NATA LIGHTING CO.,LTD.
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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1745-N
Luminaire: 92.70.124.00
Report No: 200407-B035
Test No: 200407-C035
LampCAT: BRIDGELUX V10B
Lamp flux(lm): 910.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 220.4000
Current(A): 0.0410
Power (W): 8.1000
PF: 0.8950
Ballast type: AC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 769.93
Efficiency(%): 84.61%
Lumens(lm)/Power(W): 95.05
Central intensity(cd): 5084.113
Maximum intensity(cd): 5084.113
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=13.8
[C90/270]Total=13.8
Field angle(10%Imax): [C0/180]Total=40.4
[C90/270]Total=40.4
Maximum s/h(1/2): C0_180=0.24 C90_270=0.24
Maximum s/h(1/4): C0_180=0.27 C90_270=0.27
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.61%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.319%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5084.113	0.000	0	.000%	.000%
1.0	4994.206	4.822	4.822	.530%	.626%
2.0	4741.656	13.974	18.796	1.536%	2.441%
3.0	4364.571	21.779	40.575	2.393%	5.270%
4.0	3905.120	27.681	68.257	3.042%	8.865%
5.0	3467.362	31.716	99.973	3.485%	12.985%
6.0	2927.807	33.608	133.581	3.693%	17.350%
7.0	2500.607	33.694	167.275	3.703%	21.726%
8.0	2129.206	33.135	200.41	3.641%	26.030%
9.0	1796.900	31.819	232.229	3.497%	30.162%
10.0	1528.805	30.096	262.325	3.307%	34.071%
11.0	1325.442	28.520	290.845	3.134%	37.776%
12.0	1139.411	26.944	317.789	2.961%	41.275%
13.0	1022.503	25.656	343.446	2.819%	44.608%
14.0	921.251	24.880	368.326	2.734%	47.839%
15.0	840.742	24.189	392.515	2.658%	50.981%
16.0	764.211	23.517	416.032	2.584%	54.035%
17.0	688.510	22.623	438.655	2.486%	56.973%
18.0	623.034	21.625	460.279	2.376%	59.782%
19.0	566.921	20.703	480.982	2.275%	62.471%
20.0	517.925	19.856	500.838	2.182%	65.050%
21.0	475.043	19.067	519.905	2.095%	67.526%
22.0	438.222	18.352	538.257	2.017%	69.910%
23.0	406.801	17.731	555.988	1.948%	72.213%
24.0	379.765	17.197	573.185	1.890%	74.447%
25.0	356.209	16.734	589.92	1.839%	76.620%
26.0	338.814	16.406	606.326	1.803%	78.751%
27.0	319.858	16.115	622.44	1.771%	80.844%
28.0	303.890	15.792	638.232	1.735%	82.895%
29.0	286.001	15.433	653.665	1.696%	84.900%
30.0	263.351	14.832	668.498	1.630%	86.826%
31.0	234.435	13.853	682.351	1.522%	88.625%
32.0	217.208	12.939	695.29	1.422%	90.306%
33.0	164.076	11.233	706.522	1.234%	91.765%
34.0	131.316	8.939	715.462	.982%	92.926%
35.0	92.058	6.937	722.399	.762%	93.827%
36.0	64.686	4.991	727.39	.548%	94.475%
37.0	46.403	3.623	731.013	.398%	94.946%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	35.644	2.739	733.752	.301%	95.301%
39.0	28.683	2.196	735.947	.241%	95.587%
40.0	24.112	1.841	737.788	.202%	95.826%
41.0	20.934	1.604	739.393	.176%	96.034%
42.0	18.393	1.429	740.821	.157%	96.220%
43.0	16.670	1.299	742.12	.143%	96.388%
44.0	15.133	1.200	743.321	.132%	96.544%
45.0	13.944	1.117	744.438	.123%	96.689%
46.0	13.063	1.056	745.494	.116%	96.827%
47.0	12.279	1.008	746.502	.111%	96.957%
48.0	11.578	0.964	747.467	.106%	97.083%
49.0	10.922	0.924	748.391	.102%	97.203%
50.0	10.360	0.887	749.278	.098%	97.318%
51.0	9.843	0.855	750.133	.094%	97.429%
52.0	9.420	0.827	750.959	.091%	97.536%
53.0	9.101	0.806	751.765	.089%	97.641%
54.0	8.846	0.791	752.556	.087%	97.744%
55.0	8.602	0.779	753.335	.086%	97.845%
56.0	8.335	0.765	754.1	.084%	97.944%
57.0	8.010	0.747	754.847	.082%	98.041%
58.0	7.726	0.728	755.575	.080%	98.136%
59.0	7.483	0.711	756.286	.078%	98.228%
60.0	7.291	0.698	756.984	.077%	98.319%
61.0	7.094	0.686	757.671	.075%	98.408%
62.0	6.920	0.675	758.346	.074%	98.496%
63.0	6.694	0.662	759.008	.073%	98.582%
64.0	6.450	0.645	759.653	.071%	98.665%
65.0	6.264	0.629	760.282	.069%	98.747%
66.0	6.015	0.613	760.895	.067%	98.827%
67.0	5.789	0.594	761.488	.065%	98.904%
68.0	5.557	0.575	762.063	.063%	98.979%
69.0	5.273	0.552	762.616	.061%	99.050%
70.0	5.023	0.529	763.144	.058%	99.119%
71.0	4.791	0.507	763.652	.056%	99.185%
72.0	4.559	0.486	764.138	.053%	99.248%
73.0	4.345	0.466	764.603	.051%	99.308%
74.0	4.171	0.448	765.051	.049%	99.367%
75.0	3.985	0.431	765.482	.047%	99.423%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.788	0.413	765.894	.045%	99.476%
77.0	3.614	0.395	766.289	.043%	99.527%
78.0	3.463	0.379	766.668	.042%	99.577%
79.0	3.289	0.363	767.031	.040%	99.624%
80.0	3.132	0.346	767.377	.038%	99.669%
81.0	2.935	0.328	767.705	.036%	99.711%
82.0	2.813	0.312	768.017	.034%	99.752%
83.0	2.628	0.296	768.312	.033%	99.790%
84.0	2.506	0.280	768.592	.031%	99.827%
85.0	2.367	0.266	768.858	.029%	99.861%
86.0	2.169	0.248	769.106	.027%	99.893%
87.0	2.024	0.230	769.335	.025%	99.923%
88.0	1.850	0.212	769.548	.023%	99.951%
89.0	1.729	0.196	769.744	.022%	99.976%
90.0	1.624	0.184	769.928	.020%	100.000%

