
乐达凯

Client:

LumCAT: VRNP3X6LAJUDLB

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.480

Lamp flux(lm): 4538.4

Power (W): 57.080

Number of Lamps: 1

PF: 0.991

Length(mm): 740

Width(mm): 120

Phm Type: C

Height(mm): 400

Photometric Results

Lumens(lm): 4538.43, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 79.51

Central intensity(cd): 327.920, Maximum intensity(cd): 480.920

Angle of maximum intensity: C=0.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=350.6

[C90/270]Total=359.0

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

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.87 C90_270=1.31

Maximum s/h(1/4): C0_180=2.05 C90_270=1.49

Up flux rate of lamp(%): 48.60%

Down flux rate of lamp(%): 51.40%

Up flux rate of LUM(%): 48.60%

Down flux rate of LUM(%): 51.40%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 24.685%

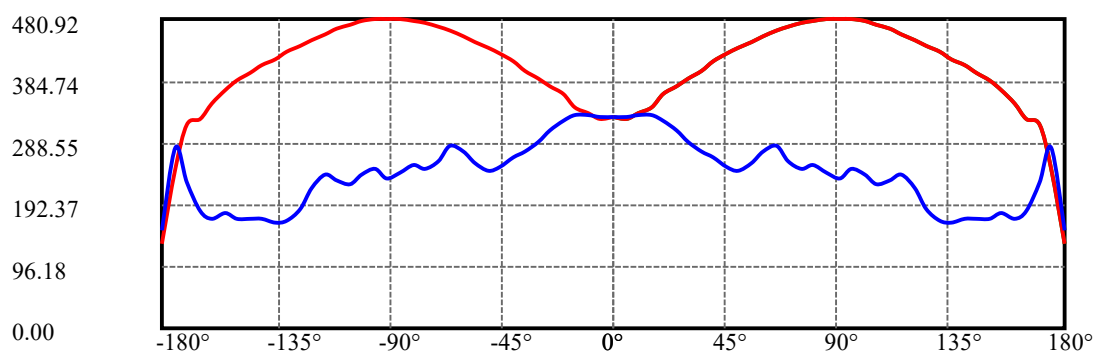
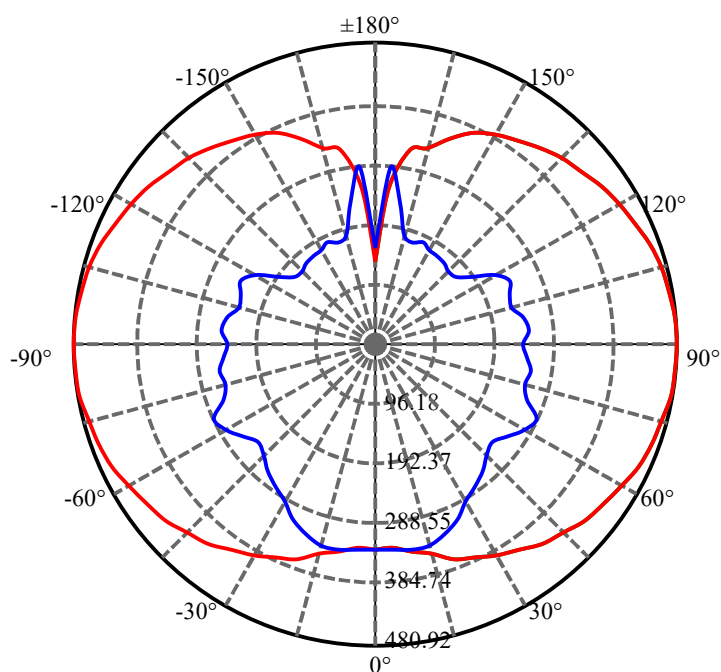
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	327.920	0.000	0	0.00%	0.00%
5.0	326.437	7.823	7.823	0.17%	0.17%
10.0	332.543	23.574	31.396	0.52%	0.69%
15.0	342.588	40.048	71.445	0.88%	1.57%
20.0	350.492	57.120	128.564	1.26%	2.83%
25.0	350.287	73.499	202.063	1.62%	4.45%
30.0	349.249	88.527	290.59	1.95%	6.40%
35.0	349.748	102.932	393.522	2.27%	8.67%
40.0	352.584	117.179	510.701	2.58%	11.25%
45.0	356.771	131.343	642.044	2.89%	14.15%
50.0	362.847	145.409	787.453	3.20%	17.35%
55.0	370.848	159.530	946.983	3.52%	20.87%
60.0	379.038	173.334	1120.317	3.82%	24.69%
65.0	384.677	185.661	1305.977	4.09%	28.78%
70.0	385.695	195.063	1501.041	4.30%	33.07%
