

PHOTOMETRIC RESULTS

Name:	CTL-20-PH-870-TWF 3000K		
Type:	LED DOWN LIGHT	Diameter:	62 mm
Luminaire:	AL.Die-casting, PC.MEDIUM LENS. (24D)	Length:	0 mm
Test no.:	LT-2024-11-27-T03	Width	0 mm
Lamp type:	LED15W, 350mA, 3000K, CRI90	Height:	90 mm
No. of lamps:	1	Power:	15.43 W
Lamp flux:	1313.00 lm	Operator:	ASY
Date:	2024-11-27 AM 10:35:55	LOR:	49.6 %
Comment:	LVED PRO 20W/ 220-240/ 500CS, 25-42VDC, MAX21W, 350mA		

Intensity [cd/klm] CTL-20-PH-870-TWF 3000K / C-Plane measurement

[illegible]

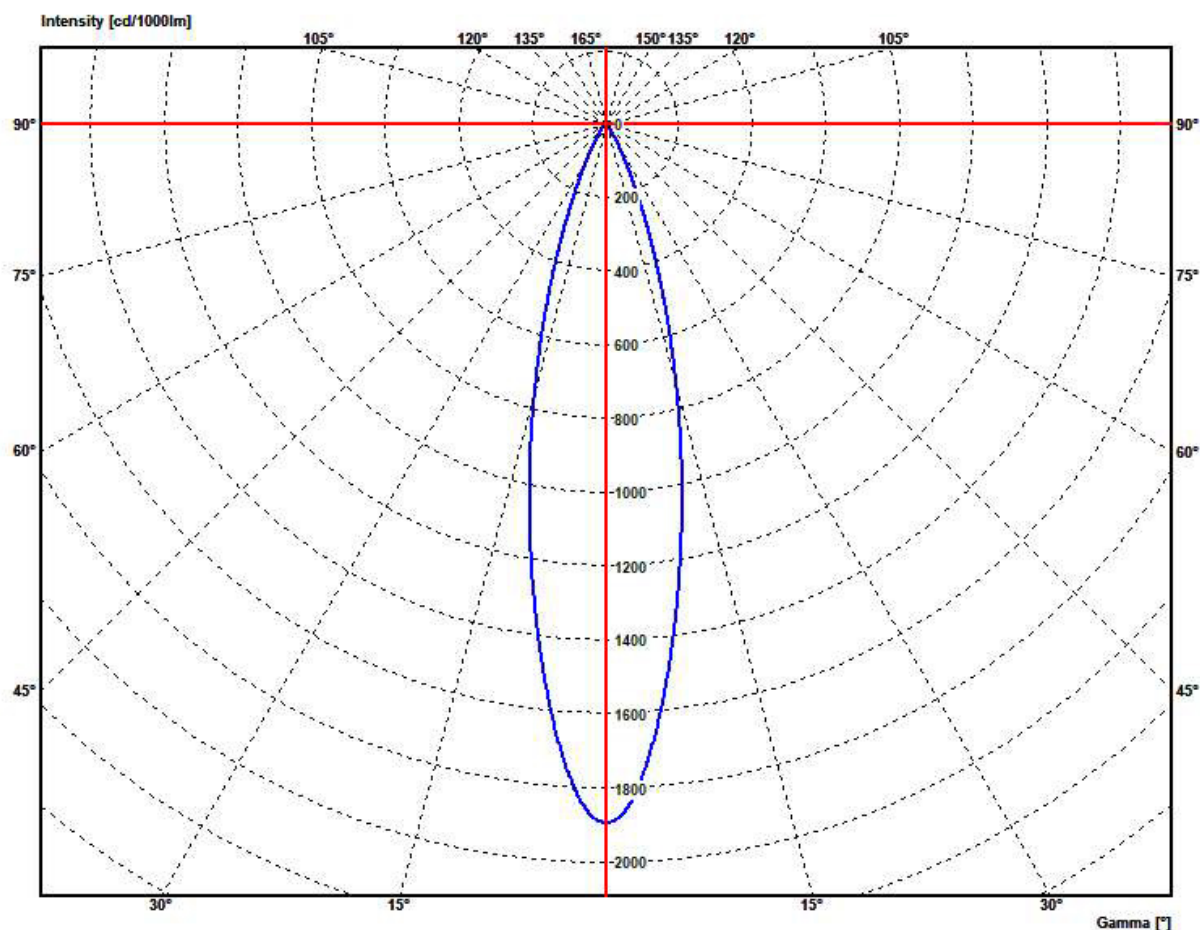
Intensity [cd/klm] CTL-20-PH-870-TWF 3000K / C-Plane measurement

