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NATA

Client:
LumCAT: 2-2646-L Luminaire:
92.70.411.00 Report No: 2023828-B010
Ballast type: AC
Test No: 2023828-C010

LampCAT: LUXEON CoB 1208 LES15	Voltage(V): 34.010
Lamp flux(lm): 2364.6 Number of Lamps: 1	Current(A): 0.503
Length(mm): 0	Power (W): 17.107
Phm Type: C	PF: 0.000
	Width(mm): 0
	Height(mm): 0

Photometric Results

Lumens(lm): 2146.93, Efficiency(%): 90.79% , Luminous Efficacy(lm/W): 125.50
Central intensity(cd): 3750.290, Maximum intensity(cd): 3750.290
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=66.8
[C90/270]Total=66.8
Maximum s/h(1/2): C0_180=0.74 C90_270=0.74
Maximum s/h(1/4): C0_180=0.72 C90_270=0.72
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.79%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.997%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3750.289	0.000	0	0.00%	0.00%
1.0	3742.471	3.585	3.585	0.15%	0.17%
2.0	3714.310	10.703	14.288	0.45%	0.67%
3.0	3679.921	17.685	31.972	0.75%	1.49%
4.0	3634.116	24.482	56.455	1.04%	2.63%
5.0	3583.537	31.050	87.505	1.31%	4.08%
6.0	3526.246	37.364	124.869	1.58%	5.82%
7.0	3469.024	43.420	168.288	1.84%	7.84%
8.0	3412.148	49.247	217.535	2.08%	10.13%
9.0	3348.630	54.792	272.328	2.32%	12.68%
10.0	3283.659	60.020	332.348	2.54%	15.48%
11.0	3213.844	64.923	397.271	2.75%	18.50%
12.0	3141.261	69.470	466.741	2.94%	21.74%
13.0	3061.760	73.614	540.356	3.11%	25.17%
14.0	2976.792	77.293	617.648	3.27%	28.77%
15.0	2888.226	80.518	698.166	3.41%	32.52%
16.0	2782.363	83.090	781.256	3.51%	36.39%
17.0	2685.286	85.146	866.402	3.60%	40.36%
18.0	2565.307	86.571	952.973	3.66%	44.39%
19.0	2448.511	87.230	1040.203	3.69%	48.45%
20.0	2313.725	87.162	1127.365	3.69%	52.51%
21.0	2185.374	86.392	1213.757	3.65%	56.53%
22.0	2066.433	85.442	1299.199	3.61%	60.51%
23.0	1930.125	83.859	1383.058	3.55%	64.42%
24.0	1796.723	81.482	1464.54	3.45%	68.22%
25.0	1640.625	78.158	1542.698	3.31%	71.86%
26.0	1465.583	73.322	1616.02	3.10%	75.27%
27.0	1316.751	68.070	1684.09	2.88%	78.44%
28.0	1147.895	62.400	1746.49	2.64%	81.35%
29.0	1013.282	56.543	1803.033	2.39%	83.98%
30.0	856.625	50.487	1853.52	2.14%	86.33%
31.0	703.897	43.427	1896.947	1.84%	88.36%
32.0	551.163	35.956	1932.903	1.52%	90.03%
33.0	421.352	28.651	1961.553	1.21%	91.37%
34.0	318.089	22.378	1983.931	0.95%	92.41%
35.0	246.033	17.520	2001.451	0.74%	93.22%
36.0	192.838	13.974	2015.424	0.59%	93.87%
37.0	145.192	11.025	2026.449	0.47%	94.39%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	102.418	8.265	2034.714	0.35%	94.77%
39.0	86.981	6.465	2041.179	0.27%	95.07%
40.0	75.156	5.655	2046.833	0.24%	95.34%
41.0	65.871	5.022	2051.855	0.21%	95.57%
42.0	57.872	4.496	2056.351	0.19%	95.78%
43.0	52.067	4.072	2060.424	0.17%	95.97%
44.0	46.795	3.731	2064.155	0.16%	96.14%
45.0	42.774	3.442	2067.597	0.15%	96.30%
46.0	39.460	3.216	2070.813	0.14%	96.45%
47.0	36.720	3.030	2073.843	0.13%	96.60%
48.0	34.319	2.872	2076.715	0.12%	96.73%
49.0	32.174	2.731	2079.445	0.12%	96.86%
50.0	30.479	2.612	2082.058	0.11%	96.98%
51.0	28.888	2.512	2084.569	0.11%	97.10%
52.0	27.455	2.418	2086.987	0.10%	97.21%
53.0	26.175	2.333	2089.32	0.10%	97.32%
54.0	25.068	2.259	2091.579	0.10%	97.42%
55.0	24.100	2.195	2093.773	0.09%	97.52%
56.0	23.124	2.134	2095.907	0.09%	97.62%
57.0	22.335	2.078	2097.986	0.09%	97.72%
58.0	21.546	2.029	2100.015	0.09%	97.81%
59.0	20.841	1.982	2101.997	0.08%	97.91%
60.0	20.183	1.938	2103.935	0.08%	98.00%
61.0	19.561	1.897	2105.831	0.08%	98.09%
62.0	19.014	1.859	2107.69	0.08%	98.17%
63.0	18.460	1.823	2109.513	0.08%	98.26%
64.0	17.976	1.788	2111.301	0.08%	98.34%
65.0	17.478	1.755	2113.055	0.07%	98.42%
66.0	17.014	1.721	2114.776	0.07%	98.50%
67.0	16.578	1.689	2116.465	0.07%	98.58%
68.0	16.184	1.660	2118.125	0.07%	98.66%
69.0	15.769	1.630	2119.755	0.07%	98.73%
70.0	15.361	1.599	2121.354	0.07%	98.81%
71.0	14.980	1.568	2122.922	0.07%	98.88%
72.0	14.593	1.538	2124.46	0.07%	98.95%
73.0	14.226	1.507	2125.967	0.06%	99.02%
74.0	13.873	1.477	2127.444	0.06%	99.09%
75.0	13.513	1.447	2128.891	0.06%	99.16%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	13.167	1.416	2130.307	0.06%	99.23%
77.0	12.794	1.384	2131.691	0.06%	99.29%
78.0	12.434	1.350	2133.042	0.06%	99.35%
79.0	12.088	1.318	2134.359	0.06%	99.41%
80.0	11.776	1.287	2135.646	0.05%	99.47%
81.0	11.465	1.257	2136.903	0.05%	99.53%
82.0	11.140	1.226	2138.129	0.05%	99.59%
83.0	10.829	1.194	2139.323	0.05%	99.65%
84.0	10.559	1.165	2140.488	0.05%	99.70%
85.0	10.275	1.137	2141.625	0.05%	99.75%
86.0	10.005	1.109	2142.733	0.05%	99.80%
87.0	9.749	1.081	2143.815	0.05%	99.85%
88.0	9.535	1.056	2144.871	0.04%	99.90%
89.0	9.376	1.036	2145.907	0.04%	99.95%
90.0	9.299	1.024	2146.931	0.04%	100.00%

