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Nata

LumCAT: 2-1682-M
Luminaire: 92.70.125.00
Report No: NT2017110105
Test No: GC2017110105
LampCAT: NICHIA NVNWS007Z-V1
Lamp flux(lm): 810.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 19.9000
Current(A): 0.3000
Power (W): 5.9700
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 734.40
Efficiency(%): 90.67%
Lumens(lm)/Power(W): 123.01
Central intensity(cd): 1913.760
Maximum intensity(cd): 1913.760
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=31.6
[C90/270]Total=31.6
Field angle(10%Imax): [C0/180]Total=66.0
[C90/270]Total=66.0
Maximum s/h(1/2): C0_180=0.52 C90_270=0.52
Maximum s/h(1/4): C0_180=0.55 C90_270=0.55
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.67%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.669%

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2017/10/9
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1913.760	0.000	0	.000%	.000%
5.0	1734.965	43.619	43.619	5.385%	5.940%
10.0	1410.545	112.525	156.144	13.892%	21.262%
15.0	1018.736	144.103	300.248	17.791%	40.884%
20.0	638.771	136.602	436.849	16.864%	59.484%
25.0	394.527	108.374	545.223	13.379%	74.241%
30.0	285.474	86.055	631.278	10.624%	85.959%
35.0	129.307	61.079	692.358	7.541%	94.276%
40.0	13.351	23.801	716.159	2.938%	97.517%
45.0	4.859	3.372	719.531	.416%	97.976%
50.0	4.040	1.798	721.329	.222%	98.221%
55.0	3.647	1.671	723	.206%	98.448%
60.0	3.372	1.623	724.623	.200%	98.669%
65.0	3.200	1.598	726.221	.197%	98.887%
70.0	3.111	1.598	727.819	.197%	99.104%
75.0	3.056	1.612	729.43	.199%	99.324%
80.0	3.049	1.633	731.064	.202%	99.546%
85.0	3.056	1.659	732.722	.205%	99.772%
90.0	3.056	1.673	734.396	.207%	100.000%

Zonal flux distribution table

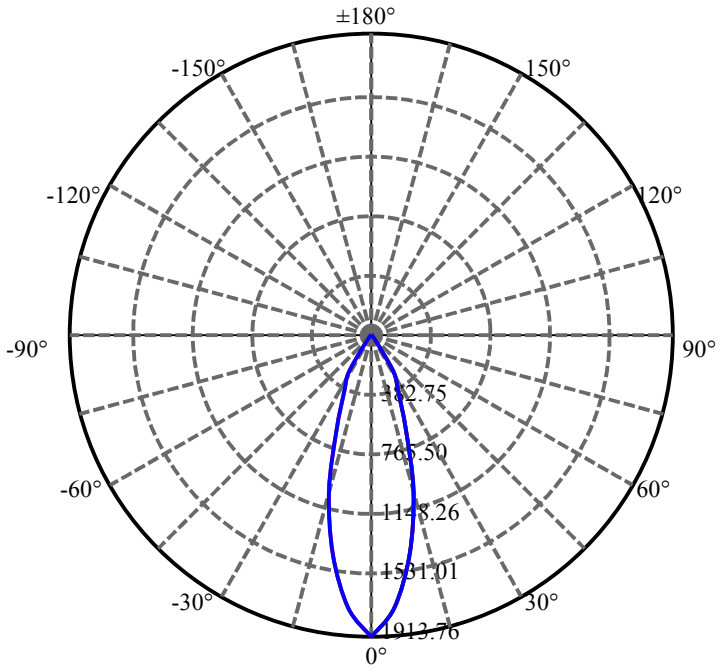
ZONAL LUMEN SUMMARY

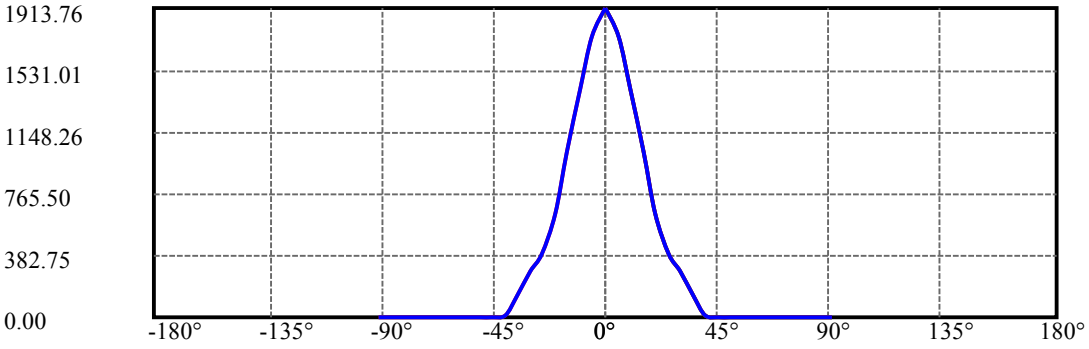
Zone	Lumens	%Lamp	%Fixt
0-30	631.28	77.94%	85.96%
0-40	716.16	88.41%	97.52%
0-60	724.62	89.46%	98.67%
0-90	732.72	90.46%	99.77%
0-120	732.72	90.46%	99.77%
0-180	734.40	90.67%	100.00%
60-90	9.72	1.20%	1.32%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.46	587.52	72.53%	80.00%

