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NATA

LumCAT: 2-1299-N	
Luminaire: 92.70.045.00+92.70.059.00	
Report No: NATA0100	Voltage(V): 35.2000
Test No: GC2018102004	Current(A): 0.7000
LampCAT: PHILIPS 1208 G7	Power (W): 24.6400
Lamp flux(lm): 3673.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 38

Photometric Results

Lumens(lm): 2745.56
Efficiency(%): 74.75%
Lumens(lm)/Power(W): 113.91
Central intensity(cd): 10657.970
Maximum intensity(cd): 10657.970
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.1
[C90/270]Total=23.1
Field angle(10%Imax): [C0/180]Total=48.2
[C90/270]Total=48.2
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.41%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.678%

Equipment:
Temperature(°C): 25.0

Date: 2018/10/20
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

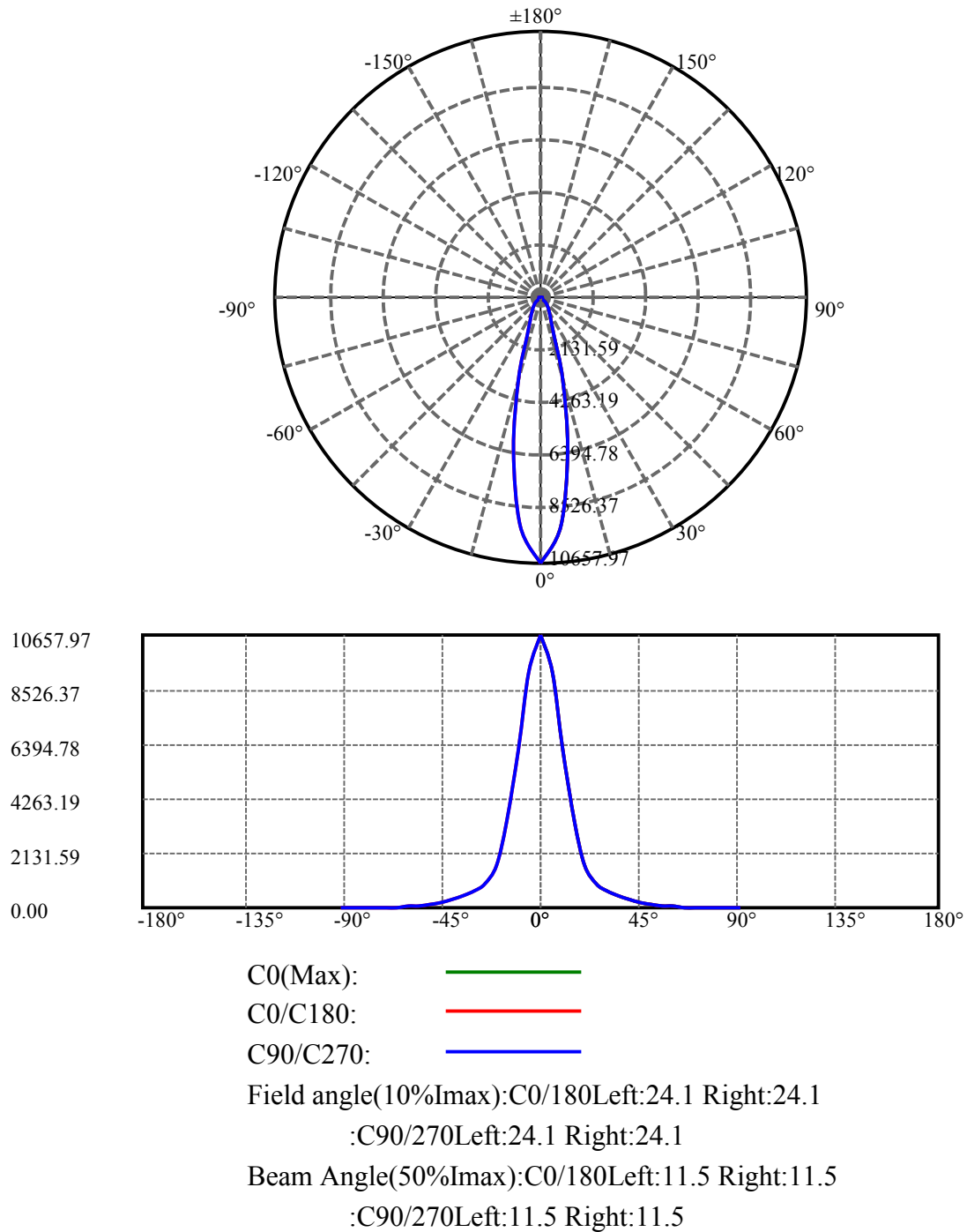
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10657.969	63.737	63.737	1.735%	2.321%
5.0	9189.492	439.013	502.749	11.952%	18.311%
10.0	6200.227	590.157	1092.906	16.067%	39.806%
15.0	3358.688	476.492	1569.397	12.973%	57.161%
20.0	1630.266	305.632	1875.03	8.321%	68.293%
25.0	945.253	218.971	2094.001	5.962%	76.269%
30.0	636.293	174.388	2268.389	4.748%	82.620%
35.0	433.716	136.360	2404.748	3.712%	87.587%
40.0	298.371	105.127	2509.875	2.862%	91.416%
45.0	184.458	71.494	2581.369	1.946%	94.020%
50.0	117.120	49.178	2630.548	1.339%	95.811%
55.0	72.872	32.720	2663.268	.891%	97.003%
60.0	46.582	22.113	2685.38	.602%	97.808%
65.0	30.980	15.390	2700.77	.419%	98.369%
70.0	25.847	13.313	2714.083	.362%	98.853%
75.0	21.670	11.474	2725.557	.312%	99.271%
80.0	17.803	9.610	2735.167	.262%	99.621%
85.0	13.627	7.441	2742.608	.203%	99.892%
90.0	10.779	2.954	2745.562	.080%	100.000%

