

PHOTOMETRIC RESULTS

Name:	CTL-20-CR-1240-TFL 4000K		
Type:	LED DOWN LIGHT	Diameter:	55 mm
Luminaire:	AL.Die-casting, PC.WIDE LENS. Ø62	Length:	0 mm
Test no.:	LT-2023-12-01-T03	Width	0 mm
Lamp type:	LED20W, 450mA, 4000K, CRI90	Height:	100 mm
No. of lamps:	1	Power:	20.33 W
Lamp flux:	1786.00 lm	Operator:	ASY
Date:	2023-12-01 AM 11:56:48	LOR:	69.7 %
Comment:	LIFUD LF-GIF022YA0450H, 220-240VAC, 18W, 25-40VDC, 450mA		

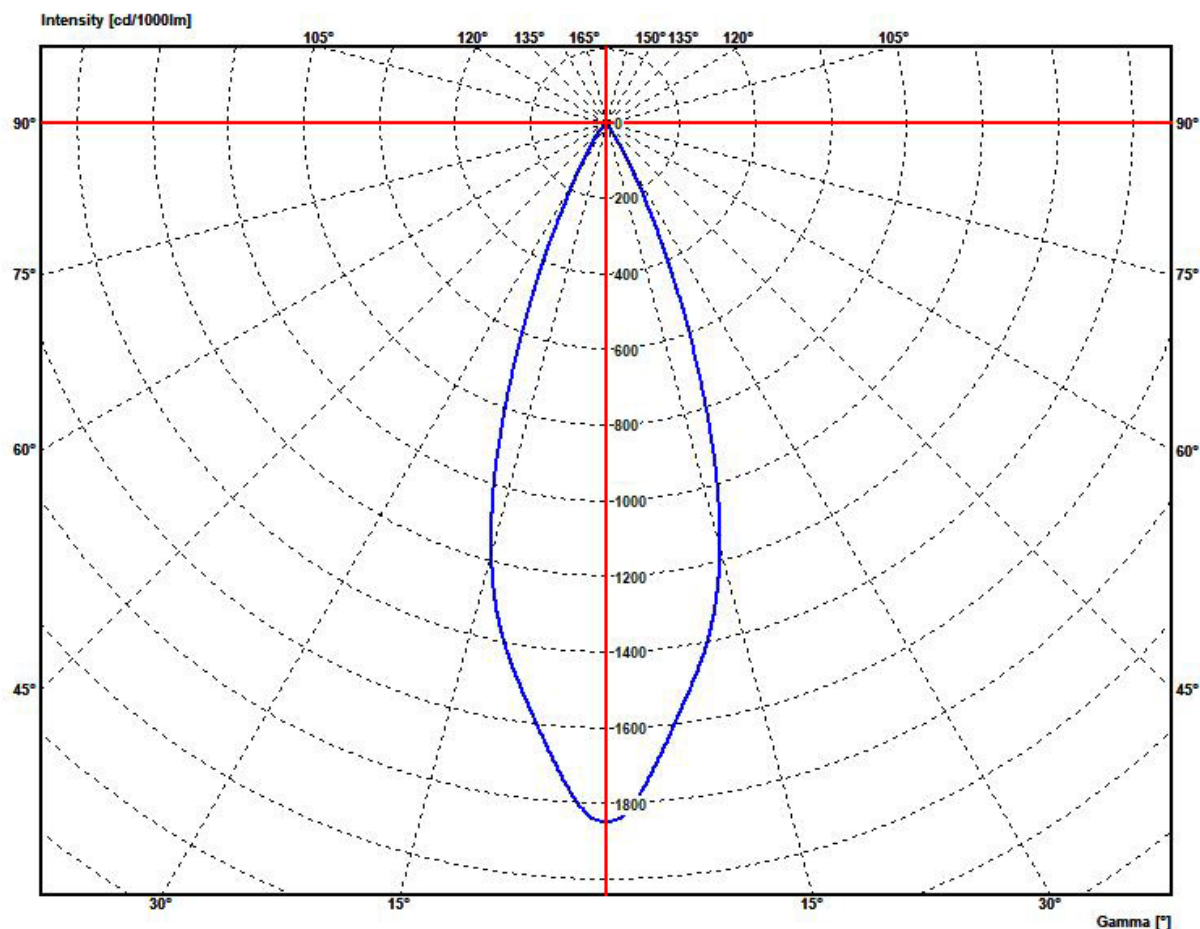
**Intensity [cd/klm] CTL-20-CR-1240-TFL 4000K /
C-Plane measurement**

