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Nata

LumCAT: 1-1005-M
Luminaire: BJB 47.360.1020

Report No: 210716-B018	Voltage(V): 37.0500
Test No: 210716-C018	Current(A): 0.4510
LampCAT: Fortimo LED SLM 1203 G7N	Power (W): 16.7090
Lamp flux(lm): 2154.2	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): 1562.26	Bright Area: 0.006
Efficiency(%): 72.52%	SLI: 14.003

Lumens(lm)/Power(W): 93.50
Central intensity(cd): 9349.734
Maximum intensity(cd): 9349.734
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=21.0
[C90/270]Total=21.0
Field angle(10%Imax): [C0/180]Total=41.5
[C90/270]Total=41.5
IES Classification : TypeI
Longitudinal Classification : VeryShort
Cut Off Classification : Cutoff
Max Cd(At 90°Vert) : 6.8625
Max Cd(80 to 90°Vert) : 7.171875
Street Side UpWard Lumens: - -of Lamp 0.00%of Luminaire
Street Side DownWard Lumens: 36.26%of Lamp 50.00%of Luminaire
House Side UpWard Lumens: - -of lamp 0.00%of Luminaire
House Side DownWard Lumens: 36.26%of Lamp 50.00%of Luminaire

Equipment: GMS1980	Date: 2021/7/16	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9349.734	0.000	0	.000%	.000%
1.0	9296.859	8.922	8.922	.414%	.571%
2.0	9130.078	26.448	35.37	1.228%	2.264%
3.0	8895.164	43.110	78.481	2.001%	5.024%
4.0	8578.406	58.490	136.97	2.715%	8.767%
5.0	8114.484	71.812	208.782	3.334%	13.364%
6.0	7549.734	82.320	291.102	3.821%	18.633%
7.0	6892.031	89.640	380.742	4.161%	24.371%
8.0	6281.789	94.283	475.024	4.377%	30.406%
9.0	5617.758	96.439	571.463	4.477%	36.579%
10.0	4948.453	95.620	667.084	4.439%	42.700%
11.0	4409.438	93.505	760.588	4.341%	48.685%
12.0	3892.078	90.747	851.336	4.213%	54.494%
13.0	3353.203	85.983	937.319	3.991%	59.998%
14.0	2917.898	80.270	1017.589	3.726%	65.136%
15.0	2542.148	74.958	1092.547	3.480%	69.934%
16.0	2161.828	68.926	1161.473	3.200%	74.346%
17.0	1858.289	62.604	1224.077	2.906%	78.353%
18.0	1568.320	56.497	1280.574	2.623%	81.969%
19.0	1272.115	49.418	1329.992	2.294%	85.133%
20.0	1086.771	43.174	1373.166	2.004%	87.896%
21.0	878.393	37.735	1410.901	1.752%	90.312%
22.0	668.517	31.086	1441.987	1.443%	92.301%
23.0	501.813	24.557	1466.544	1.140%	93.873%
24.0	353.988	18.711	1485.255	.869%	95.071%
25.0	238.535	13.473	1498.728	.625%	95.933%
26.0	137.018	8.865	1507.592	.412%	96.501%
27.0	66.621	4.982	1512.575	.231%	96.820%
28.0	35.508	2.586	1515.16	.120%	96.985%
29.0	22.598	1.520	1516.68	.071%	97.083%
30.0	17.311	1.078	1517.758	.050%	97.152%
31.0	15.068	0.901	1518.659	.042%	97.209%
32.0	13.859	0.829	1519.488	.038%	97.262%
33.0	12.980	0.791	1520.278	.037%	97.313%
34.0	12.129	0.760	1521.038	.035%	97.362%
35.0	11.517	0.734	1521.773	.034%	97.409%
36.0	11.011	0.717	1522.49	.033%	97.454%
37.0	10.533	0.703	1523.193	.033%	97.499%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	10.153	0.690	1523.883	.032%	97.544%
39.0	9.823	0.682	1524.565	.032%	97.587%
40.0	9.548	0.676	1525.241	.031%	97.630%
41.0	9.338	0.673	1525.913	.031%	97.674%
42.0	9.134	0.671	1526.584	.031%	97.716%
43.0	8.951	0.670	1527.254	.031%	97.759%
44.0	8.817	0.671	1527.925	.031%	97.802%
45.0	8.684	0.673	1528.597	.031%	97.845%
46.0	8.571	0.675	1529.272	.031%	97.889%
47.0	8.480	0.678	1529.95	.031%	97.932%
48.0	8.423	0.683	1530.633	.032%	97.976%
49.0	8.318	0.687	1531.321	.032%	98.020%
50.0	8.248	0.691	1532.012	.032%	98.064%
51.0	8.191	0.696	1532.707	.032%	98.108%
52.0	8.128	0.700	1533.407	.033%	98.153%
53.0	8.072	0.705	1534.112	.033%	98.198%
54.0	8.030	0.710	1534.822	.033%	98.244%
55.0	7.973	0.714	1535.536	.033%	98.290%
56.0	7.931	0.719	1536.255	.033%	98.336%
57.0	7.896	0.724	1536.979	.034%	98.382%
58.0	7.854	0.728	1537.707	.034%	98.428%
59.0	7.826	0.733	1538.44	.034%	98.475%
60.0	7.791	0.738	1539.178	.034%	98.523%
61.0	7.748	0.742	1539.919	.034%	98.570%
62.0	7.741	0.746	1540.666	.035%	98.618%
63.0	7.713	0.752	1541.417	.035%	98.666%
64.0	7.692	0.756	1542.173	.035%	98.714%
65.0	7.671	0.760	1542.934	.035%	98.763%
66.0	7.650	0.764	1543.698	.035%	98.812%
67.0	7.608	0.767	1544.465	.036%	98.861%
68.0	7.587	0.770	1545.235	.036%	98.910%
69.0	7.580	0.774	1546.009	.036%	98.960%
70.0	7.566	0.778	1546.786	.036%	99.010%
71.0	7.523	0.780	1547.566	.036%	99.060%
72.0	7.523	0.782	1548.349	.036%	99.110%
73.0	7.495	0.785	1549.134	.036%	99.160%
74.0	7.474	0.787	1549.921	.037%	99.210%
75.0	7.467	0.789	1550.71	.037%	99.261%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.446	0.792	1551.502	.037%	99.311%
77.0	7.460	0.795	1552.297	.037%	99.362%
78.0	7.425	0.797	1553.094	.037%	99.413%
79.0	7.305	0.791	1553.885	.037%	99.464%
80.0	7.172	0.781	1554.666	.036%	99.514%
81.0	7.095	0.772	1555.437	.036%	99.563%
82.0	7.038	0.766	1556.204	.036%	99.612%
83.0	7.017	0.764	1556.968	.035%	99.661%
84.0	6.989	0.763	1557.731	.035%	99.710%
85.0	6.940	0.760	1558.491	.035%	99.759%
86.0	6.919	0.758	1559.248	.035%	99.807%
87.0	6.877	0.755	1560.003	.035%	99.856%
88.0	6.863	0.753	1560.756	.035%	99.904%
89.0	6.841	0.751	1561.507	.035%	99.952%
90.0	6.863	0.751	1562.258	.035%	100.000%

