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NT

Client:

LumCAT: 61-0311

Luminaire: 92.70.458.00

Report No: 20260714-B003

Ballast type:

Test No: 20241112-C008

Voltage(V): 36.590

LampCAT: CITIZEN CLU7A2 LES4.5

Current(A): 0.180

Lamp flux(lm): 652.1

Power (W): 6.586

Number of Lamps: 1

PF: 0.000

Length(mm): 35

Width(mm): 35

Phm Type: C

Height(mm): 17

Photometric Results

Lumens(lm): 614.00, Efficiency(%): 94.16% , Luminous Efficacy(lm/W): 93.23

Central intensity(cd): 760.412, Maximum intensity(cd): 760.961

Angle of maximum intensity: C=0.0 γ =1.0

Beam Angle(50%Imax): [C0/180]Total=57.8

[C90/270]Total=57.8

Field angle(10%Imax): [C0/180]Total=70.2

[C90/270]Total=70.2

Maximum s/h(1/2): C0_180=0.96 C90_270=0.96

Maximum s/h(1/4): C0_180=0.83 C90_270=0.83

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.16%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.921%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	760.412	0.000	0	0.00%	0.00%
1.0	760.961	0.728	0.728	0.11%	0.12%
2.0	760.193	2.183	2.911	0.33%	0.47%
3.0	757.091	3.629	6.54	0.56%	1.07%
4.0	752.219	5.052	11.592	0.77%	1.89%
5.0	746.586	6.448	18.04	0.99%	2.94%
6.0	739.066	7.807	25.848	1.20%	4.21%
7.0	729.885	9.118	34.965	1.40%	5.69%
8.0	719.600	10.374	45.339	1.59%	7.38%
9.0	709.534	11.582	56.921	1.78%	9.27%
10.0	699.088	12.748	69.669	1.95%	11.35%
11.0	689.644	13.876	83.545	2.13%	13.61%
12.0	680.185	14.974	98.519	2.30%	16.05%
13.0	672.094	16.048	114.567	2.46%	18.66%
14.0	662.877	17.088	131.655	2.62%	21.44%
15.0	654.721	18.089	149.744	2.77%	24.39%
16.0	647.039	19.074	168.818	2.93%	27.49%
17.0	640.251	20.047	188.865	3.07%	30.76%
18.0	632.241	20.981	209.845	3.22%	34.18%
19.0	625.862	21.888	231.734	3.36%	37.74%
20.0	618.488	22.775	254.509	3.49%	41.45%
21.0	609.278	23.576	278.084	3.62%	45.29%
22.0	597.566	24.252	302.336	3.72%	49.24%
23.0	582.211	24.755	327.091	3.80%	53.27%
24.0	562.467	25.027	352.118	3.84%	57.35%
25.0	538.612	25.036	377.154	3.84%	61.43%
26.0	508.290	24.712	401.866	3.79%	65.45%
27.0	471.245	23.965	425.831	3.68%	69.35%
28.0	424.771	22.685	448.516	3.48%	73.05%
29.0	375.144	20.928	469.444	3.21%	76.46%
30.0	316.453	18.673	488.117	2.86%	79.50%
31.0	257.653	15.977	504.094	2.45%	82.10%
32.0	205.012	13.255	517.348	2.03%	84.26%
33.0	153.329	10.557	527.905	1.62%	85.98%
34.0	110.966	7.998	535.904	1.23%	87.28%
35.0	77.323	5.848	541.751	0.90%	88.23%
36.0	55.699	4.235	545.987	0.65%	88.92%
37.0	39.817	3.115	549.102	0.48%	89.43%

