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LumCAT: 2-1777-L  
Luminaire: 92.70.131.00  
Report No: NATA0100  
Test No: GC2019120310  
LampCAT: TRIDONIC SLE G7 13MM  
Lamp flux(lm): 1765.0  
Number of Lamps: 1  
Length(mm): 0  
Phm Type: C

Voltage(V): 35.0900  
Current(A): 0.3970  
Power (W): 13.9300  
PF: 1.0000  
Ballast type: DC  
Width(mm): 0  
Height(mm): 0

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### Photometric Results

Lumens(lm): 1678.57  
Efficiency(%): 95.10%  
Lumens(lm)/Power(W): 120.50  
Central intensity(cd): 11141.860  
Maximum intensity(cd): 11141.860  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=16.2  
                                  [C90/270]Total=16.2  
Field angle(10%Imax): [C0/180]Total=34.7  
                                  [C90/270]Total=34.7  
Maximum s/h(1/2): C0\_180=0.28 C90\_270=0.28  
Maximum s/h(1/4): C0\_180=0.28 C90\_270=0.28  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 95.10%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.340%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11141.859	0.000	0	.000%	.000%
1.0	11115.773	10.650	10.65	.603%	.634%
2.0	11016.211	31.766	42.416	1.800%	2.527%
3.0	10737.984	52.029	94.445	2.948%	5.626%
4.0	10226.250	70.174	164.619	3.976%	9.807%
5.0	9435.867	84.585	249.204	4.792%	14.846%
6.0	8255.391	92.972	342.176	5.268%	20.385%
7.0	6896.813	94.049	436.226	5.329%	25.988%
8.0	5708.250	90.212	526.438	5.111%	31.362%
9.0	4600.406	83.546	609.984	4.733%	36.339%
10.0	3684.234	74.973	684.957	4.248%	40.806%
11.0	3060.563	67.394	752.351	3.818%	44.821%
12.0	2539.266	61.214	813.565	3.468%	48.468%
13.0	2084.695	54.875	868.44	3.109%	51.737%
14.0	1771.805	49.363	917.803	2.797%	54.678%
15.0	1522.125	45.221	963.024	2.562%	57.372%
16.0	1295.325	41.284	1004.307	2.339%	59.831%
17.0	1153.800	38.139	1042.447	2.161%	62.103%
18.0	1039.352	36.160	1078.607	2.049%	64.257%
19.0	947.503	34.567	1113.174	1.958%	66.317%
20.0	869.098	33.249	1146.423	1.884%	68.298%
21.0	807.012	32.185	1178.608	1.823%	70.215%
22.0	756.534	31.420	1210.028	1.780%	72.087%
23.0	717.687	30.933	1240.961	1.753%	73.930%
24.0	682.242	30.607	1271.568	1.734%	75.753%
25.0	652.859	30.357	1301.926	1.720%	77.562%
26.0	629.719	30.275	1332.201	1.715%	79.365%
27.0	608.738	30.299	1362.5	1.717%	81.170%
28.0	588.734	30.317	1392.818	1.718%	82.976%
29.0	570.874	30.339	1423.156	1.719%	84.784%
30.0	545.653	30.146	1453.302	1.708%	86.580%
31.0	506.060	29.268	1482.57	1.658%	88.323%
32.0	456.363	27.572	1510.142	1.562%	89.966%
33.0	401.878	25.284	1535.426	1.433%	91.472%
34.0	340.833	22.477	1557.903	1.273%	92.811%
35.0	285.370	19.448	1577.35	1.102%	93.970%
36.0	219.199	16.066	1593.416	.910%	94.927%
37.0	174.509	12.841	1606.257	.728%	95.692%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	108.436	9.444	1615.701	.535%	96.255%
39.0	66.684	5.977	1621.678	.339%	96.611%
40.0	40.022	3.722	1625.4	.211%	96.832%
41.0	27.795	2.415	1627.815	.137%	96.976%
42.0	22.591	1.831	1629.645	.104%	97.085%
43.0	20.257	1.587	1631.232	.090%	97.180%
44.0	18.422	1.460	1632.692	.083%	97.267%
45.0	17.058	1.364	1634.056	.077%	97.348%
46.0	16.080	1.296	1635.352	.073%	97.425%
47.0	15.342	1.250	1636.602	.071%	97.500%
48.0	14.639	1.212	1637.814	.069%	97.572%
49.0	14.027	1.177	1638.991	.067%	97.642%
50.0	13.402	1.144	1640.134	.065%	97.710%
51.0	12.959	1.115	1641.25	.063%	97.777%
52.0	12.614	1.097	1642.347	.062%	97.842%
53.0	12.291	1.083	1643.43	.061%	97.907%
54.0	11.925	1.067	1644.498	.060%	97.970%
55.0	11.630	1.051	1645.549	.060%	98.033%
56.0	11.412	1.041	1646.59	.059%	98.095%
57.0	11.201	1.034	1647.624	.059%	98.156%
58.0	11.046	1.029	1648.653	.058%	98.218%
59.0	10.927	1.027	1649.68	.058%	98.279%
60.0	10.913	1.032	1650.712	.058%	98.340%
61.0	11.018	1.047	1651.758	.059%	98.403%
62.0	11.138	1.068	1652.826	.060%	98.466%
63.0	11.109	1.082	1653.908	.061%	98.531%
64.0	10.849	1.078	1654.986	.061%	98.595%
65.0	10.287	1.046	1656.032	.059%	98.657%
66.0	9.675	0.996	1657.028	.056%	98.717%
67.0	9.309	0.955	1657.982	.054%	98.773%
68.0	9.113	0.933	1658.915	.053%	98.829%
69.0	9.014	0.925	1659.84	.052%	98.884%
70.0	8.902	0.920	1660.76	.052%	98.939%
71.0	8.817	0.916	1661.676	.052%	98.994%
72.0	8.733	0.913	1662.588	.052%	99.048%
73.0	8.648	0.909	1663.497	.051%	99.102%
74.0	8.599	0.907	1664.404	.051%	99.156%
75.0	8.536	0.905	1665.31	.051%	99.210%

