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Nata

LumCAT: 2-1745-N
Luminaire: 92.70.124.00

Report No: 200407-B037	Voltage(V): 220.4000
Test No: 200407-C037	Current(A): 0.0410
LampCAT: TRIDONIC SLE G7 9MM	Power (W): 8.2900
Lamp flux(lm): 1028.0	PF: 0.8960
Number of Lamps: 1	Ballast type: AC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 873.73
Efficiency(%): 84.99%
Lumens(lm)/Power(W): 105.40
Central intensity(cd): 6321.458
Maximum intensity(cd): 6321.458
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=13.1
[C90/270]Total=13.1
Field angle(10%Imax): [C0/180]Total=37.7
[C90/270]Total=37.7
Maximum s/h(1/2): C0_180=0.23 C90_270=0.23
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(%): 84.99%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.653%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6321.458	0.000	0	.000%	.000%
1.0	6202.433	5.992	5.992	.583%	.686%
2.0	5866.589	17.323	23.315	1.685%	2.668%
3.0	5361.663	26.854	50.169	2.612%	5.742%
4.0	4753.489	33.859	84.028	3.294%	9.617%
5.0	4139.399	38.257	122.285	3.721%	13.996%
6.0	3494.624	40.119	162.404	3.903%	18.587%
7.0	2911.044	39.760	202.163	3.868%	23.138%
8.0	2492.602	38.673	240.836	3.762%	27.564%
9.0	2064.009	36.929	277.765	3.592%	31.791%
10.0	1762.793	34.631	312.396	3.369%	35.754%
11.0	1538.375	32.985	345.382	3.209%	39.530%
12.0	1351.834	31.594	376.976	3.073%	43.146%
13.0	1165.339	29.872	406.848	2.906%	46.565%
14.0	1032.005	28.126	434.974	2.736%	49.784%
15.0	937.353	27.036	462.01	2.630%	52.878%
16.0	852.975	26.233	488.244	2.552%	55.880%
17.0	765.180	25.199	513.443	2.451%	58.765%
18.0	689.438	23.983	537.426	2.333%	61.510%
19.0	623.145	22.836	560.262	2.221%	64.123%
20.0	566.121	21.767	582.029	2.117%	66.614%
21.0	515.129	20.762	602.792	2.020%	68.991%
22.0	472.873	19.854	622.646	1.931%	71.263%
23.0	438.256	19.118	641.764	1.860%	73.451%
24.0	411.087	18.570	660.334	1.806%	75.577%
25.0	387.015	18.147	678.481	1.765%	77.653%
26.0	365.670	17.767	696.248	1.728%	79.687%
27.0	350.189	17.514	713.761	1.704%	81.691%
28.0	331.552	17.260	731.022	1.679%	83.667%
29.0	316.801	16.963	747.984	1.650%	85.608%
30.0	291.384	16.421	764.405	1.597%	87.488%
31.0	266.605	15.528	779.933	1.511%	89.265%
32.0	235.984	14.399	794.332	1.401%	90.913%
33.0	189.650	12.539	806.871	1.220%	92.348%
34.0	152.168	10.344	817.216	1.006%	93.532%
35.0	110.382	8.154	825.37	.793%	94.465%
36.0	71.670	5.797	831.166	.564%	95.129%
37.0	50.475	3.984	835.15	.388%	95.585%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	37.807	2.947	838.097	.287%	95.922%
39.0	30.522	2.332	840.429	.227%	96.189%
40.0	25.435	1.952	842.38	.190%	96.412%
41.0	21.740	1.680	844.06	.163%	96.604%
42.0	19.060	1.482	845.543	.144%	96.774%
43.0	17.163	1.342	846.884	.131%	96.928%
44.0	15.551	1.235	848.119	.120%	97.069%
45.0	14.182	1.143	849.262	.111%	97.200%
46.0	13.231	1.072	850.334	.104%	97.322%
47.0	12.448	1.021	851.355	.099%	97.439%
48.0	11.734	0.978	852.333	.095%	97.551%
49.0	11.061	0.936	853.269	.091%	97.658%
50.0	10.435	0.896	854.165	.087%	97.761%
51.0	9.925	0.861	855.027	.084%	97.860%
52.0	9.507	0.834	855.86	.081%	97.955%
53.0	9.188	0.813	856.674	.079%	98.048%
54.0	8.956	0.800	857.473	.078%	98.140%
55.0	8.770	0.791	858.265	.077%	98.230%
56.0	8.457	0.778	859.043	.076%	98.319%
57.0	8.144	0.759	859.802	.074%	98.406%
58.0	7.807	0.738	860.54	.072%	98.490%
59.0	7.523	0.717	861.256	.070%	98.573%
60.0	7.280	0.699	861.956	.068%	98.653%
61.0	7.042	0.683	862.639	.066%	98.731%
62.0	6.815	0.668	863.307	.065%	98.807%
63.0	6.572	0.651	863.958	.063%	98.882%
64.0	6.305	0.632	864.59	.061%	98.954%
65.0	6.061	0.612	865.202	.060%	99.024%
66.0	5.829	0.593	865.795	.058%	99.092%
67.0	5.563	0.573	866.368	.056%	99.158%
68.0	5.319	0.551	866.919	.054%	99.221%
69.0	5.006	0.527	867.446	.051%	99.281%
70.0	4.780	0.503	867.948	.049%	99.338%
71.0	4.501	0.480	868.428	.047%	99.393%
72.0	4.252	0.455	868.883	.044%	99.445%
73.0	3.996	0.431	869.315	.042%	99.495%
74.0	3.817	0.411	869.725	.040%	99.542%
75.0	3.596	0.392	870.117	.038%	99.587%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.393	0.371	870.488	.036%	99.629%
77.0	3.190	0.351	870.839	.034%	99.669%
78.0	2.981	0.330	871.169	.032%	99.707%
79.0	2.802	0.311	871.48	.030%	99.743%
80.0	2.599	0.291	871.771	.028%	99.776%
81.0	2.390	0.270	872.041	.026%	99.807%
82.0	2.227	0.250	872.291	.024%	99.836%
83.0	2.036	0.232	872.523	.023%	99.862%
84.0	1.879	0.213	872.736	.021%	99.886%
85.0	1.723	0.197	872.933	.019%	99.909%
86.0	1.595	0.181	873.114	.018%	99.930%
87.0	1.473	0.168	873.282	.016%	99.949%
88.0	1.386	0.157	873.439	.015%	99.967%
89.0	1.322	0.148	873.587	.014%	99.984%
90.0	1.253	0.141	873.729	.014%	100.000%

