NATA LIGHTING CO.,LTD.
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Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client: NT
LumCAT: 61-0248-1
Luminaire: 92.70.458.00
Report No: 20250519-B009
Ballast type: AC

Test No: 20250519-C009	Voltage(V): 36.310
LampCAT: CITIZEN CLU7A2	Current(A): 0.176
Lamp flux(lm): 637.6	Power (W): 6.390
Number of Lamps: 1	PF: 0.000
Length(mm): 28	Width(mm): 28
Phm Type: C	Height(mm): 14

Photometric Results

Lumens(lm): 562.48, Efficiency(%): 88.22% , Luminous Efficacy(lm/W): 88.03
Central intensity(cd): 567.539, Maximum intensity(cd): 584.718
Angle of maximum intensity: C=0.0 γ=15.0
Beam Angle(50%Imax): [C0/180]Total=59.2
[C90/270]Total=59.2
Field angle(10%Imax): [C0/180]Total=75.8
[C90/270]Total=75.8
Maximum s/h(1/2): C0_180=1.01 C90_270=1.01
Maximum s/h(1/4): C0_180=0.86 C90_270=0.86
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.22%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.714%

Equipment: GMS 1800	Date: 2025/5/19	Operator: NT
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.30

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	567.539	0.000	0	0.00%	0.00%
1.0	567.765	0.543	0.543	0.09%	0.10%
2.0	567.612	1.630	2.173	0.26%	0.39%
3.0	568.564	2.717	4.89	0.43%	0.87%
4.0	569.064	3.808	8.698	0.60%	1.55%
5.0	570.043	4.900	13.599	0.77%	2.42%
6.0	571.089	5.997	19.596	0.94%	3.48%
7.0	572.308	7.097	26.693	1.11%	4.75%
8.0	573.753	8.202	34.895	1.29%	6.20%
9.0	575.286	9.312	44.207	1.46%	7.86%
10.0	576.964	10.427	54.634	1.64%	9.71%
11.0	578.623	11.547	66.181	1.81%	11.77%
12.0	581.061	12.677	78.858	1.99%	14.02%
13.0	582.906	13.813	92.672	2.17%	16.48%
14.0	584.391	14.941	107.613	2.34%	19.13%
15.0	584.718	16.050	123.663	2.52%	21.99%
16.0	584.158	17.127	140.79	2.69%	25.03%
17.0	581.640	18.155	158.945	2.85%	28.26%
18.0	577.437	19.111	178.055	3.00%	31.66%
19.0	570.849	19.978	198.033	3.13%	35.21%
20.0	561.637	20.728	218.761	3.25%	38.89%
21.0	548.814	21.323	240.084	3.34%	42.68%
22.0	531.481	21.709	261.793	3.41%	46.54%
23.0	514.049	21.938	283.731	3.44%	50.44%
24.0	490.774	21.969	305.7	3.45%	54.35%
25.0	463.889	21.707	327.407	3.40%	58.21%
26.0	431.429	21.134	348.541	3.31%	61.96%
27.0	395.758	20.237	368.778	3.17%	65.56%
28.0	356.543	19.047	387.825	2.99%	68.95%
29.0	317.901	17.645	405.47	2.77%	72.09%
30.0	275.902	16.033	421.503	2.51%	74.94%
31.0	238.806	14.324	435.827	2.25%	77.48%
32.0	202.815	12.652	448.478	1.98%	79.73%
33.0	167.484	10.909	459.388	1.71%	81.67%
34.0	138.254	9.253	468.64	1.45%	83.32%
35.0	110.583	7.728	476.368	1.21%	84.69%
36.0	90.773	6.411	482.779	1.01%	85.83%
37.0	71.615	5.296	488.076	0.83%	86.77%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	57.260	4.302	492.377	0.67%	87.54%
39.0	47.728	3.584	495.961	0.56%	88.17%
40.0	39.634	3.047	499.008	0.48%	88.72%
41.0	34.319	2.633	501.641	0.41%	89.18%
42.0	31.021	2.374	504.015	0.37%	89.61%
43.0	28.304	2.198	506.213	0.34%	90.00%
44.0	26.725	2.077	508.289	0.33%	90.37%
45.0	25.386	2.003	510.292	0.31%	90.72%
46.0	24.174	1.938	512.23	0.30%	91.07%
47.0	23.088	1.880	514.11	0.29%	91.40%
48.0	21.935	1.820	515.93	0.29%	91.72%
49.0	20.810	1.755	517.685	0.28%	92.04%
50.0	19.711	1.689	519.375	0.26%	92.34%
51.0	18.605	1.621	520.996	0.25%	92.62%
52.0	17.566	1.552	522.548	0.24%	92.90%
53.0	16.453	1.480	524.028	0.23%	93.16%
54.0	15.554	1.411	525.439	0.22%	93.41%
55.0	14.628	1.347	526.786	0.21%	93.65%
56.0	13.809	1.285	528.071	0.20%	93.88%
57.0	13.136	1.232	529.303	0.19%	94.10%
58.0	12.483	1.185	530.488	0.19%	94.31%
59.0	12.004	1.145	531.632	0.18%	94.52%
60.0	11.577	1.114	532.746	0.17%	94.71%
61.0	11.198	1.087	533.833	0.17%	94.91%
62.0	10.838	1.062	534.895	0.17%	95.10%
63.0	10.558	1.041	535.936	0.16%	95.28%
64.0	10.265	1.022	536.957	0.16%	95.46%
65.0	9.999	1.003	537.96	0.16%	95.64%
66.0	9.752	0.985	538.946	0.15%	95.82%
67.0	9.552	0.971	539.916	0.15%	95.99%
68.0	9.372	0.959	540.875	0.15%	96.16%
69.0	9.226	0.949	541.824	0.15%	96.33%
70.0	9.093	0.941	542.765	0.15%	96.49%
71.0	8.979	0.934	543.699	0.15%	96.66%
72.0	8.933	0.931	544.63	0.15%	96.83%
73.0	8.886	0.932	545.562	0.15%	96.99%
74.0	8.853	0.933	546.494	0.15%	97.16%
75.0	8.866	0.936	547.431	0.15%	97.32%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.906	0.943	548.374	0.15%	97.49%
77.0	8.993	0.954	549.328	0.15%	97.66%
78.0	9.059	0.966	550.295	0.15%	97.83%
79.0	9.139	0.978	551.272	0.15%	98.01%
80.0	9.232	0.990	552.263	0.16%	98.18%
81.0	9.332	1.004	553.267	0.16%	98.36%
82.0	9.446	1.018	554.285	0.16%	98.54%
83.0	9.479	1.029	555.314	0.16%	98.73%
84.0	9.439	1.031	556.345	0.16%	98.91%
85.0	9.452	1.031	557.376	0.16%	99.09%
86.0	9.586	1.041	558.416	0.16%	99.28%
87.0	9.579	1.049	559.465	0.16%	99.46%
88.0	9.379	1.038	560.504	0.16%	99.65%
89.0	8.939	1.004	561.508	0.16%	99.83%
90.0	8.819	0.974	562.481	0.15%	100.00%