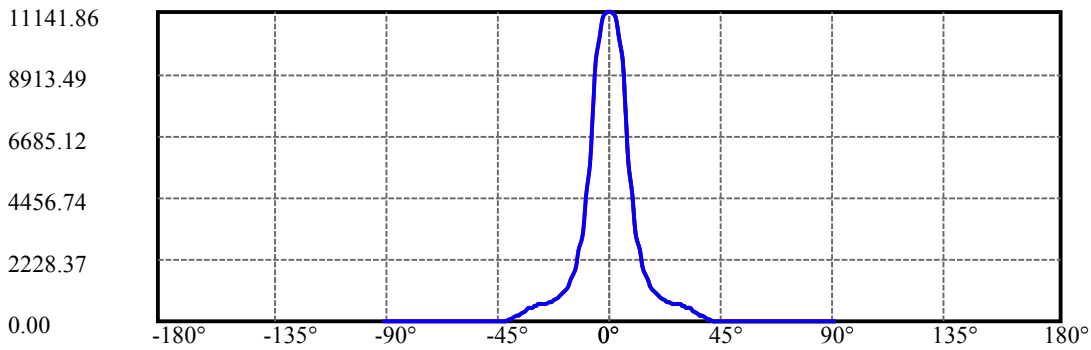
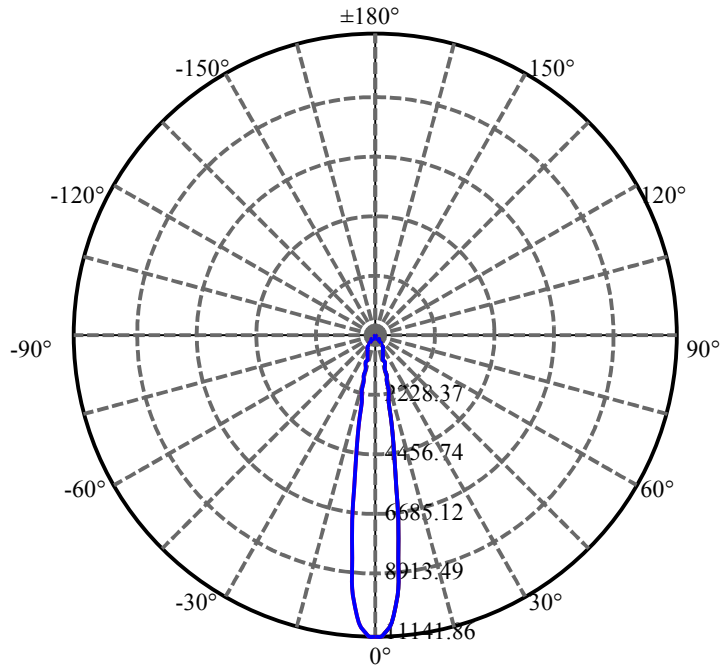
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.466	0.903	1666.212	.051%	99.264%
77.0	8.430	0.901	1667.113	.051%	99.317%
78.0	8.388	0.900	1668.013	.051%	99.371%
79.0	8.325	0.898	1668.911	.051%	99.425%
80.0	8.290	0.896	1669.807	.051%	99.478%
81.0	8.220	0.893	1670.7	.051%	99.531%
82.0	8.191	0.890	1671.59	.050%	99.584%
83.0	8.121	0.887	1672.476	.050%	99.637%
84.0	8.100	0.884	1673.36	.050%	99.690%
85.0	8.030	0.880	1674.24	.050%	99.742%
86.0	7.988	0.876	1675.116	.050%	99.794%
87.0	7.931	0.871	1675.987	.049%	99.846%
88.0	7.875	0.866	1676.853	.049%	99.898%
89.0	7.826	0.861	1677.714	.049%	99.949%
90.0	7.805	0.857	1678.571	.049%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1453.30	82.34%	86.58%
0-40	1625.40	92.09%	96.83%
0-60	1650.71	93.52%	98.34%
0-90	1677.71	95.05%	99.95%
0-120	1677.71	95.05%	99.95%
0-180	1678.57	95.10%	100.00%
60-90	28.03	1.59%	1.67%
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%
0-26.35	1342.86	76.08%	80.00%

## ZONAL LUMEN SUMMARY

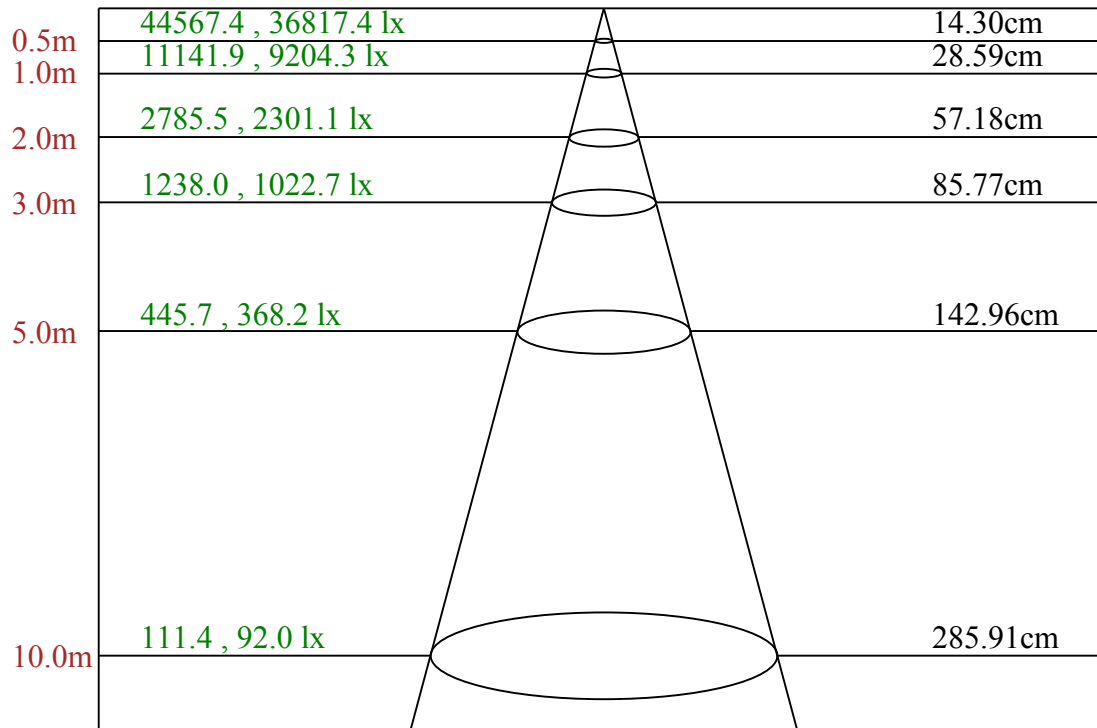
0-10	684.96
10-20	461.47
20-30	306.88
30-40	172.10
40-50	14.73
50-60	10.58
60-70	10.05
70-80	9.05
80-90	7.91
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



