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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LM01D01538BY
Luminaire:
Report No: 200417-B011
Test No: 200417-C011
LampCAT: OSRAM DURIS S8
Lamp flux(lm): 390.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 24.6700
Current(A): 0.1310
Power (W): 3.2320
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 372.99
Efficiency(%): 95.64%
Lumens(lm)/Power(W): 115.41
Central intensity(cd): 595.519
Maximum intensity(cd): 595.519
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=38.8
[C90/270]Total=38.8
Field angle(10%Imax): [C0/180]Total=77.5
[C90/270]Total=77.5
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.65 C90_270=0.65
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.64%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 92.518%

Nata LM01D01538BY

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	595.519	0.000	0	.000%	.000%
1.0	594.127	0.569	0.569	.146%	.153%
2.0	589.880	1.699	2.269	.436%	.608%
3.0	583.270	2.806	5.074	.719%	1.360%
4.0	574.418	3.875	8.95	.994%	2.399%
5.0	564.005	4.897	13.847	1.256%	3.712%
6.0	549.626	5.852	19.699	1.501%	5.281%
7.0	534.853	6.731	26.431	1.726%	7.086%
8.0	519.307	7.544	33.975	1.934%	9.109%
9.0	501.834	8.276	42.251	2.122%	11.328%
10.0	481.929	8.903	51.154	2.283%	13.714%
11.0	464.442	9.456	60.61	2.425%	16.250%
12.0	446.161	9.954	70.564	2.552%	18.918%
13.0	425.088	10.340	80.904	2.651%	21.691%
14.0	405.766	10.635	91.538	2.727%	24.542%
15.0	386.473	10.876	102.415	2.789%	27.458%
16.0	366.434	11.032	113.447	2.829%	30.416%
17.0	344.995	11.079	124.526	2.841%	33.386%
18.0	325.378	11.053	135.579	2.834%	36.349%
19.0	305.733	10.980	146.559	2.815%	39.293%
20.0	285.863	10.828	157.387	2.776%	42.196%
21.0	265.233	10.582	167.969	2.713%	45.033%
22.0	245.995	10.273	178.242	2.634%	47.787%
23.0	227.974	9.945	188.187	2.550%	50.454%
24.0	208.526	9.543	197.731	2.447%	53.012%
25.0	191.559	9.097	206.828	2.333%	55.451%
26.0	176.133	8.679	215.507	2.225%	57.778%
27.0	161.726	8.266	223.773	2.119%	59.994%
28.0	145.765	7.785	231.558	1.996%	62.082%
29.0	133.706	7.312	238.87	1.875%	64.042%
30.0	122.745	6.924	245.794	1.775%	65.898%
31.0	111.480	6.518	252.312	1.671%	67.646%
32.0	102.509	6.131	258.443	1.572%	69.289%
33.0	94.535	5.805	264.248	1.488%	70.846%
34.0	86.906	5.491	269.738	1.408%	72.318%
35.0	79.552	5.170	274.908	1.326%	73.704%
36.0	73.786	4.882	279.79	1.252%	75.013%
37.0	68.196	4.631	284.421	1.187%	76.254%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	63.260	4.388	288.809	1.125%	77.431%
39.0	58.359	4.151	292.96	1.064%	78.544%
40.0	54.176	3.925	296.885	1.006%	79.596%
41.0	50.463	3.726	300.611	.955%	80.595%
42.0	46.835	3.535	304.146	.906%	81.543%
43.0	43.545	3.348	307.494	.858%	82.440%
44.0	40.718	3.180	310.674	.815%	83.293%
45.0	38.074	3.028	313.702	.776%	84.105%
46.0	35.276	2.869	316.571	.736%	84.874%
47.0	33.068	2.718	319.289	.697%	85.603%
48.0	30.994	2.590	321.879	.664%	86.297%
49.0	29.081	2.467	324.346	.633%	86.958%
50.0	27.141	2.344	326.69	.601%	87.587%
51.0	25.545	2.229	328.919	.572%	88.184%
52.0	24.054	2.128	331.047	.546%	88.755%
53.0	22.641	2.031	333.078	.521%	89.300%
54.0	21.340	1.938	335.017	.497%	89.819%
55.0	20.215	1.855	336.872	.476%	90.317%
56.0	19.181	1.780	338.652	.456%	90.794%
57.0	18.134	1.706	340.358	.437%	91.251%
58.0	17.220	1.635	341.993	.419%	91.690%
59.0	16.446	1.574	343.567	.404%	92.112%
60.0	15.680	1.518	345.085	.389%	92.519%
61.0	14.941	1.461	346.546	.375%	92.910%
62.0	14.323	1.410	347.956	.362%	93.288%
63.0	13.718	1.364	349.32	.350%	93.654%
64.0	13.148	1.318	350.638	.338%	94.007%
65.0	12.649	1.277	351.915	.327%	94.350%
66.0	12.206	1.240	353.155	.318%	94.682%
67.0	11.791	1.207	354.362	.309%	95.006%
68.0	11.363	1.173	355.535	.301%	95.320%
69.0	11.011	1.141	356.676	.293%	95.626%
70.0	10.659	1.113	357.789	.285%	95.925%
71.0	10.336	1.085	358.874	.278%	96.216%
72.0	10.048	1.060	359.934	.272%	96.500%
73.0	9.759	1.036	360.97	.266%	96.777%
74.0	9.485	1.012	361.981	.259%	97.049%
75.0	9.190	0.987	362.968	.253%	97.313%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.923	0.961	363.93	.247%	97.571%
77.0	8.691	0.939	364.869	.241%	97.823%
78.0	8.430	0.917	365.785	.235%	98.068%
79.0	8.156	0.891	366.676	.229%	98.307%
80.0	7.889	0.865	367.541	.222%	98.539%
81.0	7.615	0.838	368.38	.215%	98.764%
82.0	7.298	0.809	369.189	.207%	98.981%
83.0	6.954	0.775	369.963	.199%	99.189%
84.0	6.497	0.733	370.696	.188%	99.385%
85.0	5.970	0.680	371.377	.174%	99.567%
86.0	4.486	0.572	371.948	.147%	99.721%
87.0	2.925	0.406	372.354	.104%	99.829%
88.0	1.948	0.267	372.621	.068%	99.901%
89.0	1.624	0.196	372.816	.050%	99.953%
90.0	1.540	0.173	372.99	.044%	100.000%

