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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:
LumCAT: 3-2805-L
Luminaire: 92.70.411.00
Report No: 2024424-B016
Ballast type: AC

Test No: 2024424-C016	Voltage(V): 36.270
LampCAT: NICHIA NFCWJ130B-V3	Current(A): 0.576
Lamp flux(lm): 2924.0	Power (W): 20.885
Number of Lamps: 1	PF: 0.000
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2516.85, Efficiency(%): 86.08% , Luminous Efficacy(lm/W): 120.51
Central intensity(cd): 11064.030, Maximum intensity(cd): 11064.030
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=17.8
[C90/270]Total=17.8
Field angle(10%Imax): [C0/180]Total=53.2
[C90/270]Total=53.2
Maximum s/h(1/2): C0_180=0.30 C90_270=0.30
Maximum s/h(1/4): C0_180=0.38 C90_270=0.38
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.08%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.559%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11064.030	0.000	0	0.00%	0.00%
1.0	10953.715	10.535	10.535	0.36%	0.42%
2.0	10608.871	30.949	41.484	1.06%	1.65%
3.0	10042.739	49.392	90.876	1.69%	3.61%
4.0	9381.288	65.018	155.894	2.22%	6.19%
5.0	8590.649	77.314	233.208	2.64%	9.27%
6.0	7772.432	85.992	319.201	2.94%	12.68%
7.0	6892.912	91.028	410.228	3.11%	16.30%
8.0	6142.068	93.289	503.517	3.19%	20.01%
9.0	5453.917	93.979	597.496	3.21%	23.74%
10.0	4883.030	93.546	691.042	3.20%	27.46%
11.0	4411.850	92.875	783.917	3.18%	31.15%
12.0	4021.725	92.191	876.108	3.15%	34.81%
13.0	3681.490	91.418	967.526	3.13%	38.44%
14.0	3368.833	90.244	1057.769	3.09%	42.03%
15.0	3093.046	88.712	1146.481	3.03%	45.55%
16.0	2841.911	86.964	1233.444	2.97%	49.01%
17.0	2620.184	85.060	1318.504	2.91%	52.39%
18.0	2417.696	83.064	1401.568	2.84%	55.69%
19.0	2226.693	80.803	1482.371	2.76%	58.90%
20.0	2052.735	78.325	1560.696	2.68%	62.01%
21.0	1895.090	75.806	1636.502	2.59%	65.02%
22.0	1744.029	73.130	1709.632	2.50%	67.93%
23.0	1602.770	70.225	1779.857	2.40%	70.72%
24.0	1356.698	64.705	1844.561	2.21%	73.29%
25.0	1263.018	59.567	1904.128	2.04%	75.66%
26.0	1167.824	57.380	1961.508	1.96%	77.93%
27.0	1067.150	54.679	2016.187	1.87%	80.11%
28.0	982.863	51.902	2068.089	1.78%	82.17%
29.0	888.167	48.951	2117.041	1.67%	84.11%
30.0	785.372	45.185	2162.226	1.55%	85.91%
31.0	676.447	40.680	2202.906	1.39%	87.53%
32.0	567.829	35.647	2238.553	1.22%	88.94%
33.0	463.147	30.373	2268.926	1.04%	90.15%
34.0	369.365	25.194	2294.121	0.86%	91.15%
35.0	275.699	20.033	2314.154	0.69%	91.95%
36.0	234.887	16.257	2330.411	0.56%	92.59%
37.0	153.117	12.655	2343.066	0.43%	93.10%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	109.283	8.759	2351.824	0.30%	93.44%
39.0	98.698	7.099	2358.923	0.24%	93.73%
40.0	91.917	6.648	2365.571	0.23%	93.99%
41.0	86.226	6.344	2371.915	0.22%	94.24%
42.0	80.673	6.064	2377.978	0.21%	94.48%
43.0	75.414	5.782	2383.76	0.20%	94.71%
44.0	70.059	5.491	2389.251	0.19%	94.93%
45.0	65.545	5.211	2394.462	0.18%	95.14%
46.0	61.493	4.968	2399.431	0.17%	95.33%
47.0	58.047	4.754	2404.185	0.16%	95.52%
48.0	54.784	4.561	2408.746	0.16%	95.70%
49.0	51.785	4.376	2413.122	0.15%	95.88%
50.0	49.444	4.221	2417.343	0.14%	96.05%
51.0	47.286	4.093	2421.436	0.14%	96.21%
52.0	45.567	3.984	2425.42	0.14%	96.37%
53.0	44.192	3.905	2429.325	0.13%	96.52%
54.0	43.138	3.849	2433.174	0.13%	96.68%
55.0	42.385	3.818	2436.991	0.13%	96.83%
56.0	41.675	3.798	2440.79	0.13%	96.98%
57.0	40.863	3.774	2444.564	0.13%	97.13%
58.0	39.547	3.718	2448.282	0.13%	97.28%
59.0	38.047	3.628	2451.91	0.12%	97.42%
60.0	36.057	3.501	2455.411	0.12%	97.56%
61.0	33.431	3.316	2458.727	0.11%	97.69%
62.0	30.973	3.103	2461.83	0.11%	97.81%
63.0	27.996	2.868	2464.698	0.10%	97.93%
64.0	25.823	2.641	2467.339	0.09%	98.03%
65.0	23.694	2.451	2469.789	0.08%	98.13%
66.0	21.880	2.274	2472.063	0.08%	98.22%
67.0	20.819	2.147	2474.21	0.07%	98.31%
68.0	20.088	2.072	2476.283	0.07%	98.39%
69.0	19.927	2.041	2478.324	0.07%	98.47%
70.0	20.110	2.056	2480.38	0.07%	98.55%
71.0	20.680	2.108	2482.488	0.07%	98.63%
72.0	21.412	2.189	2484.677	0.07%	98.72%
73.0	21.975	2.269	2486.946	0.08%	98.81%
74.0	22.385	2.332	2489.278	0.08%	98.90%
75.0	22.560	2.375	2491.653	0.08%	99.00%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	22.473	2.391	2494.043	0.08%	99.09%
77.0	22.092	2.376	2496.419	0.08%	99.19%
78.0	21.383	2.327	2498.746	0.08%	99.28%
79.0	20.154	2.232	2500.978	0.08%	99.37%
80.0	18.625	2.091	2503.069	0.07%	99.45%
81.0	16.299	1.889	2504.957	0.06%	99.53%
82.0	14.104	1.649	2506.606	0.06%	99.59%
83.0	12.882	1.467	2508.073	0.05%	99.65%
84.0	12.421	1.378	2509.452	0.05%	99.71%
85.0	11.990	1.332	2510.784	0.05%	99.76%
86.0	11.470	1.282	2512.066	0.04%	99.81%
87.0	11.097	1.235	2513.301	0.04%	99.86%
88.0	10.871	1.203	2514.505	0.04%	99.91%
89.0	10.666	1.180	2515.685	0.04%	99.95%
90.0	10.651	1.169	2516.854	0.04%	100.00%

