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Nata

LumCAT: 3-1698-N
Luminaire: 92.70.065.00+92.70.089.00

Report No: NATA0100	Voltage(V): 34.7000
Test No: GC2018091113	Current(A): 0.5000
LampCAT: LUMINUS CXM-11-AC30	Power (W): 17.3500
Lamp flux(lm): 2557.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2032.06
Efficiency(%): 79.47%
Lumens(lm)/Power(W): 117.35
Central intensity(cd): 17180.160
Maximum intensity(cd): 17180.160
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=15.1
[C90/270]Total=15.1
Field angle(10%Imax): [C0/180]Total=28.3
[C90/270]Total=28.3
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.26 C90_270=0.26
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 79.63%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.874%

Equipment: GMS1980	Date: 2018/9/11	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	17180.156	4.110	4.11	.161%	.202%
1.0	17010.703	32.556	36.666	1.273%	1.804%
2.0	16445.391	62.938	99.604	2.461%	4.902%
3.0	15509.531	89.012	188.617	3.481%	9.282%
4.0	14220.211	108.778	297.395	4.254%	14.635%
5.0	12902.484	123.316	420.712	4.823%	20.704%
6.0	11112.117	127.375	548.086	4.981%	26.972%
7.0	9486.211	126.777	674.863	4.958%	33.211%
8.0	7887.797	120.382	795.245	4.708%	39.135%
9.0	6193.969	106.256	901.501	4.155%	44.364%
10.0	4804.102	91.482	992.983	3.578%	48.866%
11.0	3742.242	78.304	1071.287	3.062%	52.719%
12.0	2819.602	64.286	1135.573	2.514%	55.883%
13.0	2142.000	52.840	1188.412	2.066%	58.483%
14.0	1768.430	46.915	1235.328	1.835%	60.792%
15.0	1413.858	40.129	1275.456	1.569%	62.767%
16.0	1243.181	37.577	1313.033	1.470%	64.616%
17.0	1129.711	36.220	1349.254	1.417%	66.398%
18.0	1033.833	35.034	1384.288	1.370%	68.122%
19.0	961.748	34.336	1418.624	1.343%	69.812%
20.0	887.400	33.283	1451.907	1.302%	71.450%
21.0	822.565	32.326	1484.233	1.264%	73.041%
22.0	763.580	31.368	1515.601	1.227%	74.585%
23.0	702.408	30.097	1545.697	1.177%	76.066%
24.0	641.496	28.613	1574.31	1.119%	77.474%
25.0	590.407	27.362	1601.672	1.070%	78.820%
26.0	540.408	25.979	1627.651	1.016%	80.099%
27.0	495.366	24.662	1652.313	.964%	81.312%
28.0	456.546	23.504	1675.817	.919%	82.469%
29.0	418.697	22.260	1698.077	.871%	83.564%
30.0	385.073	21.114	1719.19	.826%	84.603%
31.0	352.934	19.934	1739.124	.780%	85.584%
32.0	321.989	18.711	1757.835	.732%	86.505%
33.0	299.074	17.862	1775.698	.699%	87.384%
34.0	274.781	16.850	1792.548	.659%	88.213%
35.0	252.872	15.905	1808.453	.622%	88.996%
36.0	232.875	15.010	1823.463	.587%	89.735%
37.0	214.924	14.184	1837.647	.555%	90.433%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	198.914	13.429	1851.077	.525%	91.094%
39.0	184.999	12.767	1863.844	.499%	91.722%
40.0	173.130	12.204	1876.048	.477%	92.323%
41.0	161.191	11.597	1887.644	.454%	92.893%
42.0	148.978	10.932	1898.576	.428%	93.431%
43.0	136.765	10.228	1908.805	.400%	93.935%
44.0	125.923	9.592	1918.397	.375%	94.407%
45.0	115.474	8.954	1927.351	.350%	94.847%
46.0	104.386	8.234	1935.585	.322%	95.252%
47.0	93.551	7.503	1943.088	.293%	95.622%
48.0	84.059	6.850	1949.938	.268%	95.959%
49.0	74.341	6.153	1956.091	.241%	96.262%
50.0	65.046	5.464	1961.555	.214%	96.531%
51.0	58.008	4.944	1966.499	.193%	96.774%
52.0	51.356	4.438	1970.937	.174%	96.992%
53.0	44.880	3.931	1974.867	.154%	97.186%
54.0	39.488	3.503	1978.371	.137%	97.358%
55.0	34.713	3.118	1981.489	.122%	97.511%
56.0	30.347	2.759	1984.248	.108%	97.647%
57.0	26.803	2.465	1986.713	.096%	97.769%
58.0	23.829	2.216	1988.929	.087%	97.878%
59.0	21.396	2.011	1990.94	.079%	97.977%
60.0	19.554	1.857	1992.797	.073%	98.068%
61.0	18.190	1.745	1994.542	.068%	98.154%
62.0	17.381	1.683	1996.225	.066%	98.237%
63.0	16.833	1.645	1997.869	.064%	98.318%
64.0	16.334	1.610	1999.479	.063%	98.397%
65.0	15.898	1.580	2001.059	.062%	98.475%
66.0	15.518	1.555	2002.614	.061%	98.551%
67.0	15.131	1.527	2004.141	.060%	98.626%
68.0	14.759	1.501	2005.642	.059%	98.700%
69.0	14.428	1.477	2007.119	.058%	98.773%
70.0	14.098	1.453	2008.572	.057%	98.844%
71.0	13.760	1.427	2009.998	.056%	98.914%
72.0	13.458	1.404	2011.402	.055%	98.984%
73.0	13.155	1.380	2012.782	.054%	99.051%
74.0	12.895	1.359	2014.141	.053%	99.118%
75.0	12.621	1.337	2015.478	.052%	99.184%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.403	1.320	2016.798	.052%	99.249%
77.0	12.199	1.303	2018.101	.051%	99.313%
78.0	12.009	1.288	2019.389	.050%	99.377%
79.0	11.784	1.269	2020.658	.050%	99.439%
80.0	11.524	1.245	2021.902	.049%	99.500%
81.0	11.285	1.222	2023.125	.048%	99.560%
82.0	10.969	1.191	2024.316	.047%	99.619%
83.0	10.589	1.153	2025.468	.045%	99.676%
84.0	10.223	1.115	2026.583	.044%	99.731%
85.0	9.837	1.075	2027.658	.042%	99.783%
86.0	9.443	1.033	2028.691	.040%	99.834%
87.0	9.056	0.992	2029.683	.039%	99.883%
88.0	8.782	0.962	2030.645	.038%	99.930%
89.0	8.613	0.944	2031.589	.037%	99.977%
90.0	8.536	0.468	2032.058	.018%	100.000%

