

HALCYON S327 CRI90 4000K (40D)(EEI=0.181;CLASS A)

Luminaire Name: S327 CRI90 4000K (40D)(EEI=0.181;CLASS A)

Report NO.: 01315419101102A

Test NO.:

Lamp: CITIZEN CLU038-1208C4-403H5M3 1050mA

Sum Lumens: 4277.71 lm

Number of Lamps: 1

Diameter: 118mm

Length: -118mm

Photometric Type: Type C

Voltage: 229.1 V

Current: 0.182 A

Power: 41.1 W

Power Factor: 0.983

Ballast Type: KGP L44W700-1050 T

Width: -118mm

Height: 180mm

Optical Component: 40D Reflector DC(V:35.12V I:1.041A P:36.56W)

Photometric Results

Lumens: 3403.71 lm

Efficiency: 79.57%

Central Intensity: 6265.2cd

Maximum Intensity: 6900.25cd

Beam Angle(10%): Left: -37.8 Right:18.5

Maximum s/h: C0_180: 0.36 C90_270: 0.36

Effective Luminous Flux: 3015.18 lm

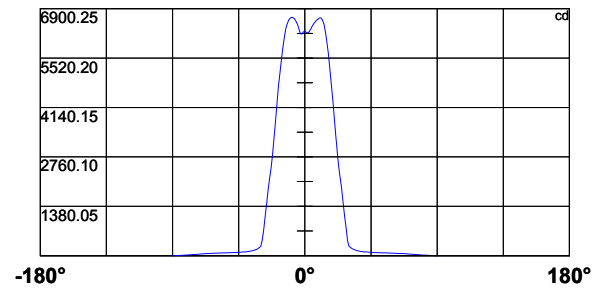
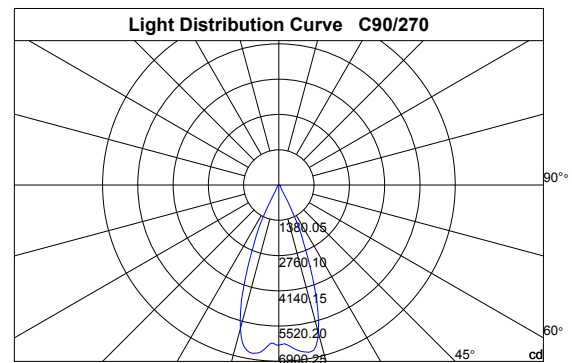
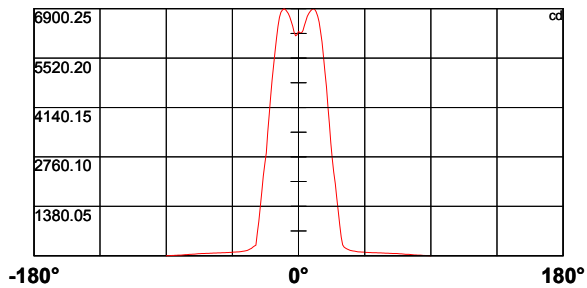
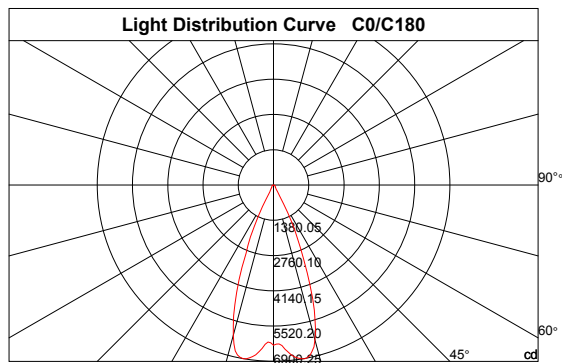
Angle of maximum intensity: C:0.0 G:10.0

Half Peak Side Angle(50%): Left: -31.0 Right:11.4

Up Flux Rate: 0.0%

Down Flux Rate: 79.57%

CIE Classification: Direct



Intensity Data [cd]

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C\γ	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	6265.2	6225.5	6222.5	6288.6	6433.8	6558.5	6686.1	6772.6	6829.8	6873.8
30.0	6265.2	6260.7	6301.8	6414.7	6527.7	6621.5	6705.2	6775.6	6818.1	6863.6
60.0	6265.2	6238.7	6325.2	6419.1	6482.2	6545.3	6601.0	6633.3	6668.5	6721.3
90.0	6265.2	6235.8	6216.7	6262.2	6328.2	6407.4	6477.8	6535.0	6577.5	6612.7
120.0	6265.2	6181.5	6163.9	6216.7	6309.1	6448.4	6548.2	6624.5	6687.6	6727.2
150.0	6265.2	6229.9	6143.3	6138.9	6229.9	6357.5	6507.1	6625.9	6719.8	6802.0
180.0	6265.2	6174.1	6143.3	6235.8	6405.9	6537.9	6680.2	6765.3	6825.4	6881.2
210.0	6265.2	6272.4	6199.1	6163.9	6282.7	6448.4	6590.7	6696.4	6772.6	6834.2
240.0	6265.2	6290.0	6247.5	6190.3	6232.8	6370.7	6493.9	6573.1	6642.1	6687.6
270.0	6265.2	6253.4	6191.7	6200.5	6322.3	6451.4	6548.2	6615.7	6646.5	6662.6
300.0	6265.2	6276.8	6216.7	6199.1	6276.8	6448.4	6570.2	6656.7	6696.4	6724.2
330.0	6265.2	6240.1	6232.8	6312.0	6463.1	6583.4	6696.4	6755.0	6803.4	6826.9
360.0	6265.2	6225.5	6222.5	6288.6	6433.8	6558.5	6686.1	6772.6	6829.8	6873.8

