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## Nata

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LumCAT: PH24L28060AW

Luminaire:

Report No: NATA0100

Voltage(V): 22.9600

Test No: GC2019101901

Current(A): 0.2980

LampCAT: PHILIPS Fortimo LED Strip 1ft 1100lm 930 FC HV4 Power (W): 6.8400

Lamp flux(lm): 1726.6

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1392.32

Efficiency(%): 80.64%

Lumens(lm)/Power(W): 203.56

Central intensity(cd): 881.250

Maximum intensity(cd): 881.250

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

Beam Angle(50%Imax): [C0/180]Total=61.9

[C90/270]Total=61.9

Field angle(10%Imax): [C0/180]Total=158.1

[C90/270]Total=158.1

Maximum s/h(1/2): C0\_180=0.89 C90\_270=0.89

Maximum s/h(1/4): C0\_180=0.95 C90\_270=0.95

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 80.64%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 79.321%

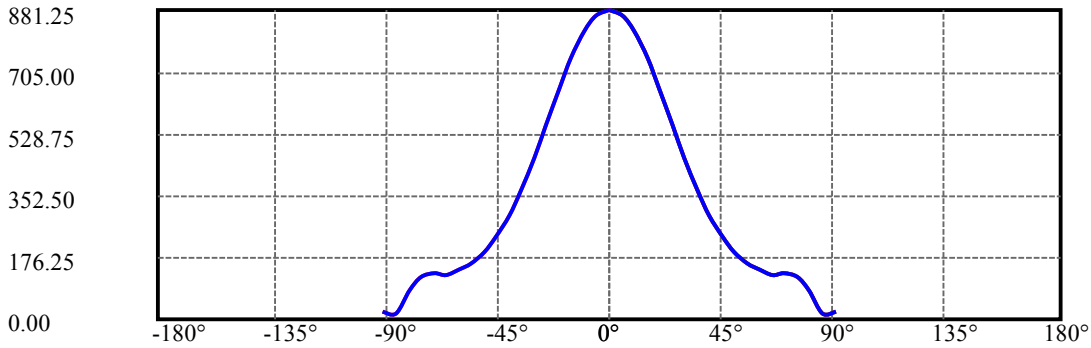
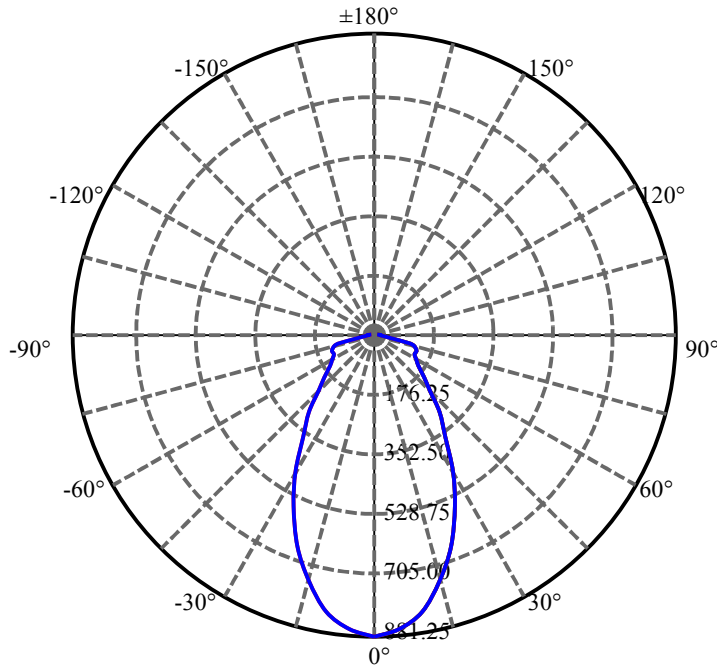
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	881.250	0.000	0	.000%	.000%
5.0	864.875	20.874	20.874	1.209%	1.499%
10.0	819.575	60.258	81.133	3.490%	5.827%
15.0	745.475	92.838	173.97	5.377%	12.495%
20.0	654.550	115.382	289.352	6.683%	20.782%
25.0	552.675	126.616	415.968	7.333%	29.876%
30.0	458.600	127.978	543.945	7.412%	39.068%
35.0	365.738	121.389	665.335	7.031%	47.786%
40.0	293.375	109.968	775.303	6.369%	55.684%
45.0	234.163	97.678	872.981	5.657%	62.700%
50.0	191.013	85.913	958.893	4.976%	68.870%
55.0	158.775	76.055	1034.949	4.405%	74.333%
60.0	141.713	69.457	1104.406	4.023%	79.321%
65.0	128.338	65.650	1170.055	3.802%	84.036%
70.0	132.138	65.954	1236.009	3.820%	88.773%
75.0	118.250	65.447	1301.457	3.791%	93.474%
80.0	81.200	53.367	1354.824	3.091%	97.307%
85.0	17.988	26.952	1381.775	1.561%	99.243%
90.0	20.525	10.545	1392.32	.611%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	543.95	31.50%	39.07%
0-40	775.30	44.90%	55.68%
0-60	1104.41	63.97%	79.32%
0-90	1381.78	80.03%	99.24%
0-120	1381.78	80.03%	99.24%
0-180	1392.32	80.64%	100.00%
60-90	346.83	20.09%	24.91%
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%
0-60.72	1113.86	64.51%	80.00%

