
乐达凯

Client:

LumCAT: EMAV1604LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP25010158

Voltage(V): 120.000

LampCAT:

Current(A): 0.115

Lamp flux(lm): 818.0

Power (W): 13.600

Number of Lamps: 1

PF: 0.984

Length(mm): 340

Width(mm): 100

Phm Type: C

Height(mm): 25

Photometric Results

Lumens(lm): 817.95, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 60.14

Central intensity(cd): 247.764, Maximum intensity(cd): 248.620

Angle of maximum intensity: C=75.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=123.8

[C90/270]Total=105.9

Field angle(10%Imax): [C0/180]Total=258.0

[C90/270]Total=195.3

Maximum s/h(1/2): C0_180=1.29 C90_270=1.29

Maximum s/h(1/4): C0_180=1.42 C90_270=1.42

Up flux rate of lamp(%): 11.52%

Down flux rate of lamp(%): 88.48%

Up flux rate of LUM(%): 11.52%

Down flux rate of LUM(%): 88.48%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 67.872%

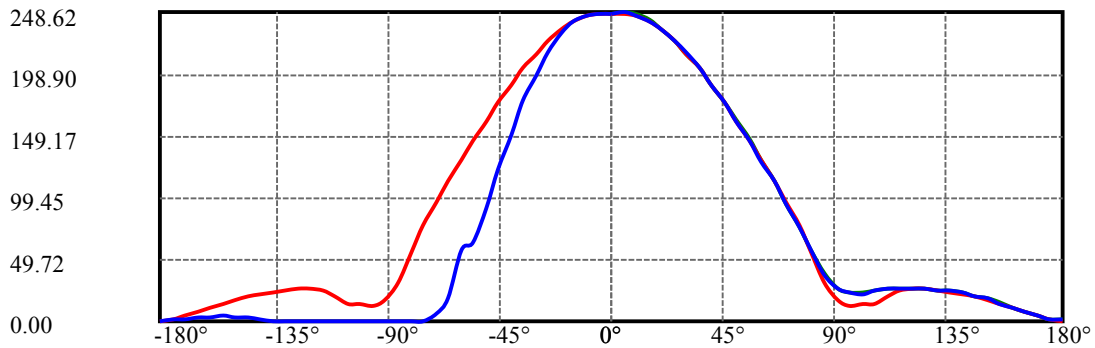
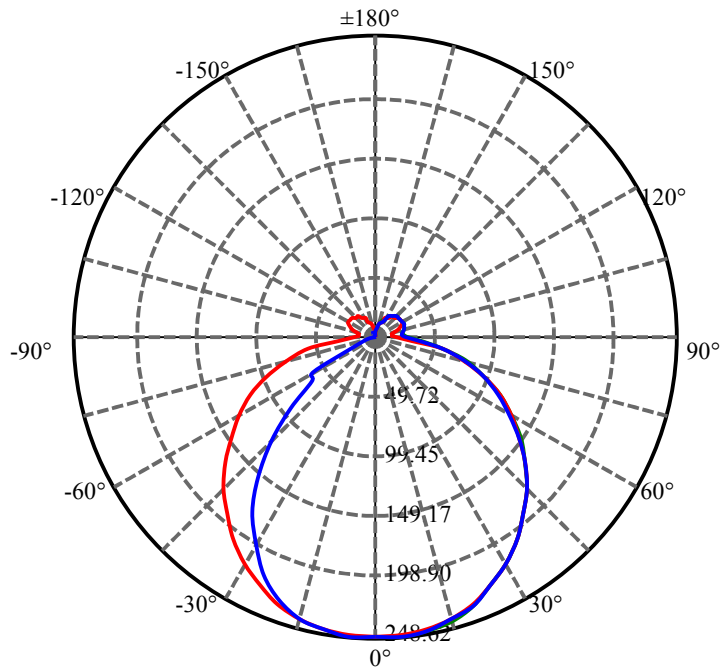
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	247.764	0.000	0	0.00%	0.00%
5.0	247.767	5.924	5.924	0.72%	0.72%
10.0	245.527	17.647	23.571	2.16%	2.88%
15.0	241.172	28.871	52.441	3.53%	6.41%
20.0	234.145	39.173	91.614	4.79%	11.20%
25.0	223.985	48.049	139.664	5.87%	17.07%
30.0	211.794	55.148	194.812	6.74%	23.82%
35.0	198.028	60.349	255.161	7.38%	31.20%
40.0	182.005	63.406	318.567	7.75%	38.95%
45.0	162.822	63.848	382.414	7.81%	46.75%
50.0	143.359	61.868	444.282	7.56%	54.32%
55.0	123.641	58.055	502.337	7.10%	61.41%
60.0	104.860	52.817	555.154	6.46%	67.87%
