



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: 3-2832-L

Luminaire: 92.70.411.00

Report No: 2024425-B001

Ballast type: AC

Test No: 2024425-C001

Voltage(V): 36.240

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.874

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2474.51, Efficiency(%): 84.63% , Luminous Efficacy(lm/W): 118.55

Central intensity(cd): 12341.310, Maximum intensity(cd): 12341.310

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.0

[C90/270]Total=17.0

Field angle(10%Imax): [C0/180]Total=48.8

[C90/270]Total=48.8

Maximum s/h(1/2): C0\_180=0.29 C90\_270=0.29

Maximum s/h(1/4): C0\_180=0.34 C90\_270=0.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.63%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.857%

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2024/4/25  
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	12341.305	0.000	0	0.00%	0.00%
1.0	12013.821	11.653	11.653	0.40%	0.47%
2.0	11856.688	34.261	45.915	1.17%	1.86%
3.0	11326.693	55.447	101.362	1.90%	4.10%
4.0	10544.174	73.209	174.571	2.50%	7.05%
5.0	9606.498	86.687	261.258	2.96%	10.56%
6.0	8622.954	95.801	357.058	3.28%	14.43%
7.0	7589.373	100.630	457.688	3.44%	18.50%
8.0	6595.003	101.515	559.203	3.47%	22.60%
9.0	5726.602	99.860	659.063	3.42%	26.63%
10.0	4998.363	97.057	756.12	3.32%	30.56%
11.0	4385.413	93.763	849.883	3.21%	34.35%
12.0	3909.698	90.677	940.56	3.10%	38.01%
13.0	3510.648	88.061	1028.621	3.01%	41.57%
14.0	3153.807	85.304	1113.926	2.92%	45.02%
15.0	2878.239	82.811	1196.736	2.83%	48.36%
16.0	2731.567	82.199	1278.936	2.81%	51.68%
17.0	2469.701	80.998	1359.933	2.77%	54.96%
18.0	2181.558	76.689	1436.622	2.62%	58.06%
19.0	2008.112	72.892	1509.514	2.49%	61.00%
20.0	1843.590	70.497	1580.011	2.41%	63.85%
21.0	1699.040	68.026	1648.037	2.33%	66.60%
22.0	1566.998	65.632	1713.669	2.24%	69.25%
23.0	1411.980	62.507	1776.176	2.14%	71.78%
24.0	1263.406	58.494	1834.67	2.00%	74.14%
25.0	1194.459	55.886	1890.556	1.91%	76.40%
26.0	1090.508	53.937	1944.493	1.84%	78.58%
27.0	1008.211	51.346	1995.839	1.76%	80.66%
28.0	946.718	49.495	2045.333	1.69%	82.66%
29.0	886.557	47.964	2093.297	1.64%	84.59%
30.0	805.028	45.672	2138.969	1.56%	86.44%
31.0	699.168	41.860	2180.829	1.43%	88.13%
32.0	596.425	37.117	2217.946	1.27%	89.63%
33.0	476.285	31.602	2249.549	1.08%	90.91%
34.0	365.941	25.488	2275.037	0.87%	91.94%
35.0	270.411	19.763	2294.8	0.68%	92.74%
36.0	227.221	15.845	2310.644	0.54%	93.38%
37.0	137.916	11.909	2322.553	0.41%	93.86%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	96.789	7.834	2330.387	0.27%	94.18%
39.0	87.915	6.304	2336.692	0.22%	94.43%
40.0	81.851	5.921	2342.613	0.20%	94.67%
41.0	76.109	5.625	2348.237	0.19%	94.90%
42.0	70.666	5.333	2353.57	0.18%	95.11%
43.0	65.560	5.046	2358.616	0.17%	95.32%
44.0	61.193	4.784	2363.4	0.16%	95.51%
45.0	57.264	4.552	2367.953	0.16%	95.69%
46.0	53.651	4.338	2372.29	0.15%	95.87%
47.0	50.432	4.140	2376.43	0.14%	96.04%
48.0	47.762	3.969	2380.399	0.14%	96.20%
49.0	45.545	3.832	2384.231	0.13%	96.35%
50.0	43.563	3.715	2387.946	0.13%	96.50%
51.0	41.873	3.615	2391.561	0.12%	96.65%
52.0	40.600	3.539	2395.1	0.12%	96.79%
53.0	39.503	3.484	2398.584	0.12%	96.93%
54.0	38.610	3.443	2402.027	0.12%	97.07%
55.0	37.659	3.405	2405.432	0.12%	97.21%
56.0	36.737	3.362	2408.794	0.11%	97.34%
57.0	35.574	3.306	2412.1	0.11%	97.48%
58.0	34.294	3.231	2415.331	0.11%	97.61%
59.0	32.787	3.136	2418.467	0.11%	97.73%
60.0	31.251	3.025	2421.492	0.10%	97.86%
61.0	29.386	2.894	2424.386	0.10%	97.97%
62.0	27.696	2.751	2427.136	0.09%	98.09%
63.0	25.728	2.598	2429.735	0.09%	98.19%
64.0	24.031	2.442	2432.176	0.08%	98.29%
65.0	22.502	2.303	2434.479	0.08%	98.38%
66.0	21.083	2.175	2436.654	0.07%	98.47%
67.0	19.934	2.062	2438.716	0.07%	98.55%
68.0	18.859	1.965	2440.681	0.07%	98.63%
69.0	18.157	1.888	2442.57	0.06%	98.71%
70.0	17.542	1.833	2444.403	0.06%	98.78%
71.0	17.015	1.786	2446.189	0.06%	98.86%
72.0	16.584	1.747	2447.936	0.06%	98.93%
73.0	16.262	1.718	2449.654	0.06%	99.00%
74.0	16.189	1.706	2451.36	0.06%	99.06%
75.0	16.130	1.708	2453.068	0.06%	99.13%

