
乐达凯

Client:

LumCAT: AVRW0717LAJUDBK-3000K

Luminaire: LED LAMP

Report No:

Ballast type:

Test No: LCZP25090316

Voltage(V): 120.080

LampCAT:

Current(A): 0.171

Lamp flux(lm): 1136.4

Power (W): 20.360

Number of Lamps: 1

PF: 0.991

Length(mm): -60

Width(mm): -60

Phm Type: C

Height(mm): 285

Photometric Results

Lumens(lm): 1136.44, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 55.82

Central intensity(cd): 22.430, Maximum intensity(cd): 180.782

Angle of maximum intensity: C=75.0 γ =85.0

Beam Angle(50%Imax): [C0/180]Total=290.0

[C90/270]Total=117.1

Field angle(10%Imax): [C0/180]Total=331.4

[C90/270]Total=221.5

Maximum s/h(1/2): C0_180=4.48 C90_270=6.42

Maximum s/h(1/4): C0_180=4.24 C90_270=5.92

Up flux rate of lamp(%): 46.87%

Down flux rate of lamp(%): 53.14%

Up flux rate of LUM(%): 46.87%

Down flux rate of LUM(%): 53.13%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 22.223%

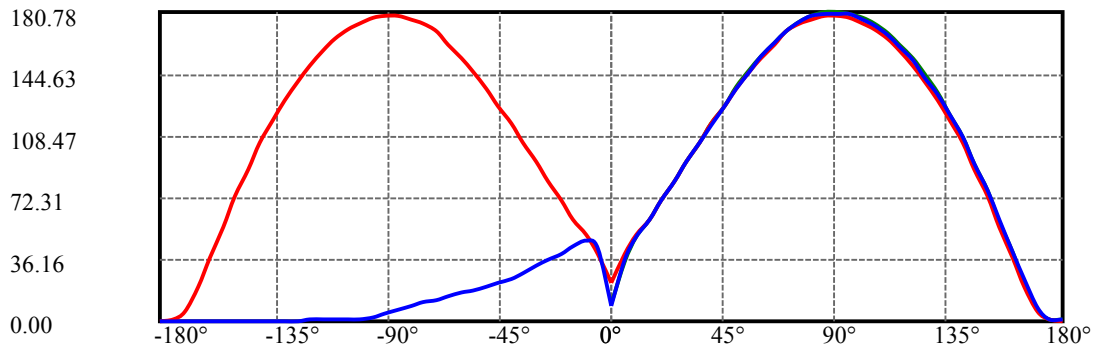
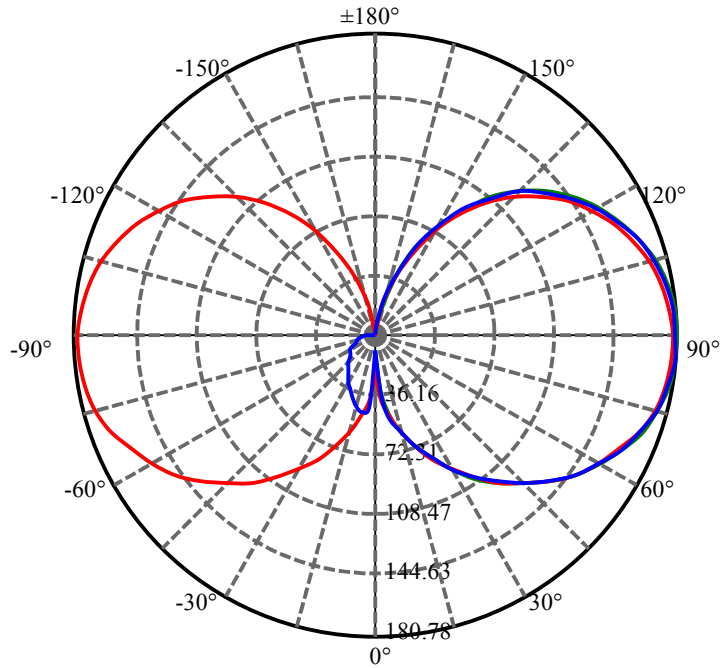
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	16.560	0.000	0	0.00%	0.00%
5.0	39.177	0.666	0.666	0.06%	0.06%
10.0	50.093	3.193	3.86	0.28%	0.34%
15.0	54.608	6.211	10.071	0.55%	0.89%
20.0	59.894	9.437	19.507	0.83%	1.72%
25.0	64.818	13.080	32.587	1.15%	2.87%
30.0	70.399	17.112	49.699	1.51%	4.37%
35.0	75.954	21.551	71.25	1.90%	6.27%
40.0	81.472	26.265	97.516	2.31%	8.58%
45.0	86.776	31.152	128.668	2.74%	11.32%
50.0	92.451	36.215	164.884	3.19%	14.51%
55.0	97.782	41.363	206.247	3.64%	18.15%
60.0	102.555	46.307	252.554	4.07%	22.22%
65.0	106.798	50.894	303.448	4.48%	26.70%
