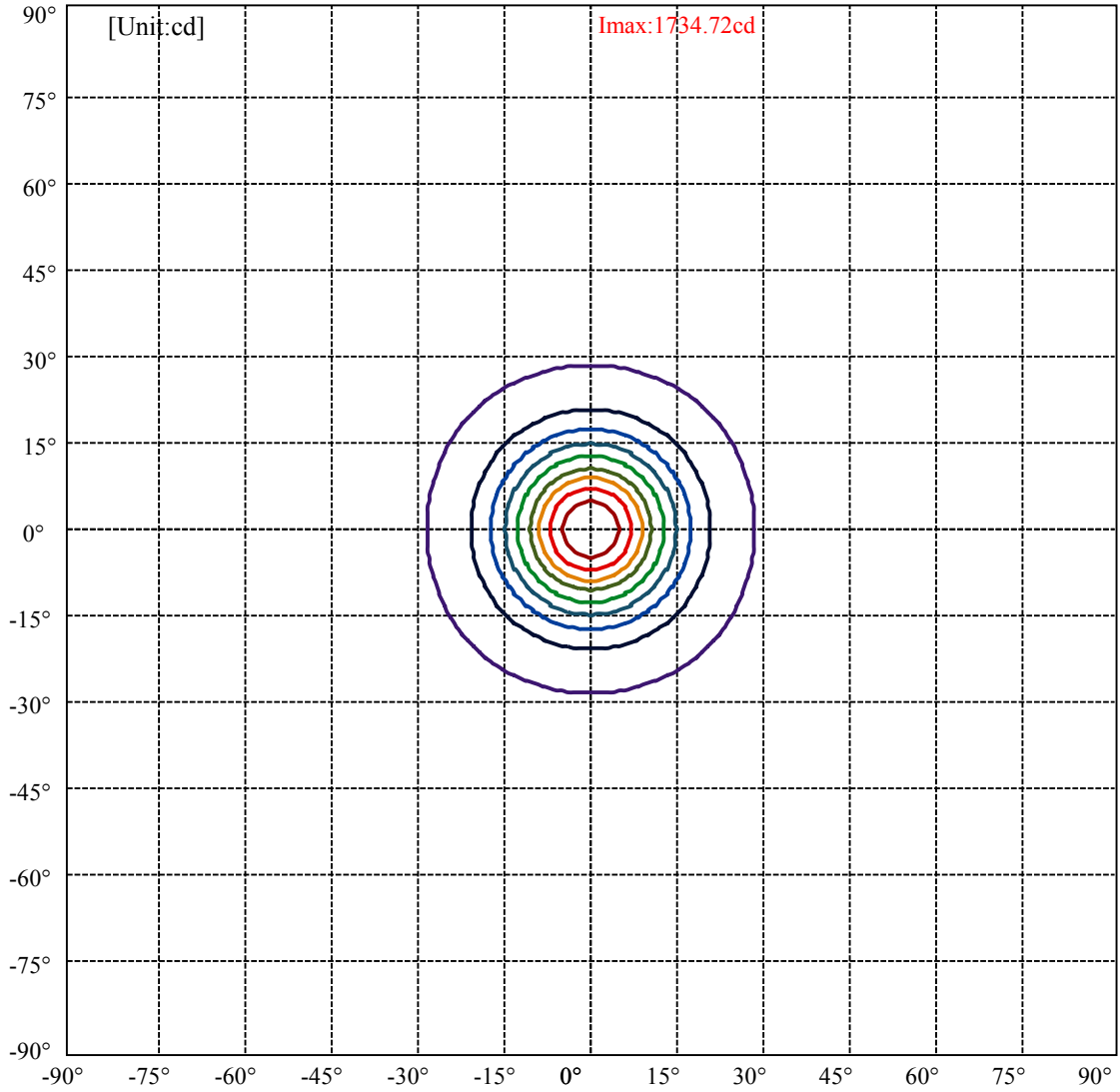
C90/C270: —————

Field angle(10%Imax):C0/180Left:28.1 Right:28.1

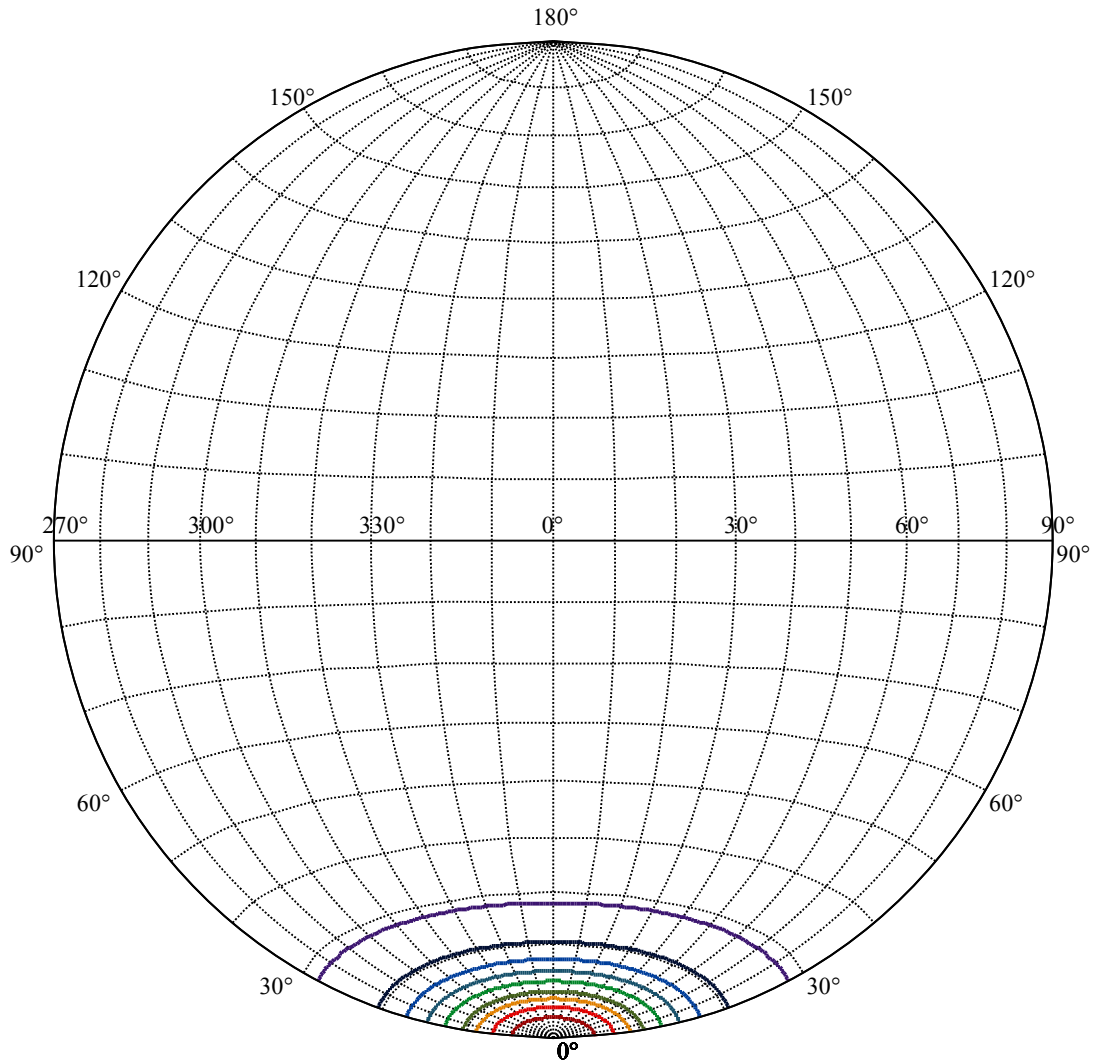
:C90/270Left:28.1 Right:28.1

Beam Angle(50%Imax):C0/180Left:12.5 Right:12.5

:C90/270Left:12.5 Right:12.5



(10%Imax) 173.472	—
(20%Imax) 346.944	—
(30%Imax) 520.416	—
(40%Imax) 693.888	—
(50%Imax) 867.36	—
(60%Imax) 1040.83	—
(70%Imax) 1214.3	—
(80%Imax) 1387.78	—
(90%Imax) 1561.25	—



