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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NATA

LumCAT: 3-2044-M
Luminaire: 92.70.134.00
Report No: NATA0100
Test No: GC2019010910
LampCAT: OSRAM SOLERIQ S19
Lamp flux(lm): 3440.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 34.9000
Current(A): 0.7000
Power (W): 24.4300
PF: 0.0000
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 2967.63
Efficiency(%): 86.27%
Lumens(lm)/Power(W): 121.56
Central intensity(cd): 8832.516
Maximum intensity(cd): 8832.516
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=29.5
[C90/270]Total=29.5
Field angle(10%Imax): [C0/180]Total=64.7
[C90/270]Total=64.7
Maximum s/h(1/2): C0_180=0.50 C90_270=0.50
Maximum s/h(1/4): C0_180=0.47 C90_270=0.47
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.33%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.604%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8832.516	2.113	2.113	.061%	.071%
1.0	8828.016	16.895	19.009	.491%	.641%
2.0	8810.648	33.719	52.728	.980%	1.777%
3.0	8771.344	50.341	103.068	1.463%	3.473%
4.0	8702.438	66.570	169.638	1.935%	5.716%
5.0	8572.852	81.936	251.574	2.382%	8.477%
6.0	8377.313	96.026	347.6	2.791%	11.713%
7.0	8116.383	108.470	456.07	3.153%	15.368%
8.0	7814.180	119.259	575.329	3.467%	19.387%
9.0	7401.867	126.977	702.306	3.691%	23.666%
10.0	6952.078	132.384	834.69	3.848%	28.126%
11.0	6487.313	135.742	970.433	3.946%	32.701%
12.0	5965.172	136.005	1106.437	3.954%	37.284%
13.0	5403.867	133.304	1239.742	3.875%	41.775%
14.0	4838.203	128.354	1368.096	3.731%	46.101%
15.0	4258.266	120.859	1488.956	3.513%	50.173%
16.0	3721.148	112.478	1601.434	3.270%	53.963%
17.0	3234.938	103.718	1705.151	3.015%	57.458%
18.0	2775.164	94.042	1799.193	2.734%	60.627%
19.0	2419.031	86.364	1885.558	2.511%	63.537%
20.0	2091.094	78.429	1963.987	2.280%	66.180%
21.0	1808.508	71.072	2035.059	2.066%	68.575%
22.0	1610.227	66.148	2101.207	1.923%	70.804%
23.0	1448.438	62.063	2163.27	1.804%	72.895%
24.0	1324.406	59.073	2222.342	1.717%	74.886%
25.0	1245.164	57.707	2280.049	1.678%	76.831%
26.0	1186.453	57.035	2337.084	1.658%	78.753%
27.0	1131.553	56.334	2393.419	1.638%	80.651%
28.0	1106.888	56.986	2450.404	1.657%	82.571%
29.0	1082.138	57.531	2507.936	1.672%	84.510%
30.0	1056.713	57.940	2565.876	1.684%	86.462%
31.0	1005.251	56.776	2622.652	1.650%	88.375%
32.0	917.852	53.338	2675.989	1.551%	90.173%
33.0	819.499	48.945	2724.934	1.423%	91.822%
34.0	717.645	44.007	2768.942	1.279%	93.305%
35.0	597.178	37.562	2806.503	1.092%	94.570%
36.0	480.902	30.998	2837.501	.901%	95.615%
37.0	376.706	24.861	2862.362	.723%	96.453%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	270.443	18.259	2880.621	.531%	97.068%
39.0	174.530	12.045	2892.665	.350%	97.474%
40.0	88.819	6.261	2898.926	.182%	97.685%
41.0	43.228	3.110	2902.036	.090%	97.790%
42.0	31.472	2.309	2904.345	.067%	97.867%
43.0	25.383	1.898	2906.244	.055%	97.931%
44.0	19.294	1.470	2907.713	.043%	97.981%
45.0	16.706	1.295	2909.009	.038%	98.025%
46.0	16.313	1.287	2910.296	.037%	98.068%
47.0	15.940	1.278	2911.574	.037%	98.111%
48.0	15.638	1.274	2912.848	.037%	98.154%
49.0	15.384	1.273	2914.122	.037%	98.197%
50.0	15.124	1.271	2915.392	.037%	98.240%
51.0	14.920	1.272	2916.664	.037%	98.283%
52.0	14.716	1.272	2917.935	.037%	98.325%
53.0	14.520	1.272	2919.207	.037%	98.368%
54.0	14.344	1.273	2920.479	.037%	98.411%
55.0	14.210	1.276	2921.756	.037%	98.454%
56.0	14.048	1.277	2923.033	.037%	98.497%
57.0	13.915	1.280	2924.313	.037%	98.540%
58.0	13.795	1.283	2925.596	.037%	98.584%
59.0	13.704	1.288	2926.884	.037%	98.627%
60.0	13.605	1.292	2928.176	.038%	98.670%
61.0	13.528	1.298	2929.474	.038%	98.714%
62.0	13.437	1.301	2930.775	.038%	98.758%
63.0	13.352	1.305	2932.079	.038%	98.802%
64.0	13.275	1.308	2933.388	.038%	98.846%
65.0	13.198	1.312	2934.699	.038%	98.890%
66.0	13.141	1.317	2936.016	.038%	98.935%
67.0	13.078	1.320	2937.336	.038%	98.979%
68.0	13.001	1.322	2938.658	.038%	99.024%
69.0	12.945	1.325	2939.983	.039%	99.068%
70.0	12.902	1.330	2941.313	.039%	99.113%
71.0	12.832	1.331	2942.643	.039%	99.158%
72.0	12.804	1.335	2943.978	.039%	99.203%
73.0	12.748	1.337	2945.315	.039%	99.248%
74.0	12.705	1.339	2946.655	.039%	99.293%
75.0	12.663	1.341	2947.996	.039%	99.338%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.621	1.343	2949.339	.039%	99.384%
77.0	12.600	1.346	2950.685	.039%	99.429%
78.0	12.572	1.349	2952.034	.039%	99.474%
79.0	12.537	1.350	2953.383	.039%	99.520%
80.0	12.516	1.352	2954.735	.039%	99.565%
81.0	12.495	1.353	2956.088	.039%	99.611%
82.0	12.466	1.354	2957.442	.039%	99.657%
83.0	12.445	1.355	2958.797	.039%	99.702%
84.0	12.424	1.355	2960.151	.039%	99.748%
85.0	12.417	1.356	2961.508	.039%	99.794%
86.0	12.424	1.359	2962.867	.040%	99.839%
87.0	12.417	1.360	2964.227	.040%	99.885%
88.0	12.445	1.364	2965.591	.040%	99.931%
89.0	12.431	1.363	2966.954	.040%	99.977%
90.0	12.354	0.677	2967.631	.020%	100.000%

