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Client:

LumCAT: WAL-191

Luminaire: LED 灯具

Report No:

Ballast type:

Test No:

Voltage(V): 119.980

LampCAT:

Current(A): 0.397

Lamp flux(lm): 3266.5

Power (W): 47.530

Number of Lamps: 1

PF: 0.998

Length(mm): 870

Width(mm): 80

Phm Type: C

Height(mm): 50

Photometric Results

Lumens(lm): 3266.47, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 68.72

Central intensity(cd): 933.741, Maximum intensity(cd): 937.225

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(%): 9.44%

Down flux rate of lamp(%): 90.56%

Up flux rate of LUM(%): 9.44%

Down flux rate of LUM(%): 90.56%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 66.499%

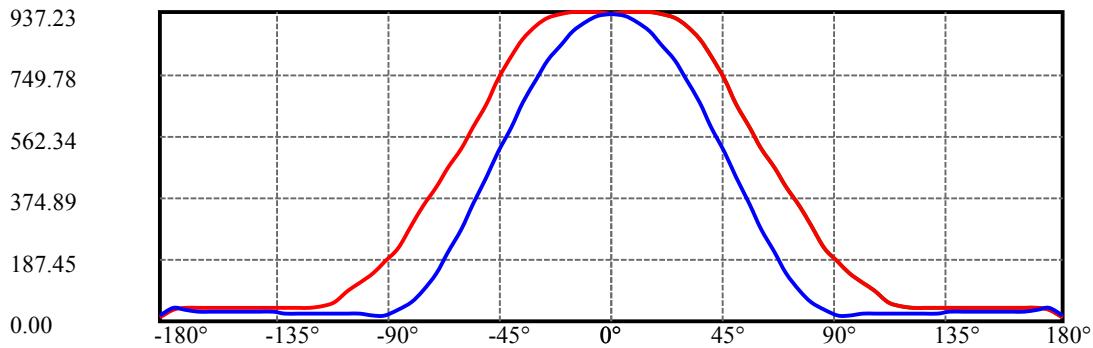
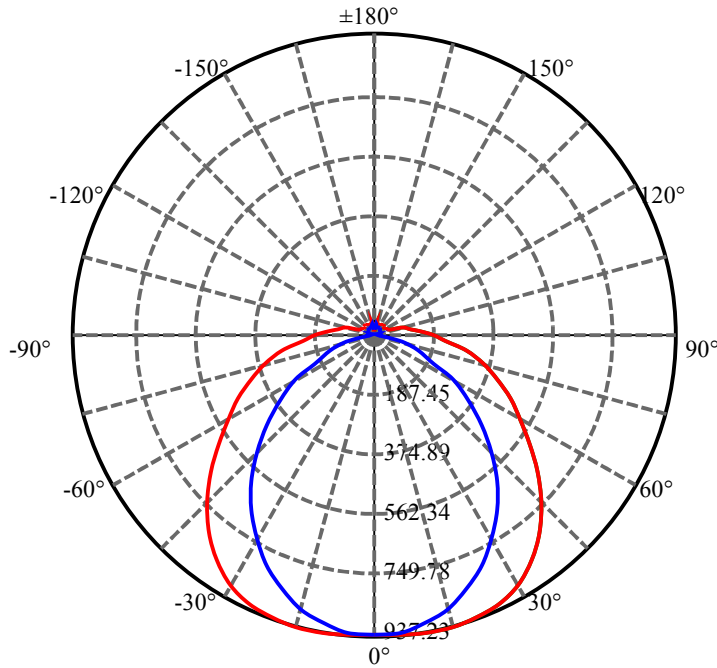
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	933.741	0.000	0	0.00%	0.00%
5.0	931.255	22.295	22.295	0.68%	0.68%
10.0	923.098	66.336	88.632	2.03%	2.71%
15.0	908.578	108.654	197.285	3.33%	6.04%
20.0	887.183	147.996	345.281	4.53%	10.57%
25.0	858.259	183.065	528.346	5.60%	16.17%
30.0	820.831	212.490	740.836	6.51%	22.68%
35.0	771.693	234.510	975.346	7.18%	29.86%
40.0	713.765	247.837	1223.184	7.59%	37.45%
45.0	648.407	252.217	1475.401	7.72%	45.17%
50.0	574.577	247.122	1722.523	7.57%	52.73%
55.0	501.546	233.985	1956.508	7.16%	59.90%
60.0	431.389	215.645	2172.153	6.60%	66.50%
65.0	362.939	193.103	2365.256	5.91%	72.41%
70.0	301.149	168.151	2533.407	5.15%	77.56%
75.0	245.777	142.958	2676.365	4.38%	81.93%
