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Nata

LumCAT: 3-2033-M	
Luminaire: 92.70.135.00	
Report No: NATA0100	Voltage(V): 33.7000
Test No: GC2018062703	Current(A): 0.5000
LampCAT: NICHIA NFCWJ120B-V3	Power (W): 16.8500
Lamp flux(lm): 2279.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2042.59
Efficiency(%): 89.63%
Lumens(lm)/Power(W): 122.09
Central intensity(cd): 15556.190
Maximum intensity(cd): 15556.190
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=15.1
 [C90/270]Total=15.1
Field angle(10%Imax): [C0/180]Total=30.4
 [C90/270]Total=30.4
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.26 C90_270=0.26
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.27%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.993%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/6/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	15556.186	14.887	14.887	.653%	.729%
2.0	14829.441	113.503	128.39	4.980%	6.286%
4.0	12821.879	196.156	324.546	8.607%	15.889%
6.0	10094.109	231.402	555.948	10.154%	27.218%
8.0	7080.941	216.128	772.077	9.483%	37.799%
10.0	4511.597	171.817	943.893	7.539%	46.211%
12.0	2809.390	128.102	1071.995	5.621%	52.482%
14.0	1815.691	96.335	1168.33	4.227%	57.198%
16.0	1375.240	83.135	1251.465	3.648%	61.268%
18.0	1110.054	75.230	1326.695	3.301%	64.952%
20.0	969.220	72.701	1399.396	3.190%	68.511%
22.0	874.034	71.807	1471.203	3.151%	72.026%
24.0	808.737	72.142	1543.345	3.165%	75.558%
26.0	766.440	73.686	1617.031	3.233%	79.166%
28.0	733.709	75.544	1692.574	3.315%	82.864%
30.0	706.972	77.524	1770.099	3.402%	86.659%
32.0	661.620	76.892	1846.991	3.374%	90.424%
34.0	535.286	65.647	1912.638	2.881%	93.638%
36.0	364.191	46.948	1959.585	2.060%	95.936%
38.0	208.705	28.180	1987.765	1.237%	97.316%
40.0	64.856	9.143	1996.908	.401%	97.763%
42.0	19.834	2.911	1999.819	.128%	97.906%
44.0	13.860	2.112	2001.93	.093%	98.009%
46.0	11.218	1.770	2003.7	.078%	98.096%
48.0	10.708	1.745	2005.445	.077%	98.181%
50.0	10.330	1.735	2007.181	.076%	98.266%
52.0	10.020	1.732	2008.913	.076%	98.351%
54.0	9.759	1.731	2010.644	.076%	98.436%
56.0	9.559	1.738	2012.382	.076%	98.521%
58.0	9.401	1.748	2014.131	.077%	98.607%
60.0	9.243	1.755	2015.886	.077%	98.693%
62.0	9.126	1.767	2017.653	.078%	98.779%
64.0	9.036	1.781	2019.434	.078%	98.866%
66.0	8.947	1.792	2021.227	.079%	98.954%
68.0	8.885	1.807	2023.033	.079%	99.042%
70.0	8.830	1.820	2024.853	.080%	99.132%
72.0	8.768	1.829	2026.682	.080%	99.221%
74.0	8.740	1.843	2028.524	.081%	99.311%

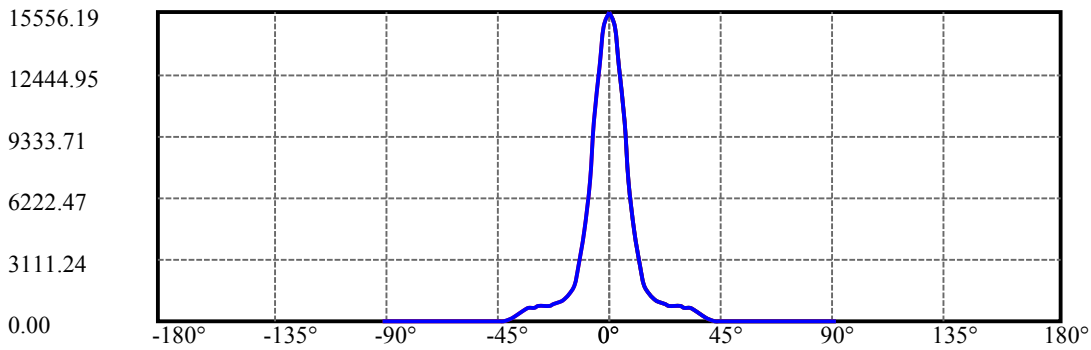
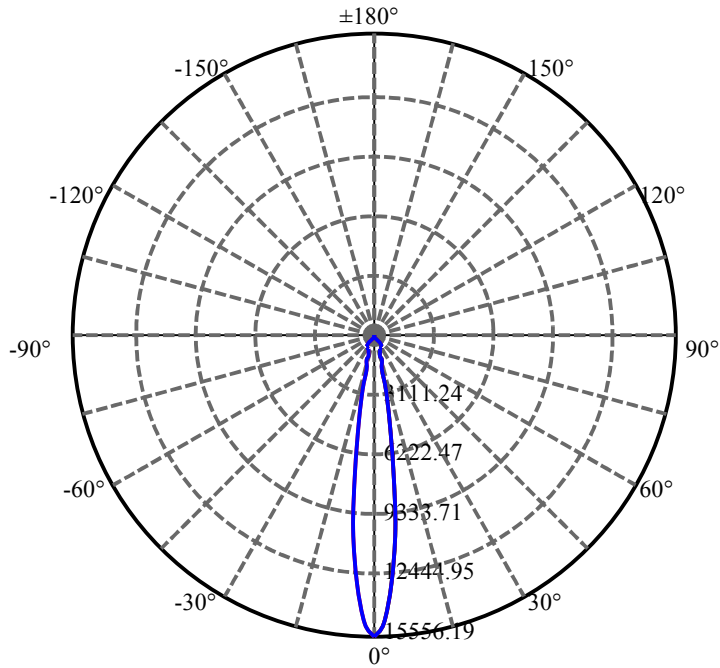
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.713	1.854	2030.378	.081%	99.402%
78.0	8.699	1.866	2032.245	.082%	99.493%
80.0	8.665	1.871	2034.116	.082%	99.585%
82.0	8.658	1.880	2035.996	.083%	99.677%
84.0	8.637	1.884	2037.88	.083%	99.769%
86.0	8.623	1.887	2039.767	.083%	99.862%
88.0	8.603	1.886	2041.652	.083%	99.954%
90.0	8.575	0.940	2042.592	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1770.10	77.67%	86.66%
0-40	1996.91	87.62%	97.76%
0-60	2015.89	88.45%	98.69%
0-90	2041.65	89.59%	99.95%
0-120	2041.65	89.59%	99.95%
0-180	2042.59	89.63%	100.00%
60-90	27.52	1.21%	1.35%
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%
0-26.45	1634.07	71.70%	80.00%

