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## Nata

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Client:

LumCAT: 1408-N

Luminaire: 92.70.043.00

Report No:

Voltage(V): 31.5600

Test No: GC20190824010

Current(A): 0.1970

LampCAT: XICATO XOB LES 6MM

Power (W): 6.2200

Lamp flux(lm): 658.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 39

Width(mm): 39

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 549.94, Efficiency(%): 83.58% , Luminous Efficacy(lm/W): 88.42

Central intensity(cd): 503.016, Maximum intensity(cd): 503.016

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.8

[C90/270]Total=57.8

Field angle(10%Imax): [C0/180]Total=102.0

[C90/270]Total=102.0

Maximum s/h(1/2): C0\_180=0.86 C90\_270=0.86

Maximum s/h(1/4): C0\_180=0.90 C90\_270=0.90

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.58%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 93.601%

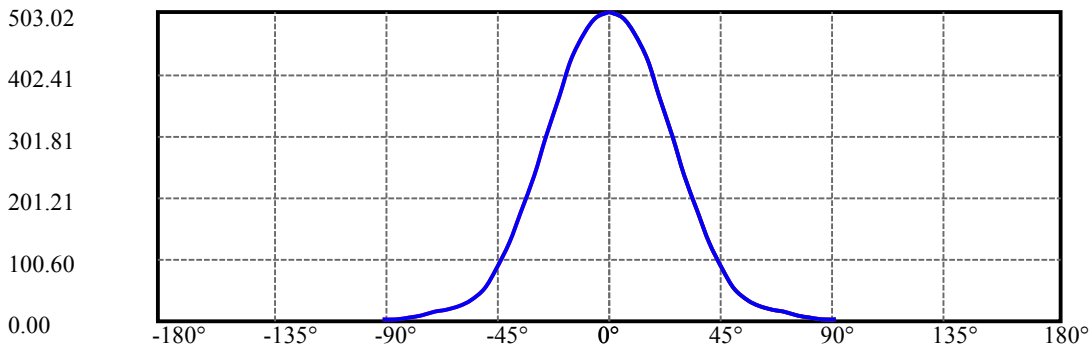
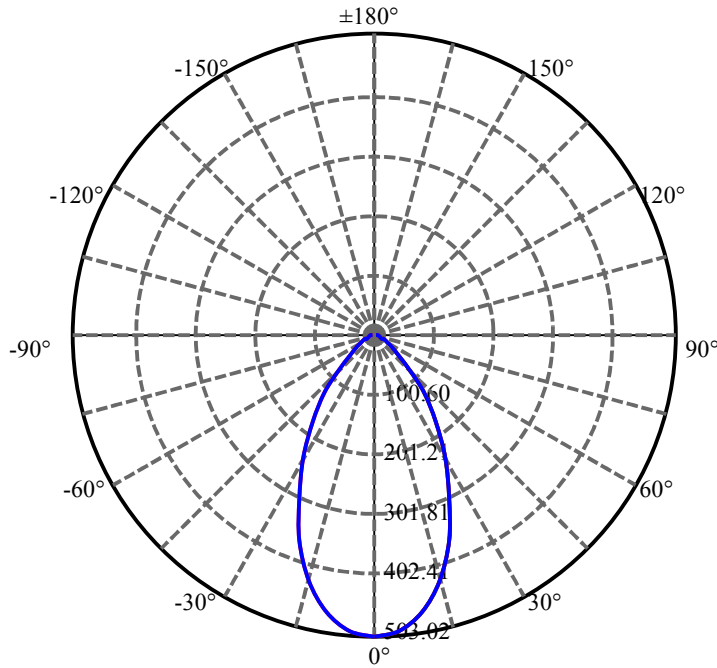
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	503.016	0.000	0	.000%	.000%
5.0	495.190	11.933	11.933	1.814%	2.170%
10.0	469.315	34.503	46.437	5.244%	8.444%
15.0	424.512	53.021	99.458	8.058%	18.085%
20.0	364.704	65.042	164.5	9.885%	29.912%
25.0	298.941	69.604	234.104	10.578%	42.569%
30.0	238.465	68.009	302.113	10.336%	54.935%
35.0	177.623	61.272	363.385	9.312%	66.077%
40.0	127.139	50.847	414.233	7.728%	75.323%
45.0	84.101	39.113	453.345	5.944%	82.435%
50.0	53.958	27.897	481.242	4.240%	87.508%
55.0	35.283	19.404	500.646	2.949%	91.036%
60.0	25.734	14.104	514.75	2.143%	93.601%
65.0	18.823	10.832	525.582	1.646%	95.570%
70.0	14.063	8.327	533.909	1.265%	97.084%
75.0	10.160	6.331	540.24	.962%	98.236%
80.0	7.038	4.602	544.842	.699%	99.072%
85.0	4.430	3.116	547.958	.474%	99.639%
90.0	2.820	1.985	549.943	.302%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	302.11	45.91%	54.94%
0-40	414.23	62.95%	75.32%
0-60	514.75	78.23%	93.60%
0-90	547.96	83.28%	99.64%
0-120	547.96	83.28%	99.64%
0-180	549.94	83.58%	100.00%
60-90	47.31	7.19%	8.60%
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%
0-43.29	439.95	66.86%	80.00%

ZONAL LUMEN SUMMARY

0-10	46.44
10-20	118.06
20-30	137.61
30-40	112.12
40-50	67.01
50-60	33.51
60-70	19.16
70-80	10.93
80-90	3.12
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: —————

