
AFX

Client:

LumCAT: VRNV1407LAJUDSN

Luminaire: LED 灯具

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.169

Lamp flux(lm): 1640.1

Power (W): 20.060

Number of Lamps: 1

PF: 0.990

Length(mm): 350

Width(mm): 120

Phm Type: C

Height(mm): 120

Photometric Results

Lumens(lm): 1640.06, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 81.76

Central intensity(cd): 195.134, Maximum intensity(cd): 200.534

Angle of maximum intensity: C=60.0 γ =175.0

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=1.31 C90_270=1.32

Maximum s/h(1/4): C0_180=1.49 C90_270=1.49

Up flux rate of lamp(%): 49.51%

Down flux rate of lamp(%): 50.49%

Up flux rate of LUM(%): 49.51%

Down flux rate of LUM(%): 50.49%

CIE Type : General diffuse lighting

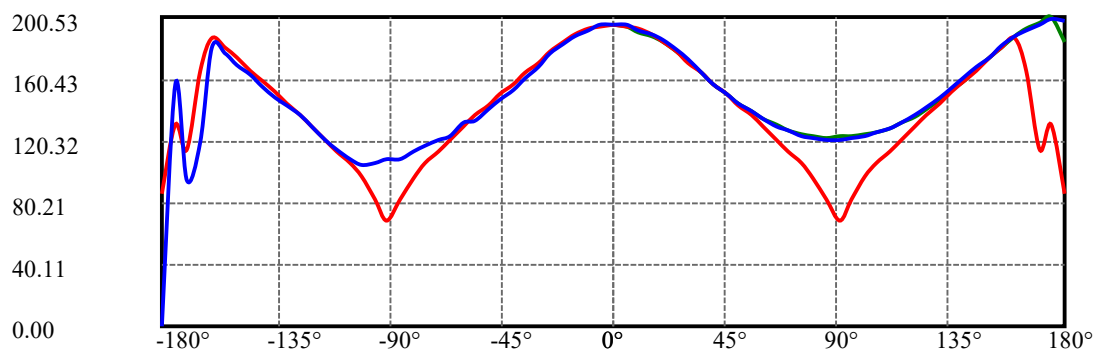
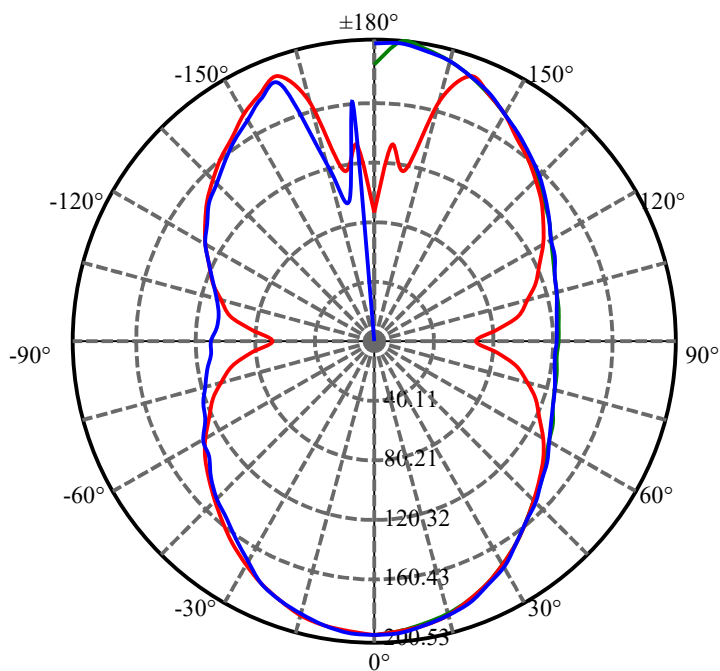
Output flux ratio in π solid angle : 29.642%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	195.134	0.000	0	0.00%	0.00%
5.0	194.347	4.656	4.656	0.28%	0.28%
10.0	192.138	13.826	18.482	0.84%	1.13%
15.0	188.508	22.580	41.062	1.38%	2.50%
20.0	183.755	30.680	71.741	1.87%	4.37%
25.0	177.128	37.850	109.591	2.31%	6.68%
30.0	169.452	43.860	153.451	2.67%	9.36%
35.0	161.707	48.766	202.217	2.97%	12.33%
40.0	153.738	52.630	254.846	3.21%	15.54%
45.0	146.217	55.539	310.385	3.39%	18.93%
50.0	138.732	57.578	367.964	3.51%	22.44%
55.0	131.809	58.824	426.788	3.59%	26.02%
60.0	124.997	59.360	486.148	3.62%	29.64%
65.0	118.301	59.146	545.294	3.61%	33.25%
70.0	112.279	58.384	603.678	3.56%	36.81%
75.0	107.343	57.406	661.084	3.50%	40.31%
