

UR4A

4" Series Round Adjustable Trim



Project _____

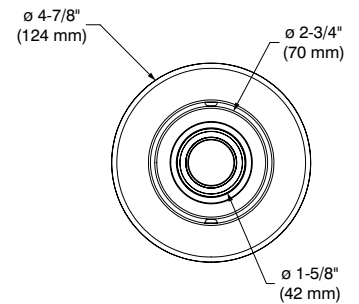
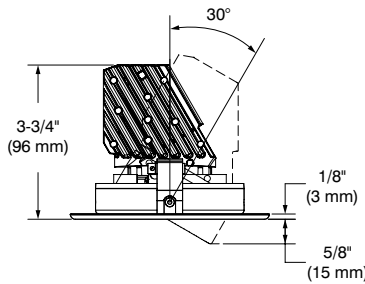
Notes _____

Fixture Type _____

Date _____



UR4A-11 (illustrated)



SPECIFICATIONS

LED MODULE

SOLID COLORS

Lumileds Luxeon CoB

2,700K - CRI: 80+

3,000K - CRI: 80+

2,700K - CRI: 90+

3,000K - CRI: 90+

3,500K - CRI: 90+

4,000K - CRI: 90+



Lumens Maintenance:

L_{70} @ 50,000 hours

Color Binning: 3 SDCM

LED MODULE (CONT'D)

WARM DIMMING (WD)

LED module mimicking the halogen lamp dimming conditions by lowering color temperature from 3,050K at full intensity down to 1,800K at low-end while ensuring 90+ CRI throughout the whole process.

Lumens Maintenance:

L_{70} @ 50,000 hours

Color Binning: 3 SDCM

DELIVERED LUMENS

Performance 1 (10W):

1,018 lumens @ 3,000K, 101.8 lms/W

Performance 2 (15W):

1,326 lumens @ 3,000K, 88.4 lms/W

Warm Dimming (WD)

650 lumens @ 3,000K, 43.3 lms/W

OPTIC SYSTEM*

Optical reflectors available:

Spot, Narrow Flood, Flood

Standard

| | |
|------------------|-----|
| Spot (S) | 16° |
| Narrow Flood (M) | 32° |
| Flood (L) | 48° |

* Average beams shown. Consult [ies files on our Website](#) for more details.

LENSES

Without lens (std)

Clear (C)

Frosted (F)

Honeycomb (H)

Linear (L)

Prismatic (P)

Solite (S)

POWER SUPPLY

(Determined by the choice of housing)

120V, 277V or 120V/277V

Several driver models available in two performances (10W and 15W) and in two dimming options (ELV and 0-10V).

See housing specification sheets for more details.

HEAT SINK

High quality aluminum injected heat sink ensuring maximum heat dissipation.

TRIM

Powder coat painted or plated die-formed steel. Tilt: up to 30°.

CEILING CUTOUT

ø 4-1/4" (108 mm)

UR4A

4" Series Round Adjustable Trim



SPECIFICATIONS (CONT'D)

COMPATIBLE HOUSINGS

| | Remodel Housings | New Construction Housings | IC Housings |
|---|---|---|---|
| Performance 1 10W Warm Dimming not compatible | IC and Air Tight REUR4-120D1 REUR4-120E1 REUR4-277D1 REUR4-UV1 | IC and Air Tight NWUR4-120D1 NWUR4-120E1 NWUR4-277D1 NWUR4-UV1 Emergency Driver Non-IC and Air Tight NWUR4-120D1-EM NWUR4-120E1-EM NWUR4-277D1-EM NWUR4-UV1-EM | Air Tight ISUR4-120D1 ISUR4-120E1 ISUR4-277D1 ISUR4-UV1 Chicago Plenum and Polyurethane Air Tight ISUR4-120D1P ISUR4-120E1P ISUR4-277D1P ISUR4-UV1P |
| Performance 2 15W MAX | Non-IC and Air Tight REUR4-120D2 REUR4-120E2 REUR4-120EB2 REUR4-2772 REUR4-277D2 REUR4-UV2 | Non-IC and Air Tight NWUR4-120D2 NWUR4-120E2 NWUR4-120EB2 NWUR4-2772 NWUR4-277D2 NWUR4-UV2 Emergency Driver Non-IC and Air Tight NWUR4-120D2-EM NWUR4-120E2-EM NWUR4-120EB2-EM NWUR4-2772-EM NWUR4-277D2-EM NWUR4-UV2-EM | Air Tight ISUR4-120D2 ISUR4-120E2 ISUR4-120EB2 ISUR4-2772 ISUR4-277D2 ISUR4-UV2 Chicago Plenum Air Tight ISUR4-120D2P ISUR4-120E2P ISUR4-120EB2P ISUR4-2772P ISUR4-277D2P ISUR4-UV2P |