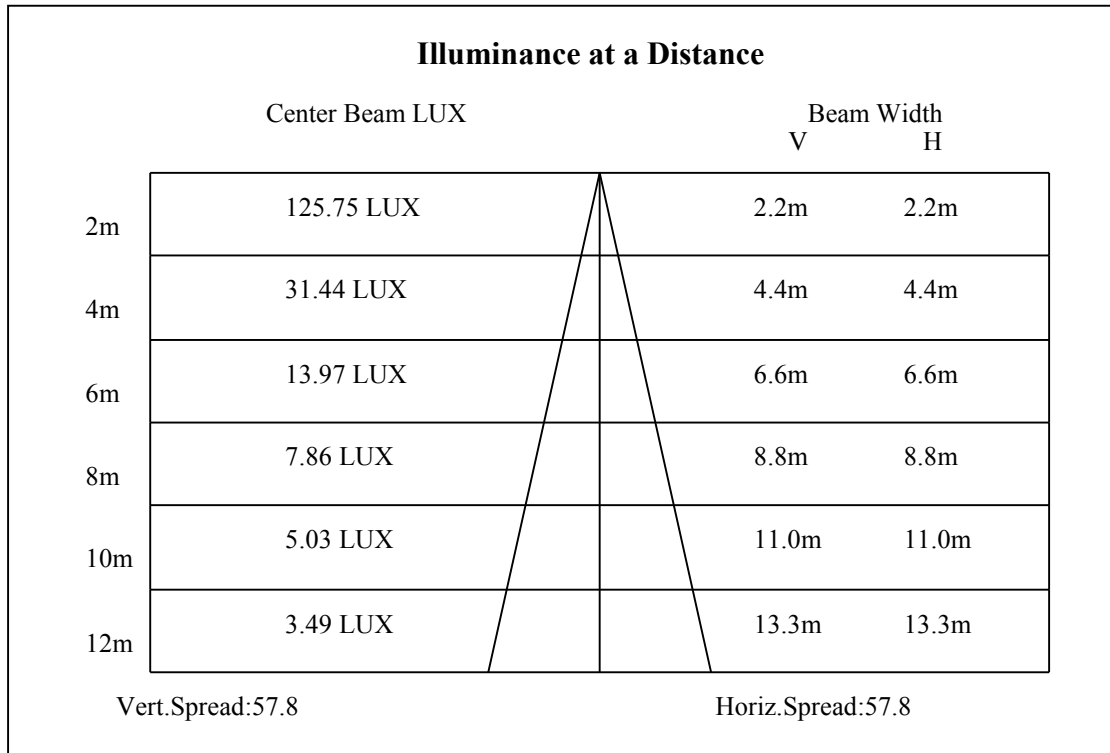
C90/C270: —————

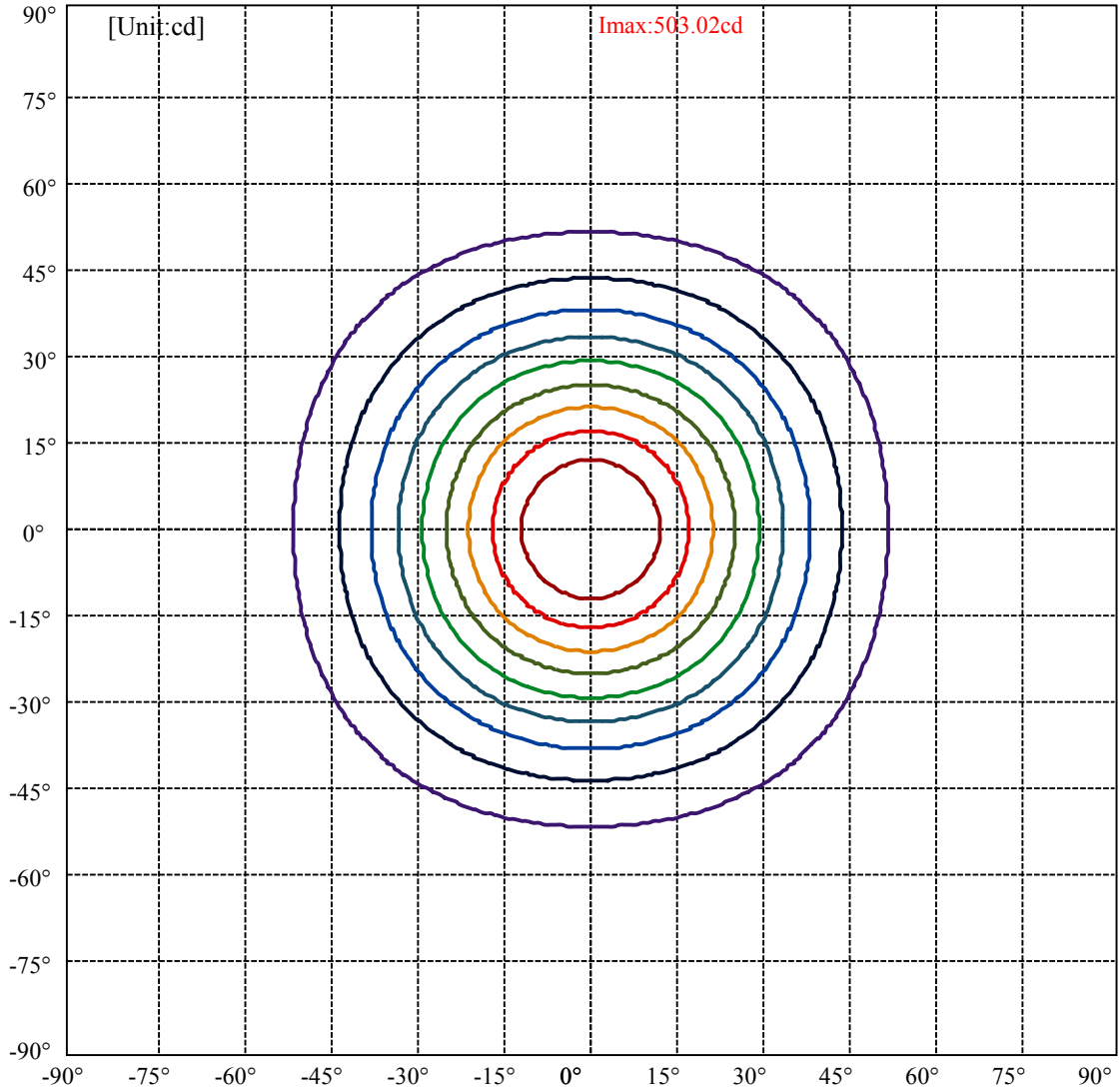
Field angle(10%Imax):C0/180Left:51.0 Right:51.0

