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NT

Client:

LumCAT: 3-2806-L

Luminaire: 92.70.411.00

Report No: 2024424-B018

Ballast type: AC

Test No: 2024424-C018

Voltage(V): 36.350

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.937

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2434.51, Efficiency(%): 83.26% , Luminous Efficacy(lm/W): 116.28

Central intensity(cd): 8388.382, Maximum intensity(cd): 8388.382

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.8

[C90/270]Total=23.8

Field angle(10%Imax): [C0/180]Total=58.8

[C90/270]Total=58.8

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.46 C90_270=0.46

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.571%

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	8388.381	0.000	0	0.00%	0.00%
1.0	8353.999	8.011	8.011	0.27%	0.33%
2.0	8222.982	23.793	31.804	0.81%	1.31%
3.0	8012.155	38.829	70.633	1.33%	2.90%
4.0	7690.281	52.561	123.194	1.80%	5.06%
5.0	7309.665	64.529	187.723	2.21%	7.71%
6.0	6849.898	74.412	262.135	2.54%	10.77%
7.0	6357.358	81.977	344.112	2.80%	14.13%
8.0	5862.111	87.452	431.565	2.99%	17.73%
9.0	5394.736	91.231	522.795	3.12%	21.47%
10.0	4936.578	93.495	616.29	3.20%	25.31%
11.0	4534.382	94.634	710.924	3.24%	29.20%
12.0	4141.988	94.845	805.77	3.24%	33.10%
13.0	3778.417	93.995	899.765	3.21%	36.96%
14.0	3448.277	92.501	992.266	3.16%	40.76%
15.0	3161.517	90.742	1083.008	3.10%	44.49%
16.0	2898.678	88.799	1171.807	3.04%	48.13%
17.0	2656.907	86.515	1258.322	2.96%	51.69%
18.0	2440.227	84.041	1342.363	2.87%	55.14%
19.0	2254.199	81.673	1424.036	2.79%	58.49%
20.0	2076.803	79.269	1503.306	2.71%	61.75%
21.0	1904.673	76.452	1579.758	2.61%	64.89%
22.0	1748.638	73.415	1653.173	2.51%	67.91%
23.0	1581.336	69.872	1723.045	2.39%	70.78%
24.0	1332.630	63.710	1786.755	2.18%	73.39%
25.0	1254.064	58.816	1845.57	2.01%	75.81%
26.0	1153.427	56.829	1902.4	1.94%	78.14%
27.0	1047.297	53.841	1956.241	1.84%	80.35%
28.0	968.745	51.042	2007.283	1.75%	82.45%
29.0	878.862	48.339	2055.621	1.65%	84.44%
30.0	783.346	44.879	2100.5	1.53%	86.28%
31.0	678.890	40.692	2141.192	1.39%	87.95%
32.0	580.850	36.090	2177.282	1.23%	89.43%
33.0	472.372	31.028	2208.311	1.06%	90.71%
34.0	368.509	25.448	2233.758	0.87%	91.75%
35.0	278.428	20.091	2253.85	0.69%	92.58%
36.0	232.108	16.256	2270.105	0.56%	93.25%
37.0	164.302	12.929	2283.034	0.44%	93.78%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	104.667	8.978	2292.012	0.31%	94.15%
39.0	91.712	6.703	2298.715	0.23%	94.42%
40.0	82.926	6.091	2304.806	0.21%	94.67%
41.0	75.750	5.650	2310.456	0.19%	94.90%
42.0	69.371	5.273	2315.728	0.18%	95.12%
43.0	63.585	4.925	2320.654	0.17%	95.32%
44.0	58.727	4.616	2325.27	0.16%	95.51%
45.0	53.943	4.330	2329.6	0.15%	95.69%
46.0	49.898	4.061	2333.661	0.14%	95.86%
47.0	46.408	3.830	2337.491	0.13%	96.01%
48.0	43.204	3.623	2341.114	0.12%	96.16%
49.0	40.541	3.439	2344.553	0.12%	96.30%
50.0	37.908	3.271	2347.824	0.11%	96.44%
51.0	35.852	3.121	2350.945	0.11%	96.57%
52.0	33.994	2.997	2353.942	0.10%	96.69%
53.0	32.458	2.891	2356.832	0.10%	96.81%
54.0	31.061	2.800	2359.632	0.10%	96.92%
55.0	29.956	2.724	2362.356	0.09%	97.04%
56.0	28.991	2.664	2365.019	0.09%	97.15%
57.0	28.405	2.624	2367.644	0.09%	97.25%
58.0	27.915	2.604	2370.248	0.09%	97.36%
59.0	27.308	2.582	2372.83	0.09%	97.47%
60.0	26.811	2.557	2375.387	0.09%	97.57%
61.0	26.233	2.531	2377.918	0.09%	97.68%
62.0	25.201	2.478	2380.396	0.08%	97.78%
63.0	24.162	2.401	2382.797	0.08%	97.88%
64.0	23.255	2.327	2385.124	0.08%	97.97%
65.0	22.217	2.250	2387.374	0.08%	98.06%
66.0	21.331	2.173	2389.547	0.07%	98.15%
67.0	20.754	2.116	2391.663	0.07%	98.24%
68.0	20.263	2.078	2393.741	0.07%	98.33%
69.0	20.154	2.062	2395.803	0.07%	98.41%
70.0	20.512	2.089	2397.891	0.07%	98.50%
71.0	21.178	2.155	2400.046	0.07%	98.58%
72.0	21.822	2.236	2402.282	0.08%	98.68%
73.0	22.560	2.321	2404.603	0.08%	98.77%
74.0	23.021	2.396	2406.999	0.08%	98.87%
75.0	23.211	2.443	2409.442	0.08%	98.97%

