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Nata

LumCAT: 1407-N	
Luminaire: 92.70.044.00	
Report No: NT2017110704	Voltage(V): 20.1000
Test No: GC2017110402	Current(A): 0.3000
LampCAT: NICHIA NVNWS007Z-V1	Power (W): 6.0300
Lamp flux(lm): 824.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 39	Width(mm):39
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 669.34
Efficiency(%): 81.23%
Lumens(lm)/Power(W): 111.00
Central intensity(cd): 875.700
Maximum intensity(cd): 875.700
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=42.6
[C90/270]Total=42.6
Field angle(10%Imax): [C0/180]Total=90.2
[C90/270]Total=90.2
Maximum s/h(1/2): C0_180=0.66 C90_270=0.66
Maximum s/h(1/4): C0_180=0.75 C90_270=0.75
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.79%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.663%

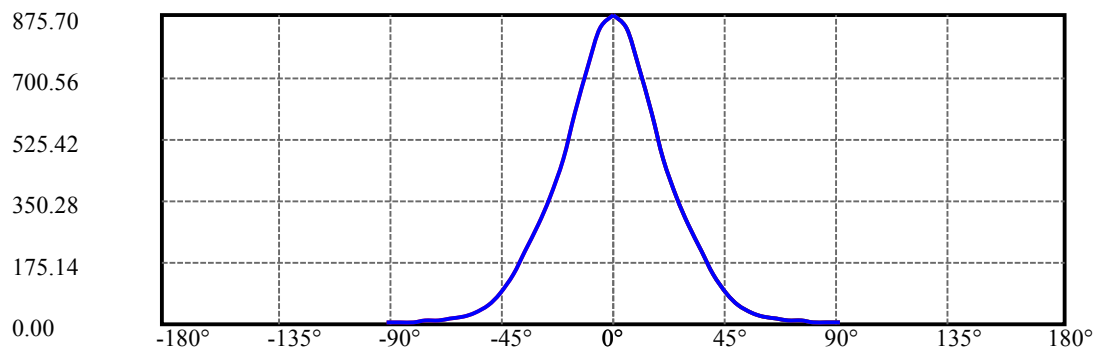
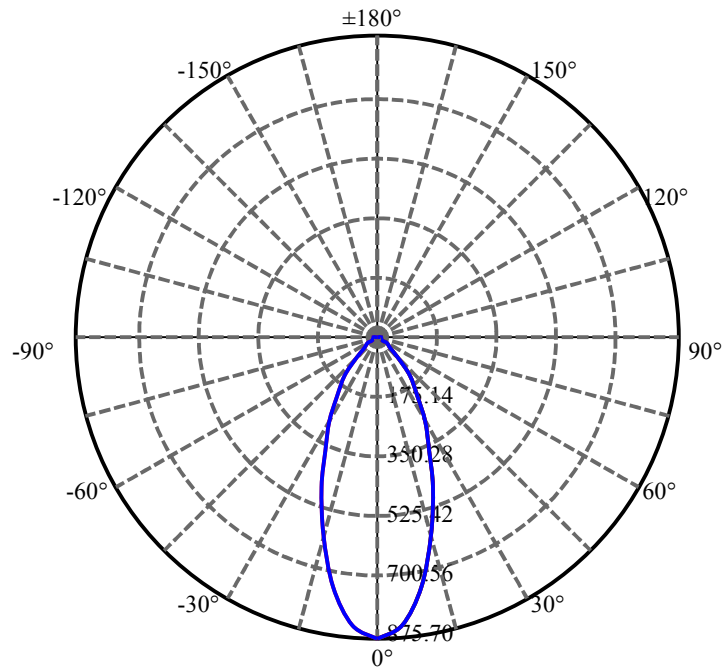
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	875.700	5.237	5.237	.636%	.782%
5.0	838.282	40.048	45.284	4.860%	6.766%
10.0	735.787	70.035	115.319	8.499%	17.229%
15.0	596.082	84.565	199.884	10.263%	29.863%
20.0	465.378	87.246	287.13	10.588%	42.897%
25.0	361.418	83.723	370.854	10.161%	55.406%
30.0	282.116	77.319	448.173	9.383%	66.957%
35.0	207.790	65.329	513.502	7.928%	76.718%
40.0	143.725	50.639	564.141	6.146%	84.283%
45.0	88.386	34.258	598.399	4.157%	89.401%
50.0	52.469	22.032	620.43	2.674%	92.693%
55.0	31.527	14.156	634.586	1.718%	94.808%
60.0	21.327	10.124	644.71	1.229%	96.320%
65.0	15.079	7.491	652.201	.909%	97.439%
70.0	11.527	5.938	658.139	.721%	98.326%
75.0	9.284	4.915	663.054	.597%	99.061%
80.0	5.974	3.225	666.279	.391%	99.543%
85.0	4.219	2.304	668.582	.280%	99.887%
90.0	2.767	0.758	669.341	.092%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	448.17	54.39%	66.96%
0-40	564.14	68.46%	84.28%
0-60	644.71	78.24%	96.32%
0-90	668.58	81.14%	99.89%
0-120	668.58	81.14%	99.89%
0-180	669.34	81.23%	100.00%
60-90	34.00	4.13%	5.08%
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%
0-37.17	535.47	64.98%	80.00%