:C90/270Left:51.0 Right:51.0

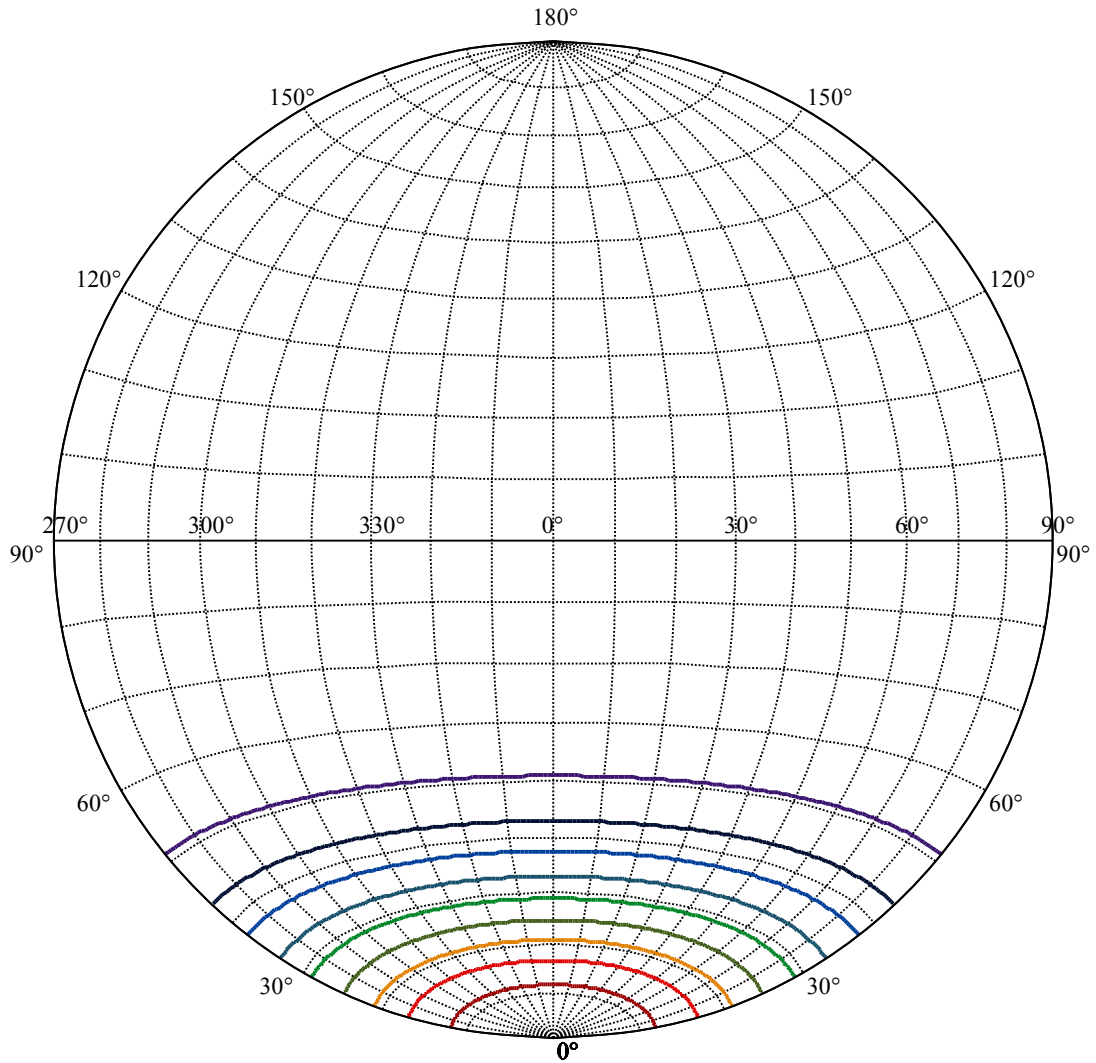
Beam Angle(50%Imax):C0/180Left:28.9 Right:28.9

:C90/270Left:28.9 Right:28.9





(10%Imax) 50.3016	—
(20%Imax) 100.603	—
(30%Imax) 150.905	—
(40%Imax) 201.206	—
(50%Imax) 251.508	—
(60%Imax) 301.809	—
(70%Imax) 352.111	—
(80%Imax) 402.413	—
(90%Imax) 452.714	—



House

[Unit:cd]

