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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LN01D02836DA-N
Luminaire: 92.70.307.00
Report No: 211112-B001
Test No: 211112-C001
LampCAT: CITIZEN CLU701-1002C9303H5.3
Lamp flux(lm): 831.6
Number of Lamps: 1
Length(mm): 111
Phm Type: C

Voltage(V): 30.5600
Current(A): 0.2510
Power (W): 7.6700
PF: 0.0000
Ballast type: DC
Width(mm): 111
Height(mm): 0

Photometric Results

Lumens(lm): 535.85
Efficiency(%): 64.44%
Lumens(lm)/Power(W): 69.86
Central intensity(cd): 966.481
Maximum intensity(cd): 966.481
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=37.9
[C90/270]Total=37.9
Field angle(10%Imax): [C0/180]Total=70.9
[C90/270]Total=70.9
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.62 C90_270=0.62
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 64.44%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.620%

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2021/11/12
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.73

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	966.481	0.000	0	.000%	.000%
1.0	964.994	0.924	0.924	.111%	.172%
2.0	960.378	2.763	3.688	.332%	.688%
3.0	952.327	4.575	8.262	.550%	1.542%
4.0	941.810	6.340	14.602	.762%	2.725%
5.0	927.597	8.042	22.645	.967%	4.226%
6.0	910.851	9.662	32.306	1.162%	6.029%
7.0	890.221	11.179	43.485	1.344%	8.115%
8.0	868.232	12.585	56.07	1.513%	10.464%
9.0	841.866	13.859	69.93	1.667%	13.050%
10.0	812.632	14.973	84.902	1.801%	15.844%
11.0	782.360	15.937	100.84	1.917%	18.818%
12.0	750.481	16.756	117.596	2.015%	21.945%
13.0	714.017	17.380	134.976	2.090%	25.189%
14.0	675.626	17.787	152.763	2.139%	28.508%
15.0	638.818	18.045	170.808	2.170%	31.876%
16.0	598.761	18.134	188.942	2.181%	35.260%
17.0	558.129	18.016	206.958	2.167%	38.622%
18.0	517.580	17.736	224.694	2.133%	41.932%
19.0	480.787	17.370	242.064	2.089%	45.173%
20.0	440.162	16.856	258.92	2.027%	48.319%
21.0	402.959	16.190	275.109	1.947%	51.340%
22.0	368.668	15.506	290.615	1.865%	54.234%
23.0	334.609	14.757	305.372	1.775%	56.988%
24.0	304.419	13.971	319.344	1.680%	59.595%
25.0	274.826	13.171	332.514	1.584%	62.053%
26.0	248.423	12.351	344.866	1.485%	64.358%
27.0	224.148	11.562	356.427	1.390%	66.516%
28.0	202.652	10.806	367.233	1.299%	68.532%
29.0	181.768	10.058	377.29	1.209%	70.409%
30.0	165.075	9.365	386.655	1.126%	72.157%
31.0	148.822	8.735	395.39	1.050%	73.787%
32.0	133.936	8.101	403.491	.974%	75.299%
33.0	122.113	7.543	411.034	.907%	76.706%
34.0	110.349	7.035	418.069	.846%	78.019%
35.0	100.601	6.551	424.621	.788%	79.242%
36.0	91.534	6.118	430.738	.736%	80.384%
37.0	83.617	5.712	436.451	.687%	81.450%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	76.282	5.337	441.788	.642%	82.446%
39.0	69.784	4.986	446.774	.600%	83.376%
40.0	64.145	4.671	451.444	.562%	84.248%
41.0	59.163	4.391	455.835	.528%	85.067%
42.0	54.681	4.136	459.972	.497%	85.839%
43.0	50.446	3.894	463.866	.468%	86.566%
44.0	46.891	3.674	467.54	.442%	87.251%
45.0	43.612	3.478	471.018	.418%	87.900%
46.0	40.654	3.295	474.313	.396%	88.515%
47.0	37.995	3.128	477.441	.376%	89.099%
48.0	35.687	2.979	480.42	.358%	89.655%
49.0	33.357	2.835	483.255	.341%	90.184%
50.0	31.258	2.694	485.949	.324%	90.687%
51.0	29.451	2.569	488.518	.309%	91.166%
52.0	27.658	2.451	490.968	.295%	91.624%
53.0	26.060	2.337	493.305	.281%	92.060%
54.0	24.529	2.230	495.535	.268%	92.476%
55.0	23.177	2.129	497.664	.256%	92.873%
56.0	21.899	2.037	499.701	.245%	93.253%
57.0	20.772	1.951	501.652	.235%	93.617%
58.0	19.629	1.868	503.52	.225%	93.966%
59.0	18.650	1.790	505.31	.215%	94.300%
60.0	17.627	1.714	507.024	.206%	94.620%
61.0	16.656	1.636	508.66	.197%	94.925%
62.0	15.790	1.563	510.223	.188%	95.217%
63.0	14.991	1.497	511.72	.180%	95.496%
64.0	14.214	1.433	513.153	.172%	95.764%
65.0	13.452	1.369	514.523	.165%	96.019%
66.0	12.787	1.309	515.832	.157%	96.264%
67.0	12.107	1.252	517.084	.151%	96.497%
68.0	11.562	1.199	518.283	.144%	96.721%
69.0	11.017	1.152	519.434	.139%	96.936%
70.0	10.643	1.112	520.547	.134%	97.143%
71.0	10.375	1.086	521.633	.131%	97.346%
72.0	10.046	1.062	522.695	.128%	97.544%
73.0	9.822	1.039	523.734	.125%	97.738%
74.0	9.643	1.023	524.757	.123%	97.929%
75.0	9.486	1.011	525.768	.122%	98.118%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.426	1.004	526.772	.121%	98.305%
77.0	9.478	1.008	527.78	.121%	98.493%
78.0	9.486	1.015	528.795	.122%	98.683%
79.0	9.247	1.006	529.801	.121%	98.871%
80.0	8.761	0.971	530.772	.117%	99.052%
81.0	8.082	0.911	531.683	.110%	99.222%
82.0	7.282	0.833	532.516	.100%	99.377%
83.0	5.781	0.710	533.226	.085%	99.510%
84.0	5.243	0.601	533.827	.072%	99.622%
85.0	4.272	0.519	534.346	.062%	99.719%
86.0	3.204	0.409	534.755	.049%	99.795%
87.0	2.689	0.323	535.078	.039%	99.855%
88.0	2.450	0.281	535.359	.034%	99.908%
89.0	2.174	0.253	535.612	.030%	99.955%
90.0	2.226	0.241	535.854	.029%	100.000%