Zonal flux distribution table

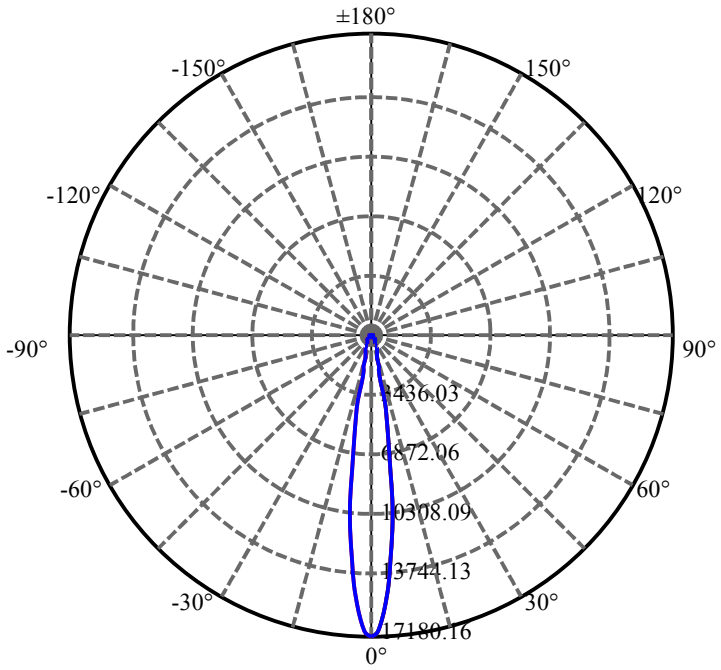
ZONAL LUMEN SUMMARY

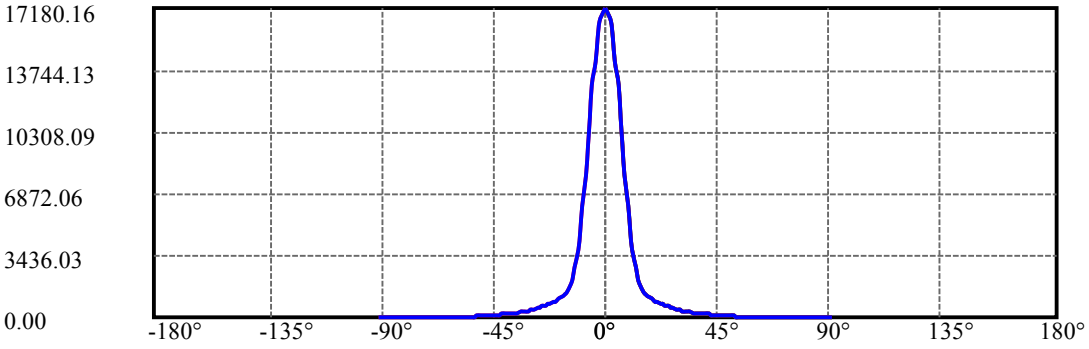
Zone	Lumens	%Lamp	%Fixt
0-30	1719.19	67.23%	84.60%
0-40	1876.05	73.37%	92.32%
0-60	1992.80	77.93%	98.07%
0-90	2031.59	79.45%	99.98%
0-120	2031.59	79.45%	99.98%
0-180	2032.06	79.47%	100.00%
60-90	40.65	1.59%	2.00%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.92	1625.65	63.58%	80.00%

ZONAL LUMEN SUMMARY

0-10	992.98
10-20	458.92
20-30	267.28
30-40	156.86
40-50	85.51
50-60	31.24
60-70	15.77
70-80	13.33
80-90	9.69
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):

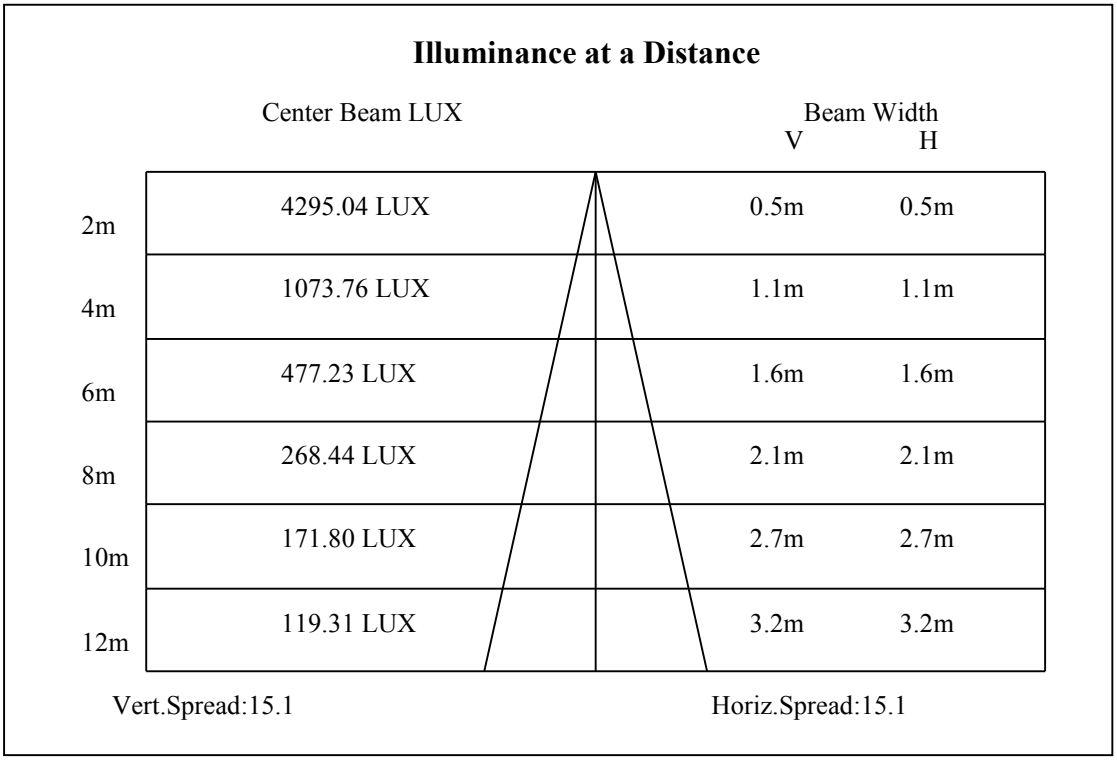
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:14.1 Right:14.1
:C90/270Left:14.1 Right:14.1

