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

LumCAT: 1709-M
Luminaire: 92.70.124.00
Report No: NATA0100
Test No: GC2019062811
LampCAT: TRIDONIC SLE 9MM G7
Lamp flux(lm): 1072.7
Number of Lamps: 1
Length(mm): 46
Phm Type: C

Voltage(V): 34.8500
Current(A): 0.2490
Power (W): 8.6770
PF: 0.0000
Ballast type: DC
Width(mm): 46
Height(mm): 0

Photometric Results

Lumens(lm): 965.49
Efficiency(%): 90.00%
Lumens(lm)/Power(W): 111.27
Central intensity(cd): 3971.109
Maximum intensity(cd): 3971.109
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=16.1
[C90/270]Total=16.1
Field angle(10%Imax): [C0/180]Total=53.3
[C90/270]Total=53.3
Maximum s/h(1/2): C0_180=0.28 C90_270=0.28
Maximum s/h(1/4): C0_180=0.30 C90_270=0.30
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.00%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.744%

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2019/6/28
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3971.109	0.000	0	.000%	.000%
1.0	3929.906	3.780	3.78	.352%	.392%
2.0	3818.602	11.121	14.902	1.037%	1.543%
3.0	3648.797	17.860	32.761	1.665%	3.393%
4.0	3400.383	23.596	56.357	2.200%	5.837%
5.0	3046.500	27.734	84.091	2.585%	8.710%
6.0	2691.000	30.152	114.244	2.811%	11.833%
7.0	2321.508	31.113	145.356	2.900%	15.055%
8.0	1996.102	30.900	176.256	2.881%	18.256%
9.0	1692.281	29.892	206.149	2.787%	21.352%
10.0	1432.828	28.281	234.43	2.636%	24.281%
11.0	1200.530	26.313	260.742	2.453%	27.006%
12.0	1047.298	24.572	285.314	2.291%	29.551%
13.0	911.637	23.248	308.562	2.167%	31.959%
14.0	807.314	22.002	330.565	2.051%	34.238%
15.0	732.171	21.135	351.699	1.970%	36.427%
16.0	670.781	20.557	372.256	1.916%	38.556%
17.0	624.305	20.168	392.424	1.880%	40.645%
18.0	585.295	19.944	412.368	1.859%	42.711%
19.0	554.808	19.835	432.204	1.849%	44.765%
20.0	525.959	19.781	451.985	1.844%	46.814%
21.0	501.701	19.733	471.718	1.840%	48.858%
22.0	480.860	19.745	491.463	1.841%	50.903%
23.0	459.647	19.734	511.197	1.840%	52.947%
24.0	440.430	19.679	530.876	1.834%	54.985%
25.0	421.580	19.600	550.476	1.827%	57.015%
26.0	405.886	19.532	570.009	1.821%	59.039%
27.0	392.119	19.523	589.532	1.820%	61.061%
28.0	382.085	19.601	609.133	1.827%	63.091%
29.0	372.115	19.732	628.865	1.839%	65.135%
30.0	364.043	19.876	648.741	1.853%	67.193%
31.0	356.217	20.044	668.785	1.869%	69.269%
32.0	348.933	20.202	688.987	1.883%	71.362%
33.0	342.773	20.378	709.365	1.900%	73.472%
34.0	336.839	20.567	729.932	1.917%	75.603%
35.0	331.502	20.756	750.688	1.935%	77.752%
36.0	325.005	20.903	771.591	1.949%	79.917%
37.0	319.317	21.014	792.606	1.959%	82.094%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	311.414	21.053	813.659	1.963%	84.275%
39.0	295.812	20.726	834.385	1.932%	86.421%
40.0	275.520	19.926	854.311	1.858%	88.485%
41.0	246.445	18.587	872.898	1.733%	90.410%
42.0	212.280	16.666	889.564	1.554%	92.136%
43.0	177.961	14.456	904.02	1.348%	93.634%
44.0	144.935	12.187	916.207	1.136%	94.896%
45.0	110.981	9.835	926.042	.917%	95.915%
46.0	81.738	7.537	933.579	.703%	96.695%
47.0	53.494	5.379	938.957	.501%	97.252%
48.0	31.767	3.447	942.404	.321%	97.609%
49.0	19.779	2.117	944.521	.197%	97.829%
50.0	15.898	1.487	946.008	.139%	97.983%
51.0	13.683	1.252	947.26	.117%	98.112%
52.0	11.313	1.073	948.332	.100%	98.223%
53.0	8.972	0.882	949.215	.082%	98.315%
54.0	7.481	0.725	949.94	.068%	98.390%
55.0	6.961	0.645	950.585	.060%	98.457%
56.0	6.420	0.605	951.189	.056%	98.519%
57.0	6.019	0.569	951.758	.053%	98.578%
58.0	5.794	0.546	952.304	.051%	98.635%
59.0	5.604	0.533	952.837	.050%	98.690%
60.0	5.372	0.519	953.356	.048%	98.744%
61.0	5.189	0.504	953.86	.047%	98.796%
62.0	5.034	0.493	954.352	.046%	98.847%
63.0	4.873	0.482	954.834	.045%	98.897%
64.0	4.725	0.471	955.305	.044%	98.946%
65.0	4.542	0.459	955.764	.043%	98.993%
66.0	4.402	0.446	956.21	.042%	99.039%
67.0	4.275	0.436	956.646	.041%	99.084%
68.0	4.170	0.428	957.074	.040%	99.129%
69.0	4.050	0.419	957.493	.039%	99.172%
70.0	3.938	0.410	957.903	.038%	99.215%
71.0	3.853	0.403	958.306	.038%	99.256%
72.0	3.790	0.397	958.703	.037%	99.298%
73.0	3.720	0.393	959.096	.037%	99.338%
74.0	3.677	0.389	959.485	.036%	99.378%
75.0	3.635	0.386	959.871	.036%	99.418%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.579	0.383	960.254	.036%	99.458%
77.0	3.565	0.381	960.635	.036%	99.498%
78.0	3.544	0.381	961.016	.035%	99.537%
79.0	3.509	0.379	961.395	.035%	99.576%
80.0	3.495	0.378	961.772	.035%	99.615%
81.0	3.459	0.376	962.148	.035%	99.654%
82.0	3.452	0.375	962.523	.035%	99.693%
83.0	3.445	0.375	962.898	.035%	99.732%
84.0	3.417	0.374	963.272	.035%	99.771%
85.0	3.417	0.373	963.645	.035%	99.809%
86.0	3.382	0.372	964.017	.035%	99.848%
87.0	3.375	0.370	964.386	.034%	99.886%
88.0	3.347	0.368	964.755	.034%	99.924%
89.0	3.333	0.366	965.121	.034%	99.962%
90.0	3.326	0.365	965.486	.034%	100.000%

