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Nata

LumCAT: LM01D01538BY
Luminaire:

Report No: 200417-B016	Voltage(V): 9.1800
Test No: 200417-C016	Current(A): 0.3000
LampCAT: BRIDGELUX 5050	Power (W): 2.7540
Lamp flux(lm): 337.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 323.74
Efficiency(%): 96.06%
Lumens(lm)/Power(W): 117.55
Central intensity(cd): 536.112
Maximum intensity(cd): 536.112
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=37.9
[C90/270]Total=37.9
Field angle(10%Imax): [C0/180]Total=76.0
[C90/270]Total=76.0
Maximum s/h(1/2): C0_180=0.61 C90_270=0.61
Maximum s/h(1/4): C0_180=0.63 C90_270=0.63
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.06%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 92.814%

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

Nata LM01D01538BY

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	536.112	0.000	0	.000%	.000%
1.0	535.205	0.513	0.513	.152%	.158%
2.0	532.308	1.532	2.045	.455%	.632%
3.0	527.365	2.534	4.579	.752%	1.414%
4.0	520.158	3.506	8.086	1.040%	2.498%
5.0	510.588	4.434	12.52	1.316%	3.867%
6.0	497.651	5.299	17.818	1.572%	5.504%
7.0	484.376	6.095	23.914	1.809%	7.387%
8.0	470.152	6.831	30.745	2.027%	9.497%
9.0	453.881	7.489	38.234	2.222%	11.810%
10.0	435.607	8.050	46.283	2.389%	14.297%
11.0	418.845	8.538	54.821	2.533%	16.934%
12.0	401.738	8.970	63.791	2.662%	19.705%
13.0	381.094	9.290	73.082	2.757%	22.574%
14.0	362.482	9.518	82.599	2.824%	25.514%
15.0	344.531	9.706	92.305	2.880%	28.512%
16.0	325.076	9.812	102.117	2.911%	31.543%
17.0	304.734	9.808	111.925	2.910%	34.573%
18.0	286.277	9.745	121.669	2.892%	37.583%
19.0	267.131	9.628	131.298	2.857%	40.557%
20.0	248.048	9.429	140.727	2.798%	43.469%
21.0	229.887	9.177	149.904	2.723%	46.304%
22.0	211.971	8.879	158.783	2.635%	49.047%
23.0	195.455	8.549	167.332	2.537%	51.688%
24.0	178.784	8.182	175.515	2.428%	54.215%
25.0	163.188	7.776	183.29	2.307%	56.617%
26.0	149.400	7.379	190.669	2.190%	58.896%
27.0	136.765	7.001	197.67	2.077%	61.059%
28.0	124.144	6.606	204.276	1.960%	63.099%
29.0	113.344	6.213	210.489	1.844%	65.018%
30.0	104.013	5.869	216.358	1.741%	66.831%
31.0	94.802	5.533	221.89	1.642%	68.540%
32.0	86.899	5.206	227.096	1.545%	70.148%
33.0	80.170	4.922	232.018	1.461%	71.669%
34.0	73.807	4.660	236.678	1.383%	73.108%
35.0	67.493	4.388	241.066	1.302%	74.463%
36.0	62.522	4.140	245.206	1.228%	75.742%
37.0	57.895	3.927	249.133	1.165%	76.955%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	53.641	3.723	252.856	1.105%	78.105%
39.0	49.458	3.519	256.375	1.044%	79.192%
40.0	46.062	3.331	259.706	.989%	80.221%
41.0	42.792	3.164	262.87	.939%	81.199%
42.0	39.691	2.997	265.867	.889%	82.124%
43.0	36.837	2.835	268.702	.841%	83.000%
44.0	34.376	2.688	271.39	.798%	83.830%
45.0	32.126	2.556	273.945	.758%	84.620%
46.0	29.911	2.426	276.372	.720%	85.369%
47.0	27.963	2.302	278.673	.683%	86.080%
48.0	26.255	2.192	280.865	.650%	86.757%
49.0	24.602	2.088	282.954	.620%	87.402%
50.0	22.915	1.981	284.935	.588%	88.014%
51.0	21.579	1.882	286.817	.559%	88.596%
52.0	20.398	1.801	288.618	.534%	89.152%
53.0	19.146	1.720	290.339	.510%	89.683%
54.0	18.021	1.638	291.977	.486%	90.189%
55.0	17.100	1.568	293.545	.465%	90.674%
56.0	16.172	1.503	295.048	.446%	91.138%
57.0	15.286	1.438	296.486	.427%	91.582%
58.0	14.555	1.380	297.866	.409%	92.009%
59.0	13.859	1.328	299.195	.394%	92.419%
60.0	13.191	1.278	300.473	.379%	92.814%
61.0	12.579	1.230	301.702	.365%	93.193%
62.0	12.030	1.186	302.888	.352%	93.560%
63.0	11.531	1.146	304.034	.340%	93.914%
64.0	11.032	1.107	305.141	.329%	94.256%
65.0	10.603	1.071	306.212	.318%	94.586%
66.0	10.202	1.038	307.25	.308%	94.907%
67.0	9.872	1.009	308.259	.300%	95.219%
68.0	9.506	0.982	309.241	.291%	95.522%
69.0	9.197	0.954	310.195	.283%	95.817%
70.0	8.923	0.931	311.126	.276%	96.104%
71.0	8.627	0.907	312.033	.269%	96.385%
72.0	8.360	0.883	312.916	.262%	96.657%
73.0	8.093	0.860	313.776	.255%	96.923%
74.0	7.805	0.836	314.612	.248%	97.181%
75.0	7.474	0.807	315.42	.240%	97.431%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.235	0.781	316.2	.232%	97.672%
77.0	7.059	0.762	316.962	.226%	97.907%
78.0	6.848	0.744	317.707	.221%	98.137%
79.0	6.673	0.726	318.433	.216%	98.362%
80.0	6.476	0.709	319.142	.210%	98.581%
81.0	6.272	0.689	319.832	.205%	98.794%
82.0	6.026	0.667	320.499	.198%	99.000%
83.0	5.752	0.640	321.139	.190%	99.197%
84.0	5.414	0.608	321.747	.180%	99.385%
85.0	4.957	0.566	322.313	.168%	99.560%
86.0	3.902	0.484	322.797	.144%	99.710%
87.0	2.862	0.370	323.168	.110%	99.824%
88.0	1.723	0.251	323.419	.075%	99.902%
89.0	1.392	0.171	323.589	.051%	99.954%
90.0	1.308	0.148	323.737	.044%	100.000%