Zonal flux distribution table

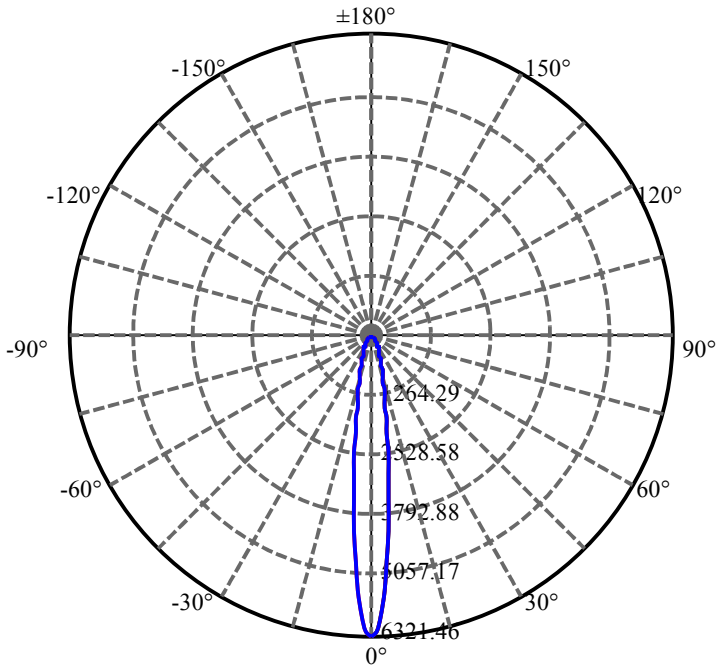
ZONAL LUMEN SUMMARY

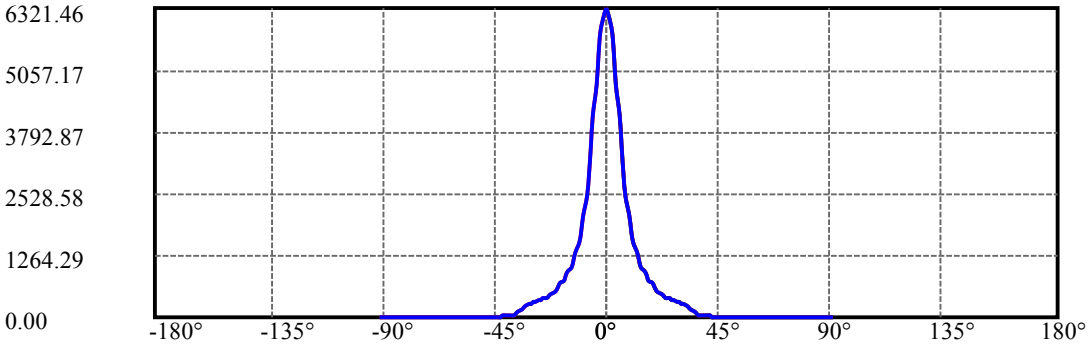
Zone	Lumens	%Lamp	%Fixt
0-30	764.41	74.36%	87.49%
0-40	842.38	81.94%	96.41%
0-60	861.96	83.85%	98.65%
0-90	873.59	84.98%	99.98%
0-120	873.59	84.98%	99.98%
0-180	873.73	84.99%	100.00%
60-90	12.33	1.20%	1.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.16	698.98	67.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	312.40
10-20	269.63
20-30	182.38
30-40	77.98
40-50	11.78
50-60	7.79
60-70	5.99
70-80	3.82
80-90	1.82
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):

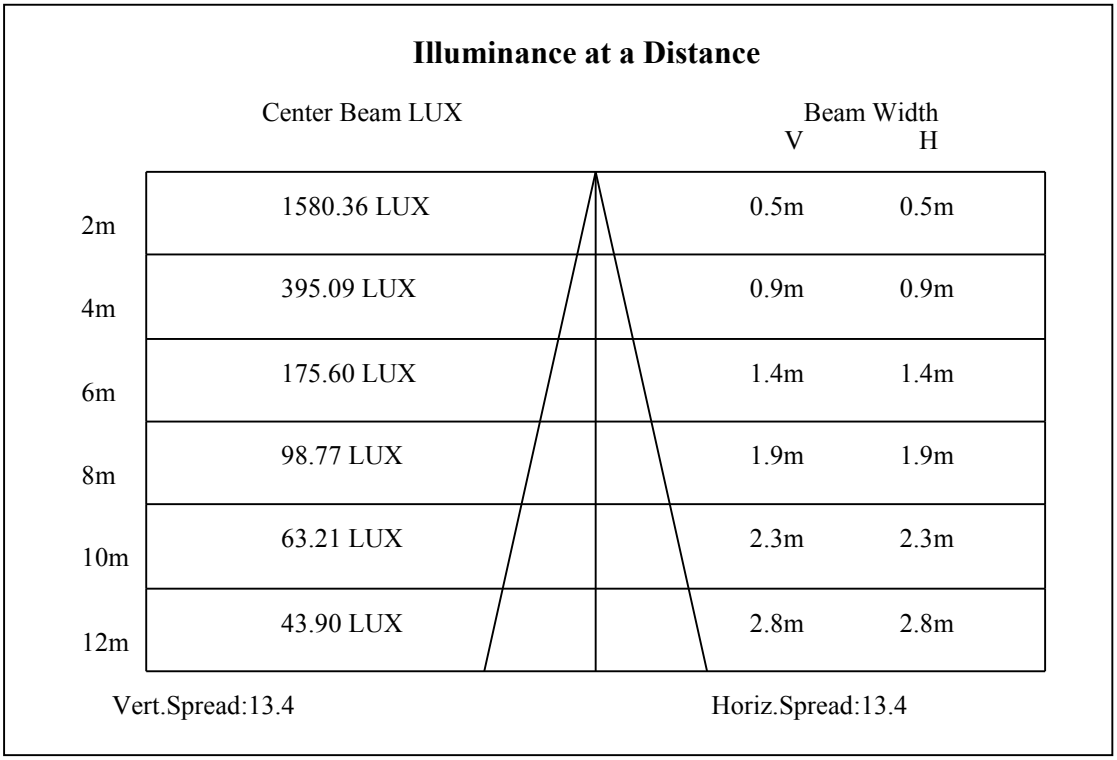
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:18.9 Right:18.9
:C90/270Left:18.9 Right:18.9