[illegible]

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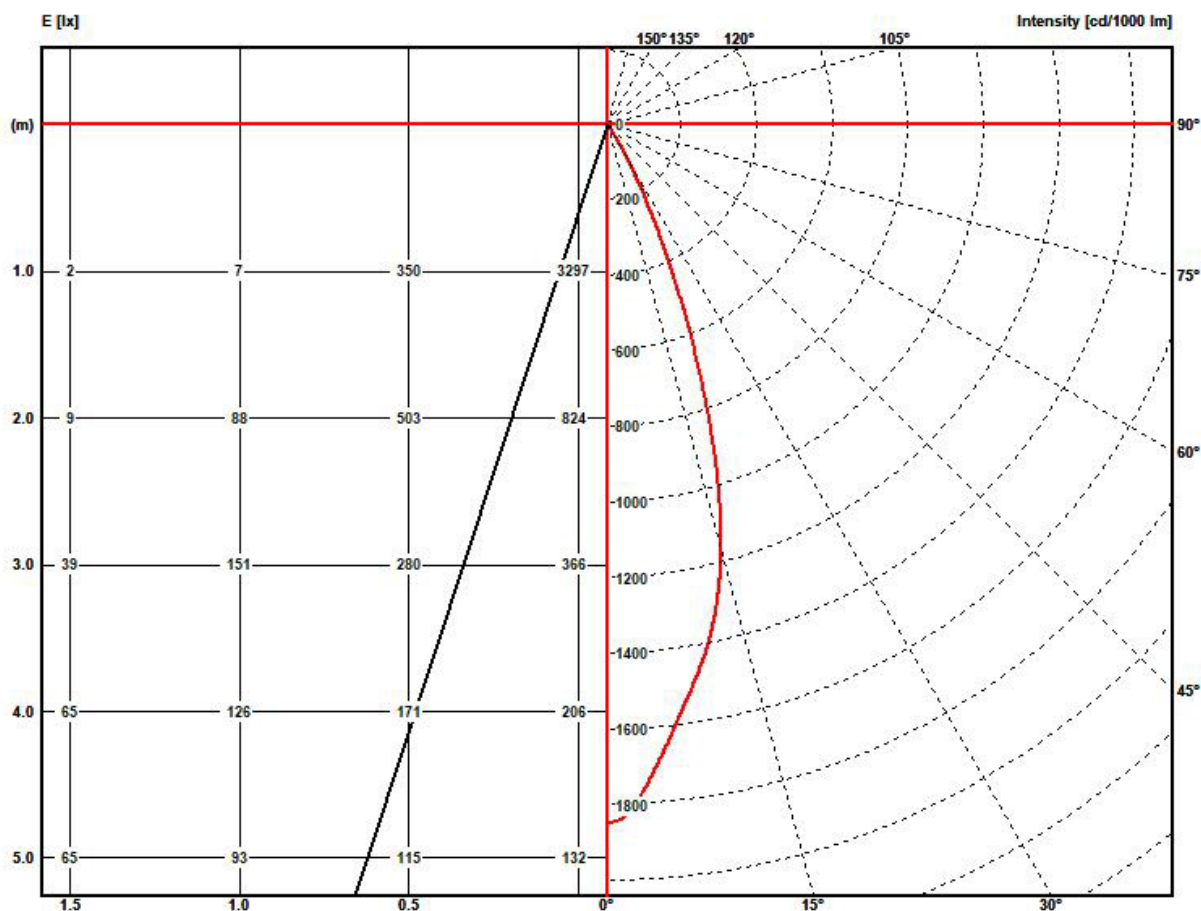
Polar diagram CTL-20-CR-1240-TFL 4000K / C-Plane measurement