Zonal flux distribution table

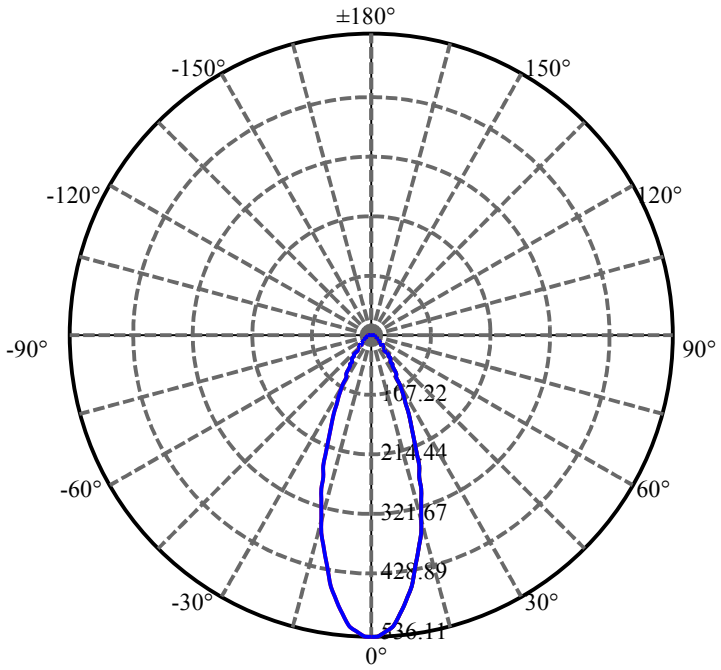
ZONAL LUMEN SUMMARY

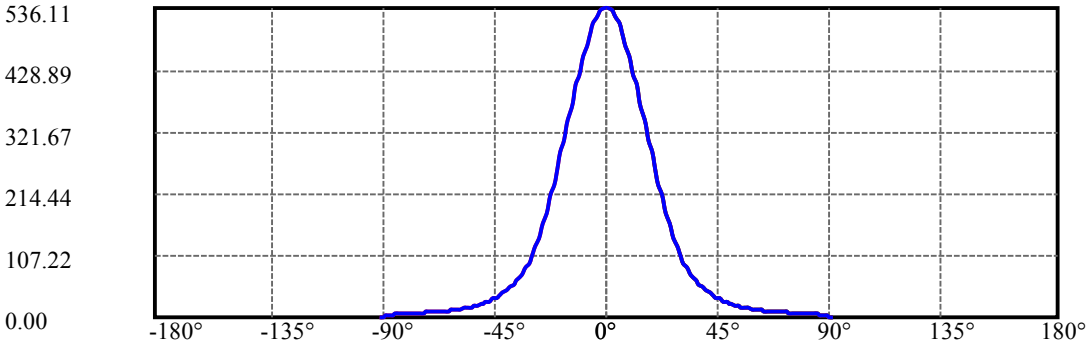
Zone	Lumens	%Lamp	%Fixt
0-30	216.36	64.20%	66.83%
0-40	259.71	77.06%	80.22%
0-60	300.47	89.16%	92.81%
0-90	323.59	96.02%	99.95%
0-120	323.59	96.02%	99.95%
0-180	323.74	96.06%	100.00%
60-90	24.39	7.24%	7.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-39.78	258.99	76.85%	80.00%

ZONAL LUMEN SUMMARY

0-10	46.28
10-20	94.44
20-30	75.63
30-40	43.35
40-50	25.23
50-60	15.54
60-70	10.65
70-80	8.02
80-90	4.45
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):

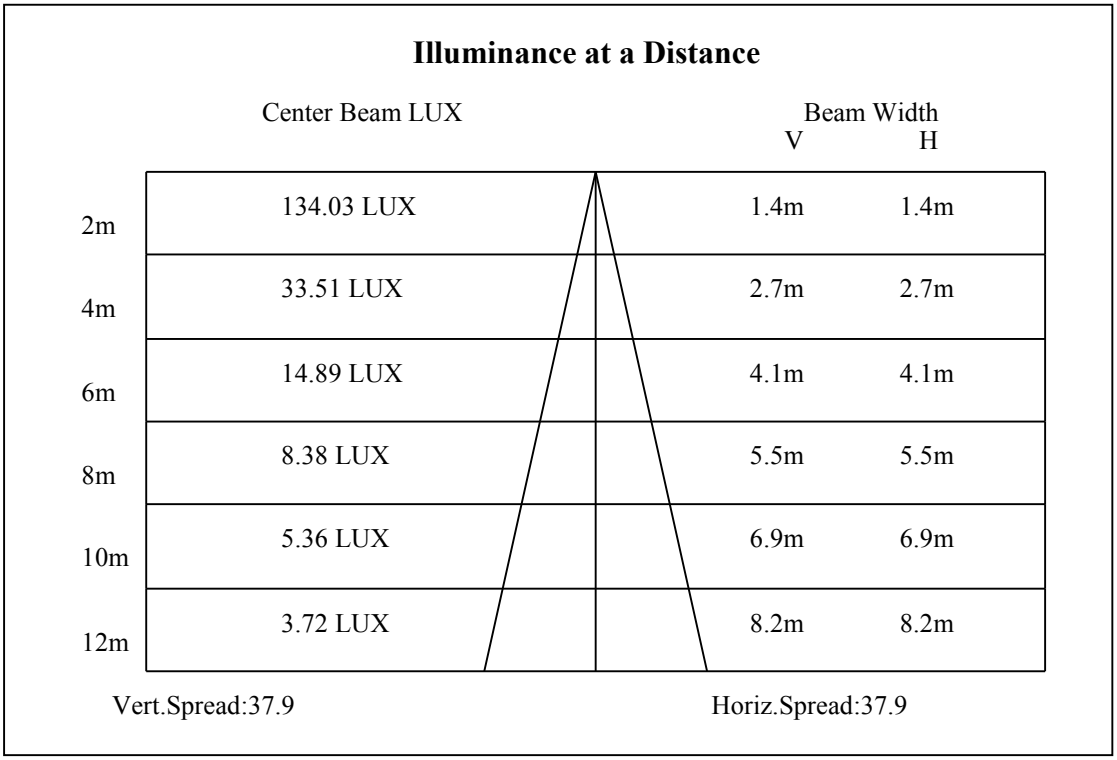
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:38.0 Right:38.0
:C90/270Left:38.0 Right:38.0

