
AFX

Client:

LumCAT: ARNP17LAJD4LB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.234

Lamp flux(lm): 2403.4

Power (W): 27.540

Number of Lamps: 1

PF: 0.981

Length(mm): 390

Width(mm): 390

Phm Type: C

Height(mm): 480

Photometric Results

Lumens(lm): 2403.39, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 87.27

Central intensity(cd): 225.282, Maximum intensity(cd): 225.282

Angle of maximum intensity: C=0.0 γ =0.0

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=1.51 C90_270=1.49

Maximum s/h(1/4): C0_180=1.71 C90_270=1.66

Up flux rate of lamp(%): 48.54%

Down flux rate of lamp(%): 51.46%

Up flux rate of LUM(%): 48.54%

Down flux rate of LUM(%): 51.46%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 26.442%

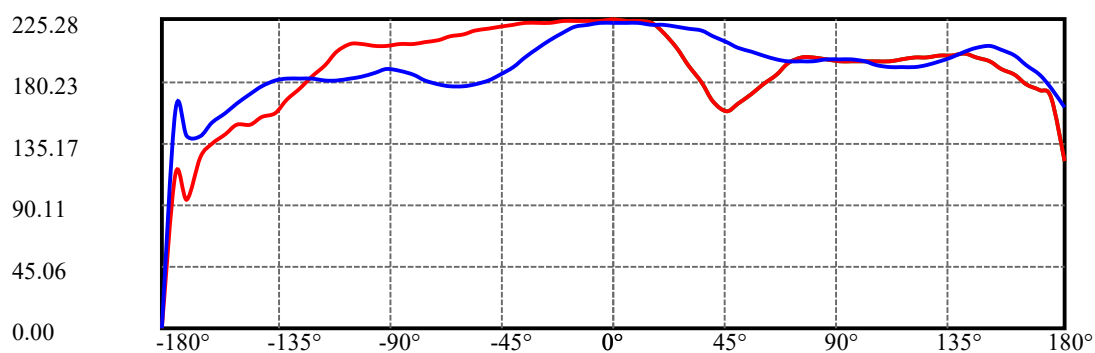
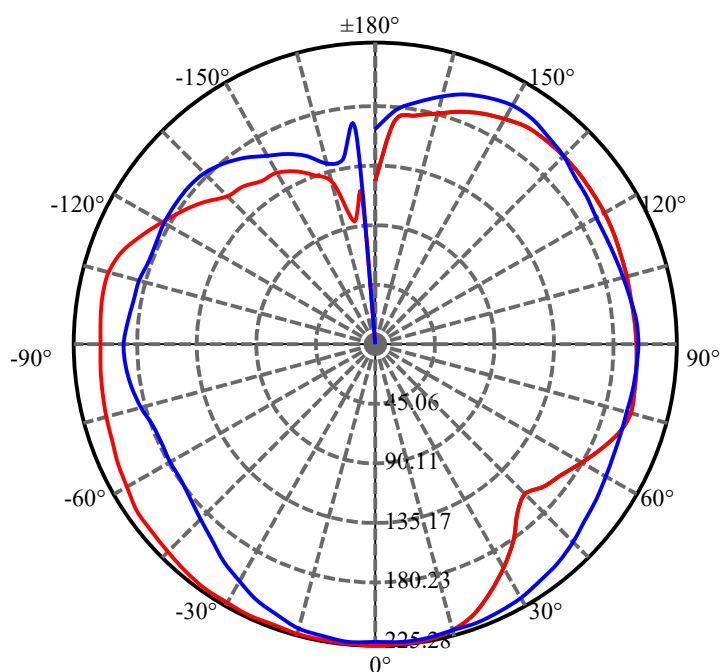
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	222.860	0.000	0	0.00%	0.00%
5.0	222.651	5.326	5.326	0.22%	0.22%
10.0	222.060	15.909	21.235	0.66%	0.88%
15.0	220.748	26.267	47.502	1.09%	1.98%
20.0	218.258	36.180	83.682	1.51%	3.48%
25.0	214.356	45.373	129.055	1.89%	5.37%
30.0	209.772	53.674	182.729	2.23%	7.60%
35.0	204.976	61.075	243.804	2.54%	10.14%
40.0	200.483	67.648	311.451	2.81%	12.96%
45.0	196.176	73.445	384.896	3.06%	16.01%
50.0	193.440	78.728	463.624	3.28%	19.29%
55.0	191.231	83.640	547.264	3.48%	22.77%
60.0	190.498	88.235	635.499	3.67%	26.44%
65.0	190.348	92.584	728.084	3.85%	30.29%
70.0	190.924	96.541	824.624	4.02%	34.31%
75.0	191.522	99.965	924.59	4.16%	38.47%