80.0	194.553	117.820	2794.185	3.61%	85.54%
85.0	147.215	92.867	2887.051	2.84%	88.38%
90.0	111.940	70.959	2958.01	2.17%	90.56%
95.0	90.742	55.496	3013.506	1.70%	92.26%
100.0	75.045	45.048	3058.554	1.38%	93.63%
105.0	54.381	34.631	3093.185	1.06%	94.70%
110.0	40.488	24.797	3117.982	0.76%	95.45%
115.0	36.577	19.513	3137.496	0.60%	96.05%
120.0	35.555	17.535	3155.031	0.54%	96.59%
125.0	35.559	16.438	3171.469	0.50%	97.09%
130.0	35.669	15.488	3186.956	0.47%	97.57%
135.0	35.784	14.438	3201.395	0.44%	98.01%
140.0	35.679	13.232	3214.626	0.41%	98.41%
145.0	35.609	11.894	3226.52	0.36%	98.78%
150.0	35.907	10.531	3237.051	0.32%	99.10%
155.0	35.610	9.050	3246.102	0.28%	99.38%
160.0	34.830	7.388	3253.49	0.23%	99.60%
165.0	34.165	5.686	3259.176	0.17%	99.78%
170.0	34.767	4.089	3263.265	0.13%	99.90%
175.0	36.371	2.545	3265.81	0.08%	99.98%
180.0	18.489	0.656	3266.466	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	740.84	22.68%	22.68%
0-40	1223.18	37.45%	37.45%
0-60	2172.15	66.50%	66.50%
0-90	2958.01	90.56%	90.56%
0-120	3155.03	96.59%	96.59%
0-180	3266.47	100.00%	100.00%
60-90	785.86	24.06%	24.06%
90-120	197.02	6.03%	6.03%
90-130	228.95	7.01%	7.01%
90-150	279.04	8.54%	8.54%
90-180	307.80	9.42%	9.42%
0-72.79	2613.17	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	88.63
10-20	256.65
20-30	395.55
30-40	482.35
40-50	499.34
50-60	449.63
60-70	361.25
70-80	260.78
80-90	163.83
90-100	100.54
100-110	59.43
110-120	37.05
120-130	31.93
130-140	27.67
140-150	22.43
150-160	16.44
160-170	9.78
170-180	2.54



