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NT

Client:

LumCAT: 2-2684-L

Luminaire: 92.70.411.00

Report No: 2024424-B005

Ballast type: AC

Test No: 2024424-C005

Voltage(V): 36.490

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 21.018

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2493.62, Efficiency(%): 85.28% , Luminous Efficacy(lm/W): 118.64

Central intensity(cd): 5774.181, Maximum intensity(cd): 5774.181

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

Beam Angle(50%Imax): [C0/180]Total=34.4

[C90/270]Total=34.4

Field angle(10%Imax): [C0/180]Total=64.6

[C90/270]Total=64.6

Maximum s/h(1/2): C0\_180=0.56 C90\_270=0.56

Maximum s/h(1/4): C0\_180=0.59 C90\_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.28%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.943%

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	5774.181	0.000	0	0.00%	0.00%
1.0	5762.330	5.520	5.52	0.19%	0.22%
2.0	5721.584	16.483	22.003	0.56%	0.88%
3.0	5645.944	27.187	49.19	0.93%	1.97%
4.0	5543.090	37.453	86.643	1.28%	3.47%
5.0	5416.389	47.147	133.791	1.61%	5.37%
6.0	5289.322	56.261	190.052	1.92%	7.62%
7.0	5124.874	64.641	254.693	2.21%	10.21%
8.0	4971.179	72.256	326.948	2.47%	13.11%
9.0	4772.788	78.970	405.918	2.70%	16.28%
10.0	4556.328	84.425	490.343	2.89%	19.66%
11.0	4357.278	89.065	579.408	3.05%	23.24%
12.0	4142.135	92.911	672.319	3.18%	26.96%
13.0	3884.563	95.257	767.576	3.26%	30.78%
14.0	3642.426	96.345	863.92	3.29%	34.65%
15.0	3413.895	96.872	960.793	3.31%	38.53%
16.0	3162.249	96.359	1057.152	3.30%	42.39%
17.0	2934.084	94.936	1152.088	3.25%	46.20%
18.0	2703.505	92.952	1245.04	3.18%	49.93%
19.0	2510.527	90.714	1335.753	3.10%	53.57%
20.0	2331.156	88.616	1424.369	3.03%	57.12%
21.0	2148.932	86.027	1510.396	2.94%	60.57%
22.0	1971.828	82.808	1593.204	2.83%	63.89%
23.0	1810.964	79.373	1672.578	2.71%	67.07%
24.0	1664.585	75.988	1748.566	2.60%	70.12%
25.0	1495.052	71.843	1820.409	2.46%	73.00%
26.0	1286.632	65.662	1886.071	2.25%	75.64%
27.0	1209.016	61.057	1947.127	2.09%	78.08%
28.0	1102.088	58.512	2005.64	2.00%	80.43%
29.0	965.519	54.094	2059.734	1.85%	82.60%
30.0	837.713	48.687	2108.421	1.67%	84.55%
31.0	711.765	43.120	2151.541	1.47%	86.28%
32.0	602.570	37.654	2189.195	1.29%	87.79%
33.0	503.659	32.590	2221.785	1.11%	89.10%
34.0	417.404	27.874	2249.659	0.95%	90.22%
35.0	346.636	23.728	2273.387	0.81%	91.17%
36.0	296.270	20.470	2293.857	0.70%	91.99%
37.0	267.419	18.384	2312.242	0.63%	92.73%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	213.293	16.045	2328.287	0.55%	93.37%
39.0	174.975	13.253	2341.54	0.45%	93.90%
40.0	144.492	11.142	2352.682	0.38%	94.35%
41.0	120.929	9.452	2362.133	0.32%	94.73%
42.0	103.182	8.142	2370.276	0.28%	95.05%
43.0	88.347	7.095	2377.371	0.24%	95.34%
44.0	77.067	6.243	2383.614	0.21%	95.59%
45.0	68.384	5.590	2389.204	0.19%	95.81%
46.0	61.324	5.073	2394.276	0.17%	96.02%
47.0	56.087	4.670	2398.946	0.16%	96.20%
48.0	51.727	4.358	2403.304	0.15%	96.38%
49.0	48.142	4.101	2407.405	0.14%	96.54%
50.0	45.084	3.887	2411.292	0.13%	96.70%
51.0	42.356	3.699	2414.992	0.13%	96.85%
52.0	40.088	3.538	2418.53	0.12%	96.99%
53.0	38.091	3.401	2421.93	0.12%	97.12%
54.0	35.962	3.264	2425.194	0.11%	97.26%
55.0	34.163	3.130	2428.324	0.11%	97.38%
56.0	32.436	3.009	2431.334	0.10%	97.50%
57.0	30.936	2.898	2434.231	0.10%	97.62%
58.0	29.561	2.798	2437.029	0.10%	97.73%
59.0	28.091	2.695	2439.724	0.09%	97.84%
60.0	26.876	2.597	2442.321	0.09%	97.94%
61.0	25.779	2.513	2444.834	0.09%	98.04%
62.0	24.748	2.435	2447.269	0.08%	98.14%
63.0	23.687	2.356	2449.624	0.08%	98.24%
64.0	22.795	2.281	2451.905	0.08%	98.33%
65.0	21.909	2.212	2454.117	0.08%	98.42%
66.0	21.149	2.148	2456.266	0.07%	98.50%
67.0	20.366	2.087	2458.353	0.07%	98.59%
68.0	19.568	2.023	2460.376	0.07%	98.67%
69.0	18.961	1.966	2462.342	0.07%	98.75%
70.0	18.376	1.918	2464.259	0.07%	98.82%
71.0	17.718	1.866	2466.125	0.06%	98.90%
72.0	17.147	1.813	2467.938	0.06%	98.97%
73.0	16.628	1.766	2469.704	0.06%	99.04%
74.0	16.152	1.723	2471.427	0.06%	99.11%
75.0	15.669	1.681	2473.109	0.06%	99.18%

