NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86 571 85021543 Fax:+86 571 87977635
Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:
LumCAT: 61-0202
Luminaire: 92.70.427.00
Report No: 20240718-B004
Ballast type: AC

Test No: 20241018-C004	Voltage(V): 220.000
LampCAT: LUMINUS CXM-6-AC40	Current(A): 0.083
Lamp flux(lm): 1086.0	Power (W): 10.800
Number of Lamps: 1	PF: 0.589
Length(mm): 45	Width(mm): 45
Phm Type: C	Height(mm): 21

Photometric Results

Lumens(lm): 957.88, Efficiency(%): 88.21% , Luminous Efficacy(lm/W): 88.69
Central intensity(cd): 4680.688, Maximum intensity(cd): 4680.688
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.2
[C90/270]Total=25.2
Field angle(10%Imax): [C0/180]Total=41.0
[C90/270]Total=41.0
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.21%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.985%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4680.688	0.000	0	0.00%	0.00%
1.0	4662.473	4.471	4.471	0.41%	0.47%
2.0	4603.438	13.299	17.77	1.22%	1.86%
3.0	4507.900	21.791	39.561	2.01%	4.13%
4.0	4390.782	29.787	69.348	2.74%	7.24%
5.0	4231.455	37.092	106.44	3.42%	11.11%
6.0	4051.937	43.531	149.972	4.01%	15.66%
7.0	3853.692	49.070	199.042	4.52%	20.78%
8.0	3619.309	53.483	252.525	4.92%	26.36%
9.0	3356.909	56.538	309.063	5.21%	32.27%
10.0	3081.341	58.264	367.327	5.37%	38.35%
11.0	2817.697	58.944	426.27	5.43%	44.50%
12.0	2515.209	58.296	484.567	5.37%	50.59%
13.0	2231.156	56.327	540.894	5.19%	56.47%
14.0	1952.442	53.550	594.444	4.93%	62.06%
15.0	1483.055	47.164	641.608	4.34%	66.98%
16.0	1338.432	41.343	682.951	3.81%	71.30%
17.0	1142.674	38.637	721.588	3.56%	75.33%
18.0	915.760	33.939	755.527	3.13%	78.87%
19.0	707.113	28.235	783.762	2.60%	81.82%
20.0	537.617	22.782	806.544	2.10%	84.20%
21.0	402.840	18.059	824.603	1.66%	86.09%
22.0	288.384	13.890	838.493	1.28%	87.54%
23.0	234.412	10.970	849.463	1.01%	88.68%
24.0	194.617	9.380	858.843	0.86%	89.66%
25.0	114.104	7.020	865.862	0.65%	90.39%
26.0	92.092	4.867	870.73	0.45%	90.90%
27.0	77.535	4.150	874.88	0.38%	91.33%
28.0	67.257	3.666	878.545	0.34%	91.72%
29.0	59.810	3.324	881.87	0.31%	92.06%
30.0	54.258	3.080	884.95	0.28%	92.39%
31.0	49.795	2.896	887.845	0.27%	92.69%
32.0	46.218	2.751	890.596	0.25%	92.98%
33.0	43.585	2.646	893.242	0.24%	93.25%
34.0	41.449	2.573	895.815	0.24%	93.52%
35.0	39.539	2.515	898.33	0.23%	93.78%
36.0	37.857	2.464	900.794	0.23%	94.04%
37.0	36.335	2.420	903.214	0.22%	94.29%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	34.836	2.376	905.59	0.22%	94.54%
39.0	33.285	2.325	907.915	0.21%	94.78%
40.0	31.756	2.268	910.183	0.21%	95.02%
41.0	30.161	2.205	912.388	0.20%	95.25%
42.0	28.435	2.129	914.517	0.20%	95.47%
43.0	26.737	2.044	916.561	0.19%	95.69%
44.0	25.172	1.959	918.52	0.18%	95.89%
45.0	23.504	1.871	920.391	0.17%	96.09%
46.0	21.909	1.776	922.167	0.16%	96.27%
47.0	20.410	1.683	923.85	0.15%	96.45%
48.0	18.932	1.590	925.44	0.15%	96.61%
49.0	17.615	1.501	926.941	0.14%	96.77%
50.0	16.320	1.415	928.356	0.13%	96.92%
51.0	15.040	1.327	929.683	0.12%	97.06%
52.0	13.863	1.240	930.923	0.11%	97.19%
53.0	12.802	1.160	932.083	0.11%	97.31%
54.0	11.851	1.087	933.169	0.10%	97.42%
55.0	10.988	1.019	934.189	0.09%	97.53%
56.0	10.337	0.964	935.153	0.09%	97.63%
57.0	9.722	0.917	936.07	0.08%	97.72%
58.0	9.195	0.875	936.944	0.08%	97.81%
59.0	8.705	0.837	937.781	0.08%	97.90%
60.0	8.252	0.801	938.582	0.07%	97.99%
61.0	7.908	0.771	939.354	0.07%	98.07%
62.0	7.593	0.747	940.101	0.07%	98.14%
63.0	7.345	0.727	940.827	0.07%	98.22%
64.0	7.110	0.709	941.536	0.07%	98.29%
65.0	6.950	0.696	942.232	0.06%	98.37%
66.0	6.781	0.685	942.917	0.06%	98.44%
67.0	6.635	0.675	943.592	0.06%	98.51%
68.0	6.518	0.666	944.258	0.06%	98.58%
69.0	6.423	0.660	944.918	0.06%	98.65%
70.0	6.313	0.654	945.572	0.06%	98.72%
71.0	6.218	0.648	946.22	0.06%	98.78%
72.0	6.130	0.642	946.862	0.06%	98.85%
73.0	6.064	0.638	947.5	0.06%	98.92%
74.0	5.984	0.633	948.133	0.06%	98.98%
75.0	5.911	0.628	948.762	0.06%	99.05%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.845	0.624	949.386	0.06%	99.11%
77.0	5.794	0.621	950.006	0.06%	99.18%
78.0	5.750	0.618	950.624	0.06%	99.24%
79.0	5.699	0.615	951.239	0.06%	99.31%
80.0	5.655	0.612	951.851	0.06%	99.37%
81.0	5.625	0.610	952.461	0.06%	99.43%
82.0	5.604	0.609	953.07	0.06%	99.50%
83.0	5.640	0.611	953.682	0.06%	99.56%
84.0	5.647	0.615	954.296	0.06%	99.63%
85.0	5.567	0.612	954.909	0.06%	99.69%
86.0	5.516	0.606	955.514	0.06%	99.75%
87.0	5.457	0.601	956.115	0.06%	99.82%
88.0	5.377	0.593	956.708	0.05%	99.88%
89.0	5.333	0.587	957.295	0.05%	99.94%
90.0	5.340	0.585	957.881	0.05%	100.00%

