NATA LIGHTING CO.,LTD
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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: 2-3020-LM
Luminaire: 92.70.412.00 LED HOLDER
Report No: 20260126-B001
Ballast type: AC

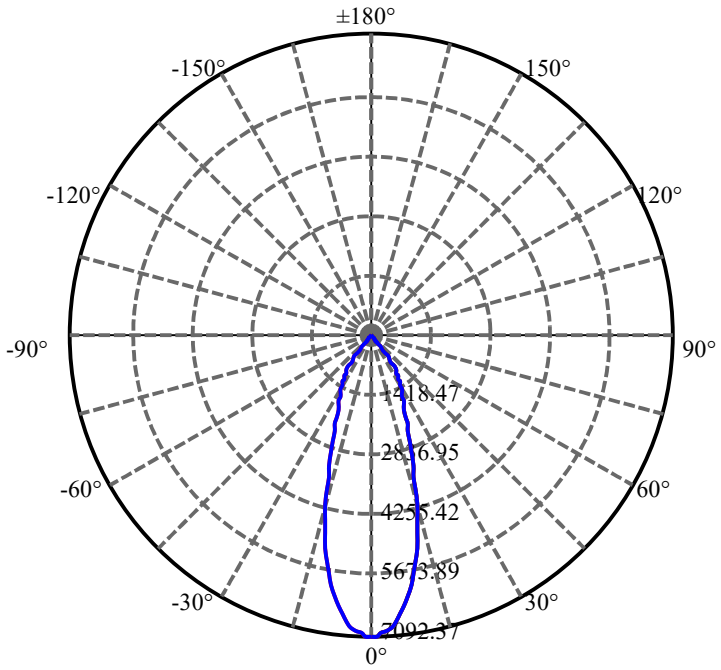
Test No: 20260126-C001	Voltage(V): 36.840
LampCAT: CITIZEN CLU038 LES14.5	Current(A): 0.712
Lamp flux(lm): 3448.6	Power (W): 26.230
Number of Lamps: 1	PF: 0.000
Length(mm): 65	Width(mm): 65
Phm Type: C	Height(mm): 34

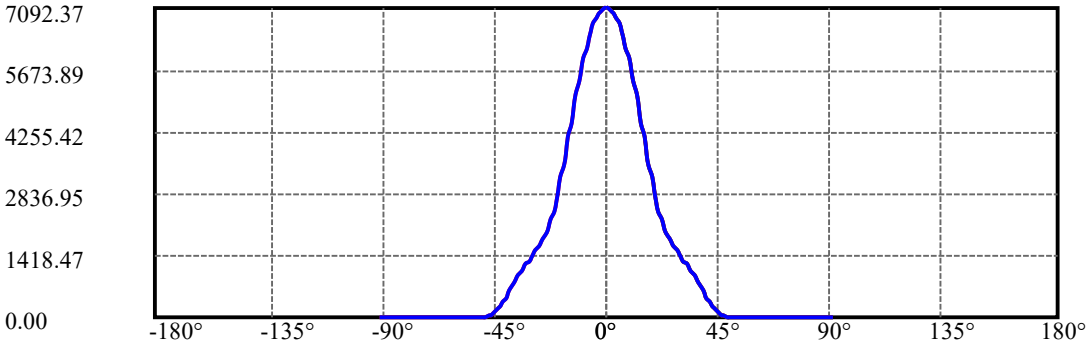
Photometric Results

Lumens(lm): 3298.43, Efficiency(%): 95.65% , Luminous Efficacy(lm/W): 125.75
Central intensity(cd): 7092.365, Maximum intensity(cd): 7092.365
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=33.6
[C90/270]Total=33.6
Field angle(10%Imax): [C0/180]Total=75.0
[C90/270]Total=75.0
Maximum s/h(1/2): C0_180=0.55 C90_270=0.55
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.65%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.804%

Equipment: GMS 1800	Date: 2026/1/26	Operator: YZQ
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.50

Light Distribution Curve [Unit:cd]





C0(Max):

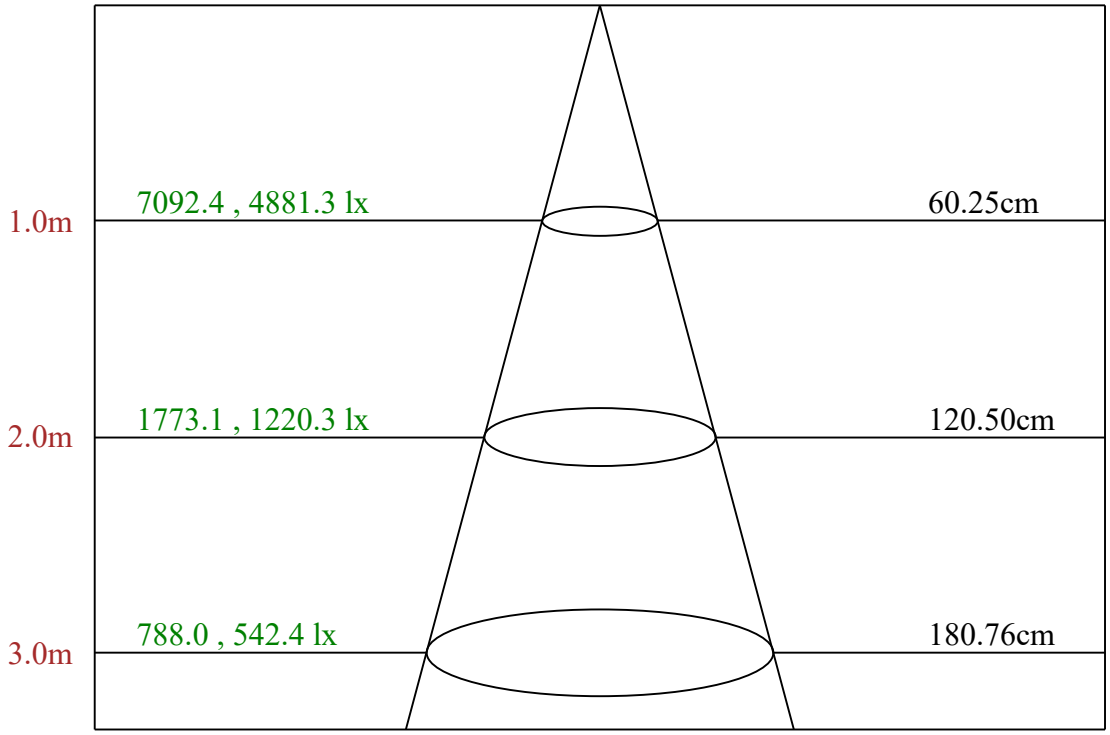
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:37.5 Right:37.5
:C90/270Left:37.5 Right:37.5

