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

NT

Client:
LumCAT: 2-2683-L
Luminaire: 92.70.411.00
Report No: 2024423-B019
Ballast type: AC

Test No: 2024423-C019	Voltage(V): 36.290
LampCAT: NICHIA NFCWJ130B-V3	Current(A): 0.576
Lamp flux(lm): 2920.0	Power (W): 20.903
Number of Lamps: 1	PF: 0.000
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2494.17, Efficiency(%): 85.42% , Luminous Efficacy(lm/W): 119.32
Central intensity(cd): 8207.400, Maximum intensity(cd): 8207.400
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.4
[C90/270]Total=25.4
Field angle(10%Imax): [C0/180]Total=58.6
[C90/270]Total=58.6
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.46 C90_270=0.46
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 85.42%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.954%

Equipment: GMS1980	Date: 2024/4/23	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8207.400	0.000	0	0.00%	0.00%
1.0	8176.383	7.839	7.839	0.27%	0.31%
2.0	8087.356	23.343	31.183	0.80%	1.25%
3.0	7941.342	38.335	69.518	1.31%	2.79%
4.0	7731.759	52.463	121.981	1.80%	4.89%
5.0	7438.341	65.261	187.242	2.23%	7.51%
6.0	7082.671	76.312	263.554	2.61%	10.57%
7.0	6685.157	85.457	349.01	2.93%	13.99%
8.0	6240.825	92.509	441.519	3.17%	17.70%
9.0	5748.577	97.168	538.687	3.33%	21.60%
10.0	5297.223	99.960	638.647	3.42%	25.61%
11.0	4844.917	101.341	739.988	3.47%	29.67%
12.0	4409.875	101.168	841.156	3.46%	33.72%
13.0	3983.978	99.614	940.77	3.41%	37.72%
14.0	3596.632	97.031	1037.801	3.32%	41.61%
15.0	3252.300	94.025	1131.826	3.22%	45.38%
16.0	2893.923	90.059	1221.886	3.08%	48.99%
17.0	2626.768	85.972	1307.858	2.94%	52.44%
18.0	2361.295	82.242	1390.1	2.82%	55.73%
19.0	2155.881	78.590	1468.69	2.69%	58.88%
20.0	1965.390	75.431	1544.12	2.58%	61.91%
21.0	1802.113	72.344	1616.464	2.48%	64.81%
22.0	1656.172	69.496	1685.96	2.38%	67.60%
23.0	1527.130	66.794	1752.754	2.29%	70.27%
24.0	1351.519	62.938	1815.692	2.16%	72.80%
25.0	1260.648	59.395	1875.087	2.03%	75.18%
26.0	1178.168	57.569	1932.655	1.97%	77.49%
27.0	1071.810	55.046	1987.701	1.89%	79.69%
28.0	960.530	51.455	2039.156	1.76%	81.76%
29.0	854.911	47.497	2086.653	1.63%	83.66%
30.0	739.154	43.039	2129.692	1.47%	85.39%
31.0	633.404	38.196	2167.889	1.31%	86.92%
32.0	528.173	33.278	2201.166	1.14%	88.25%
33.0	443.396	28.623	2229.789	0.98%	89.40%
34.0	376.753	24.820	2254.609	0.85%	90.40%
35.0	315.480	21.498	2276.108	0.74%	91.26%
36.0	274.456	18.784	2294.891	0.64%	92.01%
37.0	253.541	17.220	2312.112	0.59%	92.70%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	201.215	15.179	2327.291	0.52%	93.31%
39.0	164.507	12.483	2339.774	0.43%	93.81%
40.0	140.015	10.621	2350.394	0.36%	94.24%
41.0	119.283	9.233	2359.628	0.32%	94.61%
42.0	101.163	8.009	2367.637	0.27%	94.93%
43.0	87.111	6.974	2374.611	0.24%	95.21%
44.0	75.728	6.146	2380.757	0.21%	95.45%
45.0	66.767	5.476	2386.234	0.19%	95.67%
46.0	59.854	4.952	2391.185	0.17%	95.87%
47.0	55.026	4.569	2395.755	0.16%	96.05%
48.0	51.719	4.315	2400.07	0.15%	96.23%
49.0	48.852	4.130	2404.2	0.14%	96.39%
50.0	47.037	3.998	2408.198	0.14%	96.55%
51.0	45.523	3.916	2412.114	0.13%	96.71%
52.0	44.119	3.847	2415.96	0.13%	96.86%
53.0	42.758	3.779	2419.739	0.13%	97.02%
54.0	41.214	3.701	2423.441	0.13%	97.16%
55.0	39.583	3.607	2427.047	0.12%	97.31%
56.0	37.725	3.493	2430.541	0.12%	97.45%
57.0	35.925	3.367	2433.908	0.12%	97.58%
58.0	33.906	3.229	2437.137	0.11%	97.71%
59.0	31.887	3.076	2440.213	0.11%	97.84%
60.0	30.000	2.924	2443.137	0.10%	97.95%
61.0	28.266	2.781	2445.918	0.10%	98.07%
62.0	26.774	2.652	2448.57	0.09%	98.17%
63.0	25.223	2.529	2451.099	0.09%	98.27%
64.0	23.848	2.408	2453.507	0.08%	98.37%
65.0	22.451	2.291	2455.798	0.08%	98.46%
66.0	21.185	2.177	2457.975	0.07%	98.55%
67.0	20.029	2.072	2460.047	0.07%	98.63%
68.0	18.888	1.971	2462.019	0.07%	98.71%
69.0	18.113	1.888	2463.906	0.06%	98.79%
70.0	17.359	1.822	2465.728	0.06%	98.86%
71.0	16.730	1.762	2467.49	0.06%	98.93%
72.0	16.218	1.713	2469.203	0.06%	99.00%
73.0	15.779	1.673	2470.877	0.06%	99.07%
74.0	15.355	1.637	2472.513	0.06%	99.13%
75.0	14.952	1.601	2474.115	0.05%	99.20%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	14.565	1.567	2475.682	0.05%	99.26%
77.0	14.184	1.533	2477.214	0.05%	99.32%
78.0	13.833	1.500	2478.714	0.05%	99.38%
79.0	13.416	1.464	2480.178	0.05%	99.44%
80.0	13.072	1.428	2481.606	0.05%	99.50%
81.0	12.714	1.394	2483.001	0.05%	99.55%
82.0	12.341	1.359	2484.36	0.05%	99.61%
83.0	12.019	1.324	2485.684	0.05%	99.66%
84.0	11.756	1.295	2486.979	0.04%	99.71%
85.0	11.448	1.266	2488.245	0.04%	99.76%
86.0	11.134	1.234	2489.48	0.04%	99.81%
87.0	10.863	1.204	2490.684	0.04%	99.86%
88.0	10.688	1.181	2491.864	0.04%	99.91%
89.0	10.490	1.161	2493.025	0.04%	99.95%
90.0	10.373	1.144	2494.169	0.04%	100.00%