80.0	103.874	56.516	717.6	3.45%	43.75%
85.0	100.933	55.651	773.251	3.39%	47.15%
90.0	99.486	54.876	828.127	3.35%	50.49%
95.0	101.491	55.029	883.156	3.36%	53.85%
100.0	104.885	56.077	939.233	3.42%	57.27%
105.0	108.995	57.228	996.461	3.49%	60.76%
110.0	113.820	58.240	1054.702	3.55%	64.31%
115.0	119.881	59.175	1113.876	3.61%	67.92%
120.0	126.017	59.778	1173.654	3.64%	71.56%
125.0	132.376	59.727	1233.381	3.64%	75.20%
130.0	138.512	58.900	1292.281	3.59%	78.79%
135.0	144.649	57.217	1349.498	3.49%	82.28%
140.0	150.936	54.730	1404.228	3.34%	85.62%
145.0	157.783	51.507	1455.736	3.14%	88.76%
150.0	164.145	47.406	1503.142	2.89%	91.65%
155.0	170.022	42.289	1545.431	2.58%	94.23%
160.0	169.047	35.562	1580.993	2.17%	96.40%
165.0	154.881	26.696	1607.689	1.63%	98.03%
170.0	147.204	17.919	1625.609	1.09%	99.12%
175.0	170.551	11.367	1636.976	0.69%	99.81%
180.0	87.032	3.079	1640.055	0.19%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	153.45	9.36%	9.36%
0-40	254.85	15.54%	15.54%
0-60	486.15	29.64%	29.64%
0-90	828.13	50.49%	50.49%
0-120	1173.65	71.56%	71.56%
0-180	1640.06	100.00%	100.00%
60-90	341.98	20.85%	20.85%
90-120	345.53	21.07%	21.07%
90-130	464.15	28.30%	28.30%
90-150	675.02	41.16%	41.16%
90-180	808.85	49.32%	49.32%
0-131.73	1312.04	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	18.48
10-20	53.26
20-30	81.71
30-40	101.40
40-50	113.12
50-60	118.18
60-70	117.53
70-80	113.92
80-90	110.53
90-100	111.11
100-110	115.47
110-120	118.95
120-130	118.63
130-140	111.95
140-150	98.91
150-160	77.85
160-170	44.62
170-180	11.37



