



NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

Nata

Client: NT

LumCAT: 3-2996-LM

Luminaire: 92.70.412.00 LED HOLDER

Report No: 20260130-B018

Ballast type: DC

Test No: 20260130-C018

Voltage(V): 36.910

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.718

Lamp flux(lm): 3723.6

Power (W): 26.500

Number of Lamps: 1

PF: 0.000

Length(mm): 92

Width(mm): 92

Phm Type: C

Height(mm): 49

Photometric Results

Lumens(lm): 3668.10, Efficiency(%): 98.51% , Luminous Efficacy(lm/W): 138.42

Central intensity(cd): 13502.370, Maximum intensity(cd): 13506.140

Angle of maximum intensity: C=0.0 γ =1.0

Beam Angle(50%Imax): [C0/180]Total=25.0

[C90/270]Total=25.0

Field angle(10%Imax): [C0/180]Total=49.0

[C90/270]Total=49.0

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

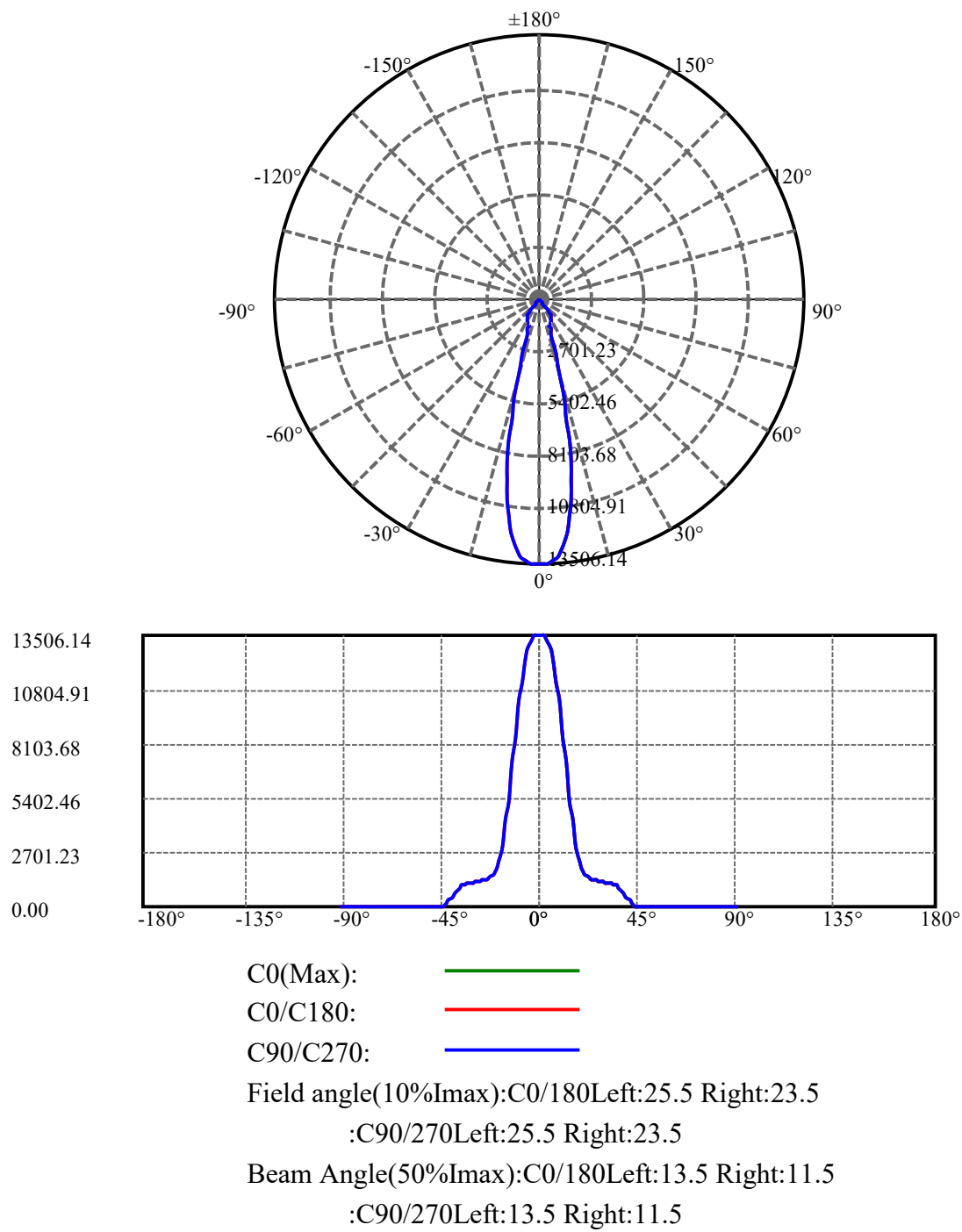
Down flux rate of lamp(%): 98.51%

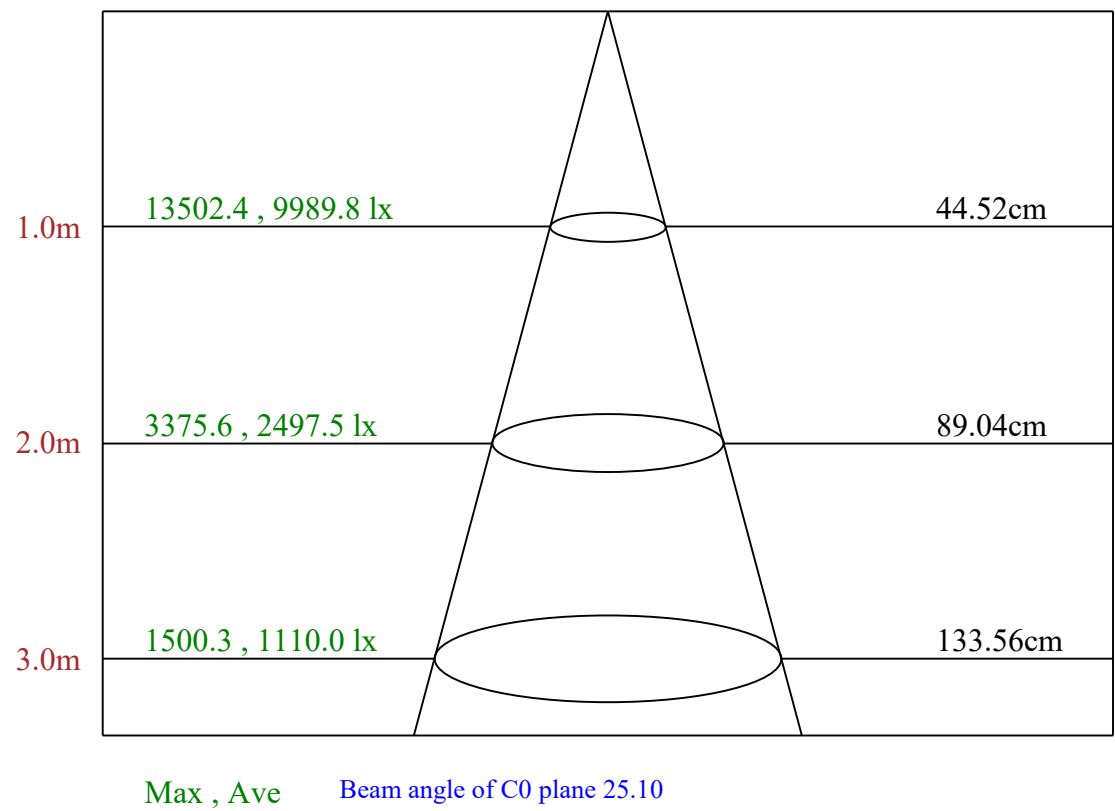
Up flux rate of LUM(%): - -

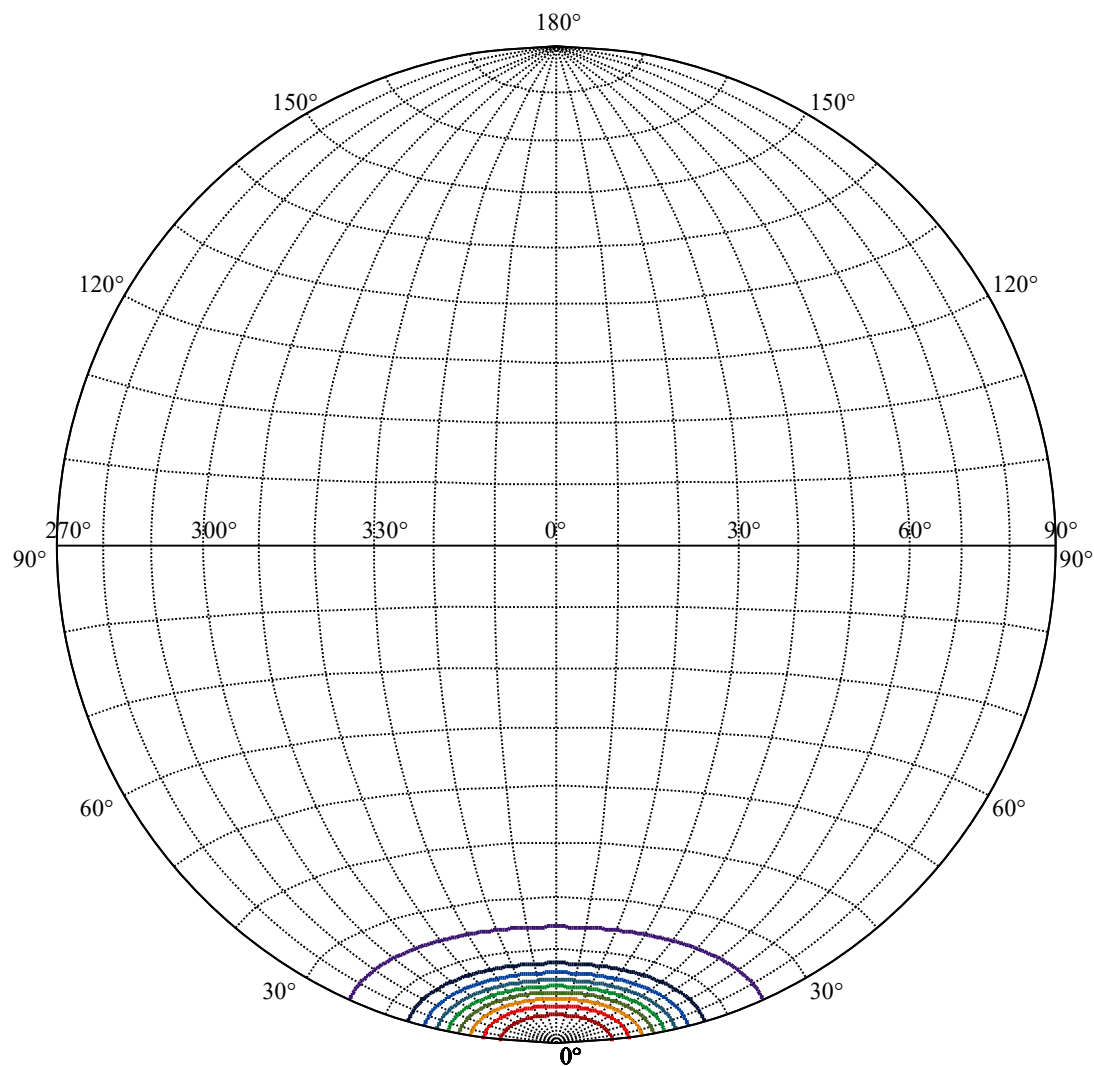
Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.292%