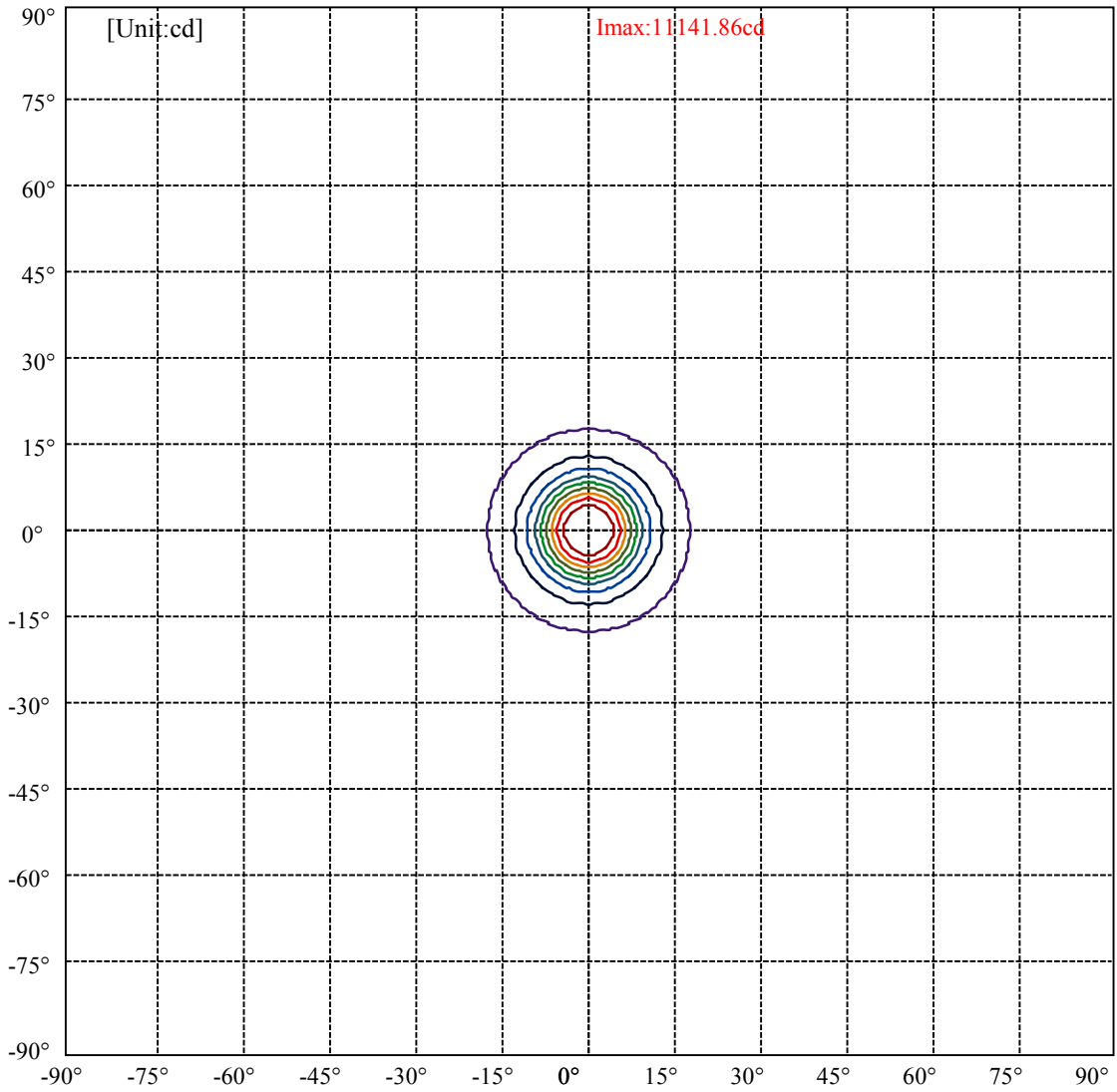
C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:17.3 Right:17.3  
:C90/270Left:17.3 Right:17.3