Zonal flux distribution table

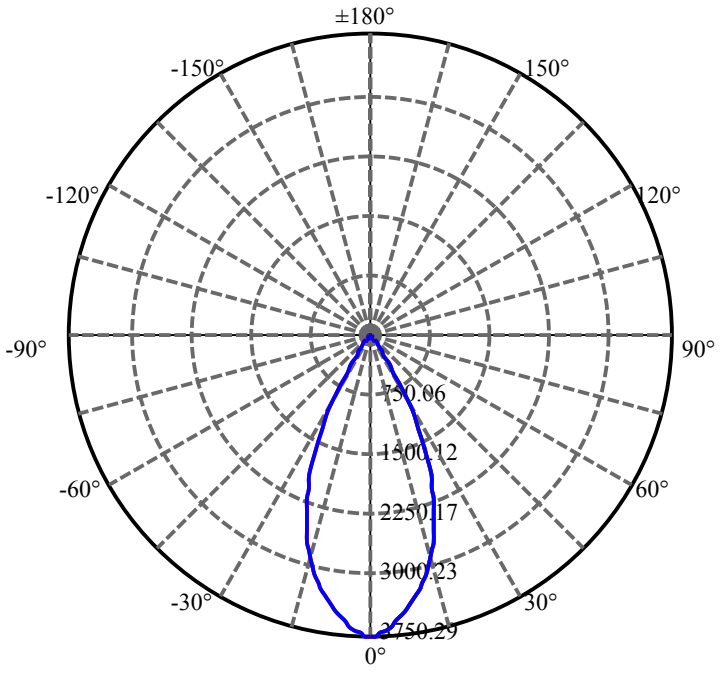
ZONAL LUMEN SUMMARY

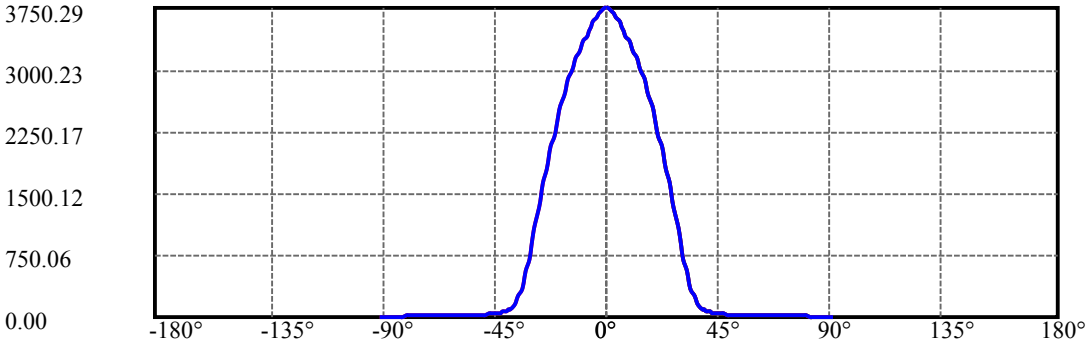
Zone	Lumens	%Lamp	%Fixt
0-30	1853.52	78.39%	86.33%
0-40	2046.83	86.56%	95.34%
0-60	2103.93	88.98%	98.00%
0-90	2145.91	90.75%	99.95%
0-120	2145.91	90.75%	99.95%
0-180	2146.93	90.79%	100.00%
60-90	41.97	1.78%	1.96%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.54	1717.55	72.64%	80.00%

ZONAL LUMEN SUMMARY

0-10	332.35
10-20	795.02
20-30	726.15
30-40	193.31
40-50	35.22
50-60	21.88
60-70	17.42
70-80	14.29
80-90	10.26
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):

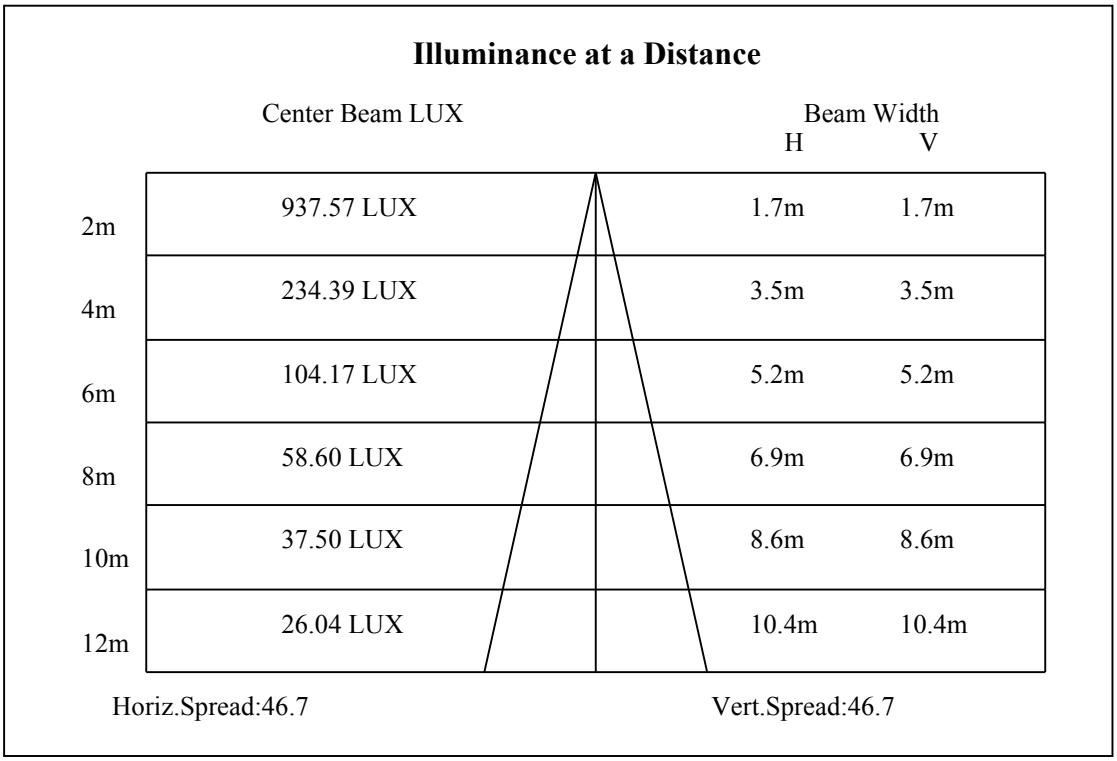
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:33.4 Right:33.4
:C90/270Left:33.4 Right:33.4

