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Nata

LumCAT: LN01D05015DA-N

Luminaire: 97.70.234.00

Report No: 210106-B007

Test No: 210106-C007

LampCAT: TRIDONIC SLE G7 9MM

Lamp flux(lm): 1978.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 36.1000

Current(A): 0.3810

Power (W): 13.7540

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1749.60

Efficiency(%): 88.45%

Lumens(lm)/Power(W): 127.21

Central intensity(cd): 11260.880

Maximum intensity(cd): 11260.880

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=19.0

[C90/270]Total=19.0

Field angle(10%Imax): [C0/180]Total=36.8

[C90/270]Total=36.8

Maximum s/h(1/2): C0_180=0.32 C90_270=0.32

Maximum s/h(1/4): C0_180=0.34 C90_270=0.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.45%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.675%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11260.884	0.000	0	.000%	.000%
1.0	11123.888	10.711	10.711	.541%	.612%
2.0	10874.363	31.574	42.285	1.596%	2.417%
3.0	10447.917	50.996	93.281	2.578%	5.332%
4.0	9902.644	68.120	161.4	3.444%	9.225%
5.0	9217.097	82.252	243.653	4.158%	13.926%
6.0	8453.644	92.864	336.517	4.695%	19.234%
7.0	7647.792	99.941	436.458	5.053%	24.946%
8.0	6840.253	103.688	540.146	5.242%	30.873%
9.0	6033.066	104.331	644.478	5.275%	36.836%
10.0	5231.855	101.943	746.421	5.154%	42.662%
11.0	4511.433	97.355	843.777	4.922%	48.227%
12.0	3874.261	91.668	935.444	4.634%	53.466%
13.0	3229.777	84.307	1019.751	4.262%	58.285%
14.0	2725.341	76.225	1095.976	3.854%	62.642%
15.0	2257.748	68.410	1164.386	3.459%	66.552%
16.0	1841.625	60.067	1224.454	3.037%	69.985%
17.0	1487.018	51.836	1276.29	2.621%	72.947%
18.0	1199.651	44.297	1320.587	2.240%	75.479%
19.0	1019.306	38.605	1359.192	1.952%	77.686%
20.0	833.147	33.905	1393.097	1.714%	79.624%
21.0	681.033	29.075	1422.173	1.470%	81.286%
22.0	571.992	25.180	1447.353	1.273%	82.725%
23.0	474.891	21.966	1469.319	1.111%	83.980%
24.0	397.034	19.063	1488.382	.964%	85.070%
25.0	339.293	16.742	1505.125	.846%	86.027%
26.0	288.619	14.822	1519.947	.749%	86.874%
27.0	247.036	13.105	1533.052	.663%	87.623%
28.0	215.374	11.707	1544.759	.592%	88.292%
29.0	186.328	10.510	1555.269	.531%	88.893%
30.0	164.039	9.460	1564.728	.478%	89.433%
31.0	145.673	8.619	1573.347	.436%	89.926%
32.0	130.880	7.923	1581.27	.401%	90.379%
33.0	118.631	7.351	1588.621	.372%	90.799%
34.0	108.345	6.869	1595.49	.347%	91.192%
35.0	99.584	6.457	1601.947	.326%	91.561%
36.0	91.434	6.082	1608.029	.307%	91.908%
37.0	84.839	5.749	1613.778	.291%	92.237%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	78.785	5.462	1619.24	.276%	92.549%
39.0	72.963	5.180	1624.42	.262%	92.845%
40.0	67.887	4.912	1629.332	.248%	93.126%
41.0	63.394	4.675	1634.007	.236%	93.393%
42.0	58.774	4.439	1638.445	.224%	93.647%
43.0	54.647	4.201	1642.647	.212%	93.887%
44.0	50.991	3.987	1646.634	.202%	94.115%
45.0	47.433	3.783	1650.416	.191%	94.331%
46.0	44.177	3.583	1653.999	.181%	94.536%
47.0	41.238	3.397	1657.396	.172%	94.730%
48.0	38.693	3.231	1660.628	.163%	94.915%
49.0	36.373	3.083	1663.71	.156%	95.091%
50.0	34.383	2.950	1666.66	.149%	95.259%
51.0	32.660	2.836	1669.497	.143%	95.422%
52.0	31.184	2.740	1672.236	.139%	95.578%
53.0	29.763	2.651	1674.887	.134%	95.730%
54.0	28.477	2.567	1677.454	.130%	95.876%
55.0	27.316	2.491	1679.945	.126%	96.019%
56.0	26.262	2.421	1682.366	.122%	96.157%
57.0	25.235	2.355	1684.72	.119%	96.292%
58.0	24.286	2.290	1687.011	.116%	96.423%
59.0	23.470	2.233	1689.243	.113%	96.550%
60.0	22.634	2.178	1691.421	.110%	96.675%
61.0	21.804	2.121	1693.542	.107%	96.796%
62.0	21.136	2.069	1695.611	.105%	96.914%
63.0	20.482	2.024	1697.635	.102%	97.030%
64.0	19.849	1.979	1699.614	.100%	97.143%
65.0	19.252	1.935	1701.549	.098%	97.254%
66.0	18.738	1.895	1703.445	.096%	97.362%
67.0	18.281	1.861	1705.306	.094%	97.468%
68.0	18.204	1.848	1707.154	.093%	97.574%
69.0	18.809	1.888	1709.043	.095%	97.682%
70.0	19.420	1.963	1711.006	.099%	97.794%
71.0	20.370	2.057	1713.062	.104%	97.912%
72.0	21.227	2.163	1715.225	.109%	98.035%
73.0	22.148	2.268	1717.494	.115%	98.165%
74.0	22.887	2.368	1719.861	.120%	98.300%
75.0	23.857	2.470	1722.331	.125%	98.441%