ZONAL LUMEN SUMMARY

0-10	943.89
10-20	455.50
20-30	370.70
30-40	226.81
40-50	10.27
50-60	8.71
60-70	8.97
70-80	9.26
80-90	7.54
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



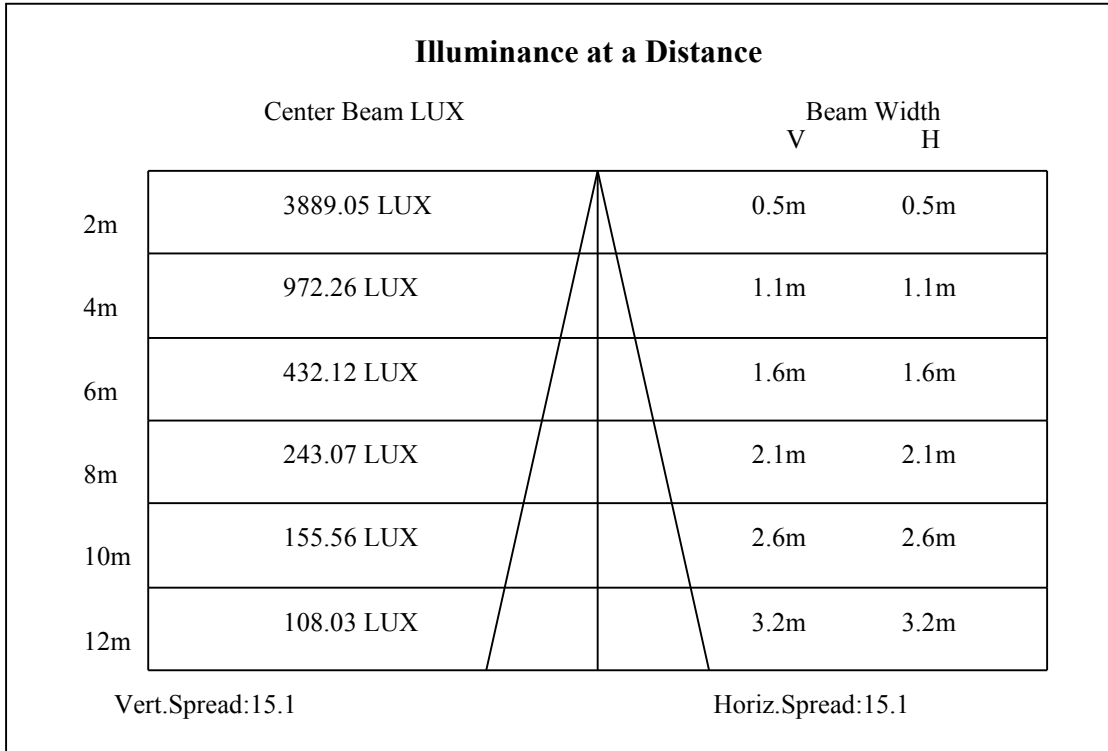
