
乐达凯

Client:

LumCAT: EMAV1604LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.146

Lamp flux(lm): 1050.9

Power (W): 17.350

Number of Lamps: 1

PF: 0.989

Length(mm): 335

Width(mm): 105

Phm Type: C

Height(mm): 25

Photometric Results

Lumens(lm): 1050.89, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 60.57

Central intensity(cd): 296.220, Maximum intensity(cd): 298.020

Angle of maximum intensity: C=90.0 γ =10.0

Beam Angle(50%Imax): [C0/180]Total=126.2

[C90/270]Total=113.1

Field angle(10%Imax): [C0/180]Total=267.2

[C90/270]Total=206.1

Maximum s/h(1/2): C0_180=1.31 C90_270=1.40

Maximum s/h(1/4): C0_180=1.44 C90_270=1.54

Up flux rate of lamp(%): 12.79%

Down flux rate of lamp(%): 87.21%

Up flux rate of LUM(%): 12.79%

Down flux rate of LUM(%): 87.21%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 64.705%

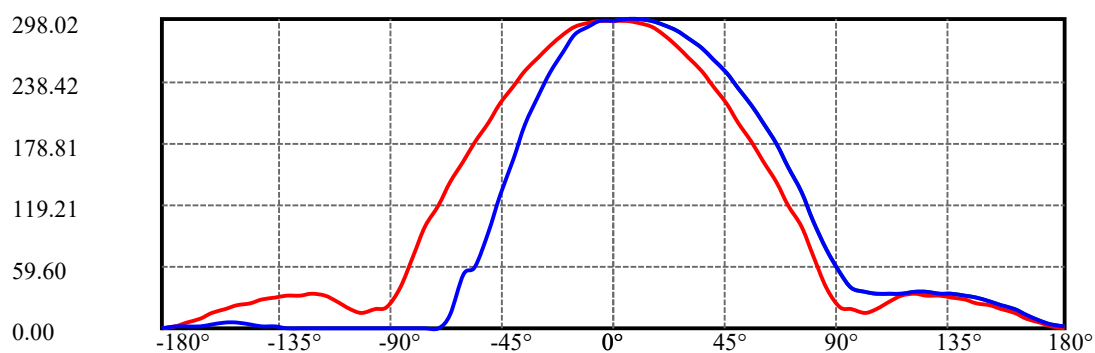
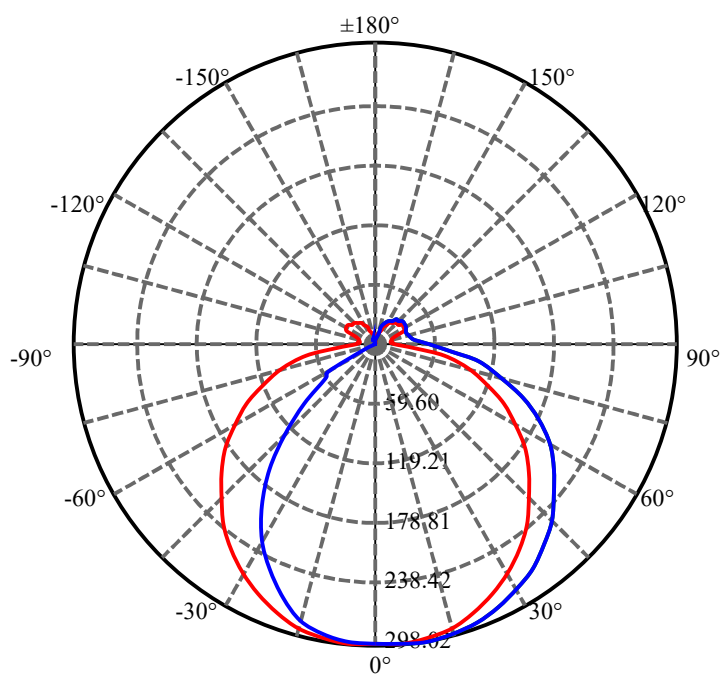
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	296.220	0.000	0	0.00%	0.00%
5.0	295.993	7.080	7.08	0.67%	0.67%
10.0	294.349	21.118	28.198	2.01%	2.68%
15.0	289.676	34.644	62.842	3.30%	5.98%
20.0	282.162	47.127	109.97	4.48%	10.46%
25.0	270.568	57.971	167.941	5.52%	15.98%
30.0	257.256	66.797	234.737	6.36%	22.34%
35.0	241.061	73.381	308.118	6.98%	29.32%
40.0	222.857	77.401	385.519	7.37%	36.69%
45.0	200.485	78.385	463.904	7.46%	44.14%
50.0	178.307	76.540	540.445	7.28%	51.43%
55.0	155.573	72.597	613.042	6.91%	58.34%
60.0	134.004	66.935	679.977	6.37%	64.70%
65.0	112.133	59.836	739.813	5.69%	70.40%
