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NATA

Client:
LumCAT: 2-2646-L
Luminaire: 92.70.411.00
Report No: 20231023-B007
Ballast type: AC

Test No: 20231023-C007	Voltage(V): 36.610
LampCAT: NICHIA NFDWJ130B-V3	Current(A): 0.576
Lamp flux(lm): 2810.0	Power (W): 21.087
Number of Lamps: 1	PF: 0.000
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2561.85, Efficiency(%): 91.17% , Luminous Efficacy(lm/W): 121.49
Central intensity(cd): 4428.980, Maximum intensity(cd): 4428.980
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=46.8
[C90/270]Total=46.8
Field angle(10%Imax): [C0/180]Total=68.2
[C90/270]Total=68.2
Maximum s/h(1/2): C0_180=0.75 C90_270=0.75
Maximum s/h(1/4): C0_180=0.71 C90_270=0.71
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.17%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.131%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4428.980	0.000	0	0.00%	0.00%
1.0	4420.400	4.234	4.234	0.15%	0.17%
2.0	4393.346	12.650	16.885	0.45%	0.66%
3.0	4345.050	20.899	37.784	0.74%	1.47%
4.0	4285.130	28.888	66.672	1.03%	2.60%
5.0	4227.493	36.621	103.293	1.30%	4.03%
6.0	4152.074	44.037	147.33	1.57%	5.75%
7.0	4078.868	51.089	198.419	1.82%	7.75%
8.0	4010.645	57.895	256.314	2.06%	10.01%
9.0	3935.641	64.400	320.714	2.29%	12.52%
10.0	3859.530	70.543	391.258	2.51%	15.27%
11.0	3777.606	76.311	467.569	2.72%	18.25%
12.0	3693.607	81.671	549.24	2.91%	21.44%
13.0	3607.671	86.648	635.887	3.08%	24.82%
14.0	3508.865	91.091	726.978	3.24%	28.38%
15.0	3410.612	94.994	821.972	3.38%	32.09%
16.0	3299.421	98.321	920.293	3.50%	35.92%
17.0	3182.555	100.942	1021.235	3.59%	39.86%
18.0	3052.405	102.801	1124.036	3.66%	43.88%
19.0	2919.418	103.897	1227.933	3.70%	47.93%
20.0	2764.428	104.030	1331.963	3.70%	51.99%
21.0	2611.583	103.230	1435.193	3.67%	56.02%
22.0	2448.290	101.680	1536.874	3.62%	59.99%
23.0	2282.437	99.263	1636.137	3.53%	63.87%
24.0	2109.664	96.027	1732.164	3.42%	67.61%
25.0	1925.613	91.753	1823.918	3.27%	71.20%
26.0	1743.915	86.620	1910.537	3.08%	74.58%
27.0	1498.034	79.315	1989.852	2.82%	77.67%
28.0	1305.646	70.983	2060.835	2.53%	80.44%
29.0	1156.212	64.409	2125.245	2.29%	82.96%
30.0	1000.904	58.242	2183.486	2.07%	85.23%
31.0	837.957	51.173	2234.659	1.82%	87.23%
32.0	696.452	43.959	2278.618	1.56%	88.94%
33.0	563.590	37.121	2315.739	1.32%	90.39%
34.0	450.959	30.703	2346.443	1.09%	91.59%
35.0	361.459	25.231	2371.673	0.90%	92.58%
36.0	288.745	20.703	2392.376	0.74%	93.38%
37.0	244.033	17.376	2409.752	0.62%	94.06%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	195.737	14.679	2424.431	0.52%	94.64%
39.0	149.275	11.776	2436.207	0.42%	95.10%
40.0	112.831	9.141	2445.349	0.33%	95.45%
41.0	92.254	7.303	2452.652	0.26%	95.74%
42.0	77.066	6.152	2458.803	0.22%	95.98%
43.0	65.968	5.298	2464.102	0.19%	96.18%
44.0	58.163	4.685	2468.787	0.17%	96.37%
45.0	51.811	4.226	2473.013	0.15%	96.53%
46.0	47.071	3.867	2476.88	0.14%	96.68%
47.0	42.781	3.574	2480.454	0.13%	96.82%
48.0	39.592	3.330	2483.784	0.12%	96.95%
49.0	36.935	3.143	2486.927	0.11%	97.08%
50.0	34.312	2.971	2489.897	0.11%	97.19%
51.0	32.223	2.815	2492.712	0.10%	97.30%
52.0	30.472	2.690	2495.402	0.10%	97.41%
53.0	28.895	2.582	2497.985	0.09%	97.51%
54.0	27.545	2.488	2500.472	0.09%	97.60%
55.0	26.376	2.407	2502.879	0.09%	97.70%
56.0	25.290	2.335	2505.214	0.08%	97.79%
57.0	24.363	2.270	2507.484	0.08%	97.88%
58.0	23.505	2.214	2509.698	0.08%	97.96%
59.0	22.757	2.163	2511.861	0.08%	98.05%
60.0	22.031	2.116	2513.976	0.08%	98.13%
61.0	21.394	2.072	2516.049	0.07%	98.21%
62.0	20.792	2.033	2518.082	0.07%	98.29%
63.0	20.252	1.996	2520.078	0.07%	98.37%
64.0	19.720	1.961	2522.039	0.07%	98.45%
65.0	19.242	1.928	2523.967	0.07%	98.52%
66.0	18.779	1.897	2525.864	0.07%	98.60%
67.0	18.322	1.866	2527.73	0.07%	98.67%
68.0	17.893	1.835	2529.564	0.07%	98.74%
69.0	17.457	1.803	2531.368	0.06%	98.81%
70.0	17.042	1.772	2533.14	0.06%	98.88%
71.0	16.634	1.741	2534.88	0.06%	98.95%
72.0	16.246	1.710	2536.59	0.06%	99.01%
73.0	15.838	1.678	2538.268	0.06%	99.08%
74.0	15.464	1.646	2539.913	0.06%	99.14%
75.0	15.063	1.613	2541.526	0.06%	99.21%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	14.683	1.579	2543.105	0.06%	99.27%
77.0	14.295	1.545	2544.65	0.05%	99.33%
78.0	13.928	1.511	2546.161	0.05%	99.39%
79.0	13.548	1.476	2547.637	0.05%	99.45%
80.0	13.174	1.441	2549.078	0.05%	99.50%
81.0	12.856	1.408	2550.486	0.05%	99.56%
82.0	12.524	1.376	2551.862	0.05%	99.61%
83.0	12.199	1.344	2553.206	0.05%	99.66%
84.0	11.894	1.313	2554.518	0.05%	99.71%
85.0	11.624	1.284	2555.802	0.05%	99.76%
86.0	11.320	1.254	2557.056	0.04%	99.81%
87.0	11.105	1.227	2558.283	0.04%	99.86%
88.0	10.905	1.206	2559.489	0.04%	99.91%
89.0	10.766	1.188	2560.677	0.04%	99.95%
90.0	10.711	1.178	2561.854	0.04%	100.00%

