
AFX

Client:

LumCAT: VRNV2207LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.243

Lamp flux(lm): 2808.2

Power (W): 28.930

Number of Lamps: 1

PF: 0.991

Length(mm): 540

Width(mm): 120

Phm Type: C

Height(mm): 120

Photometric Results

Lumens(lm): 2808.15, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 97.07

Central intensity(cd): 346.122, Maximum intensity(cd): 346.122

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=1.30 C90_270=1.34

Maximum s/h(1/4): C0_180=1.47 C90_270=1.52

Up flux rate of lamp(%): 49.21%

Down flux rate of lamp(%): 50.79%

Up flux rate of LUM(%): 49.21%

Down flux rate of LUM(%): 50.79%

CIE Type : General diffuse lighting

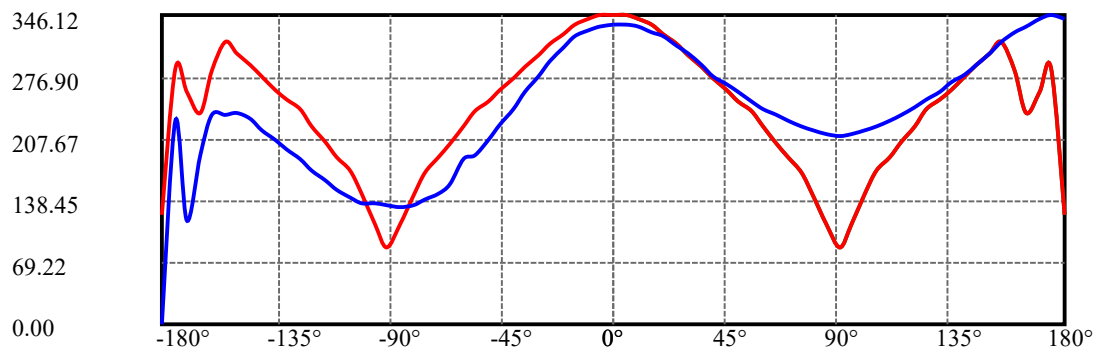
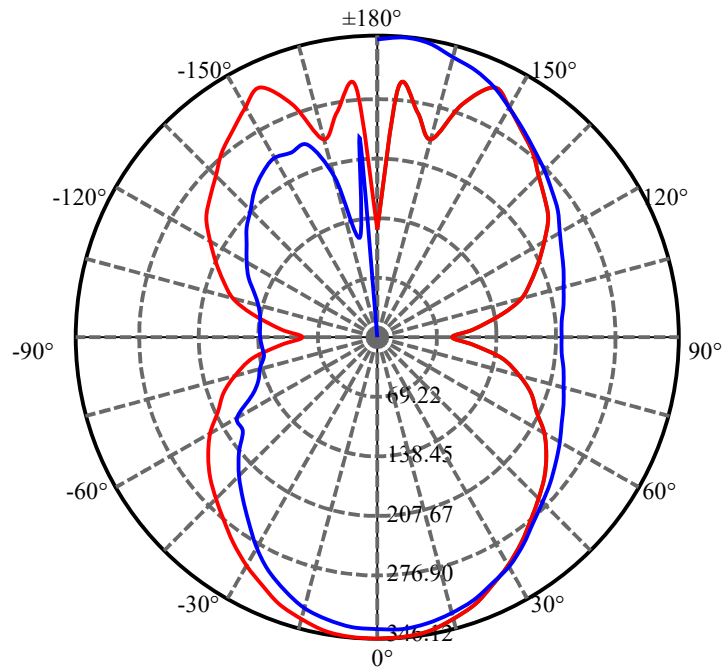
Output flux ratio in π solid angle : 30.132%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	339.865	0.000	0	0.00%	0.00%
5.0	338.721	8.112	8.112	0.29%	0.29%
10.0	334.829	24.095	32.207	0.86%	1.15%
15.0	328.305	39.337	71.544	1.40%	2.55%
20.0	319.415	53.381	124.925	1.90%	4.45%
25.0	308.046	65.809	190.734	2.34%	6.79%
30.0	294.998	76.316	267.05	2.72%	9.51%
35.0	280.919	84.808	351.858	3.02%	12.53%
40.0	267.566	91.511	443.368	3.26%	15.79%
45.0	254.289	96.626	539.994	3.44%	19.23%
50.0	241.851	100.252	640.246	3.57%	22.80%
55.0	229.375	102.460	742.706	3.65%	26.45%
60.0	218.120	103.437	846.143	3.68%	30.13%
65.0	206.140	103.138	949.281	3.67%	33.80%
70.0	194.846	101.532	1050.814	3.62%	37.42%
75.0	183.057	98.778	1149.592	3.52%	40.94%
80.0	172.832	95.226	1244.818	3.39%	44.33%
85.0	165.621	91.966	1336.784	3.27%	47.60%
90.0	161.272	89.506	1426.29	3.19%	50.79%
95.0	165.812	89.558	1515.848	3.19%	53.98%
100.0	174.320	92.422	1608.27	3.29%	57.27%
105.0	184.431	95.992	1704.262	3.42%	60.69%
110.0	194.274	98.987	1803.249	3.53%	64.21%
115.0	204.385	100.943	1904.192	3.59%	67.81%
120.0	214.800	101.905	2006.097	3.63%	71.44%
125.0	226.323	101.964	2108.061	3.63%	75.07%
130.0	237.463	100.842	2208.903	3.59%	78.66%
135.0	248.871	98.271	2307.174	3.50%	82.16%
140.0	259.325	94.097	2401.271	3.35%	85.51%
145.0	269.969	88.309	2489.58	3.14%	88.66%
150.0	282.712	81.386	2570.966	2.90%	91.55%
155.0	291.564	72.675	2643.641	2.59%	94.14%
160.0	285.345	60.507	2704.148	2.15%	96.30%
165.0	272.907	46.008	2750.156	1.64%	97.93%
170.0	275.044	32.504	2782.66	1.16%	99.09%
175.0	289.389	20.192	2802.851	0.72%	99.81%
180.0	154.176	5.303	2808.154	0.19%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	267.05	9.51%	9.51%
0-40	443.37	15.79%	15.79%
0-60	846.14	30.13%	30.13%
0-90	1426.29	50.79%	50.79%
0-120	2006.10	71.44%	71.44%
0-180	2808.15	100.00%	100.00%
60-90	580.15	20.66%	20.66%
90-120	579.81	20.65%	20.65%
90-130	782.61	27.87%	27.87%
90-150	1144.68	40.76%	40.76%
90-180	1376.56	49.02%	49.02%
0-131.91	2246.52	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	32.21
10-20	92.72
20-30	142.12
30-40	176.32
40-50	196.88
50-60	205.90
60-70	204.67
70-80	194.00
80-90	181.47
90-100	181.98
100-110	194.98
110-120	202.85
120-130	202.81
130-140	192.37
140-150	169.69
150-160	133.18
160-170	78.51
170-180	20.19

