NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1793-N
Luminaire: 99.02.73.172
Report No: NATA0100
Test No: GC2018072703
LampCAT: BRIDGELUX V9 HD
Lamp flux(lm): 1151.0
Number of Lamps: 1
Length(mm): 69
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.3100
Power (W): 10.5400
PF: 0.0000
Ballast type: DC
Width(mm): 69
Height(mm): 0

Photometric Results

Lumens(lm): 983.35
Efficiency(%): 85.43%
Lumens(lm)/Power(W): 94.05
Central intensity(cd): 8421.151
Maximum intensity(cd): 8421.151
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=14.7
[C90/270]Total=14.7
Field angle(10%Imax): [C0/180]Total=30.6
[C90/270]Total=30.6
Maximum s/h(1/2): C0_180=0.25 C90_270=0.25
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(%): 86.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.233%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8421.152	8.059	8.059	.700%	.820%
2.0	7999.557	61.228	69.287	5.320%	7.046%
4.0	6827.751	104.455	173.741	9.075%	17.668%
6.0	5245.843	120.258	294	10.448%	29.898%
8.0	3683.961	112.444	406.443	9.769%	41.332%
10.0	2380.019	90.639	497.083	7.875%	50.550%
12.0	1511.725	68.931	566.014	5.989%	57.560%
14.0	1035.604	54.946	620.96	4.774%	63.147%
16.0	734.852	44.422	665.382	3.859%	67.665%
18.0	555.319	37.635	703.017	3.270%	71.492%
20.0	466.933	35.024	738.041	3.043%	75.054%
22.0	422.854	34.740	772.782	3.018%	78.586%
24.0	395.945	35.319	808.101	3.069%	82.178%
26.0	376.661	36.212	844.313	3.146%	85.861%
28.0	347.420	35.771	880.084	3.108%	89.498%
30.0	275.179	30.175	910.259	2.622%	92.567%
32.0	157.792	18.338	928.598	1.593%	94.432%
34.0	63.219	7.753	936.351	.674%	95.220%
36.0	30.859	3.978	940.329	.346%	95.625%
38.0	24.473	3.304	943.633	.287%	95.961%
40.0	19.827	2.795	946.428	.243%	96.245%
42.0	16.544	2.428	948.856	.211%	96.492%
44.0	13.792	2.101	950.957	.183%	96.706%
46.0	11.789	1.860	952.817	.162%	96.895%
48.0	10.502	1.712	954.529	.149%	97.069%
50.0	9.635	1.619	956.147	.141%	97.233%
52.0	9.029	1.560	957.708	.136%	97.392%
54.0	8.644	1.534	959.242	.133%	97.548%
56.0	8.403	1.528	960.769	.133%	97.703%
58.0	8.224	1.530	962.299	.133%	97.859%
60.0	8.066	1.532	963.831	.133%	98.015%
62.0	7.990	1.547	965.378	.134%	98.172%
64.0	7.839	1.545	966.923	.134%	98.329%
66.0	7.515	1.506	968.429	.131%	98.482%
68.0	7.247	1.474	969.903	.128%	98.632%
70.0	6.944	1.431	971.334	.124%	98.778%
72.0	6.703	1.398	972.732	.121%	98.920%
74.0	6.455	1.361	974.093	.118%	99.058%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.221	1.324	975.417	.115%	99.193%
78.0	6.063	1.301	976.717	.113%	99.325%
80.0	5.905	1.275	977.992	.111%	99.455%
82.0	5.753	1.250	979.242	.109%	99.582%
84.0	5.630	1.228	980.47	.107%	99.707%
86.0	5.519	1.208	981.677	.105%	99.830%
88.0	5.127	1.124	982.801	.098%	99.944%
90.0	5.024	0.551	983.352	.048%	100.000%