ZONAL LUMEN SUMMARY

0-10	156.14
10-20	280.71
20-30	194.43
30-40	84.88
40-50	5.17
50-60	3.29
60-70	3.20
70-80	3.25
80-90	1.66
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

Light Distribution Curve [Unit:cd]





C0(Max):

C0/C180:

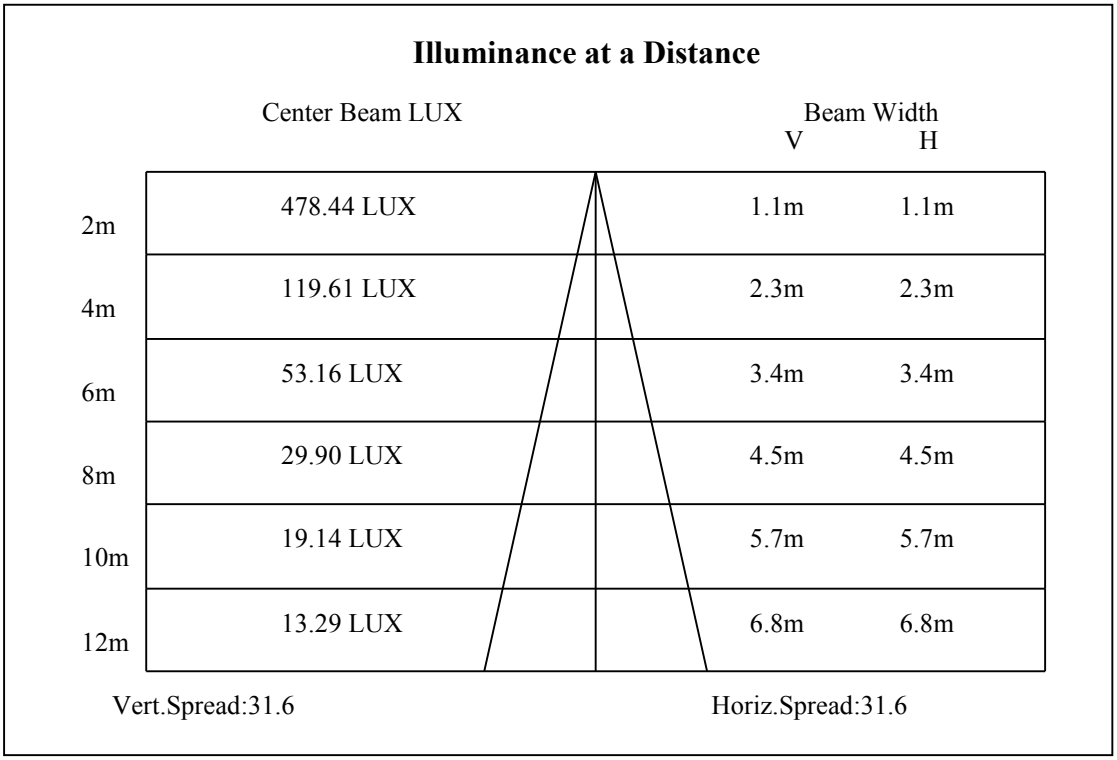
C90/C270:

Field angle(10%Imax):C0/180Left:33.0 Right:33.0
:C90/270Left:33.0 Right:33.0

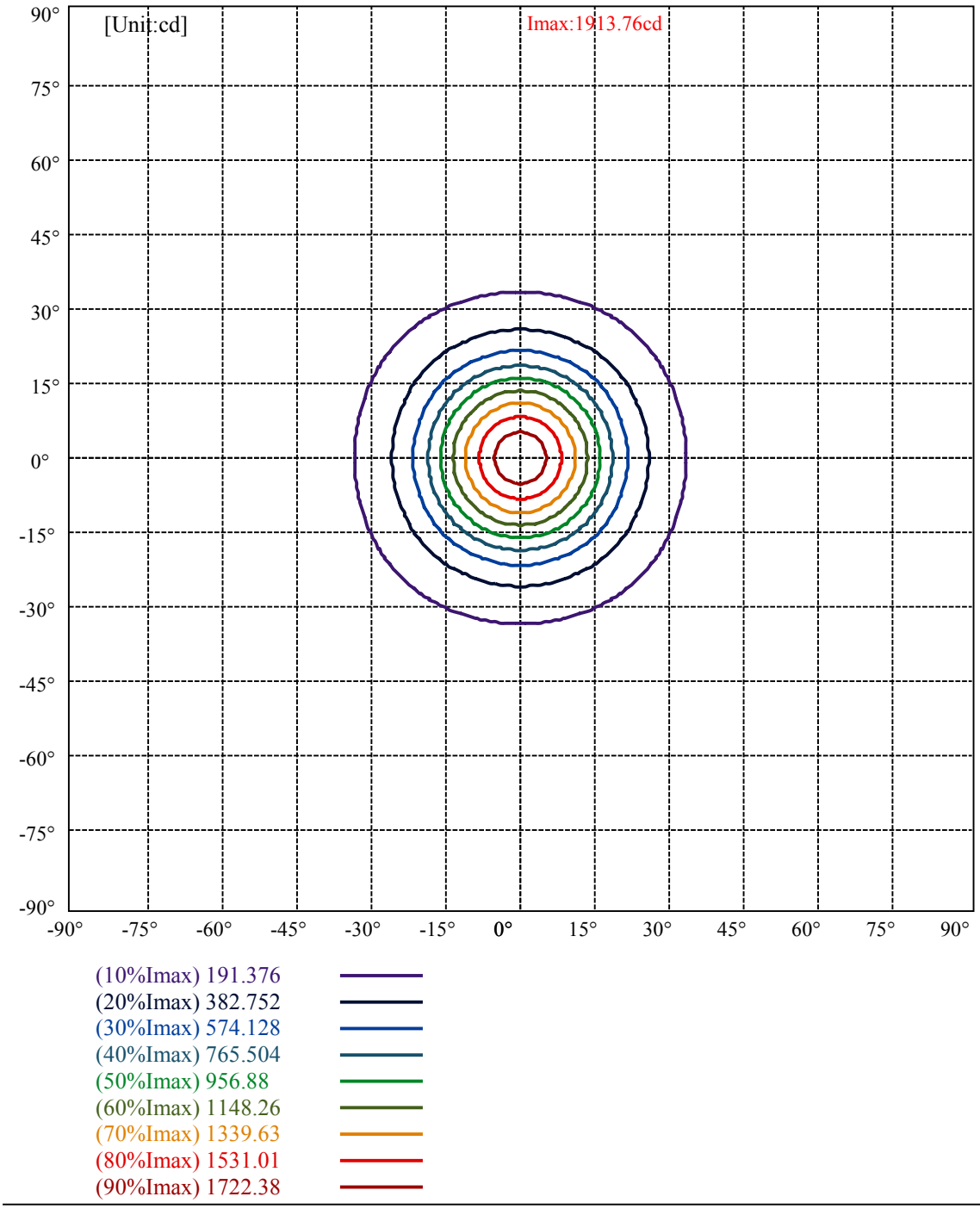
Beam Angle(50%Imax):C0/180Left:15.8 Right:15.8
:C90/270Left:15.8 Right:15.8

Equipment: GMS1980 Date: 2017/10/9 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

Lux distance Curve



ISO-Intensity(V-H)

