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NATA

Client:
LumCAT: 2-2639-L Luminaire:
92.70.411.00 Report No: 2023830-B001
Ballast type: AC
Test No: 2023830-C001

LampCAT: LUXEON CoB 1208 LES15	Voltage(V): 33.900
Lamp flux(lm): 2357.0 Number of Lamps: 1	Current(A): 0.502
Length(mm): 0	Power (W): 17.017
Phm Type: C	PF: 0.000
	Width(mm): 0
	Height(mm): 0

Photometric Results

Lumens(lm): 2204.96, Efficiency(%): 93.55% , Luminous Efficacy(lm/W): 129.57
Central intensity(cd): 8715.784, Maximum intensity(cd): 8715.784
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=21.6
[C90/270]Total=21.6
Field angle(10%Imax): [C0/180]Total=56.0
[C90/270]Total=56.0
Maximum s/h(1/2): C0_180=0.37 C90_270=0.37
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(%): 93.55%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.905%

Equipment: GMS1980	Date: 2023/8/30	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.44

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8715.784	0.000	0	0.00%	0.00%
1.0	8659.462	8.314	8.314	0.35%	0.38%
2.0	8500.735	24.630	32.944	1.04%	1.49%
3.0	8247.977	40.057	73.001	1.70%	3.31%
4.0	7863.961	53.932	126.933	2.29%	5.76%
5.0	7385.084	65.601	192.533	2.78%	8.73%
6.0	6883.926	74.987	267.521	3.18%	12.13%
7.0	6358.067	82.193	349.714	3.49%	15.86%
8.0	5798.788	87.004	436.718	3.69%	19.81%
9.0	5228.507	89.370	526.088	3.79%	23.86%
10.0	4739.251	90.205	616.293	3.83%	27.95%
11.0	4270.821	90.029	706.322	3.82%	32.03%
12.0	3827.784	88.529	794.851	3.76%	36.05%
13.0	3424.879	86.071	880.922	3.65%	39.95%
14.0	3084.939	83.325	964.247	3.54%	43.73%
15.0	2772.191	80.409	1044.657	3.41%	47.38%
16.0	2481.031	76.974	1121.631	3.27%	50.87%
17.0	2212.151	73.085	1194.716	3.10%	54.18%
18.0	1995.165	69.370	1264.086	2.94%	57.33%
19.0	1808.900	66.183	1330.269	2.81%	60.33%
20.0	1653.633	63.374	1393.643	2.69%	63.20%
21.0	1518.571	60.913	1454.556	2.58%	65.97%
22.0	1401.152	58.673	1513.229	2.49%	68.63%
23.0	1285.899	56.382	1569.61	2.39%	71.19%
24.0	1181.156	53.939	1623.549	2.29%	73.63%
25.0	1133.026	52.619	1676.168	2.23%	76.02%
26.0	1054.514	51.637	1727.805	2.19%	78.36%
27.0	968.930	49.504	1777.309	2.10%	80.61%
28.0	875.161	46.688	1823.998	1.98%	82.72%
29.0	785.357	43.444	1867.442	1.84%	84.69%
30.0	692.342	39.898	1907.339	1.69%	86.50%
31.0	602.199	36.025	1943.365	1.53%	88.14%
32.0	515.148	32.011	1975.375	1.36%	89.59%
33.0	433.647	27.952	2003.327	1.19%	90.86%
34.0	351.523	23.762	2027.089	1.01%	91.93%
35.0	277.571	19.537	2046.626	0.83%	92.82%
36.0	234.810	16.314	2062.94	0.69%	93.56%
37.0	200.740	14.205	2077.145	0.60%	94.20%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	111.911	10.436	2087.581	0.44%	94.68%
39.0	80.948	6.583	2094.164	0.28%	94.98%
40.0	66.002	5.125	2099.289	0.22%	95.21%
41.0	57.395	4.394	2103.683	0.19%	95.41%
42.0	51.603	3.960	2107.643	0.17%	95.59%
43.0	46.843	3.647	2111.29	0.15%	95.75%
44.0	42.982	3.390	2114.68	0.14%	95.91%
45.0	39.550	3.172	2117.852	0.13%	96.05%
46.0	37.045	2.995	2120.848	0.13%	96.19%
47.0	34.949	2.863	2123.711	0.12%	96.32%
48.0	33.434	2.764	2126.475	0.12%	96.44%
49.0	32.174	2.694	2129.17	0.11%	96.56%
50.0	31.129	2.639	2131.809	0.11%	96.68%
51.0	30.209	2.595	2134.404	0.11%	96.80%
52.0	29.559	2.565	2136.969	0.11%	96.92%
53.0	29.185	2.555	2139.524	0.11%	97.03%
54.0	29.123	2.570	2142.094	0.11%	97.15%
55.0	29.275	2.607	2144.701	0.11%	97.27%
56.0	29.759	2.668	2147.369	0.11%	97.39%
57.0	30.334	2.748	2150.116	0.12%	97.51%
58.0	30.867	2.830	2152.946	0.12%	97.64%
59.0	31.067	2.895	2155.842	0.12%	97.77%
60.0	30.735	2.920	2158.762	0.12%	97.90%
61.0	29.614	2.880	2161.642	0.12%	98.04%
62.0	27.587	2.756	2164.398	0.12%	98.16%
63.0	24.985	2.557	2166.955	0.11%	98.28%
64.0	22.045	2.308	2169.262	0.10%	98.38%
65.0	19.754	2.069	2171.331	0.09%	98.47%
66.0	17.983	1.883	2173.214	0.08%	98.56%
67.0	16.876	1.753	2174.967	0.07%	98.64%
68.0	16.156	1.673	2176.64	0.07%	98.72%
69.0	15.582	1.619	2178.259	0.07%	98.79%
70.0	15.098	1.576	2179.835	0.07%	98.86%
71.0	14.634	1.537	2181.371	0.07%	98.93%
72.0	14.198	1.499	2182.871	0.06%	99.00%
73.0	13.831	1.466	2184.336	0.06%	99.06%
74.0	13.465	1.435	2185.771	0.06%	99.13%
75.0	13.119	1.405	2187.176	0.06%	99.19%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.794	1.376	2188.552	0.06%	99.26%
77.0	12.496	1.348	2189.9	0.06%	99.32%
78.0	12.212	1.323	2191.223	0.06%	99.38%
79.0	11.915	1.296	2192.519	0.05%	99.44%
80.0	11.631	1.269	2193.788	0.05%	99.49%
81.0	11.313	1.241	2195.029	0.05%	99.55%
82.0	10.988	1.209	2196.238	0.05%	99.60%
83.0	10.669	1.177	2197.416	0.05%	99.66%
84.0	10.406	1.148	2198.564	0.05%	99.71%
85.0	10.157	1.122	2199.686	0.05%	99.76%
86.0	9.922	1.098	2200.784	0.05%	99.81%
87.0	9.715	1.075	2201.858	0.05%	99.86%
88.0	9.493	1.052	2202.911	0.04%	99.91%
89.0	9.320	1.031	2203.942	0.04%	99.95%
90.0	9.265	1.019	2204.961	0.04%	100.00%

