

## Luminaire Property

Luminaire: RH-MRD18 18W 4000K

Report NO.:

Voltage: 220.0 V

Test NO.:

Current: 0.145 A

Lamp:

Power: 17.3 W

Sum Lumens: 1629.35 lm

Power Factor: 0.542

Number of Lamps: 1

Ballast Type: EMC 300mA

Diameter: 225mm

Width: 225mm

Length: mm

Height: 38mm

Photometric Type: Type C

Remark: PMMA+0.5W SMD2835

## Photometric Results

Lumens: 1629.35 lm

Angle of maximum intensity: C:135.0 G:2.0

Effective luminous flux: 1606.55 lm

Half Peak Side Angle(50%): Left: -53.0 Right:55.5

Efficiency: 94.1821 lm/W

Light Out Rate(LOR) : 100.00%

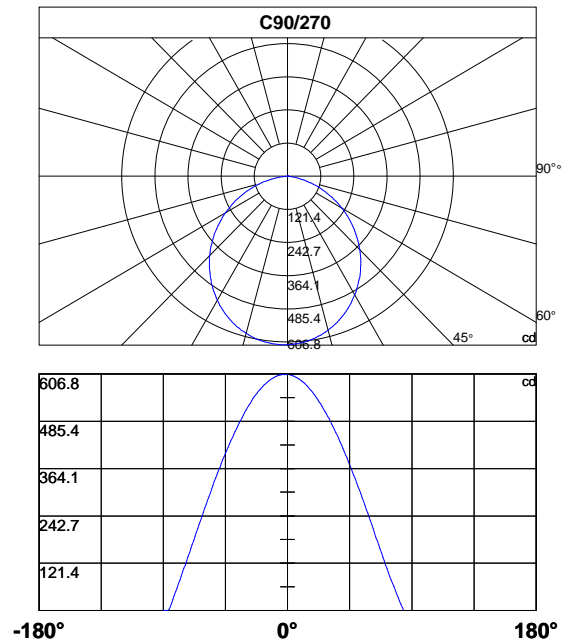
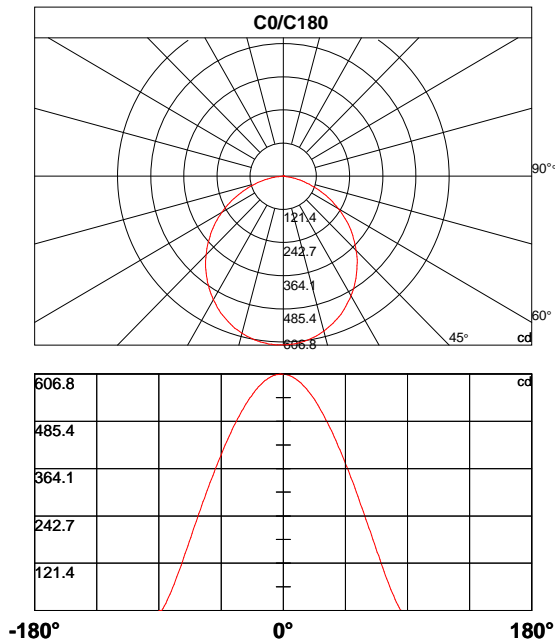
Central Intensity: 605.978cd

Up Flux Rate: 0.0%

Maximum Intensity: 606.773cd

Down Flux Rate: 100.0%

Beam Angle(10%): Left: -77.2 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	606.0	606.0	605.3	604.6	603.3	602.0	600.5	598.5	596.7	594.4
45.0	606.0	604.9	604.2	603.0	602.0	600.5	598.6	596.7	594.7	592.2
90.0	606.0	604.9	604.2	603.0	602.0	600.5	598.6	596.7	594.7	592.2
135.0	606.0	606.5	606.8	606.5	605.5	605.1	603.8	602.6	601.0	599.5
180.0	606.0	606.5	606.8	606.5	605.5	605.1	603.8	602.6	601.0	599.5
225.0	606.0	605.9	605.9	605.8	605.2	604.4	603.6	602.7	601.4	599.7
270.0	606.0	605.9	605.9	605.8	605.2	604.4	603.6	602.7	601.4	599.7
315.0	606.0	606.0	605.3	604.6	603.3	602.0	600.5	598.5	596.7	594.4
360.0	606.0	606.0	605.3	604.6	603.3	602.0	600.5	598.5	596.7	594.4

