

## PERFORMANCE DATA:

### MODEL 49-240 • 1/2" (13) SPACING • 1/4" (6) BARS • 0° DEFLECTION

**B** LINEAR DIFFUSERS AND BAR GRILLES

| Free Area Square Feet per Lineal Foot | Nominal Duct Width | Total Pressure   | .010          | .022       | .039       | .062       | .087       | .119       | .156       | .198       | .245       |          |
|---------------------------------------|--------------------|------------------|---------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|
| <b>.026</b>                           | <b>1 1/2"</b>      | Airflow, CFM/FT. | <b>10</b>     | <b>16</b>  | <b>21</b>  | <b>26</b>  | <b>31</b>  | <b>36</b>  | <b>42</b>  | <b>47</b>  | <b>52</b>  |          |
|                                       |                    | Noise Criteria   | –             | –          | –          | 19         | 24         | 30         | 34         | 37         | 40         |          |
|                                       |                    | Throw            | Sill or Floor | 1-1-1      | 2-2-2      | 4-4-4      | 7-7-7      | 8-9-10     | 10-11-12   | 11-12-14   | 12-14-16   | 14-16-18 |
|                                       |                    |                  | Side Wall     | 2-4-6      | 4-7-10     | 5-9-13     | 7-12-17    | 8-13-19    | 10-16-22   | 11-17-24   | 12-19-26   | 14-21-29 |
| <b>.045</b>                           | <b>2"</b>          | Airflow, CFM/FT. | <b>18</b>     | <b>27</b>  | <b>36</b>  | <b>45</b>  | <b>54</b>  | <b>63</b>  | <b>72</b>  | <b>81</b>  | <b>90</b>  |          |
|                                       |                    | Noise Criteria   | –             | –          | –          | 18         | 23         | 29         | 33         | 36         | 39         |          |
|                                       |                    | Throw            | Sill or Floor | 1-1-1      | 4-4-4      | 7-7-7      | 9-9-10     | 10-11-13   | 13-14-16   | 14-16-18   | 15-17-20   | 17-19-21 |
|                                       |                    |                  | Side Wall     | 3-5-7      | 5-9-12     | 7-11-16    | 9-14-20    | 11-17-23   | 13-19-26   | 14-21-28   | 15-22-30   | 17-25-33 |
| <b>.066</b>                           | <b>2 1/2"</b>      | Airflow, CFM/FT. | <b>26</b>     | <b>40</b>  | <b>53</b>  | <b>66</b>  | <b>79</b>  | <b>92</b>  | <b>106</b> | <b>119</b> | <b>132</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | –          | 20         | 26         | 31         | 35         | 38         | 41         |          |
|                                       |                    | Throw            | Sill or Floor | 2-2-2      | 6-6-6      | 8-8-9      | 11-12-13   | 13-14-16   | 15-17-19   | 18-20-22   | 21-22-23   | 22-23-24 |
|                                       |                    |                  | Side Wall     | 4-6-9      | 6-9-12     | 8-12-17    | 11-16-22   | 13-19-25   | 15-21-28   | 18-25-32   | 21-28-36   | 22-30-39 |
| <b>.088</b>                           | <b>3"</b>          | Airflow, CFM/FT. | <b>35</b>     | <b>53</b>  | <b>70</b>  | <b>88</b>  | <b>106</b> | <b>123</b> | <b>141</b> | <b>158</b> | <b>176</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | 15         | 21         | 27         | 32         | 36         | 39         | 42         |          |
|                                       |                    | Throw            | Sill or Floor | 2-2-2      | 7-7-7      | 10-10-11   | 12-13-15   | 15-16-18   | 18-19-21   | 20-22-24   | 24-24-25   | 26-26-27 |
|                                       |                    |                  | Side Wall     | 5-7-10     | 7-11-15    | 10-14-19   | 12-17-23   | 15-21-27   | 18-24-31   | 20-27-34   | 24-31-39   | 26-34-41 |
| <b>.110</b>                           | <b>3 1/2"</b>      | Airflow, CFM/FT. | <b>44</b>     | <b>66</b>  | <b>88</b>  | <b>110</b> | <b>132</b> | <b>154</b> | <b>176</b> | <b>198</b> | <b>220</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | 16         | 22         | 28         | 33         | 37         | 40         | 43         |          |
|                                       |                    | Throw            | Sill or Floor | 3-3-3      | 8-8-8      | 12-12-12   | 15-15-16   | 18-19-20   | 20-21-22   | 23-24-25   | 25-26-27   | 29-29-29 |
|                                       |                    |                  | Side Wall     | 5-7-10     | 9-12-16    | 12-16-20   | 15-20-25   | 18-23-28   | 20-26-32   | 23-29-36   | 25-32-39   | 29-36-43 |
| <b>.133</b>                           | <b>4"</b>          | Airflow, CFM/FT. | <b>53</b>     | <b>80</b>  | <b>106</b> | <b>133</b> | <b>160</b> | <b>186</b> | <b>213</b> | <b>239</b> | <b>266</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | 17         | 23         | 29         | 34         | 38         | 41         | 44         |          |
|                                       |                    | Throw            | Sill or Floor | 3-3-3      | 9-9-9      | 13-13-13   | 16-16-17   | 20-20-21   | 22-23-24   | 24-25-26   | 28-28-28   | 31-31-31 |
|                                       |                    |                  | Side Wall     | 6-8-11     | 10-13-17   | 13-17-21   | 16-21-26   | 20-25-30   | 22-28-34   | 24-30-37   | 28-35-41   | 31-38-45 |
| <b>.177</b>                           | <b>5"</b>          | Airflow, CFM/FT. | <b>71</b>     | <b>106</b> | <b>142</b> | <b>177</b> | <b>212</b> | <b>248</b> | <b>283</b> | <b>318</b> | <b>354</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | 18         | 24         | 30         | 35         | 39         | 42         | 45         |          |
|                                       |                    | Throw            | Sill or Floor | 4-4-4      | 10-10-10   | 15-15-15   | 18-18-18   | 22-22-23   | 25-25-25   | 27-27-28   | 30-30-30   | 34-34-34 |
|                                       |                    |                  | Side Wall     | 8-10-13    | 11-14-18   | 15-19-23   | 18-22-27   | 22-27-32   | 25-31-37   | 27-33-39   | 30-37-43   | 34-41-47 |
| <b>.222</b>                           | <b>6"</b>          | Airflow, CFM/FT. | <b>89</b>     | <b>133</b> | <b>178</b> | <b>222</b> | <b>266</b> | <b>310</b> | <b>355</b> | <b>400</b> | <b>444</b> |          |
|                                       |                    | Noise Criteria   | –             | –          | 20         | 25         | 31         | 36         | 40         | 43         | 46         |          |
|                                       |                    | Throw            | Sill or Floor | 5-5-5      | 10-10-10   | 15-15-15   | 19-19-19   | 23-23-23   | 25-25-25   | 29-29-29   | 31-31-31   | 36-36-36 |
|                                       |                    |                  | Side Wall     | 9-11-14    | 13-16-20   | 16-20-24   | 20-24-29   | 24-29-34   | 28-33-39   | 30-35-40   | 34-40-45   | 38-44-49 |

#### 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 |
| <b>1 1/2"</b> | .035               | .030   |
| <b>2"</b>     | .054               | .046   |
| <b>2 1/2"</b> | .075               | .064   |
| <b>3"</b>     | .098               | .083   |
| <b>3 1/2"</b> | .120               | .102   |
| <b>4"</b>     | .143               | .121   |
| <b>5"</b>     | .187               | .159   |
| <b>6"</b>     | .233               | .198   |