ZONAL LUMEN SUMMARY

0-10	115.32
10-20	171.81
20-30	161.04
30-40	115.97
40-50	56.29
50-60	24.28
60-70	13.43
70-80	8.14
80-90	2.30
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:

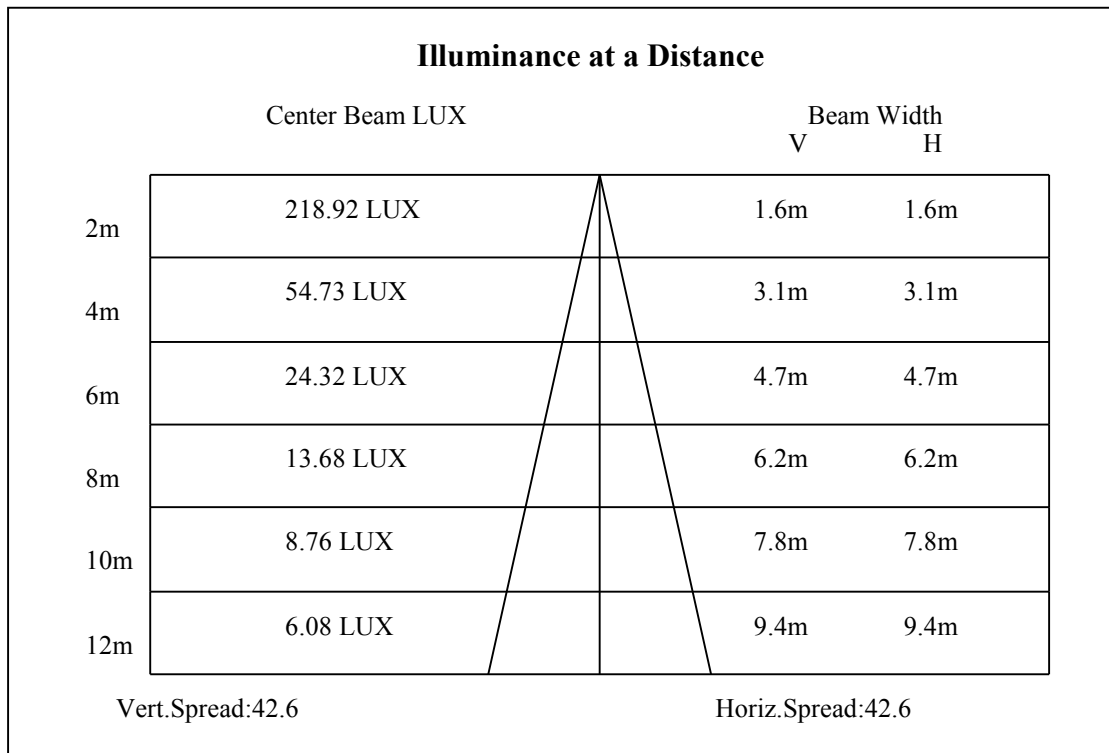
C90/C270:

