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Nata

LumCAT: 3-1545-A3
Luminaire: TE 2213382-1+92.76.365.00
Report No: GC2017060101
Test No: NT-0010
LampCAT: NICHIA NFCLJ060B
Lamp flux(lm): 2136.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 218.3000
Current(A): 0.1030
Power (W): 20.4000
PF: 0.9070
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 1968.56
Efficiency(%): 92.16%
Lumens(lm)/Power(W): 96.50
Central intensity(cd): 26672.070
Maximum intensity(cd): 26672.070
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=10.5
 [C90/270]Total=10.5
Field angle(10%Imax): [C0/180]Total=20.5
 [C90/270]Total=20.5
Maximum s/h(1/2): C0_180=0.18 C90_270=0.18
Maximum s/h(1/4): C0_180=0.18 C90_270=0.18
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.16%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.794%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	26672.072	0.000	0	.000%	.000%
1.0	26168.307	25.283	25.283	1.184%	1.284%
2.0	24395.490	72.574	97.857	3.398%	4.971%
3.0	21708.738	110.266	208.123	5.162%	10.572%
4.0	18394.344	134.238	342.361	6.285%	17.391%
5.0	14255.203	140.457	482.818	6.576%	24.526%
6.0	10790.944	131.624	614.442	6.162%	31.213%
7.0	7895.253	115.985	730.427	5.430%	37.105%
8.0	5469.303	95.648	826.074	4.478%	41.963%
9.0	3759.802	74.797	900.871	3.502%	45.763%
10.0	2801.985	59.382	960.253	2.780%	48.779%
11.0	2212.717	50.107	1010.36	2.346%	51.325%
12.0	1742.535	43.237	1053.597	2.024%	53.521%
13.0	1487.624	38.334	1091.931	1.795%	55.468%
14.0	1312.985	35.848	1127.778	1.678%	57.289%
15.0	1172.316	34.119	1161.898	1.597%	59.023%
16.0	1121.224	33.607	1195.504	1.573%	60.730%
17.0	1057.744	33.932	1229.437	1.589%	62.453%
18.0	998.998	33.911	1263.348	1.588%	64.176%
19.0	952.586	33.954	1297.301	1.590%	65.901%
20.0	908.265	34.059	1331.36	1.595%	67.631%
21.0	872.148	34.188	1365.548	1.601%	69.368%
22.0	844.070	34.488	1400.036	1.615%	71.120%
23.0	817.588	34.866	1434.902	1.632%	72.891%
24.0	792.041	35.192	1470.094	1.648%	74.679%
25.0	770.679	35.533	1505.627	1.664%	76.484%
26.0	750.969	35.919	1541.546	1.682%	78.308%
27.0	732.140	36.285	1577.83	1.699%	80.151%
28.0	714.797	36.633	1614.464	1.715%	82.012%
29.0	697.785	36.957	1651.421	1.730%	83.890%
30.0	683.085	37.283	1688.704	1.745%	85.784%
31.0	668.825	37.622	1726.326	1.761%	87.695%
32.0	647.573	37.713	1764.039	1.766%	89.610%
33.0	606.556	36.947	1800.986	1.730%	91.487%
34.0	531.735	34.448	1835.434	1.613%	93.237%
35.0	429.880	29.864	1865.298	1.398%	94.754%
36.0	312.445	23.636	1888.934	1.107%	95.955%
37.0	230.851	17.719	1906.653	.830%	96.855%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	112.645	11.465	1918.119	.537%	97.437%
39.0	50.542	5.570	1923.689	.261%	97.720%
40.0	29.400	2.788	1926.477	.131%	97.862%
41.0	25.216	1.945	1928.422	.091%	97.961%
42.0	22.188	1.722	1930.144	.081%	98.048%
43.0	19.435	1.542	1931.686	.072%	98.127%
44.0	16.242	1.347	1933.033	.063%	98.195%
45.0	11.011	1.047	1934.08	.049%	98.248%
46.0	8.919	0.779	1934.859	.036%	98.288%
47.0	8.699	0.701	1935.56	.033%	98.323%
48.0	8.534	0.697	1936.257	.033%	98.359%
49.0	8.424	0.696	1936.953	.033%	98.394%
50.0	8.314	0.698	1937.651	.033%	98.430%
51.0	8.258	0.701	1938.352	.033%	98.465%
52.0	8.148	0.704	1939.056	.033%	98.501%
53.0	8.093	0.707	1939.763	.033%	98.537%
54.0	7.983	0.709	1940.471	.033%	98.573%
55.0	7.983	0.713	1941.184	.033%	98.609%
56.0	7.928	0.719	1941.903	.034%	98.646%
57.0	7.873	0.722	1942.625	.034%	98.682%
58.0	7.818	0.726	1943.351	.034%	98.719%
59.0	7.763	0.728	1944.079	.034%	98.756%
60.0	7.763	0.733	1944.813	.034%	98.793%
61.0	7.708	0.738	1945.551	.035%	98.831%
62.0	7.708	0.743	1946.294	.035%	98.869%
63.0	7.653	0.747	1947.041	.035%	98.907%
64.0	7.653	0.751	1947.792	.035%	98.945%
65.0	7.653	0.757	1948.55	.035%	98.983%
66.0	7.653	0.764	1949.313	.036%	99.022%
67.0	7.653	0.770	1950.083	.036%	99.061%
68.0	7.653	0.775	1950.858	.036%	99.101%
69.0	7.653	0.781	1951.639	.037%	99.140%
70.0	7.653	0.786	1952.425	.037%	99.180%
71.0	7.598	0.788	1953.213	.037%	99.220%
72.0	7.598	0.790	1954.003	.037%	99.260%
73.0	7.598	0.795	1954.798	.037%	99.301%
74.0	7.598	0.799	1955.597	.037%	99.341%
75.0	7.543	0.800	1956.397	.037%	99.382%