Zonal flux distribution table

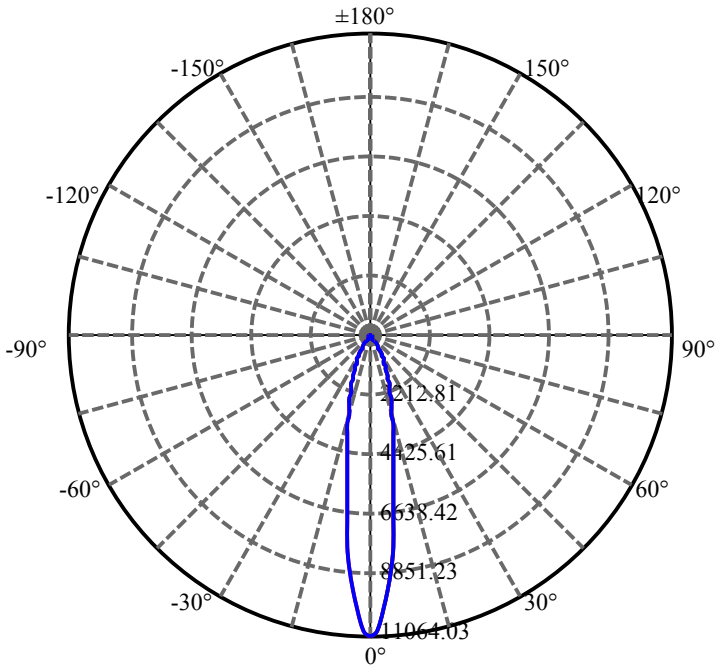
ZONAL LUMEN SUMMARY

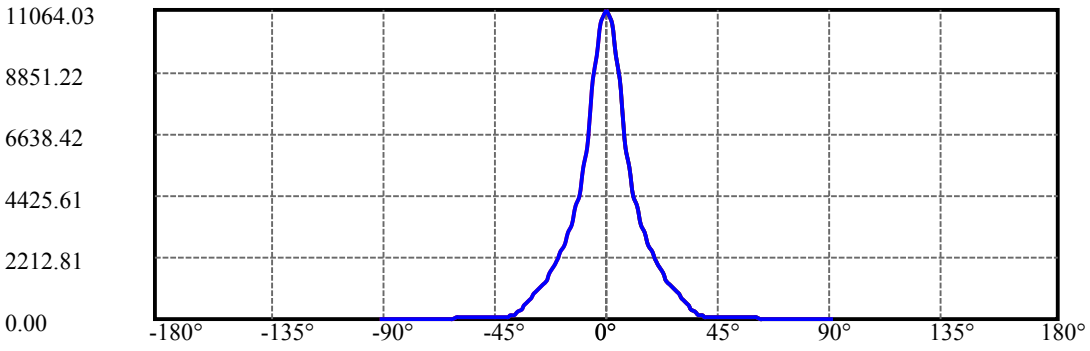
Zone	Lumens	%Lamp	%Fixt
0-30	2162.23	73.95%	85.91%
0-40	2365.57	80.90%	93.99%
0-60	2455.41	83.97%	97.56%
0-90	2515.69	86.04%	99.95%
0-120	2515.69	86.04%	99.95%
0-180	2516.85	86.08%	100.00%
60-90	60.27	2.06%	2.39%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.95	2013.48	68.86%	80.00%

ZONAL LUMEN SUMMARY

0-10	691.04
10-20	869.65
20-30	601.53
30-40	203.35
40-50	51.77
50-60	38.07
60-70	24.97
70-80	22.69
80-90	12.62
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

Light Distribution Curve [Unit:cd]





C0(Max):

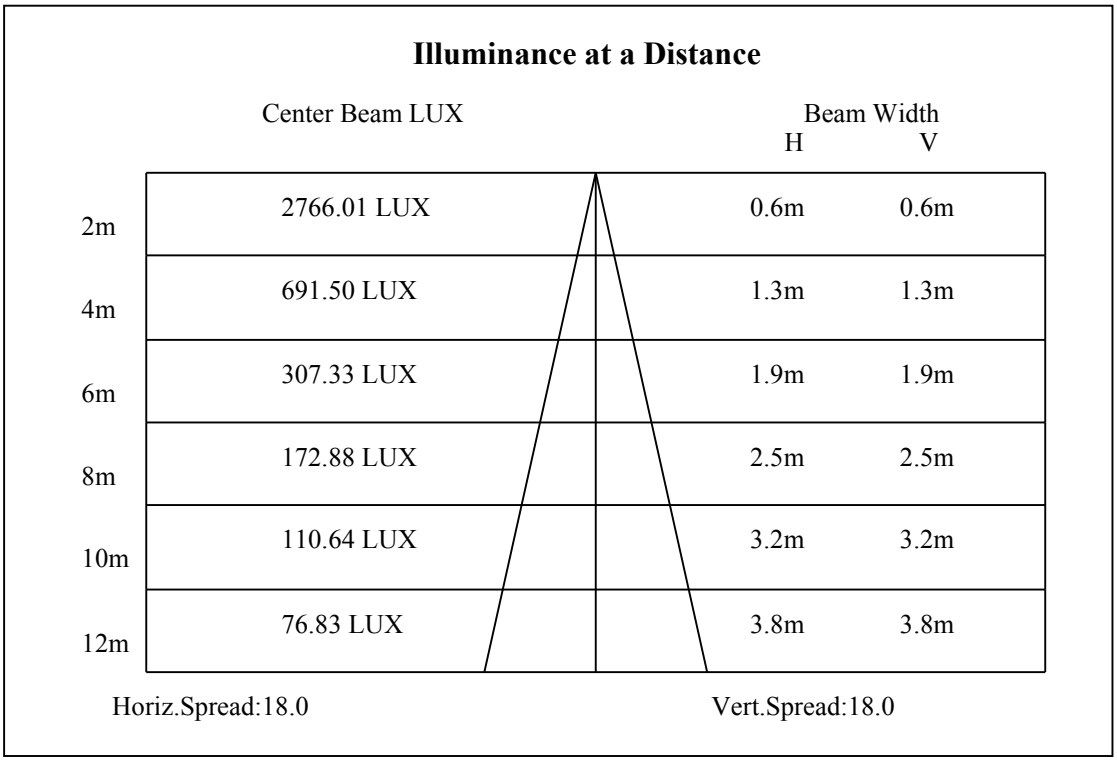
C0/C180:

C90/C270:

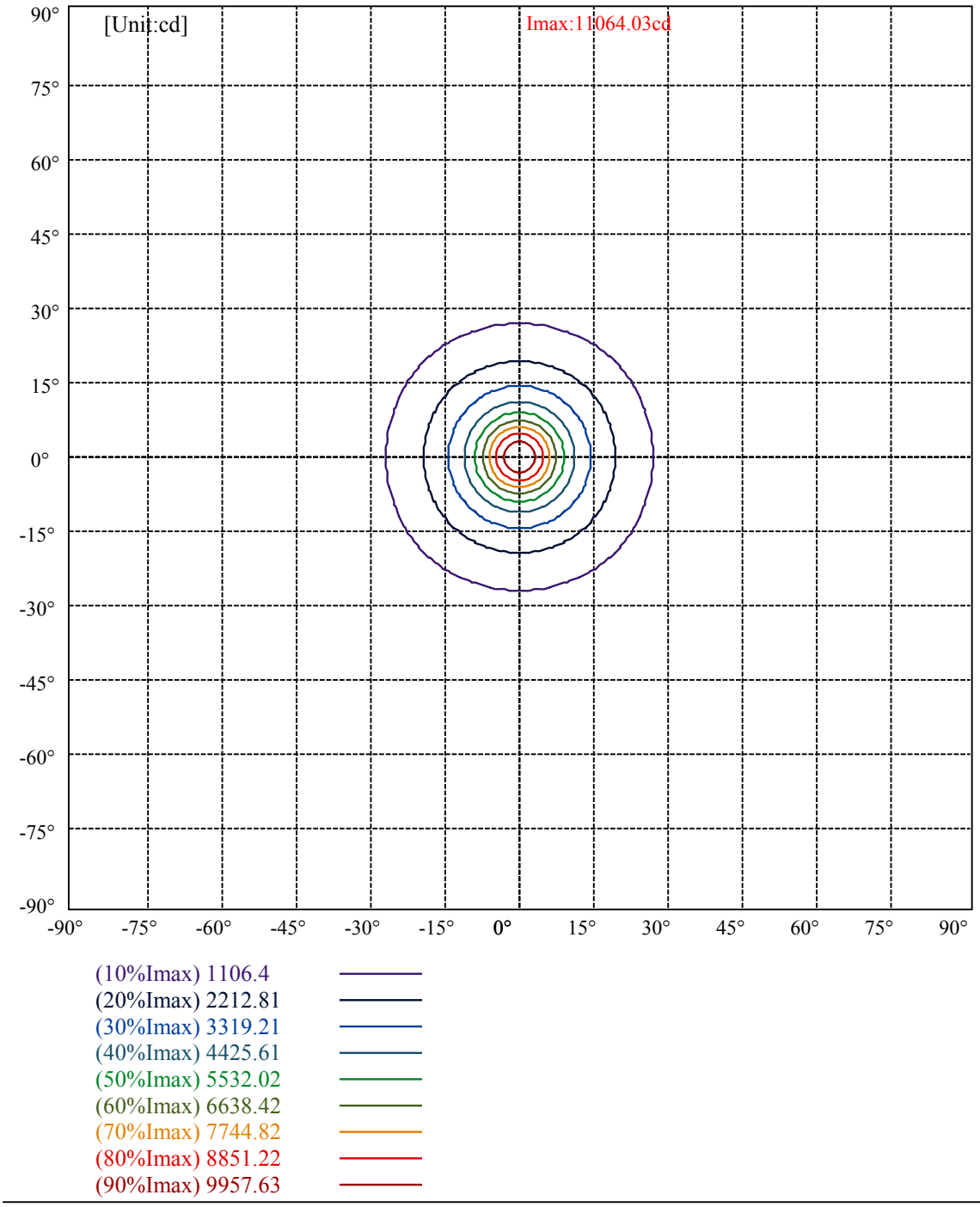
Field angle(10%Imax):C0/180Left:26.6 Right:26.6
:C90/270Left:26.6 Right:26.6

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

Lux distance Curve



ISO-Intensity(V-H)