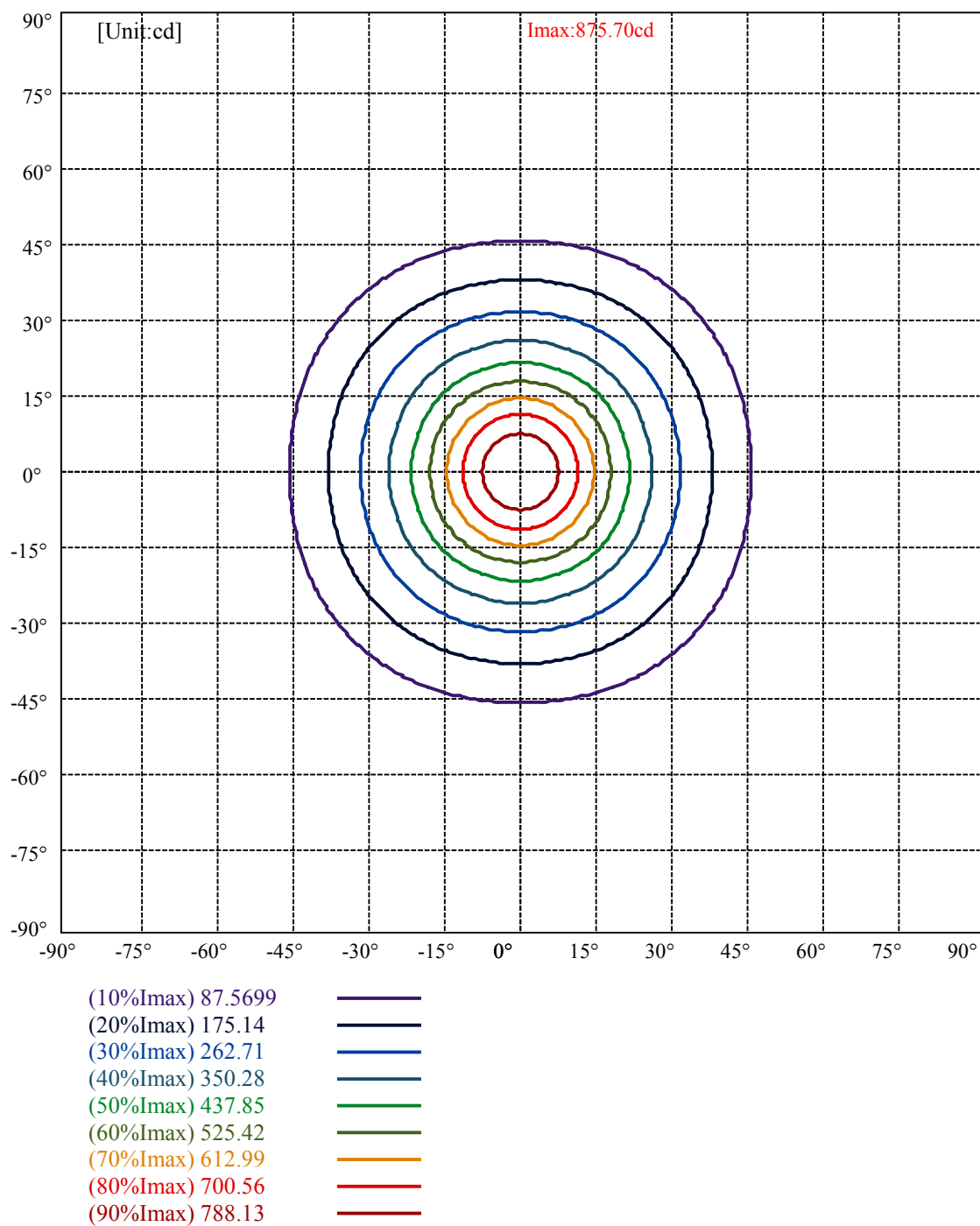
Field angle(10%Imax):C0/180Left:45.1 Right:45.1

