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NATA

LumCAT: 3-1742-N	
Luminaire: 92.70.045.00+92.70.061.00	
Report No: NATA0100	Voltage(V): 35.2000
Test No: GC2018102011	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): 86	Width(mm): 86
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2816.87
Efficiency(%): 76.69%
Lumens(lm)/Power(W): 116.74
Central intensity(cd): 10414.690
Maximum intensity(cd): 10414.690
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.1
[C90/270]Total=24.1
Field angle(10%Imax): [C0/180]Total=48.8
[C90/270]Total=48.8
Maximum s/h(1/2): C0_180=0.41 C90_270=0.41
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.31%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.704%

Equipment:
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

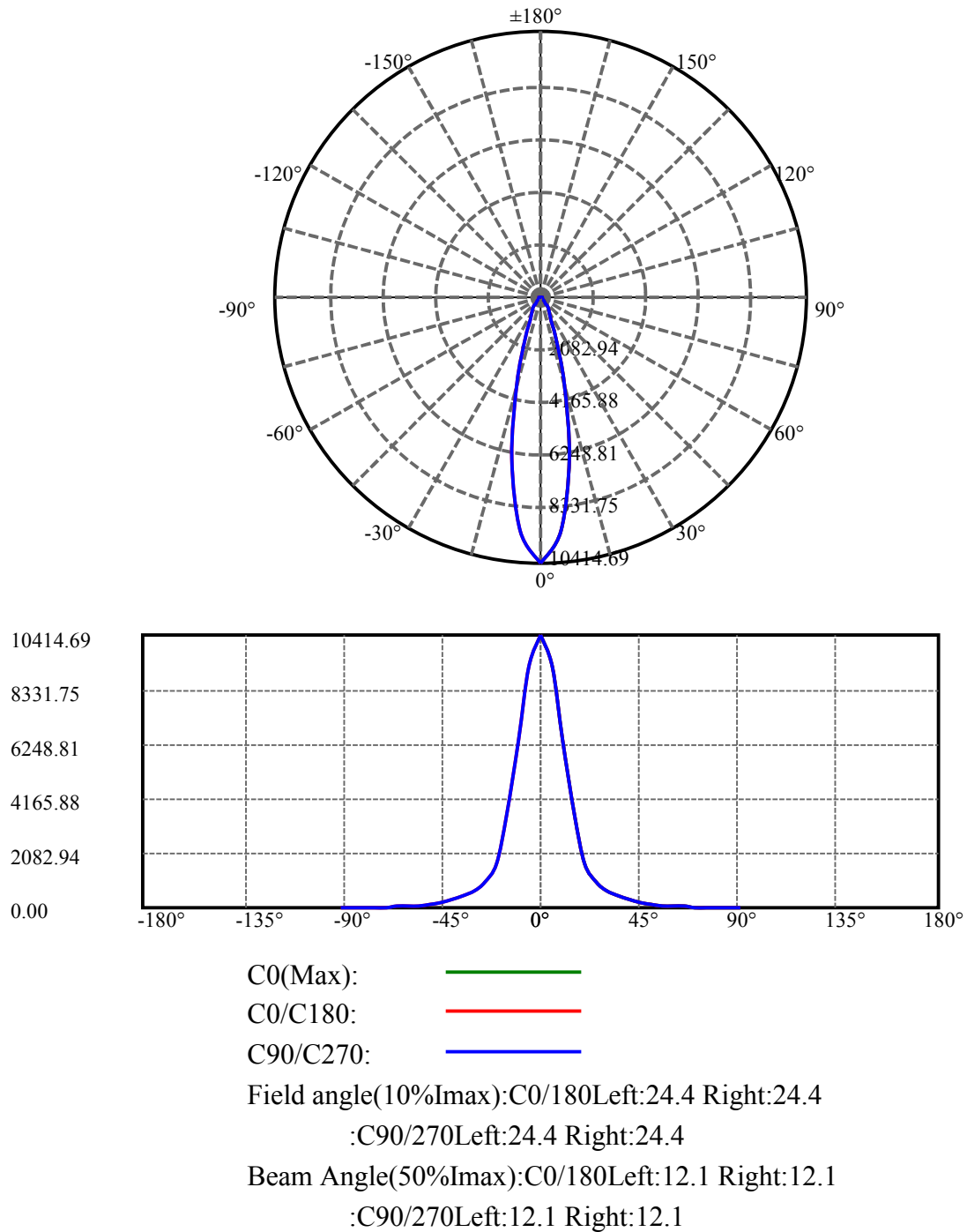
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10414.688	62.282	62.282	1.696%	2.211%
5.0	9157.922	437.504	499.786	11.911%	17.743%
10.0	6391.898	608.400	1108.187	16.564%	39.341%
15.0	3530.742	500.901	1609.087	13.637%	57.123%
20.0	1693.547	317.496	1926.583	8.644%	68.395%
25.0	955.884	221.433	2148.017	6.029%	76.256%
30.0	642.853	176.186	2324.203	4.797%	82.510%
35.0	434.306	136.545	2460.748	3.718%	87.358%
40.0	305.578	107.666	2568.414	2.931%	91.180%
45.0	200.609	77.754	2646.168	2.117%	93.940%
50.0	124.130	52.122	2698.29	1.419%	95.791%
55.0	72.949	32.755	2731.045	.892%	96.953%
60.0	46.005	21.839	2752.884	.595%	97.729%
65.0	33.870	16.826	2769.71	.458%	98.326%
70.0	28.160	14.505	2784.214	.395%	98.841%
75.0	23.196	12.281	2796.496	.334%	99.277%
80.0	18.415	9.941	2806.436	.271%	99.630%
85.0	13.591	7.422	2813.858	.202%	99.893%
90.0	10.976	3.008	2816.866	.082%	100.000%