75.0	387.247	202.035	1703.075	4.45%	37.53%
80.0	388.545	207.580	1910.655	4.57%	42.10%
85.0	386.880	210.702	2121.357	4.64%	46.74%
90.0	385.485	211.480	2332.837	4.66%	51.40%
95.0	385.644	211.141	2543.978	4.65%	56.05%
100.0	384.153	209.172	2753.15	4.61%	60.66%
105.0	380.529	204.608	2957.757	4.51%	65.17%
110.0	376.763	197.944	3155.701	4.36%	69.53%
115.0	372.067	189.609	3345.31	4.18%	73.71%
120.0	362.860	178.662	3523.972	3.94%	77.65%
125.0	350.691	164.936	3688.908	3.63%	81.28%
130.0	339.802	150.136	3839.044	3.31%	84.59%
135.0	331.093	135.564	3974.608	2.99%	87.58%
140.0	323.439	121.192	4095.8	2.67%	90.25%
145.0	315.880	106.665	4202.465	2.35%	92.60%
150.0	312.110	92.476	4294.941	2.04%	94.63%
155.0	306.730	78.315	4373.256	1.73%	96.36%
160.0	291.536	62.747	4436.003	1.38%	97.74%
165.0	274.047	46.612	4482.615	1.03%	98.77%
170.0	265.305	31.994	4514.609	0.70%	99.48%
175.0	266.153	19.012	4533.621	0.42%	99.89%
180.0	136.241	4.811	4538.432	0.11%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	290.59	6.40%	6.40%
0-40	510.70	11.25%	11.25%
0-60	1120.32	24.69%	24.69%
0-90	2332.84	51.40%	51.40%
0-120	3523.97	77.65%	77.65%
0-180	4538.43	100.00%	100.00%
60-90	1212.52	26.72%	26.72%
90-120	1191.14	26.25%	26.25%
90-130	1506.21	33.19%	33.19%
90-150	1962.10	43.23%	43.23%
90-180	2200.78	48.49%	48.49%
0-123.24	3630.75	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	31.40
10-20	97.17
20-30	162.03
30-40	220.11
40-50	276.75
50-60	332.86
60-70	380.72
70-80	409.61
80-90	422.18
90-100	420.31
100-110	402.55
110-120	368.27
120-130	315.07
130-140	256.76
140-150	199.14
150-160	141.06
160-170	78.61
170-180	19.01