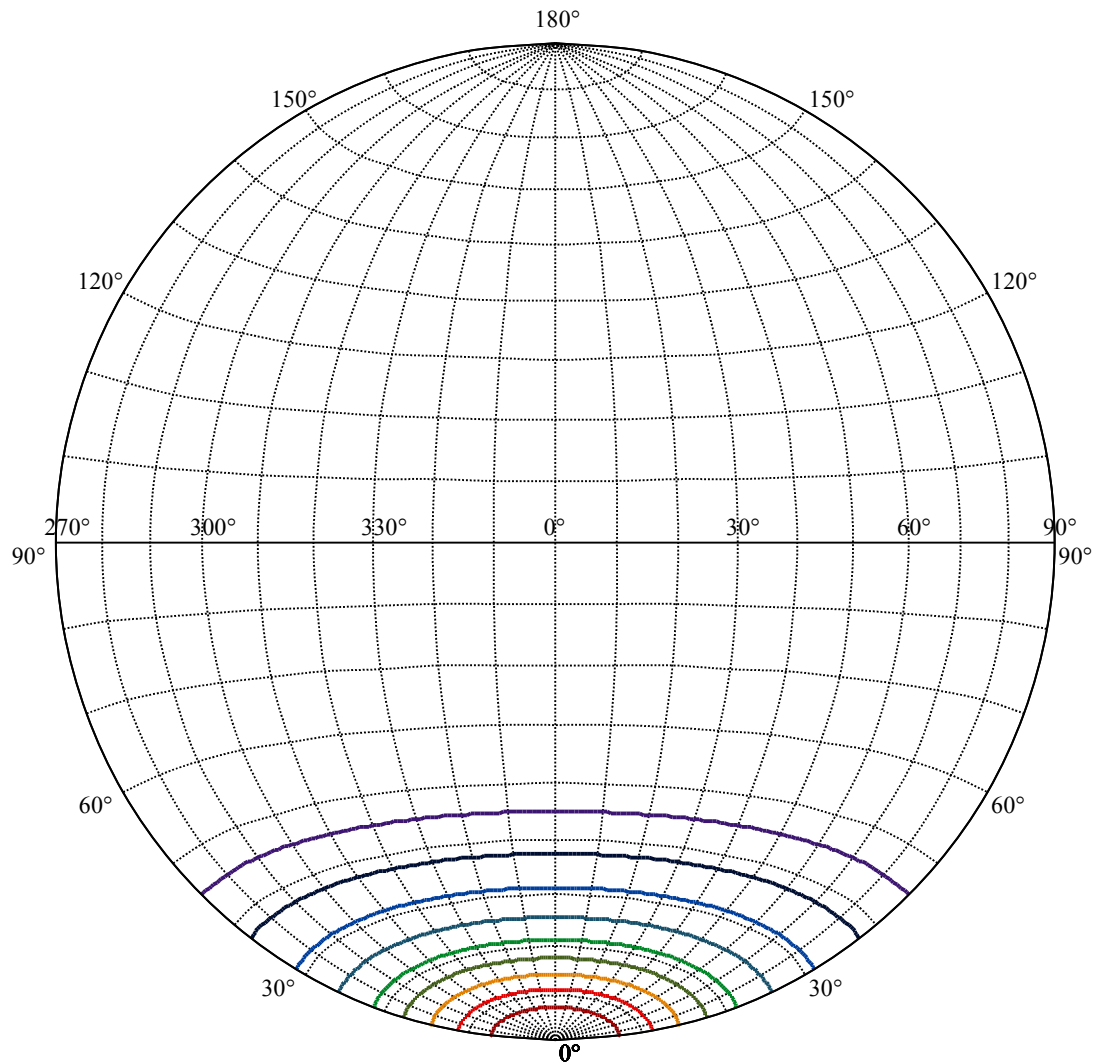
:C90/270Left:45.1 Right:45.1

Beam Angle(50%Imax):C0/180Left:21.3 Right:21.3

:C90/270Left:21.3 Right:21.3







House

[Unit:cd]

