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Client:

LumCAT: WAL-191

Luminaire: LED 灯具

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.396

Lamp flux(lm): 3523.2

Power (W): 47.480

Number of Lamps: 1

PF: 0.998

Length(mm): 870

Width(mm): 80

Phm Type: C

Height(mm): 50

Photometric Results

Lumens(lm): 3523.16, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 74.20

Central intensity(cd): 1007.186, Maximum intensity(cd): 1010.453

Angle of maximum intensity: C=0.0 γ =15.0

Beam Angle(50%Imax): [C0/180]Total=129.6

[C90/270]Total=95.8

Field angle(10%Imax): [C0/180]Total=209.4

[C90/270]Total=150.6

Maximum s/h(1/2): C0_180=1.41 C90_270=1.17

Maximum s/h(1/4): C0_180=1.49 C90_270=1.27

Up flux rate of lamp(%): 9.45%

Down flux rate of lamp(%): 90.55%

Up flux rate of LUM(%): 9.45%

Down flux rate of LUM(%): 90.55%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 66.496%

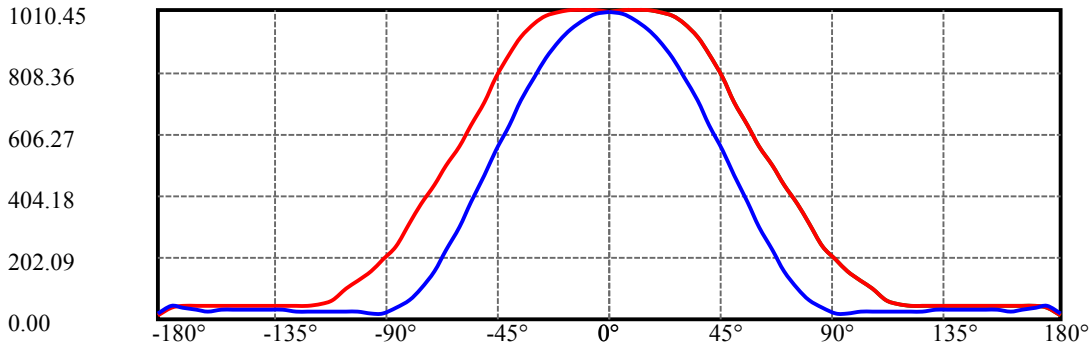
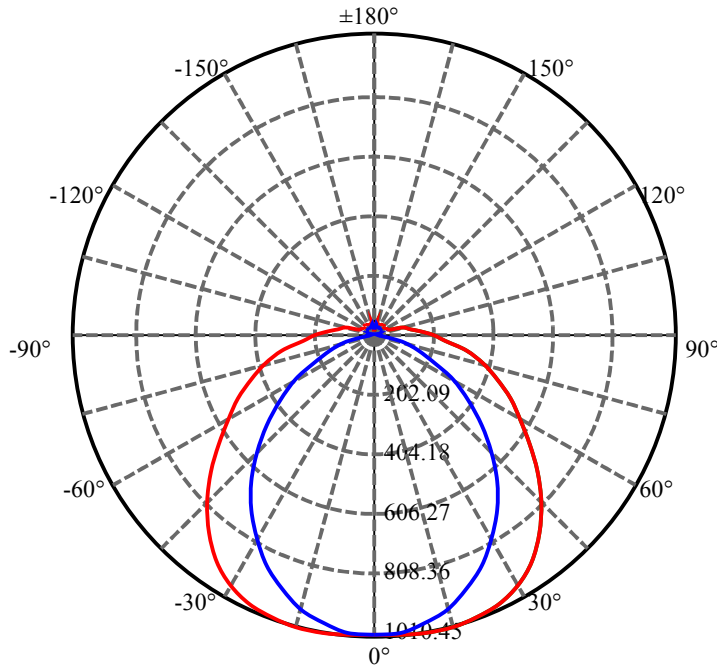
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1007.186	0.000	0	0.00%	0.00%
5.0	1004.452	24.049	24.049	0.68%	0.68%
10.0	995.584	71.548	95.596	2.03%	2.71%
15.0	979.833	117.180	212.777	3.33%	6.04%
20.0	956.839	159.609	372.386	4.53%	10.57%
25.0	925.742	197.448	569.833	5.60%	16.17%
30.0	885.437	229.206	799.04	6.51%	22.68%
35.0	832.444	252.970	1052.01	7.18%	29.86%
40.0	769.674	267.301	1319.311	7.59%	37.45%
45.0	699.327	271.997	1591.308	7.72%	45.17%
50.0	619.620	266.513	1857.821	7.56%	52.73%
55.0	540.949	252.346	2110.167	7.16%	59.89%
60.0	465.231	232.576	2342.743	6.60%	66.50%
65.0	391.416	208.252	2550.995	5.91%	72.41%