Beam Angle(50%Imax):C0/180Left:6.6 Right:6.6
:C90/270Left:6.6 Right:6.6

Lux distance Curve

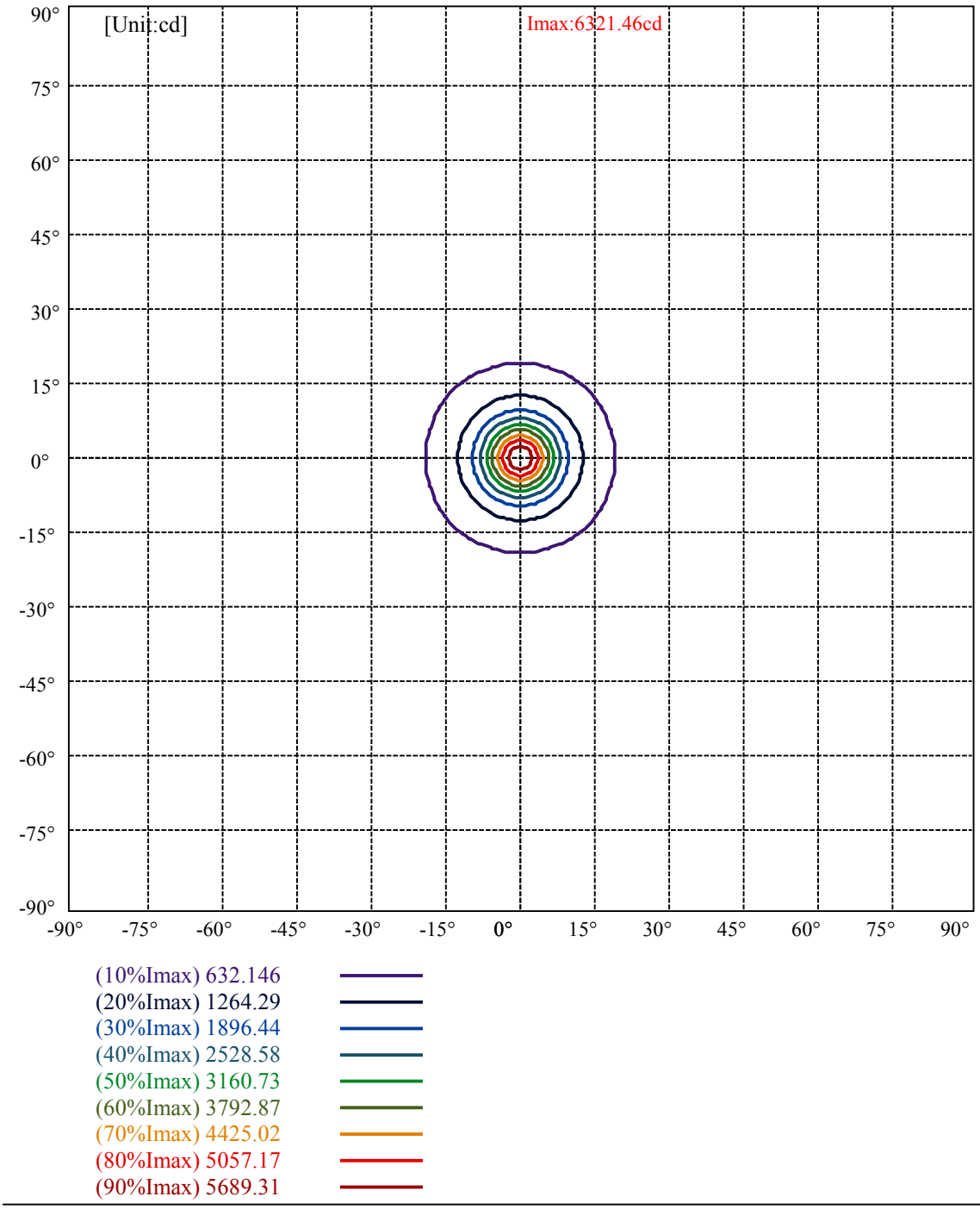


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO-Intensity(V-H)