Zonal flux distribution table

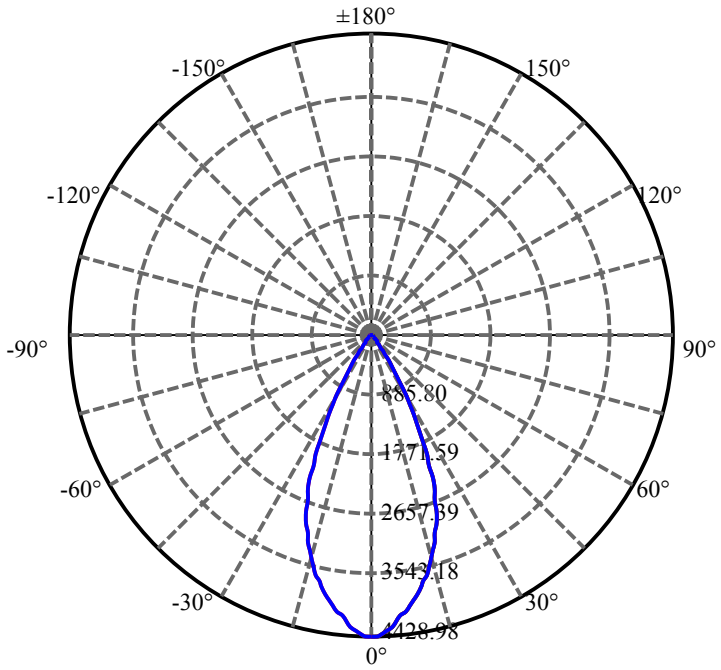
ZONAL LUMEN SUMMARY

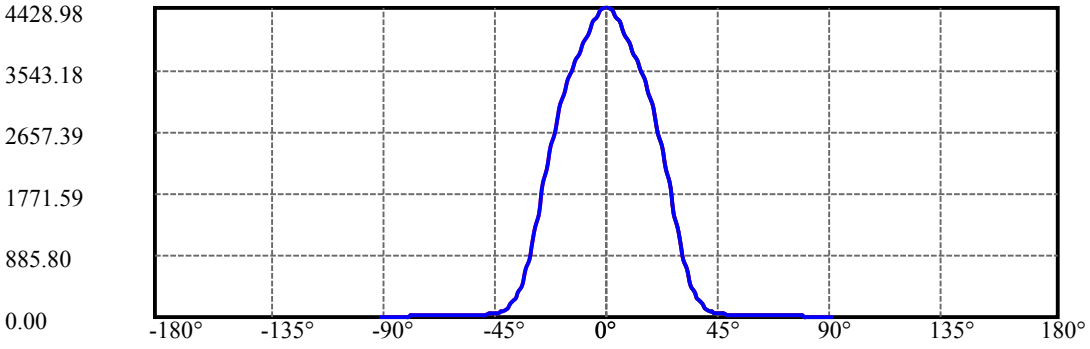
Zone	Lumens	%Lamp	%Fixt
0-30	2183.49	77.70%	85.23%
0-40	2445.35	87.02%	95.45%
0-60	2513.98	89.47%	98.13%
0-90	2560.68	91.13%	99.95%
0-120	2560.68	91.13%	99.95%
0-180	2561.85	91.17%	100.00%
60-90	46.70	1.66%	1.82%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.84	2049.48	72.94%	80.00%

ZONAL LUMEN SUMMARY

0-10	391.26
10-20	940.71
20-30	851.52
30-40	261.86
40-50	44.55
50-60	24.08
60-70	19.16
70-80	15.94
80-90	11.60
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):

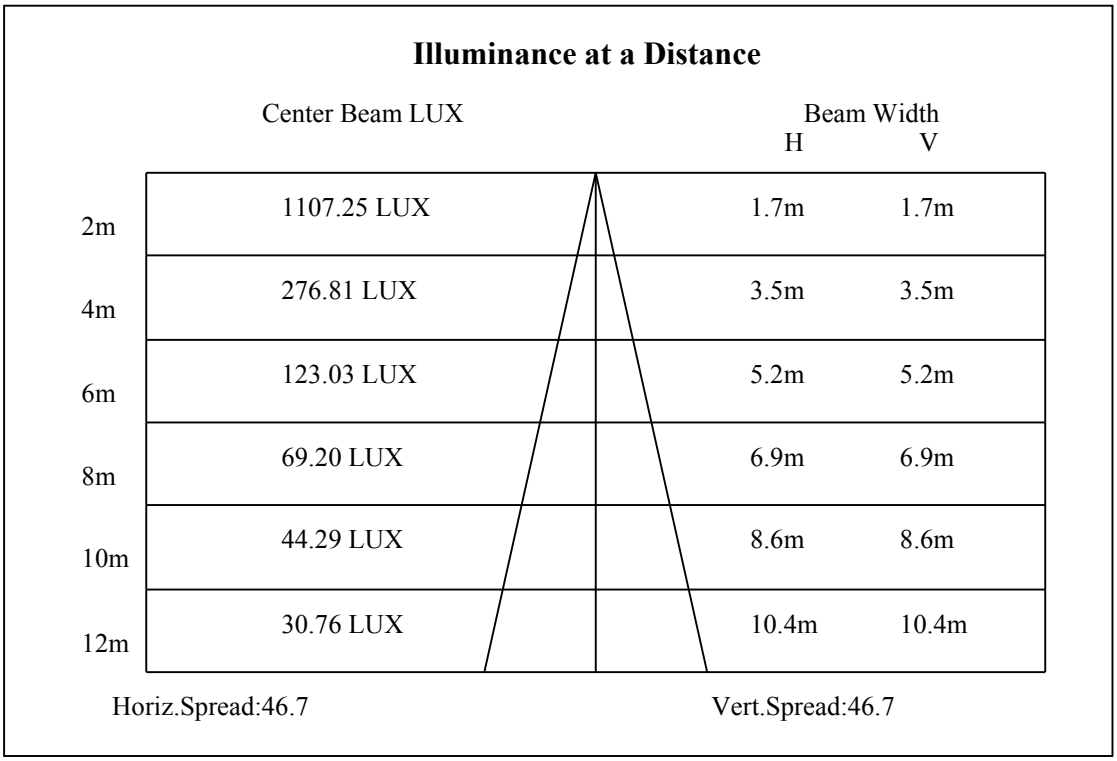
C0/C180:

