
乐达凯

Client:

LumCAT: VRNP3X6LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.478

Lamp flux(lm): 4643.0

Power (W): 56.770

Number of Lamps: 1

PF: 0.990

Length(mm): 740

Width(mm): 180

Phm Type: C

Height(mm): 440

Photometric Results

Lumens(lm): 4643.03, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 81.79

Central intensity(cd): 514.085, Maximum intensity(cd): 516.328

Angle of maximum intensity: C=0.0 γ =150.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.47 C90_270=1.17

Maximum s/h(1/4): C0_180=1.60 C90_270=1.26

Up flux rate of lamp(%): 48.68%

Down flux rate of lamp(%): 51.32%

Up flux rate of LUM(%): 48.68%

Down flux rate of LUM(%): 51.32%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 28.297%

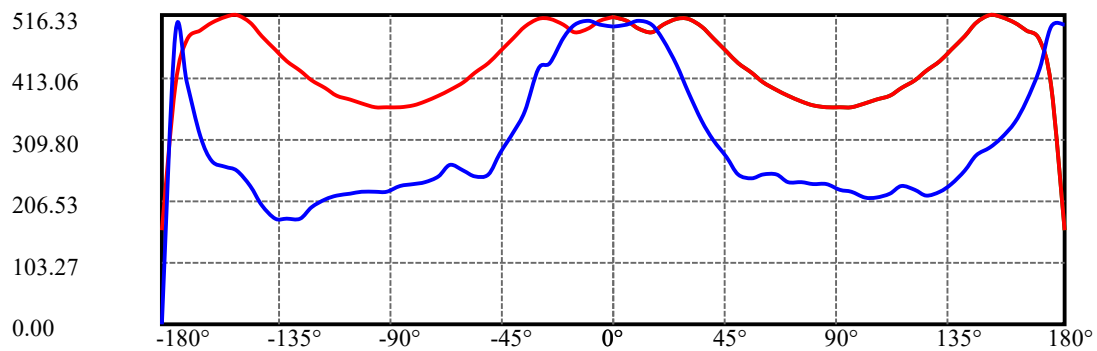
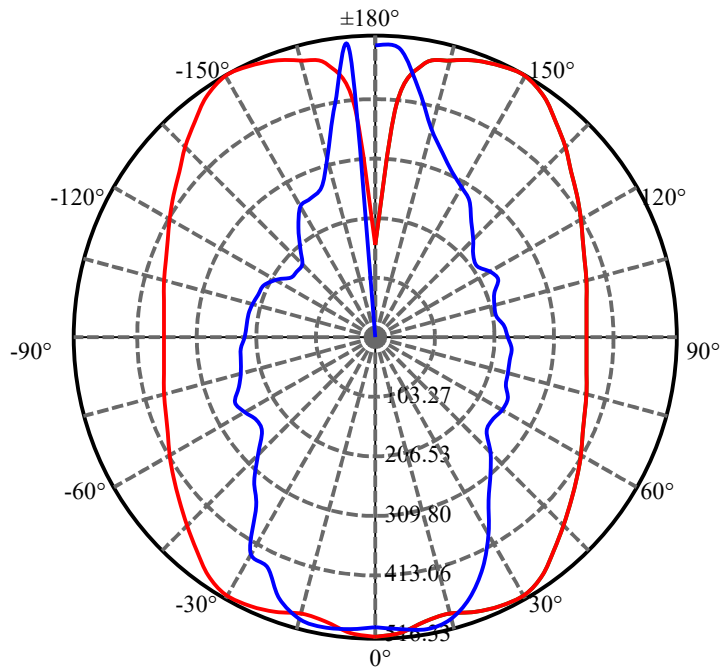
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	500.329	0.000	0	0.00%	0.00%
5.0	499.992	11.959	11.959	0.26%	0.26%
10.0	497.525	35.684	47.643	0.77%	1.03%
15.0	494.609	58.853	106.496	1.27%	2.29%
20.0	488.478	81.020	187.516	1.74%	4.04%
25.0	476.441	101.202	288.718	2.18%	6.22%
30.0	458.497	118.317	407.035	2.55%	8.77%
35.0	433.451	131.346	538.381	2.83%	11.60%
40.0	411.134	140.913	679.294	3.03%	14.63%
45.0	393.227	148.934	828.228	3.21%	17.84%
50.0	377.190	155.674	983.902	3.35%	21.19%
55.0	367.321	161.882	1145.783	3.49%	24.68%
60.0	359.807	168.074	1313.857	3.62%	28.30%
65.0	352.892	173.258	1487.116	3.73%	32.03%
70.0	344.967	176.702	1663.818	3.81%	35.83%
75.0	338.911	178.754	1842.572	3.85%	39.68%
80.0	333.303	179.866	2022.438	3.87%	43.56%
85.0	329.901	180.209	2202.646	3.88%	47.44%
90.0	327.845	180.096	2382.743	3.88%	51.32%
95.0	327.135	179.339	2562.081	3.86%	55.18%
100.0	328.855	178.248	2740.33	3.84%	59.02%
105.0	332.742	177.025	2917.354	3.81%	62.83%
110.0	336.256	174.866	3092.22	3.77%	66.60%
115.0	340.817	171.439	3263.659	3.69%	70.29%
120.0	345.266	166.788	3430.447	3.59%	73.88%
125.0	349.752	160.651	3591.099	3.46%	77.34%
130.0	358.761	154.054	3745.153	3.32%	80.66%
135.0	371.620	147.584	3892.737	3.18%	83.84%
140.0	388.031	140.656	4033.393	3.03%	86.87%
145.0	410.162	133.172	4166.565	2.87%	89.74%
150.0	427.246	123.314	4289.879	2.66%	92.39%
155.0	427.021	108.108	4397.987	2.33%	94.72%
160.0	416.479	88.468	4486.455	1.91%	96.63%
165.0	406.012	67.785	4554.24	1.46%	98.09%
170.0	420.629	49.036	4603.276	1.06%	99.14%
175.0	458.273	31.441	4634.717	0.68%	99.82%
180.0	236.968	8.311	4643.028	0.18%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	407.04	8.77%	8.77%
0-40	679.29	14.63%	14.63%
0-60	1313.86	28.30%	28.30%
0-90	2382.74	51.32%	51.32%
0-120	3430.45	73.88%	73.88%
0-180	4643.03	100.00%	100.00%
60-90	1068.89	23.02%	23.02%
90-120	1047.70	22.57%	22.57%
90-130	1362.41	29.34%	29.34%
90-150	1907.14	41.08%	41.08%
90-180	2251.97	48.50%	48.50%
0-129.00	3714.42	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	47.64
10-20	139.87
20-30	219.52
30-40	272.26
40-50	304.61
50-60	329.96
60-70	349.96
70-80	358.62
80-90	360.30
90-100	357.59
100-110	351.89
110-120	338.23
120-130	314.71
130-140	288.24
140-150	256.49
150-160	196.58
160-170	116.82
170-180	31.44