Zonal flux distribution table

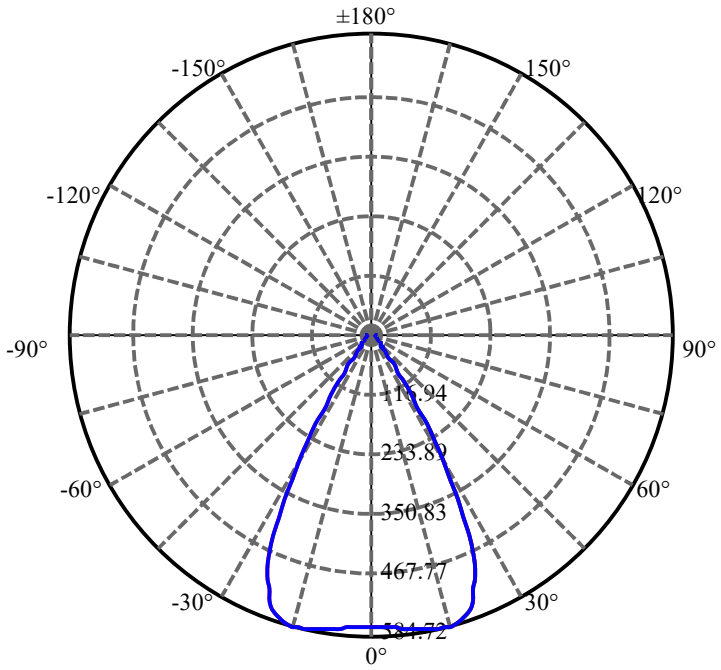
ZONAL LUMEN SUMMARY

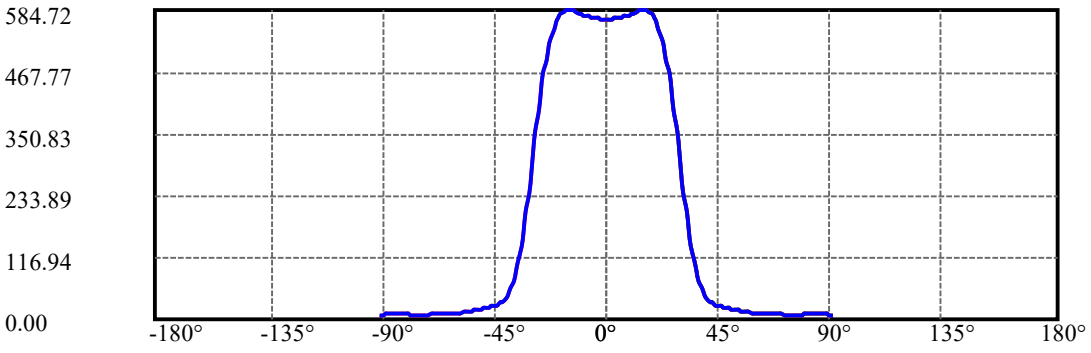
Zone	Lumens	%Lamp	%Fixt
0-30	421.50	66.11%	74.94%
0-40	499.01	78.27%	88.72%
0-60	532.75	83.56%	94.71%
0-90	561.51	88.07%	99.83%
0-120	561.51	88.07%	99.83%
0-180	562.48	88.22%	100.00%
60-90	28.76	4.51%	5.11%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-32.14	449.99	70.58%	80.00%

ZONAL LUMEN SUMMARY

0-10	54.63
10-20	164.13
20-30	202.74
30-40	77.50
40-50	20.37
50-60	13.37
60-70	10.02
70-80	9.50
80-90	9.24
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

Light Distribution Curve [Unit:cd]





C0(Max):

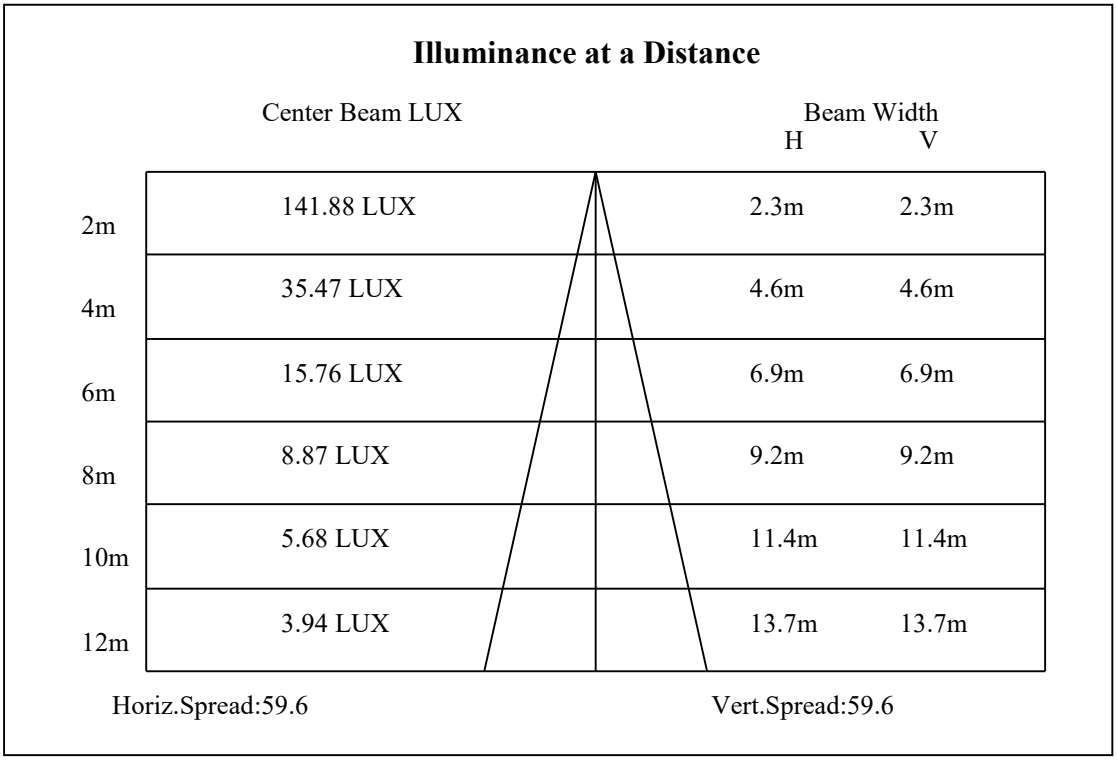
C0/C180:

C90/C270:

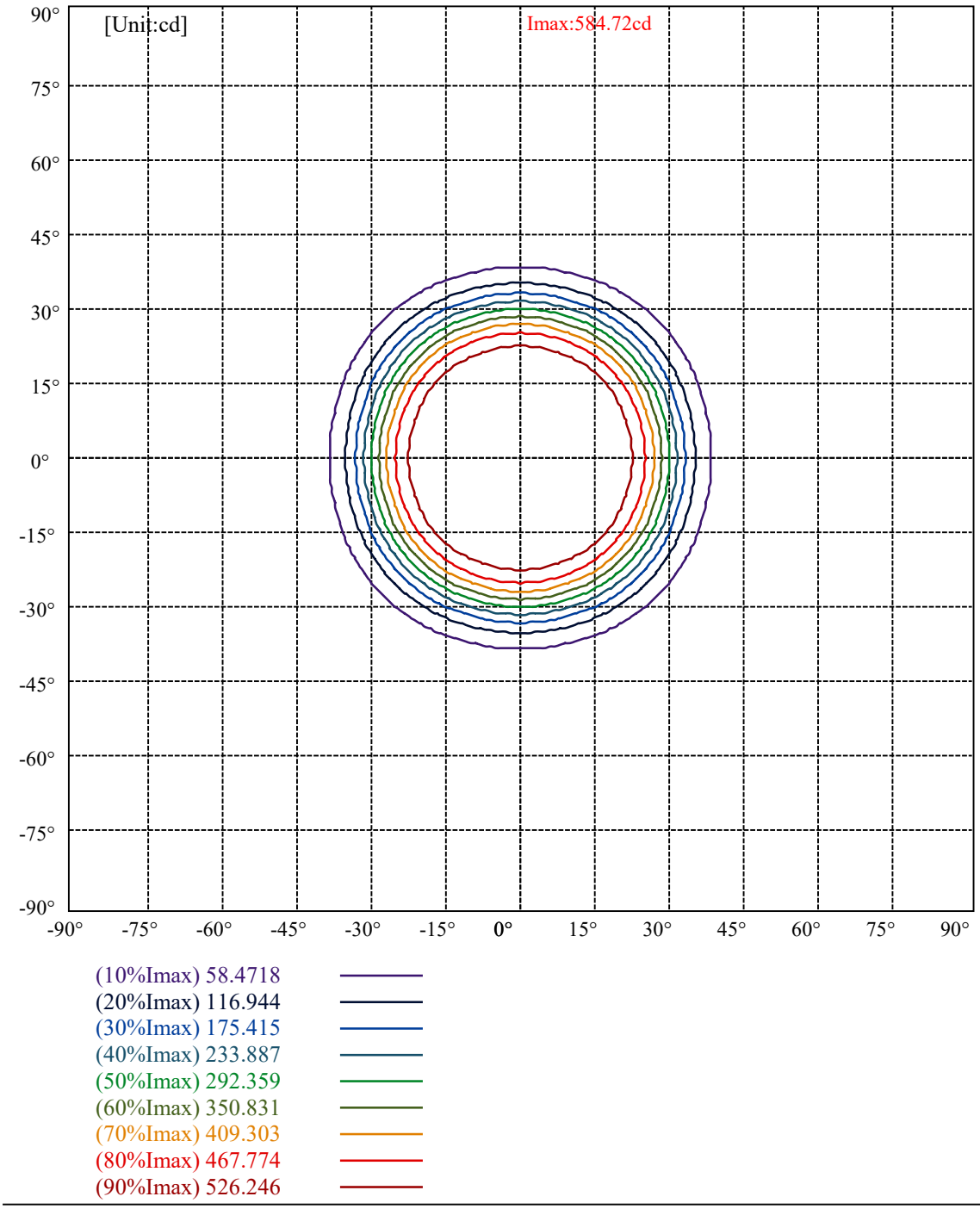
Field angle(10%Imax):C0/180Left:52.9 Right:22.9
:C90/270Left:52.9 Right:22.9

Beam Angle(50%Imax):C0/180Left:44.6 Right:14.6
:C90/270Left:44.6 Right:14.6

Lux distance Curve



ISO-Intensity(V-H)