C\G	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	591.4	588.9	586.3	583.1	579.2	575.7	571.8	568.1	563.7	558.9
45.0	589.2	586.2	583.8	580.3	576.8	572.7	568.8	564.4	559.9	555.8
90.0	589.2	586.2	583.8	580.3	576.8	572.7	568.8	564.4	559.9	555.8
135.0	597.2	595.2	592.5	590.3	587.1	584.2	580.6	576.8	573.7	569.4
180.0	597.2	595.2	592.5	590.3	587.1	584.2	580.6	576.8	573.7	569.4
225.0	597.5	595.7	593.6	590.7	588.2	584.8	581.5	578.8	574.7	571.1
270.0	597.5	595.7	593.6	590.7	588.2	584.8	581.5	578.8	574.7	571.1
315.0	591.4	588.9	586.3	583.1	579.2	575.7	571.8	568.1	563.7	558.9
360.0	591.4	588.9	586.3	583.1	579.2	575.7	571.8	568.1	563.7	558.9

C\G	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	554.1	548.9	544.4	539.2	533.4	527.6	521.3	515.1	508.6	503.1
45.0	550.9	545.5	540.2	534.9	529.9	523.8	517.7	511.4	504.8	498.1
90.0	550.9	545.5	540.2	534.9	529.9	523.8	517.7	511.4	504.8	498.1
135.0	565.0	560.5	556.0	550.7	546.3	541.3	535.3	529.9	523.9	517.8
180.0	565.0	560.5	556.0	550.7	546.3	541.3	535.3	529.9	523.9	517.8
225.0	566.6	562.3	557.8	553.7	548.7	543.3	537.9	531.9	526.8	521.0
270.0	566.6	562.3	557.8	553.7	548.7	543.3	537.9	531.9	526.8	521.0
315.0	554.1	548.9	544.4	539.2	533.4	527.6	521.3	515.1	508.6	503.1
360.0	554.1	548.9	544.4	539.2	533.4	527.6	521.3	515.1	508.6	503.1

C\G	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
0.0	496.2	489.1	482.3	474.9	468.1	460.9	453.0	445.1	436.7	428.7
45.0	492.3	485.5	478.2	470.7	463.4	455.8	449.0	441.1	432.7	424.5
90.0	492.3	485.5	478.2	470.7	463.4	455.8	449.0	441.1	432.7	424.5
135.0	511.9	505.5	498.6	491.9	485.1	477.4	471.5	463.6	456.1	448.1
180.0	511.9	505.5	498.6	491.9	485.1	477.4	471.5	463.6	456.1	448.1
225.0	514.8	508.1	501.4	494.9	487.8	481.3	474.3	466.4	459.2	451.1
270.0	514.8	508.1	501.4	494.9	487.8	481.3	474.3	466.4	459.2	451.1
315.0	496.2	489.1	482.3	474.9	468.1	460.9	453.0	445.1	436.7	428.7
360.0	496.2	489.1	482.3	474.9	468.1	460.9	453.0	445.1	436.7	428.7

### 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	419.9	412.8	404.0	395.4	386.3	376.9	369.4	360.0	350.6	341.2
45.0	416.2	408.7	400.3	391.5	382.3	373.4	364.4	354.9	346.9	337.4
90.0	416.2	408.7	400.3	391.5	382.3	373.4	364.4	354.9	346.9	337.4
135.0	440.1	433.3	424.8	416.6	408.1	399.1	390.2	383.0	373.3	364.6
180.0	440.1	433.3	424.8	416.6	408.1	399.1	390.2	383.0	373.3	364.6
225.0	443.0	436.2	427.8	419.6	411.1	402.4	394.9	385.9	376.6	367.6
270.0	443.0	436.2	427.8	419.6	411.1	402.4	394.9	385.9	376.6	367.6
315.0	419.9	412.8	404.0	395.4	386.3	376.9	369.4	360.0	350.6	341.2
360.0	419.9	412.8	404.0	395.4	386.3	376.9	369.4	360.0	350.6	341.2

C\G	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	331.7	323.5	313.5	303.6	293.6	283.2	273.0	262.7	254.0	243.6
45.0	327.8	318.0	308.5	299.8	289.8	279.7	269.9	259.8	249.3	240.3
90.0	327.8	318.0	308.5	299.8	289.8	279.7	269.9	259.8	249.3	240.3
135.0	355.2	345.6	336.1	328.0	318.4	308.3	298.6	288.5	279.6	269.4
180.0	355.2	345.6	336.1	328.0	318.4	308.3	298.6	288.5	279.6	269.4
225.0	358.0	348.9	340.4	330.8	321.0	311.3	301.2	290.9	282.3	272.1
270.0	358.0	348.9	340.4	330.8	321.0	311.3	301.2	290.9	282.3	272.1
315.0	331.7	323.5	313.5	303.6	293.6	283.2	273.0	262.7	254.0	243.6
360.0	331.7	323.5	313.5	303.6	293.6	283.2	273.0	262.7	254.0	243.6

