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## Nata

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LumCAT: 1-1009-M  
Luminaire: BJB 47.360.1020  
Report No: 210716-B014  
Test No: 210716-C014  
LampCAT: Fortimo LED SLM 1203 G7N  
Lamp flux(lm): 2154.2  
Number of Lamps: 1  
Length(mm): 570  
Phm Type: C

Voltage(V): 36.9600  
Current(A): 0.4510  
Power (W): 16.6680  
PF: 0.0000  
Ballast type: DC  
Width(mm): 45  
Height(mm): 20

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## Photometric Results

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Lumens(lm): 1574.34  
Efficiency(%): 73.08%  
Lumens(lm)/Power(W): 94.45  
Central intensity(cd): 7431.469  
Maximum intensity(cd): 7431.469  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=26.7  
                                  [C90/270]Total=26.7  
Field angle(10%Imax): [C0/180]Total=42.9  
                                  [C90/270]Total=42.9  
IES Classification : TypeI  
Longitudinal Classification : VeryShort  
Cut Off Classification : Cutoff  
Max Cd(At 90°Vert) : 7.010156  
Max Cd(80 to 90°Vert) : 7.192969  
Street Side UpWard Lumens: - -of Lamp 0.00%of Luminaire  
Street Side DownWard Lumens: 36.54%of Lamp 50.00%of Luminaire  
House Side UpWard Lumens: - -of lamp 0.00%of Luminaire  
House Side DownWard Lumens: 36.54%of Lamp 50.00%of Luminaire

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Equipment: GMS1980  
Temperature(°C): 25.0

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

Operator: NT07  
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7431.469	0.000	0	.000%	.000%
1.0	7407.141	7.100	7.1	.330%	.451%
2.0	7341.047	21.168	28.268	.983%	1.796%
3.0	7219.758	34.825	63.093	1.617%	4.008%
4.0	7057.406	47.790	110.883	2.218%	7.043%
5.0	6852.164	59.838	170.721	2.778%	10.844%
6.0	6592.078	70.653	241.374	3.280%	15.332%
7.0	6295.641	79.994	321.368	3.713%	20.413%
8.0	5971.500	87.794	409.162	4.075%	25.989%
9.0	5594.836	93.739	502.901	4.351%	31.944%
10.0	5177.883	97.489	600.39	4.526%	38.136%
11.0	4769.578	99.396	699.785	4.614%	44.450%
12.0	4339.547	99.576	799.361	4.622%	50.775%
13.0	3873.023	97.463	896.824	4.524%	56.965%
14.0	3415.359	93.291	990.114	4.331%	62.891%
15.0	2991.727	87.959	1078.074	4.083%	68.478%
16.0	2579.203	81.630	1159.703	3.789%	73.663%
17.0	2167.875	73.925	1233.628	3.432%	78.359%
18.0	1795.641	65.350	1298.978	3.034%	82.510%
19.0	1453.388	56.526	1355.504	2.624%	86.100%
20.0	1135.891	47.391	1402.895	2.200%	89.110%
21.0	841.177	37.964	1440.859	1.762%	91.522%
22.0	618.870	29.340	1470.199	1.362%	93.385%
23.0	417.438	21.745	1491.944	1.009%	94.767%
24.0	255.045	14.703	1506.647	.683%	95.700%
25.0	137.243	8.920	1515.566	.414%	96.267%
26.0	67.493	4.833	1520.399	.224%	96.574%
27.0	39.389	2.615	1523.014	.121%	96.740%
28.0	29.552	1.745	1524.76	.081%	96.851%
29.0	24.490	1.414	1526.173	.066%	96.941%
30.0	21.438	1.240	1527.413	.058%	97.020%
31.0	19.188	1.131	1528.544	.052%	97.091%
32.0	17.332	1.046	1529.59	.049%	97.158%
33.0	15.961	0.981	1530.571	.046%	97.220%
34.0	14.836	0.932	1531.503	.043%	97.279%
35.0	13.774	0.889	1532.392	.041%	97.336%
36.0	12.966	0.851	1533.243	.040%	97.390%
37.0	12.326	0.825	1534.068	.038%	97.442%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	11.700	0.802	1534.87	.037%	97.493%
39.0	11.187	0.781	1535.651	.036%	97.543%
40.0	10.786	0.766	1536.417	.036%	97.591%
41.0	10.434	0.756	1537.173	.035%	97.639%
42.0	10.104	0.746	1537.919	.035%	97.687%
43.0	9.844	0.739	1538.658	.034%	97.734%
44.0	9.598	0.734	1539.392	.034%	97.780%
45.0	9.408	0.730	1540.122	.034%	97.827%
46.0	9.204	0.728	1540.85	.034%	97.873%
47.0	9.028	0.725	1541.575	.034%	97.919%
48.0	8.895	0.725	1542.3	.034%	97.965%
49.0	8.761	0.725	1543.025	.034%	98.011%
50.0	8.634	0.725	1543.75	.034%	98.057%
51.0	8.529	0.726	1544.476	.034%	98.103%
52.0	8.445	0.728	1545.205	.034%	98.150%
53.0	8.360	0.731	1545.936	.034%	98.196%
54.0	8.269	0.733	1546.669	.034%	98.243%
55.0	8.205	0.735	1547.404	.034%	98.289%
56.0	8.121	0.738	1548.142	.034%	98.336%
57.0	8.072	0.740	1548.882	.034%	98.383%
58.0	8.016	0.744	1549.626	.035%	98.430%
59.0	7.966	0.747	1550.373	.035%	98.478%
60.0	7.924	0.751	1551.124	.035%	98.526%
61.0	7.861	0.753	1551.877	.035%	98.573%
62.0	7.826	0.756	1552.633	.035%	98.621%
63.0	7.777	0.759	1553.392	.035%	98.670%
64.0	7.741	0.761	1554.153	.035%	98.718%
65.0	7.713	0.765	1554.918	.036%	98.767%
66.0	7.678	0.768	1555.686	.036%	98.815%
67.0	7.650	0.771	1556.457	.036%	98.864%
68.0	7.601	0.773	1557.229	.036%	98.913%
69.0	7.573	0.774	1558.004	.036%	98.963%
70.0	7.538	0.776	1558.78	.036%	99.012%
71.0	7.530	0.779	1559.558	.036%	99.061%
72.0	7.488	0.781	1560.339	.036%	99.111%
73.0	7.474	0.782	1561.122	.036%	99.161%
74.0	7.446	0.784	1561.906	.036%	99.210%
75.0	7.411	0.785	1562.691	.036%	99.260%