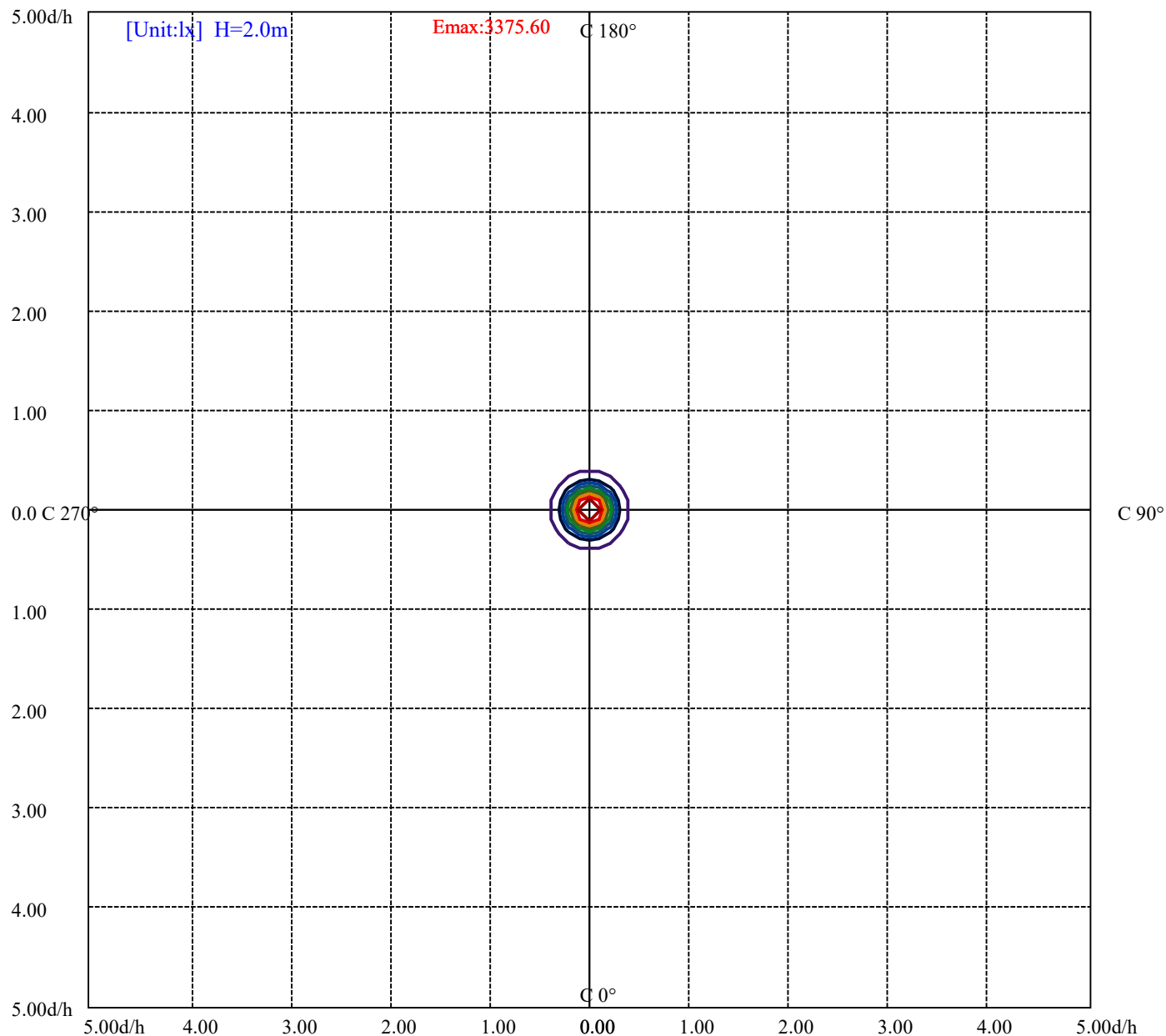


House

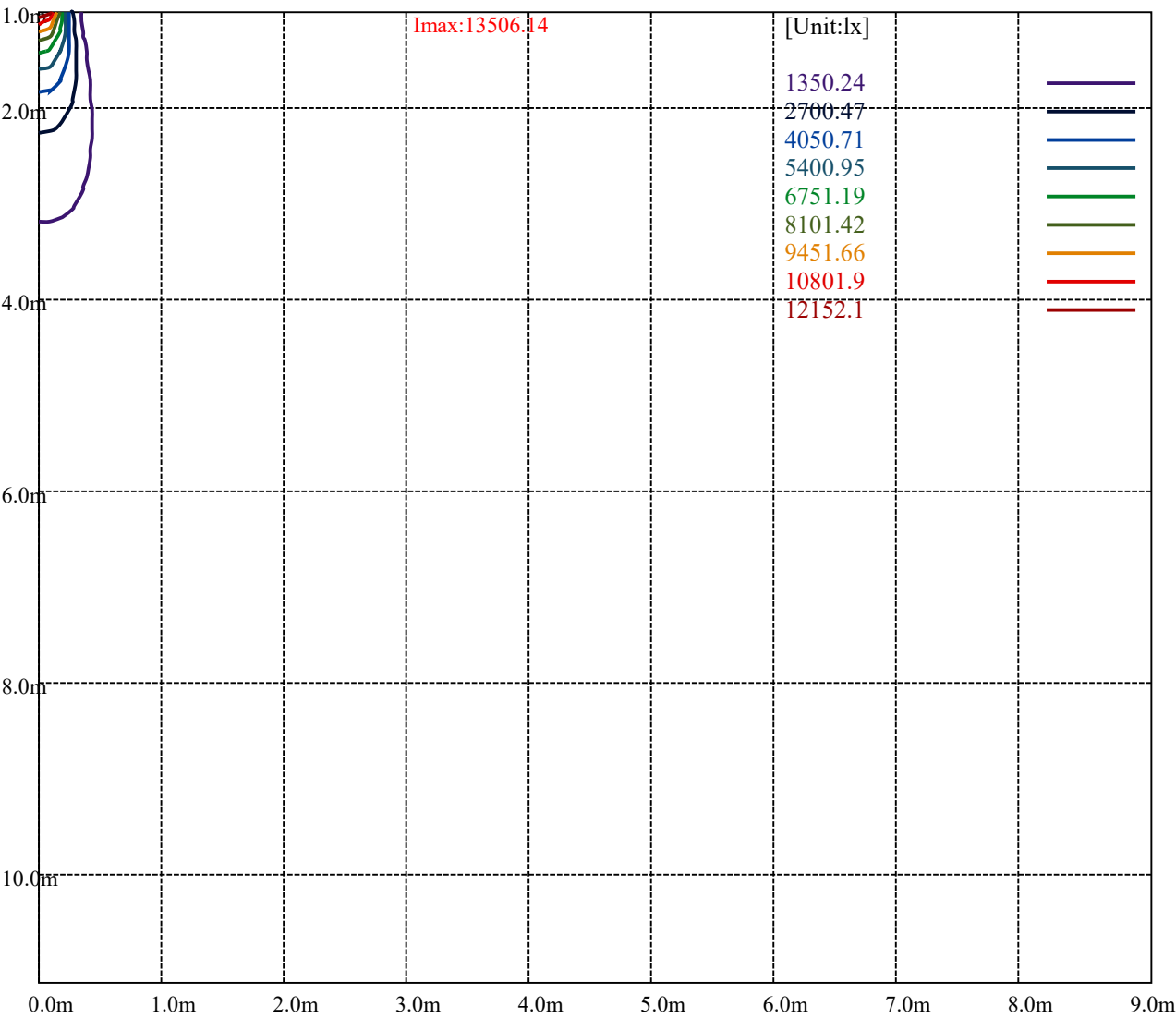
[Unit:cd]

Road

Imax:13506.14	
(10%Imax)	1350.61
(20%Imax)	2701.23
(30%Imax)	4051.84
(40%Imax)	5402.46
(50%Imax)	6753.07
(60%Imax)	8103.68
(70%Imax)	9454.3
(80%Imax)	10804.9
(90%Imax)	12155.5



(10%Emax)	337.56	
(20%Emax)	675.1175	
(30%Emax)	1012.677	