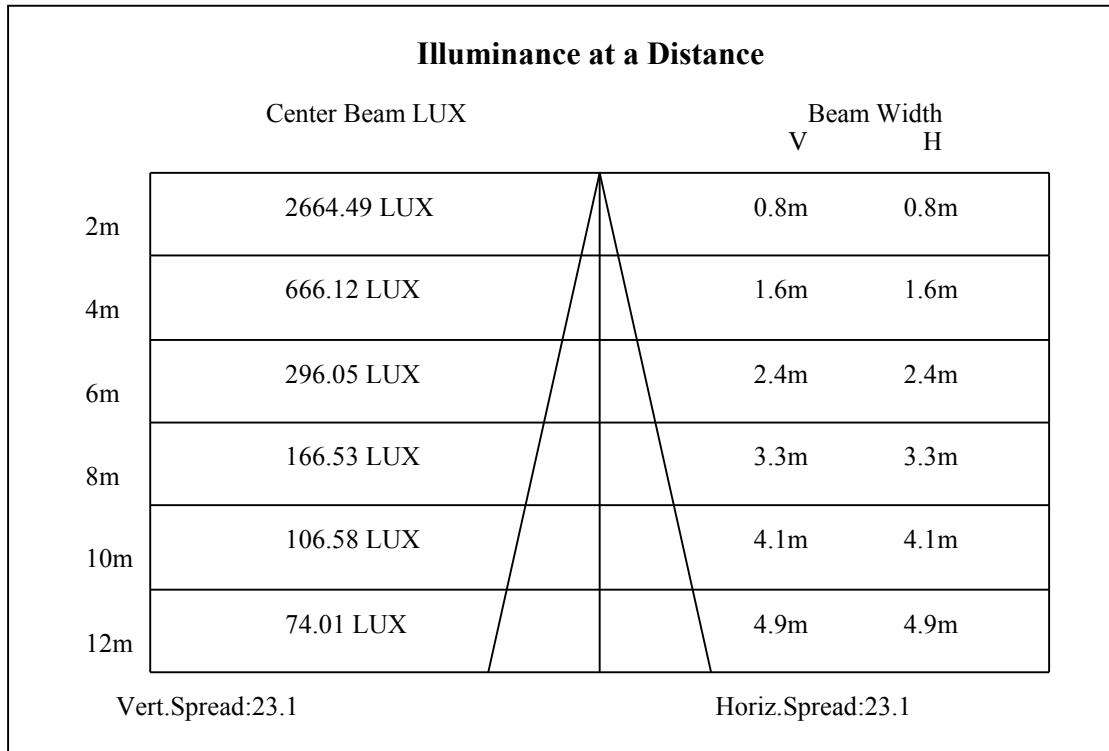
ZONAL LUMEN SUMMARY

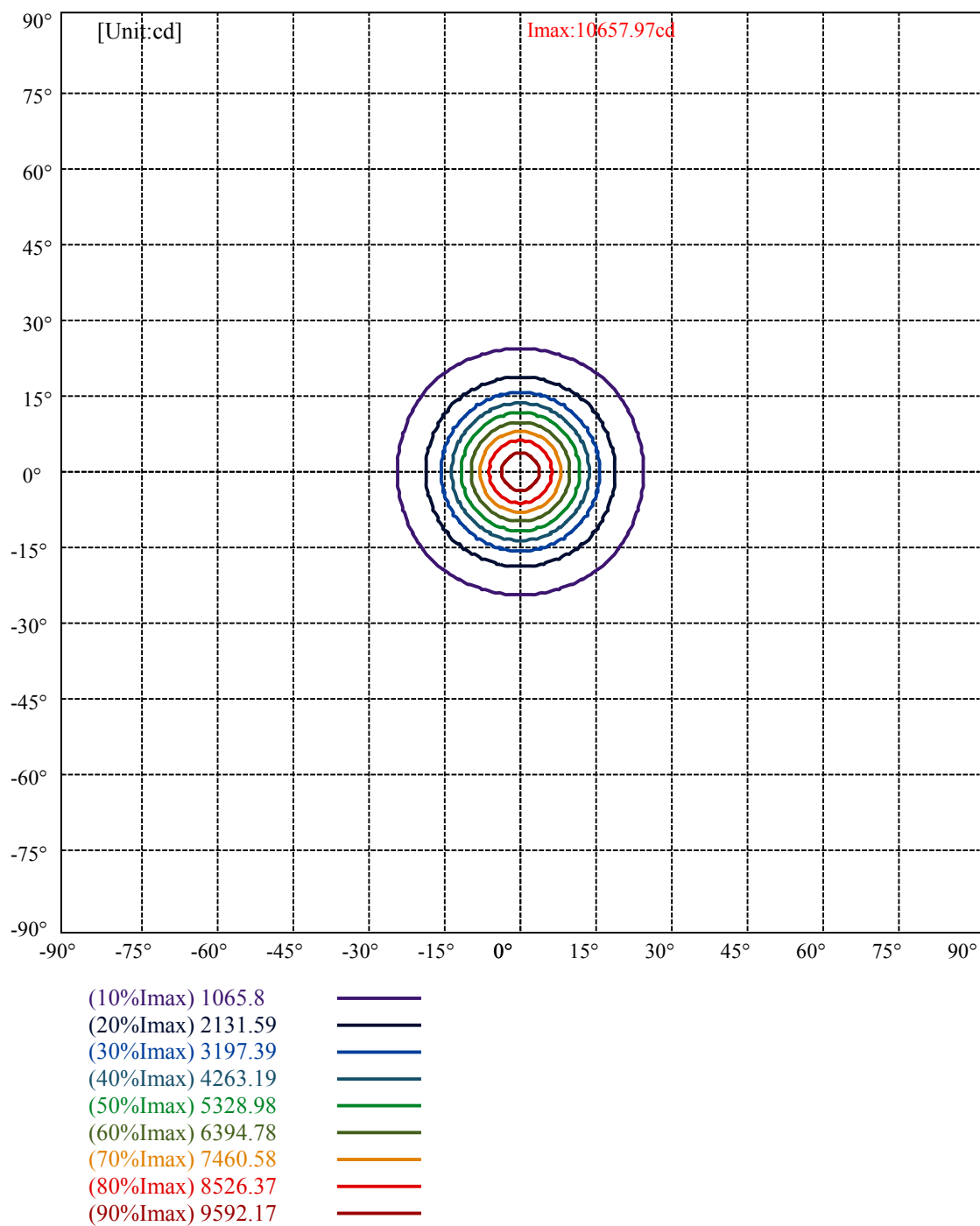
Zone	Lumens	%Lamp	%Fixt
0-30	2268.39	61.76%	82.62%
0-40	2509.88	68.33%	91.42%
0-60	2685.38	73.11%	97.81%
0-90	2742.61	74.67%	99.89%
0-120	2742.61	74.67%	99.89%
0-180	2745.56	74.75%	100.00%
60-90	79.34	2.16%	2.89%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.94	2196.45	59.80%	80.00%

ZONAL LUMEN SUMMARY

0-10	1092.91
10-20	782.12
20-30	393.36
30-40	241.49
40-50	120.67
50-60	54.83
60-70	28.70
70-80	21.08
80-90	7.44
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