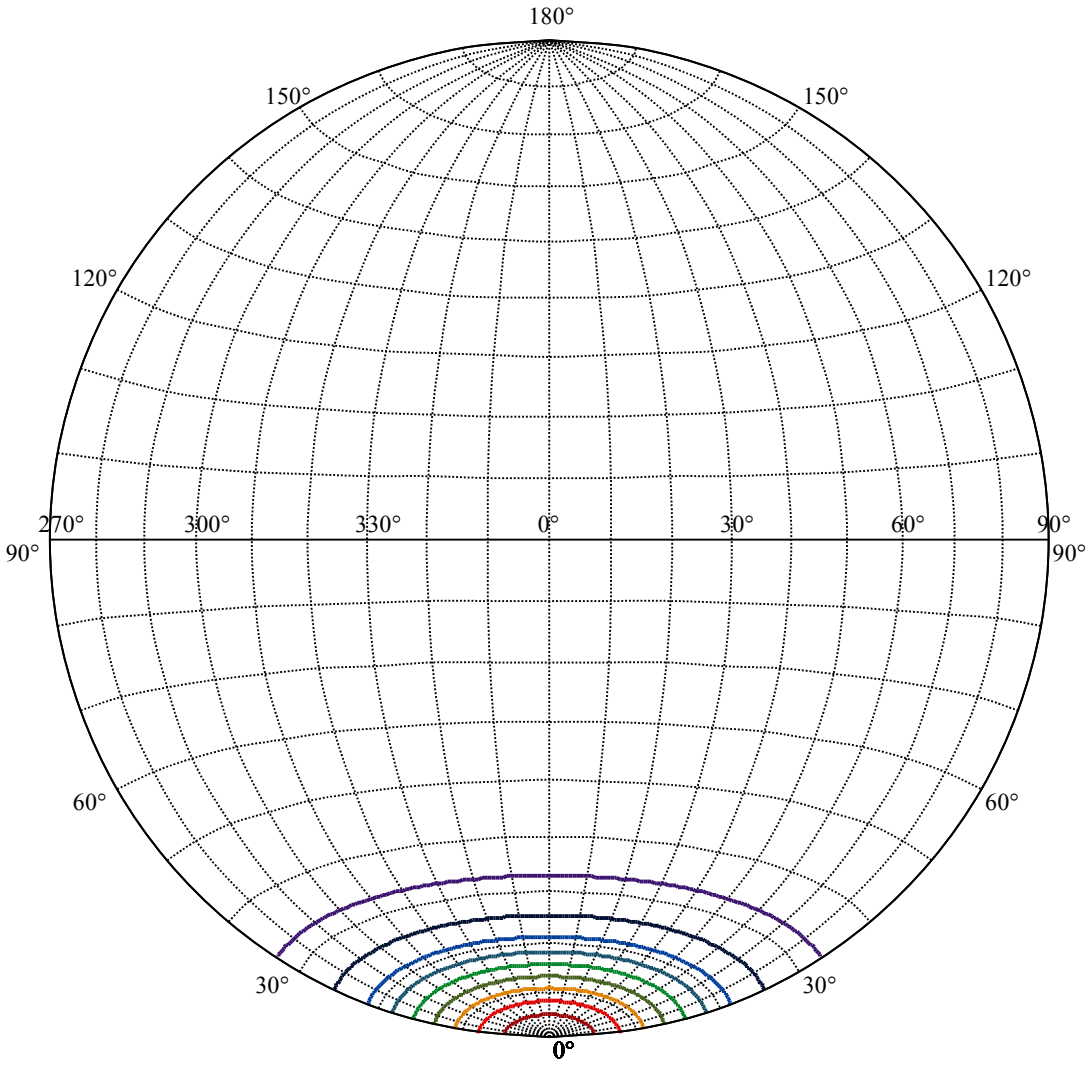


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/10/9
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:1913.76

