



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

NT

Client:

LumCAT: 2-2684-L

Luminaire: 92.70.411.00

Report No: 2024424-B004

Ballast type: AC

Test No: 2024424-C004

Voltage(V): 36.430

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.983

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2494.48, Efficiency(%): 85.31% , Luminous Efficacy(lm/W): 118.88

Central intensity(cd): 5693.712, Maximum intensity(cd): 5693.712

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.4

[C90/270]Total=35.4

Field angle(10%Imax): [C0/180]Total=66.0

[C90/270]Total=66.0

Maximum s/h(1/2): C0_180=0.58 C90_270=0.58

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.31%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.002%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/24
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5693.713	0.000	0	0.00%	0.00%
1.0	5680.033	5.442	5.442	0.19%	0.22%
2.0	5640.311	16.248	21.69	0.56%	0.87%
3.0	5584.714	26.847	48.537	0.92%	1.95%
4.0	5503.222	37.115	85.652	1.27%	3.43%
5.0	5403.660	46.921	132.572	1.60%	5.31%
6.0	5283.397	56.163	188.736	1.92%	7.57%
7.0	5133.433	64.657	253.393	2.21%	10.16%
8.0	4964.595	72.270	325.663	2.47%	13.06%
9.0	4780.762	78.981	404.643	2.70%	16.22%
10.0	4574.397	84.661	489.304	2.90%	19.62%
11.0	4359.765	89.271	578.575	3.05%	23.19%
12.0	4136.283	92.874	671.449	3.18%	26.92%
13.0	3894.073	95.300	766.749	3.26%	30.74%
14.0	3667.664	96.790	863.538	3.31%	34.62%
15.0	3448.351	97.692	961.23	3.34%	38.53%
16.0	3226.111	97.800	1059.03	3.34%	42.45%
17.0	2986.315	96.744	1155.774	3.31%	46.33%
18.0	2781.413	95.097	1250.871	3.25%	50.15%
19.0	2565.904	93.032	1343.904	3.18%	53.88%
20.0	2352.736	90.025	1433.928	3.08%	57.48%
21.0	2142.421	86.316	1520.245	2.95%	60.94%
22.0	1948.492	82.209	1602.453	2.81%	64.24%
23.0	1765.170	77.923	1680.376	2.66%	67.36%
24.0	1598.308	73.538	1753.914	2.51%	70.31%
25.0	1445.542	69.211	1823.124	2.37%	73.09%
26.0	1289.748	64.567	1887.691	2.21%	75.67%
27.0	1210.545	61.170	1948.861	2.09%	78.13%
28.0	1126.331	59.165	2008.026	2.02%	80.50%
29.0	1013.090	55.973	2063.999	1.91%	82.74%
30.0	898.693	51.618	2115.617	1.77%	84.81%
31.0	783.185	46.804	2162.421	1.60%	86.69%
32.0	675.898	41.801	2204.222	1.43%	88.36%
33.0	569.248	36.682	2240.905	1.25%	89.83%
34.0	458.363	31.099	2272.003	1.06%	91.08%
35.0	369.211	25.701	2297.705	0.88%	92.11%
36.0	291.888	21.050	2318.754	0.72%	92.96%
37.0	248.150	17.613	2336.367	0.60%	93.66%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	166.796	13.850	2350.218	0.47%	94.22%
39.0	117.506	9.704	2359.922	0.33%	94.61%
40.0	88.384	7.181	2367.102	0.25%	94.89%
41.0	77.879	5.921	2373.023	0.20%	95.13%
42.0	72.034	5.447	2378.469	0.19%	95.35%
43.0	66.511	5.132	2383.602	0.18%	95.56%
44.0	61.683	4.838	2388.44	0.17%	95.75%
45.0	58.164	4.606	2393.046	0.16%	95.93%
46.0	54.931	4.423	2397.469	0.15%	96.11%
47.0	51.931	4.250	2401.719	0.15%	96.28%
48.0	49.283	4.092	2405.81	0.14%	96.45%
49.0	46.840	3.947	2409.758	0.13%	96.60%
50.0	44.419	3.805	2413.563	0.13%	96.76%
51.0	42.165	3.663	2417.226	0.13%	96.90%
52.0	40.132	3.531	2420.757	0.12%	97.04%
53.0	38.171	3.406	2424.164	0.12%	97.18%
54.0	36.277	3.281	2427.445	0.11%	97.31%
55.0	34.440	3.157	2430.602	0.11%	97.44%
56.0	32.758	3.037	2433.638	0.10%	97.56%
57.0	30.988	2.915	2436.553	0.10%	97.68%
58.0	29.539	2.799	2439.352	0.10%	97.79%
59.0	28.098	2.695	2442.046	0.09%	97.90%
60.0	26.672	2.588	2444.634	0.09%	98.00%
61.0	25.435	2.487	2447.12	0.09%	98.10%
62.0	24.316	2.397	2449.518	0.08%	98.20%
63.0	23.233	2.313	2451.83	0.08%	98.29%
64.0	22.224	2.231	2454.061	0.08%	98.38%
65.0	21.353	2.157	2456.217	0.07%	98.47%
66.0	20.476	2.087	2458.304	0.07%	98.55%
67.0	19.620	2.016	2460.321	0.07%	98.63%
68.0	18.939	1.953	2462.274	0.07%	98.71%
69.0	18.244	1.897	2464.171	0.06%	98.78%
70.0	17.593	1.841	2466.011	0.06%	98.86%
71.0	16.979	1.787	2467.798	0.06%	98.93%
72.0	16.452	1.738	2469.537	0.06%	99.00%
73.0	15.903	1.692	2471.229	0.06%	99.07%
74.0	15.377	1.644	2472.873	0.06%	99.13%
75.0	14.938	1.602	2474.475	0.05%	99.20%

