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NT

Client:

LumCAT: 3-2835-L

Luminaire: 92.70.411.00

Report No: 2024425-B005

Ballast type: AC

Test No: 2024425-C005

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): 2467.86, Efficiency(%): 84.40% , Luminous Efficacy(lm/W): 117.87

Central intensity(cd): 4350.256, Maximum intensity(cd): 4358.742

Angle of maximum intensity: C=0.0 γ =3.0

Beam Angle(50%Imax): [C0/180]Total=44.4

[C90/270]Total=44.4

Field angle(10%Imax): [C0/180]Total=67.4

[C90/270]Total=67.4

Maximum s/h(1/2): C0_180=0.72 C90_270=0.72

Maximum s/h(1/4): C0_180=0.69 C90_270=0.69

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.702%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/25
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	4350.255	0.000	0	0.00%	0.00%
1.0	4350.987	4.163	4.163	0.14%	0.17%
2.0	4353.840	12.494	16.657	0.43%	0.67%
3.0	4358.741	20.838	37.495	0.71%	1.52%
4.0	4357.717	29.177	66.672	1.00%	2.70%
5.0	4342.428	37.428	104.099	1.28%	4.22%
6.0	4315.215	45.498	149.598	1.56%	6.06%
7.0	4266.056	53.264	202.861	1.82%	8.22%
8.0	4211.703	60.674	263.535	2.08%	10.68%
9.0	4145.646	67.732	331.267	2.32%	13.42%
10.0	4065.543	74.308	405.575	2.54%	16.43%
11.0	3976.150	80.353	485.928	2.75%	19.69%
12.0	3875.126	85.826	571.754	2.94%	23.17%
13.0	3761.885	90.632	662.386	3.10%	26.84%
14.0	3628.015	94.590	756.976	3.23%	30.67%
15.0	3481.269	97.599	854.575	3.34%	34.63%
16.0	3329.477	99.796	954.372	3.41%	38.67%
17.0	3146.960	100.856	1055.227	3.45%	42.76%
18.0	2966.271	100.794	1156.021	3.45%	46.84%
19.0	2776.951	99.920	1255.942	3.42%	50.89%
20.0	2588.362	98.200	1354.142	3.36%	54.87%
21.0	2402.919	95.843	1449.985	3.28%	58.75%
22.0	2216.745	92.834	1542.819	3.17%	62.52%
23.0	2031.667	89.143	1631.962	3.05%	66.13%
24.0	1848.126	84.826	1716.788	2.90%	69.57%
25.0	1687.628	80.395	1797.183	2.75%	72.82%
26.0	1494.087	75.105	1872.288	2.57%	75.87%
27.0	1314.072	68.702	1940.99	2.35%	78.65%
28.0	1222.652	64.224	2005.215	2.20%	81.25%
29.0	1093.734	60.603	2065.818	2.07%	83.71%
30.0	951.525	55.222	2121.04	1.89%	85.95%
31.0	790.683	48.483	2169.523	1.66%	87.91%
32.0	662.438	41.630	2211.153	1.42%	89.60%
33.0	520.068	34.837	2245.99	1.19%	91.01%
34.0	390.638	27.561	2273.551	0.94%	92.13%
35.0	288.209	21.082	2294.633	0.72%	92.98%
36.0	220.110	16.185	2310.818	0.55%	93.64%
37.0	158.340	12.343	2323.161	0.42%	94.14%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	85.626	8.143	2331.304	0.28%	94.47%
39.0	73.212	5.422	2336.726	0.19%	94.69%
40.0	66.591	4.876	2341.602	0.17%	94.88%
41.0	61.888	4.575	2346.177	0.16%	95.07%
42.0	58.435	4.372	2350.548	0.15%	95.25%
43.0	55.516	4.221	2354.769	0.14%	95.42%
44.0	52.999	4.096	2358.865	0.14%	95.58%
45.0	50.563	3.980	2362.845	0.14%	95.74%
46.0	48.464	3.873	2366.718	0.13%	95.90%
47.0	46.277	3.768	2370.486	0.13%	96.05%
48.0	44.309	3.662	2374.148	0.13%	96.20%
49.0	42.692	3.573	2377.72	0.12%	96.35%
50.0	41.024	3.490	2381.211	0.12%	96.49%
51.0	39.612	3.412	2384.622	0.12%	96.63%
52.0	38.047	3.332	2387.955	0.11%	96.76%
53.0	36.481	3.242	2391.197	0.11%	96.89%
54.0	34.857	3.144	2394.341	0.11%	97.02%
55.0	33.182	3.037	2397.378	0.10%	97.14%
56.0	31.653	2.930	2400.308	0.10%	97.26%
57.0	30.256	2.831	2403.139	0.10%	97.38%
58.0	29.042	2.742	2405.881	0.09%	97.49%
59.0	27.937	2.664	2408.545	0.09%	97.60%
60.0	26.811	2.586	2411.131	0.09%	97.70%
61.0	25.750	2.508	2413.639	0.09%	97.80%
62.0	25.040	2.447	2416.087	0.08%	97.90%
63.0	24.397	2.404	2418.491	0.08%	98.00%
64.0	23.570	2.354	2420.845	0.08%	98.10%
65.0	22.656	2.288	2423.133	0.08%	98.19%
66.0	21.514	2.204	2425.336	0.08%	98.28%
67.0	20.761	2.126	2427.462	0.07%	98.36%
68.0	20.439	2.087	2429.549	0.07%	98.45%
69.0	20.285	2.078	2431.627	0.07%	98.53%
70.0	20.190	2.079	2433.705	0.07%	98.62%
71.0	20.095	2.082	2435.788	0.07%	98.70%
72.0	19.963	2.083	2437.871	0.07%	98.78%
73.0	19.810	2.080	2439.95	0.07%	98.87%
74.0	19.737	2.079	2442.029	0.07%	98.95%
75.0	19.561	2.076	2444.106	0.07%	99.04%