ZONAL LUMEN SUMMARY

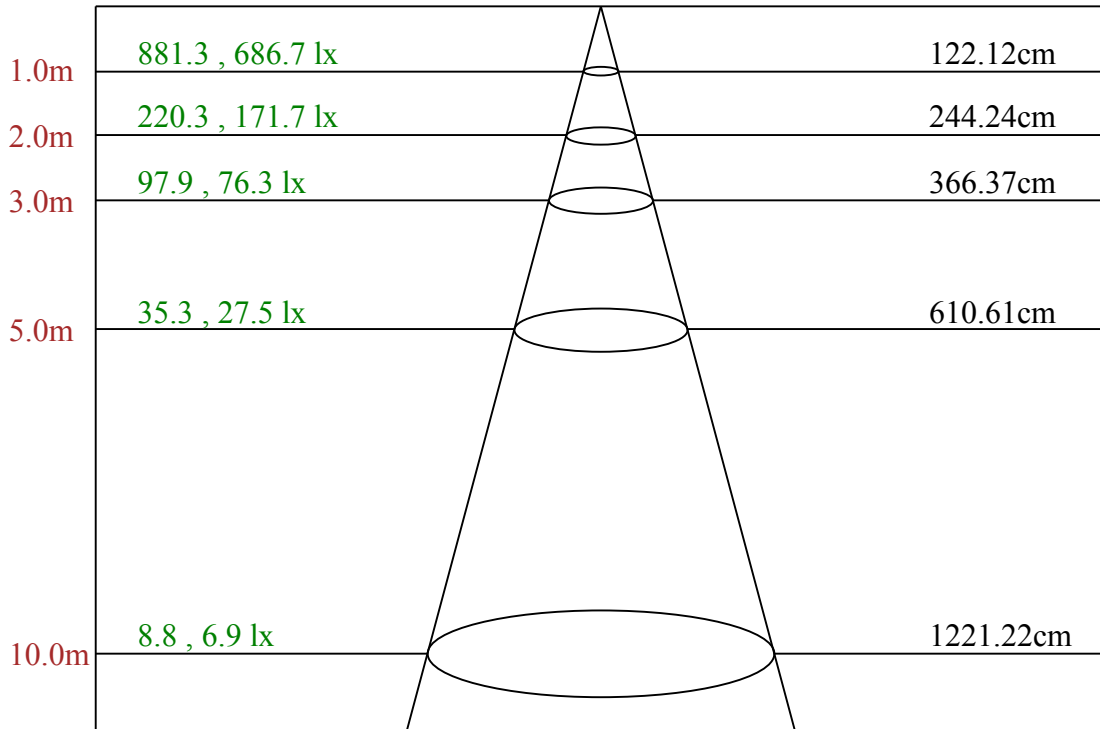
0-10	81.13
10-20	208.22
20-30	254.59
30-40	231.36
40-50	183.59
50-60	145.51
60-70	131.60
70-80	118.81
80-90	26.95
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



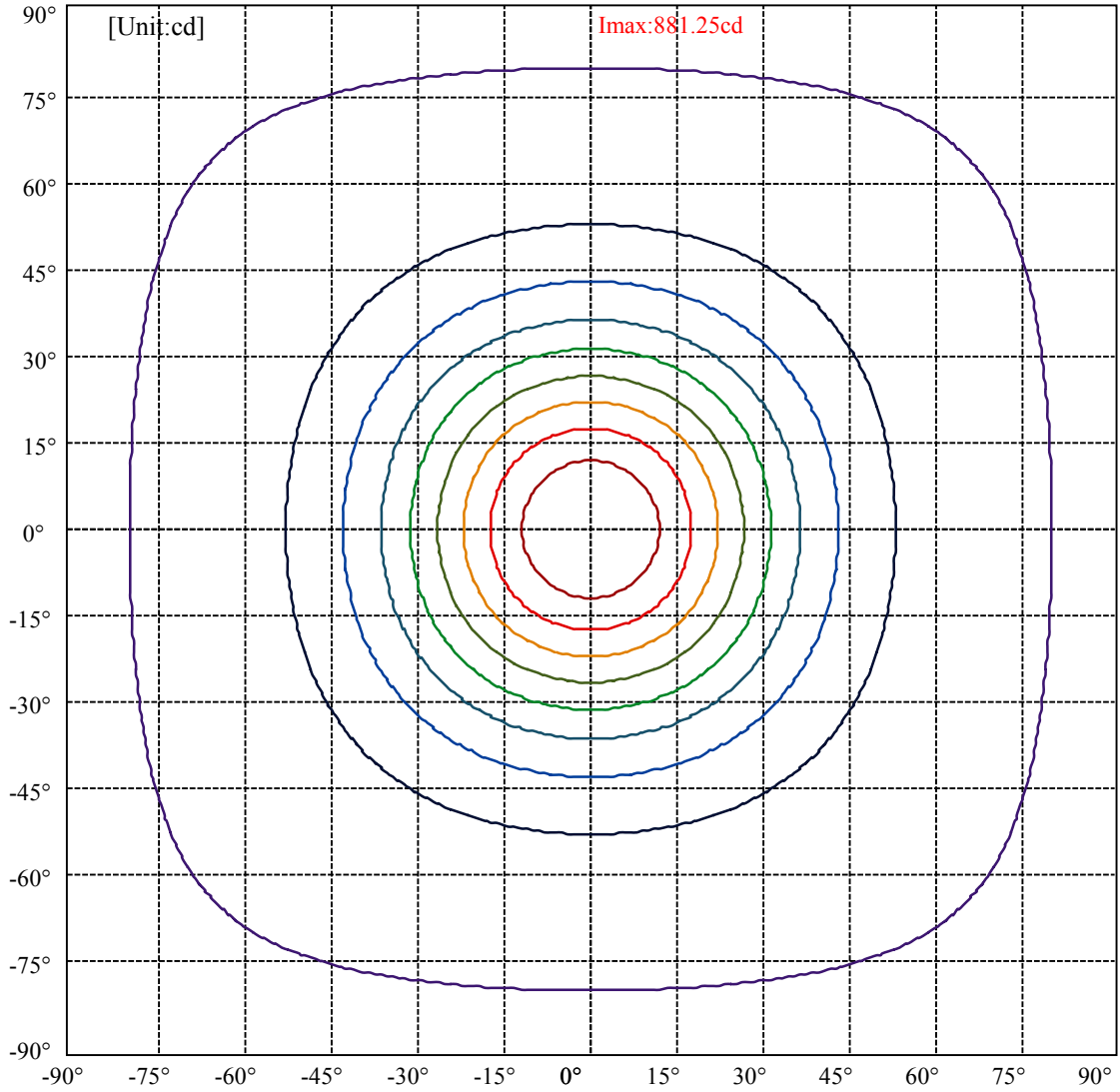
C0(Max): —————  
 C0/C180: —————  
 C90/C270: —————