Road

**I<sub>max</sub>:503.02**

(10%I<sub>max</sub>) 50.3016

(20%I<sub>max</sub>) 100.603

(30%I<sub>max</sub>) 150.905

(40%I<sub>max</sub>) 201.206

(50%I<sub>max</sub>) 251.508

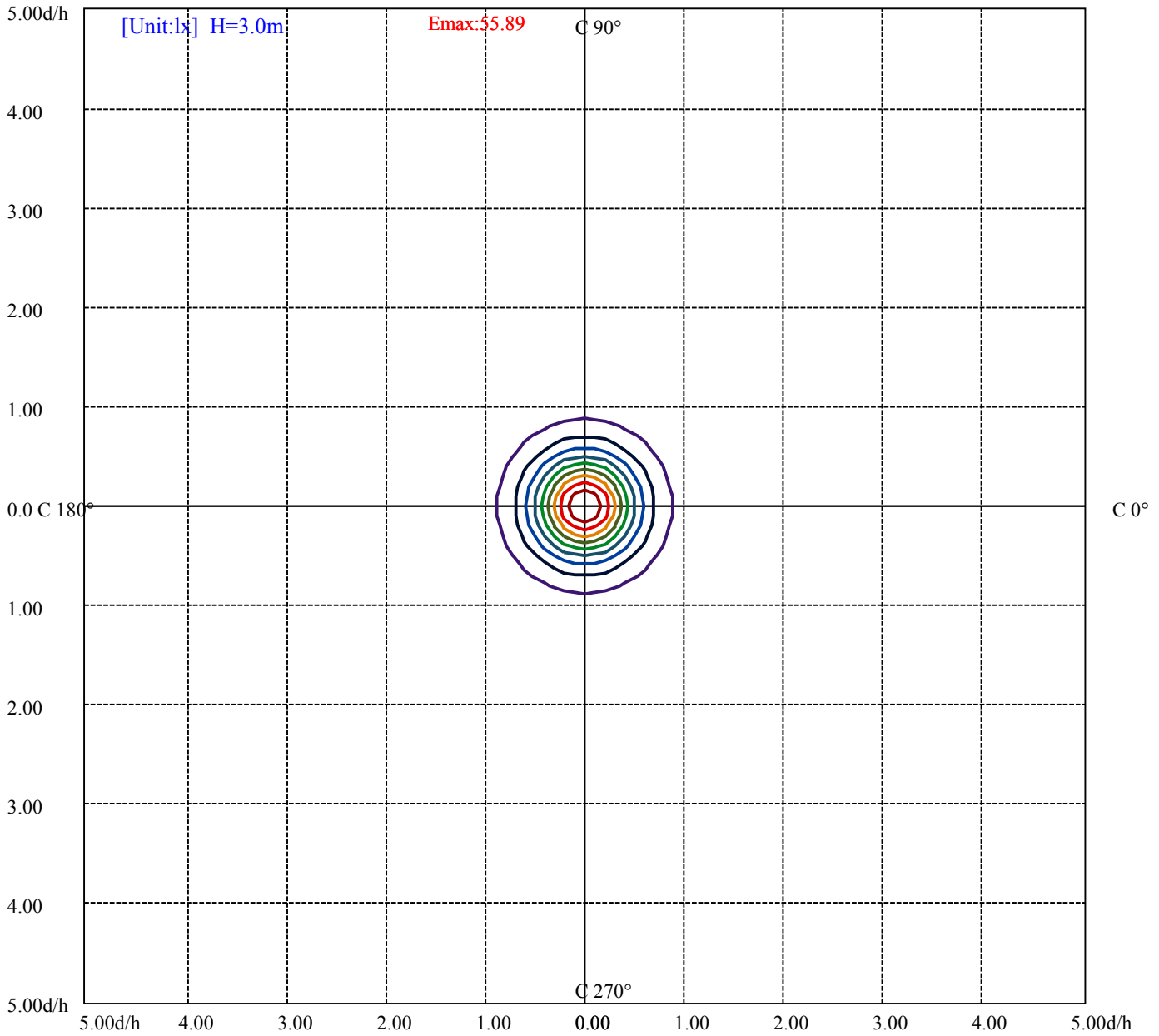
(60%I<sub>max</sub>) 301.809

(70%I<sub>max</sub>) 352.111

(80%I<sub>max</sub>) 402.413

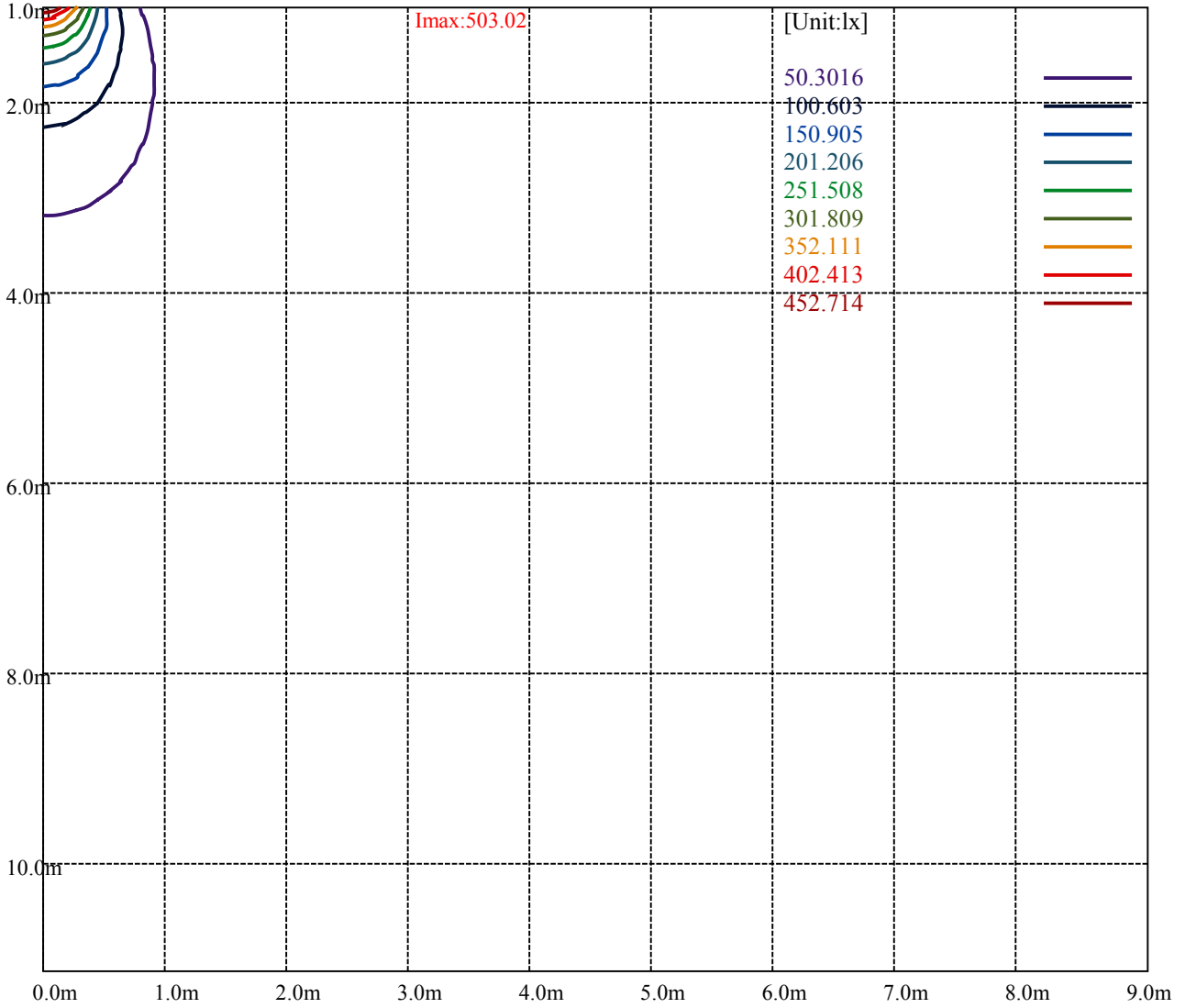
(90%I<sub>max</sub>) 452.714





- (10%Emax) 5.589056 ———
- (20%Emax) 11.17811 ———