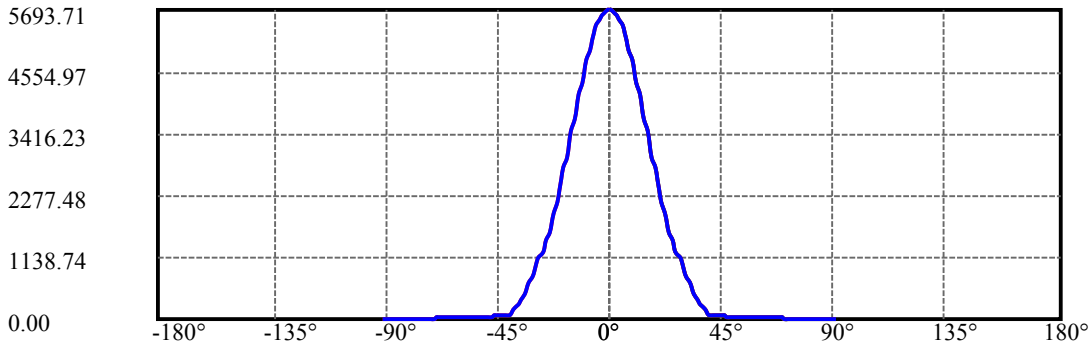
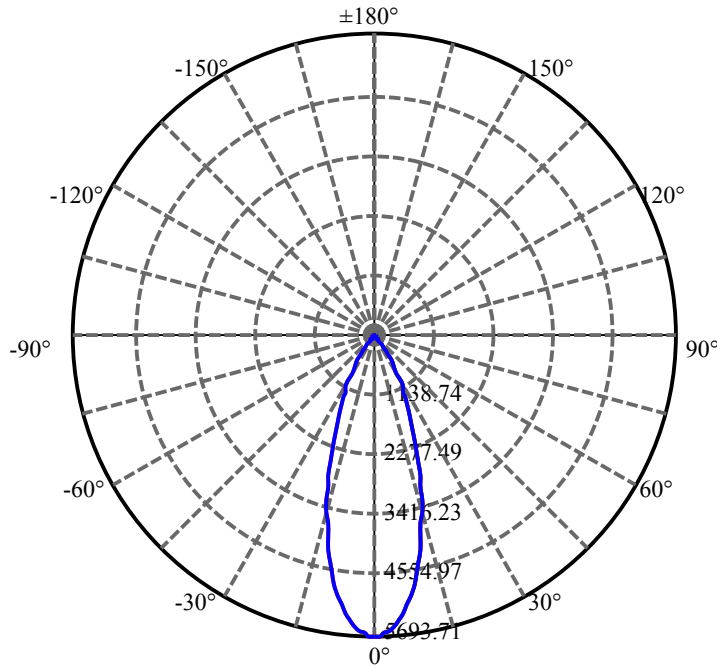
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	14.528	1.564	2476.039	0.05%	99.26%
77.0	14.155	1.529	2477.568	0.05%	99.32%
78.0	13.789	1.496	2479.064	0.05%	99.38%
79.0	13.416	1.462	2480.526	0.05%	99.44%
80.0	13.021	1.425	2481.951	0.05%	99.50%
81.0	12.677	1.390	2483.341	0.05%	99.55%
82.0	12.370	1.358	2484.699	0.05%	99.61%
83.0	12.085	1.329	2486.029	0.05%	99.66%
84.0	11.653	1.293	2487.322	0.04%	99.71%
85.0	11.309	1.253	2488.575	0.04%	99.76%
86.0	11.068	1.223	2489.798	0.04%	99.81%
87.0	10.834	1.199	2490.997	0.04%	99.86%
88.0	10.680	1.179	2492.175	0.04%	99.91%
89.0	10.454	1.158	2493.334	0.04%	99.95%
90.0	10.446	1.146	2494.48	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2115.62	72.35%	84.81%
0-40	2367.10	80.95%	94.89%
0-60	2444.63	83.61%	98.00%
0-90	2493.33	85.27%	99.95%
0-120	2493.33	85.27%	99.95%
0-180	2494.48	85.31%	100.00%
60-90	48.70	1.67%	1.95%
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%
0-27.79	1995.58	68.25%	80.00%

ZONAL LUMEN SUMMARY

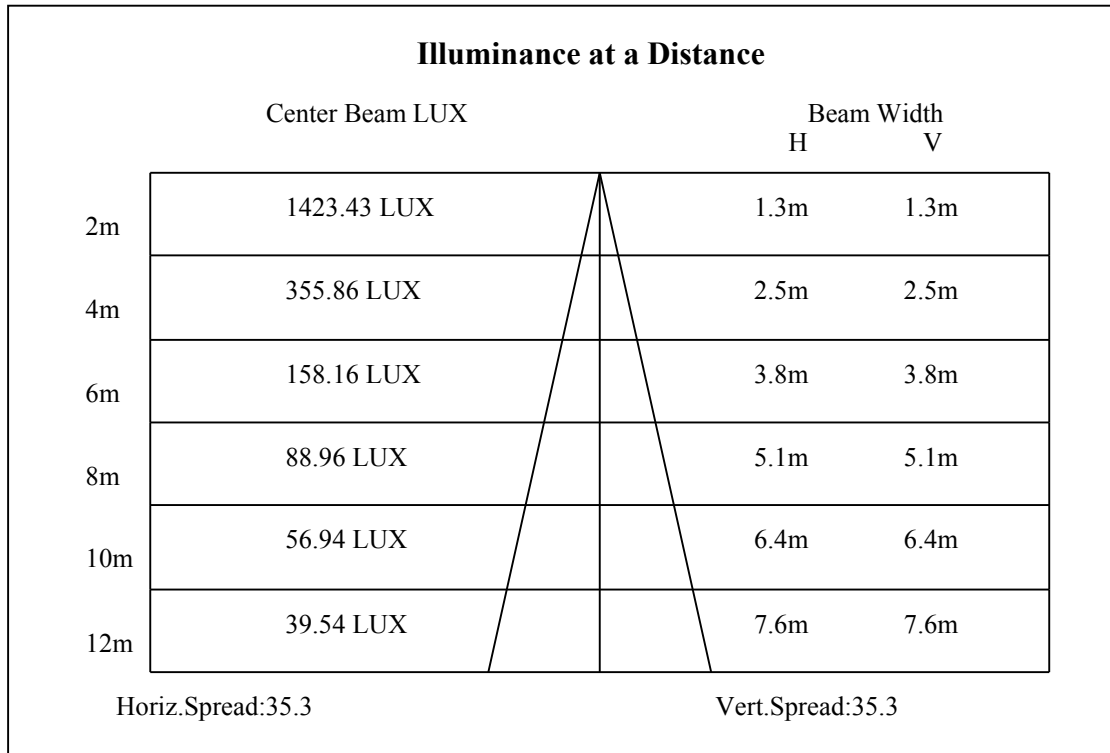
0-10	489.30
10-20	944.62
20-30	681.69
30-40	251.49
40-50	46.46
50-60	31.07
60-70	21.38
70-80	15.94
80-90	11.38
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