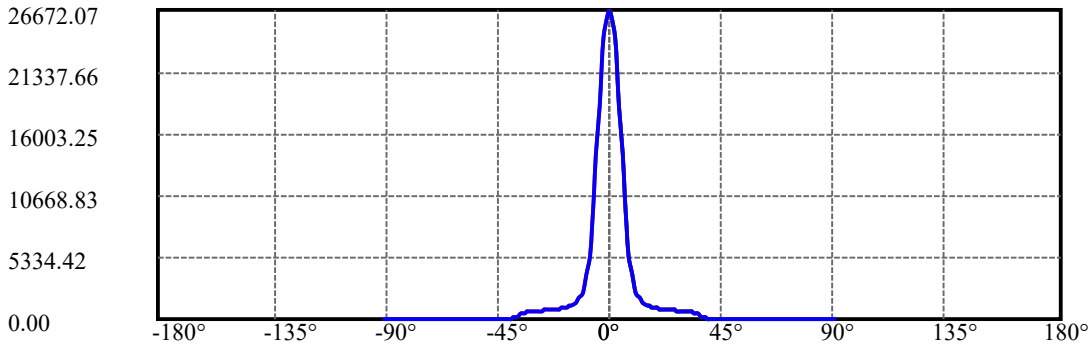
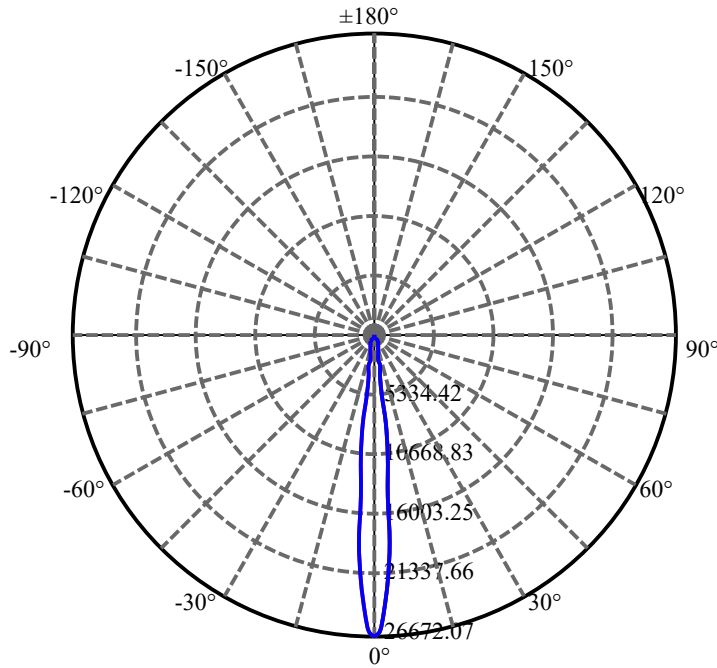
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.543	0.801	1957.198	.037%	99.423%
77.0	7.543	0.804	1958.002	.038%	99.463%
78.0	7.543	0.808	1958.809	.038%	99.505%
79.0	7.543	0.811	1959.62	.038%	99.546%
80.0	7.488	0.810	1960.43	.038%	99.587%
81.0	7.488	0.810	1961.24	.038%	99.628%
82.0	7.543	0.815	1962.055	.038%	99.669%
83.0	7.488	0.817	1962.872	.038%	99.711%
84.0	7.488	0.816	1963.688	.038%	99.752%
85.0	7.488	0.817	1964.505	.038%	99.794%
86.0	7.488	0.819	1965.324	.038%	99.835%
87.0	7.378	0.814	1966.138	.038%	99.877%
88.0	7.378	0.808	1966.946	.038%	99.918%
89.0	7.378	0.809	1967.755	.038%	99.959%
90.0	7.378	0.809	1968.564	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1688.70	79.06%	85.78%
0-40	1926.48	90.19%	97.86%
0-60	1944.81	91.05%	98.79%
0-90	1967.75	92.12%	99.96%
0-120	1967.75	92.12%	99.96%
0-180	1968.56	92.16%	100.00%
60-90	23.68	1.11%	1.20%
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%
0-26.92	1574.85	73.73%	80.00%