C\G	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0
0.0	233.0	222.7	211.9	203.1	192.2	181.7	170.8	160.5	149.9	140.8
45.0	230.0	219.6	209.0	198.1	187.6	178.7	168.1	157.6	147.3	136.9
90.0	230.0	219.6	209.0	198.1	187.6	178.7	168.1	157.6	147.3	136.9
135.0	259.1	248.8	238.6	228.2	217.6	208.6	197.7	187.4	176.5	165.8
180.0	259.1	248.8	238.6	228.2	217.6	208.6	197.7	187.4	176.5	165.8
225.0	262.0	251.4	241.2	230.4	221.4	210.9	200.2	189.5	178.9	169.4
270.0	262.0	251.4	241.2	230.4	221.4	210.9	200.2	189.5	178.9	169.4
315.0	233.0	222.7	211.9	203.1	192.2	181.7	170.8	160.5	149.9	140.8
360.0	233.0	222.7	211.9	203.1	192.2	181.7	170.8	160.5	149.9	140.8

C\G	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	130.5	119.7	109.5	99.2	89.4	81.0	71.5	62.5	53.4	44.4
45.0	127.8	117.7	107.6	97.3	87.8	77.9	69.7	60.8	51.4	42.5
90.0	127.8	117.7	107.6	97.3	87.8	77.9	69.7	60.8	51.4	42.5
135.0	156.9	146.3	136.1	125.4	115.4	105.3	96.7	86.7	76.9	67.5
180.0	156.9	146.3	136.1	125.4	115.4	105.3	96.7	86.7	76.9	67.5
225.0	159.1	148.2	137.7	127.1	116.9	108.1	98.1	87.8	78.4	68.3
270.0	159.1	148.2	137.7	127.1	116.9	108.1	98.1	87.8	78.4	68.3
315.0	130.5	119.7	109.5	99.2	89.4	81.0	71.5	62.5	53.4	44.4
360.0	130.5	119.7	109.5	99.2	89.4	81.0	71.5	62.5	53.4	44.4

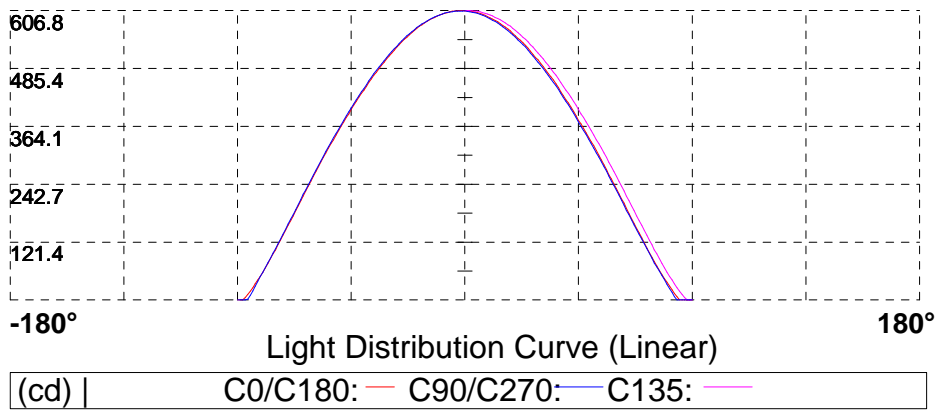
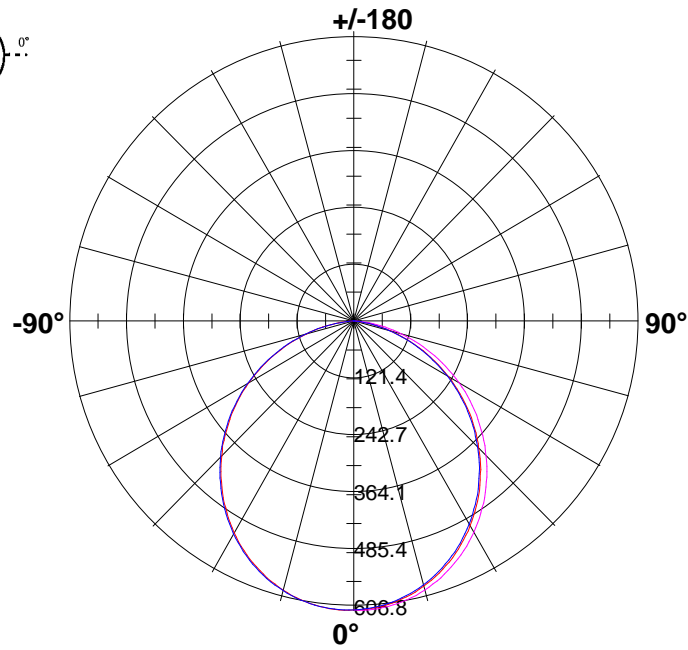
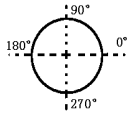
### Photometric Data Table [cd]