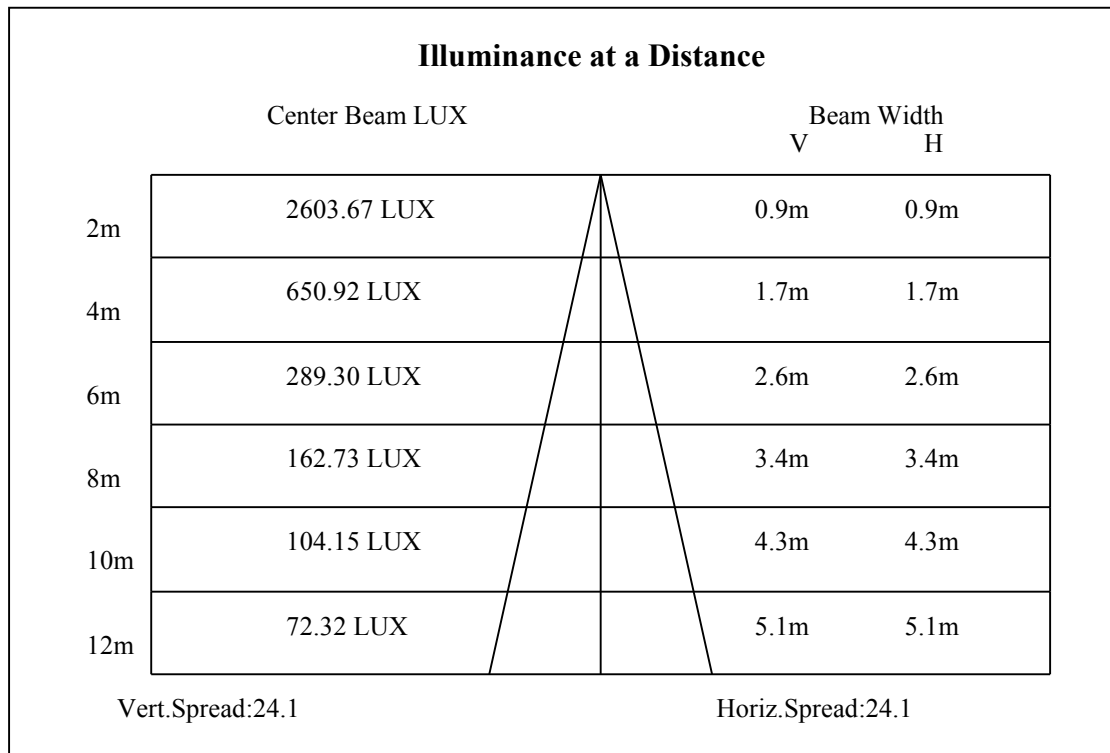
ZONAL LUMEN SUMMARY

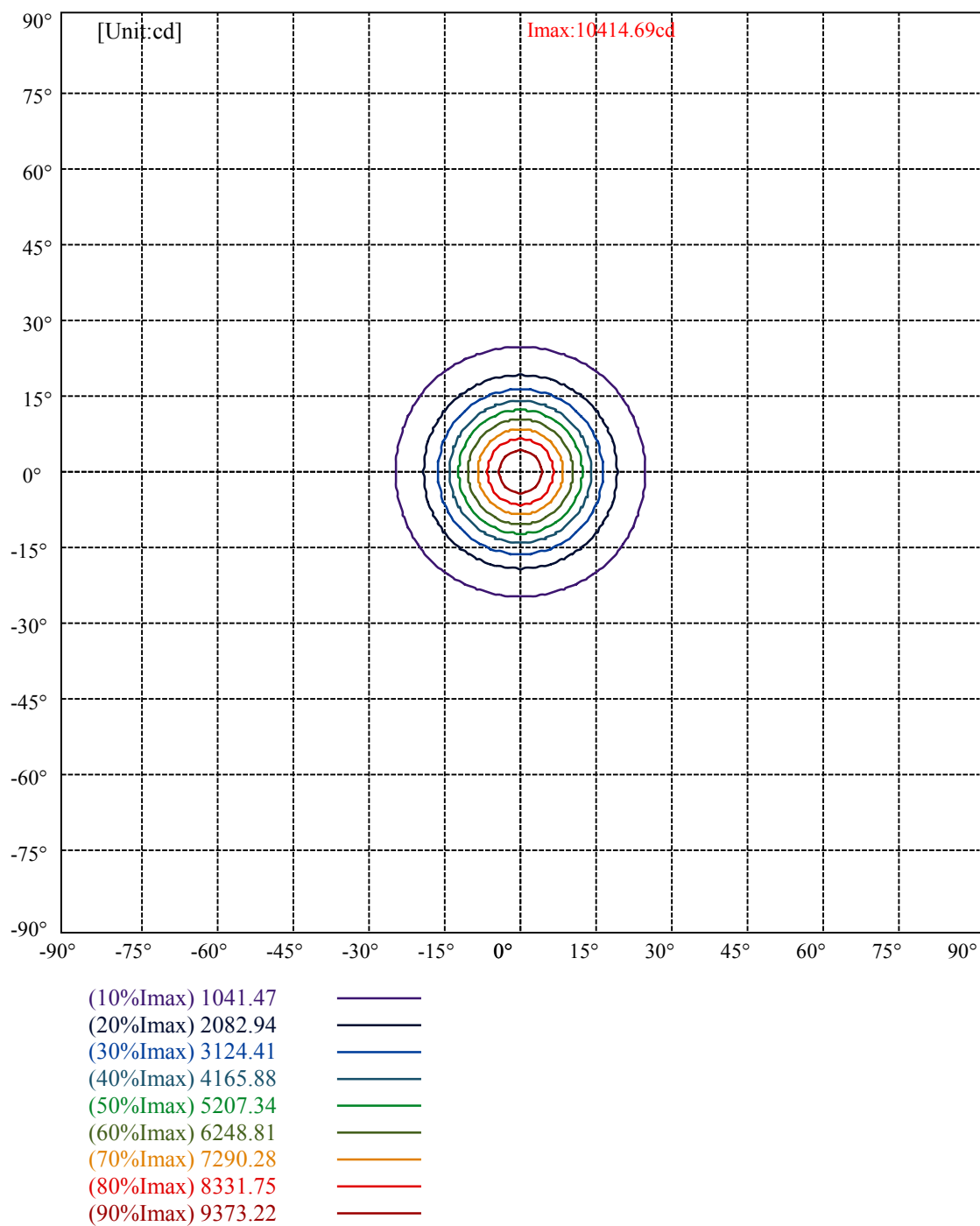
Zone	Lumens	%Lamp	%Fixt
0-30	2324.20	63.28%	82.51%
0-40	2568.41	69.93%	91.18%
0-60	2752.88	74.95%	97.73%
0-90	2813.86	76.61%	99.89%
0-120	2813.86	76.61%	99.89%
0-180	2816.87	76.69%	100.00%
60-90	82.81	2.25%	2.94%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.99	2253.49	61.35%	80.00%