Zonal flux distribution table

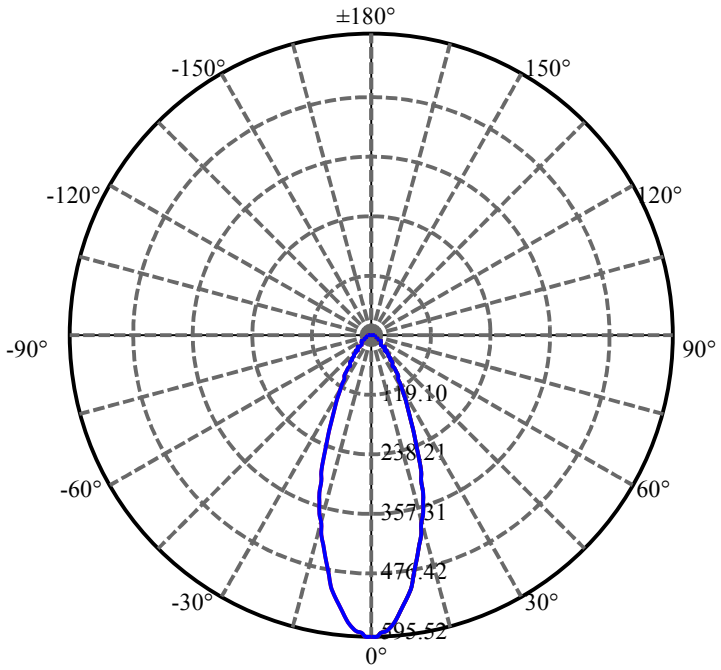
ZONAL LUMEN SUMMARY

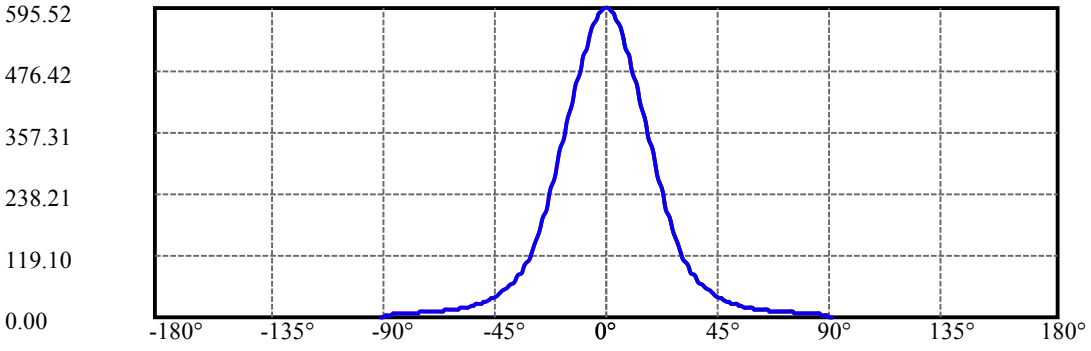
Zone	Lumens	%Lamp	%Fixt
0-30	245.79	63.02%	65.90%
0-40	296.88	76.12%	79.60%
0-60	345.08	88.48%	92.52%
0-90	372.82	95.59%	99.95%
0-120	372.82	95.59%	99.95%
0-180	372.99	95.64%	100.00%
60-90	29.25	7.50%	7.84%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-40.40	298.39	76.51%	80.00%

ZONAL LUMEN SUMMARY

0-10	51.15
10-20	106.23
20-30	88.41
30-40	51.09
40-50	29.81
50-60	18.39
60-70	12.70
70-80	9.75
80-90	5.27
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:

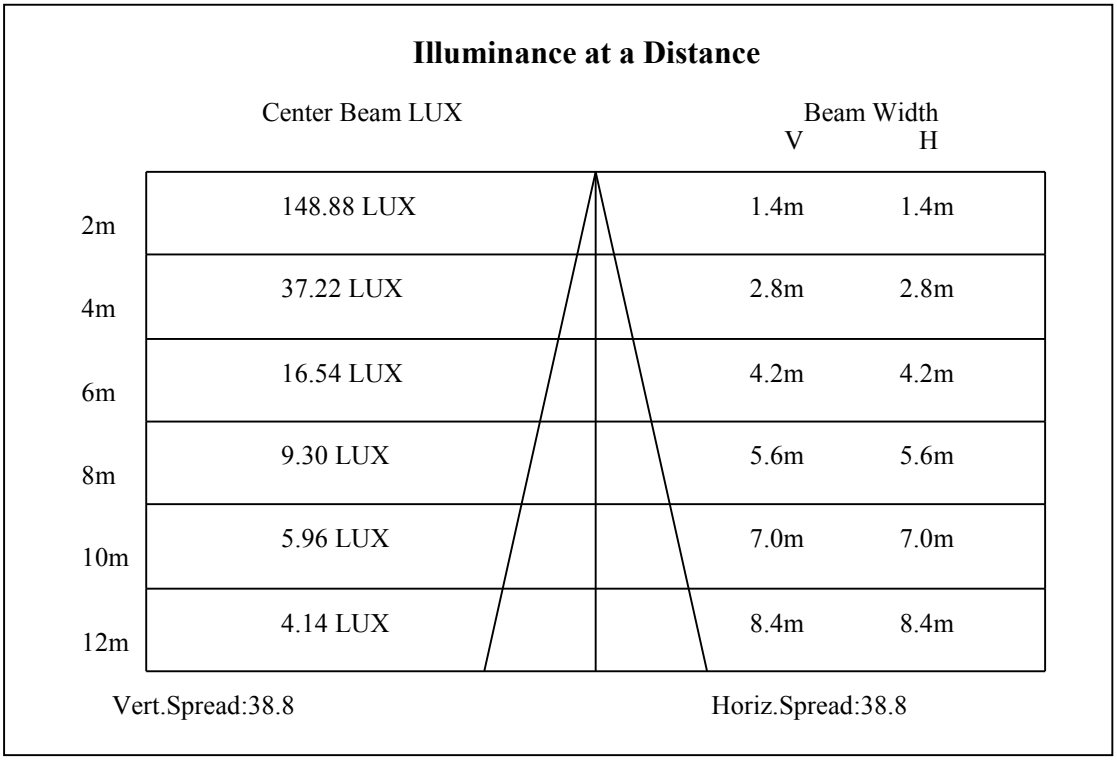
C90/C270:

Field angle(10%Imax):C0/180Left:38.8 Right:38.8
:C90/270Left:38.8 Right:38.8

Beam Angle(50%Imax):C0/180Left:19.4 Right:19.4
:C90/270Left:19.4 Right:19.4

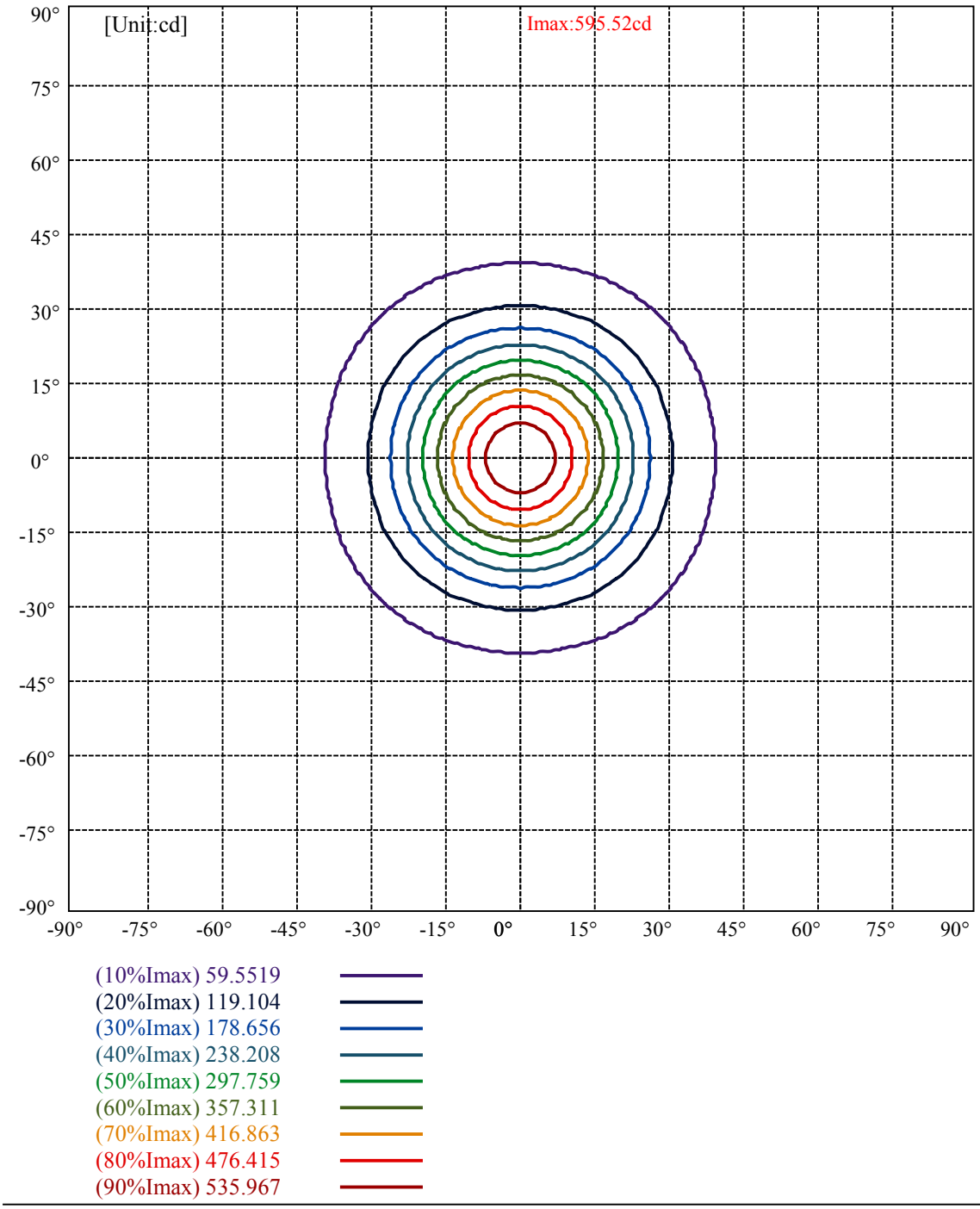
Equipment: GMS1980	Date: 2020/4/17	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Lux distance Curve



Equipment: GMS1980 Date: 2020/4/17 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)

