NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86 750 3771111
Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client: NT
LumCAT: 61-0175
Luminaire:
Report No: 20260318-B003
Ballast type: AC

Test No: 20260318-C003	Voltage(V): 4.830
LampCAT: CREE XPP	Current(A): 1.691
Lamp flux(lm): 443.0	Power (W): 8.163
Number of Lamps: 1	PF: 0.000
Length(mm): 35	Width(mm): 35
Phm Type: C	Height(mm): 18

Photometric Results

Lumens(lm): 402.74, Efficiency(%): 90.92% , Luminous Efficacy(lm/W): 49.34
Central intensity(cd): 1883.194, Maximum intensity(cd): 54507.380
Angle of maximum intensity: C=45.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=2.2
[C90/270]Total=2.3
Field angle(10%Imax): [C0/180]Total=5.2
[C90/270]Total=3.9
Maximum s/h(1/2): C0_180=0.21 C90_270=0.17
Maximum s/h(1/4): C0_180=0.22 C90_270=0.23
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.84%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 92.627%

Equipment: GMS 1800	Date: 2026/3/18	Operator: 杨泽全
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	27713.926	0.000	0	0.00%	0.00%
1.0	24246.906	24.862	24.862	5.61%	6.17%
2.0	16687.133	58.752	83.615	13.26%	20.76%
3.0	7318.589	57.414	141.028	12.96%	35.02%
4.0	2846.700	34.026	175.055	7.68%	43.47%
5.0	1998.984	20.846	195.901	4.71%	48.64%
6.0	666.091	14.006	209.907	3.16%	52.12%
7.0	542.953	7.505	217.411	1.69%	53.98%
8.0	452.707	7.126	224.537	1.61%	55.75%
9.0	384.145	6.782	231.319	1.53%	57.44%
10.0	336.832	6.525	237.844	1.47%	59.06%
11.0	292.999	6.293	244.137	1.42%	60.62%
12.0	259.530	6.040	250.177	1.36%	62.12%
13.0	224.522	5.744	255.921	1.30%	63.55%
14.0	199.434	5.427	261.348	1.23%	64.89%
15.0	174.853	5.138	266.486	1.16%	66.17%
16.0	154.280	4.823	271.309	1.09%	67.37%
17.0	138.094	4.553	275.862	1.03%	68.50%
18.0	126.309	4.359	280.222	0.98%	69.58%
19.0	114.497	4.190	284.411	0.95%	70.62%
20.0	102.888	3.979	288.39	0.90%	71.61%
21.0	93.284	3.767	292.157	0.85%	72.54%
22.0	84.600	3.575	295.731	0.81%	73.43%
23.0	77.759	3.407	299.138	0.77%	74.28%
24.0	71.093	3.254	302.392	0.73%	75.08%
25.0	64.990	3.094	305.487	0.70%	75.85%
26.0	60.645	2.966	308.452	0.67%	76.59%
27.0	55.631	2.845	311.297	0.64%	77.30%
28.0	51.827	2.721	314.018	0.61%	77.97%
29.0	48.312	2.620	316.638	0.59%	78.62%
30.0	44.958	2.518	319.156	0.57%	79.25%
31.0	42.736	2.440	321.596	0.55%	79.85%
32.0	40.352	2.380	323.977	0.54%	80.44%
33.0	38.130	2.312	326.289	0.52%	81.02%
34.0	36.295	2.252	328.541	0.51%	81.58%
35.0	34.327	2.193	330.734	0.50%	82.12%
36.0	33.047	2.145	332.88	0.48%	82.65%
37.0	31.535	2.106	334.986	0.48%	83.18%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	30.143	2.059	337.045	0.46%	83.69%
39.0	29.011	2.019	339.064	0.46%	84.19%
40.0	27.724	1.979	341.042	0.45%	84.68%
41.0	26.571	1.933	342.976	0.44%	85.16%
42.0	25.516	1.892	344.868	0.43%	85.63%
43.0	24.455	1.851	346.719	0.42%	86.09%
44.0	23.653	1.816	348.535	0.41%	86.54%
45.0	22.732	1.783	350.318	0.40%	86.98%
46.0	21.804	1.742	352.059	0.39%	87.42%
47.0	21.002	1.703	353.762	0.38%	87.84%
48.0	20.046	1.659	355.421	0.37%	88.25%
49.0	19.350	1.618	357.039	0.37%	88.65%
50.0	18.647	1.584	358.623	0.36%	89.05%
51.0	17.902	1.546	360.17	0.35%	89.43%
52.0	17.381	1.514	361.684	0.34%	89.81%
53.0	16.741	1.484	363.168	0.34%	90.17%
54.0	16.193	1.452	364.62	0.33%	90.54%
55.0	15.630	1.421	366.04	0.32%	90.89%
56.0	15.068	1.387	367.427	0.31%	91.23%
57.0	14.702	1.361	368.788	0.31%	91.57%
58.0	14.288	1.341	370.129	0.30%	91.90%
59.0	13.830	1.315	371.444	0.30%	92.23%
60.0	13.465	1.290	372.733	0.29%	92.55%
61.0	13.036	1.265	373.998	0.29%	92.86%
62.0	12.762	1.243	375.241	0.28%	93.17%
63.0	12.452	1.226	376.467	0.28%	93.48%
64.0	12.136	1.207	377.674	0.27%	93.78%
65.0	11.946	1.192	378.866	0.27%	94.07%
66.0	11.700	1.180	380.045	0.27%	94.37%
67.0	11.482	1.166	381.211	0.26%	94.65%
68.0	11.299	1.154	382.365	0.26%	94.94%
69.0	11.138	1.145	383.51	0.26%	95.23%
70.0	11.025	1.138	384.648	0.26%	95.51%
71.0	10.884	1.132	385.78	0.26%	95.79%
72.0	10.730	1.124	386.904	0.25%	96.07%
73.0	10.596	1.115	388.019	0.25%	96.35%
74.0	10.385	1.103	389.122	0.25%	96.62%
75.0	10.238	1.090	390.212	0.25%	96.89%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.886	1.068	391.28	0.24%	97.15%
77.0	9.485	1.033	392.313	0.23%	97.41%
78.0	9.316	1.006	393.319	0.23%	97.66%
79.0	8.880	0.978	394.297	0.22%	97.90%
80.0	8.550	0.940	395.237	0.21%	98.14%
81.0	8.241	0.908	396.145	0.20%	98.36%
82.0	7.861	0.873	397.018	0.20%	98.58%
83.0	7.530	0.837	397.855	0.19%	98.79%
84.0	7.228	0.804	398.659	0.18%	98.99%
85.0	6.806	0.766	399.425	0.17%	99.18%
86.0	6.434	0.724	400.148	0.16%	99.36%
87.0	6.166	0.690	400.838	0.16%	99.53%
88.0	5.885	0.660	401.498	0.15%	99.69%
89.0	5.646	0.632	402.13	0.14%	99.85%
90.0	5.449	0.608	402.739	0.14%	100.00%