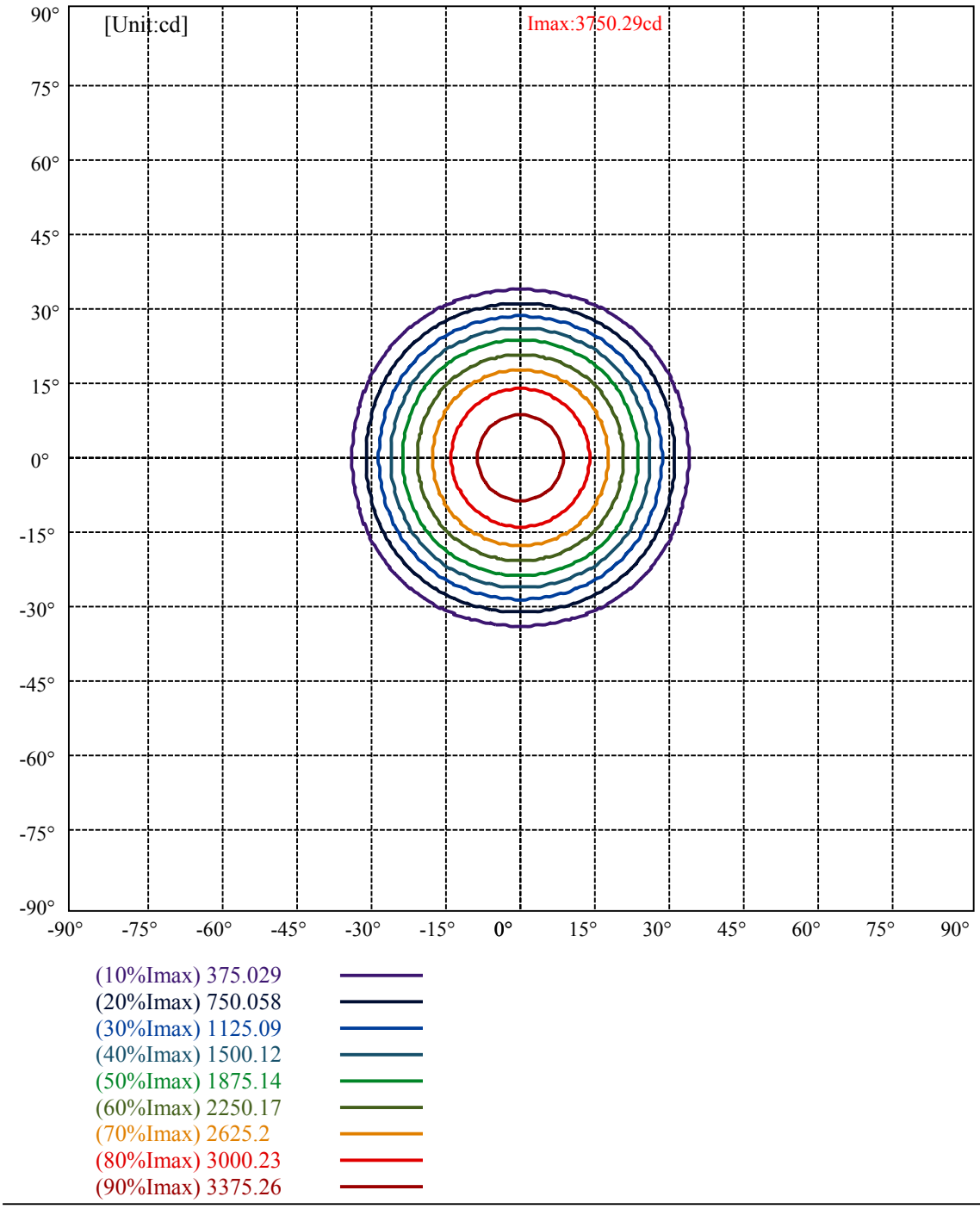
Beam Angle(50%Imax):C0/180Left:23.4 Right:23.4
:C90/270Left:23.4 Right:23.4

Lux distance Curve



Equipment: GMS1980 Date: 2023/8/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.44

ISO-Intensity(V-H)

