
乐达凯

Client:

LumCAT: EMAV1604LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP25010150

Voltage(V): 119.980

LampCAT:

Current(A): 0.146

Lamp flux(lm): 1113.6

Power (W): 17.310

Number of Lamps: 1

PF: 0.989

Length(mm): 335

Width(mm): 105

Phm Type: C

Height(mm): 25

Photometric Results

Lumens(lm): 1113.59, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 64.33

Central intensity(cd): 313.730, Maximum intensity(cd): 315.621

Angle of maximum intensity: C=90.0 γ =10.0

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

[C90/270]Total=113.0

Field angle(10%Imax): [C0/180]Total=267.6

[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(%): 12.78%

Down flux rate of lamp(%): 87.22%

Up flux rate of LUM(%): 12.78%

Down flux rate of LUM(%): 87.22%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 64.712%

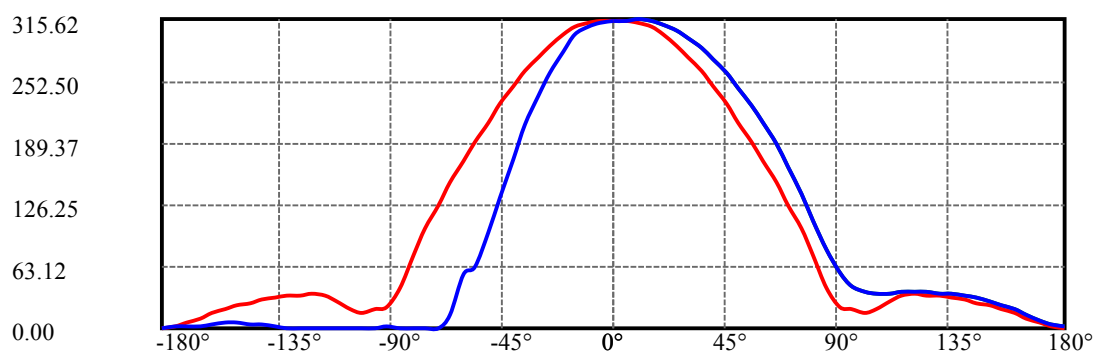
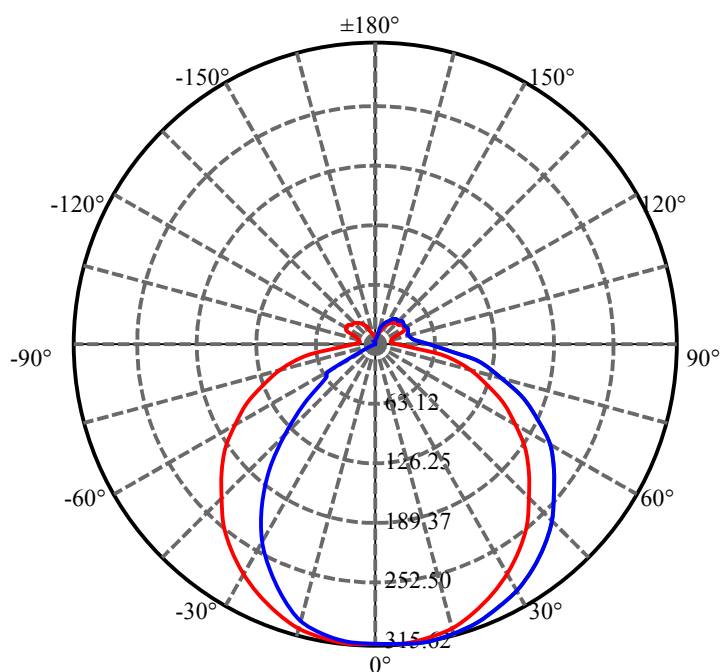
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	313.730	0.000	0	0.00%	0.00%
5.0	313.638	7.500	7.5	0.67%	0.67%
10.0	311.867	22.376	29.876	2.01%	2.68%
15.0	307.037	36.713	66.589	3.30%	5.98%
20.0	298.944	49.941	116.531	4.48%	10.46%
25.0	286.673	61.420	177.951	5.52%	15.98%
30.0	272.621	70.779	248.73	6.36%	22.34%
35.0	255.488	77.768	326.498	6.98%	29.32%
40.0	236.274	82.047	408.544	7.37%	36.69%
45.0	212.451	83.085	491.63	7.46%	44.15%
50.0	188.971	81.113	572.743	7.28%	51.43%
55.0	164.882	76.939	649.682	6.91%	58.34%
60.0	142.033	70.942	720.625	6.37%	64.71%
65.0	118.784	63.405	784.03	5.69%	70.41%
70.0	98.077	54.911	838.94	4.93%	75.34%