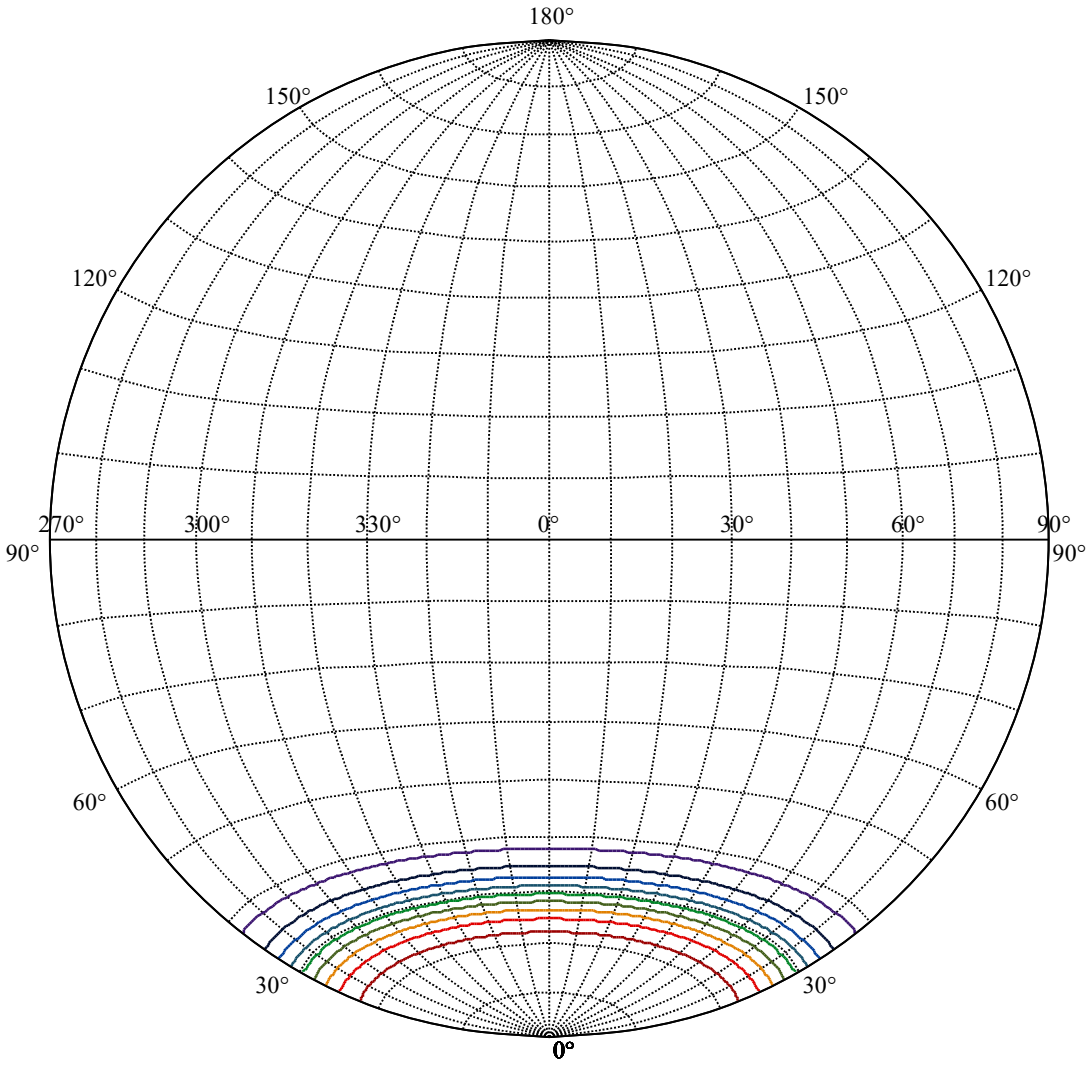
(10%Imax) 58.4718
(20%Imax) 116.944
(30%Imax) 175.415
(40%Imax) 233.887
(50%Imax) 292.359
(60%Imax) 350.831
(70%Imax) 409.303
(80%Imax) 467.774
(90%Imax) 526.246

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:584.72

(10%Imax) 58.4718

(20%Imax) 116.944

(30%Imax) 175.415

(40%Imax) 233.887

(50%Imax) 292.359

(60%Imax) 350.831

(70%Imax) 409.303

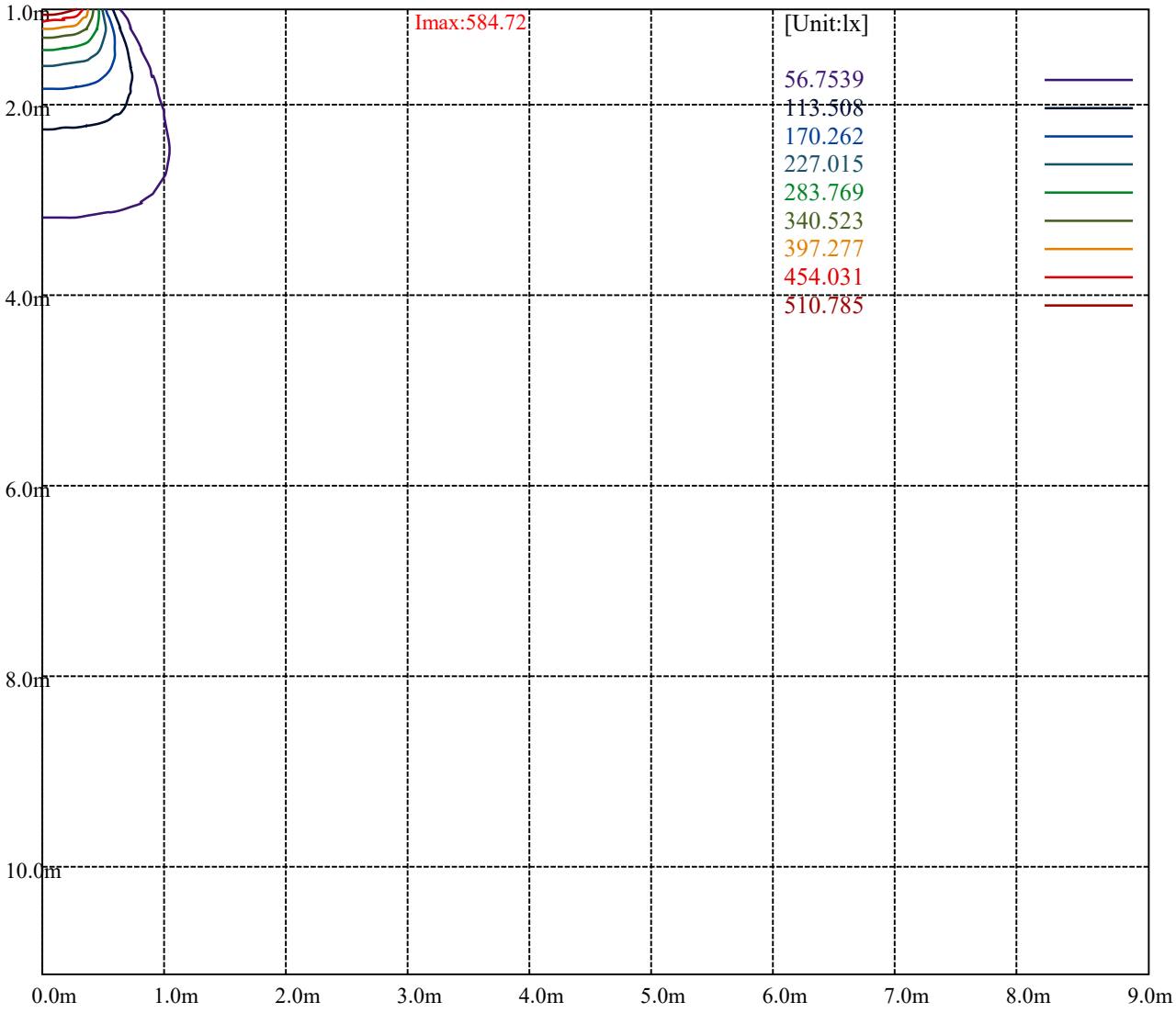
(80%Imax) 467.774

(90%Imax) 526.246

Equipment: GMS 1800 Date: 2025/5/19 Operator: NT

Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.30

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

Luminance Limitting Curve(no luminous side)