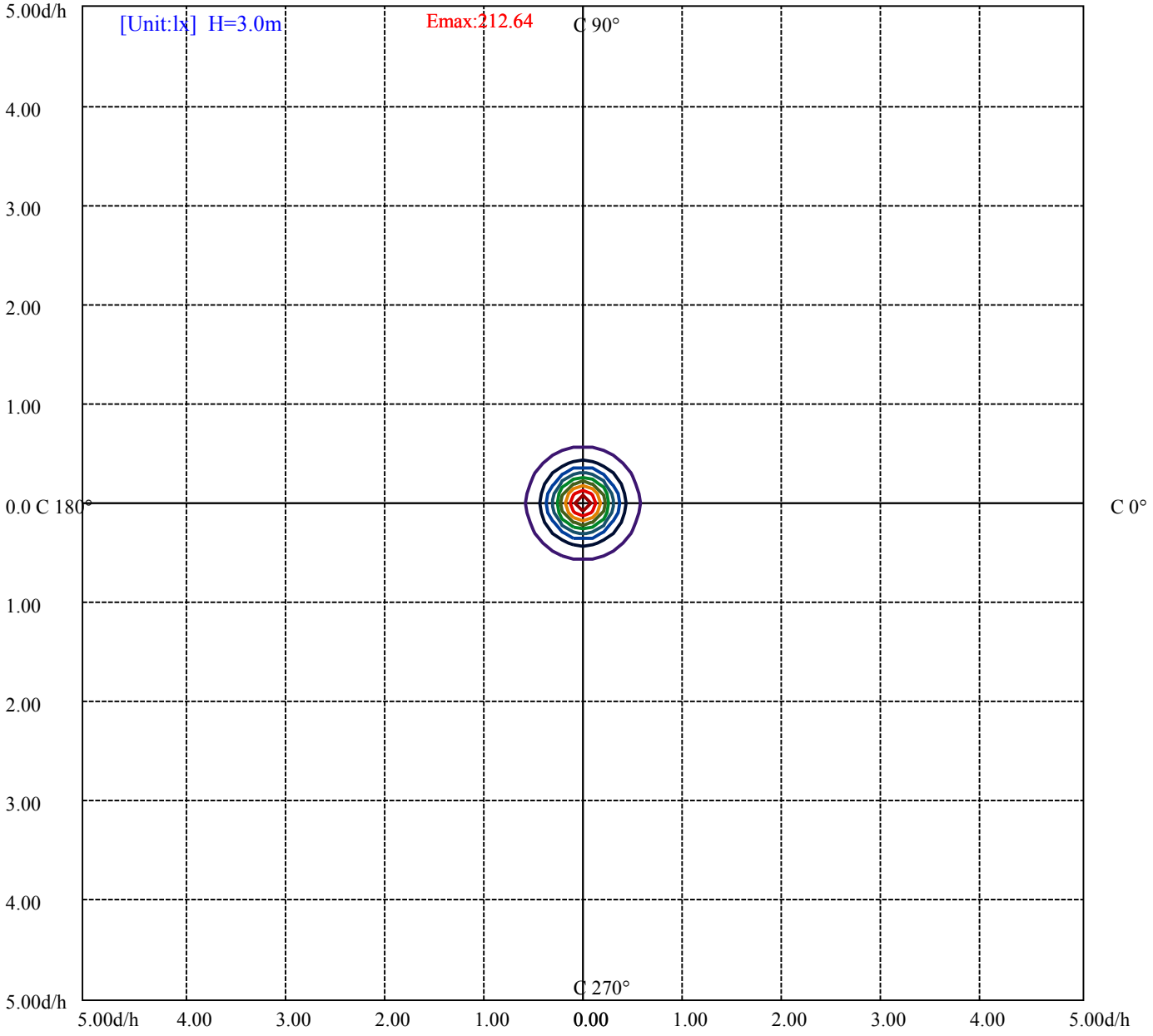
(10%Imax) 191.376
(20%Imax) 382.752
(30%Imax) 574.128
(40%Imax) 765.504
(50%Imax) 956.88
(60%Imax) 1148.26
(70%Imax) 1339.63
(80%Imax) 1531.01
(90%Imax) 1722.38

