
AFX

Client:

LumCAT: VRNV1407LAJUDSN

Luminaire: LED 灯具

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.171

Lamp flux(lm): 1597.9

Power (W): 20.340

Number of Lamps: 1

PF: 0.991

Length(mm): 350

Width(mm): 120

Phm Type: C

Height(mm): 120

Photometric Results

Lumens(lm): 1597.91, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 78.56

Central intensity(cd): 190.269, Maximum intensity(cd): 195.227

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=1.48 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

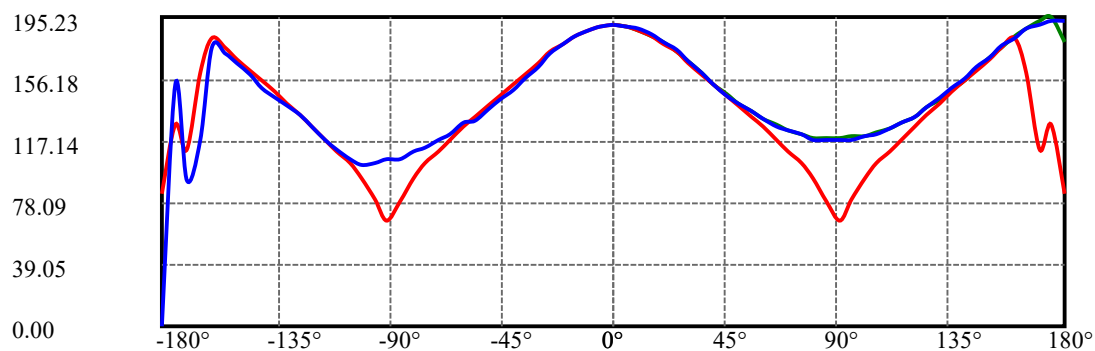
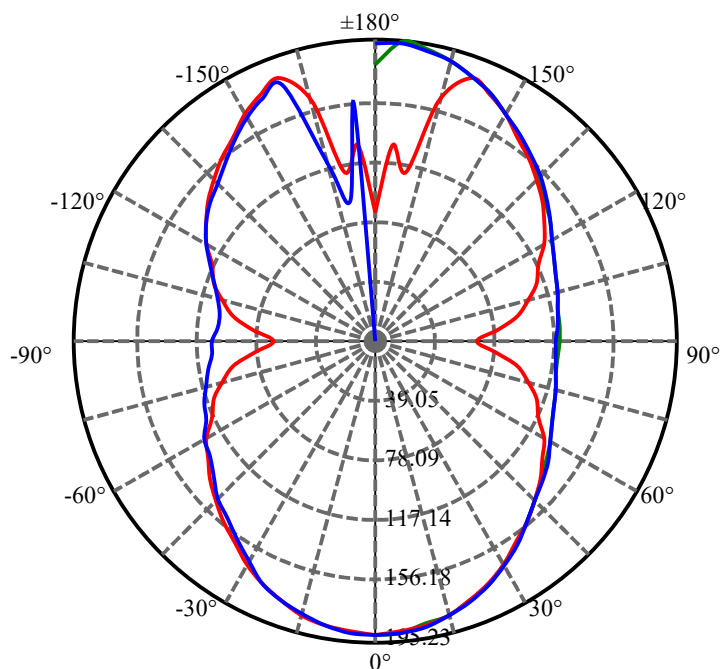
Output flux ratio in π solid angle : 29.639%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	190.269	0.000	0	0.00%	0.00%
5.0	189.447	4.539	4.539	0.28%	0.28%
10.0	187.275	13.477	18.016	0.84%	1.13%
15.0	183.720	22.007	40.023	1.38%	2.50%
20.0	178.853	29.881	69.904	1.87%	4.37%
25.0	172.562	36.857	106.761	2.31%	6.68%
30.0	165.034	42.723	149.484	2.67%	9.36%
35.0	157.626	47.514	196.998	2.97%	12.33%
40.0	149.730	51.280	248.278	3.21%	15.54%
45.0	142.434	54.097	302.375	3.39%	18.92%
50.0	135.096	56.079	358.454	3.51%	22.43%
55.0	128.436	57.301	415.755	3.59%	26.02%
60.0	121.812	57.844	473.599	3.62%	29.64%
65.0	115.227	57.625	531.224	3.61%	33.24%
70.0	109.503	56.903	588.127	3.56%	36.81%
75.0	104.606	55.965	644.092	3.50%	40.31%
80.0	101.178	55.062	699.154	3.45%	43.75%
85.0	98.278	54.197	753.351	3.39%	47.15%