65.0	85.300	46.228	601.382	5.65%	73.52%
70.0	67.826	38.773	640.155	4.74%	78.26%
75.0	52.146	31.359	671.514	3.83%	82.10%
80.0	38.076	24.141	695.655	2.95%	85.05%
85.0	24.479	16.998	712.652	2.08%	87.13%
90.0	15.902	11.057	723.709	1.35%	88.48%
95.0	13.649	8.091	731.8	0.99%	89.47%
100.0	13.177	7.290	739.09	0.89%	90.36%
105.0	14.050	7.285	746.375	0.89%	91.25%
110.0	16.194	7.905	754.28	0.97%	92.22%
115.0	17.651	8.570	762.85	1.05%	93.26%
120.0	18.061	8.682	771.532	1.06%	94.33%
125.0	18.068	8.351	779.883	1.02%	95.35%
130.0	17.773	7.793	787.676	0.95%	96.30%
135.0	17.232	7.073	794.749	0.86%	97.16%
140.0	16.418	6.230	800.98	0.76%	97.93%
145.0	15.328	5.297	806.276	0.65%	98.57%
150.0	13.689	4.273	810.549	0.52%	99.10%
155.0	11.556	3.195	813.744	0.39%	99.49%
160.0	9.026	2.159	815.903	0.26%	99.75%
165.0	6.228	1.257	817.16	0.15%	99.90%
170.0	3.422	0.572	817.732	0.07%	99.97%
175.0	1.745	0.185	817.917	0.02%	100.00%
180.0	0.606	0.028	817.945	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	194.81	23.82%	23.82%
0-40	318.57	38.95%	38.95%
0-60	555.15	67.87%	67.87%
0-90	723.71	88.48%	88.48%
0-120	771.53	94.33%	94.33%
0-180	817.95	100.00%	100.00%
60-90	168.55	20.61%	20.61%
90-120	47.82	5.85%	5.85%
90-130	63.97	7.82%	7.82%
90-150	86.84	10.62%	10.62%
90-180	94.21	11.52%	11.52%
0-72.26	654.36	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	23.57
10-20	68.04
20-30	103.20
30-40	123.75
40-50	125.72
50-60	110.87
60-70	85.00
70-80	55.50
80-90	28.05
90-100	15.38
100-110	15.19
110-120	17.25
120-130	16.14
130-140	13.30
140-150	9.57
150-160	5.35
160-170	1.83
170-180	0.18