C0(Max): —————

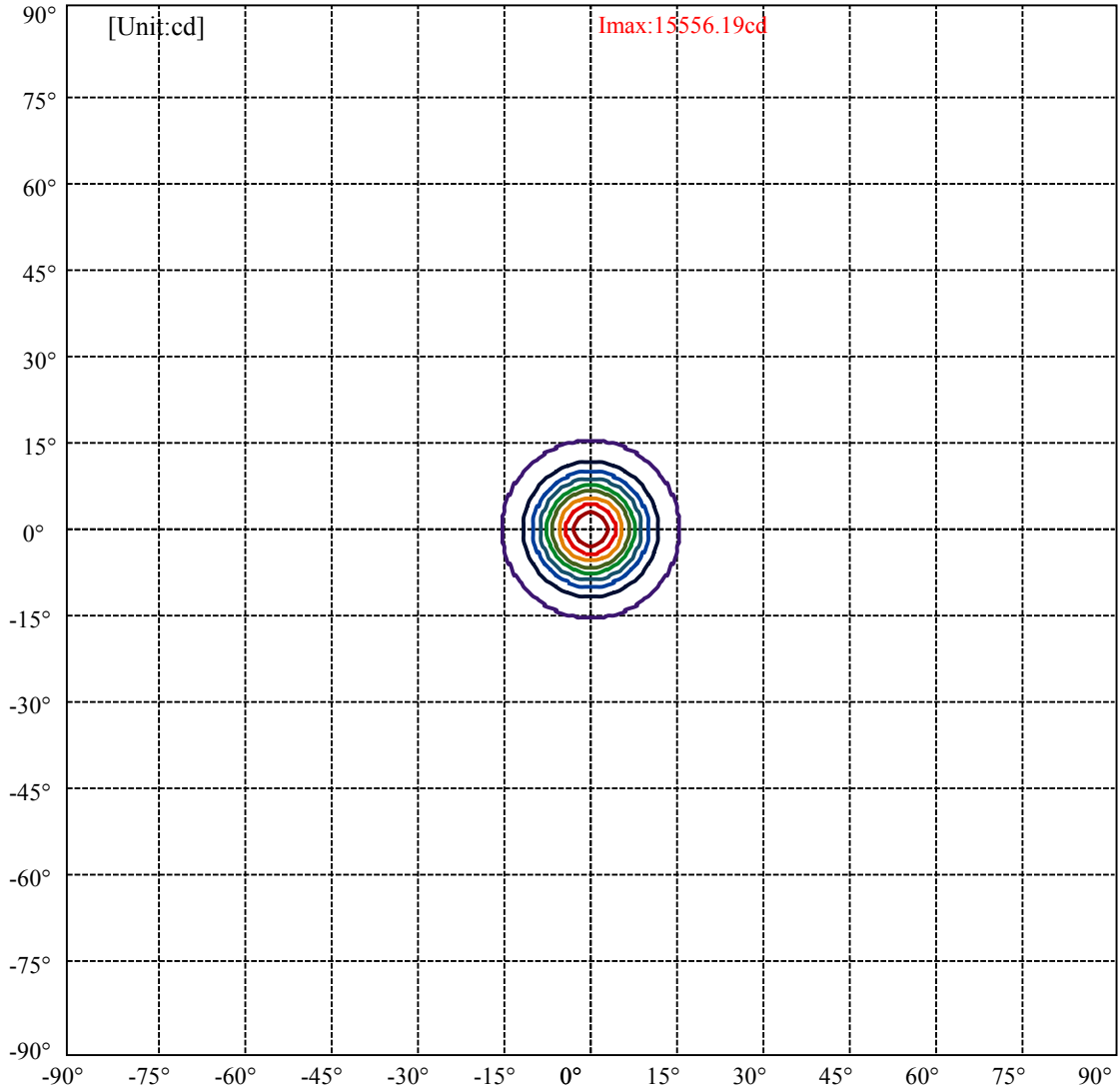
C0/C180: —————

C90/C270: —————

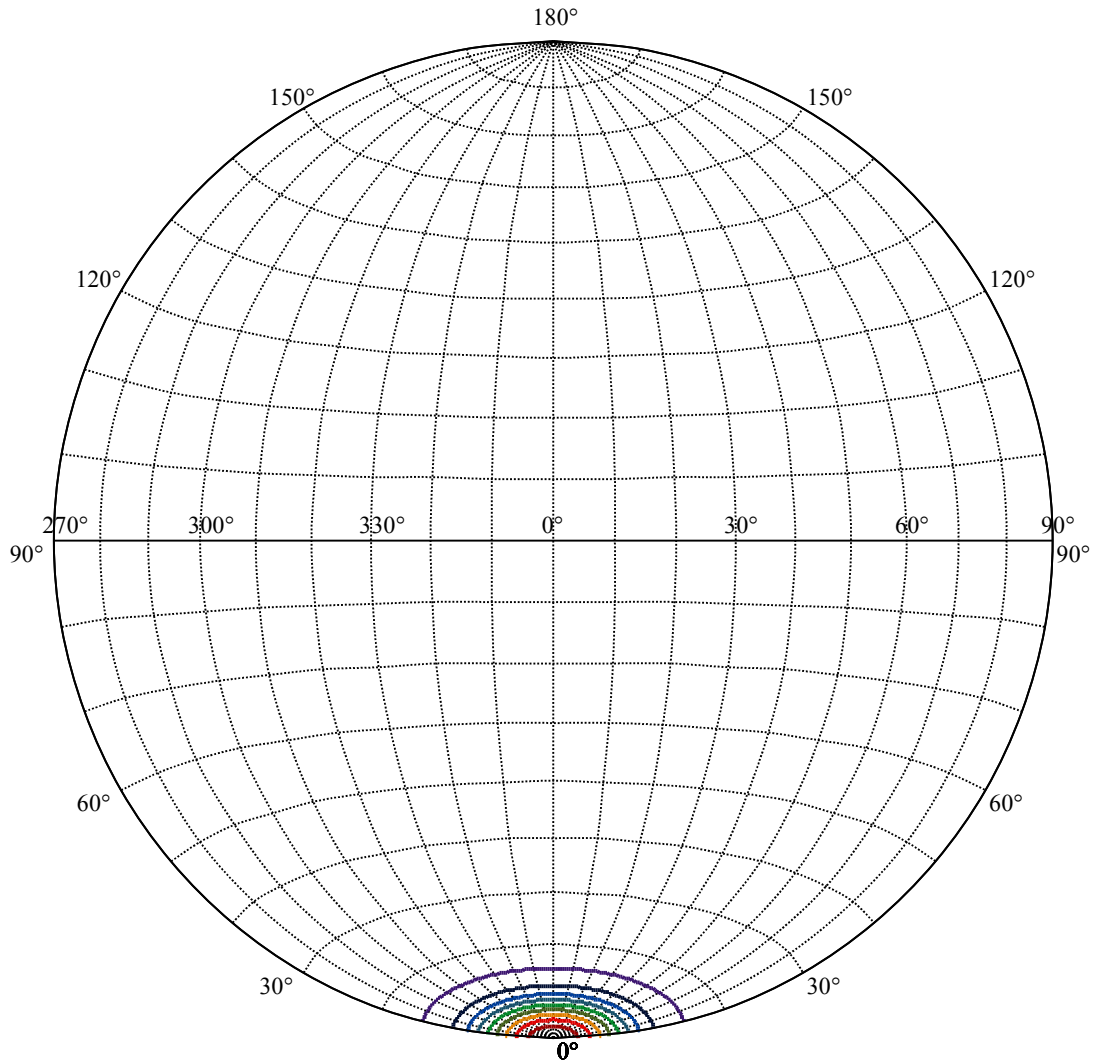
Field angle(10%Imax):C0/180Left:15.2 Right:15.2
:C90/270Left:15.2 Right:15.2

