NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LN01D02824DA-N
Luminaire: 92.70.307.00

Report No: 211111-B007	Voltage(V): 35.5400
Test No: 211111-C007	Current(A): 0.2510
LampCAT: LUMINUS CXM-6-AC40 LES6.3	Power (W): 8.9200
Lamp flux(lm): 895.7	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 111	Width(mm): 111
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 559.17
Efficiency(%): 62.43%
Lumens(lm)/Power(W): 62.69
Central intensity(cd): 1437.655
Maximum intensity(cd): 1437.655
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=29.0
[C90/270]Total=29.0
Field angle(10%Imax): [C0/180]Total=59.5
[C90/270]Total=59.5
Maximum s/h(1/2): C0_180=0.48 C90_270=0.48
Maximum s/h(1/4): C0_180=0.50 C90_270=0.50
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 62.43%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.257%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1437.655	0.000	0	.000%	.000%
1.0	1433.621	1.374	1.374	.153%	.246%
2.0	1419.953	4.096	5.47	.457%	.978%
3.0	1396.724	6.737	12.206	.752%	2.183%
4.0	1367.893	9.254	21.46	1.033%	3.838%
5.0	1327.859	11.597	33.057	1.295%	5.912%
6.0	1275.978	13.684	46.741	1.528%	8.359%
7.0	1227.870	15.541	62.282	1.735%	11.138%
8.0	1163.516	17.115	79.397	1.911%	14.199%
9.0	1104.488	18.381	97.778	2.052%	17.486%
10.0	1036.885	19.379	117.157	2.164%	20.952%
11.0	966.697	20.020	137.177	2.235%	24.532%
12.0	898.669	20.391	157.568	2.277%	28.179%
13.0	825.964	20.467	178.035	2.285%	31.839%
14.0	752.192	20.200	198.235	2.255%	35.452%
15.0	687.241	19.761	217.996	2.206%	38.986%
16.0	624.216	19.217	237.213	2.146%	42.422%
17.0	560.475	18.449	255.661	2.060%	45.722%
18.0	502.343	17.524	273.185	1.957%	48.855%
19.0	453.084	16.622	289.807	1.856%	51.828%
20.0	405.386	15.712	305.52	1.754%	54.638%
21.0	361.923	14.734	320.254	1.645%	57.273%
22.0	325.482	13.814	334.067	1.542%	59.743%
23.0	290.212	12.919	346.986	1.442%	62.054%
24.0	262.323	12.080	359.067	1.349%	64.214%
25.0	233.619	11.277	370.343	1.259%	66.231%
26.0	210.509	10.484	380.827	1.171%	68.106%
27.0	189.013	9.774	390.602	1.091%	69.854%
28.0	171.050	9.116	399.718	1.018%	71.484%
29.0	154.357	8.514	408.231	.951%	73.006%
30.0	139.941	7.946	416.177	.887%	74.428%
31.0	127.281	7.436	423.614	.830%	75.757%
32.0	115.241	6.948	430.562	.776%	77.000%
33.0	105.404	6.500	437.062	.726%	78.162%
34.0	96.680	6.116	443.177	.683%	79.256%
35.0	88.330	5.746	448.923	.642%	80.284%
36.0	80.853	5.387	454.31	.601%	81.247%
37.0	74.870	5.079	459.389	.567%	82.155%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	68.873	4.798	464.187	.536%	83.013%
39.0	63.420	4.516	468.702	.504%	83.821%
40.0	58.872	4.265	472.967	.476%	84.584%
41.0	54.749	4.046	477.013	.452%	85.307%
42.0	50.745	3.833	480.846	.428%	85.993%
43.0	47.272	3.631	484.477	.405%	86.642%
44.0	44.225	3.453	487.93	.386%	87.260%
45.0	41.439	3.292	491.222	.368%	87.848%
46.0	39.019	3.147	494.369	.351%	88.411%
47.0	36.658	3.010	497.379	.336%	88.949%
48.0	34.560	2.879	500.258	.321%	89.464%
49.0	32.640	2.760	503.017	.308%	89.958%
50.0	30.698	2.641	505.658	.295%	90.430%
51.0	29.047	2.528	508.186	.282%	90.882%
52.0	27.606	2.431	510.617	.271%	91.317%
53.0	26.142	2.338	512.955	.261%	91.735%
54.0	24.783	2.245	515.2	.251%	92.136%
55.0	23.647	2.162	517.361	.241%	92.523%
56.0	22.497	2.085	519.446	.233%	92.896%
57.0	21.436	2.009	521.455	.224%	93.255%
58.0	20.435	1.936	523.392	.216%	93.601%
59.0	19.524	1.868	525.26	.209%	93.935%
60.0	18.576	1.800	527.06	.201%	94.257%
61.0	17.679	1.730	528.79	.193%	94.567%
62.0	16.865	1.665	530.454	.186%	94.864%
63.0	16.059	1.601	532.056	.179%	95.151%
64.0	15.282	1.538	533.593	.172%	95.426%
65.0	14.542	1.476	535.069	.165%	95.690%
66.0	13.863	1.417	536.487	.158%	95.943%
67.0	13.243	1.363	537.85	.152%	96.187%
68.0	12.638	1.311	539.161	.146%	96.421%
69.0	12.130	1.264	540.424	.141%	96.647%
70.0	11.958	1.237	541.661	.138%	96.869%
71.0	11.786	1.227	542.889	.137%	97.088%
72.0	11.786	1.226	544.114	.137%	97.307%
73.0	11.839	1.235	545.35	.138%	97.528%
74.0	11.876	1.247	546.596	.139%	97.751%
75.0	11.816	1.252	547.848	.140%	97.975%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.547	1.240	549.088	.138%	98.197%
77.0	11.383	1.223	550.311	.136%	98.415%
78.0	11.174	1.207	551.518	.135%	98.631%
79.0	10.666	1.173	552.692	.131%	98.841%
80.0	9.912	1.109	553.801	.124%	99.040%
81.0	8.978	1.022	554.823	.114%	99.222%
82.0	7.835	0.912	555.734	.102%	99.385%
83.0	6.192	0.763	556.497	.085%	99.522%
84.0	5.340	0.628	557.125	.070%	99.634%
85.0	4.340	0.528	557.654	.059%	99.729%
86.0	3.122	0.408	558.061	.046%	99.802%
87.0	2.689	0.318	558.379	.036%	99.858%
88.0	2.442	0.281	558.661	.031%	99.909%
89.0	2.278	0.259	558.919	.029%	99.955%
90.0	2.315	0.252	559.171	.028%	100.000%