70.0	92.514	51.818	791.631	4.93%	75.33%
75.0	75.370	43.882	835.513	4.18%	79.51%
80.0	57.930	35.667	871.181	3.39%	82.90%
85.0	40.793	26.825	898.006	2.55%	85.45%
90.0	26.818	18.512	916.518	1.76%	87.21%
95.0	21.052	13.107	929.625	1.25%	88.46%
100.0	19.633	11.055	940.68	1.05%	89.51%
105.0	20.524	10.745	951.425	1.02%	90.54%
110.0	23.095	11.401	962.826	1.08%	91.62%
115.0	24.845	12.139	974.965	1.16%	92.78%
120.0	25.367	12.206	987.171	1.16%	93.94%
125.0	25.103	11.666	998.837	1.11%	95.05%
130.0	24.432	10.771	1009.608	1.02%	96.07%
135.0	23.572	9.700	1019.308	0.92%	96.99%
140.0	22.415	8.515	1027.823	0.81%	97.81%
145.0	20.698	7.193	1035.016	0.68%	98.49%
150.0	18.645	5.793	1040.809	0.55%	99.04%
155.0	15.769	4.355	1045.164	0.41%	99.46%
160.0	12.144	2.928	1048.092	0.28%	99.73%
165.0	8.334	1.688	1049.779	0.16%	99.89%
170.0	4.973	0.789	1050.569	0.08%	99.97%
175.0	2.730	0.276	1050.844	0.03%	100.00%
180.0	0.897	0.043	1050.888	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	234.74	22.34%	22.34%
0-40	385.52	36.69%	36.69%
0-60	679.98	64.70%	64.70%
0-90	916.52	87.21%	87.21%
0-120	987.17	93.94%	93.94%
0-180	1050.89	100.00%	100.00%
60-90	236.54	22.51%	22.51%
90-120	70.65	6.72%	6.72%
90-130	93.09	8.86%	8.86%
90-150	124.29	11.83%	11.83%
90-180	134.33	12.78%	12.78%
0-75.73	840.71	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	28.20
10-20	81.77
20-30	124.77
30-40	150.78
40-50	154.93
50-60	139.53
60-70	111.65
70-80	79.55
80-90	45.34
90-100	24.16
100-110	22.15
110-120	24.35
120-130	22.44
130-140	18.21
140-150	12.99
150-160	7.28
160-170	2.48
170-180	0.28



