

LIGHTING SYSTEM PROPOSAL

for

Anna-Maria and Stephen Kellen Gallery
at Sheila C. Johnson Design Center at The New School

EXISTING SYSTEM

erco track heads, out of production:
37 wallwasher
15 accent

GE bi-pin Base 100W Quartz Halogen
lamp Type



IDENTIFY PROBLEMS

energy inefficient

heavy/bulky

hot

short lamp life

lack of flexibility in light distribution

no individual dimming



CRITERIA FOR NEW SYSTEM

energy efficient

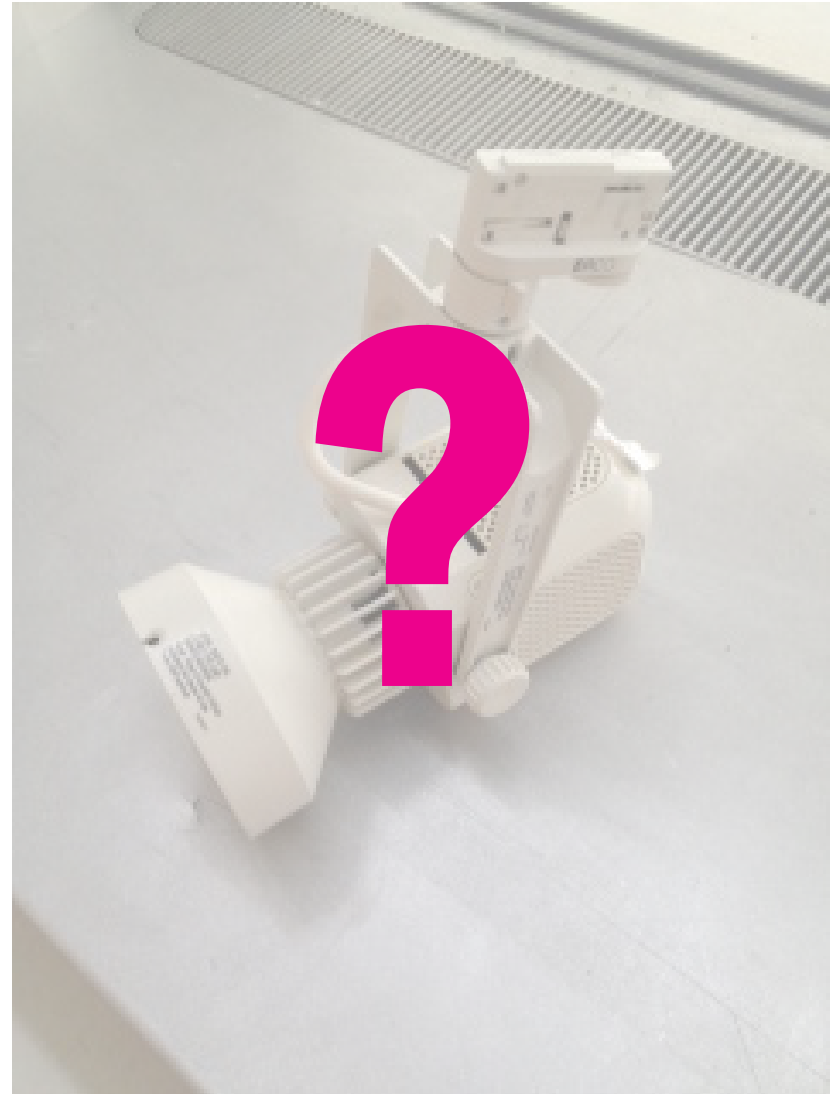
light weight/ easy to use

temperature handleable

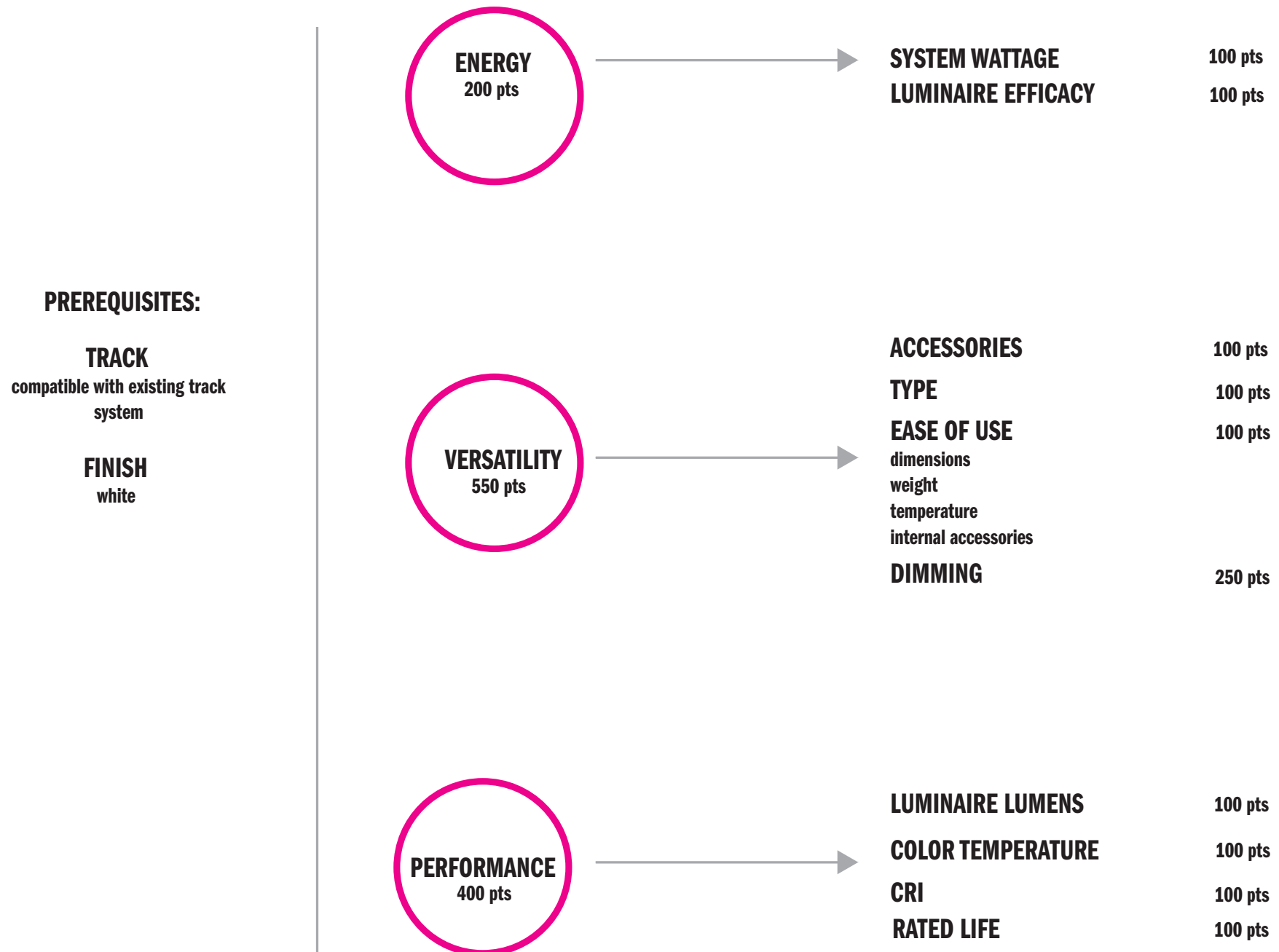
long lamp life

modifyable light distribution

