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Nata

LumCAT: 2-2187-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.6600
Test No: GC202002122	Current(A): 0.6000
LampCAT: TRIDONIC SLE G7 15MM	Power (W): 20.7960
Lamp flux(lm): 2582.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2034.68
Efficiency(%): 78.80%
Lumens(lm)/Power(W): 97.84
Central intensity(cd): 9156.516
Maximum intensity(cd): 9156.516
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.2
 [C90/270]Total=25.2
Field angle(10%Imax): [C0/180]Total=47.6
 [C90/270]Total=47.6
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.80%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.793%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/2/14
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9156.516	0.000	0	.000%	.000%
1.0	9113.766	8.742	8.742	.339%	.430%
2.0	8989.664	25.984	34.726	1.006%	1.707%
3.0	8786.953	42.516	77.242	1.647%	3.796%
4.0	8535.586	57.984	135.226	2.246%	6.646%
5.0	8235.141	72.147	207.372	2.794%	10.192%
6.0	7838.086	84.469	291.842	3.271%	14.343%
7.0	7400.391	94.585	386.426	3.663%	18.992%
8.0	6966.141	102.819	489.245	3.982%	24.045%
9.0	6445.617	108.695	597.94	4.210%	29.387%
10.0	5896.055	111.688	709.628	4.326%	34.877%
11.0	5404.992	112.921	822.548	4.373%	40.426%
12.0	4894.031	112.583	935.131	4.360%	45.960%
13.0	4359.023	109.810	1044.942	4.253%	51.357%
14.0	3904.453	105.772	1150.714	4.097%	56.555%
15.0	3469.852	101.238	1251.951	3.921%	61.531%
16.0	3043.898	95.445	1347.396	3.697%	66.222%
17.0	2672.930	89.026	1436.422	3.448%	70.597%
18.0	2332.195	82.524	1518.946	3.196%	74.653%
19.0	2032.664	75.940	1594.886	2.941%	78.385%
20.0	1765.406	69.515	1664.401	2.692%	81.802%
21.0	1515.094	62.992	1727.393	2.440%	84.898%
22.0	1227.038	55.104	1782.497	2.134%	87.606%
23.0	1083.713	48.486	1830.983	1.878%	89.989%
24.0	869.998	42.715	1873.698	1.654%	92.088%
25.0	674.388	35.116	1908.814	1.360%	93.814%
26.0	510.743	27.975	1936.789	1.083%	95.189%
27.0	359.051	21.280	1958.069	.824%	96.235%
28.0	247.078	15.346	1973.415	.594%	96.989%
29.0	120.832	9.626	1983.041	.373%	97.462%
30.0	52.763	4.687	1987.728	.182%	97.692%
31.0	17.522	1.956	1989.684	.076%	97.789%
32.0	14.238	0.910	1990.593	.035%	97.833%
33.0	13.148	0.807	1991.4	.031%	97.873%
34.0	12.192	0.767	1992.167	.030%	97.911%
35.0	11.433	0.734	1992.901	.028%	97.947%
36.0	10.856	0.710	1993.611	.027%	97.982%
37.0	10.350	0.692	1994.302	.027%	98.016%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	9.942	0.677	1994.979	.026%	98.049%
39.0	9.619	0.668	1995.647	.026%	98.082%
40.0	9.309	0.660	1996.307	.026%	98.114%
41.0	9.098	0.655	1996.963	.025%	98.146%
42.0	8.902	0.654	1997.617	.025%	98.178%
43.0	8.747	0.654	1998.271	.025%	98.211%
44.0	8.613	0.655	1998.926	.025%	98.243%
45.0	8.501	0.658	1999.583	.025%	98.275%
46.0	8.402	0.661	2000.244	.026%	98.308%
47.0	8.332	0.666	2000.91	.026%	98.340%
48.0	8.276	0.671	2001.581	.026%	98.373%
49.0	8.205	0.677	2002.258	.026%	98.407%
50.0	8.156	0.682	2002.94	.026%	98.440%
51.0	8.149	0.690	2003.63	.027%	98.474%
52.0	8.093	0.697	2004.327	.027%	98.508%
53.0	8.051	0.702	2005.03	.027%	98.543%
54.0	8.023	0.708	2005.738	.027%	98.578%
55.0	8.002	0.715	2006.453	.028%	98.613%
56.0	7.966	0.722	2007.175	.028%	98.648%
57.0	7.945	0.728	2007.902	.028%	98.684%
58.0	7.945	0.735	2008.637	.028%	98.720%
59.0	7.924	0.742	2009.379	.029%	98.757%
60.0	7.882	0.747	2010.126	.029%	98.793%
61.0	7.882	0.752	2010.878	.029%	98.830%
62.0	7.868	0.759	2011.637	.029%	98.868%
63.0	7.840	0.764	2012.401	.030%	98.905%
64.0	7.847	0.770	2013.171	.030%	98.943%
65.0	7.840	0.776	2013.947	.030%	98.981%
66.0	7.826	0.782	2014.729	.030%	99.019%
67.0	7.819	0.787	2015.515	.030%	99.058%
68.0	7.812	0.792	2016.307	.031%	99.097%
69.0	7.812	0.797	2017.104	.031%	99.136%
70.0	7.812	0.802	2017.907	.031%	99.176%
71.0	7.812	0.808	2018.714	.031%	99.215%
72.0	7.805	0.812	2019.526	.031%	99.255%
73.0	7.819	0.817	2020.343	.032%	99.295%
74.0	7.812	0.822	2021.165	.032%	99.336%
75.0	7.805	0.825	2021.99	.032%	99.376%