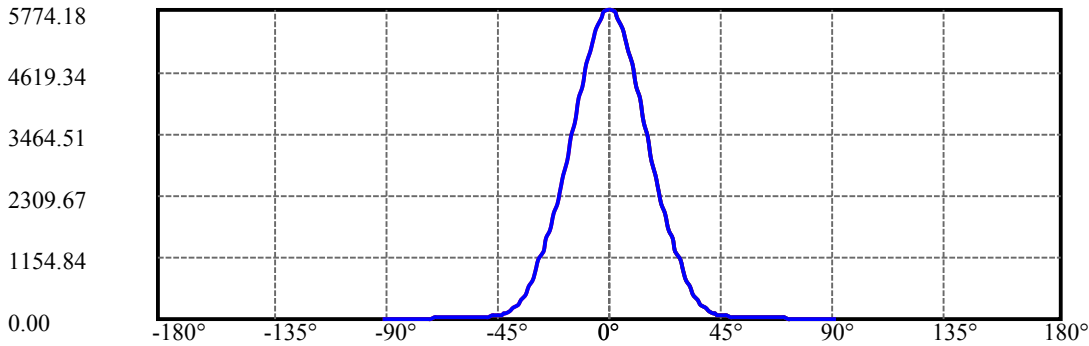
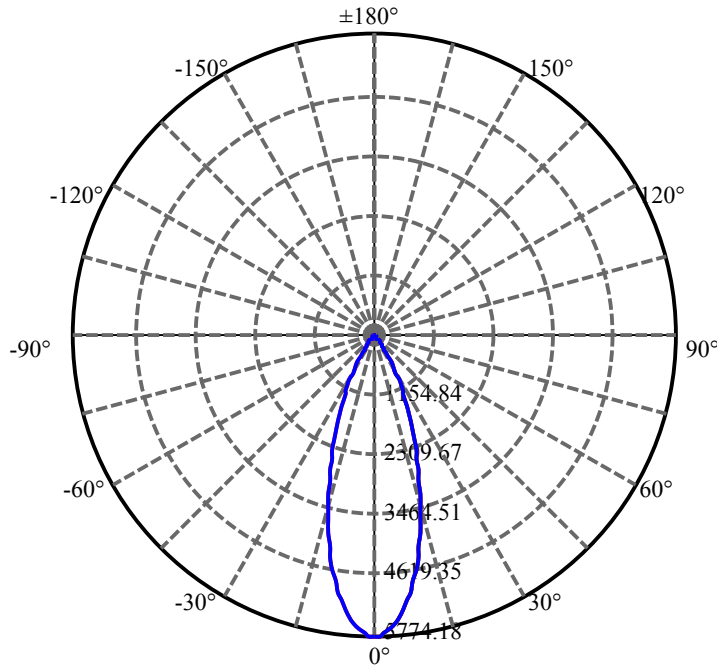
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.187	1.638	2474.747	0.06%	99.24%
77.0	14.784	1.598	2476.344	0.05%	99.31%
78.0	14.397	1.562	2477.907	0.05%	99.37%
79.0	13.899	1.520	2479.427	0.05%	99.43%
80.0	13.482	1.476	2480.903	0.05%	99.49%
81.0	13.094	1.437	2482.34	0.05%	99.55%
82.0	12.699	1.399	2483.739	0.05%	99.60%
83.0	12.239	1.356	2485.095	0.05%	99.66%
84.0	11.807	1.310	2486.405	0.04%	99.71%
85.0	11.500	1.272	2487.677	0.04%	99.76%
86.0	11.200	1.241	2488.917	0.04%	99.81%
87.0	10.958	1.213	2490.13	0.04%	99.86%
88.0	10.732	1.188	2491.318	0.04%	99.91%
89.0	10.461	1.162	2492.48	0.04%	99.95%
90.0	10.410	1.144	2493.624	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2108.42	72.11%	84.55%
0-40	2352.68	80.46%	94.35%
0-60	2442.32	83.53%	97.94%
0-90	2492.48	85.24%	99.95%
0-120	2492.48	85.24%	99.95%
0-180	2493.62	85.28%	100.00%
60-90	50.16	1.72%	2.01%
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%
0-27.82	1994.90	68.23%	80.00%

ZONAL LUMEN SUMMARY

0-10	490.34
10-20	934.03
20-30	684.05
30-40	244.26
40-50	58.61
50-60	31.03
60-70	21.94
70-80	16.64
80-90	11.58
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: —————

