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## Nata

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LumCAT: 2-1672-M  
Luminaire: 92.70.135.00  
Report No: NT2017060505  
Test No: GC2017060505  
LampCAT: LUMILEDS LUXEON CoB 1208  
Lamp flux(lm): 3097.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 35.3000  
Current(A): 0.7000  
Power (W): 24.7100  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 2862.11  
Efficiency(%): 92.42%  
Lumens(lm)/Power(W): 115.83  
Central intensity(cd): 9216.992  
Maximum intensity(cd): 9216.992  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=27.0  
                                  [C90/270]Total=27.0  
Field angle(10%Imax): [C0/180]Total=62.3  
                                  [C90/270]Total=62.3  
Maximum s/h(1/2): C0\_180=0.46 C90\_270=0.46  
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(%): 92.42%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.788%

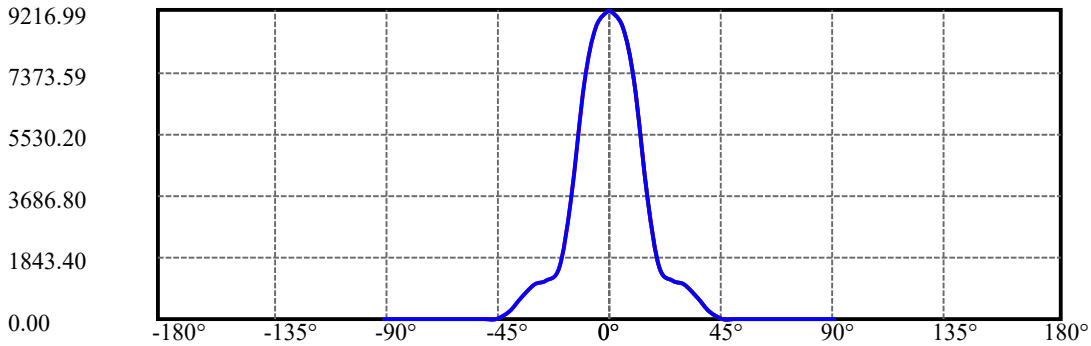
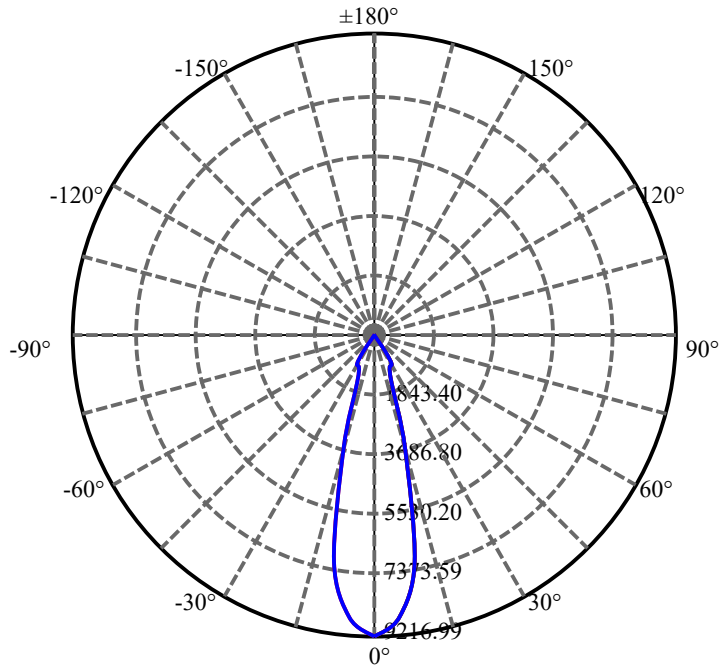
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9216.992	0.000	0	.000%	.000%
5.0	8682.119	213.979	213.979	6.909%	7.476%
10.0	7026.986	561.964	775.943	18.145%	27.111%
15.0	3569.100	628.553	1404.496	20.296%	49.072%
20.0	1554.449	422.252	1826.748	13.634%	63.825%
25.0	1125.807	281.109	2107.857	9.077%	73.647%
30.0	1006.052	269.789	2377.646	8.711%	83.073%
35.0	643.190	242.862	2620.508	7.842%	91.559%
40.0	222.944	144.508	2765.016	4.666%	96.608%
45.0	20.309	45.040	2810.056	1.454%	98.181%
50.0	12.663	6.662	2816.719	.215%	98.414%
55.0	11.851	5.330	2822.049	.172%	98.600%
60.0	11.445	5.385	2827.434	.174%	98.788%
65.0	11.142	5.491	2832.925	.177%	98.980%
70.0	10.942	5.592	2838.517	.181%	99.176%
75.0	10.970	5.728	2844.244	.185%	99.376%
80.0	11.445	5.998	2850.242	.194%	99.585%
85.0	10.708	6.020	2856.261	.194%	99.796%
90.0	10.653	5.849	2862.11	.189%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2377.65	76.77%	83.07%
0-40	2765.02	89.28%	96.61%
0-60	2827.43	91.30%	98.79%
0-90	2856.26	92.23%	99.80%
0-120	2856.26	92.23%	99.80%
0-180	2862.11	92.42%	100.00%
60-90	34.21	1.10%	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%
0-28.37	2289.69	73.93%	80.00%