Zonal flux distribution table

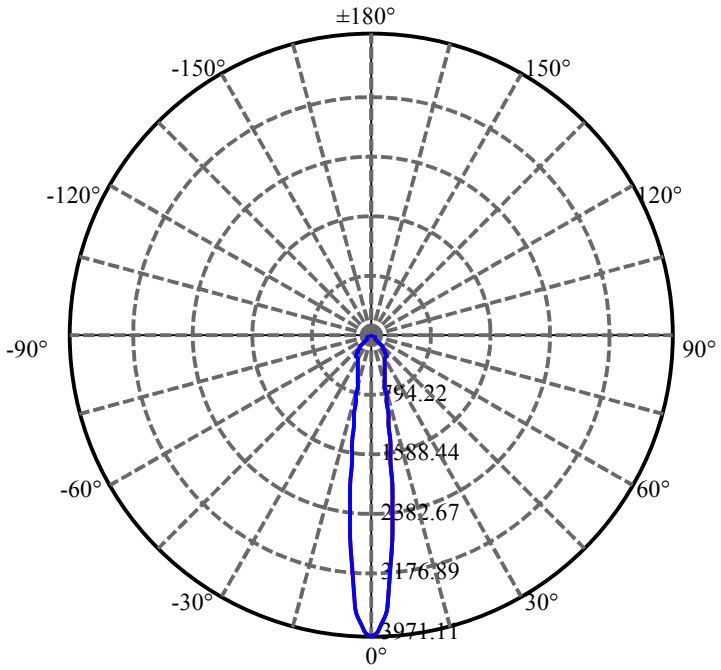
ZONAL LUMEN SUMMARY

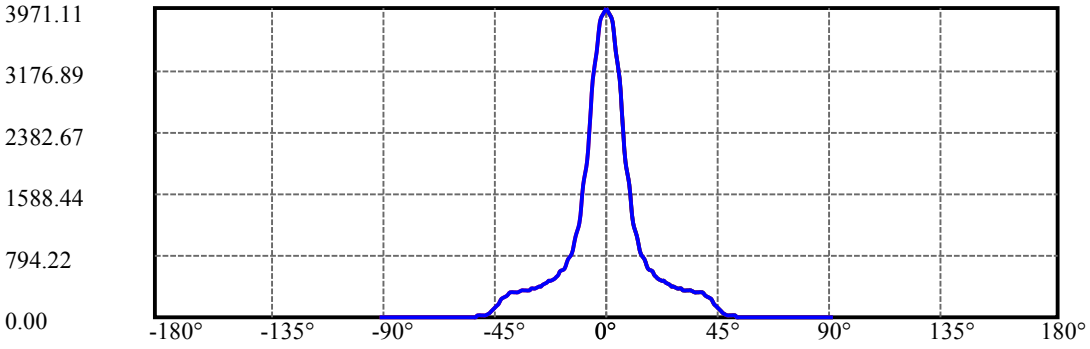
Zone	Lumens	%Lamp	%Fixt
0-30	648.74	60.48%	67.19%
0-40	854.31	79.64%	88.49%
0-60	953.36	88.87%	98.74%
0-90	965.12	89.97%	99.96%
0-120	965.12	89.97%	99.96%
0-180	965.49	90.00%	100.00%
60-90	12.28	1.15%	1.27%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-36.04	772.39	72.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	234.43
10-20	217.55
20-30	196.76
30-40	205.57
40-50	91.70
50-60	7.35
60-70	4.55
70-80	3.87
80-90	3.35
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:26.6 Right:26.6
:C90/270Left:26.6 Right:26.6