C75(Max): —————

C0/C180: —————

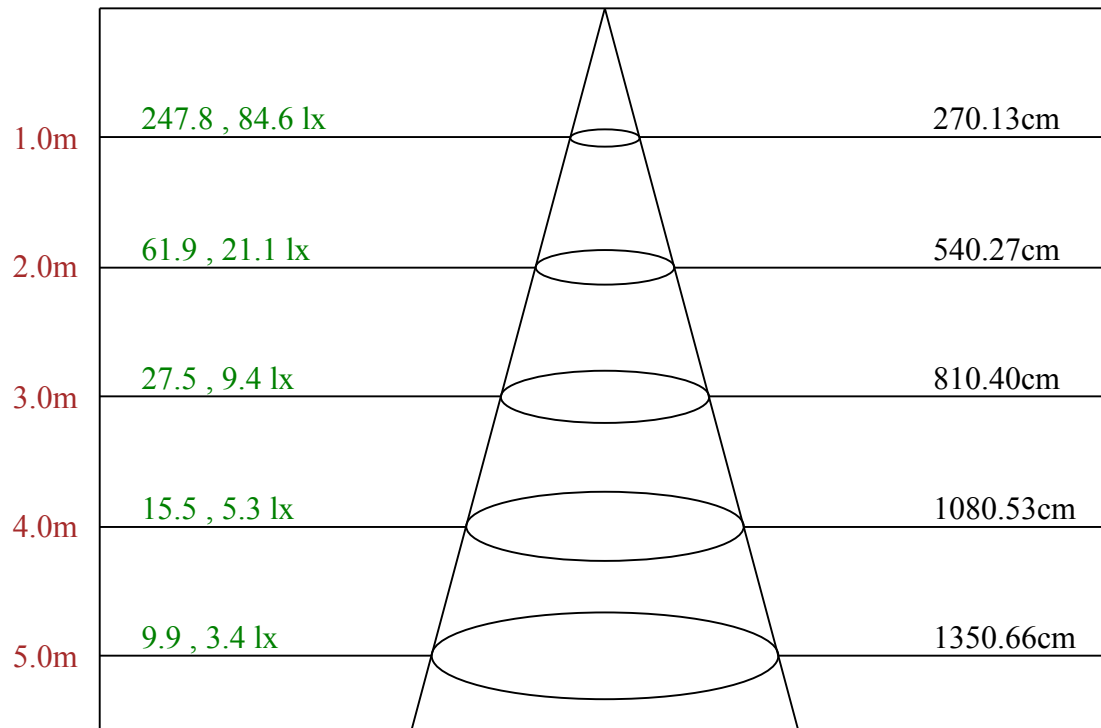
C90/C270: —————

Field angle(10%Imax):C0/180Left:129.0 Right:129.0

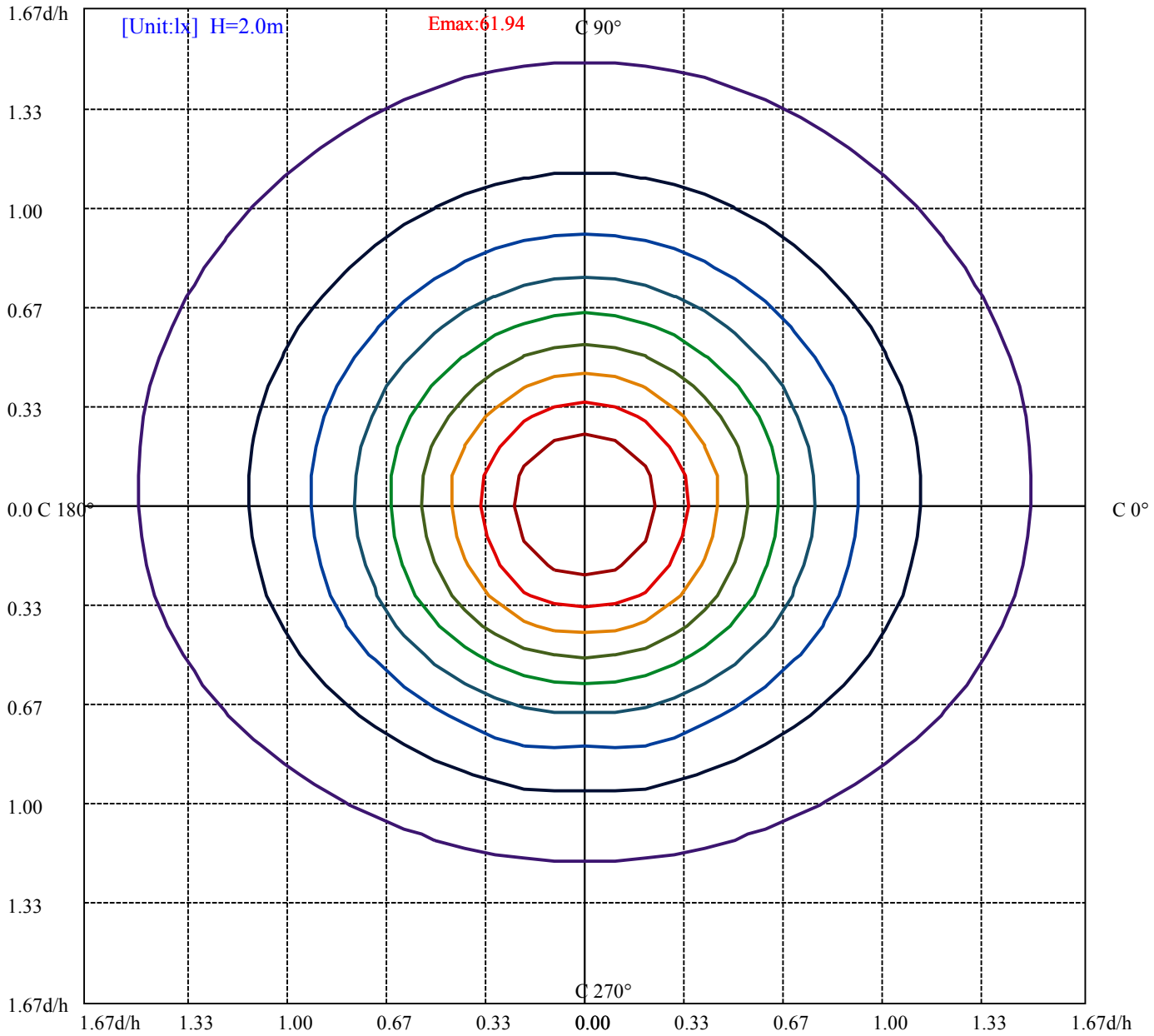
:C90/270Left:69.2 Right:126.1

Beam Angle(50%Imax):C0/180Left:61.9 Right:61.9