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	6900.3	6884.1	6818.1	6689.0	6527.7	6257.8	5971.7	5569.8	5144.4	4705.8
30.0	6882.6	6865.0	6809.3	6697.8	6489.5	6184.4	5830.9	5448.0	4965.4	4519.5
60.0	6741.8	6715.4	6630.3	6473.4	6221.1	5888.1	5527.2	5118.0	4650.0	4160.1
90.0	6642.1	6640.6	6589.3	6458.7	6247.5	5960.0	5650.5	5239.7	4814.3	4347.9
120.0	6709.6	6646.5	6533.5	6375.1	6087.6	5788.3	5421.6	4953.7	4540.0	4017.8
150.0	6846.0	6826.9	6756.5	6633.3	6391.2	6119.9	5726.7	5379.1	4912.6	4446.1
180.0	6894.4	6866.5	6800.5	6652.3	6407.4	6083.2	5722.3	5336.5	4903.8	4435.9
210.0	6876.8	6885.6	6846.0	6774.1	6602.5	6373.6	6065.6	5682.7	5329.2	4856.9
240.0	6721.3	6728.6	6703.7	6621.5	6499.8	6268.0	6020.1	5643.1	5269.1	4884.7
270.0	6639.1	6589.3	6477.8	6335.5	6092.0	5814.8	5481.8	5109.2	4726.3	4236.4
300.0	6700.8	6646.5	6526.2	6379.5	6187.3	5939.4	5634.3	5264.7	4812.9	4402.1
330.0	6803.4	6722.8	6601.0	6422.0	6177.1	5874.9	5512.6	5106.2	4645.6	4154.2
360.0	6900.3	6884.1	6818.1	6689.0	6527.7	6257.8	5971.7	5569.8	5144.4	4705.8

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	4160.1	3686.3	3142.1	2709.3	2333.8	2009.6	1615.0	1217.5	849.3	515.8
30.0	4001.7	3480.9	3043.8	2534.8	2198.9	1760.3	1370.1	935.9	770.1	373.0
60.0	3655.5	2914.9	2686.6	2342.3	1990.1	1548.2	1162.4	734.3	460.2	287.4
90.0	3859.4	3378.2	2935.2	2511.3	2204.7	1876.2	1487.4	1082.6	774.5	416.5
120.0	3576.3	2910.0	2659.0	2327.4	1976.9	1610.9	1216.2	859.0	521.0	285.4
150.0	4001.7	3479.5	3102.5	2621.3	2269.3	1952.4	1563.7	1169.1	803.9	497.7
180.0	3934.2	3451.6	2871.1	2576.6	2218.4	1789.9	1390.6	948.5	639.0	292.0
210.0	4430.0	3828.6	3373.8	2918.2	2523.8	2177.3	1715.7	1308.0	928.8	553.2
240.0	4393.3	3944.5	3431.1	2992.5	2614.0	2266.3	1920.2	1508.0	1070.8	781.9
270.0	3759.6	3309.3	2846.5	2476.3	2152.7	1850.2	1471.4	1080.1	716.9	432.1
300.0	3913.7	3429.6	3023.3	2572.9	2270.7	1955.4	1650.3	1239.5	884.5	765.7
330.0	3655.5	2921.6	2696.1	2370.2	2059.7	1699.5	1351.3	948.8	656.6	287.4
360.0	4160.1	3686.3	3142.1	2709.3	2333.8	2009.6	1615.0	1217.5	849.3	515.8

Intensity Data [cd]

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C\γ	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
0.0	302.3	237.6	208.9	183.7	165.3	150.2	140.1	132.8	123.8	117.5
30.0	255.2	224.4	192.9	174.0	156.4	144.2	136.7	127.6	121.2	113.2
60.0	242.2	212.3	189.0	173.0	148.6	139.6	131.3	123.4	116.3	110.9
90.0	264.9	229.0	198.8	177.9	164.4	143.3	135.4	126.6	119.3	112.4
120.0	240.9	209.4	183.2	164.2	149.6	138.8	131.5	123.1	117.3	110.6
150.0	298.7	239.1	206.2	182.8	164.7	147.7	138.0	130.0	123.1	115.2
180.0	269.4	237.5	204.0	186.8	163.8	144.7	135.5	128.3	121.4	113.8
210.0	286.4	261.3	228.0	196.1	182.5	156.4	145.0	136.5	127.9	121.4
240.0	393.9	265.2	228.2	195.4	175.7	159.3	145.2	136.1	127.6	120.9
270.0	263.7	226.9	197.6	175.1	161.5	142.8	135.4	126.2	119.6	112.8
300.0	319.5	243.6	211.4	187.9	173.4	154.5	138.8	129.2	122.0	114.6
330.0	253.3	224.4	194.0	178.1	160.8	142.4	132.9	125.7	118.3	111.3
360.0	302.3	237.6	208.9	183.7	165.3	150.2	140.1	132.8	123.8	117.5