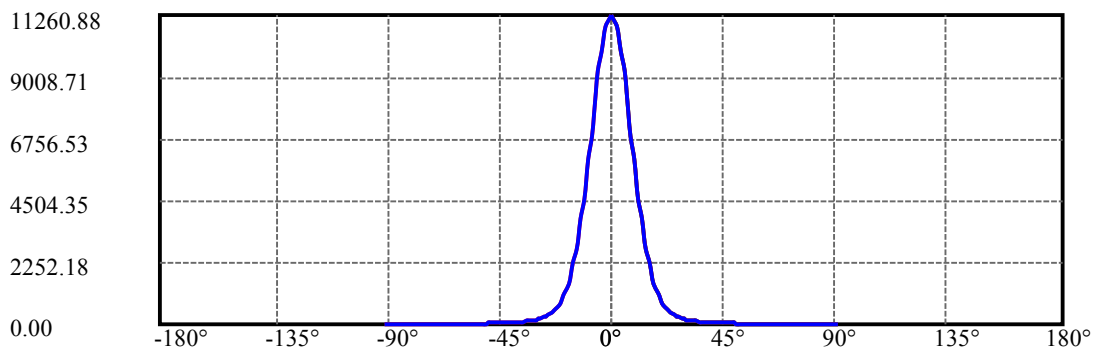
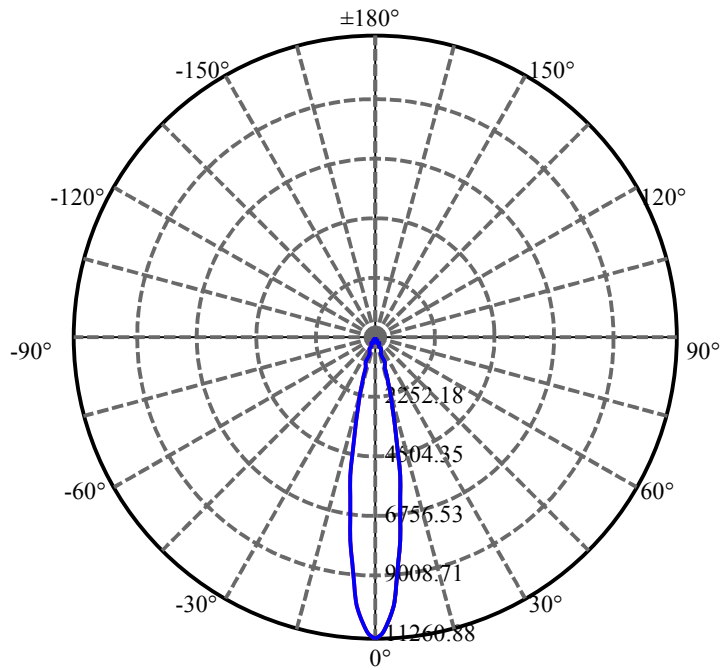
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	24.588	2.572	1724.903	.130%	98.588%
77.0	25.193	2.654	1727.557	.134%	98.740%
78.0	25.298	2.703	1730.26	.137%	98.895%
79.0	24.687	2.686	1732.945	.136%	99.048%
80.0	23.337	2.589	1735.534	.131%	99.196%
81.0	20.883	2.391	1737.926	.121%	99.333%
82.0	18.288	2.124	1740.05	.107%	99.454%
83.0	15.448	1.834	1741.884	.093%	99.559%
84.0	12.952	1.547	1743.431	.078%	99.647%
85.0	11.130	1.314	1744.745	.066%	99.723%
86.0	9.330	1.118	1745.864	.057%	99.786%
87.0	8.761	0.990	1746.854	.050%	99.843%
88.0	8.416	0.941	1747.795	.048%	99.897%
89.0	8.184	0.910	1748.705	.046%	99.949%
90.0	8.149	0.896	1749.6	.045%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1564.73	79.11%	89.43%
0-40	1629.33	82.37%	93.13%
0-60	1691.42	85.51%	96.67%
0-90	1748.70	88.41%	99.95%
0-120	1748.70	88.41%	99.95%
0-180	1749.60	88.45%	100.00%
60-90	59.46	3.01%	3.40%
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%
0-20.23	1399.68	70.76%	80.00%

ZONAL LUMEN SUMMARY

0-10	746.42
10-20	646.68
20-30	171.63
30-40	64.60
40-50	37.33
50-60	24.76
60-70	19.58
70-80	24.53
80-90	13.17
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