Beam Angle(50%Imax):C0/180Left:16.8 Right:16.8
:C90/270Left:16.8 Right:16.8

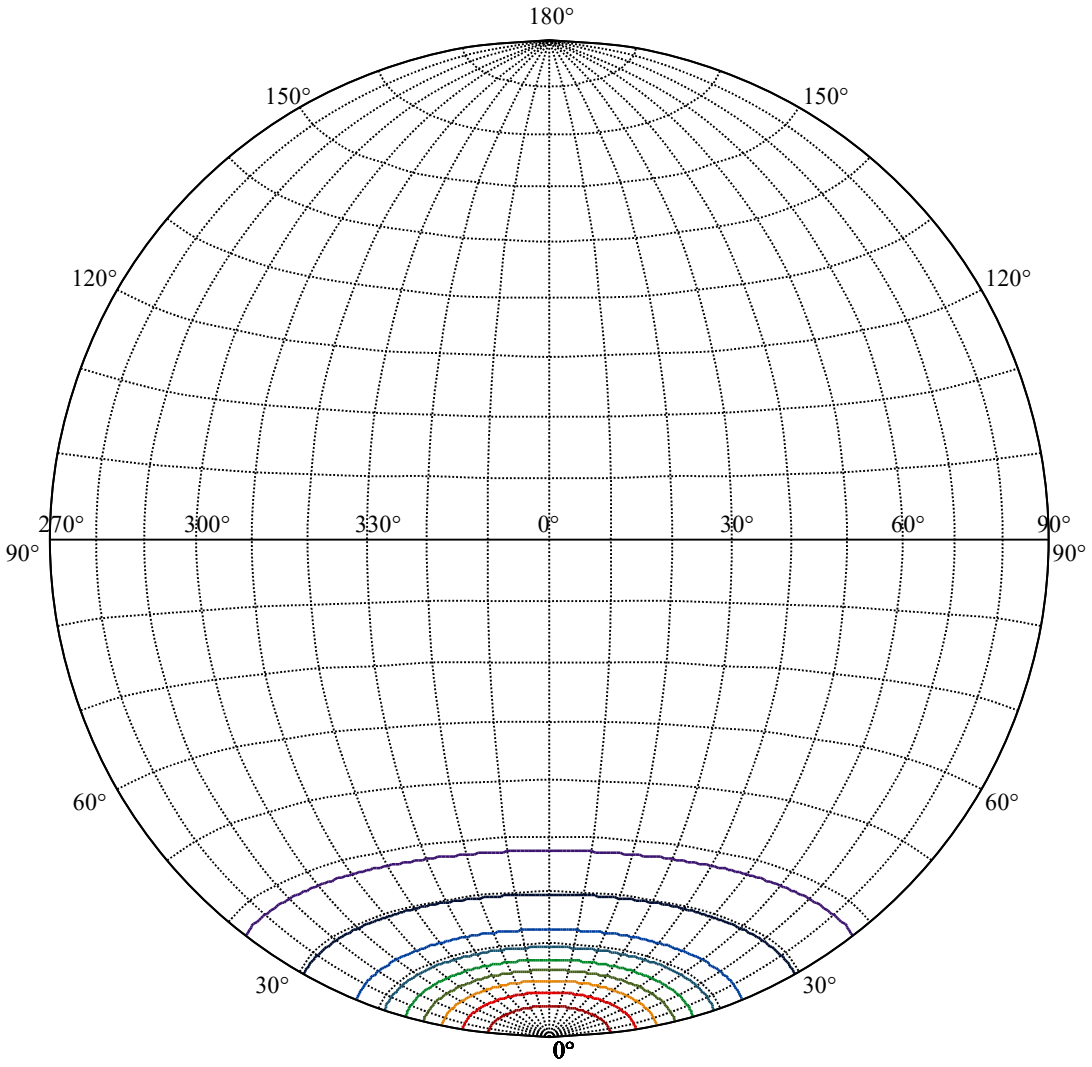
Lux distance Curve



Max , Ave

Beam angle of C0 plane 33.53

ISO candela diagram on circular web



House [Unit:cd] Road

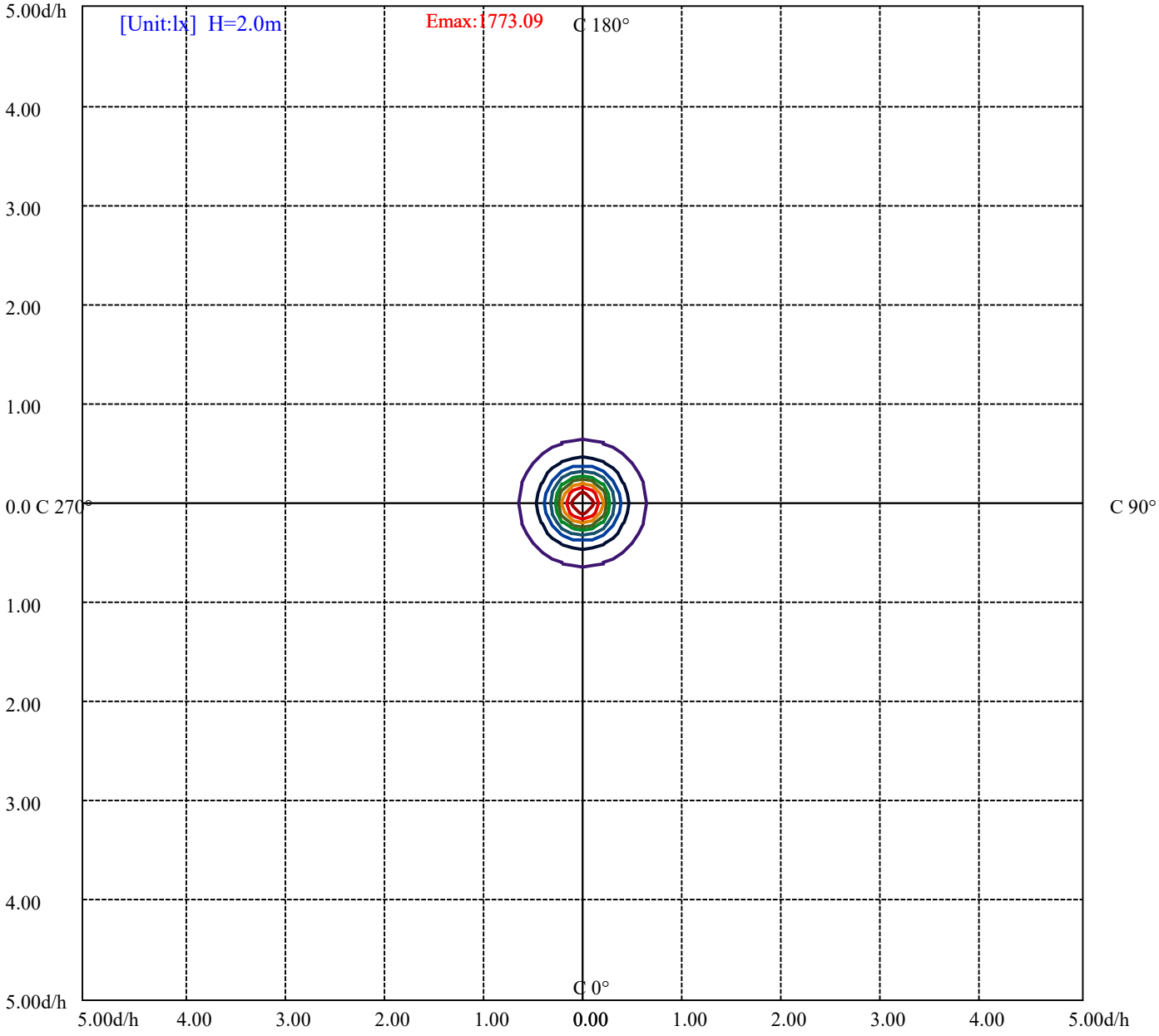
Imax:7092.37

(10%Imax) 709.237
(20%Imax) 1418.47
(30%Imax) 2127.71
(40%Imax) 2836.95
(50%Imax) 3546.18
(60%Imax) 4255.42
(70%Imax) 4964.66
(80%Imax) 5673.89
(90%Imax) 6383.13

Equipment: GMS 1800 Date: 2026/1/26 Operator: YZQ
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.50