## ZONAL LUMEN SUMMARY

0-10	775.94
10-20	1050.81
20-30	550.90
30-40	387.37
40-50	51.70
50-60	10.71
60-70	11.08
70-80	11.73
80-90	6.02
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



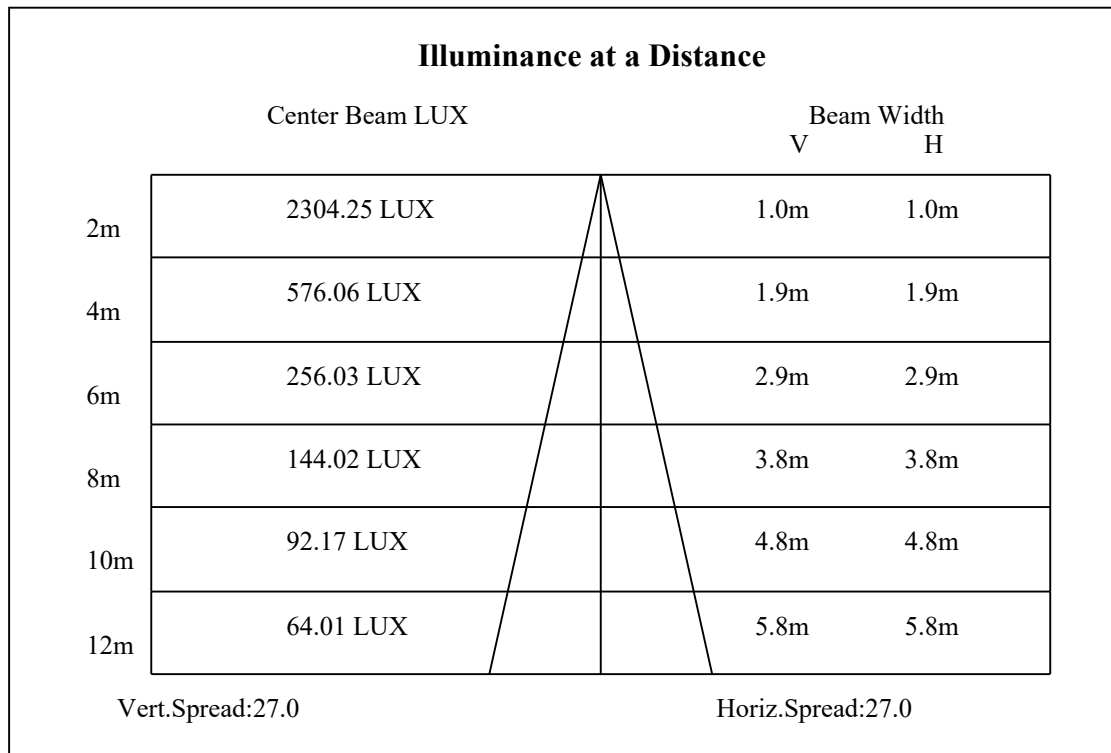