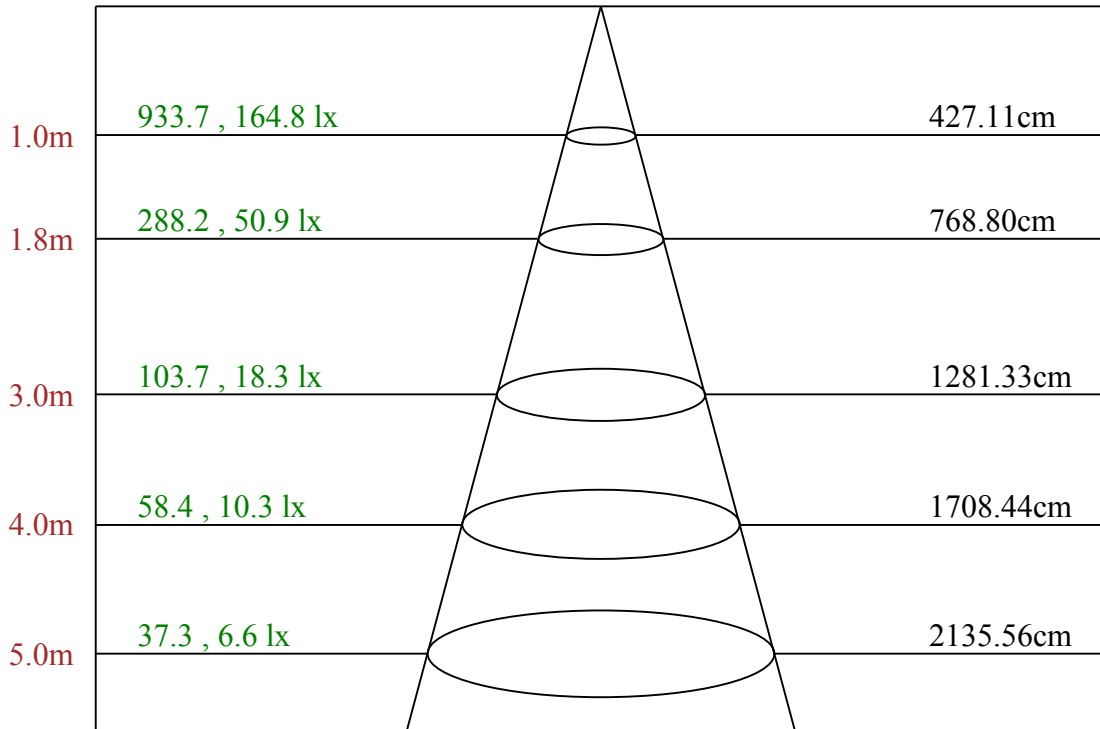
C0(Max): ———

C0/C180: ———

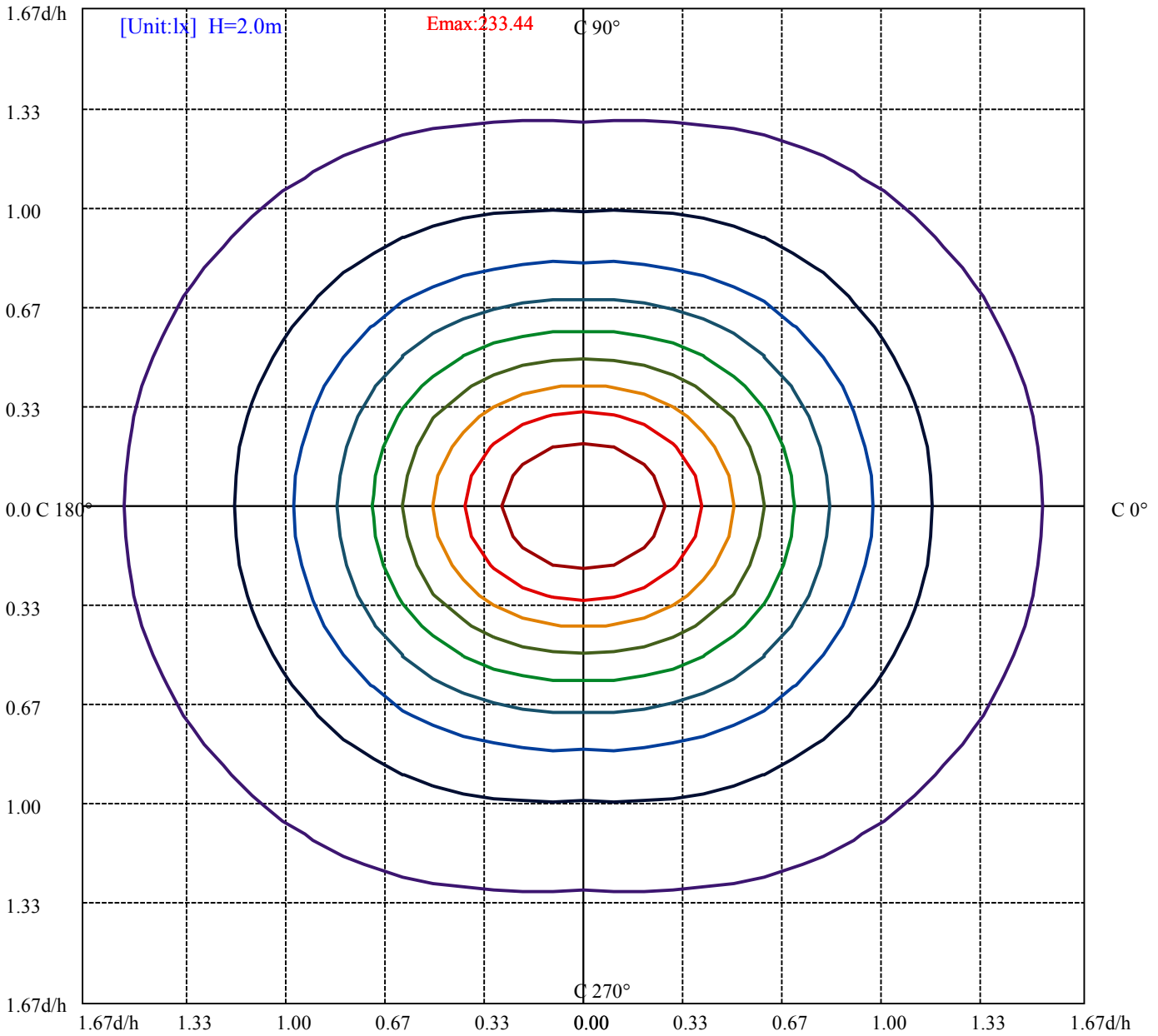
C90/C270: ———

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