Beam Angle(50%Imax):C0/180Left:8.0 Right:8.0
:C90/270Left:8.0 Right:8.0

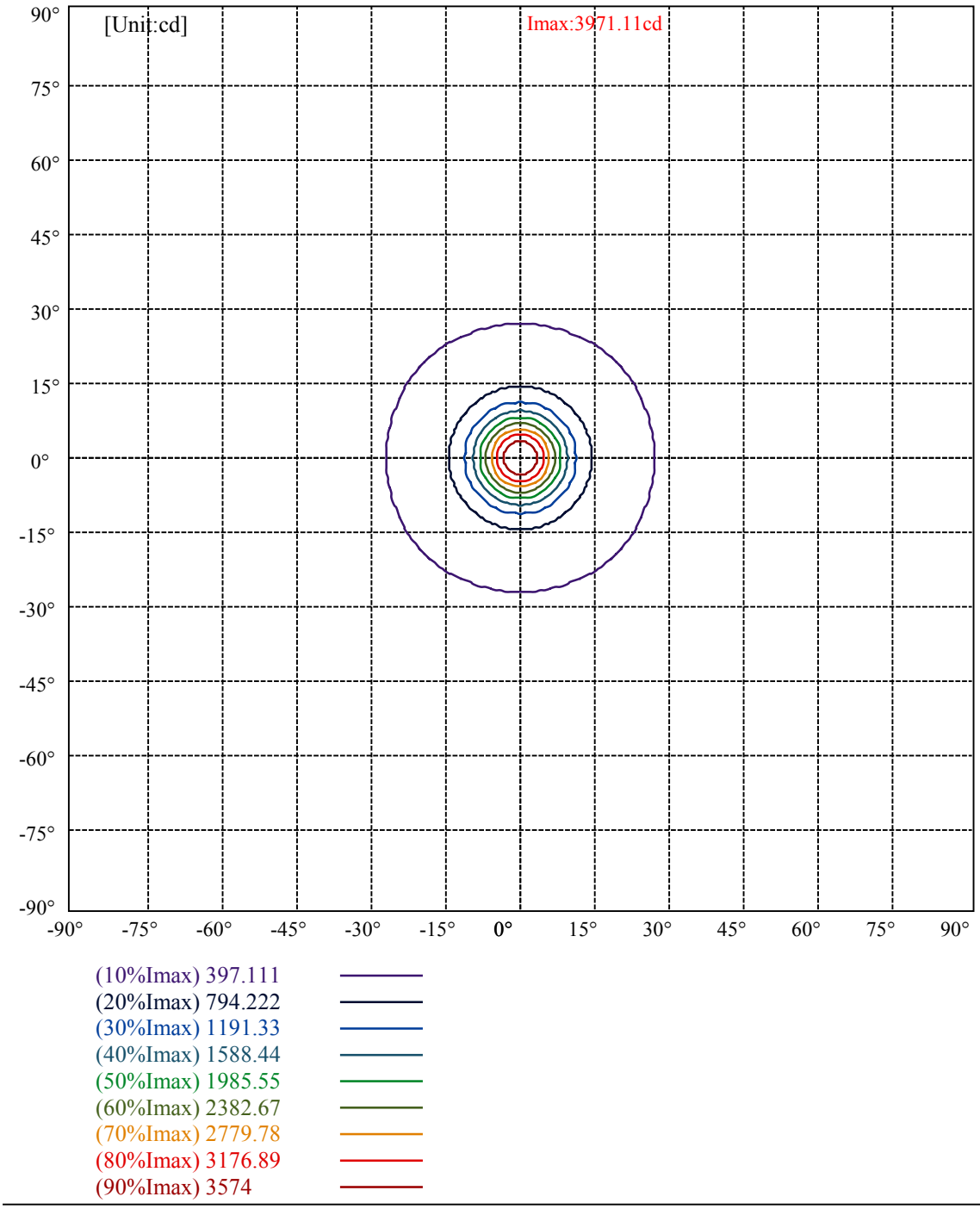
Lux distance Curve

Illuminance at a Distance

	Center Beam LUX	Beam Width V	Beam Width H
2m	992.78 LUX	0.6m	0.6m
4m	248.19 LUX	1.1m	1.1m
6m	110.31 LUX	1.7m	1.7m
8m	62.05 LUX	2.3m	2.3m
10m	39.71 LUX	2.8m	2.8m
12m	27.58 LUX	3.4m	3.4m

Vert.Spread:16.2 Horiz.Spread:16.2

ISO-Intensity(V-H)