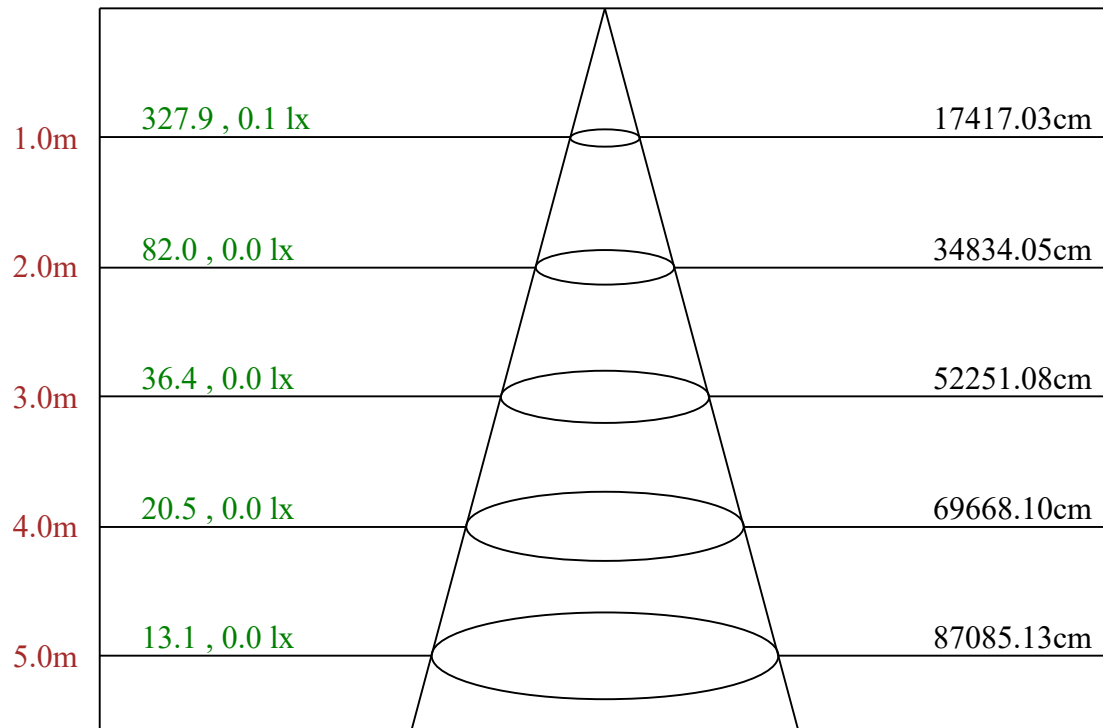
C0(Max): C0/C180: C90/C270: 