Zonal flux distribution table

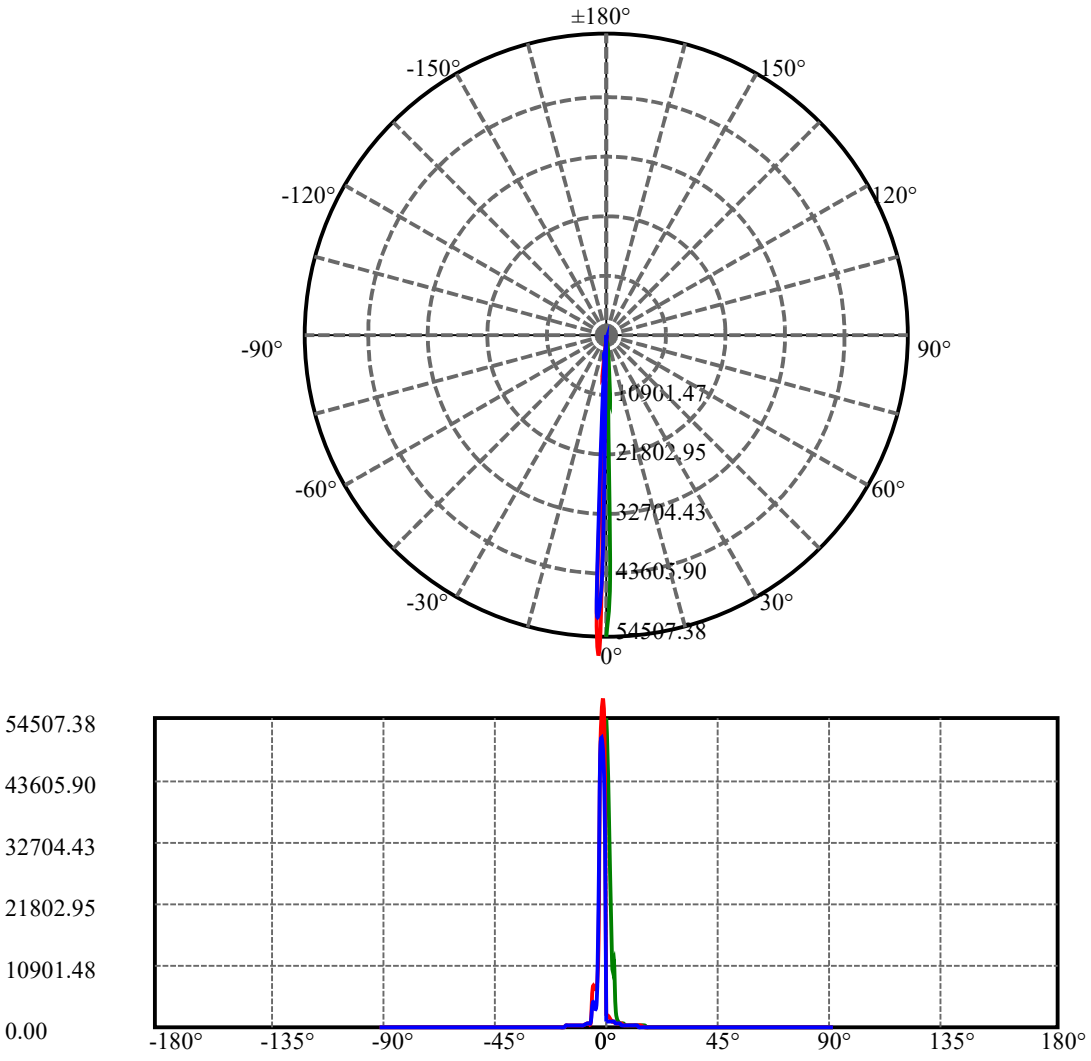
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	319.16	72.05%	79.25%
0-40	341.04	76.99%	84.68%
0-60	372.73	84.14%	92.55%
0-90	402.13	90.78%	99.85%
0-120	402.13	90.78%	99.85%
0-180	402.74	90.92%	100.00%
60-90	29.40	6.64%	7.30%
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%
0-31.25	322.19	72.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	237.84
10-20	50.55
20-30	30.77
30-40	21.89
40-50	17.58
50-60	14.11
60-70	11.91
70-80	10.59
80-90	6.89
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]



C45(Max):

C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:4.3 Right:0.9
:C90/270Left:2.0 Right:1.9