75.0	79.796	46.493	885.433	4.18%	79.51%
80.0	61.495	37.806	923.239	3.39%	82.91%
85.0	43.197	28.447	951.687	2.55%	85.46%
90.0	28.366	19.594	971.281	1.76%	87.22%
95.0	22.368	13.891	985.172	1.25%	88.47%
100.0	20.744	11.714	996.887	1.05%	89.52%
105.0	21.683	11.352	1008.239	1.02%	90.54%
110.0	24.463	12.062	1020.301	1.08%	91.62%
115.0	26.393	12.877	1033.178	1.16%	92.78%
120.0	26.806	12.933	1046.111	1.16%	93.94%
125.0	26.540	12.331	1058.441	1.11%	95.05%
130.0	25.908	11.404	1069.845	1.02%	96.07%
135.0	25.001	10.287	1080.132	0.92%	97.00%
140.0	23.772	9.031	1089.163	0.81%	97.81%
145.0	21.999	7.637	1096.8	0.69%	98.49%
150.0	19.665	6.135	1102.935	0.55%	99.04%
155.0	16.577	4.586	1107.521	0.41%	99.46%
160.0	12.846	3.086	1110.607	0.28%	99.73%
165.0	8.921	1.794	1112.401	0.16%	99.89%
170.0	5.347	0.846	1113.248	0.08%	99.97%
175.0	2.839	0.293	1113.54	0.03%	100.00%
180.0	0.987	0.046	1113.586	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	248.73	22.34%	22.34%
0-40	408.54	36.69%	36.69%
0-60	720.62	64.71%	64.71%
0-90	971.28	87.22%	87.22%
0-120	1046.11	93.94%	93.94%
0-180	1113.59	100.00%	100.00%
60-90	250.66	22.51%	22.51%
90-120	74.83	6.72%	6.72%
90-130	98.56	8.85%	8.85%
90-150	131.65	11.82%	11.82%
90-180	142.26	12.77%	12.77%
0-75.72	890.87	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	29.88
10-20	86.65
20-30	132.20
30-40	159.81
40-50	164.20
50-60	147.88
60-70	118.32
70-80	84.30
80-90	48.04
90-100	25.61
100-110	23.41
110-120	25.81
120-130	23.73
130-140	19.32
140-150	13.77
150-160	7.67
160-170	2.64
170-180	0.29