Zonal flux distribution table

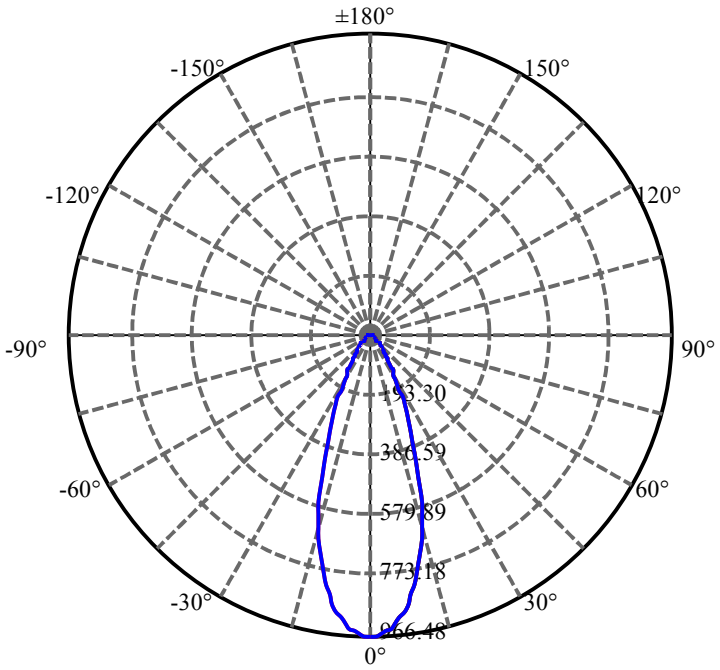
ZONAL LUMEN SUMMARY

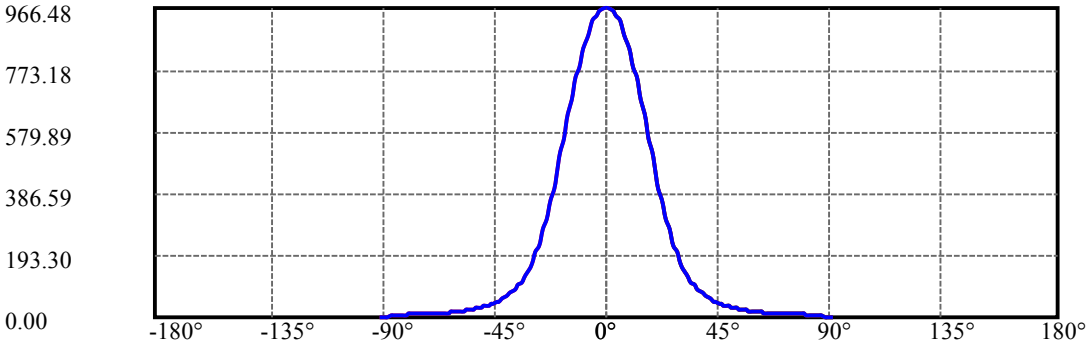
Zone	Lumens	%Lamp	%Fixt
0-30	386.66	46.50%	72.16%
0-40	451.44	54.29%	84.25%
0-60	507.02	60.97%	94.62%
0-90	535.61	64.41%	99.95%
0-120	535.61	64.41%	99.95%
0-180	535.85	64.44%	100.00%
60-90	30.30	3.64%	5.65%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-35.66	428.68	51.55%	80.00%

ZONAL LUMEN SUMMARY

0-10	84.90
10-20	174.02
20-30	127.74
30-40	64.79
40-50	34.50
50-60	21.07
60-70	13.52
70-80	10.23
80-90	4.84
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):

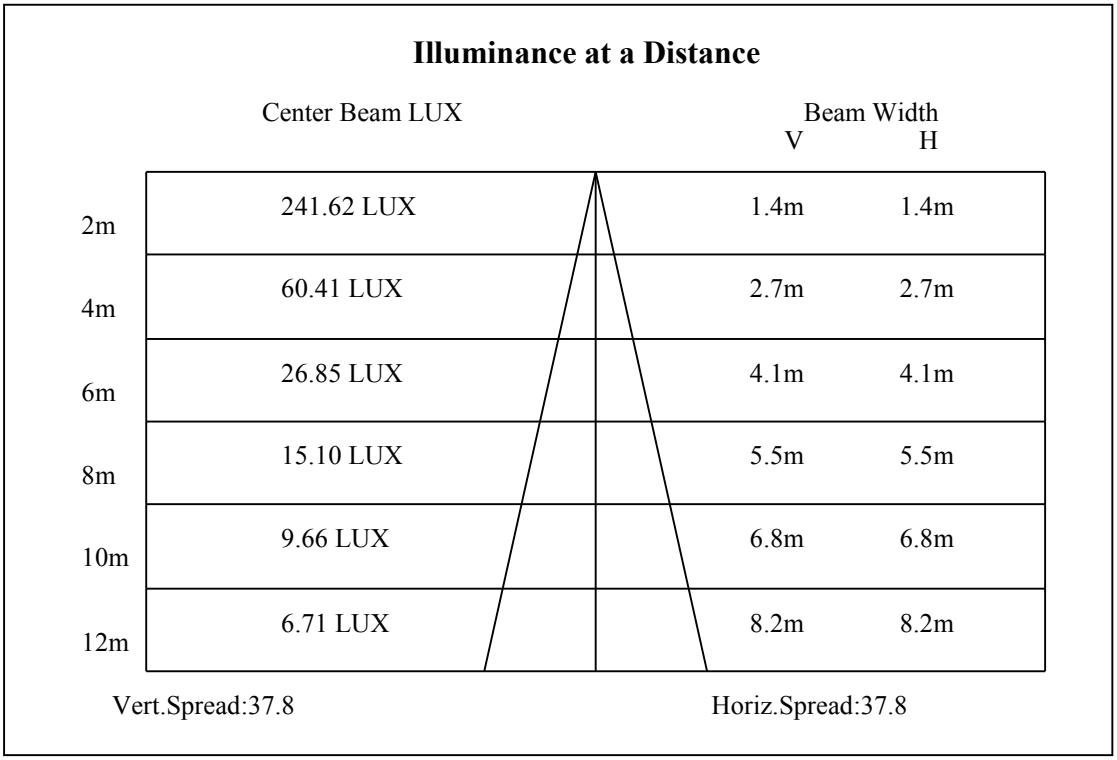
C0/C180:

C90/C270:

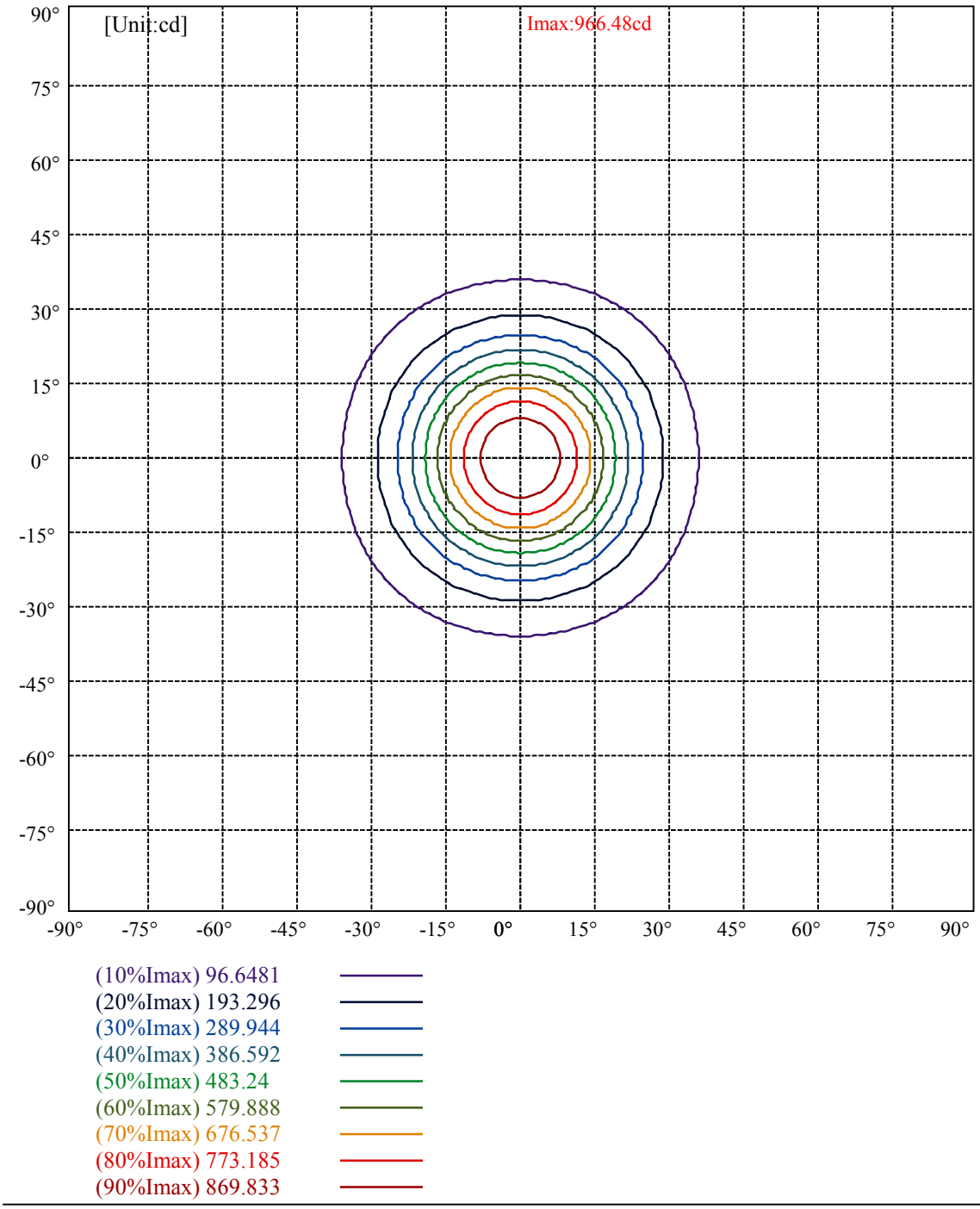
Field angle(10%Imax):C0/180Left:35.4 Right:35.4
:C90/270Left:35.4 Right:35.4

Beam Angle(50%Imax):C0/180Left:18.9 Right:18.9
:C90/270Left:18.9 Right:18.9

Lux distance Curve



ISO-Intensity(V-H)