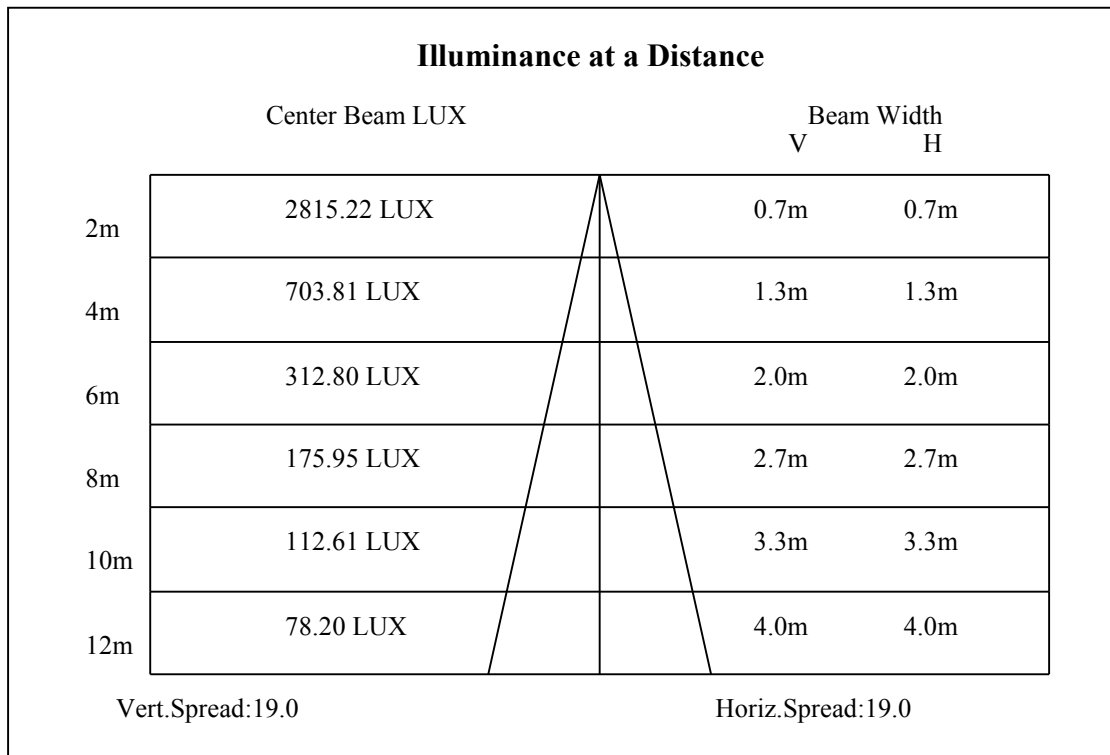
C0(Max): —————

C0/C180: —————

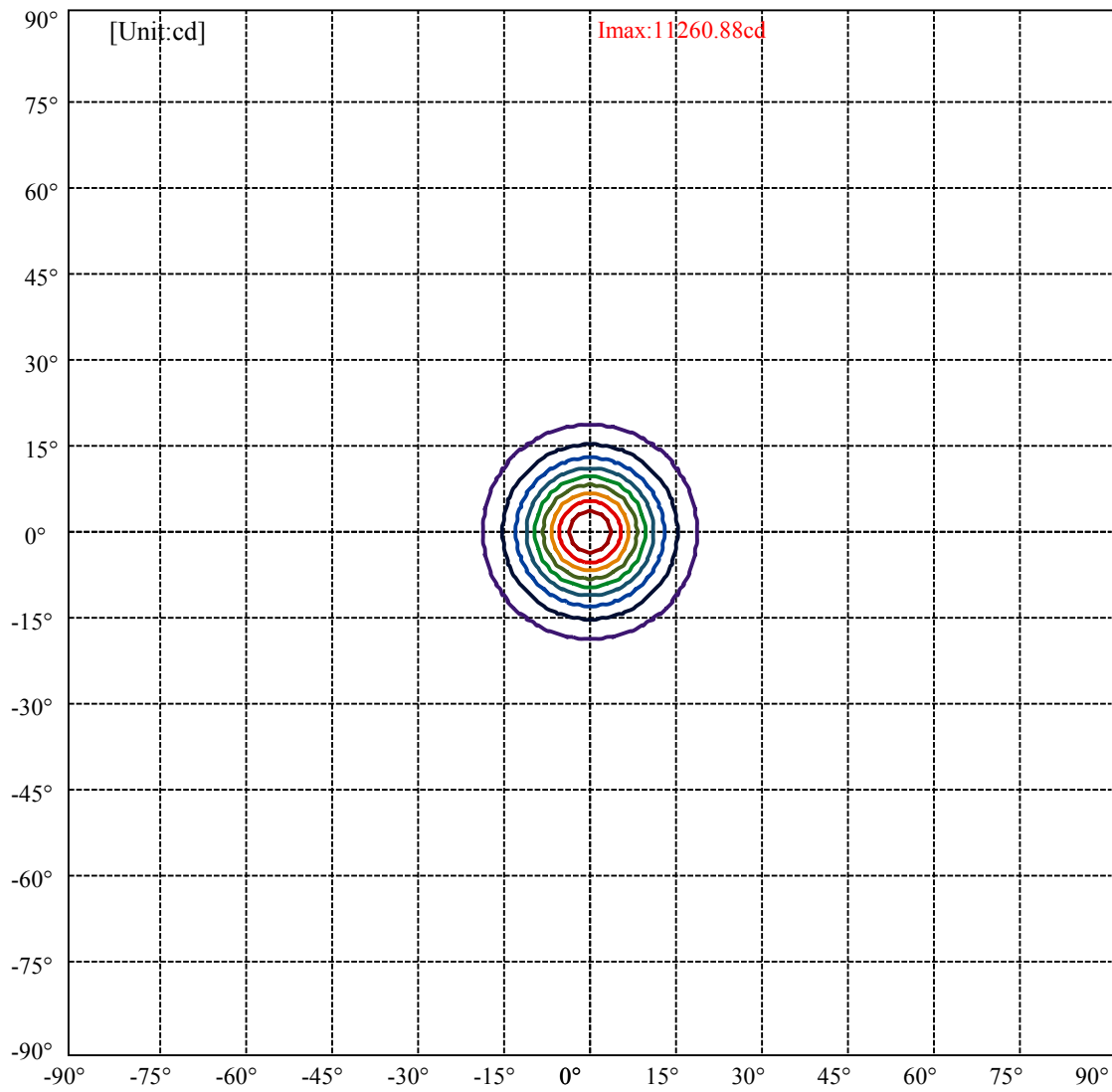
C90/C270: —————

Field angle(10%Imax):C0/180Left:18.4 Right:18.4
:C90/270Left:18.4 Right:18.4

Beam Angle(50%Imax):C0/180Left:9.5 Right:9.5
:C90/270Left:9.5 Right:9.5



ISO-Intensity(V-H)