Zonal flux distribution table

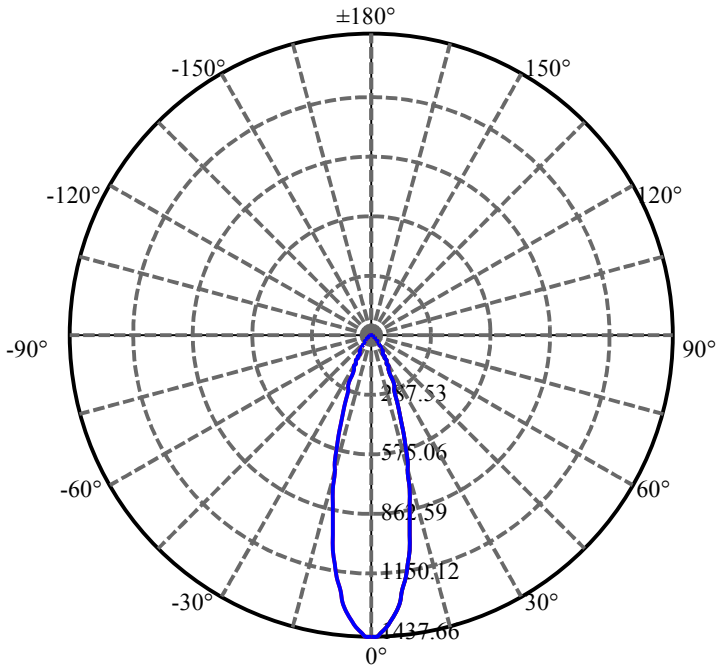
ZONAL LUMEN SUMMARY

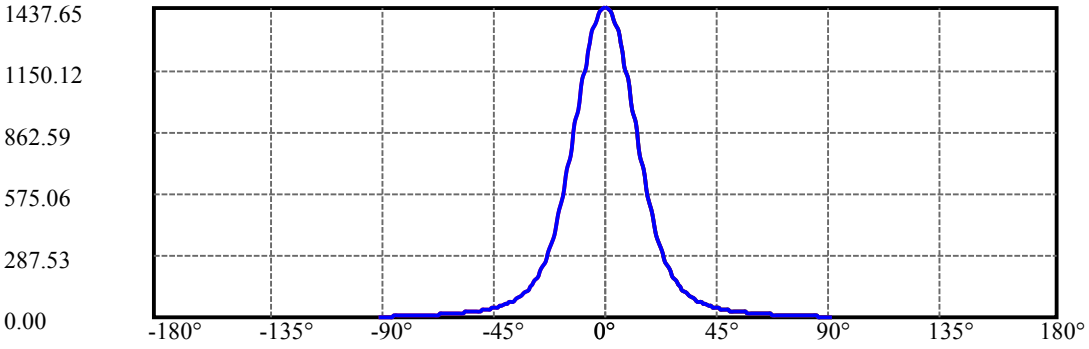
Zone	Lumens	%Lamp	%Fixt
0-30	416.18	46.47%	74.43%
0-40	472.97	52.81%	84.58%
0-60	527.06	58.85%	94.26%
0-90	558.92	62.40%	99.95%
0-120	558.92	62.40%	99.95%
0-180	559.17	62.43%	100.00%
60-90	33.66	3.76%	6.02%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-34.72	447.34	49.95%	80.00%

ZONAL LUMEN SUMMARY

0-10	117.16
10-20	188.36
20-30	110.66
30-40	56.79
40-50	32.69
50-60	21.40
60-70	14.60
70-80	12.14
80-90	5.12
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):

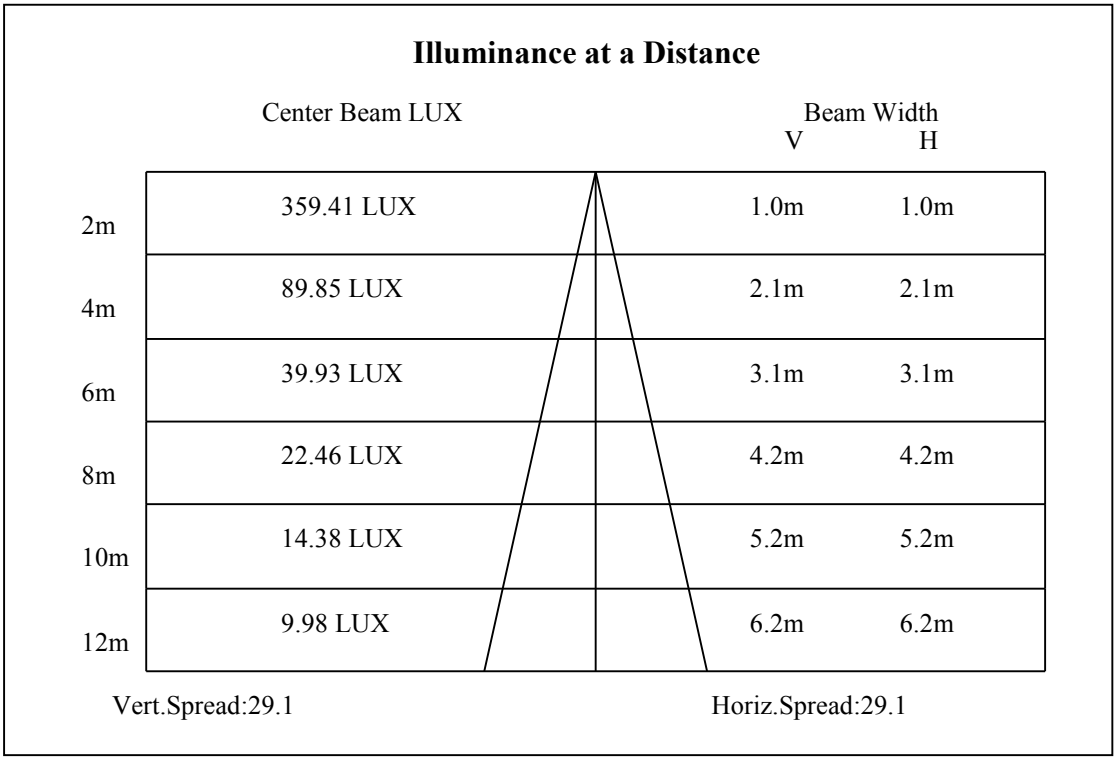
C0/C180:

C90/C270:

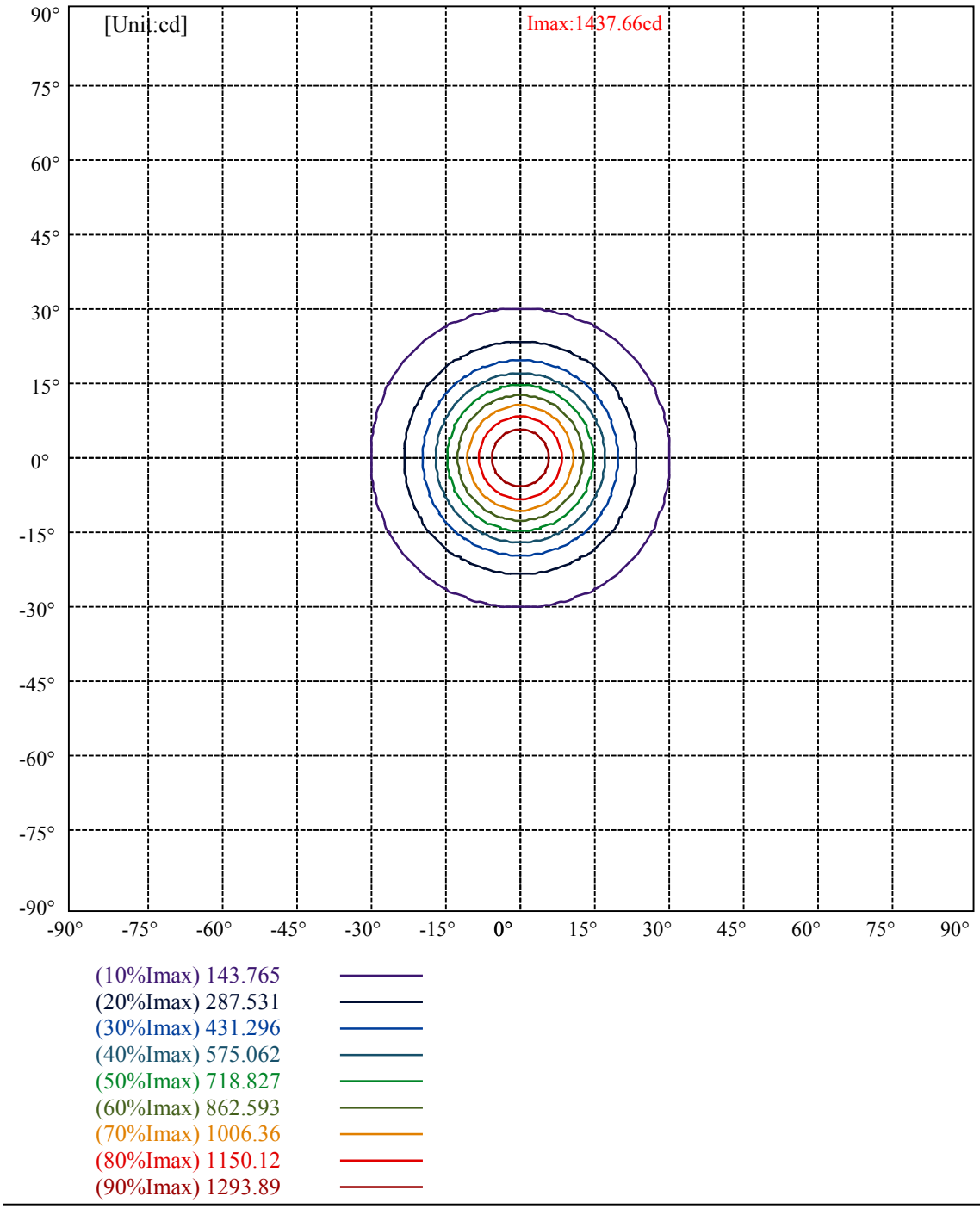
Field angle(10%Imax):C0/180Left:29.7 Right:29.7
:C90/270Left:29.7 Right:29.7

Beam Angle(50%Imax):C0/180Left:14.5 Right:14.5
:C90/270Left:14.5 Right:14.5

Lux distance Curve



ISO-Intensity(V-H)