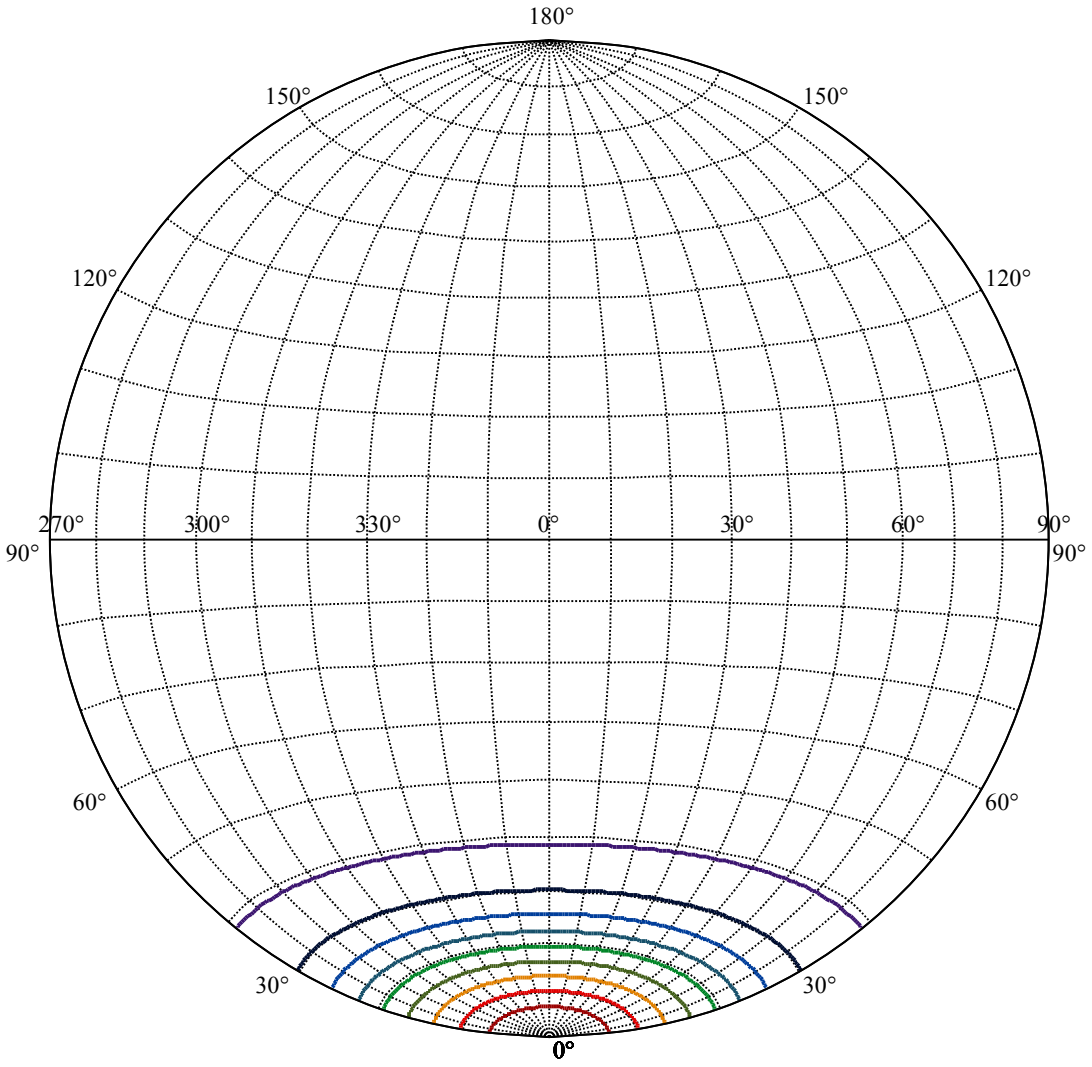


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/17
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:595.52

(10%Imax) 59.5519
(20%Imax) 119.104
(30%Imax) 178.656
(40%Imax) 238.208
(50%Imax) 297.759
(60%Imax) 357.311
(70%Imax) 416.863
(80%Imax) 476.415
(90%Imax) 535.967

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/17
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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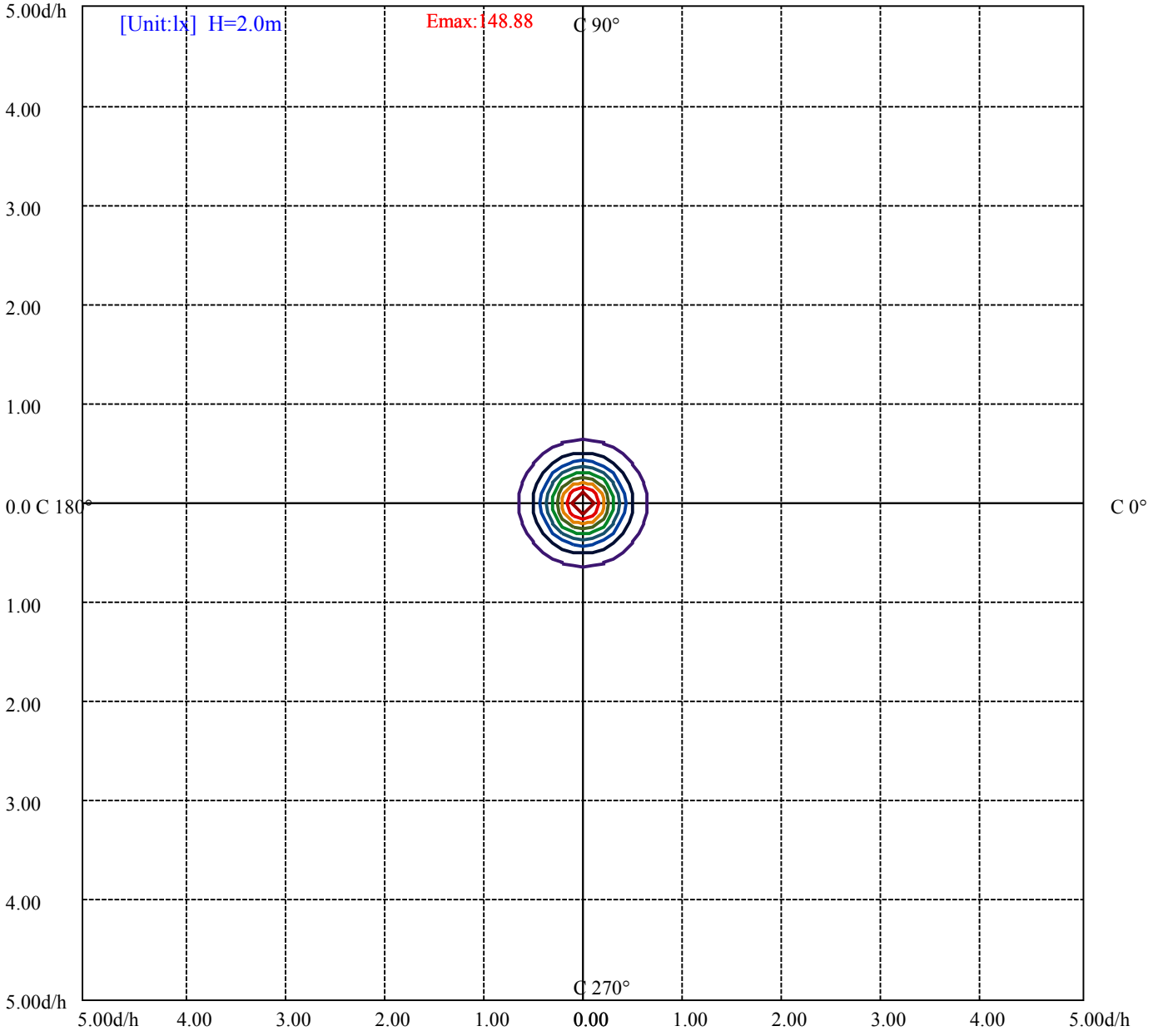
ISO illuminance diagram