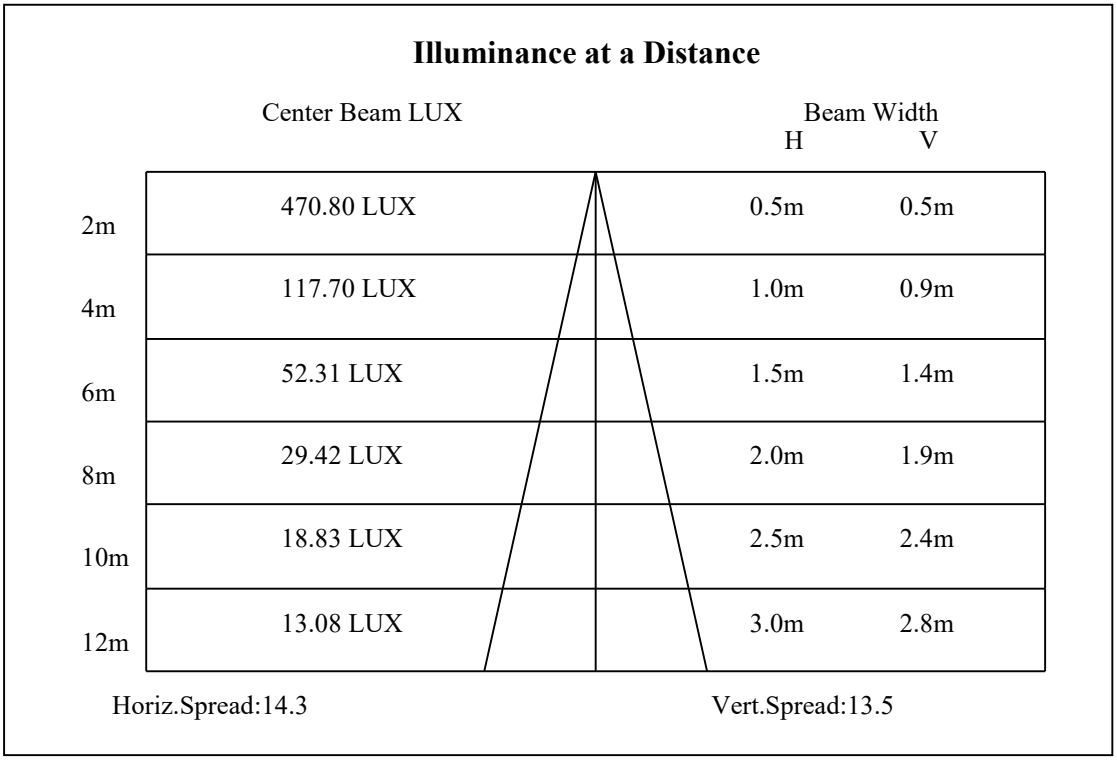
Beam Angle(50%Imax):C0/180Left:1.7 Right:0.5
:C90/270Left:0.9 Right:1.4

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/3/18
Humidity(%): 60.0%

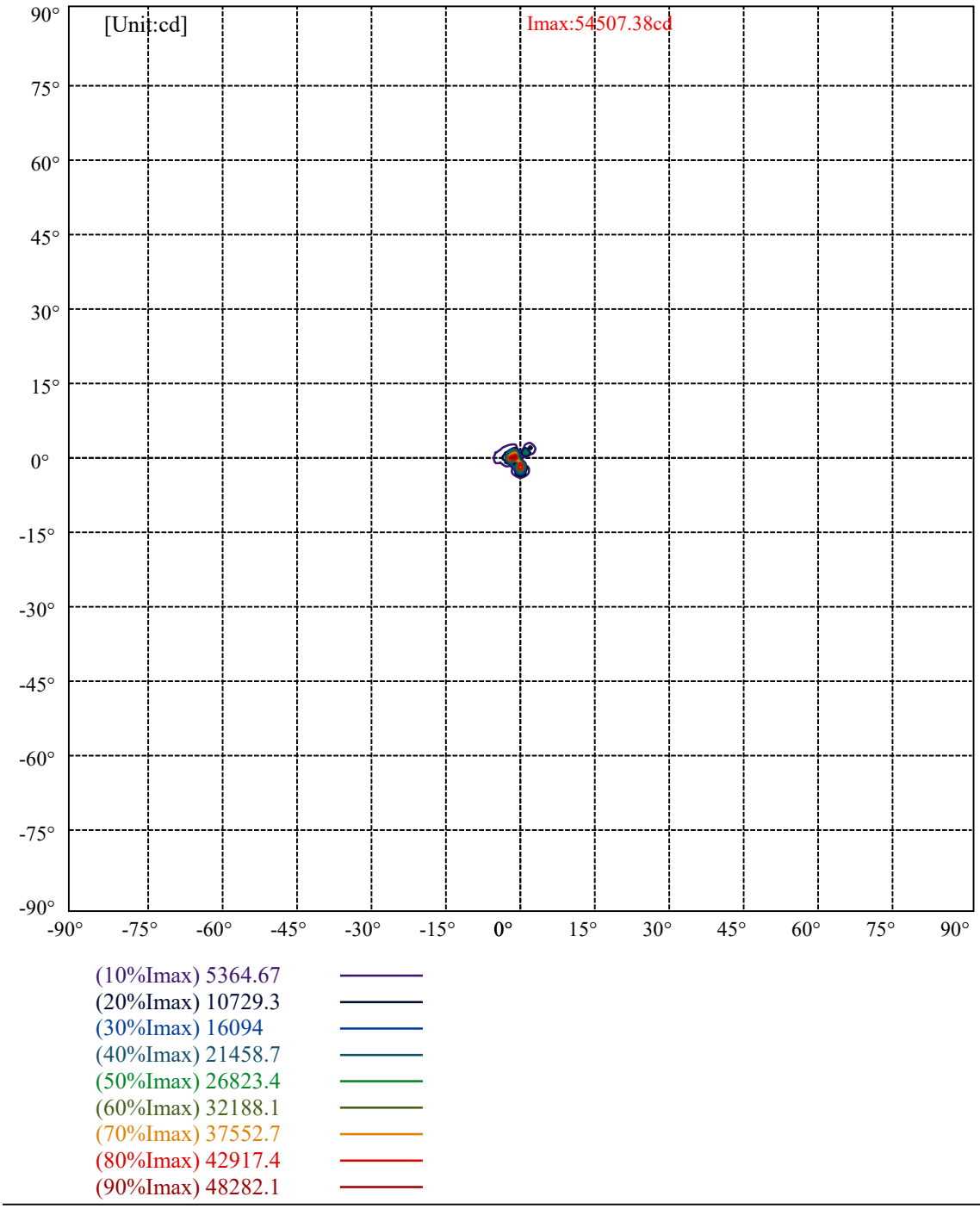
Operator: 杨泽全
Distance(m): 7.50

Lux distance Curve



Equipment: GMS 1800
Date: 2026/3/18
Operator: 杨泽全
Temperature(°C): 25.0
Humidity(%): 60.0%
Distance(m): 7.50

ISO-Intensity(V-H)