Zonal flux distribution table

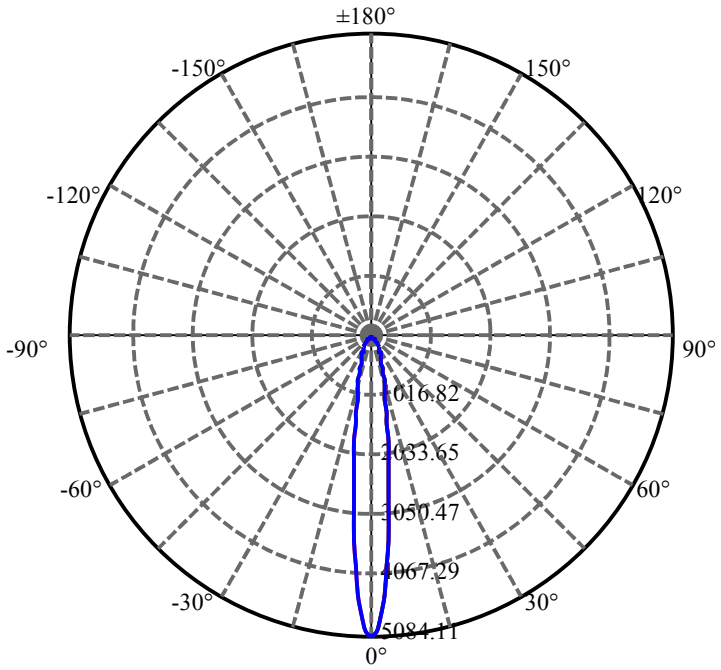
ZONAL LUMEN SUMMARY

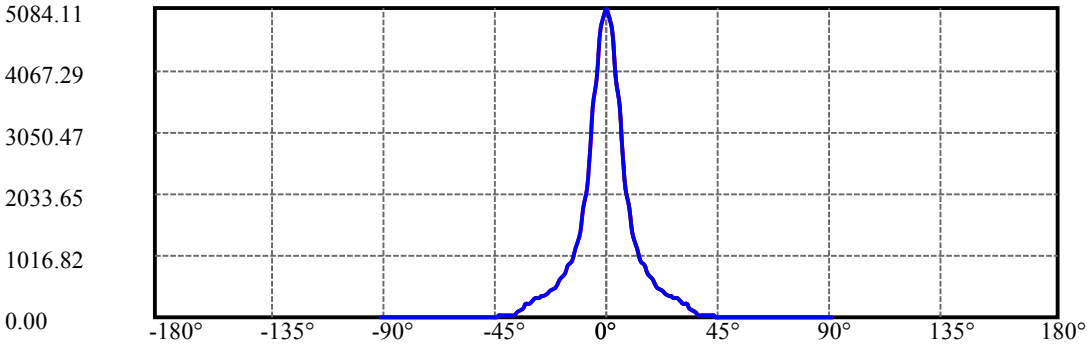
Zone	Lumens	%Lamp	%Fixt
0-30	668.50	73.46%	86.83%
0-40	737.79	81.08%	95.83%
0-60	756.98	83.19%	98.32%
0-90	769.74	84.59%	99.98%
0-120	769.74	84.59%	99.98%
0-180	769.93	84.61%	100.00%
60-90	13.46	1.48%	1.75%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.60	615.94	67.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	262.32
10-20	238.51
20-30	167.66
30-40	69.29
40-50	11.49
50-60	7.71
60-70	6.16
70-80	4.23
80-90	2.37
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):

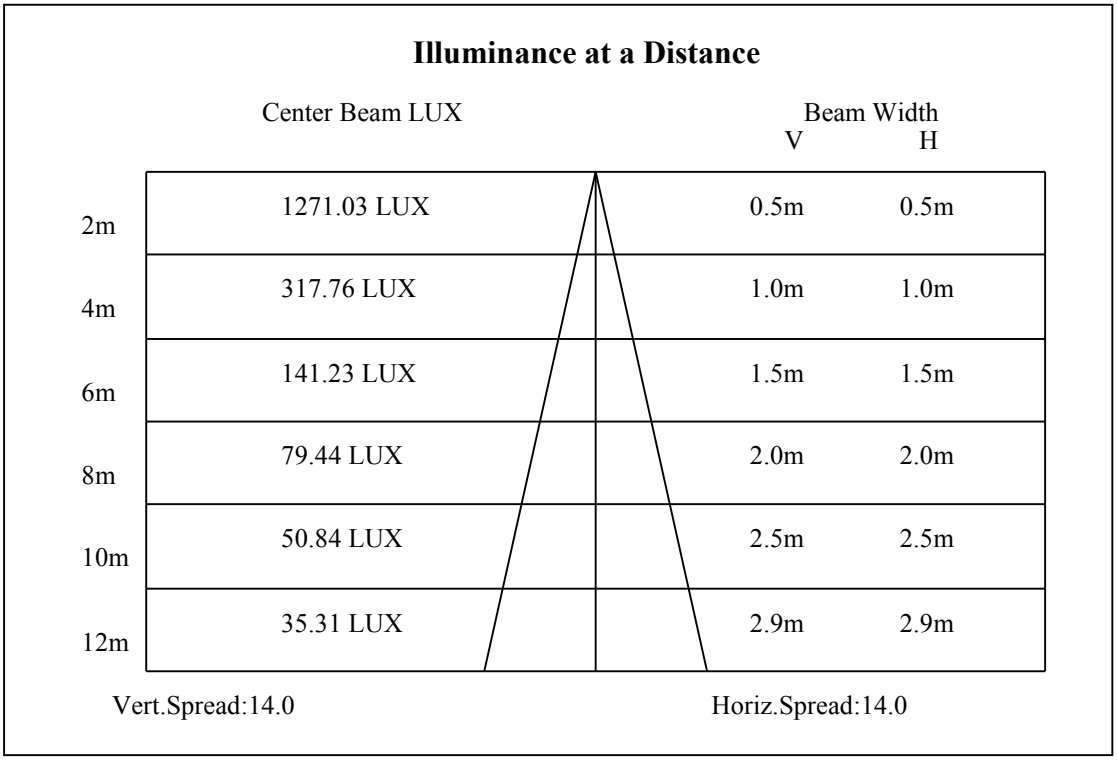
C0/C180:

C90/C270:

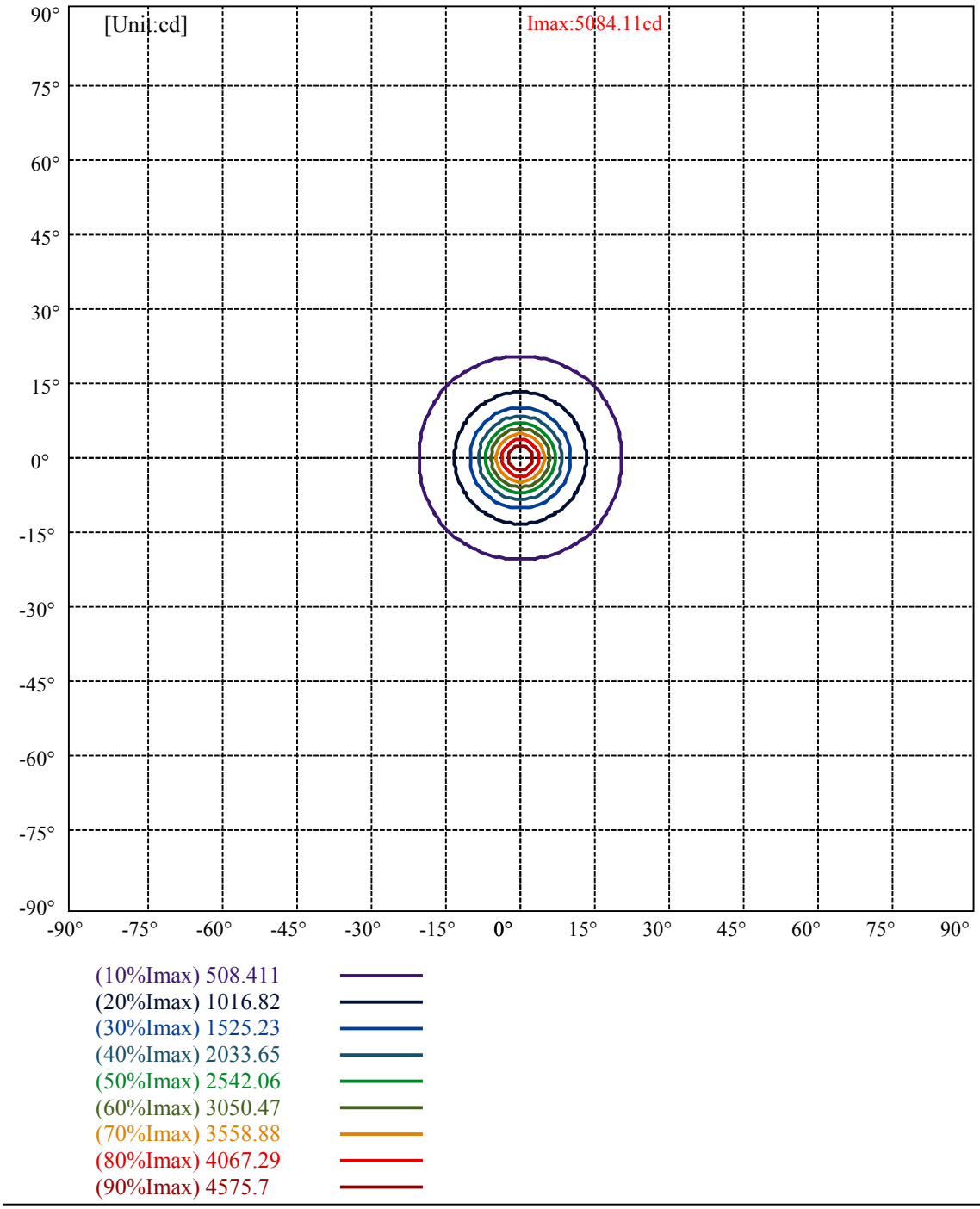
Field angle(10%Imax):C0/180Left:20.2 Right:20.2
:C90/270Left:20.2 Right:20.2

Beam Angle(50%Imax):C0/180Left:6.9 Right:6.9
:C90/270Left:6.9 Right:6.9

Lux distance Curve



ISO-Intensity(V-H)



