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

Nata

LumCAT: LN01D04515DA-N
Luminaire: 97.70.234.00

Report No: 200707-B003	Voltage(V): 36.0800
Test No: 200707-C003	Current(A): 0.2800
LampCAT: LUMINUS CXM-6-AC40	Power (W): 10.1020
Lamp flux(lm): 985.1	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 874.18
Efficiency(%): 88.74%
Lumens(lm)/Power(W): 86.54
Central intensity(cd): 9121.079
Maximum intensity(cd): 9121.079
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=15.0
[C90/270]Total=15.0
Field angle(10%Imax): [C0/180]Total=28.0
[C90/270]Total=28.0
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.26 C90_270=0.26
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.74%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.453%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9121.078	0.000	0	.000%	.000%
1.0	9010.336	8.676	8.676	.881%	.992%
2.0	8626.430	25.314	33.99	2.570%	3.888%
3.0	8074.688	39.944	73.933	4.055%	8.457%
4.0	7412.695	51.841	125.774	5.262%	14.388%
5.0	6612.539	60.336	186.11	6.125%	21.290%
6.0	5743.406	64.934	251.044	6.592%	28.718%
7.0	4972.992	66.517	317.56	6.752%	36.327%
8.0	4175.016	65.471	383.031	6.646%	43.816%
9.0	3427.945	61.618	444.649	6.255%	50.865%
10.0	2743.734	55.851	500.5	5.670%	57.254%
11.0	2122.172	48.620	549.121	4.936%	62.816%
12.0	1594.209	40.625	589.746	4.124%	67.463%
13.0	1183.648	32.966	622.712	3.346%	71.234%
14.0	907.594	26.768	649.48	2.717%	74.296%
15.0	697.816	22.040	671.52	2.237%	76.817%
16.0	541.891	18.165	689.685	1.844%	78.895%
17.0	405.330	14.751	704.436	1.497%	80.583%
18.0	328.092	12.093	716.528	1.228%	81.966%
19.0	281.735	10.610	727.138	1.077%	83.180%
20.0	220.500	9.192	736.33	.933%	84.231%
21.0	183.586	7.759	744.09	.788%	85.119%
22.0	157.838	6.861	750.951	.696%	85.904%
23.0	137.053	6.188	757.138	.628%	86.612%
24.0	117.745	5.571	762.709	.566%	87.249%
25.0	104.977	5.064	767.773	.514%	87.828%
26.0	93.635	4.688	772.461	.476%	88.364%
27.0	83.721	4.339	776.801	.440%	88.861%
28.0	74.974	4.018	780.818	.408%	89.320%
29.0	67.859	3.737	784.555	.379%	89.748%
30.0	61.425	3.491	788.046	.354%	90.147%
31.0	55.807	3.262	791.308	.331%	90.520%
32.0	50.829	3.055	794.363	.310%	90.870%
33.0	46.638	2.871	797.235	.291%	91.198%
34.0	43.362	2.724	799.958	.276%	91.510%
35.0	39.980	2.588	802.547	.263%	91.806%
36.0	37.371	2.463	805.01	.250%	92.088%
37.0	35.213	2.367	807.377	.240%	92.359%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	33.237	2.285	809.662	.232%	92.620%
39.0	31.134	2.197	811.859	.223%	92.871%
40.0	29.524	2.116	813.974	.215%	93.113%
41.0	28.027	2.049	816.024	.208%	93.348%
42.0	26.367	1.976	818	.201%	93.574%
43.0	24.912	1.900	819.899	.193%	93.791%
44.0	23.534	1.828	821.728	.186%	94.000%
45.0	22.092	1.753	823.481	.178%	94.201%
46.0	20.672	1.672	825.154	.170%	94.392%
47.0	19.498	1.598	826.751	.162%	94.575%
48.0	18.267	1.527	828.278	.155%	94.749%
49.0	17.269	1.459	829.737	.148%	94.916%
50.0	16.305	1.400	831.137	.142%	95.077%
51.0	15.546	1.348	832.485	.137%	95.231%
52.0	14.927	1.308	833.792	.133%	95.380%
53.0	14.358	1.274	835.066	.129%	95.526%
54.0	13.760	1.239	836.306	.126%	95.668%
55.0	13.310	1.208	837.514	.123%	95.806%
56.0	12.909	1.185	838.699	.120%	95.942%
57.0	12.382	1.156	839.855	.117%	96.074%
58.0	12.009	1.128	840.983	.114%	96.203%
59.0	11.623	1.105	842.088	.112%	96.329%
60.0	11.201	1.078	843.166	.109%	96.453%
61.0	10.856	1.053	844.219	.107%	96.573%
62.0	10.519	1.030	845.249	.105%	96.691%
63.0	10.181	1.007	846.255	.102%	96.806%
64.0	9.858	0.983	847.239	.100%	96.918%
65.0	9.577	0.962	848.201	.098%	97.028%
66.0	9.260	0.940	849.14	.095%	97.136%
67.0	9.042	0.920	850.061	.093%	97.241%
68.0	9.105	0.919	850.98	.093%	97.346%
69.0	9.506	0.949	851.929	.096%	97.455%
70.0	10.245	1.014	852.944	.103%	97.571%
71.0	11.363	1.117	854.061	.113%	97.699%
72.0	12.684	1.250	855.311	.127%	97.842%
73.0	13.718	1.381	856.692	.140%	98.000%
74.0	14.674	1.493	858.184	.152%	98.171%
75.0	15.405	1.589	859.774	.161%	98.352%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.469	1.639	861.412	.166%	98.540%
77.0	15.286	1.640	863.052	.166%	98.727%
78.0	14.266	1.582	864.634	.161%	98.908%
79.0	13.092	1.470	866.104	.149%	99.077%
80.0	11.834	1.344	867.448	.136%	99.230%
81.0	10.181	1.191	868.638	.121%	99.366%
82.0	8.677	1.023	869.661	.104%	99.483%
83.0	7.179	0.862	870.523	.087%	99.582%
84.0	5.766	0.705	871.228	.072%	99.663%
85.0	5.133	0.595	871.823	.060%	99.731%
86.0	4.732	0.539	872.362	.055%	99.792%
87.0	4.409	0.500	872.862	.051%	99.850%
88.0	4.064	0.464	873.327	.047%	99.903%
89.0	3.846	0.434	873.76	.044%	99.952%
90.0	3.755	0.417	874.177	.042%	100.000%