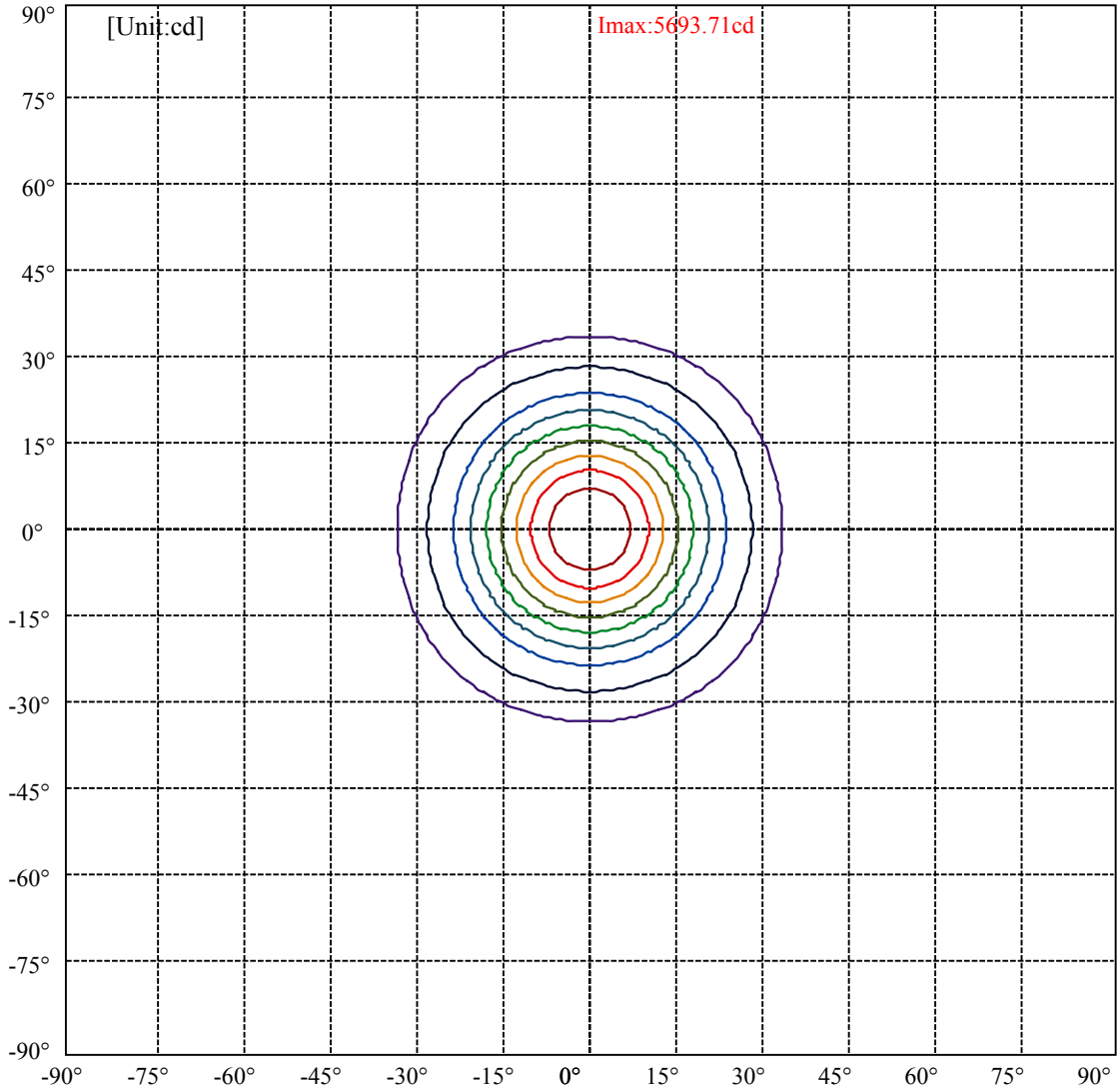


C0(Max): —————
C0/C180: —————
C90/C270: —————

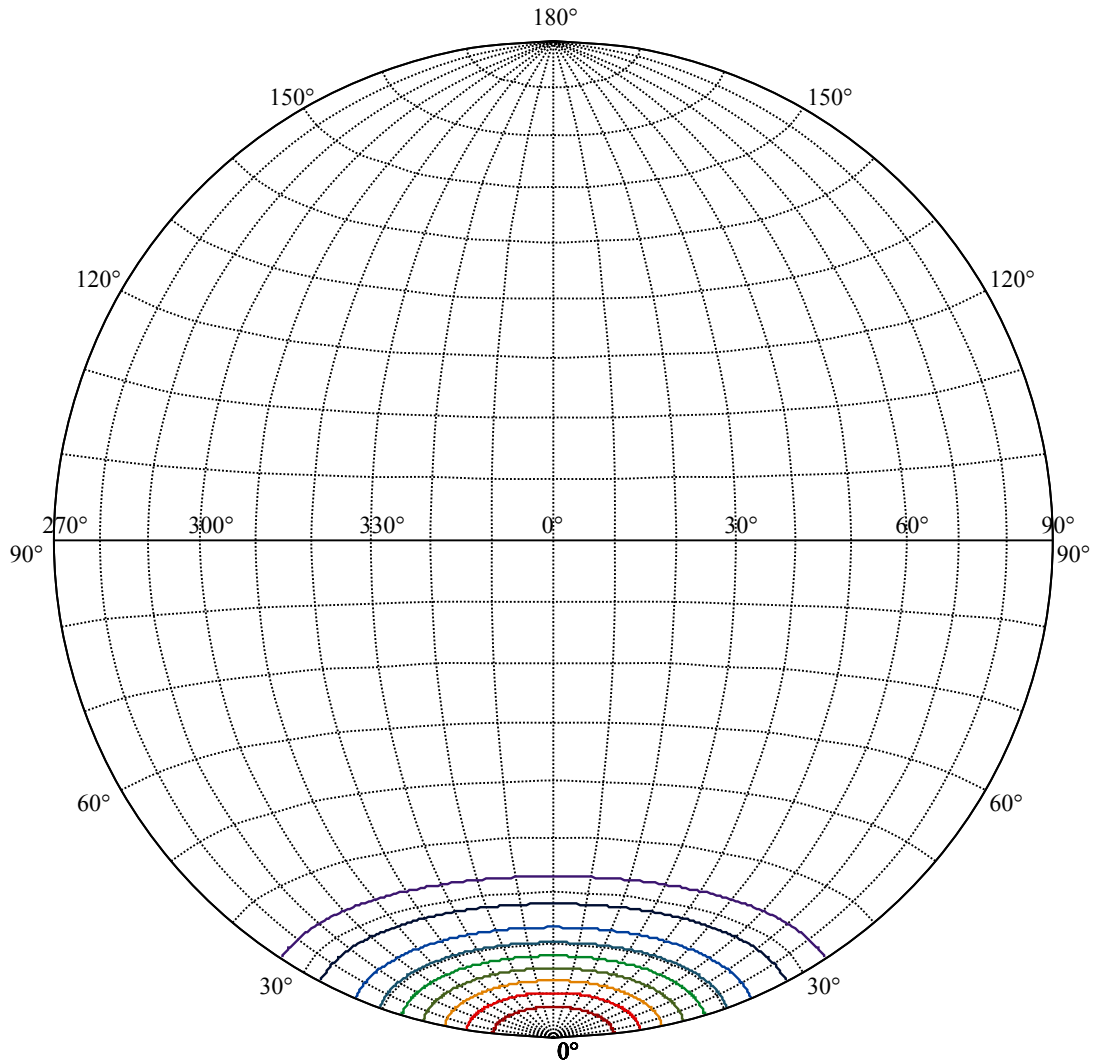
Field angle(10%Imax):C0/180Left:33.0 Right:33.0
:C90/270Left:33.0 Right:33.0

Beam Angle(50%Imax):C0/180Left:17.7 Right:17.7
:C90/270Left:17.7 Right:17.7





(10%Imax) 569.371	—
(20%Imax) 1138.74	—
(30%Imax) 1708.11	—
(40%Imax) 2277.48	—
(50%Imax) 2846.86	—
(60%Imax) 3416.23	—
(70%Imax) 3985.6	—
(80%Imax) 4554.97	—
(90%Imax) 5124.34	—