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

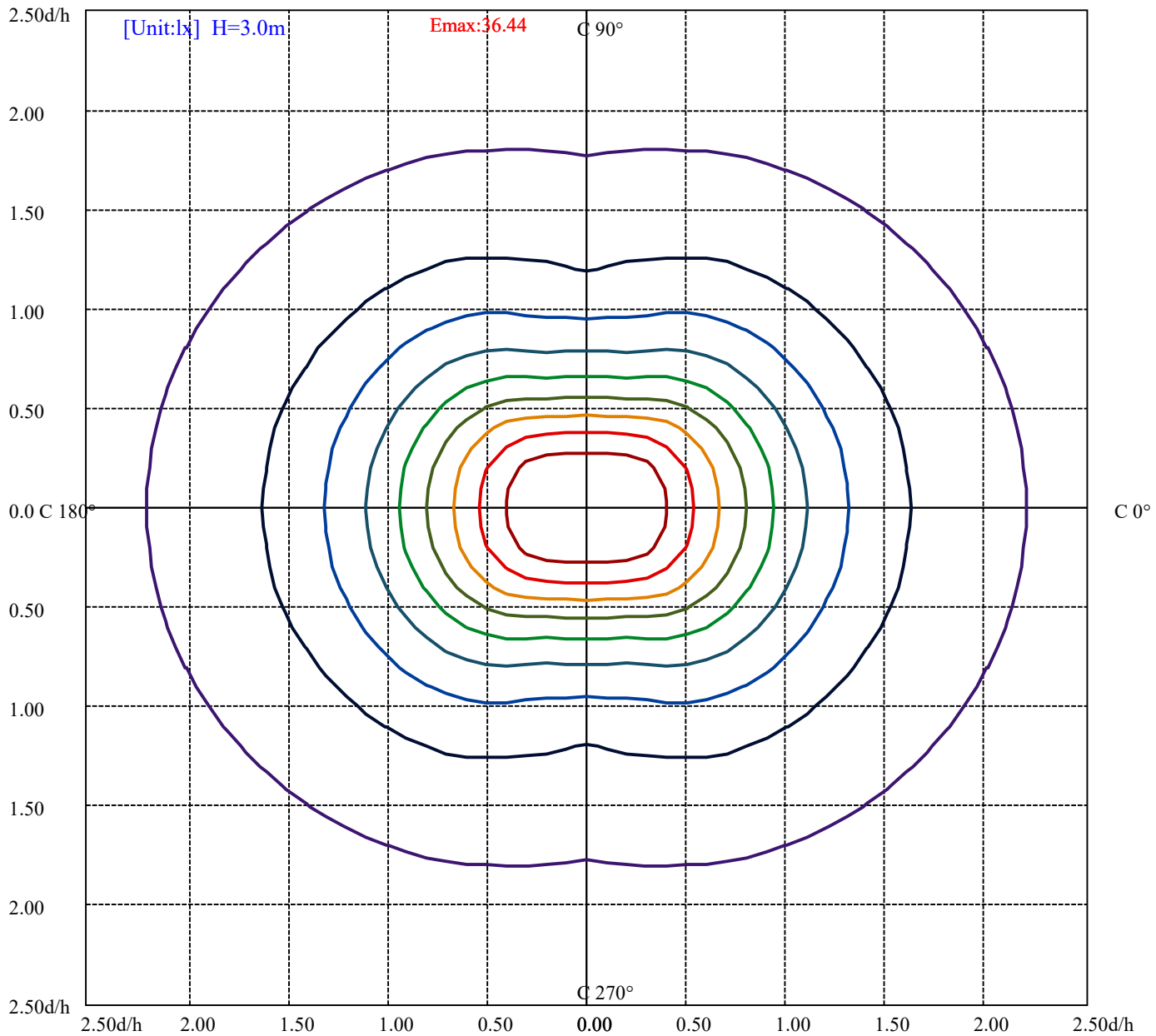
:C90/270Left:0.0 Right:0.0

Beam Angle(50%Imax):C0/180Left:265.3 Right:85.3

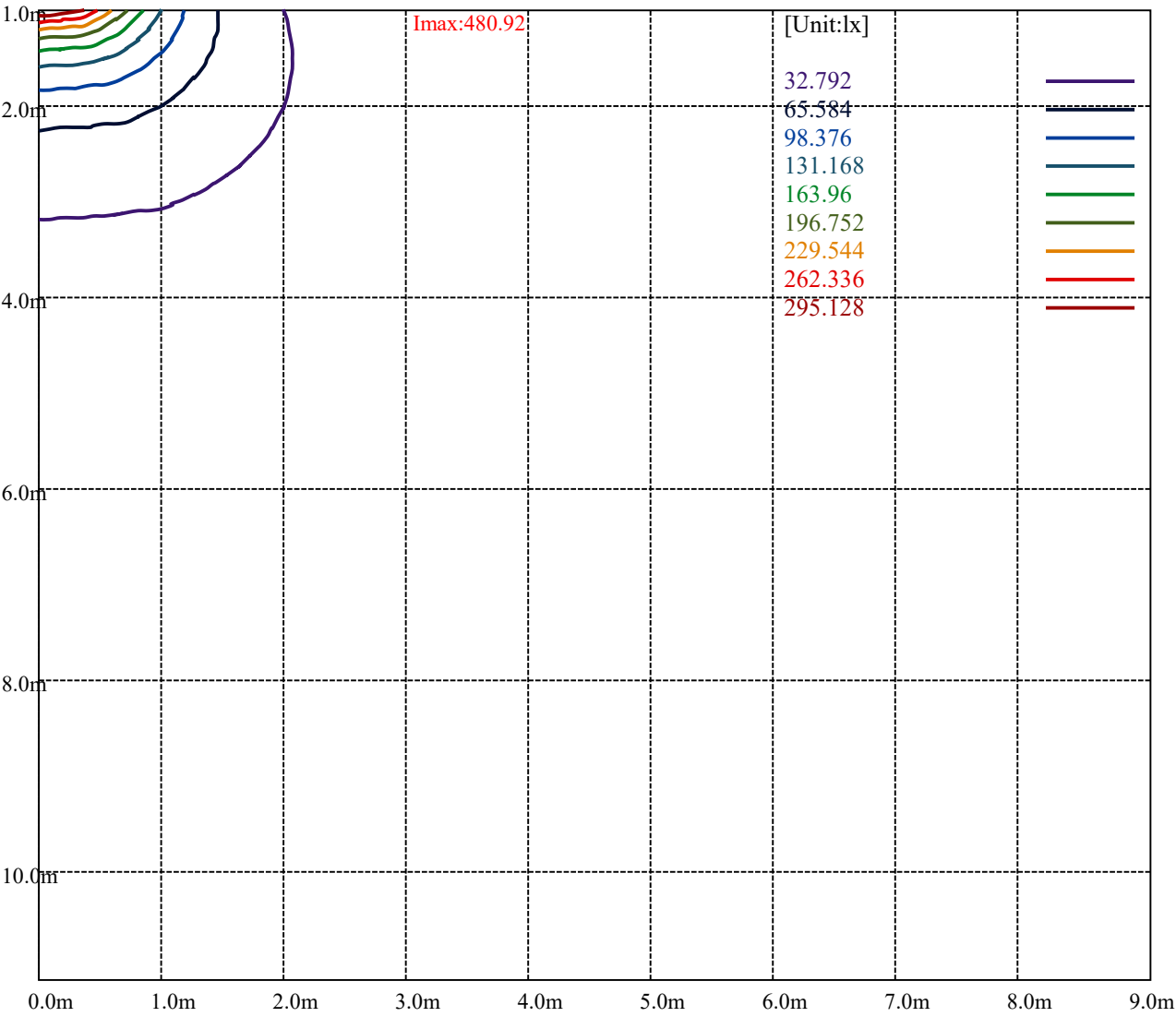
:C90/270Left:194.5 Right:164.5



Max , Ave Beam angle of C0 plane 178.68



(10%Emax) 3.643556	—
(20%Emax) 7.287111	—
(30%Emax) 10.93067	—