Zonal flux distribution table

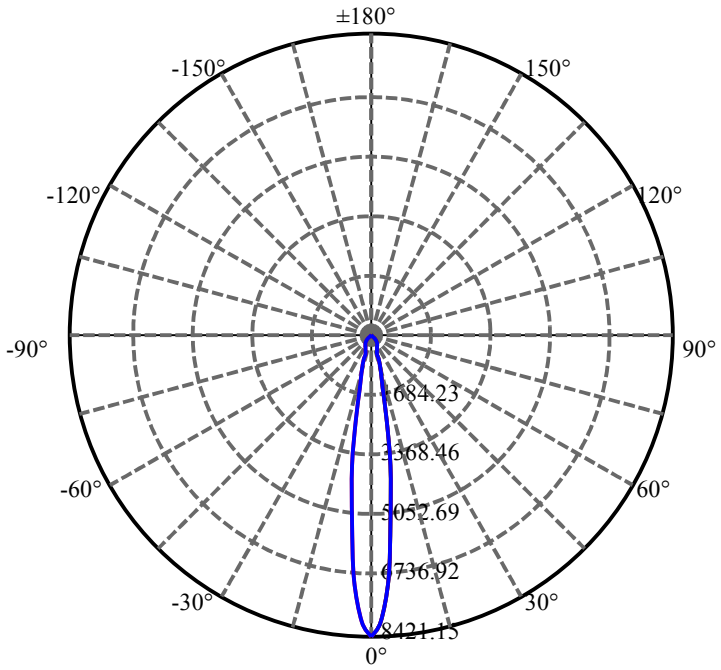
ZONAL LUMEN SUMMARY

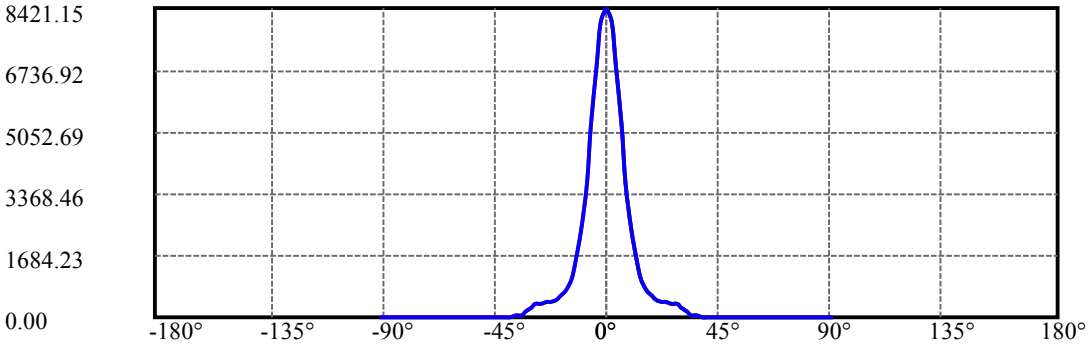
Zone	Lumens	%Lamp	%Fixt
0-30	910.26	79.08%	92.57%
0-40	946.43	82.23%	96.25%
0-60	963.83	83.74%	98.01%
0-90	982.80	85.39%	99.94%
0-120	982.80	85.39%	99.94%
0-180	983.35	85.43%	100.00%
60-90	20.50	1.78%	2.08%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.79	786.68	68.35%	80.00%

ZONAL LUMEN SUMMARY

0-10	497.08
10-20	240.96
20-30	172.22
30-40	36.17
40-50	9.72
50-60	7.68
60-70	7.50
70-80	6.66
80-90	4.81
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:15.3 Right:15.3
:C90/270Left:15.3 Right:15.3

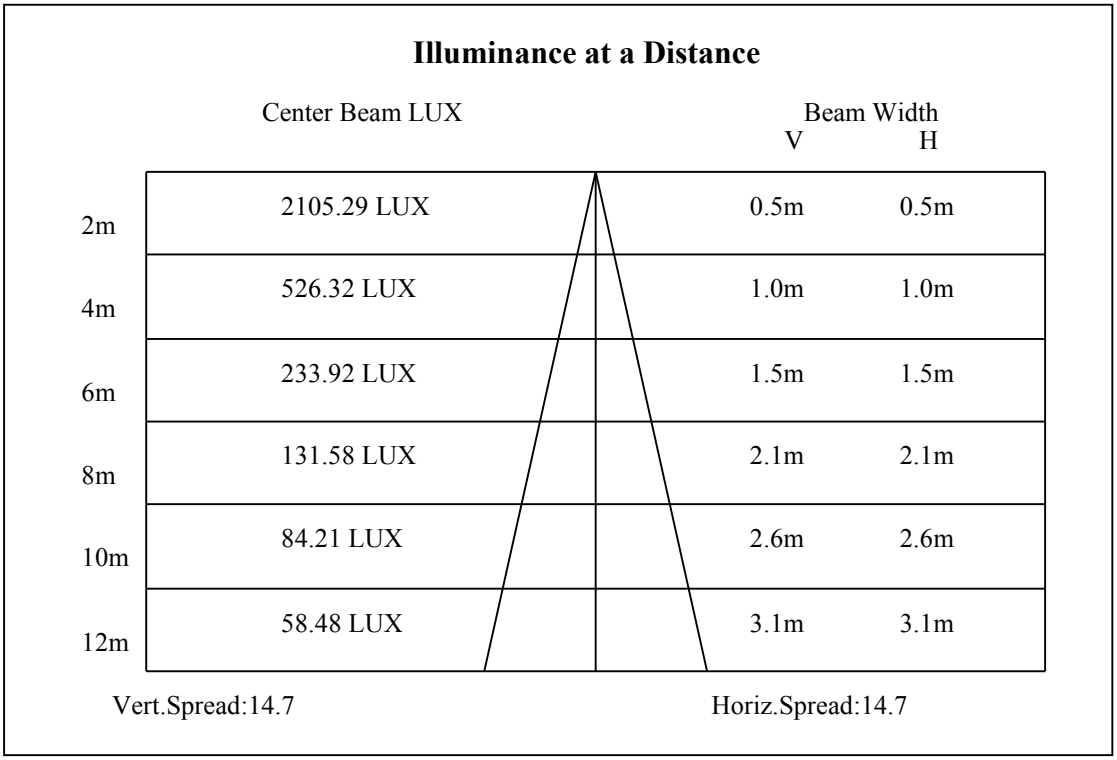
Beam Angle(50%Imax):C0/180Left:7.3 Right:7.3
:C90/270Left:7.3 Right:7.3