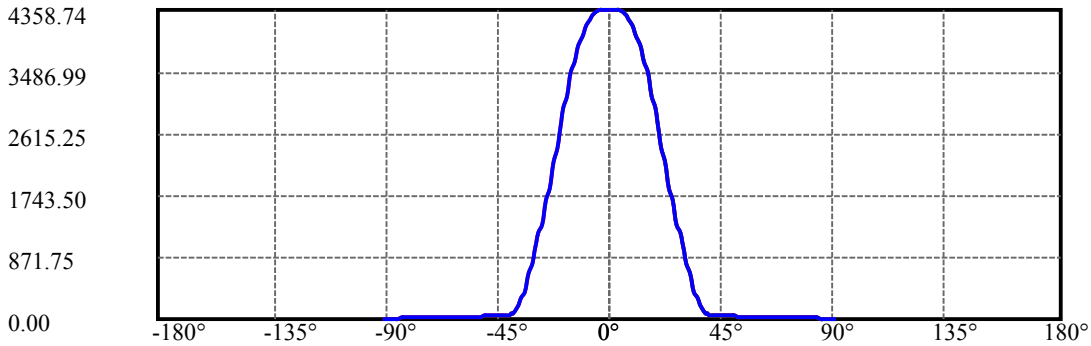
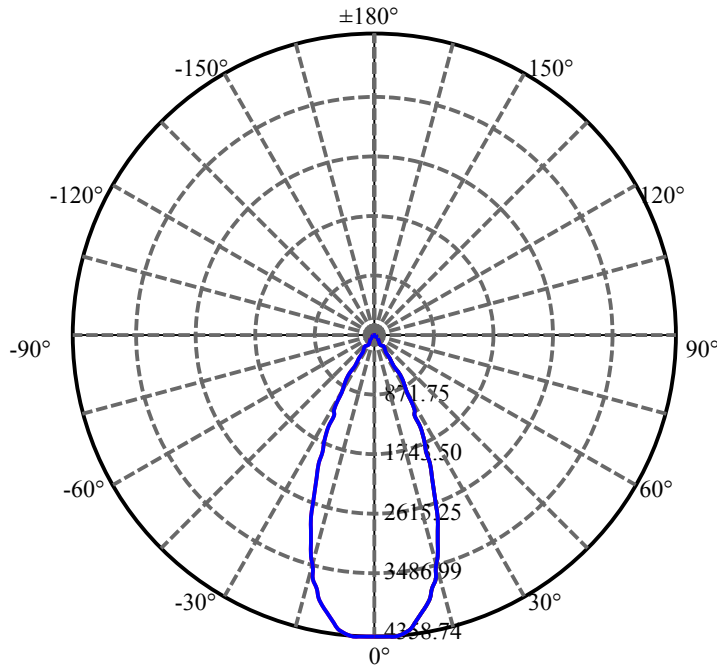
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	19.334	2.065	2446.171	0.07%	99.12%
77.0	18.932	2.040	2448.211	0.07%	99.20%
78.0	18.471	2.002	2450.213	0.07%	99.29%
79.0	17.886	1.953	2452.166	0.07%	99.36%
80.0	16.935	1.877	2454.044	0.06%	99.44%
81.0	15.969	1.779	2455.823	0.06%	99.51%
82.0	15.026	1.681	2457.504	0.06%	99.58%
83.0	14.053	1.581	2459.085	0.05%	99.64%
84.0	13.014	1.475	2460.559	0.05%	99.70%
85.0	11.946	1.362	2461.921	0.05%	99.76%
86.0	11.200	1.265	2463.187	0.04%	99.81%
87.0	10.834	1.206	2464.392	0.04%	99.86%
88.0	10.571	1.173	2465.565	0.04%	99.91%
89.0	10.424	1.151	2466.716	0.04%	99.95%
90.0	10.366	1.140	2467.856	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2121.04	72.54%	85.95%
0-40	2341.60	80.08%	94.88%
0-60	2411.13	82.46%	97.70%
0-90	2466.72	84.36%	99.95%
0-120	2466.72	84.36%	99.95%
0-180	2467.86	84.40%	100.00%
60-90	55.58	1.90%	2.25%
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%
0-27.52	1974.29	67.52%	80.00%

ZONAL LUMEN SUMMARY

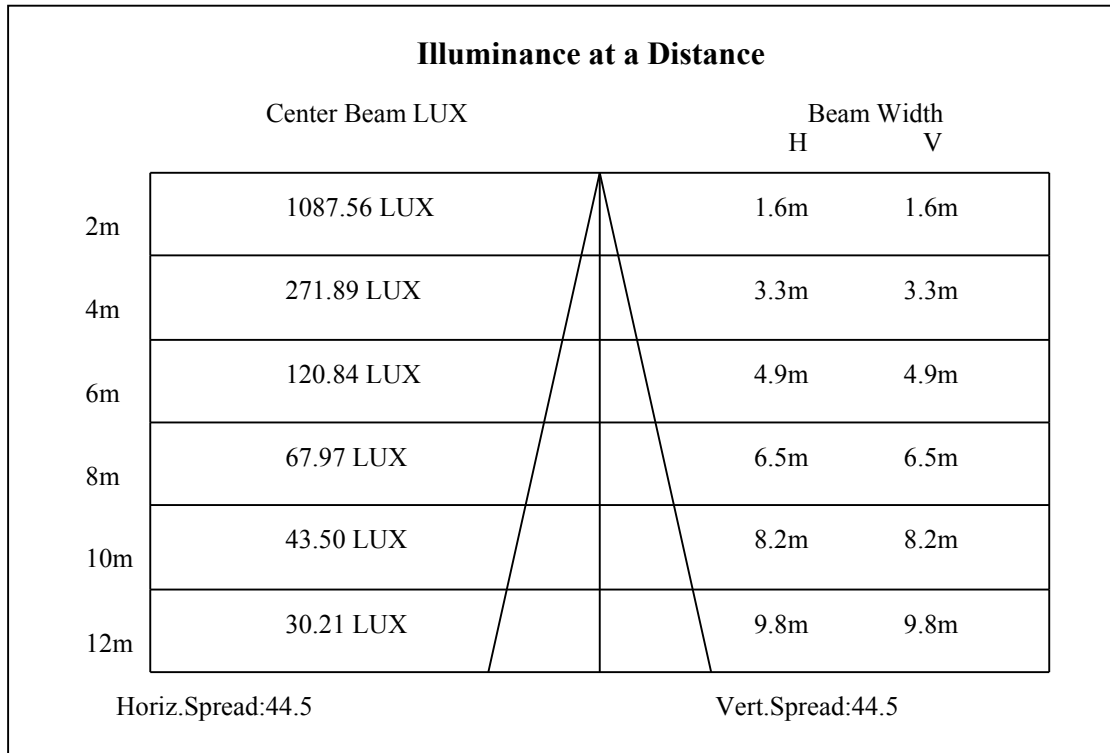
0-10	405.58
10-20	948.57
20-30	766.90
30-40	220.56
40-50	39.61
50-60	29.92
60-70	22.57
70-80	20.34
80-90	12.67
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