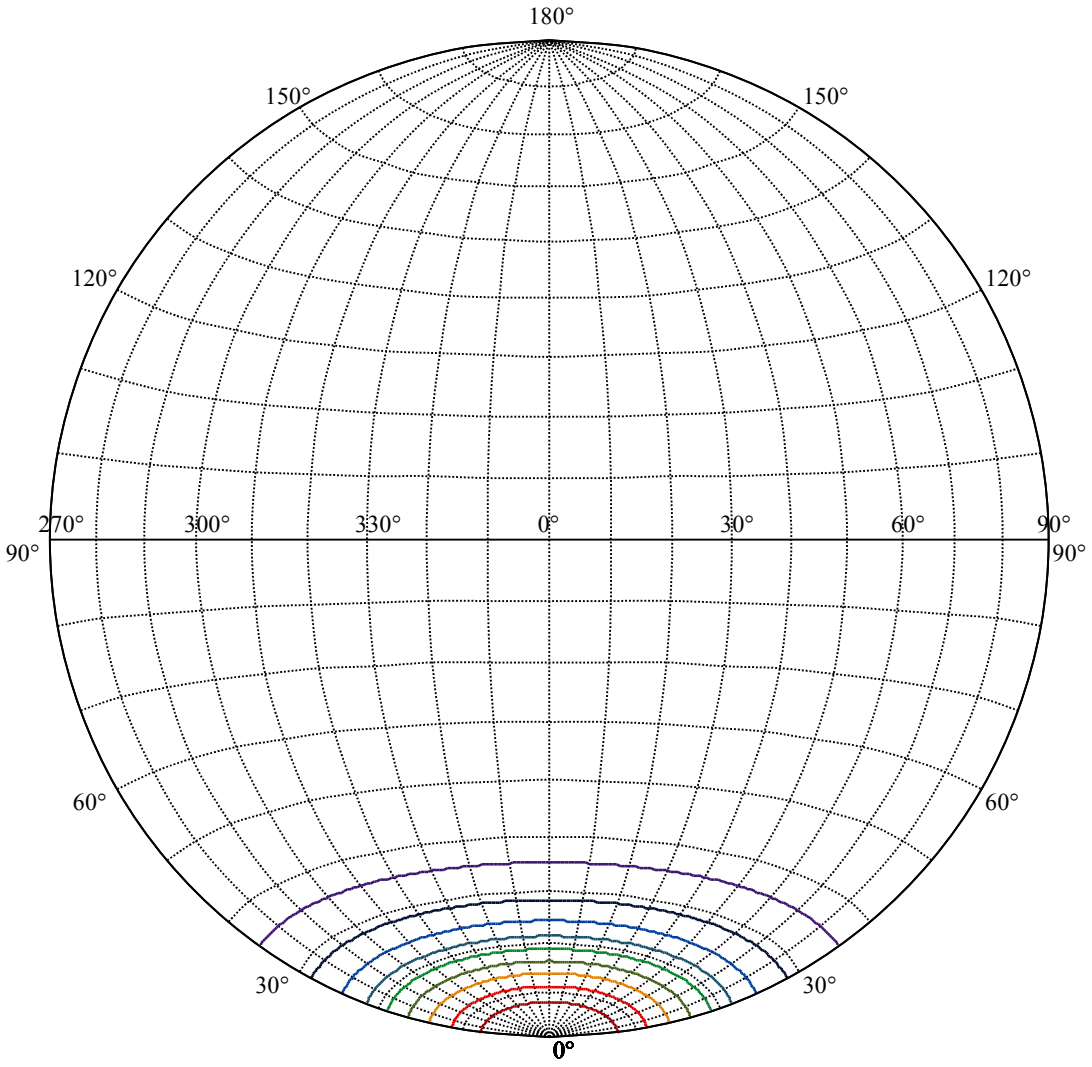


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/12
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:966.48

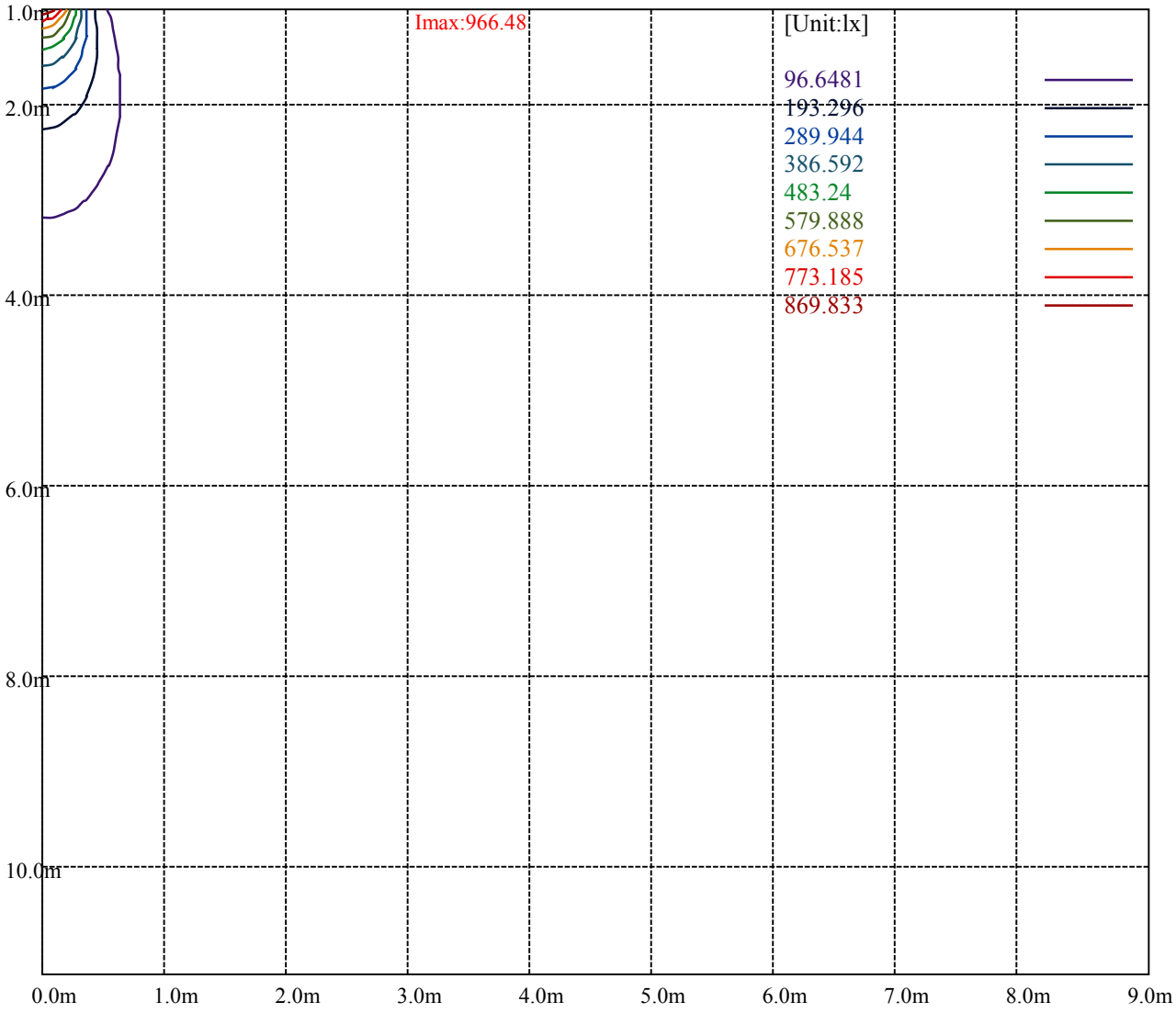
(10%Imax) 96.6481
(20%Imax) 193.296
(30%Imax) 289.944
(40%Imax) 386.592
(50%Imax) 483.24
(60%Imax) 579.888
(70%Imax) 676.537
(80%Imax) 773.185
(90%Imax) 869.833