C0(Max): —————

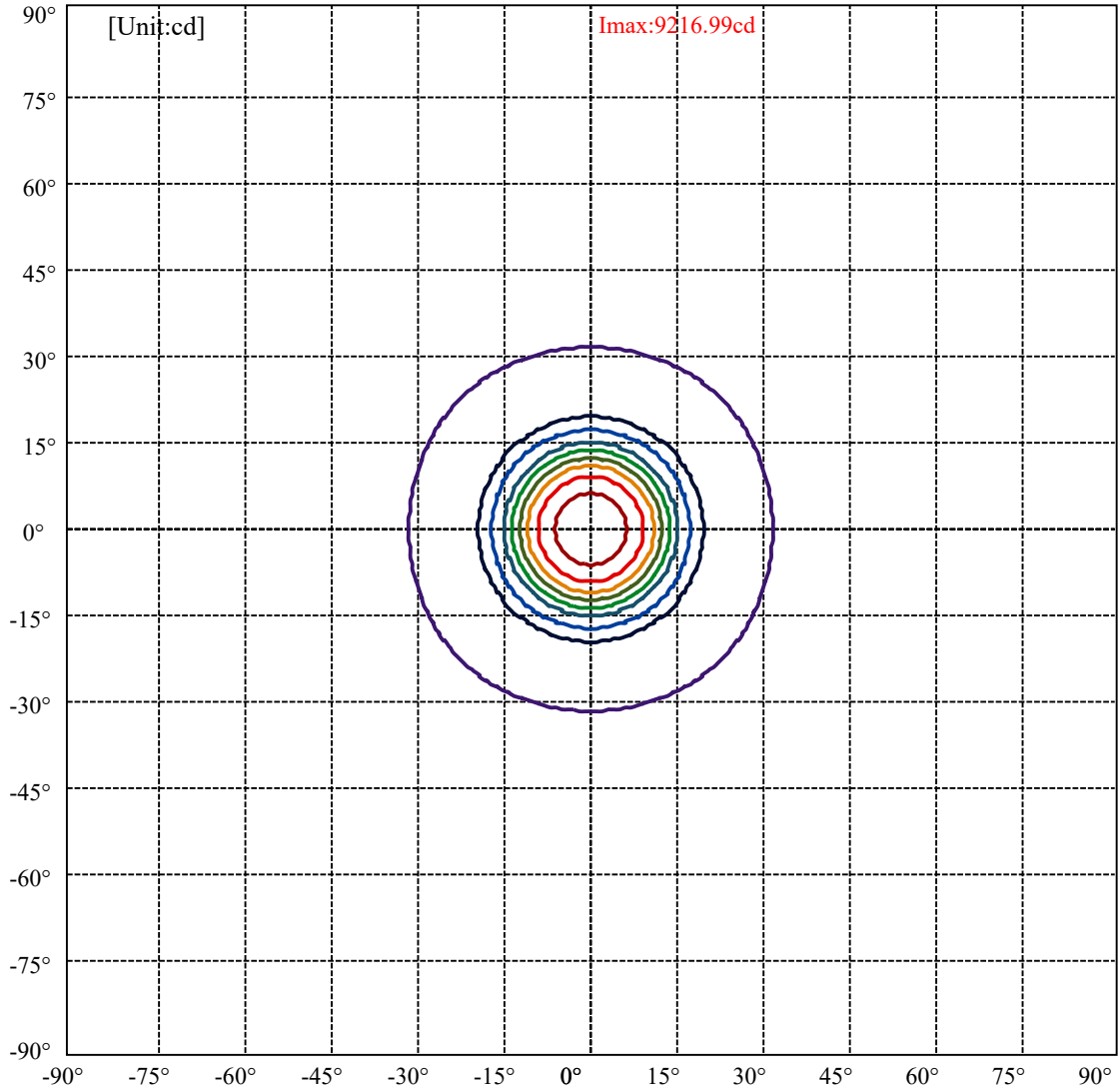
C0/C180: —————

C90/C270: —————

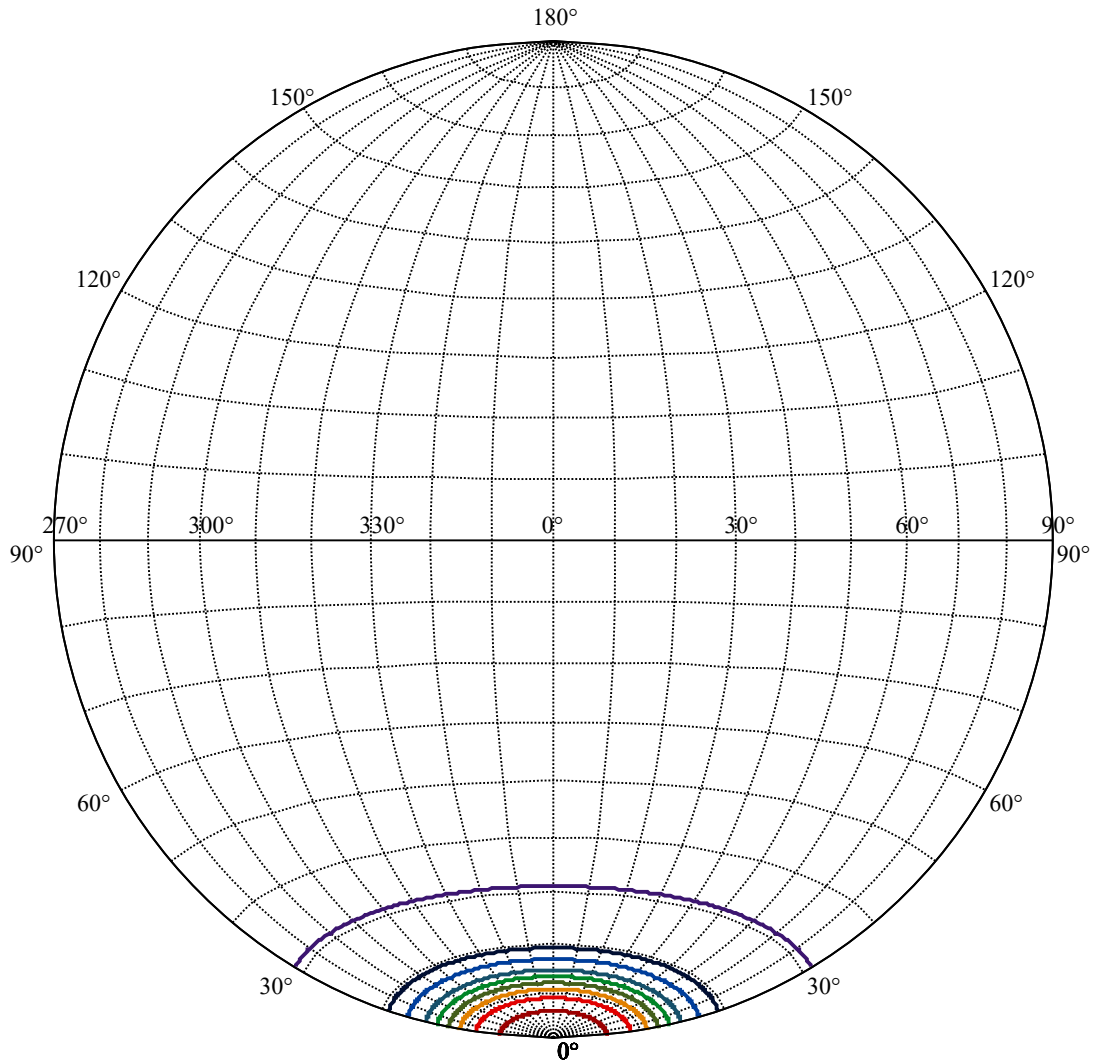
Field angle(10%Imax):C0/180Left:31.2 Right:31.2  
:C90/270Left:31.2 Right:31.2

Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5  
:C90/270Left:13.5 Right:13.5





(10%Imax) 921.699	—
(20%Imax) 1843.4	—
(30%Imax) 2765.1	—
(40%Imax) 3686.8	—
(50%Imax) 4608.5	—
(60%Imax) 5530.2	—
(70%Imax) 6451.89	—
(80%Imax) 7373.59	—
(90%Imax) 8295.29	—



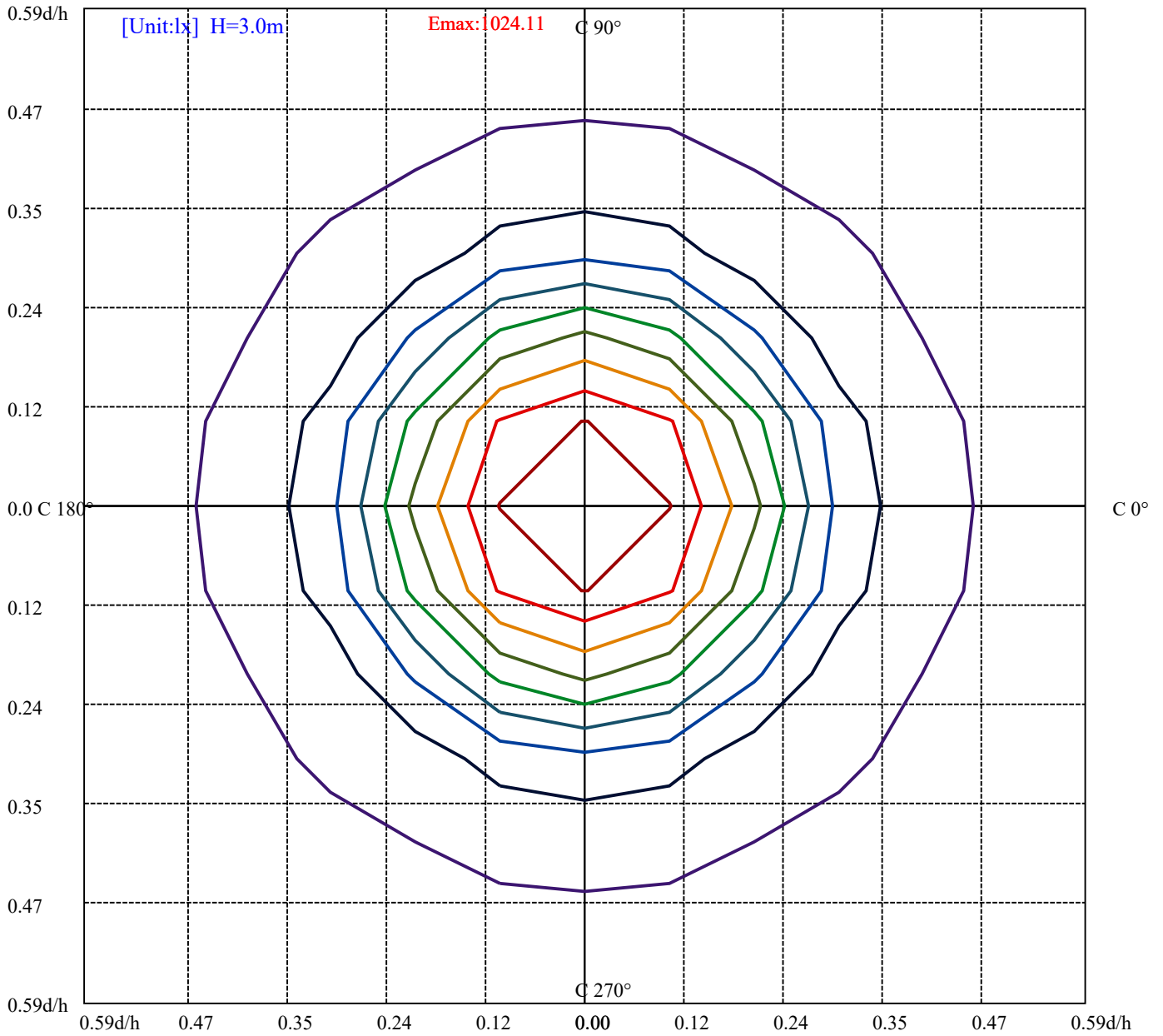
House

[Unit:cd]