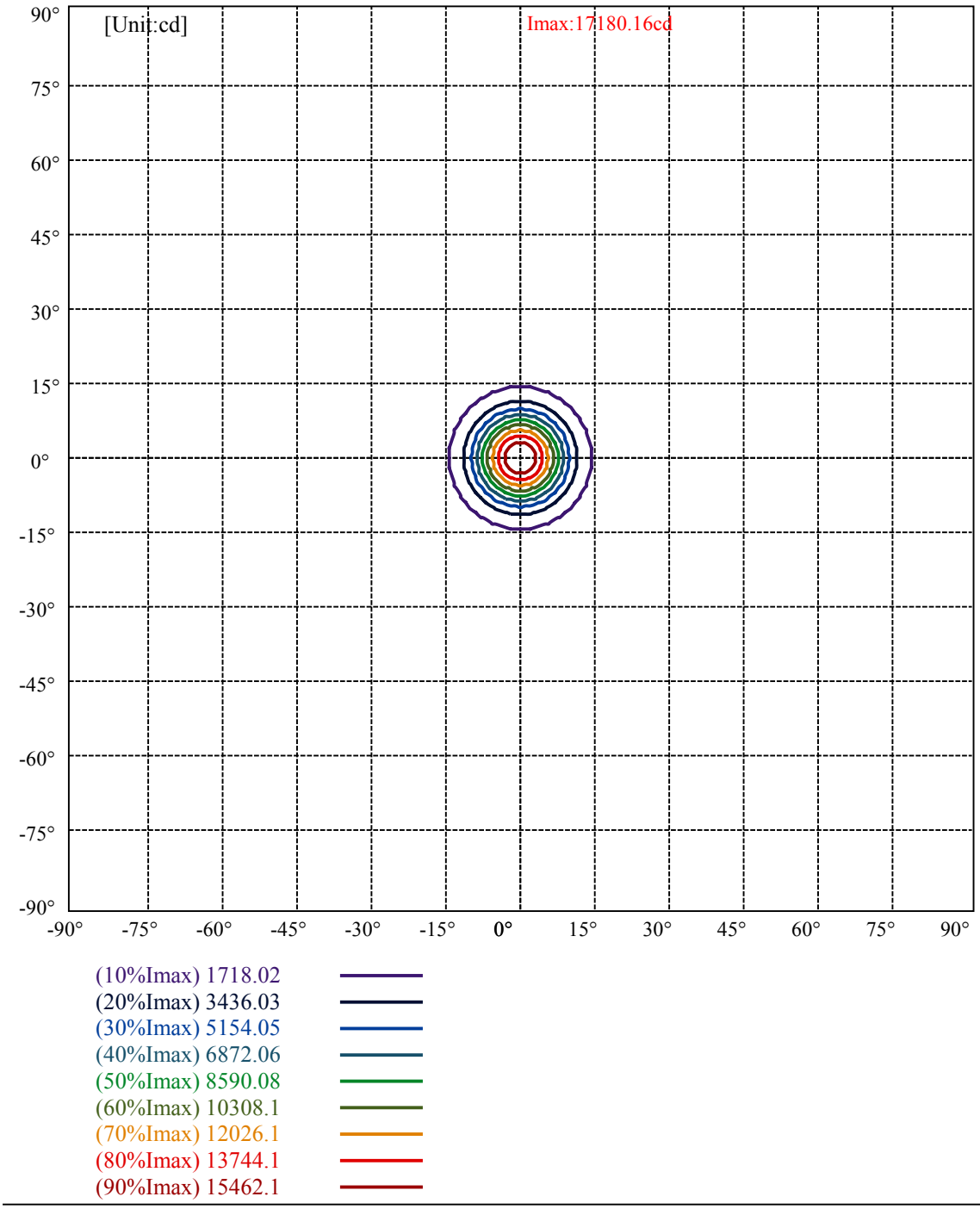
Beam Angle(50%Imax):C0/180Left:7.6 Right:7.6
:C90/270Left:7.6 Right:7.6

Lux distance Curve



Equipment: GMS1980 Date: 2018/9/11 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.50

ISO-Intensity(V-H)

