
PINII

Client:

LumCAT: HF8038-RG/HF8038-RS

Luminaire: LED FIXTURE

Report No:

Ballast type:

Test No:

Voltage(V): 119.970

LampCAT:

Current(A): 0.322

Lamp flux(lm): 2122.1

Power (W): 36.560

Number of Lamps: 1

PF: 0.948

Length(mm): 1740

Width(mm): 480

Phm Type: C

Height(mm): 200

Photometric Results

Lumens(lm): 2122.09, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 58.04

Central intensity(cd): 21.532, Maximum intensity(cd): 941.144

Angle of maximum intensity: C=135.0 γ =175.0

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=2.98 C90_270=2.87

Maximum s/h(1/4): C0_180=2.73 C90_270=2.75

Up flux rate of lamp(%): 83.22%

Down flux rate of lamp(%): 16.78%

Up flux rate of LUM(%): 83.22%

Down flux rate of LUM(%): 16.78%

CIE Type : Semi-indirect lighting

Output flux ratio in π solid angle : 6.767%

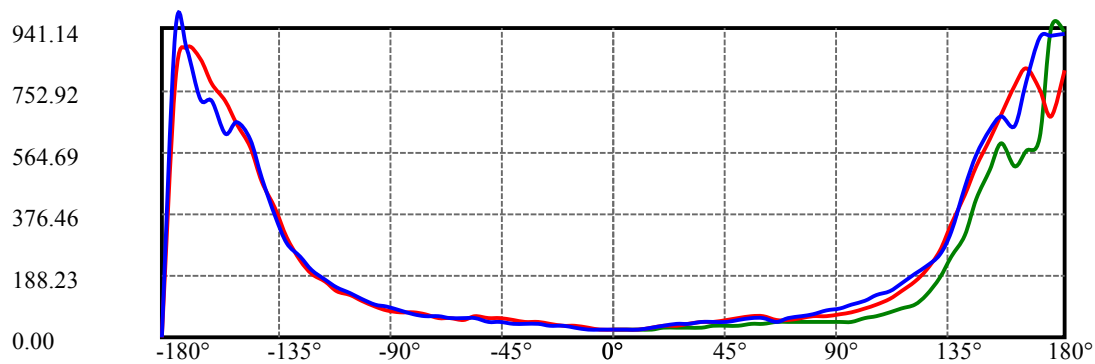
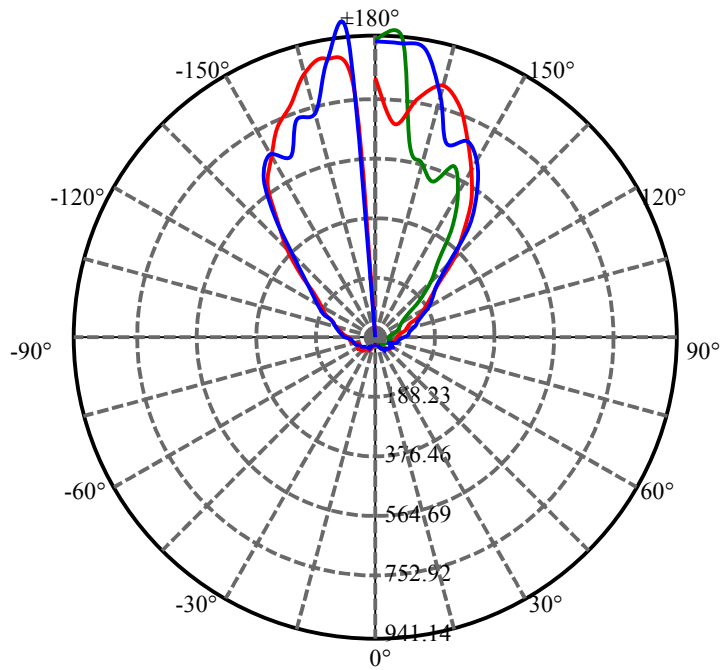
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	21.233	0.000	0	0.00%	0.00%
5.0	22.018	0.517	0.517	0.02%	0.02%
10.0	24.822	1.676	2.193	0.08%	0.10%
15.0	28.897	3.187	5.379	0.15%	0.25%
20.0	33.457	5.139	10.518	0.24%	0.50%
25.0	37.607	7.453	17.971	0.35%	0.85%
30.0	40.635	9.902	27.873	0.47%	1.31%
35.0	43.887	12.446	40.319	0.59%	1.90%
40.0	46.990	15.162	55.482	0.71%	2.61%
45.0	50.653	18.079	73.561	0.85%	3.47%
50.0	53.046	20.954	94.515	0.99%	4.45%
55.0	54.840	23.458	117.973	1.11%	5.56%
60.0	56.074	25.637	143.611	1.21%	6.77%
65.0	56.522	27.372	170.983	1.29%	8.06%
70.0	59.812	29.457	200.44	1.39%	9.45%
75.0	64.522	32.499	232.939	1.53%	10.98%