C\G	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	37.4	29.1	21.3	13.9	7.4	0.5	0.0	0.0	0.0	0.0
45.0	32.8	23.8	16.1	7.3	0.0	0.0	0.0	0.0	0.0	0.0
90.0	32.8	23.8	16.1	7.3	0.0	0.0	0.0	0.0	0.0	0.0
135.0	58.2	49.5	42.0	33.6	25.8	18.5	11.5	4.8	0.0	0.0
180.0	58.2	49.5	42.0	33.6	25.8	18.5	11.5	4.8	0.0	0.0
225.0	57.8	49.2	38.9	28.9	19.1	9.5	1.6	0.0	0.0	0.0
270.0	57.8	49.2	38.9	28.9	19.1	9.5	1.6	0.0	0.0	0.0
315.0	37.4	29.1	21.3	13.9	7.4	0.5	0.0	0.0	0.0	0.0
360.0	37.4	29.1	21.3	13.9	7.4	0.5	0.0	0.0	0.0	0.0

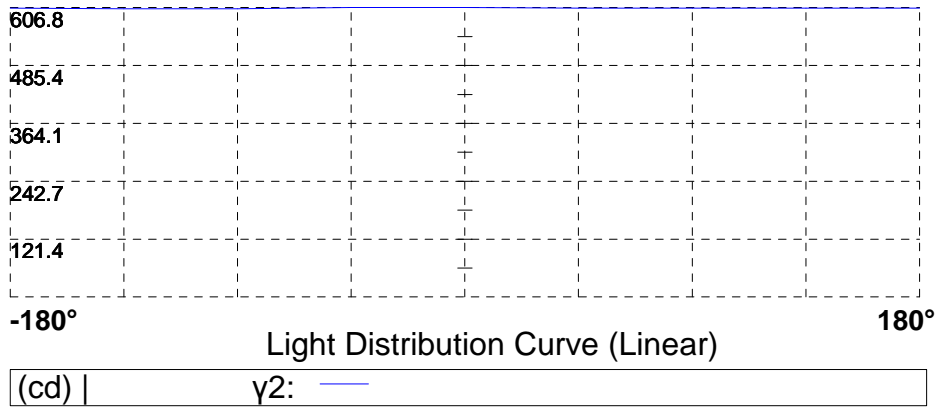
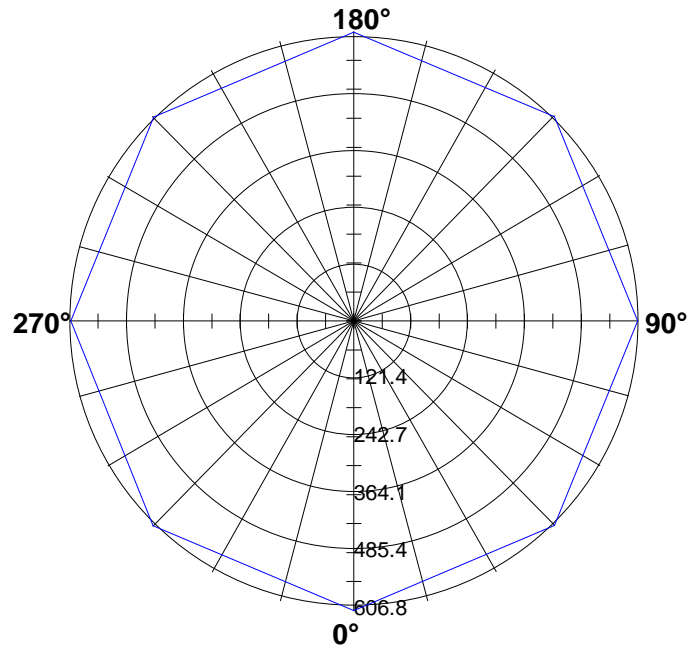
C\G	90.0
0.0	0.0
45.0	0.0
90.0	0.0
135.0	0.0
180.0	0.0
225.0	0.0
270.0	0.0
315.0	0.0
360.0	0.0