Beam Angle(50%Imax):C0/180Left:8.1 Right:8.1  
:C90/270Left:8.1 Right:8.1

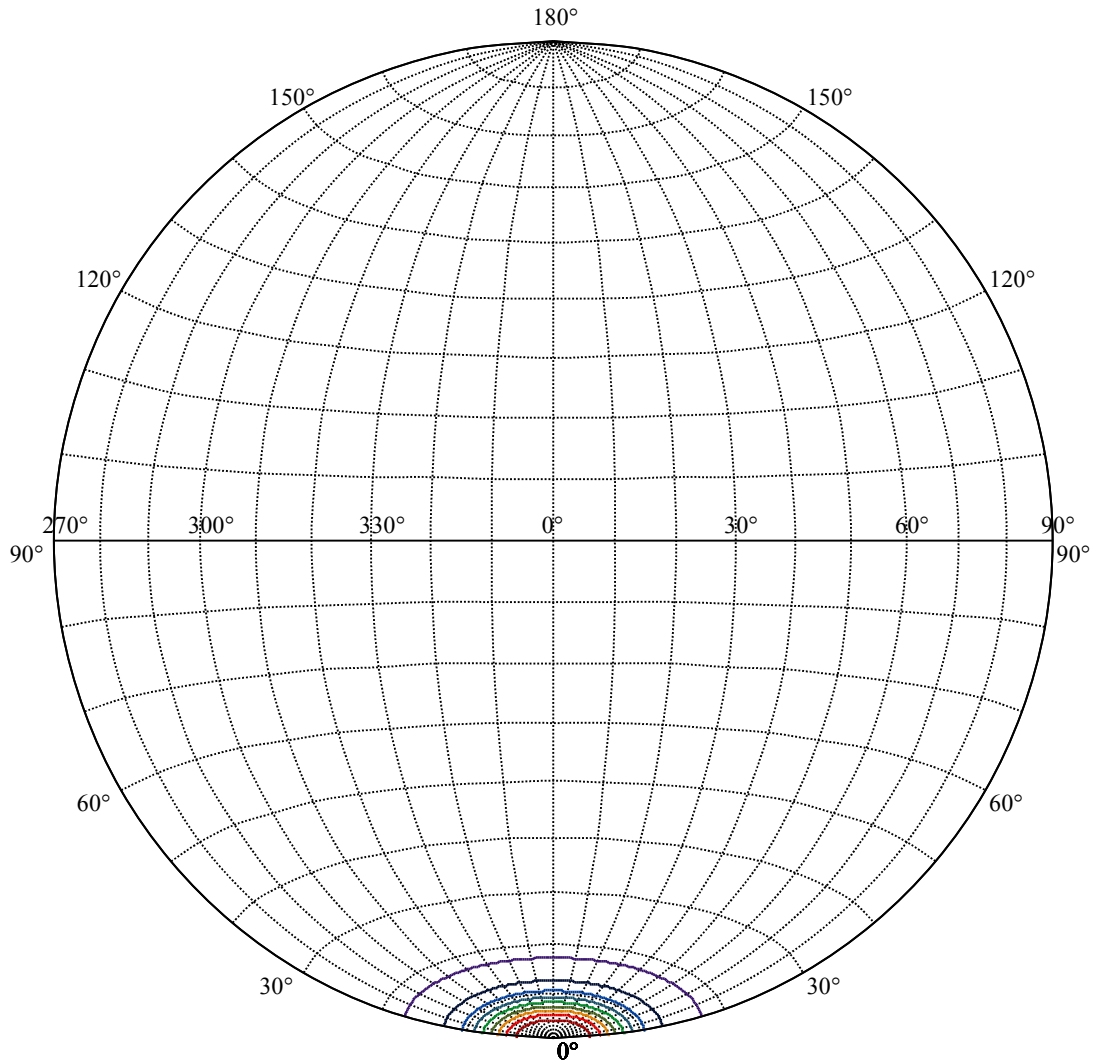


Max , Ave      Beam angle of C0 plane 16.27



(10%Imax) 1114.19	—
(20%Imax) 2228.37	—
(30%Imax) 3342.56	—
(40%Imax) 4456.74	—
(50%Imax) 5570.93	—
(60%Imax) 6685.12	—
(70%Imax) 7799.3	—
(80%Imax) 8913.49	—
(90%Imax) 10027.7	—





