

02060 - 69 Highgate High Street Daylight Calculations 24/05/2016

1. Uniformity Test

Room Depth, d
 Room width, w
 Top of Window, h
 Av Reflectance, Rb
 $d/w + d/h$
 $2/(1-Rb)$
Test is $(d/w+d/h) \leq 2/(1-Rb)$?

2nd Floor	
Living RM.2F.2	Kit/Dinn RM.2F.1
3.3	4
6.1	10
2.3	2.3
0.5	0.5
1.97576622	2.139130435
4	4
PASS	PASS

2. Daylight Factor

Height of mid-pane
 Shade tip height, Sh
 Shade tip projection, Sd
 Upper Angle
 Height of opp wall, Wh
 Dist to opp wall, Wd
 Lower Angle
 VSA
 Height of Room, Hr
 Area of room surfaces, As
 Area of window less frame, Aw
 Visible Light Transmittance, V
D.F = $(Aw/As) \times V \times VSA / (1-Rb^2)$
 Required DF
Test is calculated D.F => required D.F. ?

2nd Floor	
Living RM.2F.2	Kit/Dinn RM.2F.1
1.2	1.2
2.3	2.3
0.1	0.1
84.8	84.8
2	0
12	8
3.8	0.0
81.0	84.8
2.5	2.5
87.26	150
5.62	13.12
0.7	0.7
4.9%	6.9%
1.5%	2.0%
PASS	PASS

3. Direct View of the sky

Proj angle, PA = $\text{atan}((Wh-Sh)/(Wd-Sd))$
 Working Plane height, WPH
 Distance to no sky line, DNSL = $(h-WPH)/\tan(PA)$
 %ge of room = $(DNSL/d) \times 100$
Test is %ge > 80%

2nd Floor	
Living RM.2F.2	Kit/Dinn RM.2F.1
0.0	0.0
0.85	0.85
100.0	100.0
100%	100%
PASS	PASS

1st Floor		
Bed 1 RM.1F.6	Bed 2 RM.1F.5	Bed 3 RM.1F.4
3.1	3.4	3
3.5	2.7	3.3
2.35	2.8	2.8
0.5	0.5	0.5
2.204863222	2.47354497	1.980519481
4	4	4
PASS	PASS	PASS
1.55	1.7	1.7
2.3	2.8	2.8
0.1	0.1	0.1
82.4	84.8	84.8
4.8	0.8	0.8
12	5	5
15.2	0.0	0.0
67.3	84.8	84.8
2.4	2.4	2.4
53.38	47.64	50.04
3.31	0.7	0.7
0.7	0.7	0.7
3.9%	1.2%	1.1%
1.0%	1.0%	1.0%
PASS	PASS	PASS
11.9	0.0	0.0
0.85	0.85	0.85
7.1	100.0	100.0
100%	100%	100%
PASS	PASS	PASS