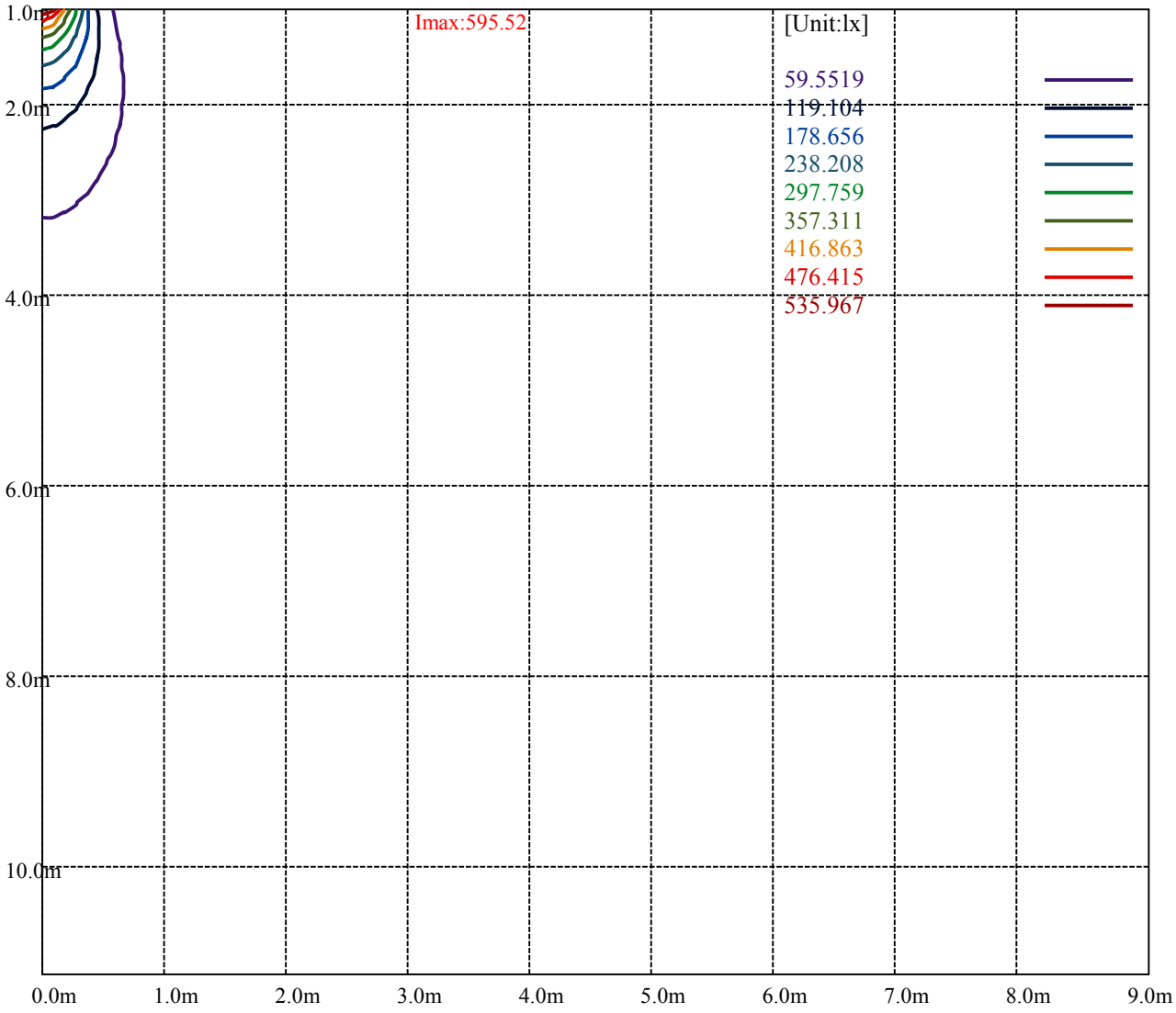


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/17
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/17
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

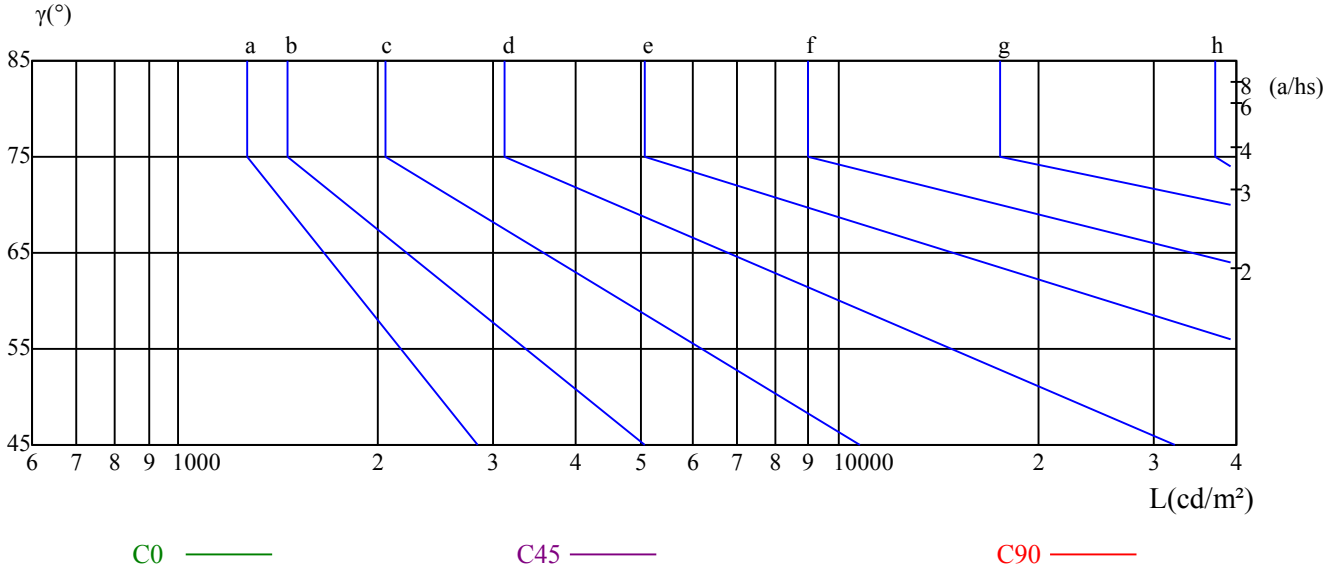
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