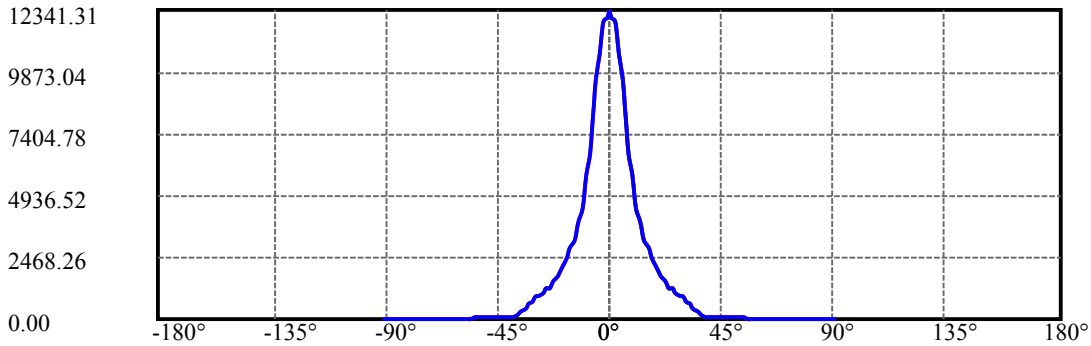
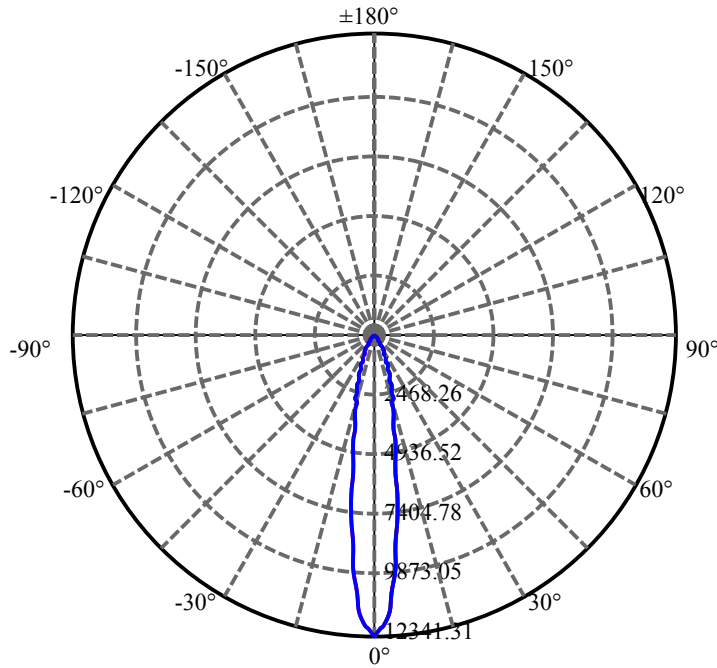
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	16.101	1.711	2454.779	0.06%	99.20%
77.0	16.050	1.714	2456.493	0.06%	99.27%
78.0	15.947	1.713	2458.206	0.06%	99.34%
79.0	15.626	1.696	2459.902	0.06%	99.41%
80.0	14.945	1.648	2461.55	0.06%	99.48%
81.0	13.987	1.565	2463.115	0.05%	99.54%
82.0	12.809	1.453	2464.568	0.05%	99.60%
83.0	12.275	1.364	2465.931	0.05%	99.65%
84.0	11.982	1.322	2467.253	0.05%	99.71%
85.0	11.683	1.292	2468.544	0.04%	99.76%
86.0	11.288	1.256	2469.8	0.04%	99.81%
87.0	10.973	1.218	2471.018	0.04%	99.86%
88.0	10.717	1.188	2472.206	0.04%	99.91%
89.0	10.468	1.161	2473.368	0.04%	99.95%
90.0	10.454	1.147	2474.515	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2138.97	73.15%	86.44%
0-40	2342.61	80.12%	94.67%
0-60	2421.49	82.81%	97.86%
0-90	2473.37	84.59%	99.95%
0-120	2473.37	84.59%	99.95%
0-180	2474.51	84.63%	100.00%
60-90	51.88	1.77%	2.10%
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%
0-26.68	1979.61	67.70%	80.00%

ZONAL LUMEN SUMMARY

0-10	756.12
10-20	823.89
20-30	558.96
30-40	203.64
40-50	45.33
50-60	33.55
60-70	22.91
70-80	17.15
80-90	11.82
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