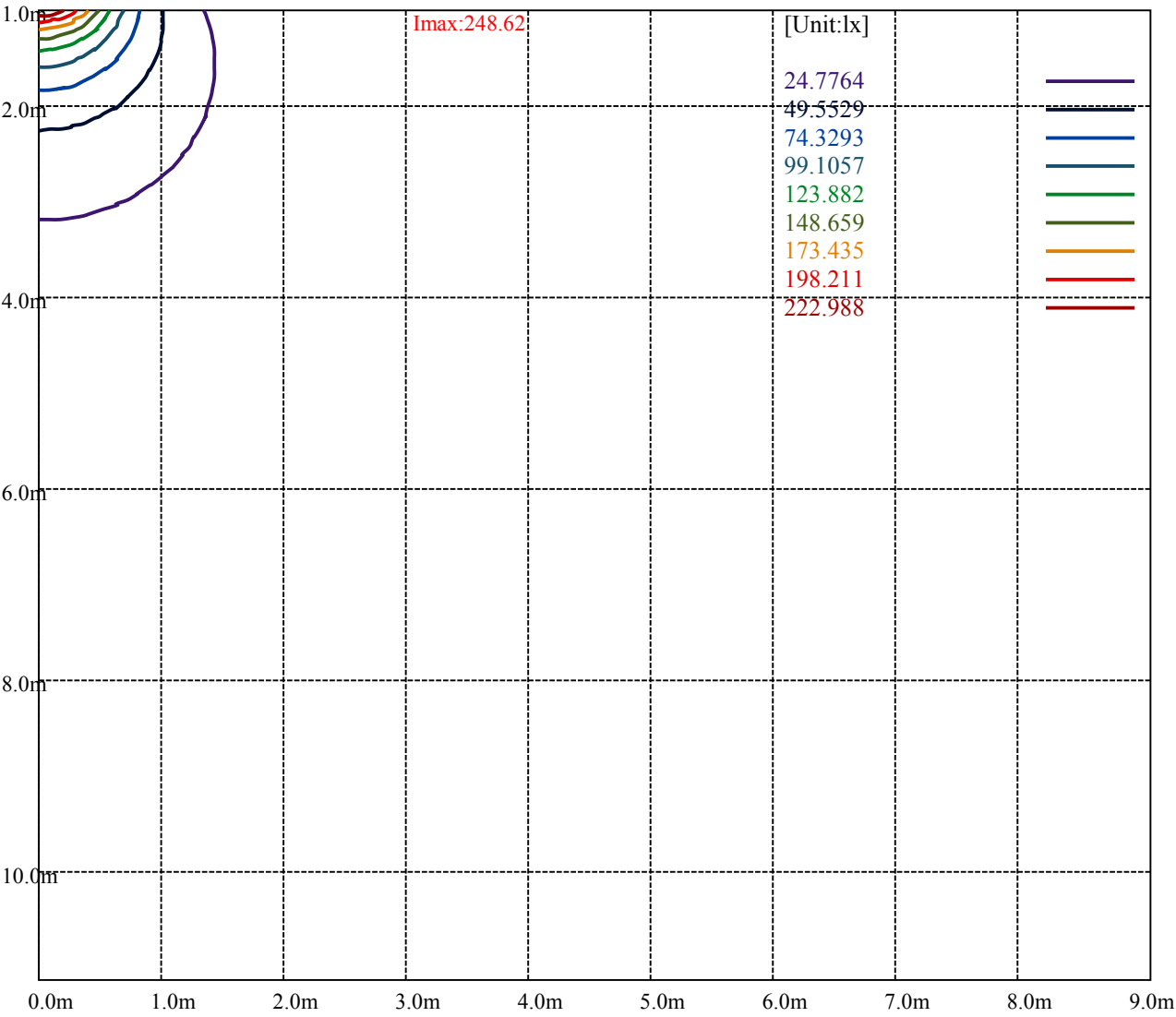
:C90/270Left:49.5 Right:56.4



Max , Ave Beam angle of C75 plane 106.97



(10%Emax) 6.1941	—
(20%Emax) 12.38822	—
(30%Emax) 18.58232	—
(40%Emax) 24.77642	—
(50%Emax) 30.9705	—
(60%Emax) 37.16475	—
(70%Emax) 43.35875	—