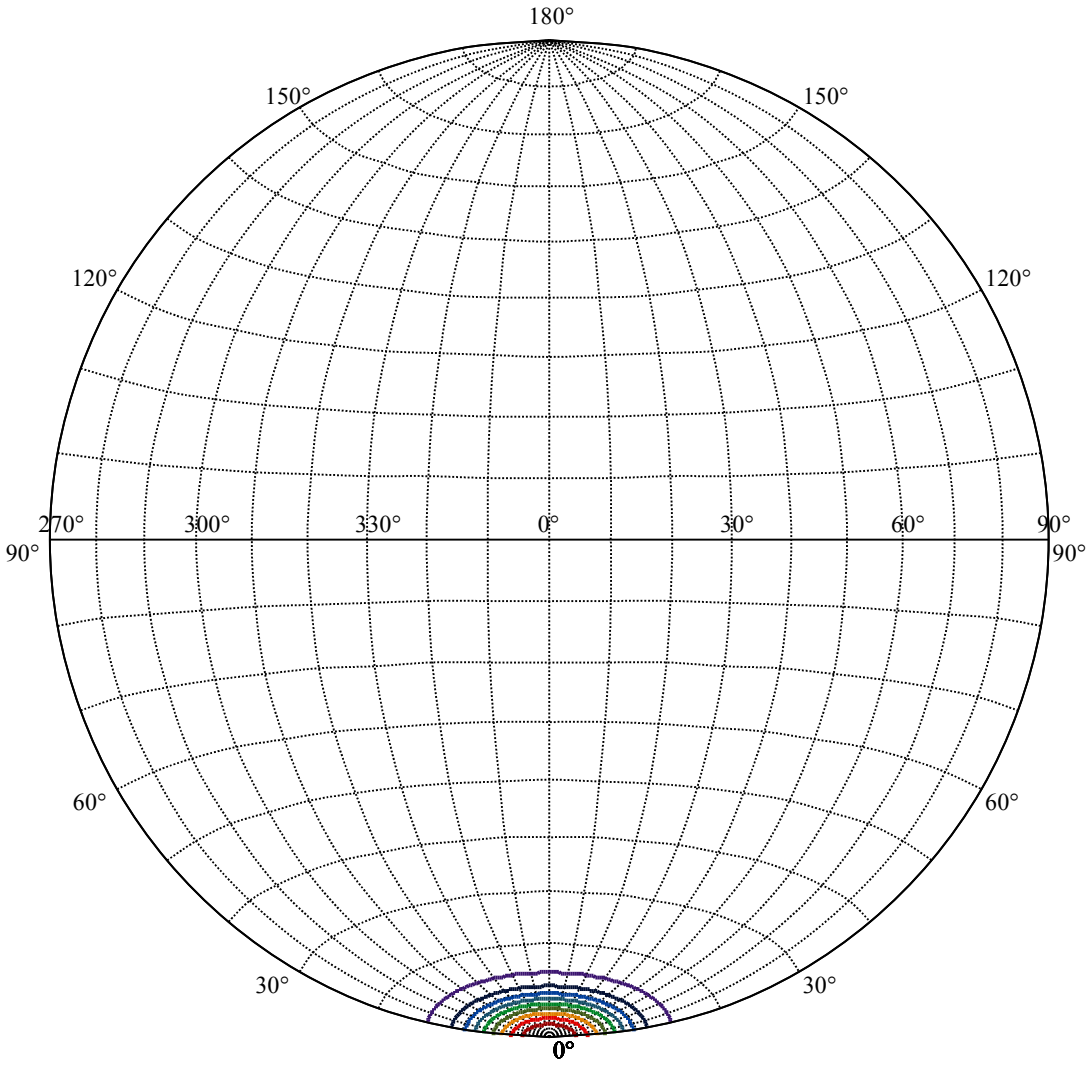


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:17180.16

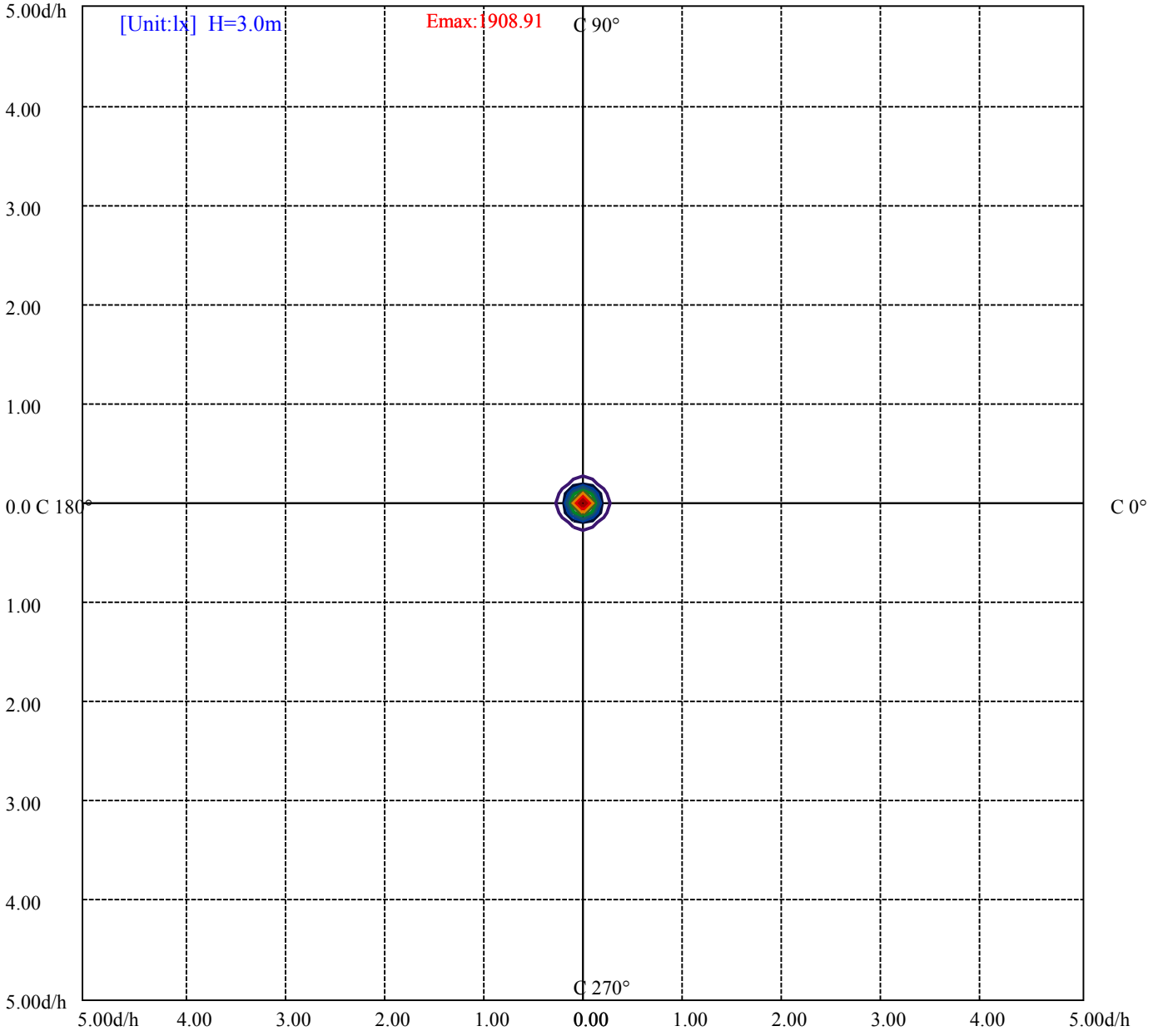
(10%Imax) 1718.02
(20%Imax) 3436.03
(30%Imax) 5154.05
(40%Imax) 6872.06
(50%Imax) 8590.08
(60%Imax) 10308.1
(70%Imax) 12026.1
(80%Imax) 13744.1
(90%Imax) 15462.1

