

## SPECIFICATION SHEET

**UR4D****4" Series****Round Adjustable Regressed Trim**

Project \_\_\_\_\_

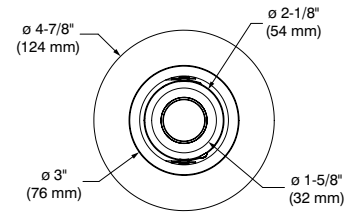
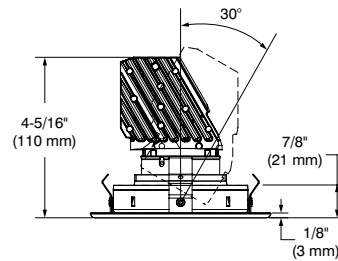
Notes \_\_\_\_\_

Fixture Type \_\_\_\_\_

Date \_\_\_\_\_



UR4D-1322 (illustrated)



## SPECIFICATIONS


## LED MODULE

**STANDARD (SOLID WHITE)** 

Lumileds Luxeon CoB 1203 GEN4

L<sub>70</sub> @ 50,000 hours of operation. 3-Step MacAdam ellipse (3 SDCM)

Color temperatures: 2,700K - 3,000K - 3,500K - 4,000K

CRI: 80+ (only 2,700K and 3,000K), 90+ ()

Delivered Lumens: Performance 1 (10W) - 918 lumens @ 3,000K, 92 lm/W  
 Performance 2 (15W) - 1,196 lumens @ 3,000K, 80 lm/W  
 Performance 3 (24W) - 1,793 lumens @ 3,000K, 75 lm/W

Power supply (*determined by the choice of housing*): 120V, 277V or 120V/277V

Several driver models available in three performances (10W, 15W and 24W) offered in two dimming options:

ELV: 120V only    0-10V: 120V / 277V

Consult housing specification sheet for more details.

**WARM DIMMING (WD)**

LTF 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.

L<sub>70</sub> @ 50,000 hours of operation. 3-Step MacAdam ellipse (3 SDCM)

Color Temperature: 3,050K to 1,800K

CRI: 90+ (over the entire dimming range)

Delivered Lumens: Performance 1 (10W) - up to 550 lumens  
 Performance 2 (15W) - up to 725 lumens  
 Performance 3 (24W) - up to 1,050 lumens

Power supply (*determined by the choice of housing*): 120V, 277V or 120V/277V

Several driver models available in three performances (10W, 15W and 24W) offered in two dimming options:

ELV: 120V only    0-10V: 120V / 277V

Consult housing specification sheet for more details.

## CEILING CUTOUT

**ø 4-1/4" (108 mm)**

## ADJUSTABILITY

Tilt: 30°

## CERTIFICATION

- cULus **E343977** for damp locations
- Certified under California Energy Commission according to reference joint Appendix 8 (JA8-2016)

## WARRANTY

1 year limited warranty on components against manufacturing defects  
 5-year limited warranty on LED arrays and drivers

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Revision 6

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## SPECIFICATION SHEET

**UR4D**

4" Series

**Round Adjustable Regressed Trim**

## SPECIFICATIONS (CONT'D)

## COMPATIBLE HOUSINGS

	Remodel Housings	New Construction Housings	IC Housings
<b>Performance 1</b> 10W  Warm Dimming not compatible	<b>IC Air Tight</b> REUR4-120D1 REUR4-120E1 REUR4-277D1 REUR4-UV1	<b>IC Air Tight</b> NWUR4-120D1 NWUR4-120E1 NWUR4-277D1 NWUR4-UV1  <b>Non-IC Air Tight Emergency Driver</b> NWUR4-120D1-EM NWUR4-120E1-EM NWUR4-277D1-EM NWUR4-UV1-EM	<b>IC Air Tight</b> ISUR4-120D1 ISUR4-120E1 ISUR4-277D1 ISUR4-UV1  <b>IC Air Tight Chicago Plenum and Polyurethane</b> ISUR4-120D1P ISUR4-120E1P ISUR4-277D1P ISUR4-UV1P
<b>Performance 2</b> 15W MAX	<b>Non-IC Air Tight</b> REUR4-120D2 REUR4-120E2 REUR4-120EB2 REUR4-2772 REUR4-277D2 REUR4-UV2	<b>Non-IC Air Tight</b> NWUR4-120D2 NWUR4-120E2 NWUR4-120EB2 NWUR4-2772 NWUR4-277D2 NWUR4-UV2  <b>Non-IC Air Tight Emergency Driver</b> NWUR4-120D2-EM NWUR4-120E2-EM NWUR4-120EB2-EM NWUR4-2772-EM NWUR4-277D2-EM NWUR4-UV2-EM	<b>IC Air Tight</b> ISUR4-120D2 ISUR4-120E2 ISUR4-120EB2 ISUR4-2772 ISUR4-277D2 ISUR4-UV2  <b>IC Air Tight Chicago Plenum</b> ISUR4-120D2P ISUR4-120E2P ISUR4-120EB2P ISUR4-2772P ISUR4-277D2P ISUR4-UV2P
<b>Performance 3</b> 24W MAX	N/A	<b>Non-IC Non-Air Tight</b> NWUR4-UV3  <b>Non-IC Non-Air Tight Emergency Driver</b> NWUR4-UV3-EM	N/A