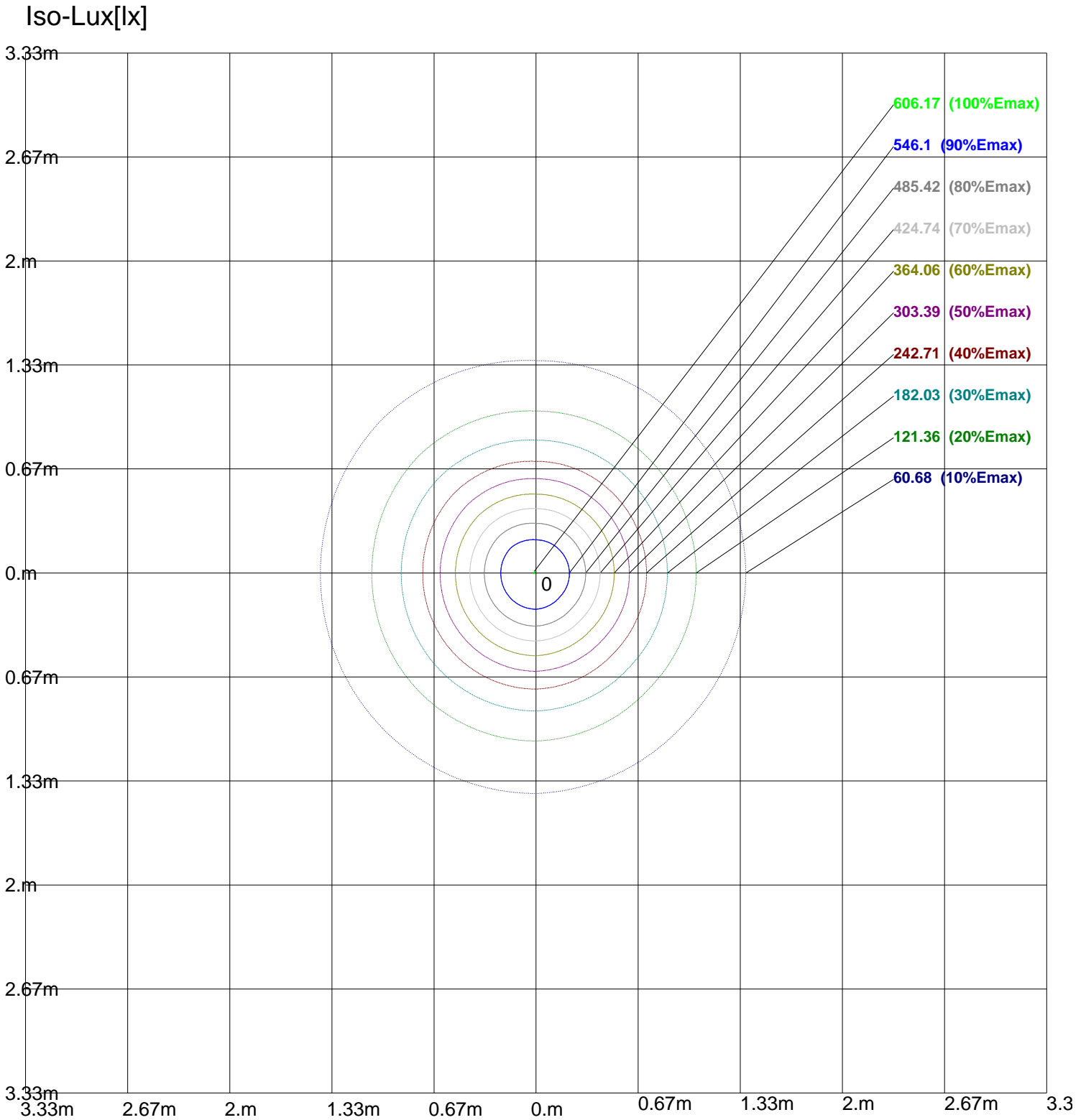
Light Distribution Curve [Unit: cd]