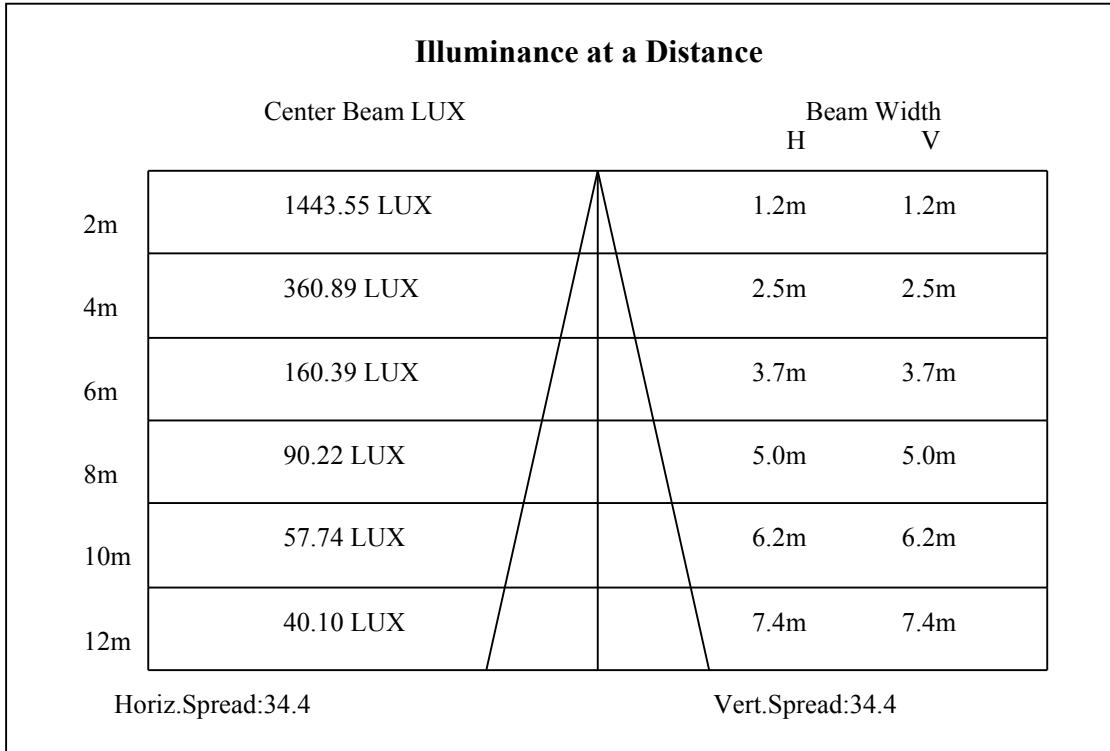
C90/C270: —————

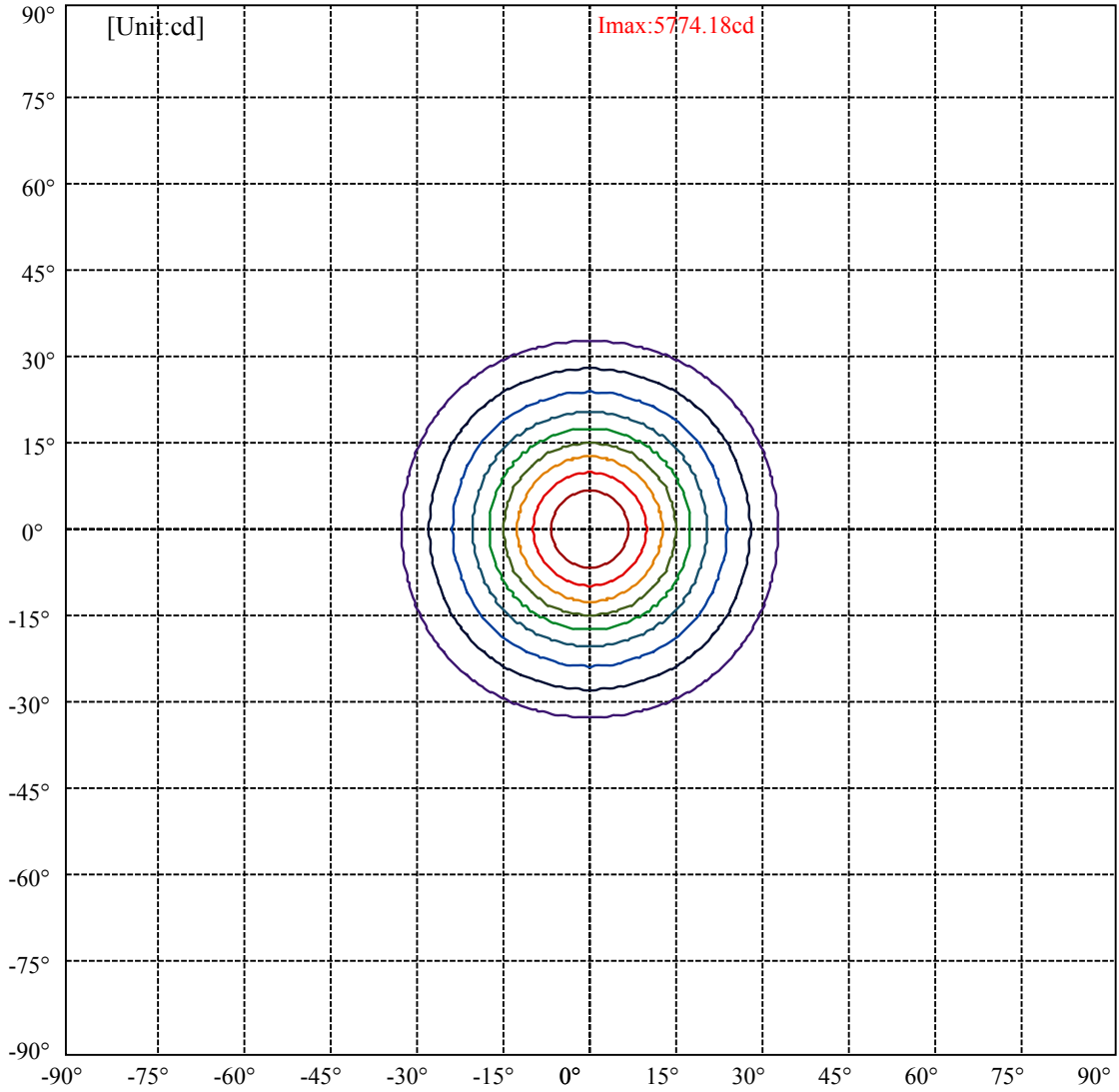
Field angle(10%Imax):C0/180Left:32.3 Right:32.3

