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NT

Client:

LumCAT: 2-2686-L

Luminaire: 92.70.411.00

Report No: 2024424-B008

Ballast type: AC

Test No: 2024424-C008

Voltage(V): 36.220

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.862

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2461.50, Efficiency(%): 84.18% , Luminous Efficacy(lm/W): 117.99

Central intensity(cd): 13238.380, Maximum intensity(cd): 13238.380

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

Beam Angle(50%Imax): [C0/180]Total=17.8

[C90/270]Total=17.8

Field angle(10%Imax): [C0/180]Total=45.4

[C90/270]Total=45.4

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(%): 84.18%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.878%

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	13238.375	0.000	0	0.00%	0.00%
1.0	13152.054	12.627	12.627	0.43%	0.51%
2.0	12532.754	36.865	49.493	1.26%	2.01%
3.0	12104.092	58.923	108.416	2.02%	4.40%
4.0	11692.313	79.654	188.07	2.72%	7.64%
5.0	10886.238	97.132	285.202	3.32%	11.59%
6.0	9814.984	108.790	393.992	3.72%	16.01%
7.0	8733.269	115.129	509.121	3.94%	20.68%
8.0	7608.613	116.956	626.077	4.00%	25.43%
9.0	6533.993	114.618	740.695	3.92%	30.09%
10.0	5614.751	109.942	850.636	3.76%	34.56%
11.0	4776.343	103.828	954.465	3.55%	38.78%
12.0	4099.604	97.027	1051.492	3.32%	42.72%
13.0	3604.284	91.426	1142.917	3.13%	46.43%
14.0	3170.632	86.718	1229.636	2.97%	49.95%
15.0	2858.341	82.768	1312.404	2.83%	53.32%
16.0	2708.451	81.569	1393.973	2.79%	56.63%
17.0	2357.045	78.883	1472.857	2.70%	59.84%
18.0	2095.896	73.419	1546.276	2.51%	62.82%
19.0	1905.771	69.621	1615.897	2.38%	65.65%
20.0	1740.371	66.735	1682.631	2.28%	68.36%
21.0	1586.603	63.885	1746.516	2.18%	70.95%
22.0	1437.883	60.778	1807.294	2.08%	73.42%
23.0	1270.948	56.839	1864.133	1.94%	75.73%
24.0	1200.933	54.044	1918.177	1.85%	77.93%
25.0	1131.196	53.028	1971.205	1.81%	80.08%
26.0	1038.043	51.205	2022.41	1.75%	82.16%
27.0	925.124	48.029	2070.439	1.64%	84.11%
28.0	815.891	44.079	2114.518	1.51%	85.90%
29.0	710.222	39.927	2154.445	1.37%	87.53%
30.0	601.011	35.403	2189.848	1.21%	88.96%
31.0	504.376	30.761	2220.61	1.05%	90.21%
32.0	396.929	25.821	2246.431	0.88%	91.26%
33.0	311.054	20.857	2267.288	0.71%	92.11%
34.0	257.821	17.216	2284.504	0.59%	92.81%
35.0	223.088	14.935	2299.439	0.51%	93.42%
36.0	141.383	11.605	2311.044	0.40%	93.89%
37.0	124.331	8.666	2319.71	0.30%	94.24%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	111.412	7.869	2327.579	0.27%	94.56%
39.0	99.898	7.213	2334.792	0.25%	94.85%
40.0	89.422	6.603	2341.395	0.23%	95.12%
41.0	80.403	6.047	2347.442	0.21%	95.37%
42.0	71.873	5.532	2352.974	0.19%	95.59%
43.0	64.587	5.055	2358.029	0.17%	95.80%
44.0	58.281	4.637	2362.667	0.16%	95.98%
45.0	52.839	4.270	2366.937	0.15%	96.16%
46.0	48.281	3.955	2370.892	0.14%	96.32%
47.0	44.411	3.687	2374.578	0.13%	96.47%
48.0	40.988	3.452	2378.031	0.12%	96.61%
49.0	37.952	3.242	2381.272	0.11%	96.74%
50.0	35.428	3.059	2384.332	0.10%	96.86%
51.0	33.292	2.907	2387.239	0.10%	96.98%
52.0	31.258	2.770	2390.009	0.09%	97.10%
53.0	29.671	2.650	2392.66	0.09%	97.20%
54.0	28.340	2.557	2395.216	0.09%	97.31%
55.0	27.140	2.477	2397.693	0.08%	97.41%
56.0	26.094	2.405	2400.098	0.08%	97.51%
57.0	25.231	2.347	2402.445	0.08%	97.60%
58.0	24.550	2.302	2404.747	0.08%	97.69%
59.0	23.950	2.267	2407.014	0.08%	97.79%
60.0	23.511	2.242	2409.257	0.08%	97.88%
61.0	23.109	2.225	2411.482	0.08%	97.97%
62.0	22.677	2.206	2413.688	0.08%	98.06%
63.0	22.151	2.180	2415.868	0.07%	98.15%
64.0	21.587	2.146	2418.014	0.07%	98.23%
65.0	20.812	2.098	2420.113	0.07%	98.32%
66.0	20.022	2.037	2422.15	0.07%	98.40%
67.0	19.166	1.970	2424.12	0.07%	98.48%
68.0	18.457	1.906	2426.026	0.07%	98.56%
69.0	17.842	1.852	2427.878	0.06%	98.63%
70.0	17.542	1.817	2429.695	0.06%	98.71%
71.0	17.637	1.818	2431.514	0.06%	98.78%
72.0	17.893	1.847	2433.361	0.06%	98.86%
73.0	18.230	1.889	2435.25	0.06%	98.93%
74.0	18.508	1.931	2437.181	0.07%	99.01%
75.0	18.596	1.960	2439.142	0.07%	99.09%