Luminaire



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





Height: 1 m  
Max Illuminance : 606.77lx

## Luminance Limiting Curve

Diameter: 225mm

Length: mm

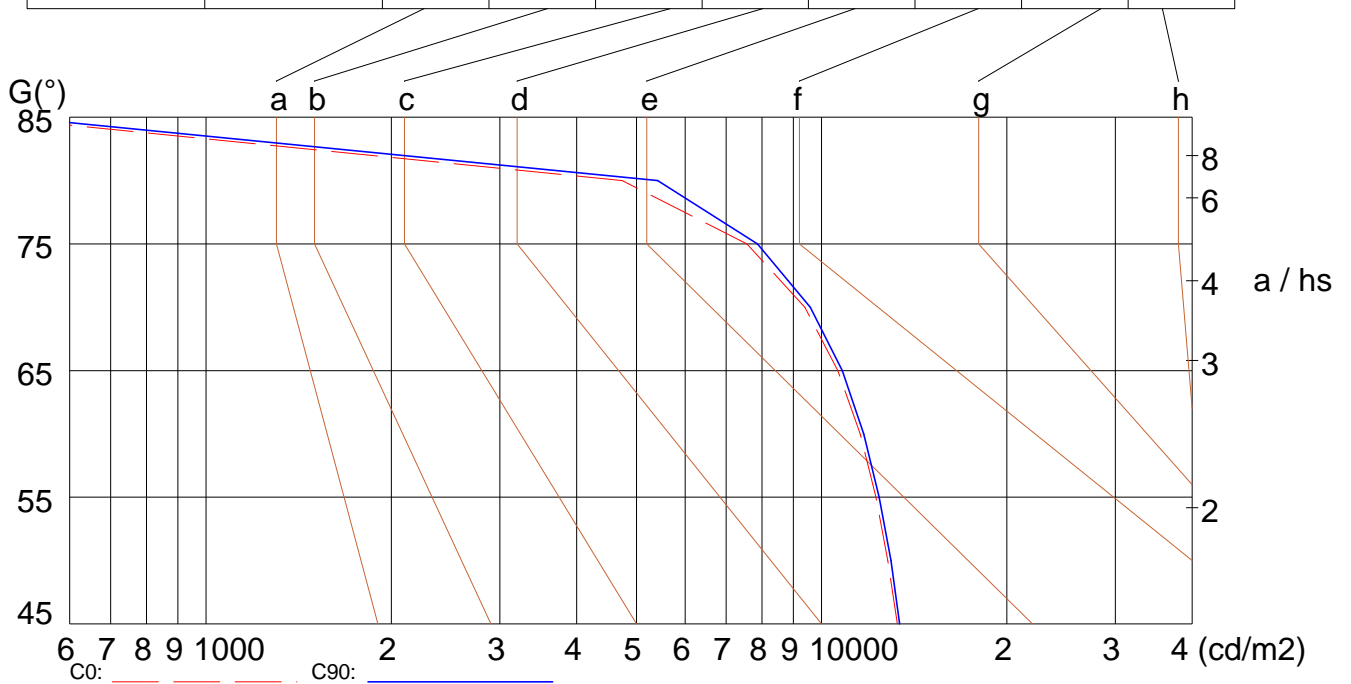
Width: 225mm

Height: 38mm

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

$\gamma$	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	13268	12815	12252	11558	10623	9389	7558	4742	0
C90	13393	12967	12404	11709	10805	9584	7866	5415	147

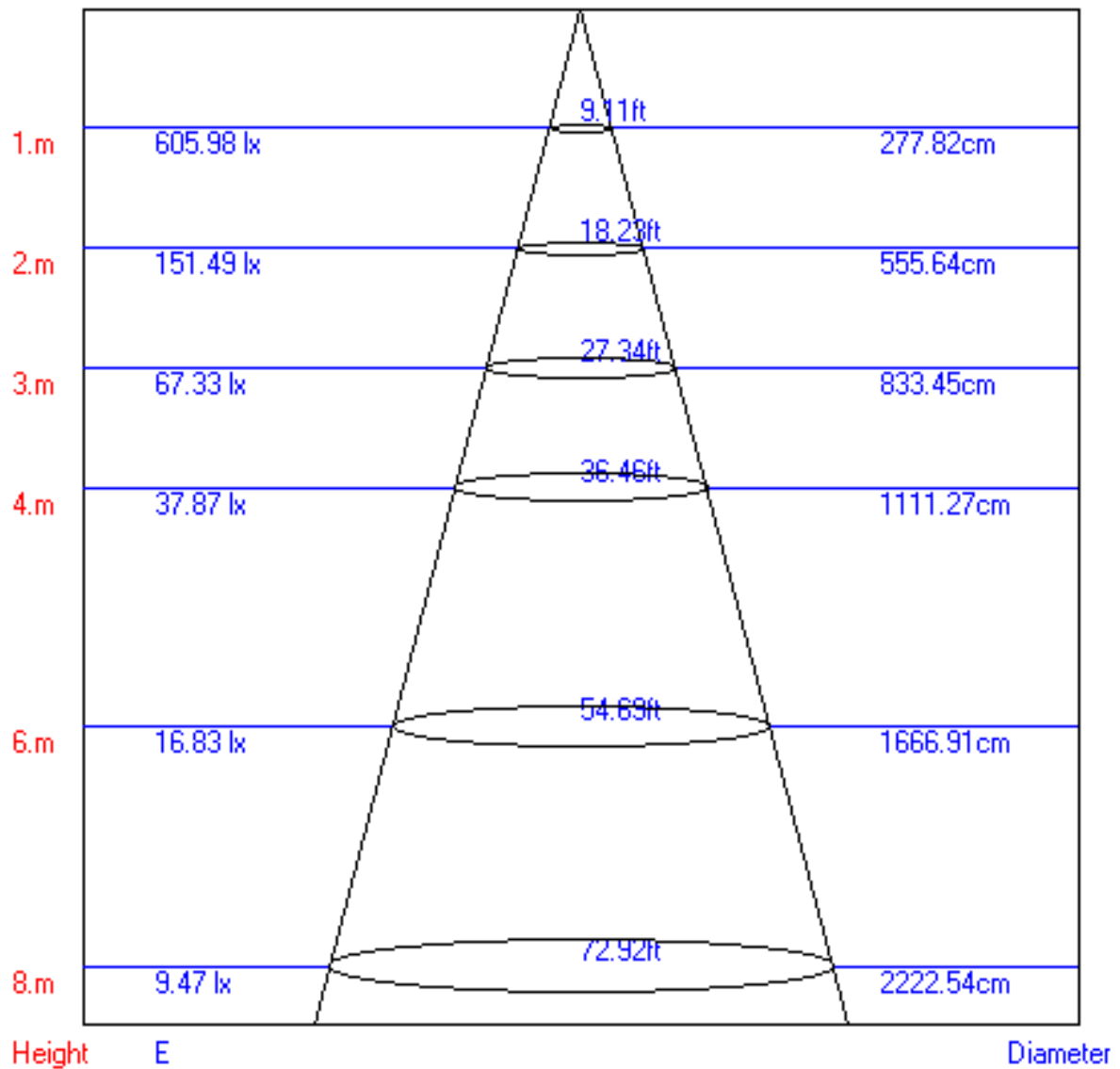
Glare	Quality	Service Values Illuminance (lx)							
1.15	A	2000	1000	500	≤300				
1.5	B		2000	1000	500	≤300			
1.85	C			2000	1000	500	≤300		
2.2	D				2000	1000	500	≤300	
2.55	E					2000	1000	500	≤300