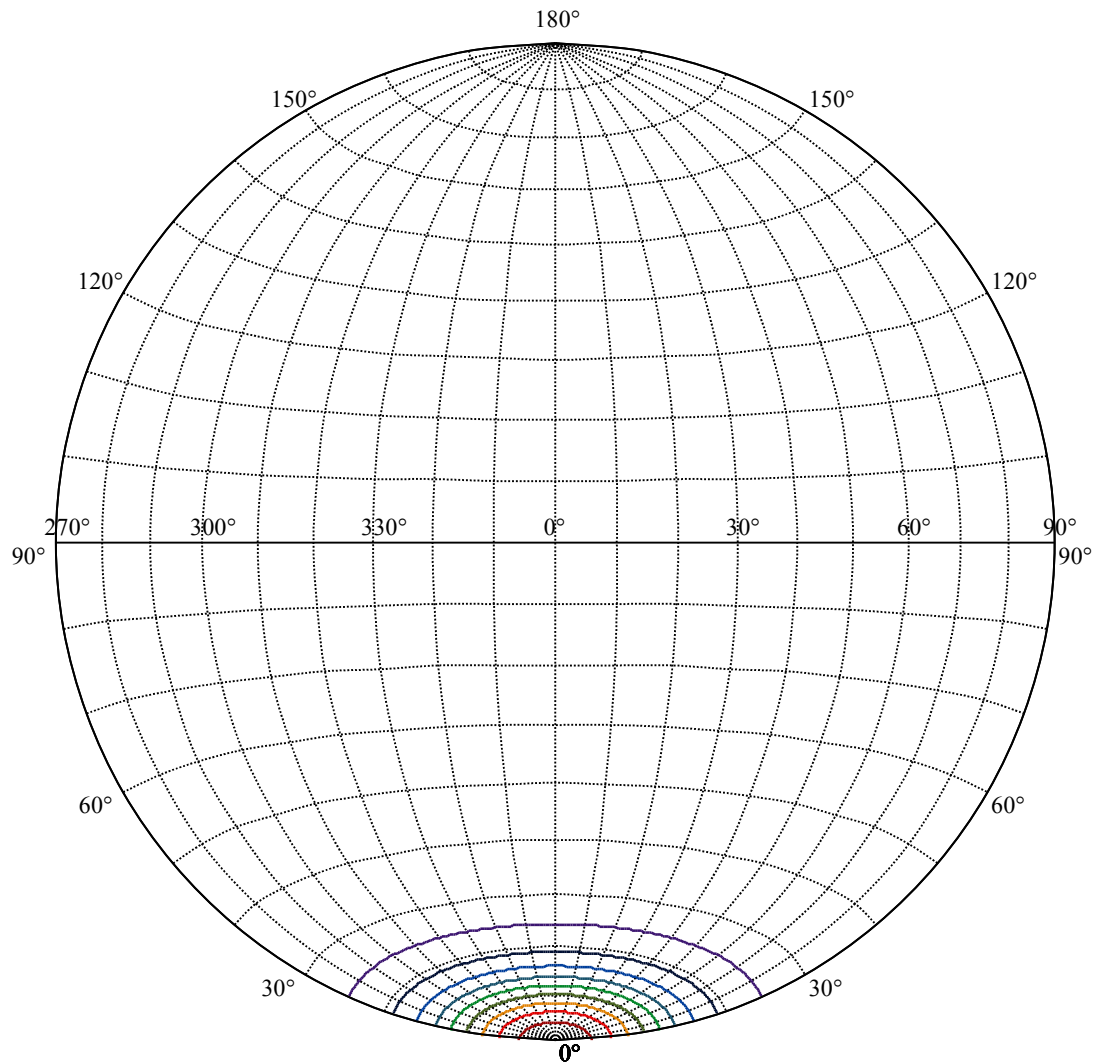
ZONAL LUMEN SUMMARY

0-10	1108.19
10-20	818.40
20-30	397.62
30-40	244.21
40-50	129.88
50-60	54.59
60-70	31.33
70-80	22.22
80-90	7.42
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