C90(Max): —————

C0/C180: —————

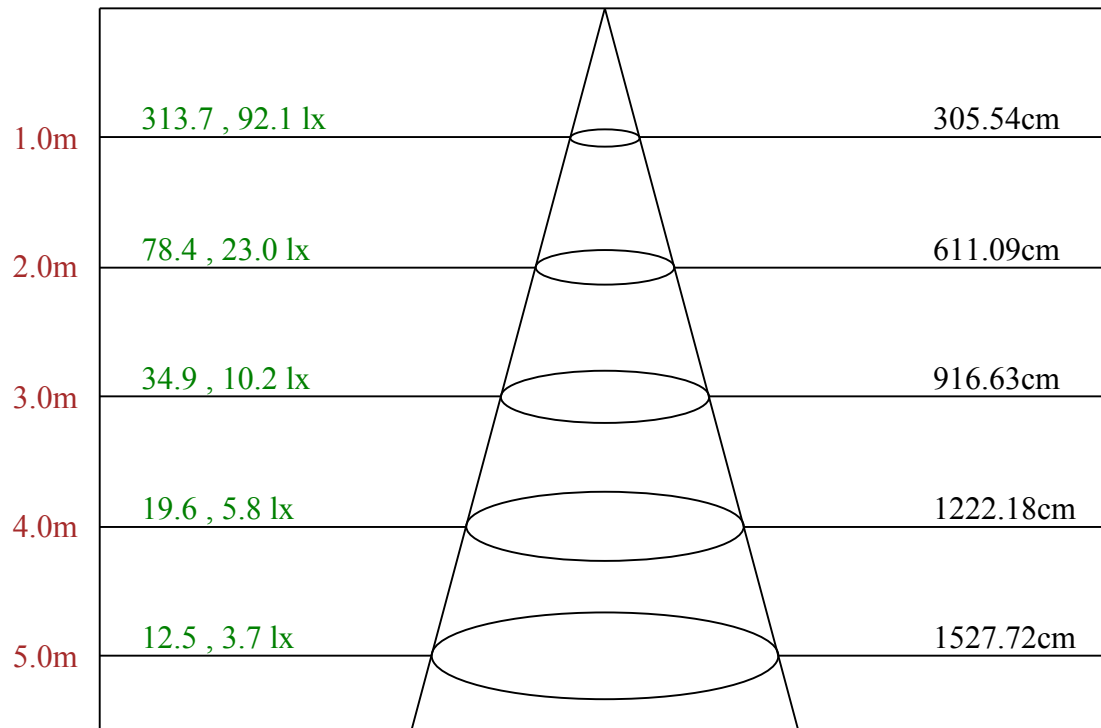
C90/C270: —————

Field angle(10%Imax):C0/180Left:138.8 Right:128.8