For dimming, please visit our Web site frequently to find our suggested compatible dimmers list:  
[www.contrastlighting.com](http://www.contrastlighting.com)

Contraste suggests ordering  
**EB2 (ELV (+Value)/15W), D2 (0-10V/15W)**  
or  
**UV2 (ELV/0-10V/15W) and UV3 (ELV/0-10V/24W)**  
dimming type and performance to use with Warm Dimming

## COMPATIBLE HOUSINGS



	Remodel Housings	New Construction Housings	IC Housings
<b>Performance 1</b> 10W	<b>IC Air Tight</b> REUR4-120D1	<b>IC Air Tight</b> NWUR4-120D1	<b>IC Air Tight</b> ISUR4-120D1
<b>Performance 2</b> 15W MAX	N/A	N/A	<b>IC Air Tight</b> ISUR4-120D2

For dimming, please visit our Web site frequently to find our suggested compatible dimmers list:  
[www.contrastlighting.com](http://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

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## SPECIFICATION SHEET

**UR4D****4" Series****Round Adjustable Regressed Trim**

## SPECIFICATIONS (CONT'D)

TRIM	Powder coat painted or plated die-formed steel. <b>Different finishes available:</b> White <b>(-01)</b> , Brushed Chrome <b>(-04BR)</b> , Matte White <b>(-11)</b> , Brushed Nickel <b>(-12BR)</b> , <b>Satin Nickel (-13)</b> , Matte Black <b>(-22)</b> and Polar Grey <b>(-25)</b>								
REFLECTORS	<b>PAINTED</b> Natural Anodized Aluminum <b>(AN)</b> Matte White <b>(11)</b> Matte Black <b>(22)</b>								
HEAT SINK	High quality aluminum injected heat sink ensuring maximum heat dissipation.								
OPTIC SYSTEM	Optical reflectors and lenses available to customize your lighting. <b>Choice of available lenses:</b> <b>Standard (without lens)</b> <b>Clear (C)</b> <b>Frosted (F)</b> <b>Honeycomb (H):</b> the honeycomb louver reduces glare <b>Linear (L):</b> the linear lens directs the lamp beam to create a strip of light <b>Prismatic (P):</b> the prismatic lens diffuses and spreads the light in an even overall pattern <b>Solite (S):</b> the solite lens softens the light in an even overall pattern <b>Optical reflectors available:</b> Spot, Narrow Flood, Flood  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">Standard</th> </tr> </thead> <tbody> <tr> <td>Spot <b>(S)</b></td> <td style="text-align: center;">16°</td> </tr> <tr> <td>Narrow Flood <b>(M)</b></td> <td style="text-align: center;">32°</td> </tr> <tr> <td>Flood <b>(L)</b></td> <td style="text-align: center;">48°</td> </tr> </tbody> </table> <b>* Average beams shown. Consult .ies files on our Website for more details.</b>	Standard		Spot <b>(S)</b>	16°	Narrow Flood <b>(M)</b>	32°	Flood <b>(L)</b>	48°
Standard									
Spot <b>(S)</b>	16°								
Narrow Flood <b>(M)</b>	32°								
Flood <b>(L)</b>	48°								
ACCESSORIES	Goof Rings (see ordering code)								