Field angle(10%Imax):C0/180Left:79.1 Right:79.1  
 :C90/270Left:79.1 Right:79.1

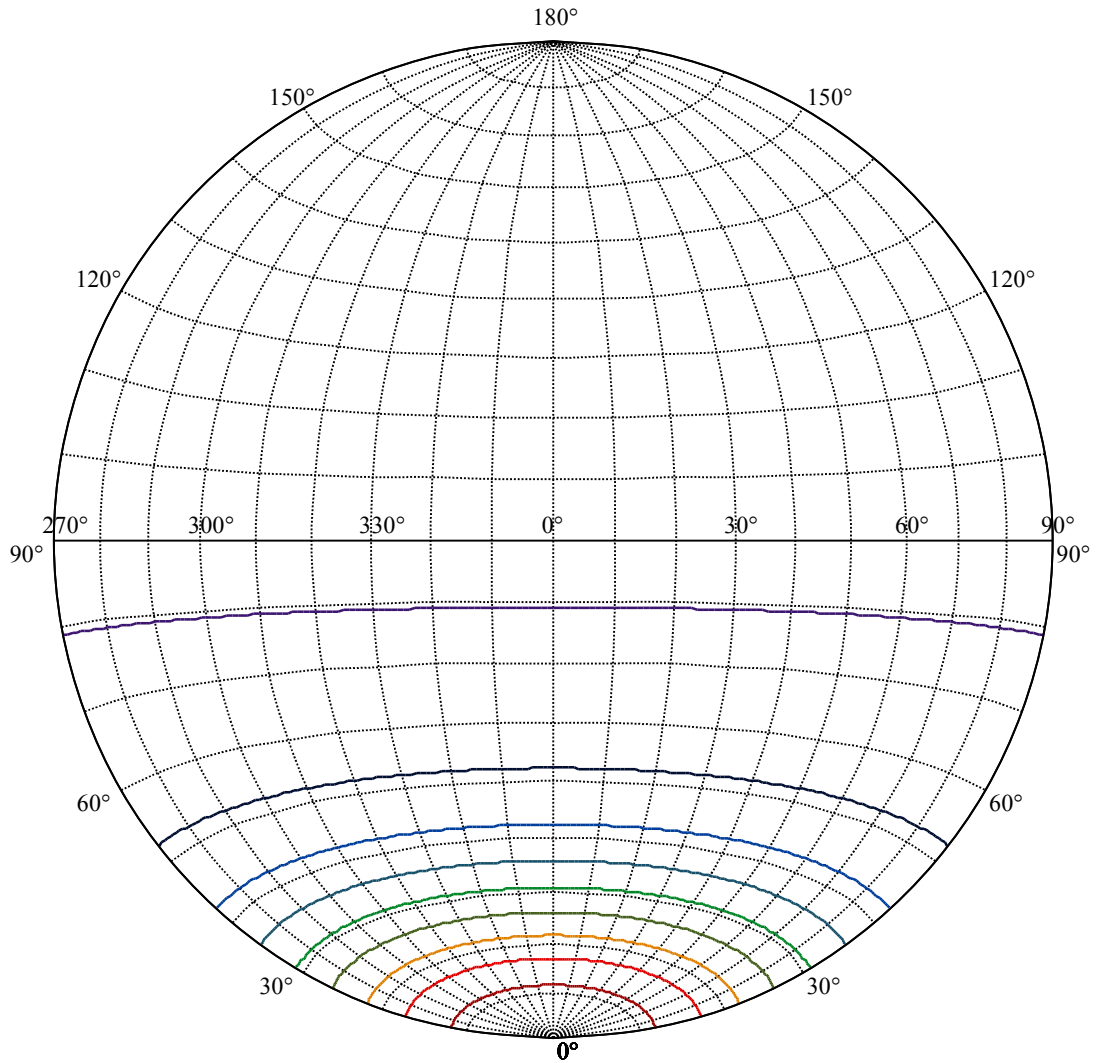
Beam Angle(50%Imax):C0/180Left:31.0 Right:31.0  
 :C90/270Left:31.0 Right:31.0