70.0	110.697	55.071	358.519	4.85%	31.55%
75.0	113.531	58.610	417.129	5.16%	36.70%
80.0	114.944	61.134	478.263	5.38%	42.08%
85.0	115.325	62.570	540.832	5.51%	47.59%
90.0	114.821	63.016	603.848	5.55%	53.13%
95.0	113.703	62.572	666.42	5.51%	58.64%
100.0	111.770	61.266	727.686	5.39%	64.03%
105.0	109.079	59.093	786.779	5.20%	69.23%
110.0	105.415	56.065	842.844	4.93%	74.17%
115.0	100.952	52.253	895.098	4.60%	78.76%
120.0	95.707	47.808	942.906	4.21%	82.97%
125.0	89.554	42.822	985.728	3.77%	86.74%
130.0	82.675	37.448	1023.177	3.30%	90.03%
135.0	74.844	31.829	1055.006	2.80%	92.83%
140.0	66.156	26.107	1081.113	2.30%	95.13%
145.0	55.767	20.342	1101.455	1.79%	96.92%
150.0	45.027	14.843	1116.298	1.31%	98.23%
155.0	34.063	10.009	1126.306	0.88%	99.11%
160.0	23.536	6.041	1132.348	0.53%	99.64%
165.0	12.433	2.964	1135.312	0.26%	99.90%
170.0	3.731	0.959	1136.271	0.08%	99.98%
175.0	0.748	0.160	1136.431	0.01%	100.00%
180.0	0.318	0.013	1136.444	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	49.70	4.37%	4.37%
0-40	97.52	8.58%	8.58%
0-60	252.55	22.22%	22.22%
0-90	603.85	53.14%	53.13%
0-120	942.91	82.97%	82.97%
0-180	1136.44	100.00%	100.00%
60-90	351.29	30.91%	30.91%
90-120	339.06	29.84%	29.83%
90-130	419.33	36.90%	36.90%
90-150	512.45	45.09%	45.09%
90-180	532.58	46.86%	46.86%
0-116.47	909.16	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	3.86
10-20	15.65
20-30	30.19
30-40	47.82
40-50	67.37
50-60	87.67
60-70	105.97
70-80	119.74
80-90	125.59
90-100	123.84
100-110	115.16
110-120	100.06
120-130	80.27
130-140	57.94
140-150	35.18
150-160	16.05
160-170	3.92
170-180	0.16



