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

NT

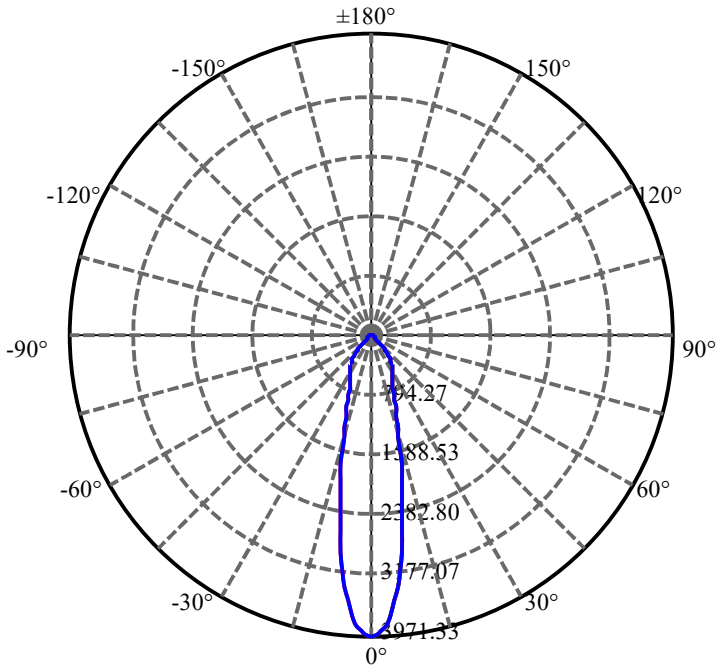
Client: NT
LumCAT: 1-1704-LM2
Luminaire: 92.70.481.00
Report No: 20251217-B020
Ballast type: AC

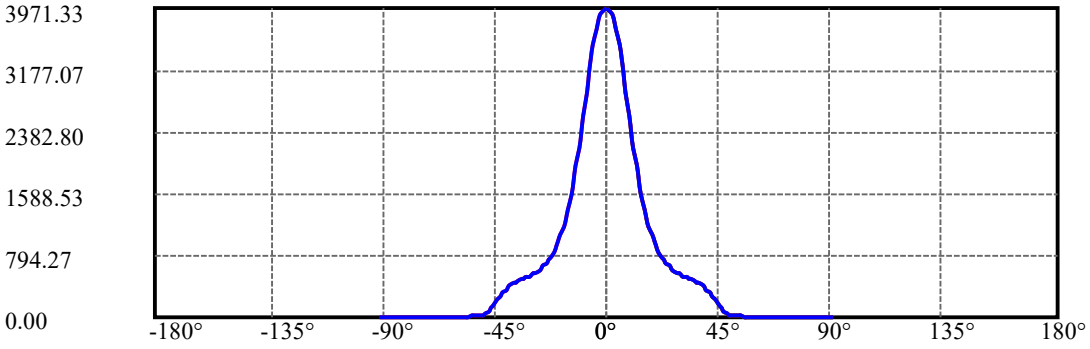
Test No: 20251217-C020	Voltage(V): 35.010
LampCAT: CITIZEN CLU028 LES9.8	Current(A): 0.361
Lamp flux(lm): 1498.0	Power (W): 12.638
Number of Lamps: 1	PF: 0.000
Length(mm): 50	Width(mm): 50
Phm Type: C	Height(mm): 22

Photometric Results

Lumens(lm): 1438.59, Efficiency(%): 96.03% , Luminous Efficacy(lm/W): 113.83
Central intensity(cd): 3971.334, Maximum intensity(cd): 3971.334
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.6
[C90/270]Total=23.6
Field angle(10%Imax): [C0/180]Total=77.4
[C90/270]Total=77.4
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.03%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.542%

Light Distribution Curve [Unit:cd]





C0(Max):

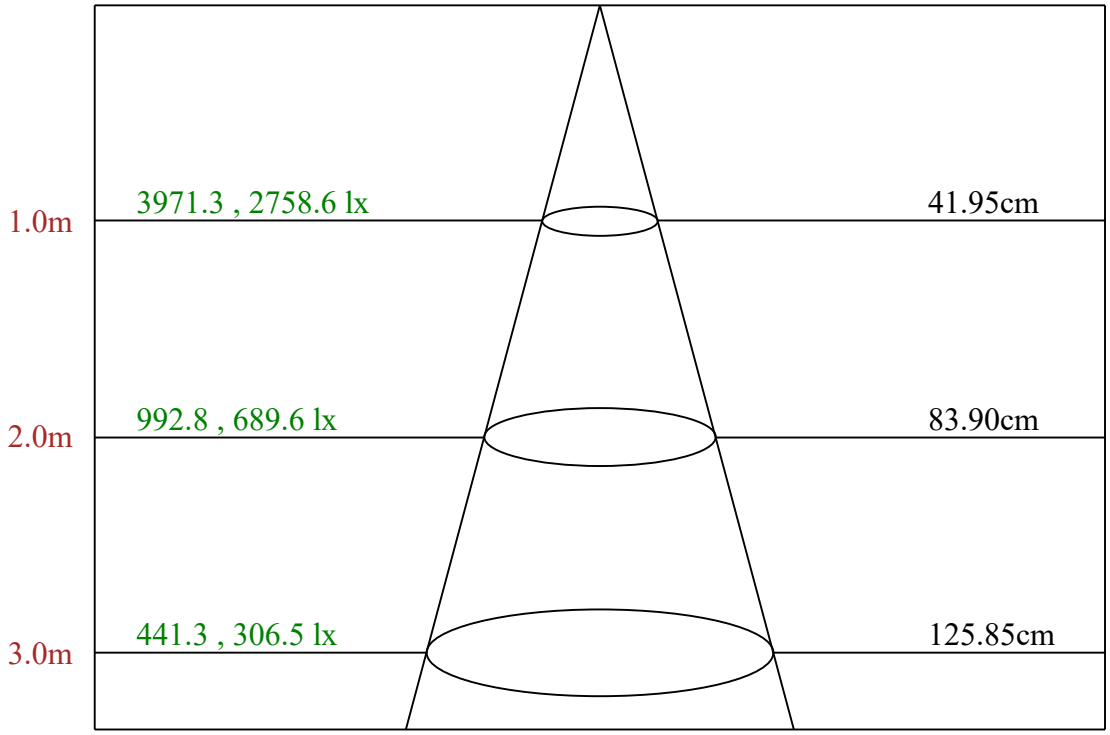
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:38.7 Right:38.7
:C90/270Left:38.7 Right:38.7

Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8
:C90/270Left:11.8 Right:11.8

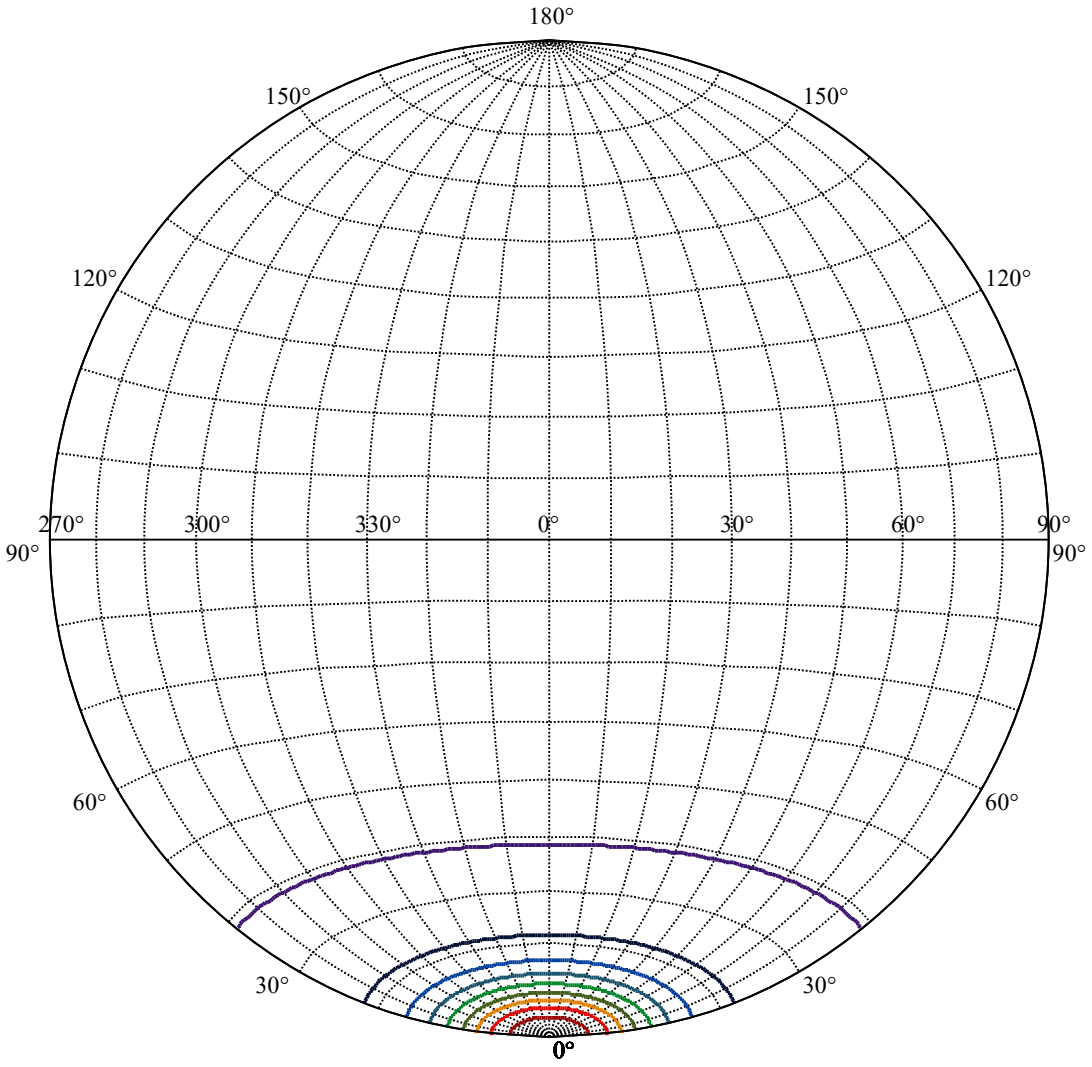
Lux distance Curve



Max , Ave

Beam angle of C0 plane 23.69

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:3971.33

(10%Imax) 397.133
(20%Imax) 794.267
(30%Imax) 1191.4
(40%Imax) 1588.53
(50%Imax) 1985.67
(60%Imax) 2382.8
(70%Imax) 2779.93
(80%Imax) 3177.07
(90%Imax) 3574.2