Zonal flux distribution table

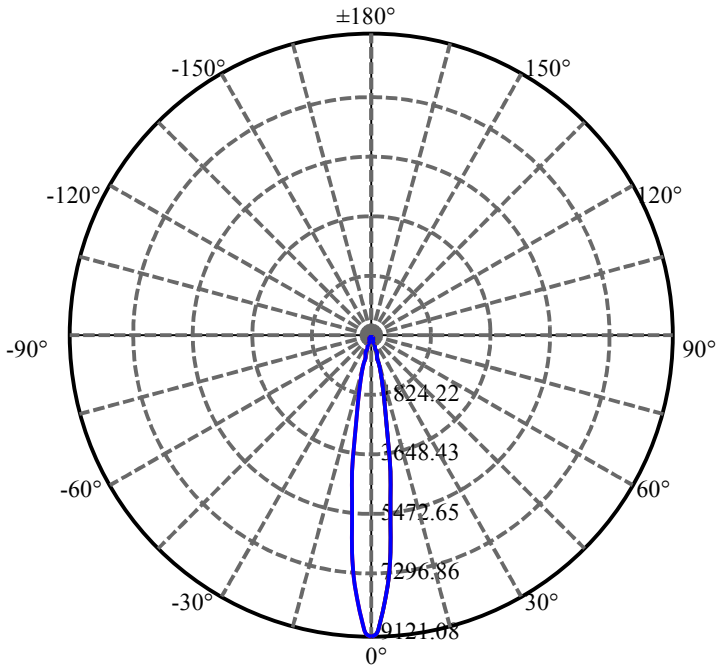
ZONAL LUMEN SUMMARY

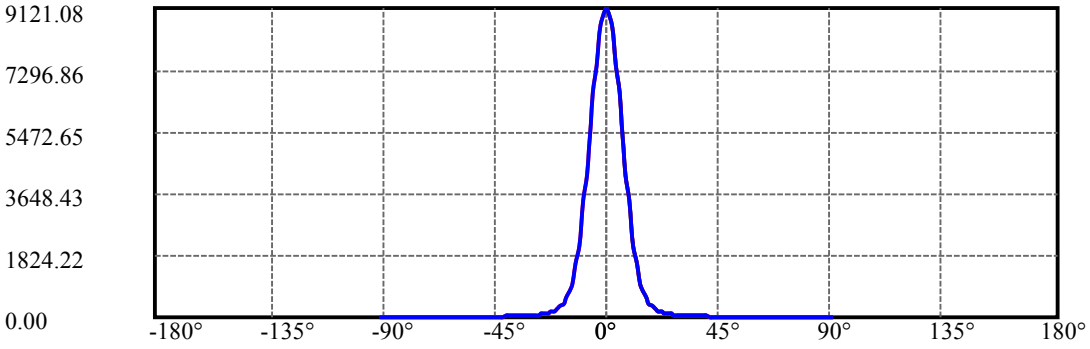
Zone	Lumens	%Lamp	%Fixt
0-30	788.05	80.00%	90.15%
0-40	813.97	82.63%	93.11%
0-60	843.17	85.59%	96.45%
0-90	873.76	88.70%	99.95%
0-120	873.76	88.70%	99.95%
0-180	874.18	88.74%	100.00%
60-90	31.67	3.22%	3.62%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.65	699.34	70.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	500.50
10-20	235.83
20-30	51.72
30-40	25.93
40-50	17.16
50-60	12.03
60-70	9.78
70-80	14.50
80-90	6.31
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):

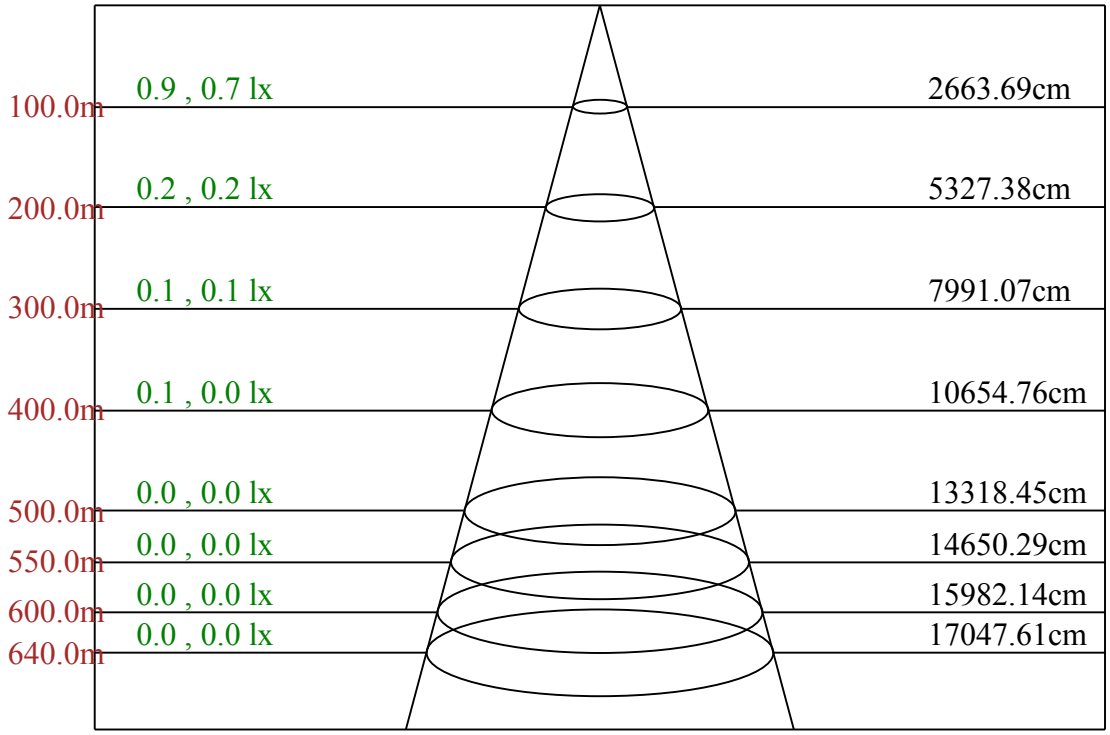
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:14.0 Right:14.0
:C90/270Left:14.0 Right:14.0