:C90/270Left:32.3 Right:32.3

Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

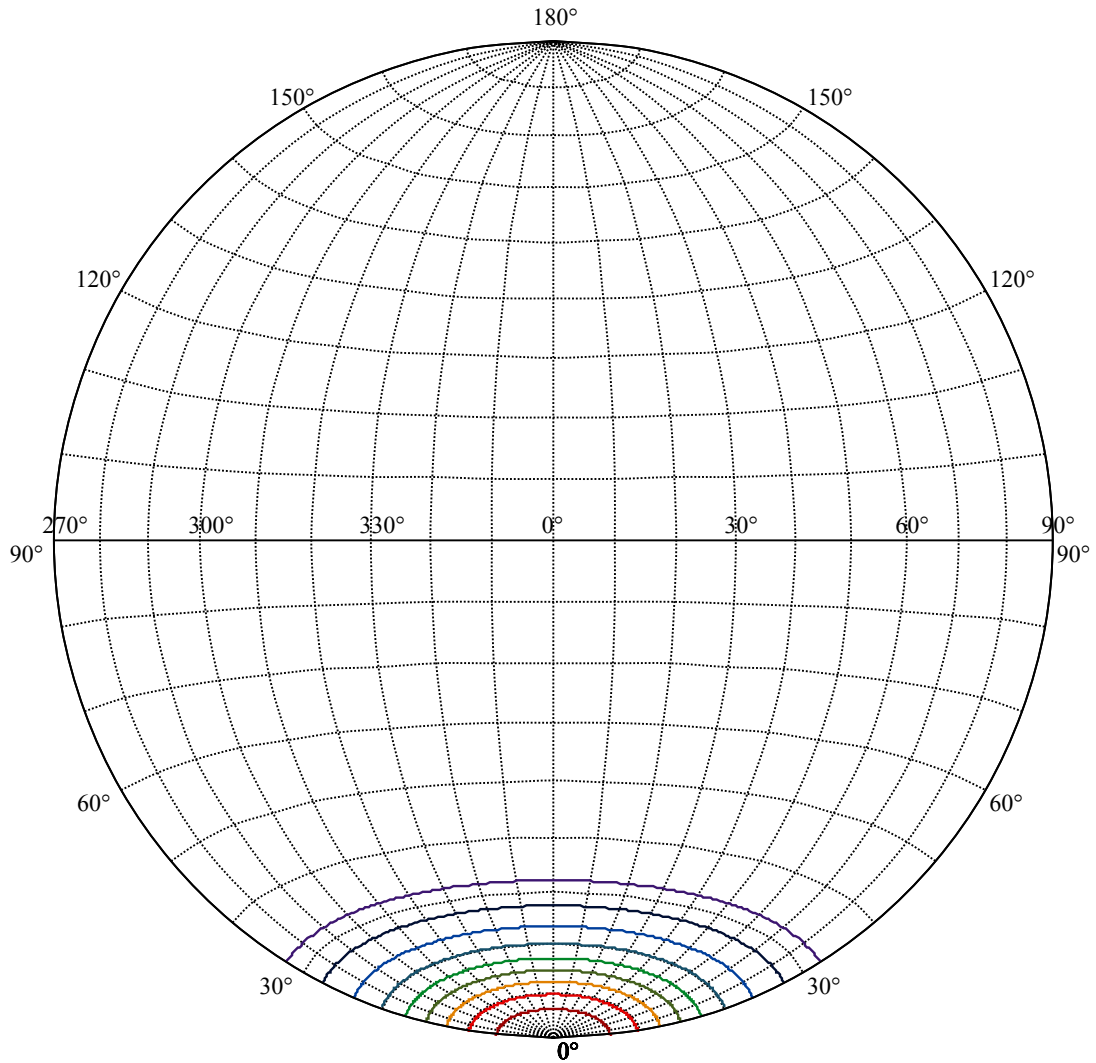
:C90/270Left:17.2 Right:17.2





(10%Imax) 577.418	—
(20%Imax) 1154.84	—
(30%Imax) 1732.25	—
(40%Imax) 2309.67	—
(50%Imax) 2887.09	—
(60%Imax) 3464.51	—
(70%Imax) 4041.93	—
(80%Imax) 4619.34	—
(90%Imax) 5196.76	—





House

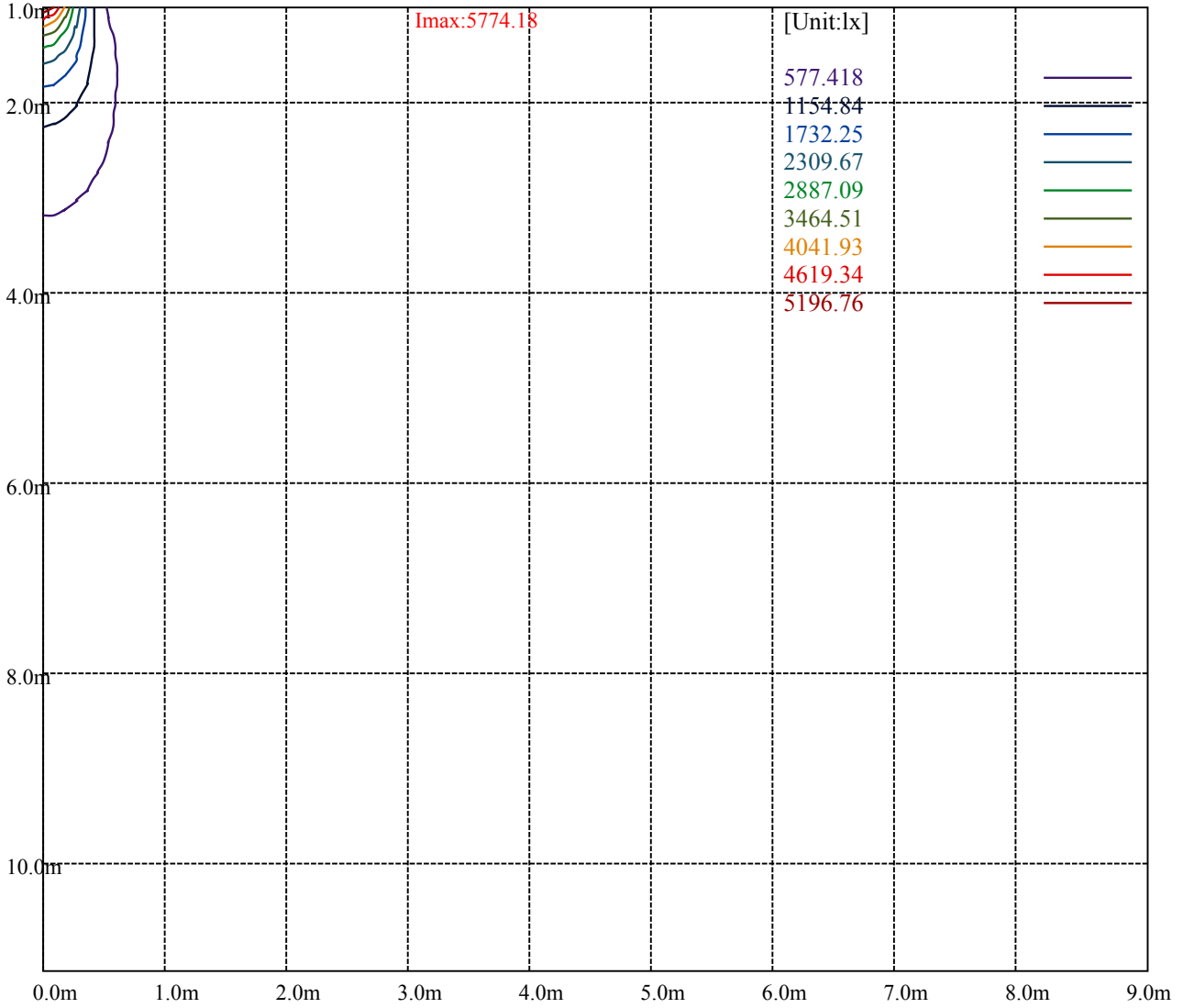
[Unit:cd]