NT NT 2-3020-LM

ISO illuminance diagram

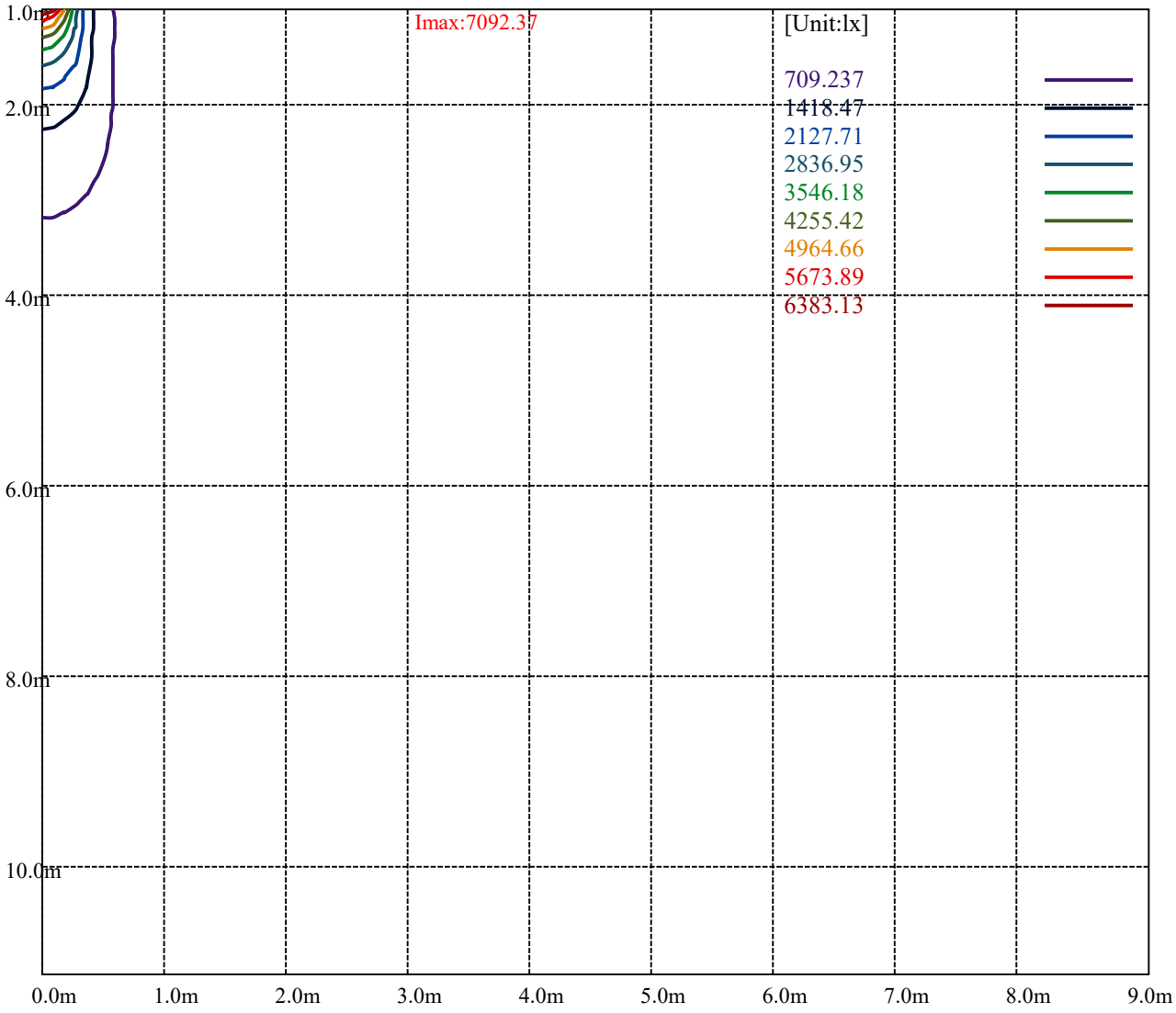


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/1/26
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/1/26
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 7.50

NT NT 2-3020-LM

Luminance Limitting Curve(no luminous side)

Luminance Table

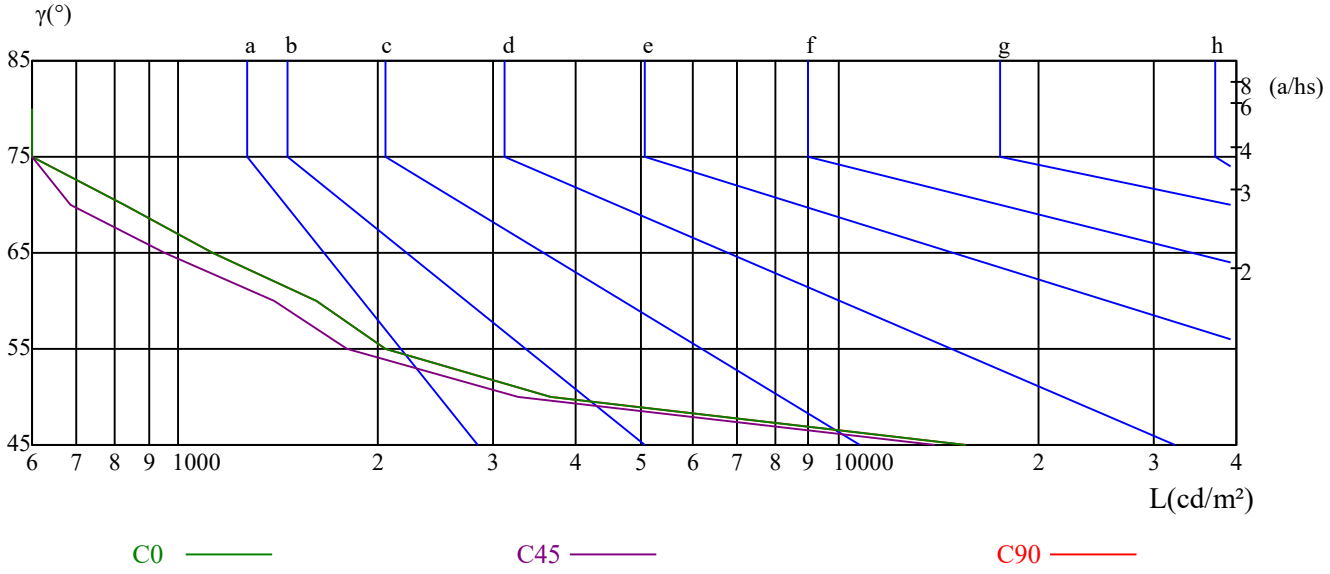
γ	45	50	55	60	65	70	75	80	85
C0	15524	3668	2058	1621	1125	829	602	381	178
C45	13984	3261	1803	1397	952	687	486	298	133
C90	15524	3668	2058	1621	1125	829	602	381	178