For dimming, please visit our Web site frequently to find our suggested compatible dimmers list:

www.contrastlighting.com

Contraste suggests ordering
**EB2 (ELV (+Value)/15W),
D2 (0-10V/15W)**
or
UV2 (ELV/0-10V/15W)
dimming type and performance to use with Warm Dimming



COMPATIBLE HOUSINGS

| | Remodel Housings | New Construction Housings | IC Housings |
|-----------------------------|--|--|---------------------------------|
| Performance 1 10W | IC and Air Tight REUR4-120D1 | IC and Air Tight NWUR4-120D1 | Air Tight ISUR4-120D1 |
| Performance 2 15W | N/A | N/A | Air Tight ISUR4-120D2 |

CERTIFICATION

cULus **E343977** for damp locations
Certified under California Energy Commission according to reference Appendix JA8

WARRANTY

1 year on components against manufacturing defects
5 years on LED arrays and drivers

CONTRASTE

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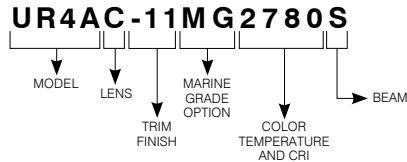
SPECIFICATION SHEET

UR4A

4" Series Round Adjustable Trim



CODIFICATION EXAMPLE



JA8 certified trim available without lens (std) and with 90+ CRI only. Not available with Warm Dimming

ORDERING CODES

| MODEL | LENSES | TRIM FINISHES | MARINE GRADE | COLOR TEMPERATURES AND CRI | BEAMS |
|-------------|--------------------|-----------------------------|---|------------------------------------|-----------------------------|
| UR4A | | | | | |
| UR4A | Without lens (std) | -01 White | MG (optional) | 2780 2,700K (80+ CRI) | S Spot (16°) |
| | C Clear | -03SA Satin Gold | May be applied on finishes: -01, -11, -22 and -25 | 3080 3,000K (80+ CRI) | M Narrow Flood (32°) |
| | F Frosted | -04BR Brushed Chrome | | 2790 2,700K (90+ CRI) | |
| | H Honeycomb | -11 Matte White | | 3090 3,000K (90+ CRI) | |
| | L Linear | -12BR Brushed Nickel | | 3590 3,500K (90+ CRI) | |
| | P Prismatic | -13 Satin Nickel | | 4090 4,000K (90+ CRI) | |
| | S Solite | -22 Matte Black | | WD90 Warm Dimming (90+ CRI) | |
| | | -25 Polar Grey | | | |

Compatible with 15W drivers only (EB2, D2 and UV2)

GOOF RINGS

Goof rings will help you fix larger than necessary or damaged ceiling cutouts.

- Code: RR4-01** (White)
RR4-03SA (Satin Gold)
RR4-04BR (Brushed Chrome)
RR4-11 (Matte White)
RR4-12BR (Brushed Nickel)
RR4-13 (Satin Nickel)
RR4-22 (Matte Black)
RR4-25 (Polar Grey)

Outside diameter: ø 6-1/8" (156 mm)
 Inside diameter: ø 4-1/8" (105 mm)

CONTRASTE

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UR4A

4" Series Round Adjustable Trim



PHOTOMETRIC DATA

In order to obtain the accurate photometric data, multiply the lumens relative to your product selection by the applicable factor(s) below tables. Take note these factors also need to be implemented in the .ies files available on our website.

With performance 1 housing

| | Spot (16°) | | Narrow Flood (32°) | | Flood (48°) | |
|----------------------------|------------|------------|--------------------|-------------|-------------|-------------|
| 2,700K with 80+ CRI | 806 lms | 80.6 lms/W | 994 lms | 99.4 lms/W | 994 lms | 99.4 lms/W |
| 3,000K with 80+ CRI | 826 lms | 82.6 lms/W | 1,018 lms | 101.8 lms/W | 1,018 lms | 101.8 lms/W |

| | | | | | | |
|----------------------------------|---|------------|---------|------------|---------|------------|
| 2,700K with 90+ CRI | 670 lms | 67 lms/W | 826 lms | 82.6 lms/W | 826 lms | 82.6 lms/W |
| 3,000K with 90+ CRI | 692 lms | 69.2 lms/W | 853 lms | 85.3 lms/W | 853 lms | 85.3 lms/W |
| 3,500K with 90+ CRI | 731 lms | 73.1 lms/W | 901 lms | 90.1 lms/W | 901 lms | 90.1 lms/W |
| 4,000K with 90+ CRI | 750 lms | 75 lms/W | 925 lms | 92.5 lms/W | 925 lms | 92.5 lms/W |
| Warm Dimming with 90+ CRI | Not available with performance 1 housings | | | | | |