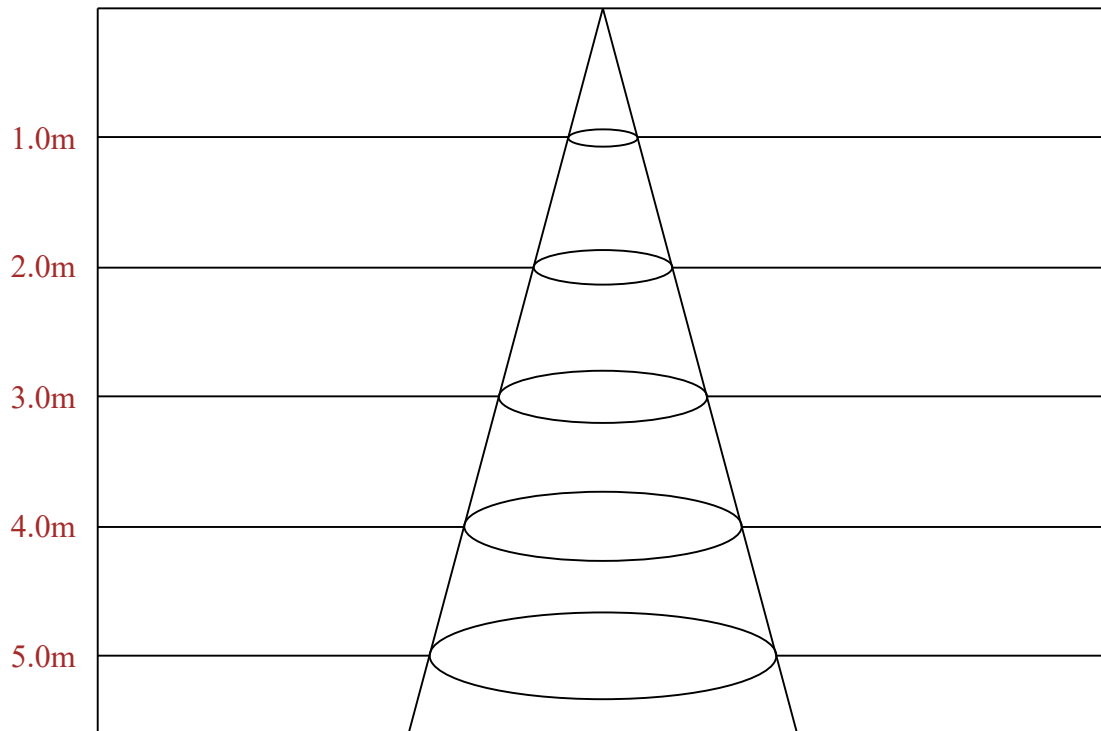
C0(Max): —————C0/C180: —————C90/C270: —————