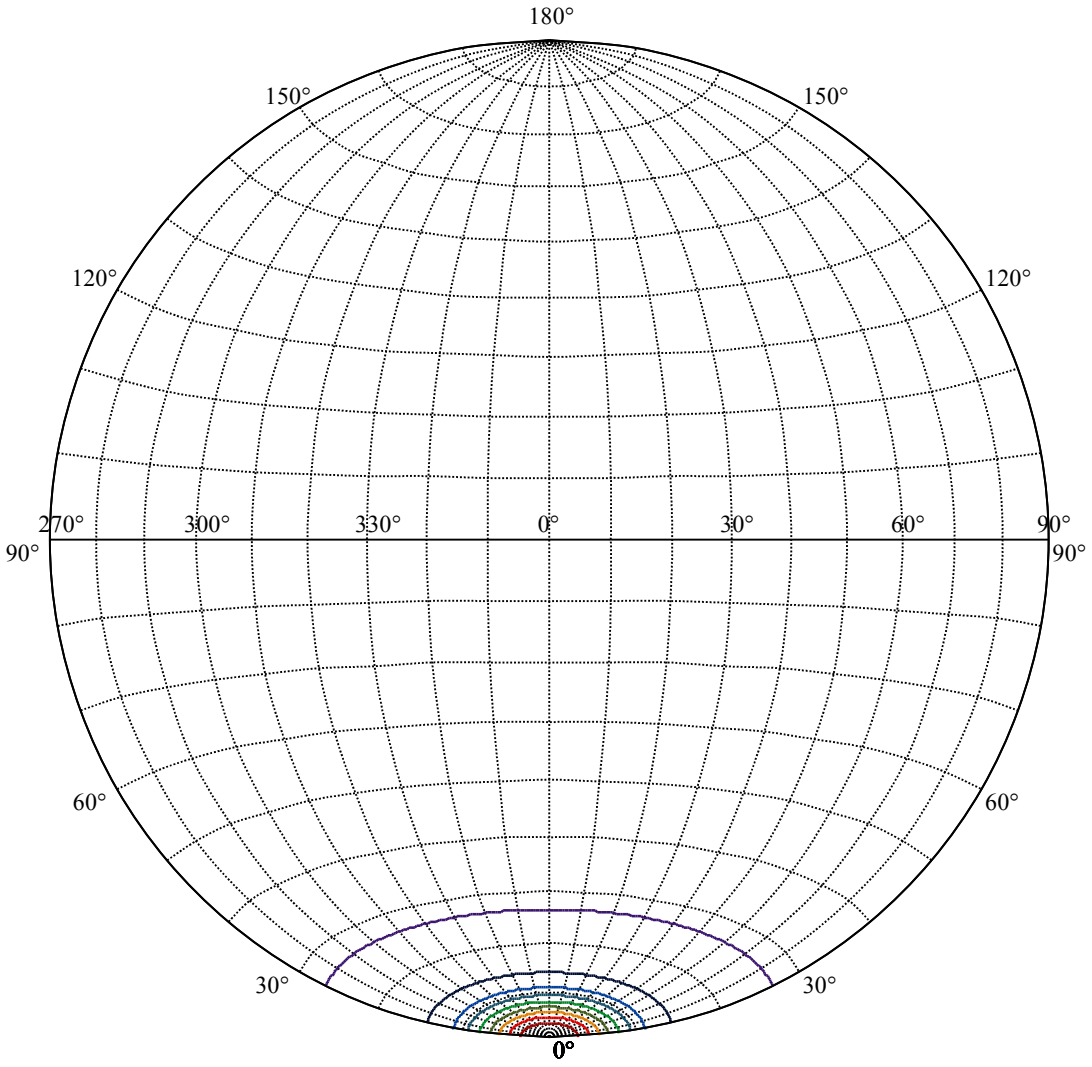


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

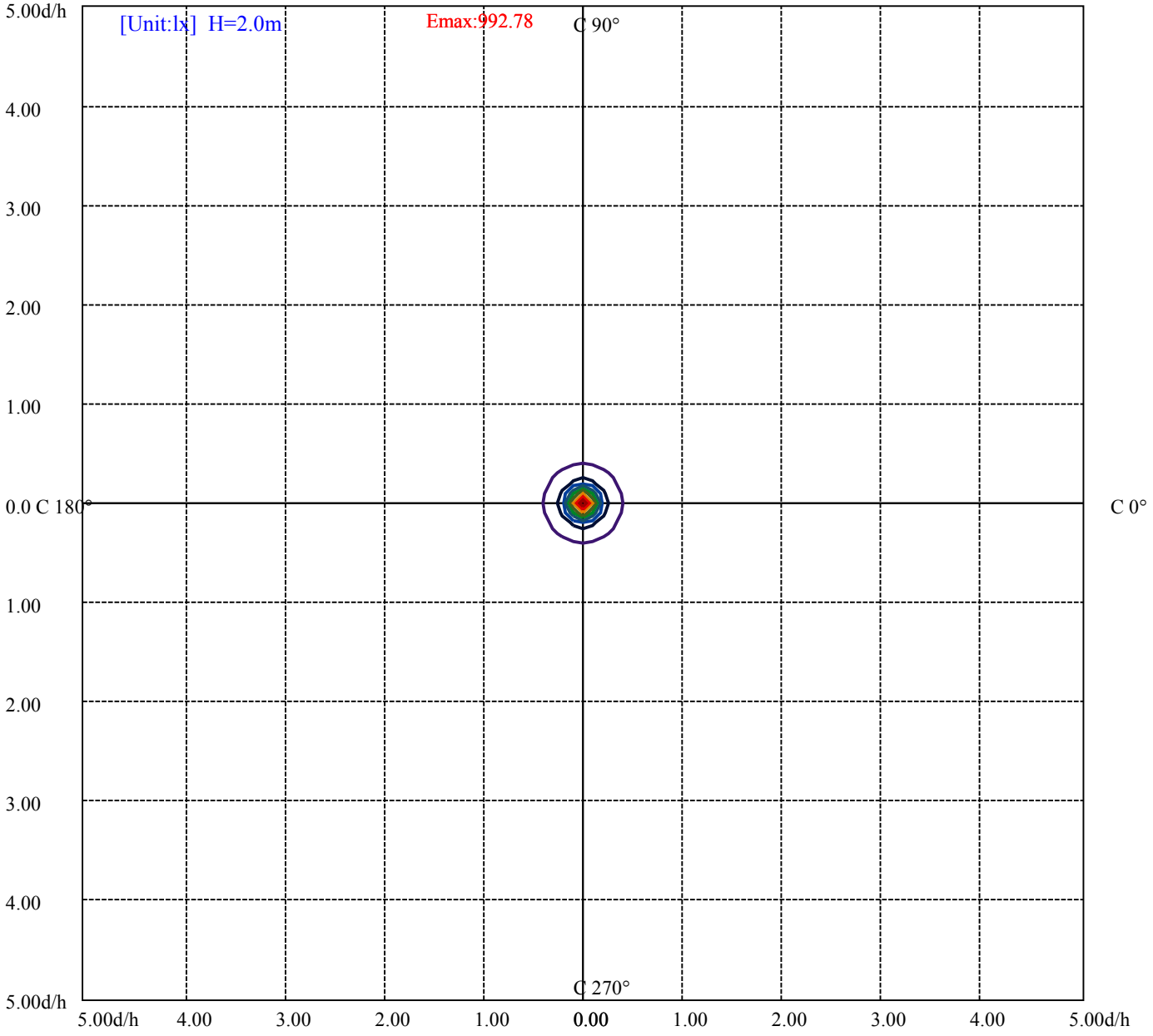
Imax:3971.11

(10%Imax) 397.111
(20%Imax) 794.222
(30%Imax) 1191.33
(40%Imax) 1588.44
(50%Imax) 1985.55
(60%Imax) 2382.67
(70%Imax) 2779.78
(80%Imax) 3176.89
(90%Imax) 3574

Equipment: GMS1980 Date: 2019/6/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

