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Nata

LumCAT: 1-0936-N
Luminaire: 92.70.246.00

Report No: 210630-B004	Voltage(V): 39.6700
Test No: 210630-C004	Current(A): 0.2510
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.9570
Lamp flux(lm): 1156.7	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 570	Width(mm): 45
Phm Type: C	Height(mm): 20

Photometric Results

Lumens(lm): 920.75
Efficiency(%): 79.60%
Lumens(lm)/Power(W): 92.47
Central intensity(cd): 3944.390
Maximum intensity(cd): 3944.390
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.6
[C90/270]Total=23.6
Field angle(10%Imax): [C0/180]Total=49.7
[C90/270]Total=49.7
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 79.60%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.133%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3944.391	0.000	0	.000%	.000%
1.0	3925.477	3.766	3.766	.326%	.409%
2.0	3852.422	11.164	14.929	.965%	1.621%
3.0	3740.344	18.159	33.089	1.570%	3.594%
4.0	3603.938	24.584	57.672	2.125%	6.264%
5.0	3434.063	30.277	87.949	2.618%	9.552%
6.0	3234.797	35.047	122.996	3.030%	13.358%
7.0	3031.945	38.898	161.894	3.363%	17.583%
8.0	2821.781	41.894	203.788	3.622%	22.133%
9.0	2599.875	43.940	247.727	3.799%	26.905%
10.0	2368.828	44.965	292.692	3.887%	31.789%
11.0	2145.445	45.107	337.799	3.900%	36.687%
12.0	1934.367	44.598	382.397	3.856%	41.531%
13.0	1712.602	43.280	425.677	3.742%	46.232%
14.0	1504.638	41.180	466.858	3.560%	50.704%
15.0	1326.741	38.870	505.728	3.361%	54.926%
16.0	1201.458	37.045	542.773	3.203%	58.949%
17.0	1048.486	35.038	577.811	3.029%	62.755%
18.0	936.584	32.729	610.541	2.830%	66.309%
19.0	841.697	30.938	641.479	2.675%	69.669%
20.0	748.125	29.098	670.577	2.516%	72.830%
21.0	663.448	27.105	697.682	2.343%	75.773%
22.0	593.374	25.256	722.939	2.184%	78.516%
23.0	522.380	23.412	746.35	2.024%	81.059%
24.0	449.606	21.251	767.601	1.837%	83.367%
25.0	384.680	18.970	786.571	1.640%	85.427%
26.0	325.202	16.757	803.328	1.449%	87.247%
27.0	263.953	14.414	817.742	1.246%	88.813%
28.0	211.859	12.047	829.788	1.041%	90.121%
29.0	162.274	9.788	839.577	.846%	91.184%
30.0	119.995	7.621	847.198	.659%	92.012%
31.0	90.429	5.856	853.054	.506%	92.648%
32.0	67.781	4.533	857.586	.392%	93.140%
33.0	52.854	3.554	861.14	.307%	93.526%
34.0	45.731	2.983	864.124	.258%	93.850%
35.0	40.887	2.690	866.814	.233%	94.142%
36.0	38.081	2.514	869.328	.217%	94.415%
37.0	36.049	2.418	871.746	.209%	94.678%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	33.785	2.331	874.077	.202%	94.931%
39.0	31.437	2.226	876.303	.192%	95.173%
40.0	29.588	2.128	878.431	.184%	95.404%
41.0	27.570	2.035	880.467	.176%	95.625%
42.0	25.495	1.928	882.395	.167%	95.835%
43.0	23.787	1.826	884.22	.158%	96.033%
44.0	22.064	1.731	885.951	.150%	96.221%
45.0	20.447	1.634	887.584	.141%	96.398%
46.0	18.921	1.540	889.124	.133%	96.565%
47.0	17.459	1.447	890.571	.125%	96.723%
48.0	16.151	1.359	891.93	.117%	96.870%
49.0	15.047	1.281	893.211	.111%	97.009%
50.0	13.830	1.204	894.415	.104%	97.140%
51.0	12.825	1.128	895.542	.097%	97.262%
52.0	11.960	1.064	896.606	.092%	97.378%
53.0	11.102	1.003	897.609	.087%	97.487%
54.0	10.406	0.948	898.557	.082%	97.590%
55.0	9.914	0.907	899.464	.078%	97.688%
56.0	9.408	0.873	900.337	.075%	97.783%
57.0	8.972	0.840	901.178	.073%	97.875%
58.0	8.620	0.814	901.991	.070%	97.963%
59.0	8.304	0.791	902.782	.068%	98.049%
60.0	8.009	0.771	903.553	.067%	98.133%
61.0	7.748	0.752	904.305	.065%	98.214%
62.0	7.530	0.736	905.041	.064%	98.294%
63.0	7.327	0.723	905.764	.062%	98.373%
64.0	7.130	0.709	906.473	.061%	98.450%
65.0	6.933	0.696	907.169	.060%	98.525%
66.0	6.736	0.682	907.851	.059%	98.599%
67.0	6.553	0.668	908.519	.058%	98.672%
68.0	6.377	0.655	909.174	.057%	98.743%
69.0	6.216	0.642	909.817	.056%	98.813%
70.0	6.068	0.631	910.448	.055%	98.881%
71.0	5.892	0.618	911.066	.053%	98.948%
72.0	5.716	0.604	911.669	.052%	99.014%
73.0	5.569	0.590	912.26	.051%	99.078%
74.0	5.421	0.578	912.837	.050%	99.141%
75.0	5.273	0.565	913.402	.049%	99.202%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.147	0.553	913.956	.048%	99.262%
77.0	5.034	0.543	914.498	.047%	99.321%
78.0	4.915	0.533	915.031	.046%	99.379%
79.0	4.802	0.522	915.553	.045%	99.436%
80.0	4.718	0.513	916.066	.044%	99.492%
81.0	4.655	0.507	916.573	.044%	99.547%
82.0	4.641	0.504	917.077	.044%	99.601%
83.0	4.627	0.504	917.581	.044%	99.656%
84.0	4.577	0.501	918.082	.043%	99.711%
85.0	4.261	0.482	918.565	.042%	99.763%
86.0	4.120	0.458	919.023	.040%	99.813%
87.0	3.987	0.444	919.467	.038%	99.861%
88.0	3.909	0.433	919.899	.037%	99.908%
89.0	3.867	0.426	920.325	.037%	99.954%
90.0	3.839	0.423	920.748	.037%	100.000%