80.0	70.990	36.259	269.198	1.71%	12.69%
85.0	79.924	41.007	310.205	1.93%	14.62%
90.0	87.812	45.927	356.132	2.16%	16.78%
95.0	93.419	49.622	405.754	2.34%	19.12%
100.0	102.279	53.176	458.93	2.51%	21.63%
105.0	115.624	58.305	517.235	2.75%	24.37%
110.0	131.213	64.519	581.754	3.04%	27.41%
115.0	151.250	71.521	653.276	3.37%	30.78%
120.0	175.661	79.473	732.748	3.75%	34.53%
125.0	215.847	90.496	823.244	4.26%	38.79%
130.0	268.930	105.407	928.651	4.97%	43.76%
135.0	343.621	123.775	1052.426	5.83%	49.59%
140.0	432.479	143.701	1196.127	6.77%	56.37%
145.0	528.627	160.353	1356.48	7.56%	63.92%
150.0	614.271	168.300	1524.78	7.93%	71.85%
155.0	669.859	162.508	1687.288	7.66%	79.51%
160.0	699.503	143.621	1830.909	6.77%	86.28%
165.0	756.624	120.005	1950.914	5.66%	91.93%
170.0	831.763	94.222	2045.136	4.44%	96.37%
175.0	878.229	61.172	2106.308	2.88%	99.26%
180.0	442.311	15.787	2122.094	0.74%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	27.87	1.31%	1.31%
0-40	55.48	2.61%	2.61%
0-60	143.61	6.77%	6.77%
0-90	356.13	16.78%	16.78%
0-120	732.75	34.53%	34.53%
0-180	2122.09	100.00%	100.00%
60-90	212.52	10.01%	10.01%
90-120	376.62	17.75%	17.75%
90-130	572.52	26.98%	26.98%
90-150	1168.65	55.07%	55.07%
90-180	1750.18	82.47%	82.47%
0-155.36	1697.68	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	2.19
10-20	8.33
20-30	17.35
30-40	27.61
40-50	39.03
50-60	49.10
60-70	56.83
70-80	68.76
80-90	86.93
90-100	102.80
100-110	122.82
110-120	150.99
120-130	195.90
130-140	267.48
140-150	328.65
150-160	306.13
160-170	214.23
170-180	61.17