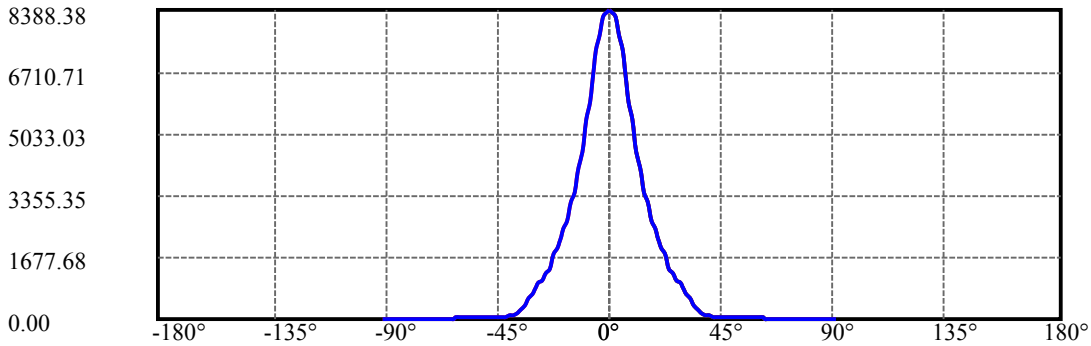
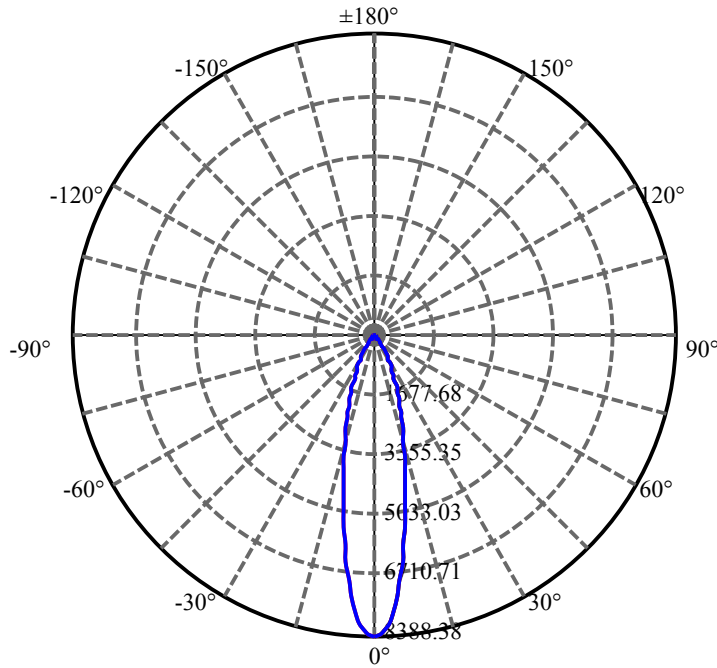
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	23.094	2.458	2411.9	0.08%	99.07%
77.0	22.721	2.443	2414.343	0.08%	99.17%
78.0	21.902	2.389	2416.731	0.08%	99.27%
79.0	20.585	2.283	2419.014	0.08%	99.36%
80.0	18.713	2.119	2421.133	0.07%	99.45%
81.0	15.896	1.872	2423.005	0.06%	99.53%
82.0	13.460	1.592	2424.596	0.05%	99.59%
83.0	12.378	1.405	2426.001	0.05%	99.65%
84.0	12.056	1.331	2427.332	0.05%	99.71%
85.0	11.653	1.294	2428.626	0.04%	99.76%
86.0	11.134	1.246	2429.872	0.04%	99.81%
87.0	10.754	1.198	2431.07	0.04%	99.86%
88.0	10.505	1.164	2432.234	0.04%	99.91%
89.0	10.366	1.144	2433.378	0.04%	99.95%
90.0	10.351	1.136	2434.514	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2100.50	71.84%	86.28%
0-40	2304.81	78.82%	94.67%
0-60	2375.39	81.24%	97.57%
0-90	2433.38	83.22%	99.95%
0-120	2433.38	83.22%	99.95%
0-180	2434.51	83.26%	100.00%
60-90	57.99	1.98%	2.38%
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%
0-26.84	1947.61	66.61%	80.00%

ZONAL LUMEN SUMMARY

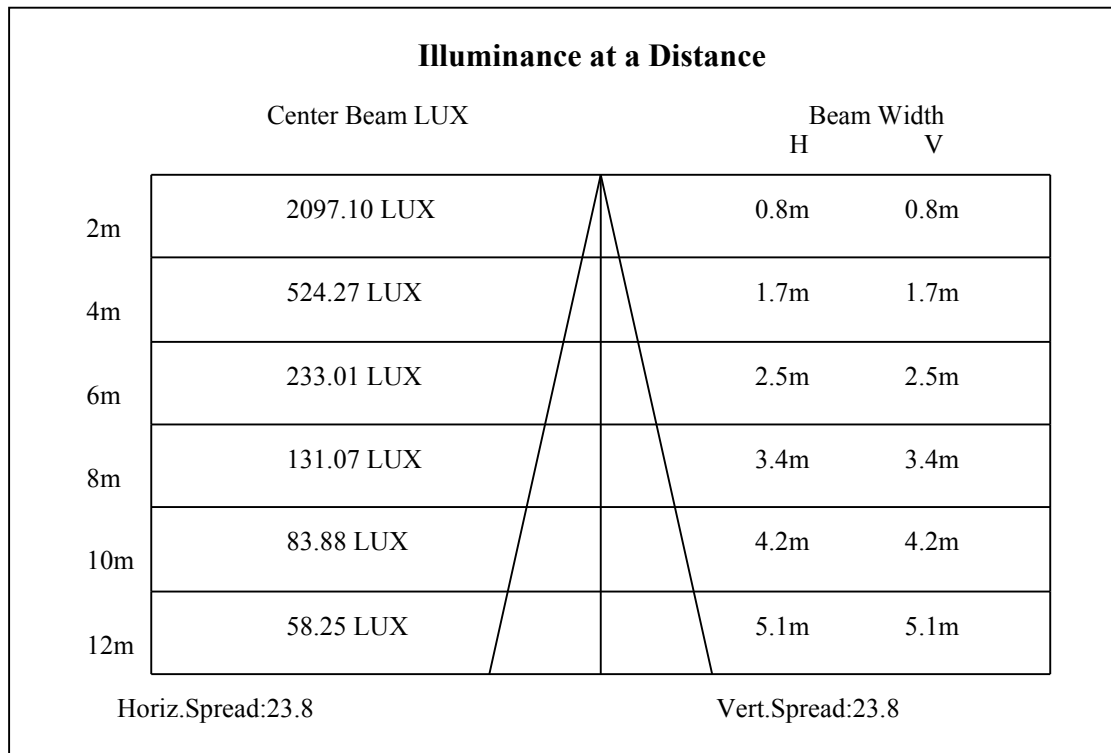
0-10	616.29
10-20	887.02
20-30	597.19
30-40	204.31
40-50	43.02
50-60	27.56
60-70	22.50
70-80	23.24
80-90	12.25
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

