
乐达凯

Client:

LumCAT: FTNW0418LAJUDBK-3000K

Luminaire: LED LAMP

Report No:

Ballast type:

Test No: LCZP25100177

Voltage(V): 120.100

LampCAT:

Current(A): 0.177

Lamp flux(lm): 1038.8

Power (W): 21.110

Number of Lamps: 1

PF: 0.991

Length(mm): 70

Width(mm): 45

Phm Type: C

Height(mm): 380

Photometric Results

Lumens(lm): 1038.77, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 49.21

Central intensity(cd): 4.665, Maximum intensity(cd): 186.300

Angle of maximum intensity: C=15.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=291.8

[C90/270]Total=109.0

Field angle(10%Imax): [C0/180]Total=341.0

[C90/270]Total=159.1

Maximum s/h(1/2): C0_180=8.27 C90_270=16.46

Maximum s/h(1/4): C0_180=7.50 C90_270=14.44

Up flux rate of lamp(%): 50.05%

Down flux rate of lamp(%): 49.95%

Up flux rate of LUM(%): 50.05%

Down flux rate of LUM(%): 49.95%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 18.608%

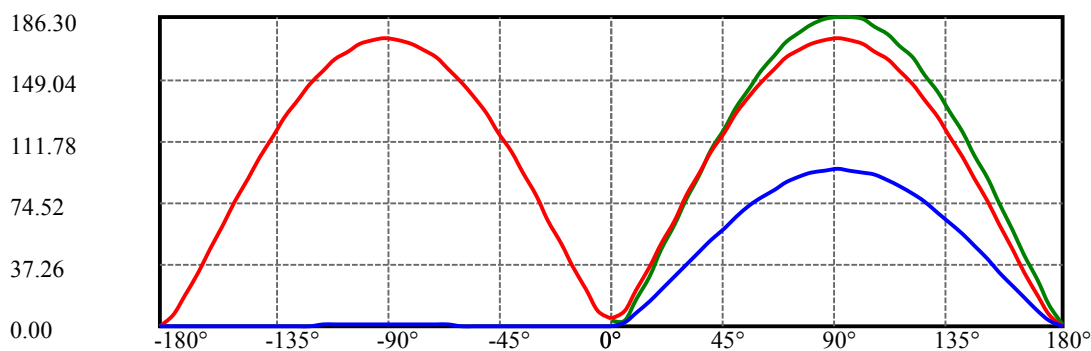
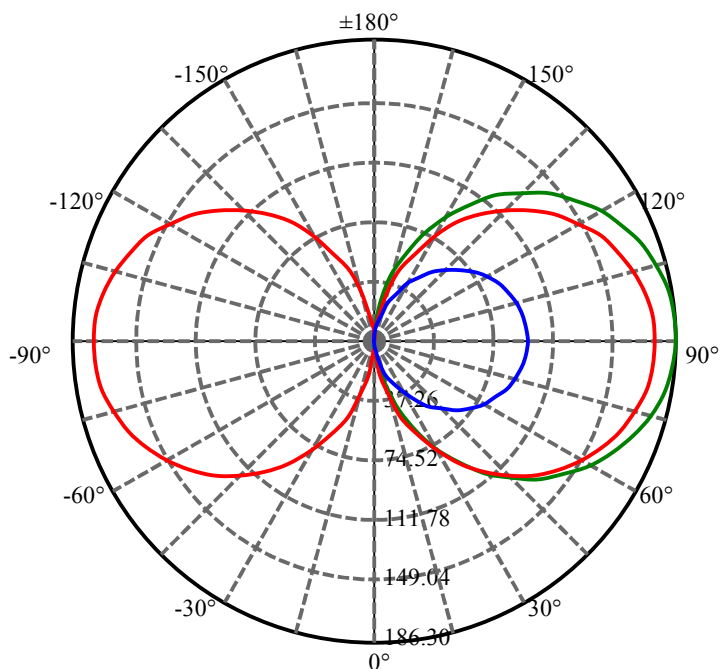
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1.794	0.000	0	0.00%	0.00%
5.0	4.706	0.078	0.078	0.01%	0.01%
10.0	12.161	0.603	0.681	0.06%	0.07%
15.0	20.594	1.943	2.624	0.19%	0.25%
20.0	29.985	4.168	6.792	0.40%	0.65%
25.0	38.411	7.173	13.966	0.69%	1.34%
30.0	47.356	10.854	24.82	1.04%	2.39%
35.0	55.988	15.218	40.038	1.47%	3.85%
40.0	64.406	20.087	60.125	1.93%	5.79%
45.0	72.201	25.294	85.419	2.43%	8.22%
50.0	79.531	30.660	116.078	2.95%	11.17%
55.0	86.148	36.024	152.103	3.47%	14.64%
60.0	92.077	41.196	193.299	3.97%	18.61%
65.0	97.210	46.016	239.315	4.43%	23.04%
70.0	101.512	50.318	289.633	4.84%	27.88%
75.0	104.881	53.948	343.58	5.19%	33.08%
80.0	107.333	56.782	400.363	5.47%	38.54%
85.0	108.843	58.740	459.103	5.65%	44.20%
90.0	109.337	59.739	518.842	5.75%	49.95%
95.0	108.828	59.735	578.578	5.75%	55.70%
100.0	107.363	58.744	637.322	5.66%	61.35%
105.0	104.903	56.796	694.118	5.47%	66.82%
110.0	101.539	53.961	748.079	5.19%	72.02%
115.0	97.251	50.335	798.414	4.85%	76.86%
120.0	92.298	46.080	844.493	4.44%	81.30%
125.0	86.260	41.273	885.766	3.97%	85.27%
130.0	79.688	36.083	921.849	3.47%	88.74%
135.0	72.511	30.754	952.603	2.96%	91.71%
140.0	65.012	25.464	978.067	2.45%	94.16%
145.0	56.455	20.266	998.333	1.95%	96.11%
150.0	47.771	15.348	1013.681	1.48%	97.58%
155.0	38.900	10.968	1024.649	1.06%	98.64%
160.0	30.201	7.247	1031.897	0.70%	99.34%
165.0	20.848	4.207	1036.104	0.41%	99.74%
170.0	12.359	1.970	1038.074	0.19%	99.93%
175.0	5.144	0.626	1038.7	0.06%	99.99%
180.0	0.497	0.067	1038.767	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	24.82	2.39%	2.39%
0-40	60.12	5.79%	5.79%
0-60	193.30	18.61%	18.61%
0-90	518.84	49.95%	49.95%
0-120	844.49	81.30%	81.30%
0-180	1038.77	100.00%	100.00%
60-90	325.54	31.34%	31.34%
90-120	325.65	31.35%	31.35%
90-130	403.01	38.80%	38.80%
90-150	494.84	47.64%	47.64%
90-180	519.86	50.05%	50.05%
0-118.54	831.01	80.00%	80.00%