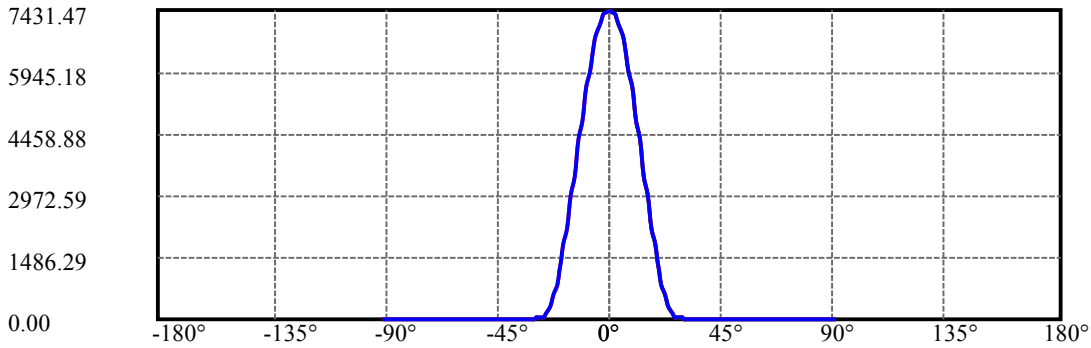
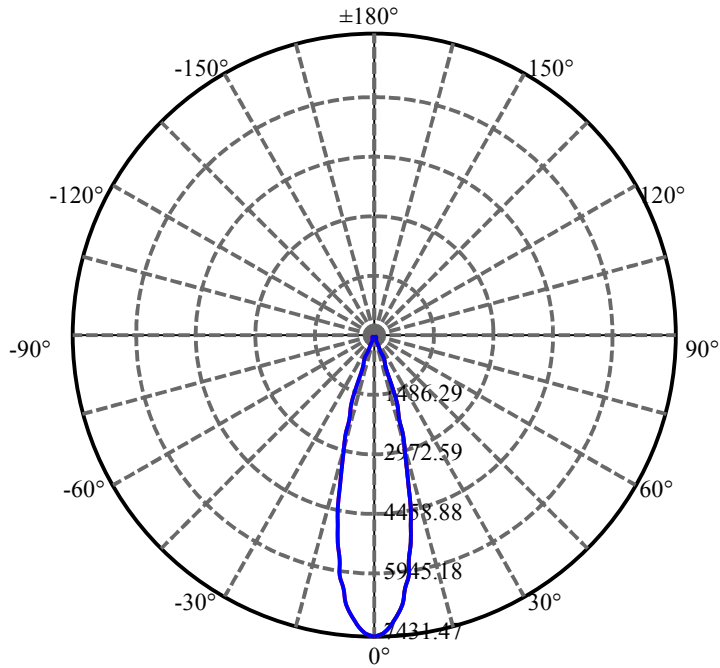
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.390	0.786	1563.477	.036%	99.310%
77.0	7.362	0.786	1564.263	.037%	99.360%
78.0	7.313	0.786	1565.049	.036%	99.410%
79.0	7.263	0.783	1565.832	.036%	99.460%
80.0	7.193	0.779	1566.611	.036%	99.509%
81.0	7.151	0.776	1567.387	.036%	99.559%
82.0	7.130	0.774	1568.161	.036%	99.608%
83.0	7.123	0.775	1568.936	.036%	99.657%
84.0	7.102	0.775	1569.711	.036%	99.706%
85.0	7.066	0.773	1570.484	.036%	99.755%
86.0	7.066	0.773	1571.257	.036%	99.804%
87.0	7.024	0.771	1572.028	.036%	99.853%
88.0	7.010	0.769	1572.797	.036%	99.902%
89.0	7.024	0.769	1573.566	.036%	99.951%
90.0	7.010	0.769	1574.336	.036%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1527.41	70.90%	97.02%
0-40	1536.42	71.32%	97.59%
0-60	1551.12	72.00%	98.53%
0-90	1573.57	73.05%	99.95%
0-120	1573.57	73.05%	99.95%
0-180	1574.34	73.08%	100.00%
60-90	23.19	1.08%	1.47%
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%
0-17.40	1259.47	58.47%	80.00%

ZONAL LUMEN SUMMARY

0-10	600.39
10-20	802.51
20-30	124.52
30-40	9.00
40-50	7.33
50-60	7.37
60-70	7.66
70-80	7.83
80-90	6.95
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