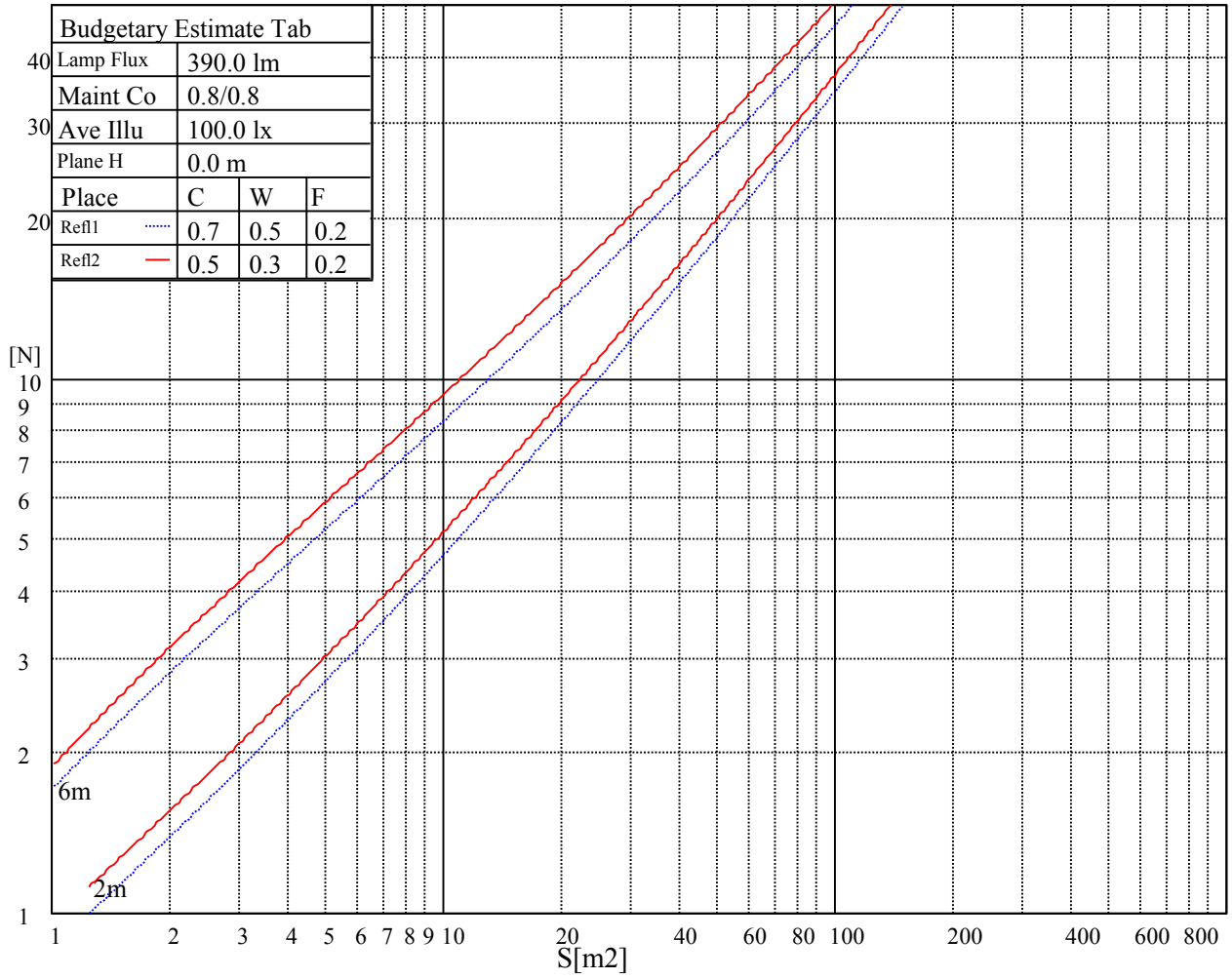


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/17
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