Zonal flux distribution table

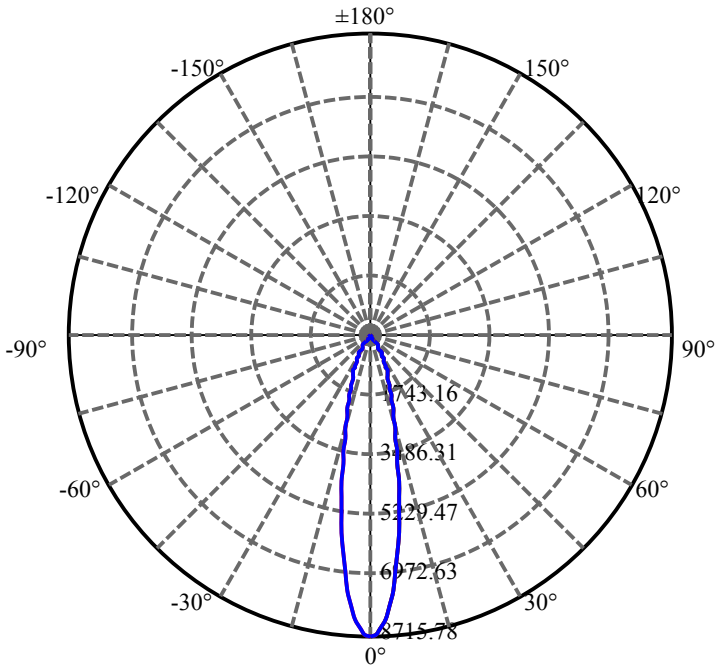
ZONAL LUMEN SUMMARY

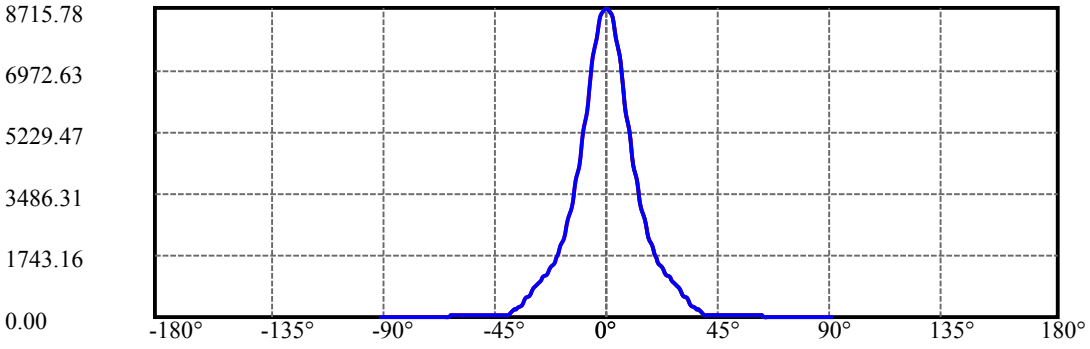
Zone	Lumens	%Lamp	%Fixt
0-30	1907.34	80.92%	86.50%
0-40	2099.29	89.06%	95.21%
0-60	2158.76	91.59%	97.90%
0-90	2203.94	93.50%	99.95%
0-120	2203.94	93.50%	99.95%
0-180	2204.96	93.55%	100.00%
60-90	45.18	1.92%	2.05%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.73	1763.97	74.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	616.29
10-20	777.35
20-30	513.70
30-40	191.95
40-50	32.52
50-60	26.95
60-70	21.07
70-80	13.95
80-90	10.15
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):

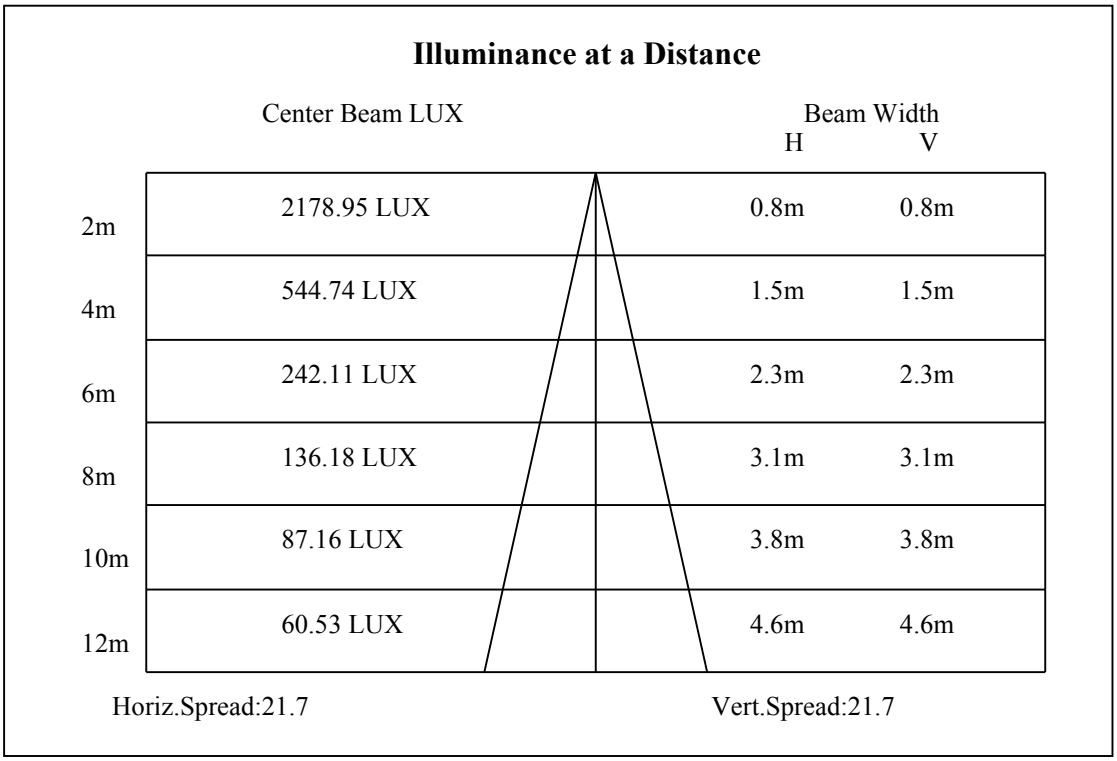
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:28.0 Right:28.0
:C90/270Left:28.0 Right:28.0