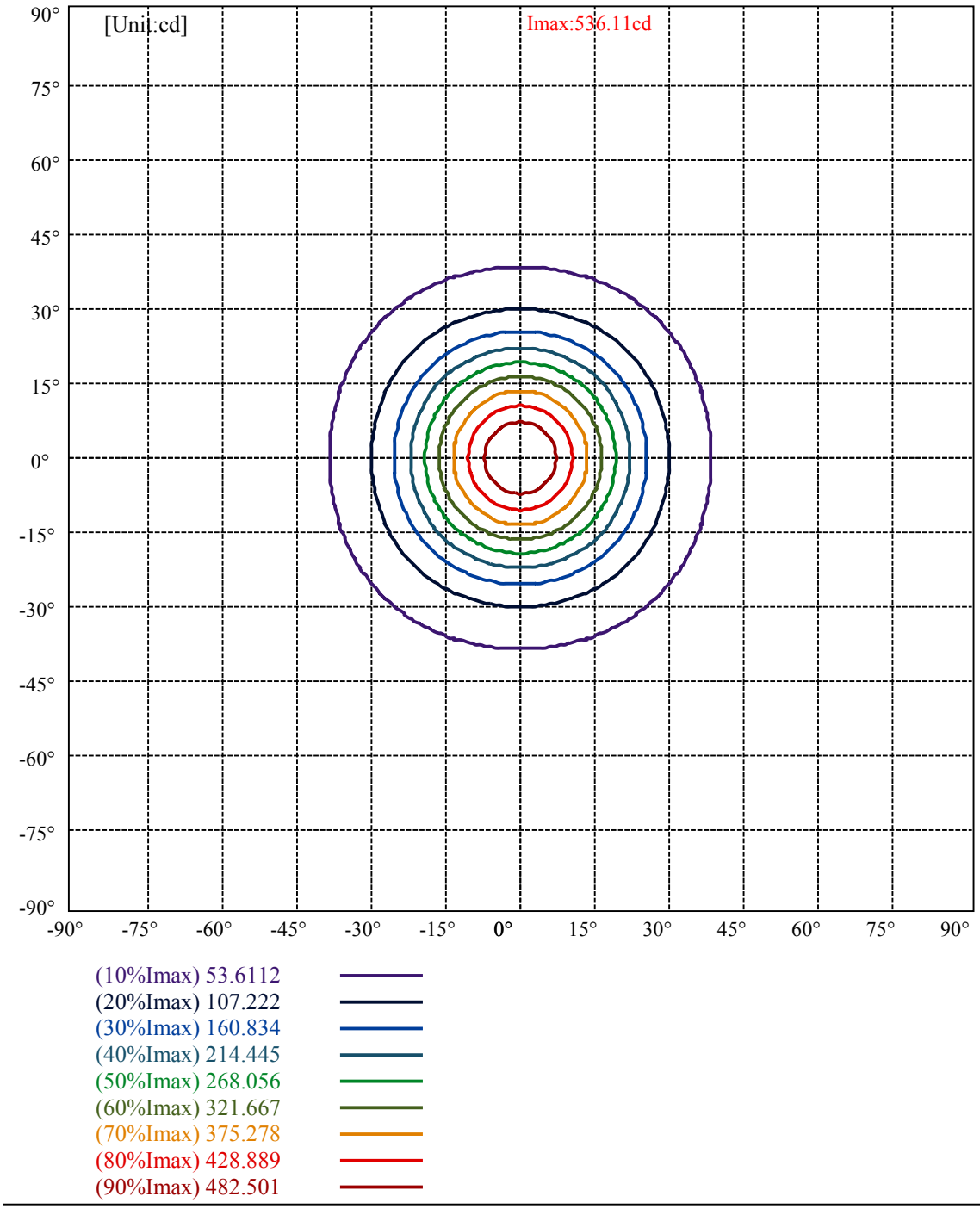
Beam Angle(50%Imax):C0/180Left:19.0 Right:19.0
:C90/270Left:19.0 Right:19.0

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)



