

LCTECH

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ACCESS LIGHTING

LumCAT: 50004LEDD

Luminaire: LED lamp

Report No:

Voltage(V): 110.0600

Test No:

Current(A): 0.1580

LampCAT:

Power (W): 17.2500

Lamp flux(lm): 1497.9

PF: 0.9932

Number of Lamps: 1

Ballast type:

Length(mm): -160

Width(mm): -160

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1497.86

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 86.83

Central intensity(cd): 541.433

Maximum intensity(cd): 545.347

Angle of maximum intensity: C=0.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=109.4

[C90/270]Total=109.1

Field angle(10%Imax): [C0/180]Total=161.4

[C90/270]Total=161.3

Maximum s/h(1/2): C0_180=1.24 C90_270=1.23

Maximum s/h(1/4): C0_180=1.36 C90_270=1.35

Up flux rate of lamp(%): 0.20%

Down flux rate of lamp(%): 99.80%

Up flux rate of LUM(%): 0.20%

Down flux rate of LUM(%): 99.80%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 78.907%

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Zonal flux distribution table

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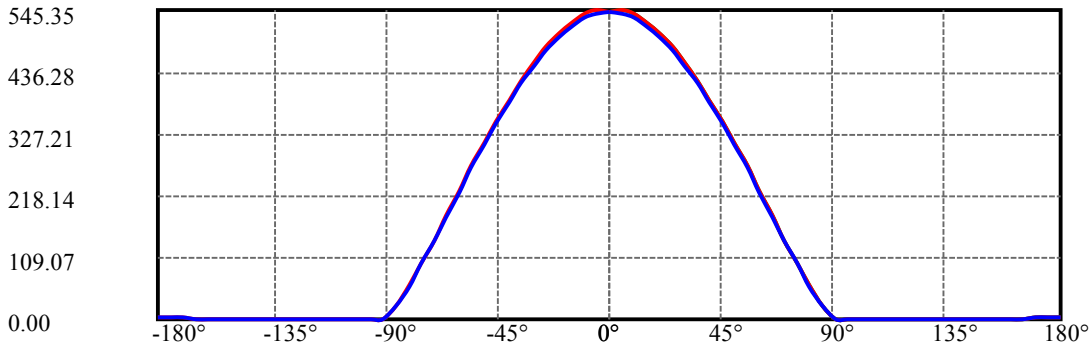
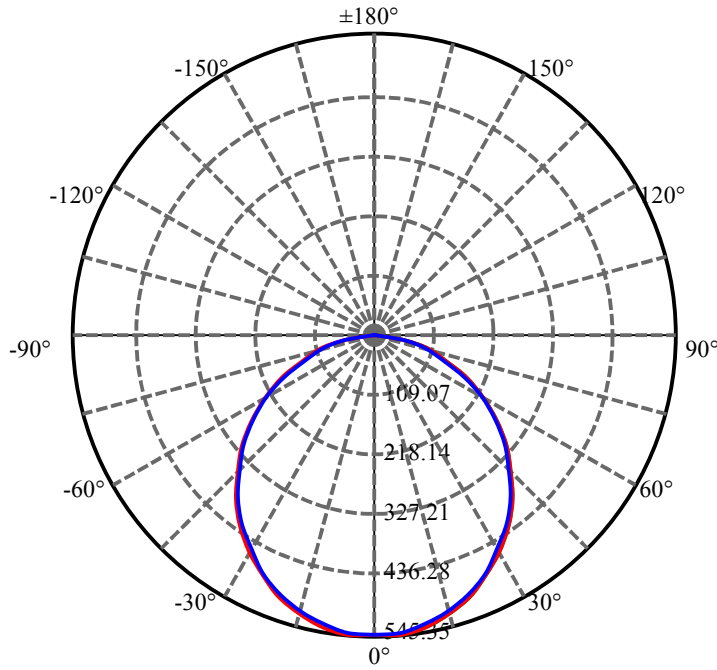
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	541.434	.000	.000	.000%	.000%
5.0	539.151	12.918	12.918	.862%	.862%
10.0	530.768	38.274	51.192	2.555%	3.418%
15.0	517.021	62.154	113.347	4.150%	7.567%
20.0	498.171	83.666	197.013	5.586%	13.153%
25.0	474.897	102.057	299.070	6.814%	19.966%
30.0	447.735	116.760	415.830	7.795%	27.762%
35.0	416.700	127.294	543.124	8.498%	36.260%
40.0	382.676	133.370	676.494	8.904%	45.164%
45.0	346.324	134.980	811.474	9.012%	54.176%
50.0	307.194	132.053	943.527	8.816%	62.992%