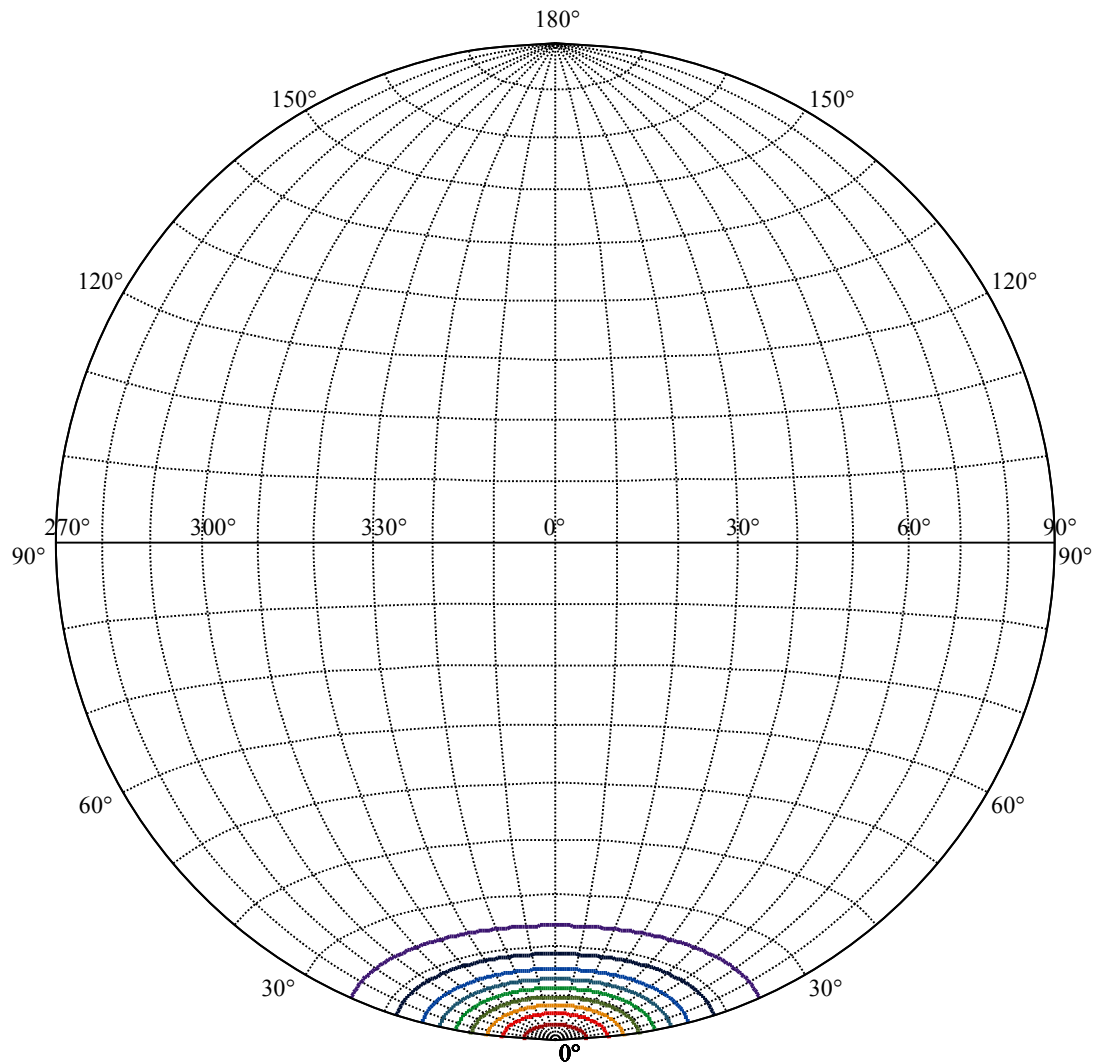




Equipment:
Temperature(°C): 25.0

Date: 2018/10/20
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50



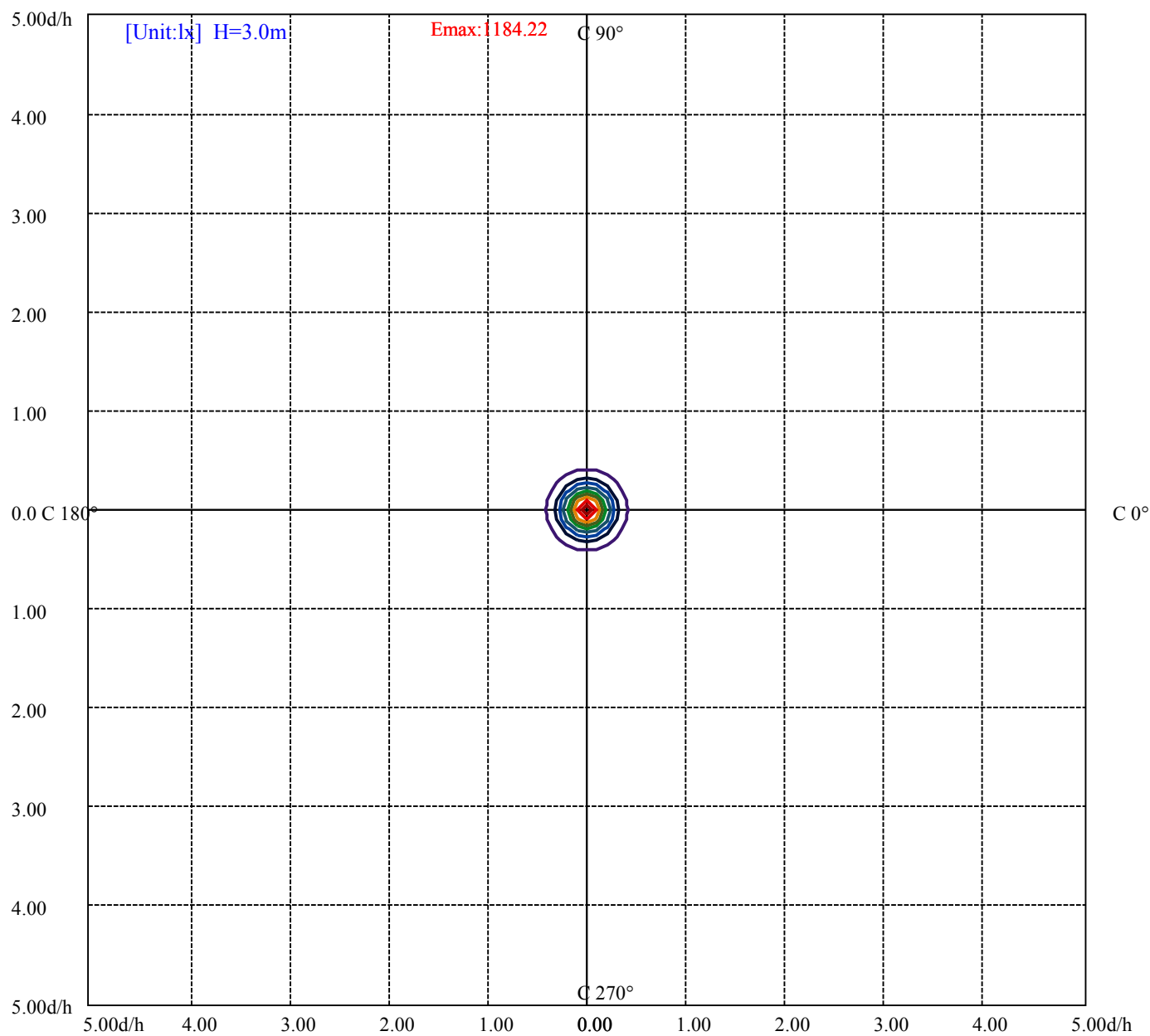
House

[Unit:cd]