Zonal flux distribution table

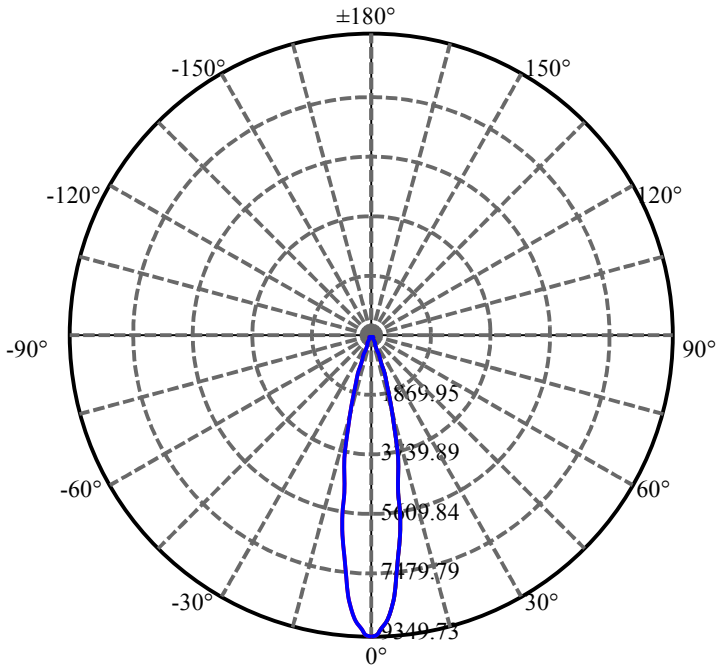
ZONAL LUMEN SUMMARY

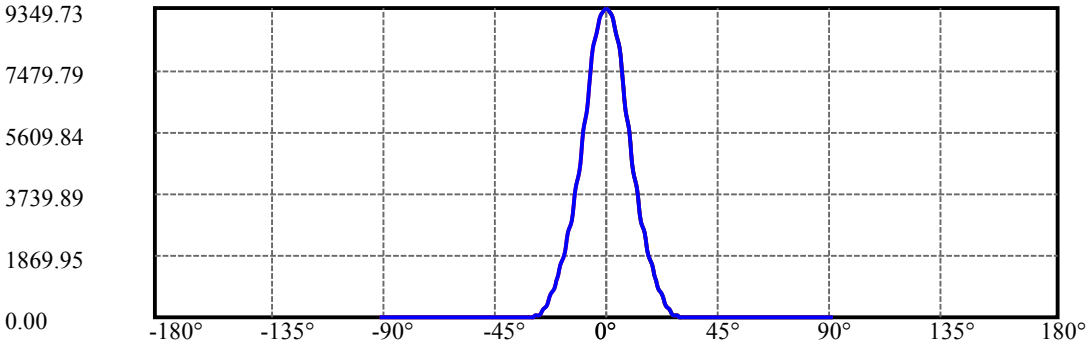
Zone	Lumens	%Lamp	%Fixt
0-30	1517.76	70.46%	97.15%
0-40	1525.24	70.80%	97.63%
0-60	1539.18	71.45%	98.52%
0-90	1561.51	72.49%	99.95%
0-120	1561.51	72.49%	99.95%
0-180	1562.26	72.52%	100.00%
60-90	23.07	1.07%	1.48%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.46	1249.81	58.02%	80.00%

ZONAL LUMEN SUMMARY

0-10	667.08
10-20	706.08
20-30	144.59
30-40	7.48
40-50	6.77
50-60	7.17
60-70	7.61
70-80	7.88
80-90	6.84
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):