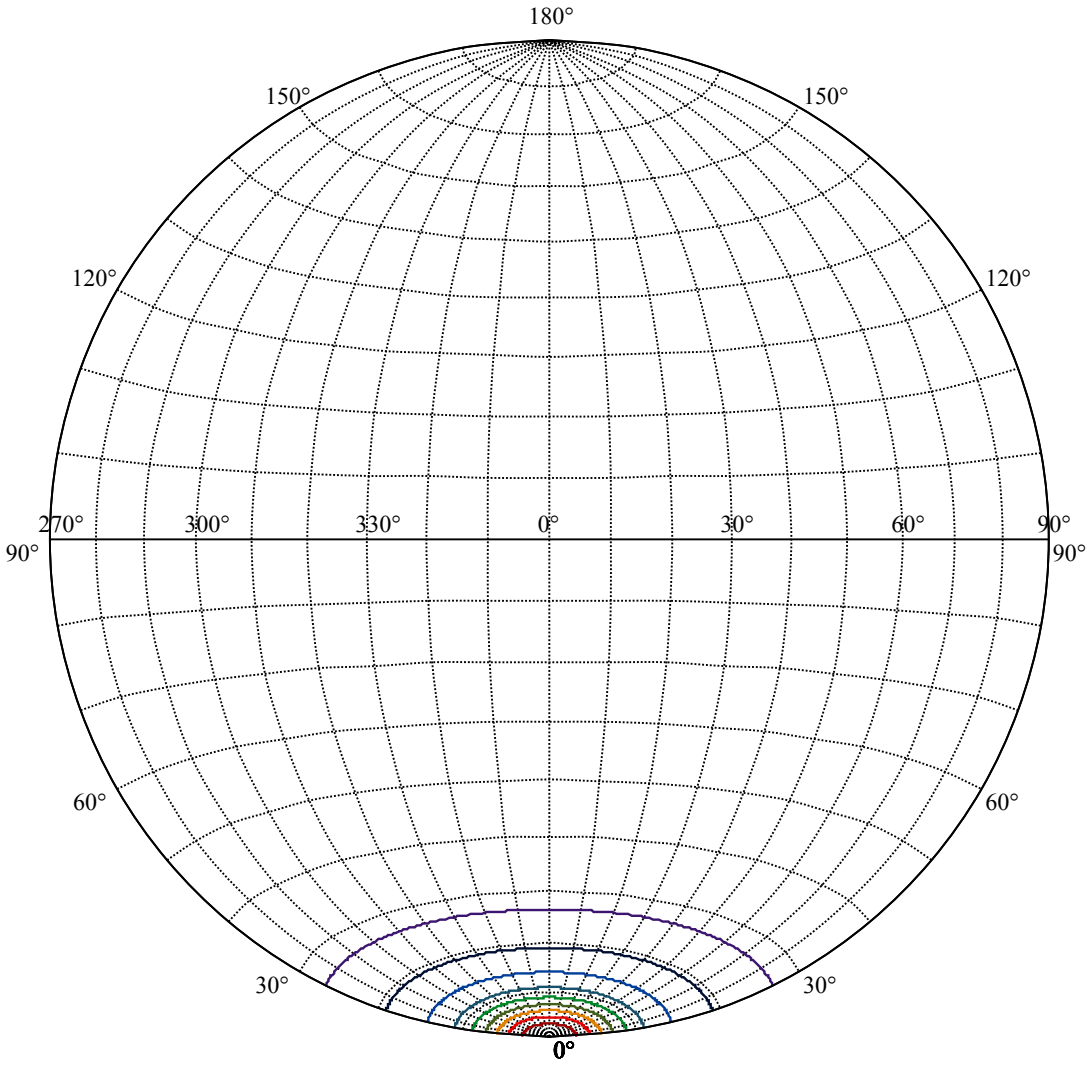


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/24
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

ISO candela diagram on circular web



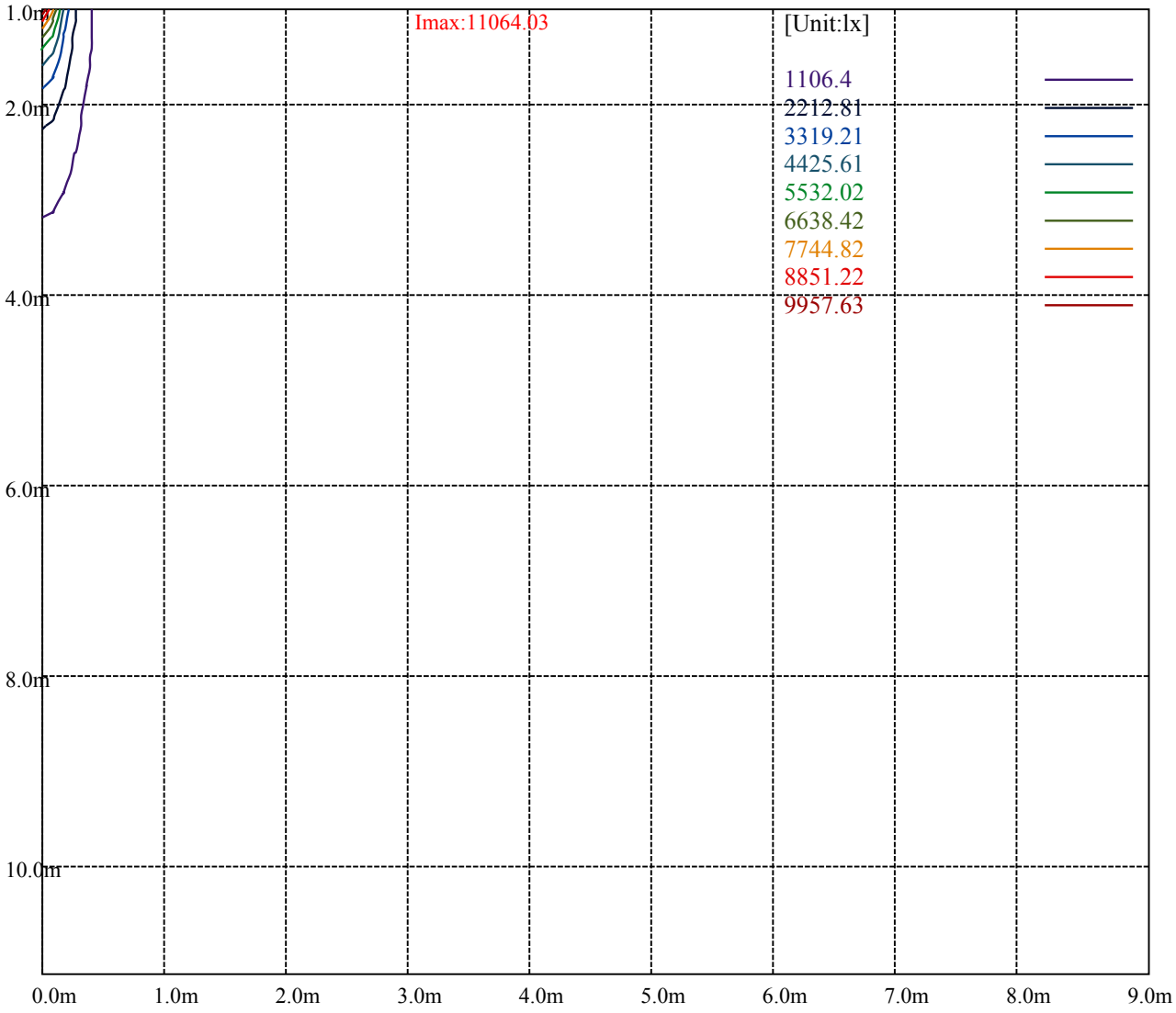
House [Unit:cd] Road

Imax:11064.03

(10%Imax) 1106.4
(20%Imax) 2212.81
(30%Imax) 3319.21
(40%Imax) 4425.61
(50%Imax) 5532.02
(60%Imax) 6638.42
(70%Imax) 7744.82
(80%Imax) 8851.22
(90%Imax) 9957.63