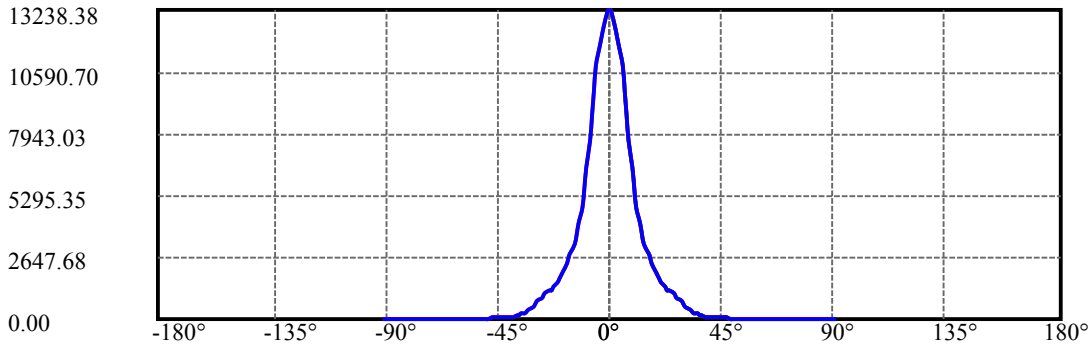
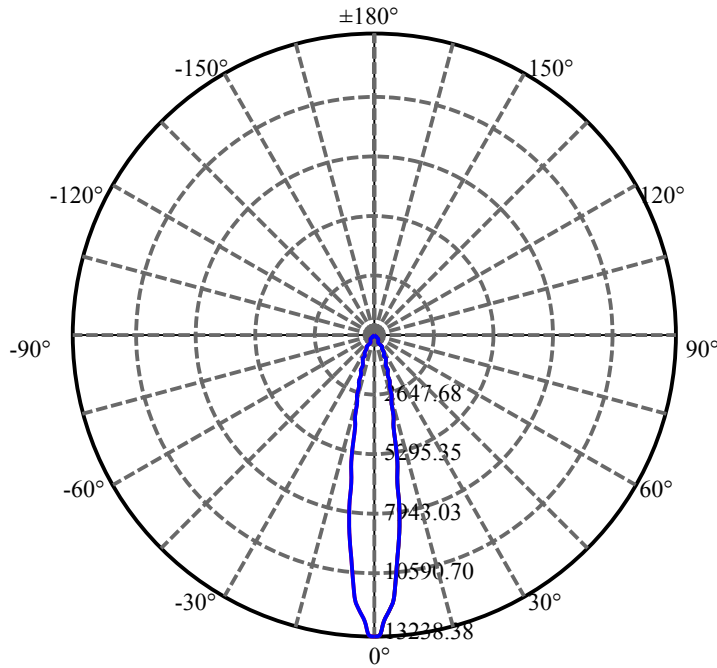
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	18.449	1.966	2441.108	0.07%	99.17%
77.0	18.127	1.950	2443.058	0.07%	99.25%
78.0	17.571	1.911	2444.969	0.07%	99.33%
79.0	16.825	1.848	2446.817	0.06%	99.40%
80.0	15.640	1.750	2448.568	0.06%	99.47%
81.0	14.038	1.605	2450.173	0.05%	99.54%
82.0	12.765	1.453	2451.626	0.05%	99.60%
83.0	12.143	1.354	2452.98	0.05%	99.65%
84.0	11.858	1.308	2454.288	0.04%	99.71%
85.0	11.544	1.277	2455.565	0.04%	99.76%
86.0	11.141	1.240	2456.805	0.04%	99.81%
87.0	10.878	1.205	2458.01	0.04%	99.86%
88.0	10.666	1.180	2459.19	0.04%	99.91%
89.0	10.497	1.160	2460.35	0.04%	99.95%
90.0	10.490	1.151	2461.501	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2189.85	74.89%	88.96%
0-40	2341.39	80.08%	95.12%
0-60	2409.26	82.40%	97.88%
0-90	2460.35	84.14%	99.95%
0-120	2460.35	84.14%	99.95%
0-180	2461.50	84.18%	100.00%
60-90	51.09	1.75%	2.08%
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%
0-24.96	1969.20	67.35%	80.00%

ZONAL LUMEN SUMMARY

0-10	850.64
10-20	831.99
20-30	507.22
30-40	151.55
40-50	42.94
50-60	24.92
60-70	20.44
70-80	18.87
80-90	11.78
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