(40%Emax)	1350.238	
(50%Emax)	1687.797	
(60%Emax)	2025.355	
(70%Emax)	2362.915	
(80%Emax)	2700.475	
(90%Emax)	3038.025	



Luminance Table

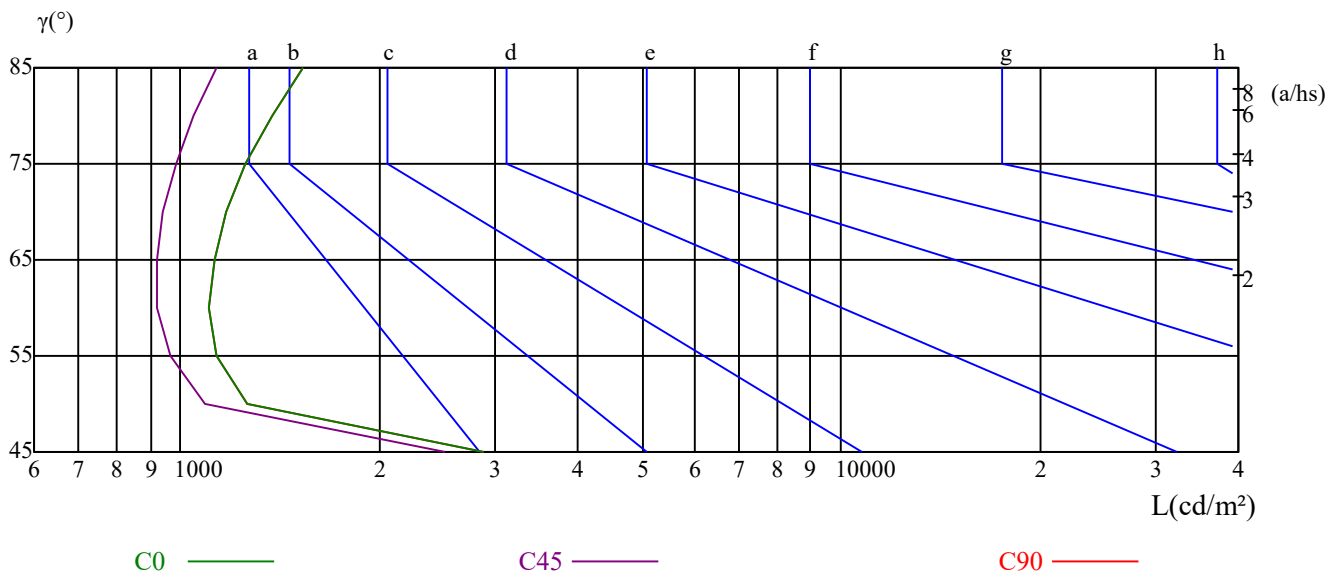
γ	45	50	55	60	65	70	75	80	85
C0	2873	1265	1137	1101	1127	1170	1253	1374	1534
C45	2511	1090	965	918	923	939	983	1048	1131
C90	2873	1265	1137	1101	1127	1170	1253	1374	1534