[illegible]

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Lamp type:	LED15W, 350mA, 3000K, CRI90	Height:	100 mm
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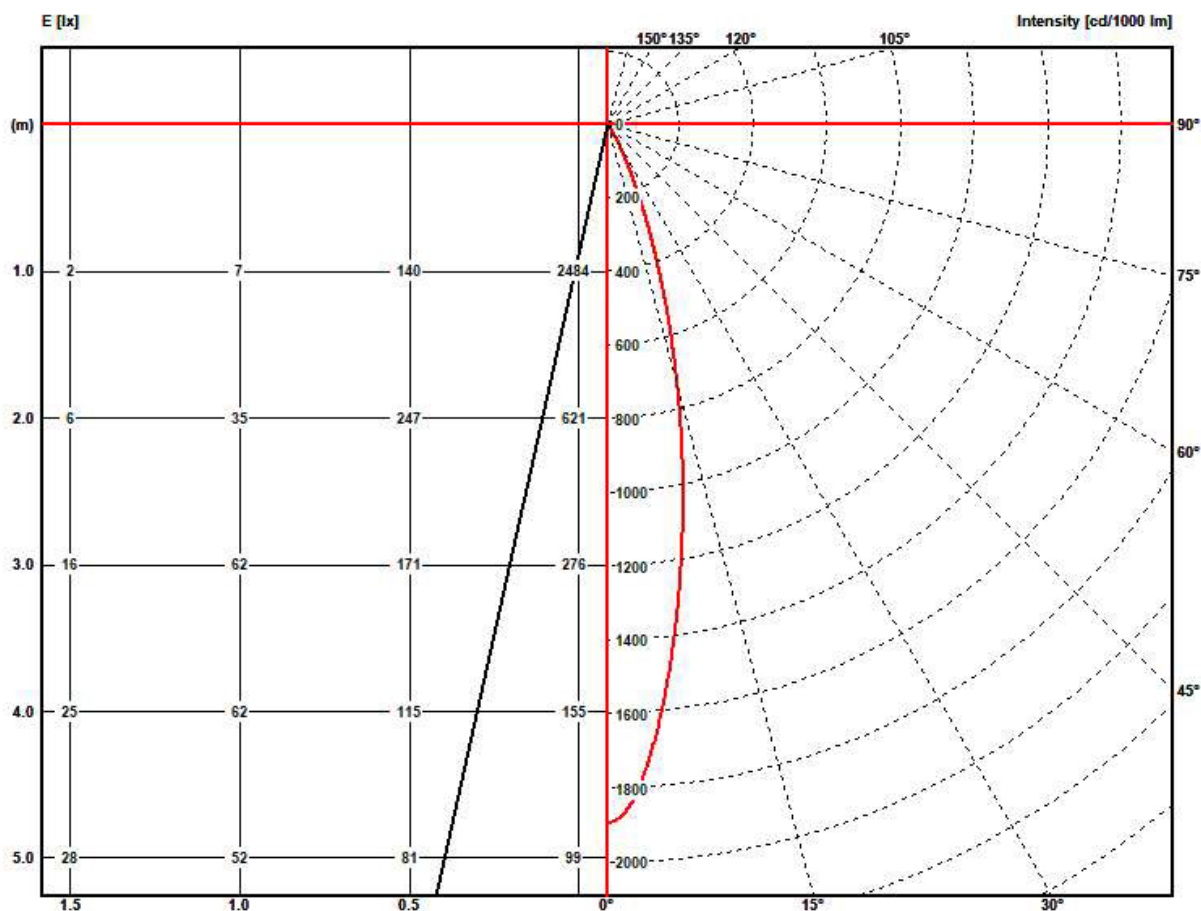
Polar diagram CTL-20-PH-870-TWF 3000K / C-Plane measurement