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

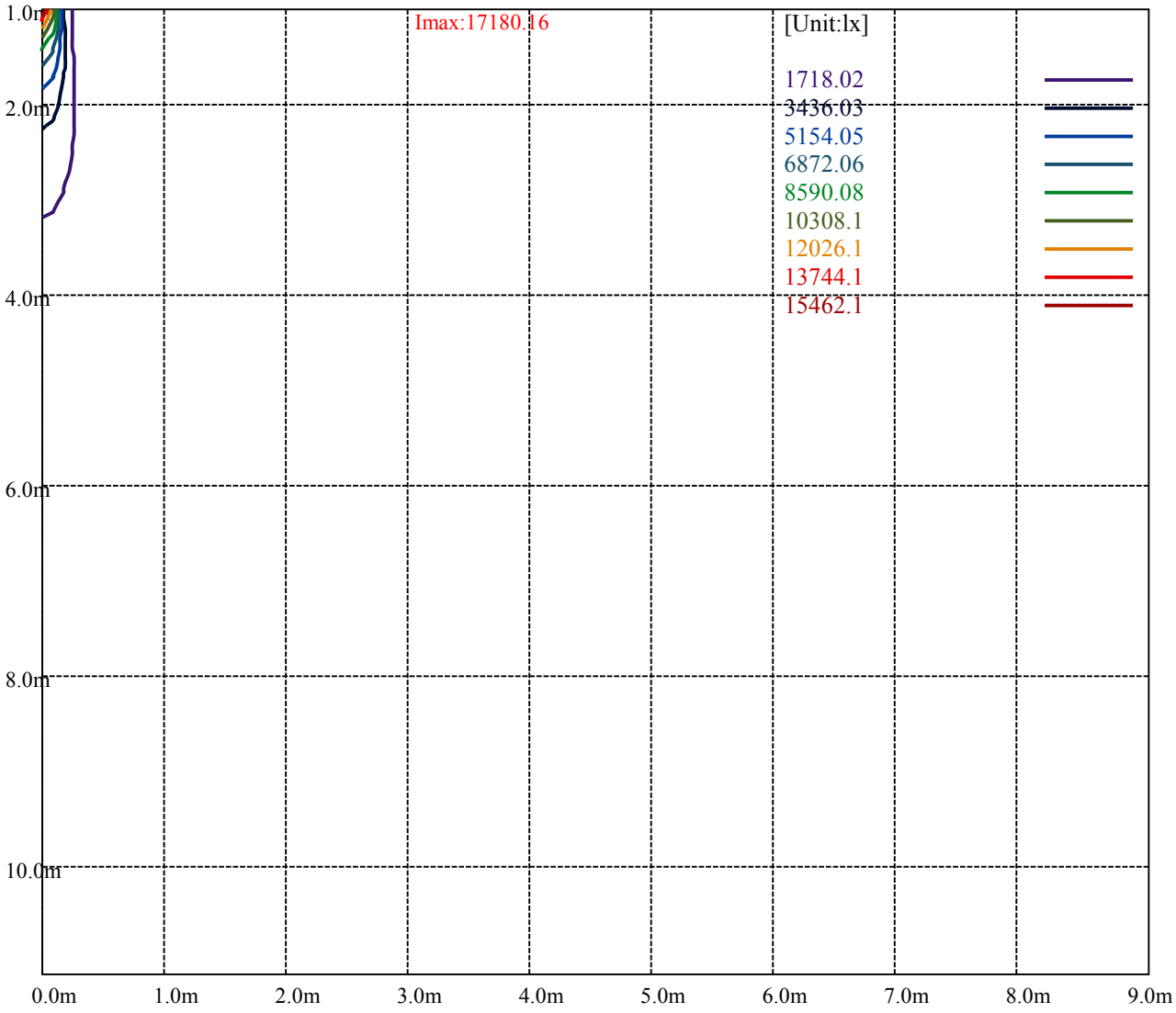


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

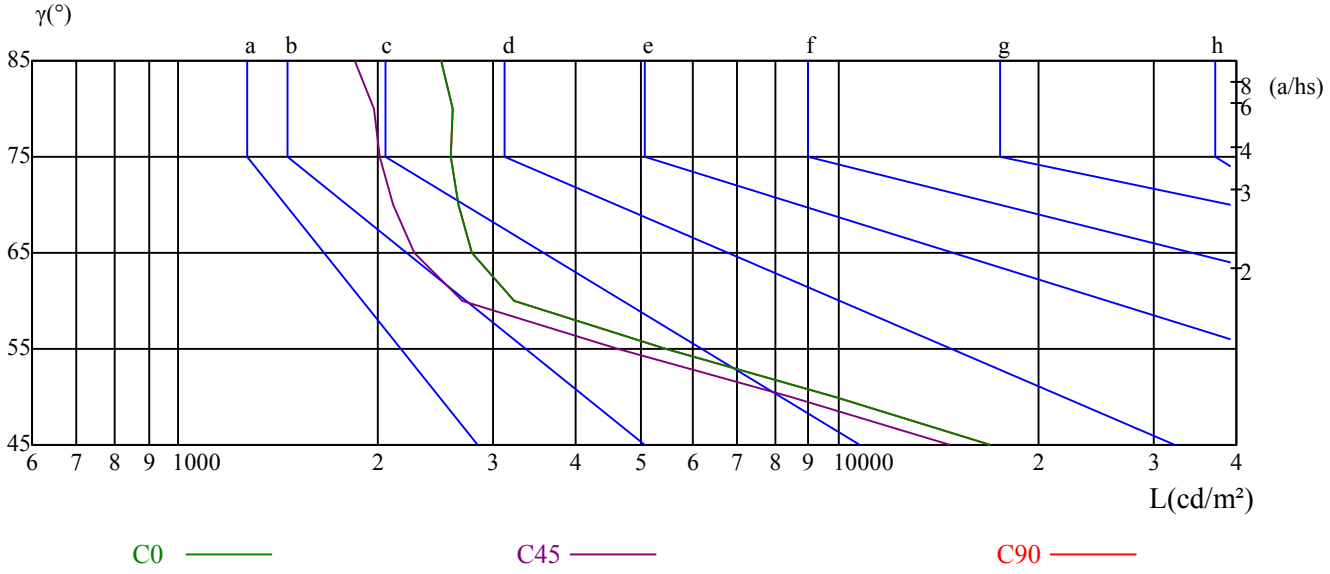
γ	45	50	55	60	65	70	75	80	85
C0	16944	9835	5456	3225	2781	2647	2578	2602	2504
C45	14785	8457	4619	2686	2274	2120	2018	1982	1846
C90	16944	9835	5456	3225	2781	2647	2578	2602	2504

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6027	6027	6027	7814	7814	7814	18084	18084	18084

