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NT

Client:

LumCAT: 2-2686-L

Luminaire: 92.70.411.00

Report No: 2024424-B009

Ballast type: AC

Test No: 2024424-C009

Voltage(V): 36.580

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 21.070

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2459.74, Efficiency(%): 84.12% , Luminous Efficacy(lm/W): 116.74

Central intensity(cd): 13134.500, Maximum intensity(cd): 13134.500

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=18.2

[C90/270]Total=18.2

Field angle(10%Imax): [C0/180]Total=45.6

[C90/270]Total=45.6

Maximum s/h(1/2): C0_180=0.31 C90_270=0.31

Maximum s/h(1/4): C0_180=0.33 C90_270=0.33

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.12%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.975%

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	13134.497	0.000	0	0.00%	0.00%
1.0	13029.157	12.519	12.519	0.43%	0.51%
2.0	12247.838	36.280	48.799	1.24%	1.98%
3.0	12020.331	58.041	106.84	1.99%	4.34%
4.0	11507.674	78.756	185.596	2.69%	7.55%
5.0	10652.441	95.332	280.928	3.26%	11.42%
6.0	9720.909	107.067	387.995	3.66%	15.77%
7.0	8722.296	114.477	502.472	3.92%	20.43%
8.0	7676.060	117.360	619.832	4.01%	25.20%
9.0	6667.205	116.244	736.076	3.98%	29.92%
10.0	5770.494	112.557	848.633	3.85%	34.50%
11.0	4922.869	106.849	955.481	3.65%	38.84%
12.0	4219.867	99.943	1055.424	3.42%	42.91%
13.0	3627.839	93.132	1148.557	3.19%	46.69%
14.0	3161.342	86.901	1235.458	2.97%	50.23%
15.0	2828.934	82.237	1317.695	2.81%	53.57%
16.0	2686.578	80.818	1398.513	2.76%	56.86%
17.0	2342.999	78.324	1476.837	2.68%	60.04%
18.0	2069.487	72.752	1549.589	2.49%	63.00%
19.0	1892.237	68.926	1618.515	2.36%	65.80%
20.0	1720.986	66.132	1684.647	2.26%	68.49%
21.0	1581.483	63.414	1748.061	2.17%	71.07%
22.0	1440.224	60.722	1808.784	2.08%	73.54%
23.0	1271.855	56.907	1865.69	1.95%	75.85%
24.0	1208.204	54.223	1919.913	1.85%	78.05%
25.0	1124.290	53.036	1972.949	1.81%	80.21%
26.0	1021.093	50.642	2023.591	1.73%	82.27%
27.0	913.865	47.339	2070.93	1.62%	84.19%
28.0	806.703	43.561	2114.492	1.49%	85.96%
29.0	703.550	39.512	2154.004	1.35%	87.57%
30.0	605.262	35.338	2189.342	1.21%	89.01%
31.0	513.367	31.130	2220.471	1.06%	90.27%
32.0	436.636	27.216	2247.688	0.93%	91.38%
33.0	364.376	23.598	2271.286	0.81%	92.34%
34.0	299.913	20.103	2291.389	0.69%	93.16%
35.0	263.103	17.485	2308.875	0.60%	93.87%
36.0	218.121	15.322	2324.197	0.52%	94.49%
37.0	163.000	12.430	2336.627	0.43%	94.99%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	124.953	9.611	2346.238	0.33%	95.39%
39.0	99.598	7.665	2353.903	0.26%	95.70%
40.0	79.276	6.238	2360.141	0.21%	95.95%
41.0	63.482	5.084	2365.225	0.17%	96.16%
42.0	52.217	4.204	2369.428	0.14%	96.33%
43.0	44.206	3.572	2373	0.12%	96.47%
44.0	39.064	3.143	2376.143	0.11%	96.60%
45.0	35.011	2.847	2378.99	0.10%	96.72%
46.0	32.195	2.628	2381.618	0.09%	96.82%
47.0	29.759	2.464	2384.082	0.08%	96.92%
48.0	27.710	2.323	2386.405	0.08%	97.02%
49.0	25.977	2.205	2388.61	0.08%	97.11%
50.0	24.631	2.110	2390.72	0.07%	97.19%
51.0	23.431	2.033	2392.754	0.07%	97.28%
52.0	22.524	1.972	2394.725	0.07%	97.36%
53.0	21.792	1.928	2396.653	0.07%	97.44%
54.0	21.251	1.897	2398.55	0.06%	97.51%
55.0	20.841	1.879	2400.429	0.06%	97.59%
56.0	20.585	1.872	2402.301	0.06%	97.66%
57.0	20.439	1.876	2404.177	0.06%	97.74%
58.0	20.432	1.890	2406.067	0.06%	97.82%
59.0	20.505	1.914	2407.981	0.07%	97.90%
60.0	20.666	1.945	2409.926	0.07%	97.97%
61.0	20.761	1.977	2411.903	0.07%	98.06%
62.0	20.768	2.001	2413.904	0.07%	98.14%
63.0	20.585	2.011	2415.915	0.07%	98.22%
64.0	20.168	2.000	2417.915	0.07%	98.30%
65.0	19.590	1.968	2419.883	0.07%	98.38%
66.0	18.771	1.914	2421.797	0.07%	98.46%
67.0	17.974	1.848	2423.644	0.06%	98.53%
68.0	17.184	1.781	2425.425	0.06%	98.60%
69.0	16.657	1.726	2427.152	0.06%	98.67%
70.0	16.379	1.697	2428.848	0.06%	98.74%
71.0	16.598	1.704	2430.553	0.06%	98.81%
72.0	16.935	1.744	2432.296	0.06%	98.88%
73.0	17.367	1.794	2434.09	0.06%	98.96%
74.0	17.718	1.844	2435.934	0.06%	99.03%
75.0	17.893	1.882	2437.816	0.06%	99.11%