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1999	1999	1999	1415	1415	1415	915	915	915

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

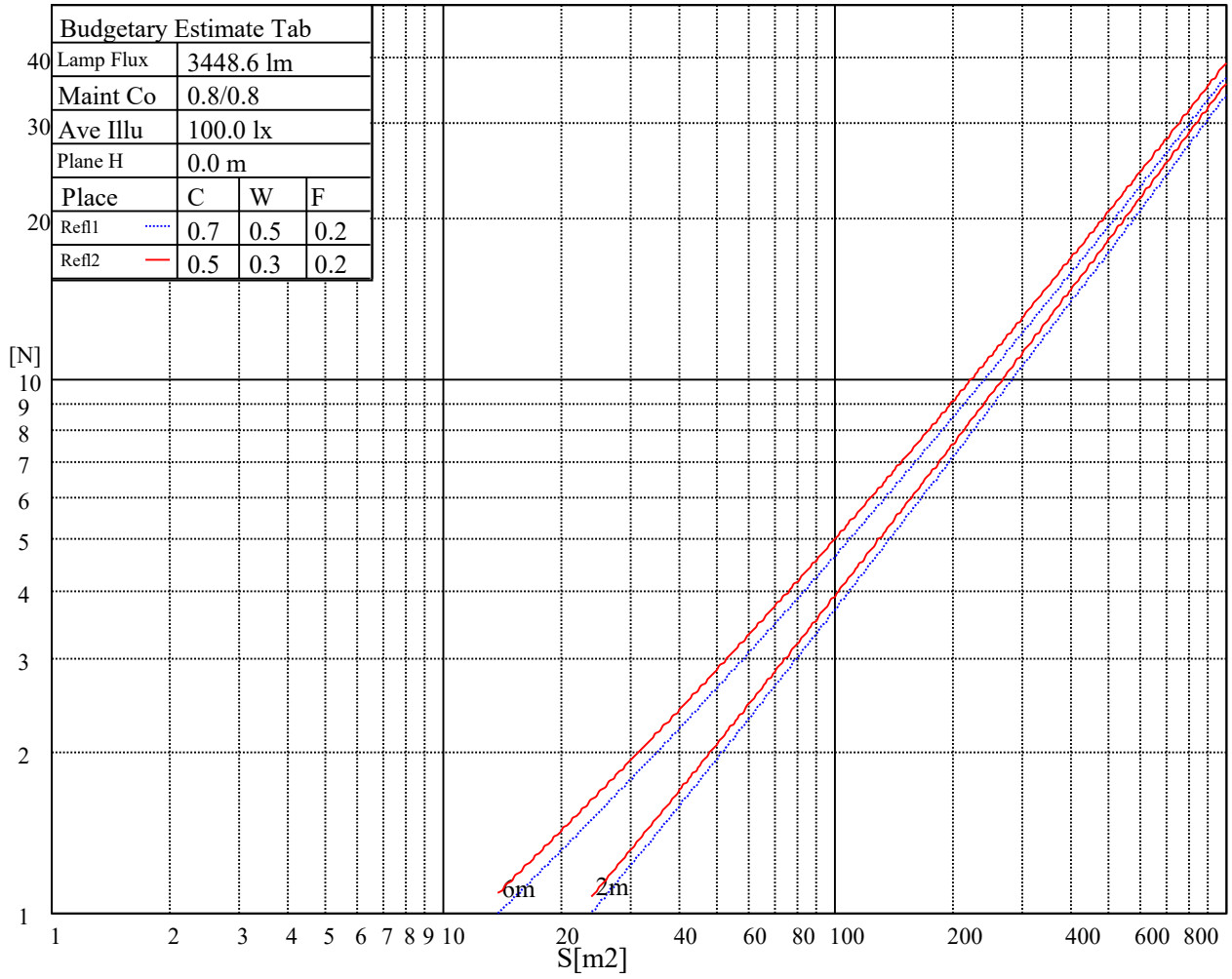
Date: 2026/1/26
Humidity(%): 60.0%

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	20.77	21.69	21.13	22.00	22.32	21.21	22.14	21.57	22.45	22.76
	3H	20.55	21.37	20.94	21.71	22.06	21.00	21.82	21.38	22.15	22.50
	4H	20.45	21.20	20.85	21.56	21.93	20.89	21.65	21.29	22.00	22.37
	6H	20.35	21.04	20.77	21.42	21.82	20.79	21.48	21.21	21.86	22.26
	8H	20.27	20.93	20.70	21.32	21.73	20.72	21.37	21.14	21.76	22.17
	12H	20.20	20.82	20.63	21.22	21.64	20.64	21.26	21.07	21.66	22.08
4H	2H	20.45	21.20	20.85	21.56	21.92	20.89	21.64	21.29	22.00	22.37
	3H	20.19	20.82	20.62	21.22	21.64	20.63	21.26	21.06	21.66	22.08
	4H	20.11	20.65	20.55	21.08	21.53	20.55	21.09	20.99	21.52	21.97
	6H	19.96	20.44	20.43	20.89	21.34	20.40	20.88	20.88	21.33	21.79
	8H	19.90	20.34	20.38	20.80	21.27	20.34	20.78	20.83	21.24	21.71
	12H	19.84	20.25	20.33	20.70	21.22	20.28	20.69	20.77	21.14	21.66
8H	4H	19.90	20.34	20.38	20.80	21.27	20.34	20.78	20.82	21.24	21.71
	6H	19.73	20.09	20.24	20.57	21.09	20.17	20.53	20.68	21.01	21.53
	8H	19.71	20.01	20.25	20.54	21.03	20.15	20.45	20.69	20.98	21.48
	12H	19.65	19.88	20.20	20.40	20.92	20.10	20.32	20.64	20.84	21.36
12H	4H	19.84	20.25	20.33	20.70	21.22	20.28	20.69	20.77	21.14	21.66
