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

NT

Client: NT
LumCAT: 61-0230-1
Luminaire: 92.70.427.00
Report No: 20250519-B014
Ballast type: AC
Test No: 20250519-C014
LampCAT: CITIZEN CLU7A2
Lamp flux(lm): 624.3
Number of Lamps: 1
Length(mm): 35
Phm Type: C

Voltage(V): 36.350
Current(A): 0.176
Power (W): 6.391
PF: 0.000
Width(mm): 35
Height(mm): 17

Photometric Results

Lumens(lm): 557.49, Efficiency(%): 89.30% , Luminous Efficacy(lm/W): 87.23
Central intensity(cd): 750.750, Maximum intensity(cd): 750.750
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=52.6
[C90/270]Total=52.6
Field angle(10%Imax): [C0/180]Total=68.2
[C90/270]Total=68.2
Maximum s/h(1/2): C0_180=0.89 C90_270=0.89
Maximum s/h(1/4): C0_180=0.76 C90_270=0.76
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.30%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.795%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	750.750	0.000	0	0.00%	0.00%
1.0	750.143	0.718	0.718	0.12%	0.13%
2.0	748.764	2.151	2.87	0.34%	0.51%
3.0	746.446	3.576	6.446	0.57%	1.16%
4.0	743.289	4.987	11.432	0.80%	2.05%
5.0	739.146	6.377	17.81	1.02%	3.19%
6.0	734.543	7.745	25.554	1.24%	4.58%
7.0	729.520	9.087	34.642	1.46%	6.21%
8.0	724.744	10.408	45.049	1.67%	8.08%
9.0	719.209	11.702	56.752	1.87%	10.18%
10.0	714.546	12.975	69.727	2.08%	12.51%
11.0	709.603	14.230	83.957	2.28%	15.06%
12.0	704.707	15.460	99.417	2.48%	17.83%
13.0	699.145	16.660	116.078	2.67%	20.82%
14.0	693.603	17.827	133.905	2.86%	24.02%
15.0	686.029	18.940	152.845	3.03%	27.42%
16.0	677.509	19.980	172.825	3.20%	31.00%
17.0	667.657	20.948	193.772	3.36%	34.76%
18.0	655.773	21.820	215.593	3.50%	38.67%
19.0	639.627	22.537	238.13	3.61%	42.71%
20.0	620.789	23.069	261.199	3.70%	46.85%
21.0	595.542	23.356	284.555	3.74%	51.04%
22.0	562.449	23.270	307.826	3.73%	55.22%
23.0	528.603	22.893	330.719	3.67%	59.32%
24.0	486.398	22.192	352.91	3.55%	63.30%
25.0	441.654	21.102	374.012	3.38%	67.09%
26.0	390.030	19.632	393.644	3.14%	70.61%
27.0	343.987	17.958	411.602	2.88%	73.83%
28.0	291.376	16.086	427.688	2.58%	76.72%
29.0	245.927	14.057	441.746	2.25%	79.24%
30.0	201.223	12.073	453.819	1.93%	81.40%
31.0	159.830	10.048	463.866	1.61%	83.21%
32.0	128.855	8.270	472.137	1.32%	84.69%
33.0	101.098	6.775	478.911	1.09%	85.90%
34.0	77.610	5.408	484.319	0.87%	86.87%
35.0	60.231	4.281	488.6	0.69%	87.64%
36.0	47.615	3.434	492.034	0.55%	88.26%
37.0	38.875	2.821	494.855	0.45%	88.76%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	33.393	2.412	497.267	0.39%	89.20%
39.0	29.589	2.150	499.417	0.34%	89.58%
40.0	27.078	1.976	501.393	0.32%	89.94%
41.0	25.266	1.864	503.257	0.30%	90.27%
42.0	23.827	1.784	505.041	0.29%	90.59%
43.0	22.555	1.718	506.759	0.28%	90.90%
44.0	21.423	1.660	508.419	0.27%	91.20%
45.0	20.330	1.605	510.023	0.26%	91.49%
46.0	19.318	1.551	511.574	0.25%	91.76%
47.0	18.358	1.498	513.072	0.24%	92.03%
48.0	17.492	1.449	514.522	0.23%	92.29%
49.0	16.606	1.400	515.922	0.22%	92.54%
50.0	15.814	1.352	517.274	0.22%	92.79%
51.0	15.008	1.304	518.578	0.21%	93.02%
52.0	14.208	1.254	519.831	0.20%	93.24%
53.0	13.536	1.207	521.038	0.19%	93.46%
54.0	12.870	1.164	522.202	0.19%	93.67%
55.0	12.263	1.122	523.324	0.18%	93.87%
56.0	11.737	1.085	524.408	0.17%	94.07%
57.0	11.264	1.052	525.46	0.17%	94.25%
58.0	10.884	1.024	526.484	0.16%	94.44%
59.0	10.565	1.003	527.487	0.16%	94.62%
60.0	10.305	0.986	528.473	0.16%	94.79%
61.0	10.078	0.973	529.446	0.16%	94.97%
62.0	9.885	0.962	530.408	0.15%	95.14%
63.0	9.672	0.951	531.359	0.15%	95.31%
64.0	9.526	0.942	532.301	0.15%	95.48%
65.0	9.392	0.936	533.237	0.15%	95.65%
66.0	9.239	0.930	534.167	0.15%	95.82%
67.0	9.086	0.921	535.088	0.15%	95.98%
68.0	8.973	0.915	536.003	0.15%	96.15%
69.0	8.859	0.910	536.913	0.15%	96.31%
70.0	8.753	0.905	537.817	0.14%	96.47%
71.0	8.673	0.901	538.718	0.14%	96.63%
72.0	8.613	0.899	539.617	0.14%	96.79%
73.0	8.600	0.900	540.517	0.14%	96.96%
74.0	8.593	0.904	541.421	0.14%	97.12%
75.0	8.633	0.910	542.331	0.15%	97.28%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.693	0.920	543.251	0.15%	97.45%
77.0	8.706	0.928	544.178	0.15%	97.61%
78.0	8.800	0.937	545.115	0.15%	97.78%
79.0	8.946	0.953	546.069	0.15%	97.95%
80.0	9.106	0.973	547.042	0.16%	98.13%
81.0	9.259	0.993	548.035	0.16%	98.30%
82.0	9.366	1.010	549.045	0.16%	98.49%
83.0	9.499	1.026	550.071	0.16%	98.67%
84.0	9.612	1.041	551.112	0.17%	98.86%
85.0	9.692	1.054	552.165	0.17%	99.04%
86.0	9.752	1.063	553.228	0.17%	99.24%
87.0	9.779	1.069	554.297	0.17%	99.43%
88.0	9.745	1.069	555.367	0.17%	99.62%
89.0	9.699	1.066	556.432	0.17%	99.81%
90.0	9.606	1.058	557.491	0.17%	100.00%