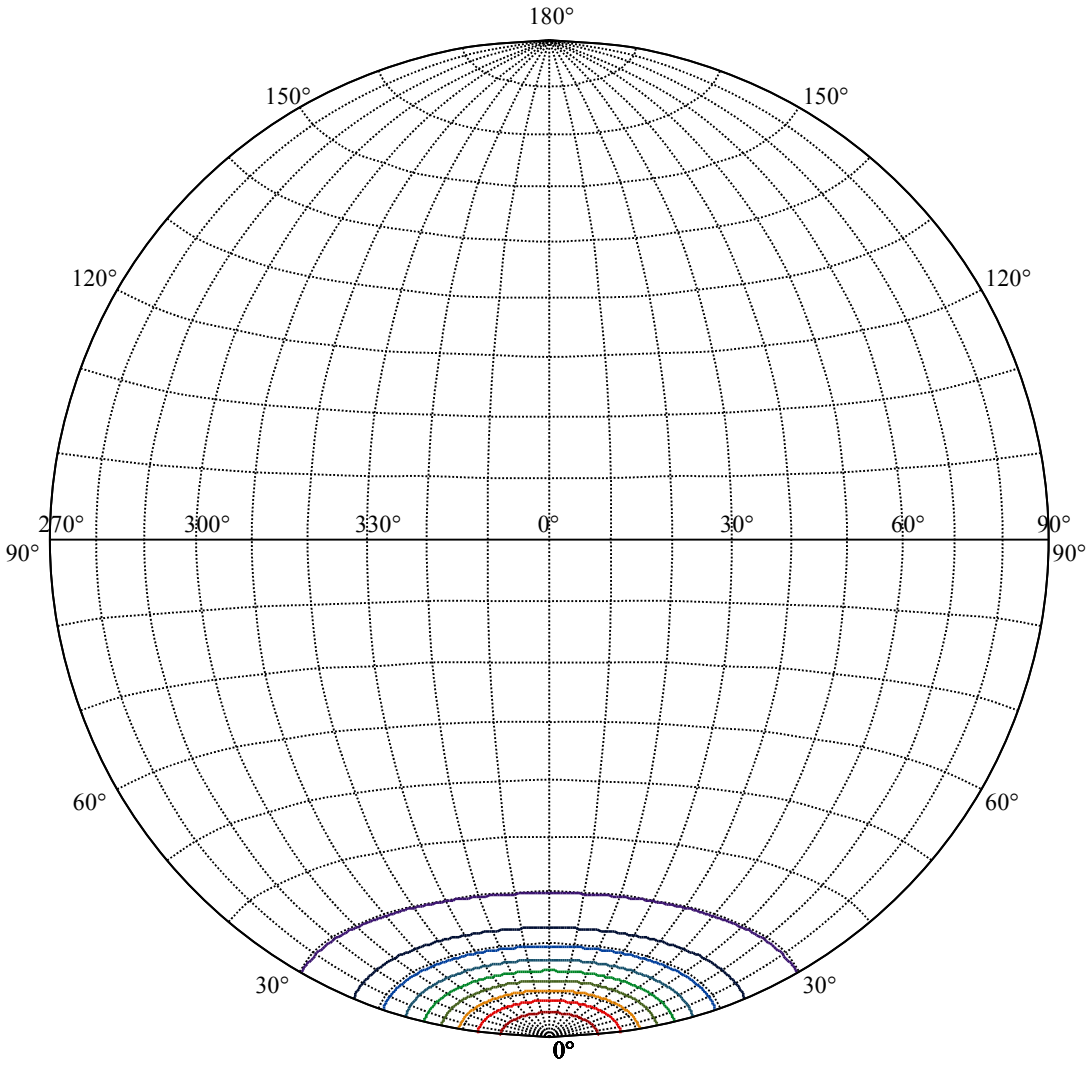


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/11
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:1437.66

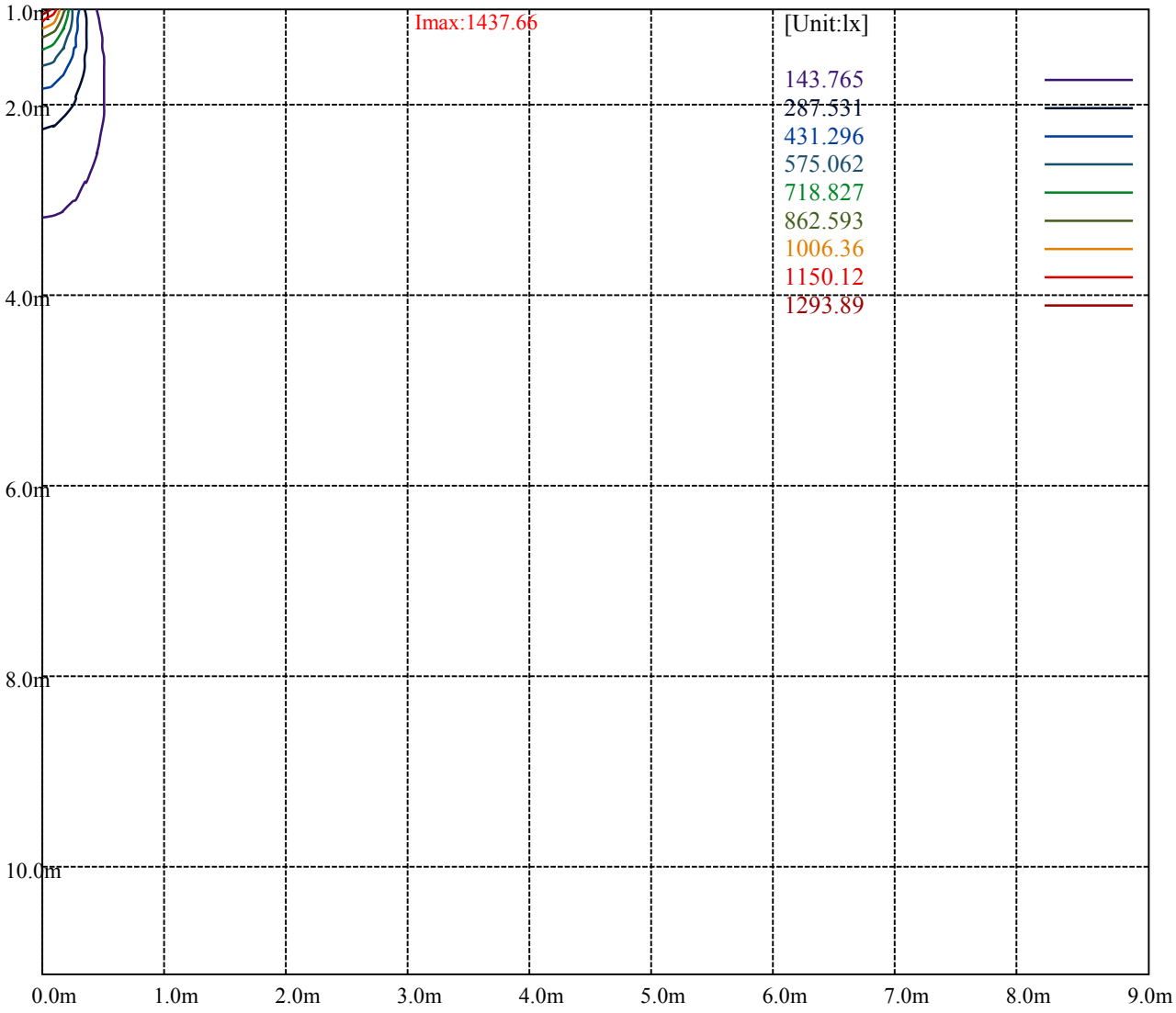
(10%Imax) 143.765
(20%Imax) 287.531
(30%Imax) 431.296
(40%Imax) 575.062
(50%Imax) 718.827
(60%Imax) 862.593
(70%Imax) 1006.36
(80%Imax) 1150.12
(90%Imax) 1293.89

