
AFX

Client:

LumCAT: ARNP17LAJD4BKLB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.239

Lamp flux(lm): 2427.4

Power (W): 28.060

Number of Lamps: 1

PF: 0.978

Length(mm): 390

Width(mm): 390

Phm Type: C

Height(mm): 480

Photometric Results

Lumens(lm): 2427.36, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 86.51

Central intensity(cd): 235.241, Maximum intensity(cd): 237.036

Angle of maximum intensity: C=180.0 γ =15.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.52 C90_270=1.48

Maximum s/h(1/4): C0_180=1.72 C90_270=1.66

Up flux rate of lamp(%): 47.87%

Down flux rate of lamp(%): 52.13%

Up flux rate of LUM(%): 47.87%

Down flux rate of LUM(%): 52.13%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 26.928%

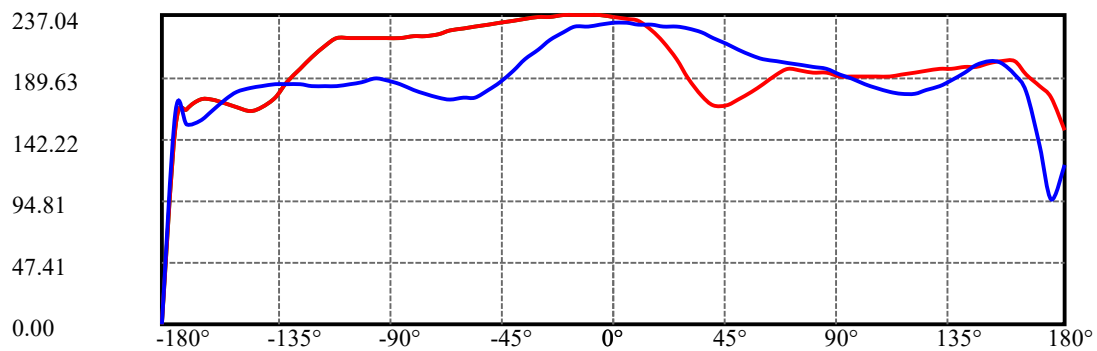
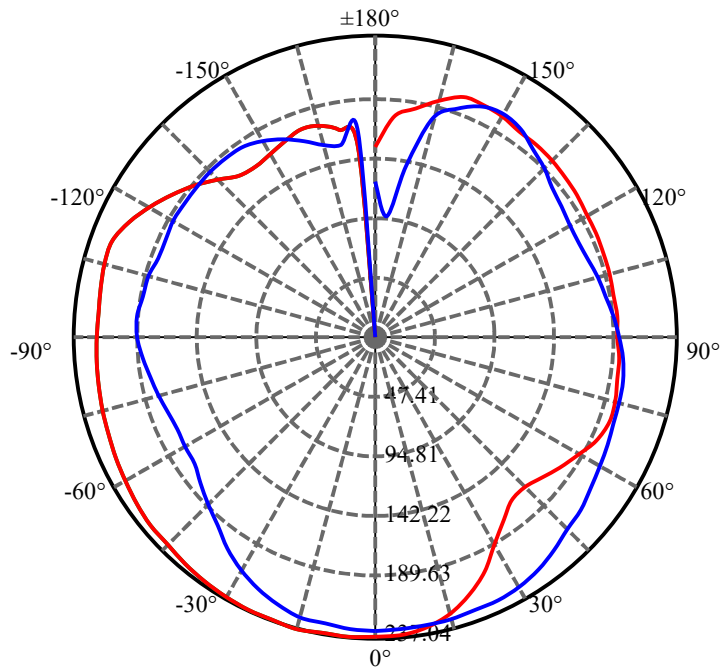
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	231.503	0.000	0	0.00%	0.00%
5.0	231.223	5.532	5.532	0.23%	0.23%
10.0	230.198	16.506	22.038	0.68%	0.91%
15.0	228.071	27.184	49.222	1.12%	2.03%
20.0	224.856	37.328	86.55	1.54%	3.57%
25.0	220.333	46.692	133.242	1.92%	5.49%
30.0	215.200	55.117	188.359	2.27%	7.76%
35.0	210.199	62.643	251.002	2.58%	10.34%
40.0	206.187	69.471	320.473	2.86%	13.20%
45.0	201.948	75.570	396.043	3.11%	16.32%
50.0	198.909	80.999	477.042	3.34%	19.65%
55.0	196.558	85.988	563.029	3.54%	23.20%
60.0	195.444	90.610	653.639	3.73%	26.93%
65.0	195.081	94.937	748.577	3.91%	30.84%
70.0	194.846	98.732	847.309	4.07%	34.91%
75.0	194.842	101.858	949.167	4.20%	39.10%
80.0	194.853	104.271	1053.438	4.30%	43.40%
85.0	194.389	105.767	1159.205	4.36%	47.76%
90.0	193.455	106.195	1265.399	4.37%	52.13%
95.0	192.386	105.646	1371.046	4.35%	56.48%
100.0	191.081	104.197	1475.243	4.29%	60.78%
105.0	189.477	101.827	1577.07	4.19%	64.97%
110.0	187.978	98.661	1675.73	4.06%	69.04%
115.0	186.853	94.910	1770.64	3.91%	72.95%
120.0	186.049	90.653	1861.294	3.73%	76.68%
125.0	185.904	85.976	1947.269	3.54%	80.22%
130.0	185.683	80.795	2028.065	3.33%	83.55%
135.0	184.790	74.859	2102.924	3.08%	86.63%
140.0	183.193	68.135	2171.059	2.81%	89.44%
145.0	181.806	60.897	2231.957	2.51%	91.95%
150.0	180.913	53.413	2285.37	2.20%	94.15%
155.0	179.668	45.632	2331.002	1.88%	96.03%
160.0	175.093	37.208	2368.209	1.53%	97.56%
165.0	163.743	27.925	2396.134	1.15%	98.71%
170.0	147.332	18.453	2414.587	0.76%	99.47%
175.0	139.385	10.257	2424.844	0.42%	99.90%
180.0	70.780	2.512	2427.356	0.10%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	188.36	7.76%	7.76%
0-40	320.47	13.20%	13.20%
0-60	653.64	26.93%	26.93%
0-90	1265.40	52.13%	52.13%
0-120	1861.29	76.68%	76.68%
0-180	2427.36	100.00%	100.00%
60-90	611.76	25.20%	25.20%
90-120	595.89	24.55%	24.55%
90-130	762.67	31.42%	31.42%
90-150	1019.97	42.02%	42.02%
90-180	1159.44	47.77%	47.77%
0-124.69	1941.89	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	22.04
10-20	64.51
20-30	101.81
30-40	132.11
40-50	156.57
50-60	176.60
60-70	193.67
70-80	206.13
80-90	211.96
90-100	209.84
100-110	200.49
110-120	185.56
120-130	166.77
130-140	142.99
140-150	114.31
150-160	82.84
160-170	46.38
170-180	10.26