Zonal flux distribution table

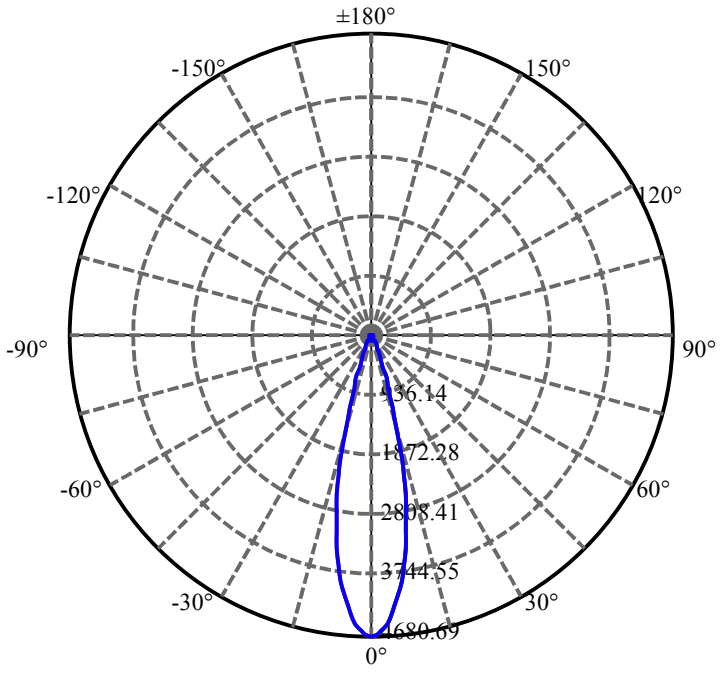
ZONAL LUMEN SUMMARY

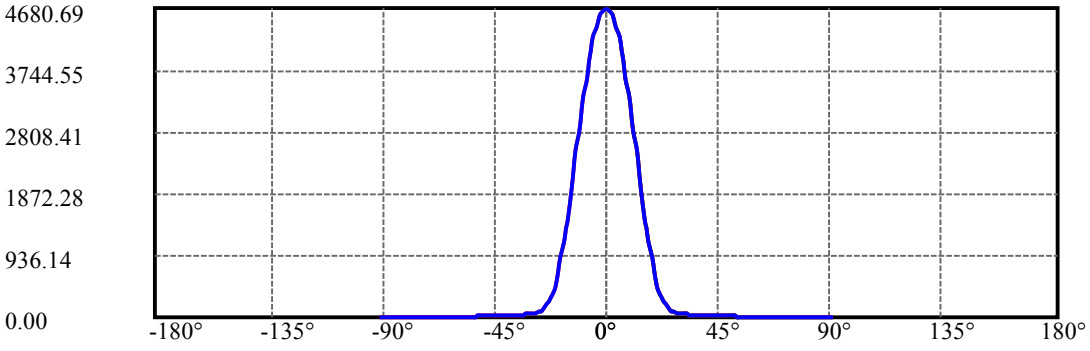
Zone	Lumens	%Lamp	%Fixt
0-30	884.95	81.49%	92.39%
0-40	910.18	83.81%	95.02%
0-60	938.58	86.43%	97.99%
0-90	957.30	88.15%	99.94%
0-120	957.30	88.15%	99.94%
0-180	957.88	88.21%	100.00%
60-90	18.71	1.72%	1.95%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-18.38	766.30	70.56%	80.00%

ZONAL LUMEN SUMMARY

0-10	367.33
10-20	439.22
20-30	78.41
30-40	25.23
40-50	18.17
50-60	10.23
60-70	6.99
70-80	6.28
80-90	5.44
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):

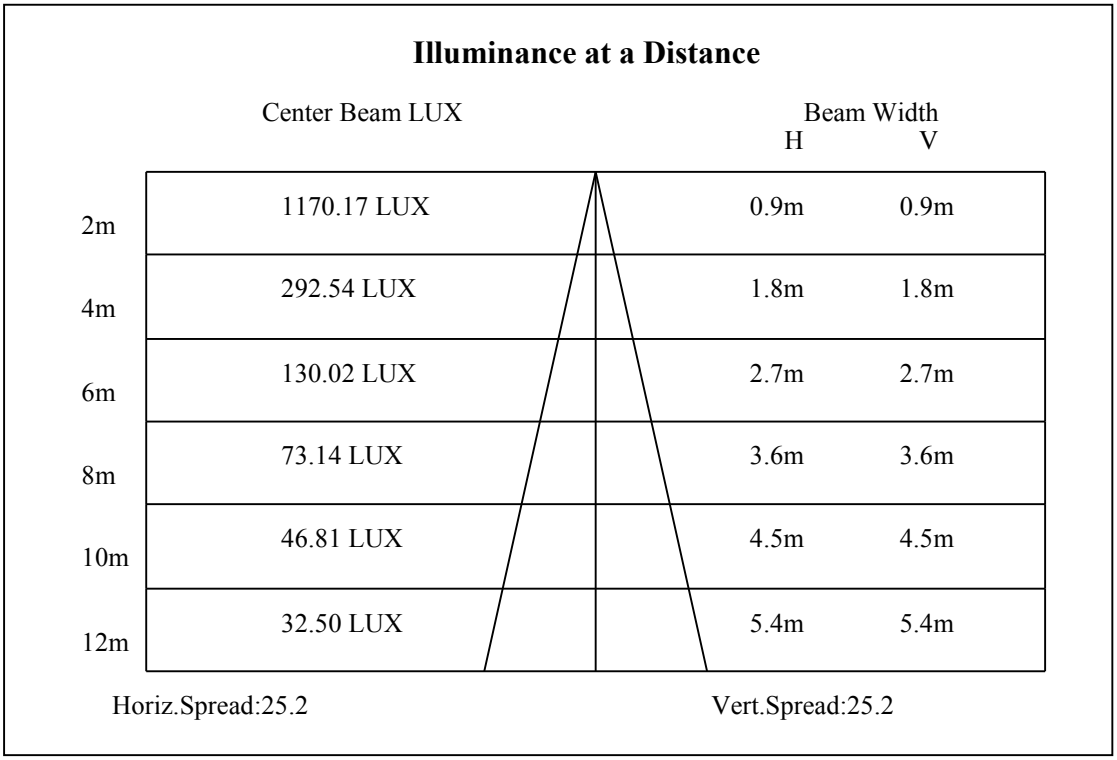
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:20.5 Right:20.5
:C90/270Left:20.5 Right:20.5