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/11
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/11/11
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Nata LN01D02824DA-N

Luminance Limitting Curve(no luminous side)

Luminance Table

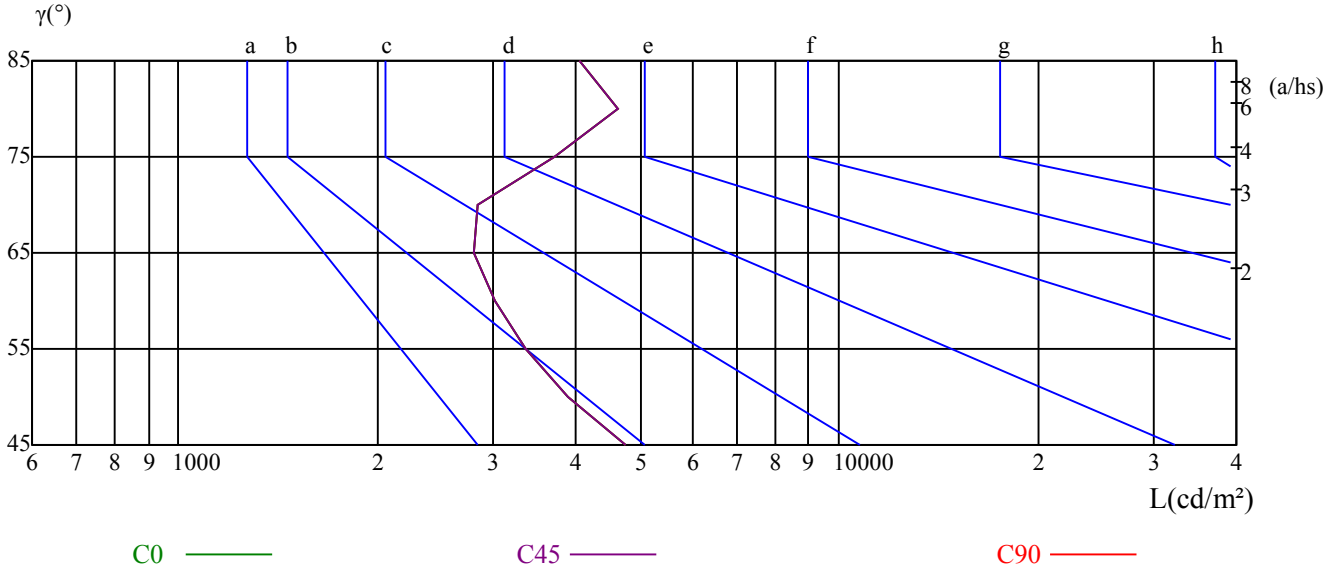
γ	45	50	55	60	65	70	75	80	85
C0	4756	3876	3346	3015	2793	2838	3705	4633	4041
C45	4756	3876	3346	3015	2793	2838	3705	4633	4041
C90	4756	3876	3346	3015	2793	2838	3705	4633	4041

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2793	2793	2793	3705	3705	3705	4041	4041	4041