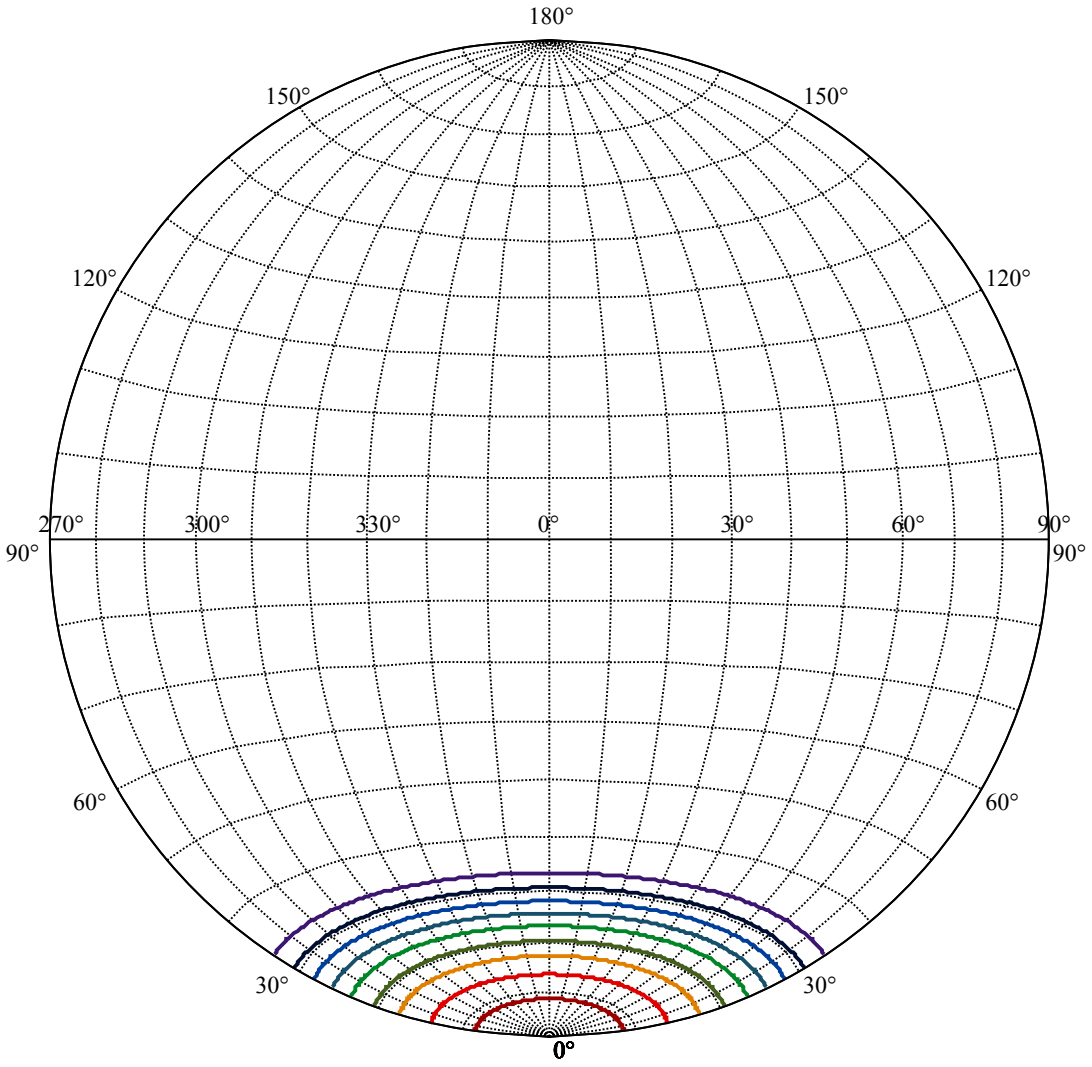


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2023/8/28
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.44

ISO candela diagram on circular web



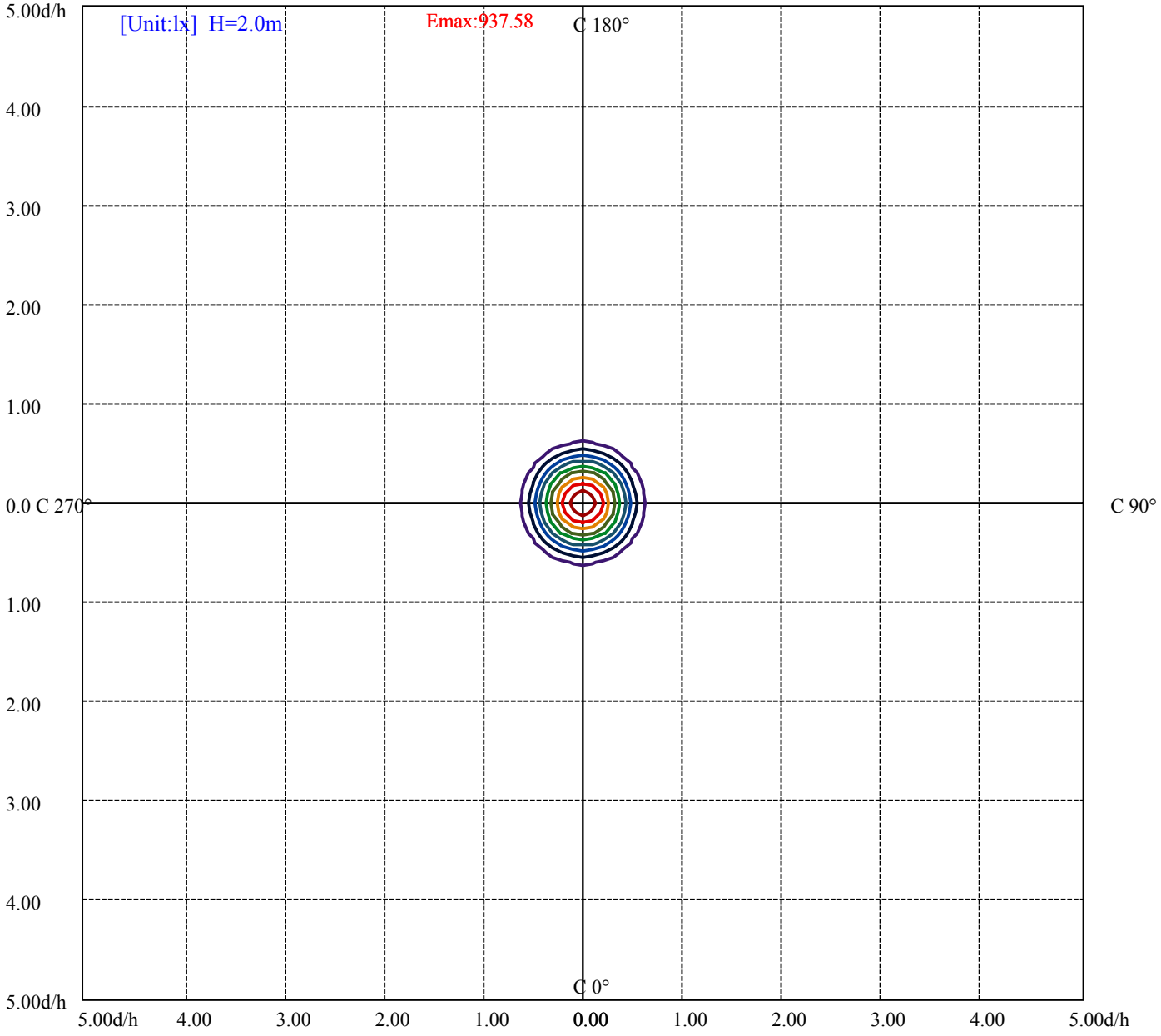
House [Unit:cd] Road

Imax:3750.29

(10%Imax) 375.029
(20%Imax) 750.058
(30%Imax) 1125.09
(40%Imax) 1500.12
(50%Imax) 1875.14
(60%Imax) 2250.17
(70%Imax) 2625.2
(80%Imax) 3000.23
(90%Imax) 3375.26