ZONAL LUMEN SUMMARY

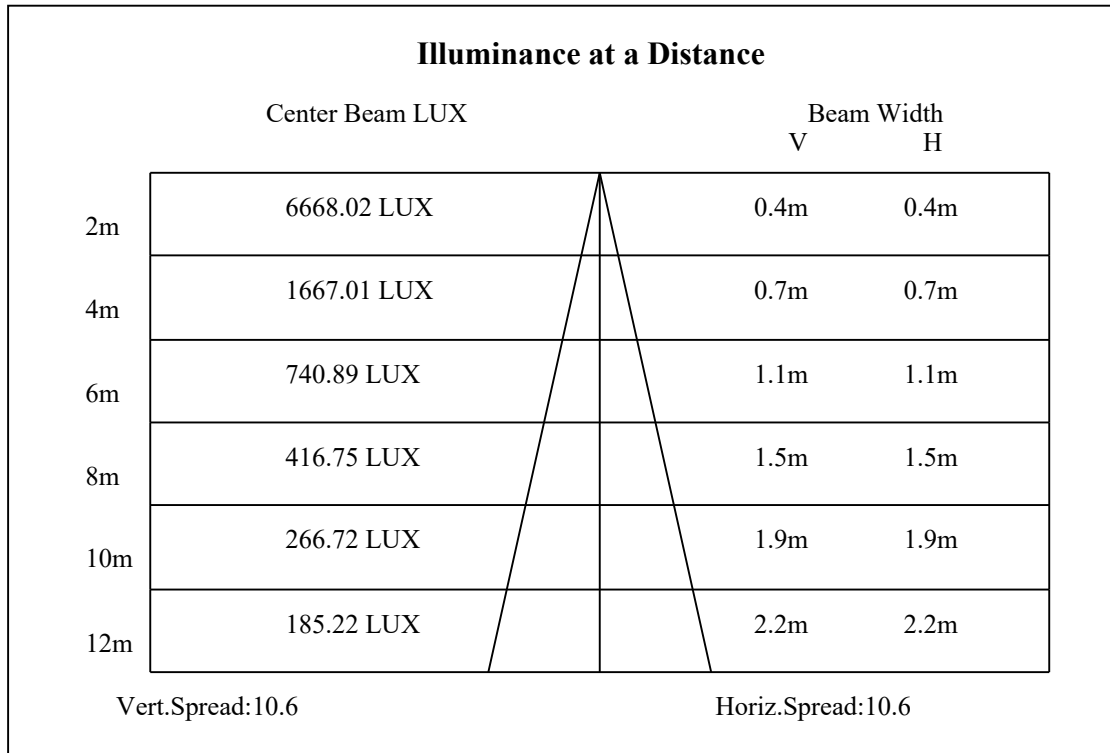
0-10	960.25
10-20	371.11
20-30	357.34
30-40	237.77
40-50	11.17
50-60	7.16
60-70	7.61
70-80	8.01
80-90	7.32
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