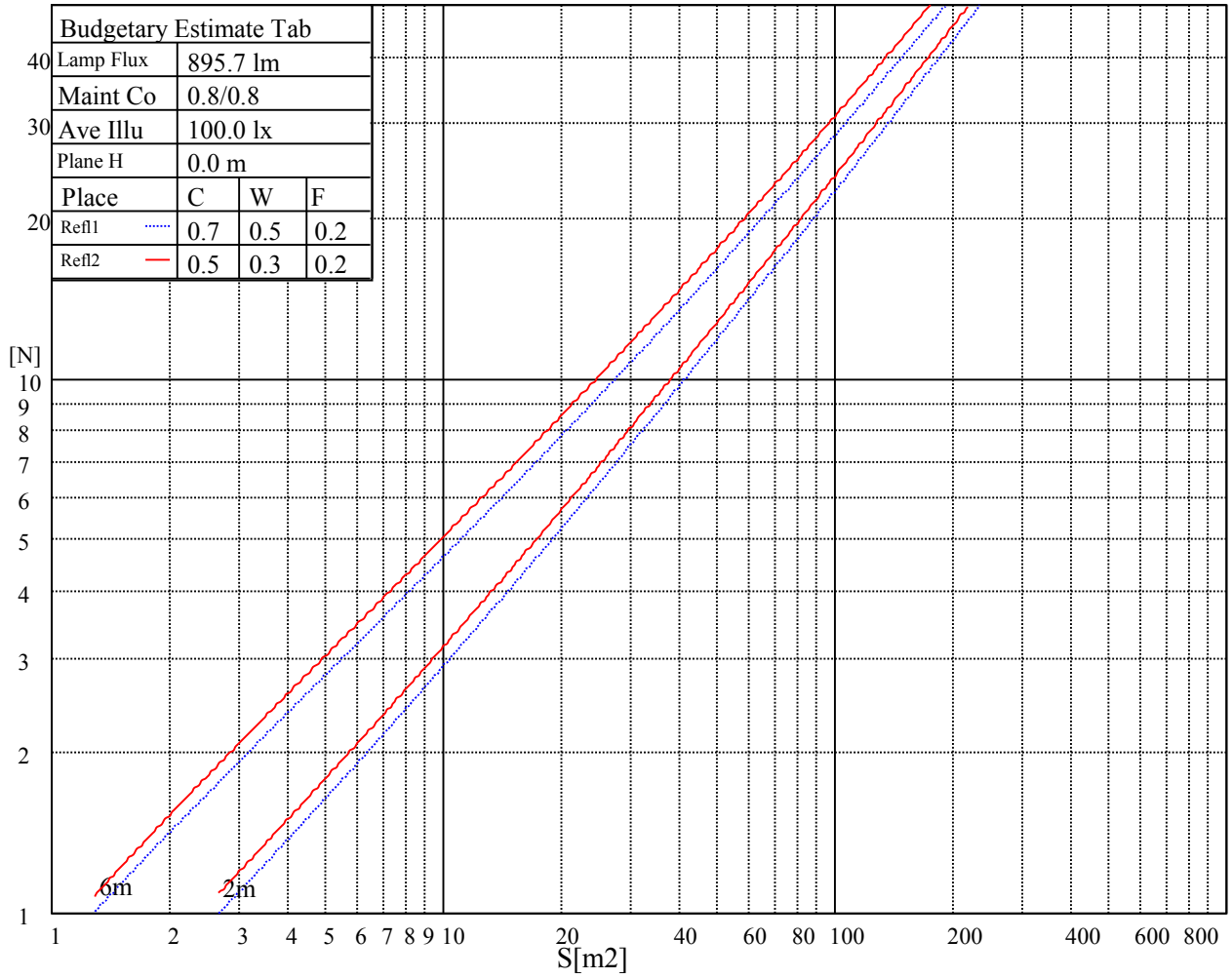
Glare Table

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

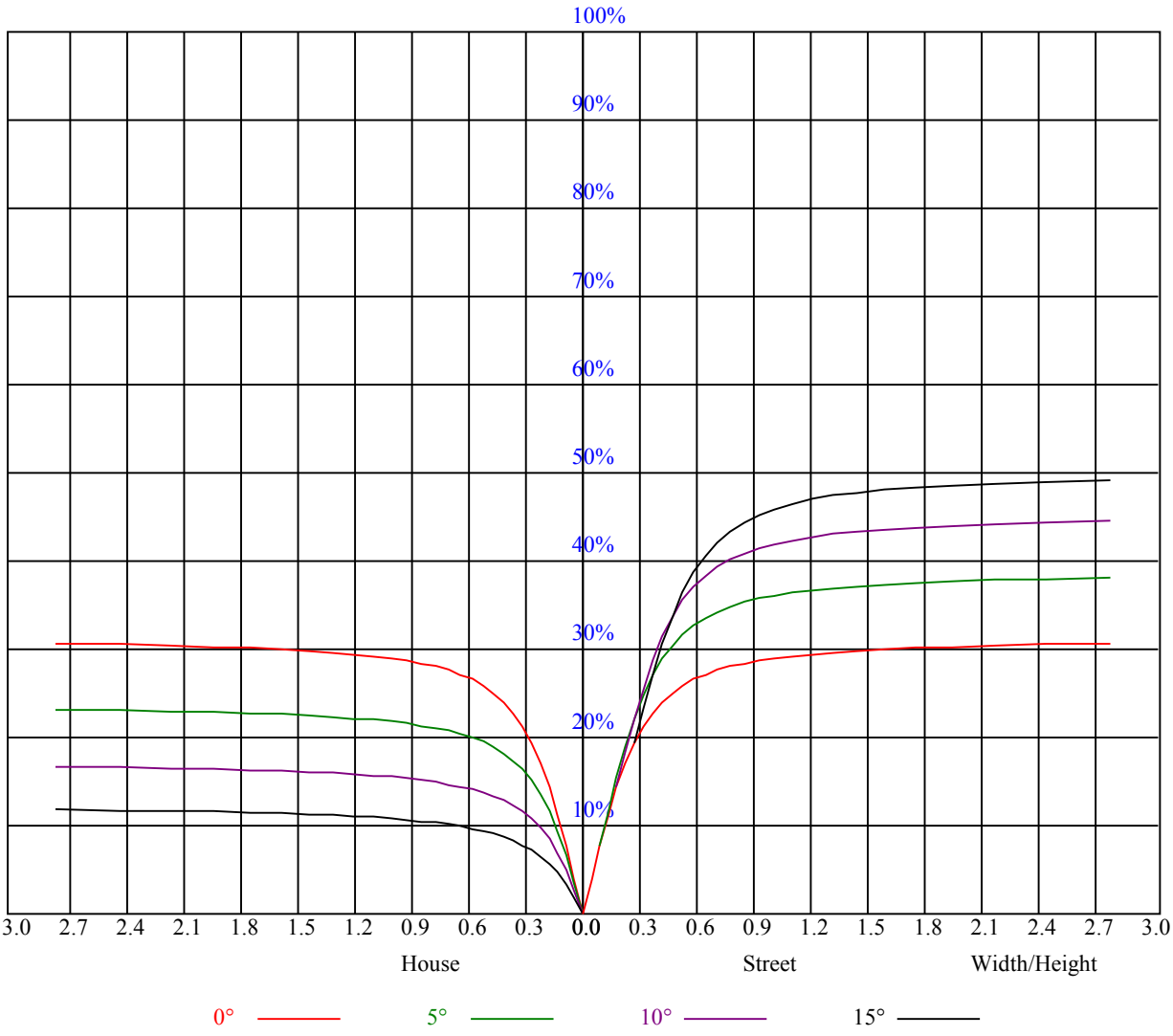


Equipment: GMS1980 Date: 2021/11/11 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