- (30%Emax) 16.76722 ———
- (40%Emax) 22.35622 ———
- (50%Emax) 27.94533 ———
- (60%Emax) 33.53433 ———
- (70%Emax) 39.12344 ———
- (80%Emax) 44.71244 ———
- (90%Emax) 50.30156 ———





Luminance Table

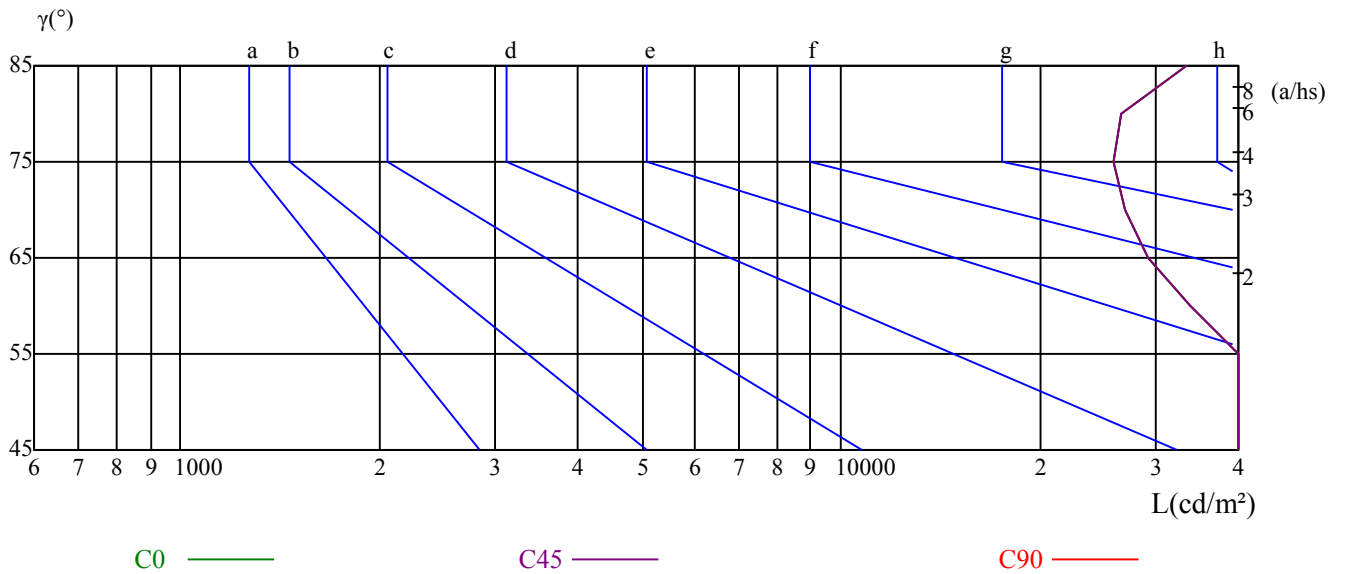
$\gamma$	45	50	55	60	65	70	75	80	85
C0	78196	55190	40443	33839	29282	27032	25809	26648	33415
C45	78196	55190	40443	33839	29282	27032	25809	26648	33415
C90	78196	55190	40443	33839	29282	27032	25809	26648	33415