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	110.0	106.1	103.3	100.3	98.1	95.6	93.1	91.1	89.0	87.0
30.0	108.3	104.7	101.8	99.0	96.8	94.5	92.0	90.1	87.7	86.0
60.0	106.8	103.6	100.9	98.4	96.0	93.5	91.5	89.3	87.5	85.4
90.0	107.5	104.1	101.2	98.6	96.2	94.0	91.8	89.8	87.6	85.8
120.0	106.1	103.2	100.4	98.1	95.2	93.2	91.2	89.2	87.5	85.3
150.0	109.1	104.9	101.9	99.3	97.1	94.8	92.4	90.5	88.3	86.4
180.0	109.1	105.5	102.6	100.0	97.5	95.0	92.6	90.8	88.4	86.6
210.0	113.3	109.4	105.8	103.1	100.7	98.0	95.7	93.4	91.3	89.2
240.0	113.0	108.6	104.7	101.9	99.6	97.1	95.1	92.7	90.8	88.9
270.0	107.6	104.6	101.7	99.3	96.9	94.5	92.6	90.7	88.7	87.1
300.0	108.1	104.6	101.7	99.0	96.8	94.3	92.1	90.2	88.3	86.7
330.0	106.9	103.7	100.9	98.6	96.1	93.5	91.8	89.8	88.0	86.1
360.0	110.0	106.1	103.3	100.3	98.1	95.6	93.1	91.1	89.0	87.0

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	85.1	83.2	81.6	79.7	78.0	76.6	75.3	74.0	72.6	71.3
30.0	83.8	81.9	79.9	78.3	76.9	75.3	74.3	72.7	71.4	70.0
60.0	83.3	81.6	79.6	78.1	76.2	74.9	73.5	72.1	70.9	69.5
90.0	83.9	82.0	80.4	78.6	77.5	75.7	75.3	73.7	72.3	71.1
120.0	83.6	81.8	80.1	78.6	77.2	75.6	74.5	73.1	71.8	70.6
150.0	84.5	82.6	80.5	79.1	77.5	76.0	75.3	73.7	72.4	71.1
180.0	84.4	82.4	80.8	78.7	77.3	75.6	74.2	72.7	71.5	70.3
210.0	87.2	85.3	83.3	81.5	79.6	78.0	76.4	74.9	73.3	72.2
240.0	87.0	85.4	83.3	81.7	79.8	78.2	76.4	75.3	74.3	72.8
270.0	85.3	83.6	81.9	80.1	78.7	77.0	75.8	74.4	73.0	71.9
300.0	84.8	83.2	81.4	79.8	78.5	76.9	75.4	74.8	73.4	72.3
330.0	84.2	82.6	80.8	79.1	77.6	76.0	74.8	73.5	72.2	70.9
360.0	85.1	83.2	81.6	79.7	78.0	76.6	75.3	74.0	72.6	71.3

Intensity Data [cd]

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C\γ	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0
0.0	70.1	68.8	67.4	65.8	63.8	61.9	59.7	57.8	55.2	52.7
30.0	68.7	67.2	65.7	64.0	62.1	60.1	57.6	55.6	52.9	50.4
60.0	68.2	66.7	65.2	63.1	61.5	59.2	57.1	54.7	51.9	49.2
90.0	69.7	68.3	66.9	65.2	63.4	61.3	59.0	56.7	54.2	51.4
120.0	69.2	67.9	66.5	64.6	62.9	60.4	58.3	56.1	53.3	50.5
150.0	69.9	68.7	67.1	65.7	63.6	61.9	59.6	57.2	54.8	52.3
180.0	68.9	67.5	66.1	64.5	62.4	60.6	58.3	56.0	53.5	50.7
210.0	70.6	69.5	68.0	66.4	64.8	62.7	60.4	57.9	55.8	53.2
240.0	71.6	70.2	69.0	67.3	65.8	64.0	61.8	59.7	57.3	54.9
270.0	70.5	69.4	67.7	66.2	64.2	62.3	60.0	57.6	55.2	52.7
300.0	71.1	69.9	68.4	66.9	65.2	63.2	60.8	58.8	56.2	54.0
330.0	69.8	68.3	66.9	65.2	63.2	61.2	58.9	56.6	54.1	51.2
360.0	70.1	68.8	67.4	65.8	63.8	61.9	59.7	57.8	55.2	52.7

C\γ	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	49.8	46.9	43.7	40.3	37.0	34.5	31.9	28.5	25.5	22.4
30.0	47.5	44.2	41.2	37.9	35.5	32.5	29.4	26.6	23.4	20.6
60.0	45.9	43.0	39.4	36.6	34.3	31.2	28.3	24.9	22.0	19.3
90.0	48.6	45.5	42.2	38.8	36.0	33.5	30.3	27.4	24.2	21.4
120.0	47.4	44.1	40.8	37.7	35.2	32.5	29.4	26.3	23.3	20.3
150.0	49.7	46.4	43.1	39.8	37.0	34.2	31.6	28.3	25.5	22.6
180.0	47.9	44.5	41.6	38.2	35.6	33.3	30.0	27.1	23.8	21.0
210.0	50.2	47.1	43.8	40.5	37.5	34.8	31.4	28.9	25.5	22.9
240.0	52.3	49.2	46.0	42.5	39.1	36.3	33.7	30.7	27.6	24.4
270.0	49.5	46.4	43.0	39.5	36.4	34.0	30.7	27.9	24.9	21.8
300.0	51.2	47.8	44.8	40.9	37.9	35.1	32.3	29.5	26.1	23.8
330.0	48.4	44.9	41.8	38.2	35.5	33.0	29.6	26.8	23.6	20.8
360.0	49.8	46.9	43.7	40.3	37.0	34.5	31.9	28.5	25.5	22.4

