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NATA

LumCAT: 2-1703-A

Luminaire: 99.02.73.173+92.76.365.00

Report No: NATA0100

Test No: GC2018101006

LampCAT: BRIDGELUX V22B

Lamp flux(lm): 3728.0

Number of Lamps: 1

Length(mm): 70

Phm Type: C

Voltage(V): 49.3000

Current(A): 0.5000

Power (W): 24.6500

PF: 0.0000

Ballast type: DC

Width(mm): 70

Height(mm): 0

Photometric Results

Lumens(lm): 3325.32

Efficiency(%): 89.20%

Lumens(lm)/Power(W): 136.15

Central intensity(cd): 5660.718

Maximum intensity(cd): 5660.718

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=44.0

[C90/270]Total=44.0

Field angle(10%Imax): [C0/180]Total=75.0

[C90/270]Total=75.0

Maximum s/h(1/2): C0_180=0.71 C90_270=0.71

Maximum s/h(1/4): C0_180=0.70 C90_270=0.70

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.02%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.784%

Equipment:
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

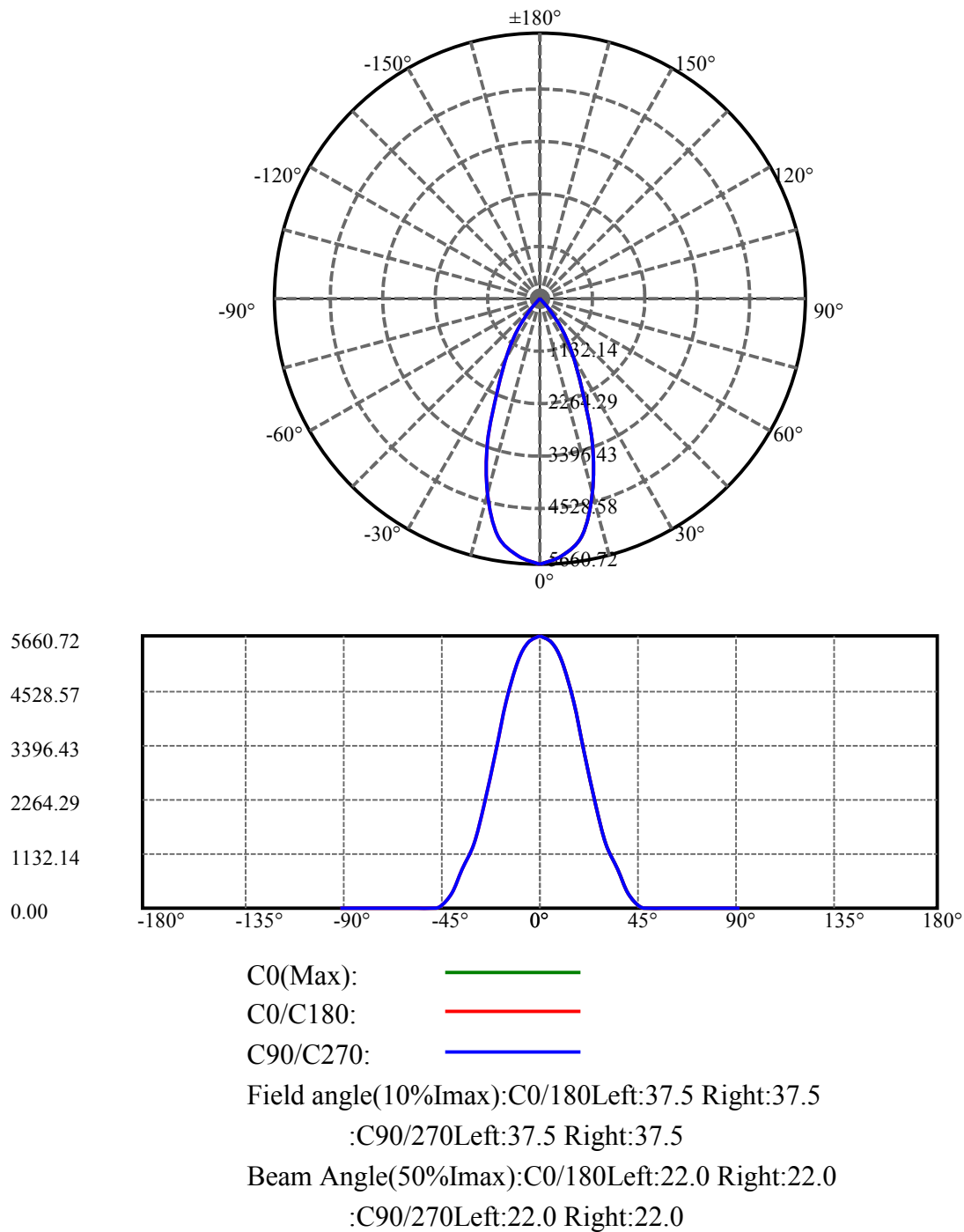
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5660.719	33.852	33.852	.908%	1.018%
5.0	5519.320	263.676	297.528	7.073%	8.947%
10.0	5116.430	486.997	784.526	13.063%	23.593%
15.0	4298.625	609.839	1394.365	16.358%	41.932%
20.0	3279.516	614.824	2009.189	16.492%	60.421%
25.0	2152.688	498.676	2507.865	13.377%	75.417%
30.0	1345.711	368.817	2876.682	9.893%	86.508%
35.0	797.639	250.777	3127.459	6.727%	94.050%
40.0	331.530	116.810	3244.269	3.133%	97.563%
45.0	40.380	15.651	3259.92	.420%	98.033%
50.0	17.374	7.295	3267.216	.196%	98.253%
55.0	15.912	7.144	3274.36	.192%	98.468%
60.0	15.356	7.290	3281.65	.196%	98.687%
65.0	15.300	7.601	3289.251	.204%	98.915%
70.0	15.497	7.982	3297.233	.214%	99.155%
75.0	15.420	8.164	3305.397	.219%	99.401%
80.0	15.103	8.153	3313.55	.219%	99.646%
85.0	14.618	7.982	3321.532	.214%	99.886%
90.0	13.816	3.787	3325.318	.102%	100.000%