ZONAL LUMEN SUMMARY

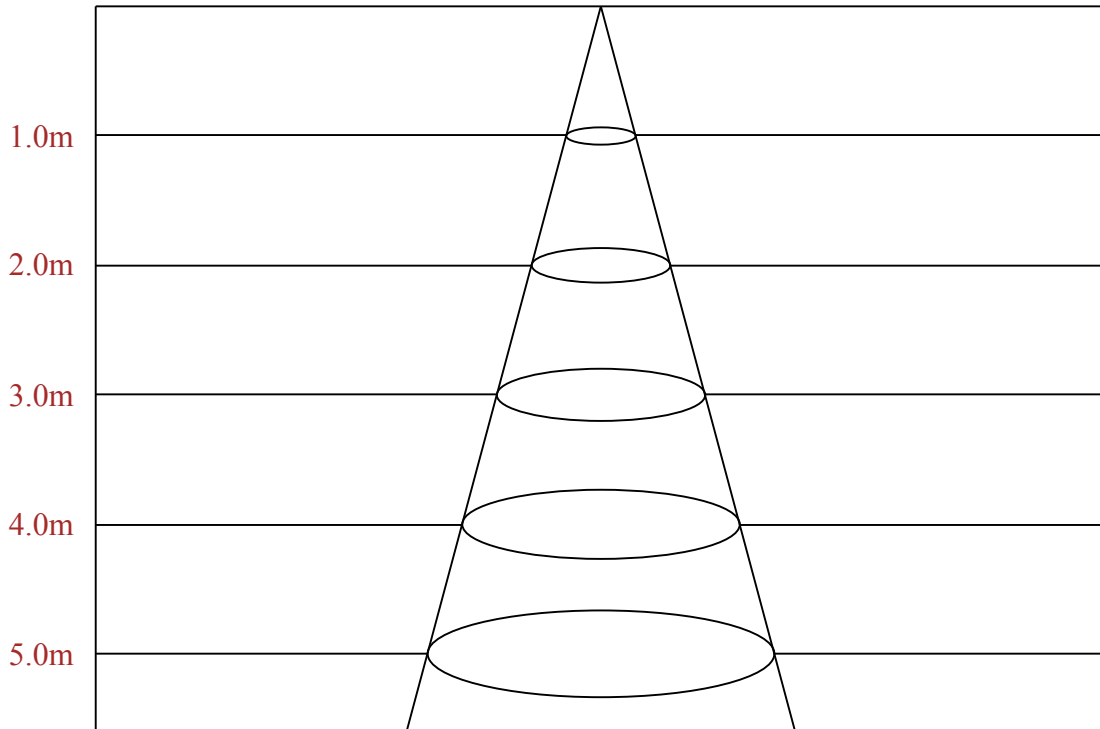
0-10	0.68
10-20	6.11
20-30	18.03
30-40	35.31
40-50	55.95
50-60	77.22
60-70	96.33
70-80	110.73
80-90	118.48
90-100	118.48
100-110	110.76
110-120	96.41
120-130	77.36
130-140	56.22
140-150	35.61
150-160	18.22
160-170	6.18
170-180	0.63