Performance 1 Housings Factors

| | |
|--------------------------|------|
| XXUR-120E1 | 0.90 |
| XXUR-120D1 or XXUR-277D1 | 1 |

With performance 2 housing

| | Spot (16°) | | Narrow Flood (32°) | | Flood (48°) | |
|----------------------------|------------|------------|--------------------|------------|-------------|------------|
| 2,700K with 80+ CRI | 1,050 lms | 70 lms/W | 1,295 lms | 86.3 lms/W | 1,295 lms | 86.3 lms/W |
| 3,000K with 80+ CRI | 1,075 lms | 71.6 lms/W | 1,326 lms | 88.4 lms/W | 1,326 lms | 88.4 lms/W |

| | | | | | | |
|----------------------------------|---------|------------|-----------|------------|-----------|------------|
| 2,700K with 90+ CRI | 872 lms | 58.1 lms/W | 1,075 lms | 71.6 lms/W | 1,075 lms | 71.6 lms/W |
| 3,000K with 90+ CRI | 901 lms | 60 lms/W | 1,111 lms | 74 lms/W | 1,111 lms | 74 lms/W |
| 3,500K with 90+ CRI | 951 lms | 63.4 lms/W | 1,173 lms | 78.2 lms/W | 1,173 lms | 78.2 lms/W |
| 4,000K with 90+ CRI | 977 lms | 65.1 lms/W | 1,205 lms | 80.3 lms/W | 1,205 lms | 80.3 lms/W |
| Warm Dimming with 90+ CRI | 527 lms | 35.1 lms/W | 650 lms | 43.3 lms/W | 650 lms | 43.3 lms/W |



Performance 2 Housings Factors

| | |
|--|------|
| XXUR-120E2 | 0.95 |
| XXUR-120EB2, XXUR-120D2, XXUR-2772 or XXUR-277D2 | 1 |

Lens Factors

| | |
|-----|------|
| STD | 1 |
| C | 0.97 |
| F | 0.68 |
| H | 0.54 |

CONTRASTE

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UR4A

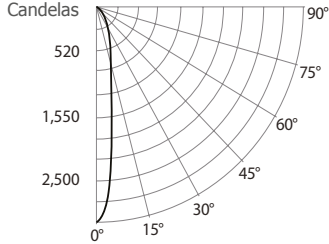
4" Series Round Adjustable Trim



PHOTOMETRIC DATA

3,000K, 90+ CRI, Spot, Performance 1

CANDLEPOWER DISTRIBUTION



LIGHT CONE

| Distance | FC | DIA |
|----------|------|------|
| 06' | 85.6 | 1.7' |
| 08' | 48.1 | 2.3' |
| 10' | 30.8 | 2.9' |
| 12' | 21.4 | 3.5' |
| 14' | 15.7 | 4.1' |
| 16' | 12 | 4.7' |

Beam: 16"
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|------------------|--------|
| Performance 1 LED | 3,000K Spot | |
| CPCB / Lumens | 3,080 | / 692 |
| Watts | 120V | 277V |
| | 10W | 10W |
| Operating AMPS | 0.083A | 0.036A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 69.2 | |
| Spacing Criteria | 0.07 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | | 50 | | | 30 | | |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|--|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR | 0 | 119 | 119 | 111 | 111 | 106 | 106 | 106 | |
| | 2 | 104 | 100 | 99 | 96 | 96 | 94 | 94 | |
| | 4 | 92 | 87 | 89 | 85 | 87 | 84 | 84 | |
| | 6 | 83 | 78 | 81 | 77 | 80 | 76 | 76 | |
| | 8 | 76 | 71 | 75 | 70 | 74 | 70 | 70 | |
| | 10 | 70 | 65 | 69 | 65 | 68 | 64 | 64 | |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|--------|------------|
| 0-30 | 530.3 | 76.6% |
| 0-40 | 639.5 | 92.4% |
| 0-60 | 670.5 | 96.9% |
| 60-90 | 21.5 | 3.1% |
| 0-90 | 692.0 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 34 | 0.44 |
| 6' | 19 | 0.25 |
| 7' | 13 | 0.17 |
| 8' | 13 | 0.17 |
| 9' | 8 | 0.11 |