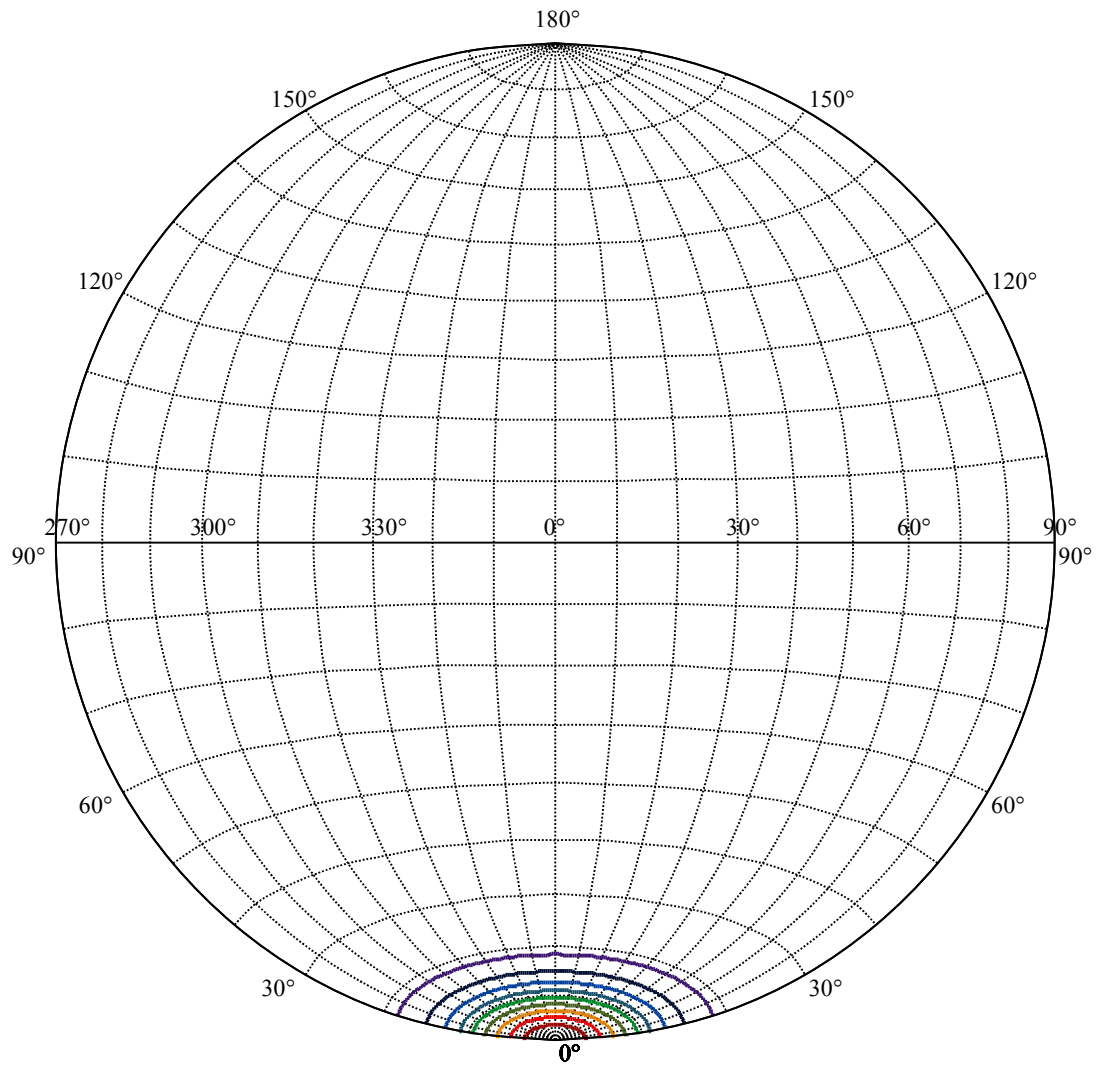


(10%Imax) 1126.09	—
(20%Imax) 2252.18	—
(30%Imax) 3378.27	—
(40%Imax) 4504.35	—
(50%Imax) 5630.44	—
(60%Imax) 6756.53	—
(70%Imax) 7882.62	—
(80%Imax) 9008.71	—
(90%Imax) 10134.8	—

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/01/06
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50



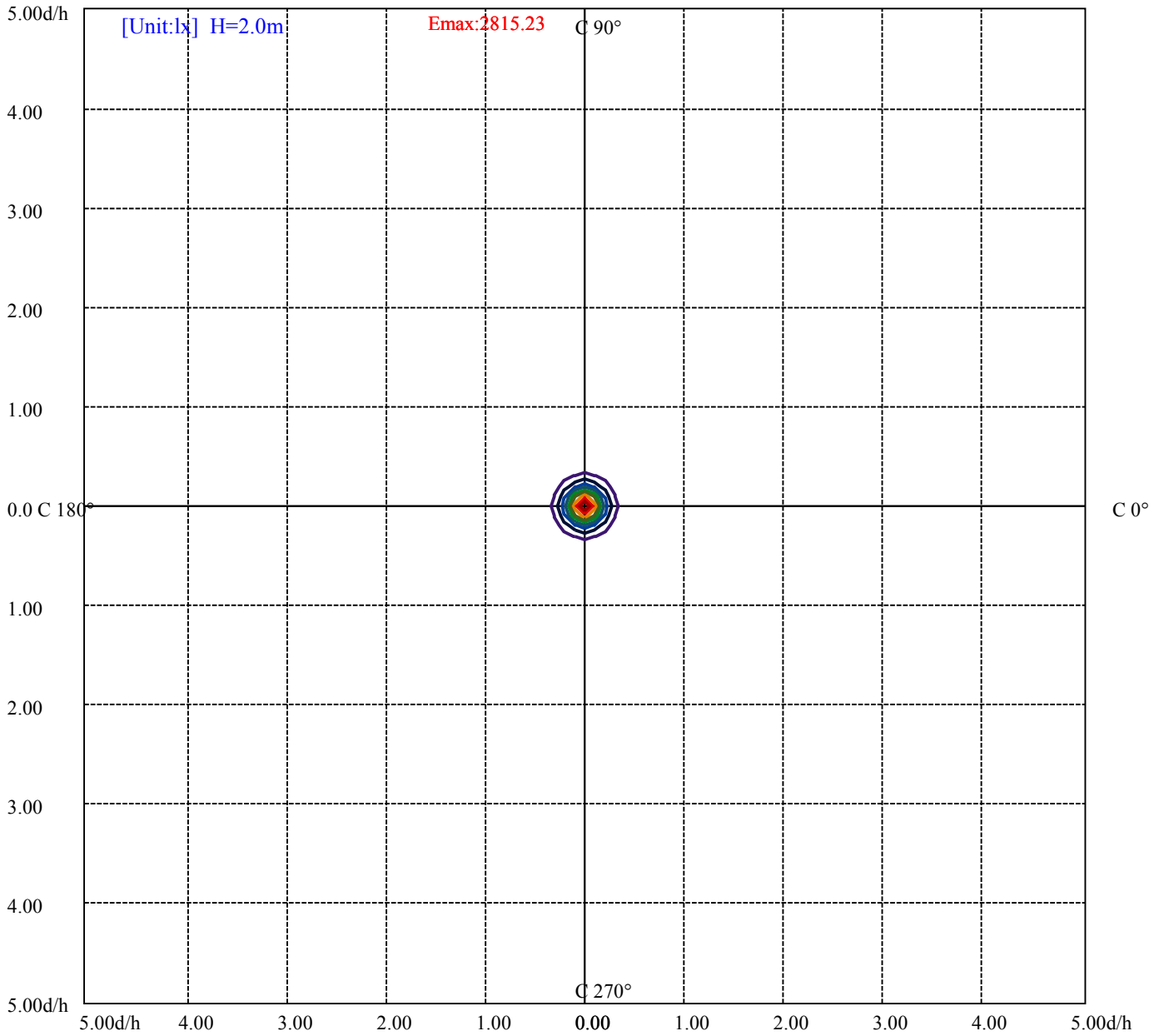
House

[Unit:cd]