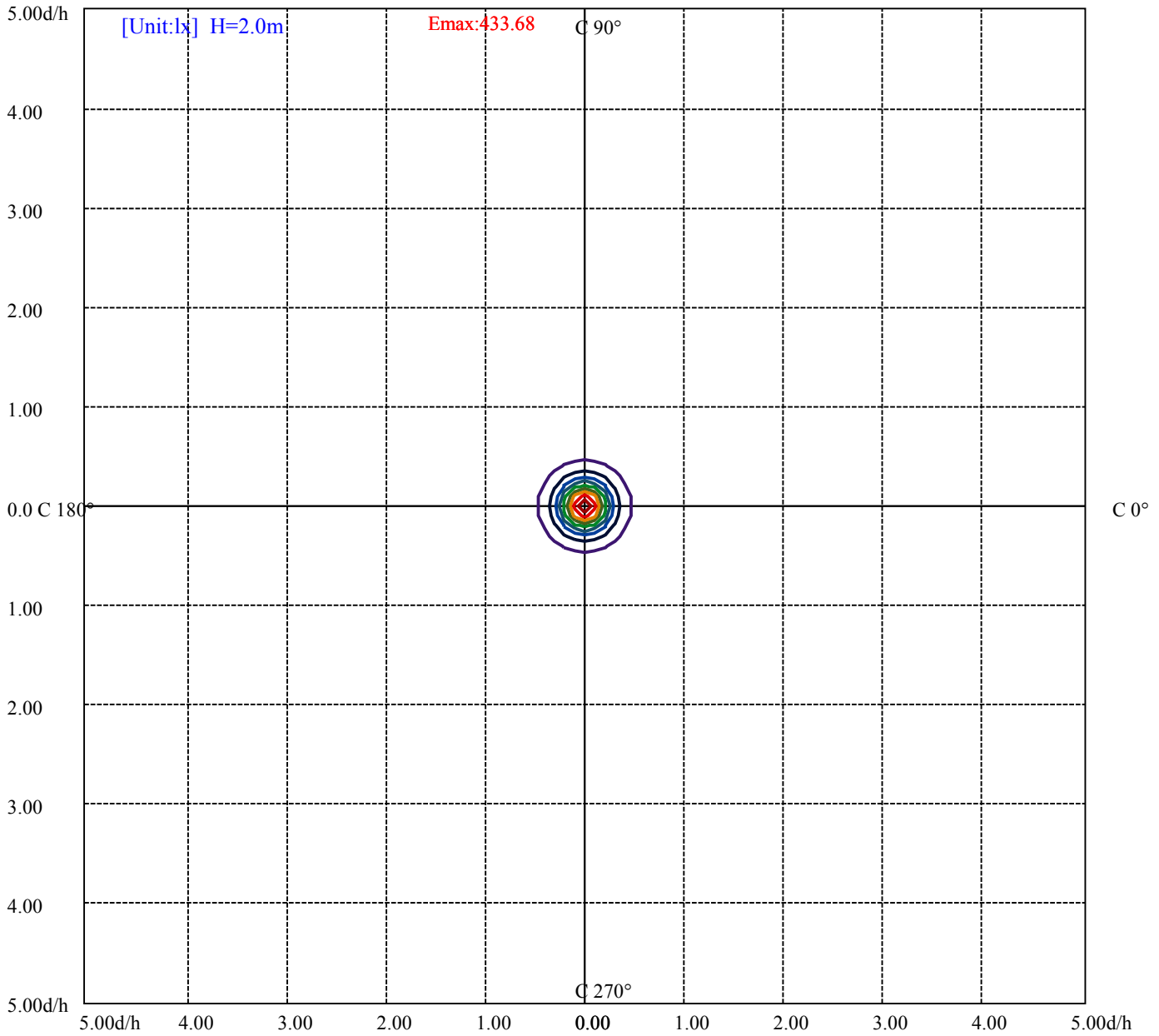
House

[Unit:cd]