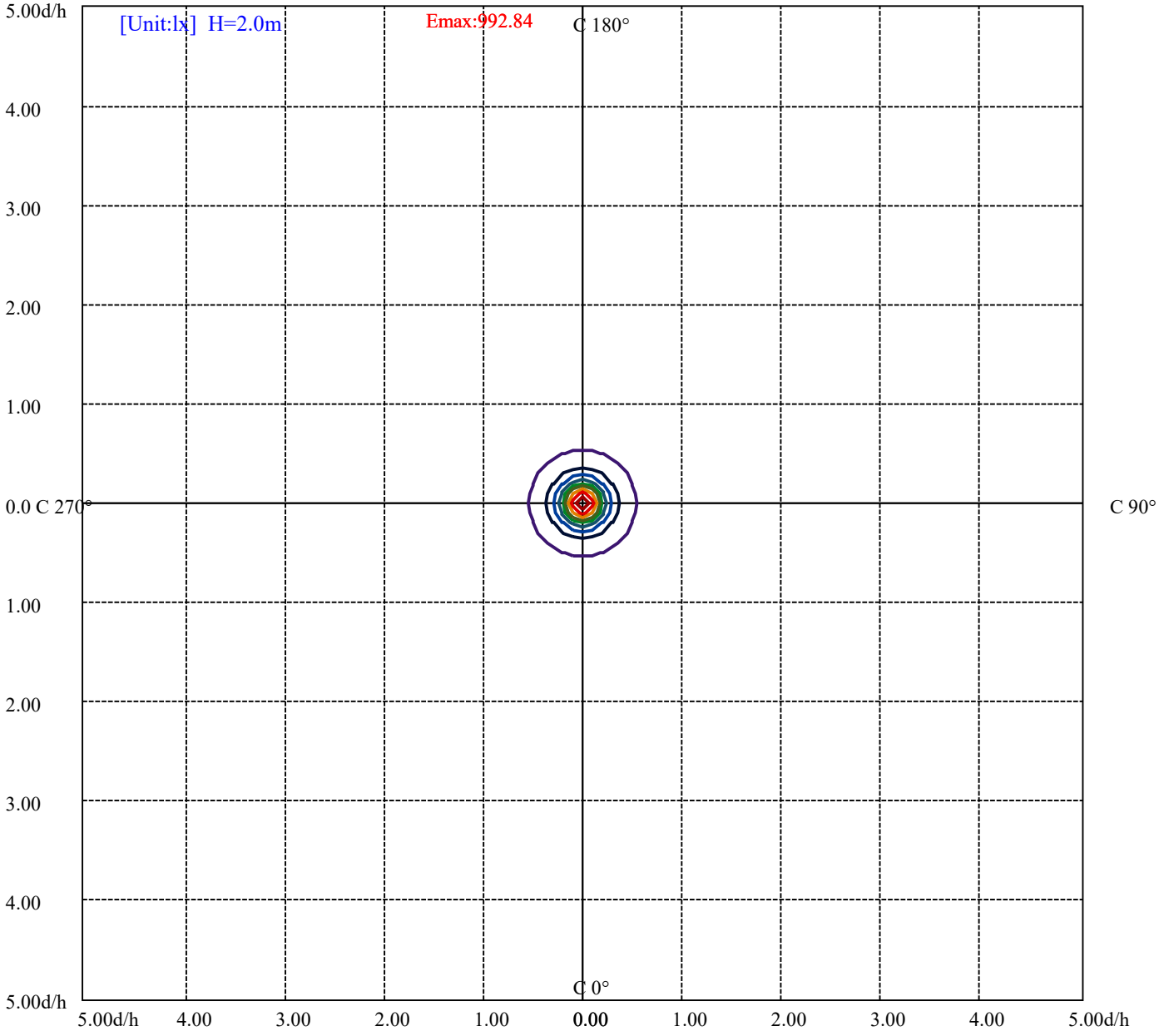
Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/12/17
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 7.50

