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

NT

Client: NT
LumCAT: 61-0244-1
Luminaire: 92.70.458.00
Report No: 20250519-B007
Ballast type: AC
Test No: 20250519-C007
LampCAT: CITIZEN CLU7A2
Lamp flux(lm): 637.6
Number of Lamps: 1
Length(mm): 28
Phm Type: C

Voltage(V): 36.340
Current(A): 0.176
Power (W): 6.395
PF: 0.000
Width(mm): 28
Height(mm): 14

Photometric Results

Lumens(lm): 578.16, Efficiency(%): 90.68% , Luminous Efficacy(lm/W): 90.41
Central intensity(cd): 2343.721, Maximum intensity(cd): 2343.721
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=27.6
[C90/270]Total=27.6
Field angle(10%Imax): [C0/180]Total=44.2
[C90/270]Total=44.2
Maximum s/h(1/2): C0_180=0.47 C90_270=0.47
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.68%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.338%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2343.721	0.000	0	0.00%	0.00%
1.0	2340.257	2.241	2.241	0.35%	0.39%
2.0	2323.670	6.694	8.935	1.05%	1.55%
3.0	2301.955	11.063	19.998	1.74%	3.46%
4.0	2264.319	15.285	35.283	2.40%	6.10%
5.0	2212.627	19.260	54.543	3.02%	9.43%
6.0	2149.745	22.925	77.468	3.60%	13.40%
7.0	2066.813	26.172	103.64	4.11%	17.93%
8.0	1975.220	28.928	132.568	4.54%	22.93%
9.0	1867.708	31.145	163.713	4.89%	28.32%
10.0	1750.004	32.739	196.452	5.14%	33.98%
11.0	1620.309	33.676	230.128	5.28%	39.80%
12.0	1461.039	33.684	263.812	5.28%	45.63%
13.0	1307.157	32.852	296.663	5.15%	51.31%
14.0	1139.560	31.318	327.981	4.91%	56.73%
15.0	1002.145	29.402	357.383	4.61%	61.81%
16.0	884.647	27.647	385.03	4.34%	66.60%
17.0	735.182	25.225	410.255	3.96%	70.96%
18.0	609.624	22.173	432.428	3.48%	74.79%
19.0	483.667	19.021	451.449	2.98%	78.08%
20.0	374.256	15.702	467.152	2.46%	80.80%
21.0	304.626	13.036	480.188	2.04%	83.05%
22.0	239.086	10.926	491.114	1.71%	84.94%
23.0	171.627	8.618	499.732	1.35%	86.43%
24.0	127.869	6.548	506.28	1.03%	87.57%
25.0	98.207	5.140	511.42	0.81%	88.46%
26.0	75.432	4.099	515.519	0.64%	89.16%
27.0	63.069	3.388	518.907	0.53%	89.75%
28.0	54.143	2.968	521.875	0.47%	90.26%
29.0	47.248	2.653	524.528	0.42%	90.72%
30.0	41.480	2.396	526.923	0.38%	91.14%
31.0	36.684	2.175	529.098	0.34%	91.51%
32.0	32.740	1.989	531.087	0.31%	91.86%
33.0	29.130	1.823	532.91	0.29%	92.17%
34.0	26.385	1.680	534.59	0.26%	92.46%
35.0	23.934	1.563	536.153	0.25%	92.73%
36.0	22.162	1.468	537.62	0.23%	92.99%
37.0	20.290	1.385	539.005	0.22%	93.23%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	18.678	1.301	540.306	0.20%	93.45%
39.0	17.652	1.240	541.546	0.19%	93.67%
40.0	16.573	1.194	542.739	0.19%	93.87%
41.0	15.661	1.148	543.887	0.18%	94.07%
42.0	14.941	1.112	544.999	0.17%	94.26%
43.0	14.308	1.083	546.083	0.17%	94.45%
44.0	13.762	1.059	547.142	0.17%	94.63%
45.0	13.269	1.039	548.181	0.16%	94.81%
46.0	12.823	1.020	549.201	0.16%	94.99%
47.0	12.470	1.006	550.207	0.16%	95.16%
48.0	12.170	0.996	551.203	0.16%	95.34%
49.0	11.890	0.988	552.191	0.15%	95.51%
50.0	11.644	0.981	553.173	0.15%	95.68%
51.0	11.431	0.976	554.149	0.15%	95.85%
52.0	11.264	0.974	555.123	0.15%	96.01%
53.0	11.111	0.973	556.096	0.15%	96.18%
54.0	10.924	0.971	557.067	0.15%	96.35%
55.0	10.731	0.967	558.034	0.15%	96.52%
56.0	10.565	0.962	558.996	0.15%	96.68%
57.0	10.378	0.958	559.954	0.15%	96.85%
58.0	10.178	0.951	560.904	0.15%	97.01%
59.0	9.939	0.940	561.845	0.15%	97.18%
60.0	9.705	0.928	562.773	0.15%	97.34%
61.0	9.379	0.911	563.684	0.14%	97.50%
62.0	9.066	0.889	564.572	0.14%	97.65%
63.0	8.760	0.867	565.439	0.14%	97.80%
64.0	8.380	0.841	566.28	0.13%	97.94%
65.0	7.974	0.809	567.09	0.13%	98.08%
66.0	7.581	0.776	567.866	0.12%	98.22%
67.0	7.174	0.742	568.608	0.12%	98.35%
68.0	6.781	0.707	569.315	0.11%	98.47%
69.0	6.355	0.670	569.985	0.11%	98.59%
70.0	5.935	0.631	570.616	0.10%	98.69%
71.0	5.529	0.593	571.208	0.09%	98.80%
72.0	5.142	0.555	571.763	0.09%	98.89%
73.0	4.769	0.518	572.282	0.08%	98.98%
74.0	4.436	0.484	572.766	0.08%	99.07%
75.0	4.177	0.455	573.221	0.07%	99.15%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.963	0.432	573.653	0.07%	99.22%
77.0	3.784	0.413	574.066	0.06%	99.29%
78.0	3.704	0.401	574.467	0.06%	99.36%
79.0	3.604	0.393	574.859	0.06%	99.43%
80.0	3.444	0.380	575.239	0.06%	99.49%
81.0	3.231	0.361	575.6	0.06%	99.56%
82.0	2.984	0.337	575.937	0.05%	99.62%
83.0	2.751	0.312	576.249	0.05%	99.67%
84.0	2.611	0.292	576.541	0.05%	99.72%
85.0	2.591	0.284	576.825	0.04%	99.77%
86.0	2.491	0.278	577.103	0.04%	99.82%
87.0	2.391	0.267	577.37	0.04%	99.86%
88.0	2.451	0.265	577.635	0.04%	99.91%
89.0	2.478	0.270	577.906	0.04%	99.96%
90.0	2.218	0.257	578.163	0.04%	100.00%