C135(Max): —————

C0/C180: —————

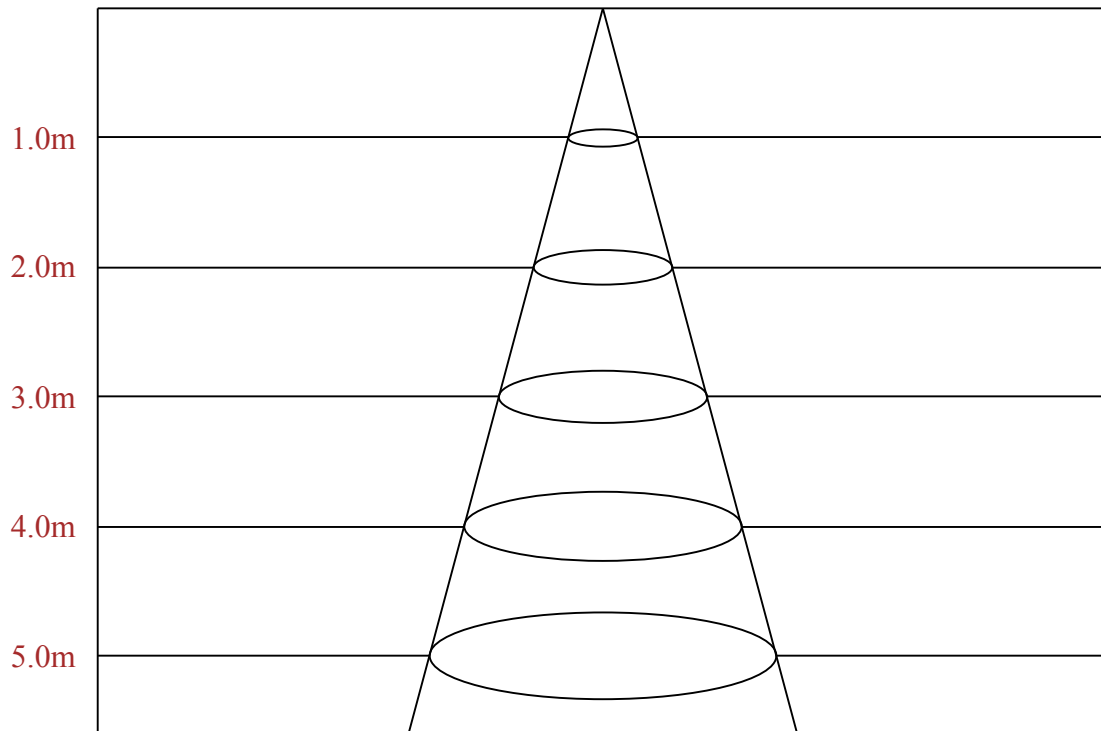
C90/C270: —————

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

:C90/270Left:0.0 Right:0.0

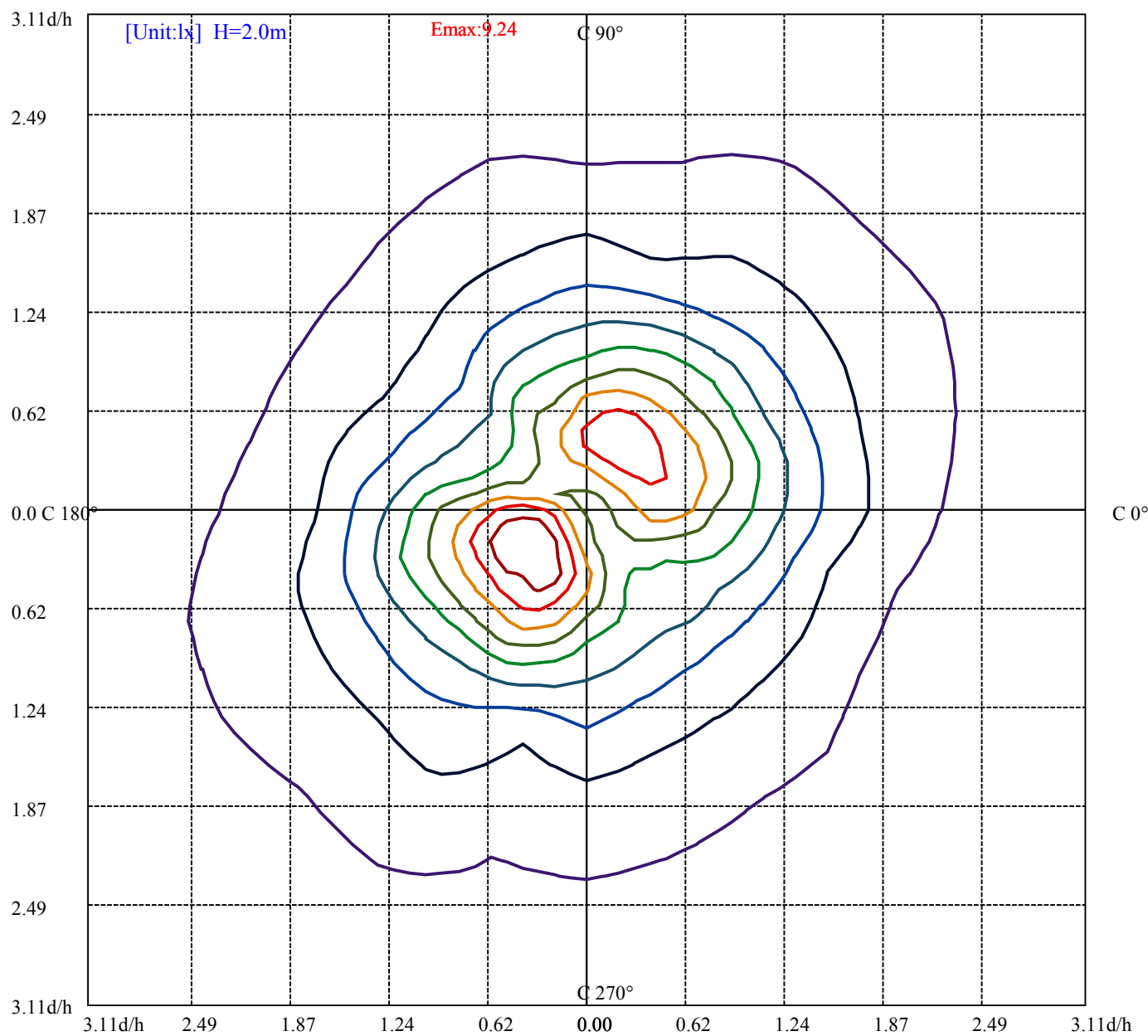
Beam Angle(50%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