55.0	266.910	124.829	1068.356	8.334%	71.325%
60.0	224.400	113.565	1181.921	7.582%	78.907%
65.0	181.433	98.659	1280.579	6.587%	85.494%
70.0	138.811	81.088	1361.667	5.414%	90.908%
75.0	97.535	61.777	1423.445	4.124%	95.032%
80.0	58.928	41.865	1465.310	2.795%	97.827%
85.0	24.384	22.638	1487.948	1.511%	99.338%
90.0	1.033	6.959	1494.907	.465%	99.803%
95.0	.161	.327	1495.234	.022%	99.825%
100.0	.173	.091	1495.325	.006%	99.831%
105.0	.214	.103	1495.428	.007%	99.838%
110.0	.233	.117	1495.545	.008%	99.845%
115.0	.236	.119	1495.664	.008%	99.853%
120.0	.248	.118	1495.781	.008%	99.861%
125.0	.281	.122	1495.904	.008%	99.869%
130.0	.352	.138	1496.042	.009%	99.879%
135.0	.319	.136	1496.177	.009%	99.888%
140.0	.480	.148	1496.325	.010%	99.898%
145.0	.675	.193	1496.518	.013%	99.910%
150.0	.885	.230	1496.748	.015%	99.926%
155.0	1.062	.246	1496.994	.016%	99.942%
160.0	1.320	.250	1497.244	.017%	99.959%
165.0	1.586	.240	1497.483	.016%	99.975%
170.0	1.770	.199	1497.682	.013%	99.988%
175.0	1.890	.131	1497.813	.009%	99.997%
180.0	2.010	.047	1497.860	.003%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	415.83	27.76%	27.76%
0-40	676.49	45.16%	45.16%
0-60	1181.92	78.91%	78.91%
0-90	1494.91	99.80%	99.80%
0-120	1495.78	99.86%	99.86%
0-180	1497.86	100.00%	100.00%
60-90	426.55	28.48%	28.48%
90-120	7.83	0.52%	0.52%
90-130	8.09	0.54%	0.54%
90-150	8.80	0.59%	0.59%
90-180	9.87	0.66%	0.66%
0-60.83	1198.29	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	51.19
10-20	145.82
20-30	218.82
30-40	260.66
40-50	267.03
50-60	238.39
60-70	179.75
70-80	103.64
80-90	29.60
90-100	0.42
100-110	0.22
110-120	0.24
120-130	0.26
130-140	0.28
140-150	0.42
150-160	0.50
160-170	0.44
170-180	0.13