Zonal flux distribution table

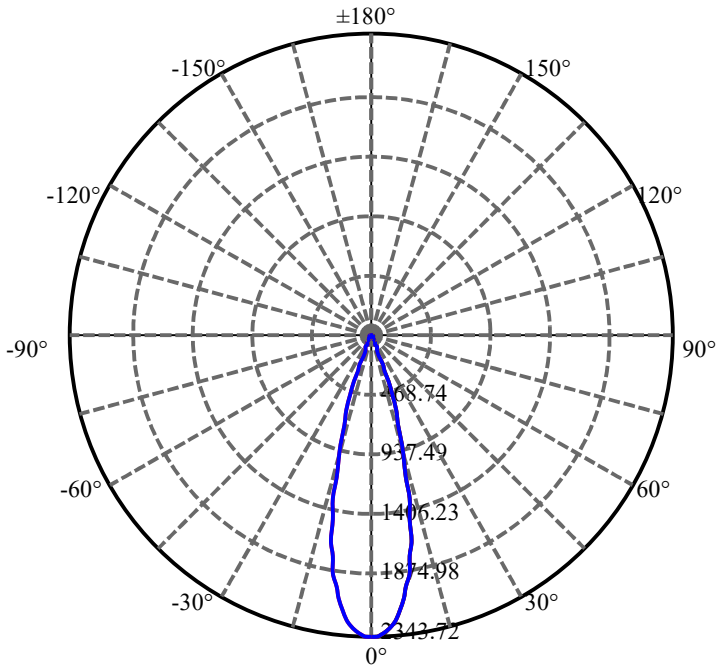
ZONAL LUMEN SUMMARY

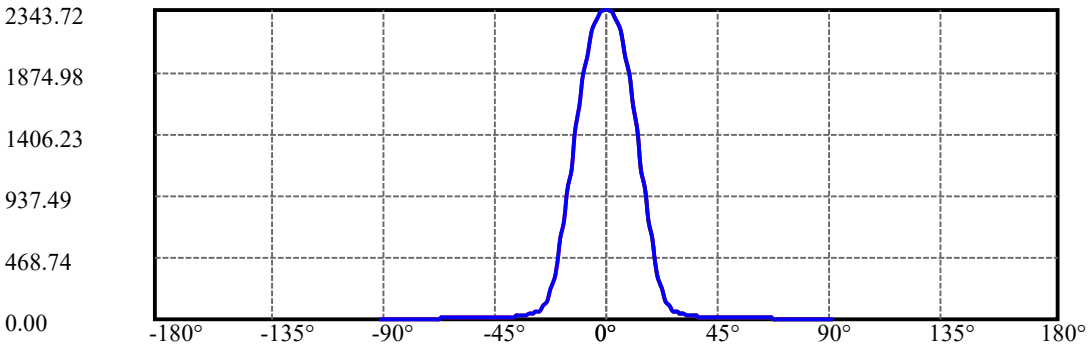
Zone	Lumens	%Lamp	%Fixt
0-30	526.92	82.65%	91.14%
0-40	542.74	85.13%	93.87%
0-60	562.77	88.27%	97.34%
0-90	577.91	90.64%	99.96%
0-120	577.91	90.64%	99.96%
0-180	578.16	90.68%	100.00%
60-90	15.13	2.37%	2.62%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-19.71	462.53	72.55%	80.00%

ZONAL LUMEN SUMMARY

0-10	196.45
10-20	270.70
20-30	59.77
30-40	15.82
40-50	10.43
50-60	9.60
60-70	7.84
70-80	4.62
80-90	2.67
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):

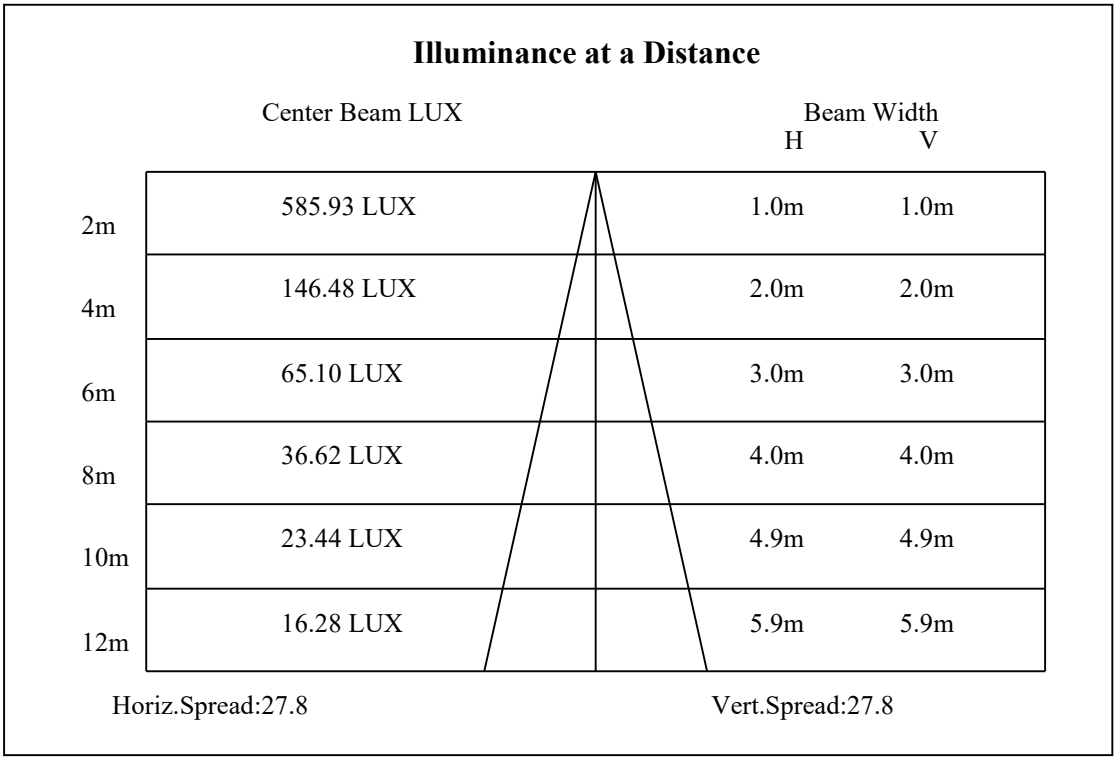
C0/C180:

C90/C270:

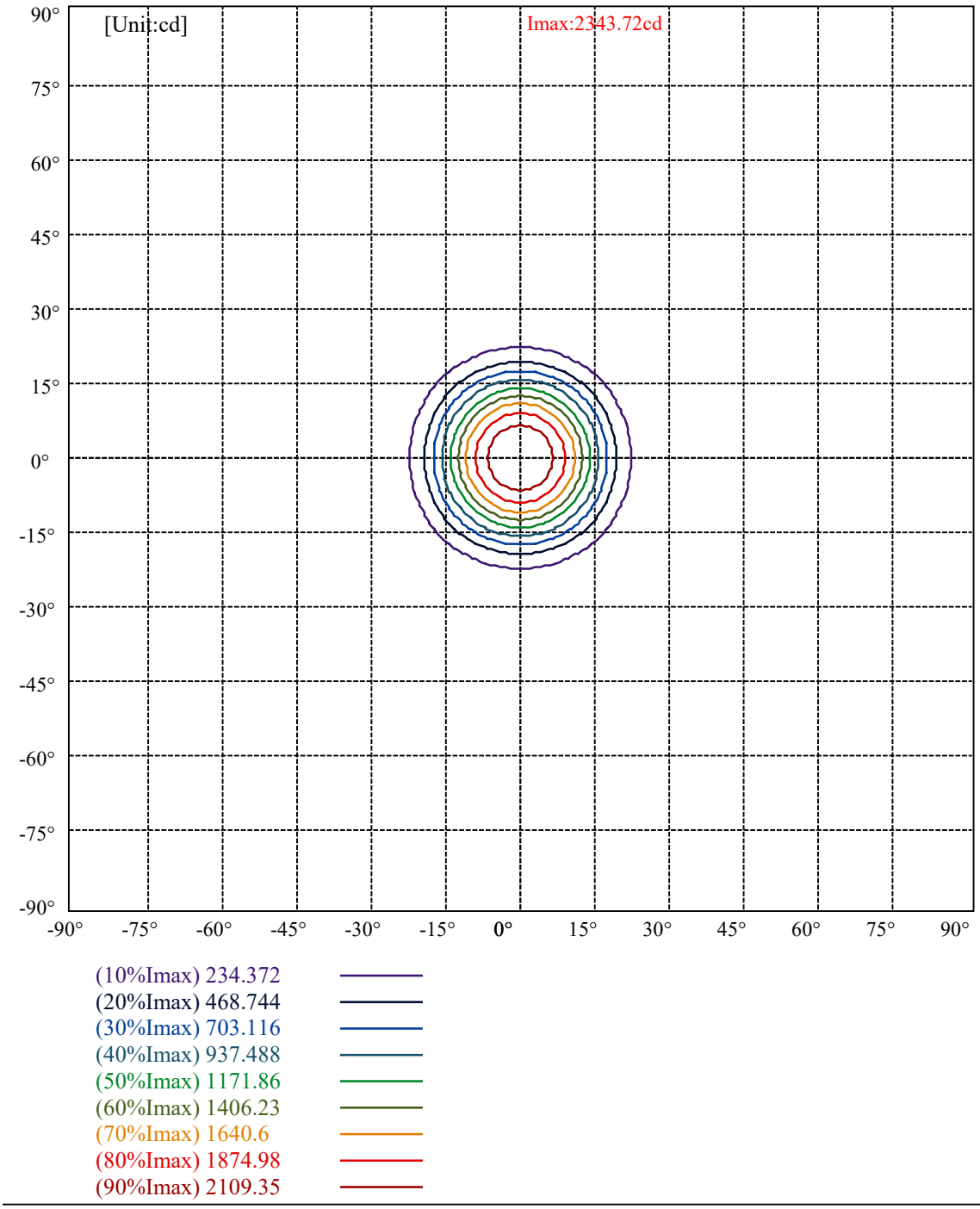
Field angle(10%Imax):C0/180Left:22.1 Right:22.1
:C90/270Left:22.1 Right:22.1

Beam Angle(50%Imax):C0/180Left:13.8 Right:13.8
:C90/270Left:13.8 Right:13.8

Lux distance Curve



ISO-Intensity(V-H)