:C90/270Left:72.9 Right:133.2

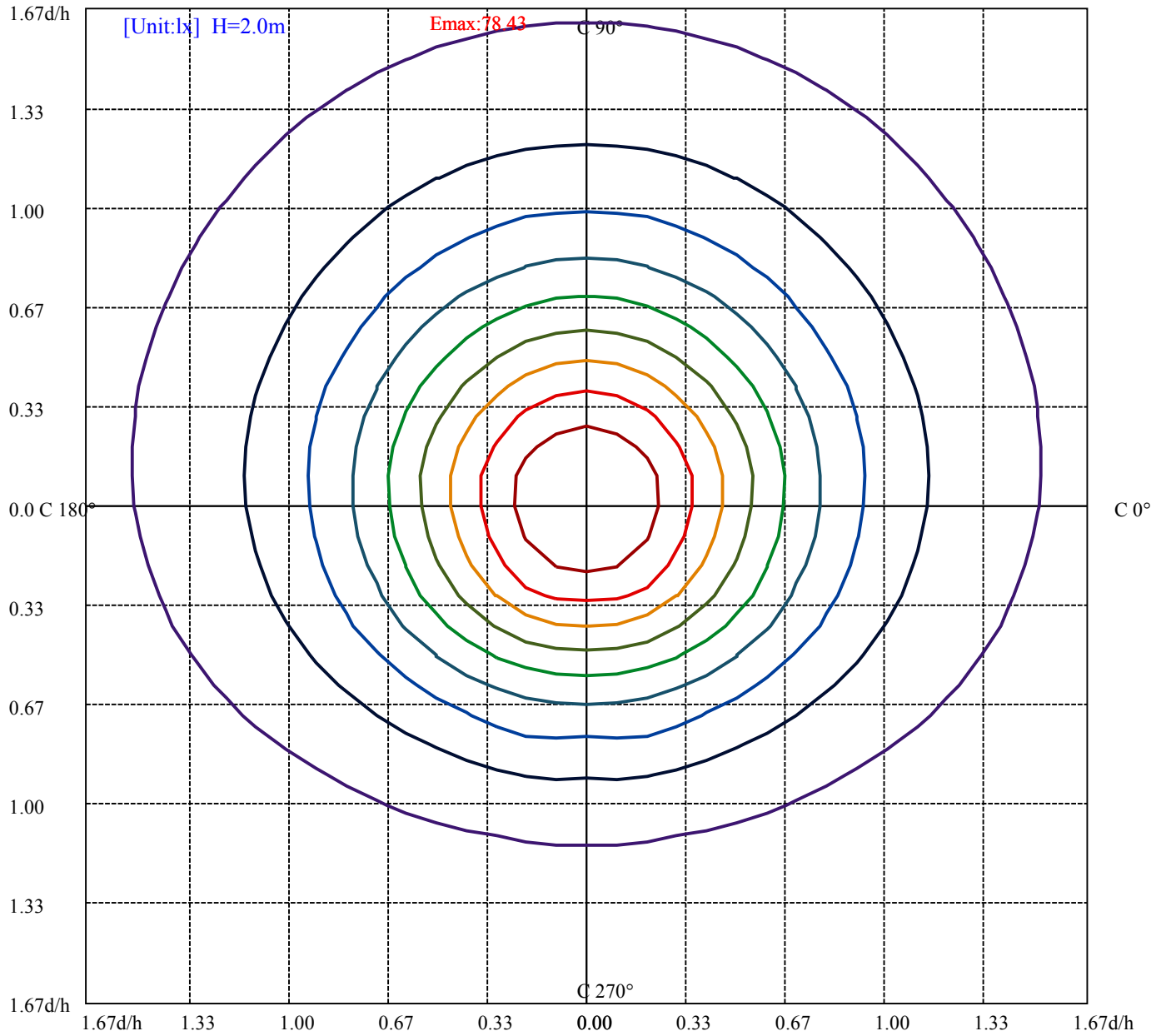
Beam Angle(50%Imax):C0/180Left:68.1 Right:58.1