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

:C90/270Left:0.0 Right:0.0

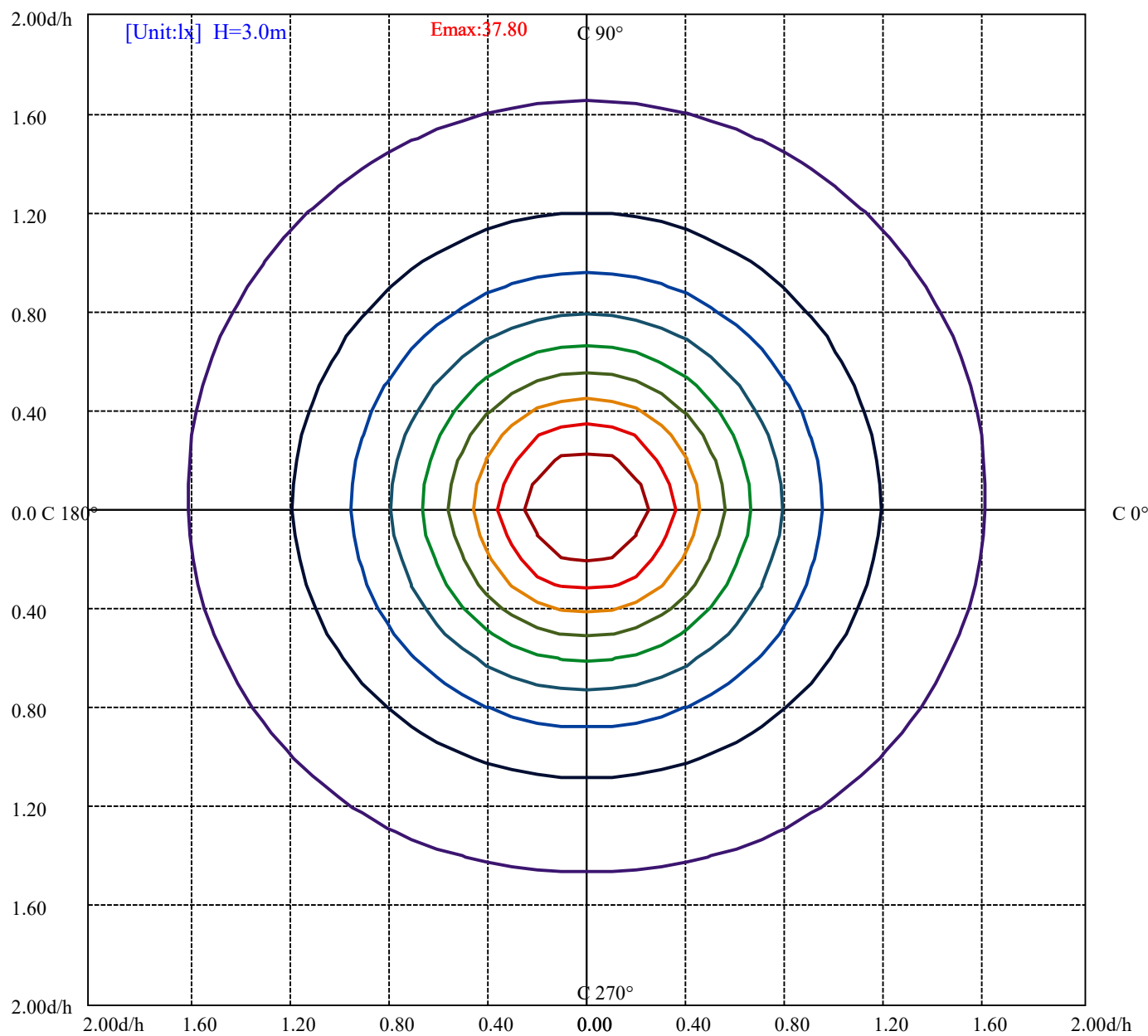
Beam Angle(50%Imax):C0/180Left:178.5 Right:178.5