C0(Max): ———

C0/C180: ———

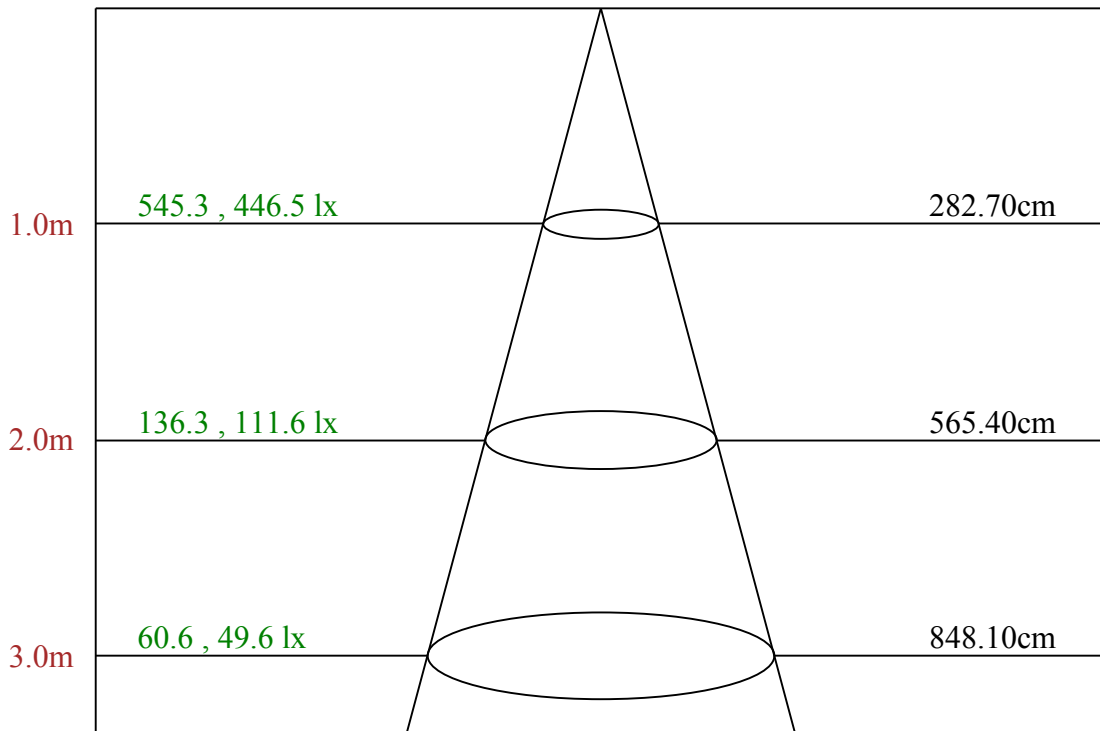
C90/C270: ———

Field angle(10%Imax):C0/180Left:85.7 Right:75.7

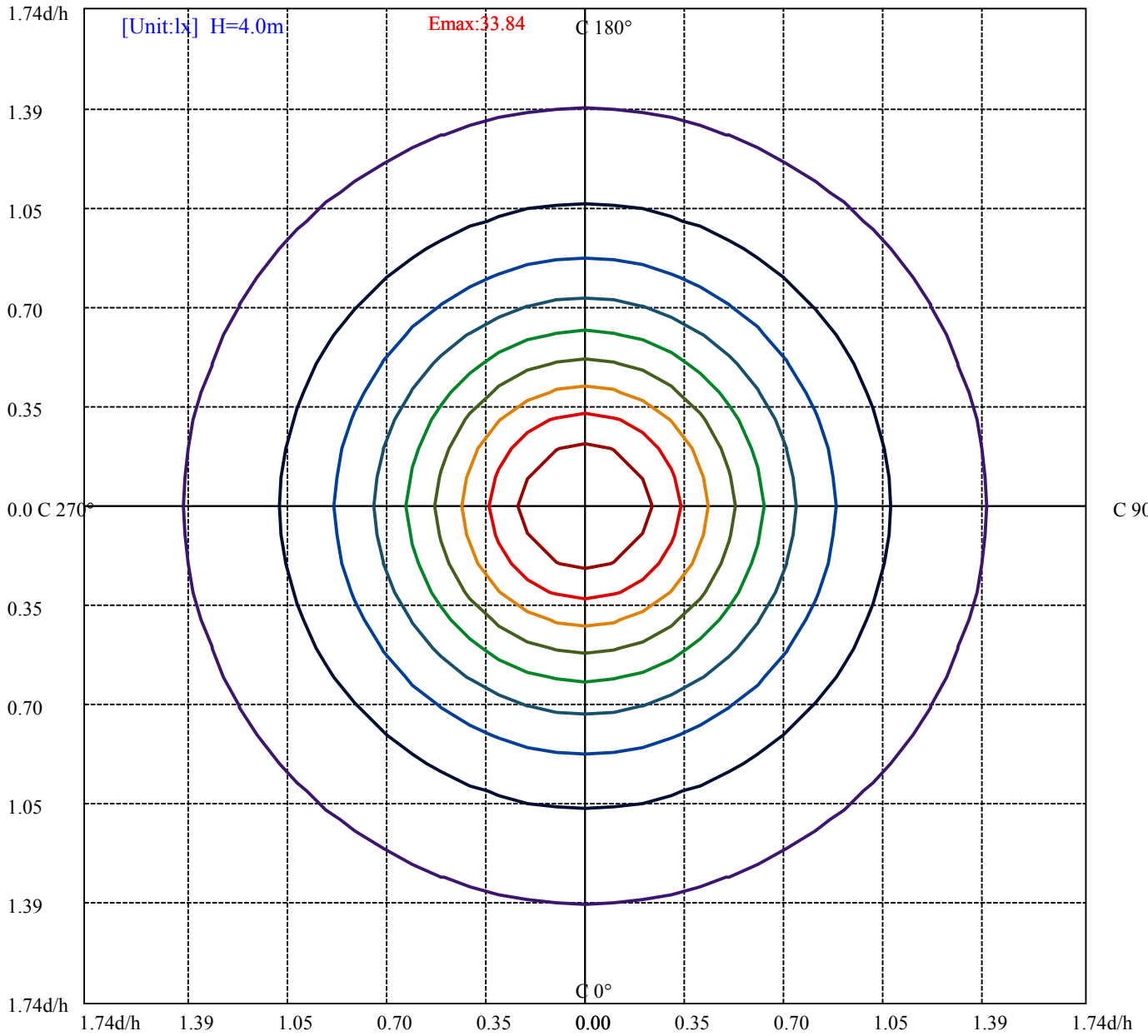
:C90/270Left:80.6 Right:80.6

Beam Angle(50%Imax):C0/180Left:59.7 Right:49.7

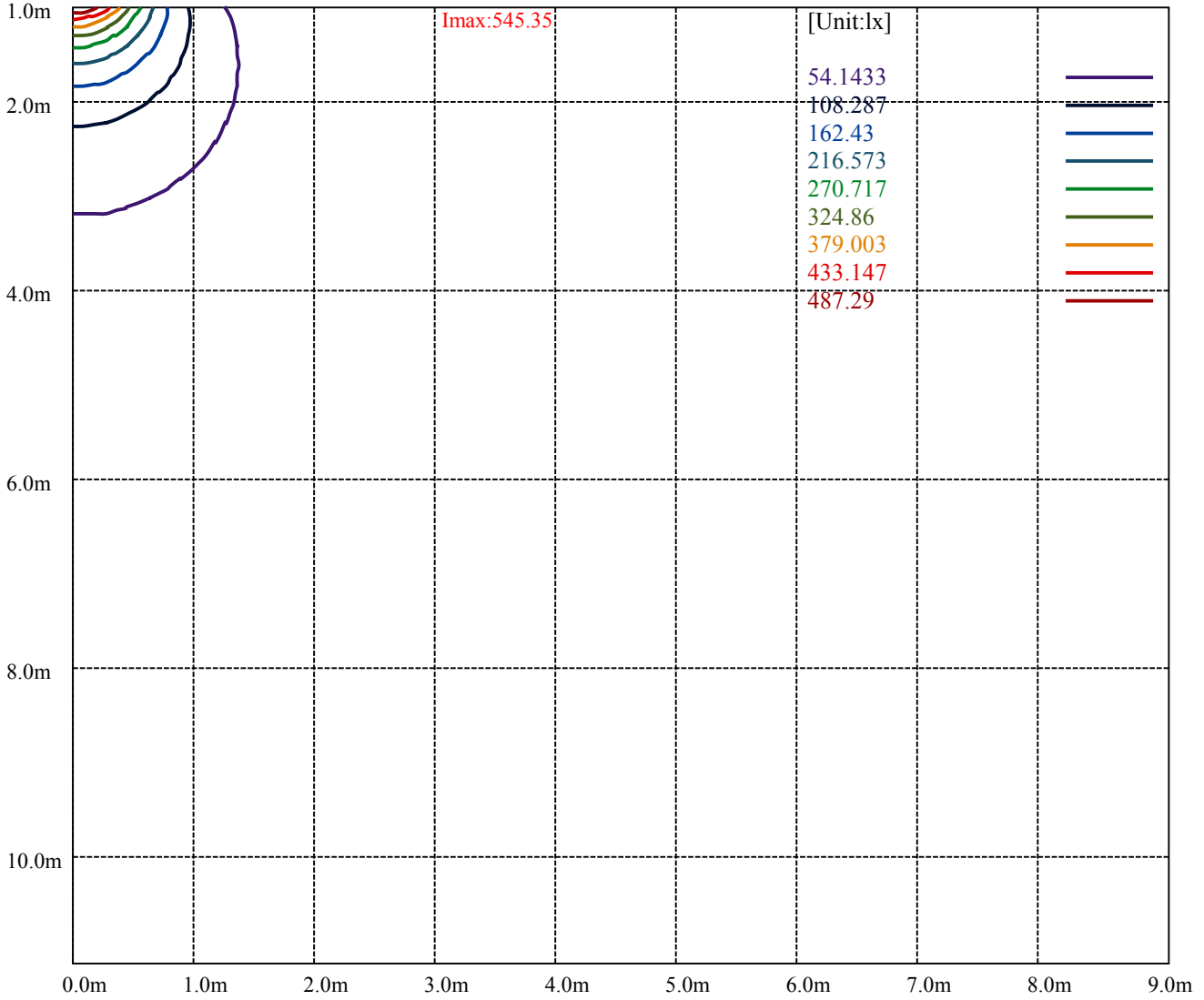