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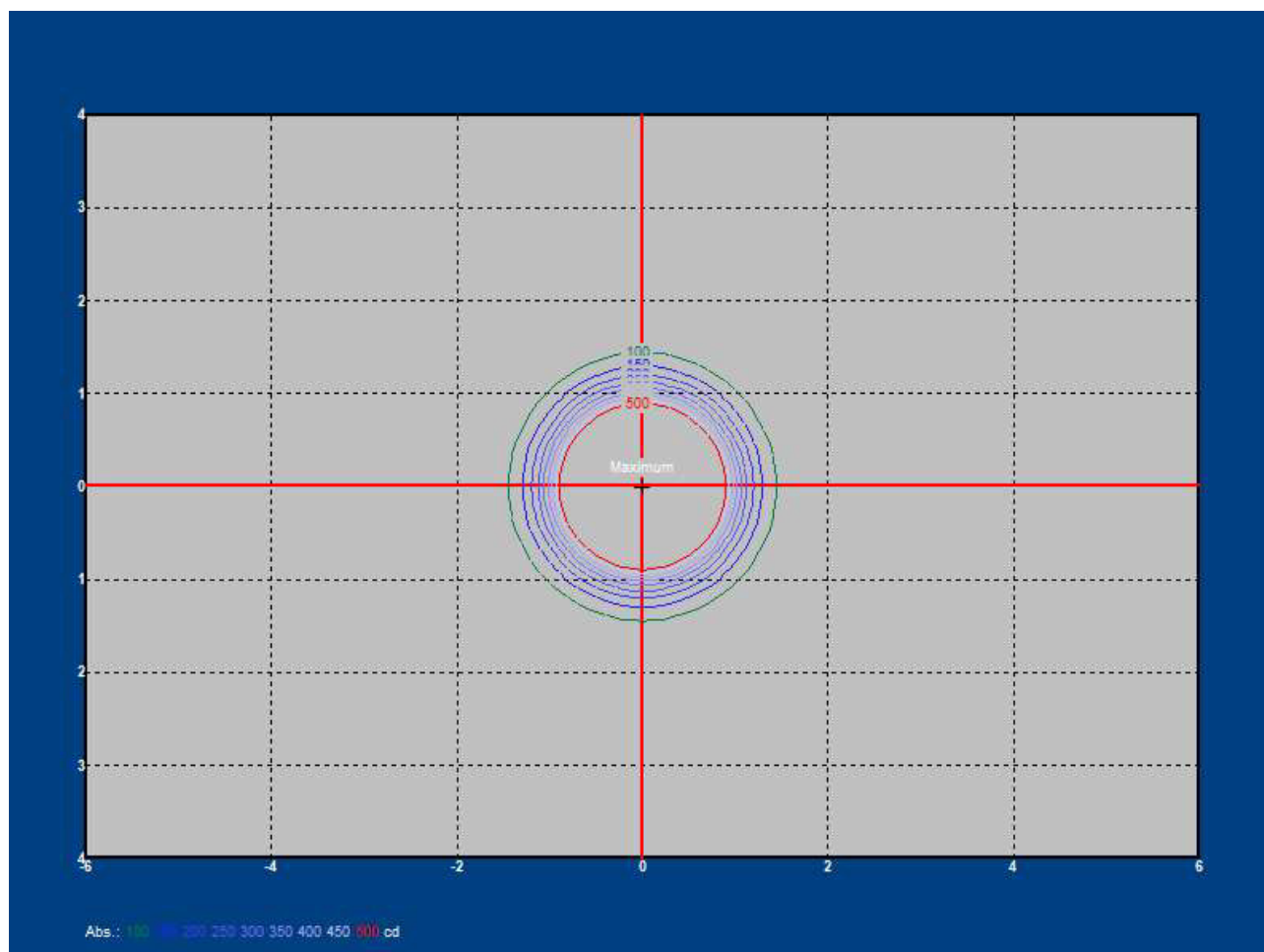
Illuminance and Intensity diagram CTL-20-PH-870-TWF 3000K / C-Plane measurement