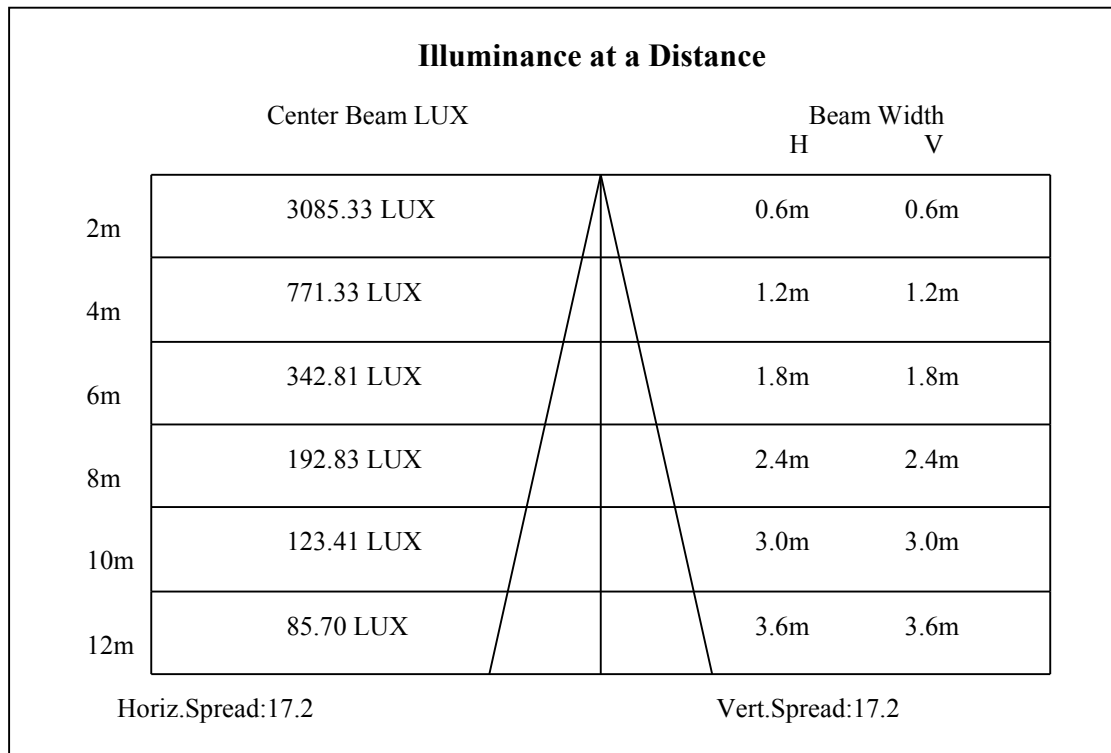
C0(Max): —————

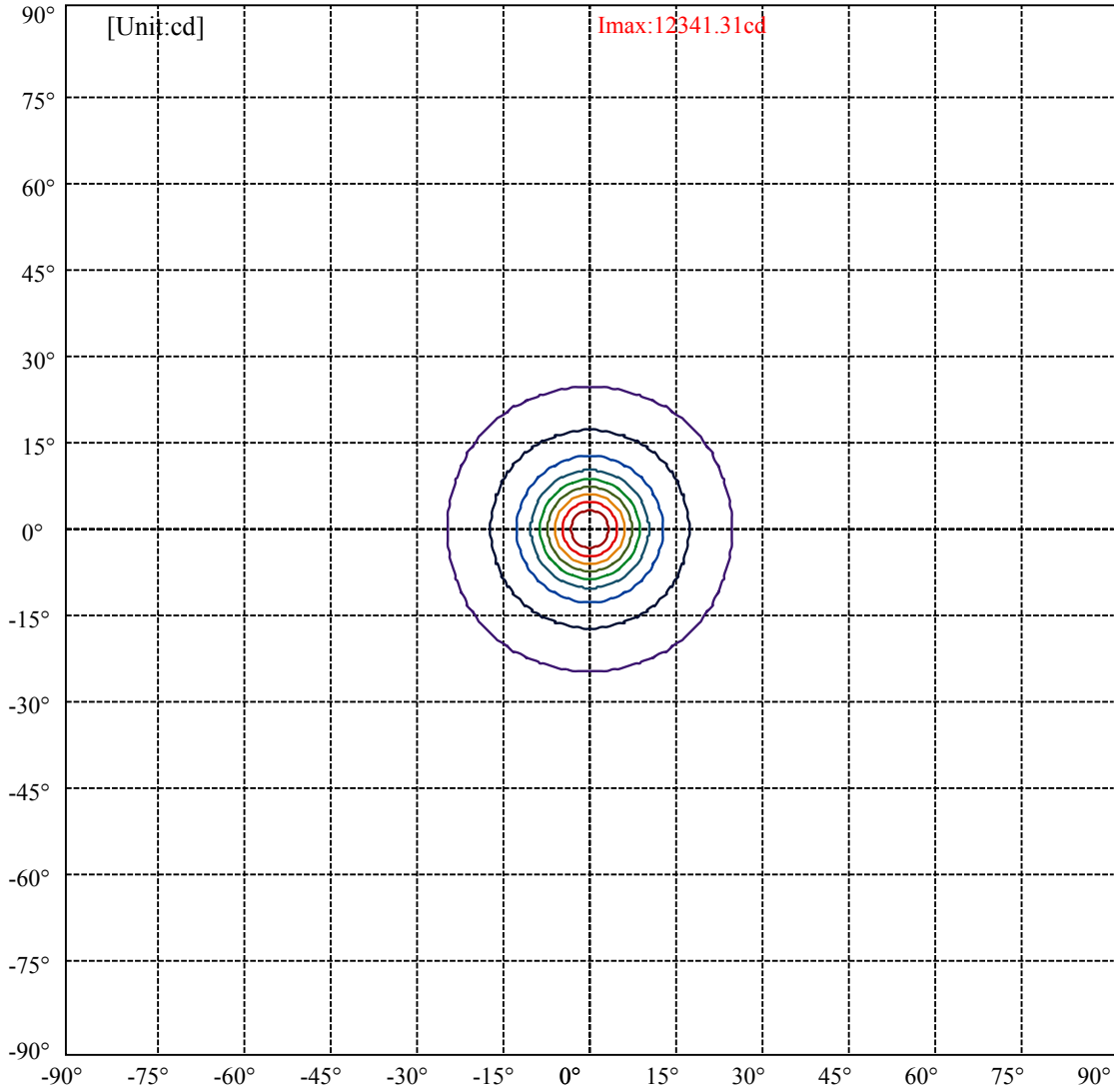
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:24.4 Right:24.4  
:C90/270Left:24.4 Right:24.4