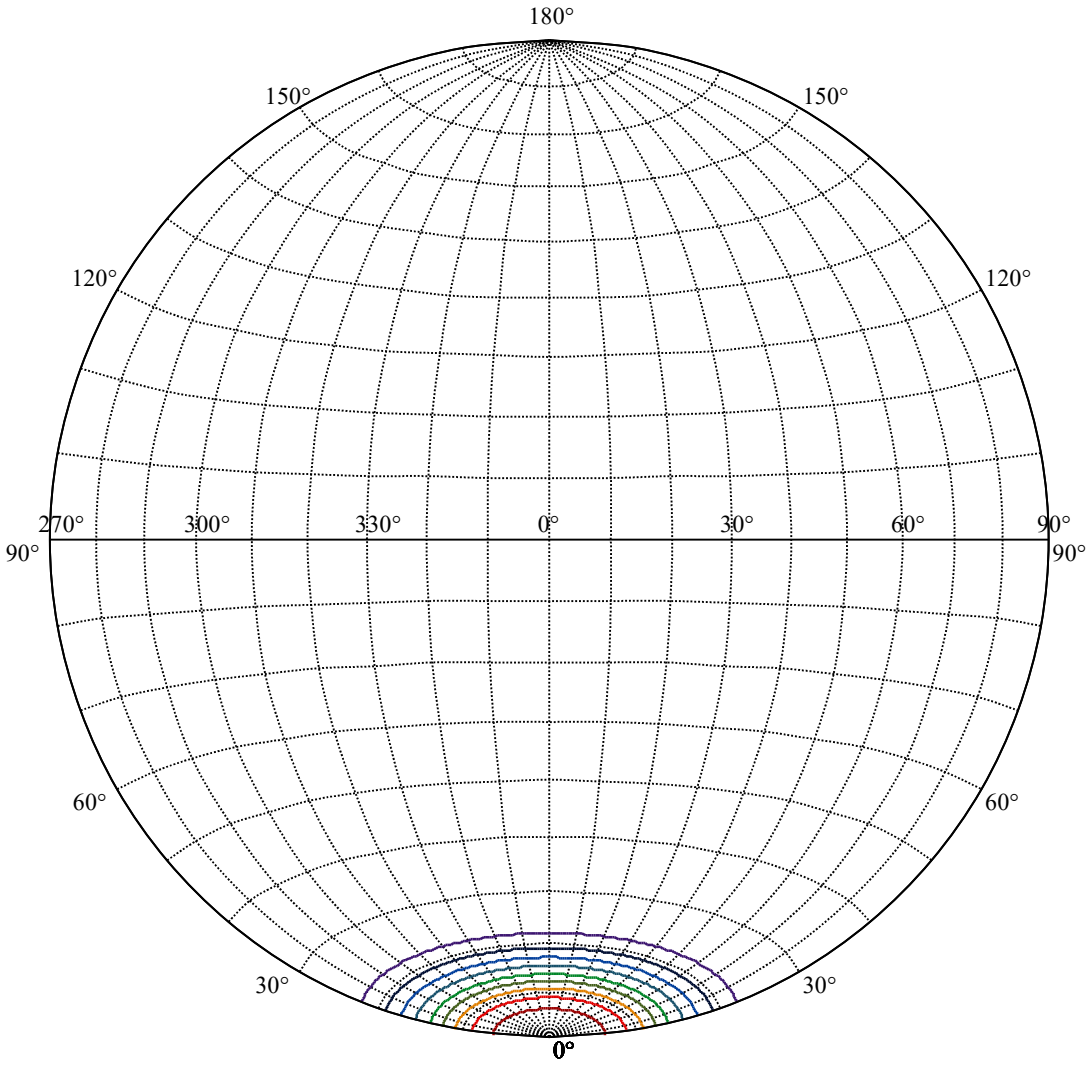
(10%Imax) 234.372
(20%Imax) 468.744
(30%Imax) 703.116
(40%Imax) 937.488
(50%Imax) 1171.86
(60%Imax) 1406.23
(70%Imax) 1640.6
(80%Imax) 1874.98
(90%Imax) 2109.35

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

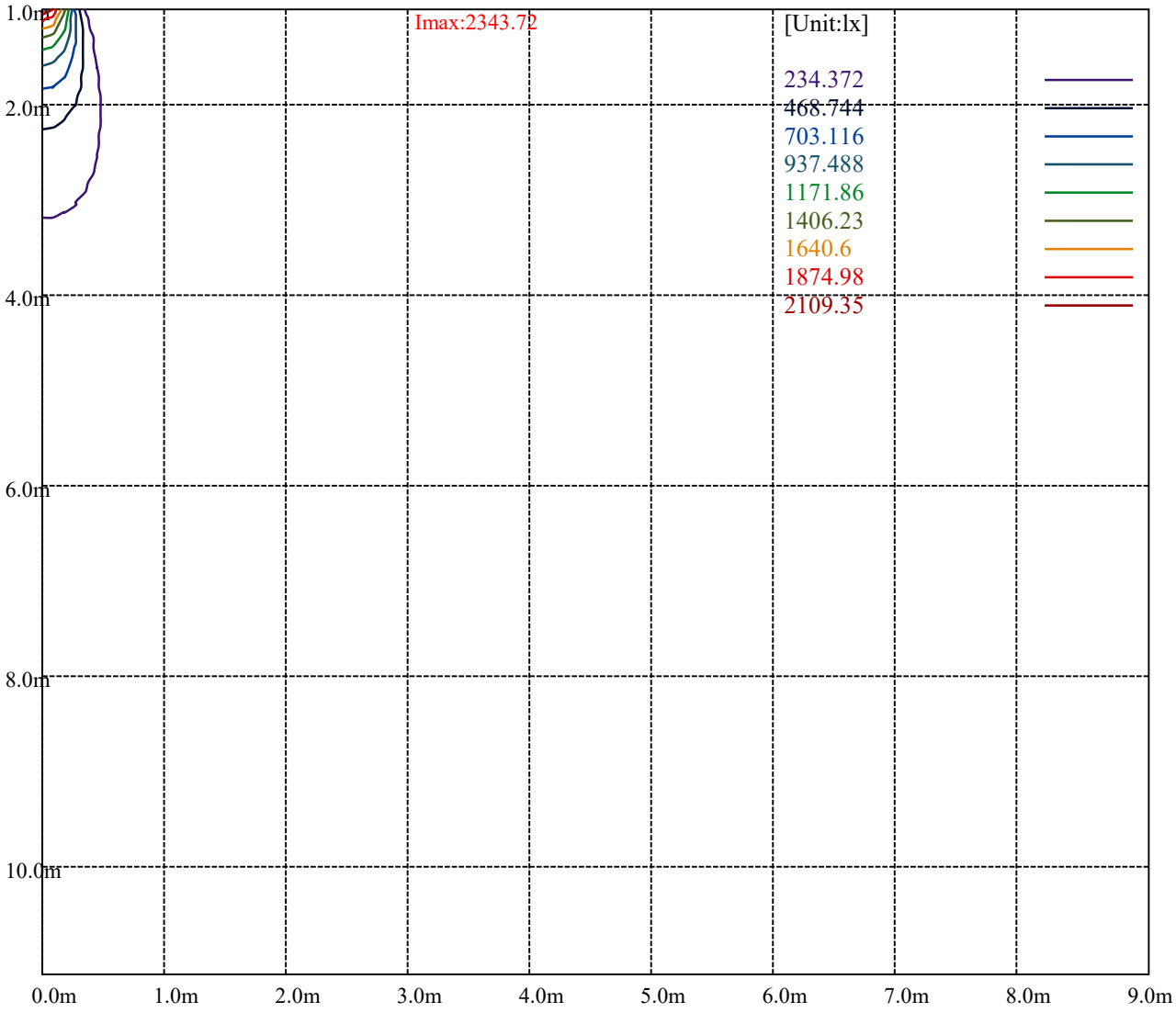


House [Unit:cd] Road

Imax:2343.72

(10%Imax) 234.372
(20%Imax) 468.744
(30%Imax) 703.116
(40%Imax) 937.488
(50%Imax) 1171.86
(60%Imax) 1406.23
(70%Imax) 1640.6
(80%Imax) 1874.98
(90%Imax) 2109.35