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2414	2414	2414	3744	3744	3744	10872	10872	10872

Glare Table

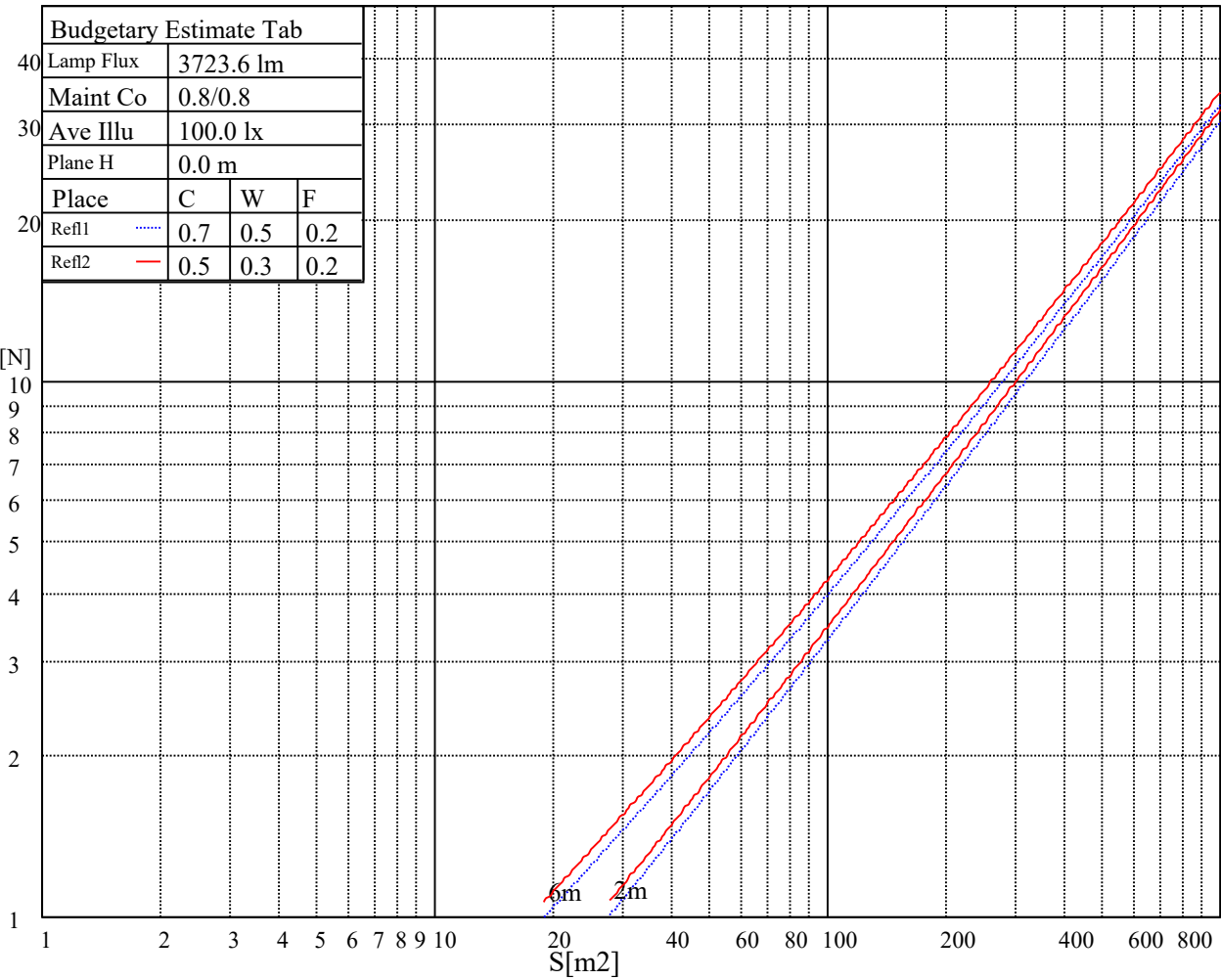
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