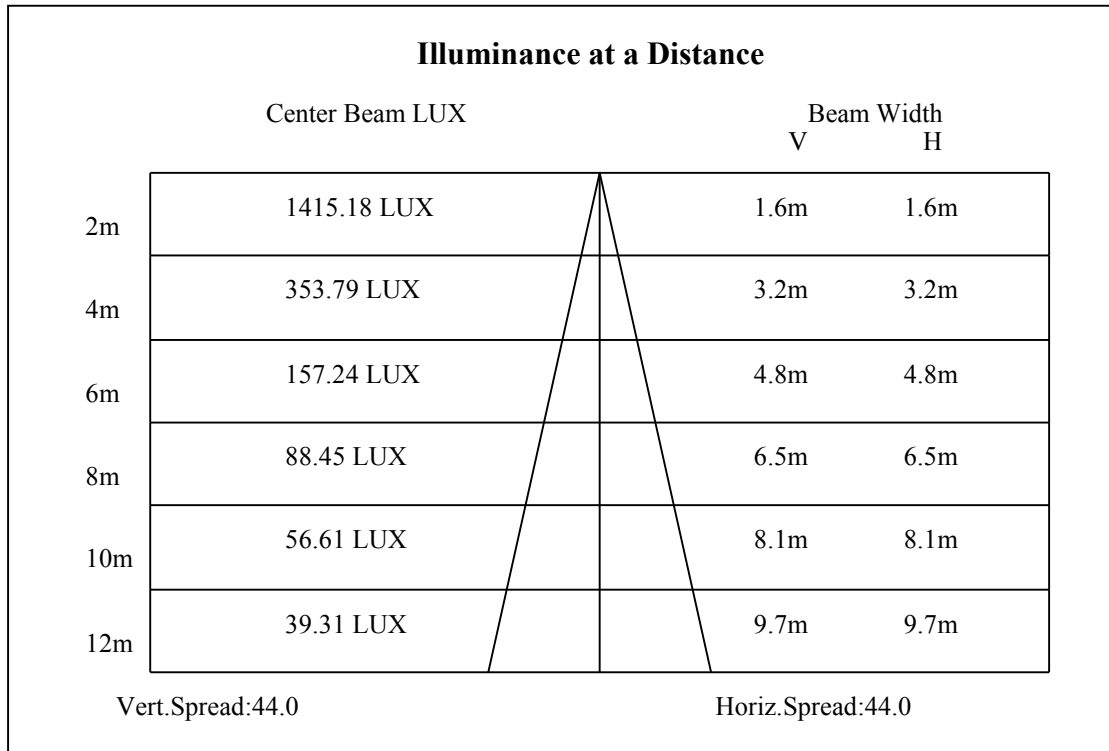
ZONAL LUMEN SUMMARY

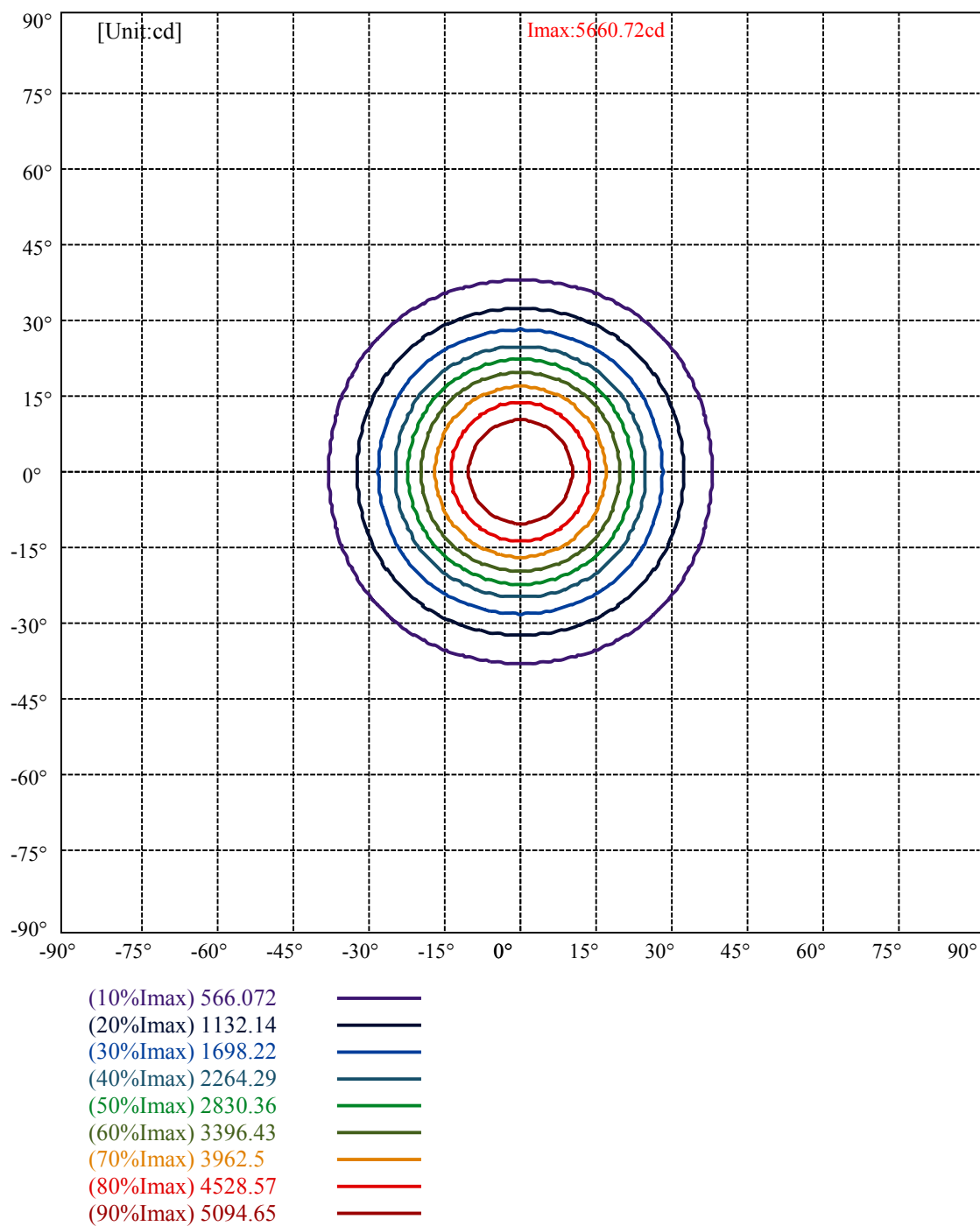
Zone	Lumens	%Lamp	%Fixt
0-30	2876.68	77.16%	86.51%
0-40	3244.27	87.02%	97.56%
0-60	3281.65	88.03%	98.69%
0-90	3321.53	89.10%	99.89%
0-120	3321.53	89.10%	99.89%
0-180	3325.32	89.20%	100.00%
60-90	47.17	1.27%	1.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.07	2660.26	71.36%	80.00%

