

## Luminaire Property

Luminaire: RH-MSD36 36W 4000K

Report NO.:

Voltage: 221.1 V

Test NO.:

Current: 0.179 A

Lamp:

Power: 38.2 W

Sum Lumens: 3100.17 lm

Power Factor: 0.965

Number of Lamps: 1

Ballast Type: 25-42V 900mA

Diameter: mm

Width: 400mm

Length: 400mm

Height: 38mm

Photometric Type: Type C

Remark: PMMA+0.5w SMD2835

## Photometric Results

Lumens: 3100.17 lm

Angle of maximum intensity: C:0.0 G:1.0

Effective luminous flux: 3046.35 lm

Half Peak Side Angle(50%): Left: -54.9 Right:54.2

Efficiency: 81.1563 lm/W

Light Out Rate(LOR) : 100.00%

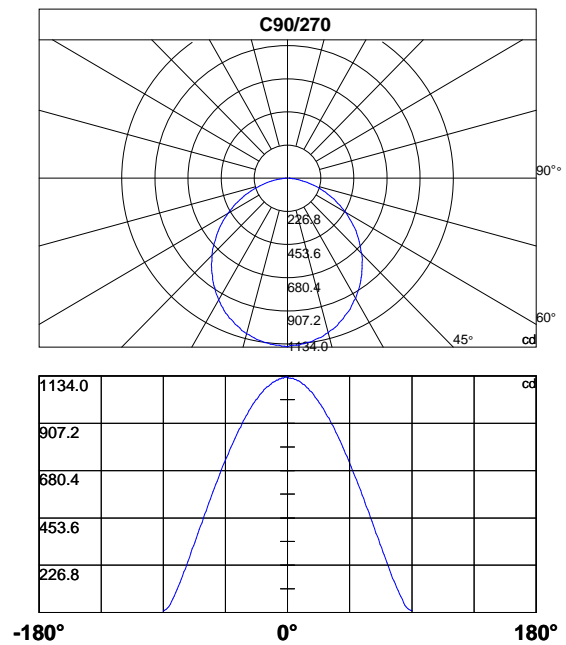
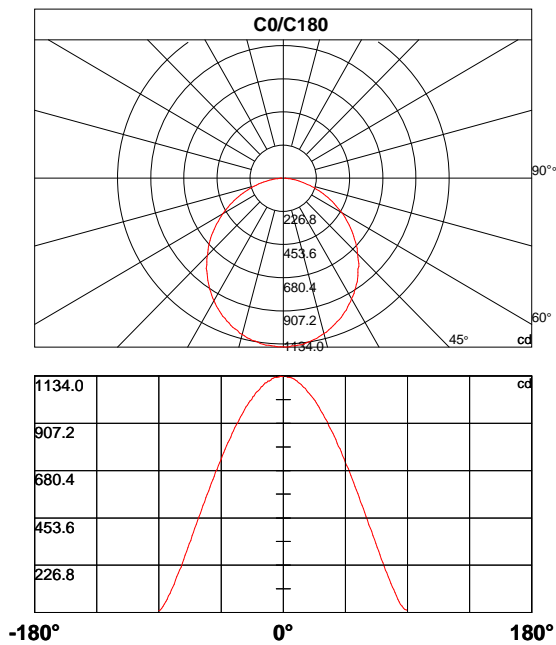
Central Intensity: 1131.421cd

Up Flux Rate: 0.0%

Maximum Intensity: 1133.999cd

Down Flux Rate: 100.0%

Beam Angle(10%): Left: -80.5 Right:79.7



### Photometric Data Table [cd]

C\G	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1131.4	1134.0	1133.0	1128.0	1128.7	1126.8	1125.4	1122.5	1118.4	1114.1
45.0	1131.4	1123.9	1123.4	1122.2	1123.2	1117.9	1117.7	1111.5	1110.7	1107.4
90.0	1131.4	1123.9	1123.4	1122.2	1123.2	1117.9	1117.7	1111.5	1110.7	1107.4
135.0	1131.4	1131.9	1132.8	1129.9	1127.8	1126.8	1127.8	1123.2	1122.0	1115.0
180.0	1131.4	1131.9	1132.8	1129.9	1127.8	1126.8	1127.8	1123.2	1122.0	1115.0
225.0	1131.4	1127.5	1127.8	1123.7	1125.1	1120.8	1121.1	1114.6	1115.0	1108.8
270.0	1131.4	1127.5	1127.8	1123.7	1125.1	1120.8	1121.1	1114.6	1115.0	1108.8
315.0	1131.4	1134.0	1133.0	1128.0	1128.7	1126.8	1125.4	1122.5	1118.4	1114.1
360.0	1131.4	1134.0	1133.0	1128.0	1128.7	1126.8	1125.4	1122.5	1118.4	1114.1