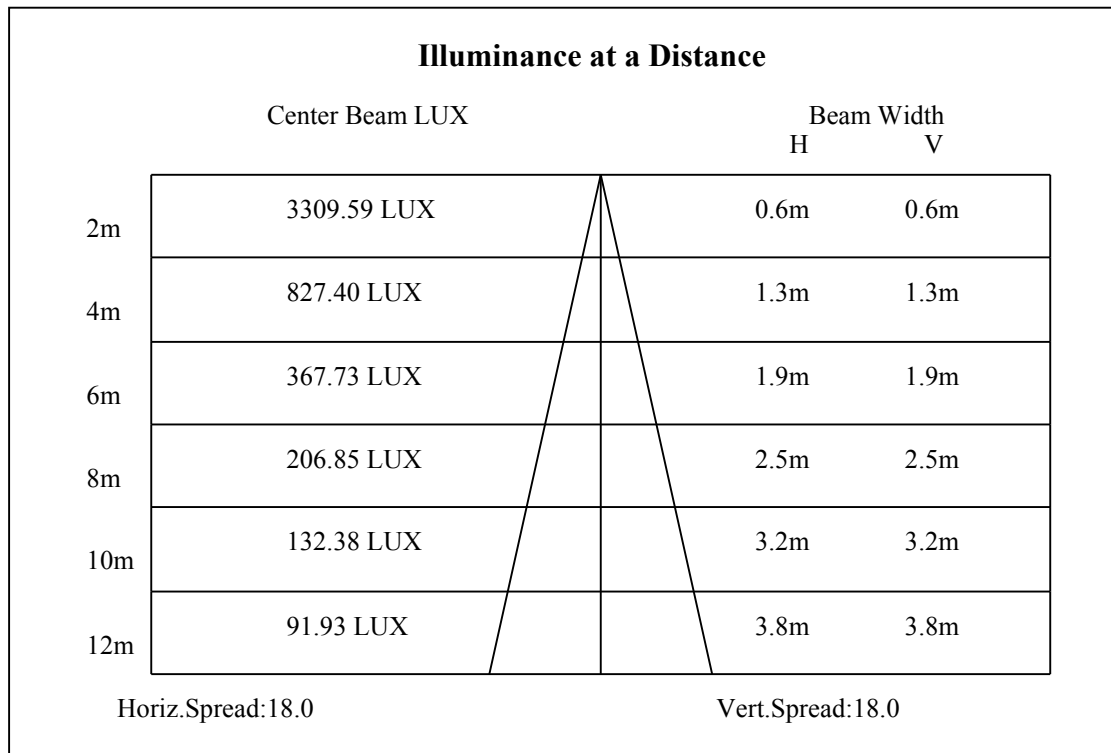
C0(Max): —————

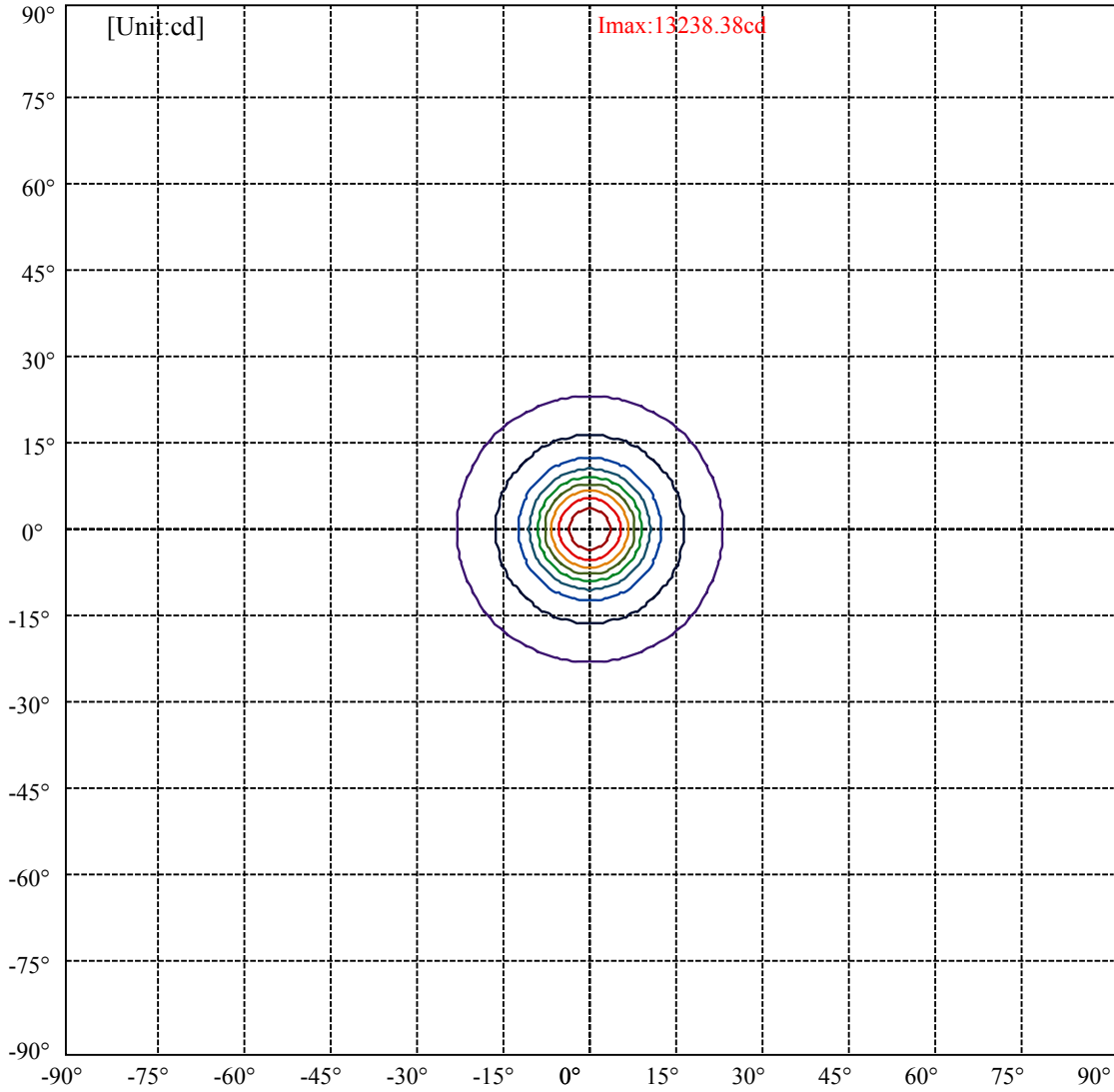
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:22.7 Right:22.7  
:C90/270Left:22.7 Right:22.7