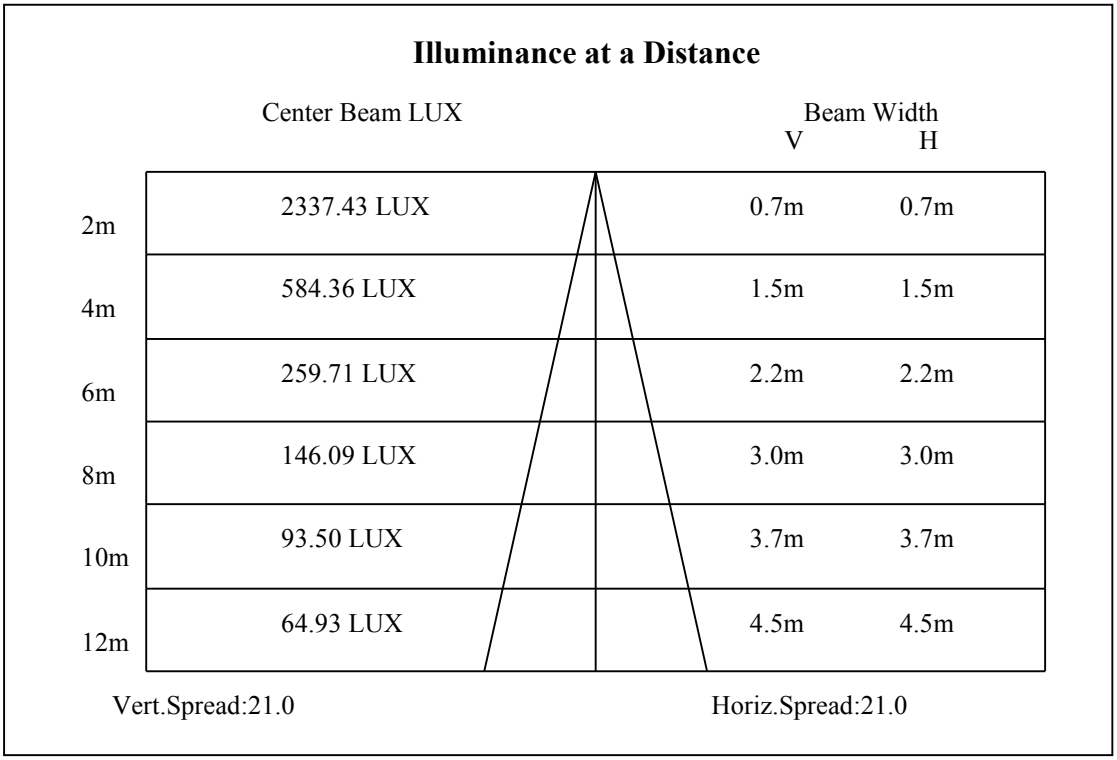
C0/C180:

C90/C270:

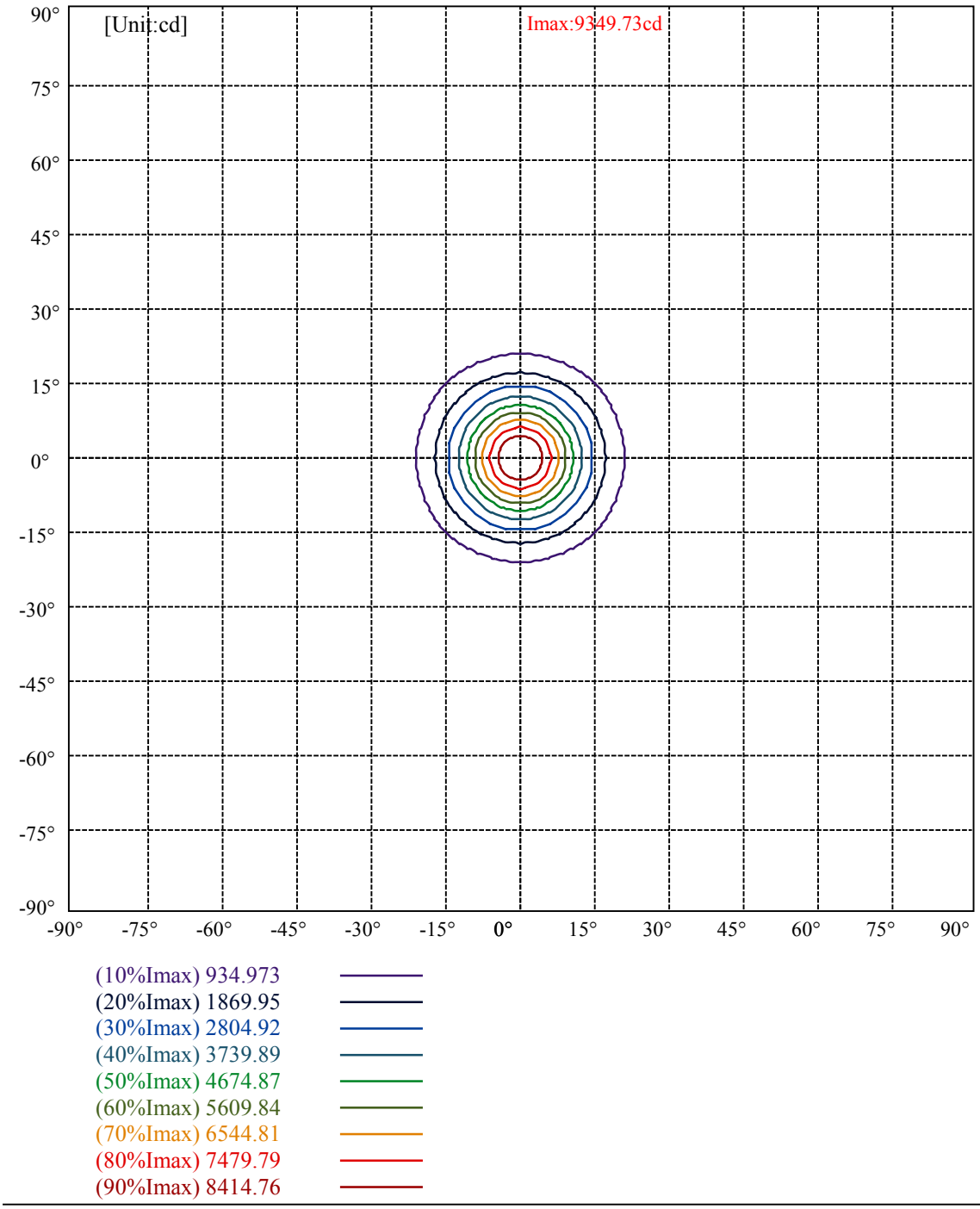
Field angle(10%Imax):C0/180Left:20.7 Right:20.7
:C90/270Left:20.7 Right:20.7