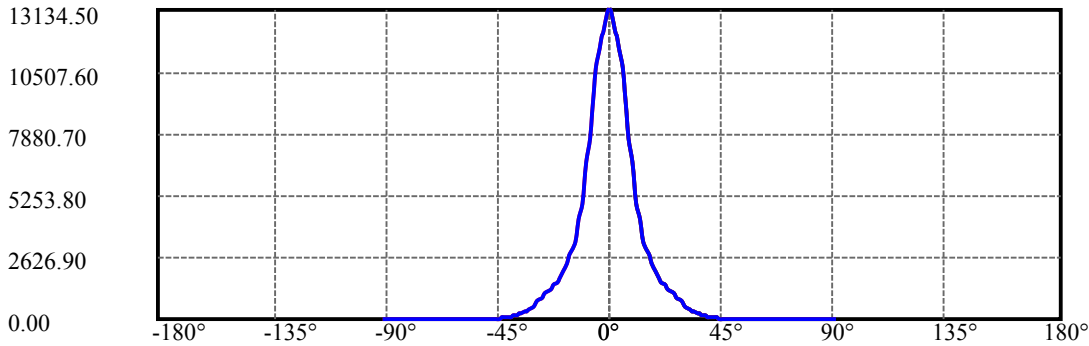
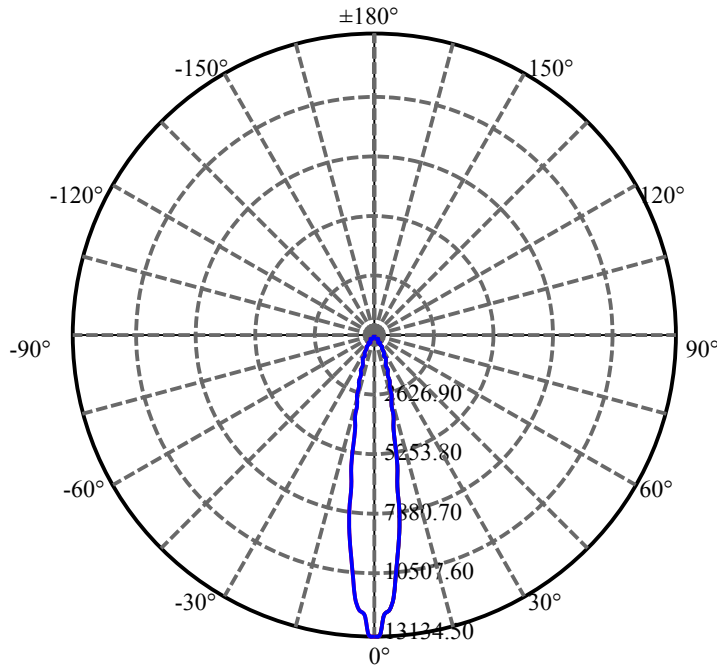
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	17.857	1.898	2439.714	0.06%	99.19%
77.0	17.630	1.892	2441.606	0.06%	99.26%
78.0	17.169	1.863	2443.469	0.06%	99.34%
79.0	16.459	1.807	2445.275	0.06%	99.41%
80.0	15.326	1.714	2446.989	0.06%	99.48%
81.0	13.819	1.576	2448.565	0.05%	99.55%
82.0	12.451	1.425	2449.99	0.05%	99.60%
83.0	11.887	1.323	2451.313	0.05%	99.66%
84.0	11.653	1.282	2452.595	0.04%	99.71%
85.0	11.419	1.259	2453.854	0.04%	99.76%
86.0	11.031	1.227	2455.082	0.04%	99.81%
87.0	10.775	1.193	2456.275	0.04%	99.86%
88.0	10.600	1.171	2457.446	0.04%	99.91%
89.0	10.468	1.155	2458.601	0.04%	99.95%
90.0	10.395	1.144	2459.745	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2189.34	74.87%	89.01%
0-40	2360.14	80.72%	95.95%
0-60	2409.93	82.42%	97.97%
0-90	2458.60	84.08%	99.95%
0-120	2458.60	84.08%	99.95%
0-180	2459.74	84.12%	100.00%
60-90	48.67	1.66%	1.98%
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%
0-24.90	1967.80	67.30%	80.00%

ZONAL LUMEN SUMMARY

0-10	848.63
10-20	836.01
20-30	504.69
30-40	170.80
40-50	30.58
50-60	19.21
60-70	18.92
70-80	18.14
80-90	11.61
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