Equipment: GMS1980
Temperature(°C): 25.0

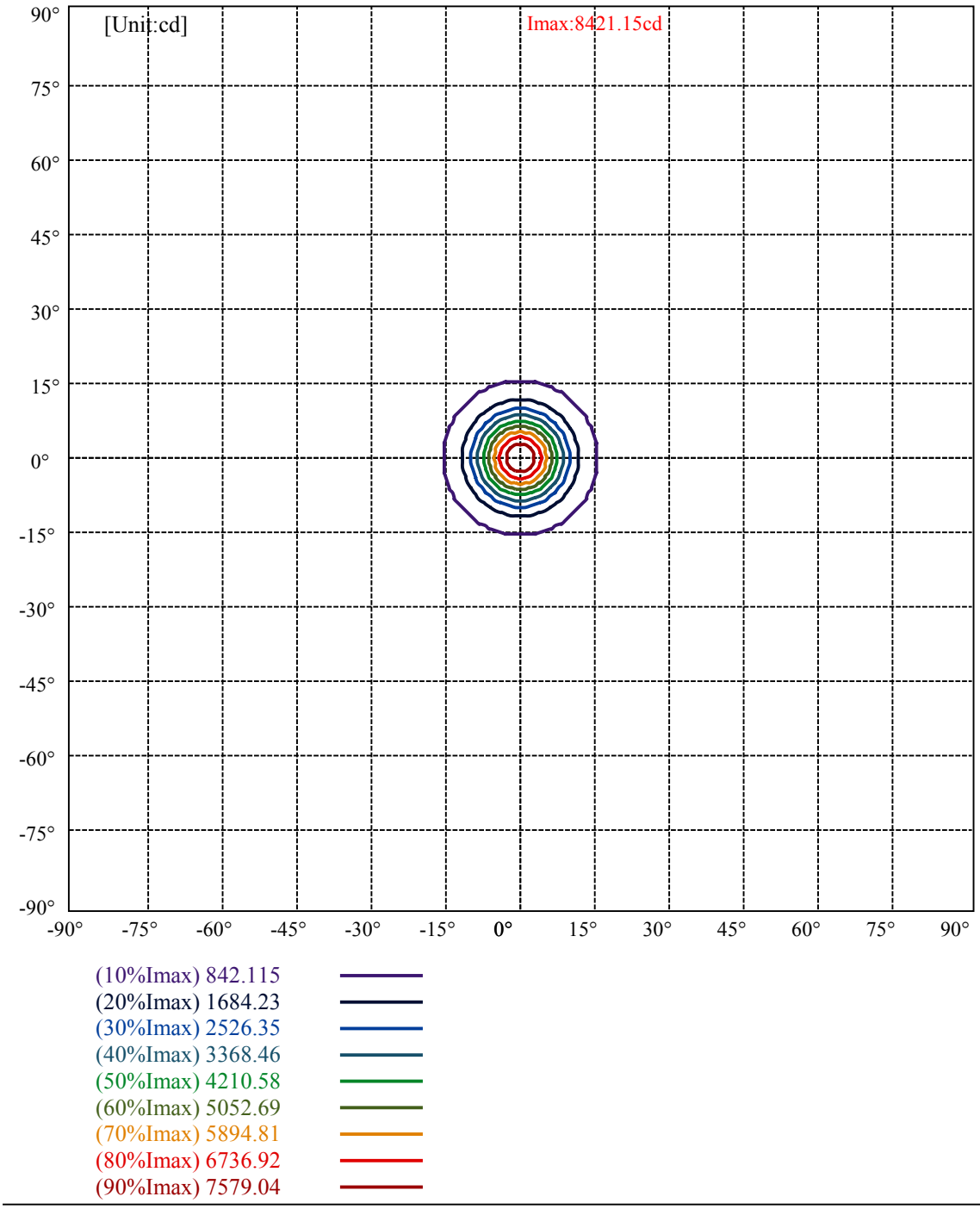
Date: 2018/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Lux distance Curve



ISO-Intensity(V-H)