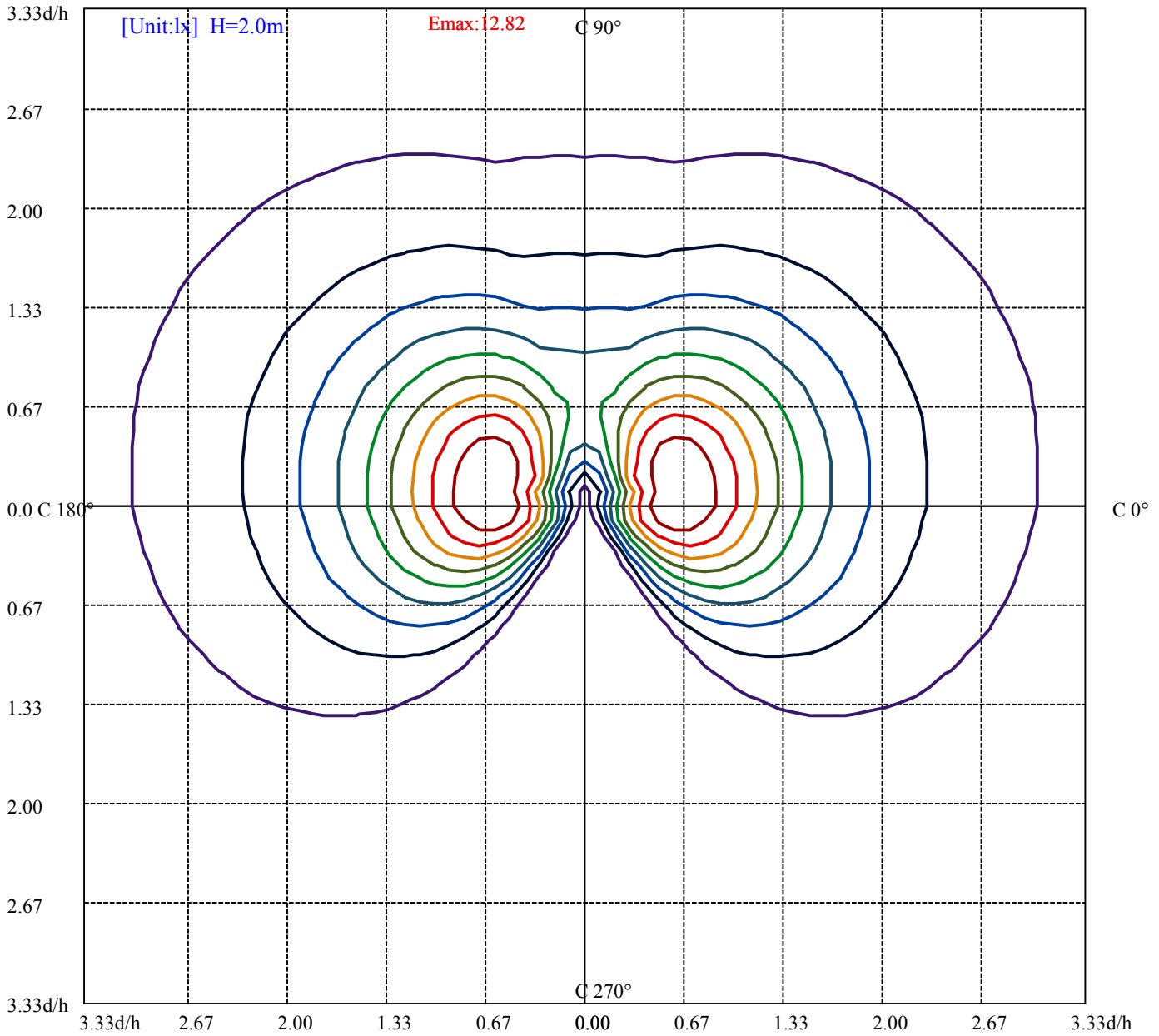
C15(Max): —
 C0/C180: —
 C90/C270: —

Field angle(10%Imax):C0/180Left:260.5 Right:80.5
