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NATA

LumCAT: 3-1698-N
Luminaire: 92.70.045.00+92.70.089.00

Report No: NATA0100	Voltage(V): 34.8000
Test No: GC2019011005	Current(A): 0.7000
LampCAT: OSRAM SOLERIQ S19	Power (W): 24.3600
Lamp flux(lm): 3479.0	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): 2668.44
Efficiency(%): 76.70%
Lumens(lm)/Power(W): 109.65
Central intensity(cd): 11525.630
Maximum intensity(cd): 11525.630
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=21.8
[C90/270]Total=21.8
Field angle(10%Imax): [C0/180]Total=44.6
[C90/270]Total=44.6
Maximum s/h(1/2): C0_180=0.37 C90_270=0.37
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.78%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.677%

Equipment: GMS1980	Date: 2019/1/10	Operator: NT07
Temperature(°C): 10.0	Humidity(%): 65.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11525.625	2.757	2.757	.079%	.103%
1.0	11503.125	22.015	24.773	.633%	.928%
2.0	11427.680	43.735	68.508	1.257%	2.567%
3.0	11247.398	64.551	133.059	1.855%	4.986%
4.0	10968.469	83.904	216.963	2.412%	8.131%
5.0	10568.672	101.011	317.974	2.903%	11.916%
6.0	9998.859	114.614	432.587	3.294%	16.211%
7.0	9258.047	123.727	556.315	3.556%	20.848%
8.0	8522.508	130.069	686.384	3.739%	25.722%
9.0	7609.641	130.541	816.925	3.752%	30.614%
10.0	6547.500	124.680	941.605	3.584%	35.287%
11.0	5661.000	118.452	1060.058	3.405%	39.726%
12.0	4795.031	109.326	1169.383	3.142%	43.823%
13.0	3889.406	95.945	1265.329	2.758%	47.418%
14.0	3261.164	86.517	1351.845	2.487%	50.660%
15.0	2763.914	78.446	1430.292	2.255%	53.600%
16.0	2368.125	71.580	1501.872	2.058%	56.283%
17.0	1969.102	63.133	1565.005	1.815%	58.649%
18.0	1747.125	59.205	1624.21	1.702%	60.867%
19.0	1565.367	55.887	1680.097	1.606%	62.962%
20.0	1421.930	53.331	1733.428	1.533%	64.960%
21.0	1298.180	51.017	1784.445	1.466%	66.872%
22.0	1180.167	48.481	1832.926	1.394%	68.689%
23.0	1091.447	46.766	1879.692	1.344%	70.442%
24.0	1010.025	45.050	1924.742	1.295%	72.130%
25.0	923.681	42.808	1967.55	1.230%	73.734%
26.0	858.516	41.271	2008.821	1.186%	75.281%
27.0	797.738	39.715	2048.536	1.142%	76.769%
28.0	733.106	37.742	2086.278	1.085%	78.183%
29.0	679.823	36.143	2122.421	1.039%	79.538%
30.0	630.176	34.553	2156.974	.993%	80.833%
31.0	573.996	32.419	2189.393	.932%	82.048%
32.0	529.763	30.785	2220.178	.885%	83.201%
33.0	494.248	29.519	2249.697	.848%	84.308%
34.0	455.822	27.952	2277.649	.803%	85.355%
35.0	421.362	26.503	2304.152	.762%	86.348%
36.0	390.959	25.200	2329.352	.724%	87.293%
37.0	359.691	23.738	2353.09	.682%	88.182%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	332.438	22.444	2375.534	.645%	89.023%
39.0	306.155	21.128	2396.663	.607%	89.815%
40.0	285.855	20.150	2416.812	.579%	90.570%
41.0	262.561	18.890	2435.702	.543%	91.278%
42.0	239.527	17.576	2453.278	.505%	91.937%
43.0	218.018	16.305	2469.583	.469%	92.548%
44.0	201.023	15.313	2484.896	.440%	93.122%
45.0	184.486	14.305	2499.202	.411%	93.658%
46.0	167.161	13.186	2512.388	.379%	94.152%
47.0	151.594	12.158	2524.546	.349%	94.607%
48.0	138.030	11.249	2535.795	.323%	95.029%
49.0	123.975	10.260	2546.055	.295%	95.414%
50.0	110.552	9.287	2555.342	.267%	95.762%
51.0	99.506	8.480	2563.822	.244%	96.079%
52.0	88.348	7.634	2571.457	.219%	96.365%
53.0	77.822	6.816	2578.272	.196%	96.621%
54.0	68.337	6.063	2584.335	.174%	96.848%
55.0	59.653	5.359	2589.693	.154%	97.049%
56.0	52.270	4.752	2594.445	.137%	97.227%
57.0	46.223	4.251	2598.697	.122%	97.386%
58.0	40.788	3.793	2602.49	.109%	97.528%
59.0	36.401	3.422	2605.911	.098%	97.657%
60.0	32.927	3.127	2609.039	.090%	97.774%
61.0	30.473	2.923	2611.961	.084%	97.883%
62.0	29.088	2.816	2614.778	.081%	97.989%
63.0	27.991	2.735	2617.513	.079%	98.091%
64.0	26.937	2.655	2620.168	.076%	98.191%
65.0	25.995	2.584	2622.751	.074%	98.288%
66.0	25.214	2.526	2625.277	.073%	98.382%
67.0	24.384	2.461	2627.739	.071%	98.475%
68.0	23.632	2.403	2630.141	.069%	98.565%
69.0	22.922	2.347	2632.488	.067%	98.653%
70.0	22.261	2.294	2634.782	.066%	98.739%
71.0	21.544	2.234	2637.016	.064%	98.822%
72.0	20.911	2.181	2639.197	.063%	98.904%
73.0	20.285	2.127	2641.324	.061%	98.984%
74.0	19.666	2.073	2643.397	.060%	99.061%
75.0	19.111	2.024	2645.421	.058%	99.137%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	18.584	1.977	2647.399	.057%	99.211%
77.0	18.070	1.931	2649.33	.055%	99.284%
78.0	17.613	1.889	2651.219	.054%	99.355%
79.0	17.100	1.841	2653.06	.053%	99.424%
80.0	16.509	1.783	2654.842	.051%	99.490%
81.0	15.947	1.727	2656.57	.050%	99.555%
82.0	15.279	1.659	2658.229	.048%	99.617%
83.0	14.548	1.583	2659.812	.046%	99.677%
84.0	13.866	1.512	2661.325	.043%	99.733%
85.0	13.127	1.434	2662.759	.041%	99.787%
86.0	12.424	1.359	2664.118	.039%	99.838%
87.0	11.869	1.300	2665.417	.037%	99.887%
88.0	11.391	1.248	2666.666	.036%	99.933%
89.0	10.842	1.189	2667.855	.034%	99.978%
90.0	10.709	0.587	2668.442	.017%	100.000%