C0(Max):

C0/C180:

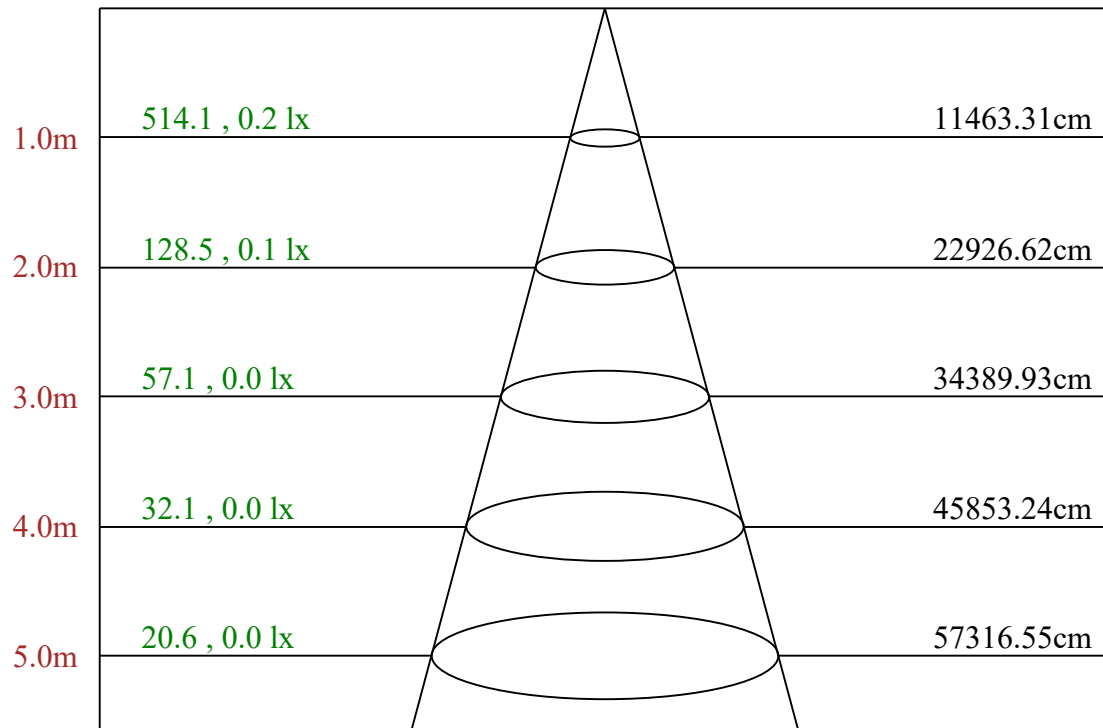
C90/C270:

Field angle(10%Imax):C0/180Left:0.0 Right:0.0

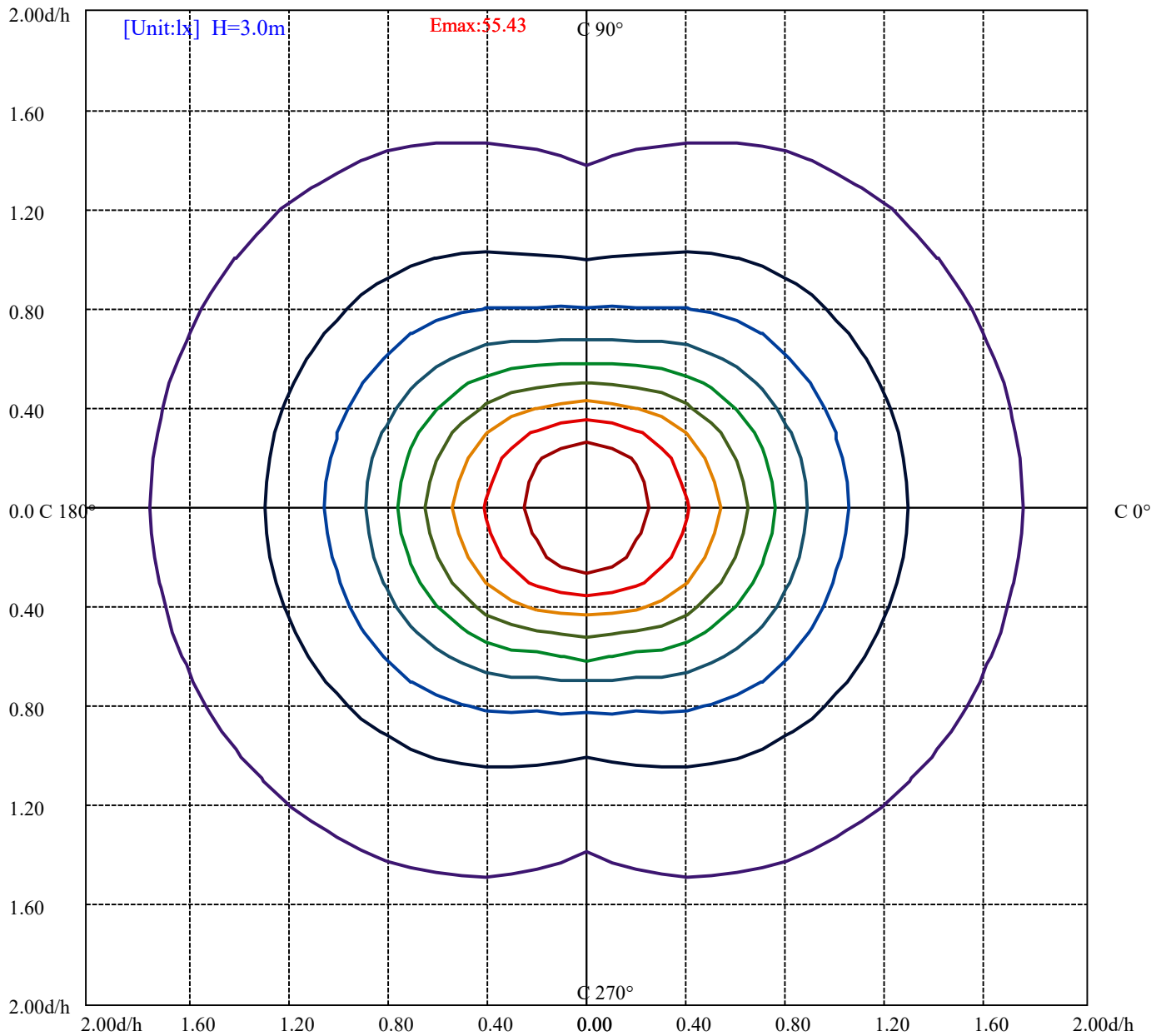
:C90/270Left:0.0 Right:0.0

Beam Angle(50%Imax):C0/180Left:327.9 Right:27.9

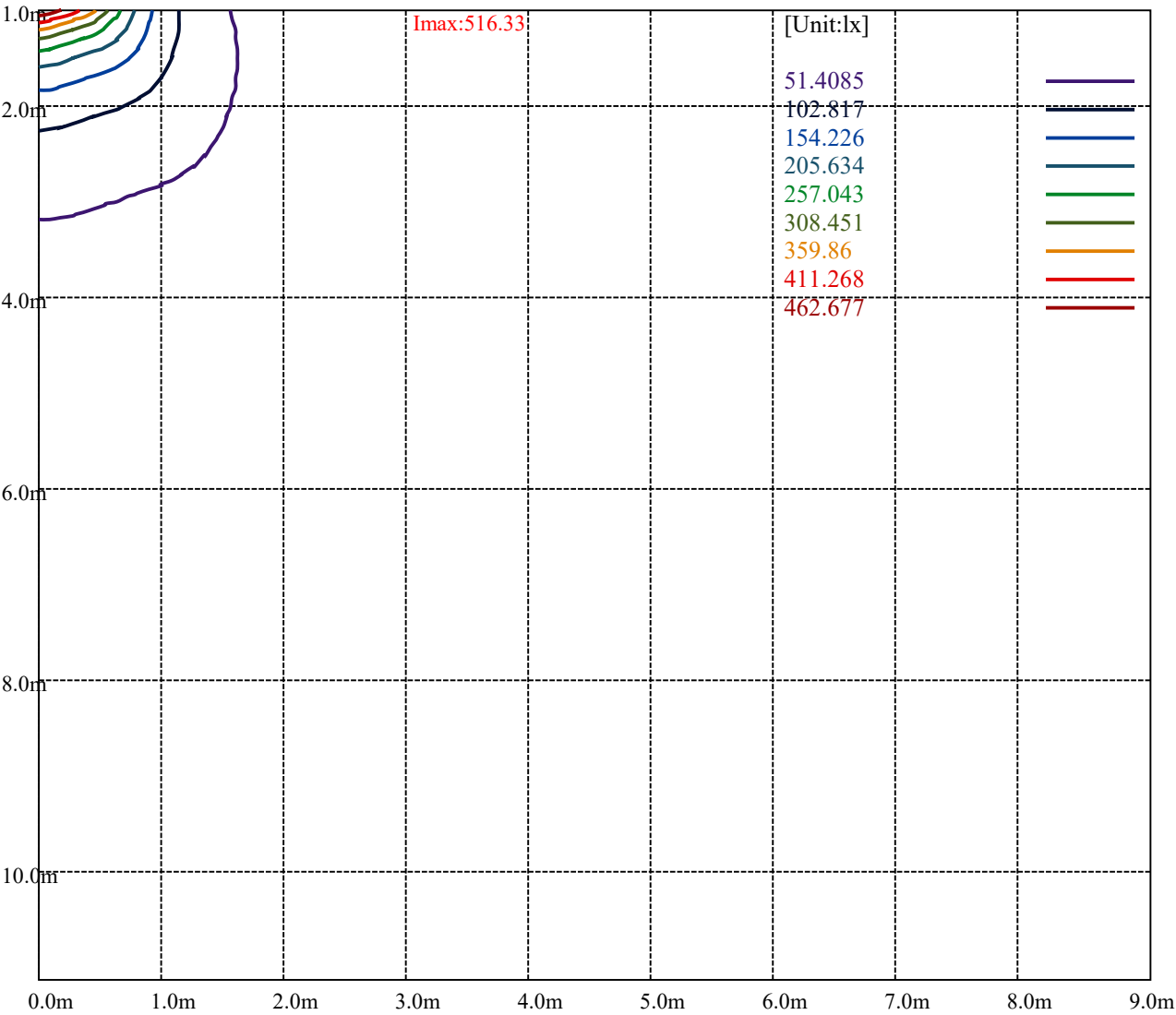
:C90/270Left:0.0 Right:0.0