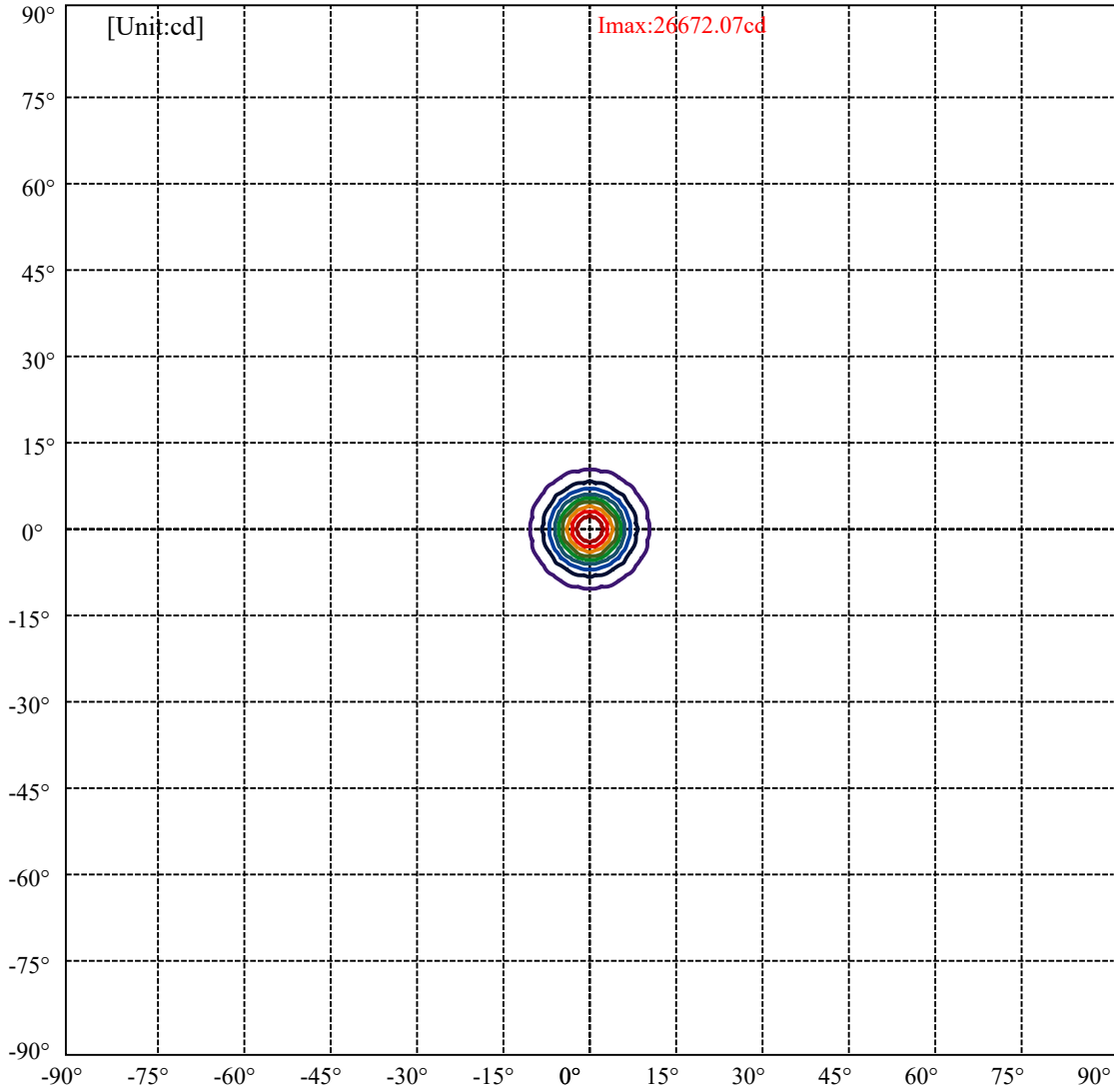


C0(Max): —————
C0/C180: —————
C90/C270: —————

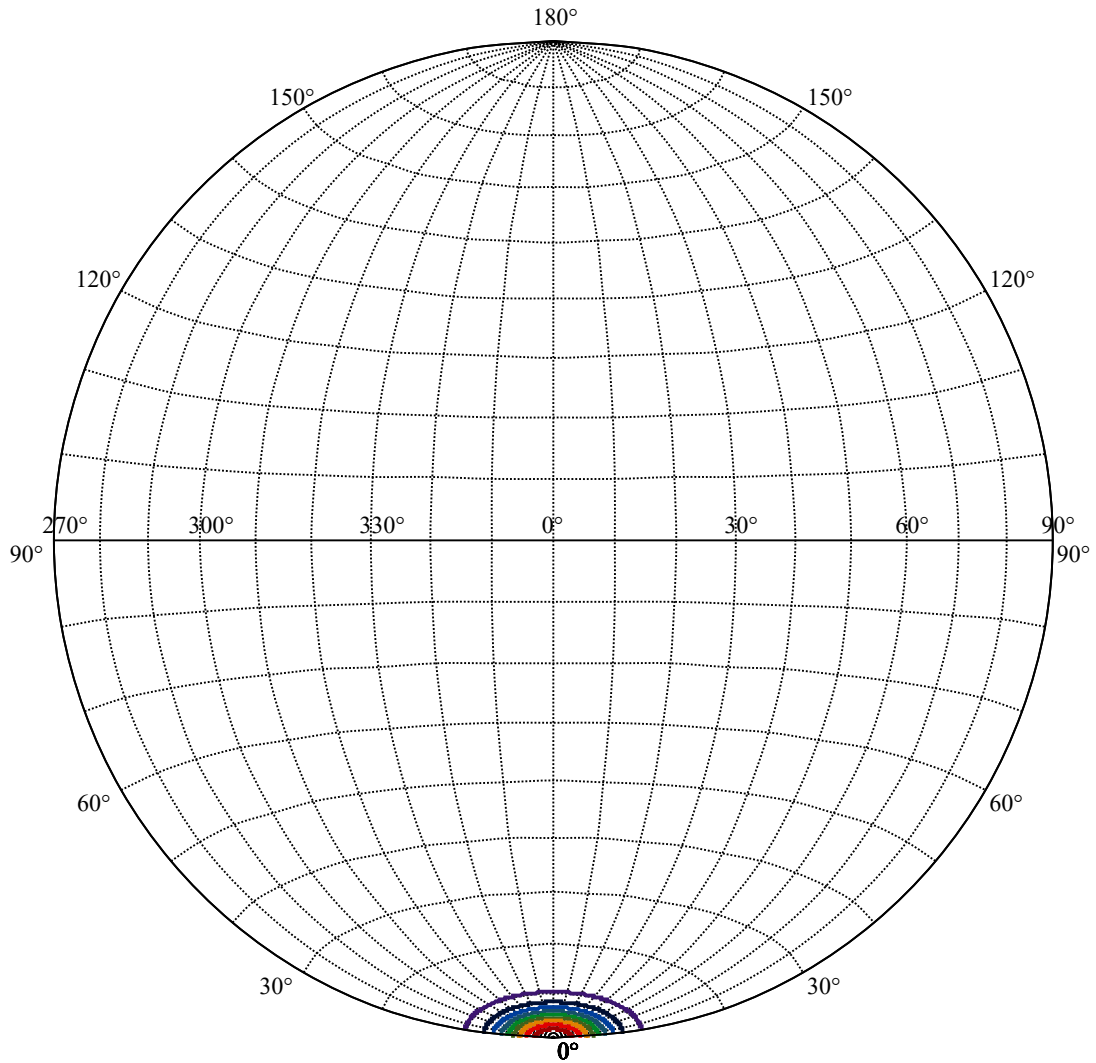
Field angle(10%Imax):C0/180Left:10.2 Right:10.2
:C90/270Left:10.2 Right:10.2

Beam Angle(50%Imax):C0/180Left:5.3 Right:5.3
:C90/270Left:5.3 Right:5.3





(10%I _{max}) 2667.21	—
(20%I _{max}) 5334.42	—
(30%I _{max}) 8001.62	—
(40%I _{max}) 10668.8	—
(50%I _{max}) 13336	—
(60%I _{max}) 16003.2	—
(70%I _{max}) 18670.5	—
(80%I _{max}) 21337.7	—
(90%I _{max}) 24004.9	—