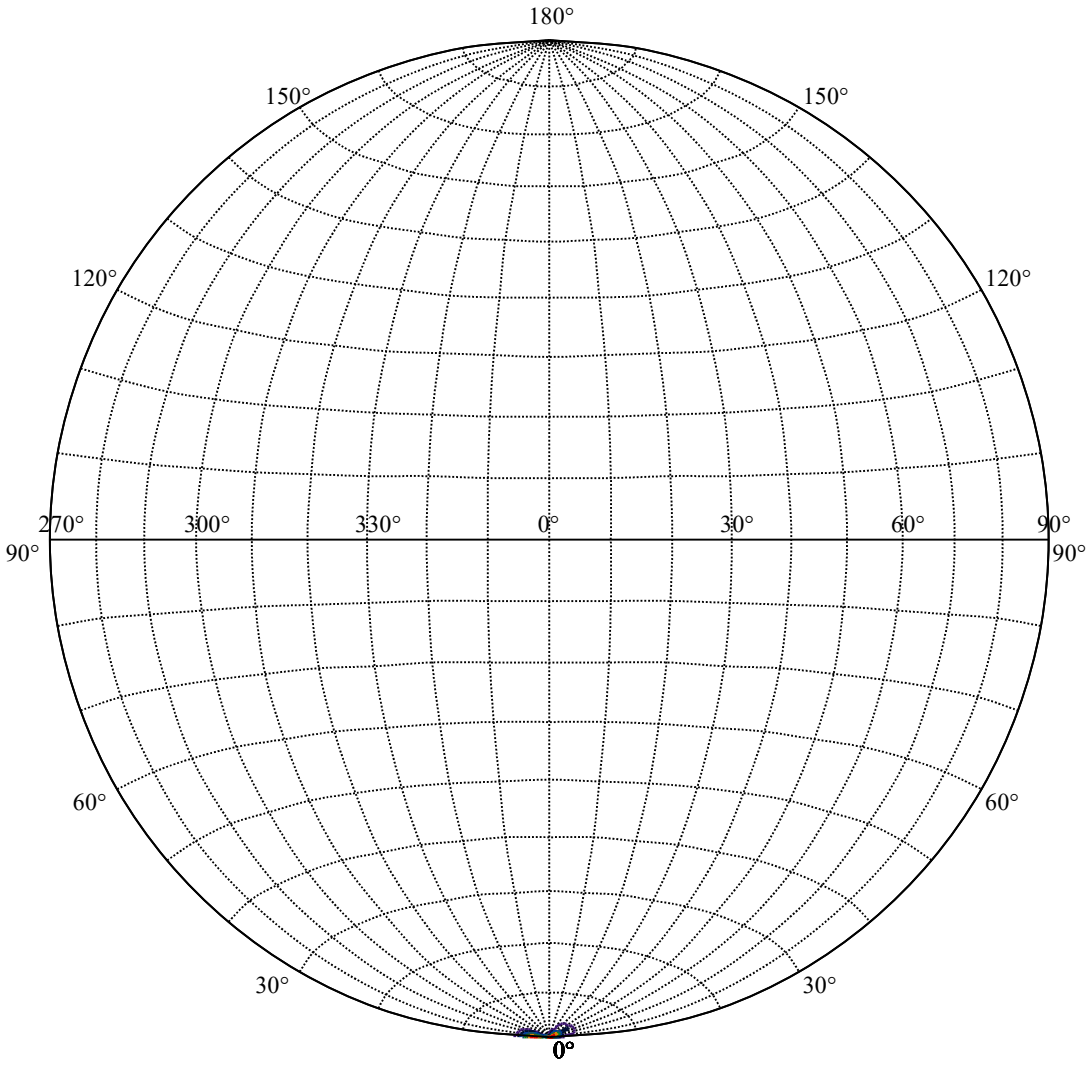


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/3/18
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:54507.38

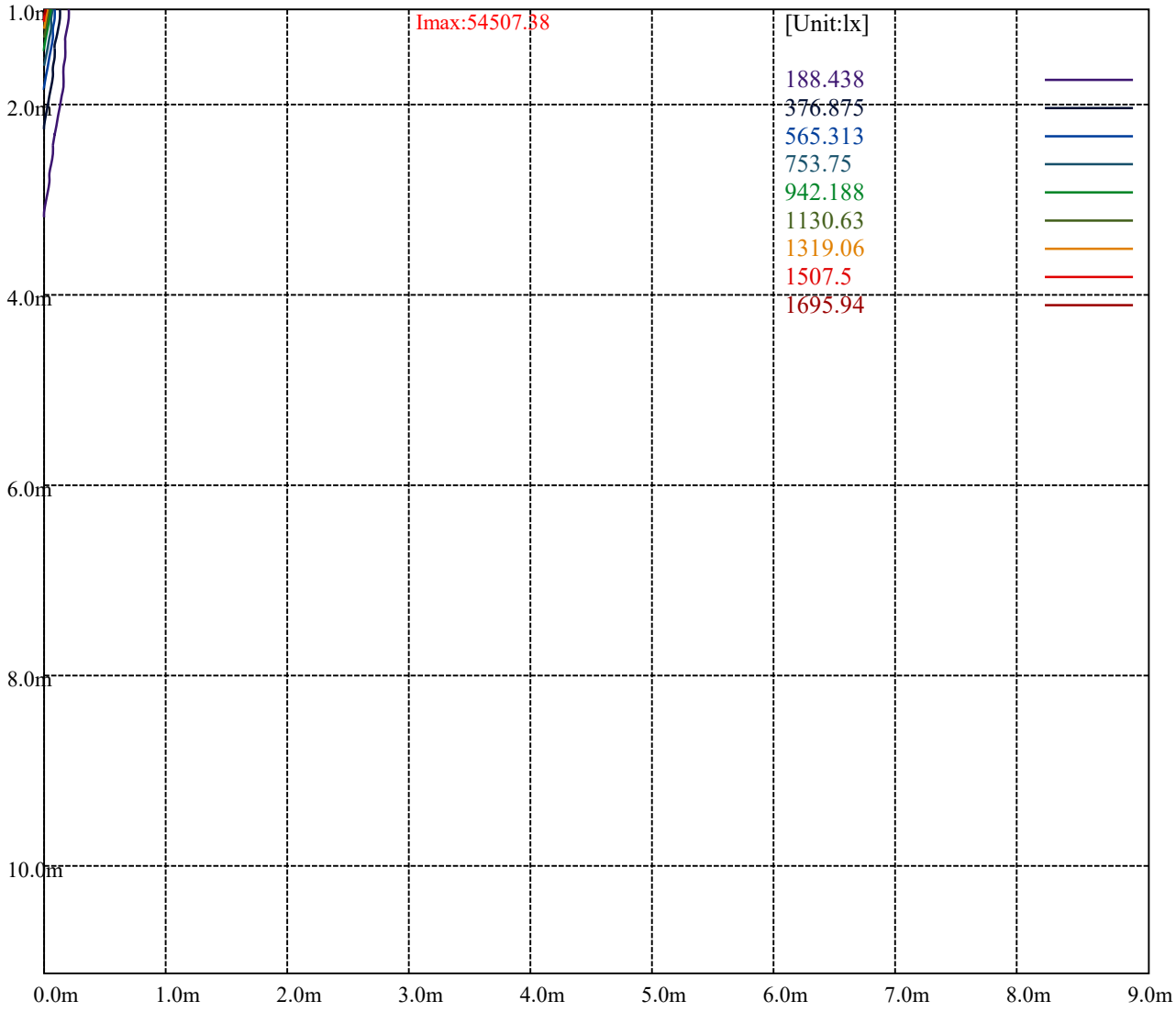
(10%Imax) 5450.63
(20%Imax) 10901.3
(30%Imax) 16351.9
(40%Imax) 21802.5
(50%Imax) 27253.1
(60%Imax) 32703.8
(70%Imax) 38154.4
(80%Imax) 43605
(90%Imax) 49055.6

