



BELL-Southcn Testing Laboratory(Shenzhen)
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Address:Junxiangda Building, West of Zhongshan Park Road, Nanshan District, Shenzhen, Guangdong, China

Sedna Lighting

LumCAT: SDPL0312

Luminaire:LED Panel Light

Report No:BST20150523044

Test No:BST50523044

LampCAT:

Lamp flux(lm):3591.01

Number of Lamps: 1

Length(mm): 1200

Phm Type: C

Voltage(V): 229.9900

Current(A): 0.2120

Power (W): 44.9600

PF: 0.9230

Ballast type:

Width(mm): 295

Height(mm): 14

Photometric Results

Lumens(lm): 3591.01

Lumens(lm)/Power(W): 79.85

Central intensity(cd): 1464.695

Maximum intensity(cd): 1478.021

Angle of maximum intensity: C=180.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=94.6

[C90/270]Total=108.4

Field angle(10%Imax): [C0/180]Total=149.2

[C90/270]Total=160.7

Maximum s/h(1/2): C0_180=1.18 C90_270=1.23

Maximum s/h(1/4): C0_180=1.29 C90_270=1.35

Up flux rate of LUM(%): 0.54%

Down flux rate of LUM(%): 99.46%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 82.391%

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00



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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	1465.209	.000	.000	.000%	.000%	.000%
5.0	1455.325	34.914	34.914	.972%	.972%	.972%
10.0	1424.741	103.029	137.943	2.869%	3.841%	3.841%
15.0	1376.752	166.183	304.126	4.628%	8.469%	8.469%
20.0	1313.110	221.682	525.808	6.173%	14.642%	14.642%
25.0	1237.073	267.467	793.275	7.448%	22.091%	22.091%
30.0	1150.417	302.139	1095.414	8.414%	30.504%	30.504%
35.0	1055.530	324.841	1420.255	9.046%	39.550%	39.550%
40.0	953.134	335.130	1755.386	9.332%	48.883%	48.883%
45.0	844.260	332.802	2088.188	9.268%	58.150%	58.150%
50.0	733.082	318.725	2406.913	8.876%	67.026%	67.026%
55.0	617.079	293.570	2700.483	8.175%	75.201%	75.201%
60.0	499.827	258.170	2958.652	7.189%	82.391%	82.391%
65.0	385.012	215.106	3173.758	5.990%	88.381%	88.381%
70.0	274.177	166.911	3340.669	4.648%	93.029%	93.029%
75.0	173.815	117.098	3457.767	3.261%	96.290%	96.290%
80.0	90.625	70.757	3528.523	1.970%	98.260%	98.260%
85.0	31.649	33.225	3561.748	.925%	99.185%	99.185%
90.0	3.797	9.706	3571.454	.270%	99.455%	99.455%
95.0	1.029	1.321	3572.775	.037%	99.492%	99.492%
100.0	1.421	.666	3573.441	.019%	99.511%	99.511%
105.0	2.021	.921	3574.362	.026%	99.536%	99.536%
110.0	2.462	1.172	3575.533	.033%	99.569%	99.569%
115.0	2.964	1.374	3576.907	.038%	99.607%	99.607%
120.0	3.283	1.519	3578.426	.042%	99.650%	99.650%
125.0	3.711	1.617	3580.042	.045%	99.695%	99.695%
130.0	3.870	1.649	3581.691	.046%	99.740%	99.740%
135.0	4.030	1.596	3583.287	.044%	99.785%	99.785%
140.0	4.152	1.515	3584.802	.042%	99.827%	99.827%
145.0	4.238	1.400	3586.202	.039%	99.866%	99.866%
150.0	4.226	1.246	3587.448	.035%	99.901%	99.901%
155.0	4.275	1.076	3588.524	.030%	99.931%	99.931%
160.0	4.348	.904	3589.428	.025%	99.956%	99.956%
165.0	4.152	.701	3590.129	.020%	99.975%	99.975%
170.0	4.079	.488	3590.617	.014%	99.989%	99.989%
175.0	4.115	.293	3590.910	.008%	99.997%	99.997%
180.0	4.140	.099	3591.009	.003%	100.000%	100.000%

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

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00



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Sedna Lighting

Zonal flux distribution table

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	1095.41	30.50%
0-40	1755.39	48.88%
0-60	2958.65	82.39%
0-90	3571.45	99.46%
0-120	3578.43	99.65%
0-180	3591.01	100.00%
60-90	870.97	24.25%
90-120	16.68	0.46%
90-130	19.94	0.56%
90-150	25.70	0.72%
90-180	29.16	0.81%
0-58.34	2872.81	80.00%

ZONAL LUMEN SUMMARY

0-10	137.94
10-20	387.87
20-30	569.61
30-40	659.97
40-50	651.53
50-60	551.74
60-70	382.02
70-80	187.85
80-90	42.93
90-100	1.99
100-110	2.09
110-120	2.89
120-130	3.27
130-140	3.11
140-150	2.65
150-160	1.98
160-170	1.19
170-180	0.29

