ARCHITECTURAL SQUARE CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 66UNI • 24 x 24 (610 x 610) CEILING MODULE • IMPERIAL UNITS

1 Slot

6" Dia. Neck	Airflow, CFM	80	100	120	140	160	175	195	235	275
	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400
	Total Pressure	.021	.033	.048	.066	.086	.108	.133	.192	.261
	Static Pressure	.011	.017	.026	.035	.046	.058	.071	.102	.139
	Throw, ft.	2-3-5	2-3-7	3-4-7	3-5-8	4-5-10	4-6-12	4-7-13	5-8-14	6-8-14
	Noise Criteria	—	_	17	21	25	28	31	35	40
8" Dia. Neck	Airflow, CFM	140	165	190	220	245	270	295	325	350
	Neck Velocity, FPM	400	475	550	625	700	775	850	925	1000
	Total Pressure	.026	.036	.048	.063	.079	.097	.117	.139	.162
	Static Pressure	.016	.022	.029	.039	.048	.060	.072	.086	.100
	Throw, ft.	3-5-8	4-5-10	4-6-12	5-6-13	5-7-13	5-8-14	6-9-14	6-10-15	7-11-15
	Noise Criteria	_	18	22	25	28	31	33	36	38
10" Dia. Neck	Airflow, CFM	110	150	190	230	275	315	355	395	455
	Neck Velocity, FPM	200	275	350	425	500	575	650	725	800
	Total Pressure	.008	.014	.023	.034	.047	.062	.080	.099	.121
	Static Pressure	.006	.009	.015	.023	.031	.041	.054	.066	.081
	Throw, ft.	2-4-6	3-5-9	4-5-12	5-7-13	5-8-14	6-10-14	7-11-15	8-12-16	9-13-17
	Noise Criteria	—	—	16	21	25	29	32	35	37
2 Slot										
6" Dia. Neck	Airflow, CFM	60	95	130	165	195	230	265	300	335
	Neck Velocity, FPM	300	475	650	825	1000	1175	1350	1525	1700
	Total Pressure	.010	.024	.045	.072	.105	.146	.193	.246	.305
	Static Pressure	.004	.010	.019	.030	.043	.060	.079	.101	.125
		012	1 2 /	2-3-5	2-4-7	3-5-8	4-5-10	4-5-12	5-6-13	5-7-14
	Ihrow, ft.	0-1-5	1-2-4							
	Noise Criteria	<u> </u>	— —		17	22	26	30	33	36
	Noise Criteria Airflow, CFM	<u> </u>		 245	17 295	22 350	26 400	30 455	33 505	36 560
8"	Inrow, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM	<u> </u>	190 550	245 700	17 295 850	22 350 1000	26 400 1150	30 455 1300	33 505 1450	36 560 1600
8" Dia	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure	-1-3 	190 550 .039	 245 700 .063	17 295 850 .092	22 350 1000 .128	26 400 1150 .169	30 455 1300 .217	33 505 1450 .269	36 560 1600 .328
8" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure		190 550 .039 .020		17 295 850 .092 .047	22 350 1000 .128 .066	26 400 1150 .169 .087	30 455 1300 .217 .112	33 505 1450 .269 .138	36 560 1600 .328 .168
8" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft.	0-1-3 	190 550 .039 .020 3-5-8	245 700 .063 .032 4-5-11	17 295 850 .092 .047 5-6-13	22 350 1000 .128 .066 5-7-15	26 400 1150 .169 .087 5-9-16	30 455 1300 .217 .112 6-10-18	33 505 1450 .269 .138 7-11-19	36 560 1600 .328 .168 8-12-20
8" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria	0-1-3 	Image: 1-2-4 Image: 190 550 .039 .020 3-5-8 Image: 100	245 700 .063 .032 4-5-11 20	17 295 850 .092 .047 5-6-13 25	22 350 1000 .128 .066 5-7-15 29	26 400 1150 .169 .087 5-9-16 33	30 455 1300 .217 .112 6-10-18 36	33 505 1450 .269 .138 7-11-19 39	36 560 1600 .328 .168 8-12-20 42
8" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM	0-1-3 	Image: 1-2-4 Image: 190 550 .039 .020 3-5-8 Image: 100 275	245 700 .063 .032 4-5-11 20 325	17 295 850 .092 .047 5-6-13 25 380	22 350 1000 .128 .066 5-7-15 29 435	26 400 1150 .169 .087 5-9-16 33 490	30 455 1300 .217 .112 6-10-18 36 545	33 505 1450 .269 .138 7-11-19 39 600	36 560 1600 .328 .168 8-12-20 42 655
8" Dia. Neck 10"	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM	0-1-3 140 400 .021 .011 2-3-6 220 400	Image: 1-2-4 Image: 190 550 .039 .020 3-5-8 Image: 1-2-4 Image: 1-2-4 <td< th=""><th>245 700 .063 .032 4-5-11 20 325 600</th><th>17 295 850 .092 .047 5-6-13 25 380 700</th><th>22 350 1000 .128 .066 5-7-15 29 435 800</th><th>26 400 1150 .169 .087 5-9-16 33 490 900</th><th>30 455 1300 .217 .112 6-10-18 36 545 1000</th><th>33 505 1450 .269 .138 7-11-19 39 600 1100</th><th>36 560 1600 .328 .168 8-12-20 42 655 1200</th></td<>	245 700 .063 .032 4-5-11 20 325 600	17 295 850 .092 .047 5-6-13 25 380 700	22 350 1000 .128 .066 5-7-15 29 435 800	26 400 1150 .169 .087 5-9-16 33 490 900	30 455 1300 .217 .112 6-10-18 36 545 1000	33 505 1450 .269 .138 7-11-19 39 600 1100	36 560 1600 .328 .168 8-12-20 42 655 1200
8" Dia. Neck 10" Dia.	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure	0-1-3 140 400 .021 .011 2-3-6 220 400 .024	Image: 1-2-4 Image: 190 550 .039 .020 3-5-8 Image: 1-2-4 Image: 1-2-4 190 550 .039 .020 3-5-8 Image: 1-2-4	245 700 .063 .032 4-5-11 20 325 600 .053	17 295 850 .092 .047 5-6-13 25 380 700 .073	22 350 1000 .128 .066 5-7-15 29 435 800 .095	26 400 1150 .169 .087 5-9-16 33 490 900 .121	30 455 1300 .217 .112 6-10-18 36 545 1000 .149	33 505 1450 .269 .138 7-11-19 39 600 1100 .180	36 560 1600 .328 .168 8-12-20 42 655 1200 .214