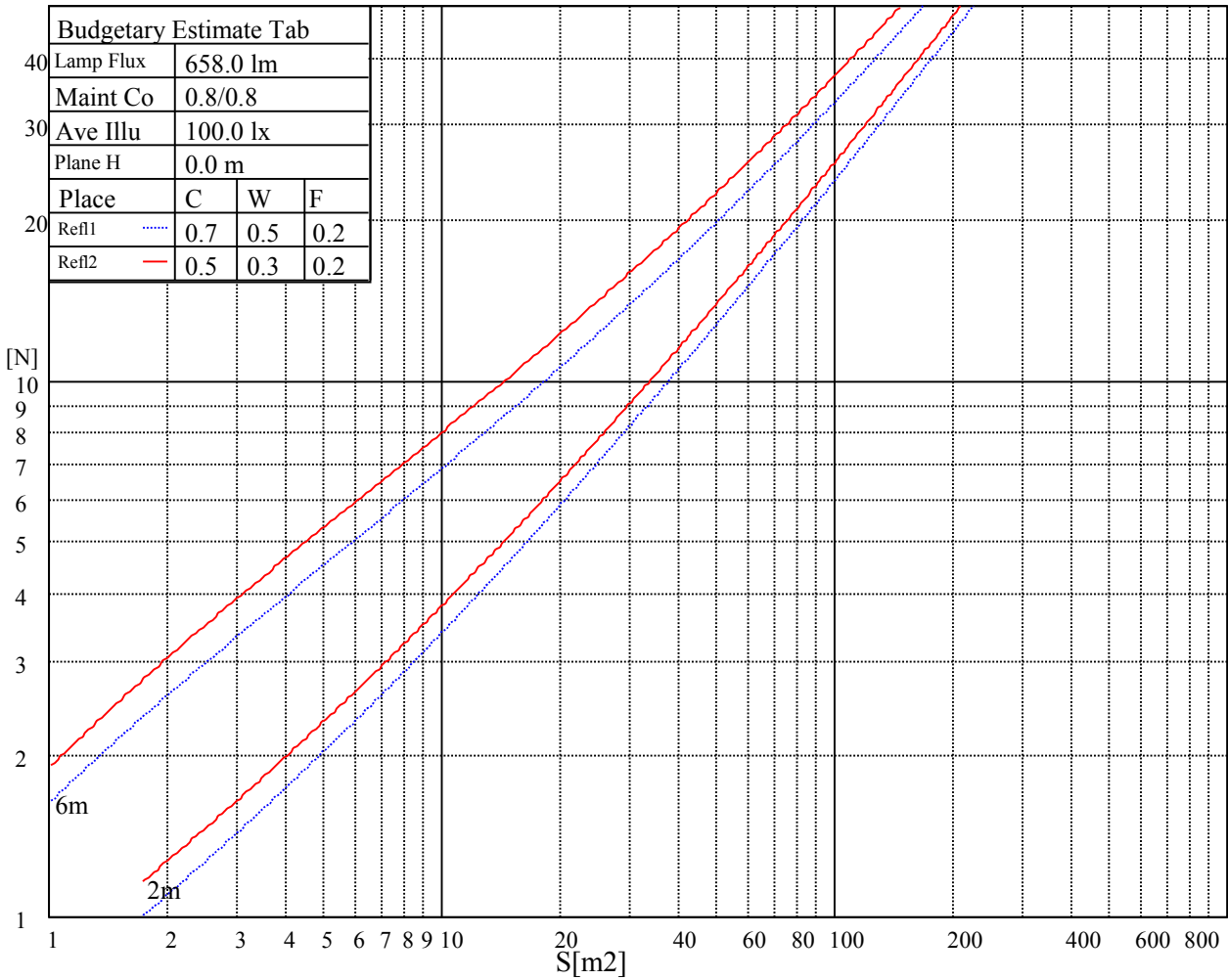
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29282	29282	29282	25809	25809	25809	33415	33415	33415

Glare Table

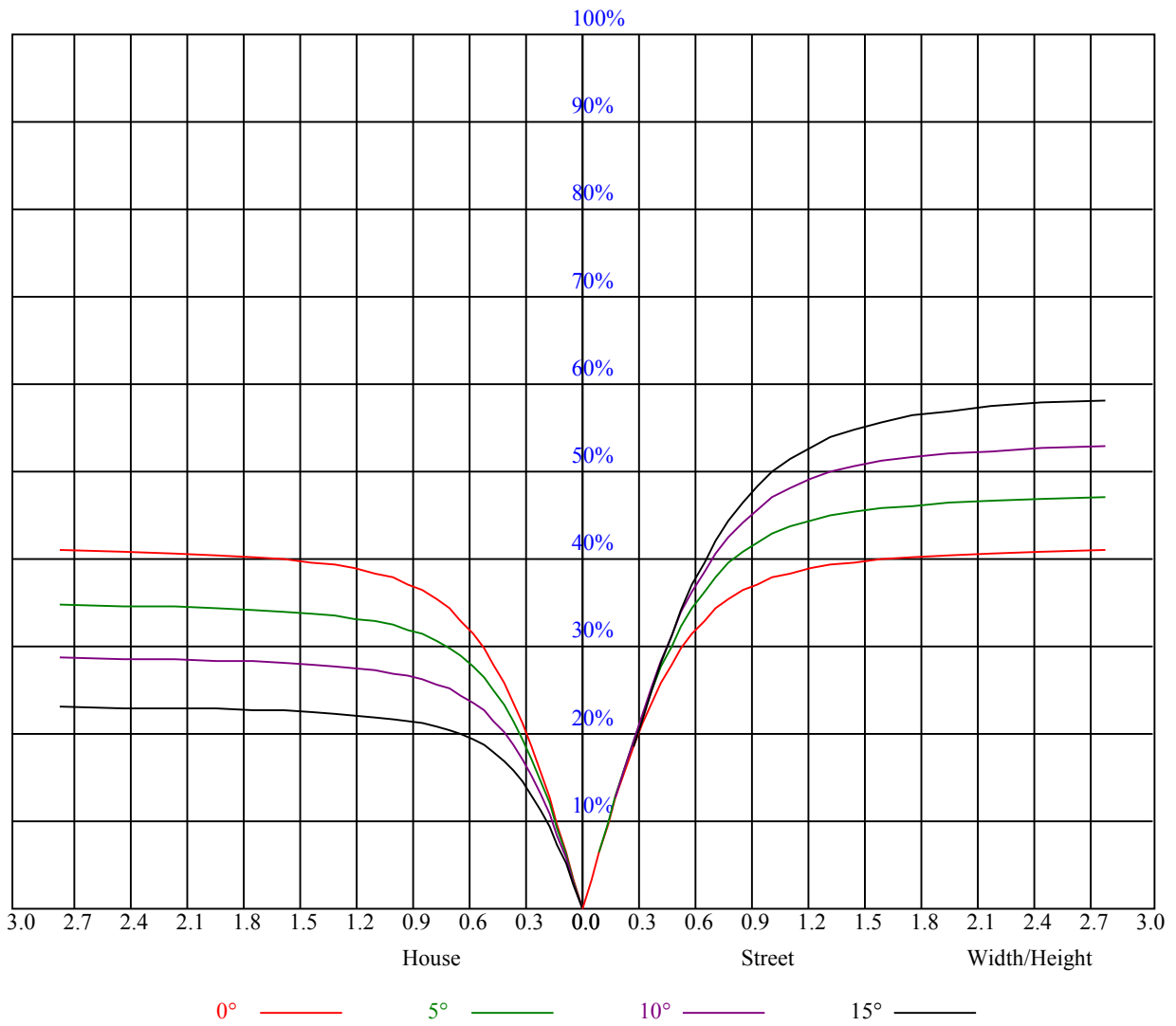
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