:C90/270Left:51.8 Right:61.2

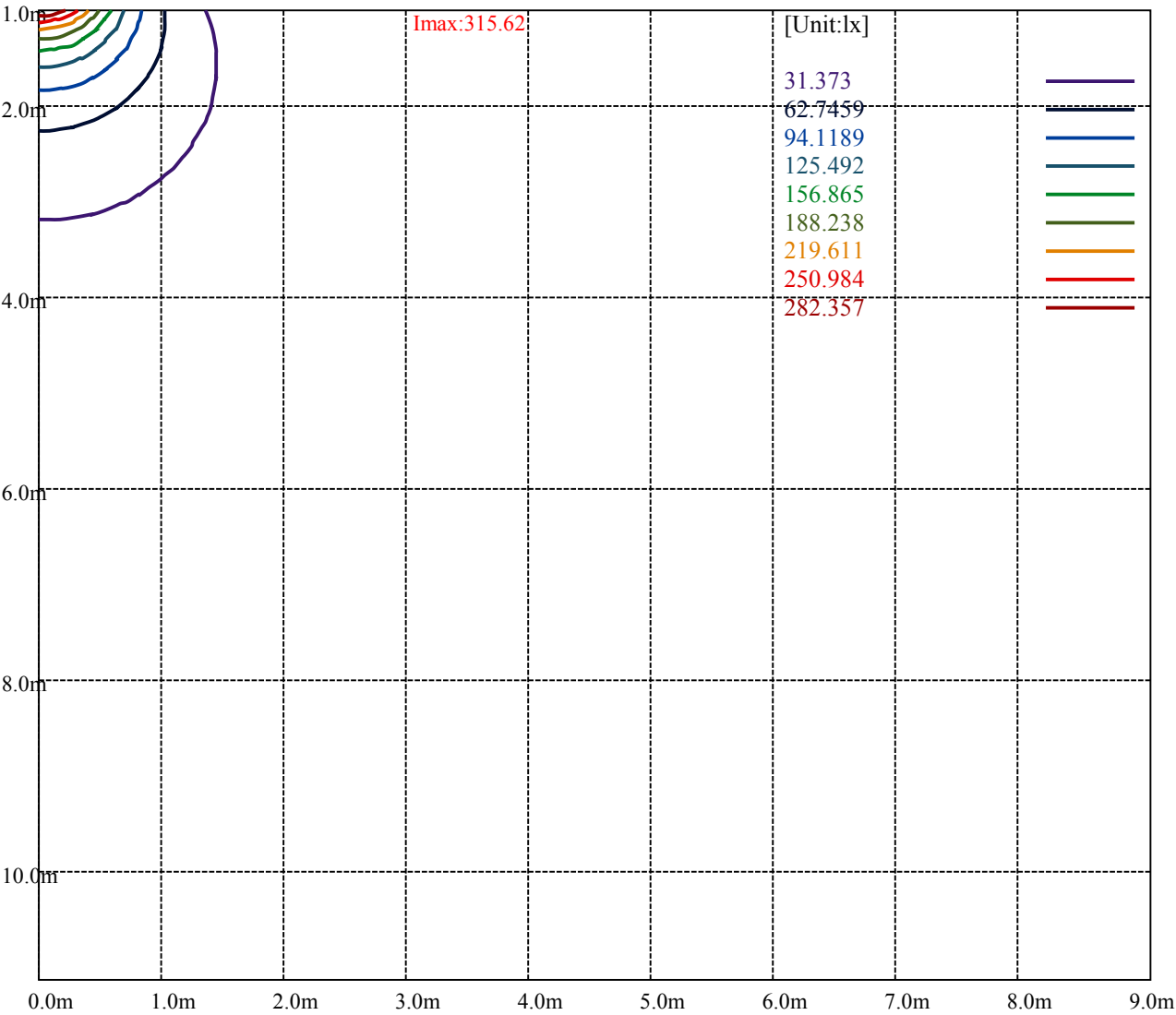


Max , Ave

Beam angle of C90 plane 113.58



(10%Emax)	7.84325	—
(20%Emax)	15.68647	—
(30%Emax)	23.52972	—
(40%Emax)	31.373	—
(50%Emax)	39.21625	—
(60%Emax)	47.0595	—
(70%Emax)	54.90275	—
(80%Emax)	62.746	—