Zonal flux distribution table

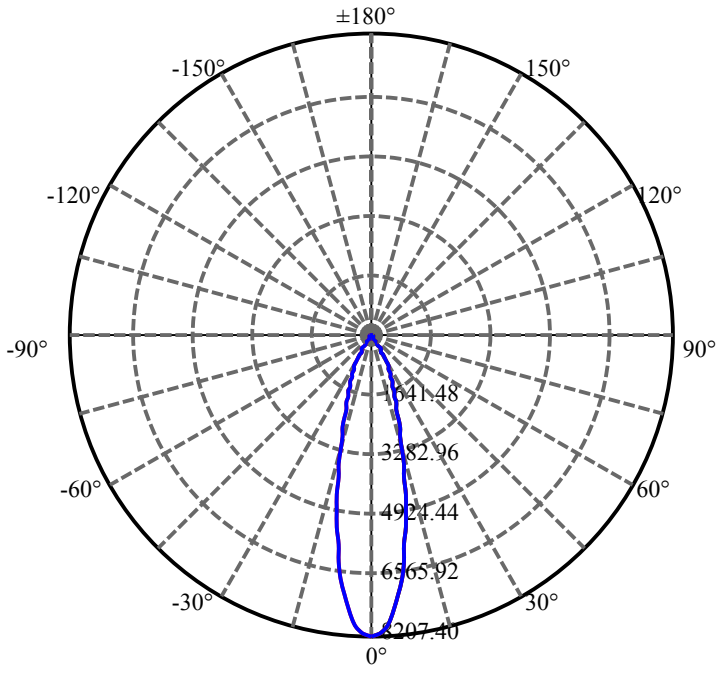
ZONAL LUMEN SUMMARY

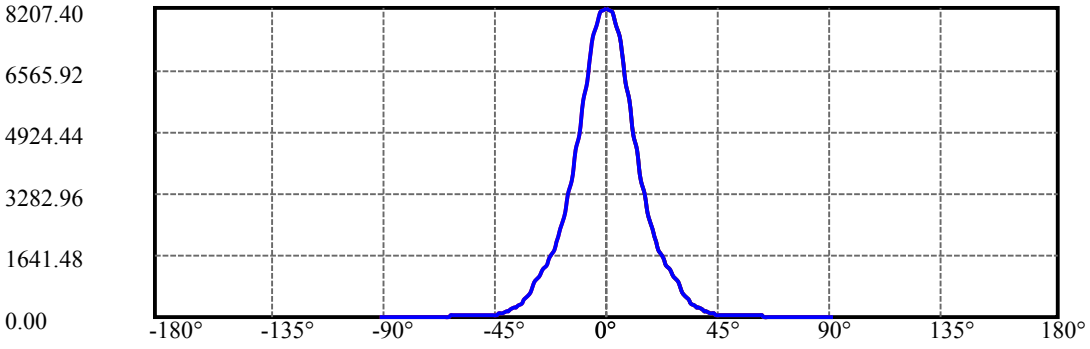
Zone	Lumens	%Lamp	%Fixt
0-30	2129.69	72.93%	85.39%
0-40	2350.39	80.49%	94.24%
0-60	2443.14	83.67%	97.95%
0-90	2493.03	85.38%	99.95%
0-120	2493.03	85.38%	99.95%
0-180	2494.17	85.42%	100.00%
60-90	49.89	1.71%	2.00%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.15	1995.34	68.33%	80.00%

ZONAL LUMEN SUMMARY

0-10	638.65
10-20	905.47
20-30	585.57
30-40	220.70
40-50	57.80
50-60	34.94
60-70	22.59
70-80	15.88
80-90	11.42
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):

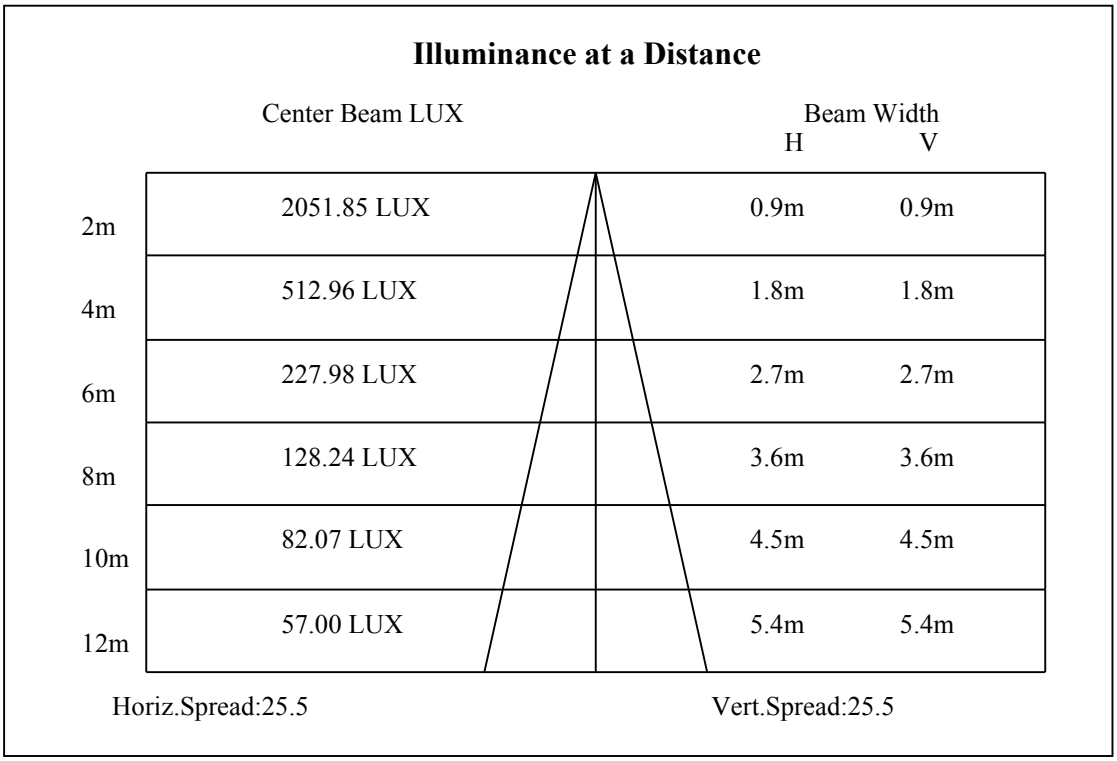
C0/C180:

C90/C270:

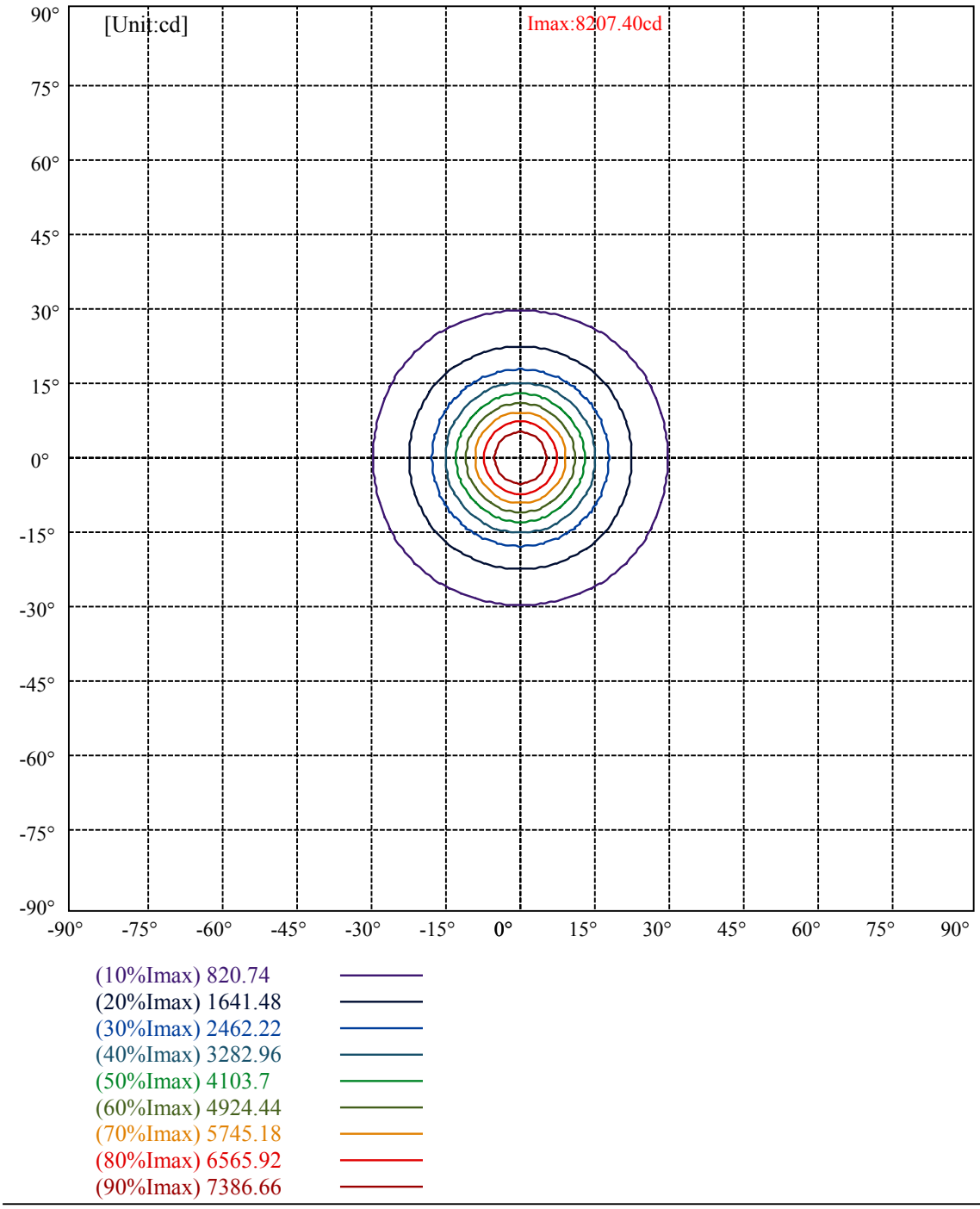
Field angle(10%Imax):C0/180Left:29.3 Right:29.3
:C90/270Left:29.3 Right:29.3

Beam Angle(50%Imax):C0/180Left:12.7 Right:12.7
:C90/270Left:12.7 Right:12.7

Lux distance Curve



ISO-Intensity(V-H)