Zonal flux distribution table

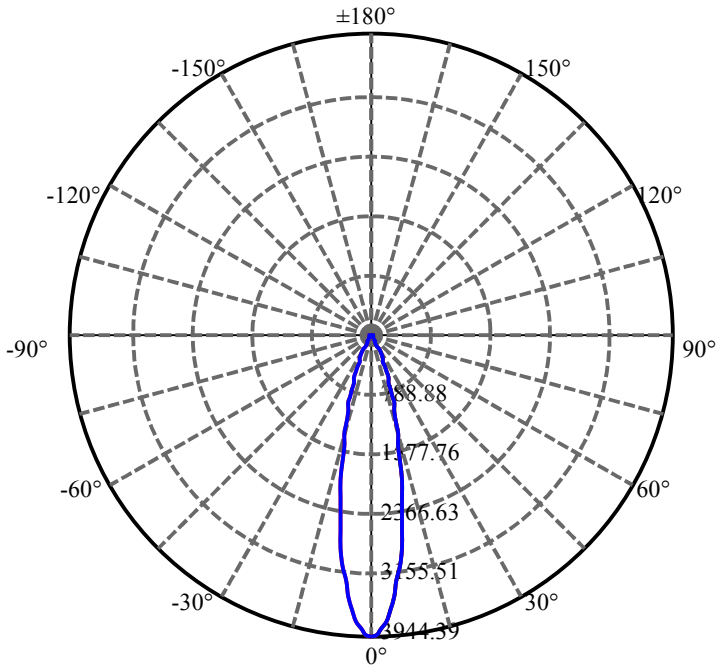
ZONAL LUMEN SUMMARY

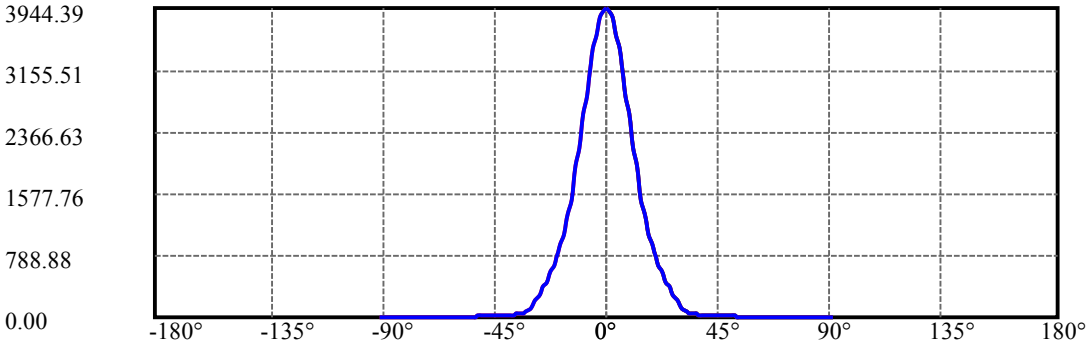
Zone	Lumens	%Lamp	%Fixt
0-30	847.20	73.24%	92.01%
0-40	878.43	75.94%	95.40%
0-60	903.55	78.12%	98.13%
0-90	920.33	79.57%	99.95%
0-120	920.33	79.57%	99.95%
0-180	920.75	79.60%	100.00%
60-90	17.54	1.52%	1.91%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.58	736.60	63.68%	80.00%

ZONAL LUMEN SUMMARY

0-10	292.69
10-20	377.89
20-30	176.62
30-40	31.23
40-50	15.98
50-60	9.14
60-70	6.89
70-80	5.62
80-90	4.26
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):

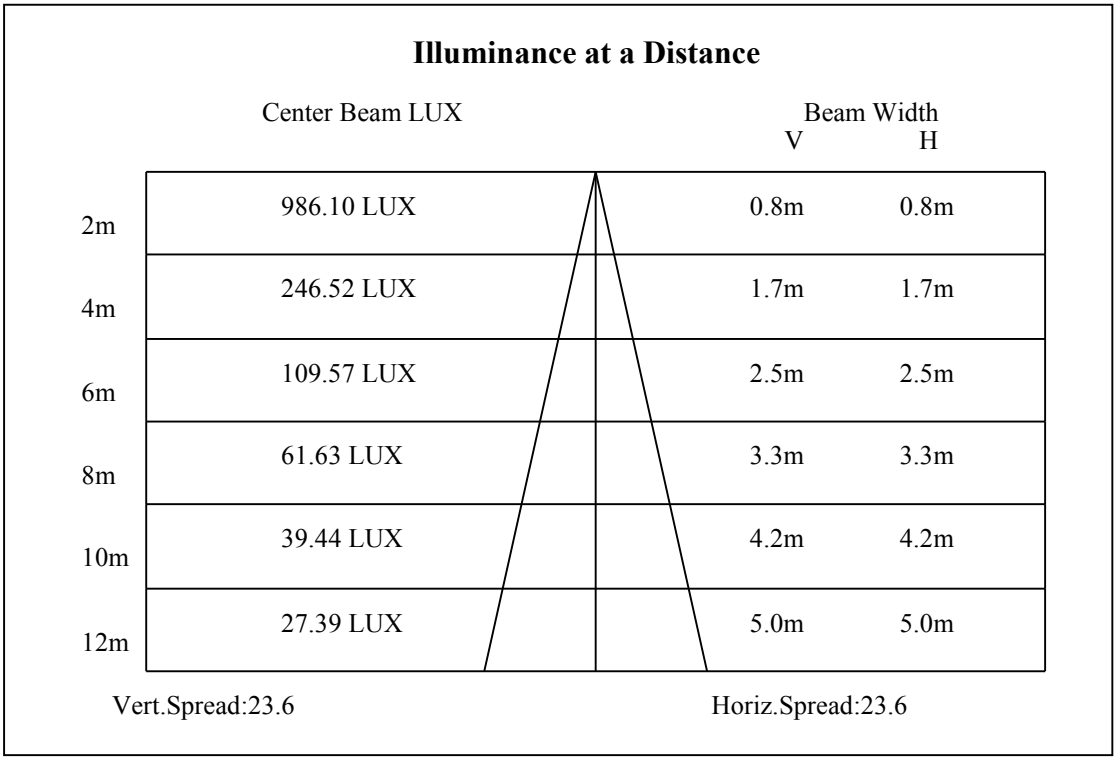
C0/C180:

C90/C270:

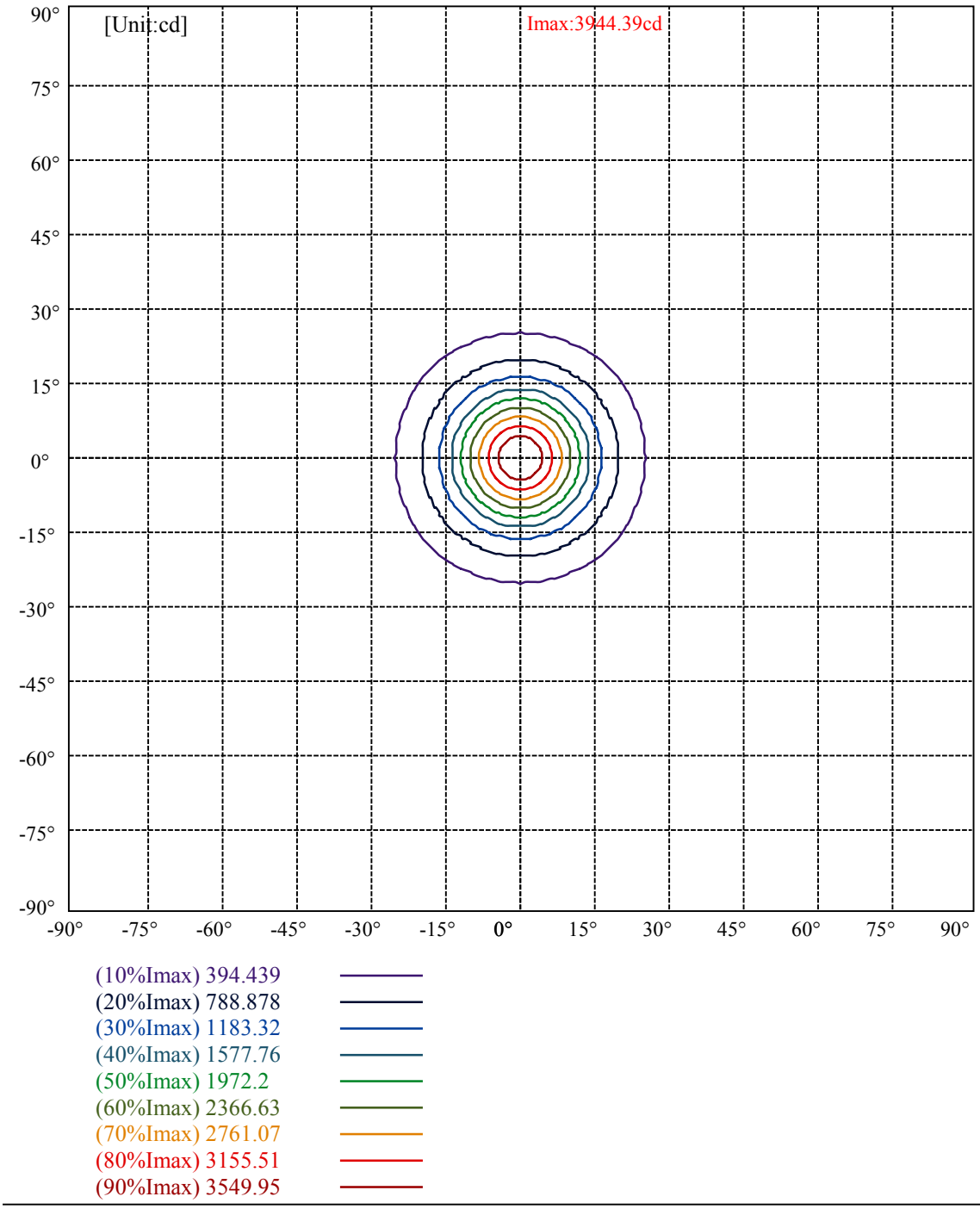
Field angle(10%Imax):C0/180Left:24.8 Right:24.8
:C90/270Left:24.8 Right:24.8

Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8
:C90/270Left:11.8 Right:11.8

Lux distance Curve



ISO-Intensity(V-H)