Beam Angle(50%Imax):C0/180Left:7.5 Right:7.5
:C90/270Left:7.5 Right:7.5

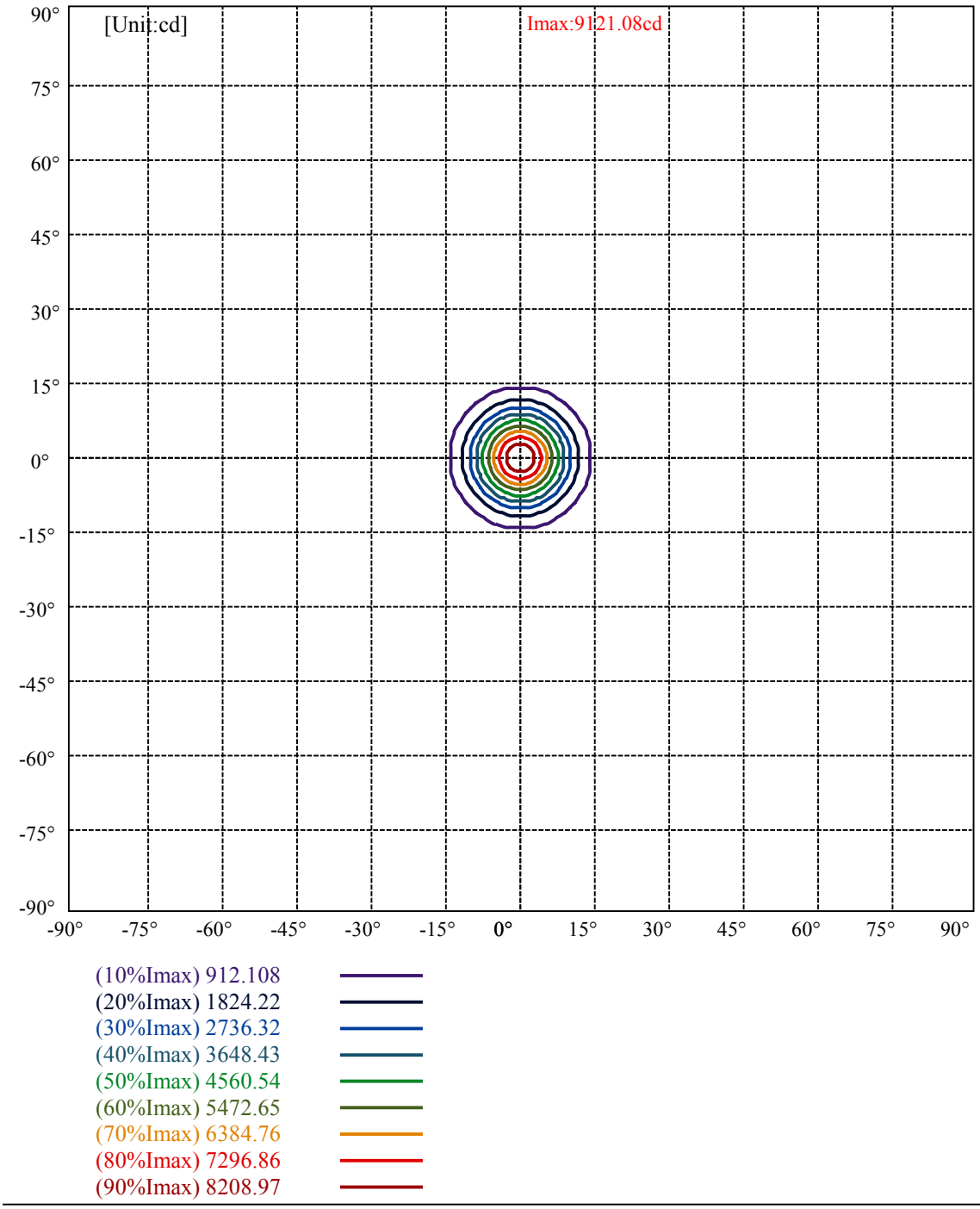
Lux distance Curve



Max , Ave

Beam angle of C0 plane 15.17

ISO-Intensity(V-H)