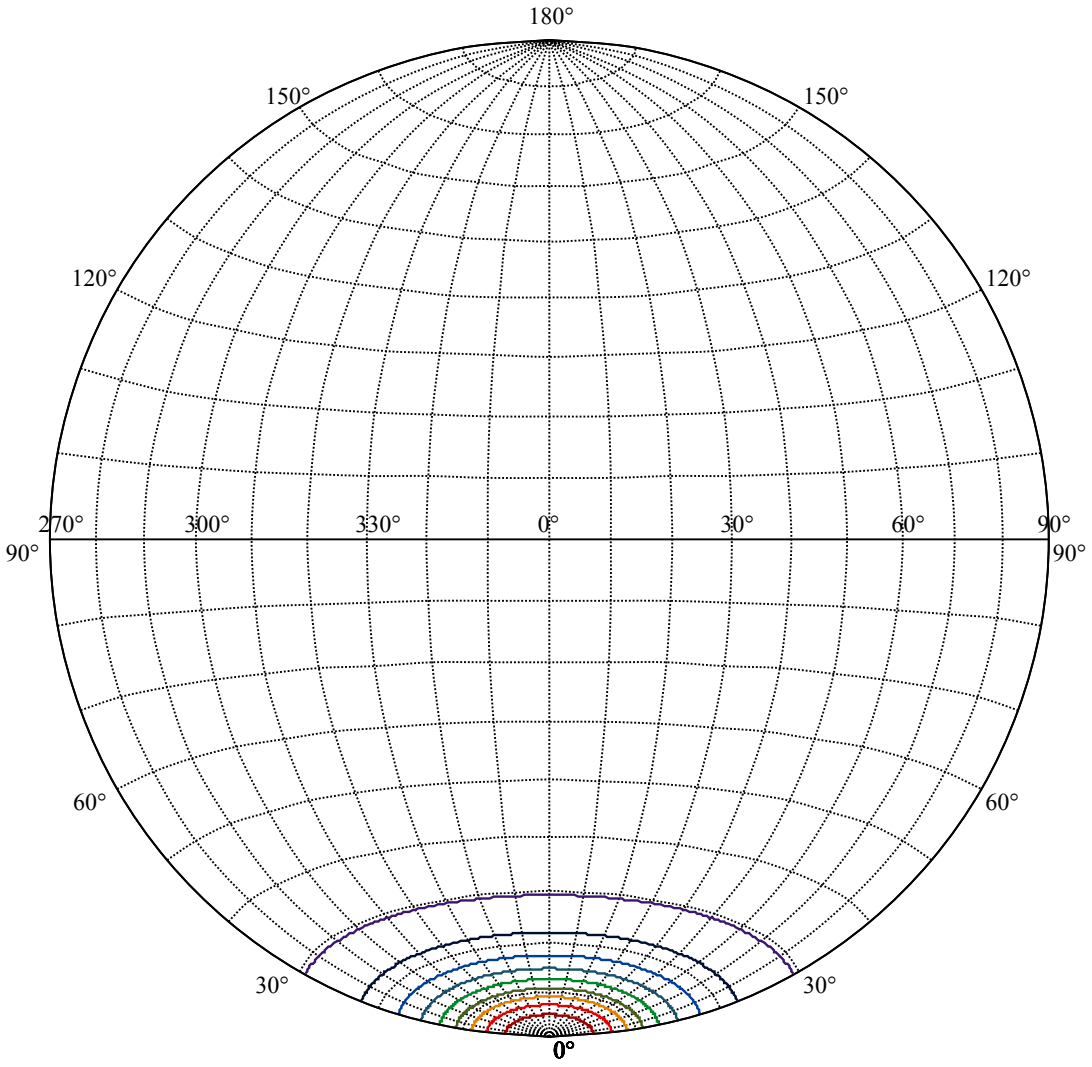
(10%Imax) 820.74
(20%Imax) 1641.48
(30%Imax) 2462.22
(40%Imax) 3282.96
(50%Imax) 4103.7
(60%Imax) 4924.44
(70%Imax) 5745.18
(80%Imax) 6565.92
(90%Imax) 7386.66

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/23
Humidity(%): 60.0%

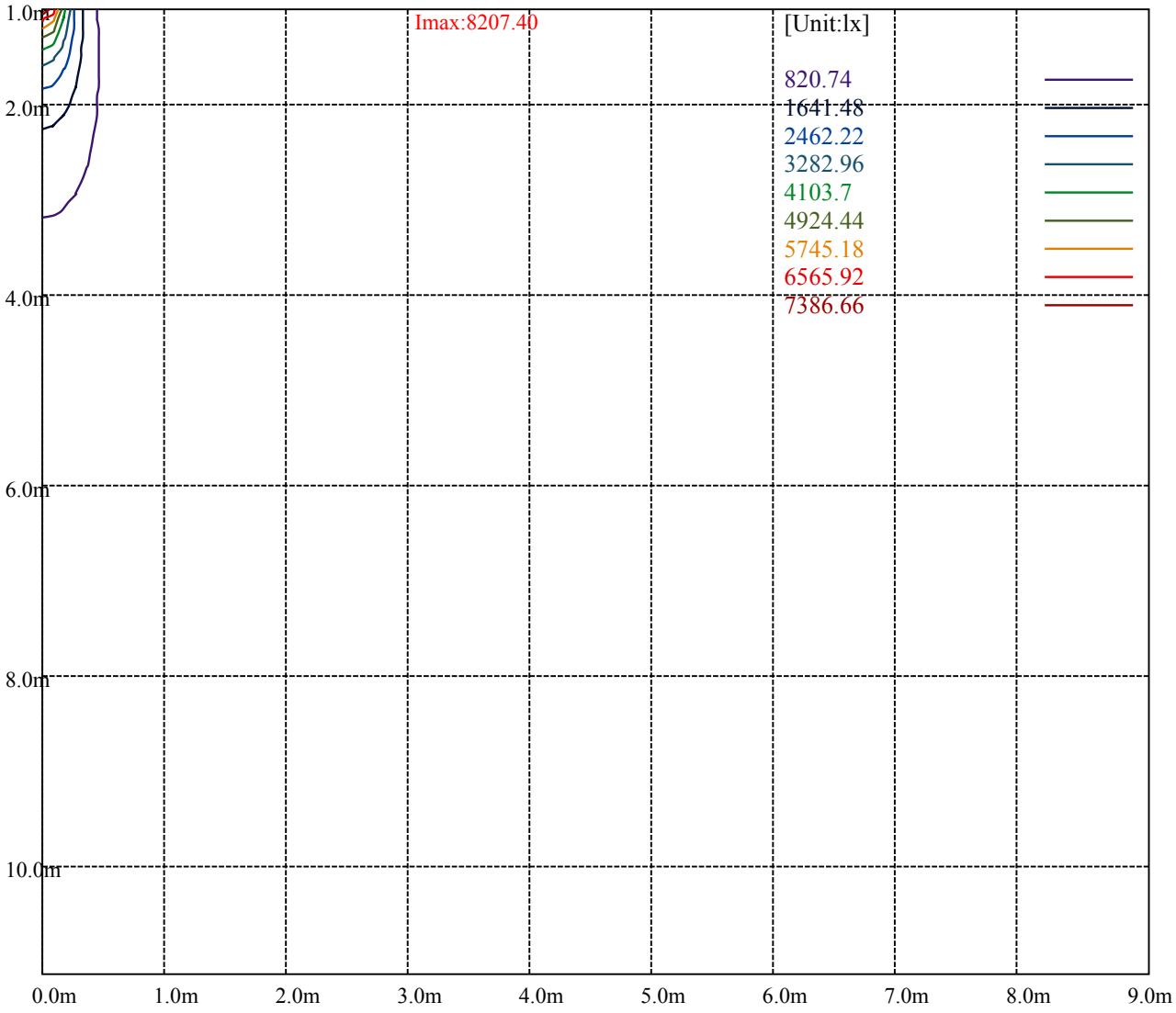
Operator: NT07
Distance(m): 7.65

ISO candela diagram on circular web



Equipment: GMS1980	Date: 2024/4/23	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/23
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