(90%Emax)	70.58925	—



Luminance Table

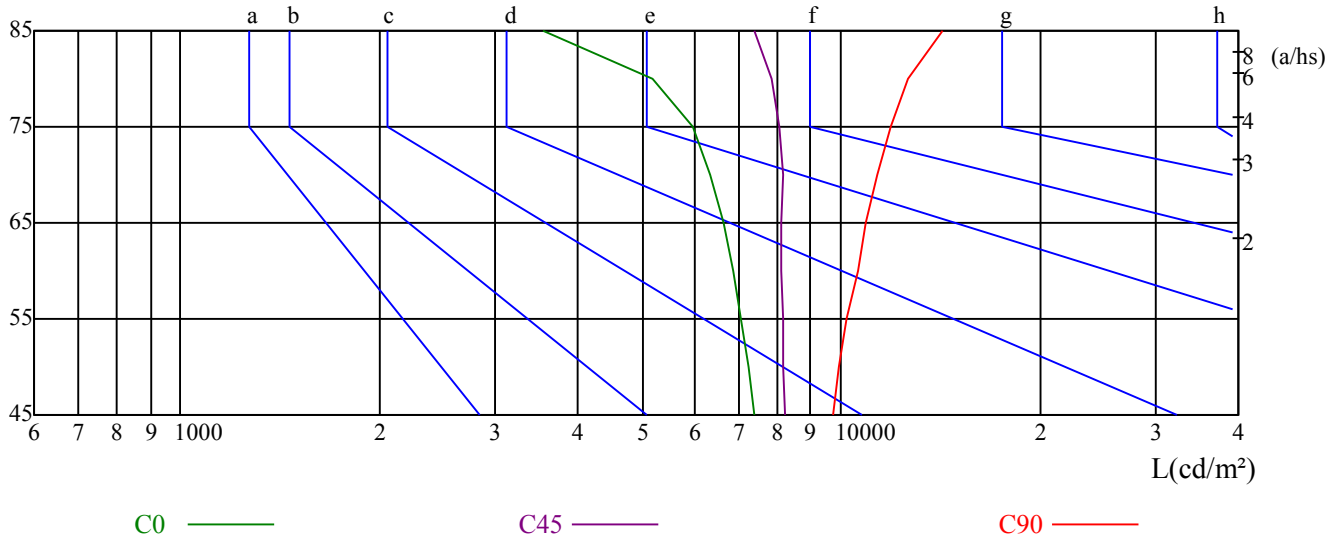
γ	45	50	55	60	65	70	75	80	85
C0	7421	7250	7055	6852	6629	6351	5979	5173	3539
C45	8243	8184	8163	8145	8141	8151	8045	7851	7409
C90	9736	9944	10200	10605	10903	11336	11868	12627	14219