 :C90/270Left:78.8 Right:80.3

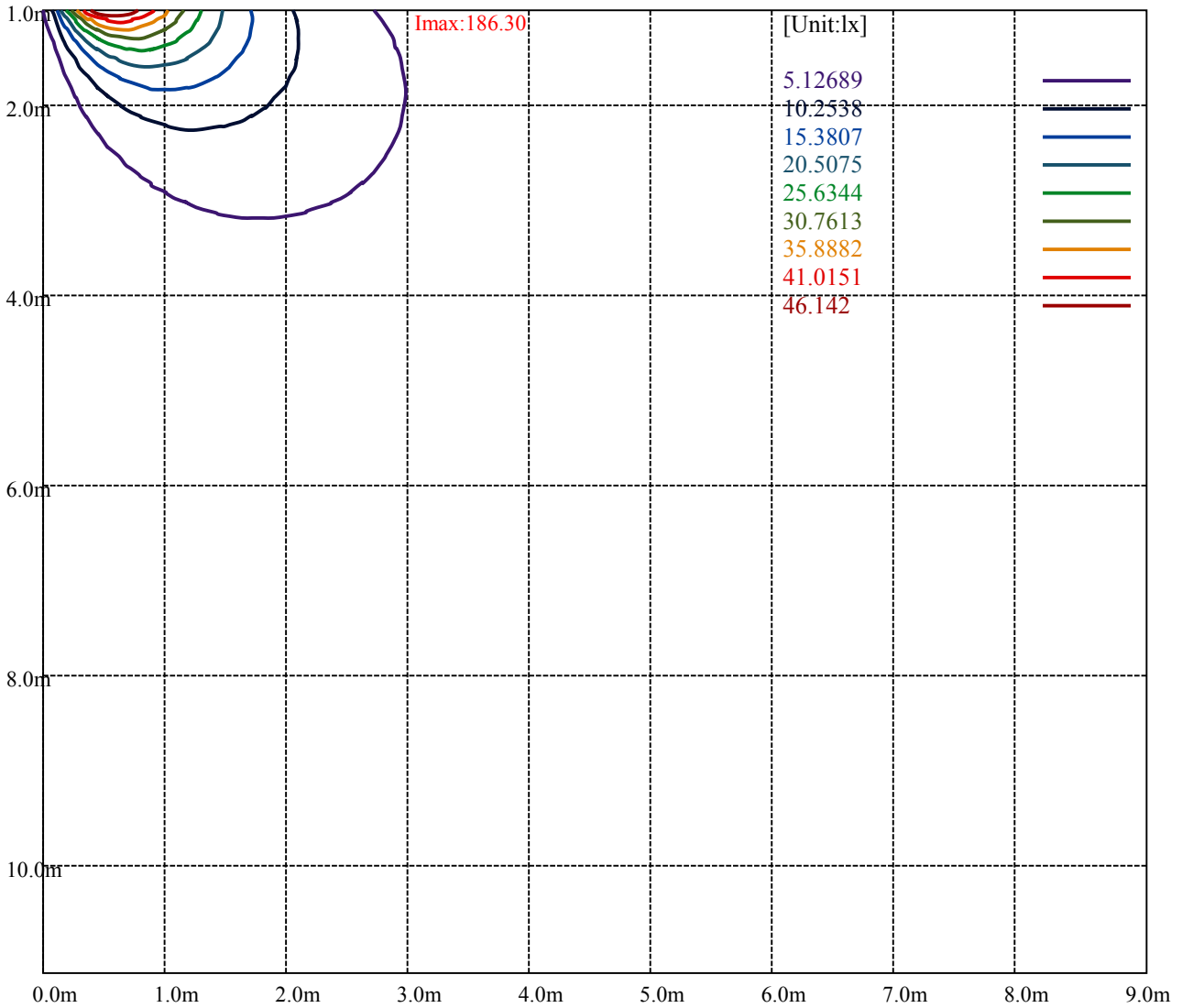
Beam Angle(50%Imax):C0/180Left:235.9 Right:55.9
 :C90/270Left:53.4 Right:55.6