Max , Ave      Beam angle of C0 plane 62.82



(10%Imax) 88.125	—
(20%Imax) 176.25	—
(30%Imax) 264.375	—
(40%Imax) 352.5	—
(50%Imax) 440.625	—
(60%Imax) 528.75	—
(70%Imax) 616.875	—
(80%Imax) 705	—
(90%Imax) 793.125	—



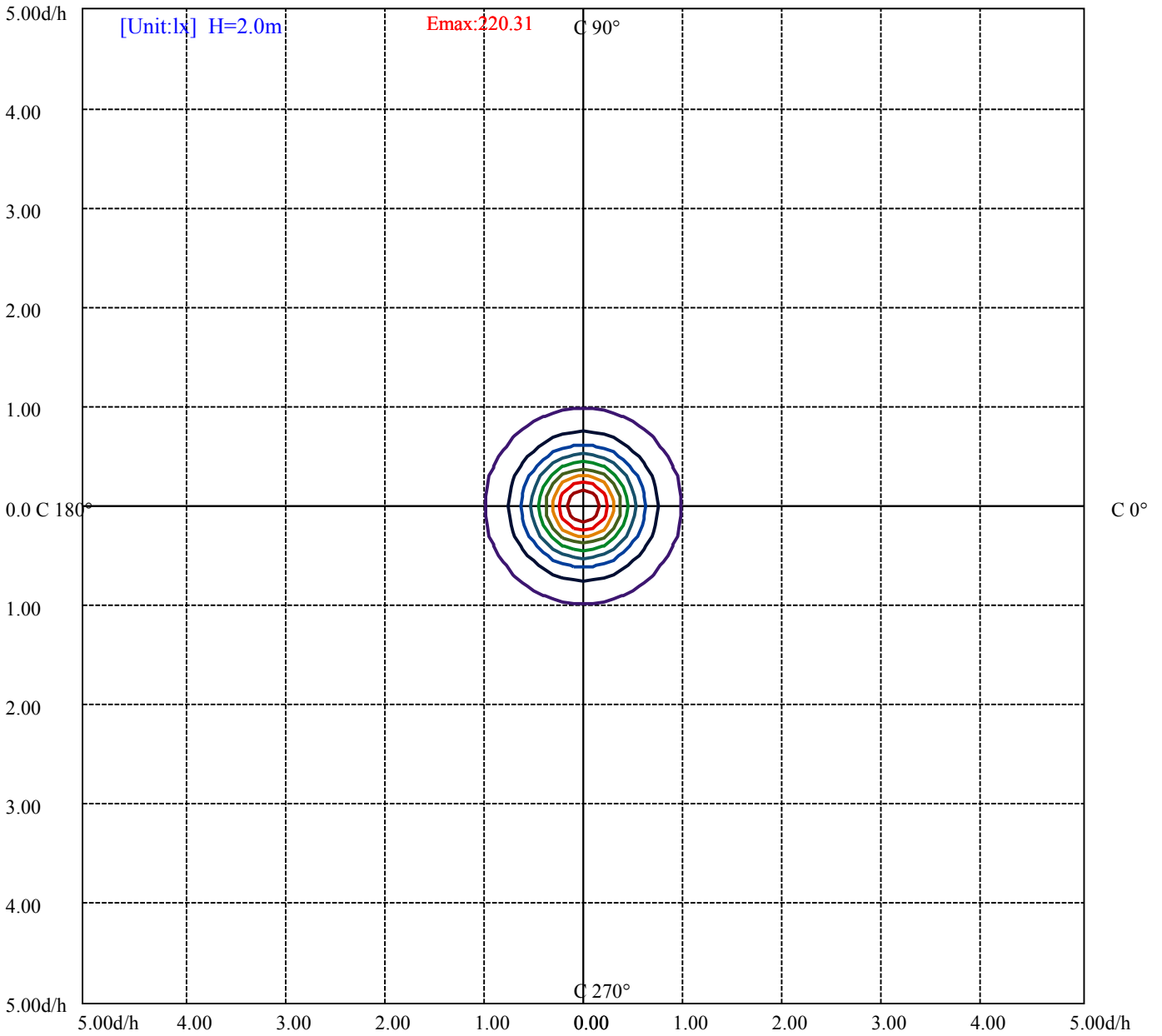
House

[Unit:cd]