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/3/18
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2026/3/18
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 7.50

NT NT 61-0175

Luminance Limitting Curve(no luminous side)

Luminance Table

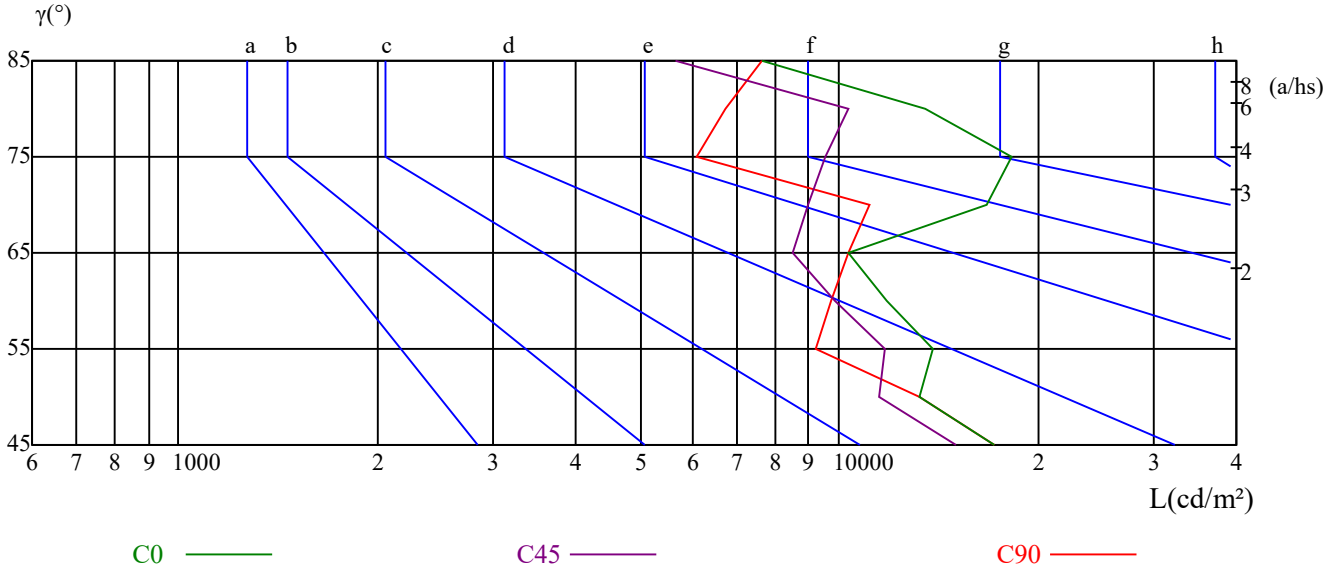
γ	45	50	55	60	65	70	75	80	85
C0	17154	13287	13847	11803	10334	16692	18232	13503	7660
C45	15038	11480	11780	9876	8489	8956	9553	10320	5657
C90	17154	13287	9231	9714	10334	11128	6077	6752	7660

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
21730	21730	21730	44354	17741	31048	79028	52685	52685