80.0	191.975	102.613	1027.203	4.27%	42.74%
85.0	192.221	104.395	1131.598	4.34%	47.08%
90.0	192.244	105.270	1236.868	4.38%	51.46%
95.0	191.963	105.199	1342.066	4.38%	55.84%
100.0	191.496	104.195	1446.262	4.34%	60.18%
105.0	190.468	102.203	1548.465	4.25%	64.43%
110.0	189.119	99.218	1647.682	4.13%	68.56%
115.0	187.896	95.463	1743.145	3.97%	72.53%
120.0	186.947	91.125	1834.27	3.79%	76.32%
125.0	186.633	86.352	1920.622	3.59%	79.91%
130.0	186.464	81.124	2001.745	3.38%	83.29%
135.0	186.281	75.319	2077.064	3.13%	86.42%
140.0	186.236	68.975	2146.039	2.87%	89.29%
145.0	184.793	61.903	2207.942	2.58%	91.87%
150.0	182.094	54.027	2261.969	2.25%	94.12%
155.0	177.773	45.541	2307.51	1.89%	96.01%
160.0	171.164	36.597	2344.107	1.52%	97.53%
165.0	159.366	27.240	2371.348	1.13%	98.67%
170.0	149.971	18.350	2389.697	0.76%	99.43%
175.0	154.947	10.908	2400.605	0.45%	99.88%
180.0	77.823	2.783	2403.388	0.12%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	182.73	7.60%	7.60%
0-40	311.45	12.96%	12.96%
0-60	635.50	26.44%	26.44%
0-90	1236.87	51.46%	51.46%
0-120	1834.27	76.32%	76.32%
0-180	2403.39	100.00%	100.00%
60-90	601.37	25.02%	25.02%
90-120	597.40	24.86%	24.86%
90-130	764.88	31.82%	31.82%
90-150	1025.10	42.65%	42.65%
90-180	1163.74	48.42%	48.42%
0-125.13	1922.71	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	21.23
10-20	62.45
20-30	99.05
30-40	128.72
40-50	152.17
50-60	171.88
60-70	189.13
70-80	202.58
80-90	209.66
90-100	209.39
100-110	201.42
110-120	186.59
120-130	167.48
130-140	144.29
140-150	115.93
150-160	82.14
160-170	45.59
170-180	10.91

