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NT

Client:

LumCAT: 2-2679-L

Luminaire: 92.70.411.00

Report No: 2024423-B011

Ballast type: AC

Test No: 2024423-C011

Voltage(V): 36.240

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2920.0

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): 2472.30, Efficiency(%): 84.67% , Luminous Efficacy(lm/W): 118.44

Central intensity(cd): 7929.127, Maximum intensity(cd): 7929.127

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.8

[C90/270]Total=24.8

Field angle(10%Imax): [C0/180]Total=61.4

[C90/270]Total=61.4

Maximum s/h(1/2): C0_180=0.41 C90_270=0.41

Maximum s/h(1/4): C0_180=0.48 C90_270=0.48

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.67%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.052%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/23
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	7929.126	0.000	0	0.00%	0.00%
1.0	7879.016	7.564	7.564	0.26%	0.31%
2.0	7726.492	22.399	29.962	0.77%	1.21%
3.0	7481.209	36.372	66.334	1.25%	2.68%
4.0	7138.121	48.936	115.27	1.68%	4.66%
5.0	6785.230	59.898	175.167	2.05%	7.09%
6.0	6386.692	69.222	244.389	2.37%	9.89%
7.0	5987.349	76.805	321.195	2.63%	12.99%
8.0	5586.616	82.833	404.027	2.84%	16.34%
9.0	5185.810	87.305	491.332	2.99%	19.87%
10.0	4812.437	90.480	581.813	3.10%	23.53%
11.0	4447.037	92.521	674.334	3.17%	27.28%
12.0	4097.658	93.406	767.739	3.20%	31.05%
13.0	3755.521	93.197	860.937	3.19%	34.82%
14.0	3441.108	92.116	953.053	3.15%	38.55%
15.0	3167.955	90.732	1043.785	3.11%	42.22%
16.0	2896.118	88.856	1132.641	3.04%	45.81%
17.0	2670.440	86.686	1219.327	2.97%	49.32%
18.0	2445.933	84.358	1303.685	2.89%	52.73%
19.0	2267.293	82.001	1385.686	2.81%	56.05%
20.0	2092.457	79.796	1465.481	2.73%	59.28%
21.0	1939.567	77.423	1542.904	2.65%	62.41%
22.0	1801.015	75.169	1618.073	2.57%	65.45%
23.0	1669.486	72.820	1690.893	2.49%	68.39%
24.0	1553.319	70.462	1761.355	2.41%	71.24%
25.0	1404.189	67.247	1828.603	2.30%	73.96%
26.0	1261.072	62.914	1891.516	2.15%	76.51%
27.0	1201.708	60.252	1951.769	2.06%	78.95%
28.0	1098.043	58.225	2009.994	1.99%	81.30%
29.0	989.835	54.625	2064.618	1.87%	83.51%
30.0	870.683	50.234	2114.852	1.72%	85.54%
31.0	758.766	45.345	2160.197	1.55%	87.38%
32.0	643.257	40.166	2200.364	1.38%	89.00%
33.0	544.925	35.004	2235.368	1.20%	90.42%
34.0	454.961	30.260	2265.627	1.04%	91.64%
35.0	365.861	25.492	2291.119	0.87%	92.67%
36.0	296.416	21.087	2312.206	0.72%	93.52%
37.0	254.514	17.968	2330.174	0.62%	94.25%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	204.968	15.337	2345.511	0.53%	94.87%
39.0	135.684	11.627	2357.139	0.40%	95.34%
40.0	104.324	8.371	2365.509	0.29%	95.68%
41.0	81.463	6.616	2372.125	0.23%	95.95%
42.0	64.594	5.307	2377.432	0.18%	96.16%
43.0	53.636	4.380	2381.811	0.15%	96.34%
44.0	45.999	3.760	2385.572	0.13%	96.49%
45.0	40.490	3.324	2388.896	0.11%	96.63%
46.0	36.342	3.005	2391.9	0.10%	96.75%
47.0	33.277	2.769	2394.669	0.09%	96.86%
48.0	30.878	2.593	2397.263	0.09%	96.96%
49.0	28.866	2.453	2399.716	0.08%	97.06%
50.0	27.286	2.341	2402.057	0.08%	97.16%
51.0	26.028	2.256	2404.313	0.08%	97.25%
52.0	25.106	2.194	2406.507	0.08%	97.34%
53.0	24.470	2.157	2408.664	0.07%	97.43%
54.0	24.082	2.140	2410.804	0.07%	97.51%
55.0	23.906	2.142	2412.946	0.07%	97.60%
56.0	23.921	2.161	2415.107	0.07%	97.69%
57.0	24.053	2.193	2417.301	0.08%	97.78%
58.0	24.309	2.236	2419.537	0.08%	97.87%
59.0	24.558	2.285	2421.822	0.08%	97.96%
60.0	24.623	2.323	2424.145	0.08%	98.05%
61.0	24.353	2.337	2426.482	0.08%	98.15%
62.0	23.738	2.317	2428.8	0.08%	98.24%
63.0	22.656	2.256	2431.056	0.08%	98.33%
64.0	21.441	2.164	2433.22	0.07%	98.42%
65.0	19.978	2.050	2435.27	0.07%	98.50%
66.0	18.676	1.929	2437.198	0.07%	98.58%
67.0	17.593	1.824	2439.022	0.06%	98.65%
68.0	16.694	1.737	2440.759	0.06%	98.72%
69.0	16.116	1.674	2442.432	0.06%	98.79%
70.0	15.699	1.634	2444.066	0.06%	98.86%
71.0	15.582	1.617	2445.683	0.06%	98.92%
72.0	15.655	1.624	2447.307	0.06%	98.99%
73.0	15.691	1.639	2448.946	0.06%	99.06%
74.0	15.743	1.653	2450.599	0.06%	99.12%
75.0	15.647	1.659	2452.258	0.06%	99.19%