70.0	324.737	181.334	2732.33	5.15%	77.55%
75.0	265.067	154.165	2886.495	4.38%	81.93%
80.0	209.847	127.074	3013.568	3.61%	85.54%
85.0	158.743	100.155	3113.723	2.84%	88.38%
90.0	120.838	76.552	3190.275	2.17%	90.55%
95.0	97.923	59.899	3250.173	1.70%	92.25%
100.0	80.903	48.591	3298.765	1.38%	93.63%
105.0	58.632	37.336	3336.1	1.06%	94.69%
110.0	43.733	26.756	3362.857	0.76%	95.45%
115.0	39.283	21.020	3383.877	0.60%	96.05%
120.0	38.350	18.873	3402.749	0.54%	96.58%
125.0	38.429	17.747	3420.497	0.50%	97.09%
130.0	38.713	16.773	3437.27	0.48%	97.56%
135.0	38.669	15.636	3452.906	0.44%	98.01%
140.0	38.535	14.295	3467.201	0.41%	98.41%
145.0	38.588	12.867	3480.068	0.37%	98.78%
150.0	38.716	11.383	3491.452	0.32%	99.10%
155.0	38.426	9.762	3501.214	0.28%	99.38%
160.0	37.523	7.966	3509.18	0.23%	99.60%
165.0	36.810	6.126	3515.306	0.17%	99.78%
170.0	37.379	4.401	3519.707	0.12%	99.90%
175.0	39.237	2.741	3522.447	0.08%	99.98%
180.0	19.991	0.708	3523.156	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	799.04	22.68%	22.68%
0-40	1319.31	37.45%	37.45%
0-60	2342.74	66.50%	66.50%
0-90	3190.27	90.55%	90.55%
0-120	3402.75	96.58%	96.58%
0-180	3523.16	100.00%	100.00%
60-90	847.53	24.06%	24.06%
90-120	212.47	6.03%	6.03%
90-130	247.00	7.01%	7.01%
90-150	301.18	8.55%	8.55%
90-180	332.17	9.43%	9.43%
0-72.80	2818.52	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	95.60
10-20	276.79
20-30	426.65
30-40	520.27
40-50	538.51
50-60	484.92
60-70	389.59
70-80	281.24
80-90	176.71
90-100	108.49
100-110	64.09
110-120	39.89
120-130	34.52
130-140	29.93
140-150	24.25
150-160	17.73
160-170	10.53
170-180	2.74