NT NT 1-1704-LM2

ISO illuminance diagram

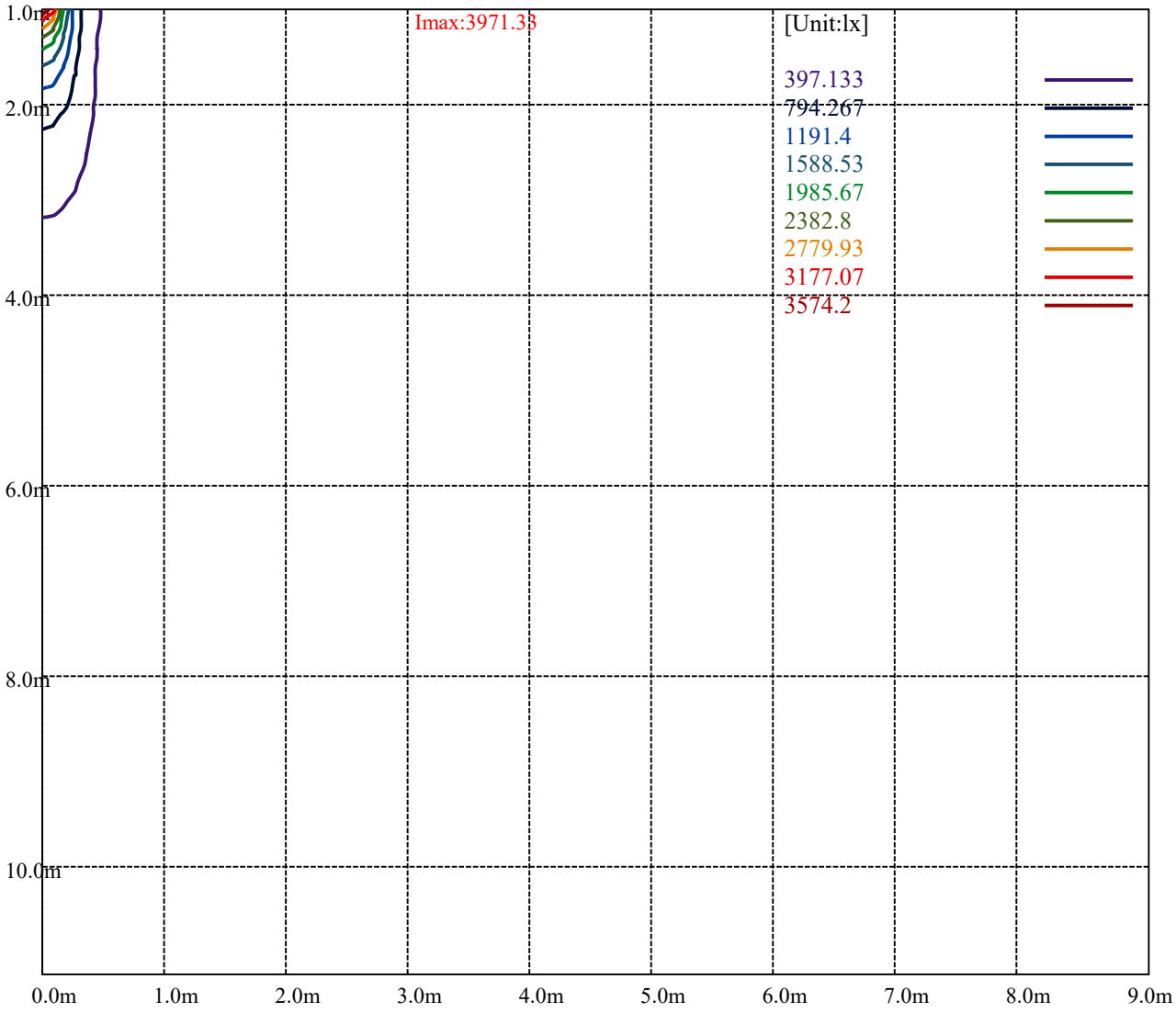


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/12/17
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/12/17
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 7.50

NT NT 1-1704-LM2

Luminance Limitting Curve(no luminous side)

Luminance Table

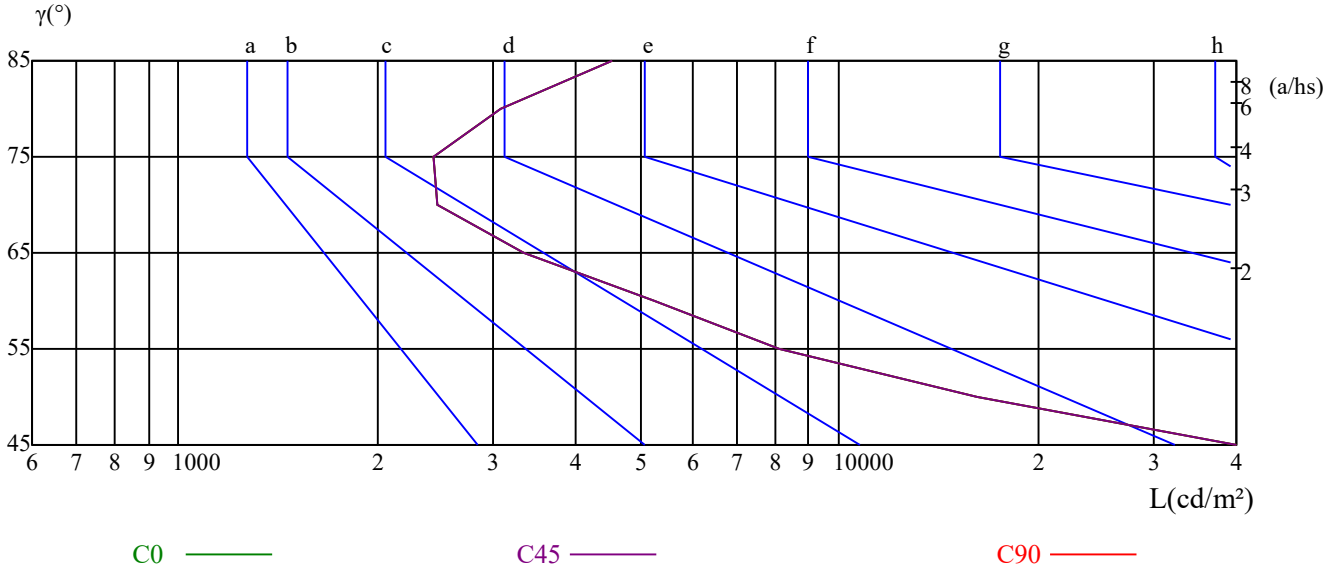
γ	45	50	55	60	65	70	75	80	85
C0	88272	16233	8100	5243	3327	2467	2434	3077	4550
C45	88272	16233	8100	5243	3327	2467	2434	3077	4550
C90	88272	16233	8100	5243	3327	2467	2434	3077	4550