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

Field angle(10%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

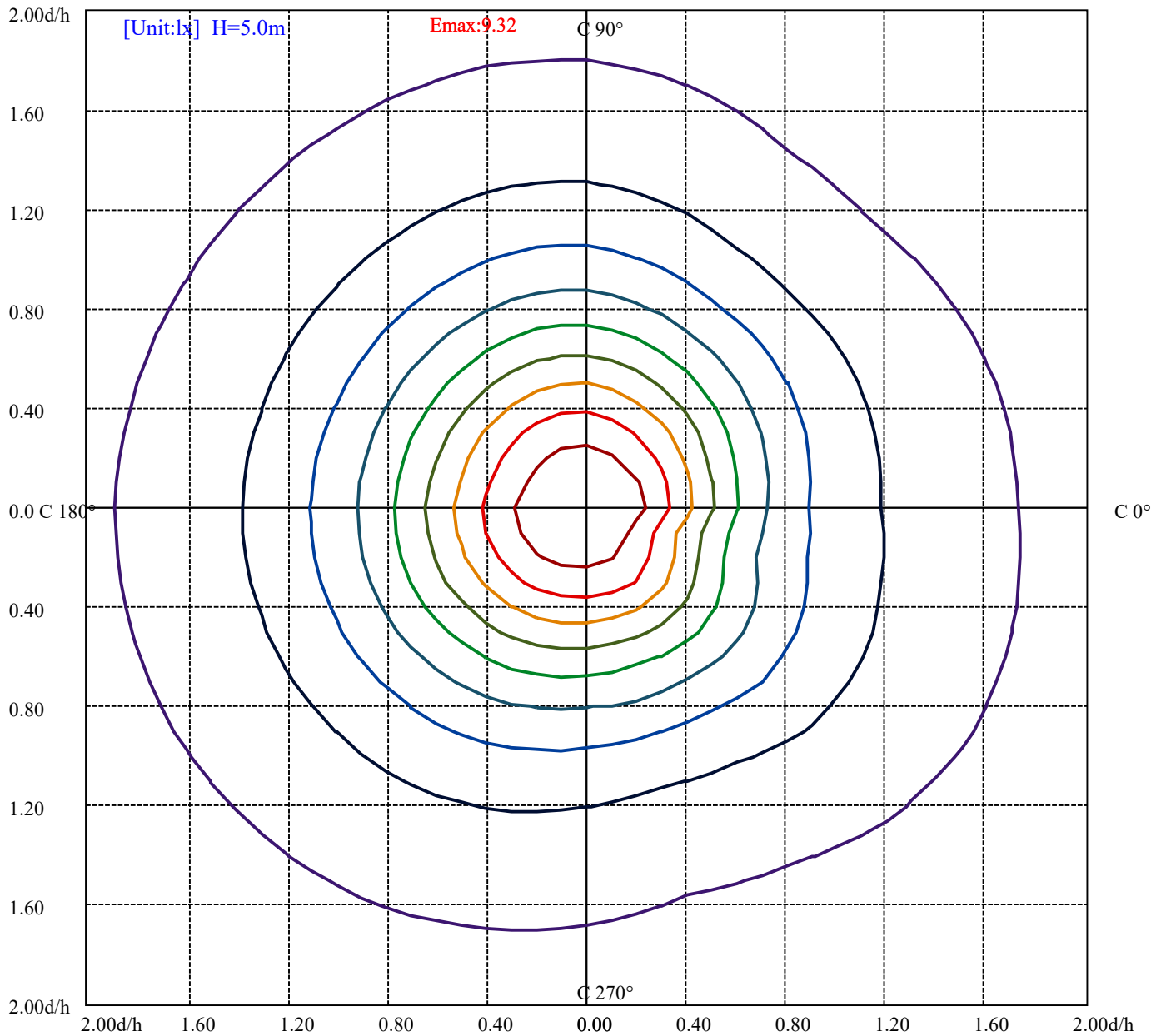
Beam Angle(50%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