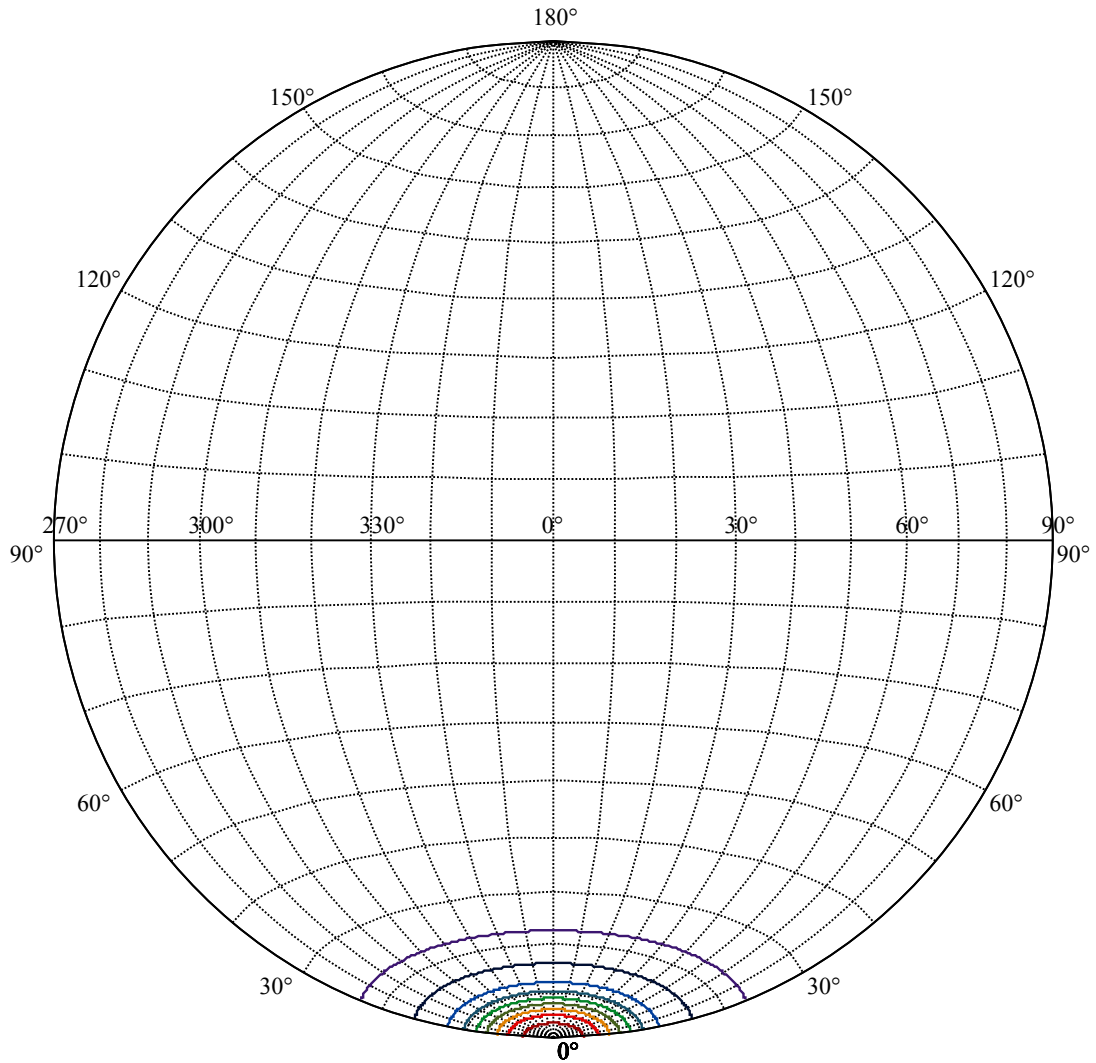
Beam Angle(50%Imax):C0/180Left:8.9 Right:8.9  
:C90/270Left:8.9 Right:8.9





(10%Imax) 1323.84	—
(20%Imax) 2647.68	—
(30%Imax) 3971.51	—
(40%Imax) 5295.35	—
(50%Imax) 6619.19	—
(60%Imax) 7943.02	—
(70%Imax) 9266.86	—
(80%Imax) 10590.7	—
(90%Imax) 11914.5	—





House

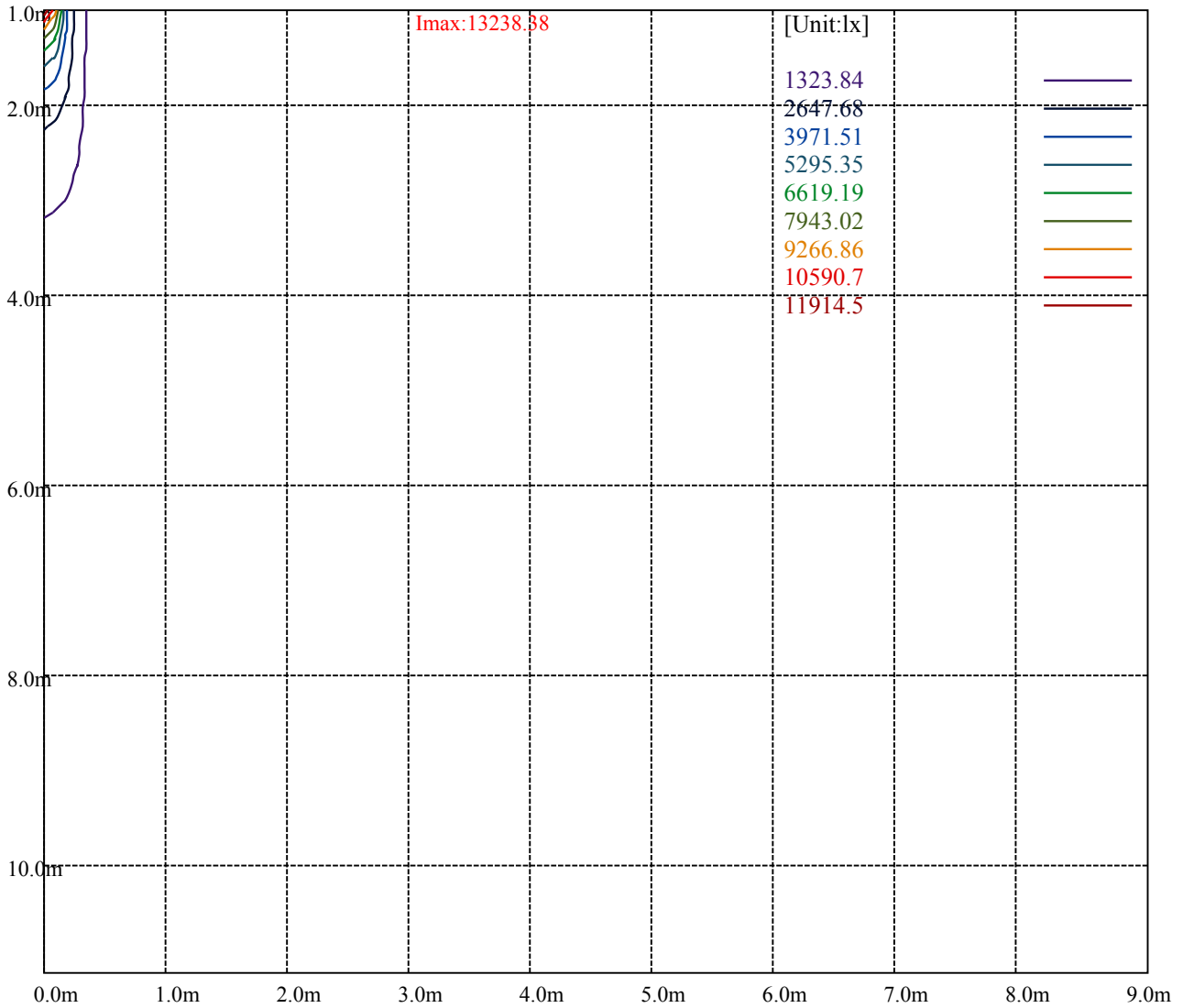
[Unit:cd]