(40%Emax) 14.57422	—
(50%Emax) 18.21778	—
(60%Emax) 21.86133	—
(70%Emax) 25.50489	—
(80%Emax) 29.14845	—
(90%Emax) 32.792	—



Luminance Table

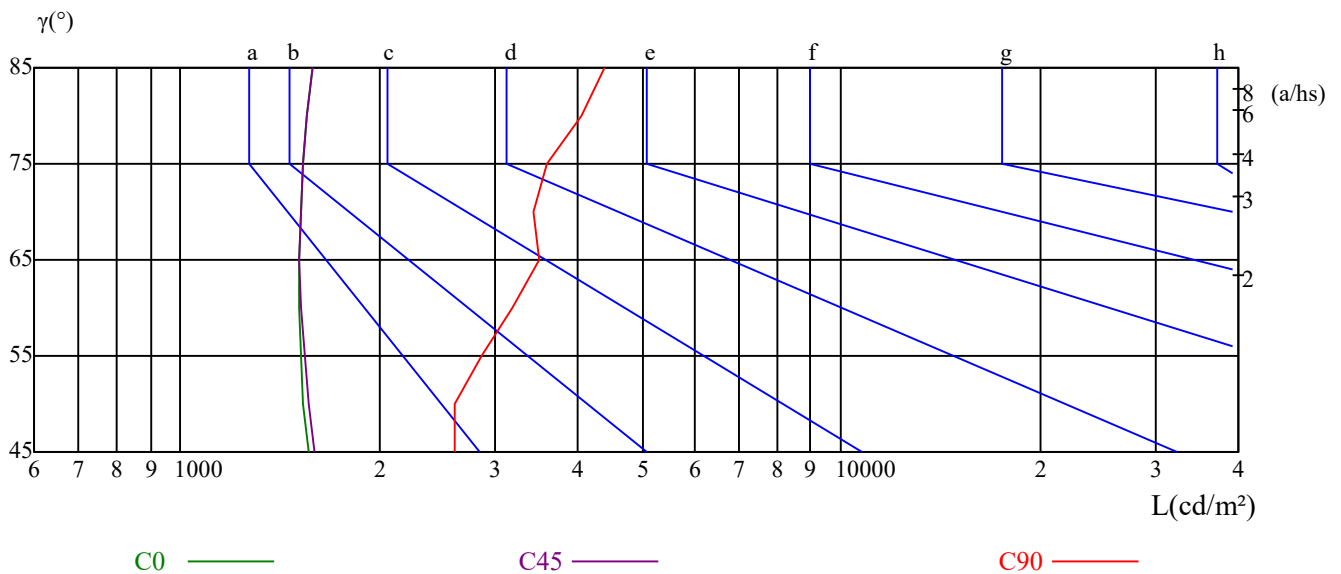
γ	45	50	55	60	65	70	75	80	85
C0	1568	1537	1518	1510	1510	1519	1534	1557	1586
C45	1600	1567	1540	1523	1516	1519	1532	1551	1581
C90	2596	2599	2853	3184	3484	3429	3589	4042	4374