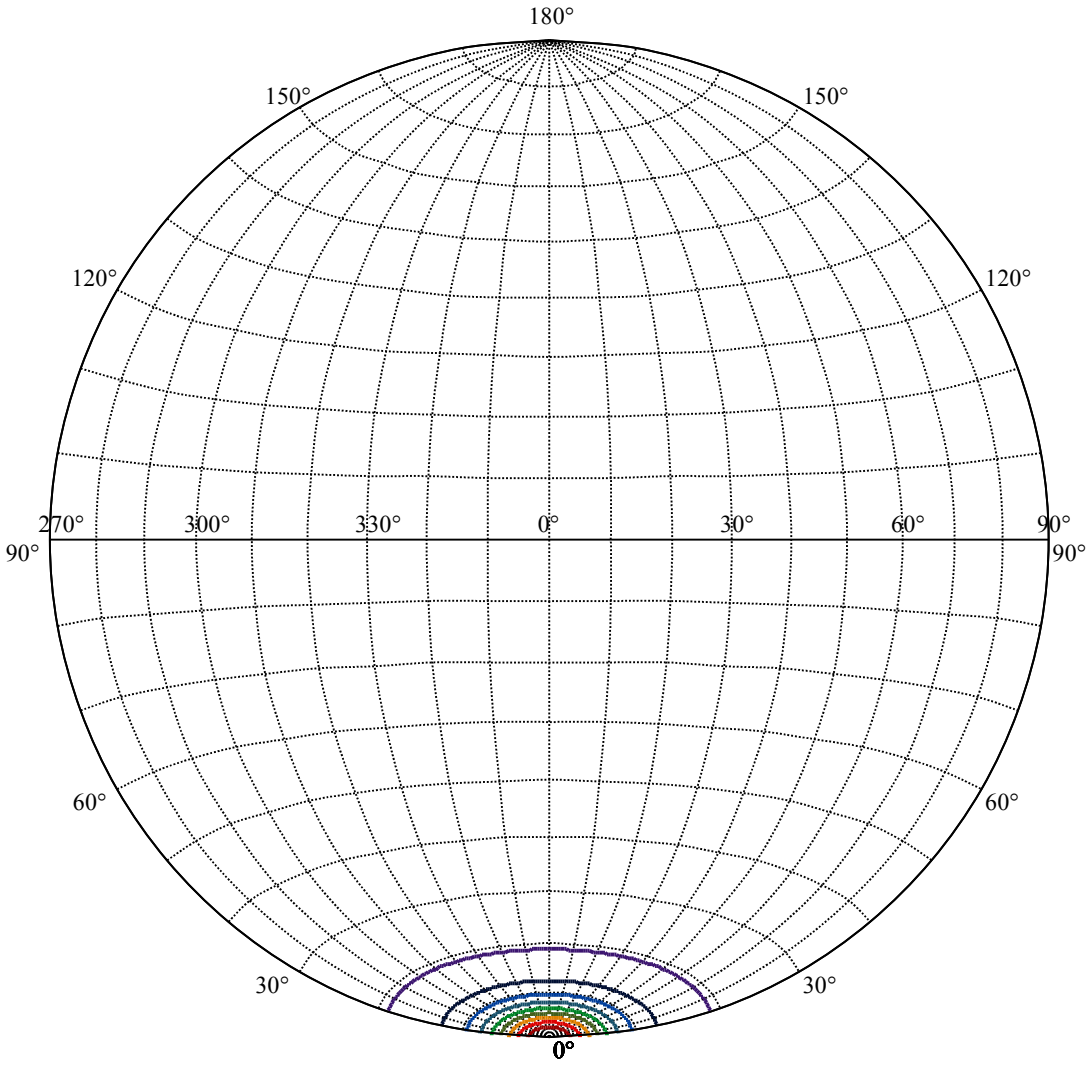


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:6321.46

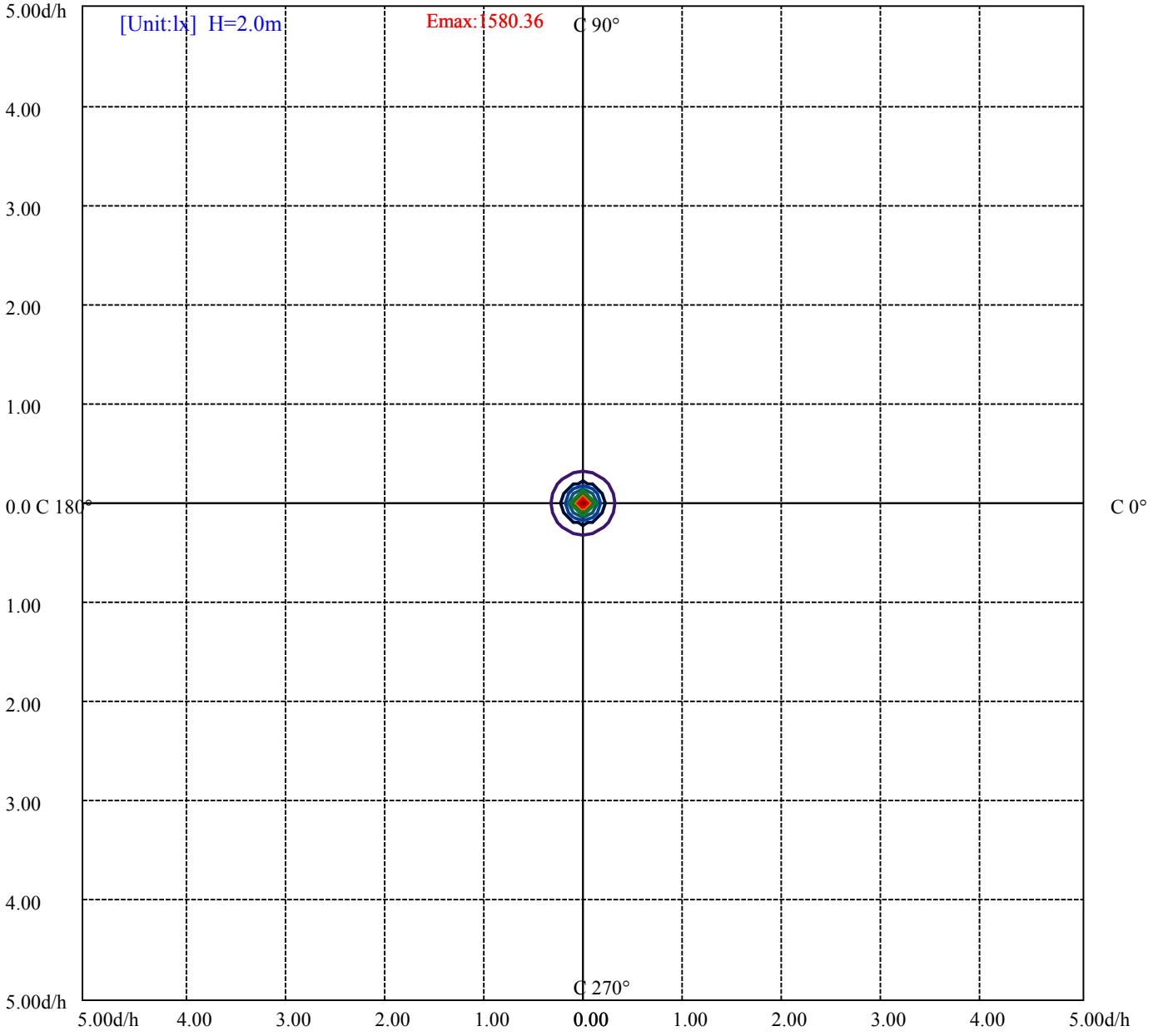
(10%Imax) 632.146
(20%Imax) 1264.29
(30%Imax) 1896.44
(40%Imax) 2528.58
(50%Imax) 3160.73
(60%Imax) 3792.87
(70%Imax) 4425.02
(80%Imax) 5057.17
(90%Imax) 5689.31