Zonal flux distribution table

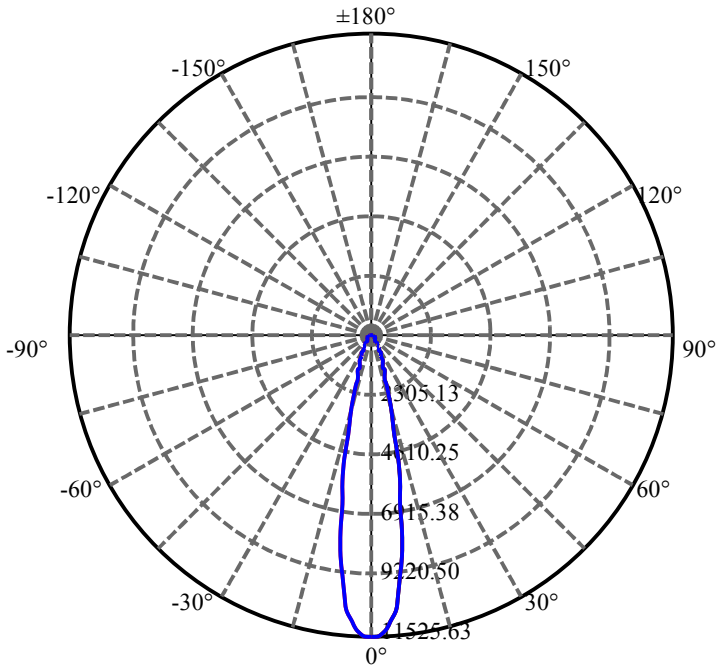
ZONAL LUMEN SUMMARY

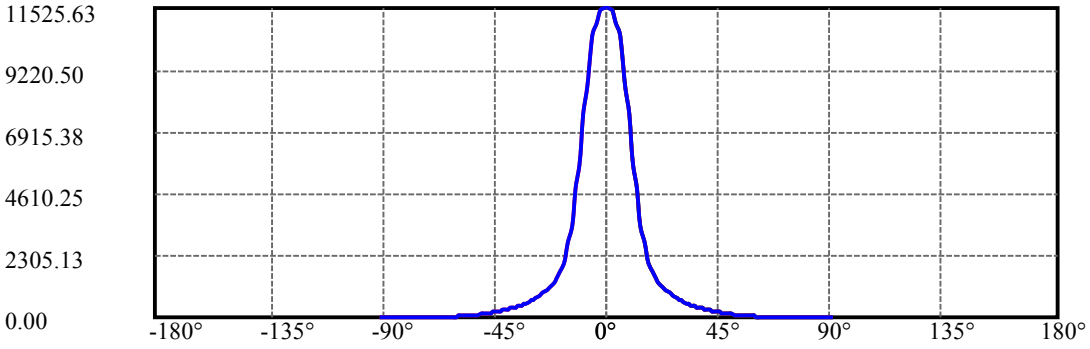
Zone	Lumens	%Lamp	%Fixt
0-30	2156.97	62.00%	80.83%
0-40	2416.81	69.47%	90.57%
0-60	2609.04	74.99%	97.77%
0-90	2667.85	76.68%	99.98%
0-120	2667.85	76.68%	99.98%
0-180	2668.44	76.70%	100.00%
60-90	61.94	1.78%	2.32%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.36	2134.75	61.36%	80.00%

ZONAL LUMEN SUMMARY

0-10	941.61
10-20	791.82
20-30	423.55
30-40	259.84
40-50	138.53
50-60	53.70
60-70	25.74
70-80	20.06
80-90	13.01
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:

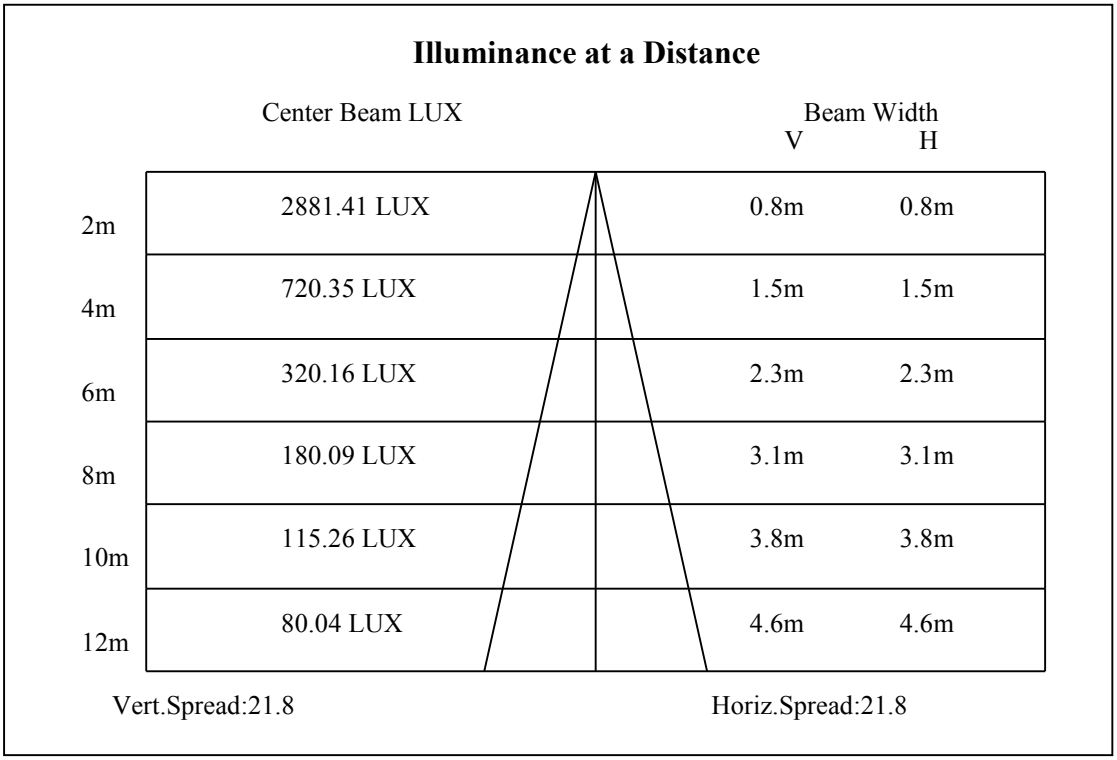
C90/C270:

Field angle(10%Imax):C0/180Left:22.3 Right:22.3
:C90/270Left:22.3 Right:22.3

Beam Angle(50%Imax):C0/180Left:10.9 Right:10.9
:C90/270Left:10.9 Right:10.9

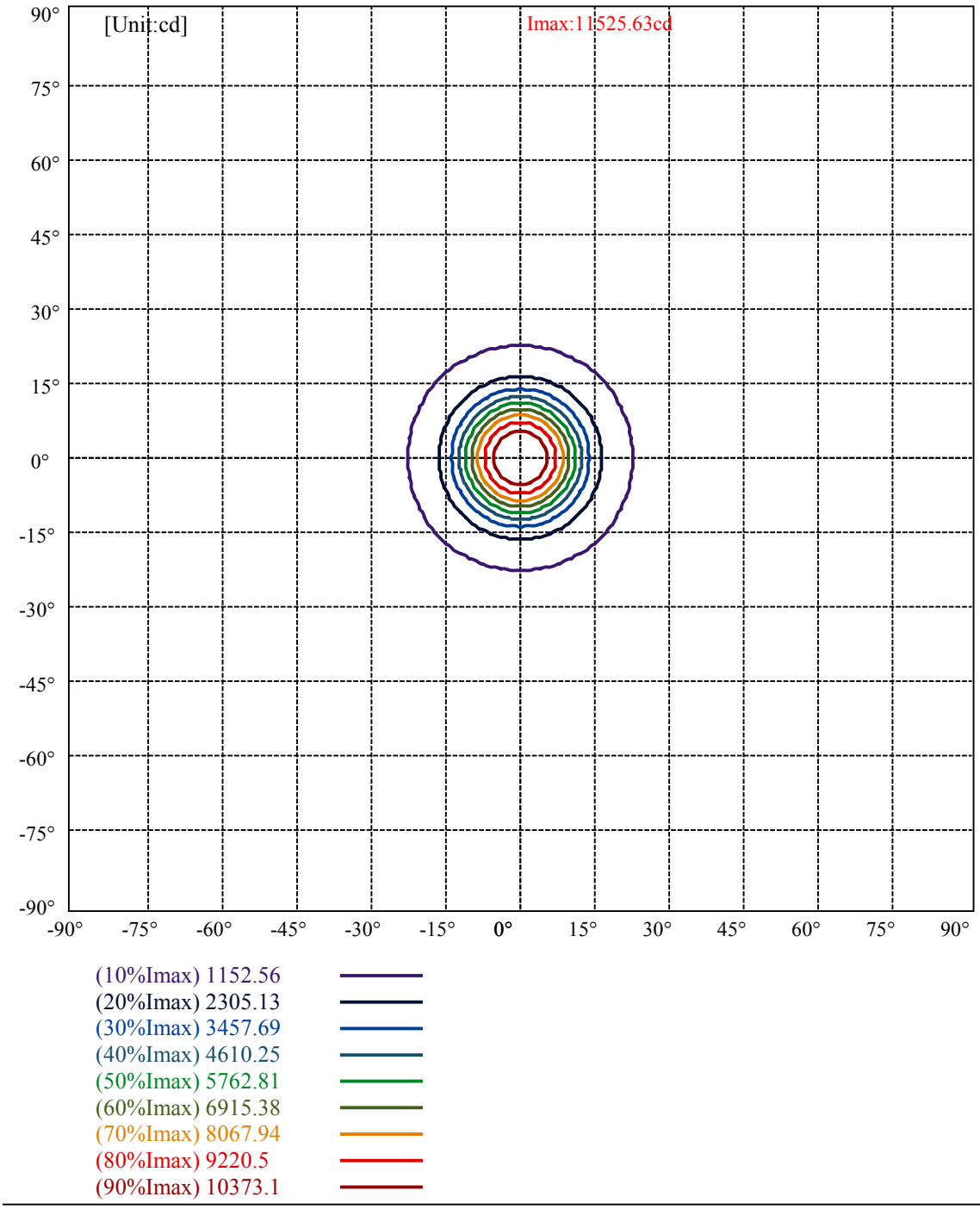
Equipment: GMS1980 Date: 2019/1/10 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

Lux distance Curve



Equipment: GMS1980 Date: 2019/1/10 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)