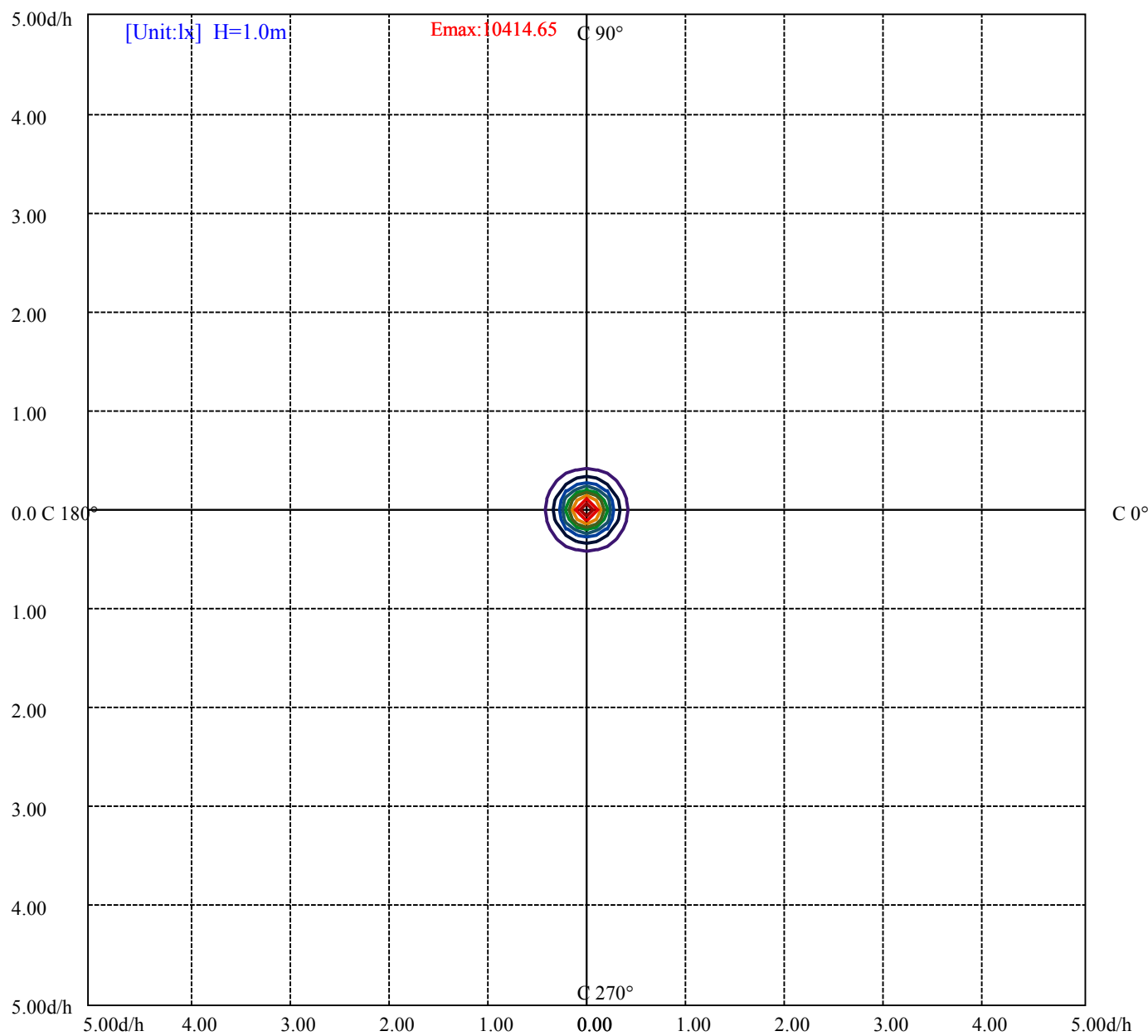
House

[Unit:cd]

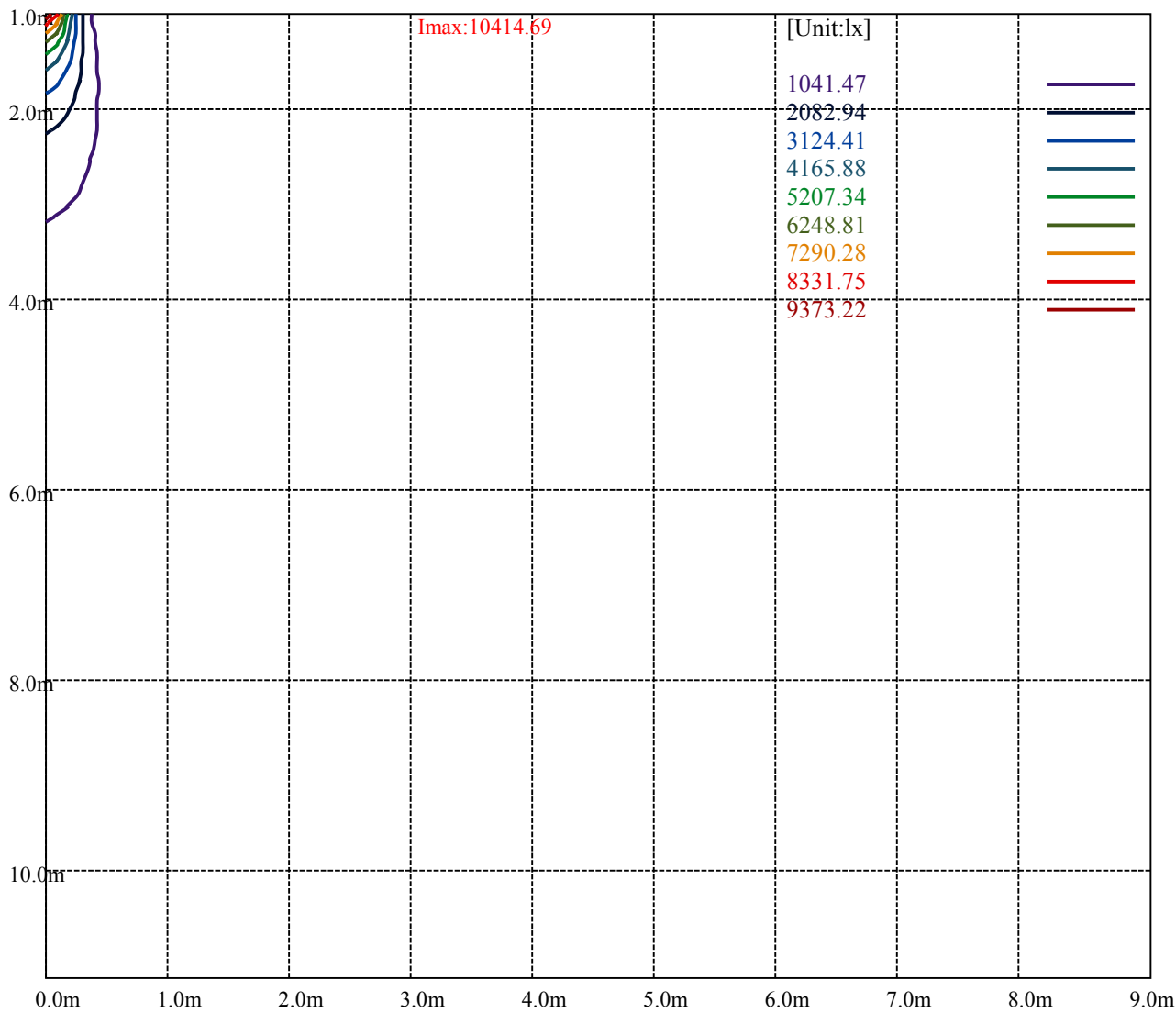
Road

Imax:10414.69

(10%Imax)	1041.47	—
(20%Imax)	2082.94	—
(30%Imax)	3124.41	—
(40%Imax)	4165.88	—
(50%Imax)	5207.34	—
(60%Imax)	6248.81	—
(70%Imax)	7290.28	—
(80%Imax)	8331.75	—
(90%Imax)	9373.22	—