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No. of lamps:	1	Power:	15.43 W
Lamp flux:	1313.00 lm	Operator:	ASY
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Comment:	LVED PRO 20W/ 220-240/ 500CS, 25-42VDC, MAX21W, 350mA		

Isoline diagram CTL-20-PH-870-TWF 3000K / 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	39	40	38	40	38	43	39	37	38	37	37	36
0.8	42	43	41	42	40	45	41	40	41	40	39	38
1	43	45	42	44	42	47	43	41	42	41	41	39
1.25	45	47	45	46	44	48	44	43	44	43	42	41
1.5	47	49	46	47	45	49	45	44	45	43	43	42
2	48	51	48	48	46	50	46	45	45	44	44	42
2.5	49	52	49	49	47	50	47	46	46	45	44	43
3	50	53	51	50	48	51	48	46	46	45	45	43
4	50	55	52	51	49	51	48	47	47	46	45	43
5	51	56	53	51	49	51	49	47	47	46	45	43

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	41	42	40	41	39	45	40	39	39	38	38	36
0.8	44	46	43	44	42	47	43	42	42	41	40	38
1	46	48	46	45	44	48	45	43	43	42	41	39
1.25	48	51	48	48	46	49	47	45	45	44	43	41
1.5	49	53	50	49	47	50	48	47	46	45	44	42
2	50	55	53	50	49	51	49	48	46	46	45	42
2.5	51	56	54	51	50	51	49	49	47	46	45	43
3	52	57	55	52	51	51	50	49	47	47	46	43
4	53	59	57	52	51	52	51	50	48	47	46	43
5	53	59	58	53	52	52	51	50	48	48	46	43

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Comment:	LVED PRO 20W/ 220-240/ 500CS, 25-42VDC, MAX21W, 350mA		

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	8.2	9.0	8.6	9.3	9.6	8.2	9.0	8.6	9.3	9.6
2H	3H	8.7	9.4	9.1	9.8	10.1	8.7	9.4	9.1	9.8	10.1
2H	4H	9.0	9.6	9.4	10.0	10.3	9.0	9.6	9.4	10.0	10.3
2H	6H	9.2	9.8	9.6	10.1	10.5	9.2	9.8	9.6	10.1	10.5
2H	8H	9.2	9.8	9.6	10.1	10.6	9.2	9.8	9.6	10.1	10.6
2H	12H	9.2	9.7	9.6	10.1	10.5	9.2	9.7	9.6	10.1	10.5
4H	2H	8.2	8.9	8.6	9.2	9.6	8.2	8.9	8.6	9.2	9.6
4H	3H	8.9	9.4	9.3	9.8	10.2	8.9	9.4	9.3	9.8	10.2
4H	4H	9.2	9.7	9.7	10.1	10.6	9.2	9.7	9.7	10.1	10.6
4H	6H	9.5	9.9	10.0	10.4	10.8	9.5	9.9	10.0	10.4	10.8
4H	8H	9.6	10.0	10.1	10.4	10.9	9.6	10.0	10.1	10.4	10.9
4H	12H	9.6	10.0	10.1	10.4	11.0	9.6	10.0	10.1	10.4	11.0
8H	4H	9.2	9.6	9.7	10.1	10.5	9.2	9.6	9.7	10.1	10.5
8H	6H	9.5	9.9	10.0	10.4	10.9	9.5	9.9	10.0	10.4	10.9
8H	8H	9.7	10.0	10.3	10.5	11.0	9.7	10.0	10.3	10.5	11.0
8H	12H	9.8	10.0	10.3	10.5	11.1	9.8	10.0	10.3	10.5	11.1
12H	4H	9.2	9.6	9.7	10.0	10.5	9.2	9.6	9.7	10.0	10.5
12H	6H	9.6	9.9	10.1	10.4	10.9	9.6	9.9	10.1	10.4	10.9
12H	8H	9.7	10.0	10.3	10.5	11.0	9.7	10.0	10.3	10.5	11.0