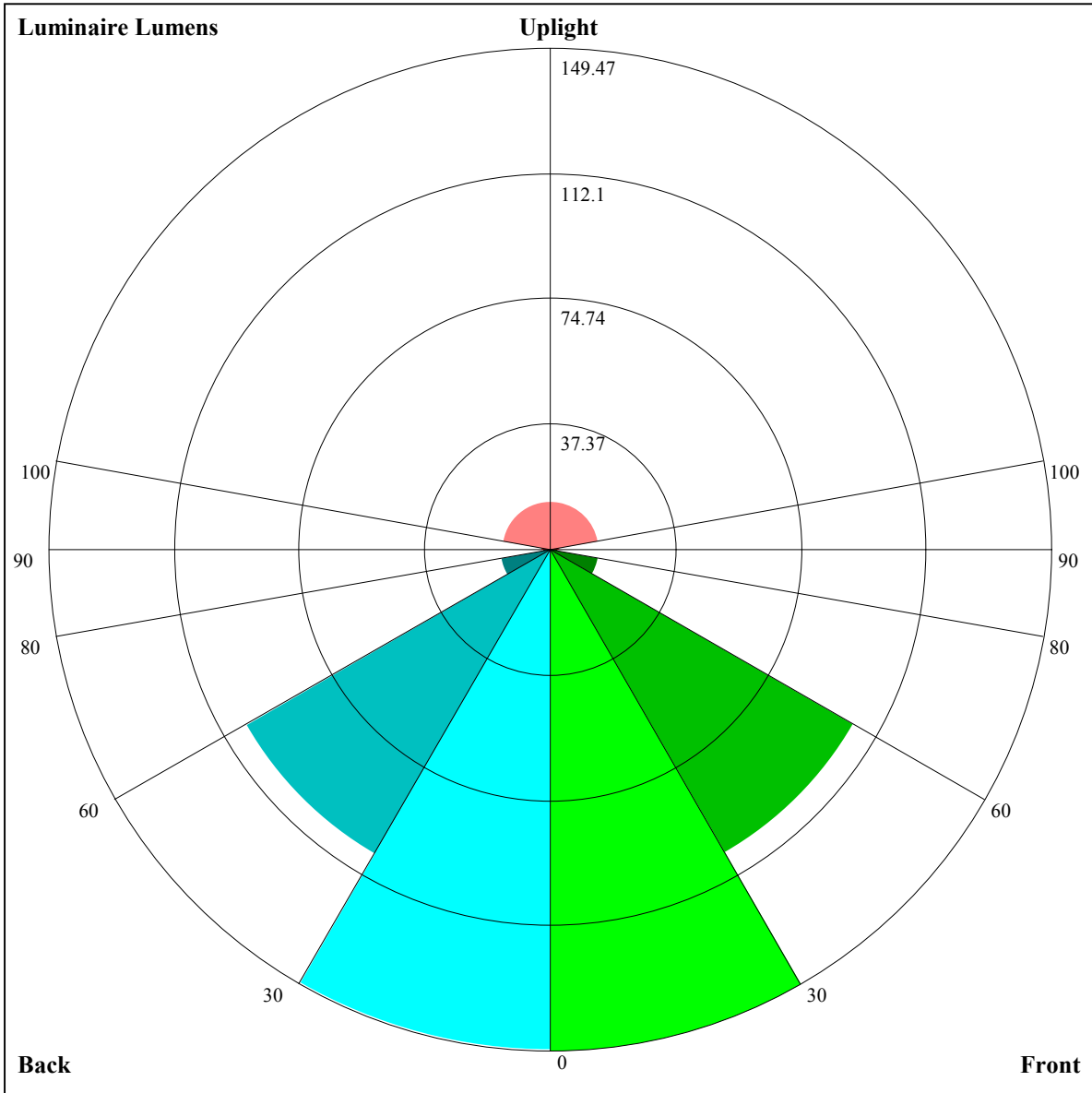
Luminance Limiting Curve





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	0.99	0.99	0.99	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.91	0.88	0.86	0.89	0.86	0.84	0.85	0.83	0.82	0.82	0.81	0.79	0.79	0.78	0.77	0.75
2	0.83	0.79	0.75	0.81	0.77	0.74	0.78	0.75	0.73	0.76	0.73	0.71	0.73	0.71	0.69	0.68
3	0.76	0.71	0.67	0.75	0.70	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.68	0.65	0.63	0.61
4	0.70	0.64	0.60	0.69	0.63	0.60	0.67	0.62	0.59	0.65	0.61	0.58	0.63	0.60	0.57	0.56
5	0.64	0.59	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.60	0.56	0.53	0.59	0.55	0.53	0.51
6	0.60	0.54	0.50	0.59	0.53	0.49	0.58	0.53	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.47
7	0.55	0.50	0.46	0.55	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.43
8	0.52	0.46	0.42	0.51	0.46	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.49	0.44	0.41	0.40
9	0.49	0.43	0.39	0.48	0.43	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.46	0.42	0.39	0.37
10	0.46	0.40	0.37	0.45	0.40	0.36	0.44	0.40	0.36	0.44	0.39	0.36	0.43	0.39	0.36	0.35