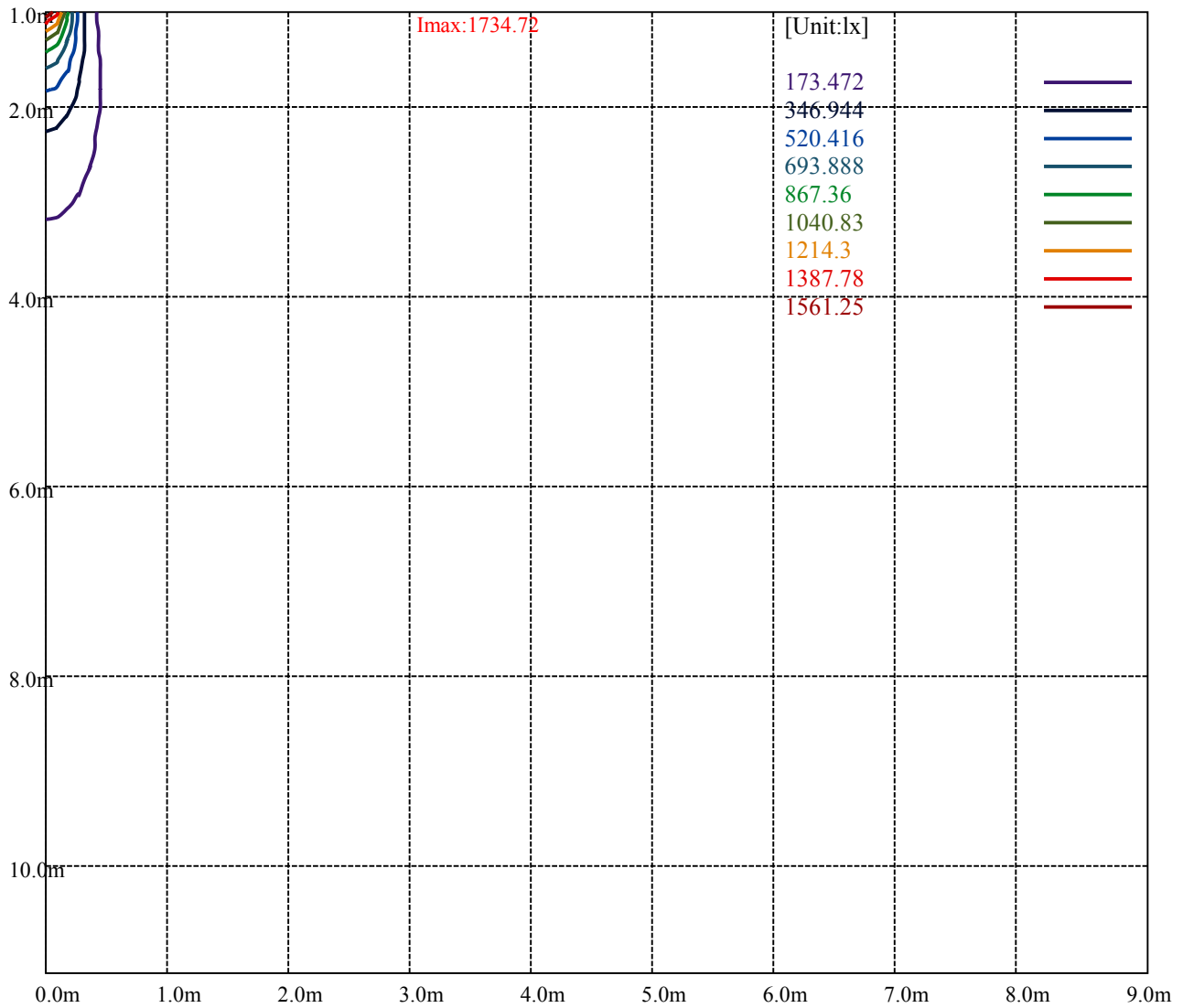
Road

Imax:1734.72

(10%Imax) 173.472	—
(20%Imax) 346.944	—
(30%Imax) 520.416	—
(40%Imax) 693.888	—
(50%Imax) 867.36	—
(60%Imax) 1040.83	—
(70%Imax) 1214.3	—
(80%Imax) 1387.78	—
(90%Imax) 1561.25	—



- (10%Emax) 43.368
- (20%Emax) 86.736
- (30%Emax) 130.1037
- (40%Emax) 173.4718
- (50%Emax) 216.8398
- (60%Emax) 260.2075
- (70%Emax) 303.575
- (80%Emax) 346.9425
- (90%Emax) 390.3125



Luminance Table

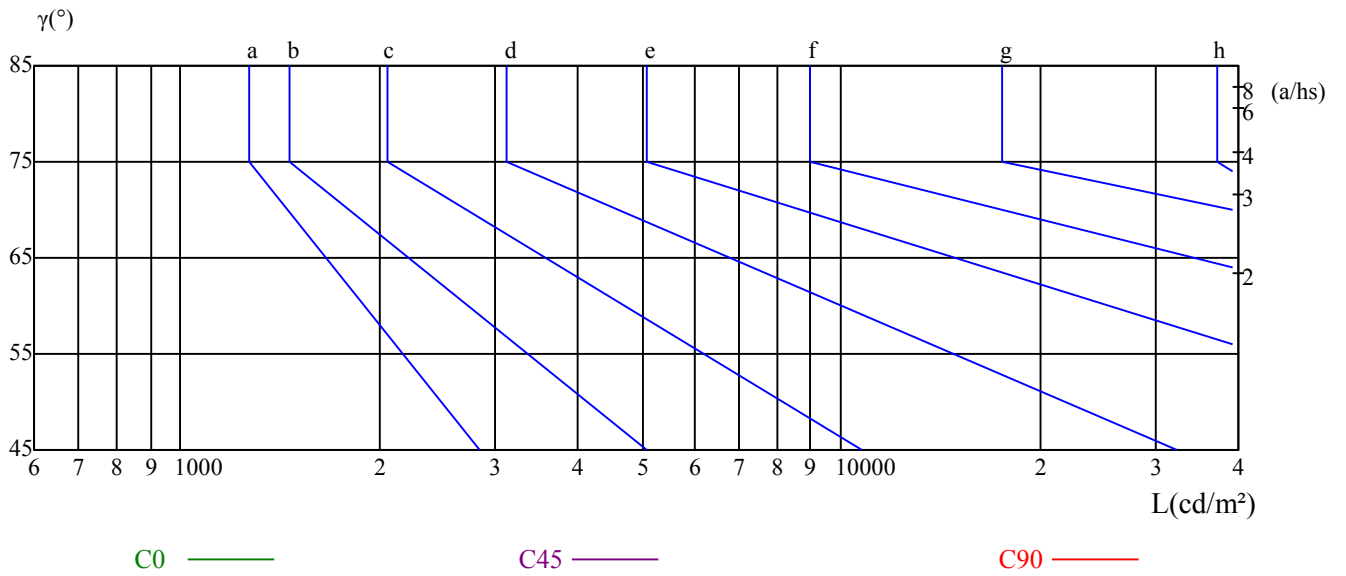
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

