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

Nata

LumCAT: 2-1747-N
Luminaire: 92.70.124.00
Report No: 200407-B033
Test No: 200407-C033
LampCAT: BRIDGELUX V10
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): 8.1100
PF: 0.8950
Ballast type: AC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 753.48
Efficiency(%): 82.80%
Lumens(lm)/Power(W): 92.91
Central intensity(cd): 1508.503
Maximum intensity(cd): 1508.503
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=39.2
[C90/270]Total=39.2
Field angle(10%Imax): [C0/180]Total=67.4
[C90/270]Total=67.4
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.64 C90_270=0.64
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.80%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.088%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1508.503	0.000	0	.000%	.000%
1.0	1506.589	1.443	1.443	.159%	.191%
2.0	1502.181	4.318	5.761	.475%	.765%
3.0	1496.438	7.172	12.933	.788%	1.716%
4.0	1485.649	9.982	22.915	1.097%	3.041%
5.0	1470.510	12.717	35.632	1.397%	4.729%
6.0	1452.239	15.360	50.992	1.688%	6.768%
7.0	1424.687	17.857	68.849	1.962%	9.137%
8.0	1393.481	20.169	89.018	2.216%	11.814%
9.0	1356.880	22.290	111.308	2.449%	14.773%
10.0	1311.115	24.144	135.453	2.653%	17.977%
11.0	1266.104	25.752	161.204	2.830%	21.395%
12.0	1212.160	27.091	188.295	2.977%	24.990%
13.0	1156.592	28.111	216.406	3.089%	28.721%
14.0	1090.432	28.762	245.168	3.161%	32.538%
15.0	1020.729	28.983	274.151	3.185%	36.385%
16.0	976.924	29.271	303.422	3.217%	40.269%
17.0	898.172	29.200	332.623	3.209%	44.145%
18.0	851.496	28.848	361.471	3.170%	47.973%
19.0	791.299	28.581	390.052	3.141%	51.767%
20.0	730.249	27.849	417.901	3.060%	55.463%
21.0	670.250	26.892	444.793	2.955%	59.032%
22.0	616.822	25.864	470.657	2.842%	62.464%
23.0	562.275	24.741	495.398	2.719%	65.748%
24.0	517.449	23.607	519.005	2.594%	68.881%
25.0	474.660	22.558	541.563	2.479%	71.875%
26.0	435.675	21.489	563.052	2.361%	74.727%
27.0	400.467	20.456	583.508	2.248%	77.442%
28.0	361.668	19.296	602.804	2.120%	80.003%
29.0	326.801	18.012	620.816	1.979%	82.393%
30.0	290.033	16.654	637.47	1.830%	84.603%
31.0	254.209	15.145	652.616	1.664%	86.614%
32.0	227.748	13.807	666.423	1.517%	88.446%
33.0	177.818	11.948	678.371	1.313%	90.032%
34.0	138.827	9.583	687.954	1.053%	91.304%
35.0	96.931	7.322	695.276	.805%	92.275%
36.0	70.603	5.334	700.61	.586%	92.983%
37.0	52.877	4.027	704.637	.443%	93.518%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	42.152	3.172	707.809	.349%	93.939%
39.0	35.974	2.667	710.476	.293%	94.293%
40.0	31.444	2.351	712.827	.258%	94.605%
41.0	27.917	2.114	714.941	.232%	94.885%
42.0	25.406	1.937	716.878	.213%	95.142%
43.0	23.271	1.803	718.681	.198%	95.382%
44.0	21.421	1.687	720.368	.185%	95.605%
45.0	19.948	1.590	721.958	.175%	95.816%
46.0	18.637	1.509	723.467	.166%	96.017%
47.0	17.471	1.436	724.903	.158%	96.207%
48.0	16.415	1.370	726.273	.151%	96.389%
49.0	15.458	1.309	727.582	.144%	96.563%
50.0	14.704	1.258	728.839	.138%	96.730%
51.0	13.886	1.210	730.049	.133%	96.890%
52.0	13.208	1.163	731.212	.128%	97.045%
53.0	12.546	1.120	732.332	.123%	97.193%
54.0	11.885	1.077	733.409	.118%	97.336%
55.0	11.317	1.036	734.444	.114%	97.474%
56.0	10.737	0.997	735.441	.110%	97.606%
57.0	10.244	0.959	736.4	.105%	97.733%
58.0	9.762	0.925	737.325	.102%	97.856%
59.0	9.310	0.892	738.217	.098%	97.974%
60.0	8.892	0.860	739.077	.094%	98.088%
61.0	8.486	0.829	739.906	.091%	98.198%
62.0	8.115	0.800	740.706	.088%	98.305%
63.0	7.744	0.771	741.477	.085%	98.407%
64.0	7.413	0.744	742.221	.082%	98.506%
65.0	7.088	0.718	742.939	.079%	98.601%
66.0	6.757	0.691	743.629	.076%	98.693%
67.0	6.485	0.666	744.295	.073%	98.781%
68.0	6.241	0.645	744.94	.071%	98.867%
69.0	5.951	0.622	745.562	.068%	98.949%
70.0	5.655	0.596	746.158	.066%	99.028%
71.0	5.441	0.574	746.732	.063%	99.104%
72.0	5.157	0.551	747.283	.061%	99.177%
73.0	4.919	0.527	747.81	.058%	99.247%
74.0	4.698	0.506	748.315	.056%	99.315%
75.0	4.437	0.483	748.798	.053%	99.379%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.223	0.460	749.258	.051%	99.440%
77.0	3.973	0.437	749.694	.048%	99.498%
78.0	3.741	0.413	750.107	.045%	99.552%
79.0	3.538	0.391	750.499	.043%	99.604%
80.0	3.324	0.370	750.869	.041%	99.653%
81.0	3.115	0.348	751.217	.038%	99.700%
82.0	2.923	0.327	751.544	.036%	99.743%
83.0	2.744	0.308	751.852	.034%	99.784%
84.0	2.564	0.289	752.141	.032%	99.822%
85.0	2.396	0.271	752.412	.030%	99.858%
86.0	2.233	0.253	752.665	.028%	99.892%
87.0	2.036	0.234	752.899	.026%	99.923%
88.0	1.816	0.211	753.11	.023%	99.951%
89.0	1.700	0.193	753.302	.021%	99.976%
90.0	1.543	0.178	753.48	.020%	100.000%