C90(Max): —————

C0/C180: —————

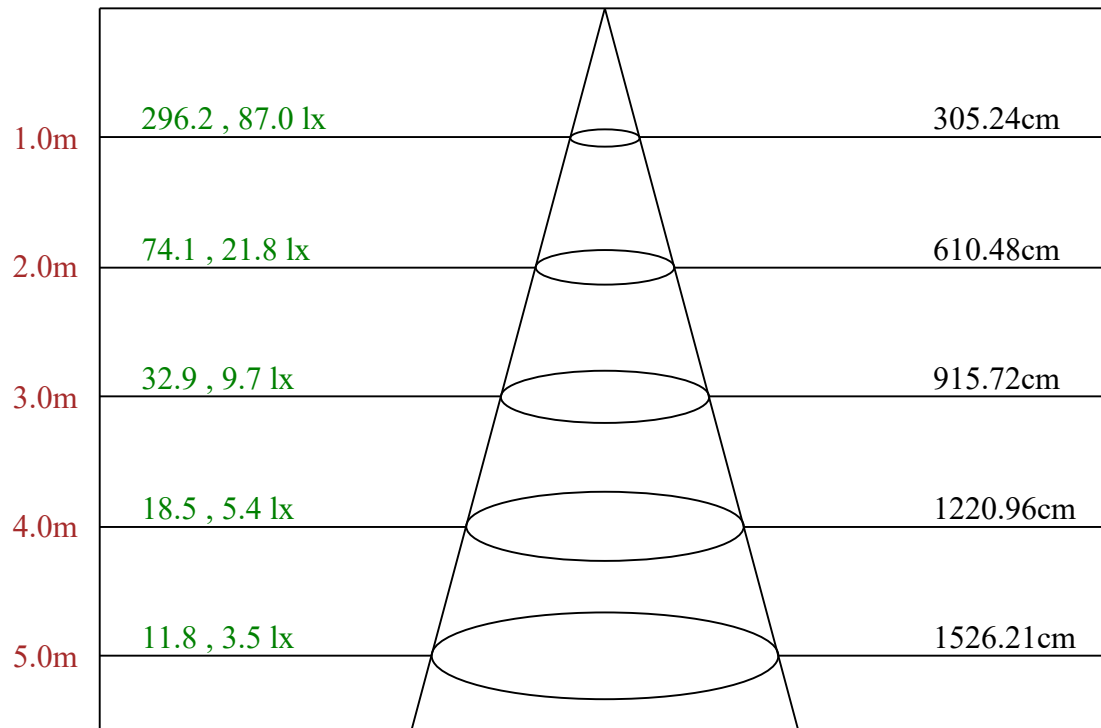
C90/C270: —————

Field angle(10%Imax):C0/180Left:138.6 Right:128.6

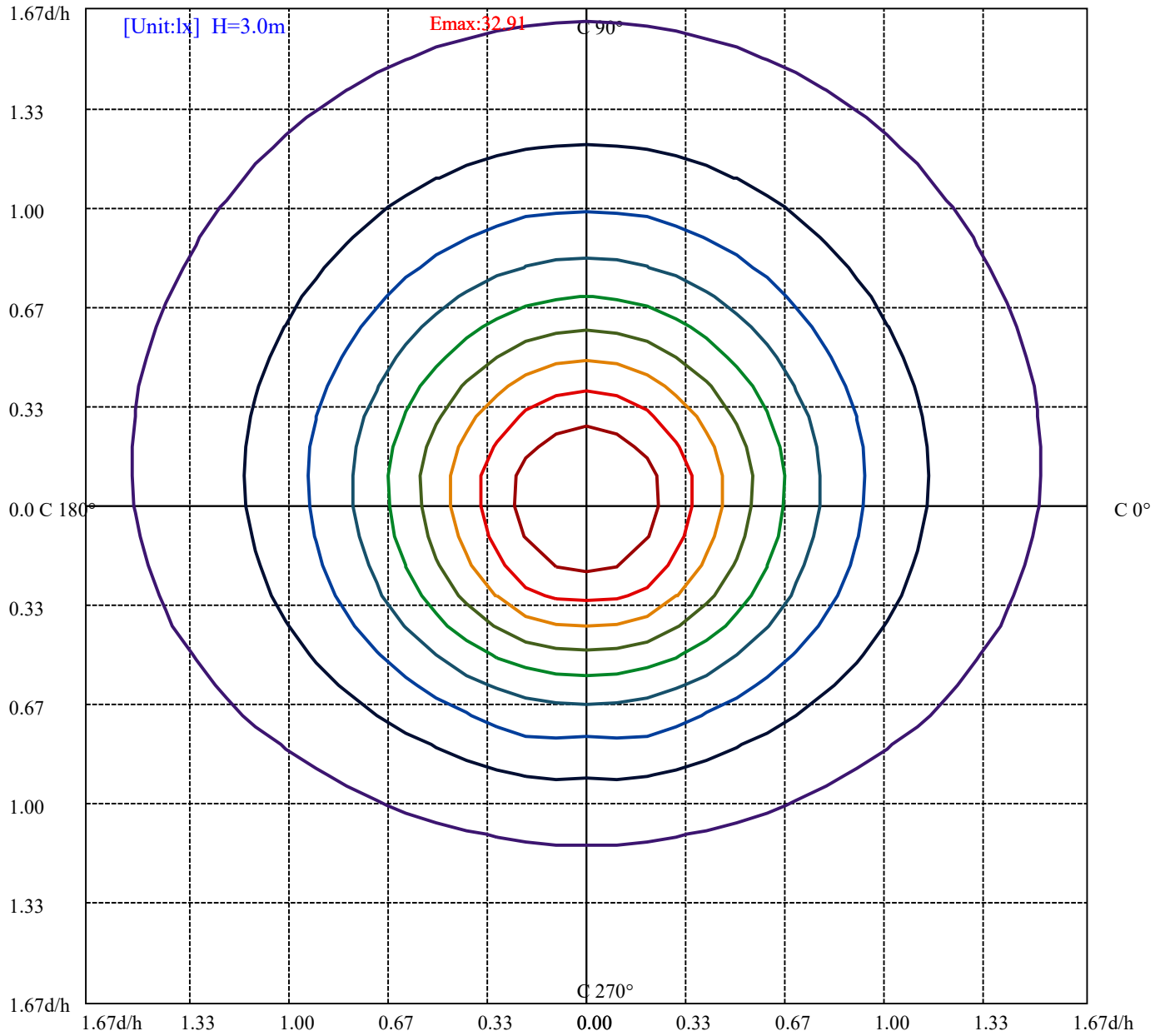
:C90/270Left:72.9 Right:133.2

Beam Angle(50%Imax):C0/180Left:68.1 Right:58.1