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

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

:C90/270Left:0.0 Right:0.0

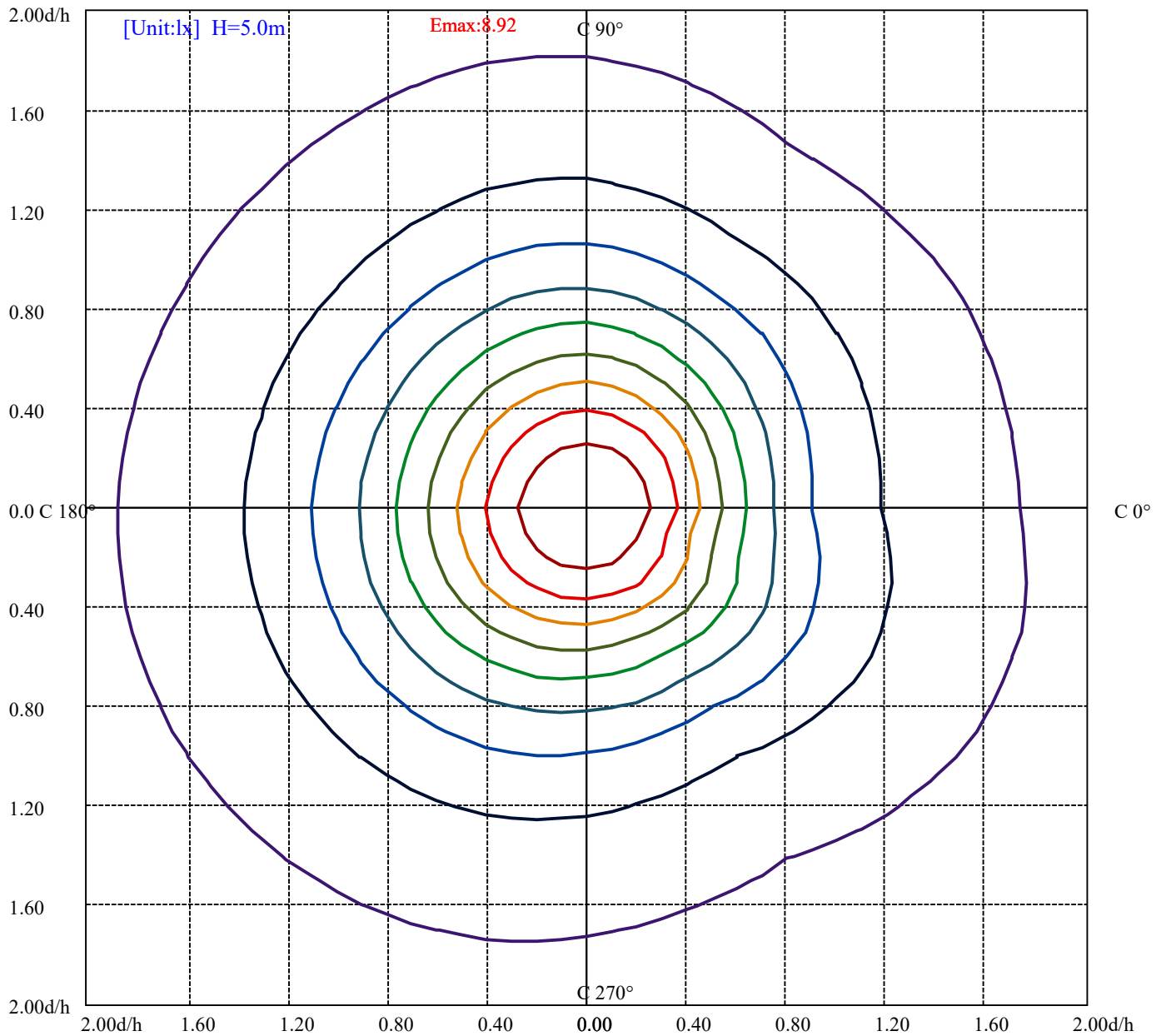
Beam Angle(50%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