Luminance Table

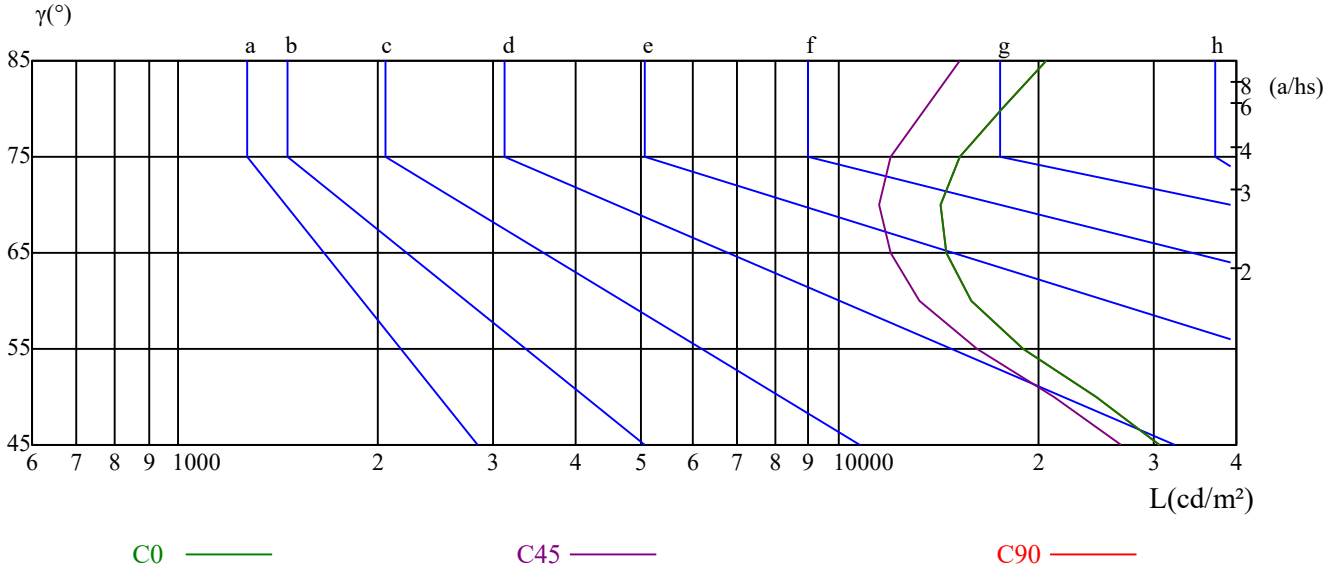
γ	45	50	55	60	65	70	75	80	85
C0	30528	24509	18978	15827	14562	14285	15245	17681	20601
C45	26825	21226	16185	13275	11992	11523	12007	13536	15231
C90	30528	24509	18978	15827	14562	14285	15245	17681	20601

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
30177	30177	30177	43694	43694	43694	138333	138333	138333