C\G	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	1109.3	1102.4	1099.7	1092.3	1085.6	1079.3	1074.3	1064.0	1056.8	1048.4
45.0	1100.0	1095.1	1093.3	1087.0	1078.4	1074.1	1064.2	1059.9	1052.5	1044.6
90.0	1100.0	1095.1	1093.3	1087.0	1078.4	1074.1	1064.2	1059.9	1052.5	1044.6
135.0	1110.5	1109.3	1101.6	1100.4	1092.5	1085.6	1081.5	1070.2	1064.5	1059.5
180.0	1110.5	1109.3	1101.6	1100.4	1092.5	1085.6	1081.5	1070.2	1064.5	1059.5
225.0	1105.5	1103.8	1096.1	1090.3	1083.9	1081.8	1075.0	1070.2	1058.2	1051.0
270.0	1105.5	1103.8	1096.1	1090.3	1083.9	1081.8	1075.0	1070.2	1058.2	1051.0
315.0	1109.3	1102.4	1099.7	1092.3	1085.6	1079.3	1074.3	1064.0	1056.8	1048.4
360.0	1109.3	1102.4	1099.7	1092.3	1085.6	1079.3	1074.3	1064.0	1056.8	1048.4

C\G	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	1040.5	1031.9	1024.7	1015.3	1005.5	994.0	983.7	970.0	958.3	948.2
45.0	1032.6	1023.5	1016.8	1004.8	995.7	986.1	977.2	962.8	950.6	939.4
90.0	1032.6	1023.5	1016.8	1004.8	995.7	986.1	977.2	962.8	950.6	939.4
135.0	1051.5	1040.0	1034.3	1021.6	1014.6	1005.3	994.2	984.7	972.7	961.4
180.0	1051.5	1040.0	1034.3	1021.6	1014.6	1005.3	994.2	984.7	972.7	961.4
225.0	1044.8	1033.1	1023.5	1019.6	1007.2	999.0	989.0	977.0	967.6	952.3
270.0	1044.8	1033.1	1023.5	1019.6	1007.2	999.0	989.0	977.0	967.6	952.3
315.0	1040.5	1031.9	1024.7	1015.3	1005.5	994.0	983.7	970.0	958.3	948.2
360.0	1040.5	1031.9	1024.7	1015.3	1005.5	994.0	983.7	970.0	958.3	948.2

C\G	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
0.0	935.0	925.5	912.5	895.5	884.7	871.0	860.0	845.4	829.8	811.8
45.0	932.6	916.3	903.4	893.1	879.2	864.8	850.0	836.3	824.3	806.8
90.0	932.6	916.3	903.4	893.1	879.2	864.8	850.0	836.3	824.3	806.8
135.0	947.2	937.4	924.8	908.9	899.1	885.2	870.8	858.6	841.3	825.7
180.0	947.2	937.4	924.8	908.9	899.1	885.2	870.8	858.6	841.3	825.7
225.0	944.1	929.0	918.7	905.8	888.8	880.2	866.0	852.6	835.1	820.5
270.0	944.1	929.0	918.7	905.8	888.8	880.2	866.0	852.6	835.1	820.5
315.0	935.0	925.5	912.5	895.5	884.7	871.0	860.0	845.4	829.8	811.8
360.0	935.0	925.5	912.5	895.5	884.7	871.0	860.0	845.4	829.8	811.8

### Photometric Data Table [cd]

C\G	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	797.0	786.7	771.3	752.4	735.9	718.6	704.9	690.8	673.8	656.8
45.0	791.5	777.8	761.3	749.0	733.0	717.1	698.2	681.0	666.3	648.6
90.0	791.5	777.8	761.3	749.0	733.0	717.1	698.2	681.0	666.3	648.6
135.0	814.5	802.0	782.8	768.0	753.6	734.7	717.9	704.0	687.0	673.3
180.0	814.5	802.0	782.8	768.0	753.6	734.7	717.9	704.0	687.0	673.3
225.0	808.0	791.7	778.7	759.8	744.2	731.1	716.7	699.7	682.6	665.6
270.0	808.0	791.7	778.7	759.8	744.2	731.1	716.7	699.7	682.6	665.6
315.0	797.0	786.7	771.3	752.4	735.9	718.6	704.9	690.8	673.8	656.8
360.0	797.0	786.7	771.3	752.4	735.9	718.6	704.9	690.8	673.8	656.8

C\G	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	636.4	621.0	603.0	588.0	570.0	551.8	530.9	514.9	498.5	480.3
45.0	634.7	616.9	599.5	584.6	563.5	548.4	527.1	508.6	493.3	477.9
90.0	634.7	616.9	599.5	584.6	563.5	548.4	527.1	508.6	493.3	477.9
135.0	653.1	637.8	620.3	602.1	584.1	565.9	551.0	529.9	513.4	494.7
180.0	653.1	637.8	620.3	602.1	584.1	565.9	551.0	529.9	513.4	494.7
225.0	644.6	628.2	615.5	594.7	579.1	561.1	542.7	524.2	505.5	486.6
270.0	644.6	628.2	615.5	594.7	579.1	561.1	542.7	524.2	505.5	486.6
315.0	636.4	621.0	603.0	588.0	570.0	551.8	530.9	514.9	498.5	480.3
360.0	636.4	621.0	603.0	588.0	570.0	551.8	530.9	514.9	498.5	480.3