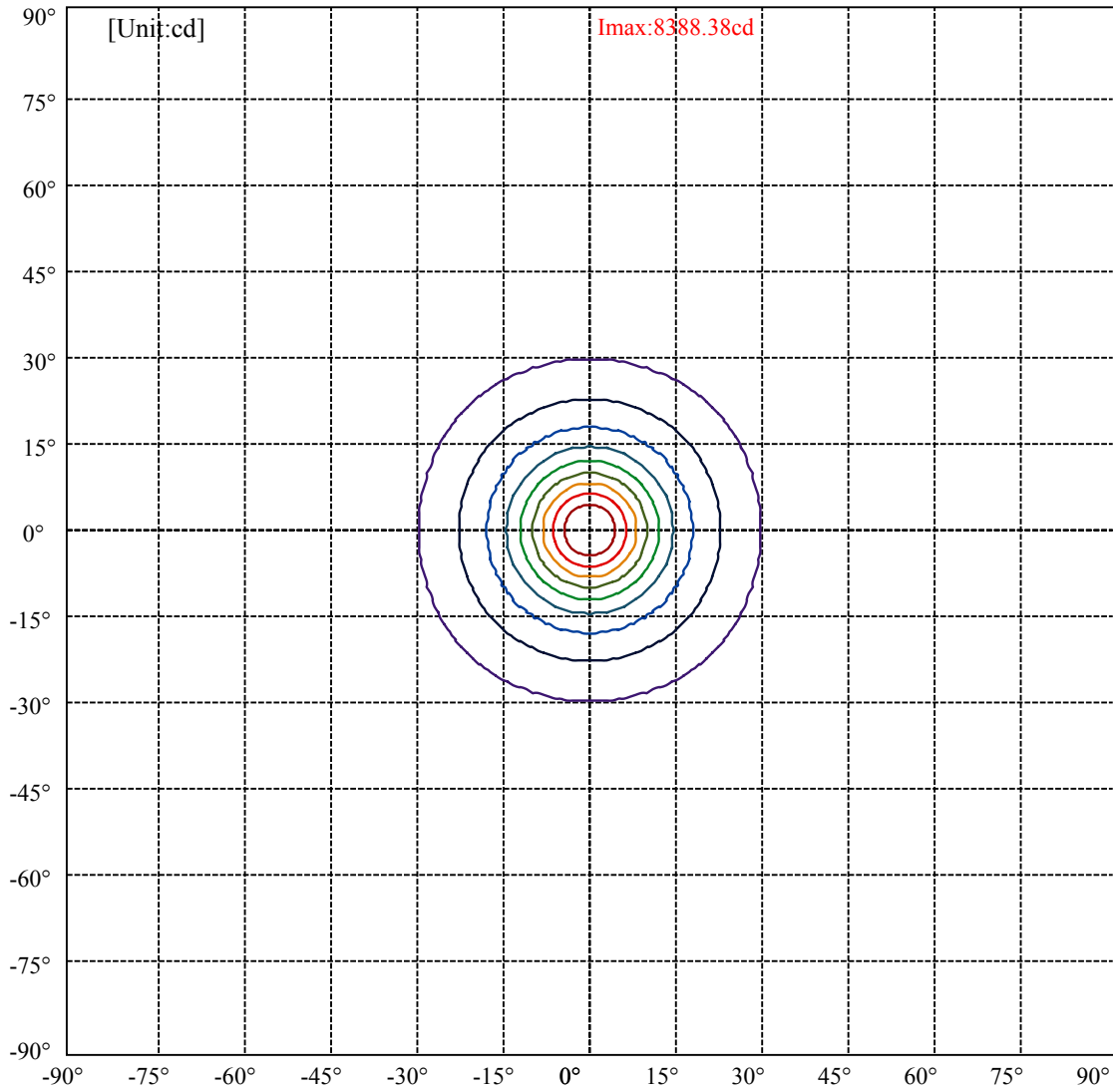


C0(Max): ———
C0/C180: ———
C90/C270: ———

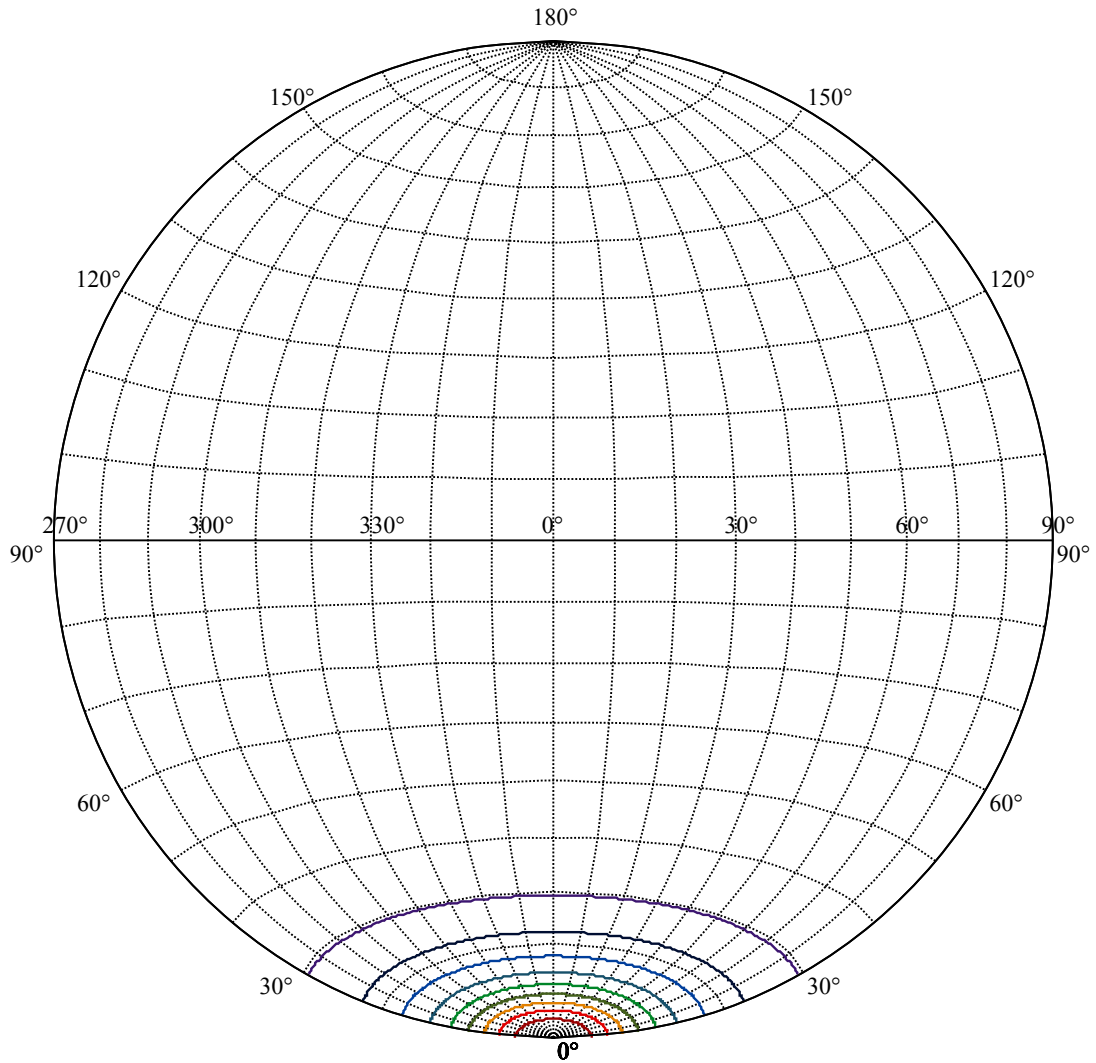
Field angle(10%Imax):C0/180Left:29.4 Right:29.4
:C90/270Left:29.4 Right:29.4

Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9
:C90/270Left:11.9 Right:11.9





(10%Imax) 838.838	—
(20%Imax) 1677.68	—
(30%Imax) 2516.51	—
(40%Imax) 3355.35	—
(50%Imax) 4194.19	—
(60%Imax) 5033.03	—
(70%Imax) 5871.87	—
(80%Imax) 6710.71	—
(90%Imax) 7549.54	—