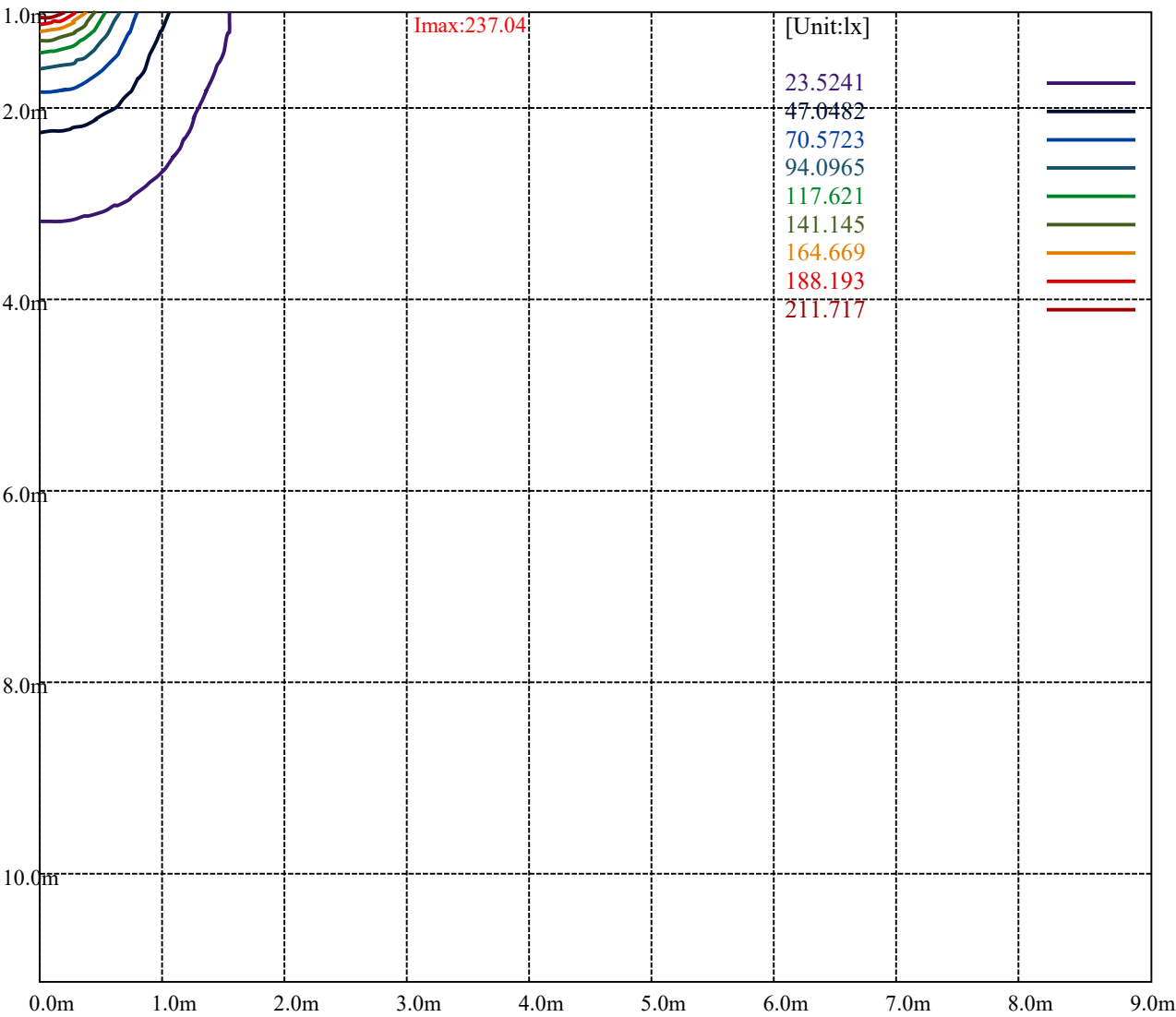


Max , Ave

Beam angle of C180 plane 325.49



(10%Emax) 0.931568	—
(20%Emax) 1.863132	—
(30%Emax) 2.7947	—
(40%Emax) 3.726264	—
(50%Emax) 4.65784	—
(60%Emax) 5.5894	—
(70%Emax) 6.52096	—