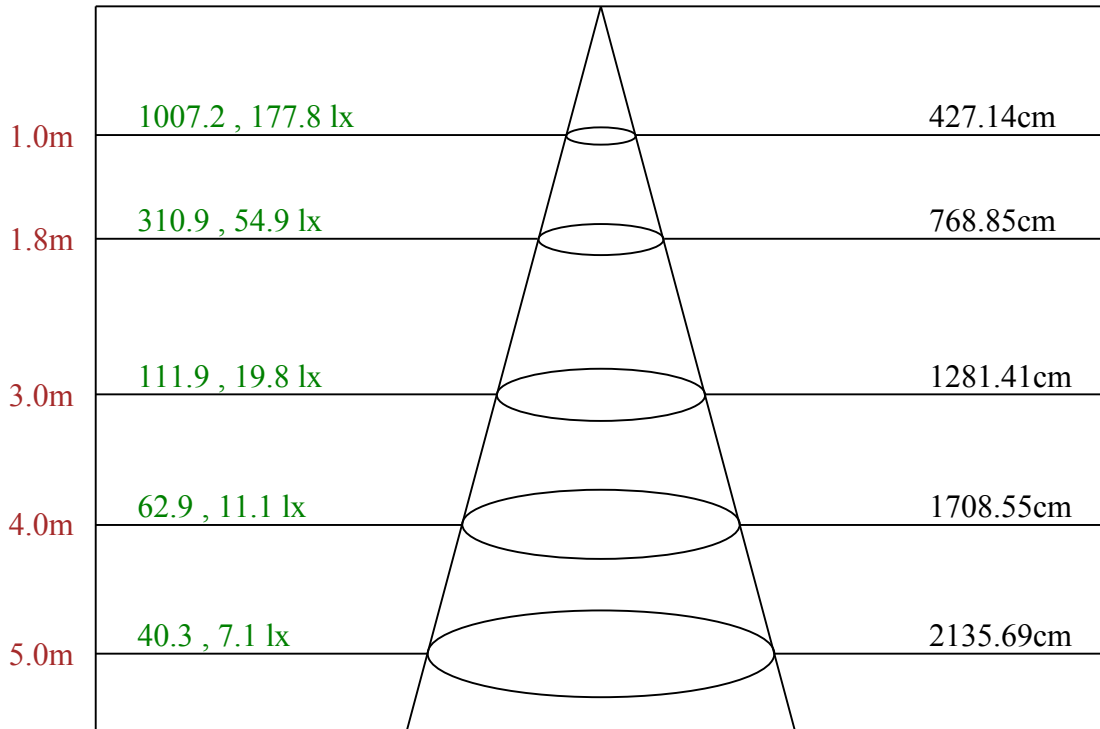
C0(Max): —————

C0/C180: —————

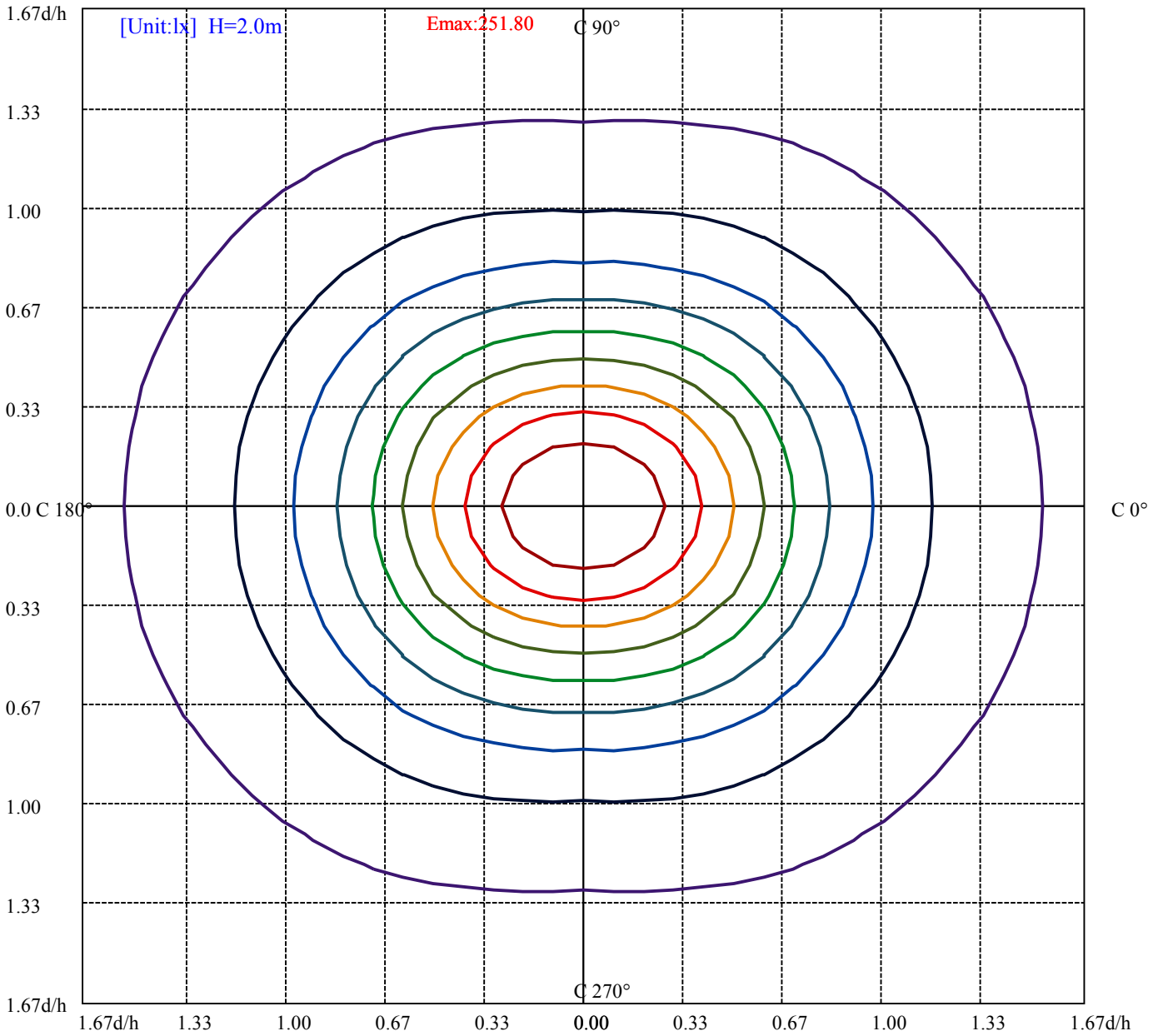
C90/C270: —————

Field angle(10%Imax):C0/180Left:119.7 Right:89.7