:C90/270Left:0.0 Right:0.0

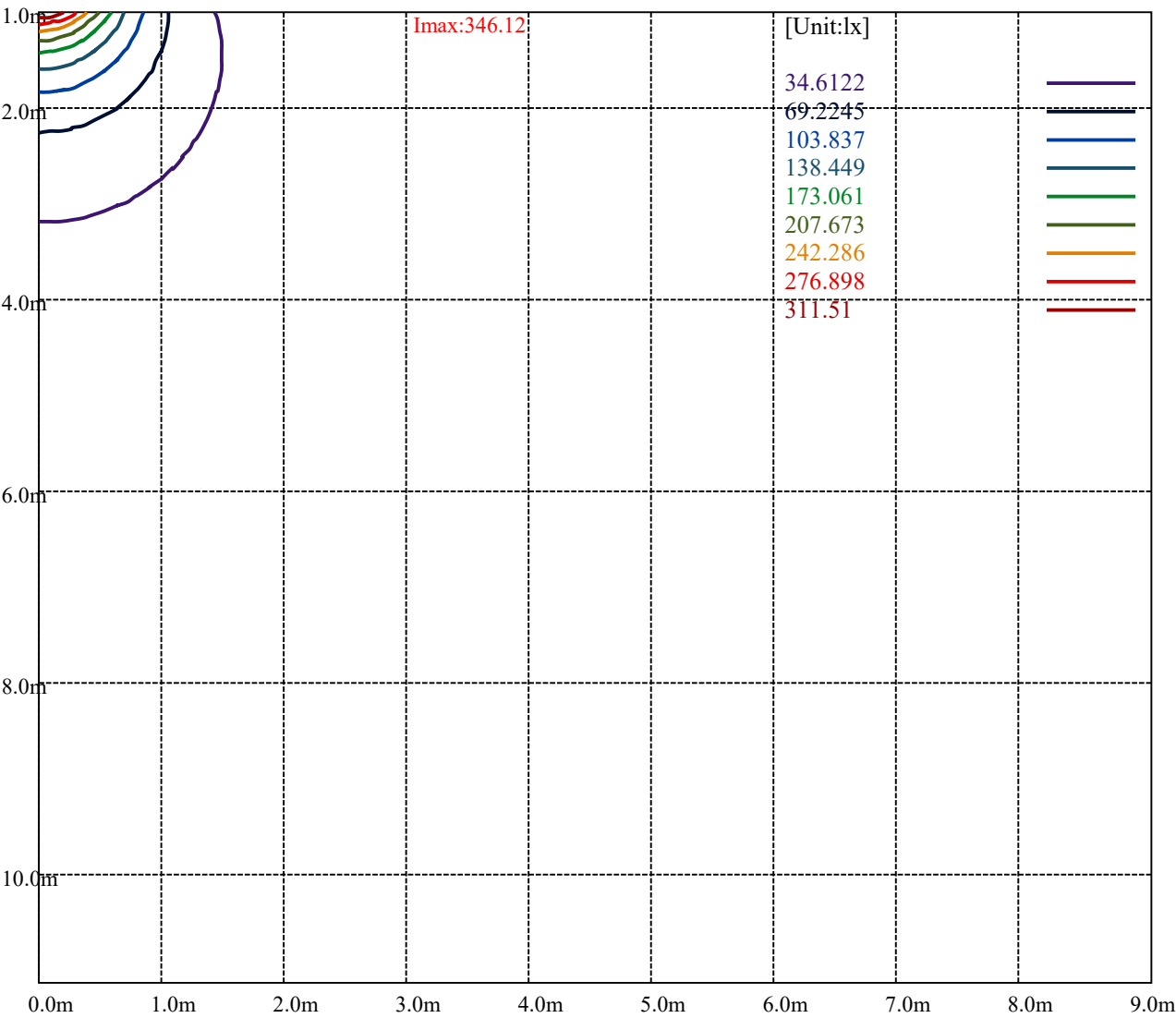


Max , Ave

Beam angle of C0 plane 252.62



(10%Emax) 3.779678	—
(20%Emax) 7.559345	—
(30%Emax) 11.339	—
(40%Emax) 15.11867	—
(50%Emax) 18.89833	—
(60%Emax) 22.678	—
(70%Emax) 26.45767	—
(80%Emax) 30.23733	—
