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Nata

Client: NT

LumCAT: 3-2999-LM

Luminaire: 92.70.412.00 LED HOLDER

Report No: 20251111-C027

Ballast type: DC

Test No: 20251111-C027

Voltage(V): 36.490

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.708

Lamp flux(lm): 3662.0

Power (W): 25.830

Number of Lamps: 1

PF: 0.000

Length(mm): 92

Width(mm): 92

Phm Type: C

Height(mm): 50

Photometric Results

Lumens(lm): 3458.23, Efficiency(%): 94.44% , Luminous Efficacy(lm/W): 133.88

Central intensity(cd): 4286.844, Maximum intensity(cd): 4286.844

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=56.6

[C90/270]Total=56.6

Field angle(10%Imax): [C0/180]Total=78.4

[C90/270]Total=78.4

Maximum s/h(1/2): C0_180=0.91 C90_270=0.91

Maximum s/h(1/4): C0_180=0.84 C90_270=0.84

Up flux rate of lamp(%): 0.00%

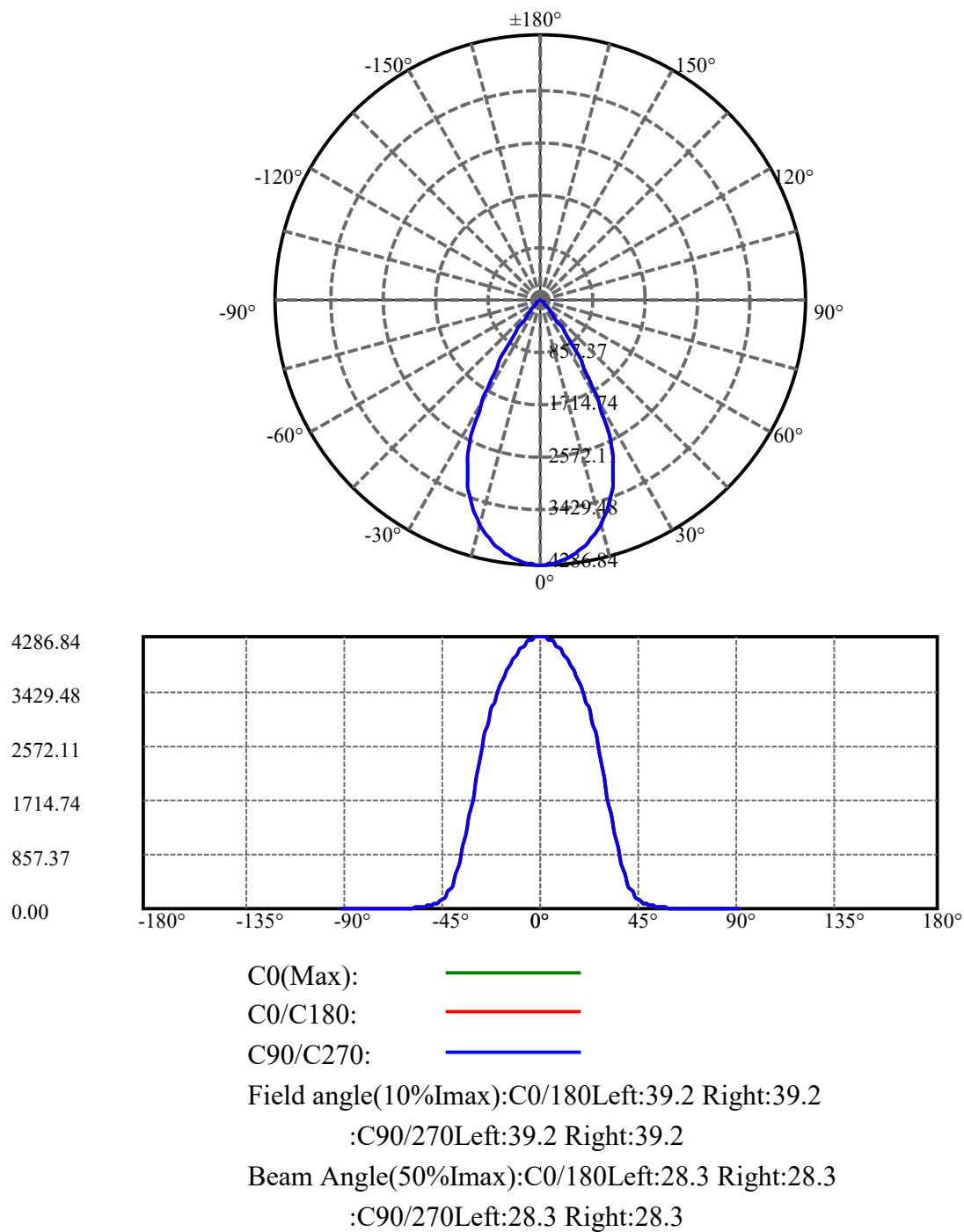
Down flux rate of lamp(%): 94.44%

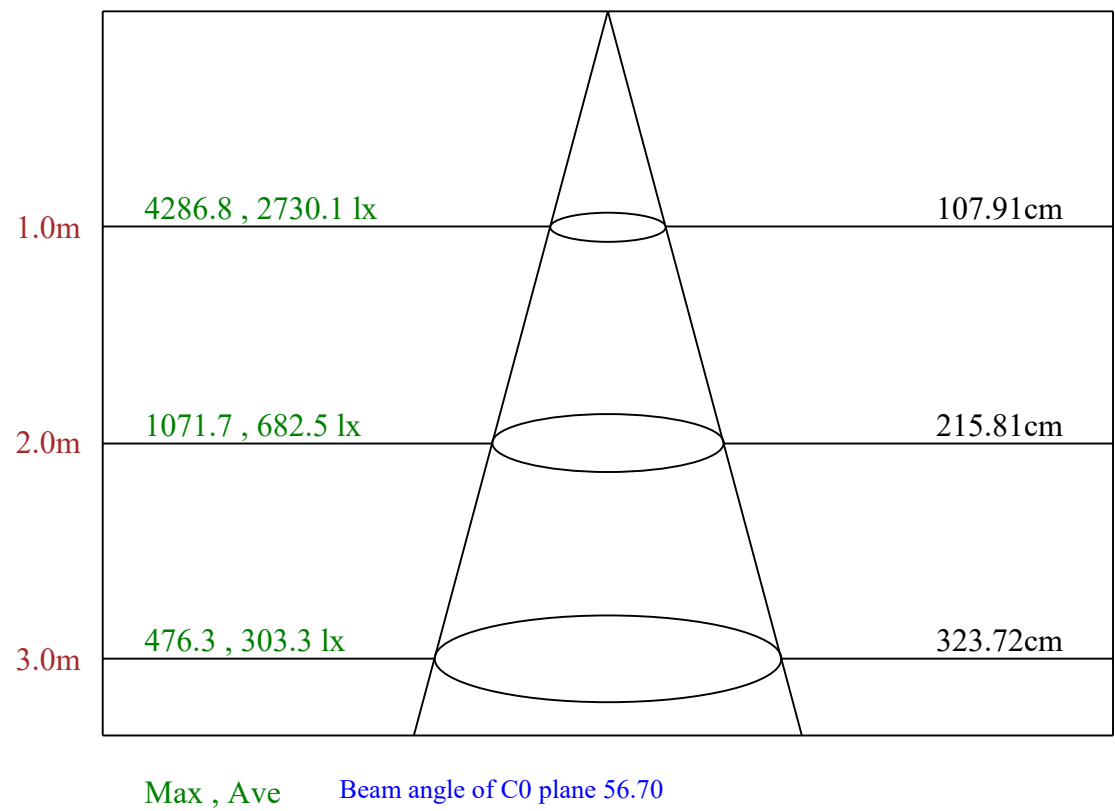
Up flux rate of LUM(%): - -

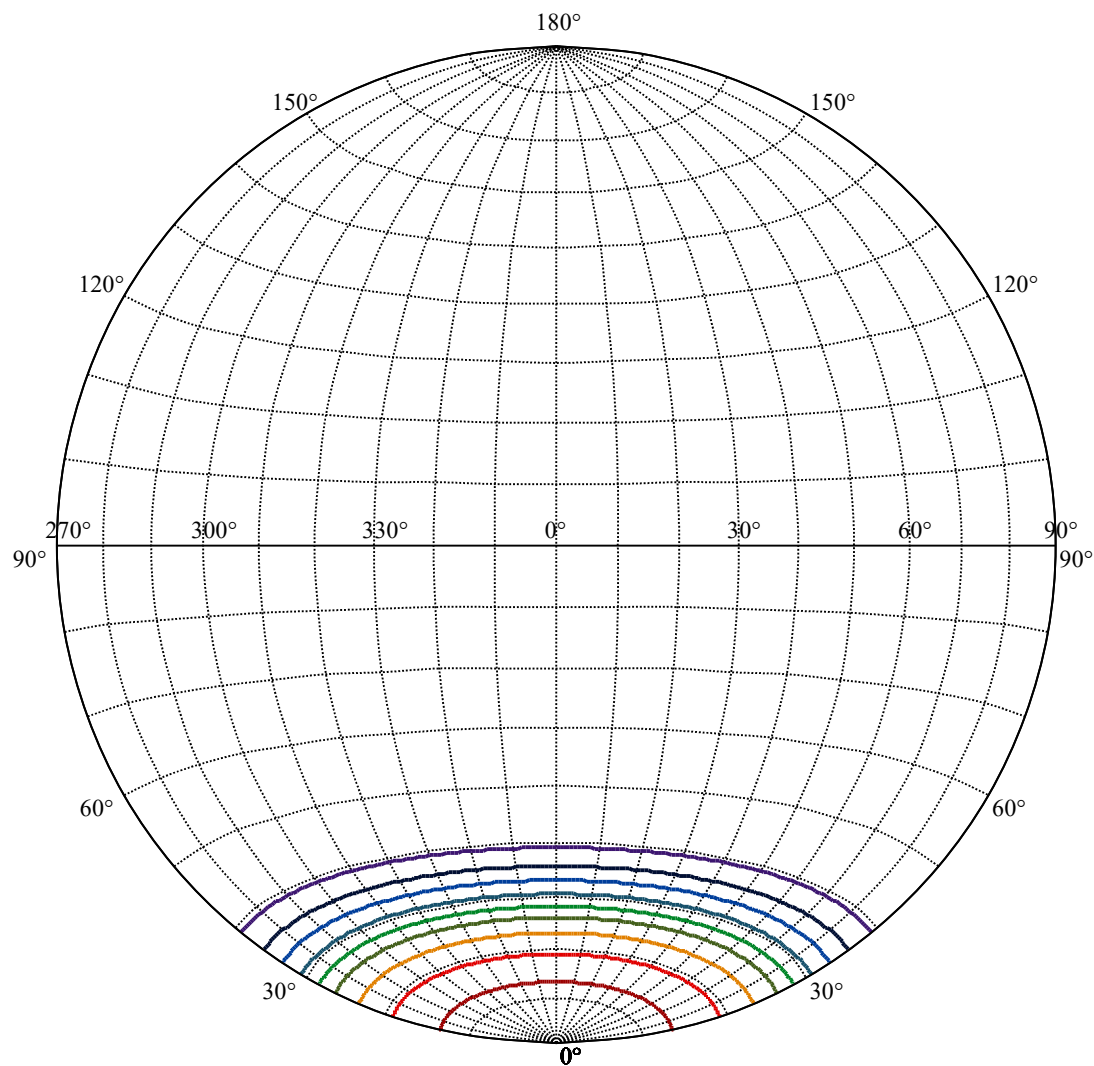
Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.436%