C75(Max): ———

C0/C180: ———

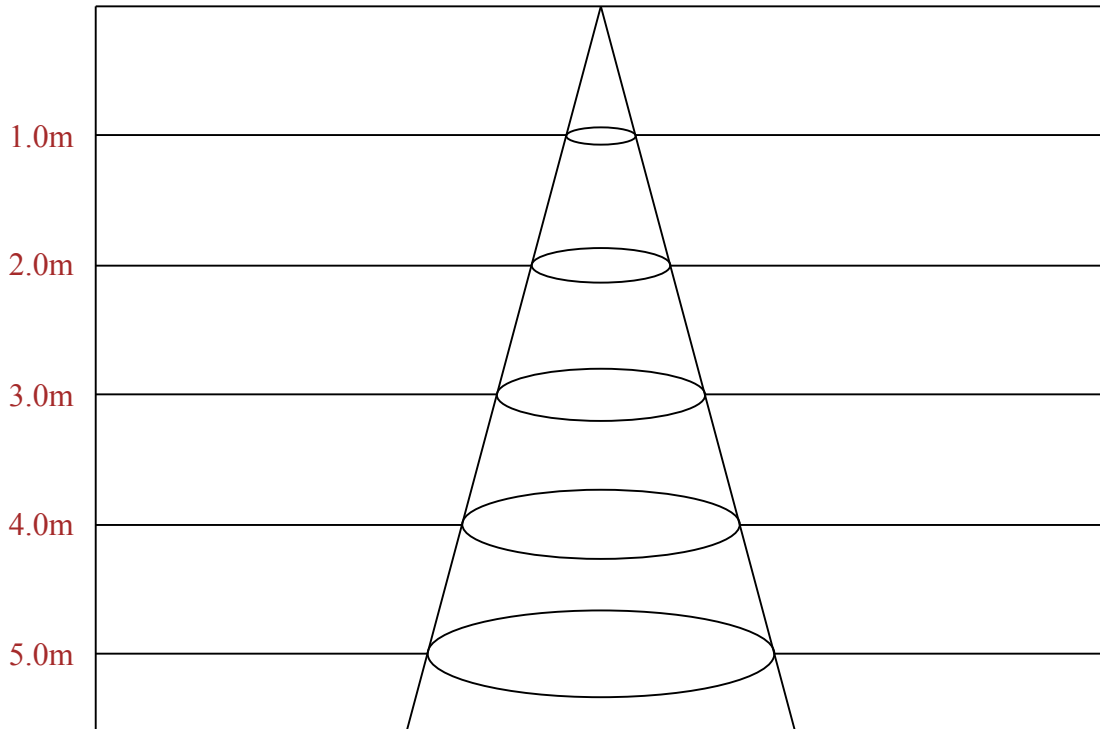
C90/C270: ———

Field angle(10%Imax):C0/180Left:255.7 Right:75.7

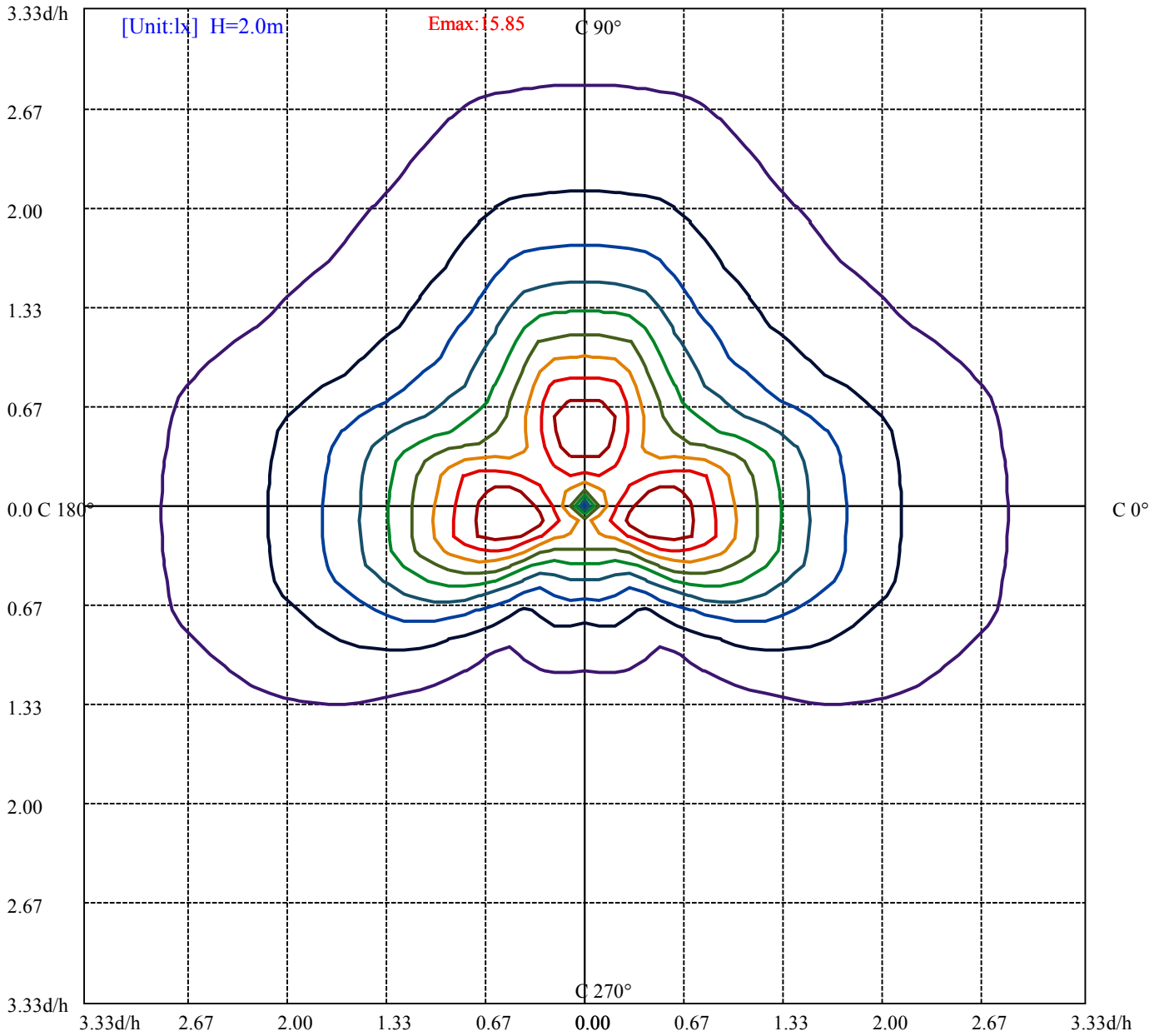
:C90/270Left:144.6 Right:76.9

Beam Angle(50%Imax):C0/180Left:235.0 Right:55.0