(10%E _{max}) 1041.46	—
(20%E _{max}) 2082.93	—
(30%E _{max}) 3124.39	—
(40%E _{max}) 4165.86	—
(50%E _{max}) 5207.32	—
(60%E _{max}) 6248.79	—
(70%E _{max}) 7290.25	—
(80%E _{max}) 8331.72	—
(90%E _{max}) 9373.18	—



Luminance Table

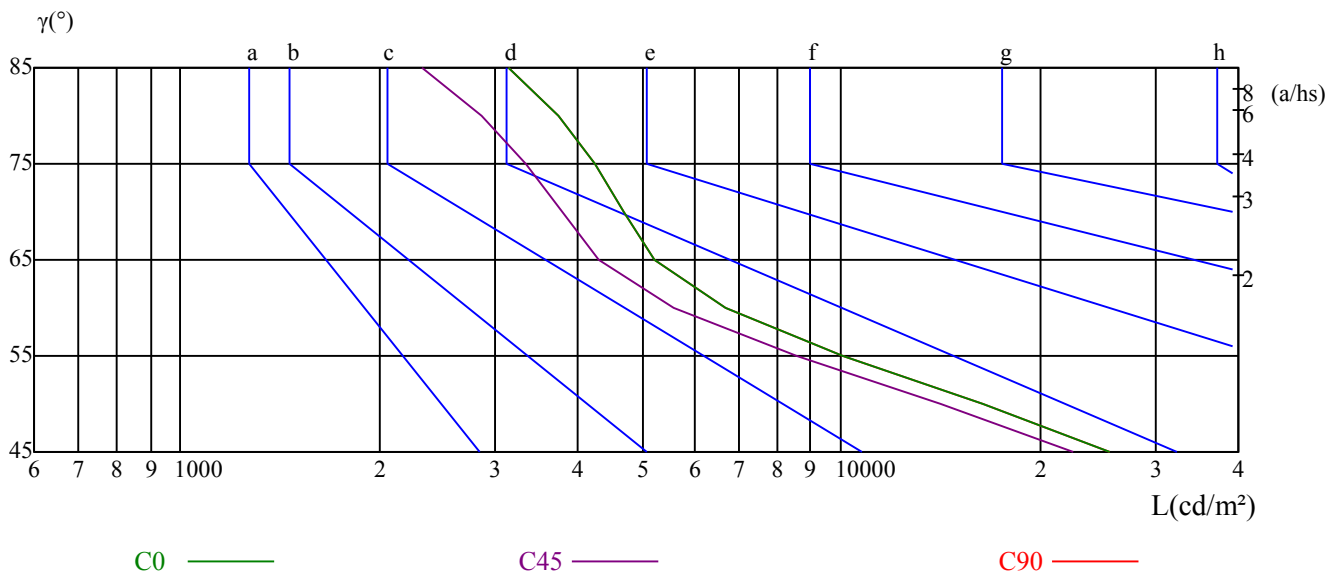
γ	45	50	55	60	65	70	75	80	85
C0	25573	16361	10032	6667	5229	4690	4228	3738	3140
C45	22470	14170	8556	5592	4306	3783	3330	2862	2322
C90	25573	16361	10032	6667	5229	4690	4228	3738	3140