(90%Emax) 34.017	—



Luminance Limiting Curve(no luminous side)

Luminance Table

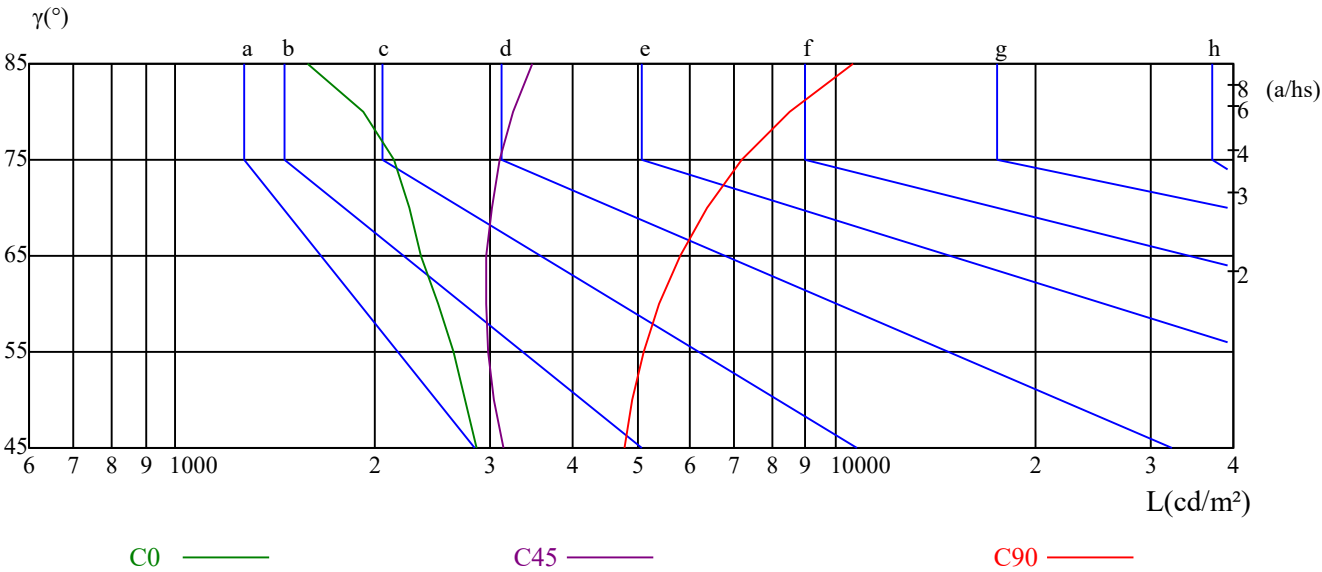
γ	45	50	55	60	65	70	75	80	85
C0	2863	2738	2638	2493	2355	2255	2140	1927	1585
C45	3135	3038	2972	2948	2959	3012	3095	3240	3480
C90	4791	4919	5105	5387	5797	6362	7222	8497	10626