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO illuminance diagram

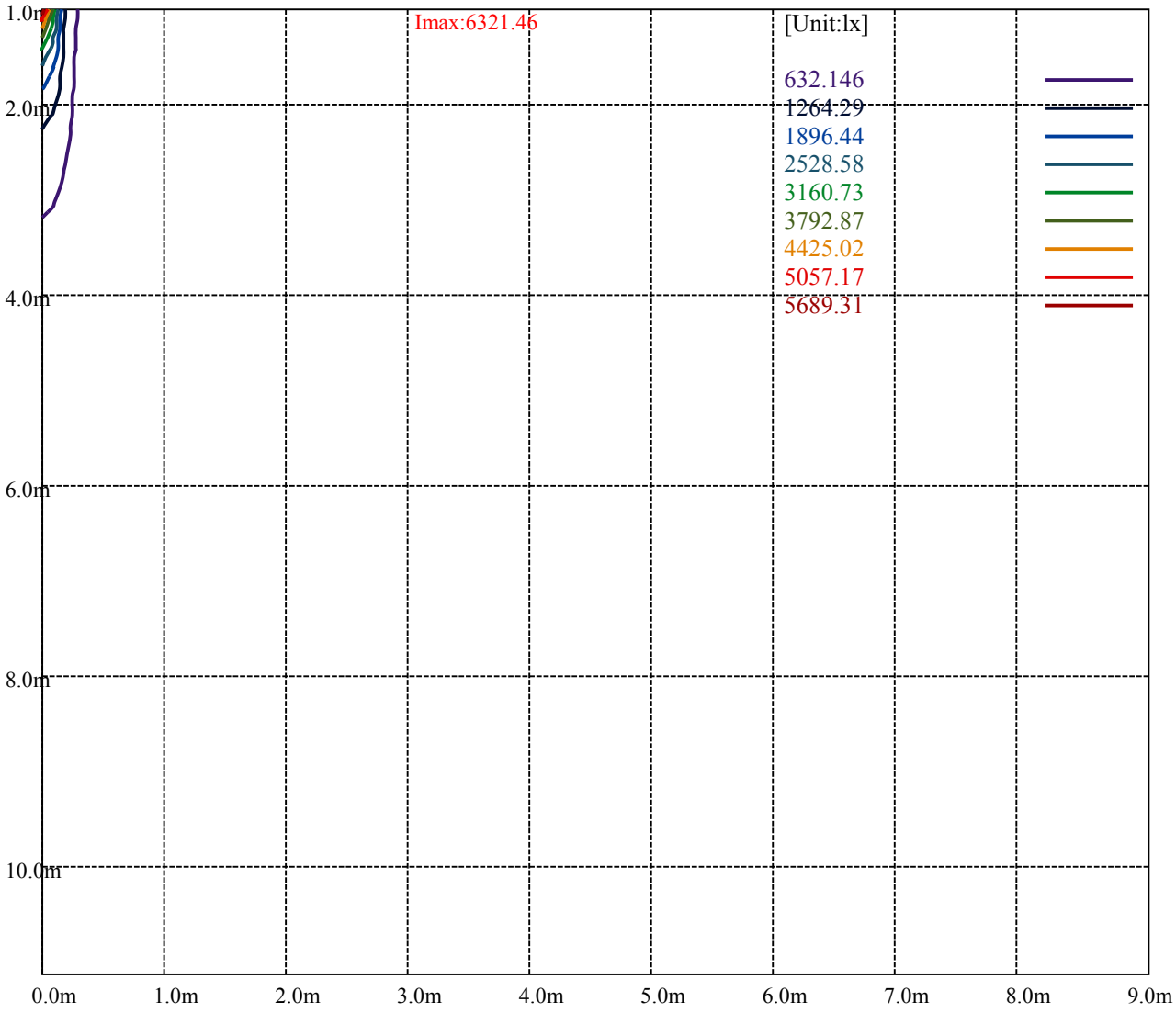


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Nata 2-1745-N

Luminance Limitting Curve(no luminous side)

Luminance Table

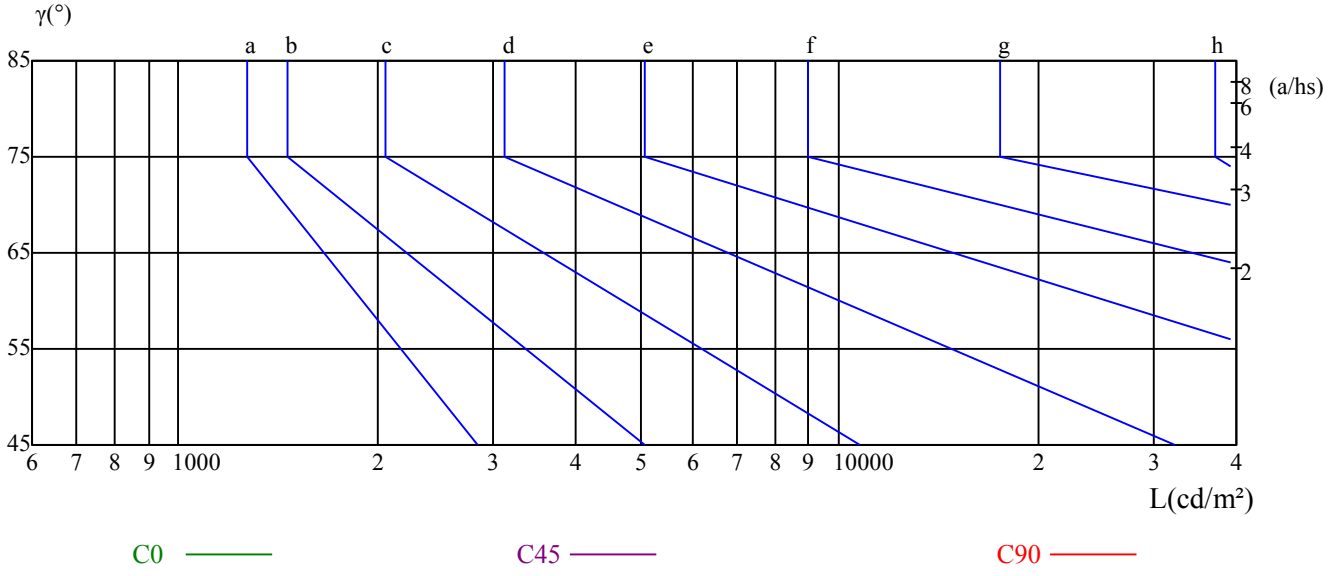
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