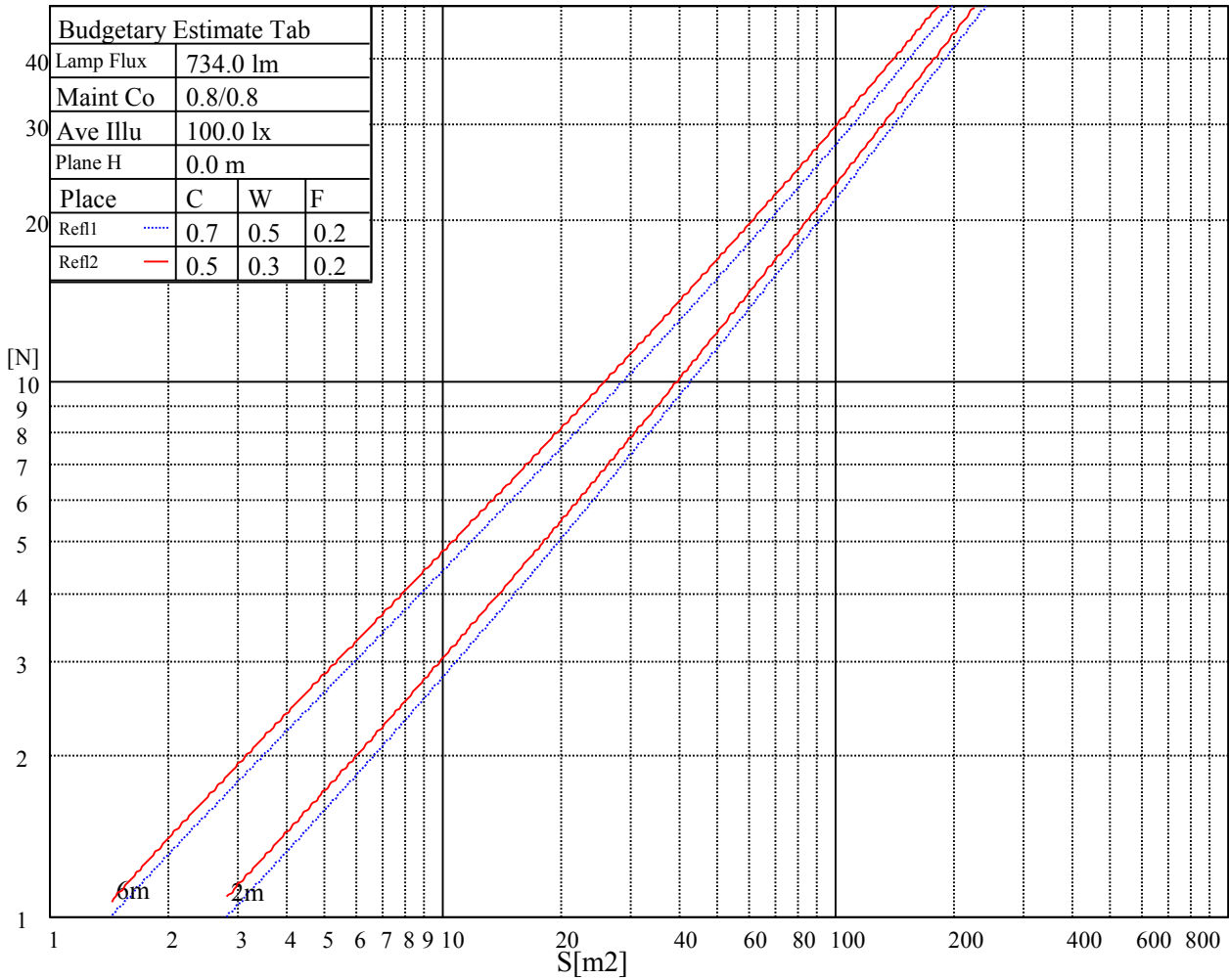
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