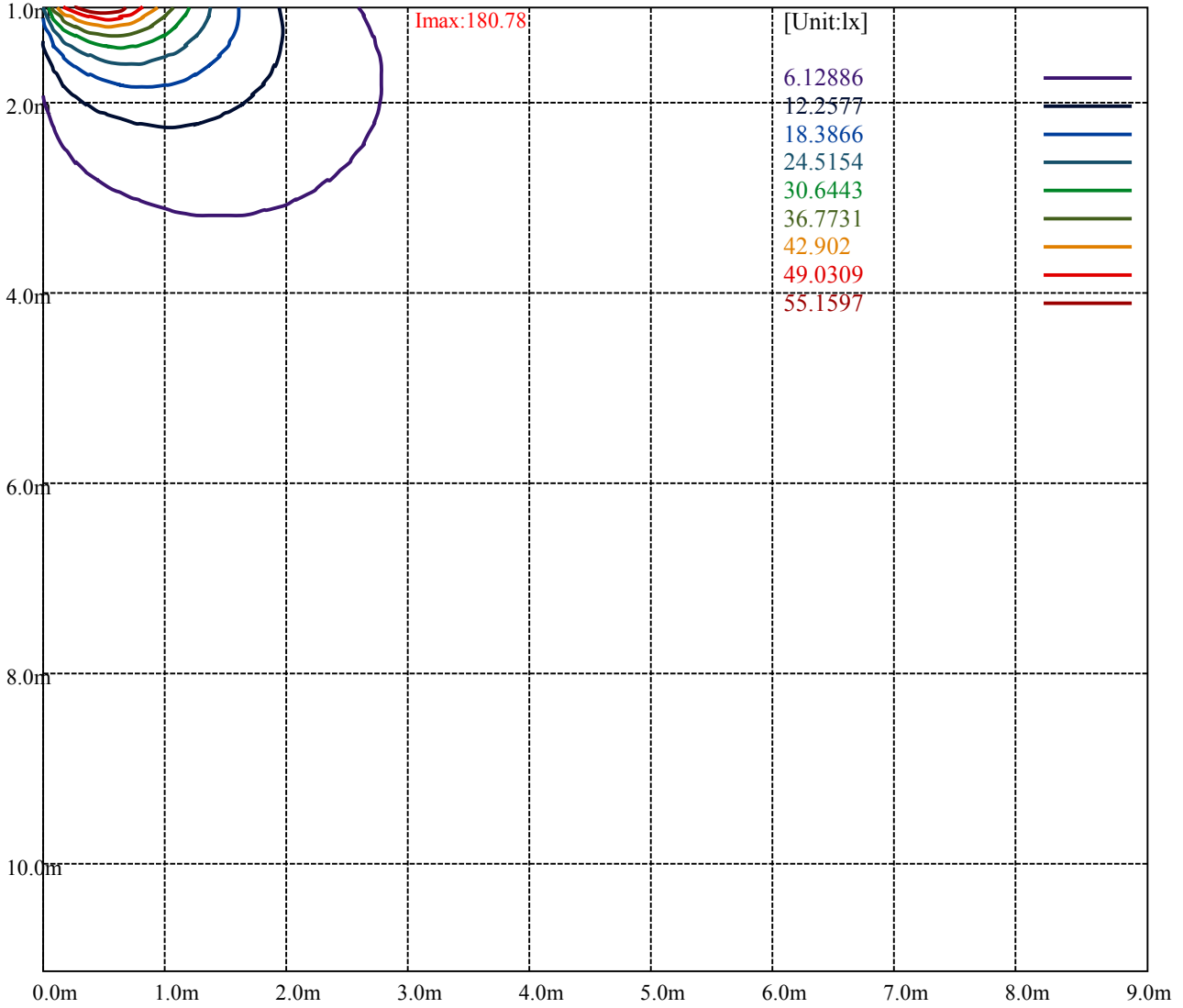
:C90/270Left:61.4 Right:55.7



Max , Ave Beam angle of C75 plane 214.72



- (10%Emax) 1.585248
- (20%Emax) 3.1705
- (30%Emax) 4.75575
- (40%Emax) 6.341
- (50%Emax) 7.92625
- (60%Emax) 9.5115
- (70%Emax) 11.09675
- (80%Emax) 12.682