90.0	96.794	53.412	806.763	3.34%	50.49%
95.0	98.799	53.555	860.318	3.35%	53.84%
100.0	102.265	54.634	914.952	3.42%	57.26%
105.0	106.261	55.796	970.747	3.49%	60.75%
110.0	110.860	56.752	1027.499	3.55%	64.30%
115.0	116.696	57.619	1085.118	3.61%	67.91%
120.0	122.828	58.229	1143.347	3.64%	71.55%
125.0	129.076	58.227	1201.574	3.64%	75.20%
130.0	135.062	57.432	1259.006	3.59%	78.79%
135.0	140.934	55.769	1314.775	3.49%	82.28%
140.0	147.148	53.341	1368.116	3.34%	85.62%
145.0	153.695	50.193	1418.309	3.14%	88.76%
150.0	159.980	46.191	1464.5	2.89%	91.65%
155.0	165.706	41.216	1505.716	2.58%	94.23%
160.0	164.575	34.640	1540.356	2.17%	96.40%
165.0	150.978	26.006	1566.362	1.63%	98.03%
170.0	143.477	17.467	1583.829	1.09%	99.12%
175.0	166.169	11.077	1594.906	0.69%	99.81%
180.0	84.833	3.001	1597.907	0.19%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	149.48	9.35%	9.36%
0-40	248.28	15.54%	15.54%
0-60	473.60	29.64%	29.64%
0-90	806.76	50.49%	50.49%
0-120	1143.35	71.55%	71.55%
0-180	1597.91	100.00%	100.00%
60-90	333.16	20.85%	20.85%
90-120	336.58	21.06%	21.06%
90-130	452.24	28.30%	28.30%
90-150	657.74	41.16%	41.16%
90-180	788.14	49.32%	49.32%
0-131.73	1278.33	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	18.02
10-20	51.89
20-30	79.58
30-40	98.79
40-50	110.18
50-60	115.14
60-70	114.53
70-80	111.03
80-90	107.61
90-100	108.19
100-110	112.55
110-120	115.85
120-130	115.66
130-140	109.11
140-150	96.38
150-160	75.86
160-170	43.47
170-180	11.08