individual dimming



POINT SYSTEM



INITIAL EVALUATION: NECESSARY CONDITIONS FOR FIXTURE



***color temperature
3000k***



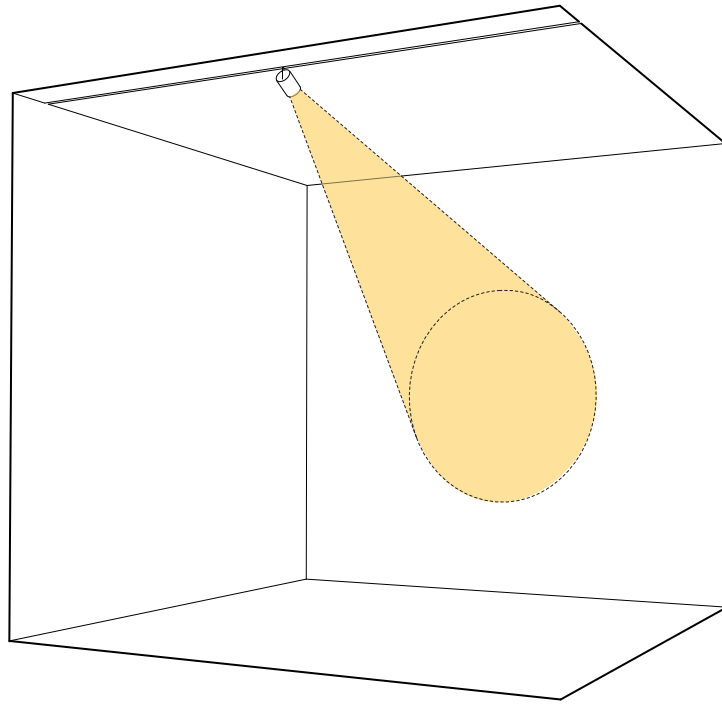
***operable in existing
track system***



***fixture finish
white***

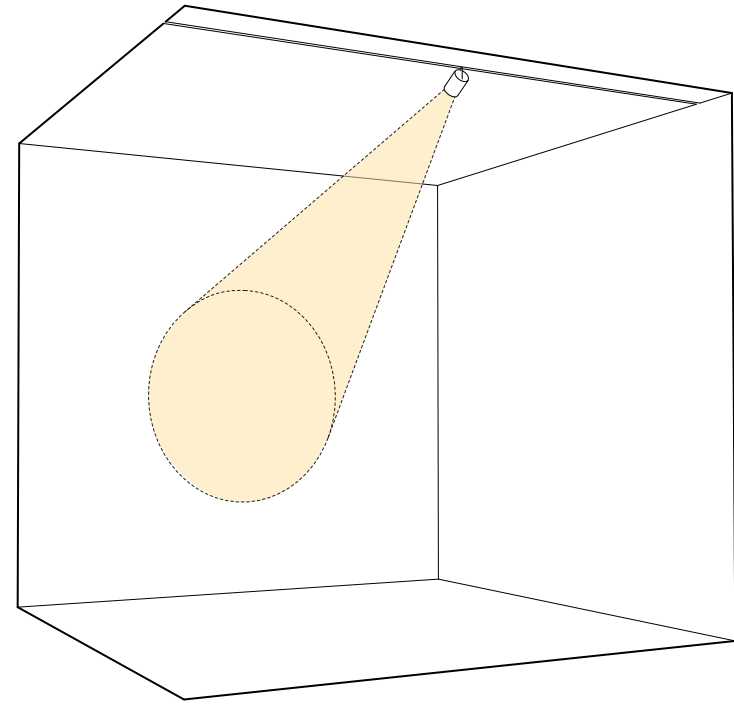