(80%Emax) 49.55275	—
(90%Emax) 55.747	—



Luminance Table

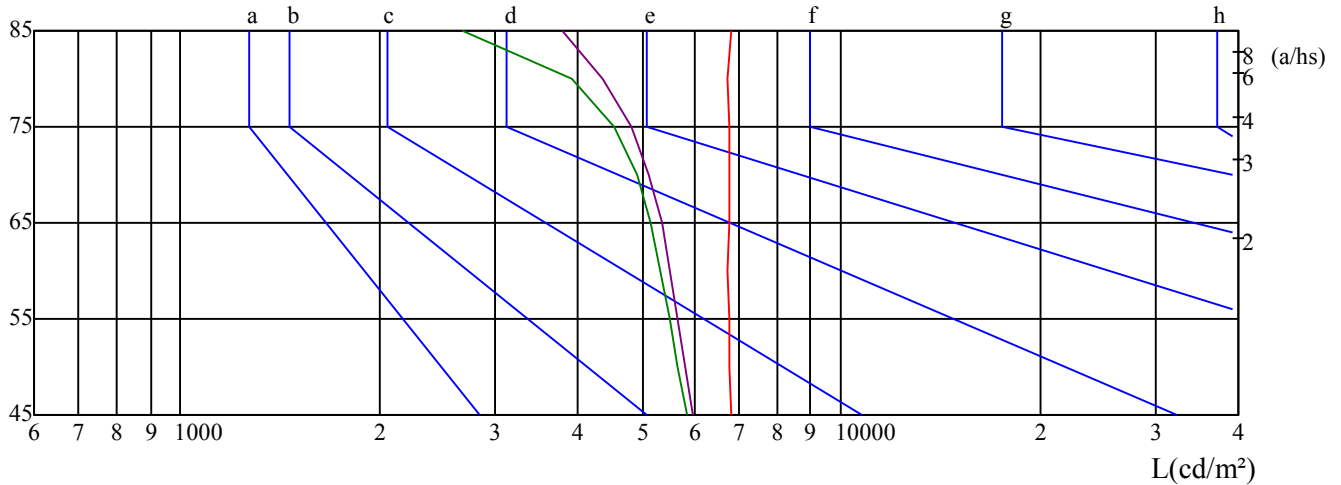
γ	45	50	55	60	65	70	75	80	85
C0	5855	5676	5503	5344	5138	4907	4547	3913	2672
C45	5977	5818	5676	5526	5349	5127	4827	4368	3786
C90	6814	6762	6770	6725	6774	6773	6765	6745	6832