1709-M

ISO illuminance diagram

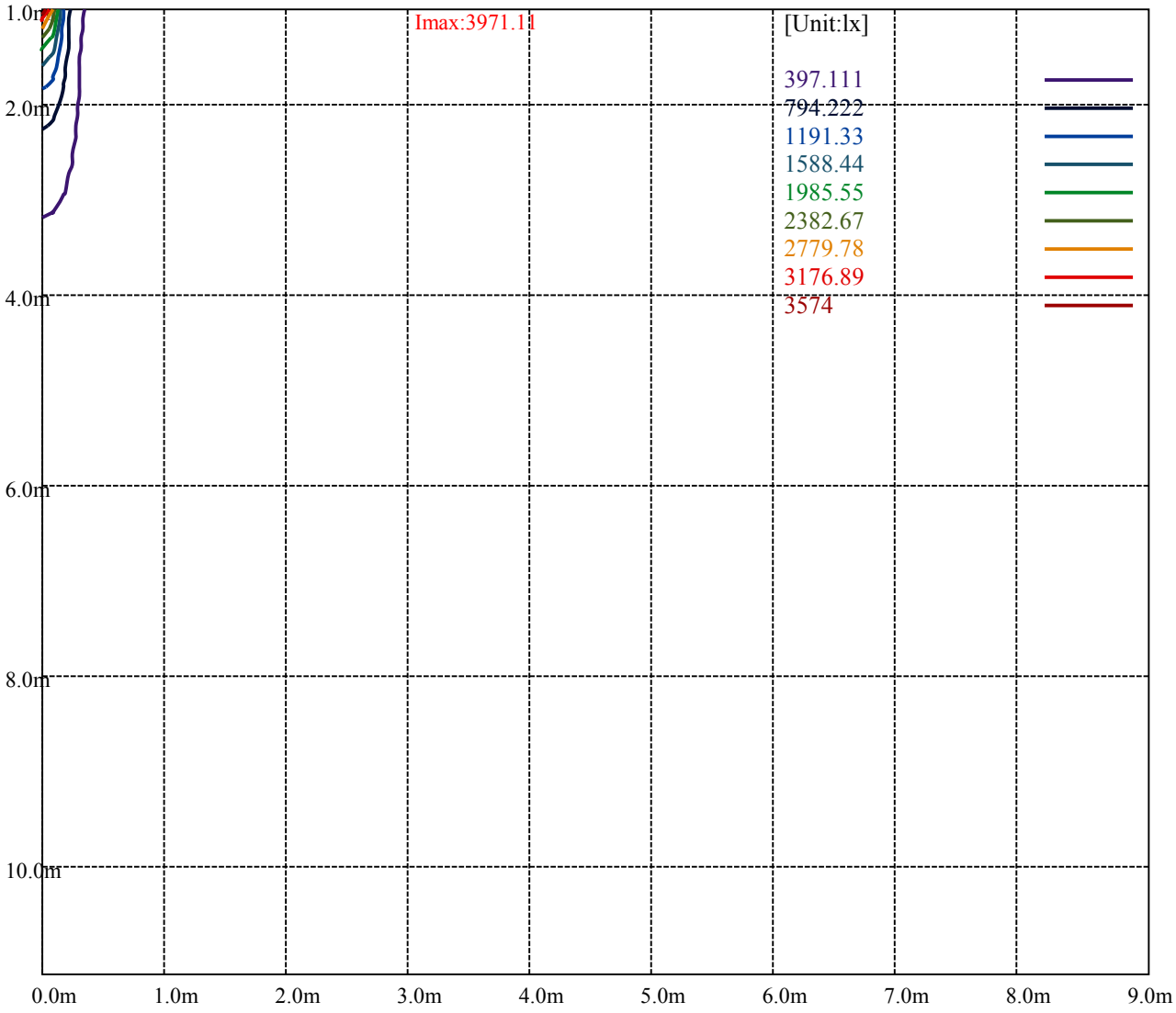


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

1709-M

Luminance Limitting Curve(no luminous side)

Luminance Table

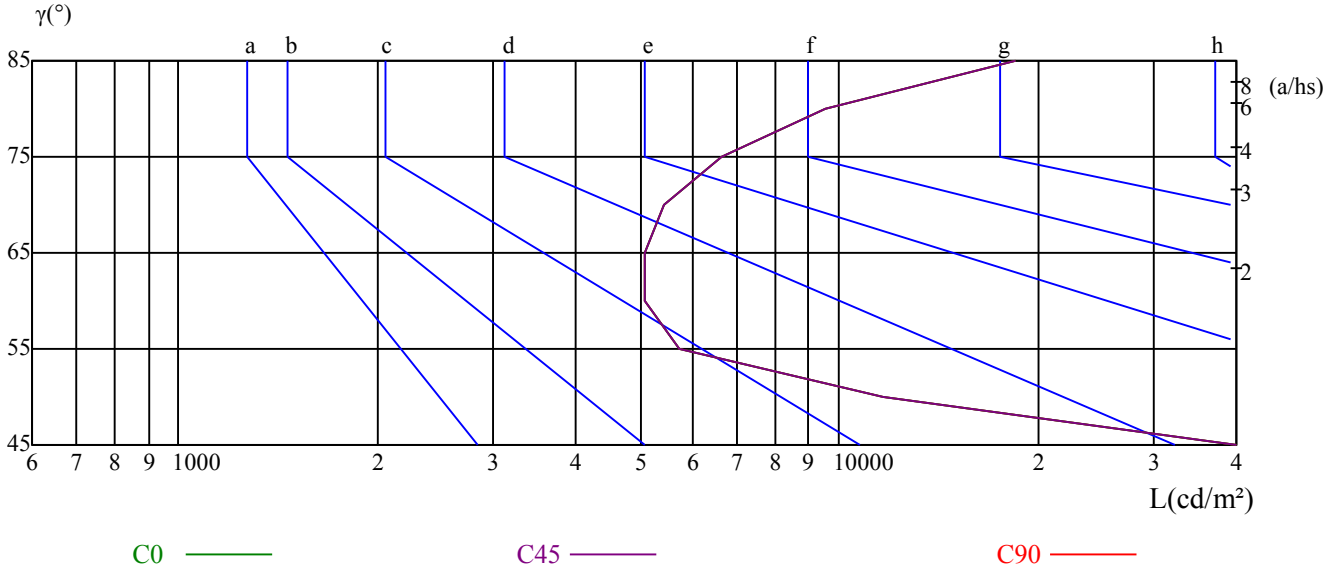
γ	45	50	55	60	65	70	75	80	85
C0	74174	11688	5735	5077	5079	5441	6638	9510	18529
C45	74174	11688	5735	5077	5079	5441	6638	9510	18529
C90	74174	11688	5735	5077	5079	5441	6638	9510	18529