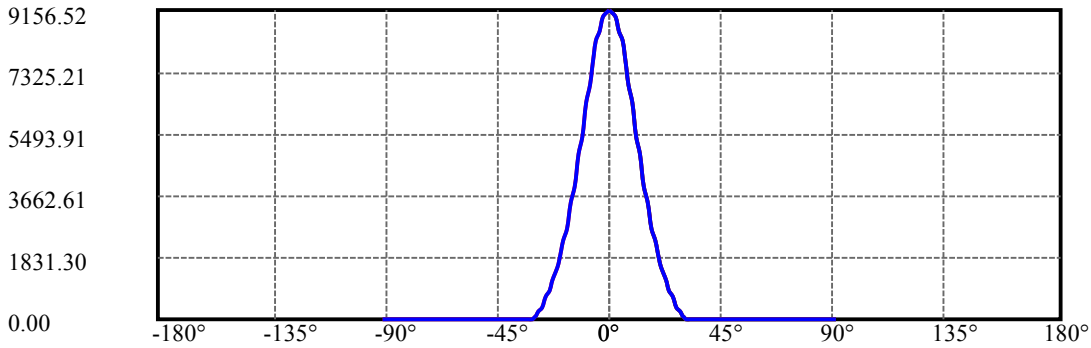
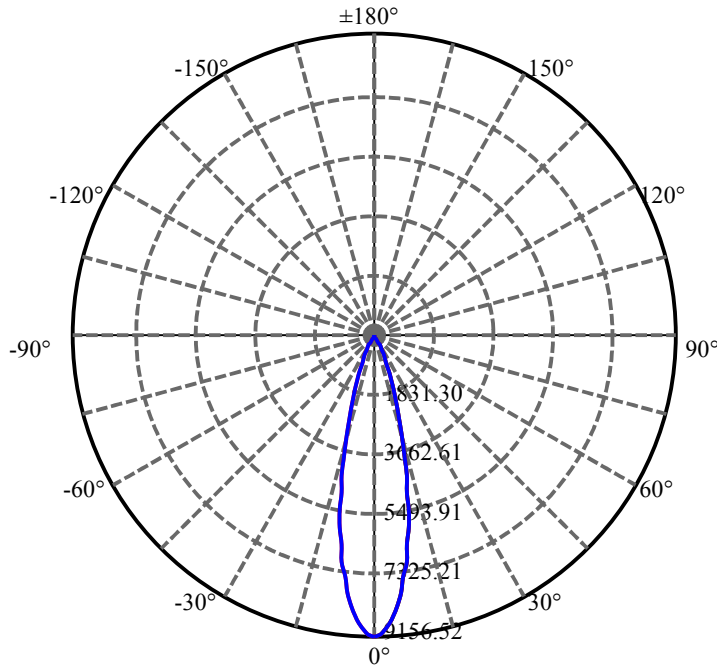
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.826	0.830	2022.82	.032%	99.417%
77.0	7.826	0.834	2023.654	.032%	99.458%
78.0	7.840	0.839	2024.493	.032%	99.499%
79.0	7.854	0.843	2025.336	.033%	99.541%
80.0	7.868	0.848	2026.183	.033%	99.582%
81.0	7.861	0.851	2027.034	.033%	99.624%
82.0	7.868	0.853	2027.887	.033%	99.666%
83.0	7.882	0.856	2028.743	.033%	99.708%
84.0	7.861	0.858	2029.601	.033%	99.750%
85.0	7.861	0.858	2030.459	.033%	99.793%
86.0	7.755	0.854	2031.313	.033%	99.835%
87.0	7.678	0.845	2032.157	.033%	99.876%
88.0	7.664	0.840	2032.998	.033%	99.917%
89.0	7.664	0.840	2033.838	.033%	99.959%
90.0	7.678	0.841	2034.679	.033%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1987.73	76.98%	97.69%
0-40	1996.31	77.32%	98.11%
0-60	2010.13	77.85%	98.79%
0-90	2033.84	78.77%	99.96%
0-120	2033.84	78.77%	99.96%
0-180	2034.68	78.80%	100.00%
60-90	24.46	0.95%	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%
0-19.47	1627.74	63.04%	80.00%

ZONAL LUMEN SUMMARY

0-10	709.63
10-20	954.77
20-30	323.33
30-40	8.58
40-50	6.63
50-60	7.19
60-70	7.78
70-80	8.28
80-90	7.65
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: —————

