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Sedna Lighting

LumCAT: SDTRF-0600

Luminaire:LED Recessed Retrofit Troffer Kit

Report No:ABR2015061006

Voltage(V): 230.0200

Test No:ABT2015061006

Current(A): 0.1200

LampCAT:

Power (W): 25.3800

Lamp flux(lm):3081.75

PF: 0.9230

Number of Lamps: 1

Ballast type:

Length(mm): 580

Width(mm): 515

Phm Type: C

Height(mm): 33

Photometric Results

Lumens(lm): 3081.75

Lumens(lm)/Power(W): 121.42

Central intensity(cd): 1004.081

Maximum intensity(cd): 1014.684

Angle of maximum intensity: $C=337.5$ $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=119.6

[C90/270]Total=119.4

Field angle(10%Imax): [C0/180]Total=156.6

[C90/270]Total=162.2

Maximum s/h(1/2): C0_180=1.29 C90_270=1.30

Maximum s/h(1/4): C0_180=1.41 C90_270=1.42

Up flux rate of LUM(%): 0.18%

Down flux rate of LUM(%): 99.82%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 78.286%

Equipment:
Temperature(°C): 25.0

Date: 2015-6-10
Humidity(%): 60.0%

Operator: Dana
Distance(m): 12.87

Sedna Lighting

Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)	Sum/Lum(%)
0.0	1010.646	.000	.000	.000%	.000%	.000%
5.0	1008.710	24.141	24.141	.783%	.783%	.783%
10.0	999.743	71.849	95.989	2.331%	3.115%	3.115%
15.0	982.204	117.568	213.557	3.815%	6.930%	6.930%
20.0	958.742	159.961	373.518	5.191%	12.120%	12.120%
25.0	927.545	197.837	571.355	6.420%	18.540%	18.540%
30.0	889.319	229.926	801.281	7.461%	26.001%	26.001%
35.0	844.289	255.286	1056.566	8.284%	34.285%	34.285%
40.0	791.277	272.882	1329.448	8.855%	43.139%	43.139%
45.0	729.216	281.532	1610.980	9.135%	52.275%	52.275%
50.0	660.652	280.843	1891.823	9.113%	61.388%	61.388%
55.0	583.743	270.573	2162.396	8.780%	70.168%	70.168%
60.0	498.614	250.184	2412.580	8.118%	78.286%	78.286%
65.0	407.385	220.250	2632.830	7.147%	85.433%	85.433%
70.0	309.789	181.593	2814.423	5.893%	91.325%	91.325%
75.0	212.990	136.646	2951.069	4.434%	95.759%	95.759%
80.0	102.794	84.495	3035.564	2.742%	98.501%	98.501%
85.0	22.064	33.927	3069.491	1.101%	99.602%	99.602%
90.0	2.091	6.614	3076.105	.215%	99.817%	99.817%
95.0	.580	.731	3076.837	.024%	99.840%	99.840%
100.0	.476	.287	3077.124	.009%	99.850%	99.850%
105.0	.559	.277	3077.401	.009%	99.859%	99.859%
110.0	.632	.311	3077.712	.010%	99.869%	99.869%
115.0	.704	.338	3078.050	.011%	99.880%	99.880%
120.0	.839	.375	3078.425	.012%	99.892%	99.892%
125.0	.890	.400	3078.825	.013%	99.905%	99.905%
130.0	.942	.398	3079.223	.013%	99.918%	99.918%
135.0	1.035	.400	3079.623	.013%	99.931%	99.931%
140.0	1.108	.397	3080.020	.013%	99.944%	99.944%
145.0	1.149	.377	3080.396	.012%	99.956%	99.956%
150.0	1.170	.342	3080.738	.011%	99.967%	99.967%
155.0	1.201	.300	3081.038	.010%	99.977%	99.977%
160.0	1.211	.253	3081.291	.008%	99.985%	99.985%
165.0	1.211	.200	3081.490	.006%	99.991%	99.991%
170.0	1.232	.145	3081.635	.005%	99.996%	99.996%
175.0	1.242	.089	3081.724	.003%	99.999%	99.999%
180.0	1.284	.030	3081.754	.001%	100.000%	100.000%