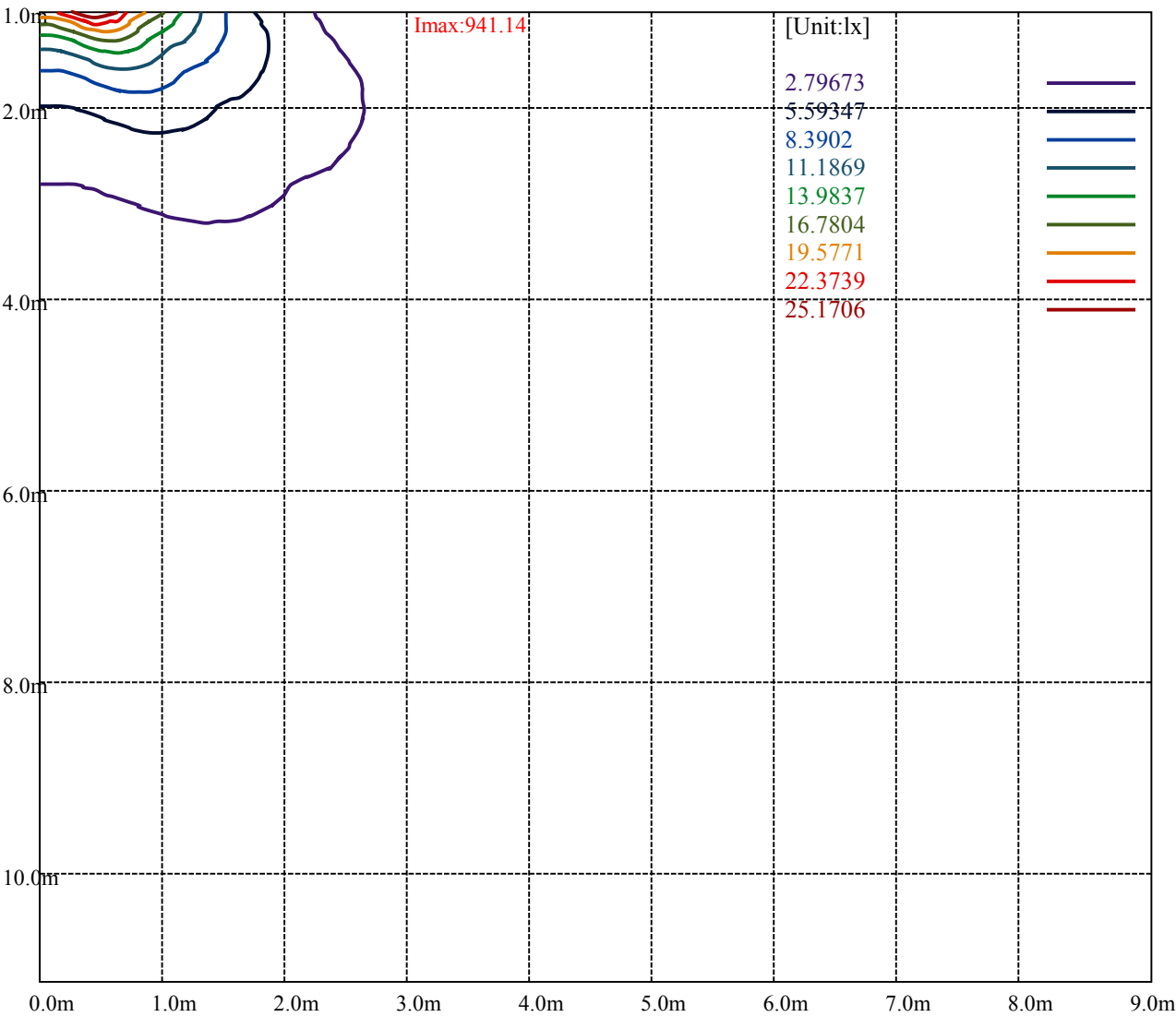


Max , Ave

Beam angle of C135 plane 180.00



(10%Emax) 0.9238775	—
(20%Emax) 1.847757	—
(30%Emax) 2.771625	—
(40%Emax) 3.695525	—
(50%Emax) 4.6194	—
(60%Emax) 5.543275	—
(70%Emax) 6.46715	—