NT 2-2683-L

Luminance Limitting Curve(no luminous side)

Luminance Table

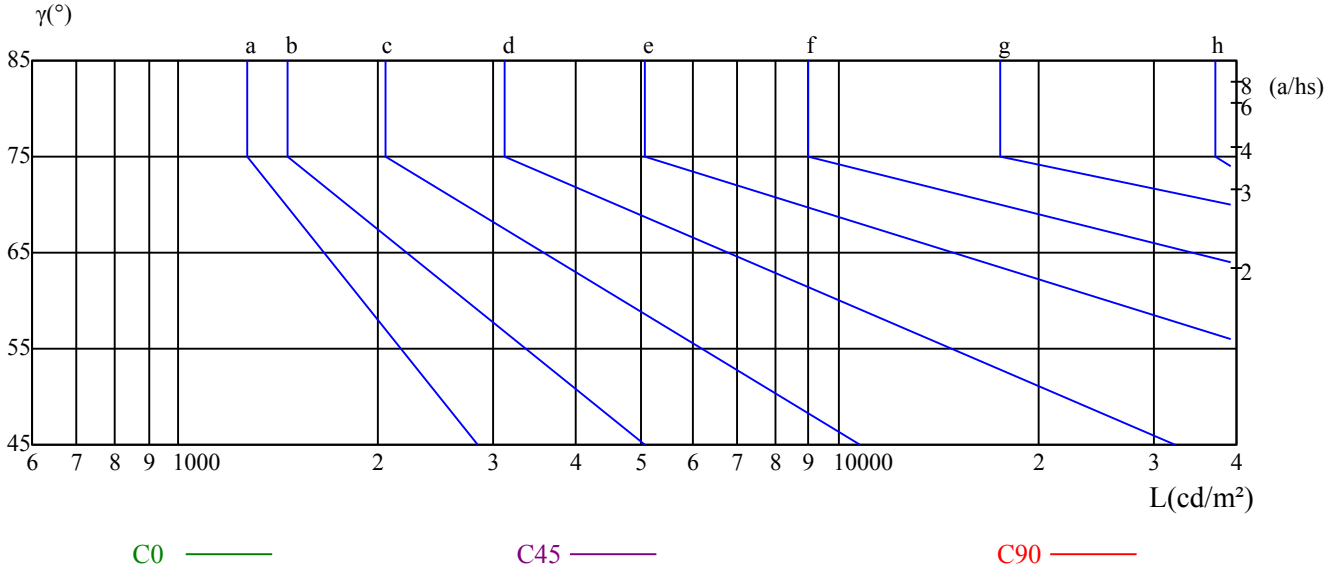
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