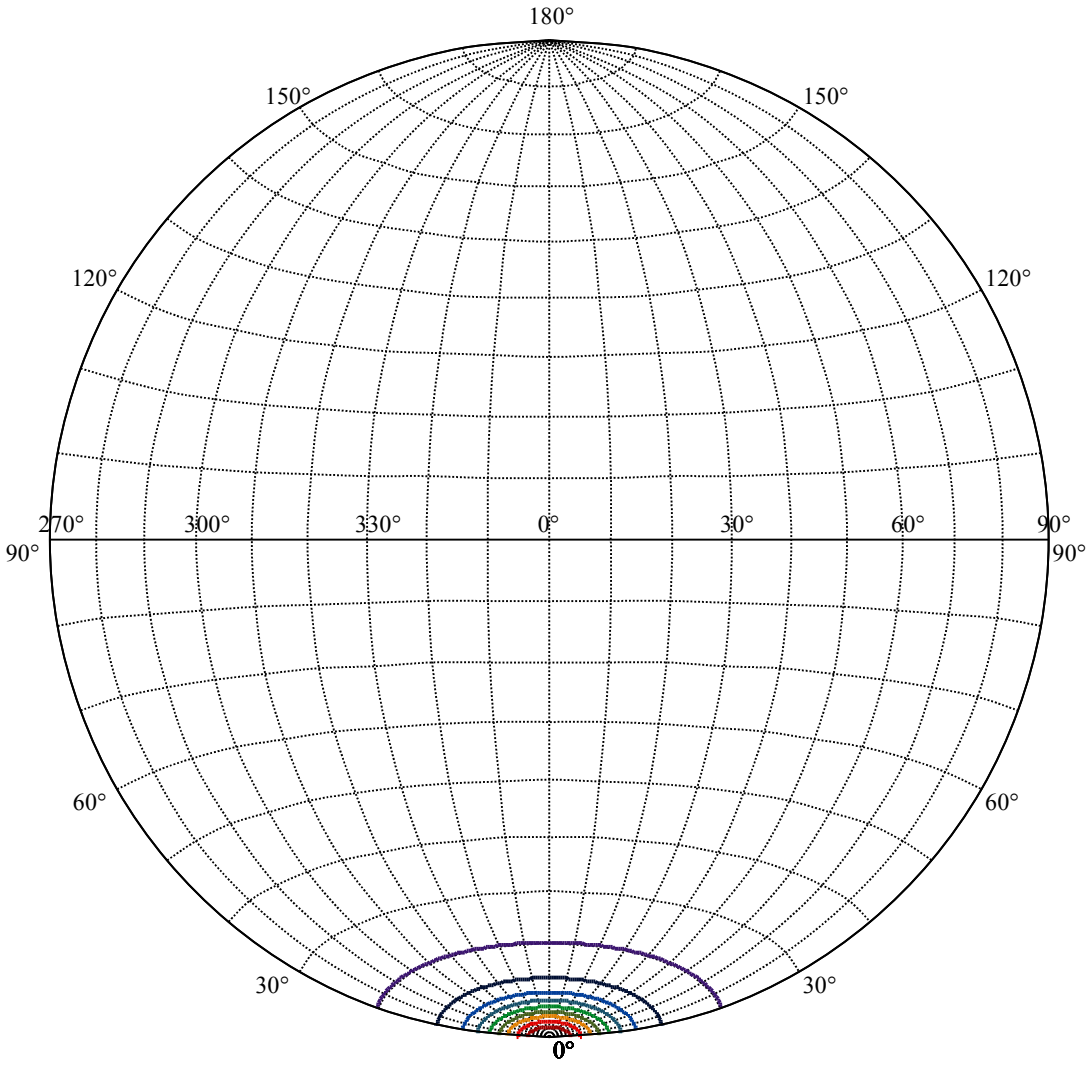
(10%Imax) 508.411
(20%Imax) 1016.82
(30%Imax) 1525.23
(40%Imax) 2033.65
(50%Imax) 2542.06
(60%Imax) 3050.47
(70%Imax) 3558.88
(80%Imax) 4067.29
(90%Imax) 4575.7

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5084.11

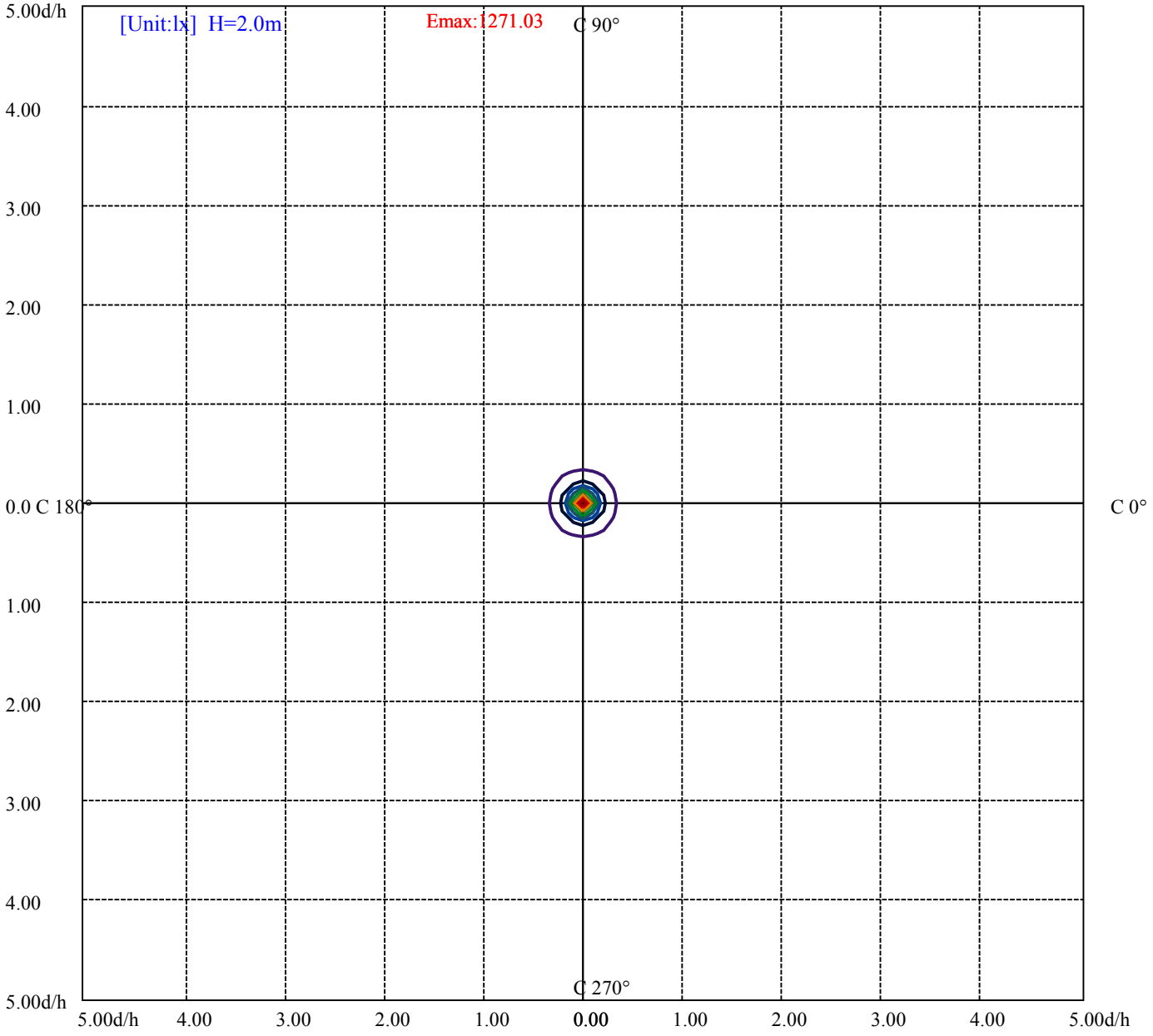
(10%Imax) 508.411
(20%Imax) 1016.82
(30%Imax) 1525.23
(40%Imax) 2033.65
(50%Imax) 2542.06
(60%Imax) 3050.47
(70%Imax) 3558.88
(80%Imax) 4067.29
(90%Imax) 4575.7