:C90/270Left:54.5 Right:54.5



Max , Ave Beam angle of C0plane109.44



- (10%Emax) 3.383956
- (20%Emax) 6.767938
- (30%Emax) 10.15187
- (40%Emax) 13.53581
- (50%Emax) 16.91981
- (60%Emax) 20.30375
- (70%Emax) 23.68769
- (80%Emax) 27.07169
- (90%Emax) 30.45563



Luminance Table

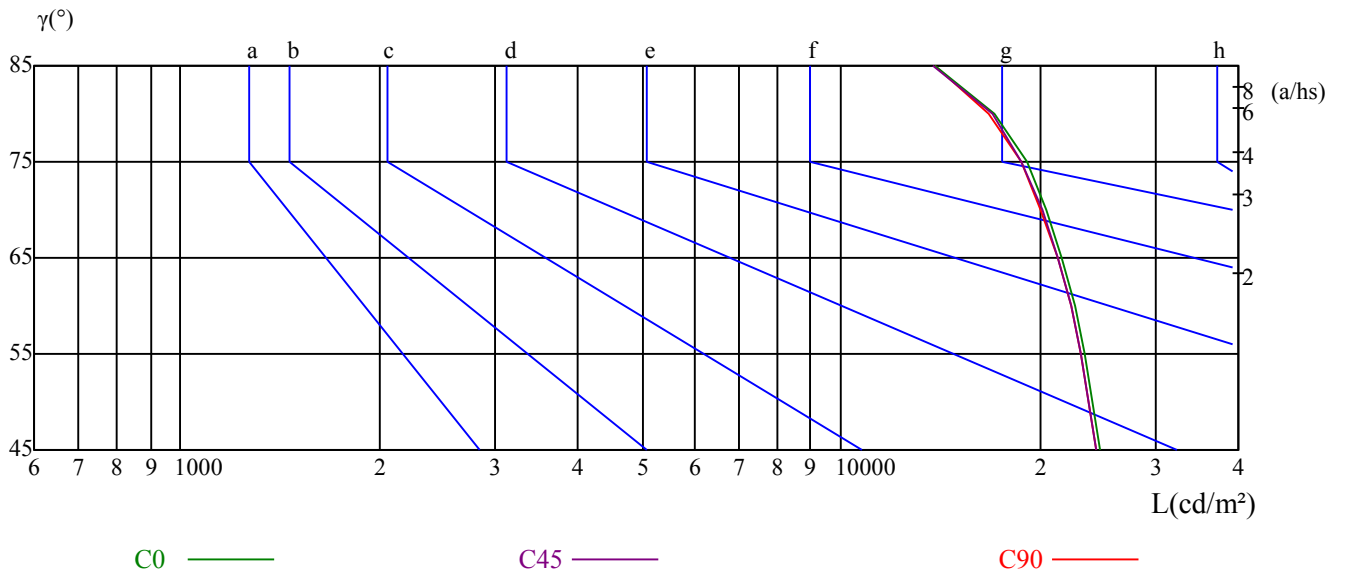
γ	45	50	55	60	65	70	75	80	85
C0	24613	24050	23449	22645	21608	20433	19156	17081	13859
C45	24346	23758	23128	22317	21292	20194	18764	16923	13831
C90	24286	23760	23157	22360	21319	20025	18712	16765	13840