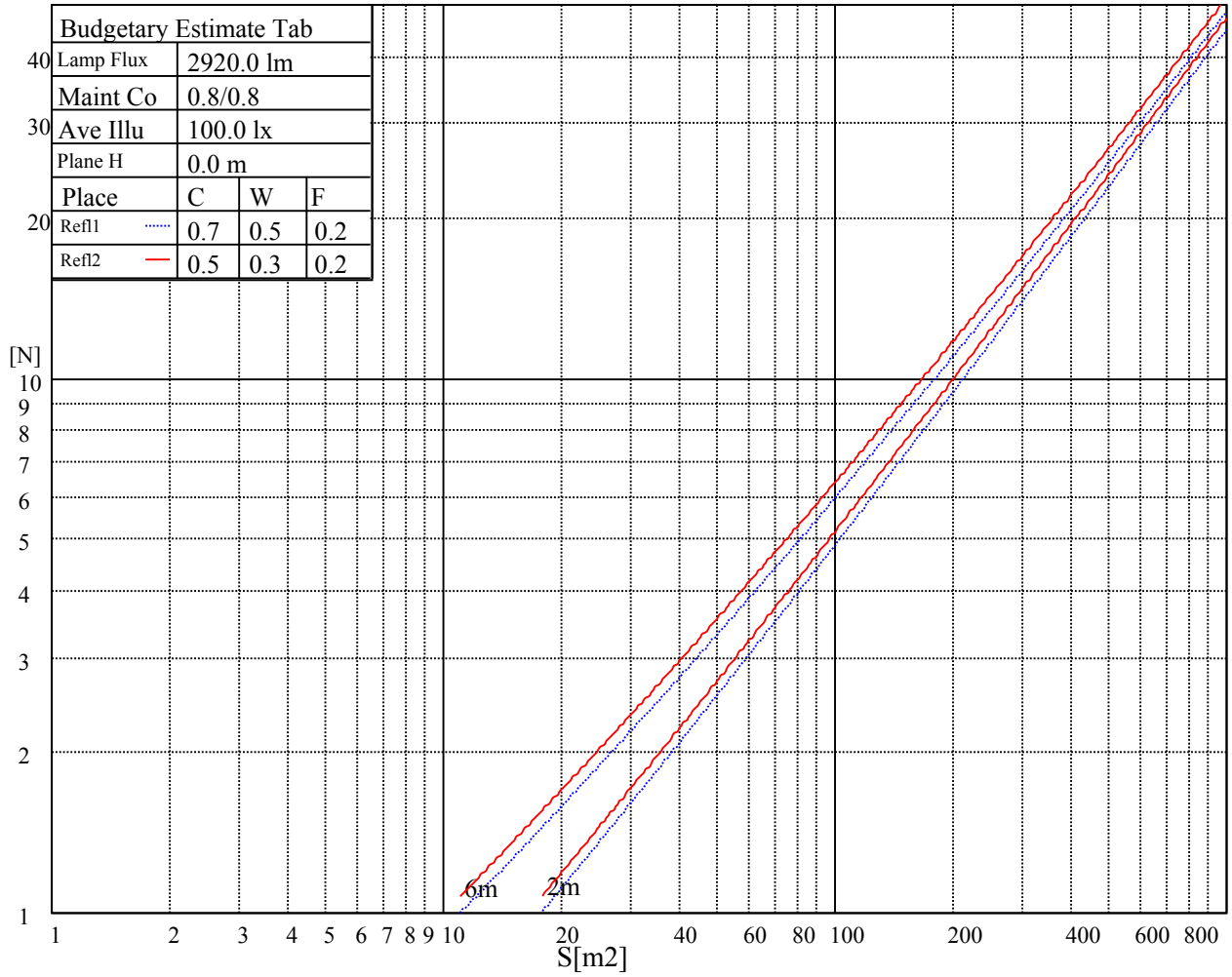
Glare Table

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

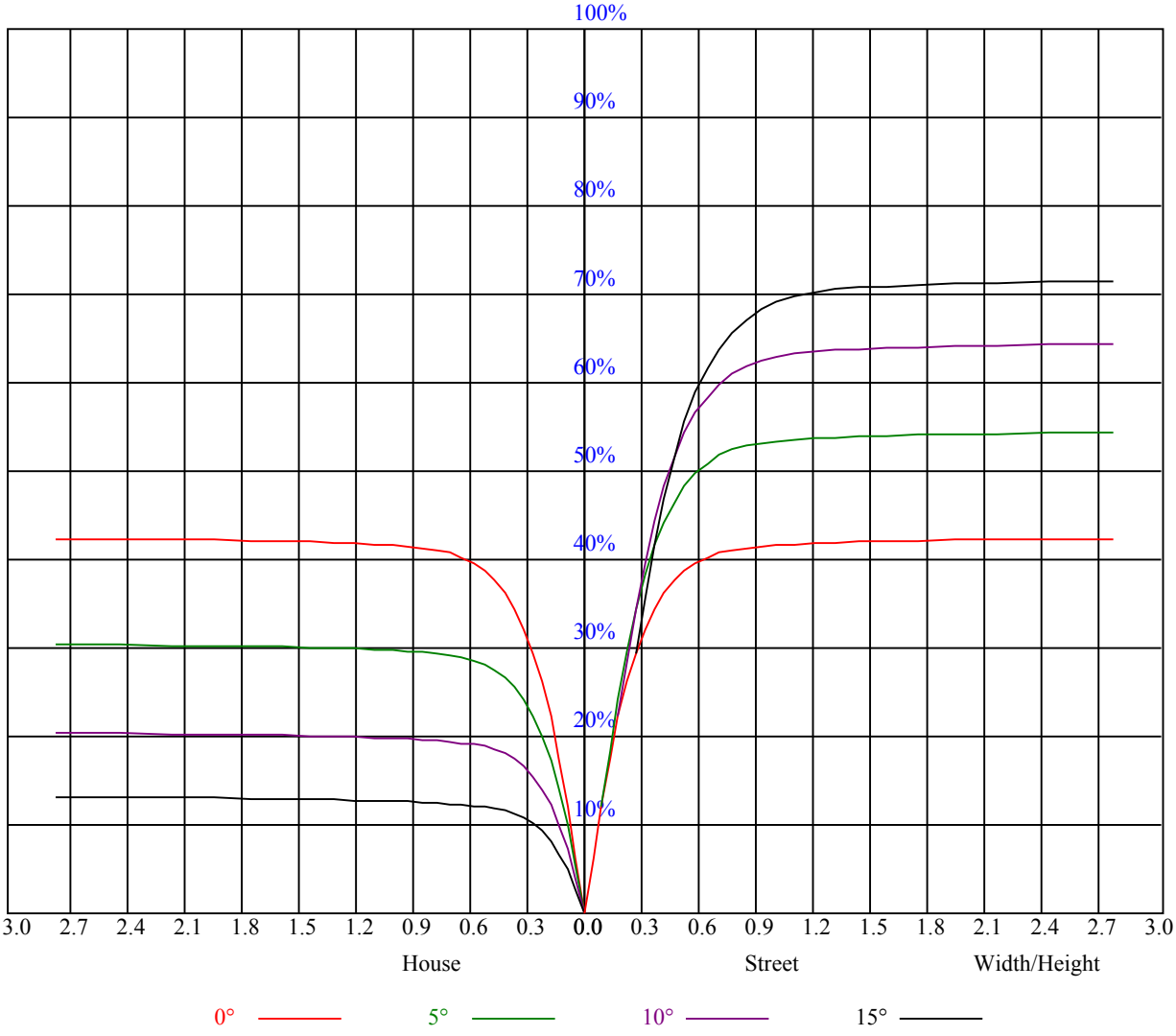


Equipment: GMS1980 Date: 2024/4/23 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