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12301	7522	10421	20620	10829	17192	62026	31398	51082

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



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	0.87	0.82	0.77	0.80	0.75	0.71	0.67	0.63	0.60	0.55	0.52	0.49	0.44	0.41	0.39	0.34
2	0.74	0.66	0.59	0.68	0.61	0.55	0.56	0.51	0.46	0.46	0.41	0.38	0.36	0.33	0.30	0.25
3	0.63	0.54	0.47	0.58	0.50	0.44	0.48	0.42	0.37	0.39	0.34	0.30	0.30	0.27	0.24	0.19
4	0.55	0.46	0.39	0.51	0.42	0.36	0.42	0.35	0.30	0.34	0.29	0.25	0.26	0.23	0.19	0.15
5	0.49	0.39	0.33	0.45	0.36	0.30	0.37	0.30	0.25	0.30	0.25	0.21	0.23	0.19	0.16	0.13
6	0.43	0.34	0.28	0.40	0.32	0.26	0.33	0.27	0.22	0.27	0.22	0.18	0.21	0.17	0.14	0.11
7	0.39	0.30	0.24	0.36	0.28	0.22	0.30	0.23	0.19	0.24	0.19	0.15	0.19	0.15	0.12	0.09
8	0.35	0.27	0.21	0.32	0.25	0.19	0.27	0.21	0.16	0.22	0.17	0.13	0.17	0.13	0.10	0.08
9	0.32	0.24	0.18	0.29	0.22	0.17	0.25	0.19	0.14	0.20	0.15	0.12	0.16	0.12	0.09	0.07
10	0.29	0.21	0.16	0.27	0.20	0.15	0.23	0.17	0.13	0.19	0.14	0.11	0.15	0.11	0.08	0.06