Equipment:
Temperature($^{\circ}\text{C}$): 25.0

Date: 2015-6-10
Humidity(%): 60.0%

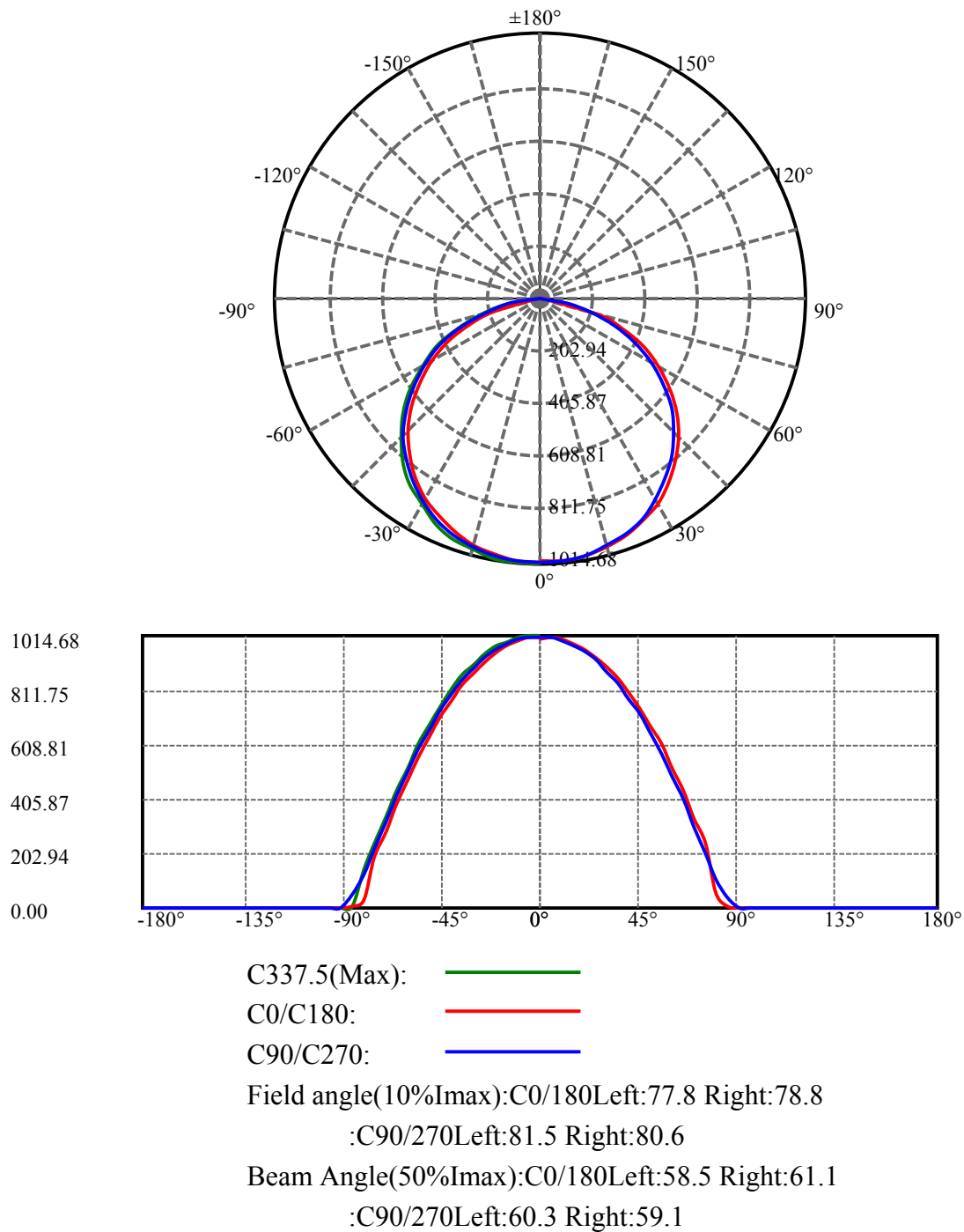
Operator: Dana
Distance(m): 12.87

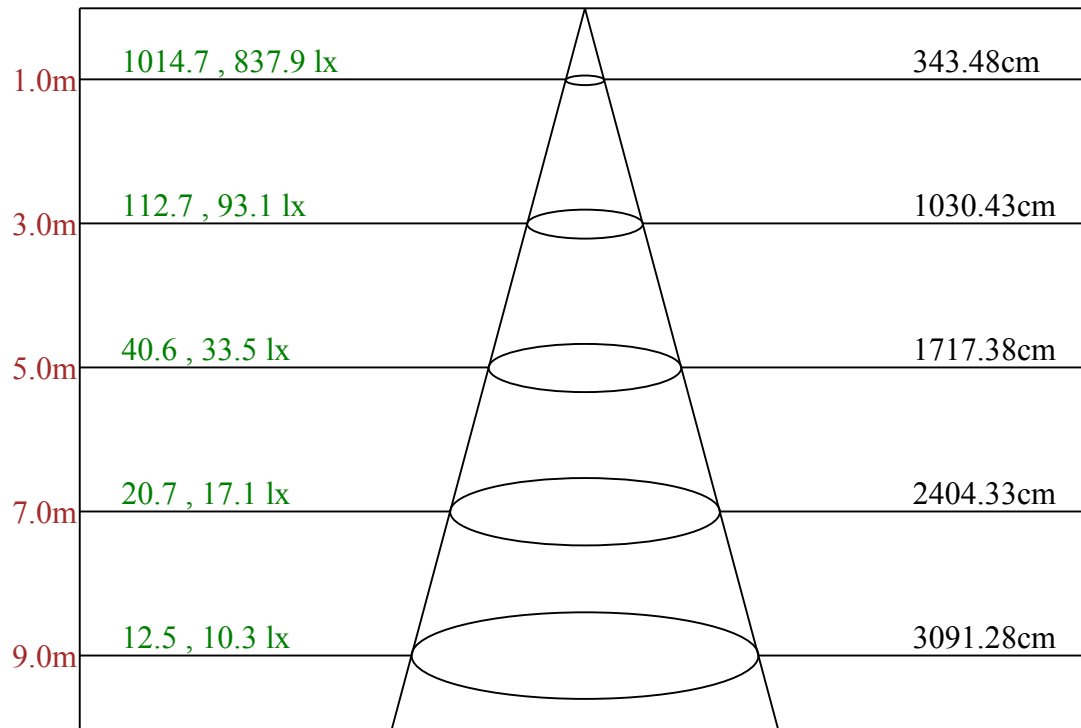
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	801.28	26.00%
0-40	1329.45	43.14%
0-60	2412.58	78.29%
0-90	3076.11	99.82%
0-120	3078.43	99.89%
0-180	3081.75	100.00%
60-90	913.71	29.65%
90-120	8.93	0.29%
90-130	9.73	0.32%
90-150	11.25	0.36%
90-180	12.23	0.40%
0-61.20	2465.40	80.00%