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	0.74	0.74	0.74	0.73	0.73	0.73	0.69	0.69	0.69	0.66	0.66	0.66	0.64	0.64	0.64	0.62
1	0.69	0.67	0.65	0.67	0.66	0.64	0.65	0.64	0.62	0.62	0.61	0.61	0.60	0.60	0.59	0.58
2	0.64	0.61	0.59	0.63	0.60	0.58	0.61	0.59	0.57	0.59	0.57	0.56	0.57	0.56	0.55	0.54
3	0.60	0.57	0.54	0.59	0.56	0.54	0.57	0.55	0.53	0.56	0.54	0.52	0.54	0.53	0.51	0.50
4	0.56	0.53	0.50	0.55	0.52	0.50	0.54	0.51	0.49	0.53	0.50	0.49	0.52	0.50	0.48	0.47
5	0.53	0.49	0.47	0.52	0.49	0.47	0.51	0.48	0.46	0.50	0.48	0.46	0.49	0.47	0.45	0.44
6	0.50	0.47	0.44	0.50	0.46	0.44	0.49	0.46	0.44	0.48	0.45	0.43	0.47	0.45	0.43	0.42
7	0.48	0.44	0.42	0.47	0.44	0.42	0.47	0.44	0.41	0.46	0.43	0.41	0.45	0.43	0.41	0.40
8	0.46	0.42	0.40	0.45	0.42	0.40	0.45	0.42	0.39	0.44	0.41	0.39	0.43	0.41	0.39	0.38
9	0.44	0.40	0.38	0.43	0.40	0.38	0.43	0.40	0.38	0.42	0.40	0.38	0.42	0.39	0.37	0.37
10	0.42	0.39	0.36	0.42	0.38	0.36	0.41	0.38	0.36	0.41	0.38	0.36	0.40	0.38	0.36	0.35

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/11/11	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.73

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	1435.86	1446.62	1447.22	1438.25	1419.13	1394.04	1355.79	1309.19	1261.98
45.0	1440.04	1433.47	1414.35	1390.45	1359.38	1311.58	1264.97	1212.98	1149.65
90.0	1434.67	1419.73	1393.44	1358.78	1320.54	1270.35	1186.45	1150.60	1090.19
135.0	1440.04	1425.11	1400.01	1370.13	1328.90	1281.10	1230.31	1168.17	1109.61
180.0	1435.86	1418.53	1394.04	1352.81	1313.37	1267.36	1189.56	1138.71	1077.40
225.0	1440.04	1438.85	1428.09	1407.78	1382.08	1344.44	1303.81	1251.82	1181.97
270.0	1434.67	1441.84	1440.64	1429.89	1414.35	1377.90	1342.65	1306.20	1247.64
315.0	1440.04	1444.83	1441.84	1425.70	1405.39	1376.11	1334.28	1285.28	1189.68
360.0	1435.86	1446.62	1447.22	1438.25	1419.13	1394.04	1355.79	1309.19	1261.98

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1202.23	1135.90	1071.97	1006.24	919.60	849.09	780.37	704.49	631.59
45.0	1080.93	1015.20	938.72	870.60	794.12	720.62	657.28	591.55	528.81
90.0	1018.91	945.41	879.44	805.89	741.77	672.10	605.95	550.92	499.30
135.0	1040.30	966.80	899.88	834.15	753.48	691.34	632.19	570.04	512.08
180.0	1005.58	931.97	866.30	793.70	722.65	661.82	596.87	542.86	485.91
225.0	1132.02	1063.36	983.35	925.87	859.25	768.90	713.93	652.86	586.89
270.0	1187.89	1137.10	1059.42	994.29	927.37	841.92	774.40	708.67	629.20
315.0	1168.05	1099.33	1034.50	958.62	889.48	811.74	736.93	672.34	610.02
360.0	1202.23	1135.90	1071.97	1006.24	919.60	849.09	780.37	704.49	631.59

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	571.84	510.29	454.12	408.71	362.70	326.85	301.75	256.04	230.89
45.0	475.04	430.22	378.83	342.38	308.32	267.63	243.85	220.37	200.53
90.0	439.90	397.42	359.29	316.81	286.87	260.10	233.34	209.73	190.91
135.0	461.89	414.09	370.47	334.62	303.54	263.87	241.22	220.55	196.11
180.0	433.45	391.56	353.80	315.79	282.15	255.62	226.40	205.67	187.03
225.0	526.42	477.31	432.13	380.86	343.94	306.71	277.25	247.62	221.80
270.0	571.84	517.46	455.91	411.70	370.47	329.84	301.75	262.85	234.29
315.0	538.37	486.33	438.53	384.51	345.85	311.07	273.01	246.12	222.52
360.0	571.84	510.29	454.12	408.71	362.70	326.85	301.75	256.04	230.89

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	208.42	183.98	167.13	152.19	135.94	124.47	114.19	104.93	94.77
45.0	177.76	162.17	147.89	133.19	120.58	109.41	100.62	91.72	83.83
90.0	172.15	157.15	141.85	128.23	117.65	106.90	97.46	89.87	83.06
135.0	176.45	162.83	144.96	132.29	121.06	108.69	99.91	91.96	83.18
180.0	170.36	151.77	138.39	126.44	114.61	104.21	95.96	87.72	80.37
225.0	201.37	182.90	162.71	148.37	135.64	121.48	111.32	102.12	93.87
270.0	209.08	189.36	170.00	154.82	139.82	126.50	116.04	105.34	95.90
315.0	196.53	178.24	161.93	144.00	132.95	120.28	107.73	99.79	91.66
360.0	208.42	183.98	167.13	152.19	135.94	124.47	114.19	104.93	94.77