Road

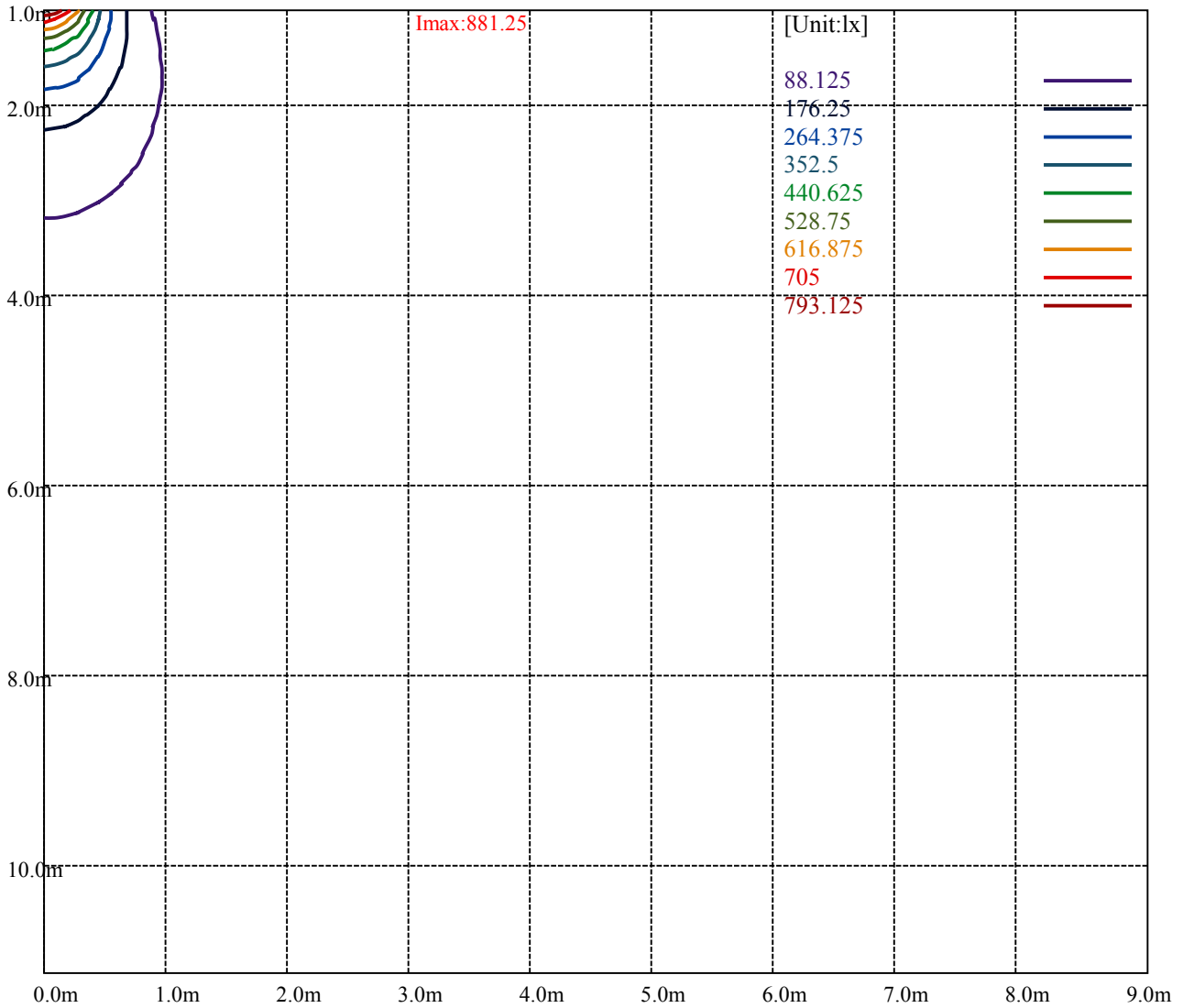
I<sub>max</sub>:881.25

(10%I <sub>max</sub> ) 88.125	—
(20%I <sub>max</sub> ) 176.25	—
(30%I <sub>max</sub> ) 264.375	—
(40%I <sub>max</sub> ) 352.5	—
(50%I <sub>max</sub> ) 440.625	—
(60%I <sub>max</sub> ) 528.75	—
(70%I <sub>max</sub> ) 616.875	—
(80%I <sub>max</sub> ) 705	—
(90%I <sub>max</sub> ) 793.125	—



- (10%Emax) 22.03125
- (20%Emax) 44.0625
- (30%Emax) 66.09375
- (40%Emax) 88.125
- (50%Emax) 110.1563
- (60%Emax) 132.1875
- (70%Emax) 154.2188
- (80%Emax) 176.25
- (90%Emax) 198.2813