Equipment: GMS1980 Date: 2023/8/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.44

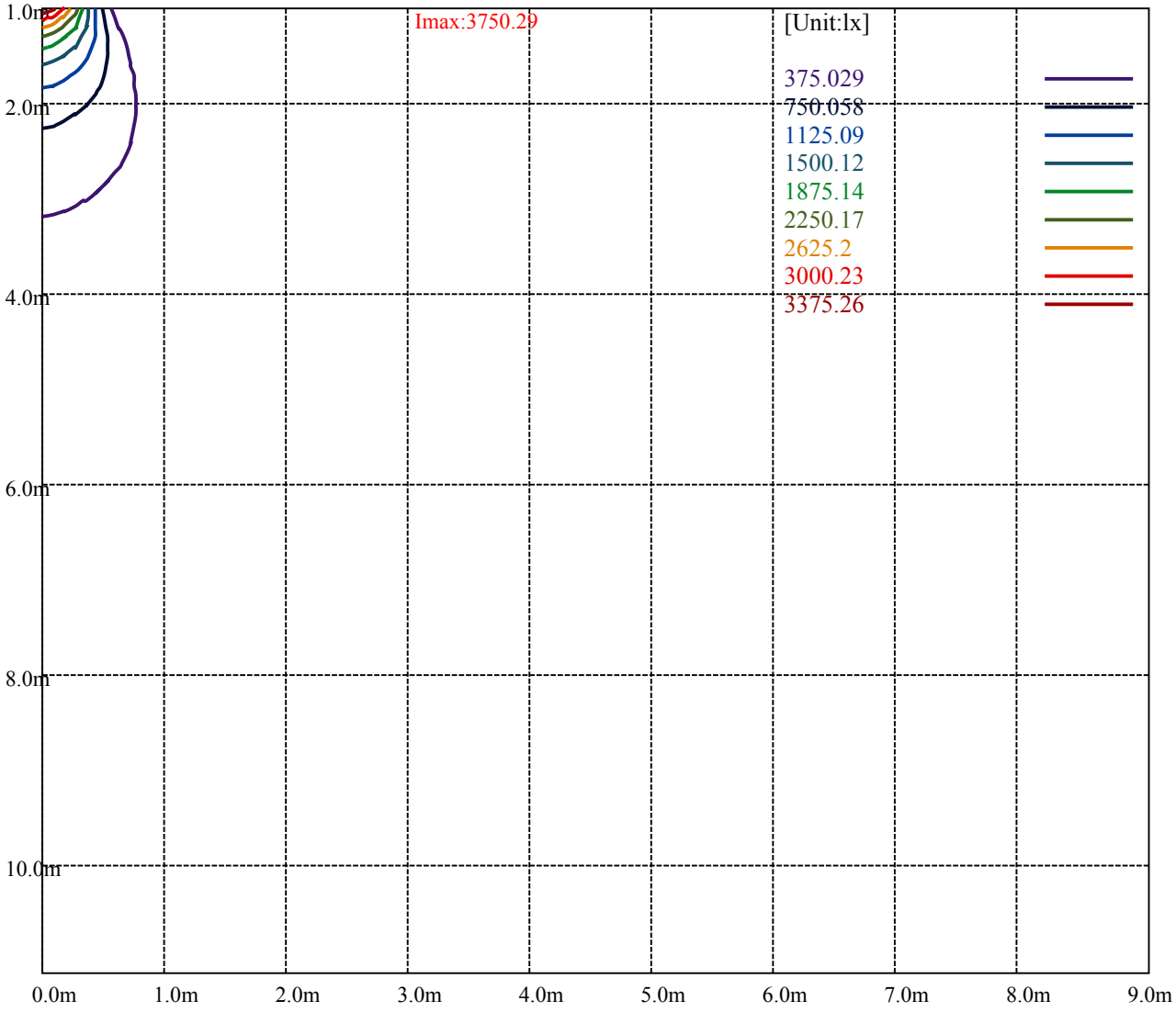
ISO illuminance diagram



(10%Emax) 93.75725
(20%Emax) 187.5145
(30%Emax) 281.2725
(40%Emax) 375.03
(50%Emax) 468.785
(60%Emax) 562.5425
(70%Emax) 656.3
(80%Emax) 750.0575
(90%Emax) 843.815

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2023/8/28
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.44

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2023/8/28
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.44

Luminance Limitting Curve(no luminous side)

Luminance Table

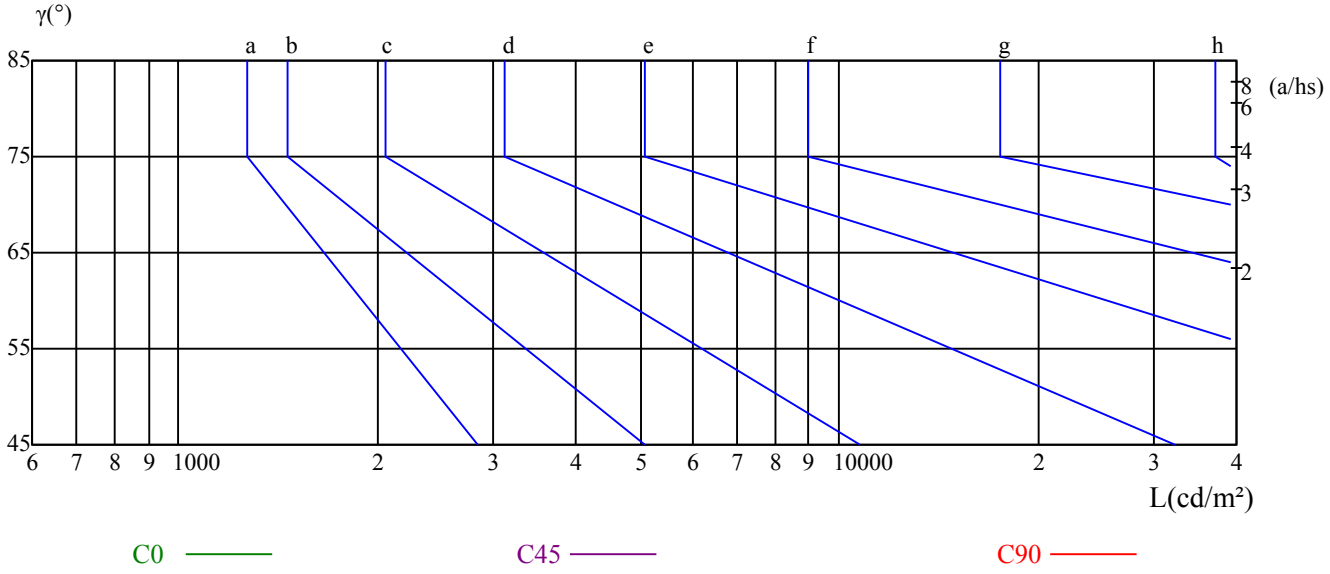
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