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/10/9
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

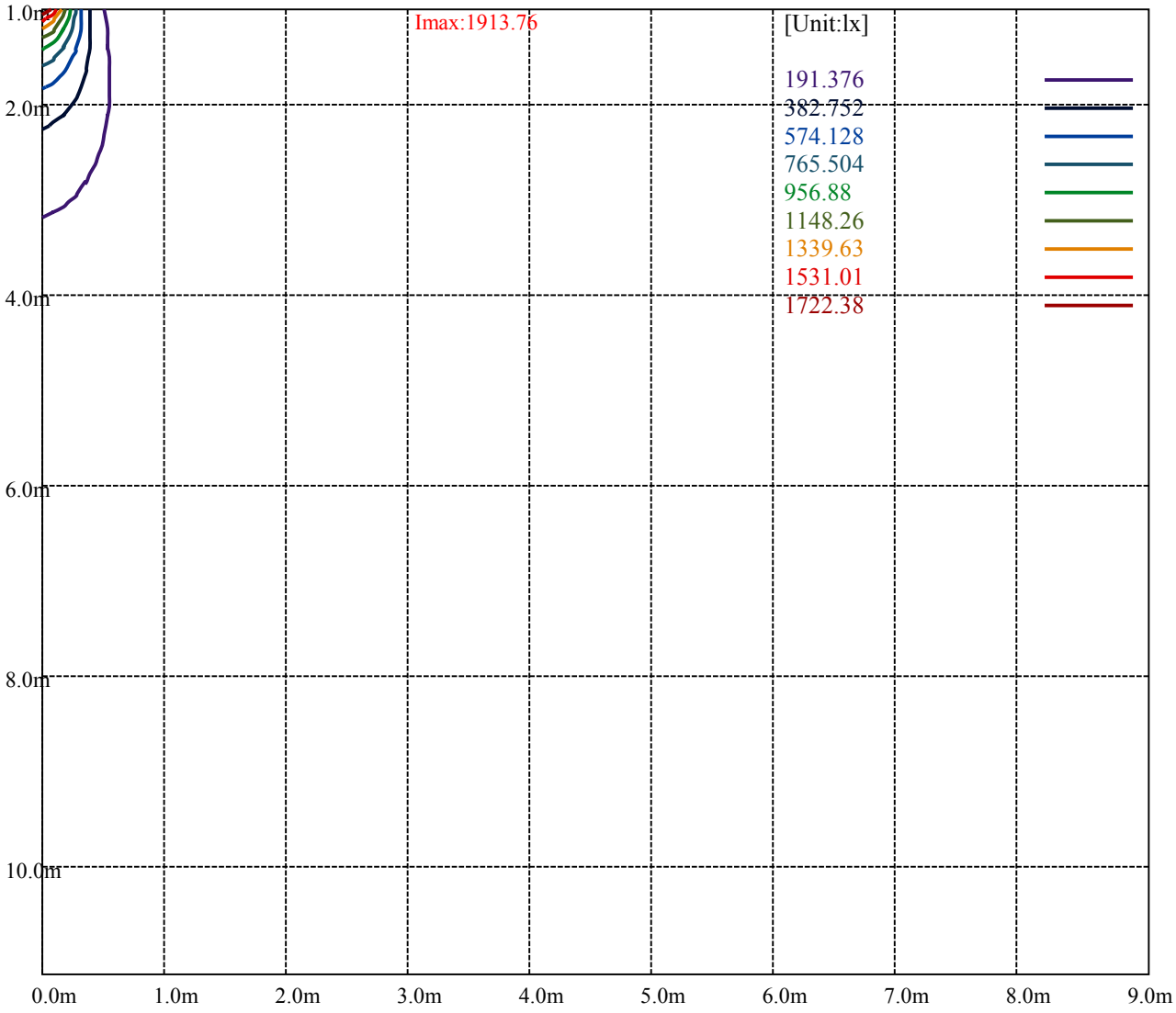
ISO illuminance diagram



(10%Emax) 21.264
(20%Emax) 42.52789
(30%Emax) 63.79189
(40%Emax) 85.05578
(50%Emax) 106.3198
(60%Emax) 127.5833
(70%Emax) 148.8478
(80%Emax) 170.1111
(90%Emax) 191.3755

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2017/10/9
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/10/9
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Nata 2-1682-M

Luminance Limitting Curve(no luminous side)

Luminance Table

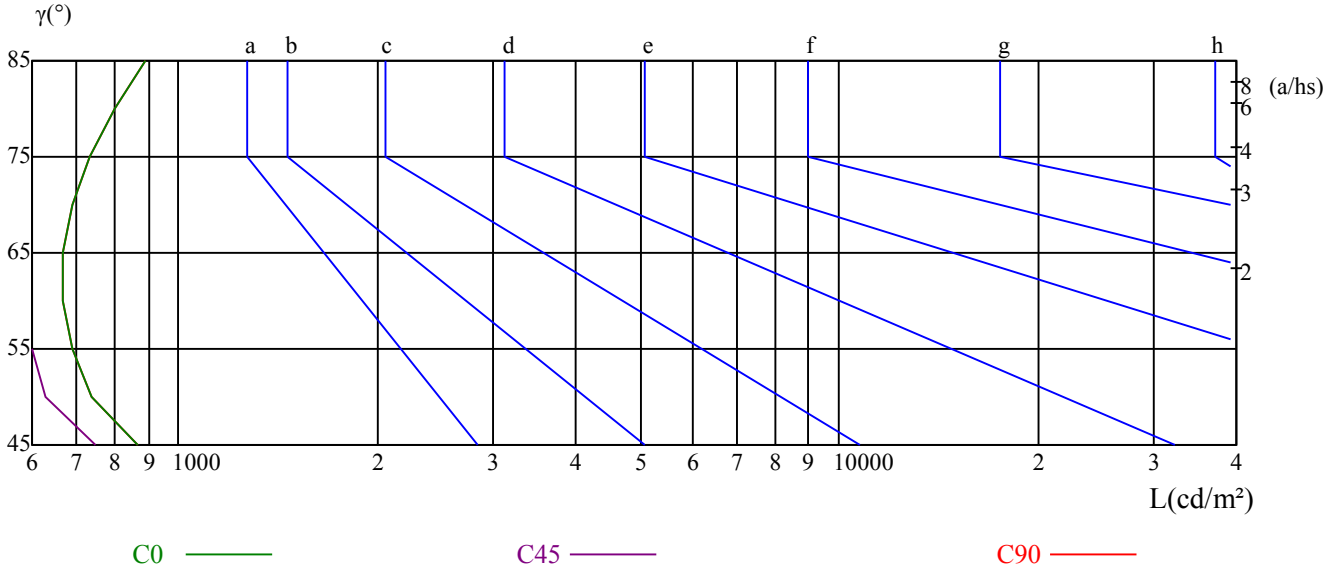
γ	45	50	55	60	65	70	75	80	85
C0	869	741	691	667	667	691	732	799	892
C45	750	630	579	550	540	548	568	605	655
C90	869	741	691	667	667	691	732	799	892

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1545	1545	1545	2409	2409	2409	7155	7155	7155