	6H	19.71	20.01	20.25	20.54	21.03	20.15	20.45	20.69	20.98	21.48
	8H	19.65	19.88	20.20	20.40	20.92	20.10	20.32	20.64	20.84	21.36
Variation with the observer position at spacings:											
S = 1.0H		4.9/-18.8					4.9/-18.8				
S = 1.5H		7.7/-19.4					7.7/-19.4				
S = 2.0H		9.7/-20.1					9.7/-20.1				
Standard tables:		BK0					BK0				
Uncorrected UGR		1.2					1.2				

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

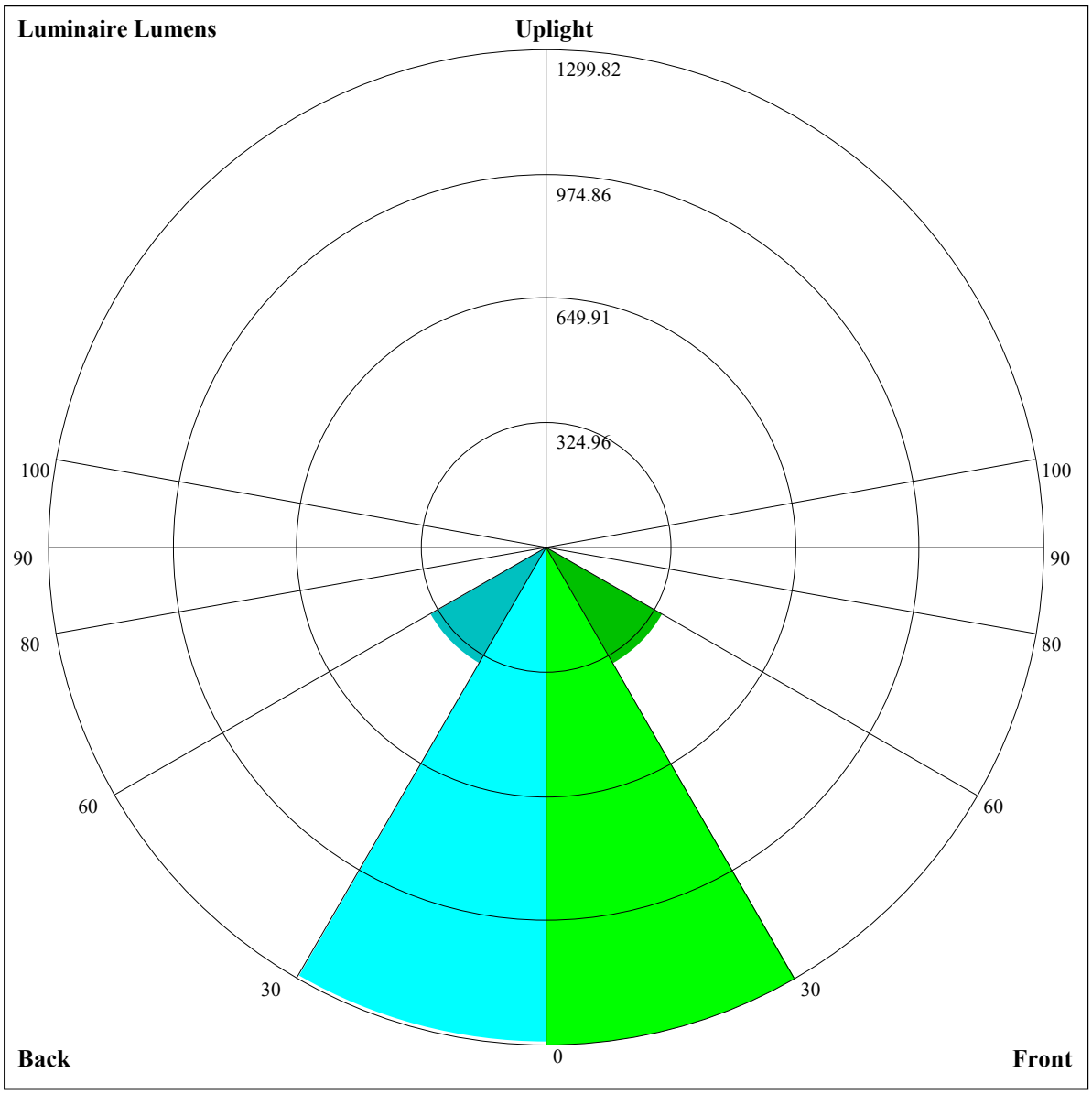
Budgetary Estimate Table



Equipment: GMS 1800 Date: 2026/1/26 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	1.11	1.11	1.11	1.06	1.06	1.06	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	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91
2	1.00	0.97	0.94	0.99	0.95	0.93	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.85
3	0.94	0.90	0.87	0.93	0.89	0.86	0.91	0.87	0.85	0.88	0.86	0.83	0.86	0.84	0.82	0.81
4	0.89	0.84	0.81	0.88	0.84	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.78	0.76
5	0.84	0.79	0.76	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.72
6	0.80	0.75	0.71	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.70	0.68
7	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.65
8	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.62
9	0.69	0.64	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.59
10	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56



