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: 3-2997-LM
Luminaire: 92.70.412.00 LED HOLDER
Report No: 20260130-B015
Ballast type: DC

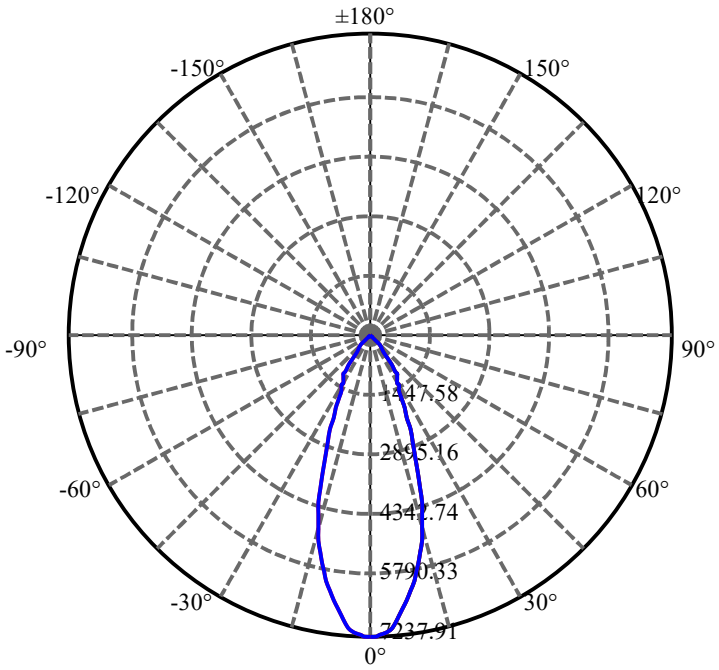
Test No: 20260130-C015	Voltage(V): 36.880
LampCAT: CITIZEN CLU038 LES14.5	Current(A): 0.718
Lamp flux(lm): 3723.6	Power (W): 26.470
Number of Lamps: 1	PF: 0.000
Length(mm): 92	Width(mm): 92
Phm Type: C	Height(mm): 49

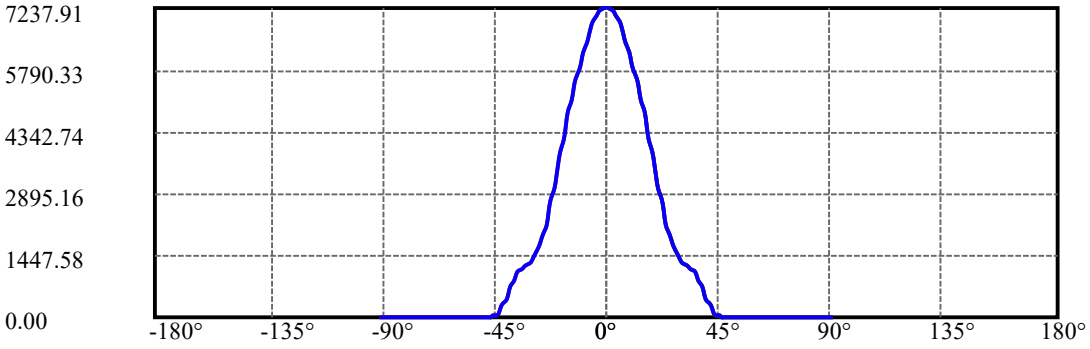
Photometric Results

Lumens(lm): 3575.60, Efficiency(%): 96.02% , Luminous Efficacy(lm/W): 135.08
Central intensity(cd): 7237.906, Maximum intensity(cd): 7237.906
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=37.8
[C90/270]Total=37.8
Field angle(10%Imax): [C0/180]Total=75.6
[C90/270]Total=75.6
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.02%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.280%

Equipment: GMS1980	Date: 2026/1/30	Operator: YZQ
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 9.28

Light Distribution Curve [Unit:cd]





C0(Max):

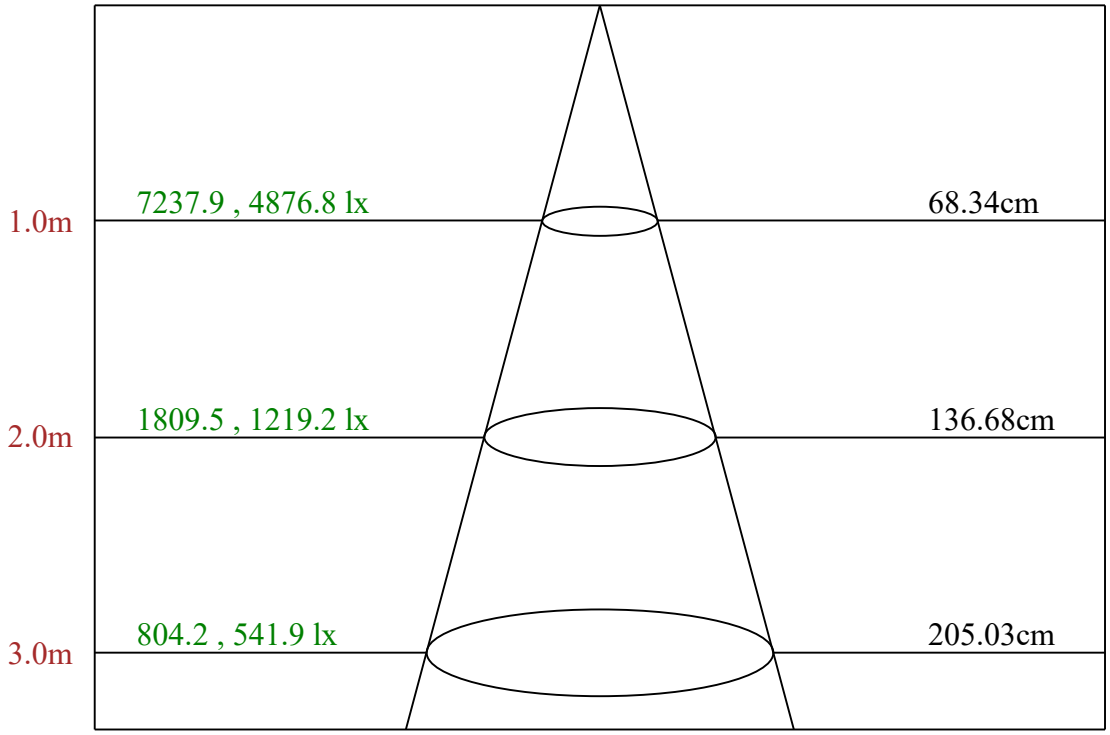
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:37.8 Right:37.8
:C90/270Left:37.8 Right:37.8