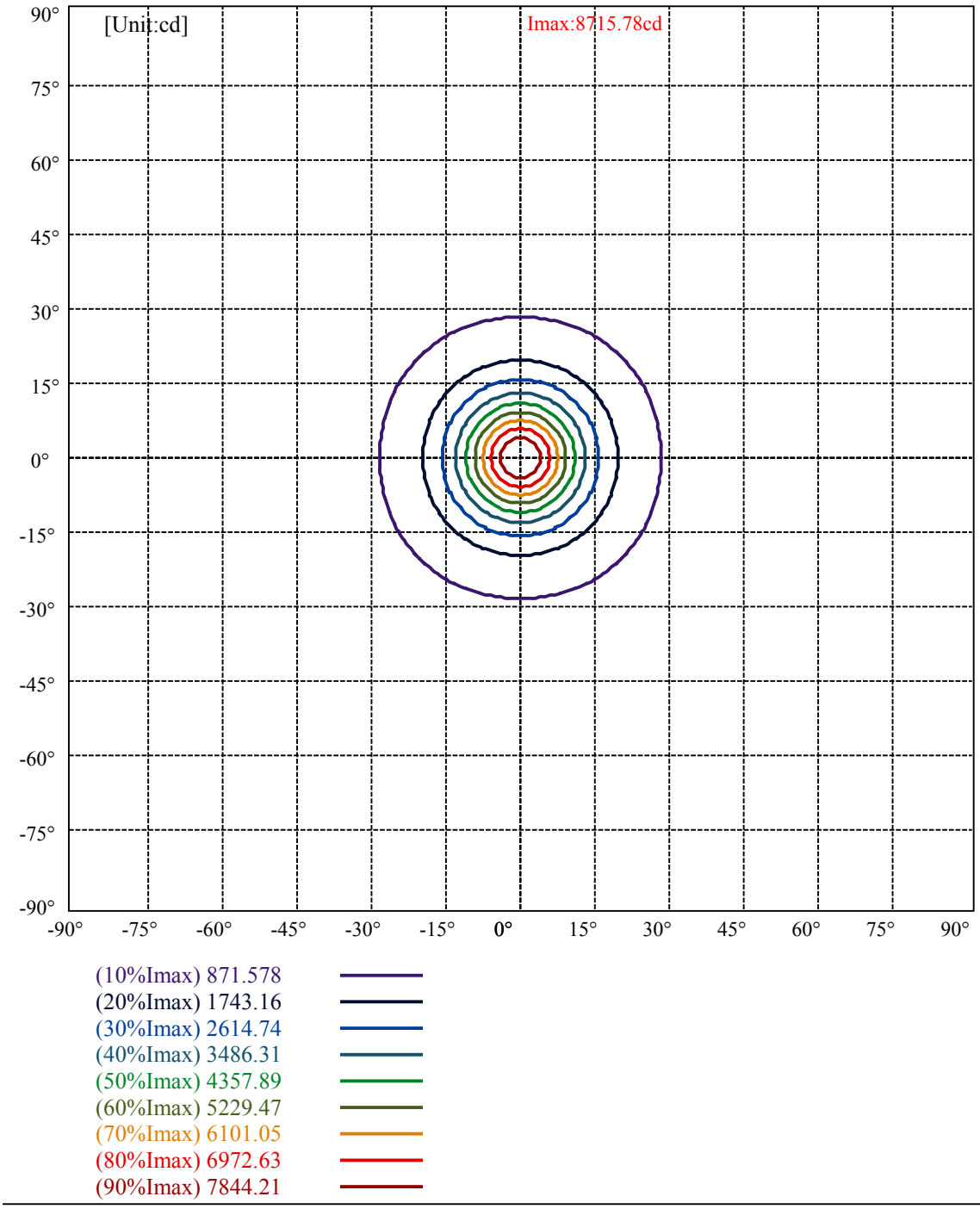
Beam Angle(50%Imax):C0/180Left:10.8 Right:10.8
:C90/270Left:10.8 Right:10.8

Lux distance Curve



Equipment: GMS1980 Date: 2023/8/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.44

ISO-Intensity(V-H)

