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Client:

LumCAT: WAL-191

Luminaire: LED 灯具

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.397

Lamp flux(lm): 3159.5

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): 3159.52, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 66.47

Central intensity(cd): 903.280, Maximum intensity(cd): 906.329

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=209.6

[C90/270]Total=150.8

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 : 66.498%

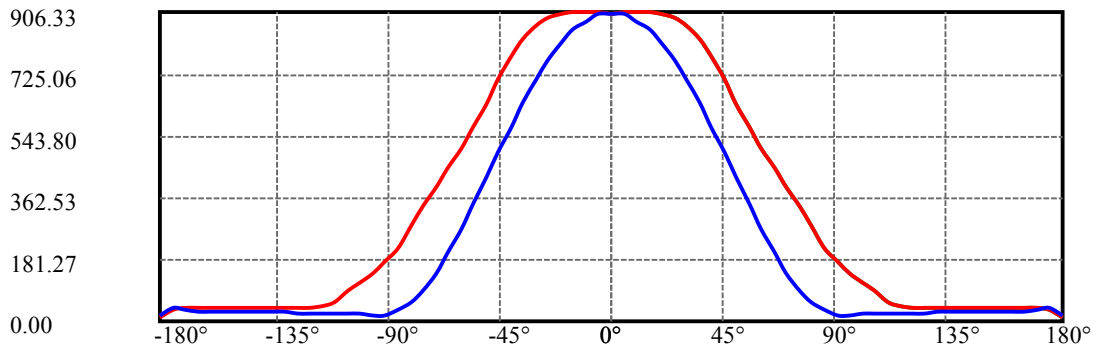
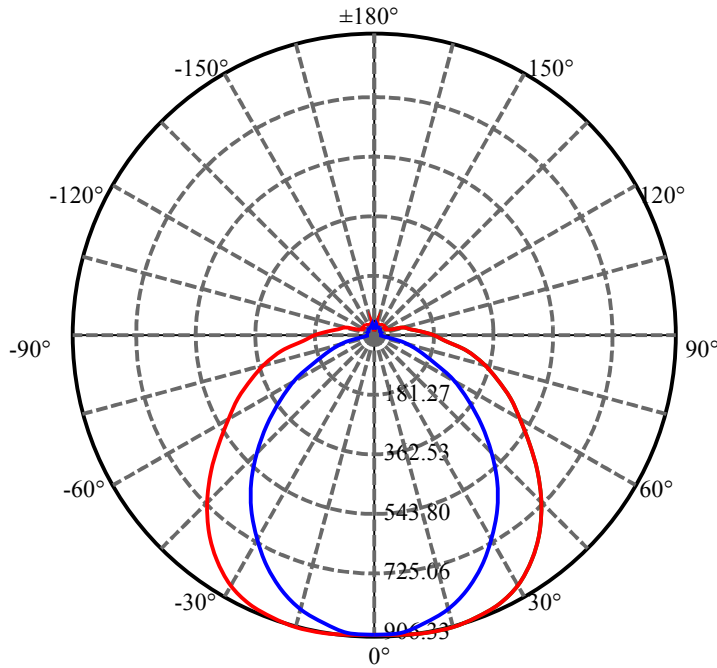
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	903.280	0.000	0	0.00%	0.00%
5.0	900.796	21.567	21.567	0.68%	0.68%
10.0	892.860	64.165	85.732	2.03%	2.71%
15.0	878.782	105.093	190.825	3.33%	6.04%
20.0	858.160	143.148	333.973	4.53%	10.57%
25.0	830.268	177.085	511.058	5.60%	16.18%
30.0	794.092	205.564	716.622	6.51%	22.68%
35.0	746.540	226.869	943.491	7.18%	29.86%
40.0	690.122	239.696	1183.187	7.59%	37.45%
45.0	627.159	243.905	1427.092	7.72%	45.17%
50.0	555.727	239.019	1666.112	7.57%	52.73%
55.0	485.167	226.325	1892.437	7.16%	59.90%
60.0	417.220	208.584	2101.021	6.60%	66.50%
65.0	350.984	186.752	2287.773	5.91%	72.41%
70.0	291.370	162.648	2450.421	5.15%	77.56%
75.0	237.693	138.288	2588.71	4.38%	81.93%
80.0	188.351	113.997	2702.707	3.61%	85.54%
85.0	142.268	89.837	2792.544	2.84%	88.39%