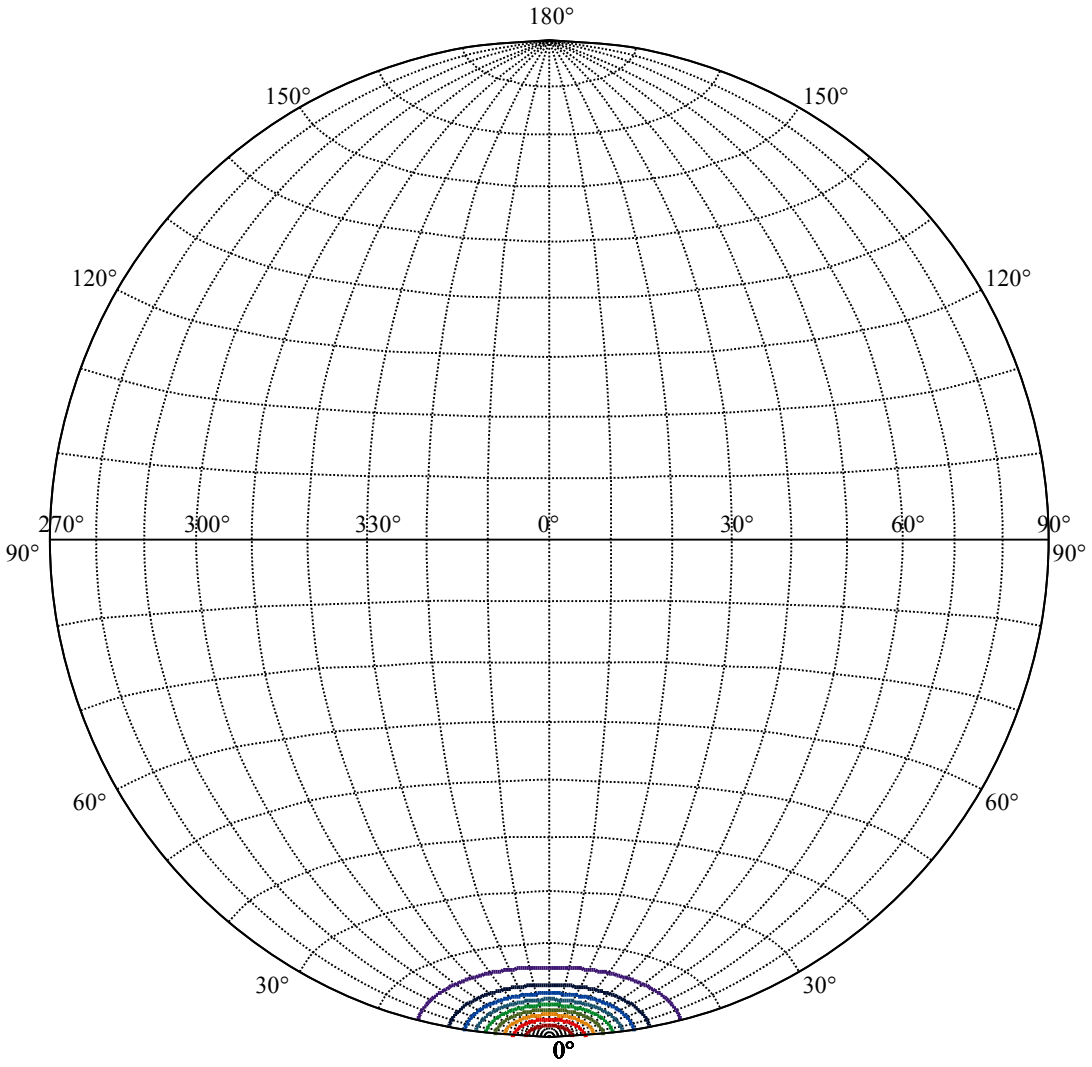


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8421.15

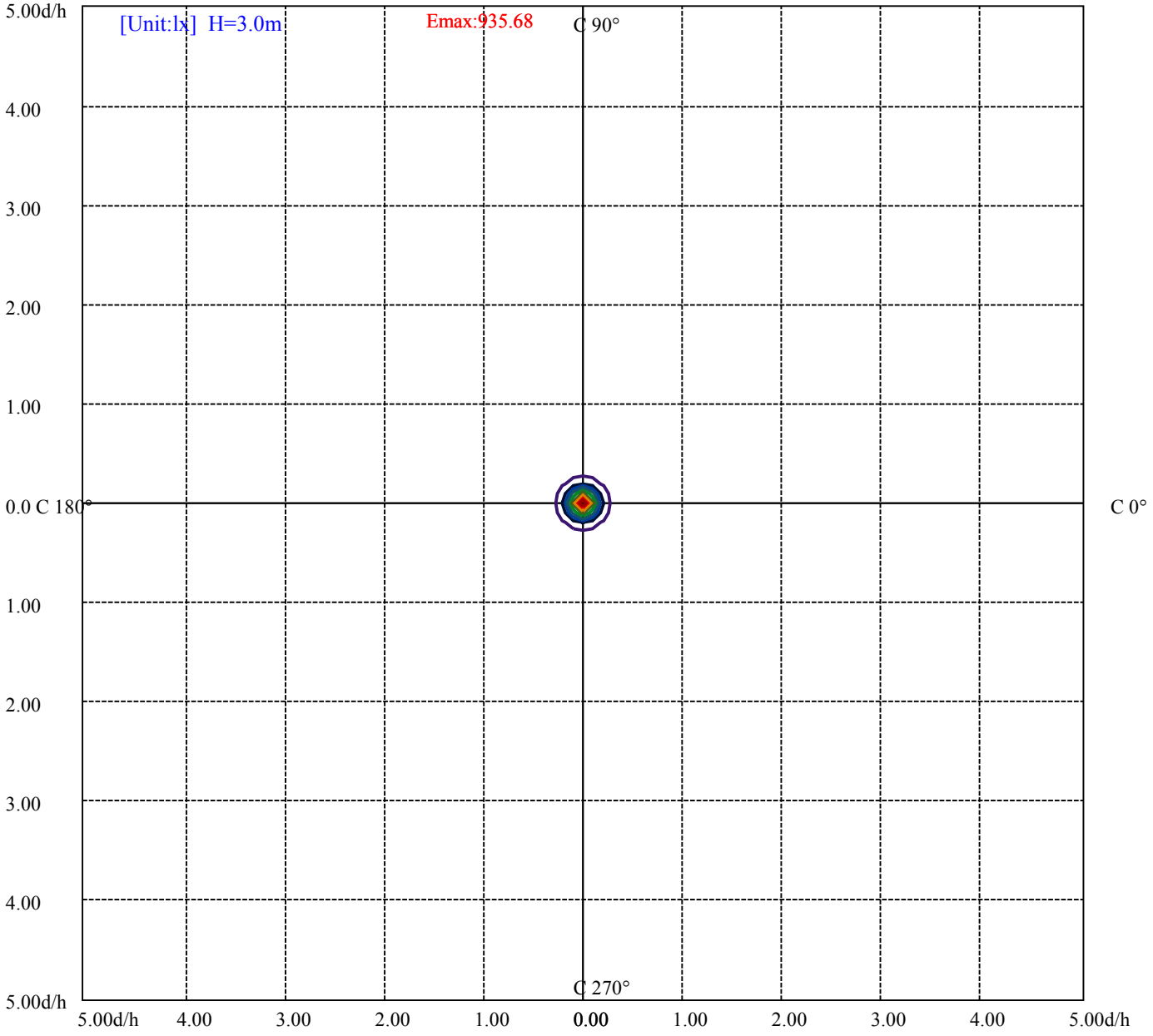
(10%Imax) 842.115
(20%Imax) 1684.23
(30%Imax) 2526.35
(40%Imax) 3368.46
(50%Imax) 4210.58
(60%Imax) 5052.69
(70%Imax) 5894.81
(80%Imax) 6736.92
(90%Imax) 7579.04