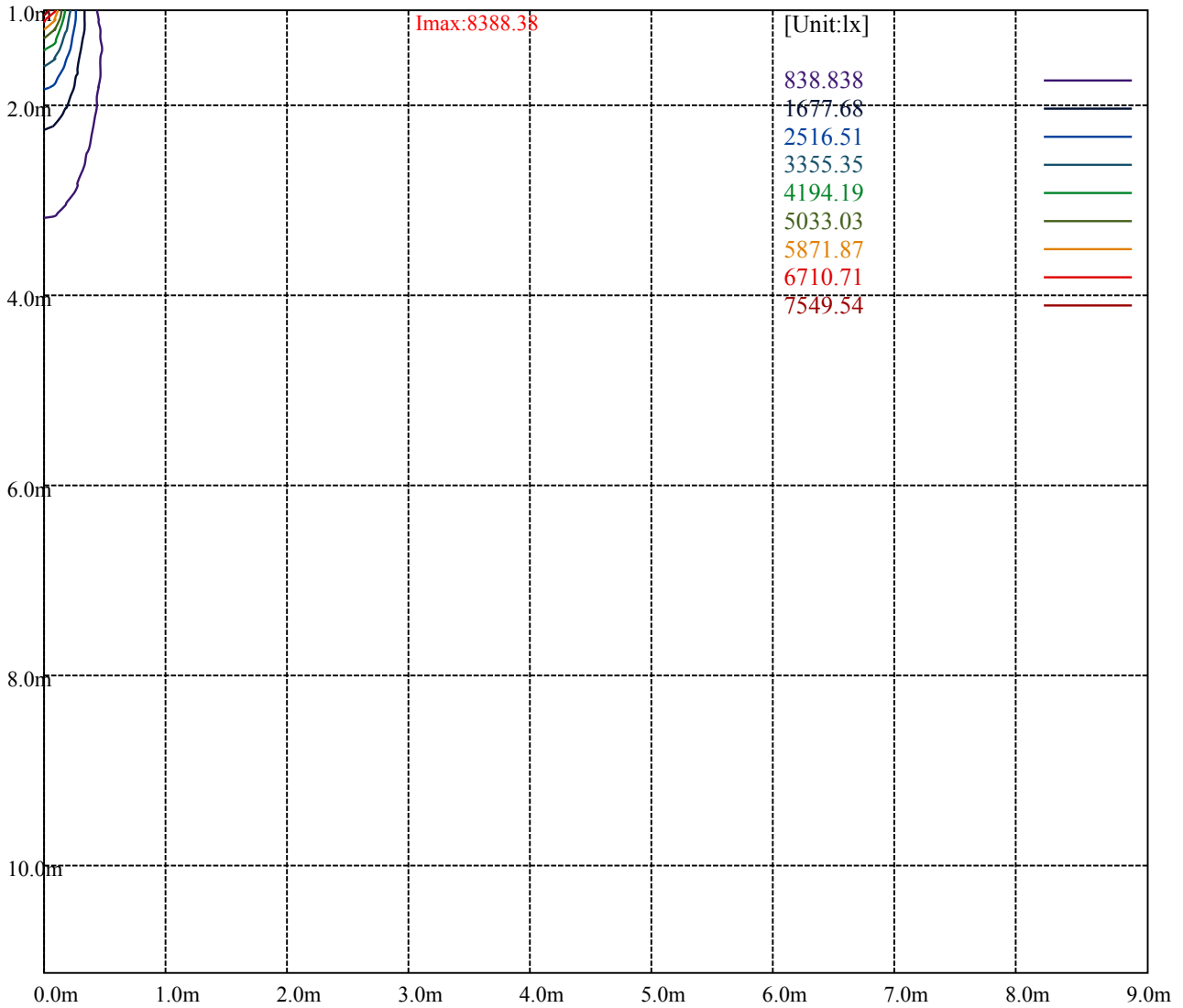
House

[Unit:cd]

Road

Imax:8388.38

(10%Imax)	838.838	—
(20%Imax)	1677.68	—
(30%Imax)	2516.51	—
(40%Imax)	3355.35	—
(50%Imax)	4194.19	—
(60%Imax)	5033.03	—
(70%Imax)	5871.87	—
(80%Imax)	6710.71	—
(90%Imax)	7549.54	—



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

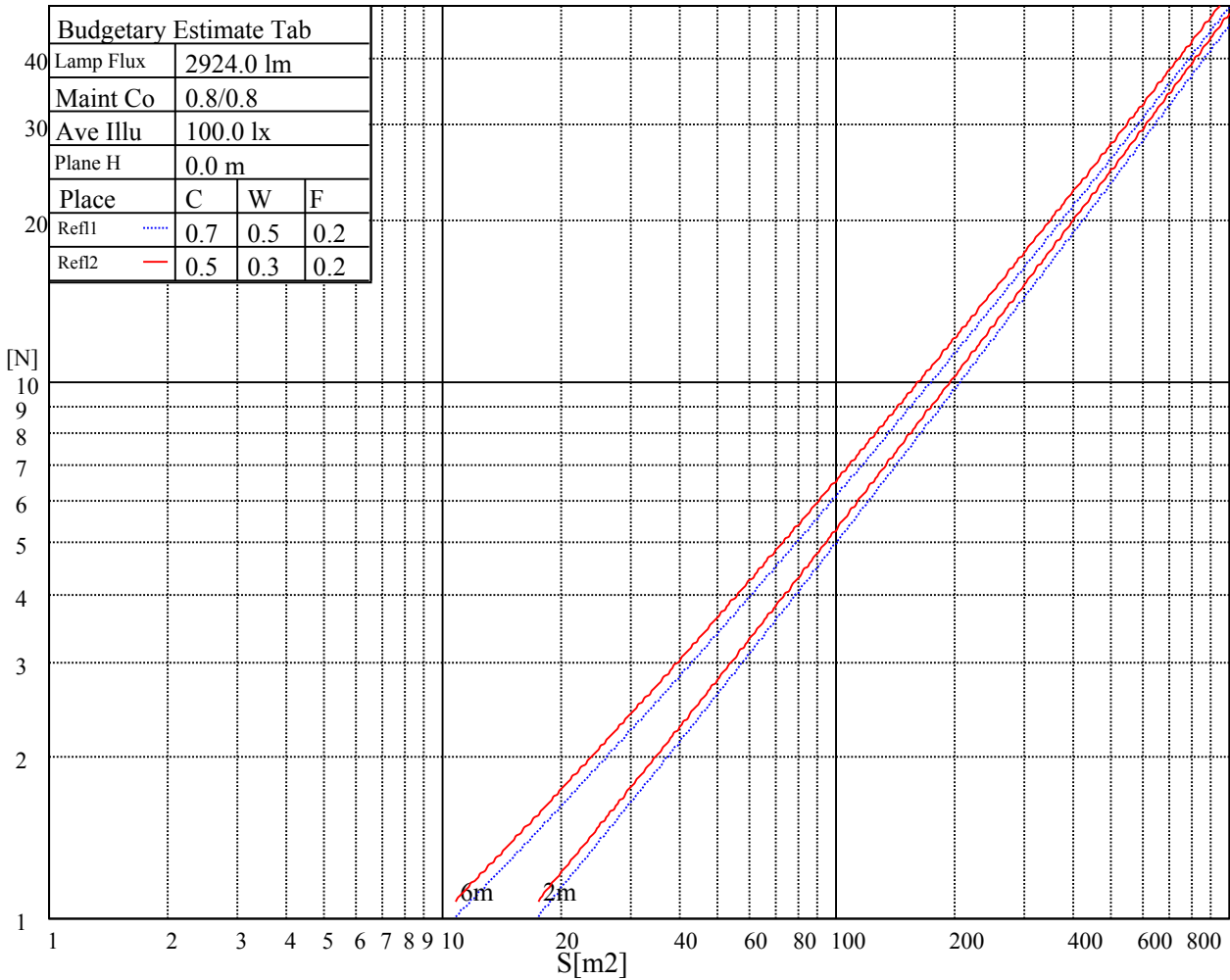
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