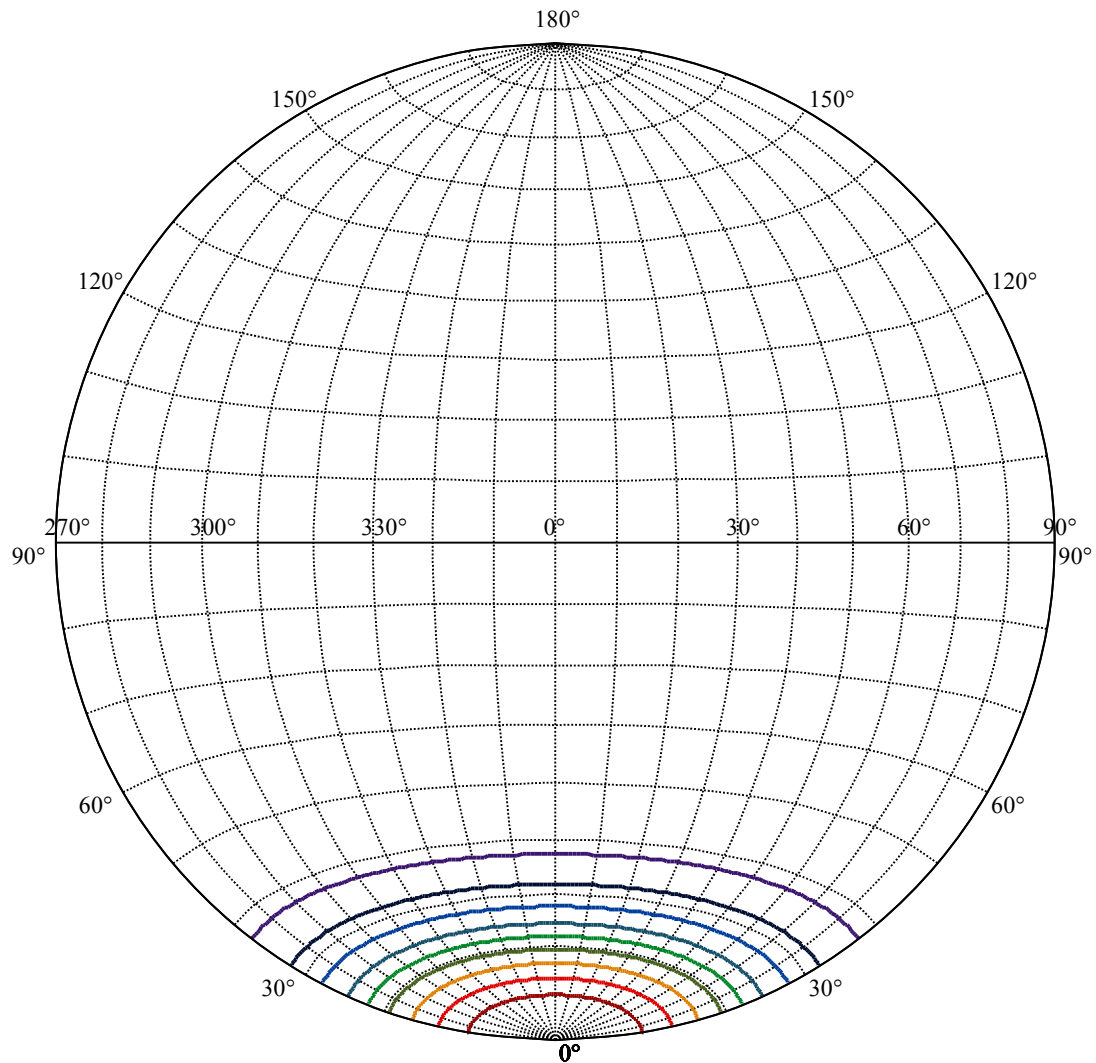
ZONAL LUMEN SUMMARY

0-10	784.53
10-20	1224.66
20-30	867.49
30-40	367.59
40-50	22.95
50-60	14.43
60-70	15.58
70-80	16.32
80-90	7.98
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









House

[Unit:cd]