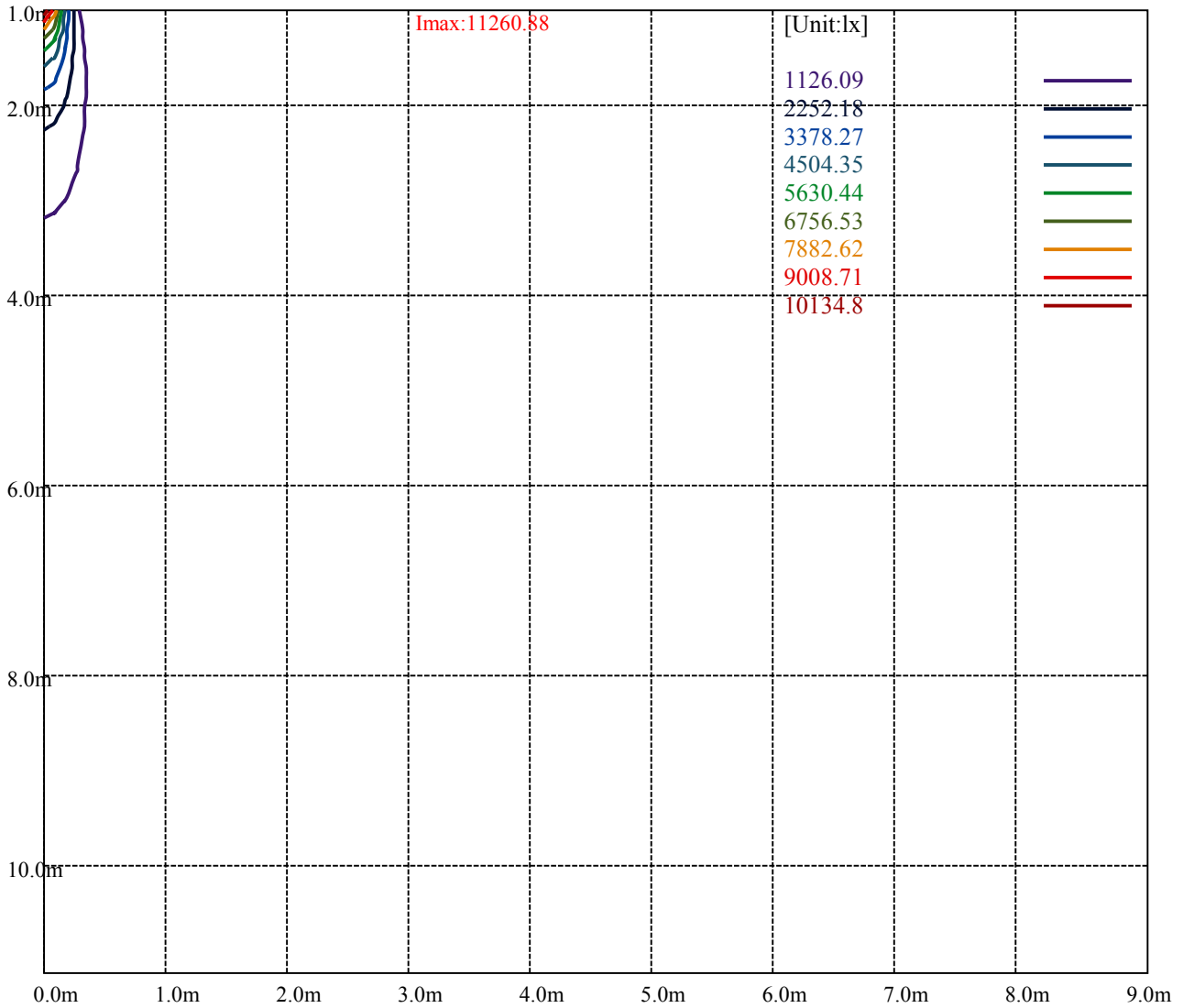
Road

Imax:11260.88

(10%Imax)	1126.09	—
(20%Imax)	2252.18	—
(30%Imax)	3378.27	—
(40%Imax)	4504.35	—
(50%Imax)	5630.44	—
(60%Imax)	6756.53	—
(70%Imax)	7882.62	—
(80%Imax)	9008.71	—
(90%Imax)	10134.8	—



(10%Emax) 281.5225	—
(20%Emax) 563.0425	—
(30%Emax) 844.565	—
(40%Emax) 1126.088	—
(50%Emax) 1407.608	—
(60%Emax) 1689.13	—
(70%Emax) 1970.65	—
(80%Emax) 2252.173	—
(90%Emax) 2533.7	—



Luminance Table

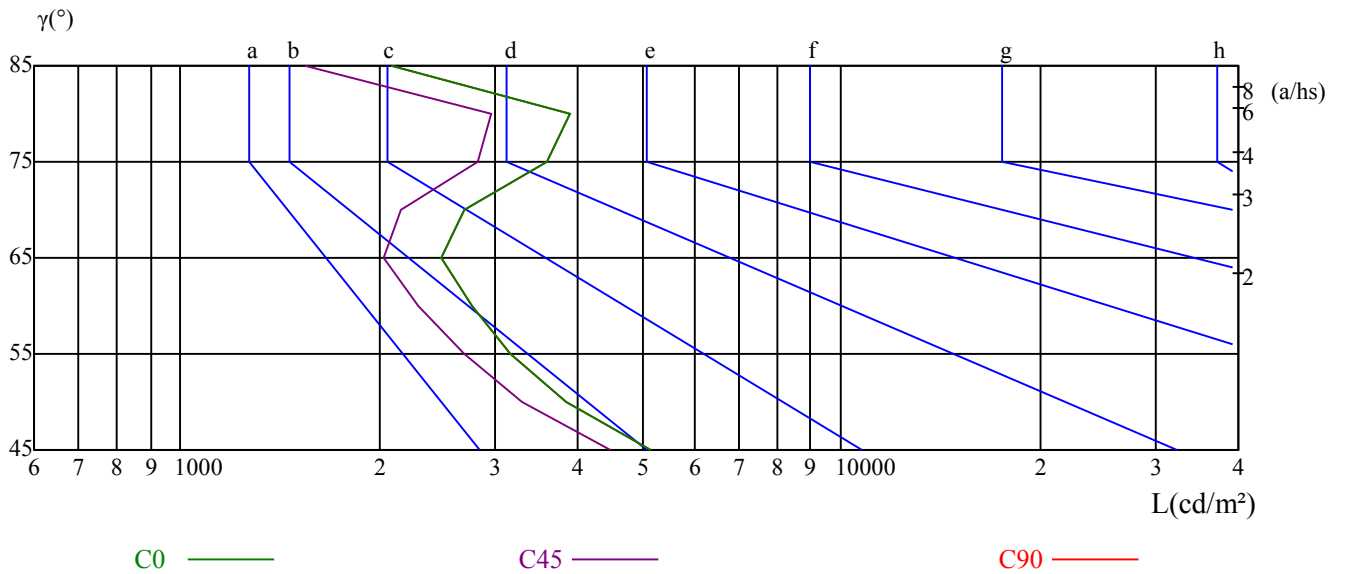
γ	45	50	55	60	65	70	75	80	85
C0	5135	3836	3168	2755	2485	2691	3596	3890	2092
C45	4481	3298	2682	2294	2032	2156	2815	2963	1542
C90	5135	3836	3168	2755	2485	2691	3596	3890	2092