Max , Ave Beam angle of C0 plane 178.00



(10%Emax) 5.542589	—
(20%Emax) 11.08518	—
(30%Emax) 16.62778	—
(40%Emax) 22.17033	—
(50%Emax) 27.71289	—
(60%Emax) 33.25555	—
(70%Emax) 38.79811	—
(80%Emax) 44.34067	—
(90%Emax) 49.88334	—



Luminance Table

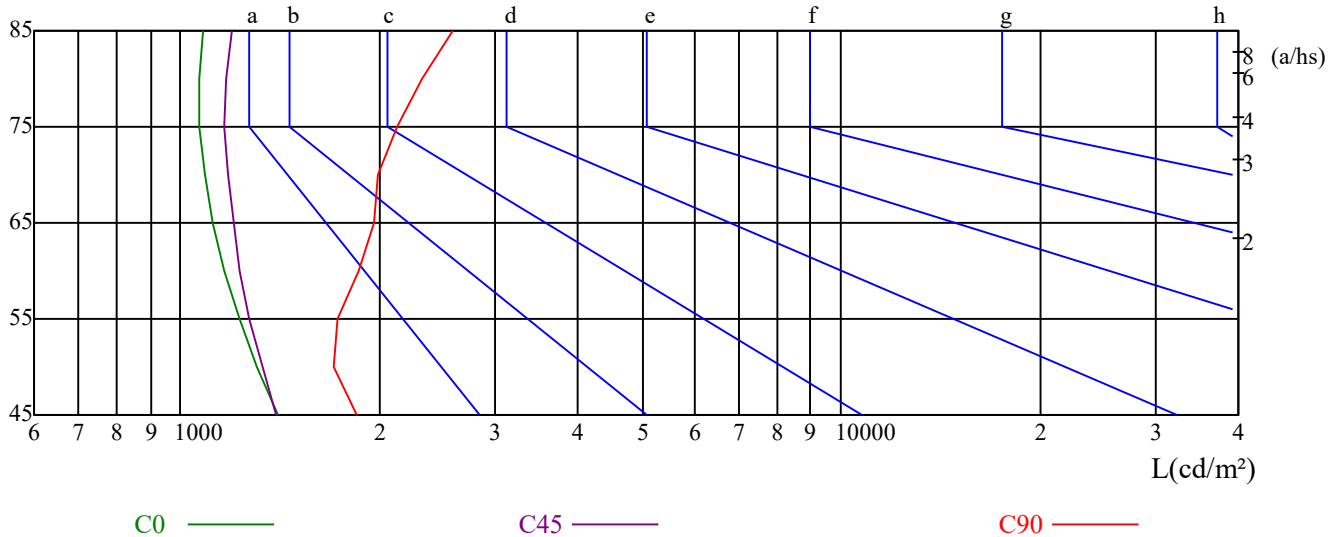
γ	45	50	55	60	65	70	75	80	85
C0	1406	1303	1225	1162	1117	1086	1069	1067	1083
C45	1399	1327	1270	1231	1202	1179	1167	1172	1194
C90	1852	1711	1734	1858	1961	1989	2126	2316	2577

