Variable: Count_C{0,…,20},Count_O{0,…,10}
Inputs: AC:pure,Door:pure
Output: Lights off, Full brightness, Dim down,
Minimum brightness, Blink lights

Light Controller System

Door Closed ^ AC = ON ^ Count_C >= 10/ Lights off

Door Opened ^ AC = OFF / Full
brightness
Count_O = Count_O +1

AC = OFF ^ Door Opened / Dim down
Count_O = Count_O +1
OR
AC = OFF ^ Door Closed / Dim down
Count_C = Count_C +1
OR
AC = ON ^ Door Closed / Dim down
Count_C = Count_C + 1

Door Closed ^ AC = OFF / Lights off
OR
Door Closed ^ AC = ON / Lights off

Door Opened ^ AC = OFF / Full Brightness

Door Opened ^ AC = OFF ^ Count_O >= 20 / Dim Down
Count_O = 0

LIGHTS OFF

Count_C = 0
Count_O = 0

FULL BRIGHTNESS

DIM DOWN

AC = OFF
Door Closed

Door Opened ^ AC = OFF ^ Count_O <20 /
Full Brightness
OR
Door Closed ^ AC = OFF ^ Count_C <10 /
Full Brightness

AC = OFF ^ Door Closed ^ Count_C >= 10 / Dim
Down
Count_C = 0

Door Open ^ AC = ON / Blink lights, Full brightness
Count_O = Count_O +1

Door Opened ^ AC = ON / Blink Lights, Full
Brightness

AC = OFF ^ Door Closed / Full brightness
Count_C = Count_C +1

Count_O = 8 / Door Opened ^ AC = OFF / Minimum Brightness

Door Closed ^ AC = OFF ^ Count_C >= 8 / Minimum Brightness
Count_C = 0

BLINK LIGHTS , FULL BRIGHTNESS

AC = OFF ^ Door Open / Full bright
Count_C = 0
Count_O = 0

AC = ON ^ Door Closed / Dim Down

AC = ON ^ Door Opened ^ Count_O < 8 / Blink
Lights,Dim Down
Count_C = 0

Door Opened ^ AC = OFF ^
Count_O >=20 / Blink
Lights,Dim Down

Door Closed ^ AC = ON / Blink lights, Full brightness
Count_C = Count_C +1

BLINK LIGHTS , DIM DOWN

AC = ON ^ Door Opened / Blink,
Dim Down
Count_O = Count_O +1
Count_C = Count_C +1

AC = ON ^ Door Opened ^ Count_O >=8 / Blink
Lights, Minimum Brightness

Door Opened ^ AC = OFF / Minimum Brightness
Count_O = 0
OR
Door Closed ^ AC =ON / Minimum Brightness
Count_C = 0

MINIMUM BRIGHTNESS

AC = ON ^ Door Opened / Blink Lights, Minimum
Brightness

BLINK LIGHTS, MINIMUM BRIGHTNESS

AC = ON ^ Door Opened / Blink
lights, Minimum brightness

Door Closed ^ AC = ON / Minimum brightness
Count_C = Count_C +1

Door Closed ^ AC = ON ^ Count_O = 10 / Lights off

Door Opened ^ AC = OFF ^
Count_O >=20 / Full
Brightness
OR
Door Closed ^ AC = OFF ^
Count_C >=10 / Full
Brightness