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
21608	21319	21292	19156	18712	18764	13859	13840	13831

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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.04	1.00	0.96	1.02	0.98	0.94	0.97	0.94	0.91	0.93	0.91	0.88	0.90	0.88	0.86	0.83
2	0.91	0.84	0.78	0.89	0.82	0.77	0.85	0.80	0.75	0.82	0.77	0.73	0.79	0.75	0.72	0.70
3	0.80	0.71	0.65	0.78	0.70	0.64	0.75	0.68	0.63	0.72	0.67	0.62	0.70	0.65	0.61	0.59
4	0.70	0.62	0.55	0.69	0.61	0.55	0.67	0.59	0.54	0.64	0.58	0.53	0.62	0.57	0.52	0.50
5	0.63	0.54	0.47	0.62	0.53	0.47	0.60	0.52	0.47	0.58	0.51	0.46	0.56	0.50	0.45	0.43
6	0.57	0.48	0.41	0.56	0.47	0.41	0.54	0.46	0.41	0.52	0.45	0.40	0.51	0.45	0.40	0.38
7	0.51	0.43	0.37	0.51	0.42	0.36	0.49	0.42	0.36	0.48	0.41	0.36	0.46	0.40	0.36	0.34
8	0.47	0.38	0.33	0.46	0.38	0.32	0.45	0.38	0.32	0.44	0.37	0.32	0.42	0.36	0.32	0.30
9	0.43	0.35	0.29	0.43	0.35	0.29	0.41	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.29	0.27
10	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.26	0.37	0.31	0.26	0.36	0.30	0.26	0.24

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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	541.43	545.35	536.88	522.82	503.44	480.38	453.11	421.37	386.85
15.0	541.43	538.72	530.01	516.90	497.92	474.49	447.33	416.18	382.38
30.0	541.43	538.69	530.30	516.58	497.92	474.41	447.18	416.40	382.27
45.0	541.43	538.77	530.64	516.65	497.69	474.39	447.61	416.39	382.87
60.0	541.43	538.57	530.16	516.24	497.78	474.81	447.21	416.24	381.87
75.0	541.43	538.12	529.96	516.09	497.13	473.79	447.05	415.92	382.03
90.0	541.43	538.72	530.19	516.50	497.76	474.59	446.95	416.78	382.41
105.0	541.43	538.12	529.96	516.09	497.13	473.79	447.05	415.92	382.03
120.0	541.43	538.57	530.16	516.24	497.78	474.81	447.21	416.24	381.87
135.0	541.43	538.77	530.64	516.65	497.69	474.39	447.61	416.39	382.87
150.0	541.43	538.69	530.30	516.58	497.92	474.41	447.18	416.40	382.27
165.0	541.43	538.72	530.01	516.90	497.92	474.49	447.33	416.18	382.38
180.0	541.43	545.35	536.88	522.82	503.44	480.38	453.11	421.37	386.85
195.0	541.43	538.72	530.01	516.90	497.92	474.49	447.33	416.18	382.38
210.0	541.43	538.69	530.30	516.58	497.92	474.41	447.18	416.40	382.27
225.0	541.43	538.77	530.64	516.65	497.69	474.39	447.61	416.39	382.87
240.0	541.43	538.57	530.16	516.24	497.78	474.81	447.21	416.24	381.87
255.0	541.43	538.12	529.96	516.09	497.13	473.79	447.05	415.92	382.03
270.0	541.43	538.72	530.19	516.50	497.76	474.59	446.95	416.78	382.41
285.0	541.43	538.12	529.96	516.09	497.13	473.79	447.05	415.92	382.03
300.0	541.43	538.57	530.16	516.24	497.78	474.81	447.21	416.24	381.87
315.0	541.43	538.77	530.64	516.65	497.69	474.39	447.61	416.39	382.87
330.0	541.43	538.69	530.30	516.58	497.92	474.41	447.18	416.40	382.27
345.0	541.43	538.72	530.01	516.90	497.92	474.49	447.33	416.18	382.38
360.0	541.43	545.35	536.88	522.82	503.44	480.38	453.11	421.37	386.85