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6973	4598	6594	10826	6870	10241	31338	20016	29638

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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.51
1	0.89	0.83	0.79	0.82	0.77	0.73	0.68	0.65	0.62	0.56	0.53	0.51	0.45	0.43	0.41	0.36
2	0.76	0.68	0.62	0.69	0.63	0.57	0.58	0.53	0.48	0.47	0.44	0.40	0.38	0.35	0.32	0.27
3	0.65	0.57	0.50	0.60	0.52	0.46	0.50	0.44	0.39	0.41	0.36	0.33	0.32	0.29	0.26	0.22
4	0.57	0.48	0.41	0.53	0.45	0.38	0.44	0.38	0.33	0.36	0.31	0.27	0.29	0.25	0.22	0.18
5	0.51	0.42	0.35	0.47	0.39	0.33	0.39	0.33	0.28	0.32	0.27	0.23	0.25	0.22	0.19	0.15
6	0.45	0.36	0.30	0.42	0.34	0.28	0.35	0.29	0.24	0.29	0.24	0.20	0.23	0.19	0.16	0.13
7	0.41	0.32	0.26	0.38	0.30	0.24	0.32	0.25	0.21	0.26	0.21	0.17	0.21	0.17	0.14	0.11
8	0.37	0.28	0.23	0.34	0.26	0.21	0.29	0.23	0.18	0.24	0.19	0.15	0.19	0.15	0.12	0.10
9	0.33	0.26	0.20	0.31	0.24	0.19	0.26	0.20	0.16	0.22	0.17	0.14	0.18	0.14	0.11	0.09
10	0.31	0.23	0.18	0.28	0.21	0.17	0.24	0.18	0.15	0.20	0.16	0.12	0.16	0.13	0.10	0.08