- (90%Emax) 14.26723



Luminance Table

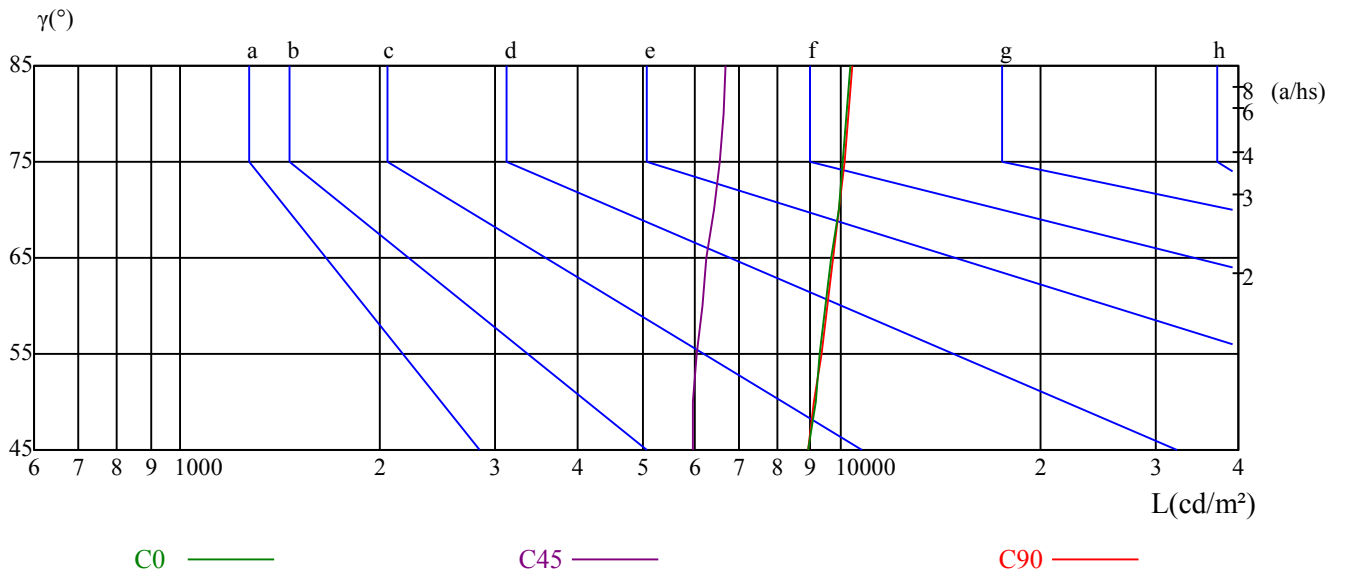
γ	45	50	55	60	65	70	75	80	85
C0	8914	9139	9314	9496	9699	9927	10083	10201	10326
C45	5963	5954	6042	6172	6270	6407	6541	6629	6708
C90	8933	9112	9345	9523	9739	9954	10158	10276	10409