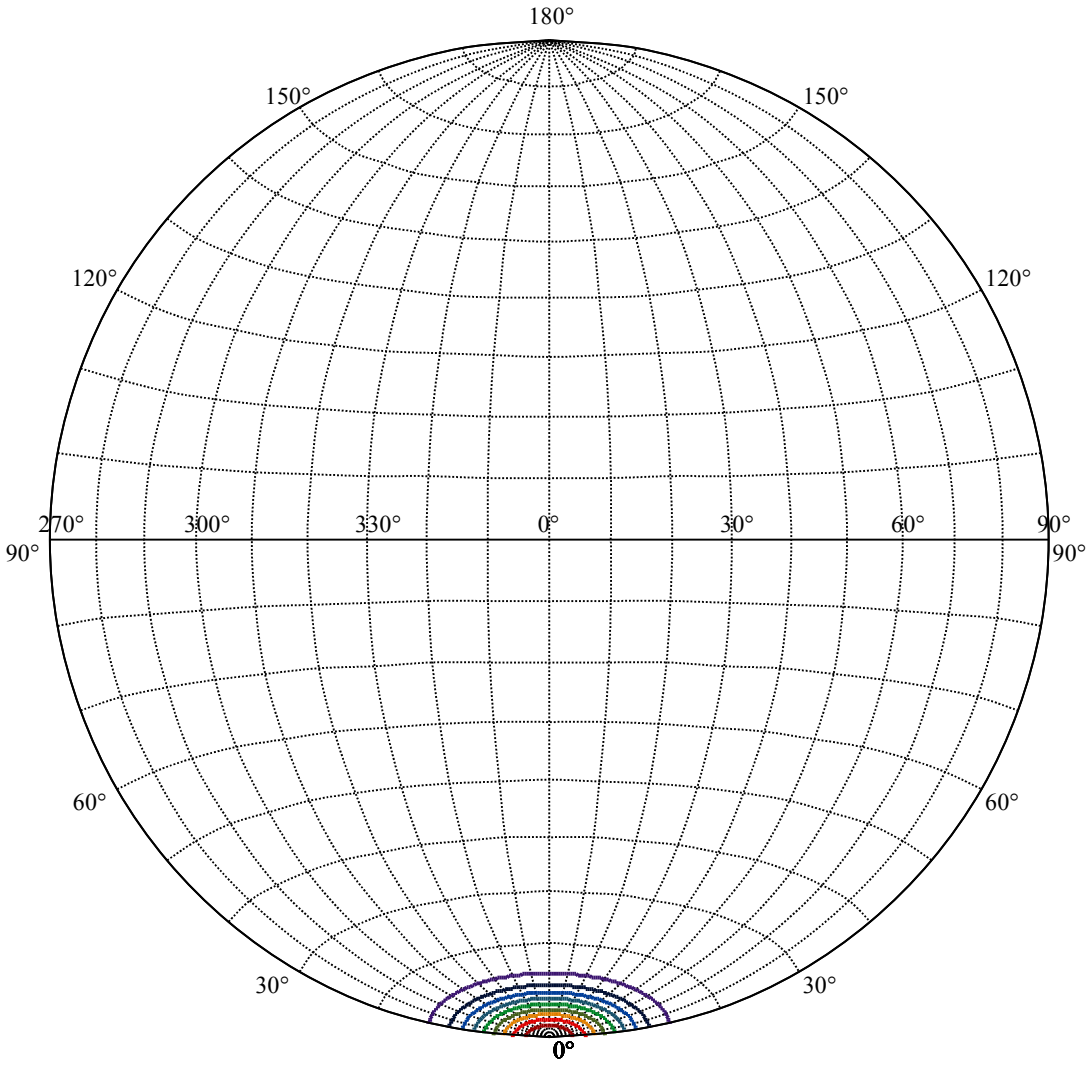
(10%Imax) 912.108
(20%Imax) 1824.22
(30%Imax) 2736.32
(40%Imax) 3648.43
(50%Imax) 4560.54
(60%Imax) 5472.65
(70%Imax) 6384.76
(80%Imax) 7296.86
(90%Imax) 8208.97

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:9121.08

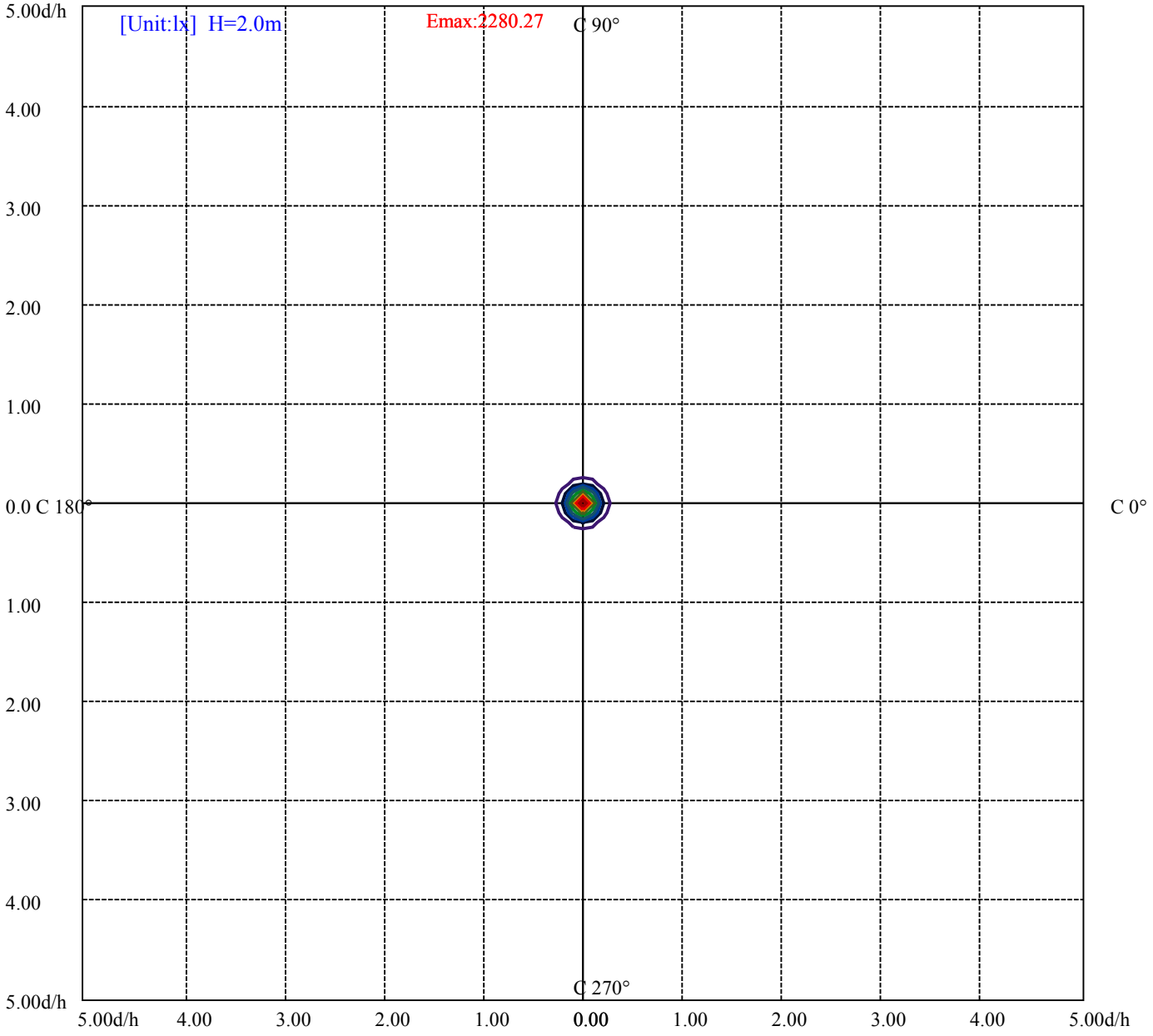
(10%Imax) 912.108
(20%Imax) 1824.22
(30%Imax) 2736.32
(40%Imax) 3648.43
(50%Imax) 4560.54
(60%Imax) 5472.65
(70%Imax) 6384.76
(80%Imax) 7296.86
(90%Imax) 8208.97