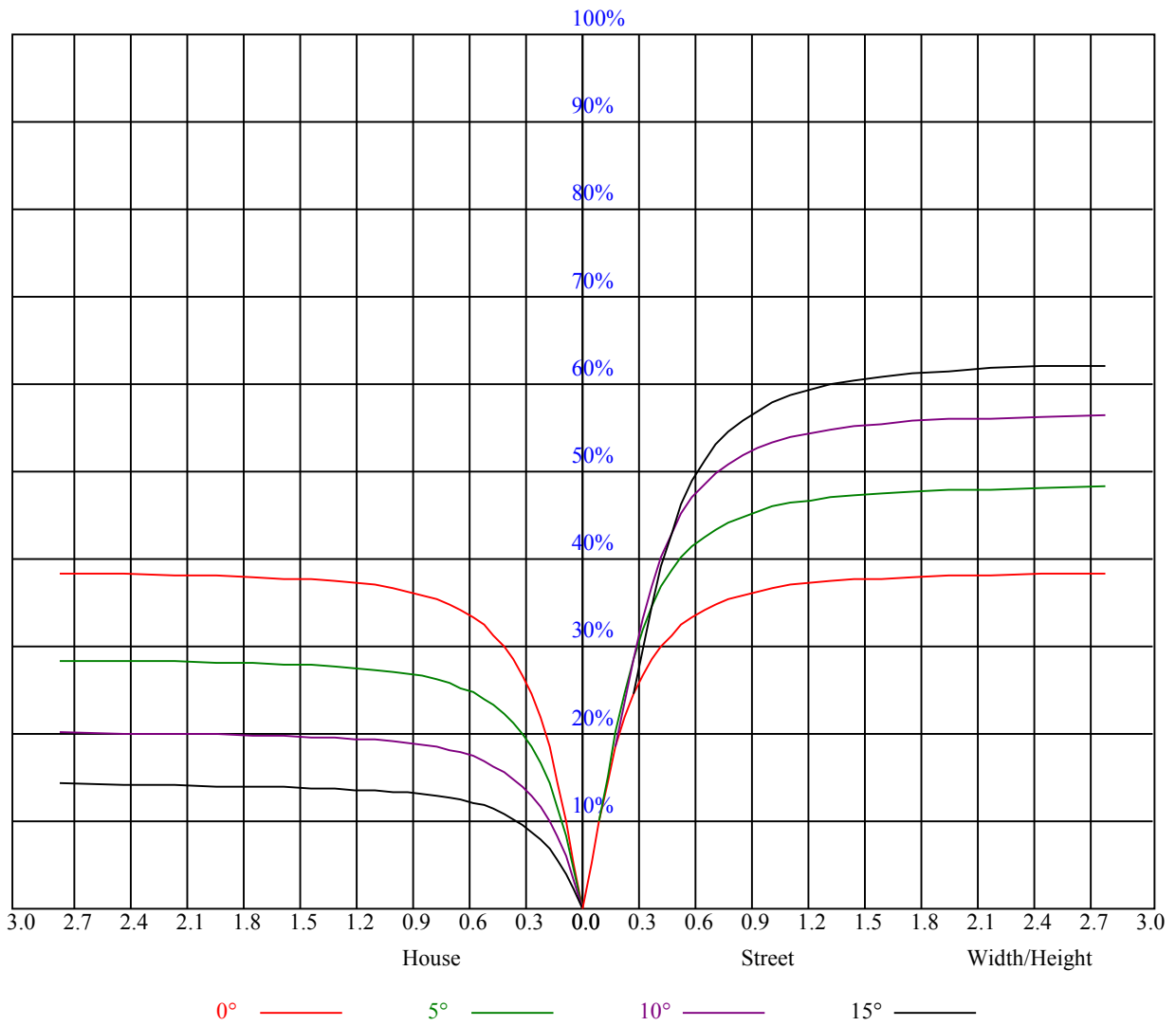
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.86	0.84	0.82	0.84	0.82	0.81	0.81	0.80	0.78	0.78	0.77	0.76	0.75	0.75	0.74	0.72
2	0.80	0.77	0.74	0.79	0.76	0.73	0.76	0.74	0.72	0.74	0.72	0.70	0.72	0.70	0.69	0.68
3	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.68	0.66	0.65	0.63
4	0.71	0.67	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.65	0.63	0.61	0.60
5	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.63	0.60	0.58	0.62	0.60	0.58	0.56
6	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54
7	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.57	0.54	0.52	0.51
8	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49
9	0.55	0.51	0.48	0.55	0.51	0.48	0.54	0.51	0.48	0.54	0.50	0.48	0.53	0.50	0.48	0.47
10	0.53	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.46	0.52	0.48	0.46	0.51	0.48	0.46	0.45