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5079	5079	5079	6638	6638	6638	18529	18529	18529

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

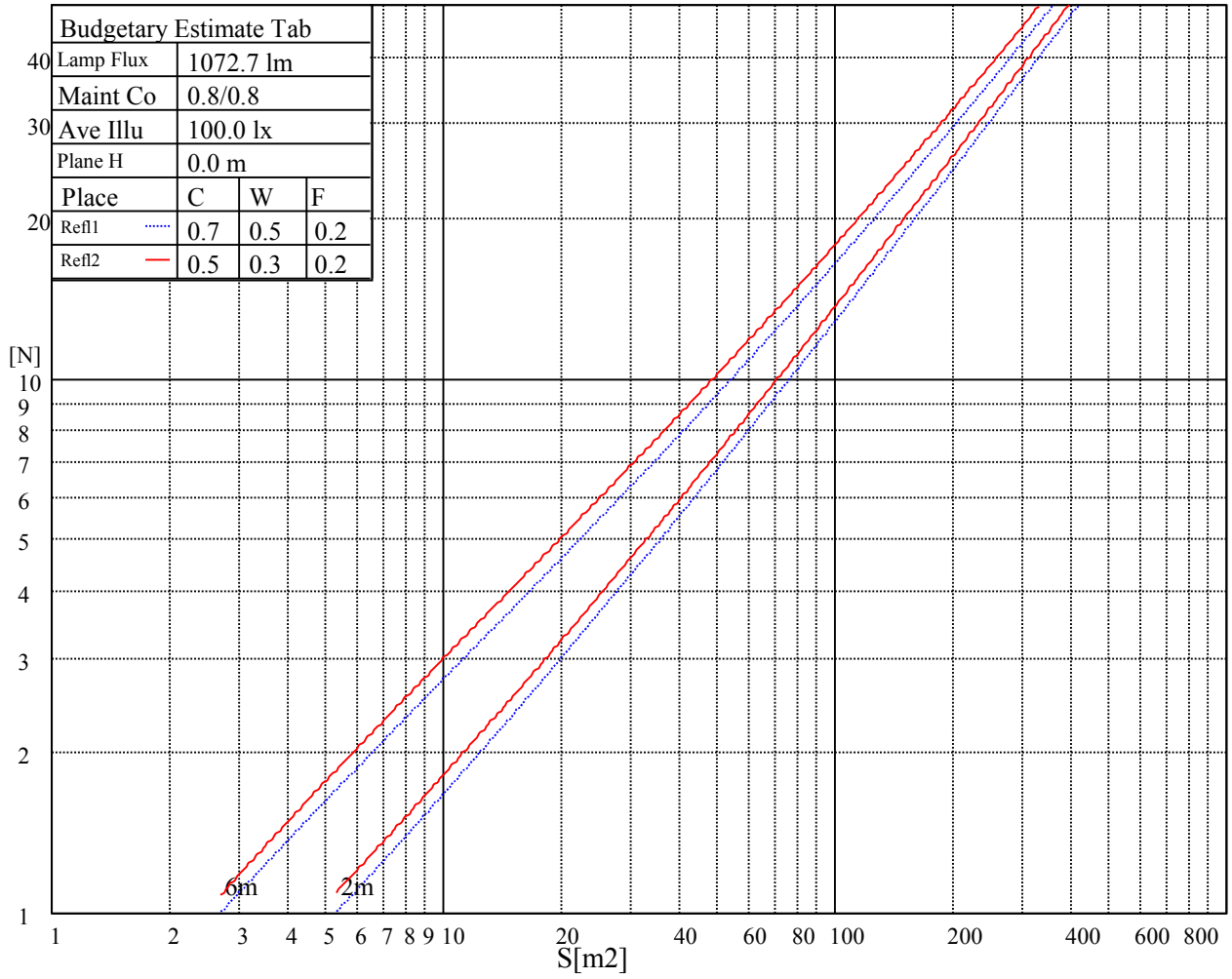


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

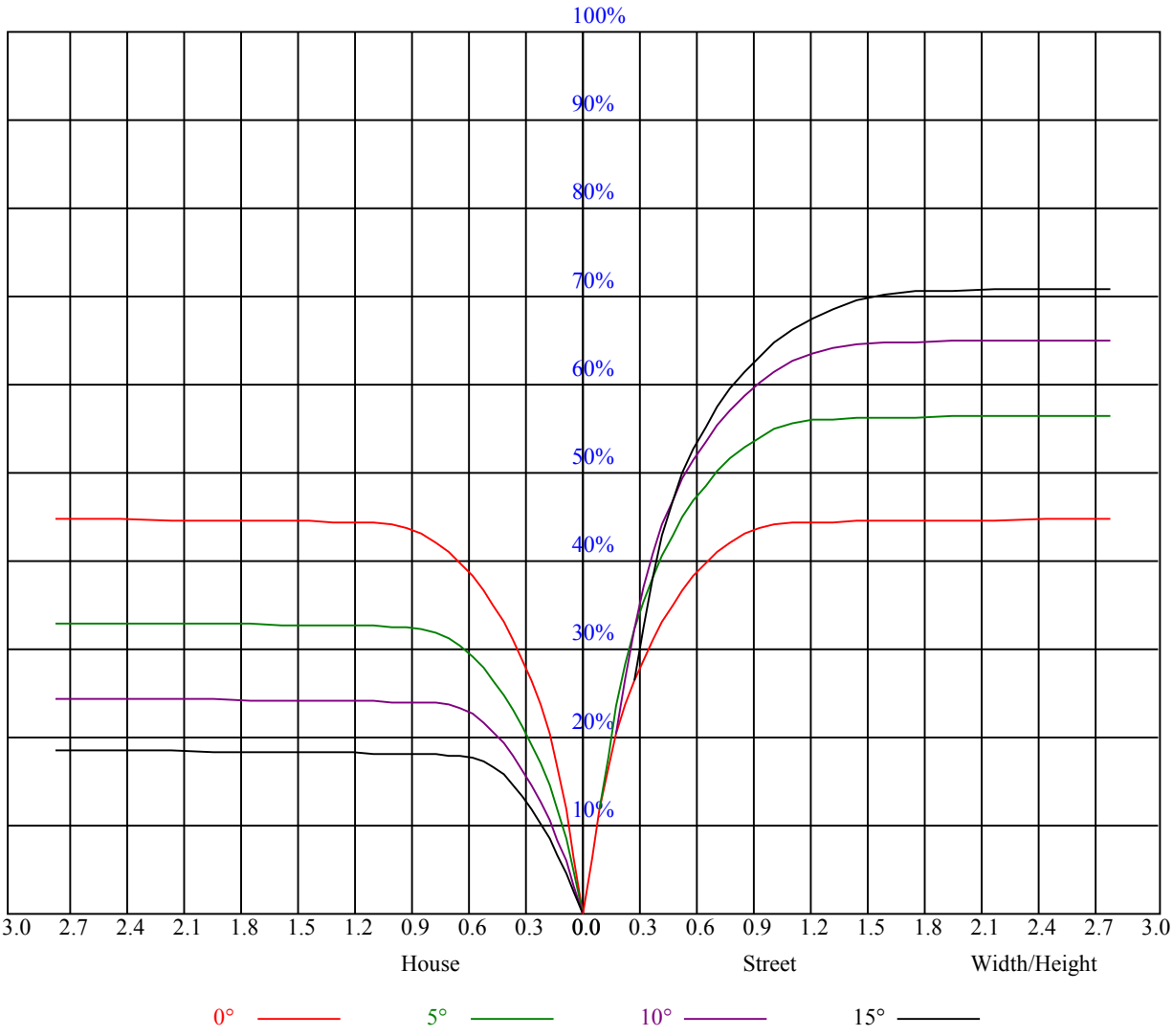


Equipment: GMS1980 Date: 2019/6/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.84
2	0.93	0.90	0.87	0.92	0.88	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.79
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.80	0.78	0.82	0.79	0.76	0.80	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.69
5	0.77	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.65
6	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.62
7	0.69	0.64	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.59	0.58
8	0.66	0.61	0.57	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.56	0.55
9	0.63	0.58	0.54	0.62	0.58	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.53
10	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.58	0.54	0.51	0.50

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/6/28	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	3961.13	3954.94	3850.88	3724.88	3521.25	3151.13	2810.25	2474.44	2115.56
45.0	3975.19	3956.06	3856.50	3701.81	3480.19	3148.31	2760.19	2415.38	2097.56
90.0	3976.31	3914.44	3795.19	3595.50	3297.38	2969.44	2625.19	2211.19	1905.19
135.0	3971.81	3944.25	3828.38	3691.69	3472.88	3101.63	2763.56	2420.44	2102.06
180.0	3961.13	3888.00	3758.06	3555.00	3278.81	2916.56	2568.38	2193.75	1850.63
225.0	3975.19	3909.94	3804.19	3606.75	3309.75	2969.44	2622.94	2203.31	1899.56
270.0	3976.31	3956.06	3856.50	3710.81	3495.94	3140.44	2750.63	2404.13	2089.69
315.0	3971.81	3915.56	3799.13	3603.94	3346.88	2975.06	2626.88	2249.44	1908.56
360.0	3961.13	3954.94	3850.88	3724.88	3521.25	3151.13	2810.25	2474.44	2115.56

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1800.00	1553.06	1313.44	1132.88	978.19	856.69	773.44	699.19	643.50