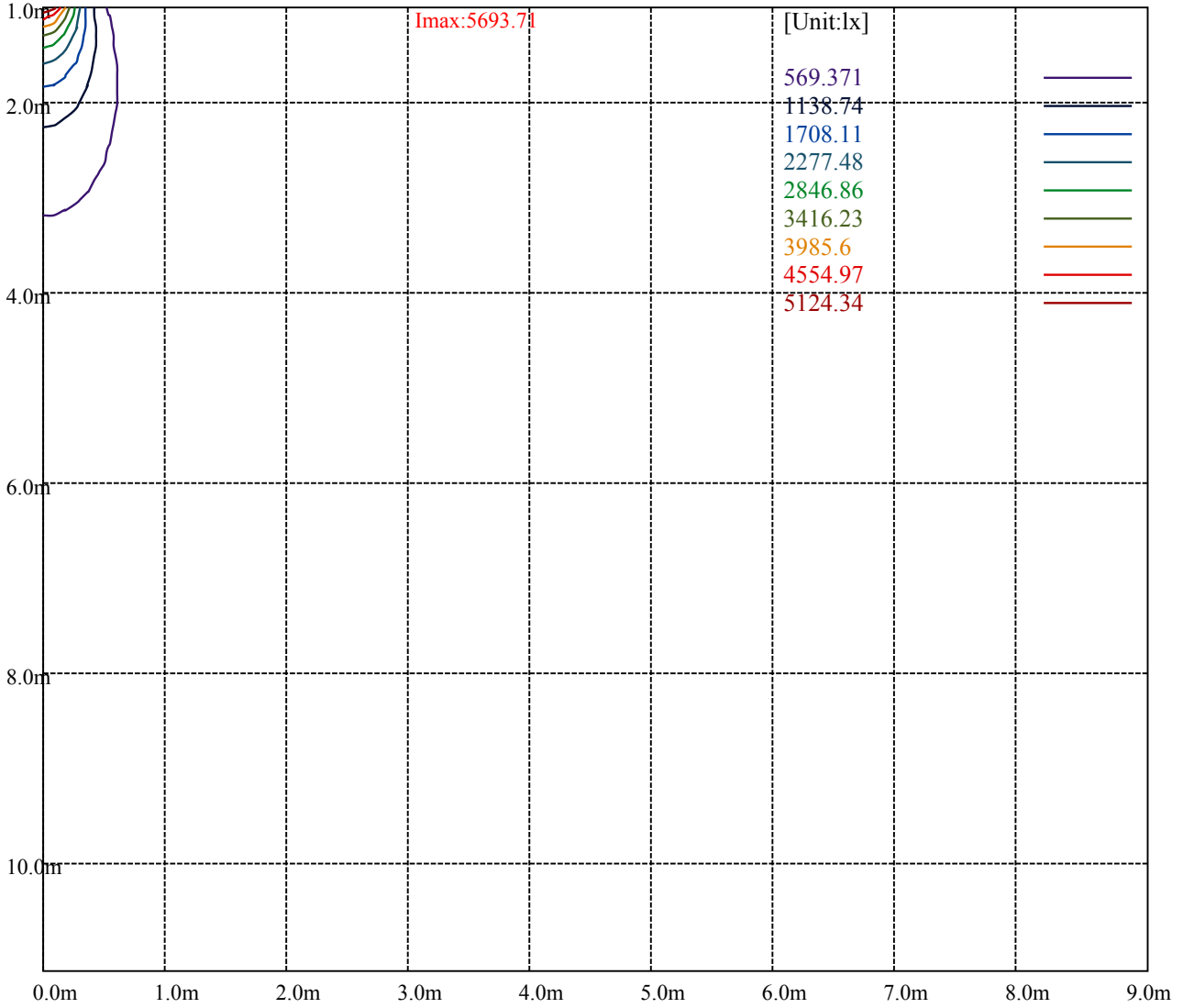
House

[Unit:cd]

Road

Imax:5693.71

(10%Imax) 569.371	—
(20%Imax) 1138.74	—
(30%Imax) 1708.11	—
(40%Imax) 2277.48	—
(50%Imax) 2846.86	—
(60%Imax) 3416.23	—
(70%Imax) 3985.6	—
(80%Imax) 4554.97	—
(90%Imax) 5124.34	—



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

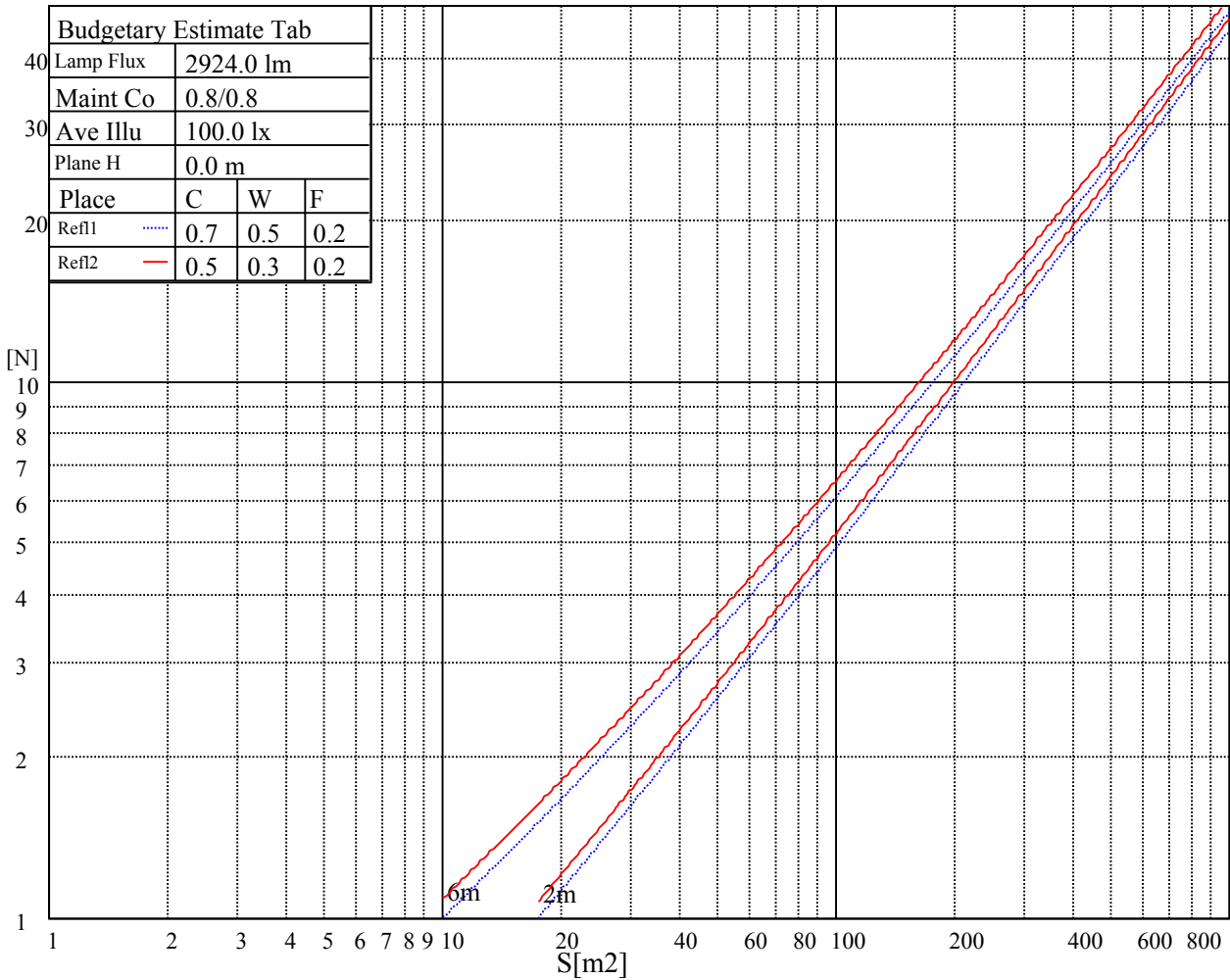
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