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00



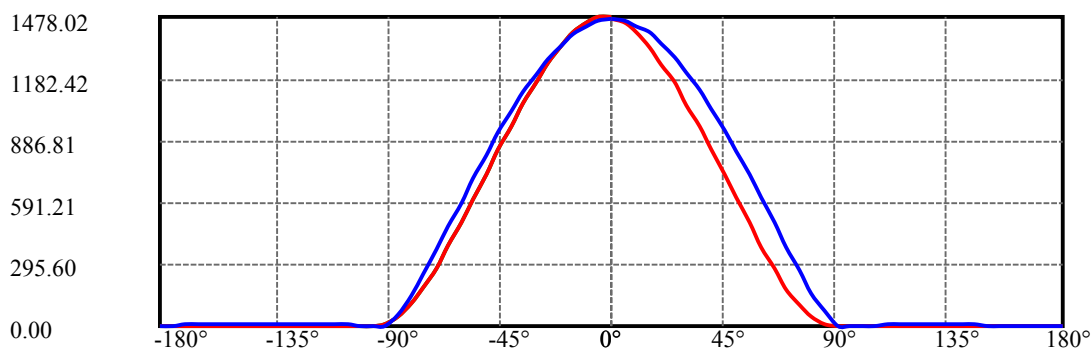
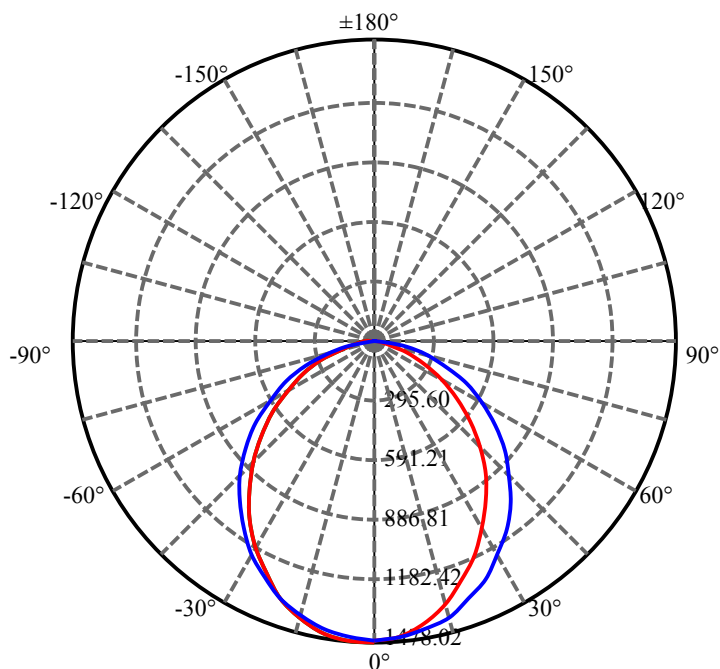
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Sedna Lighting

Light Distribution Curve [Unit:cd]

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C180(Max): C0/C180: C90/C270: 

Field angle(10%Imax):C0/180Left:77.3 Right:71.9

:C90/270Left:79.9 Right:80.8

Beam Angle(50%Imax):C0/180Left:49.9 Right:44.7

:C90/270Left:53.9 Right:54.5

Equipment:
Temperature(°C): 25.0Date: 2013-10-17
Humidity(%): 60.0%Operator: Ann Lee
Distance(m): 14.00

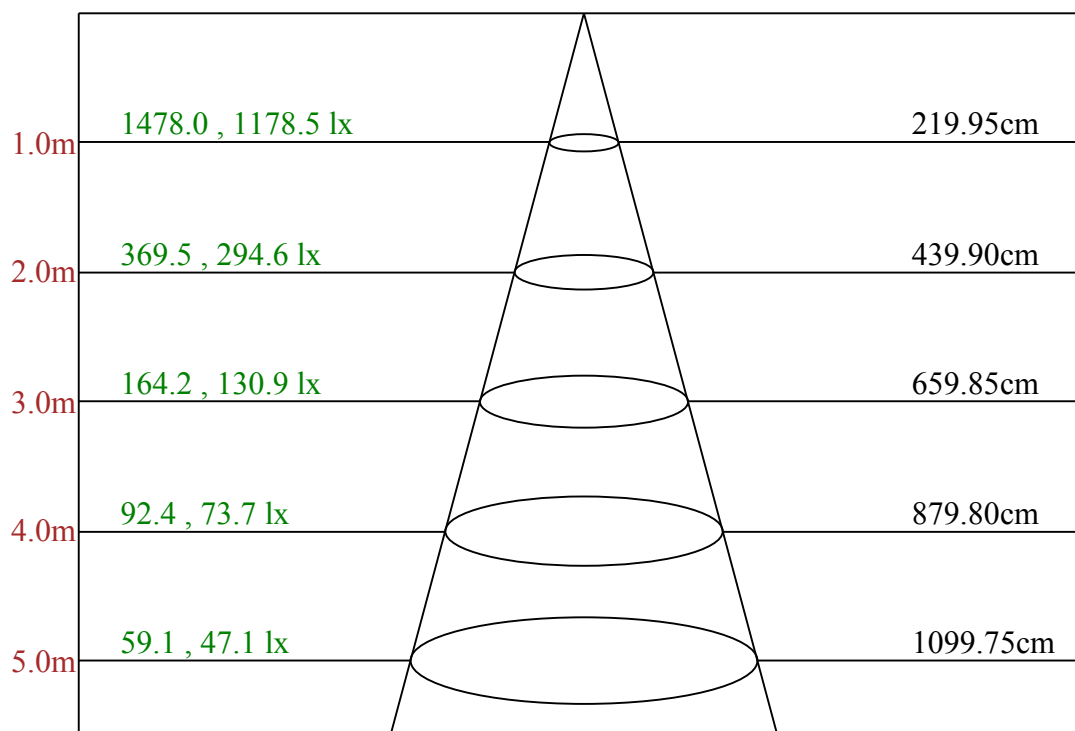


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Sedna Lighting

Lux distance Curve

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Max , Ave Beam angle of C180plane95.19