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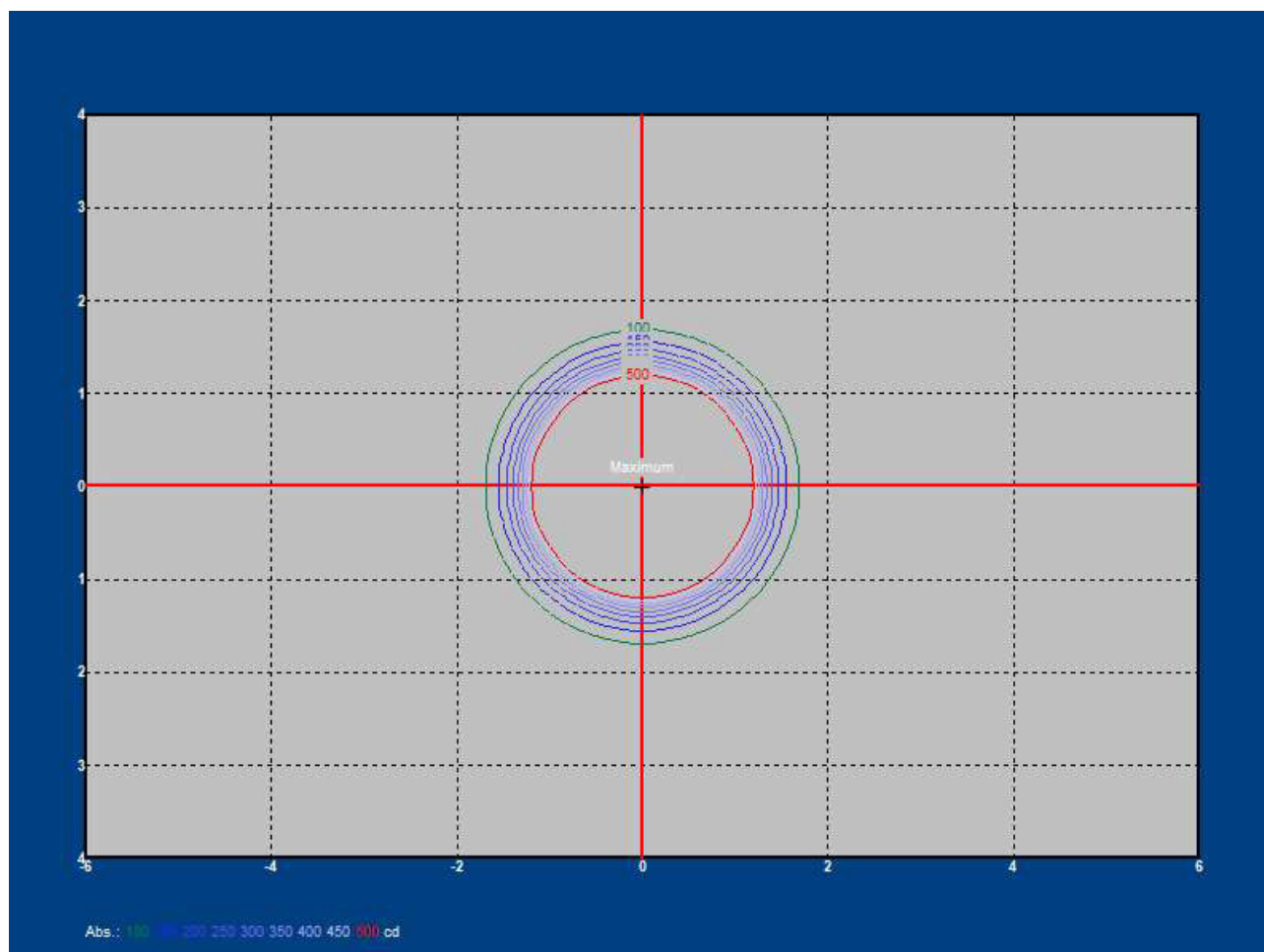
Illuminance and Intensity diagram CTL-20-CR-1240-TFL 4000K / C-Plane measurement



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Isoline diagram CTL-20-CR-1240-TFL 4000K / C-Plane measurement