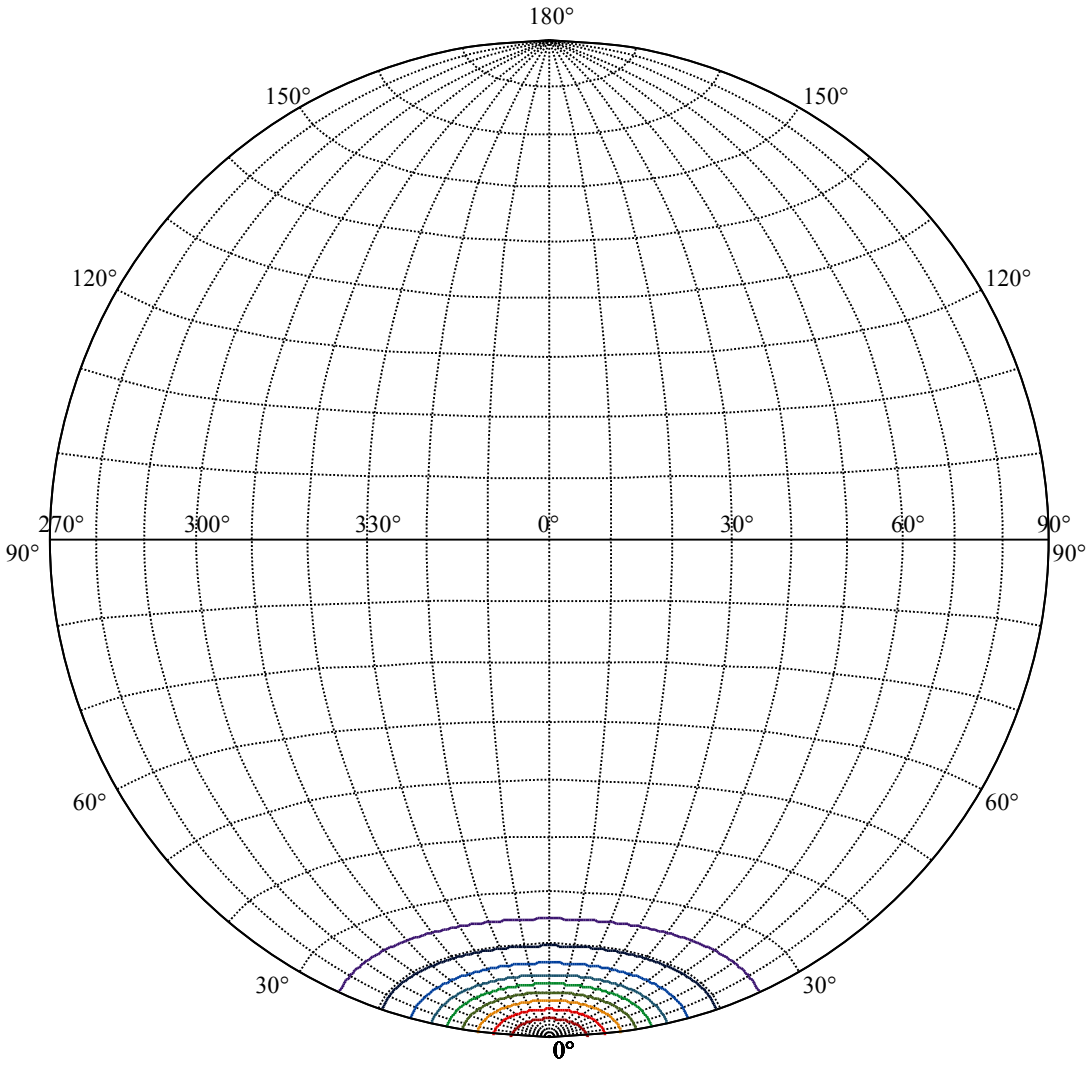
(10%Imax) 394.439
(20%Imax) 788.878
(30%Imax) 1183.32
(40%Imax) 1577.76
(50%Imax) 1972.2
(60%Imax) 2366.63
(70%Imax) 2761.07
(80%Imax) 3155.51
(90%Imax) 3549.95