Road

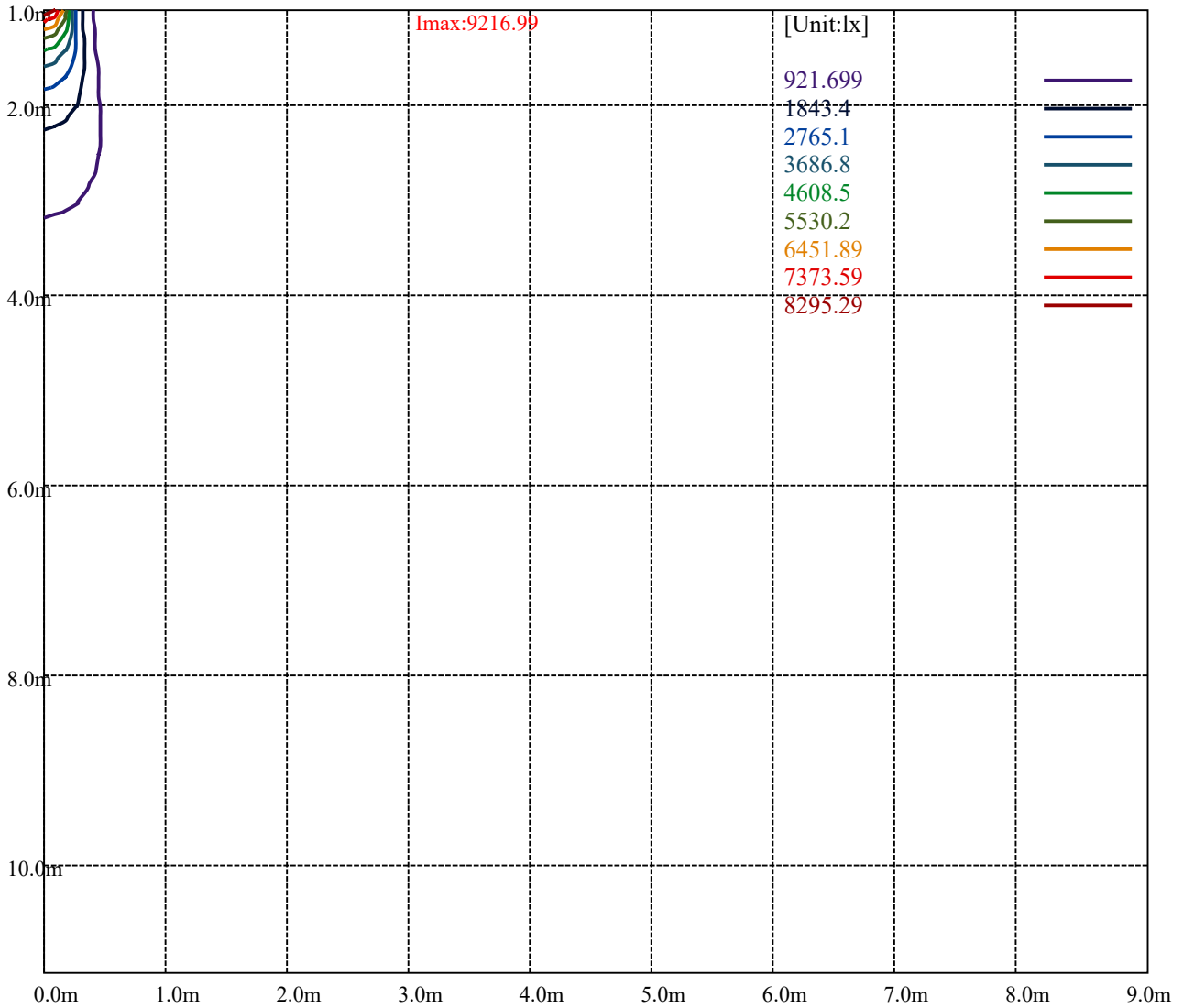
Imax:9216.99

(10%Imax)	921.699	—
(20%Imax)	1843.4	—
(30%Imax)	2765.1	—
(40%Imax)	3686.8	—
(50%Imax)	4608.5	—
(60%Imax)	5530.2	—
(70%Imax)	6451.89	—
(80%Imax)	7373.59	—
(90%Imax)	8295.29	—



- (10%Emax) 102.4109
- (20%Emax) 204.8222
- (30%Emax) 307.2322
- (40%Emax) 409.6433
- (50%Emax) 512.0544