Zonal flux distribution table

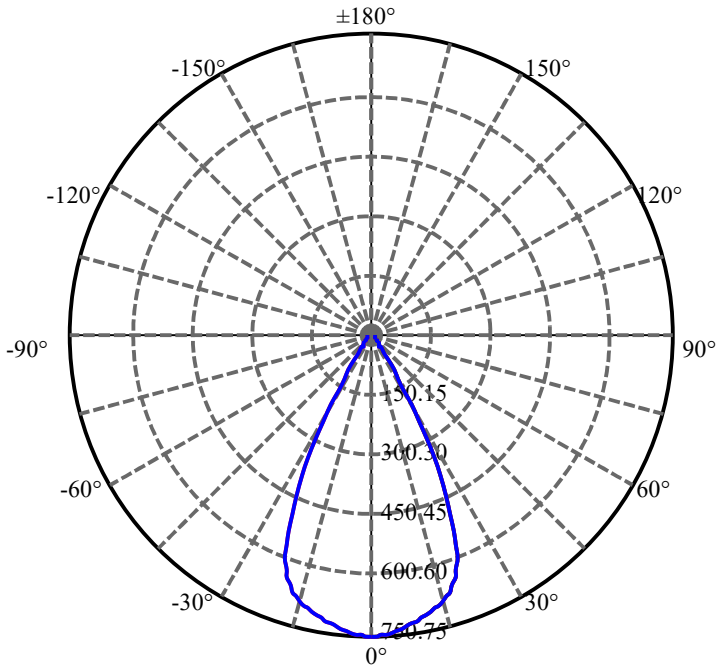
ZONAL LUMEN SUMMARY

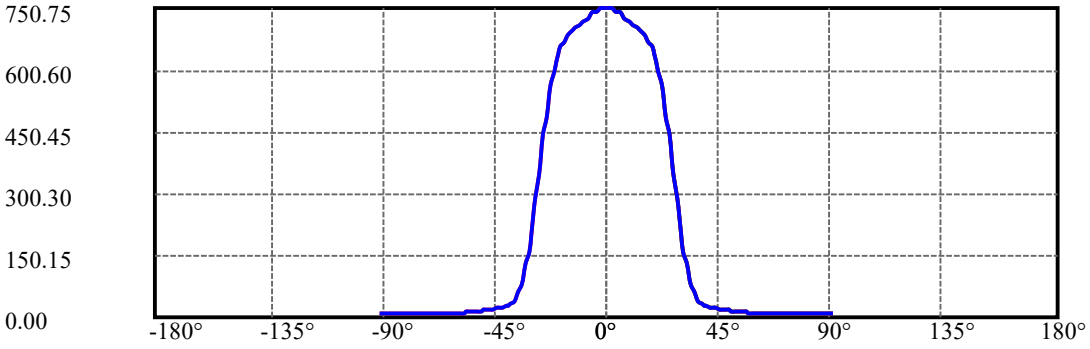
Zone	Lumens	%Lamp	%Fixt
0-30	453.82	72.69%	81.40%
0-40	501.39	80.31%	89.94%
0-60	528.47	84.65%	94.79%
0-90	556.43	89.13%	99.81%
0-120	556.43	89.13%	99.81%
0-180	557.49	89.30%	100.00%
60-90	27.96	4.48%	5.02%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.35	445.99	71.44%	80.00%

ZONAL LUMEN SUMMARY

0-10	69.73
10-20	191.47
20-30	192.62
30-40	47.57
40-50	15.88
50-60	11.20
60-70	9.34
70-80	9.22
80-90	9.39
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):

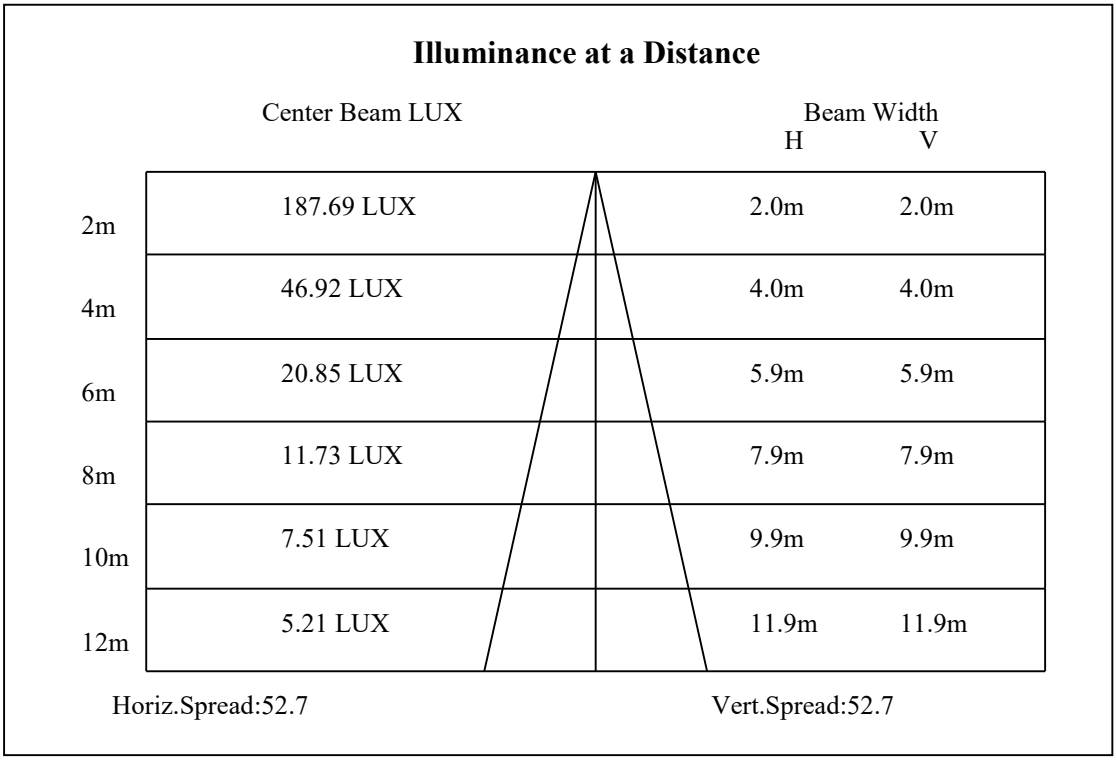
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:34.1 Right:34.1
:C90/270Left:34.1 Right:34.1