C90/C270:

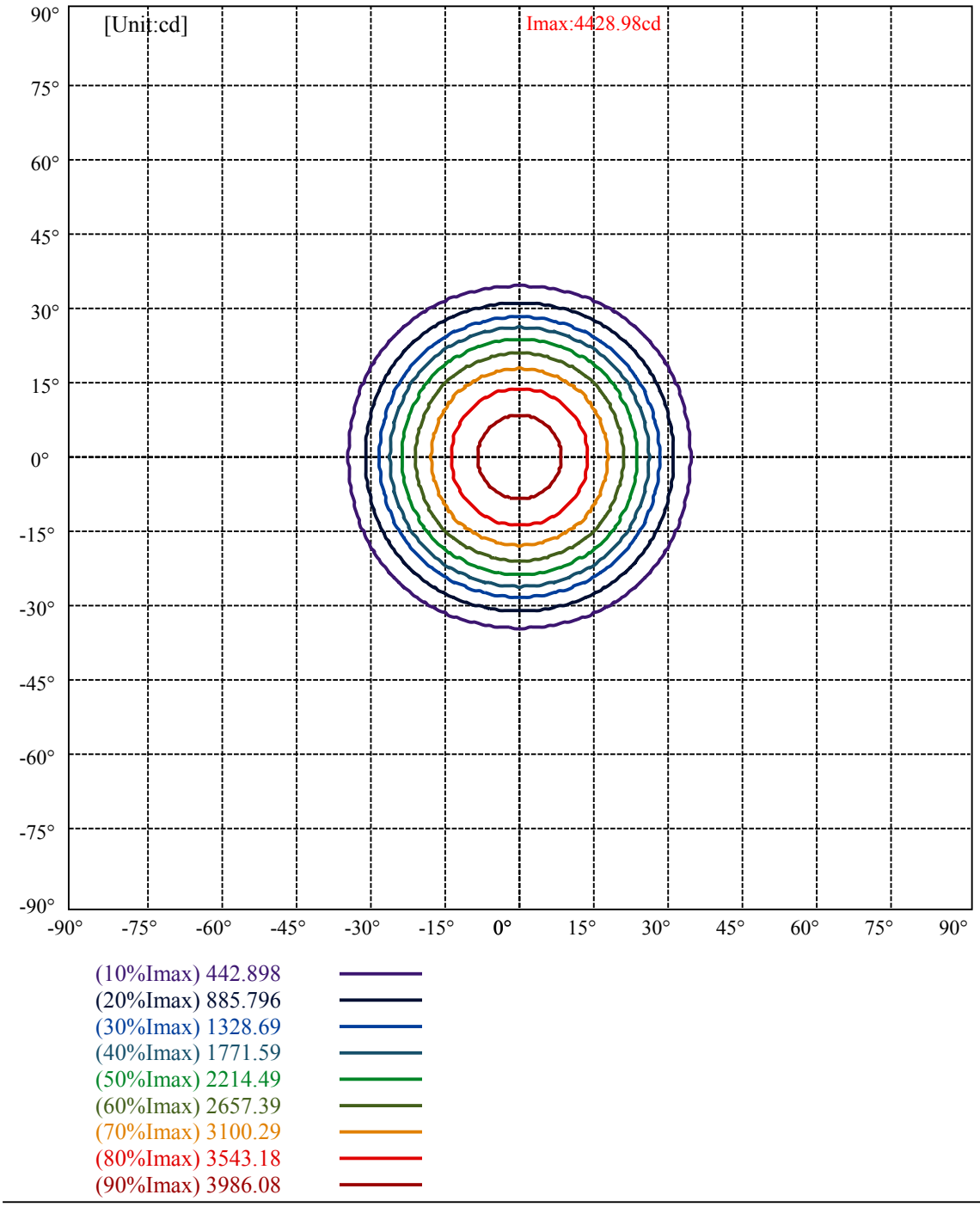
Field angle(10%Imax):C0/180Left:34.1 Right:34.1
:C90/270Left:34.1 Right:34.1

Beam Angle(50%Imax):C0/180Left:23.4 Right:23.4
:C90/270Left:23.4 Right:23.4

Lux distance Curve



ISO-Intensity(V-H)

