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NT

Client:

LumCAT: 2-2682-L

Luminaire: 92.70.411.00

Report No: 2024423-B017

Ballast type: AC

Test No: 2024423-C017

Voltage(V): 36.280

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2920.0

Power (W): 20.897

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2509.59, Efficiency(%): 85.94% , Luminous Efficacy(lm/W): 120.09

Central intensity(cd): 10193.950, Maximum intensity(cd): 10193.950

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=20.2

[C90/270]Total=20.2

Field angle(10%Imax): [C0/180]Total=55.0

[C90/270]Total=55.0

Maximum s/h(1/2): C0_180=0.34 C90_270=0.34

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.94%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.999%

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	10193.946	0.000	0	0.00%	0.00%
1.0	10110.552	9.715	9.715	0.33%	0.39%
2.0	9905.065	28.728	38.444	0.98%	1.53%
3.0	9509.892	46.434	84.878	1.59%	3.38%
4.0	9030.446	62.060	146.938	2.13%	5.86%
5.0	8397.598	74.975	221.913	2.57%	8.84%
6.0	7753.705	84.879	306.792	2.91%	12.22%
7.0	6991.303	91.522	398.314	3.13%	15.87%
8.0	6321.293	95.276	493.59	3.26%	19.67%
9.0	5715.073	97.548	591.138	3.34%	23.56%
10.0	5131.311	98.156	689.294	3.36%	27.47%
11.0	4620.483	97.440	786.734	3.34%	31.35%
12.0	4157.424	95.955	882.689	3.29%	35.17%
13.0	3753.911	93.888	976.577	3.22%	38.91%
14.0	3386.829	91.401	1067.978	3.13%	42.56%
15.0	3054.933	88.435	1156.413	3.03%	46.08%
16.0	2782.364	85.533	1241.946	2.93%	49.49%
17.0	2485.363	82.033	1323.979	2.81%	52.76%
18.0	2282.217	78.607	1402.586	2.69%	55.89%
19.0	2092.165	76.105	1478.691	2.61%	58.92%
20.0	1919.597	73.426	1552.117	2.51%	61.85%
21.0	1771.023	70.867	1622.985	2.43%	64.67%
22.0	1637.006	68.486	1691.471	2.35%	67.40%
23.0	1505.404	65.936	1757.407	2.26%	70.03%
24.0	1366.471	62.789	1820.196	2.15%	72.53%
25.0	1248.109	59.450	1879.646	2.04%	74.90%
26.0	1172.988	57.150	1936.796	1.96%	77.18%
27.0	1073.668	54.965	1991.761	1.88%	79.37%
28.0	968.533	51.704	2043.466	1.77%	81.43%
29.0	858.649	47.804	2091.27	1.64%	83.33%
30.0	754.084	43.543	2134.813	1.49%	85.07%
31.0	643.023	38.879	2173.693	1.33%	86.62%
32.0	548.188	34.127	2207.82	1.17%	87.98%
33.0	460.104	29.705	2237.524	1.02%	89.16%
34.0	380.952	25.453	2262.977	0.87%	90.17%
35.0	327.419	21.999	2284.977	0.75%	91.05%
36.0	286.636	19.552	2304.528	0.67%	91.83%
37.0	248.399	17.450	2321.978	0.60%	92.52%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	217.579	15.554	2337.532	0.53%	93.14%
39.0	177.982	13.502	2351.033	0.46%	93.68%
40.0	148.713	11.394	2362.427	0.39%	94.14%
41.0	127.228	9.826	2372.253	0.34%	94.53%
42.0	109.408	8.597	2380.851	0.29%	94.87%
43.0	94.594	7.557	2388.408	0.26%	95.17%
44.0	80.834	6.621	2395.029	0.23%	95.44%
45.0	70.783	5.827	2400.856	0.20%	95.67%
46.0	62.670	5.219	2406.075	0.18%	95.88%
47.0	56.050	4.722	2410.796	0.16%	96.06%
48.0	51.595	4.352	2415.148	0.15%	96.24%
49.0	48.442	4.108	2419.256	0.14%	96.40%
50.0	45.648	3.923	2423.179	0.13%	96.56%
51.0	44.002	3.793	2426.972	0.13%	96.71%
52.0	43.087	3.737	2430.709	0.13%	96.86%
53.0	42.151	3.708	2434.417	0.13%	97.00%
54.0	41.463	3.685	2438.102	0.13%	97.15%
55.0	41.032	3.682	2441.785	0.13%	97.30%
56.0	40.410	3.680	2445.465	0.13%	97.44%
57.0	39.217	3.641	2449.105	0.12%	97.59%
58.0	37.820	3.562	2452.668	0.12%	97.73%
59.0	35.830	3.443	2456.111	0.12%	97.87%
60.0	33.226	3.262	2459.374	0.11%	98.00%
61.0	30.571	3.045	2462.418	0.10%	98.12%
62.0	28.201	2.832	2465.25	0.10%	98.23%
63.0	25.421	2.608	2467.858	0.09%	98.34%
64.0	22.904	2.371	2470.229	0.08%	98.43%
65.0	21.222	2.184	2472.413	0.07%	98.52%
66.0	19.810	2.047	2474.46	0.07%	98.60%
67.0	18.669	1.935	2476.395	0.07%	98.68%
68.0	17.864	1.851	2478.246	0.06%	98.75%
69.0	17.162	1.787	2480.032	0.06%	98.82%
70.0	16.613	1.735	2481.767	0.06%	98.89%
71.0	16.050	1.688	2483.455	0.06%	98.96%
72.0	15.604	1.646	2485.101	0.06%	99.02%
73.0	15.179	1.610	2486.711	0.06%	99.09%
74.0	14.828	1.578	2488.288	0.05%	99.15%
75.0	14.521	1.551	2489.839	0.05%	99.21%