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



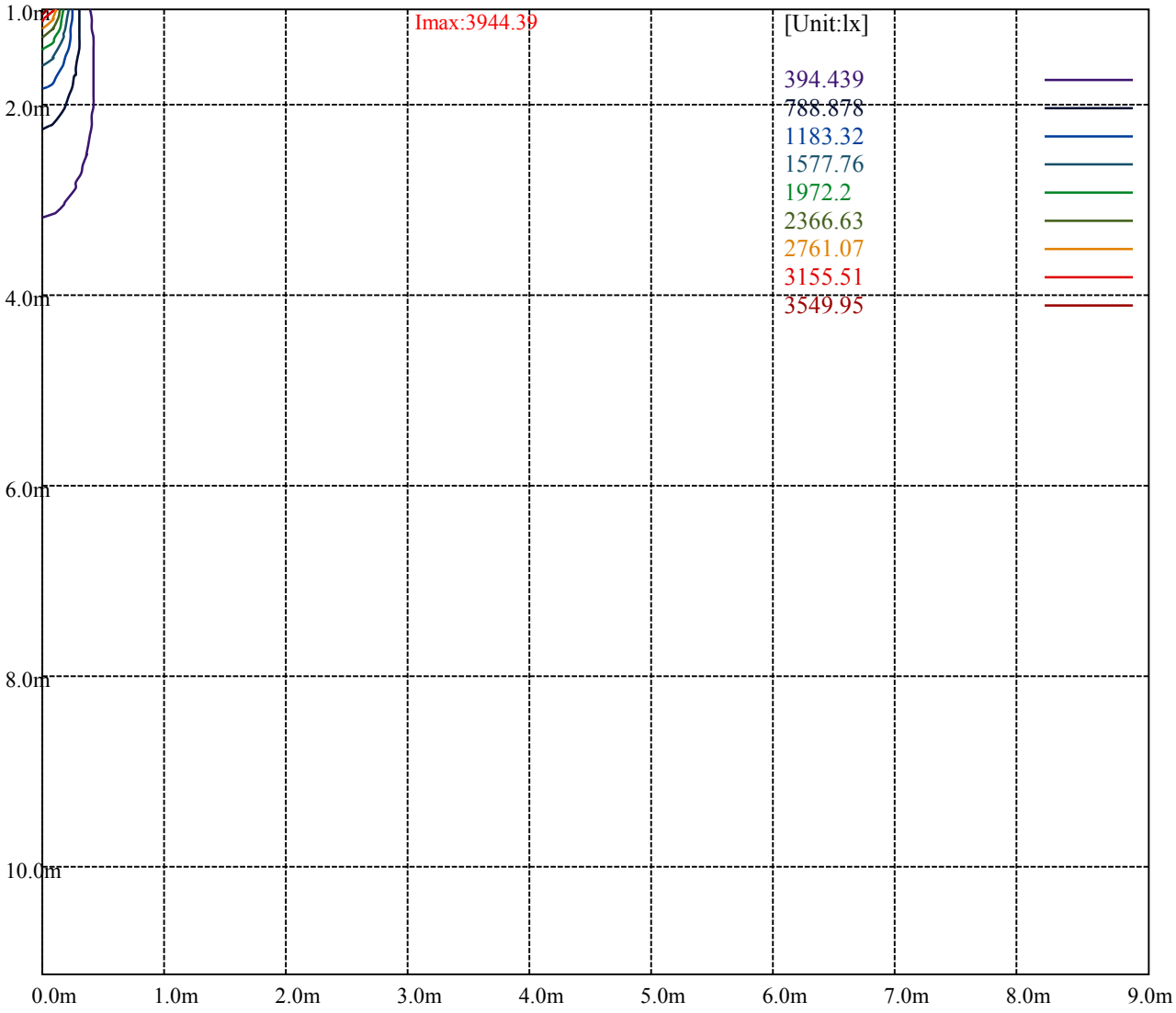
House [Unit:cd] Road

Imax:3944.39

(10%Imax) 394.439
(20%Imax) 788.878
(30%Imax) 1183.32
(40%Imax) 1577.76
(50%Imax) 1972.2
(60%Imax) 2366.63
(70%Imax) 2761.07
(80%Imax) 3155.51
(90%Imax) 3549.95

Equipment: GMS1980 Date: 2021/6/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

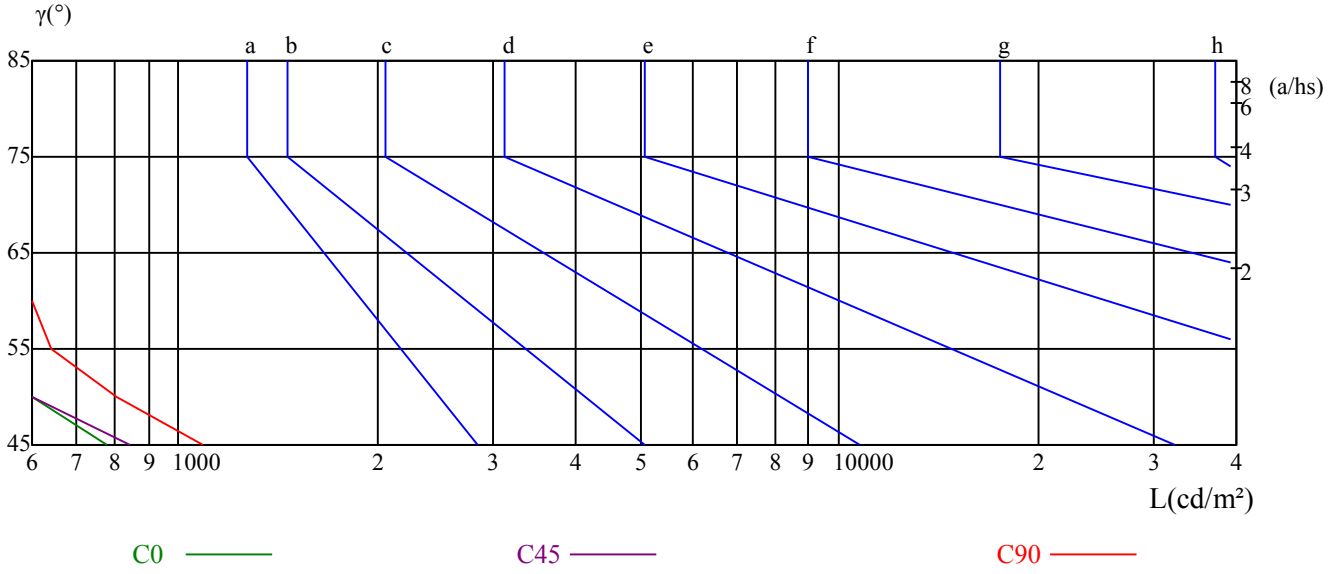
γ	45	50	55	60	65	70	75	80	85
C0	780	548	412	353	327	311	299	301	313
C45	842	597	454	393	370	358	351	362	391
C90	1089	805	642	589	595	631	702	883	1360

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
640	640	640	794	794	794	1906	1906	1906