INITIAL EVALUATION: LUMINAIRE LUMENS

ideal



100 points - 2000 lumens

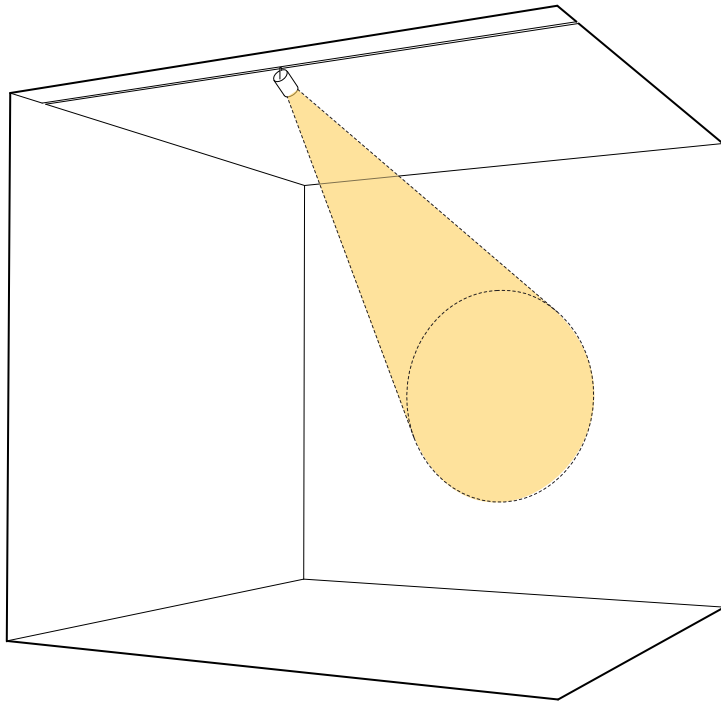
test luminaire



more points closer to the ideal

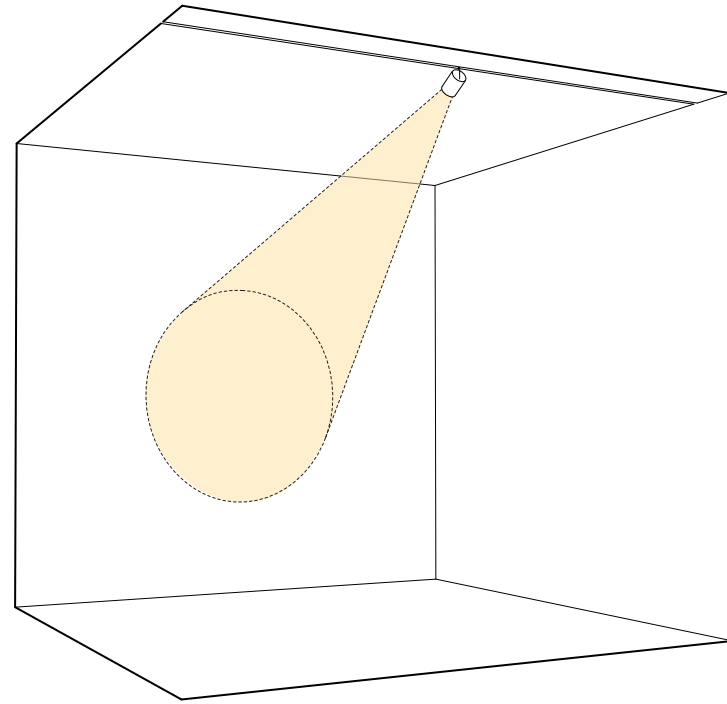
INITIAL EVALUATION: LUMINAIRE EFFICACY

ideal



100 points - 2000 lumens/per 1 watt

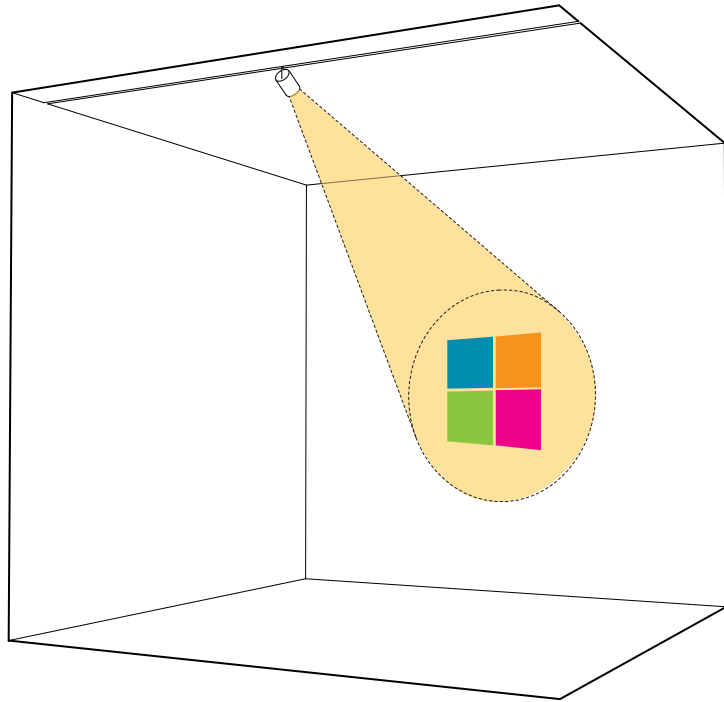