Road

Imax:875.70

(10%Imax) 87.5699

(20%Imax) 175.14

(30%Imax) 262.71

(40%Imax) 350.28

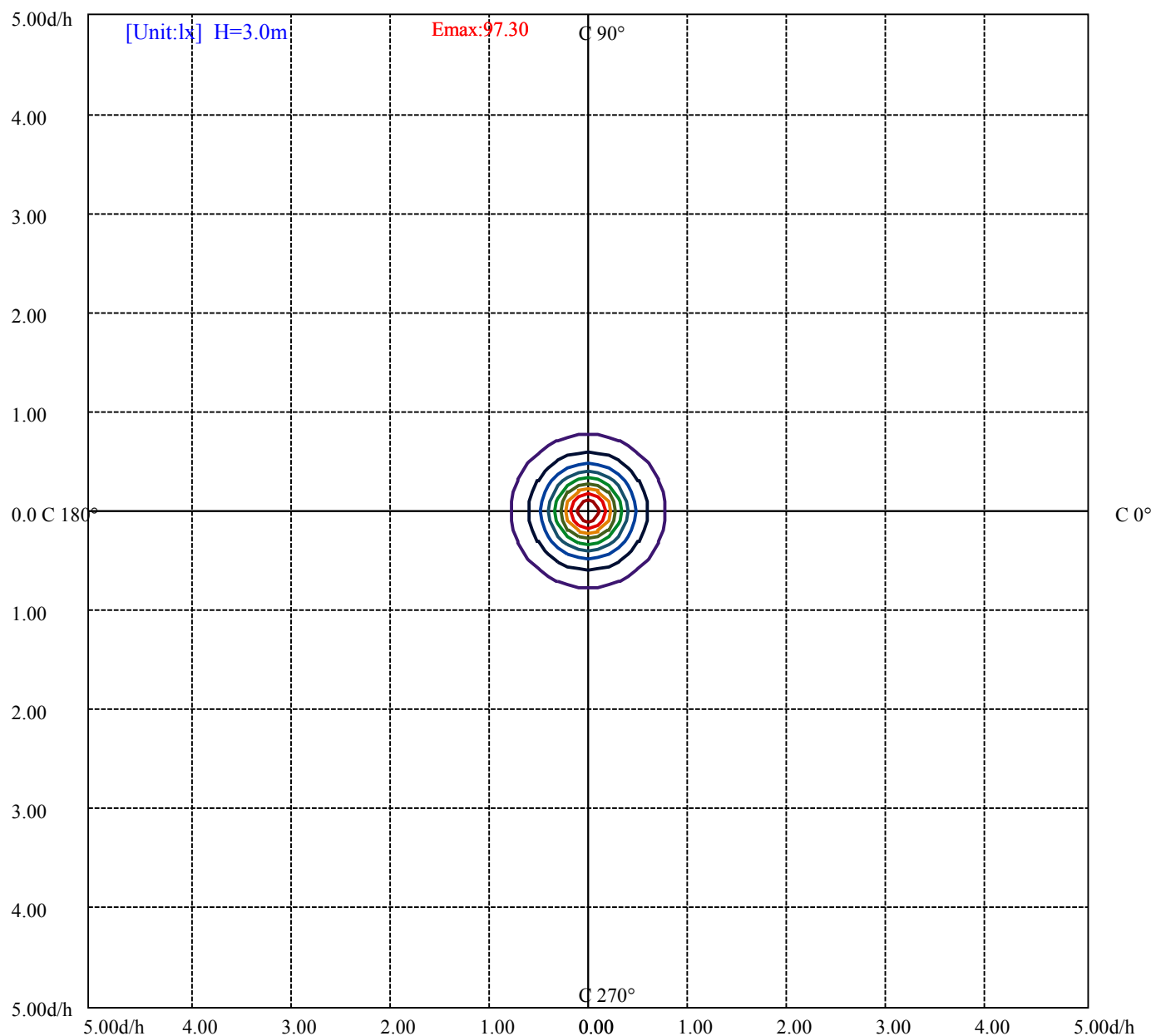
(50%Imax) 437.85

(60%Imax) 525.42

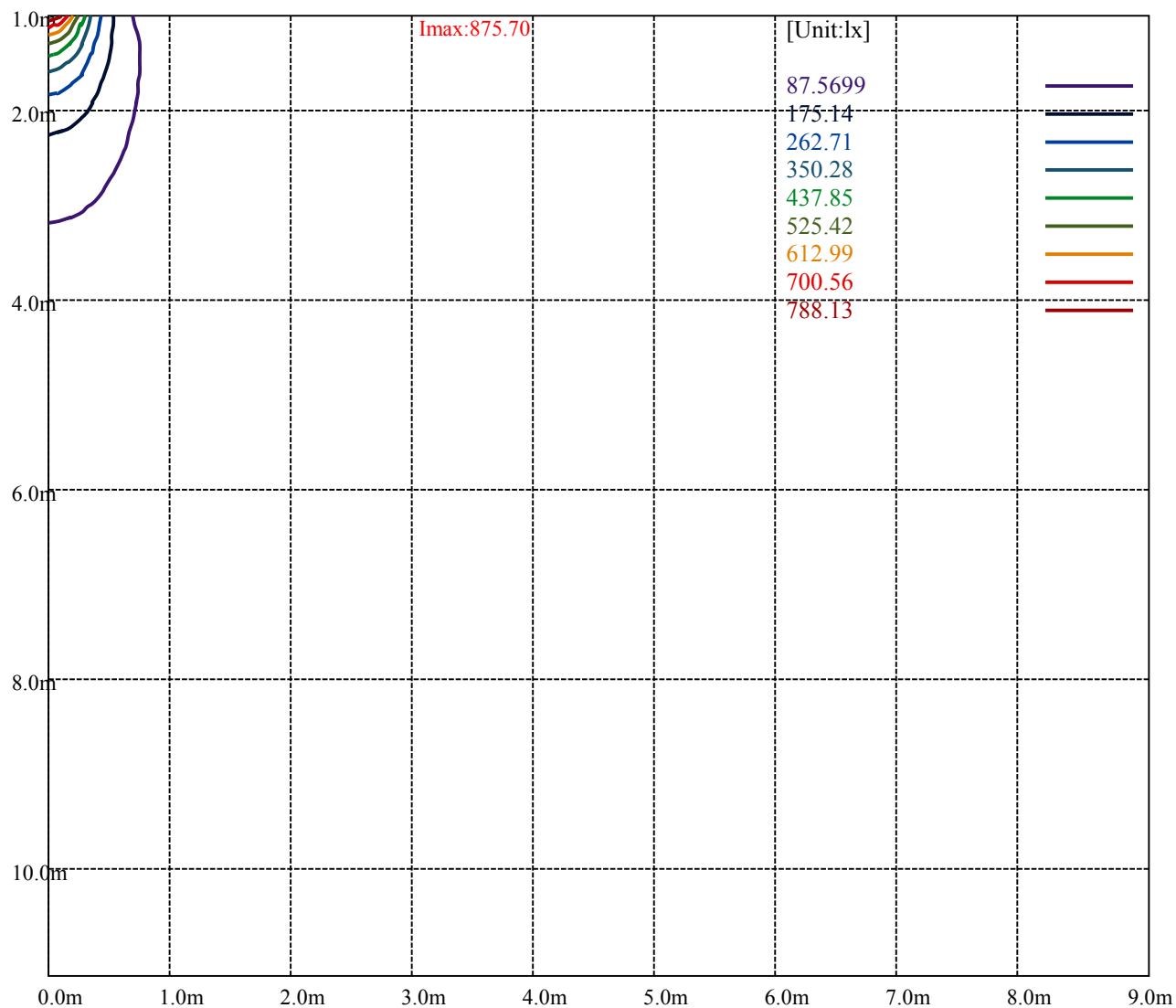
(70%Imax) 612.99

(80%Imax) 700.56

(90%Imax) 788.13



(10%Emax)	9.729978	—
(20%Emax)	19.46	—
(30%Emax)	29.19	—
(40%Emax)	38.91989	—
(50%Emax)	48.64989	—
(60%Emax)	58.37989	—
(70%Emax)	68.10989	—
(80%Emax)	77.83989	—
(90%Emax)	87.56989	—