C\G	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0
0.0	461.4	442.5	420.6	404.4	389.0	369.1	350.6	331.5	313.0	293.9
45.0	456.4	437.5	418.5	402.2	380.9	365.3	349.5	326.9	311.6	290.3
90.0	456.4	437.5	418.5	402.2	380.9	365.3	349.5	326.9	311.6	290.3
135.0	476.1	457.8	441.3	422.6	403.9	383.7	368.4	346.1	330.3	311.8
180.0	476.1	457.8	441.3	422.6	403.9	383.7	368.4	346.1	330.3	311.8
225.0	470.7	451.4	429.5	413.7	397.4	378.5	356.0	337.5	320.9	305.2
270.0	470.7	451.4	429.5	413.7	397.4	378.5	356.0	337.5	320.9	305.2
315.0	461.4	442.5	420.6	404.4	389.0	369.1	350.6	331.5	313.0	293.9
360.0	461.4	442.5	420.6	404.4	389.0	369.1	350.6	331.5	313.0	293.9

C\G	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	275.4	256.9	238.7	223.1	202.3	190.8	170.4	156.7	139.5	121.3
45.0	277.1	259.1	236.8	222.0	203.7	182.9	165.1	150.5	136.4	120.1
90.0	277.1	259.1	236.8	222.0	203.7	182.9	165.1	150.5	136.4	120.1
135.0	293.1	274.0	255.3	237.3	218.9	204.7	189.1	172.3	155.1	135.7
180.0	293.1	274.0	255.3	237.3	218.9	204.7	189.1	172.3	155.1	135.7
225.0	285.7	264.4	245.7	227.7	208.1	195.9	174.5	159.9	142.8	125.9
270.0	285.7	264.4	245.7	227.7	208.1	195.9	174.5	159.9	142.8	125.9
315.0	275.4	256.9	238.7	223.1	202.3	190.8	170.4	156.7	139.5	121.3
360.0	275.4	256.9	238.7	223.1	202.3	190.8	170.4	156.7	139.5	121.3

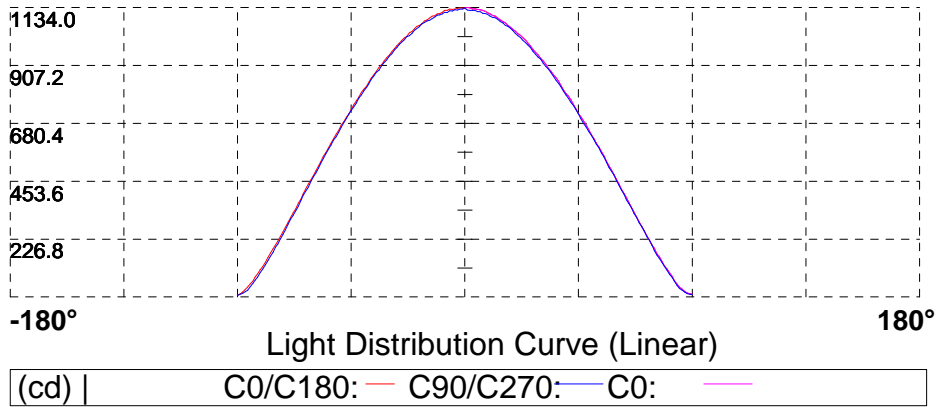
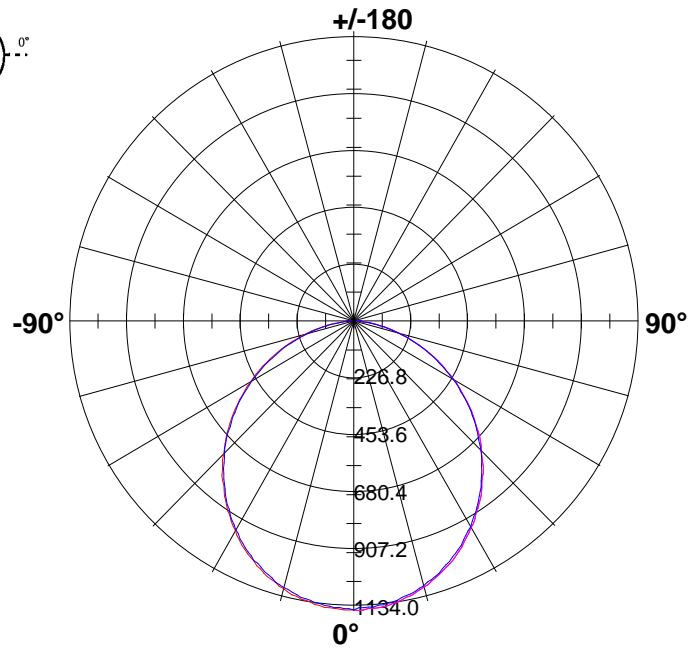
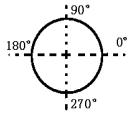
### Photometric Data Table [cd]