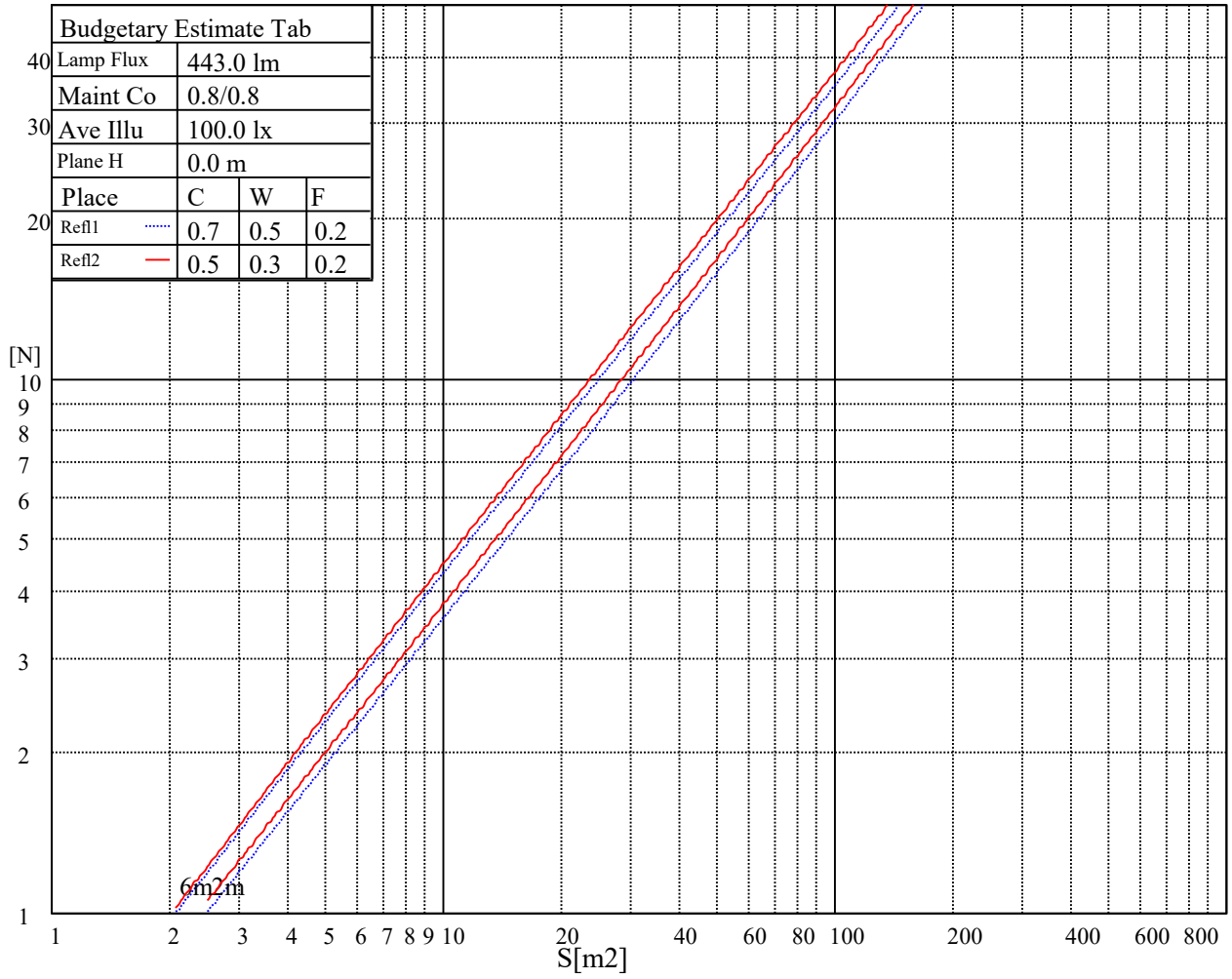
Glare Table

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



Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

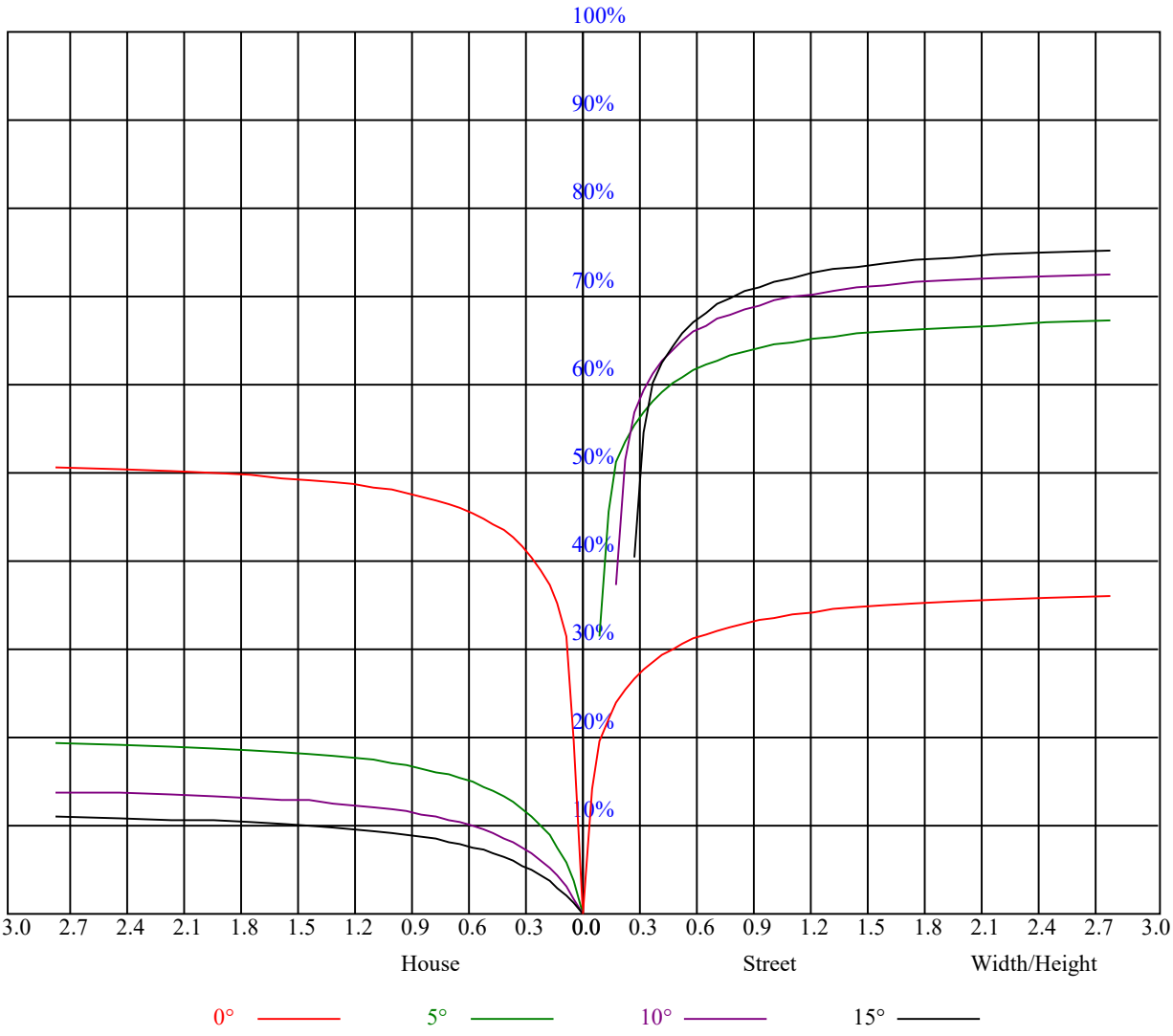
Date: 2026/3/18
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 7.50