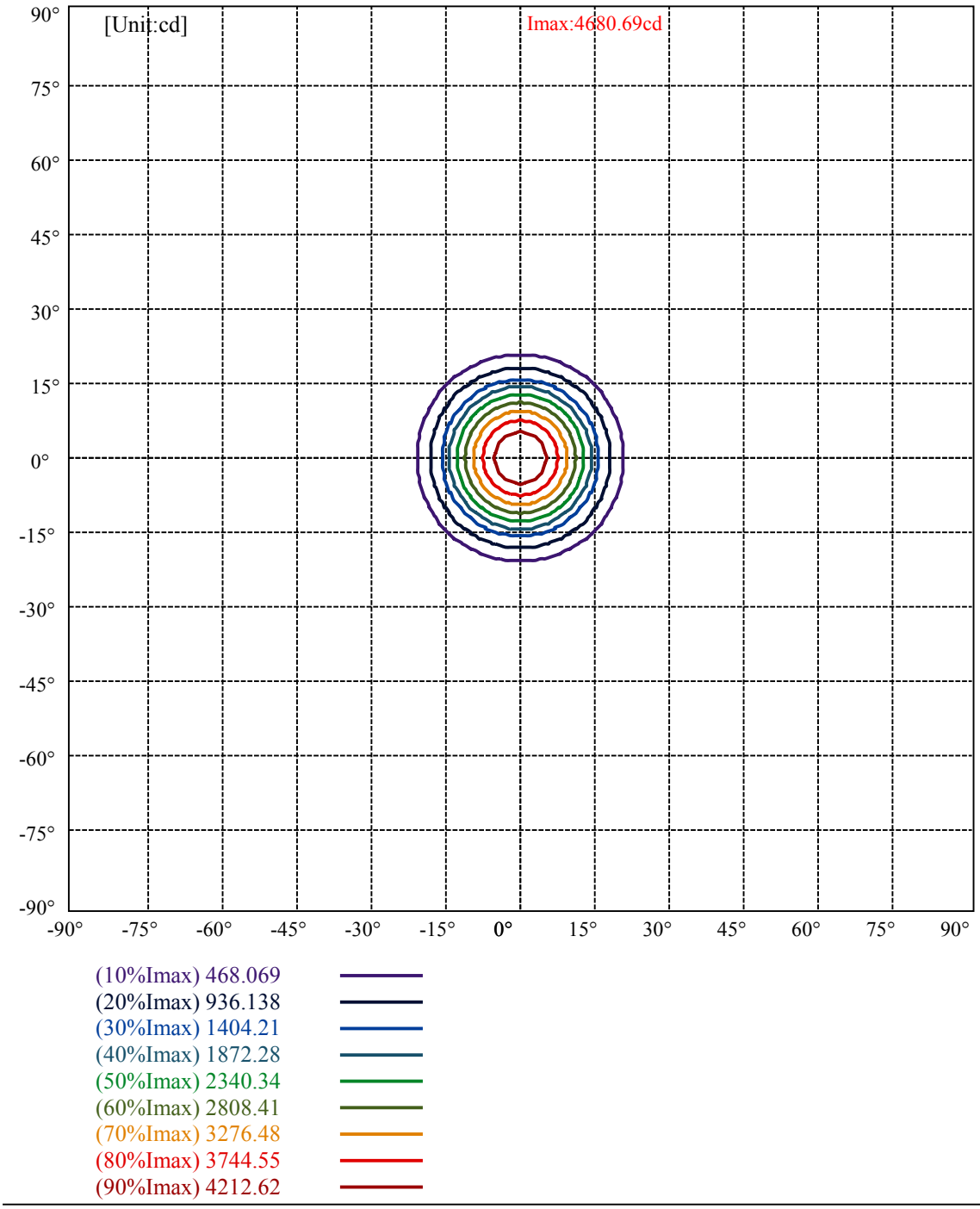
Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6
:C90/270Left:12.6 Right:12.6

Lux distance Curve



Equipment: GMS1980 Date: 2024/10/18 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

ISO-Intensity(V-H)

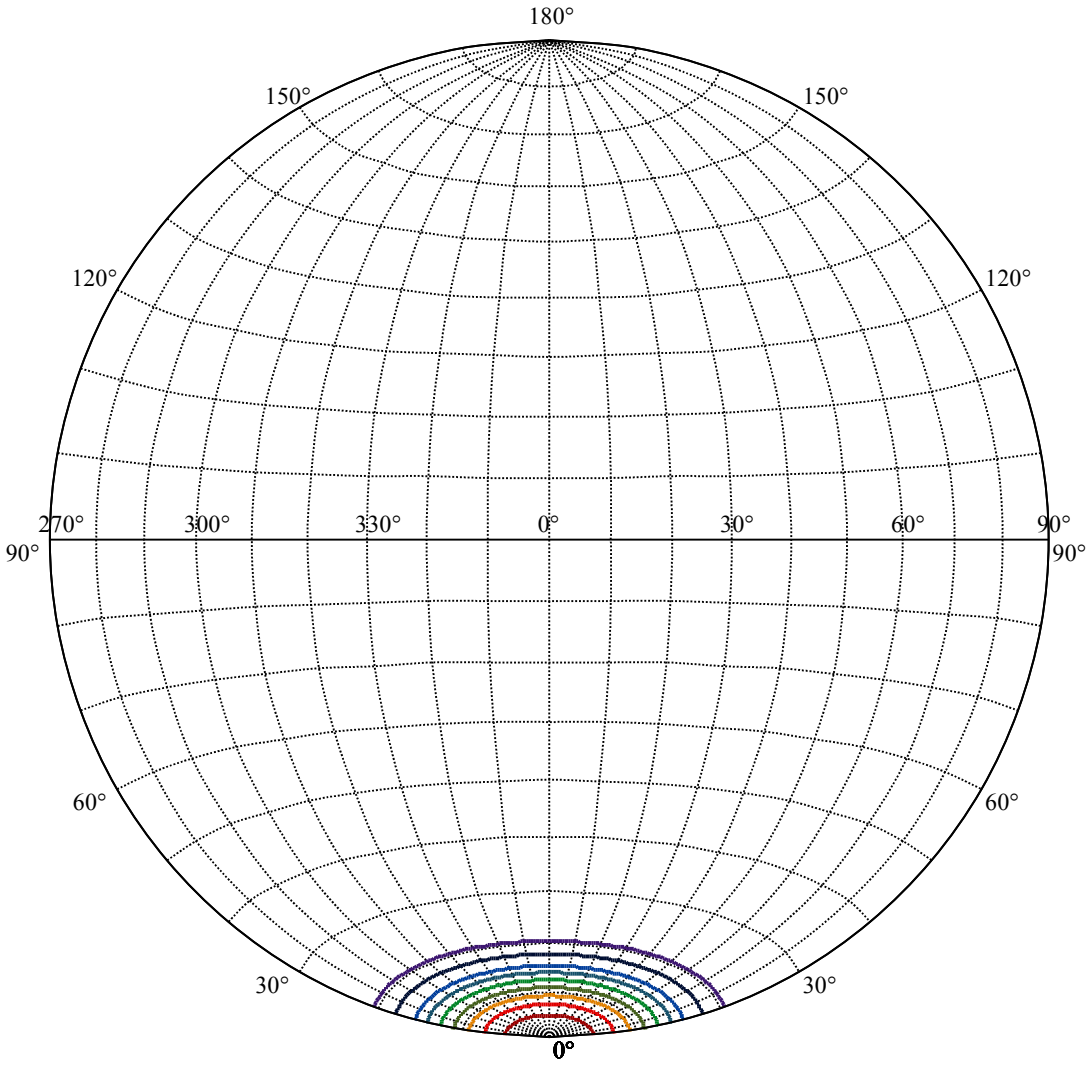


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/10/18
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:4680.69