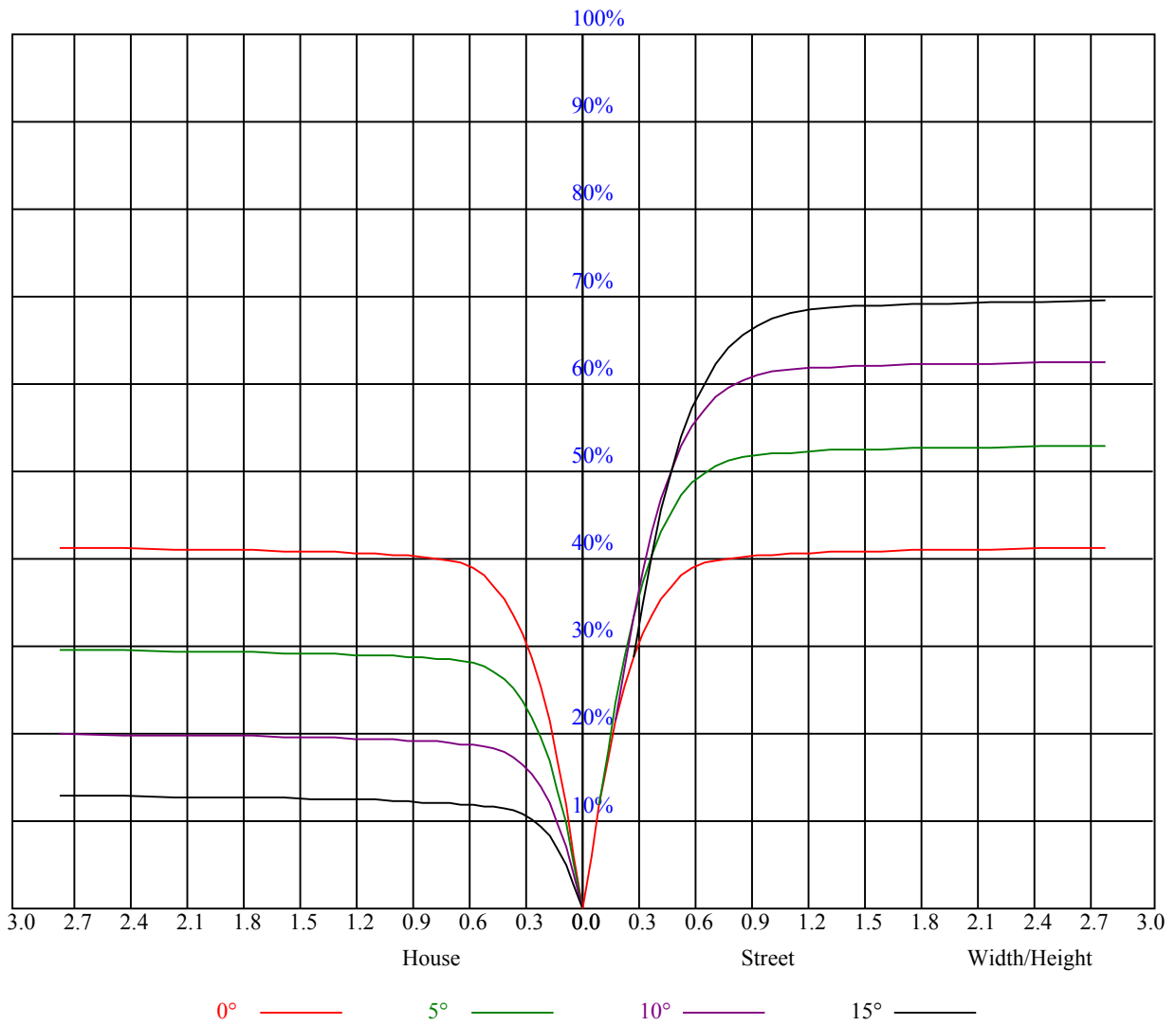
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