Luminance Table

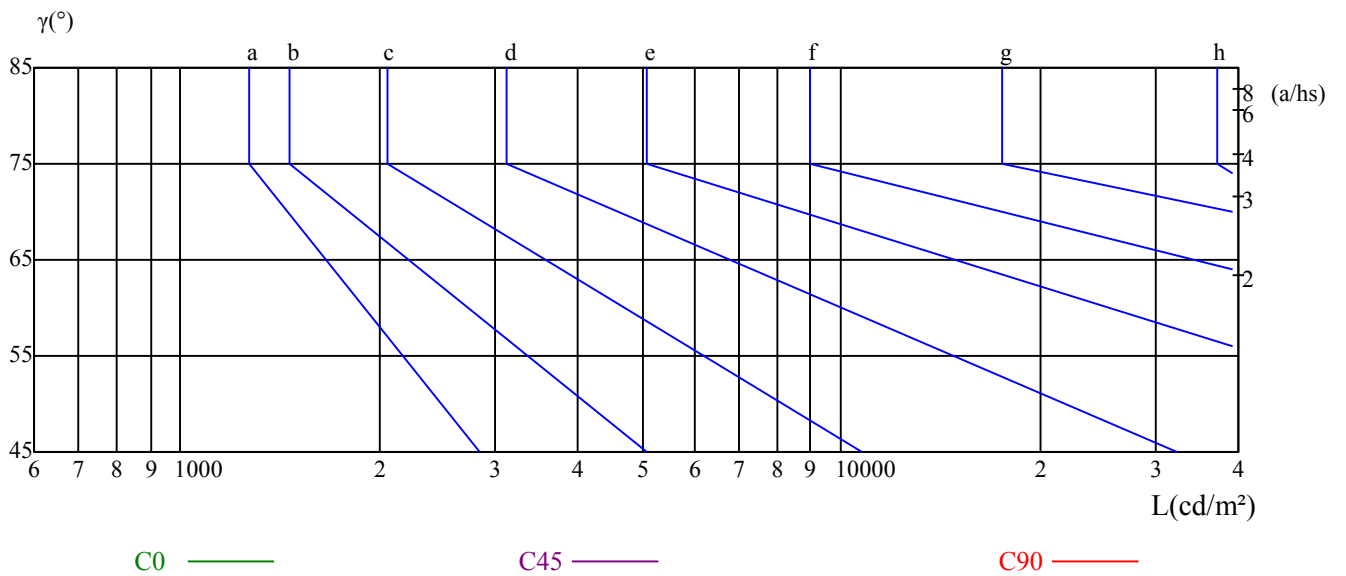
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

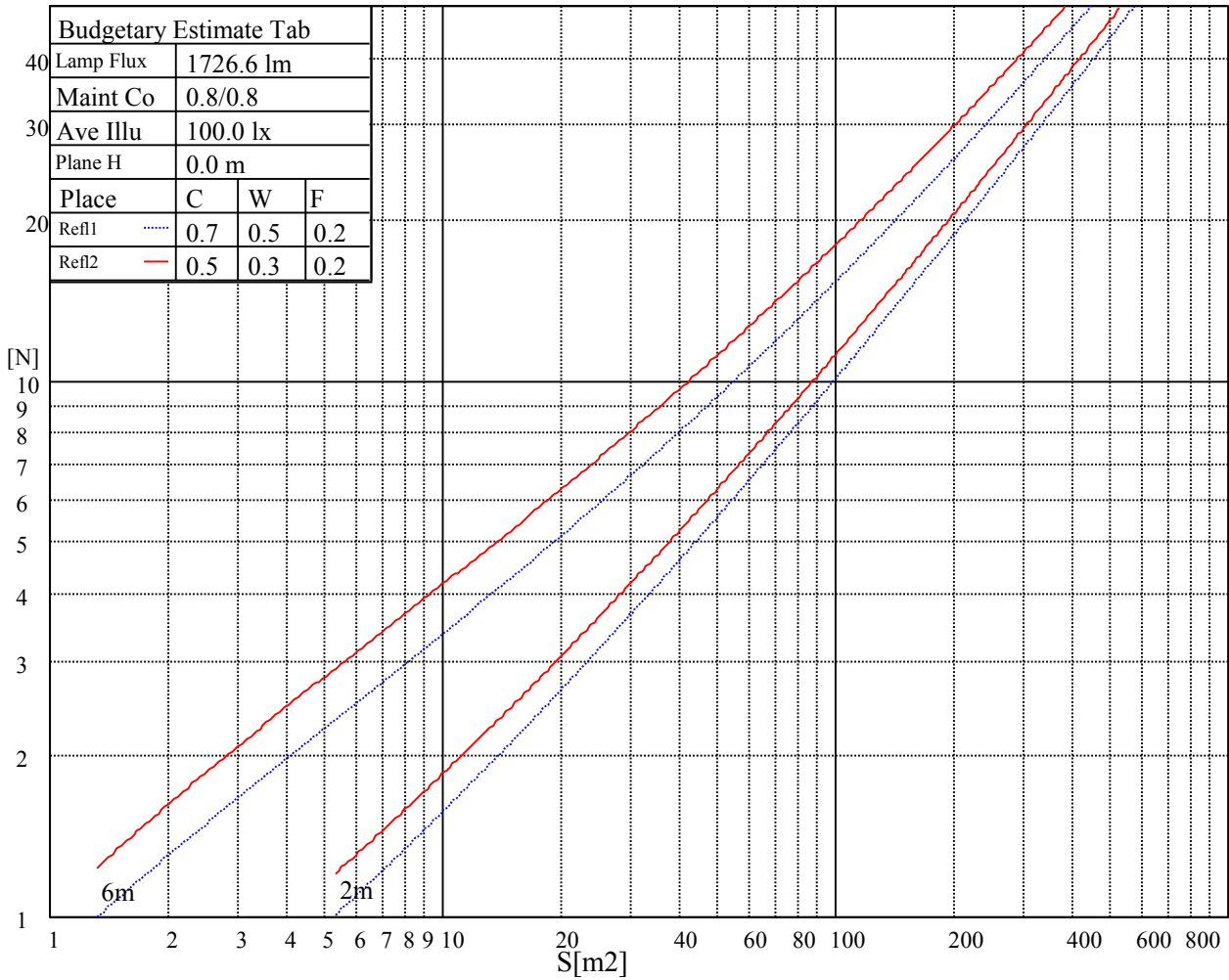
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