C0(Max): —————

C0/C180: —————

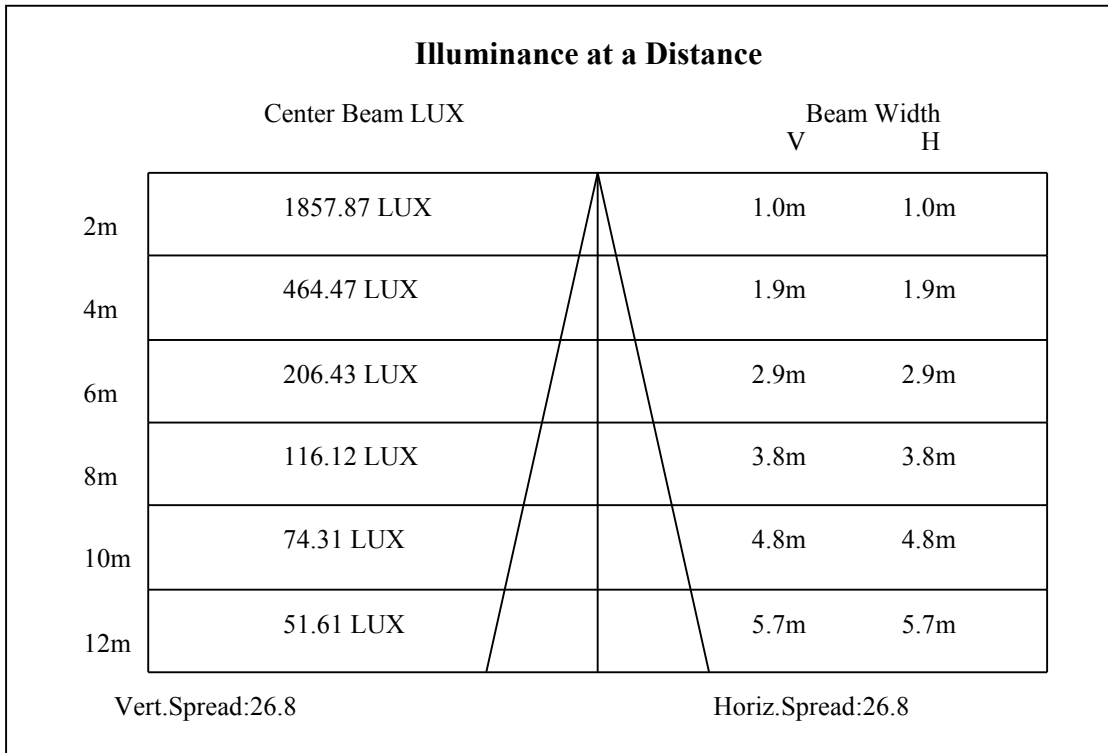
C90/C270: —————

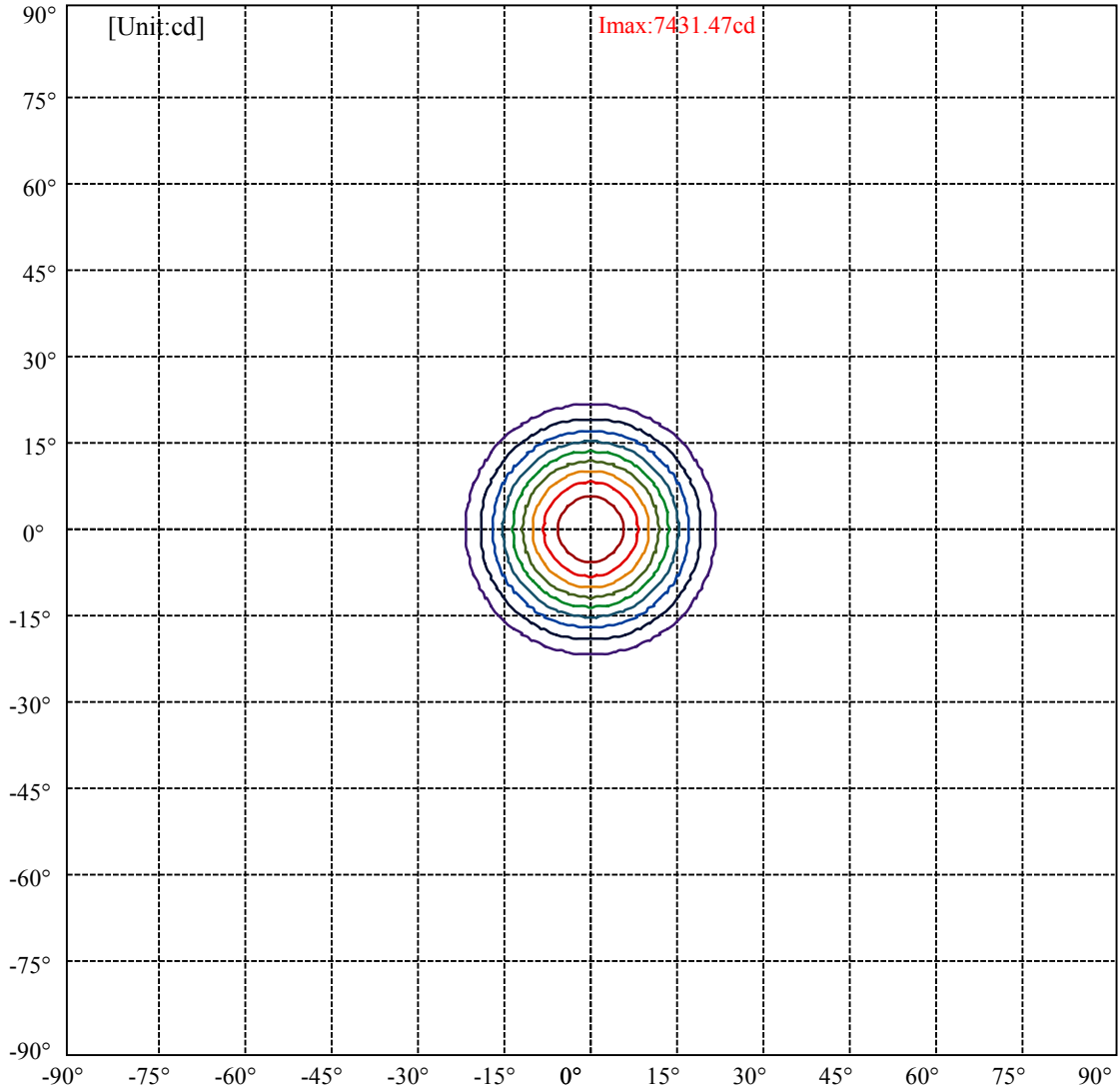
Field angle(10%Imax):C0/180Left:21.4 Right:21.4