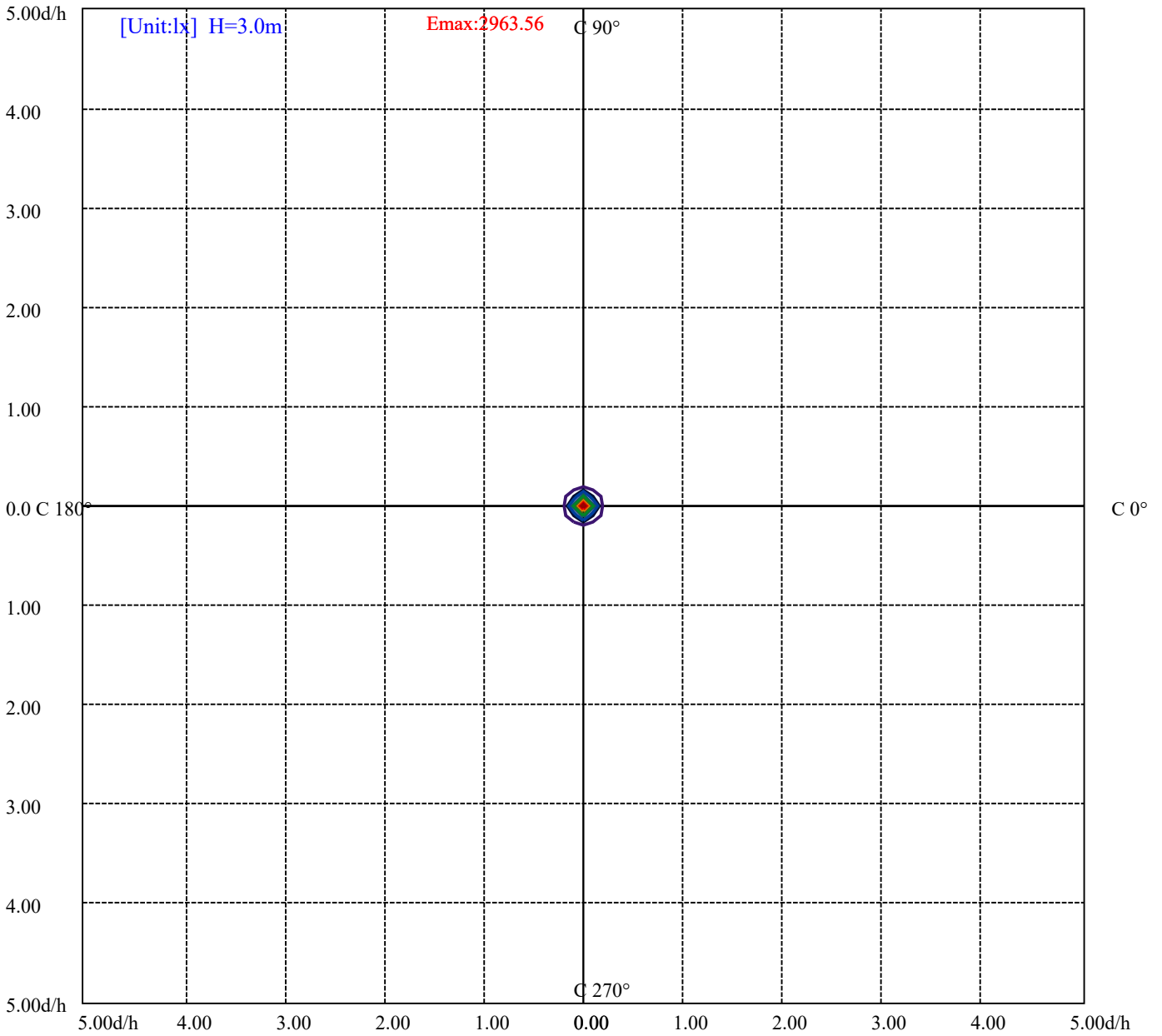
House

[Unit:cd]