Beam Angle(50%Imax):C0/180Left:7.5 Right:7.5
:C90/270Left:7.5 Right:7.5





(10%I _{max}) 1555.62	—
(20%I _{max}) 3111.24	—
(30%I _{max}) 4666.86	—
(40%I _{max}) 6222.47	—
(50%I _{max}) 7778.09	—
(60%I _{max}) 9333.71	—
(70%I _{max}) 10889.3	—
(80%I _{max}) 12444.9	—
(90%I _{max}) 14000.6	—



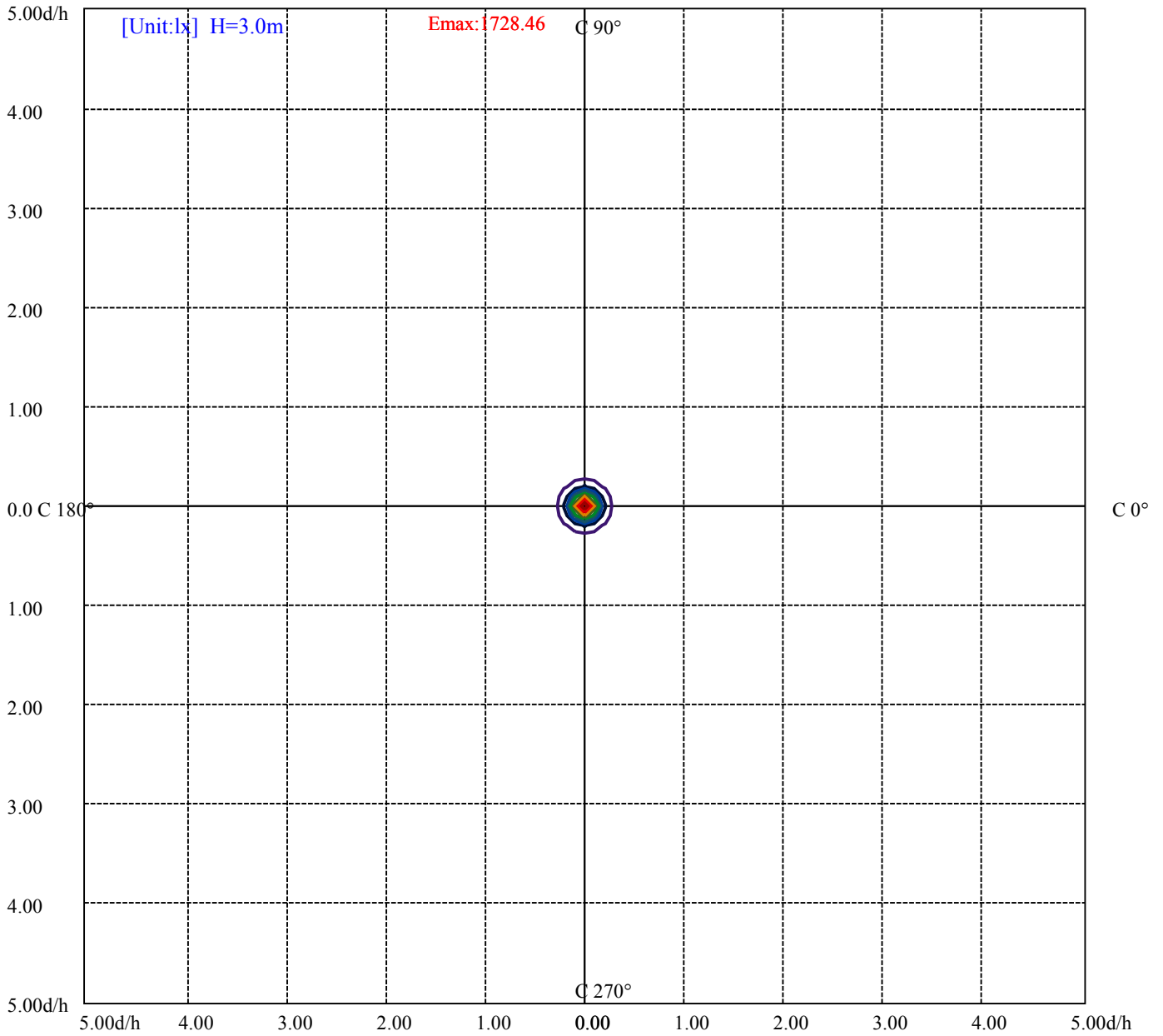
House

[Unit:cd]

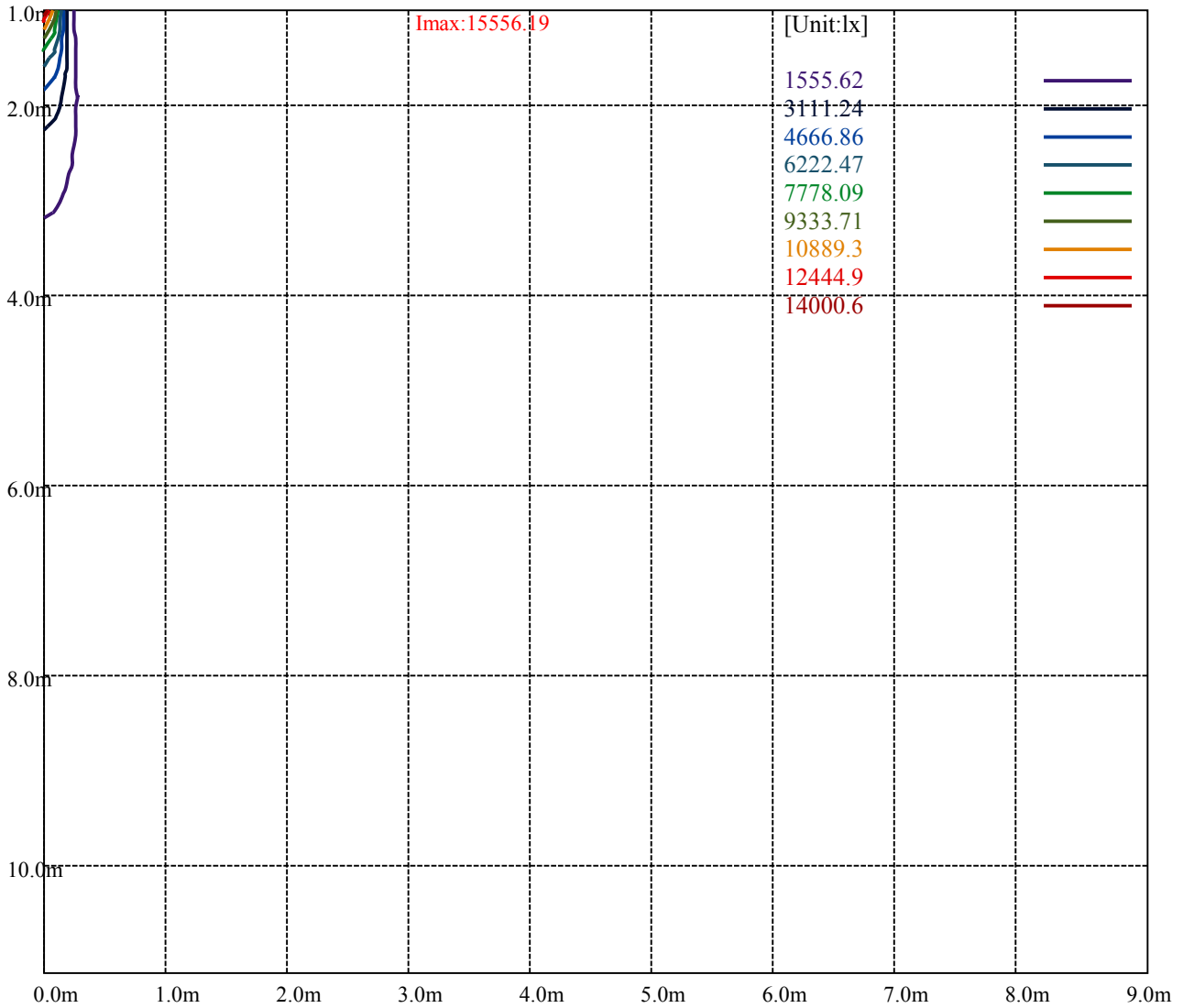
Road

Imax:15556.19

(10%Imax)	1555.62	—
(20%Imax)	3111.24	—
(30%Imax)	4666.86	—
(40%Imax)	6222.47	—
(50%Imax)	7778.09	—
(60%Imax)	9333.71	—
(70%Imax)	10889.3	—
(80%Imax)	12444.9	—
(90%Imax)	14000.6	—