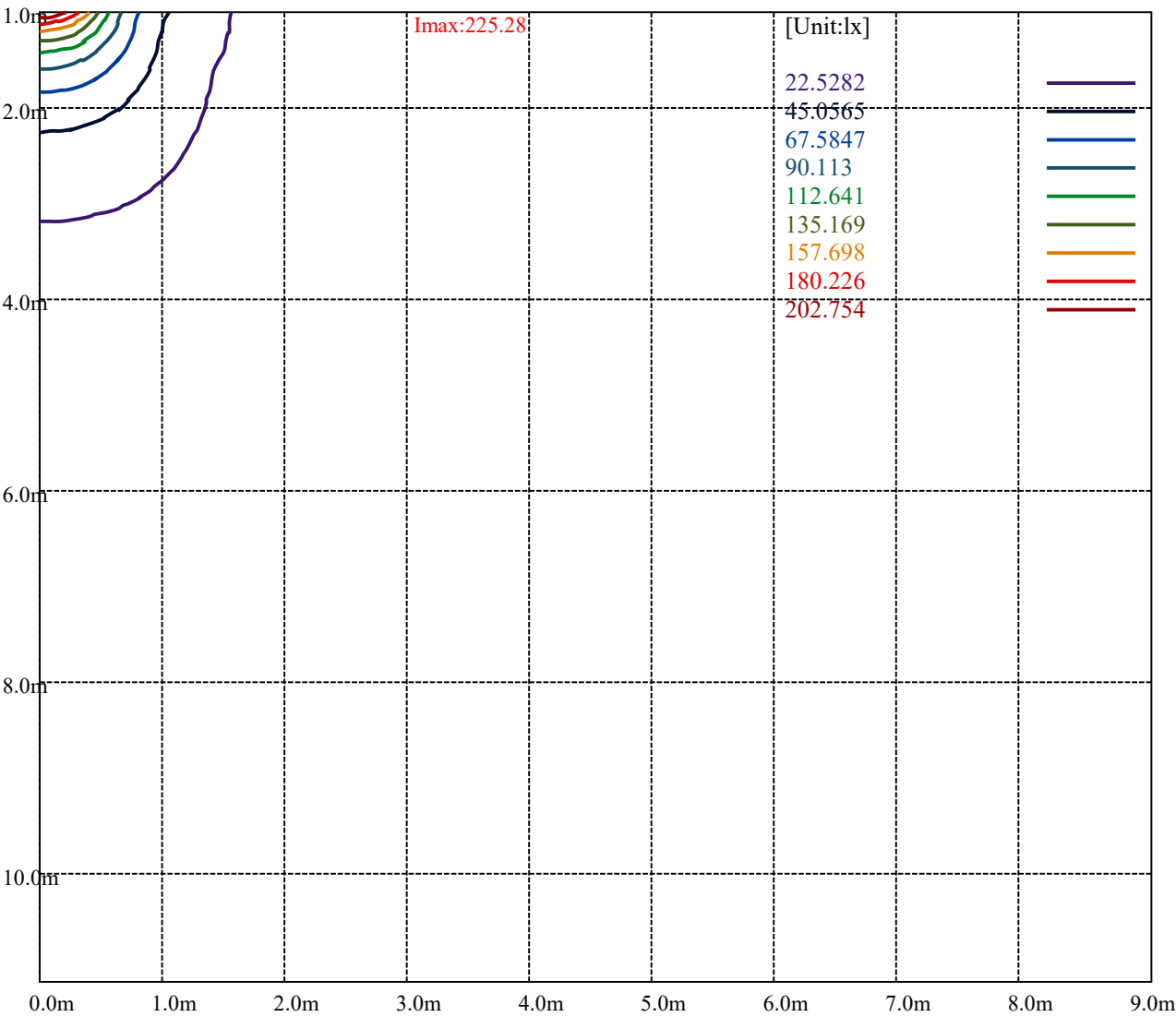


Max , Ave

Beam angle of C0 plane 346.98



(10%Emax) 0.892156	—
(20%Emax) 1.784316	—
(30%Emax) 2.676472	—
(40%Emax) 3.568632	—
(50%Emax) 4.4608	—
(60%Emax) 5.35296	—
(70%Emax) 6.24512	—