Beam Angle(50%Imax):C0/180Left:10.5 Right:10.5
:C90/270Left:10.5 Right:10.5

Lux distance Curve



ISO-Intensity(V-H)



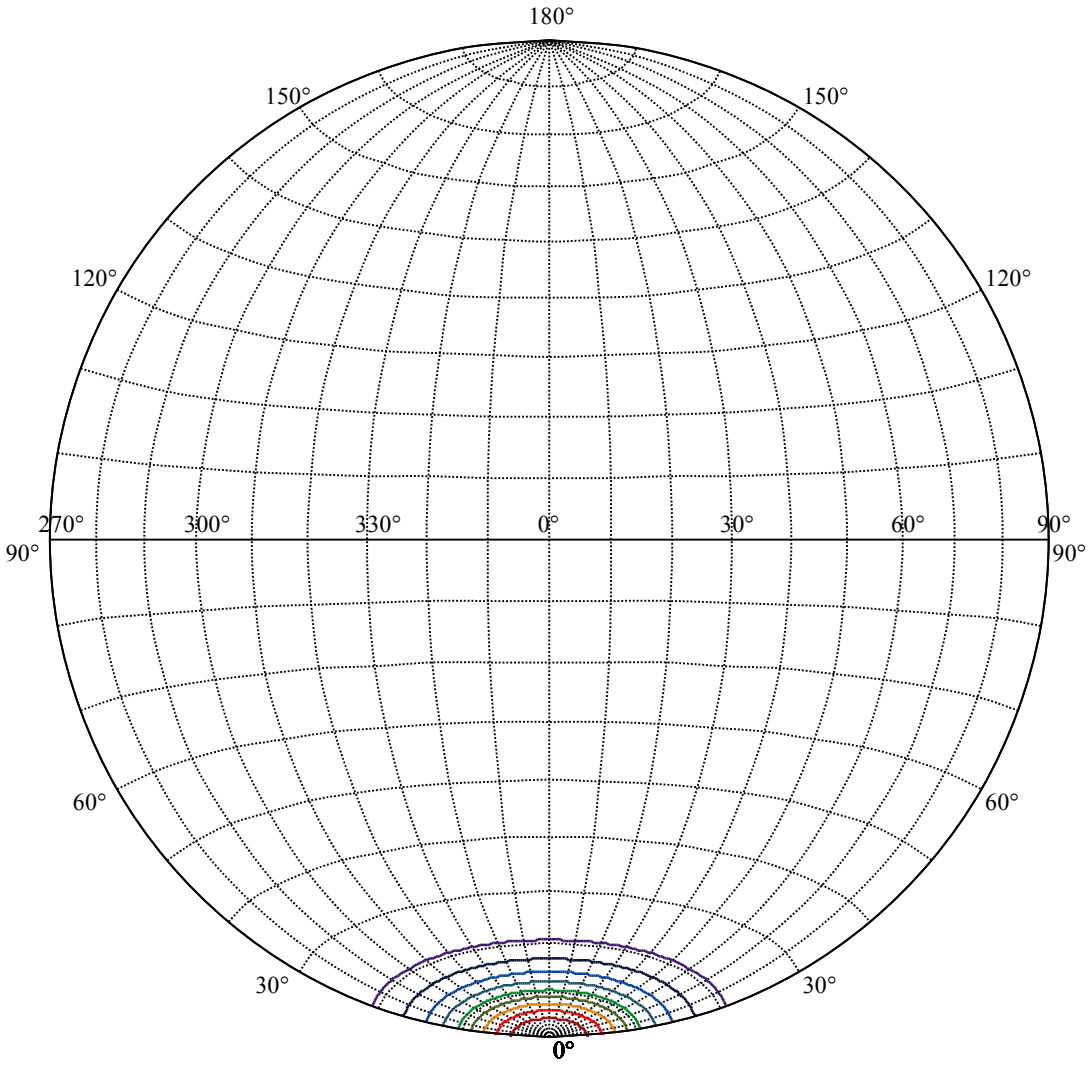
(10%Imax) 934.973
(20%Imax) 1869.95
(30%Imax) 2804.92
(40%Imax) 3739.89
(50%Imax) 4674.87
(60%Imax) 5609.84
(70%Imax) 6544.81
(80%Imax) 7479.79
(90%Imax) 8414.76