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

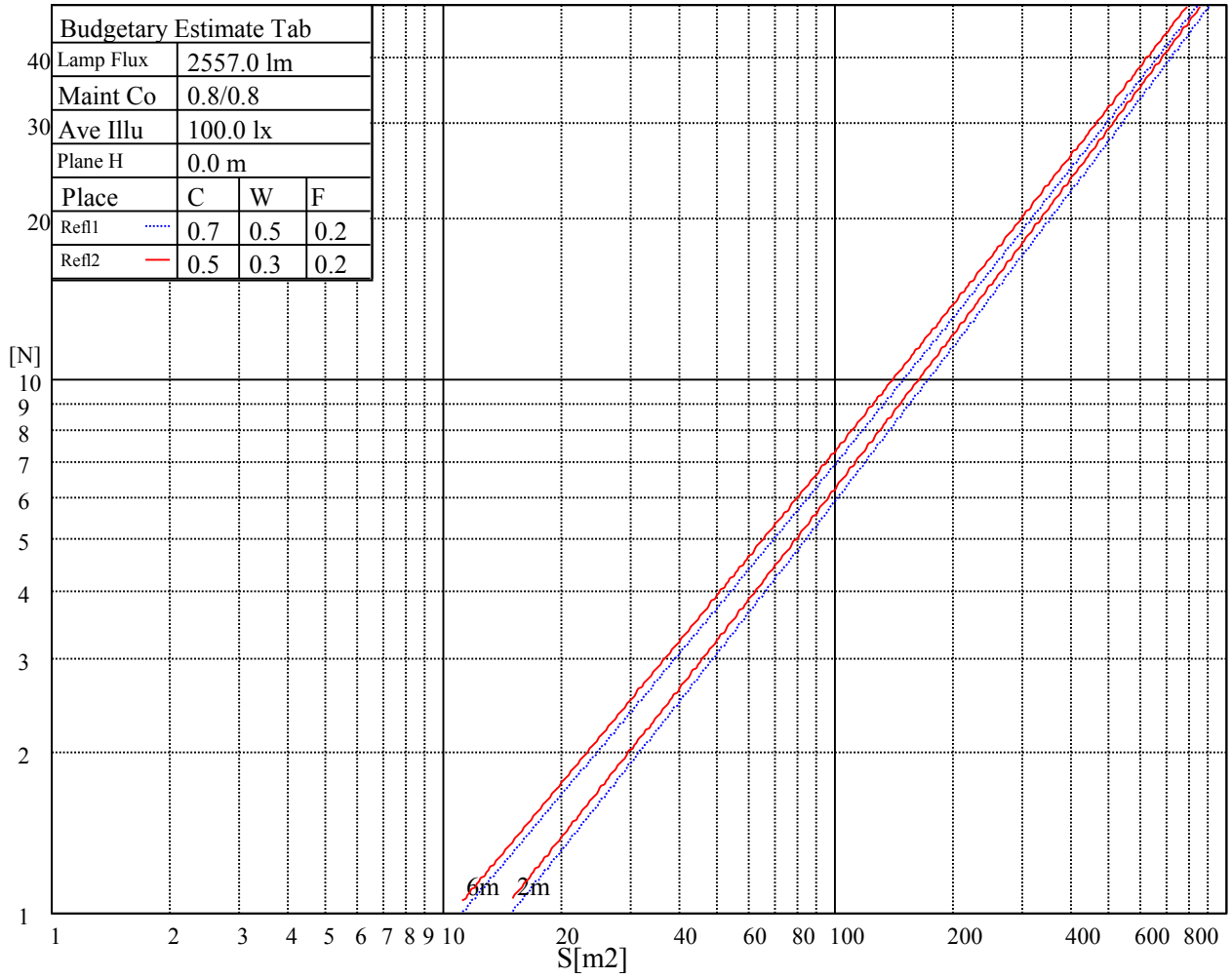


UGR Glare

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	7.18	8.17	7.55	8.48	8.79	7.11	8.09	7.47	8.40	8.72
	3H	8.07	8.93	8.45	9.27	9.64	7.99	8.86	8.38	9.19	9.56
	4H	8.60	9.41	9.01	9.76	10.15	8.53	9.33	8.93	9.68	10.07
	6H	9.22	9.95	9.63	10.33	10.72	9.15	9.88	9.57	10.26	10.65
	8H	9.52	10.21	9.96	10.60	11.01	9.46	10.15	9.90	10.54	10.95
	12H	10.01	10.67	10.44	11.05	11.48	9.96	10.62	10.40	11.01	11.44
4H	2H	7.24	8.04	7.65	8.40	8.79	7.17	7.98	7.58	8.33	8.72
	3H	8.39	9.05	8.81	9.46	9.86	8.33	8.99	8.74	9.40	9.80
	4H	9.10	9.69	9.54	10.11	10.56	9.04	9.62	9.47	10.05	10.50
	6H	9.80	10.30	10.27	10.75	11.23	9.75	10.25	10.22	10.70	11.17
	8H	10.22	10.69	10.69	11.14	11.61	10.17	10.64	10.65	11.09	11.57
	12H	10.77	11.18	11.26	11.66	12.14	10.74	11.15	11.23	11.63	12.11
8H	4H	9.29	9.76	9.77	10.21	10.69	9.24	9.70	9.71	10.16	10.63
	6H	10.20	10.58	10.71	11.08	11.57	10.16	10.53	10.67	11.03	11.52
	8H	10.75	11.08	11.29	11.61	12.10	10.72	11.05	11.25	11.57	12.07
	12H	11.48	11.77	12.00	12.27	12.85	11.46	11.75	11.98	12.24	12.83
12H	4H	9.32	9.72	9.81	10.21	10.69	9.26	9.66	9.75	10.15	10.63
	6H	10.55	10.62	10.82	11.09	11.64	10.51	10.58	10.78	11.05	11.60
	8H	10.92	11.20	11.44	11.70	12.28	10.88	11.17	11.40	11.67	12.25

Variation with the observer position at spacings:		
S = 1.0H	2.0/-3.1	2.0/-3.1
S = 1.5H	3.6/-3.3	3.6/-3.3
S = 2.0H	5.2/-2.8	5.2/-2.8
Standard tables:	BK2	BK2
Uncorrected UGR	-3.0	-3.0