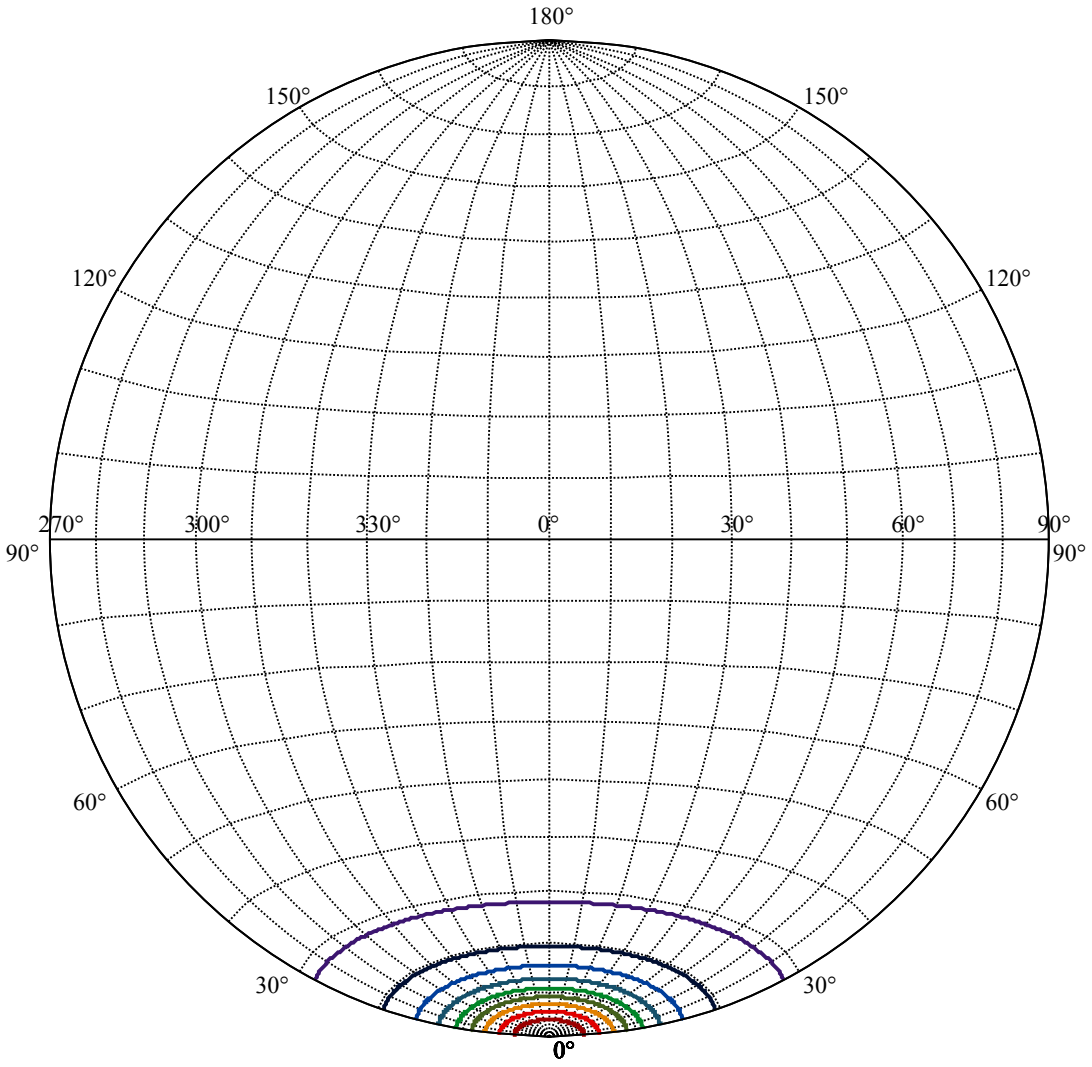


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2023/8/30
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.44

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8715.78

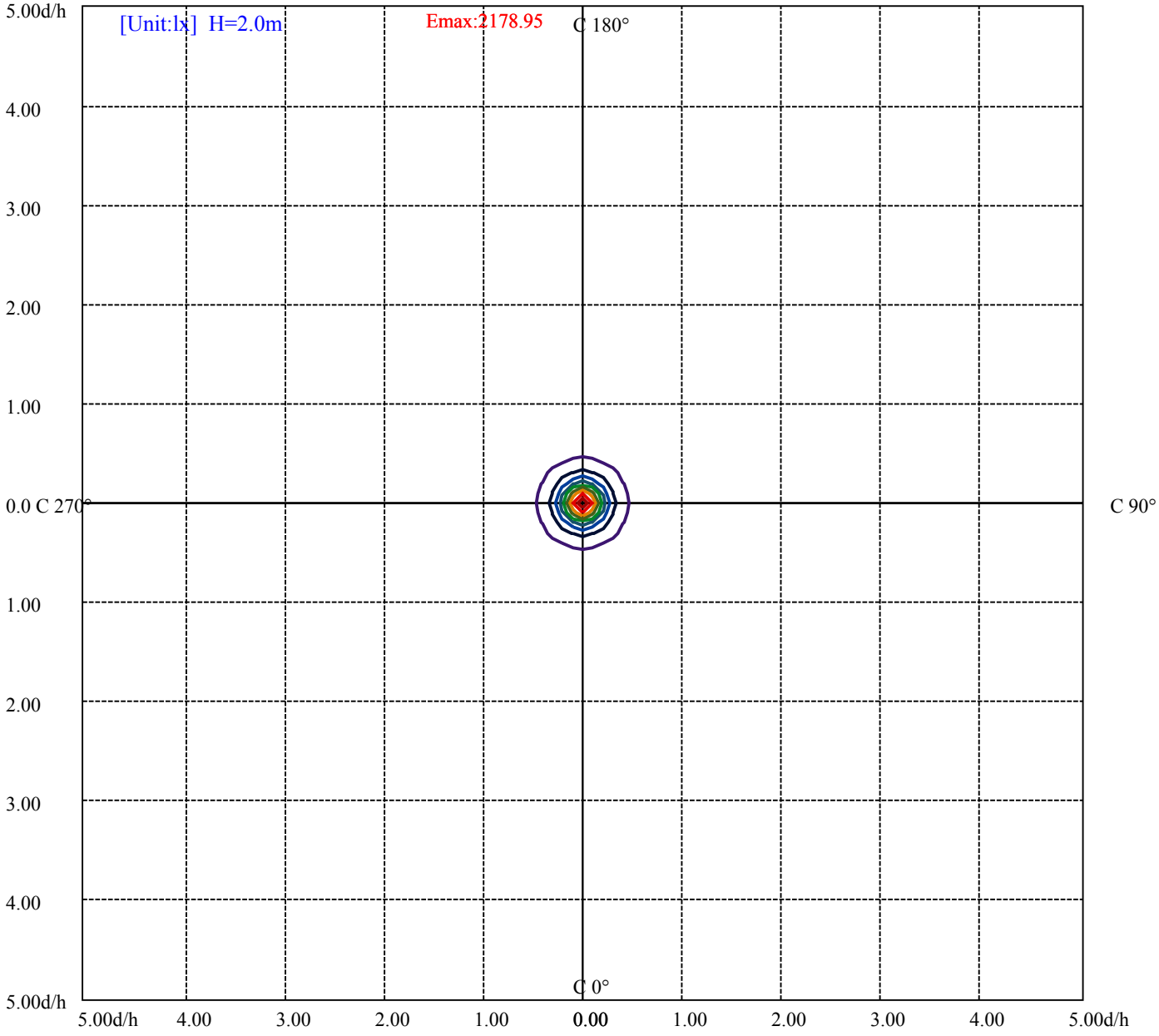
(10%Imax) 871.578
(20%Imax) 1743.16
(30%Imax) 2614.74
(40%Imax) 3486.31
(50%Imax) 4357.89
(60%Imax) 5229.47
(70%Imax) 6101.05
(80%Imax) 6972.63
(90%Imax) 7844.21