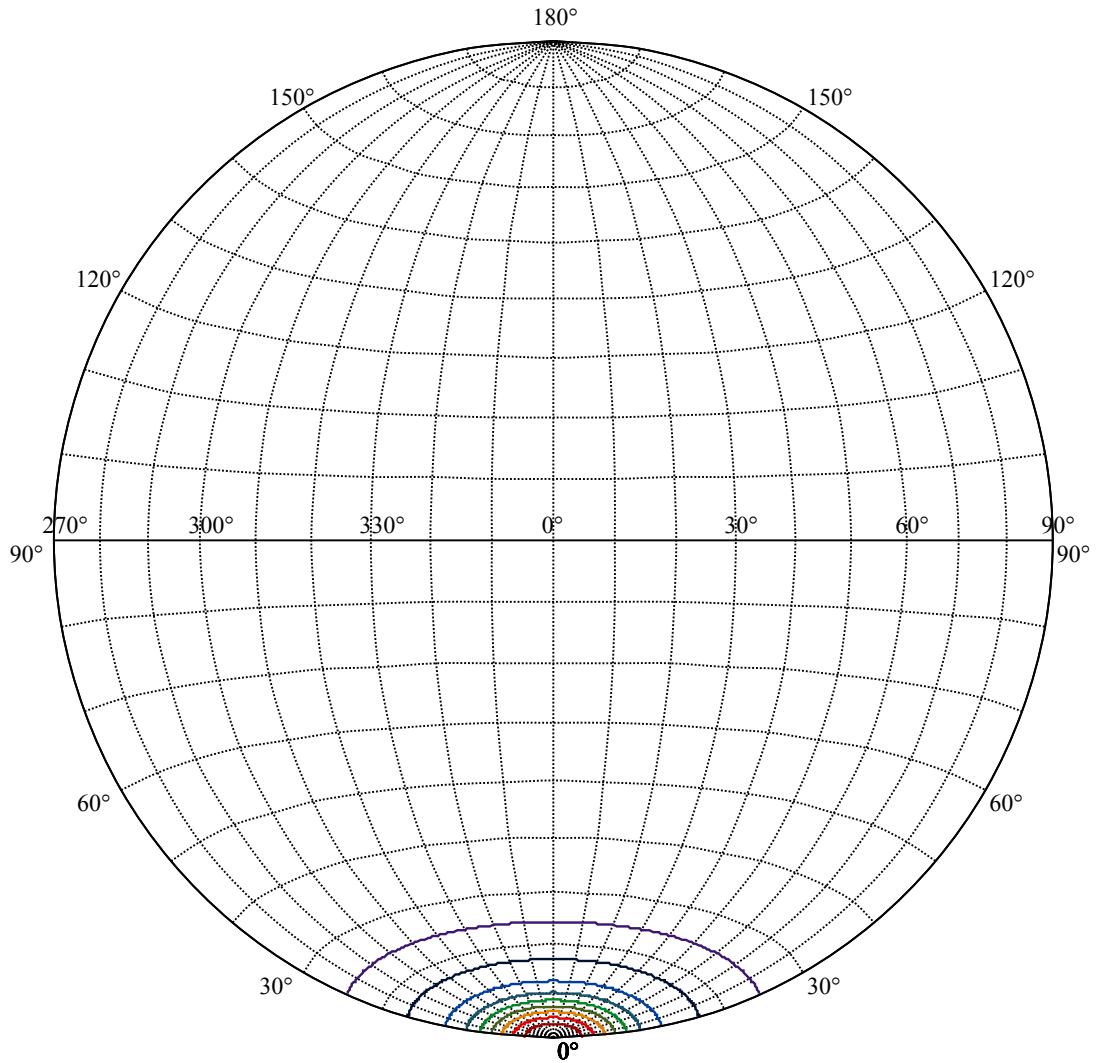
Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5  
:C90/270Left:8.5 Right:8.5





(10%Imax) 1234.13	—
(20%Imax) 2468.26	—
(30%Imax) 3702.39	—
(40%Imax) 4936.52	—
(50%Imax) 6170.65	—
(60%Imax) 7404.78	—
(70%Imax) 8638.91	—
(80%Imax) 9873.04	—
(90%Imax) 11107.2	—





House

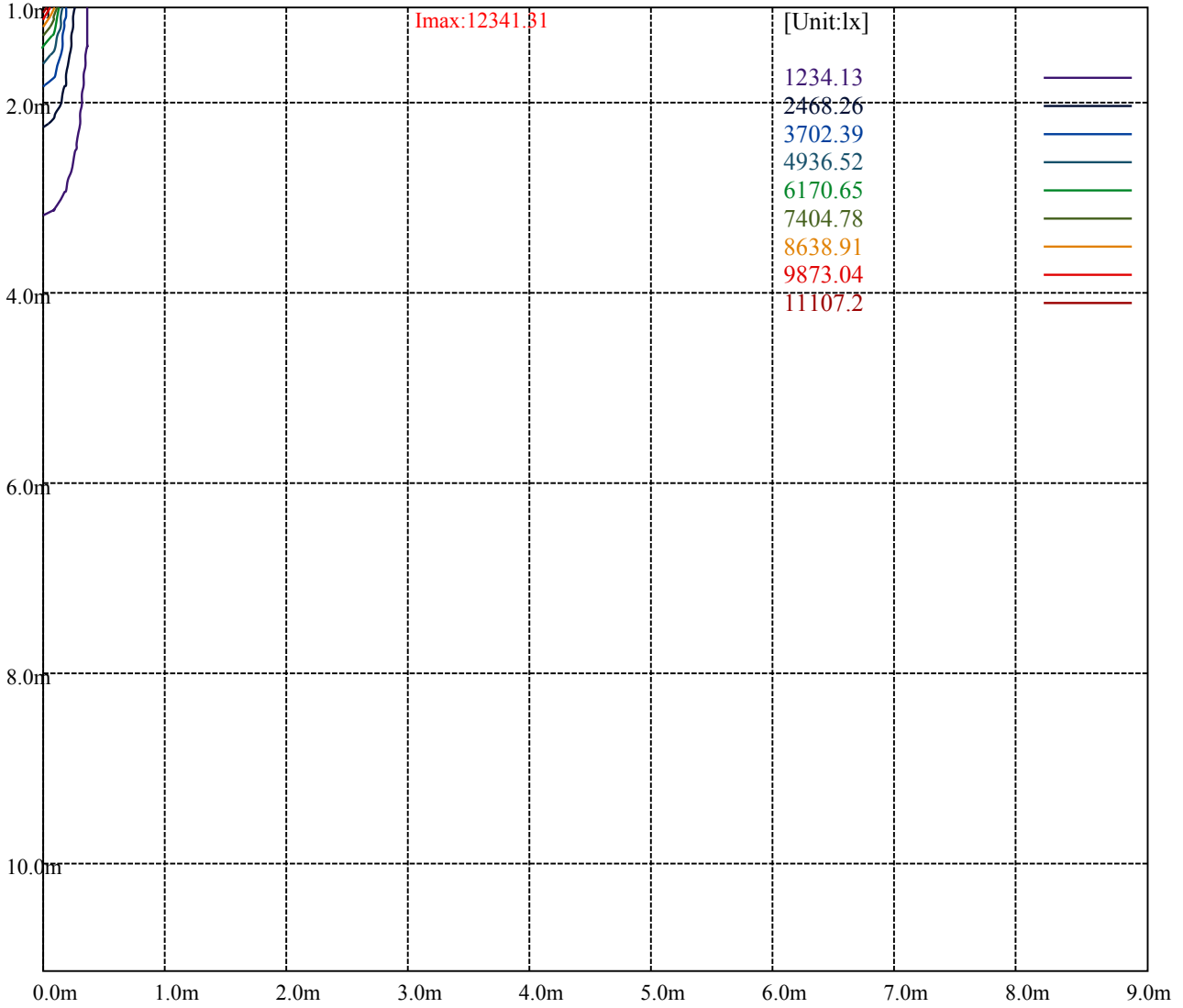
[Unit:cd]