Zonal flux distribution table

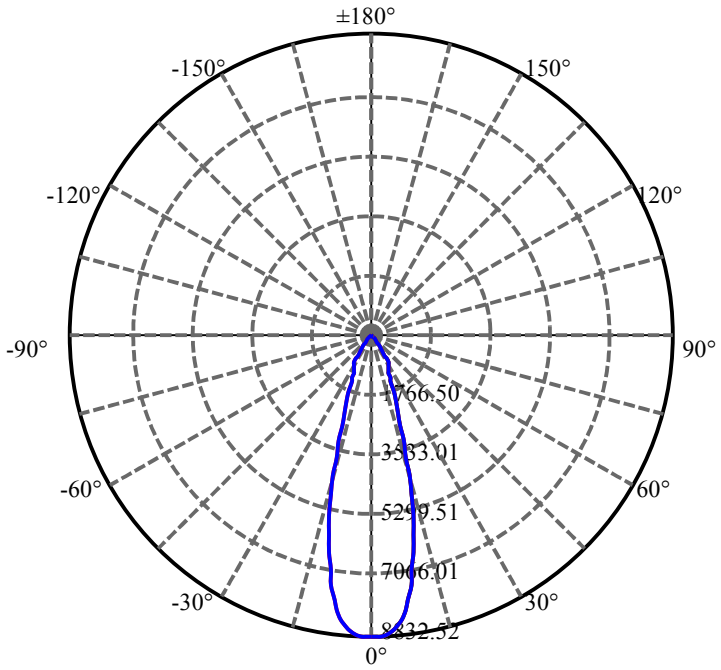
ZONAL LUMEN SUMMARY

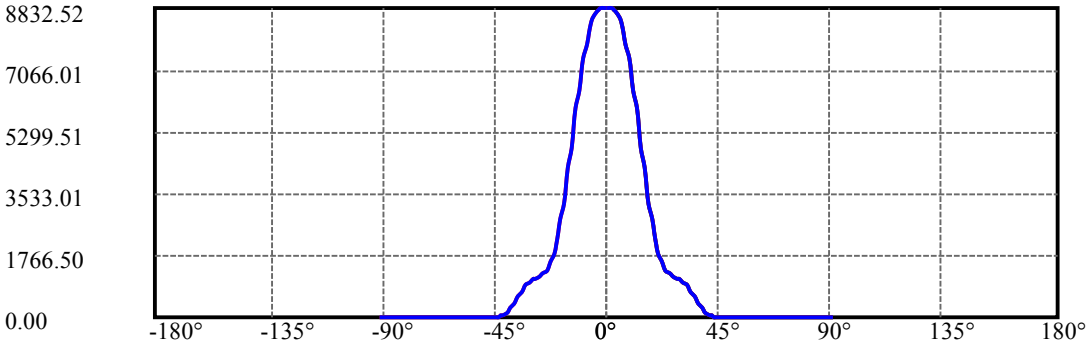
Zone	Lumens	%Lamp	%Fixt
0-30	2565.88	74.59%	86.46%
0-40	2898.93	84.27%	97.68%
0-60	2928.18	85.12%	98.67%
0-90	2966.95	86.25%	99.98%
0-120	2966.95	86.25%	99.98%
0-180	2967.63	86.27%	100.00%
60-90	40.07	1.16%	1.35%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.66	2374.11	69.01%	80.00%

ZONAL LUMEN SUMMARY

0-10	834.69
10-20	1129.30
20-30	601.89
30-40	333.05
40-50	16.47
50-60	12.78
60-70	13.14
70-80	13.42
80-90	12.22
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:

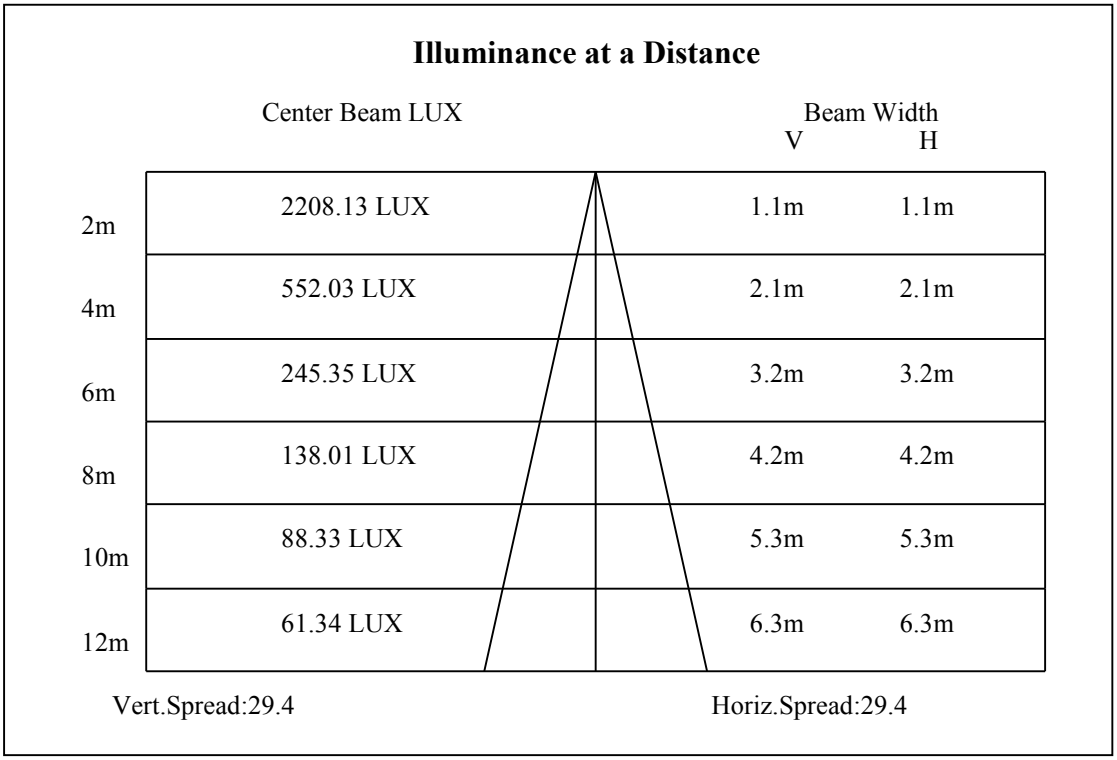
C90/C270:

Field angle(10%Imax):C0/180Left:32.4 Right:32.4
:C90/270Left:32.4 Right:32.4

Beam Angle(50%Imax):C0/180Left:14.7 Right:14.7
:C90/270Left:14.7 Right:14.7

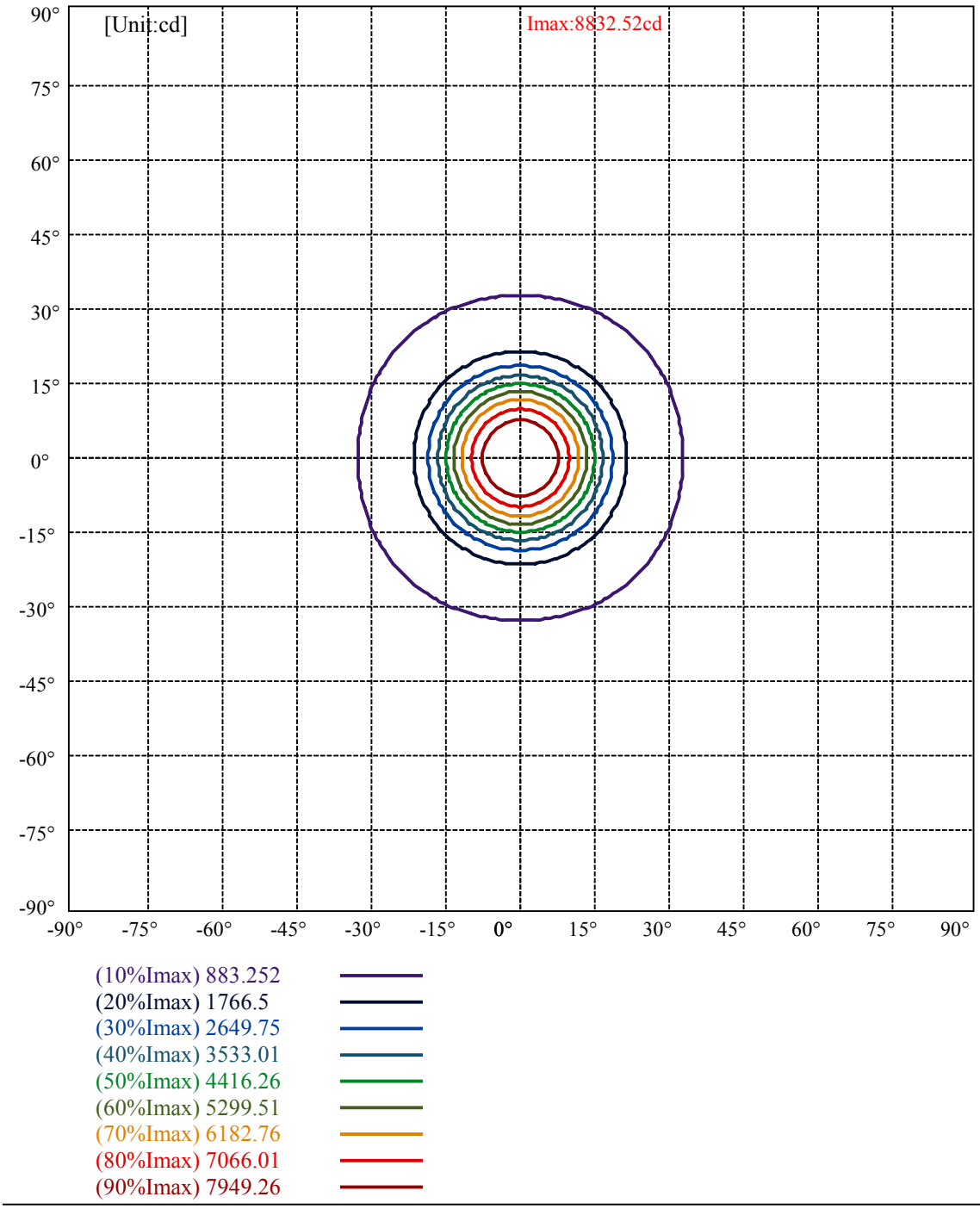
Equipment: GMS1980 Date: 2019/1/9 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

Lux distance Curve



Equipment: GMS1980 Date: 2019/1/9 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)