C60(Max):

C0/C180:

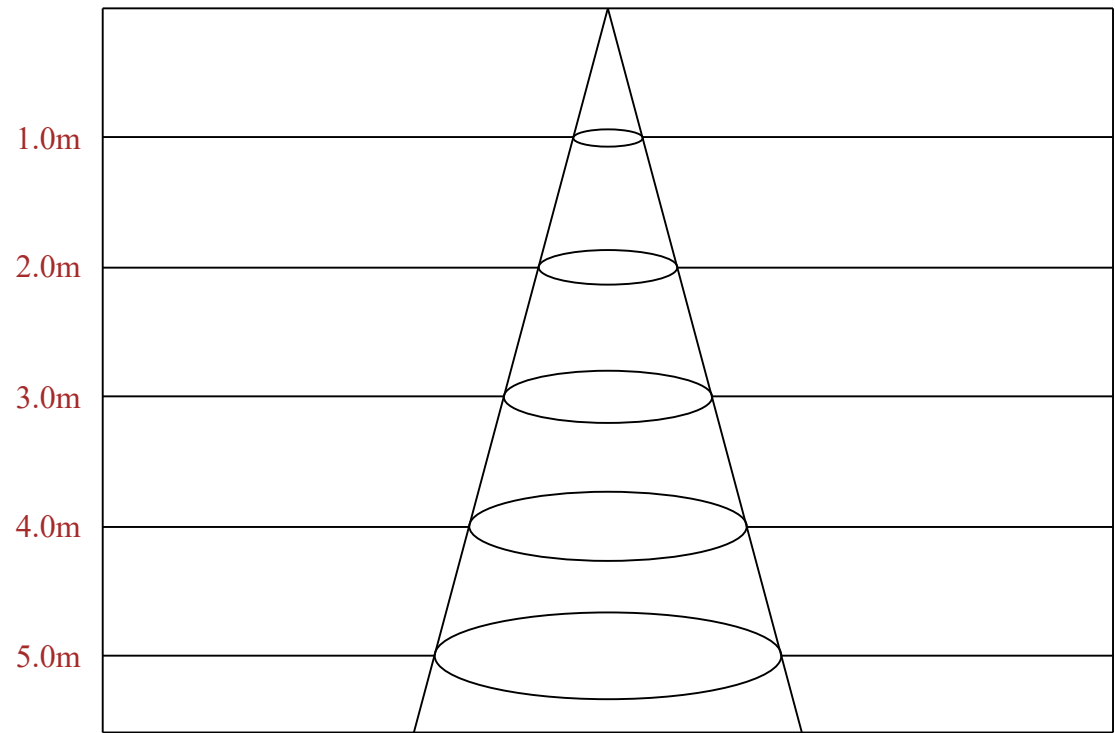
C90/C270:

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

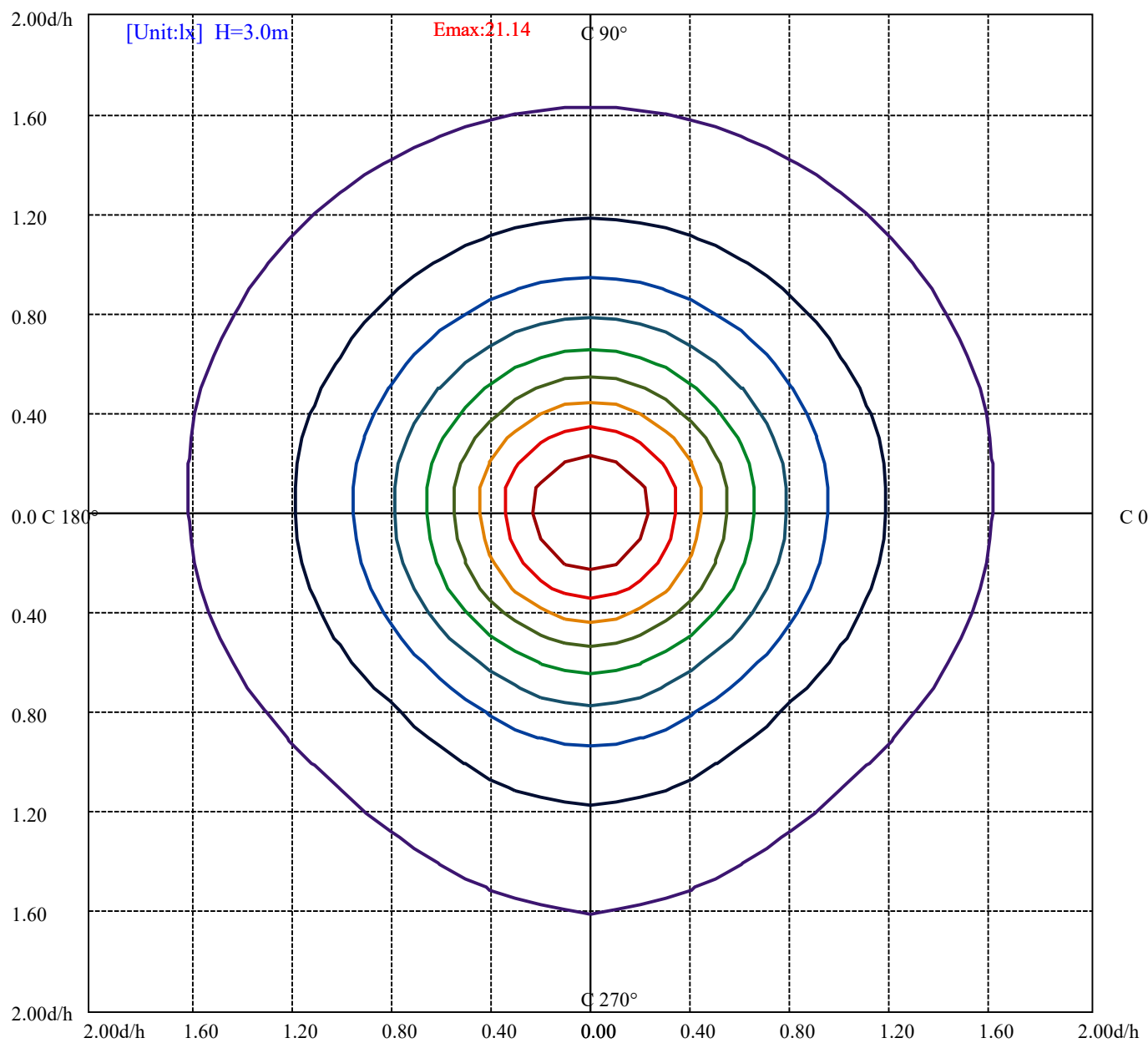
:C90/270Left:0.0 Right:0.0

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

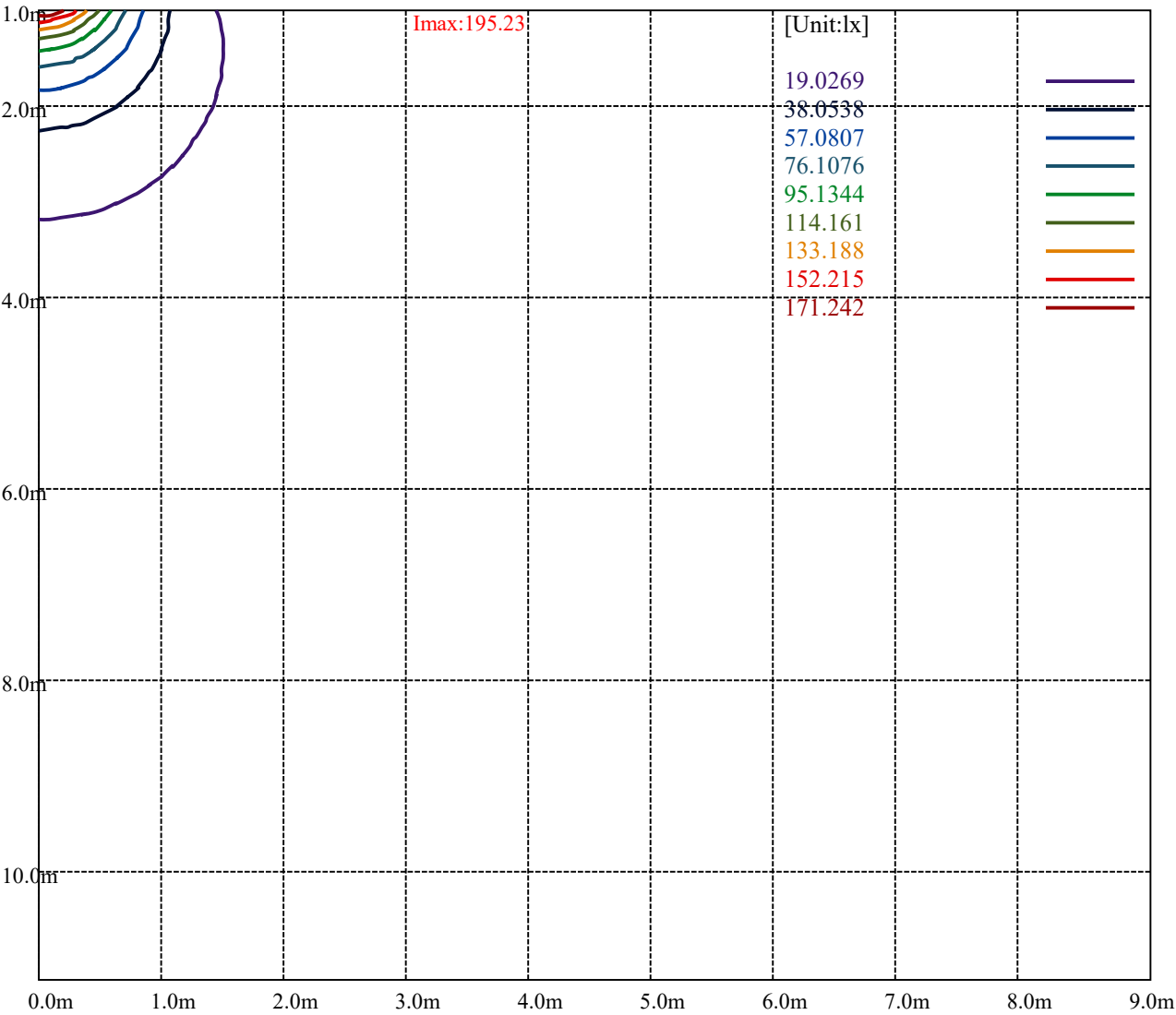
:C90/270Left:0.0 Right:0.0