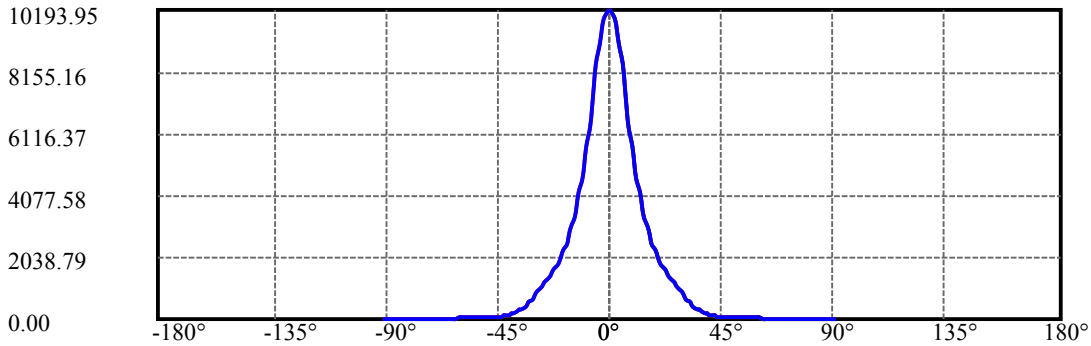
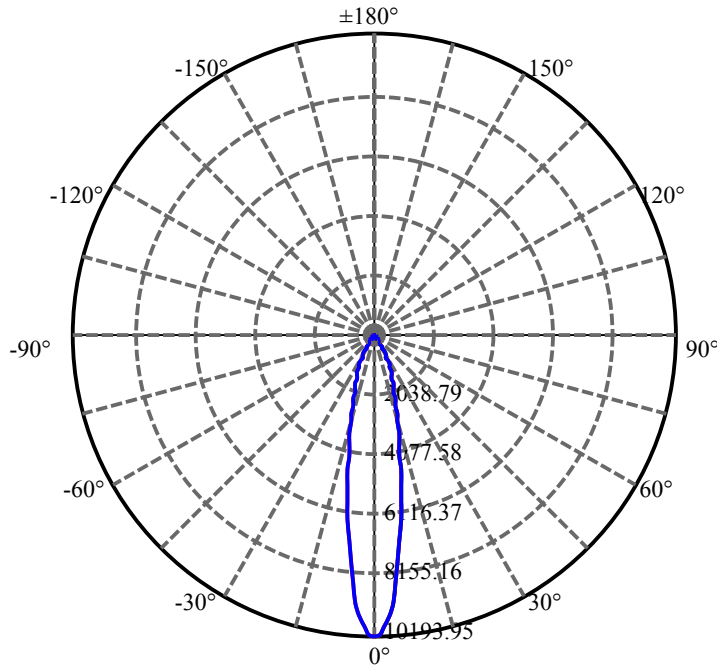
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	14.199	1.525	2491.364	0.05%	99.27%
77.0	13.884	1.497	2492.861	0.05%	99.33%
78.0	13.577	1.470	2494.331	0.05%	99.39%
79.0	13.226	1.440	2495.771	0.05%	99.45%
80.0	12.875	1.407	2497.178	0.05%	99.51%
81.0	12.516	1.373	2498.551	0.05%	99.56%
82.0	12.158	1.338	2499.889	0.05%	99.61%
83.0	11.836	1.304	2501.194	0.04%	99.67%
84.0	11.536	1.273	2502.467	0.04%	99.72%
85.0	11.258	1.244	2503.711	0.04%	99.77%
86.0	11.024	1.218	2504.929	0.04%	99.81%
87.0	10.805	1.195	2506.124	0.04%	99.86%
88.0	10.593	1.172	2507.296	0.04%	99.91%
89.0	10.432	1.152	2508.448	0.04%	99.95%
90.0	10.373	1.141	2509.589	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2134.81	73.11%	85.07%
0-40	2362.43	80.91%	94.14%
0-60	2459.37	84.23%	98.00%
0-90	2508.45	85.91%	99.95%
0-120	2508.45	85.91%	99.95%
0-180	2509.59	85.94%	100.00%
60-90	49.07	1.68%	1.96%
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%
0-27.31	2007.67	68.76%	80.00%

ZONAL LUMEN SUMMARY

0-10	689.29
10-20	862.82
20-30	582.70
30-40	227.61
40-50	60.75
50-60	36.19
60-70	22.39
70-80	15.41
80-90	11.27
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