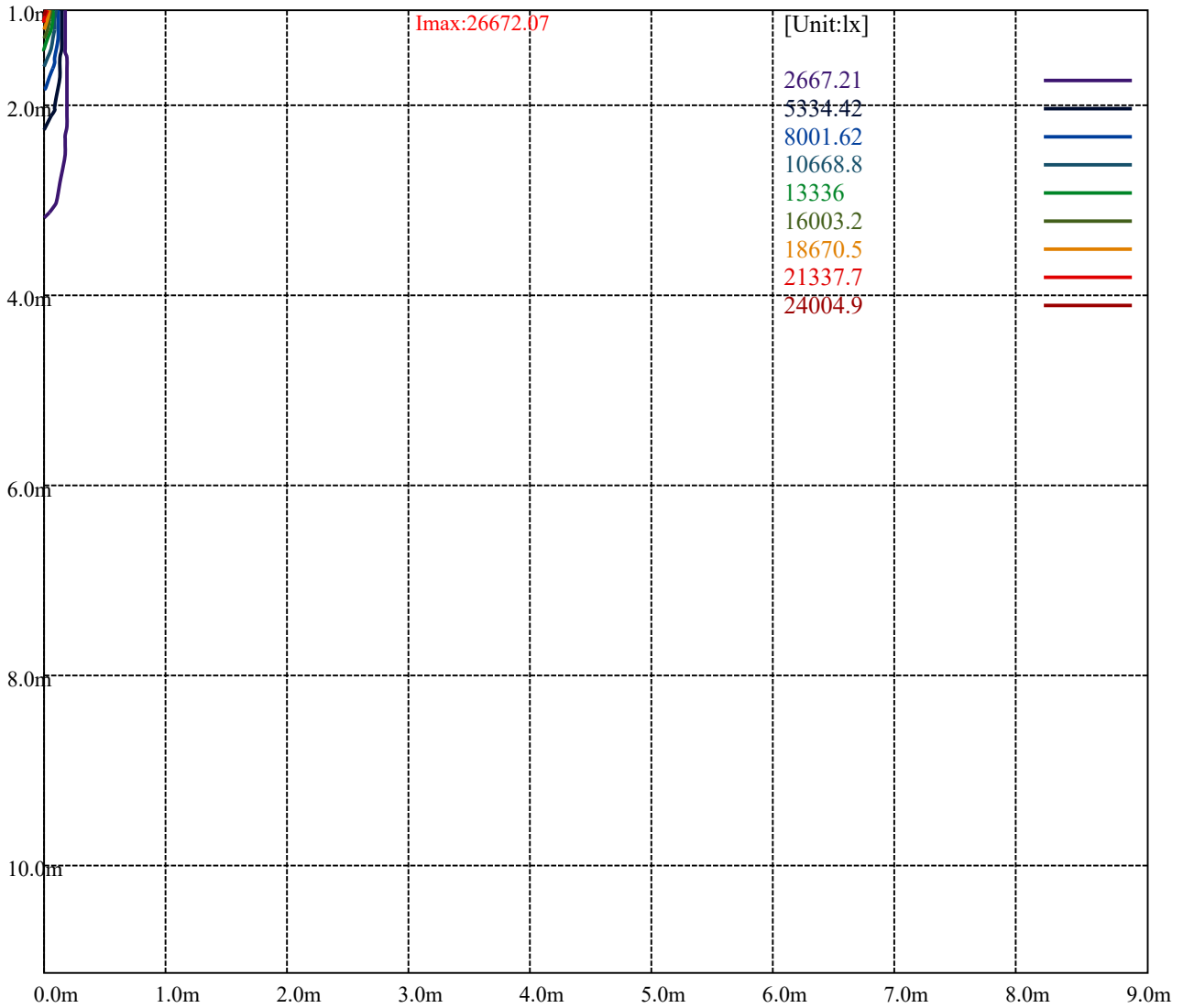
Road

Imax:26672.07

(10%Imax)	2667.21	—
(20%Imax)	5334.42	—
(30%Imax)	8001.62	—
(40%Imax)	10668.8	—
(50%Imax)	13336	—
(60%Imax)	16003.2	—
(70%Imax)	18670.5	—
(80%Imax)	21337.7	—
(90%Imax)	24004.9	—



- (10%Emax) 296.3556
- (20%Emax) 592.7111
- (30%Emax) 889.0667
- (40%Emax) 1185.422
- (50%Emax) 1481.778
- (60%Emax) 1778.133
- (70%Emax) 2074.489
- (80%Emax) 2370.844
- (90%Emax) 2667.2



Luminance Table

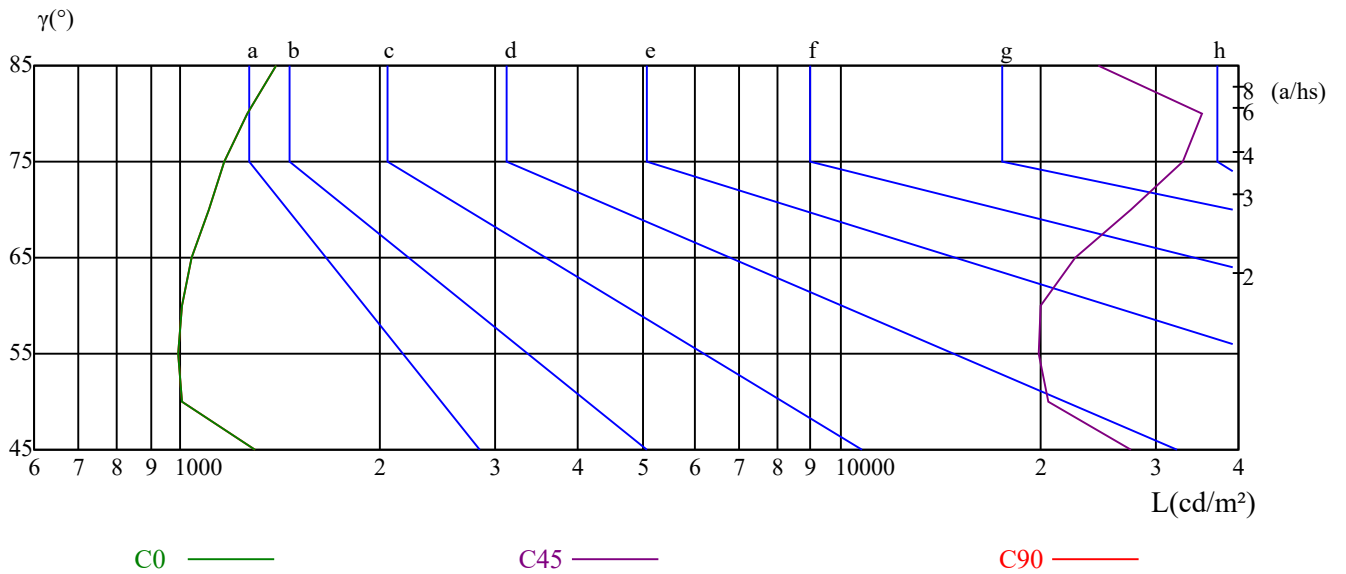
γ	45	50	55	60	65	70	75	80	85
C0	1299	1003	993	1004	1039	1102	1166	1260	1394
C45	27467	20653	19929	20120	22660	27448	32929	35235	24489
C90	1299	1003	993	1004	1039	1102	1166	1260	1394