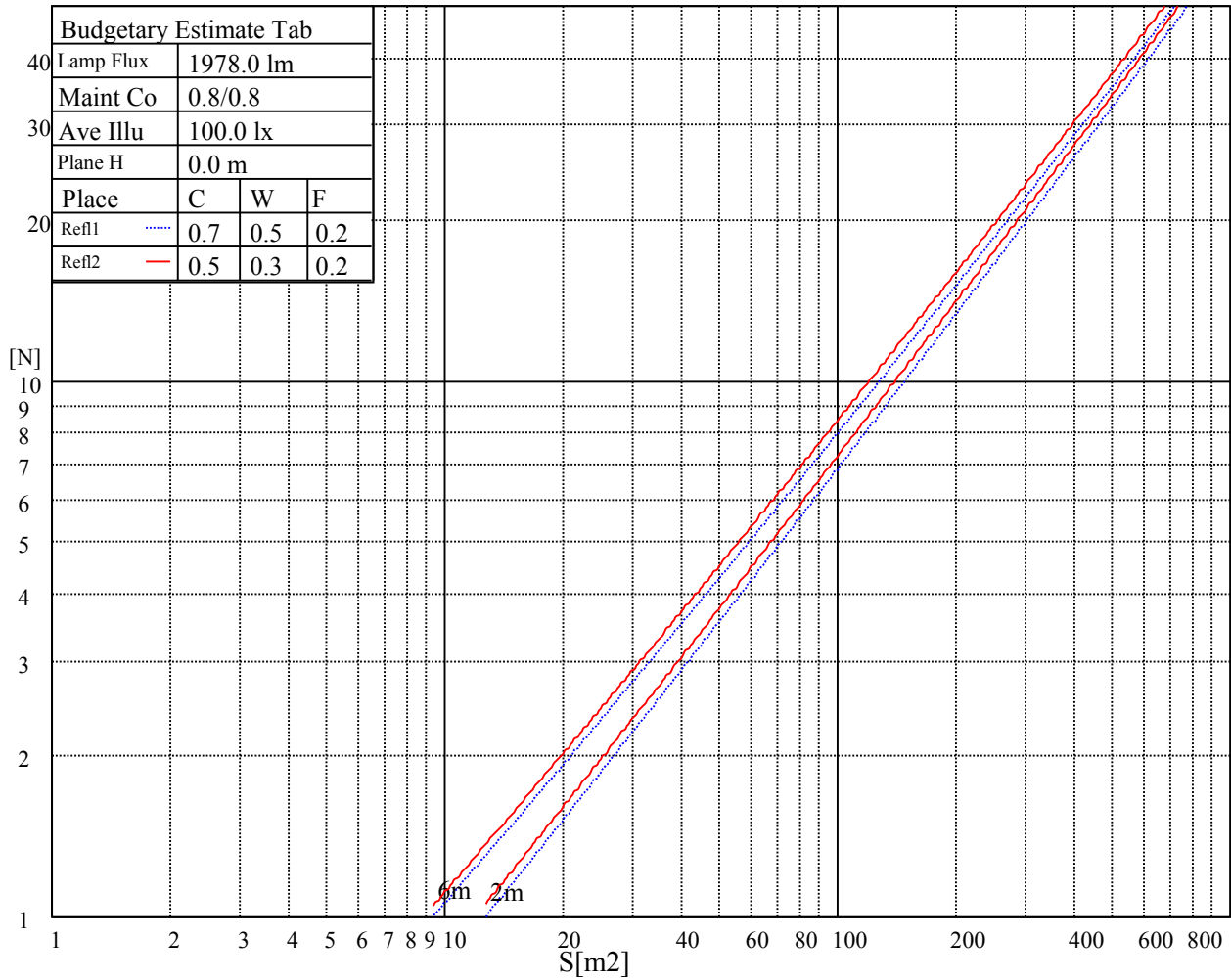
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5382	5382	5382	10890	10890	10890	15088	15088	15088