Lum. Limiting Curve (C0/C90)



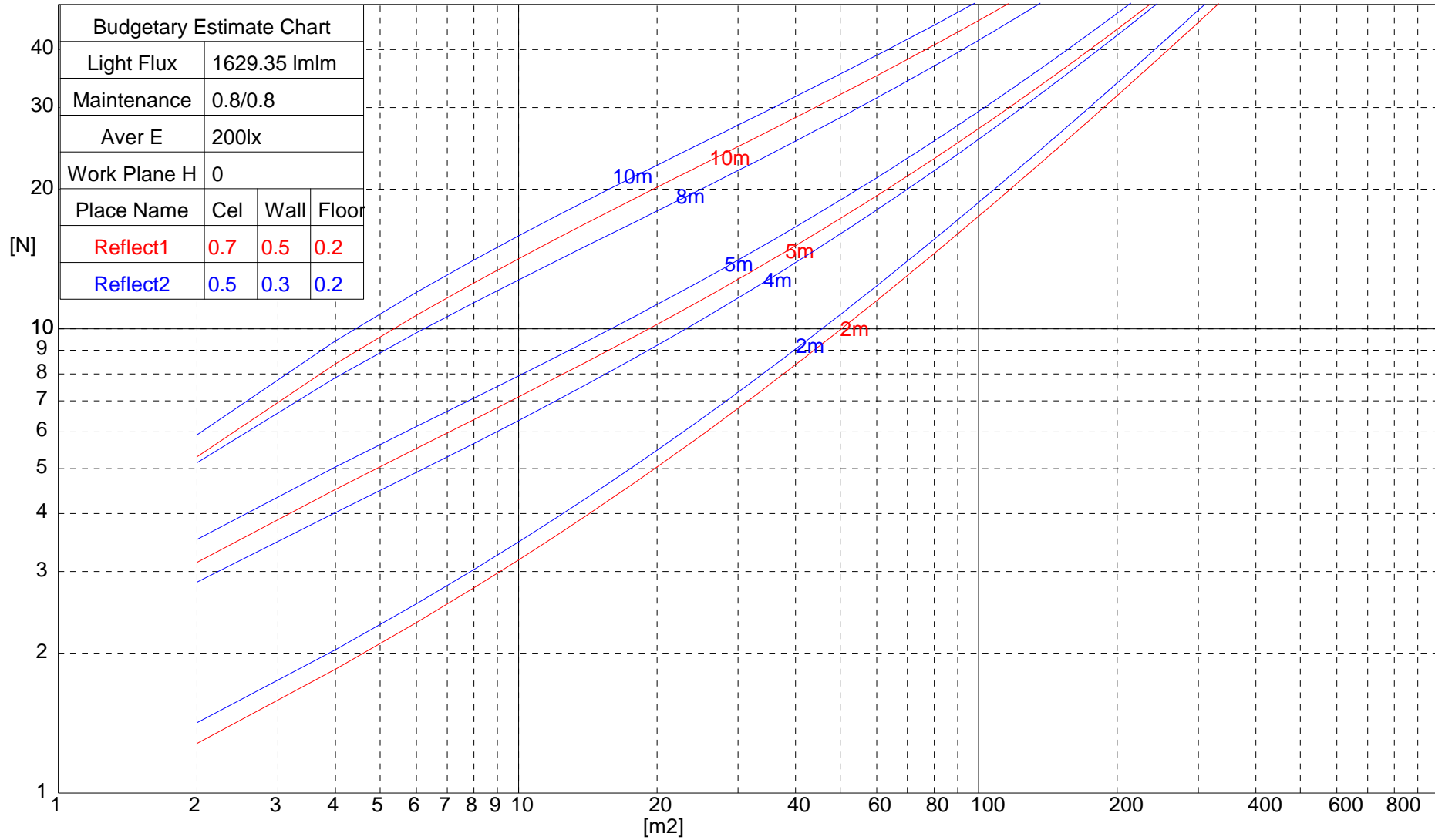
### Lux-Distance Curve



Beam Angle:108.50°

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	1.04	1.02	1.04	1.02	1.01	1.00	0.98	0.96	0.96	0.93	0.91	0.89	0.87	0.85	0.80
2	0.90	0.87	0.86	0.89	0.86	0.84	0.87	0.83	0.81	0.84	0.80	0.76	0.79	0.75	0.71	0.67
3	0.77	0.74	0.72	0.77	0.74	0.71	0.76	0.71	0.68	0.73	0.69	0.65	0.70	0.65	0.61	0.56
4	0.67	0.64	0.62	0.67	0.63	0.61	0.67	0.62	0.58	0.65	0.60	0.56	0.63	0.57	0.52	0.48
5	0.58	0.56	0.54	0.59	0.55	0.53	0.59	0.54	0.51	0.58	0.53	0.48	0.57	0.51	0.46	0.42
6	0.52	0.49	0.47	0.52	0.49	0.46	0.53	0.48	0.44	0.53	0.47	0.42	0.52	0.45	0.40	0.37
7	0.46	0.43	0.42	0.47	0.43	0.41	0.48	0.43	0.39	0.48	0.42	0.38	0.48	0.41	0.36	0.32
8	0.41	0.39	0.37	0.42	0.39	0.37	0.43	0.38	0.35	0.44	0.38	0.34	0.44	0.37	0.32	0.29
9	0.37	0.35	0.34	0.38	0.35	0.33	0.40	0.35	0.32	0.40	0.34	0.30	0.41	0.34	0.29	0.26
10	0.34	0.32	0.30	0.35	0.32	0.30	0.36	0.32	0.29	0.37	0.32	0.28	0.38	0.31	0.26	0.24