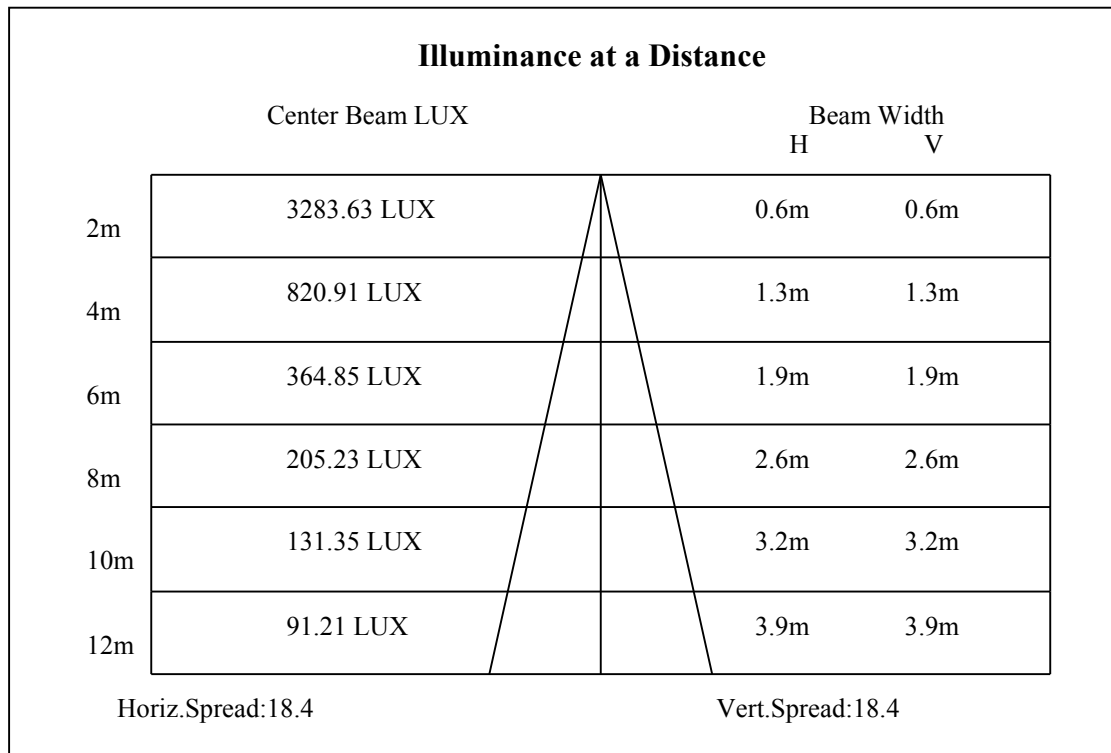
C0(Max): —————

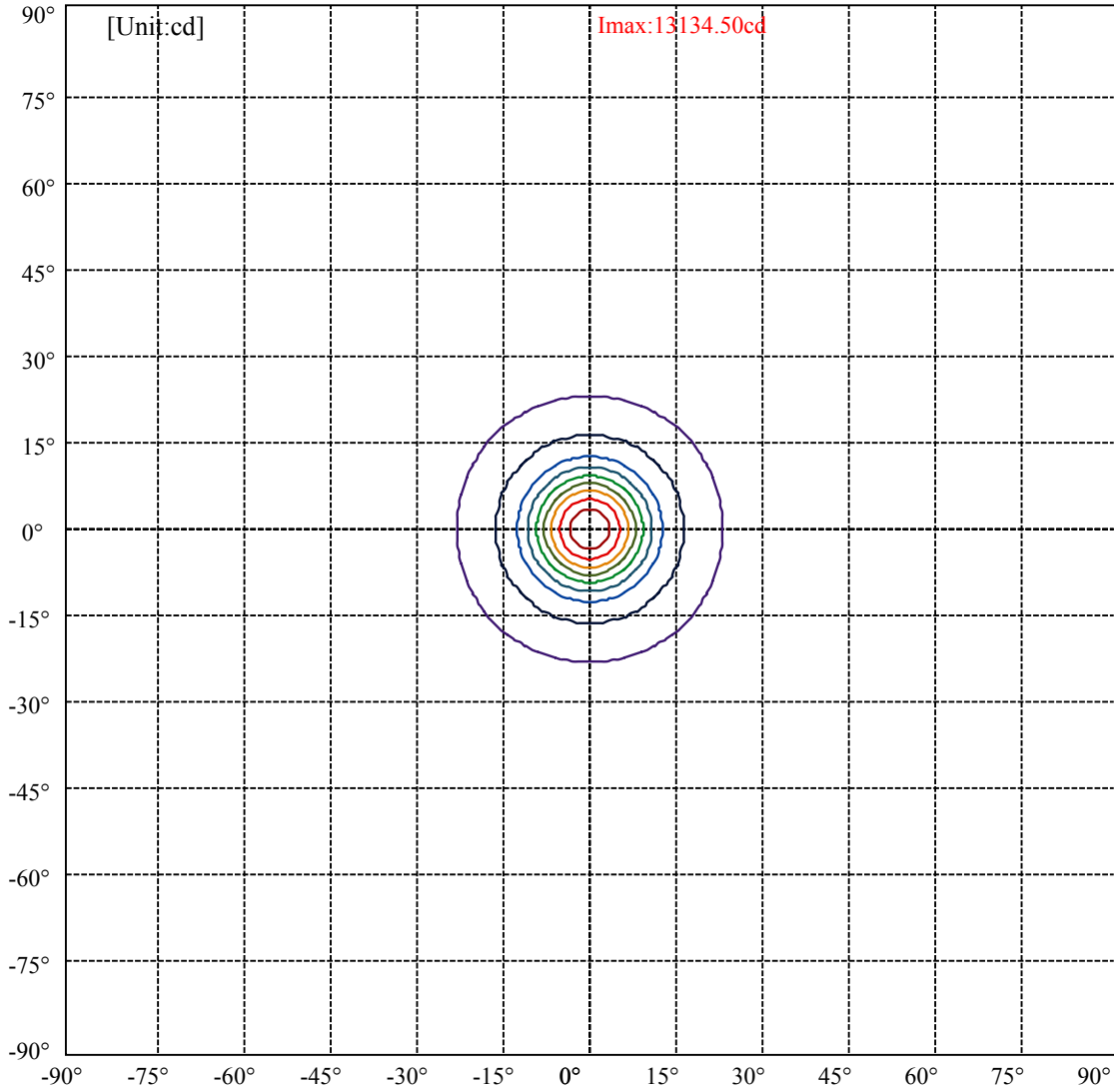
C0/C180: —————

C90/C270: —————

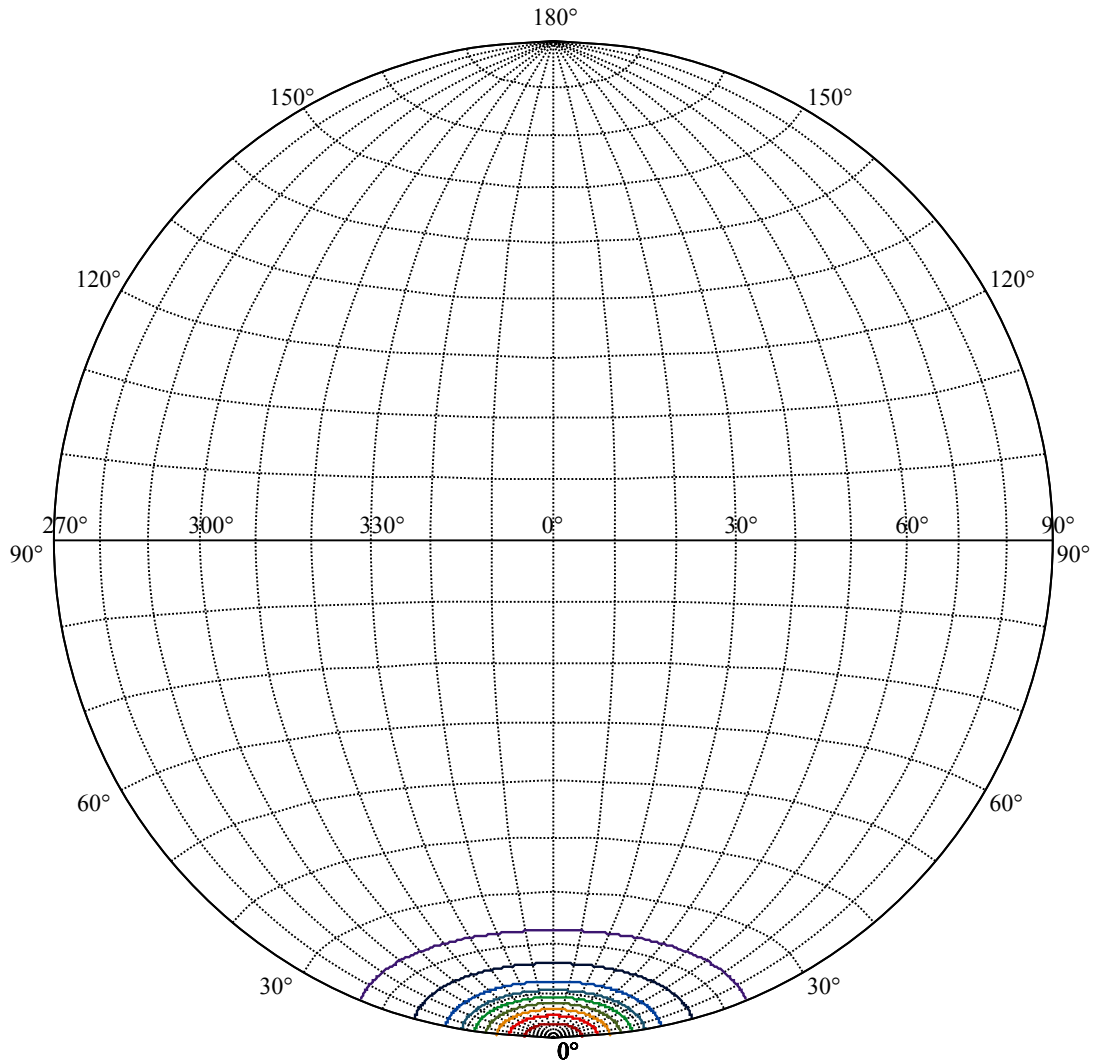
Field angle(10%Imax):C0/180Left:22.8 Right:22.8
:C90/270Left:22.8 Right:22.8

Beam Angle(50%Imax):C0/180Left:9.1 Right:9.1
:C90/270Left:9.1 Right:9.1





(10%I _{max}) 1313.45	—
(20%I _{max}) 2626.9	—
(30%I _{max}) 3940.35	—
(40%I _{max}) 5253.8	—
(50%I _{max}) 6567.25	—
(60%I _{max}) 7880.7	—
(70%I _{max}) 9194.15	—
(80%I _{max}) 10507.6	—
(90%I _{max}) 11821	—