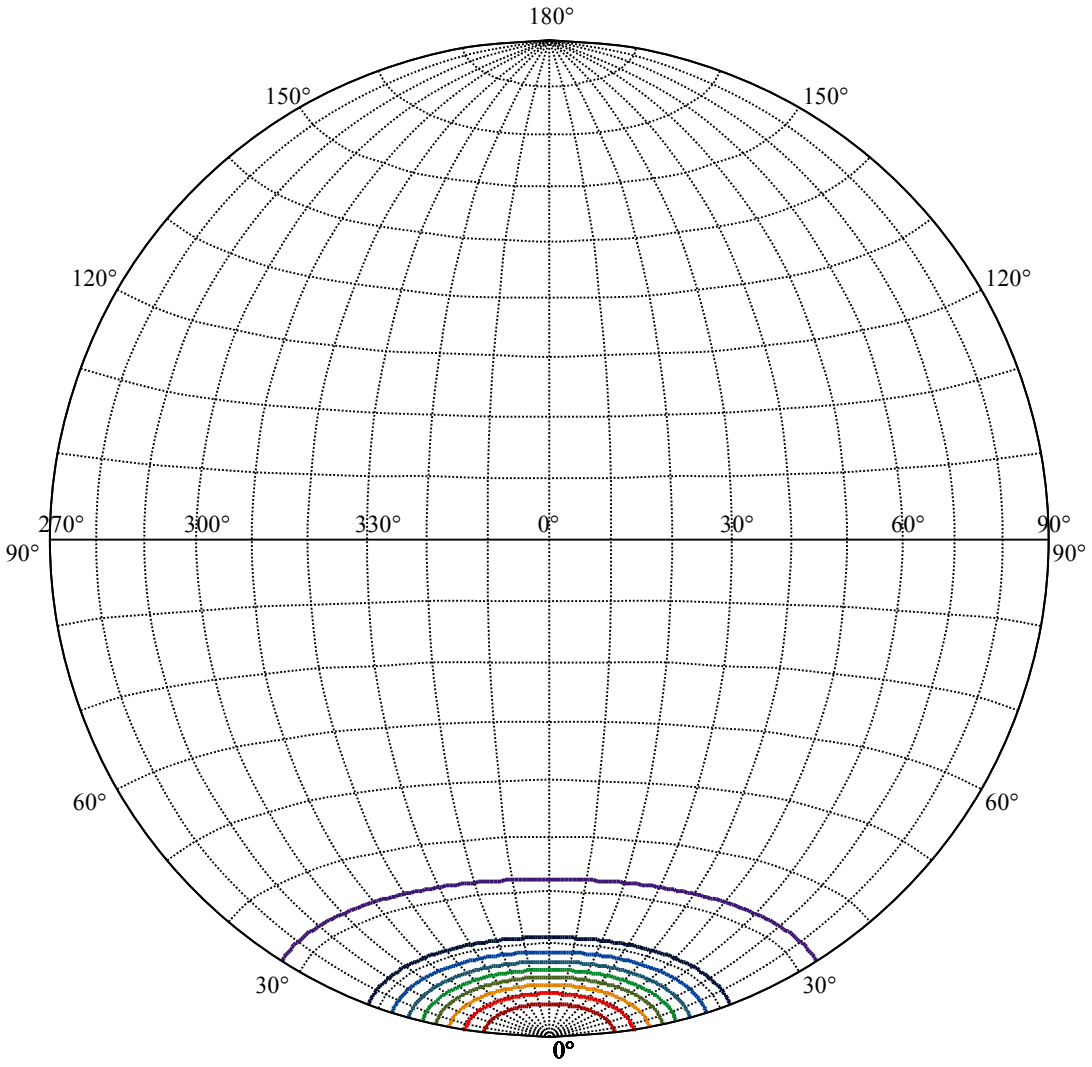


Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/9
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8832.52

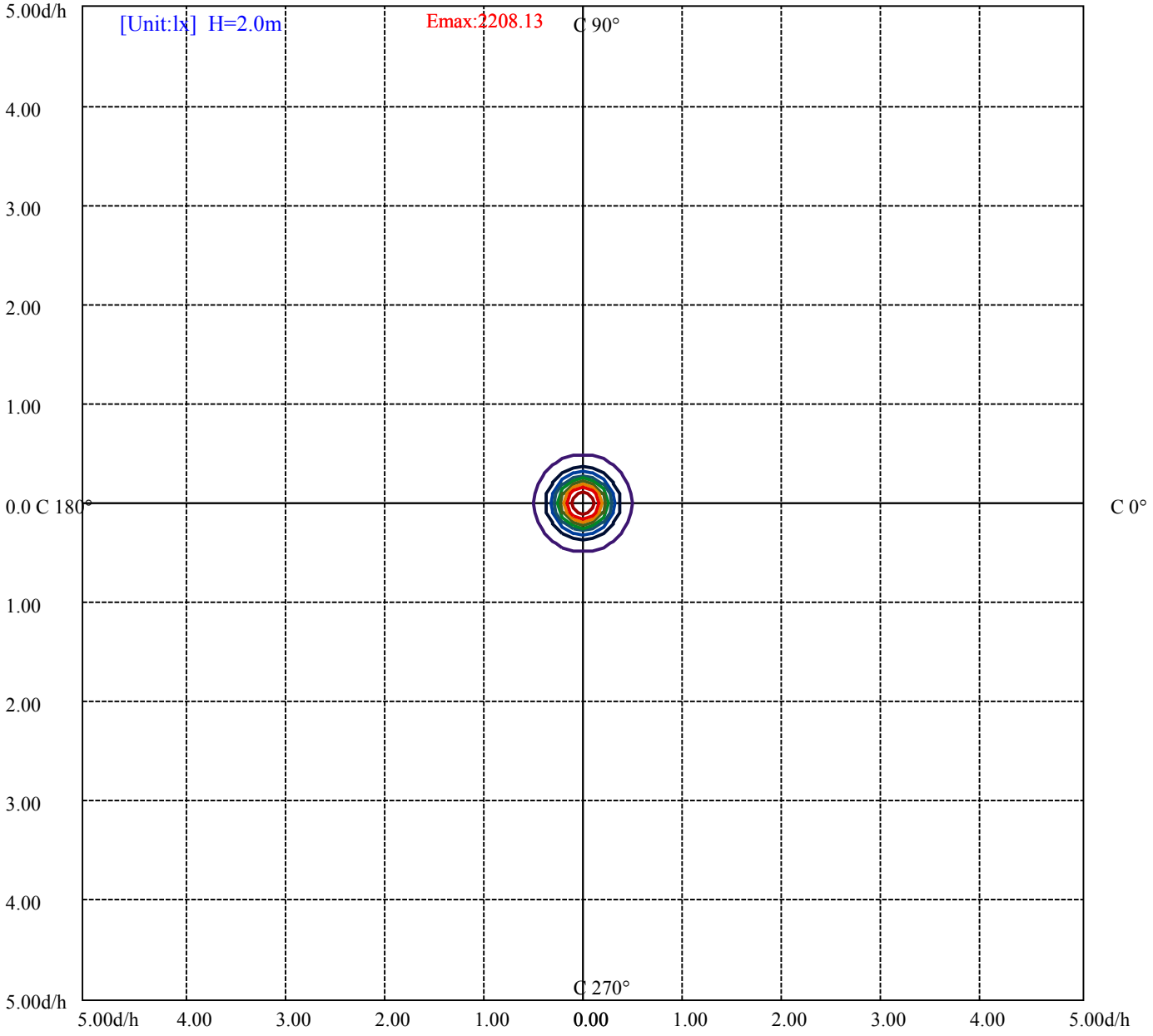
(10%Imax) 883.252
(20%Imax) 1766.5
(30%Imax) 2649.75
(40%Imax) 3533.01
(50%Imax) 4416.26
(60%Imax) 5299.51
(70%Imax) 6182.76
(80%Imax) 7066.01
(90%Imax) 7949.26

Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/9
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