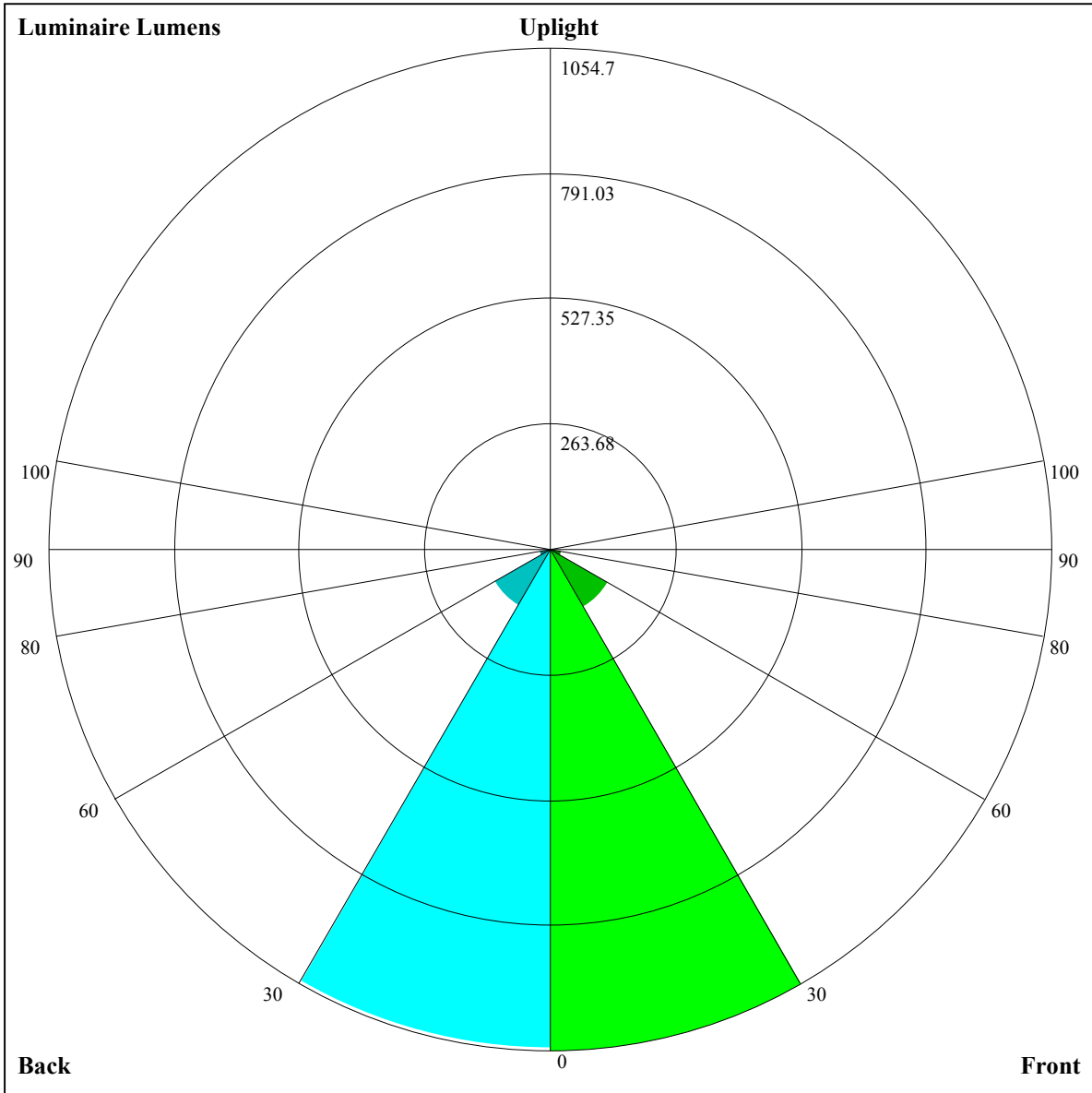
Luminance Limiting Curve





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	0.99	0.99	0.99	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.83
1	0.93	0.91	0.89	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.83	0.82	0.82	0.81	0.80	0.79
2	0.87	0.84	0.82	0.86	0.83	0.81	0.83	0.81	0.79	0.81	0.79	0.77	0.79	0.77	0.76	0.75
3	0.83	0.79	0.76	0.82	0.78	0.76	0.79	0.77	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.68
5	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.69	0.66	0.70	0.68	0.66	0.65
6	0.72	0.67	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	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.60	0.59
8	0.66	0.62	0.59	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.57
9	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
10	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53





Luminaire Lumens:

FL=1054.7,FM=138.07,FH=23.23,FVH=6.85

BL=1047.7,BM=137.68,BH=22.46,BVH=6.77

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	8384.58	8324.88	8176.82	7945.07	7541.27	7147.41	6728.98	6167.16	5721.22
45.0	8370.53	8405.65	8377.55	8223.64	8012.96	7710.40	7228.76	6804.47	6252.02
90.0	8405.06	8340.10	8158.68	7914.64	7574.04	7171.41	6625.39	6183.55	5734.09
135.0	8393.36	8396.28	8323.13	8124.15	7859.05	7506.74	7102.93	6550.48	6099.86
180.0	8384.58	8383.99	8290.94	8124.74	7871.92	7444.71	7033.88	6578.57	6007.39
225.0	8370.53	8268.70	8033.44	7744.93	7385.60	6969.50	6399.49	5930.14	5469.57
270.0	8405.06	8386.33	8277.48	8115.96	7786.48	7435.93	7027.44	6576.23	5998.03
315.0	8393.36	8326.05	8145.81	7904.11	7490.94	7091.23	6652.31	6068.26	5614.71
360.0	8384.58	8324.88	8176.82	7945.07	7541.27	7147.41	6728.98	6167.16	5721.22
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5178.71	4763.79	4389.83	4038.11	3631.38	3334.09	3069.56	2834.89	2572.71
45.0	5808.42	5375.35	4955.16	4480.54	4127.65	3797.00	3490.93	3150.91	2904.53
90.0	5296.34	4878.49	4402.71	4049.82	3720.92	3349.89	3084.78	2845.42	2579.15
135.0	5657.43	5124.29	4726.34	4353.55	3921.65	3609.14	3307.75	2978.27	2744.18
180.0	5564.38	5026.56	4622.17	4248.21	3822.75	3515.51	3223.48	2967.15	2681.56
225.0	4931.75	4540.82	4179.15	3769.49	3466.93	3121.65	2873.51	2648.79	2445.71