Zonal flux distribution table

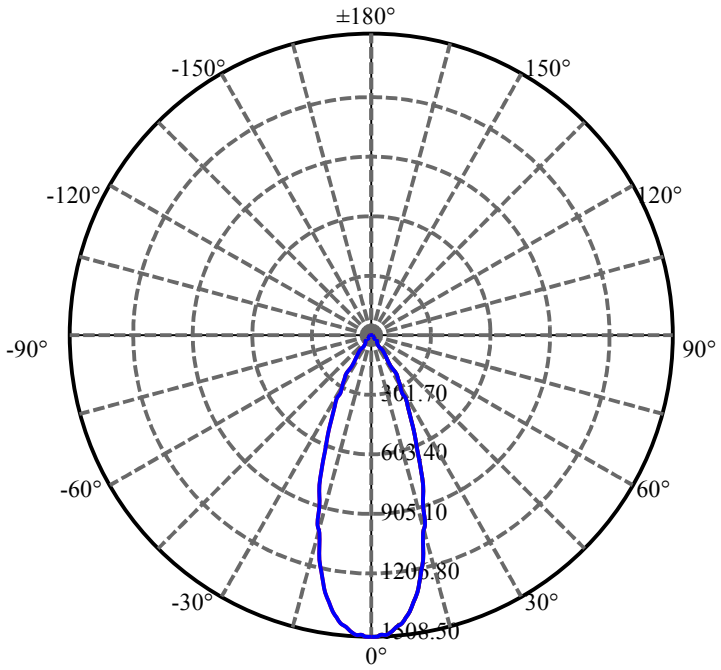
ZONAL LUMEN SUMMARY

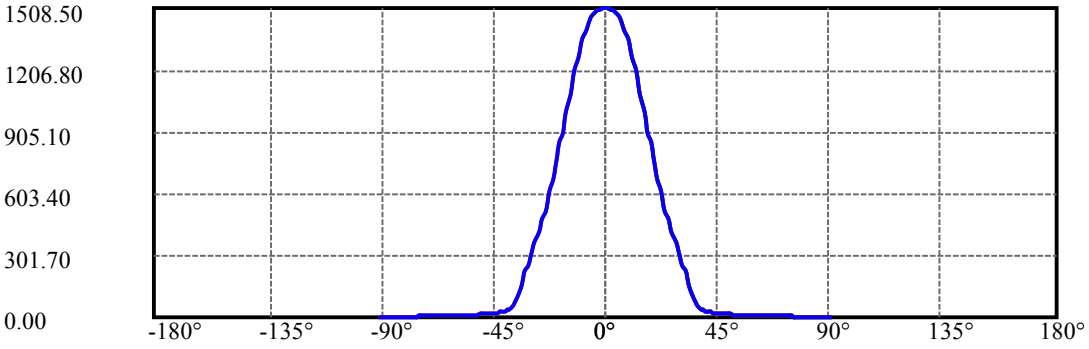
Zone	Lumens	%Lamp	%Fixt
0-30	637.47	70.05%	84.60%
0-40	712.83	78.33%	94.60%
0-60	739.08	81.22%	98.09%
0-90	753.30	82.78%	99.98%
0-120	753.30	82.78%	99.98%
0-180	753.48	82.80%	100.00%
60-90	15.09	1.66%	2.00%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.00	602.78	66.24%	80.00%

ZONAL LUMEN SUMMARY

0-10	135.45
10-20	282.45
20-30	219.57
30-40	75.36
40-50	16.01
50-60	10.24
60-70	7.08
70-80	4.71
80-90	2.43
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):

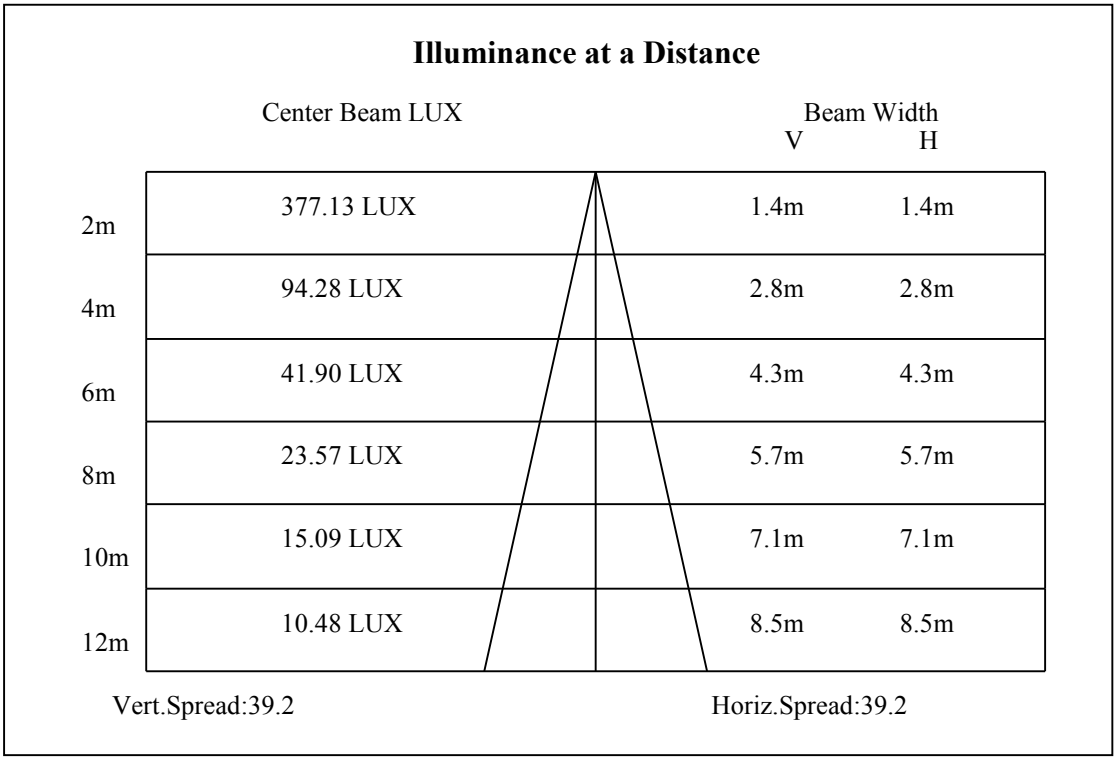
C0/C180:

C90/C270:

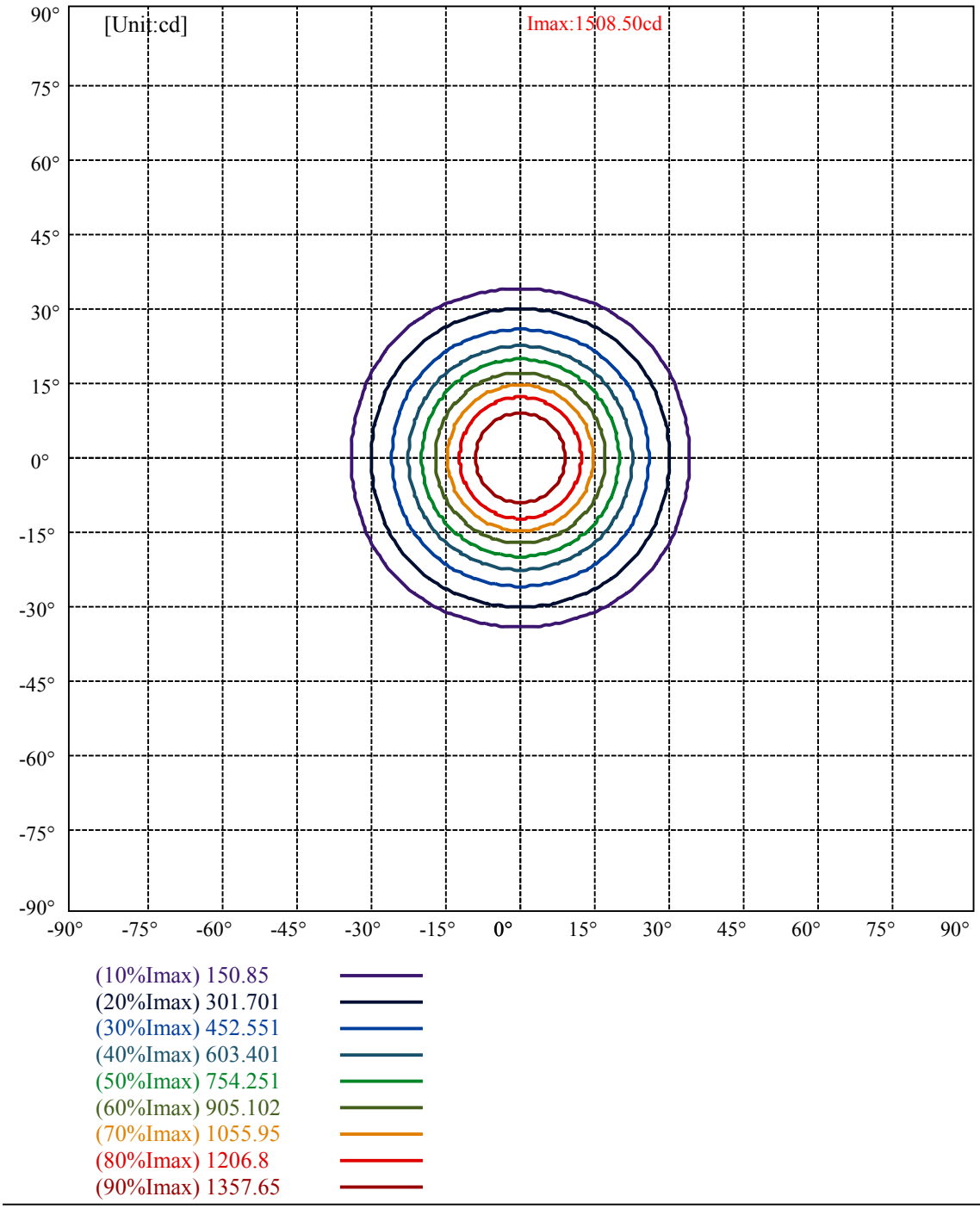
Field angle(10%Imax):C0/180Left:33.7 Right:33.7
:C90/270Left:33.7 Right:33.7

Beam Angle(50%Imax):C0/180Left:19.6 Right:19.6
:C90/270Left:19.6 Right:19.6

Lux distance Curve



ISO-Intensity(V-H)