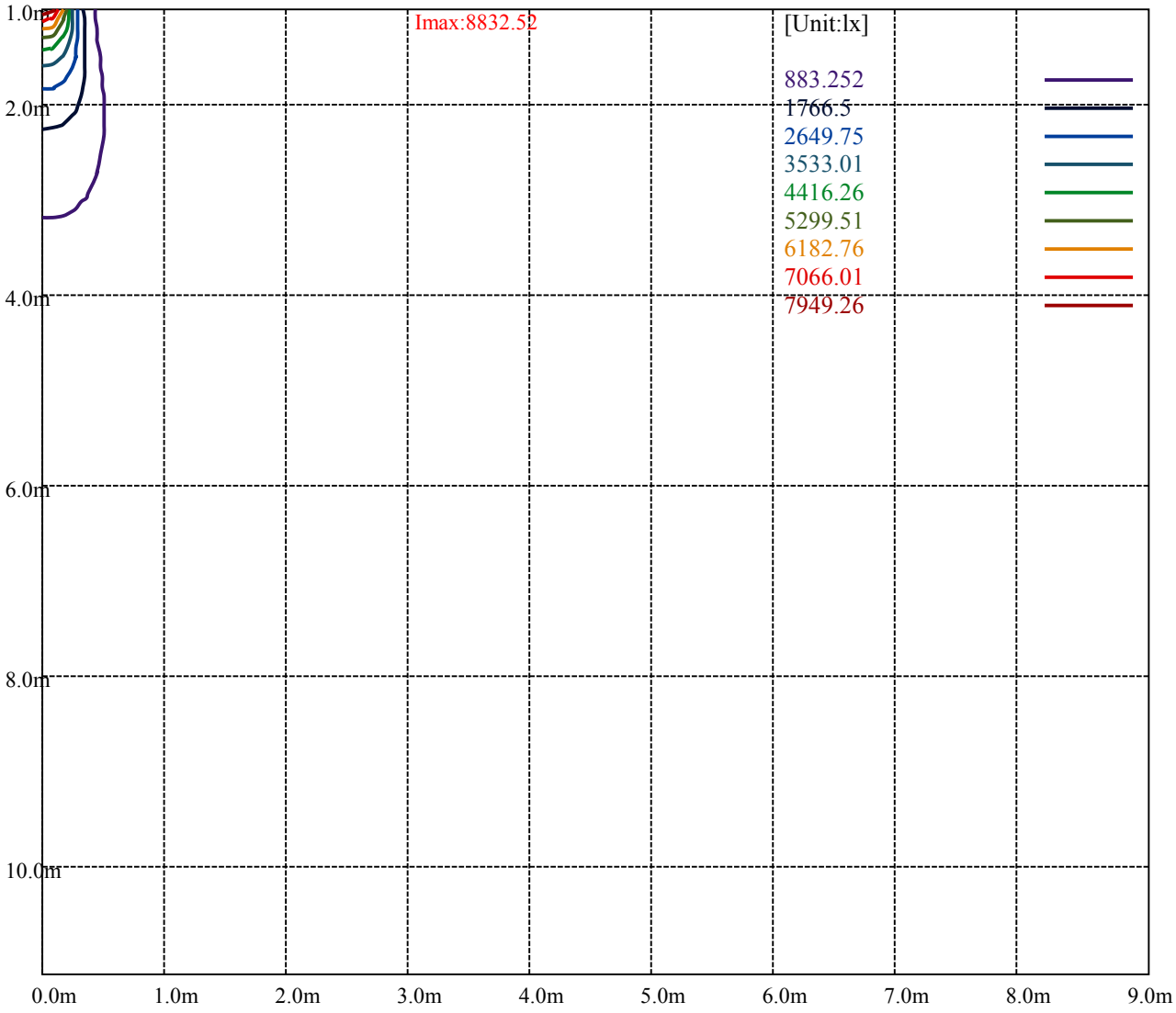


Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/9
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/9
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

NATA 3-2044-M

Luminance Limitting Curve(no luminous side)

Luminance Table

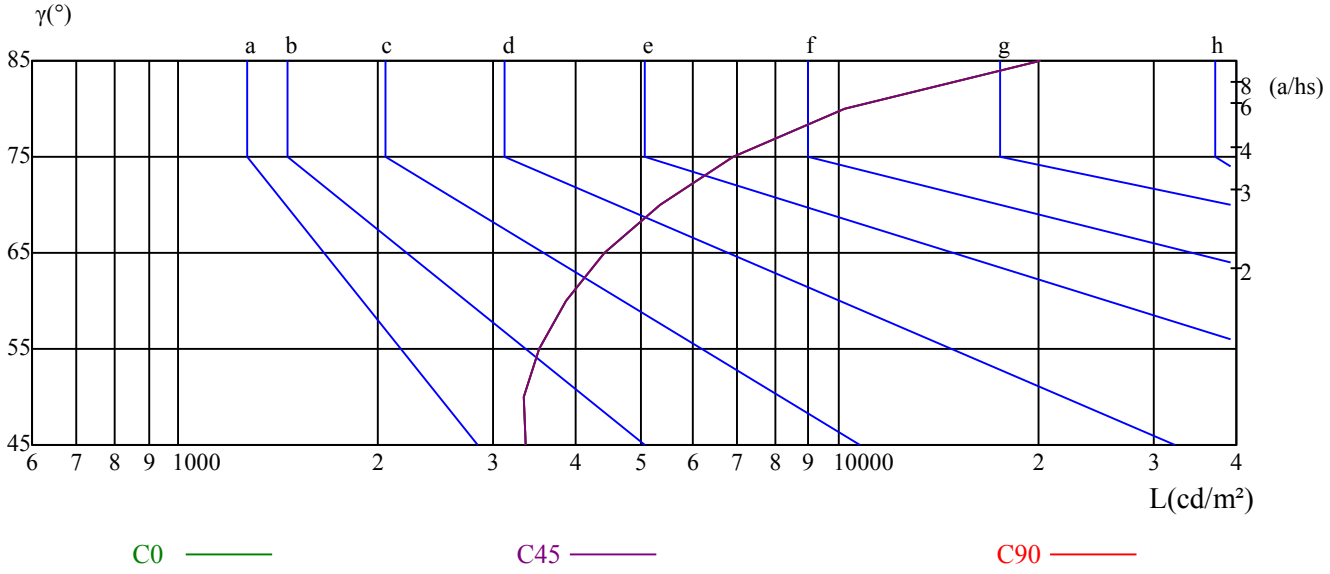
γ	45	50	55	60	65	70	75	80	85
C0	3348	3335	3511	3856	4426	5346	6934	10215	20192
C45	3348	3335	3511	3856	4426	5346	6934	10215	20192
C90	3348	3335	3511	3856	4426	5346	6934	10215	20192

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4426	4426	4426	6934	6934	6934	20192	20192	20192