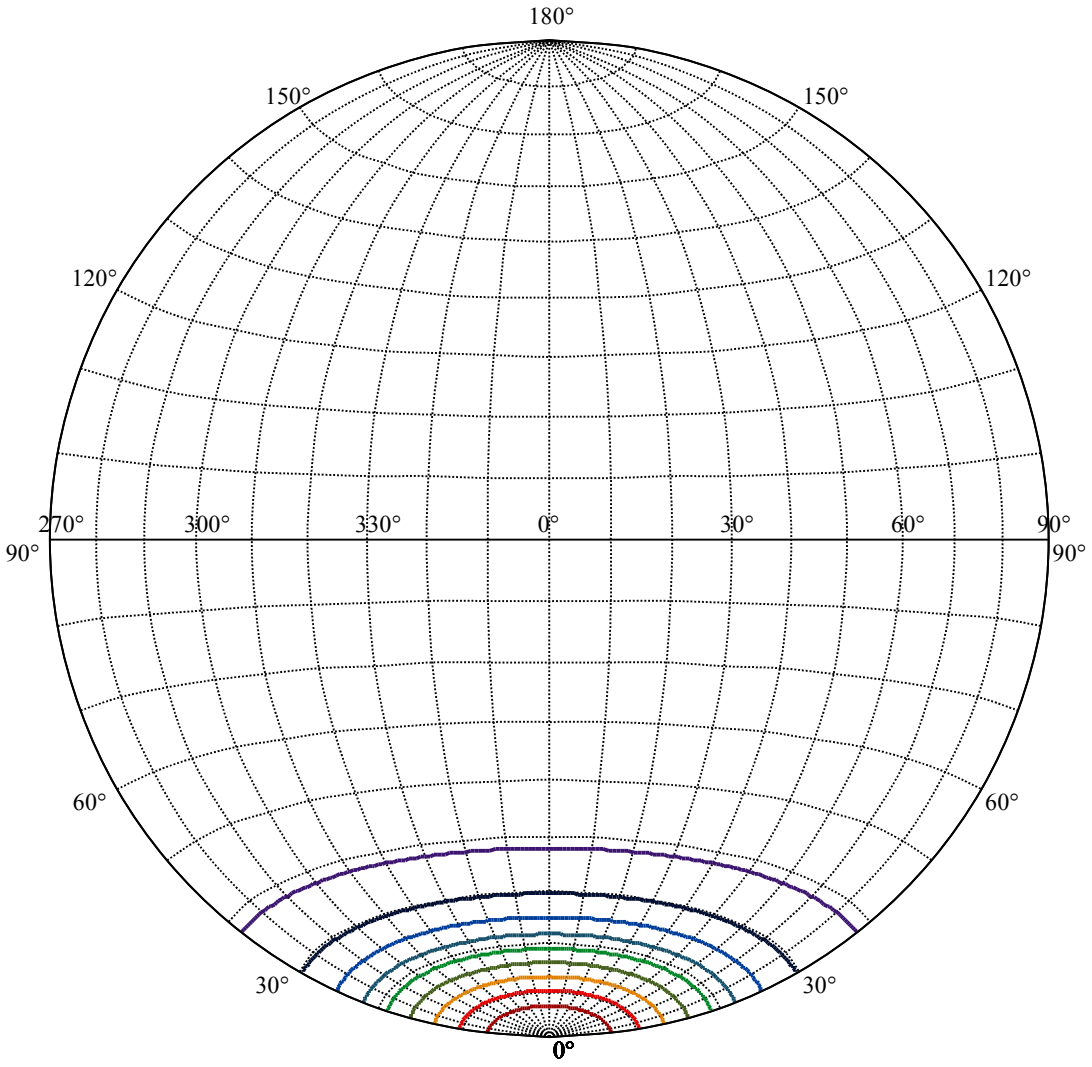
(10%Imax) 53.6112
(20%Imax) 107.222
(30%Imax) 160.834
(40%Imax) 214.445
(50%Imax) 268.056
(60%Imax) 321.667
(70%Imax) 375.278
(80%Imax) 428.889
(90%Imax) 482.501

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:536.11

(10%Imax) 53.6112
(20%Imax) 107.222
(30%Imax) 160.834
(40%Imax) 214.445
(50%Imax) 268.056
(60%Imax) 321.667
(70%Imax) 375.278
(80%Imax) 428.889
(90%Imax) 482.501

Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

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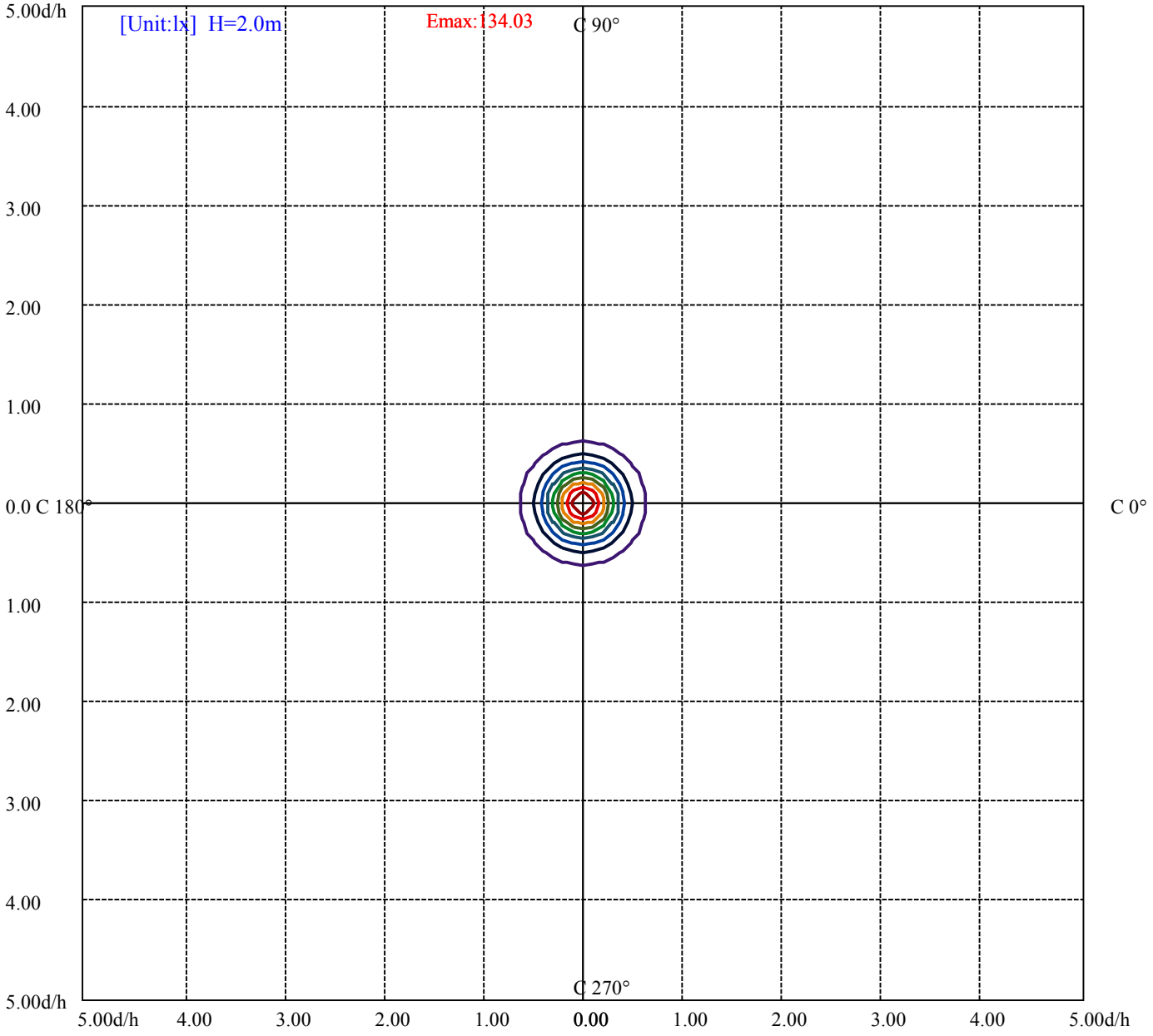
ISO illuminance diagram