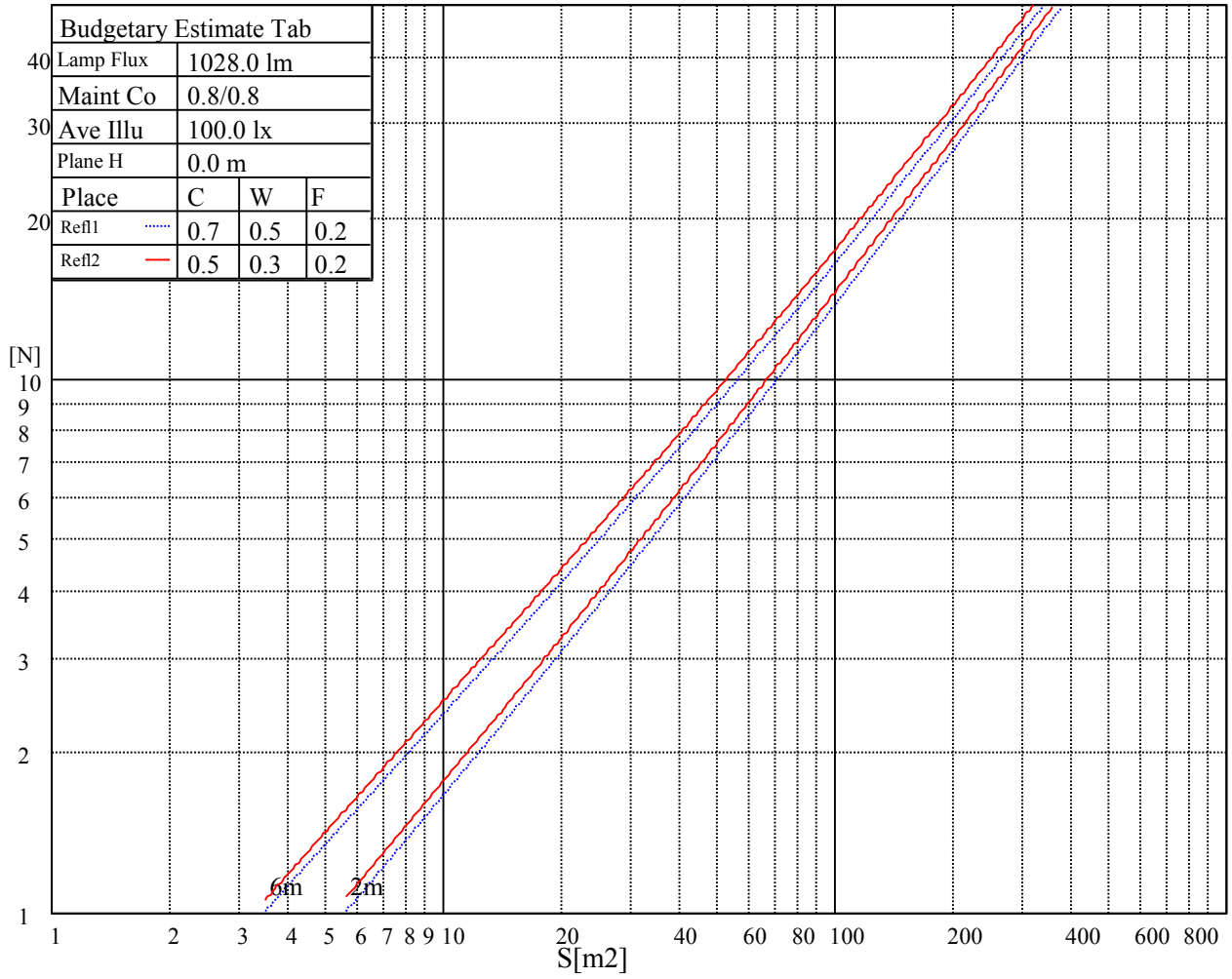


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Budgetary Estimate Table

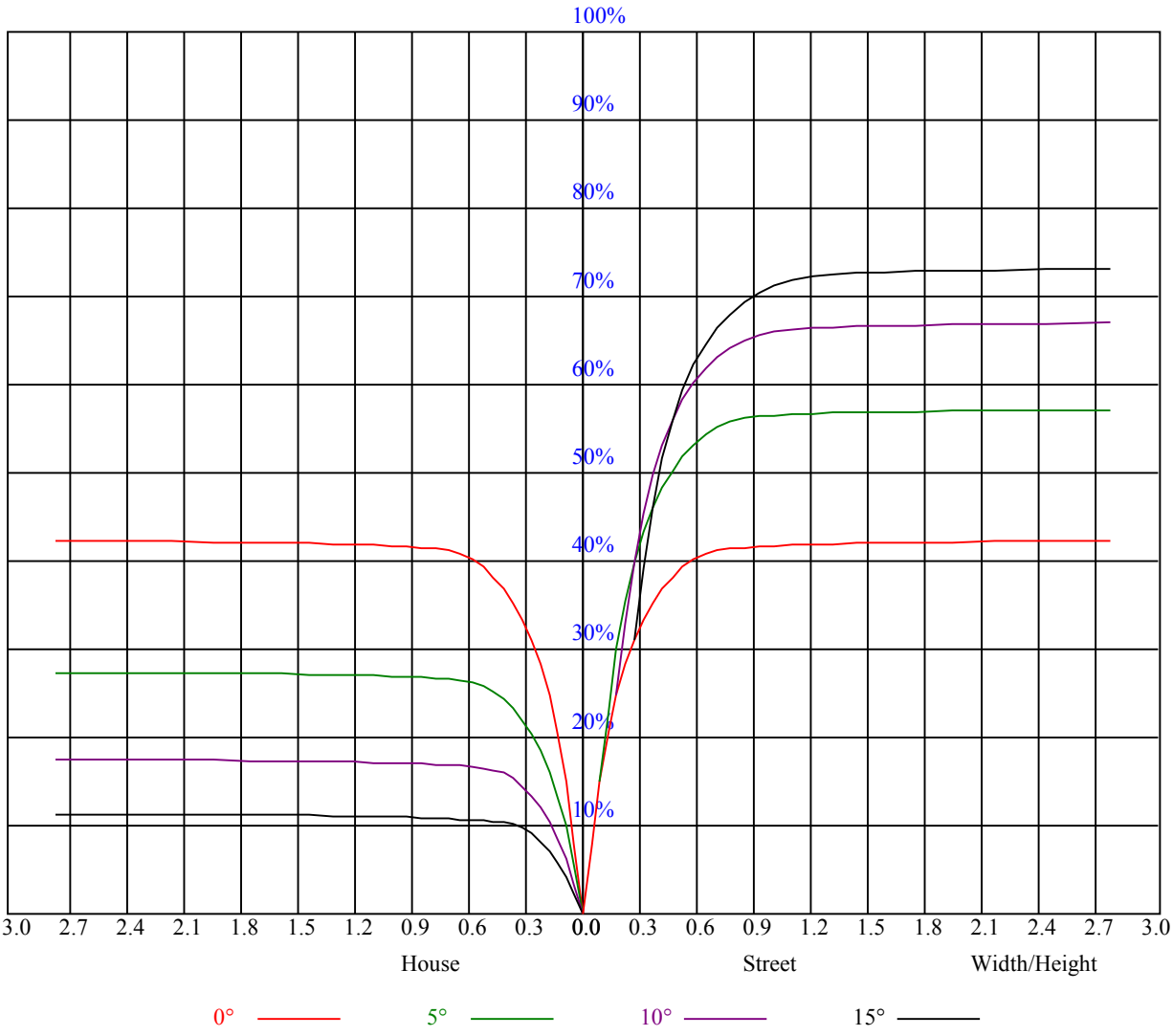


Equipment: GMS 1800 Date: 2020/4/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.95	0.94	0.92	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.81
2	0.90	0.88	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.81	0.80	0.79	0.78
3	0.86	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.75
4	0.82	0.78	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.78	0.75	0.73	0.76	0.74	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	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.70	0.67	0.65	0.64
8	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.64	0.61	0.59	0.58

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

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	6237.12	5889.56	5381.44	4750.82	4078.44	3446.42	2866.38	2361.05	1963.37
45.0	6478.88	6230.62	5792.58	5214.85	4542.47	3867.77	3355.94	2667.77	2284.95
90.0	6171.69	5692.81	5064.51	4376.35	3714.17	3099.79	2566.62	2126.71	1790.29
135.0	6398.14	6309.51	5981.44	5470.07	4835.74	4154.54	3500.71	2934.13	2449.68
180.0	6237.12	6364.27	6225.06	5854.76	5322.51	4690.96	4036.67	3413.01	3063.13
225.0	6478.88	6443.15	6154.06	5681.21	5078.89	4402.33	3723.91	3112.32	2582.39
270.0	6171.69	6461.71	6491.87	6246.40	5812.07	5484.46	4568.46	3894.22	3506.28
315.0	6398.14	6227.84	5841.76	5298.84	4643.63	3968.92	3338.30	2779.14	2300.72