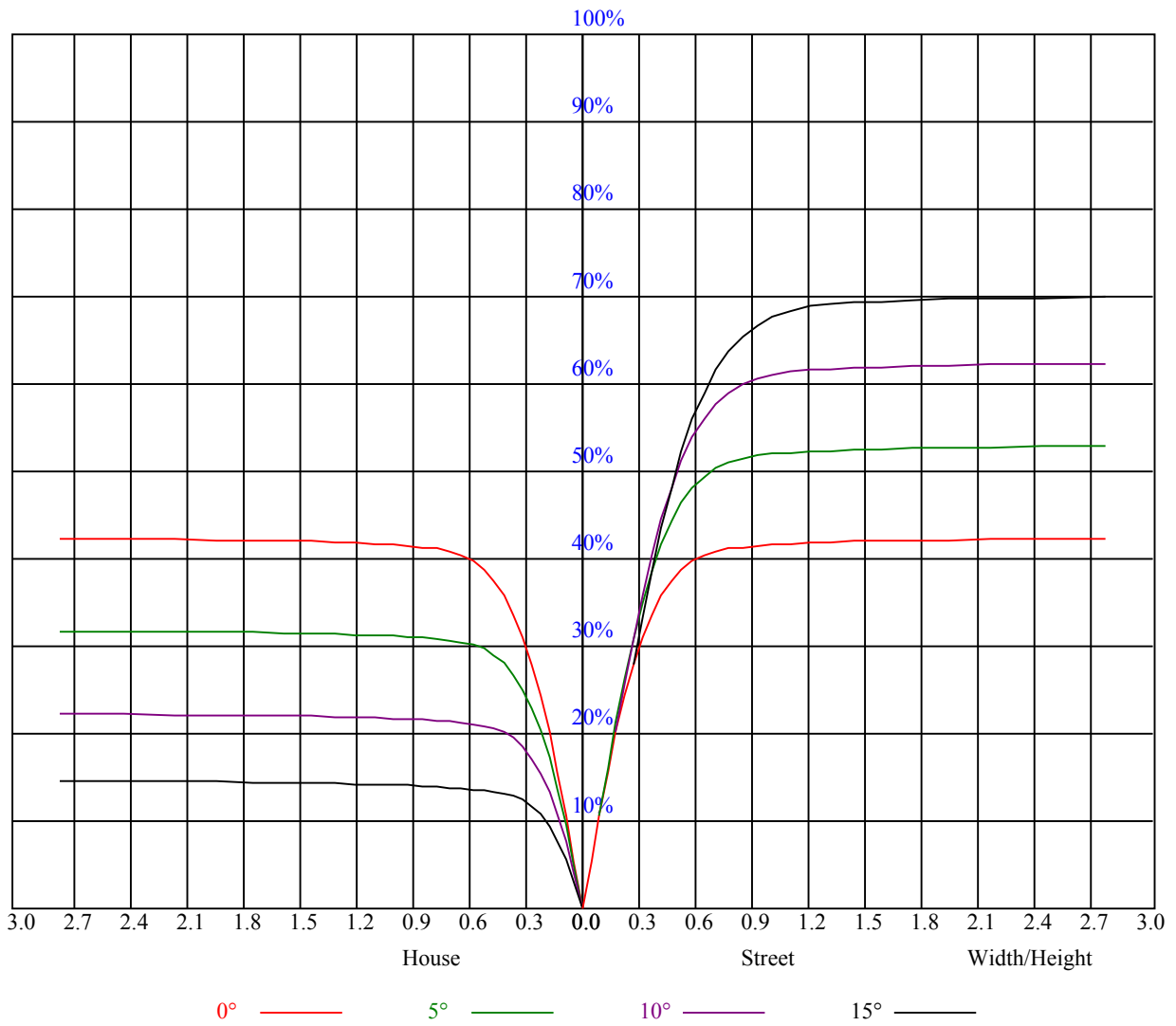
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