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

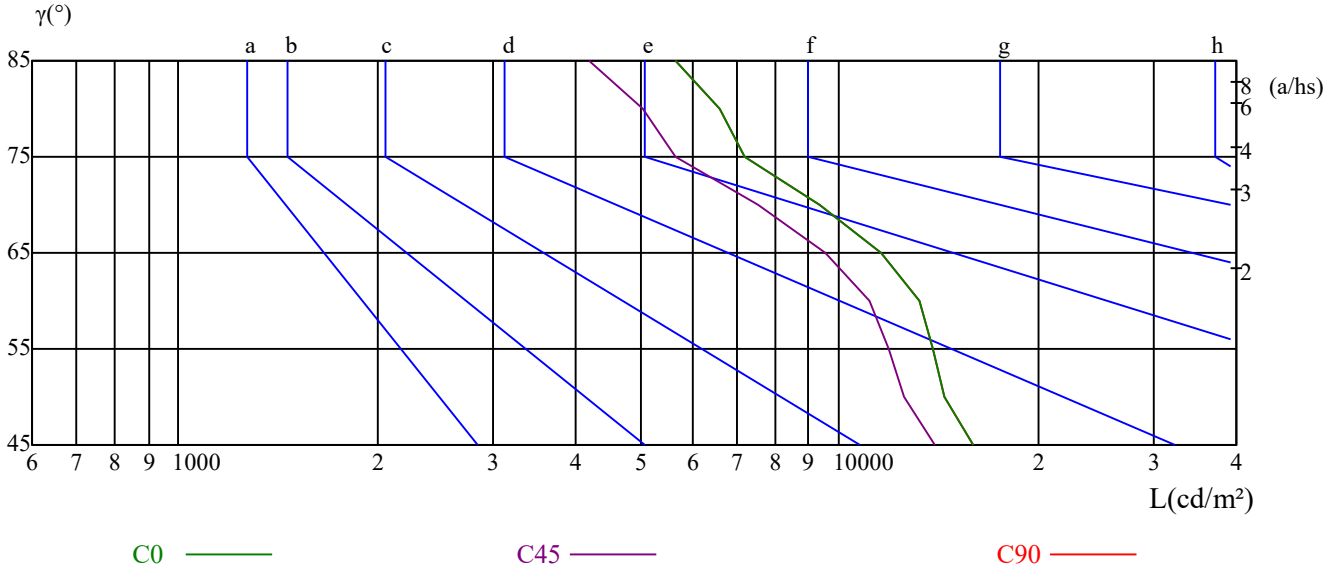
γ	45	50	55	60	65	70	75	80	85
C0	15957	14478	13922	13268	11613	9325	7182	6595	5647
C45	14021	12539	11874	11129	9563	7522	5656	5049	4175
C90	15957	14478	13922	13268	11613	9325	7182	6595	5647

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
24065	24065	24065	20583	20583	20583	37922	37922	37922