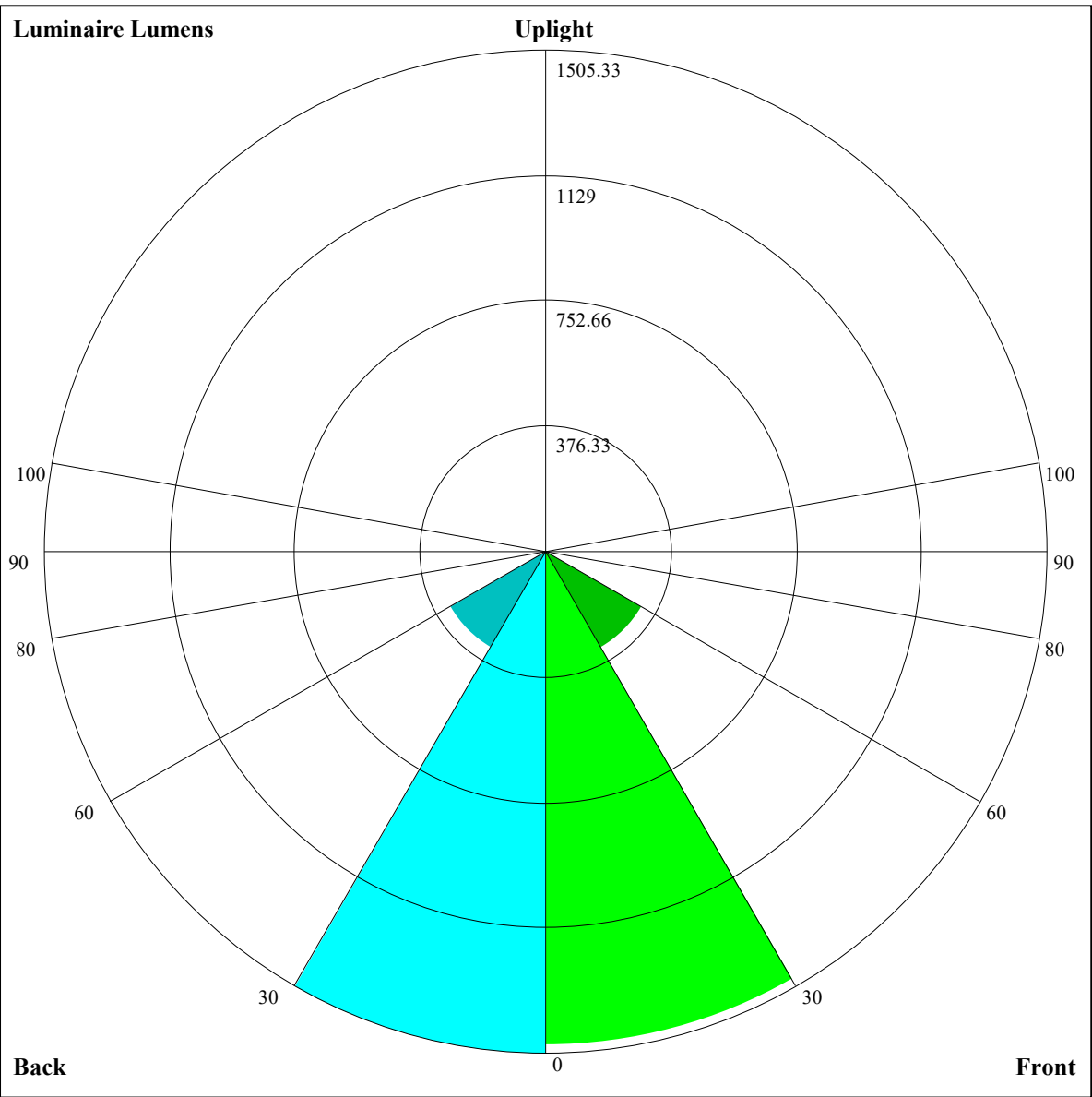


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	17.81	18.73	18.18	19.04	19.36	17.83	18.74	18.19	19.05	19.37
	3H	17.61	18.42	18.00	18.76	19.11	17.62	18.44	18.01	18.78	19.12
	4H	17.51	18.27	17.92	18.62	18.99	17.53	18.28	17.93	18.64	19.00
	6H	17.45	18.13	17.87	18.51	18.91	17.46	18.15	17.88	18.53	18.92
	8H	17.39	18.04	17.81	18.43	18.84	17.40	18.06	17.82	18.44	18.85
	12H	17.34	17.96	17.77	18.35	18.77	17.35	17.97	17.78	18.37	18.79
4H	2H	17.49	18.24	17.89	18.59	18.96	17.50	18.25	17.90	18.61	18.98
	3H	17.25	17.88	17.68	18.28	18.70	17.27	17.90	17.69	18.29	18.71
	4H	17.19	17.74	17.63	18.16	18.61	17.21	17.75	17.65	18.17	18.62
	6H	17.09	17.57	17.56	18.02	18.48	17.10	17.58	17.58	18.04	18.49
	8H	17.06	17.50	17.55	17.96	18.44	17.08	17.52	17.56	17.98	18.45
	12H	17.05	17.46	17.54	17.91	18.43	17.07	17.47	17.56	17.93	18.45
8H	4H	16.99	17.44	17.48	17.90	18.37	17.01	17.45	17.50	17.91	18.39
	6H	16.90	17.26	17.41	17.74	18.25	16.91	17.27	17.42	17.75	18.27
	8H	16.93	17.23	17.47	17.76	18.26	16.95	17.25	17.48	17.77	18.27
	12H	16.95	17.18	17.50	17.70	18.22	16.96	17.19	17.51	17.71	18.23
12H	4H	16.94	17.35	17.44	17.81	18.33	16.96	17.37	17.45	17.82	18.34
	6H	16.89	17.19	17.43	17.71	18.21	16.90	17.21	17.44	17.73	18.23
	8H	16.90	17.12	17.44	17.64	18.17	16.91	17.14	17.46	17.66	18.18
Variation with the observer position at spacings:											
S = 1.0H		4.9/-13.6					4.9/-13.6				
S = 1.5H		7.7/-11.6					7.7/-11.6				
S = 2.0H		9.6/-10.1					9.6/-10.1				
Standard tables:		BK0					BK0				
Uncorrected UGR		-1.7					-1.7				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.17	1.17	1.17	1.15	1.15	1.15	1.09	1.09	1.09	1.05	1.05	1.05	1.01	1.01	1.01	0.99
1	1.10	1.08	1.06	1.08	1.06	1.05	1.04	1.03	1.01	1.01	0.99	0.98	0.97	0.96	0.96	0.94
2	1.04	1.01	0.98	1.03	1.00	0.97	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.89
3	0.99	0.95	0.92	0.98	0.94	0.91	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.89	0.87	0.85
4	0.94	0.90	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.85	0.83	0.82
5	0.90	0.85	0.82	0.89	0.85	0.81	0.87	0.84	0.81	0.86	0.83	0.80	0.84	0.82	0.79	0.78
6	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.75
7	0.82	0.78	0.74	0.82	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.76	0.73	0.72
8	0.79	0.75	0.71	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
9	0.76	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.67
10	0.74	0.69	0.66	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65