Luminaire Lumens:
FL=1299.82,FM=349.36,FH=3.04,FVH=0.22
BL=1291.85,BM=352.64,BH=2.96,BVH=0.23
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	7117.26	7106.01	7023.88	6914.76	6849.51	6711.69	6552.51	6376.44	6118.26
45.0	7046.38	7097.01	7102.63	7075.07	7018.82	6969.88	6840.51	6709.44	6549.13
90.0	7130.76	7124.57	7082.38	7005.88	6880.44	6828.69	6643.63	6473.76	6269.57
135.0	7075.07	7088.01	7073.94	7048.07	6963.13	6866.94	6746.57	6560.94	6490.63
180.0	7117.26	7104.88	7072.26	7004.76	6912.51	6846.13	6688.63	6527.19	6340.44
225.0	7046.38	7007.57	6868.07	6793.82	6649.82	6448.44	6249.32	6014.19	5698.07
270.0	7130.76	7102.07	7040.19	6946.26	6878.76	6712.82	6541.26	6342.13	6113.19
315.0	7075.07	7036.82	6938.94	6876.51	6749.94	6490.63	6376.44	6163.26	5921.38
360.0	7117.26	7106.01	7023.88	6914.76	6849.51	6711.69	6552.51	6376.44	6118.26

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5970.88	5699.19	5399.94	5080.44	4670.94	4460.01	4109.57	3569.57	3377.76
45.0	6364.07	6104.19	5849.94	5570.94	5390.38	5003.94	4670.38	4327.26	3984.13
90.0	5988.88	5831.38	5550.69	5244.69	4921.26	4518.51	4313.76	3841.26	3452.01
135.0	6258.32	5934.32	5779.63	5435.94	5122.07	4789.07	4452.13	4246.26	3839.01
180.0	6122.76	5821.26	5651.38	5214.32	5015.19	4603.44	4254.69	3906.51	3571.26
225.0	5525.94	5218.82	4895.38	4553.38	4133.76	3930.13	3599.38	3111.13	2941.26
270.0	5808.88	5527.63	5222.19	5028.69	4628.19	4287.88	3945.32	3613.44	3422.19
315.0	5653.07	5299.82	5108.01	4774.44	4436.38	4095.51	3701.19	3507.69	3197.76
360.0	5970.88	5699.19	5399.94	5080.44	4670.94	4460.01	4109.57	3569.57	3377.76

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3075.69	2800.07	2552.57	2301.69	2192.01	2027.76	1886.57	1765.07	1645.26
45.0	3779.38	3394.07	3094.26	2823.13	2583.51	2453.57	2155.44	2000.76	1917.51
90.0	3269.76	2984.01	2724.69	2495.76	2262.32	2158.82	2004.69	1872.51	1759.44
135.0	3508.26	3201.69	2921.01	2622.32	2405.19	2213.38	2114.38	1940.57	1818.51
180.0	3380.01	3025.07	2755.07	2514.32	2303.38	2192.01	1943.38	1815.69	1748.76
225.0	2688.13	2463.13	2266.82	2064.88	1976.01	1844.94	1733.01	1636.26	1532.19
270.0	3067.26	2805.13	2564.94	2352.88	2239.82	1984.44	1856.19	1788.13	1667.19
315.0	2914.82	2607.13	2386.63	2193.13	2026.07	1859.57	1788.13	1682.94	1589.57
360.0	3075.69	2800.07	2552.57	2301.69	2192.01	2027.76	1886.57	1765.07	1645.26

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1589.01	1504.63	1425.88	1340.38	1276.82	1094.63	1094.63	1034.27	927.11
45.0	1773.51	1670.01	1576.63	1492.26	1443.88	1355.57	1288.63	1223.38	1127.76
90.0	1644.69	1592.38	1510.26	1391.01	1350.51	1285.82	1103.74	1045.07	1045.07
135.0	1712.76	1622.19	1571.57	1479.88	1407.88	1341.51	1275.69	1232.38	1090.07
180.0	1634.57	1549.63	1472.01	1399.44	1357.26	1279.63	1210.44	1122.69	1023.13
225.0	1483.26	1406.76	1337.01	1259.38	1067.51	1067.51	1026.34	898.37	834.24
270.0	1580.01	1500.13	1427.01	1384.26	1304.94	1237.44	1154.19	1063.63	1000.63
315.0	1504.63	1411.26	1370.19	1279.63	1089.51	1089.51	1089.51	986.01	878.51
360.0	1589.01	1504.63	1425.88	1340.38	1276.82	1094.63	1094.63	1034.27	927.11