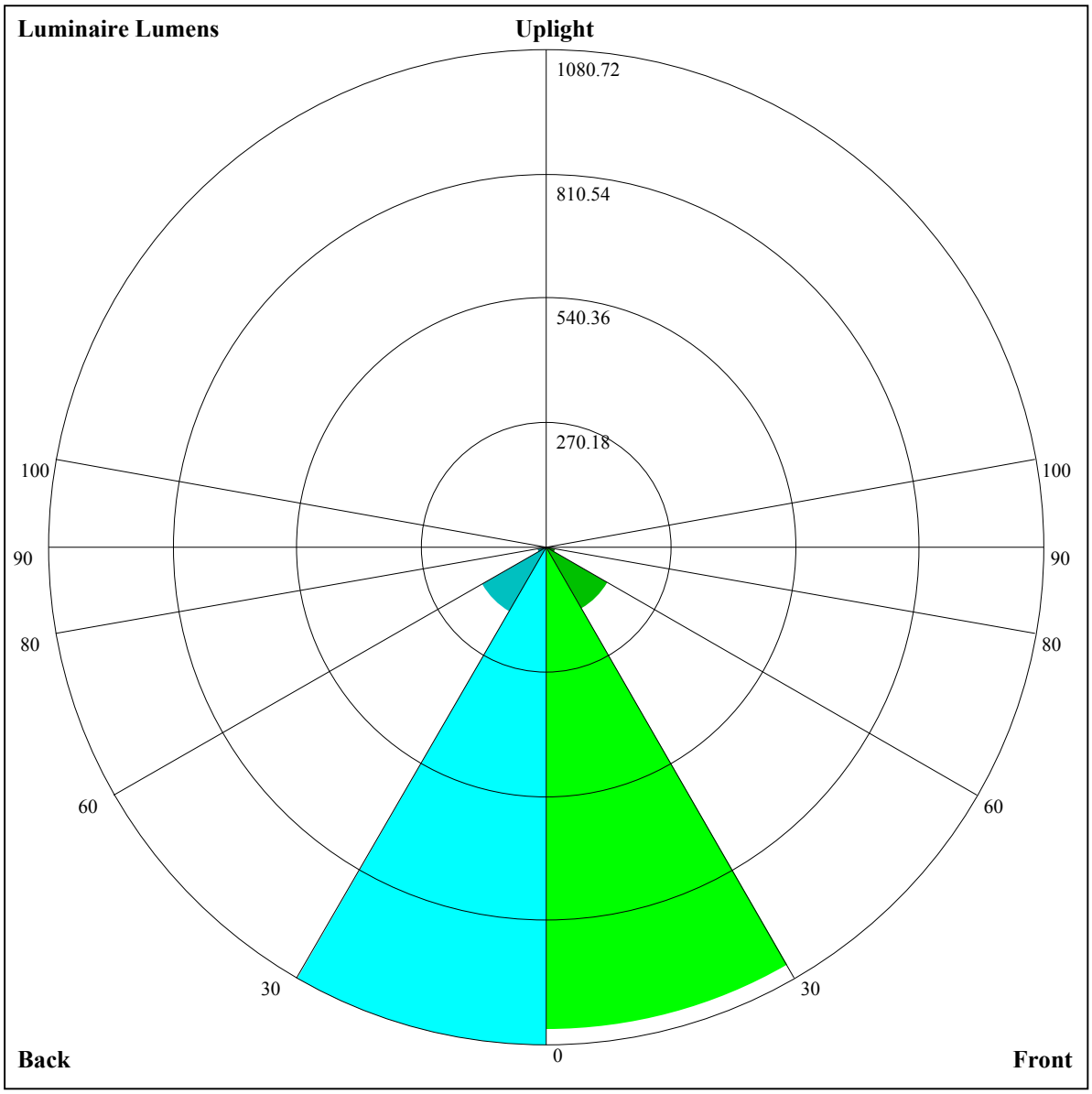
Utilization factor table for indoor luminaire

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	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	0.92	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.81	0.83	0.81	0.80	0.81	0.79	0.78	0.77
3	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.81	0.77	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.75	0.72	0.71	0.69
5	0.77	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.69	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	0.72	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.63
7	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	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	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
9	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.63	0.58	0.56	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2024/4/23	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65



Luminaire Lumens:
FL=1049.09,FM=154.73,FH=19.14,FVH=6.27
BL=1080.72,BM=160.78,BH=19.37,BVH=6.3
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	8217.20	8148.73	7981.94	7781.80	7541.85	7152.68	6779.89	6373.16	5952.97
45.0	8208.42	8207.84	8184.43	8066.21	7892.99	7650.12	7372.14	6955.46	6559.85
90.0	8209.01	8172.14	8089.04	7945.07	7727.37	7441.78	7028.03	6648.21	6122.10
135.0	8194.96	8217.79	8194.38	8141.12	8004.18	7729.71	7446.46	7132.20	6650.56
180.0	8217.20	8221.30	8186.77	8091.38	7928.10	7651.88	7380.92	7033.29	6637.68
225.0	8208.42	8127.66	8008.86	7813.40	7525.47	7211.20	6761.16	6338.05	5879.23
270.0	8209.01	8202.57	8132.93	7964.39	7768.34	7525.47	7224.08	6763.50	6335.12
315.0	8194.96	8113.03	7920.49	7727.37	7465.77	7143.90	6668.70	6237.39	5789.10
360.0	8217.20	8148.73	7981.94	7781.80	7541.85	7152.68	6779.89	6373.16	5952.97

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5411.63	4959.84	4539.06	4152.82	3690.49	3341.69	3026.26	2672.78	2429.33
45.0	6133.22	5730.00	5209.15	4781.35	4368.76	3877.76	3524.28	3113.46	2820.26
90.0	5704.25	5286.40	4763.20	4352.96	3947.40	3582.22	3174.90	2879.95	2612.50
135.0	6229.19	5795.54	5375.35	4836.36	4406.22	4008.85	3636.06	3216.46	2911.55
180.0	6108.05	5667.38	5205.05	4748.57	4231.82	3852.59	3497.95	3095.31	2805.63
225.0	5414.56	4856.84	4439.58	4063.28	3701.61	3277.32	2968.32	2690.92	2447.47
270.0	5780.91	5313.90	4865.62	4352.38	3977.25	3619.09	3279.66	2898.09	2634.16
315.0	5206.81	4767.89	4362.33	3991.29	3548.28	3213.53	2910.97	2584.41	2353.25
360.0	5411.63	4959.84	4539.06	4152.82	3690.49	3341.69	3026.26	2672.78	2429.33

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2177.68	2006.21	1851.71	1715.35	1562.61	1449.08	1155.12	1155.12	1104.14
45.0	2563.93	2340.96	2103.94	1937.74	1789.68	1654.49	1507.01	1396.99	1289.31
90.0	2383.68	2137.89	1965.83	1811.33	1643.37	1522.23	1408.70	1164.54	1164.54
135.0	2580.32	2353.25	2155.44	1944.18	1793.77	1658.59	1536.86	1395.23	1286.97
180.0	2483.75	2260.78	2071.76	1857.56	1715.35	1585.43	1467.80	1336.71	1229.62
225.0	2189.97	2009.72	1812.50	1673.80	1547.98	1408.11	1143.82	1143.82	1091.56
270.0	2401.82	2197.58	1969.93	1818.94	1687.85	1540.37	1431.52	1331.45	1199.77
315.0	2109.21	1940.66	1792.02	1658.00	1508.77	1398.75	1161.32	1161.32	1059.43
360.0	2177.68	2006.21	1851.71	1715.35	1562.61	1449.08	1155.12	1155.12	1104.14