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3327	3327	3327	2434	2434	2434	4550	4550	4550

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: GMS 1800
Temperature(°C): 25.0

Date: 2025/12/17
Humidity(%): 60.0%

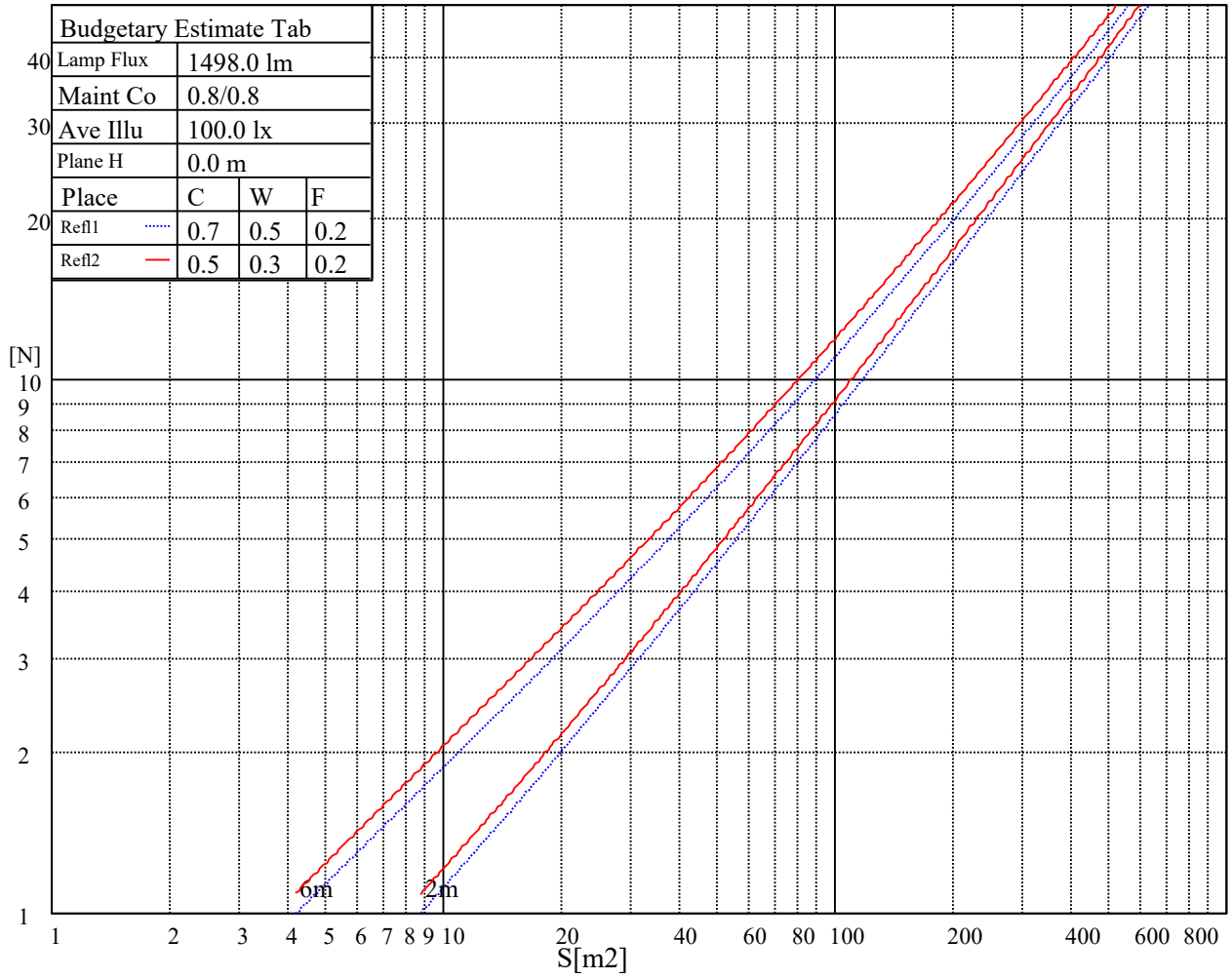
Operator: YZQ
Distance(m): 7.50

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	23.18	24.20	23.54	24.51	24.82	23.24	24.25	23.60	24.56	24.88
	3H	22.99	23.89	23.38	24.22	24.57	23.05	23.94	23.43	24.28	24.62
	4H	22.89	23.72	23.29	24.07	24.44	22.95	23.77	23.35	24.13	24.49
	6H	22.81	23.57	23.23	23.94	24.34	22.86	23.62	23.28	23.99	24.39
	8H	22.74	23.46	23.16	23.84	24.25	22.79	23.51	23.21	23.89	24.30
	12H	22.67	23.35	23.10	23.75	24.17	22.72	23.40	23.14	23.79	24.21
4H	2H	22.89	23.72	23.29	24.07	24.44	22.95	23.78	23.35	24.13	24.50
	3H	22.67	23.35	23.09	23.75	24.16	22.72	23.41	23.15	23.80	24.22
	4H	22.60	23.19	23.04	23.61	24.06	22.65	23.24	23.09	23.66	24.11
	6H	22.47	22.99	22.94	23.44	23.89	22.51	23.03	22.98	23.48	23.94