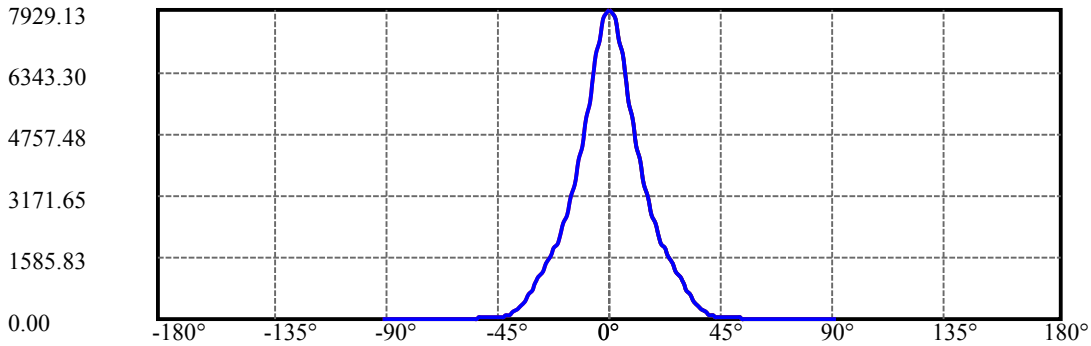
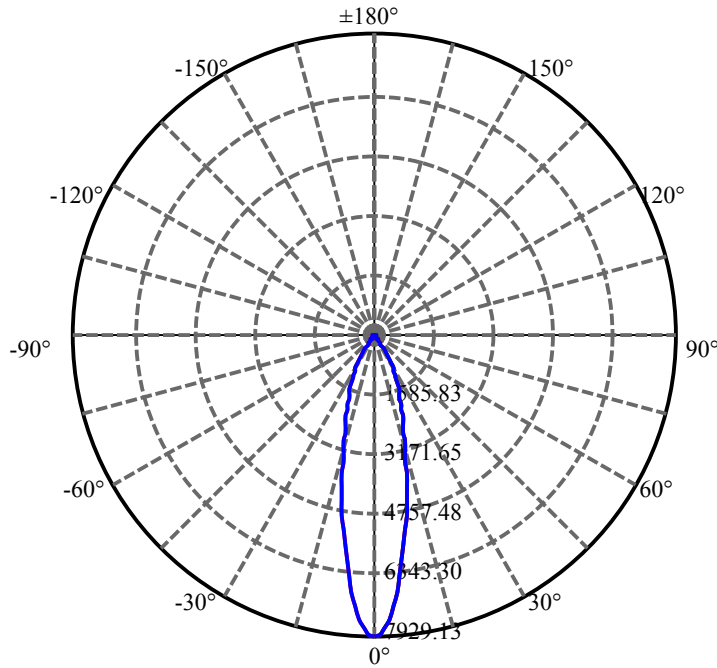
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.421	1.649	2453.907	0.06%	99.26%
77.0	15.018	1.623	2455.53	0.06%	99.32%
78.0	14.353	1.572	2457.102	0.05%	99.39%
79.0	13.504	1.497	2458.599	0.05%	99.45%
80.0	12.912	1.424	2460.023	0.05%	99.50%
81.0	12.312	1.364	2461.387	0.05%	99.56%
82.0	11.968	1.317	2462.703	0.05%	99.61%
83.0	11.719	1.288	2463.991	0.04%	99.66%
84.0	11.507	1.265	2465.256	0.04%	99.72%
85.0	11.244	1.242	2466.498	0.04%	99.77%
86.0	10.900	1.210	2467.708	0.04%	99.81%
87.0	10.615	1.177	2468.886	0.04%	99.86%
88.0	10.439	1.153	2470.039	0.04%	99.91%
89.0	10.278	1.136	2471.175	0.04%	99.95%
90.0	10.249	1.125	2472.3	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2114.85	72.43%	85.54%
0-40	2365.51	81.01%	95.68%
0-60	2424.15	83.02%	98.05%
0-90	2471.17	84.63%	99.95%
0-120	2471.17	84.63%	99.95%
0-180	2472.30	84.67%	100.00%
60-90	47.03	1.61%	1.90%
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%
0-27.45	1977.84	67.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	581.81
10-20	883.67
20-30	649.37
30-40	250.66
40-50	36.55
50-60	22.09
60-70	19.92
70-80	15.96
80-90	11.15
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