Beam Angle(50%Imax):C0/180Left:18.9 Right:18.9
:C90/270Left:18.9 Right:18.9

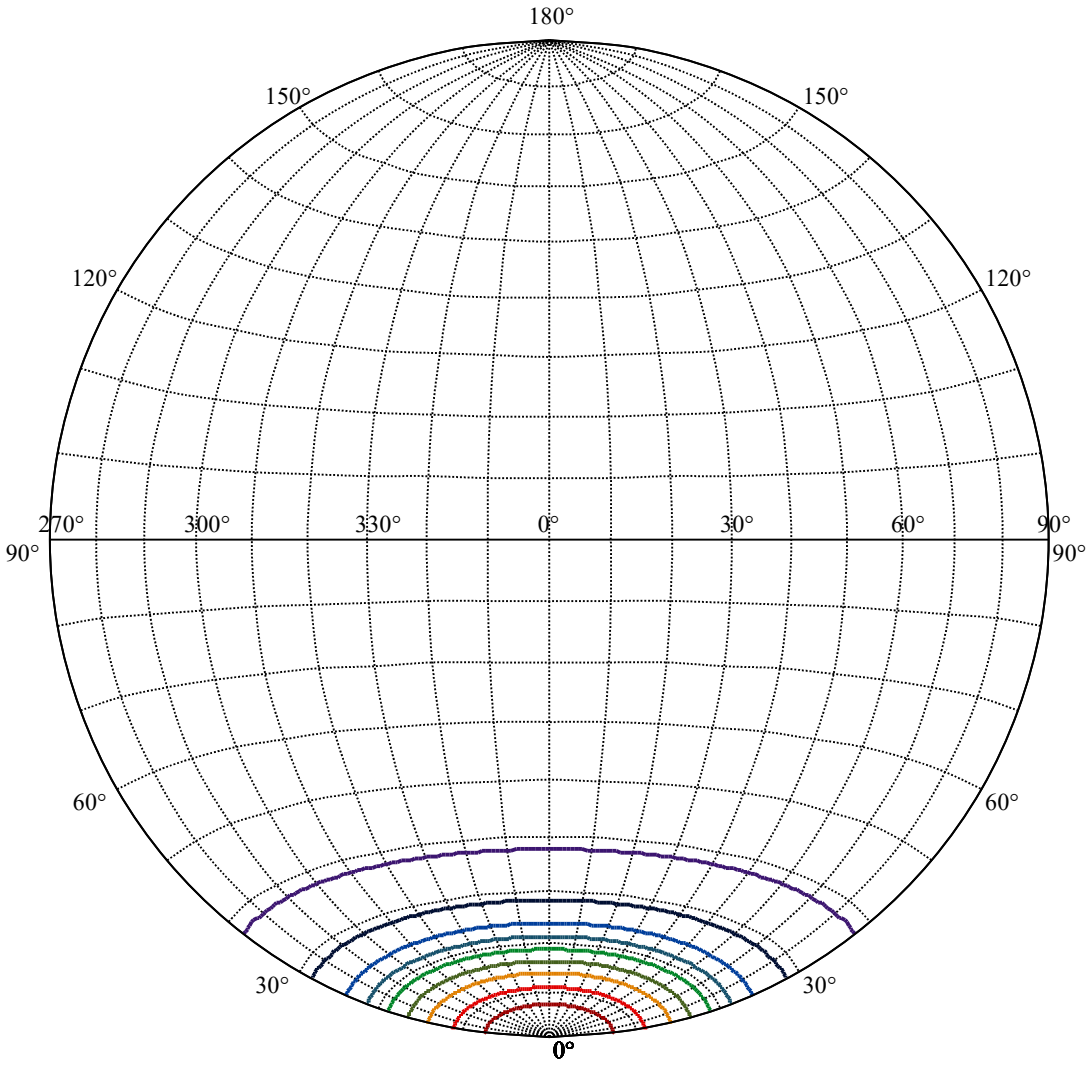
Lux distance Curve



Max , Ave

Beam angle of C0 plane 37.73

ISO candela diagram on circular web