8" Dia. Neck 10" Dia. Neck	Ihrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Static Pressure Static Pressure Static Pressure Static Pressure Static Pressure	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014	1-2-4 — 190 550 .039 .020 3-5-8 — 275 500 .037 .021	245 700 .063 .032 4-5-11 20 325 600 .053 .031	17 295 850 .092 .047 5-6-13 25 380 700 .073 .042	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055	26 400 1150 .169 .087 5-9-16 33 490 900 .121 .071	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124
8" Dia. Neck 10" Dia. Neck	Ihrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Static Pressure Static Pressure Total Pressure Static Pressure Throw, ft.	0-1-3	I=2-4 Ig0 550 .039 .020 3-5-8 Image: Image of the state of the st	245 700 .063 .032 4-5-11 20 325 600 .053 .031 5-7-14	17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17	26 400 1150 .087 5-9-16 33 490 900 .121 .071 7-11-18	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22
8" Dia. Neck 10" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014 3-5-9	Image: 1-2-4 Image: 1-2-4 </th <th>245 700 .063 .032 4-5-11 20 325 600 .053 .031 5-7-14 21</th> <th>17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25</th> <th>22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29</th> <th>26 400 1150 .087 5-9-16 33 490 900 .121 .071 7-11-18 32</th> <th>30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35</th> <th>33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37</th> <th>36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40</th>	245 700 .063 .032 4-5-11 20 325 600 .053 .031 5-7-14 21	17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29	26 400 1150 .087 5-9-16 33 490 900 .121 .071 7-11-18 32	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40
8" Dia. Neck 10" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM	0-1-3	190 550 .039 .020 3-5-8 — 275 500 .037 .021 4-6-12 16 315		17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25 470	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29 550	26 400 1150 .087 5-9-16 33 490 900 .121 .071 7-11-18 32 630	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35 705	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37 785	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40 865 865
8" Dia. Neck 10" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014 3-5-9 235 300	190 550 .039 .020 3-5-8 275 500 .037 .021 4-6-12 16 315 400		17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25 470 600	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29 550 700	26 400 1150 .169 .087 5-9-16 33 490 900 .121 .071 7-11-18 32 630 800	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35 705 900	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37 785 1000	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40 865 100 865
8" Dia. Neck 10" Dia. Neck 12" Dia.	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014 3-5-9 235 300 .015	190 550 .039 .020 3-5-8 275 500 .037 .021 4-6-12 16 315 400 .027		17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25 470 600 .061	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29 550 700 .083	26 400 1150 .169 .087 5-9-16 33 490 900 .121 .071 7-11-18 32 630 800 .107	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35 705 900 .136	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37 785 1000 .168	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40 865 1100 .203
8" Dia. Neck 10" Dia. Neck 12" Dia. Neck	Inrow, it. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Static Pressure Static Pressure	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014 3-5-9 235 300 .015 .009	190 550 .039 .020 3-5-8 275 500 .037 .021 4-6-12 16 315 400 .027 .017		17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25 470 600 .061 .039	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29 550 700 .083 .052	26 400 1150 .169 .087 5-9-16 33 490 900 .121 .071 7-11-18 32 630 800 .107 .067	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35 705 900 .136 .086	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37 785 1000 .168 .106	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40 865 1100 .203 .128
8" Dia. Neck 10" Dia. Neck 12" Dia. Neck	Inrow, tt. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Throw, ft. Noise Criteria Airflow, CFM Neck Velocity, FPM Total Pressure Static Pressure Static Pressure Static Pressure Throw, ft.	0-1-3 140 400 .021 .011 2-3-6 220 400 .024 .014 3-5-9 235 300 .015 .009 4-5-10	190 550 .039 .020 3-5-8 275 500 .037 .021 4-6-12 16 315 400 .027 .017 5-7-14		17 295 850 .092 .047 5-6-13 25 380 700 .073 .042 5-8-16 25 470 600 .061 .039 7-10-18	22 350 1000 .128 .066 5-7-15 29 435 800 .095 .055 6-9-17 29 550 700 .083 .052 8-12-20	26 400 1150 .169 .087 5-9-16 33 490 900 .121 .071 7-11-18 32 630 800 .107 .067 9-14-21	30 455 1300 .217 .112 6-10-18 36 545 1000 .149 .087 8-12-19 35 705 900 .136 .086 10-15-22	33 505 1450 .269 .138 7-11-19 39 600 1100 .180 .105 9-13-21 37 785 1000 .168 .106 12-16-23	36 560 1600 .328 .168 8-12-20 42 655 1200 .214 .124 9-14-22 40 865 1100 .203 .128 13-17-24