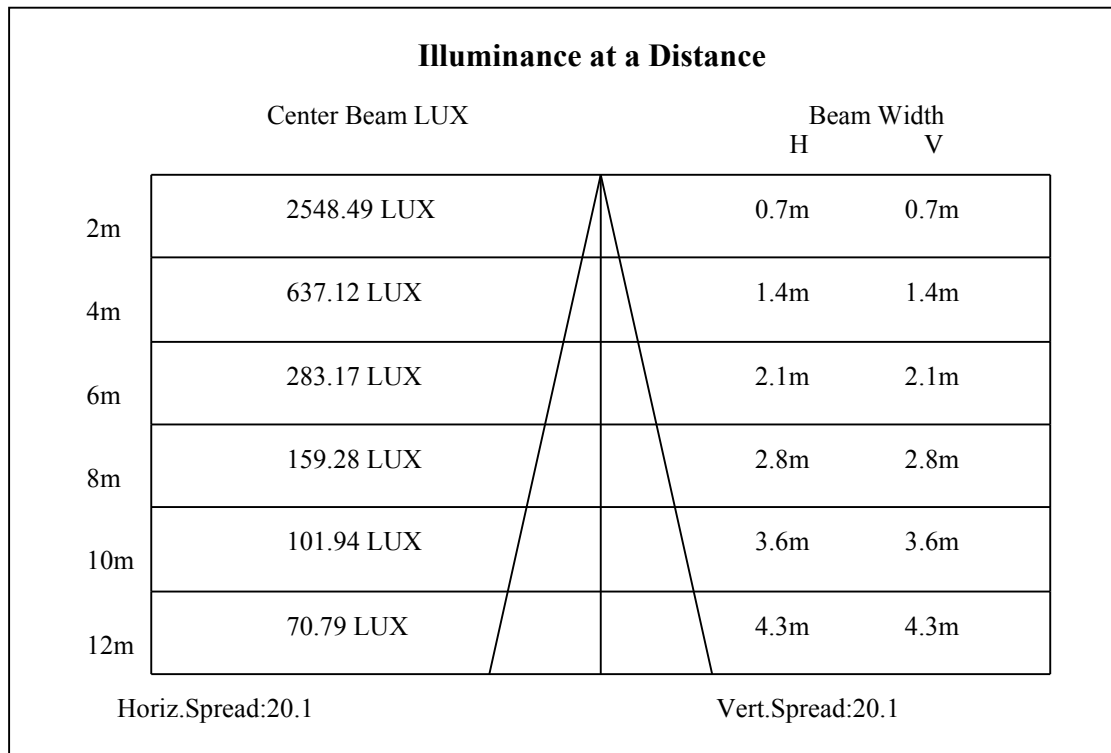
C0(Max): —————

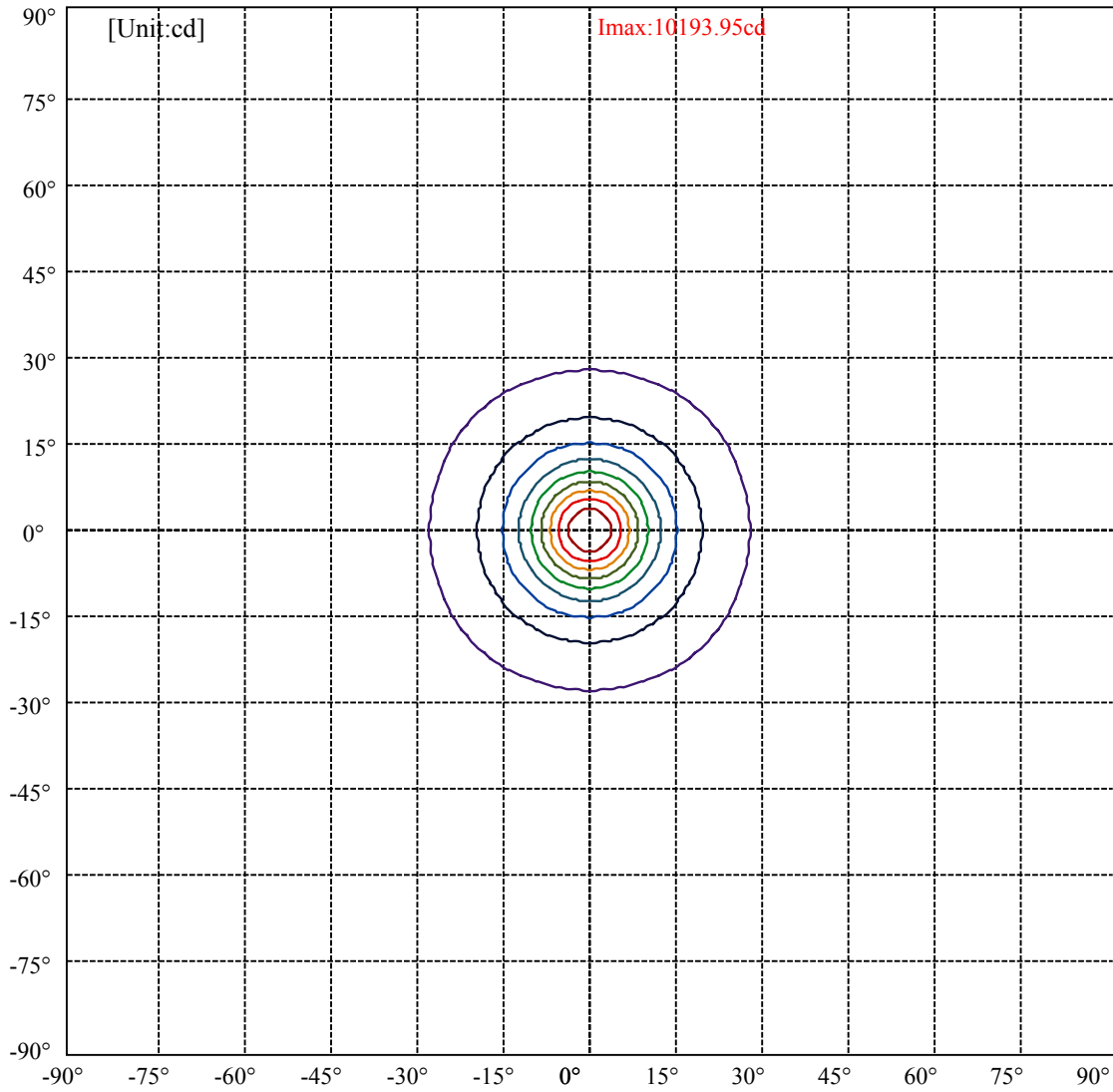
C0/C180: —————

C90/C270: —————

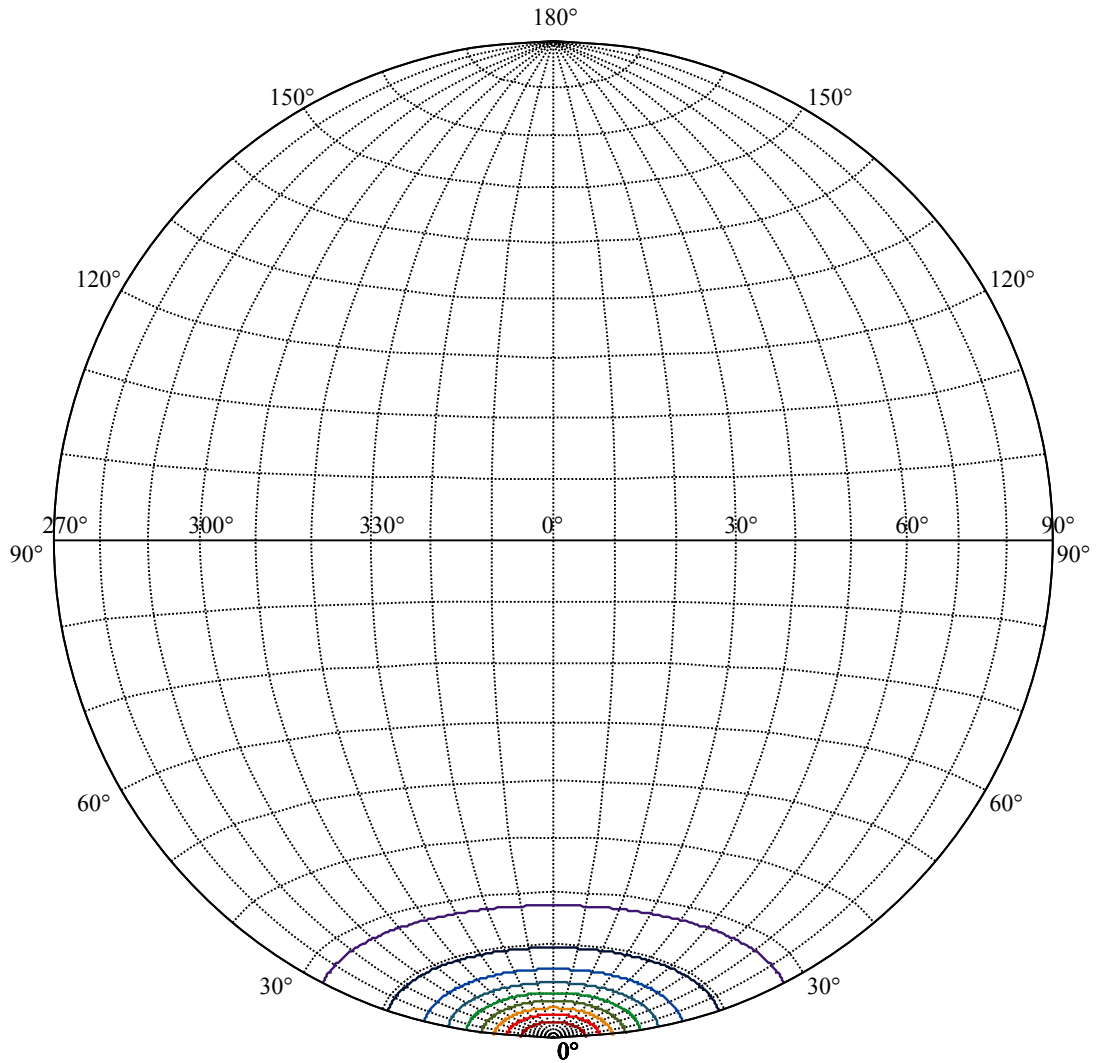
Field angle(10%Imax):C0/180Left:27.5 Right:27.5
:C90/270Left:27.5 Right:27.5

Beam Angle(50%Imax):C0/180Left:10.1 Right:10.1
:C90/270Left:10.1 Right:10.1





(10%Imax) 1019.39	—
(20%Imax) 2038.79	—
(30%Imax) 3058.18	—
(40%Imax) 4077.58	—
(50%Imax) 5096.97	—
(60%Imax) 6116.37	—
(70%Imax) 7135.76	—
(80%Imax) 8155.16	—
(90%Imax) 9174.55	—