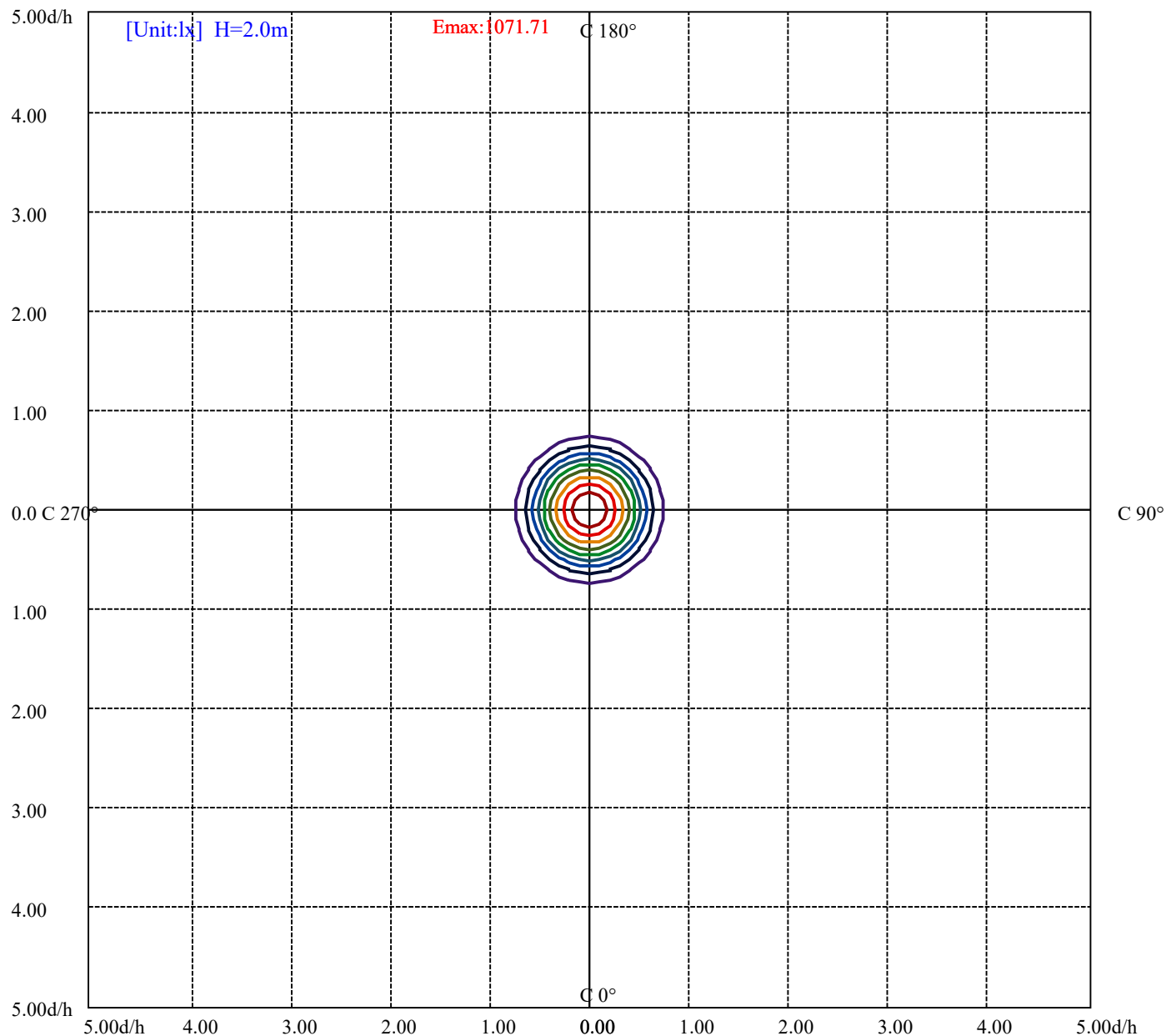


House

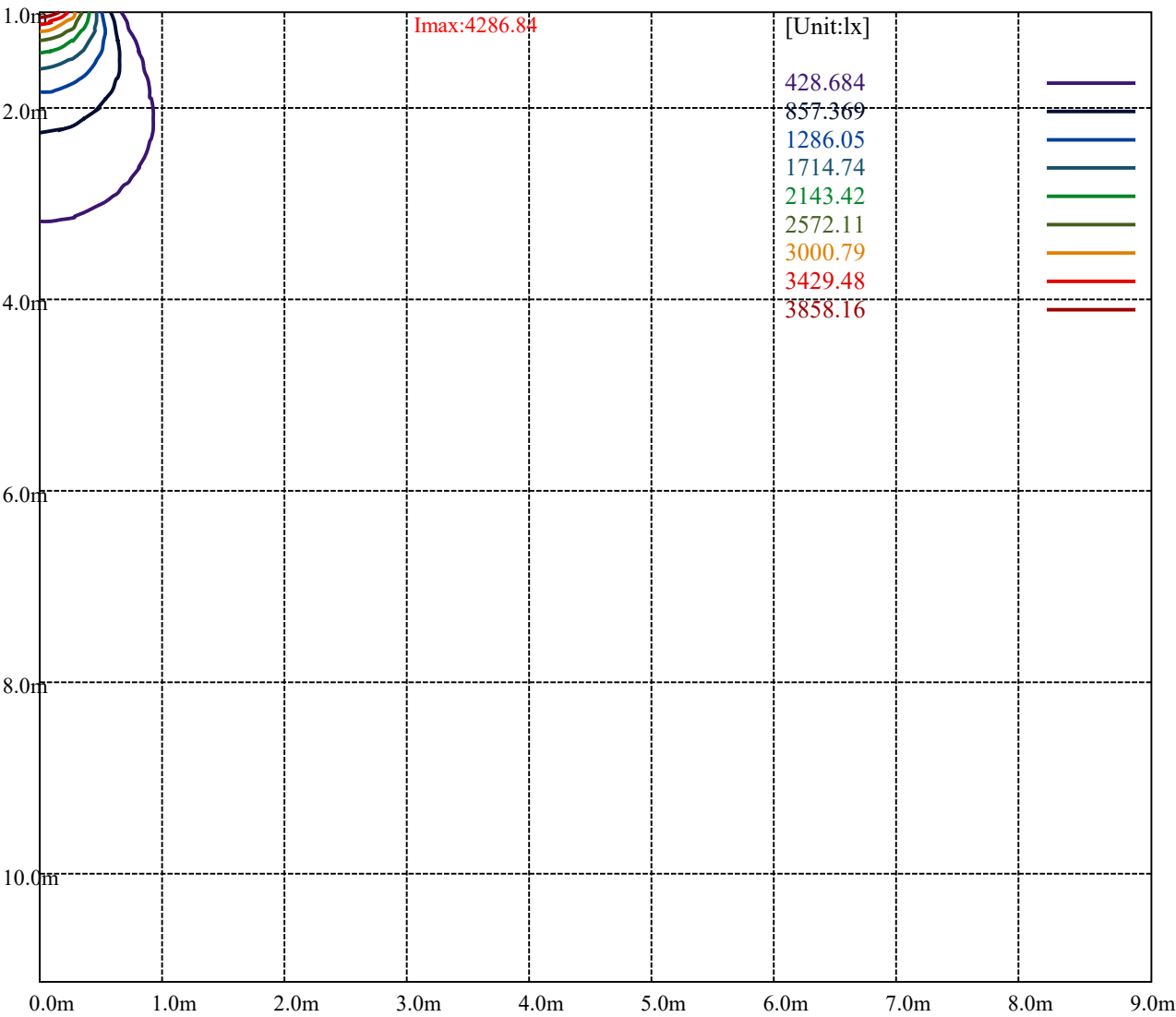
[Unit:cd]

Road

Imax:4286.84	
(10%Imax) 428.684	
(20%Imax) 857.369	
(30%Imax) 1286.05	
(40%Imax) 1714.74	
(50%Imax) 2143.42	
(60%Imax) 2572.11	
(70%Imax) 3000.79	
(80%Imax) 3429.48	
(90%Imax) 3858.16	



(10%Emax) 107.171	—
(20%Emax) 214.3423	—
(30%Emax) 321.5125	—
(40%Emax) 428.685	—
(50%Emax) 535.855	—
(60%Emax) 643.0275	—
(70%Emax) 750.1975	—
(80%Emax) 857.37	—
(90%Emax) 964.54	—