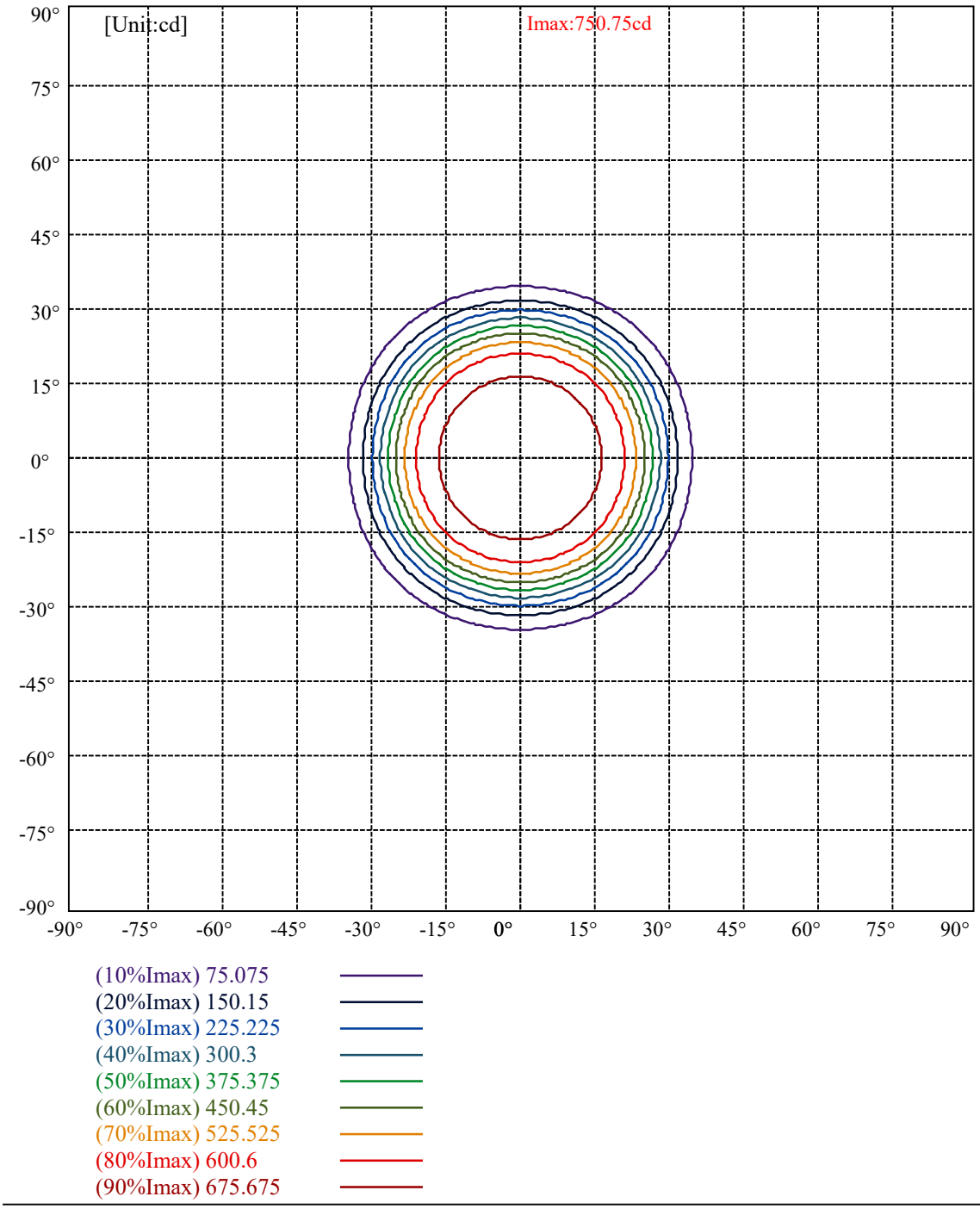
Beam Angle(50%Imax):C0/180Left:26.3 Right:26.3
:C90/270Left:26.3 Right:26.3

Lux distance Curve



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

ISO-Intensity(V-H)