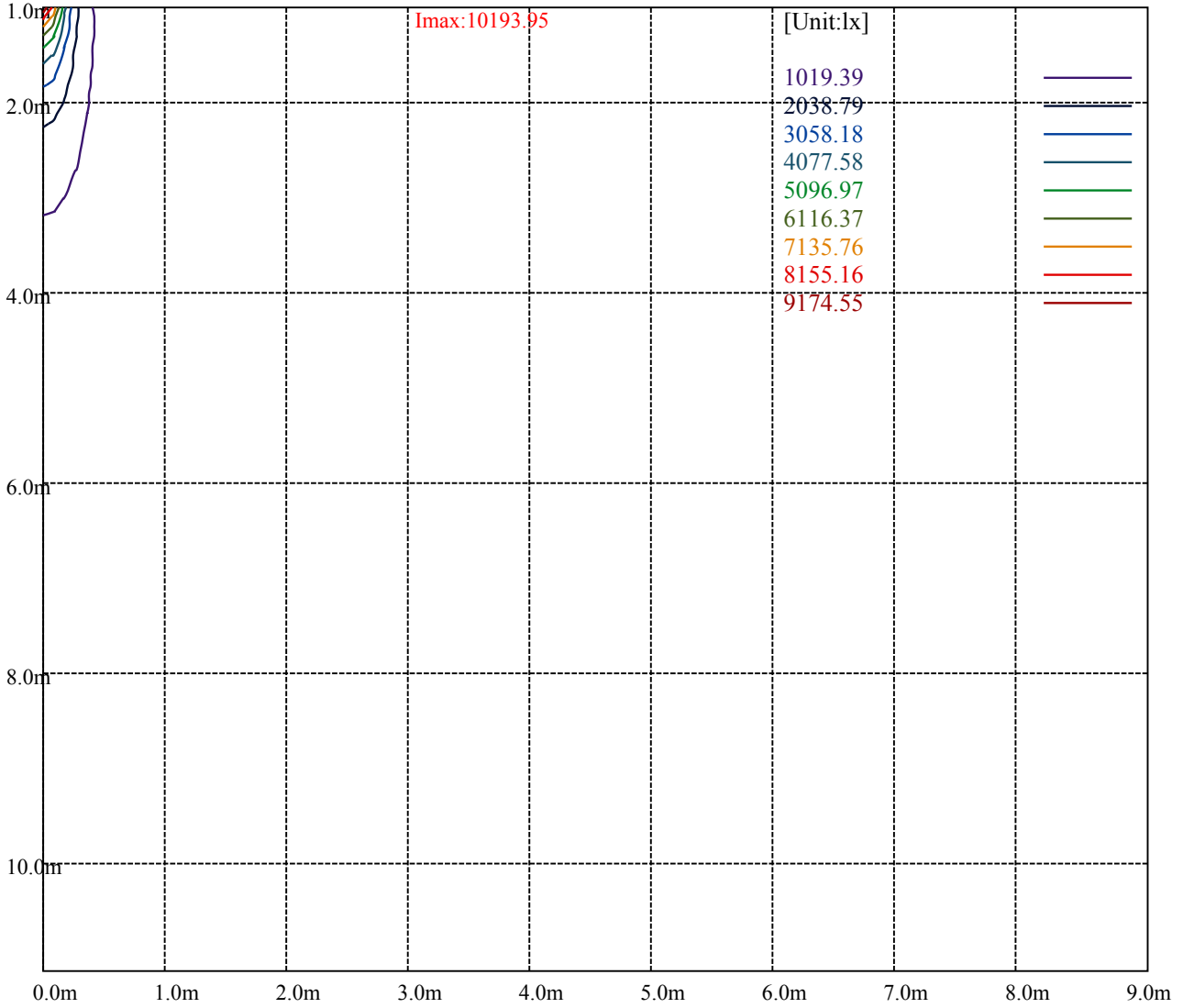
House

[Unit:cd]

Road

Imax:10193.95

(10%Imax) 1019.39	—
(20%Imax) 2038.79	—
(30%Imax) 3058.18	—
(40%Imax) 4077.58	—
(50%Imax) 5096.97	—
(60%Imax) 6116.37	—
(70%Imax) 7135.76	—
(80%Imax) 8155.16	—
(90%Imax) 9174.55	—



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

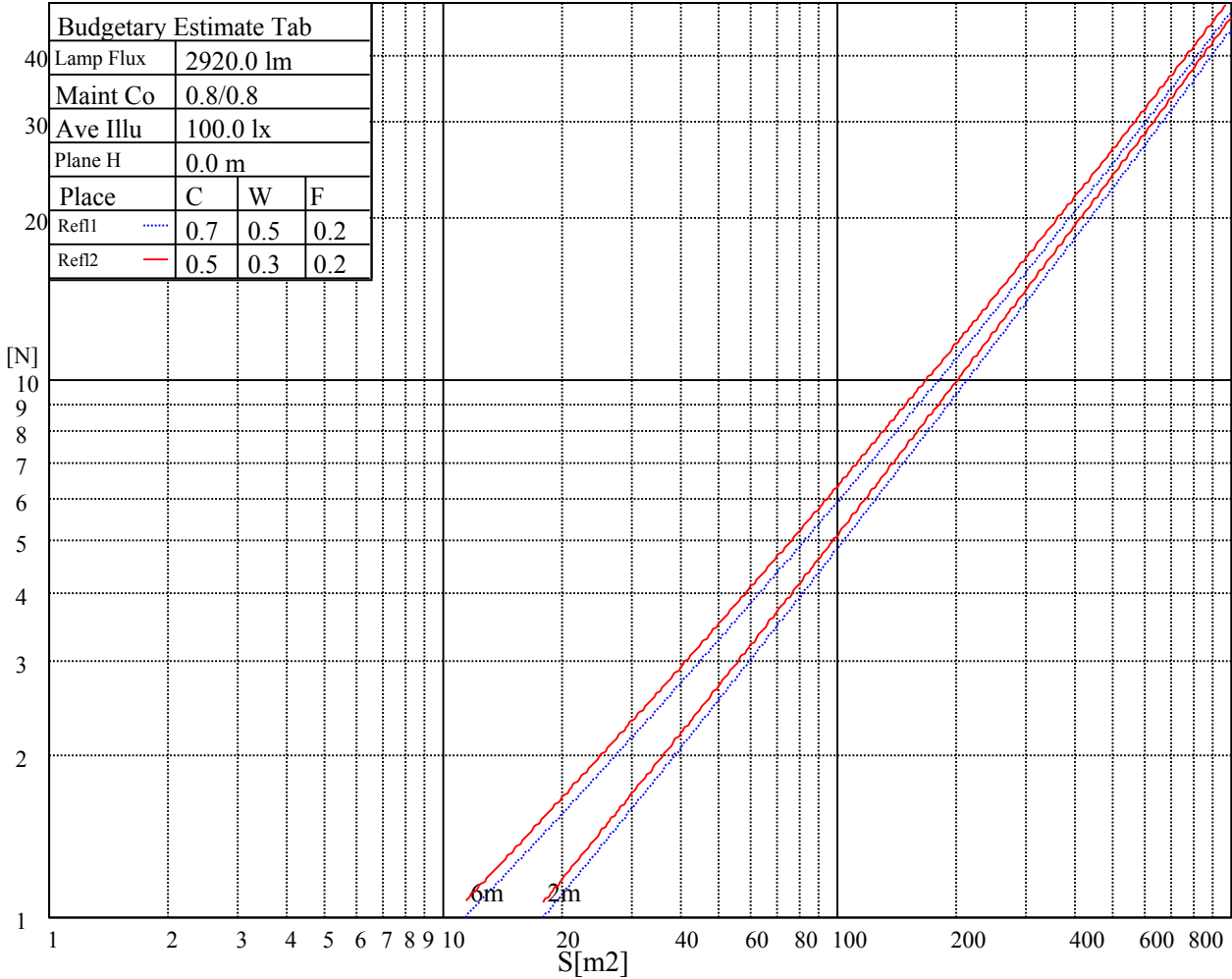
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