	8H	22.41	22.90	22.90	23.35	23.83	22.45	22.94	22.94	23.40	23.87
	12H	22.37	22.81	22.86	23.27	23.79	22.41	22.85	22.90	23.30	23.82
8H	4H	22.40	22.88	22.89	23.34	23.81	22.45	22.93	22.94	23.39	23.87
	6H	22.26	22.66	22.77	23.14	23.65	22.30	22.70	22.81	23.18	23.69
	8H	22.26	22.59	22.79	23.11	23.61	22.29	22.63	22.83	23.15	23.65
	12H	22.21	22.47	22.75	22.99	23.51	22.24	22.50	22.79	23.02	23.54
12H	4H	22.35	22.79	22.84	23.25	23.77	22.40	22.84	22.89	23.30	23.82
	6H	22.25	22.58	22.78	23.10	23.60	22.29	22.62	22.82	23.15	23.64
	8H	22.20	22.47	22.75	22.98	23.51	22.24	22.50	22.78	23.02	23.54

Variation with the observer position at spacings:		
S = 1.0H	3.3/-13.7	3.3/-13.7
S = 1.5H	5.3/-15.2	5.3/-15.2
S = 2.0H	7.3/-15.3	7.3/-15.3
Standard tables:	BK0	BK0
Uncorrected UGR	4.5	4.5

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

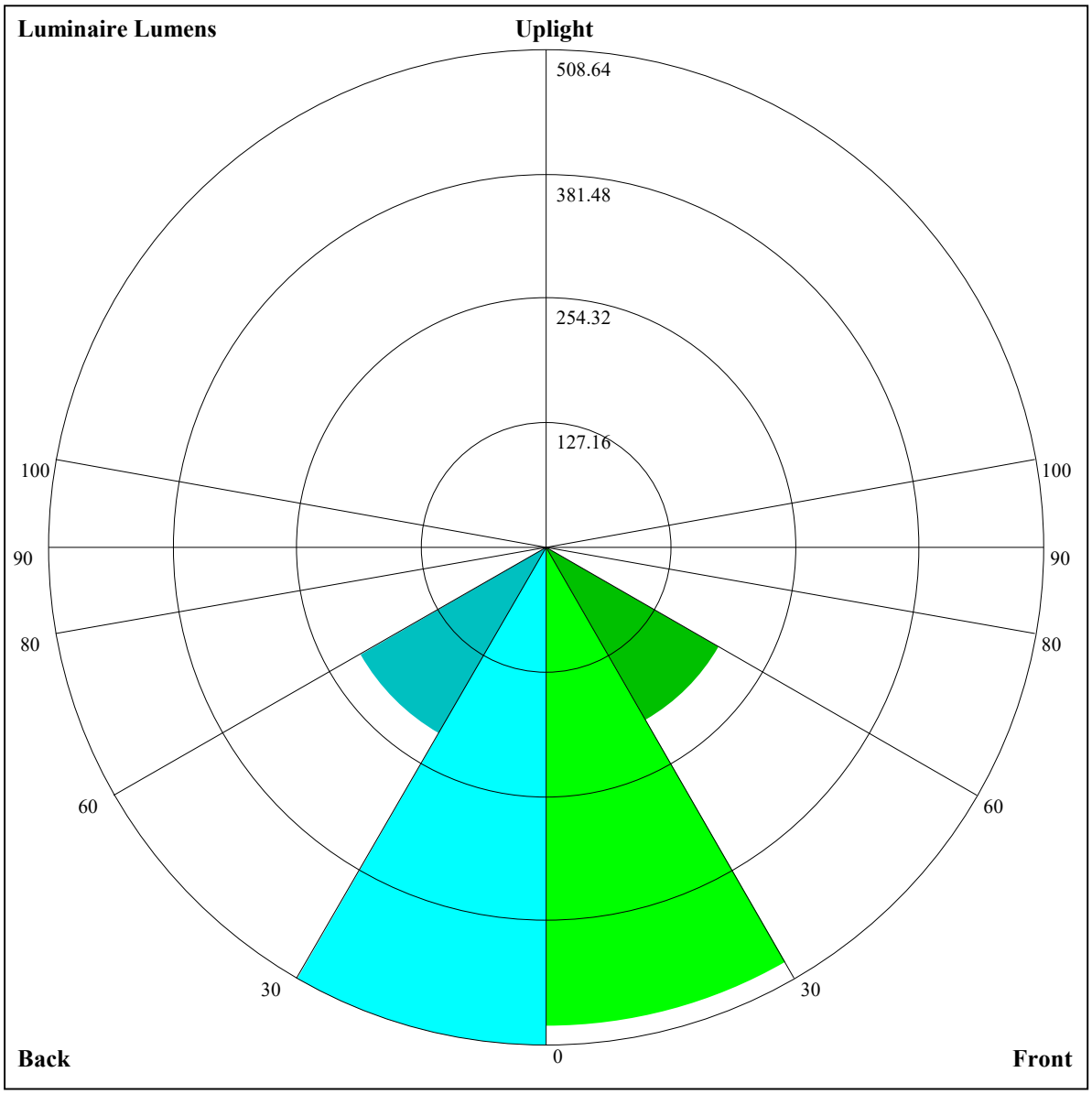
Budgetary Estimate Table



Equipment: GMS 1800	Date: 2025/12/17	Operator: YZQ
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.50