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/12
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/12
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

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Luminance Limitting Curve(no luminous side)

Luminance Table

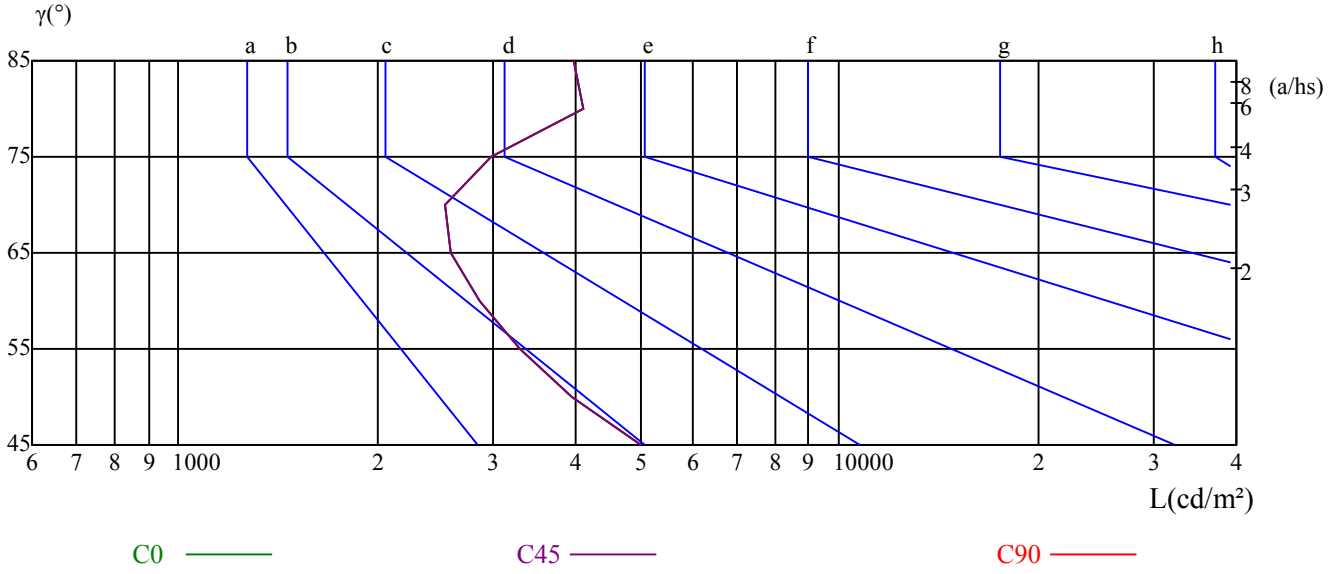
γ	45	50	55	60	65	70	75	80	85
C0	5006	3947	3280	2861	2583	2526	2975	4095	3979
C45	5006	3947	3280	2861	2583	2526	2975	4095	3979
C90	5006	3947	3280	2861	2583	2526	2975	4095	3979

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2583	2583	2583	2975	2975	2975	3979	3979	3979