C\G	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	110.3	94.9	80.8	63.3	50.8	38.1	30.2	21.8	15.1	12.7
45.0	104.5	89.2	76.9	62.3	46.0	33.5	26.6	18.7	12.9	11.3
90.0	104.5	89.2	76.9	62.3	46.0	33.5	26.6	18.7	12.9	11.3
135.0	119.4	106.4	90.8	79.1	62.3	51.8	39.8	29.2	19.9	12.0
180.0	119.4	106.4	90.8	79.1	62.3	51.8	39.8	29.2	19.9	12.0
225.0	110.0	96.4	78.1	66.6	53.0	40.3	27.3	21.1	14.4	10.3
270.0	110.0	96.4	78.1	66.6	53.0	40.3	27.3	21.1	14.4	10.3
315.0	110.3	94.9	80.8	63.3	50.8	38.1	30.2	21.8	15.1	12.7
360.0	110.3	94.9	80.8	63.3	50.8	38.1	30.2	21.8	15.1	12.7

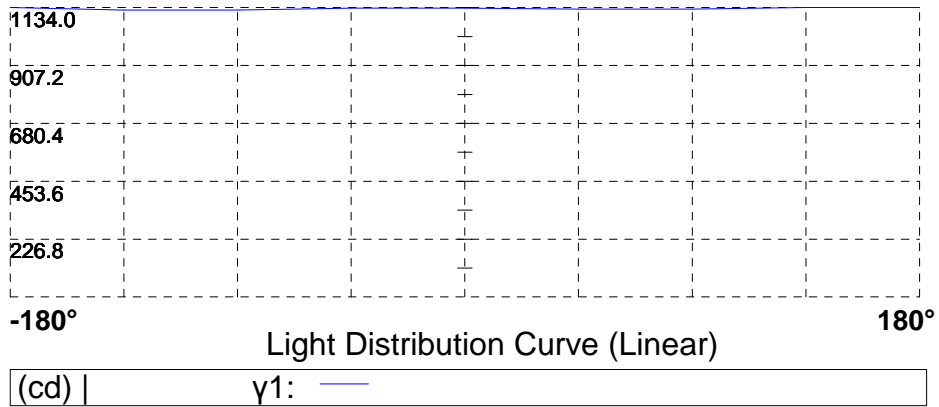
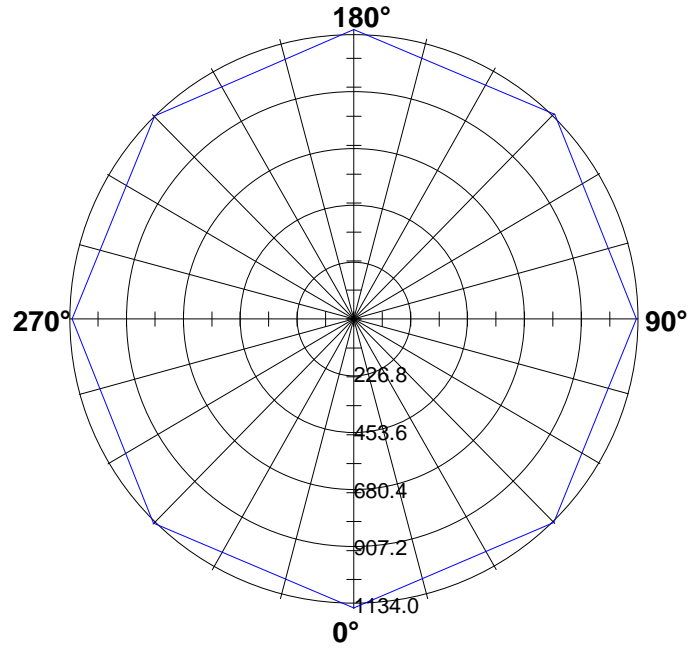
C\G	90.0
0.0	10.3
45.0	9.6
90.0	9.6
135.0	8.6
180.0	8.6
225.0	6.0
270.0	6.0
315.0	10.3
360.0	10.3