ZONAL LUMEN SUMMARY

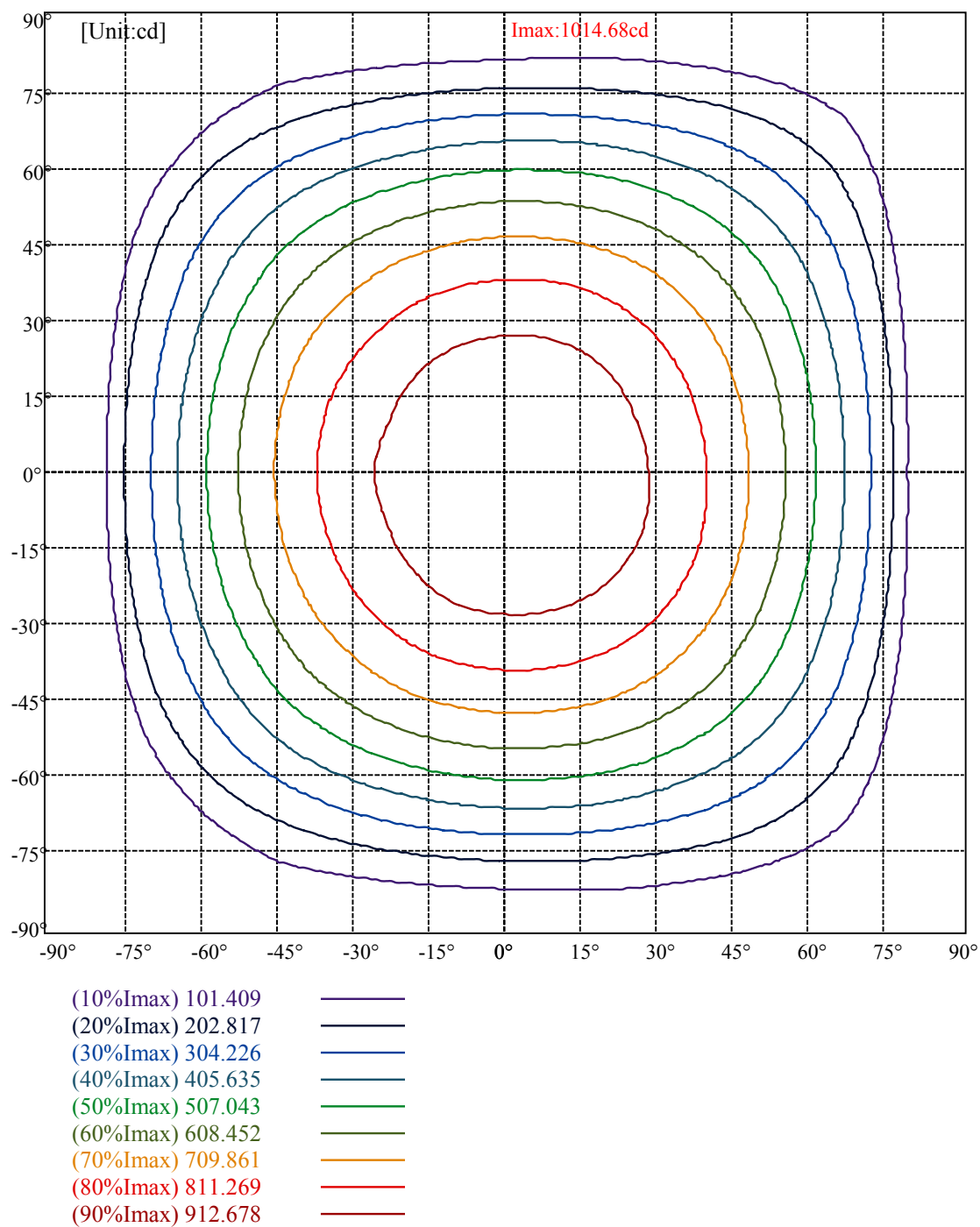
0-10	95.99
10-20	277.53
20-30	427.76
30-40	528.17
40-50	562.37
50-60	520.76
60-70	401.84
70-80	221.14
80-90	40.54
90-100	1.02
100-110	0.59
110-120	0.71
120-130	0.80
130-140	0.80
140-150	0.72
150-160	0.55
160-170	0.34
170-180	0.09