test luminaire



more points closer to the ideal

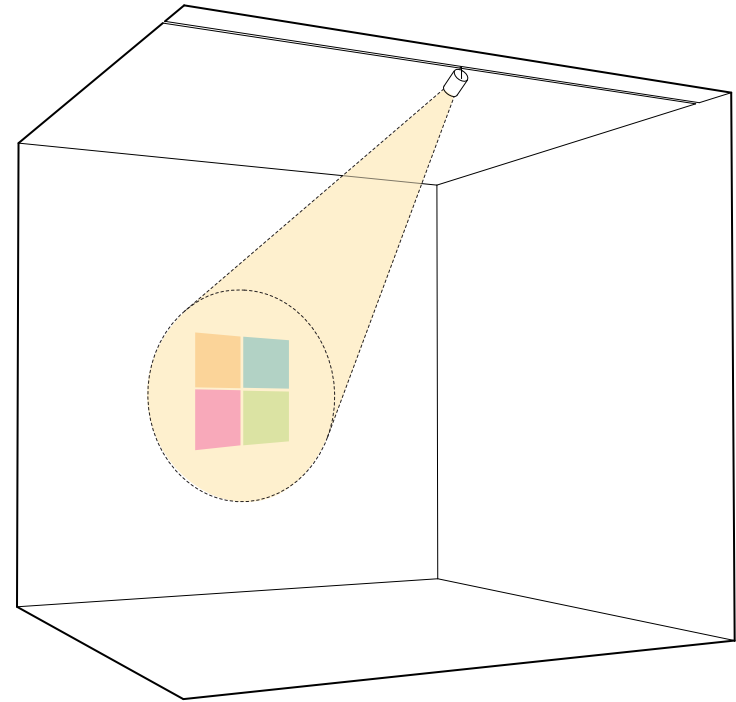
INITIAL EVALUATION: LUMINAIRE CRI

ideal



100 points - 100 CRI

test luminaire



more points closer to the ideal

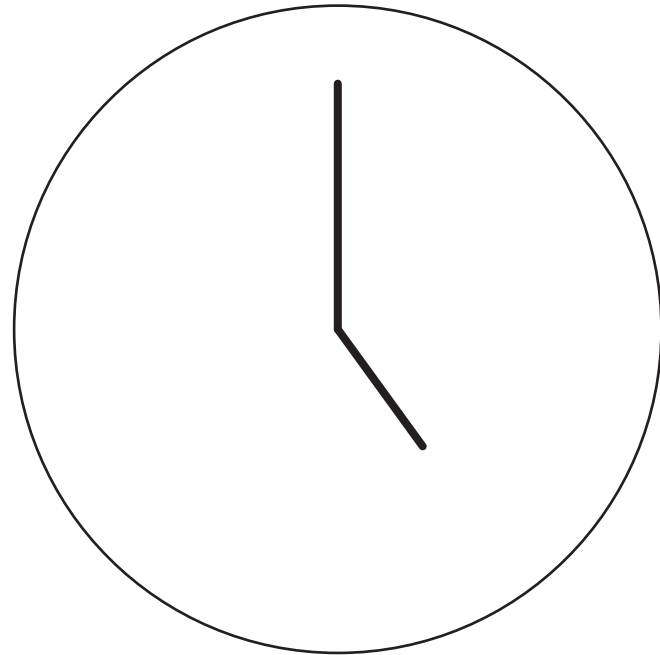
INITIAL EVALUATION: LUMINAIRE RATED LIFE