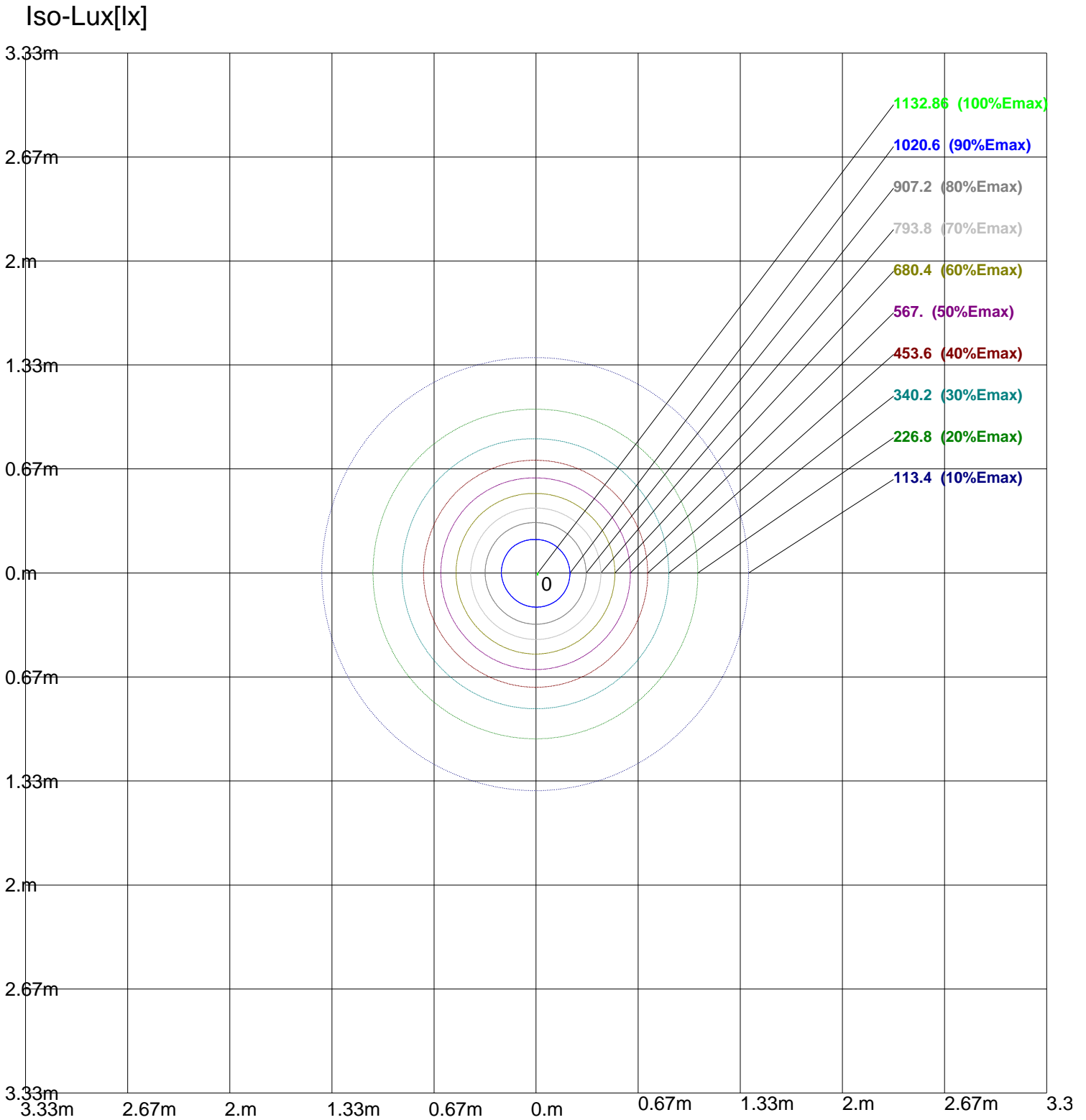
Light Distribution Curve [Unit: cd]