Road

Imax:5660.72

(10%Imax) 566.072

(20%Imax) 1132.14

(30%Imax) 1698.22

(40%Imax) 2264.29

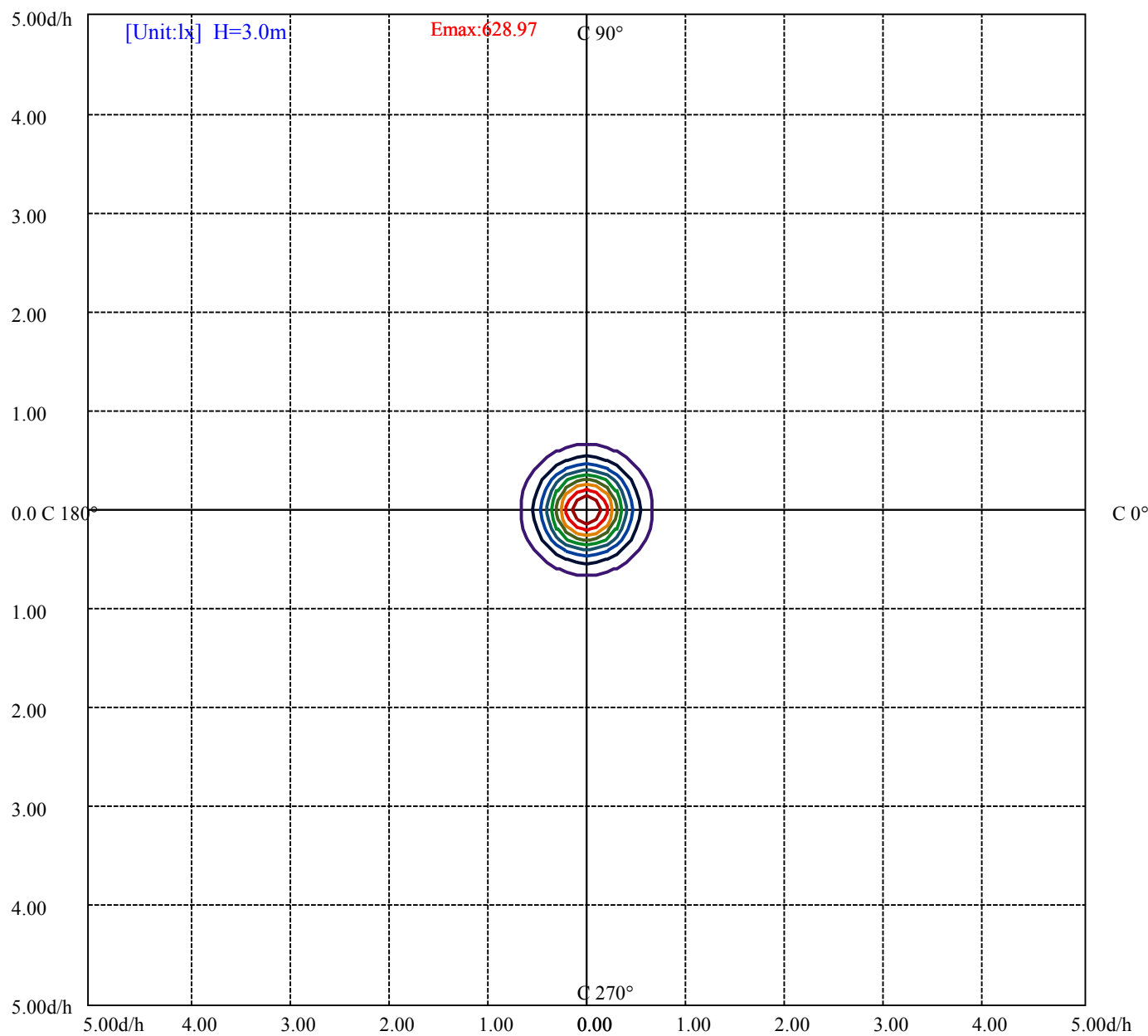
(50%Imax) 2830.36

(60%Imax) 3396.43

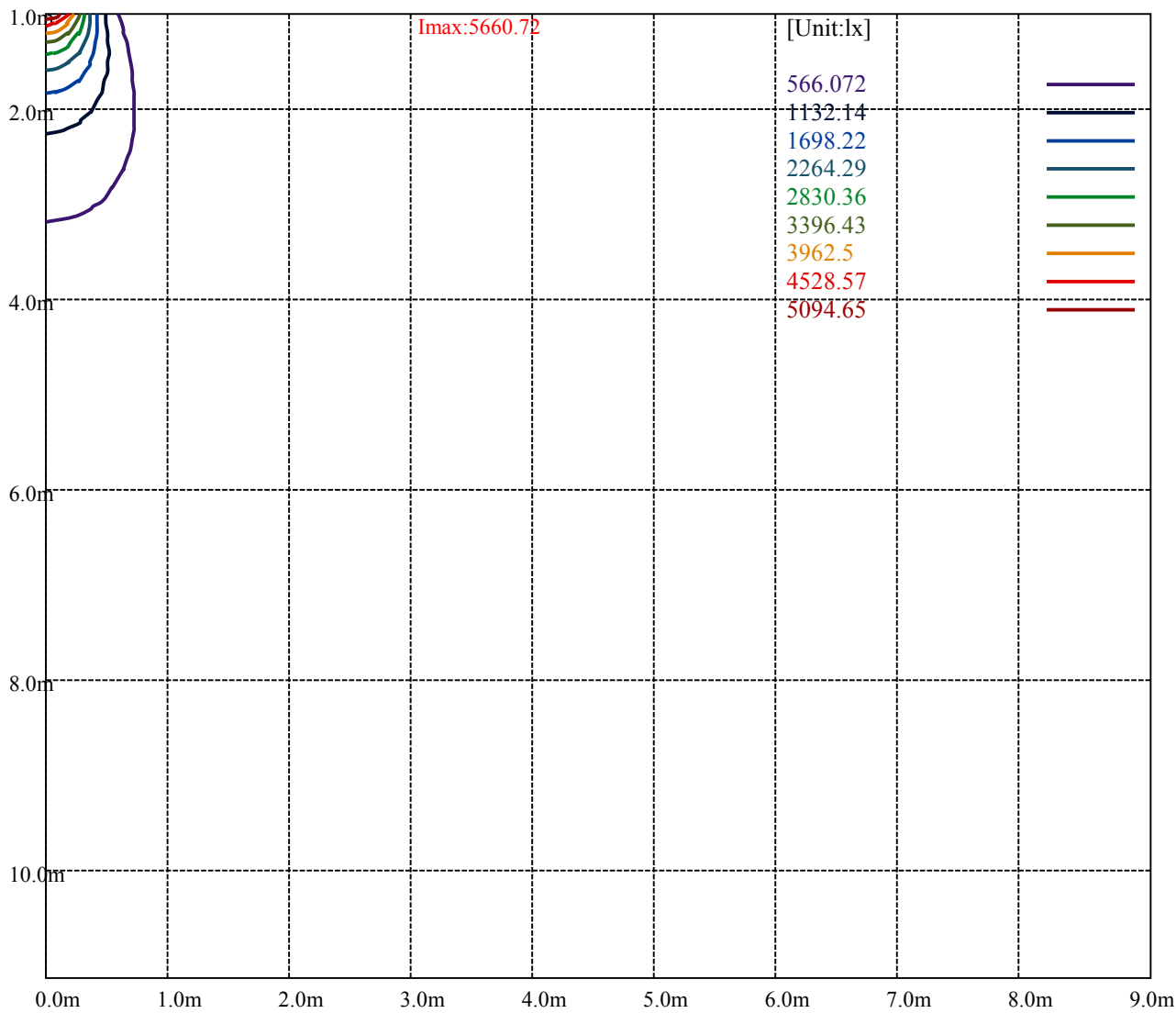
(70%Imax) 3962.5

(80%Imax) 4528.57

(90%Imax) 5094.65



(10%Emax) 62.89677	—
(20%Emax) 125.7933	—
(30%Emax) 188.69	—
(40%Emax) 251.5878	—