ideal



100 points - 50 000 hour

test luminaire

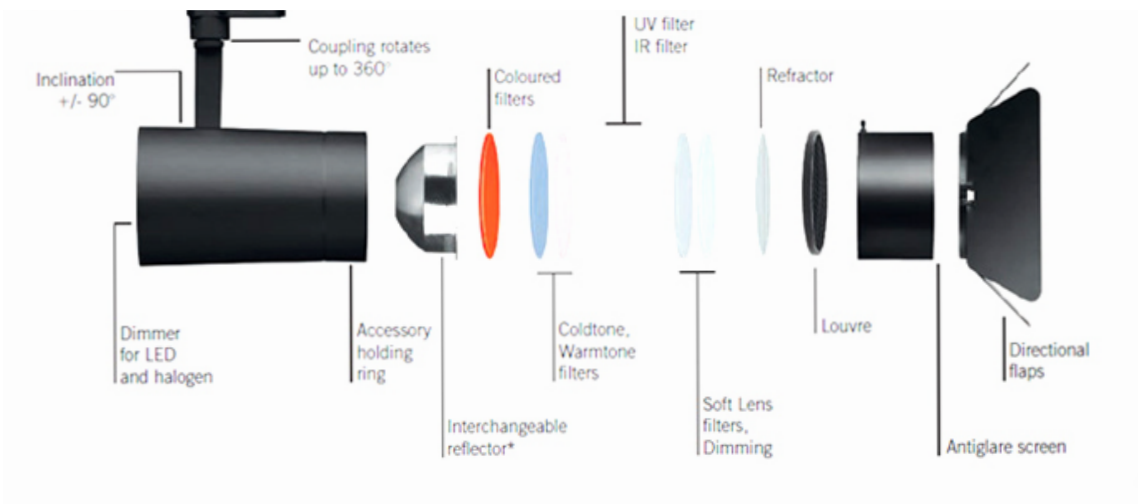


more points closer to the ideal

INITIAL EVALUATION: ACCESSORIES

ideal

test luminaire



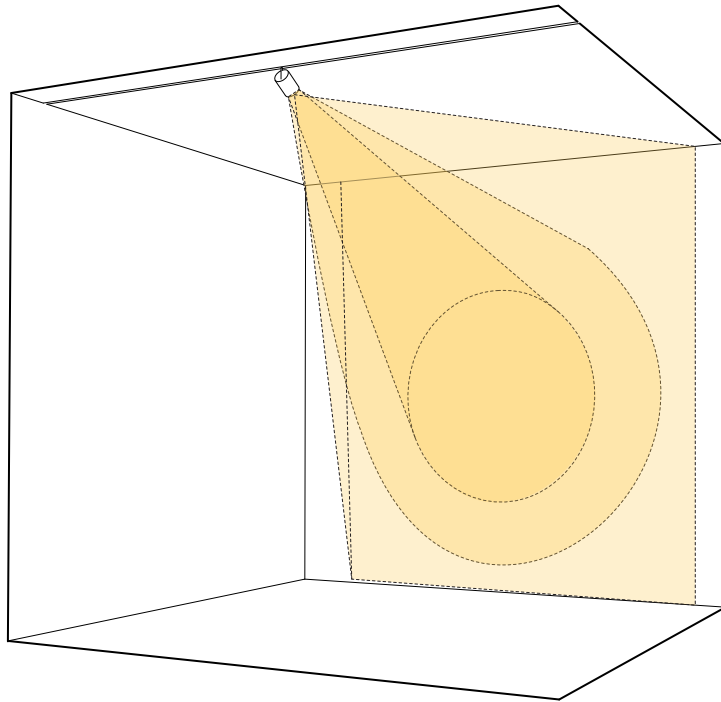
?

100 points - variety of accessories

more points closer to the ideal

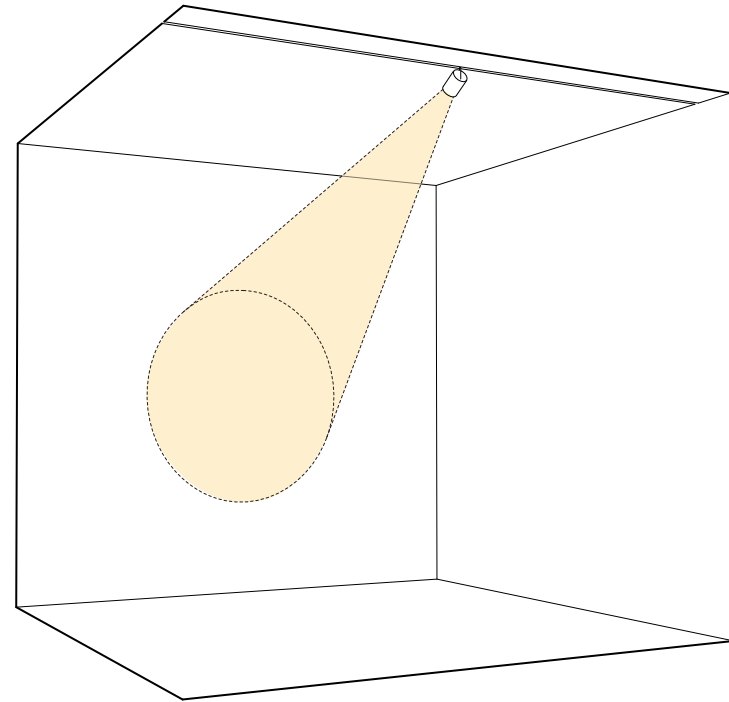
INITIAL EVALUATION: LUMINAIRE BEAM SPREAD

