



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:

LumCAT: 2-2683-L

Luminaire: 92.70.411.00

Report No: 2024423-B018

Ballast type: AC

Test No: 2024423-C018

Voltage(V): 36.270

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2920.0

Power (W): 20.891

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2481.75, Efficiency(%): 84.99% , Luminous Efficacy(lm/W): 118.80

Central intensity(cd): 8376.969, Maximum intensity(cd): 8376.969

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.8

[C90/270]Total=24.8

Field angle(10%Imax): [C0/180]Total=59.6

[C90/270]Total=59.6

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.99%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.938%

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	8376.969	0.000	0	0.00%	0.00%
1.0	8342.587	8.000	8	0.27%	0.32%
2.0	8237.539	23.797	31.797	0.81%	1.28%
3.0	8055.169	38.967	70.764	1.33%	2.85%
4.0	7812.227	53.113	123.877	1.82%	4.99%
5.0	7465.262	65.723	189.6	2.25%	7.64%
6.0	7095.838	76.522	266.123	2.62%	10.72%
7.0	6685.303	85.539	351.662	2.93%	14.17%
8.0	6220.854	92.367	444.029	3.16%	17.89%
9.0	5738.482	96.924	540.953	3.32%	21.80%
10.0	5253.331	99.472	640.425	3.41%	25.81%
11.0	4822.605	100.679	741.104	3.45%	29.86%
12.0	4373.591	100.528	841.632	3.44%	33.91%
13.0	3957.862	98.873	940.505	3.39%	37.90%
14.0	3599.558	96.734	1037.239	3.31%	41.79%
15.0	3234.012	93.814	1131.054	3.21%	45.57%
16.0	2924.282	90.236	1221.29	3.09%	49.21%
17.0	2624.719	86.413	1307.703	2.96%	52.69%
18.0	2361.953	82.219	1389.922	2.82%	56.01%
19.0	2133.643	78.214	1468.136	2.68%	59.16%
20.0	1935.324	74.473	1542.61	2.55%	62.16%
21.0	1753.027	70.824	1613.434	2.43%	65.01%
22.0	1591.944	67.219	1680.652	2.30%	67.72%
23.0	1449.222	63.812	1744.464	2.19%	70.29%
24.0	1332.455	60.817	1805.282	2.08%	72.74%
25.0	1214.283	57.907	1863.189	1.98%	75.08%
26.0	1161.767	56.087	1919.276	1.92%	77.34%
27.0	1085.658	54.984	1974.26	1.88%	79.55%
28.0	1009.791	53.052	2027.312	1.82%	81.69%
29.0	912.022	50.280	2077.592	1.72%	83.71%
30.0	814.531	46.617	2124.209	1.60%	85.59%
31.0	711.912	42.479	2166.687	1.45%	87.30%
32.0	614.647	38.004	2204.692	1.30%	88.84%
33.0	510.792	33.156	2237.847	1.14%	90.17%
34.0	417.134	28.082	2265.929	0.96%	91.30%
35.0	330.967	23.233	2289.162	0.80%	92.24%
36.0	276.526	19.343	2308.505	0.66%	93.02%
37.0	206.475	15.753	2324.258	0.54%	93.65%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	141.954	11.630	2335.888	0.40%	94.12%
39.0	96.628	8.143	2344.031	0.28%	94.45%
40.0	79.920	6.157	2350.189	0.21%	94.70%
41.0	70.820	5.368	2355.556	0.18%	94.92%
42.0	65.099	4.938	2360.495	0.17%	95.11%
43.0	60.871	4.666	2365.161	0.16%	95.30%
44.0	57.425	4.465	2369.626	0.15%	95.48%
45.0	54.448	4.299	2373.925	0.15%	95.66%
46.0	52.400	4.179	2378.104	0.14%	95.82%
47.0	50.783	4.104	2382.208	0.14%	95.99%
48.0	49.452	4.052	2386.26	0.14%	96.15%
49.0	48.244	4.012	2390.272	0.14%	96.31%
50.0	47.133	3.977	2394.248	0.14%	96.47%
51.0	46.094	3.944	2398.192	0.14%	96.63%
52.0	45.179	3.917	2402.109	0.13%	96.79%
53.0	44.075	3.883	2405.992	0.13%	96.95%
54.0	42.773	3.828	2409.819	0.13%	97.10%
55.0	41.375	3.756	2413.576	0.13%	97.25%
56.0	39.920	3.673	2417.249	0.13%	97.40%
57.0	38.003	3.563	2420.812	0.12%	97.54%
58.0	36.006	3.422	2424.234	0.12%	97.68%
59.0	33.826	3.265	2427.499	0.11%	97.81%
60.0	31.149	3.070	2430.569	0.11%	97.94%
61.0	29.269	2.883	2433.452	0.10%	98.05%
62.0	27.067	2.715	2436.166	0.09%	98.16%
63.0	25.201	2.542	2438.709	0.09%	98.27%
64.0	23.680	2.399	2441.107	0.08%	98.36%
65.0	22.158	2.268	2443.376	0.08%	98.45%
66.0	20.746	2.141	2445.516	0.07%	98.54%
67.0	19.532	2.025	2447.542	0.07%	98.62%
68.0	18.413	1.922	2449.464	0.07%	98.70%
69.0	17.586	1.836	2451.3	0.06%	98.77%
70.0	16.957	1.774	2453.074	0.06%	98.84%
71.0	16.430	1.726	2454.8	0.06%	98.91%
72.0	16.196	1.696	2456.496	0.06%	98.98%
73.0	16.006	1.684	2458.18	0.06%	99.05%
74.0	15.830	1.674	2459.854	0.06%	99.12%
75.0	15.552	1.658	2461.512	0.06%	99.18%