C\γ	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	19.9	17.0	14.5	11.9	9.6	7.5	5.3	3.4	1.5	0.1
30.0	18.0	15.5	12.9	10.6	8.3	6.1	4.1	2.2	0.4	0.1
60.0	16.6	14.2	11.7	9.6	7.3	5.1	3.2	1.2	0.1	0.1
90.0	18.9	16.2	14.0	11.3	8.9	6.9	4.7	2.8	1.0	0.1
120.0	17.8	15.2	12.8	10.5	8.3	6.0	4.1	2.1	0.3	0.1
150.0	19.7	17.1	14.7	12.3	9.9	7.5	5.6	3.6	1.6	0.1
180.0	18.1	15.8	13.2	11.0	8.6	6.5	4.4	2.4	0.7	0.1
210.0	20.1	17.3	14.8	12.3	10.0	7.8	5.6	3.7	1.8	0.1
240.0	21.8	18.9	16.2	13.5	11.2	8.9	6.7	4.8	2.7	0.8
270.0	19.3	16.5	14.2	11.6	9.4	7.1	5.1	3.1	1.3	0.1
300.0	20.5	17.9	15.0	12.6	10.2	8.0	5.9	3.9	2.0	0.1
330.0	17.9	15.7	13.1	10.8	8.5	6.4	4.3	2.3	0.6	0.1
360.0	19.9	17.0	14.5	11.9	9.6	7.5	5.3	3.4	1.5	0.1

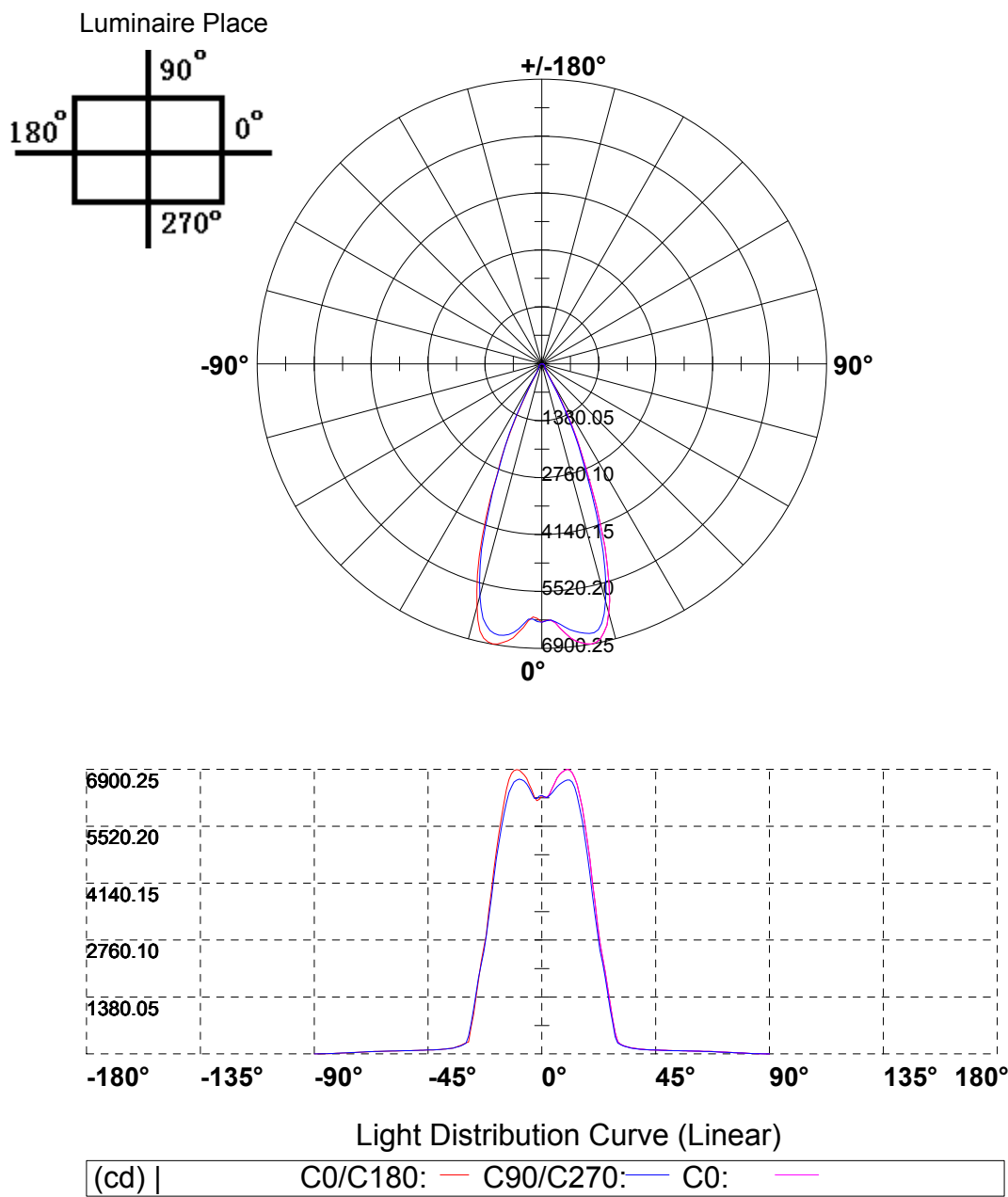
Intensity Data [cd]