:C90/270Left:75.3 Right:75.3

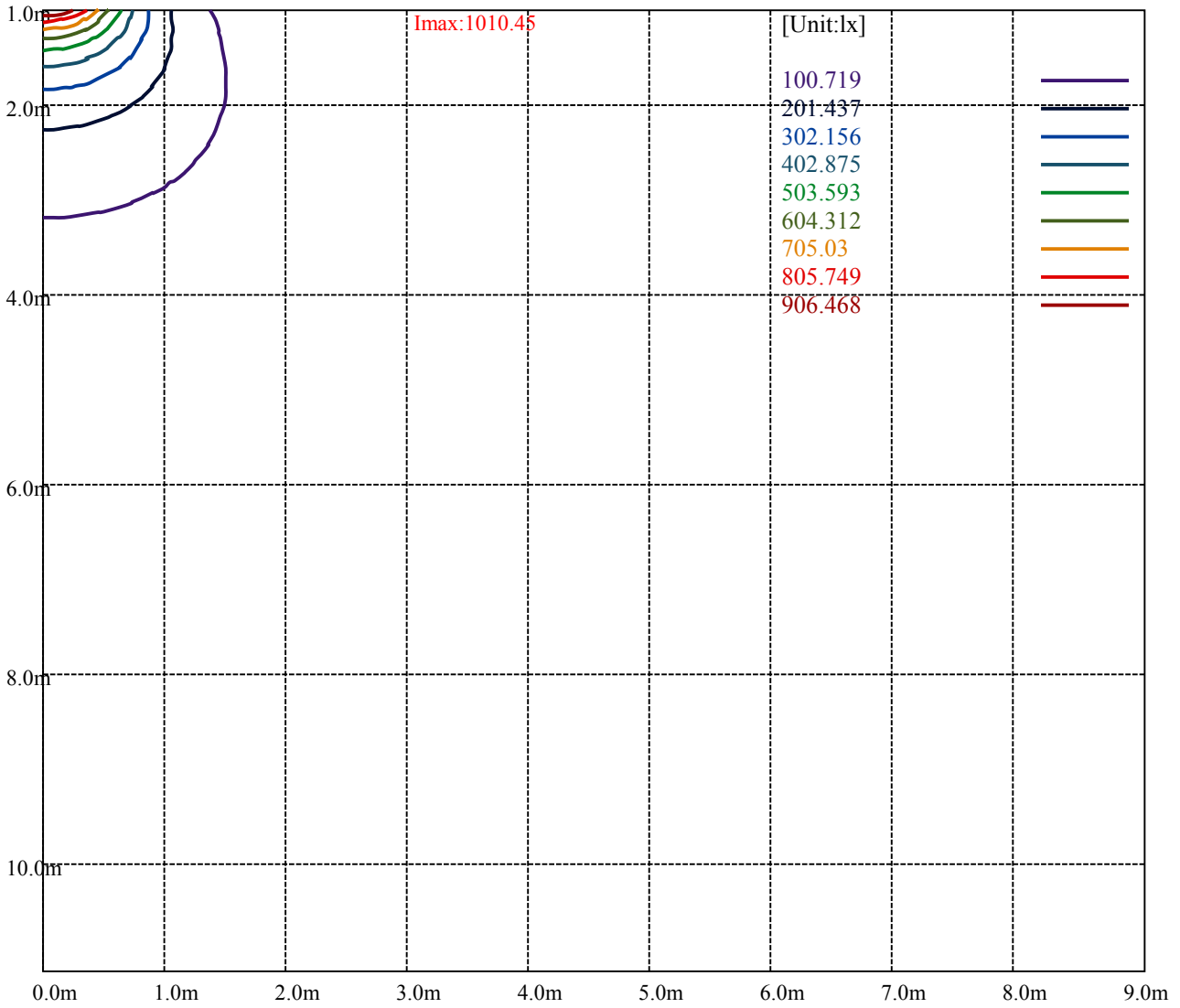
Beam Angle(50%Imax):C0/180Left:79.8 Right:49.8
:C90/270Left:47.9 Right:47.9