Road

**Imax:12341.31**

(10%Imax)	1234.13	—
(20%Imax)	2468.26	—
(30%Imax)	3702.39	—
(40%Imax)	4936.52	—
(50%Imax)	6170.65	—
(60%Imax)	7404.78	—
(70%Imax)	8638.91	—
(80%Imax)	9873.04	—
(90%Imax)	11107.2	—





Luminance Table

$\gamma$	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

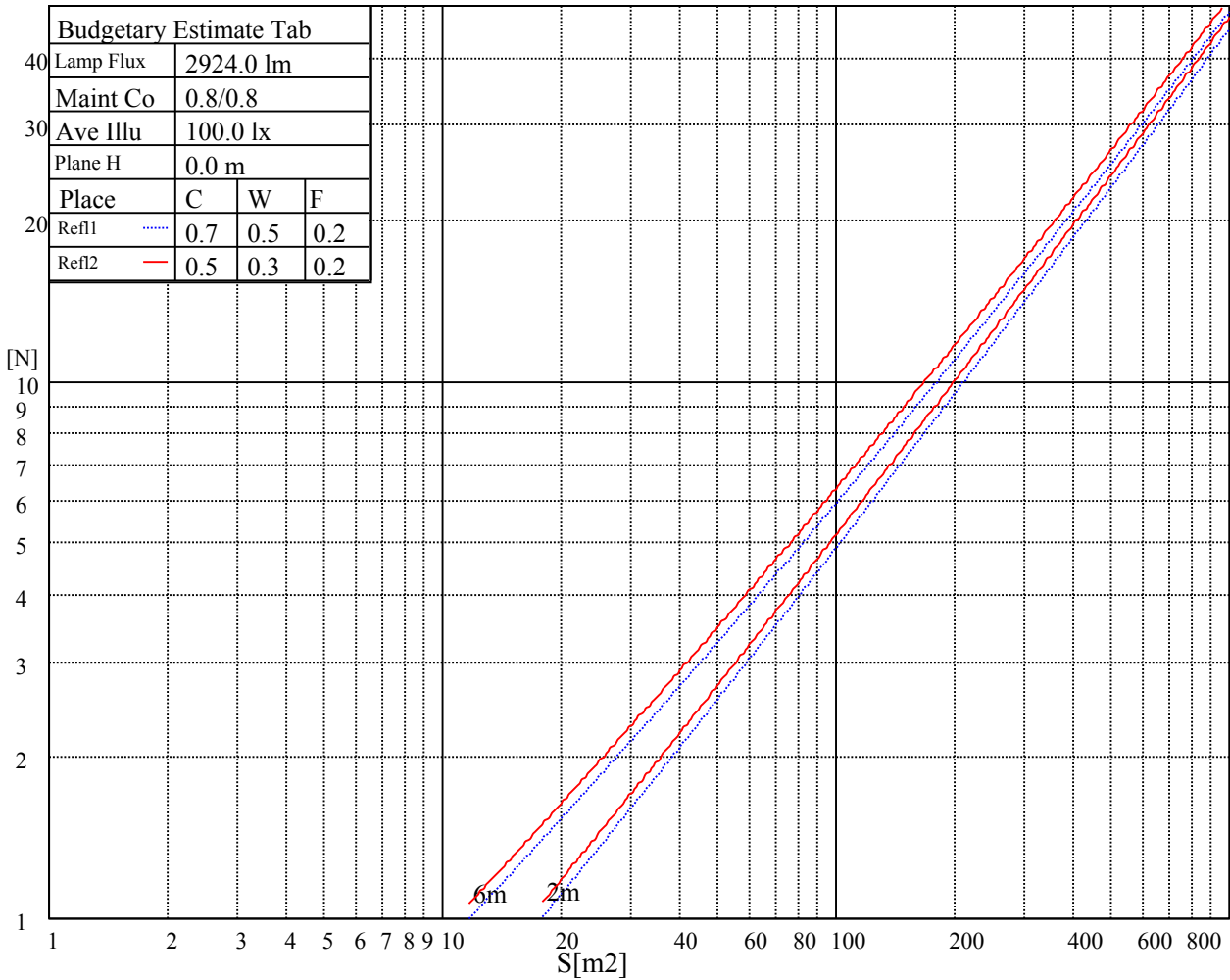
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