(50%Emax) 314.4845	—
(60%Emax) 377.3811	—
(70%Emax) 440.2778	—
(80%Emax) 503.1744	—
(90%Emax) 566.0711	—



Luminance Table

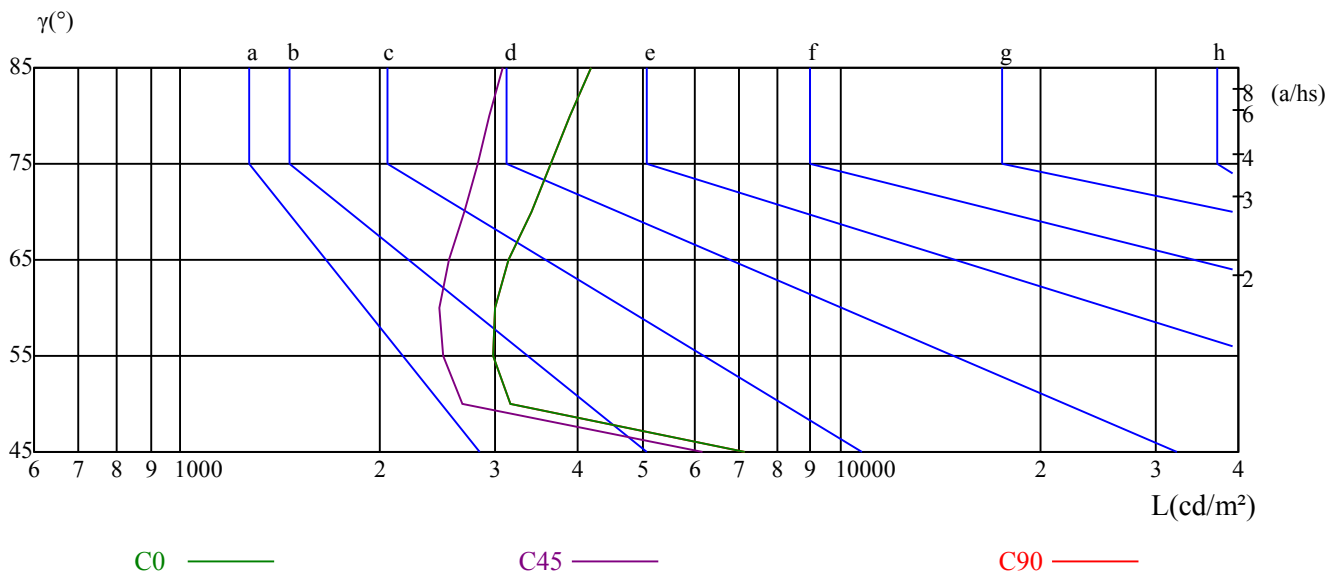
γ	45	50	55	60	65	70	75	80	85
C0	7156	3154	2983	3001	3147	3391	3634	3888	4182
C45	6170	2679	2495	2468	2542	2686	2816	2938	3067
C90	7156	3154	2983	3001	3147	3391	3634	3888	4182