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7406	7155	7682	10128	10756	11342	19699	30481	32467

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	0.89	0.84	0.80	0.82	0.78	0.74	0.69	0.66	0.63	0.57	0.54	0.52	0.46	0.44	0.42	0.37
2	0.77	0.69	0.63	0.70	0.64	0.59	0.59	0.54	0.50	0.48	0.45	0.41	0.39	0.36	0.33	0.29
3	0.66	0.58	0.51	0.61	0.54	0.48	0.51	0.45	0.41	0.42	0.38	0.34	0.33	0.30	0.27	0.23
4	0.58	0.49	0.43	0.54	0.46	0.40	0.45	0.39	0.34	0.37	0.32	0.28	0.29	0.26	0.23	0.19
5	0.52	0.43	0.36	0.48	0.40	0.34	0.40	0.34	0.29	0.33	0.28	0.24	0.26	0.23	0.20	0.16
6	0.46	0.37	0.31	0.43	0.35	0.29	0.36	0.30	0.25	0.30	0.25	0.21	0.24	0.20	0.17	0.14
7	0.41	0.33	0.27	0.38	0.31	0.25	0.32	0.26	0.22	0.27	0.22	0.18	0.21	0.18	0.15	0.12
8	0.38	0.29	0.24	0.35	0.27	0.22	0.29	0.23	0.19	0.24	0.20	0.16	0.20	0.16	0.13	0.11
9	0.34	0.26	0.21	0.32	0.24	0.20	0.27	0.21	0.17	0.22	0.18	0.14	0.18	0.14	0.12	0.10
10	0.31	0.24	0.19	0.29	0.22	0.17	0.25	0.19	0.15	0.21	0.16	0.13	0.17	0.13	0.11	0.09