:C90/270Left:21.4 Right:21.4

Beam Angle(50%Imax):C0/180Left:13.3 Right:13.3

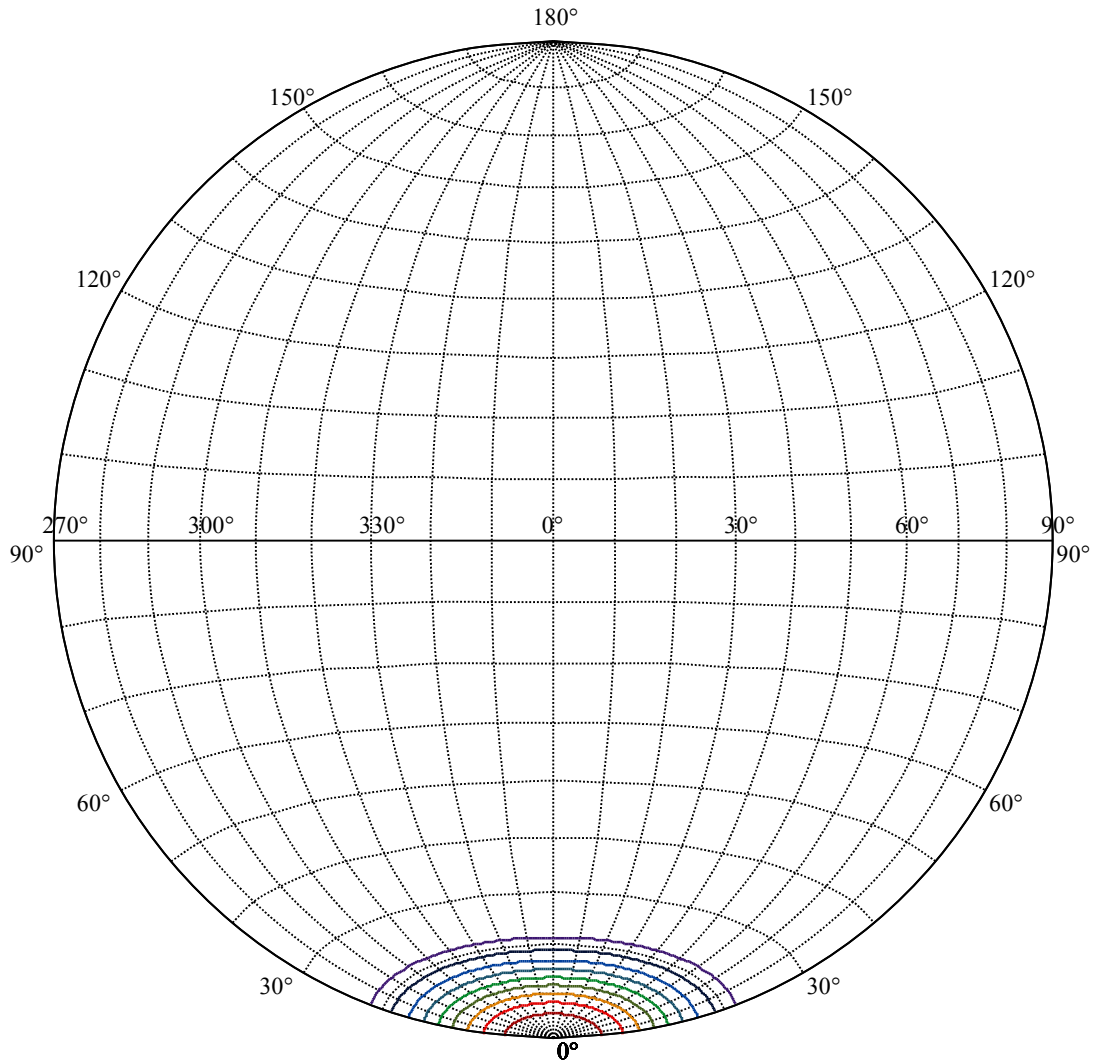
:C90/270Left:13.3 Right:13.3





(10%Imax) 743.147	—
(20%Imax) 1486.29	—
(30%Imax) 2229.44	—
(40%Imax) 2972.59	—
(50%Imax) 3715.73	—
(60%Imax) 4458.88	—
(70%Imax) 5202.03	—
(80%Imax) 5945.18	—
(90%Imax) 6688.32	—