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): 10.0

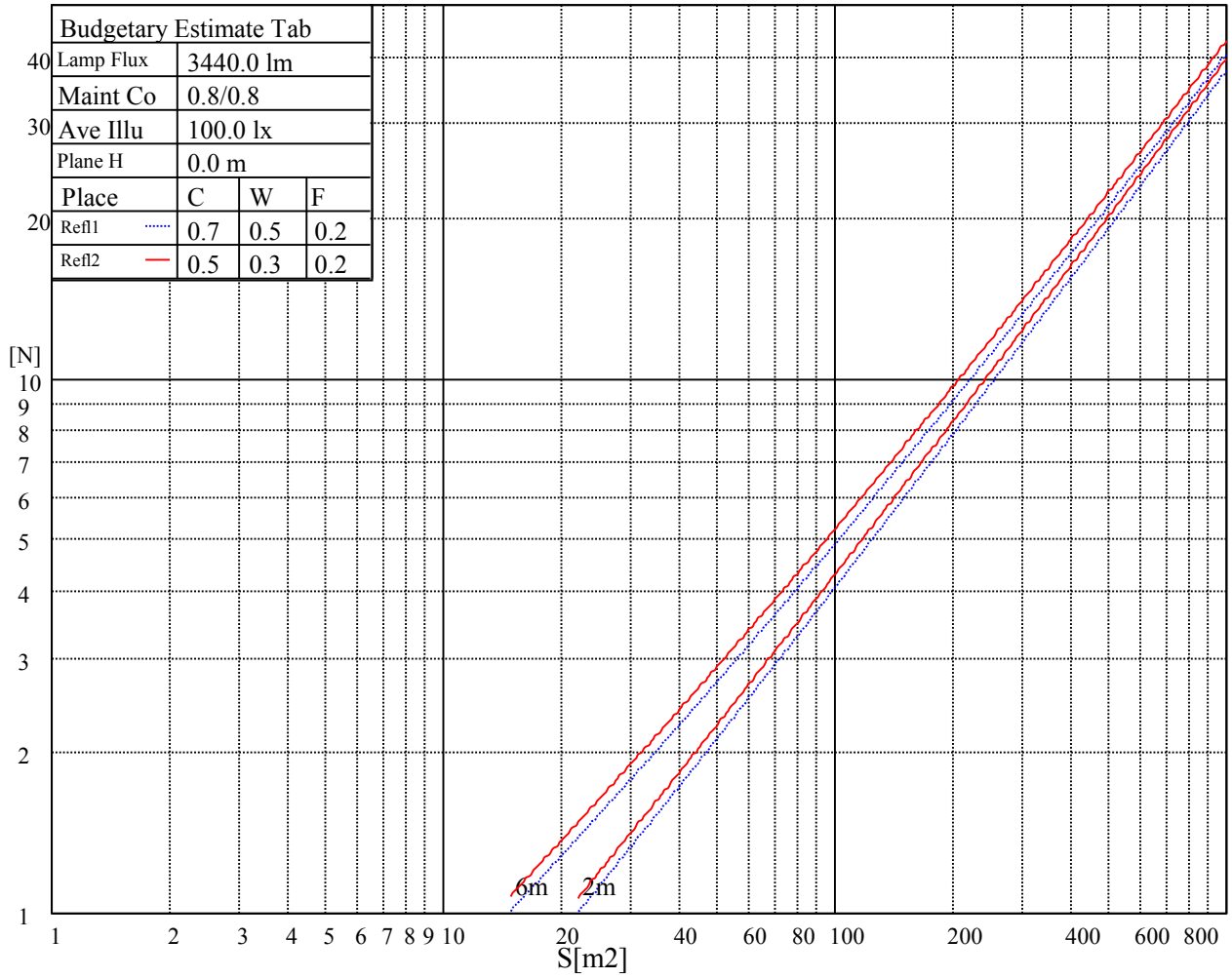
Date: 2019/1/9
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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	1.49	2.40	1.85	2.71	3.02	1.46	2.37	1.83	2.68	3.00
	3H	4.70	5.50	5.08	5.83	6.20	4.67	5.47	5.05	5.81	6.18
	4H	6.45	7.19	6.86	7.54	7.94	6.42	7.16	6.83	7.52	7.91
	6H	8.41	9.09	8.83	9.46	9.86	8.37	9.05	8.79	9.42	9.82
	8H	9.49	10.13	9.93	10.52	10.93	9.45	10.08	9.89	10.48	10.89
	12H	11.25	11.86	11.69	12.24	12.68	11.21	11.82	11.65	12.20	12.64
4H	2H	2.39	3.14	2.80	3.49	3.88	2.38	3.12	2.78	3.47	3.87
	3H	5.85	6.46	6.26	6.87	7.27	5.82	6.44	6.24	6.85	7.25
	4H	7.76	8.31	8.20	8.73	9.18	7.74	8.29	8.18	8.71	9.16
	6H	9.88	10.35	10.35	10.80	11.27	9.86	10.32	10.33	10.77	11.25
	8H	11.06	11.50	11.54	11.95	12.42	11.03	11.47	11.51	11.92	12.40
	12H	12.72	13.09	13.21	13.58	14.06	12.69	13.06	13.18	13.55	14.03
8H	4H	8.48	8.92	8.96	9.37	9.85	8.47	8.90	8.95	9.35	9.83
	6H	10.87	11.21	11.38	11.72	12.20	10.85	11.19	11.36	11.70	12.18
	8H	12.24	12.54	12.78	13.07	13.56	12.22	12.52	12.76	13.05	13.54
	12H	14.04	14.30	14.56	14.80	15.38	14.02	14.28	14.54	14.78	15.36
12H	4H	8.69	9.06	9.18	9.55	10.03	8.67	9.04	9.16	9.53	10.01
	6H	11.38	11.49	11.72	11.96	12.51	11.37	11.47	11.71	11.95	12.50
	8H	12.69	12.95	13.21	13.45	14.03	12.67	12.93	13.19	13.43	14.01
Variation with the observer position at spacings:											
S = 1.0H		5.7/-7.0					5.7/-7.0				
S = 1.5H		7.7/-5.1					7.7/-5.1				
S = 2.0H		9.0/-3.7					9.0/-3.7				
Standard tables:		BK3					BK3				
Uncorrected UGR		0.8					0.8				