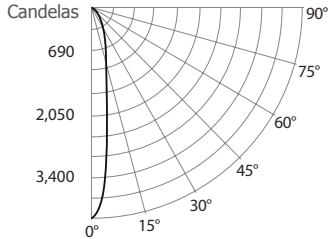
38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 3,080 |
| 15 | 683 |
| 30 | 235 |
| 45 | 25 |
| 65 | 9 |
| 75 | 8 |
| 90 | 0 |

3,000K, 90+ CRI, Spot, Performance 2

CANDLEPOWER DISTRIBUTION



LIGHT CONE

| Distance | FC | DIA |
|----------|-------|------|
| 06' | 111.4 | 1.7' |
| 08' | 62.7 | 2.3' |
| 10' | 40.1 | 2.8' |
| 12' | 27.8 | 3.4' |
| 14' | 20.5 | 4.0' |
| 16' | 15.7 | 4.5' |

Beam: 16"
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|------------------|---------|
| Performance 2 LED | 3,000K Spot | |
| CPCB / Lumens | 4,010 | / 901.7 |
| Watts | 120V | 277V |
| | 15W | 15W |
| Operating AMPS | 0.125A | 0.054A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 60.1 | |
| Spacing Criteria | 0.07 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | | 50 | | | 30 | | |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|--|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR | 0 | 119 | 119 | 111 | 111 | 106 | 106 | 106 | |
| | 2 | 104 | 100 | 99 | 96 | 96 | 94 | 94 | |
| | 4 | 92 | 87 | 89 | 85 | 87 | 84 | 84 | |
| | 6 | 83 | 78 | 81 | 77 | 80 | 76 | 76 | |
| | 8 | 76 | 71 | 75 | 70 | 74 | 69 | 69 | |
| | 10 | 70 | 65 | 69 | 64 | 68 | 64 | 64 | |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|--------|------------|
| 0-30 | 690.5 | 76.6% |
| 0-40 | 832.5 | 92.3% |
| 0-60 | 873.3 | 96.8% |
| 60-90 | 28.4 | 3.2% |
| 0-90 | 901.7 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 44 | 0.66 |
| 6' | 25 | 0.37 |
| 7' | 17 | 0.26 |
| 8' | 17 | 0.26 |
| 9' | 11 | 0.17 |

38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 4 010 |
| 15 | 890 |
| 30 | 307 |
| 45 | 33 |
| 65 | 12 |
| 75 | 11 |
| 90 | 0 |

UR4A

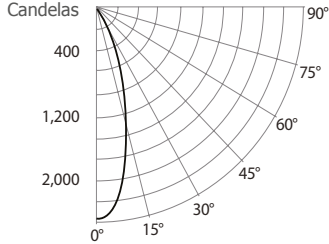
4" Series Round Adjustable Trim



PHOTOMETRIC DATA

3,000K, 90+ CRI, Narrow Flood, Performance 1

CANDLEPOWER DISTRIBUTION



LIGHT CONE

| Distance | FC | DIA |
|----------|------|------|
| 06' | 65.3 | 3.5' |
| 08' | 36.7 | 4.7' |
| 10' | 23.5 | 5.9' |
| 12' | 16.3 | 7.1' |
| 14' | 12.0 | 8.3' |
| 16' | 9.2 | 9.5' |

Beam: 33°
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|---------------------|---------|
| Performance 1 LED | 3,000K Narrow Flood | |
| CPCB / Lumens | 2 350 | / 852,9 |
| Watts | 120V | 277V |
| | 10W | 10W |
| Operating AMPS | 0.083A | 0.036A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 85.2 | |
| Spacing Criteria | 0.14 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | 50 | | 30 | | |
|-------------------|----|-----|-----|-----|-----|-----|-----|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR | 0 | 119 | 119 | 111 | 111 | 106 | 106 |
| | 2 | 106 | 103 | 102 | 99 | 99 | 97 |
| | 4 | 96 | 92 | 93 | 90 | 91 | 88 |
| | 6 | 88 | 83 | 86 | 82 | 85 | 81 |
| | 8 | 81 | 76 | 80 | 76 | 79 | 75 |
| | 10 | 75 | 71 | 74 | 70 | 73 | 70 |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|--------|------------|
| 0-30 | 786.9 | 92.3% |
| 0-40 | 846.2 | 99.2% |
| 0-60 | 852.9 | 100% |
| 60-90 | 0 | 0% |
| 0-90 | 852.9 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 42 | 0.44 |
| 6' | 24 | 0.25 |
| 7' | 17 | 0.17 |
| 8' | 17 | 0.17 |
| 9' | 11 | 0.11 |