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
135487	74032	66936	237661	127137	115398	724147	377729	344416

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	1.08	1.08	1.08	1.00	1.00	1.00	0.85	0.85	0.85	0.71	0.71	0.71	0.59	0.59	0.59	0.53
1	0.86	0.80	0.75	0.79	0.74	0.69	0.66	0.62	0.58	0.54	0.51	0.48	0.43	0.41	0.39	0.33
2	0.72	0.64	0.57	0.66	0.59	0.52	0.55	0.49	0.44	0.45	0.40	0.36	0.35	0.32	0.28	0.24
3	0.62	0.52	0.45	0.57	0.48	0.41	0.47	0.40	0.35	0.38	0.33	0.28	0.29	0.25	0.22	0.18
4	0.54	0.44	0.36	0.49	0.40	0.34	0.40	0.34	0.28	0.33	0.27	0.23	0.25	0.21	0.18	0.14
5	0.47	0.37	0.30	0.43	0.34	0.28	0.36	0.29	0.23	0.29	0.23	0.19	0.22	0.18	0.14	0.11
6	0.42	0.32	0.25	0.38	0.30	0.23	0.32	0.25	0.20	0.25	0.20	0.16	0.20	0.15	0.12	0.09
7	0.37	0.28	0.22	0.34	0.26	0.20	0.28	0.22	0.17	0.23	0.18	0.13	0.18	0.14	0.10	0.07
8	0.34	0.25	0.19	0.31	0.23	0.17	0.26	0.19	0.14	0.21	0.15	0.12	0.16	0.12	0.09	0.06
9	0.30	0.22	0.16	0.28	0.20	0.15	0.23	0.17	0.13	0.19	0.14	0.10	0.15	0.11	0.08	0.05
10	0.28	0.20	0.14	0.26	0.18	0.13	0.21	0.15	0.11	0.17	0.12	0.09	0.14	0.10	0.07	0.05