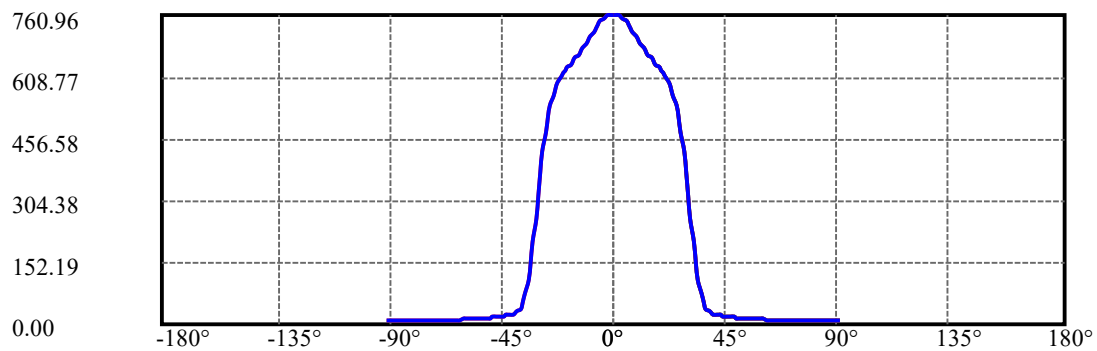
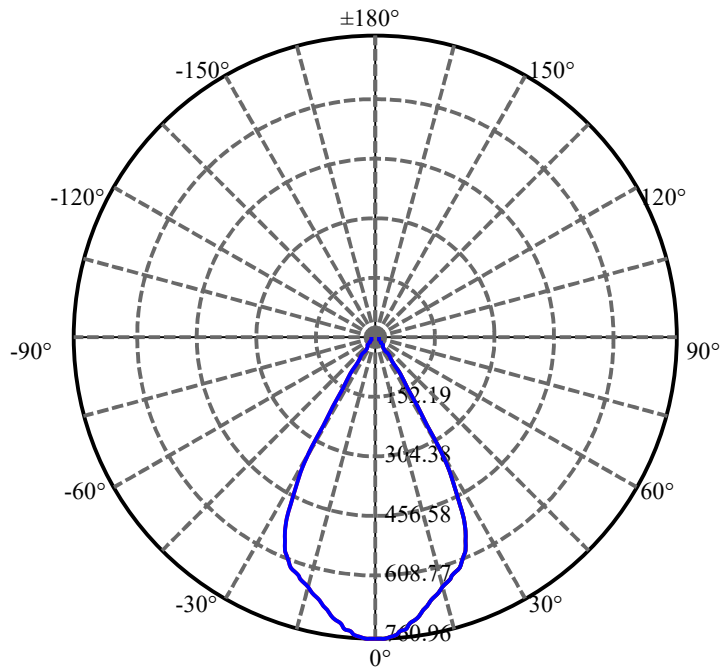
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	31.822	2.391	551.493	0.37%	89.82%
39.0	27.762	2.034	553.527	0.31%	90.15%
40.0	25.508	1.858	555.385	0.28%	90.45%
41.0	24.016	1.764	557.148	0.27%	90.74%
42.0	22.809	1.701	558.849	0.26%	91.02%
43.0	21.595	1.645	560.494	0.25%	91.29%
44.0	20.578	1.592	562.086	0.24%	91.54%
45.0	19.561	1.543	563.629	0.24%	91.80%
46.0	18.742	1.498	565.127	0.23%	92.04%
47.0	17.893	1.457	566.584	0.22%	92.28%
48.0	17.162	1.417	568.001	0.22%	92.51%
49.0	16.496	1.382	569.383	0.21%	92.73%
50.0	15.882	1.350	570.733	0.21%	92.95%
51.0	15.304	1.319	572.052	0.20%	93.17%
52.0	14.762	1.290	573.342	0.20%	93.38%
53.0	14.258	1.262	574.605	0.19%	93.58%
54.0	13.745	1.234	575.839	0.19%	93.78%
55.0	13.336	1.209	577.048	0.19%	93.98%
56.0	12.904	1.186	578.234	0.18%	94.17%
57.0	12.575	1.165	579.399	0.18%	94.36%
58.0	12.304	1.150	580.549	0.18%	94.55%
59.0	12.078	1.140	581.689	0.17%	94.74%
60.0	11.836	1.130	582.819	0.17%	94.92%
61.0	11.624	1.120	583.938	0.17%	95.10%
62.0	11.397	1.109	585.048	0.17%	95.28%
63.0	11.156	1.097	586.144	0.17%	95.46%
64.0	10.944	1.084	587.229	0.17%	95.64%
65.0	10.746	1.073	588.302	0.16%	95.81%
66.0	10.541	1.062	589.364	0.16%	95.99%
67.0	10.358	1.051	590.415	0.16%	96.16%
68.0	10.198	1.041	591.457	0.16%	96.33%
69.0	10.073	1.034	592.491	0.16%	96.50%
70.0	9.963	1.029	593.52	0.16%	96.66%
71.0	9.868	1.025	594.545	0.16%	96.83%
72.0	9.773	1.021	595.566	0.16%	97.00%
73.0	9.715	1.019	596.585	0.16%	97.16%
74.0	9.715	1.021	597.607	0.16%	97.33%
75.0	9.715	1.027	598.633	0.16%	97.50%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.759	1.034	599.667	0.16%	97.67%
77.0	9.795	1.043	600.709	0.16%	97.84%
78.0	9.839	1.051	601.76	0.16%	98.01%
79.0	9.868	1.059	602.819	0.16%	98.18%
80.0	9.861	1.064	603.883	0.16%	98.35%
81.0	9.839	1.065	604.948	0.16%	98.53%
82.0	9.788	1.064	606.013	0.16%	98.70%
83.0	9.700	1.059	607.072	0.16%	98.87%
84.0	9.612	1.052	608.124	0.16%	99.04%
85.0	9.429	1.039	609.163	0.16%	99.21%
86.0	9.210	1.019	610.182	0.16%	99.38%
87.0	9.049	0.999	611.181	0.15%	99.54%
88.0	9.078	0.993	612.174	0.15%	99.70%
89.0	8.339	0.955	613.129	0.15%	99.86%
90.0	7.579	0.873	614.002	0.13%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	488.12	74.86%	79.50%
0-40	555.38	85.18%	90.45%
0-60	582.82	89.38%	94.92%
0-90	613.13	94.03%	99.86%
0-120	613.13	94.03%	99.86%
0-180	614.00	94.16%	100.00%
60-90	30.31	4.65%	4.94%
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%
0-30.19	491.20	75.33%	80.00%

ZONAL LUMEN SUMMARY

0-10	69.67
10-20	184.84
20-30	233.61
30-40	67.27
40-50	15.35
50-60	12.09
60-70	10.70
70-80	10.36
80-90	9.25
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