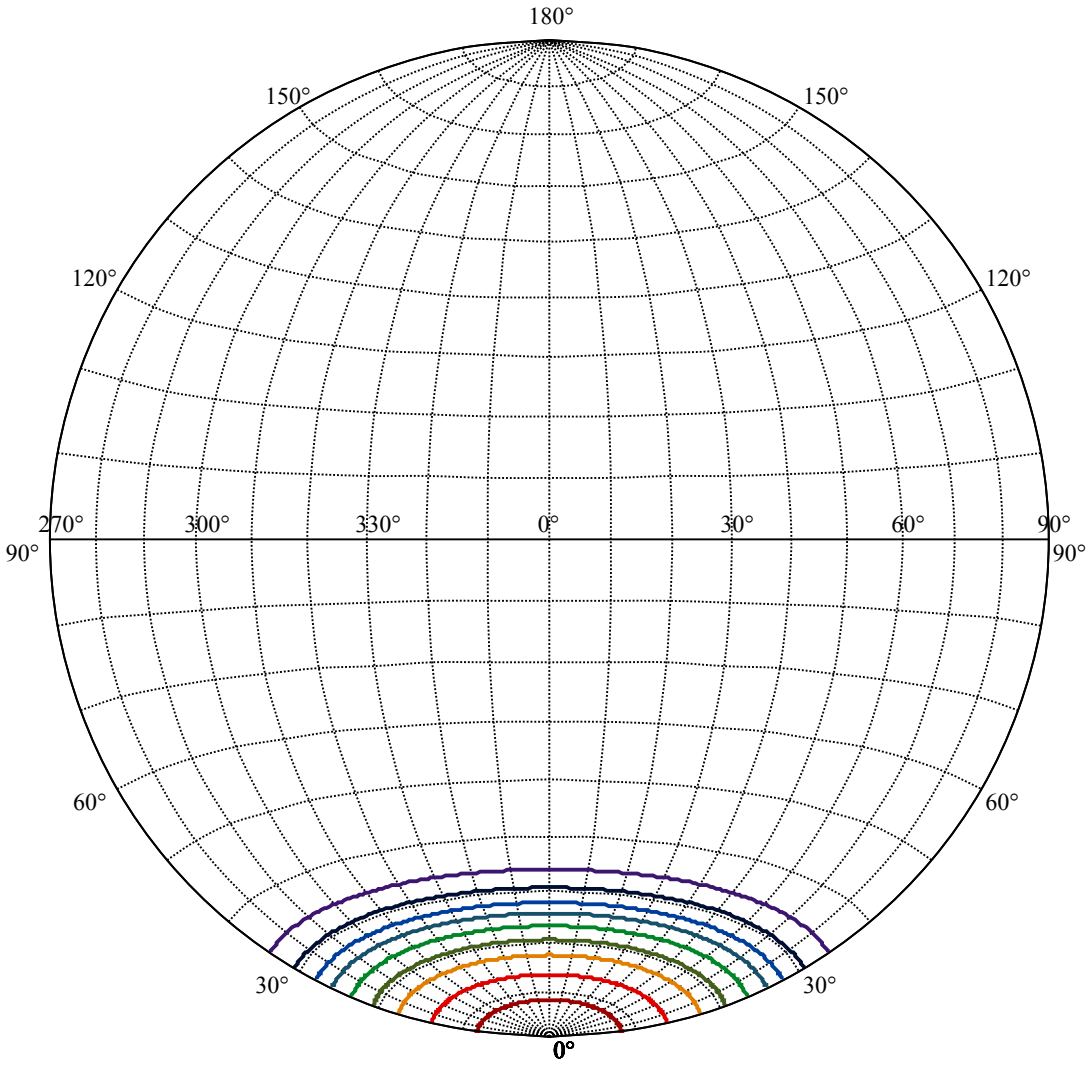


Equipment: GMS1980
Temperature(°C): 0.0

Date: 2023/10/23
Humidity(%): 0.0%

Operator: NT07
Distance(m): 7.44

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:4428.98

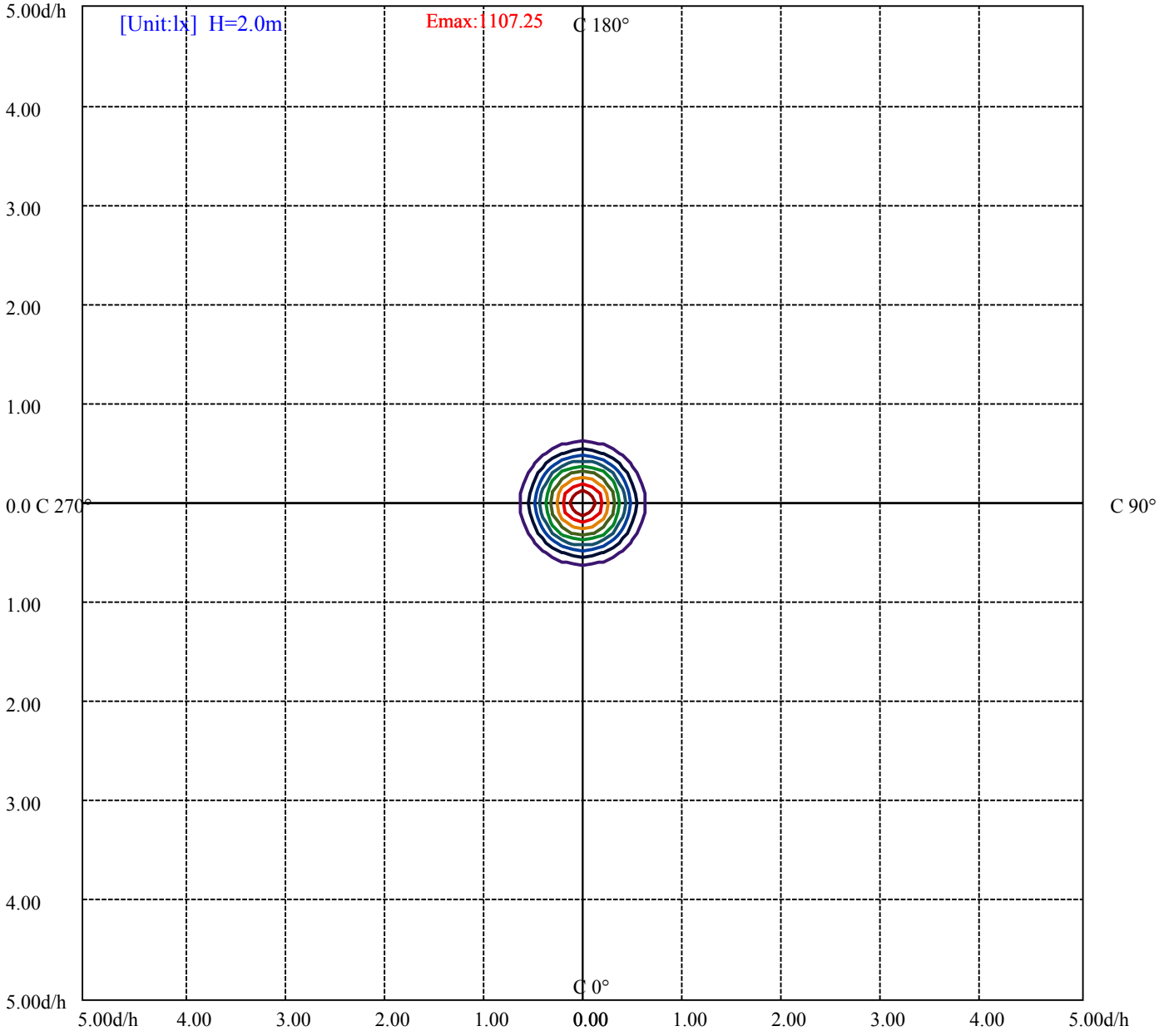
(10%Imax) 442.898
(20%Imax) 885.796
(30%Imax) 1328.69
(40%Imax) 1771.59
(50%Imax) 2214.49
(60%Imax) 2657.39
(70%Imax) 3100.29
(80%Imax) 3543.18
(90%Imax) 3986.08