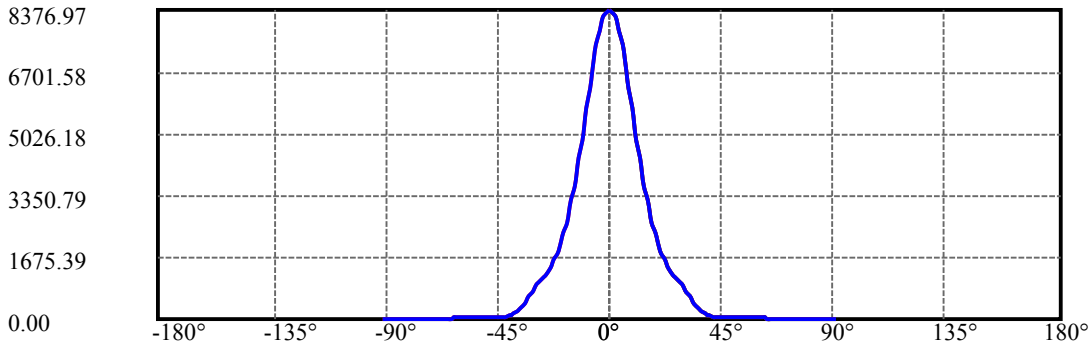
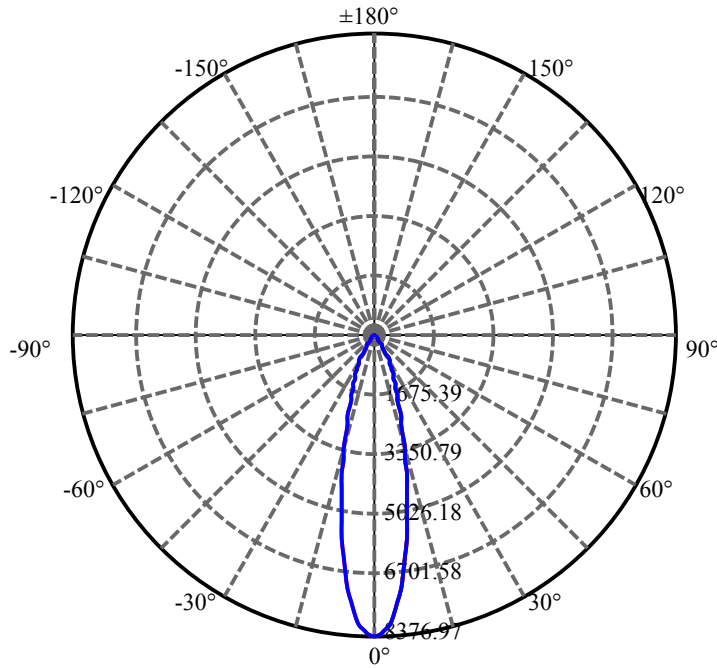
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.099	1.627	2463.139	0.06%	99.25%
77.0	14.543	1.580	2464.72	0.05%	99.31%
78.0	14.002	1.528	2466.248	0.05%	99.38%
79.0	13.453	1.475	2467.723	0.05%	99.43%
80.0	13.029	1.428	2469.15	0.05%	99.49%
81.0	12.685	1.391	2470.541	0.05%	99.55%
82.0	12.363	1.358	2471.899	0.05%	99.60%
83.0	12.107	1.330	2473.229	0.05%	99.66%
84.0	11.858	1.306	2474.535	0.04%	99.71%
85.0	11.485	1.274	2475.809	0.04%	99.76%
86.0	11.134	1.236	2477.045	0.04%	99.81%
87.0	10.878	1.205	2478.25	0.04%	99.86%
88.0	10.658	1.180	2479.43	0.04%	99.91%
89.0	10.615	1.166	2480.596	0.04%	99.95%
90.0	10.468	1.156	2481.752	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2124.21	72.75%	85.59%
0-40	2350.19	80.49%	94.70%
0-60	2430.57	83.24%	97.94%
0-90	2480.60	84.95%	99.95%
0-120	2480.60	84.95%	99.95%
0-180	2481.75	84.99%	100.00%
60-90	50.03	1.71%	2.02%
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%
0-27.21	1985.40	67.99%	80.00%

ZONAL LUMEN SUMMARY

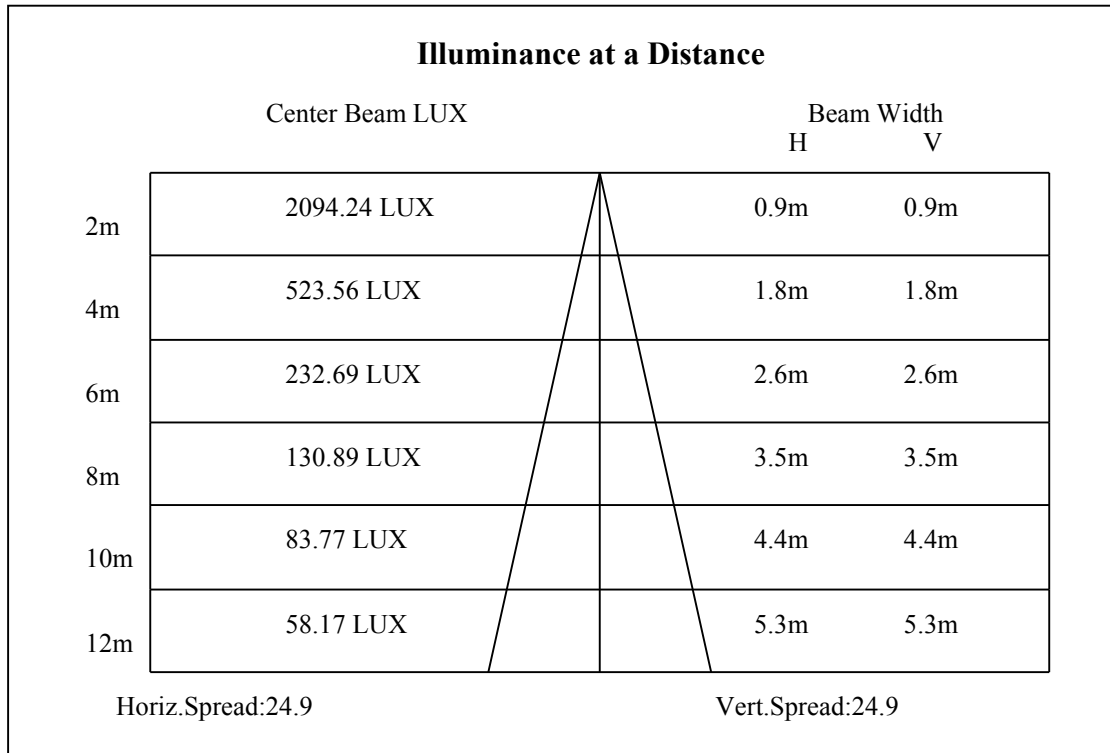
0-10	640.42
10-20	902.19
20-30	581.60
30-40	225.98
40-50	44.06
50-60	36.32
60-70	22.51
70-80	16.08
80-90	11.45
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