Road

**Imax:5774.18**

(10%Imax) 577.418	—
(20%Imax) 1154.84	—
(30%Imax) 1732.25	—
(40%Imax) 2309.67	—
(50%Imax) 2887.09	—
(60%Imax) 3464.51	—
(70%Imax) 4041.93	—
(80%Imax) 4619.34	—
(90%Imax) 5196.76	—





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

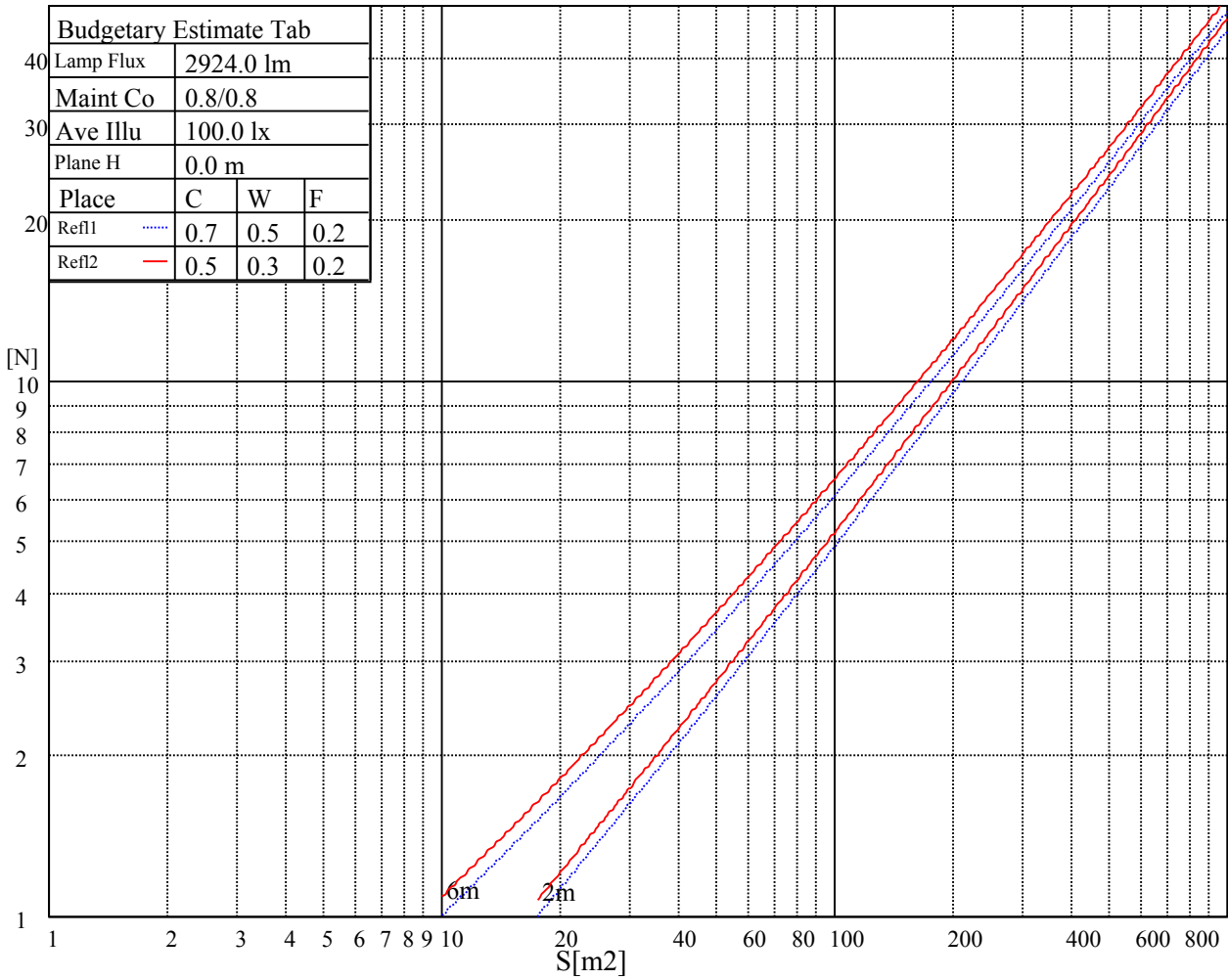
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