- (10%Emax) 172.8456
- (20%Emax) 345.6922
- (30%Emax) 518.5378
- (40%Emax) 691.3834
- (50%Emax) 864.23
- (60%Emax) 1037.076
- (70%Emax) 1209.922
- (80%Emax) 1382.767
- (90%Emax) 1555.611



Luminance Table

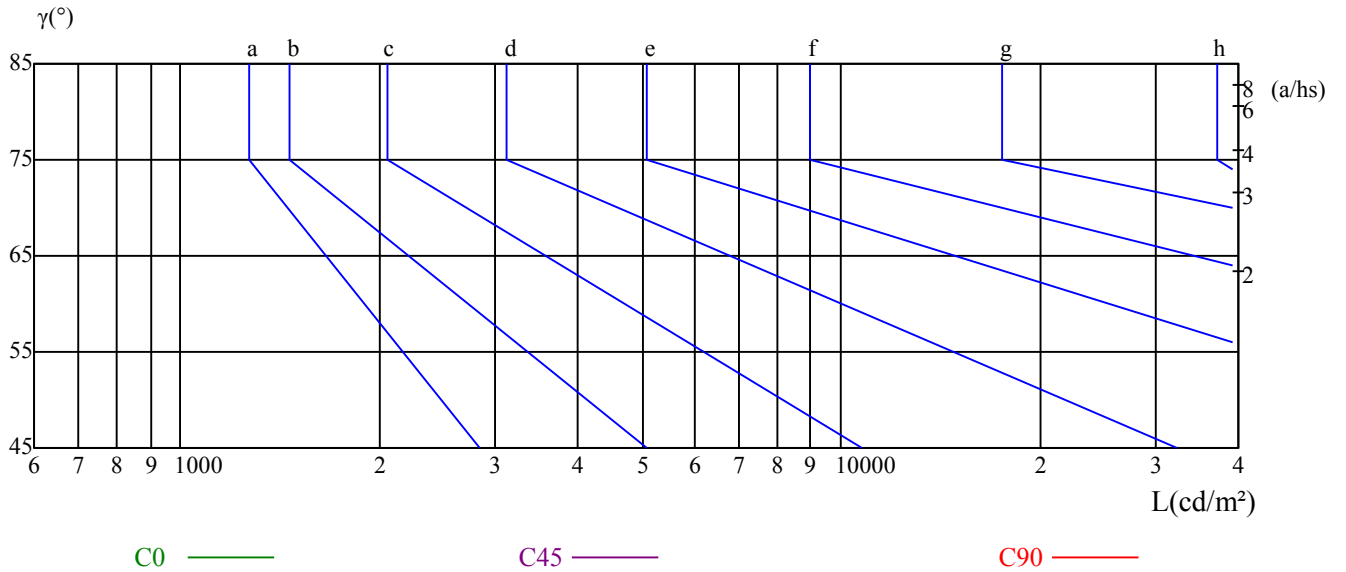
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

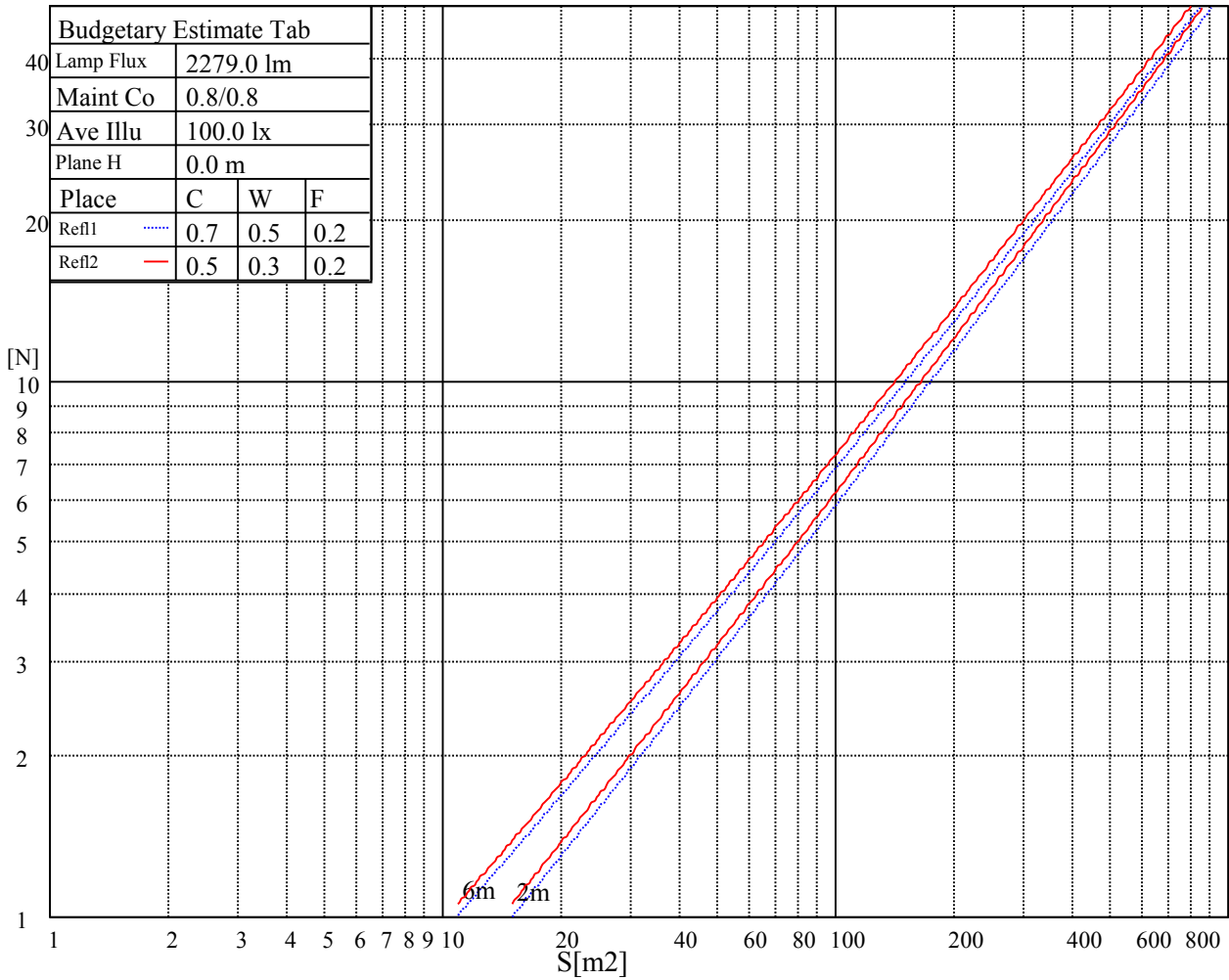
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