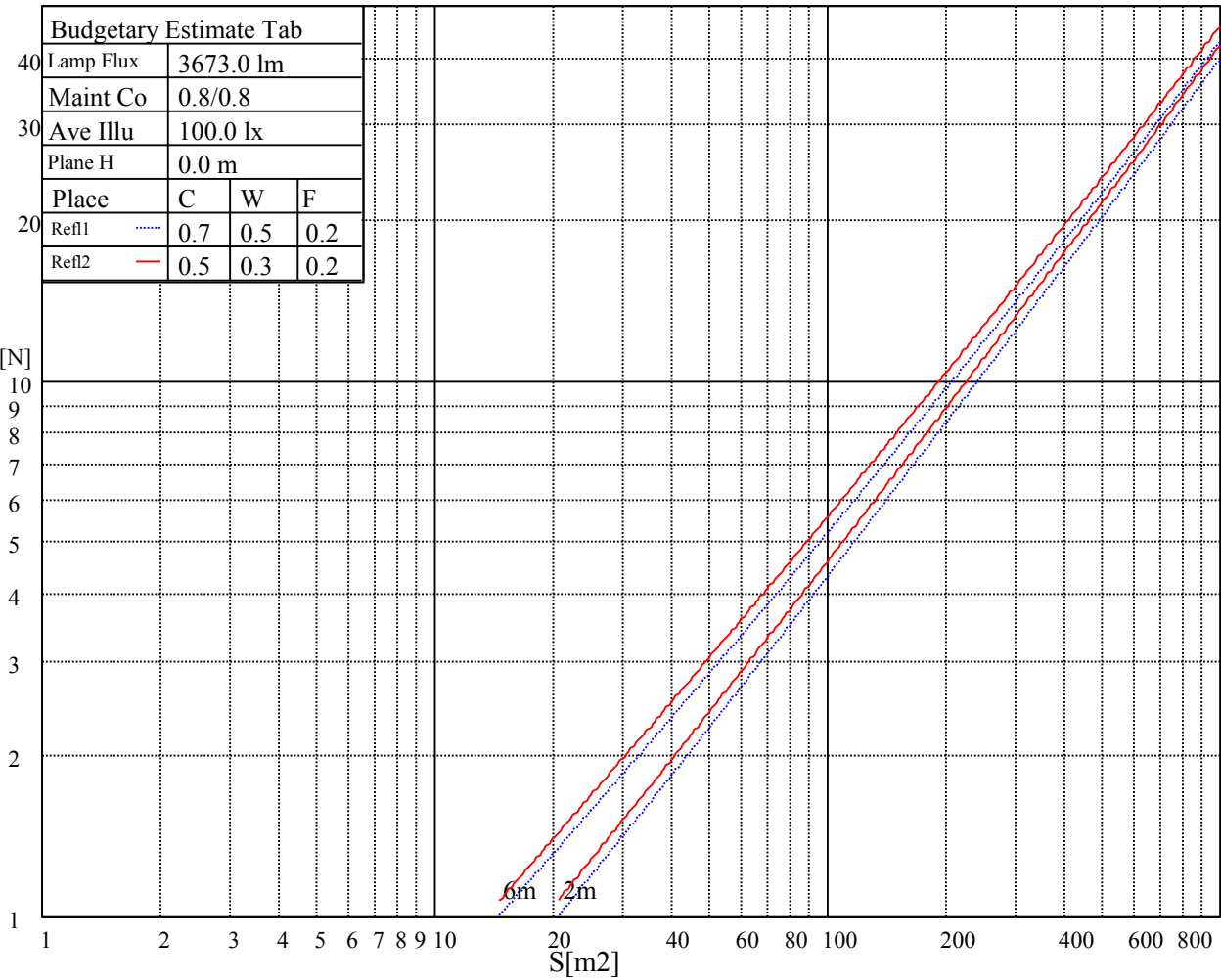
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10836	10836	10836	12118	12118	12118	21085	21085	21085