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7892	4582	5538	8790	4326	5323	10309	6348	8153

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

 $\gamma(^{\circ})$ 

C0

C45

C90

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	1.16	1.16	1.16	1.12	1.12	1.12	1.05	1.05	1.05	0.98	0.98	0.98	0.91	0.91	0.91	0.88
1	1.00	0.96	0.92	0.97	0.93	0.89	0.91	0.87	0.84	0.85	0.82	0.80	0.79	0.77	0.75	0.73
2	0.87	0.80	0.75	0.84	0.78	0.73	0.79	0.74	0.69	0.74	0.70	0.66	0.69	0.66	0.63	0.60
3	0.77	0.68	0.62	0.74	0.67	0.61	0.70	0.63	0.58	0.65	0.60	0.56	0.61	0.57	0.53	0.51
4	0.68	0.59	0.52	0.66	0.58	0.51	0.62	0.55	0.49	0.58	0.52	0.47	0.55	0.50	0.46	0.43
5	0.61	0.52	0.45	0.59	0.50	0.44	0.55	0.48	0.43	0.52	0.46	0.41	0.49	0.44	0.40	0.37
6	0.54	0.46	0.39	0.53	0.45	0.39	0.50	0.43	0.37	0.47	0.41	0.36	0.45	0.39	0.35	0.33
7	0.49	0.41	0.35	0.48	0.40	0.34	0.45	0.38	0.33	0.43	0.37	0.32	0.41	0.35	0.31	0.29
8	0.45	0.37	0.31	0.44	0.36	0.30	0.42	0.34	0.29	0.39	0.33	0.29	0.37	0.32	0.28	0.26
9	0.41	0.33	0.28	0.40	0.32	0.27	0.38	0.31	0.27	0.36	0.30	0.26	0.35	0.29	0.25	0.23
10	0.38	0.30	0.25	0.37	0.30	0.25	0.35	0.29	0.24	0.34	0.28	0.23	0.32	0.27	0.23	0.21

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Intensity data(cd)