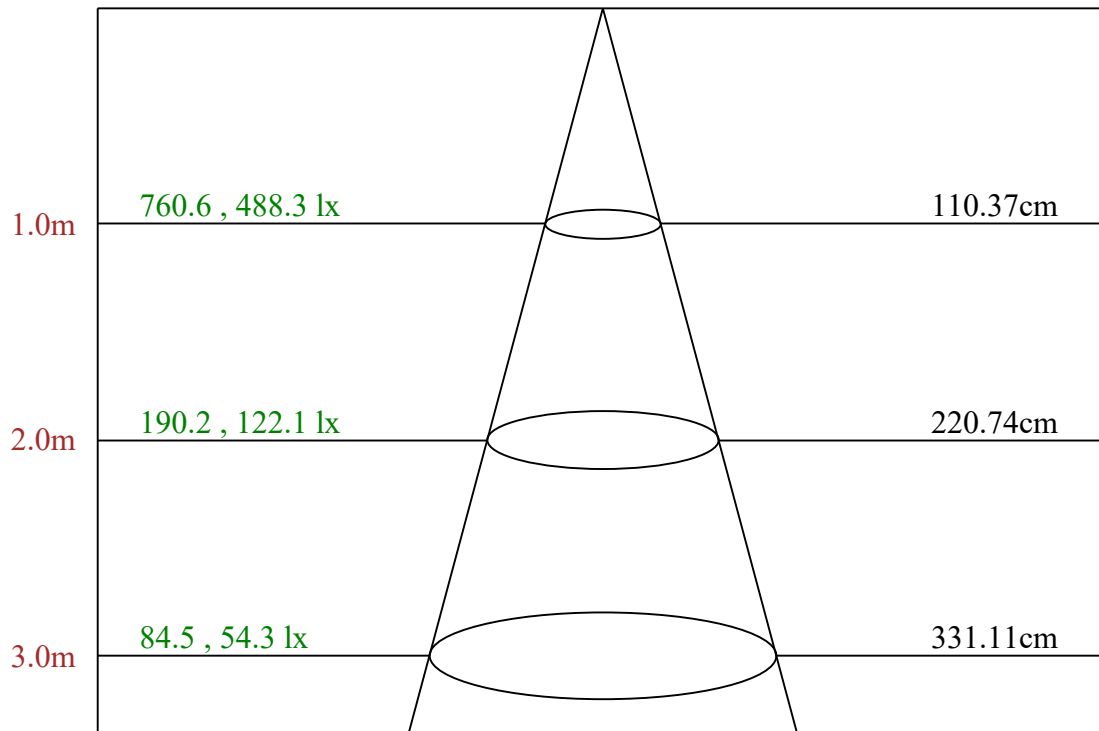
C0(Max): —————C0/C180: —————C90/C270: —————

Field angle(10%Imax):C0/180Left:36.1 Right:34.1

:C90/270Left:36.1 Right:34.1

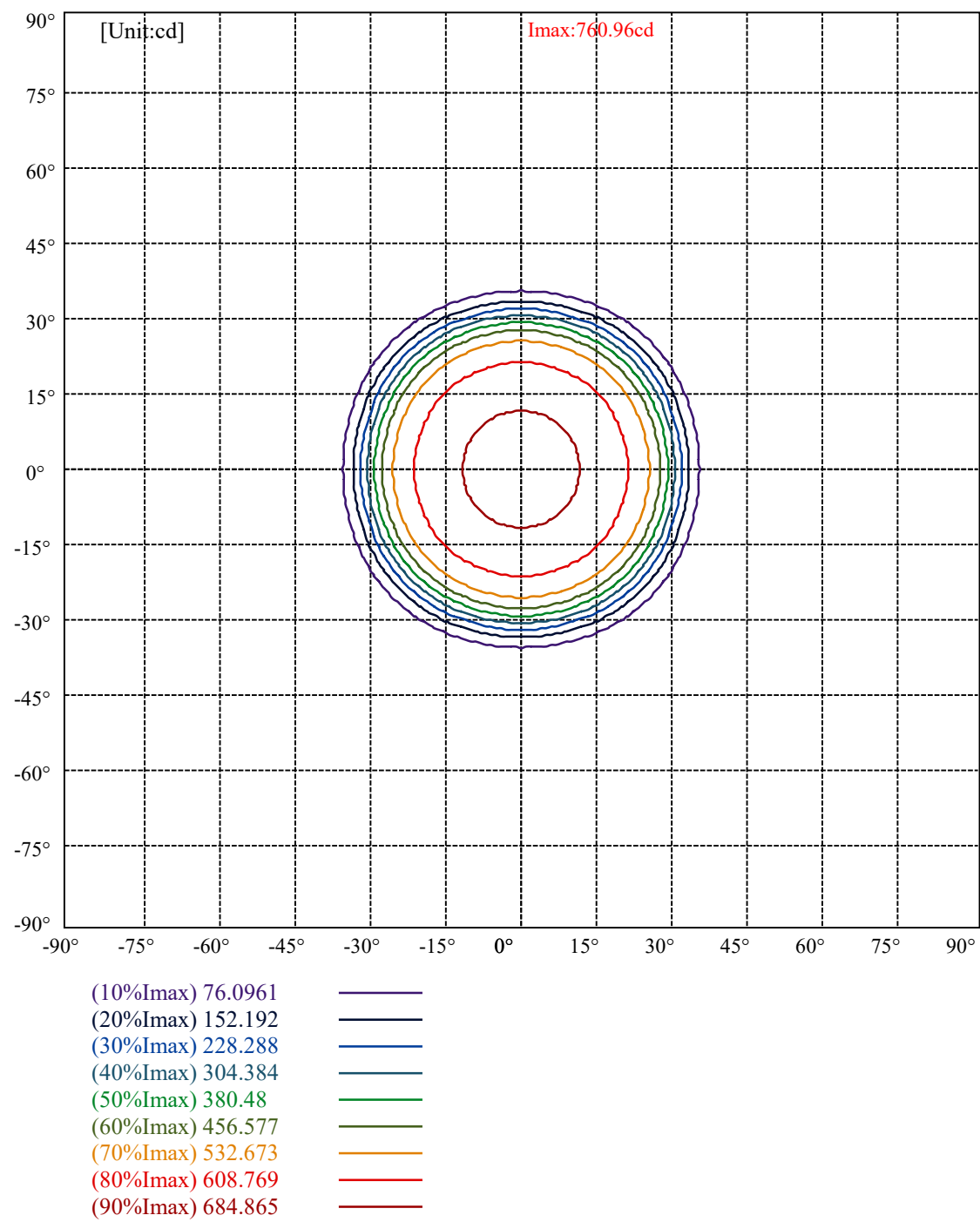
Beam Angle(50%Imax):C0/180Left:29.9 Right:27.9