Performance Notes:

- 1. All pressures are in inches w.g..
- 2. Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.
- Noise Criteria (NC) values are based on 10 dB room absorption, re 10⁻¹² watts. Dash (—) in spaces indicates an Noise Criteria level of less than 15.
- 4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors and the calculations required to convert the average velocity into airflow.

CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 66UNI • 24 x 24 (610 x 610) CEILING MODULE • IMPERIAL UNITS

3 Slot

8" Dia. Neck	Airflow, CFM	105	165	225	290	350	410	470	530	595
	Neck Velocity, FPM	300	475	650	825	1000	1175	1350	1525	1700
	Total Pressure	.010	.024	.045	.072	.106	.146	.192	.245	.304
	Static Pressure	.004	.010	.018	.030	.043	.060	.078	.100	.124
	Throw, ft.	2-3-4	3-4-6	3-6-9	4-8-11	5-9-13	6-11-16	7-13-18	8-14-20	9-16-23
	Noise Criteria	—	—	18	22	25	28	32	35	38
10" Dia. Neck	Airflow, CFM	165	230	300	370	435	505	575	640	710
	Neck Velocity, FPM	300	425	550	675	800	925	1050	1175	1300
	Total Pressure	.010	.021	.035	.052	.074	.099	.127	.159	.195
	Static Pressure	.005	.010	.016	.024	.034	.045	.058	.073	.090
	Throw, ft.	3-5-7	4-7-10	5-8-12	6-10-14	6-11-16	7-13-18	8-14-20	9-15-22	9-16-24
	Noise Criteria	—	—	18	24	27	30	33	36	39
12" Dia. Neck	Airflow, CFM	235	315	395	470	550	630	705	785	865
	Neck Velocity, FPM	300	400	500	600	700	800	900	1000	1100
	Total Pressure	.012	.021	.034	.048	.066	.086	.110	.136	.164
	Static Pressure	.006	.011	.018	.026	.036	.047	.059	.073	.089
	Throw, ft.	4-7-10	5-9-12	6-10-15	7-12-17	8-13-19	8-15-21	9-16-23	10-17-25	11-19-27
	Noise Criteria	—	16	20	25	28	30	33	35	37
14" Dia. Neck	Airflow, CFM	320	430	535	640	750	855	960	1070	1175
	Neck Velocity, FPM	300	400	500	600	700	800	900	1000	1100
	Total Pressure	.013	.023	.037	.053	.072	.094	.119	.148	.179
	Static Pressure	.007	.013	.021	.030	.041	.054	.069	.085	.104
	Throw, ft.	5-8-12	6-10-15	7-12-17	8-14-20	9-16-23	10-17-25	11-19-27	12-21-30	13-22-32
	Noise Criteria			20	28	31	33	36	39	41

Performance Notes:

- 1. All pressures are in inches w.g..
- 2. Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.
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