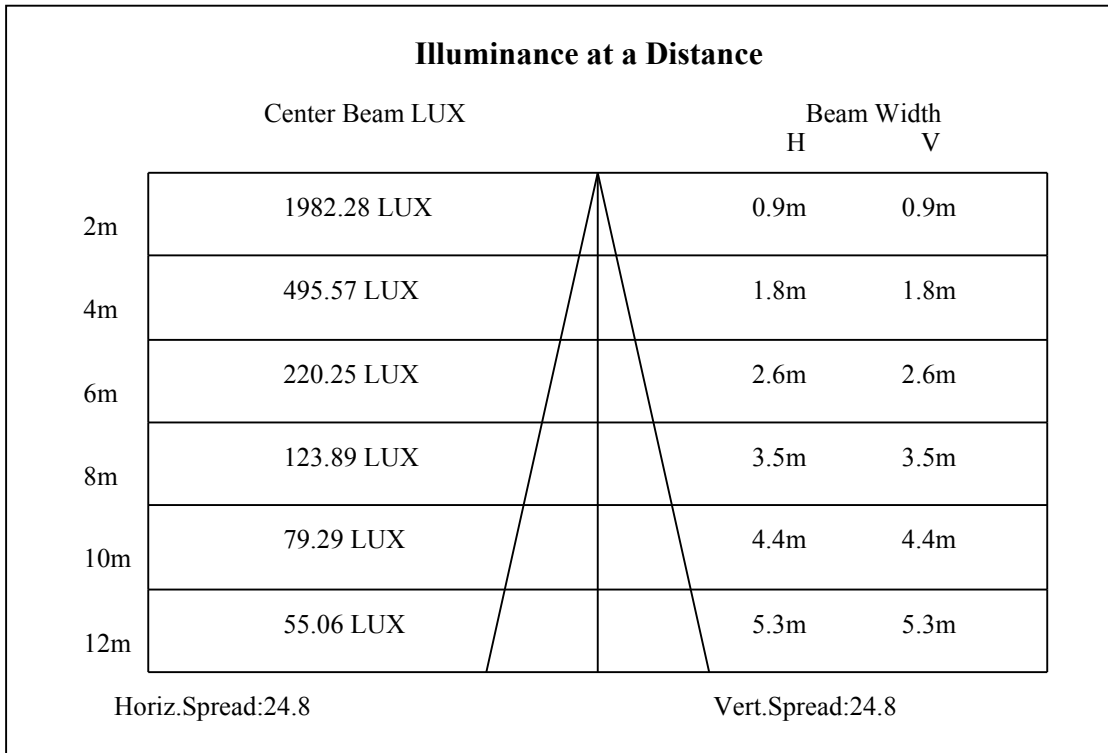
C0(Max): ———

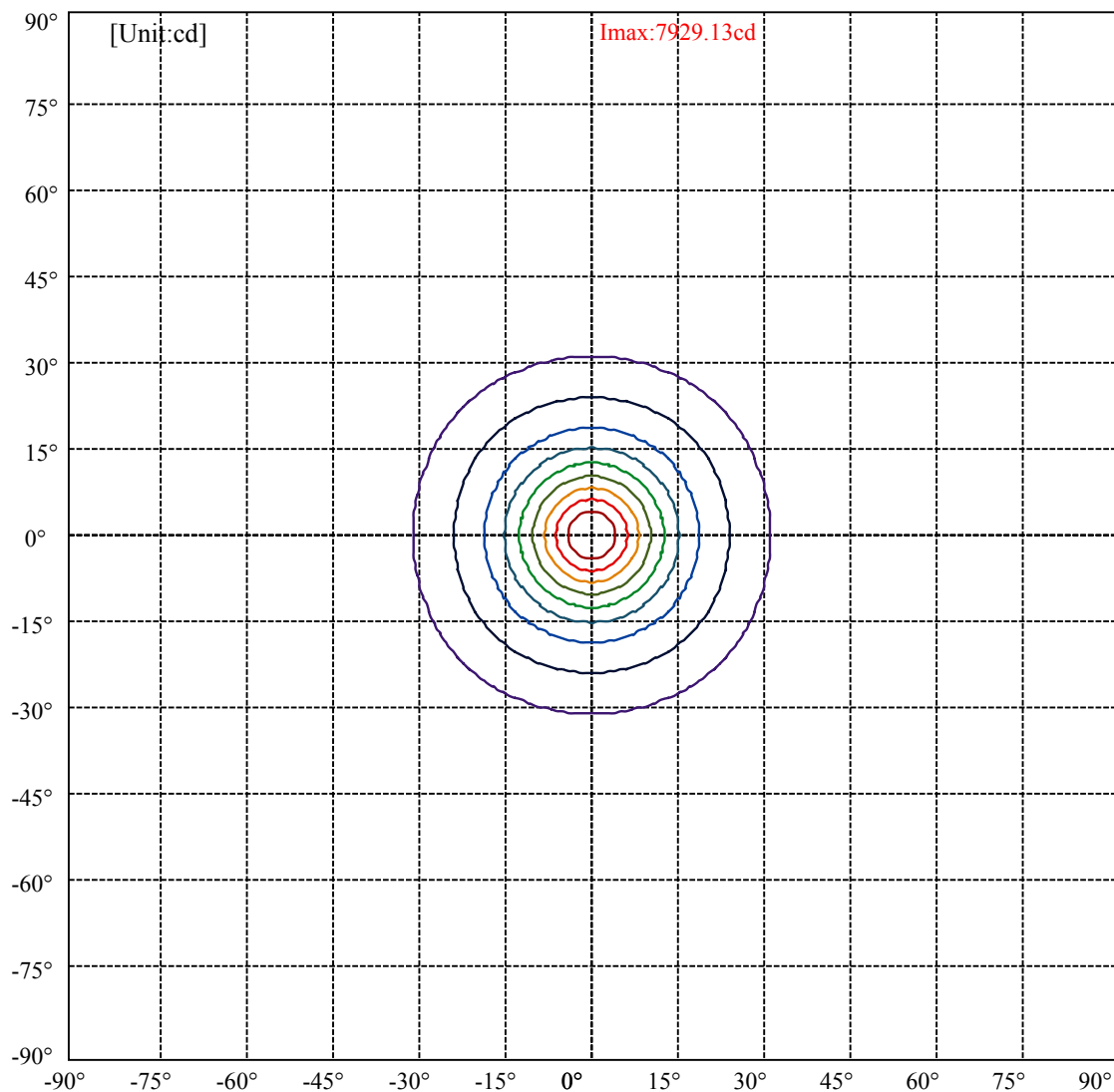
C0/C180: ———

C90/C270: ———

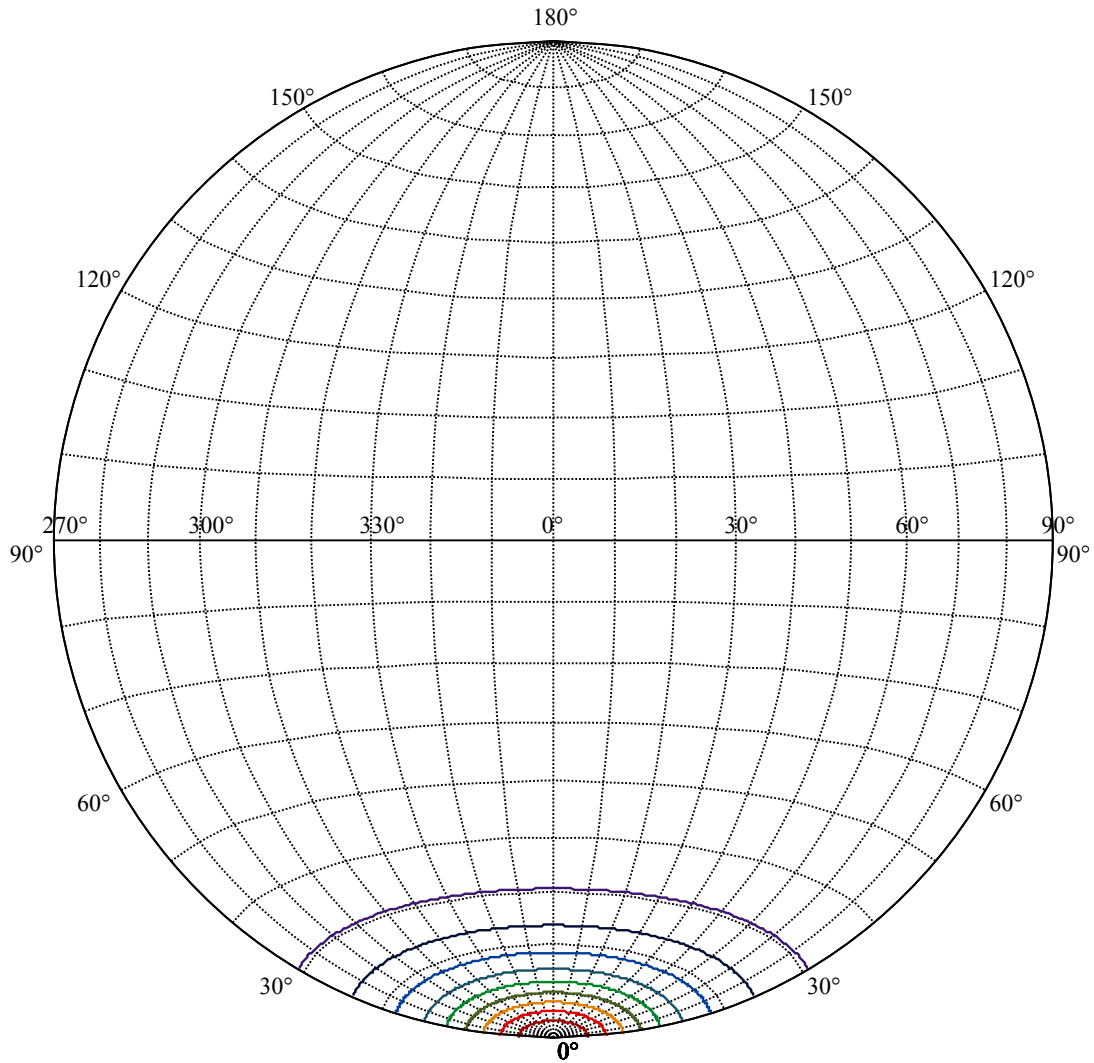
Field angle(10%Imax):C0/180Left:30.7 Right:30.7
:C90/270Left:30.7 Right:30.7

Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4
:C90/270Left:12.4 Right:12.4





(10%Imax) 792.913	—
(20%Imax) 1585.83	—
(30%Imax) 2378.74	—
(40%Imax) 3171.65	—
(50%Imax) 3964.56	—
(60%Imax) 4757.48	—
(70%Imax) 5550.39	—
(80%Imax) 6343.3	—
(90%Imax) 7136.21	—