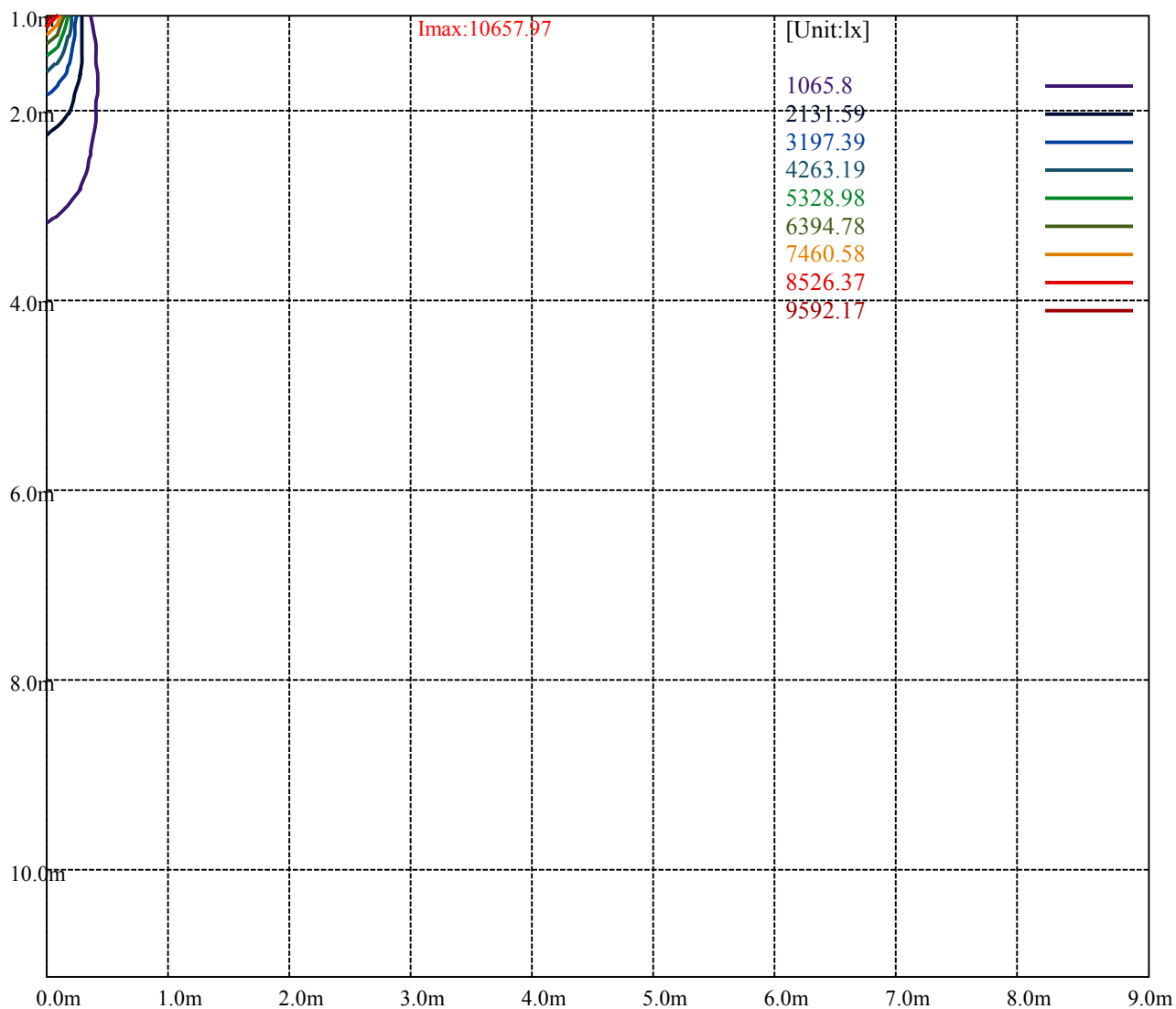
Road

Imax:10657.97

(10%Imax)	1065.8	
(20%Imax)	2131.59	
(30%Imax)	3197.39	
(40%Imax)	4263.19	
(50%Imax)	5328.98	
(60%Imax)	6394.78	
(70%Imax)	7460.58	
(80%Imax)	8526.37	
(90%Imax)	9592.17	