Equipment: GMS1980
Temperature(°C): 0.0

Date: 2023/10/23
Humidity(%): 0.0%

Operator: NT07
Distance(m): 7.44

ISO illuminance diagram

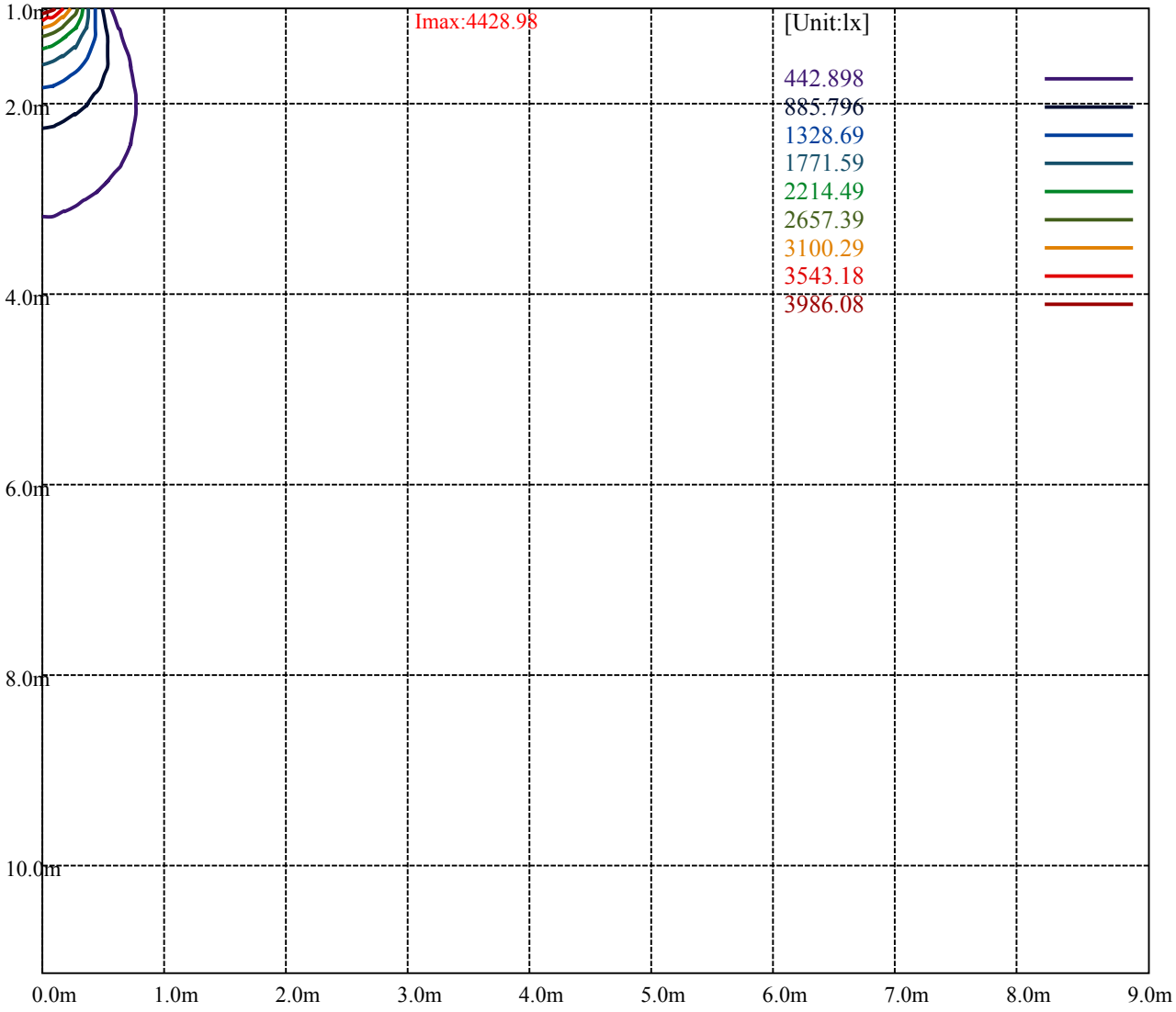


Equipment: GMS1980
Temperature(°C): 0.0

Date: 2023/10/23
Humidity(%): 0.0%

Operator: NT07
Distance(m): 7.44

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 0.0

Date: 2023/10/23
Humidity(%): 0.0%

Operator: NT07
Distance(m): 7.44

NATA 2-2646-L

Luminance Limitting Curve(no luminous side)

Luminance Table

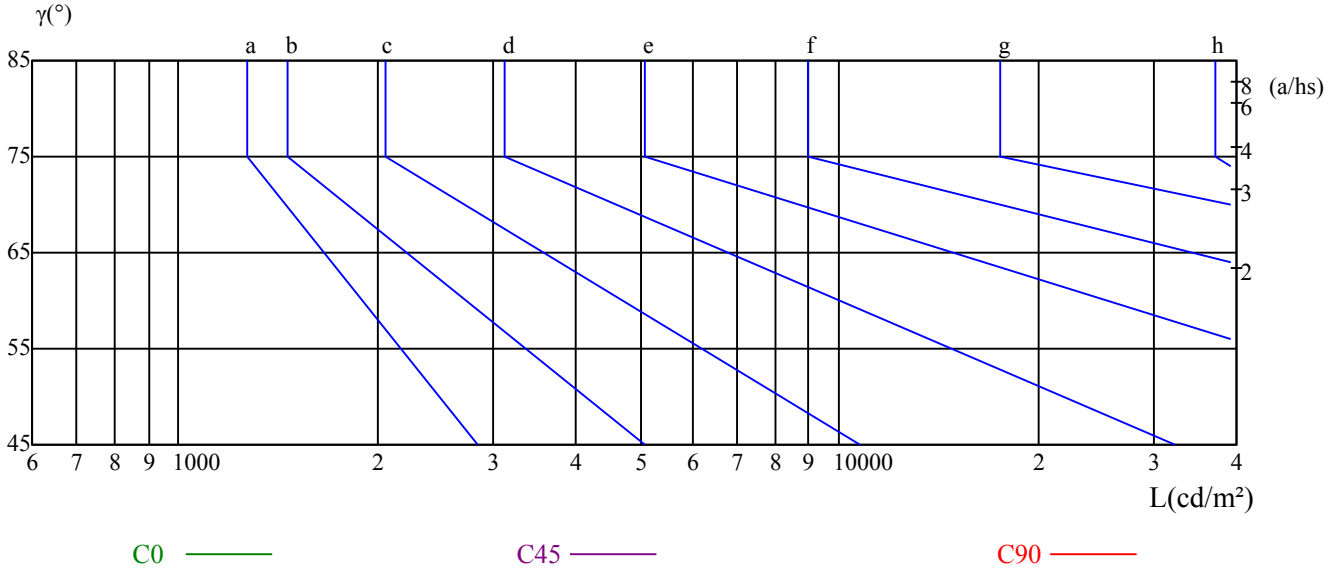
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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 Limitting Curve