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10014	6790	7497	11291	7621	8255	13170	13321	14468

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

 $\gamma(^{\circ})$ 

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	313.73	314.35	312.85	308.87	301.98	292.26	279.89	266.46	250.29
15.0	313.73	314.53	313.64	310.18	303.71	294.04	282.77	269.82	254.21
30.0	313.73	314.71	314.00	310.71	304.85	296.16	285.15	273.17	258.53
45.0	313.73	313.91	313.82	311.23	305.88	298.04	288.50	277.09	263.89
60.0	313.73	314.54	314.63	312.56	307.90	300.55	291.67	281.45	268.90
75.0	313.73	314.00	314.81	313.10	309.06	302.60	293.99	284.30	272.54
90.0	313.73	314.63	315.62	314.00	310.31	304.45	295.99	286.35	274.29
105.0	313.73	314.82	315.81	313.91	310.38	304.50	296.08	286.76	274.00
120.0	313.73	314.00	314.72	312.65	308.67	301.80	293.12	283.18	270.80
135.0	313.73	314.72	315.09	312.55	307.94	300.35	291.04	279.93	266.64
150.0	313.73	314.36	314.63	312.19	301.35	299.27	289.14	277.39	262.84
165.0	313.73	314.09	314.18	311.46	306.48	297.41	286.81	274.48	258.34
180.0	313.73	313.82	311.17	305.25	296.77	285.37	272.91	258.33	242.78
195.0	313.73	313.64	310.80	304.42	296.34	284.64	271.77	257.05	238.51
210.0	313.73	313.55	309.91	303.79	294.12	281.69	266.25	247.34	222.05
225.0	313.73	312.93	309.18	302.94	292.51	276.11	255.78	231.08	201.58
240.0	313.73	313.10	309.34	302.25	288.44	268.27	246.66	217.79	185.69
255.0	313.73	312.56	309.06	300.18	285.19	263.12	239.07	208.82	175.35
270.0	313.73	312.56	308.24	299.32	282.84	260.51	237.73	206.93	171.54
285.0	313.73	313.01	308.39	301.06	286.40	265.32	241.61	212.29	204.42
300.0	313.73	312.74	309.03	301.98	299.36	270.62	248.65	222.17	191.44
315.0	313.73	312.46	309.12	301.44	290.77	276.67	257.96	234.01	206.17
330.0	313.73	311.92	308.31	301.17	291.22	277.48	264.65	245.49	223.61
345.0	313.73	312.37	308.47	301.67	292.16	278.92	265.69	250.00	232.15
360.0	313.73	314.35	312.85	308.87	301.98	292.26	279.89	266.46	250.29
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	232.36	214.95	195.69	175.55	154.79	133.05	109.29	86.32	50.62
15.0	236.92	218.56	200.90	180.15	161.43	140.59	118.41	94.20	63.60
30.0	243.17	225.07	207.76	187.79	169.07	147.95	124.52	98.69	71.89
45.0	248.56	232.51	214.95	196.49	176.70	156.73	131.32	106.27	78.63
60.0	254.46	239.76	221.83	204.16	183.90	161.84	136.74	109.57	83.21
75.0	258.63	243.10	225.70	206.94	186.12	163.77	136.22	110.20	81.66
90.0	260.24	244.84	227.73	210.62	188.02	164.34	138.13	109.77	80.77
105.0	260.88	245.68	228.94	210.30	189.67	168.04	141.16	114.47	85.97
120.0	256.52	241.24	225.78	206.44	188.00	166.04	141.00	113.98	87.49
135.0	252.18	235.09	218.46	199.75	180.14	158.54	136.03	109.91	81.62
150.0	246.57	229.22	210.69	192.79	172.64	151.22	128.17	102.86	74.30
165.0	242.21	225.17	205.95	185.65	165.97	142.95	121.10	96.18	65.18
180.0	224.67	205.94	185.80	164.86	142.95	119.71	96.30	62.20	30.13
195.0	216.60	194.52	169.24	145.38	121.34	94.02	64.40	36.81	22.00
210.0	193.03	165.61	134.72	104.01	74.55	48.99	32.04	22.10	14.82
225.0	170.19	133.28	100.03	65.26	38.51	20.24	13.19	9.90	7.04
240.0	149.02	111.90	75.85	43.22	19.37	4.39	1.88	1.61	1.52
255.0	136.13	99.52	64.88	35.54	14.18	1.35	0.72	0.72	0.90
270.0	134.26	97.61	62.76	55.56	13.87	0.81	0.63	0.81	0.90
285.0	140.89	104.15	68.68	38.82	14.57	2.17	0.63	0.72	0.90
300.0	154.38	119.85	84.15	51.70	25.40	9.76	5.88	4.79	3.80
315.0	176.07	142.99	109.64	77.55	50.44	28.65	20.07	14.64	10.12
330.0	198.04	172.55	145.79	118.95	91.20	64.26	40.85	24.86	16.54
345.0	212.84	192.17	171.23	151.29	127.99	104.43	76.42	44.33	23.12
360.0	232.36	214.95	195.69	175.55	154.79	133.05	109.29	86.32	50.62