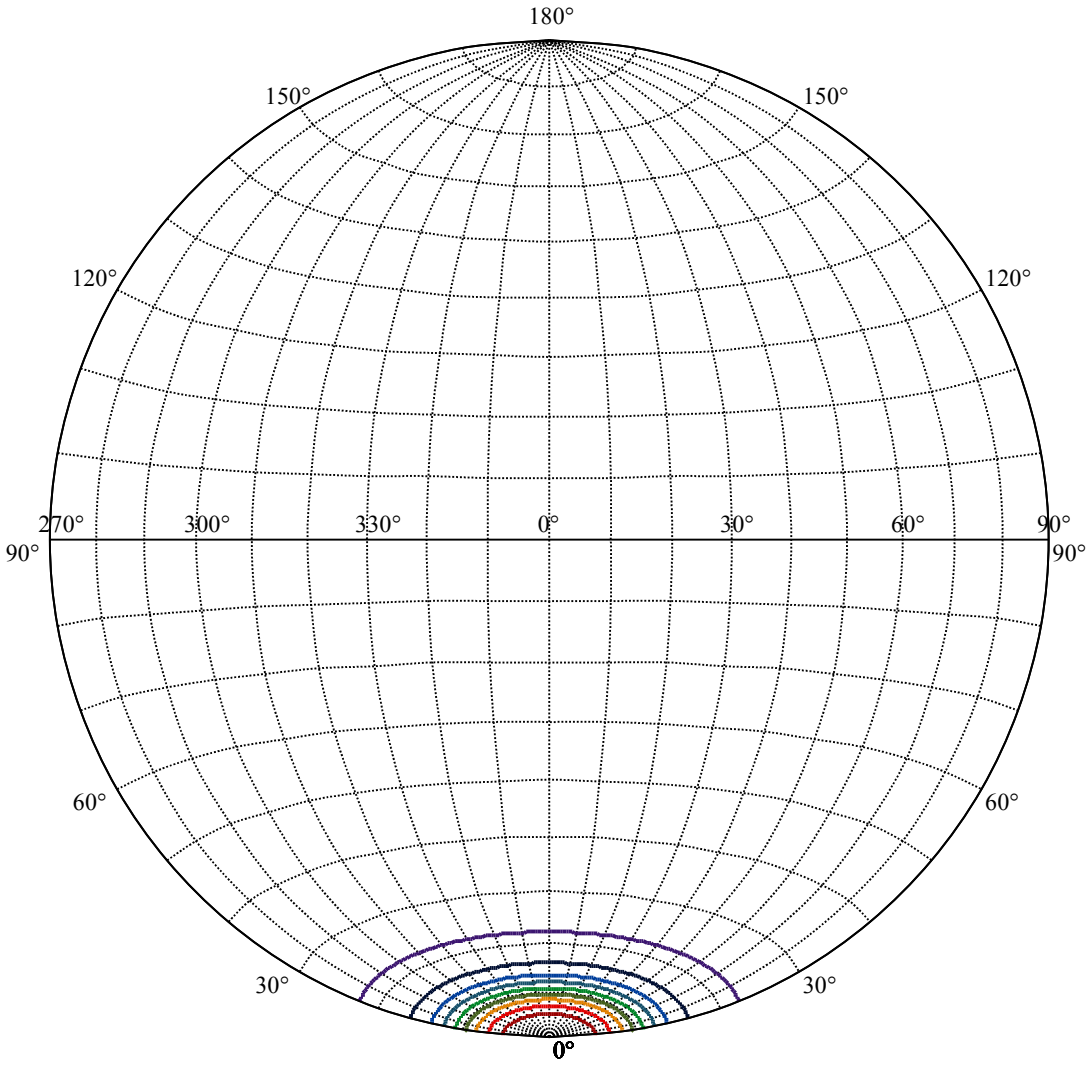


Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



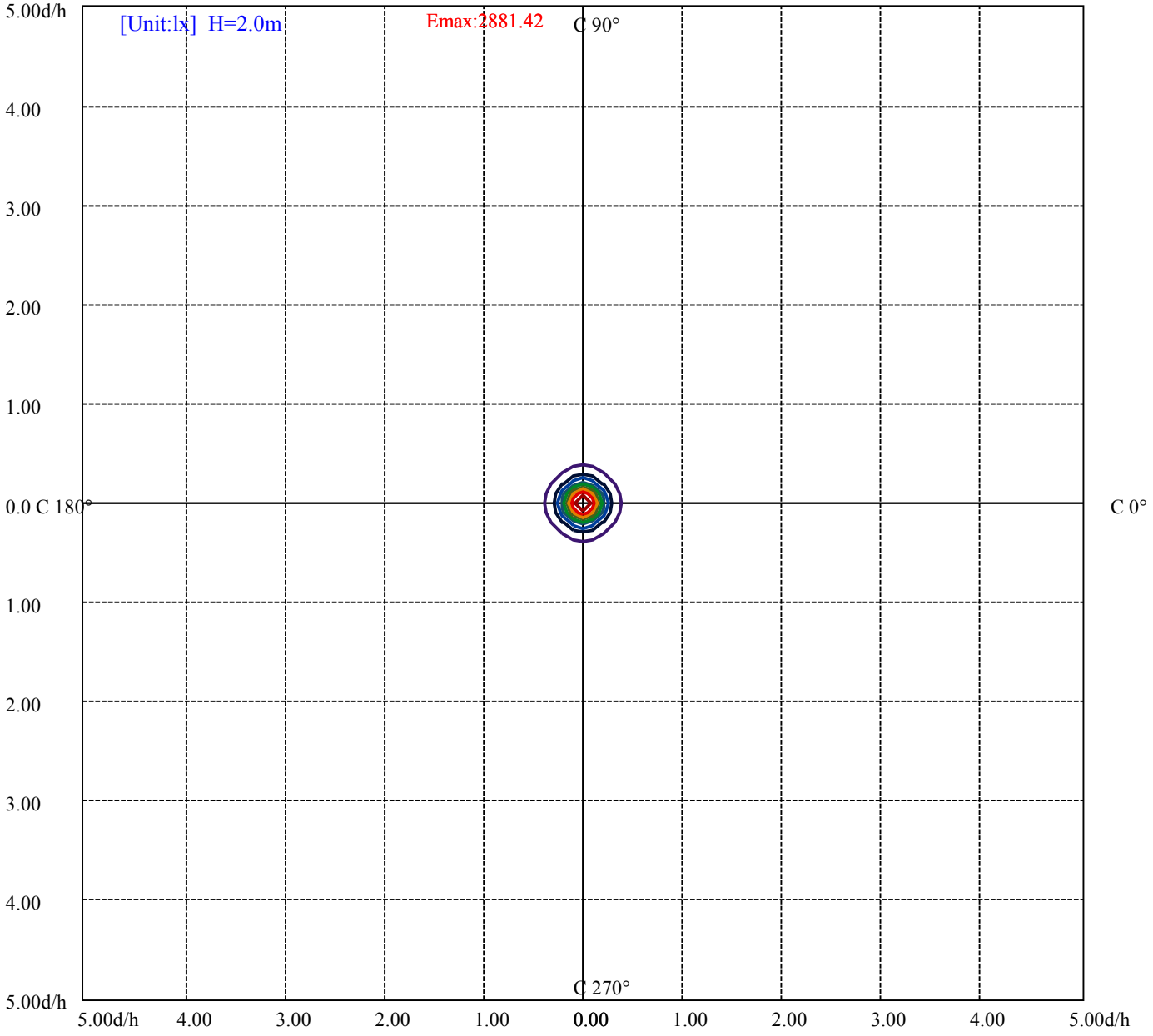
House [Unit:cd] Road

Imax:11525.63

(10%Imax) 1152.56
(20%Imax) 2305.13
(30%Imax) 3457.69
(40%Imax) 4610.25
(50%Imax) 5762.81
(60%Imax) 6915.38
(70%Imax) 8067.94
(80%Imax) 9220.5
(90%Imax) 10373.1

Equipment: GMS1980 Date: 2019/1/10 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