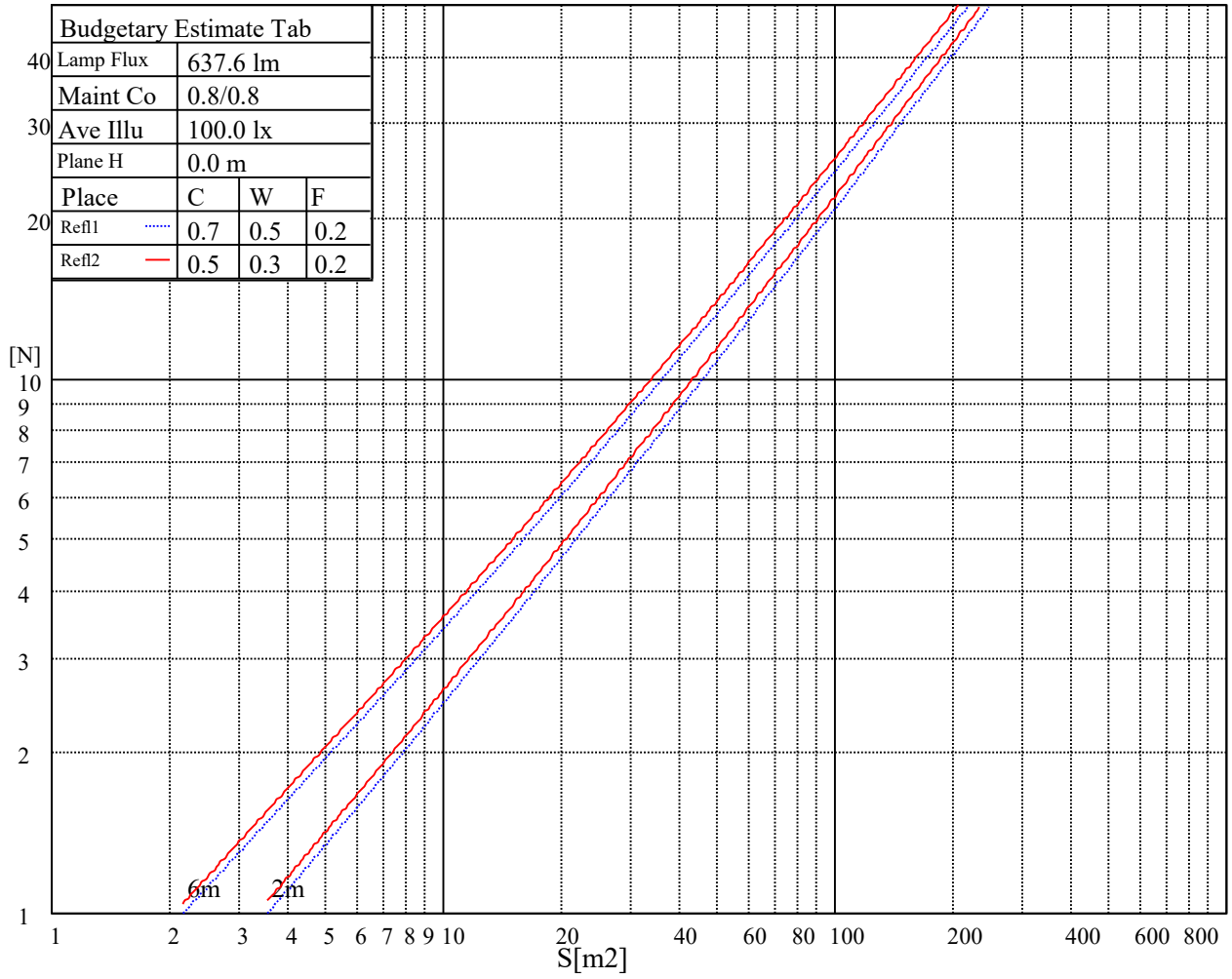
Glare Table

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

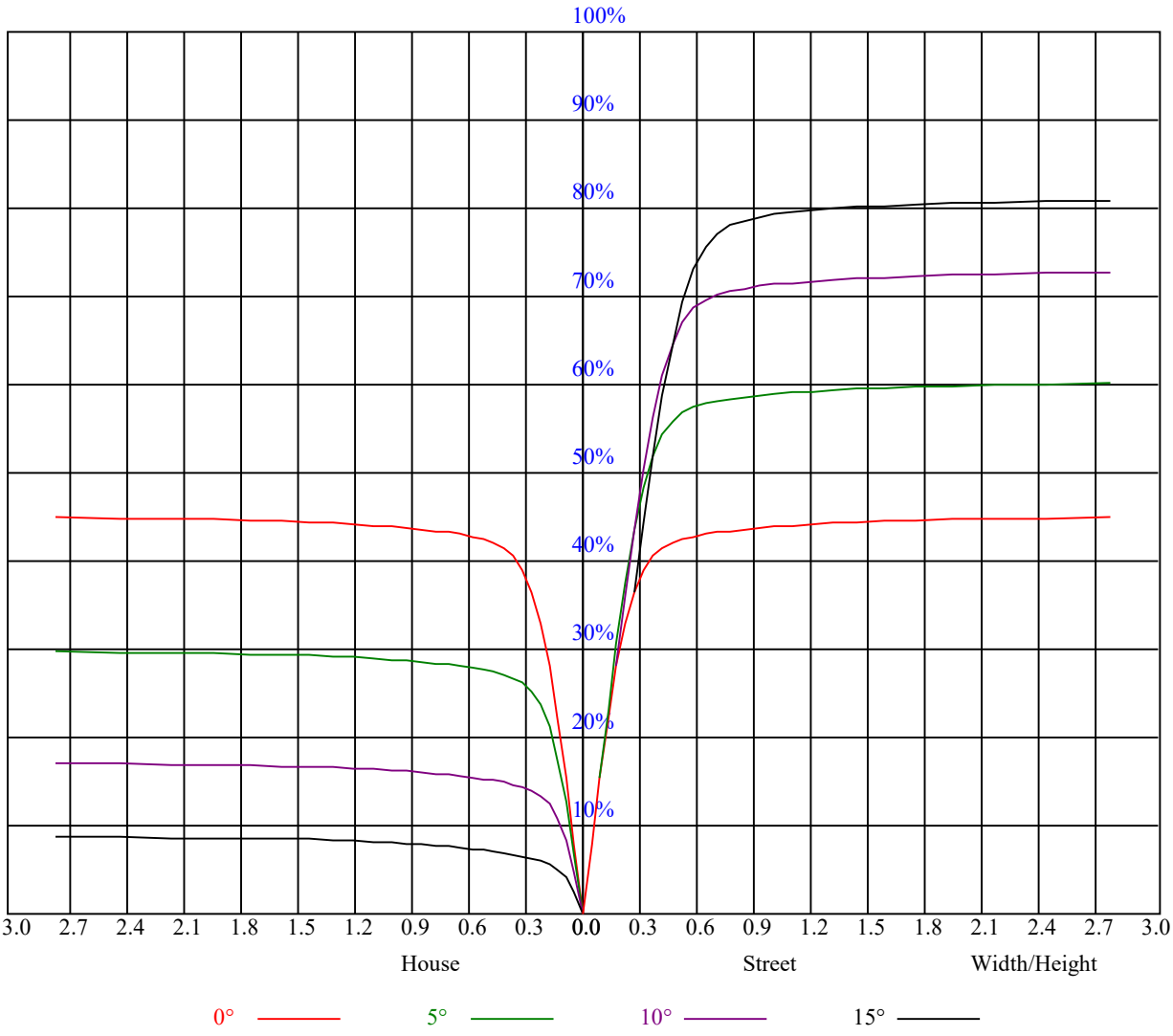


Equipment: GMS 1800 Date: 2025/5/19 Operator: NT
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.30