360.0	6237.12	5889.56	5381.44	4750.82	4078.44	3446.42	2866.38	2361.05	1963.37

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1671.03	1454.33	1317.44	1143.89	895.17	895.17	837.86	754.15	681.62
45.0	1904.44	1618.60	1404.68	1240.87	1103.05	981.01	876.14	785.66	708.63
90.0	1545.28	1355.49	1208.39	1128.11	881.62	881.62	791.36	711.73	642.45
135.0	2062.68	1758.73	1528.11	1415.35	1256.65	1068.72	1000.04	895.63	804.22
180.0	2545.73	1982.40	1790.75	1539.25	1350.85	1200.96	1072.89	962.45	863.15
225.0	2144.81	1812.56	1556.88	1357.81	1193.54	1044.59	883.19	860.69	764.73
270.0	2710.47	2418.12	2017.20	1712.33	1481.71	1304.44	1157.81	1032.06	920.69
315.0	1927.64	1702.12	1483.56	1277.07	1160.13	879.53	879.53	821.43	735.96
360.0	1671.03	1454.33	1317.44	1143.89	895.17	895.17	837.86	754.15	681.62

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	618.93	564.40	516.84	477.82	444.22	414.80	388.91	367.28	349.60
45.0	639.95	577.77	523.48	474.29	438.56	407.93	392.62	359.21	336.01
90.0	580.13	527.61	485.15	447.10	420.18	398.28	380.97	363.90	349.28
135.0	725.33	655.26	593.55	538.33	489.60	451.09	421.39	399.12	379.63
180.0	779.16	708.16	648.30	590.30	538.79	493.78	455.73	424.64	399.58
225.0	689.14	617.21	558.97	504.40	457.77	423.06	393.64	369.37	343.06
270.0	820.92	735.54	658.05	591.69	536.47	490.99	454.34	423.71	404.68
315.0	661.94	599.21	544.64	497.12	457.40	426.12	401.11	388.91	363.52
360.0	618.93	564.40	516.84	477.82	444.22	414.80	388.91	367.28	349.60