ISO illuminance diagram

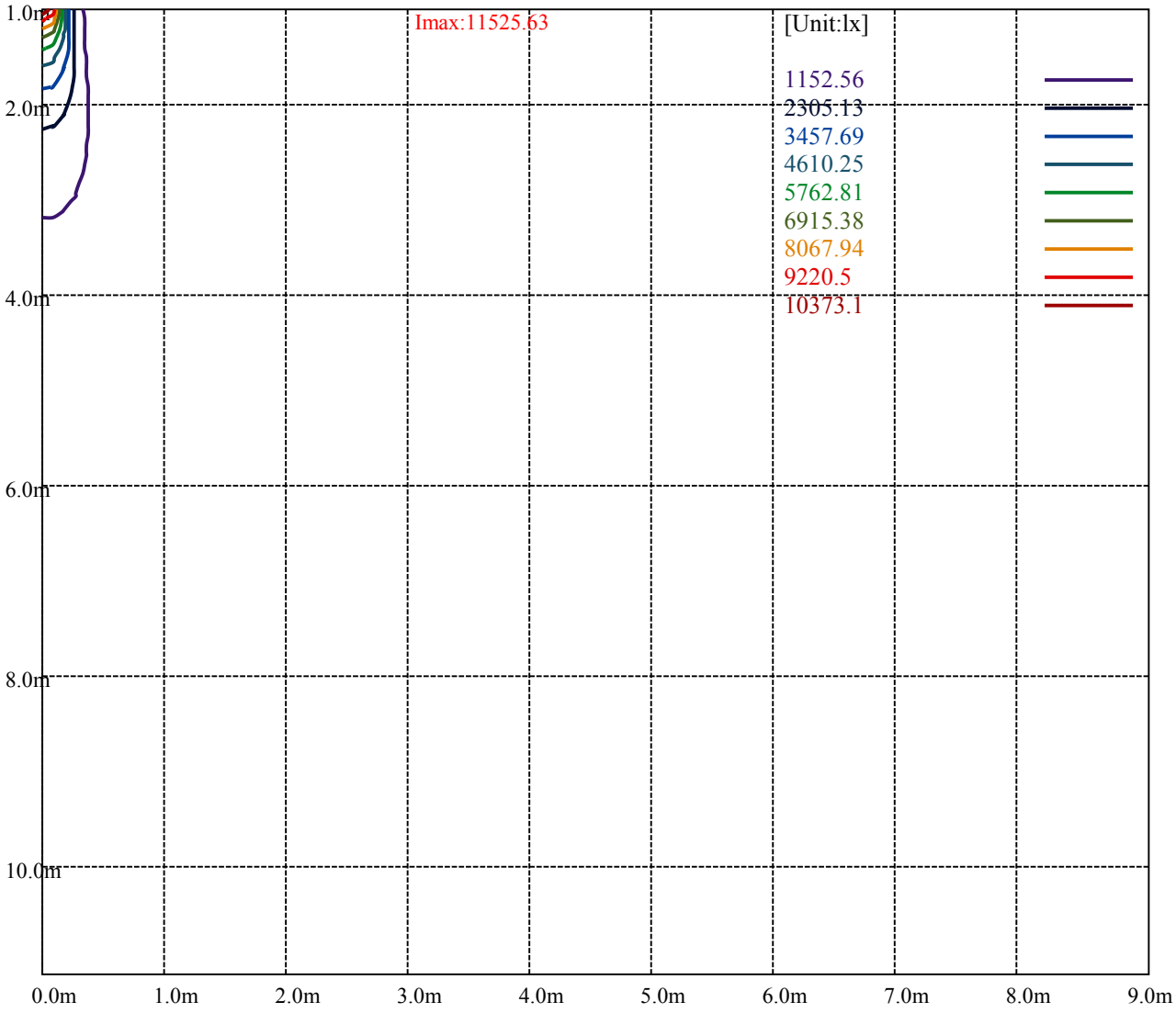


Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/1/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

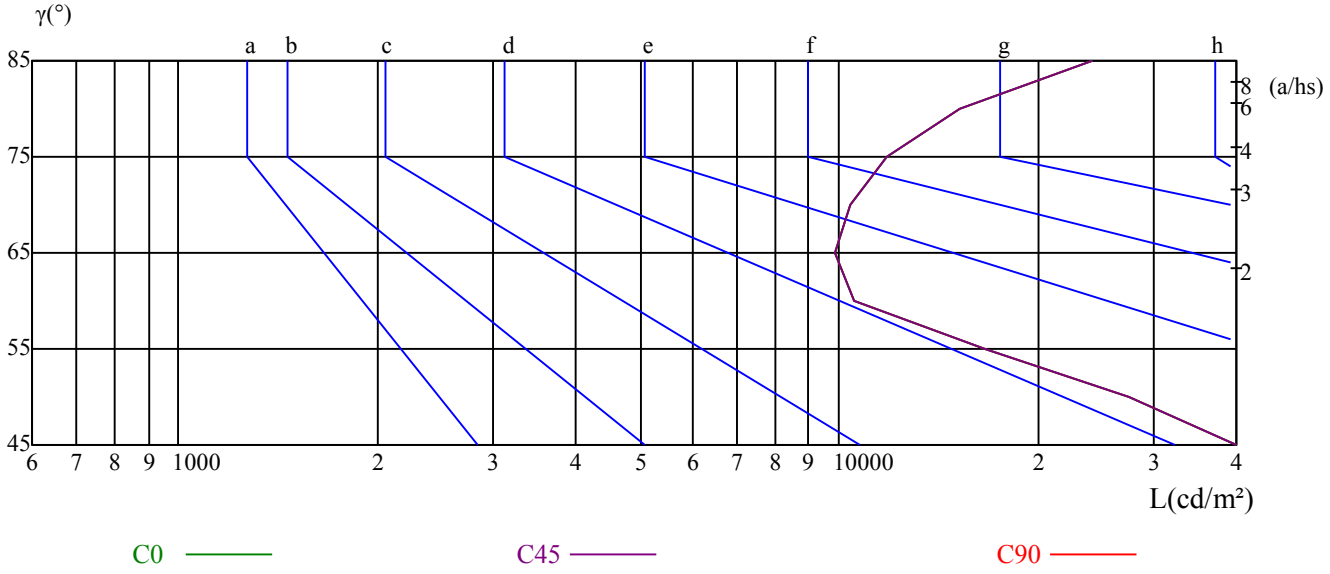
γ	45	50	55	60	65	70	75	80	85
C0	41805	27558	16664	10552	9856	10429	11831	15234	24134
C45	41805	27558	16664	10552	9856	10429	11831	15234	24134
C90	41805	27558	16664	10552	9856	10429	11831	15234	24134

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9856	9856	9856	11831	11831	11831	24134	24134	24134