(10%E _{max}) 118.4211	—
(20%E _{max}) 236.8422	—
(30%E _{max}) 355.2644	—
(40%E _{max}) 473.6855	—
(50%E _{max}) 592.1067	—
(60%E _{max}) 710.5278	—
(70%E _{max}) 828.95	—
(80%E _{max}) 947.3711	—
(90%E _{max}) 1065.792	—



Luminance Table

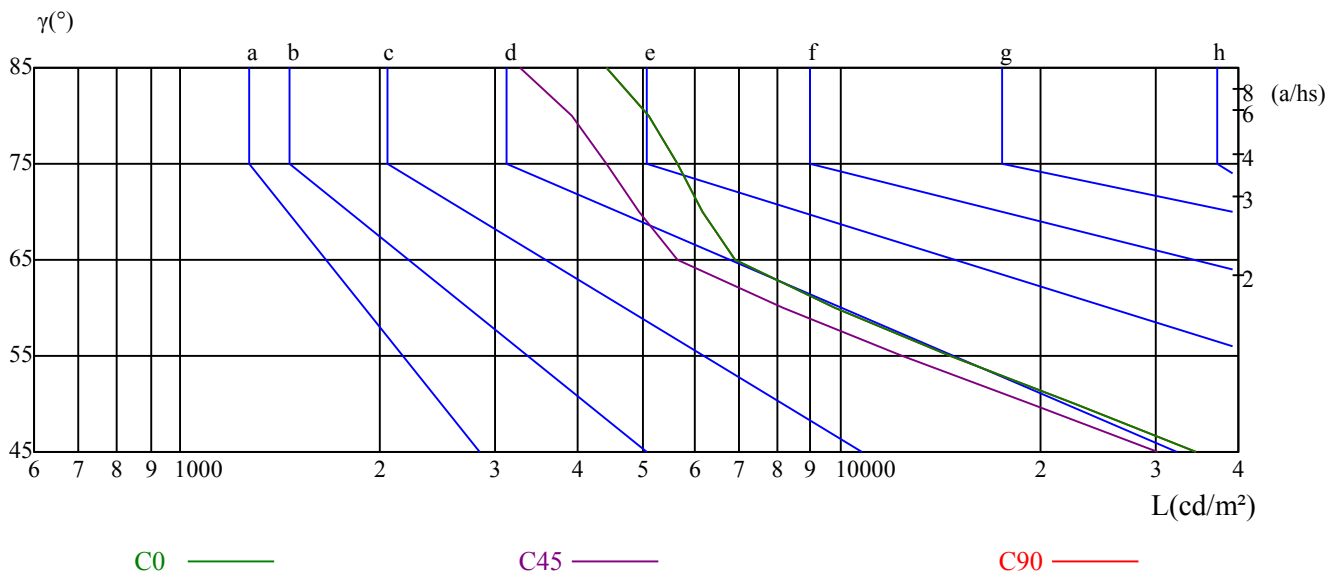
γ	45	50	55	60	65	70	75	80	85
C0	34506	22578	14605	9799	6913	6190	5647	5130	4429
C45	30116	19418	12368	8161	5653	4960	4421	3908	3264
C90	34506	22578	14605	9799	6913	6190	5647	5130	4429