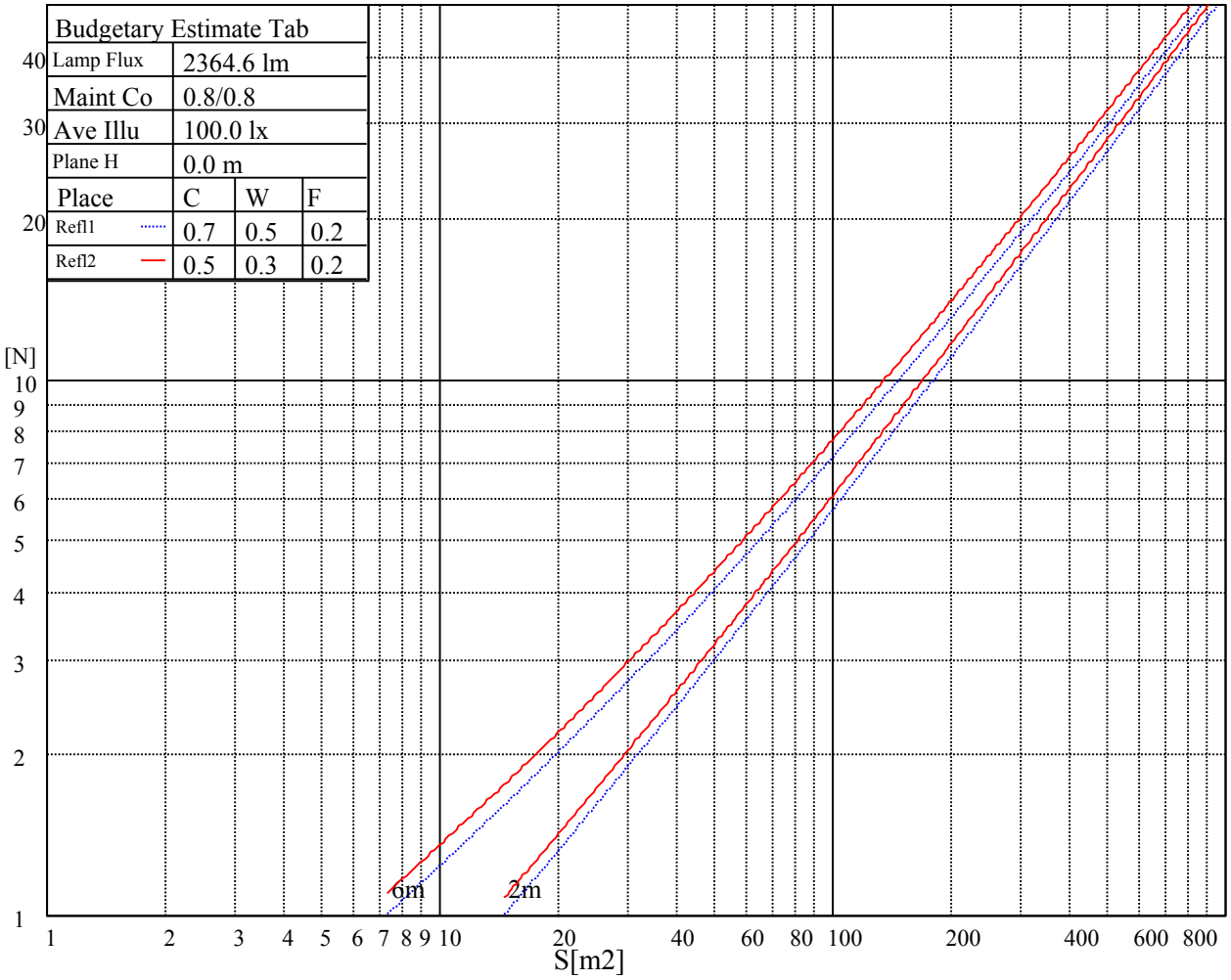


UGR Glare

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

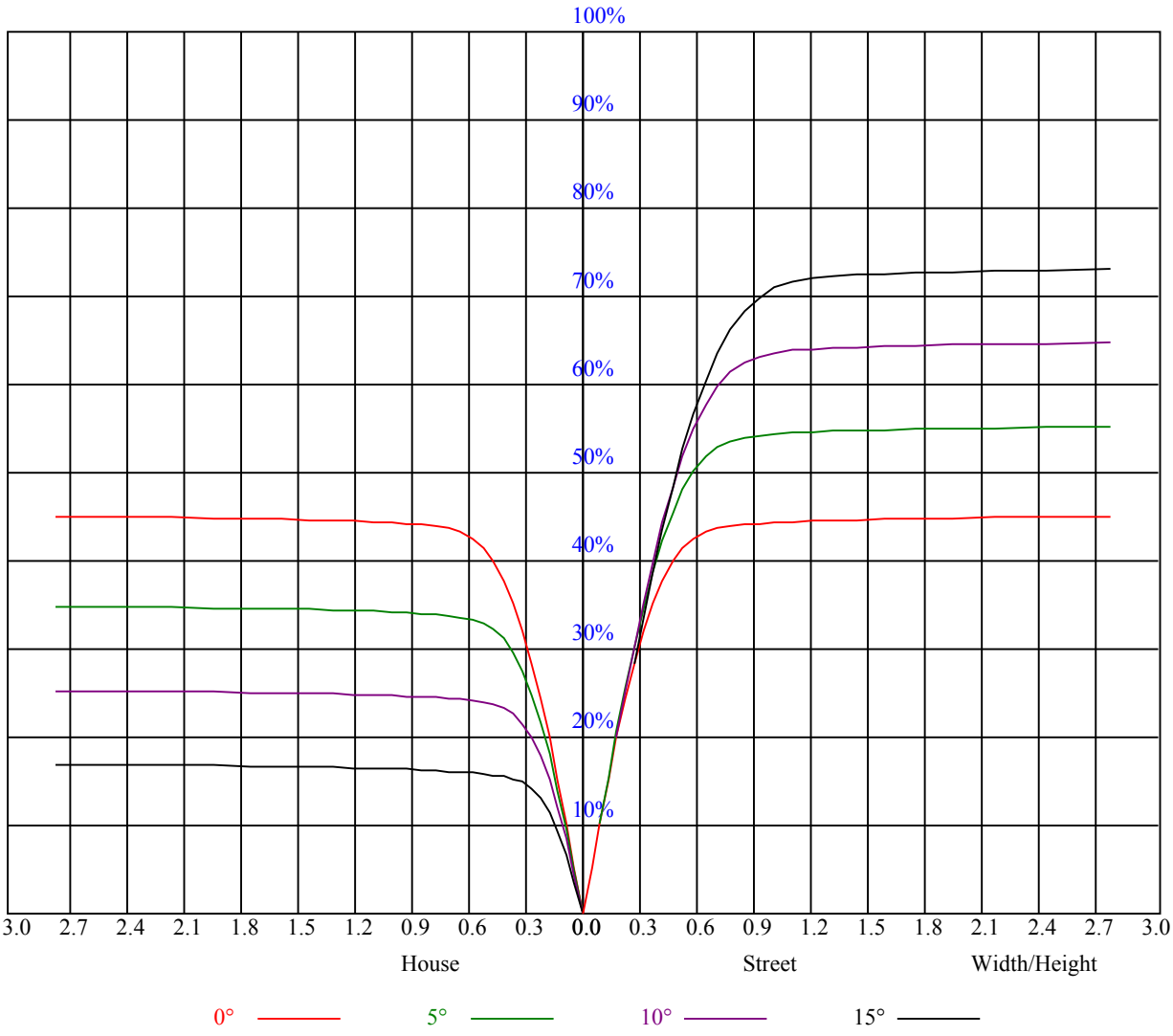


Equipment: GMS1980 Date: 2023/8/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.44

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	1.08	1.08	1.08	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	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.87	0.85	0.84	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.78	0.81	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	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	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	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.63	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	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.53

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2023/8/28	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	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	3724.13	3699.78	3647.75	3599.59	3548.11	3476.15	3427.99	3372.64	3314.52
45.0	3764.54	3730.22	3706.42	3666.01	3609.00	3547.56	3488.88	3426.89	3369.87
90.0	3742.40	3706.98	3664.35	3617.86	3563.06	3508.26	3439.62	3383.71	3312.30
135.0	3770.08	3759.56	3715.83	3684.28	3638.89	3584.09	3532.61	3465.08	3412.49
180.0	3724.13	3758.45	3769.52	3744.62	3704.76	3669.89	3631.69	3579.66	3524.86
225.0	3764.54	3763.44	3735.76	3716.94	3672.66	3627.27	3567.48	3517.11	3462.87
270.0	3742.40	3770.63	3757.90	3735.21	3702.55	3666.57	3610.66	3555.86	3499.95
315.0	3770.08	3750.70	3716.94	3674.87	3633.91	3588.52	3511.02	3451.24	3400.32