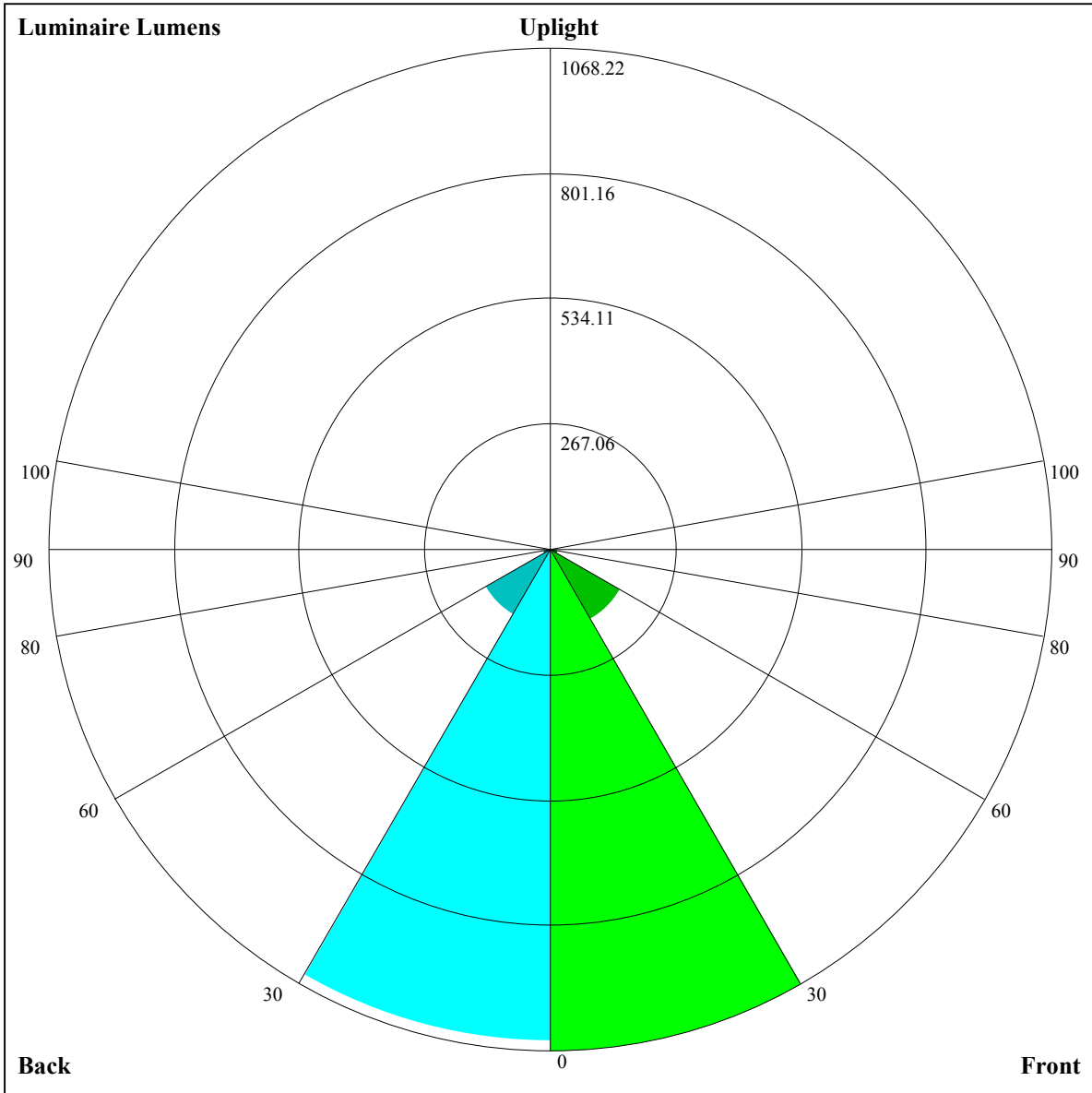
Luminance Limiting Curve





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 RHOF=20 CU															
0	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.80
2	0.89	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.81	0.82	0.81	0.79	0.80	0.79	0.77	0.76
3	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
6	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.59
8	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.56
9	0.63	0.59	0.56	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52





Luminaire Lumens:

FL=1068.22,FM=170.47,FH=18.76,FVH=6.29

BL=1046.69,BM=161.56,BH=18.61,BVH=6.26

UL=0,UH=0

BUG Rating:B3-U0-G0

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	5707.17	5692.54	5645.14	5592.47	5490.05	5388.81	5281.71	5110.83	4955.16
45.0	5681.42	5697.22	5698.98	5665.62	5616.46	5539.80	5421.58	5319.17	5157.65
90.0	5690.79	5683.76	5630.51	5575.50	5497.66	5402.86	5284.64	5126.63	4961.60
135.0	5695.47	5693.13	5674.99	5627.58	5546.82	5458.45	5350.77	5229.63	5050.55
180.0	5707.17	5693.13	5659.18	5600.66	5535.70	5422.17	5314.49	5183.40	4991.44
225.0	5681.42	5636.95	5559.11	5476.59	5384.71	5274.11	5100.88	4934.68	4761.45
270.0	5690.79	5683.76	5641.04	5594.22	5495.91	5408.12	5301.03	5135.41	4976.23
315.0	5695.47	5659.77	5613.54	5545.07	5458.45	5334.97	5212.07	5027.73	4862.69
360.0	5707.17	5692.54	5645.14	5592.47	5490.05	5388.81	5281.71	5110.83	4955.16
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4739.80	4546.67	4343.01	4129.99	3861.37	3657.13	3449.37	3236.94	2977.10
45.0	5010.17	4840.45	4663.72	4413.24	4205.49	3991.88	3775.93	3507.90	3294.29
90.0	4790.71	4604.61	4350.62	4135.26	3921.07	3654.20	3441.18	3177.83	2974.76
135.0	4886.10	4663.72	4465.33	4261.08	3999.49	3787.05	3574.61	3366.86	3108.19
180.0	4814.70	4581.79	4375.20	4161.59	3888.29	3666.49	3456.98	3246.30	2989.97
225.0	4517.41	4304.97	4087.27	3819.24	3599.78	3336.43	3126.92	2927.35	2720.77
270.0	4807.68	4621.00	4366.42	4154.57	3932.77	3715.65	3441.77	3232.84	2973.59
315.0	4679.52	4431.97	4226.55	4015.29	3744.33	3532.48	3320.04	3112.87	2851.86