House

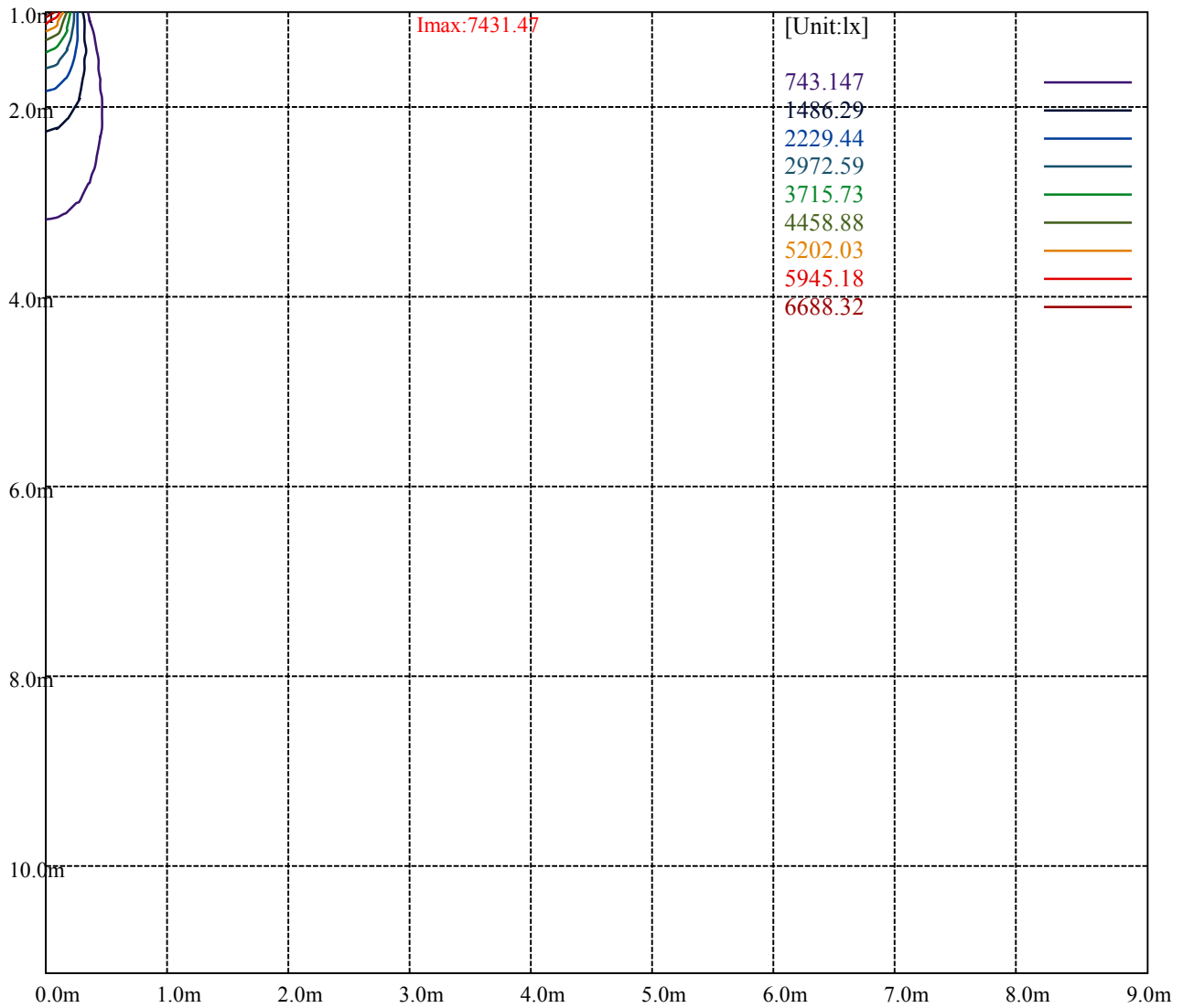
[Unit:cd]

Road

**Imax:7431.47**

(10%Imax) 743.147	—
(20%Imax) 1486.29	—
(30%Imax) 2229.44	—
(40%Imax) 2972.59	—
(50%Imax) 3715.73	—
(60%Imax) 4458.88	—
(70%Imax) 5202.03	—
(80%Imax) 5945.18	—
(90%Imax) 6688.32	—





Luminance Table

$\gamma$	45	50	55	60	65	70	75	80	85
C0	359	342	341	349	364	387	420	459	520
C45	387	373	376	389	412	445	493	552	648
C90	501	503	531	582	662	784	987	1347	2256