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

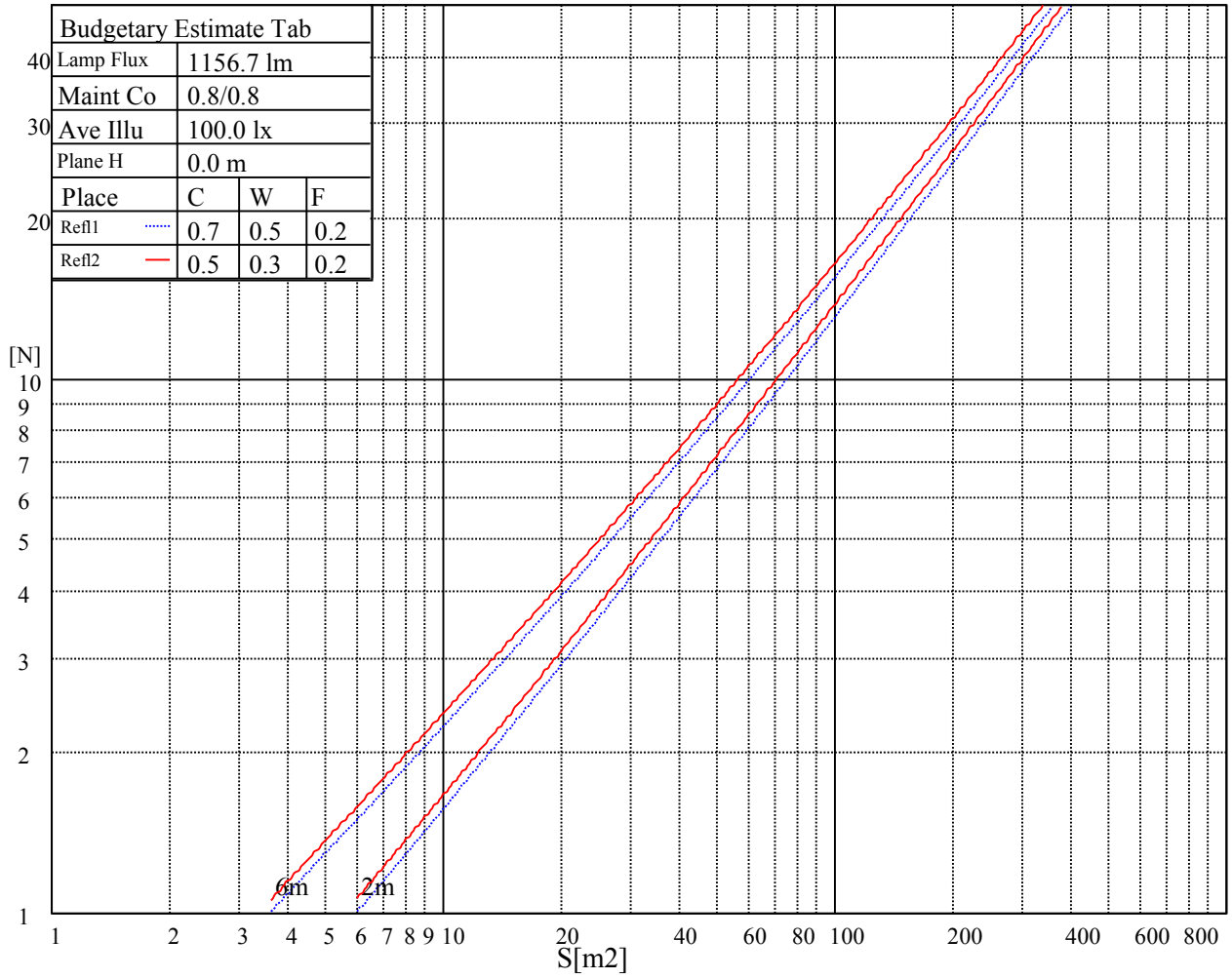


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

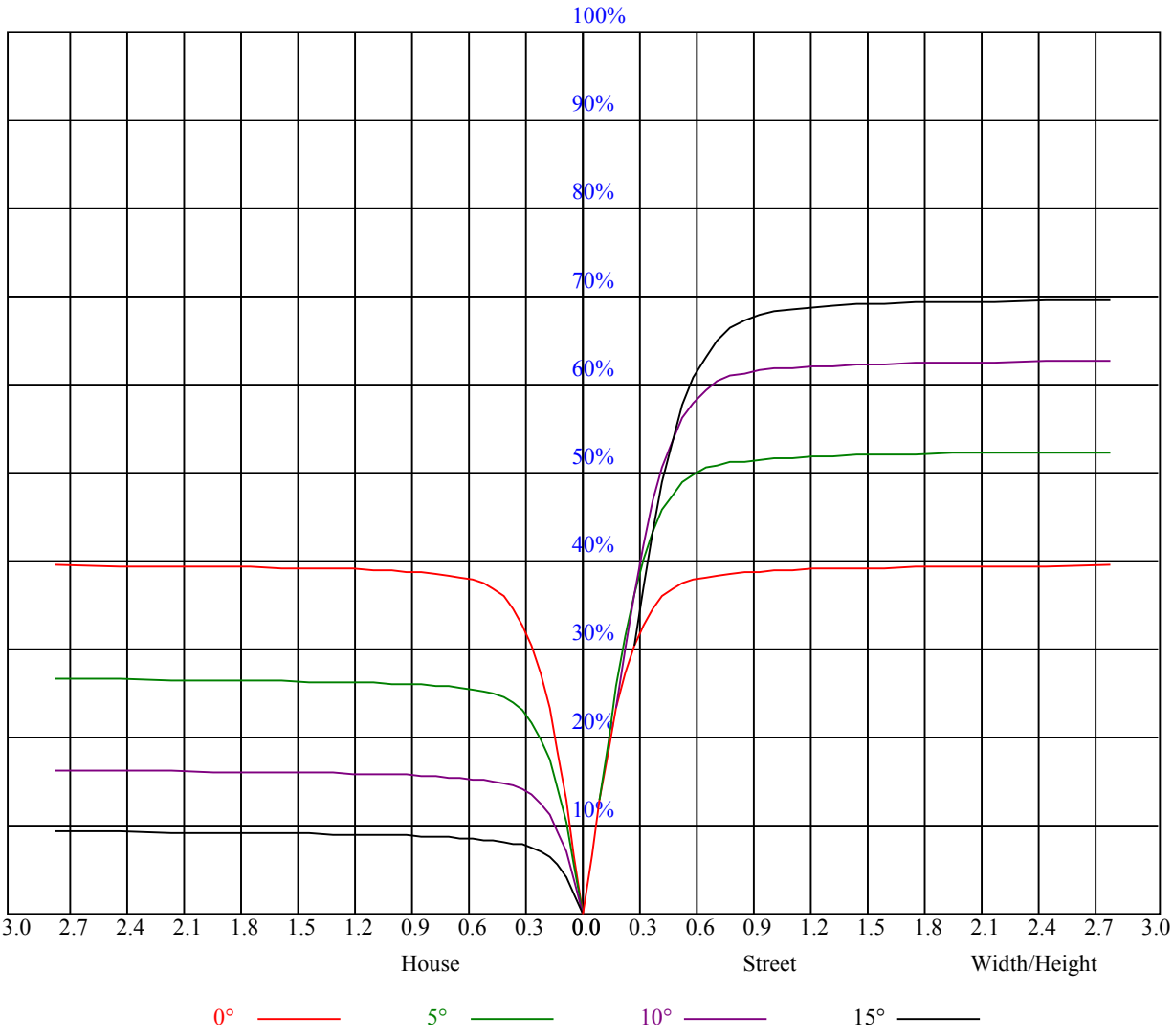


Equipment: GMS1980 Date: 2021/6/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.95	0.95	0.95	0.93	0.93	0.93	0.88	0.88	0.88	0.85	0.85	0.85	0.81	0.81	0.81	0.80
1	0.89	0.88	0.86	0.88	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.76
2	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.78	0.77	0.75	0.76	0.75	0.74	0.73
3	0.81	0.77	0.75	0.79	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.70
4	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.66	0.65
6	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.63
7	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.61	0.61
8	0.66	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.60	0.59
9	0.64	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
10	0.62	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
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	3906.00	3975.19	3989.81	3942.56	3841.31	3721.50	3557.81	3364.31	3177.00
45.0	3969.00	3975.75	3902.06	3802.50	3682.69	3499.31	3322.13	3119.63	2906.44
90.0	3943.69	3891.94	3781.13	3650.06	3487.50	3317.06	3096.00	2899.69	2688.75
135.0	3958.88	3889.69	3776.06	3643.88	3477.94	3297.94	3071.25	2849.06	2649.94
180.0	3906.00	3819.38	3697.88	3501.00	3322.13	3136.50	2894.63	2679.19	2453.06
225.0	3969.00	3917.81	3817.13	3700.69	3553.31	3336.19	3169.69	2956.50	2702.25
270.0	3943.69	3956.63	3913.31	3837.38	3728.81	3569.06	3379.50	3183.75	2976.75
315.0	3958.88	3977.44	3942.00	3844.69	3737.81	3594.94	3387.38	3203.44	3020.06
360.0	3906.00	3975.19	3989.81	3942.56	3841.31	3721.50	3557.81	3364.31	3177.00

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2971.69	2751.19	2540.25	2322.56	2061.56	1854.00	1662.19	1459.13	1280.25