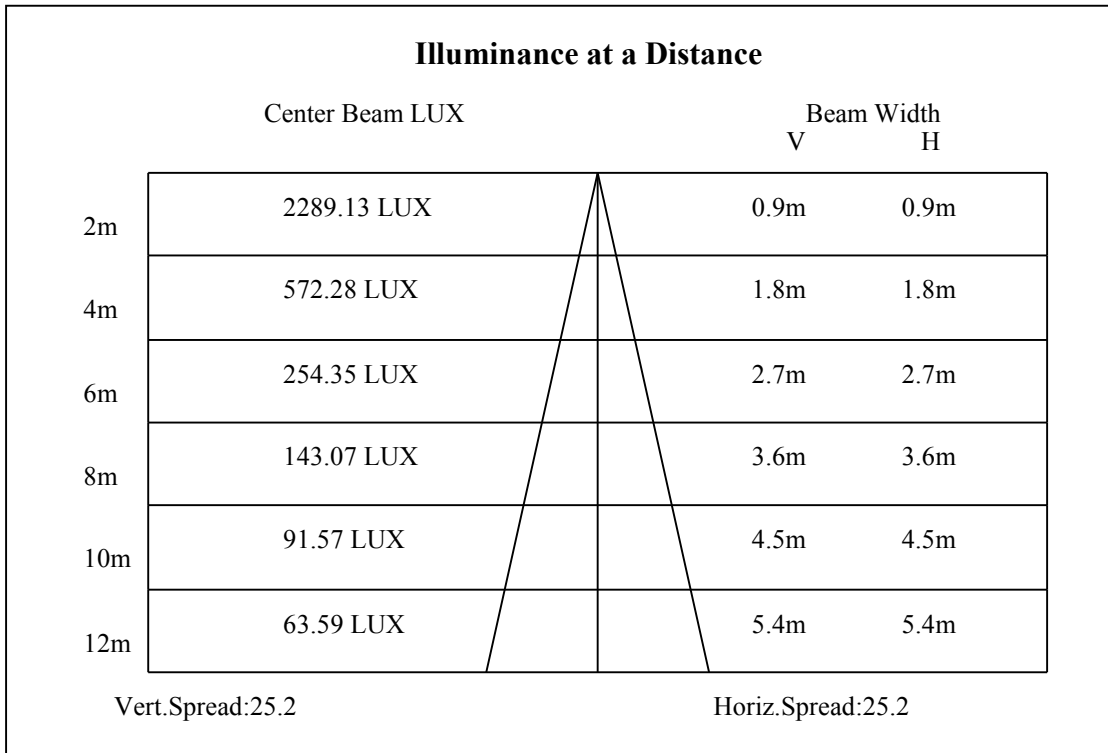
C90/C270: —————

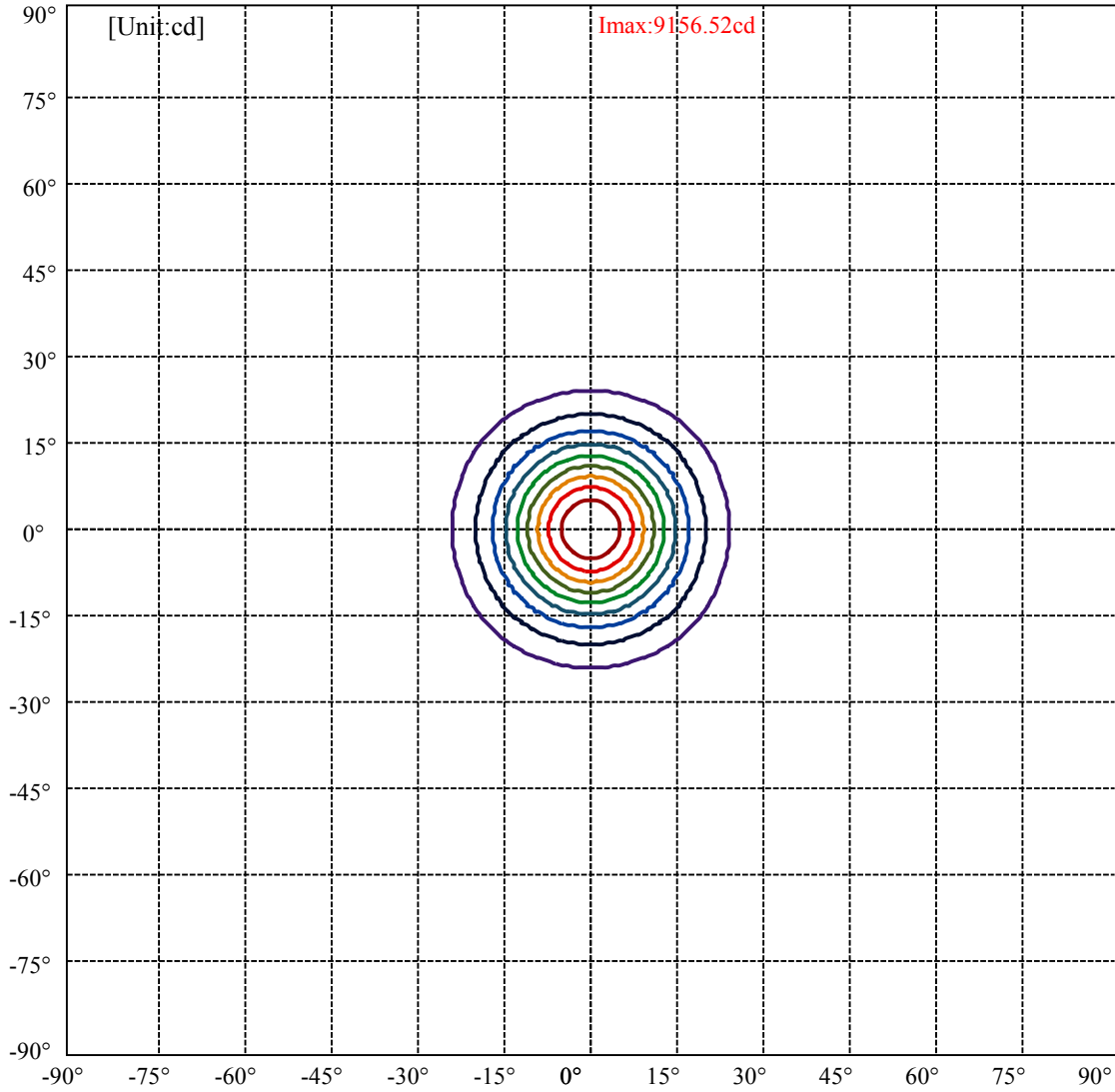
Field angle(10%Imax):C0/180Left:23.8 Right:23.8

:C90/270Left:23.8 Right:23.8

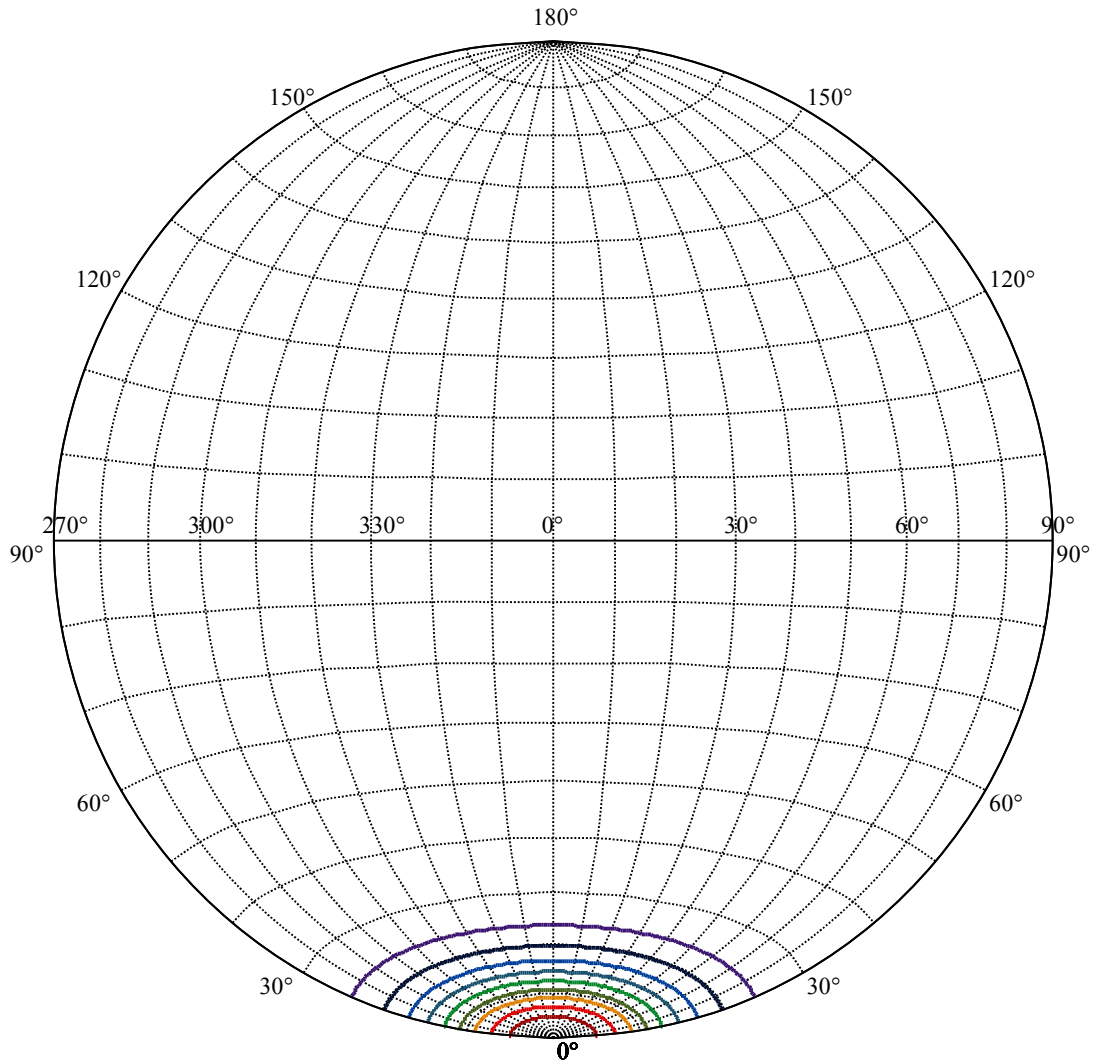
Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6