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	514.09	504.22	488.07	484.48	494.35	503.32	503.32	488.07	467.43
15.0	511.39	504.22	490.76	488.07	494.35	499.73	497.94	482.68	463.84
30.0	506.91	502.42	496.14	493.45	496.14	497.04	488.07	470.12	453.97
45.0	501.52	500.63	499.73	498.83	497.94	490.76	471.92	450.39	433.34
60.0	497.94	498.83	501.52	499.73	491.66	475.51	446.80	417.19	393.86
75.0	495.24	498.83	502.42	498.83	481.79	454.87	421.68	383.99	350.80
90.0	496.14	500.63	506.01	500.63	474.61	434.24	386.69	340.03	306.84
105.0	495.24	501.52	506.01	497.04	470.12	421.68	369.64	327.47	298.76
120.0	495.24	501.52	501.52	499.73	478.20	443.21	415.40	391.17	368.74
135.0	496.14	502.42	504.22	500.63	488.07	479.10	452.18	447.69	427.06
150.0	497.04	502.42	501.52	496.14	492.55	493.45	493.45	477.30	460.25
165.0	497.04	501.52	496.14	488.07	488.96	497.94	502.42	496.14	481.79
180.0	514.09	510.50	497.94	493.45	503.32	514.98	517.67	505.11	486.27
195.0	511.39	506.91	492.55	488.07	497.04	508.70	513.19	503.32	485.38
210.0	506.91	504.22	497.04	495.24	499.73	504.22	504.22	489.86	473.71
225.0	501.52	502.42	501.52	501.52	500.63	497.04	486.27	465.64	445.90
240.0	497.94	501.52	506.01	505.11	497.04	483.58	458.46	427.06	403.73
255.0	495.24	501.52	506.91	505.11	489.86	462.05	427.06	391.17	357.98
270.0	496.14	500.63	505.11	499.73	476.40	435.13	425.26	354.39	320.29
285.0	495.24	497.94	498.83	498.83	471.02	422.57	379.51	339.13	310.43
300.0	495.24	493.45	497.04	490.76	478.20	454.87	425.26	394.76	373.23
315.0	496.14	490.76	488.07	485.38	482.68	479.10	458.46	433.34	417.19
330.0	497.04	487.17	480.89	481.79	488.96	487.17	474.61	457.56	439.62
345.0	497.04	483.58	474.61	479.99	489.86	494.35	484.48	469.23	446.80
360.0	514.09	504.22	488.07	484.48	494.35	503.32	503.32	488.07	467.43
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	446.80	427.06	411.81	396.55	383.99	373.23	365.15	359.77	357.08
15.0	444.11	426.16	409.12	395.66	383.99	374.12	367.84	363.36	360.67
30.0	436.93	421.68	408.22	394.76	383.10	373.23	366.95	361.56	359.77
45.0	417.19	403.73	394.76	387.58	379.51	370.54	362.46	357.98	354.39
60.0	378.61	368.74	362.46	357.98	354.39	350.80	345.42	340.03	334.65
75.0	332.85	319.40	313.12	311.32	306.84	304.14	298.76	294.28	287.10
90.0	278.13	250.31	244.93	251.21	251.21	238.65	235.96	234.16	233.27
105.0	285.30	277.23	280.82	290.69	301.45	308.63	308.63	304.14	302.35
120.0	356.18	349.90	349.90	353.49	352.59	347.21	343.62	334.65	331.06
135.0	412.70	405.53	394.76	386.69	379.51	371.43	363.36	357.08	354.39
150.0	446.80	419.88	416.29	402.83	389.38	378.61	370.54	362.46	357.98
165.0	462.95	443.21	424.37	408.22	394.76	382.20	374.12	366.95	361.56
180.0	465.64	445.90	428.85	413.60	401.04	390.27	381.30	374.12	370.54
195.0	464.74	447.69	428.85	413.60	401.04	389.38	381.30	375.92	371.43
210.0	457.56	441.41	426.16	410.91	397.45	386.69	379.51	373.23	371.43
225.0	429.75	415.40	405.53	395.66	389.38	381.30	373.23	366.95	364.26
240.0	386.69	375.92	371.43	366.95	365.15	364.26	362.46	355.28	355.28
255.0	340.93	325.68	322.99	322.99	322.09	320.29	317.60	314.91	306.84
270.0	285.30	251.21	247.62	256.59	266.46	247.62	237.75	233.27	231.47
285.0	299.66	288.89	289.79	294.28	296.97	299.66	299.66	291.58	288.89
300.0	358.87	349.90	339.13	326.57	319.40	311.32	308.63	303.25	298.76
315.0	401.94	384.89	367.84	352.59	336.44	323.88	313.12	308.63	303.25
330.0	420.78	403.73	384.89	366.95	349.90	338.24	330.16	323.88	321.19
345.0	427.06	409.12	392.07	377.71	363.36	353.49	346.31	341.83	340.03
360.0	446.80	427.06	411.81	396.55	383.99	373.23	365.15	359.77	357.08