Road

**Imax:13238.38**

(10%Imax)	1323.84	—
(20%Imax)	2647.68	—
(30%Imax)	3971.51	—
(40%Imax)	5295.35	—
(50%Imax)	6619.19	—
(60%Imax)	7943.02	—
(70%Imax)	9266.86	—
(80%Imax)	10590.7	—
(90%Imax)	11914.5	—





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

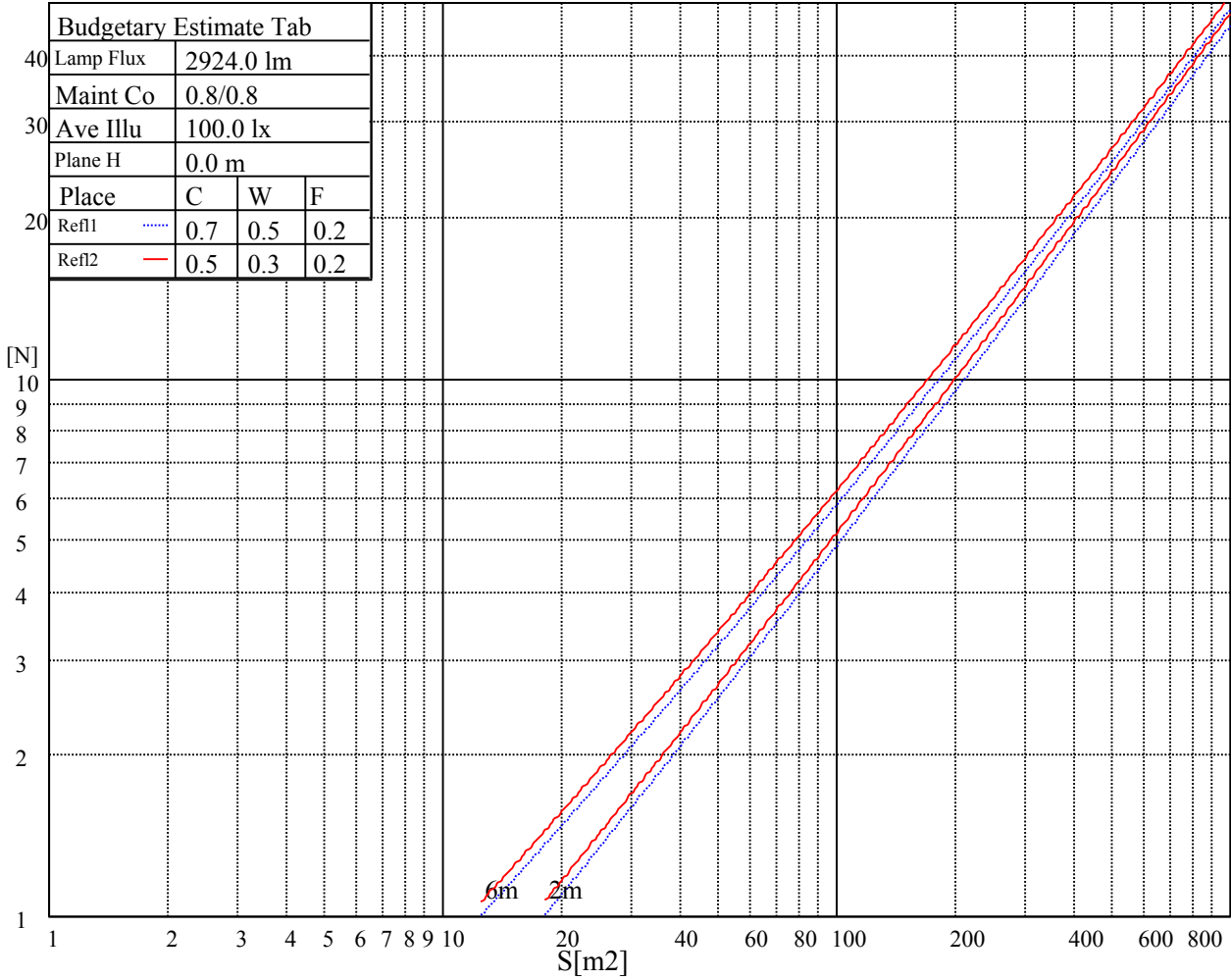
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