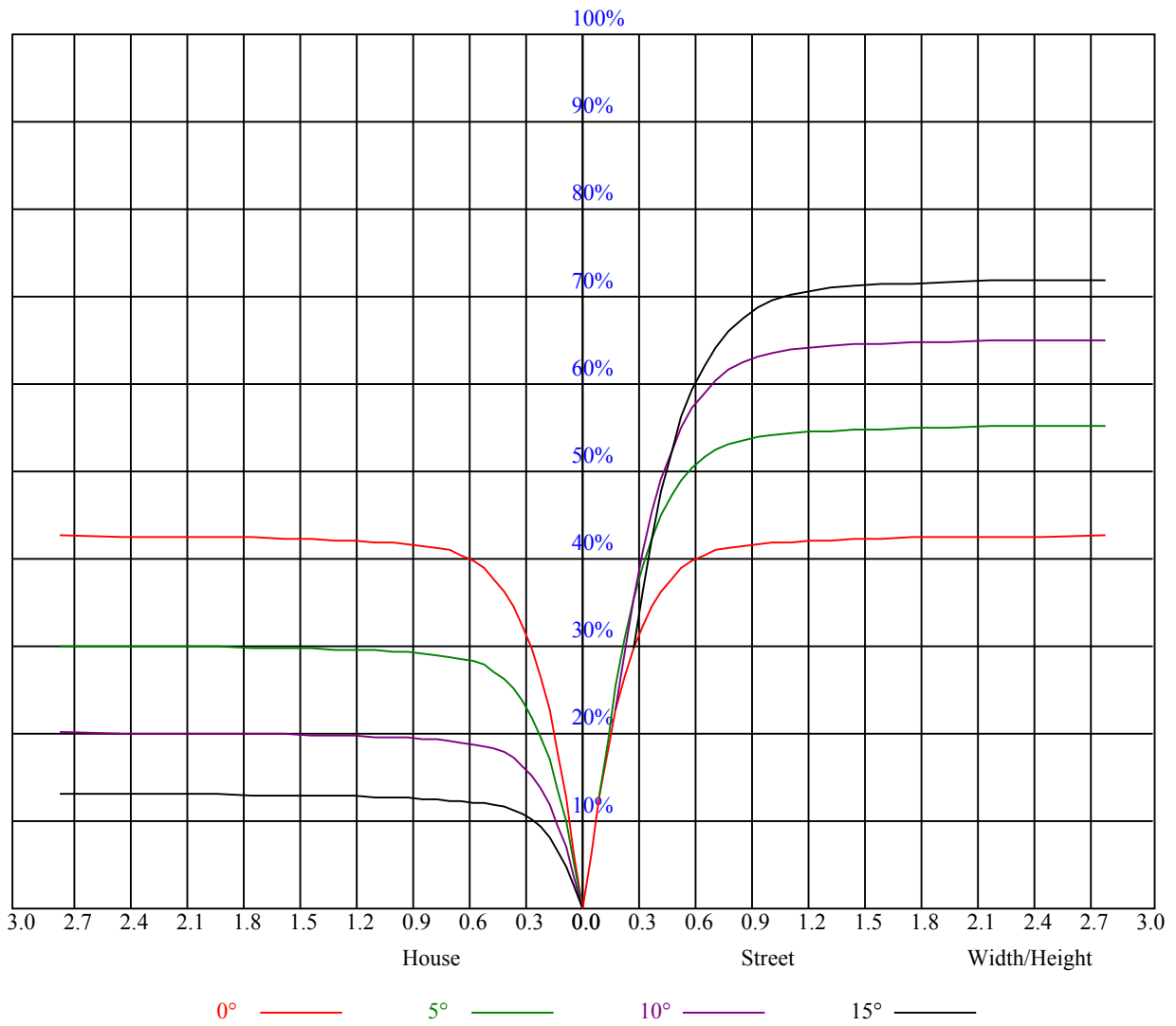
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