(80%Emax) 7.45252	—
(90%Emax) 8.38408	—



Luminance Table

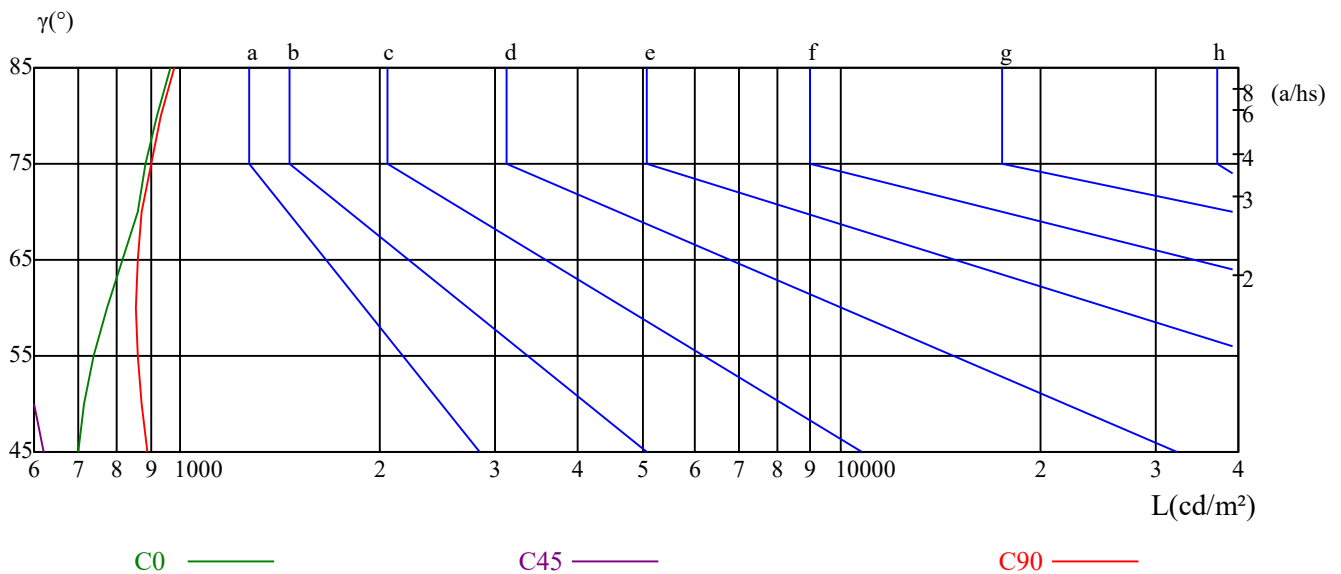
γ	45	50	55	60	65	70	75	80	85
C0	698	712	739	775	819	861	886	918	963
C45	620	575	538	519	523	537	559	584	613
C90	893	872	859	855	860	875	902	935	978