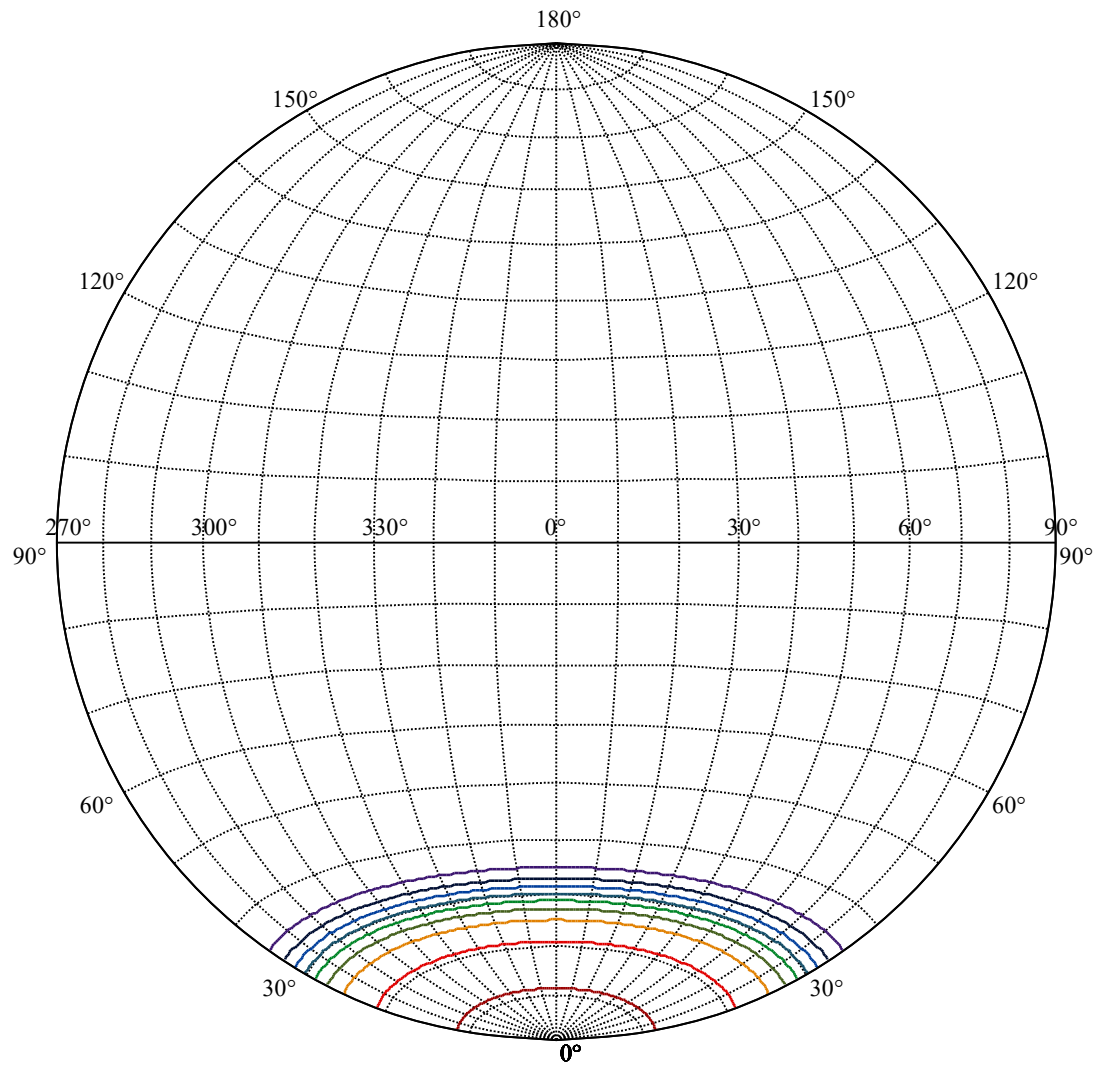
:C90/270Left:29.9 Right:27.9



Max , Ave

Beam angle of C0 plane 57.78



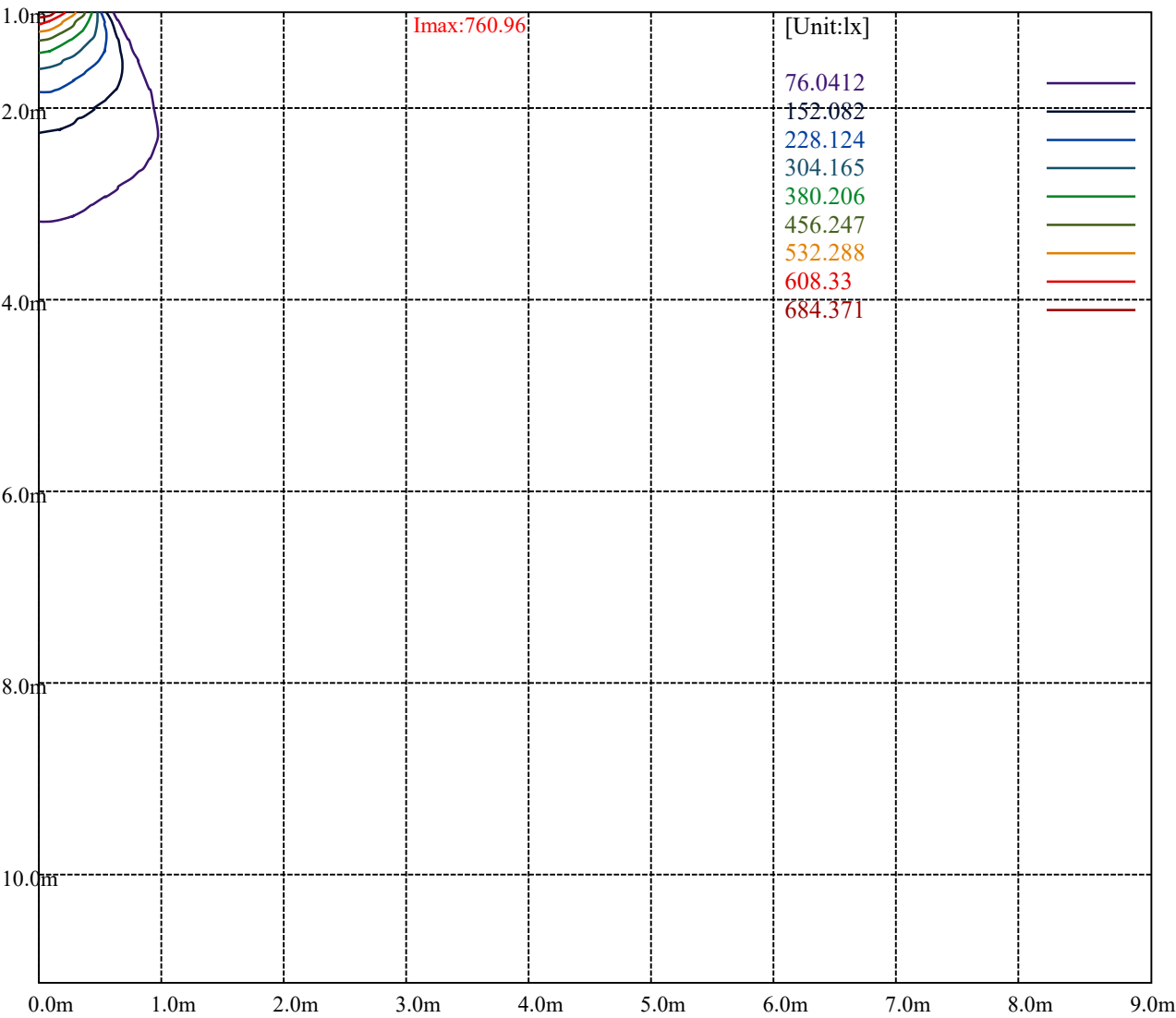


House

[Unit:cd]

Road

Imax:760.96	
(10%Imax) 76.0961	—
(20%Imax) 152.192	—
(30%Imax) 228.288	—
(40%Imax) 304.384	—
(50%Imax) 380.48	—
(60%Imax) 456.577	—