Glare Table

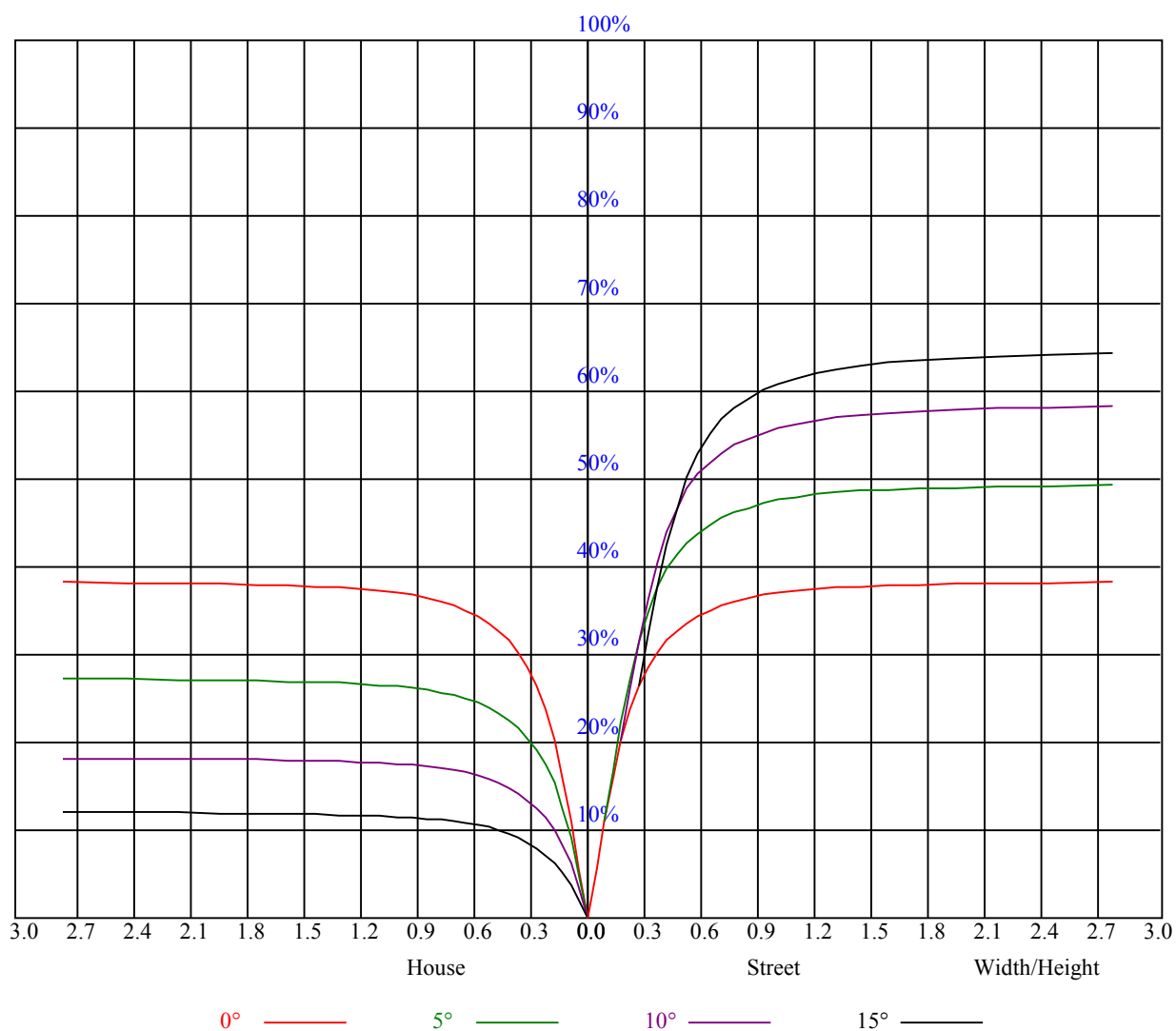
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.85	0.83	0.81	0.84	0.82	0.80	0.80	0.79	0.77	0.77	0.76	0.75	0.75	0.74	0.73	0.71
2	0.80	0.77	0.75	0.79	0.76	0.74	0.77	0.74	0.72	0.74	0.72	0.71	0.72	0.71	0.69	0.68
3	0.76	0.73	0.70	0.75	0.72	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.66	0.65
4	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.67	0.65	0.63	0.62
5	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
7	0.64	0.60	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
8	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54
9	0.60	0.56	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.52
10	0.58	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.56	0.54	0.52	0.51



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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	10377.00	9729.56	6993.00	4190.06	1941.19	1051.88	691.31	467.44	322.31		
45.0	10380.38	9563.63	6816.38	3761.44	1870.31	990.56	663.19	454.50	320.63		
90.0	10460.25	8842.50	6197.06	3305.25	1568.81	914.63	607.73	411.02	297.68		
135.0	10441.13	9337.50	6900.75	3735.00	1827.56	984.38	666.56	444.38	309.38		
180.0	10377.00	8602.31	5850.00	3067.31	1472.06	873.56	595.18	398.76	282.94		
225.0	10380.38	8867.81	5862.38	3202.88	1544.06	911.81	621.73	426.04	297.45		
270.0	10460.25	9285.75	6328.69	3687.19	1724.06	976.50	659.25	444.94	313.88		
315.0	10441.13	9034.31	6186.94	3296.81	1600.31	943.76	637.88	427.39	300.38		
360.0	10377.00	9729.56	6993.00	4190.06	1941.19	1051.88	691.31	467.44	322.31		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	223.31	134.21	81.28	50.68	35.33	28.91	23.79	19.07	13.89		
45.0	209.59	132.86	77.51	48.43	34.54	28.29	23.06	18.28	13.56		
90.0	193.44	119.42	71.61	44.83	32.96	27.51	22.78	17.72	13.44		
135.0	205.14	128.19	75.32	48.04	34.65	28.86	24.24	19.13	14.01		
180.0	185.01	115.26	68.01	41.96	33.30	27.84	22.61	17.83	13.05		
225.0	189.73	119.31	69.92	43.71	32.74	27.84	22.84	17.94	13.50		
270.0	206.89	127.29	74.08	46.41	34.26	28.41	23.29	19.13	13.67		
315.0	191.76	116.49	65.87	43.99	33.19	27.62	22.95	18.23	13.61		
360.0	223.31	134.21	81.28	50.68	35.33	28.91	23.79	19.07	13.89		
C/ γ (°)	90.0										
0.0	10.97										
45.0	11.03										
90.0	10.97										
135.0	10.97										
180.0	10.97										
225.0	11.03										
270.0	10.97										
315.0	10.91										
360.0	10.97										

Equipment:
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50