:C90/270Left:12.6 Right:12.6





(10%Imax) 915.652	—
(20%Imax) 1831.3	—
(30%Imax) 2746.95	—
(40%Imax) 3662.61	—
(50%Imax) 4578.26	—
(60%Imax) 5493.91	—
(70%Imax) 6409.56	—
(80%Imax) 7325.21	—
(90%Imax) 8240.86	—



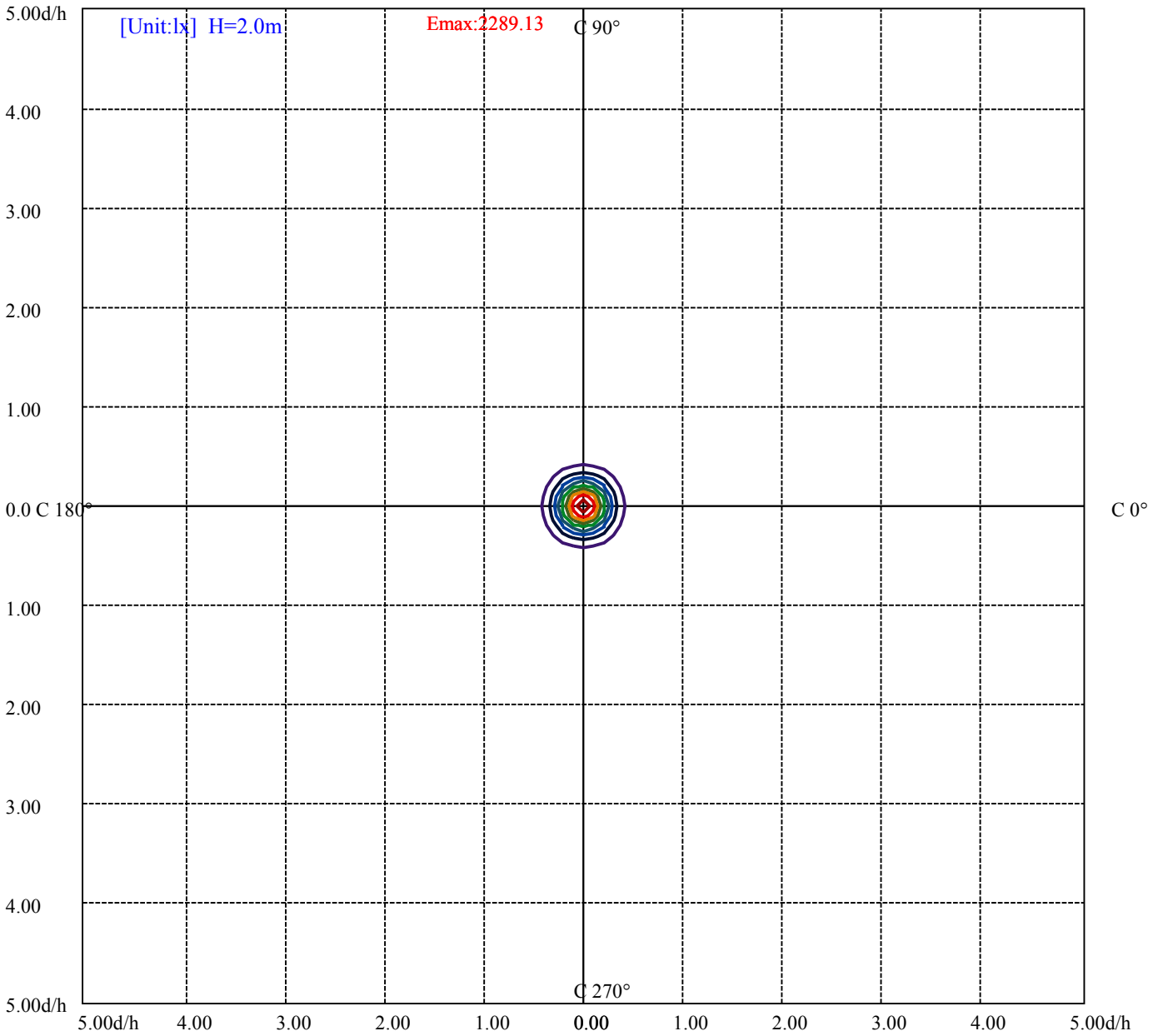
House

[Unit:cd]