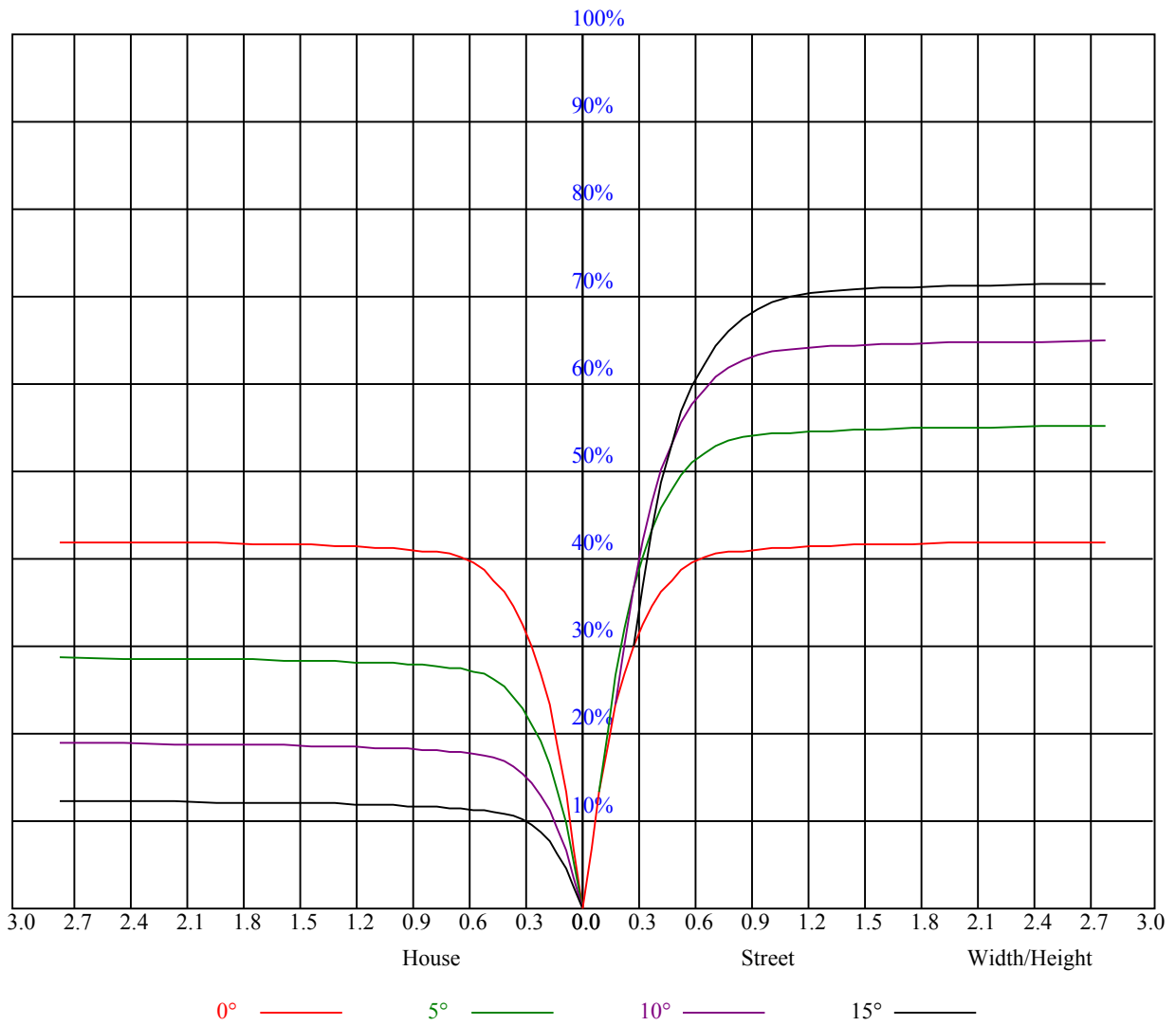
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