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:9349.73

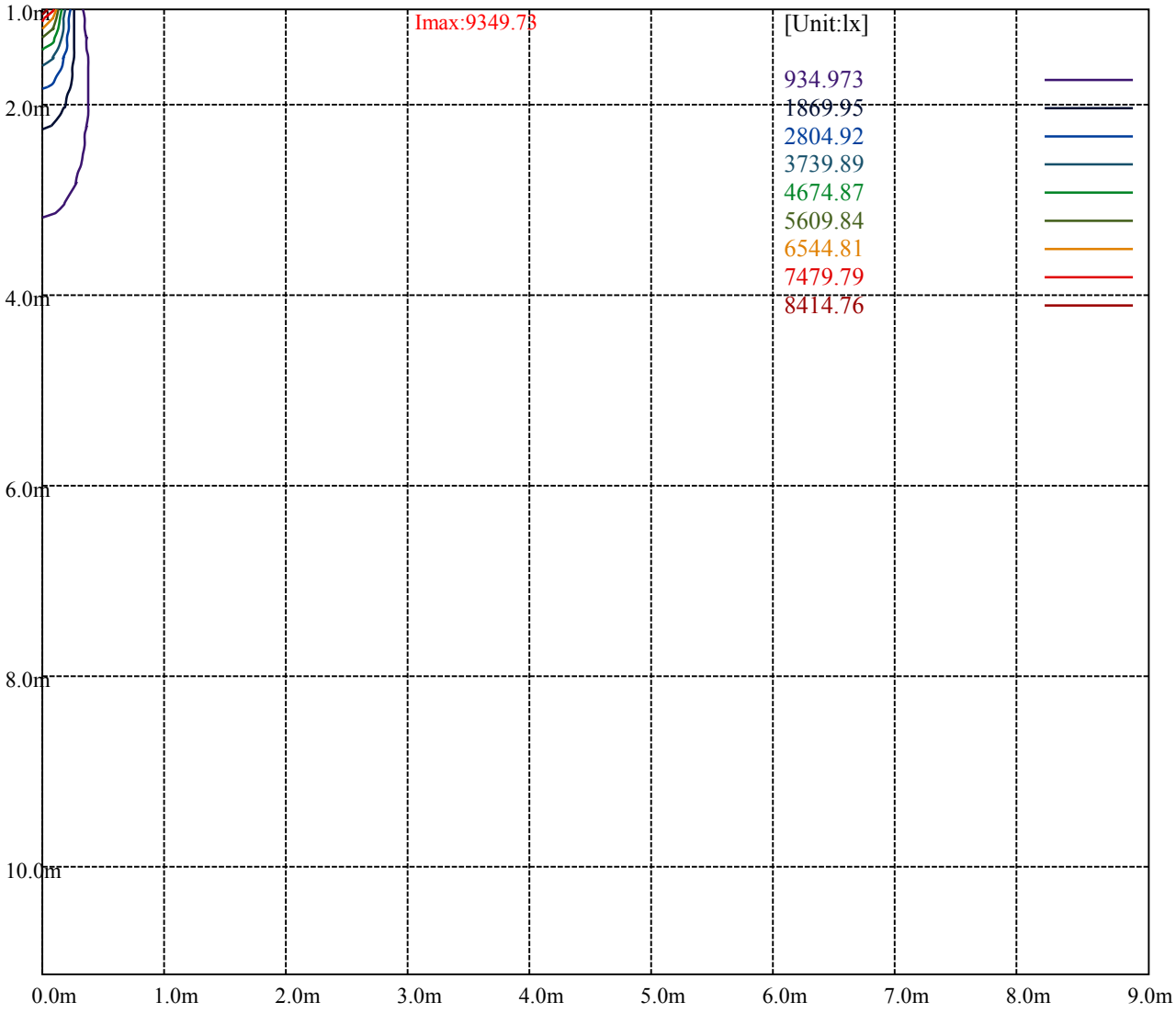
(10%Imax) 934.973
(20%Imax) 1869.95
(30%Imax) 2804.92
(40%Imax) 3739.89
(50%Imax) 4674.87
(60%Imax) 5609.84
(70%Imax) 6544.81
(80%Imax) 7479.79
(90%Imax) 8414.76

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

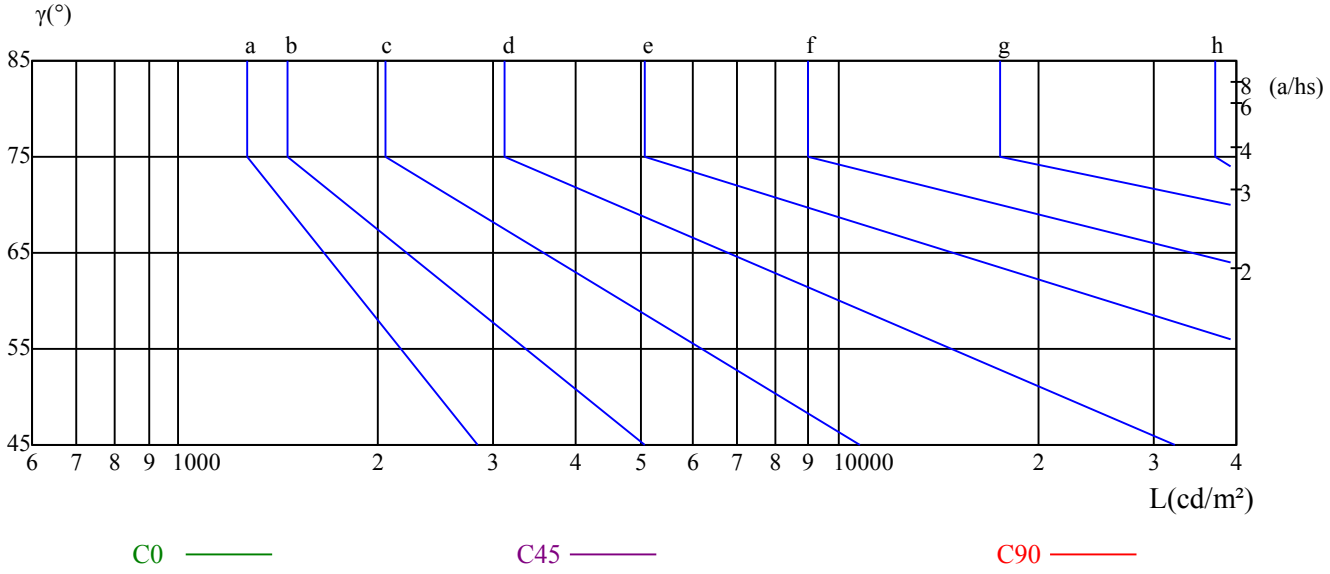
γ	45	50	55	60	65	70	75	80	85
C0	331	327	332	343	362	388	423	457	511
C45	358	356	365	383	410	446	496	551	637
C90	463	480	516	573	658	787	995	1343	2216

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
708	708	708	1125	1125	1125	3104	3104	3104