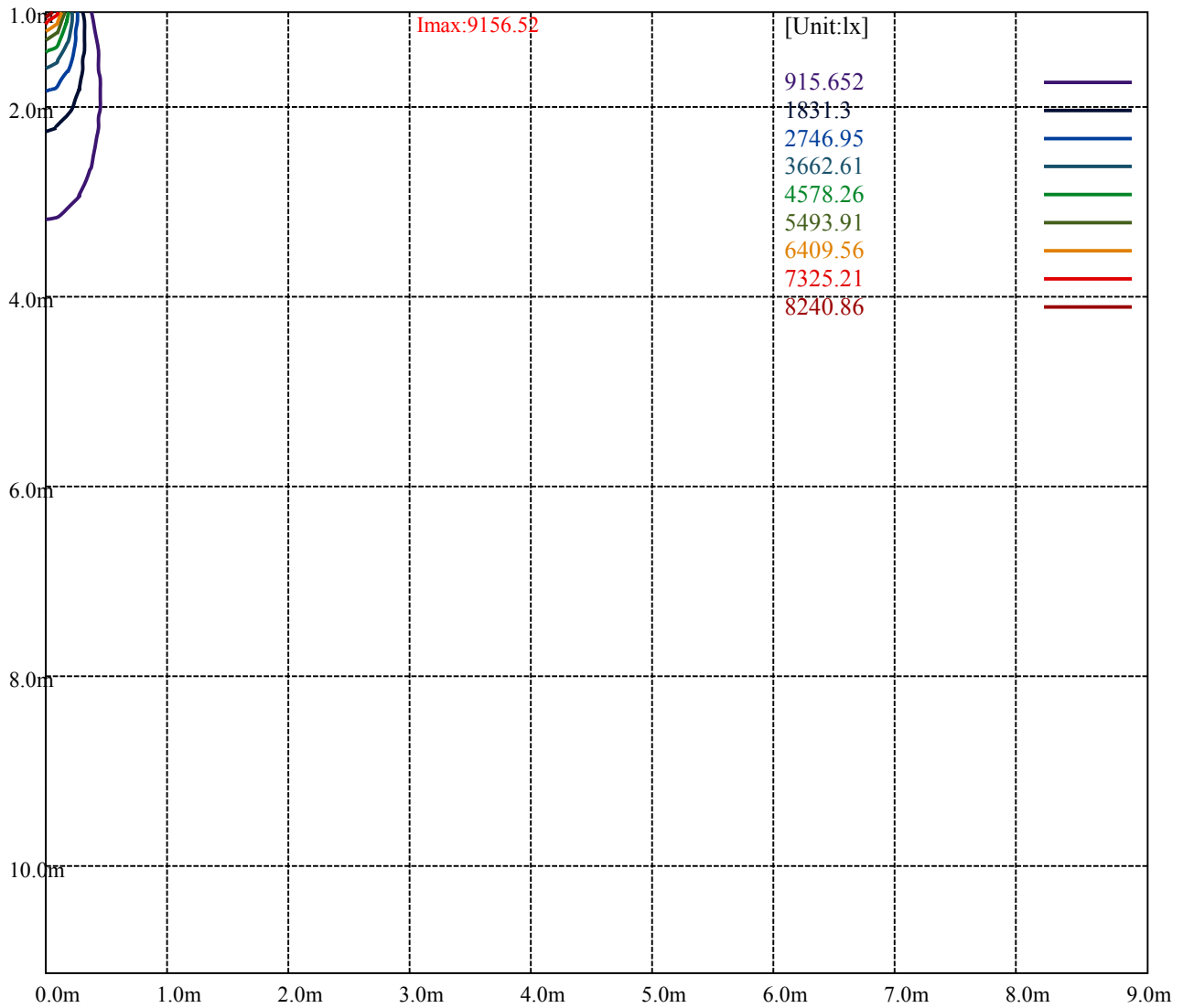
Road

Imax:9156.52

(10%Imax) 915.652	—
(20%Imax) 1831.3	—
(30%Imax) 2746.95	—
(40%Imax) 3662.61	—
(50%Imax) 4578.26	—
(60%Imax) 5493.91	—
(70%Imax) 6409.56	—
(80%Imax) 7325.21	—
(90%Imax) 8240.86	—



- (10%Emax) 228.9128 ———
- (20%Emax) 457.825 ———
- (30%Emax) 686.7375 ———
- (40%Emax) 915.65 ———
- (50%Emax) 1144.563 ———
- (60%Emax) 1373.478 ———
- (70%Emax) 1602.39 ———
- (80%Emax) 1831.302 ———
- (90%Emax) 2060.215 ———



Luminance Table

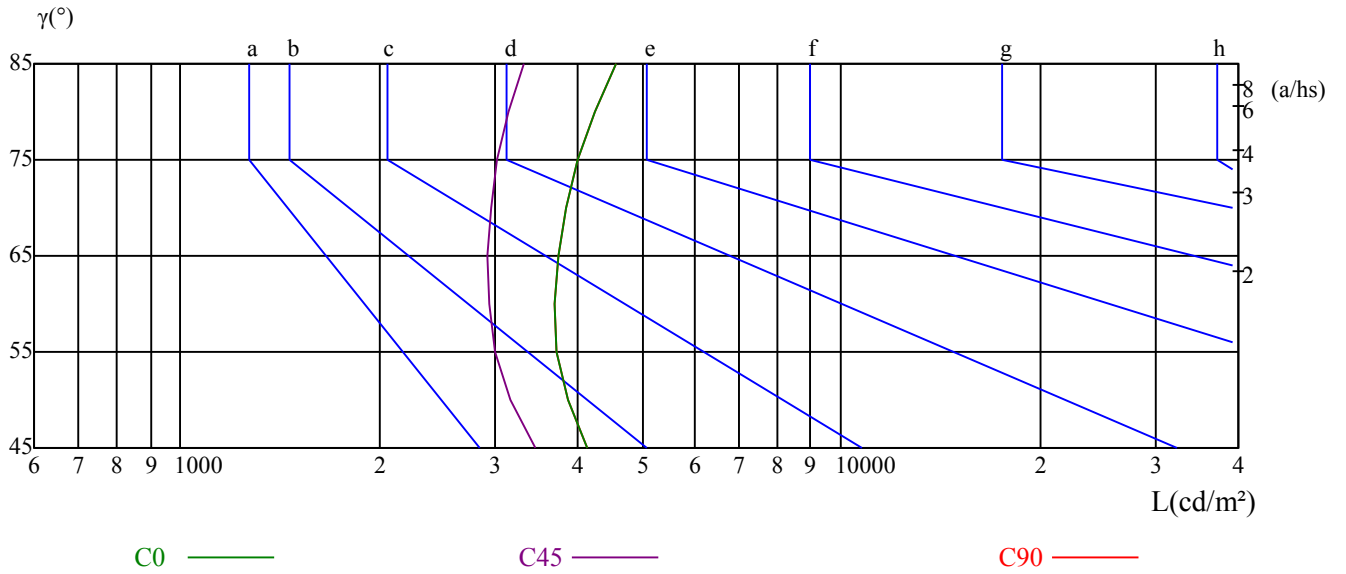
γ	45	50	55	60	65	70	75	80	85
C0	4126	3855	3707	3678	3726	3839	3986	4232	4579
C45	3438	3165	2998	2929	2920	2957	3015	3139	3321
C90	4126	3855	3707	3678	3726	3839	3986	4232	4579