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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	327.92	331.43	329.67	330.55	362.11	377.90	393.68	411.22	427.87		
15.0	327.92	329.69	327.04	336.76	362.39	376.53	391.56	409.24	421.61		
30.0	327.92	329.70	327.92	341.29	362.67	376.04	386.73	397.42	404.55		
45.0	327.92	328.82	328.82	341.43	358.55	368.46	371.16	371.16	372.96		
60.0	327.92	327.92	327.92	336.95	348.70	347.79	342.37	334.24	326.11		
75.0	327.92	327.92	328.82	332.42	333.33	321.61	305.40	290.08	276.57		
90.0	327.92	327.02	330.63	335.15	332.44	320.69	301.72	281.85	262.88		
105.0	327.92	327.02	330.63	334.24	330.63	314.37	294.50	279.14	270.10		
120.0	327.92	325.22	328.82	335.11	336.90	329.72	324.33	316.24	310.85		
135.0	327.92	326.11	329.73	340.57	346.89	351.41	347.79	344.18	348.70		
150.0	327.92	321.61	324.32	340.53	360.35	361.25	363.05	369.36	374.77		
165.0	327.92	320.71	323.42	345.04	360.35	368.46	375.67	382.87	390.08		
180.0	327.92	317.40	341.07	358.61	369.13	375.27	384.03	391.93	400.69		
195.0	327.92	317.31	342.95	359.74	369.46	375.65	383.60	391.56	399.51		
210.0	327.92	319.90	341.29	357.33	368.02	373.37	378.71	384.95	390.30		
225.0	327.92	323.42	338.73	352.24	358.55	360.35	362.15	367.56	374.77		
240.0	327.92	326.11	333.34	341.47	341.47	335.15	328.82	328.82	334.24		
255.0	327.92	327.92	332.42	331.52	321.61	307.20	291.88	283.78	285.58		
270.0	327.92	330.63	333.34	328.82	315.27	295.40	277.33	270.10	267.39		
285.0	327.92	331.53	335.15	336.95	327.02	308.05	283.66	265.59	262.88		
300.0	327.92	330.62	337.80	344.99	344.99	325.22	316.24	318.94	325.22		
315.0	327.92	331.53	339.66	350.50	357.73	362.25	373.09	377.60	384.83		
330.0	327.92	327.92	336.03	354.95	369.36	385.58	398.19	405.40	415.31		
345.0	327.92	327.02	331.52	354.95	373.86	389.18	406.30	420.71	434.22		
360.0	327.92	331.43	329.67	330.55	362.11	377.90	393.68	411.22	427.87		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	441.90	450.67	458.56	465.58	471.71	476.97	481.36	484.87	486.62		
15.0	434.87	443.71	449.90	456.97	462.27	466.69	471.11	473.76	476.41		
30.0	411.68	419.70	425.05	429.50	435.74	438.41	441.09	443.76	446.43		
45.0	377.47	383.77	387.38	390.98	393.68	399.09	404.49	406.30	406.30		
60.0	326.11	333.34	341.47	348.70	353.21	357.73	361.34	364.05	364.05		
75.0	265.76	267.56	275.67	295.49	310.80	317.11	321.61	315.31	308.10		
90.0	242.10	230.36	239.39	263.78	272.82	250.23	232.16	230.36	234.87		
105.0	269.20	270.10	275.53	284.56	297.21	306.24	312.56	315.27	311.66		
120.0	309.95	315.34	321.63	328.82	336.01	344.09	347.69	348.58	348.58		
135.0	351.41	356.83	363.15	369.47	375.80	378.51	380.32	382.12	383.93		
150.0	381.07	388.28	394.59	399.99	405.40	410.80	415.31	418.91	422.51		
165.0	397.29	405.40	414.40	423.41	431.52	439.63	446.84	452.24	455.84		
180.0	411.22	421.74	432.26	442.78	451.55	460.32	466.45	470.84	473.47		
195.0	408.35	418.08	427.80	436.64	444.59	451.66	457.85	461.39	463.15		
210.0	397.42	403.66	409.90	416.14	420.59	425.05	428.61	431.29	432.18		
225.0	380.17	383.77	387.38	390.08	391.88	392.78	393.68	393.68	394.59		
240.0	341.47	350.50	357.73	361.34	361.34	360.44	359.54	358.63	357.73		
255.0	294.59	306.30	317.11	327.02	331.52	326.12	324.32	323.42	311.70		
270.0	260.17	257.46	275.53	283.66	291.79	267.39	265.59	276.43	251.13		
285.0	263.78	274.62	293.59	313.47	317.08	310.76	306.24	302.63	292.69		
300.0	334.21	344.99	357.57	364.75	364.75	361.16	357.57	353.08	348.58		
315.0	393.87	401.09	402.90	402.90	402.90	402.90	402.00	400.19	396.58		
330.0	425.22	429.72	434.22	436.93	439.63	440.53	441.43	441.43	441.43		
345.0	443.23	451.34	457.65	463.95	468.46	472.06	474.76	476.57	476.57		
360.0	441.90	450.67	458.56	465.58	471.71	476.97	481.36	484.87	486.62		