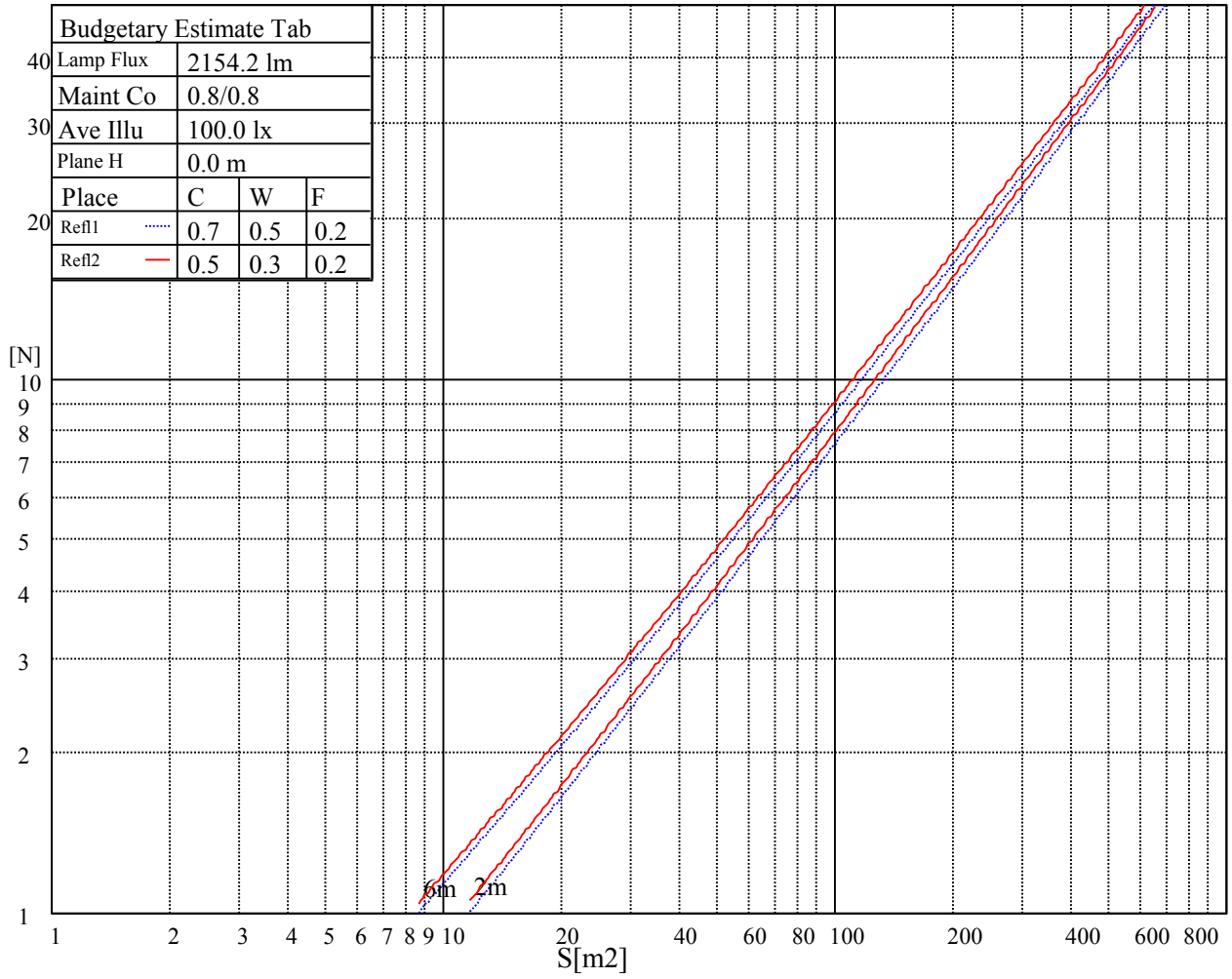
Glare Table

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

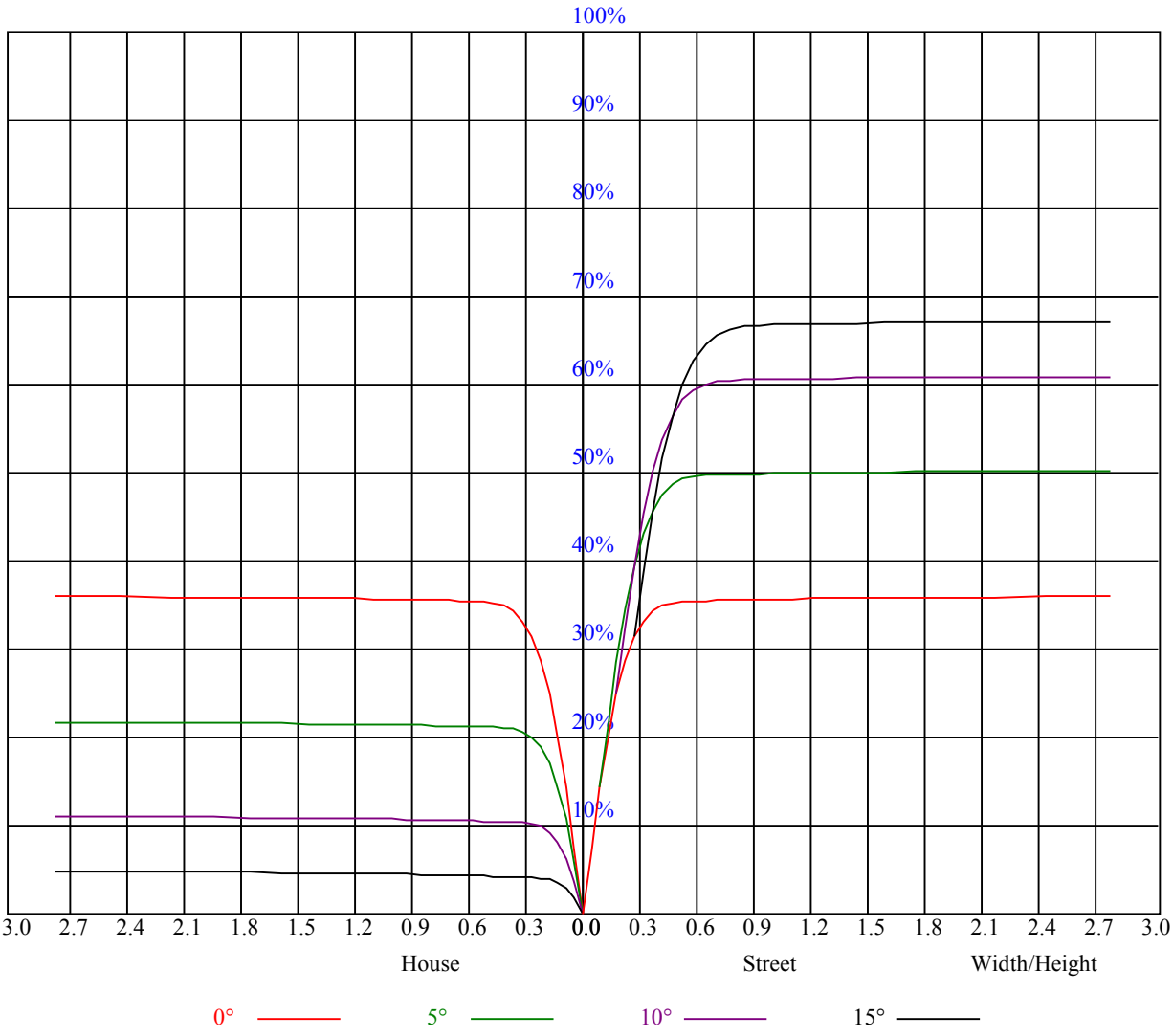


Equipment: GMS1980 Date: 2021/7/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/7/16	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	9333.56	9353.25	9293.63	9072.00	8850.94	8449.88	7927.88	7382.25	6806.81
45.0	9347.63	9331.31	9140.06	8978.63	8663.06	8201.81	7678.69	7006.50	6387.75
90.0	9365.63	9303.75	9137.81	8894.81	8599.50	8145.56	7530.75	6841.69	6183.56
135.0	9352.13	9317.25	9162.00	8976.94	8708.63	8229.38	7769.81	7047.00	6432.75
180.0	9333.56	9155.25	8939.81	8678.81	8194.50	7683.75	7024.50	6321.94	5695.31
225.0	9347.63	9302.06	9118.69	8843.06	8534.81	8083.69	7400.81	6828.75	6230.81
270.0	9365.63	9334.13	9175.50	8928.00	8628.75	8137.69	7619.63	6972.75	6379.31
315.0	9352.13	9277.88	9073.13	8789.06	8447.06	7984.13	7445.81	6735.38	6138.00
360.0	9333.56	9353.25	9293.63	9072.00	8850.94	8449.88	7927.88	7382.25	6806.81

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6128.44	5454.00	4899.94	4435.31	3754.69	3301.31	2936.25	2480.06	2113.31
45.0	5674.50	4987.13	4423.50	3899.25	3313.13	2893.50	2519.44	2115.56	1825.31
90.0	5475.38	4812.19	4269.94	3700.69	3241.13	2779.88	2416.50	2049.75	1758.38
135.0	5811.75	5064.19	4502.25	3979.69	3386.25	2959.31	2572.31	2157.75	1857.94
180.0	5107.50	4423.50	3912.75	3456.00	2936.81	2566.69	2238.75	1906.88	1616.63
225.0	5480.44	4912.88	4375.13	3757.50	3366.00	2898.56	2450.25	2172.38	1881.00