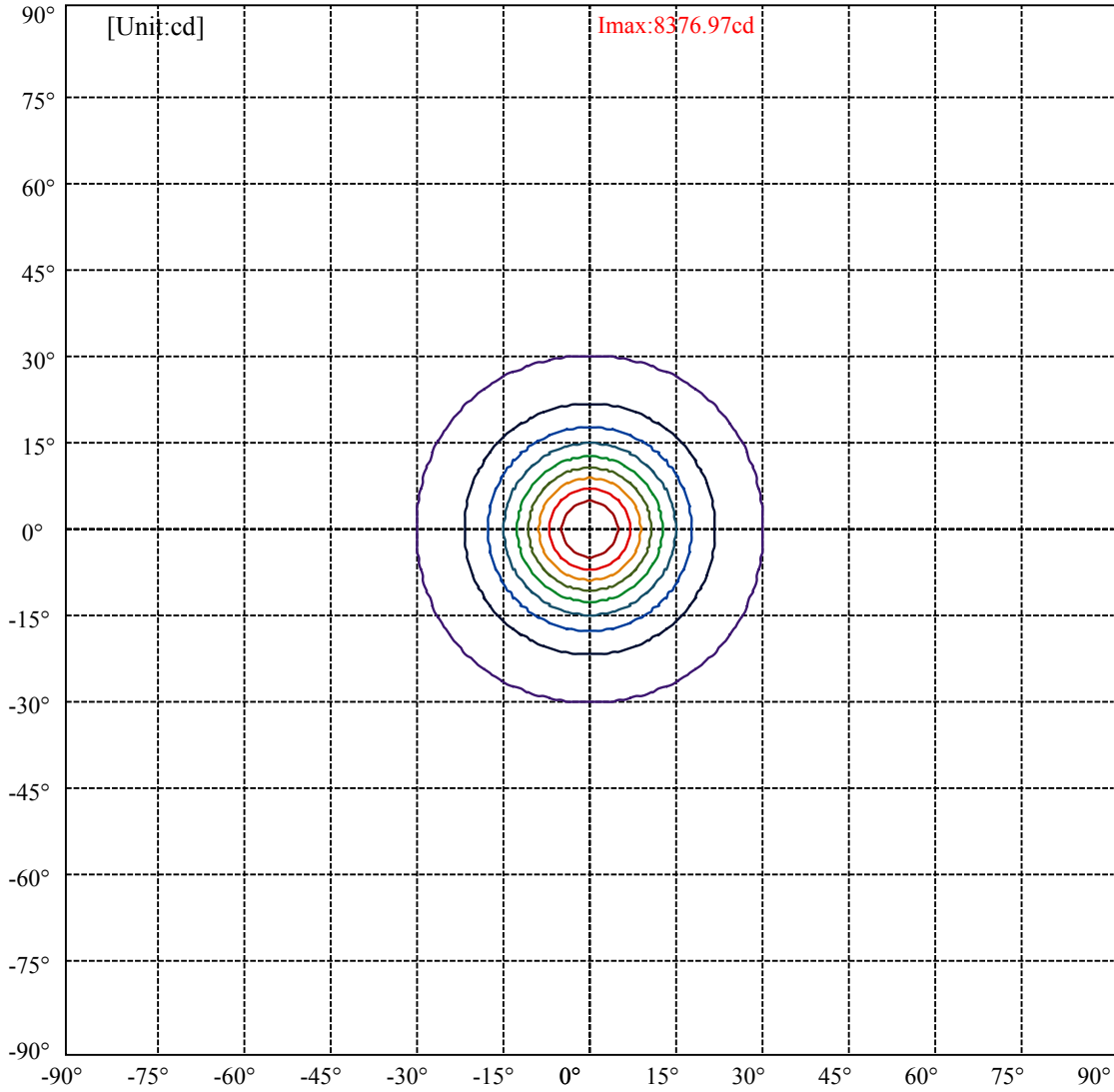


C0(Max): ———
C0/C180: ———
C90/C270: ———

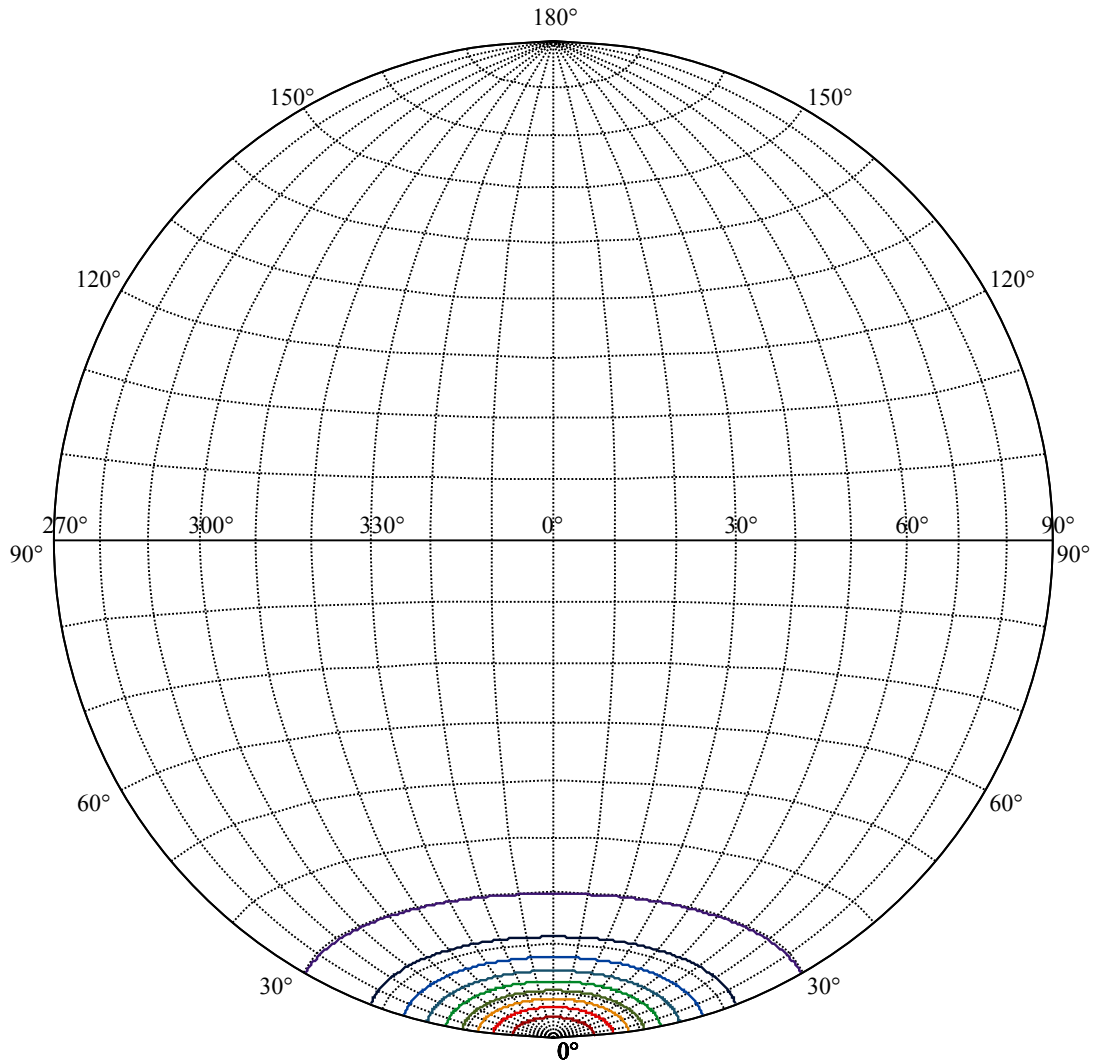
Field angle(10%Imax):C0/180Left:29.8 Right:29.8
:C90/270Left:29.8 Right:29.8

Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4