Max , Ave Beam angle of C60 plane 245.97



(10%Emax) 2.1141	—
(20%Emax) 4.2282	—
(30%Emax) 6.3423	—
(40%Emax) 8.4564	—
(50%Emax) 10.57049	—
(60%Emax) 12.68456	—
(70%Emax) 14.79867	—
(80%Emax) 16.91278	—
(90%Emax) 19.02689	—



Luminance Limiting Curve(no luminous side)

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Luminance Table

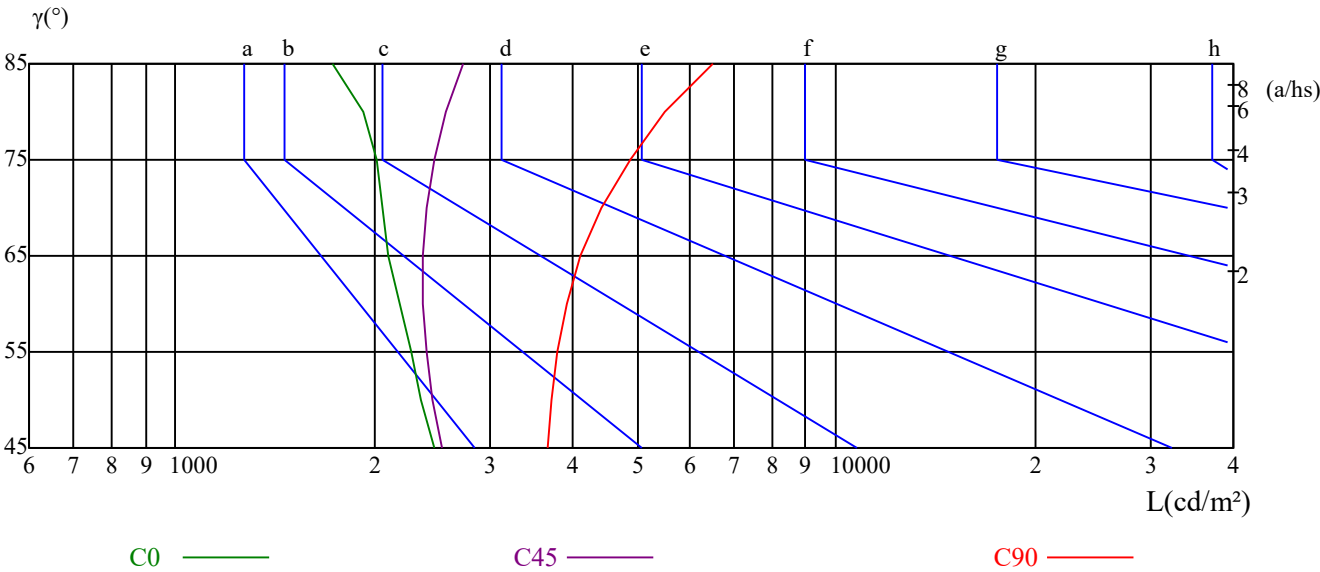
γ	45	50	55	60	65	70	75	80	85
C0	2458	2356	2269	2190	2101	2055	2013	1919	1731
C45	2533	2446	2393	2365	2362	2395	2459	2559	2726
C90	3663	3699	3794	3906	4099	4429	4876	5501	6511

