

3" ROUND FLANGED
REMODEL / RETROFIT SERIES



NOMINAL LUMENS / WATTAGE DATA				
MODEL NUMBER	SOURCE LUMENS ¹	DELIVERED LUMENS ²	SYSTEM WATTS	LPW
ES03RMF007	700	494	8.8	56
ES03RMF013	1300	1009	14.5	70

1 Nominal Source Lumens 2 Nominal Delivered Lumens at 930 DL NF GP MW

FEATURES

3" downlight and wall wash remodeling series with regress for visual comfort. Optional downlight lens for wet location applications. Zhaga international standard LED module for ease of maintenance and future replacement. Quick connect LED module and trim attachment.

TRIM FINISH

Variety of powdercoat and anodized finishes available. Specify finish and flange finish.

ELECTRONICS

120V-277V universal input with standard 0-10V 1% Dimming. LED system features high efficacy LEDs backed by standard softening lens. Standard CRI is 90. Drivers are overload and short circuit protected as well as thermally regulated. Sound rating A. Auto dim thermal protector for long term reliability.

CONSTRUCTION

Housing/frame constructed of #22 GA galvanized steel. Self-flanged one piece die cast aluminum. Passive internal aluminum heatsink.

CODE COMPLIANCE

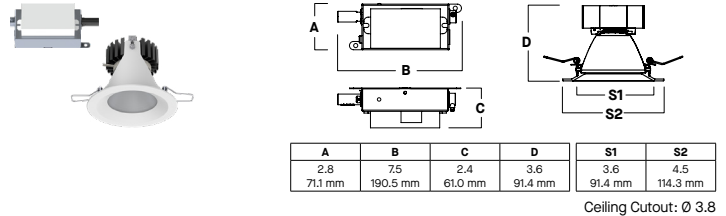
ENERGY STAR® pending and BAA Compliant. Non-IC rated. ETL certified to meet US and Canadian standards. Manufactured and tested to UL standards No. 1598/8750.

RATED LIFE

Rated for 50,000 Hours at 70% lumen maintenance. (L70)

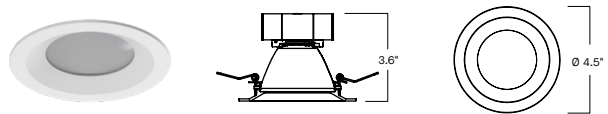
HOUSING DIMENSIONS

ES03RMF RT - 3" RETROFIT / REMODELER

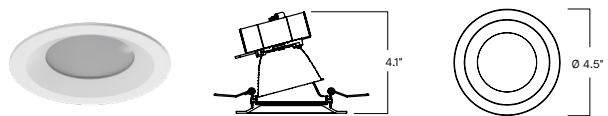


TRIM OPTIONS

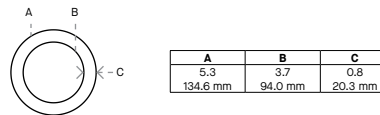
DL - 3" DOWNLIGHT



WW - 3" WALL WASH



GRES03R - 3" ROUND GOOF RING



PRODUCT SELECTOR GUIDE

HOUSING				HOUSING OPTIONS		TRIM OPTIONS					SEPARATE		
SERIES	TYPE	CRI / CCT	LUMENS	DIMMING	MOUNTING	TRIM TYPE	BEAM	LENS	FINISH	FLANGE FINISH	OPTIONS	ADDITIONAL ACCESSORIES	
ES03RMF	RT												
EXAMPLE	ES03RMF	RT	927	007	D11	BO	DL	NF	GP	MW	MF		

HOUSING				HOUSING OPTIONS			
SERIES	TYPE	CRI/CCT	LUMENS	DIMMING		MOUNTING	
ES03RMF	RT	Remodel / Retrofit	927 2700K 930 3000K	007 494 Lm 013 1009 Lm	D1 1%, 0-10V D3 1%, ELV/MLV Phase-Cut	1 120V 2 277V	RT BO No Bar Hangers
				Nominal Delivered Lumens at 930 CRI xxx DL NF GP MW		1 120V	