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

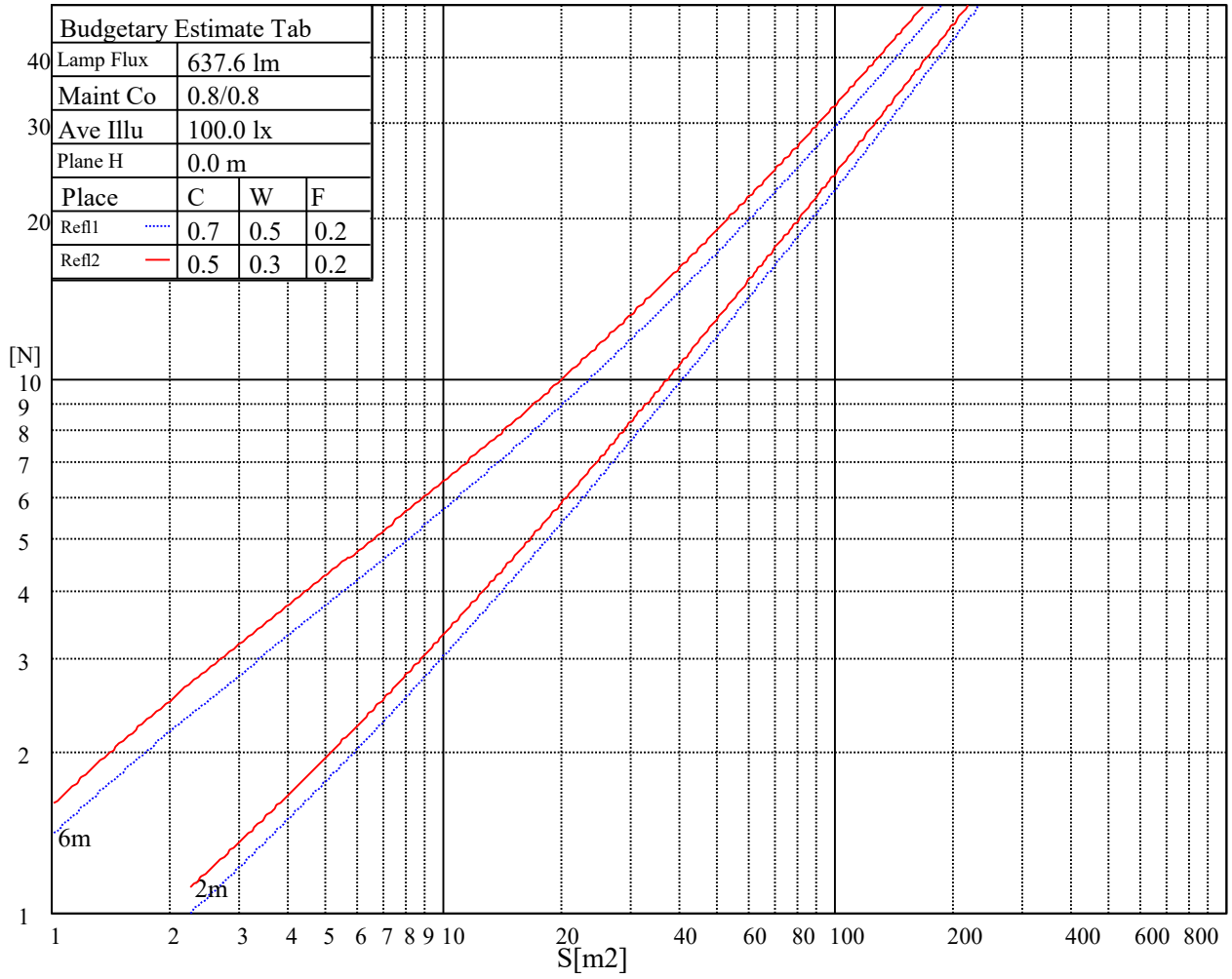


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

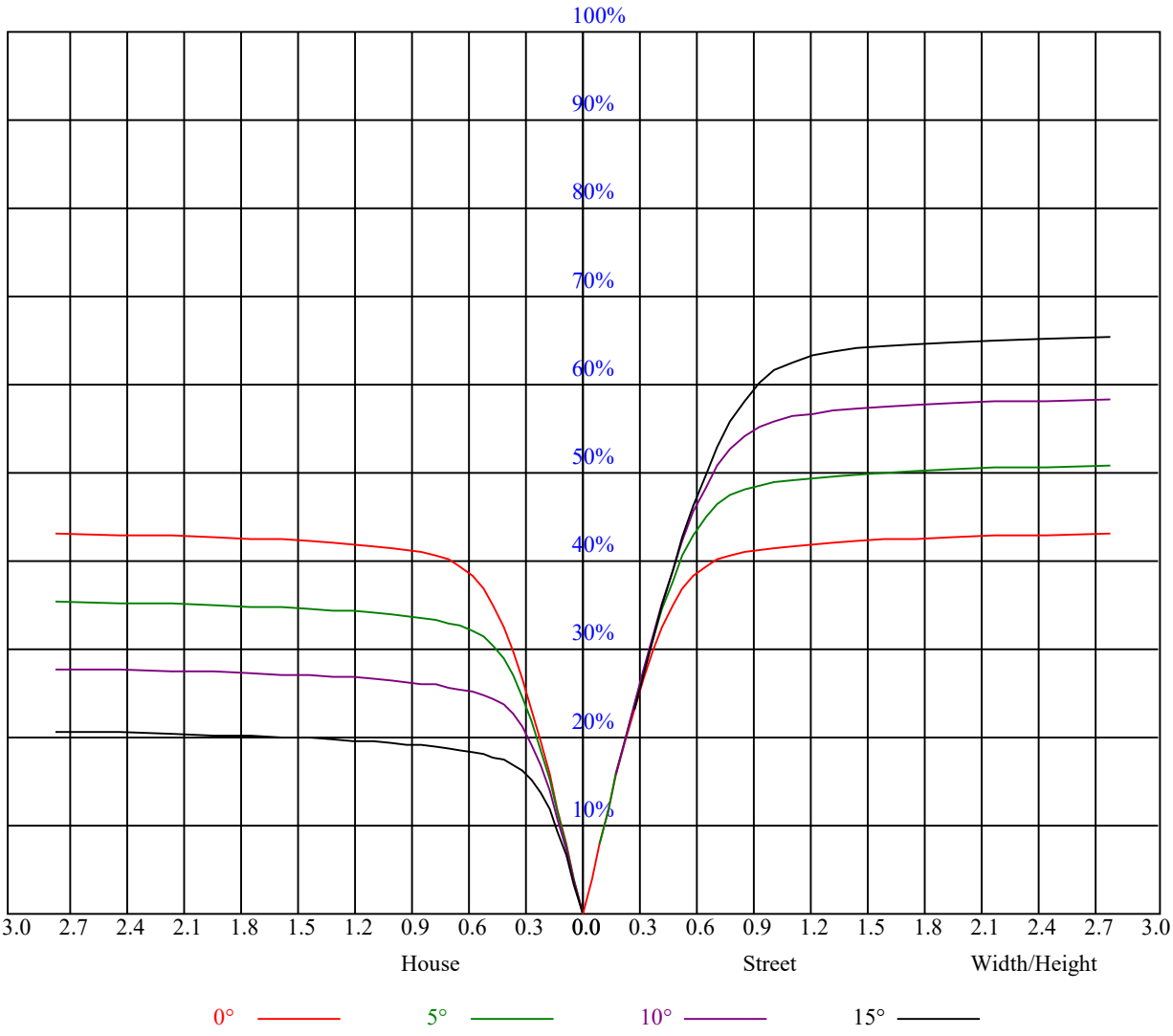
Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