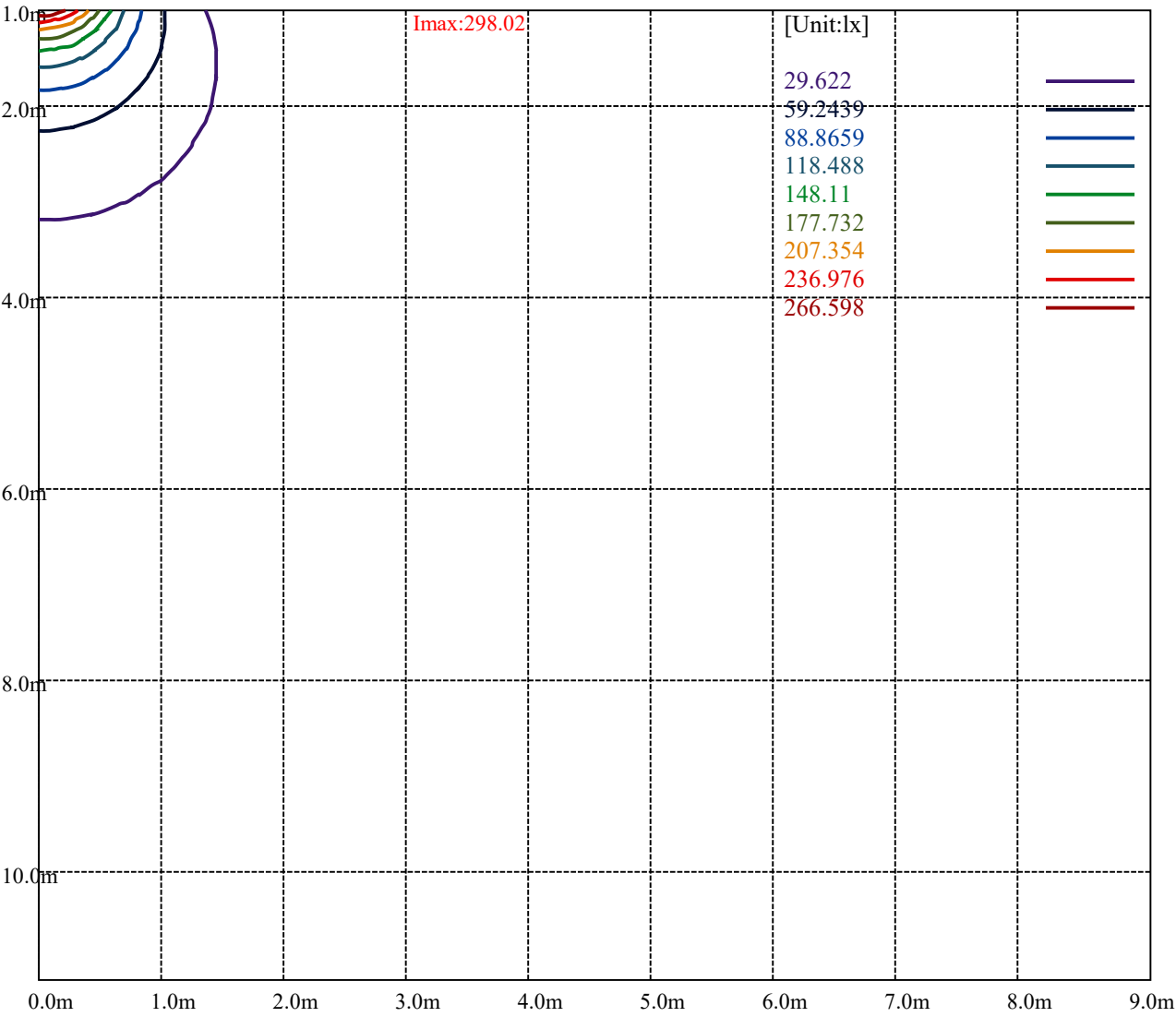
:C90/270Left:51.9 Right:61.2



Max , Ave Beam angle of C90 plane 113.53



(10%Emax) 3.291333	—
(20%Emax) 6.582655	—
(30%Emax) 9.873989	—
(40%Emax) 13.16533	—
(50%Emax) 16.45667	—
(60%Emax) 19.748	—
(70%Emax) 23.03933	—
(80%Emax) 26.33067	—