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

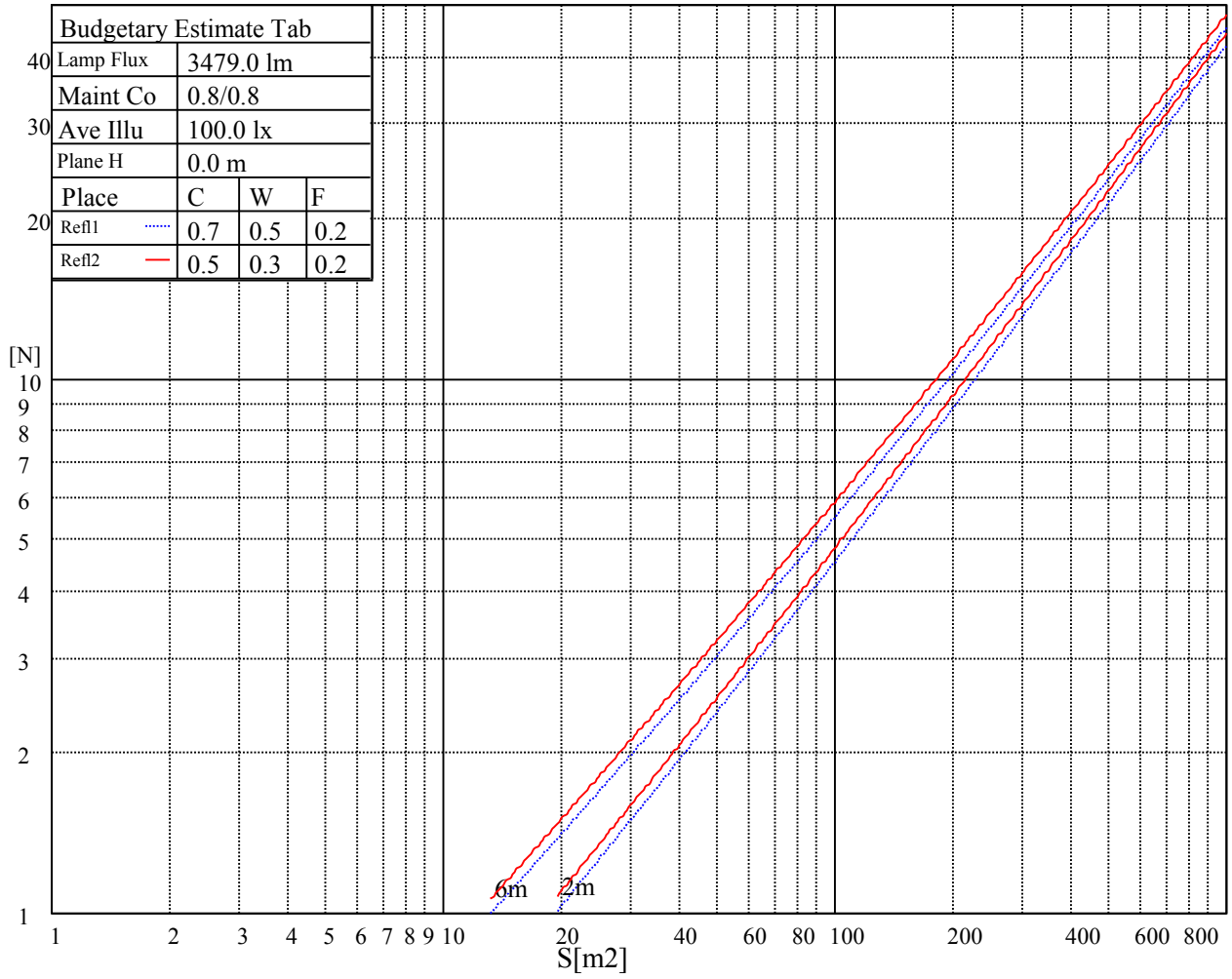


UGR Glare

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	10.73	11.75	11.10	12.06	12.38	10.76	11.77	11.12	12.08	12.40
	3H	11.97	12.86	12.35	13.20	13.57	11.97	12.87	12.35	13.20	13.57
	4H	12.73	13.56	13.13	13.91	14.30	12.71	13.54	13.12	13.90	14.29
	6H	13.64	14.40	14.06	14.78	15.17	13.62	14.37	14.03	14.75	15.15
	8H	14.15	14.87	14.59	15.26	15.67	14.11	14.83	14.55	15.22	15.63
	12H	15.02	15.70	15.46	16.09	16.52	14.97	15.65	15.40	16.03	16.46
4H	2H	10.95	11.77	11.35	12.13	12.52	10.97	11.80	11.37	12.15	12.54
	3H	12.52	13.20	12.94	13.61	14.01	12.52	13.20	12.94	13.61	14.01
	4H	13.50	14.10	13.94	14.53	14.98	13.48	14.09	13.92	14.51	14.96
	6H	14.54	15.06	15.01	15.51	15.98	14.51	15.03	14.98	15.48	15.95
	8H	15.20	15.68	15.67	16.13	16.61	15.16	15.64	15.63	16.09	16.57
	12H	16.13	16.55	16.62	17.03	17.51	16.07	16.49	16.56	16.98	17.45
8H	4H	13.87	14.35	14.35	14.80	15.28	13.86	14.34	14.33	14.79	15.26
	6H	15.20	15.59	15.71	16.09	16.57	15.17	15.56	15.68	16.06	16.55
	8H	16.04	16.38	16.57	16.90	17.40	16.00	16.34	16.53	16.87	17.36
	12H	17.26	17.56	17.78	18.05	18.63	17.21	17.50	17.73	18.00	18.58
12H	4H	13.95	14.37	14.44	14.85	15.33	13.93	14.35	14.42	14.84	15.32
	6H	15.68	15.72	15.91	16.20	16.74	15.65	15.70	15.89	16.17	16.72
	8H	16.33	16.63	16.85	17.13	17.71	16.29	16.59	16.82	17.09	17.67

Variation with the observer position at spacings:		
S = 1.0H	1.8/-2.6	1.8/-2.6
S = 1.5H	3.2/-2.8	3.2/-2.8
S = 2.0H	4.5/-2.3	4.5/-2.3
Standard tables:	BK3	BK3
Uncorrected UGR	2.9	2.9