Luminance Table

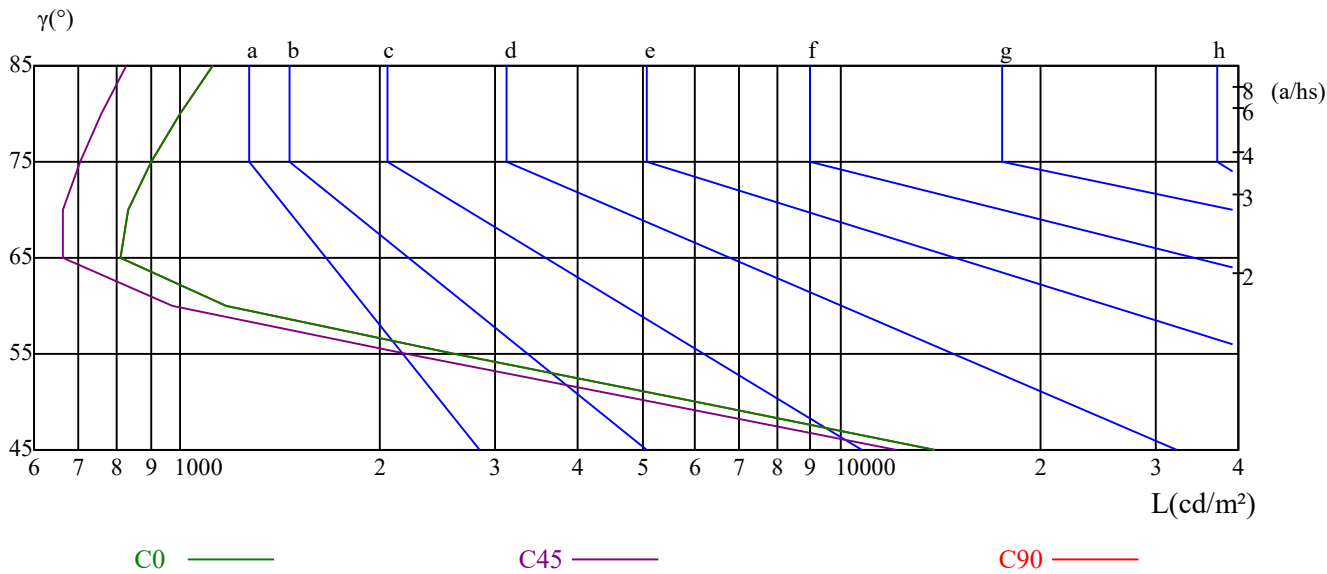
γ	45	50	55	60	65	70	75	80	85
C0	13924	6049	2599	1170	809	831	902	998	1121
C45	12152	5202	2201	974	661	666	706	760	826
C90	13924	6049	2599	1170	809	831	902	998	1121

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1751	1751	1751	2732	2732	2732	8084	8084	8084

Glare Table

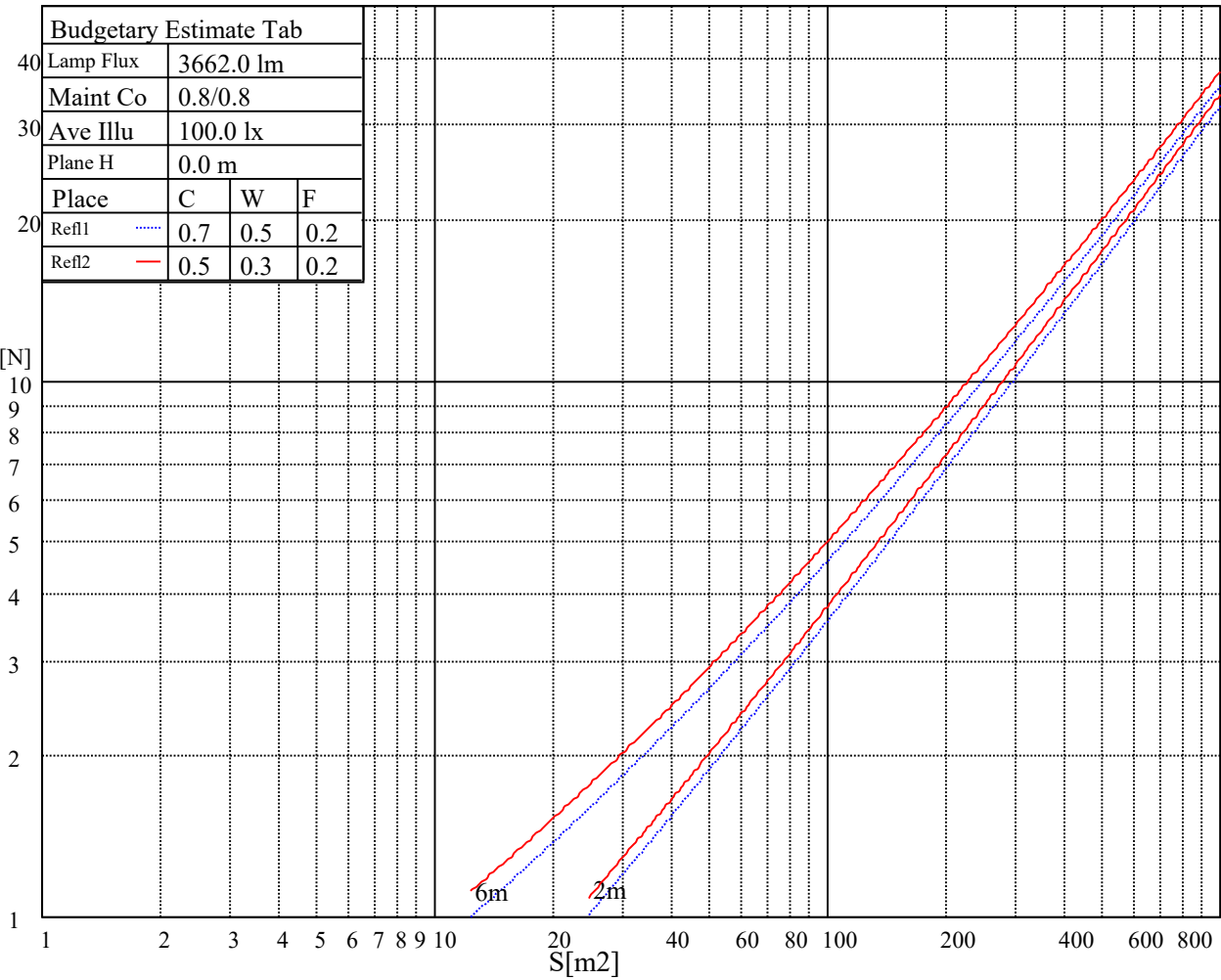
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