Equipment: GMS1980	Date: 2024/4/24	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/24
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

Luminance Limitting Curve(no luminous side)

Luminance Table

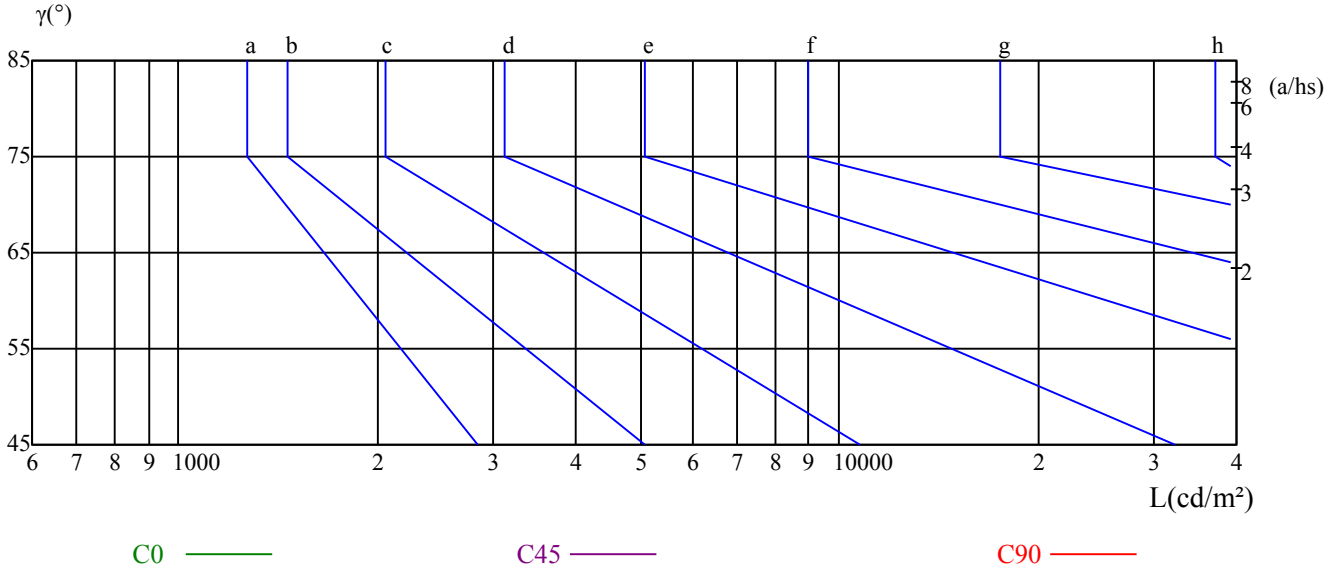
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