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SPECIFICATION SHEET

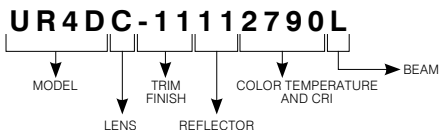
# UR4D

## 4" Series

### Round Adjustable Regressed Trim



CODIFICATION EXAMPLE



**JAB** certified trim available without lens (std) only.  
Not available with Warm Dimming

*Options in red may generate a longer production lead time.*

ORDERING CODES

MODEL	LENSES	TRIM FINISHES	REFLECTOR FINISHES	COLOR TEMPERATURE AND CRI	BEAMS
<b>UR4D</b>					
<b>UR4D</b>	Whitout lens (std)	<b>-01</b> White	<b>PAINTED</b>	<b>2780</b> 2,700K (80+ CRI)	<b>S</b> Spot (16°) <b>M</b> Narrow Flood (32°) <b>L</b> Flood (48°) <i>Not available with Warm Dimming</i>
<b>C</b>	Clear	<b>-04BR</b> Brushed Chrome	<b>AN</b> Natural Anodized Aluminum	<b>3080</b> 3,000K (80+ CRI)	
<b>F</b>	Frosted	<b>-11</b> Matte White	<b>11</b> Matte White	<b>2790</b> 2,700K (90+ CRI)	
<b>H</b>	Honeycomb	<b>-12BR</b> Brushed Nickel	<b>22</b> Matte Black	<b>3090</b> 3,000K (90+ CRI)	
<b>L</b>	Linear	<b>-22</b> Matte Black		<b>3590</b> 3,500K (90+ CRI)	
<b>P</b>	Prismatic	<b>-25</b> Polar Grey		<b>4090</b> 4,000K (90+ CRI)	
<b>S</b>	Solite	<b>-13</b> <i>Satin Nickel</i>			
		<i>(-25 finish perfectly matches with AN reflector)</i>		<b>WD90</b> Warm Dimming 3,050K to 1,800K (90+ CRI)	
				<i>Compatible with 15W and 24W drivers only (EB2, D2, UV2 and UV3)</i>	

GOOF RINGS

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

- Code: RR4-01** (white)  
**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)

## SPECIFICATION SHEET

**UR4D****4" Series****Round Adjustable Regressed Trim**

## PHOTOMETRIC DATA



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

## WITH PERFORMANCE 1 HOUSING (10W)

	Spot (16°)		Narrow Flood (32°)		Flood (48°)	
	lm	lm/W	lm	lm/W	lm	lm/W
<b>2,700K with 80+ CRI</b>	726	73	896	90	896	90
<b>3,000K with 80+ CRI</b>	744	74	918	92	918	92

<b>2,700K with 90+ CRI</b>	604	60	744	74	744	74
<b>3,000K with 90+ CRI</b>	623	62	769	77	769	77
<b>3,500K with 90+ CRI</b>	658	66	812	81	812	81
<b>4,000K with 90+ CRI</b>	676	68	834	83	834	83
<b>Warm Dimming with 90+ CRI</b>	Not available		550	55	550	55

Performance 1 Housings Factors	
<b>XXUR-120E1</b>	0.90
<b>XXUR-120D1 or XXUR-277D1</b>	1

Lens Factors			
<b>STD</b>	1	<b>F</b>	0.68
<b>C</b>	0.97	<b>H</b>	0.54

Reflector Factors			
<b>11</b>	1	<b>AN</b>	0.99
<b>22</b>	0.97		

## WITH PERFORMANCE 2 HOUSING (15W)

	Spot (16°)		Narrow Flood (32°)		Flood (48°)	
	lm	lm/W	lm	lm/W	lm	lm/W
<b>2,700K with 80+ CRI</b>	946	63	1,167	78	1,167	78
<b>3,000K with 80+ CRI</b>	970	65	1,196	80	1,196	80

<b>2,700K with 90+ CRI</b>	786	52	970	65	970	65
<b>3,000K with 90+ CRI</b>	812	54	1,002	67	1,002	67
<b>3,500K with 90+ CRI</b>	858	57	1,058	71	1,058	71
<b>4,000K with 90+ CRI</b>	881	59	1,086	72	1,086	72
<b>Warm Dimming with 90+ CRI</b>	Not available		725	48	725	48

Performance 2 Housings Factors	
<b>XXUR-120E2</b>	0.95
<b>XXUR-120EB2, XXUR-120D2, XXUR-2772 or XXUR-277D2</b>	1