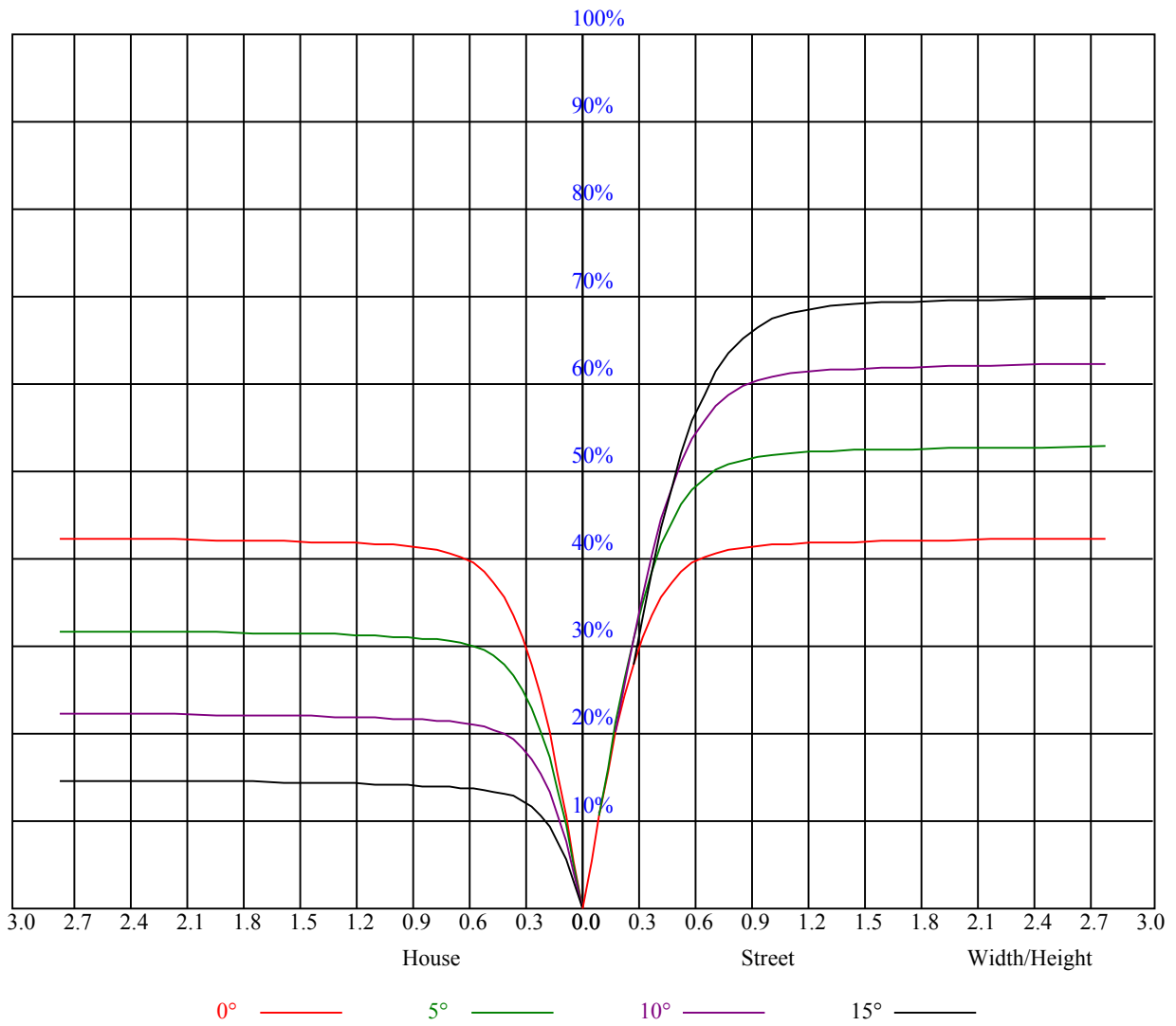
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