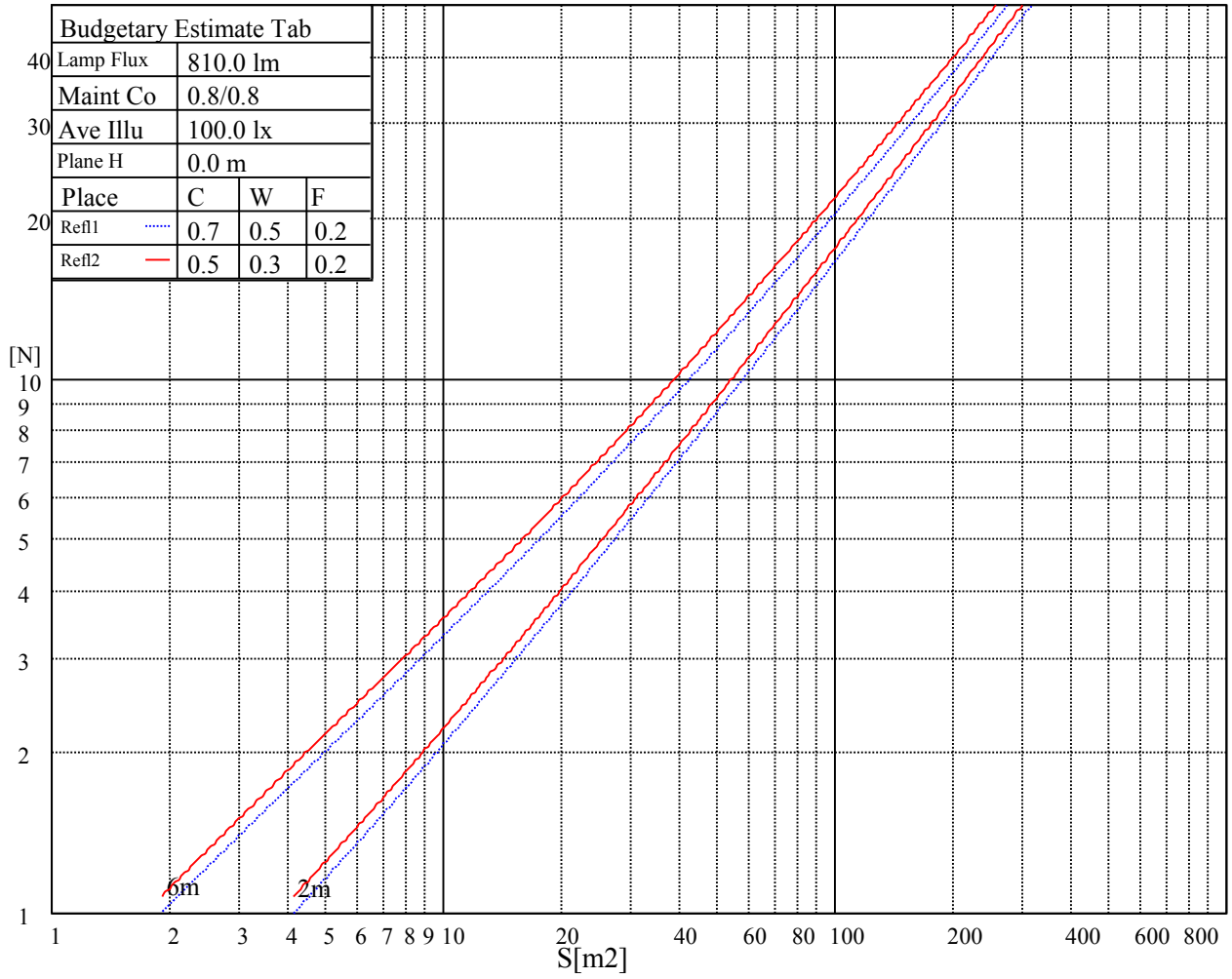
Glare Table

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 Limitting Curve



Budgetary Estimate Table

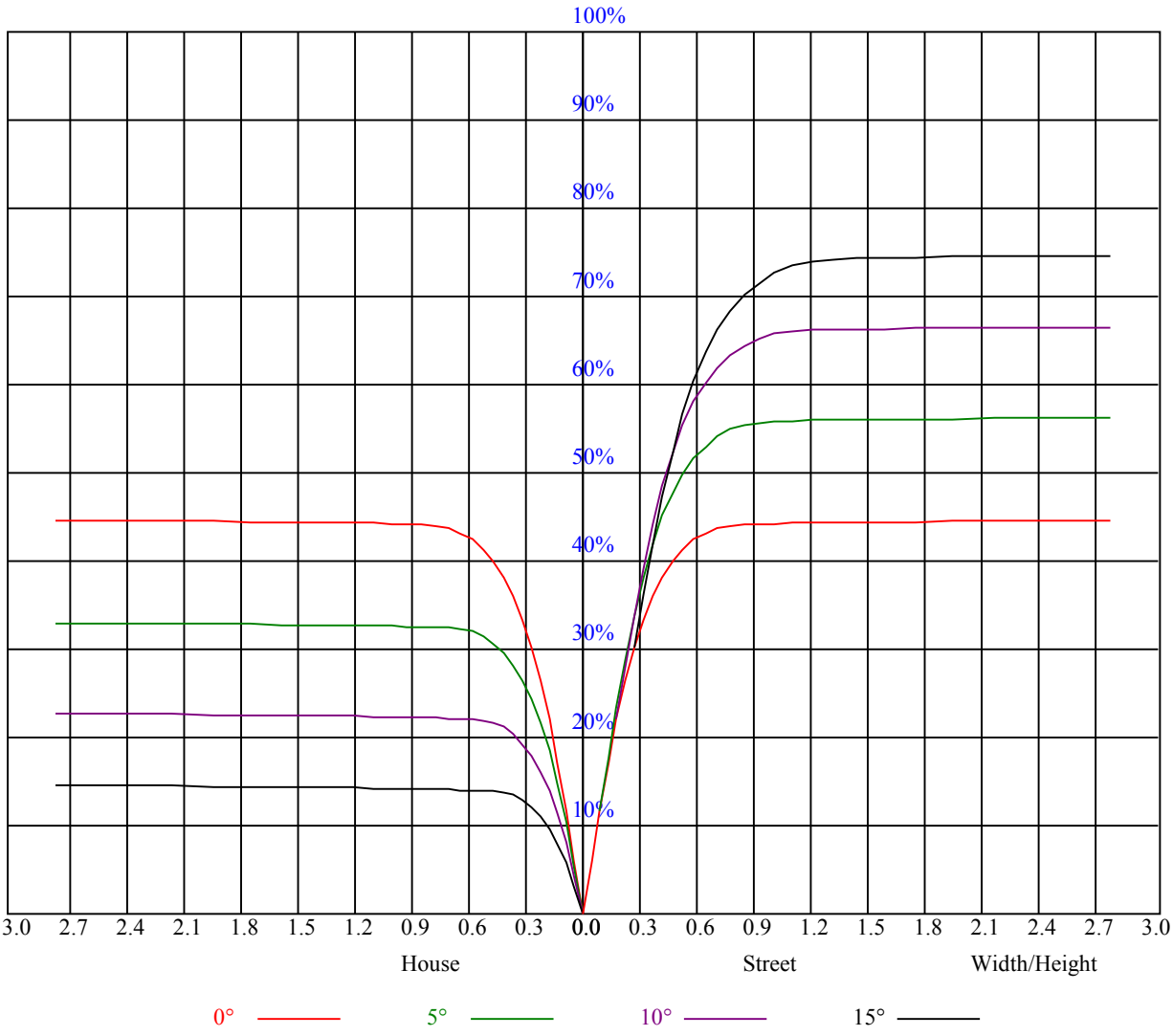


Equipment: GMS1980 Date: 2017/10/9 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.89	0.86	0.88	0.86	0.85	0.86	0.84	0.83	0.81
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.77
4	0.86	0.81	0.78	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.81	0.77	0.74	0.81	0.76	0.73	0.79	0.75	0.73	0.78	0.74	0.72	0.76	0.74	0.71	0.70
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
7	0.74	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
8	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.61
9	0.68	0.64	0.61	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2017/10/9	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.42

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	1914.31	1841.64	1519.56	1148.48	718.49	416.23	294.00	179.87	12.88
45.0	1921.47	1712.25	1373.11	999.27	595.16	361.72	279.14	99.76	8.97
90.0	1891.19	1602.14	1271.25	861.91	506.63	330.39	246.05	46.96	6.83