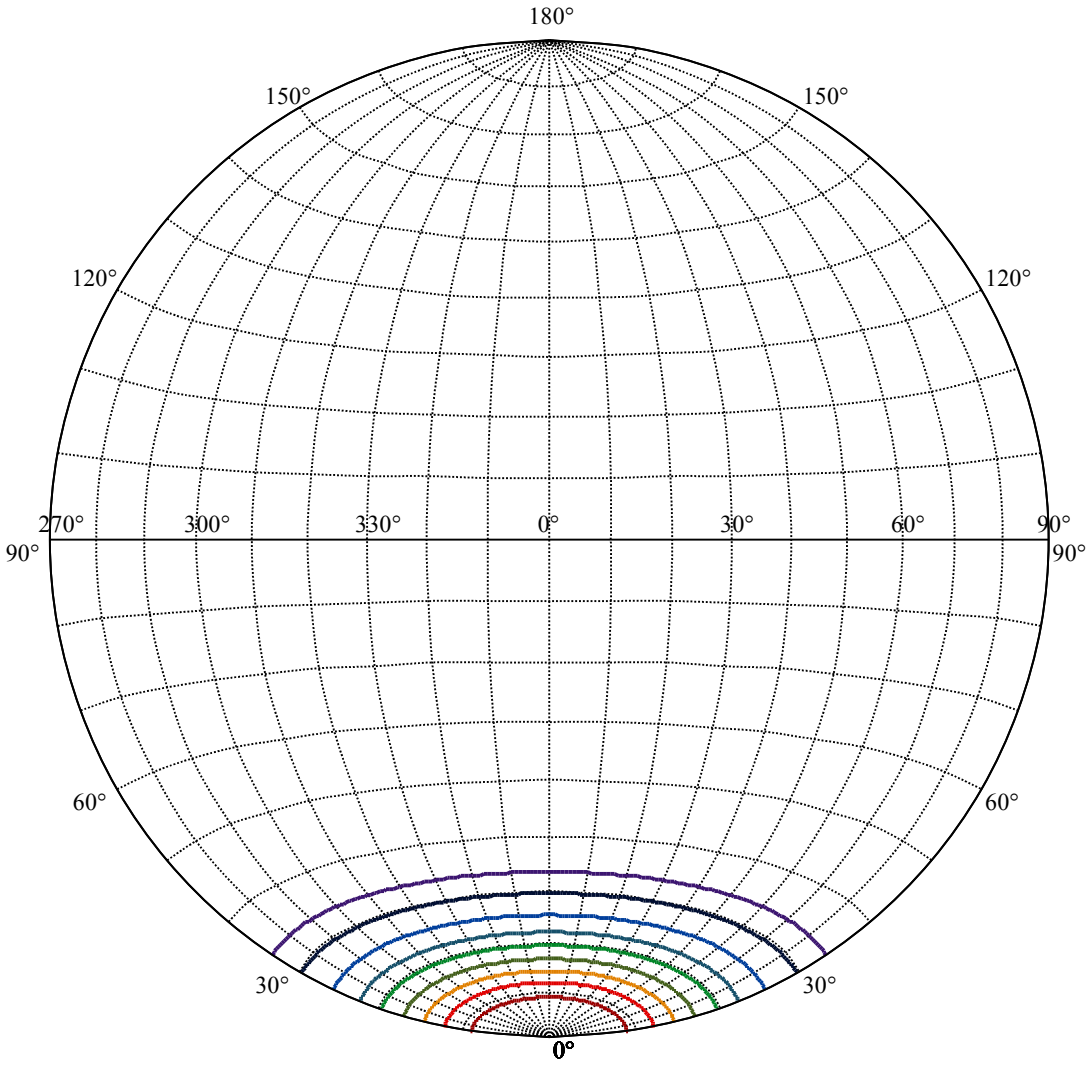
(10%Imax) 150.85
(20%Imax) 301.701
(30%Imax) 452.551
(40%Imax) 603.401
(50%Imax) 754.251
(60%Imax) 905.102
(70%Imax) 1055.95
(80%Imax) 1206.8
(90%Imax) 1357.65

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:1508.50

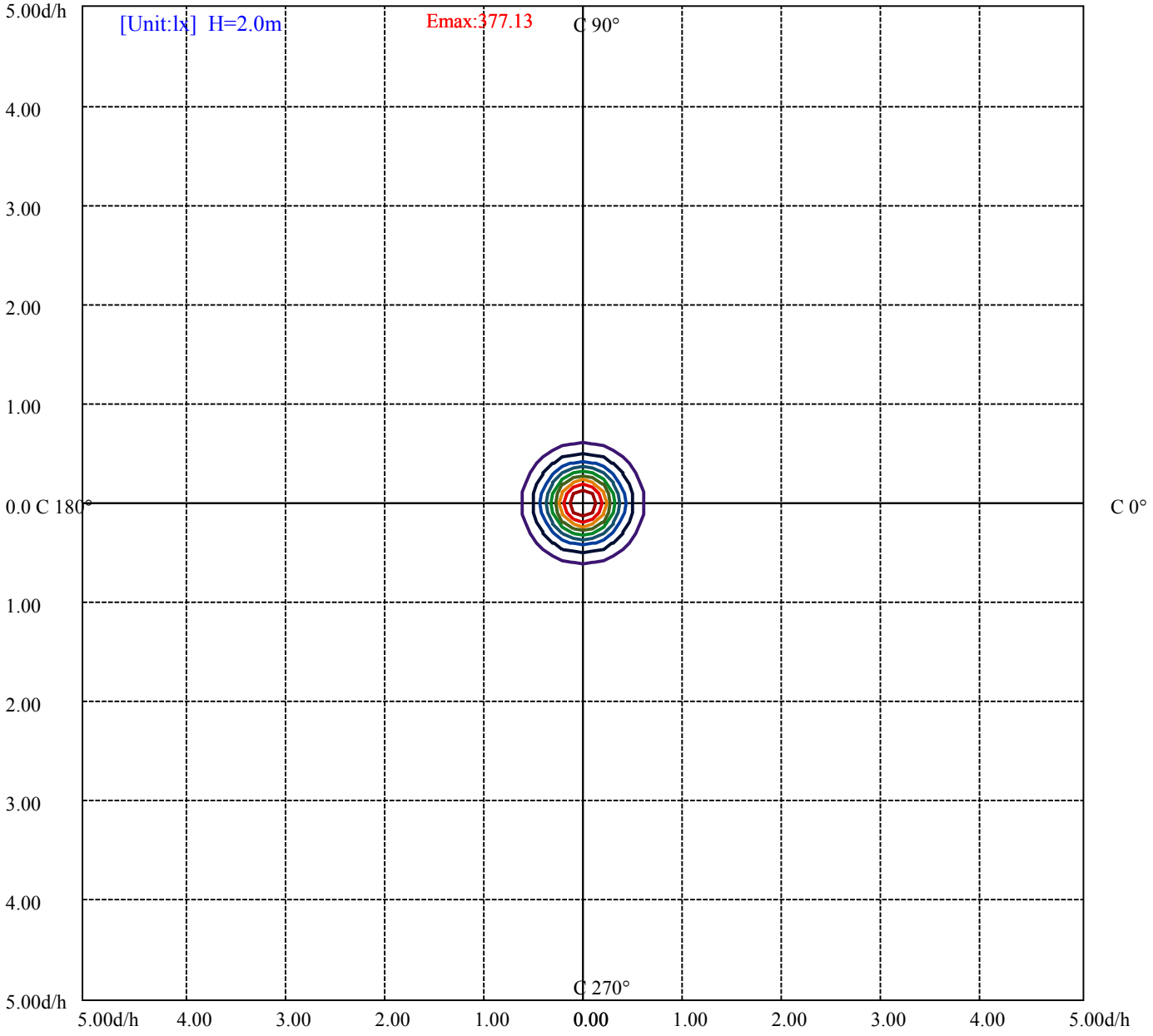
(10%Imax) 150.85
(20%Imax) 301.701
(30%Imax) 452.551
(40%Imax) 603.401
(50%Imax) 754.251
(60%Imax) 905.102
(70%Imax) 1055.95
(80%Imax) 1206.8
(90%Imax) 1357.65

Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 6.81

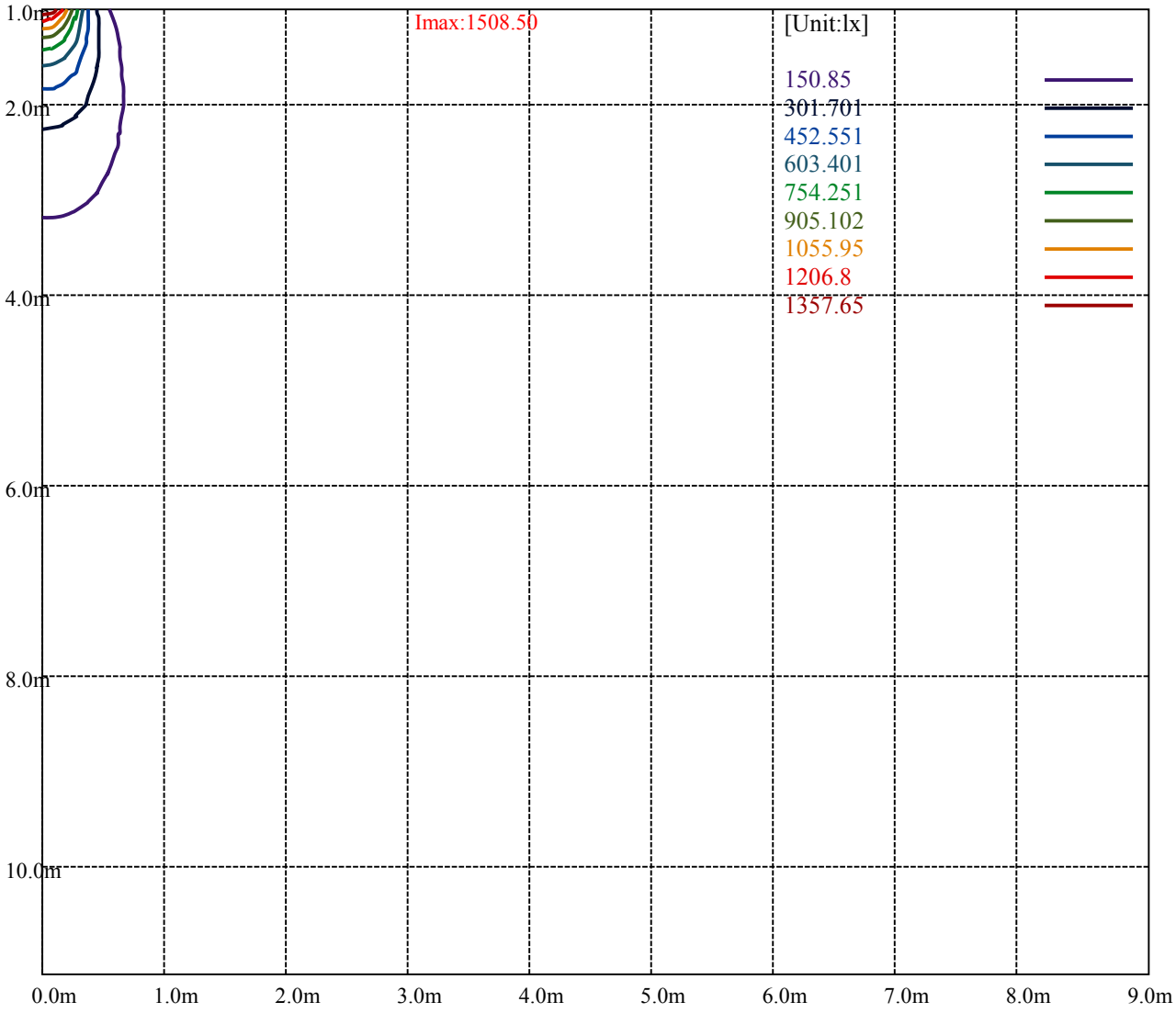
ISO illuminance diagram



(10%Emax) 37.7125
(20%Emax) 75.42525
(30%Emax) 113.1377
(40%Emax) 150.8503
(50%Emax) 188.5627
(60%Emax) 226.2755
(70%Emax) 263.9875
(80%Emax) 301.7
(90%Emax) 339.4125

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

Luminance Limitting Curve(no luminous side)

Luminance Table

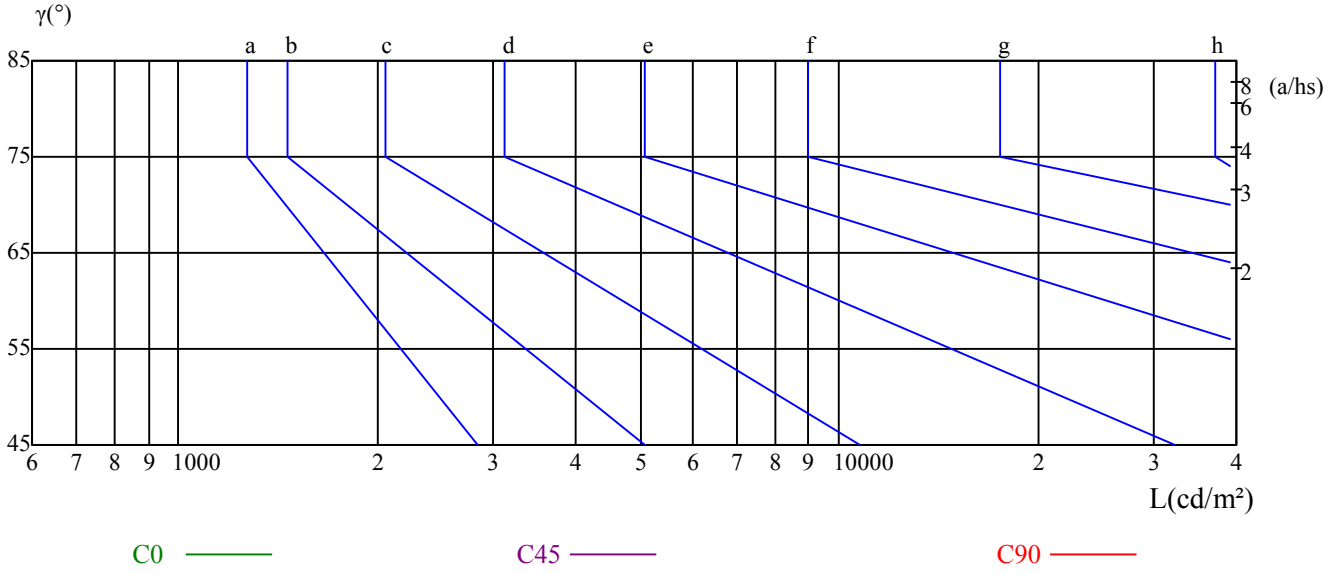
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