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

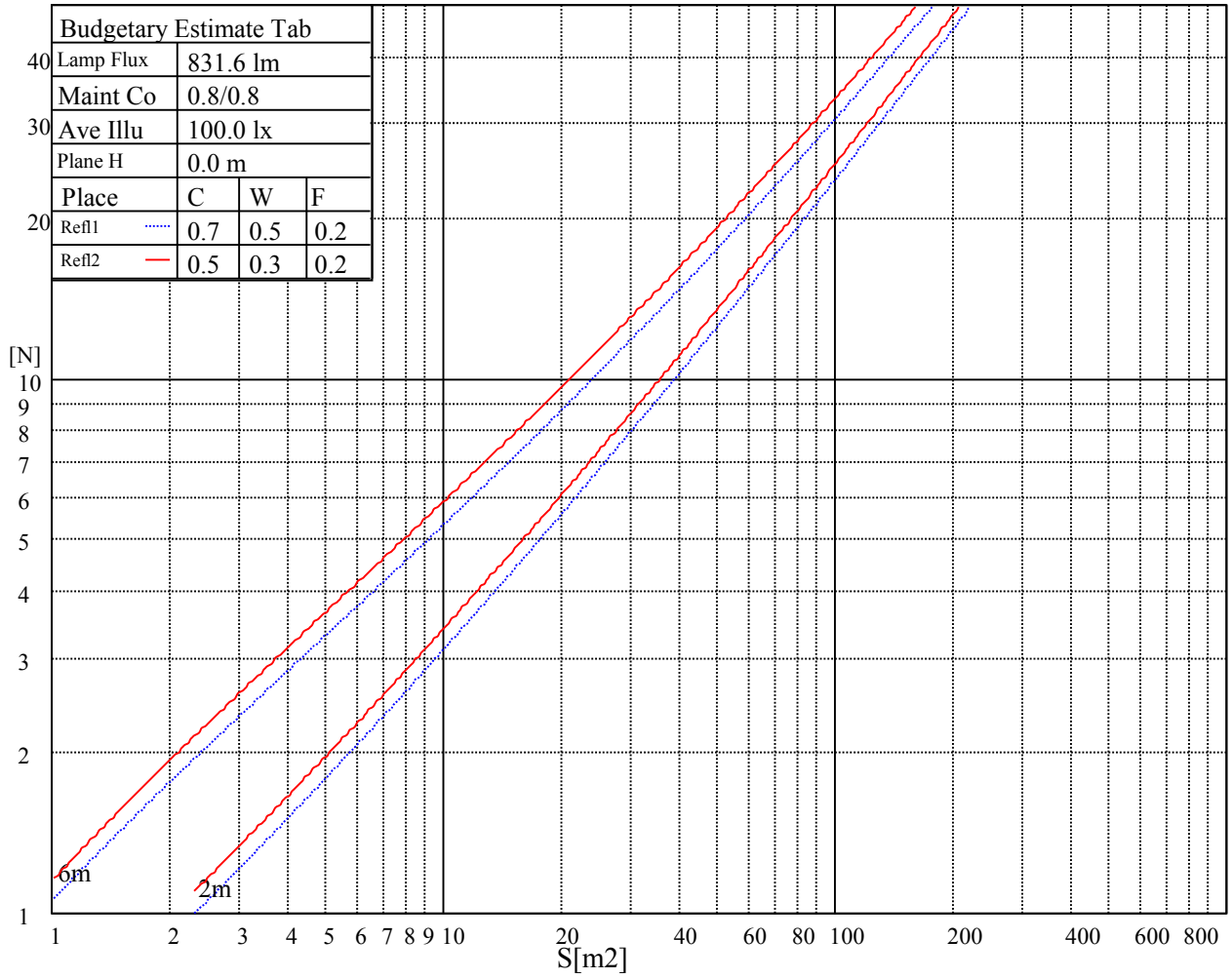


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/12
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Budgetary Estimate Table

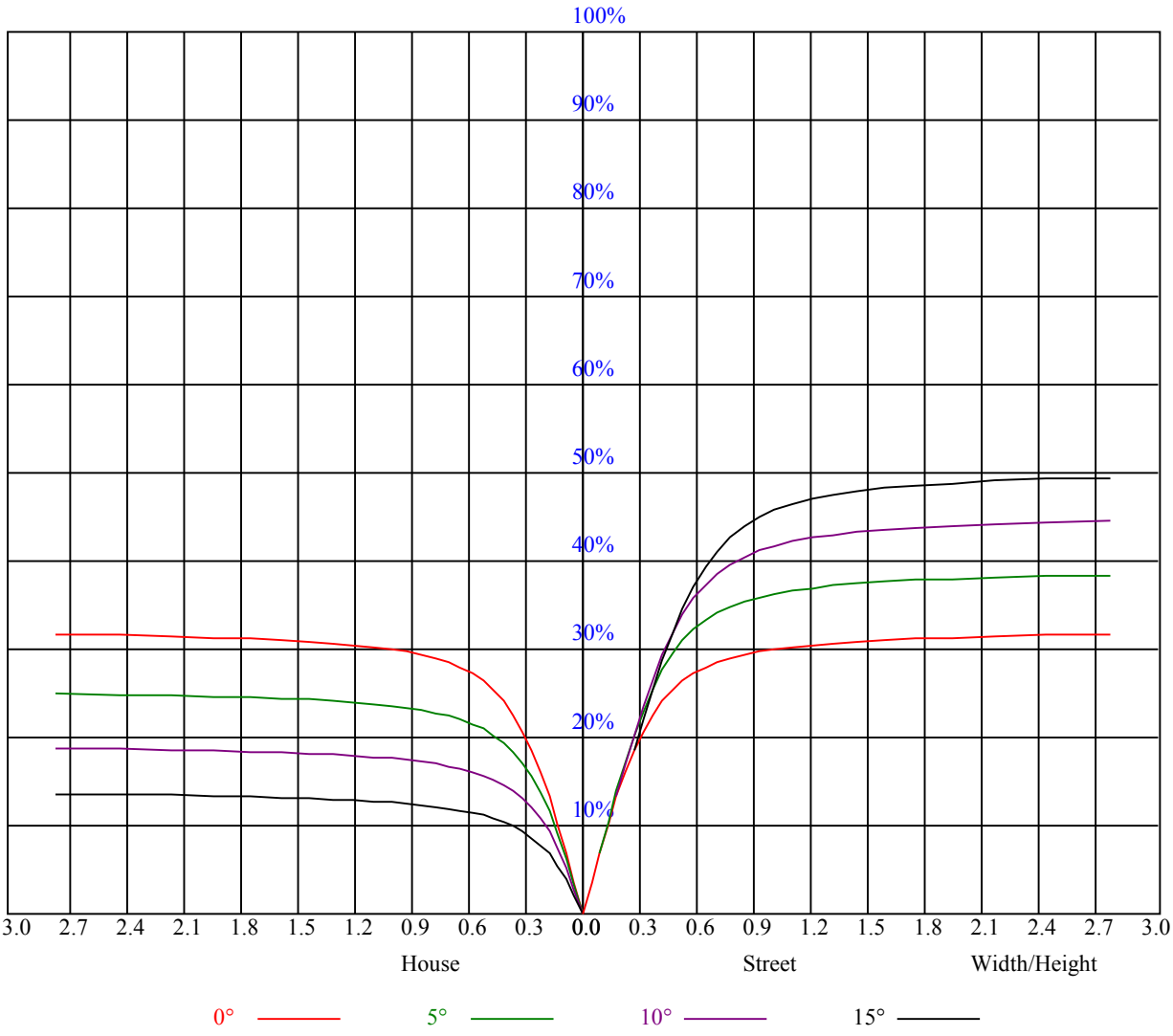


Equipment: GMS1980 Date: 2021/11/12 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