Equipment: GMS1980
Temperature(°C): 0.0

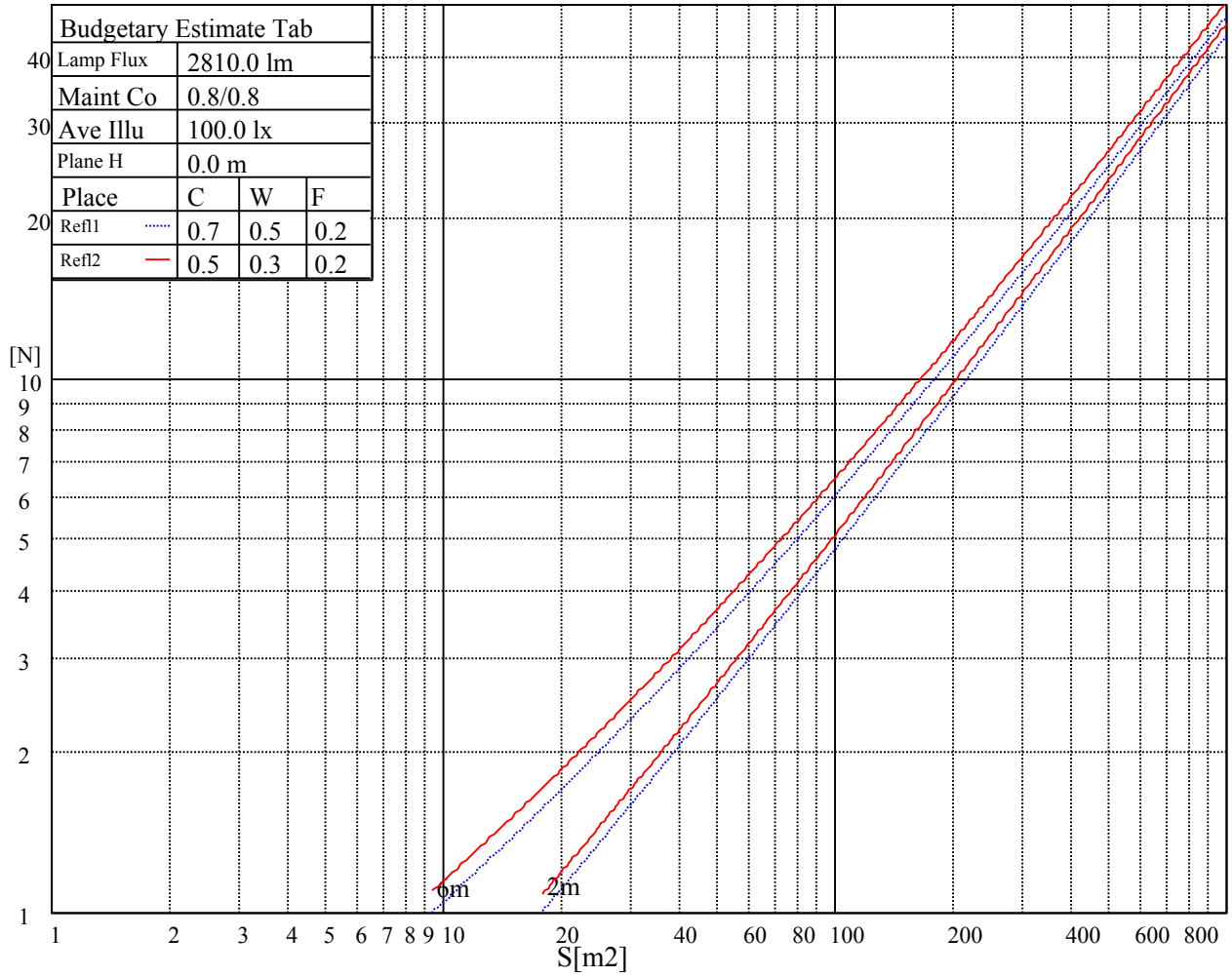
Date: 2023/10/23
Humidity(%): 0.0%

Operator: NT07
Distance(m): 7.44

Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	3H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	4H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	6H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	8H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	12H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
4H	2H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	3H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	4H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	6H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	8H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	12H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
8H	4H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	6H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	8H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	12H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
12H	4H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	6H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
	8H	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字	非数字
Variation with the observer position at spacings:											
S = 1.0H		非数字/非数字					非数字/非数字				
S = 1.5H		非数字/非数字					非数字/非数字				
S = 2.0H		非数字/非数字					非数字/非数字				
Standard tables:		BK0					BK0				
Uncorrected UGR		负无穷大					负无穷大				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25