360.0	4739.80	4546.67	4343.01	4129.99	3861.37	3657.13	3449.37	3236.94	2977.10
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2772.27	2570.37	2370.22	2127.35	1946.52	1735.84	1587.77	1459.02	1148.09
45.0	3091.80	2895.75	2644.69	2439.86	2196.99	2006.80	1830.06	1638.10	1503.50
90.0	2772.27	2520.04	2322.23	2129.69	1947.10	1740.52	1594.80	1466.05	1284.63
135.0	2906.87	2702.63	2502.48	2254.93	2062.98	1883.31	1680.24	1534.52	1380.60
180.0	2783.39	2573.88	2370.22	2173.00	1934.81	1767.44	1584.85	1456.68	1342.56
225.0	2514.19	2264.29	2070.00	1893.85	1728.23	1545.64	1422.16	1166.24	1166.24
270.0	2768.17	2559.83	2297.65	2114.48	1938.32	1765.10	1580.75	1453.76	1341.98
315.0	2642.35	2440.45	2244.40	2006.21	1832.98	1676.73	1505.84	1389.97	1150.38
360.0	2772.27	2570.37	2370.22	2127.35	1946.52	1735.84	1587.77	1459.02	1148.09
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1148.09	1125.10	997.22	891.65	783.97	678.51	578.61	457.88	373.02
45.0	1382.36	1253.61	1154.12	1051.71	943.44	835.17	702.33	601.08	505.11
90.0	1159.62	1134.87	1032.10	922.67	787.48	679.80	573.05	446.70	355.52
135.0	1274.68	1177.53	1049.95	942.86	836.35	732.76	605.77	509.20	416.15
180.0	1223.76	1128.96	1025.37	885.50	770.21	673.07	577.09	454.19	364.07
225.0	1095.37	986.10	849.86	742.01	637.60	515.93	427.16	345.28	255.39
270.0	1250.10	1128.37	1024.79	918.28	780.16	671.90	571.24	449.51	362.31
315.0	1150.38	1076.11	971.30	834.88	726.26	620.05	518.74	403.04	322.11
360.0	1148.09	1125.10	997.22	891.65	783.97	678.51	578.61	457.88	373.02
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	296.12	227.54	157.66	116.58	89.42	81.70	75.32	68.41	62.74
45.0	395.09	314.32	295.60	206.99	112.66	85.56	77.83	71.34	66.66
90.0	257.79	190.90	137.00	99.90	80.70	74.09	68.76	64.49	59.81
135.0	331.88	311.98	221.98	117.69	89.31	76.96	71.05	66.48	61.51
180.0	306.13	306.13	144.96	108.15	86.44	76.96	71.28	65.60	61.45
225.0	192.30	140.04	104.46	85.15	78.65	72.86	68.24	62.33	59.05
270.0	304.38	304.38	144.26	107.21	85.15	78.13	72.45	67.59	61.86
315.0	251.41	189.91	128.46	98.38	84.74	76.78	71.34	65.84	60.40
360.0	296.12	227.54	157.66	116.58	89.42	81.70	75.32	68.41	62.74