Budgetary Estimate Table

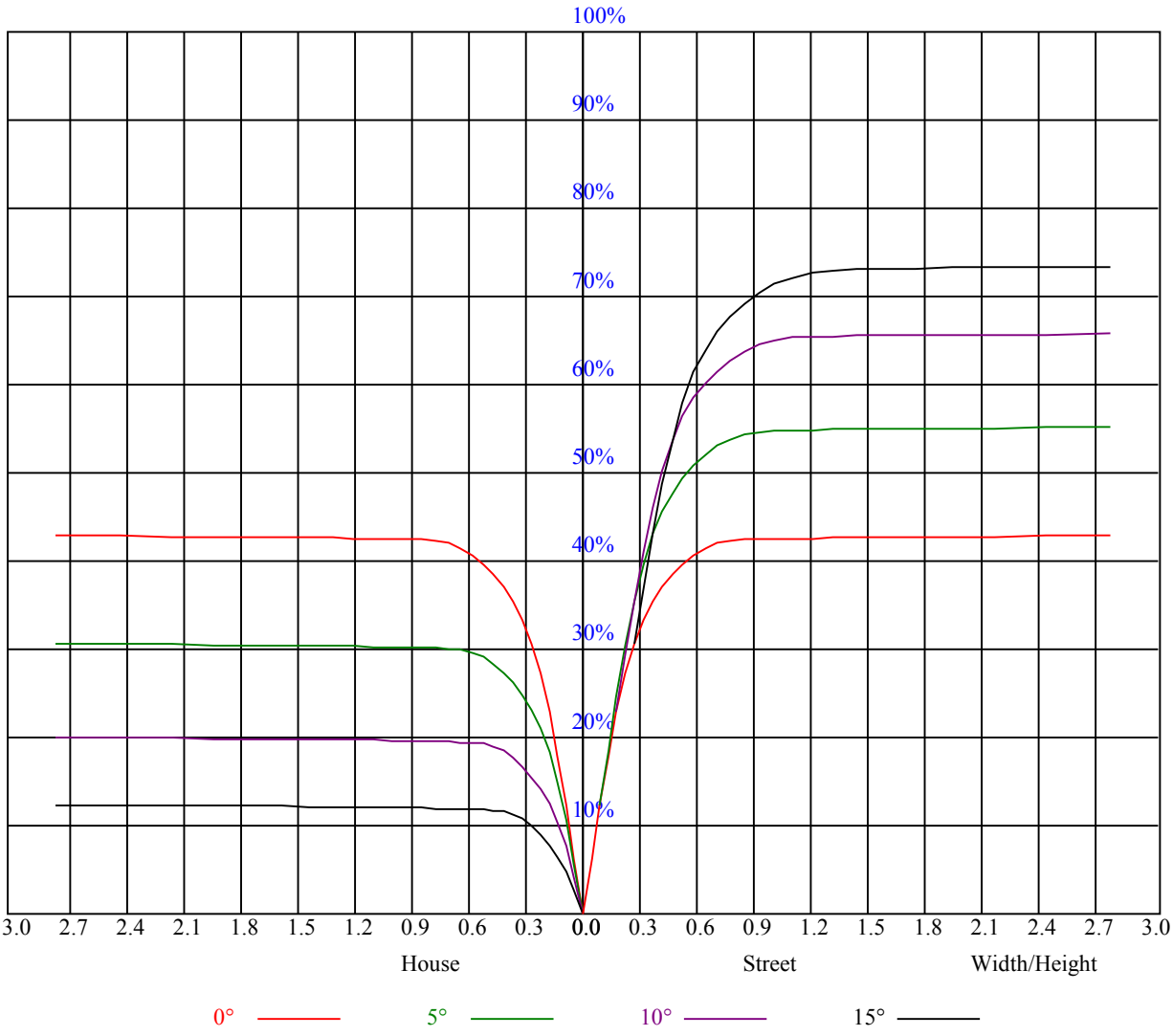


Equipment: GMS1980 Date: 2019/1/9 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.97	0.95	0.93	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.82
2	0.91	0.88	0.86	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.80	0.78
3	0.87	0.83	0.80	0.85	0.82	0.80	0.83	0.81	0.78	0.81	0.79	0.77	0.79	0.78	0.76	0.75
4	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.72
5	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.73	0.71	0.75	0.73	0.70	0.74	0.72	0.70	0.69
6	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.64	0.63
8	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/1/9	Operator: NT07
Temperature(°C): 10.0	Humidity(%): 65.0%	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	8816.06	8825.06	8829.56	8820.56	8767.13	8644.50	8461.13	8178.75	7872.19
45.0	8846.44	8840.81	8830.69	8810.44	8761.50	8657.44	8429.63	8171.44	7912.13
90.0	8835.19	8814.38	8789.63	8750.81	8679.94	8542.69	8347.50	8056.13	7707.38
135.0	8832.38	8815.50	8782.88	8742.38	8678.81	8556.75	8399.25	8185.50	7961.06
180.0	8816.06	8796.94	8766.00	8691.19	8600.63	8472.38	8274.94	8011.13	7706.25
225.0	8846.44	8838.56	8805.38	8751.38	8668.69	8531.44	8332.31	8094.94	7751.81
270.0	8835.19	8848.13	8842.50	8806.50	8744.63	8622.56	8429.06	8195.63	7943.63
315.0	8832.38	8844.75	8838.56	8797.50	8718.19	8555.06	8344.69	8037.56	7659.00
360.0	8816.06	8825.06	8829.56	8820.56	8767.13	8644.50	8461.13	8178.75	7872.19

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7471.13	7005.94	6548.06	6053.06	5400.56	4848.75	4300.31	3651.75	3189.38
45.0	7475.63	7004.25	6600.38	5979.94	5390.44	4912.88	4222.13	3707.44	3264.75
90.0	7337.25	6865.31	6351.19	5864.63	5357.25	4700.81	4177.13	3685.50	3176.44
135.0	7526.81	7146.56	6734.81	6231.94	5691.38	5243.63	4588.31	4013.44	3549.94
180.0	7295.63	6841.69	6408.56	5887.69	5392.69	4818.94	4244.63	3752.44	3289.50
225.0	7384.50	6924.38	6415.88	5929.31	5349.38	4758.19	4241.81	3738.38	3161.25
270.0	7457.06	7052.06	6611.63	6067.13	5483.25	4942.69	4339.13	3762.00	3289.50
315.0	7266.94	6776.44	6228.00	5707.69	5166.00	4479.75	3952.69	3458.25	2958.75
360.0	7471.13	7005.94	6548.06	6053.06	5400.56	4848.75	4300.31	3651.75	3189.38

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2784.38	2431.69	2059.31	1814.06	1593.56	1429.31	1320.75	1243.69	1180.69
45.0	2752.88	2389.50	2085.19	1785.94	1599.19	1445.06	1307.81	1236.38	1182.94
90.0	2722.50	2373.19	2041.88	1770.75	1582.31	1422.56	1317.94	1233.00	1172.25
135.0	3054.38	2657.25	2322.00	1984.50	1756.69	1556.44	1388.25	1292.63	1217.81
180.0	2770.88	2417.63	2118.38	1810.13	1613.81	1460.81	1332.56	1243.69	1188.00
225.0	2764.13	2413.69	2078.44	1803.94	1607.63	1438.88	1319.63	1246.50	1188.56
270.0	2817.00	2454.75	2110.50	1827.56	1625.63	1469.81	1331.44	1256.06	1201.50
315.0	2535.19	2214.56	1913.06	1671.19	1503.00	1364.63	1276.88	1209.38	1159.88
360.0	2784.38	2431.69	2059.31	1814.06	1593.56	1429.31	1320.75	1243.69	1180.69