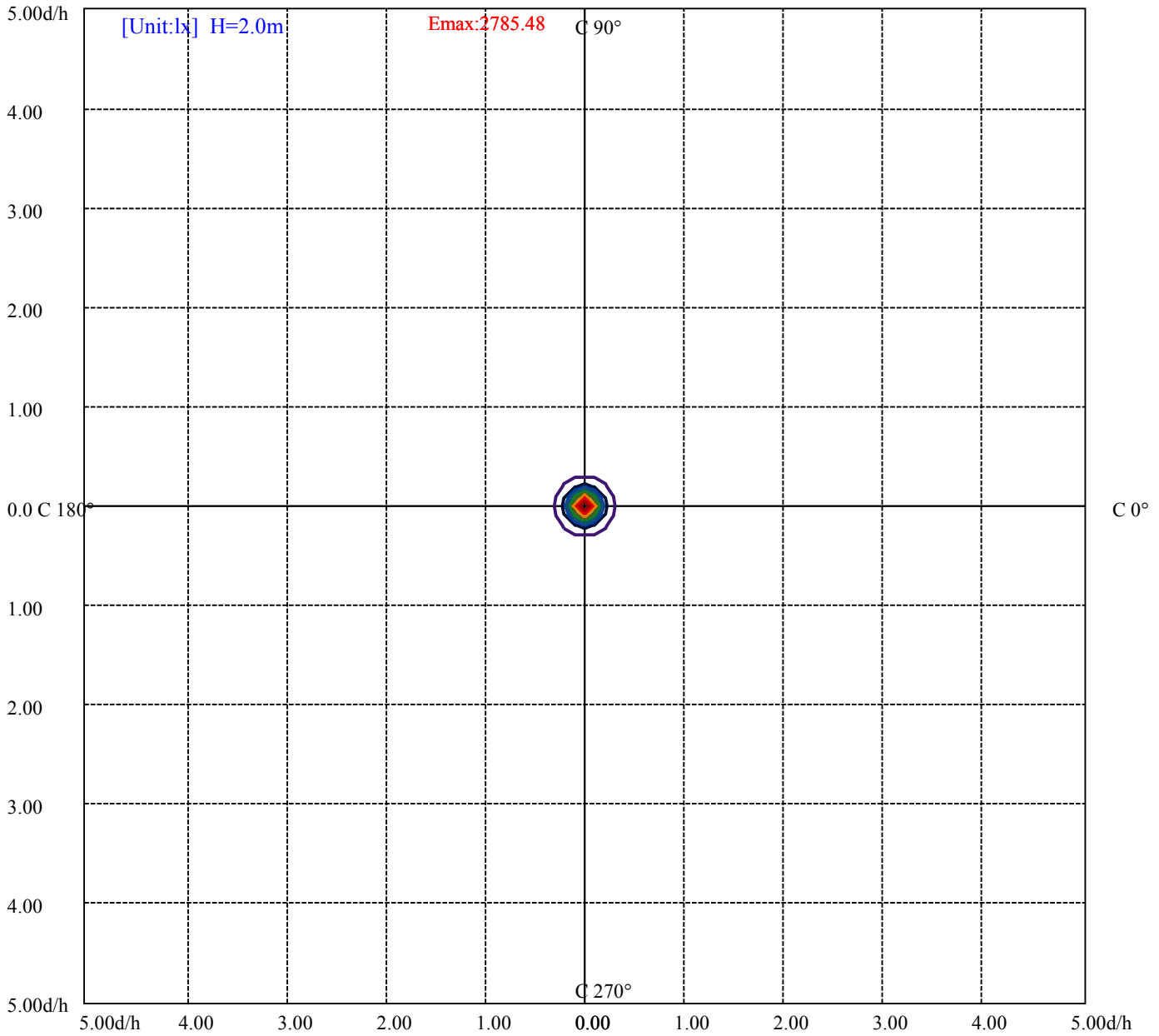
House

[Unit:cd]

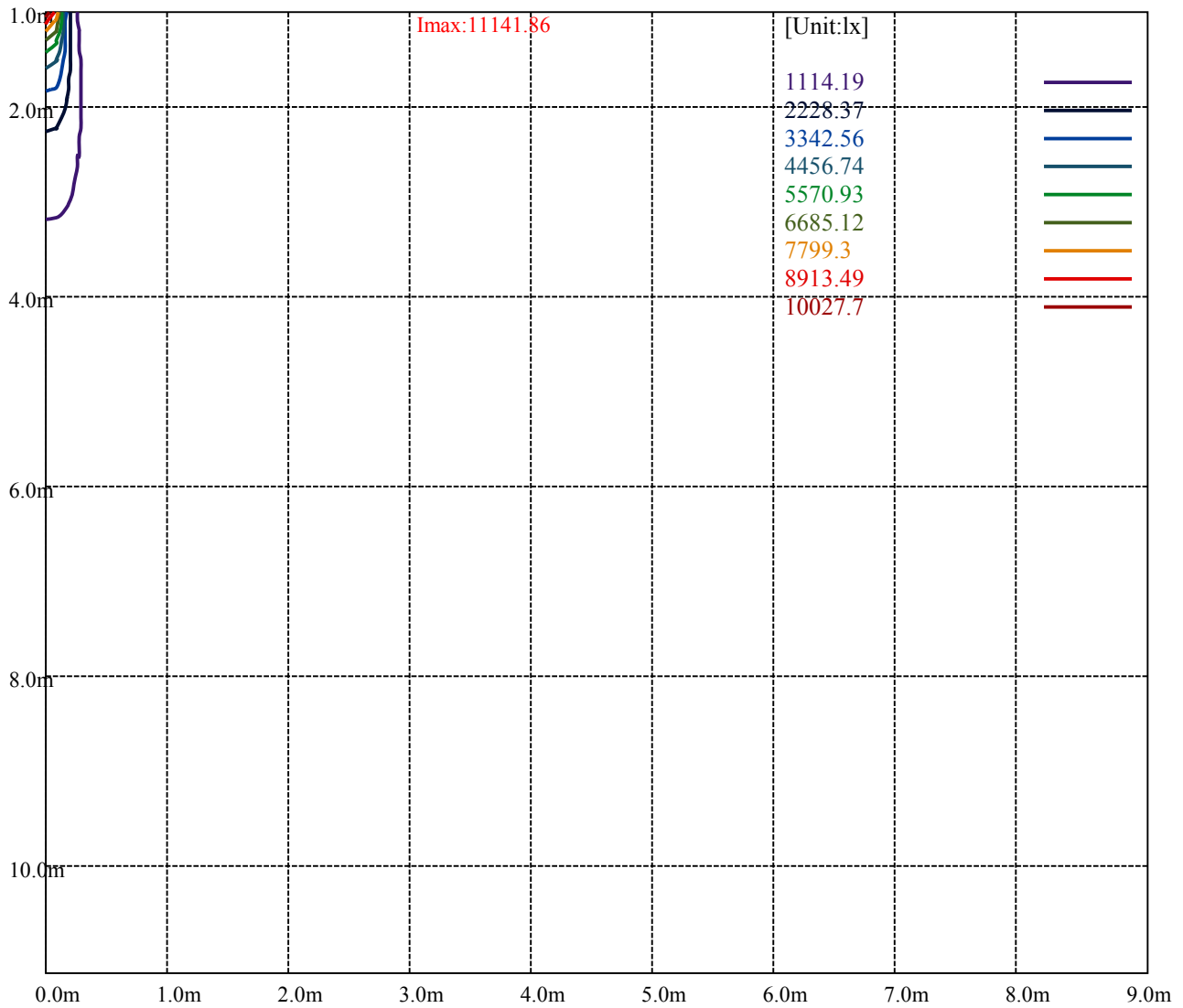
Road

**Imax:11141.86**

(10%Imax)	1114.19	—
(20%Imax)	2228.37	—
(30%Imax)	3342.56	—
(40%Imax)	4456.74	—
(50%Imax)	5570.93	—
(60%Imax)	6685.12	—
(70%Imax)	7799.3	—
(80%Imax)	8913.49	—
(90%Imax)	10027.7	—



(10%Emax) 278.5475	—
(20%Emax) 557.0925	—
(30%Emax) 835.64	—
(40%Emax) 1114.185	—
(50%Emax) 1392.733	—
(60%Emax) 1671.277	—
(70%Emax) 1949.825	—
(80%Emax) 2228.37	—
(90%Emax) 2506.925	—