Max , Ave Beam angle of C0 plane 129.82



(10%Emax) 25.17975	—
(20%Emax) 50.35925	—
(30%Emax) 75.539	—
(40%Emax) 100.7188	—
(50%Emax) 125.8982	—
(60%Emax) 151.078	—
(70%Emax) 176.2575	—
(80%Emax) 201.4373	—
(90%Emax) 226.617	—



Luminance Table

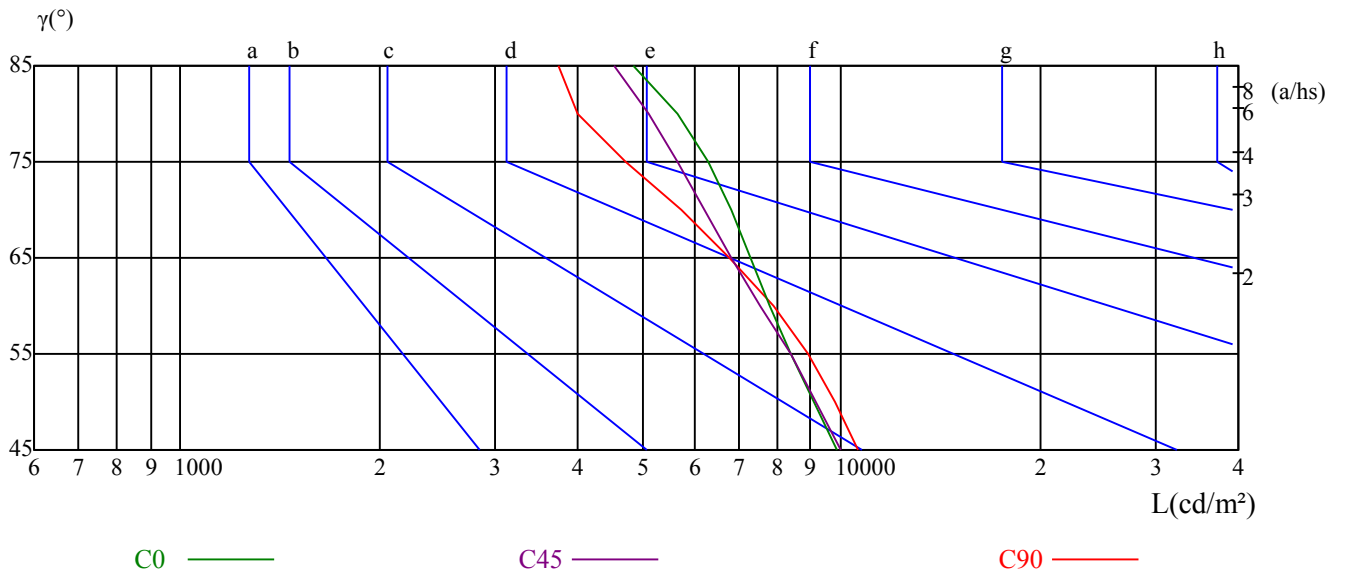
γ	45	50	55	60	65	70	75	80	85
C0	9882	9099	8402	7820	7307	6828	6291	5673	4864
C45	10006	9161	8374	7555	6846	6231	5669	5134	4526
C90	10615	9801	8903	7899	6792	5727	4726	3983	3741