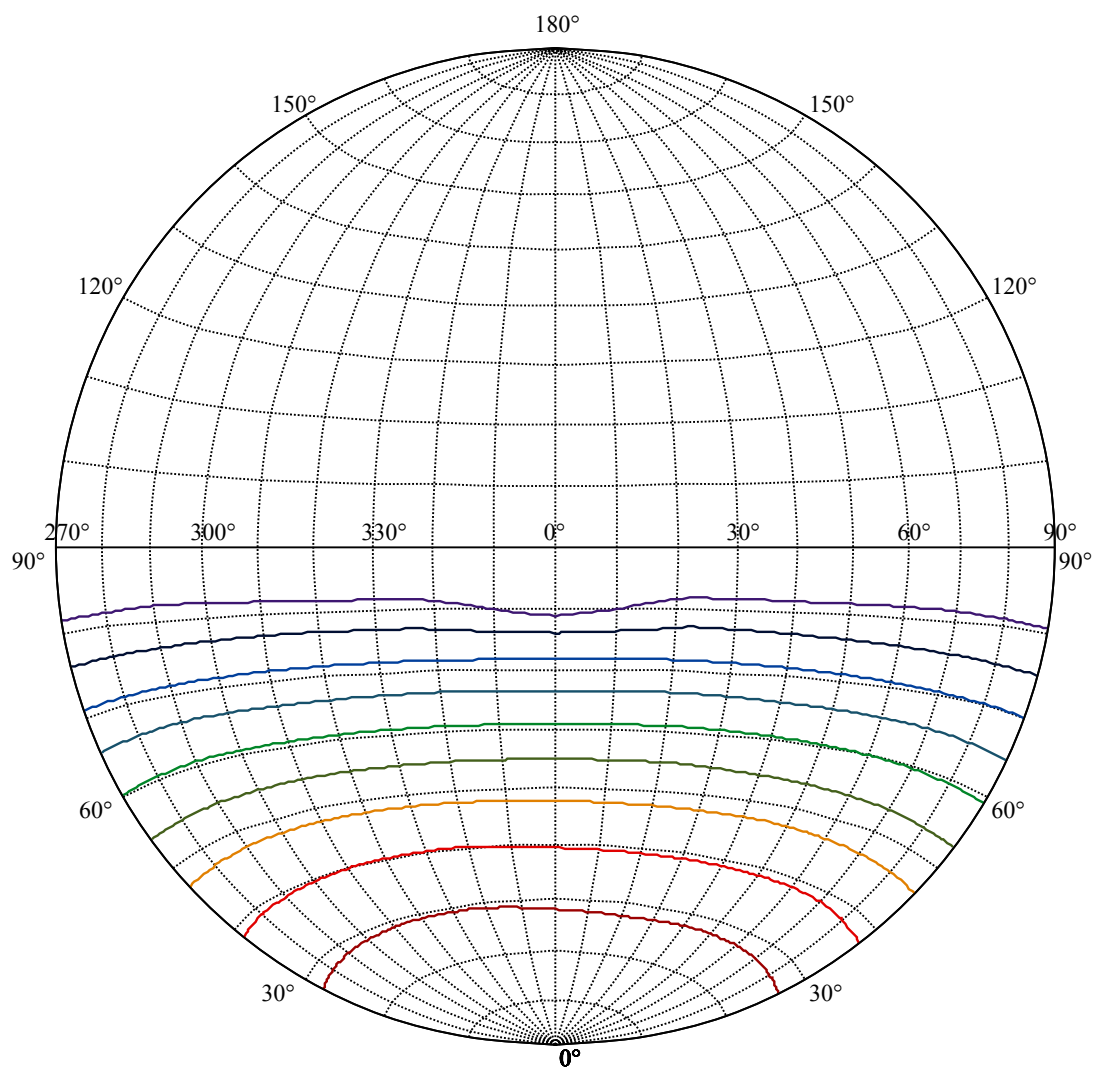




Max , Ave

Beam angle of C337.5plane119.44





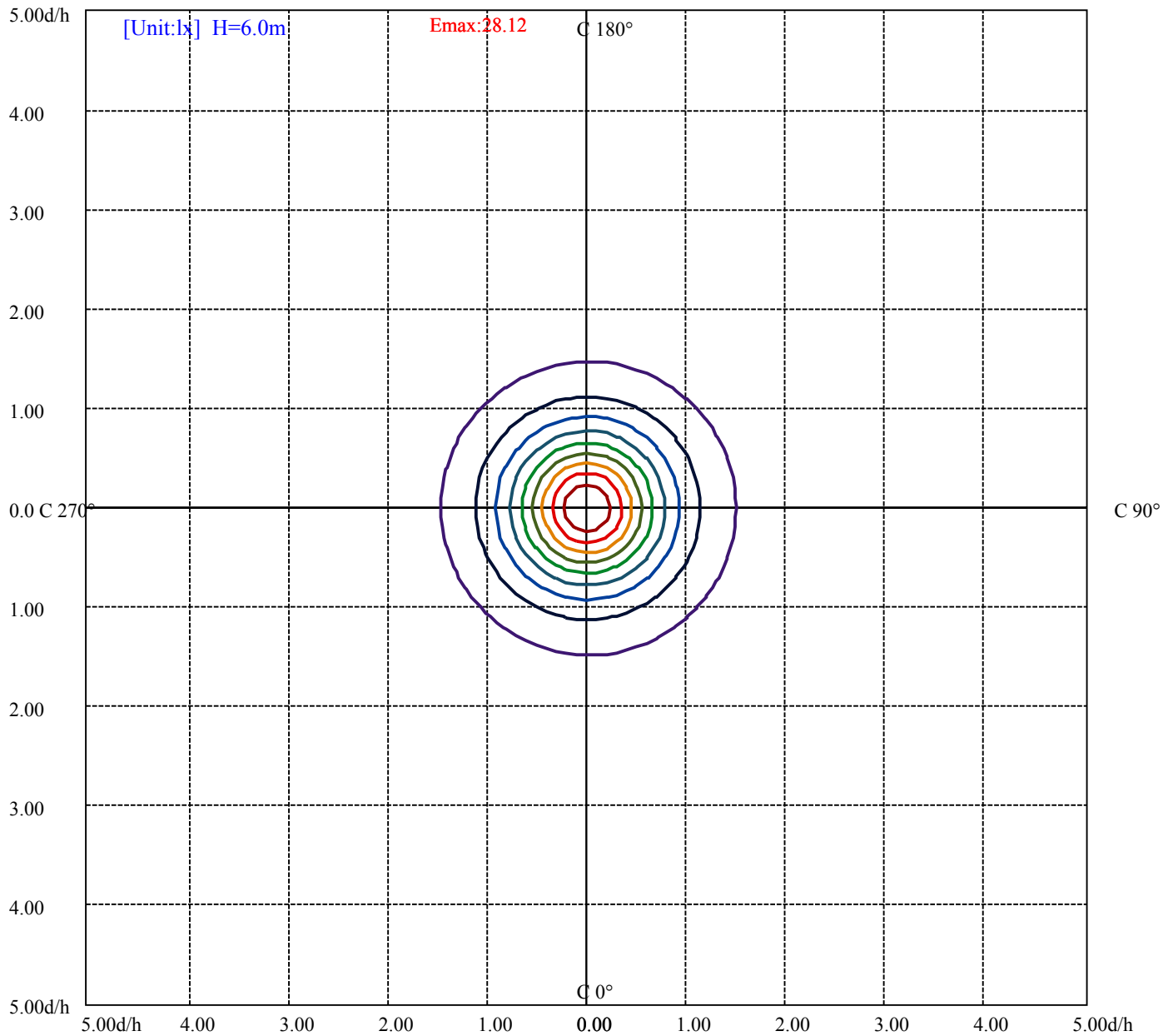
House

[Unit:cd]