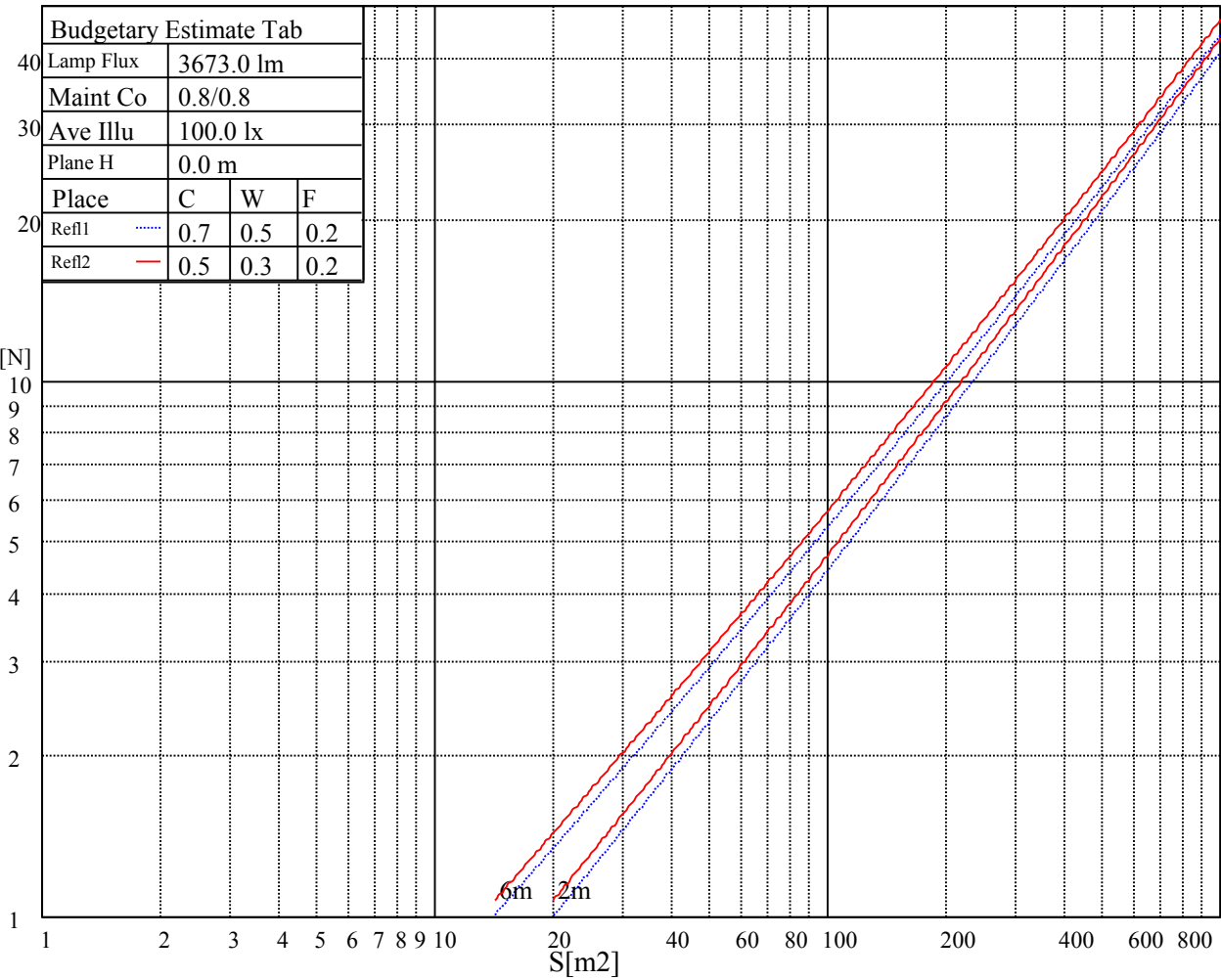
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14960	14960	14960	17087	17087	17087	31908	31908	31908