270.0	5716.69	5083.88	4552.88	4056.75	3481.88	3059.44	2677.50	2248.31	1946.25
315.0	5547.38	4849.88	4339.13	3851.44	3345.75	2884.50	2526.19	2163.94	1867.50
360.0	6128.44	5454.00	4899.94	4435.31	3754.69	3301.31	2936.25	2480.06	2113.31

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1793.25	1543.50	1281.38	1095.19	849.38	671.06	505.13	325.69	293.63
45.0	1564.31	1295.44	1055.25	857.81	653.63	488.25	333.56	286.31	117.96
90.0	1432.13	1116.73	988.03	771.64	582.30	425.25	299.42	167.46	92.93
135.0	1592.44	1319.63	1080.56	876.94	667.13	487.69	343.13	291.38	120.38
180.0	1370.81	1121.46	918.28	711.23	520.31	376.93	236.08	130.67	67.28
225.0	1533.38	1253.25	1115.16	888.69	677.87	513.51	364.33	211.61	124.03
270.0	1682.44	1406.81	1160.44	958.50	738.56	551.25	396.56	286.31	153.90
315.0	1577.81	1120.11	1095.08	867.15	658.97	500.57	353.70	208.86	126.06
360.0	1793.25	1543.50	1281.38	1095.19	849.38	671.06	505.13	325.69	293.63

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	122.12	57.26	35.94	21.60	16.93	15.36	14.12	13.05	12.21
45.0	57.38	33.75	21.38	17.04	14.96	13.95	13.11	12.26	11.70
90.0	50.91	29.70	19.35	15.81	14.18	13.11	12.32	11.59	11.08
135.0	57.99	31.16	19.74	15.98	14.06	12.99	12.26	11.48	10.91
180.0	35.55	20.14	16.20	14.57	13.33	12.43	11.81	11.19	10.69
225.0	64.52	33.58	21.60	17.72	15.92	14.51	13.61	12.71	12.09
270.0	75.83	39.49	24.53	18.51	15.86	14.63	13.67	12.66	11.98
315.0	68.68	38.98	22.05	17.27	15.30	13.89	12.94	12.09	11.48
360.0	122.12	57.26	35.94	21.60	16.93	15.36	14.12	13.05	12.21