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	349.93	310.82	270.43	227.65	183.61	140.51	99.69	59.64	24.29
15.0	346.32	307.02	266.64	224.58	181.89	139.05	97.28	59.69	24.87
30.0	346.32	306.61	267.23	224.21	181.39	139.00	97.71	58.96	24.31
45.0	346.13	307.05	266.73	224.35	180.92	138.87	97.64	59.08	24.24
60.0	345.65	306.62	266.32	223.95	181.15	138.61	97.07	58.57	24.34
75.0	345.91	306.93	265.80	223.10	180.87	138.23	96.97	58.17	24.28
90.0	345.28	307.07	267.06	224.78	181.16	137.71	97.37	58.53	24.25
105.0	345.91	306.93	265.80	223.10	180.87	138.23	96.97	58.17	24.28
120.0	345.65	306.62	266.32	223.95	181.15	138.61	97.07	58.57	24.34
135.0	346.13	307.05	266.73	224.35	180.92	138.87	97.64	59.08	24.24
150.0	346.32	306.61	267.23	224.21	181.39	139.00	97.71	58.96	24.31
165.0	346.32	307.02	266.64	224.58	181.89	139.05	97.28	59.69	24.87
180.0	349.93	310.82	270.43	227.65	183.61	140.51	99.69	59.64	24.29
195.0	346.32	307.02	266.64	224.58	181.89	139.05	97.28	59.69	24.87
210.0	346.32	306.61	267.23	224.21	181.39	139.00	97.71	58.96	24.31
225.0	346.13	307.05	266.73	224.35	180.92	138.87	97.64	59.08	24.24
240.0	345.65	306.62	266.32	223.95	181.15	138.61	97.07	58.57	24.34
255.0	345.91	306.93	265.80	223.10	180.87	138.23	96.97	58.17	24.28
270.0	345.28	307.07	267.06	224.78	181.16	137.71	97.37	58.53	24.25
285.0	345.91	306.93	265.80	223.10	180.87	138.23	96.97	58.17	24.28
300.0	345.65	306.62	266.32	223.95	181.15	138.61	97.07	58.57	24.34
315.0	346.13	307.05	266.73	224.35	180.92	138.87	97.64	59.08	24.24
330.0	346.32	306.61	267.23	224.21	181.39	139.00	97.71	58.96	24.31
345.0	346.32	307.02	266.64	224.58	181.89	139.05	97.28	59.69	24.87
360.0	349.93	310.82	270.43	227.65	183.61	140.51	99.69	59.64	24.29