Luminance Table

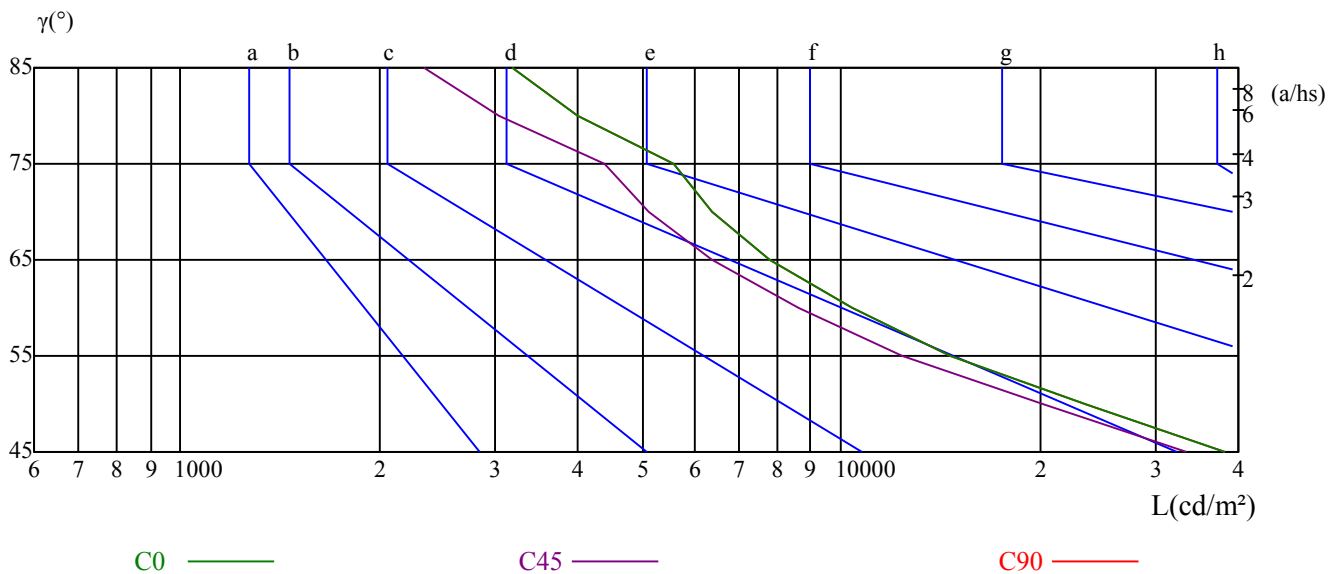
γ	45	50	55	60	65	70	75	80	85
C0	38272	23412	14625	10384	7786	6389	5598	3982	3172
C45	33401	20134	12383	8647	6367	5119	4382	3034	2338
C90	38272	23412	14625	10384	7786	6389	5598	3982	3172