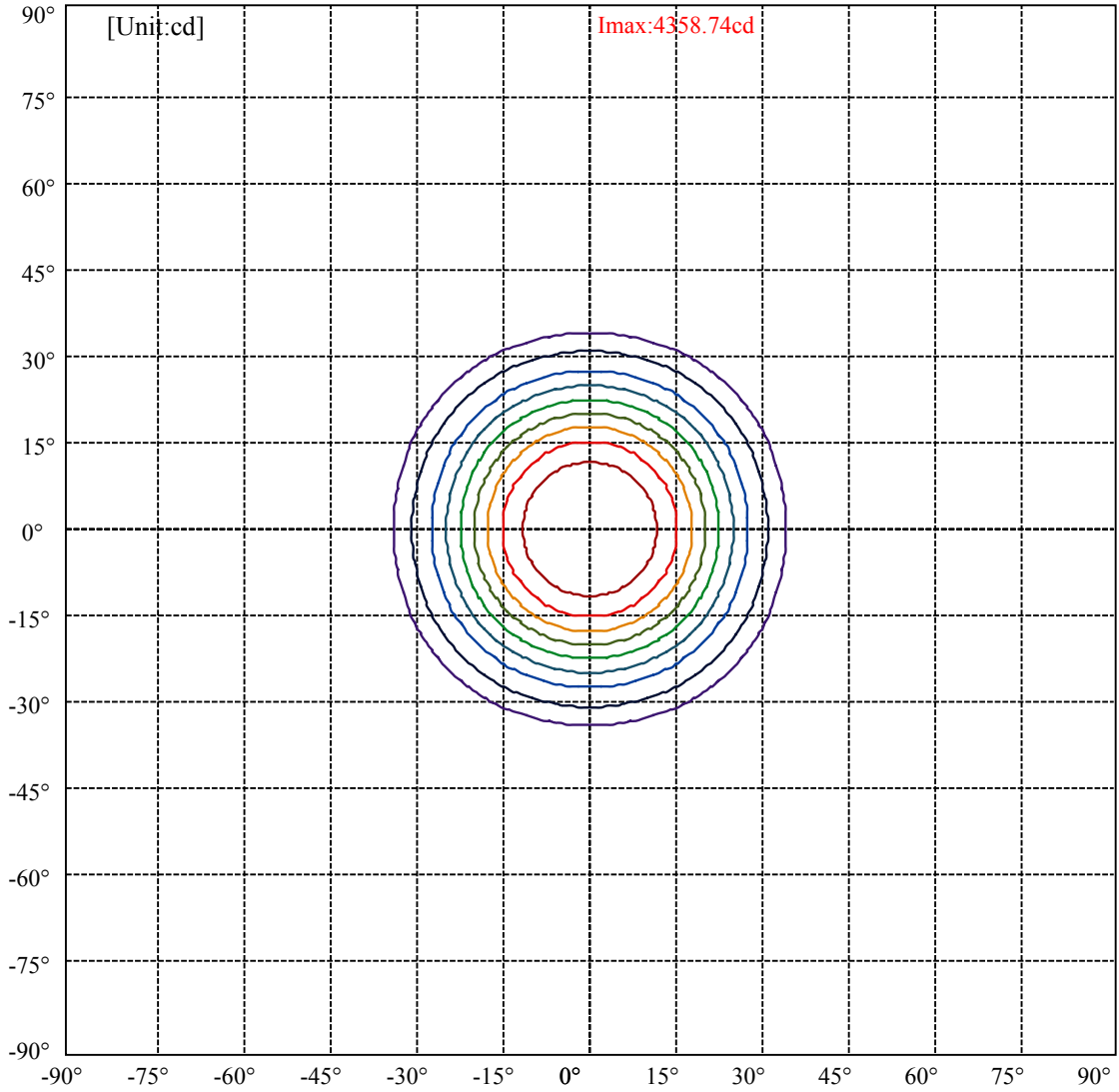


C0(Max): —————
C0/C180: —————
C90/C270: —————

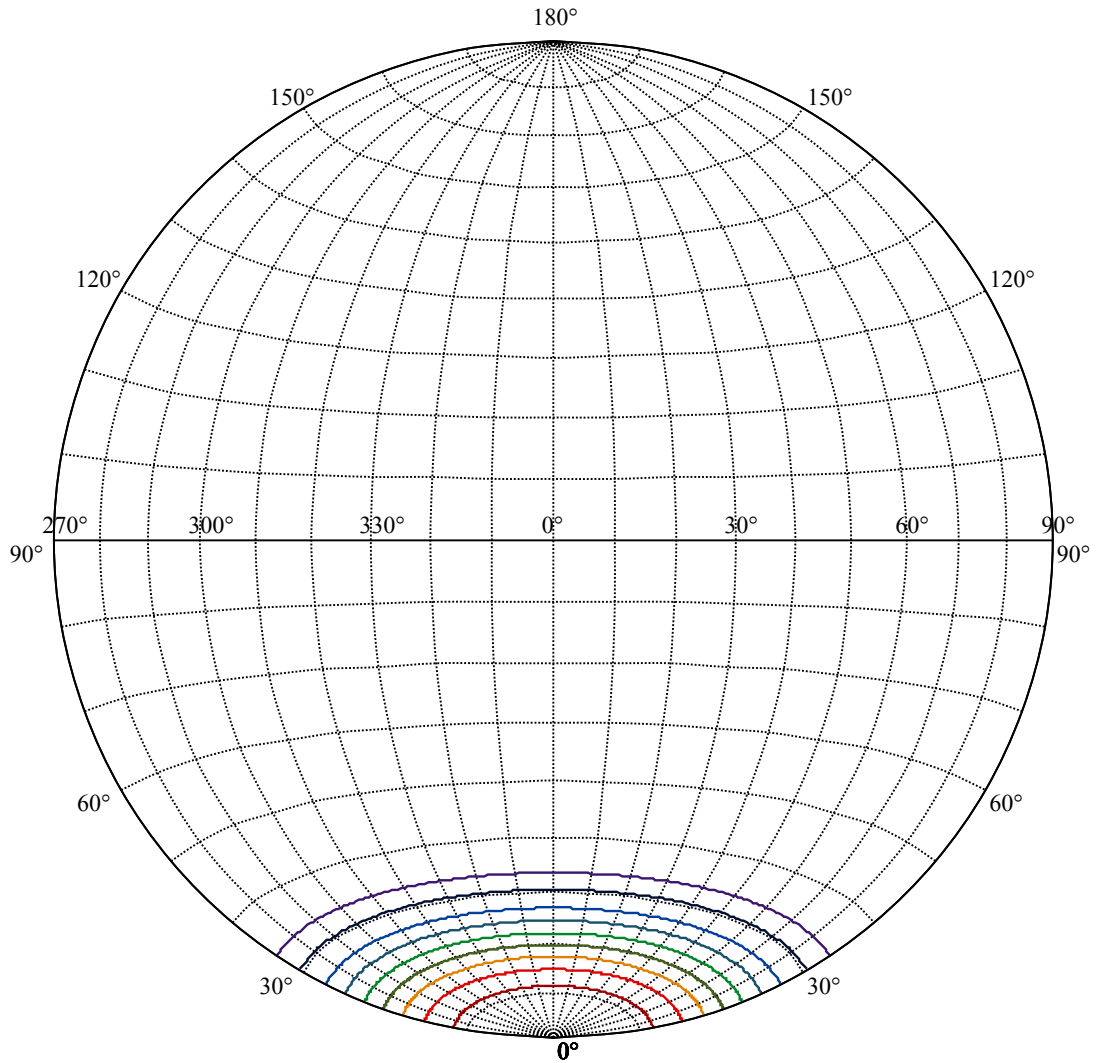
Field angle(10%Imax):C0/180Left:36.7 Right:30.7
:C90/270Left:36.7 Right:30.7

Beam Angle(50%Imax):C0/180Left:25.2 Right:19.2
:C90/270Left:25.2 Right:19.2





(10%Imax) 435.874	—
(20%Imax) 871.748	—
(30%Imax) 1307.62	—
(40%Imax) 1743.5	—
(50%Imax) 2179.37	—
(60%Imax) 2615.25	—
(70%Imax) 3051.12	—
(80%Imax) 3486.99	—
(90%Imax) 3922.87	—