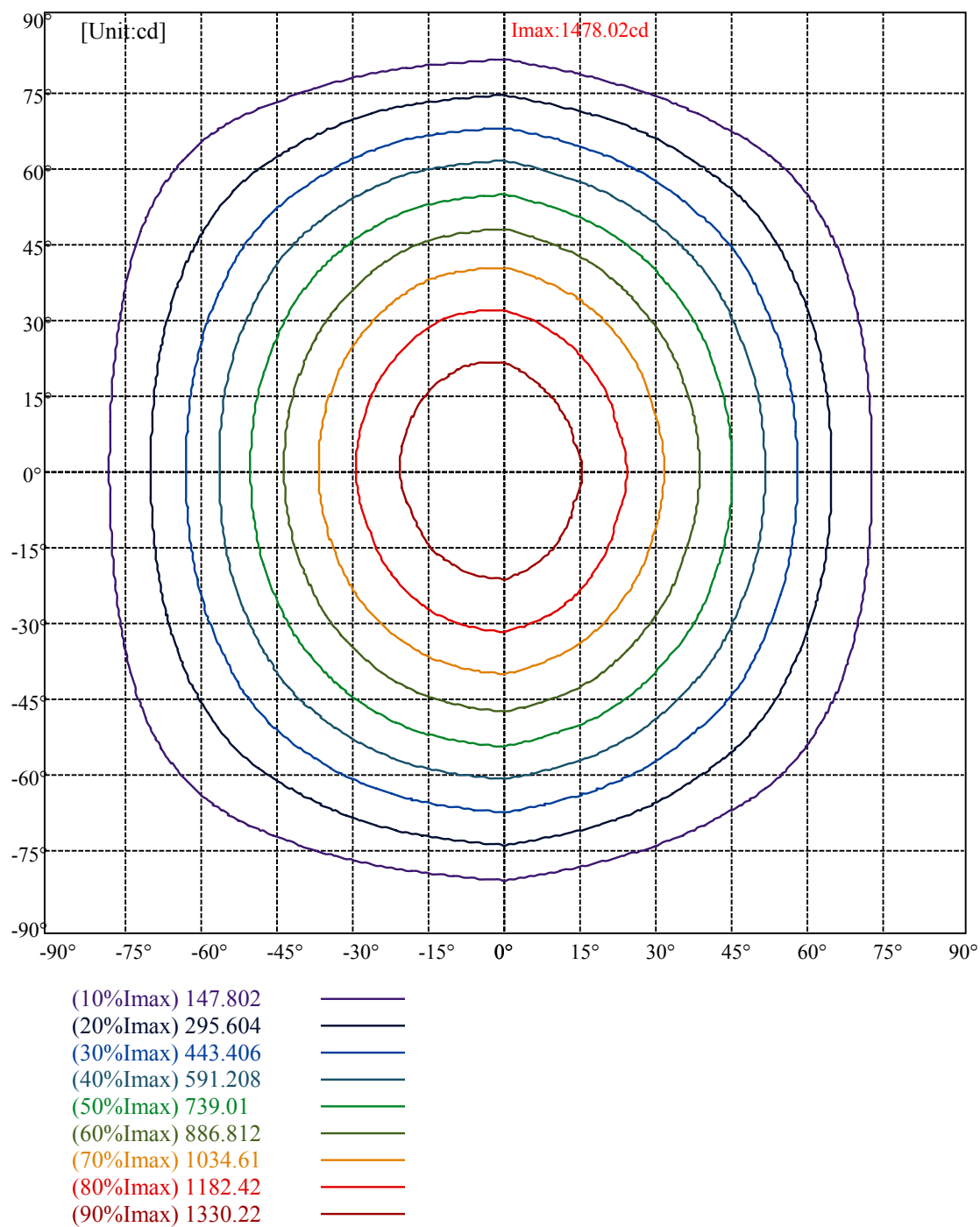
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Sedna Lighting

ISO-Intensity(V-H)

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Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00