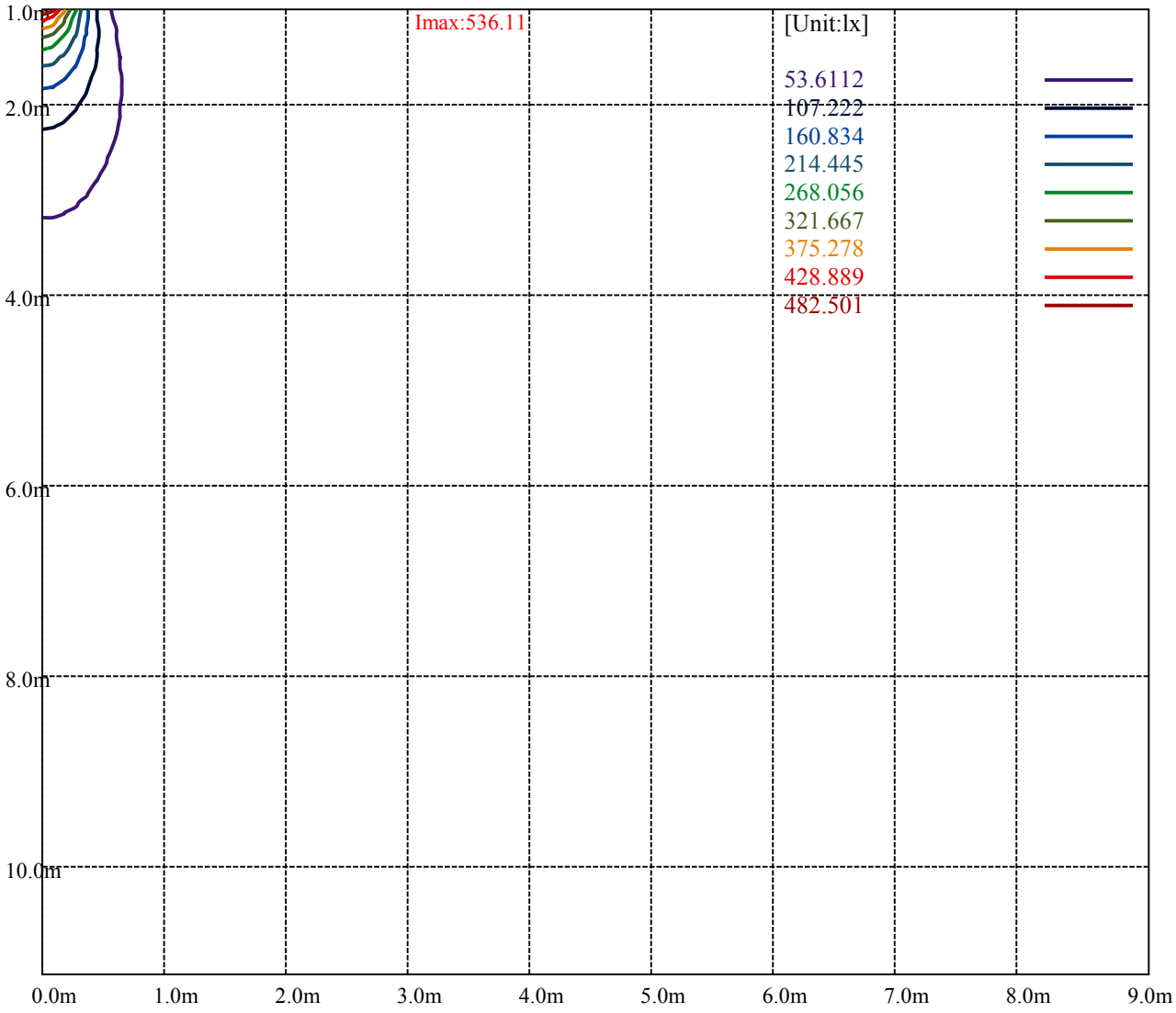


Equipment: GMS1980
Temperature(°C): 25.0

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

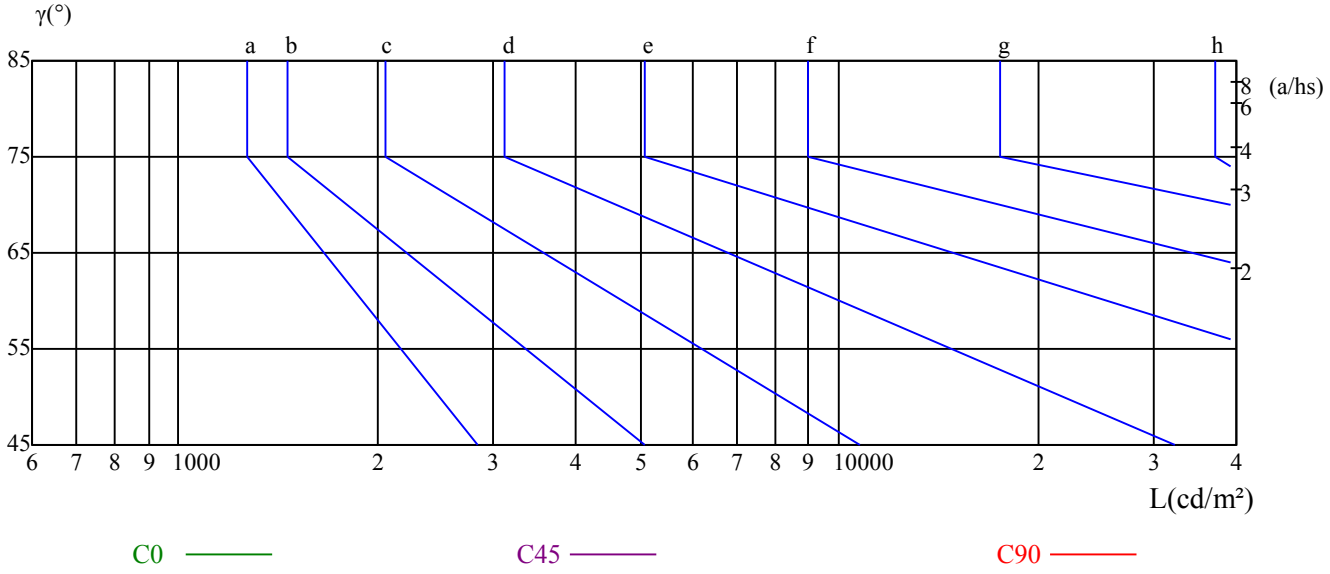
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