90.0	108.321	68.613	2861.157	2.17%	90.56%
95.0	87.678	53.666	2914.823	1.70%	92.26%
100.0	72.461	43.513	2958.337	1.38%	93.63%
105.0	52.536	33.446	2991.782	1.06%	94.69%
110.0	39.271	23.997	3015.779	0.76%	95.45%
115.0	35.249	18.869	3034.648	0.60%	96.05%
120.0	34.301	16.908	3051.556	0.54%	96.58%
125.0	34.416	15.884	3067.44	0.50%	97.09%
130.0	34.637	15.014	3082.455	0.48%	97.56%
135.0	34.678	14.006	3096.461	0.44%	98.00%
140.0	34.534	12.815	3109.276	0.41%	98.41%
145.0	34.613	11.537	3120.812	0.37%	98.77%
150.0	34.689	10.205	3131.018	0.32%	99.10%
155.0	34.613	8.770	3139.788	0.28%	99.38%
160.0	33.796	7.175	3146.963	0.23%	99.60%
165.0	32.984	5.504	3152.467	0.17%	99.78%
170.0	33.660	3.953	3156.42	0.13%	99.90%
175.0	35.263	2.466	3158.885	0.08%	99.98%
180.0	17.935	0.636	3159.521	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	716.62	22.68%	22.68%
0-40	1183.19	37.45%	37.45%
0-60	2101.02	66.50%	66.50%
0-90	2861.16	90.56%	90.56%
0-120	3051.56	96.58%	96.58%
0-180	3159.52	100.00%	100.00%
60-90	760.14	24.06%	24.06%
90-120	190.40	6.03%	6.03%
90-130	221.30	7.00%	7.00%
90-150	269.86	8.54%	8.54%
90-180	297.73	9.42%	9.42%
0-72.79	2527.62	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	85.73
10-20	248.24
20-30	382.65
30-40	466.56
40-50	482.92
50-60	434.91
60-70	349.40
70-80	252.29
80-90	158.45
90-100	97.18
100-110	57.44
110-120	35.78
120-130	30.90
130-140	26.82
140-150	21.74
150-160	15.95
160-170	9.46
170-180	2.47