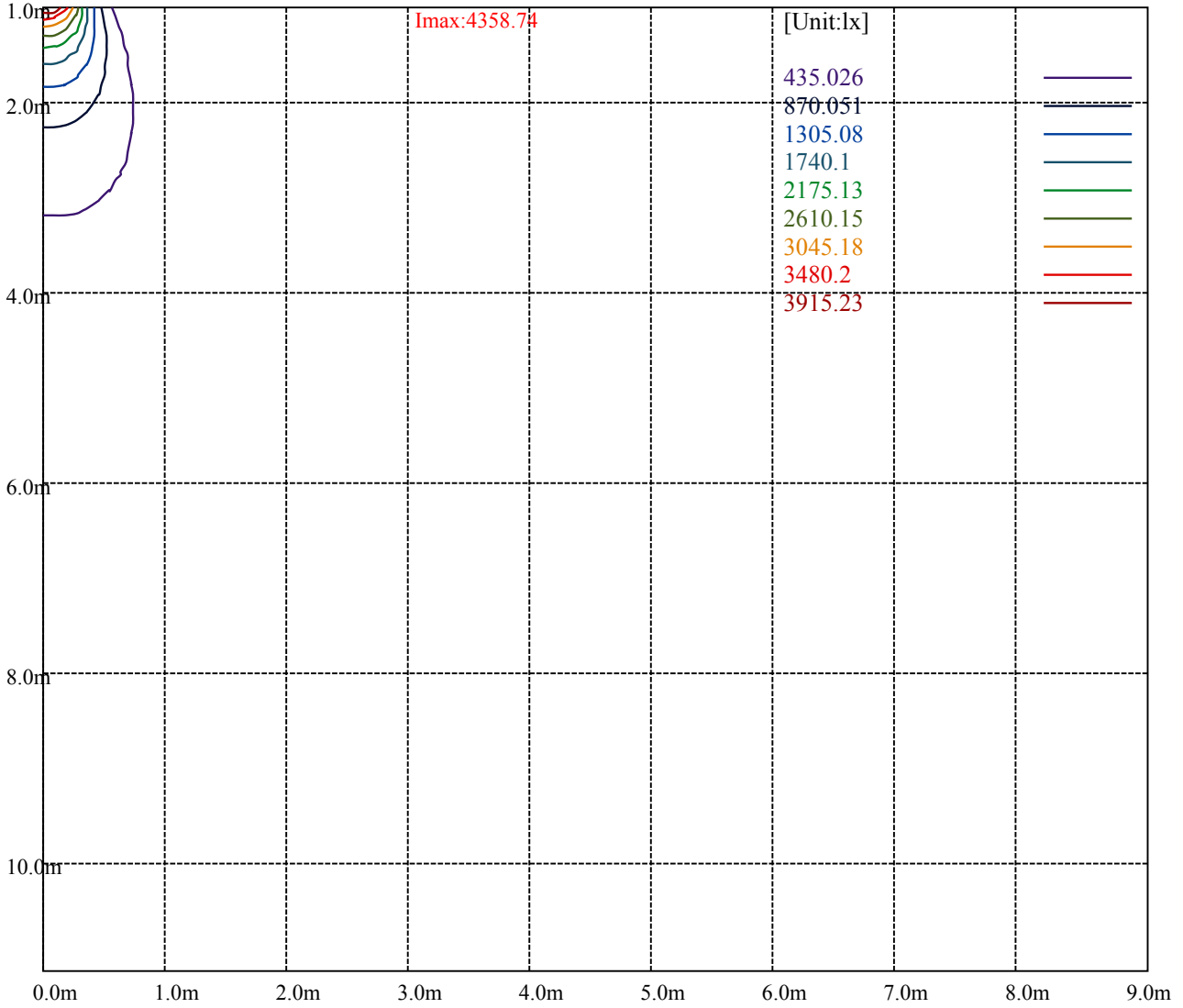
House

[Unit:cd]

Road

Imax:4358.74

(10%Imax) 435.874	—
(20%Imax) 871.748	—
(30%Imax) 1307.62	—
(40%Imax) 1743.5	—
(50%Imax) 2179.37	—
(60%Imax) 2615.25	—
(70%Imax) 3051.12	—
(80%Imax) 3486.99	—
(90%Imax) 3922.87	—



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

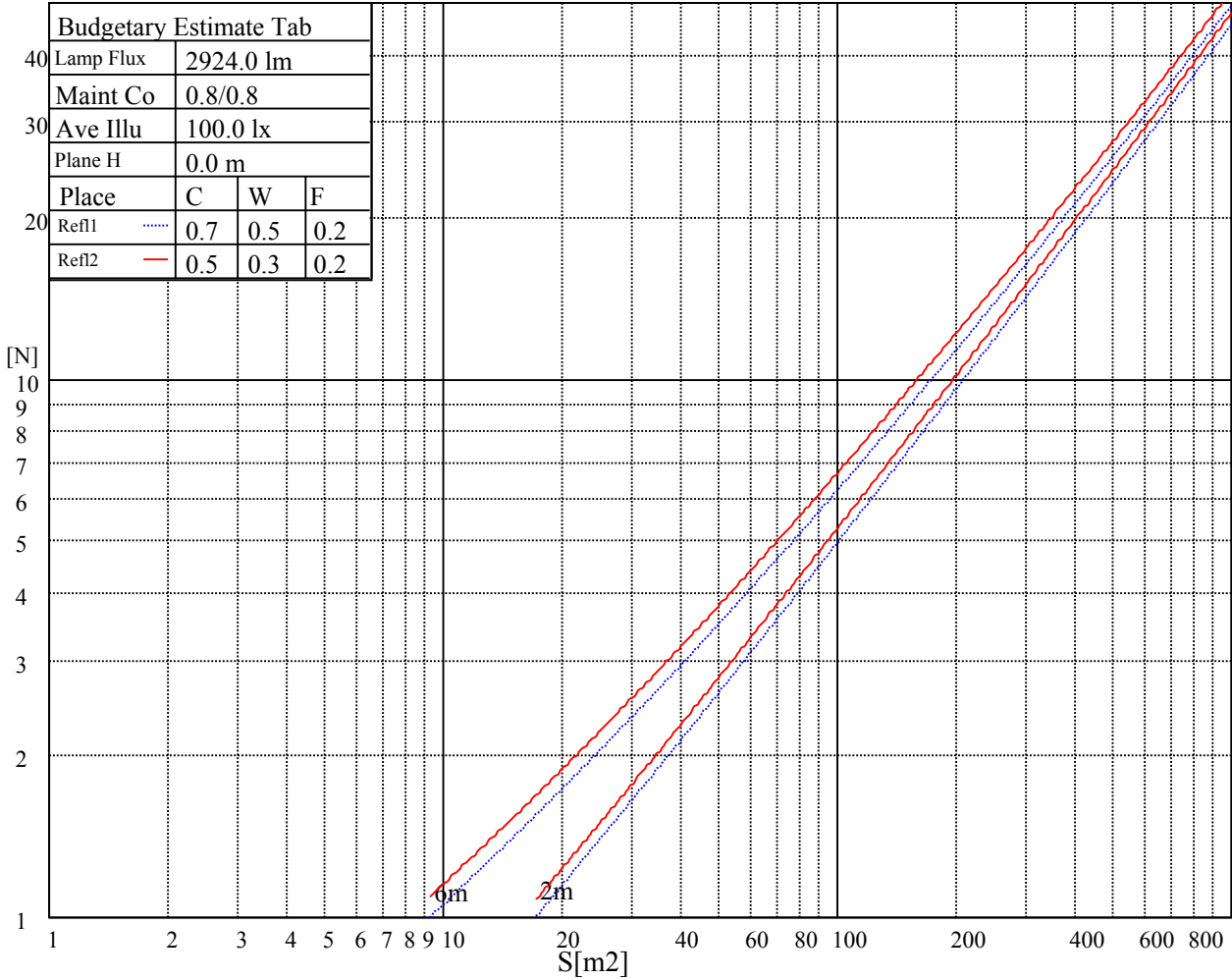
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