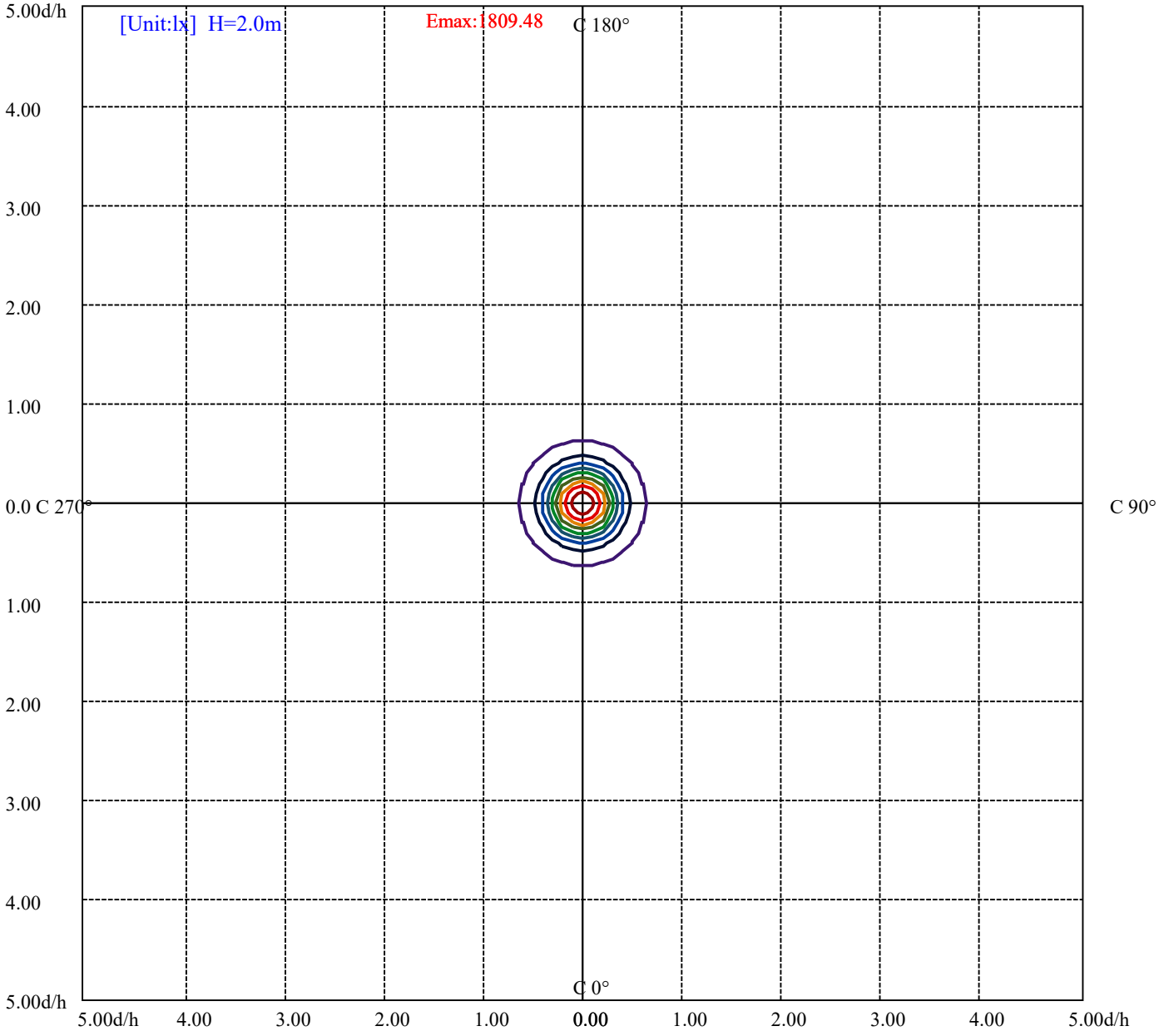
House [Unit:cd] Road

Imax:7237.91

(10%Imax) 723.791
(20%Imax) 1447.58
(30%Imax) 2171.37
(40%Imax) 2895.16
(50%Imax) 3618.95
(60%Imax) 4342.74
(70%Imax) 5066.53
(80%Imax) 5790.33
(90%Imax) 6514.12