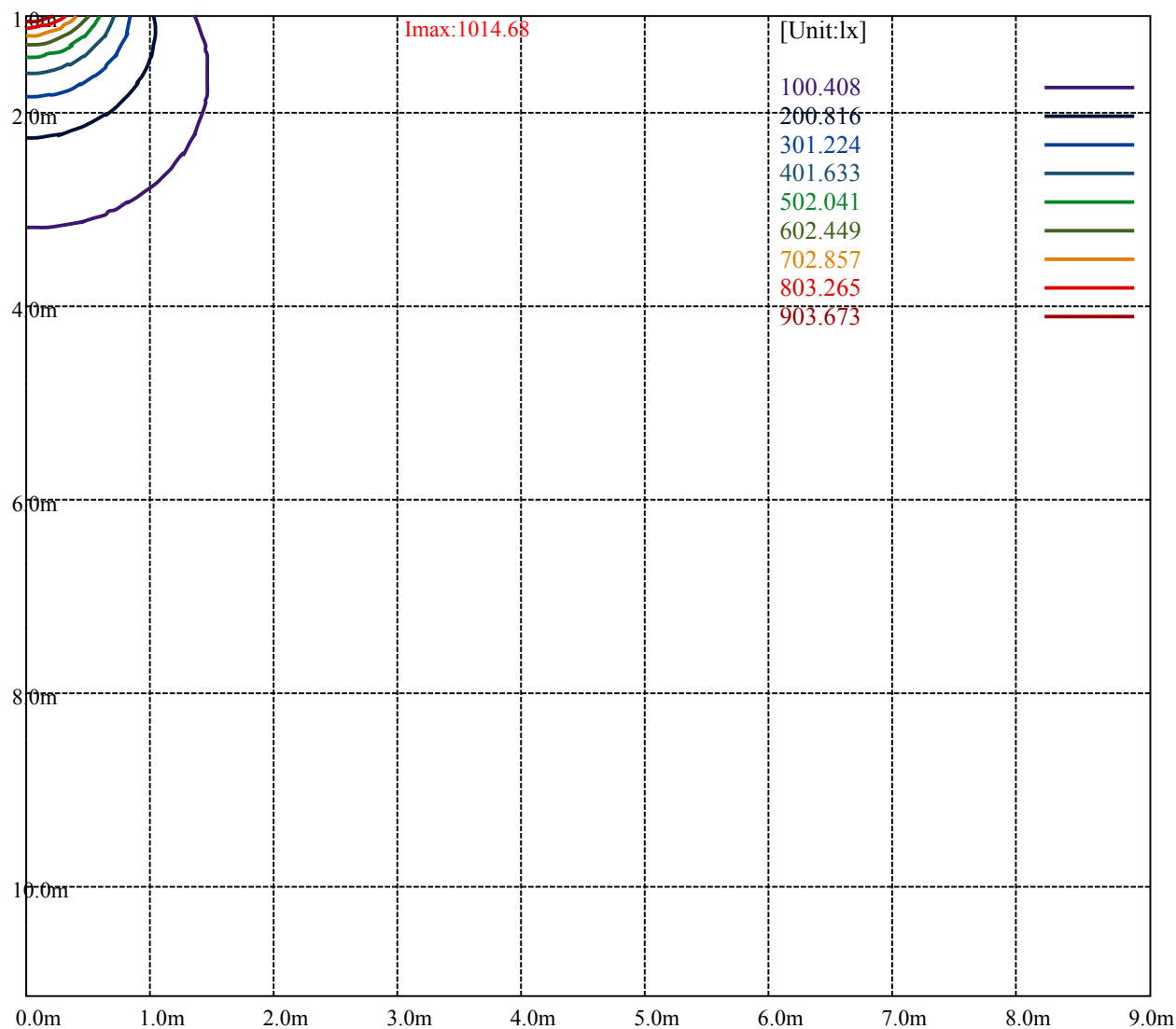
Road

Imax:1014.68

(10%Imax)	101.46	—
(20%Imax)	202.921	—
(30%Imax)	304.381	—
(40%Imax)	405.841	—
(50%Imax)	507.301	—
(60%Imax)	608.762	—
(70%Imax)	710.222	—
(80%Imax)	811.682	—
(90%Imax)	913.142	—



(10%Emax)	2.812111	—
(20%Emax)	5.62425	—
(30%Emax)	8.436361	—
(40%Emax)	11.2485	—
(50%Emax)	14.06061	—
(60%Emax)	16.87275	—
(70%Emax)	19.68486	—
(80%Emax)	22.49697	—
(90%Emax)	25.30911	—



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Luminance Limiting Curve(no luminous side)

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Luminance Table

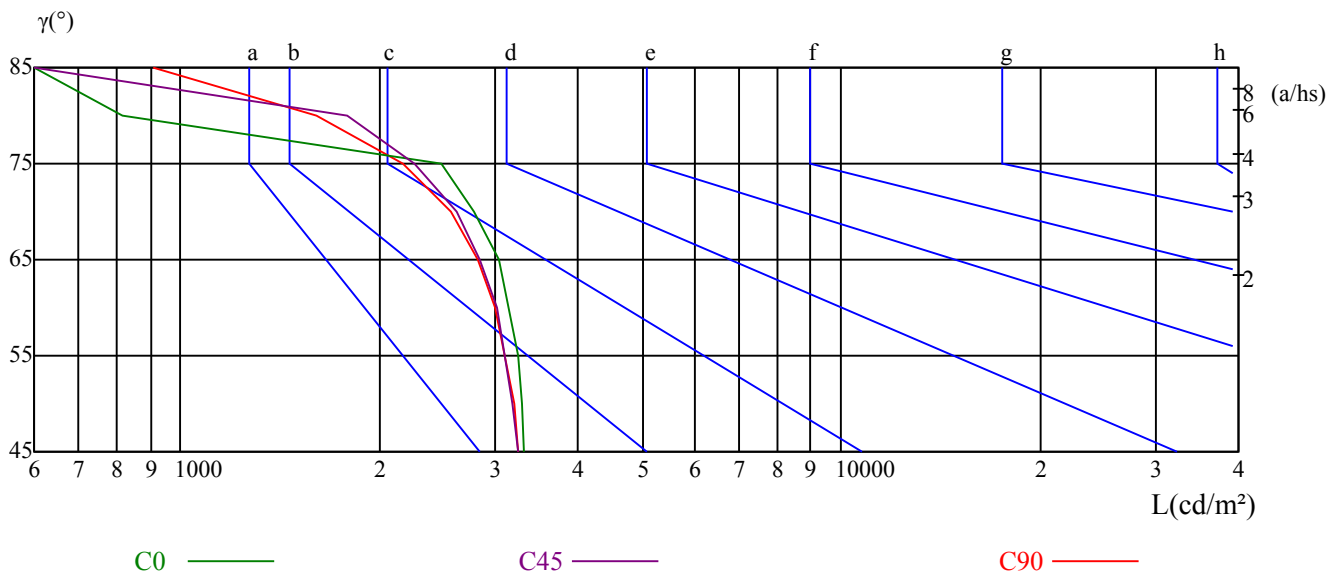
γ	45	50	55	60	65	70	75	80	85
C0	3319	3297	3254	3146	3025	2789	2488	815	77
C45	3238	3182	3101	3008	2830	2619	2256	1787	479
C90	3243	3199	3101	2991	2826	2565	2171	1606	906

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
3247	3243	3216	2768	2761	2741	130	1686	636