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Zonal flux CTL-20-PH-870-TWF 3000K / 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	1892.2	1892.2	1892.2	0.59	0.59	0.05	0.05
1.0	1878.8	1878.8	1878.8	4.72	5.32	0.36	0.40
2.0	1840.7	1840.7	1840.7	9.25	14.57	0.70	1.11
3.0	1780.3	1780.3	1780.3	13.42	27.98	1.02	2.13
4.0	1707.6	1707.6	1707.6	17.15	45.13	1.31	3.44
5.0	1624.7	1624.7	1624.7	20.39	65.52	1.55	4.99
6.0	1537.0	1537.0	1537.0	23.13	88.65	1.76	6.75
7.0	1445.7	1445.7	1445.7	25.37	114.02	1.93	8.68
8.0	1353.6	1353.6	1353.6	27.13	141.15	2.07	10.75
9.0	1262.0	1262.0	1262.0	28.42	169.57	2.16	12.91
10.0	1170.6	1170.6	1170.6	29.27	198.84	2.23	15.14
11.0	1081.0	1081.0	1081.0	29.70	228.54	2.26	17.41
12.0	993.7	993.7	993.7	29.75	258.28	2.27	19.67
13.0	909.0	909.0	909.0	29.44	287.73	2.24	21.91
14.0	825.7	825.7	825.7	28.76	316.49	2.19	24.10
15.0	743.2	743.2	743.2	27.70	344.19	2.11	26.21
16.0	666.8	666.8	666.8	26.46	370.65	2.02	28.23
17.0	594.3	594.3	594.3	25.02	395.67	1.91	30.13
18.0	526.4	526.4	526.4	23.42	419.09	1.78	31.92
19.0	462.7	462.7	462.7	21.69	440.78	1.65	33.57
20.0	403.4	403.4	403.4	19.87	460.64	1.51	35.08
21.0	350.1	350.1	350.1	18.06	478.71	1.38	36.46
22.0	302.6	302.6	302.6	16.32	495.03	1.24	37.70
23.0	259.9	259.9	259.9	14.62	509.65	1.11	38.82
24.0	222.8	222.8	222.8	13.05	522.70	0.99	39.81
25.0	190.2	190.2	190.2	11.57	534.27	0.88	40.69
26.0	162.6	162.6	162.6	10.26	544.53	0.78	41.47
27.0	138.7	138.7	138.7	9.07	553.60	0.69	42.16
28.0	118.7	118.7	118.7	8.03	561.63	0.61	42.77
29.0	102.0	102.0	102.0	7.12	568.75	0.54	43.32
30.0	87.8	87.8	87.8	6.32	575.07	0.48	43.80