Max , Ave Beam angle of C15 plane 349.39



(10%Emax) 1.28172	—
(20%Emax) 2.56345	—
(30%Emax) 3.845175	—
(40%Emax) 5.126875	—
(50%Emax) 6.4086	—
(60%Emax) 7.690325	—
(70%Emax) 8.97205	—
(80%Emax) 10.25377	—
(90%Emax) 11.5355	—



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Luminance Limiting Curve(no luminous side)

Luminance Table

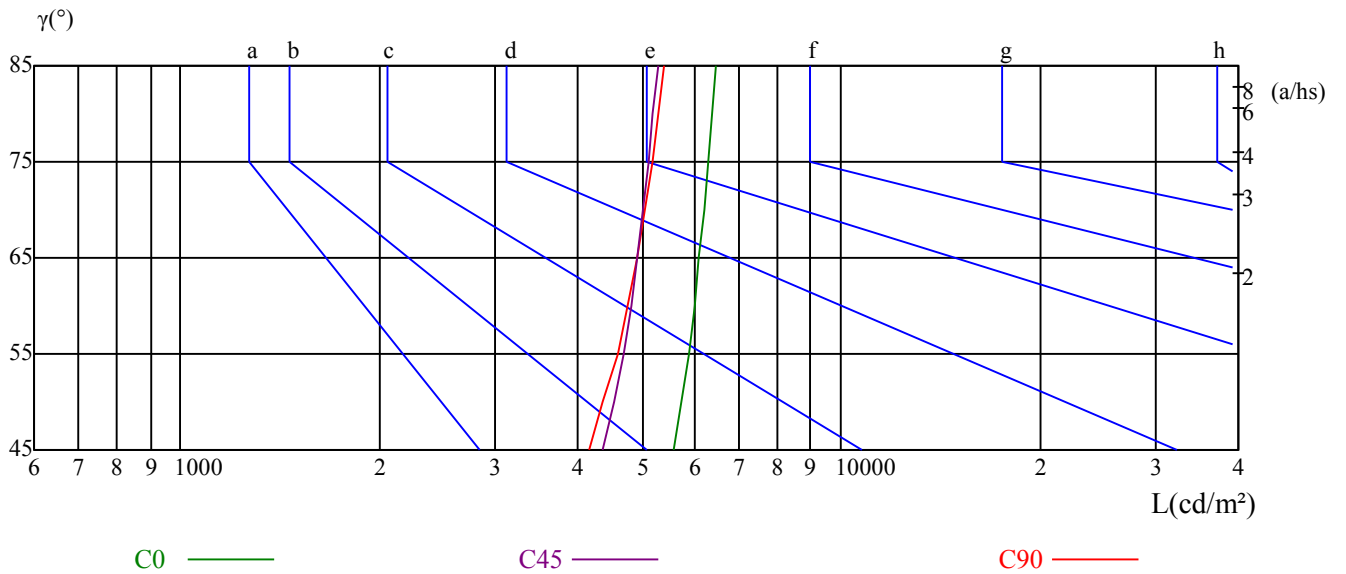
γ	45	50	55	60	65	70	75	80	85
C0	5581	5731	5874	5991	6108	6208	6293	6379	6454
C45	4369	4534	4685	4811	4928	5022	5119	5200	5278
C90	4160	4360	4584	4753	4915	5060	5187	5304	5416