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3240	2902	3003	5290	4761	4903	15543	14297	14532

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



RHOC	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	1.00	1.00	1.00	0.85	0.85	0.85	0.71	0.71	0.71	0.58	0.58	0.58	0.52
1	0.88	0.82	0.78	0.81	0.76	0.72	0.68	0.64	0.61	0.56	0.53	0.50	0.45	0.43	0.41	0.35
2	0.75	0.67	0.60	0.69	0.62	0.56	0.57	0.52	0.47	0.47	0.43	0.39	0.37	0.34	0.31	0.27
3	0.64	0.56	0.49	0.59	0.51	0.45	0.49	0.43	0.38	0.40	0.36	0.32	0.32	0.28	0.25	0.21
4	0.56	0.47	0.40	0.52	0.44	0.37	0.43	0.37	0.32	0.35	0.30	0.26	0.28	0.24	0.21	0.17
5	0.50	0.41	0.34	0.46	0.38	0.31	0.38	0.32	0.27	0.31	0.26	0.22	0.25	0.21	0.18	0.14
6	0.44	0.35	0.29	0.41	0.33	0.27	0.34	0.28	0.23	0.28	0.23	0.19	0.22	0.18	0.15	0.12
7	0.40	0.31	0.25	0.37	0.29	0.23	0.31	0.24	0.20	0.25	0.20	0.16	0.20	0.16	0.13	0.10
8	0.36	0.28	0.22	0.33	0.26	0.20	0.28	0.22	0.17	0.23	0.18	0.14	0.18	0.15	0.12	0.09
9	0.33	0.25	0.19	0.30	0.23	0.18	0.26	0.20	0.15	0.21	0.16	0.13	0.17	0.13	0.10	0.08
10	0.30	0.22	0.17	0.28	0.21	0.16	0.24	0.18	0.14	0.20	0.15	0.12	0.16	0.12	0.09	0.07

Intensity data(cd)