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	1.04	1.02	1.05	1.03	1.01	1.01	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90
2	1.00	0.96	0.93	0.98	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.85
3	0.94	0.89	0.85	0.92	0.88	0.85	0.90	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.79
4	0.88	0.83	0.79	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.74
5	0.83	0.78	0.74	0.82	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.70
6	0.78	0.73	0.69	0.78	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.66
7	0.74	0.69	0.65	0.74	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.62
8	0.70	0.65	0.61	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.59
9	0.67	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.56
10	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	0.58	0.55	0.54



Luminaire Lumens:
FL=489.49,FM=204.59,FH=2.44,FVH=0.49
BL=508.64,BM=220.08,BH=2.85,BVH=0.53
UL=0,UH=0

BUG Rating:B2-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	3955.44	3918.32	3829.44	3702.32	3542.01	3311.94	3183.13	2954.76	2716.82
45.0	3979.63	3978.51	3941.38	3850.26	3808.63	3652.26	3486.88	3293.38	3030.13
90.0	3979.63	3932.94	3825.51	3751.82	3598.26	3280.44	3188.76	2893.44	2737.07
135.0	3970.63	3977.38	3961.63	3885.69	3778.26	3634.26	3453.69	3329.38	3047.01
180.0	3955.44	3993.13	3981.88	3932.94	3826.07	3697.26	3533.01	3339.51	3212.38
225.0	3979.63	3932.94	3890.19	3790.07	3655.07	3489.13	3253.44	3121.82	2796.69
270.0	3979.63	3986.38	3952.63	3914.94	3796.26	3652.82	3473.94	3216.88	2973.88
315.0	3970.63	3924.51	3836.76	3682.07	3583.63	3308.01	3022.26	2866.44	2602.07
360.0	3955.44	3918.32	3829.44	3702.32	3542.01	3311.94	3183.13	2954.76	2716.82

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2427.69	2198.76	2069.94	1797.13	1592.94	1500.13	1360.07	1097.89	1097.89
45.0	2796.69	2560.44	2330.38	2195.94	1946.19	1758.88	1592.38	1442.76	1284.69
90.0	2366.94	2067.13	1929.32	1719.51	1534.44	1370.76	1046.76	1046.76	1006.59
135.0	2679.13	2517.69	2202.69	1954.63	1733.01	1539.51	1436.01	1256.57	1128.88
180.0	2937.32	2696.57	2454.13	2222.38	2090.76	1849.44	1668.32	1506.88	1337.01
225.0	2514.32	2377.63	2158.82	1954.07	1769.57	1574.38	1486.07	1353.32	1097.94
270.0	2718.51	2457.51	2304.51	2017.63	1806.69	1621.07	1454.57	1365.13	1209.88
315.0	2338.26	2088.51	1819.07	1697.01	1515.88	1360.63	1078.31	1078.31	1019.98
360.0	2427.69	2198.76	2069.94	1797.13	1592.94	1500.13	1360.07	1097.89	1097.89

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1043.61	962.21	890.72	818.78	787.11	739.24	697.84	661.95	625.50
45.0	1169.94	1069.26	1014.13	917.38	847.63	785.76	734.01	706.44	658.07
90.0	900.11	854.72	787.67	732.60	684.96	638.66	619.09	589.67	552.21
135.0	1022.01	931.44	883.07	778.44	725.01	698.01	659.19	623.19	596.19
180.0	1214.38	1107.51	1013.01	962.38	873.51	809.38	754.82	708.13	683.38
225.0	1097.94	1043.27	961.59	889.37	814.78	781.93	731.81	689.23	645.36
270.0	1100.76	1005.69	925.82	843.69	786.88	738.51	713.76	667.63	635.01
315.0	935.38	850.89	814.78	761.40	691.59	669.99	637.65	620.61	586.63
360.0	1043.61	962.21	890.72	818.78	787.11	739.24	697.84	661.95	625.50

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	609.47	585.39	564.24	541.80	525.04	510.02	494.94	474.41	465.41
45.0	623.19	593.38	566.94	552.88	519.13	502.26	492.69	474.13	457.26
90.0	541.74	525.43	510.08	497.81	485.44	479.64	470.31	457.99	447.24
135.0	575.38	565.26	545.57	533.76	521.94	512.94	507.32	496.07	477.51
180.0	640.63	600.13	584.94	561.88	541.07	525.32	513.51	506.76	492.13
225.0	613.86	597.83	563.18	538.14	526.89	508.95	492.64	478.13	456.19
270.0	608.01	584.94	573.13	552.88	530.38	522.51	507.32	496.07	483.13
315.0	562.33	551.70	535.56	521.44	508.50	494.21	487.41	473.57	458.61
360.0	609.47	585.39	564.24	541.80	525.04	510.02	494.94	474.41	465.41