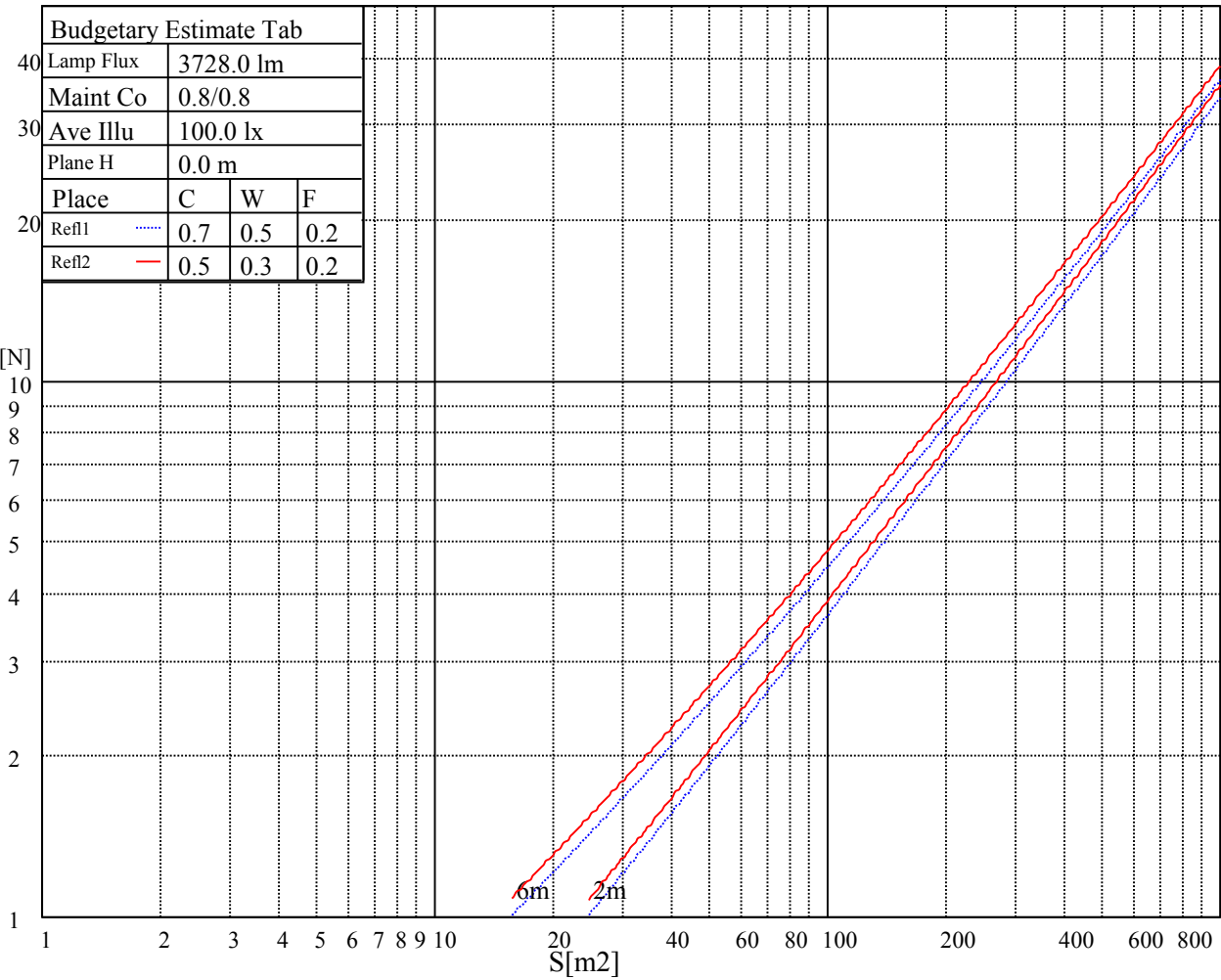
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7388	7388	7388	12158	12158	12158	34229	34229	34229