(70%Imax) 532.673	—
(80%Imax) 608.769	—
(90%Imax) 684.865	—



Luminance Table

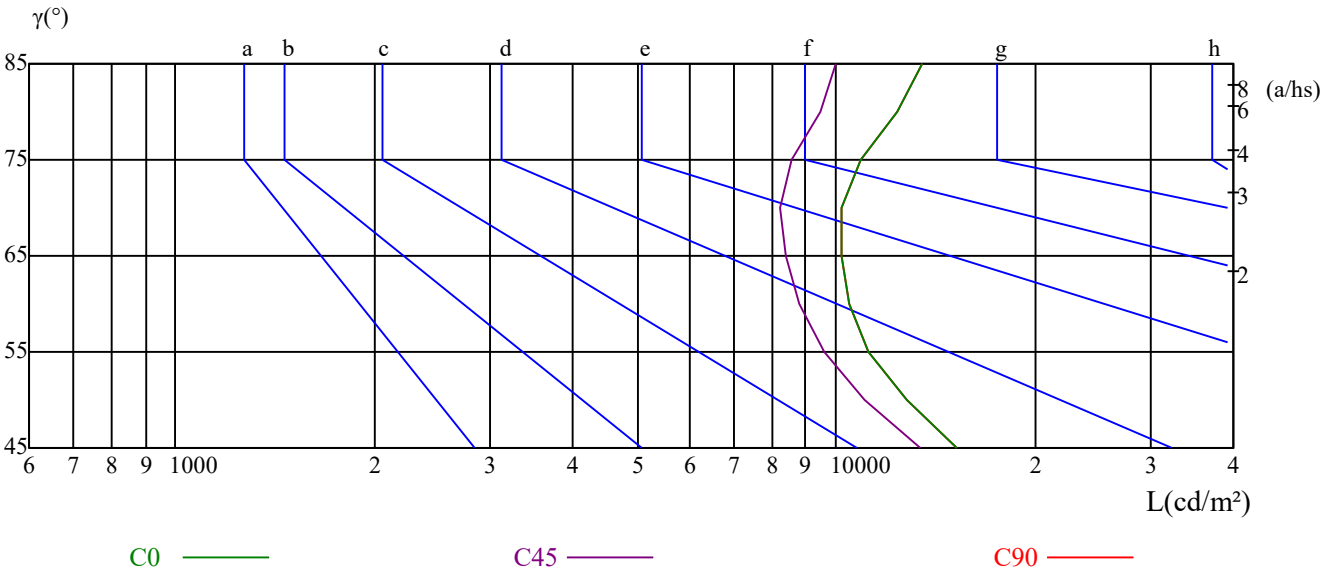
γ	45	50	55	60	65	70	75	80	85
C0	15200	12775	11206	10495	10167	10186	10894	12347	13480
C45	13387	11091	9581	8825	8393	8236	8599	9469	9978
C90	15200	12775	11206	10495	10167	10186	10894	12347	13480