:C90/270Left:12.4 Right:12.4





(10%Imax) 837.697	—
(20%Imax) 1675.39	—
(30%Imax) 2513.09	—
(40%Imax) 3350.79	—
(50%Imax) 4188.48	—
(60%Imax) 5026.18	—
(70%Imax) 5863.88	—
(80%Imax) 6701.58	—
(90%Imax) 7539.27	—



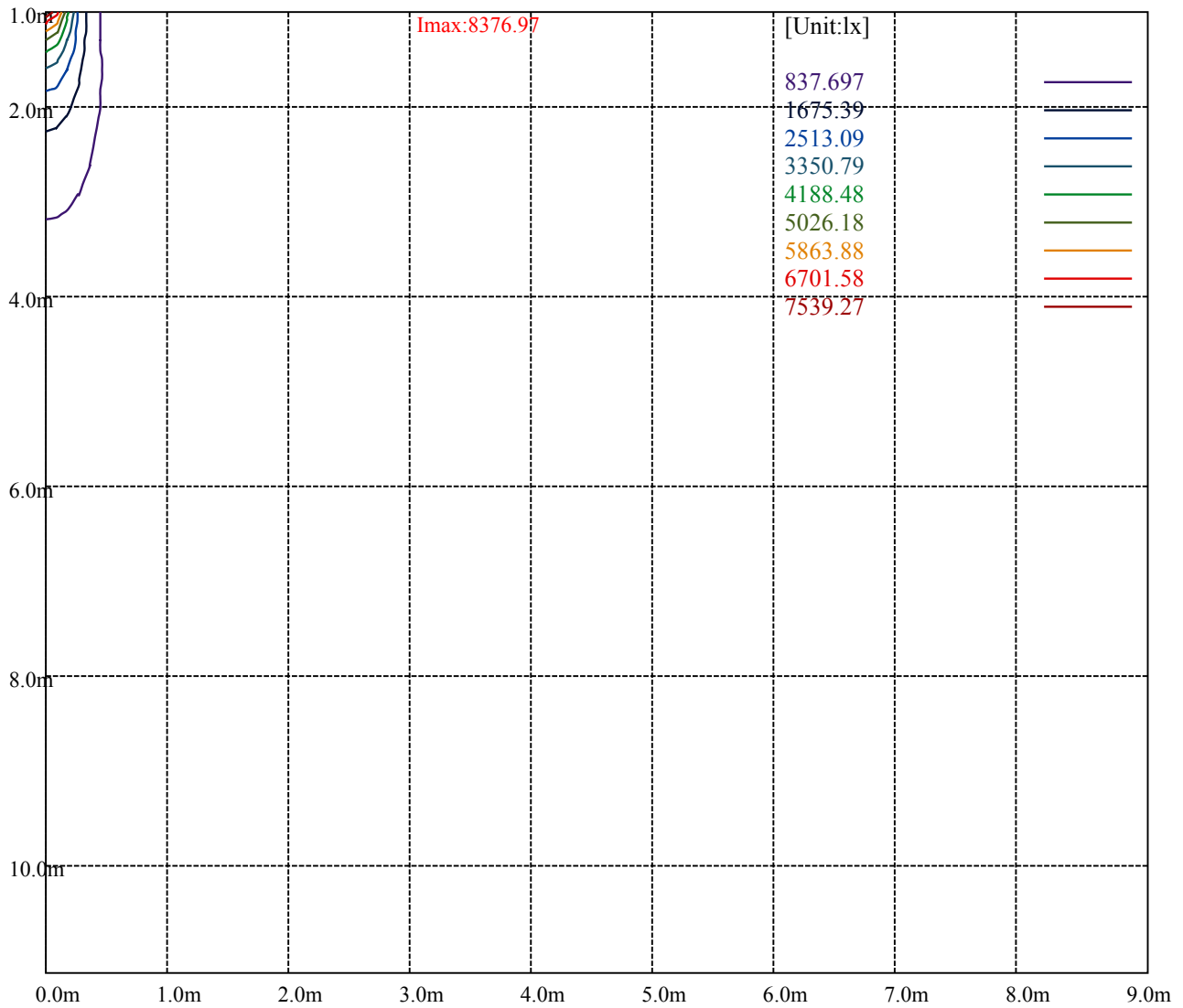
House

[Unit:cd]