Luminaire mounting height above ground: 2.4 m

Luminaire rotation angle: 0 °

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LiTG Utilization factors

Ceiling	70	80	80	50	50	80	80	80	50	50	30	0
Wall	50	50	30	50	30	80	50	30	50	30	30	0
Working plane	20	30	30	30	30	10	10	10	10	10	10	0
Roomindices	Utilization coefficients for ceiling mounted luminaires											
0.6	59	60	57	59	57	63	58	56	58	56	56	54
0.8	63	65	62	64	61	67	62	60	61	60	60	58
1	66	68	65	66	64	69	64	62	64	62	62	60
1.25	69	72	69	70	68	71	68	66	67	66	66	64
1.5	71	74	71	72	70	72	69	68	68	67	67	65
2	73	77	74	74	72	73	71	69	70	69	68	67
2.5	74	79	76	75	73	74	71	70	70	69	69	67
3	75	81	78	76	75	74	72	71	71	70	70	68
4	76	83	80	77	76	74	73	72	71	71	70	68
5	77	84	82	78	77	75	73	73	72	71	70	68

Ceiling	70	80	80	50	50	80	80	80	50	50	30	0
Wall	50	50	30	50	30	80	50	30	50	30	30	0
Working plane	20	30	30	30	30	10	10	10	10	10	10	0
Roomindices	Utilization coefficients for pendant mounted luminaires											
0.6	60	62	58	60	57	65	59	56	58	56	56	54
0.8	64	67	63	65	62	68	63	61	62	60	60	58
1	67	70	67	68	65	70	65	63	64	63	62	60
1.25	71	75	72	72	69	72	69	67	67	66	66	64
1.5	72	77	74	73	71	73	70	69	69	68	67	65
2	74	80	77	75	73	74	71	70	70	69	68	67
2.5	76	82	79	76	75	74	72	71	71	70	69	67
3	77	84	81	78	76	74	73	72	71	71	70	68
4	77	85	83	78	77	75	73	73	72	71	70	68
5	78	86	84	79	78	75	74	73	72	71	70	68

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UGR Unified Glare Ratios

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor cavity reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimension		Viewed crosswise					Viewed endwise				
2H	2H	7.6	8.3	8.0	8.6	8.9	7.6	8.3	8.0	8.6	8.9
2H	3H	7.5	8.1	7.8	8.4	8.8	7.5	8.1	7.8	8.4	8.8
2H	4H	7.3	7.9	7.8	8.3	8.7	7.3	7.9	7.8	8.3	8.7
2H	6H	7.2	7.8	7.7	8.2	8.6	7.2	7.8	7.7	8.2	8.6
2H	8H	7.2	7.7	7.6	8.1	8.5	7.2	7.7	7.6	8.1	8.5
2H	12H	7.1	7.6	7.5	8.0	8.4	7.1	7.6	7.5	8.0	8.4
4H	2H	7.3	7.9	7.7	8.3	8.6	7.3	7.9	7.7	8.3	8.6
4H	3H	7.2	7.7	7.6	8.1	8.5	7.2	7.7	7.6	8.1	8.5
4H	4H	7.1	7.5	7.5	7.9	8.4	7.1	7.5	7.5	7.9	8.4
4H	6H	6.9	7.3	7.4	7.8	8.2	6.9	7.3	7.4	7.8	8.2
4H	8H	6.8	7.2	7.3	7.7	8.1	6.8	7.2	7.3	7.7	8.1
4H	12H	6.8	7.1	7.3	7.6	8.1	6.8	7.1	7.3	7.6	8.1
8H	4H	6.8	7.2	7.3	7.7	8.1	6.8	7.2	7.3	7.7	8.1
8H	6H	6.7	7.0	7.2	7.4	8.0	6.7	7.0	7.2	7.4	8.0
8H	8H	6.6	6.9	7.2	7.4	7.9	6.6	6.9	7.2	7.4	7.9
8H	12H	6.6	6.8	7.1	7.3	7.8	6.6	6.8	7.1	7.3	7.8
12H	4H	6.8	7.1	7.3	7.6	8.1	6.8	7.1	7.3	7.6	8.1
12H	6H	6.6	6.9	7.2	7.4	7.9	6.6	6.9	7.2	7.4	7.9
12H	8H	6.6	6.8	7.1	7.3	7.8	6.6	6.8	7.1	7.3	7.8