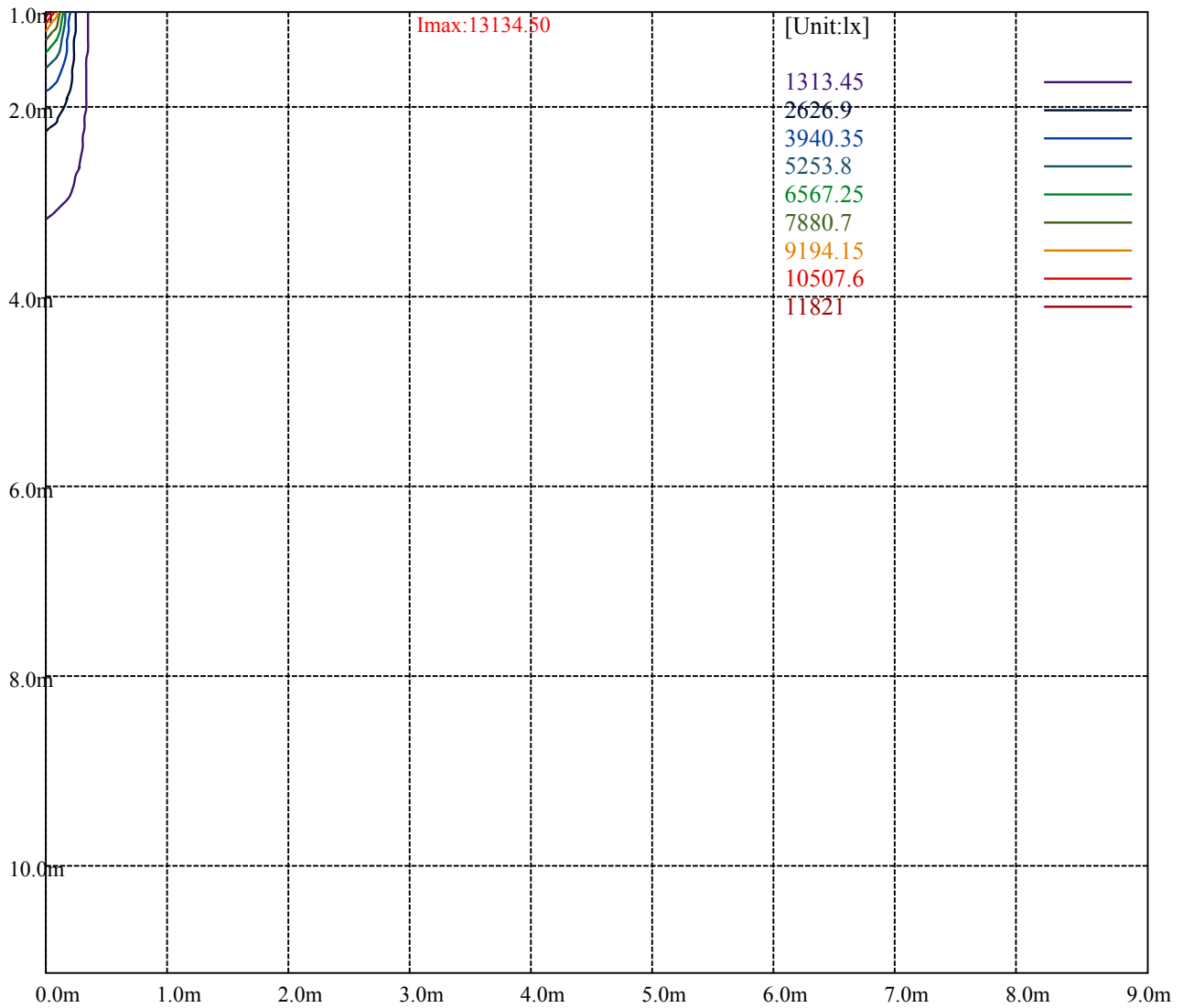
House

[Unit:cd]

Road

Imax:13134.50

(10%Imax)	1313.45	—
(20%Imax)	2626.9	—
(30%Imax)	3940.35	—
(40%Imax)	5253.8	—
(50%Imax)	6567.25	—
(60%Imax)	7880.7	—
(70%Imax)	9194.15	—
(80%Imax)	10507.6	—
(90%Imax)	11821	—



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

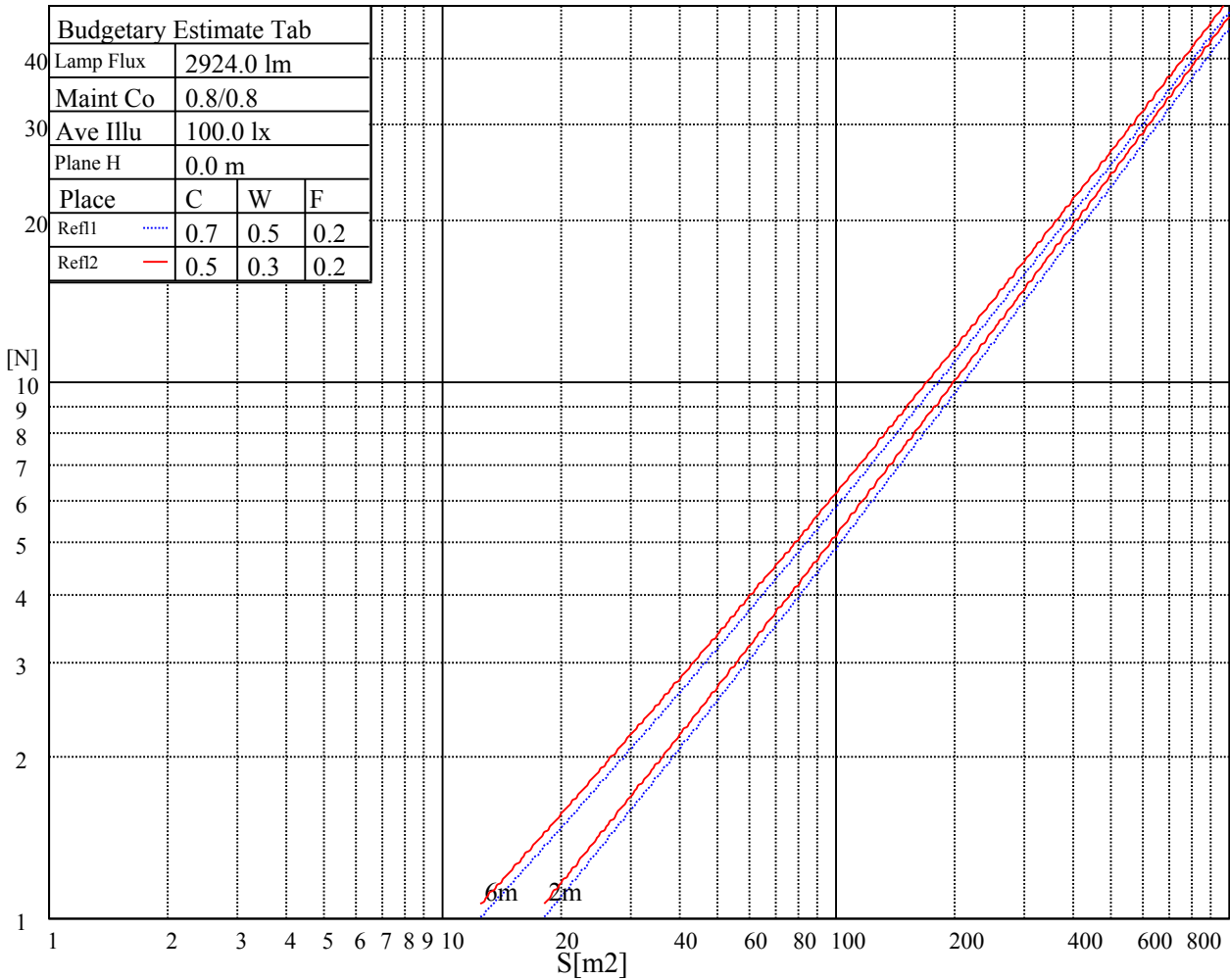
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