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2023/8/30
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.44

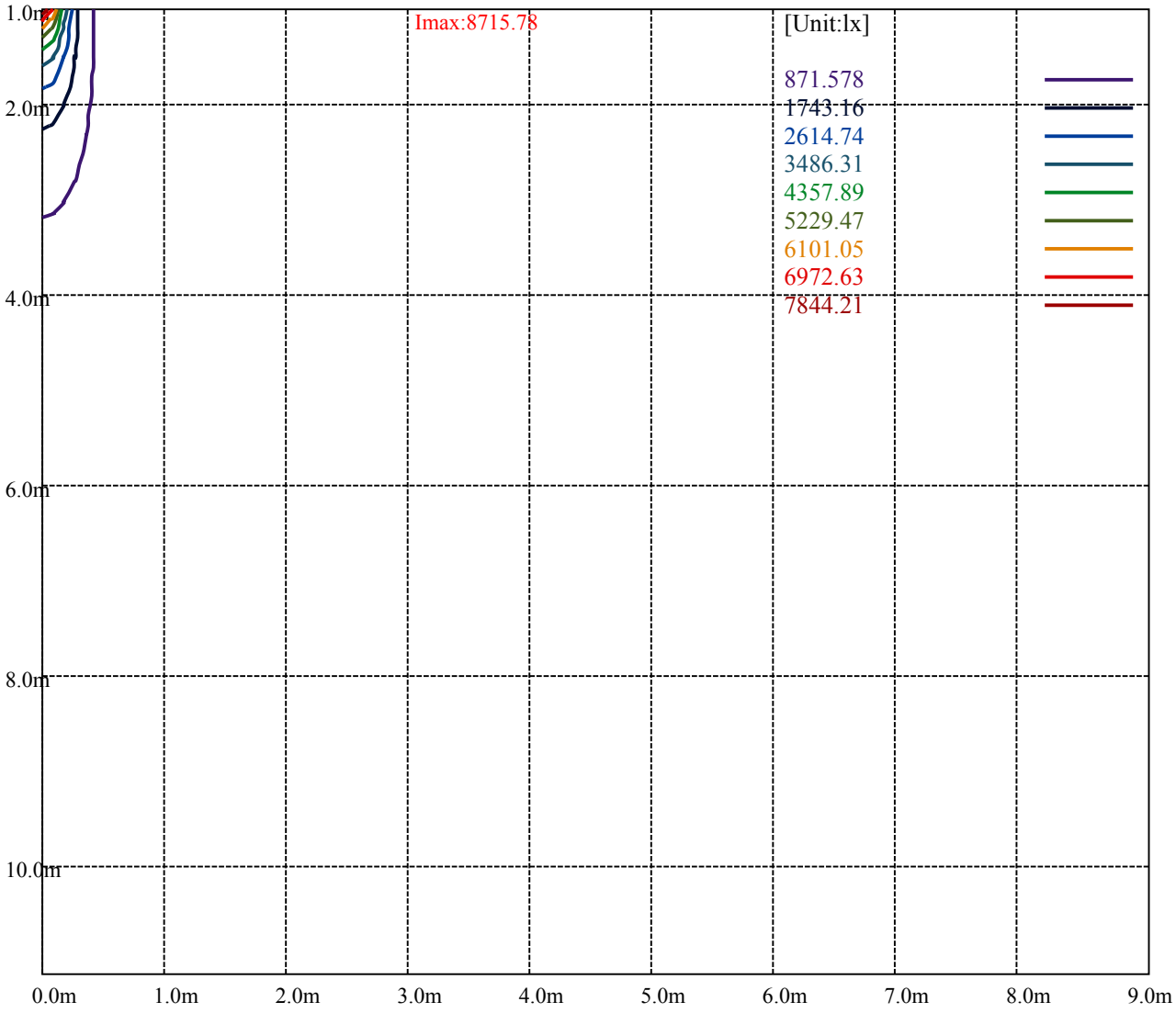
ISO illuminance diagram



(10%Emax) 217.8945
(20%Emax) 435.79
(30%Emax) 653.6825
(40%Emax) 871.5775
(50%Emax) 1089.473
(60%Emax) 1307.368
(70%Emax) 1525.26
(80%Emax) 1743.155
(90%Emax) 1961.05

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2023/8/30
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.44

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2023/8/30
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.44

Luminance Limitting Curve(no luminous side)

Luminance Table

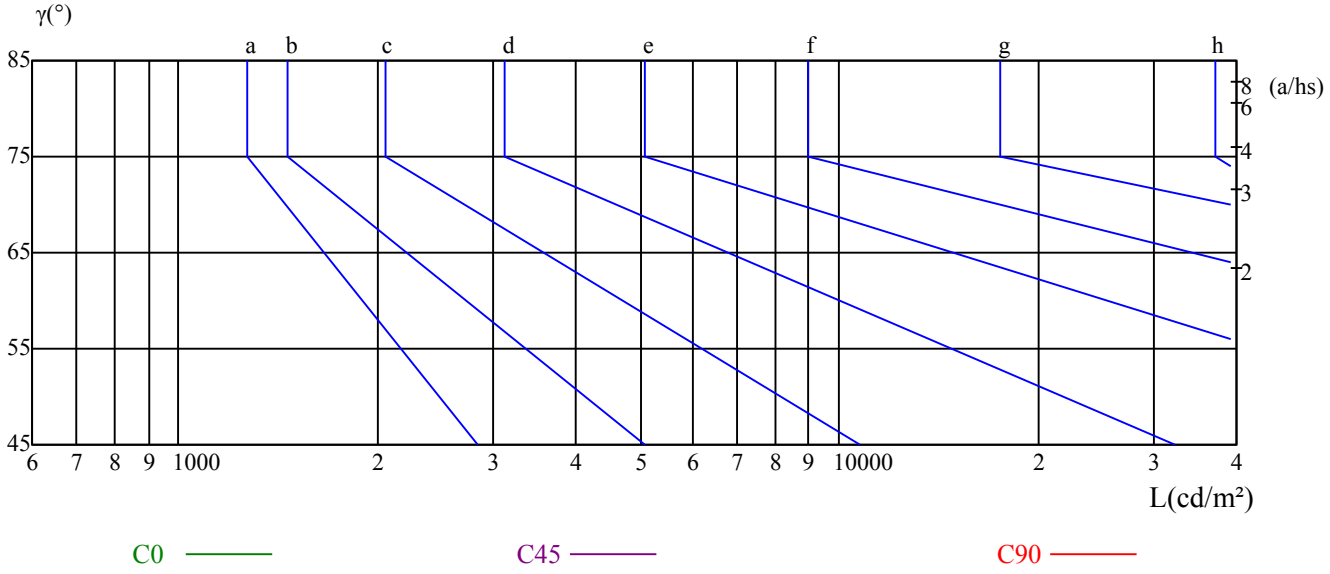
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