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO illuminance diagram

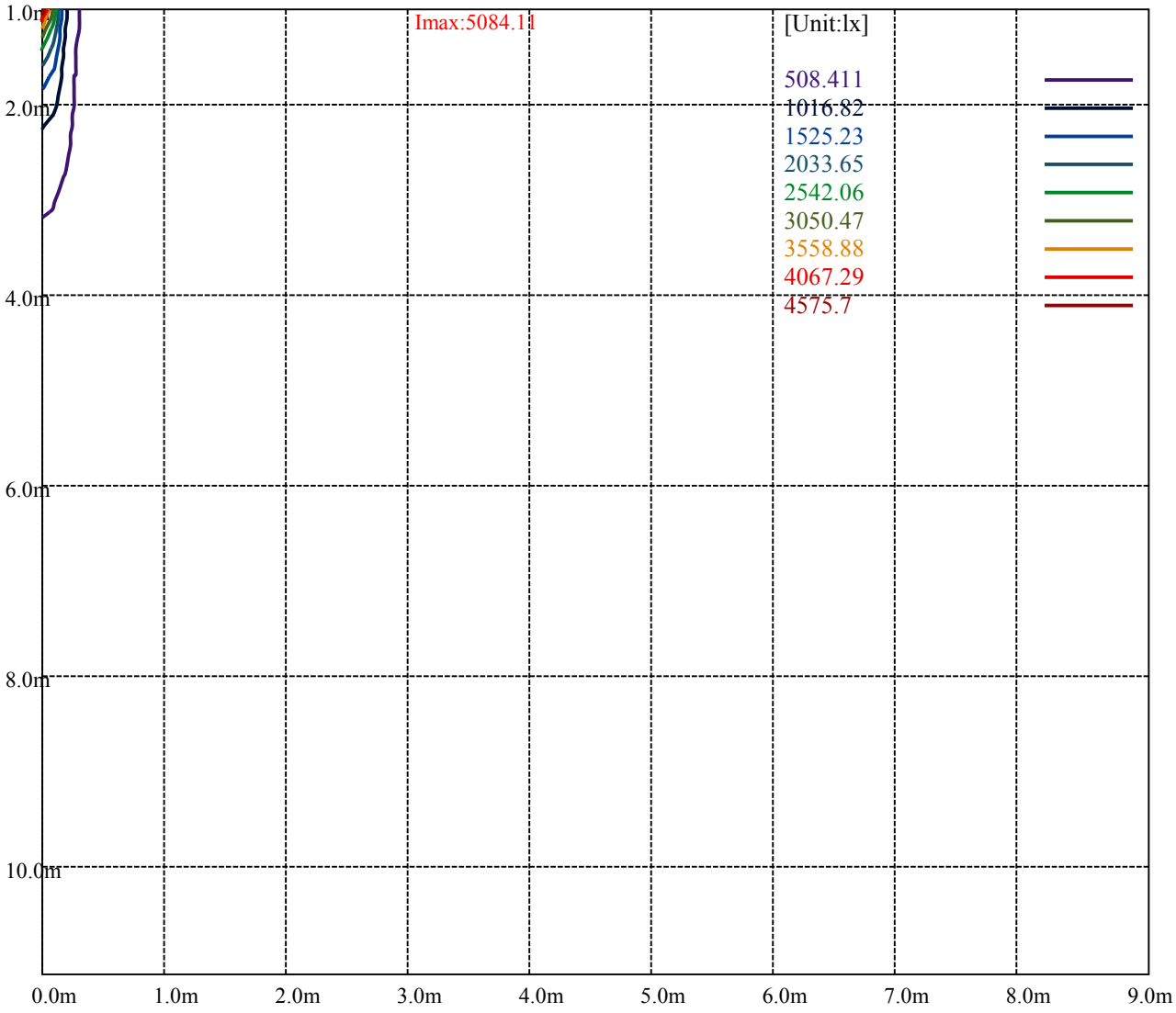


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Nata 2-1745-N

Luminance Limitting Curve(no luminous side)

Luminance Table

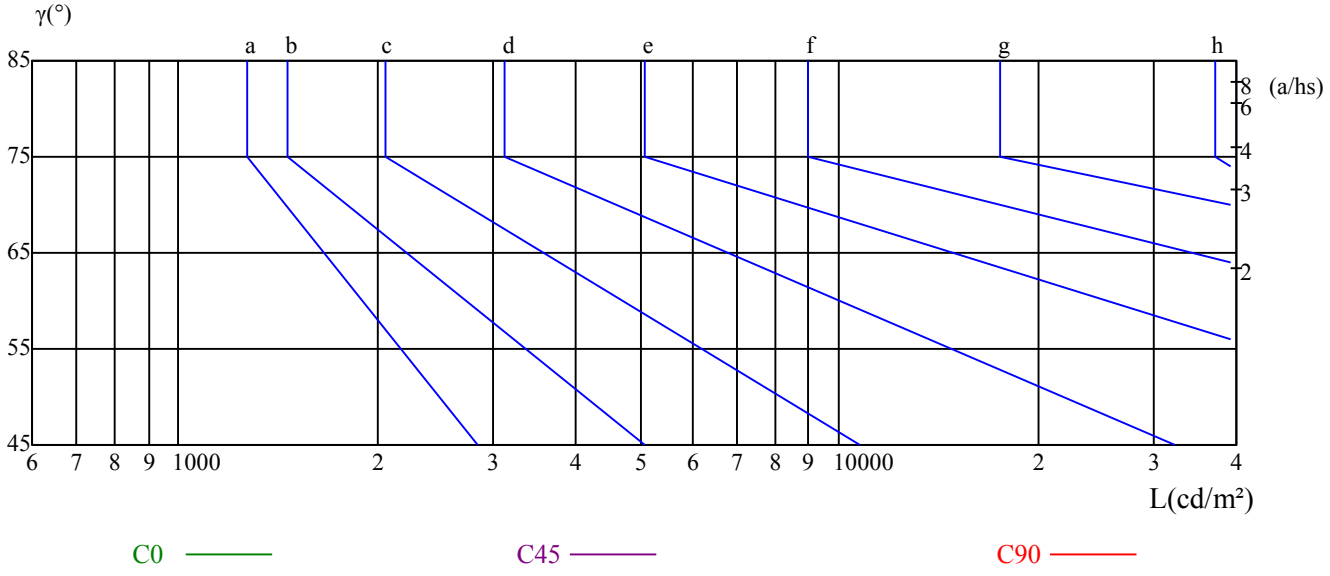
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