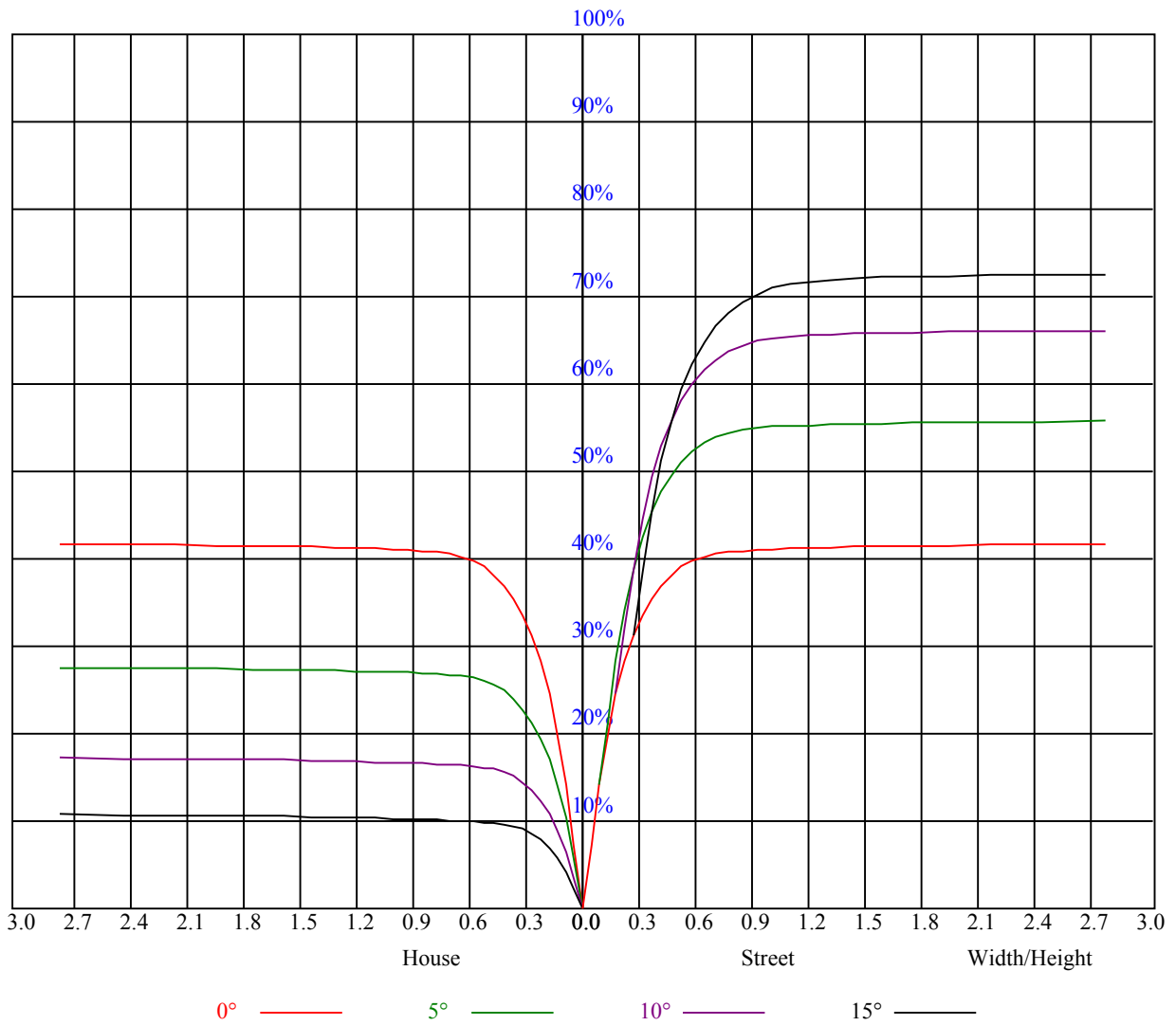
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