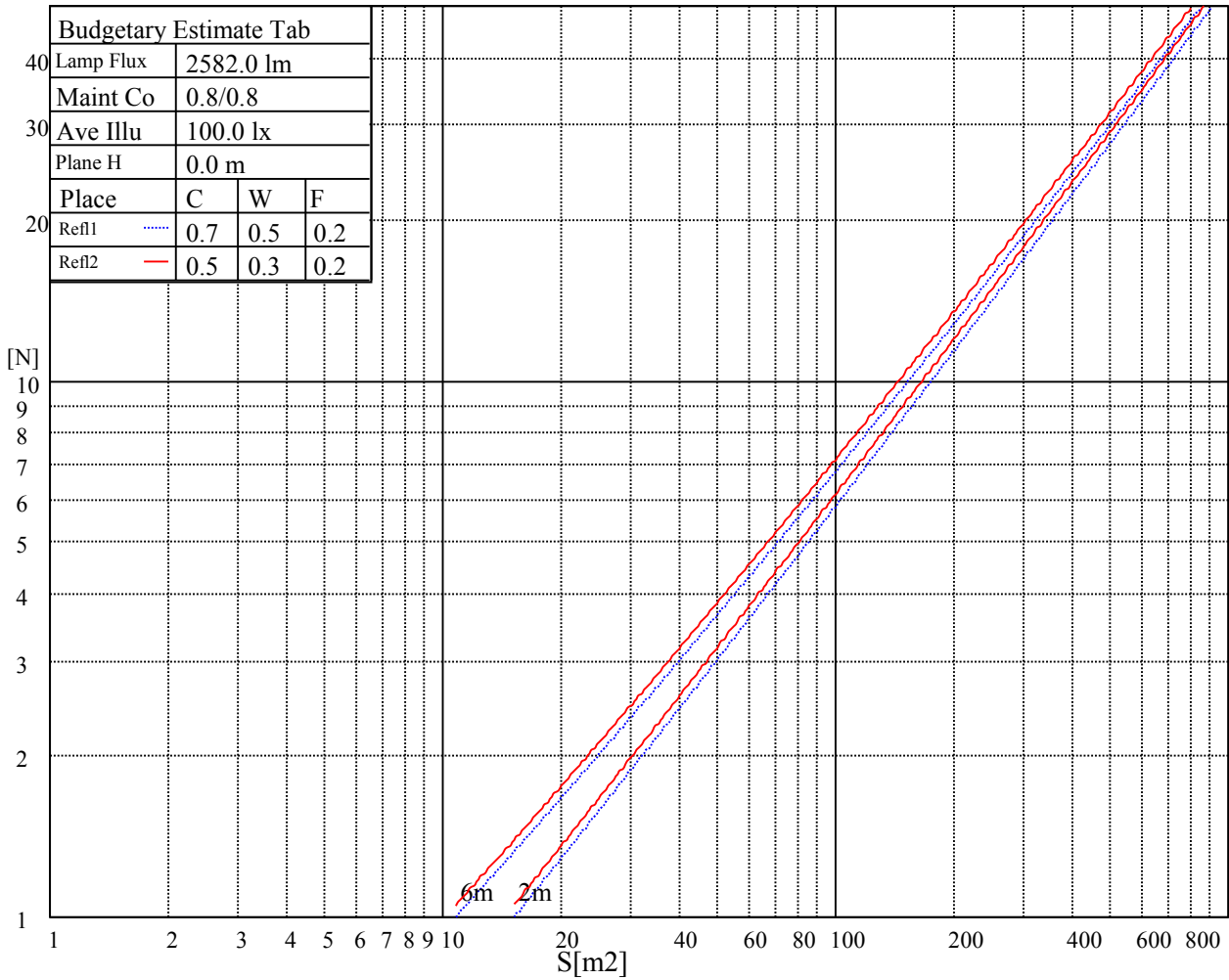
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11184	11184	11184	17870	17870	17870	53424	53424	53424