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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	22.43	31.49	47.46	56.34	66.48	77.34	88.46	99.32	108.83
15.0	19.38	32.84	49.17	56.70	67.47	78.23	90.08	101.20	110.80
30.0	14.98	33.20	50.51	53.83	59.12	64.60	70.52	77.07	82.63
45.0	12.38	35.17	50.96	53.20	57.42	62.26	66.93	72.49	78.32
60.0	9.06	36.52	50.87	57.24	63.70	69.98	76.44	83.62	90.08
75.0	9.06	35.80	50.24	60.02	71.24	81.73	93.67	104.88	115.38
90.0	9.51	36.25	49.70	59.75	71.24	81.73	93.22	104.70	114.93
105.0	11.84	34.54	49.43	59.48	70.52	81.64	92.68	104.97	115.20
120.0	16.42	33.91	49.97	57.69	64.78	71.33	77.88	84.87	91.51
135.0	22.88	32.84	50.87	52.66	56.70	61.28	66.12	71.51	77.79
150.0	23.51	28.53	50.78	51.86	61.19	62.80	68.54	75.63	83.44
165.0	27.27	26.74	48.54	54.01	63.52	75.81	87.21	99.68	112.87
180.0	22.43	46.29	52.75	63.52	74.74	86.67	98.87	109.90	122.02
195.0	19.38	45.04	52.31	62.89	73.21	85.59	97.16	109.10	120.40
210.0	14.98	45.67	51.59	57.96	63.88	69.71	76.17	82.81	88.64
225.0	12.38	46.56	48.81	49.61	48.63	47.73	47.19	46.92	47.73
240.0	9.06	44.41	49.52	45.94	40.91	36.16	32.30	28.26	24.22
255.0	9.06	42.08	47.64	45.04	40.91	37.05	34.00	29.88	26.20
270.0	9.51	42.35	46.83	43.96	39.57	35.98	32.84	28.44	24.76
285.0	11.84	44.41	48.27	45.67	41.63	37.68	34.36	30.15	29.16
300.0	16.42	46.74	48.63	45.49	44.50	35.62	31.13	27.09	22.70
315.0	22.88	47.01	49.61	51.77	52.75	53.11	53.92	54.91	55.98
330.0	23.51	45.85	53.11	60.92	68.10	75.09	82.09	88.37	94.29
345.0	27.27	46.03	54.64	65.05	75.27	86.49	97.79	107.12	117.44
360.0	22.43	31.49	47.46	56.34	66.48	77.34	88.46	99.32	108.83
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	118.70	128.93	138.70	147.50	155.12	162.93	168.22	171.81	174.05
15.0	121.30	131.80	141.67	150.01	158.26	165.35	171.09	174.59	176.66
30.0	88.82	95.19	101.65	107.75	113.40	118.43	122.64	125.25	127.04
45.0	83.71	88.19	93.85	99.41	103.71	108.38	111.79	113.76	114.75
60.0	94.56	103.27	109.82	115.74	121.03	125.78	129.73	131.89	133.32
75.0	125.87	136.55	146.33	154.85	162.48	169.48	175.13	178.27	180.15
90.0	125.87	135.92	146.06	154.49	162.57	169.57	175.22	178.09	179.89
105.0	126.14	136.82	146.78	155.57	163.20	170.64	176.12	179.53	181.41
120.0	97.52	104.25	110.44	115.83	120.58	124.80	128.39	130.27	131.08
135.0	84.34	89.45	95.01	100.84	105.60	109.90	113.85	116.01	117.08
150.0	90.71	98.33	105.78	112.24	118.16	123.99	129.01	132.87	135.03
165.0	123.00	134.31	144.81	154.05	162.03	169.39	175.85	180.06	182.40
180.0	132.51	143.73	152.43	160.60	168.67	175.31	179.62	181.77	182.85
195.0	131.98	142.56	151.62	160.42	167.59	174.86	178.99	181.50	182.58
210.0	94.83	101.20	106.67	111.43	115.92	119.77	122.64	124.08	124.17
225.0	47.73	47.82	48.81	49.35	49.61	50.33	50.33	49.26	48.00
240.0	21.26	19.11	16.78	14.62	12.83	11.39	10.14	8.16	6.55
255.0	23.69	21.53	19.29	16.96	15.34	13.73	11.84	11.21	7.00
270.0	22.34	20.01	17.85	17.14	14.35	12.83	10.86	8.52	6.28
285.0	23.60	21.35	19.11	16.87	15.34	13.55	11.57	9.15	6.91
300.0	19.29	16.87	14.62	12.74	11.21	9.96	8.70	7.00	5.56
315.0	56.07	56.88	58.68	59.93	61.01	61.82	61.82	60.92	59.66
330.0	100.84	106.85	113.13	117.98	122.82	126.59	129.28	130.63	130.63
345.0	127.94	137.90	146.87	155.03	162.30	167.95	171.90	174.05	174.77
360.0	118.70	128.93	138.70	147.50	155.12	162.93	168.22	171.81	174.05