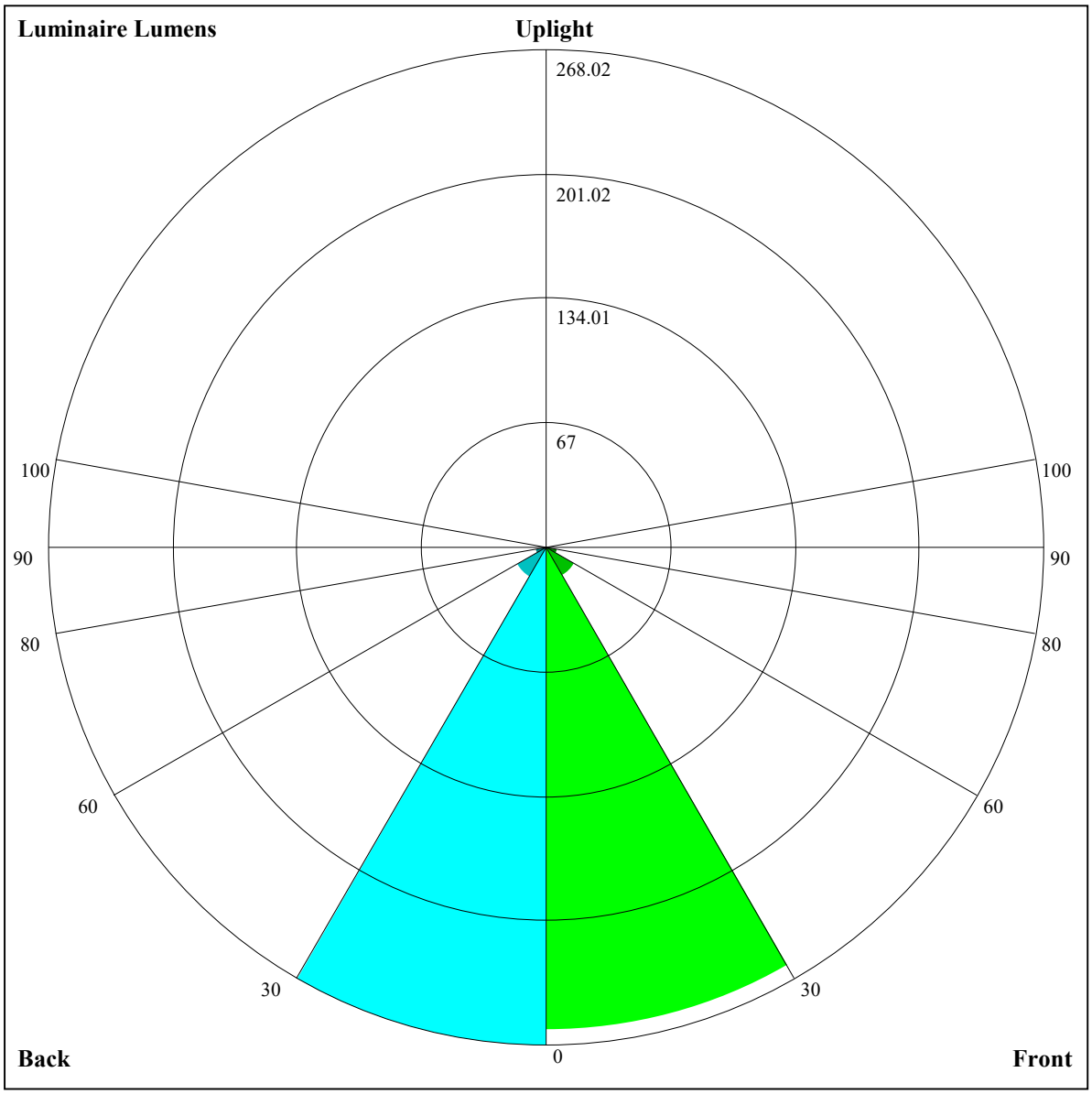
Utilization factor table for indoor luminaire

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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.83	0.81	0.80
4	0.88	0.84	0.81	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.80	0.78	0.76	0.75
6	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
9	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
10	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65

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=260.36,FM=17.96,FH=6.12,FVH=1.45
BL=268.02,BM=18.08,BH=6.38,BVH=1.53
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	2344.39	2327.87	2296.96	2267.12	2217.02	2152.01	2071.54	1979.88	1874.37
45.0	2356.11	2342.26	2318.27	2286.30	2242.07	2184.52	2113.64	2021.45	1919.67
90.0	2323.60	2303.89	2243.67	2207.96	2137.62	2049.69	1948.44	1837.07	1713.43
135.0	2350.78	2337.46	2319.87	2278.31	2227.68	2177.06	2098.72	1982.01	1893.02
180.0	2344.39	2350.78	2349.72	2336.39	2311.35	2273.51	2220.22	2154.67	2073.14
225.0	2356.11	2360.91	2356.11	2348.12	2324.67	2268.18	2234.61	2166.40	2077.94
270.0	2323.60	2345.45	2360.91	2361.97	2353.98	2335.86	2304.95	2256.46	2198.37
315.0	2350.78	2353.45	2343.85	2329.47	2300.16	2260.19	2205.83	2136.56	2051.82
360.0	2344.39	2327.87	2296.96	2267.12	2217.02	2152.01	2071.54	1979.88	1874.37

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1756.60	1628.17	1491.75	1345.73	980.11	980.11	884.19	727.89	582.25
45.0	1802.96	1680.39	1548.23	1409.68	1264.20	1114.99	967.37	821.36	682.27
90.0	1584.47	1445.38	1303.10	983.89	983.89	834.20	689.47	557.04	437.83
135.0	1772.05	1643.62	1506.14	1361.19	1208.78	1053.70	898.10	745.69	601.27
180.0	1975.62	1864.78	1736.35	1604.72	1461.90	1311.63	1152.82	988.69	825.62
225.0	1974.02	1859.98	1731.02	1592.47	1444.85	1223.70	1012.88	980.86	823.60
270.0	2121.10	2032.11	1926.06	1807.76	1677.20	1536.51	1384.63	1227.96	1067.56
315.0	1954.84	1845.59	1719.83	1582.87	1436.33	1061.64	1027.70	1027.70	861.06
360.0	1756.60	1628.17	1491.75	1345.73	980.11	980.11	884.19	727.89	582.25

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	502.52	342.60	285.69	208.20	152.09	113.19	88.41	72.37	62.03
45.0	551.71	456.32	350.28	294.85	294.85	140.26	106.26	84.46	70.02
90.0	374.47	281.00	181.93	150.97	111.64	85.53	68.26	57.07	49.24
135.0	469.64	354.54	295.92	295.92	152.62	111.06	84.30	68.05	57.61
180.0	668.95	527.20	401.43	296.45	296.45	277.80	124.27	91.98	72.47
225.0	704.12	539.88	443.05	338.07	251.53	185.77	137.91	104.66	83.19
270.0	902.89	809.10	602.87	525.60	411.03	280.47	280.47	204.74	126.14
315.0	702.68	558.69	432.87	326.93	242.47	178.95	133.07	102.32	82.76
360.0	502.52	342.60	285.69	208.20	152.09	113.19	88.41	72.37	62.03