Appendix Page: 10 Total:12

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	247.76	247.94	246.70	243.41	238.35	230.63	220.68	210.20	197.86
15.0	247.76	247.94	246.79	243.58	237.98	229.98	219.84	209.17	196.63
30.0	247.76	248.12	246.52	242.87	237.00	228.99	218.84	208.25	195.26
45.0	247.76	248.57	246.69	242.67	236.23	227.56	217.18	206.10	193.67
60.0	247.76	248.21	246.24	242.47	235.29	226.94	216.61	205.39	192.11
75.0	247.76	248.84	246.60	242.20	235.46	226.21	215.79	204.12	191.55
90.0	247.76	248.48	246.05	241.55	235.43	225.44	215.73	203.85	190.26
105.0	247.76	248.40	246.41	241.79	234.83	225.42	214.93	202.81	189.15
120.0	247.76	247.94	245.24	240.47	233.26	223.71	213.98	202.00	188.39
135.0	247.76	247.40	245.25	239.94	233.56	224.12	213.60	201.56	187.53
150.0	247.76	248.22	246.05	242.08	227.55	225.66	215.10	204.27	190.20
165.0	247.76	247.94	245.78	241.45	235.22	226.10	215.63	204.89	189.55
180.0	247.76	246.25	243.15	237.73	230.00	220.23	209.40	197.06	182.94
195.0	247.76	246.07	242.87	237.63	230.42	220.46	210.06	197.52	183.56
210.0	247.76	246.43	243.85	238.86	231.57	221.33	210.92	196.15	177.72
225.0	247.76	247.14	244.46	239.54	232.56	221.57	207.08	189.20	167.02
240.0	247.76	247.41	245.16	240.49	232.77	219.49	202.16	183.04	158.53
255.0	247.76	247.94	245.34	240.85	232.05	216.69	198.10	178.62	150.96
270.0	247.76	247.58	244.97	240.56	231.65	216.27	197.46	176.85	150.39
285.0	247.76	248.13	245.96	241.88	233.74	219.54	201.09	181.37	175.94
300.0	247.76	248.21	246.14	242.27	240.74	223.17	206.95	187.67	165.78
315.0	247.76	247.40	245.43	241.38	234.82	225.47	212.07	195.89	175.22
330.0	247.76	247.94	245.60	241.36	234.77	225.66	215.28	203.19	187.40
345.0	247.76	247.85	245.42	241.09	234.23	225.02	214.55	203.54	190.54
360.0	247.76	247.94	246.70	243.41	238.35	230.63	220.68	210.20	197.86
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	184.00	169.62	154.70	140.13	123.79	106.74	88.63	68.73	41.03
15.0	183.82	169.33	154.30	138.91	122.73	106.01	88.84	69.46	45.09
30.0	181.55	167.22	152.09	137.68	121.57	104.30	85.70	66.21	46.46
45.0	179.01	165.41	150.30	134.75	118.38	101.04	83.42	62.95	44.35
60.0	178.10	163.38	148.03	133.40	115.89	99.20	80.25	60.86	41.47
75.0	176.55	162.54	147.10	131.02	114.05	96.09	78.31	57.83	39.51
90.0	175.86	160.74	145.89	128.88	112.68	94.68	75.87	56.43	37.26
105.0	175.76	160.74	145.00	128.63	111.63	93.71	74.54	56.08	36.82
120.0	174.07	159.02	143.43	127.49	110.37	93.34	74.33	54.78	36.13
135.0	174.14	158.22	143.39	127.57	110.76	93.14	74.08	55.56	36.77
150.0	175.49	160.24	144.36	128.39	111.43	94.65	75.88	56.30	37.26
165.0	176.73	160.48	145.68	129.52	112.64	95.13	76.54	57.95	32.58
180.0	167.93	152.39	136.58	120.24	103.01	85.79	66.07	42.98	20.07
195.0	167.81	148.96	131.44	112.85	94.18	73.99	52.03	30.24	17.25
210.0	156.37	134.92	111.60	87.66	65.86	43.52	28.21	18.07	12.10
225.0	142.26	116.77	89.15	62.41	38.45	21.19	11.98	8.85	6.17
240.0	130.26	100.90	72.00	45.51	24.24	8.62	2.06	1.62	1.35
255.0	123.39	93.84	65.65	40.05	19.40	6.29	0.18	0.27	0.27
270.0	121.41	91.80	63.72	57.69	18.99	6.39	0.27	0.18	0.36
285.0	127.73	97.97	69.38	43.06	22.25	7.96	0.27	0.18	0.36
300.0	138.93	110.37	81.63	54.15	30.72	13.69	4.68	3.24	2.61
315.0	152.56	127.48	101.77	74.08	50.70	29.94	17.89	13.22	9.35
330.0	167.91	147.52	126.59	104.84	82.83	60.63	40.60	26.08	17.32
345.0	176.10	160.75	143.60	127.72	110.66	91.79	70.85	45.76	25.54
360.0	184.00	169.62	154.70	140.13	123.79	106.74	88.63	68.73	41.03