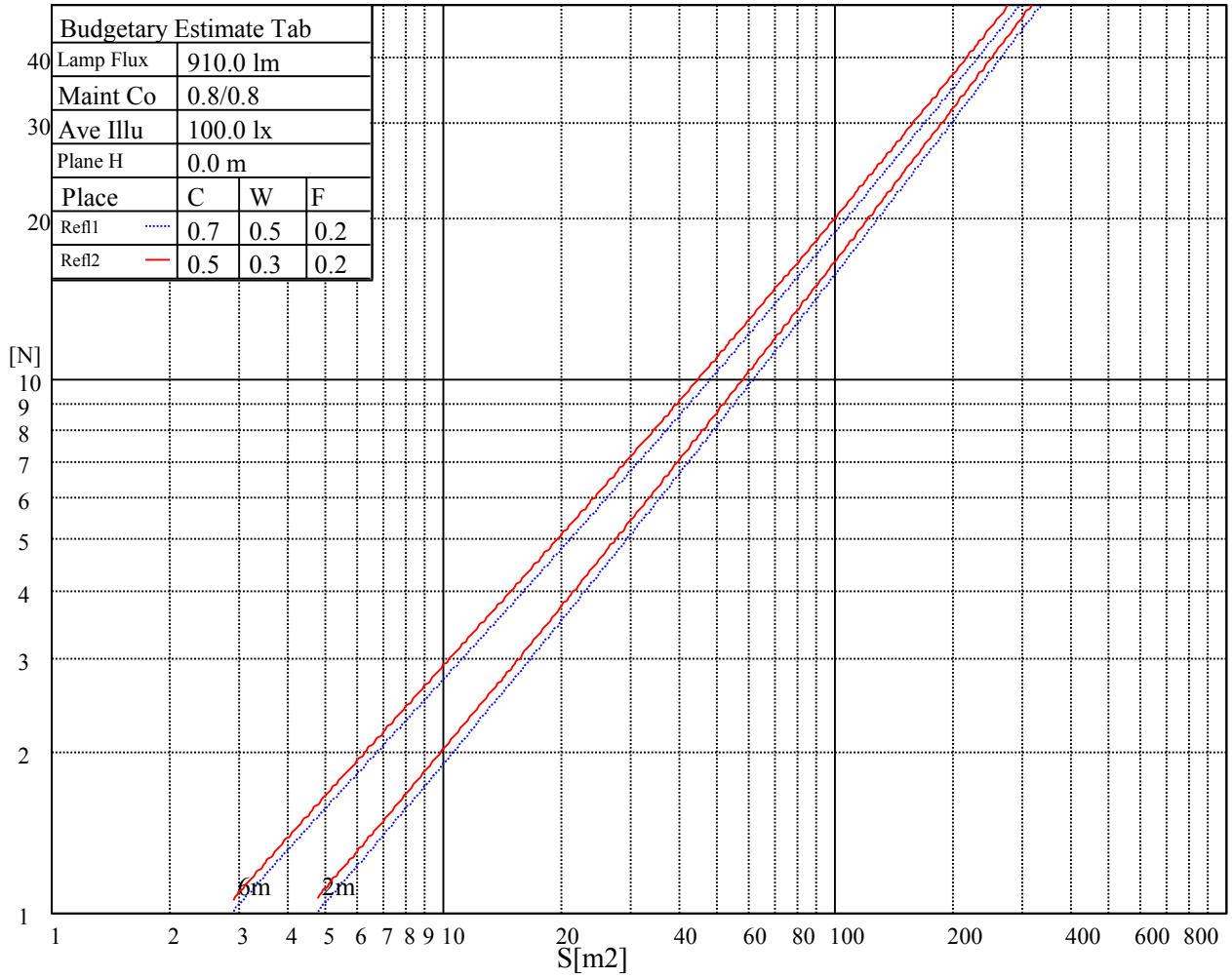


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Budgetary Estimate Table

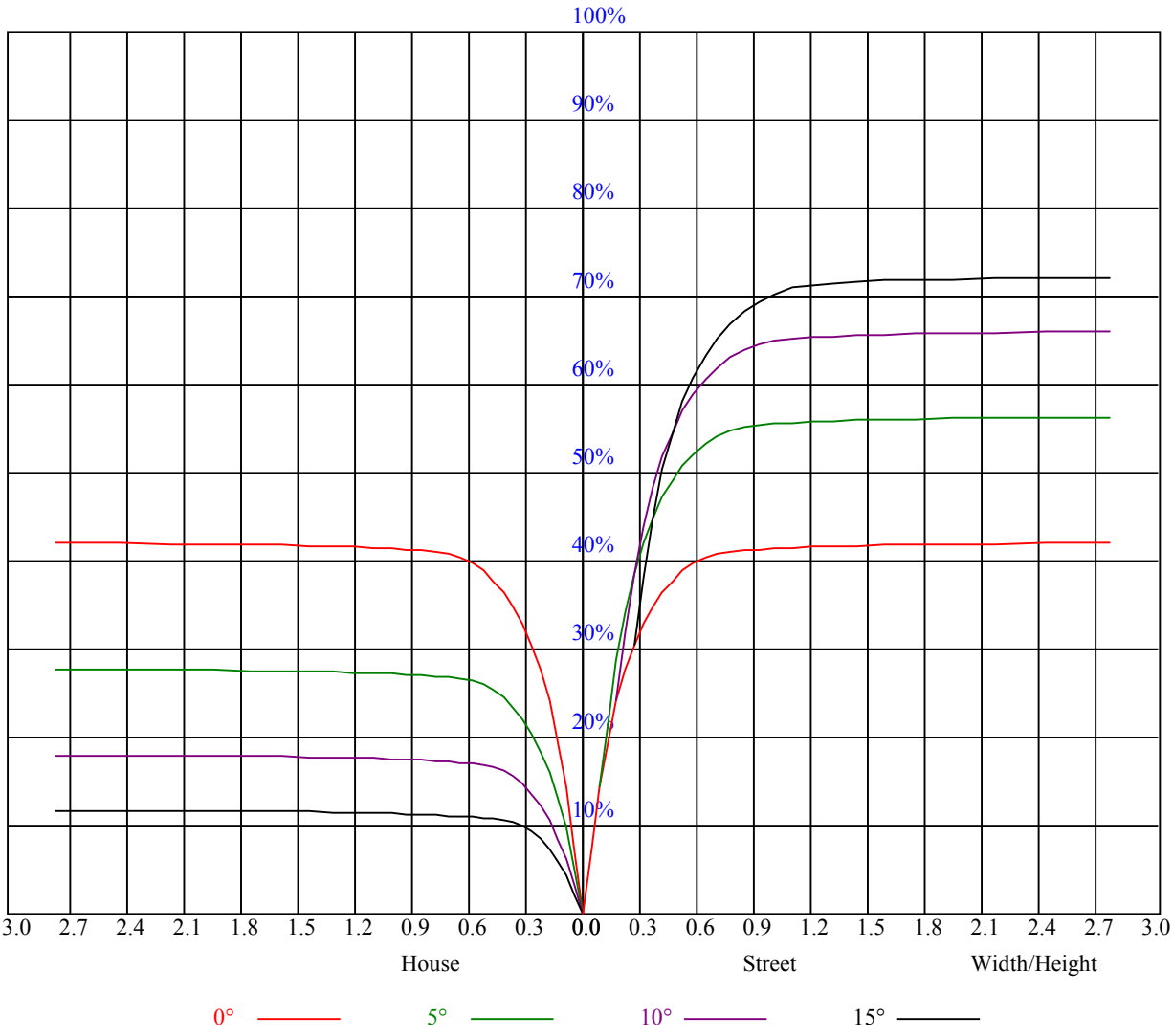


Equipment: GMS 1800 Date: 2020/4/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

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	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.81
2	0.90	0.87	0.84	0.88	0.86	0.83	0.86	0.83	0.82	0.83	0.81	0.80	0.81	0.79	0.78	0.77
3	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.74
4	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.76	0.73	0.72	0.71
5	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.72	0.70	0.74	0.72	0.69	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
7	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.64	0.69	0.66	0.64	0.63
8	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.59	0.64	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

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	5146.18	5116.48	4895.60	4543.40	4090.97	3587.49	3078.91	2595.39	2157.34
45.0	5038.99	5067.76	4908.59	4602.33	4183.31	3794.91	3284.94	2795.38	2355.48
90.0	4960.10	4643.17	4216.25	3713.71	3197.24	2718.35	2299.80	1933.67	1637.62
135.0	5191.19	4958.24	4587.48	4118.81	3593.99	3072.88	2597.71	2190.75	1862.21
180.0	5146.18	4980.05	4660.80	4228.78	3732.73	3420.90	2727.63	2294.23	2063.14
225.0	5038.99	4832.03	4492.82	4061.27	3570.78	3060.81	2589.82	2168.01	1808.38
270.0	4960.10	5127.15	5105.81	4902.56	4562.89	4303.03	3602.80	3285.40	2768.01