NT Nata 3-2997-LM

ISO illuminance diagram



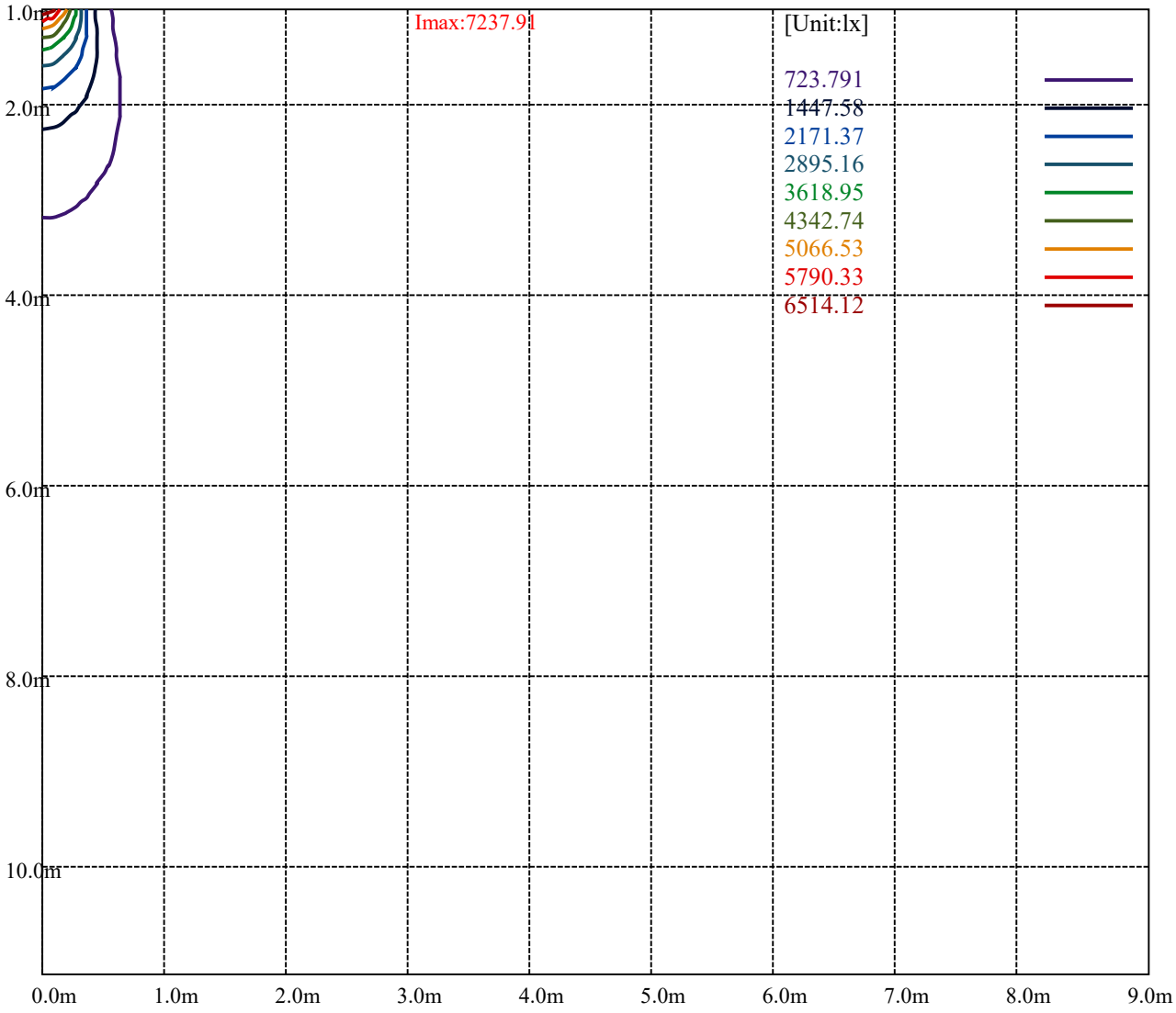
(10%Emax) 180.9478
(20%Emax) 361.895
(30%Emax) 542.8425
(40%Emax) 723.79
(50%Emax) 904.7375
(60%Emax) 1085.685
(70%Emax) 1266.632
(80%Emax) 1447.58
(90%Emax) 1628.527

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/1/30
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/1/30
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

NT Nata 3-2997-LM

Luminance Limitting Curve(no luminous side)

Luminance Table

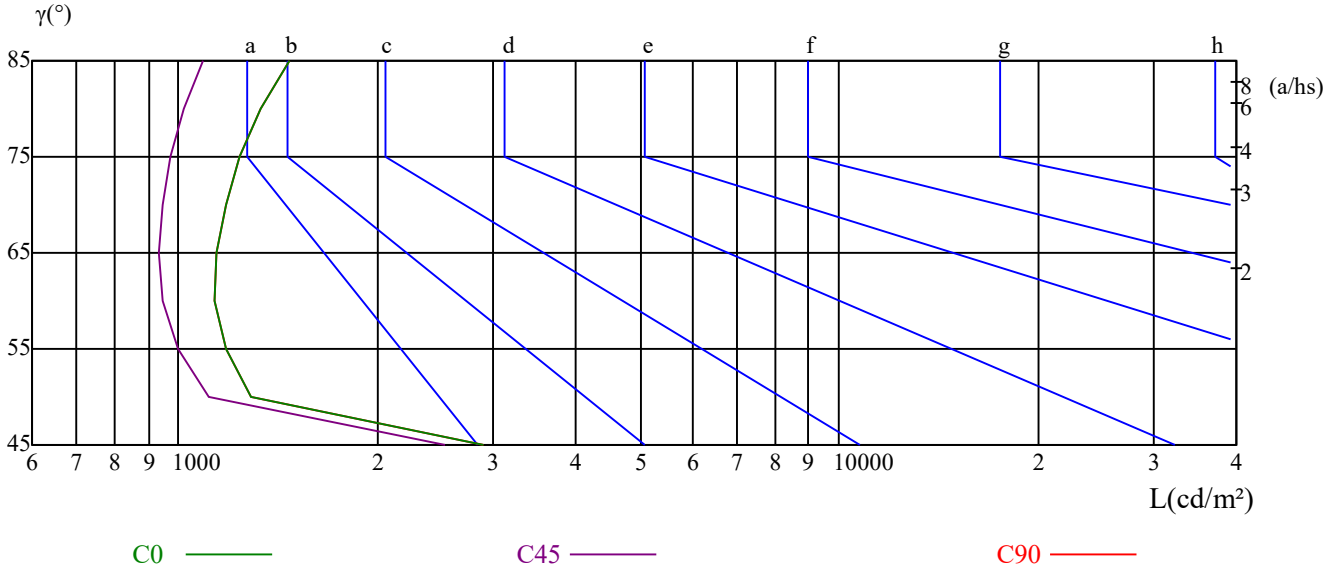
γ	45	50	55	60	65	70	75	80	85
C0	2892	1291	1176	1135	1144	1179	1238	1333	1476
C45	2528	1113	998	947	937	946	971	1017	1089
C90	2892	1291	1176	1135	1144	1179	1238	1333	1476