(80%Emax) 7.391025	—
(90%Emax) 8.3149	—



Luminance Table

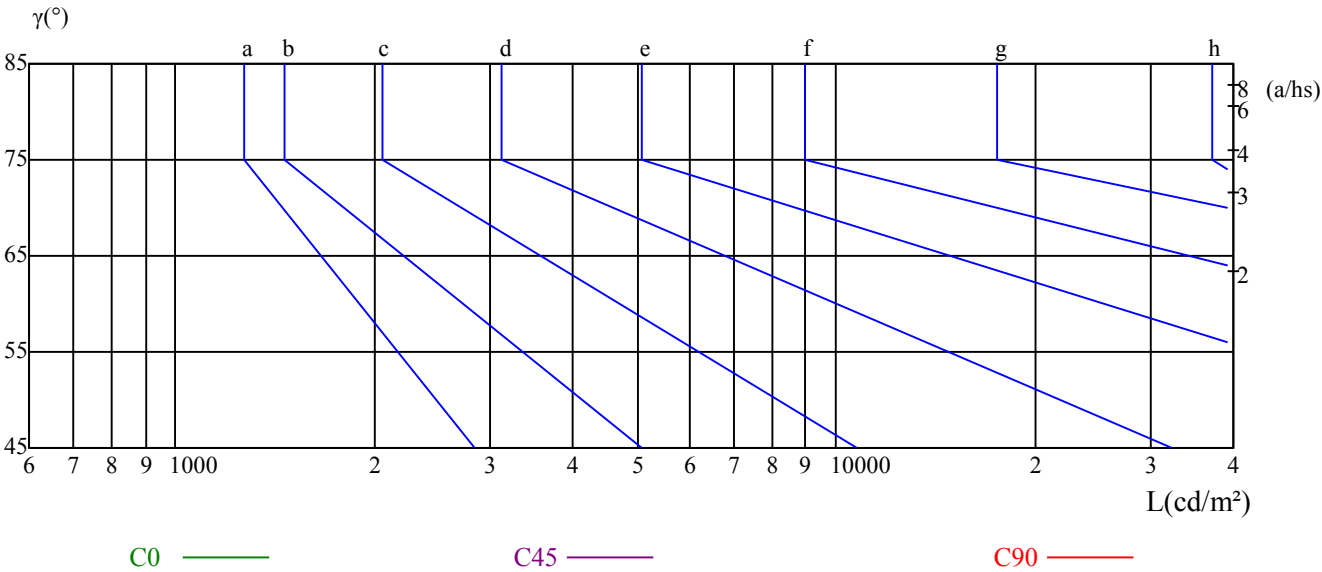
γ	45	50	55	60	65	70	75	80	85
C0	64	73	81	86	79	86	106	131	158
C45	72	84	85	103	111	122	152	198	279
C90	75	88	103	118	112	148	212	300	474