45.0	2691.00	2479.50	2237.06	2022.19	1797.19	1587.94	1417.50	1244.25	1096.88
90.0	2441.25	2198.81	1988.44	1769.63	1565.44	1395.56	1108.52	1093.05	969.75
135.0	2410.88	2168.44	1958.06	1757.81	1526.06	1359.56	1212.75	1088.44	951.75
180.0	2208.94	1971.56	1774.69	1562.63	1375.88	1122.36	1063.41	972.62	863.89
225.0	2519.44	2270.25	2008.69	1828.13	1639.69	1395.56	1213.88	1121.12	990.28
270.0	2754.00	2542.50	2304.56	2099.25	1863.56	1645.31	1461.94	1321.31	1119.94
315.0	2801.81	2568.38	2351.81	2112.75	1871.44	1676.81	1473.75	1311.75	1115.16
360.0	2971.69	2751.19	2540.25	2322.56	2061.56	1854.00	1662.19	1459.13	1280.25

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1141.88	1011.94	897.75	809.44	718.88	643.50	571.50	493.31	430.88
45.0	983.81	884.25	777.38	695.81	622.69	541.13	473.63	413.44	341.44
90.0	858.71	770.51	691.54	605.25	541.24	473.96	401.18	342.00	279.00
135.0	856.69	763.88	676.69	609.75	546.19	469.13	402.75	331.31	284.63
180.0	757.35	689.57	618.41	533.31	473.68	415.35	337.73	276.58	228.77
225.0	877.11	788.74	709.48	619.09	557.89	491.23	422.61	357.53	296.83
270.0	1001.25	912.38	793.69	716.06	645.75	567.56	495.00	434.25	367.88
315.0	1015.88	912.32	820.07	718.88	640.69	577.18	492.47	429.02	372.21
360.0	1141.88	1011.94	897.75	809.44	718.88	643.50	571.50	493.31	430.88

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	367.31	286.31	254.03	189.23	137.81	107.04	79.54	62.38	49.67
45.0	285.75	225.06	171.68	128.08	98.16	68.34	54.90	47.48	42.64
90.0	227.98	172.97	127.69	97.09	69.64	52.20	43.99	40.44	38.14
135.0	218.59	171.39	118.86	93.38	65.31	47.53	41.40	37.97	35.94
180.0	176.46	125.27	98.04	67.44	51.19	42.36	38.14	36.11	33.98
225.0	238.56	183.60	138.43	103.73	78.19	55.63	45.45	40.56	38.08
270.0	303.19	286.31	192.43	141.53	109.69	81.17	59.40	49.28	43.03
315.0	293.79	243.96	197.04	139.50	113.46	87.98	60.02	51.64	45.62
360.0	367.31	286.31	254.03	189.23	137.81	107.04	79.54	62.38	49.67

