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

Nata

LumCAT: 2-1746-N
Luminaire: 92.70.124.00
Report No: 200407-B034
Test No: 200407-C034
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): 8.1000
PF: 0.8950
Ballast type: AC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 747.72
Efficiency(%): 82.17%
Lumens(lm)/Power(W): 92.31
Central intensity(cd): 2687.496
Maximum intensity(cd): 2687.496
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.8
[C90/270]Total=23.8
Field angle(10%Imax): [C0/180]Total=59.8
[C90/270]Total=59.8
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.17%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.249%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2687.496	0.000	0	.000%	.000%
1.0	2674.561	2.566	2.566	.282%	.343%
2.0	2639.875	7.628	10.193	.838%	1.363%
3.0	2577.056	12.477	22.671	1.371%	3.032%
4.0	2499.679	16.993	39.664	1.867%	5.305%
5.0	2398.925	21.074	60.738	2.316%	8.123%
6.0	2267.604	24.524	85.261	2.695%	11.403%
7.0	2129.380	27.292	112.553	2.999%	15.053%
8.0	1979.439	29.406	141.959	3.231%	18.986%
9.0	1823.640	30.822	172.781	3.387%	23.108%
10.0	1657.110	31.500	204.281	3.461%	27.321%
11.0	1502.239	31.568	235.849	3.469%	31.543%
12.0	1329.734	30.958	266.807	3.402%	35.683%
13.0	1151.122	29.442	296.248	3.235%	39.620%
14.0	1034.876	27.981	324.229	3.075%	43.363%
15.0	924.285	26.896	351.125	2.956%	46.960%
16.0	831.995	25.734	376.86	2.828%	50.401%
17.0	747.732	24.601	401.46	2.703%	53.692%
18.0	672.924	23.424	424.884	2.574%	56.824%
19.0	609.299	22.308	447.192	2.451%	59.808%
20.0	554.363	21.298	468.49	2.340%	62.656%
21.0	506.609	20.373	488.863	2.239%	65.381%
22.0	465.269	19.530	508.393	2.146%	67.993%
23.0	430.136	18.788	527.181	2.065%	70.506%
24.0	401.128	18.174	545.355	1.997%	72.936%
25.0	374.307	17.632	562.987	1.938%	75.294%
26.0	354.440	17.202	580.189	1.890%	77.595%
27.0	331.053	16.771	596.96	1.843%	79.838%
28.0	312.068	16.282	613.243	1.789%	82.015%
29.0	291.372	15.788	629.03	1.735%	84.127%
30.0	266.233	15.055	644.085	1.654%	86.140%
31.0	234.644	13.939	658.024	1.532%	88.005%
32.0	205.677	12.615	670.639	1.386%	89.692%
33.0	173.572	11.173	681.812	1.228%	91.186%
34.0	124.738	9.028	690.839	.992%	92.393%
35.0	90.730	6.692	697.531	.735%	93.288%
36.0	64.164	4.932	702.463	.542%	93.948%
37.0	46.311	3.603	706.066	.396%	94.430%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	36.885	2.777	708.843	.305%	94.801%
39.0	30.464	2.299	711.142	.253%	95.109%
40.0	26.119	1.973	713.115	.217%	95.372%
41.0	23.254	1.758	714.873	.193%	95.608%
42.0	20.876	1.603	716.477	.176%	95.822%
43.0	19.037	1.478	717.955	.162%	96.020%
44.0	17.320	1.372	719.327	.151%	96.203%
45.0	16.050	1.282	720.61	.141%	96.375%
46.0	14.901	1.210	721.82	.133%	96.537%
47.0	13.991	1.149	722.969	.126%	96.690%
48.0	13.086	1.095	724.064	.120%	96.837%
49.0	12.355	1.045	725.109	.115%	96.976%
50.0	11.705	1.003	726.112	.110%	97.111%
51.0	11.114	0.965	727.077	.106%	97.240%
52.0	10.632	0.933	728.01	.103%	97.365%
53.0	10.232	0.908	728.918	.100%	97.486%
54.0	9.843	0.885	729.803	.097%	97.604%
55.0	9.484	0.863	730.665	.095%	97.720%
56.0	9.107	0.840	731.505	.092%	97.832%
57.0	8.683	0.813	732.319	.089%	97.941%
58.0	8.358	0.788	733.107	.087%	98.046%
59.0	8.080	0.769	733.875	.084%	98.149%
60.0	7.784	0.749	734.625	.082%	98.249%
61.0	7.506	0.730	735.355	.080%	98.347%
62.0	7.262	0.712	736.066	.078%	98.442%
63.0	7.013	0.694	736.76	.076%	98.535%
64.0	6.723	0.674	737.434	.074%	98.625%
65.0	6.456	0.652	738.087	.072%	98.712%
66.0	6.177	0.630	738.717	.069%	98.796%
67.0	5.911	0.608	739.325	.067%	98.878%
68.0	5.655	0.586	739.911	.064%	98.956%
69.0	5.383	0.563	740.474	.062%	99.031%
70.0	5.139	0.540	741.014	.059%	99.104%
71.0	4.884	0.518	741.532	.057%	99.173%
72.0	4.658	0.496	742.028	.055%	99.239%
73.0	4.437	0.476	742.504	.052%	99.303%
74.0	4.200	0.454	742.958	.050%	99.364%
75.0	3.979	0.432	743.39	.047%	99.421%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.793	0.413	743.803	.045%	99.477%
77.0	3.614	0.395	744.198	.043%	99.529%
78.0	3.411	0.376	744.574	.041%	99.580%
79.0	3.208	0.356	744.929	.039%	99.627%
80.0	3.034	0.336	745.266	.037%	99.672%
81.0	2.854	0.318	745.584	.035%	99.715%
82.0	2.680	0.300	745.884	.033%	99.755%
83.0	2.529	0.283	746.167	.031%	99.793%
84.0	2.367	0.267	746.434	.029%	99.829%
85.0	2.233	0.251	746.685	.028%	99.862%
86.0	2.094	0.237	746.922	.026%	99.894%
87.0	1.961	0.222	747.144	.024%	99.923%
88.0	1.816	0.207	747.35	.023%	99.951%
89.0	1.665	0.191	747.541	.021%	99.977%
90.0	1.526	0.175	747.716	.019%	100.000%