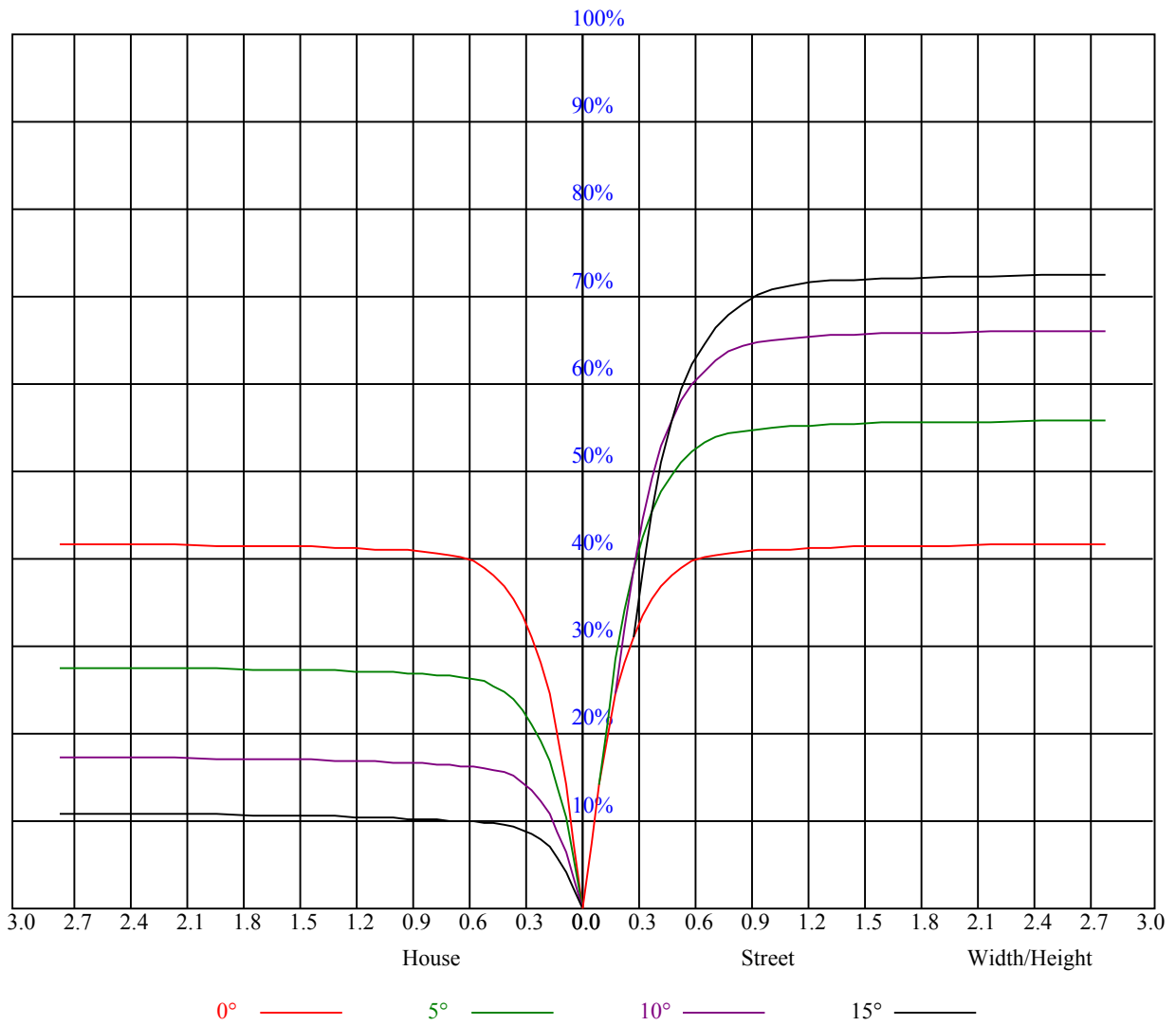
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