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1133.44	1104.75	1078.88	1056.94	1004.63	916.88	823.50	725.06	595.13
45.0	1133.44	1100.81	1078.31	1053.00	994.50	914.63	813.38	712.13	591.75
90.0	1122.24	1096.31	1067.57	1042.26	987.47	889.48	798.19	699.19	580.89
135.0	1153.13	1117.69	1091.81	1067.63	1031.63	965.25	863.44	753.75	649.13
180.0	1119.04	1104.92	1078.26	1051.99	1003.67	912.15	802.69	698.51	594.17
225.0	1120.39	1114.09	1090.13	1067.85	1020.54	925.54	834.47	733.89	599.46
270.0	1148.63	1121.63	1099.69	1075.50	1024.88	952.88	852.75	754.88	637.31
315.0	1122.13	1094.91	1072.46	1038.54	974.70	866.03	767.59	663.75	529.59
360.0	1133.44	1104.75	1078.88	1056.94	1004.63	916.88	823.50	725.06	595.13

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	489.38	382.50	290.25	156.43	82.35	39.77	31.16	24.86	18.06
45.0	471.38	366.75	290.81	154.13	83.25	41.40	31.50	25.43	18.39
90.0	459.79	357.19	247.84	159.53	79.99	37.74	30.88	24.13	18.45
135.0	532.69	429.19	315.56	291.38	123.64	61.99	34.20	29.19	23.12
180.0	466.37	367.31	271.91	172.74	87.41	42.58	31.78	25.09	19.69
225.0	490.33	385.03	261.79	171.84	97.59	41.01	32.74	26.78	19.13
270.0	514.69	407.25	290.25	179.83	102.09	49.33	32.12	26.66	20.36
315.0	422.61	318.43	195.13	110.36	54.23	32.01	27.39	20.93	17.16
360.0	489.38	382.50	290.25	156.43	82.35	39.77	31.16	24.86	18.06

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	16.65	16.31	15.92	15.58	15.36	15.02	14.85	14.63	14.40
45.0	16.65	16.26	15.98	15.64	15.41	15.19	14.96	14.79	14.57
90.0	16.59	16.26	15.86	15.58	15.41	15.13	14.91	14.74	14.51
135.0	16.99	16.54	16.20	15.86	15.58	15.36	15.13	14.91	14.74
180.0	16.76	16.37	16.03	15.75	15.47	15.24	15.02	14.79	14.63
225.0	16.88	16.43	15.98	15.69	15.41	15.13	14.96	14.74	14.57
270.0	16.71	16.31	15.98	15.64	15.30	15.08	14.85	14.68	14.46
315.0	16.43	16.03	15.58	15.36	15.13	14.85	14.68	14.46	14.29
360.0	16.65	16.31	15.92	15.58	15.36	15.02	14.85	14.63	14.40

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	14.23	14.12	13.95	13.84	13.73	13.61	13.50	13.44	13.39
45.0	14.40	14.29	14.12	13.95	13.89	13.78	13.67	13.61	13.50
90.0	14.40	14.23	14.12	14.01	13.89	13.78	13.67	13.61	13.44
135.0	14.51	14.34	14.23	14.01	13.89	13.84	13.78	13.67	13.56
180.0	14.40	14.29	14.12	14.01	13.84	13.73	13.67	13.50	13.50
225.0	14.40	14.23	14.01	13.89	13.78	13.67	13.56	13.56	13.44
270.0	14.29	14.18	14.01	13.89	13.73	13.67	13.56	13.44	13.39
315.0	14.12	14.01	13.84	13.73	13.61	13.56	13.44	13.39	13.28
360.0	14.23	14.12	13.95	13.84	13.73	13.61	13.50	13.44	13.39

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.28	13.22	13.11	13.11	12.99	12.94	12.88	12.83	12.77
45.0	13.39	13.33	13.28	13.22	13.11	13.05	12.99	12.94	12.88
90.0	13.39	13.28	13.28	13.22	13.16	13.05	12.99	12.99	12.88
135.0	13.50	13.39	13.28	13.22	13.16	13.05	13.05	12.99	12.94
180.0	13.39	13.33	13.22	13.11	13.11	12.99	12.94	12.88	12.83
225.0	13.39	13.28	13.16	13.11	13.05	12.99	12.94	12.88	12.83
270.0	13.28	13.22	13.16	13.11	13.05	12.99	12.94	12.88	12.83
315.0	13.22	13.16	13.11	13.05	12.99	12.94	12.83	12.83	12.71
360.0	13.28	13.22	13.11	13.11	12.99	12.94	12.88	12.83	12.77

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	12.71	12.66	12.66	12.60	12.54	12.54	12.49	12.49	12.43
45.0	12.83	12.77	12.77	12.71	12.66	12.66	12.60	12.54	12.54
90.0	12.88	12.83	12.77	12.71	12.66	12.60	12.60	12.54	12.60
135.0	12.88	12.83	12.77	12.71	12.66	12.60	12.60	12.60	12.54
180.0	12.83	12.71	12.66	12.60	12.60	12.60	12.54	12.49	12.43
225.0	12.77	12.77	12.71	12.66	12.66	12.60	12.60	12.54	12.54
270.0	12.83	12.77	12.71	12.71	12.66	12.66	12.60	12.60	12.60
315.0	12.71	12.66	12.60	12.60	12.54	12.54	12.54	12.49	12.43
360.0	12.71	12.66	12.66	12.60	12.54	12.54	12.49	12.49	12.43

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.49	12.43	12.43	12.38	12.38	12.38	12.43	12.54	12.32
45.0	12.49	12.49	12.49	12.49	12.49	12.49	12.49	12.43	12.38
90.0	12.54	12.49	12.49	12.49	12.43	12.49	12.49	12.49	12.43
135.0	12.54	12.49	12.43	12.38	12.43	12.43	12.38	12.43	12.54
180.0	12.43	12.43	12.38	12.38	12.38	12.38	12.32	12.32	12.49
225.0	12.49	12.49	12.43	12.43	12.43	12.43	12.43	12.43	12.49
270.0	12.54	12.49	12.49	12.49	12.43	12.43	12.43	12.49	12.43
315.0	12.43	12.43	12.43	12.38	12.38	12.38	12.38	12.43	12.38
360.0	12.49	12.43	12.43	12.38	12.38	12.38	12.43	12.54	12.32

Intensity data(cd)

C/γ(°)	90.0
0.0	12.32
45.0	12.38
90.0	12.38
135.0	12.38
180.0	12.32
225.0	12.38
270.0	12.38
315.0	12.32
360.0	12.32