(80%Emax) 7.13728	—
(90%Emax) 8.0294	—



Luminance Table

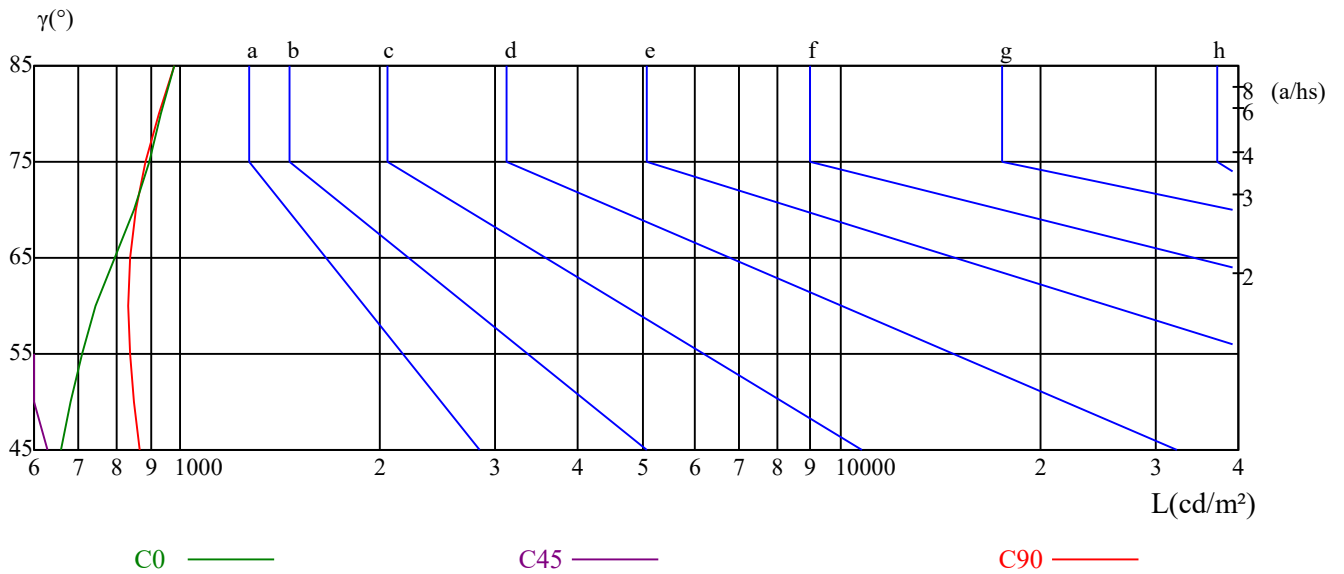
γ	45	50	55	60	65	70	75	80	85
C0	661	681	708	746	792	848	896	933	979
C45	630	599	567	548	539	548	567	594	631
C90	869	849	837	833	838	855	883	925	979