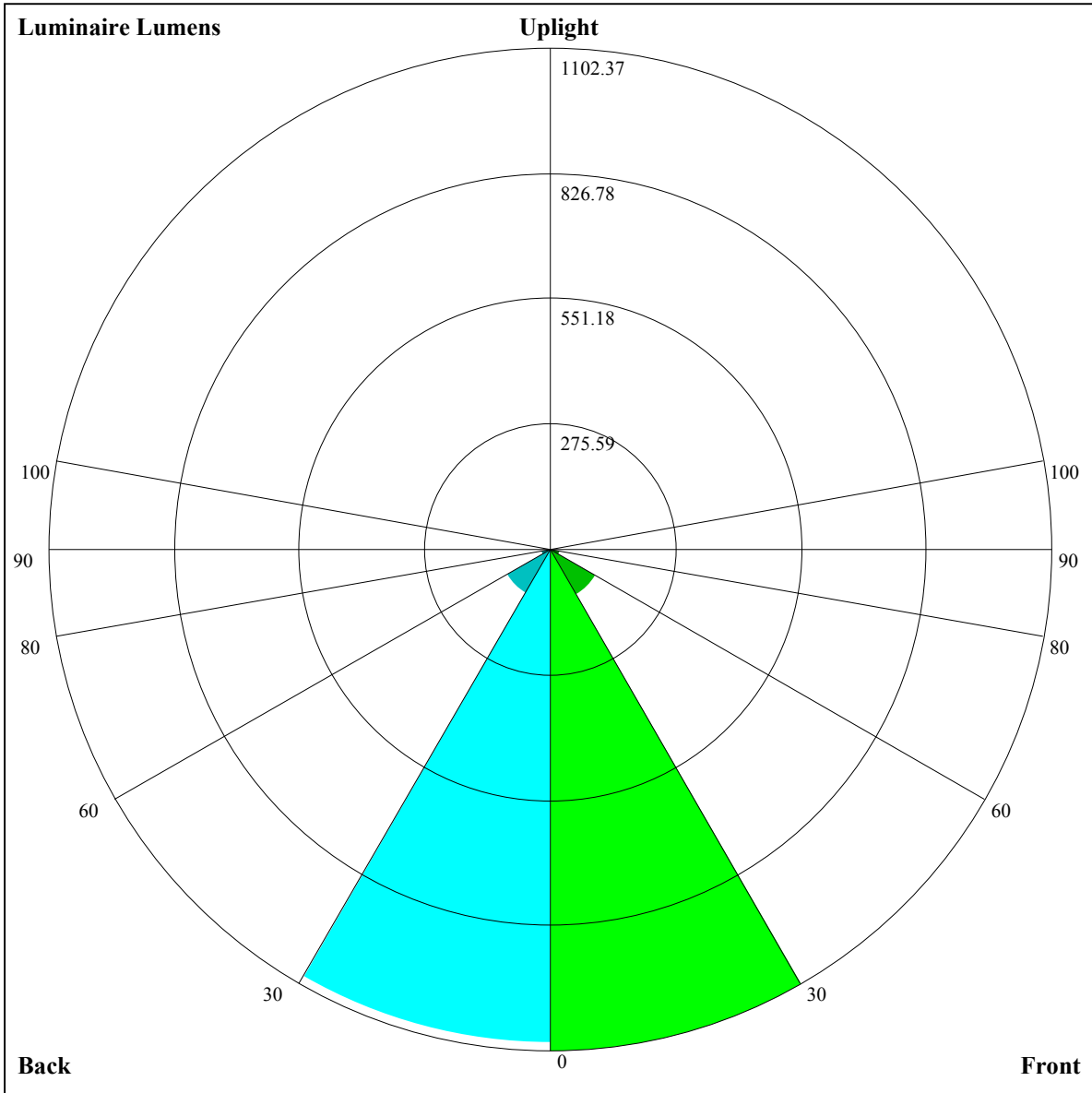
Luminance Limiting Curve





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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
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	0.81	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	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.72	0.71
5	0.78	0.74	0.71	0.77	0.73	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	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.66
7	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
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	0.61
9	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.60
10	0.65	0.62	0.59	0.65	0.61	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=1102.37,FM=114.33,FH=19.51,FVH=6.5

BL=1084.85,BM=110.47,BH=20.01,BVH=6.58

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	13241.30	13065.73	12480.51	11584.00	11393.22	10552.25	9597.75	8598.77	7331.17
45.0	13217.89	13270.56	13147.66	12720.45	12223.01	11561.71	10537.56	9577.79	8313.71
90.0	13241.30	13036.47	11650.72	11650.72	11263.88	10385.46	9166.44	8145.81	7131.03
135.0	13253.01	13235.45	12948.69	12521.47	11930.40	11187.16	10063.53	9051.09	7769.45
180.0	13241.30	13229.60	13001.36	12603.41	11889.43	11134.49	10256.65	8969.16	7921.61
225.0	13217.89	13013.06	11545.38	11545.38	11157.96	10263.73	8978.58	7913.47	6887.57
270.0	13241.30	13258.86	13030.62	12673.63	12146.93	11292.50	10420.52	9162.28	8114.73
315.0	13253.01	13106.70	12457.10	11533.67	11533.67	10712.60	9498.85	8447.78	7399.64
360.0	13241.30	13065.73	12480.51	11584.00	11393.22	10552.25	9597.75	8598.77	7331.17
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6366.72	5483.03	4559.55	3980.76	3517.26	3057.27	2758.22	2504.24	2235.03
45.0	7318.82	6353.20	5498.77	4585.82	4000.60	3526.57	3146.17	2982.31	2982.31
90.0	6168.92	5116.10	4425.53	3869.57	3418.94	2974.76	2686.24	2380.75	2177.10
135.0	6780.42	5867.47	5048.15	4228.84	3713.84	3286.62	3017.42	3017.42	2348.57
180.0	6663.37	5744.57	4925.25	4263.95	3725.54	3210.54	3029.12	3029.12	2363.78
225.0	5699.56	4909.51	4258.16	3624.36	3214.11	2880.54	2535.84	2308.19	2113.89
270.0	7096.44	6130.82	5065.71	4369.29	3813.33	3362.70	2999.86	2999.86	2402.99
315.0	6177.69	5313.32	4429.63	3874.25	3430.65	3066.05	2693.85	2445.71	2232.69
360.0	6366.72	5483.03	4559.55	3980.76	3517.26	3057.27	2758.22	2504.24	2235.03
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2054.78	1890.92	1741.69	1595.97	1429.76	1264.14	1152.02	1129.95	1036.08
45.0	2281.27	2094.58	1887.99	1736.42	1588.36	1419.23	1316.23	1207.96	1124.86
90.0	2002.11	1806.06	1660.93	1519.89	1388.80	1156.76	1156.76	1093.96	1001.85
135.0	2144.32	1969.34	1776.80	1632.25	1493.55	1340.81	1245.42	1162.90	1051.71
180.0	2108.62	1937.15	1770.95	1593.04	1453.17	1324.42	1213.23	1135.98	1042.34
225.0	1936.57	1740.52	1592.46	1450.83	1262.39	1152.72	1131.36	1043.40	947.07
270.0	2195.82	1969.93	1803.14	1619.38	1477.17	1356.02	1238.98	1162.32	1076.29
315.0	2043.66	1837.67	1689.02	1545.05	1409.87	1153.48	1153.48	1113.10	1024.14
360.0	2054.78	1890.92	1741.69	1595.97	1429.76	1264.14	1152.02	1129.95	1036.08
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	909.50	807.03	707.65	584.82	490.13	401.35	296.77	226.31	173.52
45.0	1027.71	900.72	800.65	702.33	603.43	483.45	393.33	310.23	310.23
90.0	878.01	777.88	676.87	549.58	452.67	341.36	261.65	196.99	154.15
135.0	952.22	827.57	728.66	631.52	536.12	419.66	333.05	311.98	311.98
180.0	927.05	824.06	726.32	603.43	508.03	417.32	332.47	311.98	224.26
225.0	824.87	725.74	603.78	504.82	413.29	307.77	234.91	178.44	143.73
270.0	979.14	860.92	760.85	654.34	550.17	435.47	346.51	304.96	304.96
315.0	902.48	803.22	676.99	577.27	481.17	369.04	289.74	221.68	161.87
360.0	909.50	807.03	707.65	584.82	490.13	401.35	296.77	226.31	173.52
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	142.56	123.31	111.19	100.72	91.12	80.47	72.98	66.31	59.05
45.0	167.49	141.04	126.00	113.12	99.61	89.60	78.54	71.10	64.32
90.0	127.93	114.94	103.64	93.40	82.05	73.91	66.72	60.51	53.96
135.0	138.99	121.79	109.50	96.45	87.14	78.65	69.47	63.09	57.64
180.0	140.63	123.25	108.15	98.20	86.61	77.95	70.11	61.92	56.24
225.0	123.54	111.84	101.54	89.42	80.53	72.51	65.49	57.94	52.90
270.0	151.81	133.96	118.22	107.21	97.15	87.61	77.02	69.64	61.74
315.0	138.11	124.54	113.07	100.66	91.18	82.52	74.67	66.19	60.40
360.0	142.56	123.31	111.19	100.72	91.12	80.47	72.98	66.31	59.05