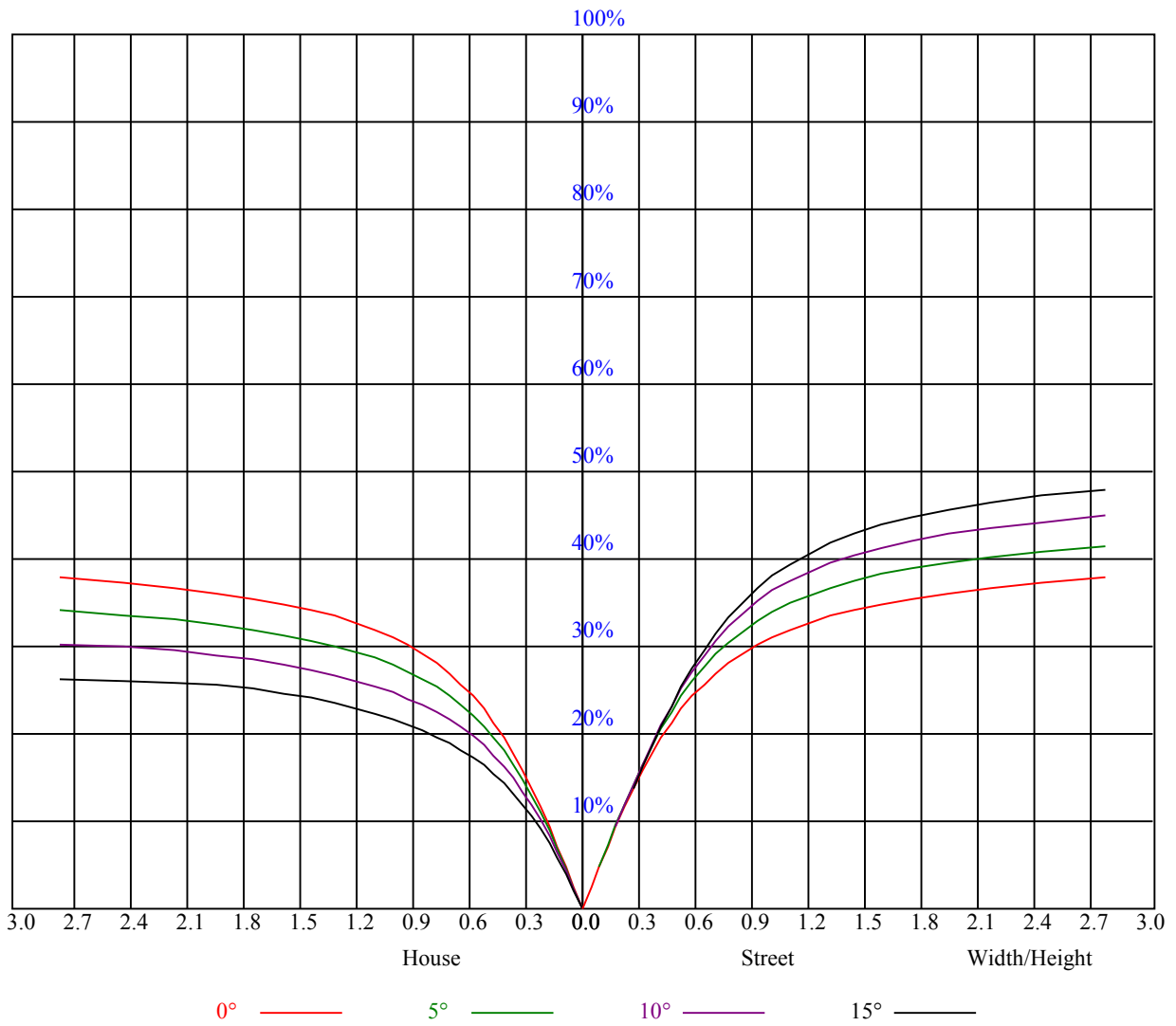
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.84	0.81	0.78	0.82	0.79	0.76	0.79	0.76	0.74	0.76	0.74	0.72	0.73	0.71	0.70	0.68
2	0.74	0.69	0.64	0.73	0.68	0.64	0.70	0.66	0.62	0.67	0.64	0.61	0.65	0.62	0.59	0.58
3	0.66	0.60	0.55	0.65	0.59	0.54	0.62	0.58	0.54	0.60	0.56	0.53	0.58	0.55	0.52	0.50
4	0.60	0.53	0.48	0.59	0.52	0.48	0.57	0.51	0.47	0.55	0.50	0.46	0.53	0.49	0.46	0.44
5	0.54	0.47	0.42	0.53	0.47	0.42	0.52	0.46	0.42	0.50	0.45	0.41	0.49	0.44	0.41	0.39
6	0.50	0.43	0.38	0.49	0.42	0.38	0.47	0.42	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.35
7	0.46	0.39	0.34	0.45	0.39	0.34	0.44	0.38	0.34	0.43	0.38	0.34	0.42	0.37	0.34	0.32
8	0.42	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.40	0.35	0.31	0.39	0.34	0.31	0.29
9	0.39	0.33	0.29	0.39	0.33	0.29	0.38	0.32	0.29	0.37	0.32	0.28	0.36	0.32	0.28	0.27
10	0.37	0.31	0.27	0.36	0.30	0.27	0.35	0.30	0.26	0.35	0.30	0.26	0.34	0.30	0.26	0.25