Glare Table

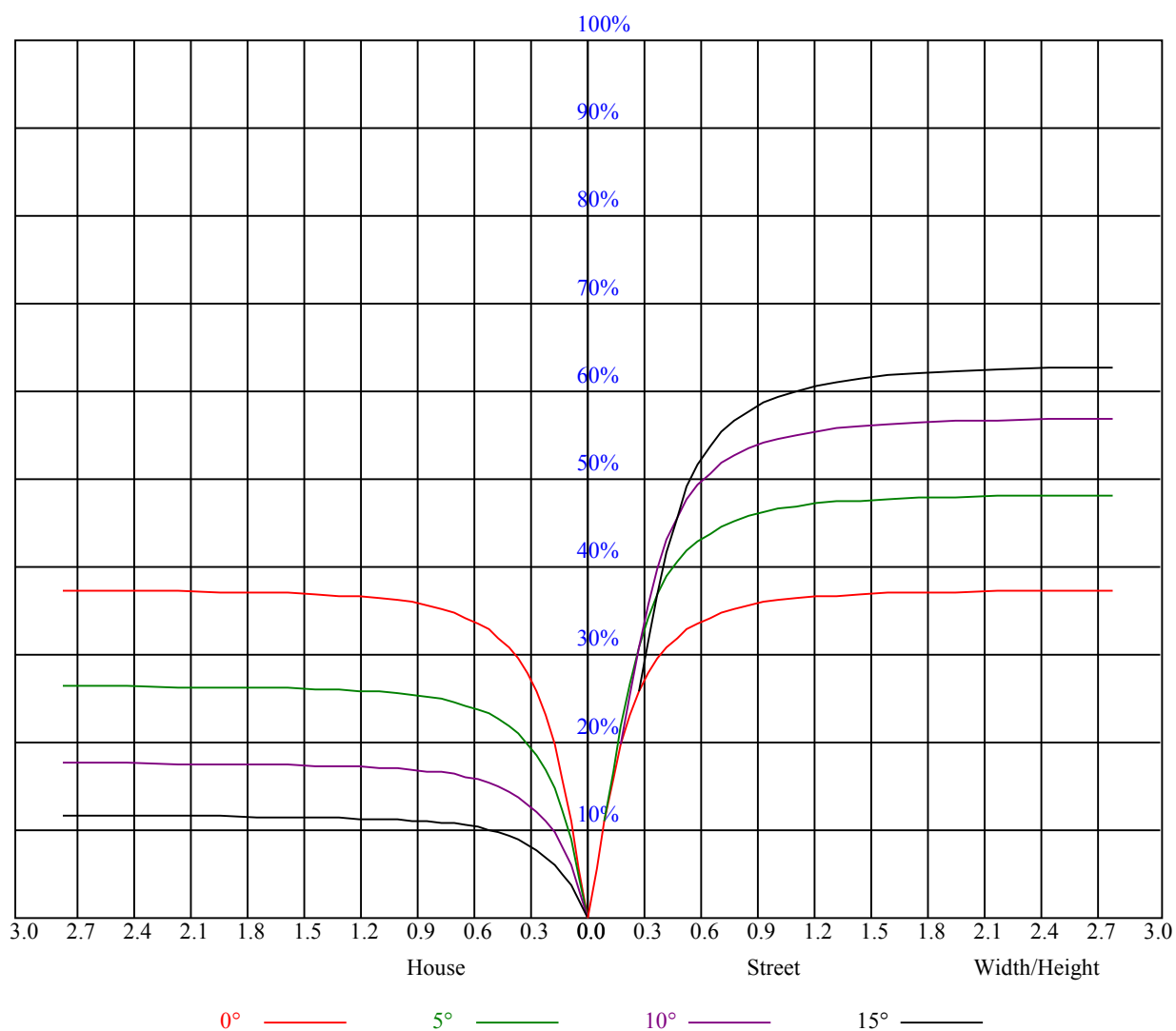
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.83	0.81	0.79	0.82	0.79	0.78	0.78	0.77	0.75	0.76	0.74	0.73	0.73	0.72	0.71	0.69
2	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.72	0.70	0.72	0.70	0.69	0.70	0.69	0.67	0.66
3	0.74	0.71	0.68	0.73	0.70	0.67	0.71	0.69	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.63
4	0.71	0.67	0.64	0.70	0.67	0.64	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.63	0.62	0.61
5	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.63	0.61	0.59	0.58
6	0.65	0.61	0.58	0.65	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.57	0.61	0.59	0.57	0.56
7	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.60	0.58	0.55	0.60	0.57	0.55	0.54
8	0.60	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.55	0.53	0.53
9	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.56	0.54	0.52	0.51
10	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.50	0.55	0.52	0.50	0.50



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Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	10641.94	9473.63	6831.00	3749.06	1826.44	1041.19	676.69	456.75	325.13		
45.0	10672.31	9396.00	6523.31	3609.00	1748.25	972.56	666.56	448.88	307.13		
90.0	10665.56	9033.75	6040.13	3114.56	1483.88	896.06	600.36	412.54	286.54		
135.0	10652.06	9493.31	6489.00	3723.19	1726.88	990.56	659.25	452.81	306.00		
180.0	10641.94	8839.69	5518.13	3015.56	1494.00	896.63	601.93	406.74	272.14		
225.0	10672.31	9045.56	5960.25	3059.44	1564.31	921.60	620.89	431.27	292.67		
270.0	10665.56	9264.38	6561.00	3498.75	1685.81	954.56	651.38	448.31	313.88		
315.0	10652.06	8969.63	5679.00	3099.94	1512.56	888.86	613.29	412.43	283.50		
360.0	10641.94	9473.63	6831.00	3749.06	1826.44	1041.19	676.69	456.75	325.13		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	195.86	125.10	79.65	50.57	32.23	26.61	22.44	18.45	13.89		
45.0	186.19	122.01	75.09	47.14	31.44	25.93	21.66	17.89	13.50		
90.0	175.22	109.24	68.85	44.61	29.98	25.20	21.38	17.38	13.33		
135.0	193.78	122.12	75.21	48.60	31.56	26.33	22.16	18.34	13.78		
180.0	174.09	112.05	69.30	44.66	30.26	25.37	20.87	17.10	13.16		
225.0	179.04	112.89	71.27	44.55	30.21	25.48	21.38	17.44	13.67		
270.0	193.39	121.44	74.31	47.93	31.50	26.21	21.94	18.17	14.01		
315.0	178.09	112.11	69.30	44.61	30.66	25.65	21.54	17.66	13.67		
360.0	195.86	125.10	79.65	50.57	32.23	26.61	22.44	18.45	13.89		
C/γ(°)	90.0										
0.0	10.74										
45.0	10.86										
90.0	10.80										
135.0	10.74										
180.0	10.74										
225.0	10.86										
270.0	10.80										
315.0	10.69										
360.0	10.74										

Equipment:
Temperature(°C): 25.0

Date: 2018/10/20
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50