Glare Table

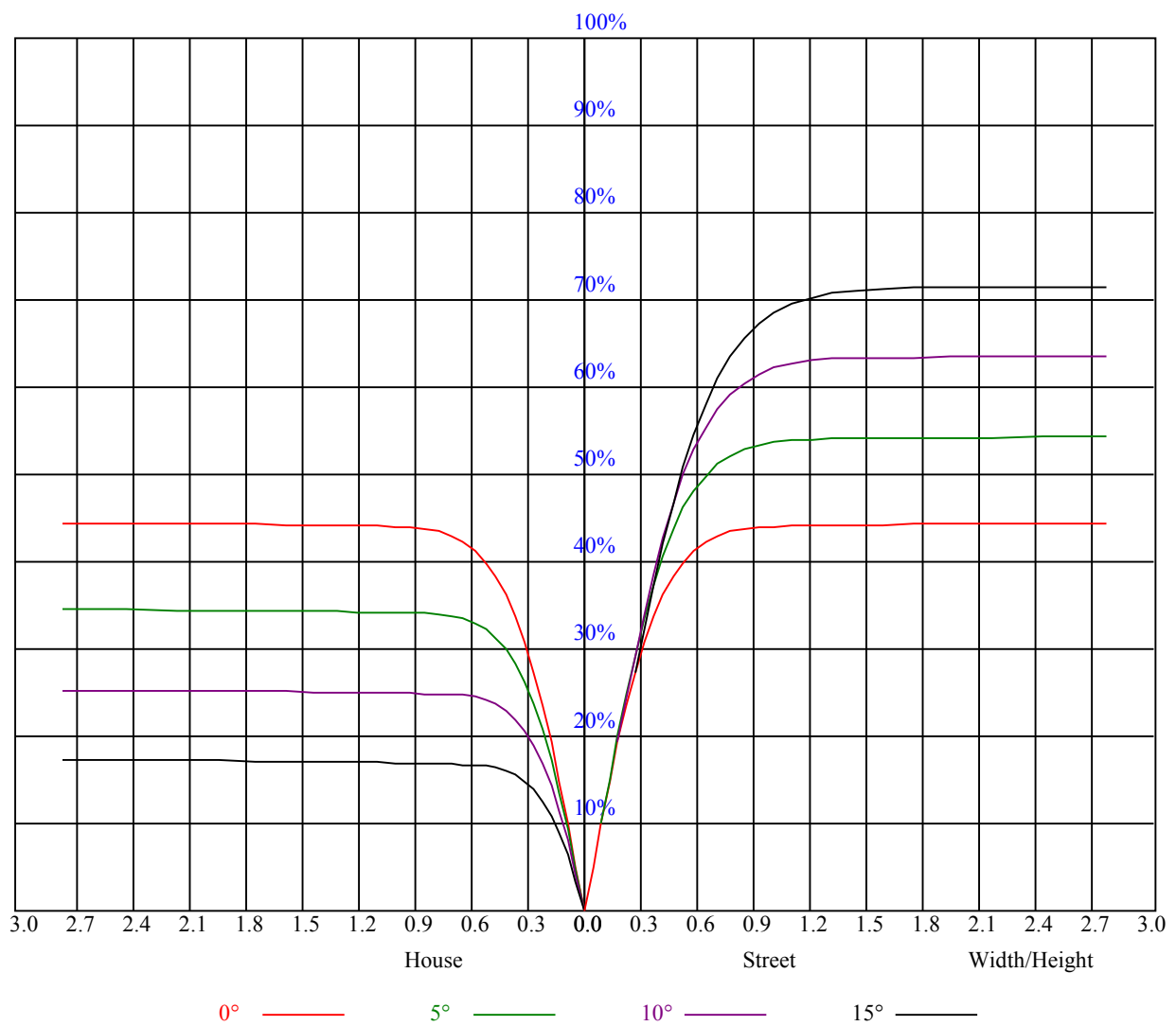
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	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	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.87	0.84	0.83	0.84	0.82	0.81	0.80
3	0.89	0.85	0.81	0.87	0.84	0.81	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
6	0.76	0.72	0.68	0.76	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56



NATA 2-1703-E

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	5661.00	5585.63	5278.50	4542.19	3563.44	2432.25	1574.44	922.50	452.25		
45.0	5656.50	5528.81	5175.00	4372.88	3416.63	2241.00	1469.81	902.25	390.38		
90.0	5649.19	5435.44	4960.69	4061.25	2961.56	1929.94	1105.31	624.49	221.57		
135.0	5676.19	5492.81	5092.88	4235.63	3162.94	2014.31	1320.19	716.63	299.25		
180.0	5661.00	5479.88	4959.00	4100.06	3009.38	1906.88	1100.59	667.91	225.39		
225.0	5656.50	5492.25	5006.81	4061.25	3126.94	2004.19	1102.16	745.88	279.11		
270.0	5649.19	5582.81	5239.69	4577.63	3553.31	2380.50	1591.88	946.69	428.06		
315.0	5676.19	5556.94	5218.88	4438.13	3441.94	2312.44	1501.31	854.78	356.23		
360.0	5661.00	5585.63	5278.50	4542.19	3563.44	2432.25	1574.44	922.50	452.25		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	69.36	19.01	15.98	15.41	15.02	15.02	15.02	15.02	14.63		
45.0	46.80	17.61	15.75	15.30	15.08	15.30	15.47	15.08	14.57		
90.0	22.78	16.59	15.81	15.30	15.75	16.14	15.75	15.30	14.63		
135.0	24.75	16.99	16.31	15.64	16.14	16.43	16.09	15.47	14.85		
180.0	24.58	17.61	16.37	15.53	15.47	15.98	15.86	15.41	14.63		
225.0	26.83	16.48	15.64	15.24	15.02	15.02	15.19	14.85	14.46		
270.0	63.51	17.10	15.81	15.19	14.91	15.02	14.96	14.85	14.57		
315.0	44.44	17.61	15.64	15.24	15.02	15.08	15.02	14.85	14.63		
360.0	69.36	19.01	15.98	15.41	15.02	15.02	15.02	15.02	14.63		
C/ γ (°)	90.0										
0.0	13.95										
45.0	13.73										
90.0	13.73										
135.0	13.89										
180.0	13.89										
225.0	13.73										
270.0	13.78										
315.0	13.84										
360.0	13.95										

Equipment:
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50