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	1729.50	1704.44	1663.61	1606.53	1537.85	1458.04	1369.41	1271.96	1172.19
45.0	1743.42	1734.60	1708.62	1671.03	1614.88	1548.06	1467.78	1381.47	1288.67
90.0	1727.64	1698.41	1651.08	1590.75	1550.38	1438.09	1348.06	1291.45	1193.08
135.0	1738.32	1739.24	1721.15	1687.74	1651.08	1590.75	1518.36	1433.45	1340.17
180.0	1729.50	1738.32	1732.75	1715.11	1679.38	1628.80	1563.84	1484.95	1398.18
225.0	1743.42	1737.39	1718.83	1683.56	1632.52	1568.94	1491.45	1439.48	1311.40
270.0	1727.64	1740.64	1739.24	1722.54	1688.20	1640.40	1578.22	1504.91	1419.52
315.0	1738.32	1723.47	1692.84	1645.04	1584.26	1510.01	1422.77	1329.04	1232.52
360.0	1729.50	1704.44	1663.61	1606.53	1537.85	1458.04	1369.41	1271.96	1172.19

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1036.23	904.87	904.87	811.04	724.12	643.38	571.04	505.01	445.84
45.0	1191.68	1093.77	994.93	900.74	810.25	722.55	640.88	581.02	513.27
90.0	1098.41	900.18	900.18	807.84	723.01	644.54	572.34	506.82	448.02
135.0	1244.12	1147.14	1049.69	952.71	860.36	772.20	687.28	611.18	542.97
180.0	1342.03	1209.78	1113.73	1053.87	918.83	862.68	773.13	689.60	612.57
225.0	1254.33	1156.88	1020.92	891.32	872.80	782.50	697.63	619.44	550.02
270.0	1327.18	1231.59	1132.29	1034.84	937.39	842.27	788.90	704.45	597.26
315.0	1131.36	900.97	900.97	881.85	752.43	668.07	621.62	524.31	486.68
360.0	1036.23	904.87	904.87	811.04	724.12	643.38	571.04	505.01	445.84

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	393.45	347.38	308.95	276.94	250.07	228.40	209.60	193.04	183.94
45.0	452.48	397.26	341.11	309.56	275.68	247.38	242.27	232.99	189.37
90.0	397.68	353.50	316.10	283.99	267.10	235.08	223.25	205.94	190.35
135.0	481.71	428.81	399.58	340.65	306.31	288.68	252.48	240.42	232.06
180.0	543.43	482.18	426.96	378.23	335.54	299.35	269.65	245.06	236.24
225.0	485.47	427.75	377.86	342.74	298.19	268.16	247.19	224.92	205.71
270.0	555.49	490.53	433.45	384.27	340.65	304.45	273.36	248.77	231.60
315.0	430.48	381.85	339.58	303.66	273.64	248.17	226.49	207.61	191.41
360.0	393.45	347.38	308.95	276.94	250.07	228.40	209.60	193.04	183.94

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	164.36	156.66	140.93	134.71	124.82	115.59	107.28	99.86	93.18
45.0	173.97	165.85	148.31	141.58	131.00	117.12	111.79	103.80	96.75
90.0	176.43	163.53	152.30	142.18	132.76	123.90	115.41	107.84	100.83
135.0	218.23	189.88	176.33	163.85	152.67	142.50	133.04	124.08	116.10
180.0	232.06	193.59	178.88	165.43	152.62	140.79	130.35	121.16	112.62
225.0	188.63	173.50	160.00	147.79	136.57	126.50	117.12	108.35	100.46
270.0	231.60	191.23	176.94	163.71	151.74	141.02	134.85	121.76	116.47
315.0	177.21	163.99	151.79	141.02	131.28	122.27	115.50	105.99	98.84
360.0	164.36	156.66	140.93	134.71	124.82	115.59	107.28	99.86	93.18

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	86.96	81.07	75.54	70.58	65.85	60.51	55.87	51.69	47.75
45.0	89.88	83.85	78.28	73.27	68.40	63.53	58.56	54.20	50.16
90.0	94.38	88.44	83.02	78.00	74.29	66.50	61.53	58.75	52.71
135.0	108.58	101.67	95.36	89.23	84.36	77.73	71.69	66.36	61.44
180.0	104.73	97.35	90.53	84.18	78.19	71.65	66.12	60.97	56.38
225.0	93.32	86.59	80.37	74.52	68.72	63.34	58.47	55.54	49.61
270.0	108.21	97.91	93.83	87.66	81.81	76.52	71.04	65.75	60.97
315.0	93.60	86.03	81.48	76.15	71.18	65.61	60.74	56.29	52.11
360.0	86.96	81.07	75.54	70.58	65.85	60.51	55.87	51.69	47.75