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
17101	7629	13931	20966	5740	15880	39610	6199	29490

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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	0.99	0.99	0.99	0.93	0.93	0.93	0.91
1	1.00	0.95	0.90	0.96	0.92	0.88	0.90	0.87	0.84	0.85	0.82	0.79	0.80	0.77	0.75	0.73
2	0.86	0.79	0.73	0.83	0.77	0.71	0.78	0.73	0.68	0.74	0.69	0.65	0.69	0.66	0.62	0.59
3	0.75	0.67	0.60	0.73	0.65	0.59	0.69	0.62	0.57	0.65	0.59	0.54	0.61	0.56	0.52	0.50
4	0.67	0.57	0.51	0.65	0.56	0.50	0.61	0.54	0.48	0.57	0.51	0.46	0.54	0.49	0.45	0.42
5	0.59	0.50	0.43	0.58	0.49	0.43	0.54	0.47	0.41	0.51	0.45	0.40	0.49	0.43	0.39	0.36
6	0.53	0.44	0.38	0.52	0.43	0.37	0.49	0.42	0.36	0.46	0.40	0.35	0.44	0.38	0.34	0.32
7	0.48	0.39	0.33	0.47	0.39	0.33	0.45	0.37	0.32	0.42	0.36	0.31	0.40	0.34	0.30	0.28
8	0.44	0.35	0.29	0.43	0.35	0.29	0.41	0.33	0.28	0.39	0.32	0.28	0.37	0.31	0.27	0.25
9	0.40	0.32	0.26	0.39	0.31	0.26	0.37	0.30	0.25	0.36	0.29	0.25	0.34	0.28	0.24	0.22
10	0.37	0.29	0.24	0.36	0.29	0.24	0.35	0.28	0.23	0.33	0.27	0.23	0.32	0.26	0.22	0.20