360.0	3724.13	3699.78	3647.75	3599.59	3548.11	3476.15	3427.99	3372.64	3314.52

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3232.04	3167.28	3096.43	3020.59	2915.97	2830.17	2731.09	2598.24	2485.32
45.0	3313.96	3258.06	3180.56	3107.50	3028.89	2914.87	2832.39	2711.16	2608.21
90.0	3259.72	3193.85	3116.35	3039.96	2959.70	2875.01	2762.64	2660.79	2555.07
135.0	3352.71	3298.47	3220.42	3157.87	3089.78	3015.06	2911.54	2825.19	2730.54
180.0	3460.10	3397.00	3343.86	3277.43	3194.95	3132.96	3061.00	2959.70	2872.80
225.0	3399.76	3321.16	3257.50	3181.67	3106.94	3015.06	2937.56	2854.53	2766.52
270.0	3427.99	3368.21	3304.00	3225.40	3153.99	3083.14	3002.32	2896.04	2809.14
315.0	3342.75	3265.25	3191.63	3119.67	3043.84	2948.08	2867.26	2753.23	2654.70
360.0	3232.04	3167.28	3096.43	3020.59	2915.97	2830.17	2731.09	2598.24	2485.32

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2338.63	2218.52	2095.63	1945.07	1819.42	1691.55	1549.85	1282.49	1092.02
45.0	2493.07	2386.24	2236.23	2111.68	1994.89	1872.00	1722.00	1583.61	1435.82
90.0	2434.95	2280.51	2155.41	2033.08	1911.30	1754.10	1625.13	1449.66	1068.44
135.0	2602.67	2489.20	2334.76	2211.32	2087.33	1970.53	1816.10	1690.44	1557.59
180.0	2753.23	2656.36	2540.12	2391.22	2278.85	2159.29	2033.08	1894.14	1766.28
225.0	2641.97	2540.67	2399.52	2281.07	2164.82	2016.48	1895.25	1772.92	1637.86
270.0	2716.15	2613.74	2469.27	2354.69	2239.00	2098.95	1973.30	1828.27	1693.21
315.0	2541.78	2402.84	2278.85	2154.86	2035.85	1878.09	1759.08	1623.47	1473.46
360.0	2338.63	2218.52	2095.63	1945.07	1819.42	1691.55	1549.85	1282.49	1092.02