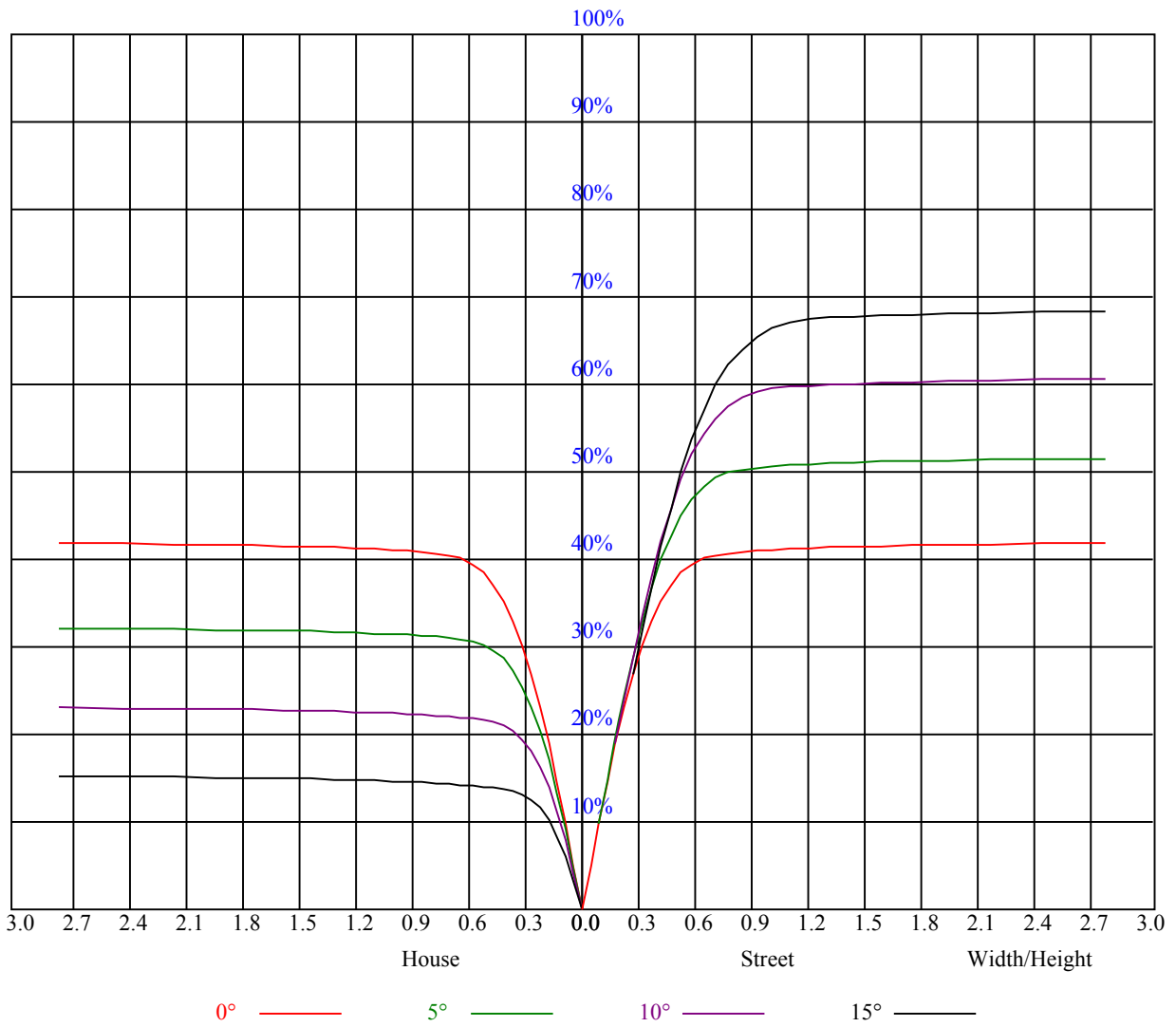
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