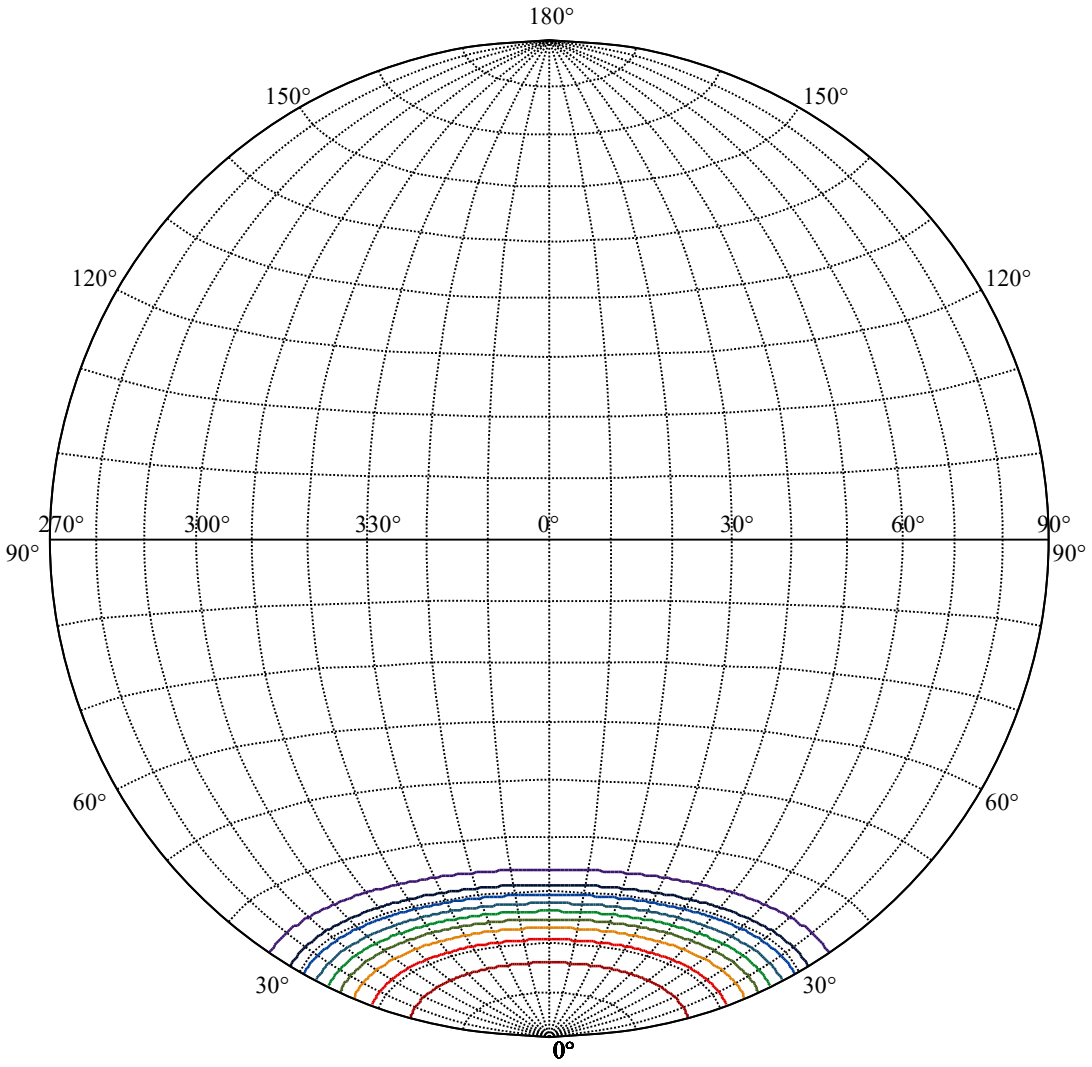


Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT
Distance(m): 7.30

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:750.75

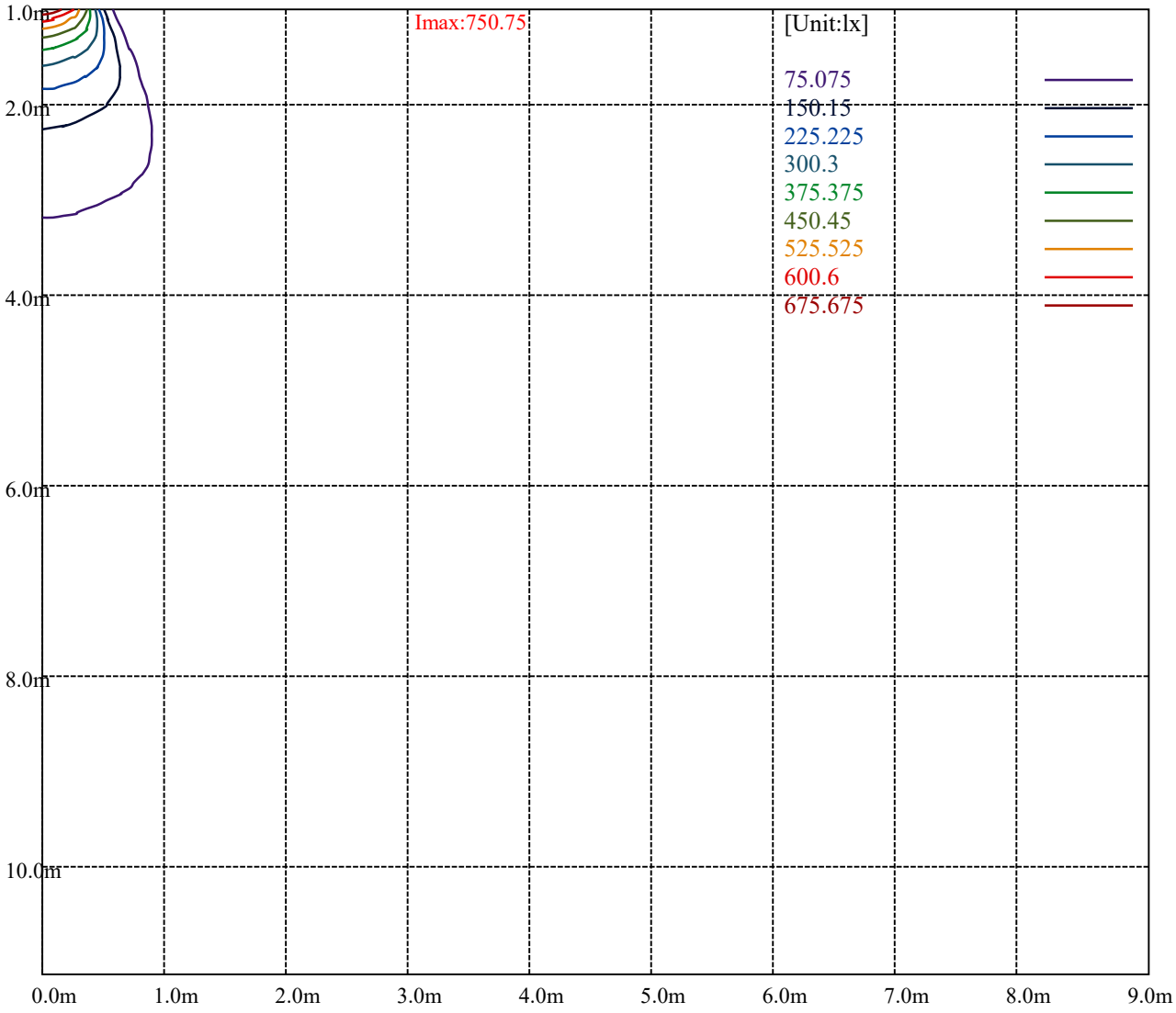
(10%Imax) 75.075
(20%Imax) 150.15
(30%Imax) 225.225
(40%Imax) 300.3
(50%Imax) 375.375
(60%Imax) 450.45
(70%Imax) 525.525
(80%Imax) 600.6
(90%Imax) 675.675

Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT
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

NT NT 61-0230-1

Luminance Limitting Curve(no luminous side)

Luminance Table

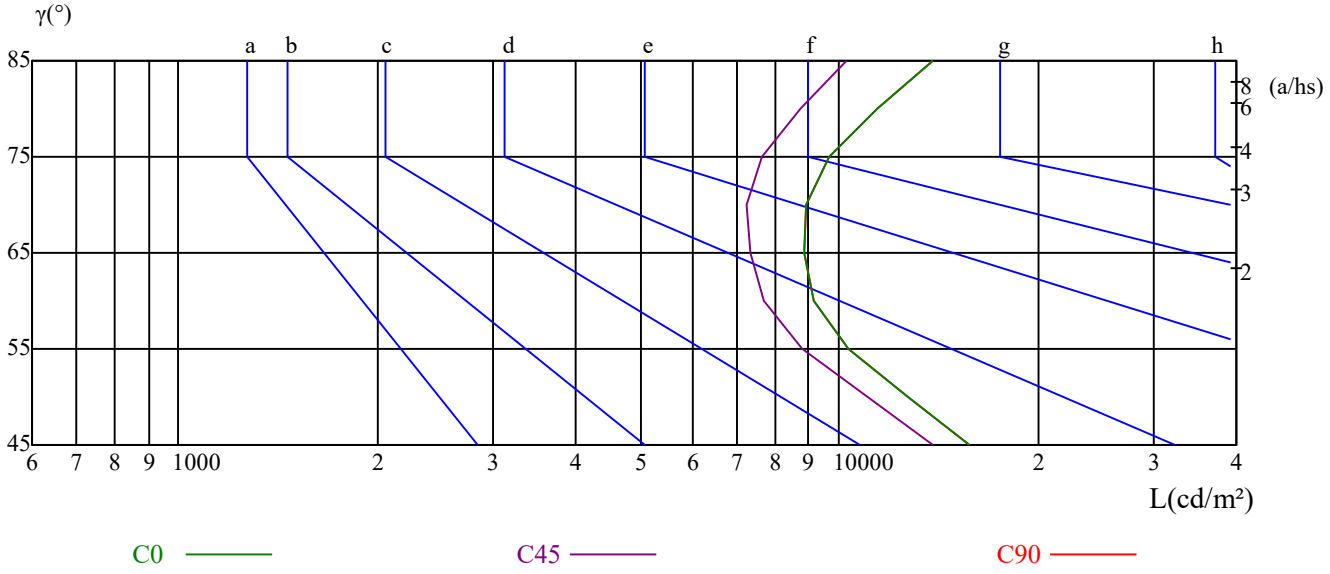
γ	45	50	55	60	65	70	75	80	85
C0	15797	12720	10305	9137	8886	8949	9681	11401	13856
C45	13913	11043	8810	7683	7336	7236	7641	8744	10256
C90	15797	12720	10305	9137	8886	8949	9681	11401	13856

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
18142	18142	18142	27229	27229	27229	90779	90779	90779