TRIM OPTIONS					
TRIM TYPE	BEAM ¹	LENS	FINISH	FLANGE FINISH	OPTION
DL	SP Spot (22°) NF Narrow Flood (27°) FL Flood (34°) WF Wide Flood (53°)	GP Solite™ Micro Prism Lens	MW Matte White MB Matte Black PT Platinum Silver CC Custom Color	MF Matching Flange WF White Flange For Use with Non-White Trim Finish	WL Wet Location
WW	WF Wide Flood	LW Wall Wash Lens			

SEPARATE	
ADDITIONAL ACCESSORIES	
GOOF RING	
GRES03R	MW Matte White MB Matte Black PT Platinum Silver CC Custom Color



PHOTOMETRIC DATA - 3" ROUND DOWNLIGHT

ES03RMFxx 930 013 xxx DL SP GP MW

CANDLEPOWER CURVE TEST SP-00869	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS		SINGLE UNIT: PERFORMANCE INITIAL FOOTCANDLES BASED ON IES BEAM ANGLE				MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT								
		0° - 10°	267	27%	Mounting Height AFF	FC at Center on Floor	Beam Diameter	FC at Beam Edge	Ceiling Height	Fixture Spacing	RCR 4		RCR 6			
	0.00°	0.00°	3,832	0° - 10°	267	27%	5.5'	127 fc	2.1'	63 fc	9'	2'	226	3.51	182	3.11
	5.00°	5.00°	3,249	0° - 20°	611	61%	6.5'	91 fc	2.4'	45 fc	12'	2'	200	3.11	219	3.73
	10.00°	10.00°	2,129	0° - 30°	823	82%	7.5'	68 fc	2.8'	34 fc	16'	4'	53	0.81	42	0.72
	15.00°	15.00°	1,294	0° - 40°	917	92%	8.5'	53 fc	3.2'	27 fc	Delivered Illuminance Rating: (DIR)		64 FC per W/Sq. Ft.		59 FC per W/Sq. Ft.	
	20.00°	20.00°	819	0° - 60°	978	98%	10.0'	38 fc	3.7'	19 fc	Recessed Mounting Square rooms used for multiple units: - RCR 4: Length & Width = Ceiling Ht. -2.5' x 2.50 - RCR 6: Length & Width = Ceiling Ht. -2.5' x 1.66 * Average Footcandles at 2.5' Above Floor					
	30.00°	30.00°	304	0° - 80°	1,000	100%	12.0'	27 fc	4.5'	13 fc						
	40.00°	40.00°	84	0° - 90°	1,001	100%	14.0'	20 fc	5.2'	10 fc						
	50.00°	50.00°	34	Total	1,001	100%	16.0'	15 fc	6.0'	7 fc						
	60.00°	60.00°	18													
	70.00°	70.00°	11													
	80.00°	80.00°	3													
	90.00°	90.00°	0													