315.0	5191.19	5228.78	5065.90	4745.72	4309.06	3780.53	3240.86	2742.02	2381.47
360.0	5146.18	5116.48	4895.60	4543.40	4090.97	3587.49	3078.91	2595.39	2157.34

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1800.96	1529.50	1328.57	1172.66	917.67	917.67	882.55	799.67	722.96
45.0	1968.48	1654.79	1413.49	1229.27	1082.64	964.77	858.97	766.17	684.50
90.0	1412.56	1241.34	1110.48	908.76	908.76	837.91	760.64	689.69	626.07
135.0	1697.02	1399.57	1236.23	1151.78	1028.34	923.47	829.74	747.60	676.14
180.0	1737.39	1488.67	1297.95	1146.67	1021.85	915.58	821.85	738.79	668.25
225.0	1523.00	1308.16	1144.82	869.88	869.88	850.71	723.66	674.94	604.03
270.0	2305.36	1920.68	1613.49	1384.72	1210.71	1077.07	965.70	868.25	781.01
315.0	1930.43	1687.74	1458.50	1251.54	1140.18	882.82	882.82	828.58	745.10
360.0	1800.96	1529.50	1328.57	1172.66	917.67	917.67	882.55	799.67	722.96

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	656.65	599.76	549.23	504.22	464.40	429.00	400.60	374.57	351.64
45.0	617.67	561.06	510.95	466.40	429.74	397.72	368.49	339.72	324.41
90.0	570.67	520.97	477.72	440.23	408.49	384.73	363.52	345.94	330.02
135.0	614.89	561.53	515.59	472.43	437.17	407.00	381.48	359.67	341.58
180.0	607.93	556.42	511.88	472.90	439.49	411.18	386.12	365.24	353.64
225.0	542.41	491.13	445.80	406.31	373.18	345.66	323.38	305.71	291.04
270.0	701.20	634.38	575.91	528.12	483.57	444.13	410.72	382.41	364.78
315.0	672.85	610.11	556.33	509.74	469.74	434.98	403.80	376.42	353.41
360.0	656.65	599.76	549.23	504.22	464.40	429.00	400.60	374.57	351.64

