



# WAVEGUIDE SURFACE MOUNT LS SERIES

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

## Performance & Specifications:

Color Temperature . . . . . 3500K, 4000K, 5000K  
 CRI . . . . . 81-98 min  
 Input Voltage . . . . . 110-277 VAC  
 Warranty . . . . . 5 Years  
 Projected L70\* . . . . . min 200,000 hrs  
 Dimming . . . . . 0-10 Volts

\*L70 TM-21 projection calculated at 25 °C.

Product	Height (in.)	Input Power (W)	Max Lumens (nominal)	Efficacy
<b>LS14</b>	3.25	19	1800	81
		32	2700	84
<b>LS22</b>		22	2200	84
		37	3300	98
<b>LS24</b>		36	3300	84
		48	4000	87
	59	5000	93	

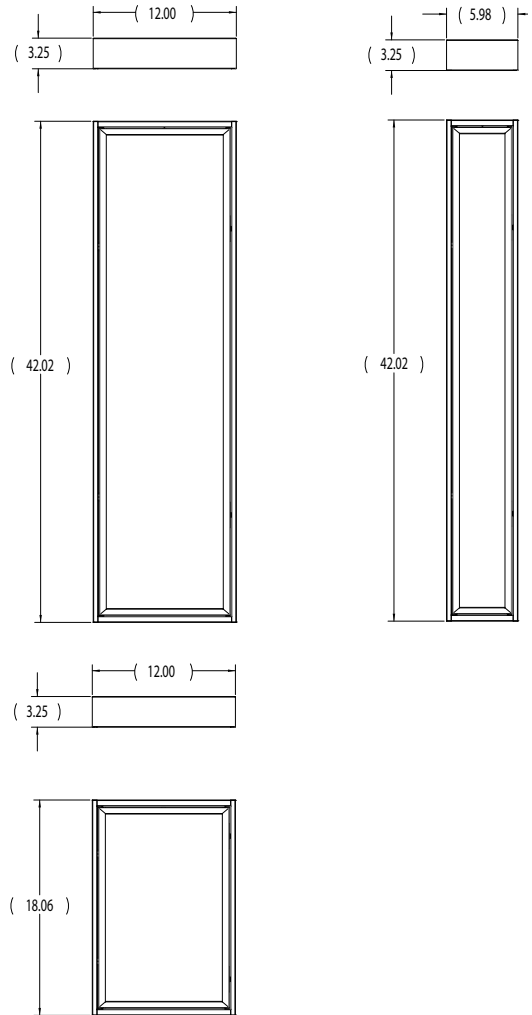
## Additional Ordering Options:

- Integrated Occupancy and Daylight & Harvesting Sensor - Field Programmable
- Battery backup

## Product Benefits:

- The highest light quality in an LED fixture is achieved through advanced waveguide technology.
  - Leading system efficacy.
- Zero maintenance.
- Architectural grade finish.
- Developed & patented in the USA. Manufactured & assembled in the USA of U.S. and imported parts.
- Custom sizes & finishes available.

## Measurements:



## Qualifications:





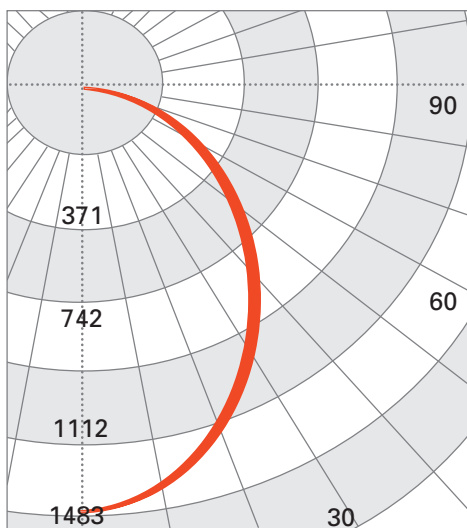
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## LS24-4000L-35K Photometric Details (representative)