(10%Imax) 468.069
(20%Imax) 936.138
(30%Imax) 1404.21
(40%Imax) 1872.28
(50%Imax) 2340.34
(60%Imax) 2808.41
(70%Imax) 3276.48
(80%Imax) 3744.55
(90%Imax) 4212.62

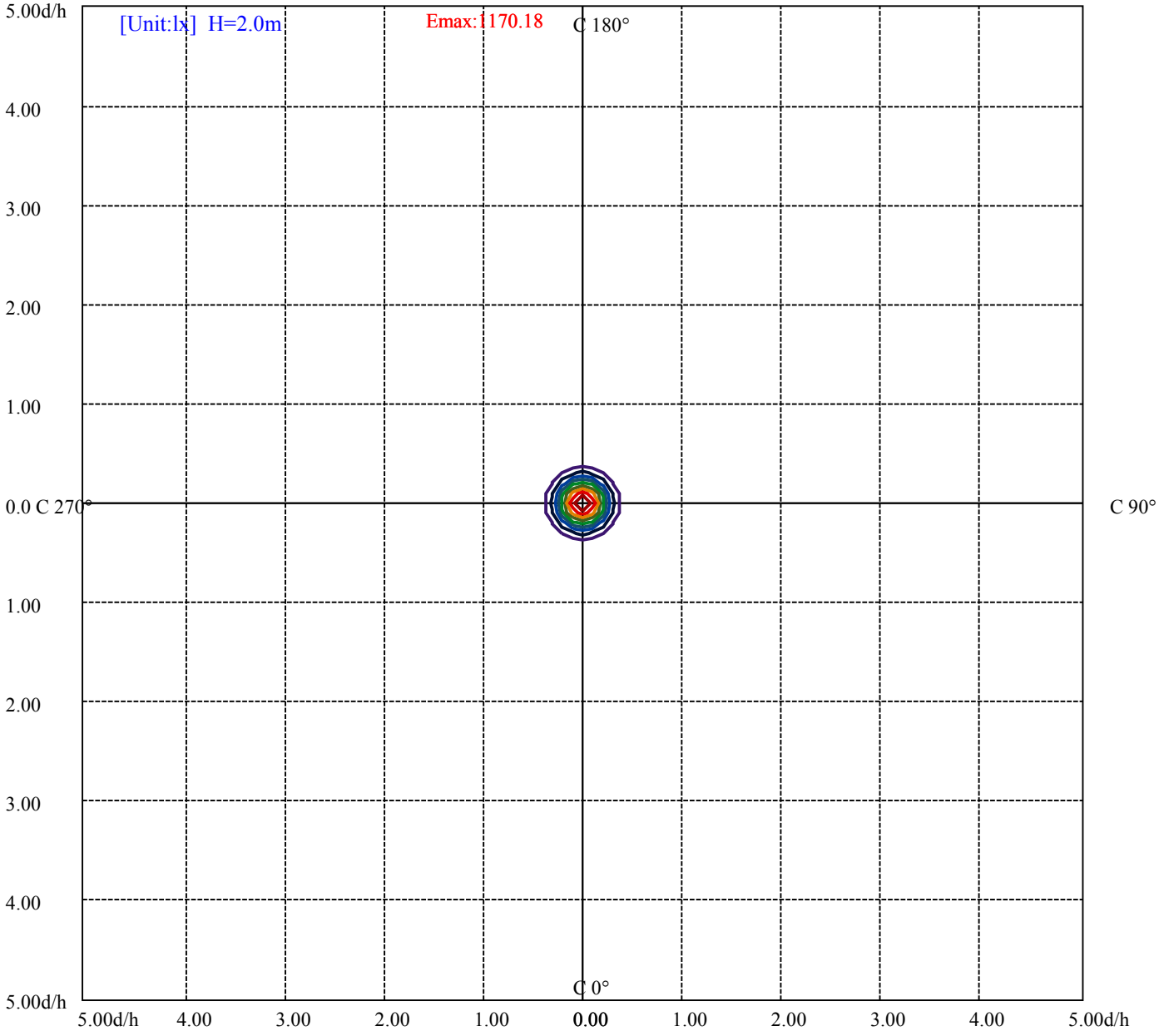
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/10/18
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