Road

I_{max}:8376.97

(10%I _{max}) 837.697	—
(20%I _{max}) 1675.39	—
(30%I _{max}) 2513.09	—
(40%I _{max}) 3350.79	—
(50%I _{max}) 4188.48	—
(60%I _{max}) 5026.18	—
(70%I _{max}) 5863.88	—
(80%I _{max}) 6701.58	—
(90%I _{max}) 7539.27	—



Luminance Table

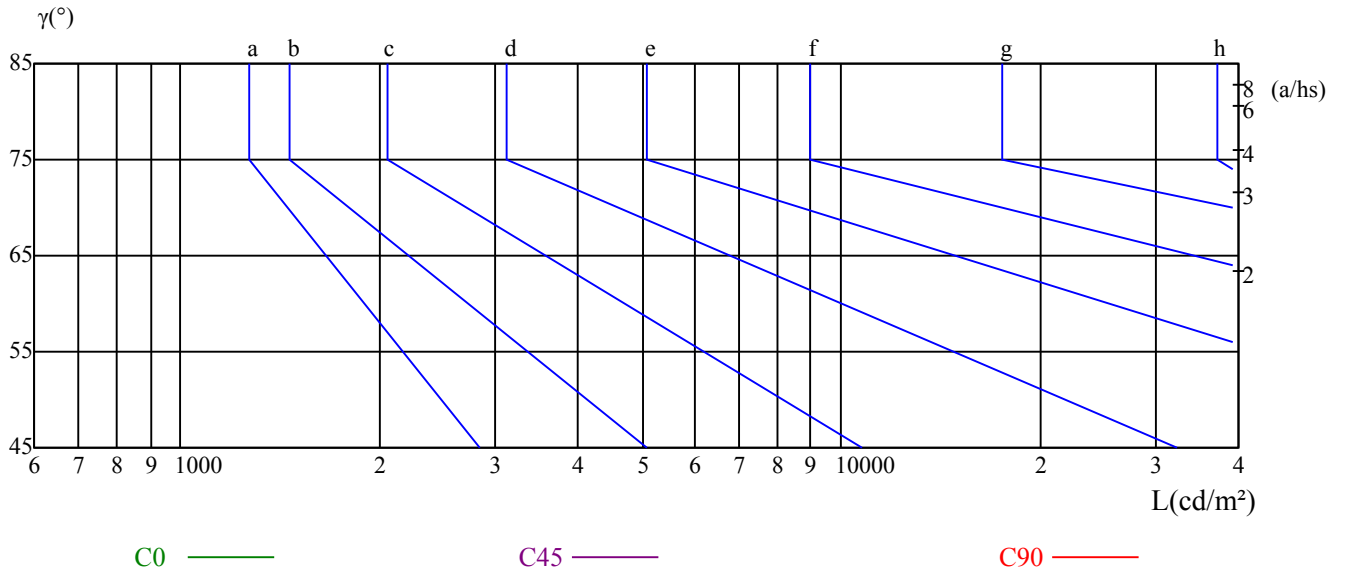
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

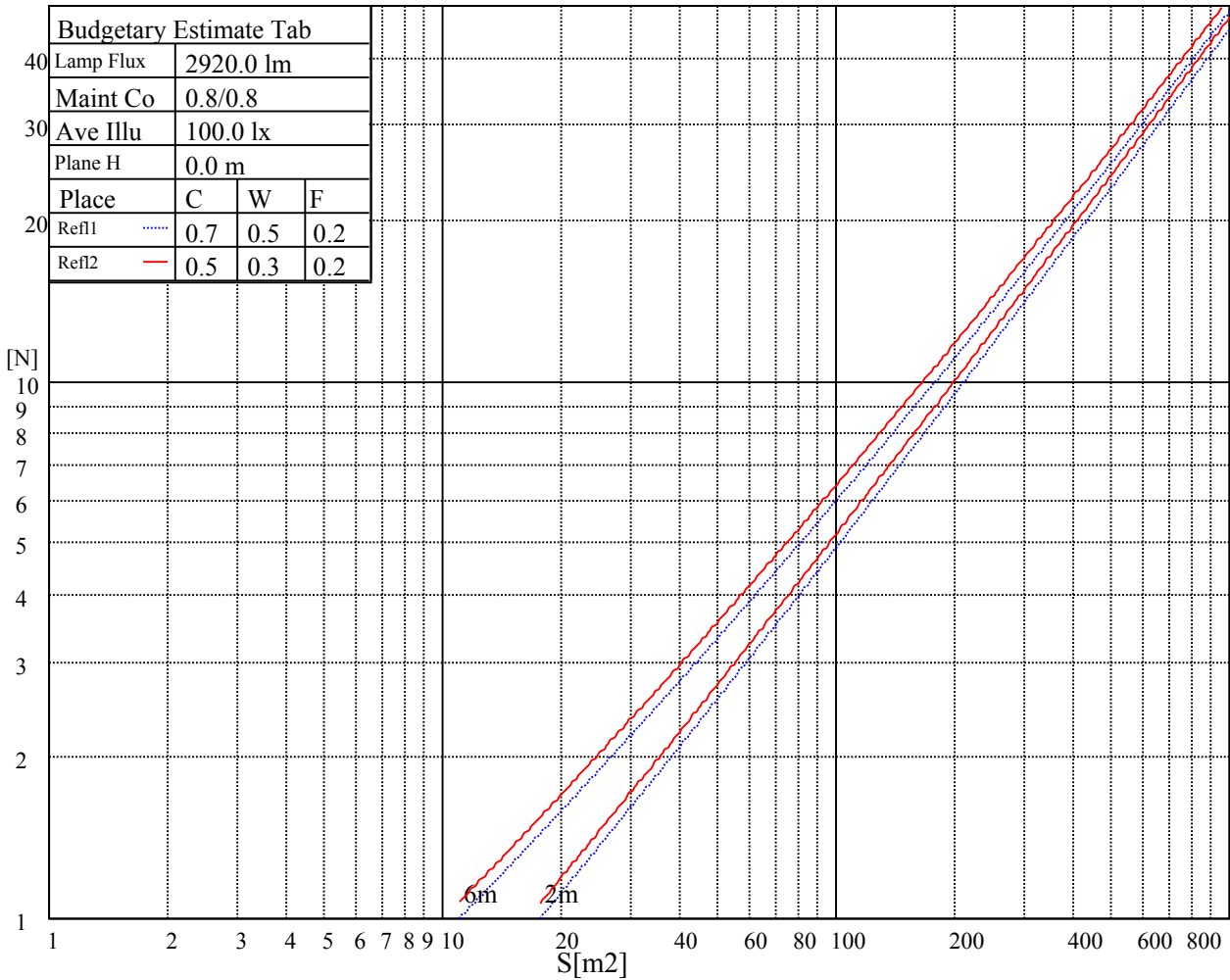
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