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	53.96	49.51	44.71	41.49	38.51	35.35	33.24	31.43	29.85
45.0	57.18	52.09	47.75	43.95	39.80	36.81	34.29	32.13	29.90
90.0	49.33	44.42	41.14	38.33	35.17	33.01	31.19	29.26	27.92
135.0	51.68	47.58	44.13	41.02	37.69	35.29	33.30	31.31	29.90
180.0	51.38	47.23	42.84	39.97	37.45	35.23	32.83	31.19	29.67
225.0	47.46	43.89	40.85	37.45	35.11	33.07	31.31	29.38	28.09
270.0	56.42	51.79	47.81	43.54	40.56	37.86	35.52	33.07	31.37
315.0	55.30	49.74	46.06	42.14	39.33	36.81	34.65	32.30	30.67
360.0	53.96	49.51	44.71	41.49	38.51	35.35	33.24	31.43	29.85
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	28.50	27.04	26.10	25.28	24.46	23.94	23.47	22.94	22.53
45.0	28.38	27.15	26.04	24.99	24.29	23.58	23.12	22.77	22.36
90.0	26.86	25.93	25.05	24.40	23.94	23.53	23.12	22.82	22.53
135.0	28.79	27.74	26.63	25.93	25.16	24.58	24.17	23.82	23.35
180.0	28.15	27.10	26.22	25.22	24.58	23.94	23.53	23.17	22.82
225.0	26.92	25.93	24.93	24.23	23.70	23.17	22.82	22.53	22.00
270.0	29.79	28.15	27.04	25.87	25.11	24.40	23.94	23.35	22.94
315.0	29.32	28.09	26.74	25.93	25.16	24.46	23.94	23.47	22.88
360.0	28.50	27.04	26.10	25.28	24.46	23.94	23.47	22.94	22.53
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	21.83	21.19	20.42	19.66	18.67	17.97	17.32	17.03	17.62
45.0	21.95	21.48	20.72	20.07	19.25	18.55	17.67	17.03	16.50
90.0	21.89	21.30	20.66	19.61	18.84	18.14	17.50	17.32	17.50
135.0	22.94	22.47	21.83	20.95	20.07	19.37	18.61	17.91	17.67
180.0	22.30	21.77	21.07	20.37	19.37	18.73	18.90	19.49	20.60
225.0	21.48	20.83	19.90	19.08	18.26	17.62	16.91	16.39	15.92
270.0	22.47	21.95	21.13	20.42	19.61	18.79	18.02	17.73	17.85
315.0	22.36	21.71	20.78	20.01	19.25	18.49	17.79	17.44	17.44
360.0	21.83	21.19	20.42	19.66	18.67	17.97	17.32	17.03	17.62
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	17.91	17.97	17.79	17.26	16.74	16.15	15.57	15.10	14.05
45.0	15.92	15.51	15.16	14.81	14.51	14.22	13.87	13.58	13.28
90.0	18.26	19.31	20.01	20.48	20.66	20.54	20.19	19.08	16.68
135.0	17.97	18.67	19.61	20.60	21.24	21.42	20.66	19.84	18.55
180.0	21.42	21.77	21.54	21.13	20.25	19.55	18.84	17.97	17.15
225.0	15.57	15.10	14.81	14.40	14.05	13.75	13.40	13.11	12.82
270.0	18.32	19.02	19.84	20.19	20.01	19.66	19.02	18.14	16.62
315.0	17.79	18.49	19.31	19.90	20.13	19.72	19.02	17.79	15.98
360.0	17.91	17.97	17.79	17.26	16.74	16.15	15.57	15.10	14.05
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.87	12.29	12.00	11.65	11.47	11.18	10.89	10.65	10.42
45.0	12.93	12.70	12.35	12.06	11.76	11.47	11.12	10.77	10.71
90.0	14.63	12.58	12.06	11.88	11.35	11.00	10.83	10.65	10.42
135.0	16.27	14.16	12.17	11.88	11.59	11.12	10.89	10.71	10.48
180.0	15.51	12.87	12.17	11.82	11.53	11.06	10.83	10.65	10.59
225.0	12.58	12.29	12.00	11.76	11.12	10.89	10.71	10.53	10.42
270.0	14.16	12.82	12.41	12.11	12.06	11.24	10.94	10.71	10.53
315.0	13.34	12.41	12.00	11.70	11.47	11.18	10.83	10.65	10.42
360.0	12.87	12.29	12.00	11.65	11.47	11.18	10.89	10.65	10.42

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	10.42
45.0	10.42
90.0	10.53
135.0	10.53
180.0	10.59
225.0	10.48
270.0	10.48
315.0	10.48
360.0	10.42