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

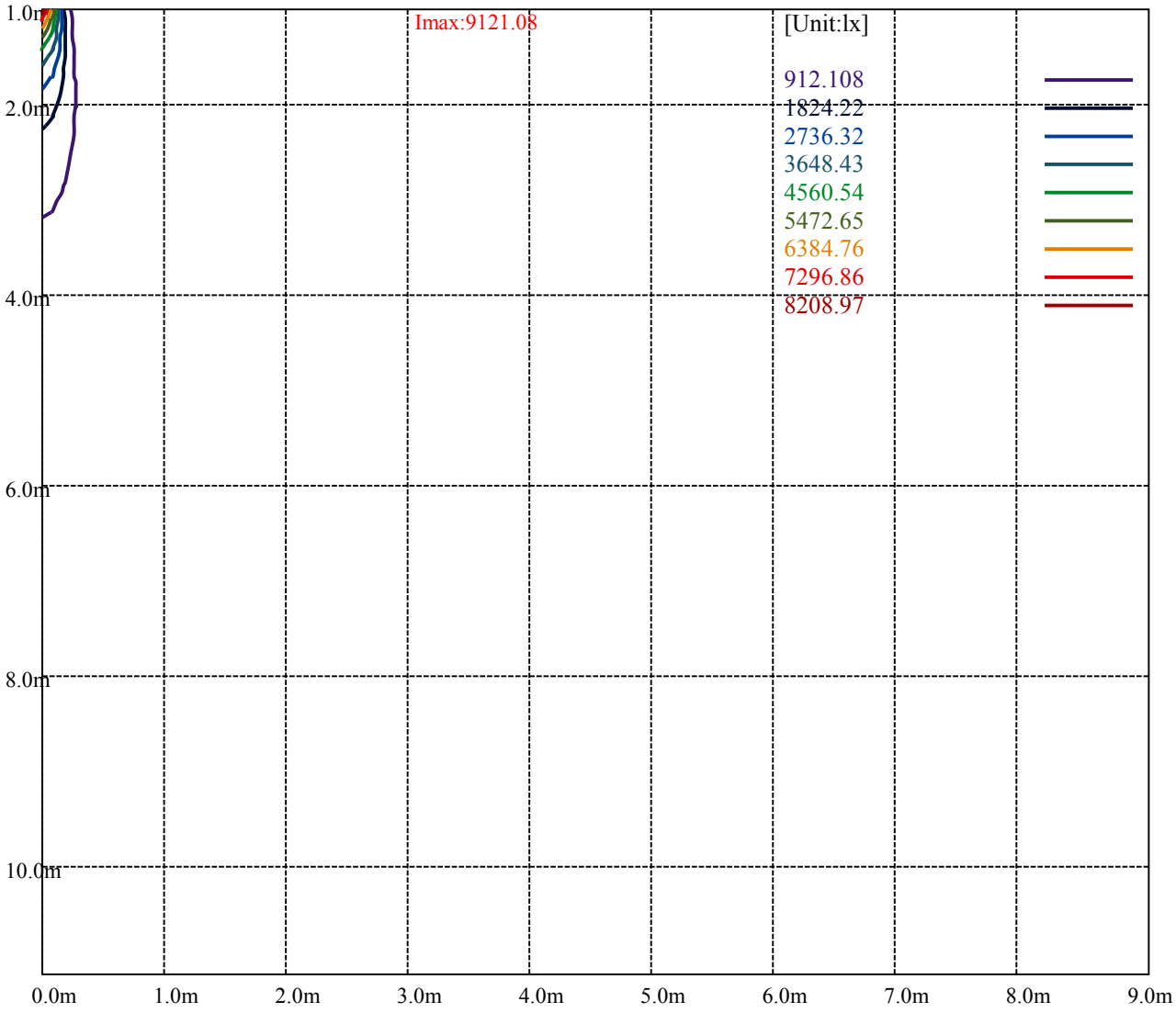


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Nata LM01D04515DA-3

Luminance Limitting Curve(no luminous side)

Luminance Table

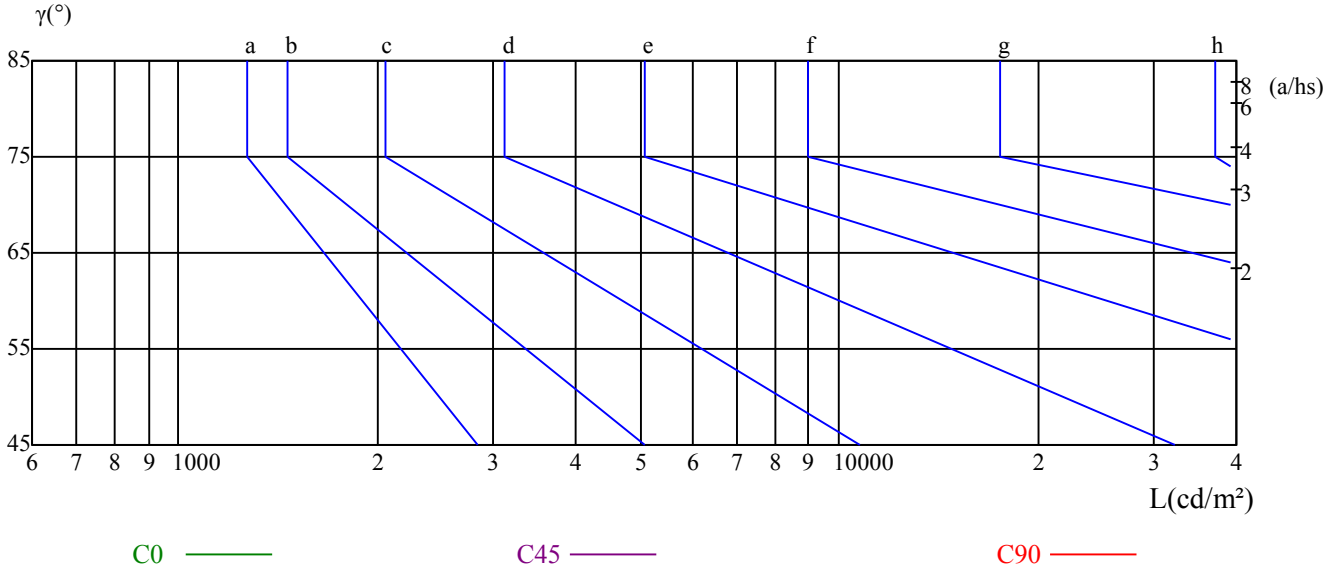
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