270.0	5547.99	5111.41	4698.83	4235.92	3895.90	3577.54	3217.63	2965.39	2737.16
315.0	5172.86	4671.91	4300.88	3960.28	3640.16	3281.42	3024.50	2798.60	2590.26
360.0	5178.71	4763.79	4389.83	4038.11	3631.38	3334.09	3069.56	2834.89	2572.71
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2383.09	2213.38	2051.86	1862.24	1713.60	1529.25	1139.90	1139.90	1093.38
45.0	2685.66	2488.44	2264.29	2100.43	1905.55	1759.24	1616.45	1431.52	1286.38
90.0	2390.70	2174.75	2017.33	1865.17	1722.38	1540.96	1149.67	1149.67	1123.05
135.0	2531.74	2345.06	2174.75	1976.95	1827.72	1689.02	1514.62	1368.90	1226.10
180.0	2471.46	2277.17	2095.75	1908.48	1764.51	1617.04	1452.59	1304.53	1172.85
225.0	2217.48	2051.27	1899.11	1752.81	1576.65	1327.93	1155.53	1155.53	1036.90
270.0	2490.19	2302.33	2089.31	1938.91	1788.51	1641.61	1472.48	1322.67	1182.80
315.0	2351.49	2181.19	2022.01	1832.40	1690.19	1545.64	1159.80	1159.80	1105.96
360.0	2383.09	2213.38	2051.86	1862.24	1713.60	1529.25	1139.90	1139.90	1093.38
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1014.08	933.84	823.70	728.49	632.57	534.43	437.22	323.28	239.59
45.0	1151.78	1056.97	957.49	869.70	774.31	677.75	551.34	453.02	358.22
90.0	1017.36	946.72	868.24	778.52	657.03	554.62	425.22	329.19	242.34
135.0	1092.09	1018.94	927.05	842.78	750.32	654.34	527.35	427.86	333.05
180.0	1051.71	983.82	910.67	803.57	712.86	615.72	517.40	397.43	308.47
225.0	969.95	899.26	790.81	697.30	574.16	477.37	384.96	298.29	218.58
270.0	1076.87	983.24	914.18	828.74	712.86	615.72	515.64	390.40	299.69
315.0	1004.54	927.17	838.74	717.66	617.00	516.87	419.84	328.60	227.48
360.0	1014.08	933.84	823.70	728.49	632.57	534.43	437.22	323.28	239.59
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	169.07	115.23	101.24	91.06	82.17	75.85	70.17	63.85	59.17
45.0	313.74	313.74	126.00	102.47	92.00	82.52	75.90	69.88	64.37
90.0	155.32	113.94	97.85	86.09	79.36	73.21	67.30	61.16	56.83
135.0	310.23	207.70	108.44	94.69	83.98	77.72	70.23	64.73	60.10
180.0	308.47	209.10	104.52	91.88	82.98	74.73	68.59	62.97	57.29
225.0	139.46	105.87	94.34	83.69	76.90	70.46	63.26	58.58	54.02
270.0	299.69	136.71	105.98	94.22	83.63	76.84	70.52	64.84	60.04
315.0	160.88	112.13	98.96	89.60	82.40	74.67	69.00	62.68	58.00
360.0	169.07	115.23	101.24	91.06	82.17	75.85	70.17	63.85	59.17