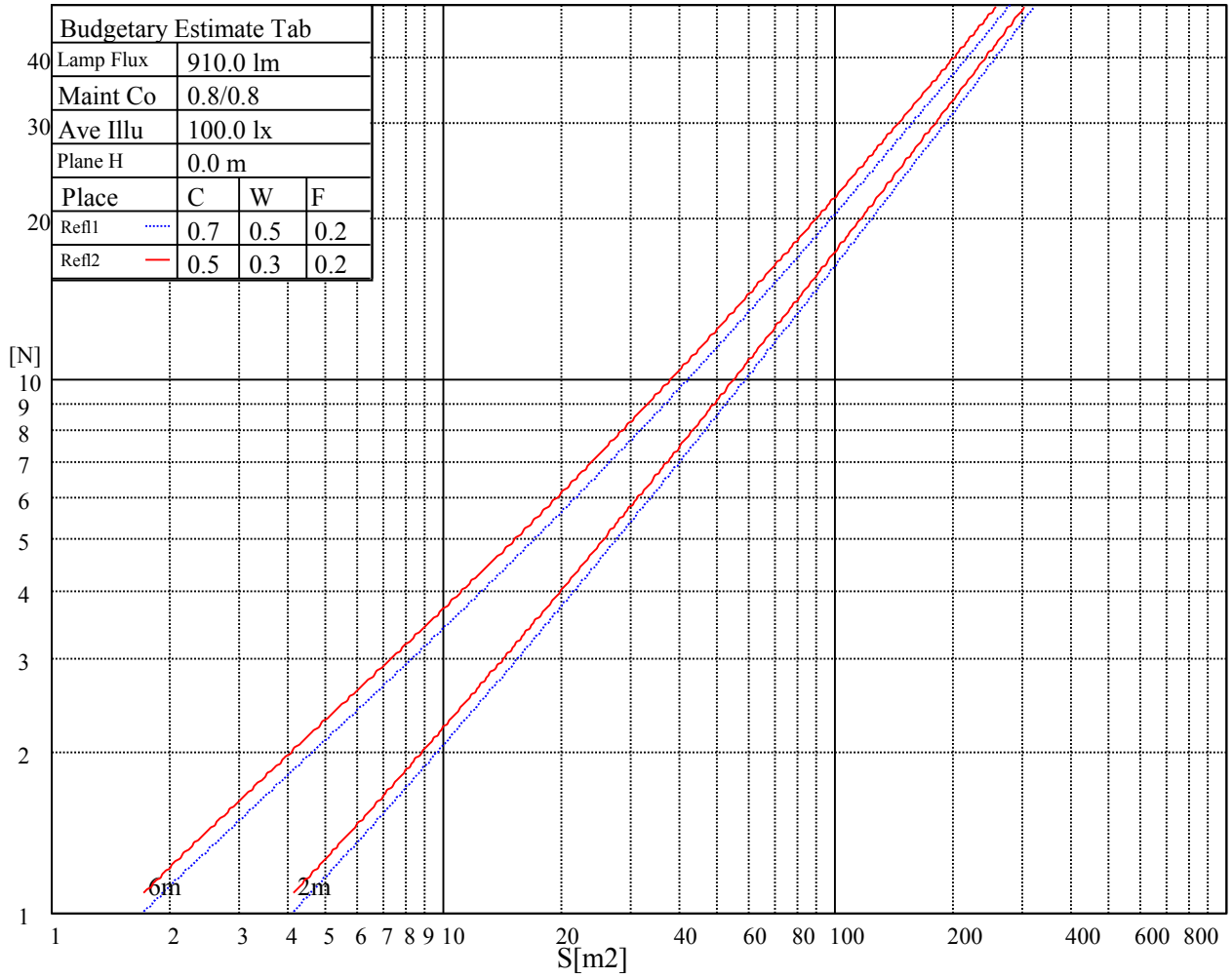
Glare Table

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



Budgetary Estimate Table

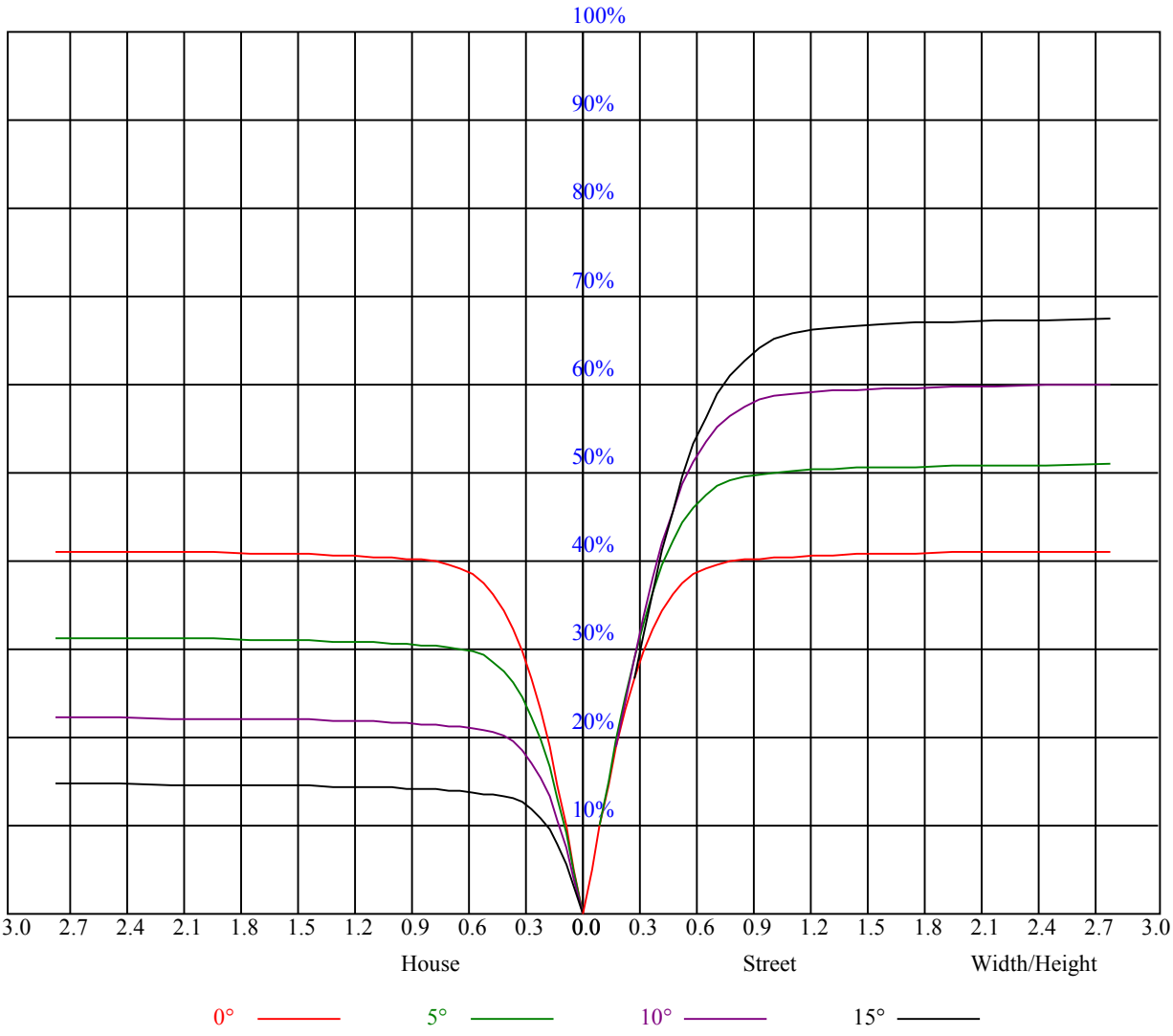


Equipment: GMS 1800 Date: 2020/4/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

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	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.83
1	0.92	0.90	0.88	0.90	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.86	0.83	0.81	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.76	0.78	0.76	0.75	0.74
3	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.69
4	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.62
6	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.60	0.59
7	0.66	0.62	0.59	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
8	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.54
9	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52
10	0.58	0.54	0.51	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.50	0.56	0.53	0.50	0.49

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	1505.37	1497.48	1489.13	1484.03	1474.28	1463.14	1447.37	1431.59	1402.82
45.0	1509.55	1508.62	1507.23	1507.23	1499.34	1484.49	1473.35	1445.05	1423.24
90.0	1512.80	1511.87	1506.30	1497.95	1481.71	1464.07	1439.48	1409.78	1370.80
135.0	1506.30	1513.72	1513.26	1509.08	1496.55	1484.49	1461.29	1434.37	1398.64
180.0	1505.37	1509.08	1507.69	1502.59	1491.91	1472.42	1457.58	1415.35	1374.05
225.0	1509.55	1502.59	1498.87	1486.81	1469.18	1445.05	1416.28	1376.83	1334.61
270.0	1512.80	1507.69	1503.98	1499.80	1493.77	1483.10	1467.78	1447.37	1434.37