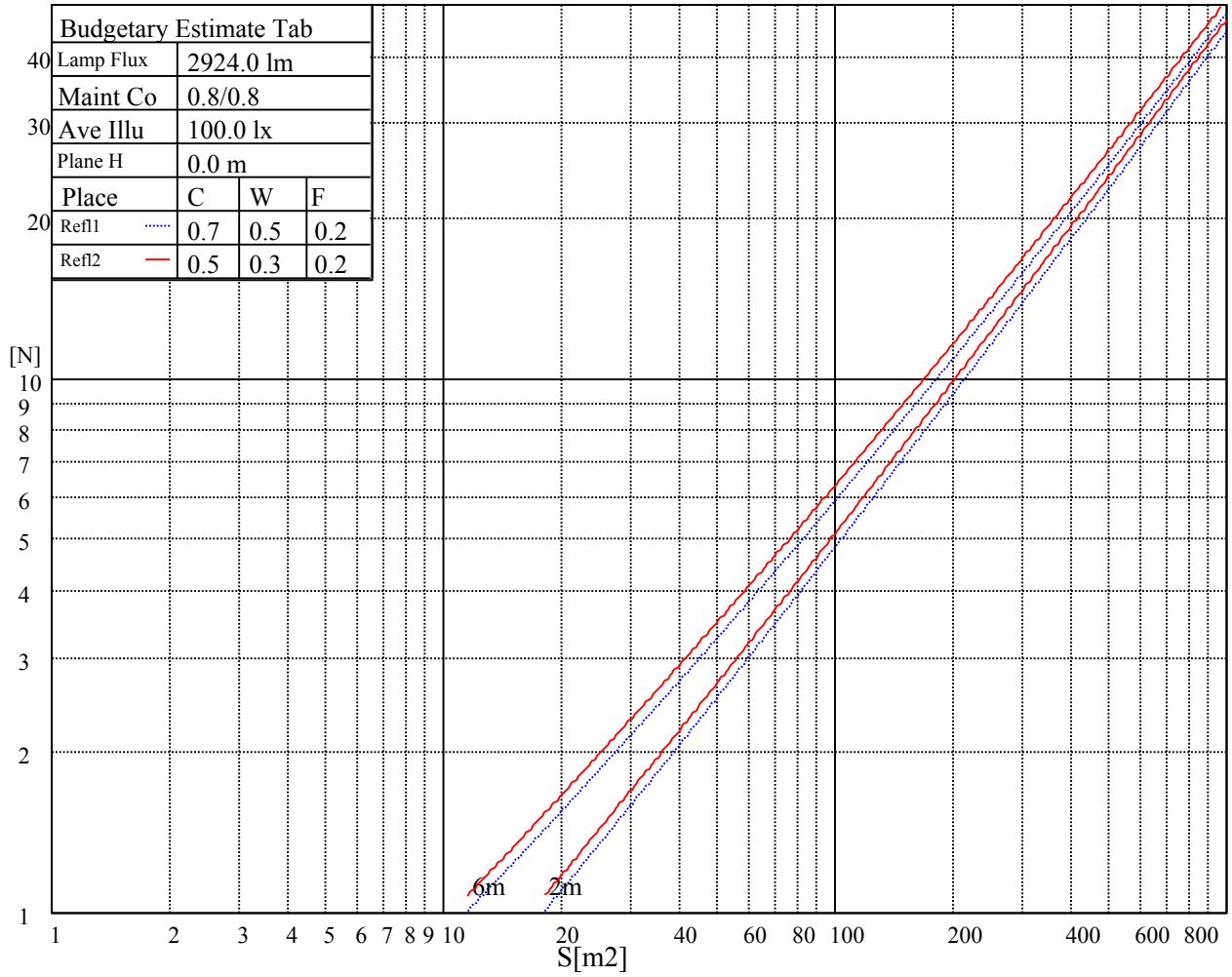
Glare Table

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 Limitting Curve



Budgetary Estimate Table

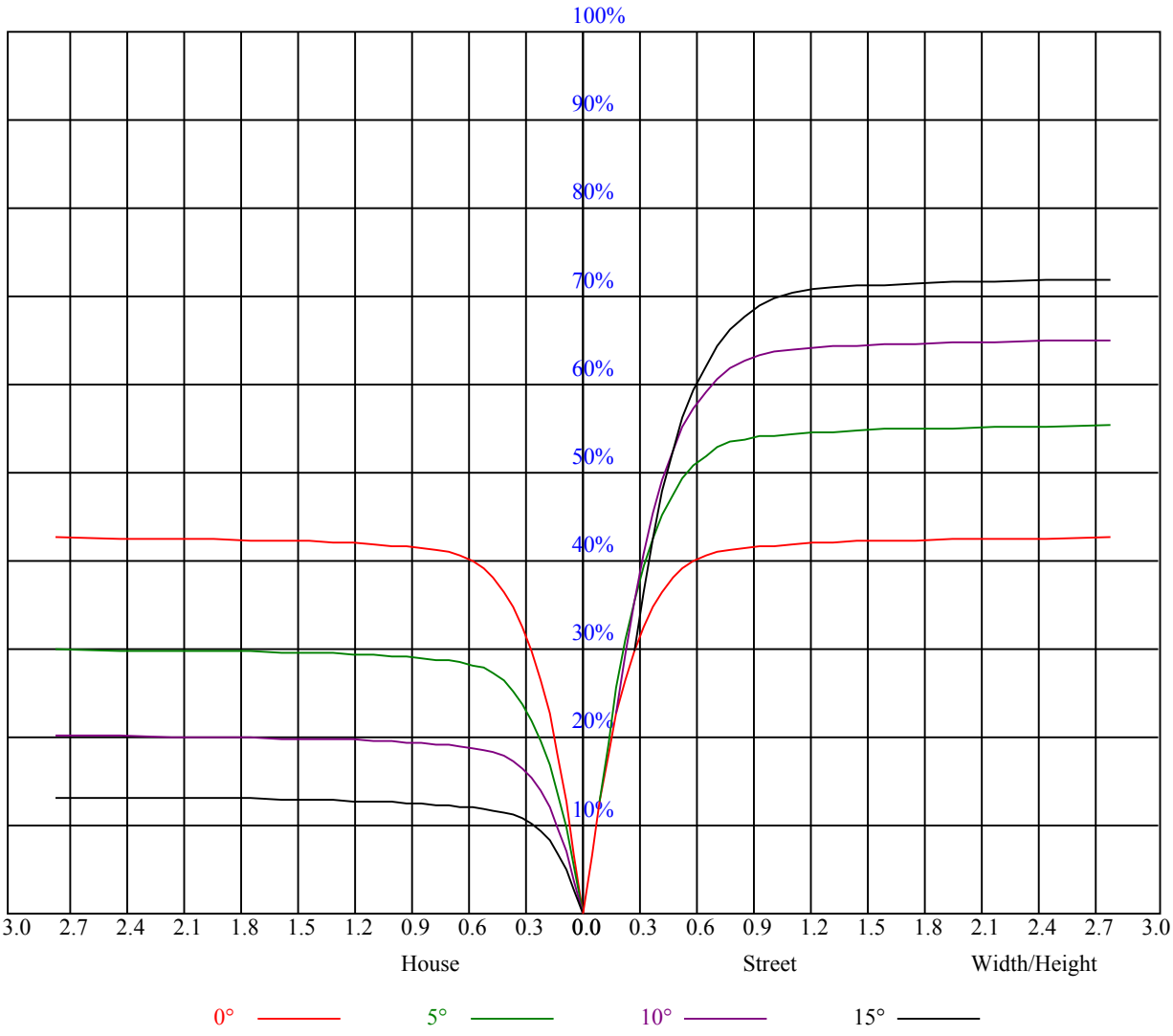


Equipment: GMS1980 Date: 2024/4/24 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