Glare Table

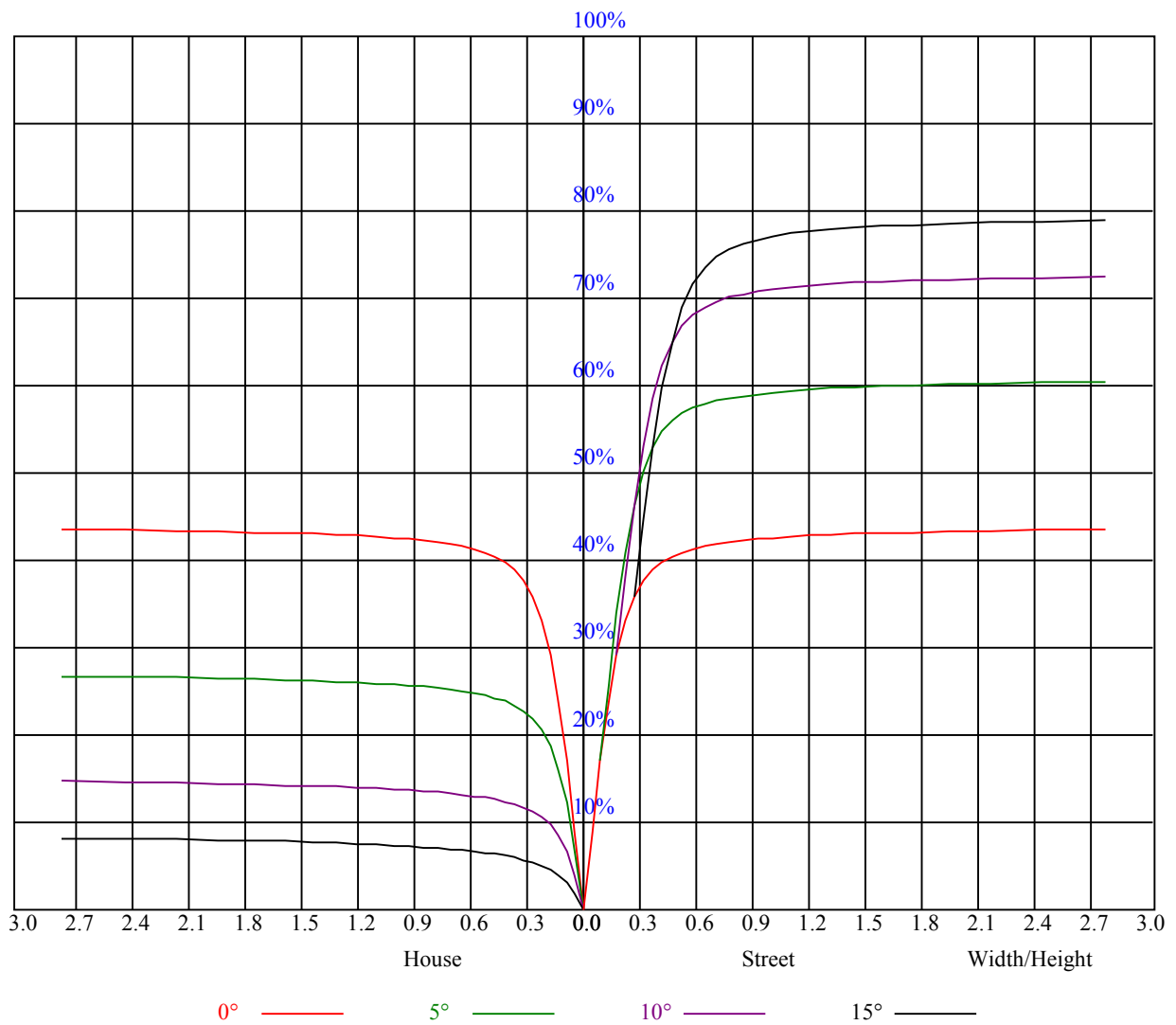
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.87	0.86	0.84
2	0.94	0.91	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.85	0.84	0.82	0.81
3	0.90	0.86	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.84	0.82	0.81	0.83	0.81	0.79	0.78
4	0.86	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.78	0.80	0.78	0.77	0.76
5	0.83	0.79	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
6	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
7	0.78	0.74	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.71	0.70
8	0.76	0.72	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.68
9	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65



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	11244.49	11103.86	10721.36	10248.86	9646.99	8786.36	8043.86	7284.49	6435.11
45.0	11396.36	11013.86	10693.24	10096.99	9511.99	8842.61	7920.11	7143.86	6378.86
90.0	11202.19	11080.13	10814.63	10367.44	9756.56	9104.06	8299.13	7441.88	6666.19
135.0	11200.50	11216.25	11137.61	10895.74	10518.86	9866.36	9219.49	8510.74	7678.24
180.0	11244.49	11223.56	11095.31	10757.81	10292.06	9630.56	8951.06	8119.69	7157.81
225.0	11396.36	11205.56	11043.56	10733.63	10150.31	9564.75	8885.81	7972.88	7309.69
270.0	11202.19	11167.31	10945.13	10530.00	10013.63	9401.06	8525.25	7777.13	7021.13
315.0	11200.50	10980.56	10544.06	9952.88	9330.75	8541.00	7784.44	6931.69	6075.00
360.0	11244.49	11103.86	10721.36	10248.86	9646.99	8786.36	8043.86	7284.49	6435.11
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5619.49	4927.61	4190.74	3588.86	2970.11	2840.74	2052.00	1674.00	1360.69
45.0	5551.99	4741.99	4078.24	3403.24	2857.61	2332.69	1896.19	1567.69	1256.06
90.0	5904.00	5011.88	4356.00	3756.38	3067.31	2592.00	2185.31	1792.13	1465.31
135.0	6823.24	6063.86	5259.49	4584.49	3870.11	3223.24	2851.99	2265.19	1856.81
180.0	6474.94	5641.31	4773.94	4208.63	3607.88	2873.25	2471.63	2070.00	1689.19
225.0	6454.69	5523.19	4897.13	4221.56	3391.31	2919.94	2442.38	1888.31	1595.81
270.0	6087.94	5366.81	4679.44	3963.94	3320.44	2805.19	2304.56	1927.13	1574.44
315.0	5348.25	4578.19	3856.50	3267.00	2753.44	2215.69	1857.94	1548.56	1097.83
360.0	5619.49	4927.61	4190.74	3588.86	2970.11	2840.74	2052.00	1674.00	1360.69
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1134.56	947.25	760.50	641.81	544.50	445.50	380.25	326.81	293.06
45.0	1007.44	824.06	668.81	529.31	442.69	366.19	308.81	284.06	217.24
90.0	1113.75	995.34	830.98	683.72	567.28	483.69	405.96	342.45	296.21
135.0	1552.50	1292.06	1023.75	852.75	724.50	578.81	492.75	417.38	351.56
180.0	1366.31	1102.67	933.13	739.01	617.40	519.53	429.92	358.20	306.84
225.0	1109.48	1056.54	845.72	693.96	571.61	461.19	375.36	315.84	263.08
270.0	1287.56	1078.31	882.56	725.63	614.25	524.25	430.88	370.69	320.63
315.0	1025.61	858.21	719.72	582.08	493.71	419.96	352.35	298.91	260.33
360.0	1134.56	947.25	760.50	641.81	544.50	445.50	380.25	326.81	293.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	234.84	205.99	182.25	160.48	142.26	128.64	115.88	105.19	96.86
45.0	189.45	162.73	145.07	130.95	118.18	108.11	101.48	93.43	87.75
90.0	258.24	218.64	192.43	170.66	152.21	133.37	121.16	110.93	99.79
135.0	297.56	286.88	225.96	190.97	167.01	151.03	133.37	120.32	111.83
180.0	260.27	226.01	194.85	169.82	151.48	134.55	120.54	110.53	101.70
225.0	222.53	194.12	169.43	151.59	135.11	121.95	112.50	104.40	95.85
270.0	288.56	232.99	205.93	183.15	159.36	143.72	130.44	117.68	106.82
315.0	224.83	195.64	174.71	154.69	139.78	125.66	113.68	104.29	96.08
360.0	234.84	205.99	182.25	160.48	142.26	128.64	115.88	105.19	96.86
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	88.65	82.24	75.66	69.75	65.08	60.81	55.97	52.48	48.99
45.0	81.84	76.56	72.34	67.67	63.45	59.74	56.31	52.03	48.88
90.0	92.19	85.28	78.47	72.51	67.50	62.44	58.33	54.11	50.18
135.0	101.31	93.94	87.47	80.27	74.53	69.24	63.00	58.33	54.34
180.0	92.59	86.23	80.33	74.48	68.96	64.63	60.08	55.86	52.37
225.0	89.83	84.38	78.24	73.74	69.58	65.25	60.98	57.49	53.61
270.0	98.21	89.55	82.97	76.22	70.26	65.59	60.64	56.25	52.43
315.0	86.85	80.55	74.81	69.08	63.73	59.46	54.90	50.63	47.14
360.0	88.65	82.24	75.66	69.75	65.08	60.81	55.97	52.48	48.99