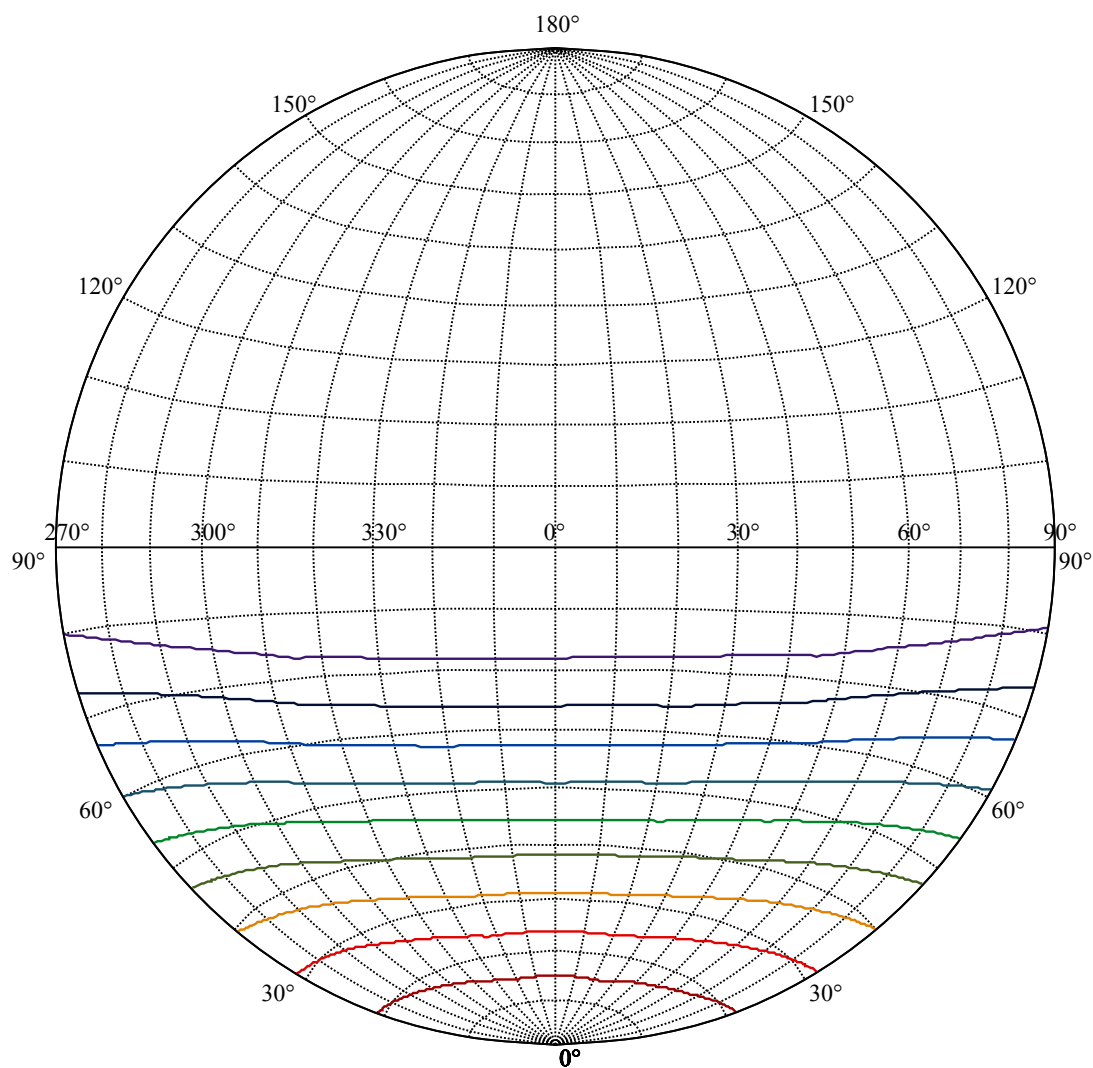


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Sedna Lighting

ISO candela diagram on circular web

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House

[Unit:cd]

Road

Imax:1478.02

(10%Imax)	147.802	—
(20%Imax)	295.604	—
(30%Imax)	443.406	—
(40%Imax)	591.208	—
(50%Imax)	739.01	—
(60%Imax)	886.812	—
(70%Imax)	1034.61	—
(80%Imax)	1182.42	—
(90%Imax)	1330.22	—



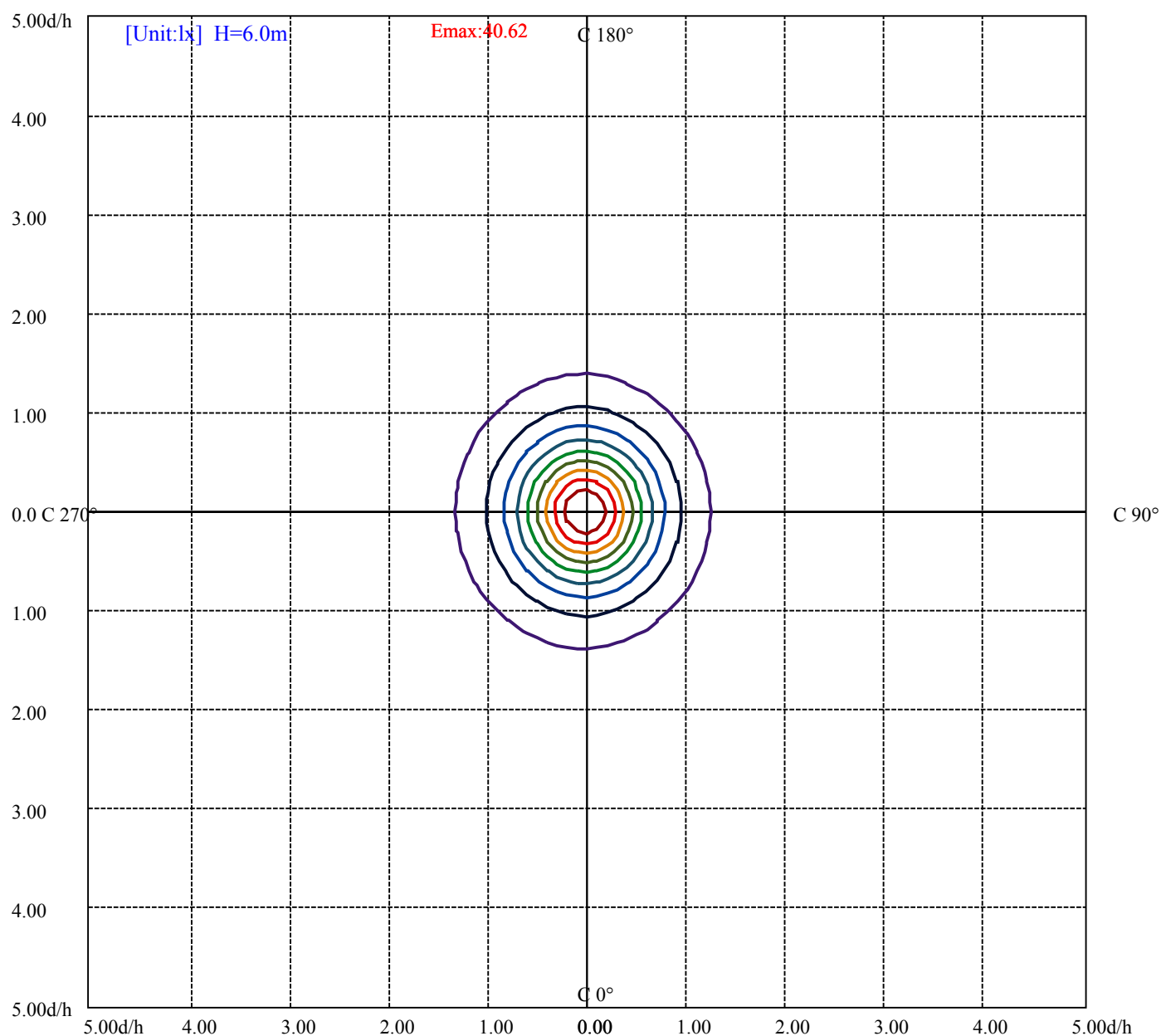
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Sedna Lighting

ISO illuminance diagram

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(10%Emax)	4.062056	—
(20%Emax)	8.124111	—
(30%Emax)	12.18617	—
(40%Emax)	16.24825	—
(50%Emax)	20.31031	—
(60%Emax)	24.37236	—
(70%Emax)	28.43444	—
(80%Emax)	32.49639	—
(90%Emax)	36.55861	—