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2450	2450	2450	3700	3700	3700	10463	10463	10463

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 Limitting Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/1/30
Humidity(%): 60.0%

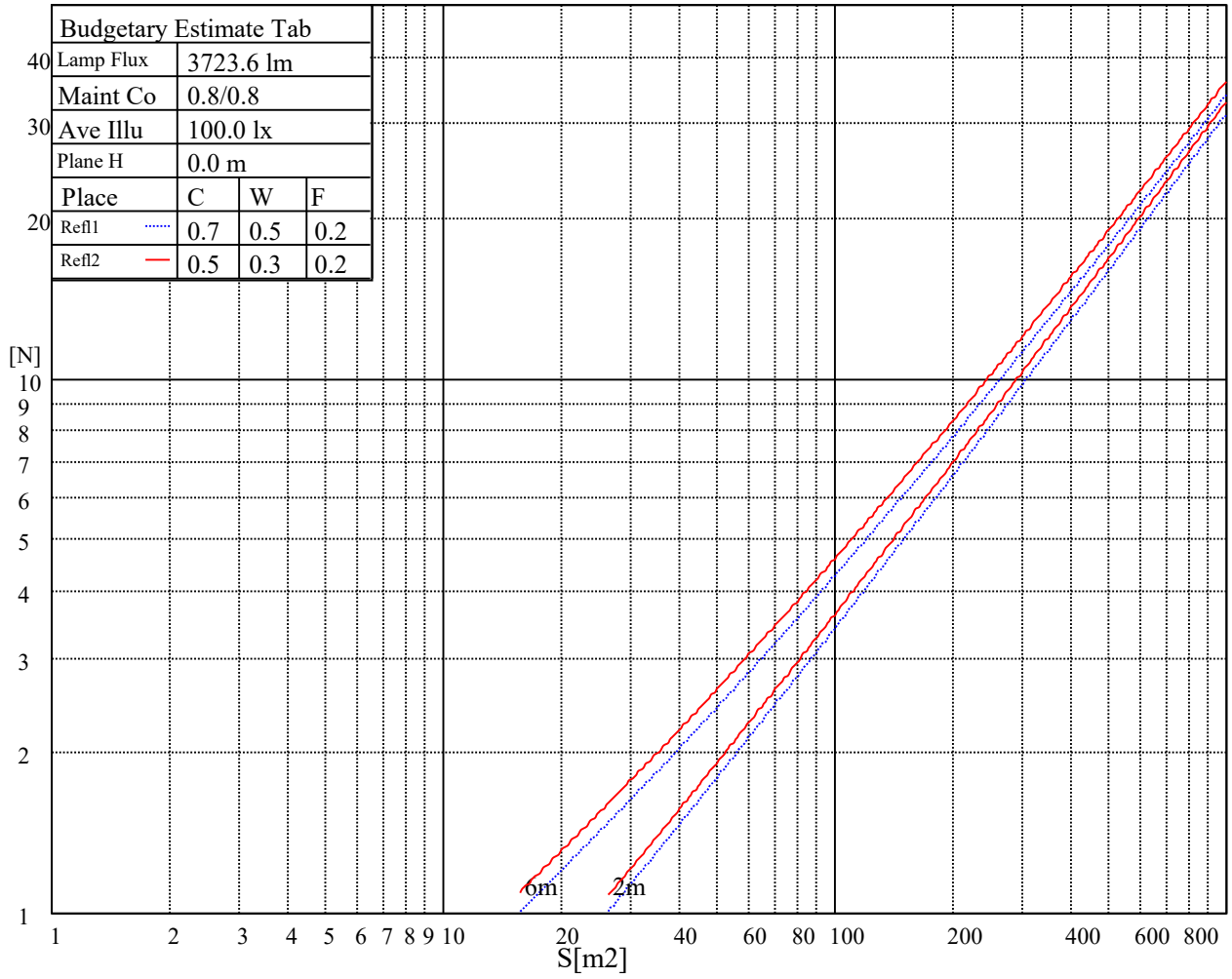
Operator: YZQ
Distance(m): 9.28

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	18.01	18.93	18.37	19.24	19.56	17.84	18.76	18.21	19.07	19.39
	3H	17.81	18.62	18.20	18.96	19.31	17.64	18.46	18.03	18.79	19.14
	4H	17.71	18.47	18.11	18.82	19.19	17.55	18.30	17.95	18.65	19.02
	6H	17.64	18.33	18.06	18.71	19.11	17.48	18.16	17.89	18.54	18.94
	8H	17.58	18.24	18.00	18.62	19.03	17.42	18.07	17.84	18.46	18.87
	12H	17.53	18.15	17.96	18.55	18.96	17.37	17.98	17.79	18.38	18.80
4H	2H	17.69	18.44	18.09	18.79	19.16	17.52	18.27	17.92	18.63	19.00
	3H	17.45	18.08	17.88	18.48	18.90	17.28	17.91	17.71	18.31	18.73
	4H	17.39	17.93	17.83	18.36	18.81	17.22	17.77	17.66	18.19	18.64
	6H	17.28	17.76	17.76	18.22	18.67	17.12	17.60	17.59	18.05	18.51