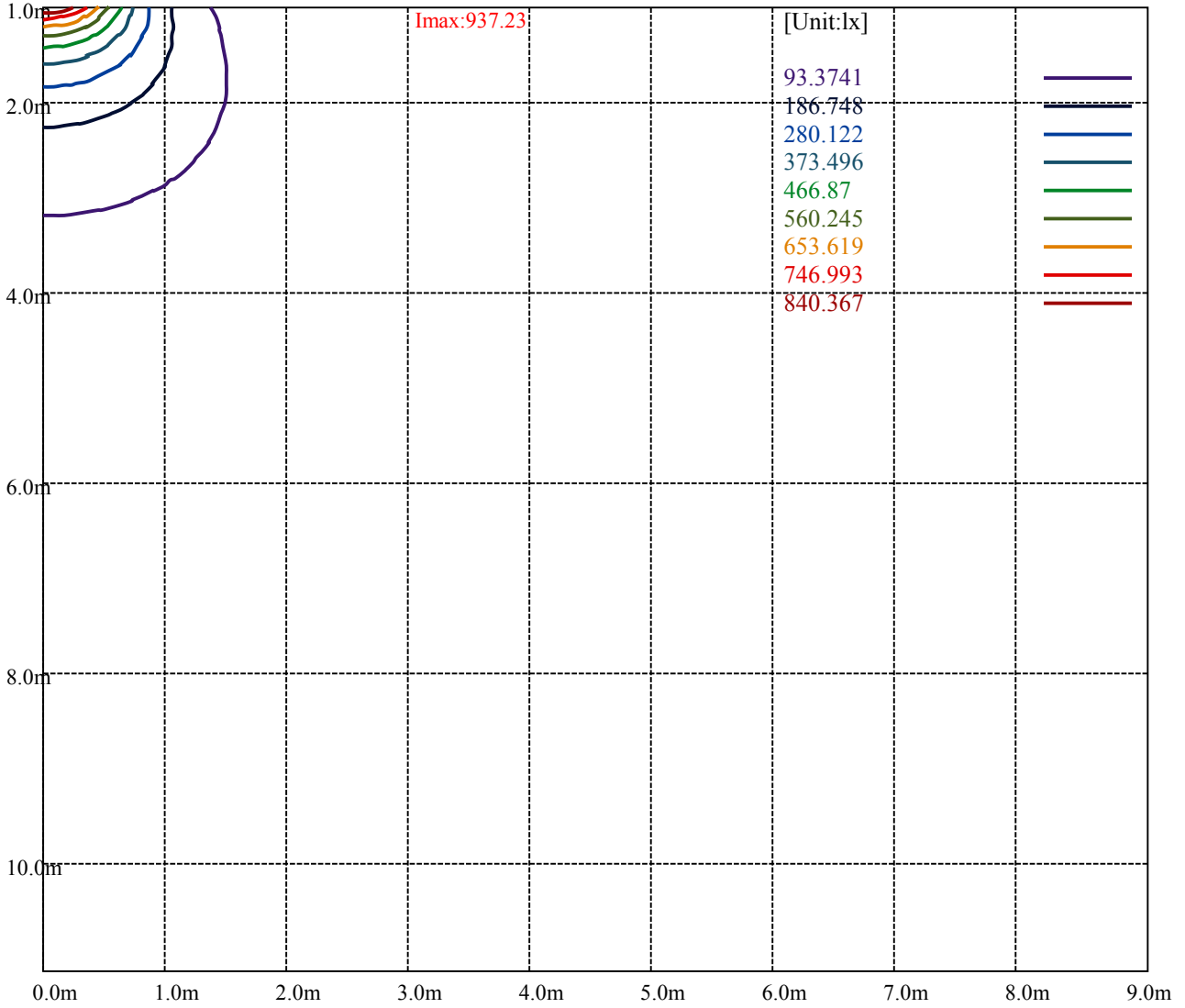
Beam Angle(50%Imax):C0/180Left:79.8 Right:49.8
:C90/270Left:47.9 Right:47.9



Max , Ave Beam angle of C0 plane 129.82



(10%Emax) 23.34352	—
(20%Emax) 46.687	—