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
155	153	164	295	305	293	992	1097	1094

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	0.99	0.99	0.99	0.87	0.87	0.87	0.65	0.65	0.65	0.44	0.44	0.44	0.26	0.26	0.26	0.17
1	0.83	0.79	0.75	0.73	0.69	0.66	0.54	0.51	0.49	0.36	0.34	0.33	0.19	0.19	0.18	0.10
2	0.72	0.65	0.60	0.63	0.57	0.53	0.46	0.42	0.39	0.31	0.28	0.26	0.16	0.15	0.14	0.07
3	0.62	0.55	0.49	0.55	0.48	0.43	0.40	0.36	0.32	0.26	0.24	0.21	0.14	0.12	0.11	0.05
4	0.55	0.47	0.41	0.48	0.41	0.36	0.35	0.30	0.27	0.23	0.20	0.18	0.12	0.10	0.09	0.04
5	0.48	0.40	0.34	0.42	0.35	0.30	0.31	0.26	0.23	0.20	0.17	0.15	0.11	0.09	0.07	0.03
6	0.43	0.35	0.29	0.38	0.31	0.26	0.28	0.23	0.19	0.18	0.15	0.13	0.09	0.08	0.06	0.03
7	0.39	0.31	0.25	0.34	0.27	0.22	0.25	0.20	0.17	0.16	0.13	0.11	0.09	0.07	0.05	0.02
8	0.35	0.27	0.22	0.30	0.24	0.19	0.22	0.18	0.14	0.15	0.12	0.09	0.08	0.06	0.05	0.02
9	0.31	0.24	0.19	0.28	0.21	0.17	0.20	0.16	0.13	0.14	0.10	0.08	0.07	0.05	0.04	0.02
10	0.29	0.22	0.17	0.25	0.19	0.15	0.19	0.14	0.11	0.12	0.09	0.07	0.07	0.05	0.04	0.01