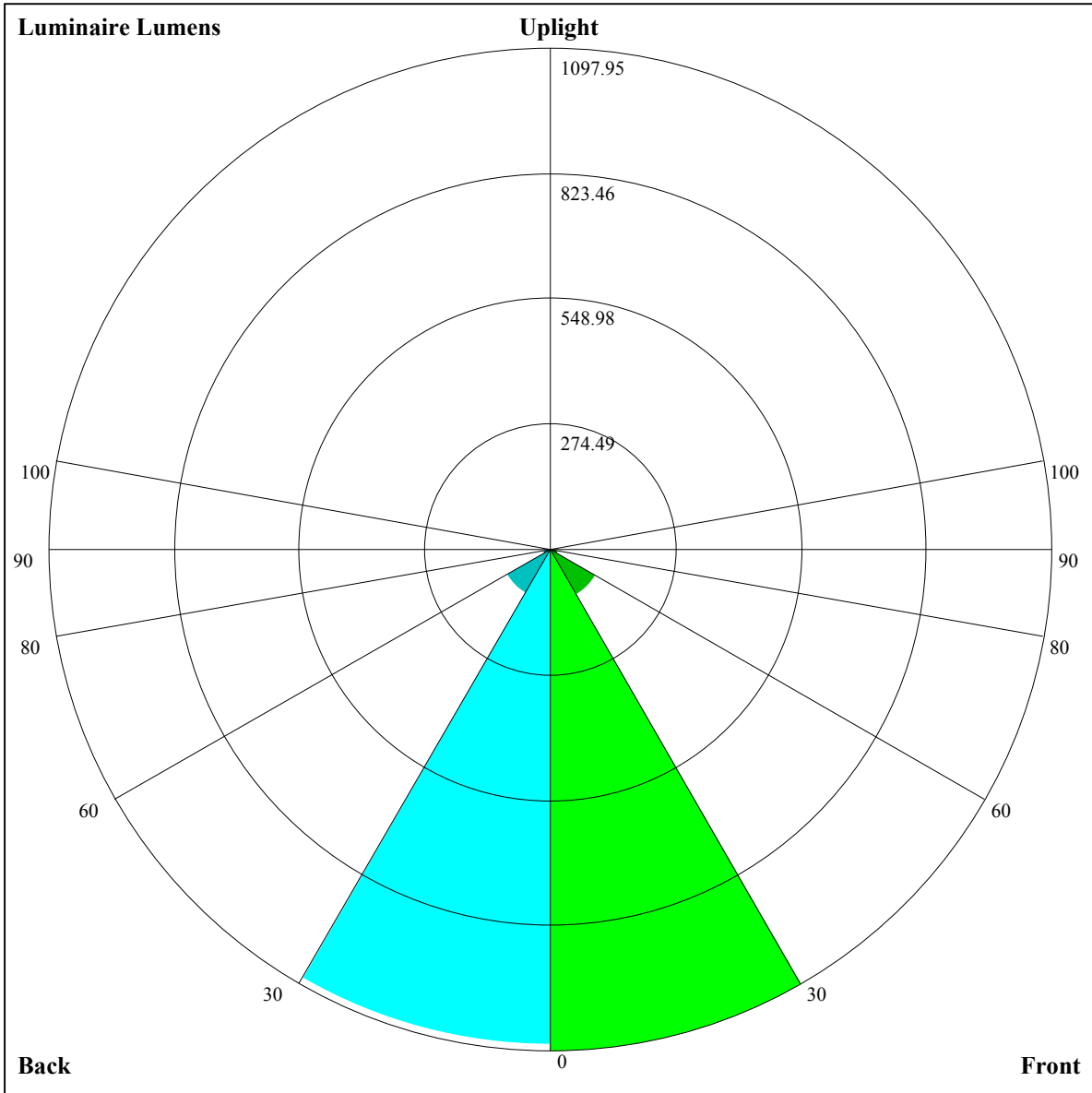
Luminance Limiting Curve





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	1.00	1.00	1.00	0.98	0.98	0.98	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.84
1	0.94	0.92	0.91	0.92	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	0.80	0.80	0.79	0.78	0.77
3	0.85	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	0.74
4	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.76	0.73	0.72	0.71
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
7	0.72	0.68	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.64
8	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.62
9	0.67	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.61	0.60
10	0.65	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58





Luminaire Lumens:

FL=1097.95,FM=113.35,FH=18.35,FVH=6.4

BL=1086.2,BM=110.11,BH=18.84,BVH=6.48

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	13165.22	12919.43	11640.77	11640.77	11275.00	10240.91	9349.61	8413.84	7476.89
45.0	13094.99	13124.26	12942.84	12597.55	11936.25	11222.27	10414.66	9291.03	8354.67
90.0	13124.26	12925.28	11530.75	11530.75	11154.45	10118.01	9215.60	8259.92	7067.82
135.0	13153.52	13089.14	12837.50	12287.38	11672.90	10906.25	10057.68	8910.64	7950.87
180.0	13165.22	13124.26	12808.23	12381.02	11784.09	10865.29	9999.15	9056.94	8073.76
225.0	13094.99	12860.90	11658.33	11658.33	10921.53	10050.71	8872.65	7888.89	6932.63
270.0	13124.26	13141.81	12977.95	12480.51	11912.84	11210.57	10391.26	9460.75	8255.18
315.0	13153.52	13048.18	11586.34	11586.34	11404.34	10605.51	9466.66	8496.36	7296.64
360.0	13165.22	12919.43	11640.77	11640.77	11275.00	10240.91	9349.61	8413.84	7476.89
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6352.09	5512.88	4762.62	4131.75	3495.02	3098.24	2771.68	2445.13	2240.30
45.0	7418.31	6505.36	5645.08	4714.57	4082.53	3450.49	3046.68	2958.90	2958.90
90.0	6160.14	5314.49	4422.60	3847.33	3370.95	2987.63	2612.50	2373.15	2172.41
135.0	6786.27	5914.28	5106.67	4263.95	3719.69	3274.92	2988.16	2988.16	2327.50
180.0	6903.31	6002.07	5171.05	4451.22	3731.39	3280.77	2999.86	2999.86	2332.77
225.0	6025.54	5211.49	4323.70	3759.54	3301.90	2848.93	2561.59	2328.08	2134.37
270.0	7312.97	6165.93	5334.91	4591.68	3819.18	3339.29	2953.05	2953.05	2345.06
315.0	6379.01	5537.46	4616.31	3998.90	3502.04	3010.46	2697.95	2446.30	2232.69
360.0	6352.09	5512.88	4762.62	4131.75	3495.02	3098.24	2771.68	2445.13	2240.30
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2012.65	1853.47	1707.75	1571.39	1423.91	1165.07	1165.07	1118.42	996.40
45.0	2201.09	2022.60	1822.45	1677.31	1547.39	1433.27	1303.94	1207.38	1110.82
90.0	1998.02	1801.38	1659.76	1500.58	1386.46	1154.18	1154.18	1057.44	960.88
135.0	2134.96	1965.24	1772.12	1632.84	1508.18	1395.23	1263.56	1162.90	1061.66
180.0	2136.13	1912.57	1748.71	1607.09	1453.17	1344.91	1246.00	1128.96	1025.96
225.0	1920.77	1764.51	1590.11	1467.22	1282.29	1153.83	1130.95	1033.74	938.47
270.0	2147.25	1973.44	1768.61	1629.32	1500.58	1384.12	1257.71	1165.24	1072.78
315.0	2005.04	1844.69	1698.38	1566.12	1419.81	1144.23	1144.23	1120.24	1001.79
360.0	2012.65	1853.47	1707.75	1571.39	1423.91	1165.07	1165.07	1118.42	996.40
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	898.73	801.06	703.62	587.16	509.50	420.84	354.47	294.49	243.40
45.0	1011.91	889.60	790.70	694.72	585.87	509.79	437.22	354.12	295.01
90.0	837.57	738.03	644.16	560.12	467.01	397.72	333.75	277.51	217.24
135.0	932.91	831.08	707.01	616.30	534.37	460.05	374.60	313.15	299.11
180.0	933.49	836.35	711.69	613.96	530.27	454.78	366.41	305.55	305.55
225.0	815.57	718.54	624.26	537.06	442.66	373.43	311.16	245.79	202.14
270.0	975.04	855.66	761.44	639.71	546.66	459.46	388.06	319.01	303.79
315.0	905.69	783.32	685.53	593.07	490.59	417.03	349.32	289.69	238.60
360.0	898.73	801.06	703.62	587.16	509.50	420.84	354.47	294.49	243.40
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	190.14	155.26	119.03	95.45	77.07	62.91	52.61	43.60	38.86
45.0	295.01	233.10	150.75	120.32	96.56	73.56	60.16	50.45	43.54
90.0	177.38	143.67	109.09	87.43	71.10	55.83	47.29	41.14	35.82
135.0	299.11	162.87	131.50	105.34	80.06	64.96	53.96	44.59	39.68
180.0	194.35	159.82	123.54	99.96	80.41	65.14	51.62	44.30	39.27
225.0	157.66	128.69	104.64	80.12	64.73	53.31	45.18	38.57	35.00
270.0	245.21	168.60	136.94	112.13	86.55	69.12	56.88	47.81	41.84
315.0	186.10	151.98	124.13	96.04	77.72	63.03	50.04	43.19	38.51
360.0	190.14	155.26	119.03	95.45	77.07	62.91	52.61	43.60	38.86