Budgetary Estimate Table

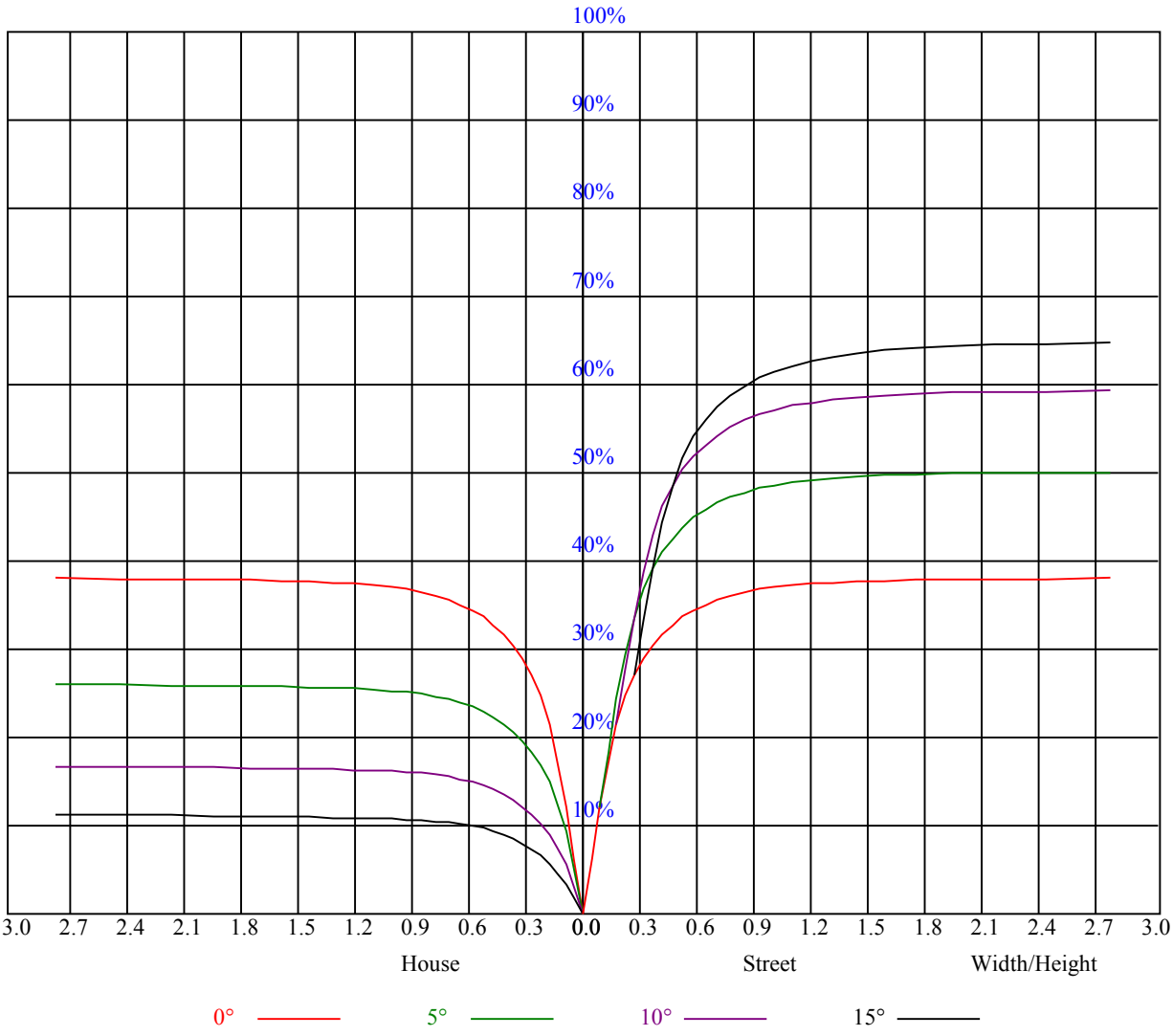


Equipment: GMS1980 Date: 2019/1/10 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.78	0.78	0.78	0.77
1	0.86	0.84	0.82	0.84	0.82	0.81	0.81	0.80	0.78	0.78	0.77	0.76	0.75	0.75	0.74	0.73
2	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.75	0.73	0.72	0.73	0.71	0.70	0.69
3	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.70	0.68	0.67	0.66
4	0.73	0.69	0.66	0.72	0.69	0.66	0.70	0.67	0.65	0.69	0.66	0.65	0.67	0.65	0.64	0.63
5	0.69	0.66	0.63	0.69	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.58
7	0.64	0.60	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
8	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54
9	0.60	0.56	0.53	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52
10	0.58	0.54	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.56	0.53	0.51	0.56	0.53	0.51	0.51

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/1/10	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	11503.13	11463.75	11362.50	11205.00	10839.38	10333.13	9849.38	9005.63	8246.25
45.0	11559.38	11508.75	11396.25	11137.50	10800.00	10344.38	9624.38	8893.13	8077.50
90.0	11536.88	11514.38	11514.38	11224.69	10815.19	10426.50	9779.63	8877.38	8151.19
135.0	11503.13	11520.00	11491.88	11401.88	11221.88	10890.00	10389.38	9804.38	9123.75
180.0	11503.13	11508.75	11469.38	11196.56	11095.31	10743.19	10261.13	9484.88	8740.13
225.0	11559.38	11559.38	11514.38	11413.13	11200.50	10874.25	10362.94	9724.50	9043.88
270.0	11536.88	11514.38	11458.13	11311.88	11075.63	10721.25	10102.50	9511.88	8825.63
315.0	11503.13	11435.63	11214.56	11088.56	10699.88	10216.69	9621.56	8762.63	7971.75
360.0	11503.13	11463.75	11362.50	11205.00	10839.38	10333.13	9849.38	9005.63	8246.25

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7402.50	6271.88	5394.38	4573.13	3684.38	3082.50	2885.63	2151.56	1897.88
45.0	6958.13	6013.13	5124.38	4218.75	3448.13	2874.38	2383.88	2060.44	1795.50
90.0	7265.25	5999.63	5234.06	4443.19	3504.94	3010.50	2540.25	2141.44	1885.50
135.0	8145.00	7261.88	6316.88	5416.88	4404.38	3701.25	3099.38	2846.25	2147.63
180.0	7911.56	6781.50	5864.06	5013.56	4158.00	3427.31	2885.06	2397.38	2075.63
225.0	8252.44	7146.56	6218.44	5319.00	4198.50	3583.69	2990.81	2449.13	2056.50
270.0	7852.50	6975.00	6080.63	5113.13	4230.00	3549.38	2902.50	2840.63	2064.38
315.0	7089.75	5930.44	5055.19	4262.63	3486.94	2860.31	2423.81	2058.19	1829.81
360.0	7402.50	6271.88	5394.38	4573.13	3684.38	3082.50	2885.63	2151.56	1897.88

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1704.94	1528.31	1379.81	1266.19	1156.50	1070.44	979.88	898.31	833.63
45.0	1628.44	1475.44	1345.50	1245.94	1148.06	1059.19	979.88	899.44	837.56
90.0	1667.25	1488.94	1361.25	1240.88	1113.58	1054.01	978.86	886.95	834.02
135.0	1905.75	1692.56	1526.06	1400.06	1277.44	1158.75	1078.31	983.81	911.81
180.0	1813.50	1614.38	1466.44	1327.50	1180.13	1113.36	1031.40	938.70	872.10
225.0	1817.44	1621.69	1483.31	1352.81	1242.00	1119.94	1059.24	983.03	904.39
270.0	1797.75	1618.31	1451.25	1310.63	1206.56	1117.13	1015.31	939.94	870.19
315.0	1641.94	1483.31	1361.81	1241.44	1117.07	1038.77	957.32	859.28	804.43
360.0	1704.94	1528.31	1379.81	1266.19	1156.50	1070.44	979.88	898.31	833.63