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	21.53	21.53	23.33	26.92	32.30	37.68	42.17	45.76	46.65
15.0	21.53	21.53	24.22	28.71	33.20	39.48	44.86	49.35	54.73
30.0	21.53	21.53	24.22	29.61	34.99	41.27	44.86	51.14	55.63
45.0	21.53	21.53	24.22	30.50	36.78	43.06	46.65	50.24	55.63
60.0	21.53	21.53	25.12	30.50	36.78	43.06	49.35	52.93	54.73
75.0	21.53	21.53	26.02	29.61	36.78	45.76	49.35	51.14	53.83
90.0	21.53	21.53	25.12	27.81	34.99	42.17	43.06	48.45	47.55
105.0	20.64	21.53	24.22	27.81	32.30	36.78	38.58	40.37	43.06
120.0	20.64	21.53	23.33	26.02	29.61	32.30	35.89	39.48	43.06
135.0	20.64	21.53	23.33	25.12	27.81	28.71	29.61	31.40	33.20
150.0	20.64	20.64	22.43	25.12	27.81	27.81	29.61	29.61	34.09
165.0	21.53	21.53	22.43	26.02	28.71	30.50	33.20	34.99	37.68
180.0	21.53	23.33	28.71	33.20	37.68	43.06	44.86	47.55	52.93
195.0	21.53	22.43	28.71	37.68	42.17	47.55	52.93	57.42	59.21
210.0	21.53	23.33	29.61	37.68	44.86	47.55	56.52	55.63	59.21
225.0	21.53	23.33	29.61	36.78	43.96	49.35	51.14	56.52	57.42
240.0	21.53	23.33	27.81	34.99	40.37	49.35	52.04	55.63	59.21
255.0	21.53	23.33	26.92	30.50	36.78	41.27	43.96	49.35	51.14
270.0	21.53	23.33	24.22	26.92	32.30	35.89	38.58	38.58	40.37
285.0	20.64	22.43	22.43	25.12	27.81	29.61	31.40	34.99	35.89
300.0	20.64	21.53	21.53	22.43	23.33	24.22	26.02	29.61	34.99
315.0	20.64	21.53	20.64	22.43	24.22	25.12	27.81	32.30	36.78
330.0	20.64	20.64	22.43	24.22	26.92	27.81	28.71	32.30	36.78
345.0	21.53	22.43	25.12	27.81	30.50	33.20	34.09	38.58	43.96
360.0	21.53	21.53	23.33	26.92	32.30	37.68	42.17	45.76	46.65
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	53.83	58.32	61.91	61.91	52.93	52.93	58.32	63.70	66.39
15.0	59.21	63.70	64.60	62.80	61.91	66.39	74.47	85.23	90.62
30.0	60.11	60.11	62.80	68.19	69.08	78.05	83.44	92.41	108.56
45.0	58.32	65.49	62.80	70.88	70.88	70.88	78.95	89.72	107.66
60.0	60.11	61.91	59.21	66.39	70.88	74.47	80.75	97.79	110.35
75.0	57.42	57.42	56.52	48.45	52.93	64.60	75.36	85.23	110.35
90.0	49.35	53.83	57.42	59.21	49.35	55.63	65.49	71.77	79.85
105.0	47.55	49.35	52.93	52.93	57.42	57.42	59.21	52.93	64.60
120.0	43.96	46.65	48.45	49.35	50.24	50.24	48.45	43.06	47.55
135.0	35.89	36.78	40.37	42.17	44.86	44.86	45.76	43.96	45.76
150.0	35.89	39.48	39.48	42.17	44.86	34.99	34.99	37.68	43.96
165.0	43.06	45.76	48.45	51.14	46.65	43.96	43.06	47.55	52.93
180.0	58.32	60.11	63.70	52.93	56.52	60.11	69.08	76.26	78.05
195.0	64.60	70.88	72.67	69.98	71.77	79.85	89.72	98.69	113.04
210.0	62.80	64.60	68.19	69.08	75.36	83.44	97.79	108.56	117.53
225.0	61.01	59.21	66.39	69.98	67.29	74.47	81.64	108.56	121.12
240.0	61.01	58.32	58.32	72.67	77.16	78.95	88.82	96.90	110.35
255.0	51.14	52.04	43.06	47.55	51.14	69.98	81.64	84.34	104.07
270.0	44.86	48.45	55.63	56.52	58.32	61.91	66.39	71.77	79.85
285.0	41.27	43.96	46.65	50.24	53.83	54.73	50.24	56.52	60.11
300.0	37.68	41.27	45.76	45.76	47.55	48.45	43.96	49.35	50.24
315.0	40.37	41.27	44.86	45.76	48.45	49.35	46.65	44.86	43.96
330.0	40.37	43.96	46.65	47.55	36.78	36.78	39.48	43.96	52.04
345.0	47.55	50.24	49.35	42.17	40.37	43.06	44.86	52.93	59.21
360.0	53.83	58.32	61.91	61.91	52.93	52.93	58.32	63.70	66.39