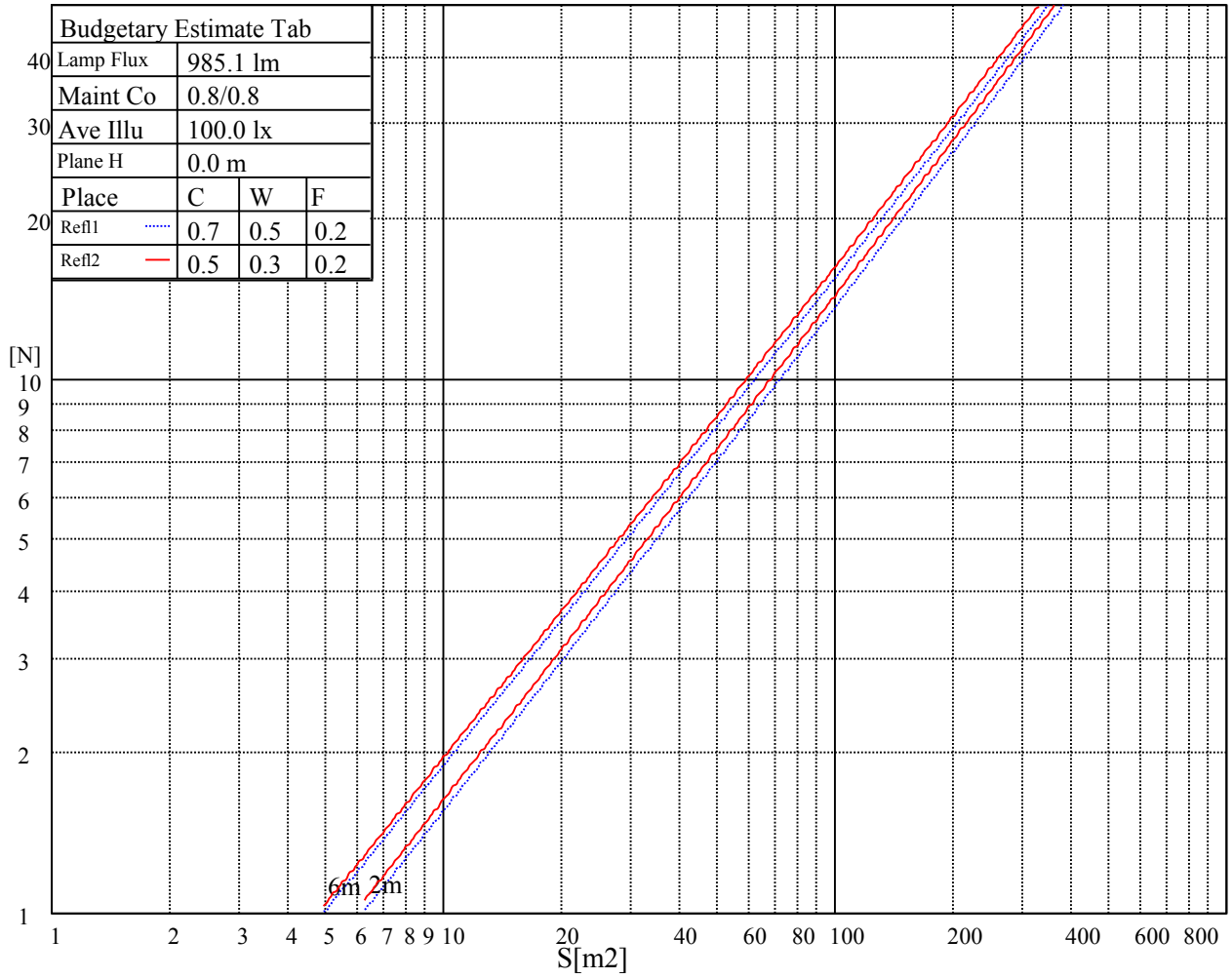


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

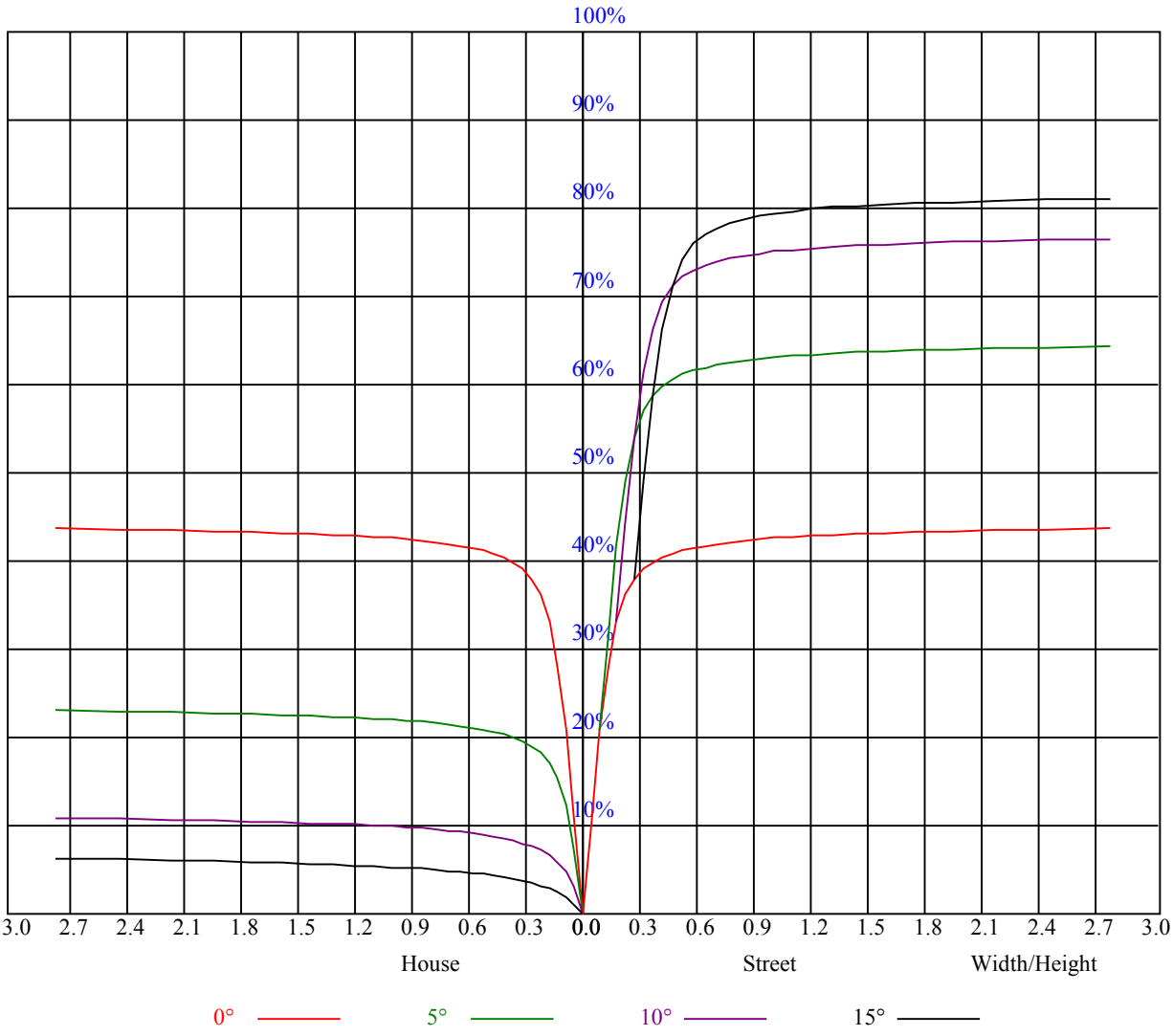


Equipment: GMS1980 Date: 2020/7/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	1.00	0.98	0.96	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.87	0.85
2	0.95	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.87	0.85	0.86	0.85	0.84	0.82
3	0.92	0.88	0.86	0.90	0.87	0.85	0.88	0.86	0.84	0.86	0.84	0.83	0.84	0.83	0.81	0.80
4	0.88	0.85	0.82	0.88	0.84	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.83	0.81	0.79	0.78
5	0.86	0.82	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.82	0.80	0.78	0.81	0.79	0.78	0.77
6	0.84	0.80	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.78	0.76	0.75
7	0.82	0.78	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.79	0.77	0.75	0.78	0.76	0.75	0.74
8	0.80	0.77	0.74	0.79	0.76	0.74	0.79	0.76	0.74	0.78	0.75	0.74	0.77	0.75	0.73	0.73
9	0.78	0.75	0.73	0.78	0.75	0.73	0.77	0.74	0.73	0.77	0.74	0.72	0.76	0.74	0.72	0.71
10	0.77	0.74	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.75	0.73	0.71	0.70

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/7/7	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	9107.44	9030.38	8787.94	8263.69	7551.00	6823.13	5964.19	5108.06	4371.75
45.0	9147.94	8985.38	8503.88	7932.38	7255.13	6424.88	5565.94	4800.94	3987.00
90.0	9079.88	8768.81	8116.31	7458.75	6727.50	5868.56	5011.88	4267.69	3474.56
135.0	9149.06	9007.88	8532.56	7944.19	7255.13	6417.00	5559.75	4794.19	3979.13
180.0	9107.44	8928.00	8484.75	7836.19	7149.38	6383.25	5417.44	4649.63	3909.94
225.0	9147.94	9095.63	8789.06	8238.38	7614.56	6786.56	5934.38	5175.00	4344.19