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 Limiting Curve

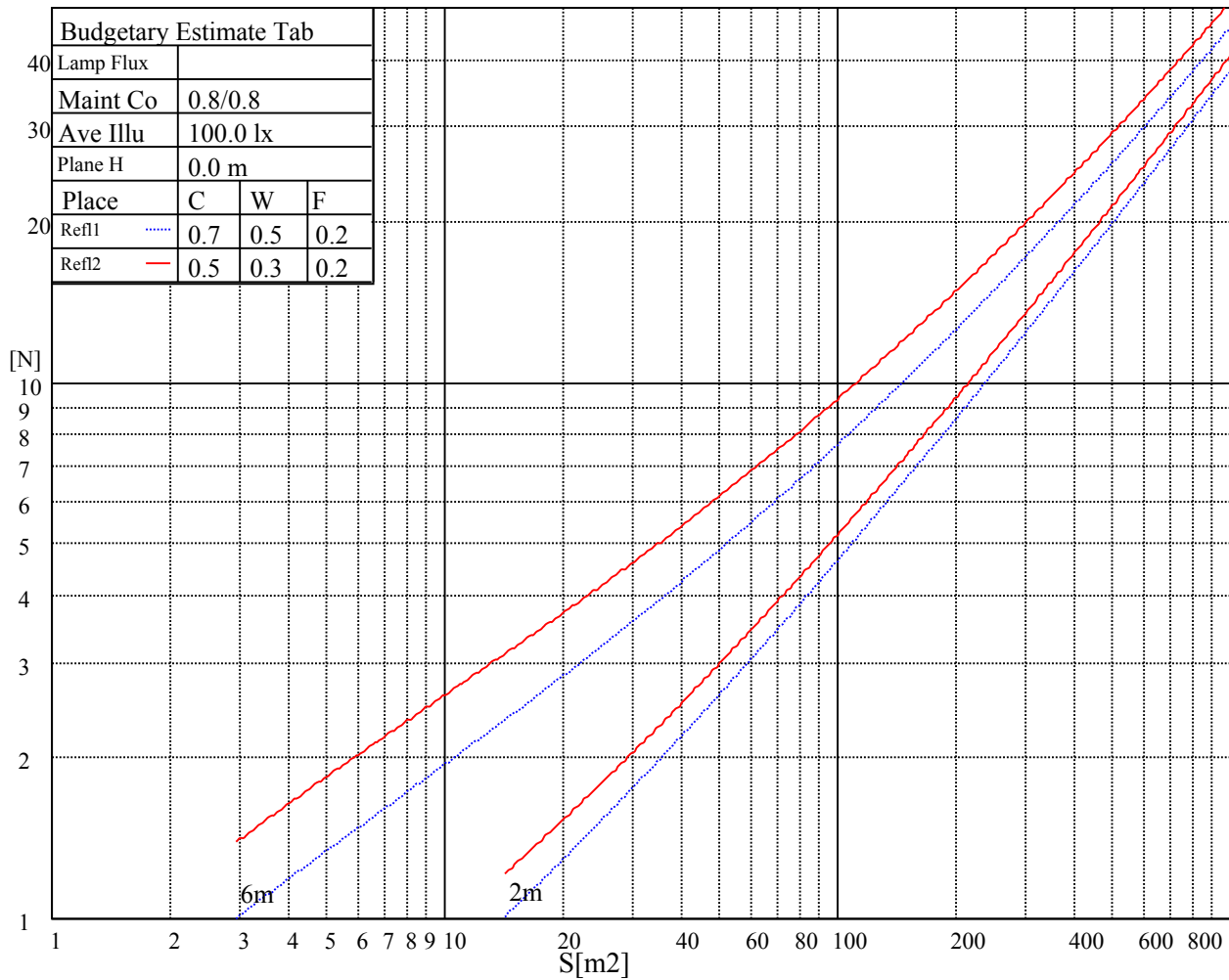


Equipment:
Temperature($^{\circ}$ C): 25.0

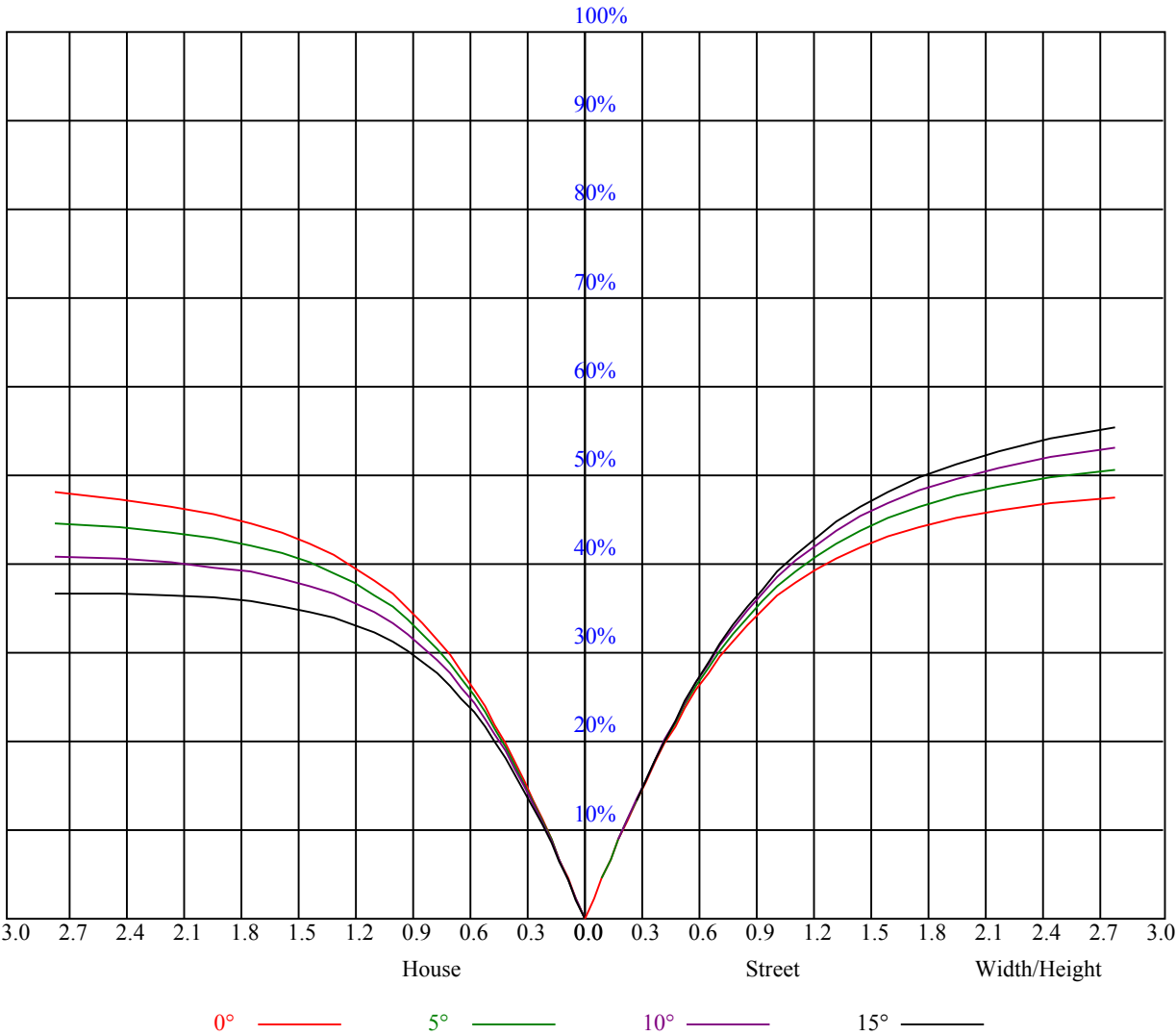
Date: 2015-6-10
Humidity(%): 60.0%

Operator: Dana
Distance(m): 12.87

Illuminatin 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	11.0	12.4	11.3	12.7	12.9	11.3	12.7	11.6	12.9	13.2
	3H	12.6	13.9	13.0	14.1	14.4	13.0	14.2	13.3	14.5	14.8
	4H	13.0	14.1	13.4	14.4	14.8	13.5	14.5	13.9	14.9	15.2
	6H	13.5	14.5	13.8	14.8	15.2	13.8	14.9	14.2	15.2	15.5
	8H	13.6	14.6	14.0	15.0	15.3	13.8	14.9	14.2	15.2	15.6
	12H	13.5	14.3	13.9	14.7	15.1	13.7	14.5	14.1	14.9	15.3
4H	2H	11.6	12.7	12.0	13.0	13.3	11.8	12.9	12.2	13.2	13.5
	3H	13.4	14.2	13.8	14.6	15.0	13.7	14.5	14.1	14.9	15.3
	4H	14.1	14.9	14.5	15.3	15.7	14.5	15.3	15.0	15.7	16.1
	6H	14.6	15.4	15.1	15.8	16.2	15.0	15.8	15.4	16.2	16.6
	8H	14.6	15.1	15.1	15.6	16.1	14.9	15.4	15.4	15.8	16.4
	12H	14.7	15.2	15.2	15.7	16.2	14.9	15.4	15.4	15.9	16.4
8H	4H	14.4	14.8	14.9	15.3	15.8	14.8	15.2	15.3	15.7	16.2
	6H	15.0	15.5	15.5	15.9	16.5	15.4	15.8	15.9	16.3	16.8
	8H	15.2	15.7	15.7	16.2	16.7	15.5	15.9	16.0	16.4	16.9
	12H	15.4	15.8	15.9	16.3	16.8	15.5	16.0	16.0	16.5	17.0
12H	4H	14.4	14.9	14.9	15.4	15.9	14.8	15.2	15.3	15.7	16.2