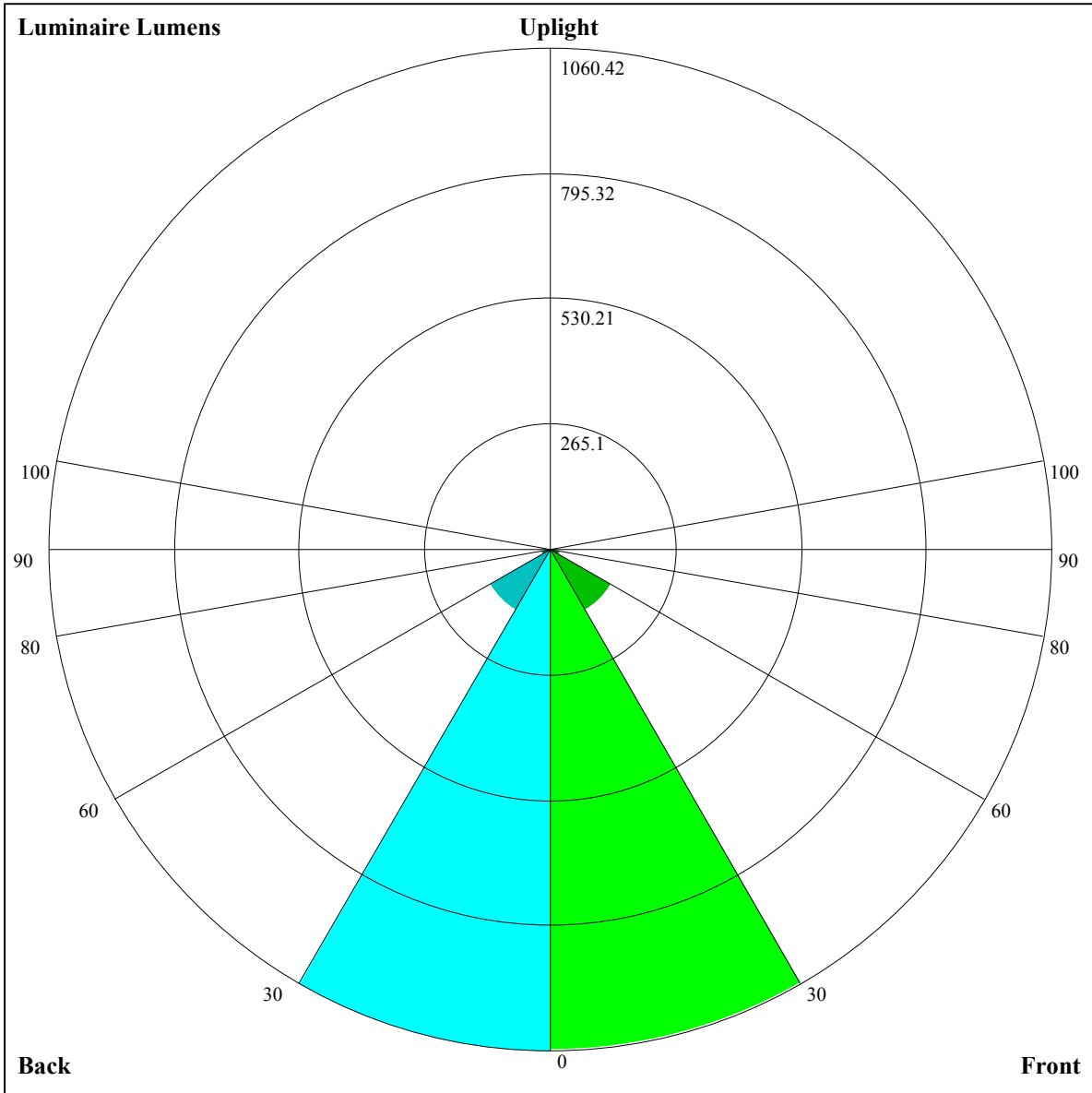
Luminance Limiting Curve





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	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.87	0.86	0.85	0.84	0.83	0.82	0.82	0.81	0.79
2	0.88	0.85	0.82	0.86	0.84	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.79	0.77	0.76	0.75
3	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.77	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
4	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.69	0.67	0.65	0.63
6	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.66	0.64	0.61	0.60
7	0.67	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
8	0.64	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55
9	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.59	0.56	0.53	0.52
10	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.56	0.53	0.51	0.50





Luminaire Lumens:

FL=1057.24,FM=146.29,FH=21.65,FVH=6.97

BL=1060.42,BM=147.56,BH=21.37,BVH=6.91

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	4348.87	4352.96	4360.57	4361.16	4359.40	4333.65	4304.97	4255.81	4206.66
45.0	4354.72	4345.94	4345.94	4355.89	4361.16	4359.98	4344.18	4307.31	4270.45
90.0	4344.77	4347.11	4345.94	4350.04	4348.87	4331.89	4321.36	4278.64	4211.34
135.0	4350.62	4346.52	4346.52	4350.62	4358.23	4357.06	4335.41	4306.73	4260.50
180.0	4348.87	4352.38	4350.62	4360.57	4363.50	4354.72	4330.14	4291.51	4234.75
225.0	4354.13	4359.98	4364.08	4364.67	4350.04	4316.68	4280.39	4199.05	4130.58
270.0	4344.77	4354.13	4356.47	4368.18	4367.01	4357.06	4334.82	4276.30	4224.21
315.0	4355.30	4348.87	4360.57	4358.81	4353.55	4328.38	4270.45	4213.09	4155.16
360.0	4348.87	4352.96	4360.57	4361.16	4359.40	4333.65	4304.97	4255.81	4206.66
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4128.24	4052.16	3964.37	3839.13	3722.67	3595.10	3426.55	3270.30	3071.90
45.0	4223.04	4156.33	4079.08	4001.24	3907.02	3798.75	3654.79	3524.87	3339.94
90.0	4151.64	4065.62	3978.42	3885.95	3779.44	3633.72	3499.70	3353.98	3194.22
135.0	4206.07	4142.87	4065.62	3984.27	3888.29	3777.10	3620.85	3487.41	3336.43
180.0	4159.84	4091.95	4005.34	3914.04	3774.76	3661.81	3528.38	3393.19	3204.75
225.0	4048.06	3958.52	3842.06	3737.31	3619.09	3451.72	3294.29	3130.43	2924.43