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

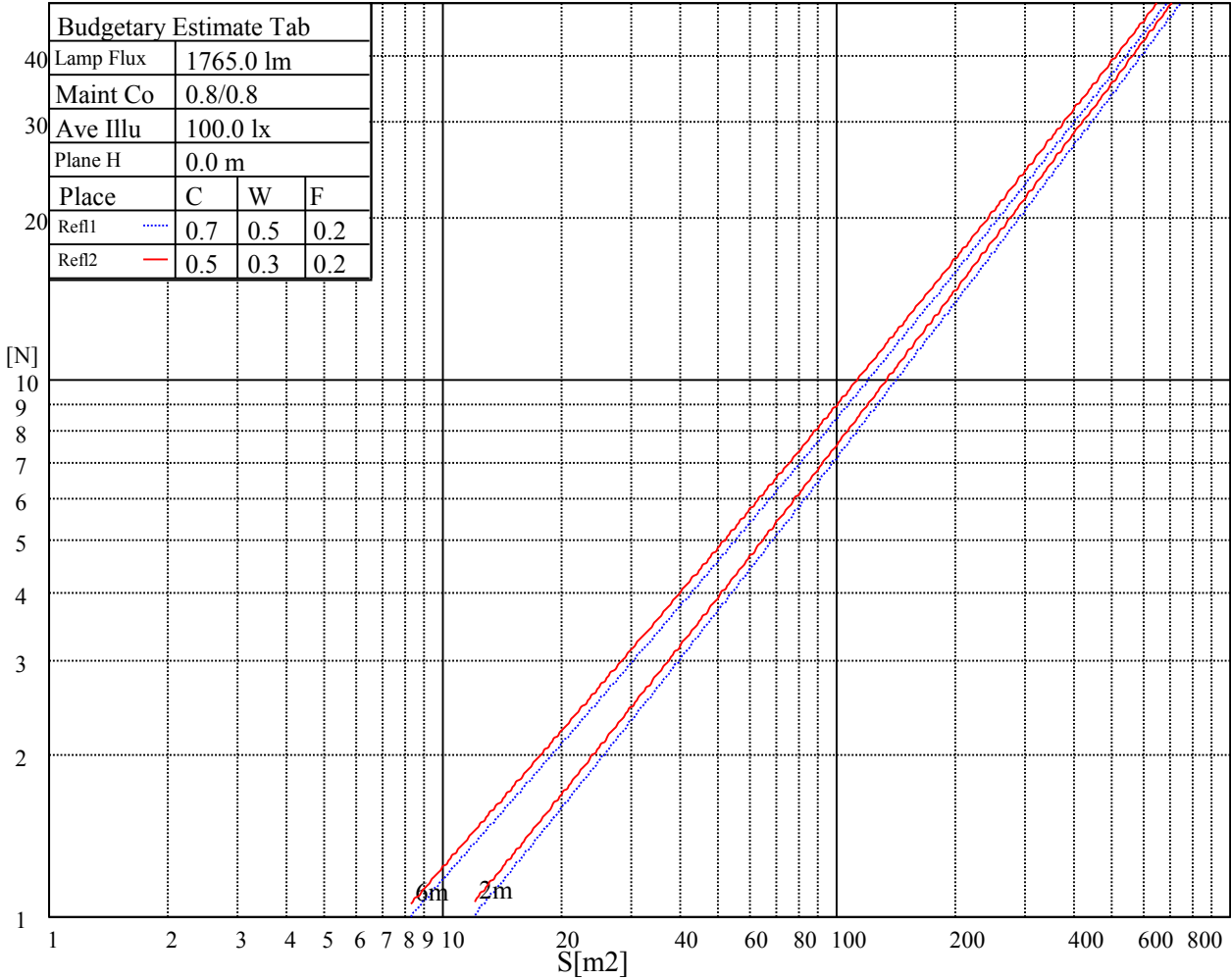
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