(90%Emax) 29.622	—



Luminance Table

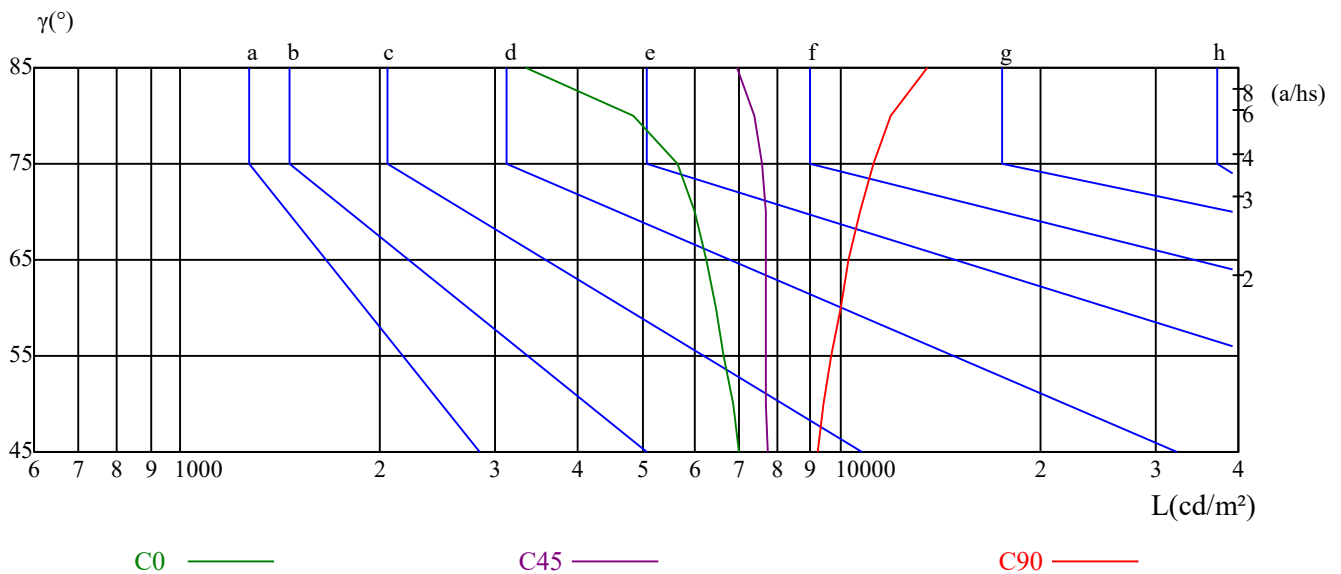
γ	45	50	55	60	65	70	75	80	85
C0	7006	6854	6656	6461	6261	5998	5657	4866	3333
C45	7773	7714	7710	7695	7680	7705	7590	7401	6973
C90	9196	9398	9638	10019	10286	10682	11216	11911	13472