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

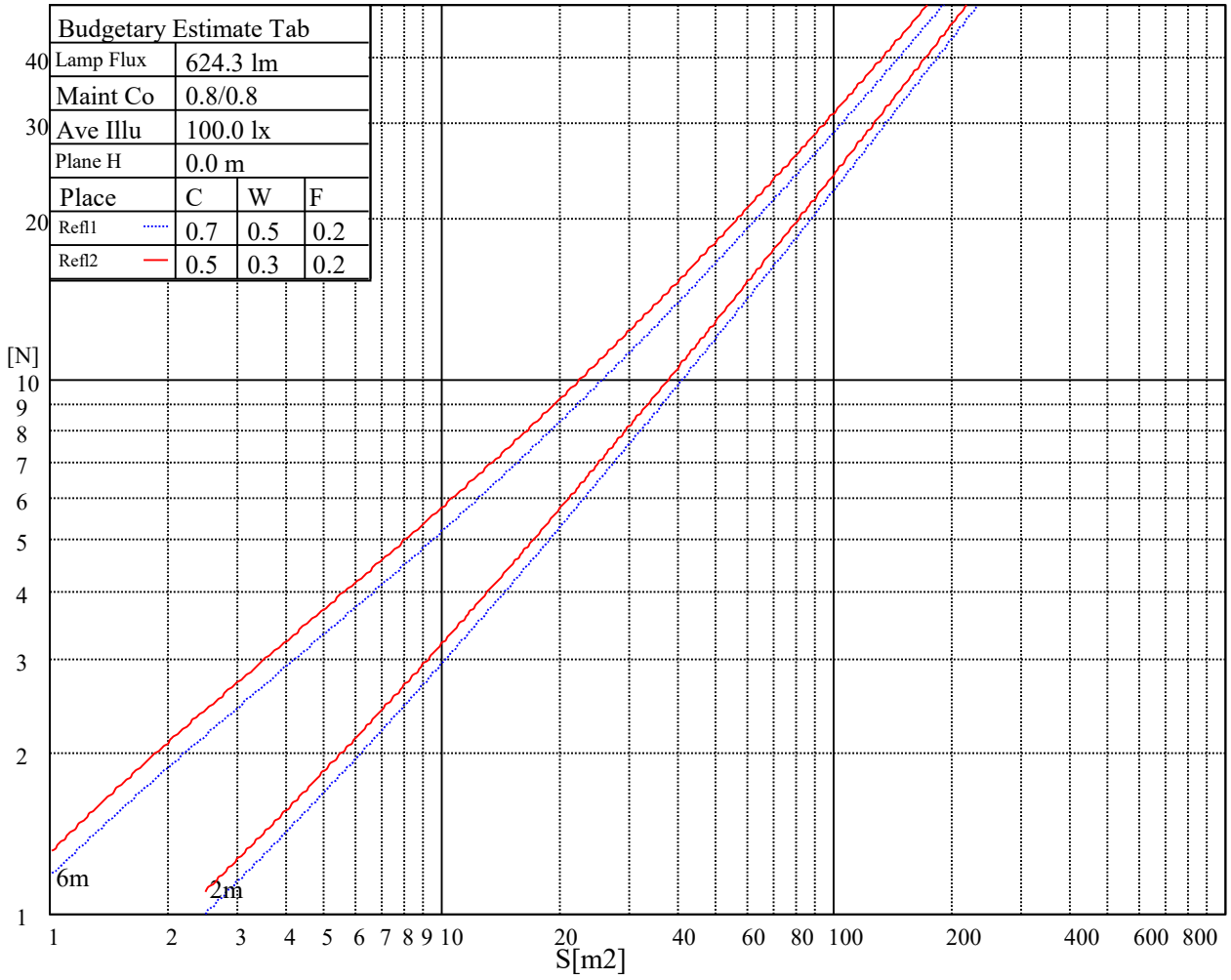


Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT
Distance(m): 7.30

Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

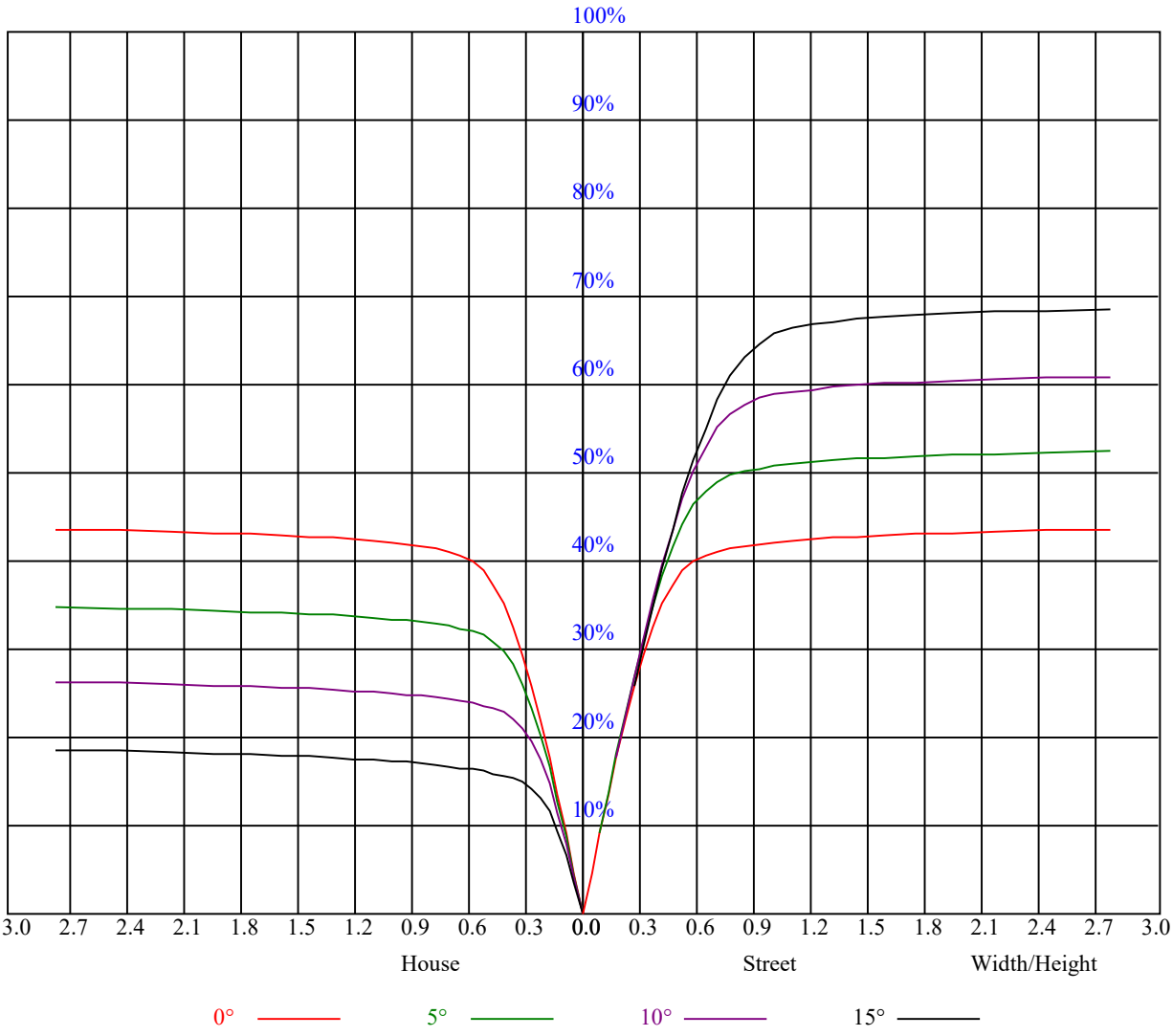
Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