- (60%Emax) 614.4656
- (70%Emax) 716.8755
- (80%Emax) 819.2867
- (90%Emax) 921.6978





Luminance Table

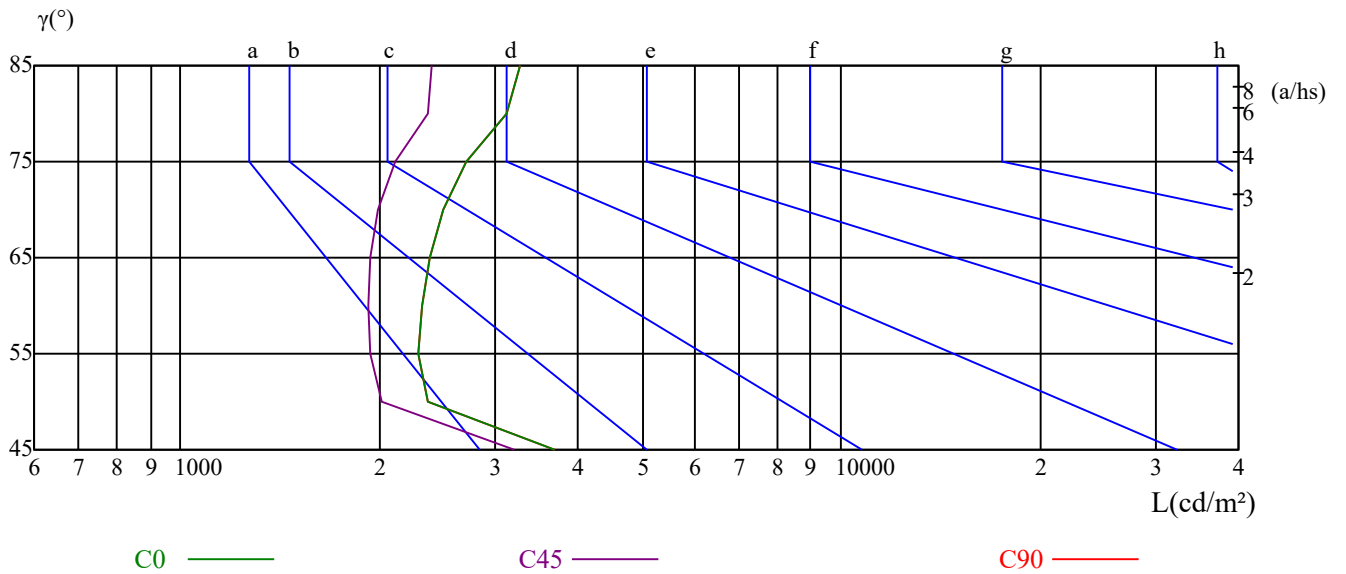
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3696	2368	2296	2319	2385	2502	2715	3112	3259
C45	3206	2023	1932	1919	1938	1993	2114	2361	2395
C90	3696	2368	2296	2319	2385	2502	2715	3112	3259