Lens Factors			
<b>STD</b>	1	<b>F</b>	0.68
<b>C</b>	0.97	<b>H</b>	0.54

Reflector Factors			
<b>11</b>	1	<b>AN</b>	0.99
<b>22</b>	0.97		

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## SPECIFICATION SHEET

**UR4D**

4" Series

**Round Adjustable Regressed Trim**

## PHOTOMETRIC DATA



WITH PERFORMANCE 3 HOUSING (24W)

	Spot (16°)		Narrow Flood (32°)		Flood (48°)	
	lm	lm/W	lm	lm/W	lm	lm/W
<b>2,700K with 80+ CRI</b>	1,419	59	1,751	73	1,751	73
<b>3,000K with 80+ CRI</b>	1,455	61	1,793	75	1,793	75

<b>2,700K with 90+ CRI</b>	1,179	49	1,455	61	1,455	61
<b>3,000K with 90+ CRI</b>	1,218	51	1,503	63	1,503	63
<b>3,500K with 90+ CRI</b>	1,286	54	1,588	66	1,588	66
<b>4,000K with 90+ CRI</b>	1,322	55	1,630	68	1,630	68
<b>Warm Dimming with 90+ CRI</b>	Not available		1,050	44	1,050	44

Lens Factors			
<b>STD</b>	1	<b>F</b>	0.68
<b>C</b>	0.97	<b>H</b>	0.54

Reflector Factors			
<b>11</b>	1	<b>AN</b>	0.99
<b>22</b>	0.97		

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# UR4D

4" Series

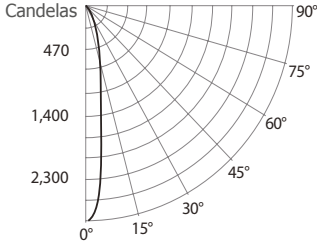
## Round Adjustable Regressed Trim

## PHOTOMETRIC DATA



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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	77.2	1.7
08'	43.4	2.3
10'	27.8	2.8
12'	19.3	3.4
14'	14.2	4.0
16'	10.9	4.5

Beam: 16.1°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 1 LED	3,000K Spot	
CBCP / Lumens	2,778	/ 625
Watts	120V	277V
	10W	10.5W
Operating AMPS	0.08A	0.038A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	62.5	
Spacing Criteria	0.28	

#### 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	104	100	99	96	96	94
	4	92	87	89	85	87	84
	6	83	78	81	77	80	76
	8	76	71	74	70	74	69
	10	70	65	69	64	68	64

#### Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	478.3	76.5%
0-40	576.7	92.3%
0-60	604.9	96.8%
60-90	20.1	3.2%
0-90	625	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	30	0.44
6'	23	0.34
7'	17	0.25
8'	12	0.17
9'	12	0.17

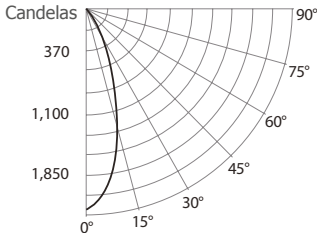
38' x 38' x 10' Room. Workplan located 2-1/2' (30").  
Reflectance factor 80%/50%/30%

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	2,778	45	27
5	2,111	55	14
10	1,014	65	10
15	617	75	9
20	442	85	5
25	301	90	0
30	213		

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	58.8	3.5'
08'	33.1	4.7'
10'	21.2	5.9'
12'	14.7	7.1'
14'	10.8	8.3'
16'	8.3	9.5'

Beam: 32.9°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 1 LED	3,000K Narrow Flood	
CBCP/ Lumens	2,118	/ 768.5
Watts	120V	277V
	10W	10.5W
Operating AMPS	0.08A	0.038A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	76.8	
Spacing Criteria	0.56	

#### 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	709.2	92.3%
0-40	762.7	99.2%
0-60	768.5	100%
60-90	0.0	0%
0-90	768.5	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	29	0.33
6'	29	0.34
7'	21	0.25
8'	15	0.17
9'	15	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	2,118
15	1,185
30	227
45	4
60	0
75	0
90	0

# UR4D

4" Series

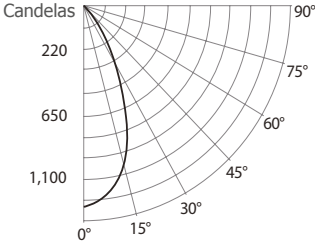
## Round Adjustable Regressed Trim

## PHOTOMETRIC DATA



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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	33.9	5.4'
08'	19.1	7.2'
10'	12.2	9.0'
12'	8.5	10.8'
14'	6.2	12.6'
16'	4.8	14.4'