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6606	6960	6183	9525	10743	8957	21517	30423	25497

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	0.50
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	190.27	189.38	187.61	184.07	179.65	173.45	167.26	160.18	153.99
15.0	190.27	190.27	187.60	184.05	179.60	174.26	167.15	160.93	153.82
30.0	190.27	189.38	187.60	184.05	179.60	172.49	166.26	159.15	152.93
45.0	190.27	189.38	187.59	184.02	178.66	173.30	166.15	159.00	151.86
60.0	190.27	188.48	186.70	183.12	177.76	172.40	165.26	158.11	151.86
75.0	190.27	189.37	186.68	183.99	179.50	173.22	166.93	159.75	152.57
90.0	190.27	189.37	187.56	183.96	179.45	174.04	167.73	160.51	153.30
105.0	190.27	190.27	188.46	184.83	180.30	174.87	167.62	161.28	154.03
120.0	190.27	190.27	185.74	183.93	180.30	174.87	168.52	161.28	153.12
135.0	190.27	190.27	189.36	185.74	181.21	175.77	163.99	162.18	154.03
150.0	190.27	191.17	189.36	186.64	182.11	176.68	170.34	163.09	154.93
165.0	190.27	190.27	188.46	186.64	182.11	177.58	171.24	163.99	156.75
180.0	190.27	188.50	186.73	183.19	177.88	172.57	165.49	158.41	151.33
195.0	190.27	189.38	187.60	184.05	178.71	173.38	166.26	159.15	151.15
210.0	190.27	189.38	187.60	183.16	178.71	173.38	166.26	156.48	144.92
225.0	190.27	189.38	187.59	184.02	179.55	173.30	166.15	155.43	142.03
240.0	190.27	189.38	186.70	183.12	178.66	172.40	165.26	157.22	146.50
255.0	190.27	189.37	186.68	183.99	179.50	173.22	166.04	158.86	150.78
270.0	190.27	189.37	186.66	183.05	178.55	172.23	163.22	156.00	149.69
285.0	190.27	189.36	188.46	183.02	177.58	167.62	158.56	150.40	144.06
300.0	190.27	189.36	186.64	183.02	176.68	165.81	155.84	144.97	135.91
315.0	190.27	189.36	186.64	182.11	175.77	167.62	157.65	148.59	140.44
330.0	190.27	188.46	185.74	181.21	175.77	168.52	160.37	153.12	144.97
345.0	190.27	187.55	184.83	180.30	174.87	168.52	161.28	154.93	148.59
360.0	190.27	189.38	187.61	184.07	179.65	173.45	167.26	160.18	153.99
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	146.91	140.71	134.52	126.55	118.59	111.51	103.54	92.04	77.88
15.0	147.59	141.37	136.03	130.70	123.59	118.25	112.03	106.69	101.36
30.0	146.70	141.37	136.03	131.59	128.03	124.47	122.70	120.03	117.36
45.0	145.60	141.14	135.78	131.31	127.74	125.06	122.38	120.59	119.70
60.0	145.60	140.25	134.89	130.42	126.85	123.27	121.49	119.70	119.70
75.0	146.29	140.91	135.52	131.03	126.55	123.85	121.16	118.47	118.47
90.0	146.08	140.67	136.16	130.75	126.24	123.54	120.83	118.13	117.23
105.0	147.68	141.34	135.91	131.38	126.85	123.22	120.50	118.69	117.79
120.0	146.78	140.44	135.91	131.38	126.85	123.22	120.50	118.69	117.79
135.0	147.68	140.44	135.91	131.38	126.85	123.22	120.50	117.79	116.88
150.0	148.59	137.72	135.91	131.38	126.85	123.22	119.60	117.79	115.07
165.0	149.50	143.15	136.81	130.47	125.94	119.60	114.16	108.73	102.38
180.0	145.14	138.06	130.98	124.78	115.93	109.74	103.54	94.69	79.65
195.0	144.92	136.92	128.03	120.92	112.92	104.91	99.58	94.25	90.69
210.0	135.14	128.03	119.14	109.36	100.47	92.47	84.47	79.13	76.46
225.0	128.63	117.02	111.66	103.62	95.58	85.75	75.93	70.57	67.89
240.0	135.78	125.06	115.23	104.51	96.47	87.54	81.29	77.72	77.72
255.0	143.60	135.52	125.65	116.67	110.39	105.01	97.83	96.93	95.13
270.0	143.38	137.07	129.85	128.05	120.83	117.23	112.72	110.01	105.50
285.0	138.62	131.38	123.22	117.79	111.44	106.01	102.38	103.29	99.66
300.0	130.47	122.32	114.16	105.10	96.04	88.79	83.36	83.36	86.07
315.0	131.38	121.41	111.44	99.66	88.79	77.01	70.67	68.86	68.86
330.0	135.91	126.85	117.79	108.73	97.85	88.79	82.45	79.73	79.73
345.0	140.44	133.19	125.94	115.97	107.82	102.38	96.95	92.42	89.70
360.0	146.91	140.71	134.52	126.55	118.59	111.51	103.54	92.04	77.88