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	69.08	74.47	88.82	100.48	117.53	142.65	171.36	202.76	261.08
15.0	108.56	114.84	122.91	137.27	147.14	156.11	169.57	200.97	253.01
30.0	122.02	124.71	133.68	144.45	154.32	166.88	183.92	225.19	267.36
45.0	123.81	124.71	126.50	144.45	159.70	179.44	191.10	226.99	266.46
60.0	119.33	127.40	137.27	140.86	161.49	182.13	199.17	229.68	280.82
75.0	126.50	132.78	137.27	139.06	156.11	173.16	192.89	219.81	253.90
90.0	89.72	101.38	108.56	128.30	142.65	163.29	193.79	217.12	248.52
105.0	64.60	63.70	69.98	90.62	106.76	122.91	152.52	199.17	250.31
120.0	49.35	53.83	59.21	69.08	79.85	93.31	113.94	162.39	211.74
135.0	44.86	48.45	58.32	65.49	74.47	85.23	98.69	126.50	181.23
150.0	57.42	61.01	67.29	82.54	84.34	100.48	129.19	164.18	220.71
165.0	60.11	64.60	68.19	85.23	99.59	118.43	150.73	177.64	228.78
180.0	83.44	93.31	110.35	129.19	142.65	170.46	195.59	235.96	305.04
195.0	129.19	135.47	139.96	143.55	153.42	168.67	192.00	236.86	311.32
210.0	127.40	134.58	145.34	152.52	168.67	192.00	205.45	250.31	296.97
225.0	123.81	126.50	140.86	155.21	172.26	190.20	194.69	257.49	313.12
240.0	118.43	130.99	134.58	159.70	183.03	197.38	209.04	246.73	321.19
255.0	118.43	117.53	128.30	144.45	165.98	185.72	203.66	230.58	285.30
270.0	94.20	101.38	116.63	131.89	149.83	176.74	207.25	244.03	286.20
285.0	62.80	69.98	82.54	99.59	118.43	148.04	185.72	230.58	284.41
300.0	51.14	60.11	69.08	80.75	99.59	124.71	162.39	203.66	270.05
315.0	46.65	54.73	61.91	69.08	84.34	99.59	139.96	200.07	244.03
330.0	55.63	61.91	70.88	84.34	104.07	130.99	174.05	229.68	277.23
345.0	61.01	63.70	76.26	96.90	122.91	161.49	199.17	261.98	335.55
360.0	69.08	74.47	88.82	100.48	117.53	142.65	171.36	202.76	261.08
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	344.52	433.34	517.67	604.70	679.17	764.40	815.54	752.74	670.20
15.0	324.78	436.03	516.78	619.95	684.55	759.91	827.20	863.09	744.66
30.0	326.57	407.32	514.09	617.26	687.24	778.75	834.38	882.83	909.74
45.0	345.42	422.57	525.75	614.57	706.08	759.91	827.20	894.49	935.76
60.0	339.13	436.03	523.06	627.13	722.23	766.19	812.85	881.03	921.41
75.0	312.22	418.98	512.29	590.35	688.14	698.90	785.03	907.95	928.58
90.0	320.29	456.67	552.66	632.51	674.68	644.18	778.75	913.33	918.71
105.0	316.71	392.97	479.99	568.81	599.32	537.41	725.82	890.00	929.48
120.0	264.67	349.90	431.54	526.65	543.69	531.13	549.97	777.86	935.76
135.0	243.14	309.53	418.09	510.50	587.65	517.67	567.02	610.08	941.14
150.0	296.97	383.10	448.59	566.12	640.59	698.90	526.65	686.34	742.87
165.0	298.76	385.79	487.17	571.51	638.79	708.77	711.47	516.78	831.69
180.0	393.86	475.51	581.37	649.56	720.44	772.47	850.53	885.52	776.06
195.0	392.97	477.30	545.49	658.53	715.05	724.03	792.21	788.62	829.89
210.0	395.66	415.40	558.94	634.31	716.85	749.15	710.57	793.11	931.28
225.0	388.48	460.25	551.77	634.31	715.95	679.17	709.67	901.67	798.49
240.0	389.38	468.33	558.05	652.25	654.94	605.60	825.41	794.90	830.79
255.0	371.43	493.45	606.50	633.41	552.66	636.10	797.59	766.19	918.71
270.0	368.74	482.68	602.91	654.94	621.75	717.75	727.61	876.55	932.17
285.0	351.70	446.80	530.23	609.19	663.02	706.08	729.41	924.10	930.38
300.0	357.98	455.77	549.97	668.40	746.46	688.14	758.12	908.85	930.38
315.0	314.01	409.12	494.35	566.12	641.49	698.01	759.02	915.13	939.35
330.0	349.00	438.72	573.30	659.43	717.75	817.33	872.06	909.74	926.79
345.0	440.52	523.95	606.50	671.99	758.12	828.10	864.88	921.41	923.20
360.0	344.52	433.34	517.67	604.70	679.17	764.40	815.54	752.74	670.20

Intensity data(cd)

C/ γ (°)	180.0
0.0	810.16
15.0	875.65
30.0	770.68
45.0	904.36
60.0	920.51
75.0	925.89
90.0	924.99
105.0	937.56
120.0	939.35
135.0	931.28
150.0	909.74
165.0	765.30
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	810.16