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

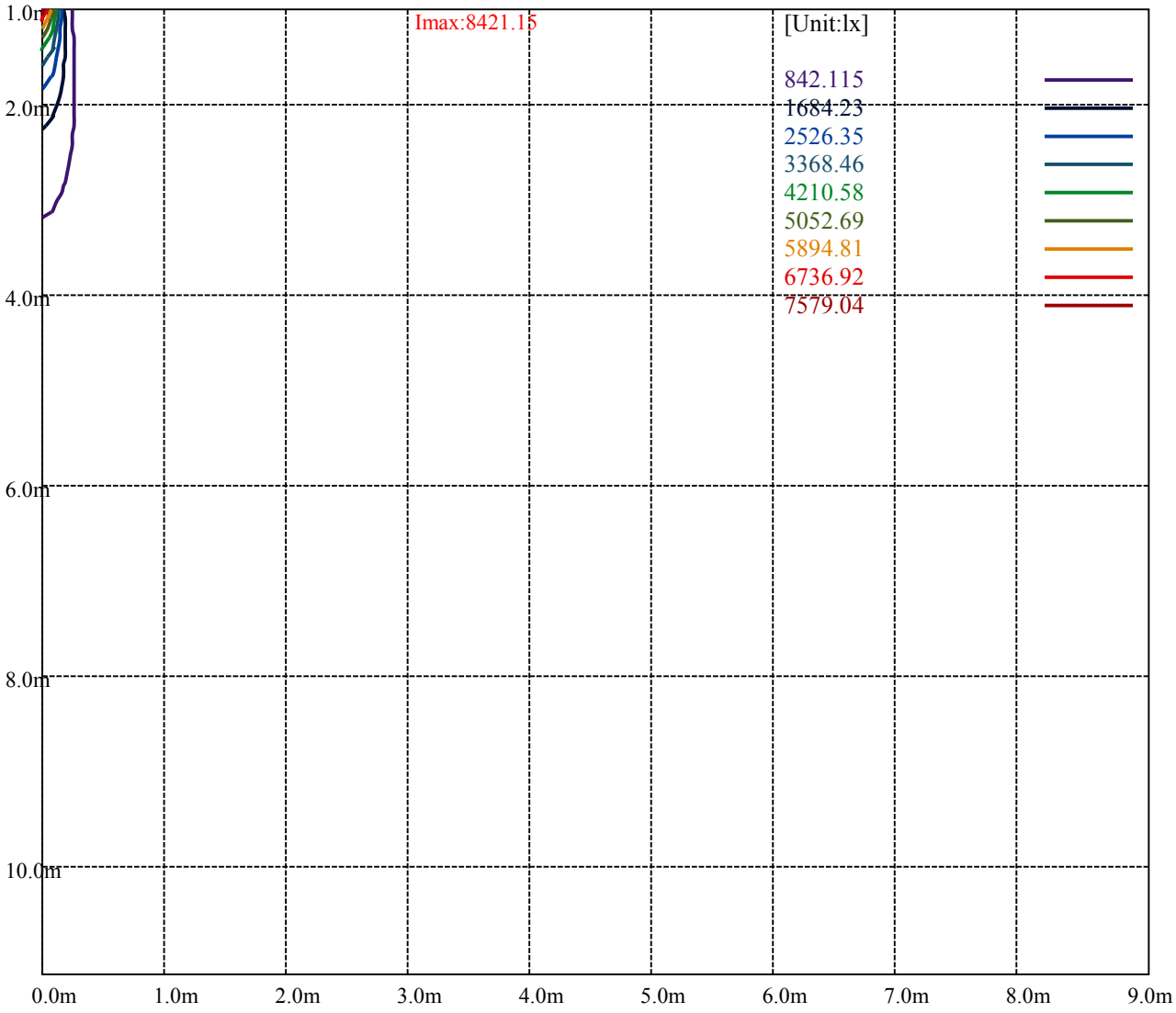
ISO illuminance diagram



(10%Emax) 93.568
(20%Emax) 187.1356
(30%Emax) 280.7045
(40%Emax) 374.2722
(50%Emax) 467.84
(60%Emax) 561.4078
(70%Emax) 654.9755
(80%Emax) 748.5444
(90%Emax) 842.1122

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2018/7/27
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Luminance Limitting Curve(no luminous side)