135.0	1928.08	1674.27	1334.02	942.02	599.56	365.57	279.69	87.43	8.75
180.0	1914.31	1637.93	1291.07	893.79	568.18	363.43	269.78	86.05	8.26
225.0	1921.47	1739.23	1421.01	1031.92	639.15	411.38	294.11	145.84	11.07
270.0	1891.19	1851.00	1557.55	1178.21	772.44	492.75	323.73	214.83	37.05
315.0	1928.08	1821.27	1516.80	1094.30	710.56	414.74	297.30	173.70	12.99
360.0	1914.31	1841.64	1519.56	1148.48	718.49	416.23	294.00	179.87	12.88

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5.34	4.29	3.80	3.47	3.25	3.14	3.08	3.08	3.08
45.0	4.29	3.91	3.52	3.30	3.14	3.08	3.03	3.03	3.03
90.0	4.13	3.74	3.47	3.25	3.14	3.08	3.03	3.03	3.03
135.0	4.46	4.02	3.63	3.36	3.19	3.14	3.08	3.08	3.08
180.0	4.35	3.91	3.58	3.36	3.19	3.08	3.08	3.08	3.08
225.0	5.18	4.07	3.69	3.36	3.19	3.08	3.03	3.03	3.03
270.0	6.22	4.24	3.80	3.47	3.25	3.14	3.03	3.03	3.03
315.0	4.90	4.13	3.69	3.41	3.25	3.14	3.08	3.03	3.08
360.0	5.34	4.29	3.80	3.47	3.25	3.14	3.08	3.08	3.08

C/γ(°)	90.0
0.0	3.08
45.0	3.03
90.0	3.03
135.0	3.08
180.0	3.08
225.0	3.03
270.0	3.03
315.0	3.08
360.0	3.08