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	357.08	358.87	364.26	371.43	382.20	394.76	409.12	427.06	445.90
15.0	360.67	362.46	367.84	375.02	383.99	396.55	410.91	427.06	445.90
30.0	359.77	362.46	366.95	374.12	383.10	393.86	408.22	424.37	440.52
45.0	354.39	357.08	362.46	368.74	375.92	383.99	389.38	400.14	411.81
60.0	335.55	337.34	343.62	350.80	352.59	350.80	349.90	344.52	340.03
75.0	274.54	268.26	268.26	267.36	270.95	273.64	270.95	265.57	263.77
90.0	226.09	221.60	211.74	211.74	218.02	232.37	226.09	213.53	220.71
105.0	301.45	294.28	293.38	293.38	282.61	281.72	270.95	243.14	242.24
120.0	331.06	331.06	332.85	332.85	322.99	316.71	320.29	321.19	332.85
135.0	351.70	350.80	350.80	355.28	359.77	363.36	372.33	381.30	395.66
150.0	356.18	353.49	353.49	359.77	368.74	377.71	389.38	401.94	417.19
165.0	358.87	357.08	358.87	362.46	369.64	378.61	389.38	401.94	417.19
180.0	368.74	368.74	371.43	375.92	382.20	392.07	403.73	417.19	433.34
195.0	369.64	369.64	371.43	375.02	382.20	390.27	401.94	414.50	428.85
210.0	369.64	369.64	372.33	375.92	380.41	387.58	398.35	410.91	425.26
225.0	363.36	364.26	366.05	369.64	376.82	383.99	383.99	392.97	398.35
240.0	356.18	355.28	353.49	358.87	362.46	357.08	350.80	350.80	348.11
255.0	310.43	304.14	297.86	301.45	293.38	280.82	270.05	261.08	251.21
270.0	222.50	219.81	220.71	218.02	214.43	209.94	194.69	176.74	174.95
285.0	273.64	267.36	270.95	264.67	250.31	236.86	230.58	216.22	209.04
300.0	297.86	299.66	298.76	300.56	297.86	295.17	296.97	302.35	309.53
315.0	305.94	308.63	311.32	321.19	332.85	344.52	357.08	369.64	385.79
330.0	322.09	324.78	331.96	340.93	353.49	369.64	386.69	406.42	426.16
345.0	340.93	344.52	351.70	360.67	373.23	387.58	404.63	423.47	445.90
360.0	357.08	358.87	364.26	371.43	382.20	394.76	409.12	427.06	445.90
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	466.53	489.86	513.19	524.85	519.47	508.70	496.14	494.35	467.43
15.0	465.64	488.07	511.39	521.26	516.78	505.11	496.14	498.83	506.01
30.0	457.56	476.40	494.35	505.11	504.22	500.63	502.42	509.60	512.29
45.0	419.88	430.65	445.00	460.25	473.71	488.07	506.01	514.09	514.09
60.0	340.93	351.70	371.43	397.45	431.54	475.51	500.63	514.09	514.98
75.0	272.74	287.10	321.19	355.28	397.45	447.69	463.84	471.92	502.42
90.0	235.06	256.59	283.51	296.07	310.43	335.55	371.43	427.06	496.14
105.0	265.57	288.00	311.32	293.38	267.36	289.79	297.86	383.10	483.58
120.0	345.42	360.67	374.12	386.69	321.19	310.43	294.28	362.46	454.87
135.0	411.81	426.16	441.41	463.84	427.06	324.78	302.35	327.47	419.88
150.0	431.54	449.49	465.64	482.68	487.17	404.63	312.22	281.72	382.20
165.0	435.13	454.87	474.61	493.45	498.83	477.30	398.35	303.25	295.17
180.0	452.18	471.92	493.45	507.81	506.91	497.04	487.17	455.77	330.16
195.0	445.90	464.74	485.38	499.73	503.32	501.52	456.67	332.85	344.52
210.0	436.93	439.62	465.64	482.68	491.66	464.74	347.21	320.29	418.09
225.0	407.32	416.29	429.75	446.80	447.69	357.98	303.25	366.95	451.28
240.0	340.03	342.72	358.87	381.30	344.52	298.76	301.45	380.41	474.61
255.0	244.93	250.31	273.64	294.28	281.72	270.95	305.04	391.17	482.68
270.0	176.74	197.38	230.58	256.59	261.98	273.64	315.81	402.83	484.48
285.0	221.60	241.34	279.02	317.60	343.62	366.95	388.48	430.65	487.17
300.0	321.19	340.93	367.84	396.55	421.68	429.75	443.21	460.25	488.96
315.0	406.42	426.16	448.59	468.33	476.40	475.51	476.40	482.68	491.66
330.0	447.69	470.12	491.66	506.91	503.32	494.35	489.86	490.76	497.04
345.0	470.12	491.66	512.29	514.98	510.50	496.14	488.07	492.55	498.83
360.0	466.53	489.86	513.19	524.85	519.47	508.70	496.14	494.35	467.43

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	314.01
15.0	465.64
30.0	497.04
45.0	503.32
60.0	500.63
75.0	501.52
90.0	499.73
105.0	497.04
120.0	495.24
135.0	495.24
150.0	485.38
165.0	432.44
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	314.01