Utilization factor table for indoor luminaire

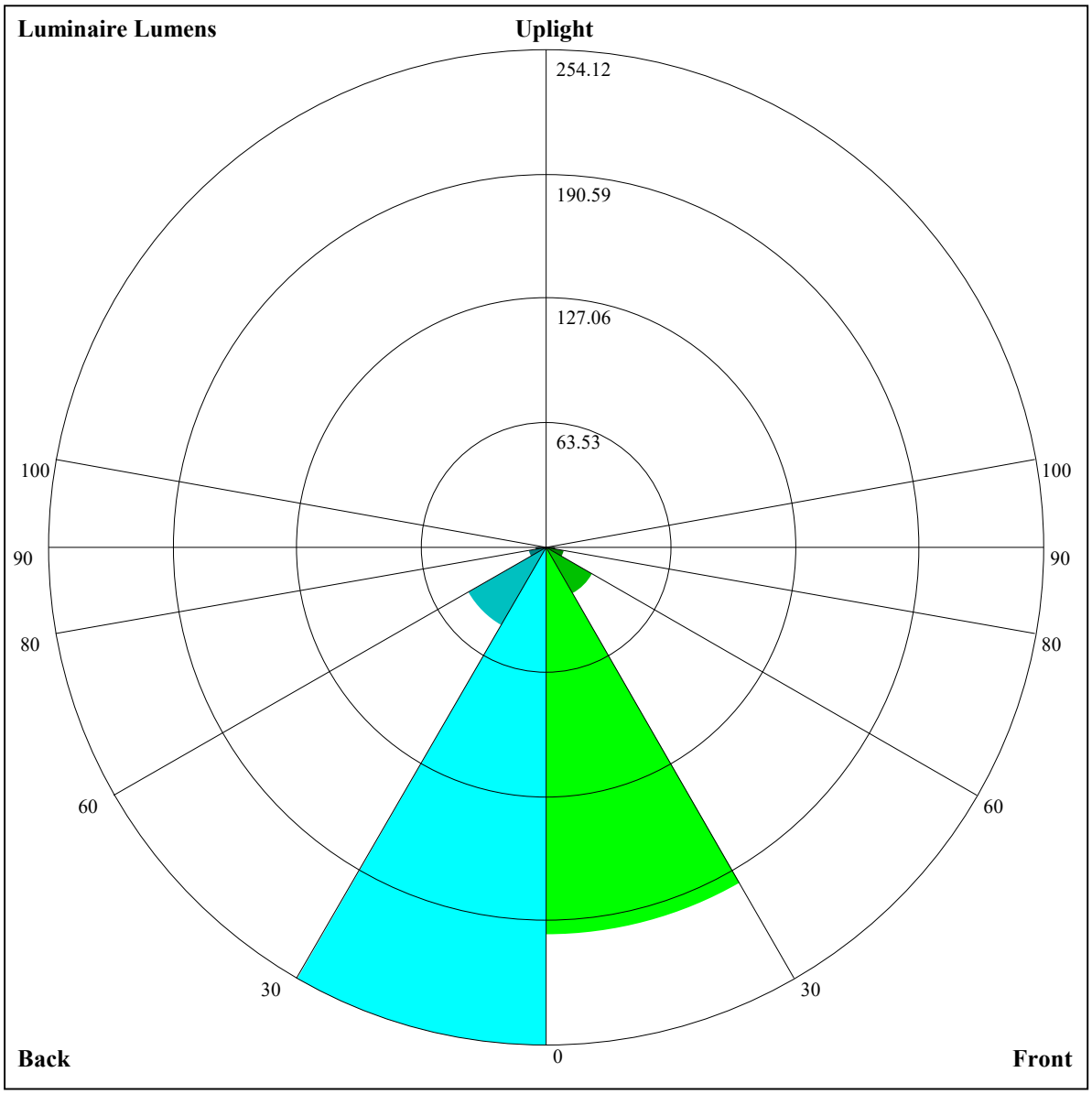
RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.98	0.95	0.93	0.96	0.94	0.92	0.92	0.90	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.91	0.87	0.84	0.90	0.86	0.83	0.87	0.84	0.81	0.84	0.82	0.80	0.81	0.80	0.78	0.76
3	0.85	0.81	0.77	0.84	0.80	0.76	0.82	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.71
4	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.67
5	0.75	0.70	0.67	0.75	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.63
6	0.71	0.66	0.62	0.71	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
7	0.68	0.62	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57
8	0.64	0.59	0.56	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.54
9	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.56	0.52	0.50	0.48

Coefficient Utilization Curve



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

LCS Graph



Luminaire Lumens:

FL=197.74,FM=27.31,FH=9.12,FVH=4.74

BL=254.12,BM=46.11,BH=9.36,BVH=5.49

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	748.40	742.60	735.56	727.14	718.30	709.18	700.44	693.62	685.63
45.0	751.60	749.95	747.50	743.45	739.24	734.28	728.63	723.89	719.36
90.0	752.77	753.41	753.52	752.29	750.59	747.23	744.57	740.30	737.59
135.0	750.22	754.48	756.56	759.81	760.13	761.09	760.77	759.49	756.50
180.0	748.40	753.04	756.24	759.06	761.67	762.10	762.26	759.12	758.90
225.0	751.60	752.93	752.51	751.92	750.06	746.11	743.13	738.44	731.88
270.0	752.77	751.02	748.72	745.63	742.17	737.75	730.07	723.62	717.82
315.0	750.22	743.72	739.51	732.26	724.16	715.42	706.47	697.67	690.27
360.0	748.40	742.60	735.56	727.14	718.30	709.18	700.44	693.62	685.63

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	678.75	671.51	662.50	652.64	639.64	628.45	603.72	586.03	559.07
45.0	715.68	713.50	711.31	708.70	703.59	697.25	687.49	672.68	653.87
90.0	735.72	735.03	734.82	735.88	734.23	732.20	729.49	718.46	712.38
135.0	752.51	748.83	744.78	741.64	741.37	743.34	746.54	750.64	754.85
180.0	755.23	749.79	746.01	741.00	735.46	730.71	728.85	727.25	729.27
225.0	725.12	718.19	711.00	705.40	700.50	695.65	692.13	689.36	685.68
270.0	708.06	702.90	696.61	690.69	685.74	679.55	672.68	666.07	657.33
315.0	682.59	676.62	669.80	661.70	652.64	641.66	627.33	609.58	588.80
360.0	678.75	671.51	662.50	652.64	639.64	628.45	603.72	586.03	559.07

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	526.82	489.31	445.93	396.69	343.40	287.61	231.76	179.27	135.41
45.0	629.20	610.06	575.21	532.90	485.15	430.64	372.66	311.64	251.26
90.0	697.46	676.68	648.38	612.25	567.80	515.26	455.42	390.56	324.86
135.0	757.68	759.81	758.90	750.86	736.20	717.12	685.31	643.10	592.64
180.0	732.31	735.51	738.60	740.78	738.97	732.15	717.23	696.07	665.59
225.0	682.01	677.05	667.56	656.75	639.75	617.10	586.78	565.73	503.59
270.0	645.87	631.54	613.63	591.15	564.61	533.17	496.34	454.14	408.04
315.0	574.84	537.06	518.09	482.97	423.71	395.78	345.69	292.72	238.85
360.0	526.82	489.31	445.93	396.69	343.40	287.61	231.76	179.27	135.41