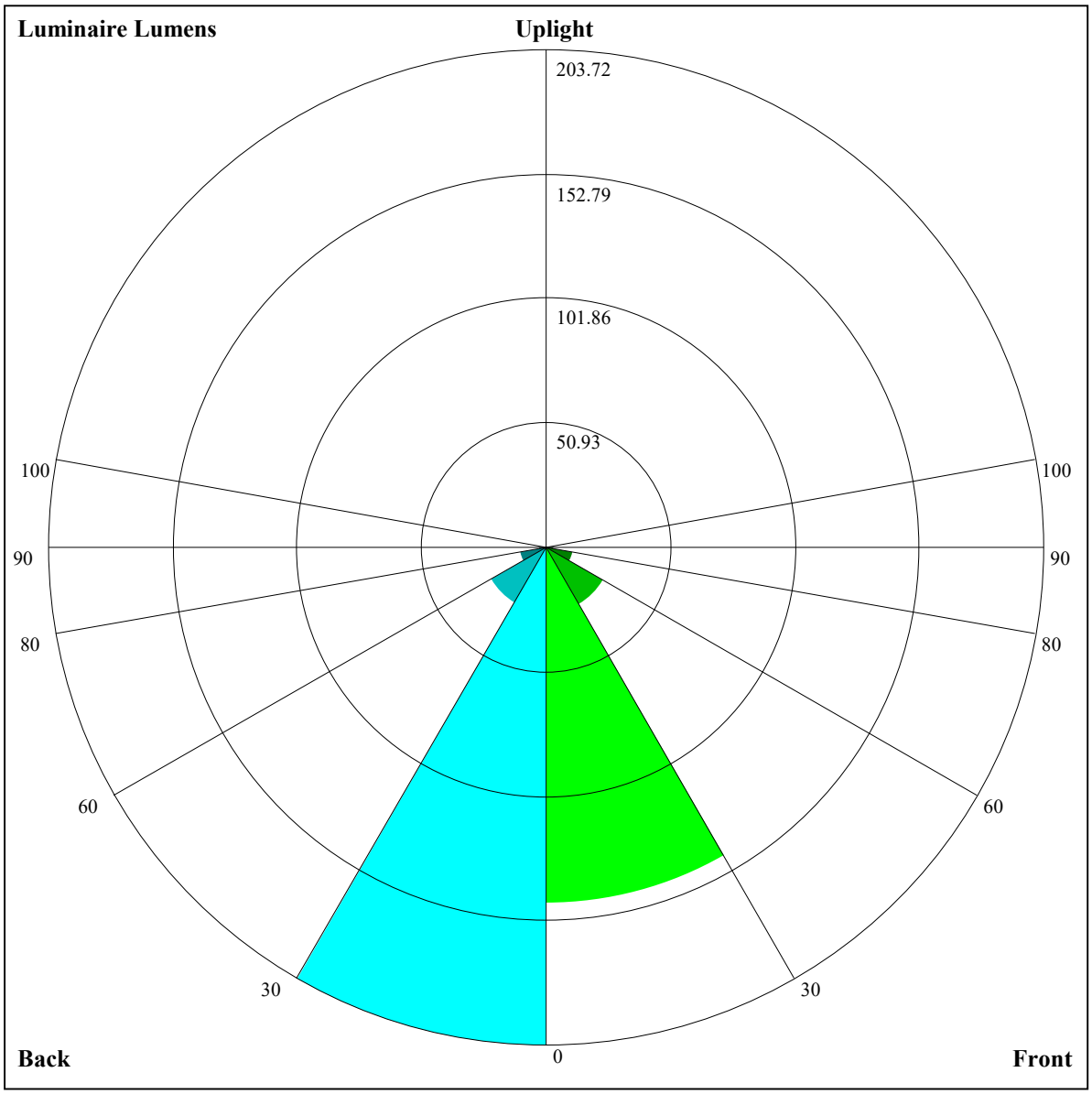
Utilization factor table for indoor luminaire

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.90	0.89	0.89	0.88	0.87	0.85
2	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.90	0.87	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.80	0.83	0.81	0.79	0.78
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.77	0.81	0.78	0.76	0.75
5	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
7	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.74	0.72	0.70	0.69
9	0.75	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.68
10	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.72	0.69	0.67	0.67

Coefficient Utilization Curve



Equipment: GMS 1800	Date: 2026/3/18	Operator: 杨泽全
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.50



Luminaire Lumens:
FL=145.57,FM=26.68,FH=11.02,FVH=3.56
BL=203.72,BM=26.44,BH=10.8,BVH=3.58
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	1883.19	1883.19	1001.03	1001.03	728.61	639.34	525.38	440.89	377.83
45.0	54507.38	43864.88	11819.25	11819.25	2824.88	734.57	589.44	527.57	426.32
90.0	1099.63	1099.63	1021.73	897.30	689.51	536.29	480.15	404.89	343.13
135.0	53365.50	48449.25	16594.88	4996.13	4996.13	902.19	692.38	534.88	442.63
180.0	1883.19	53646.75	50339.25	15554.25	7189.88	7189.88	850.44	677.19	556.82
225.0	54507.38	2081.19	2081.19	1040.40	1040.40	894.49	711.68	559.46	498.66
270.0	1099.63	41935.50	49624.88	22225.50	4354.88	4354.88	883.07	709.82	581.57
315.0	53365.50	1014.86	1014.86	1014.86	949.33	740.25	596.19	488.93	394.71
360.0	1883.19	1883.19	1001.03	1001.03	728.61	639.34	525.38	440.89	377.83

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	319.11	292.73	256.67	211.28	201.26	174.88	163.24	139.84	123.92
45.0	363.32	314.38	288.51	288.51	207.39	182.36	170.38	149.18	134.61
90.0	295.14	249.81	230.68	204.19	169.26	161.78	142.54	133.59	121.16
135.0	374.01	322.82	296.38	296.38	211.89	197.16	171.96	154.29	139.05
180.0	464.57	420.13	347.01	299.76	282.88	245.81	198.68	175.95	157.05
225.0	417.43	354.66	304.65	255.99	236.25	206.21	182.48	158.34	141.19
270.0	480.88	433.07	352.63	303.13	285.13	247.39	200.64	176.74	158.01
315.0	358.71	307.07	267.47	217.01	202.11	179.89	168.92	146.31	129.77
360.0	319.11	292.73	256.67	211.28	201.26	174.88	163.24	139.84	123.92

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	116.38	105.24	95.63	87.47	78.81	74.98	68.96	63.11	57.04
45.0	122.01	110.70	103.73	88.54	80.38	75.71	68.01	62.38	57.88
90.0	102.77	96.86	86.96	79.20	72.00	64.58	61.14	56.48	52.26
135.0	124.99	117.28	103.44	90.17	85.22	77.18	69.53	63.68	58.89
180.0	147.32	130.56	118.07	106.31	94.33	86.23	78.36	71.21	67.39
225.0	125.94	113.68	100.97	95.34	87.08	79.09	72.39	65.48	62.72
270.0	148.61	130.33	113.46	107.49	97.14	87.02	79.48	72.51	68.79
315.0	122.46	111.32	100.86	91.74	81.84	77.29	70.88	65.08	60.19
360.0	116.38	105.24	95.63	87.47	78.81	74.98	68.96	63.11	57.04