270.0	9079.88	9180.00	9016.31	8669.25	8121.94	7377.19	6526.13	5770.13	4934.81
315.0	9149.06	9086.63	8780.63	8254.69	7626.94	6819.75	5967.56	5218.31	4398.75
360.0	9107.44	9030.38	8787.94	8263.69	7551.00	6823.13	5964.19	5108.06	4371.75

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3666.38	2850.75	2269.69	1769.06	1357.88	960.75	726.19	550.13	398.81
45.0	3217.50	2594.25	1978.88	1527.19	1128.38	832.50	639.56	500.63	375.75
90.0	2817.56	2169.56	1638.56	1100.48	930.04	689.18	535.05	422.72	323.44
135.0	3219.19	2601.00	1991.25	1548.00	1146.94	850.50	658.13	520.31	398.25
180.0	3047.06	2426.63	1897.88	1103.51	1028.42	775.69	570.43	440.55	337.05
225.0	3632.06	2896.31	2228.06	1728.56	1115.66	910.86	721.41	558.79	410.06
270.0	4131.56	3449.25	2738.81	2171.81	1641.94	1221.75	939.38	721.69	530.44
315.0	3692.25	2962.13	2234.25	1805.06	1119.94	1019.53	792.39	620.33	468.84
360.0	3666.38	2850.75	2269.69	1769.06	1357.88	960.75	726.19	550.13	398.81

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	315.00	290.25	202.67	167.40	143.83	123.53	109.52	96.69	86.23
45.0	304.31	288.56	202.78	169.43	145.86	129.71	108.17	97.03	87.58
90.0	267.19	225.45	189.00	161.78	142.65	125.83	111.88	101.42	91.46
135.0	324.56	288.56	215.21	186.86	159.24	140.12	118.24	105.86	94.61
180.0	264.60	217.58	178.71	149.74	130.56	115.14	100.18	90.62	82.13
225.0	344.14	285.53	235.01	195.53	167.34	142.43	122.40	108.28	95.06
270.0	424.13	344.81	286.31	227.87	194.40	168.64	142.59	126.23	112.61
315.0	380.81	313.14	254.31	210.09	178.82	151.03	128.98	113.68	99.39
360.0	315.00	290.25	202.67	167.40	143.83	123.53	109.52	96.69	86.23