C60(Max): ————

C0/C180: ————

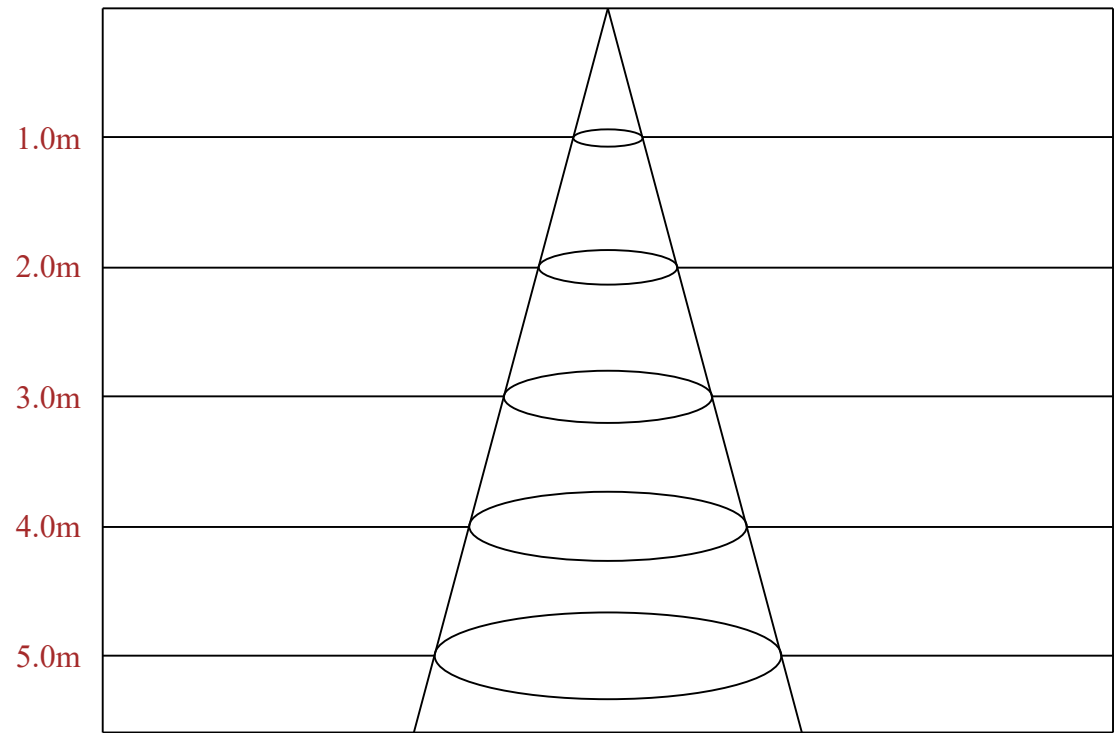
C90/C270: ————

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

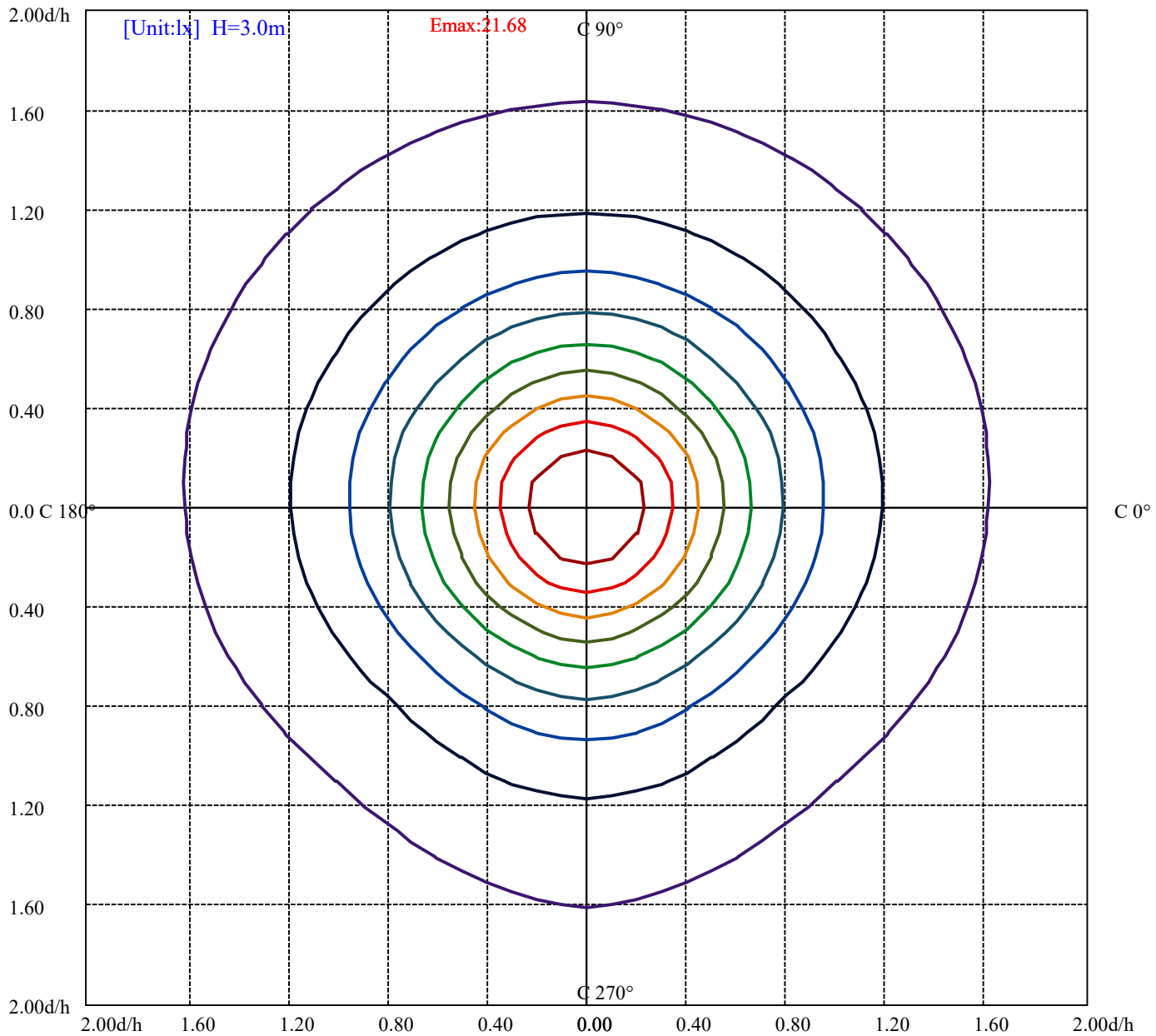
:C90/270Left:0.0 Right:0.0

Beam Angle(50%Imax):C0/180Left:178.7 Right:178.7

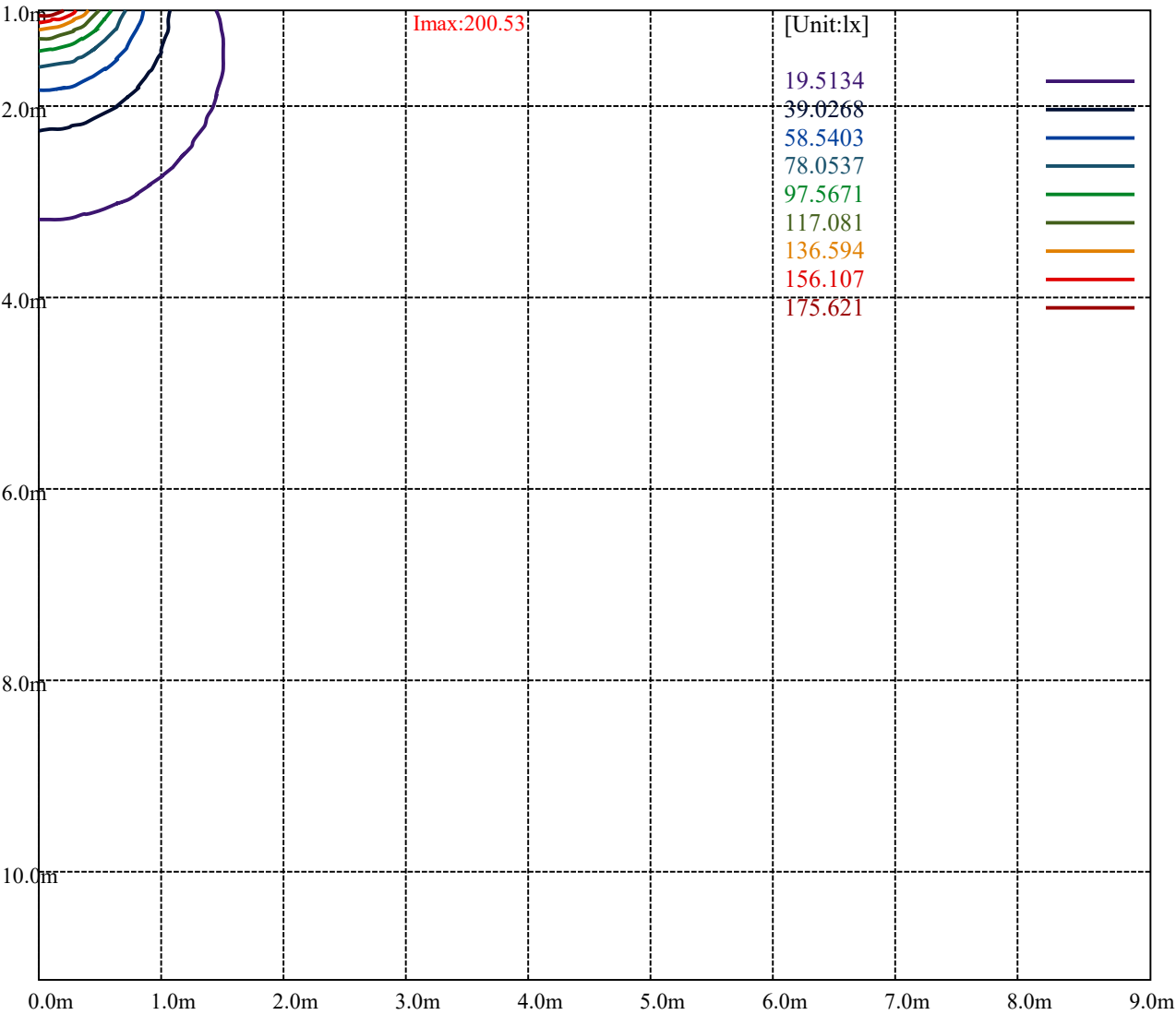