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	53.98	47.64	42.26	37.52	33.47	30.00	26.91	24.46	22.38
45.0	59.79	52.17	45.83	40.39	35.70	31.76	28.35	26.54	23.18
90.0	43.11	38.05	33.89	30.11	26.96	24.41	22.28	20.52	18.97
135.0	50.20	44.55	39.65	35.28	31.60	28.51	25.74	23.45	21.64
180.0	61.02	53.24	46.95	41.83	37.46	33.68	30.32	27.34	24.94
225.0	68.80	58.73	51.05	44.66	39.22	34.64	30.70	27.50	24.94
270.0	98.16	78.98	66.03	56.17	48.55	42.21	36.93	32.61	28.94
315.0	69.49	59.79	52.33	45.88	40.50	36.72	31.81	28.67	26.49
360.0	53.98	47.64	42.26	37.52	33.47	30.00	26.91	24.46	22.38

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	20.62	18.92	17.64	16.73	15.51	14.87	14.23	13.64	13.16
45.0	22.06	20.20	18.12	17.37	16.36	15.45	14.71	14.12	13.59
90.0	17.69	16.63	15.77	15.24	14.60	13.80	13.54	13.06	12.74
135.0	20.04	18.70	17.37	16.36	15.56	14.92	14.12	13.70	13.22
180.0	22.91	21.48	19.56	18.49	17.37	16.41	15.56	14.81	14.18
225.0	22.75	20.89	19.34	18.07	16.95	16.04	15.56	14.87	14.28
270.0	27.18	23.66	21.58	20.46	18.92	17.59	16.47	15.67	14.97
315.0	24.03	21.85	20.04	18.49	17.32	16.20	15.35	14.60	13.96
360.0	20.62	18.92	17.64	16.73	15.51	14.87	14.23	13.64	13.16

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	12.68	12.31	11.99	11.78	11.51	11.30	11.14	10.98	10.76
45.0	13.06	12.63	12.36	12.10	11.78	11.56	11.40	11.19	11.03
90.0	12.42	12.10	11.83	11.56	11.40	11.19	10.98	10.87	10.76
135.0	12.84	12.36	12.04	11.83	11.56	11.35	11.14	10.98	10.82
180.0	13.64	13.22	12.79	12.42	12.15	11.88	11.67	11.46	11.30
225.0	13.80	13.38	12.95	12.58	12.26	12.04	11.83	11.62	11.51
270.0	14.34	13.75	13.32	12.95	12.63	12.20	11.94	11.78	11.62
315.0	13.38	12.84	12.47	12.15	11.83	11.62	11.35	11.24	11.08
360.0	12.68	12.31	11.99	11.78	11.51	11.30	11.14	10.98	10.76

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.55	10.39	10.23	9.97	9.70	9.49	9.17	8.79	8.42
45.0	10.87	10.71	10.50	10.28	10.07	9.86	9.65	9.33	8.95
90.0	10.60	10.34	10.18	9.97	9.75	9.43	9.17	8.79	8.42
135.0	10.60	10.44	10.28	10.07	9.86	9.65	9.33	8.95	8.79
180.0	11.14	10.92	10.76	10.66	10.50	10.23	10.07	9.81	9.49
225.0	11.35	11.14	10.92	10.71	10.55	10.34	10.13	9.86	9.38
270.0	11.40	11.19	11.08	10.98	10.76	10.50	10.39	10.07	9.91
315.0	10.87	10.71	10.55	10.39	10.23	10.02	9.75	9.43	9.17
360.0	10.55	10.39	10.23	9.97	9.70	9.49	9.17	8.79	8.42

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.21	7.78	7.41	7.03	6.55	6.13	5.76	5.33	4.90
45.0	8.58	8.26	7.78	7.35	6.98	6.55	6.13	5.70	5.33
90.0	8.05	7.62	7.14	6.77	6.39	5.97	5.54	5.12	4.74
135.0	8.37	7.99	7.62	7.25	6.77	6.45	6.02	5.65	5.17
180.0	9.22	8.85	8.42	7.99	7.62	7.30	6.82	6.39	6.02
225.0	9.17	8.79	8.42	7.99	7.57	7.14	6.82	6.39	5.92
270.0	9.65	9.33	8.95	8.58	8.21	7.78	7.30	6.87	6.50
315.0	8.85	8.42	8.05	7.67	7.30	6.93	6.45	6.02	5.65
360.0	8.21	7.78	7.41	7.03	6.55	6.13	5.76	5.33	4.90

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.48	4.05	3.89	3.68	3.41	3.25	3.04	2.77	2.61
45.0	4.96	4.53	4.21	4.10	3.89	3.68	3.46	3.41	3.14
90.0	4.42	4.21	4.00	3.78	3.68	3.46	3.30	3.14	3.04
135.0	4.85	4.53	4.21	4.00	3.84	3.78	4.42	4.80	4.64
180.0	5.60	5.17	4.74	4.37	4.16	3.94	3.73	3.62	3.36
225.0	5.49	5.17	4.80	4.42	4.26	4.10	3.94	3.73	3.52
270.0	6.08	5.65	5.22	4.85	4.48	4.21	4.05	3.89	3.73
315.0	5.28	4.85	4.42	4.21	4.00	3.84	3.68	3.46	3.52
360.0	4.48	4.05	3.89	3.68	3.41	3.25	3.04	2.77	2.61

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.50	2.34	2.24	2.03	1.92	1.76	1.65	1.55	1.44
45.0	2.98	2.77	2.72	2.61	2.45	2.40	2.50	2.61	2.66
90.0	2.82	2.66	2.50	2.56	2.98	3.14	2.98	2.72	2.45
135.0	3.41	2.82	2.66	2.61	2.66	2.61	2.34	2.13	1.87
180.0	3.09	2.93	2.72	2.56	2.45	2.24	2.13	2.03	1.92
225.0	3.41	3.30	3.09	2.88	2.82	2.72	2.56	2.40	2.66
270.0	3.62	3.30	3.14	2.98	2.82	2.66	2.56	3.94	4.74
315.0	4.00	3.73	2.93	2.66	2.61	2.40	2.40	2.24	2.08
360.0	2.50	2.34	2.24	2.03	1.92	1.76	1.65	1.55	1.44

Intensity data(cd)

C/γ(°)	90.0
0.0	1.39
45.0	2.61
90.0	2.34
135.0	1.71
180.0	1.76
225.0	2.82
270.0	3.20
315.0	1.92
360.0	1.39