Beam: 48.4°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 1 LED	3,000K Flood	
CBCP / Lumens	1,220	/ 769.2
Watts	120V	277V
	10W	10.5W
Operating AMPS	0.08A	0.038A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	76.9	
Spacing Criteria	0.82	

#### 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	105	101	100	97	97	94
4	93	88	89	85	87	84
6	83	77	81	76	79	75
8	75	69	73	68	72	68
10	68	62	67	62	66	62

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	633.0	82.3%
0-40	741.9	96.4%
0-60	768.2	99.9%
60-90	1.0	0.1%
0-90	769.2	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	28	0.33
6'	29	0.34
7'	21	0.25
8'	15	0.17
9'	15	0.17

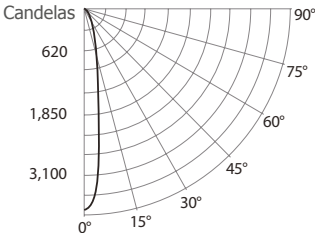
38' x 38' x 10' Room. Workplan located 2-1/2' (30").  
Reflectance factor 80%/50%/30%

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS
0	1,220
15	966
30	337
45	27
60	2
75	0
90	0

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	100.4	1.7'
08'	56.5	2.3'
10'	36.2	2.8'
12'	25.1	3.4'
14'	18.4	4.0'
16'	14.1	4.5'

Beam: 16.1°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K Spot	
CBCP / Lumens	3,615	/ 813.1
Watts	120V	277V
	15W	15.5W
Operating AMPS	0.12A	0.055A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	54.2	
Spacing Criteria	0.28	

#### 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	104	100	99	96	96	94
4	92	87	89	85	87	84
6	83	78	81	77	80	76
8	76	71	75	70	74	69
10	70	65	69	64	68	64

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	622.6	76.6%
0-40	750.7	92.3%
0-60	787.6	96.9%
60-90	25.4	3.1%
0-90	813.1	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	30	0.50
6'	30	0.51
7'	22	0.37
8'	15	0.26
9'	15	0.26

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

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	3,615	45	30
5	2,748	55	15
10	1,320	65	11
15	802	75	10
20	575	85	5
25	392	90	0
30	276		



# UR4D

4" Series

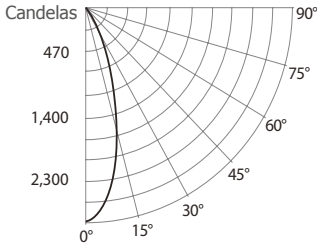
## Round Adjustable Regressed Trim

## PHOTOMETRIC DATA



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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	76.7	3.5'
08'	43.1	4.7'
10'	27.6	5.9'
12'	19.2	7.1'
14'	14.1	8.3'
16'	10.8	9.5'

Beam: 32.9°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K Narrow Flood	
CBCP / Lumens	2,760	1,002.2
Watts	120V	277V
	15W	15.5W
Operating AMPS	0.12A	0.055A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	66.8	
Spacing Criteria	0.56	

#### 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	924.5	92.2%
0-40	994.4	99.2%
0-60	1,002.2	100%
60-90	0.0	0%
0-90	1,002.2	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	31	0.42
6'	33	0.44
7'	28	0.37
8'	19	0.26
9'	19	0.26

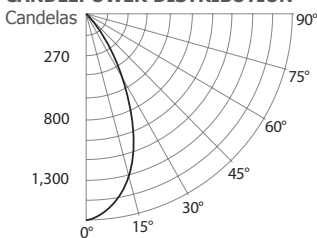
38' x 38' x 10' Room. Workplan located 2-1/2' (30").  
Reflectance factor 80%/50%/30%

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS
0	2,760
15	1,544
30	296
45	6
60	0
75	0
90	0

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	44.1	5.4'
08'	24.8	7.2'
10'	15.9	9.0'
12'	11.0	10.8'
14'	8.1	12.6'
16'	6.2	14.4'

Beam: 48.4°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K Flood	
CBCP / Lumens	1,589	1,002
Watts	120V	277V
	15W	15.5W
Operating AMPS	0.12A	0.055A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	66.8	
Spacing Criteria	0.82	

#### 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	105	101	100	97	97	94
	4	93	88	89	85	87	84
	6	83	77	81	76	79	75
	8	75	69	73	68	72	68
	10	68	62	66	62	66	61