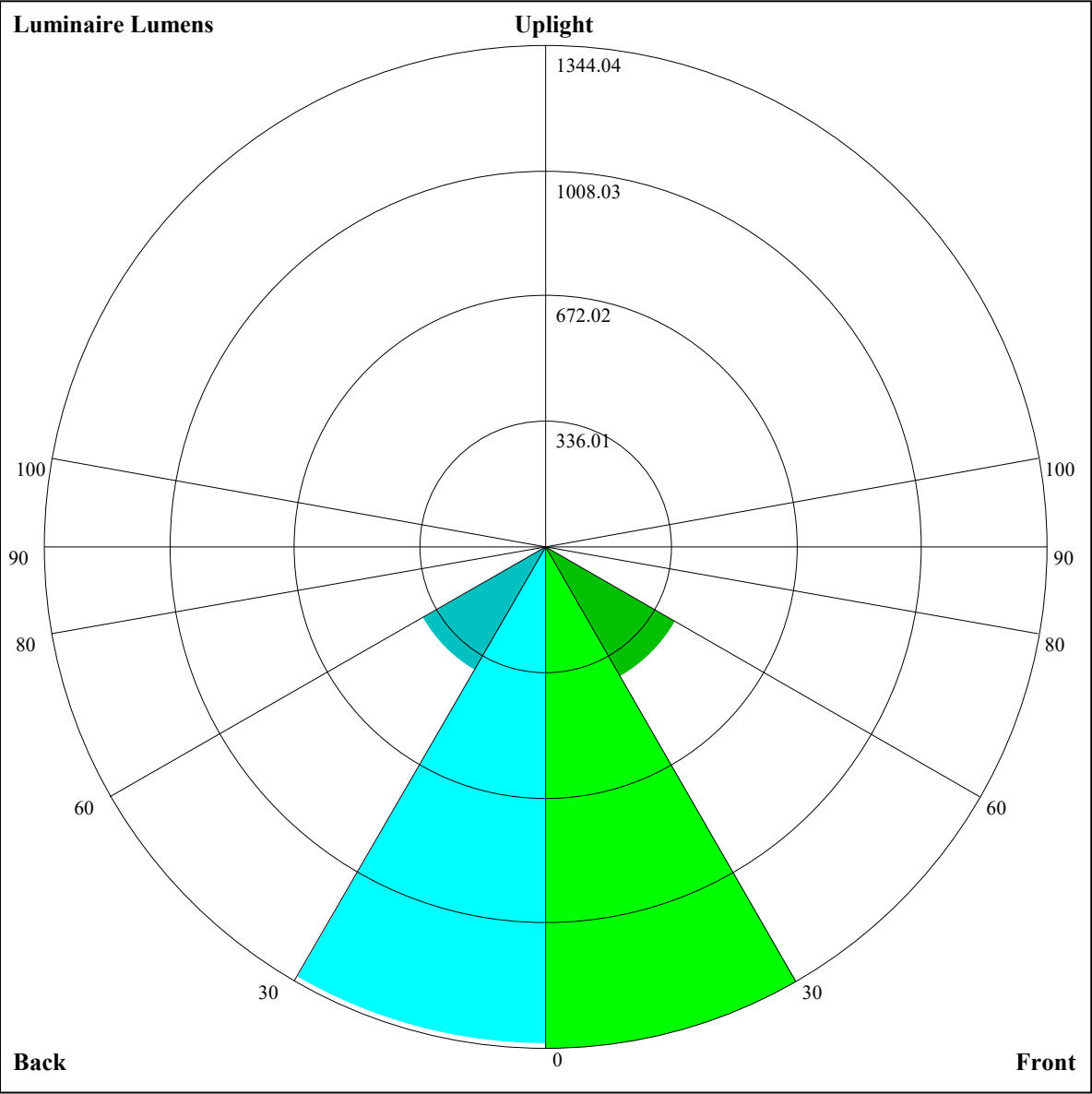


Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	18.99	19.93	19.36	20.24	20.56	19.49	20.43	19.85	20.74	21.06
	3H	18.78	19.62	19.17	19.96	20.30	19.28	20.12	19.67	20.45	20.80
	4H	18.68	19.45	19.08	19.81	20.18	19.18	19.95	19.58	20.30	20.67
	6H	18.60	19.30	19.02	19.68	20.08	19.09	19.80	19.51	20.17	20.57
	8H	18.53	19.20	18.95	19.59	19.99	19.02	19.69	19.44	20.08	20.49
	12H	18.47	19.10	18.89	19.50	19.92	18.96	19.59	19.38	19.99	20.41
4H	2H	18.67	19.45	19.08	19.80	20.17	19.17	19.94	19.57	20.30	20.67
	3H	18.43	19.07	18.86	19.47	19.89	18.92	19.57	19.35	19.96	20.38
	4H	18.36	18.91	18.80	19.34	19.79	18.85	19.40	19.29	19.83	20.28
	6H	18.23	18.72	18.70	19.17	19.62	18.72	19.21	19.19	19.66	20.11
	8H	18.18	18.63	18.67	19.09	19.57	18.67	19.12	19.15	19.58	20.05
	12H	18.14	18.56	18.63	19.01	19.54	18.63	19.04	19.12	19.50	20.02
8H	4H	18.15	18.60	18.64	19.06	19.54	18.64	19.10	19.13	19.56	20.03
	6H	18.02	18.39	18.52	18.87	19.38	18.50	18.87	19.01	19.35	19.87
	8H	18.02	18.33	18.55	18.85	19.35	18.50	18.81	19.04	19.34	19.83
	12H	17.99	18.23	18.54	18.75	19.27	18.47	18.71	19.02	19.23	19.75
12H	4H	18.10	18.52	18.59	18.97	19.49	18.59	19.01	19.08	19.46	19.98
	6H	18.00	18.31	18.54	18.83	19.33	18.49	18.80	19.02	19.32	19.82
	8H	17.97	18.21	18.51	18.72	19.25	18.45	18.69	19.00	19.21	19.73
Variation with the observer position at spacings:											
S = 1.0H		5.6/-13.3					5.6/-13.3				
S = 1.5H		8.4/-13.9					8.4/-13.9				
S = 2.0H		10.4/-12.7					10.4/-12.7				
Standard tables:		BK0					BK0				
Uncorrected UGR		-0.9					-0.9				