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	767.81	705.94	655.88	603.56	546.75	507.94	474.19	438.19	403.88
45.0	788.06	717.75	668.25	626.63	564.75	525.38	493.31	449.44	413.44
90.0	777.99	719.04	661.89	610.76	558.73	514.35	480.54	444.94	414.84
135.0	839.81	775.13	722.25	671.63	609.19	561.94	522.00	477.56	444.94
180.0	811.24	748.58	689.23	637.26	579.88	531.90	496.86	460.41	428.40
225.0	841.56	770.91	719.94	670.33	624.38	572.01	533.53	495.84	450.28
270.0	807.75	737.44	685.69	634.50	572.06	532.13	496.69	460.13	424.69
315.0	747.68	690.08	635.46	586.74	536.23	492.47	456.86	420.08	390.43
360.0	767.81	705.94	655.88	603.56	546.75	507.94	474.19	438.19	403.88

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	376.31	346.50	318.94	295.88	288.00	251.44	230.23	211.61	195.58
45.0	387.56	352.69	326.25	301.50	285.75	251.78	230.18	210.15	193.50
90.0	383.68	354.60	330.24	304.54	282.04	260.27	240.24	217.35	200.36
135.0	414.56	383.06	353.25	329.06	304.88	284.63	256.84	234.00	216.11
180.0	395.66	365.29	339.69	313.14	287.10	269.16	246.77	220.95	206.33
225.0	415.91	383.85	350.78	320.46	296.66	272.81	250.14	227.19	207.45
270.0	395.44	362.81	336.38	305.44	284.06	271.63	240.30	219.83	203.18
315.0	358.54	328.73	303.98	279.23	258.36	238.78	221.51	203.06	185.68
360.0	376.31	346.50	318.94	295.88	288.00	251.44	230.23	211.61	195.58

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	178.65	164.31	148.78	135.62	121.56	108.39	97.31	87.08	75.32
45.0	177.36	158.57	144.06	130.50	116.27	103.05	92.08	80.61	70.31
90.0	184.16	166.89	150.30	136.41	121.95	108.39	97.03	85.50	75.94
135.0	196.71	178.43	162.73	148.05	130.89	118.35	106.65	94.33	83.19
180.0	190.07	171.11	156.88	143.61	129.54	116.33	104.96	92.59	82.74
225.0	190.69	172.97	156.60	142.99	130.22	115.26	104.23	93.66	82.69
270.0	187.59	168.92	154.52	141.02	126.90	113.96	103.33	92.08	81.68
315.0	170.66	156.09	138.88	126.06	114.47	100.69	90.45	80.94	70.71
360.0	178.65	164.31	148.78	135.62	121.56	108.39	97.31	87.08	75.32

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	66.66	58.95	50.85	45.39	40.50	35.72	31.84	29.98	28.63
45.0	62.04	54.00	47.93	42.36	37.63	34.20	31.44	29.93	28.80
90.0	66.04	57.15	50.79	45.39	39.49	35.49	32.34	30.43	29.08
135.0	73.58	63.51	54.96	48.66	43.37	38.42	34.26	31.28	29.93
180.0	72.28	62.89	55.86	49.67	43.03	38.36	34.31	30.99	29.53
225.0	72.51	64.18	55.80	48.54	43.09	38.14	34.48	31.44	29.70
270.0	72.68	63.06	55.41	48.32	42.53	38.08	34.26	30.88	29.31
315.0	60.92	53.49	46.58	41.46	36.68	32.79	30.49	28.86	27.73
360.0	66.66	58.95	50.85	45.39	40.50	35.72	31.84	29.98	28.63

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	27.51	26.44	25.59	24.75	23.96	23.18	22.50	21.94	21.09
45.0	27.79	26.66	25.82	25.03	24.24	23.51	22.84	22.16	21.43
90.0	28.01	27.11	26.04	25.26	24.47	23.68	22.95	22.28	21.60
135.0	28.74	27.56	26.66	25.88	24.92	24.19	23.51	22.89	22.11
180.0	28.41	27.28	26.27	25.43	24.53	23.85	23.06	22.33	21.71
225.0	28.58	27.45	26.44	25.65	24.86	23.96	23.23	22.61	21.88
270.0	28.13	27.00	26.16	25.37	24.47	23.74	23.12	22.33	21.66
315.0	26.78	25.99	24.98	24.36	23.63	22.95	22.16	21.54	20.87
360.0	27.51	26.44	25.59	24.75	23.96	23.18	22.50	21.94	21.09

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	20.48	19.91	19.24	18.79	18.34	17.83	17.33	16.99	16.43
45.0	20.87	20.25	19.74	19.18	18.62	18.11	17.66	17.10	16.48
90.0	20.87	20.25	19.63	19.13	18.56	18.06	17.72	17.21	16.54
135.0	21.49	20.81	20.19	19.63	19.07	18.56	18.11	17.66	17.16
180.0	21.04	20.36	19.74	19.07	18.45	18.00	17.49	16.93	16.31
225.0	21.26	20.59	19.91	19.24	18.73	18.06	17.55	16.93	16.31
270.0	21.04	20.36	19.74	19.18	18.68	18.17	17.66	17.04	16.59
315.0	20.25	19.74	19.13	18.68	18.23	17.78	17.38	16.93	16.26
360.0	20.48	19.91	19.24	18.79	18.34	17.83	17.33	16.99	16.43

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	15.75	15.08	14.34	13.61	12.83	12.04	11.42	10.97	10.63
45.0	15.86	15.24	14.51	13.84	12.88	12.09	11.42	11.03	10.74
90.0	16.03	15.36	14.57	13.84	13.05	12.32	11.53	11.08	10.74
135.0	16.54	15.98	15.24	14.68	14.06	13.33	13.16	13.16	11.19
180.0	15.75	15.02	14.34	13.61	12.88	12.26	11.59	11.19	10.69
225.0	15.81	15.19	14.46	13.89	13.22	12.60	12.04	11.48	11.14
270.0	16.09	15.30	14.68	13.89	13.16	12.38	11.87	11.31	10.91
315.0	15.75	15.08	14.23	13.56	12.94	12.38	11.93	10.91	10.69
360.0	15.75	15.08	14.34	13.61	12.83	12.04	11.42	10.97	10.63

Intensity data(cd)

C/γ(°)	90.0
0.0	10.63
45.0	10.80
90.0	10.74
135.0	10.69
180.0	10.58
225.0	10.80
270.0	10.74
315.0	10.69
360.0	10.63