Luminaire



**Max Plane Light Distribution Curve [Unit: cd]**





Height: 1 m  
Max Illuminance : 1134.lx

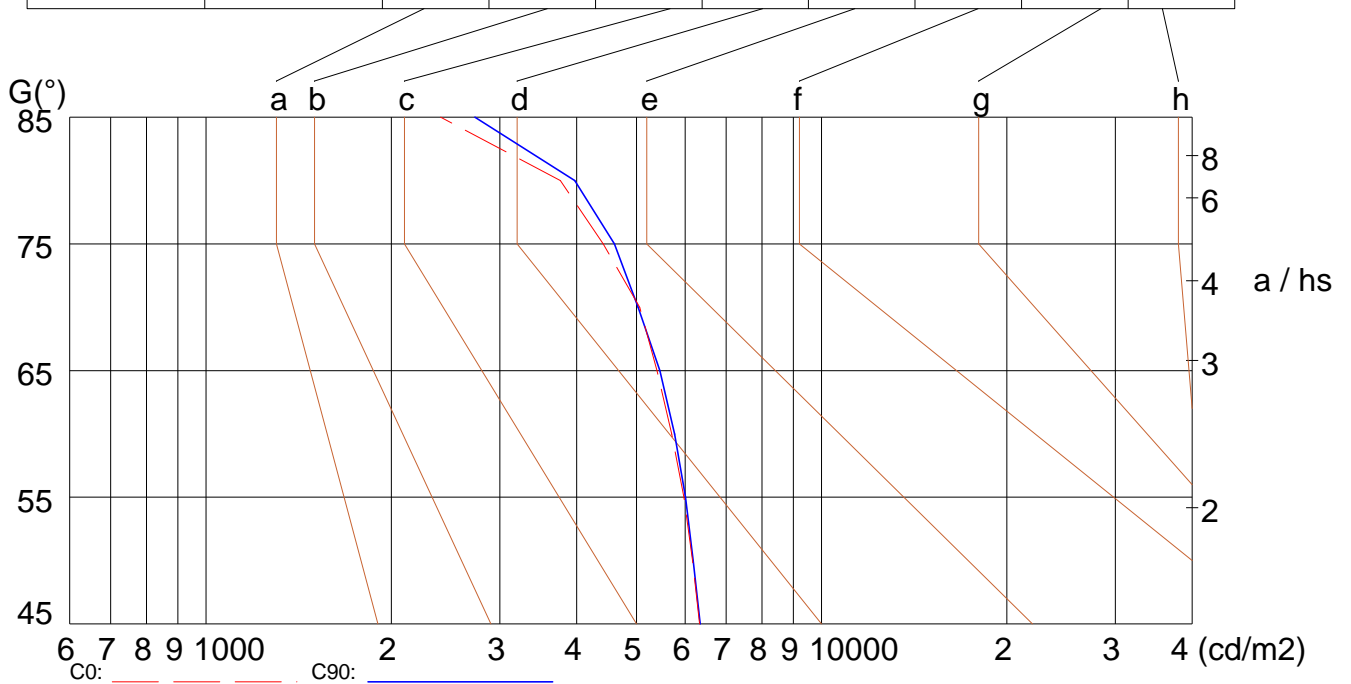
## Luminance Limiting Curve

Diameter: mm  
 Length: 400mm  
 Width: 400mm  
 Height: 38mm

(cd/m<sup>2</sup>)

$\gamma$	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	6339	6171	5976	5705	5402	5063	4416	3761	2405
C90	6351	6188	6012	5768	5459	5033	4607	3969	2731

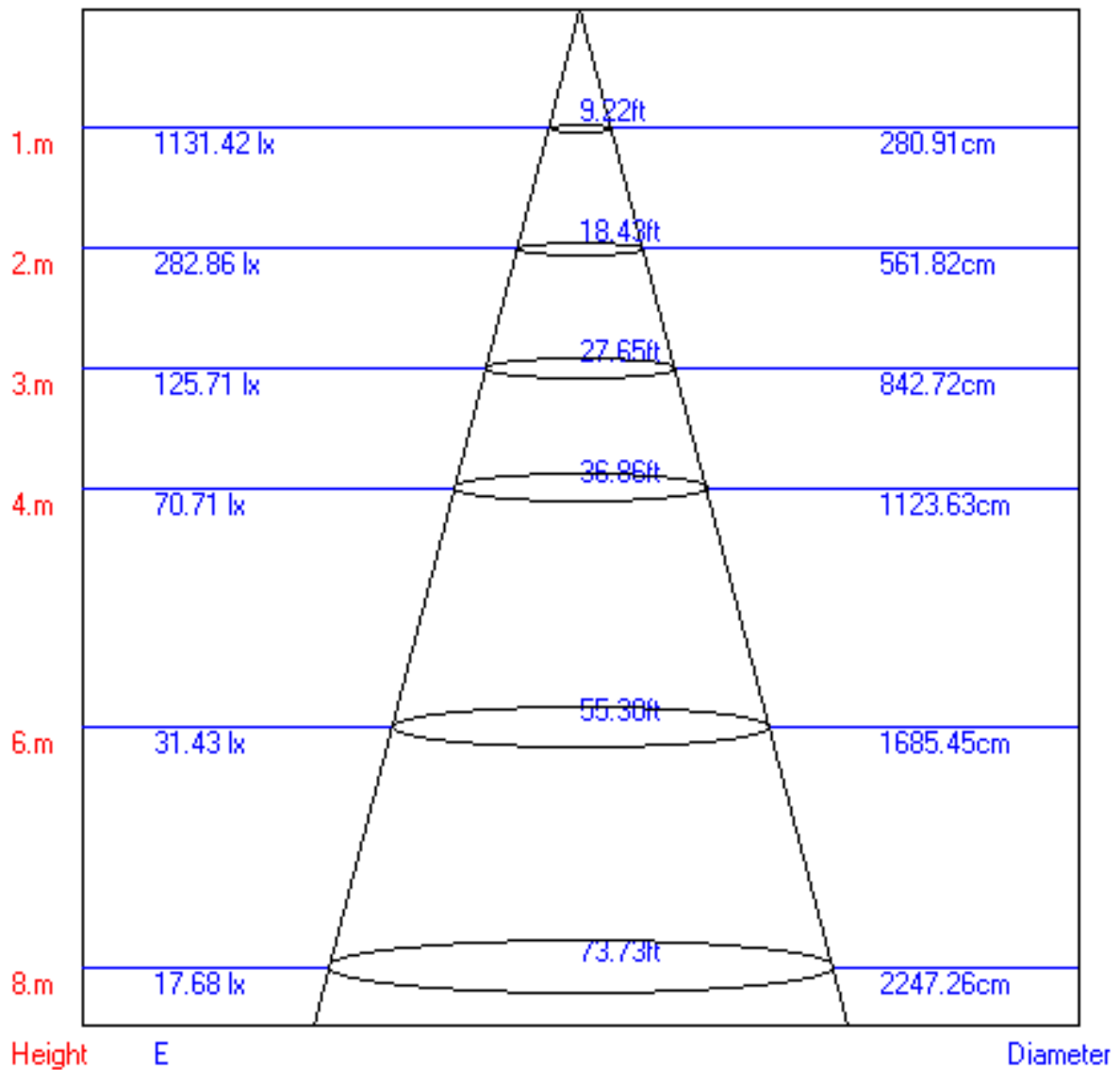
Glare	Quality	Service Values Illuminance (lx)							
1.15	A	2000	1000	500	≤300				
1.5	B		2000	1000	500	≤300			
1.85	C			2000	1000	500	≤300		
2.2	D				2000	1000	500	≤300	
2.55	E					2000	1000	500	≤300