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

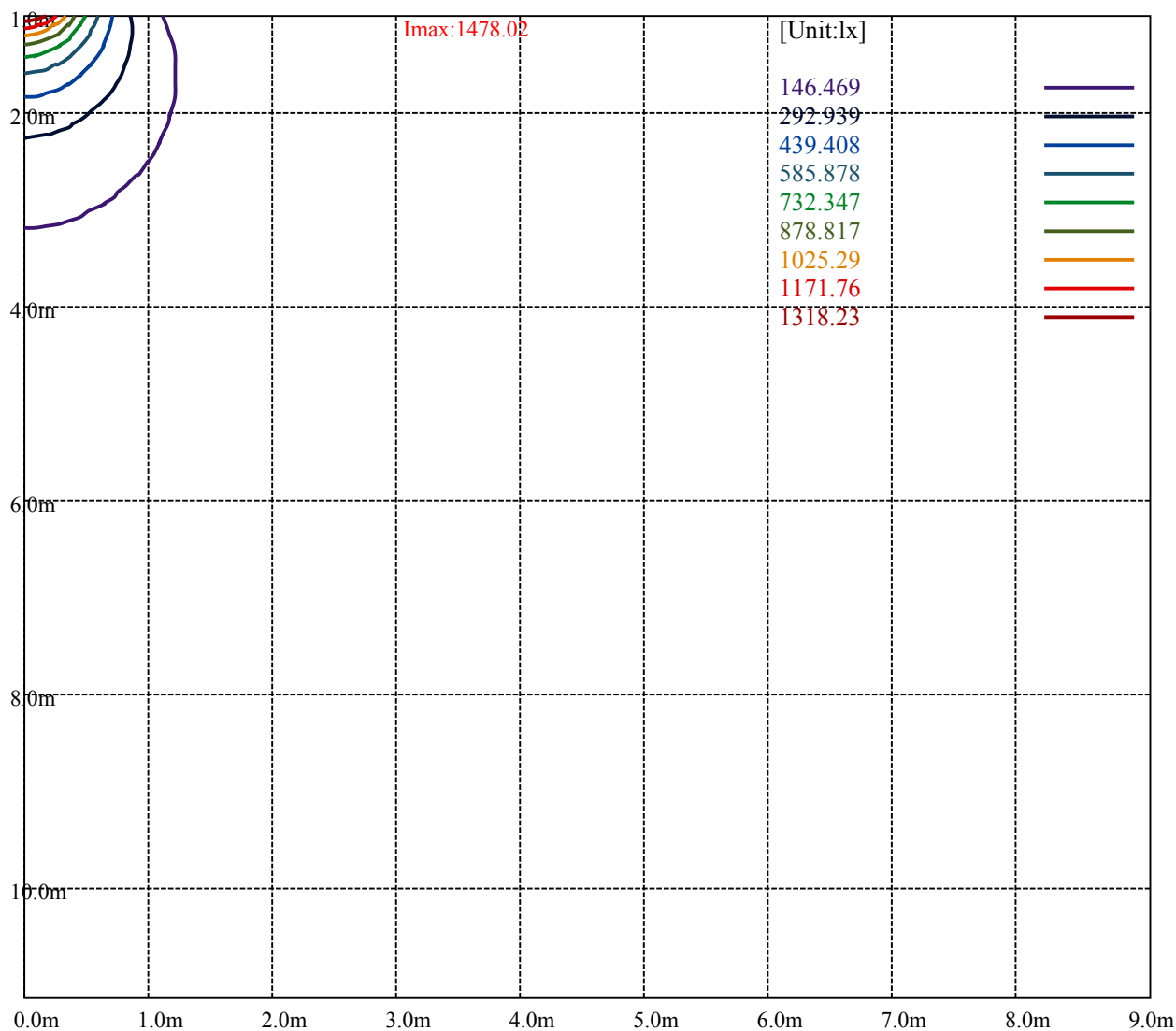
Operator: Ann Lee
Distance(m): 14.00



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Sedna Lighting

Space ISO Lux diagram





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Sedna Lighting

Luminance Limiting Curve(no luminous side)

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Luminance Table

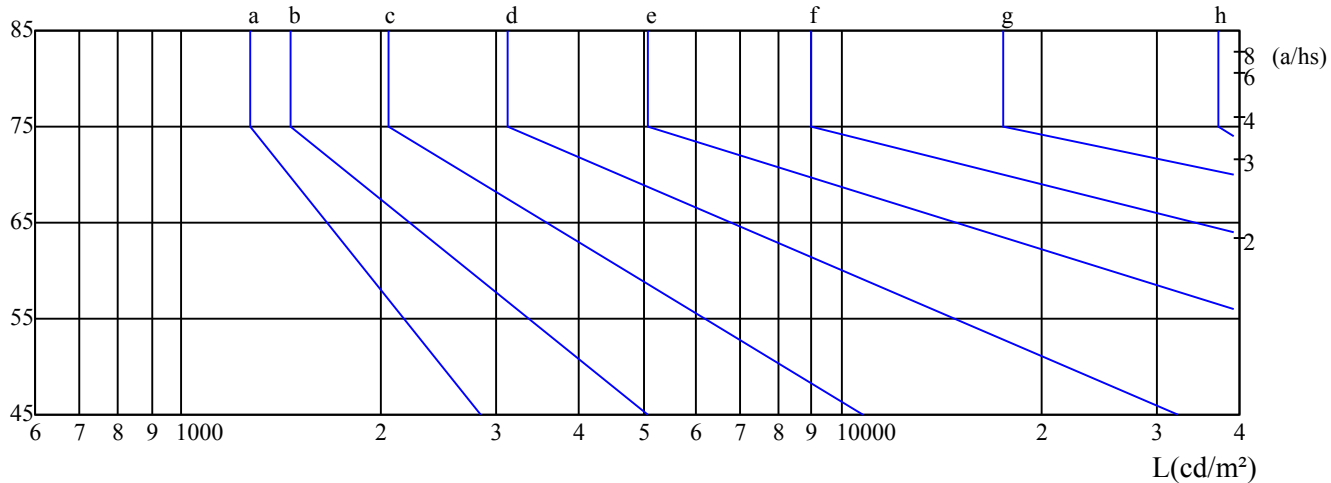
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(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 Limiting Curve