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	346.12	346.12	343.38	336.97	327.81	317.74	304.92	291.18	277.45
15.0	345.21	343.38	340.63	334.22	326.89	315.91	304.92	290.27	276.53
30.0	343.38	343.38	339.71	335.13	326.89	316.82	304.92	291.18	278.36
45.0	343.38	343.38	340.63	335.13	327.81	317.74	305.83	293.93	280.19
60.0	342.46	342.46	338.80	333.30	326.89	317.74	305.83	293.93	281.11
75.0	338.80	337.88	336.05	330.56	324.15	314.99	303.09	291.18	279.28
90.0	336.05	336.05	333.30	327.81	321.40	312.24	302.17	290.27	278.36
105.0	336.97	336.05	333.30	328.72	321.40	312.24	301.25	289.35	278.36
120.0	337.88	337.88	336.05	330.56	323.23	313.16	303.09	290.27	277.45
135.0	336.97	336.97	334.22	328.72	321.40	312.24	300.34	289.35	275.62
150.0	335.13	335.13	332.39	326.89	312.24	309.50	299.42	286.60	272.87
165.0	336.05	336.05	333.30	327.81	319.57	309.50	297.59	284.77	270.12
180.0	346.12	345.21	339.71	332.39	323.23	310.41	298.51	284.77	271.95
195.0	345.21	342.46	337.88	331.47	321.40	310.41	296.68	282.94	270.12
210.0	343.38	340.63	336.05	329.64	319.57	307.66	293.93	279.28	266.46
225.0	343.38	341.54	336.97	328.72	318.65	305.83	291.18	274.70	260.05
240.0	342.46	340.63	335.13	326.89	315.91	302.17	285.69	269.21	251.81
255.0	338.80	336.97	331.47	323.23	312.24	297.59	280.19	262.80	245.40
270.0	336.05	334.22	328.72	321.40	308.58	294.84	278.36	259.13	241.74
285.0	336.97	334.22	329.64	321.40	310.41	295.76	279.28	261.88	257.30
300.0	337.88	336.05	331.47	322.31	319.57	297.59	282.03	266.46	250.89
315.0	336.97	335.13	329.64	322.31	312.24	299.42	285.69	271.04	256.39
330.0	335.13	333.30	328.72	321.40	312.24	300.34	287.52	272.87	260.97
345.0	336.05	334.22	328.72	322.31	312.24	301.25	287.52	274.70	262.80
360.0	346.12	346.12	343.38	336.97	327.81	317.74	304.92	291.18	277.45
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	264.63	251.81	240.82	225.25	206.03	189.54	174.89	151.09	121.78
15.0	264.63	252.72	241.74	232.58	219.76	206.94	194.12	181.30	169.40
30.0	266.46	256.39	245.40	237.16	229.83	222.51	216.10	210.60	206.94
45.0	270.12	259.13	249.06	240.82	233.50	227.09	221.59	217.01	216.10
60.0	270.12	260.05	250.89	242.65	236.24	229.83	224.34	220.68	218.84
75.0	269.21	260.05	250.89	242.65	235.33	228.92	222.51	217.93	215.18
90.0	268.29	259.13	249.98	241.74	234.41	227.09	221.59	216.10	212.43
105.0	267.37	258.22	249.06	240.82	233.50	227.09	222.51	218.84	215.18
120.0	266.46	256.39	248.15	238.99	232.58	226.17	220.68	217.93	216.10
135.0	265.54	254.56	244.48	236.24	228.92	223.42	217.01	213.35	211.52
150.0	261.88	250.89	240.82	232.58	225.25	217.93	209.69	205.11	201.45
165.0	259.13	248.15	237.16	227.09	212.43	198.70	184.96	168.48	152.92
180.0	260.05	248.15	235.33	216.10	199.62	184.96	164.82	138.27	100.72
195.0	258.22	248.15	232.58	219.76	203.28	184.05	162.99	140.10	123.62
210.0	253.64	238.99	224.34	210.60	195.95	178.56	153.83	138.27	137.35
225.0	245.40	231.66	214.27	200.53	189.54	175.81	161.16	150.17	151.09
240.0	235.33	219.76	205.11	191.37	179.47	167.57	156.58	149.25	141.93
255.0	228.00	209.69	194.12	178.56	164.82	152.92	137.35	135.52	127.28
270.0	224.34	206.03	188.63	184.96	157.49	146.51	139.18	132.77	131.86
285.0	227.09	210.60	194.12	179.47	166.65	155.66	147.42	143.76	140.10
300.0	234.41	219.76	206.03	193.21	182.22	172.15	163.90	156.58	156.58
315.0	242.65	228.92	213.35	200.53	189.54	177.64	161.16	150.17	154.75
330.0	249.06	235.33	221.59	208.77	195.04	176.72	154.75	137.35	130.94
345.0	250.89	239.90	227.09	212.43	195.95	178.56	160.24	137.35	120.87
360.0	264.63	251.81	240.82	225.25	206.03	189.54	174.89	151.09	121.78