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	100.29	74.34	57.29	47.16	41.83	38.80	36.61	34.53	33.36
45.0	196.96	149.48	110.47	81.11	60.16	46.84	39.06	34.75	32.08
90.0	262.03	204.31	154.97	114.31	83.61	61.66	51.85	36.98	31.49
135.0	533.43	465.12	393.44	321.45	253.98	194.56	143.94	104.24	74.77
180.0	642.73	576.06	518.14	479.29	381.88	339.88	272.26	208.47	154.11
225.0	472.63	416.35	356.78	294.37	233.84	179.69	135.14	99.23	72.05
270.0	357.84	304.18	271.46	194.77	165.31	123.37	90.49	66.72	50.57
315.0	185.98	141.17	104.87	77.32	58.03	46.04	39.43	35.97	33.41
360.0	100.29	74.34	57.29	47.16	41.83	38.80	36.61	34.53	33.36

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	30.96	29.36	28.56	27.28	25.95	24.78	23.66	22.59	21.48
45.0	30.11	28.83	27.12	25.05	24.35	23.13	22.01	21.10	20.14
90.0	29.42	25.79	24.57	22.81	21.16	19.82	18.65	17.59	16.68
135.0	54.36	41.62	34.43	30.59	28.08	26.01	24.25	22.70	21.85
180.0	110.58	78.71	56.65	42.21	34.16	30.11	27.76	25.90	24.19
225.0	53.45	41.57	34.96	31.28	28.94	27.07	25.47	23.98	22.65
270.0	41.03	36.13	33.63	31.65	29.95	28.46	26.96	25.74	24.51
315.0	31.01	28.99	27.23	25.85	24.03	22.75	21.85	20.84	19.88
360.0	30.96	29.36	28.56	27.28	25.95	24.78	23.66	22.59	21.48

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	20.41	19.40	18.39	17.37	16.36	15.51	14.65	13.80	13.06
45.0	19.18	18.33	17.53	16.68	15.83	15.03	14.34	13.59	12.84
90.0	15.88	15.13	14.34	13.64	13.06	12.42	11.78	11.24	10.76
135.0	20.52	18.92	18.39	17.43	16.47	15.67	14.92	14.18	13.38
180.0	22.70	21.32	19.88	18.76	17.64	16.68	15.93	14.92	14.28
225.0	21.53	20.89	19.50	18.92	17.96	17.05	16.25	15.45	14.71
270.0	23.45	22.38	21.42	20.52	19.66	19.08	17.85	16.95	16.47
315.0	18.97	18.17	17.43	16.63	15.88	15.08	14.34	13.54	12.79
360.0	20.41	19.40	18.39	17.37	16.36	15.51	14.65	13.80	13.06

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	12.47	11.99	11.62	11.30	11.03	10.82	10.60	10.34	10.07
45.0	12.26	11.78	11.35	10.98	10.76	10.55	10.23	10.07	9.86
90.0	10.44	10.02	9.75	9.65	9.49	9.38	9.27	9.11	9.01
135.0	12.79	12.15	11.62	11.14	10.71	10.44	10.23	10.02	9.86
180.0	13.48	12.79	12.15	11.51	10.98	10.50	10.13	9.86	9.65
225.0	13.91	13.11	12.47	11.83	11.35	10.82	10.50	10.28	10.13
270.0	15.51	14.71	13.91	13.11	12.36	11.78	11.35	10.98	10.66
315.0	12.10	11.56	11.03	10.60	10.39	10.23	10.13	9.97	9.86
360.0	12.47	11.99	11.62	11.30	11.03	10.82	10.60	10.34	10.07

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.81	9.65	9.49	9.27	9.11	9.01	8.90	8.79	8.69
45.0	9.65	9.54	9.38	9.17	9.06	9.01	8.90	8.85	8.85
90.0	8.79	8.69	8.63	8.47	8.31	8.15	8.05	7.89	7.73
135.0	9.70	9.54	9.49	9.38	9.27	9.22	9.17	9.22	9.17
180.0	9.43	9.33	9.27	9.11	9.01	8.90	8.85	8.74	8.63
225.0	9.86	9.70	9.59	9.54	9.43	9.33	9.17	9.06	9.06
270.0	10.39	10.18	10.02	9.81	9.59	9.43	9.38	9.22	9.17
315.0	9.75	9.59	9.27	9.17	8.90	8.74	8.47	8.26	8.10
360.0	9.81	9.65	9.49	9.27	9.11	9.01	8.90	8.79	8.69

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.69	8.74	8.79	8.90	9.11	9.49	9.81	10.23	10.50
45.0	8.85	8.90	8.90	8.95	9.11	9.22	9.33	9.43	9.59
90.0	7.57	7.41	7.30	7.19	7.19	7.14	7.14	7.09	7.19
135.0	9.22	9.38	9.43	9.59	9.70	9.97	10.23	10.50	10.71
180.0	8.63	8.58	8.53	8.53	8.58	8.74	8.85	9.06	9.22
225.0	9.01	8.95	8.95	9.01	9.06	9.22	9.33	9.49	9.75
270.0	9.06	9.06	9.06	9.11	9.11	9.17	9.27	9.43	9.65
315.0	7.89	7.78	7.78	7.78	7.67	6.71	6.45	6.34	6.23
360.0	8.69	8.74	8.79	8.90	9.11	9.49	9.81	10.23	10.50

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.71	10.66	10.60	10.55	10.50	10.50	10.39	10.39	10.44
45.0	9.81	9.97	10.02	10.13	10.18	10.07	9.97	9.86	9.81
90.0	7.19	7.14	7.19	7.19	7.09	6.93	6.71	6.50	6.34
135.0	11.14	11.46	11.83	12.15	12.47	12.68	12.74	12.68	12.47
180.0	9.43	9.65	9.86	10.07	10.23	10.44	10.71	10.87	11.03
225.0	9.91	10.07	10.39	10.60	10.82	11.03	11.30	11.40	11.46
270.0	9.75	9.97	10.13	10.34	10.50	10.71	10.82	10.92	10.87
315.0	6.13	6.02	5.97	5.86	5.76	5.65	5.60	5.33	5.17
360.0	10.71	10.66	10.60	10.55	10.50	10.50	10.39	10.39	10.44

Intensity data(cd)

C/γ(°)	90.0
0.0	10.44
45.0	9.70
90.0	6.23
135.0	12.10
180.0	11.19
225.0	11.40
270.0	10.66
315.0	5.12
360.0	10.44