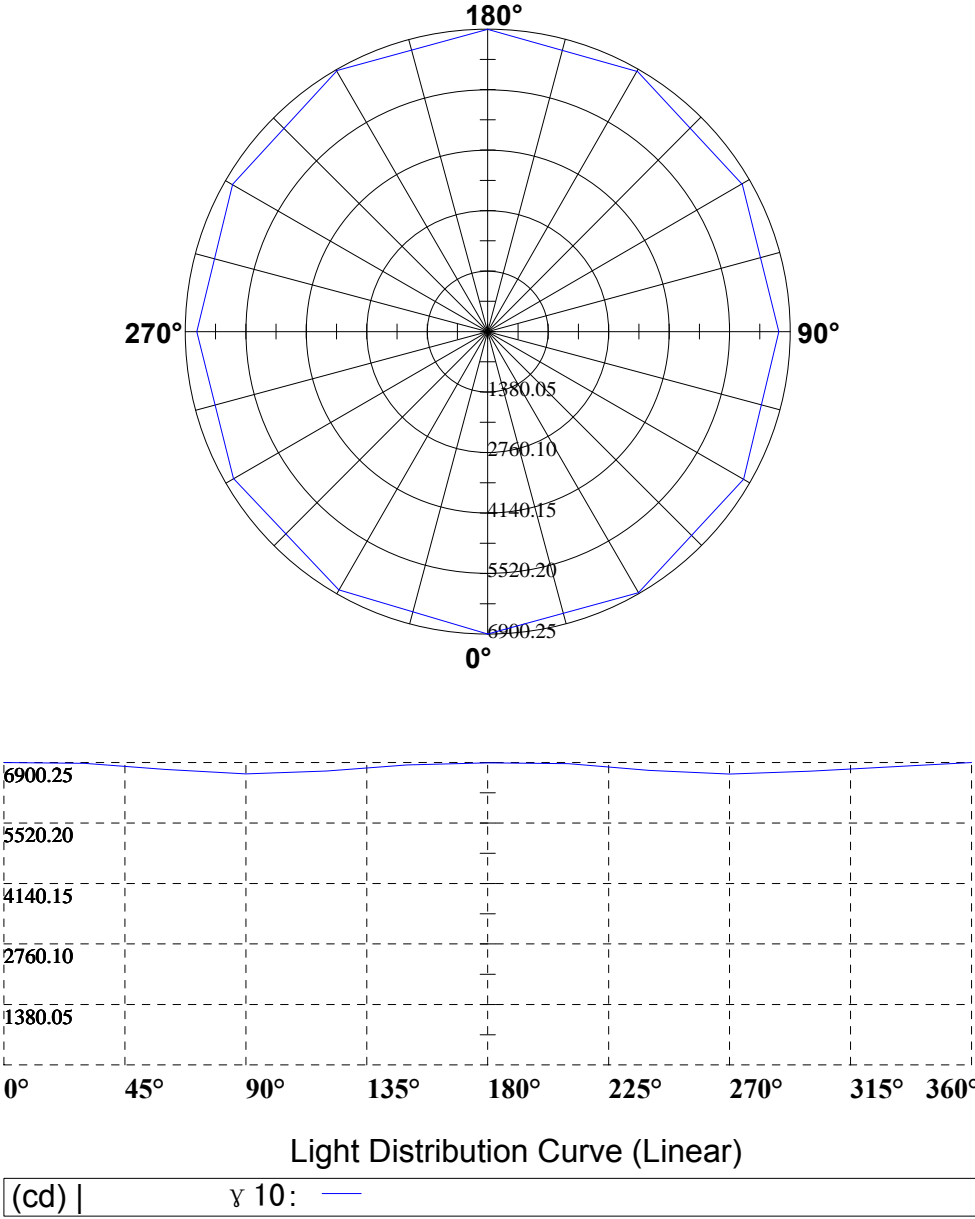
C\γ	90.0
0.0	0.1
30.0	0.1
60.0	0.1
90.0	0.1
120.0	0.1
150.0	0.1
180.0	0.1
210.0	0.1
240.0	0.1
270.0	0.1
300.0	0.1
330.0	0.1
360.0	0.1

Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
0	6265.20	0.00	0.00	0.00	0.00
1	6239.91	5.98	5.98	5.98	5.98
2	6217.05	17.88	23.86	17.88	23.86
3	6253.47	29.83	53.69	29.83	53.69
4	6357.87	42.21	95.90	42.21	95.90
5	6481.58	55.23	151.14	55.23	151.14
6	6592.08	68.71	219.84	68.71	219.84
7	6669.09	82.31	302.15	82.31	302.15
8	6723.98	95.85	398.01	95.85	398.01
9	6768.11	109.35	507.35	109.35	507.35
10	6779.84	122.60	629.96	122.60	629.96
11	6751.48	135.21	765.16	135.21	765.16
12	6674.35	146.76	911.93	146.76	911.93
13	6542.70	156.85	1068.78	156.85	1068.78
14	6327.55	164.74	1233.52	164.74	1233.52
15	6046.03	169.87	1403.39	169.87	1403.39
16	5713.78	172.31	1575.70	172.31	1575.70
17	5320.90	171.84	1747.54	171.84	1747.54
18	4892.81	168.40	1915.94	168.40	1915.94
19	4430.62	162.21	2078.15	162.21	2078.15
20	3945.08	153.30	2231.45	153.30	2231.45
21	3394.58	140.94	2372.39	140.94	2372.39
22	2984.27	128.19	2500.57	128.19	2500.57
23	2579.43	116.74	2617.31	116.74	2617.31
24	2234.42	105.25	2722.56	105.25	2722.56
25	1874.69	93.43	2815.99	93.43	2815.99
26	1492.85	79.49	2895.48	79.49	2895.48
27	1085.94	63.09	2958.57	63.09	2958.57
28	756.30	46.64	3005.22	46.64	3005.22
29	457.33	31.75	3036.97	9.96	3015.18
30	282.54	19.98	3056.94	0.00	3015.18
31	234.23	14.38	3071.33	0.00	3015.18
32	203.52	12.54	3083.87	0.00	3015.18
33	181.25	11.34	3095.20	0.00	3015.18
34	163.90	10.45	3105.65	0.00	3015.18
35	147.00	9.66	3115.30	0.00	3015.18
36	137.14	9.05	3124.35	0.00	3015.18
37	128.79	8.67	3133.02	0.00	3015.18
38	121.47	8.35	3141.38	0.00	3015.18
39	114.54	8.06	3149.43	0.00	3015.18
40	108.81	7.79	3157.22	0.00	3015.18