(30%Emax) 70.0305	—
(40%Emax) 93.374	—
(50%Emax) 116.7175	—
(60%Emax) 140.0612	—
(70%Emax) 163.4048	—
(80%Emax) 186.7482	—
(90%Emax) 210.0918	—



Luminance Table

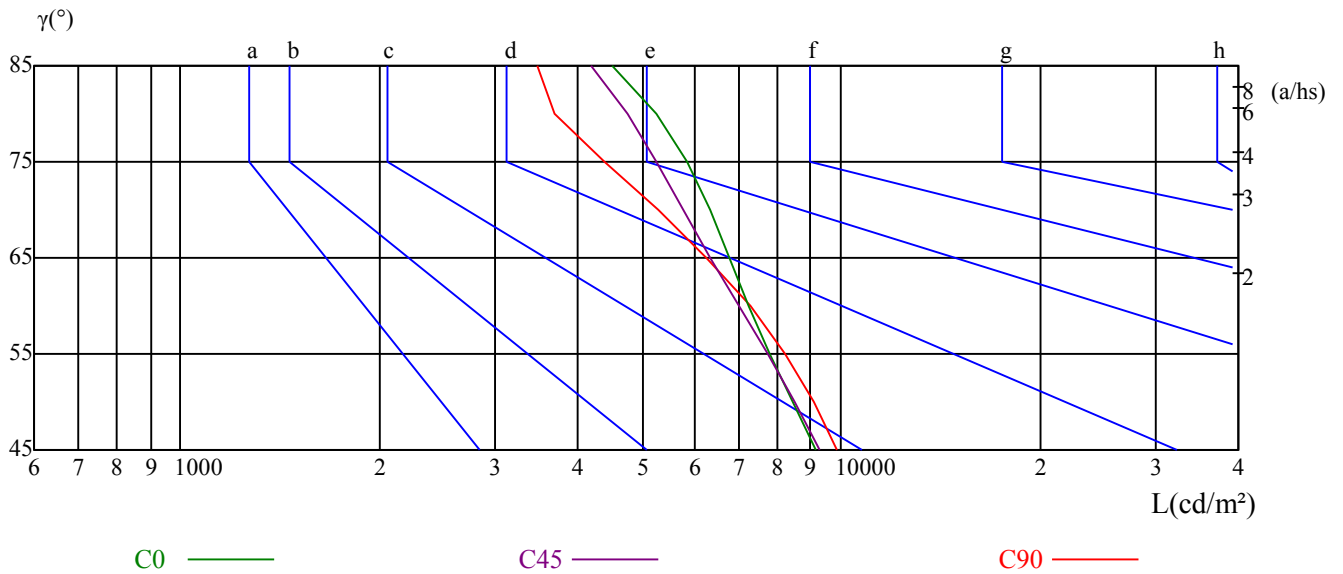
γ	45	50	55	60	65	70	75	80	85
C0	9160	8441	7788	7253	6776	6329	5833	5265	4505
C45	9275	8492	7761	7006	6347	5782	5256	4760	4195
C90	9845	9086	8258	7318	6276	5306	4382	3673	3461