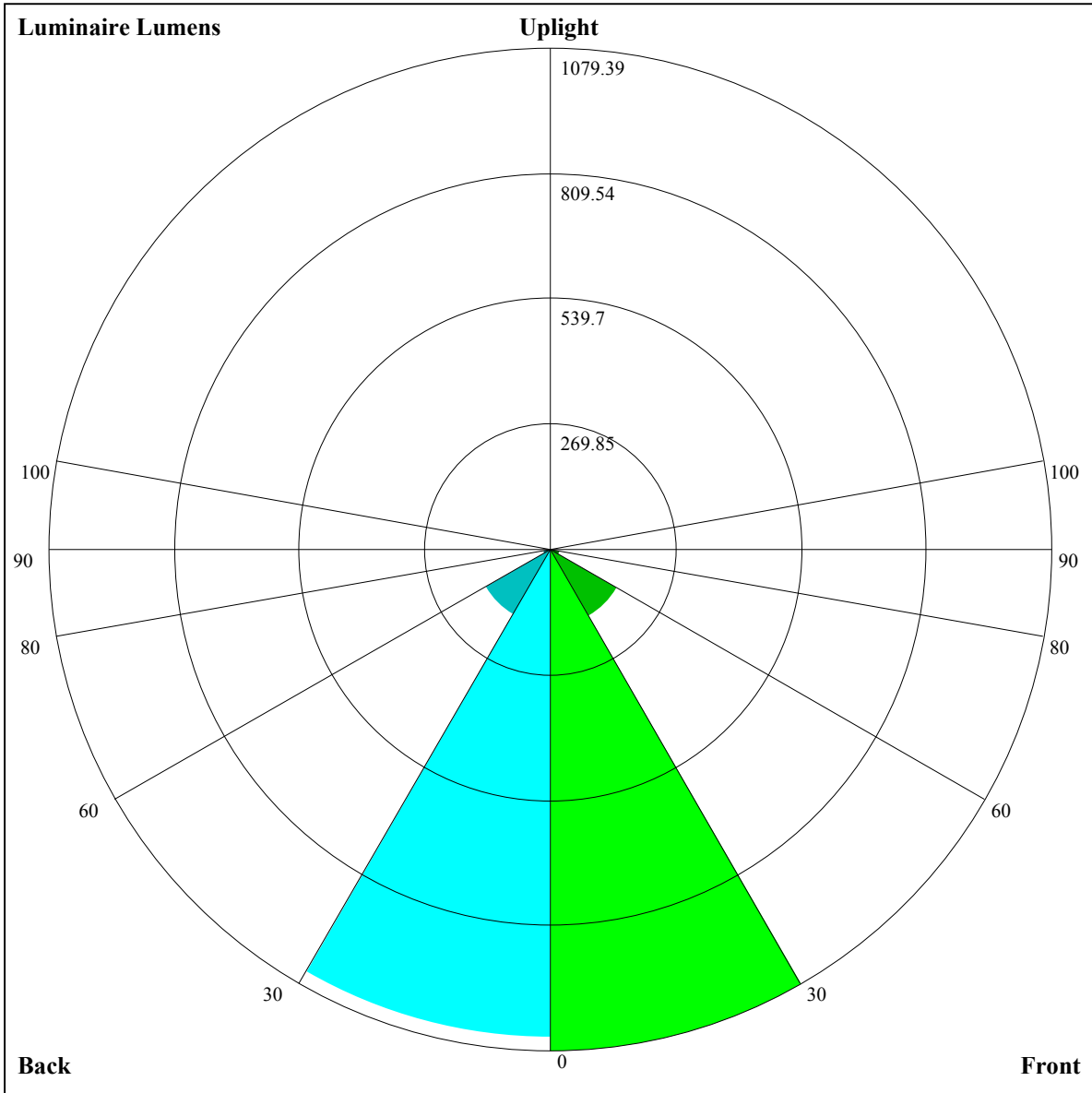
Luminance Limiting Curve





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	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	0.92	0.91	0.91	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.81
2	0.90	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.79	0.77
3	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.73
4	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	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	0.60	0.65	0.62	0.60	0.59
9	0.66	0.61	0.59	0.65	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55





Luminaire Lumens:

FL=1079.39,FM=165.68,FH=19.13,FVH=6.24

BL=1051.01,BM=161.1,BH=18.78,BVH=6.19

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	10221.60	10108.06	9903.24	9457.29	8982.68	8269.29	7622.03	6964.82	6194.08
45.0	10138.50	10254.96	10224.52	10047.79	9772.15	9351.37	8803.01	8028.76	7371.55
90.0	10271.93	10237.98	10083.49	9689.04	9214.43	8626.28	7987.79	7145.66	6494.89
135.0	10169.51	10230.96	10150.79	9922.55	9429.79	8892.55	8255.24	7572.28	6746.53
180.0	10221.60	10181.80	9993.95	9645.15	9186.92	8443.10	7776.53	7088.30	6445.14
225.0	10087.00	9803.16	9395.26	8728.10	8085.53	7399.64	6727.81	5951.80	5381.20
270.0	10271.93	10127.38	9866.37	9380.04	8875.00	8272.21	7610.32	6758.24	6122.10
315.0	10169.51	9940.11	9622.91	9209.16	8697.09	7926.35	7246.90	6420.56	5814.85
360.0	10221.60	10108.06	9903.24	9457.29	8982.68	8269.29	7622.03	6964.82	6194.08
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5610.61	5087.42	4615.73	4086.10	3707.46	3370.95	3073.07	2792.75	2492.53
45.0	6726.63	6113.90	5423.34	4925.90	4486.39	3977.83	3603.87	3269.13	2901.60
90.0	5878.64	5194.52	4709.36	4283.91	3882.44	3431.82	3123.40	2839.57	2534.67
135.0	6137.31	5432.12	4922.97	4470.01	3956.76	3586.90	3249.23	2953.10	2629.47
180.0	5708.93	5169.94	4684.20	4135.26	3747.84	3400.22	3011.63	2745.93	2451.57
225.0	4872.64	4409.73	3998.32	3552.96	3228.74	2938.47	2621.28	2402.41	2163.64
270.0	5542.14	5011.93	4419.68	4004.17	3644.25	3313.60	2950.18	2693.26	2412.36
315.0	5243.67	4630.94	4190.27	3801.09	3377.39	3074.83	2806.80	2562.76	2297.07
360.0	5610.61	5087.42	4615.73	4086.10	3707.46	3370.95	3073.07	2792.75	2492.53
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2288.87	2070.00	1916.09	1773.88	1616.45	1498.82	1388.80	1159.68	1159.68
45.0	2648.79	2428.74	2190.56	2023.77	1872.78	1704.23	1581.92	1468.39	1360.71
90.0	2331.01	2108.62	1953.54	1814.84	1687.85	1543.88	1437.96	1153.36	1153.36
135.0	2405.92	2213.96	2047.18	1860.49	1728.23	1605.92	1467.80	1361.88	1234.88
180.0	2253.76	2069.41	1906.14	1766.27	1609.43	1495.89	1391.14	1295.16	1170.51
225.0	1995.09	1845.27	1679.65	1560.27	1453.17	1283.46	1155.53	1132.00	1035.73
270.0	2221.57	2046.59	1849.95	1716.52	1593.04	1482.43	1356.02	1261.80	1164.07
315.0	2112.72	1954.71	1813.67	1652.15	1535.10	1428.59	1152.60	1152.60	1104.96
360.0	2288.87	2070.00	1916.09	1773.88	1616.45	1498.82	1388.80	1159.68	1159.68
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1060.14	961.41	839.33	739.90	642.52	549.18	464.20	374.78	321.00
45.0	1227.86	1126.03	1023.62	924.71	801.23	702.33	580.60	492.82	418.49
90.0	1102.62	1000.91	899.67	797.66	670.49	572.76	484.04	395.61	341.48
135.0	1137.15	1035.91	911.25	812.94	713.45	616.30	503.35	427.27	366.41
180.0	1075.12	980.90	857.41	754.41	630.35	536.71	454.78	373.43	324.86
225.0	938.29	814.87	714.03	613.73	520.56	422.94	362.02	301.68	261.36
270.0	1065.17	944.03	841.03	733.93	607.52	514.47	434.30	355.29	304.96
315.0	983.00	884.22	782.86	655.39	558.07	470.81	397.54	326.73	280.79
360.0	1060.14	961.41	839.33	739.90	642.52	549.18	464.20	374.78	321.00
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	265.40	228.35	196.23	162.34	139.81	120.61	101.83	89.25	78.48
45.0	346.51	299.69	299.69	250.94	185.75	161.17	139.58	120.67	100.54
90.0	286.64	250.18	217.41	188.85	158.13	136.30	117.10	100.95	83.98
135.0	317.84	295.01	295.01	195.29	169.01	140.63	121.02	100.54	86.79
180.0	303.21	303.21	213.55	180.13	157.19	136.53	114.47	98.67	85.44
225.0	226.60	188.50	163.10	140.86	122.25	102.71	89.01	77.48	66.54
270.0	304.96	213.72	183.35	157.19	129.92	112.42	97.91	85.85	72.98
315.0	241.93	208.52	172.29	148.24	127.64	107.45	94.34	83.34	71.92
360.0	265.40	228.35	196.23	162.34	139.81	120.61	101.83	89.25	78.48