:C90/270Left:0.0 Right:0.0



Max , Ave Beam angle of C60 plane 246.12



(10%Emax) 2.168155	—
(20%Emax) 4.336311	—
(30%Emax) 6.504467	—
(40%Emax) 8.672634	—
(50%Emax) 10.84079	—
(60%Emax) 13.00889	—
(70%Emax) 15.17711	—
(80%Emax) 17.34522	—
(90%Emax) 19.51344	—



Luminance Limiting Curve(no luminous side)

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Luminance Table

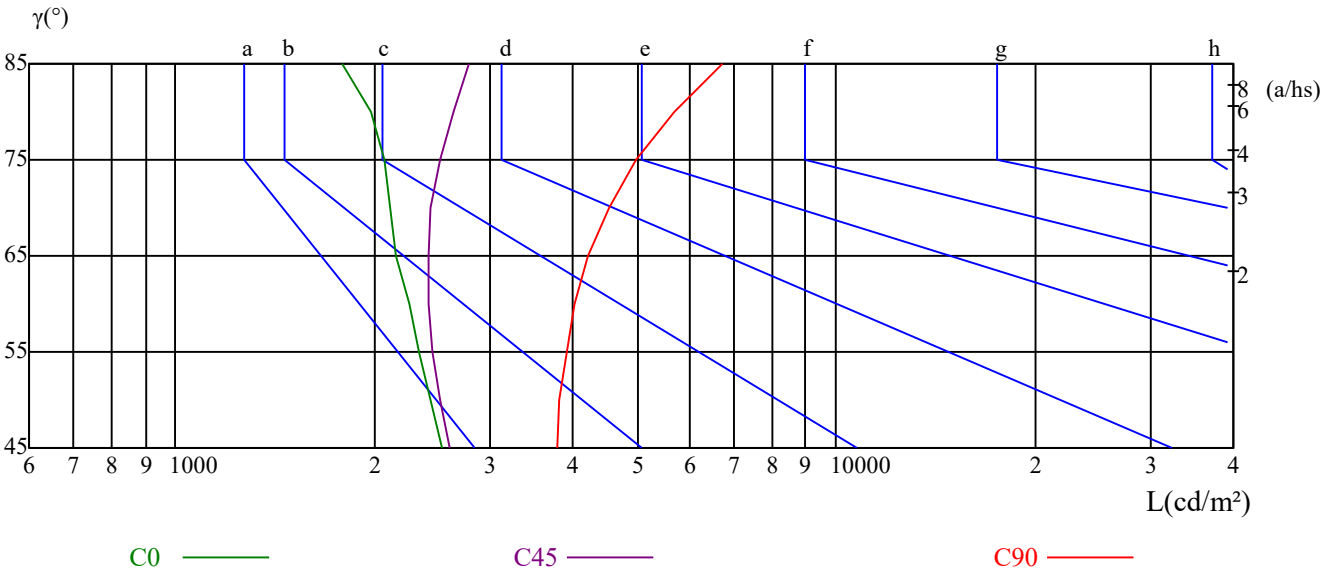
γ	45	50	55	60	65	70	75	80	85
C0	2531	2428	2335	2257	2161	2109	2069	1978	1793
C45	2596	2510	2450	2415	2414	2440	2516	2630	2781
C90	3783	3801	3902	4022	4224	4534	4995	5679	6723