	6H	15.1	15.6	15.6	16.0	16.5	15.4	15.9	15.9	16.4	16.9
	8H	15.3	15.8	15.8	16.3	16.8	15.6	16.0	16.1	16.5	17.0
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.6					0.3/-0.6				
S = 1.5H		0.6/-0.6					0.7/-0.6				
S = 2.0H		0.9/-0.8					0.9/-0.7				
Standard tables:		BK3					BK3				
Uncorrected UGR		2.1					2.3				



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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.04	1.00	0.96	1.02	0.98	0.94	0.97	0.94	0.91	0.93	0.91	0.88	0.90	0.88	0.86	0.84
2	0.90	0.83	0.78	0.88	0.82	0.77	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.75	0.71	0.69
3	0.79	0.71	0.64	0.77	0.70	0.64	0.74	0.68	0.62	0.72	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.54	0.68	0.60	0.54	0.66	0.59	0.53	0.63	0.57	0.52	0.61	0.56	0.51	0.49
5	0.62	0.53	0.46	0.61	0.52	0.46	0.59	0.51	0.45	0.57	0.50	0.45	0.55	0.49	0.44	0.42
6	0.56	0.47	0.40	0.55	0.46	0.40	0.53	0.45	0.40	0.51	0.44	0.39	0.50	0.44	0.39	0.37
7	0.51	0.42	0.35	0.50	0.41	0.35	0.48	0.41	0.35	0.47	0.40	0.35	0.45	0.39	0.34	0.32
8	0.46	0.37	0.31	0.45	0.37	0.31	0.44	0.36	0.31	0.43	0.36	0.31	0.41	0.35	0.31	0.29
9	0.42	0.34	0.28	0.42	0.34	0.28	0.40	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28	0.26
10	0.39	0.31	0.26	0.38	0.31	0.25	0.37	0.30	0.25	0.36	0.30	0.25	0.35	0.29	0.25	0.23