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	331.27	312.20	294.01	270.76	238.05	216.52	163.76	141.11	104.41
45.0	303.06	276.61	266.40	250.16	237.63	237.63	170.86	138.33	105.06
90.0	314.89	296.61	264.82	225.98	183.43	158.24	118.33	70.16	54.80
135.0	327.19	311.88	293.32	275.22	238.56	238.56	147.33	108.07	74.15
180.0	328.58	318.37	302.13	282.18	250.16	250.16	160.18	119.49	83.80
225.0	277.17	262.83	246.54	220.23	188.82	161.07	119.58	94.01	67.28
270.0	342.04	328.58	313.27	293.78	278.93	251.09	244.13	230.67	136.70
315.0	334.66	324.03	307.51	288.49	259.91	224.41	188.44	148.68	110.25
360.0	331.27	312.20	294.01	270.76	238.05	216.52	163.76	141.11	104.41

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	72.76	51.04	39.54	32.06	26.40	22.60	19.72	17.40	15.59
45.0	76.10	53.50	41.90	32.53	27.01	23.76	20.28	18.47	16.75
90.0	39.35	31.69	25.80	22.09	19.40	17.17	15.45	14.11	13.04
135.0	50.02	38.19	31.09	25.80	22.46	20.00	17.87	16.33	15.13
180.0	55.03	38.56	31.18	25.57	21.58	19.03	16.98	15.36	14.52
225.0	47.33	36.52	30.30	25.34	21.86	19.44	17.49	15.96	14.76
270.0	100.42	70.02	47.05	34.80	28.58	23.62	20.09	18.61	15.82
315.0	76.47	51.69	38.28	31.28	25.61	21.86	19.26	17.12	15.45
360.0	72.76	51.04	39.54	32.06	26.40	22.60	19.72	17.40	15.59

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	14.20	13.09	12.11	11.32	10.63	9.98	9.47	9.05	8.77
45.0	15.27	14.11	13.27	12.53	11.88	11.23	10.67	10.12	9.61
90.0	12.11	11.46	10.86	10.21	9.65	9.19	8.86	8.54	8.45
135.0	14.06	13.27	12.67	12.25	11.42	11.14	10.53	10.07	9.84
180.0	12.90	12.34	11.60	10.90	10.30	9.65	9.19	8.77	8.45
225.0	13.97	13.32	12.62	12.06	11.46	10.81	10.30	9.88	9.61
270.0	14.90	13.55	12.58	11.74	11.00	10.35	9.84	9.37	8.96
315.0	14.15	13.36	12.53	11.60	11.04	10.53	9.88	9.56	9.14
360.0	14.20	13.09	12.11	11.32	10.63	9.98	9.47	9.05	8.77

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.40	8.26	8.03	7.70	7.42	7.15	6.96	6.82	6.59
45.0	9.37	9.19	8.91	8.54	8.07	7.75	7.47	7.24	7.10
90.0	8.26	7.75	7.52	7.29	6.96	6.82	6.64	6.40	6.13
135.0	9.70	9.42	8.96	8.72	8.54	8.40	8.40	8.26	8.12
180.0	8.21	8.03	7.75	7.33	7.10	6.91	6.68	6.45	6.26
225.0	9.23	8.86	8.58	8.07	7.84	7.47	7.15	6.87	6.64
270.0	8.63	8.49	8.35	8.12	7.89	7.56	7.38	7.19	7.01
315.0	8.96	8.82	8.58	8.31	7.98	7.80	7.66	7.52	7.52
360.0	8.40	8.26	8.03	7.70	7.42	7.15	6.96	6.82	6.59

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.36	6.13	5.89	5.71	5.43	5.20	4.92	4.59	4.36
45.0	6.82	6.40	6.26	5.94	5.66	5.48	5.15	4.87	4.59
90.0	5.89	5.71	5.43	5.15	4.97	4.69	4.36	4.13	3.99
135.0	7.89	7.70	7.56	7.42	7.15	6.96	6.77	6.50	6.40
180.0	6.13	5.89	5.80	5.48	5.38	5.15	4.73	4.59	4.32
225.0	6.31	6.03	5.80	5.52	5.29	4.97	4.73	4.50	4.22
270.0	6.82	6.59	6.40	6.08	5.89	5.61	5.38	5.15	4.78
315.0	7.33	7.15	6.96	6.82	6.54	6.40	6.13	5.85	5.66
360.0	6.36	6.13	5.89	5.71	5.43	5.20	4.92	4.59	4.36

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.22	3.99	3.90	3.53	3.39	3.20	3.06	2.83	2.64
45.0	4.36	4.13	3.85	3.71	3.53	3.29	3.11	2.92	2.74
90.0	3.76	3.53	3.39	3.25	3.02	2.88	2.69	2.51	2.41
135.0	6.26	6.08	5.99	5.94	5.80	5.71	5.66	5.57	5.52
180.0	4.18	3.94	3.67	3.53	3.39	3.16	2.97	2.78	2.64
225.0	3.99	3.81	3.62	3.43	3.16	3.02	2.88	2.69	2.46
270.0	4.41	4.18	4.04	3.76	3.53	3.39	3.20	2.97	2.78
315.0	5.29	5.10	4.92	4.73	4.50	4.27	4.13	4.04	3.85
360.0	4.22	3.99	3.90	3.53	3.39	3.20	3.06	2.83	2.64

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.37	2.23	2.13	1.95	1.86	1.72	1.62	1.53	1.44
45.0	2.51	2.32	2.09	2.00	1.76	1.58	1.48	1.35	1.35
90.0	2.18	2.13	1.95	1.81	1.67	1.58	1.53	1.44	1.30
135.0	5.48	5.43	5.34	5.24	5.10	4.69	4.27	3.67	3.43
180.0	2.46	2.27	2.09	1.95	1.81	1.67	1.58	1.48	1.39
225.0	2.23	2.09	1.90	1.76	1.67	1.48	1.39	1.35	1.25
270.0	2.60	2.51	2.23	2.09	2.00	1.81	1.67	1.58	1.44
315.0	3.67	3.53	3.29	3.25	3.06	2.83	2.64	2.41	2.23
360.0	2.37	2.23	2.13	1.95	1.86	1.72	1.62	1.53	1.44

Intensity data(cd)

C/γ(°)	90.0
0.0	1.39
45.0	1.21
90.0	1.25
135.0	2.97
180.0	1.30
225.0	1.25
270.0	1.39
315.0	2.23
360.0	1.39