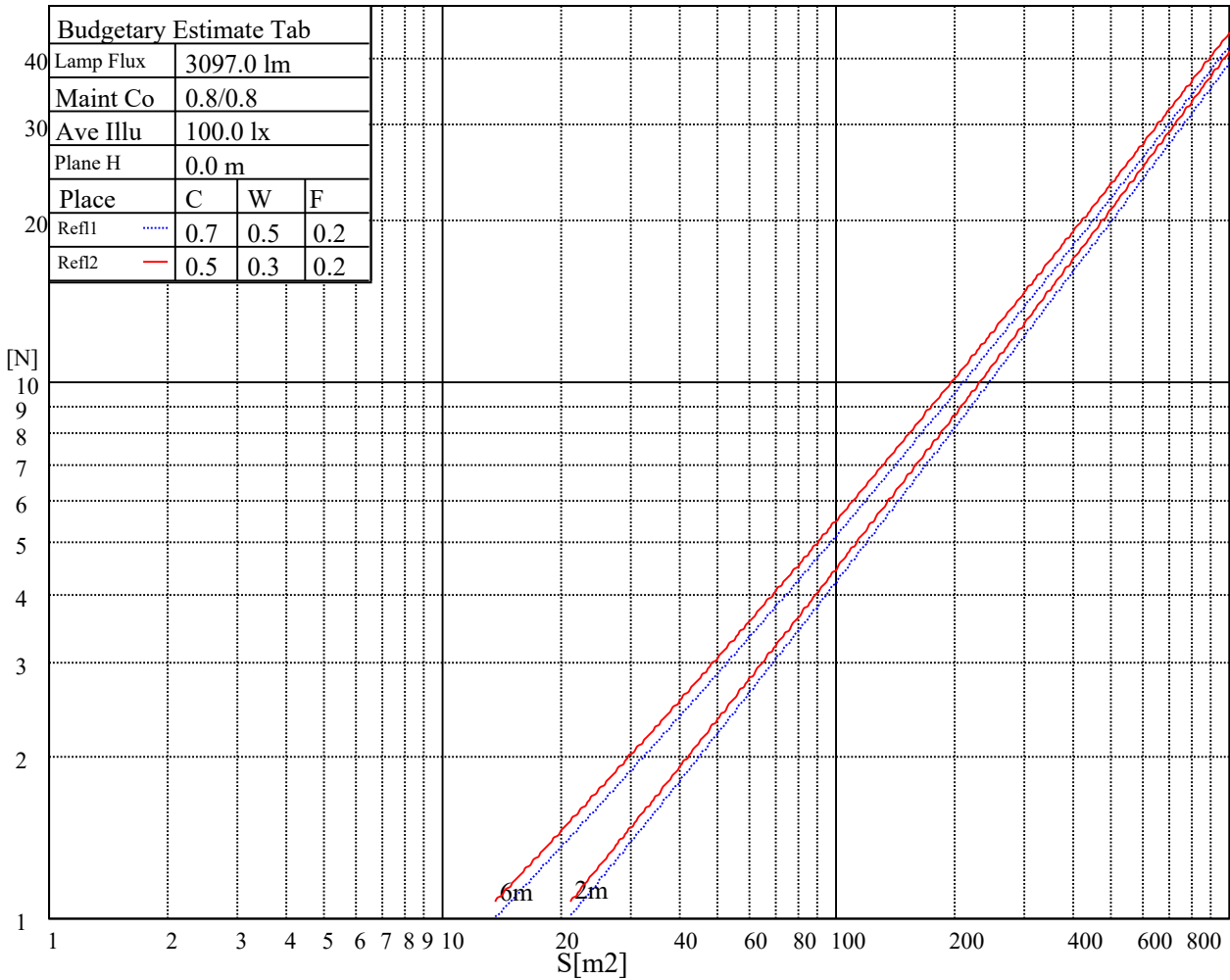
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5380	5380	5380	8650	8650	8650	25075	25075	25075