45.0	1751.63	1513.13	1298.81	1103.63	953.44	847.69	758.25	690.19	642.38
90.0	1638.56	1351.69	1116.62	1006.37	888.30	777.32	711.06	659.25	612.73
135.0	1752.19	1503.00	1257.75	1081.69	933.19	832.50	745.31	680.63	634.50
180.0	1588.50	1335.38	1121.63	973.35	862.31	757.58	695.76	644.68	595.24
225.0	1629.56	1338.75	1105.71	996.30	858.21	775.24	712.24	649.46	613.41
270.0	1733.63	1488.94	1276.88	1080.56	932.06	831.94	747.56	683.44	640.69
315.0	1644.19	1378.69	1113.41	1003.61	887.40	779.57	713.76	659.42	612.00
360.0	1800.00	1553.06	1313.44	1132.88	978.19	856.69	773.44	699.19	643.50

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	603.00	570.38	536.06	513.00	493.31	471.38	450.56	433.69	414.00
45.0	599.06	564.75	533.25	508.50	486.56	466.88	443.81	425.25	409.50
90.0	574.31	544.67	516.60	492.81	473.12	451.91	434.14	414.56	398.53
135.0	594.00	565.31	534.94	508.50	487.69	463.50	442.69	424.69	409.50
180.0	563.85	536.34	507.77	486.56	467.66	444.77	429.81	410.74	393.64
225.0	576.00	542.53	520.14	495.11	470.19	453.09	435.77	413.38	401.68
270.0	597.94	567.56	537.75	511.31	490.50	468.56	447.75	429.19	414.00
315.0	574.20	546.92	521.16	497.81	477.84	457.09	438.92	421.14	406.24
360.0	603.00	570.38	536.06	513.00	493.31	471.38	450.56	433.69	414.00

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	399.94	389.81	379.69	370.69	362.25	354.38	348.19	340.88	335.81
45.0	392.06	381.94	371.81	363.38	354.38	348.19	340.88	334.13	328.50
90.0	386.27	374.85	365.40	357.69	350.78	342.90	336.66	331.31	325.97
135.0	390.38	380.25	372.38	362.81	354.38	347.06	340.31	333.56	329.06
180.0	384.41	375.53	363.26	356.79	350.16	342.17	336.54	331.76	326.31
225.0	390.88	381.04	371.81	364.56	357.58	350.83	345.83	340.43	334.13
270.0	398.81	389.25	379.13	370.13	361.69	355.50	349.31	343.69	338.63
315.0	394.20	384.02	373.44	366.30	358.54	350.44	344.48	338.96	333.62
360.0	399.94	389.81	379.69	370.69	362.25	354.38	348.19	340.88	335.81