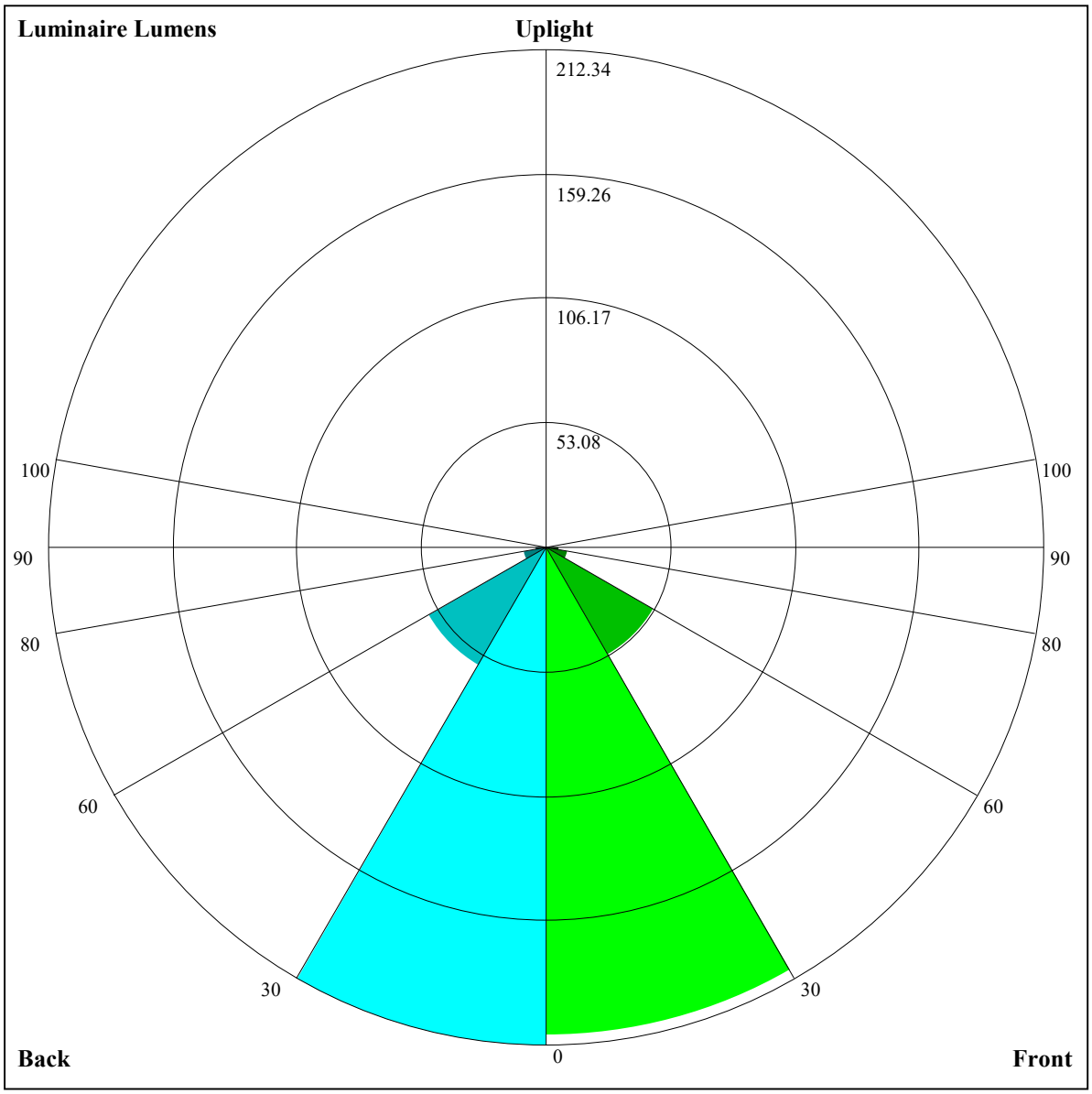
Utilization factor table for indoor luminaire

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.96	0.94	0.92	0.94	0.92	0.90	0.91	0.89	0.87	0.88	0.86	0.85	0.84	0.83	0.82	0.81
2	0.89	0.85	0.82	0.88	0.84	0.81	0.85	0.82	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.74
3	0.83	0.78	0.75	0.82	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.70	0.69
4	0.78	0.72	0.68	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
5	0.73	0.67	0.63	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
6	0.68	0.63	0.59	0.68	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.56
7	0.64	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.57	0.54	0.61	0.57	0.54	0.53
8	0.61	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.50
9	0.57	0.52	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.55	0.51	0.48	0.55	0.51	0.48	0.47
10	0.54	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.48	0.46	0.52	0.48	0.45	0.44

Coefficient Utilization Curve



Equipment: GMS 1800	Date: 2025/5/19	Operator: NT
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.30



Luminaire Lumens:
FL=207.94,FM=53.15,FH=9.74,FVH=5.36
BL=212.34,BM=58.04,BH=9.91,BVH=5.04
UL=0,UH=0

BUG Rating:B1-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	567.43	568.02	568.18	569.78	570.42	571.48	572.97	574.41	577.02
45.0	567.11	567.01	566.53	566.26	566.63	567.80	569.35	568.98	570.79
90.0	567.65	567.22	566.79	566.85	567.27	567.75	567.65	568.71	568.76
135.0	567.96	567.70	567.54	567.49	567.65	567.65	568.07	568.71	568.82
180.0	567.43	566.37	567.01	567.75	568.07	568.23	568.39	570.36	570.42
225.0	567.11	568.76	567.70	570.04	569.94	572.65	573.35	575.53	577.18
270.0	567.65	568.50	567.59	568.98	570.63	571.54	573.67	574.63	577.34
315.0	567.96	568.55	569.56	571.38	571.91	573.24	575.27	577.13	579.69
360.0	567.43	568.02	568.18	569.78	570.42	571.48	572.97	574.41	577.02

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	579.69	581.45	584.01	586.14	588.43	588.16	586.99	583.85	578.94
45.0	571.70	572.17	574.84	576.49	578.14	580.27	581.39	580.75	578.25
90.0	568.60	569.30	570.15	571.80	572.12	573.56	574.15	573.13	569.35
135.0	570.10	572.12	571.38	572.97	574.20	575.80	576.70	577.56	577.72
180.0	571.48	572.76	573.99	577.02	577.61	580.75	580.81	582.67	582.78
225.0	579.32	581.50	583.90	587.04	590.29	592.48	592.37	590.72	586.46
270.0	579.21	581.18	584.27	586.19	590.56	591.47	592.00	593.01	591.52
315.0	582.19	585.23	586.46	590.83	591.89	592.64	593.33	591.57	588.11
360.0	579.69	581.45	584.01	586.14	588.43	588.16	586.99	583.85	578.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	570.42	558.75	545.80	527.41	507.53	481.79	452.11	417.42	378.89
45.0	576.54	571.06	565.57	550.49	535.40	525.23	505.40	482.91	455.79
90.0	566.74	560.88	551.92	539.83	524.80	507.37	485.58	459.73	427.01
135.0	575.96	573.13	567.27	558.21	546.01	529.92	511.21	490.91	464.16
180.0	581.45	578.36	573.45	563.97	553.31	538.71	520.59	498.95	474.12
225.0	580.01	570.47	557.20	548.30	520.06	507.64	479.77	450.57	411.77
270.0	586.83	581.77	571.16	558.43	540.68	520.64	498.58	470.87	436.50
315.0	581.55	572.39	560.72	543.88	524.05	501.09	472.95	439.75	403.19
360.0	570.42	558.75	545.80	527.41	507.53	481.79	452.11	417.42	378.89