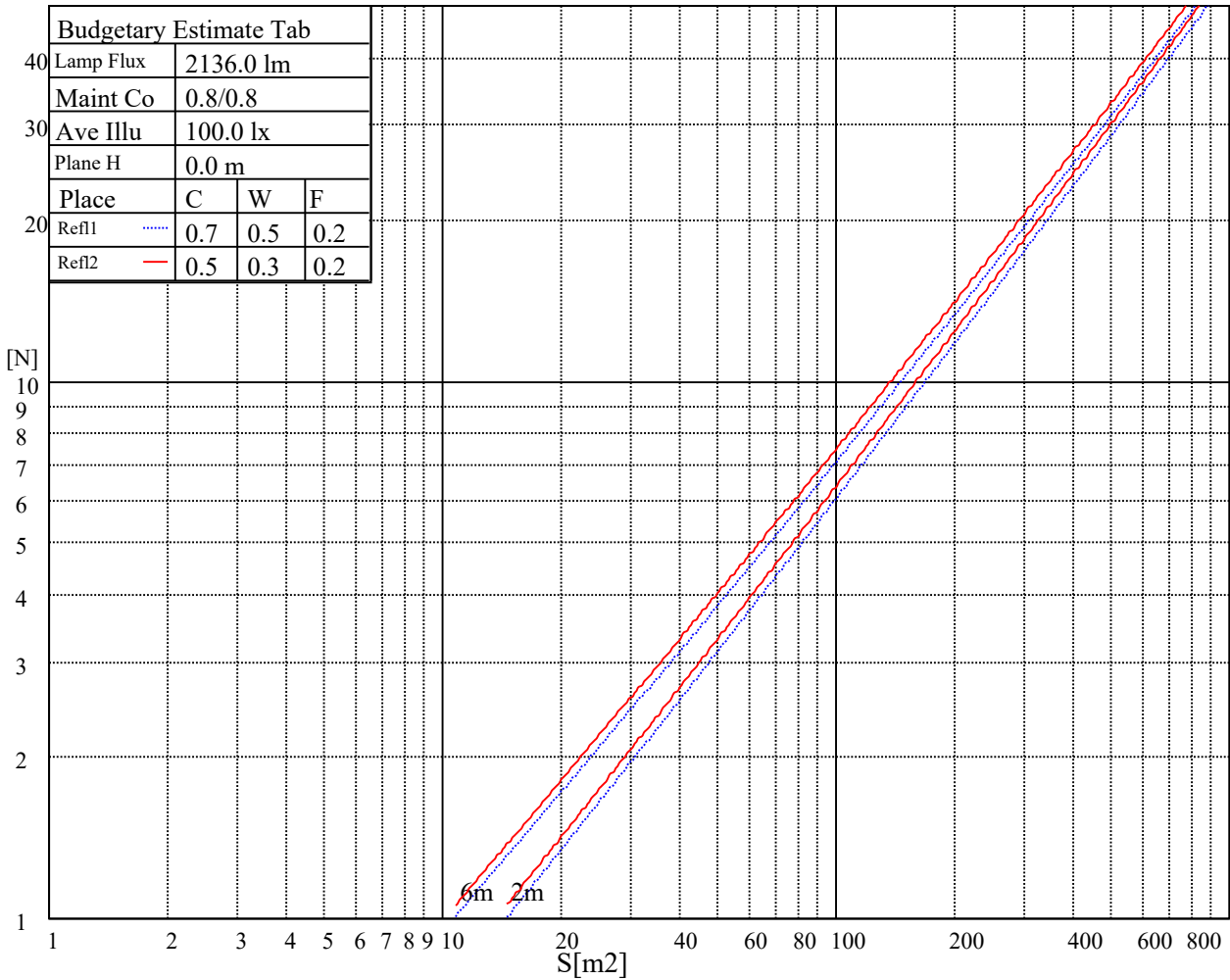
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2506	2506	67937	4034	4034	147429	11891	11891	285282

Glare Table

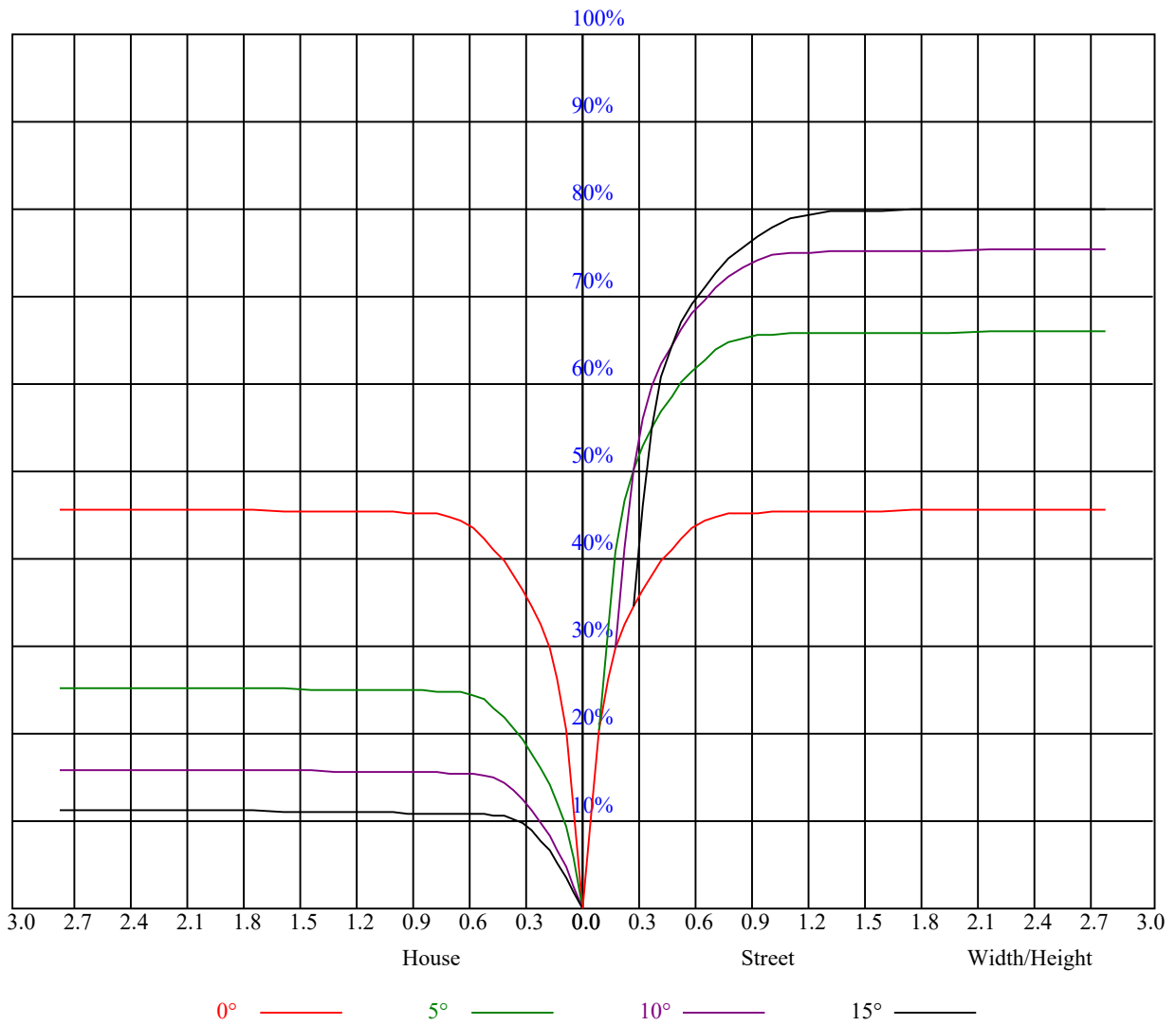
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.04	1.02	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.99	0.96	0.93	0.97	0.95	0.92	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.87	0.85
3	0.94	0.91	0.88	0.93	0.90	0.87	0.91	0.88	0.86	0.89	0.87	0.85	0.87	0.85	0.84	0.82
4	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.84	0.82	0.84	0.82	0.81	0.80
5	0.87	0.83	0.80	0.86	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.82	0.80	0.78	0.77
6	0.84	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.78	0.76	0.75
7	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.76	0.74	0.73
8	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.74	0.72	0.71
9	0.77	0.73	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.70	0.69
10	0.75	0.71	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.73	0.70	0.68	0.67