Intensity data(cd)

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C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	68.14	84.07	97.35	106.20	112.39	118.59	128.32	134.52	141.60
15.0	100.47	104.03	109.36	113.81	119.14	126.25	131.59	136.92	143.15
30.0	117.36	119.14	120.92	122.70	125.36	128.92	134.26	138.70	144.04
45.0	119.70	120.59	122.38	124.17	126.85	130.42	134.89	139.35	145.60
60.0	120.59	121.49	121.49	123.27	125.95	129.53	133.99	139.35	144.71
75.0	118.47	119.37	120.26	122.96	125.65	129.24	133.73	139.11	145.39
90.0	117.23	118.13	119.93	121.74	124.44	128.05	132.56	137.97	144.28
105.0	117.79	118.69	119.60	121.41	124.13	127.75	132.28	137.72	143.15
120.0	117.79	118.69	119.60	121.41	123.22	126.85	131.38	135.91	141.34
135.0	115.97	116.88	117.79	119.60	122.32	125.03	129.56	135.00	140.44
150.0	113.26	113.26	115.07	117.79	120.50	123.22	127.75	133.19	138.62
165.0	96.95	95.13	98.76	104.19	109.63	115.97	123.22	129.56	135.91
180.0	64.60	75.22	90.27	100.89	108.85	115.93	124.78	132.75	139.83
195.0	88.02	89.80	95.13	102.25	107.58	115.58	125.36	129.81	136.92
210.0	75.57	79.13	84.47	89.80	96.91	104.91	111.14	119.14	126.25
225.0	67.00	67.89	67.89	73.25	78.61	86.65	87.54	99.15	103.62
240.0	81.29	79.50	79.50	80.40	84.86	91.11	100.05	106.30	110.77
255.0	93.34	90.65	93.34	96.93	101.42	109.49	119.37	128.34	135.52
270.0	105.50	102.80	101.90	105.50	111.82	118.13	126.24	133.46	138.87
285.0	99.66	100.57	102.38	104.19	109.63	118.69	126.85	134.09	139.53
300.0	83.36	83.36	87.89	91.51	96.04	103.29	108.73	114.16	119.60
315.0	67.95	67.95	72.48	78.83	84.26	91.51	96.95	101.48	106.91
330.0	80.64	86.07	91.51	96.95	103.29	109.63	115.97	123.22	129.56
345.0	92.42	98.76	105.10	110.54	117.79	125.94	131.38	138.62	145.87
360.0	68.14	84.07	97.35	106.20	112.39	118.59	128.32	134.52	141.60
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	148.68	155.76	161.95	169.03	176.11	181.42	183.19	124.78	100.89
15.0	149.37	155.59	162.71	169.82	176.04	182.27	187.60	163.60	104.91
30.0	150.26	155.59	162.71	169.82	176.93	183.16	188.49	192.94	144.92
45.0	150.96	157.22	163.47	170.62	177.76	184.02	189.38	193.84	188.48
60.0	150.96	157.22	163.47	171.51	177.76	184.02	189.38	192.06	193.84
75.0	150.78	157.06	164.24	171.42	176.81	183.09	187.58	191.17	192.96
90.0	150.59	156.90	163.22	169.53	176.74	182.15	187.56	190.27	192.97
105.0	149.50	155.84	162.18	169.43	176.68	182.11	187.55	192.08	194.80
120.0	147.68	154.03	160.37	167.62	174.87	182.11	187.55	192.99	196.61
135.0	145.87	152.22	158.56	164.90	173.05	179.40	185.74	192.08	194.80
150.0	144.06	150.40	156.75	163.99	170.34	177.58	183.93	188.46	192.08
165.0	142.25	149.50	155.84	162.18	169.43	175.77	181.21	185.74	188.46
180.0	146.91	153.99	161.06	169.03	176.11	181.42	138.06	98.23	153.99
195.0	144.92	152.93	160.04	167.15	175.15	175.15	107.58	96.91	173.38
210.0	133.37	135.14	144.04	150.26	151.15	130.70	96.91	98.69	159.15
225.0	108.09	112.55	117.91	119.70	121.49	105.41	95.58	99.15	116.13
240.0	115.23	122.38	128.63	131.31	135.78	123.27	109.87	71.46	92.90
255.0	140.91	147.19	154.37	163.34	167.83	165.14	128.34	68.21	120.26
270.0	144.28	150.59	158.71	165.92	172.23	175.84	117.23	91.98	153.30
285.0	144.97	153.12	160.37	166.71	172.15	154.93	98.76	96.04	178.49
300.0	125.94	131.38	135.00	139.53	143.15	120.50	95.13	104.19	187.55
315.0	110.54	115.97	120.50	121.41	124.13	111.44	96.95	111.44	190.27
330.0	134.09	139.53	145.87	151.31	155.84	145.87	129.56	136.81	188.46
345.0	152.22	159.46	166.71	173.96	179.40	183.02	170.34	170.34	188.46
360.0	148.68	155.76	161.95	169.03	176.11	181.42	183.19	124.78	100.89

Intensity data(cd)

C/ γ (°)	180.0
0.0	167.26
15.0	133.37
30.0	101.36
45.0	120.59
60.0	165.26
75.0	191.17
90.0	192.97
105.0	193.89
120.0	193.89
135.0	193.89
150.0	192.08
165.0	190.27
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	167.26