Glare Table

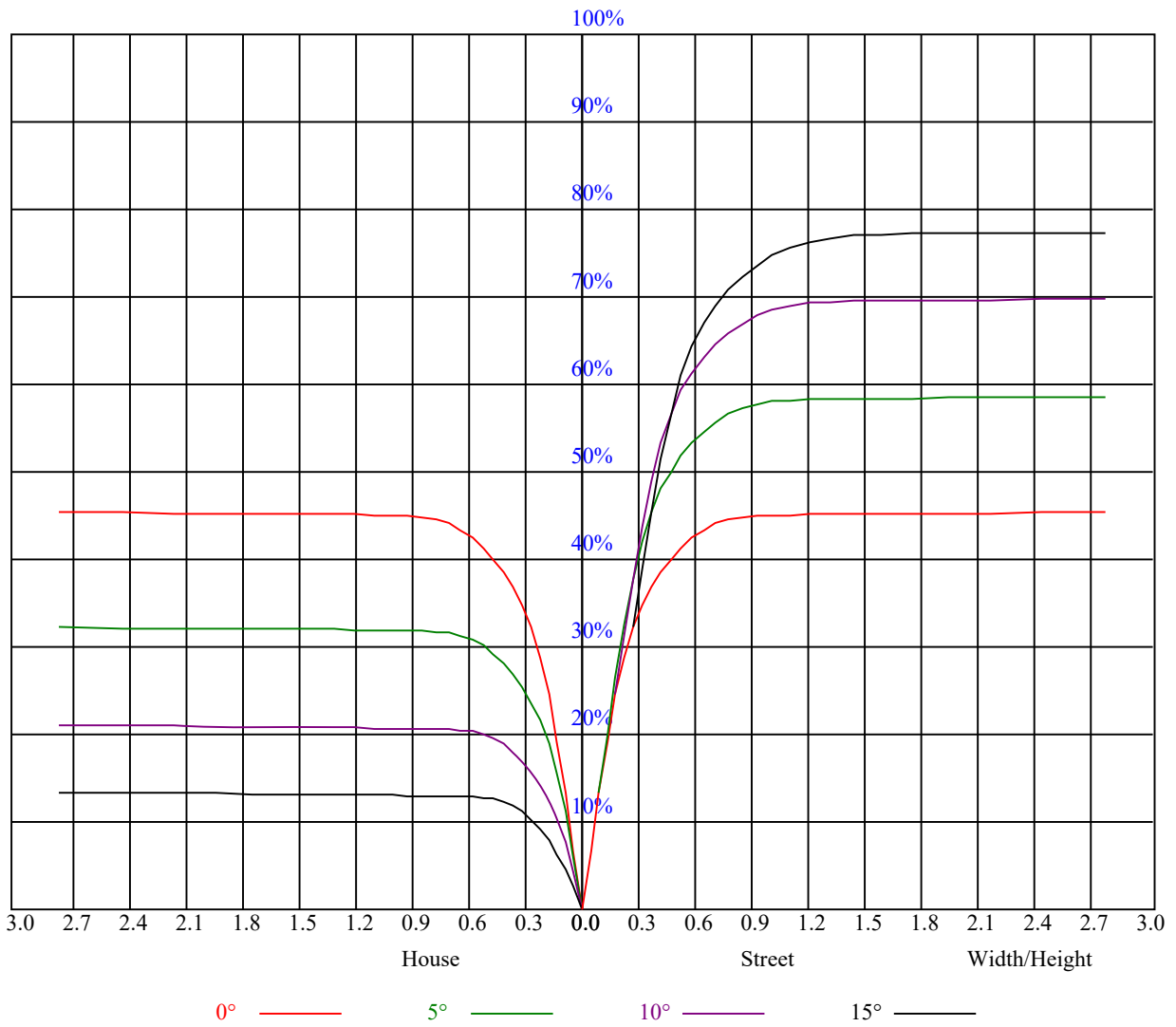
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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 RHOF=20 CU															
0	1.10	1.10	1.10	1.07	1.07	1.07	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.01	0.99	1.01	0.99	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88
2	0.97	0.94	0.92	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.88	0.86	0.85	0.84
3	0.92	0.89	0.85	0.91	0.88	0.85	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.80
4	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.76
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
6	0.80	0.76	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
9	0.71	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
10	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60



Nata 2-1672-M

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	9260.49	8733.60	7165.04	3816.51	1579.57	1129.21	1016.34	684.35	289.60
45.0	9177.35	9061.73	8070.72	5073.45	2047.55	1228.31	1059.29	840.71	379.89
90.0	9234.61	8904.82	7551.54	4091.24	1651.14	1091.11	1025.65	728.45	234.71
135.0	9195.52	8969.24	7761.85	4335.69	1733.73	1173.25	1046.62	768.04	296.20
180.0	9260.49	8709.92	6914.53	3232.36	1440.28	1097.93	1007.20	586.79	158.62
225.0	9177.35	8230.38	5567.30	2293.10	1272.90	1074.76	934.25	439.96	35.73
270.0	9234.61	8524.93	6806.62	2955.43	1378.06	1116.54	989.36	573.14	291.80
315.0	9195.52	8322.33	6378.28	2755.02	1332.36	1095.35	969.71	524.08	97.01
360.0	9260.49	8733.60	7165.04	3816.51	1579.57	1129.21	1016.34	684.35	289.60

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	21.91	12.88	12.00	11.56	11.29	11.01	10.96	12.44	10.79
45.0	28.19	13.49	12.17	11.67	11.34	11.12	10.96	12.00	10.85
90.0	23.23	12.61	11.78	11.40	11.12	10.90	10.79	10.74	10.68
135.0	25.22	12.99	12.00	11.56	11.18	10.96	10.79	10.74	10.68
180.0	17.01	12.50	11.84	11.40	11.12	10.90	10.79	11.01	10.68
225.0	15.53	12.28	11.67	11.34	11.01	10.96	10.85	10.85	10.68
270.0	15.86	12.33	11.73	11.34	11.12	10.85	11.01	11.78	10.68
315.0	15.53	12.22	11.62	11.29	10.96	10.85	11.62	12.00	10.63
360.0	21.91	12.88	12.00	11.56	11.29	11.01	10.96	12.44	10.79

C/γ(°)	90.0
0.0	10.74
45.0	10.68
90.0	10.63
135.0	10.63
180.0	10.63
225.0	10.68
270.0	10.63
315.0	10.63
360.0	10.74