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6796	7151	6305	9791	11053	9160	22292	31343	26040

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	COEFFCIENTS 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	0.50
1	0.89	0.84	0.80	0.82	0.78	0.74	0.69	0.65	0.62	0.56	0.54	0.52	0.45	0.43	0.42	0.36
2	0.76	0.69	0.63	0.70	0.64	0.58	0.59	0.54	0.49	0.48	0.44	0.41	0.38	0.35	0.33	0.28
3	0.66	0.58	0.51	0.61	0.53	0.47	0.51	0.45	0.40	0.42	0.37	0.34	0.33	0.30	0.27	0.23
4	0.58	0.49	0.42	0.53	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	0.51	0.43	0.36	0.47	0.39	0.34	0.40	0.33	0.29	0.33	0.28	0.24	0.26	0.22	0.19	0.16
6	0.46	0.37	0.31	0.42	0.35	0.29	0.36	0.29	0.25	0.29	0.24	0.21	0.23	0.20	0.17	0.14
7	0.41	0.33	0.27	0.38	0.30	0.25	0.32	0.26	0.22	0.27	0.22	0.18	0.21	0.18	0.15	0.12
8	0.37	0.29	0.24	0.35	0.27	0.22	0.29	0.23	0.19	0.24	0.19	0.16	0.20	0.16	0.13	0.11
9	0.34	0.26	0.21	0.32	0.24	0.19	0.27	0.21	0.17	0.22	0.18	0.14	0.18	0.14	0.12	0.09
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	0.08