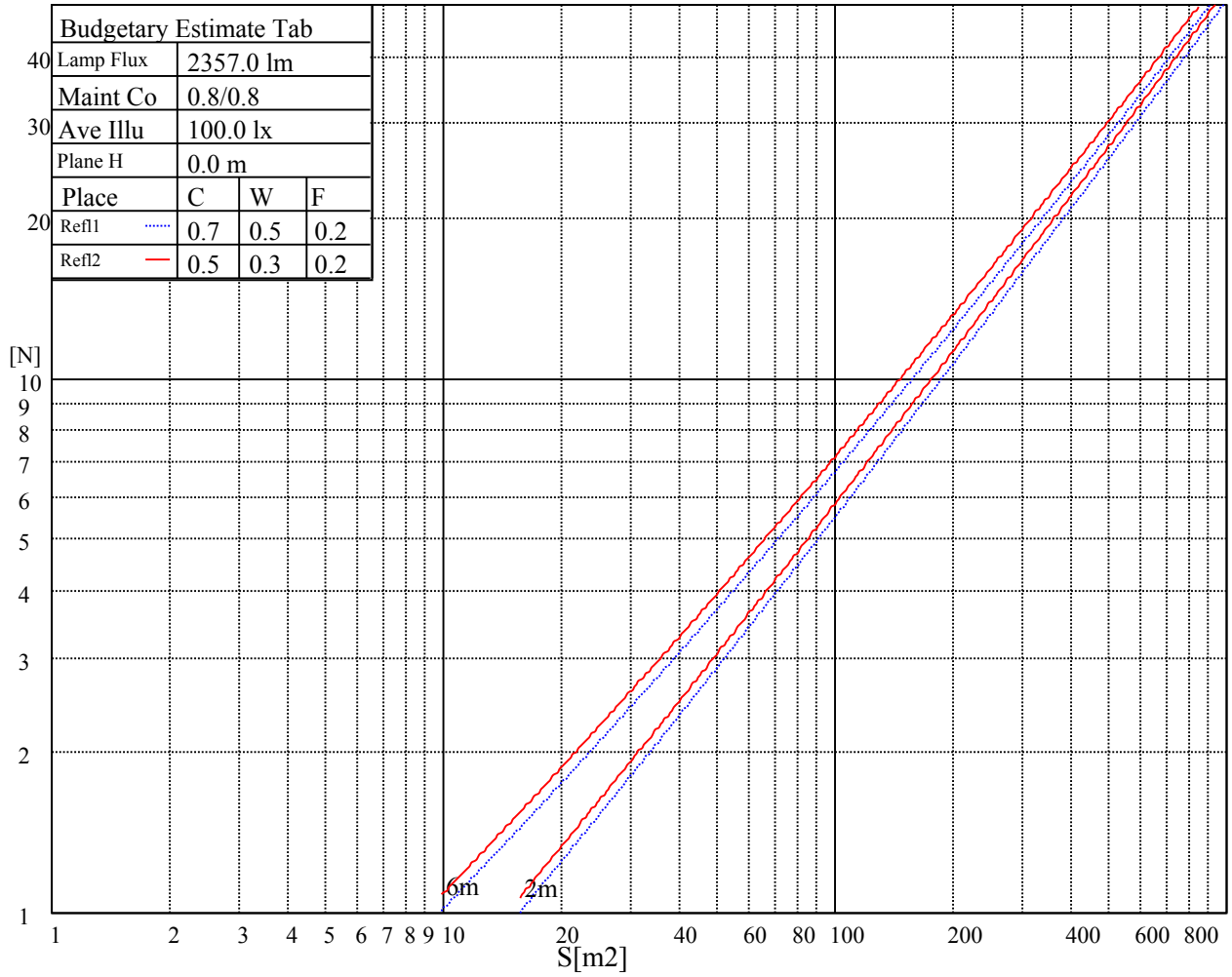


UGR Glare

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

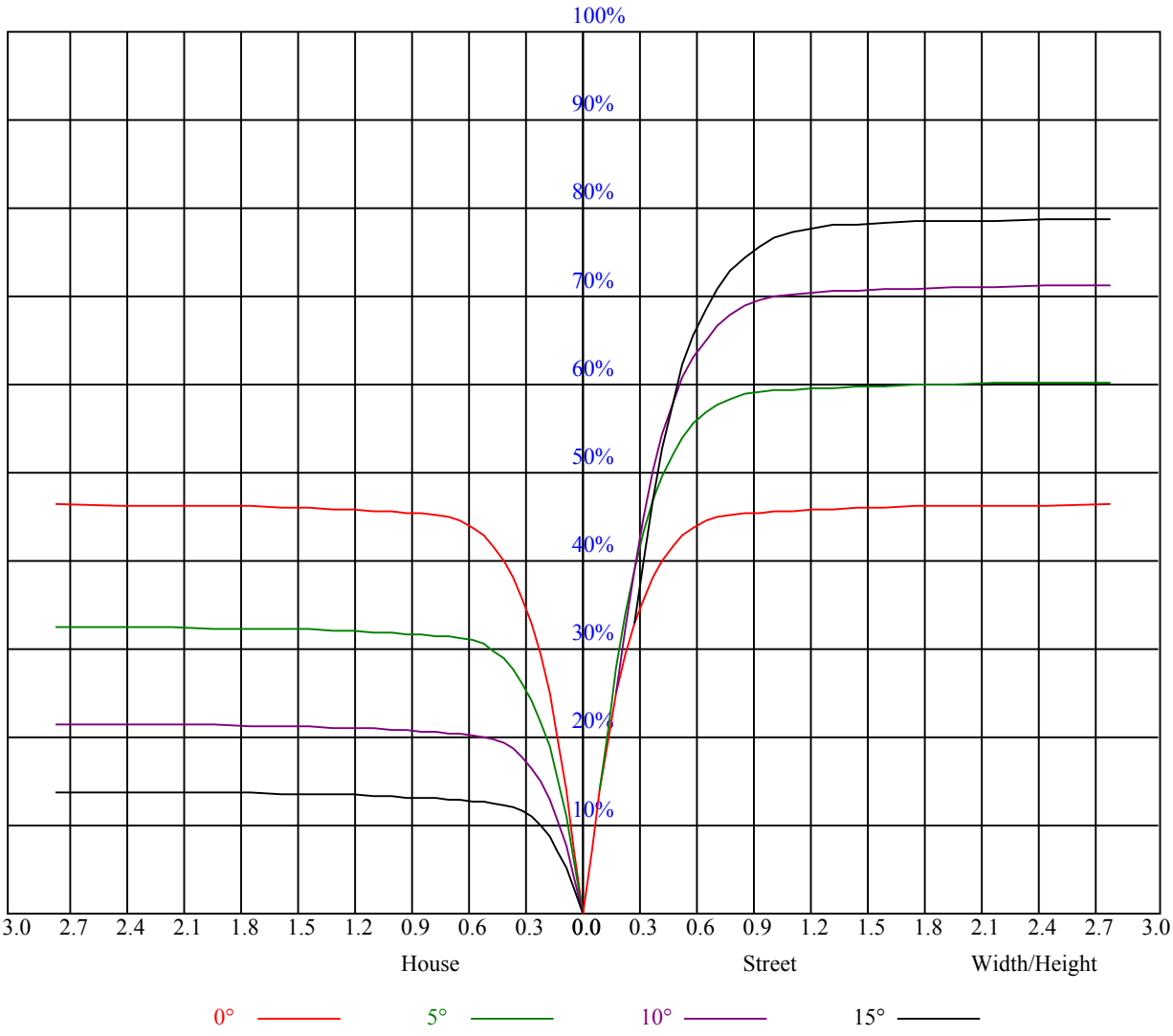


Equipment: GMS1980 Date: 2023/8/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.44

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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.94
1	1.04	1.02	1.00	1.02	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.98	0.95	0.92	0.97	0.94	0.91	0.94	0.92	0.89	0.91	0.89	0.88	0.89	0.87	0.86	0.84
3	0.93	0.89	0.86	0.92	0.88	0.86	0.90	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.82	0.80
4	0.89	0.84	0.81	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.73
6	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
9	0.72	0.68	0.65	0.72	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.70	0.65	0.62	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2023/8/30	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	8632.89	8447.46	8164.60	7795.95	7221.38	6733.71	6254.90	5618.34	5132.33
45.0	8740.28	8734.74	8635.66	8407.05	8105.37	7578.96	7118.42	6629.65	5995.85
90.0	8761.31	8651.16	8485.10	8219.40	7737.27	7284.48	6661.75	6134.78	5606.71
135.0	8728.65	8728.65	8643.41	8457.42	8100.94	7701.84	7220.82	6623.56	6096.59
180.0	8632.89	8740.28	8708.73	8573.11	8380.48	7964.77	7546.85	7092.40	6461.37
225.0	8740.28	8642.86	8376.60	8062.75	7661.44	7218.05	6599.20	6081.09	5555.23
270.0	8761.31	8750.24	8619.61	8406.50	8069.95	7542.43	7084.65	6603.63	5965.96
315.0	8728.65	8580.31	8372.18	8061.64	7634.87	7056.42	6584.81	6081.09	5576.27