Delivered Lumens: 1,001
Luminaire Watts: 14.5
LER: 69.03

CP at 0deg (Nadir): 3,832
CRI: 90

Beam Angle: 21.96
Spacing Ratio: 0.37

Lumen Multiplier: 7L x 0.49
CCT Multiplier: 27HK x 0.97

ES03RMFxx 930 013 xxx DL NF GP MW

CANDLEPOWER CURVE TEST SP-00868	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS		SINGLE UNIT: PERFORMANCE INITIAL FOOTCANDLES BASED ON IES BEAM ANGLE				MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT								
		0° - 10°	242	24%	Mounting Height AFF	FC at Center on Floor	Beam Diameter	FC at Beam Edge	Ceiling Height	Fixture Spacing	RCR 3		RCR 5			
	0.00°	0.00°	3,095	0° - 10°	242	24%	5.5'	102 fc	2.6'	51 fc	9'	2'	255	3.74	189	3.09
	5.00°	5.00°	2,780	0° - 20°	601	60%	6.5'	73 fc	3.1'	37 fc	12'	4'	63	0.93	62	1.00
	10.00°	10.00°	2,086	0° - 30°	826	82%	7.5'	55 fc	3.5'	28 fc	16'	6'	24	0.35	20	0.32
	15.00°	15.00°	1,364	0° - 40°	920	91%	8.5'	43 fc	4.0'	21 fc	Delivered Illuminance Rating: (DIR)		68 FC per W/Sq. Ft.		61 FC per W/Sq. Ft.	
	20.00°	20.00°	835	0° - 60°	982	97%	10.0'	31 fc	4.7'	15 fc	Recessed Mounting Square rooms used for multiple units: - RCR 3: Length & Width = Ceiling Ht. -2.5' x 3.33 - RCR 5: Length & Width = Ceiling Ht. -2.5' x 2.00 * Average Footcandles at 2.5' Above Floor					
	30.00°	30.00°	291	0° - 80°	1,007	100%	12.0'	21 fc	5.7'	11 fc						
	40.00°	40.00°	84	0° - 90°	1,009	100%	14.0'	16 fc	6.6'	8 fc						
	50.00°	50.00°	36	Total	1,009	100%	16.0'	12 fc	7.5'	6 fc						
	60.00°	60.00°	21													
	70.00°	70.00°	12													
	80.00°	80.00°	3													
	90.00°	90.00°	0													

Delivered Lumens: 1,009
Luminaire Watts: 14.5
LER: 69.59

CP at 0deg (Nadir): 3,095
CRI: 90

Beam Angle: 27.3
Spacing Ratio: 0.45

Lumen Multiplier: 7L x 0.49
CCT Multiplier: 27HK x 0.97

ES03RMFxx 930 013 xxx DL FL GP MW

CANDLEPOWER CURVE TEST SP-00867	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS		SINGLE UNIT: PERFORMANCE INITIAL FOOTCANDLES BASED ON IES BEAM ANGLE				MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT								
		0° - 10°	199	19%	Mounting Height AFF	FC at Center on Floor	Beam Diameter	FC at Beam Edge	Ceiling Height	Fixture Spacing	RCR 3		RCR 5			
	0.00°	0.00°	2,367	0° - 10°	199	19%	5.5'	78 fc	3.2'	39 fc	9'	2'	212	3.09	189	3.09
	5.00°	5.00°	2,204	0° - 20°	557	55%	6.5'	56 fc	3.8'	28 fc	12'	4'	63	0.93	61	1.00
	10.00°	10.00°	1,811	0° - 30°	817	80%	7.5'	42 fc	4.4'	21 fc	16'	6'	24	0.35	19	0.32
	15.00°	15.00°	1,342	0° - 40°	931	91%	8.5'	33 fc	5.0'	16 fc	Delivered Illuminance Rating: (DIR)		68 FC per W/Sq. Ft.		61 FC per W/Sq. Ft.	
	20.00°	20.00°	922	0° - 60°	997	98%	10.0'	24 fc	5.9'	12 fc	Recessed Mounting Square rooms used for multiple units: - RCR 3: Length & Width = Ceiling Ht. -2.5' x 3.33 - RCR 5: Length & Width = Ceiling Ht. -2.5' x 2.00 * Average Footcandles at 2.5' Above Floor					
	30.00°	30.00°	357	0° - 80°	1,020	100%	12.0'	16 fc	7.1'	8 fc						
	40.00°	40.00°	105	0° - 90°	1,022	100%	14.0'	12 fc	8.3'	6 fc						
	50.00°	50.00°	38	Total	1,022	100%	16.0'	9 fc	9.4'	5 fc						
	60.00°	60.00°	21													
	70.00°	70.00°	14													
	80.00°	80.00°	3													
	90.00°	90.00°	0													

Delivered Lumens: 1,022
Luminaire Watts: 14.5
LER: 70.48

CP at 0deg (Nadir): 2,367
CRI: 90

Beam Angle: 33.47
Spacing Ratio: 0.55

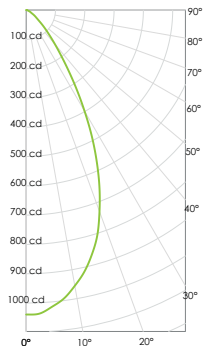
Lumen Multiplier: 7L x 0.49
CCT Multiplier: 27HK x 0.97