	8H	17.25	17.70	17.74	18.16	18.63	17.09	17.53	17.58	17.99	18.47
	12H	17.24	17.65	17.73	18.10	18.62	17.08	17.48	17.57	17.94	18.46
8H	4H	17.19	17.64	17.68	18.10	18.57	17.03	17.47	17.51	17.93	18.41
	6H	17.09	17.45	17.60	17.93	18.45	16.93	17.29	17.43	17.77	18.28
	8H	17.12	17.42	17.66	17.95	18.44	16.96	17.26	17.49	17.78	18.28
	12H	17.13	17.36	17.68	17.88	18.40	16.97	17.20	17.52	17.72	18.24
12H	4H	17.14	17.55	17.63	18.00	18.53	16.98	17.38	17.47	17.84	18.36
	6H	17.08	17.38	17.62	17.91	18.41	16.92	17.22	17.45	17.74	18.24
	8H	17.08	17.31	17.63	17.83	18.35	16.92	17.15	17.47	17.67	18.19

Variation with the observer position at spacings:		
S = 1.0H	4.9/-13.7	4.9/-13.7
S = 1.5H	7.7/-11.7	7.7/-11.7
S = 2.0H	9.6/-10.3	9.6/-10.3
Standard tables:	BK0	BK0
Uncorrected UGR	-1.5	-1.5

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

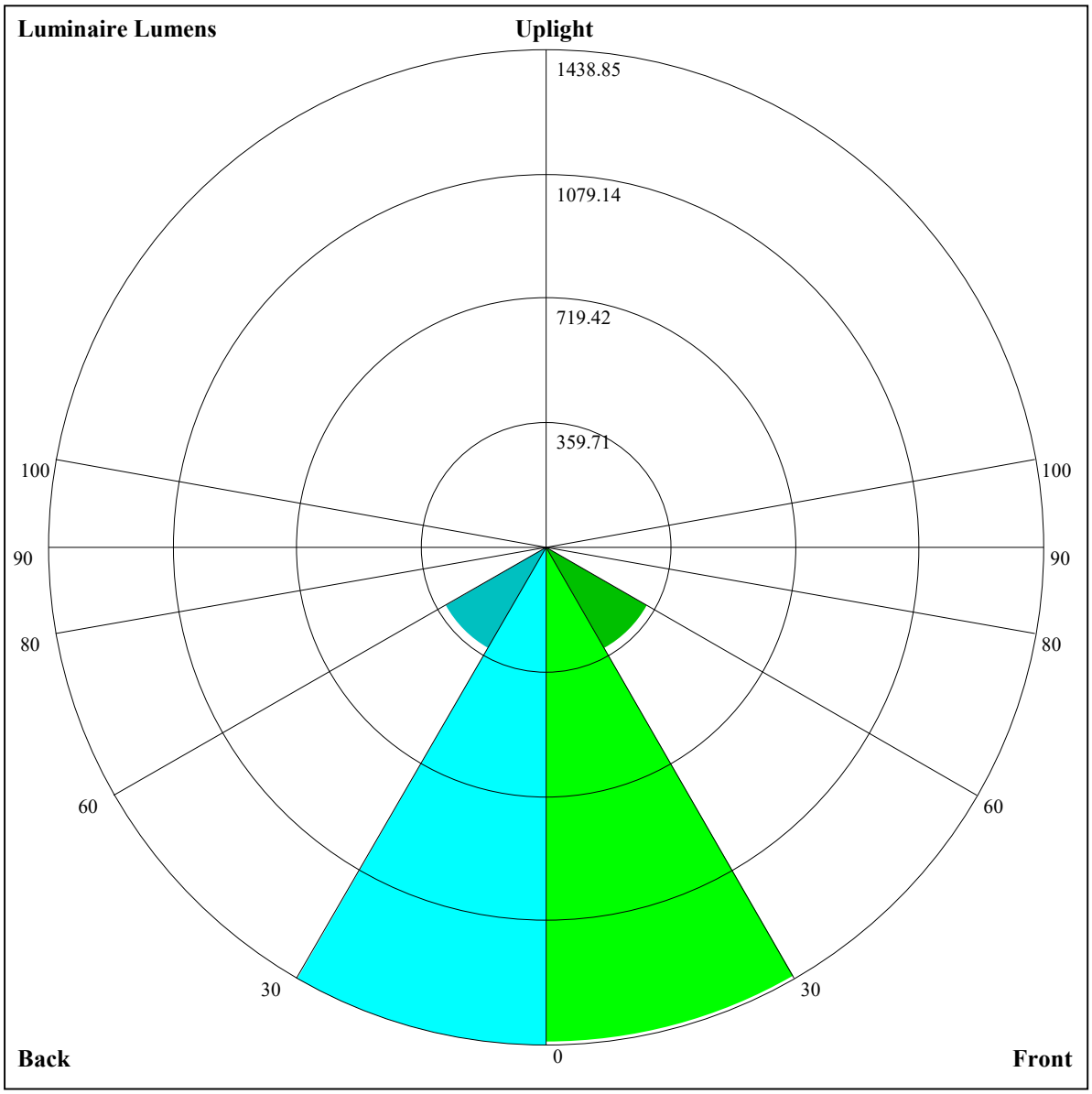
Budgetary Estimate Table



Equipment: GMS1980 Date: 2026/1/30 Operator: YZQ
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 9.28