Zonal flux distribution table

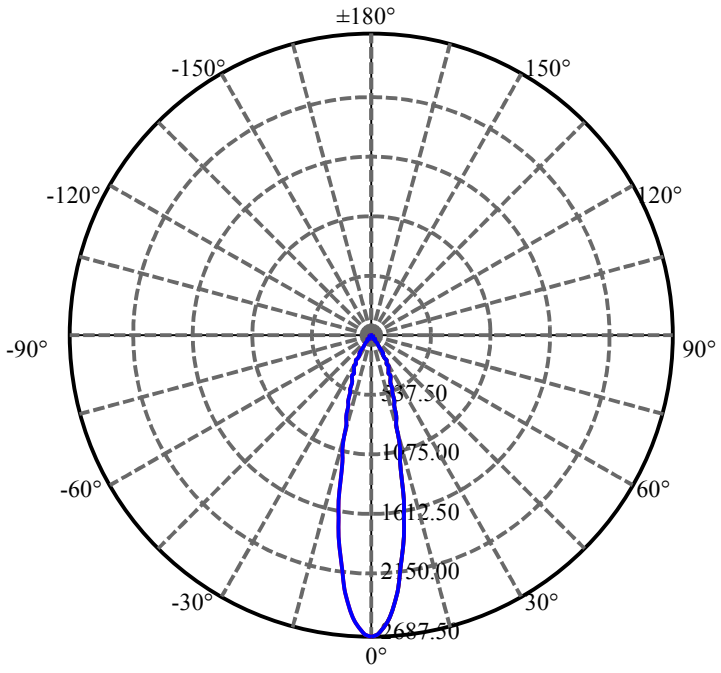
ZONAL LUMEN SUMMARY

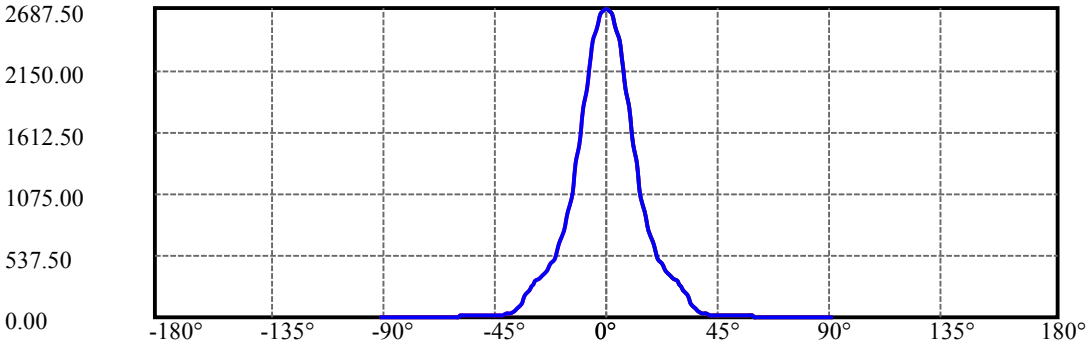
Zone	Lumens	%Lamp	%Fixt
0-30	644.09	70.78%	86.14%
0-40	713.12	78.36%	95.37%
0-60	734.62	80.73%	98.25%
0-90	747.54	82.15%	99.98%
0-120	747.54	82.15%	99.98%
0-180	747.72	82.17%	100.00%
60-90	13.67	1.50%	1.83%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.07	598.17	65.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	204.28
10-20	264.21
20-30	175.60
30-40	69.03
40-50	13.00
50-60	8.51
60-70	6.39
70-80	4.25
80-90	2.28
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):

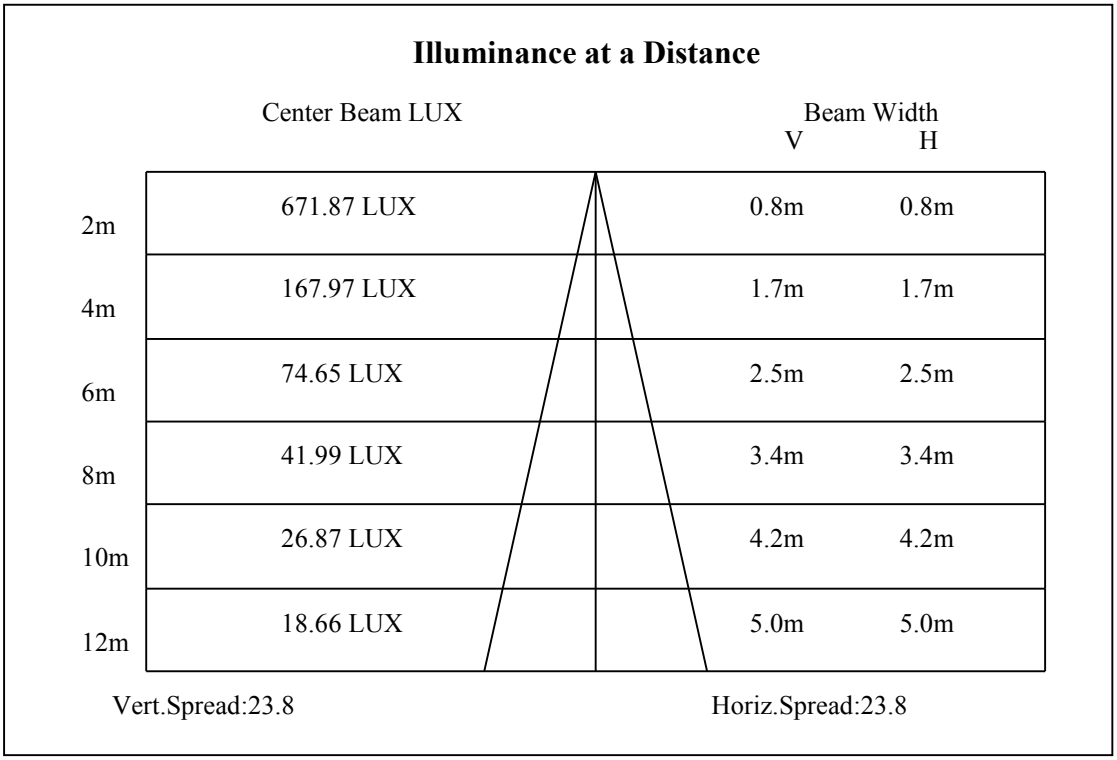
C0/C180:

C90/C270:

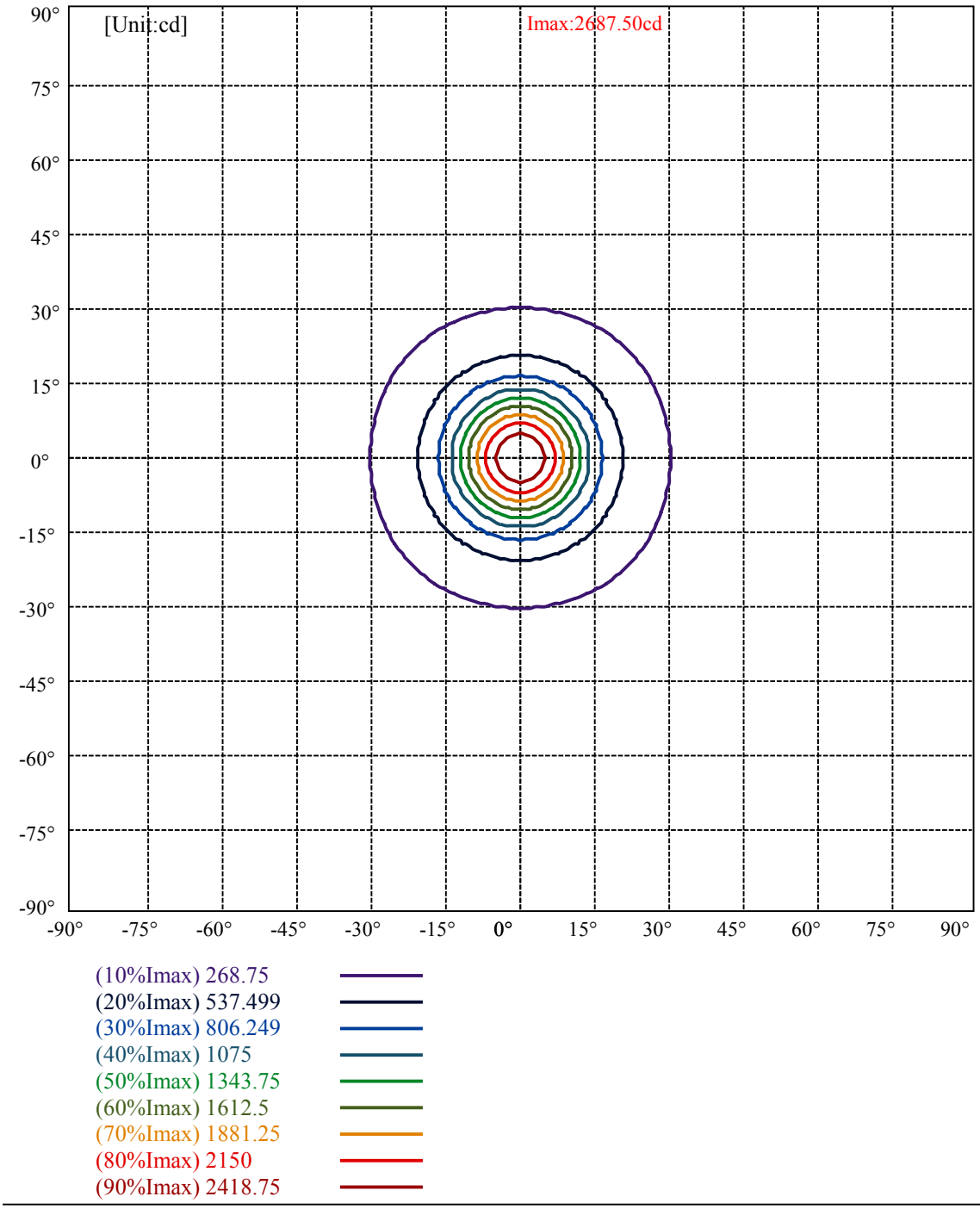
Field angle(10%Imax):C0/180Left:29.9 Right:29.9
:C90/270Left:29.9 Right:29.9

Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9
:C90/270Left:11.9 Right:11.9

Lux distance Curve



ISO-Intensity(V-H)