Lum. Limiting Curve (C0/C90)



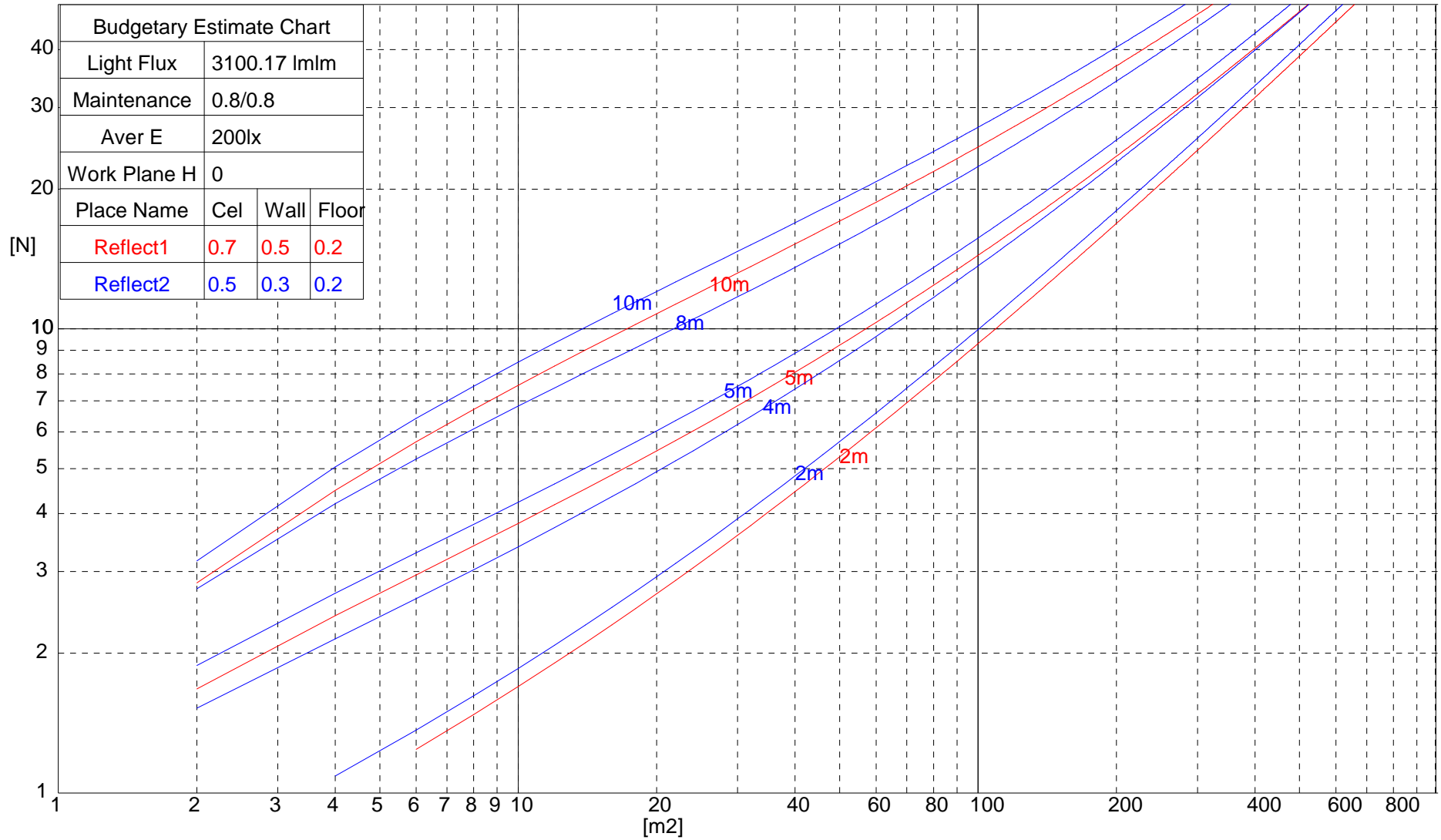
### Lux-Distance Curve



Beam Angle:109.10°

Utilization Coefficient Table

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	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	1.05	1.03	1.01	1.03	1.01	1.00	1.00	0.97	0.96	0.95	0.93	0.90	0.88	0.86	0.84	0.79
2	0.89	0.86	0.85	0.88	0.85	0.83	0.86	0.82	0.80	0.83	0.79	0.75	0.78	0.74	0.70	0.66
3	0.76	0.73	0.71	0.76	0.73	0.70	0.75	0.71	0.67	0.73	0.68	0.64	0.70	0.64	0.60	0.55
4	0.66	0.63	0.61	0.66	0.62	0.60	0.66	0.61	0.57	0.64	0.59	0.55	0.62	0.56	0.52	0.47
5	0.58	0.55	0.53	0.58	0.54	0.52	0.58	0.53	0.50	0.58	0.52	0.47	0.56	0.50	0.45	0.41
6	0.51	0.48	0.46	0.52	0.48	0.45	0.52	0.47	0.44	0.52	0.46	0.42	0.51	0.45	0.39	0.36
7	0.45	0.43	0.41	0.46	0.42	0.40	0.47	0.42	0.39	0.47	0.41	0.37	0.47	0.40	0.35	0.32
8	0.41	0.38	0.37	0.42	0.38	0.36	0.43	0.38	0.34	0.43	0.37	0.33	0.43	0.37	0.31	0.28
9	0.37	0.34	0.33	0.38	0.34	0.32	0.39	0.34	0.31	0.40	0.34	0.30	0.40	0.33	0.28	0.26
10	0.33	0.31	0.30	0.34	0.31	0.29	0.36	0.31	0.28	0.37	0.31	0.27	0.37	0.31	0.26	0.23



## UGR Glare Index

Ceiling	70	70	50	50	30	70	70	50	50	30	
Wall	50	30	50	30	30	50	30	50	30	30	