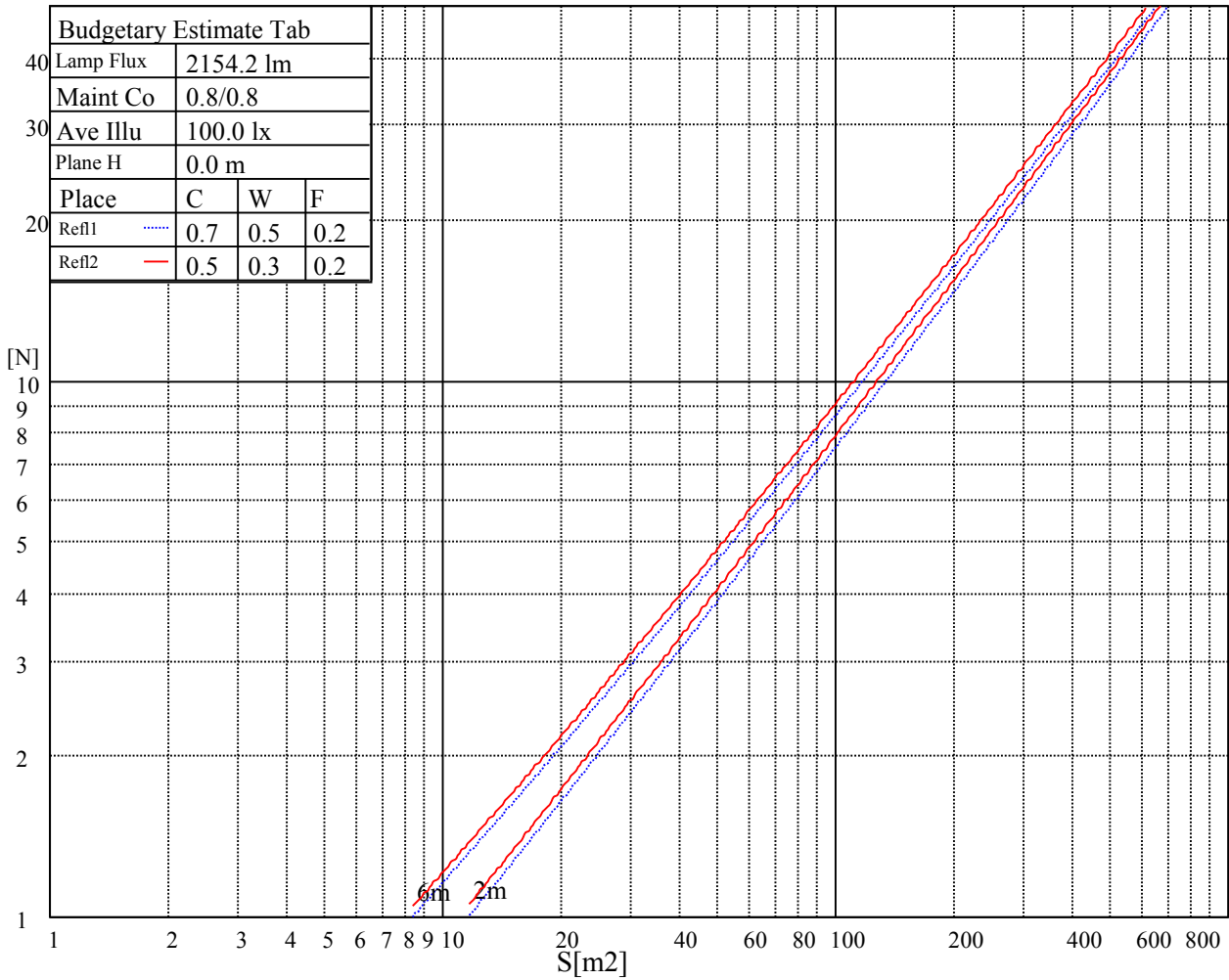
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
712	712	712	1116	1116	1116	3161	3161	3161

Glare Table

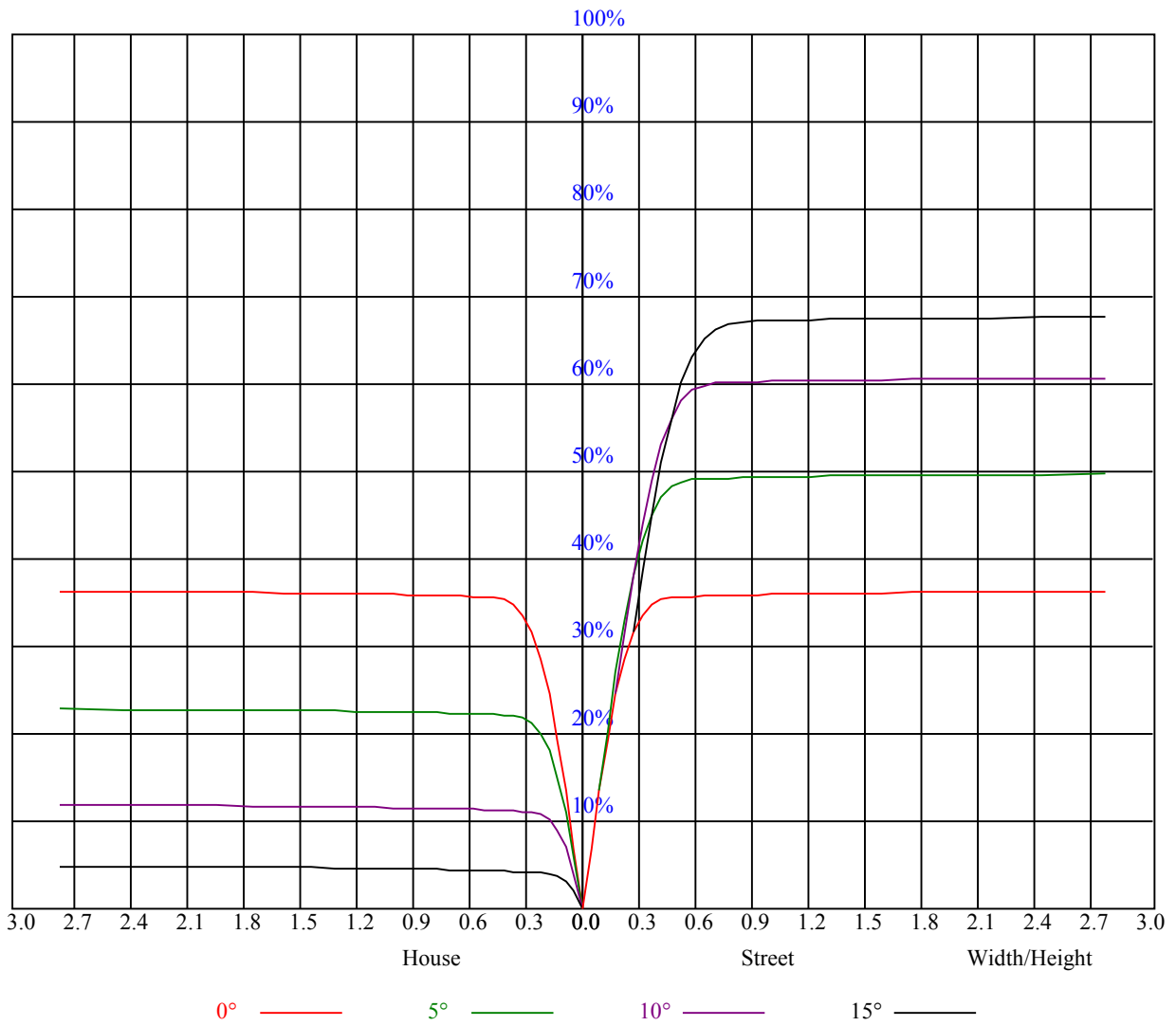
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.87	0.87	0.87	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.75	0.75	0.75	0.73
1	0.82	0.81	0.80	0.81	0.80	0.78	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.72	0.72	0.70
2	0.79	0.77	0.75	0.78	0.76	0.74	0.75	0.74	0.72	0.73	0.72	0.71	0.71	0.70	0.69	0.68
3	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.70	0.68	0.67	0.66
4	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.69	0.68	0.66	0.68	0.67	0.65	0.65
5	0.71	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	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.66	0.64	0.62	0.65	0.63	0.62	0.61
7	0.66	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.64	0.62	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	0.59	0.62	0.61	0.59	0.58
9	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.59	0.58	0.61	0.59	0.58	0.57
10	0.61	0.59	0.57	0.61	0.59	0.57	0.61	0.58	0.57	0.60	0.58	0.57	0.60	0.58	0.56	0.56