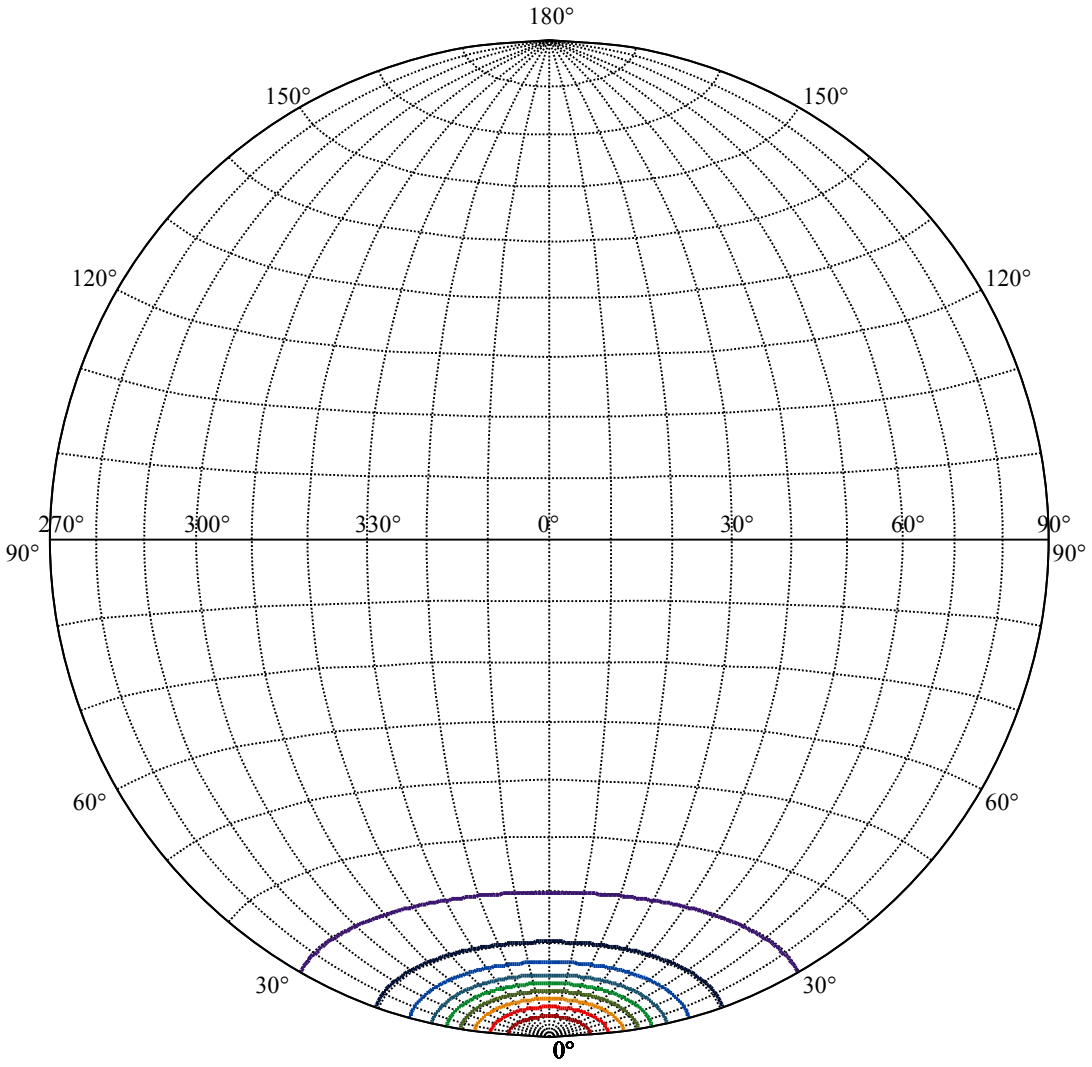


Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 6.81

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:2687.50

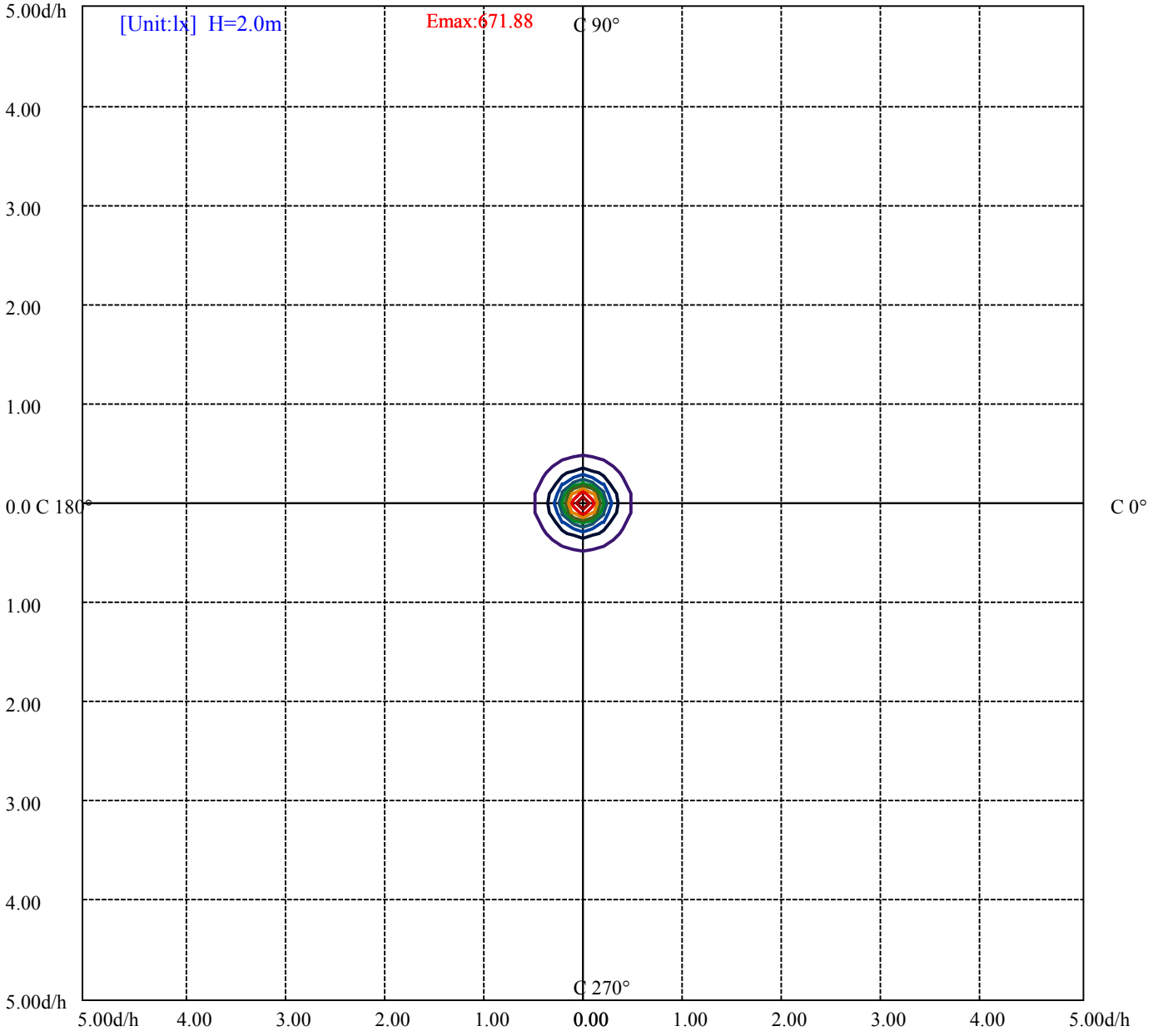
(10%Imax) 268.75
(20%Imax) 537.499
(30%Imax) 806.249
(40%Imax) 1075
(50%Imax) 1343.75
(60%Imax) 1612.5
(70%Imax) 1881.25
(80%Imax) 2150
(90%Imax) 2418.75

Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 6.81

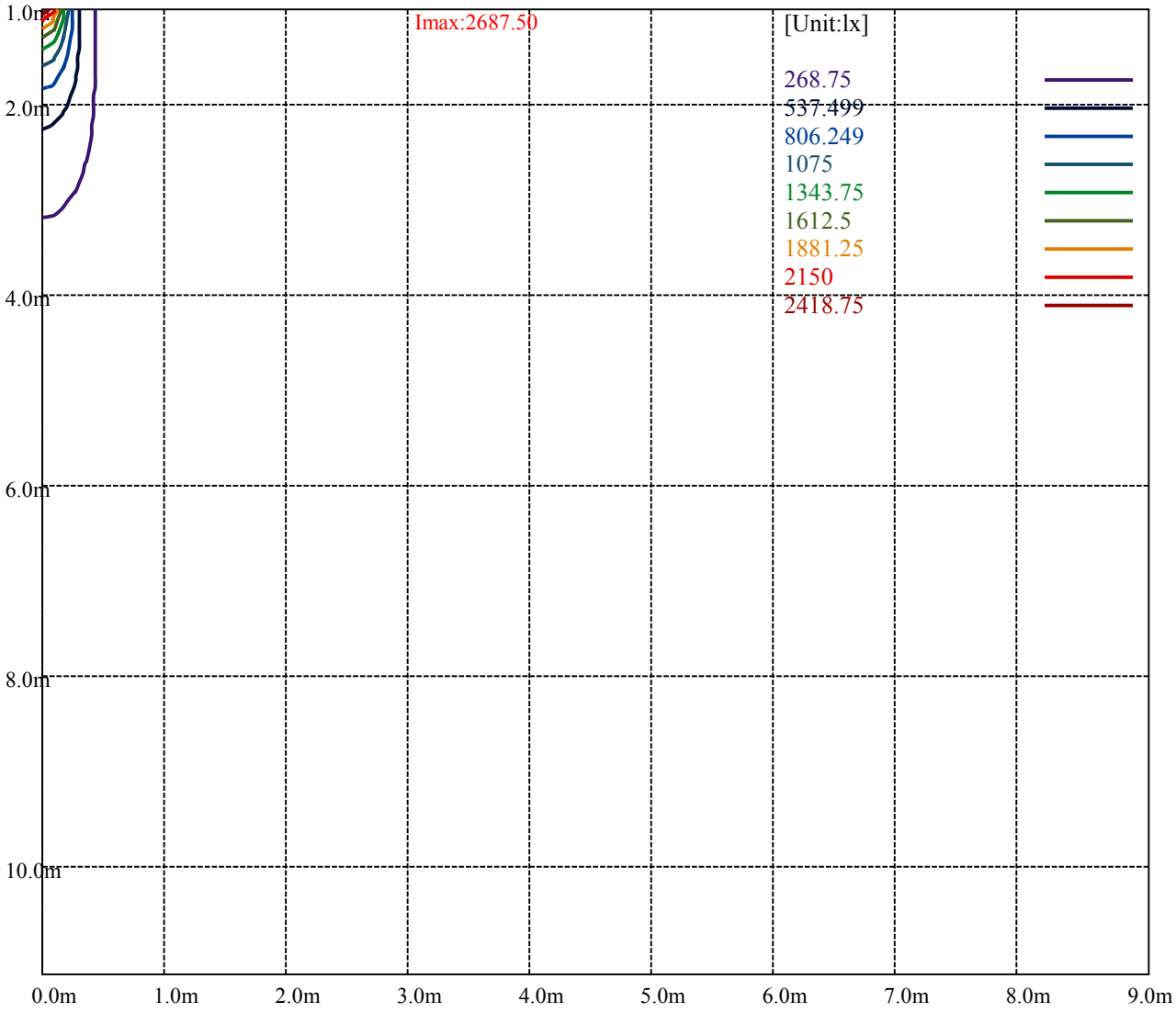
ISO illuminance diagram



(10%Emax) 67.18725
(20%Emax) 134.3748
(30%Emax) 201.562
(40%Emax) 268.75
(50%Emax) 335.9375
(60%Emax) 403.125
(70%Emax) 470.3125
(80%Emax) 537.5
(90%Emax) 604.685

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

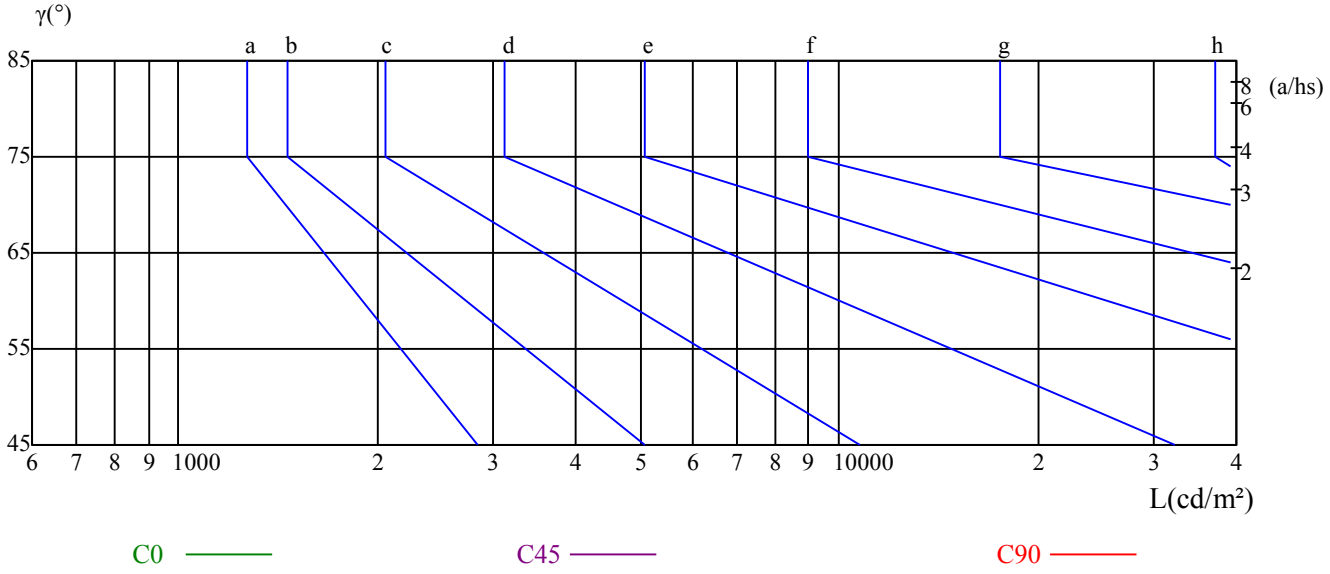
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

