

PERFORMANCE DATA:

MODEL 49-243 • 1/2" (13) SPACING • 1/4" (6) BARS • 30° DEFLECTION

| Free Area Square Feet per Lineal Foot | Nominal Duct Width | Total Pressure | .012 | .025 | .047 | .074 | .105 | .142 | .187 | .237 | .294 |
|---------------------------------------|--------------------|------------------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|
| .031 | 1 1/2" | Airflow, CFM/FT. | 12 | 19 | 25 | 31 | 37 | 43 | 50 | 56 | 62 |
| | | Noise Criteria | – | 16 | 24 | 32 | 37 | 42 | 46 | 49 | 52 |
| | | Throw | Sill or Floor | 1-1-1 | 3-3-3 | 5-5-5 | 7-7-7 | 9-9-10 | 10-11-12 | 12-13-15 | 13-15-17 |
| | | Side Wall | 2-4-6 | 4-7-10 | 6-10-14 | 7-12-17 | 9-14-20 | 10-16-23 | 12-18-25 | 13-20-27 | 14-22-30 |
| .048 | 2" | Airflow, CFM/FT. | 19 | 29 | 38 | 48 | 58 | 67 | 77 | 86 | 96 |
| | | Noise Criteria | – | – | 20 | 27 | 32 | 37 | 41 | 44 | 47 |
| | | Throw | Sill or Floor | 1-1-1 | 4-4-4 | 7-7-7 | 9-9-10 | 11-12-13 | 13-14-15 | 15-16-18 | 16-18-20 |
| | | Side Wall | 3-5-7 | 5-8-12 | 7-11-16 | 9-14-20 | 11-17-24 | 13-19-26 | 15-22-29 | 16-23-31 | 17-25-34 |
| .067 | 2 1/2" | Airflow, CFM/FT. | 27 | 40 | 54 | 67 | 80 | 94 | 107 | 120 | 134 |
| | | Noise Criteria | – | – | 20 | 27 | 32 | 37 | 41 | 44 | 47 |
| | | Throw | Sill or Floor | 1-1-1 | 5-5-5 | 9-9-9 | 11-11-12 | 13-14-15 | 15-16-18 | 17-19-21 | 20-21-22 |
| | | Side Wall | 4-6-8 | 6-9-13 | 9-13-17 | 11-16-21 | 14-19-25 | 15-21-27 | 17-24-31 | 20-27-35 | 22-29-38 |
| .086 | 3" | Airflow, CFM/FT. | 34 | 52 | 69 | 86 | 103 | 120 | 138 | 155 | 172 |
| | | Noise Criteria | – | – | 20 | 27 | 32 | 37 | 41 | 44 | 47 |
| | | Throw | Sill or Floor | 2-2-2 | 6-6-6 | 10-10-11 | 12-13-14 | 15-16-18 | 18-19-20 | 20-21-23 | 23-24-25 |
| | | Side Wall | 4-6-9 | 8-11-15 | 10-14-19 | 13-18-23 | 16-21-27 | 18-24-31 | 21-28-35 | 23-30-38 | 26-34-41 |
| .105 | 3 1/2" | Airflow, CFM/FT. | 42 | 63 | 84 | 105 | 126 | 147 | 168 | 189 | 210 |
| | | Noise Criteria | – | – | 20 | 28 | 33 | 38 | 42 | 45 | 48 |
| | | Throw | Sill or Floor | 2-2-2 | 8-8-8 | 11-11-12 | 15-15-15 | 17-18-19 | 21-21-22 | 22-23-25 | 25-25-26 |
| | | Side Wall | 6-8-11 | 9-12-16 | 12-16-21 | 14-19-24 | 18-23-29 | 21-27-33 | 23-29-36 | 25-32-39 | 28-36-43 |
| .127 | 4" | Airflow, CFM/FT. | 51 | 76 | 102 | 127 | 152 | 178 | 203 | 228 | 254 |
| | | Noise Criteria | – | – | 21 | 29 | 34 | 39 | 43 | 46 | 49 |
| | | Throw | Sill or Floor | 3-3-3 | 9-9-9 | 13-13-13 | 16-16-17 | 19-20-21 | 22-22-23 | 24-25-26 | 27-27-27 |
| | | Side Wall | 6-9-12 | 10-13-17 | 13-17-22 | 15-20-25 | 19-24-30 | 22-28-34 | 25-31-38 | 28-36-41 | 30-37-44 |
| .167 | 5" | Airflow, CFM/FT. | 67 | 100 | 134 | 167 | 200 | 234 | 267 | 301 | 334 |
| | | Noise Criteria | – | – | 21 | 29 | 34 | 39 | 43 | 46 | 49 |
| | | Throw | Sill or Floor | 4-4-4 | 10-10-10 | 14-14-14 | 18-18-18 | 21-21-22 | 24-24-25 | 26-27-28 | 30-30-30 |
| | | Side Wall | 8-11-14 | 11-15-19 | 15-19-24 | 19-23-28 | 21-26-32 | 24-30-36 | 26-32-39 | 29-36-42 | 33-39-46 |
| .210 | 6" | Airflow, CFM/FT. | 84 | 126 | 168 | 210 | 252 | 294 | 336 | 378 | 420 |
| | | Noise Criteria | – | 15 | 23 | 31 | 36 | 41 | 45 | 48 | 51 |
| | | Throw | Sill or Floor | 5-5-5 | 10-10-10 | 15-15-15 | 19-19-19 | 23-23-23 | 25-25-25 | 28-28-29 | 31-31-31 |
| | | Side Wall | 9-12-15 | 14-17-21 | 17-21-25 | 20-24-29 | 24-29-34 | 27-32-38 | 29-35-40 | 32-38-43 | 36-42-47 |

Performance Notes:

- Throws are given at 150, 100 and 50 fpm terminal velocities.
- Throw values are based on a 4 foot section with a cooling ΔT of 20°F (11°C). For other lengths, use the correction factor table shown.
- Total Pressure is in inches w.g..
- Noise Criteria [NC] values are based on a 10 foot active section. For other lengths, use the correction factor table shown.
- Return Air Applications:
Noise Criteria value is increased by + 4.
Negative Static Pressure = 0.8 x Total Pressure.
- Dash (–) in space indicates an Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70–2023.

Noise Criteria Correction for Length

| Active Length, ft. | 1 | 2 | 4 | 8 | 10 | 15 | 20 |
|--------------------|-----|----|----|----|----|----|----|
| Correction Factor | -10 | -7 | -4 | -1 | 0 | +2 | +3 |

Throw Correction for Length

| Active Length | Terminal Velocity | | |
|---------------|-------------------|---------|--------|
| | 150 fpm | 100 fpm | 50 fpm |
| 1 ft. | 0.5 | 0.6 | 0.7 |
| 10 ft. + | 1.6 | 1.4 | 1.2 |

| Nominal Width | Ak Factor per foot | |
|---------------|--------------------|--------|
| | Supply | Return |
| 1 1/2" | .041 | .037 |
| 2" | .058 | .051 |
| 2 1/2" | .076 | .066 |
| 3" | .095 | .080 |
| 3 1/2" | .115 | .098 |
| 4" | .137 | .113 |
| 5" | .177 | .148 |
| 6" | .230 | .189 |

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LINEAR DIFFUSERS AND BAR GRILLES