1. Daylighting:
   a. Photocell control is to override motion control if there is adequate illumination. Zones being turned off because of daylight harvesting during the day are at no time to drop below illumination required by authorities having jurisdiction.
   b. Control exterior lighting via astronomic timeclock to turn off during daylight hours.
   c. Interior lighting within designated daylight zones to be controlled as follows:
      1) Control such that combined illuminance from luminaires and available daylight is not less than the illuminance from luminaires when no daylight is available.
      2) When illuminance measured at the farthest edge of the secondary sidelight zone away from the glazing or opening is greater than 150 percent of the illuminance provided by the controlled lighting, power consumption of light source to be zero.
      3) Exception: Luminaires located in daylight adaptation zone within 66 feet (20.1 m) of a vehicular entrance to remain on even when there is available daylight.

2. Occupancy Sensing:
   a. Control interior luminaires via occupancy sensor control, except for luminaires designated as security which are to remain at full on.
      1) Upon sensing an occupant at any general garage luminaire, bring all luminaires on that drive aisle or ramp to full on.
      2) Upon sensing an occupant adjacent to any stairwell entrance, bring adjacent general garage lighting to full on.
      3) When a pedestrian steps out of any stair tower or pedestrian entry/exit, bring luminaires within 30 feet (9.1 m) of door to full on.
      4) Upon sensing an occupant at any elevator lobby or stair, bring all luminaires at all levels for that stair to full on.
      5) When a vehicle turns into a drive aisle, bring luminaires in that drive aisle to full on.
      6) Bring luminaires in an intersection or turning bay to full on when an approaching vehicle reaches a point no less than 80 feet (24.4 m) from the area.
      7) When a vehicle reaches an intersection with multiple turning options, bring luminaries to full on for at least 80 feet (24.4 m) in each direction of possible travel.
      8) Lights return to an unoccupied level after 15 minutes.

SPEC:

Wireless Network:
1. RF Frequency: 2.4 ghz: Wireless devices must be capable of communicating in a high density mesh for reliable and high performance communication in parking environments. The system gateway must be capable of communicating with 800 wireless nodes.
2. High density mesh network must be self-healing to ensure reliability of system performance if one luminaire stops functioning or is vandalized.
3. If the system gateway is unable to communicate to the cloud, system operation due to occupancy and daylight and any scheduled events is unaffected.

Relay:
1. Load switched in manner that prevents arcing at mechanical contacts when power is applied to and removed from load circuits.
2. Rated for switching of electronic ballast or load up to 1000w.
3. Capable of handling inrush current of 270A for 1.05ms at voltages of 120-277v.

Wireless Nodes:
1. Must be capable of occupancy sensing and daylight sensing in a single unit without requiring wiring a 3rd party sensor.
2. Must be capable of measuring power with an accuracy of +/- 5%.
3. Must be able to tolerate environmental temperatures from -40°F to +158°F.
4. Must be a minimum of IP66 rated.
5. Must be capable of measuring temperature with an accuracy of +/- 2°C.
6. Must be capable of having occupancy settings, including sensitivity and detection profiles adjusted remotely.
7. Must have multiple occupancy sensor lens options for mounting at heights from 8 feet to 40 feet.

System:
1. Must be capable of connecting to an Enterprise level system that provides a single sign on and graphical navigation to multiple lighting control systems for interior and exterior spaces.

Emergency Interface(s) to be provided by contractor. Not in Lutron’s scope.