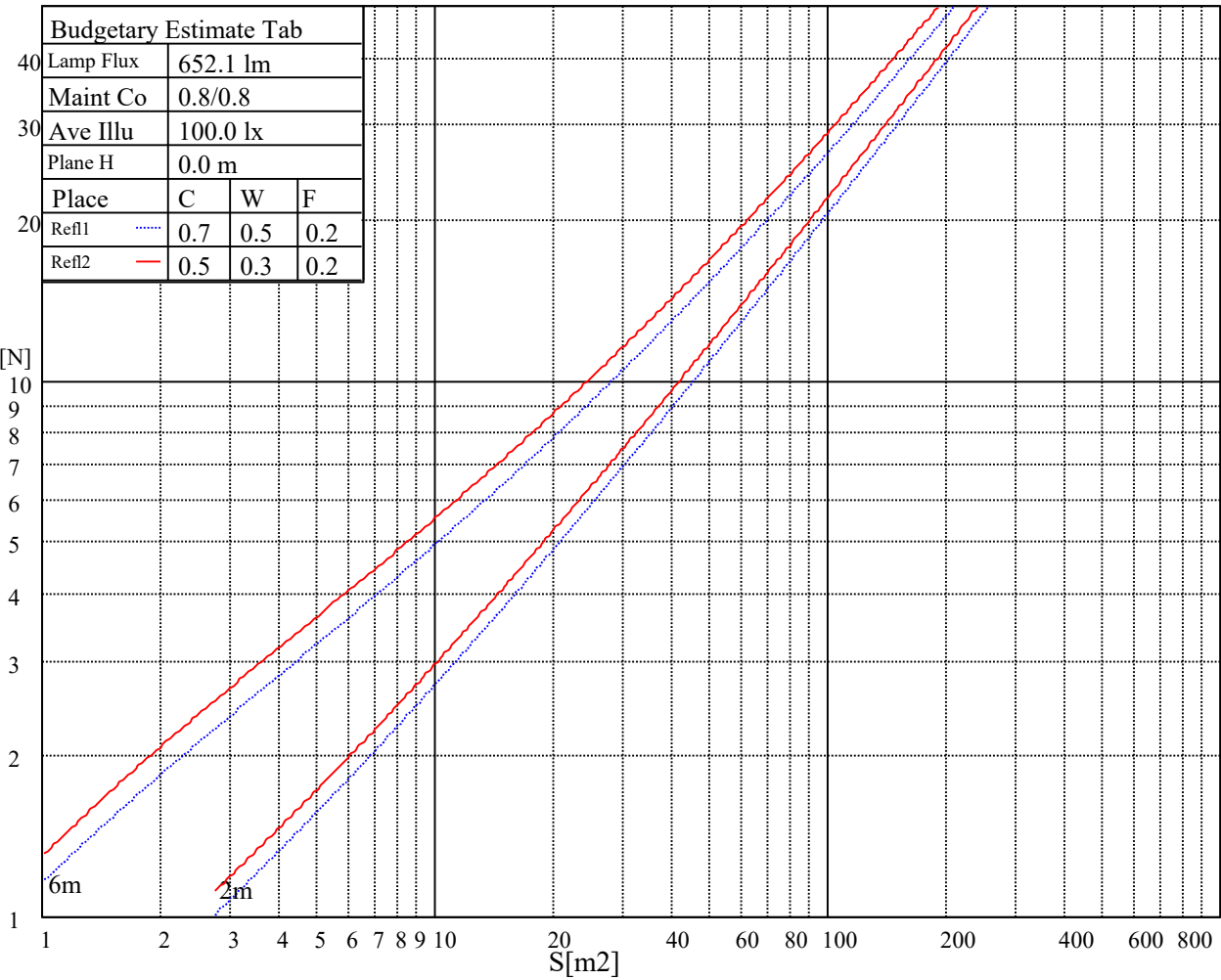
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20757	20757	20757	30642	30642	30642	88315	88315	88315