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
116727	31473	75010	204630	55958	132055	629405	173201	406532

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	1.07	1.07	1.07	0.99	0.99	0.99	0.83	0.83	0.83	0.69	0.69	0.69	0.56	0.56	0.56	0.50
1	0.85	0.79	0.73	0.78	0.72	0.67	0.64	0.60	0.56	0.52	0.49	0.46	0.40	0.38	0.36	0.30
2	0.71	0.62	0.55	0.65	0.57	0.51	0.53	0.47	0.42	0.42	0.38	0.34	0.32	0.29	0.26	0.21
3	0.61	0.51	0.43	0.55	0.47	0.40	0.45	0.38	0.33	0.35	0.30	0.26	0.27	0.23	0.19	0.15
4	0.52	0.43	0.35	0.48	0.39	0.32	0.39	0.32	0.26	0.30	0.25	0.21	0.23	0.19	0.15	0.11
5	0.46	0.36	0.29	0.42	0.33	0.26	0.34	0.27	0.22	0.27	0.21	0.17	0.20	0.16	0.12	0.09
6	0.41	0.31	0.24	0.37	0.28	0.22	0.30	0.23	0.18	0.24	0.18	0.14	0.18	0.13	0.10	0.07
7	0.36	0.27	0.21	0.33	0.25	0.19	0.27	0.20	0.15	0.21	0.16	0.12	0.16	0.12	0.08	0.06
8	0.32	0.24	0.18	0.30	0.22	0.16	0.24	0.18	0.13	0.19	0.14	0.10	0.14	0.10	0.07	0.05
9	0.29	0.21	0.15	0.27	0.19	0.14	0.22	0.16	0.11	0.17	0.12	0.09	0.13	0.09	0.06	0.04
10	0.27	0.19	0.13	0.24	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.08	0.12	0.08	0.05	0.03