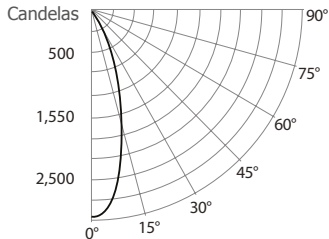
38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 2,350 |
| 15 | 1,314 |
| 30 | 251 |
| 45 | 5 |
| 60 | 0 |
| 75 | 0 |
| 90 | 0 |

3,000K, 90+ CRI, Narrow Flood, Performance 2

DISTRIBUTION DES CANDELAS



LIGHT CONE

| Distance | FC | DIA |
|----------|------|------|
| 06' | 85.0 | 3.5' |
| 08' | 47.8 | 4.7' |
| 10' | 30.6 | 5.9' |
| 12' | 21.3 | 7.1' |
| 14' | 15.6 | 8.3' |
| 16' | 12.0 | 9.5' |

Beam: 33°
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|---------------------|-----------|
| Performance 2 LED | 3,000K Narrow Flood | |
| CPCB / Lumens | 3,061 | / 1,111.3 |
| Watts | 120V | 277V |
| | 15W | 15W |
| Operating AMPS | 0.125A | 0.054A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 74 | |
| Spacing Criteria | 0.14 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | 50 | | 30 | | |
|-------------------|----|-----|-----|-----|-----|-----|-----|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR | 0 | 119 | 119 | 111 | 111 | 106 | 106 |
| | 2 | 106 | 103 | 102 | 99 | 99 | 97 |
| | 4 | 96 | 92 | 93 | 90 | 91 | 88 |
| | 6 | 88 | 83 | 86 | 82 | 85 | 81 |
| | 8 | 81 | 76 | 80 | 76 | 79 | 75 |
| | 10 | 75 | 71 | 74 | 70 | 73 | 70 |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|---------|------------|
| 0-30 | 1,024.9 | 92.2% |
| 0-40 | 1,102.2 | 99.2% |
| 0-60 | 1,111.2 | 100% |
| 60-90 | 0.1 | 0% |
| 0-90 | 1,111.3 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 55 | 0.66 |
| 6' | 31 | 0.37 |
| 7' | 22 | 0.26 |
| 8' | 22 | 0.26 |
| 9' | 14 | 0.17 |

38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 3,061 |
| 15 | 1,712 |
| 30 | 328 |
| 45 | 7 |
| 60 | 1 |
| 75 | 0 |
| 90 | 0 |

UR4A

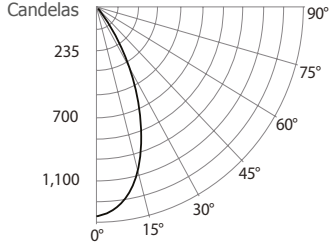
4" Series Round Adjustable Trim



PHOTOMETRIC DATA

3,000K, 90+ CRI, Flood, Performance 1

CANDLEPOWER DISTRIBUTION



LIGHT CONE

| Distance | FC | DIA |
|----------|------|-------|
| 06' | 37.6 | 5.4' |
| 08' | 21.1 | 7.2' |
| 10' | 13.5 | 9.0' |
| 12' | 9.4 | 10.8' |
| 14' | 6.9 | 12.6' |
| 16' | 5.3 | 14.4' |