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15857	7049	12915	19438	5322	14723	36687	5734	27333

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	933.74	942.45	949.42	956.39	958.13	952.90	933.74	895.42	841.41
15.0	933.74	941.63	950.40	954.78	954.78	947.77	926.73	892.53	839.05
30.0	933.74	940.79	946.97	946.97	940.79	930.21	908.17	872.02	822.64
45.0	933.74	940.84	941.72	934.63	921.33	900.93	874.33	836.20	788.32
60.0	933.74	937.28	934.63	920.45	899.19	867.30	829.20	783.14	728.21
75.0	933.74	935.52	926.61	908.79	877.61	840.19	788.51	732.38	669.12
90.0	933.74	932.85	920.36	898.07	865.07	818.70	765.19	700.97	631.41
105.0	933.74	931.96	918.57	893.57	860.54	818.59	765.02	706.11	640.05
120.0	933.74	931.07	918.59	896.32	868.70	832.17	787.62	740.40	686.05
135.0	933.74	926.67	916.94	901.91	881.57	854.16	821.44	781.65	735.67
150.0	933.74	927.53	919.55	908.03	894.72	876.99	853.93	822.90	777.67
165.0	933.74	927.57	918.75	912.58	904.64	892.30	872.90	843.81	797.96
180.0	933.74	927.64	924.16	918.06	907.61	891.06	861.45	816.15	760.41
195.0	933.74	925.85	919.71	911.82	902.18	885.52	854.83	810.12	755.76
210.0	933.74	924.92	915.22	902.88	886.13	864.09	833.22	788.26	734.47
225.0	933.74	923.10	907.14	886.74	861.03	829.11	792.75	747.52	692.55
240.0	933.74	920.45	900.08	871.73	833.63	791.11	743.27	690.12	628.99
255.0	933.74	920.38	896.32	864.24	819.70	768.02	710.11	643.28	572.90
270.0	933.74	921.26	898.07	864.18	816.91	760.73	696.52	626.06	548.47
285.0	933.74	925.71	905.18	873.93	831.98	781.09	723.07	655.23	583.81
300.0	933.74	930.18	915.92	892.76	860.68	819.70	771.58	711.89	653.08
315.0	933.74	932.86	925.78	910.75	888.65	857.70	818.79	772.81	712.68
330.0	933.74	938.17	938.17	931.08	918.67	897.38	881.42	814.03	756.39
345.0	933.74	943.44	946.09	945.20	938.15	920.52	886.13	837.63	773.27
360.0	933.74	942.45	949.42	956.39	958.13	952.90	933.74	895.42	841.41
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	769.99	695.08	628.01	572.26	517.39	454.68	384.99	322.28	263.92
15.0	771.54	695.26	627.75	566.38	512.90	452.40	384.02	317.38	260.40
30.0	758.28	680.69	605.74	536.09	479.66	422.34	359.74	297.14	237.18
45.0	724.47	653.53	575.50	495.69	423.86	366.23	311.25	251.84	196.86
60.0	667.08	597.98	523.57	442.95	365.88	292.35	234.76	184.27	136.43
75.0	599.63	524.78	451.72	375.99	300.26	228.09	163.05	109.59	70.39
90.0	554.72	477.13	399.54	319.27	242.58	175.69	117.72	72.24	43.70
105.0	568.64	493.65	419.56	345.47	274.94	205.32	146.40	95.52	58.92
120.0	626.35	556.86	487.36	416.98	343.92	272.64	210.27	158.59	117.61
135.0	679.97	615.42	546.45	471.29	398.79	328.93	268.80	220.17	180.38
150.0	720.92	655.30	584.36	510.76	438.05	371.55	317.45	269.57	219.91
165.0	742.41	674.52	602.21	528.15	457.61	396.77	343.87	297.14	236.30
180.0	695.08	622.78	548.75	479.06	415.48	364.09	315.31	256.08	181.17
195.0	690.88	617.23	545.34	472.57	409.44	359.47	311.25	251.63	177.10
210.0	670.99	599.57	523.74	449.68	383.55	330.64	284.80	233.66	161.35
225.0	628.70	558.65	485.05	409.68	340.51	281.98	234.99	195.08	133.01
240.0	566.09	498.76	427.89	353.47	282.60	220.59	166.55	132.00	91.25
255.0	503.40	431.23	356.39	283.33	216.51	155.03	102.46	65.04	41.88
270.0	469.99	391.51	313.92	240.79	172.12	116.83	74.02	45.48	25.86
285.0	510.61	434.73	357.07	284.76	213.35	151.76	122.30	64.27	36.60
300.0	585.37	511.42	433.90	391.14	282.44	223.63	175.52	129.19	93.55
315.0	673.78	565.90	486.32	413.82	356.34	303.29	245.81	192.76	152.97
330.0	681.91	605.65	536.48	476.18	423.86	361.79	297.95	241.19	196.86
345.0	700.97	632.19	570.47	517.57	458.49	391.48	325.35	267.16	219.55
360.0	769.99	695.08	628.01	572.26	517.39	454.68	384.99	322.28	263.92