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	824.4	82.3%
0-40	966.0	96.4%
0-60	1,000.2	99.8%
60-90	1.8	0.2%
0-90	1,002	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	31	0.42
6'	32	0.44
7'	27	0.37
8'	19	0.26
9'	19	0.26

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

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS
0	1,589
15	1,257
30	438
45	36
60	3
75	0
90	0

# UR4D

4" Series

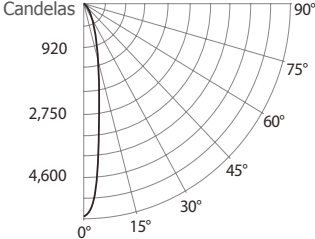
## Round Adjustable Regressed Trim

## PHOTOMETRIC DATA



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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	150.6	1.7'
08'	84.7	2.3'
10'	54.2	2.8'
12'	37.7	3.4'
14'	27.7	4.0'
16'	21.2	4.5'

Beam: 16.1°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K Spot	
CBCP / Lumens	5,422 / 1,219.6	
120V	277V	
Watts	24W	24.5W
Operating AMPS	0.20A	0.088A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	50.8	
Spacing Criteria	0.28	

#### 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	104	100	99	96	96	94
	4	92	87	89	85	87	84
	6	83	78	81	77	80	76
	8	76	71	75	70	74	69
	10	70	65	69	64	68	64

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	933.8	76.6%
0-40	1,126	92.3%
0-60	1,181.5	96.9%
60-90	38.1	3.1%
0-90	1,219.6	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	30	0.53
6'	32	0.58
7'	28	0.50
8'	23	0.42
9'	23	0.42

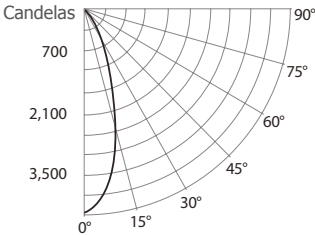
38' x 38' x 10' Room. Workplan located 2-1/2' (30").  
Reflectance factor 80%/50%/30%

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	5,422	45	45
5	4,121	55	23
10	1,980	65	16
15	1,204	75	15
20	862	85	8
25	588	90	0
30	415		

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	115.0	3.5'
08'	64.7	4.7'
10'	41.4	5.9'
12'	28.8	7.1'
14'	21.1	8.3'
16'	16.2	9.5'

Beam: 32.9°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K Narrow Flood	
CBCP / Lumens	4,141 / 1,503.3	
120V	277V	
Watts	24W	24.5W
Operating AMPS	0.20A	0.088A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	90+	
Lumens/Watt	62.6	
Spacing Criteria	0.56	

#### 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	1,386.7	92.2%
0-40	1,491.5	99.2%
0-60	1,503.3	100%
60-90	0.0	0%
0-90	1,503.3	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	28	0.40
6'	33	0.47
7'	28	0.40
8'	29	0.42
9'	29	0.42

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

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	4,141		
15	2,317		
30	444		
45	10		
60	0		
75	0		
90	0		

# UR4D

4" Series

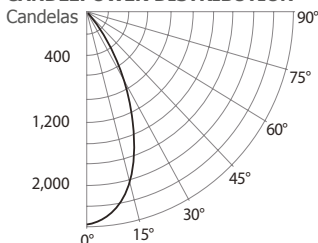
Round Adjustable Regressed Trim

## PHOTOMETRIC DATA



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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	66.2	5.4'
08'	37.2	7.2'
10'	23.8	9.0'
12'	16.6	10.8'
14'	12.2	12.6'
16'	9.3	14.4'

Beam: 48.4°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K Flood	
<b>CBCP / Lumens</b>	2,383	/ 1,502.9
<b>Watts</b>	120V	277V
	24W	24.5W
<b>Operating AMPS</b>	0.20A	0.088A
<b>Lumen Maintenance</b>	L70 @ 50,000 Hrs	
<b>CRI</b>	90+	
<b>Lumens/Watt</b>	62.6	
<b>Spacing Criteria</b>	0.82	

#### COEFFICIENT OF UTILIZATION - %

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

**Zonal Cavity Method**  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,236.7	82.3%
0-40	1,449.0	96.4%
0-60	1,500.3	99.8%
60-90	2.6	0.2%
0-90	1,502.9	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	27	0.40
6'	32	0.47
7'	27	0.40
8'	29	0.42
9'	29	0.42

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

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS
0	2,383
15	1,886
30	658
45	53
60	5
75	0
90	0