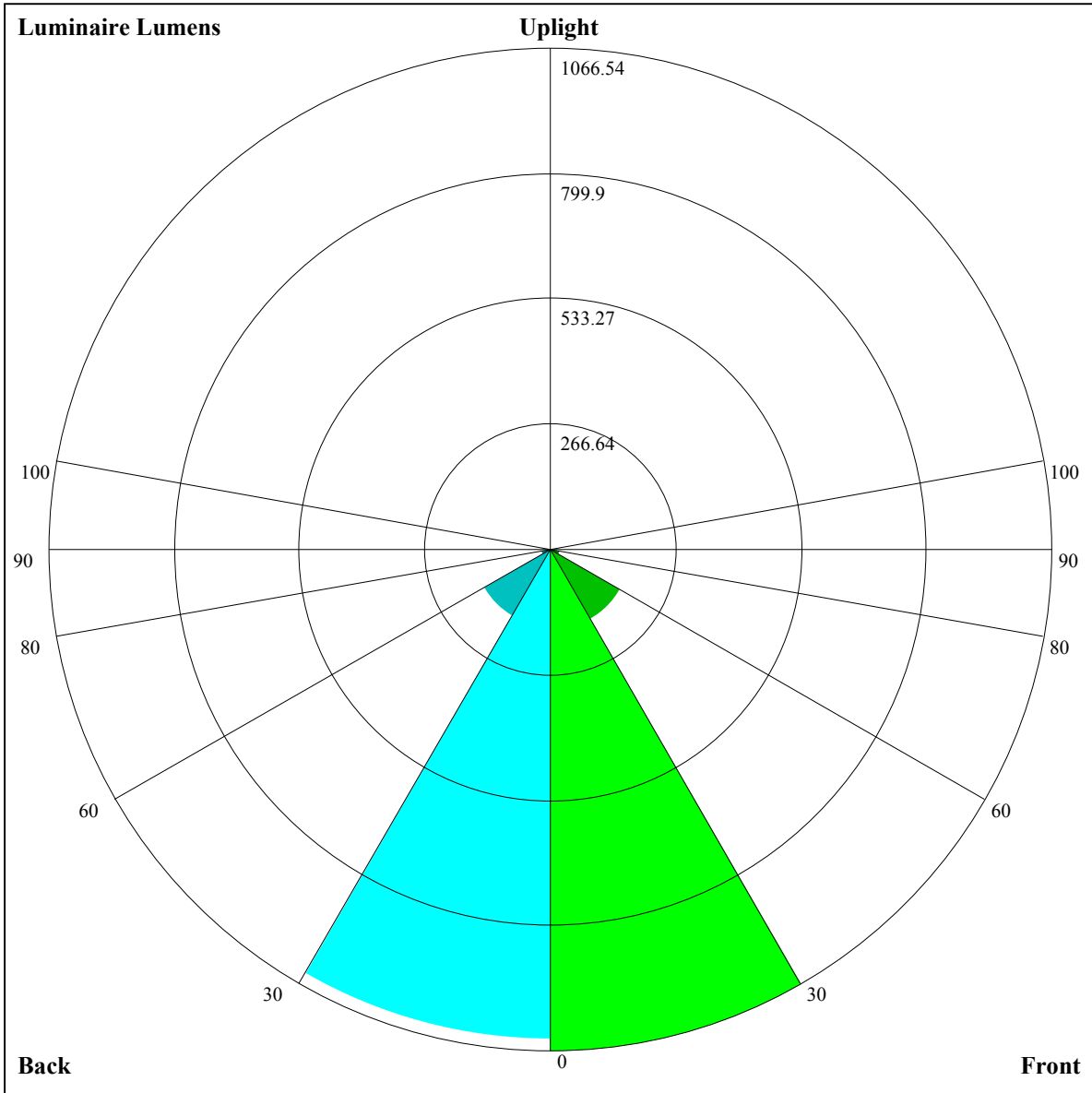
Luminance Limiting Curve





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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	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	0.84	0.83	0.82	0.80
2	0.89	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.81	0.82	0.80	0.79	0.80	0.79	0.77	0.76
3	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
5	0.75	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.66	0.71	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	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
8	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.63	0.59	0.57	0.56
9	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52





Luminaire Lumens:

FL=1066.54,FM=173.31,FH=19.41,FVH=6.41

BL=1042.49,BM=164.02,BH=19.21,BVH=6.35

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	5773.89	5738.77	5677.33	5598.91	5512.88	5385.88	5262.40	5094.44	4993.78
45.0	5763.35	5782.67	5770.38	5731.17	5651.58	5533.95	5431.53	5306.88	5165.84
90.0	5798.47	5809.59	5777.40	5684.93	5571.40	5432.12	5298.69	5112.00	4932.92
135.0	5761.01	5801.98	5811.34	5770.38	5669.13	5528.09	5402.86	5248.94	5089.18
180.0	5773.89	5789.69	5777.40	5711.85	5587.20	5481.86	5350.77	5154.14	4978.57
225.0	5763.35	5701.91	5612.95	5518.15	5381.79	5233.73	5087.42	4924.73	4746.82
270.0	5798.47	5757.50	5701.32	5605.34	5518.15	5422.75	5302.78	5118.44	4970.96
315.0	5761.01	5716.54	5644.55	5546.82	5452.60	5312.73	5178.13	5039.43	4891.37
360.0	5773.89	5738.77	5677.33	5598.91	5512.88	5385.88	5262.40	5094.44	4993.78
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4786.61	4550.77	4344.18	4128.82	3901.75	3615.58	3389.68	3165.54	2949.59
45.0	4979.74	4818.80	4652.01	4463.57	4200.80	3978.42	3747.84	3463.42	3231.67
90.0	4750.92	4513.90	4323.12	4120.04	3898.24	3605.63	3372.71	3146.81	2935.55
135.0	4853.33	4650.26	4450.69	4255.23	4001.83	3785.88	3558.23	3258.59	3033.86
180.0	4750.92	4553.69	4357.64	4151.64	3882.44	3648.35	3413.68	3181.34	2914.48
225.0	4564.23	4306.14	4084.34	3863.13	3564.08	3337.60	3112.87	2857.13	2661.08
270.0	4779.59	4589.98	4388.08	4166.28	3874.25	3643.67	3414.85	3193.05	2924.43
315.0	4716.97	4467.08	4258.16	3988.37	3753.11	3524.28	3301.31	3032.11	2822.01
360.0	4786.61	4550.77	4344.18	4128.82	3901.75	3615.58	3389.68	3165.54	2949.59
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2698.53	2514.77	2338.62	2169.49	1969.93	1821.28	1679.07	1505.26	1140.02
45.0	3015.14	2765.25	2581.49	2406.50	2196.99	2033.13	1880.39	1700.14	1557.93
90.0	2688.00	2509.50	2336.86	2130.28	1974.02	1818.35	1638.10	1497.65	1136.51
135.0	2779.88	2591.43	2418.79	2256.10	2058.29	1900.28	1752.22	1608.84	1435.03
180.0	2718.43	2524.13	2307.02	2139.06	1979.29	1787.34	1645.71	1513.45	1343.74
225.0	2426.40	2257.27	2092.82	1933.64	1746.96	1607.09	1476.00	1150.32	1150.32
270.0	2726.62	2529.99	2343.30	2131.45	1972.85	1790.26	1654.49	1530.42	1367.73
315.0	2575.05	2391.87	2230.35	2024.94	1876.29	1729.98	1590.70	1454.34	1161.79
360.0	2698.53	2514.77	2338.62	2169.49	1969.93	1821.28	1679.07	1505.26	1140.02
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1140.02	1080.38	961.93	845.59	703.56	599.45	504.87	409.19	347.97
45.0	1421.57	1289.89	1131.88	1010.16	862.09	746.22	635.03	537.30	434.30
90.0	1136.51	1076.58	960.30	841.38	697.47	592.66	496.50	419.08	342.01
135.0	1299.84	1169.34	1042.34	894.87	777.82	639.12	540.22	455.36	369.34
180.0	1214.40	1098.53	944.03	821.13	707.01	599.33	504.52	405.62	344.17
225.0	1059.02	939.75	791.63	675.00	567.90	477.54	387.48	318.19	272.01
270.0	1238.98	1121.93	1003.13	845.71	724.57	616.89	517.40	416.74	352.95
315.0	1161.79	1040.30	888.90	767.87	653.70	549.35	443.25	377.76	310.34
360.0	1140.02	1080.38	961.93	845.59	703.56	599.45	504.87	409.19	347.97
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	295.77	251.94	213.84	174.75	149.82	124.07	107.56	94.22	80.82
45.0	369.34	313.15	300.28	243.28	177.79	150.87	128.69	106.45	92.23
90.0	289.74	246.15	199.04	167.43	141.74	115.76	99.02	85.50	72.51
135.0	314.32	300.86	245.91	179.96	152.74	124.89	107.21	92.64	80.70
180.0	304.38	304.38	200.62	170.83	139.58	119.15	102.24	85.50	74.97
225.0	231.81	196.64	160.29	135.89	115.87	99.25	82.98	73.04	65.37
270.0	299.69	299.69	201.08	169.42	143.03	116.69	99.96	83.57	73.62
315.0	265.11	226.54	185.28	158.24	135.36	116.75	97.79	85.85	76.31
360.0	295.77	251.94	213.84	174.75	149.82	124.07	107.56	94.22	80.82