315.0	1506.30	1501.66	1490.99	1484.03	1478.46	1467.32	1454.79	1437.16	1409.32
360.0	1505.37	1497.48	1489.13	1484.03	1474.28	1463.14	1447.37	1431.59	1402.82

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1370.80	1331.82	1295.63	1234.84	1181.48	1135.07	1060.83	1003.29	920.78
45.0	1389.36	1351.78	1302.59	1251.08	1192.15	1131.82	1071.04	1010.25	944.82
90.0	1323.93	1271.96	1211.17	1174.98	1087.28	1048.30	901.43	901.43	851.08
135.0	1353.63	1302.12	1244.12	1184.72	1149.92	1065.93	1001.43	963.38	873.82
180.0	1352.70	1285.88	1254.33	1198.64	1137.39	1074.28	1013.03	952.71	888.21
225.0	1286.35	1233.45	1176.84	1112.80	1051.55	925.98	899.90	885.89	822.08
270.0	1392.61	1360.59	1334.61	1272.43	1238.09	1181.48	1119.30	1058.97	995.40
315.0	1385.65	1351.31	1309.55	1267.79	1214.89	1160.59	1098.88	1039.48	889.18
360.0	1370.80	1331.82	1295.63	1234.84	1181.48	1135.07	1060.83	1003.29	920.78

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	896.61	836.84	777.81	716.70	660.78	604.50	554.10	512.43	472.39
45.0	883.10	817.67	752.71	692.85	634.84	581.94	530.44	479.86	434.85
90.0	788.07	723.24	665.56	607.70	556.47	511.36	469.23	428.16	403.29
135.0	837.16	773.59	710.95	650.62	592.62	542.50	497.95	458.05	418.60
180.0	826.49	762.45	703.52	645.52	588.44	537.40	490.53	449.23	409.32
225.0	757.67	693.87	636.38	580.18	529.00	480.74	439.53	405.43	368.16
270.0	933.68	874.75	812.10	751.32	692.85	638.09	587.98	539.25	495.17
315.0	889.18	847.97	782.96	717.12	679.58	601.67	569.83	524.87	483.62
360.0	896.61	836.84	777.81	716.70	660.78	604.50	554.10	512.43	472.39