PHOTOMETRIC DATA - 3" ROUND DOWNLIGHT

ES03RMFxx 930 013 xxx DL WF GP MW

CANDLEPOWER CURVE TEST SP-00870



INTENSITY CANDELA 0° AZIMUTH

Intensity (cd)	Beam Angle (°)
1000	0.00°
1000	0.00°
800	5.00°
600	10.00°
400	15.00°
200	20.00°
100	30.00°
50	40.00°
22	50.00°
8	60.00°
3	70.00°
0	80.00°
0	90.00°

ZONAL LUMENS

Beam Angle Range (°)	Lumens	% of Total
0° - 10°	96	11%
0° - 20°	334	38%
0° - 30°	593	67%
0° - 40°	752	85%
0° - 60°	863	97%
0° - 80°	886	100%
0° - 90°	888	100%
Total	888	100%

SINGLE UNIT: PERFORMANCE INITIAL FOOTCANDLES BASED ON IES BEAM ANGLE

Mounting Height AFF	FC at Center on Floor	Beam Diameter	FC at Beam Edge
5.5'	34 fc	5.5'	17 fc
6.5'	25 fc	6.5'	12 fc
7.5'	18 fc	7.5'	9 fc
8.5'	14 fc	8.5'	7 fc
10.0'	10 fc	10.0'	5 fc
12.0'	7 fc	12.0'	4 fc
14.0'	5 fc	14.0'	3 fc
16.0'	4 fc	16.0'	2 fc

MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT

Ceiling Height	Fixture Spacing	RCR 2		RCR 4	
		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.
9'	4'	54	0.88	47	0.88
12'	6'	25	0.41	22	0.41
16'	8'	13	0.20	11	0.20
Delivered Illuminance Rating: (DIR)		62 FC per W/Sq. Ft.		53 FC per W/Sq. Ft.	
Recessed Mounting Square rooms used for multiple units: - RCR 2: Length & Width = Ceiling Ht. -2.5' x 5.00' - RCR 4: Length & Width = Ceiling Ht. -2.5' x 2.50' + Average Footcandles at 2.5' Above Floor					

Delivered Lumens: 888
Luminaire Watts: 14.5
LER: 61.24

CP at 0deg (Nadir): 1,039
CRI: 90

Beam Angle: 52.95
Spacing Ratio: 0.82

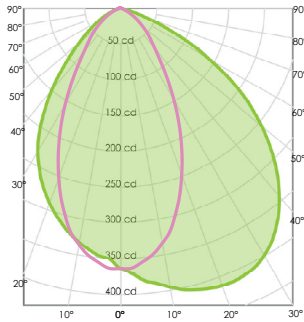
Lumen Multiplier: 7L x 0.49
CCT Multiplier: 27HK x 0.97