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	87.48	80.91	74.27	68.36	63.76	59.27	55.15	51.39	48.58
45.0	77.56	72.00	66.09	61.07	56.53	52.64	48.28	44.99	41.83
90.0	75.41	69.91	64.89	59.27	55.15	51.33	47.50	44.04	41.23
135.0	77.02	71.58	64.89	60.41	56.17	51.87	47.98	44.99	41.83
180.0	74.57	68.72	64.11	59.45	55.09	51.63	48.70	45.47	43.20
225.0	84.73	78.22	72.42	65.85	61.19	57.06	52.76	48.88	45.35
270.0	88.31	81.38	73.74	68.24	63.34	58.50	54.08	50.55	46.97
315.0	81.74	76.24	70.57	64.71	59.75	55.69	51.51	47.86	44.81
360.0	87.48	80.91	74.27	68.36	63.76	59.27	55.15	51.39	48.58

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	46.13	43.68	41.47	39.68	37.94	35.79	34.12	32.68	31.07
45.0	38.96	36.63	34.54	32.33	30.35	28.68	26.95	25.57	24.08
90.0	38.36	36.09	33.64	31.49	29.70	27.84	26.11	24.68	23.36
135.0	39.02	36.75	34.30	32.39	30.41	28.56	27.07	25.63	24.02
180.0	41.17	38.90	37.17	35.43	33.64	32.03	30.65	29.34	28.26
225.0	42.48	39.91	37.23	34.84	32.86	30.65	28.98	27.49	26.11
270.0	43.68	40.99	38.30	36.03	33.76	31.55	29.82	28.20	26.35
315.0	41.71	39.20	36.63	34.30	32.45	30.47	28.68	27.25	25.87
360.0	46.13	43.68	41.47	39.68	37.94	35.79	34.12	32.68	31.07

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	29.88	28.86	27.79	26.77	25.93	25.04	24.14	23.30	22.41
45.0	22.71	21.57	20.44	19.30	18.34	17.51	16.49	15.72	15.06
90.0	21.81	20.61	19.60	18.46	17.45	16.55	15.66	14.70	13.98
135.0	22.83	21.69	20.32	19.36	18.40	17.45	16.55	15.72	14.82
180.0	27.25	26.35	25.57	24.74	24.02	23.42	22.65	21.69	20.91
225.0	24.50	23.30	22.11	20.85	19.66	18.70	17.75	16.73	15.95
270.0	25.04	23.72	22.23	21.09	20.08	18.88	17.75	16.85	15.89
315.0	24.26	23.06	21.93	20.91	19.60	18.64	17.63	16.73	15.89
360.0	29.88	28.86	27.79	26.77	25.93	25.04	24.14	23.30	22.41

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	21.57	20.61	19.72	18.94	18.28	17.39	16.73	16.19	15.42
45.0	14.16	13.38	12.79	12.13	11.53	11.05	10.46	9.98	9.50
90.0	13.21	12.55	11.83	11.17	10.64	10.16	9.50	9.02	8.48
135.0	14.16	13.44	12.73	12.19	11.53	10.99	10.52	10.04	9.50
180.0	20.14	19.30	18.58	17.87	17.21	16.55	16.73	18.88	21.51
225.0	15.06	14.34	13.56	12.85	12.25	11.71	10.99	10.52	9.98
270.0	15.06	14.22	13.44	12.73	12.07	11.35	10.82	10.28	9.62
315.0	15.12	14.40	13.68	13.03	12.43	11.89	11.29	10.76	10.28
360.0	21.57	20.61	19.72	18.94	18.28	17.39	16.73	16.19	15.42

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.36	16.49	19.12	21.63	21.93	21.33	20.91	20.91	21.09
45.0	8.90	8.43	8.01	7.47	7.11	7.89	8.13	7.47	5.98
90.0	7.95	7.47	6.99	6.45	5.98	5.56	5.08	4.66	4.30
135.0	9.08	8.66	8.07	7.65	7.23	6.81	6.45	6.09	5.68
180.0	24.86	26.89	27.55	27.49	27.61	27.79	27.31	25.57	23.48
225.0	9.38	8.90	8.43	7.95	7.59	7.65	8.31	8.13	7.05
270.0	9.08	8.60	8.01	7.47	7.05	6.57	6.09	5.68	5.26
315.0	9.68	9.26	8.84	8.43	7.89	7.47	7.11	6.81	6.45
360.0	15.36	16.49	19.12	21.63	21.93	21.33	20.91	20.91	21.09

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	20.26	18.64	15.83	12.01	7.59	4.90	3.76	3.35	2.45
45.0	4.96	4.66	4.30	4.06	3.05	2.75	2.33	2.21	2.21
90.0	3.94	3.59	3.29	2.87	2.57	2.33	2.21	2.21	2.27
135.0	5.38	5.08	4.84	5.20	3.23	2.87	2.39	2.27	2.27
180.0	20.55	15.24	6.75	4.60	3.41	2.87	2.45	2.33	2.27
225.0	5.74	5.20	4.90	4.60	4.36	3.11	2.81	2.39	2.21
270.0	4.84	4.48	4.06	3.70	3.41	2.87	2.63	2.33	2.27
315.0	6.15	5.80	5.56	5.68	7.11	3.29	2.93	2.45	2.27
360.0	20.26	18.64	15.83	12.01	7.59	4.90	3.76	3.35	2.45

Intensity data(cd)

C/γ(°)	90.0
0.0	2.39
45.0	2.21
90.0	2.21
135.0	2.27
180.0	2.63
225.0	2.27
270.0	2.27
315.0	2.27
360.0	2.39