## 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	14.8	15.9	15.1	15.9	16.3	14.7	15.9	14.9	15.9	16.3
	3H	16.2	17.4	16.7	17.7	18.0	16.2	17.4	16.5	17.9	18.0
	4H	16.9	18.1	17.4	18.6	18.7	17.0	18.0	17.3	18.6	18.8
	6H	17.5	18.5	18.0	18.9	19.0	17.3	18.3	17.8	18.8	19.1
	8H	17.9	18.9	18.2	18.9	19.3	17.8	18.7	18.0	19.0	19.3
	12H	18.0	18.8	18.2	19.3	19.5	17.8	18.6	18.0	19.2	19.5
4H	2H	15.6	16.6	15.9	16.9	17.1	15.6	16.6	15.8	16.8	17.0
	3H	17.5	18.4	17.8	18.3	18.7	17.3	18.2	17.5	18.4	18.8
	4H	18.2	19.0	18.5	19.1	19.5	18.0	18.9	18.4	19.2	19.5
	6H	18.8	19.5	19.2	19.8	20.1	18.8	19.4	19.0	19.7	20.1
	8H	19.0	19.8	19.5	19.9	20.4	19.0	19.6	19.2	19.9	20.3
	12H	19.3	19.9	19.7	20.2	20.4	19.2	19.7	19.6	20.2	20.5
8H	4H	18.6	19.2	18.8	19.4	19.9	18.4	19.0	18.8	19.4	19.8
	6H	19.4	19.8	19.7	20.2	20.7	19.2	19.9	19.7	20.2	20.6
	8H	19.8	20.2	20.1	20.5	20.9	19.6	20.0	20.0	20.5	20.9
	12H	19.9	20.5	20.4	20.7	21.3	19.9	20.4	20.2	20.7	21.1
	12H	18.6	19.1	18.9	19.5	19.9	18.4	19.0	18.8	19.6	19.9
12H	4H	18.6	19.1	18.9	19.5	19.9	18.4	19.0	18.8	19.6	19.9
	6H	19.6	20.0	19.9	20.2	20.6	19.3	19.8	19.8	20.2	20.7
	8H	19.9	20.4	20.3	20.7	21.1	19.9	20.3	20.2	20.6	21.1