360.0	8632.89	8447.46	8164.60	7795.95	7221.38	6733.71	6254.90	5618.34	5132.33

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4559.42	4139.29	3750.70	3391.46	2978.52	2680.17	2418.90	2182.54	1936.77
45.0	5477.74	4985.09	4538.94	4026.37	3651.62	3308.98	2980.18	2602.12	2346.94
90.0	4974.02	4505.17	4097.22	3725.24	3297.91	2972.99	2675.18	2405.06	2116.11
135.0	5432.35	4936.38	4480.82	3989.83	3635.02	3285.73	2963.58	2602.67	2333.65
180.0	5916.14	5396.37	4768.10	4332.47	3833.73	3486.11	3151.23	2837.92	2489.20
225.0	5037.12	4465.87	4047.95	3569.70	3235.92	2918.19	2561.71	2313.17	2091.20
270.0	5467.22	4983.43	4410.52	3983.19	3510.47	3163.40	2850.10	2573.89	2270.55
315.0	4964.06	4502.41	4072.31	3604.02	3255.84	2863.94	2576.65	2330.88	2112.79
360.0	4559.42	4139.29	3750.70	3391.46	2978.52	2680.17	2418.90	2182.54	1936.77

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1769.60	1629.00	1508.88	1378.80	1286.92	1100.54	1100.54	1045.96	946.66
45.0	2126.08	1890.82	1729.74	1599.11	1455.19	1352.23	1245.95	1169.01	1097.05
90.0	1919.05	1719.78	1582.50	1469.58	1345.04	1206.65	1100.32	1100.32	1020.22
135.0	2108.92	1911.86	1705.39	1564.24	1447.44	1320.13	1234.88	1155.73	1063.84
180.0	2247.85	2023.67	1823.29	1629.55	1508.88	1400.94	1296.88	1204.99	1124.18
225.0	1854.29	1697.64	1571.43	1461.83	1340.06	1255.36	1090.58	1090.58	1012.80
270.0	2061.31	1881.41	1722.55	1564.24	1464.05	1369.95	1277.51	1195.03	1123.62
315.0	1874.22	1717.01	1585.27	1481.21	1361.64	1281.38	1102.59	1102.59	1047.73
360.0	1769.60	1629.00	1508.88	1378.80	1286.92	1100.54	1100.54	1045.96	946.66