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1052.77	898.94	753.86	580.22	451.46	313.19	225.18	164.34	122.50
45.0	1279.17	1085.98	928.78	744.45	607.17	479.86	338.16	289.44	289.44
90.0	1068.44	955.29	805.23	661.75	496.91	376.90	273.39	192.02	133.18
135.0	1410.91	1219.38	1067.72	917.71	770.47	599.98	471.56	330.41	280.59
180.0	1643.95	1501.13	1304.08	1157.39	1005.72	809.21	652.01	524.70	375.80
225.0	1451.87	1088.69	1088.69	969.13	771.52	623.72	489.27	345.57	252.91
270.0	1554.27	1361.09	1201.12	1050.00	896.12	705.15	563.44	436.68	326.53
315.0	1072.64	1072.64	956.79	772.35	631.81	501.28	357.81	261.55	187.32
360.0	1052.77	898.94	753.86	580.22	451.46	313.19	225.18	164.34	122.50

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	102.57	87.79	74.28	65.65	58.51	52.70	46.88	43.12	39.91
45.0	132.24	105.23	90.12	78.77	69.69	60.34	54.41	49.38	45.39
90.0	109.93	93.44	80.59	68.75	60.94	54.69	48.05	43.95	39.74
135.0	280.59	126.59	99.80	84.91	74.12	63.27	56.24	50.37	44.62
180.0	294.98	294.98	133.18	110.54	93.55	80.65	68.42	60.39	53.75
225.0	185.60	137.55	114.42	93.77	81.87	71.90	63.66	56.85	50.21
270.0	301.62	203.54	131.08	109.71	90.67	79.54	68.14	60.83	54.58
315.0	135.17	112.42	95.87	83.75	71.90	63.88	57.18	51.64	46.16
360.0	102.57	87.79	74.28	65.65	58.51	52.70	46.88	43.12	39.91

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	37.25	34.32	32.38	30.72	28.84	27.57	26.18	25.13	24.24
45.0	41.24	38.53	35.59	33.54	31.66	29.67	28.17	26.96	25.57
90.0	37.09	34.76	32.82	30.61	29.12	27.73	26.57	25.19	24.19
135.0	41.18	38.19	35.70	33.10	31.27	29.78	28.06	26.90	25.79
180.0	48.38	43.29	40.02	37.36	34.65	32.77	31.16	29.28	27.95
225.0	45.89	42.40	39.47	36.37	34.32	32.44	30.39	28.89	27.23
270.0	48.55	44.56	41.24	38.47	35.48	33.43	31.55	29.95	28.17
315.0	42.62	39.63	36.53	34.37	32.05	30.44	29.01	27.34	26.24
360.0	37.25	34.32	32.38	30.72	28.84	27.57	26.18	25.13	24.24

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	23.41	22.42	21.75	21.09	20.43	19.71	19.21	18.65	18.10
45.0	24.58	23.69	22.86	22.14	21.26	20.59	19.98	19.26	18.76
90.0	23.30	22.47	21.53	20.87	20.09	19.54	18.99	18.43	18.05
135.0	24.63	23.75	22.97	22.03	21.31	20.70	20.09	19.37	18.88
180.0	26.46	25.46	24.47	23.58	22.81	21.92	21.20	20.59	20.04
225.0	26.07	25.02	23.86	23.03	22.25	21.53	20.70	20.15	19.54
270.0	26.90	25.79	24.47	23.64	22.58	21.81	21.15	20.48	19.76
315.0	25.19	24.19	23.08	22.31	21.64	20.92	20.15	19.54	18.99
360.0	23.41	22.42	21.75	21.09	20.43	19.71	19.21	18.65	18.10

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	17.66	17.21	16.72	16.27	15.83	15.44	15.06	14.78	14.39
45.0	18.10	17.66	17.21	16.72	16.33	16.00	15.61	15.11	14.78
90.0	17.60	17.16	16.72	16.33	15.94	15.55	15.11	14.78	14.45
135.0	18.49	18.05	17.55	17.16	16.66	16.33	15.94	15.50	15.11
180.0	19.32	18.82	18.27	17.77	17.38	16.88	16.50	16.11	15.61
225.0	18.99	18.38	17.88	17.44	16.88	16.50	16.11	15.61	15.22
270.0	19.15	18.65	18.16	17.55	17.10	16.66	16.22	15.78	15.39
315.0	18.38	17.88	17.33	16.88	16.50	16.11	15.61	15.22	14.89
360.0	17.66	17.21	16.72	16.27	15.83	15.44	15.06	14.78	14.39

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	14.00	13.67	13.40	13.06	12.73	12.40	12.07	11.79	11.46
45.0	14.39	14.06	13.62	13.34	13.01	12.62	12.29	11.90	11.62
90.0	14.06	13.67	13.34	12.95	12.68	12.23	11.90	11.62	11.29
135.0	14.78	14.39	14.00	13.62	13.28	12.95	12.57	12.23	11.90
180.0	15.28	14.89	14.56	14.23	13.78	13.45	13.06	12.68	12.34
225.0	14.78	14.45	14.12	13.73	13.34	12.95	12.62	12.23	11.96
270.0	14.95	14.61	14.23	13.78	13.45	13.12	12.68	12.34	12.01
315.0	14.50	14.06	13.73	13.40	13.06	12.62	12.29	11.90	11.62
360.0	14.00	13.67	13.40	13.06	12.73	12.40	12.07	11.79	11.46

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	11.18	10.90	10.63	10.41	10.13	9.69	9.47	9.35	9.35
45.0	11.35	10.96	10.68	10.41	10.13	9.91	9.63	9.41	9.24
90.0	11.02	10.68	10.46	10.19	9.96	9.74	9.52	9.24	9.24
135.0	11.51	11.24	10.85	10.63	10.30	10.02	9.80	9.58	9.35
180.0	12.07	11.68	11.29	11.02	10.68	10.35	10.13	9.91	9.69
225.0	11.57	11.24	10.90	10.63	10.35	10.07	9.85	9.63	9.41
270.0	11.62	11.35	11.02	10.68	10.41	10.19	9.91	9.69	9.47
315.0	11.40	11.07	10.79	10.52	10.24	10.07	9.69	9.47	9.24
360.0	11.18	10.90	10.63	10.41	10.13	9.69	9.47	9.35	9.35

Intensity data(cd)

C/γ(°)	90.0
0.0	9.35
45.0	9.30
90.0	9.24
135.0	9.30
180.0	9.52
225.0	9.24
270.0	9.19
315.0	9.24
360.0	9.35