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	11.59	10.91	10.46	10.01	9.68	9.39	9.11	8.83	8.66
45.0	11.19	10.80	10.35	10.01	9.73	9.51	9.28	9.11	8.94
90.0	10.63	10.18	9.90	9.62	9.39	9.17	9.00	8.89	8.78
135.0	10.52	10.13	9.79	9.51	9.23	9.06	8.83	8.66	8.55
180.0	10.35	9.96	9.68	9.39	9.23	9.00	8.89	8.72	8.61
225.0	11.48	10.97	10.58	10.24	9.90	9.73	9.51	9.34	9.17
270.0	11.42	10.91	10.46	10.13	9.84	9.68	9.45	9.28	9.17
315.0	10.91	10.41	10.01	9.68	9.39	9.17	9.00	8.78	8.66
360.0	11.59	10.91	10.46	10.01	9.68	9.39	9.11	8.83	8.66

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	8.55	8.38	8.27	8.21	8.10	7.99	7.93	7.88	7.82
45.0	8.83	8.72	8.61	8.55	8.44	8.33	8.27	8.21	8.16
90.0	8.66	8.49	8.44	8.38	8.33	8.27	8.21	8.10	8.10
135.0	8.38	8.33	8.21	8.16	8.04	7.99	7.93	7.88	7.82
180.0	8.49	8.44	8.38	8.27	8.21	8.16	8.10	8.04	7.99
225.0	9.06	8.94	8.83	8.83	8.66	8.61	8.55	8.49	8.44
270.0	9.00	8.89	8.83	8.78	8.66	8.61	8.55	8.49	8.44
315.0	8.49	8.38	8.27	8.21	8.10	8.04	7.99	7.93	7.82
360.0	8.55	8.38	8.27	8.21	8.10	7.99	7.93	7.88	7.82

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.76	7.71	7.65	7.59	7.59	7.54	7.54	7.48	7.48
45.0	8.16	8.10	8.04	8.04	7.99	7.99	7.93	7.88	7.93
90.0	8.04	7.99	7.93	7.93	7.88	7.82	7.82	7.82	7.76
135.0	7.76	7.71	7.65	7.59	7.54	7.54	7.48	7.43	7.43
180.0	7.93	7.88	7.82	7.82	7.76	7.76	7.71	7.65	7.65
225.0	8.38	8.38	8.38	8.33	8.27	8.27	8.27	8.27	8.21
270.0	8.38	8.33	8.27	8.21	8.21	8.16	8.10	8.04	8.04
315.0	7.82	7.71	7.71	7.65	7.59	7.54	7.48	7.43	7.43
360.0	7.76	7.71	7.65	7.59	7.59	7.54	7.54	7.48	7.48

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.43	7.43	7.37	7.37	7.31	7.31	7.31	7.31	7.26
45.0	7.93	7.93	7.88	7.88	7.88	7.88	7.88	7.88	7.88
90.0	7.71	7.71	7.71	7.71	7.65	7.59	7.59	7.59	7.54
135.0	7.43	7.37	7.31	7.31	7.26	7.20	7.26	7.20	7.14
180.0	7.59	7.59	7.59	7.54	7.48	7.48	7.43	7.43	7.37
225.0	8.21	8.21	8.21	8.16	8.16	8.16	8.16	8.16	8.16
270.0	8.04	7.99	7.99	7.93	7.88	7.82	7.82	7.76	7.65
315.0	7.37	7.31	7.31	7.31	7.26	7.26	7.20	7.20	7.20
360.0	7.43	7.43	7.37	7.37	7.31	7.31	7.31	7.31	7.26

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.26	7.26	7.20	7.20	7.20	7.20	7.14	7.14	7.09
45.0	7.93	7.88	7.93	7.93	7.88	7.82	7.71	7.54	7.20
90.0	7.54	7.48	7.43	7.43	7.37	7.37	7.31	7.26	7.14
135.0	7.14	7.14	7.09	7.09	7.09	7.09	7.09	7.03	6.98
180.0	7.31	7.31	7.26	7.26	7.20	7.20	7.14	7.14	7.09
225.0	8.16	8.16	8.10	8.10	8.16	8.38	8.38	7.76	7.48
270.0	7.65	7.59	7.65	7.59	7.59	7.54	7.54	7.48	7.43
315.0	7.20	7.14	7.14	7.14	7.09	7.09	7.09	7.09	6.98
360.0	7.26	7.26	7.20	7.20	7.20	7.20	7.14	7.14	7.09

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.09	7.03	7.03	6.98	6.92	6.92	6.86	6.86	6.81
45.0	7.03	7.09	7.03	7.03	7.03	6.98	6.92	6.92	6.92
90.0	7.03	6.98	6.98	6.92	6.92	6.92	6.86	6.86	6.86
135.0	7.03	6.98	6.98	6.92	6.86	6.86	6.81	6.81	6.81
180.0	7.09	6.98	6.98	6.98	6.86	6.81	6.81	6.81	6.75
225.0	7.20	7.09	7.09	7.09	7.09	7.03	6.98	6.92	6.92
270.0	7.31	7.20	7.09	7.03	6.98	6.98	6.92	6.92	6.86
315.0	6.98	6.98	6.98	6.98	6.86	6.86	6.86	6.81	6.81
360.0	7.09	7.03	7.03	6.98	6.92	6.92	6.86	6.86	6.81

Intensity data(cd)

C/γ(°)	90.0
0.0	6.81
45.0	6.92
90.0	6.86
135.0	6.81
180.0	6.86
225.0	6.98
270.0	6.86
315.0	6.81
360.0	6.81