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9458	6420	7081	10684	7220	7791	12402	12629	13618

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	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	0.97	0.97	0.97	0.90	0.90	0.90	0.87
1	0.99	0.95	0.90	0.96	0.92	0.88	0.89	0.86	0.83	0.83	0.80	0.78	0.77	0.75	0.73	0.70
2	0.86	0.79	0.73	0.83	0.77	0.71	0.77	0.72	0.67	0.72	0.68	0.64	0.67	0.64	0.61	0.58
3	0.75	0.67	0.60	0.73	0.65	0.59	0.68	0.61	0.56	0.63	0.58	0.54	0.59	0.55	0.51	0.48
4	0.67	0.58	0.51	0.64	0.56	0.50	0.60	0.53	0.48	0.56	0.50	0.46	0.53	0.48	0.44	0.41
5	0.59	0.50	0.44	0.57	0.49	0.43	0.54	0.47	0.41	0.51	0.44	0.39	0.47	0.42	0.38	0.35
6	0.53	0.44	0.38	0.52	0.43	0.37	0.49	0.41	0.36	0.46	0.39	0.35	0.43	0.38	0.33	0.31
7	0.48	0.39	0.33	0.47	0.39	0.33	0.44	0.37	0.32	0.42	0.35	0.31	0.39	0.34	0.29	0.27
8	0.44	0.35	0.30	0.43	0.35	0.29	0.40	0.33	0.28	0.38	0.32	0.27	0.36	0.30	0.26	0.24
9	0.40	0.32	0.27	0.39	0.31	0.26	0.37	0.30	0.25	0.35	0.29	0.25	0.33	0.28	0.24	0.22
10	0.37	0.29	0.24	0.36	0.29	0.24	0.34	0.28	0.23	0.33	0.27	0.22	0.31	0.25	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	296.22	297.10	295.34	291.80	285.61	275.88	264.39	252.01	236.09
15.0	296.22	297.11	296.22	292.67	286.46	277.60	266.95	254.54	239.46
30.0	296.22	297.11	296.22	292.67	287.35	279.37	268.73	257.20	243.89
45.0	296.22	296.22	296.22	293.54	289.08	281.05	272.13	261.42	248.93
60.0	296.22	297.12	297.12	295.32	290.83	283.65	275.57	265.70	254.03
75.0	296.22	296.22	297.12	295.32	291.73	285.45	277.37	268.39	257.62
90.0	296.22	297.12	298.02	296.22	292.62	287.22	279.11	270.11	258.40
105.0	296.22	297.13	298.03	296.22	293.50	288.07	279.91	270.86	259.08
120.0	296.22	296.22	297.12	294.41	290.80	284.48	276.35	267.32	255.58
135.0	296.22	297.12	297.12	294.41	289.90	283.58	274.55	263.71	251.06
150.0	296.22	296.22	296.22	294.41	284.48	281.77	272.74	261.90	247.45
165.0	296.22	296.22	296.22	293.50	288.97	280.82	270.86	259.08	243.68
180.0	296.22	296.22	293.57	288.26	280.30	269.69	257.31	244.05	229.02
195.0	296.22	296.22	293.56	287.35	279.37	268.73	256.31	242.12	225.27
210.0	296.22	295.33	292.67	286.46	277.60	266.07	250.99	233.25	209.30
225.0	296.22	295.33	291.76	286.41	276.59	260.53	241.79	218.60	190.04
240.0	296.22	296.22	292.63	285.45	272.88	253.13	233.39	205.56	175.04