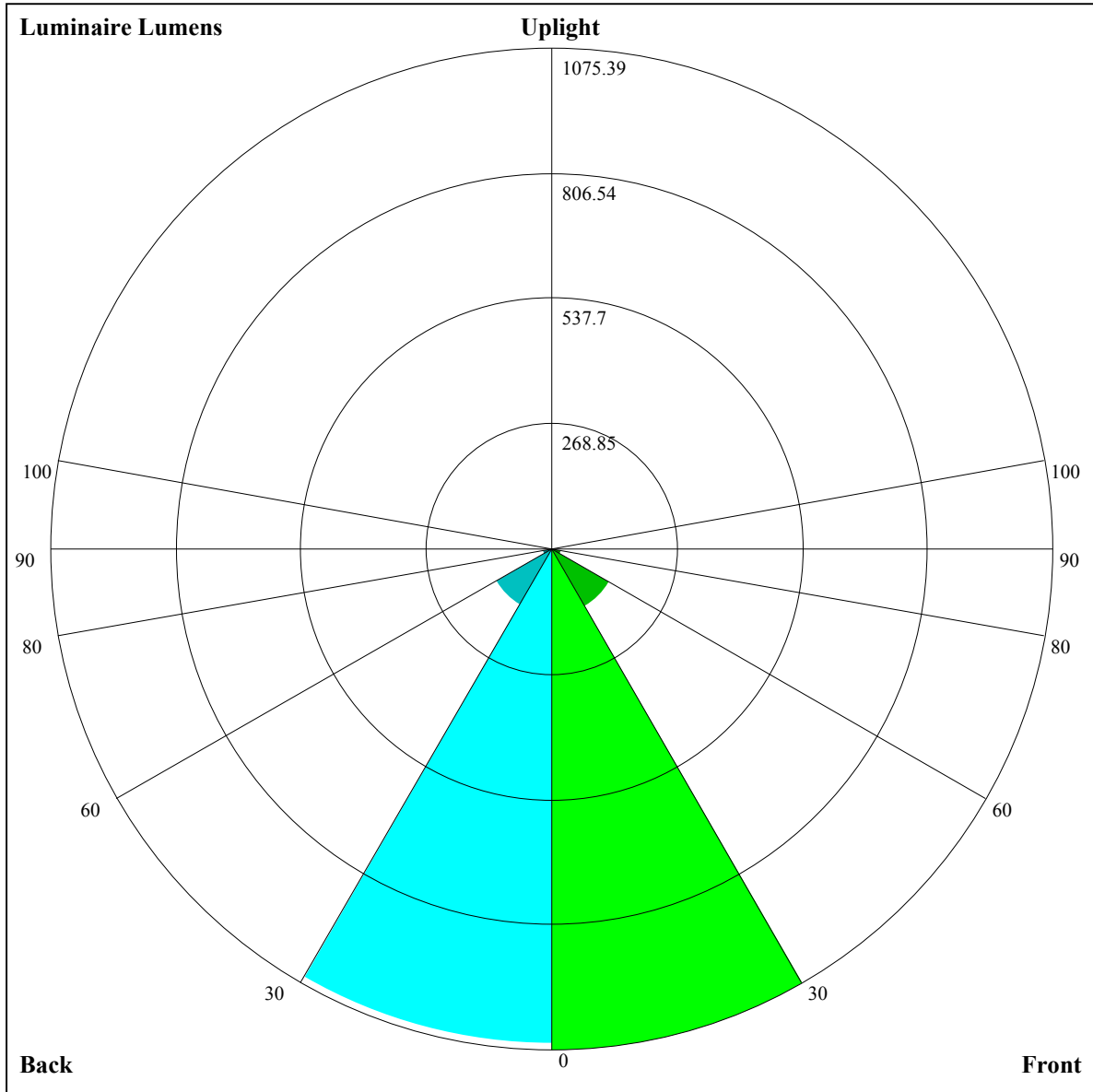
Luminance Limiting Curve





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	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.95	0.93	0.91	0.93	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.82	0.80
2	0.89	0.86	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.78	0.76
3	0.85	0.81	0.78	0.83	0.80	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.77	0.76	0.74	0.73
4	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.70	0.68	0.67
6	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
7	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62
8	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60
9	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
10	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.56





Luminaire Lumens:

FL=1075.39,FM=143.06,FH=20.14,FVH=6.51

BL=1062.94,BM=139.45,BH=20.21,BVH=6.56

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	12492.21	11565.86	11565.86	11231.11	10460.96	9343.76	8407.40	7462.85	6332.19
45.0	12334.20	12486.36	12345.91	11854.32	11245.68	10467.33	9595.35	8419.05	7476.83
90.0	12451.25	11602.73	11602.73	11104.12	10314.06	9187.51	8248.80	7092.40	6213.98
135.0	12451.25	12404.43	12123.52	11631.93	10759.95	9923.08	9004.27	7839.67	6915.02
180.0	12492.21	12416.13	12012.33	11479.77	10765.80	9729.95	8817.00	7857.23	6915.02
225.0	11606.83	11606.83	11449.99	10538.21	9673.24	8746.83	7536.00	6610.17	5774.47
270.0	12451.25	12410.28	12135.23	11649.49	10783.36	9975.75	9080.35	8103.03	6938.43
315.0	12451.25	11617.95	11617.95	11124.60	10350.35	9477.78	8294.45	7330.59	6194.08
360.0	12492.21	11565.86	11565.86	11231.11	10460.96	9343.76	8407.40	7462.85	6332.19

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5521.66	4862.69	4322.53	3777.69	3414.26	3101.75	2831.96	2535.25	2329.25
45.0	6575.59	5756.27	4901.84	4357.59	3906.96	3432.93	3111.06	2970.60	2970.60
90.0	5430.95	4641.48	4146.38	3735.55	3386.76	3016.31	2759.98	2527.65	2323.99
135.0	5879.17	5159.34	4585.82	4012.30	3631.91	3304.18	3017.42	2953.05	2675.12
180.0	5873.32	5141.79	4550.71	4070.83	3585.09	3251.51	2970.60	2970.60	2456.83
225.0	5058.16	4362.91	3921.65	3548.28	3226.99	2887.56	2645.86	2434.01	2242.06
270.0	6072.29	5311.50	4539.01	4064.97	3573.38	3245.66	2953.05	2953.05	2452.15
315.0	5401.69	4750.92	4115.36	3710.39	3359.84	2990.56	2735.99	2508.33	2307.60
360.0	5521.66	4862.69	4322.53	3777.69	3414.26	3101.75	2831.96	2535.25	2329.25

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2145.49	1944.18	1797.87	1634.59	1514.62	1312.72	1161.38	1132.47	1036.90
45.0	2336.86	2155.44	1954.12	1813.67	1685.51	1564.95	1422.74	1308.04	1189.82
90.0	2102.77	1945.93	1800.21	1638.69	1515.79	1401.09	1145.23	1145.23	1055.92
135.0	2285.36	2110.38	1950.03	1773.29	1641.03	1516.96	1370.66	1255.37	1142.42
180.0	2220.40	2041.91	1888.58	1756.90	1598.31	1471.90	1364.22	1243.08	1106.72
225.0	2026.11	1872.78	1702.48	1577.83	1460.78	1140.60	1140.60	1089.63	1011.33
270.0	2256.10	2071.17	1874.53	1742.86	1612.94	1491.21	1357.20	1236.64	1127.79
315.0	2079.36	1923.11	1780.90	1654.49	1507.01	1396.41	1145.23	1145.23	1053.17
360.0	2145.49	1944.18	1797.87	1634.59	1514.62	1312.72	1161.38	1132.47	1036.90

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	972.18	925.12	854.25	773.32	679.68	580.78	449.04	348.15	251.12
45.0	1085.65	999.04	947.54	893.11	792.45	696.48	592.89	461.22	355.88
90.0	974.69	925.12	862.62	777.88	655.57	546.07	434.18	326.03	210.80
135.0	1037.66	980.90	921.79	847.46	755.00	653.17	519.15	412.06	310.23
180.0	1024.20	963.34	910.67	816.45	719.89	616.89	485.80	383.38	311.98
225.0	943.27	890.36	814.40	717.66	590.37	483.63	380.51	263.18	183.23
270.0	1040.00	963.92	916.52	835.17	742.12	640.88	502.18	390.99	314.32
315.0	988.04	925.94	864.67	779.17	658.26	553.51	446.53	342.53	225.72
360.0	972.18	925.12	854.25	773.32	679.68	580.78	449.04	348.15	251.12