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3092	2892	2922	5153	4767	4788	15167	14460	14319

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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.51
1	0.88	0.82	0.77	0.81	0.76	0.72	0.68	0.64	0.60	0.55	0.53	0.50	0.44	0.42	0.40	0.35
2	0.75	0.67	0.60	0.68	0.62	0.56	0.57	0.52	0.47	0.46	0.42	0.39	0.37	0.34	0.31	0.26
3	0.64	0.56	0.48	0.59	0.51	0.45	0.49	0.43	0.38	0.40	0.35	0.31	0.31	0.28	0.25	0.21
4	0.56	0.47	0.40	0.52	0.43	0.37	0.43	0.37	0.31	0.35	0.30	0.26	0.28	0.24	0.21	0.17
5	0.50	0.41	0.34	0.46	0.37	0.31	0.38	0.32	0.27	0.31	0.26	0.22	0.24	0.21	0.17	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	0.14	0.11	0.09
9	0.33	0.25	0.19	0.30	0.23	0.18	0.25	0.19	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	0.23	0.18	0.14	0.19	0.15	0.11	0.16	0.12	0.09	0.07

Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	225.28	224.56	223.76	222.05	215.68	204.83	191.91	178.99	164.90
15.0	223.58	223.13	222.95	220.80	214.16	205.37	193.43	180.51	170.37
30.0	223.76	223.22	222.86	221.07	216.49	208.86	199.62	188.86	181.14
45.0	223.04	223.22	222.95	220.89	218.82	212.90	206.35	198.19	191.64
60.0	222.77	222.50	222.41	221.51	219.00	214.96	210.12	205.01	197.47
75.0	222.32	222.59	222.32	221.96	220.89	219.00	216.40	212.00	206.26
90.0	222.95	222.77	222.50	221.60	221.25	220.17	218.37	216.31	212.72
105.0	222.68	222.68	222.05	221.87	221.25	220.08	218.91	217.39	215.32
120.0	221.87	221.96	221.69	221.42	220.62	219.90	218.46	216.94	214.52
135.0	222.05	221.96	221.87	221.60	221.16	220.26	218.64	216.94	214.25
150.0	222.05	222.14	221.96	221.69	220.17	219.54	218.37	217.21	215.14
165.0	221.96	221.96	221.87	221.25	220.71	219.72	218.73	218.10	216.67
180.0	225.28	224.56	224.30	224.12	223.49	222.77	222.68	222.05	220.98
195.0	223.58	223.40	222.77	222.68	222.32	221.96	221.96	221.51	220.80
210.0	223.76	223.22	223.04	222.86	222.77	222.68	222.32	221.51	220.44
225.0	223.04	223.31	222.41	221.87	220.26	220.35	219.09	218.28	217.12
240.0	222.77	222.23	221.60	220.44	218.37	215.95	213.17	210.12	208.51
255.0	222.32	222.50	221.87	220.08	217.21	213.53	208.86	204.65	200.25
270.0	222.95	222.59	221.69	219.36	215.86	210.30	204.29	197.29	190.47
285.0	222.68	222.50	221.42	219.00	214.96	208.33	200.61	191.91	189.48
300.0	221.87	221.78	220.71	218.82	218.19	208.86	199.80	190.11	180.15
315.0	222.05	221.51	220.53	219.09	215.23	210.39	205.01	197.83	191.19
330.0	222.05	221.87	220.62	217.75	212.99	207.34	201.06	196.75	192.98
345.0	221.96	221.42	219.27	214.16	206.35	196.48	186.34	180.96	178.81
360.0	225.28	224.56	223.76	222.05	215.68	204.83	191.91	178.99	164.90
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	158.53	164.18	170.37	177.64	185.36	193.25	197.38	196.66	195.50
15.0	166.07	166.25	169.75	176.12	182.40	188.59	190.92	190.83	191.19
30.0	175.85	174.14	174.50	176.57	178.18	177.55	178.45	180.06	182.67
45.0	185.81	180.15	172.44	167.41	163.92	164.81	167.23	170.55	174.77
60.0	189.48	180.24	169.75	161.22	157.55	161.67	166.52	171.54	176.12
75.0	199.08	192.63	186.26	182.49	180.42	180.06	181.41	183.83	186.70
90.0	208.42	204.83	201.42	198.37	196.12	194.87	194.51	194.87	195.50
105.0	212.45	209.58	206.62	203.75	201.24	199.53	197.65	196.39	194.15
120.0	211.47	208.42	205.37	202.14	199.26	196.84	194.60	192.45	188.50
135.0	211.20	208.15	204.92	201.60	198.64	195.94	193.16	191.82	189.57
150.0	212.99	210.30	207.07	203.75	200.43	197.56	195.32	193.70	192.36
165.0	215.41	213.17	211.02	208.24	204.92	201.96	199.00	196.66	195.32
180.0	219.63	218.19	216.40	214.25	212.09	209.76	208.33	207.25	206.62
195.0	219.72	218.37	217.48	216.13	214.79	213.17	212.18	211.11	210.57
210.0	219.45	218.82	217.30	216.04	214.61	213.80	213.17	212.27	211.38
225.0	215.50	214.16	212.54	211.11	210.21	209.22	208.24	205.72	202.94
240.0	206.71	205.45	204.02	202.85	201.78	200.88	199.35	195.50	191.46
255.0	197.02	193.97	192.18	191.28	191.64	192.63	193.34	193.52	188.68
270.0	184.28	180.06	177.10	176.48	175.67	177.64	180.78	184.82	187.87
285.0	173.96	167.32	162.66	161.94	163.29	166.61	170.91	175.58	180.24
300.0	169.30	159.16	151.44	155.39	161.76	167.32	172.71	178.00	183.03
315.0	184.37	178.99	176.39	176.48	178.54	181.77	185.27	188.68	192.00
330.0	191.73	192.27	193.52	195.41	195.77	196.84	197.38	197.83	198.55
345.0	179.80	183.74	189.04	195.32	199.80	199.89	198.73	197.74	197.65
360.0	158.53	164.18	170.37	177.64	185.36	193.25	197.38	196.66	195.50

Intensity data(cd)