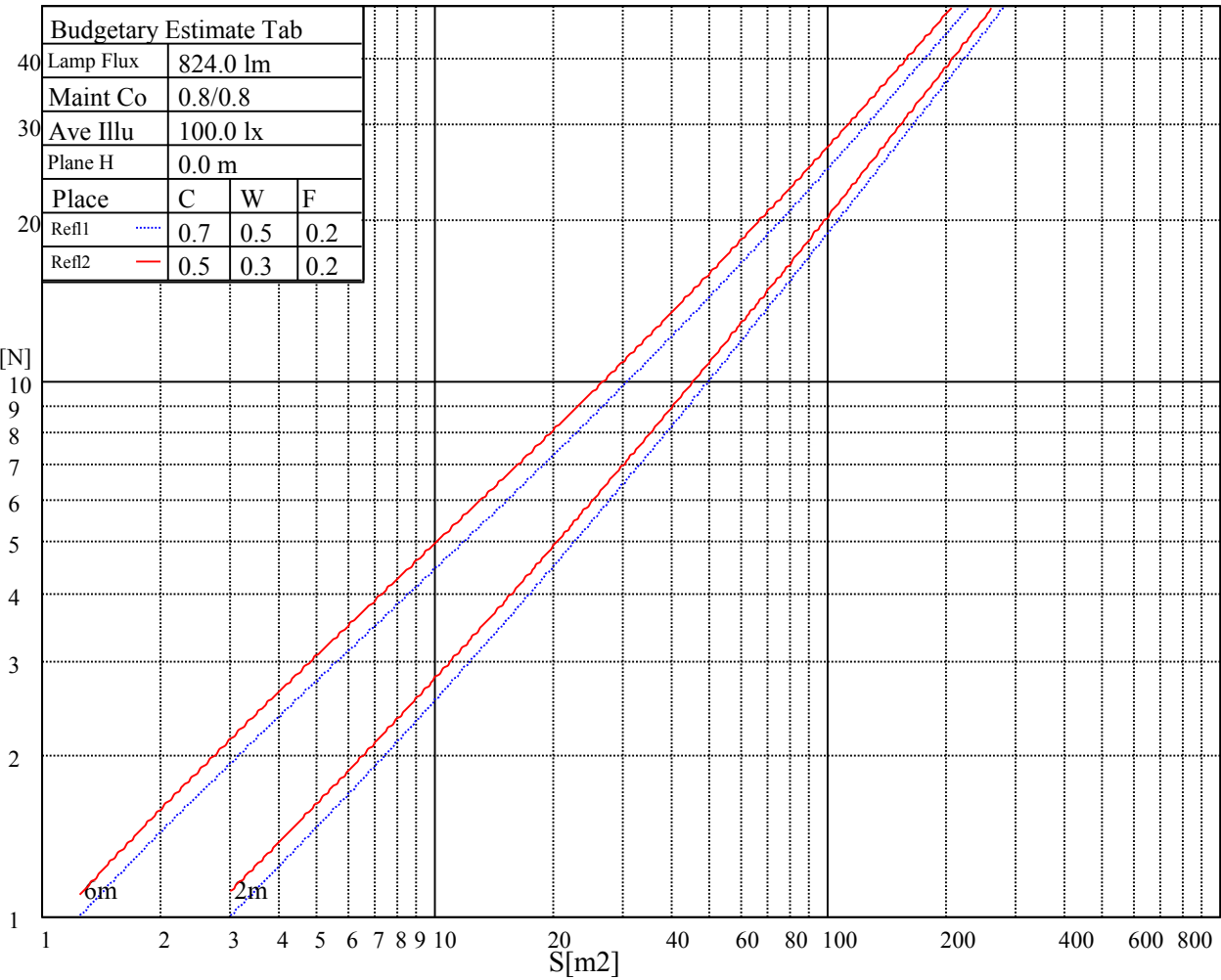
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
16862	16862	16862	16952	16952	16952	22875	22875	22875