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	1.12	1.12	1.12	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.05	1.02	1.00	1.03	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.98	0.94	0.91	0.96	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.83
3	0.92	0.87	0.83	0.90	0.86	0.83	0.88	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.78
4	0.86	0.81	0.77	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.72	0.80	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.64
7	0.72	0.66	0.63	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.60
8	0.68	0.62	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.57
9	0.64	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.53
10	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.51



Luminaire Lumens:

FL=1344.04,FM=401.63,FH=6.57,FVH=3.24

BL=1330.76,BM=384.08,BH=6.51,BVH=3.24

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	4281.89	4283.62	4275.00	4261.22	4243.14	4219.03	4197.50	4171.66	4136.35
45.0	4288.78	4291.37	4287.92	4280.17	4264.67	4256.92	4244.86	4210.41	4182.86
90.0	4293.09	4288.78	4283.62	4268.11	4245.72	4230.22	4206.11	4171.66	4142.38
135.0	4283.62	4291.37	4288.78	4285.34	4273.28	4256.92	4229.36	4202.66	4173.38
180.0	4281.89	4275.86	4265.53	4244.86	4220.75	4198.36	4165.63	4126.88	4090.71
225.0	4288.78	4280.17	4265.53	4254.34	4231.94	4214.72	4176.83	4144.96	4110.52
270.0	4293.09	4288.78	4292.23	4264.67	4262.95	4240.56	4217.30	4182.86	4153.58
315.0	4283.62	4270.70	4246.58	4227.64	4202.66	4172.52	4128.60	4093.29	4049.37
360.0	4281.89	4283.62	4275.00	4261.22	4243.14	4219.03	4197.50	4171.66	4136.35
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4088.13	4041.62	3996.84	3953.78	3902.11	3835.80	3772.07	3709.21	3635.14
45.0	4150.13	4118.27	4070.90	4029.57	3988.23	3936.56	3871.97	3817.71	3751.40
90.0	4111.38	4059.71	4008.90	3963.25	3913.31	3859.91	3772.93	3719.54	3650.65
135.0	4127.74	4091.57	4046.79	3991.67	3940.86	3890.05	3835.80	3752.26	3691.12
180.0	4039.04	3993.40	3952.06	3904.69	3825.47	3772.07	3702.32	3625.67	3527.50
225.0	4076.07	4017.51	3964.12	3909.86	3846.13	3781.55	3704.90	3606.72	3528.36
270.0	4118.27	4072.63	4029.57	3984.78	3912.45	3857.33	3797.05	3705.76	3628.25
315.0	3995.98	3950.34	3884.89	3825.47	3767.77	3688.54	3610.17	3536.11	3459.46
360.0	4088.13	4041.62	3996.84	3953.78	3902.11	3835.80	3772.07	3709.21	3635.14
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3535.25	3463.77	3381.09	3303.59	3197.66	3092.60	2989.26	2838.55	2692.15
45.0	3661.84	3581.75	3512.86	3420.71	3338.90	3254.50	3134.80	3023.70	2899.69
90.0	3557.64	3485.30	3409.51	3307.89	3226.08	3105.52	3000.45	2877.30	2734.35
135.0	3611.89	3536.11	3445.68	3369.04	3266.56	3182.16	3093.46	2961.70	2843.72
180.0	3453.43	3365.59	3262.25	3160.63	3056.43	2910.03	2773.96	2581.92	2420.01
225.0	3445.68	3327.70	3226.94	3129.63	3009.06	2833.38	2679.23	2514.74	2339.92
270.0	3553.33	3478.41	3374.21	3279.47	3186.47	3078.82	2925.53	2776.54	2630.14
315.0	3381.96	3276.03	3181.30	3087.43	2978.92	2828.21	2686.98	2496.66	2335.62
360.0	3535.25	3463.77	3381.09	3303.59	3197.66	3092.60	2989.26	2838.55	2692.15
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	2540.58	2325.28	2152.18	1701.18	1701.18	1558.57	1386.85	1167.59	1000.52
45.0	2754.15	2563.83	2395.04	2218.50	2039.37	1824.94	1648.39	1480.46	1267.75
90.0	2551.77	2383.84	2218.50	1925.69	1706.69	1665.01	1504.57	1342.59	1142.19
135.0	2710.23	2519.05	2359.73	2187.49	2012.67	1799.10	1624.28	1454.63	1285.83
180.0	2246.92	2068.65	1832.69	1652.70	1475.29	1301.34	1092.93	928.44	768.26
225.0	2110.85	1696.02	1696.02	1526.10	1352.23	1190.50	995.10	850.25	713.23
270.0	2420.01	2247.78	2066.93	1857.66	1685.42	1473.57	1313.39	1149.77	993.89
315.0	2160.80	1708.16	1708.16	1579.58	1363.68	1200.58	1042.03	893.65	718.57
360.0	2540.58	2325.28	2152.18	1701.18	1701.18	1558.57	1386.85	1167.59	1000.52
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	842.41	697.82	536.00	422.67	323.46	246.04	180.59	147.87	117.21
45.0	1105.85	912.08	774.29	637.36	487.52	434.12	434.12	241.99	203.76
90.0	985.97	810.72	677.92	558.05	430.42	353.60	297.54	257.32	212.80
135.0	1082.59	925.86	781.18	611.53	490.10	435.85	435.85	241.22	204.88
180.0	633.06	482.35	453.07	330.69	202.98	160.87	129.35	106.87	89.30
225.0	554.34	444.89	349.47	272.48	210.90	178.78	150.36	126.94	103.17
270.0	825.10	690.76	570.19	469.43	446.18	344.30	257.15	221.93	184.12
315.0	594.65	482.09	383.92	289.27	237.26	201.09	163.62	139.43	118.76
360.0	842.41	697.82	536.00	422.67	323.46	246.04	180.59	147.87	117.21