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	1007.19	1016.42	1024.00	1031.23	1033.58	1027.74	1007.10	965.72	907.45
15.0	1007.19	1016.31	1024.90	1029.19	1029.37	1022.44	999.65	962.12	904.16
30.0	1007.19	1014.76	1020.40	1020.40	1014.24	1002.52	978.64	940.13	886.12
45.0	1007.19	1014.37	1015.88	1008.43	994.15	973.03	943.67	902.60	850.44
60.0	1007.19	1011.53	1007.36	992.57	969.72	935.88	894.43	844.56	784.95
75.0	1007.19	1009.50	1000.15	980.18	946.93	906.65	850.85	790.42	722.23
90.0	1007.19	1006.47	993.36	969.45	933.14	883.36	825.29	756.15	681.30
105.0	1007.19	1004.78	990.31	963.71	928.35	882.55	825.32	762.55	690.33
120.0	1007.19	1003.80	990.79	966.83	936.63	897.17	849.69	798.11	739.58
135.0	1007.19	1000.20	988.88	972.87	950.68	921.05	886.03	843.40	793.62
150.0	1007.19	999.92	991.58	979.17	964.09	945.92	921.09	887.48	838.98
165.0	1007.19	999.96	990.97	983.30	975.19	961.88	941.61	908.82	859.64
180.0	1007.19	1000.31	996.21	989.68	979.23	961.28	929.05	880.80	819.74
195.0	1007.19	998.51	992.02	984.04	972.82	954.67	922.05	873.91	814.82
210.0	1007.19	997.05	986.13	973.09	955.38	932.12	898.28	849.65	792.29
225.0	1007.19	995.92	979.24	956.71	928.95	895.15	855.32	807.42	747.36
240.0	1007.19	992.22	970.78	939.34	899.21	853.42	801.96	744.21	678.66
255.0	1007.19	993.73	967.70	932.94	885.17	828.66	766.09	694.33	618.31
270.0	1007.19	994.43	968.83	931.98	880.95	820.02	751.87	675.95	592.18
285.0	1007.19	998.26	977.10	943.17	897.28	843.00	779.96	707.11	628.81
300.0	1007.19	1002.73	987.14	962.02	928.08	883.98	832.22	768.17	703.68
315.0	1007.19	1006.30	998.70	982.42	958.90	925.03	883.64	833.32	768.41
330.0	1007.19	1012.60	1011.80	1004.53	990.43	967.82	950.62	878.53	814.86
345.0	1007.19	1016.79	1019.79	1018.73	1011.68	992.47	956.06	903.18	834.25
360.0	1007.19	1016.42	1024.00	1031.23	1033.58	1027.74	1007.10	965.72	907.45
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	830.89	749.62	677.67	617.66	557.82	490.31	414.96	346.85	284.66
15.0	832.09	749.14	676.72	610.52	552.91	487.50	413.85	342.22	281.19
30.0	817.31	733.69	652.98	578.35	516.68	455.44	387.77	319.84	255.78
45.0	781.69	705.49	621.31	534.20	457.38	394.66	334.96	271.27	211.83
60.0	719.41	644.91	565.37	477.95	393.98	314.88	252.26	198.59	146.41
75.0	647.18	566.79	487.10	404.92	324.35	245.38	175.59	118.63	75.94
90.0	597.98	514.74	430.71	344.44	262.28	189.57	127.75	78.86	47.01
105.0	613.36	532.39	453.37	372.30	295.61	221.24	158.03	102.94	63.48
120.0	675.61	601.23	526.31	450.23	370.86	293.98	226.81	170.42	127.21
135.0	733.75	663.88	589.42	507.79	429.97	354.89	290.51	237.27	194.65
150.0	777.53	706.87	629.99	550.45	472.60	400.87	342.53	291.36	236.30
165.0	800.94	727.43	648.89	570.18	493.50	428.01	371.16	319.86	254.90
180.0	749.79	670.96	591.96	515.83	448.24	393.01	340.40	276.29	195.90
195.0	744.85	665.76	587.72	510.30	441.56	387.81	335.82	271.46	191.58
210.0	722.77	646.02	563.90	484.52	414.21	356.85	306.89	251.73	173.84
225.0	677.81	602.77	523.91	442.56	367.34	303.91	253.26	211.30	143.97
240.0	610.19	537.47	460.77	381.58	304.70	237.56	179.72	142.16	97.96
255.0	543.35	465.00	384.34	305.01	233.17	167.66	111.06	70.59	45.46
270.0	506.89	422.23	338.46	260.05	186.54	126.14	79.04	48.80	28.19
285.0	550.51	469.00	385.88	306.95	230.17	163.83	131.96	69.82	39.28
300.0	631.43	551.43	468.14	421.81	304.40	240.79	189.39	139.33	101.11
315.0	727.20	610.02	524.15	446.07	384.34	326.59	265.48	207.65	165.11
330.0	735.42	652.78	578.56	514.10	457.18	390.76	321.60	260.60	211.83
345.0	755.90	681.24	615.14	557.76	494.21	422.02	350.80	288.49	236.22
360.0	830.89	749.62	677.67	617.66	557.82	490.31	414.96	346.85	284.66