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	7454.25	7436.25	7364.81	7243.88	7087.50	6855.75	6582.38	6302.81	5954.06
45.0	7419.94	7347.94	7228.69	7020.56	6809.63	6571.69	6225.75	5911.31	5562.00
90.0	7405.31	7316.44	7215.19	7034.63	6774.75	6570.00	6289.31	5845.50	5548.50
135.0	7446.38	7426.13	7365.94	7260.75	7107.75	6876.00	6637.50	6363.56	6067.13
180.0	7454.25	7431.75	7358.63	7253.44	7107.75	6875.44	6628.50	6349.50	5952.38
225.0	7419.94	7445.81	7444.69	7383.38	7279.31	7130.81	6923.25	6676.88	6408.00
270.0	7405.31	7435.13	7421.63	7355.25	7250.63	7111.69	6867.56	6629.63	6357.94
315.0	7446.38	7417.69	7328.81	7206.19	7041.94	6825.94	6582.38	6285.94	5922.00
360.0	7454.25	7436.25	7364.81	7243.88	7087.50	6855.75	6582.38	6302.81	5954.06
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5614.88	5203.69	4763.81	4347.00	3915.00	3376.69	2965.50	2574.00	2108.81
45.0	5097.38	4691.25	4263.19	3782.25	3307.50	2903.06	2471.06	2063.81	1736.44
90.0	5170.50	4620.94	4254.75	3832.88	3363.19	2917.69	2534.63	2129.06	1789.31
135.0	5649.19	5272.31	4870.69	4410.56	3933.56	3519.00	3059.44	2612.25	2242.69
180.0	5600.25	5218.88	4777.31	4369.50	3902.63	3429.56	3024.00	2637.00	2167.88
225.0	6090.75	5653.69	5278.50	4884.19	4372.31	3947.06	3524.06	3113.44	2617.31
270.0	5967.00	5623.31	5254.31	4820.63	4354.31	3927.94	3453.19	2989.69	2587.50
315.0	5568.75	5139.00	4694.06	4269.38	3835.69	3301.88	2901.94	2514.38	2093.06
360.0	5614.88	5203.69	4763.81	4347.00	3915.00	3376.69	2965.50	2574.00	2108.81
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1768.50	1451.25	1122.75	830.81	599.63	380.25	298.69	104.57	46.69
45.0	1382.06	1092.94	812.81	545.63	353.81	293.63	79.65	38.98	29.42
90.0	1427.06	1098.23	835.03	579.88	388.46	215.44	107.94	45.45	30.09
135.0	1855.13	1509.75	1145.25	891.56	649.13	415.69	293.63	124.14	57.04
180.0	1816.88	1481.63	1107.73	848.64	619.76	426.88	233.78	122.79	59.34
225.0	2239.31	1890.56	1528.31	1120.78	919.58	655.93	430.20	270.23	140.85
270.0	2167.88	1820.25	1462.50	1132.88	866.25	609.19	392.63	297.00	128.48
315.0	1708.31	1282.50	1072.74	779.23	554.34	342.51	203.85	94.78	48.04
360.0	1768.50	1451.25	1122.75	830.81	599.63	380.25	298.69	104.57	46.69
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	34.09	27.56	23.68	21.26	19.24	17.21	15.92	14.79	13.61
45.0	23.91	21.26	19.18	17.38	15.86	14.68	13.78	13.05	12.26
90.0	24.92	21.88	19.24	17.61	16.26	14.91	14.01	13.22	12.49
135.0	33.08	26.27	22.73	20.25	18.23	16.71	15.47	14.34	13.50
180.0	34.09	27.28	23.57	20.59	18.39	16.82	15.41	14.40	13.44
225.0	72.06	43.20	32.29	27.00	23.51	20.48	18.56	17.04	15.47
270.0	57.09	39.77	31.05	25.76	22.39	20.19	18.23	16.65	15.47
315.0	35.89	29.19	24.19	21.66	19.63	17.66	16.31	15.19	13.95
360.0	34.09	27.56	23.68	21.26	19.24	17.21	15.92	14.79	13.61
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	12.83	12.15	11.48	10.97	10.52	10.18	9.84	9.56	9.34
45.0	11.70	11.25	10.80	10.46	10.18	9.90	9.62	9.45	9.28
90.0	11.87	11.42	10.97	10.58	10.29	10.01	9.79	9.56	9.34
135.0	12.71	12.09	11.53	11.08	10.69	10.35	10.01	9.79	9.51
180.0	12.66	12.09	11.48	10.97	10.58	10.29	9.96	9.73	9.51
225.0	14.40	13.61	12.77	12.09	11.53	11.08	10.69	10.35	10.07
270.0	14.40	13.56	12.77	12.09	11.64	11.19	10.80	10.46	10.18
315.0	13.16	12.43	11.81	11.25	10.86	10.46	10.13	9.84	9.56
360.0	12.83	12.15	11.48	10.97	10.52	10.18	9.84	9.56	9.34