Appendix Page: 10 Total:12

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	235.24	234.16	231.92	225.37	215.77	203.03	188.68	175.67	167.68
15.0	234.52	233.00	230.76	225.28	215.86	204.74	191.46	181.59	175.13
30.0	233.63	232.10	230.04	225.46	217.84	208.42	198.46	190.02	184.19
45.0	232.64	231.29	229.32	226.09	220.71	214.07	206.71	199.35	191.73
60.0	231.29	230.67	228.87	226.00	222.41	217.57	212.81	205.90	197.65
75.0	230.49	230.04	229.05	227.88	226.45	224.74	221.87	215.41	209.22
90.0	230.49	230.67	230.22	229.68	228.78	228.87	226.63	223.31	219.18
105.0	230.49	230.93	230.84	230.67	230.84	230.67	228.78	226.72	223.22
120.0	230.67	231.11	231.38	231.38	231.65	231.11	229.32	227.26	224.30
135.0	230.67	230.40	231.47	231.65	231.92	231.20	229.05	227.53	225.19
150.0	229.14	229.86	230.67	231.11	231.56	231.11	230.22	227.79	226.27
165.0	228.78	230.13	230.67	231.56	231.92	231.92	231.11	229.95	228.42
180.0	235.24	236.32	236.86	237.04	236.59	236.14	234.88	234.16	233.00
195.0	234.52	235.51	236.14	236.14	236.14	235.33	234.34	233.36	232.10
210.0	233.63	234.61	234.97	235.42	234.97	234.25	233.00	231.65	230.13
225.0	232.64	233.45	233.54	233.63	232.28	229.95	226.81	224.74	222.95
240.0	231.29	231.74	232.19	231.20	229.59	226.90	223.67	219.27	215.50
255.0	230.49	230.84	230.31	228.87	226.45	222.32	217.12	210.57	204.11
270.0	230.49	230.13	228.87	227.53	223.67	217.93	211.20	202.85	193.70
285.0	230.49	230.04	228.60	226.36	222.14	215.77	206.89	197.29	195.77
300.0	230.67	229.59	228.24	225.82	224.83	215.86	208.86	200.61	191.37
315.0	230.67	229.05	226.36	222.50	217.39	211.38	206.71	201.96	198.10
330.0	229.14	227.44	222.77	216.85	208.51	199.71	192.98	190.20	189.31
345.0	228.78	226.27	220.71	210.21	198.28	185.00	173.25	167.59	170.29
360.0	235.24	234.16	231.92	225.37	215.77	203.03	188.68	175.67	167.68
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	167.50	171.81	177.73	184.55	191.64	196.30	195.05	193.52	192.36
15.0	172.53	174.50	178.18	182.31	184.73	184.28	184.73	185.90	186.17
30.0	180.24	177.19	174.95	172.26	171.36	171.54	172.80	174.23	176.03
45.0	182.76	172.80	163.74	158.53	159.16	161.67	164.81	167.68	169.66
60.0	187.87	177.46	168.85	163.83	164.36	167.32	170.82	173.34	173.87
75.0	202.22	195.59	190.92	187.78	186.08	185.81	186.08	185.36	185.00
90.0	214.34	210.30	206.71	203.57	201.15	199.53	198.55	197.02	195.41
105.0	219.72	216.13	212.27	208.77	205.90	203.30	201.33	199.44	195.41
120.0	220.08	217.03	213.26	210.12	206.53	203.66	200.97	198.91	194.51
135.0	221.60	218.46	215.14	211.56	208.68	205.54	203.12	201.60	200.16
150.0	224.03	221.60	218.73	215.59	212.36	209.22	207.25	205.81	204.11
165.0	227.08	225.01	222.68	220.71	218.02	215.05	212.36	210.48	208.33
180.0	231.65	229.95	228.42	226.27	224.92	222.86	221.42	220.35	219.72
195.0	230.58	229.14	228.06	226.45	225.19	223.76	222.23	221.78	221.07
210.0	229.14	227.35	225.10	223.76	222.32	220.71	219.45	218.55	217.03
225.0	221.33	219.45	218.10	216.40	214.43	212.63	211.74	209.58	206.08
240.0	212.18	210.03	207.88	205.90	204.56	203.48	201.96	199.35	194.78
255.0	198.01	194.42	191.28	189.13	188.05	188.50	190.20	190.38	191.28
270.0	185.09	178.90	174.05	173.25	171.99	173.78	176.30	179.97	183.65
285.0	175.85	165.62	157.63	157.46	160.78	164.99	169.66	174.41	178.72
300.0	181.86	172.98	167.68	167.15	170.29	174.32	178.18	182.04	185.54
315.0	194.96	193.43	191.46	189.93	189.93	191.19	192.36	193.43	194.69
330.0	190.83	193.43	196.75	200.88	200.79	199.71	198.73	198.37	197.47
345.0	175.31	181.23	187.78	194.51	198.73	197.11	196.12	194.96	194.33
360.0	167.50	171.81	177.73	184.55	191.64	196.30	195.05	193.52	192.36

Intensity data(cd)