NT 61-0202

ISO illuminance diagram

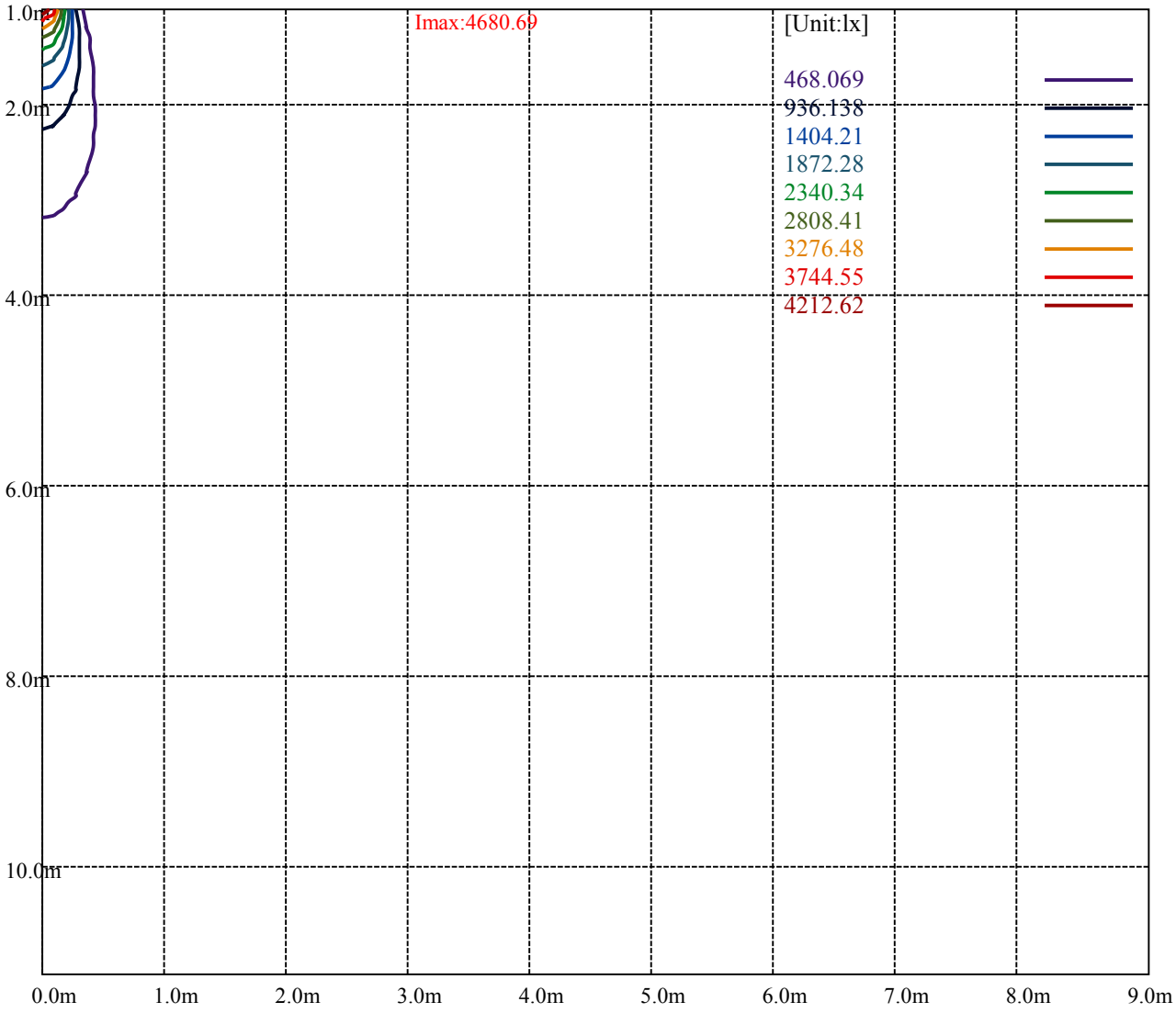


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/10/18
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/10/18
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

Luminance Limitting Curve(no luminous side)

Luminance Table

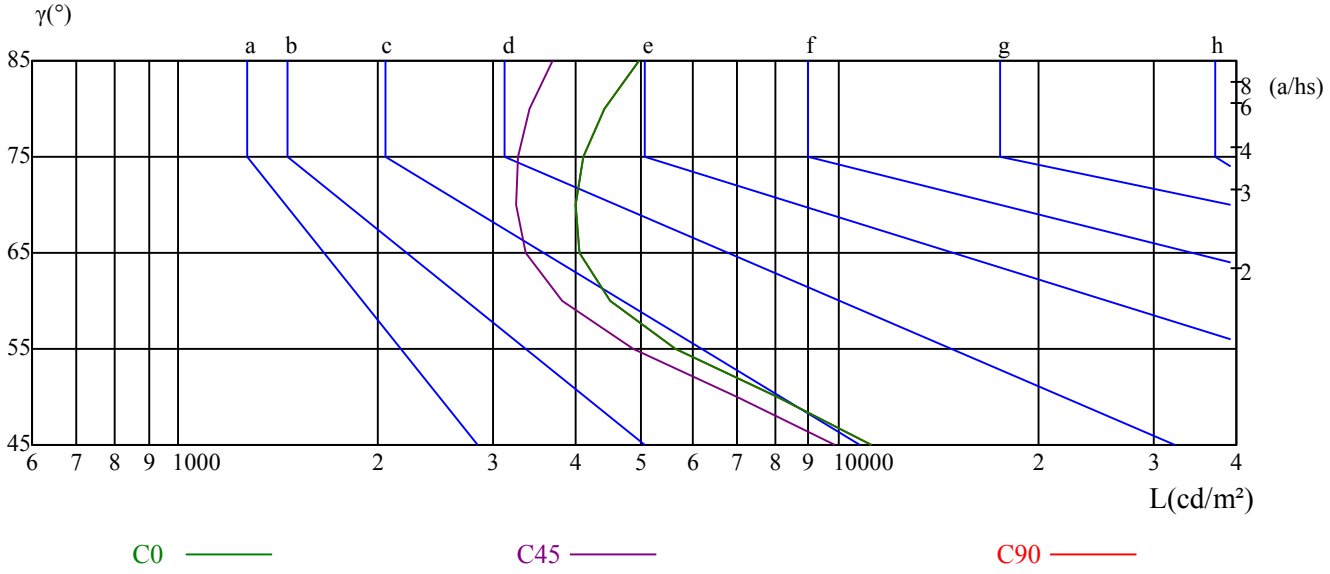
γ	45	50	55	60	65	70	75	80	85
C0	11192	8057	5677	4507	4059	3994	4114	4410	4980
C45	9889	7018	4870	3803	3362	3240	3257	3391	3692
C90	11192	8057	5677	4507	4059	3994	4114	4410	4980

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8121	8121	8121	11278	11278	11278	31543	31543	31543