Zonal flux CTL-20-PH-870-TWF 3000K / 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 [%]
31.0	75.4	75.4	75.4	5.59	580.66	0.43	44.22
32.0	65.1	65.1	65.1	4.97	585.63	0.38	44.60
33.0	56.9	56.9	56.9	4.46	590.09	0.34	44.94
34.0	49.9	49.9	49.9	4.02	594.11	0.31	45.25
35.0	43.8	43.8	43.8	3.62	597.73	0.28	45.52
36.0	38.5	38.5	38.5	3.26	600.99	0.25	45.77
37.0	34.1	34.1	34.1	2.95	603.94	0.22	46.00
38.0	30.1	30.1	30.1	2.67	606.61	0.20	46.20
39.0	26.7	26.7	26.7	2.42	609.03	0.18	46.38
40.0	23.8	23.8	23.8	2.20	611.23	0.17	46.55
41.0	21.2	21.2	21.2	2.01	613.23	0.15	46.70
42.0	19.0	19.0	19.0	1.84	615.07	0.14	46.84
43.0	17.3	17.3	17.3	1.70	616.76	0.13	46.97
44.0	15.7	15.7	15.7	1.57	618.33	0.12	47.09
45.0	14.4	14.4	14.4	1.46	619.80	0.11	47.20
46.0	13.3	13.3	13.3	1.38	621.18	0.11	47.31
47.0	12.4	12.4	12.4	1.31	622.48	0.10	47.41
48.0	11.6	11.6	11.6	1.24	623.72	0.09	47.50
49.0	10.9	10.9	10.9	1.19	624.91	0.09	47.59
50.0	10.3	10.3	10.3	1.14	626.05	0.09	47.68
51.0	9.8	9.8	9.8	1.10	627.15	0.08	47.76
52.0	9.3	9.3	9.3	1.05	628.20	0.08	47.84
53.0	9.1	9.1	9.1	1.04	629.24	0.08	47.92
54.0	8.7	8.7	8.7	1.02	630.26	0.08	48.00
55.0	8.4	8.4	8.4	0.99	631.25	0.08	48.08
56.0	8.3	8.3	8.3	0.99	632.23	0.08	48.15
57.0	8.1	8.1	8.1	0.98	633.21	0.07	48.23
58.0	8.0	8.0	8.0	0.98	634.20	0.07	48.30
59.0	7.7	7.7	7.7	0.95	635.14	0.07	48.37
60.0	7.5	7.5	7.5	0.93	636.08	0.07	48.44
61.0	7.2	7.2	7.2	0.91	636.98	0.07	48.51
62.0	6.9	6.9	6.9	0.88	637.86	0.07	48.58
63.0	6.9	6.9	6.9	0.88	638.75	0.07	48.65
64.0	6.5	6.5	6.5	0.84	639.59	0.06	48.71
65.0	6.3	6.3	6.3	0.82	640.41	0.06	48.77
66.0	6.0	6.0	6.0	0.79	641.20	0.06	48.83
67.0	5.7	5.7	5.7	0.76	641.96	0.06	48.89
68.0	5.5	5.5	5.5	0.73	642.70	0.06	48.95
69.0	5.2	5.2	5.2	0.70	643.40	0.05	49.00
70.0	5.2	5.2	5.2	0.70	644.11	0.05	49.06
71.0	4.7	4.7	4.7	0.64	644.75	0.05	49.10
72.0	4.6	4.6	4.6	0.63	645.38	0.05	49.15
73.0	4.6	4.6	4.6	0.63	646.01	0.05	49.20
74.0	4.2	4.2	4.2	0.58	646.59	0.04	49.24

Zonal flux CTL-20-PH-870-TWF 3000K / C-Plane measurement

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75.0	3.9	3.9	3.9	0.55	647.13	0.04	49.29
76.0	3.9	3.9	3.9	0.55	647.68	0.04	49.33
77.0	3.6	3.6	3.6	0.50	648.18	0.04	49.37
78.0	3.3	3.3	3.3	0.46	648.65	0.04	49.40
79.0	3.3	3.3	3.3	0.46	649.11	0.04	49.44
80.0	2.9	2.9	2.9	0.42	649.53	0.03	49.47
81.0	2.7	2.7	2.7	0.38	649.91	0.03	49.50
82.0	2.5	2.5	2.5	0.35	650.26	0.03	49.52
83.0	2.1	2.1	2.1	0.30	650.56	0.02	49.55
84.0	1.9	1.9	1.9	0.27	650.84	0.02	49.57
85.0	1.6	1.6	1.6	0.23	651.07	0.02	49.59
86.0	1.3	1.3	1.3	0.19	651.26	0.01	49.60
87.0	0.9	0.9	0.9	0.13	651.39	0.01	49.61
88.0	0.7	0.7	0.7	0.10	651.48	0.01	49.62
89.0	0.5	0.5	0.5	0.07	651.55	0.01	49.62
90.0	0.4	0.4	0.4	0.05	651.60	0.00	49.63