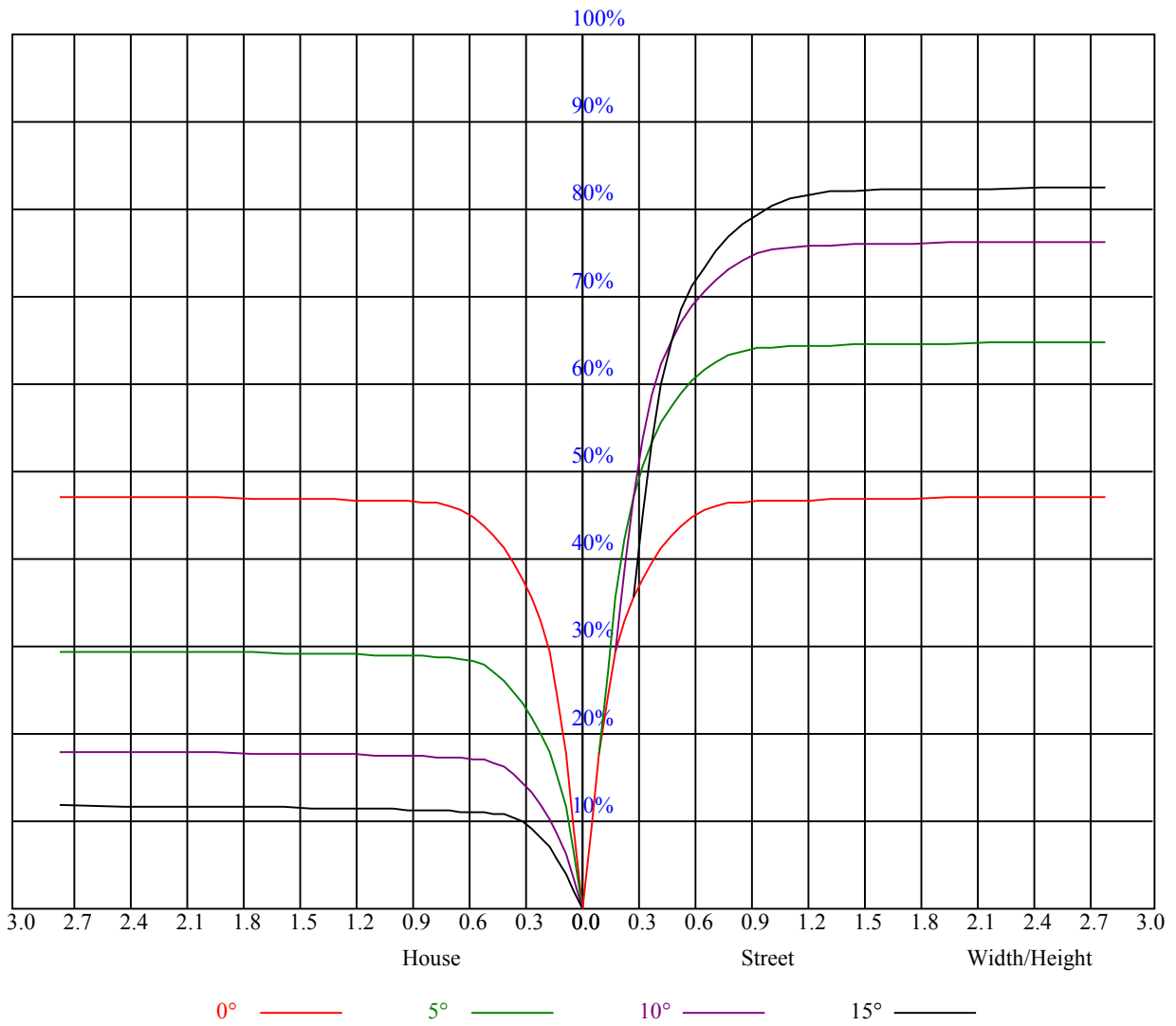
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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 RHOFC=20 CU															
0	1.13	1.13	1.13	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.07	1.05	1.03	1.05	1.03	1.01	1.01	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.91
2	1.01	0.98	0.96	1.00	0.97	0.94	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.90	0.89	0.87
3	0.97	0.93	0.90	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.88	0.86	0.89	0.87	0.85	0.84
4	0.92	0.88	0.85	0.91	0.88	0.85	0.89	0.86	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.81
5	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.78
6	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.79	0.77	0.75
7	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
8	0.80	0.76	0.73	0.79	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
9	0.78	0.73	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
10	0.75	0.71	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.74	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	11137.50	11164.50	11144.81	11102.63	10848.94	10293.75	9405.56	7913.81	6604.88
45.0	11154.94	11181.94	11161.69	11102.06	10815.75	10342.69	9494.44	8127.00	6800.06
90.0	11134.69	11170.13	11098.69	10919.81	10603.69	10009.69	8903.81	7476.75	6156.56
135.0	11140.31	11105.44	11045.25	10893.38	10467.00	9839.81	8796.94	7404.19	6113.81
180.0	11137.50	11021.63	10844.44	10228.50	9502.31	8483.06	6938.44	5751.00	4717.69
225.0	11154.94	11031.75	10847.25	10266.75	9489.38	8439.19	7102.13	5754.38	4735.69
270.0	11134.69	11115.00	10956.38	10718.44	10075.50	8987.63	7786.69	6373.69	5256.00
315.0	11140.31	11135.81	11031.19	10672.31	10007.44	9091.13	7615.13	6373.69	5281.31
360.0	11137.50	11164.50	11144.81	11102.63	10848.94	10293.75	9405.56	7913.81	6604.88
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5433.19	4299.75	3562.88	2964.94	2377.13	2028.94	1753.31	1495.13	1334.81
45.0	5470.88	4399.31	3632.06	2992.50	2398.50	2024.44	1739.25	1469.25	1308.94
90.0	4862.25	3873.38	3195.56	2617.88	2210.63	1828.13	1532.25	1329.75	1111.67
135.0	4804.88	3767.63	3115.13	2598.75	2131.88	1823.06	1563.75	1327.50	1143.56
180.0	3897.56	3094.31	2608.88	2221.31	1819.13	1557.00	1352.25	1120.05	1035.39
225.0	3819.38	3101.63	2605.50	2162.25	1842.19	1560.94	1339.31	1108.80	1069.59
270.0	4238.44	3456.00	2890.13	2428.31	1972.69	1690.88	1465.31	1248.19	1112.63
315.0	4276.69	3481.88	2874.38	2328.19	1925.44	1661.06	1431.56	1263.94	1113.81
360.0	5433.19	4299.75	3562.88	2964.94	2377.13	2028.94	1753.31	1495.13	1334.81
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1206.00	1094.06	995.63	920.81	851.06	799.88	750.94	710.44	678.94
45.0	1175.06	1067.63	955.13	884.81	820.13	772.88	733.50	702.56	671.06
90.0	991.35	910.07	836.49	764.27	721.69	681.24	646.03	616.33	591.64
135.0	1018.69	920.81	839.81	788.06	738.56	706.50	675.56	646.88	627.75
180.0	943.71	861.75	799.76	744.36	701.55	671.23	641.64	618.08	599.79
225.0	960.69	891.45	833.06	773.66	736.31	703.91	669.49	645.92	625.16
270.0	1004.06	909.00	835.31	781.31	732.38	691.31	660.38	630.56	609.19
315.0	1015.26	925.26	857.59	798.81	750.60	714.54	680.40	652.11	634.22
360.0	1206.00	1094.06	995.63	920.81	851.06	799.88	750.94	710.44	678.94
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	652.50	623.25	603.00	586.69	568.13	540.00	492.75	433.69	370.69
45.0	645.19	623.25	602.44	586.13	570.38	531.00	476.44	419.63	355.50
90.0	572.79	549.90	535.33	518.29	479.98	424.63	376.14	317.70	262.91
135.0	609.19	590.63	577.13	552.94	500.63	444.38	389.81	324.00	289.13
180.0	583.76	567.23	542.25	500.29	444.32	385.14	328.56	261.90	197.72
225.0	602.10	588.60	567.90	521.44	478.18	420.24	350.89	299.36	237.21
270.0	587.25	569.81	556.31	535.50	486.56	439.31	388.69	322.31	287.44
315.0	617.12	597.21	582.64	563.96	520.31	466.20	411.75	348.08	282.38
360.0	652.50	623.25	603.00	586.69	568.13	540.00	492.75	433.69	370.69
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	311.63	287.44	180.96	124.48	74.08	40.73	24.47	21.71	19.52
45.0	294.19	285.75	162.96	114.53	71.78	37.91	25.82	23.91	21.88
90.0	206.33	150.47	104.51	66.09	34.76	25.76	23.74	21.26	19.41
135.0	201.66	141.24	92.19	49.73	26.44	23.12	20.81	18.45	16.82
180.0	145.35	91.86	52.31	27.06	22.33	20.31	18.17	15.75	14.85
225.0	159.98	114.19	68.12	33.24	24.92	23.06	20.87	18.51	17.16
270.0	210.26	162.06	93.99	54.51	32.34	24.81	22.50	20.81	18.39
315.0	224.21	163.07	112.44	63.84	33.53	26.66	24.36	21.66	19.35
360.0	311.63	287.44	180.96	124.48	74.08	40.73	24.47	21.71	19.52