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	9.17	8.94	8.78	8.66	8.49	8.44	8.33	8.21	8.16
45.0	9.11	8.94	8.83	8.72	8.61	8.55	8.44	8.38	8.33
90.0	9.23	9.06	8.94	8.83	8.72	8.61	8.55	8.49	8.44
135.0	9.34	9.17	9.00	8.83	8.72	8.61	8.49	8.44	8.33
180.0	9.28	9.06	8.89	8.78	8.66	8.49	8.38	8.27	8.21
225.0	9.84	9.56	9.34	9.17	9.06	8.83	8.72	8.66	8.55
270.0	9.96	9.73	9.51	9.34	9.17	9.06	8.89	8.78	8.66
315.0	9.34	9.17	8.94	8.83	8.66	8.49	8.44	8.33	8.21
360.0	9.17	8.94	8.78	8.66	8.49	8.44	8.33	8.21	8.16
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.04	7.99	7.93	7.88	7.82	7.76	7.76	7.65	7.65
45.0	8.27	8.16	8.16	8.10	8.04	7.99	7.99	7.93	7.93
90.0	8.33	8.33	8.21	8.21	8.10	8.10	8.04	7.99	7.99
135.0	8.27	8.21	8.10	7.99	7.99	7.93	7.88	7.82	7.76
180.0	8.10	8.04	7.93	7.93	7.88	7.82	7.76	7.71	7.65
225.0	8.44	8.38	8.27	8.21	8.16	8.10	8.04	7.99	7.93
270.0	8.55	8.49	8.38	8.33	8.27	8.21	8.16	8.10	8.04
315.0	8.16	8.04	7.99	7.93	7.88	7.82	7.76	7.71	7.65
360.0	8.04	7.99	7.93	7.88	7.82	7.76	7.76	7.65	7.65
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.59	7.54	7.54	7.48	7.43	7.43	7.37	7.31	7.37
45.0	7.88	7.88	7.82	7.82	7.82	7.76	7.76	7.76	7.76
90.0	7.93	7.88	7.88	7.82	7.82	7.76	7.71	7.71	7.65
135.0	7.71	7.65	7.59	7.59	7.54	7.48	7.48	7.48	7.43
180.0	7.59	7.59	7.59	7.54	7.54	7.43	7.43	7.37	7.37
225.0	7.93	7.88	7.82	7.82	7.82	7.76	7.71	7.65	7.71
270.0	7.99	7.99	7.93	7.88	7.82	7.76	7.76	7.65	7.65
315.0	7.59	7.54	7.54	7.48	7.43	7.43	7.37	7.37	7.31
360.0	7.59	7.54	7.54	7.48	7.43	7.43	7.37	7.31	7.37
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.31	7.26	7.26	7.20	7.20	7.14	7.14	7.14	7.09
45.0	7.76	7.76	7.76	7.71	7.71	7.65	7.54	7.26	7.14
90.0	7.65	7.59	7.54	7.54	7.48	7.43	7.37	7.31	7.20
135.0	7.37	7.37	7.31	7.31	7.26	7.26	7.20	7.26	7.20
180.0	7.26	7.26	7.26	7.20	7.20	7.20	7.14	7.14	7.09
225.0	7.65	7.65	7.65	7.59	7.59	7.54	7.48	7.37	7.31
270.0	7.59	7.59	7.54	7.48	7.48	7.48	7.43	7.43	7.37
315.0	7.31	7.31	7.26	7.26	7.20	7.20	7.20	7.20	7.14
360.0	7.31	7.26	7.26	7.20	7.20	7.14	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	7.09	7.09	7.03	7.03	7.03	6.98	6.92	6.98
45.0	7.14	7.09	7.14	7.14	7.09	7.09	7.03	7.03	7.03
90.0	7.14	7.14	7.14	7.14	7.09	7.09	7.03	7.03	7.09
135.0	7.14	7.14	7.14	7.09	7.09	7.03	7.03	7.03	7.03
180.0	7.09	7.09	7.03	7.03	6.98	6.98	6.92	6.92	6.92
225.0	7.14	7.14	7.14	7.14	7.09	7.14	7.09	7.03	7.03
270.0	7.31	7.26	7.20	7.14	7.14	7.14	7.09	7.09	7.09
315.0	7.14	7.09	7.09	7.09	7.03	7.03	7.03	7.03	7.03
360.0	7.09	7.09	7.09	7.03	7.03	7.03	6.98	6.92	6.98

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	6.92
45.0	7.03
90.0	7.03
135.0	7.03
180.0	6.98
225.0	6.98
270.0	7.09
315.0	7.03
360.0	6.92