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Zonal flux CTL-20-CR-1240-TFL 4000K / C-Plane measurement

Gamma [°]	Imin [cd/klm]	Imax [cd/klm]	Imean [cd/klm]	Zonal flux [lm]	Sum. zonal flux [lm]	Rel. zonal flux [%]	Sum. rel. zonal flux [%]
0.0	1845.9	1845.9	1845.9	0.79	0.79	0.04	0.04
1.0	1837.4	1837.4	1837.4	6.28	7.07	0.35	0.40
2.0	1810.3	1810.3	1810.3	12.37	19.44	0.69	1.09
3.0	1769.1	1769.1	1769.1	18.13	37.58	1.02	2.10
4.0	1721.5	1721.5	1721.5	23.52	61.10	1.32	3.42
5.0	1671.7	1671.7	1671.7	28.54	89.63	1.60	5.02
6.0	1623.6	1623.6	1623.6	33.24	122.87	1.86	6.88
7.0	1575.5	1575.5	1575.5	37.60	160.48	2.11	8.99
8.0	1531.3	1531.3	1531.3	41.74	202.21	2.34	11.32
9.0	1487.5	1487.5	1487.5	45.57	247.79	2.55	13.87
10.0	1444.7	1444.7	1444.7	49.13	296.92	2.75	16.62
11.0	1399.9	1399.9	1399.9	52.31	349.23	2.93	19.55
12.0	1351.2	1351.2	1351.2	55.02	404.26	3.08	22.63
13.0	1296.9	1296.9	1296.9	57.14	461.40	3.20	25.83
14.0	1236.0	1236.0	1236.0	58.56	519.96	3.28	29.11
15.0	1168.0	1168.0	1168.0	59.21	579.17	3.32	32.43
16.0	1095.1	1095.1	1095.1	59.12	638.29	3.31	35.74
17.0	1016.2	1016.2	1016.2	58.19	696.47	3.26	39.00
18.0	932.0	932.0	932.0	56.41	752.88	3.16	42.15
19.0	843.4	843.4	843.4	53.78	806.66	3.01	45.17
20.0	754.9	754.9	754.9	50.57	857.22	2.83	48.00
21.0	667.3	667.3	667.3	46.83	904.06	2.62	50.62
22.0	583.2	583.2	583.2	42.79	946.85	2.40	53.02
23.0	503.3	503.3	503.3	38.51	985.36	2.16	55.17
24.0	429.4	429.4	429.4	34.21	1019.57	1.92	57.09
25.0	361.7	361.7	361.7	29.94	1049.51	1.68	58.76
26.0	303.3	303.3	303.3	26.04	1075.55	1.46	60.22
27.0	251.7	251.7	251.7	22.38	1097.93	1.25	61.47
28.0	208.8	208.8	208.8	19.20	1117.13	1.07	62.55
29.0	173.2	173.2	173.2	16.44	1133.57	0.92	63.47