270.0	4159.84	4064.45	3980.17	3854.35	3733.21	3613.24	3479.22	3285.51	3122.23
315.0	4088.44	3992.46	3894.15	3784.71	3670.59	3492.68	3346.38	3190.12	2981.78
360.0	4128.24	4052.16	3964.37	3839.13	3722.67	3595.10	3426.55	3270.30	3071.90
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2901.02	2723.11	2546.37	2319.89	2142.57	1964.07	1799.63	1609.43	1463.71
45.0	3180.17	3012.80	2800.95	2626.55	2448.05	2276.58	2060.64	1887.41	1725.30
90.0	2986.46	2817.92	2647.62	2432.25	2252.00	2075.85	1866.93	1707.16	1559.10
135.0	3133.35	2968.32	2759.39	2583.83	2404.16	2232.11	2010.89	1839.42	1675.56
180.0	3034.45	2819.09	2646.45	2477.32	2251.42	2079.36	1916.09	1758.66	1568.46
225.0	2744.18	2529.40	2355.59	2173.00	1995.09	1788.51	1635.18	1495.89	1167.17
270.0	2949.59	2765.25	2549.88	2380.17	2184.12	1983.39	1803.14	1657.42	1477.75
315.0	2800.95	2579.73	2400.65	2230.35	2056.54	1853.47	1692.53	1545.64	1315.64
360.0	2901.02	2723.11	2546.37	2319.89	2142.57	1964.07	1799.63	1609.43	1463.71
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1163.78	1163.78	1019.99	892.06	720.82	596.17	470.17	327.49	227.89
45.0	1572.56	1401.67	1266.49	1133.64	959.24	824.64	695.31	538.47	417.91
90.0	1154.94	1154.94	1121.29	979.37	807.67	679.39	548.36	422.83	280.38
135.0	1522.23	1349.59	1222.01	1082.14	918.86	782.50	650.83	497.50	379.28
180.0	1438.54	1303.35	1169.92	995.53	847.46	720.47	557.19	432.54	323.10
225.0	1167.17	1069.97	922.61	787.13	625.25	501.60	355.58	253.34	168.95
270.0	1349.00	1224.93	1055.80	911.25	776.65	650.24	489.89	368.17	314.32
315.0	1144.35	1112.98	971.77	831.08	669.50	544.49	393.21	284.77	193.83
360.0	1163.78	1163.78	1019.99	892.06	720.82	596.17	470.17	327.49	227.89
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	149.70	100.13	80.18	72.16	66.95	62.56	58.46	55.95	53.49
45.0	304.96	304.96	111.84	83.75	72.80	67.01	62.56	58.93	55.77
90.0	187.04	118.51	81.35	73.04	67.01	61.57	58.23	55.71	53.08
135.0	297.94	297.94	101.13	81.52	72.92	66.07	61.80	58.52	56.12
180.0	297.35	185.81	87.61	73.45	67.13	62.56	58.87	55.54	53.26
225.0	98.55	78.54	70.17	64.73	59.69	56.65	54.31	52.03	49.33
270.0	314.32	98.08	78.83	70.70	64.20	60.10	57.18	54.25	52.03
315.0	111.02	82.75	73.91	66.36	62.03	58.58	56.06	53.20	50.91
360.0	149.70	100.13	80.18	72.16	66.95	62.56	58.46	55.95	53.49