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———

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

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00



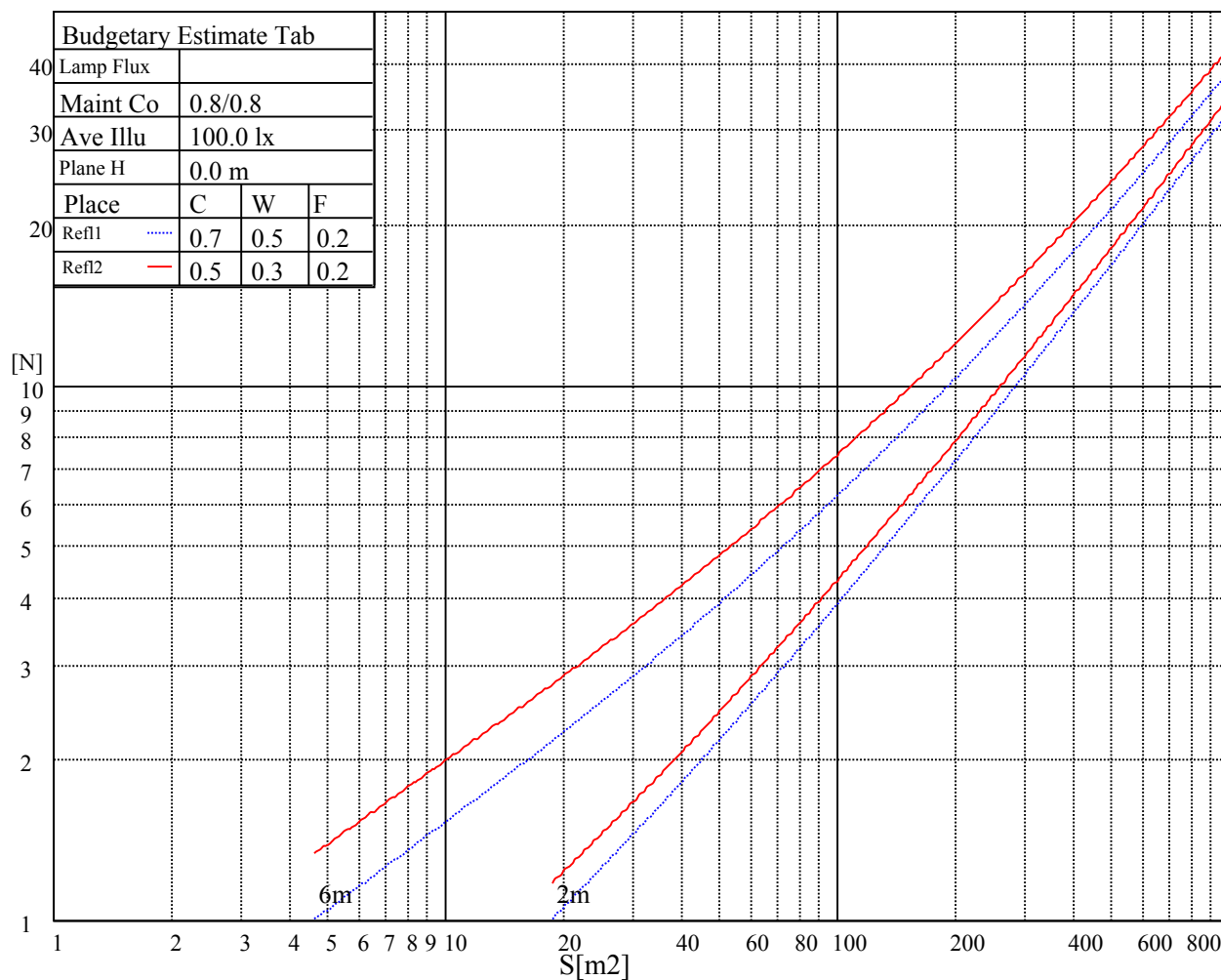
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Sedna Lighting

Budgetary Estimate Table

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Equipment:
Temperature(°C): 25.0Date: 2013-10-17
Humidity(%): 60.0%Operator: Ann Lee
Distance(m): 14.00



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Sedna Lighting

Utilization factor table for indoor luminaire

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RHOC	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 RHOF=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	0.99
1	1.05	1.01	0.97	1.03	0.99	0.96	0.98	0.95	0.93	0.94	0.92	0.90	0.91	0.89	0.87	0.85
2	0.92	0.86	0.80	0.90	0.84	0.79	0.87	0.82	0.77	0.83	0.79	0.76	0.80	0.77	0.74	0.72
3	0.81	0.74	0.67	0.80	0.73	0.67	0.77	0.71	0.66	0.74	0.69	0.64	0.71	0.67	0.63	0.61
4	0.73	0.64	0.58	0.71	0.63	0.57	0.69	0.62	0.56	0.66	0.60	0.56	0.64	0.59	0.55	0.53
5	0.65	0.56	0.50	0.64	0.56	0.50	0.62	0.55	0.49	0.60	0.53	0.49	0.58	0.52	0.48	0.46
6	0.59	0.50	0.44	0.58	0.50	0.44	0.56	0.49	0.43	0.54	0.48	0.43	0.53	0.47	0.42	0.40
7	0.53	0.45	0.39	0.53	0.45	0.39	0.51	0.44	0.38	0.50	0.43	0.38	0.48	0.42	0.38	0.36
8	0.49	0.41	0.35	0.48	0.40	0.35	0.47	0.40	0.35	0.46	0.39	0.34	0.44	0.38	0.34	0.32
9	0.45	0.37	0.31	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.29
10	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28	0.26