C0(Max): ———

C0/C180: ———

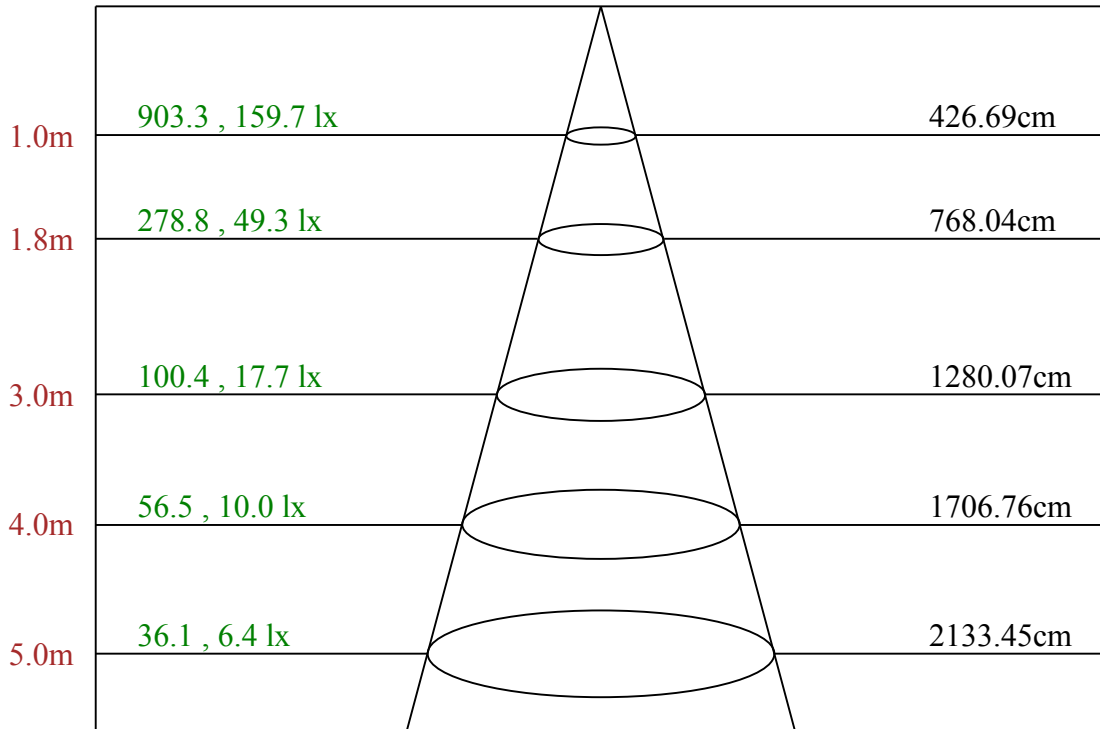
C90/C270: ———

Field angle(10%Imax):C0/180Left:119.8 Right:89.8

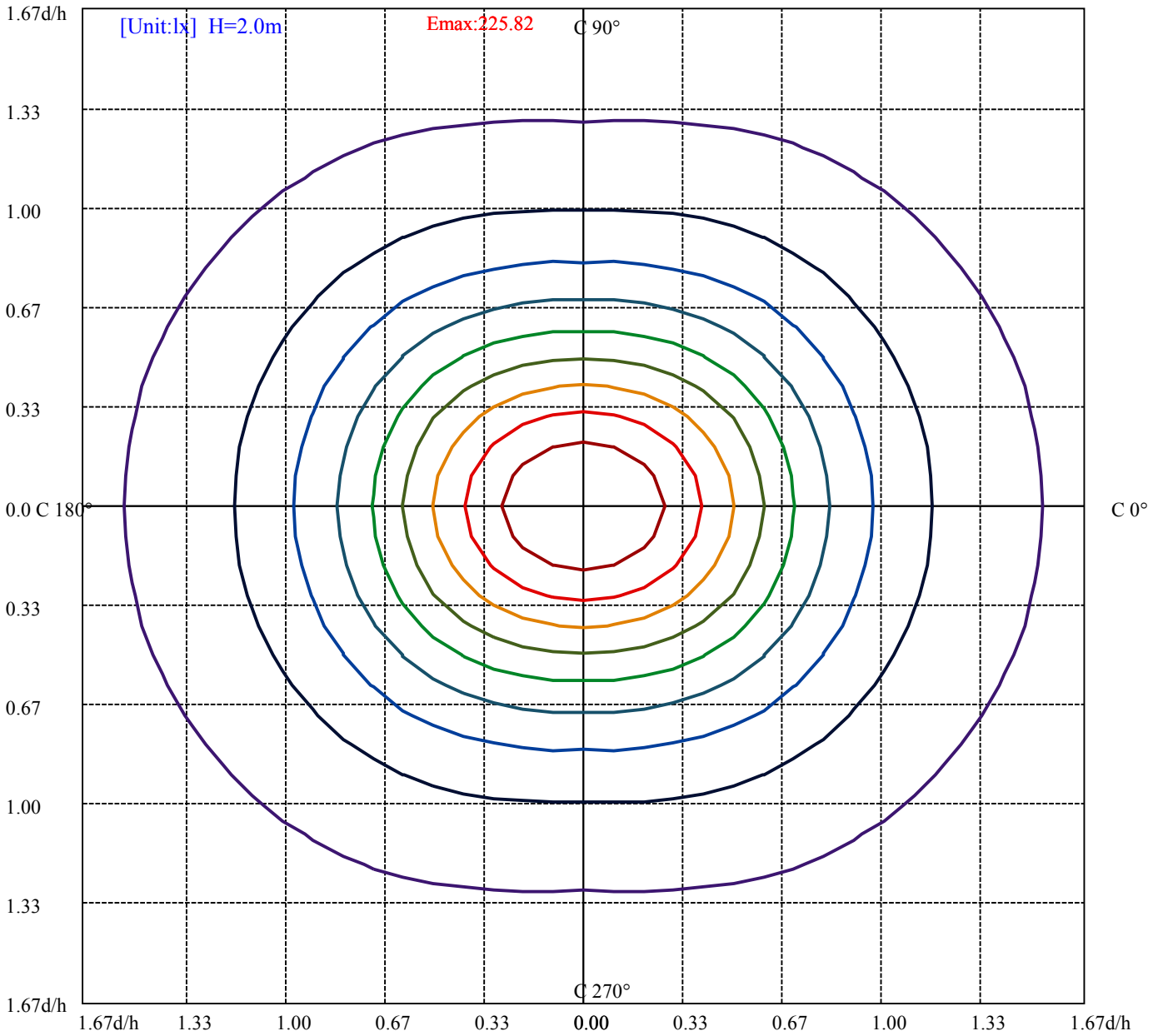
:C90/270Left:75.4 Right:75.4