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	59.17	55.25	52.44	49.86	47.46	44.54	42.49	40.56	38.62
45.0	61.39	58.05	54.95	52.14	48.92	46.53	44.36	42.31	39.97
90.0	56.65	53.72	50.50	48.16	45.94	43.25	41.38	39.15	37.40
135.0	58.41	54.78	52.14	49.69	47.34	44.65	42.55	40.67	38.92
180.0	58.64	55.36	51.91	49.45	47.05	44.77	42.25	40.20	38.33
225.0	55.19	52.49	49.92	46.94	44.71	42.66	40.67	38.39	36.52
270.0	58.64	55.48	52.67	49.51	47.11	44.95	42.25	40.32	37.98
315.0	57.24	54.31	50.91	48.52	46.17	44.01	41.38	39.44	37.63
360.0	59.17	55.25	52.44	49.86	47.46	44.54	42.49	40.56	38.62
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	36.34	34.65	33.01	31.08	29.61	27.92	26.69	25.52	24.52
45.0	38.10	35.87	34.24	32.66	30.84	29.32	27.92	26.69	25.16
90.0	35.64	34.06	32.13	30.61	29.20	27.92	26.34	25.16	24.23
135.0	36.69	35.00	33.36	31.54	30.14	28.68	27.10	25.87	24.52
180.0	36.58	34.47	32.95	30.96	29.50	28.21	26.63	25.46	24.40
225.0	34.82	33.18	31.19	29.73	28.44	26.80	25.57	24.29	23.23
270.0	36.23	34.53	32.95	31.02	29.61	28.27	27.04	25.52	24.52
315.0	35.82	33.77	32.25	30.31	28.97	27.68	26.10	24.99	23.94
360.0	36.34	34.65	33.01	31.08	29.61	27.92	26.69	25.52	24.52
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	23.29	22.36	21.48	20.72	19.66	18.96	18.32	17.56	17.03
45.0	24.23	23.17	22.24	21.24	20.54	19.78	18.84	18.26	17.67
90.0	23.17	22.06	21.30	20.31	19.55	18.90	18.14	17.50	16.97
135.0	23.64	22.59	21.77	20.83	20.01	19.25	18.67	18.08	17.32
180.0	23.12	22.12	21.30	20.48	19.43	18.79	18.20	17.56	16.85
225.0	22.24	21.24	20.37	19.55	18.90	18.32	17.50	16.91	16.39
270.0	23.47	22.47	21.42	20.54	19.61	18.90	18.32	17.56	16.91
315.0	22.71	21.77	20.95	20.13	19.25	18.61	17.97	17.32	16.68
360.0	23.29	22.36	21.48	20.72	19.66	18.96	18.32	17.56	17.03
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	16.44	15.86	15.39	14.86	14.51	14.10	13.75	13.34	12.99
45.0	16.91	16.39	15.80	15.39	14.92	14.51	14.10	13.75	13.40
90.0	16.50	15.92	15.45	15.04	14.69	14.28	13.93	13.52	13.11
135.0	16.74	16.27	15.68	15.27	14.75	14.46	14.16	13.69	13.28
180.0	16.39	15.92	15.33	14.92	14.46	14.10	13.75	13.46	13.05
225.0	15.98	15.33	14.86	14.40	14.05	13.75	13.34	12.93	12.64
270.0	16.44	15.98	15.39	14.92	14.57	14.16	13.75	13.46	12.93
315.0	16.21	15.57	15.10	14.69	14.28	13.87	13.52	13.17	12.76
360.0	16.44	15.86	15.39	14.86	14.51	14.10	13.75	13.34	12.99
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.64	12.29	12.11	11.70	11.41	11.12	10.89	10.71	10.48
45.0	13.05	12.64	12.35	12.00	11.53	11.24	11.00	10.83	10.65
90.0	12.76	12.52	12.17	11.65	11.29	11.12	10.89	10.65	10.42
135.0	12.99	12.58	12.35	11.76	11.41	11.18	10.94	10.71	10.53
180.0	12.70	12.35	12.11	11.65	11.29	11.00	10.77	10.59	10.42
225.0	12.35	12.11	11.59	11.35	11.12	10.89	10.65	10.42	10.42
270.0	12.58	12.35	12.06	11.65	11.24	11.06	10.77	10.71	10.36
315.0	12.35	12.11	11.94	11.47	11.18	10.94	10.77	10.83	10.36
360.0	12.64	12.29	12.11	11.70	11.41	11.12	10.89	10.71	10.48

Intensity data(cd)

C/γ(°)	90.0
0.0	10.48
45.0	10.42
90.0	10.42
135.0	10.36
180.0	10.36
225.0	10.42
270.0	10.53
315.0	10.59
360.0	10.48