Luminance Table

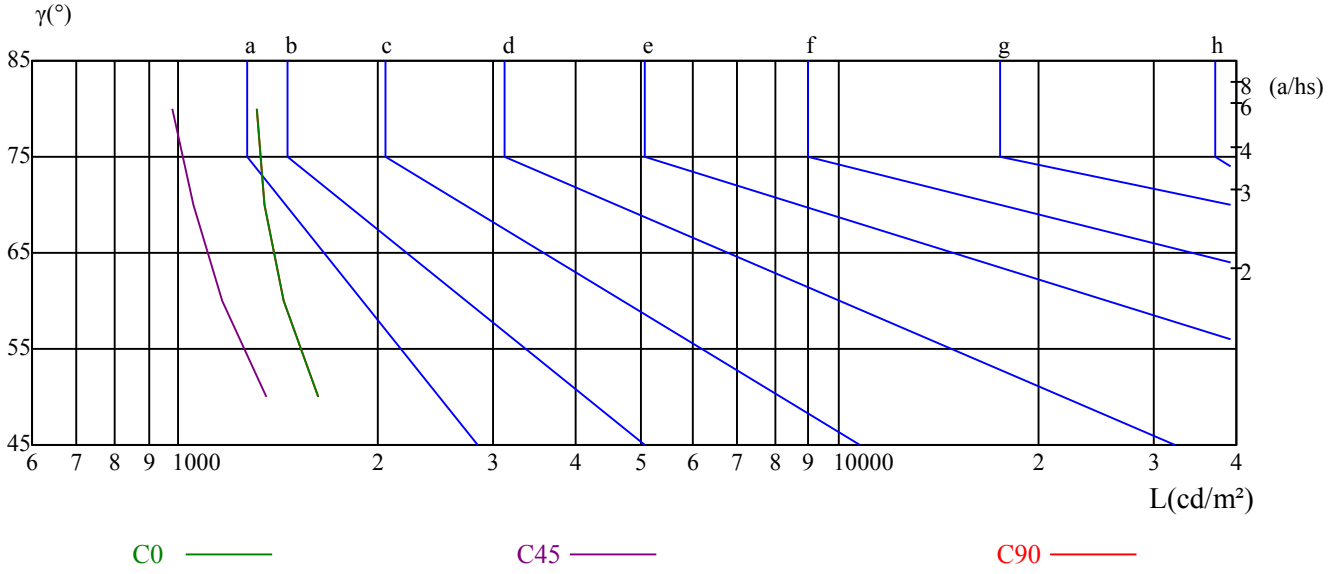
γ	45	50	55	60	65	70	75	80	85
C0	0	1629	0	1438	0	1354	0	1313	0
C45	0	1358	0	1162	0	1055	0	982	0
C90	0	1629	0	1438	0	1354	0	1313	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2346	2346	2346	3720	3720	3720	10897	10897	10897