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

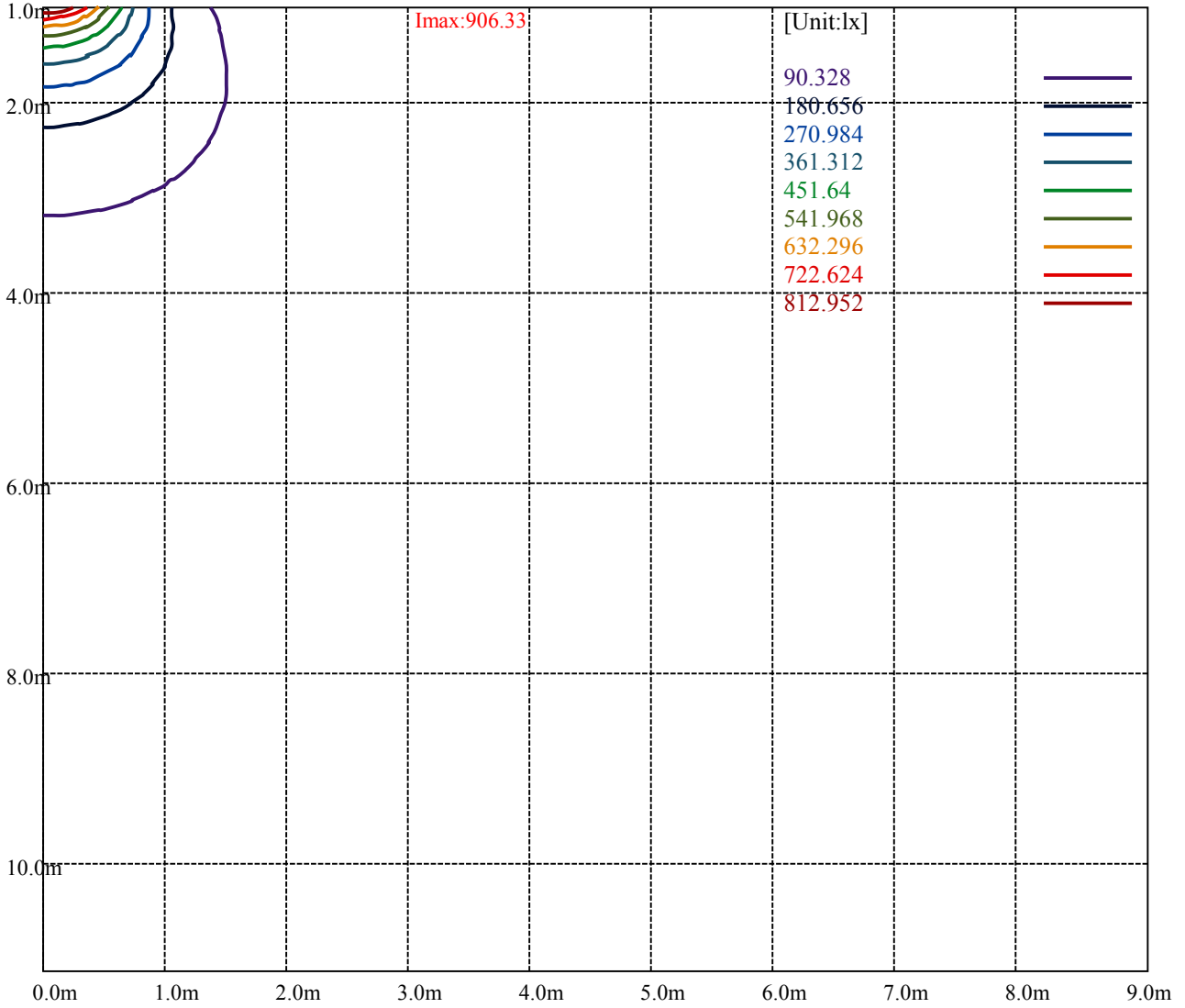
:C90/270Left:47.9 Right:47.9



Max , Ave Beam angle of C0 plane 129.77



(10%Emax) 22.582	—