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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	4.67	2.69	13.91	26.29	40.10	54.37	68.54	82.36	94.83
15.0	4.31	3.32	14.44	28.26	43.33	58.68	73.12	87.92	102.01
30.0	3.05	2.96	14.53	27.45	42.98	57.42	72.49	87.12	101.11
45.0	1.97	2.60	12.83	25.12	38.31	51.95	65.67	78.95	91.06
60.0	0.90	2.15	10.32	19.74	30.86	41.18	52.31	63.34	74.02
75.0	0.54	1.97	7.72	14.80	22.52	30.59	38.67	46.20	54.46
90.0	0.45	2.06	7.72	14.80	22.25	29.52	37.32	44.86	52.40
105.0	0.45	2.87	9.06	16.51	24.49	32.48	40.19	48.81	56.16
120.0	0.27	3.59	12.83	23.06	33.82	44.23	55.18	65.94	76.35
135.0	1.97	4.58	16.06	28.17	41.72	55.45	69.08	81.91	95.64
150.0	0.99	5.02	17.14	32.30	58.41	62.71	77.34	92.50	106.94
165.0	1.97	4.76	17.85	32.66	48.36	63.61	80.21	94.02	110.80
180.0	4.67	16.69	30.59	45.04	59.84	73.84	88.91	101.92	115.38
195.0	4.31	14.80	25.93	39.03	51.14	63.79	76.08	87.83	98.78
210.0	3.05	10.95	19.92	29.34	38.94	48.63	57.42	66.75	74.74
225.0	1.97	6.64	12.11	17.32	22.70	27.81	32.93	37.86	42.35
240.0	0.90	1.70	2.33	2.87	3.32	3.50	3.68	3.86	4.04
255.0	0.54	0.45	0.27	0.18	0.18	0.18	0.18	0.18	0.18
270.0	0.45	0.27	0.18	0.09	0.09	0.09	0.00	0.00	0.09
285.0	0.45	0.18	0.18	0.09	0.00	0.00	0.00	0.00	0.09
300.0	0.27	0.27	0.36	0.45	0.45	0.27	0.36	0.27	0.54
315.0	1.97	3.59	8.07	12.65	17.23	21.89	26.47	31.04	35.35
330.0	0.99	7.81	15.52	24.31	33.29	42.35	51.14	59.66	67.47
345.0	1.97	11.04	21.98	33.73	45.31	57.33	69.26	80.39	90.97
360.0	4.67	2.69	13.91	26.29	40.10	54.37	68.54	82.36	94.83
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	107.84	118.88	129.46	138.70	147.32	154.58	160.06	164.72	167.77
15.0	115.38	127.85	139.24	149.47	158.17	166.16	172.08	176.83	180.15
30.0	114.39	126.86	137.45	147.68	156.56	164.18	170.46	175.13	178.45
45.0	103.18	114.48	124.98	134.13	142.38	149.02	154.67	158.89	161.94
60.0	84.16	93.13	102.10	109.55	116.27	122.02	126.68	130.18	132.60
75.0	61.46	68.46	74.74	80.48	85.41	89.45	92.77	95.19	96.90
90.0	59.57	65.94	72.49	77.88	82.72	86.76	89.90	92.23	93.76
105.0	63.61	70.70	77.07	82.72	87.48	91.87	95.01	97.43	98.96
120.0	86.31	95.55	103.62	111.70	117.98	123.63	128.12	131.44	133.68
135.0	107.21	118.52	129.10	138.52	146.78	153.42	159.25	163.29	165.89
150.0	120.58	133.32	144.98	155.57	164.09	171.81	178.00	182.76	185.81
165.0	123.81	136.73	147.77	158.35	167.59	175.49	181.59	186.26	189.40
180.0	126.95	137.90	147.77	156.20	163.47	169.12	173.60	176.48	177.82
195.0	108.74	118.52	126.68	134.22	140.23	145.25	148.84	151.26	152.34
210.0	82.72	89.81	96.36	102.01	106.59	110.53	113.13	114.93	115.74
225.0	46.47	50.24	53.83	56.61	59.12	61.01	62.26	62.98	62.98
240.0	4.22	4.40	4.49	4.58	4.76	4.67	4.58	4.40	4.04
255.0	0.36	0.45	0.63	0.99	1.17	1.26	1.44	1.53	1.53
270.0	0.18	0.36	0.45	0.45	1.08	1.17	1.35	1.35	1.35
285.0	0.09	0.27	0.45	0.81	1.17	1.26	1.35	1.44	1.44
300.0	0.45	0.81	0.99	1.08	1.44	1.70	1.88	1.97	2.06
315.0	39.30	42.89	46.20	48.81	51.14	53.02	54.46	55.36	55.63
330.0	75.00	82.18	88.37	93.85	98.60	102.37	105.33	107.12	108.11
345.0	100.84	110.53	118.34	125.52	131.53	136.55	140.32	142.83	143.91
360.0	107.84	118.88	129.46	138.70	147.32	154.58	160.06	164.72	167.77