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	195.13	194.25	192.47	188.93	184.49	178.28	172.07	164.98	157.88
15.0	195.13	195.13	193.35	189.79	185.33	179.10	171.97	164.84	158.60
30.0	195.13	195.13	192.46	188.90	184.44	178.20	171.08	163.95	157.71
45.0	195.13	194.24	192.46	188.01	183.55	177.31	170.19	162.17	155.93
60.0	195.13	194.24	191.55	187.97	183.50	177.23	170.07	162.91	155.75
75.0	195.13	194.23	192.44	188.84	184.34	178.05	171.75	164.56	156.47
90.0	195.13	195.13	192.42	189.71	185.20	178.87	172.55	164.42	157.19
105.0	195.13	194.23	192.42	188.81	184.29	178.87	171.65	164.42	158.09
120.0	195.13	194.23	189.71	188.81	184.29	178.87	172.55	165.32	157.19
135.0	195.13	195.13	193.33	189.71	185.20	179.78	167.13	165.32	158.09
150.0	195.13	195.13	193.33	190.62	187.00	181.58	174.36	167.13	159.00
165.0	195.13	195.13	194.23	191.50	187.87	182.43	176.07	168.81	160.65
180.0	195.13	194.25	192.47	188.93	183.60	177.39	170.30	163.20	156.11
195.0	195.13	195.13	192.46	188.90	184.44	178.20	171.08	163.95	155.93
210.0	195.13	194.24	192.46	188.90	184.44	178.20	171.08	161.28	148.80
225.0	195.13	194.24	192.46	188.01	183.55	177.31	170.19	158.60	145.24
240.0	195.13	194.24	192.45	188.87	183.50	178.13	170.07	161.12	151.27
255.0	195.13	194.23	192.44	188.84	184.34	178.05	170.85	162.76	155.57
270.0	195.13	195.13	191.52	187.91	183.39	177.07	168.03	160.81	153.58
285.0	195.13	193.33	192.42	187.00	182.49	171.65	162.61	153.58	147.25
300.0	195.13	193.33	191.52	187.00	180.68	169.84	159.00	149.06	139.12
315.0	195.13	193.33	190.62	187.00	180.68	171.65	161.71	151.77	143.64
330.0	195.13	193.33	190.62	186.10	179.78	172.55	164.42	156.29	148.16
345.0	195.13	193.32	189.69	185.15	179.70	172.44	166.09	159.74	152.48
360.0	195.13	194.25	192.47	188.93	184.49	178.28	172.07	164.98	157.88
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	151.67	145.46	138.37	130.39	121.52	114.42	106.44	94.91	80.71
15.0	152.37	145.24	139.89	134.54	127.42	121.18	115.83	109.60	104.25
30.0	150.58	145.24	139.89	135.44	131.87	128.31	125.63	122.96	121.18
45.0	149.69	144.35	139.00	134.54	130.98	127.42	125.63	123.85	122.07
60.0	149.48	144.11	138.74	134.27	130.69	127.11	125.32	123.53	123.53
75.0	150.17	144.78	138.48	133.99	130.39	127.69	124.09	122.30	121.40
90.0	150.87	144.54	140.03	134.61	130.09	126.48	123.77	121.96	121.06
105.0	150.87	144.54	139.12	134.61	130.09	126.48	123.77	121.06	120.15
120.0	150.87	144.54	139.12	133.70	130.09	126.48	123.77	121.96	121.06
135.0	150.87	144.54	139.12	133.70	129.19	125.57	122.86	121.06	119.25
150.0	151.77	140.93	139.12	134.61	130.09	125.57	122.86	120.15	118.35
165.0	153.38	147.03	140.68	134.32	129.79	122.53	117.08	111.63	105.28
180.0	149.01	141.92	134.82	128.61	119.74	112.65	106.44	97.57	82.49
195.0	148.80	140.78	131.87	124.74	115.83	107.81	102.47	97.12	92.67
210.0	139.00	130.98	122.96	113.16	103.36	94.45	86.43	81.97	78.41
225.0	131.87	120.29	114.05	106.03	97.12	87.32	77.52	72.17	69.50
240.0	139.64	128.90	118.15	107.41	99.36	89.51	83.25	79.66	80.56
255.0	147.47	139.38	129.49	119.60	113.30	107.91	100.71	99.82	98.02
270.0	147.25	140.93	133.70	131.90	123.77	121.06	116.54	112.92	108.41
285.0	141.83	134.61	125.57	120.15	114.73	108.41	104.79	105.70	102.08
300.0	133.70	125.57	116.54	107.50	98.47	90.34	84.92	84.92	87.63
315.0	134.61	124.67	113.83	102.08	90.34	79.50	72.27	70.47	70.47
330.0	139.12	130.09	121.06	111.12	100.28	91.24	84.92	81.31	81.31
345.0	144.31	136.14	129.79	118.90	110.73	105.28	98.93	94.39	92.58
360.0	151.67	145.46	138.37	130.39	121.52	114.42	106.44	94.91	80.71