Luminaire Lumens:

FL=149.47,FM=104.31,FH=14.51,FVH=2.33

BL=149.39,BM=104.63,BH=15.18,BVH=2.62

UL=3.08,UH=14.64

BUG Rating:B1-U2-G0

Intensity data(cd)

<b>C/γ(°)</b>	<b>0.0</b>	<b>5.0</b>	<b>10.0</b>	<b>15.0</b>	<b>20.0</b>	<b>25.0</b>	<b>30.0</b>	<b>35.0</b>	<b>40.0</b>
<b>0.0</b>	<b>502.43</b>	<b>498.04</b>	<b>475.65</b>	<b>434.14</b>	<b>381.15</b>	<b>313.99</b>	<b>251.33</b>	<b>187.88</b>	<b>133.20</b>
<b>45.0</b>	<b>501.64</b>	<b>495.62</b>	<b>465.81</b>	<b>425.14</b>	<b>371.48</b>	<b>309.77</b>	<b>257.91</b>	<b>192.43</b>	<b>139.05</b>
<b>90.0</b>	<b>503.44</b>	<b>492.13</b>	<b>459.45</b>	<b>410.96</b>	<b>347.79</b>	<b>282.71</b>	<b>220.67</b>	<b>162.23</b>	<b>118.13</b>
<b>135.0</b>	<b>504.56</b>	<b>497.08</b>	<b>473.74</b>	<b>437.63</b>	<b>380.81</b>	<b>318.43</b>	<b>260.38</b>	<b>199.63</b>	<b>147.32</b>
<b>180.0</b>	<b>502.43</b>	<b>493.99</b>	<b>473.01</b>	<b>427.28</b>	<b>358.20</b>	<b>283.16</b>	<b>212.85</b>	<b>153.56</b>	<b>110.08</b>
<b>225.0</b>	<b>501.64</b>	<b>493.26</b>	<b>468.96</b>	<b>426.49</b>	<b>370.46</b>	<b>309.32</b>	<b>249.08</b>	<b>188.44</b>	<b>136.63</b>
<b>270.0</b>	<b>503.44</b>	<b>496.41</b>	<b>469.24</b>	<b>418.89</b>	<b>352.13</b>	<b>281.59</b>	<b>223.26</b>	<b>165.66</b>	<b>116.61</b>
<b>315.0</b>	<b>504.56</b>	<b>495.00</b>	<b>468.68</b>	<b>415.58</b>	<b>355.61</b>	<b>292.56</b>	<b>232.26</b>	<b>171.17</b>	<b>116.10</b>
<b>360.0</b>	<b>502.43</b>	<b>498.04</b>	<b>475.65</b>	<b>434.14</b>	<b>381.15</b>	<b>313.99</b>	<b>251.33</b>	<b>187.88</b>	<b>133.20</b>
<b>C/γ(°)</b>	<b>45.0</b>	<b>50.0</b>	<b>55.0</b>	<b>60.0</b>	<b>65.0</b>	<b>70.0</b>	<b>75.0</b>	<b>80.0</b>	<b>85.0</b>
<b>0.0</b>	<b>87.47</b>	<b>55.18</b>	<b>36.62</b>	<b>26.83</b>	<b>19.63</b>	<b>14.68</b>	<b>10.63</b>	<b>7.31</b>	<b>4.61</b>
<b>45.0</b>	<b>89.94</b>	<b>58.33</b>	<b>36.68</b>	<b>25.65</b>	<b>18.73</b>	<b>13.89</b>	<b>9.96</b>	<b>6.81</b>	<b>4.16</b>
<b>90.0</b>	<b>77.68</b>	<b>51.24</b>	<b>33.24</b>	<b>24.92</b>	<b>18.17</b>	<b>13.22</b>	<b>9.51</b>	<b>6.47</b>	<b>3.99</b>
<b>135.0</b>	<b>101.98</b>	<b>63.90</b>	<b>40.67</b>	<b>29.08</b>	<b>20.98</b>	<b>15.58</b>	<b>11.36</b>	<b>8.16</b>	<b>5.23</b>
<b>180.0</b>	<b>75.38</b>	<b>50.68</b>	<b>34.59</b>	<b>26.04</b>	<b>19.97</b>	<b>15.98</b>	<b>12.32</b>	<b>8.94</b>	<b>6.13</b>
<b>225.0</b>	<b>85.33</b>	<b>52.43</b>	<b>33.98</b>	<b>24.69</b>	<b>17.89</b>	<b>13.22</b>	<b>9.51</b>	<b>6.47</b>	<b>4.11</b>
<b>270.0</b>	<b>77.96</b>	<b>50.57</b>	<b>33.64</b>	<b>24.58</b>	<b>17.66</b>	<b>12.99</b>	<b>8.94</b>	<b>6.02</b>	<b>3.38</b>
<b>315.0</b>	<b>77.06</b>	<b>49.33</b>	<b>32.85</b>	<b>24.08</b>	<b>17.55</b>	<b>12.94</b>	<b>9.06</b>	<b>6.13</b>	<b>3.83</b>
<b>360.0</b>	<b>87.47</b>	<b>55.18</b>	<b>36.62</b>	<b>26.83</b>	<b>19.63</b>	<b>14.68</b>	<b>10.63</b>	<b>7.31</b>	<b>4.61</b>
<b>C/γ(°)</b>	<b>90.0</b>								
<b>0.0</b>	<b>2.81</b>								
<b>45.0</b>	<b>2.64</b>								
<b>90.0</b>	<b>2.42</b>								
<b>135.0</b>	<b>3.21</b>								
<b>180.0</b>	<b>3.83</b>								
<b>225.0</b>	<b>2.70</b>								
<b>270.0</b>	<b>2.36</b>								
<b>315.0</b>	<b>2.59</b>								
<b>360.0</b>	<b>2.81</b>								