ideal



100 points - spot, flood, wallwash

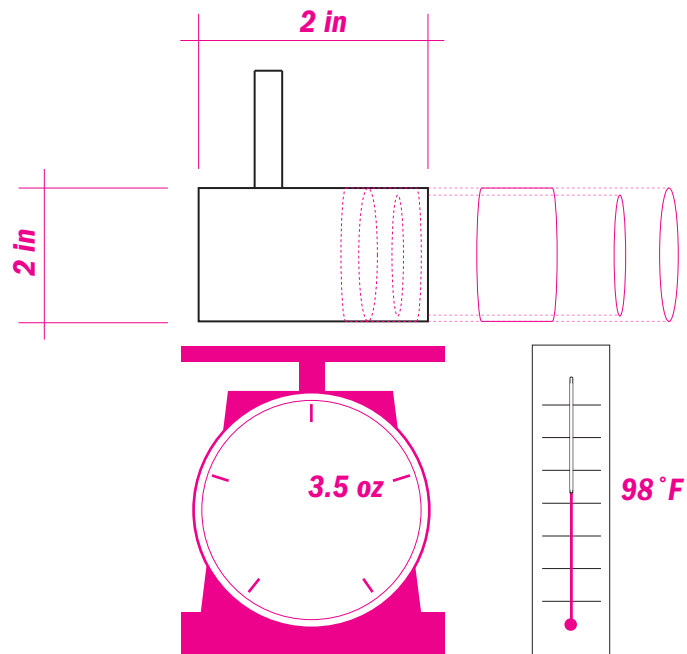
test luminaire



more points closer to the ideal

INITIAL EVALUATION: EASE OF USE

ideal



100 points:

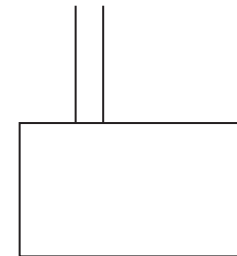
25 points - dimensions 2" x 2" x 2"

25 points - weight 3.5 oz.