Intensity Summary (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	1483	1483	1483	1483	1483	
5.0	1473	1475	1483	1483	1469	85
10.0	1455	1458	1466	1465	1451	
15.0	1424	1427	1435	1432	1418	245
20.0	1381	1382	1390	1386	1373	
25.0	1323	1324	1331	1324	1313	370
30.0	1252	1254	1258	1252	1244	
35.0	1169	1171	1172	1170	1071	443
40.0	1077	1078	1078	1077	1071	
45.0	977	976	977	975	970	454
50.0	870	867	868	867	863	
55.0	7577	752	754	753	749	403
60.0	639	634	636	634	631	
65.0	518	515	515	512	510	301
70.0	396	394	393	391	389	
75.0	275	273	271	270	269	164
80.0	160	158	156	154	154	
85.0	63	62	60	59	59	37
90.0	0	0	0	0	0	

Two Plane Symmetry



Zonal Flux and Percentages

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	1154	N/A	28
0-40	1885	N/A	45
0-60	3311	N/A	79
0-90	4183	N/A	100

Average Luminance (cd/sq.m)

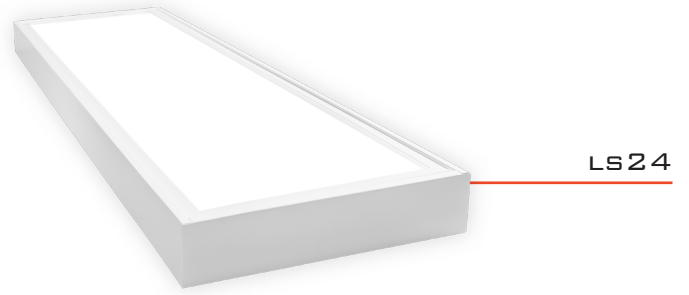
Gamma	C0	C45	C90
45	4856	4856	4821
55	4638	4620	4589
65	4307	4283	4241
75	3734	3680	3653
85	2510	2416	2379

Coefficients of Utilization - Zonal Cavity Method Effective Floor Cavity Reflectance 0.20

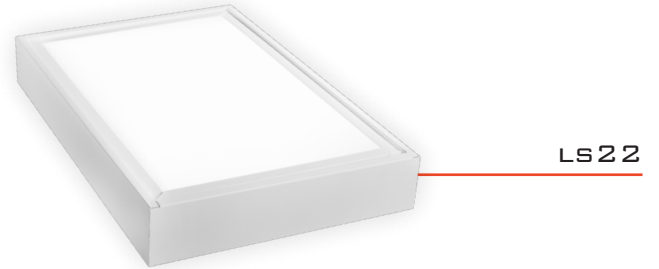
RC RW	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	0		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70		
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59	59		
4	83	70	62	55	80	69	61	55	67	59	54	65	58	53	62	57	52	50	50		
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43	43		
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38	38		
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33	33		
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30	30		
9	56	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27	27		
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	24	24		



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LS24



LS22

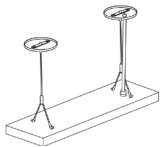


LS14

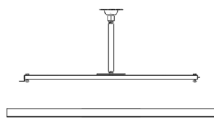
**MODERN APPEARANCE:** The LS series provides a fresh and refined look compared to older parabolic louver and prismatic lens fixtures.



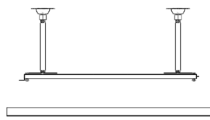
Raffino can configure products to fit your customer's specific needs. Contact us for more details!



SUSPENDED



SINGLE PENDANT



DOUBLE PENDANT

Product Size	Lumen Output	Color Temp.	Battery & Transformers	Mounting Options	Sensory Option	Cord/Plug
LS14	1800L 1800 Lumens 2700L-2700 Lumens	35K-3500K 40K-4000K 50K-5000K	N-None (standard) B1-Emergency Battery Pack 900 lms B2-Emergency Battery Pack 1300 lms 3-347 V Transformer 4-480 V Transformer	S -Standard S1 - Suspension (2 loop) S2 - Suspension (2 loop and power) S3 - Suspension - double j-box with covers P1 - Single Pendant P2 - Double Pendant	N-None Multiple Sensor Options are available. <b>See Indoor Sensing Solutions Spec Sheet</b>	#P-5-15 Plug (6-15 if HV option) #W-Whip (no plug)  #= Cord length (6' standard, 8' & 10' available)
LS22	2200L 2200 Lumens 3300L-3300 Lumens					
LS24	3300L-3300 Lumens 4000L-4000 Lumens 5000L-5000 Lumens					

**EXAMPLE ORDER:** LS24-3300L-40K-N-S-N-6P