Utilization factor table for indoor luminaire

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	1.14	1.14	1.14	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.07	1.05	1.03	1.05	1.03	1.01	1.01	1.00	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.91
2	1.00	0.97	0.94	0.99	0.96	0.93	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.89	0.87	0.86
3	0.95	0.90	0.87	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.82	0.81
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.81	0.79	0.83	0.80	0.78	0.77
5	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.72
6	0.80	0.75	0.72	0.80	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.69
7	0.76	0.71	0.68	0.76	0.71	0.68	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.65
8	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.70	0.66	0.63	0.62
9	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.67	0.63	0.60	0.59
10	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57



Luminaire Lumens:
FL=1432.28,FM=340.14,FH=8.61,FVH=4.21
BL=1438.85,BM=338,BH=8.65,BVH=4.22
UL=0,UH=0

BUG Rating:B3-U0-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	7215.95	7192.69	7172.03	7106.58	7007.54	6845.64	6686.32	6507.19	6314.29
45.0	7247.81	7232.31	7200.45	7165.14	7068.68	6966.20	6811.19	6592.45	6409.88
90.0	7241.78	7208.20	7154.80	7067.82	6934.34	6768.13	6600.20	6375.43	6191.14
135.0	7246.09	7242.64	7234.03	7195.28	7122.94	7041.99	6873.20	6700.10	6539.92
180.0	7215.95	7215.95	7194.42	7143.61	7068.68	6963.62	6785.35	6620.87	6440.02
225.0	7247.81	7258.14	7230.59	7182.36	7097.10	6968.79	6785.35	6621.73	6443.46
270.0	7241.78	7259.01	7285.70	7271.92	7224.56	7151.36	7044.57	6878.36	6713.02
315.0	7246.09	7245.23	7184.94	7107.44	7005.82	6844.78	6635.51	6461.55	6236.78
360.0	7215.95	7192.69	7172.03	7106.58	7007.54	6845.64	6686.32	6507.19	6314.29

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6055.07	5849.25	5618.45	5435.88	5235.22	4942.42	4691.82	4417.96	4150.13
45.0	6217.83	6019.76	5781.21	5600.37	5428.13	5236.95	4957.06	4682.34	4393.85
90.0	6005.98	5761.41	5593.48	5416.07	5214.56	4903.67	4625.51	4336.15	4058.85
135.0	6309.98	6100.71	5910.39	5686.48	5497.88	5298.95	5062.13	4744.35	4406.76
180.0	6210.08	6028.37	5843.22	5649.45	5370.43	5116.38	4833.05	4461.02	4167.36
225.0	6262.62	6033.54	5842.36	5620.17	5362.68	4983.76	4659.09	4260.36	3956.37
270.0	6545.95	6365.10	6154.97	5973.26	5699.40	5428.13	5155.13	4747.79	4404.18
315.0	5998.23	5840.64	5649.45	5393.68	5134.47	4786.55	4498.05	4188.89	3909.00
360.0	6055.07	5849.25	5618.45	5435.88	5235.22	4942.42	4691.82	4417.96	4150.13

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3828.91	3575.72	3324.26	3078.82	2786.02	2566.41	2346.81	1945.50	1716.94
45.0	4049.37	3796.19	3480.99	3227.80	2985.81	2702.48	2488.91	2281.36	2078.12
90.0	3737.62	3477.55	3218.33	2922.08	2679.23	2399.34	2179.74	1690.93	1690.93
135.0	4134.63	3859.05	3518.02	3257.95	2962.56	2699.90	2469.10	2190.08	1987.70
180.0	3878.00	3598.11	3253.64	2990.98	2674.06	2454.46	2218.50	1954.11	1770.68
225.0	3645.48	3282.92	3011.65	2750.71	2511.30	2229.69	1686.20	1686.20	1646.41
270.0	4075.21	3766.04	3365.59	3085.71	2805.82	2531.97	2258.97	2031.62	1827.52
315.0	3627.39	3253.64	2967.73	2727.46	2472.55	2228.83	1708.07	1708.07	1624.28
360.0	3828.91	3575.72	3324.26	3078.82	2786.02	2566.41	2346.81	1945.50	1716.94

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1716.94	1533.34	1423.45	1341.72	1265.25	1215.22	1179.91	1152.26	1096.03
45.0	1886.08	1666.48	1524.38	1418.46	1340.09	1262.58	1213.49	1173.02	1144.60
90.0	1575.28	1449.80	1361.10	1294.88	1228.82	1191.19	1163.89	1135.82	1052.02
135.0	1788.77	1614.81	1456.35	1368.51	1308.22	1241.05	1200.58	1173.88	1151.49
180.0	1606.19	1472.71	1355.59	1287.56	1231.58	1188.52	1150.63	1124.79	1063.65
225.0	1504.57	1373.07	1297.03	1240.45	1185.85	1155.62	1123.85	1070.80	975.12
270.0	1607.92	1466.68	1368.51	1276.36	1228.13	1189.38	1154.93	1132.54	1098.10
315.0	1491.83	1353.01	1290.14	1232.18	1180.94	1150.54	1125.05	1078.81	980.72
360.0	1716.94	1533.34	1423.45	1341.72	1265.25	1215.22	1179.91	1152.26	1096.03

