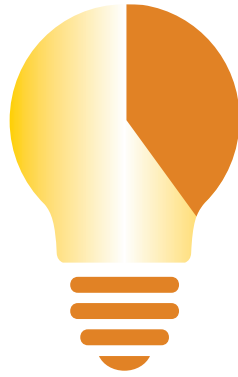


OPPORTUNITY

How much electricity is used for lighting in U.S. commercial buildings?

39%
OF ELECTRICITY
GOES TO LIGHTING¹



1%
OF BUILDINGS
HAVE ADVANCED
LIGHTING CONTROLS²

TECHNOLOGY

How does Occupant Responsive Lighting save energy?

USES 3 CONTROL STRATEGIES

OCCUPANCY SENSING, TIMER SCHEDULING, AND DIMMING

M&V

Where did Measurement and Verification occur?

LAWRENCE BERKELEY NATIONAL LABORATORY assessed the use of responsive lighting systems in 5 federal buildings in California

RESULTS

How did Occupant Responsive Lighting perform in M&V?

27%-63%
ENERGY SAVINGS³

SAVINGS VARY DEPENDING ON OPERATING HOURS & OCCUPANCY⁴

IMPROVED SATISFACTION

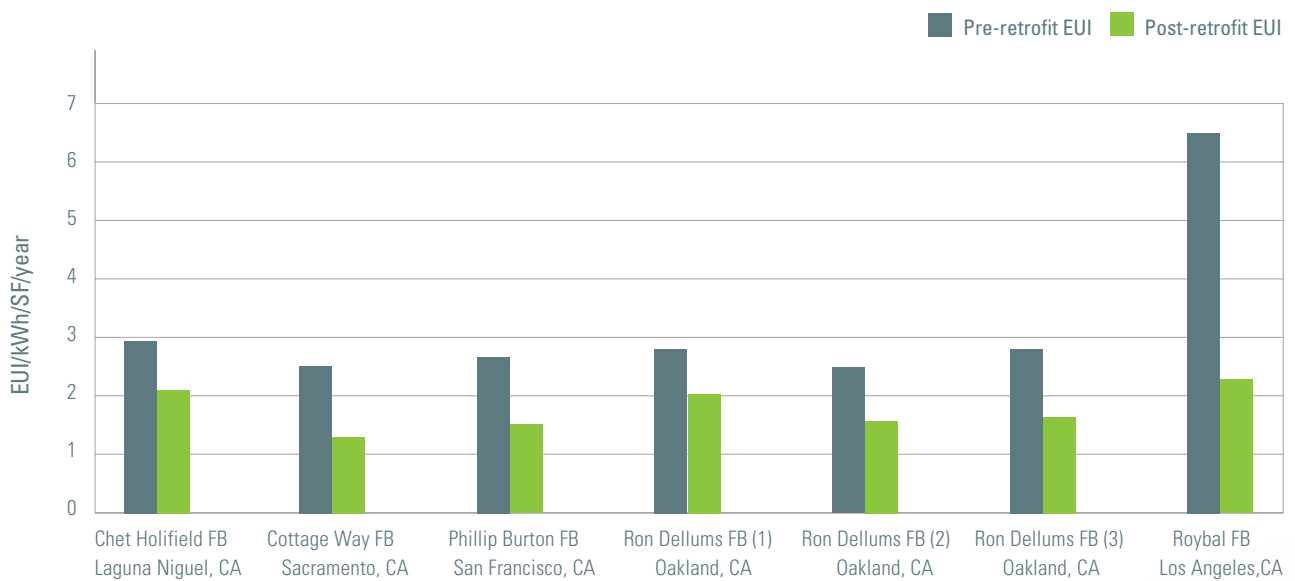
BETTER QUALITY LIGHT WITH LESS GLARE WITHIN P100 STANDARDS⁵

6 YEARS

PAYBACK FOR CALL CENTERS
Lit 18 hours a day
7 days a week⁶

Annual Energy Savings By Site

Energy savings ranged from 27% to 63%



DEPLOYMENT

Where does M&V recommend deploying Occupant Responsive Lighting?

LONG OPERATING HOURS

Buildings with operating hours > 14 hours
Utility costs > \$.11/kwh
And variable occupancy patterns

¹Responsive Lighting Solutions. Joy Wei, Abby Enscoe, Francis Rubenstein (LBNL), September 2012, p.17 ²Ibid, p.17 ³Ibid, p.34

⁴Ibid, p.12 ⁵Ibid, p.13 ⁶Ibid, p.12