Glare Table

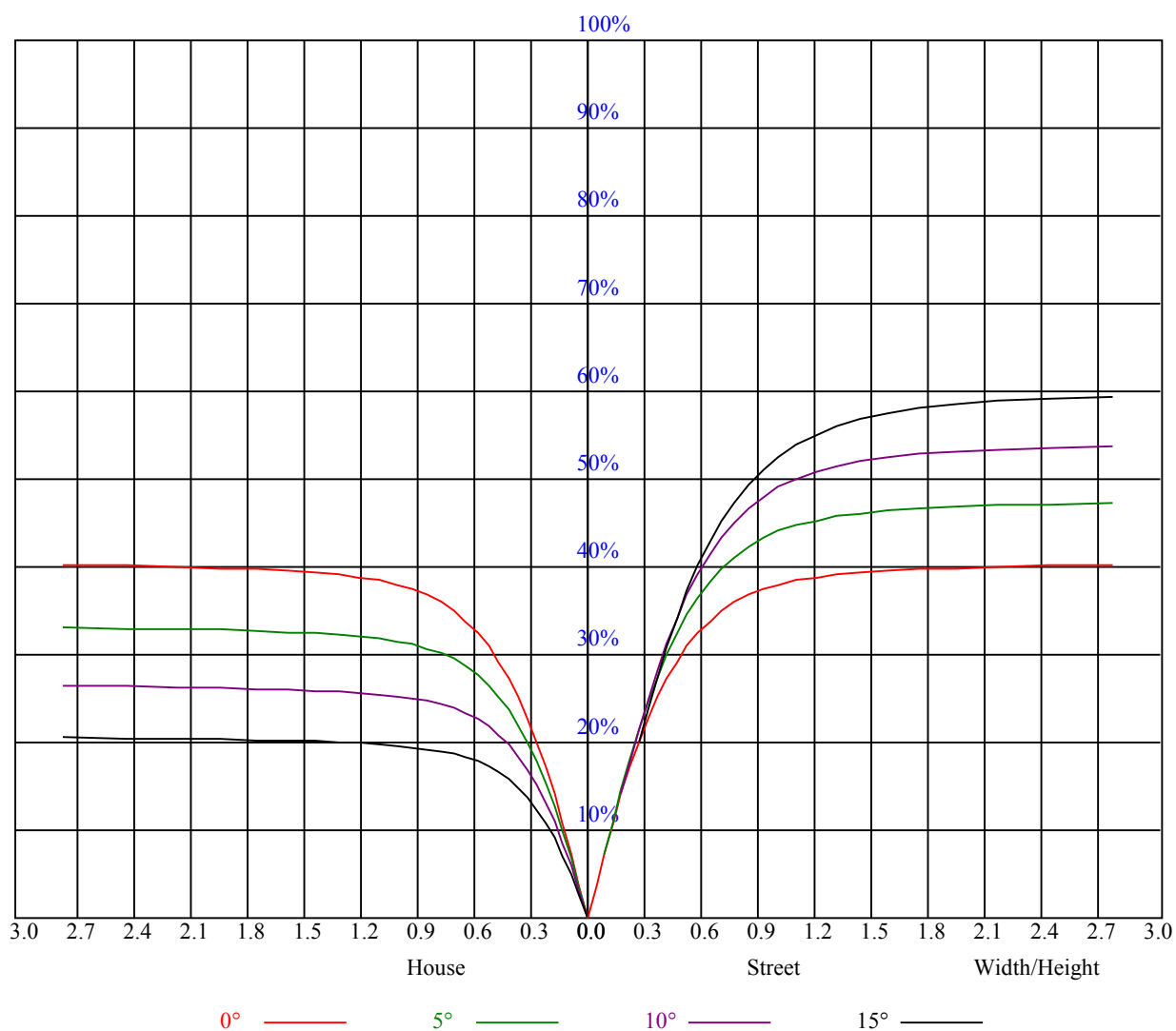
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.82
1	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.82	0.81	0.81	0.80	0.78	0.78	0.77	0.76	0.74
2	0.83	0.79	0.76	0.81	0.78	0.75	0.78	0.76	0.73	0.76	0.74	0.72	0.74	0.72	0.70	0.69
3	0.77	0.72	0.69	0.76	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
4	0.72	0.67	0.63	0.71	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.66	0.63	0.60	0.59
5	0.67	0.62	0.58	0.66	0.62	0.58	0.65	0.61	0.57	0.63	0.60	0.57	0.62	0.59	0.56	0.55
6	0.63	0.58	0.54	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.59	0.56	0.53	0.52
7	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.49
8	0.56	0.51	0.48	0.56	0.51	0.48	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.50	0.47	0.46
9	0.53	0.48	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.51	0.47	0.45	0.51	0.47	0.45	0.43
10	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.45	0.43	0.49	0.45	0.42	0.48	0.45	0.42	0.41



Nata 1407-N

Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	875.95	867.63	783.23	646.91	509.38	395.69	305.84	231.18	169.13		
45.0	877.38	832.51	726.25	587.18	457.41	353.02	279.03	206.41	142.82		
90.0	872.04	799.42	683.64	537.79	416.12	325.55	251.83	182.90	124.81		
135.0	877.43	816.98	709.24	561.63	437.75	341.62	265.87	193.14	130.32		
180.0	875.95	809.49	678.18	550.01	431.31	332.82	256.89	182.13	117.66		
225.0	877.38	847.98	740.67	594.50	461.10	365.63	281.83	205.36	143.15		
270.0	872.04	869.12	789.78	657.92	513.24	396.79	316.68	237.13	163.46		
315.0	877.43	863.12	775.30	632.71	496.72	380.22	298.96	224.08	158.45		
360.0	875.95	867.63	783.23	646.91	509.38	395.69	305.84	231.18	169.13		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	107.03	63.37	36.78	23.95	16.24	11.89	8.70	6.22	4.18		
45.0	88.48	52.69	31.33	21.09	14.98	11.12	8.04	5.84	3.91		
90.0	73.17	43.88	27.53	19.77	14.26	10.68	8.09	5.67	3.96		
135.0	78.73	46.80	29.18	20.65	14.76	11.07	7.54	5.07	3.63		
180.0	70.25	42.67	26.87	18.33	13.54	10.63	8.37	5.45	4.07		
225.0	86.11	50.98	31.22	20.70	14.76	12.83	13.38	6.28	4.62		
270.0	103.07	60.62	35.24	23.73	16.52	12.44	10.74	6.72	4.79		
315.0	100.26	58.75	34.08	22.41	15.58	11.56	9.41	6.55	4.57		
360.0	107.03	63.37	36.78	23.95	16.24	11.89	8.70	6.22	4.18		
C/γ(°)	90.0										
0.0	2.81										
45.0	2.75										
90.0	2.75										
135.0	2.75										
180.0	2.75										
225.0	2.70										
270.0	2.81										
315.0	2.81										
360.0	2.81										