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	19.98	13.41	15.01	12.26	17.32	22.91	25.75	25.58	25.04
15.0	26.77	19.74	19.74	18.14	22.41	25.88	26.68	26.41	25.97
30.0	30.70	24.03	22.78	23.05	25.45	26.34	26.61	26.52	26.08
45.0	28.79	23.96	22.44	23.61	25.75	26.47	26.65	26.38	25.75
60.0	27.29	23.70	22.62	24.06	25.76	26.57	26.66	26.30	25.58
75.0	26.58	23.35	22.45	23.98	25.59	26.22	26.22	25.95	25.32
90.0	26.01	22.86	22.23	24.03	25.56	26.10	26.10	25.83	25.11
105.0	25.78	23.07	22.52	24.51	25.87	26.41	26.41	26.05	25.24
120.0	25.50	22.97	22.79	24.51	26.04	26.58	26.49	26.13	25.41
135.0	25.35	22.83	22.47	24.54	26.07	26.61	26.52	26.16	25.53
150.0	25.08	22.92	21.74	24.00	26.17	26.71	26.80	26.35	25.53
165.0	19.59	18.23	15.80	17.69	21.93	25.63	26.45	26.09	25.36
180.0	13.68	12.26	11.90	15.63	22.02	26.02	26.02	25.40	24.15
195.0	11.92	11.21	10.58	13.52	18.41	21.43	22.06	22.14	21.70
210.0	8.28	7.74	7.30	8.37	9.97	11.84	12.99	13.88	14.33
225.0	4.38	4.11	3.84	4.11	4.38	4.83	4.83	6.26	6.88
240.0	1.17	1.08	1.08	1.08	0.99	0.90	0.90	0.90	1.08
255.0	0.45	0.45	0.54	0.45	0.36	0.36	0.36	0.36	0.45
270.0	0.36	0.36	0.36	0.36	0.27	0.27	0.27	0.27	0.18
285.0	0.36	0.45	0.45	0.36	0.36	0.36	0.36	0.36	0.63
300.0	1.98	1.80	1.53	1.71	1.71	1.89	1.98	2.16	2.34
315.0	6.29	5.21	4.85	4.94	5.39	6.20	7.19	8.18	8.81
330.0	11.19	9.20	8.84	9.38	11.91	13.99	15.43	16.24	16.78
345.0	14.17	12.64	12.37	12.91	18.95	23.11	23.74	23.74	23.29
360.0	19.98	13.41	15.01	12.26	17.32	22.91	25.75	25.58	25.04
C/ $\gamma(^{\circ})$	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	24.15	23.09	21.40	19.18	16.52	13.32	9.77	6.39	2.22
15.0	24.99	23.66	21.97	19.74	16.90	13.78	10.05	6.23	2.76
30.0	25.19	23.76	22.07	19.67	16.73	13.44	9.79	5.87	2.85
45.0	25.04	23.52	21.64	19.05	16.27	12.79	9.12	5.36	2.59
60.0	24.60	23.16	21.19	18.76	15.71	12.21	8.53	4.67	2.15
75.0	24.16	22.72	20.74	18.14	15.18	11.67	7.90	4.40	2.07
90.0	23.94	22.50	20.43	17.91	14.67	11.07	7.47	4.14	1.89
105.0	24.15	22.43	20.35	17.64	14.74	10.95	7.33	3.89	1.63
120.0	24.15	22.43	20.45	17.75	14.42	10.72	7.30	3.78	1.62
135.0	24.27	22.65	20.59	17.71	14.65	11.24	7.46	3.96	1.62
150.0	24.36	22.83	20.93	18.05	14.98	11.37	7.67	4.15	1.89
165.0	24.28	22.57	20.58	17.87	14.89	11.37	7.94	4.33	2.08
180.0	22.65	20.78	18.38	15.63	12.52	9.15	5.68	2.22	1.24
195.0	20.90	19.30	17.07	14.41	11.65	10.94	5.42	1.96	1.16
210.0	14.51	14.60	13.97	12.37	9.61	6.41	4.27	1.78	1.25
225.0	7.69	7.87	7.78	6.97	5.28	3.76	2.68	1.52	1.25
240.0	1.80	2.24	2.78	3.32	3.68	3.05	2.06	1.53	1.26
255.0	0.81	1.26	2.33	3.77	4.22	3.86	2.69	1.53	1.26
270.0	0.54	1.26	2.34	3.69	4.41	3.78	3.06	1.44	1.26
285.0	1.09	2.26	3.62	4.43	3.98	3.26	2.71	1.72	1.36
300.0	2.70	3.06	3.69	4.32	4.68	3.78	2.70	1.98	1.44
315.0	8.45	9.17	9.62	8.27	7.10	5.66	4.32	2.25	1.44
330.0	17.05	16.42	15.43	13.53	11.10	8.48	6.32	3.07	1.71
345.0	22.11	20.49	18.50	16.34	13.45	10.56	7.22	3.97	1.90
360.0	24.15	23.09	21.40	19.18	16.52	13.32	9.77	6.39	2.22

Intensity data(cd)

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C/ $\gamma(^{\circ})$	180.0
0.0	1.24
15.0	1.25
30.0	1.25
45.0	1.16
60.0	1.26
75.0	1.26
90.0	1.26
105.0	1.18
120.0	1.17
135.0	1.17
150.0	1.17
165.0	1.17
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	1.24