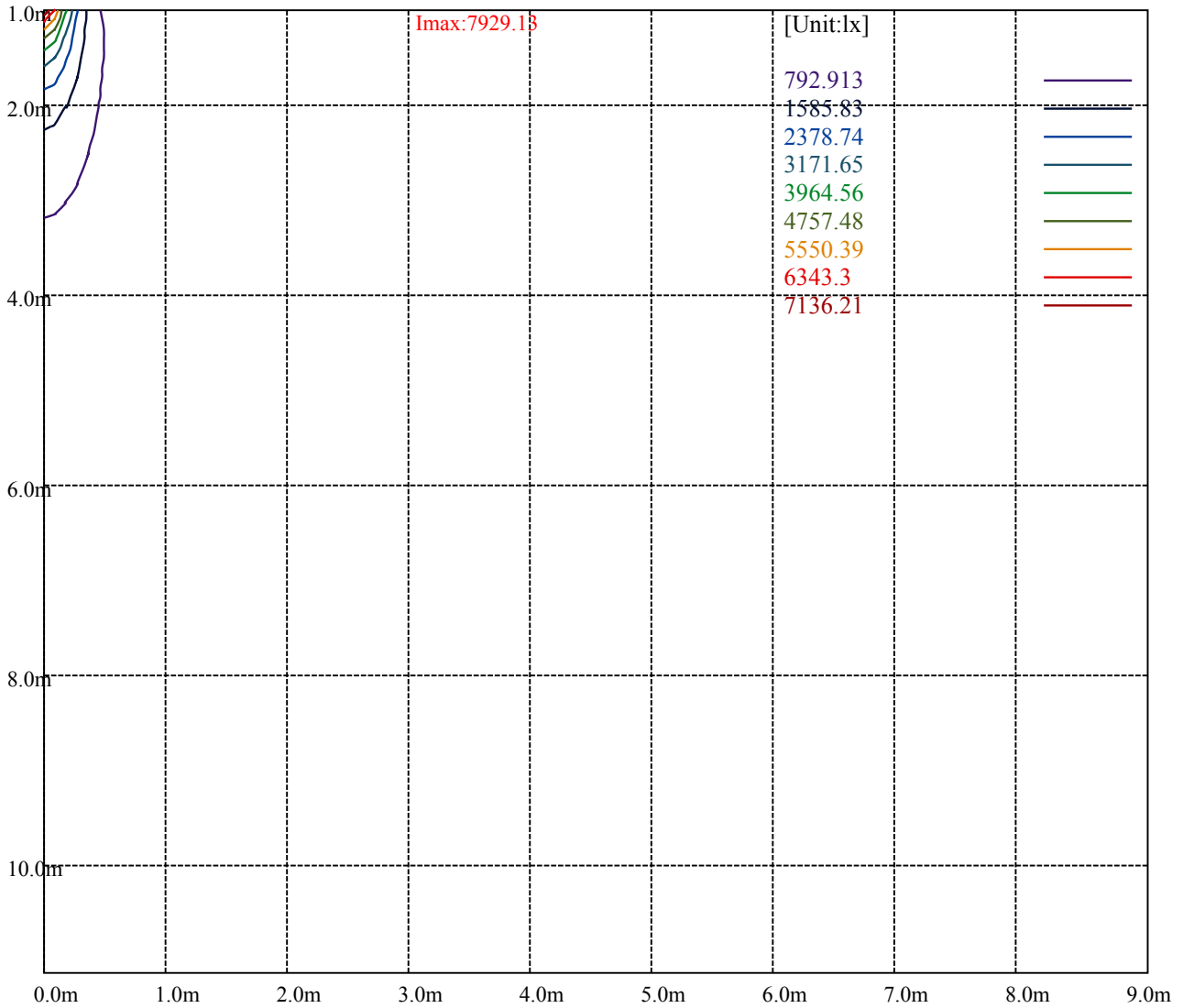
House

[Unit:cd]

Road

Imax:7929.13

(10%Imax)	792.913	—
(20%Imax)	1585.83	—
(30%Imax)	2378.74	—
(40%Imax)	3171.65	—
(50%Imax)	3964.56	—
(60%Imax)	4757.48	—
(70%Imax)	5550.39	—
(80%Imax)	6343.3	—
(90%Imax)	7136.21	—



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

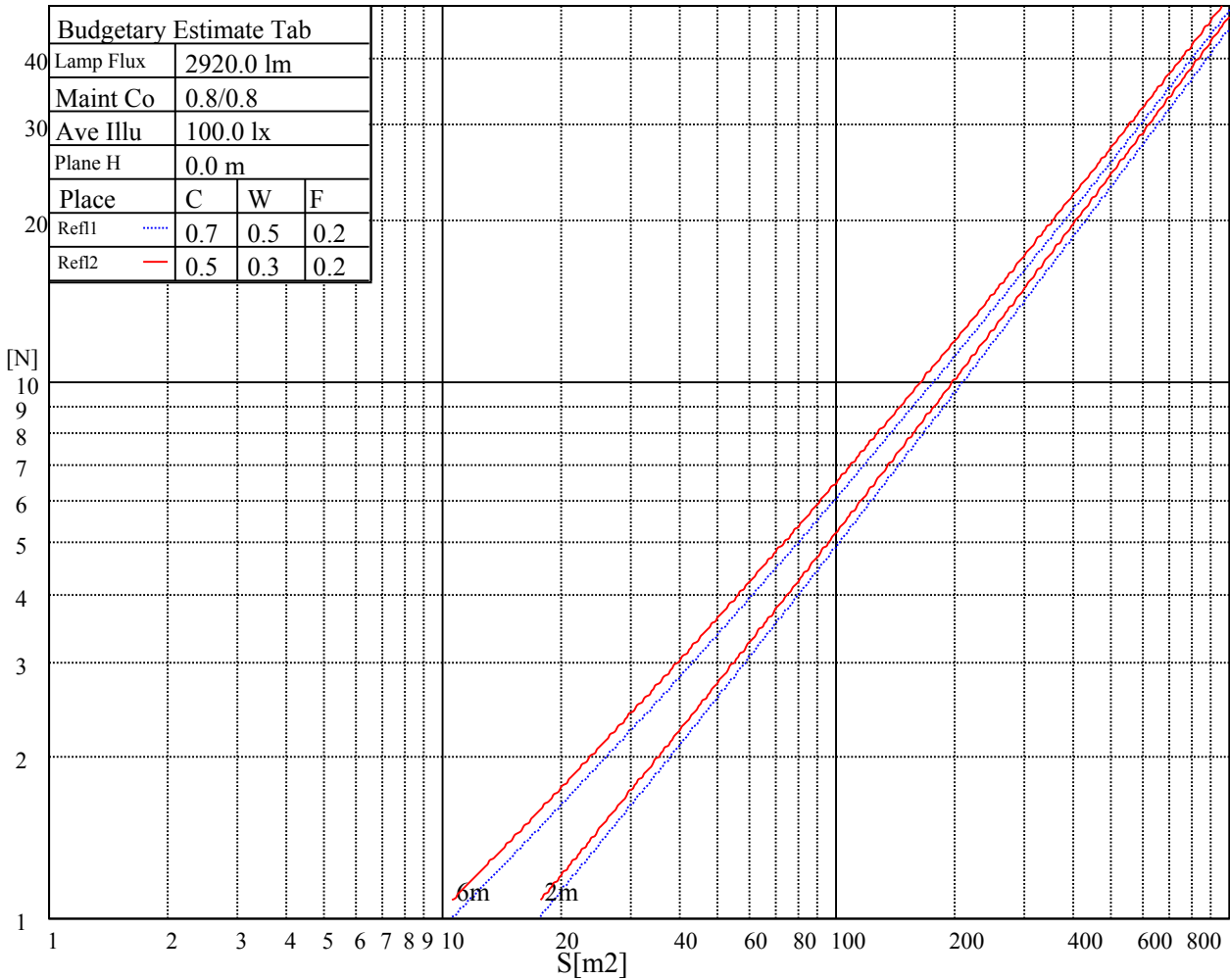
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