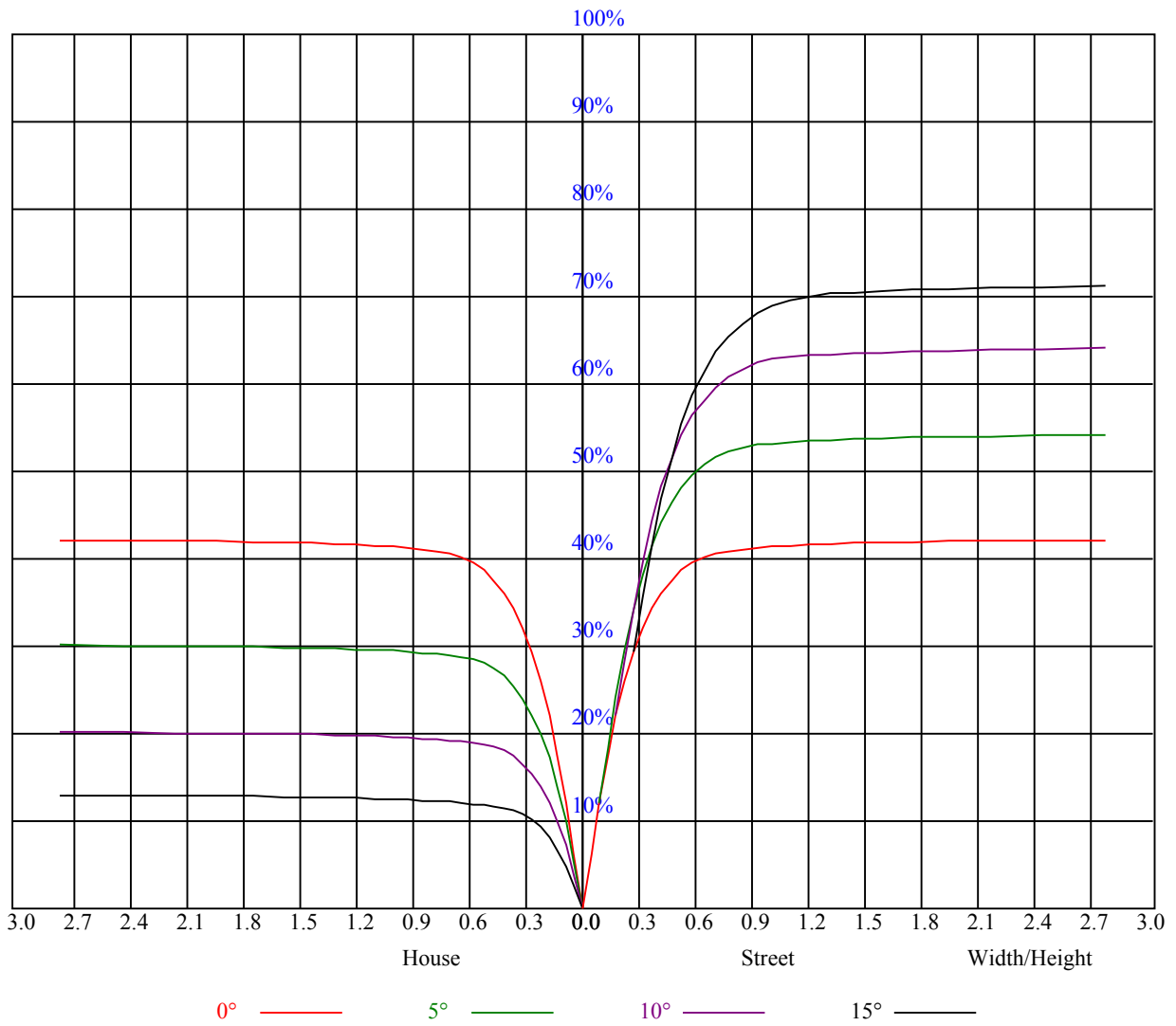
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