Budgetary Estimate Table

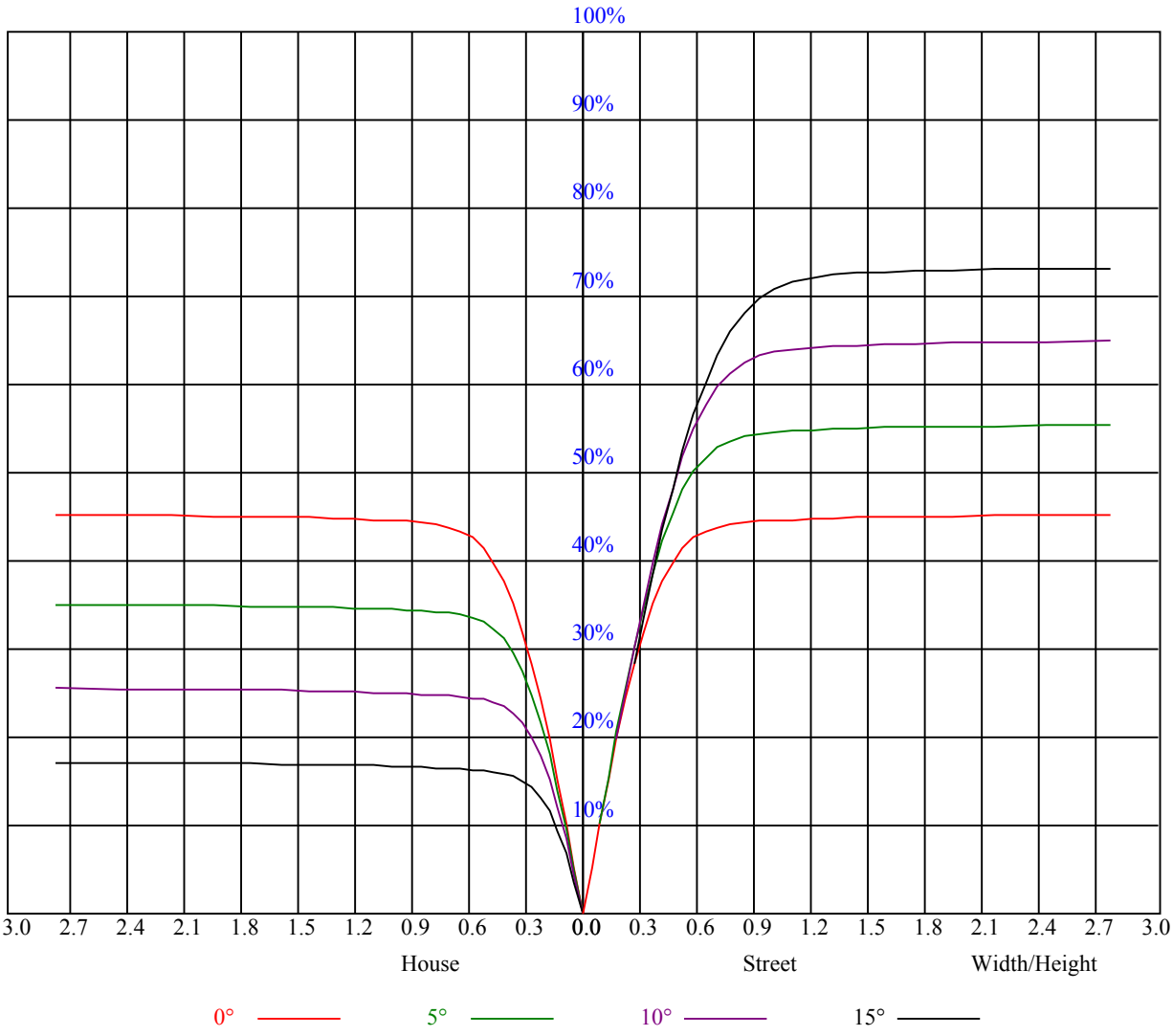


Equipment: GMS1980 Date: 2023/10/23 Operator: NT07
Temperature(°C): 0.0 Humidity(%): 0.0% Distance(m): 7.44

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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	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	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.61
8	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.58
9	0.65	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2023/10/23	Operator: NT07
Temperature(°C): 0.0	Humidity(%): 0.0%	Distance(m): 7.44

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	4408.36	4399.50	4347.47	4291.56	4228.46	4155.39	4086.76	4018.67	3930.11
45.0	4444.89	4406.15	4391.20	4320.35	4250.05	4198.02	4131.59	4047.46	3989.33
90.0	4408.91	4365.18	4312.05	4247.28	4156.50	4086.20	4023.10	3940.62	3881.39
135.0	4453.75	4432.72	4385.11	4330.87	4246.17	4180.30	4086.20	4005.39	3945.05
180.0	4408.36	4433.27	4444.34	4377.36	4331.42	4287.69	4199.12	4134.91	4069.60
225.0	4444.89	4439.36	4385.67	4362.42	4309.28	4245.07	4167.57	4096.72	4027.53
270.0	4408.91	4446.00	4444.89	4423.86	4402.83	4355.77	4296.55	4236.76	4153.73
315.0	4453.75	4441.02	4436.04	4406.70	4356.33	4311.49	4225.69	4150.41	4088.42
360.0	4408.36	4399.50	4347.47	4291.56	4228.46	4155.39	4086.76	4018.67	3930.11

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3859.25	3774.01	3696.51	3585.25	3493.37	3364.95	3254.79	3140.76	2989.65
45.0	3920.70	3845.97	3750.76	3671.05	3594.11	3500.56	3374.36	3262.54	3147.41
90.0	3808.88	3724.74	3647.80	3574.74	3492.26	3376.57	3281.91	3185.05	3073.23
135.0	3869.22	3802.79	3732.49	3642.27	3569.75	3487.83	3395.94	3278.59	3180.62
180.0	3979.92	3916.27	3851.50	3774.01	3668.84	3594.66	3516.61	3428.05	3301.29
225.0	3966.09	3873.64	3789.51	3704.82	3626.21	3526.58	3431.37	3299.63	3186.71
270.0	4082.88	4017.01	3924.57	3847.08	3751.87	3666.62	3577.50	3454.62	3343.91
315.0	3998.19	3921.80	3827.70	3749.65	3664.96	3553.15	3452.40	3346.13	3237.63
360.0	3859.25	3774.01	3696.51	3585.25	3493.37	3364.95	3254.79	3140.76	2989.65

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2857.91	2720.63	2571.73	2382.42	2217.47	2044.21	1870.40	1655.63	1477.94
45.0	2991.86	2855.69	2675.24	2531.32	2377.44	2219.13	2002.69	1828.33	1651.75
90.0	2911.60	2780.41	2638.71	2454.93	2309.35	2105.65	1940.70	1772.42	1552.67
135.0	3075.45	2949.24	2781.52	2651.99	2475.97	2329.83	2172.63	1962.29	1794.56
180.0	3189.47	3074.34	2904.96	2764.91	2580.58	2437.77	2292.19	2141.63	1944.02
225.0	3056.07	2891.12	2756.06	2614.90	2472.65	2285.55	2129.45	1965.61	1795.67
270.0	3248.15	3126.92	2967.51	2825.80	2676.90	2526.89	2329.28	2162.11	1991.07
315.0	3088.73	2956.99	2819.71	2666.38	2475.97	2310.46	2139.97	1916.90	1743.64
360.0	2857.91	2720.63	2571.73	2382.42	2217.47	2044.21	1870.40	1655.63	1477.94