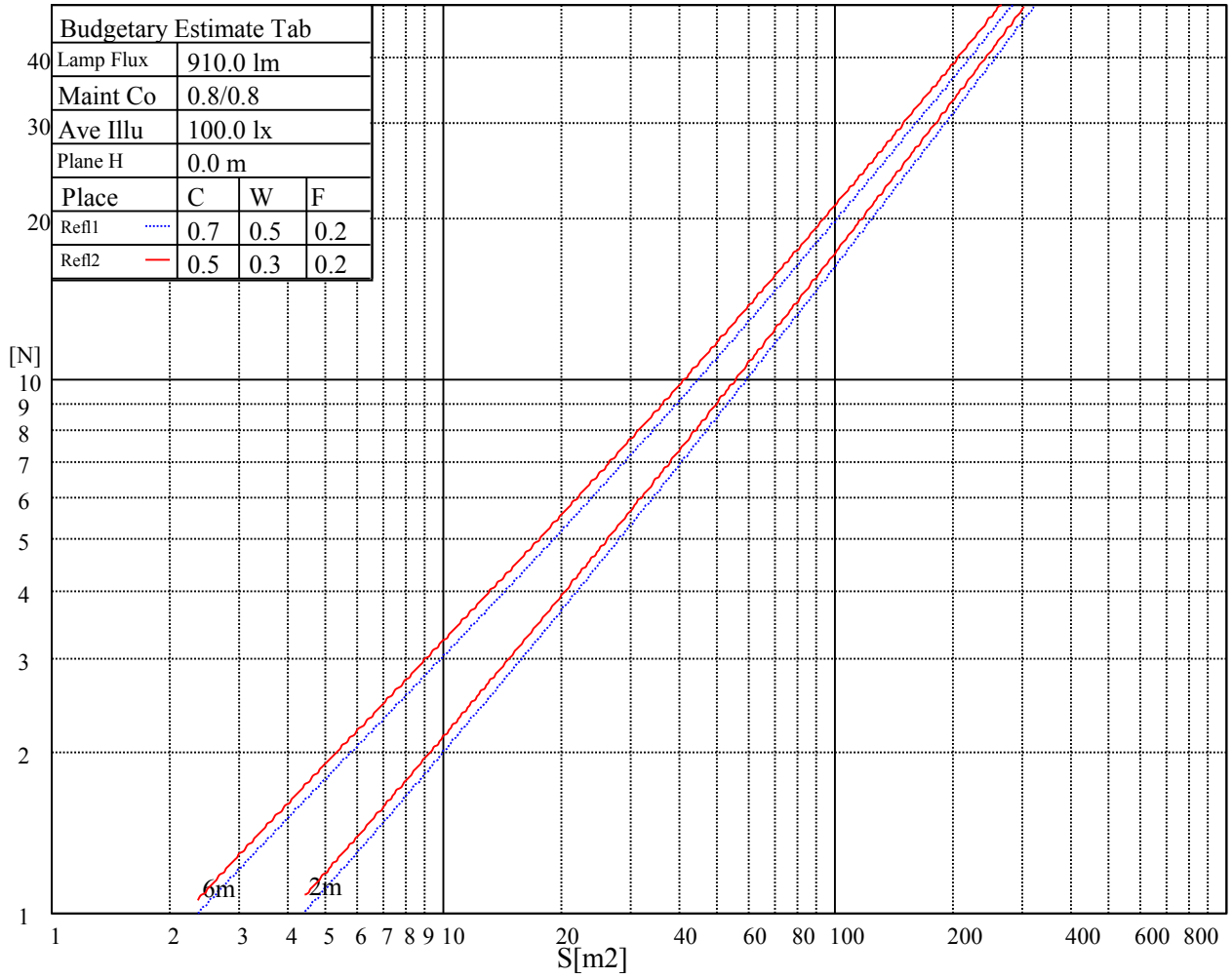
Glare Table

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

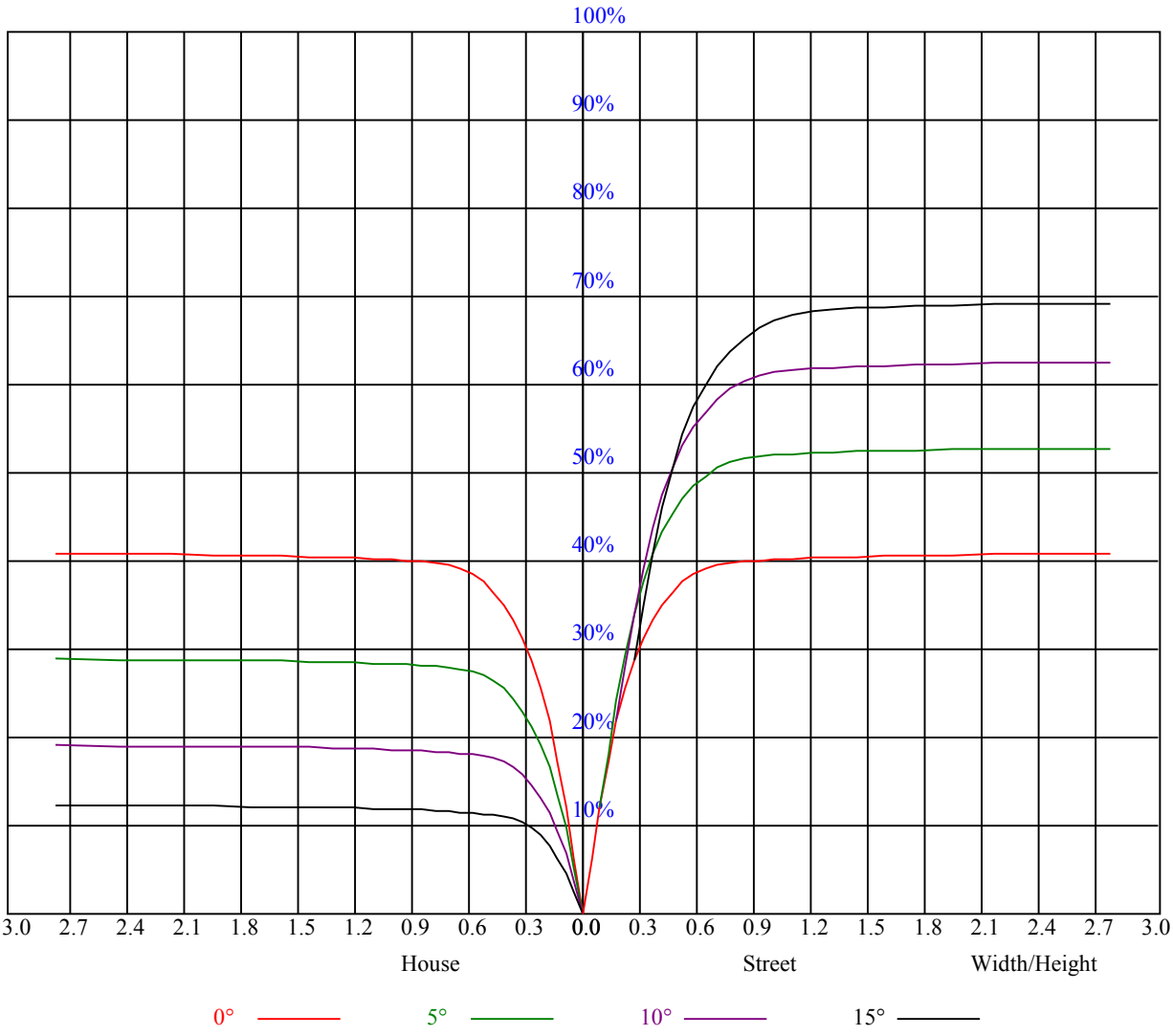


Equipment: GMS 1800 Date: 2020/4/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

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	0.98	0.98	0.98	0.96	0.96	0.96	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.82
1	0.92	0.90	0.88	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.85	0.83	0.80	0.83	0.80	0.79	0.80	0.78	0.77	0.78	0.77	0.75	0.74
3	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.74	0.71	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.66	0.64
6	0.71	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.62
7	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.59
8	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.57
9	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55
10	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53

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	2680.30	2652.00	2599.56	2529.96	2437.15	2315.57	2179.15	2027.87	1866.85
45.0	2691.90	2680.30	2656.64	2573.11	2524.85	2425.55	2302.12	2156.41	2000.96
90.0	2678.45	2629.26	2554.09	2458.03	2337.85	2201.42	2058.03	1901.19	1741.56
135.0	2699.33	2689.12	2646.89	2579.14	2500.26	2392.14	2263.14	2117.90	1968.01
180.0	2680.30	2684.02	2658.49	2608.38	2534.60	2460.82	2324.85	2181.00	2057.11
225.0	2691.90	2673.81	2650.14	2586.57	2506.76	2388.43	2251.54	2101.65	1937.85
270.0	2678.45	2698.86	2697.94	2680.77	2630.19	2591.21	2470.10	2397.71	2264.53