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Intensity data(cd)									Appendix Page: 11 Total:12	
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0	
0.0	486.62	485.74	482.24	476.97	469.96	460.32	450.67	439.27	427.87	
15.0	477.30	476.41	474.64	469.34	463.15	455.20	446.36	435.75	426.03	
30.0	447.33	447.33	445.54	441.98	437.52	432.18	426.83	418.81	411.68	
45.0	405.40	404.49	404.49	403.59	403.59	401.79	399.09	391.88	382.87	
60.0	363.15	364.05	364.96	365.86	366.76	362.25	353.21	339.66	325.21	
75.0	306.30	305.40	310.80	312.61	303.60	296.39	280.17	260.35	239.63	
90.0	220.42	224.94	224.94	218.61	221.32	240.29	224.03	190.61	169.83	
105.0	309.85	308.05	309.85	309.85	307.14	307.14	298.11	282.75	265.59	
120.0	348.58	347.69	346.79	345.89	345.89	344.99	344.99	340.50	331.51	
135.0	384.83	385.74	385.74	386.64	386.64	386.64	384.83	383.03	381.22	
150.0	424.31	425.22	425.22	424.31	422.51	419.81	417.11	414.40	410.80	
165.0	458.55	458.55	457.65	454.94	452.24	447.74	443.23	437.83	430.62	
180.0	475.22	473.47	470.84	467.33	462.07	455.05	448.04	440.15	430.50	
195.0	464.04	462.27	458.73	454.32	449.90	444.59	438.41	430.45	422.50	
210.0	432.18	430.40	428.61	425.05	421.48	417.92	414.36	409.01	403.66	
225.0	393.68	393.68	392.78	390.98	390.08	387.38	385.58	376.57	371.16	
240.0	357.73	356.83	355.92	355.92	351.41	344.18	333.34	319.79	305.34	
255.0	309.90	310.80	308.10	302.70	294.59	285.58	266.66	237.83	214.41	
270.0	248.42	269.20	253.84	228.55	235.78	235.78	213.19	181.58	163.51	
285.0	288.17	287.27	288.17	281.85	266.49	252.04	238.49	225.84	213.19	
300.0	342.29	340.50	342.29	343.19	335.11	320.73	298.27	283.00	275.81	
315.0	392.96	389.35	388.45	384.83	382.12	373.99	364.96	356.83	348.70	
330.0	439.63	436.03	431.52	426.12	419.81	413.50	405.40	397.29	390.98	
345.0	474.76	472.06	467.56	461.25	453.14	444.13	433.32	423.41	412.60	
360.0	486.62	485.74	482.24	476.97	469.96	460.32	450.67	439.27	427.87	
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0	
0.0	417.35	405.95	396.31	386.67	372.64	348.96	322.66	300.74	221.83	
15.0	416.31	406.59	395.98	385.37	369.46	345.60	320.85	303.17	281.07	
30.0	402.77	391.19	380.49	368.91	356.43	336.83	314.55	298.51	292.28	
45.0	372.06	361.25	347.74	333.33	320.71	307.20	295.49	290.08	289.18	
60.0	308.95	294.50	280.04	269.20	259.26	256.55	263.78	268.30	285.46	
75.0	223.42	205.40	195.49	194.59	192.79	184.68	186.48	229.72	270.26	
90.0	166.22	178.87	184.29	175.25	181.58	167.12	170.74	215.90	261.97	
105.0	244.81	224.03	220.42	237.58	246.62	221.32	208.68	211.39	252.94	
120.0	323.43	317.14	311.75	316.24	325.22	328.82	256.05	220.11	235.38	
135.0	379.41	379.41	373.09	367.67	365.86	362.25	326.11	229.45	215.00	
150.0	405.40	401.79	395.49	388.28	381.97	372.06	352.24	290.98	210.81	
165.0	424.31	416.21	409.00	394.59	383.77	368.46	346.84	329.72	280.17	
180.0	421.74	412.09	398.94	384.03	370.88	347.21	326.17	329.67	274.44	
195.0	413.66	405.70	390.68	375.65	364.16	357.97	329.69	304.06	199.76	
210.0	396.53	392.97	364.45	355.54	348.42	333.27	319.01	220.99	218.32	
225.0	361.25	343.24	330.62	330.62	325.22	314.41	251.35	211.71	267.56	
240.0	287.27	271.01	267.39	271.91	283.66	241.20	199.64	231.26	295.40	
255.0	208.10	209.90	208.10	218.01	214.41	187.38	191.89	232.43	301.79	
270.0	161.70	160.80	156.28	168.03	175.25	175.25	191.51	236.68	301.72	
285.0	205.97	200.55	204.16	213.19	211.39	205.06	218.61	252.94	296.30	
300.0	273.12	271.32	276.71	285.69	277.61	258.74	257.84	268.62	292.88	
315.0	345.99	342.37	338.76	336.05	330.63	314.37	304.43	295.40	292.69	
330.0	383.77	377.47	370.26	360.35	347.74	329.72	310.80	298.19	290.08	
345.0	402.69	392.78	384.68	373.86	355.85	332.42	311.70	297.29	260.35	
360.0	417.35	405.95	396.31	386.67	372.64	348.96	322.66	300.74	221.83	

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	263.04
15.0	220.97
30.0	280.69
45.0	299.09
60.0	302.63
75.0	300.89
90.0	303.53
105.0	302.63
120.0	293.78
135.0	274.62
150.0	239.63
165.0	188.28
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	263.04