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	153.97	108.03	91.59	84.33	79.18	73.91	68.00	63.56	59.99
45.0	307.30	307.30	108.73	95.16	87.49	80.64	75.26	69.88	65.31
90.0	142.44	104.93	92.88	84.21	79.12	72.57	67.65	62.03	58.52
135.0	310.23	131.91	102.88	93.58	85.33	79.77	73.97	67.83	63.03
180.0	311.98	126.06	98.08	87.67	82.28	77.25	71.81	66.13	61.62
225.0	126.58	98.61	90.71	85.03	78.24	72.63	67.94	63.26	58.46
270.0	314.32	119.68	96.15	88.43	82.93	76.96	71.81	67.30	61.92
315.0	150.93	106.80	93.28	84.92	80.23	75.14	68.88	64.49	60.69
360.0	153.97	108.03	91.59	84.33	79.18	73.91	68.00	63.56	59.99

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	56.12	52.20	49.33	47.17	45.00	42.78	41.32	39.97	39.03
45.0	60.10	56.24	53.02	49.16	46.76	44.36	42.31	40.85	39.50
90.0	54.89	51.79	48.28	45.88	43.95	42.37	40.79	39.85	38.80
135.0	59.11	54.60	51.38	48.75	46.41	44.07	42.43	41.26	40.20
180.0	58.00	53.90	50.80	48.34	45.59	43.83	42.19	40.56	39.44
225.0	55.13	52.03	49.39	46.35	44.48	42.78	41.14	39.91	38.86
270.0	58.46	55.07	51.44	48.98	46.70	44.42	42.72	41.55	40.44
315.0	56.30	53.37	49.80	47.46	45.47	43.89	42.08	40.85	39.74
360.0	56.12	52.20	49.33	47.17	45.00	42.78	41.32	39.97	39.03
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	38.22	36.87	36.05	34.88	33.42	31.72	30.55	28.56	26.86
45.0	38.51	37.81	36.93	35.82	34.59	33.53	31.95	30.43	28.32
90.0	38.10	37.28	36.28	34.82	33.59	32.19	30.26	28.38	27.04
135.0	39.03	38.22	37.51	36.11	35.11	33.36	32.01	30.20	28.50
180.0	38.68	37.51	36.64	35.70	34.82	32.89	31.60	29.96	28.03
225.0	37.92	37.22	35.82	34.94	33.30	32.01	29.85	28.09	26.45
270.0	39.33	38.33	37.69	36.75	35.29	34.00	32.48	30.55	28.73
315.0	39.09	38.04	36.99	35.58	34.24	32.60	31.31	28.91	27.62
360.0	38.22	36.87	36.05	34.88	33.42	31.72	30.55	28.56	26.86
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	24.93	23.70	22.24	20.78	19.72	18.61	17.97	17.38	16.80
45.0	27.04	25.11	23.41	21.89	20.42	19.37	18.43	17.67	17.09
90.0	24.99	23.47	21.71	20.72	19.61	18.49	17.85	17.32	16.74
135.0	26.45	24.64	23.53	21.77	20.54	19.49	18.79	18.20	17.62
180.0	25.98	24.11	22.47	20.95	19.96	18.73	18.08	17.44	16.97
225.0	24.46	22.71	21.19	20.13	18.84	18.20	17.44	16.97	16.50
270.0	26.51	24.76	23.41	21.42	20.48	19.20	18.55	17.79	17.26
315.0	25.46	23.76	22.06	21.01	19.90	18.79	18.14	17.56	17.15
360.0	24.93	23.70	22.24	20.78	19.72	18.61	17.97	17.38	16.80
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	16.33	15.98	15.57	15.04	14.69	14.28	13.93	13.52	13.11
45.0	16.62	16.21	15.68	15.39	15.04	14.69	14.28	13.93	13.64
90.0	16.39	16.39	17.09	17.50	17.79	18.08	18.20	17.67	16.56
135.0	17.21	16.85	16.85	17.03	17.32	17.73	17.91	17.79	17.21
180.0	16.44	16.09	15.74	15.39	15.04	14.86	14.98	15.22	15.16
225.0	16.09	15.63	15.27	14.92	14.51	14.10	13.75	13.46	13.11
270.0	16.91	16.56	16.80	17.09	17.44	17.67	17.85	17.79	16.68
315.0	16.68	16.39	16.50	16.68	16.97	16.97	16.68	15.63	14.10
360.0	16.33	15.98	15.57	15.04	14.69	14.28	13.93	13.52	13.11
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.82	12.47	12.23	11.88	11.59	11.24	11.00	10.77	10.42
45.0	13.23	12.87	12.47	12.17	11.82	11.53	11.12	10.89	10.65
90.0	14.57	12.87	12.29	11.94	11.59	11.24	10.94	10.65	10.36
135.0	15.92	13.64	12.47	12.11	11.76	11.41	11.06	10.83	10.53
180.0	14.28	12.70	12.17	11.88	11.65	11.24	10.94	10.71	10.42
225.0	12.70	12.29	12.00	11.76	11.35	11.00	10.77	10.53	10.42
270.0	15.04	13.11	12.35	12.11	11.82	11.41	11.06	10.77	10.53
315.0	13.34	12.52	12.23	12.00	11.88	11.24	10.89	10.59	10.42
360.0	12.82	12.47	12.23	11.88	11.59	11.24	11.00	10.77	10.42

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	10.48
45.0	10.42
90.0	10.48
135.0	10.42
180.0	10.48
225.0	10.42
270.0	10.48
315.0	10.48
360.0	10.48