255.0	296.22	295.32	291.73	283.65	269.29	248.64	225.31	197.48	165.16
270.0	296.22	295.32	290.82	282.71	266.51	245.80	224.19	195.38	162.07
285.0	296.22	295.31	291.69	284.44	270.86	250.93	228.28	200.20	192.95
300.0	296.22	294.41	291.70	284.48	282.67	255.58	234.81	209.52	180.62
315.0	296.22	294.41	291.70	284.48	274.55	261.00	242.94	220.36	194.17
330.0	296.22	294.41	290.80	283.58	274.55	261.90	249.26	231.20	210.42
345.0	296.22	294.41	290.78	284.44	275.38	262.70	250.93	235.53	219.22
360.0	296.22	297.10	295.34	291.80	285.61	275.88	264.39	252.01	236.09
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	219.29	203.37	184.81	165.35	145.90	125.56	103.46	81.35	47.75
15.0	223.50	206.64	189.79	170.28	152.54	133.03	111.75	88.69	60.31
30.0	229.70	211.97	196.00	177.38	159.64	139.24	117.07	93.12	67.40
45.0	234.66	219.49	203.43	185.58	166.85	148.11	124.02	99.93	74.05
60.0	240.57	226.20	209.15	192.99	174.14	152.60	129.26	103.23	78.99
75.0	244.16	229.79	212.74	195.68	175.94	154.39	128.36	104.13	77.20
90.0	245.80	231.39	215.19	198.98	177.37	154.86	130.55	103.54	76.53
105.0	246.40	231.90	216.50	198.39	179.36	158.53	133.16	107.80	81.53
120.0	242.03	227.58	213.13	195.07	177.01	156.24	132.76	107.47	82.18
135.0	237.52	221.26	205.91	188.75	169.78	149.92	128.24	103.86	76.76
150.0	232.10	215.84	198.68	181.52	162.56	142.69	121.02	96.63	70.44
165.0	228.28	211.97	193.86	174.83	156.72	134.97	114.14	90.59	61.60
180.0	212.22	194.53	175.08	155.63	135.29	113.18	91.08	58.36	28.30
195.0	203.98	183.59	159.64	137.47	114.41	88.69	61.20	34.59	20.40
210.0	181.81	156.09	126.82	98.44	70.06	46.12	30.15	20.40	14.19
225.0	160.60	125.80	94.58	61.56	36.58	18.74	12.49	8.92	6.25
240.0	140.93	105.92	71.81	40.39	17.95	4.49	1.80	1.80	1.80
255.0	128.36	94.25	61.04	33.21	13.46	0.90	0.90	0.90	0.90
270.0	126.95	91.84	59.42	52.22	13.51	0.90	0.90	0.90	0.90
285.0	133.16	98.74	65.22	36.23	13.59	1.81	0.91	0.91	0.91
300.0	145.40	112.89	79.47	48.77	24.38	9.03	5.42	4.52	3.61
315.0	166.17	134.56	102.95	73.15	47.86	27.09	18.97	13.55	9.93
330.0	186.94	162.56	137.27	111.99	85.80	60.51	38.83	23.48	15.35
345.0	201.10	181.17	161.24	142.22	120.48	98.74	72.47	41.67	21.74
360.0	219.29	203.37	184.81	165.35	145.90	125.56	103.46	81.35	47.75