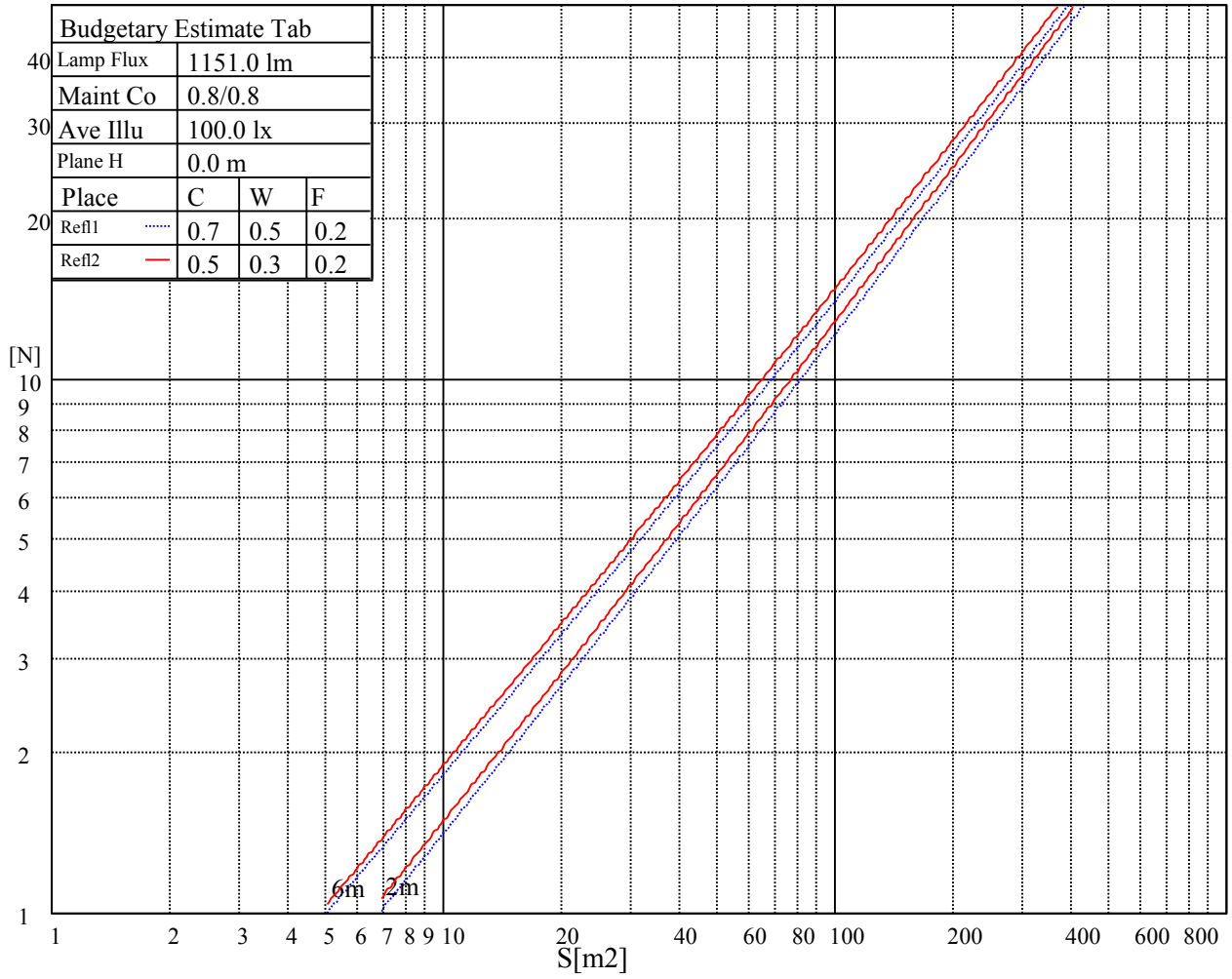
Glare Table

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

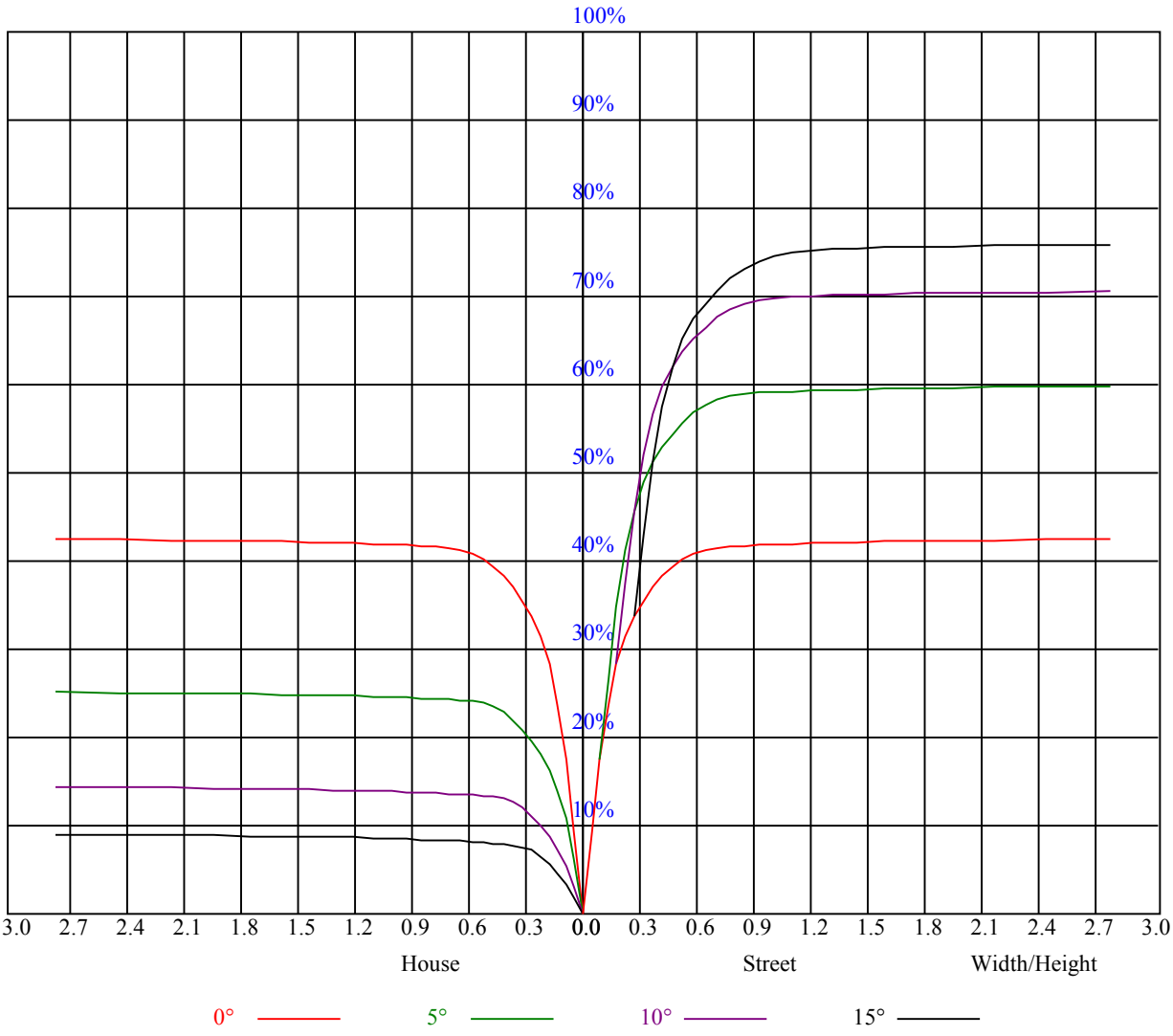


Equipment: GMS1980 Date: 2018/7/27 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