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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	169.21	169.12	167.59	164.54	159.97	154.49	147.32	138.88	129.37
15.0	181.77	181.77	180.33	177.10	172.35	165.98	158.71	149.11	139.51
30.0	180.15	180.15	178.45	175.40	171.00	164.72	157.10	148.12	137.99
45.0	163.38	163.65	162.03	159.34	155.12	149.38	142.47	134.76	125.52
60.0	133.77	133.77	132.60	130.27	126.95	121.93	116.63	109.82	102.10
75.0	97.61	97.34	96.36	94.47	91.60	87.83	83.35	78.14	72.58
90.0	94.47	94.11	92.95	90.88	88.01	84.51	80.03	74.65	68.72
105.0	99.68	99.41	98.06	96.18	93.13	89.27	84.51	79.13	73.30
120.0	134.58	134.31	132.87	130.18	126.59	121.66	115.56	108.56	100.57
135.0	167.23	166.88	165.08	162.21	157.37	151.26	143.73	135.56	125.25
150.0	187.06	186.97	184.91	181.32	175.94	169.12	161.40	151.80	141.04
165.0	190.83	190.56	188.86	184.64	179.62	172.71	164.36	154.41	143.91
180.0	177.46	175.49	172.08	167.06	160.69	153.33	144.09	133.77	122.29
195.0	152.07	150.19	147.41	143.01	137.36	130.63	122.56	114.03	103.62
210.0	115.38	113.94	111.43	108.02	103.62	97.97	92.14	85.14	77.34
225.0	62.26	61.28	59.21	57.15	54.28	50.87	50.06	42.98	38.49
240.0	3.68	3.32	3.23	2.33	1.88	1.44	1.17	0.81	0.63
255.0	1.53	1.35	1.35	1.17	0.99	0.72	0.54	0.27	0.18
270.0	1.35	1.17	1.08	0.99	0.72	0.63	0.36	0.09	0.00
285.0	1.35	1.26	1.17	0.99	0.81	0.54	0.36	0.09	0.09
300.0	1.88	1.70	1.53	1.44	1.17	0.90	0.72	0.45	0.27
315.0	55.45	54.73	53.11	51.23	48.81	45.94	42.89	39.39	35.53
330.0	108.02	106.94	104.97	101.92	97.88	93.31	87.56	81.19	74.11
345.0	143.91	142.47	140.05	135.83	131.08	124.89	117.53	109.10	100.13
360.0	169.21	169.12	167.59	164.54	159.97	154.49	147.32	138.88	129.37

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	119.24	107.66	95.28	81.91	68.01	54.28	39.83	25.75	12.47
15.0	128.30	115.74	102.28	88.73	73.93	58.50	42.89	28.26	14.09
30.0	127.31	114.21	101.47	87.56	73.30	57.33	42.71	27.72	13.73
45.0	115.02	103.89	91.69	78.68	65.94	52.04	38.04	24.58	12.56
60.0	93.49	84.51	74.47	63.79	52.84	41.99	30.15	19.83	9.69
75.0	66.21	59.21	51.86	44.23	36.69	28.71	20.81	13.37	6.64
90.0	62.53	55.18	48.09	40.46	32.66	24.67	17.14	9.78	3.41
105.0	66.48	59.12	51.32	43.69	35.35	27.01	18.84	11.39	4.04
120.0	91.60	82.00	72.22	61.46	50.42	38.94	27.72	17.32	7.27
135.0	114.93	103.53	90.44	77.16	64.06	49.26	35.89	22.34	10.41
150.0	128.93	115.74	102.55	87.74	72.40	56.52	40.73	26.29	12.02
165.0	131.17	118.61	104.25	89.27	73.57	58.32	42.17	26.56	11.93
180.0	109.73	97.08	83.08	68.46	53.74	38.76	24.22	11.21	0.54
195.0	93.31	82.00	69.80	57.24	45.04	41.45	20.10	7.98	0.45
210.0	69.44	67.02	51.05	41.90	31.67	22.52	13.19	3.95	0.45
225.0	33.55	28.71	23.51	18.21	13.10	8.07	3.86	0.54	0.36
240.0	0.54	0.54	0.45	0.36	0.36	0.36	0.36	0.36	0.36
255.0	0.09	0.09	0.09	0.18	0.09	0.09	0.18	0.18	0.36
270.0	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.18	0.36
285.0	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.27	0.27
300.0	0.18	0.18	0.00	0.09	0.09	0.18	0.18	0.27	0.27
315.0	31.67	27.54	23.06	18.48	14.09	9.87	5.65	1.97	0.36
330.0	66.39	58.32	49.97	40.73	32.12	23.15	14.44	6.37	0.54
345.0	90.17	79.40	68.01	56.16	44.14	32.75	20.99	10.14	0.90
360.0	119.24	107.66	95.28	81.91	68.01	54.28	39.83	25.75	12.47

Intensity data(cd)

C/γ(°)	180.0
0.0	0.45
15.0	2.15
30.0	1.97
45.0	1.97
60.0	1.26
75.0	0.90
90.0	0.54
105.0	0.45
120.0	0.45
135.0	0.45
150.0	0.54
165.0	0.81
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	0.45