## 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	17.21	15.13	14.34	13.67	12.99	12.26	11.81	11.42	11.14
45.0	19.58	18.34	17.49	16.71	15.75	14.85	14.12	13.61	12.99
90.0	18.00	17.38	16.48	15.81	15.19	14.63	14.12	13.95	13.61
135.0	15.92	15.30	14.79	14.23	13.95	13.39	13.05	12.77	12.26
180.0	14.29	13.50	12.94	12.43	12.04	11.70	11.48	11.14	10.91
225.0	16.14	15.41	14.79	14.23	13.73	13.11	12.71	12.32	12.04
270.0	17.33	16.82	15.98	15.08	14.57	14.06	13.61	13.39	13.33
315.0	18.00	16.76	15.92	14.96	14.01	13.22	12.77	12.32	12.04
360.0	17.21	15.13	14.34	13.67	12.99	12.26	11.81	11.42	11.14
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.91	10.63	10.52	10.35	10.24	10.18	10.07	9.96	9.79
45.0	12.60	12.21	11.76	11.53	11.25	11.08	10.74	10.69	10.58
90.0	12.99	12.54	12.43	12.15	11.70	11.48	11.48	11.53	11.53
135.0	12.04	11.81	11.48	11.25	11.42	10.97	10.91	11.03	11.14
180.0	10.63	10.41	10.24	10.07	9.96	9.84	9.73	9.62	9.56
225.0	11.64	11.42	11.25	11.08	10.86	10.69	10.58	10.46	10.58
270.0	12.88	12.60	12.43	12.15	12.04	12.21	12.54	13.05	13.28
315.0	11.70	11.42	11.19	11.03	10.91	10.97	11.25	11.81	12.66
360.0	10.91	10.63	10.52	10.35	10.24	10.18	10.07	9.96	9.79
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.62	9.51	9.39	9.23	9.17	9.00	8.94	8.78	8.66
45.0	10.63	10.97	10.69	10.18	9.56	9.28	9.23	9.06	8.94
90.0	11.36	10.74	9.90	9.51	9.28	9.17	9.11	9.00	8.89
135.0	11.53	11.76	11.31	10.52	9.84	9.39	9.17	9.06	8.94
180.0	9.39	9.28	9.17	9.06	8.94	8.89	8.72	8.66	8.66
225.0	10.63	10.41	9.84	9.39	9.17	9.06	9.00	8.89	8.83
270.0	12.54	10.97	10.01	9.45	9.28	9.11	9.06	8.94	8.89
315.0	13.16	13.16	11.98	10.07	9.23	9.00	8.89	8.83	8.72
360.0	9.62	9.51	9.39	9.23	9.17	9.00	8.94	8.78	8.66
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.61	8.55	8.49	8.38	8.33	8.33	8.27	8.21	8.21
45.0	8.89	8.78	8.66	8.61	8.49	8.44	8.38	8.33	8.27
90.0	8.83	8.78	8.72	8.66	8.61	8.55	8.49	8.44	8.38
135.0	8.78	8.66	8.61	8.55	8.55	8.44	8.44	8.38	8.38
180.0	8.55	8.49	8.44	8.38	8.33	8.27	8.21	8.16	8.10
225.0	8.78	8.66	8.66	8.61	8.49	8.49	8.44	8.33	8.33
270.0	8.83	8.78	8.72	8.72	8.66	8.66	8.66	8.61	8.49
315.0	8.61	8.49	8.49	8.38	8.27	8.27	8.21	8.16	8.16
360.0	8.61	8.55	8.49	8.38	8.33	8.33	8.27	8.21	8.21
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.16	8.16	8.10	8.10	8.04	7.99	7.99	7.93	7.88
45.0	8.21	8.21	8.16	8.16	8.10	8.04	7.99	7.93	7.88
90.0	8.27	8.27	8.16	8.10	8.04	7.99	7.93	7.82	7.82
135.0	8.27	8.21	8.10	8.10	8.04	7.99	7.88	7.88	7.82
180.0	8.10	8.04	7.99	7.99	7.93	7.93	7.88	7.82	7.76
225.0	8.27	8.21	8.21	8.16	8.04	7.99	7.93	7.88	7.82
270.0	8.38	8.33	8.21	8.16	8.04	7.99	7.93	7.88	7.82
315.0	8.10	8.10	8.04	8.04	7.99	7.99	7.93	7.88	7.82
360.0	8.16	8.16	8.10	8.10	8.04	7.99	7.99	7.93	7.88

Intensity data(cd)

C/γ(°)	90.0
0.0	7.88
45.0	7.88
90.0	7.76
135.0	7.82
180.0	7.76
225.0	7.82
270.0	7.76
315.0	7.76
360.0	7.88