315.0	2699.33	2689.12	2655.25	2600.49	2525.78	2416.27	2291.91	2151.31	1998.64
360.0	2680.30	2652.00	2599.56	2529.96	2437.15	2315.57	2179.15	2027.87	1866.85

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1703.51	1537.85	1377.76	1219.99	913.91	893.64	893.64	803.43	723.94
45.0	1839.94	1671.96	1505.83	1339.25	1177.76	1036.23	909.55	804.68	717.44
90.0	1578.69	1419.06	1258.04	1047.37	896.70	896.70	800.74	694.70	654.98
135.0	1842.72	1647.37	1480.78	1349.46	1189.83	1049.23	926.26	823.24	740.18
180.0	1898.87	1734.60	1569.87	1406.53	1244.58	1093.77	961.52	848.30	759.21
225.0	1772.19	1607.46	1441.80	1277.99	1053.40	890.80	868.16	784.08	695.26
270.0	2110.93	1955.95	1797.71	1630.66	1460.82	1296.09	1141.10	1004.21	892.85
315.0	1842.26	1682.63	1586.11	1366.62	1271.96	1122.54	893.31	893.31	798.00
360.0	1703.51	1537.85	1377.76	1219.99	913.91	893.64	893.64	803.43	723.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	659.90	603.01	552.43	508.86	469.42	436.75	409.97	386.17	365.10
45.0	644.12	583.34	529.04	480.79	440.88	407.00	381.48	347.14	326.73
90.0	596.19	545.33	501.39	463.20	429.05	400.83	376.70	354.43	334.38
135.0	669.18	611.18	560.13	512.80	471.97	437.17	407.93	382.87	361.53
180.0	682.18	618.14	563.38	516.98	474.29	438.09	407.00	379.63	364.78
225.0	620.60	557.03	501.25	454.89	414.47	379.39	350.25	327.28	308.77
270.0	796.33	714.66	646.44	588.44	540.65	497.95	461.76	428.81	409.79
315.0	714.89	641.71	580.83	526.91	481.43	443.89	413.92	388.12	364.45
360.0	659.90	603.01	552.43	508.86	469.42	436.75	409.97	386.17	365.10