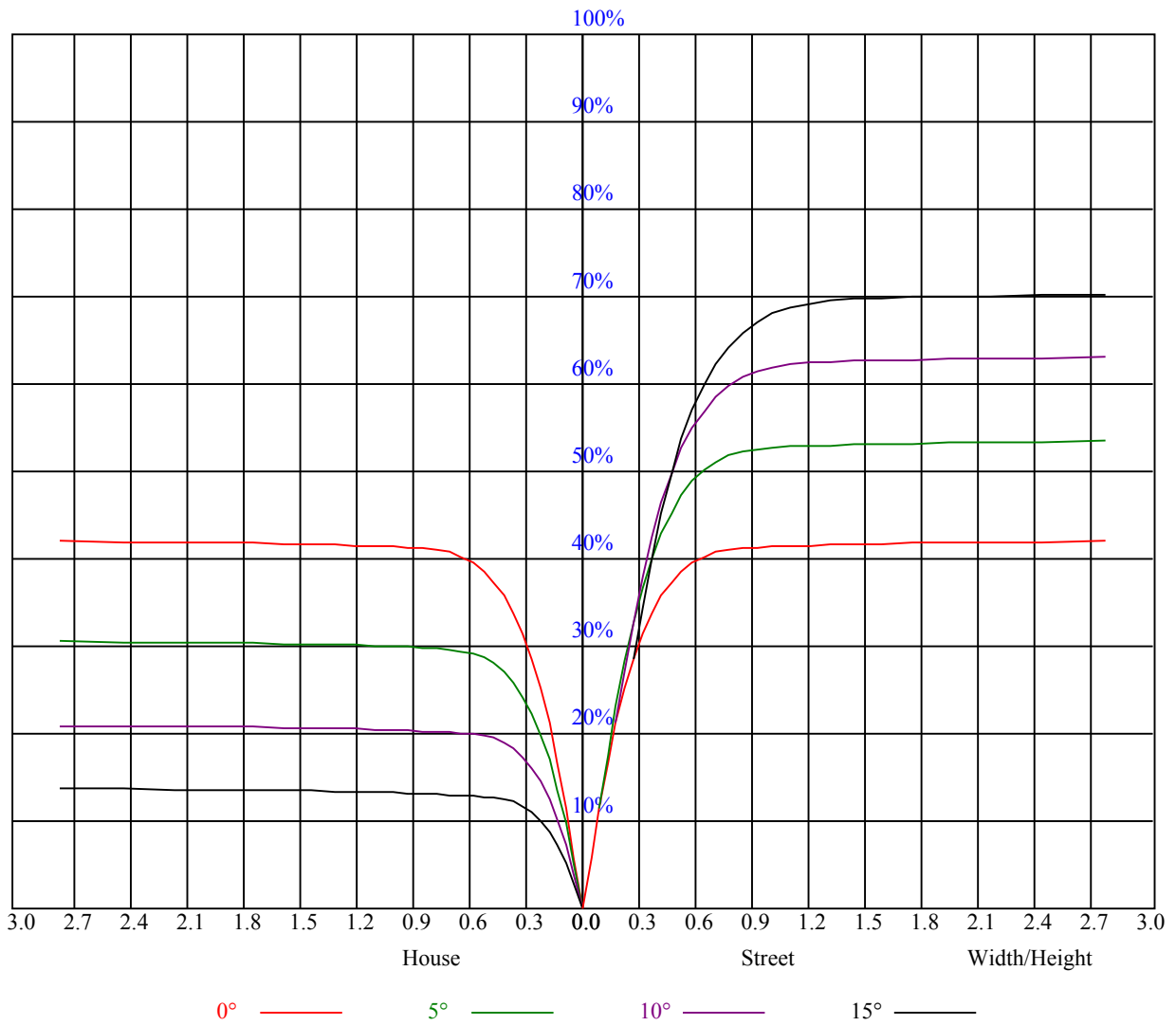
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