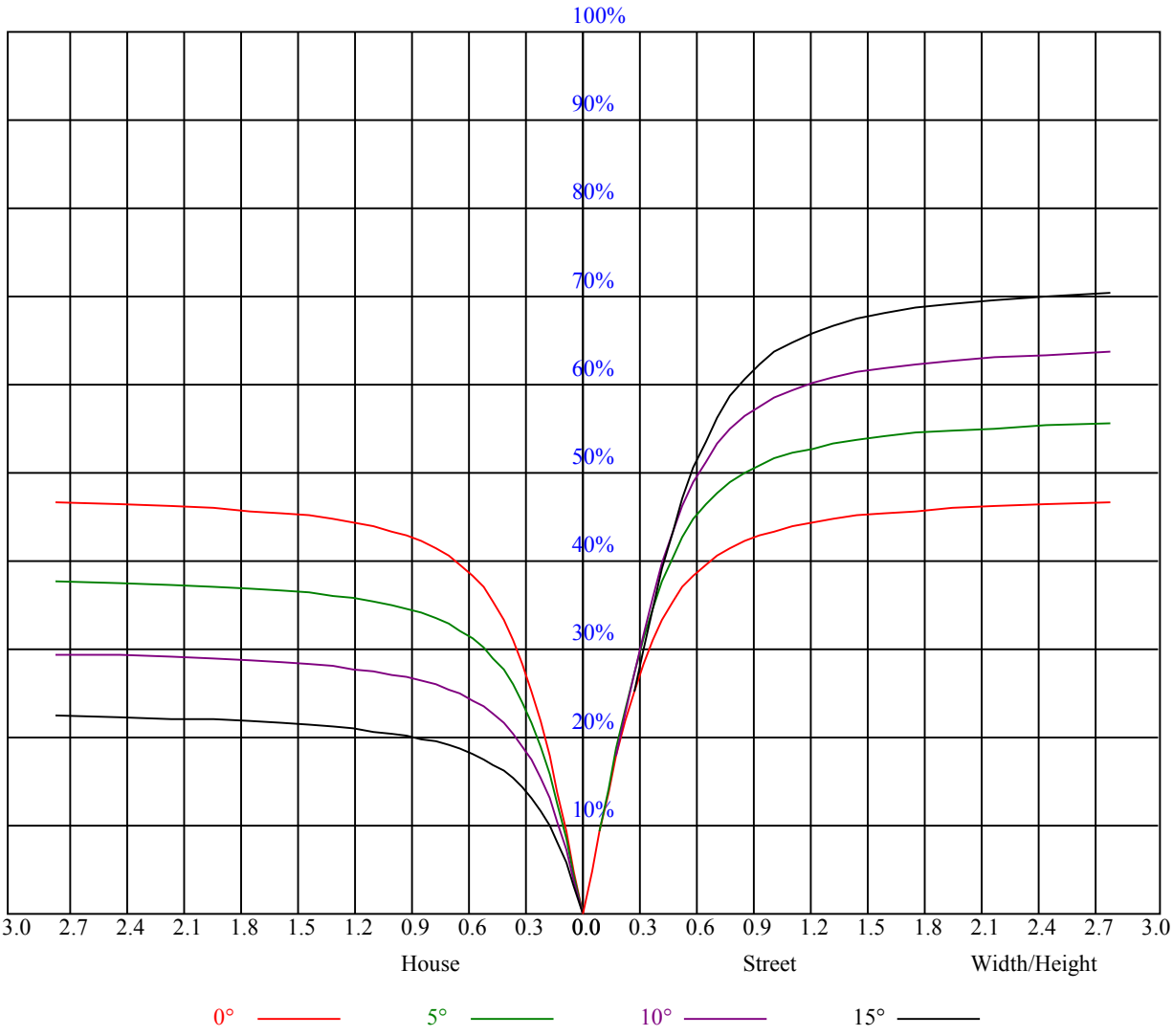


Equipment: GMS1980	Date: 2020/4/17	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	1.14	1.14	1.14	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.04	1.01	0.99	1.02	0.99	0.97	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.87
2	0.96	0.91	0.87	0.94	0.90	0.86	0.91	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.79
3	0.88	0.83	0.79	0.87	0.82	0.78	0.85	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.74	0.73
4	0.82	0.76	0.72	0.81	0.76	0.72	0.79	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.67
5	0.77	0.71	0.66	0.76	0.70	0.66	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.63
6	0.72	0.66	0.62	0.71	0.66	0.61	0.70	0.65	0.61	0.69	0.64	0.61	0.67	0.63	0.60	0.59
7	0.68	0.62	0.58	0.67	0.62	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.55
8	0.64	0.58	0.54	0.64	0.58	0.54	0.63	0.57	0.54	0.62	0.57	0.54	0.61	0.56	0.53	0.52
9	0.61	0.55	0.51	0.60	0.55	0.51	0.60	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.50	0.49
10	0.58	0.52	0.48	0.57	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.47

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/4/17	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	592.82	595.46	595.74	594.68	590.85	585.06	575.21	565.31	553.39
45.0	597.60	593.55	585.11	576.23	565.99	551.03	536.46	520.48	500.51
90.0	594.34	585.23	573.58	555.98	540.45	523.52	501.02	482.40	464.40
135.0	597.32	589.67	579.26	567.17	551.59	536.79	518.91	499.84	482.57
180.0	592.82	589.16	582.92	575.61	563.29	553.67	539.72	523.91	508.78
225.0	597.60	598.89	598.44	595.58	591.13	584.04	571.33	558.73	544.78
270.0	594.34	600.47	602.38	601.43	596.87	590.01	578.81	564.19	549.11
315.0	597.32	600.58	601.59	599.51	595.18	587.93	575.55	563.96	550.91
360.0	592.82	595.46	595.74	594.68	590.85	585.06	575.21	565.31	553.39

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	538.93	519.13	501.86	483.81	460.74	441.17	420.92	397.74	374.18
45.0	479.76	458.44	439.03	419.57	397.74	375.19	355.67	334.35	312.13
90.0	444.54	424.52	406.97	387.56	367.14	348.81	328.39	309.88	289.01
135.0	465.36	443.31	425.31	407.31	384.69	366.36	348.47	328.22	306.73
180.0	492.24	469.69	452.08	434.76	412.37	393.30	374.12	352.52	330.92
225.0	528.24	510.75	493.76	473.79	455.46	434.64	413.78	395.27	373.95
270.0	530.83	512.38	495.79	480.77	457.71	441.11	424.58	405.84	387.06
315.0	534.77	517.22	500.74	481.73	464.85	445.56	425.87	407.64	385.99
360.0	538.93	519.13	501.86	483.81	460.74	441.17	420.92	397.74	374.18

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	353.36	330.13	307.18	286.76	264.60	245.19	224.33	204.19	187.43
45.0	293.12	276.81	251.83	233.78	218.25	196.76	178.43	164.36	149.40
90.0	268.14	250.03	232.31	213.30	195.13	179.94	162.51	149.46	137.31
135.0	288.62	268.14	251.21	231.75	213.08	197.38	179.83	165.77	151.31
180.0	311.63	289.86	271.07	250.37	230.23	213.41	195.47	178.59	164.53
225.0	352.97	334.01	315.11	290.87	272.03	253.86	231.92	215.04	198.90
270.0	370.69	351.73	332.66	314.66	294.02	276.13	255.77	235.52	217.80
315.0	364.50	345.15	325.52	300.38	280.63	261.11	239.96	219.54	202.39
360.0	353.36	330.13	307.18	286.76	264.60	245.19	224.33	204.19	187.43