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00

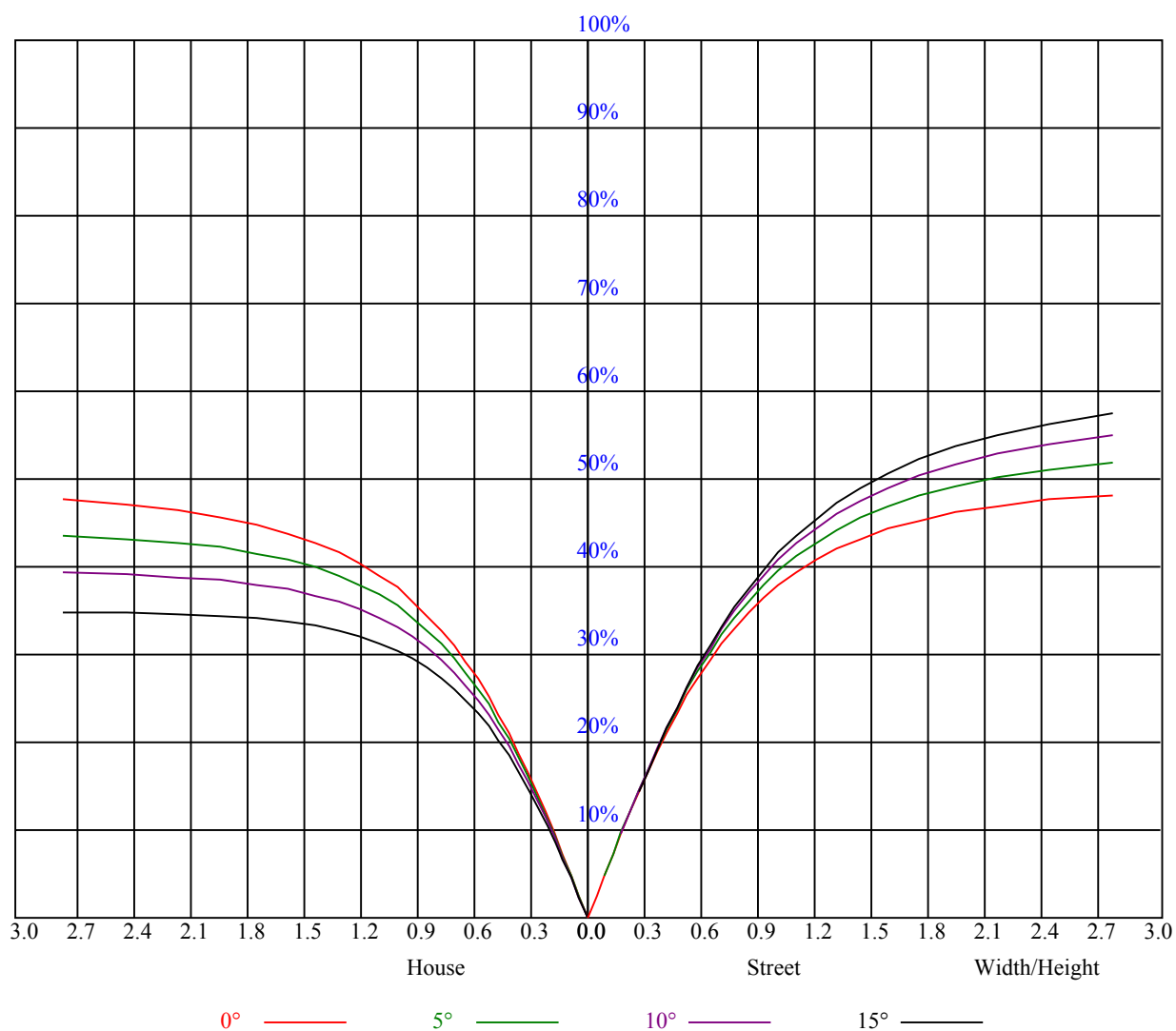


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Sedna Lighting

Coefficient Utilization Curve

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Sedna Lighting

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	1464.70	1450.78	1401.40	1334.18	1252.26	1163.88	1058.64	954.78	845.42
22.5	1462.93	1436.67	1391.99	1327.32	1253.24	1160.15	1065.30	963.20	856.79
45.0	1462.34	1442.16	1402.57	1349.07	1275.19	1196.02	1105.48	1009.84	898.92
67.5	1457.25	1442.55	1414.13	1369.45	1308.70	1238.35	1159.76	1069.03	970.26
90.0	1465.48	1459.01	1436.48	1401.20	1346.52	1285.18	1210.52	1126.64	1033.36
112.5	1466.85	1463.91	1444.90	1409.43	1355.73	1294.98	1219.34	1129.00	1035.32
135.0	1469.20	1469.01	1446.67	1405.32	1348.88	1277.54	1191.12	1098.82	1001.42
157.5	1466.26	1470.18	1446.27	1403.16	1341.23	1260.88	1172.89	1074.12	970.85
180.0	1478.02	1478.02	1451.56	1403.36	1338.49	1253.83	1163.88	1062.17	955.36
202.5	1462.93	1463.13	1436.87	1389.25	1324.97	1244.42	1156.04	1060.40	950.27
225.0	1462.34	1461.17	1439.41	1393.75	1335.94	1263.43	1174.66	1081.18	981.43
247.5	1457.25	1453.33	1432.16	1393.36	1341.62	1274.99	1195.23	1105.67	1010.82
270.0	1465.48	1456.07	1432.36	1392.97	1341.82	1278.33	1203.07	1117.82	1024.15
292.5	1466.85	1450.78	1420.60	1375.72	1313.21	1243.44	1162.70	1067.26	969.87
315.0	1469.20	1448.04	1408.65	1352.40	1282.83	1197.19	1104.50	1006.51	896.18
337.5	1466.26	1440.39	1389.83	1328.10	1249.13	1160.55	1063.54	962.03	849.73
360.0	1464.70	1450.78	1401.40	1334.18	1252.26	1163.88	1058.64	954.78	845.42
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	725.88	611.24	496.79	377.44	273.19	174.42	101.91	43.11	9.60
22.5	738.62	625.93	508.55	392.14	281.42	185.19	107.20	46.25	12.15
45.0	792.12	677.08	562.83	440.15	326.10	218.51	118.96	53.89	15.09
67.5	864.63	758.02	640.24	526.58	412.52	299.25	184.41	87.60	21.75
90.0	937.53	834.84	721.18	610.65	497.18	376.27	266.33	160.50	71.14
112.5	931.45	822.10	708.24	594.19	477.58	354.51	241.44	136.00	46.25
135.0	887.75	777.42	659.64	543.23	418.01	302.19	194.99	98.57	40.96
157.5	854.05	741.36	625.15	502.67	388.42	281.02	181.86	104.06	44.09
180.0	841.90	729.41	607.91	493.07	381.56	276.91	179.31	107.39	43.11
202.5	843.27	730.78	609.47	494.05	377.83	268.48	173.04	96.42	38.02
225.0	867.96	758.02	640.63	520.31	402.53	281.81	177.55	88.97	33.90
247.5	904.02	797.21	686.29	564.99	449.76	326.88	215.77	112.88	32.53
270.0	926.36	817.60	709.42	591.25	477.78	364.51	247.12	145.02	58.20
292.5	863.65	751.75	637.50	519.91	401.55	289.06	174.81	79.37	17.64
315.0	789.38	670.42	556.36	436.63	319.43	208.51	114.84	47.03	11.76