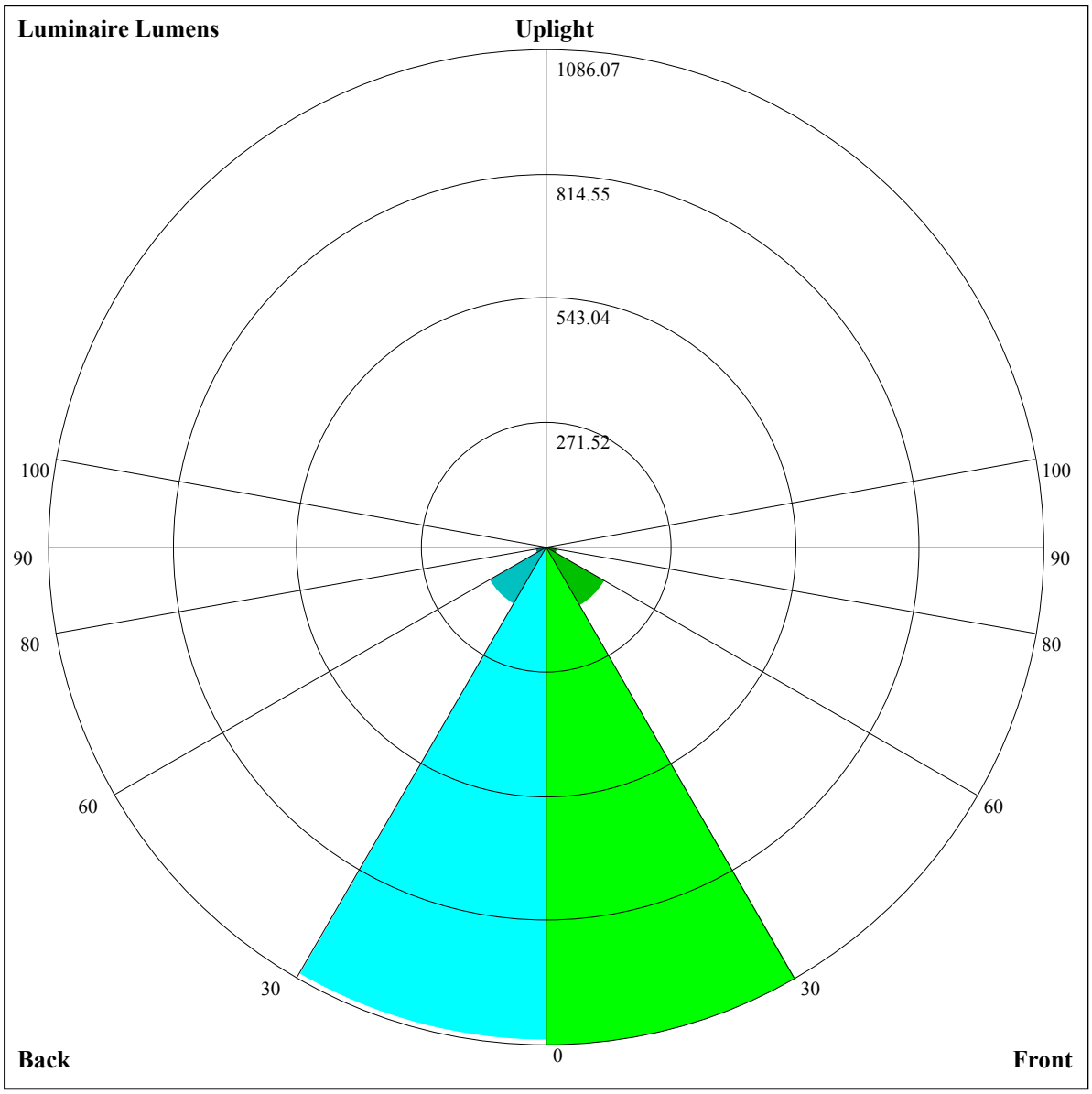
Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.02	1.02	1.02	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	0.92	0.91	0.91	0.89	0.88	0.87	0.86	0.85	0.85	0.84	0.83	0.81
2	0.90	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.79	0.77
3	0.86	0.82	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	0.74	0.80	0.77	0.74	0.79	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.74	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
7	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
8	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.60	0.59
9	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
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2024/4/24	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65



Luminaire Lumens:
FL=1086.07,FM=148.61,FH=23.97,FVH=6.99
BL=1074.58,BM=144.59,BH=24.02,BVH=7
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	11076.61	10896.95	10537.03	9874.56	9232.57	8511.57	7565.26	6806.81	6098.69
45.0	11043.84	11096.51	10950.79	10469.73	9906.75	9250.12	8523.28	7747.85	6788.67
90.0	11066.08	10775.22	10314.06	9700.75	9010.77	8048.66	7269.72	6504.83	5803.73
135.0	11069.59	11052.03	10824.38	10246.76	9606.53	8890.21	8112.45	7120.49	6364.38
180.0	11076.61	11056.71	10755.32	10291.83	9675.00	8802.43	8028.76	7025.10	6273.67
225.0	11043.84	10788.10	10215.16	9595.99	8709.96	7906.45	7097.67	6144.34	5492.98
270.0	11066.08	11070.17	10858.32	10302.36	9709.53	9033.59	8088.45	7270.31	6489.03
315.0	11069.59	10894.02	10415.89	9859.93	9199.21	8282.16	7493.86	6523.56	5825.39
360.0	11076.61	10896.95	10537.03	9874.56	9232.57	8511.57	7565.26	6806.81	6098.69

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5336.73	4839.87	4410.31	4035.77	3631.96	3339.94	3080.10	2840.16	2569.78
45.0	6086.98	5324.44	4829.92	4408.56	3965.54	3651.86	3363.35	3036.21	2803.87
90.0	5077.47	4618.07	4136.43	3811.63	3509.07	3176.07	2930.87	2706.72	2505.99
135.0	5687.86	4998.47	4554.86	4083.17	3761.88	3465.18	3194.22	2895.17	2678.63
180.0	5616.46	5062.25	4487.56	4113.02	3785.88	3413.68	3149.15	2909.80	2688.58
225.0	4951.06	4402.12	4040.45	3723.26	3435.91	3113.46	2877.02	2664.59	2462.10
270.0	5638.70	5069.28	4600.51	4108.34	3778.86	3487.41	3163.78	2924.43	2706.14
315.0	5236.07	4749.74	4234.75	3890.05	3582.81	3303.07	2985.88	2758.22	2546.37
360.0	5336.73	4839.87	4410.31	4035.77	3631.96	3339.94	3080.10	2840.16	2569.78

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2383.68	2168.90	2012.06	1868.10	1694.87	1553.25	1298.09	1142.65	1118.13
45.0	2590.85	2398.90	2187.04	2037.23	1895.02	1760.42	1590.70	1446.15	1305.70
90.0	2289.46	2131.45	1985.73	1844.10	1677.90	1535.69	1166.70	1166.70	1119.42
135.0	2487.26	2315.21	2117.40	1969.93	1830.06	1693.70	1519.30	1379.43	1207.96
180.0	2489.02	2257.86	2089.31	1907.31	1767.44	1626.98	1456.10	1317.99	1177.53
225.0	2238.54	2079.95	1933.64	1753.98	1616.45	1447.91	1154.47	1154.47	1084.01
270.0	2504.82	2316.38	2105.70	1960.56	1783.24	1649.81	1511.11	1339.64	1196.84
315.0	2357.93	2144.91	1990.99	1819.52	1687.26	1554.42	1157.11	1157.11	1133.00
360.0	2383.68	2168.90	2012.06	1868.10	1694.87	1553.25	1298.09	1142.65	1118.13