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	334.75	317.96	292.76	255.82	231.41	185.80	120.56	95.92	63.25
45.0	324.87	299.81	287.75	258.05	243.66	236.70	148.21	110.63	77.59
90.0	333.41	313.13	294.75	238.98	192.85	162.78	118.98	68.26	52.95
135.0	363.85	349.93	336.47	316.98	296.10	251.09	251.09	148.86	103.15
180.0	387.05	361.53	352.25	339.72	314.66	294.24	250.16	250.16	142.55
225.0	324.96	310.35	299.35	286.63	261.90	233.69	188.44	156.24	114.94
270.0	378.70	362.46	350.86	334.15	322.09	296.56	258.51	249.70	231.60
315.0	353.92	337.26	320.23	300.74	270.16	227.01	181.25	137.59	97.03
360.0	334.75	317.96	292.76	255.82	231.41	185.80	120.56	95.92	63.25

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	44.13	35.96	29.14	24.22	21.07	18.56	16.52	14.99	13.83
45.0	54.34	42.92	35.03	28.91	24.83	21.72	19.16	17.22	16.01
90.0	39.63	32.20	26.26	22.41	19.58	17.35	15.59	14.29	13.22
135.0	66.59	45.66	36.43	29.70	24.55	21.30	18.75	16.75	15.13
180.0	99.49	64.83	44.59	36.01	29.09	24.04	20.88	18.38	17.08
225.0	80.65	53.69	40.46	33.41	27.38	23.43	20.65	18.47	16.75
270.0	123.48	84.22	54.57	40.09	32.76	26.59	22.37	20.60	17.35
315.0	65.06	44.32	35.96	29.42	24.22	20.93	18.56	16.61	15.03
360.0	44.13	35.96	29.14	24.22	21.07	18.56	16.52	14.99	13.83

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	12.81	11.97	11.28	10.67	10.07	9.51	9.10	8.91	8.72
45.0	14.76	13.69	13.09	12.30	11.51	10.86	10.39	9.93	9.51
90.0	12.34	11.60	10.95	10.39	9.79	9.33	9.05	8.82	8.68
135.0	13.83	12.81	12.11	11.60	10.95	10.07	9.74	9.23	8.91
180.0	14.80	13.55	12.90	12.06	11.42	10.77	10.16	9.61	9.14
225.0	15.41	14.34	13.55	12.81	12.06	11.65	10.77	10.35	10.12
270.0	15.68	14.80	13.64	12.76	11.93	11.18	10.53	9.98	9.47
315.0	13.83	13.09	12.06	11.28	10.77	10.12	9.65	9.23	8.96
360.0	12.81	11.97	11.28	10.67	10.07	9.51	9.10	8.91	8.72

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.54	8.40	7.75	7.56	7.33	7.05	6.82	6.64	6.45
45.0	9.47	9.28	8.68	8.31	8.07	7.80	7.52	7.19	6.87
90.0	8.58	8.35	7.89	7.61	7.38	7.15	6.91	6.64	6.45
135.0	8.72	8.58	8.40	7.93	7.70	7.42	7.19	7.01	6.77
180.0	8.82	8.58	8.54	8.31	7.80	7.52	7.33	7.15	6.91
225.0	9.70	9.65	9.51	9.19	8.54	8.17	7.84	7.61	7.38
270.0	9.14	8.86	8.63	8.45	8.17	7.80	7.52	7.19	7.01
315.0	8.68	8.45	8.26	7.80	7.47	7.29	7.10	6.91	6.68
360.0	8.54	8.40	7.75	7.56	7.33	7.05	6.82	6.64	6.45

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.22	5.89	5.71	5.48	5.20	4.87	4.55	4.36	4.13
45.0	6.73	6.31	6.17	5.89	5.52	5.29	4.97	4.73	4.45
90.0	6.17	5.94	5.61	5.38	5.15	4.83	4.45	4.27	4.08
135.0	6.50	6.31	6.08	5.85	5.57	5.29	5.15	4.83	4.41
180.0	6.64	6.40	6.17	5.94	5.71	5.61	5.29	5.01	4.78
225.0	7.01	6.73	6.45	6.17	5.85	5.57	5.29	5.01	4.69
270.0	6.82	6.59	6.31	6.17	5.94	5.75	5.43	5.20	5.01
315.0	6.50	6.26	5.99	5.75	5.57	5.34	4.92	4.83	4.45
360.0	6.22	5.89	5.71	5.48	5.20	4.87	4.55	4.36	4.13

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.90	3.62	3.53	3.29	3.11	2.97	2.64	2.55	2.37
45.0	4.18	3.94	3.76	3.53	3.29	3.11	2.92	2.69	2.46
90.0	3.90	3.57	3.43	3.20	3.02	2.88	2.60	2.41	2.27
135.0	4.32	4.08	3.85	3.67	3.43	3.25	3.02	2.92	2.64
180.0	4.45	4.18	3.99	3.76	3.57	3.34	3.16	2.97	2.78
225.0	4.36	4.18	3.99	3.81	3.62	3.34	3.16	2.97	2.78
270.0	4.64	4.36	4.18	3.94	3.71	3.43	3.29	3.11	2.88
315.0	4.27	4.04	3.81	3.57	3.39	3.20	3.06	2.78	2.60
360.0	3.90	3.62	3.53	3.29	3.11	2.97	2.64	2.55	2.37

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.18	2.00	1.86	1.72	1.62	1.48	1.39	1.35	1.30
45.0	2.27	2.09	1.86	1.76	1.58	1.44	1.35	1.25	1.25
90.0	2.04	1.90	1.81	1.62	1.44	1.44	1.30	1.25	1.21
135.0	2.41	2.32	2.04	1.90	1.81	1.62	1.48	1.44	1.35
180.0	2.55	2.37	2.18	2.00	1.81	1.67	1.58	1.48	1.39
225.0	2.55	2.32	2.13	2.00	1.76	1.67	1.48	1.35	1.30
270.0	2.64	2.51	2.27	2.13	2.00	1.76	1.62	1.48	1.39
315.0	2.46	2.32	2.13	1.90	1.76	1.67	1.58	1.48	1.39
360.0	2.18	2.00	1.86	1.72	1.62	1.48	1.39	1.35	1.30

Intensity data(cd)

C/γ(°)	90.0
0.0	1.30
45.0	1.21
90.0	1.16
135.0	1.25
180.0	1.25
225.0	1.21
270.0	1.35
315.0	1.30
360.0	1.30