Luminaire Lumens:

FL=1478.95,FM=333,FH=8.65,FVH=4.37

BL=1505.33,BM=332.62,BH=8.66,BVH=4.38

UL=0,UH=0

BUG Rating:B3-U0-G0

Intensity data(cd)

Appendix Page: 12 Total:14

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	13500.01	13614.54	13607.65	13531.01	13354.47	12990.19	12532.04	11936.10	11254.90
45.0	13419.06	13487.09	13577.51	13593.88	13535.32	13370.83	13084.92	12544.09	11977.43
90.0	13508.62	13533.59	13505.17	13425.08	13215.82	12930.76	12522.56	11871.51	11216.15
135.0	13581.82	13549.96	13471.59	13437.14	13313.99	13134.00	12880.82	12405.44	11925.76
180.0	13500.01	13391.50	13357.05	13273.52	13103.00	12823.12	12308.13	11779.36	10984.49
225.0	13419.06	13422.50	13351.02	13138.31	12862.73	12445.92	11752.66	11107.64	10365.30
270.0	13508.62	13513.79	13491.39	13420.78	13222.71	12945.40	12560.45	12041.16	11258.34
315.0	13581.82	13536.18	13414.75	13218.40	12894.59	12310.71	11708.74	11011.18	9983.79
360.0	13500.01	13614.54	13607.65	13531.01	13354.47	12990.19	12532.04	11936.10	11254.90
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	10255.07	9343.93	8356.15	7056.63	6037.85	4869.22	4044.21	3329.42	2741.23
45.0	11312.60	10539.26	9412.83	8430.22	7392.49	6335.82	5100.88	4225.92	3466.35
90.0	10457.44	9366.32	8392.32	7361.49	6322.90	5106.05	4242.28	3487.02	2869.55
135.0	11192.03	10503.95	9721.99	8623.98	7649.12	6646.70	5666.68	4545.42	3751.40
180.0	10257.65	9421.44	8505.14	7526.83	6290.17	5345.46	4480.83	3722.12	2923.81
225.0	9534.25	8363.04	7363.21	6350.46	5379.90	4296.53	3560.22	2793.77	2314.09
270.0	10533.23	9465.36	8512.03	7493.25	6203.19	5219.72	4346.48	3418.13	2812.71
315.0	9070.08	8092.63	6834.44	5844.08	4923.48	3913.31	3228.66	2650.81	1959.28
360.0	10255.07	9343.93	8356.15	7056.63	6037.85	4869.22	4044.21	3329.42	2741.23
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1954.11	1693.95	1693.95	1561.76	1452.90	1393.22	1351.11	1320.02	1289.97
45.0	2724.01	2275.33	1903.30	1712.98	1578.64	1487.35	1408.98	1366.79	1334.92
90.0	2301.17	1694.38	1694.38	1599.74	1507.85	1442.91	1387.63	1354.73	1328.20
135.0	3086.57	2547.47	2140.13	1802.54	1635.47	1501.99	1429.65	1378.84	1334.92
180.0	2407.96	2030.76	1731.93	1577.78	1454.63	1390.90	1346.98	1307.36	1282.39
225.0	1695.24	1695.24	1557.97	1467.54	1405.71	1352.32	1320.71	1295.13	1272.74
270.0	2331.31	2000.62	1739.68	1602.75	1508.88	1444.29	1386.59	1353.01	1326.31
315.0	1696.53	1656.57	1530.93	1446.44	1376.09	1336.56	1306.16	1276.45	1256.21
360.0	1954.11	1693.95	1693.95	1561.76	1452.90	1393.22	1351.11	1320.02	1289.97
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1268.61	1249.66	1227.70	1211.17	1189.04	1171.12	1153.13	1128.58	1077.77
45.0	1309.95	1281.53	1260.86	1241.91	1219.52	1200.58	1181.63	1157.52	1136.85
90.0	1299.10	1277.57	1258.10	1239.07	1214.27	1193.69	1174.05	1152.95	1088.97
135.0	1307.36	1284.97	1260.86	1242.77	1225.55	1209.19	1182.49	1161.82	1143.74
180.0	1260.86	1241.91	1218.66	1201.44	1184.21	1161.82	1137.71	1114.46	1055.90
225.0	1247.17	1227.88	1209.19	1191.28	1163.37	1143.57	1113.60	1047.80	944.80
270.0	1297.03	1274.64	1253.11	1228.13	1207.47	1185.08	1159.24	1135.13	1080.01
315.0	1237.00	1214.53	1197.30	1172.42	1153.38	1134.52	1111.19	1037.12	938.52
360.0	1268.61	1249.66	1227.70	1211.17	1189.04	1171.12	1153.13	1128.58	1077.77
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	981.75	862.56	728.04	549.78	412.94	281.87	167.76	64.16	32.81
45.0	1084.32	958.58	845.77	710.56	562.44	458.24	458.24	146.06	66.48
90.0	990.79	869.62	697.82	548.66	372.12	245.09	137.10	65.71	36.94
135.0	1104.12	998.20	875.05	745.01	547.80	435.85	435.85	122.98	60.02
180.0	930.16	806.15	671.81	500.43	466.85	466.85	105.15	50.55	33.24
225.0	792.63	659.24	524.03	389.94	236.74	133.48	61.40	35.65	26.70
270.0	983.56	831.13	692.48	550.38	444.46	444.46	135.38	66.14	37.72
315.0	815.20	677.67	498.19	357.74	230.19	125.65	49.09	30.49	22.22
360.0	981.75	862.56	728.04	549.78	412.94	281.87	167.76	64.16	32.81