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	338.76	298.42	257.71	219.08	196.75	163.12	122.46	108.07	86.86
45.0	422.11	385.23	345.64	304.61	264.16	225.47	188.54	156.14	128.11
90.0	389.34	350.70	325.60	267.57	243.38	204.21	167.54	135.62	108.55
135.0	438.79	396.05	357.47	324.48	275.72	244.33	205.54	169.94	138.39
180.0	443.43	408.25	370.21	330.24	289.63	249.34	210.92	189.45	143.35
225.0	371.80	333.60	290.27	248.12	208.68	172.55	140.53	113.45	89.85
270.0	398.82	358.69	316.86	274.66	232.34	192.06	169.94	125.18	98.96
315.0	363.01	321.39	279.45	238.47	199.78	171.43	134.40	108.18	90.59
360.0	338.76	298.42	257.71	219.08	196.75	163.12	122.46	108.07	86.86

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	70.13	57.02	47.43	40.02	34.59	30.75	28.24	26.33	24.67
45.0	104.40	84.25	68.53	55.95	46.68	39.86	36.66	31.60	30.11
90.0	85.85	68.21	54.52	44.66	37.46	32.61	29.36	27.18	25.47
135.0	111.22	88.09	69.22	54.36	43.80	36.50	31.65	28.51	26.38
180.0	126.03	100.66	73.01	64.11	51.69	42.95	36.82	32.93	30.38
225.0	71.30	56.81	46.15	41.14	33.47	30.27	28.88	26.86	26.22
270.0	85.32	60.38	52.33	41.89	34.64	30.06	27.07	25.05	23.66
315.0	71.94	57.50	46.90	39.70	34.75	31.55	29.47	27.98	26.91
360.0	70.13	57.02	47.43	40.02	34.59	30.75	28.24	26.33	24.67

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	23.23	21.85	20.46	19.08	17.75	16.47	15.29	14.65	13.59
45.0	28.30	26.91	25.63	24.41	23.18	22.06	20.84	19.61	18.44
90.0	24.19	22.97	22.01	21.00	20.04	19.34	18.39	17.59	16.95
135.0	24.94	23.82	22.75	21.53	20.46	19.29	18.54	17.37	15.67
180.0	28.83	27.60	26.65	25.58	24.46	23.13	21.74	20.25	18.92
225.0	25.21	24.14	23.18	22.06	20.94	19.82	18.60	17.53	16.41
270.0	22.59	21.53	20.57	19.66	18.81	18.01	17.16	16.36	15.67
315.0	25.79	24.57	23.45	22.17	20.84	19.56	18.28	17.16	15.99
360.0	23.23	21.85	20.46	19.08	17.75	16.47	15.29	14.65	13.59

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	12.31	11.83	11.19	10.66	10.18	9.86	9.59	9.33	9.06
45.0	17.37	16.36	15.35	14.44	13.70	13.06	12.47	12.04	11.67
90.0	16.25	15.51	14.92	14.23	13.70	13.11	12.63	12.20	11.72
135.0	14.97	13.91	13.00	12.10	11.40	10.82	10.39	10.07	9.70
180.0	17.64	16.73	15.40	14.55	13.91	13.11	12.68	12.26	11.88
225.0	15.35	14.49	13.75	13.06	12.47	12.10	11.78	11.40	11.08
270.0	15.13	14.18	13.59	13.22	12.47	12.15	11.67	11.24	10.87
315.0	15.40	14.02	13.27	12.84	12.04	11.83	11.40	11.03	10.71
360.0	12.31	11.83	11.19	10.66	10.18	9.86	9.59	9.33	9.06

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.79	8.69	8.47	8.31	8.10	8.05	7.94	7.83	7.67
45.0	11.40	10.98	10.71	10.34	10.13	9.91	9.65	9.43	9.33
90.0	11.40	11.03	10.71	10.34	10.07	9.91	9.70	9.54	9.38
135.0	9.43	9.22	9.01	8.79	8.63	8.42	8.26	8.15	7.99
180.0	11.62	11.24	10.92	10.66	10.44	10.23	10.07	9.86	9.75
225.0	10.87	10.60	10.34	10.18	9.97	9.86	9.81	9.70	9.65
270.0	10.55	10.23	9.91	9.70	9.54	9.27	9.11	9.06	8.90
315.0	10.39	10.13	9.91	9.70	9.54	9.33	9.27	9.17	9.17
360.0	8.79	8.69	8.47	8.31	8.10	8.05	7.94	7.83	7.67

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.67	7.62	7.51	7.46	7.46	7.57	7.62	7.73	7.83
45.0	9.27	9.22	9.17	9.22	9.27	9.38	9.49	9.59	9.75
90.0	9.38	9.22	9.22	9.22	9.33	9.33	9.43	9.49	9.65
135.0	7.94	7.89	7.73	7.73	7.67	7.67	7.67	7.62	7.57
180.0	9.65	9.54	9.43	9.43	9.38	9.33	9.33	9.33	9.33
225.0	9.59	9.59	9.65	9.65	9.70	9.86	9.91	9.91	10.02
270.0	8.85	8.79	8.79	8.85	8.85	9.06	9.11	9.22	9.33
315.0	9.11	9.22	9.33	9.38	9.59	9.75	9.91	10.23	10.39
360.0	7.67	7.62	7.51	7.46	7.46	7.57	7.62	7.73	7.83

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.05	8.31	8.47	8.42	8.10	7.73	7.51	7.35	7.19
45.0	9.91	10.02	10.13	10.18	10.28	10.34	10.34	10.39	10.55
90.0	9.81	9.91	10.02	10.02	10.07	10.18	10.34	10.34	10.13
135.0	7.51	7.73	7.57	7.25	7.14	6.98	6.93	6.71	6.39
180.0	9.27	9.27	9.22	9.17	9.06	8.85	8.63	8.31	7.99
225.0	10.07	10.07	9.97	9.97	9.81	9.65	9.65	9.70	9.59
270.0	9.43	9.54	9.65	9.65	10.28	12.15	12.63	11.88	9.65
315.0	10.60	10.71	10.82	10.87	10.87	10.82	10.60	10.34	10.02
360.0	8.05	8.31	8.47	8.42	8.10	7.73	7.51	7.35	7.19

Intensity data(cd)

C/γ(°)	90.0
0.0	7.14
45.0	10.55
90.0	10.07
135.0	6.13
180.0	7.73
225.0	9.54
270.0	9.43
315.0	9.97
360.0	7.14