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	1003.45	886.59	717.37	567.09	423.87	295.56	151.74	71.31	36.60
45.0	1086.04	948.25	831.13	689.03	517.66	449.62	449.62	139.17	51.41
90.0	944.55	819.67	646.49	502.85	335.78	209.61	108.85	42.89	30.40
135.0	1089.48	997.34	869.02	686.45	538.33	460.82	460.82	125.13	54.17
180.0	931.89	807.02	668.36	494.41	461.68	461.68	100.93	50.72	34.28
225.0	822.86	691.96	555.38	420.00	262.58	156.39	74.58	39.44	29.19
270.0	1018.87	875.91	742.43	607.22	468.57	435.85	276.87	90.77	37.55
315.0	870.40	716.25	580.70	409.32	271.53	150.19	64.59	33.76	27.39
360.0	1003.45	886.59	717.37	567.09	423.87	295.56	151.74	71.31	36.60

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	26.96	20.24	14.30	13.00	12.40	11.97	11.45	11.11	10.85
45.0	32.47	25.49	18.77	13.26	12.31	11.80	11.28	10.94	10.59
90.0	23.85	17.48	12.75	11.88	11.45	11.11	10.76	10.42	10.25
135.0	31.43	24.63	18.86	14.21	12.40	11.80	11.45	11.11	10.76
180.0	27.13	18.86	14.38	13.00	12.49	11.97	11.63	11.37	11.02
225.0	21.53	15.59	12.40	11.97	11.45	11.11	10.76	10.51	10.25
270.0	29.88	22.39	14.81	12.23	11.54	11.20	10.85	10.59	10.25
315.0	18.95	14.04	12.23	11.63	11.28	10.94	10.59	10.33	10.16
360.0	26.96	20.24	14.30	13.00	12.40	11.97	11.45	11.11	10.85

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.51	10.25	10.08	9.90	9.73	9.47	9.39	9.21	9.13
45.0	10.33	10.16	9.90	9.73	9.56	9.39	9.30	9.13	9.04
90.0	9.90	9.73	9.56	9.39	9.21	9.13	8.96	8.87	8.78
135.0	10.51	10.25	9.99	9.82	9.65	9.47	9.39	9.21	9.13
180.0	10.76	10.51	10.25	10.08	9.90	9.73	9.56	9.47	9.30
225.0	10.08	9.90	9.73	9.56	9.39	9.30	9.13	9.04	9.04
270.0	10.08	9.82	9.73	9.56	9.39	9.21	9.13	8.96	8.96
315.0	9.99	9.82	9.65	9.47	9.30	9.21	9.04	8.96	8.87
360.0	10.51	10.25	10.08	9.90	9.73	9.47	9.39	9.21	9.13

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.04	8.87	8.78	8.70	8.70	8.61	8.53	8.53	8.44
45.0	8.96	8.87	8.78	8.70	8.61	8.61	8.53	8.44	8.35
90.0	8.70	8.61	8.61	8.53	8.44	8.44	8.35	8.27	8.18
135.0	9.04	8.96	8.87	8.70	8.70	8.61	8.53	8.44	8.44
180.0	9.21	9.13	8.96	8.87	8.78	8.70	8.61	8.61	8.53
225.0	8.87	8.78	8.70	8.61	8.53	8.53	8.44	8.35	8.35
270.0	8.78	8.70	8.70	8.61	8.53	8.44	8.35	8.27	8.27
315.0	8.78	8.70	8.70	8.61	8.53	8.44	8.44	8.35	8.27
360.0	9.04	8.87	8.78	8.70	8.70	8.61	8.53	8.53	8.44

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.35	8.27	8.27	8.18	8.10	8.10	8.01	8.01	7.84
45.0	8.27	8.27	8.18	8.10	8.10	8.10	8.01	7.92	7.84
90.0	8.18	8.10	8.01	8.01	8.01	7.92	7.84	7.84	7.84
135.0	8.35	8.27	8.27	8.18	8.10	8.10	8.10	8.01	8.01
180.0	8.44	8.35	8.35	8.27	8.18	8.18	8.10	8.01	8.01
225.0	8.27	8.18	8.18	8.10	8.01	8.01	7.92	7.92	7.84
270.0	8.27	8.18	8.10	8.01	8.01	7.92	7.92	7.92	7.84
315.0	8.27	8.18	8.10	8.01	8.01	7.92	7.84	7.92	7.84
360.0	8.35	8.27	8.27	8.18	8.10	8.10	8.01	8.01	7.84

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.84	7.84	7.84	7.75	7.75	7.75	7.66	7.66	7.66
45.0	7.84	7.84	7.84	7.84	7.75	7.66	7.66	7.58	7.58
90.0	7.75	7.75	7.75	7.75	7.66	7.66	7.66	7.58	7.58
135.0	7.92	7.84	7.84	7.84	7.75	7.75	7.75	7.66	7.66
180.0	7.92	7.92	7.84	7.84	7.75	7.75	7.75	7.66	7.58
225.0	7.84	7.75	7.75	7.75	7.75	7.66	7.66	7.58	7.58
270.0	7.75	7.84	7.75	7.66	7.66	7.66	7.66	7.58	7.58
315.0	7.75	7.75	7.66	7.66	7.66	7.66	7.66	7.66	7.58
360.0	7.84	7.84	7.84	7.75	7.75	7.75	7.66	7.66	7.66

Intensity data(cd)

C/γ(°)	90.0
0.0	7.66
45.0	7.58
90.0	7.58
135.0	7.58
180.0	7.58
225.0	7.58
270.0	7.58
315.0	7.58
360.0	7.66