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	35.29	32.54	29.67	27.86	25.87	24.58	23.58	22.47	21.83
45.0	37.75	34.35	31.60	28.73	26.86	25.28	23.70	22.77	21.95
90.0	32.66	30.20	28.09	26.04	24.64	23.47	22.36	21.71	21.19
135.0	35.17	32.36	30.08	28.15	26.16	24.87	23.82	23.00	22.24
180.0	35.70	32.13	29.90	28.03	26.45	24.81	23.70	22.59	21.89
225.0	32.19	29.96	27.62	25.98	24.64	23.53	22.36	21.59	20.89
270.0	36.87	33.94	31.13	29.14	26.98	25.57	24.35	23.35	22.30
315.0	34.47	32.07	29.96	27.74	26.22	24.93	23.58	22.71	22.06
360.0	35.29	32.54	29.67	27.86	25.87	24.58	23.58	22.47	21.83
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	21.24	20.78	20.48	20.37	20.37	20.48	20.66	20.72	20.66
45.0	21.19	20.78	20.48	20.25	20.19	20.25	20.42	20.60	20.66
90.0	20.78	20.48	20.37	20.31	20.37	20.48	20.60	20.66	20.60
135.0	21.77	21.42	21.19	21.07	21.01	21.07	21.24	21.30	21.36
180.0	21.42	20.95	20.72	20.60	20.60	20.66	20.83	20.95	20.95
225.0	20.48	20.19	20.01	19.96	20.07	20.25	20.42	20.54	20.48
270.0	21.59	21.13	20.72	20.42	20.31	20.25	20.37	20.48	20.60
315.0	21.54	21.01	20.72	20.54	20.54	20.60	20.78	20.83	20.83
360.0	21.24	20.78	20.48	20.37	20.37	20.48	20.66	20.72	20.66
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	20.42	19.96	19.43	18.38	17.67	16.97	16.21	16.04	16.62
45.0	20.60	20.31	19.78	19.14	18.38	17.44	16.68	15.92	15.51
90.0	20.31	19.84	19.08	18.32	17.56	16.74	16.27	16.15	16.62
135.0	21.19	20.89	20.37	19.66	18.67	17.91	17.32	16.68	16.56
180.0	20.78	20.48	20.01	19.08	18.32	17.56	17.73	18.43	19.66
225.0	20.19	19.55	18.84	18.02	17.09	16.44	15.74	15.27	14.92
270.0	20.54	20.25	19.72	18.84	18.14	17.32	16.74	16.33	16.56
315.0	20.66	20.07	19.49	18.73	17.97	17.09	16.56	16.21	16.33
360.0	20.42	19.96	19.43	18.38	17.67	16.97	16.21	16.04	16.62
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	17.09	17.21	17.03	16.68	16.15	15.74	15.22	14.81	13.81
45.0	15.04	14.75	14.46	14.16	13.99	13.75	13.46	13.23	12.93
90.0	17.50	18.61	19.37	19.90	20.07	20.13	19.78	18.61	16.68
135.0	16.91	17.91	18.90	19.78	20.66	20.89	20.37	19.43	18.08
180.0	20.54	20.83	20.78	20.37	19.72	19.14	18.49	17.67	17.03
225.0	14.63	14.34	14.05	13.81	13.58	13.28	13.05	12.82	12.52
270.0	17.09	17.79	18.79	19.31	19.25	18.84	18.43	17.67	15.86
315.0	16.68	17.50	18.38	19.14	19.43	19.25	18.55	17.44	15.68
360.0	17.09	17.21	17.03	16.68	16.15	15.74	15.22	14.81	13.81
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.64	12.06	11.70	11.53	11.29	11.12	10.77	10.59	10.42
45.0	12.64	12.41	12.11	11.82	11.65	11.24	10.94	10.71	10.59
90.0	14.10	12.17	11.88	11.70	11.24	11.00	10.71	10.59	10.42
135.0	16.33	13.69	11.88	11.59	11.47	11.00	10.77	10.59	10.42
180.0	15.51	12.82	11.88	11.65	11.41	10.94	10.77	10.59	10.53
225.0	12.29	12.00	11.82	11.59	11.12	10.83	10.65	10.53	10.42
270.0	13.93	12.35	12.06	11.88	11.82	11.12	10.83	10.65	10.59
315.0	13.11	12.11	11.76	11.47	11.35	11.00	10.77	10.53	10.36
360.0	12.64	12.06	11.70	11.53	11.29	11.12	10.77	10.59	10.42

Intensity data(cd)

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