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	214.27	151.56	123.69	114.98	69.68	47.04	42.68	40.07	40.07
15.0	211.30	149.05	123.62	111.35	66.63	46.47	41.21	39.45	39.45
30.0	190.45	132.26	121.68	96.11	53.78	43.20	38.80	37.91	38.80
45.0	154.29	105.52	112.62	67.39	41.68	37.24	36.36	37.24	37.24
60.0	97.45	64.67	64.67	36.32	31.01	31.89	32.78	32.78	32.78
75.0	40.98	35.64	21.38	23.17	24.95	24.95	25.84	28.51	29.40
90.0	24.08	10.70	22.30	23.19	23.19	24.08	24.97	25.86	25.86
105.0	33.03	31.24	16.96	22.32	24.10	25.89	27.67	28.57	29.46
120.0	82.86	71.28	51.68	31.18	29.40	31.18	32.08	32.08	32.97
135.0	124.68	107.88	96.38	53.94	38.02	35.37	35.37	37.14	36.25
150.0	154.29	132.12	119.71	79.81	47.88	39.90	38.13	38.13	39.90
165.0	166.64	142.84	128.73	94.34	59.08	44.09	40.56	39.68	39.68
180.0	150.69	135.88	109.75	69.68	47.91	43.55	40.94	40.94	42.68
195.0	149.05	135.02	101.70	65.76	47.34	43.84	41.21	40.33	41.21
210.0	140.19	126.97	86.41	53.78	44.09	40.56	40.56	40.56	40.56
225.0	122.37	102.86	62.07	41.68	39.02	39.02	39.90	39.90	38.13
240.0	86.82	60.24	36.32	33.66	36.32	37.21	37.21	36.32	35.44
255.0	40.09	24.06	28.51	30.29	29.40	29.40	30.29	30.29	31.18
270.0	5.35	24.97	24.08	24.08	24.08	24.97	24.97	24.97	25.86
285.0	33.92	22.32	24.99	25.89	27.67	29.46	29.46	30.35	30.35
300.0	63.26	59.70	36.53	32.97	33.86	35.64	33.86	33.86	32.97
315.0	102.57	108.76	66.32	43.33	38.91	38.02	38.02	38.02	36.25
330.0	138.33	120.60	99.32	56.75	45.22	40.79	39.90	39.90	39.02
345.0	159.59	121.68	121.68	73.18	48.49	44.09	40.56	40.56	40.56
360.0	214.27	151.56	123.69	114.98	69.68	47.04	42.68	40.07	40.07
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	40.07	40.07	38.33	38.33	37.45	37.45	38.33	39.20	39.20
15.0	40.33	39.45	37.70	37.70	37.70	37.70	38.58	38.58	39.45
30.0	38.80	37.91	37.03	37.03	37.03	37.91	38.80	38.80	39.68
45.0	36.36	35.47	36.36	36.36	37.24	38.13	39.02	39.02	39.90
60.0	32.78	32.78	33.66	36.32	37.21	37.21	38.09	38.09	38.98
75.0	31.18	32.08	32.97	33.86	35.64	33.86	33.86	35.64	37.42
90.0	27.65	29.43	30.32	31.21	31.21	29.43	27.65	30.32	36.56
105.0	30.35	31.24	32.14	33.03	33.03	30.35	27.67	29.46	35.71
120.0	33.86	33.86	33.86	35.64	36.53	35.64	29.40	28.51	33.86
135.0	36.25	36.25	36.25	36.25	37.14	38.02	33.60	27.41	30.95
150.0	39.02	38.13	38.13	38.13	38.13	39.02	38.13	31.92	27.49
165.0	40.56	39.68	38.80	38.80	38.80	38.80	38.80	38.80	30.86
180.0	40.94	39.20	39.20	38.33	38.33	38.33	39.20	39.20	31.36
195.0	40.33	39.45	38.58	37.70	37.70	38.58	38.58	30.69	23.67
210.0	38.80	38.80	37.91	37.91	37.91	37.91	30.86	23.81	33.51
225.0	38.13	37.24	36.36	37.24	37.24	31.92	24.83	30.15	38.13
240.0	35.44	35.44	36.32	36.32	33.66	27.46	25.69	32.78	38.98
255.0	32.08	32.97	33.86	33.86	28.51	23.17	25.84	33.86	39.20
270.0	28.54	30.32	31.21	30.32	25.86	23.19	27.65	35.67	40.13
285.0	31.24	33.03	33.03	33.03	31.24	31.24	33.03	37.49	40.17
300.0	32.97	32.97	33.86	35.64	36.53	37.42	37.42	38.31	39.20
315.0	35.37	35.37	35.37	35.37	36.25	37.14	38.02	38.91	39.79
330.0	38.13	37.24	36.36	36.36	37.24	38.13	38.13	39.02	39.90
345.0	39.68	37.91	37.03	37.03	37.03	37.91	38.80	38.80	38.80
360.0	40.07	40.07	38.33	38.33	37.45	37.45	38.33	39.20	39.20

Intensity data(cd)

C/γ(°)	180.0
0.0	23.52
15.0	37.70
30.0	39.68
45.0	39.90
60.0	39.87
75.0	40.09
90.0	40.13
105.0	40.17
120.0	39.20
135.0	38.02
150.0	36.36
165.0	29.10
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	23.52