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	53.16	50.91	46.69	43.71	42.24	39.94	38.03	36.39	34.37
45.0	53.72	51.36	47.59	44.66	41.96	39.88	38.70	36.79	34.71
90.0	48.83	44.83	43.37	39.88	37.29	36.00	34.03	32.34	30.99
135.0	55.91	51.47	47.70	44.83	42.08	40.56	37.86	35.78	34.14
180.0	60.53	55.69	51.75	48.32	46.41	42.98	40.56	38.53	36.34
225.0	56.36	50.79	48.71	44.55	41.51	38.76	36.00	34.76	32.79
270.0	61.48	56.76	52.76	48.94	47.03	43.48	40.73	38.36	35.66
315.0	55.07	52.82	47.93	44.78	43.37	41.23	39.15	37.41	35.61
360.0	53.16	50.91	46.69	43.71	42.24	39.94	38.03	36.39	34.37

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	33.47	32.23	31.05	29.81	28.18	27.11	25.99	24.58	23.85
45.0	33.92	32.63	30.43	28.97	27.84	27.06	25.82	24.69	23.57
90.0	29.31	28.41	27.17	25.93	24.69	23.40	22.28	21.21	20.25
135.0	32.06	31.16	29.53	27.73	26.94	25.54	24.36	23.34	22.44
180.0	34.76	33.24	32.18	31.39	30.26	29.19	28.18	27.34	26.61
225.0	31.05	29.59	28.13	27.51	25.88	24.81	24.24	23.34	22.56
270.0	34.88	32.12	30.54	29.81	28.18	26.89	25.82	24.75	24.19
315.0	34.93	32.91	32.12	30.94	29.81	28.58	27.45	26.38	25.76
360.0	33.47	32.23	31.05	29.81	28.18	27.11	25.99	24.58	23.85

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	22.84	21.94	21.04	19.91	19.35	18.62	17.94	17.21	16.48
45.0	22.61	22.05	21.15	19.97	19.58	18.73	18.06	17.38	16.76
90.0	19.74	19.01	18.06	17.33	16.48	16.20	15.81	15.19	14.63
135.0	21.77	20.70	19.80	19.01	18.11	17.38	16.82	16.20	15.81
180.0	25.48	24.08	23.40	22.44	21.49	20.59	19.86	19.35	18.68
225.0	21.77	20.93	20.53	19.74	19.13	18.39	17.55	17.27	16.54
270.0	22.78	21.94	21.21	20.19	19.52	18.84	18.11	17.89	17.16
315.0	24.86	23.79	22.84	21.77	21.15	20.42	19.07	18.56	17.89
360.0	22.84	21.94	21.04	19.91	19.35	18.62	17.94	17.21	16.48

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	16.03	15.47	14.85	14.57	14.29	13.95	13.67	13.33	13.16
45.0	16.48	15.92	15.47	14.96	14.51	14.29	13.67	13.22	13.11
90.0	14.18	13.78	13.05	12.71	12.49	12.32	11.87	11.42	11.08
135.0	15.24	14.74	14.29	13.95	13.67	13.22	12.77	12.49	12.26
180.0	18.00	17.33	16.82	16.43	15.98	15.30	15.08	14.68	14.40
225.0	15.53	15.24	14.74	14.29	13.89	13.28	13.11	12.71	12.38
270.0	16.59	16.03	15.41	15.24	14.51	13.84	13.61	13.16	12.77
315.0	17.49	16.54	15.92	15.47	14.96	14.46	13.95	13.28	12.94
360.0	16.03	15.47	14.85	14.57	14.29	13.95	13.67	13.33	13.16

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.16	13.11	13.05	13.22	13.22	13.56	13.89	14.18	14.63
45.0	12.77	12.54	12.26	12.04	11.98	11.70	11.64	11.42	11.19
90.0	10.80	10.58	10.35	10.01	9.56	9.28	9.00	8.61	8.33
135.0	11.81	11.53	11.36	11.25	11.25	11.14	11.25	11.14	11.08
180.0	14.06	13.67	13.56	13.28	13.05	12.77	12.43	12.38	12.09
225.0	12.04	11.64	11.48	11.36	10.97	10.86	10.58	10.58	10.58
270.0	12.32	11.76	11.64	11.08	10.74	10.46	10.07	9.84	9.45
315.0	12.66	12.26	11.87	11.36	11.08	10.63	10.24	10.07	9.73
360.0	13.16	13.11	13.05	13.22	13.22	13.56	13.89	14.18	14.63

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.02	15.13	15.13	14.96	14.74	13.89	13.11	12.21	11.42
45.0	11.14	10.91	10.52	10.41	10.18	9.84	9.73	9.28	9.23
90.0	8.10	8.10	7.71	7.31	7.14	6.75	6.69	6.24	5.85
135.0	10.97	10.69	11.08	11.19	10.29	9.73	9.56	9.28	9.06
180.0	11.98	11.81	11.53	11.48	11.36	11.19	11.25	11.03	11.08
225.0	10.35	10.29	10.24	10.07	9.62	9.11	8.89	8.44	7.93
270.0	8.89	8.78	8.38	8.10	7.65	7.37	7.43	7.09	6.58
315.0	9.39	9.06	8.49	8.38	8.10	7.99	7.88	7.48	7.26
360.0	15.02	15.13	15.13	14.96	14.74	13.89	13.11	12.21	11.42

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.74	9.96	9.28	8.66	7.87	7.26	6.75	6.30	5.96
45.0	8.89	8.49	8.44	8.04	7.76	7.48	7.31	7.03	6.81
90.0	5.79	5.63	5.12	4.84	4.61	4.50	4.22	3.99	3.88
135.0	8.21	7.82	7.54	6.98	6.47	5.96	5.68	5.57	5.40
180.0	11.08	10.69	10.35	10.24	9.56	8.89	8.44	7.88	7.37
225.0	7.59	7.26	6.75	6.58	6.19	5.91	5.74	5.46	5.29
270.0	6.53	6.24	6.13	5.91	5.68	5.40	5.34	5.18	4.89
315.0	7.09	6.81	6.64	6.58	6.30	6.08	5.85	5.68	5.57
360.0	10.74	9.96	9.28	8.66	7.87	7.26	6.75	6.30	5.96

Intensity data(cd)

C/γ(°)	90.0
0.0	5.79
45.0	6.47
90.0	3.77
135.0	5.12
180.0	6.97
225.0	5.18
270.0	4.78
315.0	5.51
360.0	5.79