Intensity data(cd)

C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	24.11	17.57	13.00	11.20	10.85	10.42	10.16	9.90	9.73
45.0	31.95	25.49	18.69	12.83	11.63	11.11	10.59	10.33	10.08
90.0	30.14	23.08	16.88	15.07	14.21	13.43	12.83	12.14	11.63
135.0	33.33	25.32	18.60	13.61	11.80	11.11	10.76	10.42	10.16
180.0	26.09	17.31	12.57	11.28	10.85	10.51	10.25	9.99	9.73
225.0	19.20	13.78	11.45	11.02	10.68	10.33	10.16	9.90	9.73
270.0	30.06	21.01	16.19	14.64	13.87	13.00	12.40	11.97	11.54
315.0	15.93	11.88	10.94	10.59	10.33	10.08	9.82	9.65	9.47
360.0	24.11	17.57	13.00	11.20	10.85	10.42	10.16	9.90	9.73
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.47	9.30	9.13	9.04	8.87	8.87	8.78	8.78	8.70
45.0	9.82	9.56	9.39	9.21	9.13	8.96	8.87	8.87	8.78
90.0	11.11	10.76	10.42	10.08	9.90	9.65	9.47	9.30	9.21
135.0	9.90	9.65	9.47	9.30	9.13	8.96	8.87	8.87	8.78
180.0	9.65	9.39	9.30	9.13	8.96	8.87	8.78	8.70	8.70
225.0	9.56	9.39	9.21	9.13	8.96	8.96	8.78	8.70	8.70
270.0	10.94	10.59	10.33	10.08	9.82	9.65	9.39	9.21	9.13
315.0	9.30	9.13	9.04	8.96	8.87	8.78	8.70	8.61	8.61
360.0	9.47	9.30	9.13	9.04	8.87	8.87	8.78	8.78	8.70
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.61	8.53	8.53	8.53	8.44	8.44	8.35	8.35	8.35
45.0	8.70	8.61	8.61	8.53	8.53	8.44	8.35	8.27	8.27
90.0	9.04	8.96	8.87	8.78	8.70	8.61	8.53	8.44	8.35
135.0	8.70	8.70	8.61	8.53	8.53	8.44	8.44	8.35	8.35
180.0	8.70	8.53	8.53	8.53	8.44	8.35	8.35	8.35	8.27
225.0	8.61	8.53	8.53	8.44	8.35	8.35	8.27	8.27	8.27
270.0	9.04	8.96	8.87	8.78	8.61	8.53	8.53	8.44	8.35
315.0	8.53	8.53	8.53	8.44	8.44	8.35	8.35	8.27	8.27
360.0	8.61	8.53	8.53	8.53	8.44	8.44	8.35	8.35	8.35
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.27	8.27	8.27	8.18	8.27	8.18	8.18	8.18	8.10
45.0	8.27	8.27	8.18	8.18	8.10	8.18	8.10	8.10	8.10
90.0	8.35	8.27	8.27	8.27	8.18	8.18	8.18	8.10	8.18
135.0	8.27	8.27	8.27	8.18	8.18	8.18	8.10	8.18	8.10
180.0	8.27	8.27	8.27	8.18	8.18	8.18	8.18	8.18	8.10
225.0	8.18	8.18	8.18	8.18	8.10	8.10	8.10	8.10	8.10
270.0	8.35	8.35	8.27	8.27	8.27	8.18	8.10	8.18	8.10
315.0	8.18	8.18	8.18	8.18	8.10	8.10	8.18	8.10	8.18
360.0	8.27	8.27	8.27	8.18	8.27	8.18	8.18	8.18	8.10
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.10	8.10	8.10	8.01	8.01	7.92	8.01	7.92	8.01
45.0	8.10	8.01	8.10	8.01	8.01	8.01	7.92	7.92	7.92
90.0	8.10	8.10	8.10	8.01	8.01	7.92	8.01	7.92	7.84
135.0	8.10	8.10	8.10	8.10	8.10	8.01	8.01	8.01	8.01
180.0	8.10	8.10	8.01	8.01	8.01	8.01	8.01	7.92	7.92
225.0	8.01	8.10	8.01	8.01	8.01	8.01	8.01	7.92	7.92
270.0	8.10	8.10	8.10	8.01	8.01	8.01	8.01	7.92	7.92
315.0	8.10	8.01	8.01	8.01	8.01	8.01	7.92	7.92	7.92
360.0	8.10	8.10	8.10	8.01	8.01	7.92	8.01	7.92	8.01

Intensity data(cd)

C/ γ (°)	90.0
0.0	7.92
45.0	7.92
90.0	7.92
135.0	8.01
180.0	7.92
225.0	7.92
270.0	7.92
315.0	7.92
360.0	7.92