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	821.53	689.85	623.53	517.16	411.81	314.83	211.78	165.15	97.48
45.0	1090.63	965.19	812.76	745.82	612.51	505.63	399.88	301.44	301.44
90.0	980.66	824.34	685.24	616.44	498.54	389.08	289.18	183.77	138.77
135.0	984.32	919.07	785.76	675.51	565.82	458.38	398.19	299.19	299.19
180.0	960.69	831.32	679.44	614.19	485.38	386.38	329.01	329.01	293.01
225.0	724.22	612.79	482.91	379.86	285.53	198.23	111.15	76.61	39.66
270.0	867.88	707.57	639.51	501.13	391.44	332.38	332.38	291.88	75.38
315.0	745.09	636.02	525.83	403.09	344.70	251.72	169.71	101.53	48.54
360.0	821.53	689.85	623.53	517.16	411.81	314.83	211.78	165.15	97.48

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	49.72	28.41	21.99	18.79	16.31	14.18	12.77	9.79	9.00
45.0	136.01	75.49	51.41	26.89	22.11	19.13	16.82	15.75	13.56
90.0	81.34	43.76	26.55	21.88	18.73	16.48	14.18	12.88	10.46
135.0	131.74	63.79	35.44	25.65	22.16	20.14	17.38	15.53	13.11
180.0	70.26	35.61	24.36	20.98	19.07	15.98	14.29	12.09	9.23
225.0	24.41	21.04	17.55	15.69	14.01	10.86	9.34	8.66	8.10
270.0	40.72	30.04	23.68	20.48	18.17	16.26	14.85	10.18	9.17
315.0	35.38	25.54	22.33	19.24	16.88	15.58	11.31	10.13	9.68
360.0	49.72	28.41	21.99	18.79	16.31	14.18	12.77	9.79	9.00

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.38	7.71	7.43	6.92	6.13	5.96	5.57	5.23	4.78
45.0	10.69	9.79	9.17	8.72	8.27	7.71	7.48	7.03	6.75
90.0	9.79	9.17	8.61	8.27	7.54	7.26	6.92	6.53	6.08
135.0	10.63	9.84	9.23	8.66	8.27	7.54	7.03	6.58	6.19
180.0	8.55	7.99	7.48	7.14	6.53	6.02	5.57	5.18	4.78
225.0	7.71	7.14	6.92	6.47	6.13	5.79	5.34	5.01	4.05
270.0	8.55	7.93	7.48	7.03	6.58	6.41	5.91	5.63	4.95
315.0	9.17	8.66	8.10	7.48	7.14	6.81	6.41	5.85	5.01
360.0	8.38	7.71	7.43	6.92	6.13	5.96	5.57	5.23	4.78

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.28	4.11	3.83	3.54	3.26	2.98	2.87	2.64	2.42
45.0	6.30	5.46	4.95	4.11	3.71	3.54	3.26	2.98	2.81
90.0	5.18	4.28	4.05	3.77	3.49	3.21	2.93	2.87	2.59
135.0	5.96	5.29	4.73	4.39	4.05	3.71	3.49	3.21	3.09
180.0	4.61	4.33	3.99	3.66	3.43	3.15	2.87	2.70	2.53
225.0	3.60	3.49	3.21	2.98	2.76	2.53	2.42	2.19	1.97
270.0	4.28	3.94	3.60	3.21	3.09	2.81	2.59	2.36	2.19
315.0	4.67	4.16	3.83	3.66	3.38	3.09	2.87	2.59	2.48
360.0	4.28	4.11	3.83	3.54	3.26	2.98	2.87	2.64	2.42

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	2.19	1.97	1.91	1.69	1.41	1.35	1.18	1.01	0.96
45.0	2.53	2.42	2.19	2.03	1.80	1.63	1.52	1.35	1.18
90.0	2.25	2.19	1.97	1.86	1.63	1.41	1.35	1.18	1.01
135.0	2.76	2.53	2.31	2.14	2.03	1.74	1.52	1.46	1.29
180.0	2.31	2.14	1.97	1.74	1.63	1.46	1.29	1.18	0.96
225.0	1.80	1.63	1.52	1.35	1.18	1.07	0.90	0.79	0.62
270.0	2.08	1.80	1.69	1.52	1.29	1.24	1.13	0.90	0.79
315.0	2.25	2.03	1.91	1.63	1.52	1.41	1.13	1.07	0.90
360.0	2.19	1.97	1.91	1.69	1.41	1.35	1.18	1.01	0.96

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	0.79	0.62	0.56	0.39	0.28	0.23	0.11	0.06	0.00
45.0	1.01	0.84	0.68	0.56	0.51	0.39	0.23	0.17	0.06
90.0	0.90	0.79	0.56	0.51	0.45	0.34	0.28	0.17	0.06
135.0	1.13	1.01	0.84	0.73	0.62	0.51	0.39	0.28	0.17
180.0	0.84	0.68	0.62	0.45	0.39	0.28	0.17	0.06	0.00
225.0	0.51	0.39	0.34	0.23	0.17	0.11	0.00	0.00	0.11
270.0	0.73	0.62	0.51	0.34	0.34	0.23	0.11	0.00	0.00
315.0	0.84	0.62	0.56	0.39	0.28	0.23	0.17	0.06	0.00
360.0	0.79	0.62	0.56	0.39	0.28	0.23	0.11	0.06	0.00

Intensity data(cd)

C/γ(°)	90.0
0.0	0.00
45.0	0.00
90.0	0.00
135.0	0.11
180.0	0.00
225.0	0.11
270.0	0.11
315.0	0.11
360.0	0.00