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	330.75	325.13	317.81	306.00	286.31	271.24	228.15	196.54	165.21
45.0	322.31	316.69	311.06	300.38	284.63	250.43	220.89	181.74	151.88
90.0	317.98	313.59	306.68	289.63	267.86	238.50	208.46	171.34	132.81
135.0	322.88	317.25	311.63	298.69	287.44	248.18	208.24	179.44	148.16
180.0	319.89	315.39	304.48	284.40	258.64	232.59	197.44	162.17	127.63
225.0	327.21	319.56	310.05	289.63	261.73	233.89	204.92	165.99	135.90
270.0	332.44	326.25	316.69	299.81	285.75	251.61	216.90	186.19	152.16
315.0	326.59	320.68	312.92	297.96	271.80	245.14	213.24	180.28	145.74
360.0	330.75	325.13	317.81	306.00	286.31	271.24	228.15	196.54	165.21

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	126.96	96.30	69.53	42.75	23.96	17.21	15.08	12.71	10.01
45.0	120.32	85.89	58.73	36.06	21.38	16.54	14.34	11.59	9.17
90.0	101.93	75.38	45.45	28.63	19.74	15.36	13.11	10.74	8.55
135.0	110.70	82.91	57.60	32.12	20.08	16.09	13.61	11.19	8.72
180.0	96.86	70.09	42.58	25.43	17.16	15.08	12.71	10.41	8.49
225.0	104.46	75.21	43.76	26.10	17.83	15.02	12.99	10.80	8.72
270.0	112.33	83.64	58.11	33.36	18.96	16.14	13.95	11.70	9.28
315.0	114.30	84.49	52.20	29.70	19.13	15.75	13.67	11.36	8.83
360.0	126.96	96.30	69.53	42.75	23.96	17.21	15.08	12.71	10.01

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.93	7.03	6.47	6.13	5.96	5.74	5.51	5.34	5.18
45.0	7.59	6.92	6.19	5.91	5.68	5.51	5.29	5.12	5.01
90.0	7.26	6.92	6.36	5.79	5.57	5.40	5.18	5.01	4.89
135.0	7.09	6.64	6.24	6.02	5.79	5.63	5.34	5.23	5.06
180.0	7.31	6.98	6.41	5.79	5.57	5.40	5.18	5.01	4.89
225.0	7.54	7.03	6.41	6.19	5.91	5.68	5.46	5.23	5.01
270.0	7.59	7.03	6.53	6.24	6.08	5.85	5.63	5.34	5.18
315.0	7.54	7.14	6.75	6.08	5.79	5.63	5.40	5.23	5.06
360.0	7.93	7.03	6.47	6.13	5.96	5.74	5.51	5.34	5.18

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.01	4.84	4.67	4.44	4.33	4.28	4.11	3.99	3.88
45.0	4.84	4.67	4.56	4.44	4.28	4.16	4.11	3.99	3.88
90.0	4.73	4.61	4.50	4.39	4.28	4.16	4.05	3.94	3.88
135.0	4.84	4.73	4.61	4.44	4.33	4.22	4.11	3.99	3.88
180.0	4.73	4.61	4.44	4.28	4.22	4.11	3.94	3.88	3.83
225.0	4.89	4.73	4.50	4.39	4.28	4.11	3.99	3.88	3.83
270.0	5.01	4.84	4.56	4.44	4.28	4.16	4.05	3.94	3.83
315.0	4.95	4.78	4.50	4.39	4.22	4.16	4.05	3.88	3.83
360.0	5.01	4.84	4.67	4.44	4.33	4.28	4.11	3.99	3.88

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.83	3.71	3.71	3.66	3.60	3.60	3.54	3.54	3.49
45.0	3.83	3.71	3.66	3.66	3.60	3.54	3.54	3.49	3.49
90.0	3.83	3.77	3.71	3.66	3.60	3.60	3.60	3.54	3.54
135.0	3.83	3.71	3.66	3.66	3.60	3.54	3.54	3.49	3.49
180.0	3.71	3.71	3.66	3.60	3.54	3.54	3.49	3.49	3.43
225.0	3.77	3.71	3.66	3.60	3.54	3.54	3.49	3.49	3.49
270.0	3.77	3.71	3.71	3.66	3.60	3.60	3.60	3.54	3.54
315.0	3.77	3.71	3.66	3.60	3.54	3.54	3.54	3.49	3.49
360.0	3.83	3.71	3.71	3.66	3.60	3.60	3.54	3.54	3.49

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.49	3.43	3.43	3.38	3.43	3.38	3.38	3.38	3.32
45.0	3.43	3.43	3.43	3.43	3.38	3.38	3.38	3.38	3.38
90.0	3.49	3.54	3.49	3.49	3.49	3.38	3.38	3.32	3.32
135.0	3.43	3.43	3.43	3.43	3.43	3.38	3.38	3.32	3.32
180.0	3.43	3.43	3.43	3.32	3.38	3.38	3.38	3.32	3.32
225.0	3.43	3.43	3.43	3.43	3.38	3.38	3.38	3.38	3.38
270.0	3.49	3.49	3.49	3.49	3.49	3.43	3.38	3.32	3.32
315.0	3.49	3.43	3.43	3.38	3.38	3.38	3.38	3.38	3.32
360.0	3.49	3.43	3.43	3.38	3.43	3.38	3.38	3.38	3.32

Intensity data(cd)

C/γ(°)	90.0
0.0	3.32
45.0	3.38
90.0	3.32
135.0	3.32
180.0	3.32
225.0	3.32
270.0	3.32
315.0	3.32
360.0	3.32