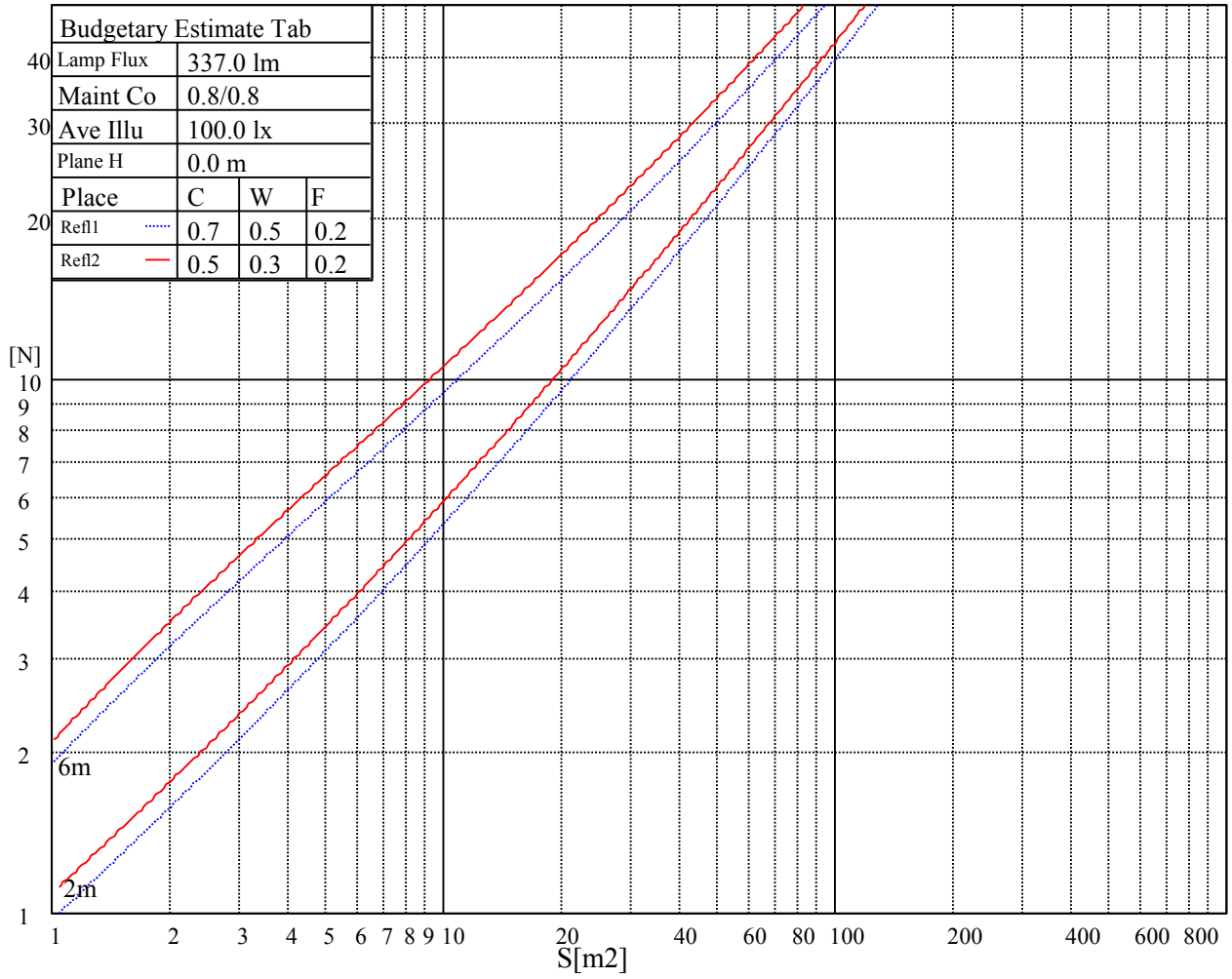


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

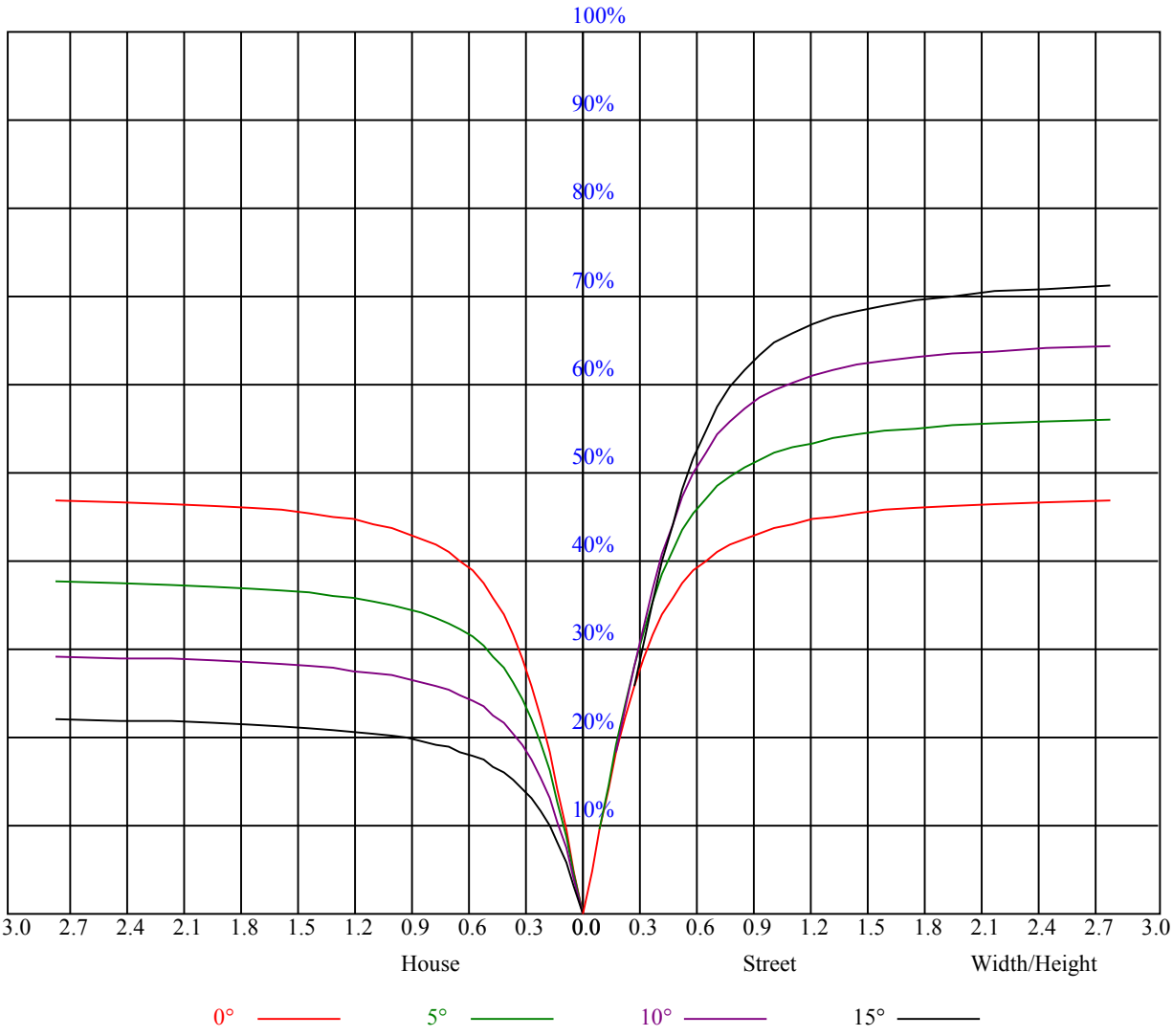


Equipment: GMS1980 Date: 2020/4/17 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.05	1.02	0.99	1.03	1.00	0.98	0.99	0.96	0.95	0.95	0.93	0.92	0.92	0.90	0.89	0.87
2	0.96	0.92	0.88	0.95	0.91	0.87	0.91	0.88	0.85	0.89	0.86	0.83	0.86	0.84	0.82	0.80
3	0.89	0.84	0.80	0.88	0.83	0.79	0.85	0.81	0.78	0.83	0.79	0.76	0.81	0.78	0.75	0.74
4	0.83	0.77	0.73	0.82	0.77	0.72	0.80	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.68
5	0.78	0.72	0.67	0.77	0.71	0.67	0.75	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.64
6	0.73	0.67	0.63	0.72	0.67	0.62	0.71	0.66	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.60
7	0.69	0.63	0.59	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.57	0.56
8	0.65	0.59	0.55	0.65	0.59	0.55	0.64	0.58	0.55	0.63	0.58	0.54	0.62	0.57	0.54	0.53
9	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.54	0.51	0.50
10	0.59	0.53	0.49	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.48

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	530.61	530.61	528.98	525.77	520.71	512.21	501.08	489.88	478.13
45.0	537.92	537.36	533.81	529.43	523.29	512.83	499.44	485.38	468.39
90.0	538.20	536.29	531.06	522.84	513.11	501.58	485.38	471.26	456.41
135.0	537.75	537.24	534.60	530.27	522.62	513.73	500.18	487.46	473.63
180.0	530.61	529.43	527.40	522.90	515.36	506.59	495.79	479.42	465.24
225.0	537.92	536.96	534.54	530.66	525.38	516.88	505.46	493.37	477.62