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	44.83	42.47	39.38	36.84	34.82	32.23	29.70	28.01	25.59
45.0	40.39	38.03	35.16	33.30	31.28	28.86	26.66	24.92	23.01
90.0	36.00	33.86	32.06	29.81	27.62	25.93	24.02	22.05	20.76
135.0	34.03	32.12	30.38	28.07	26.38	24.64	22.73	21.43	19.91
180.0	31.89	30.26	28.46	26.21	24.69	23.12	21.54	20.08	18.56
225.0	35.44	33.41	31.61	29.25	27.28	25.71	23.85	22.16	20.87
270.0	40.39	38.36	35.72	33.53	31.67	29.31	27.11	25.37	23.40
315.0	41.68	39.88	37.52	34.48	32.96	30.77	28.35	26.27	24.41
360.0	44.83	42.47	39.38	36.84	34.82	32.23	29.70	28.01	25.59

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	23.85	22.44	20.42	18.73	17.55	15.98	14.68	13.78	12.49
45.0	21.21	19.58	17.89	16.88	15.47	14.12	13.28	12.26	11.14
90.0	19.07	17.33	16.37	15.02	13.95	12.99	11.93	11.08	10.46
135.0	18.51	17.04	15.86	14.63	13.73	12.66	11.76	10.91	10.24
180.0	17.27	16.03	14.79	13.89	12.94	11.98	11.25	10.52	10.07
225.0	19.24	17.72	16.48	15.19	14.12	13.16	12.15	11.36	10.74
270.0	21.88	20.31	18.62	17.27	16.03	14.63	13.61	12.66	11.59
315.0	22.56	20.93	19.24	17.61	16.59	15.13	13.95	13.11	12.09
360.0	23.85	22.44	20.42	18.73	17.55	15.98	14.68	13.78	12.49

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.59	10.97	10.29	9.73	9.28	8.89	8.49	8.21	7.93
45.0	10.52	10.07	9.39	9.06	8.66	8.33	8.04	7.76	7.54
90.0	9.79	9.34	8.94	8.55	8.21	7.93	7.65	7.43	7.20
135.0	9.79	9.34	8.89	8.49	8.21	7.93	7.65	7.48	7.31
180.0	9.51	9.11	8.78	8.38	8.16	7.93	7.71	7.48	7.31
225.0	10.13	9.68	9.23	8.83	8.49	8.21	7.93	7.71	7.48
270.0	10.86	10.29	9.73	9.28	8.89	8.55	8.21	7.93	7.71
315.0	11.08	10.52	10.01	9.45	9.06	8.66	8.38	7.99	7.76
360.0	11.59	10.97	10.29	9.73	9.28	8.89	8.49	8.21	7.93

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.65	7.43	7.20	7.09	6.86	6.64	6.47	6.30	6.13
45.0	7.31	7.09	6.92	6.69	6.47	6.36	6.19	6.08	5.91
90.0	7.03	6.92	6.75	6.47	6.36	6.19	6.02	5.91	5.74
135.0	7.14	6.98	6.75	6.53	6.41	6.24	6.13	5.96	5.74
180.0	7.14	6.92	6.75	6.58	6.41	6.24	6.08	5.91	5.74
225.0	7.31	7.14	6.92	6.75	6.53	6.36	6.19	6.02	5.85
270.0	7.48	7.26	7.09	6.92	6.69	6.53	6.36	6.19	6.02
315.0	7.54	7.31	7.09	6.86	6.69	6.47	6.30	6.19	6.02
360.0	7.65	7.43	7.20	7.09	6.86	6.64	6.47	6.30	6.13

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.02	5.85	5.68	5.51	5.40	5.23	5.12	5.01	4.84
45.0	5.68	5.57	5.40	5.29	5.18	5.06	4.89	4.73	4.67
90.0	5.51	5.46	5.29	5.18	5.01	4.95	4.89	4.84	4.89
135.0	5.63	5.46	5.29	5.18	5.06	4.95	4.84	4.78	4.67
180.0	5.57	5.40	5.23	5.12	5.01	4.89	4.78	4.67	4.61
225.0	5.68	5.51	5.40	5.23	5.06	4.95	4.78	4.73	4.61
270.0	5.79	5.68	5.57	5.34	5.23	5.12	5.01	4.84	4.73
315.0	5.85	5.63	5.51	5.34	5.23	5.12	5.01	4.84	4.73
360.0	6.02	5.85	5.68	5.51	5.40	5.23	5.12	5.01	4.84

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.73	4.61	4.50	4.39	4.28	4.22	4.16	4.05	3.99
45.0	4.50	4.44	4.39	4.33	4.28	4.16	4.05	3.94	3.88
90.0	5.01	5.29	5.46	5.57	4.28	4.05	3.94	3.83	3.77
135.0	4.67	4.61	4.56	4.44	4.28	4.11	3.94	3.83	3.83
180.0	4.56	4.50	4.44	4.33	4.22	4.05	3.88	3.88	3.88
225.0	4.50	4.44	4.39	4.28	4.22	4.11	3.94	3.88	3.83
270.0	4.67	4.73	4.89	4.95	4.33	4.11	3.99	3.94	3.88
315.0	4.61	4.50	4.39	4.33	4.22	4.16	3.99	3.94	3.88
360.0	4.73	4.61	4.50	4.39	4.28	4.22	4.16	4.05	3.99

Intensity data(cd)

C/γ(°)	90.0
0.0	3.94
45.0	3.83
90.0	3.77
135.0	3.83
180.0	3.88
225.0	3.88
270.0	3.77
315.0	3.83
360.0	3.94