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	54.78	50.15	46.64	43.72	41.08	37.92	36.11	34.41	32.89
45.0	58.35	53.84	49.92	46.58	42.66	40.09	37.51	35.46	33.42
90.0	52.44	48.98	45.12	42.19	39.85	36.93	35.11	33.01	31.54
135.0	55.71	50.68	47.40	44.48	41.67	38.68	36.40	34.65	33.12
180.0	53.02	48.98	45.12	42.19	39.74	36.93	35.05	33.47	31.95
225.0	49.10	46.00	43.01	39.85	37.63	35.64	34.00	32.07	30.72
270.0	54.48	50.45	47.11	43.31	40.79	38.45	35.87	34.18	32.77
315.0	53.67	50.10	46.94	43.31	40.91	38.62	36.75	34.70	33.24
360.0	54.78	50.15	46.64	43.72	41.08	37.92	36.11	34.41	32.89
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	31.49	30.37	29.38	28.91	28.38	27.45	27.21	26.51	25.34
45.0	31.95	30.61	29.32	28.50	27.97	27.51	26.92	26.51	25.81
90.0	30.43	29.44	28.38	28.15	27.68	27.15	26.69	26.10	24.93
135.0	31.54	30.61	29.61	28.79	28.50	27.86	27.21	26.98	26.04
180.0	30.49	29.50	28.62	27.86	27.45	26.92	26.34	26.10	24.99
225.0	29.67	28.44	27.80	27.45	26.92	26.34	25.98	24.70	23.64
270.0	31.13	30.02	29.03	28.38	27.74	27.27	26.69	26.34	25.34
315.0	31.78	30.67	29.79	29.20	28.68	27.97	27.45	26.63	25.52
360.0	31.49	30.37	29.38	28.91	28.38	27.45	27.21	26.51	25.34
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	24.52	24.35	23.88	24.05	24.70	25.16	26.04	27.10	28.62
45.0	24.76	23.82	22.88	21.42	20.54	19.78	18.61	17.91	17.32
90.0	23.88	22.88	21.71	20.60	19.96	19.37	19.43	20.07	21.07
135.0	24.70	23.99	22.94	21.71	20.78	20.07	19.66	20.19	21.13
180.0	23.76	23.00	21.71	20.78	20.19	20.42	21.07	22.12	23.64
225.0	22.82	21.30	20.42	19.66	18.67	17.67	17.03	16.56	16.04
270.0	24.17	23.35	21.95	20.89	20.13	19.14	18.73	18.96	19.49
315.0	24.70	23.35	22.24	21.54	21.07	20.48	20.66	21.19	22.12
360.0	24.52	24.35	23.88	24.05	24.70	25.16	26.04	27.10	28.62
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	29.55	29.90	29.55	28.97	27.86	26.92	25.87	24.52	20.60
45.0	16.68	16.27	15.92	15.45	15.10	14.75	14.46	14.16	13.87
90.0	22.18	23.53	24.52	25.22	25.57	25.52	24.81	23.12	19.96
135.0	22.24	23.82	25.16	26.45	27.56	27.56	25.98	22.94	22.18
180.0	24.99	26.04	26.28	26.16	25.46	24.81	24.11	22.77	20.13
225.0	15.57	15.22	14.86	14.51	14.16	13.81	13.52	13.23	12.93
270.0	20.37	21.42	22.65	23.17	23.35	23.35	22.94	22.18	20.60
315.0	23.00	24.29	25.22	25.75	25.69	25.05	23.53	21.77	19.43
360.0	29.55	29.90	29.55	28.97	27.86	26.92	25.87	24.52	20.60
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	16.97	13.40	12.35	12.06	11.82	11.29	10.77	10.48	10.24
45.0	13.46	13.23	12.87	12.64	12.47	11.59	10.94	10.65	10.42
90.0	17.09	13.81	12.64	12.23	11.35	10.94	10.71	10.48	10.30
135.0	16.27	13.23	12.23	11.94	11.59	11.06	10.83	10.59	10.48
180.0	16.80	13.40	12.06	11.82	11.41	11.00	10.71	10.48	10.53
225.0	12.58	12.29	12.00	11.70	11.12	10.77	10.59	10.42	10.30
270.0	17.56	14.69	12.35	12.06	11.76	11.29	10.83	10.48	10.42
315.0	16.44	13.64	12.52	12.00	11.70	11.12	10.65	10.48	10.24
360.0	16.97	13.40	12.35	12.06	11.82	11.29	10.77	10.48	10.24

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.36
45.0	10.24
90.0	10.42
135.0	10.30
180.0	10.36
225.0	10.30
270.0	10.36
315.0	10.48
360.0	10.36