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	85.16	100.72	137.35	164.82	183.13	198.70	215.18	235.33	248.15
15.0	161.16	163.90	174.89	188.63	200.53	213.35	227.09	238.99	249.06
30.0	204.19	206.03	209.69	214.27	219.76	226.17	233.50	241.74	251.81
45.0	215.18	216.10	217.01	219.76	225.25	231.66	238.99	246.31	255.47
60.0	217.93	217.93	219.76	222.51	228.00	234.41	240.82	248.15	257.30
75.0	214.27	215.18	217.93	222.51	228.00	234.41	242.65	250.89	260.05
90.0	210.60	212.43	216.10	221.59	227.09	234.41	242.65	251.81	260.97
105.0	214.27	215.18	217.93	221.59	226.17	233.50	240.82	249.98	259.13
120.0	215.18	216.10	217.93	220.68	225.25	231.66	238.07	246.31	254.56
135.0	210.60	210.60	211.52	214.27	219.76	226.17	233.50	241.74	250.89
150.0	198.70	199.62	202.36	206.94	213.35	221.59	228.00	236.24	246.31
165.0	141.93	146.51	159.33	175.81	190.46	204.19	218.84	232.58	242.65
180.0	87.90	122.70	154.75	177.64	192.29	208.77	228.00	244.48	255.47
195.0	119.95	132.77	158.41	178.56	194.12	208.77	225.25	237.16	248.15
210.0	137.35	140.10	147.42	160.24	170.31	178.56	189.54	199.62	210.60
225.0	151.09	155.66	158.41	167.57	177.64	188.63	190.46	207.86	221.59
240.0	136.43	137.35	137.35	146.51	162.99	176.72	190.46	204.19	221.59
255.0	129.11	130.94	130.94	139.18	153.83	166.65	179.47	193.21	206.03
270.0	133.69	134.60	135.52	141.93	150.17	162.07	173.06	184.05	195.95
285.0	138.27	141.01	146.51	154.75	161.16	167.57	176.72	187.71	203.28
300.0	149.25	146.51	151.09	162.99	174.89	185.88	197.78	212.43	228.00
315.0	150.17	155.66	162.07	170.31	180.39	190.46	199.62	212.43	225.25
330.0	130.94	132.77	144.68	157.49	166.65	173.98	181.30	192.29	200.53
345.0	117.21	129.11	154.75	175.81	191.37	206.94	223.42	236.24	246.31
360.0	85.16	100.72	137.35	164.82	183.13	198.70	215.18	235.33	248.15
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	260.05	272.87	286.60	301.25	314.99	312.24	238.99	233.50	309.50
15.0	260.05	272.87	286.60	300.34	314.07	325.98	289.35	234.41	284.77
30.0	263.71	275.62	287.52	302.17	314.99	325.98	335.13	274.70	238.07
45.0	265.54	276.53	289.35	303.09	315.91	325.98	334.22	338.80	260.97
60.0	267.37	278.36	290.27	304.00	315.91	325.98	334.22	340.63	340.63
75.0	270.12	280.19	292.10	304.92	315.91	325.98	334.22	340.63	346.12
90.0	270.12	280.19	291.18	304.00	315.91	325.98	333.30	341.54	346.12
105.0	267.37	278.36	290.27	303.09	314.99	324.15	333.30	340.63	343.38
120.0	265.54	274.70	288.44	299.42	312.24	323.23	332.39	338.80	341.54
135.0	260.97	271.95	284.77	297.59	310.41	322.31	330.56	337.88	340.63
150.0	256.39	269.21	282.03	295.76	308.58	320.48	328.72	336.05	338.80
165.0	254.56	266.46	279.28	293.93	306.75	317.74	326.89	333.30	337.88
180.0	266.46	280.19	293.01	306.75	318.65	253.64	232.58	288.44	263.71
195.0	258.22	260.97	261.88	273.78	271.04	258.22	228.00	274.70	232.58
210.0	220.68	220.68	214.27	227.09	237.16	223.42	228.92	244.48	231.66
225.0	235.33	242.65	251.81	270.12	290.27	282.94	265.54	227.09	243.57
240.0	238.99	254.56	271.04	287.52	293.01	295.76	271.95	228.00	198.70
255.0	219.76	232.58	246.31	256.39	259.13	261.88	239.90	172.15	167.57
270.0	206.03	217.93	229.83	236.24	233.50	234.41	188.63	115.37	228.00
285.0	216.10	228.00	240.82	249.98	250.89	238.07	154.75	151.09	281.11
300.0	244.48	259.13	273.78	288.44	291.18	225.25	185.88	222.51	293.93
315.0	238.99	247.23	260.05	275.62	274.70	219.76	214.27	273.78	314.07
330.0	209.69	214.27	215.18	225.25	232.58	213.35	218.84	298.51	327.81
345.0	256.39	268.29	272.87	278.36	284.77	265.54	269.21	314.07	334.22
360.0	260.05	272.87	286.60	301.25	314.99	312.24	238.99	233.50	309.50

Intensity data(cd)

C/ γ (°)	180.0
0.0	245.40
15.0	282.94
30.0	308.58
45.0	258.22
60.0	254.56
75.0	329.64
90.0	341.54
105.0	339.71
120.0	336.97
135.0	335.13
150.0	334.22
165.0	333.30
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	245.40