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	232.05	164.10	134.31	123.86	75.61	50.78	45.56	43.29	43.47
15.0	227.27	160.46	133.36	119.68	71.99	49.80	44.72	42.61	42.96
30.0	205.74	143.36	131.37	103.44	58.24	46.08	41.76	41.24	42.29
45.0	166.24	113.46	120.82	72.21	45.77	39.83	38.85	40.27	40.36
60.0	105.14	70.59	70.51	38.53	33.84	34.72	36.14	35.87	35.70
75.0	44.03	38.50	22.91	24.96	27.63	27.54	28.25	30.04	31.82
90.0	26.50	11.60	23.46	24.53	24.98	25.60	27.03	28.28	28.64
105.0	36.25	33.75	18.93	23.57	25.80	27.86	29.28	30.80	31.87
120.0	89.35	77.41	55.32	33.67	31.45	33.50	34.74	35.19	36.26
135.0	135.31	116.20	103.91	58.19	41.03	37.32	37.50	39.53	39.35
150.0	167.05	142.67	128.48	86.90	51.87	43.54	40.79	40.88	42.74
165.0	179.98	154.16	139.17	101.63	63.20	47.42	43.54	42.75	43.28
180.0	162.54	146.68	117.42	75.35	51.83	47.12	44.68	44.16	45.29
195.0	160.89	145.20	110.21	70.58	51.03	46.56	44.72	44.28	45.24
210.0	151.90	135.95	94.01	57.54	47.23	43.97	43.53	44.58	44.06
225.0	131.64	111.42	66.71	45.86	42.14	41.87	43.38	42.93	41.16
240.0	93.54	64.31	39.33	37.20	38.80	40.30	39.68	38.88	38.09
255.0	43.23	26.38	30.39	32.09	31.55	31.02	32.09	32.98	33.69
270.0	5.44	26.85	26.41	26.05	26.05	27.21	27.39	27.12	28.73
285.0	36.78	23.57	26.78	28.66	29.91	31.07	31.78	32.59	32.94
300.0	67.97	64.59	38.66	35.90	36.97	37.86	36.79	36.52	36.08
315.0	110.63	117.62	70.66	46.61	41.56	40.77	41.12	40.68	38.82
330.0	148.79	130.08	107.55	61.45	48.50	43.98	43.00	43.09	42.65
345.0	171.87	131.24	130.98	78.71	52.62	47.07	44.07	43.72	43.63
360.0	232.05	164.10	134.31	123.86	75.61	50.78	45.56	43.29	43.47
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	43.73	43.47	41.46	41.03	40.76	40.76	41.55	42.07	42.33
15.0	43.31	42.70	40.86	40.60	40.33	40.51	41.47	42.00	42.70
30.0	42.20	40.62	39.91	39.91	39.74	40.71	41.59	42.20	42.91
45.0	38.77	38.32	38.77	38.59	39.74	40.98	41.78	42.49	43.29
60.0	35.96	36.14	36.85	38.35	39.77	40.48	41.19	41.01	41.63
75.0	33.42	34.85	35.83	36.81	38.15	37.35	36.72	37.70	40.73
90.0	29.53	31.40	33.01	34.17	34.08	31.58	28.99	32.12	38.90
105.0	33.12	34.28	35.09	35.80	35.98	32.32	29.11	31.16	38.03
120.0	36.52	36.70	37.42	38.48	39.55	37.59	31.45	30.20	36.61
135.0	38.91	39.00	38.91	39.27	40.24	40.77	36.17	29.45	33.87
150.0	42.38	41.32	41.32	41.05	41.14	41.85	41.50	34.23	29.44
165.0	44.33	43.10	42.40	42.31	41.60	41.96	42.40	42.04	32.79
180.0	44.34	42.77	42.33	41.72	41.46	41.72	41.98	42.59	33.54
195.0	43.84	42.44	41.82	41.12	40.95	41.39	41.39	33.14	26.04
210.0	42.20	41.50	41.06	40.44	40.71	40.71	33.13	25.64	36.48
225.0	40.72	39.92	39.47	40.10	40.54	34.60	26.52	31.93	40.98
240.0	37.64	38.09	38.53	39.06	36.32	28.70	27.81	35.16	42.25
255.0	34.49	35.74	36.81	36.90	30.66	25.49	28.79	36.81	42.87
270.0	30.96	32.74	33.81	32.20	28.19	24.80	29.71	37.56	43.00
285.0	34.11	35.44	36.16	35.71	34.02	33.66	35.62	40.00	43.03
300.0	35.99	36.26	37.24	38.40	39.46	40.62	40.44	41.16	42.85
315.0	37.85	37.58	37.50	38.20	39.35	40.41	41.21	41.92	42.63
330.0	40.79	39.63	39.37	39.10	39.81	40.88	41.50	42.29	43.00
345.0	42.92	40.81	40.19	39.84	39.66	40.72	41.43	42.22	41.78
360.0	43.73	43.47	41.46	41.03	40.76	40.76	41.55	42.07	42.33

Intensity data(cd)

C/γ(°)	180.0
0.0	25.09
15.0	40.68
30.0	43.09
45.0	43.38
60.0	43.31
75.0	43.23
90.0	43.27
105.0	43.12
120.0	42.58
135.0	41.39
150.0	39.10
165.0	31.55
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	25.09