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	23.87	17.68	15.92	16.80	22.11	29.18	32.72	32.72	31.83
15.0	35.48	26.61	23.95	25.72	31.04	35.48	35.48	35.48	33.70
30.0	43.46	32.81	30.15	31.93	36.36	38.14	38.14	38.14	36.36
45.0	50.86	40.15	37.47	38.37	41.04	41.93	41.04	40.15	38.37
60.0	54.76	43.09	40.39	40.39	41.29	41.29	41.29	39.50	37.70
75.0	52.96	41.29	37.70	35.91	35.91	36.80	36.80	35.91	35.01
90.0	54.02	39.62	36.01	34.21	33.31	34.21	35.11	35.11	34.21
105.0	57.07	44.39	39.86	38.95	39.86	39.86	39.86	38.05	37.14
120.0	56.90	45.16	41.54	41.54	42.45	42.45	41.54	40.64	38.83
135.0	51.48	37.93	35.22	35.22	38.83	39.74	39.74	39.74	37.93
150.0	44.25	31.61	29.80	28.90	33.42	36.12	37.03	36.12	35.22
165.0	33.52	21.74	21.74	19.93	25.36	30.80	33.52	33.52	32.61
180.0	15.92	17.68	15.03	20.34	28.30	32.72	32.72	31.83	30.06
195.0	13.30	14.19	13.30	17.74	23.06	26.61	27.49	27.49	26.61
210.0	9.76	8.87	8.87	10.64	13.30	15.08	16.85	17.74	18.62
225.0	4.46	4.46	4.46	5.35	5.35	6.25	6.25	8.03	8.92
240.0	1.80	0.90	1.80	1.80	1.80	0.90	1.80	1.80	1.80
255.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
270.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
285.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.81
300.0	2.71	2.71	2.71	2.71	2.71	3.61	3.61	3.61	4.52
315.0	7.22	6.32	6.32	7.22	9.03	9.93	11.74	11.74	11.74
330.0	11.74	10.84	11.74	15.35	18.97	20.77	22.58	22.58	22.58
345.0	15.40	14.49	14.49	20.84	28.08	31.71	30.80	29.89	28.99
360.0	23.87	17.68	15.92	16.80	22.11	29.18	32.72	32.72	31.83
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	30.06	28.30	26.53	23.87	20.34	15.92	11.50	7.07	2.65
15.0	32.81	30.15	27.49	24.83	21.29	16.85	12.42	7.10	3.55
30.0	34.59	32.81	29.27	25.72	22.17	16.85	12.42	7.10	3.55
45.0	36.58	33.90	30.34	26.77	22.31	17.84	12.49	7.14	3.57
60.0	35.91	33.21	30.52	26.93	22.44	17.95	12.57	8.08	3.59
75.0	34.11	31.42	29.62	26.03	22.44	17.95	12.57	8.08	3.59
90.0	33.31	31.51	28.81	26.11	22.51	18.01	12.61	8.10	3.60
105.0	34.42	32.61	29.89	26.27	22.65	18.12	12.68	8.15	3.62
120.0	36.12	33.42	30.71	27.09	22.58	18.06	13.55	8.13	3.61
135.0	36.12	33.42	30.71	26.19	22.58	18.06	13.55	8.13	3.61
150.0	33.42	31.61	28.90	26.19	22.58	18.06	12.64	8.13	4.52
165.0	30.80	29.89	27.18	24.46	21.74	17.21	12.68	8.15	4.53
180.0	28.30	26.53	22.99	20.34	16.80	12.38	7.96	2.65	1.77
195.0	25.72	23.95	21.29	18.62	14.19	13.30	6.21	2.66	1.77
210.0	18.62	18.62	17.74	15.08	11.53	7.98	4.43	2.66	1.77
225.0	9.81	9.81	9.81	8.92	8.03	4.46	2.68	1.78	1.78
240.0	2.69	3.59	4.49	5.39	5.39	3.59	2.69	1.80	1.80
255.0	1.80	3.59	4.49	6.28	5.39	3.59	2.69	1.80	1.80
270.0	1.80	2.70	4.50	5.40	5.40	3.60	2.70	1.80	1.80
285.0	2.72	3.62	5.44	6.34	5.44	4.53	2.72	1.81	1.81
300.0	5.42	5.42	6.32	6.32	5.42	3.61	2.71	1.81	1.81
315.0	11.74	12.64	11.74	10.84	9.03	5.42	2.71	1.81	1.81
330.0	21.67	20.77	17.16	15.35	11.74	8.13	4.52	2.71	1.81
345.0	27.18	24.46	20.84	18.12	14.49	9.96	6.34	2.72	1.81
360.0	30.06	28.30	26.53	23.87	20.34	15.92	11.50	7.07	2.65

Intensity data(cd)

C/ γ (°)	180.0
0.0	1.77
15.0	1.77
30.0	1.77
45.0	1.78
60.0	1.80
75.0	1.80
90.0	1.80
105.0	1.81
120.0	1.81
135.0	1.81
150.0	1.81
165.0	1.81
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	1.77