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	72.33	65.72	58.82	54.25	50.21	46.88	43.48	41.20	38.98
45.0	78.07	69.58	62.85	56.30	52.09	48.69	45.71	42.60	40.44
90.0	64.84	58.99	54.37	49.98	46.99	44.24	41.96	39.44	37.51
135.0	71.16	62.27	57.24	53.02	48.81	45.82	42.66	40.56	38.62
180.0	66.72	59.17	54.48	50.74	47.64	44.24	41.90	39.85	37.86
225.0	59.52	53.96	50.39	46.64	44.07	41.73	39.21	37.28	35.52
270.0	65.95	59.99	54.37	50.80	47.70	44.36	42.08	40.09	38.16
315.0	68.47	60.92	56.18	52.09	47.64	44.71	41.84	39.68	37.63
360.0	72.33	65.72	58.82	54.25	50.21	46.88	43.48	41.20	38.98
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	36.52	34.76	33.12	31.54	29.79	28.50	27.27	25.87	24.93
45.0	38.39	36.46	34.29	32.71	31.25	29.50	28.21	26.98	25.57
90.0	35.29	33.65	32.13	30.31	29.09	27.92	26.51	25.52	24.64
135.0	36.23	34.53	32.89	31.43	30.02	28.50	27.27	26.22	25.22
180.0	35.64	33.94	32.01	30.61	29.38	27.86	26.69	25.69	24.70
225.0	33.94	32.01	30.61	29.32	28.15	26.69	25.63	24.70	23.47
270.0	35.93	34.29	32.36	30.96	29.55	28.03	26.86	25.81	24.93
315.0	35.76	33.65	32.07	30.61	29.26	27.74	26.57	25.46	24.52
360.0	36.52	34.76	33.12	31.54	29.79	28.50	27.27	25.87	24.93
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	23.76	22.82	22.06	21.36	20.37	19.66	19.02	18.49	17.73
45.0	24.76	23.82	22.65	21.89	21.24	20.37	19.66	19.08	18.49
90.0	23.76	22.82	21.83	21.19	20.42	19.55	18.96	18.38	17.67
135.0	24.17	23.23	22.41	21.48	20.83	19.90	19.25	18.73	18.02
180.0	23.58	22.71	21.89	21.19	20.25	19.55	18.90	18.26	17.67
225.0	22.53	21.77	20.89	20.13	19.49	18.73	18.20	17.62	16.91
270.0	23.64	22.71	22.00	21.13	20.37	19.61	19.02	18.38	17.85
315.0	23.29	22.47	21.54	20.83	19.96	19.20	18.67	18.08	17.38
360.0	23.76	22.82	22.06	21.36	20.37	19.66	19.02	18.49	17.73
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	17.15	16.68	16.21	15.68	15.22	14.75	14.34	13.99	13.46
45.0	17.91	17.15	16.68	16.21	15.68	15.22	14.81	14.34	13.99
90.0	17.15	16.56	16.09	15.68	15.27	14.86	14.40	13.93	13.46
135.0	17.44	16.91	16.44	15.92	15.45	15.04	14.75	14.22	13.69
180.0	17.09	16.68	16.09	15.68	15.10	14.75	14.40	13.81	13.40
225.0	16.44	16.04	15.57	15.04	14.63	14.28	13.87	13.28	13.05
270.0	17.21	16.62	16.15	15.74	15.16	14.81	14.40	13.93	13.52
315.0	16.80	16.39	15.98	15.39	14.98	14.57	14.22	13.69	13.28
360.0	17.15	16.68	16.21	15.68	15.22	14.75	14.34	13.99	13.46
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	13.17	12.76	12.35	11.82	11.59	11.29	11.00	10.77	10.48
45.0	13.46	13.11	12.76	12.29	11.82	11.47	11.24	11.00	10.71
90.0	13.05	12.70	12.35	11.76	11.53	11.24	11.06	10.83	10.42
135.0	13.34	12.87	12.35	11.88	11.53	11.24	11.00	10.83	10.65
180.0	13.05	12.64	12.11	11.65	11.35	11.12	10.89	10.71	10.30
225.0	12.58	12.17	11.76	11.53	11.24	10.89	10.71	10.36	10.42
270.0	13.17	12.76	12.23	11.82	11.53	11.24	10.94	10.71	10.42
315.0	12.93	12.58	12.00	11.70	11.41	11.12	10.83	10.65	10.30
360.0	13.17	12.76	12.35	11.82	11.59	11.29	11.00	10.77	10.48

Intensity data(cd)

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