Budgetary Estimate Table

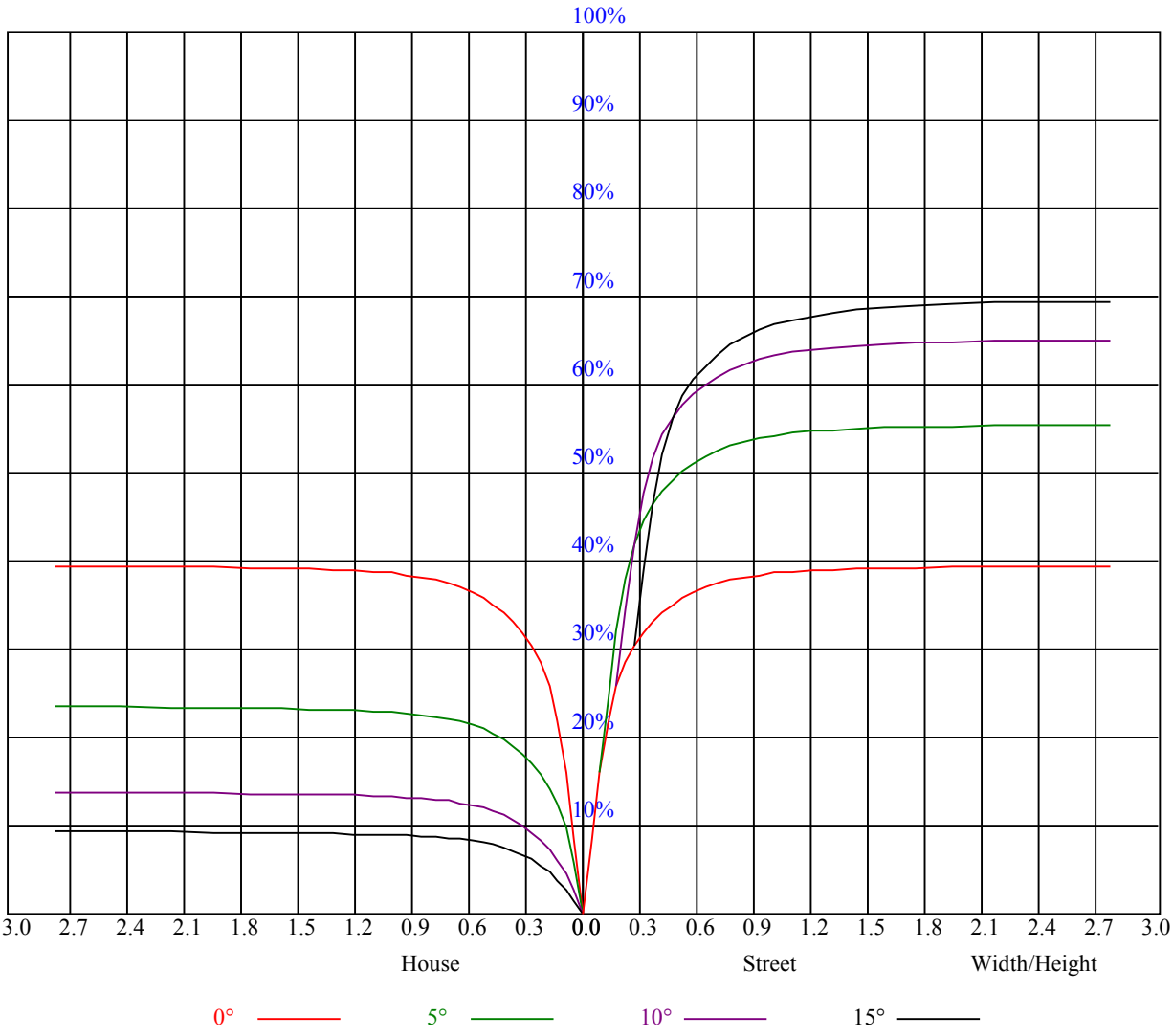


Equipment: GMS1980 Date: 2018/9/11 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.50

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	0.95	0.95	0.95	0.93	0.93	0.93	0.88	0.88	0.88	0.85	0.85	0.85	0.81	0.81	0.81	0.80
1	0.89	0.87	0.86	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.76
2	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.79	0.77	0.76	0.76	0.75	0.74	0.73
3	0.81	0.78	0.75	0.80	0.77	0.75	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.70
4	0.77	0.74	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.70	0.72	0.70	0.69	0.68
5	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.67	0.66
6	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.69	0.67	0.65	0.68	0.66	0.65	0.64
7	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
8	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
9	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.60	0.59
10	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.60	0.59	0.62	0.60	0.58	0.58

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

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	17398.13	17212.50	16515.00	15609.38	14467.50	12746.25	11182.50	9331.88	7734.38
45.0	16914.38	17381.25	17341.88	16908.75	16081.88	14934.38	13674.38	11998.13	10316.25
90.0	17240.63	17403.75	17150.63	16391.25	15485.63	14371.88	12166.88	11045.25	9326.81
135.0	17167.50	17358.75	17111.25	16543.13	15581.25	14495.63	13010.63	11255.63	9585.00
180.0	17398.13	17201.25	16695.00	15682.50	14602.50	13291.88	11143.13	9660.38	7984.13
225.0	16914.38	16205.63	15255.00	13747.50	11212.31	10581.19	8486.44	6883.31	5456.25
270.0	17240.63	16683.75	15778.13	14686.88	13179.38	11610.00	9714.38	7824.38	6305.63
315.0	17167.50	16638.75	15716.25	14506.88	13151.25	11188.69	9518.63	7890.75	6393.94
360.0	17398.13	17212.50	16515.00	15609.38	14467.50	12746.25	11182.50	9331.88	7734.38

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6091.88	4809.38	3611.25	2868.75	2089.13	1643.06	1407.94	1241.44	1123.31
45.0	8409.38	6693.75	5338.13	4168.13	3003.75	2908.13	1870.88	1524.38	1356.19
90.0	7453.13	5805.56	4548.38	3394.13	2513.25	1957.50	1580.63	1382.06	1231.88
135.0	7768.13	6108.75	4826.25	3729.38	2840.63	2061.56	1676.81	1432.69	1245.38
180.0	6251.06	4737.38	3628.13	2642.06	2025.00	1585.13	1339.88	1111.50	1100.36
225.0	3953.25	2988.56	2253.38	1667.25	1441.13	1259.44	1114.37	1035.28	960.75
270.0	4826.25	3583.13	2908.13	2057.06	1583.44	1331.44	1198.13	1109.25	1005.75
315.0	4798.69	3706.31	2824.31	2030.06	1639.69	1401.19	1122.24	1108.86	1014.08
360.0	6091.88	4809.38	3611.25	2868.75	2089.13	1643.06	1407.94	1241.44	1123.31

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1042.88	974.25	895.50	836.44	780.75	709.88	654.19	604.13	549.56
45.0	1228.50	1121.06	1018.13	948.94	879.19	805.50	744.75	689.63	629.44
90.0	1104.41	1036.13	968.18	890.72	831.09	775.35	704.70	648.96	599.51
135.0	1134.00	1042.88	949.50	885.94	826.31	764.44	696.94	644.06	587.25
180.0	1003.05	936.68	875.31	803.14	747.90	694.41	626.18	574.59	527.85
225.0	878.57	820.01	765.34	706.11	644.46	590.63	542.64	490.50	453.32
270.0	943.31	888.75	809.44	752.63	704.25	637.88	579.38	538.31	483.75
315.0	935.94	874.24	817.82	756.62	694.69	641.19	583.20	533.08	492.58
360.0	1042.88	974.25	895.50	836.44	780.75	709.88	654.19	604.13	549.56