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	70.07	86.92	100.23	109.10	115.31	122.40	131.27	138.37	145.46
15.0	103.36	106.92	112.27	116.72	122.96	130.09	135.44	140.78	147.02
30.0	121.18	122.96	124.74	126.53	129.20	132.76	137.22	142.56	147.91
45.0	122.96	123.85	124.74	126.53	130.09	133.65	138.11	142.56	148.80
60.0	124.42	124.42	125.32	127.11	129.79	133.37	137.85	143.22	149.48
75.0	122.30	122.30	124.09	125.89	129.49	133.09	137.58	142.98	149.27
90.0	121.06	121.96	122.86	125.57	128.28	131.90	136.41	141.83	148.16
105.0	120.15	121.06	122.86	124.67	127.38	130.99	135.51	140.93	146.35
120.0	121.06	121.96	122.86	123.77	126.48	130.09	134.61	139.12	144.54
135.0	119.25	119.25	120.15	121.96	124.67	128.28	132.80	138.22	143.64
150.0	115.64	115.64	117.44	120.15	122.86	126.48	130.99	136.41	141.83
165.0	99.84	98.02	101.65	107.10	112.54	118.90	127.06	133.42	139.77
180.0	66.52	77.17	93.13	103.78	111.76	119.74	127.72	136.59	143.69
195.0	89.99	92.67	98.01	105.14	110.49	118.51	128.31	133.65	140.78
210.0	77.52	81.97	86.43	91.78	99.79	107.81	114.94	122.07	130.09
225.0	68.61	69.50	69.50	74.85	80.19	88.21	89.10	101.58	106.03
240.0	84.14	81.46	81.46	82.35	86.83	93.99	102.94	109.20	113.68
255.0	96.22	93.52	95.32	99.82	104.31	112.40	123.20	131.29	138.48
270.0	108.41	105.70	104.79	108.41	114.73	121.06	129.19	136.41	142.74
285.0	102.08	102.99	103.89	106.60	112.02	121.96	130.09	137.32	142.74
300.0	84.92	85.82	89.44	93.95	98.47	105.70	111.12	116.54	122.86
315.0	69.56	69.56	74.08	80.40	86.73	93.95	99.37	103.89	109.31
330.0	83.11	88.53	93.95	99.37	105.70	112.02	118.35	125.57	131.90
345.0	95.30	101.65	108.00	114.36	121.62	129.79	135.23	142.49	149.75
360.0	70.07	86.92	100.23	109.10	115.31	122.40	131.27	138.37	145.46
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	152.56	159.66	165.86	173.85	180.94	187.15	188.93	128.61	103.78
15.0	153.26	160.38	167.51	174.64	181.77	188.01	192.46	168.40	107.81
30.0	154.15	160.38	167.51	174.64	181.77	188.01	193.35	197.81	148.80
45.0	154.15	160.38	167.51	174.64	181.77	188.90	194.24	198.70	193.35
60.0	154.85	161.12	168.28	176.34	182.60	189.76	194.24	197.82	199.61
75.0	155.57	161.86	169.06	176.25	182.54	188.84	192.44	196.93	198.73
90.0	154.48	161.71	168.03	174.36	181.58	187.91	192.42	196.04	198.75
105.0	152.67	159.00	166.23	173.45	180.68	187.00	192.42	196.04	199.65
120.0	150.87	157.19	164.42	171.65	178.87	186.10	191.52	196.94	201.46
135.0	149.06	155.38	161.71	168.94	177.07	183.39	190.62	196.04	199.65
150.0	148.16	153.58	160.81	167.13	174.36	181.58	187.91	192.42	196.04
165.0	147.03	153.38	160.65	167.00	174.26	180.61	186.97	190.60	194.23
180.0	150.79	158.77	165.86	173.85	180.94	187.15	141.92	101.11	158.77
195.0	149.69	156.82	164.84	171.97	179.99	179.99	110.49	99.79	178.20
210.0	137.22	139.00	148.80	154.15	155.04	134.54	99.79	101.58	163.95
225.0	110.49	115.83	121.18	122.96	123.85	107.81	97.12	101.58	119.40
240.0	119.05	126.21	132.48	135.16	139.64	127.11	112.78	73.40	95.78
255.0	144.78	151.07	159.16	167.26	172.65	169.96	132.19	70.14	124.09
270.0	148.16	155.38	162.61	169.84	177.07	180.68	120.15	94.86	157.19
285.0	149.06	156.29	163.52	170.74	176.16	158.09	101.18	98.47	182.49
300.0	128.28	134.61	138.22	142.74	146.35	122.86	96.66	106.60	191.52
315.0	112.92	118.35	122.86	124.67	127.38	114.73	99.37	113.83	194.23
330.0	137.32	142.74	149.06	154.48	159.00	149.06	132.80	140.03	192.42
345.0	157.01	163.37	170.63	178.80	184.24	187.87	175.17	175.17	193.32
360.0	152.56	159.66	165.86	173.85	180.94	187.15	188.93	128.61	103.78

Intensity data(cd)

C/ γ (°)	180.0
0.0	172.07
15.0	137.22
30.0	104.25
45.0	122.96
60.0	170.07
75.0	196.03
90.0	197.84
105.0	197.84
120.0	198.75
135.0	198.75
150.0	196.94
165.0	196.04
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	172.07