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1003.54	902.36	803.46	678.45	582.36	473.56	400.41	343.88	285.88
45.0	1183.97	1052.29	949.29	822.30	719.89	619.23	505.11	428.44	364.07
90.0	1059.96	927.93	827.22	723.81	598.04	502.53	423.76	360.32	293.02
135.0	1180.46	1077.46	946.95	845.12	743.29	616.89	523.83	443.66	362.90
180.0	1126.62	1028.88	925.30	796.55	695.31	572.41	483.45	407.38	335.39
225.0	966.09	866.78	766.24	662.88	543.15	459.58	392.04	327.32	284.36
270.0	1096.18	971.53	865.61	756.17	652.00	530.86	449.51	384.55	332.47
315.0	957.66	857.00	755.23	627.95	533.20	450.33	369.04	318.48	265.75
360.0	1003.54	902.36	803.46	678.45	582.36	473.56	400.41	343.88	285.88

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	247.84	214.48	178.67	154.50	133.84	115.46	95.92	83.28	73.27
45.0	311.40	298.52	245.56	182.18	156.02	129.45	112.30	97.67	82.52
90.0	248.72	211.79	179.72	147.65	125.88	108.73	91.76	80.64	69.35
135.0	310.81	298.52	245.50	182.47	156.20	129.39	112.42	98.20	86.20
180.0	300.28	300.28	203.07	174.40	149.99	129.04	107.45	93.05	80.94
225.0	247.02	206.23	178.44	153.68	127.46	109.61	94.05	78.36	68.88
270.0	299.11	299.11	206.41	178.32	147.83	126.88	104.23	89.25	77.19
315.0	230.46	199.39	172.35	142.85	122.90	105.69	91.18	76.43	67.48
360.0	247.84	214.48	178.67	154.50	133.84	115.46	95.92	83.28	73.27

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	65.60	58.46	54.60	51.91	48.87	47.52	45.65	44.07	42.66
45.0	73.04	65.14	57.53	53.96	50.74	48.34	46.82	45.71	44.30
90.0	62.27	56.83	52.85	49.92	47.75	46.23	45.71	44.01	42.84
135.0	73.91	66.19	60.16	55.95	52.67	50.56	48.22	47.23	46.06
180.0	71.28	61.80	56.18	52.49	49.28	47.17	45.06	43.95	42.72
225.0	61.45	56.06	52.44	48.92	46.58	45.00	43.60	42.08	40.79
270.0	65.95	59.40	54.60	51.38	48.22	46.23	45.06	43.72	42.02
315.0	60.63	54.95	51.85	49.22	46.70	45.24	44.07	42.19	40.67
360.0	65.60	58.46	54.60	51.91	48.87	47.52	45.65	44.07	42.66

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	41.02	39.03	37.22	35.05	32.83	31.31	28.91	27.62	26.22
45.0	42.84	41.49	39.62	37.75	35.87	33.83	31.95	29.50	28.03
90.0	41.73	40.15	38.10	36.40	33.77	31.89	29.96	28.09	26.92
135.0	44.13	42.78	40.85	39.21	36.99	34.88	32.77	30.72	28.68
180.0	41.26	39.39	37.92	36.40	34.65	32.30	30.67	28.79	27.33
225.0	39.03	37.45	35.46	33.59	31.84	30.14	28.38	26.86	25.52
270.0	40.67	39.09	37.22	35.52	33.47	31.31	29.50	27.92	26.34
315.0	39.03	37.28	35.41	33.47	31.84	29.44	27.86	26.63	25.16
360.0	41.02	39.03	37.22	35.05	32.83	31.31	28.91	27.62	26.22

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	24.23	23.17	21.77	20.42	19.43	18.43	17.73	17.09	16.50
45.0	26.45	24.87	23.53	22.24	20.95	19.72	18.84	17.85	17.21
90.0	25.40	23.70	22.53	21.36	20.07	18.84	18.08	17.38	16.80
135.0	27.51	25.98	24.23	23.00	21.83	20.13	19.14	18.38	17.44
180.0	25.87	24.29	22.71	21.65	20.48	19.08	18.26	17.56	16.80
225.0	23.94	22.77	21.42	20.07	18.84	18.08	17.44	16.62	16.15
270.0	24.87	23.53	22.47	21.01	19.72	18.79	18.08	17.26	16.68
315.0	23.53	22.47	20.95	19.72	18.90	18.02	17.32	16.74	16.27
360.0	24.23	23.17	21.77	20.42	19.43	18.43	17.73	17.09	16.50

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	16.04	15.63	15.27	14.92	14.46	14.10	13.75	13.34	12.99
45.0	16.68	16.27	15.68	15.33	14.92	14.46	14.16	13.75	13.28
90.0	16.21	15.80	15.27	14.92	14.51	14.10	13.75	13.34	13.05
135.0	16.85	16.39	15.98	15.45	15.16	14.81	14.40	13.93	13.58
180.0	16.33	15.86	15.45	15.04	14.63	14.34	13.99	13.52	13.17
225.0	15.74	15.22	14.86	14.46	14.10	13.69	13.34	13.05	12.70
270.0	16.09	15.68	15.27	14.81	14.46	14.10	13.69	13.28	12.99
315.0	15.80	15.39	15.04	14.69	14.28	13.87	13.58	13.11	12.82
360.0	16.04	15.63	15.27	14.92	14.46	14.10	13.75	13.34	12.99

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.64	12.23	11.88	11.65	11.35	11.06	10.77	10.83	10.30
45.0	12.99	12.58	12.35	12.00	11.70	11.41	11.00	10.77	10.77
90.0	12.58	12.29	12.06	11.76	11.41	11.18	10.89	10.71	10.53
135.0	13.23	12.82	12.35	12.06	11.70	11.41	11.18	10.89	10.77
180.0	12.82	12.47	12.11	11.82	11.53	11.18	10.94	10.71	10.59
225.0	12.35	12.06	11.76	11.59	11.18	10.89	10.71	10.53	10.30
270.0	12.64	12.23	11.94	11.70	11.47	11.06	10.77	10.65	10.30
315.0	12.47	12.06	11.70	11.47	11.24	10.89	10.65	10.42	10.36
360.0	12.64	12.23	11.88	11.65	11.35	11.06	10.77	10.83	10.30

Intensity data(cd)

C/γ(°)	90.0
0.0	10.53
45.0	10.30
90.0	10.42
135.0	10.42
180.0	10.24
225.0	10.36
270.0	10.36
315.0	10.36
360.0	10.53