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	50.50	48.34	45.82	43.95	42.37	40.97	39.21	37.69	36.23
45.0	53.49	51.15	49.04	46.53	44.54	42.60	41.20	39.85	38.10
90.0	50.86	48.75	46.76	44.48	42.84	41.43	40.20	38.51	37.10
135.0	53.20	51.03	48.98	46.47	44.54	42.49	41.02	39.74	38.39
180.0	50.91	48.87	46.41	44.54	42.78	41.08	39.68	38.04	36.58
225.0	47.34	45.47	43.37	41.90	40.61	38.98	37.69	36.17	34.18
270.0	49.45	47.34	45.35	43.66	42.25	40.67	39.33	37.63	36.11
315.0	48.75	46.76	44.48	42.96	41.61	39.97	38.57	36.75	35.17
360.0	50.50	48.34	45.82	43.95	42.37	40.97	39.21	37.69	36.23
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	34.65	32.60	31.19	30.02	28.68	27.62	26.57	25.40	24.70
45.0	36.69	35.17	33.65	31.84	30.49	29.32	28.21	26.86	25.93
90.0	35.29	33.65	32.13	30.43	29.32	28.21	26.92	25.98	25.28
135.0	36.52	34.94	33.36	31.84	30.26	29.14	28.03	26.69	25.87
180.0	35.05	33.07	31.54	30.20	28.97	27.68	26.63	25.63	24.93
225.0	32.60	31.13	29.90	28.56	27.51	26.57	25.63	24.70	24.17
270.0	34.53	32.89	31.08	29.90	28.85	27.80	26.63	25.69	24.99
315.0	33.53	32.01	30.37	29.26	28.27	27.15	25.87	25.05	24.46
360.0	34.65	32.60	31.19	30.02	28.68	27.62	26.57	25.40	24.70
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	24.11	23.35	22.36	21.24	20.66	20.48	20.42	20.31	20.19
45.0	25.16	24.46	23.88	23.12	21.65	20.89	20.72	20.60	20.48
90.0	24.70	23.94	23.00	21.83	20.78	20.37	20.19	20.07	19.90
135.0	25.11	24.35	23.64	22.30	21.13	20.54	20.31	20.13	20.13
180.0	24.23	23.70	22.94	21.42	20.48	20.19	19.90	19.78	19.61
225.0	23.58	22.36	21.13	20.42	20.25	20.13	20.01	19.96	19.84
270.0	24.35	23.47	22.53	21.13	20.66	20.60	20.48	20.48	20.48
315.0	23.94	22.94	21.77	20.66	20.48	20.31	20.25	20.19	20.13
360.0	24.11	23.35	22.36	21.24	20.66	20.48	20.42	20.31	20.19
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	20.01	19.84	19.61	19.14	18.61	18.02	17.50	16.97	16.21
45.0	20.42	20.25	20.07	19.84	19.61	19.02	18.49	18.02	17.56
90.0	19.66	19.37	19.14	18.84	18.49	17.97	17.50	16.97	16.39
135.0	20.01	19.84	19.61	19.37	19.14	18.67	18.02	17.56	16.74
180.0	19.43	19.25	19.20	19.02	18.67	18.26	17.73	17.15	16.33
225.0	19.72	19.49	19.20	18.79	18.32	17.73	17.15	16.62	15.92
270.0	20.37	20.37	20.78	21.07	21.24	21.30	21.30	20.48	18.55
315.0	20.07	20.07	20.31	20.42	20.60	20.48	20.07	19.31	17.79
360.0	20.01	19.84	19.61	19.14	18.61	18.02	17.50	16.97	16.21
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	15.57	14.92	13.75	12.17	11.47	11.12	10.77	10.53	10.30
45.0	16.97	16.27	15.45	14.57	12.82	11.65	11.12	10.83	10.59
90.0	15.74	15.22	14.86	13.99	12.11	11.18	10.94	10.65	10.42
135.0	16.04	15.39	14.51	14.05	12.76	11.76	11.18	10.77	10.59
180.0	15.74	14.98	14.34	13.11	12.00	11.06	10.77	10.53	10.36
225.0	15.16	14.22	12.76	11.88	11.06	10.77	10.48	10.30	10.36
270.0	16.62	14.92	13.75	12.41	11.88	11.06	10.71	10.48	10.36
315.0	15.92	14.28	12.99	11.94	11.47	11.00	10.71	10.48	10.42
360.0	15.57	14.92	13.75	12.17	11.47	11.12	10.77	10.53	10.30

Intensity data(cd)

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