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	44.08	40.74	37.49	34.43	31.83	29.42	27.29	25.61	23.48
45.0	46.40	42.78	39.35	36.10	33.64	30.12	27.66	25.80	23.34
90.0	50.25	46.40	42.64	39.12	35.96	33.18	30.53	27.98	25.61
135.0	56.75	52.39	48.31	44.83	41.62	38.65	35.82	33.27	30.86
180.0	52.34	47.24	44.73	40.97	36.43	34.62	31.93	29.47	27.24
225.0	47.19	43.34	38.38	36.43	33.46	30.72	28.03	25.66	23.53
270.0	56.52	52.39	48.45	44.73	41.30	38.10	35.13	32.30	29.70
315.0	48.31	44.69	41.53	38.47	35.73	33.13	30.77	28.63	26.31
360.0	44.08	40.74	37.49	34.43	31.83	29.42	27.29	25.61	23.48
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	21.48	19.63	17.96	16.33	14.80	13.46	12.20	11.18	10.35
45.0	21.76	19.91	18.19	16.47	15.13	13.69	12.58	11.60	10.72
90.0	23.48	21.48	19.54	17.73	16.06	14.48	13.09	11.88	10.90
135.0	28.49	26.17	24.04	22.18	20.46	18.79	17.17	16.33	14.94
180.0	25.06	22.97	21.16	19.35	17.73	16.15	14.66	13.27	12.06
225.0	22.23	19.49	17.68	16.19	14.85	13.55	12.39	11.42	10.58
270.0	28.31	24.92	23.53	21.44	19.54	17.87	16.15	14.62	13.27
315.0	24.13	22.13	20.32	19.30	16.94	15.50	14.57	13.32	12.11
360.0	21.48	19.63	17.96	16.33	14.80	13.46	12.20	11.18	10.35
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.61	9.00	8.54	8.17	7.89	7.61	7.38	7.19	7.05
45.0	9.98	9.37	8.77	8.26	7.89	7.66	7.38	7.05	6.82
90.0	10.12	9.56	8.86	8.58	8.31	8.07	7.75	7.56	7.42
135.0	13.83	12.95	12.30	11.74	11.37	11.04	10.81	10.58	10.26
180.0	10.90	10.12	9.47	8.96	8.54	8.21	7.89	7.61	7.52
225.0	9.88	9.51	8.77	8.58	8.21	7.89	7.70	7.42	7.10
270.0	12.16	11.18	10.35	9.65	9.19	8.77	8.45	8.21	7.93
315.0	11.14	10.30	9.65	9.14	8.77	8.49	8.21	7.98	7.75
360.0	9.61	9.00	8.54	8.17	7.89	7.61	7.38	7.19	7.05
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.68	6.54	6.40	6.13	6.08	5.89	5.75	5.85	5.94
45.0	6.64	6.45	6.26	6.08	5.89	5.71	5.66	5.52	5.29
90.0	7.29	7.19	7.15	7.19	7.33	7.56	7.52	7.01	6.73
135.0	10.07	9.93	9.79	9.70	9.61	9.74	9.98	10.35	10.53
180.0	7.24	6.96	6.77	6.59	6.36	6.13	5.94	5.85	5.85
225.0	6.87	6.68	6.50	6.17	5.99	5.80	5.66	5.57	5.48
270.0	7.70	7.42	7.19	7.05	6.87	6.68	6.64	6.54	6.64
315.0	7.56	7.42	7.19	7.01	6.91	6.77	6.73	6.59	6.54
360.0	6.68	6.54	6.40	6.13	6.08	5.89	5.75	5.85	5.94
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.94	5.71	5.57	5.20	4.87	3.39	2.04	1.90	2.27
45.0	5.20	5.06	4.92	4.83	4.83	4.64	4.08	3.67	3.34
90.0	6.45	6.45	6.36	6.13	5.61	5.20	4.78	4.41	4.22
135.0	10.72	10.77	10.77	10.58	10.16	9.47	8.68	7.93	7.93
180.0	5.94	6.59	6.59	5.57	4.69	3.48	3.62	4.13	4.13
225.0	5.61	5.57	5.15	4.69	4.36	3.76	3.16	2.97	3.02
270.0	6.96	7.38	7.56	7.56	7.52	7.33	6.68	5.99	5.38
315.0	6.45	6.26	6.31	6.40	6.45	6.08	5.94	5.71	5.57
360.0	5.94	5.71	5.57	5.20	4.87	3.39	2.04	1.90	2.27

Intensity data(cd)

C/γ(°)	90.0
0.0	2.32
45.0	3.11
90.0	4.13
135.0	6.91
180.0	3.53
225.0	3.02
270.0	4.83
315.0	5.48
360.0	2.32