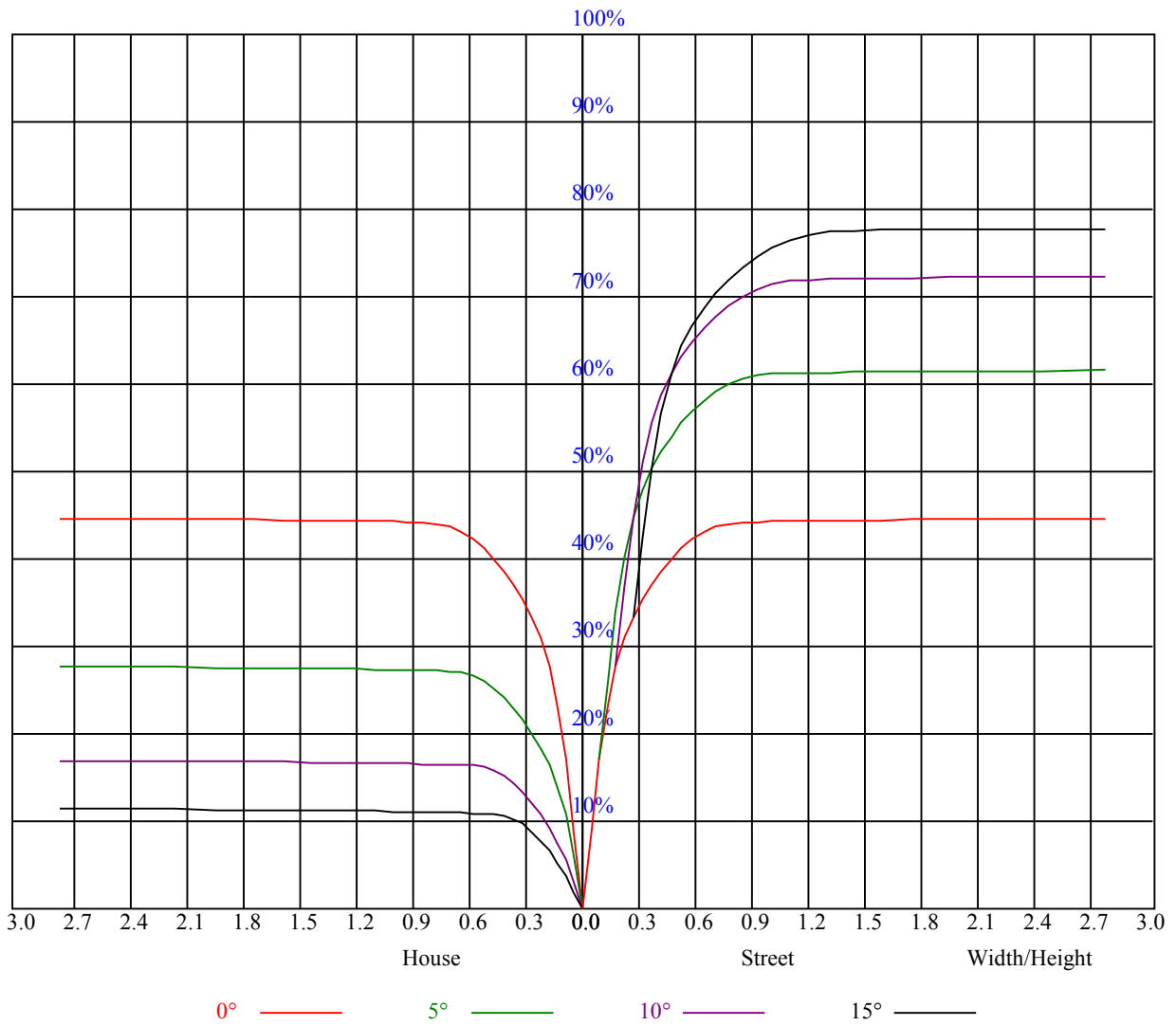
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	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	1.01	0.99	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	0.96	0.93	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.84	0.82
3	0.91	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.84	0.82	0.80	0.79
4	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.78	0.76
5	0.84	0.80	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.79	0.77	0.75	0.74
6	0.81	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.73	0.72
7	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.73	0.71	0.70
8	0.76	0.72	0.70	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.68
9	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64