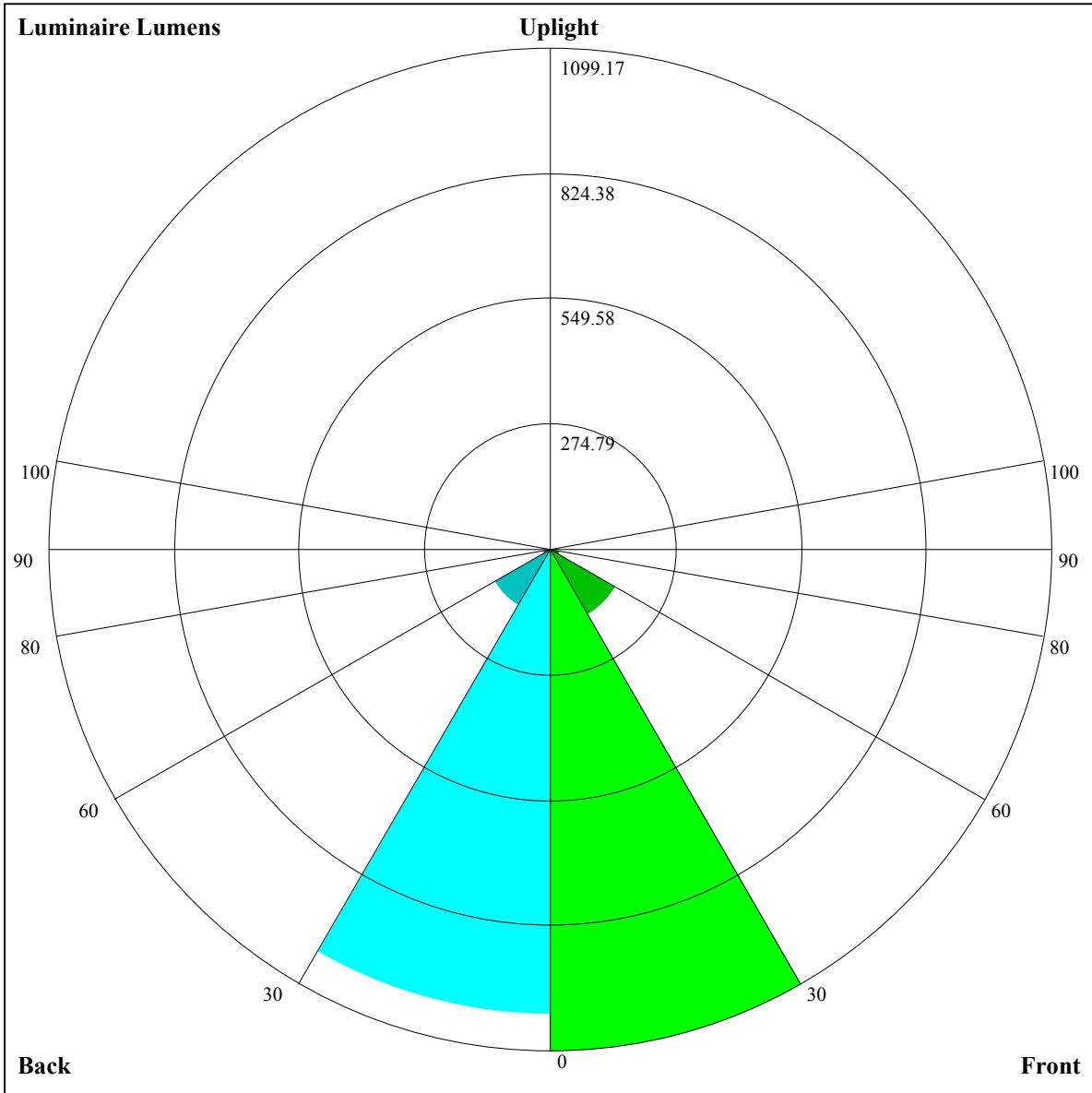
Luminance Limiting Curve





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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.86	0.85	0.84	0.83	0.83	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	0.79	0.80	0.79	0.78	0.76
3	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.74	0.73
4	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
5	0.77	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
7	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.58
9	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.54





Luminaire Lumens:

FL=1099.17,FM=164.39,FH=19.61,FVH=6.36

BL=1019.95,BM=143.56,BH=19.08,BVH=6.25

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	8412.08	8406.82	8352.39	8245.88	8064.46	7742.00	7428.90	7060.80	6639.44
45.0	8331.32	8396.87	8385.16	8317.28	8141.12	7922.83	7641.34	7308.35	6825.54
90.0	8377.55	8285.67	8134.10	7926.93	7658.31	7227.00	6843.68	6312.88	5879.23
135.0	8386.92	8354.15	8218.96	8008.86	7741.41	7329.42	6930.88	6506.00	5964.09
180.0	8412.08	8355.32	8224.23	7950.34	7664.75	7242.22	6841.34	6410.03	5969.94
225.0	8331.32	8204.33	8007.11	7672.36	7350.48	6977.70	6449.24	6009.15	5572.57
270.0	8377.55	8370.53	8305.57	8178.58	7939.81	7672.94	7366.87	6999.93	6473.23
315.0	8386.92	8367.02	8272.80	8141.12	7937.47	7607.98	7264.46	6875.28	6442.80
360.0	8412.08	8406.82	8352.39	8245.88	8064.46	7742.00	7428.90	7060.80	6639.44
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6079.96	5617.63	5159.99	4618.07	4214.26	3844.40	3414.85	3098.24	2819.09
45.0	6404.76	5959.40	5505.86	4952.23	4532.63	4237.09	3689.90	3358.08	2978.27
90.0	5436.21	4883.76	4474.69	4091.37	3734.96	3328.82	3032.69	2755.30	2441.62
135.0	5525.17	5090.35	4674.84	4188.51	3819.82	3471.61	3153.25	2798.02	2536.42
180.0	5426.26	4990.86	4567.74	4168.62	3703.95	3365.10	3058.44	2782.22	2465.61
225.0	5134.82	4600.51	4202.56	3828.02	3482.73	3102.34	2825.52	2511.26	2280.10
270.0	6033.73	5483.62	5040.02	4614.56	4125.89	3757.79	3420.70	3114.63	2771.10
315.0	5866.94	5400.51	4955.16	4527.36	4048.65	3689.32	3276.73	2976.51	2536.55
360.0	6079.96	5617.63	5159.99	4618.07	4214.26	3844.40	3414.85	3098.24	2819.09
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2500.72	2272.49	2065.90	1877.46	1677.90	1542.71	1424.50	1165.83	1165.83
45.0	2707.89	2460.93	2237.37	1986.31	1811.92	1663.85	1535.10	1393.48	1294.58
90.0	2220.40	2017.33	1842.35	1656.25	1527.50	1389.97	1156.93	1156.93	1140.43
135.0	2249.08	2047.76	1871.61	1685.51	1556.76	1446.15	1349.00	1244.83	1171.09
180.0	2238.54	1980.46	1798.45	1646.88	1486.53	1375.34	1279.36	1185.14	1115.50
225.0	2065.32	1837.08	1680.82	1543.30	1393.48	1164.07	1164.07	1129.13	1060.25
270.0	2519.45	2279.51	2010.31	1831.23	1673.22	1533.93	1388.21	1289.31	1196.84
315.0	2394.21	2173.58	1975.78	1797.28	1608.26	1477.75	1362.46	1149.62	1149.62
360.0	2500.72	2272.49	2065.90	1877.46	1677.90	1542.71	1424.50	1165.83	1165.83
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1129.95	1062.24	965.80	880.47	764.65	671.43	578.09	462.27	377.65
45.0	1209.72	1137.74	1052.88	975.04	862.68	767.29	671.90	554.27	463.56
90.0	1055.28	978.09	890.65	797.25	678.28	580.37	484.68	393.33	292.50
135.0	1099.70	1021.28	909.50	813.52	717.54	620.40	502.18	412.64	309.06
180.0	1042.93	963.34	845.12	745.64	650.24	557.78	443.66	361.73	303.79
225.0	961.58	871.05	776.30	657.27	563.86	473.45	368.22	292.61	223.73
270.0	1104.96	1034.15	927.05	832.25	738.03	644.39	527.93	437.81	354.12
315.0	1081.14	1010.45	928.87	814.81	720.00	602.08	509.67	422.42	323.34
360.0	1129.95	1062.24	965.80	880.47	764.65	671.43	578.09	462.27	377.65
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	300.75	230.99	157.07	112.95	85.85	75.85	68.41	64.02	59.34
45.0	378.11	299.11	299.11	146.07	104.64	80.00	73.21	67.48	63.09
90.0	221.33	160.76	102.47	79.53	71.63	64.96	60.63	56.18	54.37
135.0	309.06	222.21	110.90	84.97	74.56	68.88	62.85	58.64	56.36
180.0	303.79	146.25	107.04	81.46	74.91	69.12	63.32	59.93	57.70
225.0	149.52	106.45	83.22	73.27	67.53	63.03	58.82	55.83	53.55
270.0	297.35	297.35	140.16	103.12	83.92	74.32	68.30	64.08	58.17
315.0	252.29	188.68	135.66	91.65	76.31	70.40	65.25	60.80	56.83
360.0	300.75	230.99	157.07	112.95	85.85	75.85	68.41	64.02	59.34