Appendix Page: 11 Total:12

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	194.60	194.78	194.33	194.33	194.78	195.94	197.02	197.74	198.55
15.0	191.55	191.37	190.83	190.83	191.01	191.73	192.63	193.52	194.42
30.0	186.08	188.77	190.11	190.02	189.66	189.48	189.66	190.29	191.28
45.0	179.44	182.85	187.33	189.84	189.93	190.11	190.47	191.46	192.36
60.0	181.14	185.45	188.95	192.71	192.98	193.52	194.06	195.14	196.39
75.0	189.75	192.36	194.87	196.21	196.48	196.84	197.47	198.82	200.25
90.0	195.94	195.50	193.97	192.27	190.74	190.02	190.56	192.00	194.69
105.0	190.92	186.79	183.11	179.26	175.76	172.62	171.36	172.35	176.30
120.0	183.56	178.63	173.52	168.04	162.30	156.92	151.89	150.82	159.25
135.0	184.46	179.26	174.77	170.02	166.07	163.65	162.12	163.83	168.40
150.0	191.10	188.23	184.73	181.50	179.35	177.73	178.00	175.85	172.26
165.0	194.33	194.69	194.60	194.15	194.15	192.89	185.90	177.28	169.93
180.0	205.90	206.35	206.62	206.80	200.88	192.00	182.94	174.23	165.98
195.0	210.21	210.48	211.56	212.45	210.30	203.48	197.11	191.19	186.17
210.0	210.03	209.31	207.52	206.71	205.19	204.29	202.58	200.16	197.65
225.0	199.35	195.41	191.82	187.60	184.01	181.95	181.14	183.65	181.23
240.0	186.97	182.22	180.69	171.27	165.80	160.95	160.86	163.11	162.39
255.0	184.37	180.24	176.39	173.16	171.00	170.11	170.11	171.00	169.75
270.0	188.50	186.43	183.92	182.13	180.69	181.05	181.77	182.13	181.95
285.0	185.63	190.20	192.00	192.54	192.71	193.43	194.60	196.12	196.66
300.0	188.14	192.71	195.94	197.56	199.26	200.34	201.42	203.12	203.84
315.0	194.96	197.65	199.35	200.97	202.76	204.29	205.99	207.70	208.15
330.0	199.08	199.89	200.70	201.96	203.12	204.83	205.37	206.17	206.26
345.0	197.83	197.56	198.28	198.91	199.89	201.33	201.69	201.51	201.06
360.0	194.60	194.78	194.33	194.33	194.78	195.94	197.02	197.74	198.55
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	198.82	199.44	197.56	193.97	189.22	184.46	178.27	173.69	167.41
15.0	195.23	195.59	194.24	190.20	185.09	178.63	171.63	168.13	163.74
30.0	192.00	193.25	192.18	188.50	183.74	178.72	173.60	167.41	160.51
45.0	193.16	194.24	194.15	191.82	187.51	182.58	176.83	171.45	161.31
60.0	197.74	199.08	199.35	197.65	193.88	188.50	182.67	177.46	166.70
75.0	202.14	204.20	205.45	202.94	199.08	194.06	188.05	181.59	172.62
90.0	197.92	201.87	204.74	205.37	202.85	198.28	191.46	184.19	175.22
105.0	183.29	191.91	198.82	202.40	202.40	198.73	193.34	184.55	174.50
120.0	170.64	181.59	189.84	194.69	195.94	193.79	185.81	176.66	167.15
135.0	175.04	180.42	184.28	186.61	185.54	179.62	171.54	162.21	152.61
150.0	170.29	170.73	172.53	172.26	169.21	161.94	152.52	142.11	133.77
165.0	164.27	162.84	162.12	158.80	153.69	144.36	134.04	122.02	114.30
180.0	156.92	154.23	148.57	148.21	141.84	133.77	124.44	93.67	111.34
195.0	181.41	174.41	169.12	168.67	160.33	158.80	126.50	89.45	128.84
210.0	192.45	190.38	186.34	183.29	174.14	160.78	124.62	94.92	143.10
225.0	177.55	175.58	173.78	168.67	165.98	152.79	121.12	111.43	152.79
240.0	158.08	154.05	150.64	147.41	146.78	136.91	113.67	118.61	159.34
255.0	166.88	161.22	152.25	144.09	141.49	134.67	120.58	128.93	160.69
270.0	180.15	176.74	170.46	163.02	157.28	149.38	139.87	139.69	158.62
285.0	195.77	193.43	188.50	181.05	174.05	167.77	157.81	151.18	157.63
300.0	204.74	203.21	200.43	195.32	187.51	180.33	170.64	162.12	157.37
315.0	208.15	206.35	203.21	198.28	193.16	185.54	176.57	167.77	160.24
330.0	206.62	205.54	201.06	196.12	190.47	183.83	176.66	167.23	159.34
345.0	201.51	199.35	195.41	190.92	185.36	179.71	172.53	162.84	159.61
360.0	198.82	199.44	197.56	193.97	189.22	184.46	178.27	173.69	167.41

Intensity data(cd)

C/ γ (°)	180.0
0.0	121.93
15.0	158.98
30.0	159.70
45.0	157.99
60.0	157.81
75.0	158.08
90.0	160.95
105.0	164.81
120.0	161.31
135.0	158.44
150.0	155.39
165.0	152.34
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	121.93