

VDT control with balanced illumination for visual comfort.

VRA2G12LS232
VISION SMART



2' X 4' RECESSED FLUORESCENT
4" DEEP, 12 CELL (2 X 6) PARABOLIC LOUVER
STATIC OR AIR SUPPLY/RETURN/HEAT EXTRACTION
IES RP1 FOR NORMAL VDT USE

Vision Smart Parabolics meet the Preferred and Basic Criteria of IES RP-1 and RP-24. This luminaire delivers low to medium light levels with the best performance in terms of efficiency, wide spacing and excellent glare control.

Project: _____
Location: _____
Catalog No: _____
Fixture Type: _____
Mfg: _____ Lamps: _____ Qty: _____
Notes: _____

Ordering Guide

Explanation of Catalog Number Example: **VRA2G12LS232120SO**

Family	Body Style	Fixture Width	Ceiling Type	Number of Cells	Louver Finish*	Single "V" Reflector	Lamp Quantity	Lamp Length	Voltage	Ballast Type	Options
VP		2		12		S	2				
4" Deep Pre-Anodized Aluminum Louver for Normal VDT Use	A = Air Handling S = Static	2 = 24"	G = Grid (Lay-in T-Bar) T = Slot Grid or Two-Directional Concealed T (See Options)	12 = 2 Rows of 6 Cells	L = Low Iridescence Semi-Specular (Standard) P = Low Iridescence Specular *See Options and Consult Your Philips Lighting Representative	S = One Ballast Cover Reflector Installed	2 = 2 Lamps	32 = T8	UNV = 120/277V 120 = 120V 277 = 277V 347 = 347V	<20THD† SO* PW *Instant Start Standard **Rapid Start Standard <10THD† RO** 2 Lamp Elec. T8 T8 Dimming	Add Appropriate Suffix to Catalog Number

Features

- Meets IES RP-1 luminance criteria, for lighting VDT areas with normal use.
- Can provide 49 maintained footcandles at .78 watts per square foot (8 x 10 module).
- Efficiency 70.9%.
- 1.8 spacing mounting ratio.
- Only 6" deep body.
- One-piece housing.
- Semi-specular low iridescence pre-anodized louver (standard).
- Spring-loaded latches.
- Concealed "T" hinges.
- Louver frame with integral positive light stop.
- Built in hold-down clip
- Louver has protective film dust guard.
- Air closure strips (optional).
- Twin knockout access plate.

Specifications

Performance: In an installation of 2 lamp 32W luminaires in a room cavity ratio of 1, with reflectance of 80% ceiling, 50% wall, 20% floor; the C.U. shall not be less than .77 with a spacing to mounting ratio of 1.8 perpendicular to the lamps. To meet IES RP-1 recommended (basic) requirements for VDT areas the VCP (visual comfort probability) shall not be less than 92 either crosswise or lengthwise and the maximum average brightness at 65°, 75° and 85° shall not exceed 345, 61 and 36 candelas per square meter respectively in the 0°, 45° and 90° horizontal planes. Candelas at Nadir (0°) not to exceed 1510.

Air Handling: (VRA only) Side air passages for air supply or air return. Optional side closure strips. Air return is also provided through the lamp compartment through fixture body ends.

Materials: Chassis parts are die-formed code gauge cold rolled steel. Housing side rails hemmed over and housing ends turned in for safe handling. Louver is pre-anodized aluminum.

Finish: Chassis exterior—black baked polyester enamel. Cavity—white baked polyester enamel minimum 86% reflectance. Phosphate undercoating. Louver—low iridescence, semi-specular pre-anodized vertical grain aluminum reflector sheet is standard.

Electrical: Thermally protected class "P" ballast C.B.M. approved, non PCB. If K.O. is within 3" of ballast, use wire suitable for at least 90°.

Labels: I.B.E.W./UL and C-UL.

This product may have a mercury containing lamp. Manage in accord with Disposal Laws. See: www.lamprecycle.org

Options/Accessories

Drywall Kit: For plaster frames, order catalog number: **FK92X4**.

Internal Interference Filter: Consult your Philips Lighting representative.

Radio Interference Filter: 120, 277 or 347 volt, 50 or 60 Hz. Suffix: **R**.

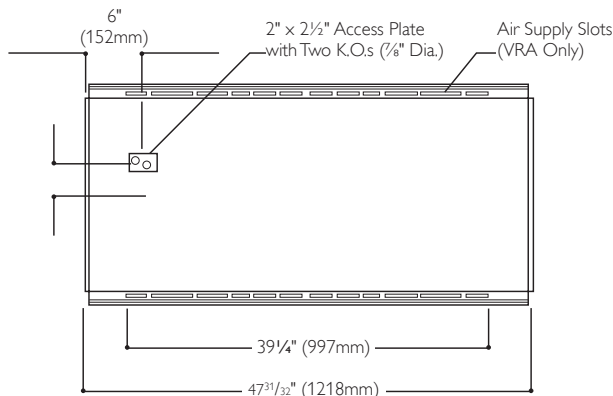
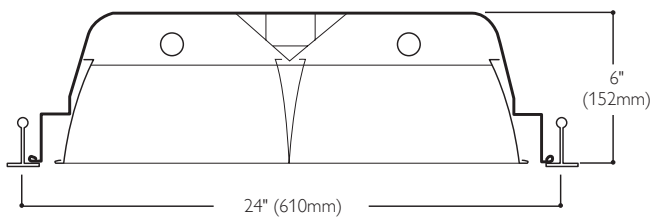
Emergency Lighting System: Emergency battery pack with charger. (90 minutes at 20% of lumens for 1 lamp.) Suffix: **O**.

Louver Finish: Low iridescence semi-specular (standard). For other finishes, consult your Philips Lighting representative.