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	78.13	70.09	63.11	57.88	53.10	47.98	44.61	41.85	38.81
45.0	77.34	69.13	63.84	56.70	51.19	47.81	43.48	40.50	37.97
90.0	83.76	75.54	68.29	62.55	57.38	51.98	47.87	44.44	40.50
135.0	84.38	74.98	68.01	61.20	55.13	50.68	46.07	42.81	39.49
180.0	73.13	66.66	60.64	54.84	49.67	45.96	42.41	39.88	37.35
225.0	84.88	75.60	67.56	61.37	56.03	50.23	46.29	42.92	39.38
270.0	99.68	89.55	81.56	73.46	66.26	60.36	54.90	50.34	46.07
315.0	88.48	78.24	69.86	63.39	57.71	51.64	47.48	44.16	40.28
360.0	78.13	70.09	63.11	57.88	53.10	47.98	44.61	41.85	38.81

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	36.62	34.76	32.79	31.11	29.64	28.13	26.89	25.43	23.96
45.0	35.21	33.30	31.61	29.76	28.35	27.00	25.43	24.24	23.01
90.0	37.91	35.55	33.30	30.77	28.97	27.28	25.48	23.85	22.39
135.0	36.90	34.59	32.74	30.77	29.03	27.56	25.82	24.47	23.01
180.0	35.16	33.41	31.56	29.98	28.58	27.23	25.65	24.30	23.06
225.0	37.13	35.04	32.96	31.16	29.59	27.96	26.61	25.09	23.68
270.0	42.24	39.43	37.29	34.09	32.18	30.71	28.35	26.78	25.43
315.0	37.80	35.61	33.64	31.44	29.87	28.35	26.72	25.14	23.74
360.0	36.62	34.76	32.79	31.11	29.64	28.13	26.89	25.43	23.96

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	22.73	21.32	20.03	18.90	17.89	16.76	16.09	15.41	14.79
45.0	21.66	20.36	19.35	18.23	17.33	16.43	15.69	15.08	14.46
90.0	20.87	19.46	18.23	17.10	16.20	15.36	14.63	14.06	13.61
135.0	21.66	20.08	19.01	17.72	16.82	15.86	15.13	14.57	13.95
180.0	21.54	20.31	19.18	17.94	16.99	16.20	15.47	14.91	14.34
225.0	22.39	21.04	19.91	18.73	17.72	16.65	15.92	15.30	14.68
270.0	23.63	22.05	20.81	19.24	18.00	16.99	15.98	15.24	14.68
315.0	22.28	20.76	19.46	18.28	17.21	16.20	15.47	14.85	14.34
360.0	22.73	21.32	20.03	18.90	17.89	16.76	16.09	15.41	14.79

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	14.18	13.73	13.22	12.77	12.38	11.93	11.59	11.19	10.80
45.0	13.95	13.44	13.05	12.49	12.09	11.70	11.25	10.91	10.52
90.0	12.99	12.60	12.21	11.76	11.42	11.08	10.74	10.46	10.18
135.0	13.39	12.94	12.66	12.04	11.70	11.31	10.86	10.52	10.24
180.0	13.67	13.28	12.83	12.32	11.98	11.64	11.14	10.86	10.52
225.0	14.12	13.67	13.22	12.66	12.26	11.81	11.36	10.97	10.63
270.0	14.06	13.61	13.28	12.71	12.32	11.98	11.48	11.14	10.80
315.0	13.73	13.22	12.83	12.32	11.93	11.53	11.19	10.80	10.46
360.0	14.18	13.73	13.22	12.77	12.38	11.93	11.59	11.19	10.80

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.46	10.18	9.79	9.51	9.23	8.83	8.61	8.33	8.10
45.0	10.18	9.84	9.51	9.17	8.94	8.61	8.33	8.10	7.88
90.0	9.90	9.56	9.34	9.11	9.17	11.93	16.59	21.71	27.00
135.0	9.90	9.56	9.34	8.94	8.72	8.44	8.21	7.99	7.76
180.0	10.18	9.84	9.56	9.23	8.94	8.61	8.33	8.10	7.88
225.0	10.24	9.90	9.62	9.28	9.00	8.66	8.38	8.16	7.99
270.0	10.46	10.18	9.96	9.62	9.39	9.11	9.23	11.42	16.31
315.0	10.13	9.79	9.51	9.23	8.94	8.66	8.38	8.16	7.99
360.0	10.46	10.18	9.79	9.51	9.23	8.83	8.61	8.33	8.10

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.82	7.65	7.48	7.26	7.03	6.81	6.53	6.30	6.08
45.0	7.59	7.37	7.14	6.86	6.64	6.41	6.19	5.96	5.74
90.0	33.19	37.52	41.29	43.09	41.34	37.86	33.08	28.18	23.68
135.0	7.54	7.37	7.14	6.86	6.64	6.41	6.19	5.96	5.79
180.0	7.59	7.37	7.20	6.92	6.69	6.53	6.30	6.08	5.91
225.0	7.71	7.48	7.26	6.98	6.81	8.38	7.99	8.55	8.04
270.0	22.33	27.45	32.51	38.14	41.68	43.14	41.34	37.35	33.30
315.0	7.71	7.54	7.37	7.14	6.92	6.75	6.53	6.36	6.13
360.0	7.82	7.65	7.48	7.26	7.03	6.81	6.53	6.30	6.08

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.91	5.74	5.51	5.34	5.06	4.84	4.61	4.33	4.16
45.0	5.57	5.34	5.12	4.89	4.67	4.50	4.28	4.05	3.83
90.0	18.39	12.43	6.58	5.40	5.12	4.67	4.11	3.88	3.77
135.0	5.57	5.40	5.18	4.89	4.67	4.39	3.99	3.83	3.77
180.0	5.74	5.51	5.34	5.12	4.89	4.61	4.39	4.11	4.05
225.0	5.79	5.63	5.34	3.32	4.78	4.44	4.22	3.94	3.15
270.0	28.52	23.63	18.84	11.93	6.86	5.68	5.29	4.33	4.11
315.0	5.96	5.74	5.51	5.23	5.01	4.73	4.39	4.05	3.94
360.0	5.91	5.74	5.51	5.34	5.06	4.84	4.61	4.33	4.16

Intensity data(cd)

C/γ(°)	90.0
0.0	4.11
45.0	3.77
90.0	3.71
135.0	3.77
180.0	3.94
225.0	3.04
270.0	3.88
315.0	3.83
360.0	4.11