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	173.93	153.79	140.79	130.44	116.49	107.61	100.35	91.18	83.98
45.0	137.14	124.54	113.06	103.89	94.16	86.68	79.76	74.36	67.16
90.0	126.11	113.57	104.18	95.85	87.47	79.99	74.08	68.06	62.89
135.0	139.44	125.78	115.76	106.76	96.13	88.99	82.41	75.71	68.79
180.0	151.26	136.18	125.33	115.54	105.81	97.14	90.00	82.69	75.99
225.0	181.29	164.42	151.09	137.42	125.33	115.65	105.81	97.82	89.61
270.0	200.36	180.45	165.99	152.72	138.15	127.18	117.28	107.33	98.33
315.0	184.28	167.40	153.45	139.33	128.31	116.83	106.59	98.10	89.66
360.0	173.93	153.79	140.79	130.44	116.49	107.61	100.35	91.18	83.98

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	78.81	72.11	67.16	62.66	57.66	53.89	50.40	46.46	43.43
45.0	62.44	58.39	53.38	49.73	46.97	43.03	39.88	37.63	34.82
90.0	58.67	54.34	50.63	46.80	43.31	40.39	37.80	34.76	32.63
135.0	64.01	59.40	54.90	50.74	47.25	43.82	40.56	37.97	35.49
180.0	70.59	65.03	60.53	55.97	51.69	48.21	45.06	41.51	38.87
225.0	82.41	76.50	71.21	64.97	60.41	56.42	52.09	48.71	45.62
270.0	91.24	83.64	77.51	71.33	65.81	61.48	56.93	52.65	49.28
315.0	82.13	76.16	70.76	64.69	60.30	56.48	51.98	48.66	45.62
360.0	78.81	72.11	67.16	62.66	57.66	53.89	50.40	46.46	43.43

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	40.61	37.46	35.16	32.96	30.71	28.58	26.89	25.20	23.63
45.0	32.85	30.99	28.91	27.28	25.82	24.02	22.73	21.60	20.25
90.0	30.71	28.46	26.78	25.31	23.79	22.44	21.26	20.08	19.07
135.0	33.36	30.94	29.14	27.39	25.82	24.13	22.84	21.60	20.19
180.0	36.45	33.64	31.56	29.64	27.73	25.99	24.58	23.06	21.83
225.0	42.36	39.32	36.84	34.26	32.29	30.15	28.18	26.61	25.09
270.0	46.07	42.30	39.43	36.90	34.26	31.84	29.81	27.84	26.04
315.0	42.19	39.09	36.73	34.20	32.23	29.98	28.07	26.44	25.03
360.0	40.61	37.46	35.16	32.96	30.71	28.58	26.89	25.20	23.63

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	22.39	21.15	20.03	18.96	17.94	17.16	16.43	15.58	14.91
45.0	19.24	18.28	17.38	16.59	15.86	15.13	14.46	13.95	13.33
90.0	18.06	17.21	16.48	15.69	14.96	14.40	13.89	13.28	12.83
135.0	19.18	18.28	17.33	16.48	15.75	15.02	14.40	13.78	13.22
180.0	20.53	19.41	18.45	17.55	16.71	16.03	15.36	14.57	14.01
225.0	23.40	22.11	20.98	19.63	18.62	17.72	16.71	15.92	15.24
270.0	24.53	23.12	21.88	20.59	19.35	18.39	17.49	16.43	15.75
315.0	23.40	22.16	20.93	19.58	18.56	17.72	16.71	16.03	15.30
360.0	22.39	21.15	20.03	18.96	17.94	17.16	16.43	15.58	14.91

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	14.40	13.67	13.16	12.77	12.26	11.87	11.48	11.08	10.69
45.0	12.83	12.38	11.93	11.59	11.25	10.86	10.52	10.29	10.01
90.0	12.38	11.93	11.53	11.19	10.80	10.46	10.24	9.90	9.62
135.0	12.71	12.21	11.81	11.42	11.14	10.74	10.46	10.18	9.90
180.0	13.50	12.88	12.43	12.04	11.64	11.19	10.91	10.52	10.24
225.0	14.40	13.78	13.28	12.60	12.26	11.76	11.25	10.91	10.58
270.0	15.02	14.34	13.67	13.22	12.60	12.15	11.76	11.25	10.86
315.0	14.51	14.01	13.39	12.83	12.38	11.87	11.48	11.14	10.80
360.0	14.40	13.67	13.16	12.77	12.26	11.87	11.48	11.08	10.69

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.41	10.07	9.79	9.45	9.17	8.89	8.61	8.27	8.04
45.0	9.79	9.51	9.23	8.94	8.72	8.44	8.16	7.88	7.59
90.0	9.39	9.06	8.78	8.44	8.16	7.88	7.54	7.31	6.98
135.0	9.68	9.45	9.17	8.94	8.66	8.49	8.21	7.93	7.65
180.0	9.96	9.62	9.34	9.06	8.72	8.49	8.21	7.93	7.59
225.0	10.24	10.01	9.79	9.39	9.23	9.00	8.78	8.55	8.33
270.0	10.52	10.18	9.84	9.62	9.23	9.00	8.83	8.49	8.21
315.0	10.41	10.18	9.96	9.68	9.51	9.34	9.11	8.89	8.72
360.0	10.41	10.07	9.79	9.45	9.17	8.89	8.61	8.27	8.04

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.65	7.26	6.86	6.58	6.13	5.79	3.71	2.25	1.63
45.0	7.20	6.86	6.53	5.96	5.46	3.15	1.97	1.58	1.52
90.0	6.69	6.41	5.91	5.34	4.84	2.48	1.69	1.58	1.58
135.0	7.43	7.14	6.75	6.08	5.40	3.21	1.97	1.58	1.52
180.0	7.26	6.75	6.41	6.02	5.51	3.04	1.91	1.52	1.46
225.0	8.16	7.88	7.59	7.14	6.64	5.79	3.26	2.19	1.69
270.0	7.99	7.71	7.43	7.14	6.64	6.19	5.34	2.70	1.91
315.0	8.55	8.38	8.16	7.71	7.14	6.24	3.54	2.19	1.69
360.0	7.65	7.26	6.86	6.58	6.13	5.79	3.71	2.25	1.63

Intensity data(cd)

C/γ(°)	90.0
0.0	1.52
45.0	1.52
90.0	1.58
135.0	1.52
180.0	1.52
225.0	1.58
270.0	1.58
315.0	1.52
360.0	1.52