Glare Table

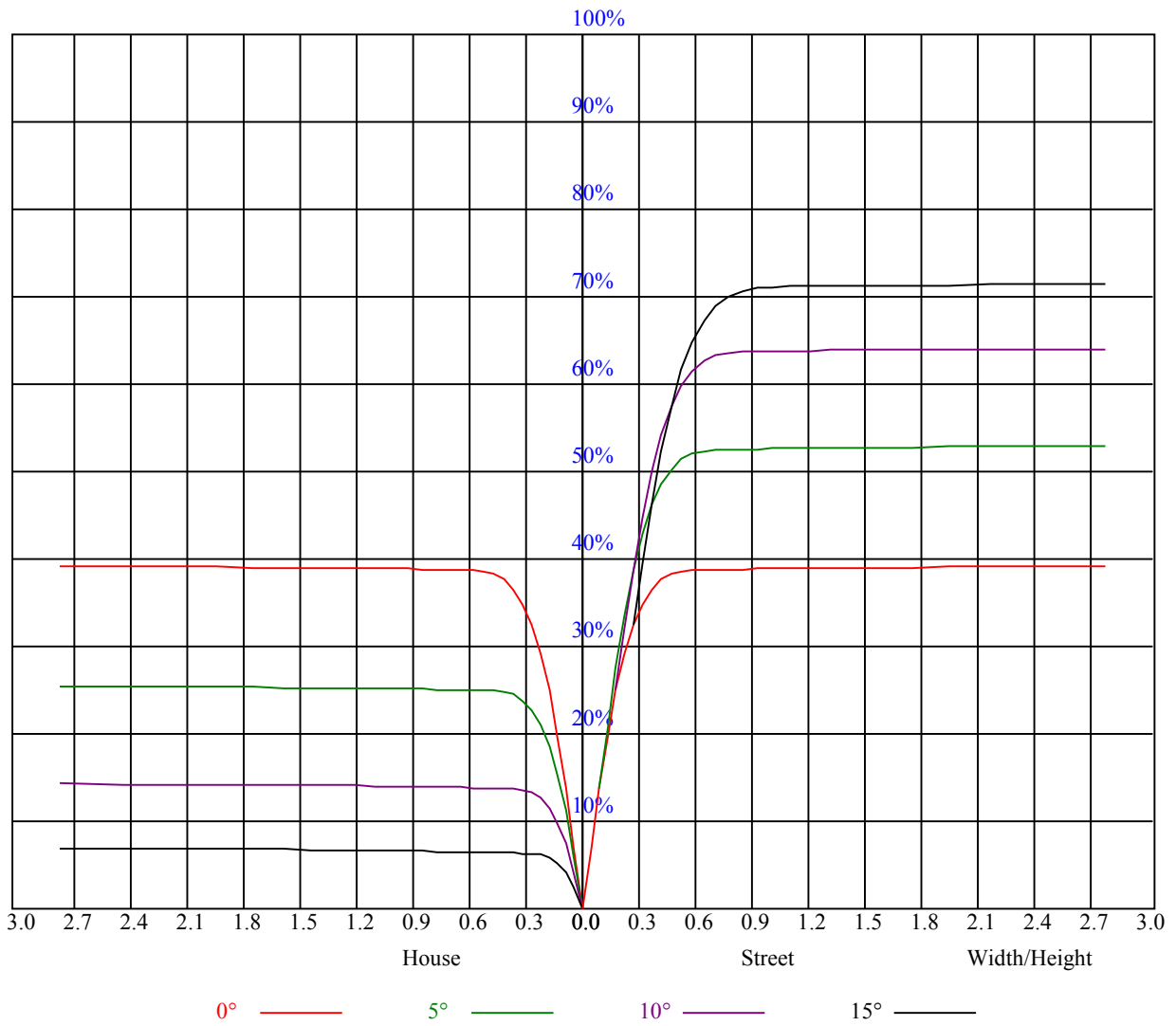
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.80	0.80	0.80	0.79
1	0.89	0.87	0.86	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.76
2	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.79	0.77	0.76	0.76	0.75	0.74	0.73
3	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.76	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.70	0.69
5	0.75	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.67
6	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
7	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.68	0.65	0.64	0.63
8	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
9	0.66	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.60
10	0.65	0.62	0.60	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.58



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	9151.31	9121.50	8998.31	8794.69	8559.56	8238.94	7857.56	7481.25	7062.75
45.0	9165.38	9113.63	8970.75	8750.81	8507.25	8218.13	7773.75	7372.69	6939.56
90.0	9152.44	9069.19	8924.63	8696.81	8404.31	8089.31	7714.69	7193.25	6739.88
135.0	9156.94	9141.75	9036.00	8851.50	8633.25	8361.56	7940.81	7540.31	7115.63
180.0	9151.31	9100.69	8975.25	8772.19	8503.31	8202.38	7838.44	7319.25	6865.31
225.0	9165.38	9135.00	9021.38	8834.06	8571.94	8284.50	7886.25	7439.63	6998.06
270.0	9152.44	9147.38	9051.75	8872.88	8659.69	8347.50	7961.06	7576.88	7161.75
315.0	9156.94	9081.00	8939.25	8722.69	8445.38	8138.81	7732.13	7279.88	6846.19
360.0	9151.31	9121.50	8998.31	8794.69	8559.56	8238.94	7857.56	7481.25	7062.75
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6498.00	6025.50	5548.50	5014.69	4495.50	4051.69	3581.44	3141.00	2783.81
45.0	6373.13	5887.13	5392.13	4850.44	4336.88	3903.19	3437.44	3062.25	2674.69
90.0	6261.19	5641.31	5150.81	4678.31	4171.50	3688.31	3287.25	2871.00	2533.50
135.0	6544.69	6040.13	5536.13	4979.81	4443.75	3989.81	3506.63	3114.56	2715.19
180.0	6379.88	5758.88	5264.44	4782.38	4262.63	3767.06	3355.31	2931.75	2589.75
225.0	6527.81	5913.56	5416.31	4932.00	4349.25	3908.81	3494.81	3058.88	2660.63
270.0	6599.25	6122.25	5639.06	5097.94	4572.00	4116.38	3689.44	3189.38	2827.13
315.0	6381.00	5779.69	5292.56	4816.69	4240.69	3810.38	3406.50	2982.38	2598.75
360.0	6498.00	6025.50	5548.50	5014.69	4495.50	4051.69	3581.44	3141.00	2783.81
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2421.00	2138.06	1849.50	1584.56	1369.69	1139.06	918.00	736.88	562.50
45.0	2315.81	2035.69	1745.44	1490.06	1289.25	1081.69	832.50	665.44	506.25
90.0	2188.69	1884.38	1646.44	1401.75	1100.81	982.35	796.50	583.37	427.89
135.0	2346.75	2062.13	1764.56	1512.00	1306.69	1116.00	876.94	700.88	543.38
180.0	2239.88	1932.19	1693.13	1451.81	1101.38	1030.61	846.51	631.74	473.63
225.0	2348.44	2038.50	1791.56	1538.44	1120.33	1096.93	881.49	682.59	516.32
270.0	2499.75	2178.00	1886.06	1651.50	1406.81	1177.31	980.44	766.13	587.25
315.0	2297.25	1992.38	1746.56	1490.63	1121.34	1045.74	827.61	628.09	468.73
360.0	2421.00	2138.06	1849.50	1584.56	1369.69	1139.06	918.00	736.88	562.50
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	372.94	293.06	147.60	71.72	19.41	14.79	13.61	12.43	11.70
45.0	362.25	296.44	120.21	58.33	15.64	13.67	12.66	11.76	11.08
90.0	298.52	177.19	83.08	30.43	14.79	13.44	12.49	11.76	11.08
135.0	390.94	297.56	131.01	55.18	16.93	14.06	13.05	12.15	11.42
180.0	334.24	207.11	102.43	37.63	17.04	13.61	12.66	11.87	11.19
225.0	371.14	217.80	122.40	51.30	18.73	14.74	13.50	12.43	11.59
270.0	411.75	295.31	155.42	78.24	21.09	15.13	13.89	12.71	11.93
315.0	330.64	192.15	104.51	39.26	16.54	14.46	13.33	12.43	11.48
360.0	372.94	293.06	147.60	71.72	19.41	14.79	13.61	12.43	11.70
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	11.03	10.46	9.96	9.68	9.34	9.11	8.89	8.78	8.61
45.0	10.58	10.13	9.79	9.45	9.23	9.00	8.83	8.66	8.55
90.0	10.58	10.18	9.79	9.51	9.23	9.00	8.83	8.72	8.61
135.0	10.91	10.41	10.01	9.73	9.39	9.17	9.00	8.83	8.72
180.0	10.63	10.18	9.84	9.56	9.23	9.06	8.89	8.72	8.61
225.0	10.97	10.41	10.01	9.62	9.28	9.11	8.89	8.72	8.55
270.0	11.25	10.63	10.13	9.79	9.45	9.23	9.00	8.83	8.66
315.0	10.91	10.41	10.01	9.62	9.34	9.11	8.89	8.72	8.61
360.0	11.03	10.46	9.96	9.68	9.34	9.11	8.89	8.78	8.61