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	435.17	410.39	360.65	327.10	302.09	258.14	212.99	169.09	126.77
45.0	409.79	349.93	315.59	297.03	263.62	242.27	242.27	154.34	116.94
90.0	355.73	321.76	297.03	234.34	188.95	161.85	121.34	87.10	60.32
135.0	380.09	345.29	309.09	266.87	239.95	239.95	140.97	103.02	72.67
180.0	387.51	340.65	308.16	285.43	242.74	242.74	145.06	106.54	75.50
225.0	336.70	308.86	274.71	236.01	202.92	161.76	114.43	87.89	62.83
270.0	453.87	412.11	381.02	338.33	298.88	264.55	238.56	238.56	135.96
315.0	444.87	404.36	368.16	335.17	294.52	250.72	206.91	164.08	124.45
360.0	435.17	410.39	360.65	327.10	302.09	258.14	212.99	169.09	126.77

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	90.12	62.97	48.21	40.37	34.06	29.93	26.96	24.50	22.46
45.0	86.17	62.41	48.54	40.88	34.76	30.58	28.07	25.06	22.88
90.0	45.57	38.24	32.48	28.77	26.08	23.76	21.81	20.23	18.89
135.0	51.93	41.95	35.64	31.18	28.26	25.94	24.04	22.41	21.02
180.0	53.55	42.23	35.87	30.90	27.56	25.10	22.97	21.11	19.63
225.0	47.70	40.37	34.38	30.12	27.24	24.78	22.64	20.93	19.44
270.0	99.67	70.77	52.85	43.94	37.08	32.02	28.54	25.75	23.39
315.0	90.12	64.08	49.23	41.62	36.52	31.23	28.21	26.17	23.67
360.0	90.12	62.97	48.21	40.37	34.06	29.93	26.96	24.50	22.46

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	20.70	19.26	17.96	16.80	15.73	14.94	14.11	13.50	12.71
45.0	21.39	19.49	18.42	17.22	16.10	15.13	14.29	13.50	12.71
90.0	17.59	16.52	15.55	14.71	13.83	13.46	12.44	11.74	11.37
135.0	19.77	18.70	17.73	16.89	16.06	15.36	14.66	14.29	13.36
180.0	18.33	17.12	16.52	15.45	14.34	13.83	13.13	12.39	11.79
225.0	18.14	16.94	15.96	15.03	14.11	13.32	12.67	11.97	11.60
270.0	21.44	20.42	18.38	17.17	16.47	15.50	14.57	13.78	13.04
315.0	22.23	20.65	19.26	18.05	17.03	16.10	15.22	14.48	13.78
360.0	20.70	19.26	17.96	16.80	15.73	14.94	14.11	13.50	12.71

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.97	11.51	10.90	10.26	9.79	9.37	8.91	8.45	8.07
45.0	12.06	11.42	10.81	10.16	9.74	9.28	8.82	8.40	8.07
90.0	10.77	10.16	9.65	9.23	8.77	8.31	7.93	7.56	7.19
135.0	12.99	12.39	11.74	11.55	11.04	10.63	10.26	9.88	9.47
180.0	11.14	10.58	10.02	9.51	9.10	8.68	8.21	7.89	7.56
225.0	10.63	10.35	9.84	9.37	8.91	8.49	8.12	7.75	7.38
270.0	12.34	11.69	11.09	10.53	9.93	9.47	9.05	8.58	8.17
315.0	13.18	12.44	11.83	11.32	10.81	10.26	9.84	9.37	9.00
360.0	11.97	11.51	10.90	10.26	9.79	9.37	8.91	8.45	8.07

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.70	7.38	7.01	6.68	6.40	6.08	5.80	5.52	5.34
45.0	7.75	7.24	6.91	6.73	6.31	6.17	5.85	5.52	5.29
90.0	6.82	6.54	6.26	5.94	5.66	5.43	5.15	4.87	4.64
135.0	9.14	8.82	8.54	8.17	7.89	7.61	7.42	7.10	6.87
180.0	7.15	6.82	6.54	6.26	5.94	5.80	5.52	5.15	5.01
225.0	7.01	6.68	6.45	6.03	5.80	5.52	5.24	4.92	4.69
270.0	7.80	7.42	7.05	6.68	6.45	6.22	5.85	5.61	5.34
315.0	8.58	8.40	7.93	7.56	7.42	7.10	6.77	6.54	6.36
360.0	7.70	7.38	7.01	6.68	6.40	6.08	5.80	5.52	5.34

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.97	4.73	4.55	4.22	4.08	3.81	3.48	3.34	3.11
45.0	5.01	4.73	4.45	4.22	3.99	3.71	3.48	3.25	3.02
90.0	4.36	4.13	3.94	3.67	3.48	3.25	3.02	2.83	2.64
135.0	6.68	6.54	6.26	6.17	5.99	5.71	5.57	5.43	5.24
180.0	4.73	4.45	4.22	3.99	3.71	3.43	3.29	3.02	2.83
225.0	4.45	4.18	4.08	3.67	3.48	3.29	3.02	2.78	2.55
270.0	5.06	4.87	4.55	4.32	4.13	3.81	3.53	3.34	3.16
315.0	5.99	5.71	5.52	5.24	4.92	4.78	4.55	4.32	4.04
360.0	4.97	4.73	4.55	4.22	4.08	3.81	3.48	3.34	3.11

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.92	2.64	2.46	2.32	2.09	1.90	1.76	1.62	1.53
45.0	2.74	2.55	2.27	2.13	1.95	1.76	1.58	1.44	1.35
90.0	2.46	2.27	2.13	1.95	1.76	1.76	1.62	1.44	1.35
135.0	5.10	4.97	4.87	4.78	4.55	4.22	3.85	3.25	2.97
180.0	2.60	2.46	2.23	2.00	1.86	1.72	1.58	1.48	1.39
225.0	2.37	2.09	2.00	1.76	1.67	1.53	1.39	1.25	1.21
270.0	2.88	2.69	2.51	2.27	2.13	1.90	1.76	1.62	1.58
315.0	3.85	3.71	3.48	3.29	3.16	3.06	2.74	2.41	2.23
360.0	2.92	2.64	2.46	2.32	2.09	1.90	1.76	1.62	1.53

Intensity data(cd)

C/γ(°)	90.0
0.0	1.48
45.0	1.30
90.0	1.30
135.0	2.18
180.0	1.35
225.0	1.21
270.0	1.39
315.0	2.13
360.0	1.48