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	856.60	775.12	693.14	587.97	509.86	432.70	355.87	270.18	210.07
45.0	1017.90	910.51	825.27	741.68	655.33	549.61	468.24	392.40	304.94
90.0	910.57	824.33	736.42	650.63	546.06	467.30	390.85	301.84	237.97
135.0	977.49	890.03	784.31	697.40	612.16	532.45	437.24	366.94	298.85
180.0	1036.72	948.15	866.78	761.06	673.60	587.80	506.98	411.78	340.37
225.0	930.00	843.81	738.69	653.34	570.25	470.39	394.39	321.72	240.40
270.0	1054.43	949.81	864.01	757.74	669.72	581.71	494.81	400.70	326.53
315.0	967.75	859.53	774.23	688.93	580.60	499.23	420.80	346.62	261.44
360.0	856.60	775.12	693.14	587.97	509.86	432.70	355.87	270.18	210.07

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	158.09	115.02	79.16	65.43	57.29	52.09	47.99	43.40	40.46
45.0	287.78	287.78	119.12	85.69	67.70	58.45	52.53	48.32	44.50
90.0	182.28	126.37	91.67	69.30	61.61	55.08	50.37	44.95	41.35
135.0	282.80	207.63	119.12	81.20	67.09	60.34	53.31	49.43	45.33
180.0	293.32	293.32	149.95	109.99	81.81	64.82	57.90	52.14	46.61
225.0	184.11	135.34	97.09	69.36	59.84	53.69	48.55	43.40	40.02
270.0	289.44	289.44	130.91	92.61	71.24	59.12	53.19	47.99	43.95
315.0	200.66	151.00	108.27	74.01	61.44	55.58	48.99	45.11	41.63
360.0	158.09	115.02	79.16	65.43	57.29	52.09	47.99	43.40	40.46

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	38.08	35.76	34.26	32.94	31.88	30.89	30.28	29.89	29.84
45.0	40.52	37.97	35.81	34.21	32.55	31.44	30.61	29.72	29.34
90.0	38.53	36.20	34.04	32.60	31.44	30.44	29.45	28.89	28.51
135.0	41.35	38.80	36.75	35.15	33.77	32.44	31.50	30.78	30.06
180.0	42.73	39.74	36.75	35.04	33.54	32.33	31.00	30.11	29.34
225.0	37.42	34.93	33.43	31.88	30.94	30.11	29.45	28.78	28.62
270.0	39.80	37.14	34.76	33.27	32.05	31.05	30.00	29.39	29.06
315.0	37.97	35.81	33.77	32.38	31.22	30.33	29.39	28.89	28.73
360.0	38.08	35.76	34.26	32.94	31.88	30.89	30.28	29.89	29.84

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	30.00	30.39	31.11	31.55	31.61	30.94	29.50	27.40	24.74
45.0	29.23	29.23	29.45	30.06	30.78	31.16	31.22	30.83	28.84
90.0	28.45	28.62	29.12	29.67	30.17	30.50	30.06	28.89	27.12
135.0	29.84	29.61	30.06	30.56	31.00	31.39	31.66	31.00	29.12
180.0	28.89	28.51	28.67	29.01	29.84	30.22	30.67	30.50	29.56
225.0	28.67	29.06	29.84	30.61	31.11	31.22	30.67	29.17	26.24
270.0	28.95	29.28	29.84	30.61	31.39	31.99	31.88	30.72	28.95
315.0	28.95	29.50	30.00	30.61	31.05	31.11	30.22	28.40	26.13
360.0	30.00	30.39	31.11	31.55	31.61	30.94	29.50	27.40	24.74

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	21.64	19.32	17.99	16.94	16.16	15.61	15.17	14.61	14.28
45.0	26.57	23.64	21.09	18.65	17.33	16.50	15.78	15.33	14.72
90.0	24.63	21.31	19.04	17.66	16.55	15.89	15.28	14.78	14.39
135.0	26.85	24.13	21.42	18.99	17.71	16.94	16.33	15.67	15.17
180.0	27.18	24.41	21.92	19.48	17.71	16.72	16.11	15.61	15.00
225.0	23.41	20.70	18.27	17.05	16.27	15.61	15.11	14.72	14.34
270.0	26.29	22.75	19.98	18.05	16.94	16.33	15.72	15.28	14.78
315.0	23.30	20.09	18.32	17.05	16.33	15.67	15.17	14.78	14.39
360.0	21.64	19.32	17.99	16.94	16.16	15.61	15.17	14.61	14.28

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	13.89	13.51	13.17	12.90	12.57	12.29	12.01	11.68	11.35
45.0	14.34	13.95	13.56	13.23	12.95	12.68	12.34	12.07	11.85
90.0	14.00	13.62	13.23	12.95	12.62	12.34	12.12	11.85	11.51
135.0	14.61	14.23	13.89	13.40	13.06	12.79	12.51	12.12	11.90
180.0	14.61	14.28	13.78	13.45	13.12	12.79	12.51	12.23	11.90
225.0	13.84	13.51	13.17	12.90	12.51	12.23	11.96	11.62	11.40
270.0	14.34	14.00	13.62	13.23	12.90	12.51	12.23	12.01	11.68
315.0	13.95	13.56	13.28	12.90	12.62	12.34	12.01	11.73	11.46
360.0	13.89	13.51	13.17	12.90	12.57	12.29	12.01	11.68	11.35

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	11.02	10.68	10.41	10.19	9.96	9.74	9.52	9.30	9.24
45.0	11.51	11.13	10.79	10.52	10.24	9.96	9.74	9.52	9.30
90.0	11.18	10.85	10.57	10.30	10.07	9.85	9.69	9.47	9.24
135.0	11.57	11.24	10.85	10.57	10.30	10.07	9.91	9.63	9.41
180.0	11.62	11.29	10.96	10.68	10.35	10.13	9.91	9.69	9.47
225.0	11.07	10.79	10.52	10.24	10.02	9.80	9.58	9.35	9.24
270.0	11.40	11.07	10.68	10.46	10.19	9.96	9.74	9.52	9.30
315.0	11.13	10.85	10.57	10.30	10.13	9.85	9.63	9.47	9.35
360.0	11.02	10.68	10.41	10.19	9.96	9.74	9.52	9.30	9.24

Intensity data(cd)

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