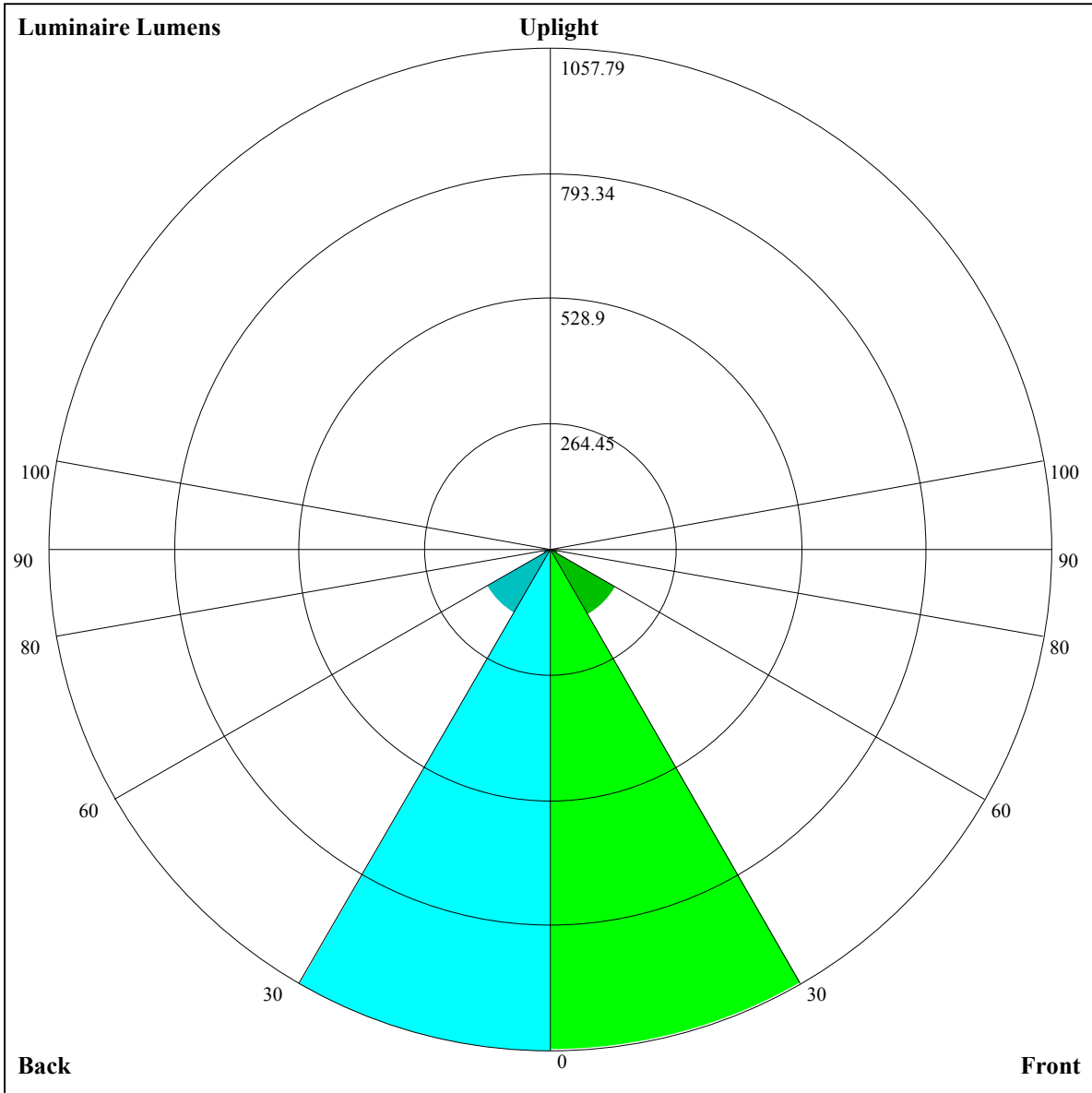
Luminance Limiting Curve





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 RHOFc=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	0.94	0.92	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	0.83	0.87	0.85	0.82	0.85	0.82	0.81	0.82	0.80	0.79	0.80	0.78	0.77	0.76
3	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.74	0.72	0.70	0.69
5	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.65
6	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.63
7	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.58	0.57
9	0.64	0.60	0.57	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55
10	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53





Luminaire Lumens:

FL=1056.23,FM=157.37,FH=17.73,FVH=6.15

BL=1057.79,BM=155.48,BH=18.23,BVH=6.16

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	7933.37	7808.72	7596.86	7315.37	6903.37	6549.31	6184.72	5811.34	5341.99
45.0	7948.00	7922.83	7808.72	7586.33	7219.98	6880.55	6521.81	6156.63	5686.10
90.0	7910.54	7768.34	7457.00	7143.31	6806.23	6439.87	5978.72	5607.68	5247.77
135.0	7924.59	7902.94	7771.26	7522.54	7129.85	6785.16	6413.54	5946.53	5576.08
180.0	7933.37	7946.24	7845.58	7647.19	7359.85	6946.68	6592.03	6205.78	5826.56
225.0	7948.00	7876.60	7712.74	7459.34	7055.53	6699.13	6222.76	5836.51	5454.36
270.0	7910.54	7946.24	7899.43	7741.41	7510.84	7203.59	6864.16	6404.76	6019.68
315.0	7924.59	7860.22	7720.35	7434.17	7119.32	6777.55	6315.81	5929.56	5540.38
360.0	7933.37	7808.72	7596.86	7315.37	6903.37	6549.31	6184.72	5811.34	5341.99
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4983.25	4643.23	4299.71	3982.51	3602.12	3329.99	3019.23	2786.90	2582.66
45.0	5325.02	4976.81	4549.60	4214.26	3901.75	3529.55	3259.18	3012.80	2735.40
90.0	4816.46	4470.01	4057.42	3751.35	3461.08	3138.03	2905.12	2691.51	2497.80
135.0	5221.44	4878.49	4532.63	4118.29	3804.61	3511.99	3239.86	2930.87	2707.89
180.0	5360.13	5007.83	4654.94	4310.24	3903.51	3593.93	3309.51	2990.56	2755.88
225.0	5079.81	4646.16	4304.39	3987.20	3672.35	3317.11	3055.52	2822.60	2601.97
270.0	5541.55	5165.25	4804.17	4369.93	4035.18	3723.85	3428.89	3102.34	2864.73
315.0	5158.82	4711.70	4373.44	4047.47	3663.57	3384.41	3126.33	2831.38	2617.18
360.0	4983.25	4643.23	4299.71	3982.51	3602.12	3329.99	3019.23	2786.90	2582.66
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2353.83	2193.48	2043.66	1907.31	1751.64	1635.76	1526.33	1422.16	1159.62
45.0	2537.01	2364.37	2170.07	2026.69	1892.68	1770.36	1628.15	1517.55	1409.28
90.0	2285.95	2134.96	1992.75	1861.07	1707.16	1594.21	1483.02	1164.89	1164.89
135.0	2463.27	2292.97	2134.37	1954.12	1823.62	1701.89	1586.60	1446.15	1336.71
180.0	2496.04	2307.02	2128.52	1939.49	1804.89	1679.65	1566.12	1434.44	1324.42
225.0	2362.03	2188.80	1995.09	1853.47	1725.89	1581.34	1468.97	1294.58	1154.82
270.0	2648.20	2447.47	2219.82	2060.64	1915.50	1751.64	1634.01	1525.15	1393.48
315.0	2421.13	2209.28	2055.37	1913.74	1786.75	1641.03	1533.35	1428.59	1145.34
360.0	2353.83	2193.48	2043.66	1907.31	1751.64	1635.76	1526.33	1422.16	1159.62
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1159.62	1081.44	978.67	847.00	744.06	618.99	525.42	439.50	345.58
45.0	1300.43	1168.17	1065.75	933.49	828.15	723.40	597.57	505.69	422.01
90.0	1138.96	1004.54	898.61	792.63	663.59	565.44	474.68	392.86	302.44
135.0	1229.62	1125.45	991.43	887.84	782.50	656.10	561.29	474.09	376.94
180.0	1224.93	1120.76	1016.01	886.09	778.41	656.68	560.70	469.41	374.60
225.0	1128.96	1028.53	921.73	815.22	685.53	586.04	494.05	393.68	323.86
270.0	1285.80	1163.49	1059.32	949.88	839.86	718.13	618.64	522.08	431.95
315.0	1145.34	1091.97	987.16	853.32	748.03	621.27	527.05	442.37	349.50
360.0	1159.62	1081.44	978.67	847.00	744.06	618.99	525.42	439.50	345.58
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	278.86	221.74	162.52	125.71	97.91	77.48	59.81	50.21	43.48
45.0	347.68	295.60	295.60	158.77	123.89	91.82	73.56	60.40	49.16
90.0	240.18	188.44	146.01	106.28	84.21	68.12	54.54	47.17	40.61
135.0	307.89	307.89	176.74	136.94	106.86	80.41	65.84	55.54	48.22
180.0	307.30	307.30	235.08	143.20	112.48	89.01	68.47	57.18	49.10
225.0	260.43	193.83	150.81	117.16	86.32	69.35	57.18	47.17	41.73
270.0	345.93	296.18	296.18	168.49	122.78	96.50	73.27	59.87	50.80
315.0	283.07	225.14	176.80	128.93	100.13	79.01	64.08	51.56	44.89
360.0	278.86	221.74	162.52	125.71	97.91	77.48	59.81	50.21	43.48