270.0	538.20	537.36	534.99	529.82	521.27	511.26	498.49	485.10	471.88
315.0	537.69	536.40	533.08	527.23	519.53	509.63	495.39	483.13	469.91
360.0	530.61	530.61	528.98	525.77	520.71	512.21	501.08	489.88	478.13

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	461.19	446.18	430.03	411.08	391.28	373.44	353.19	332.78	314.72
45.0	450.17	432.79	413.04	395.55	375.19	354.54	336.66	319.16	296.61
90.0	438.53	420.02	403.48	384.69	365.96	349.14	330.81	314.10	294.92
135.0	457.26	439.48	423.00	407.81	383.18	365.01	348.53	325.46	303.86
180.0	449.89	426.83	411.53	393.92	373.61	353.08	334.41	313.54	295.20
225.0	462.43	444.26	425.81	408.88	388.80	367.82	349.26	330.69	307.52
270.0	456.08	438.86	423.34	407.98	388.46	372.21	356.12	336.99	317.14
315.0	455.51	436.44	420.53	403.99	382.28	364.61	347.29	327.88	307.91
360.0	461.19	446.18	430.03	411.08	391.28	373.44	353.19	332.78	314.72

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	294.81	277.65	258.64	239.91	223.59	207.90	188.61	173.70	159.81
45.0	279.23	261.39	240.69	223.88	207.39	190.46	174.21	159.86	145.01
90.0	275.06	257.06	239.91	218.64	202.11	186.47	167.96	154.46	141.81
135.0	287.55	264.60	244.97	229.33	207.90	191.76	175.95	157.89	144.84
180.0	274.22	253.63	236.14	217.07	198.56	182.70	168.13	151.03	138.26
225.0	289.29	271.29	249.36	231.86	214.93	194.68	179.55	165.26	149.01
270.0	299.76	280.46	261.11	243.90	225.23	209.14	191.98	175.33	161.44
315.0	290.31	270.96	253.58	234.51	216.06	200.53	183.88	167.96	155.03
360.0	294.81	277.65	258.64	239.91	223.59	207.90	188.61	173.70	159.81