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	501.19	462.94	423.56	390.38	356.06	325.69	302.63	285.75	252.96
45.0	576.00	535.50	489.94	452.81	416.25	381.38	353.25	322.88	297.00
90.0	546.47	499.05	459.90	424.52	386.21	352.80	323.10	298.91	274.33
135.0	541.69	495.00	455.06	421.88	385.88	351.00	322.31	300.38	285.75
180.0	475.76	444.54	405.96	364.61	338.01	308.59	279.51	261.28	242.72
225.0	420.41	387.62	356.29	328.44	299.81	274.28	253.80	232.93	215.94
270.0	445.50	412.31	374.06	343.69	317.81	286.88	284.63	244.97	223.48
315.0	455.91	415.41	384.81	354.26	323.44	295.31	273.38	251.16	230.79
360.0	501.19	462.94	423.56	390.38	356.06	325.69	302.63	285.75	252.96

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	234.17	217.86	199.13	186.36	175.33	163.63	150.24	139.61	128.48
45.0	285.75	251.49	227.36	210.88	197.10	183.54	170.61	157.39	145.01
90.0	251.94	233.83	217.80	201.38	187.26	175.61	163.86	148.50	137.70
135.0	248.85	232.26	213.13	197.10	184.73	172.07	158.79	147.32	135.56
180.0	221.12	206.04	192.94	178.48	168.08	158.01	145.07	133.31	123.47
225.0	198.68	185.06	173.87	162.90	150.92	139.67	129.09	116.94	106.99
270.0	207.68	194.12	180.68	168.98	159.02	146.42	134.61	124.31	113.51
315.0	214.82	198.73	186.41	173.93	162.62	150.58	139.56	126.73	116.66
360.0	234.17	217.86	199.13	186.36	175.33	163.63	150.24	139.61	128.48

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	116.89	106.76	94.95	84.88	74.48	65.48	58.33	52.31	45.17
45.0	132.69	122.23	110.25	99.79	88.26	77.74	69.30	61.54	53.21
90.0	127.63	114.58	104.18	93.71	82.86	72.79	64.80	56.93	50.74
135.0	126.06	114.92	103.50	93.32	83.59	72.34	64.41	57.09	49.39
180.0	112.89	103.22	92.42	82.91	73.24	64.46	57.60	50.63	45.00
225.0	97.14	85.95	75.83	67.78	59.63	52.31	46.80	41.12	36.34
270.0	103.84	93.21	82.74	74.19	65.93	57.04	50.85	45.45	39.26
315.0	106.65	94.22	84.54	75.88	66.77	58.22	51.98	45.79	39.94
360.0	116.89	106.76	94.95	84.88	74.48	65.48	58.33	52.31	45.17

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	39.88	35.04	30.04	26.72	23.85	21.32	18.84	17.72	17.10
45.0	47.48	42.19	36.11	31.95	28.63	25.09	22.44	20.31	18.62
90.0	44.55	38.81	34.31	29.93	26.16	23.40	20.98	18.73	17.72
135.0	43.76	38.59	33.30	28.86	25.99	22.84	20.76	18.79	17.78
180.0	38.59	33.86	29.93	26.66	23.34	21.09	19.24	17.78	17.10
225.0	31.73	27.79	24.92	22.50	20.03	18.68	17.83	17.21	16.76
270.0	34.76	30.83	27.11	24.02	21.60	19.46	18.17	17.55	16.99
315.0	35.16	30.60	27.06	23.79	21.04	19.29	18.17	17.44	16.99
360.0	39.88	35.04	30.04	26.72	23.85	21.32	18.84	17.72	17.10

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	16.54	16.09	15.69	15.30	14.91	14.63	14.29	13.95	13.61
45.0	17.83	17.33	16.82	16.37	15.98	15.53	15.19	14.85	14.40
90.0	17.16	16.54	16.14	15.75	15.36	14.96	14.63	14.29	14.01
135.0	17.16	16.65	16.14	15.75	15.41	14.96	14.68	14.34	14.01
180.0	16.59	16.09	15.64	15.24	14.85	14.51	14.18	13.84	13.50
225.0	16.37	15.92	15.53	15.19	14.79	14.51	14.12	13.78	13.50
270.0	16.48	16.03	15.58	15.24	14.85	14.46	14.18	13.89	13.50
315.0	16.54	16.03	15.64	15.30	14.91	14.51	14.18	13.84	13.56
360.0	16.54	16.09	15.69	15.30	14.91	14.63	14.29	13.95	13.61

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	13.28	12.99	12.77	12.43	12.21	12.04	11.81	11.64	11.42
45.0	14.12	13.84	13.50	13.16	12.88	12.54	12.32	12.04	11.70
90.0	13.67	13.33	13.05	12.77	12.49	12.26	12.04	11.76	11.48
135.0	13.73	13.44	13.11	12.77	12.54	12.32	12.09	11.87	11.64
180.0	13.22	12.88	12.66	12.43	12.21	12.09	11.93	11.76	11.59
225.0	13.22	12.94	12.77	12.54	12.38	12.15	12.04	11.76	11.48
270.0	13.22	12.94	12.71	12.49	12.32	12.15	11.98	11.81	11.53
315.0	13.22	12.88	12.60	12.38	12.21	12.04	11.87	11.64	11.36
360.0	13.28	12.99	12.77	12.43	12.21	12.04	11.81	11.64	11.42

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	11.08	10.80	10.46	10.13	9.79	9.34	9.00	8.72	8.55
45.0	11.48	11.19	10.80	10.52	10.18	9.84	9.45	9.11	8.89
90.0	11.25	10.97	10.63	10.29	9.96	9.62	9.23	8.89	8.66
135.0	11.48	11.19	10.86	10.52	10.13	9.73	9.34	8.94	8.66
180.0	11.36	11.08	10.69	10.29	9.96	9.56	9.06	8.78	8.55
225.0	11.25	10.86	10.41	10.01	9.51	9.11	8.78	8.61	8.55
270.0	11.25	10.91	10.52	10.07	9.62	9.17	8.83	8.61	8.55
315.0	11.14	10.74	10.35	9.96	9.56	9.17	8.78	8.61	8.49
360.0	11.08	10.80	10.46	10.13	9.79	9.34	9.00	8.72	8.55

Intensity data(cd)

C/γ(°)	90.0
0.0	8.55
45.0	8.66
90.0	8.55
135.0	8.49
180.0	8.49
225.0	8.55
270.0	8.49
315.0	8.49
360.0	8.55