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	97.49	82.16	66.31	56.06	47.62	40.39	33.33	28.76	25.06
45.0	164.57	138.74	117.29	99.12	80.43	68.03	54.77	46.42	39.53
90.0	183.09	157.25	134.43	110.15	93.87	79.83	65.28	55.03	46.59
135.0	165.78	140.20	118.07	99.81	81.21	68.55	57.61	48.83	39.70
180.0	74.06	60.20	50.90	42.80	36.77	30.57	26.18	22.82	19.20
225.0	87.32	73.98	60.11	51.07	41.94	35.57	30.40	24.72	21.10
270.0	159.41	137.44	113.93	97.74	80.87	69.41	58.47	49.52	39.61
315.0	97.31	82.85	70.27	57.27	48.92	41.42	35.31	28.59	24.20
360.0	97.49	82.16	66.31	56.06	47.62	40.39	33.33	28.76	25.06
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	21.87	18.34	16.19	14.30	12.14	10.85	9.82	8.44	7.84
45.0	32.38	27.47	23.08	19.20	16.10	13.61	11.88	9.82	8.61
90.0	37.38	30.92	24.89	20.07	16.53	14.12	10.68	9.13	8.18
135.0	33.76	27.47	23.25	19.89	15.85	13.61	11.88	10.08	8.53
180.0	16.79	14.90	12.49	11.20	10.08	8.61	7.92	7.41	6.89
225.0	18.26	15.16	12.66	11.20	9.39	8.35	7.49	6.89	6.46
270.0	32.98	27.82	22.48	17.65	14.98	11.80	9.39	8.35	7.32
315.0	20.67	17.22	14.04	12.23	10.25	8.61	7.84	6.98	6.54
360.0	21.87	18.34	16.19	14.30	12.14	10.85	9.82	8.44	7.84
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.15	6.63	6.37	6.20	6.11	6.03	6.03	6.03	6.03
45.0	7.92	7.23	6.63	6.29	6.11	6.03	6.03	6.03	5.94
90.0	7.32	6.54	6.20	6.03	5.94	5.94	5.94	5.94	5.86
135.0	7.75	7.15	6.72	6.29	6.11	6.03	6.03	6.03	6.03
180.0	6.46	6.20	6.11	6.11	6.11	6.03	6.03	6.03	6.03
225.0	6.20	6.03	6.03	6.03	5.94	5.94	5.94	5.94	5.94
270.0	6.54	6.20	6.03	5.94	5.94	5.94	5.94	5.94	5.94
315.0	6.29	6.03	6.03	6.03	6.03	6.03	6.03	6.03	5.94
360.0	7.15	6.63	6.37	6.20	6.11	6.03	6.03	6.03	6.03
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.11	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
45.0	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94
90.0	5.94	5.94	5.94	5.94	5.94	5.86	5.94	5.86	5.94
135.0	6.03	6.03	6.03	6.03	6.03	6.03	5.94	6.03	6.03
180.0	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
225.0	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94
270.0	5.86	5.86	5.86	5.94	5.94	5.94	5.94	5.86	5.94
315.0	5.94	6.03	6.03	6.03	5.94	5.94	6.03	6.03	6.03
360.0	6.11	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
45.0	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94
90.0	5.94	5.94	5.86	5.86	5.94	5.86	5.86	5.86	5.86
135.0	6.03	5.94	5.94	6.03	6.03	6.03	5.94	5.94	5.94
180.0	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	5.94
225.0	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.86
270.0	5.86	5.94	5.86	5.86	5.86	5.86	5.86	5.94	5.86
315.0	5.94	5.94	5.94	5.94	5.94	6.03	5.94	5.94	5.94
360.0	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03

Intensity data(cd)

C/γ(°)	90.0
0.0	6.03
45.0	5.94
90.0	5.86
135.0	5.94
180.0	6.03
225.0	5.94
270.0	5.86
315.0	5.94
360.0	6.03