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1089.25	1089.25	931.88	787.90	626.77	515.78	419.75	319.89	254.46
45.0	1471.85	1255.97	1091.57	937.69	793.77	636.57	527.52	410.17	332.68
90.0	1099.65	1099.65	1013.80	815.69	677.75	557.24	455.89	350.61	280.59
135.0	1616.88	1437.53	1212.80	1038.99	876.25	729.01	570.14	466.63	379.73
180.0	1781.83	1614.11	1435.32	1214.46	1043.42	882.89	737.31	582.32	477.15
225.0	1579.79	1270.37	1064.84	1023.54	867.11	727.57	575.90	474.32	366.33
270.0	1776.30	1603.04	1424.25	1202.28	1027.92	865.73	680.85	559.07	455.56
315.0	1568.72	1075.24	1075.24	986.68	790.67	656.83	541.36	444.66	345.19
360.0	1089.25	1089.25	931.88	787.90	626.77	515.78	419.75	319.89	254.46

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	201.82	160.25	120.39	97.87	81.26	69.25	58.84	52.86	47.94
45.0	281.75	281.75	155.71	124.93	101.91	81.04	69.47	61.11	54.80
90.0	225.01	180.12	137.00	111.76	89.34	76.44	66.76	57.84	52.25
135.0	290.61	290.61	220.69	140.99	115.47	95.98	78.27	68.47	60.89
180.0	368.10	298.36	282.86	215.27	141.87	114.19	93.27	75.11	65.15
225.0	294.48	234.70	187.04	149.34	113.42	92.61	77.33	64.15	57.07
270.0	368.10	281.20	281.20	215.55	146.02	113.97	94.77	80.48	67.31
315.0	280.09	225.29	181.01	138.49	113.36	94.54	77.83	67.70	59.89
360.0	201.82	160.25	120.39	97.87	81.26	69.25	58.84	52.86	47.94

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	43.07	39.85	36.48	34.21	32.33	30.22	28.84	27.57	26.46
45.0	48.43	44.28	40.85	37.25	34.82	32.71	30.50	28.95	27.40
90.0	47.49	43.62	39.69	37.14	34.87	32.82	30.67	29.12	27.79
135.0	53.75	48.99	44.95	41.52	38.69	35.65	33.65	31.83	29.84
180.0	57.79	52.14	46.44	42.73	39.58	36.37	34.15	32.16	30.11
225.0	51.64	47.11	42.40	39.30	36.64	33.88	31.88	29.84	28.45
270.0	59.56	52.31	47.83	44.06	40.74	37.36	35.09	33.05	31.33
315.0	52.75	48.27	43.62	40.52	37.81	35.48	32.99	31.27	29.78
360.0	43.07	39.85	36.48	34.21	32.33	30.22	28.84	27.57	26.46

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	25.24	24.30	23.53	22.75	22.03	21.42	20.87	20.20	19.76
45.0	26.35	25.30	24.41	23.47	22.75	22.09	21.42	20.87	20.20
90.0	26.35	25.30	24.41	23.41	22.64	21.98	21.20	20.65	20.15
135.0	28.62	27.34	26.02	25.13	24.02	23.30	22.53	21.92	21.20
180.0	28.67	27.46	26.07	25.13	24.30	23.36	22.69	22.03	21.42
225.0	27.23	26.18	24.96	24.08	23.36	22.69	21.92	21.37	20.81
270.0	29.45	28.12	26.96	25.91	24.74	23.91	23.03	22.31	21.59
315.0	28.45	27.01	25.96	25.02	24.19	23.30	22.58	21.81	21.20
360.0	25.24	24.30	23.53	22.75	22.03	21.42	20.87	20.20	19.76

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	19.32	18.76	18.32	17.93	17.44	17.05	16.66	16.33	15.89
45.0	19.82	19.32	18.76	18.38	17.93	17.55	17.16	16.77	16.33
90.0	19.65	19.15	18.71	18.27	17.88	17.38	16.99	16.50	16.16
135.0	20.65	20.20	19.71	19.26	18.76	18.32	17.88	17.38	16.94
180.0	20.76	20.20	19.71	19.26	18.76	18.38	17.88	17.49	17.10
225.0	20.20	19.71	19.26	18.71	18.32	17.93	17.44	17.05	16.72
270.0	20.98	20.43	19.93	19.37	18.88	18.43	17.99	17.55	17.10
315.0	20.65	19.98	19.54	19.04	18.60	18.10	17.66	17.27	16.83
360.0	19.32	18.76	18.32	17.93	17.44	17.05	16.66	16.33	15.89

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.55	15.22	14.83	14.39	14.12	13.73	13.34	13.01	12.68
45.0	15.94	15.61	15.17	14.83	14.50	14.17	13.78	13.40	13.12
90.0	15.78	15.33	15.00	14.67	14.23	13.84	13.51	13.17	12.79
135.0	16.55	16.11	15.78	15.28	14.89	14.50	14.17	13.73	13.40
180.0	16.66	16.27	15.94	15.55	15.11	14.83	14.45	14.12	13.62
225.0	16.33	15.89	15.50	15.17	14.78	14.39	14.00	13.62	13.23
270.0	16.77	16.27	15.89	15.50	15.11	14.61	14.28	13.84	13.45
315.0	16.38	16.00	15.61	15.11	14.72	14.28	13.89	13.51	13.12
360.0	15.55	15.22	14.83	14.39	14.12	13.73	13.34	13.01	12.68

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.34	12.12	11.85	11.57	11.35	11.07	10.90	10.74	10.79
45.0	12.73	12.45	12.12	11.90	11.62	11.24	11.02	10.85	10.63
90.0	12.51	12.23	11.90	11.62	11.35	11.07	10.90	10.68	10.63
135.0	13.06	12.68	12.29	11.90	11.62	11.35	11.18	10.90	10.68
180.0	13.40	12.95	12.62	12.29	12.01	11.62	11.40	11.18	11.02
225.0	12.90	12.57	12.23	11.96	11.68	11.46	11.18	11.02	10.85
270.0	13.12	12.73	12.45	12.12	11.79	11.51	11.24	11.02	10.85
315.0	12.79	12.45	12.12	11.79	11.57	11.24	11.02	10.85	10.68
360.0	12.34	12.12	11.85	11.57	11.35	11.07	10.90	10.74	10.79

Intensity data(cd)

C/γ(°)	90.0
0.0	10.79
45.0	10.74
90.0	10.63
135.0	10.63
180.0	10.79
225.0	10.68
270.0	10.68
315.0	10.74
360.0	10.79