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	344.22	323.15	300.51	266.45	226.26	193.08	144.22	112.30	78.00
45.0	304.45	284.50	266.40	242.27	237.17	203.85	145.85	111.18	79.30
90.0	314.61	291.51	257.40	218.33	175.59	134.76	111.88	66.59	52.20
135.0	341.58	320.23	298.88	281.71	229.28	229.28	191.60	122.37	87.47
180.0	336.47	316.98	306.31	288.68	263.15	242.74	242.74	146.40	108.77
225.0	292.48	276.89	262.23	240.55	211.18	176.47	140.74	105.47	87.10
270.0	371.74	356.89	332.76	310.48	287.75	257.12	242.74	202.32	136.29
315.0	342.87	326.40	306.49	281.39	246.77	208.12	168.82	131.28	96.70
360.0	344.22	323.15	300.51	266.45	226.26	193.08	144.22	112.30	78.00

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	52.39	39.35	32.67	27.19	23.62	21.11	19.12	17.40	15.92
45.0	55.54	41.67	37.31	29.09	25.34	23.62	20.42	19.35	17.68
90.0	38.38	31.69	26.36	23.06	20.74	18.79	17.12	15.82	14.71
135.0	60.14	42.04	34.20	28.68	24.73	22.27	20.32	18.75	17.40
180.0	76.57	52.16	38.33	32.11	27.01	23.99	21.02	19.07	17.73
225.0	62.18	45.61	37.54	31.51	27.01	23.99	21.62	19.49	17.82
270.0	100.46	70.49	49.79	39.63	33.04	27.84	25.48	22.64	19.35
315.0	67.66	47.47	38.89	32.44	27.47	24.41	21.90	19.77	17.96
360.0	52.39	39.35	32.67	27.19	23.62	21.11	19.12	17.40	15.92

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	14.76	13.78	12.90	12.11	11.42	10.86	10.44	9.93	9.74
45.0	16.33	15.27	14.25	13.36	12.62	11.97	11.32	10.77	10.35
90.0	13.69	12.81	12.11	11.46	10.86	10.35	9.98	9.61	9.19
135.0	16.47	15.22	14.52	13.74	12.95	12.44	11.88	11.46	11.14
180.0	16.01	15.03	14.01	13.18	12.34	11.65	11.04	10.53	10.02
225.0	16.52	15.27	14.29	13.50	12.76	12.02	11.37	10.81	10.53
270.0	18.14	16.57	15.22	14.06	13.04	12.30	11.60	10.95	10.35
315.0	16.47	15.27	14.62	13.27	12.85	12.06	11.28	11.00	10.53
360.0	14.76	13.78	12.90	12.11	11.42	10.86	10.44	9.93	9.74

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.23	8.91	8.63	8.21	7.89	7.61	7.38	7.15	6.87
45.0	10.07	9.65	9.10	8.54	8.21	7.89	7.56	7.24	7.05
90.0	8.86	8.40	8.07	7.80	7.47	7.29	7.01	6.73	6.40
135.0	10.77	10.39	9.98	9.61	9.37	9.14	8.91	8.68	8.45
180.0	9.65	9.42	9.00	8.58	8.21	7.98	7.61	7.33	7.10
225.0	10.12	9.70	9.37	8.82	8.54	8.17	7.80	7.47	7.24
270.0	9.88	9.56	9.19	8.82	8.45	8.12	7.80	7.47	7.29
315.0	10.16	9.84	9.51	9.10	8.72	8.45	8.21	7.98	7.70
360.0	9.23	8.91	8.63	8.21	7.89	7.61	7.38	7.15	6.87

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.59	6.31	6.08	5.80	5.52	5.24	5.01	4.73	4.45
45.0	6.82	6.40	6.17	5.85	5.61	5.34	5.01	4.73	4.50
90.0	6.22	5.99	5.61	5.34	5.10	4.83	4.55	4.32	4.13
135.0	8.17	7.89	7.66	7.42	7.19	6.91	6.77	6.45	6.26
180.0	6.82	6.54	6.36	5.94	5.75	5.57	5.15	5.01	4.73
225.0	6.91	6.54	6.26	5.99	5.61	5.29	5.10	4.83	4.50
270.0	7.05	6.82	6.45	6.31	5.99	5.75	5.48	5.20	4.87
315.0	7.52	7.29	7.05	6.77	6.50	6.31	5.99	5.85	5.61
360.0	6.59	6.31	6.08	5.80	5.52	5.24	5.01	4.73	4.45

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.22	4.04	3.81	3.57	3.34	3.25	3.02	2.88	2.69
45.0	4.27	4.04	3.76	3.57	3.39	3.20	2.97	2.78	2.60
90.0	3.90	3.67	3.43	3.29	3.11	2.88	2.78	2.55	2.46
135.0	6.08	5.85	5.66	5.38	5.24	5.10	4.87	4.64	4.50
180.0	4.50	4.27	4.04	3.81	3.62	3.39	3.20	2.97	2.74
225.0	4.32	4.08	3.85	3.57	3.43	3.25	3.06	2.78	2.60
270.0	4.69	4.45	4.18	3.94	3.76	3.57	3.29	3.11	2.97
315.0	5.29	5.10	4.87	4.69	4.45	4.27	4.08	3.94	3.71
360.0	4.22	4.04	3.81	3.57	3.34	3.25	3.02	2.88	2.69

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.41	2.32	2.13	2.00	1.81	1.72	1.62	1.58	1.53
45.0	2.46	2.23	2.09	1.95	1.72	1.62	1.53	1.48	1.35
90.0	2.18	2.09	2.04	1.86	1.76	1.72	1.72	1.62	1.35
135.0	4.41	4.22	4.08	3.90	3.81	3.57	3.29	3.02	2.51
180.0	2.60	2.46	2.23	2.09	1.95	1.76	1.62	1.53	1.48
225.0	2.41	2.23	2.09	1.86	1.76	1.62	1.48	1.44	1.35
270.0	2.78	2.55	2.37	2.23	2.04	1.86	1.81	1.62	1.58
315.0	3.57	3.34	3.20	3.06	3.02	2.88	2.60	2.23	2.18
360.0	2.41	2.32	2.13	2.00	1.81	1.72	1.62	1.58	1.53

Intensity data(cd)

C/γ(°)	90.0
0.0	1.44
45.0	1.25
90.0	1.30
135.0	2.13
180.0	1.30
225.0	1.25
270.0	1.35
315.0	2.18
360.0	1.44