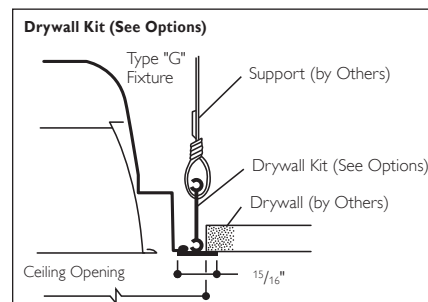
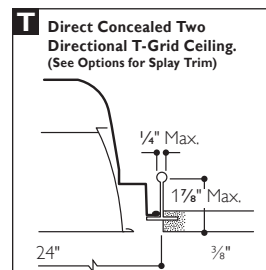
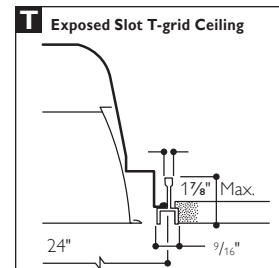
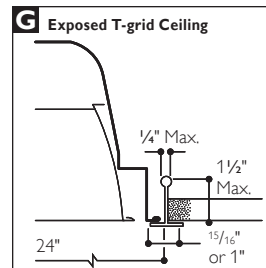
Air Pattern Control and Air Slot Closure: For horizontal and vertical air supply and to balance return. Suffix: **S**.

Ballast Options: For other ballast options, consult your Philips Lighting representative.

Dimensions



Mounting Methods



VRA2G12LS232

VISION SMART

Model No. VRA2G12LS232120SO

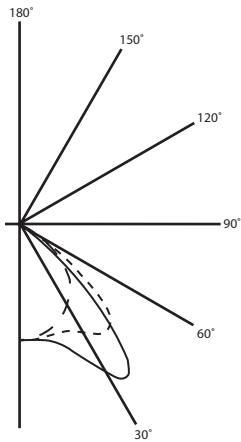
Report Number: ITL42563
Catalog Number: VRA2G12LS232120SO
Lamp: (2) F32T8
Lumens per Lamp: 2850
Luminaire: 2 x 4VDT Troffer, with 12 cell semi-specular louver
Ballast: R1L-2P32-RH-TP
CIE Type: Direct
Total Efficiency: 70.9%
Plane: 0-Deg 90-Deg
 Spacing Criteria: 1.2 1.8
 Shielding Angles: 65 65
 Luminous Length: 45.500 21.500

Candela Distribution

Angle	0.0	22.5	45.0	67.5	Across	Output Lumens
0	1510	1510	1510	1510	1510	
5	1511	1507	1509	1507	1508	144
15	1432	1445	1499	1559	1580	426
25	1301	1367	1541	1795	1917	733
35	1129	1286	1747	2254	2450	1098
45	906	1204	1674	1446	1280	1035
55	537	799	616	373	350	505
65	45	62	92	75	64	87
75	10	11	8	8	7	10
85	2	2	2	2	2	2
90	0	0	0	0	0	

Coefficients of Utilization

Ceiling	80%			50%			30%			
Wall	70	50	30	50	30	10	50	30	10	
RCR	Zonal Cavity Method— Effective Floor Cavity Reflectance = 0.20									
Room Cavity Ratio	1	79	77	75	73	71	69	70	69	67
	2	74	70	67	66	64	62	64	62	60
	3	69	64	59	61	57	54	59	56	53
	4	64	57	53	55	51	48	53	50	47
	5	59	52	46	50	45	42	48	45	42
	6	55	47	41	45	40	37	44	40	37
	7	51	42	36	40	36	32	39	35	32
	8	46	38	32	36	31	28	35	31	28
	9	42	33	28	32	27	24	31	27	24
	10	39	30	25	29	24	21	28	24	21



Luminance Data in Candela/Sq. Meter

Average in Deg.	Average 0 Deg.	Average 45 Deg.	Average 90 Deg.
0	2392.	2392.	2392.
45	2029.	3750.	2867.
55	1483.	1701.	967.
65	169.	345.	240.
75	61.	49.	43.
85	36.	36.	36.

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1304	22.9	32.3
0-40	2402	42.1	59.4
0-60	3942	69.2	97.6
0-90	4041	70.9	100.0
90-180	0	0.0	0.0
0-180	4041	70.9	100.0

Visual Comfort Probability (VCP average 100fc; reflectances 80/50/20)

Room Size		Ceiling Height				Ceiling Height			
W	L	8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
		Luminaires Lengthwise				Luminaires Crosswise			
20	20	91	89	84	85	94	91	88	84
20	30	92	91	87	84	94	91	90	85
20	40	92	91	89	87	94	91	90	87
20	60	92	91	89	87	94	91	90	87
30	20	92	90	86	85	94	92	89	84
30	30	92	92	89	85	94	92	91	85
30	40	92	92	90	87	94	92	91	87
30	60	92	92	89	87	94	92	91	87
30	80	92	92	90	87	94	92	91	87
40	20	92	90	87	87	94	92	89	86
40	30	92	92	89	86	94	92	91	86
40	40	92	92	89	88	94	92	91	87
40	60	92	92	90	88	94	92	91	88
40	80	92	92	90	88	94	93	91	88
40	100	92	91	90	88	94	93	91	88
60	30	92	92	89	87	94	92	91	86
60	40	92	92	90	88	94	93	91	88
60	60	92	91	90	88	94	93	91	88
60	80	92	92	90	88	94	93	91	88
60	100	92	92	90	88	94	93	91	88
100	40	92	91	90	88	94	93	91	88
100	60	92	91	90	88	94	93	91	88
100	80	92	92	90	88	94	92	91	88
100	100	92	92	90	88	94	92	91	88



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