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Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1004.08	1007.73	1000.11	984.04	962.83	934.67	900.38	856.48	806.61
22.5	1005.24	1004.91	998.12	981.05	959.02	930.86	895.24	853.00	802.14
45.0	1012.36	1009.71	1003.25	984.86	963.83	933.51	896.90	852.33	799.16
67.5	1012.53	1010.71	1001.27	987.02	964.49	931.85	894.08	847.70	796.84
90.0	1010.05	1006.07	997.12	977.91	954.88	925.23	884.97	839.41	784.58
112.5	1013.19	1010.71	1000.93	984.70	953.55	922.58	882.48	834.44	776.96
135.0	1012.36	1007.23	995.63	973.27	948.09	914.29	871.39	825.50	768.84
157.5	1012.86	1006.07	990.66	973.27	945.60	908.99	869.89	827.65	772.98
180.0	1009.05	1005.90	993.48	975.26	951.57	915.95	877.18	829.14	776.30
202.5	1005.24	1002.92	990.17	971.78	945.44	912.30	871.39	826.66	772.48
225.0	1012.36	1009.88	998.78	977.91	949.91	918.60	879.83	833.45	779.61
247.5	1012.53	1011.70	1004.08	988.34	960.35	930.03	892.92	844.55	791.20
270.0	1010.05	1007.40	1000.11	983.70	962.00	933.34	896.07	849.35	797.50
292.5	1013.19	1012.70	1005.57	990.50	970.95	939.14	902.53	857.64	805.45
315.0	1012.36	1011.04	1006.57	989.67	967.97	942.12	907.33	864.10	813.24
337.5	1012.86	1014.68	1010.05	991.99	979.40	947.26	906.51	867.24	816.55
360.0	1004.08	1007.73	1000.11	984.04	962.83	934.67	900.38	856.48	806.61
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	745.98	681.37	608.48	522.00	434.37	335.14	238.39	57.65	3.48
22.5	743.00	677.56	607.65	526.48	434.53	340.77	244.85	151.25	20.54
45.0	742.50	673.25	596.22	515.87	422.77	330.50	230.11	137.67	24.68
67.5	732.06	664.97	585.45	503.45	415.15	313.43	216.19	124.41	48.37
90.0	723.95	655.86	574.52	490.69	400.24	303.00	203.43	110.17	38.93
112.5	713.34	642.77	563.25	477.27	383.67	288.09	192.33	102.88	22.03
135.0	707.55	638.30	561.93	473.80	380.69	280.80	184.55	97.74	5.30
157.5	709.70	638.46	561.60	470.98	378.04	282.12	187.03	33.13	3.81
180.0	709.20	640.29	560.77	476.28	385.50	283.95	189.52	29.82	3.31
202.5	707.05	637.80	558.61	470.48	376.88	277.15	184.71	32.47	4.14
225.0	713.51	646.25	569.88	479.92	389.31	288.42	193.16	103.37	7.95
247.5	728.09	658.84	578.99	493.01	400.74	306.31	207.24	115.14	27.83
270.0	738.86	668.45	594.89	510.24	418.46	321.05	223.48	123.75	48.87
292.5	746.48	679.22	601.36	520.35	431.39	329.83	232.92	135.84	58.15
315.0	755.09	681.87	607.15	522.33	430.89	335.96	239.71	144.13	28.33
337.5	751.11	685.18	609.14	524.65	435.53	340.11	240.21	145.29	7.29
360.0	745.98	681.37	608.48	522.00	434.37	335.14	238.39	57.65	3.48
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	2.32	0.50	0.50	0.66	0.66	0.66	0.83	0.83	0.99
22.5	2.65	0.66	0.66	0.83	0.66	0.83	0.83	0.99	0.99
45.0	3.15	0.83	0.33	0.50	0.66	0.66	0.83	0.83	0.83
67.5	3.15	0.66	0.50	0.66	0.83	0.66	0.83	0.83	0.99
90.0	0.66	0.50	0.50	0.50	0.66	0.66	0.83	0.99	0.99
112.5	1.49	0.66	0.50	0.50	0.66	0.66	0.83	0.83	0.99
135.0	1.66	0.66	0.50	0.66	0.66	0.66	0.99	0.99	0.99
157.5	1.49	0.66	0.66	0.66	0.66	0.83	0.99	0.99	0.99
180.0	1.66	0.66	0.83	0.83	0.83	0.99	0.99	0.99	1.16
202.5	1.16	0.50	0.50	0.50	0.66	0.66	0.83	0.83	0.99
225.0	1.66	0.50	0.33	0.50	0.66	0.66	0.83	0.83	0.99
247.5	1.82	0.50	0.33	0.50	0.50	0.66	0.83	0.83	0.83
270.0	0.50	0.33	0.33	0.50	0.50	0.66	0.83	0.99	0.83
292.5	3.81	0.50	0.33	0.33	0.50	0.66	0.66	0.83	0.83
315.0	3.31	0.66	0.33	0.33	0.50	0.66	0.66	0.83	0.83
337.5	2.98	0.50	0.50	0.50	0.50	0.66	0.83	0.83	0.83
360.0	2.32	0.50	0.50	0.66	0.66	0.66	0.83	0.83	0.99

Equipment:
Temperature(°C): 25.0Date: 2015-6-10
Humidity(%): 60.0%Operator: Dana
Distance(m): 12.87

Sedna Lighting

Intensity data(cd)									Page: 16 Total:16
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	1.16	1.16	1.16	1.16	1.16	1.16	1.33	1.33	1.33
22.5	1.16	1.16	1.16	1.16	1.33	1.16	1.16	1.33	1.33
45.0	1.16	1.16	1.16	1.16	1.16	1.33	1.16	1.33	1.16
67.5	0.99	1.16	1.16	1.16	1.33	1.16	1.33	1.16	1.16
90.0	0.99	1.16	1.16	1.33	1.33	1.16	1.16	1.16	1.33
112.5	0.99	1.16	1.33	1.33	1.16	1.33	1.33	1.33	1.16
135.0	0.99	1.16	1.33	1.33	1.16	1.16	1.16	1.33	1.16
157.5	1.16	1.33	1.16	1.16	1.33	1.33	1.33	1.16	1.33
180.0	1.16	1.33	1.33	1.49	1.33	1.49	1.33	1.33	1.33
202.5	0.99	0.99	1.16	1.16	0.99	1.16	1.16	1.16	1.33
225.0	0.99	0.99	1.16	1.16	1.16	1.16	1.33	1.16	1.33
247.5	0.99	0.99	0.99	0.99	1.16	1.16	1.16	1.33	1.16
270.0	0.99	0.99	1.16	0.99	1.16	1.16	1.16	1.16	1.16
292.5	0.99	0.99	0.99	0.99	0.99	1.16	1.16	1.16	1.16
315.0	0.99	0.99	0.99	0.99	1.33	1.16	0.99	1.16	1.16
337.5	0.83	0.99	0.99	1.16	1.16	1.16	1.16	1.16	1.33
360.0	1.16	1.16	1.16	1.16	1.16	1.16	1.33	1.33	1.33
C/γ(°)	180.0								
0.0	1.49								
22.5	1.16								
45.0	1.33								
67.5	1.33								
90.0	1.33								
112.5	1.16								
135.0	1.33								
157.5	1.16								
180.0	1.49								
202.5	1.16								
225.0	1.33								
247.5	1.33								
270.0	1.33								
292.5	1.16								
315.0	1.33								
337.5	1.16								
360.0	1.49								