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	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.83	0.82
2	0.92	0.89	0.86	0.90	0.88	0.85	0.87	0.85	0.84	0.85	0.83	0.82	0.83	0.81	0.80	0.79
3	0.88	0.84	0.82	0.87	0.84	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.81	0.79	0.77	0.76
4	0.84	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.78	0.75	0.79	0.77	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.72
6	0.79	0.75	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.70
7	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.75	0.72	0.70	0.74	0.71	0.70	0.69
8	0.75	0.71	0.69	0.74	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.67
9	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.71	0.68	0.67	0.66
10	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.64

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/7/27
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	8244.70	8227.63	7443.07	5921.32	4302.66	2895.97	1852.65	1250.88	864.39
45.0	8420.88	8615.23	7919.31	6509.32	4883.50	3245.02	2092.69	1372.01	928.25
90.0	8613.57	8724.79	7839.48	6464.17	4578.49	2924.60	1915.96	1096.06	820.56
135.0	8405.46	8392.25	7570.26	5984.63	4356.61	2790.26	1772.27	1179.86	800.52
180.0	8244.70	7520.15	6055.10	4437.00	2974.70	1904.40	1093.37	880.08	636.62
225.0	8420.88	7324.15	5714.85	4032.88	2651.52	1715.01	1089.73	834.99	619.60
270.0	8613.57	7615.95	6023.72	4156.21	2799.62	1761.80	1197.48	816.49	578.09
315.0	8405.46	7576.31	6056.20	4461.22	2924.60	1803.10	1079.66	854.48	630.78
360.0	8244.70	8227.63	7443.07	5921.32	4302.66	2895.97	1852.65	1250.88	864.39

C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	627.09	508.72	454.22	414.57	390.35	370.53	328.69	202.11	81.43
45.0	644.71	507.62	445.41	409.07	389.25	371.08	351.81	284.64	105.76
90.0	606.67	491.54	432.58	403.84	380.94	363.37	335.95	217.20	95.47
135.0	590.20	487.80	437.15	400.26	379.34	360.07	321.53	204.15	84.29
180.0	504.98	445.79	410.34	388.97	369.87	345.81	231.40	102.96	33.42
225.0	505.86	446.51	412.70	392.66	371.74	309.09	190.83	68.71	33.25
270.0	457.52	393.65	369.98	361.17	357.32	311.07	210.10	84.90	35.90
315.0	505.53	453.83	420.47	397.01	374.49	348.34	231.13	97.67	36.23
360.0	627.09	508.72	454.22	414.57	390.35	370.53	328.69	202.11	81.43

C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	32.10	25.49	19.60	16.57	13.87	11.73	10.19	9.25	8.70
45.0	34.80	27.86	21.58	18.22	15.09	12.66	11.40	10.24	9.41
90.0	35.02	28.46	22.68	18.88	15.36	12.99	11.34	10.30	9.63
135.0	33.75	27.14	22.02	18.06	15.20	12.94	11.23	10.13	9.52
180.0	26.65	21.53	17.84	14.53	12.39	10.85	9.74	9.19	8.59
225.0	26.76	20.87	17.18	14.76	12.44	10.63	9.80	9.14	8.70
270.0	29.57	22.79	19.38	16.02	13.38	11.45	10.41	9.63	9.08
315.0	28.24	21.64	18.33	15.31	12.61	11.07	9.91	9.19	8.59
360.0	32.10	25.49	19.60	16.57	13.87	11.73	10.19	9.25	8.70

C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	8.20	7.98	7.87	7.71	7.60	7.65	7.32	7.10	6.83
45.0	8.97	8.70	8.53	8.31	8.31	8.26	7.98	7.76	7.43
90.0	9.08	8.81	8.53	8.42	8.31	8.31	7.98	7.65	7.32
135.0	8.97	8.64	8.48	8.26	8.15	8.04	7.76	7.43	7.10
180.0	8.42	8.20	8.09	8.04	7.93	7.76	7.43	7.16	6.83
225.0	8.42	8.26	8.09	7.93	7.93	7.60	7.27	6.99	6.72
270.0	8.75	8.53	8.26	8.09	7.98	7.60	7.27	6.99	6.72
315.0	8.31	8.09	7.93	7.76	7.71	7.49	7.10	6.88	6.61
360.0	8.20	7.98	7.87	7.71	7.60	7.65	7.32	7.10	6.83

C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	6.61	6.33	6.17	6.11	5.95	5.78	5.67	5.51	5.18
45.0	7.21	6.94	6.55	6.39	6.22	6.06	5.89	5.73	5.45
90.0	6.99	6.72	6.39	6.28	6.00	5.84	5.67	5.40	5.23
135.0	6.88	6.66	6.39	6.11	6.00	5.78	5.67	5.40	5.23
180.0	6.61	6.33	6.11	5.89	5.73	5.56	5.40	5.23	5.01
225.0	6.44	6.22	6.00	5.89	5.73	5.67	5.62	5.67	5.01
270.0	6.50	6.22	6.06	5.89	5.78	5.62	5.56	5.62	4.96
315.0	6.39	6.22	6.11	5.95	5.84	5.73	5.56	5.62	4.96
360.0	6.61	6.33	6.17	6.11	5.95	5.78	5.67	5.51	5.18

Intensity data(cd)

C/γ(°)	90.0
0.0	5.01
45.0	5.23
90.0	5.07
135.0	5.07
180.0	4.96
225.0	5.01
270.0	4.96
315.0	4.90
360.0	5.01