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	38.62	34.24	31.60	29.09	27.45	26.16	24.99	24.35	23.88
45.0	43.01	38.39	34.18	31.60	29.50	27.45	26.22	25.28	24.58
90.0	36.75	33.71	31.31	28.91	27.39	26.22	25.34	24.52	24.17
135.0	41.61	37.69	34.65	32.19	29.79	28.15	26.69	25.75	25.11
180.0	43.37	38.10	35.00	32.54	30.49	28.44	26.92	25.93	25.22
225.0	37.63	34.47	31.43	29.50	27.92	26.63	25.40	24.58	23.99
270.0	42.96	38.62	35.23	32.60	29.96	28.27	26.80	25.69	24.64
315.0	39.97	35.52	32.83	30.61	28.44	26.98	25.87	24.76	24.17
360.0	38.62	34.24	31.60	29.09	27.45	26.16	24.99	24.35	23.88
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	23.64	23.58	23.76	23.99	24.35	24.64	24.58	24.23	23.29
45.0	24.05	23.88	23.88	23.99	24.35	24.64	24.81	24.58	23.99
90.0	23.94	23.94	24.17	24.40	24.70	24.81	24.52	23.88	22.88
135.0	24.64	24.40	24.35	24.40	24.58	24.87	24.99	24.76	24.17
180.0	24.70	24.40	24.29	24.29	24.46	24.70	24.87	24.76	24.40
225.0	23.76	23.64	23.76	23.94	24.23	24.46	24.52	24.17	23.53
270.0	24.11	23.76	23.53	23.58	23.76	24.05	24.29	24.29	23.99
315.0	23.82	23.64	23.64	23.82	24.05	24.29	24.40	24.17	23.64
360.0	23.64	23.58	23.76	23.99	24.35	24.64	24.58	24.23	23.29
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	22.18	20.95	19.25	18.14	17.03	16.33	15.86	15.45	15.33
45.0	22.88	21.71	20.37	18.73	17.73	16.85	16.21	15.57	15.16
90.0	21.71	20.13	18.84	17.91	17.09	16.27	15.86	16.09	16.68
135.0	23.23	22.18	20.54	19.31	18.26	17.15	16.56	16.09	15.80
180.0	23.41	22.24	20.72	19.37	18.20	17.15	16.50	16.15	16.56
225.0	22.12	20.89	19.55	18.26	17.03	16.27	15.74	15.16	14.81
270.0	23.35	22.30	21.07	19.43	18.14	17.21	16.39	15.68	15.27
315.0	22.36	21.13	19.49	18.26	17.26	16.33	15.80	15.39	15.04
360.0	22.18	20.95	19.25	18.14	17.03	16.33	15.86	15.45	15.33
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.57	15.45	15.16	14.46	13.99	13.52	13.17	12.82	12.52
45.0	14.86	14.51	14.28	13.99	13.75	13.46	13.23	12.99	12.70
90.0	17.44	17.97	18.32	18.26	17.97	17.15	15.51	13.46	12.52
135.0	16.33	17.03	17.91	18.38	18.43	18.14	17.21	15.98	14.63
180.0	17.15	17.32	17.03	16.33	15.51	14.75	14.10	13.40	12.99
225.0	14.40	14.16	13.93	13.69	13.40	13.17	12.87	12.70	12.41
270.0	14.81	14.51	14.69	15.27	15.27	15.10	14.46	13.75	13.05
315.0	14.69	14.57	14.63	14.81	15.04	14.86	14.28	12.93	12.47
360.0	15.57	15.45	15.16	14.46	13.99	13.52	13.17	12.82	12.52
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.17	11.88	11.59	11.41	11.24	10.89	10.65	10.48	10.30
45.0	12.47	12.17	12.00	11.82	11.65	11.53	10.65	10.48	10.30
90.0	12.11	11.88	11.70	11.59	11.00	10.65	10.48	10.30	10.24
135.0	12.76	12.11	11.76	11.47	11.18	10.77	10.59	10.42	10.24
180.0	12.52	12.17	11.82	11.59	11.29	10.83	10.65	10.48	10.30
225.0	12.11	11.88	11.65	11.41	11.06	10.83	10.59	10.42	10.30
270.0	12.29	11.88	11.70	11.47	11.24	11.00	10.71	10.53	10.36
315.0	12.06	11.76	11.53	11.29	11.29	10.71	10.59	10.42	10.18
360.0	12.17	11.88	11.59	11.41	11.24	10.89	10.65	10.48	10.30

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.36
45.0	10.24
90.0	10.24
135.0	10.18
180.0	10.24
225.0	10.30
270.0	10.24
315.0	10.18
360.0	10.36