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	0.77	0.77	0.77	0.75	0.75	0.75	0.72	0.72	0.72	0.69	0.69	0.69	0.66	0.66	0.66	0.64
1	0.71	0.69	0.67	0.69	0.68	0.66	0.67	0.65	0.64	0.64	0.63	0.62	0.62	0.61	0.60	0.59
2	0.65	0.63	0.60	0.64	0.62	0.60	0.62	0.60	0.58	0.60	0.59	0.57	0.59	0.57	0.56	0.55
3	0.61	0.58	0.55	0.60	0.57	0.55	0.58	0.56	0.54	0.57	0.55	0.53	0.55	0.54	0.52	0.51
4	0.57	0.53	0.51	0.56	0.53	0.50	0.55	0.52	0.50	0.54	0.51	0.49	0.52	0.50	0.49	0.48
5	0.54	0.50	0.47	0.53	0.50	0.47	0.52	0.49	0.46	0.51	0.48	0.46	0.50	0.47	0.46	0.45
6	0.51	0.47	0.44	0.50	0.47	0.44	0.49	0.46	0.44	0.48	0.45	0.43	0.47	0.45	0.43	0.42
7	0.48	0.44	0.41	0.48	0.44	0.41	0.47	0.43	0.41	0.46	0.43	0.41	0.45	0.43	0.41	0.40
8	0.46	0.42	0.39	0.45	0.42	0.39	0.44	0.41	0.39	0.44	0.41	0.39	0.43	0.41	0.39	0.38
9	0.43	0.40	0.37	0.43	0.39	0.37	0.42	0.39	0.37	0.42	0.39	0.37	0.41	0.39	0.37	0.36
10	0.41	0.38	0.35	0.41	0.38	0.35	0.41	0.37	0.35	0.40	0.37	0.35	0.40	0.37	0.35	0.34

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/11/12	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.73

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	962.38	967.46	968.71	965.85	960.17	950.31	938.42	921.93	904.84
45.0	970.69	969.07	963.04	955.27	944.81	928.02	910.93	891.04	865.70
90.0	966.50	961.66	954.37	941.77	928.68	912.85	891.15	865.94	840.84
135.0	965.97	960.11	951.15	940.39	924.92	906.33	886.37	860.92	836.30
180.0	963.16	955.15	945.23	930.95	913.62	895.46	874.48	844.79	818.73
225.0	970.69	969.37	964.47	956.35	946.72	932.68	917.45	898.09	875.92
270.0	966.50	968.83	968.18	964.71	958.74	947.56	935.85	921.69	903.28
315.0	965.97	968.30	967.88	963.34	956.82	947.56	932.15	917.39	900.24
360.0	962.38	967.46	968.71	965.85	960.17	950.31	938.42	921.93	904.84

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	882.25	856.20	830.39	802.30	763.76	730.54	695.58	650.11	612.23
45.0	836.78	807.74	772.07	738.25	698.39	656.56	618.50	575.06	530.07
90.0	809.35	775.11	742.31	703.71	667.68	625.73	582.95	544.71	506.35
135.0	805.65	771.53	738.84	704.73	660.39	623.64	586.47	539.33	500.25
180.0	790.65	752.95	721.10	687.99	649.45	609.60	573.51	532.70	496.19
225.0	853.75	825.90	795.43	766.27	735.08	693.85	659.97	624.84	579.30
270.0	881.71	860.08	832.96	806.48	773.86	738.25	704.85	670.07	624.30
315.0	874.78	851.54	825.79	794.12	763.52	726.83	688.71	653.28	616.35
360.0	882.25	856.20	830.39	802.30	763.76	730.54	695.58	650.11	612.23

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	569.68	532.34	490.87	454.54	414.86	381.22	345.61	311.91	283.95
45.0	492.12	455.38	409.96	375.19	343.28	303.19	276.00	250.66	224.73
90.0	458.72	422.27	387.32	346.51	315.91	287.71	258.43	231.90	210.27
135.0	464.34	424.72	385.65	351.35	316.75	285.26	259.81	233.99	211.88
180.0	455.26	415.94	382.42	346.93	313.46	286.10	260.64	231.60	210.39
225.0	543.15	507.30	463.32	428.67	395.09	355.17	328.70	296.73	264.35
270.0	587.43	555.22	505.21	469.06	433.63	395.62	359.47	328.88	296.37
315.0	569.92	533.12	496.55	451.43	416.36	382.60	346.69	312.93	285.44
360.0	569.68	532.34	490.87	454.54	414.86	381.22	345.61	311.91	283.95

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	254.91	228.50	207.46	190.73	167.61	152.73	140.84	124.29	113.77
45.0	202.20	183.20	164.44	148.25	133.97	121.60	110.06	99.85	90.70
90.0	188.34	170.77	152.85	137.01	124.53	112.22	101.34	92.74	85.09
135.0	189.83	170.30	154.52	140.18	124.47	113.59	103.85	92.98	85.33
180.0	191.09	171.49	153.74	139.64	125.60	113.47	103.73	94.11	86.46
225.0	243.61	221.50	194.32	178.96	163.01	143.47	132.29	120.70	108.99
270.0	266.32	242.00	217.26	197.60	180.04	160.20	145.98	131.64	118.97
315.0	256.88	233.45	209.55	188.22	171.37	154.22	138.81	126.50	115.50
360.0	254.91	228.50	207.46	190.73	167.61	152.73	140.84	124.29	113.77