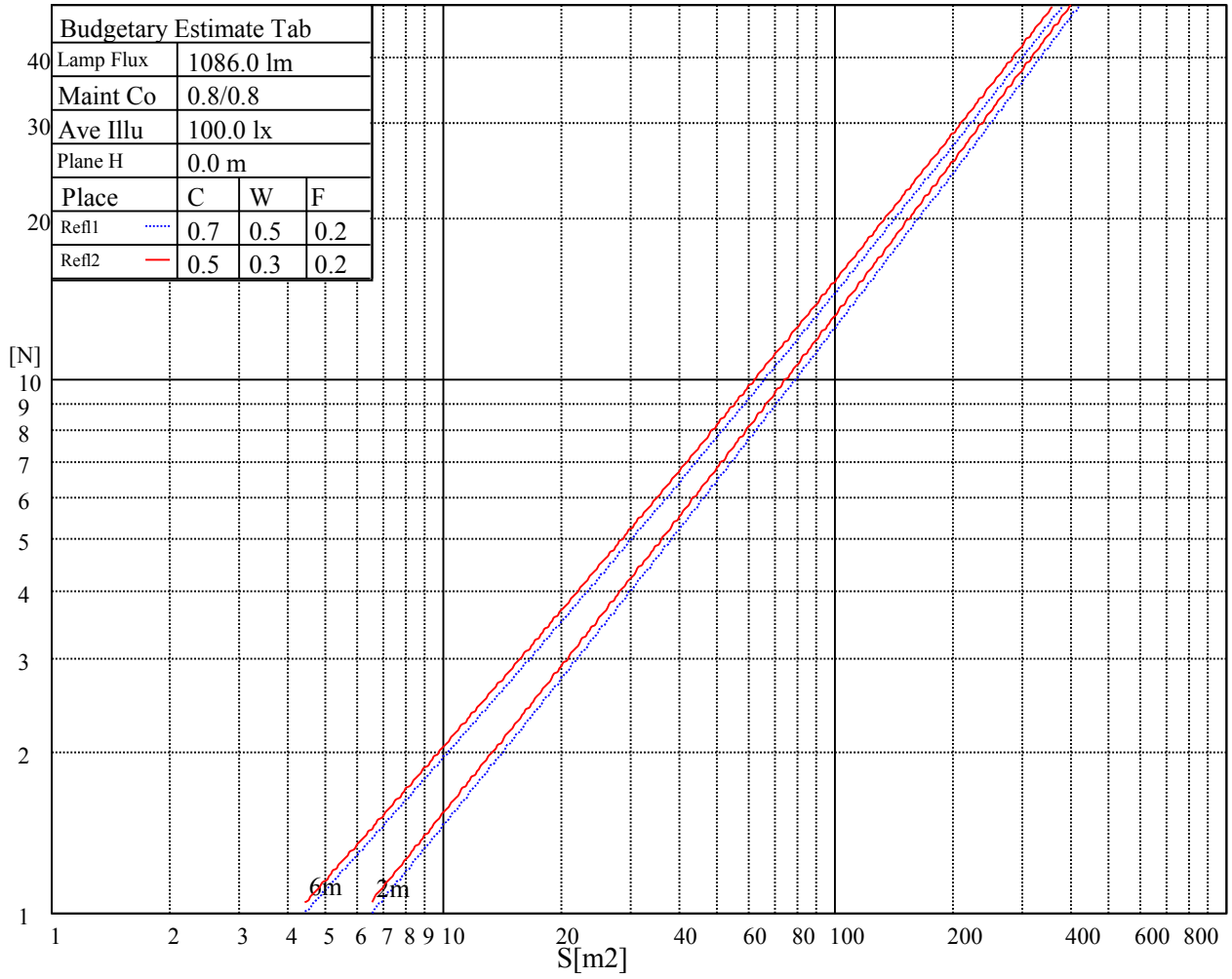
Glare Table

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

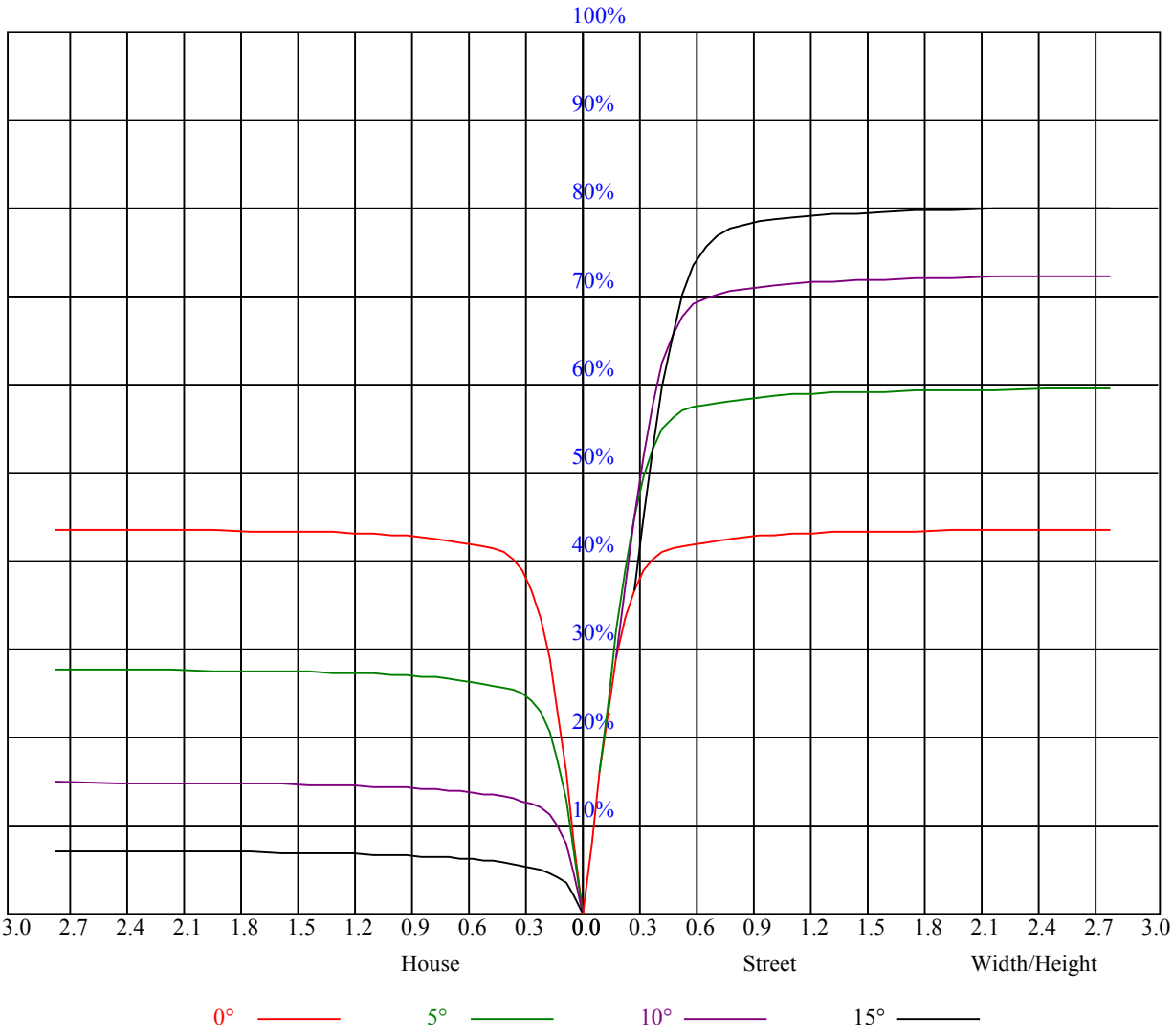


Equipment: GMS1980 Date: 2024/10/18 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