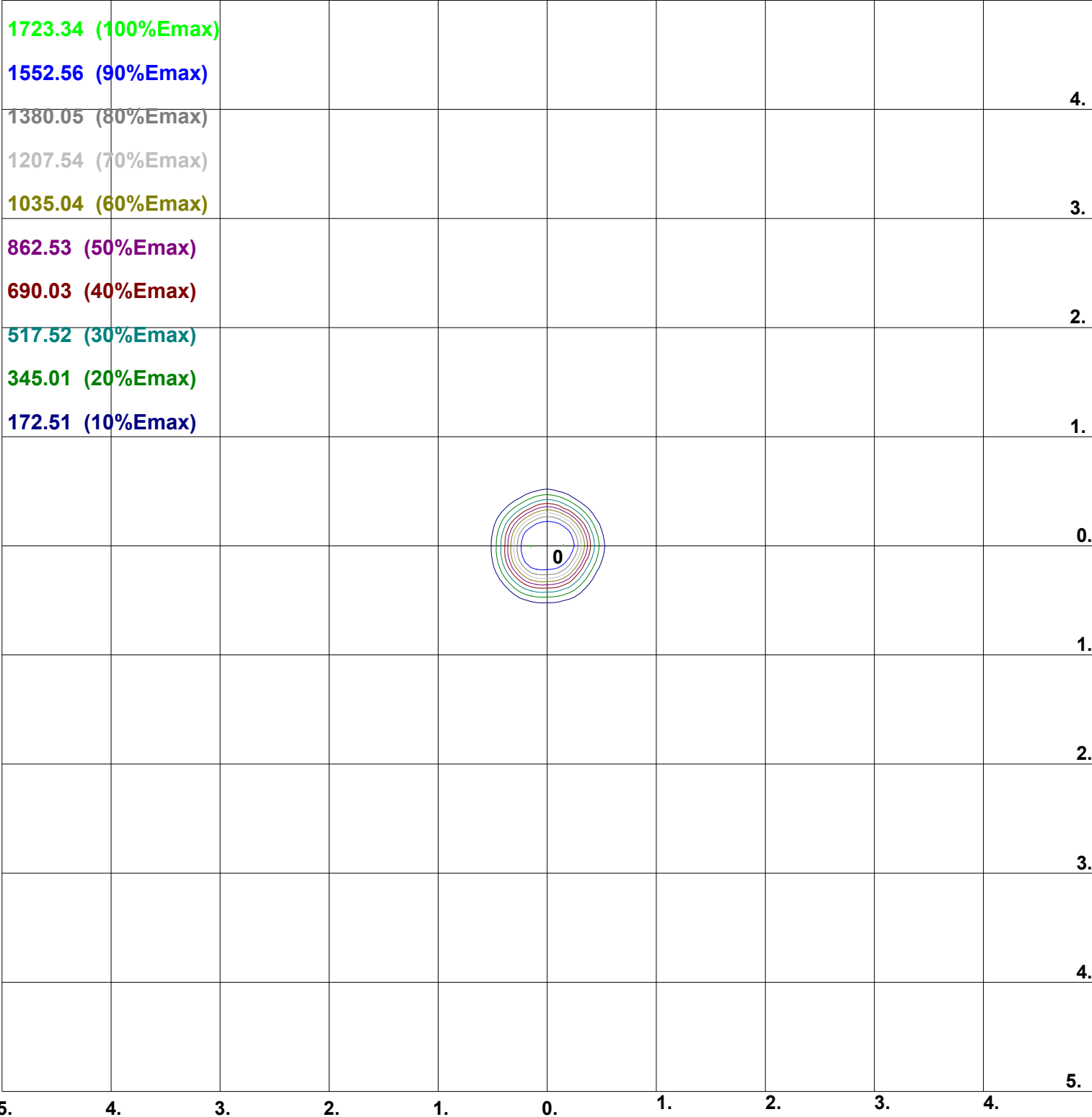
Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
41	105.25	7.62	3164.85	0.00	3015.18
42	102.25	7.54	3172.38	0.00	3015.18
43	99.63	7.48	3179.86	0.00	3015.18
44	97.25	7.43	3187.29	0.00	3015.18
45	94.83	7.38	3194.68	0.00	3015.18
46	92.67	7.33	3202.01	0.00	3015.18
47	90.63	7.29	3209.30	0.00	3015.18
48	88.59	7.25	3216.54	0.00	3015.18
49	86.71	7.20	3223.74	0.00	3015.18
50	84.75	7.15	3230.89	0.00	3015.18
51	82.95	7.09	3237.99	0.00	3015.18
52	81.14	7.04	3245.03	0.00	3015.18
53	79.43	6.98	3252.01	0.00	3015.18
54	77.90	6.93	3258.95	0.00	3015.18
55	76.30	6.88	3265.83	0.00	3015.18
56	75.08	6.84	3272.67	0.00	3015.18
57	73.74	6.80	3279.47	0.00	3015.18
58	72.43	6.76	3286.23	0.00	3015.18
59	71.17	6.71	3292.95	0.00	3015.18
60	69.86	6.66	3299.61	0.00	3015.18
61	68.52	6.60	3306.21	0.00	3015.18
62	67.07	6.53	3312.75	0.00	3015.18
63	65.40	6.44	3319.19	0.00	3015.18
64	63.58	6.33	3325.52	0.00	3015.18
65	61.55	6.19	3331.71	0.00	3015.18
66	59.29	6.03	3337.74	0.00	3015.18
67	57.05	5.85	3343.59	0.00	3015.18
68	54.53	5.65	3349.24	0.00	3015.18
69	51.92	5.43	3354.67	0.00	3015.18
70	49.03	5.18	3359.86	0.00	3015.18
71	45.82	4.90	3364.76	0.00	3015.18
72	42.62	4.60	3369.36	0.00	3015.18
73	39.25	4.28	3373.64	0.00	3015.18
74	36.42	3.98	3377.62	0.00	3015.18
75	33.75	3.71	3381.33	0.00	3015.18
76	30.72	3.42	3384.75	0.00	3015.18
77	27.73	3.12	3387.87	0.00	3015.18
78	24.62	2.80	3390.67	0.00	3015.18
79	21.76	2.49	3393.16	0.00	3015.18
80	19.05	2.20	3395.36	0.00	3015.18
81	16.44	1.92	3397.28	0.00	3015.18