Nata PH24L28060AW

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>873.20</b>	<b>846.30</b>	<b>791.60</b>	<b>710.70</b>	<b>612.20</b>	<b>514.00</b>	<b>421.80</b>	<b>338.00</b>	<b>280.40</b>
<b>45.0</b>	<b>881.80</b>	<b>857.20</b>	<b>803.00</b>	<b>726.50</b>	<b>634.30</b>	<b>531.80</b>	<b>443.90</b>	<b>356.40</b>	<b>287.10</b>
<b>90.0</b>	<b>889.40</b>	<b>867.60</b>	<b>815.80</b>	<b>730.20</b>	<b>633.40</b>	<b>532.30</b>	<b>437.30</b>	<b>351.30</b>	<b>285.50</b>
<b>135.0</b>	<b>880.60</b>	<b>880.00</b>	<b>847.60</b>	<b>780.40</b>	<b>694.20</b>	<b>595.40</b>	<b>495.30</b>	<b>396.20</b>	<b>315.70</b>
<b>180.0</b>	<b>873.20</b>	<b>868.10</b>	<b>829.60</b>	<b>769.20</b>	<b>683.70</b>	<b>579.10</b>	<b>481.40</b>	<b>380.20</b>	<b>300.40</b>
<b>225.0</b>	<b>881.80</b>	<b>875.90</b>	<b>837.80</b>	<b>769.50</b>	<b>683.50</b>	<b>584.50</b>	<b>484.40</b>	<b>384.30</b>	<b>306.80</b>
<b>270.0</b>	<b>889.40</b>	<b>875.90</b>	<b>836.30</b>	<b>762.80</b>	<b>673.50</b>	<b>571.00</b>	<b>474.20</b>	<b>378.10</b>	<b>300.40</b>
<b>315.0</b>	<b>880.60</b>	<b>848.00</b>	<b>794.90</b>	<b>714.50</b>	<b>621.60</b>	<b>513.30</b>	<b>430.50</b>	<b>341.40</b>	<b>270.70</b>
<b>360.0</b>	<b>873.20</b>	<b>846.30</b>	<b>791.60</b>	<b>710.70</b>	<b>612.20</b>	<b>514.00</b>	<b>421.80</b>	<b>338.00</b>	<b>280.40</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>229.00</b>	<b>195.30</b>	<b>166.60</b>	<b>143.80</b>	<b>119.40</b>	<b>94.70</b>	<b>69.10</b>	<b>43.40</b>	<b>16.80</b>
<b>45.0</b>	<b>229.20</b>	<b>184.50</b>	<b>149.20</b>	<b>125.50</b>	<b>115.10</b>	<b>164.90</b>	<b>162.80</b>	<b>117.70</b>	<b>16.10</b>
<b>90.0</b>	<b>235.20</b>	<b>201.20</b>	<b>184.20</b>	<b>210.20</b>	<b>219.40</b>	<b>216.90</b>	<b>201.90</b>	<b>149.80</b>	<b>12.30</b>
<b>135.0</b>	<b>248.90</b>	<b>197.00</b>	<b>156.80</b>	<b>130.90</b>	<b>113.00</b>	<b>135.20</b>	<b>143.60</b>	<b>112.10</b>	<b>30.60</b>
<b>180.0</b>	<b>238.80</b>	<b>194.60</b>	<b>158.90</b>	<b>132.20</b>	<b>109.10</b>	<b>86.20</b>	<b>61.50</b>	<b>39.70</b>	<b>17.90</b>
<b>225.0</b>	<b>236.80</b>	<b>185.40</b>	<b>147.40</b>	<b>122.90</b>	<b>104.10</b>	<b>102.90</b>	<b>94.50</b>	<b>59.40</b>	<b>20.00</b>
<b>270.0</b>	<b>241.30</b>	<b>198.90</b>	<b>167.80</b>	<b>149.70</b>	<b>143.40</b>	<b>137.70</b>	<b>112.60</b>	<b>71.60</b>	<b>14.60</b>
<b>315.0</b>	<b>214.10</b>	<b>171.20</b>	<b>139.30</b>	<b>118.50</b>	<b>103.20</b>	<b>118.60</b>	<b>100.00</b>	<b>55.90</b>	<b>15.60</b>
<b>360.0</b>	<b>229.00</b>	<b>195.30</b>	<b>166.60</b>	<b>143.80</b>	<b>119.40</b>	<b>94.70</b>	<b>69.10</b>	<b>43.40</b>	<b>16.80</b>
<b>C/γ(°)</b>	<b>90.0</b>								
<b>0.0</b>	<b>7.50</b>								
<b>45.0</b>	<b>37.30</b>								
<b>90.0</b>	<b>35.90</b>								
<b>135.0</b>	<b>32.50</b>								
<b>180.0</b>	<b>7.20</b>								
<b>225.0</b>	<b>14.20</b>								
<b>270.0</b>	<b>11.30</b>								
<b>315.0</b>	<b>18.30</b>								
<b>360.0</b>	<b>7.50</b>								