Glare Table

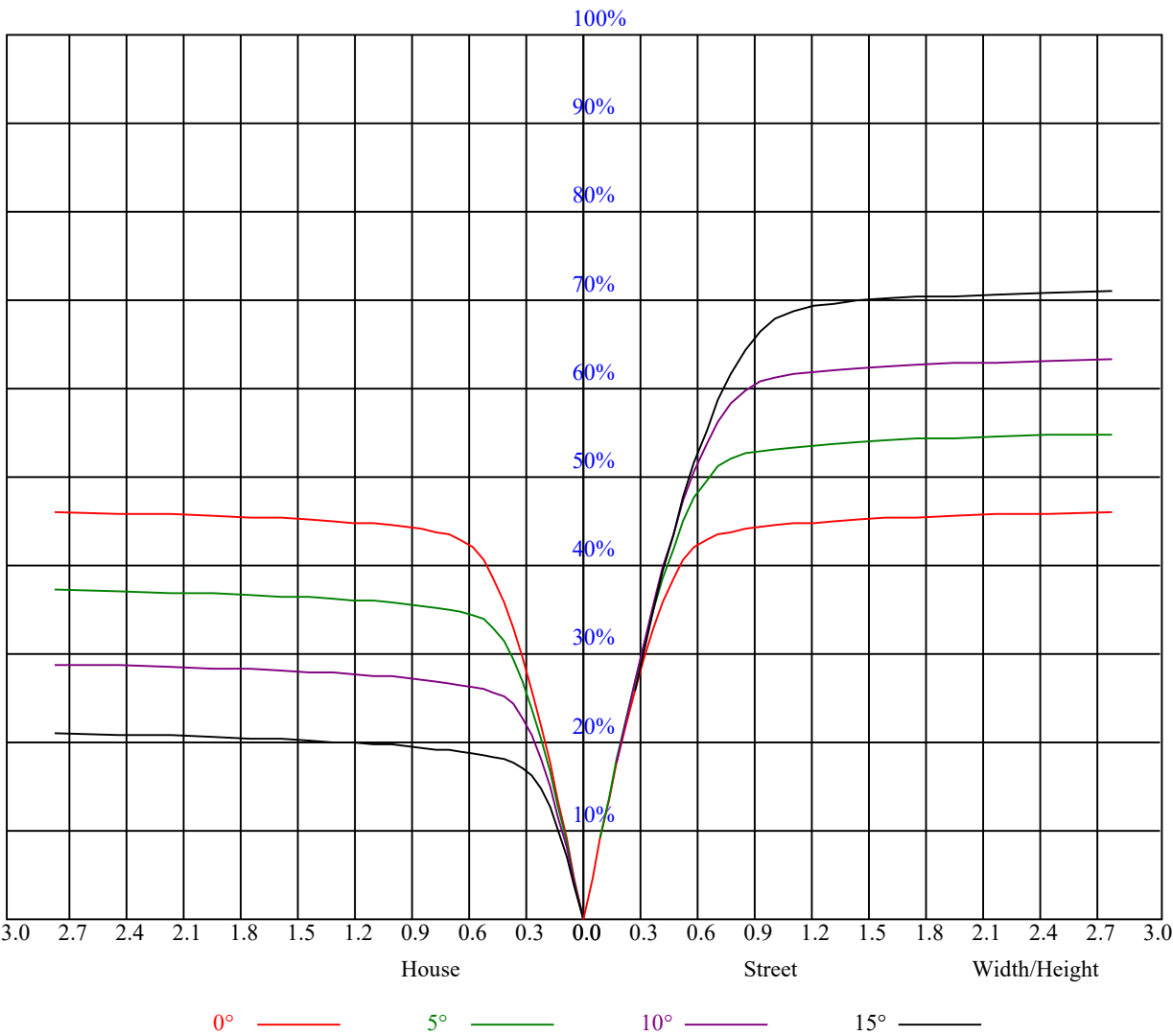
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