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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	0.45	0.18	0.18	0.23	0.18	0.23	0.23	0.31	0.31
15.0	1.04	0.16	0.16	0.25	0.22	0.25	0.27	0.29	0.36
30.0	1.33	0.18	0.16	0.20	0.22	0.22	0.25	0.31	0.36
45.0	0.99	0.16	0.18	0.23	0.25	0.25	0.25	0.27	0.34
60.0	1.08	0.14	0.18	0.23	0.25	0.23	0.25	0.25	0.34
75.0	0.99	0.16	0.18	0.18	0.23	0.23	0.23	0.29	0.36
90.0	1.08	0.18	0.18	0.18	0.27	0.27	0.27	0.23	0.41
105.0	0.99	0.16	0.18	0.18	0.23	0.23	0.23	0.29	0.36
120.0	1.08	0.14	0.18	0.23	0.25	0.23	0.25	0.25	0.34
135.0	0.99	0.16	0.18	0.23	0.25	0.25	0.25	0.27	0.34
150.0	1.33	0.18	0.16	0.20	0.22	0.22	0.25	0.31	0.36
165.0	1.04	0.16	0.16	0.25	0.22	0.25	0.27	0.29	0.36
180.0	0.45	0.18	0.18	0.23	0.18	0.23	0.23	0.31	0.31
195.0	1.04	0.16	0.16	0.25	0.22	0.25	0.27	0.29	0.36
210.0	1.33	0.18	0.16	0.20	0.22	0.22	0.25	0.31	0.36
225.0	0.99	0.16	0.18	0.23	0.25	0.25	0.25	0.27	0.34
240.0	1.08	0.14	0.18	0.23	0.25	0.23	0.25	0.25	0.34
255.0	0.99	0.16	0.18	0.18	0.23	0.23	0.23	0.29	0.36
270.0	1.08	0.18	0.18	0.18	0.27	0.27	0.27	0.23	0.41
285.0	0.99	0.16	0.18	0.18	0.23	0.23	0.23	0.29	0.36
300.0	1.08	0.14	0.18	0.23	0.25	0.23	0.25	0.25	0.34
315.0	0.99	0.16	0.18	0.23	0.25	0.25	0.25	0.27	0.34
330.0	1.33	0.18	0.16	0.20	0.22	0.22	0.25	0.31	0.36
345.0	1.04	0.16	0.16	0.25	0.22	0.25	0.27	0.29	0.36
360.0	0.45	0.18	0.18	0.23	0.18	0.23	0.23	0.31	0.31
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.31	0.49	0.67	0.90	1.07	1.30	1.65	1.83	1.97
15.0	0.34	0.47	0.65	0.88	1.03	1.35	1.59	1.80	1.91
30.0	0.32	0.47	0.70	0.85	1.08	1.30	1.57	1.75	1.91
45.0	0.32	0.52	0.65	0.88	1.08	1.33	1.60	1.76	1.92
60.0	0.32	0.43	0.68	0.90	1.04	1.31	1.58	1.71	1.85
75.0	0.32	0.47	0.70	0.90	1.10	1.35	1.58	1.80	1.85
90.0	0.32	0.54	0.68	0.90	0.99	1.26	1.54	1.76	1.85
105.0	0.32	0.47	0.70	0.90	1.10	1.35	1.58	1.80	1.85
120.0	0.32	0.43	0.68	0.90	1.04	1.31	1.58	1.71	1.85
135.0	0.32	0.52	0.65	0.88	1.08	1.33	1.60	1.76	1.92
150.0	0.32	0.47	0.70	0.85	1.08	1.30	1.57	1.75	1.91
165.0	0.34	0.47	0.65	0.88	1.03	1.35	1.59	1.80	1.91
180.0	0.31	0.49	0.67	0.90	1.07	1.30	1.65	1.83	1.97
195.0	0.34	0.47	0.65	0.88	1.03	1.35	1.59	1.80	1.91
210.0	0.32	0.47	0.70	0.85	1.08	1.30	1.57	1.75	1.91
225.0	0.32	0.52	0.65	0.88	1.08	1.33	1.60	1.76	1.92
240.0	0.32	0.43	0.68	0.90	1.04	1.31	1.58	1.71	1.85
255.0	0.32	0.47	0.70	0.90	1.10	1.35	1.58	1.80	1.85
270.0	0.32	0.54	0.68	0.90	0.99	1.26	1.54	1.76	1.85
285.0	0.32	0.47	0.70	0.90	1.10	1.35	1.58	1.80	1.85
300.0	0.32	0.43	0.68	0.90	1.04	1.31	1.58	1.71	1.85
315.0	0.32	0.52	0.65	0.88	1.08	1.33	1.60	1.76	1.92
330.0	0.32	0.47	0.70	0.85	1.08	1.30	1.57	1.75	1.91
345.0	0.34	0.47	0.65	0.88	1.03	1.35	1.59	1.80	1.91
360.0	0.31	0.49	0.67	0.90	1.07	1.30	1.65	1.83	1.97

Intensity data(cd)

C/γ(°)	180.0
0.0	2.06
15.0	2.02
30.0	1.93
45.0	2.03
60.0	2.03
75.0	1.98
90.0	2.08
105.0	1.98
120.0	2.03
135.0	2.03
150.0	1.93
165.0	2.02
180.0	2.06
195.0	2.02
210.0	1.93
225.0	2.03
240.0	2.03
255.0	1.98
270.0	2.08
285.0	1.98
300.0	2.03
315.0	2.03
330.0	1.93
345.0	2.02
360.0	2.06