(20%Emax) 45.164	—
(30%Emax) 67.746	—
(40%Emax) 90.328	—
(50%Emax) 112.91	—
(60%Emax) 135.492	—
(70%Emax) 158.074	—
(80%Emax) 180.656	—
(90%Emax) 203.238	—



Luminance Table

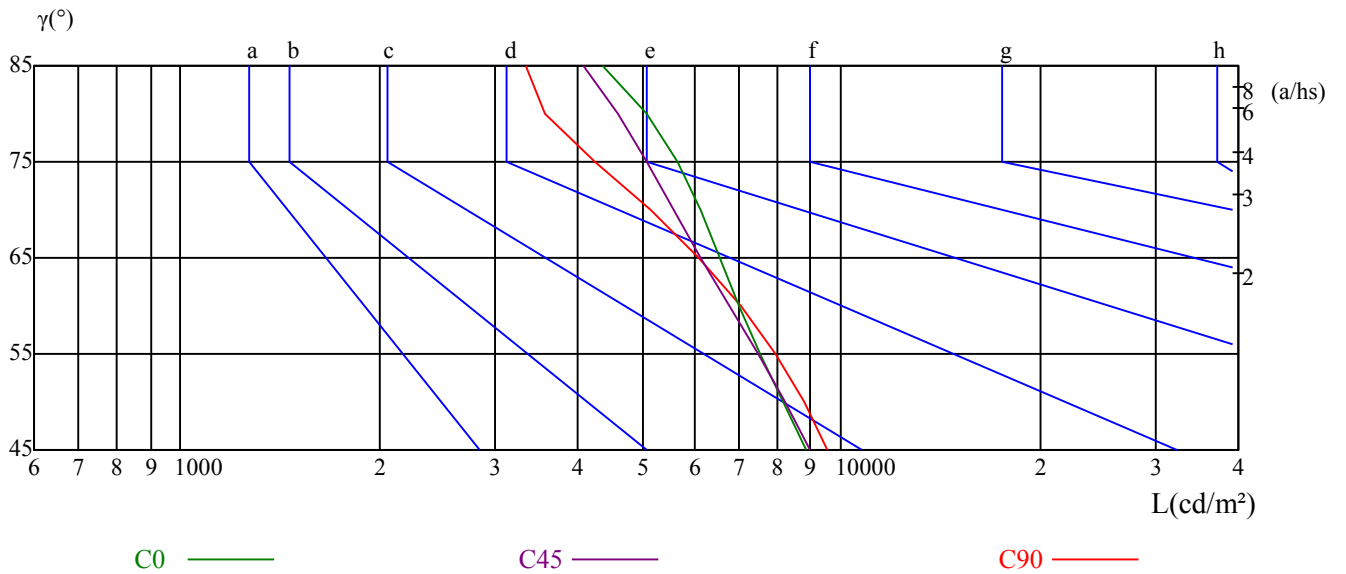
γ	45	50	55	60	65	70	75	80	85
C0	8866	8163	7540	7013	6548	6121	5644	5091	4355
C45	8974	8223	7509	6782	6143	5593	5084	4610	4063
C90	9536	8795	7986	7080	6092	5149	4243	3565	3330