Zonal flux CTL-20-CR-1240-TFL 4000K / C-Plane measurement

Gamma [°]	Imin [cd/klm]	Imax [cd/klm]	Imean [cd/klm]	Zonal flux [lm]	Sum. zonal flux [lm]	Rel. zonal flux [%]	Sum. rel. zonal flux [%]
30.0	143.7	143.7	143.7	14.07	1147.64	0.79	64.26
31.0	118.6	118.6	118.6	11.96	1159.60	0.67	64.93
32.0	97.9	97.9	97.9	10.16	1169.76	0.57	65.50
33.0	81.5	81.5	81.5	8.69	1178.45	0.49	65.98
34.0	68.1	68.1	68.1	7.46	1185.91	0.42	66.40
35.0	56.9	56.9	56.9	6.39	1192.30	0.36	66.76
36.0	47.6	47.6	47.6	5.48	1197.78	0.31	67.07
37.0	40.0	40.0	40.0	4.71	1202.50	0.26	67.33
38.0	33.6	33.6	33.6	4.05	1206.55	0.23	67.56
39.0	28.1	28.1	28.1	3.47	1210.02	0.19	67.75
40.0	23.7	23.7	23.7	2.98	1213.00	0.17	67.92
41.0	20.0	20.0	20.0	2.57	1215.57	0.14	68.06
42.0	16.9	16.9	16.9	2.22	1217.79	0.12	68.19
43.0	14.3	14.3	14.3	1.91	1219.70	0.11	68.29
44.0	12.1	12.1	12.1	1.65	1221.35	0.09	68.38
45.0	10.4	10.4	10.4	1.44	1222.78	0.08	68.46
46.0	9.0	9.0	9.0	1.27	1224.06	0.07	68.54
47.0	8.0	8.0	8.0	1.14	1225.20	0.06	68.60
48.0	7.2	7.2	7.2	1.05	1226.25	0.06	68.66
49.0	6.7	6.7	6.7	0.99	1227.24	0.06	68.71
50.0	6.4	6.4	6.4	0.96	1228.21	0.05	68.77
51.0	6.2	6.2	6.2	0.94	1229.15	0.05	68.82
52.0	6.1	6.1	6.1	0.95	1230.10	0.05	68.87
53.0	6.0	6.0	6.0	0.94	1231.03	0.05	68.93
54.0	5.8	5.8	5.8	0.92	1231.95	0.05	68.98
55.0	5.7	5.7	5.7	0.91	1232.87	0.05	69.03
56.0	5.5	5.5	5.5	0.90	1233.77	0.05	69.08
57.0	5.2	5.2	5.2	0.86	1234.62	0.05	69.13
58.0	5.0	5.0	5.0	0.83	1235.45	0.05	69.17
59.0	4.7	4.7	4.7	0.79	1236.25	0.04	69.22
60.0	4.5	4.5	4.5	0.76	1237.01	0.04	69.26
61.0	4.2	4.2	4.2	0.72	1237.73	0.04	69.30
62.0	4.0	4.0	4.0	0.70	1238.43	0.04	69.34
63.0	3.7	3.7	3.7	0.64	1239.07	0.04	69.38
64.0	3.4	3.4	3.4	0.60	1239.67	0.03	69.41
65.0	3.1	3.1	3.1	0.55	1240.22	0.03	69.44
66.0	2.8	2.8	2.8	0.50	1240.72	0.03	69.47
67.0	2.5	2.5	2.5	0.46	1241.18	0.03	69.49
68.0	2.2	2.2	2.2	0.39	1241.57	0.02	69.52
69.0	1.8	1.8	1.8	0.32	1241.89	0.02	69.53
70.0	1.5	1.5	1.5	0.27	1242.16	0.01	69.55
71.0	1.3	1.3	1.3	0.24	1242.39	0.01	69.56
72.0	1.2	1.2	1.2	0.23	1242.62	0.01	69.58

Zonal flux CTL-20-CR-1240-TFL 4000K / C-Plane measurement

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73.0	1.0	1.0	1.0	0.18	1242.80	0.01	69.59
74.0	0.9	0.9	0.9	0.18	1242.98	0.01	69.60
75.0	0.9	0.9	0.9	0.16	1243.15	0.01	69.61
76.0	0.7	0.7	0.7	0.14	1243.28	0.01	69.61
77.0	0.6	0.6	0.6	0.12	1243.41	0.01	69.62
78.0	0.6	0.6	0.6	0.11	1243.51	0.01	69.63
79.0	0.5	0.5	0.5	0.10	1243.61	0.01	69.63
80.0	0.5	0.5	0.5	0.09	1243.71	0.01	69.64
81.0	0.5	0.5	0.5	0.09	1243.80	0.01	69.64
82.0	0.5	0.5	0.5	0.09	1243.89	0.01	69.65
83.0	0.5	0.5	0.5	0.09	1243.99	0.01	69.65
84.0	0.5	0.5	0.5	0.09	1244.08	0.01	69.66
85.0	0.5	0.5	0.5	0.09	1244.17	0.01	69.66
86.0	0.5	0.5	0.5	0.09	1244.27	0.01	69.67
87.0	0.5	0.5	0.5	0.09	1244.36	0.01	69.67
88.0	0.4	0.4	0.4	0.09	1244.44	0.00	69.68
89.0	0.4	0.4	0.4	0.09	1244.53	0.00	69.68
90.0	0.4	0.4	0.4	0.08	1244.61	0.00	69.69