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	25.18	18.91	16.87	17.67	23.59	31.10	34.72	34.28	33.40
15.0	37.25	27.94	25.19	27.05	33.08	37.25	37.70	37.17	36.10
30.0	46.42	35.14	32.13	33.90	38.61	40.38	40.65	40.03	38.61
45.0	53.76	42.88	39.94	40.74	43.42	44.13	43.60	42.26	40.39
60.0	57.83	45.91	42.59	42.68	44.11	44.11	43.31	41.96	40.17
75.0	56.54	43.43	39.93	38.50	38.41	39.04	38.86	38.14	37.33
90.0	56.82	42.32	37.91	36.02	35.39	36.65	36.83	36.74	36.02
105.0	60.00	46.51	42.44	41.35	41.90	42.17	41.72	40.45	38.91
120.0	59.93	47.63	43.84	43.66	45.19	45.37	44.38	43.11	41.13
135.0	54.41	40.67	37.15	37.06	40.76	42.57	42.57	41.76	40.13
150.0	46.64	33.35	31.27	30.82	35.79	38.69	38.96	38.59	37.60
165.0	35.53	22.66	22.66	21.39	26.56	32.63	35.81	35.17	34.36
180.0	17.32	18.55	15.99	21.38	29.69	34.63	34.19	33.31	31.89
195.0	14.46	15.17	13.66	18.72	24.84	28.12	29.18	29.18	28.65
210.0	9.94	9.76	9.58	11.09	13.76	15.97	17.66	18.90	19.61
225.0	5.08	4.81	4.81	5.44	5.97	6.69	6.95	8.92	9.81
240.0	1.43	1.34	1.43	1.43	1.43	1.34	1.43	1.52	2.15
255.0	0.90	0.90	0.81	0.81	0.90	0.90	0.81	0.81	1.26
270.0	0.99	0.90	0.90	0.90	0.90	0.81	0.81	0.72	0.90
285.0	0.90	1.00	0.90	0.81	0.90	0.90	0.81	0.90	1.54
300.0	3.07	2.98	2.89	3.16	3.25	3.53	3.62	3.89	4.61
315.0	7.41	6.96	7.05	7.95	9.22	10.85	12.20	12.74	12.65
330.0	12.38	11.57	12.11	16.00	19.98	22.42	23.59	24.31	24.31
345.0	16.59	15.50	15.77	21.85	29.46	33.18	33.00	32.09	30.28
360.0	25.18	18.91	16.87	17.67	23.59	31.10	34.72	34.28	33.40
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	32.07	30.39	28.10	25.09	21.29	17.05	12.28	7.60	2.56
15.0	34.33	32.20	29.54	26.34	22.44	17.83	12.95	7.81	3.73
30.0	36.83	34.43	31.33	27.42	23.16	18.28	13.22	7.99	3.73
45.0	38.34	35.57	32.10	28.17	23.63	18.63	13.37	7.93	3.74
60.0	37.75	35.24	32.01	28.24	23.76	18.74	13.63	8.25	3.86
75.0	35.81	33.65	31.23	27.64	23.51	18.76	13.55	8.26	3.86
90.0	35.03	33.14	30.71	27.46	23.41	18.64	13.60	8.37	4.05
105.0	36.83	34.30	31.40	27.78	23.71	19.09	13.85	8.60	4.07
120.0	38.59	35.61	32.45	28.38	24.04	19.07	14.10	8.77	4.25
135.0	38.14	35.43	32.18	28.20	24.13	19.25	14.10	8.68	4.25
150.0	35.79	33.53	31.00	27.66	23.50	18.98	13.74	8.68	4.43
165.0	33.09	31.45	29.19	26.11	22.66	18.13	13.60	8.70	4.35
180.0	29.95	27.74	24.56	21.29	17.67	12.72	8.04	3.09	1.77
195.0	27.67	25.46	22.71	19.60	15.26	14.10	6.92	2.66	1.95
210.0	20.15	20.15	18.64	15.89	11.89	8.43	5.06	2.57	1.77
225.0	10.52	10.70	10.70	9.09	8.20	5.08	3.30	2.23	1.96
240.0	2.96	3.95	5.02	6.01	5.74	4.03	2.78	1.97	1.79
255.0	2.06	3.50	5.03	6.28	5.92	4.22	2.87	1.88	1.62
270.0	1.62	2.97	4.50	5.31	5.31	3.69	2.61	1.89	1.71
285.0	2.62	4.25	5.79	6.97	6.15	4.34	2.90	1.99	1.63
300.0	5.33	5.97	6.51	6.69	5.60	4.16	2.80	1.99	1.72
315.0	12.65	13.38	12.47	11.39	9.22	5.69	3.25	2.17	1.72
330.0	23.41	21.87	18.44	15.91	12.38	8.59	4.70	2.89	1.72
345.0	28.46	25.65	22.39	19.04	15.23	10.79	6.89	3.35	1.90
360.0	32.07	30.39	28.10	25.09	21.29	17.05	12.28	7.60	2.56

Intensity data(cd)

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C/ $\gamma(^{\circ})$	180.0
0.0	1.77
15.0	1.86
30.0	1.95
45.0	1.96
60.0	1.97
75.0	1.97
90.0	1.98
105.0	2.08
120.0	2.08
135.0	1.99
150.0	1.99
165.0	2.08
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