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	69.47	60.69	55.19	50.86	47.93	45.41	43.83	43.01	41.79
45.0	87.02	75.85	66.89	58.52	53.49	48.57	46.06	43.83	42.90
90.0	72.92	64.37	56.53	52.03	48.63	45.71	43.95	43.13	42.25
135.0	75.26	64.78	58.52	53.14	49.45	46.35	44.24	43.25	42.55
180.0	72.51	64.55	57.00	52.90	49.69	46.82	44.77	44.18	43.07
225.0	59.52	53.90	49.57	46.88	44.54	43.48	42.37	41.38	41.08
270.0	64.73	58.23	51.50	48.11	45.88	43.19	42.25	41.73	40.67
315.0	64.84	58.99	53.20	50.33	47.93	45.65	44.54	44.18	42.90
360.0	69.47	60.69	55.19	50.86	47.93	45.41	43.83	43.01	41.79
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	41.08	40.79	40.20	39.03	37.57	35.41	32.95	30.37	28.38
45.0	42.25	41.26	40.91	40.38	39.44	38.10	36.87	34.00	31.49
90.0	41.38	41.02	40.44	39.44	38.04	36.64	33.71	31.13	29.09
135.0	41.14	40.61	40.50	39.74	38.57	37.28	34.47	32.19	29.79
180.0	42.19	41.96	41.32	40.09	38.74	36.40	33.77	30.67	28.38
225.0	41.02	40.20	38.92	37.28	34.82	32.25	29.44	26.86	24.05
270.0	40.38	40.44	39.97	38.45	37.40	35.23	32.66	29.67	27.33
315.0	42.25	41.96	41.02	39.33	37.98	35.35	31.95	29.67	27.10
360.0	41.08	40.79	40.20	39.03	37.57	35.41	32.95	30.37	28.38
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	25.16	22.77	21.19	19.55	18.55	17.79	17.03	16.50	15.92
45.0	29.44	26.39	23.88	22.00	20.25	19.08	18.08	17.44	16.85
90.0	26.57	23.35	21.71	19.96	18.84	18.08	17.26	16.74	16.15
135.0	26.92	24.29	22.24	20.78	19.25	18.38	17.67	17.09	16.39
180.0	25.57	22.65	21.13	19.78	18.73	17.79	17.15	16.62	16.09
225.0	21.65	20.25	19.08	18.26	17.44	16.91	16.39	15.92	15.39
270.0	24.46	21.77	20.25	19.02	18.02	17.38	16.80	16.21	15.74
315.0	23.58	21.77	20.31	19.14	18.26	17.50	16.91	16.39	15.86
360.0	25.16	22.77	21.19	19.55	18.55	17.79	17.03	16.50	15.92
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.51	15.16	14.81	14.46	14.16	13.93	13.64	13.17	12.87
45.0	16.33	15.74	15.39	15.04	14.69	14.34	14.05	13.75	13.40
90.0	15.68	15.22	14.92	14.57	14.34	13.99	13.69	13.34	12.93
135.0	15.92	15.39	15.04	14.75	14.40	14.10	13.87	13.46	13.17
180.0	15.57	15.22	14.86	14.51	14.22	13.87	13.52	13.23	12.82
225.0	15.04	14.63	14.34	14.10	13.69	13.34	13.05	12.70	12.35
270.0	15.33	14.98	14.57	14.34	14.05	13.75	13.34	13.05	12.76
315.0	15.45	15.10	14.69	14.40	14.05	13.75	13.46	13.11	12.70
360.0	15.51	15.16	14.81	14.46	14.16	13.93	13.64	13.17	12.87
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.58	12.17	11.88	11.53	11.29	11.06	10.83	10.59	10.36
45.0	12.99	12.58	12.23	11.82	11.53	11.29	11.06	10.89	10.65
90.0	12.58	12.23	11.88	11.59	11.29	11.12	10.89	10.71	10.53
135.0	12.82	12.41	12.06	11.70	11.41	11.18	11.00	10.77	10.53
180.0	12.47	12.17	11.76	11.53	11.24	10.94	10.77	10.48	10.30
225.0	12.00	11.65	11.47	11.18	10.94	10.71	10.48	10.30	10.30
270.0	12.35	12.06	11.65	11.47	11.18	10.94	10.71	10.48	10.36
315.0	12.35	12.00	11.76	11.47	11.18	10.94	10.71	10.53	10.42
360.0	12.58	12.17	11.88	11.53	11.29	11.06	10.83	10.59	10.36

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.36
45.0	10.48
90.0	10.36
135.0	10.36
180.0	10.30
225.0	10.36
270.0	10.36
315.0	10.42
360.0	10.36