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1036.78	962.34	877.60	759.10	663.35	567.14	444.48	353.65	266.51
45.0	1155.29	1069.26	989.67	875.56	778.41	654.34	555.44	455.95	358.80
90.0	1038.07	961.88	848.69	754.41	630.81	527.81	424.93	328.78	223.32
135.0	1106.72	1027.13	918.86	821.71	724.57	600.50	502.18	403.86	311.40
180.0	1088.58	990.26	896.62	797.13	694.14	573.58	474.68	383.38	296.77
225.0	981.60	891.01	789.23	686.94	558.89	461.39	370.45	288.98	201.38
270.0	1096.18	1002.55	917.69	821.71	721.06	619.23	492.82	394.50	306.13
315.0	1033.98	958.48	866.95	766.41	640.35	538.64	440.21	345.81	241.29
360.0	1036.78	962.34	877.60	759.10	663.35	567.14	444.48	353.65	266.51

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	175.45	125.47	103.41	93.40	88.08	82.87	76.90	72.04	67.53
45.0	313.74	313.74	125.06	106.34	97.79	90.42	84.92	80.12	74.21
90.0	157.37	118.33	104.29	94.86	89.89	84.62	79.71	73.68	68.94
135.0	311.40	142.91	112.30	102.53	94.34	89.54	84.45	78.42	73.68
180.0	296.77	143.03	111.60	103.58	95.80	90.65	85.15	79.88	73.33
225.0	147.01	113.24	103.76	95.92	88.31	81.99	76.61	71.28	65.43
270.0	306.13	145.96	114.53	100.83	93.99	88.37	81.23	76.08	71.10
315.0	171.24	122.25	99.31	92.11	87.14	81.35	76.43	71.81	66.25
360.0	175.45	125.47	103.41	93.40	88.08	82.87	76.90	72.04	67.53

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	63.56	59.05	56.01	53.26	50.56	47.87	46.06	44.36	43.25
45.0	69.47	65.37	60.45	57.47	53.96	51.27	48.92	46.76	45.00
90.0	64.02	60.22	57.18	53.67	51.15	48.87	46.29	44.95	43.89
135.0	69.17	64.37	60.86	57.53	53.67	51.21	49.28	47.70	45.88
180.0	68.76	64.55	60.86	57.06	54.02	51.62	49.39	46.99	45.71
225.0	61.45	57.88	55.01	51.56	49.16	47.05	44.77	43.66	42.55
270.0	65.31	61.39	57.82	55.07	51.56	49.16	47.11	45.18	43.54
315.0	62.62	59.11	56.18	52.67	50.21	48.52	46.47	44.95	43.72
360.0	63.56	59.05	56.01	53.26	50.56	47.87	46.06	44.36	43.25

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	42.43	41.79	41.26	40.38	38.80	37.04	34.88	32.42	30.20
45.0	43.95	43.25	42.66	41.67	40.73	39.62	38.27	35.46	32.60
90.0	43.07	42.43	41.61	40.85	39.68	37.92	35.41	32.60	30.26
135.0	44.54	43.72	43.13	42.43	41.61	39.97	37.86	35.05	32.30
180.0	44.30	43.42	42.66	41.84	40.38	38.86	37.40	34.41	32.19
225.0	41.73	40.91	40.03	38.98	37.57	36.23	33.18	31.13	28.73
270.0	42.31	41.55	40.61	39.97	38.68	37.22	36.11	33.88	31.31
315.0	42.78	42.02	41.43	40.79	38.92	37.51	35.35	32.48	30.20
360.0	42.43	41.79	41.26	40.38	38.80	37.04	34.88	32.42	30.20

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	26.63	25.05	22.71	21.42	20.19	20.01	20.72	21.71	22.94
45.0	29.90	27.10	25.52	22.59	21.36	20.19	19.37	18.55	17.97
90.0	27.15	24.99	22.77	21.54	20.48	19.66	19.61	20.01	20.78
135.0	29.38	26.86	24.99	22.59	21.54	20.48	19.90	19.96	20.48
180.0	28.91	26.63	24.29	22.36	21.59	21.65	22.24	23.06	24.29
225.0	25.93	24.29	21.83	20.72	19.66	18.79	18.20	17.62	17.21
270.0	28.91	26.16	24.76	22.18	21.19	20.13	19.78	20.01	20.60
315.0	27.15	25.52	22.71	21.65	20.54	19.78	19.61	19.96	21.19
360.0	26.63	25.05	22.71	21.42	20.19	20.01	20.72	21.71	22.94

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	24.11	24.46	24.40	23.88	23.35	22.71	22.00	21.01	19.96
45.0	17.50	17.03	16.50	16.09	15.68	15.33	14.92	14.57	14.22
90.0	21.95	22.94	23.82	24.46	24.70	24.58	23.88	22.18	19.96
135.0	21.48	22.82	23.99	25.05	25.93	25.93	25.16	22.65	20.01
180.0	25.34	25.69	25.69	25.16	24.40	23.58	22.53	21.65	20.72
225.0	16.74	16.27	15.86	15.51	15.10	14.69	14.40	14.05	13.69
270.0	21.71	22.71	23.64	24.46	24.58	24.40	23.94	22.71	20.78
315.0	22.47	23.88	25.16	25.87	26.04	25.52	24.23	22.41	19.66
360.0	24.11	24.46	24.40	23.88	23.35	22.71	22.00	21.01	19.96

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	17.85	14.28	12.70	12.23	11.88	11.47	11.06	10.83	10.59
45.0	13.93	13.46	13.11	12.82	12.47	11.94	11.29	11.00	10.83
90.0	16.68	14.22	12.82	12.47	11.82	11.35	11.00	10.83	10.59
135.0	16.50	14.86	13.23	12.47	12.00	11.53	11.18	10.94	10.89
180.0	18.38	15.22	12.87	12.41	12.00	11.41	11.12	10.89	10.65
225.0	13.28	12.87	12.52	12.17	11.53	11.12	10.89	10.77	10.59
270.0	17.85	14.63	13.05	12.64	12.35	11.59	11.18	10.89	10.65
315.0	15.92	13.28	12.76	12.17	11.88	11.35	11.06	10.83	10.53
360.0	17.85	14.28	12.70	12.23	11.88	11.47	11.06	10.83	10.59

Intensity data(cd)

C/γ(°)	90.0
0.0	10.59
45.0	10.59
90.0	10.71
135.0	10.65
180.0	10.77
225.0	10.65
270.0	10.65
315.0	10.59
360.0	10.59