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	8.55	8.38	8.33	8.27	8.16	8.16	8.10	8.10	8.04
45.0	8.44	8.38	8.27	8.27	8.16	8.10	8.10	8.04	7.99
90.0	8.44	8.38	8.33	8.27	8.21	8.16	8.16	8.10	8.10
135.0	8.61	8.49	8.44	8.33	8.27	8.21	8.21	8.16	8.10
180.0	8.49	8.38	8.33	8.27	8.21	8.16	8.16	8.10	8.04
225.0	8.49	8.38	8.27	8.21	8.16	8.10	8.10	8.04	7.99
270.0	8.49	8.44	8.38	8.33	8.27	8.21	8.21	8.16	8.10
315.0	8.49	8.38	8.33	8.27	8.21	8.16	8.16	8.04	8.04
360.0	8.55	8.38	8.33	8.27	8.16	8.16	8.10	8.10	8.04
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.04	7.99	7.93	7.93	7.93	7.88	7.88	7.88	7.82
45.0	7.99	7.99	7.93	7.93	7.93	7.88	7.82	7.82	7.82
90.0	8.04	7.99	7.99	7.99	7.99	7.99	7.93	7.93	7.93
135.0	8.10	8.04	7.99	7.99	7.99	7.99	7.93	7.93	7.93
180.0	7.99	7.99	7.99	7.93	7.93	7.93	7.88	7.88	7.88
225.0	7.93	7.99	7.88	7.88	7.88	7.88	7.82	7.82	7.76
270.0	8.04	8.04	8.04	7.99	7.99	7.99	7.93	7.93	7.93
315.0	8.04	7.99	7.99	7.93	7.93	7.88	7.88	7.88	7.88
360.0	8.04	7.99	7.93	7.93	7.93	7.88	7.88	7.88	7.82
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.82	7.82	7.82	7.76	7.76	7.76	7.76	7.76	7.76
45.0	7.82	7.82	7.82	7.82	7.76	7.76	7.71	7.76	7.71
90.0	7.88	7.93	7.93	7.93	7.93	7.93	7.99	7.93	7.93
135.0	7.88	7.88	7.82	7.82	7.82	7.82	7.82	7.82	7.82
180.0	7.76	7.82	7.82	7.82	7.82	7.76	7.76	7.76	7.76
225.0	7.76	7.76	7.76	7.76	7.76	7.71	7.71	7.71	7.71
270.0	7.93	7.93	7.93	7.93	7.93	7.93	7.99	7.99	8.04
315.0	7.88	7.82	7.82	7.76	7.76	7.82	7.76	7.76	7.76
360.0	7.82	7.82	7.82	7.76	7.76	7.76	7.76	7.76	7.76
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.76	7.76	7.71	7.71	7.71	7.71	7.71	7.71	7.76
45.0	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71
90.0	7.99	7.99	7.99	7.99	8.10	8.16	8.16	8.27	8.27
135.0	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76
180.0	7.76	7.76	7.76	7.71	7.71	7.71	7.71	7.71	7.71
225.0	7.71	7.71	7.71	7.65	7.71	7.65	7.71	7.65	7.65
270.0	8.04	8.10	8.16	8.16	8.16	8.16	8.21	8.27	8.33
315.0	7.71	7.76	7.71	7.76	7.76	7.76	7.76	7.76	7.76
360.0	7.76	7.76	7.71	7.71	7.71	7.71	7.71	7.71	7.76
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.71	7.71	7.71	7.76	7.71	7.71	7.65	7.71	7.65
45.0	7.71	7.71	7.71	7.71	7.71	7.65	7.65	7.65	7.65
90.0	8.33	8.33	8.33	7.99	7.76	7.65	7.65	7.65	7.65
135.0	7.76	7.76	7.76	7.76	7.82	7.76	7.71	7.71	7.71
180.0	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.65	7.71
225.0	7.65	7.65	7.65	7.65	7.71	7.65	7.65	7.59	7.65
270.0	8.33	8.38	8.44	8.55	8.72	8.21	7.76	7.65	7.65
315.0	7.71	7.71	7.76	7.76	7.76	7.71	7.65	7.71	7.65
360.0	7.71	7.71	7.71	7.76	7.71	7.71	7.65	7.71	7.65

Intensity data(cd)

C/γ(°)	90.0
0.0	7.71
45.0	7.65
90.0	7.65
135.0	7.71
180.0	7.71
225.0	7.59
270.0	7.71
315.0	7.71
360.0	7.71