337.5	739.60	626.13	503.06	389.98	275.34	179.31	101.51	42.92	10.19
360.0	725.88	611.24	496.79	377.44	273.19	174.42	101.91	43.11	9.60
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.59	0.59	0.78	1.18	1.37	1.76	1.96	2.35	2.74
22.5	1.18	0.98	0.98	1.18	1.37	1.76	1.96	2.55	2.55
45.0	1.57	0.98	0.98	1.37	1.76	2.35	2.55	2.94	3.14
67.5	2.35	1.18	1.57	2.35	2.74	3.53	4.12	4.51	4.51
90.0	2.94	1.57	2.55	4.12	4.90	5.68	6.08	6.27	6.08
112.5	5.68	1.18	1.18	1.96	2.74	3.33	3.92	4.51	4.70
135.0	7.84	1.18	0.98	1.18	1.57	2.35	2.55	2.74	2.94
157.5	9.21	0.98	0.78	0.78	1.18	1.37	1.57	2.16	2.55
180.0	9.60	0.78	0.78	0.98	1.18	1.37	1.96	2.35	2.55
202.5	7.05	0.98	0.59	0.78	1.18	1.57	1.96	2.35	2.74
225.0	3.92	0.98	0.98	1.57	1.96	2.55	2.74	2.94	3.33
247.5	2.55	0.98	1.76	2.55	3.33	3.92	4.31	4.70	4.90
270.0	1.76	1.37	4.31	6.08	6.66	6.86	6.66	7.05	6.66
292.5	1.96	1.18	2.35	3.14	3.72	4.31	4.70	5.49	5.29
315.0	1.37	0.98	1.37	1.96	2.16	2.74	3.14	3.53	3.72
337.5	1.18	0.59	0.78	1.18	1.57	1.96	2.35	2.94	3.53
360.0	0.59	0.59	0.78	1.18	1.37	1.76	1.96	2.35	2.74

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00



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Sedna Lighting

Intensity data(cd)										Page: 15 Total:15	
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	2.94	3.14	3.33	3.53	3.72	4.12	3.92	3.72	3.53		
22.5	2.94	3.14	3.33	3.72	3.92	3.92	3.92	4.12	3.72		
45.0	3.33	3.72	3.72	3.92	4.12	4.12	4.12	3.72	4.31		
67.5	4.51	4.90	4.90	4.70	4.31	4.51	4.12	4.12	4.12		
90.0	5.68	4.90	4.70	4.51	4.12	4.31	3.92	4.12	4.12		
112.5	4.51	4.70	4.12	3.92	4.12	4.31	4.12	4.12	4.12		
135.0	3.14	3.53	3.72	2.94	3.14	3.92	3.92	4.12	4.12		
157.5	2.74	2.74	3.33	3.53	3.33	2.94	3.33	3.14	3.92		
180.0	2.94	3.14	3.33	3.53	3.72	4.12	3.92	3.53	3.53		
202.5	3.14	3.53	3.72	3.92	3.92	3.72	3.72	3.72	4.12		
225.0	3.72	4.12	4.12	3.92	4.12	4.31	4.12	4.51	4.51		
247.5	4.90	4.90	4.90	4.70	5.29	5.29	5.10	4.70	4.51		
270.0	6.47	5.88	5.88	5.88	5.88	5.68	5.10	4.70	4.51		
292.5	5.49	5.88	5.88	5.88	5.68	5.49	4.51	4.51	4.31		
315.0	4.31	4.31	4.70	4.90	5.10	4.70	4.51	4.31	4.31		
337.5	3.72	3.92	4.12	4.12	3.92	4.12	4.12	4.12	4.12		
360.0	2.94	3.14	3.33	3.53	3.72	4.12	3.92	3.72	3.53		
C/ γ (°)	180.0										
0.0	3.33										
22.5	4.31										
45.0	4.31										
67.5	4.31										
90.0	4.31										
112.5	4.12										
135.0	4.31										
157.5	4.12										
180.0	3.33										
202.5	4.31										
225.0	4.31										
247.5	4.31										
270.0	4.31										
292.5	4.12										
315.0	4.31										
337.5	4.12										
360.0	3.33										

Equipment:
Temperature(°C): 25.0

Date: 2013-10-17
Humidity(%): 60.0%

Operator: Ann Lee
Distance(m): 14.00