PHOTOMETRIC DATA - 3" ROUND WALL WASH

ESO3RMFxx 930 013 xxx WW WF LW MW

CANDLEPOWER CURVE TEST SP-00871

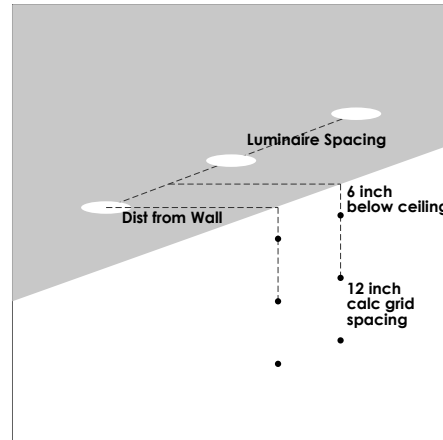


Delivered Lumens: 572
 Luminaire Watts: 14.5
 LER: 39.45

 CP at 0deg (Nadir): 365
 CRI: 90

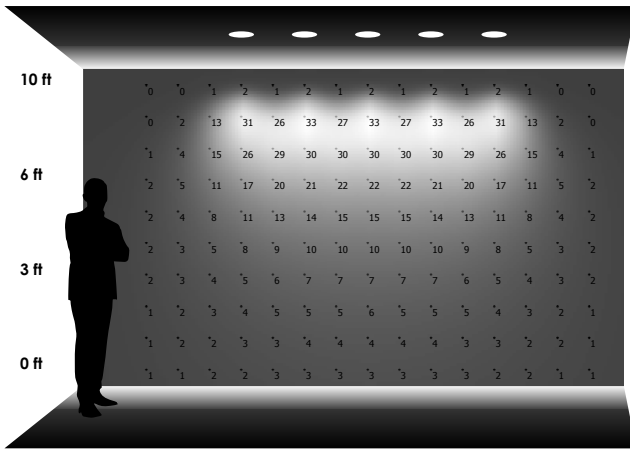
 Lumen Multiplier: 7L x 0.49
 CCT Multiplier: 27HK x 0.97

PERFORMANCE DATA - REFERENCE DIAGRAM

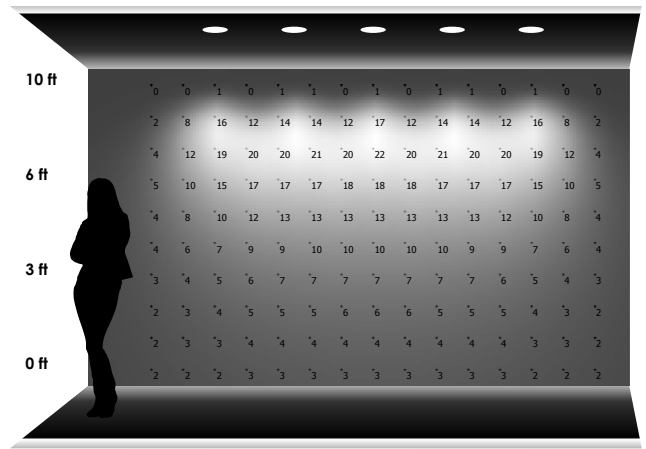


PERFORMANCE DATA - INITIAL ILLUMINATION (FOOTCANDLES) ON WALL - DIRECT LIGHT ONLY

Performance Data calculated using AGI32, consult factory for details.



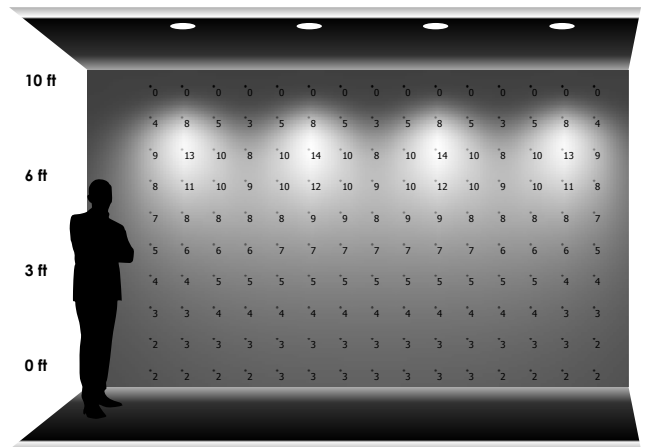
(5) ESO3RMF-930 013-D1-WW-MW
 A 2' AWAY FROM WALL
 B 2' BETWEEN LUMINAIRE



(5) ESO3RMF-930 013-D1-WW-MW
 A 2'-6" AWAY FROM WALL
 B 2'-6" BETWEEN LUMINAIRE



(5) ESO3RMF-930 013-D1-WW-MW
 A 3' AWAY FROM WALL
 B 3' BETWEEN LUMINAIRE



(5) ESO3RMF-930 013-D1-WW-MW
 A 3' AWAY FROM WALL
 B 4' BETWEEN LUMINAIRE