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	450.34	428.46	398.59	354.88	312.81	268.59	214.43	196.31	143.16
45.0	440.38	425.19	414.51	385.26	354.88	318.88	279.51	279.51	193.39
90.0	434.48	424.80	390.60	372.09	329.51	290.19	249.86	205.93	154.91
135.0	468.51	453.88	437.57	413.94	382.44	361.07	313.26	296.94	296.94
180.0	478.63	464.01	452.19	442.63	412.26	366.13	342.51	292.44	292.44
225.0	446.46	428.96	405.11	375.36	333.17	294.02	252.00	201.66	176.68
270.0	467.38	459.51	440.38	415.63	384.69	347.57	323.38	281.76	281.76
315.0	442.52	421.14	391.95	356.96	310.11	285.30	243.17	199.13	156.88
360.0	450.34	428.46	398.59	354.88	312.81	268.59	214.43	196.31	143.16

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	103.05	68.85	38.76	29.87	22.28	19.97	17.61	15.08	13.78
45.0	151.82	128.31	86.91	58.67	38.64	27.68	26.38	22.89	19.35
90.0	130.05	92.42	60.02	36.96	24.47	21.66	18.79	15.81	14.46
135.0	183.66	142.48	103.67	69.08	52.03	27.84	18.79	16.31	13.50
180.0	240.53	164.25	138.77	80.27	52.65	40.39	26.94	23.46	21.32
225.0	136.69	100.13	69.24	42.64	34.99	27.39	22.67	21.54	18.56
270.0	193.95	143.44	103.61	68.40	41.12	29.59	18.45	15.24	13.84
315.0	108.62	86.51	54.00	30.21	18.11	14.18	11.81	9.68	7.54
360.0	103.05	68.85	38.76	29.87	22.28	19.97	17.61	15.08	13.78

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.87	9.45	8.78	7.93	7.14	6.30	5.51	5.12	4.56
45.0	18.00	15.58	13.67	12.15	10.80	10.18	8.89	7.82	6.86
90.0	12.32	10.58	9.23	8.10	7.59	6.69	5.79	5.01	4.05
135.0	11.48	10.41	8.27	7.59	6.53	6.08	5.63	5.06	4.73
180.0	19.13	17.72	15.19	13.33	11.81	10.74	10.41	9.34	8.04
225.0	17.10	14.29	12.32	11.48	10.29	9.34	8.38	7.37	6.86
270.0	11.31	9.56	7.99	6.75	6.24	5.46	4.89	4.33	3.94
315.0	6.58	5.34	4.39	3.94	3.54	3.26	2.93	2.59	2.42
360.0	11.87	9.45	8.78	7.93	7.14	6.30	5.51	5.12	4.56

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.05	3.54	3.09	2.93	2.64	2.36	2.25	2.08	2.03
45.0	5.96	5.18	4.56	4.16	3.83	3.32	2.93	2.70	2.64
90.0	3.71	3.04	2.36	2.19	1.91	1.69	1.52	1.35	1.24
135.0	3.99	3.43	2.93	2.53	2.08	1.86	1.63	1.58	1.41
180.0	7.59	6.53	5.68	5.06	4.50	4.11	3.54	3.15	2.81
225.0	6.19	5.57	4.84	4.22	3.88	3.21	2.76	2.70	2.59
270.0	3.54	3.32	2.81	2.59	2.36	2.14	1.97	1.86	1.74
315.0	2.19	2.14	1.86	1.69	1.63	1.58	1.52	1.46	1.41
360.0	4.05	3.54	3.09	2.93	2.64	2.36	2.25	2.08	2.03

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.86	1.80	1.69	1.69	1.63	1.58	1.46	1.41	1.41
45.0	2.59	2.48	2.31	2.25	2.19	2.08	2.08	2.03	1.97
90.0	1.18	1.13	1.07	0.96	0.96	0.90	0.90	0.79	0.79
135.0	1.35	1.29	1.18	1.18	1.18	1.13	1.13	1.01	1.07
180.0	2.48	2.19	1.97	1.69	1.63	1.52	1.46	1.41	1.29
225.0	2.48	2.31	2.14	2.08	2.08	2.14	2.08	1.97	1.97
270.0	1.69	1.63	1.46	1.46	1.46	1.41	1.35	1.29	1.24
315.0	1.35	1.35	1.35	1.29	1.24	1.18	1.13	1.01	0.96
360.0	1.86	1.80	1.69	1.69	1.63	1.58	1.46	1.41	1.41

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.29	1.18	1.13	1.07	0.90	0.84	0.79	0.73	0.73
45.0	1.91	1.80	1.69	1.52	1.24	0.96	0.79	0.62	0.56
90.0	0.79	0.73	0.68	0.62	0.62	0.56	0.56	0.51	0.51
135.0	1.07	0.96	1.01	0.96	0.96	0.90	0.84	0.79	0.79
180.0	1.35	1.24	1.24	1.24	1.18	1.13	1.07	1.01	0.84
225.0	1.97	1.86	1.74	1.58	1.41	1.24	0.96	0.79	0.62
270.0	1.13	1.07	1.01	0.96	0.84	0.79	0.79	0.68	0.62
315.0	0.90	0.84	0.84	0.84	0.79	0.73	0.62	0.62	0.62
360.0	1.29	1.18	1.13	1.07	0.90	0.84	0.79	0.73	0.73

Intensity data(cd)

C/γ(°)	90.0
0.0	0.79
45.0	0.39
90.0	0.51
135.0	0.73
180.0	0.79
225.0	0.56
270.0	0.56
315.0	0.68
360.0	0.79