[illegible]





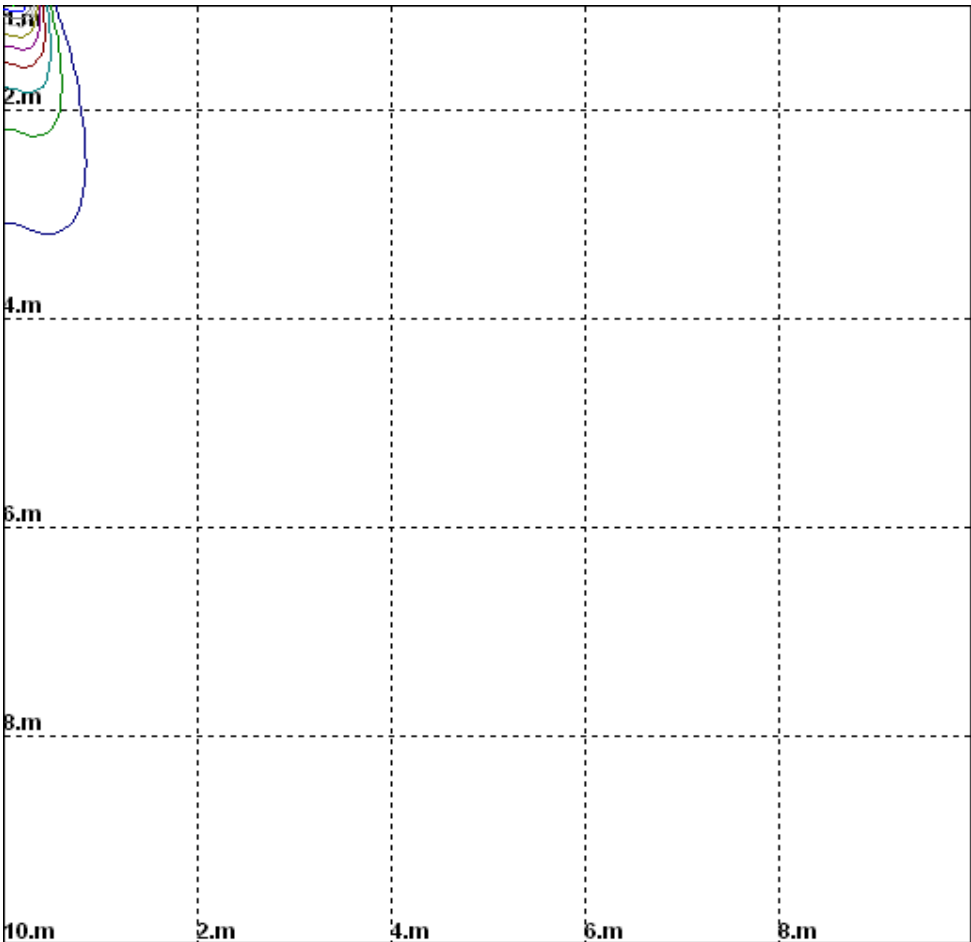
Unit: [lx]



Coordinate Scale: d/h
Height: 2 m
Max Illuminance : 1725.06lx

Unit: [lx]
Illuminance

- 1723.34
- 1552.56
- 1380.05
- 1207.54
- 1035.04
- 862.53
- 690.03
- 517.52
- 345.01
- 172.51