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15325	6843	12501	18810	5153	14240	35468	5518	26473

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	903.28	911.12	918.09	925.06	926.80	921.57	903.28	865.82	813.56
15.0	903.28	911.17	919.07	923.45	923.45	917.31	896.26	862.94	811.20
30.0	903.28	908.56	913.84	913.84	908.56	898.00	876.87	842.53	794.11
45.0	903.28	910.38	911.27	905.05	891.74	873.11	846.49	810.11	762.20
60.0	903.28	907.71	903.28	890.00	869.63	839.52	802.33	757.16	704.03
75.0	903.28	905.06	897.04	879.20	849.78	814.11	763.28	708.89	648.26
90.0	903.28	903.28	891.68	870.25	838.12	792.60	740.83	678.35	611.41
105.0	903.28	901.49	888.11	864.01	832.77	791.71	739.94	683.71	618.55
120.0	903.28	900.61	888.14	867.65	840.03	805.29	761.64	716.21	662.76
135.0	903.28	897.09	887.36	872.32	853.74	826.31	795.35	756.42	712.18
150.0	903.28	896.19	889.10	878.46	864.28	848.32	826.16	796.02	751.70
165.0	903.28	897.11	889.18	882.13	874.20	861.86	844.24	815.16	770.21
180.0	903.28	897.18	893.70	887.60	878.89	861.47	833.60	790.04	735.17
195.0	903.28	895.39	889.25	882.23	872.59	855.92	826.98	783.14	730.52
210.0	903.28	892.72	883.91	872.47	855.74	835.49	805.56	761.54	709.59
225.0	903.28	892.63	877.55	858.03	834.07	803.01	767.52	724.04	669.92
240.0	903.28	889.11	870.51	842.18	805.87	765.13	719.08	666.83	609.27
255.0	903.28	891.69	868.50	837.30	794.49	742.78	687.49	623.29	554.63
270.0	903.28	892.57	869.36	836.34	789.92	735.48	673.89	606.95	531.08
285.0	903.28	895.25	876.50	846.16	804.20	756.01	699.77	633.72	564.10
300.0	903.28	899.72	885.46	862.30	832.02	792.82	746.50	688.60	630.69
315.0	903.28	902.40	896.20	881.16	859.93	830.73	792.69	747.57	689.18
330.0	903.28	908.60	906.83	899.73	888.21	867.82	851.87	788.04	730.42
345.0	903.28	912.09	914.74	913.85	906.80	890.06	856.57	809.87	748.18
360.0	903.28	911.12	918.09	925.06	926.80	921.57	903.28	865.82	813.56
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	745.62	672.45	607.99	553.99	499.98	439.01	371.94	310.97	255.22
15.0	747.18	672.64	606.86	547.23	495.49	437.61	370.96	307.82	251.69
30.0	732.48	656.77	585.46	518.55	463.09	408.50	347.75	287.01	228.90
45.0	700.97	633.54	557.23	480.03	410.82	354.04	299.91	244.01	189.88
60.0	644.69	577.39	506.55	428.62	353.34	282.50	226.71	178.00	131.06
75.0	580.49	508.26	436.93	362.92	291.58	220.25	156.94	107.00	68.66
90.0	537.33	462.35	386.48	308.83	234.75	170.48	115.14	70.51	41.95
105.0	549.82	477.52	407.01	333.82	265.09	199.04	141.03	91.93	56.23
120.0	605.75	538.94	472.13	403.54	332.27	263.68	203.10	153.22	114.02
135.0	658.22	595.40	529.05	455.62	385.73	318.49	260.99	213.21	175.17
150.0	696.74	633.80	564.66	492.86	423.72	359.89	306.71	261.50	211.86
165.0	718.22	653.01	581.62	511.12	442.39	383.34	333.11	287.29	228.24
180.0	672.45	601.90	531.34	462.53	401.55	352.78	305.74	248.25	175.08
195.0	668.25	597.22	527.94	457.78	395.51	348.16	301.68	243.80	171.89
210.0	647.97	578.42	505.34	434.03	371.52	319.58	274.68	226.26	154.95
225.0	607.81	541.26	469.39	397.51	329.19	273.29	227.15	189.88	129.55
240.0	546.40	481.75	413.56	342.72	273.64	213.42	161.17	127.52	88.56
255.0	486.86	417.31	345.08	272.86	208.66	149.80	99.87	63.31	40.13
270.0	455.21	378.45	303.47	232.96	167.80	113.36	70.51	43.74	24.99
285.0	493.59	421.29	346.32	275.80	206.18	147.27	117.82	62.48	35.70
300.0	566.55	494.40	420.46	378.59	272.59	215.58	170.14	124.71	90.86
315.0	652.02	547.63	469.78	399.88	345.03	292.84	237.98	185.79	147.75
330.0	659.51	585.05	518.57	460.95	410.42	351.03	288.98	233.13	189.70
345.0	677.68	610.71	550.78	500.55	443.27	378.94	314.61	259.09	212.38
360.0	745.62	672.45	607.99	553.99	499.98	439.01	371.94	310.97	255.22