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	143.49	131.63	120.83	109.86	100.29	92.70	84.71	77.40	71.61
45.0	132.92	121.16	109.86	100.63	91.69	84.38	78.08	71.94	65.59
90.0	128.76	117.17	107.78	97.93	90.39	82.74	76.05	70.48	64.91
135.0	132.81	119.64	110.08	101.03	90.28	84.04	77.01	70.43	64.63
180.0	126.68	115.99	103.95	95.40	86.85	79.14	73.18	67.89	62.38
225.0	138.38	125.49	112.95	104.96	96.92	86.91	81.06	74.87	67.33
270.0	148.39	133.59	122.91	113.34	102.49	94.39	87.41	80.83	73.46
315.0	142.71	128.48	118.41	108.96	99.51	90.90	83.87	76.61	70.03
360.0	143.49	131.63	120.83	109.86	100.29	92.70	84.71	77.40	71.61

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	65.64	60.81	55.86	51.24	47.70	44.38	40.73	38.14	35.72
45.0	61.14	56.64	52.20	48.32	45.06	41.74	38.59	36.11	33.64
90.0	59.85	55.86	52.20	47.87	44.66	41.74	38.59	35.72	33.36
135.0	60.13	55.46	51.81	47.81	44.49	41.40	38.31	35.66	33.30
180.0	57.54	53.21	49.67	45.96	42.92	39.71	37.18	34.09	32.01
225.0	62.94	58.33	53.89	49.78	46.52	43.09	40.22	37.29	34.59
270.0	68.18	63.39	58.33	53.89	50.23	46.46	42.98	40.11	37.24
315.0	64.74	59.46	55.18	50.79	46.91	43.82	40.95	37.58	35.16
360.0	65.64	60.81	55.86	51.24	47.70	44.38	40.73	38.14	35.72

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	32.91	30.83	28.91	26.89	24.98	23.40	21.94	20.70	19.52
45.0	31.56	29.31	27.39	25.88	24.41	22.73	21.43	20.31	18.84
90.0	30.99	28.91	27.17	25.31	23.85	22.28	20.87	19.74	18.68
135.0	31.33	29.03	27.28	25.71	24.02	22.44	21.21	19.97	18.79
180.0	29.98	28.18	26.04	24.53	23.12	21.43	20.25	19.24	18.00
225.0	32.40	30.15	28.13	26.49	24.98	23.18	21.88	20.64	19.52
270.0	34.88	32.40	30.15	28.29	26.33	24.47	23.01	21.88	20.19
315.0	32.96	30.49	28.63	26.94	25.14	23.40	22.05	20.70	19.63
360.0	32.91	30.83	28.91	26.89	24.98	23.40	21.94	20.70	19.52

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	18.34	17.44	16.48	15.58	14.91	14.23	13.44	12.88	12.38
45.0	17.89	16.99	15.98	15.13	14.40	13.67	13.11	12.49	11.93
90.0	17.44	16.59	15.75	14.85	14.12	13.50	12.77	12.21	11.76
135.0	17.72	16.71	15.92	15.08	14.29	13.67	13.05	12.38	11.87
180.0	16.99	16.14	15.24	14.57	13.84	13.22	12.66	12.04	11.48
225.0	18.23	17.27	16.43	15.36	14.63	13.95	13.28	12.66	12.09
270.0	19.13	18.28	17.10	16.14	15.47	14.51	13.73	13.22	12.49
315.0	18.45	17.38	16.48	15.58	14.79	14.12	13.50	12.77	12.26
360.0	18.34	17.44	16.48	15.58	14.91	14.23	13.44	12.88	12.38

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	11.87	11.36	10.97	10.63	10.18	9.84	9.51	9.23	8.94
45.0	11.42	10.91	10.52	10.07	9.73	9.39	9.06	8.83	8.49
90.0	11.19	10.74	10.35	9.96	9.68	9.34	9.00	8.78	8.44
135.0	11.36	10.86	10.46	10.07	9.79	9.39	9.17	8.83	8.61
180.0	11.08	10.63	10.18	9.79	9.51	9.23	8.89	8.66	8.33
225.0	11.59	11.03	10.58	10.24	9.90	9.51	9.23	8.94	8.72
270.0	11.98	11.53	10.97	10.46	10.13	9.68	9.34	9.06	8.66
315.0	11.76	11.19	10.80	10.41	10.07	9.68	9.39	9.06	8.83
360.0	11.87	11.36	10.97	10.63	10.18	9.84	9.51	9.23	8.94

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.72	8.44	8.21	7.99	7.76	7.59	7.31	7.14	6.92
45.0	8.27	8.10	7.88	7.59	7.43	7.26	6.98	6.81	6.64
90.0	8.16	7.93	7.65	7.37	7.20	6.92	6.69	6.47	6.24
135.0	8.38	8.16	7.99	7.76	7.54	7.37	7.20	6.92	6.75
180.0	8.10	7.82	7.59	7.31	7.09	6.86	6.64	6.47	6.13
225.0	8.33	8.10	7.93	7.71	7.54	7.37	7.09	6.92	6.75
270.0	8.38	7.93	7.14	6.24	5.74	5.68	5.68	5.68	5.63
315.0	8.55	8.27	8.04	7.82	7.59	7.43	7.20	6.98	6.75
360.0	8.72	8.44	8.21	7.99	7.76	7.59	7.31	7.14	6.92

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.69	6.47	6.13	5.79	5.34	4.95	4.22	2.03	1.52
45.0	6.41	6.13	5.79	5.40	5.01	3.49	1.97	1.46	1.29
90.0	6.02	5.79	5.51	4.95	4.50	2.42	1.63	1.29	1.29
135.0	6.53	6.30	6.02	5.63	4.95	3.38	1.91	1.41	1.29
180.0	5.91	5.57	5.23	4.89	4.50	2.81	1.80	1.41	1.29
225.0	6.47	6.24	6.02	5.74	5.23	4.84	3.32	1.91	1.41
270.0	5.57	5.40	5.23	5.01	4.73	4.33	3.99	2.25	1.58
315.0	6.58	6.30	6.08	5.91	5.40	5.01	4.05	2.03	1.46
360.0	6.69	6.47	6.13	5.79	5.34	4.95	4.22	2.03	1.52

Intensity data(cd)

C/γ(°)	90.0
0.0	1.29
45.0	1.29
90.0	1.29
135.0	1.35
180.0	1.35
225.0	1.29
270.0	1.29
315.0	1.29
360.0	1.29