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	190.47	190.38	190.29	190.47	190.65	191.55	192.36	193.70	195.23
15.0	185.45	184.10	183.03	181.59	180.24	179.44	178.54	179.35	180.24
30.0	177.73	178.54	177.01	175.40	173.60	172.71	172.17	172.44	171.81
45.0	171.00	172.53	173.96	174.05	171.99	171.09	171.63	172.98	172.71
60.0	174.14	173.69	173.16	174.50	174.77	176.83	178.81	181.32	182.58
75.0	184.73	183.38	181.68	180.96	180.78	181.32	182.85	185.81	188.68
90.0	192.00	187.87	183.83	180.96	178.00	176.57	176.66	178.90	182.22
105.0	190.83	185.63	180.69	175.04	169.75	164.90	161.40	161.67	167.32
120.0	188.77	183.20	178.00	173.34	167.68	163.83	161.13	161.58	166.70
135.0	195.94	191.55	186.70	183.11	180.15	177.82	177.19	177.91	177.19
150.0	202.76	201.96	200.34	198.19	195.94	194.15	193.43	187.06	179.44
165.0	207.07	206.62	206.98	207.34	207.79	207.79	202.40	192.80	181.77
180.0	219.36	218.82	219.27	219.90	219.36	212.99	204.11	195.32	185.27
195.0	220.62	220.71	220.71	220.35	220.26	218.82	213.08	207.88	200.43
210.0	215.14	213.08	211.20	208.51	205.90	203.84	204.02	204.56	201.96
225.0	201.87	198.10	193.16	188.32	183.56	178.72	177.64	178.81	183.29
240.0	189.66	185.18	183.47	174.50	169.30	165.26	163.74	168.76	175.04
255.0	188.05	183.47	179.17	175.85	173.52	172.26	172.98	175.76	179.26
270.0	186.79	188.59	186.08	183.83	181.95	182.04	182.94	183.38	183.92
285.0	183.56	187.87	191.19	192.09	192.45	193.34	193.97	192.80	190.74
300.0	189.31	192.18	194.42	195.14	196.57	197.92	198.91	199.35	197.65
315.0	195.85	197.02	197.56	198.64	199.08	201.06	202.76	204.11	204.11
330.0	197.29	197.74	198.19	198.91	200.34	201.33	202.76	204.11	205.72
345.0	194.51	195.05	195.85	196.48	197.83	198.91	199.71	201.33	203.12
360.0	190.47	190.38	190.29	190.47	190.65	191.55	192.36	193.70	195.23
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	195.85	196.57	197.92	199.98	201.60	201.15	192.09	182.67	174.05
15.0	179.62	179.26	180.87	183.38	186.52	183.29	175.22	164.27	167.06
30.0	169.48	165.80	164.54	166.61	171.90	169.93	156.02	145.34	156.74
45.0	171.27	170.29	171.00	173.87	178.09	174.86	155.03	137.90	147.05
60.0	183.03	184.19	186.97	190.56	194.96	192.80	166.43	135.56	131.26
75.0	192.00	195.50	199.17	203.12	204.38	201.51	174.50	135.65	107.39
90.0	187.51	193.25	198.82	201.69	199.53	192.00	177.46	136.28	95.91
105.0	175.85	179.26	181.68	183.47	181.05	173.25	160.78	136.73	98.51
120.0	170.37	166.79	165.44	164.63	163.38	157.72	147.05	134.04	106.76
135.0	172.17	164.81	158.35	154.94	153.51	151.71	147.86	137.81	119.06
150.0	172.35	165.80	159.16	155.21	155.12	155.12	155.03	147.50	120.94
165.0	171.36	161.31	153.33	153.24	158.35	161.94	162.93	160.24	130.36
180.0	174.41	166.07	163.74	166.34	169.66	172.89	172.71	164.99	150.64
195.0	192.54	185.81	180.78	177.01	175.94	174.86	174.95	161.13	148.84
210.0	198.01	196.57	189.22	183.74	178.18	174.77	173.34	158.44	152.16
225.0	185.99	186.26	185.09	182.31	177.37	171.90	167.06	156.20	158.44
240.0	178.36	180.06	179.53	177.28	173.34	168.31	161.58	154.85	166.61
255.0	180.87	181.23	179.71	175.94	171.00	165.08	159.16	153.60	168.49
270.0	184.01	183.03	181.59	177.55	172.08	164.09	156.74	153.60	161.85
285.0	189.66	187.87	185.09	181.50	175.40	168.13	160.78	155.03	145.97
300.0	195.59	193.43	191.01	186.61	181.41	174.77	168.67	146.78	123.81
315.0	203.57	202.31	200.43	196.48	190.38	184.19	169.03	132.96	120.31
330.0	206.53	206.35	205.45	203.21	198.46	189.48	155.39	120.13	137.72
345.0	204.56	204.83	204.47	203.21	200.43	178.45	140.05	124.26	155.30
360.0	195.85	196.57	197.92	199.98	201.60	201.15	192.09	182.67	174.05

Intensity data(cd)

C/ γ (°)	180.0
0.0	149.38
15.0	170.20
30.0	176.74
45.0	175.31
60.0	163.92
75.0	147.05
90.0	122.38
105.0	103.53
120.0	108.56
135.0	124.62
150.0	131.71
165.0	125.34
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	149.38