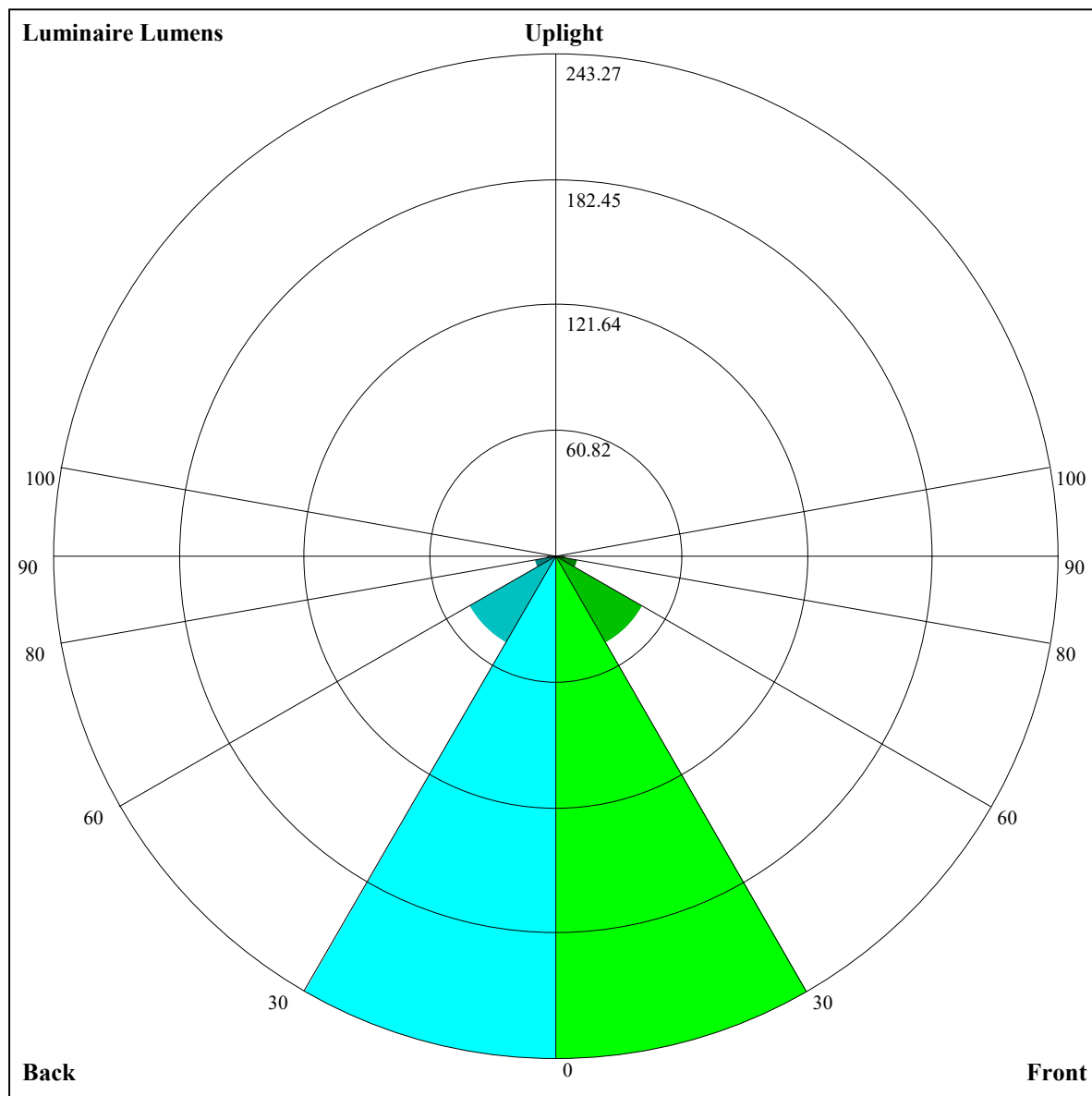
Luminance Limiting Curve





RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.12	1.12	1.12	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.01	0.98	1.01	0.99	0.97	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.86
2	0.96	0.92	0.88	0.94	0.90	0.87	0.91	0.88	0.85	0.88	0.86	0.84	0.86	0.84	0.82	0.80
3	0.89	0.85	0.81	0.88	0.84	0.80	0.86	0.82	0.79	0.83	0.80	0.77	0.81	0.79	0.76	0.75
4	0.84	0.79	0.74	0.83	0.78	0.74	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.70
5	0.79	0.73	0.69	0.78	0.73	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.74	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.62
7	0.70	0.65	0.61	0.70	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.58
8	0.66	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
9	0.63	0.58	0.54	0.63	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.52
10	0.60	0.55	0.51	0.60	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.49





Luminaire Lumens:

FL=243.27,FM=48.16,FH=10.54,FVH=5.04

BL=243.27,BM=48.16,BH=10.54,BVH=5.04

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)

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C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
45.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
90.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
135.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
180.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
225.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
270.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
315.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60
360.0	760.41	760.96	760.19	757.09	752.22	746.59	739.07	729.89	719.60

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
45.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
90.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
135.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
180.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
225.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
270.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
315.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25
360.0	709.53	699.09	689.64	680.19	672.09	662.88	654.72	647.04	640.25

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
45.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
90.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
135.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
180.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
225.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
270.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
315.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29
360.0	632.24	625.86	618.49	609.28	597.57	582.21	562.47	538.61	508.29

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
45.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
90.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
135.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
180.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
225.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
270.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
315.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32
360.0	471.25	424.77	375.14	316.45	257.65	205.01	153.33	110.97	77.32

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
45.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
90.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
135.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
180.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
225.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
270.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
315.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58
360.0	55.70	39.82	31.82	27.76	25.51	24.02	22.81	21.60	20.58

Intensity data(cd)

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C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
45.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
90.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
135.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
180.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
225.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
270.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
315.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
360.0	19.56	18.74	17.89	17.16	16.50	15.88	15.30	14.76	14.26
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
45.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
90.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
135.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
180.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
225.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
270.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
315.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
360.0	13.75	13.34	12.90	12.58	12.30	12.08	11.84	11.62	11.40
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
45.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
90.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
135.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
180.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
225.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
270.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
315.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
360.0	11.16	10.94	10.75	10.54	10.36	10.20	10.07	9.96	9.87
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
45.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
90.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
135.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
180.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
225.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
270.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
315.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
360.0	9.77	9.72	9.72	9.72	9.76	9.80	9.84	9.87	9.86
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
45.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
90.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
135.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
180.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
225.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
270.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
315.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34
360.0	9.84	9.79	9.70	9.61	9.43	9.21	9.05	9.08	8.34

Intensity data(cd)

Appendix Page: 19 Total:19

C/γ(°)	90.0
0.0	7.58
45.0	7.58
90.0	7.58
135.0	7.58
180.0	7.58
225.0	7.58
270.0	7.58
315.0	7.58
360.0	7.58