25 points - temperature 98.6°F

25 points - internal accessories

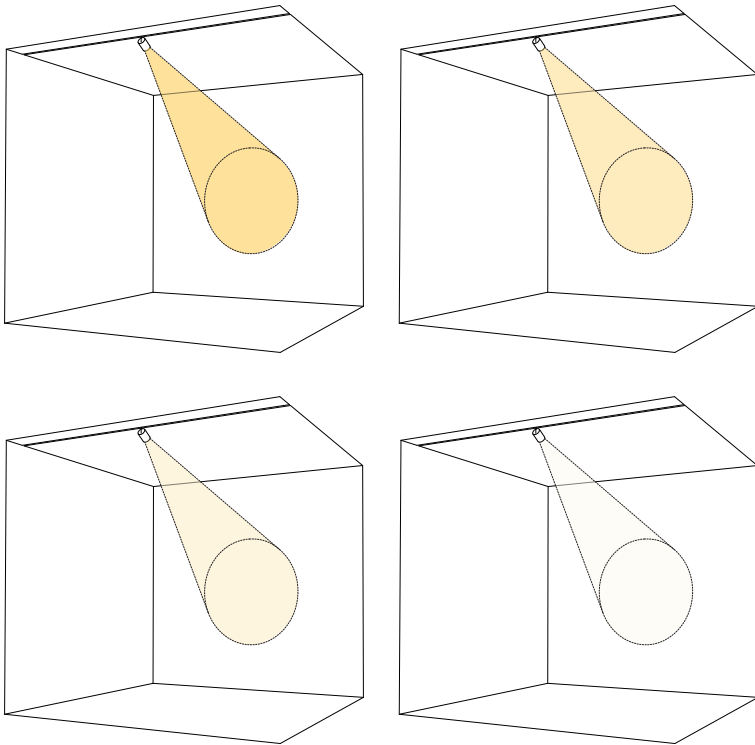
test luminaire



more points closer to the ideal

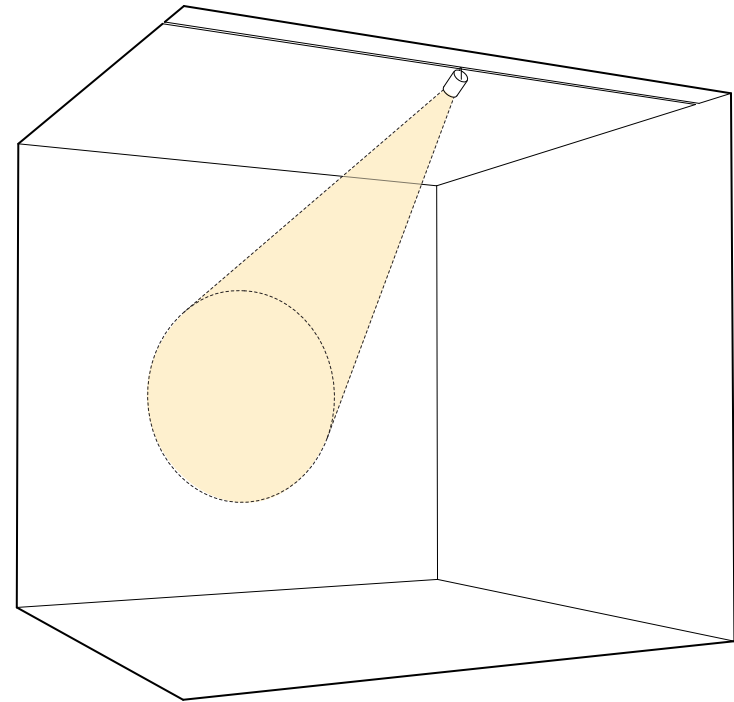
INITIAL EVALUATION: LUMINAIRE DIMMING

ideal



100 points - individually dimable
100 points - dimable to 1%

test luminaire



more points closer to the ideal

INITIAL EVALUATION: SYSTEM WATTAGE

ideal

1W

100 points

test luminaire

?W

more points closer to the ideal

INITIAL EVALUATION: WINNERS



erco



LSI



edison price

TESTING: OBSTACLES



erco



LSI



edison price

TESTING: PROCESS

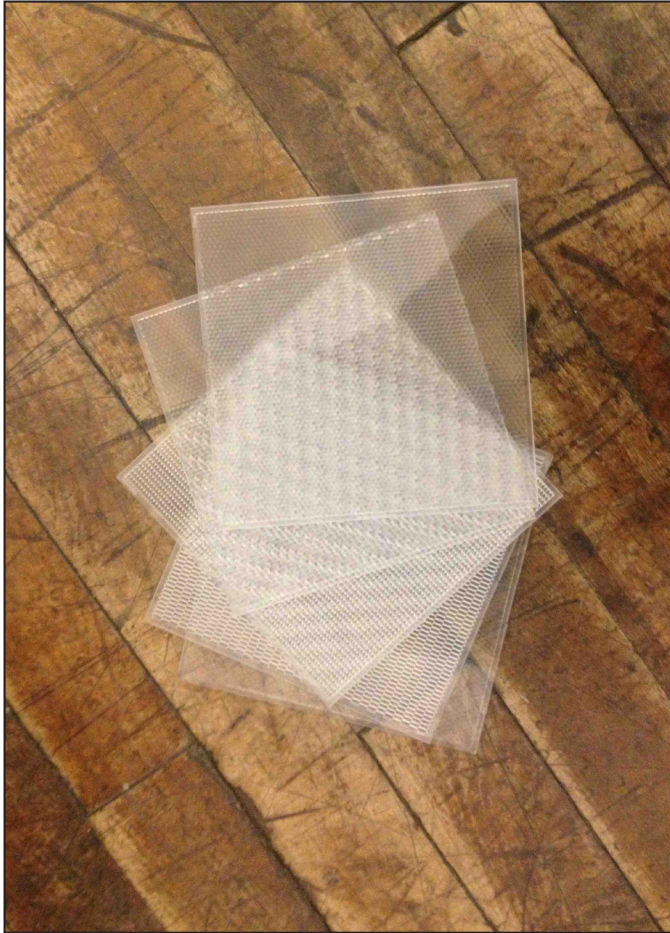


color rendering



beam spread

TESTING: ACCESSORIES



erco



LSI

TESTING: WINNER



erco

570/900 points
testing:
even beam spread
good color rendering
very easy to use
flexible and usable (pop out lens)
energy efficient
long life
ascetically clean/small
light wieght

SAVINGS

\$4380.00/YR

\$1182.00/YR

\$3179.00/YR SAVINGS

yearly savings by switching to Erco LED 27W fixture.

*over 10 years: **\$31,974***