Utilization factor table for indoor luminaire

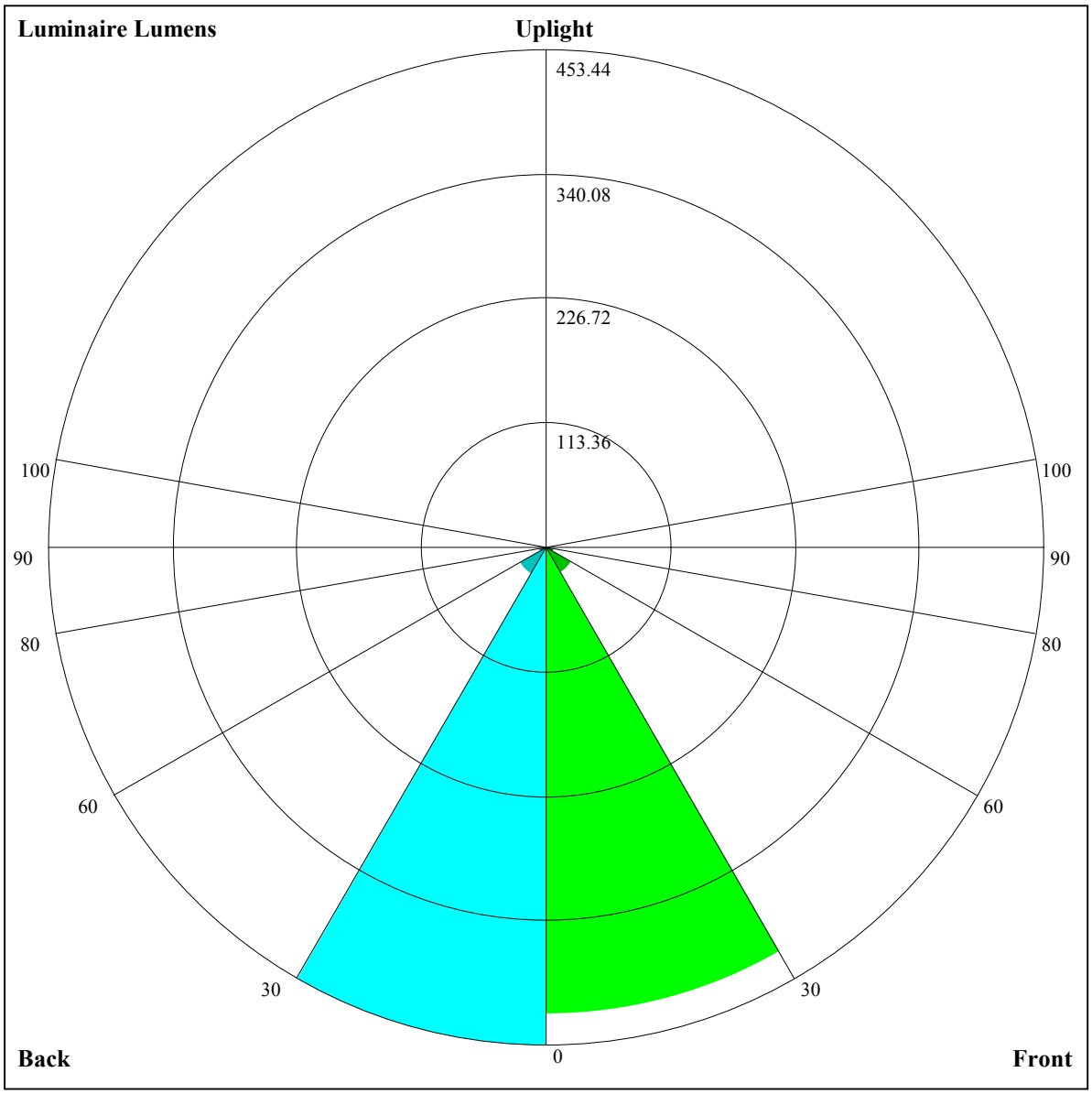
RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.96	0.97	0.96	0.94	0.94	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.92	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.85	0.85	0.84	0.83	0.82
3	0.90	0.87	0.84	0.89	0.86	0.84	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.79
4	0.87	0.83	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.80	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.79	0.77	0.75	0.74
6	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.72
7	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.74	0.71	0.75	0.73	0.71	0.70
8	0.76	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.70	0.74	0.71	0.69	0.69
9	0.74	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67
10	0.72	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2024/10/18	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.65

LCS Graph



Luminaire Lumens:

FL=425.13,FM=26.24,FH=6.57,FVH=3

BL=453.44,BM=27.41,BH=6.69,BVH=3.01

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	4680.69	4633.87	4528.53	4410.90	4274.54	4066.79	3881.27	3674.10	3444.11
45.0	4695.90	4674.25	4618.07	4523.26	4385.73	4239.43	4078.49	3902.34	3655.37
90.0	4656.69	4599.93	4489.90	4374.62	4230.06	4068.54	3847.33	3646.01	3410.75
135.0	4689.47	4679.52	4635.63	4541.40	4437.23	4302.05	4154.57	3976.66	3729.70
180.0	4680.69	4697.66	4666.64	4599.93	4510.97	4356.47	4203.73	4024.65	3818.65
225.0	4695.90	4677.76	4615.14	4530.29	4407.97	4232.99	4049.82	3798.75	3566.42
270.0	4656.69	4684.78	4688.30	4625.68	4544.92	4403.29	4256.99	4077.91	3830.36
315.0	4689.47	4652.01	4585.30	4457.13	4334.82	4182.08	3943.30	3729.11	3499.12
360.0	4680.69	4633.87	4528.53	4410.90	4274.54	4066.79	3881.27	3674.10	3444.11

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3136.28	2877.02	2611.92	2345.64	2006.21	1746.37	1119.89	1119.89	953.86
45.0	3425.97	3114.04	2861.22	2587.92	2245.57	1975.19	1710.09	1384.12	1147.10
90.0	3099.41	2836.06	2568.61	2226.25	1965.83	1717.11	1127.26	1127.26	971.47
135.0	3510.24	3277.32	3015.72	2695.60	2438.11	2177.10	1858.73	1605.33	1306.28
180.0	3539.50	3298.39	3043.23	2714.33	2450.98	2191.73	1864.00	1611.18	1312.13
225.0	3309.51	2984.71	2713.16	2439.86	2168.32	1835.91	1139.14	1139.14	1082.55
270.0	3593.93	3345.79	3078.34	2730.13	2453.91	2182.95	1918.43	1593.63	1350.76
315.0	3240.45	2917.41	2649.37	2381.92	2120.33	1793.19	1126.91	1126.91	1017.24
360.0	3136.28	2877.02	2611.92	2345.64	2006.21	1746.37	1119.89	1119.89	953.86

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	755.53	542.74	406.67	296.94	198.22	146.25	112.01	91.65	76.08
45.0	931.15	737.44	534.95	403.28	297.94	297.94	146.66	112.54	91.24
90.0	739.84	576.97	441.08	331.30	225.08	166.91	126.41	100.54	80.94
135.0	1085.07	884.33	661.95	510.37	385.72	309.64	309.64	145.72	113.48
180.0	1073.95	850.98	670.73	486.97	359.39	306.13	306.13	135.30	106.75
225.0	816.92	633.56	480.12	358.45	244.39	180.89	127.58	100.42	83.63
270.0	1114.33	842.20	663.12	509.20	358.22	304.38	304.38	127.52	101.01
315.0	809.31	588.68	442.31	326.20	238.13	163.16	124.13	99.14	83.63
360.0	755.53	542.74	406.67	296.94	198.22	146.25	112.01	91.65	76.08