Floor	20	20	20	20	20	20	20	20	20	20	
Room Size X      Y	Weft to light axis direction of observation					Direction of light axis parallel observation					
2H	2H	14.7	16.0	14.9	15.9	16.5	14.7	15.9	14.8	16.0	16.5
	3H	16.3	17.4	16.7	17.9	17.9	16.2	17.4	16.4	17.8	18.0
	4H	16.9	18.1	17.4	18.7	18.8	16.9	18.1	17.3	18.5	18.8
	6H	17.6	18.5	18.0	18.9	18.9	17.4	18.3	17.8	18.9	19.0
	8H	17.8	18.9	18.1	19.0	19.3	17.7	18.7	17.9	19.0	19.3
4H	12H	17.9	18.8	18.1	19.2	19.5	17.7	18.7	18.1	19.2	19.6
	2H	15.7	16.6	15.9	16.8	17.0	15.6	16.6	15.8	16.9	17.0
	3H	17.5	18.4	17.7	18.4	18.8	17.3	18.2	17.6	18.3	18.7
	4H	18.3	18.9	18.5	19.1	19.5	18.0	18.9	18.4	19.1	19.6
	6H	18.8	19.5	19.1	19.8	20.2	18.7	19.5	18.9	19.7	20.0
8H	8H	19.0	19.7	19.4	20.0	20.3	19.0	19.5	19.3	20.0	20.3
	12H	19.2	19.8	19.7	20.0	20.5	19.1	19.8	19.5	20.1	20.5
	4H	18.5	19.2	18.8	19.4	19.8	18.5	19.1	18.7	19.4	19.8
	6H	19.3	19.8	19.8	20.2	20.6	19.2	19.7	19.6	20.2	20.5
	8H	19.8	20.2	20.2	20.5	20.9	19.6	20.0	20.1	20.4	21.0
12H	12H	20.0	20.4	20.4	20.9	21.1	19.8	20.3	20.3	20.8	21.2
	4H	18.6	19.2	19.1	19.6	19.8	18.5	19.0	18.9	19.4	19.8
	6H	19.5	20.0	19.9	20.2	20.7	19.4	19.9	19.8	20.2	20.6
	8H	19.9	20.3	20.4	20.5	21.1	19.8	20.2	20.3	20.6	21.0