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Appendix Page: 11 Total:12

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	174.50	174.05	171.99	168.40	163.38	157.10	149.47	140.77	131.44
15.0	176.74	176.21	173.96	170.29	165.26	158.71	151.00	141.49	130.72
30.0	127.58	127.49	126.23	123.90	120.40	116.10	110.80	104.61	97.34
45.0	114.93	114.21	112.78	110.35	107.03	102.82	97.97	92.23	85.68
60.0	133.50	132.69	130.99	128.12	124.08	119.06	113.04	106.23	98.87
75.0	179.89	179.35	176.66	172.80	167.41	160.51	152.88	143.46	132.78
90.0	180.15	179.26	176.83	172.80	167.50	160.60	152.43	143.10	132.51
105.0	181.59	180.78	178.27	174.41	169.03	162.30	154.23	145.16	134.49
120.0	130.72	129.73	127.58	124.35	120.04	114.75	108.65	101.74	94.02
135.0	117.35	116.99	115.56	113.13	109.99	105.78	100.84	95.10	88.64
150.0	136.19	136.46	135.65	133.68	130.54	126.32	121.12	115.02	107.93
165.0	182.94	182.58	180.33	177.10	171.90	165.44	157.63	149.20	138.17
180.0	182.40	180.60	177.10	172.08	165.71	158.44	148.66	139.06	127.67
195.0	182.13	180.33	177.10	172.08	165.89	158.26	149.29	138.97	128.12
210.0	123.54	121.75	118.97	115.20	110.44	104.88	98.69	91.33	83.44
225.0	46.65	44.95	43.33	41.72	39.48	37.23	36.43	31.40	28.17
240.0	4.76	3.32	3.23	2.60	2.24	2.06	1.97	1.61	1.44
255.0	4.84	2.96	2.06	1.97	1.61	1.53	1.26	0.99	0.81
270.0	4.22	2.69	1.53	1.44	1.26	0.99	0.81	0.54	0.27
285.0	4.67	2.96	1.97	2.06	1.70	1.44	1.17	0.99	0.63
300.0	4.04	2.96	2.33	2.24	1.97	1.88	1.61	1.26	1.08
315.0	58.23	56.34	54.37	52.31	49.52	46.56	42.71	37.86	32.93
330.0	129.82	127.85	124.80	120.85	115.74	109.73	102.82	95.55	86.76
345.0	174.32	172.35	168.85	164.00	157.81	150.37	141.49	131.62	120.31
360.0	174.50	174.05	171.99	168.40	163.38	157.10	149.47	140.77	131.44

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	119.95	108.20	93.93	78.86	61.01	44.14	26.02	9.87	0.72
15.0	118.61	105.24	90.71	73.93	56.88	40.46	25.30	9.69	0.90
30.0	89.45	79.49	68.01	55.80	43.69	30.15	18.12	6.19	0.99
45.0	77.43	67.56	57.24	46.83	35.44	23.42	11.48	2.42	0.99
60.0	89.54	79.40	67.38	54.55	41.36	28.89	15.61	3.95	0.90
75.0	120.85	107.21	91.42	75.45	57.87	40.19	22.52	6.46	0.81
90.0	121.39	107.30	92.59	75.81	59.39	40.82	24.31	7.81	0.90
105.0	122.47	108.74	92.68	76.53	58.59	39.92	21.53	6.82	0.90
120.0	85.14	75.45	63.88	51.86	39.21	25.93	13.91	3.50	0.99
135.0	80.75	70.79	60.92	49.17	38.04	26.11	14.18	3.95	0.90
150.0	99.68	90.44	78.77	66.03	52.40	38.13	23.60	8.70	0.90
165.0	127.49	114.48	99.41	82.45	65.67	47.64	29.34	12.20	0.99
180.0	114.93	100.13	84.34	66.93	49.17	31.04	13.64	1.08	0.72
195.0	114.66	99.14	81.82	63.97	46.92	41.90	11.93	0.99	0.72
210.0	74.38	71.95	52.40	40.64	28.98	17.94	6.64	0.72	0.72
225.0	24.40	20.19	16.15	11.93	7.98	4.31	1.53	0.72	0.63
240.0	1.17	1.17	1.08	1.08	0.90	0.90	0.81	0.63	0.54
255.0	0.54	0.45	0.45	0.54	0.54	0.54	0.54	0.54	0.63
270.0	0.18	0.09	0.09	0.18	0.18	0.45	0.45	0.45	0.45
285.0	0.45	0.45	0.45	0.45	0.36	0.45	0.45	0.45	0.54
300.0	0.90	0.81	0.81	0.72	0.72	0.63	0.63	0.54	0.54
315.0	27.81	23.06	17.85	12.65	8.07	5.11	1.35	0.63	0.54
330.0	75.99	62.80	50.06	36.43	24.76	14.18	5.38	0.63	0.54
345.0	108.11	93.22	75.99	57.87	39.39	21.62	9.15	0.63	0.54
360.0	119.95	108.20	93.93	78.86	61.01	44.14	26.02	9.87	0.72

Intensity data(cd)

C/γ(°)	180.0
0.0	0.63
15.0	0.72
30.0	0.54
45.0	0.72
60.0	0.63
75.0	0.63
90.0	0.63
105.0	0.63
120.0	0.63
135.0	0.63
150.0	0.63
165.0	0.63
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	0.63