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	105.40	94.53	85.92	79.89	72.36	66.56	62.50	57.36	53.60
45.0	82.34	75.77	69.07	63.22	58.32	54.02	49.18	45.71	42.60
90.0	76.54	70.51	65.01	58.86	54.43	50.43	46.37	42.72	39.86
135.0	78.52	71.64	65.49	60.47	55.45	51.45	47.38	44.04	40.75
180.0	78.93	72.24	66.92	61.61	56.88	53.12	49.71	46.25	43.98
225.0	98.53	90.29	82.04	74.57	68.72	62.86	58.26	53.54	49.24
270.0	108.75	99.43	89.03	81.62	75.11	68.54	62.74	58.14	53.36
315.0	103.25	94.53	86.76	78.04	71.88	66.33	61.31	55.81	51.75
360.0	105.40	94.53	85.92	79.89	72.36	66.56	62.50	57.36	53.60

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	50.31	47.09	44.81	42.72	40.51	38.78	37.11	34.66	32.98
45.0	39.08	36.51	34.24	31.91	29.76	27.96	26.17	24.68	23.12
90.0	36.87	34.48	32.03	29.76	27.96	26.05	24.32	22.83	21.51
135.0	37.82	35.07	32.92	30.95	28.68	27.01	25.39	23.96	22.29
180.0	41.89	39.56	37.82	36.09	33.88	32.15	30.53	28.74	27.67
225.0	45.77	42.60	39.08	36.57	34.24	31.61	29.70	28.02	26.41
270.0	49.12	45.65	42.19	39.32	36.39	33.64	31.55	29.58	27.37
315.0	48.04	44.28	40.87	38.18	35.43	32.86	30.83	28.80	27.13
360.0	50.31	47.09	44.81	42.72	40.51	38.78	37.11	34.66	32.98

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	31.37	29.82	28.44	27.37	26.23	25.28	24.14	23.06	22.11
45.0	21.69	20.44	19.18	18.05	17.09	16.19	15.12	14.34	13.56
90.0	19.96	18.76	17.69	16.61	15.54	14.70	13.74	12.91	12.13
135.0	21.03	19.90	18.52	17.45	16.55	15.60	14.70	13.86	13.03
180.0	26.41	25.28	24.56	23.78	22.65	21.99	21.21	20.20	19.54
225.0	24.68	23.30	21.99	20.67	19.42	18.34	17.27	16.19	15.30
270.0	25.75	24.20	22.47	21.15	19.96	18.64	17.39	16.43	15.30
315.0	25.34	23.72	22.35	21.09	19.60	18.46	17.45	16.25	15.36
360.0	31.37	29.82	28.44	27.37	26.23	25.28	24.14	23.06	22.11

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	21.21	20.20	19.30	18.52	17.45	16.61	15.89	15.24	14.70
45.0	12.79	12.07	11.47	10.88	10.34	9.86	9.38	8.96	8.54
90.0	11.35	10.88	10.22	9.62	9.08	8.66	8.13	7.71	7.29
135.0	12.37	11.71	10.99	10.52	9.92	9.44	8.96	8.54	8.13
180.0	18.82	17.99	17.15	16.43	15.77	15.36	14.94	15.48	16.61
225.0	14.40	13.62	12.91	12.19	11.53	10.99	10.34	9.86	9.38
270.0	14.40	13.56	12.67	11.95	11.23	10.58	10.04	9.50	8.90
315.0	14.58	13.68	12.91	12.19	11.53	10.99	10.46	9.86	9.44
360.0	21.21	20.20	19.30	18.52	17.45	16.61	15.89	15.24	14.70

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	14.16	14.10	14.46	14.58	14.58	14.52	14.46	14.64	14.88
45.0	8.07	7.71	7.35	6.99	6.81	7.71	7.83	5.92	5.38
90.0	6.81	6.45	6.09	5.62	5.32	4.96	4.54	4.24	3.88
135.0	7.77	7.41	6.99	6.57	6.27	5.98	5.62	5.32	5.08
180.0	17.33	17.87	18.52	19.54	21.09	22.29	23.00	23.06	22.11
225.0	8.84	8.48	8.07	7.65	7.23	7.05	7.77	8.84	7.47
270.0	8.43	8.01	7.53	7.11	6.69	6.27	5.92	5.56	5.14
315.0	8.96	8.54	8.13	7.83	7.41	7.05	6.75	6.39	6.15
360.0	14.16	14.10	14.46	14.58	14.58	14.52	14.46	14.64	14.88

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	14.82	14.22	13.50	12.31	9.92	5.86	4.12	3.59	2.39
45.0	5.02	4.72	4.54	4.24	3.23	2.57	2.21	2.15	2.15
90.0	3.47	3.23	2.99	2.57	2.27	2.15	2.15	2.15	2.09
135.0	4.72	4.48	4.66	4.96	2.81	2.51	2.21	2.21	2.09
180.0	20.44	16.43	6.45	4.60	3.47	3.05	2.33	2.27	2.15
225.0	5.50	5.14	4.78	4.54	4.36	3.23	2.87	2.33	2.15
270.0	4.78	4.42	4.00	3.70	3.35	2.93	2.63	2.39	2.15
315.0	5.92	5.62	5.32	5.02	4.78	3.35	2.99	2.51	2.21
360.0	14.82	14.22	13.50	12.31	9.92	5.86	4.12	3.59	2.39

Intensity data(cd)

C/γ(°)	90.0
0.0	2.27
45.0	2.15
90.0	2.09
135.0	2.21
180.0	2.63
225.0	2.15
270.0	2.15
315.0	2.15
360.0	2.27