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	45.17	42.30	39.83	37.35	35.10	33.47	31.73	30.54	29.19
45.0	45.96	42.92	40.05	37.91	35.83	33.75	32.18	30.71	29.48
90.0	46.86	43.54	40.61	38.19	36.11	33.98	32.34	30.94	29.48
135.0	49.50	46.24	43.03	39.71	36.96	34.88	32.68	31.05	29.42
180.0	48.66	45.68	42.53	39.71	37.52	35.27	33.41	31.95	30.66
225.0	50.29	46.91	43.76	41.12	38.48	36.28	34.43	32.79	31.11
270.0	49.39	45.06	42.24	39.94	37.18	35.10	33.64	31.84	30.38
315.0	43.65	40.78	37.86	35.61	33.81	32.34	30.88	29.64	28.41
360.0	45.17	42.30	39.83	37.35	35.10	33.47	31.73	30.54	29.19
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	27.96	26.89	25.82	24.86	24.02	23.12	22.16	21.32	20.64
45.0	28.18	27.00	26.04	25.09	24.08	23.34	22.50	21.66	21.04
90.0	28.24	27.23	26.16	25.20	24.41	23.57	22.84	21.99	21.26
135.0	28.13	26.94	25.82	24.69	23.85	23.12	22.22	21.60	21.09
180.0	29.19	28.07	27.06	25.99	24.92	24.13	23.18	22.33	21.66
225.0	29.87	28.63	27.45	26.21	25.26	24.30	23.40	22.56	21.77
270.0	29.25	27.84	26.83	25.88	24.75	23.91	23.23	22.16	21.43
315.0	27.00	25.93	24.92	23.96	23.01	22.28	21.54	20.81	20.19
360.0	27.96	26.89	25.82	24.86	24.02	23.12	22.16	21.32	20.64
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	19.97	19.35	18.84	18.34	17.83	17.44	16.93	16.43	15.81
45.0	20.36	19.74	19.13	18.56	17.94	17.44	16.93	16.43	15.98
90.0	20.64	19.97	19.24	18.73	18.17	17.55	17.10	16.65	16.14
135.0	20.59	20.08	19.58	19.07	18.56	18.39	20.14	23.74	29.14
180.0	20.81	20.19	19.52	18.90	18.39	17.94	17.38	16.88	16.37
225.0	21.15	20.48	19.74	19.24	18.68	17.94	17.55	16.99	16.48
270.0	20.81	19.91	19.41	18.96	18.34	17.78	17.33	16.76	16.20
315.0	19.52	19.07	18.56	18.11	18.34	21.15	27.11	31.50	36.84
360.0	19.97	19.35	18.84	18.34	17.83	17.44	16.93	16.43	15.81
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.24	14.74	14.34	13.89	13.44	13.16	12.71	12.26	11.98
45.0	15.41	14.96	14.51	14.18	13.73	13.39	13.05	12.60	12.32
90.0	15.64	15.19	14.79	14.68	14.74	14.96	15.13	14.74	13.73
135.0	33.19	38.08	42.13	47.76	51.47	54.90	59.06	61.71	61.03
180.0	15.75	15.24	14.74	14.29	13.84	13.50	13.11	12.77	12.38
225.0	16.03	15.53	15.02	14.57	14.18	13.84	13.50	13.11	12.71
270.0	15.81	15.24	14.85	14.40	14.01	13.84	13.78	13.73	13.33
315.0	42.75	48.21	52.71	57.09	61.31	63.96	62.04	56.59	49.22
360.0	15.24	14.74	14.34	13.89	13.44	13.16	12.71	12.26	11.98
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	11.42	10.91	10.63	10.07	9.56	8.55	8.21	7.88	7.71
45.0	11.93	11.48	11.14	11.08	10.18	9.45	9.00	8.83	8.72
90.0	12.88	11.98	11.31	10.86	10.01	9.34	8.66	8.44	8.16
135.0	54.56	48.54	39.38	27.90	17.72	9.56	8.89	8.49	8.27
180.0	11.87	11.48	11.08	10.74	10.24	9.11	8.72	8.27	7.99
225.0	12.38	11.98	11.53	11.19	11.03	10.46	9.51	9.00	8.78
270.0	12.66	11.81	11.31	10.74	10.24	9.45	8.78	8.38	8.10
315.0	39.38	28.13	17.21	11.03	10.07	8.72	8.33	8.04	7.76
360.0	11.42	10.91	10.63	10.07	9.56	8.55	8.21	7.88	7.71

Intensity data(cd)

C/γ(°)	90.0
0.0	7.65
45.0	8.83
90.0	8.21
135.0	8.04
180.0	7.82
225.0	8.94
270.0	7.93
315.0	7.76
360.0	7.65