Beam: 48°
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|------------------|---------|
| Performance 1 LED | 3,000K Flood | |
| CPCB / Lumens | 1,353 | / 853.5 |
| Watts | 120V | 277V |
| | 10W | 10W |
| Operating AMPS | 0.083A | 0.036A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 85.3 | |
| Spacing Criteria | 0.20 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | | 50 | | | 30 | | |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR 0 | 119 | 119 | 111 | 111 | 106 | 106 | 106 | 106 | |
| 2 | 105 | 101 | 100 | 97 | 97 | 94 | 94 | 94 | |
| 4 | 93 | 88 | 89 | 85 | 87 | 84 | 84 | 84 | |
| 6 | 83 | 77 | 81 | 76 | 79 | 75 | 75 | 75 | |
| 8 | 75 | 69 | 73 | 68 | 72 | 68 | 68 | 68 | |
| 10 | 68 | 62 | 66 | 62 | 66 | 61 | 61 | 61 | |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|--------|------------|
| 0-30 | 701.7 | 82.2% |
| 0-40 | 822.3 | 96.3% |
| 0-60 | 851.8 | 99.8% |
| 60-90 | 1.6 | 0.2% |
| 0-90 | 853.5 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 42 | 0.44 |
| 6' | 23 | 0.25 |
| 7' | 16 | 0.17 |
| 8' | 16 | 0.17 |
| 9' | 10 | 0.11 |

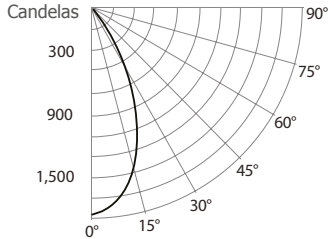
38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 1,353 |
| 15 | 1,070 |
| 30 | 374 |
| 45 | 30 |
| 60 | 3 |
| 75 | 0 |
| 90 | 0 |

3,000K, 90+ CRI, Flood, Performance 2

CANDLEPOWER DISTRIBUTION



LIGHT CONE

| Distance | FC | DIA |
|----------|------|-------|
| 06' | 48.9 | 5.4' |
| 08' | 27.5 | 7.2' |
| 10' | 17.6 | 9.0' |
| 12' | 12.2 | 10.8' |
| 14' | 9.0 | 12.6' |
| 16' | 6.9 | 14.4' |

Beam: 48°
Beam Edge defined as 50% of Maximum Nadir Candle-power.

LUMINAIRE

| | | |
|-------------------|------------------|-----------|
| Performance 2 LED | 3,000K Flood | |
| CPCB / Lumens | 1,762 | / 1,111.5 |
| Watts | 120V | 277V |
| | 15W | 15W |
| Operating AMPS | 0.125A | 0.054A |
| Lumen Maintenance | L70 @ 50,000 Hrs | |
| CRI | 90+ | |
| Lumens/Watt | 74.1 | |
| Spacing Criteria | 0.20 | |

COEFFICIENT OF UTILIZATION - %

| Ceiling Reflect % | 80 | | | 50 | | | 30 | | |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Wall Reflect % | 50 | 30 | 50 | 30 | 50 | 30 | 50 | 30 | |
| RCR 0 | 119 | 119 | 111 | 111 | 106 | 106 | 106 | 106 | |
| 2 | 105 | 101 | 100 | 97 | 97 | 94 | 94 | 94 | |
| 4 | 93 | 88 | 89 | 85 | 87 | 84 | 84 | 84 | |
| 6 | 83 | 77 | 81 | 76 | 79 | 75 | 75 | 75 | |
| 8 | 75 | 69 | 73 | 68 | 72 | 68 | 68 | 68 | |
| 10 | 68 | 62 | 66 | 62 | 66 | 61 | 61 | 61 | |

Zonal Cavity Method
Effective Floor Cavity Reflectance 20%

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LUMINAIRE |
|-------|---------|------------|
| 0-30 | 914.2 | 82.2% |
| 0-40 | 1,071.3 | 96.4% |
| 0-60 | 1,109.7 | 98.8% |
| 60-90 | 1.8 | 0.2% |
| 0-90 | 1,111.5 | 100% |

MULTIPLE UNIT DATA - (RCR 2)

| SPACING ON CENTER | INITIAL FOOTCANDLES | WATTS/SQ. FT. |
|-------------------|---------------------|---------------|
| 5' | 54 | 0.66 |
| 6' | 30 | 0.37 |
| 7' | 21 | 0.26 |
| 8' | 21 | 0.26 |
| 9' | 14 | 0.17 |

38' x 38' x 10' Room. Workplan located 2-1/2' (30").
Reflectance factor 80%/50%/30%

CANDELAS DISTRIBUTION

| DEGREES/VERTICAL | CANDELAS |
|------------------|----------|
| 0 | 1,762 |
| 15 | 1,394 |
| 30 | 487 |
| 45 | 39 |
| 60 | 4 |
| 75 | 0 |
| 90 | 0 |