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	15575.46	14562.42	12541.85	9458.69	6513.17	4068.67	2846.42	1696.84	1318.05
45.0	15619.50	14512.87	12442.75	9447.68	6513.17	4134.74	2780.35	1752.45	1345.58
90.0	15503.88	14221.07	10829.04	8903.72	6047.39	3679.42	2354.21	1669.31	1291.62
135.0	15525.90	14931.30	13163.99	10295.55	7294.97	4718.33	2862.93	1880.73	1413.85
180.0	15575.46	15123.99	13417.24	10762.43	7341.77	4795.96	2873.39	1827.32	1408.89
225.0	15619.50	15294.67	13527.36	10867.03	7840.58	4899.47	2893.76	1891.19	1405.04
270.0	15503.88	15322.20	13984.33	11214.99	8236.44	5599.24	3297.88	2053.60	1487.62
315.0	15525.90	14667.02	12668.48	9802.79	6860.03	4196.95	2566.18	1754.10	1331.26
360.0	15575.46	14562.42	12541.85	9458.69	6513.17	4068.67	2846.42	1696.84	1318.05
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	1093.42	950.27	869.34	809.88	766.39	734.45	710.23	652.97	506.52
45.0	1109.94	959.08	870.44	804.92	760.88	729.50	700.87	651.32	516.43
90.0	1061.38	935.85	845.72	789.01	748.71	718.71	693.55	641.96	508.28
135.0	1152.88	983.31	882.55	810.98	767.49	733.90	706.92	672.24	559.92
180.0	1088.69	972.68	876.28	810.49	766.88	733.02	705.93	654.79	521.22
225.0	1093.37	980.44	874.52	809.66	773.27	738.25	707.47	671.96	553.48
270.0	1194.72	1013.59	906.78	826.95	781.25	747.12	721.24	692.06	597.91
315.0	1086.04	958.53	866.64	808.01	766.66	734.73	709.57	655.67	518.52
360.0	1093.42	950.27	869.34	809.88	766.39	734.45	710.23	652.97	506.52
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	331.44	167.48	41.02	17.89	12.72	11.07	10.63	10.24	9.91
45.0	346.86	165.44	50.21	17.56	12.17	10.79	10.46	10.08	9.80
90.0	332.65	179.76	47.18	17.23	12.39	10.74	10.41	10.13	9.86
135.0	399.16	278.03	85.61	19.77	14.15	10.96	10.57	10.24	9.97
180.0	345.92	193.63	56.87	19.55	13.49	11.07	10.63	10.24	9.97
225.0	371.74	222.76	74.77	21.53	15.20	11.51	10.96	10.52	10.19
270.0	448.16	282.44	115.12	25.55	17.45	12.33	11.23	10.79	10.41
315.0	337.61	180.09	48.06	19.60	13.32	11.29	10.79	10.41	10.08
360.0	331.44	167.48	41.02	17.89	12.72	11.07	10.63	10.24	9.91
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	9.69	9.47	9.30	9.19	9.08	9.03	8.92	8.86	8.81
45.0	9.58	9.41	9.30	9.14	9.08	8.97	8.92	8.86	8.81
90.0	9.58	9.41	9.30	9.14	9.08	8.97	8.92	8.86	8.81
135.0	9.69	9.52	9.41	9.25	9.08	9.03	8.97	8.86	8.81
180.0	9.74	9.58	9.41	9.25	9.14	9.08	8.92	8.92	8.86
225.0	9.91	9.63	9.47	9.30	9.14	9.03	8.97	8.86	8.75
270.0	10.08	9.80	9.58	9.41	9.25	9.14	9.03	8.97	8.92
315.0	9.80	9.63	9.41	9.25	9.14	9.03	8.92	8.86	8.86
360.0	9.69	9.47	9.30	9.19	9.08	9.03	8.92	8.86	8.81
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	8.81	8.75	8.75	8.70	8.70	8.70	8.64	8.64	8.64
45.0	8.75	8.70	8.70	8.70	8.64	8.64	8.59	8.59	8.59
90.0	8.75	8.75	8.70	8.70	8.64	8.64	8.64	8.59	8.59
135.0	8.75	8.75	8.75	8.70	8.70	8.64	8.64	8.64	8.59
180.0	8.81	8.75	8.70	8.70	8.64	8.64	8.64	8.64	8.64
225.0	8.70	8.70	8.64	8.64	8.64	8.64	8.59	8.59	8.59
270.0	8.81	8.81	8.75	8.75	8.70	8.70	8.70	8.64	8.59
315.0	8.75	8.70	8.70	8.70	8.64	8.64	8.64	8.64	8.59
360.0	8.81	8.75	8.75	8.70	8.70	8.70	8.64	8.64	8.64

Intensity data(cd)

C/γ(°)	90.0
0.0	8.59
45.0	8.53
90.0	8.59
135.0	8.59
180.0	8.59
225.0	8.53
270.0	8.59
315.0	8.59
360.0	8.59