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	55.01	52.79	50.39	48.92	47.93	46.35	45.41	44.59	43.66
45.0	57.24	55.01	52.90	50.80	49.57	48.22	46.64	46.00	45.12
90.0	52.44	50.86	49.69	48.69	47.64	46.82	45.76	44.71	43.54
135.0	54.19	52.14	50.97	49.92	48.34	47.23	46.41	45.06	43.89
180.0	55.54	53.37	52.03	50.91	49.45	48.46	47.29	46.00	44.42
225.0	51.38	49.98	49.16	47.99	46.82	45.94	45.18	43.89	42.84
270.0	55.25	52.85	50.56	49.10	48.05	46.64	45.88	45.71	44.30
315.0	54.54	52.20	50.56	49.28	48.16	47.40	46.17	45.47	44.83
360.0	55.01	52.79	50.39	48.92	47.93	46.35	45.41	44.59	43.66
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	42.55	41.32	40.09	38.62	36.69	34.65	32.66	30.55	27.74
45.0	43.66	42.55	41.26	39.85	37.98	35.99	33.77	31.89	28.68
90.0	42.25	40.56	38.92	36.40	34.24	32.25	28.91	27.33	25.87
135.0	42.43	40.56	38.92	36.93	34.29	32.25	29.32	27.56	25.63
180.0	43.01	41.26	39.56	37.34	35.17	32.60	29.79	28.03	26.39
225.0	41.32	39.85	37.98	35.64	33.47	31.31	28.09	26.63	24.87
270.0	43.19	42.19	41.26	39.39	37.75	35.70	33.18	30.84	28.44
315.0	43.77	42.72	41.38	39.85	38.45	35.87	33.47	31.31	28.91
360.0	42.55	41.32	40.09	38.62	36.69	34.65	32.66	30.55	27.74
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	26.28	24.35	22.77	21.54	19.96	18.67	17.79	17.03	16.21
45.0	26.92	25.52	23.35	22.00	20.60	19.20	18.32	17.50	16.56
90.0	23.94	22.47	21.36	19.78	18.96	17.97	17.26	16.91	16.68
135.0	23.99	22.71	21.54	19.78	18.90	17.91	17.21	16.74	16.27
180.0	24.05	22.82	21.59	20.01	18.96	18.14	17.32	16.85	16.85
225.0	23.17	21.77	20.31	18.90	18.08	17.26	16.44	16.04	15.63
270.0	26.34	24.64	23.06	21.89	20.19	19.02	18.14	17.15	16.50
315.0	26.92	25.16	23.29	22.06	20.60	19.14	18.20	17.44	16.74
360.0	26.28	24.35	22.77	21.54	19.96	18.67	17.79	17.03	16.21
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.74	15.39	15.04	14.69	14.34	14.10	13.69	13.40	13.05
45.0	16.09	15.68	15.27	14.92	14.63	14.34	13.93	13.64	13.34
90.0	16.80	16.97	17.21	17.15	16.27	14.51	13.64	13.17	12.87
135.0	16.09	16.04	16.15	16.27	16.27	16.09	15.51	14.22	13.23
180.0	17.38	17.62	17.44	16.91	16.27	15.39	14.40	13.40	13.05
225.0	15.27	14.86	14.51	14.22	13.93	13.58	13.28	12.99	12.64
270.0	16.04	15.63	15.45	15.04	14.40	14.05	13.75	13.40	12.99
315.0	16.15	15.86	15.57	15.22	14.69	14.28	13.81	13.40	13.05
360.0	15.74	15.39	15.04	14.69	14.34	14.10	13.69	13.40	13.05
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.70	12.41	12.17	11.82	11.65	11.29	11.12	10.83	10.65
45.0	12.99	12.70	12.35	12.11	11.94	11.65	11.18	10.94	10.71
90.0	12.47	12.23	12.11	12.00	11.35	11.00	10.71	10.71	10.36
135.0	12.76	12.35	12.06	11.70	11.24	10.94	10.65	10.48	10.36
180.0	12.70	12.29	12.00	11.76	11.35	10.89	10.65	10.42	10.89
225.0	12.47	12.17	11.94	11.76	11.12	10.83	10.59	10.36	10.59
270.0	12.70	12.35	12.11	11.88	11.70	11.24	11.06	10.77	10.77
315.0	12.70	12.41	12.11	11.82	11.53	11.24	11.06	10.77	10.59
360.0	12.70	12.41	12.17	11.82	11.65	11.29	11.12	10.83	10.65

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.71
45.0	10.53
90.0	10.65
135.0	10.36
180.0	10.36
225.0	10.42
270.0	10.30
315.0	10.42
360.0	10.71