Luminance Limiting Curve (There is not luminous side)

Diameter: 118mm

Length: -118mm

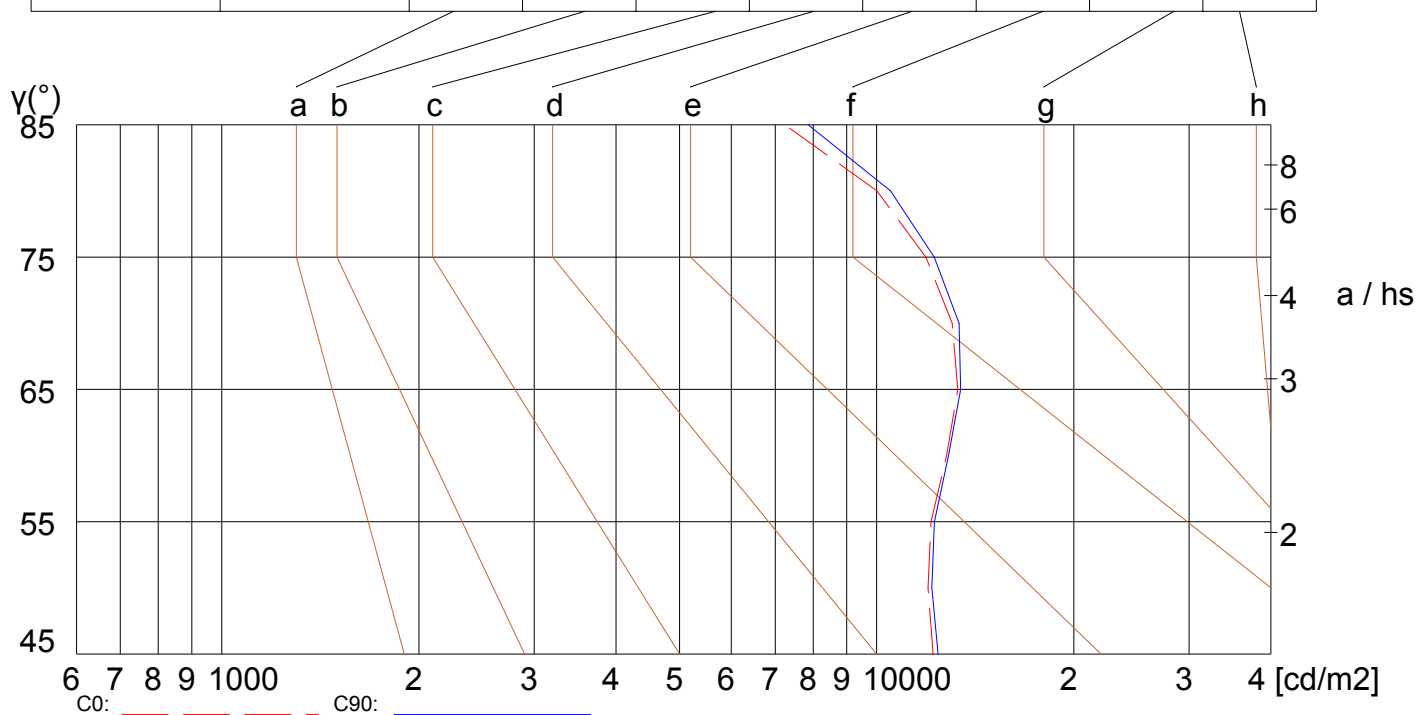
Width: -118mm

Height: 180mm

(cd/m²)

γ	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	12200	11976	12107	12790	13301	13040	11892	10005	7242
C90	12409	12143	12248	12871	13438	13363	12245	10501	7859

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



Luminance Limiting Curve (C0/C90)

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 FOR RHOFC=20															
0	0.95	0.95	0.95	0.93	0.93	0.93	0.88	0.88	0.88	0.85	0.85	0.85	0.81	0.81	0.81	0.80
1	0.91	0.91	0.90	0.90	0.89	0.89	0.86	0.86	0.85	0.82	0.81	0.80	0.76	0.75	0.74	0.70
2	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.78	0.77	0.75	0.73	0.72	0.70	0.67
3	0.82	0.81	0.81	0.81	0.80	0.79	0.78	0.76	0.75	0.75	0.73	0.71	0.71	0.68	0.67	0.63
4	0.78	0.77	0.77	0.77	0.76	0.75	0.75	0.73	0.71	0.72	0.69	0.68	0.68	0.65	0.63	0.60
5	0.75	0.74	0.73	0.74	0.72	0.71	0.71	0.69	0.68	0.69	0.66	0.64	0.65	0.63	0.60	0.57
6	0.71	0.70	0.70	0.71	0.69	0.68	0.68	0.66	0.65	0.66	0.63	0.61	0.63	0.60	0.58	0.55
7	0.68	0.67	0.67	0.68	0.66	0.65	0.66	0.64	0.62	0.63	0.61	0.59	0.61	0.58	0.55	0.53
8	0.66	0.65	0.64	0.65	0.64	0.63	0.63	0.61	0.60	0.61	0.58	0.56	0.59	0.56	0.53	0.50
9	0.63	0.62	0.62	0.62	0.61	0.60	0.61	0.59	0.57	0.59	0.56	0.54	0.57	0.54	0.51	0.48
10	0.61	0.60	0.59	0.60	0.59	0.58	0.59	0.56	0.55	0.57	0.54	0.52	0.55	0.52	0.49	0.47