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	208.18	146.34	120.21	111.49	67.94	45.29	40.07	38.33	39.20
15.0	204.33	143.82	120.15	106.99	64.90	44.73	39.46	38.59	38.59
30.0	184.00	128.54	117.09	92.44	51.94	40.50	37.86	36.98	37.86
45.0	149.07	101.15	108.25	65.66	40.82	36.38	35.49	36.38	36.38
60.0	93.87	62.88	62.88	33.65	30.11	30.99	31.88	31.88	31.88
75.0	39.23	33.88	20.51	22.29	24.97	24.97	24.97	27.64	28.53
90.0	24.10	9.82	21.42	22.31	22.31	23.21	24.10	24.99	24.99
105.0	32.13	30.35	16.96	21.42	23.21	24.99	25.88	27.67	28.56
120.0	80.17	69.48	48.99	30.29	28.51	30.29	31.18	31.18	32.07
135.0	121.20	104.39	92.89	52.20	37.16	32.73	33.62	35.39	35.39
150.0	148.92	128.53	115.24	78.01	46.09	39.00	36.34	37.23	38.12
165.0	161.27	138.36	124.26	90.77	56.40	43.18	38.77	37.89	38.77
180.0	145.47	132.40	105.40	67.94	46.17	42.68	40.07	39.20	40.07
195.0	144.70	129.79	99.10	63.14	45.60	41.22	39.46	39.46	40.34
210.0	136.46	121.49	84.52	51.94	43.14	39.62	38.74	39.62	39.62
225.0	118.01	100.27	60.34	40.82	38.15	37.27	39.04	38.15	37.27
240.0	84.13	58.45	35.42	32.77	35.42	36.31	36.31	35.42	33.65
255.0	38.34	23.18	27.64	29.43	28.53	28.53	29.43	29.43	30.32
270.0	5.36	24.10	23.21	23.21	23.21	24.10	24.10	24.10	25.88
285.0	33.03	21.42	24.10	24.99	27.67	28.56	28.56	29.45	29.45
300.0	61.47	57.01	33.85	32.07	32.96	33.85	32.96	32.96	32.07
315.0	99.09	105.28	62.81	41.58	37.16	37.16	37.16	36.27	35.39
330.0	132.97	116.12	96.62	54.96	43.44	39.00	38.12	39.00	38.12
345.0	154.22	117.21	117.21	70.50	46.71	41.42	39.66	38.77	38.77
360.0	208.18	146.34	120.21	111.49	67.94	45.29	40.07	38.33	39.20
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	39.20	39.20	37.46	36.58	36.58	36.58	37.46	37.46	38.33
15.0	38.59	38.59	36.83	36.83	35.96	36.83	37.71	37.71	38.59
30.0	37.86	36.98	36.10	36.10	36.10	36.98	36.98	37.86	38.74
45.0	35.49	33.72	35.49	33.72	36.38	37.27	37.27	38.15	39.04
60.0	31.88	31.88	32.77	33.65	36.31	36.31	37.19	37.19	37.19
75.0	30.32	31.21	32.10	32.99	33.88	32.99	32.99	33.88	36.56
90.0	25.88	28.56	29.45	30.35	30.35	28.56	25.88	29.45	35.70
105.0	29.45	30.35	31.24	32.13	32.13	29.45	25.88	28.56	33.92
120.0	32.96	32.96	32.96	33.85	35.63	32.96	28.51	27.62	32.96
135.0	35.39	35.39	35.39	35.39	36.27	37.16	31.85	25.66	30.08
150.0	38.12	37.23	37.23	37.23	37.23	37.23	37.23	31.03	25.71
165.0	39.66	38.77	37.89	37.89	37.01	37.89	37.89	37.89	29.96
180.0	39.20	38.33	38.33	37.46	37.46	37.46	37.46	38.33	30.49
195.0	39.46	37.71	37.71	36.83	36.83	36.83	36.83	29.82	23.68
210.0	37.86	36.98	36.98	36.10	36.98	36.98	29.93	22.89	32.57
225.0	36.38	36.38	35.49	36.38	36.38	31.06	23.96	29.28	37.27
240.0	33.65	33.65	33.65	35.42	32.77	25.68	24.80	30.99	38.08
255.0	31.21	32.10	32.99	32.99	27.64	23.18	25.86	32.99	38.34
270.0	28.56	29.45	30.35	29.45	24.99	22.31	25.88	33.03	38.38
285.0	30.35	31.24	32.13	32.13	30.35	30.35	32.13	36.60	38.38
300.0	32.07	32.07	32.96	33.85	35.63	36.52	36.52	37.41	38.30
315.0	33.62	33.62	33.62	33.62	35.39	36.27	37.16	38.04	38.04
330.0	36.34	35.46	35.46	35.46	36.34	37.23	37.23	38.12	38.12
345.0	38.77	37.01	36.13	36.13	36.13	37.01	37.01	37.89	37.89
360.0	39.20	39.20	37.46	36.58	36.58	36.58	37.46	37.46	38.33

Intensity data(cd)

C/γ(°)	180.0
0.0	22.65
15.0	36.83
30.0	38.74
45.0	39.04
60.0	38.97
75.0	38.34
90.0	38.38
105.0	38.38
120.0	38.30
135.0	37.16
150.0	35.46
165.0	28.20
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	22.65