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	26672.07	26168.31	24395.49	21708.74	18394.34	14255.20	10790.94	7895.25	5469.30
90.0	26672.07	26168.31	24395.49	21708.74	18394.34	14255.20	10790.94	7895.25	5469.30
180.0	26672.07	26168.31	24395.49	21708.74	18394.34	14255.20	10790.94	7895.25	5469.30
270.0	26672.07	26168.31	24395.49	21708.74	18394.34	14255.20	10790.94	7895.25	5469.30
360.0	26672.07	26168.31	24395.49	21708.74	18394.34	14255.20	10790.94	7895.25	5469.30
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3759.80	2801.99	2212.72	1742.54	1487.62	1312.99	1172.32	1121.22	1057.74
90.0	3759.80	2801.99	2212.72	1742.54	1487.62	1312.99	1172.32	1121.22	1057.74
180.0	3759.80	2801.99	2212.72	1742.54	1487.62	1312.99	1172.32	1121.22	1057.74
270.0	3759.80	2801.99	2212.72	1742.54	1487.62	1312.99	1172.32	1121.22	1057.74
360.0	3759.80	2801.99	2212.72	1742.54	1487.62	1312.99	1172.32	1121.22	1057.74
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	999.00	952.59	908.27	872.15	844.07	817.59	792.04	770.68	750.97
90.0	999.00	952.59	908.27	872.15	844.07	817.59	792.04	770.68	750.97
180.0	999.00	952.59	908.27	872.15	844.07	817.59	792.04	770.68	750.97
270.0	999.00	952.59	908.27	872.15	844.07	817.59	792.04	770.68	750.97
360.0	999.00	952.59	908.27	872.15	844.07	817.59	792.04	770.68	750.97
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	732.14	714.80	697.78	683.08	668.83	647.57	606.56	531.73	429.88
90.0	732.14	714.80	697.78	683.08	668.83	647.57	606.56	531.73	429.88
180.0	732.14	714.80	697.78	683.08	668.83	647.57	606.56	531.73	429.88
270.0	732.14	714.80	697.78	683.08	668.83	647.57	606.56	531.73	429.88
360.0	732.14	714.80	697.78	683.08	668.83	647.57	606.56	531.73	429.88
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	312.45	230.85	112.65	50.54	29.40	25.22	22.19	19.43	16.24
90.0	312.45	230.85	112.65	50.54	29.40	25.22	22.19	19.43	16.24
180.0	312.45	230.85	112.65	50.54	29.40	25.22	22.19	19.43	16.24
270.0	312.45	230.85	112.65	50.54	29.40	25.22	22.19	19.43	16.24
360.0	312.45	230.85	112.65	50.54	29.40	25.22	22.19	19.43	16.24
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	11.01	8.92	8.70	8.53	8.42	8.31	8.26	8.15	8.09
90.0	11.01	8.92	8.70	8.53	8.42	8.31	8.26	8.15	8.09
180.0	11.01	8.92	8.70	8.53	8.42	8.31	8.26	8.15	8.09
270.0	11.01	8.92	8.70	8.53	8.42	8.31	8.26	8.15	8.09
360.0	11.01	8.92	8.70	8.53	8.42	8.31	8.26	8.15	8.09
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.98	7.98	7.93	7.87	7.82	7.76	7.76	7.71	7.71
90.0	7.98	7.98	7.93	7.87	7.82	7.76	7.76	7.71	7.71
180.0	7.98	7.98	7.93	7.87	7.82	7.76	7.76	7.71	7.71
270.0	7.98	7.98	7.93	7.87	7.82	7.76	7.76	7.71	7.71
360.0	7.98	7.98	7.93	7.87	7.82	7.76	7.76	7.71	7.71
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.60
90.0	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.60
180.0	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.60
270.0	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.60
360.0	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.60

Intensity data(cd)										Appendix Page: 17 Total:17
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	
0.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.49	
90.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.49	
180.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.49	
270.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.49	
360.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.49	
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	
0.0	7.49	7.54	7.49	7.49	7.49	7.49	7.38	7.38	7.38	
90.0	7.49	7.54	7.49	7.49	7.49	7.49	7.38	7.38	7.38	
180.0	7.49	7.54	7.49	7.49	7.49	7.49	7.38	7.38	7.38	
270.0	7.49	7.54	7.49	7.49	7.49	7.49	7.38	7.38	7.38	
360.0	7.49	7.54	7.49	7.49	7.49	7.49	7.38	7.38	7.38	
C/γ(°)	90.0									
0.0	7.38									
90.0	7.38									
180.0	7.38									
270.0	7.38									
360.0	7.38									