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	67.30	60.28	55.01	49.57	46.23	43.66	41.08	39.39	37.92
45.0	77.43	65.72	59.11	52.67	48.87	45.71	42.49	40.44	38.86
90.0	70.81	62.97	55.89	51.50	47.23	44.59	42.37	40.61	38.74
135.0	92.29	78.54	67.01	60.34	54.95	49.74	46.64	43.54	41.38
180.0	87.14	74.27	64.02	58.05	53.08	48.46	45.59	43.37	40.85
225.0	70.05	62.50	56.42	51.68	47.17	44.36	42.19	40.56	38.74
270.0	84.27	70.46	63.44	57.53	52.67	48.11	45.47	43.19	41.02
315.0	70.99	63.32	57.59	52.73	48.16	45.12	42.84	40.50	38.80
360.0	67.30	60.28	55.01	49.57	46.23	43.66	41.08	39.39	37.92

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	36.05	34.70	32.95	31.49	30.08	28.56	26.57	25.05	23.53
45.0	37.57	36.23	35.05	33.88	32.42	30.61	29.09	27.51	25.52
90.0	37.34	35.82	34.29	32.36	30.72	29.03	27.33	25.22	23.58
135.0	39.56	37.51	36.05	34.59	32.95	31.08	29.26	27.62	25.98
180.0	39.33	37.98	36.40	35.05	33.83	32.48	30.67	29.32	27.97
225.0	37.28	35.93	34.29	32.95	31.19	29.67	28.27	26.45	25.11
270.0	38.92	37.34	35.93	34.12	32.60	31.08	28.97	27.33	25.69
315.0	36.81	35.17	33.71	31.84	30.26	28.79	27.33	25.40	23.99
360.0	36.05	34.70	32.95	31.49	30.08	28.56	26.57	25.05	23.53

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	21.95	20.13	18.67	17.44	16.27	14.81	13.81	12.76	11.88
45.0	23.94	22.00	20.60	19.14	17.50	16.21	15.04	13.99	12.87
90.0	21.59	20.07	18.67	17.15	15.98	14.92	13.93	12.87	12.06
135.0	24.05	22.47	21.07	19.25	17.97	16.74	15.33	14.28	13.40
180.0	26.74	25.28	24.17	22.77	21.71	20.48	18.55	16.62	14.75
225.0	23.58	22.00	20.07	18.55	17.21	15.92	14.46	13.46	12.52
270.0	23.64	22.18	20.66	19.20	17.62	16.39	15.27	14.22	13.05
315.0	22.53	21.13	19.37	17.97	16.68	15.10	13.93	12.70	11.88
360.0	21.95	20.13	18.67	17.44	16.27	14.81	13.81	12.76	11.88

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.18	10.36	9.83	9.31	8.84	8.37	8.02	7.72	7.49
45.0	12.06	11.24	10.59	9.89	9.36	8.84	8.25	7.90	7.61
90.0	11.29	10.65	9.95	9.42	8.90	8.43	8.02	7.72	7.37
135.0	12.35	11.59	10.89	10.18	9.66	9.13	8.66	8.25	7.84
180.0	13.11	11.65	11.00	10.36	9.77	9.19	8.72	8.37	8.02
225.0	11.47	10.77	10.12	9.42	8.95	8.49	8.02	7.67	7.43
270.0	12.17	11.18	10.53	9.95	9.31	8.84	8.43	8.02	7.61
315.0	11.18	10.48	9.77	9.25	8.78	8.37	7.90	7.61	7.37
360.0	11.18	10.36	9.83	9.31	8.84	8.37	8.02	7.72	7.49

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.26	7.02	6.91	6.73	6.61	6.50	6.44	6.32	6.26
45.0	7.32	7.08	6.91	6.73	6.61	6.44	6.38	6.26	6.14
90.0	7.20	6.96	6.79	6.67	6.50	6.38	6.32	6.20	6.14
135.0	7.55	7.32	7.14	6.96	6.73	6.67	6.50	6.38	6.26
180.0	7.72	7.49	7.32	7.20	7.08	6.96	6.85	6.79	6.55
225.0	7.20	6.96	6.79	6.61	6.50	6.32	6.26	6.14	6.09
270.0	7.37	7.14	6.96	6.73	6.55	6.50	6.32	6.20	6.14
315.0	7.14	6.91	6.79	6.61	6.50	6.38	6.32	6.20	6.14
360.0	7.26	7.02	6.91	6.73	6.61	6.50	6.44	6.32	6.26

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.14	6.09	5.97	5.85	5.79	5.74	5.68	5.62	5.56
45.0	6.09	6.03	5.91	5.85	5.79	5.74	5.74	5.68	5.62
90.0	6.09	6.03	5.97	5.91	5.79	5.74	5.68	5.68	5.62
135.0	6.26	6.14	6.09	5.97	5.91	5.85	5.85	5.74	5.74
180.0	6.44	6.38	6.32	6.26	6.14	6.09	5.97	5.91	5.85
225.0	5.97	5.91	5.85	5.79	5.74	5.68	5.68	5.62	5.56
270.0	6.03	5.97	5.85	5.79	5.79	5.74	5.68	5.62	5.62
315.0	6.03	5.97	5.91	5.85	5.79	5.79	5.74	5.74	5.68
360.0	6.14	6.09	5.97	5.85	5.79	5.74	5.68	5.62	5.56

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.50	5.50	5.62	5.50	5.27	5.27	5.21	5.15	5.09
45.0	5.62	5.62	5.62	5.68	5.62	5.62	5.62	5.50	5.44
90.0	5.62	5.62	5.74	5.62	5.44	5.44	5.38	5.27	5.21
135.0	5.68	5.62	5.56	5.62	5.56	5.44	5.38	5.33	5.27
180.0	5.79	5.79	5.79	5.85	6.03	5.91	5.85	5.74	5.74
225.0	5.50	5.44	5.50	5.44	5.33	5.27	5.21	5.15	5.09
270.0	5.56	5.50	5.50	5.68	5.50	5.44	5.33	5.27	5.15
315.0	5.74	5.74	5.79	5.79	5.79	5.74	5.68	5.62	5.68
360.0	5.50	5.50	5.62	5.50	5.27	5.27	5.21	5.15	5.09

Intensity data(cd)

C/γ(°)	90.0
0.0	5.09
45.0	5.50
90.0	5.27
135.0	5.21
180.0	5.74
225.0	5.09
270.0	5.15
315.0	5.68
360.0	5.09