

Ceiling Cutout: 10 1/8" (257 mm) Dia.

Complete Fixture consists of Reflector Trim & Frame-In Kit. Select each separately.

Reflector Trim	Frame-In Kit	Lamp
WW9 CLW Specular Clear, White Self-Flange	WW9BC 10HJ	100W ED17, BD17 (Coated) Metal Halide
WW9 CLP Specular Clear, Polished Self-Flange	WW9BC 17HB	175W ED28, BT28 (Coated) Enclosed Metal Halide
	WW9BC 25HB	250W ED28, BT28 (Coated) Enclosed Metal Halide

Features

- Downlight Reflector Trim:** Specular clear Alzak® aluminum (with UV resistant, non-fading finish), 16 ga. Opening in reflector permits reflector/ housing to perform as wall washer. May be reoriented and locked after fixture is installed. Painted white flange. For other finishes, consult factory.
- Reflector / Housing:** Alzak® aluminum, 16 ga. Specular clear to match downlight reflector.
- Lamp Guard:** High heat-resistant glass (as required by lamp manufacturer).
- Socket Cup:** Heat dissipating die-cast aluminum with mogul base porcelain socket with nickel plated screw shell. ED17 unit uses socket plate with medium base pulse rated socket.
- Mounting Frame:** Die-formed steel, 16 ga. vertically oriented for maximum rigidity. Comes with 4 mounting brackets to accept standard 3/4" or 1 1/2" lathing channels (by others), 1/2" EMT tubing (by other) or optional Lightolier mounting bars (1950 or 1951).
- Mounting Ring:** Die-formed steel, 20 ga. Designed for vertical adjustment from inside of fixture, black finish.
- Retaining Springs:** Rust-resistant springs simplify reflector/housing removal for inspection and maintenance.
- Ballast/Junction Box Assembly:** Ballast and splice box on 16 ga. plate. Ballast assembly is accessible from below without tools for inspection and replacement.
- Junction Box:** 16 ga. steel. Can be inspected from below. UL Listed for maximum of (8) No. 12 AWG, 90°C through branch circuit conductors.
- Thermal Protector:** Meets NEC and UL requirements. Thermal insulation shall not be installed within 3" (76mm) of the recessed fixture enclosure, wiring compartment, or ballast, and shall not be so installed above the fixture so as to entrap heat and prevent the free circulation of air.

Electrical

Ballast: 120/277V, magnetic, lag type high reactance autotransformer, high power factor, encased and filled with a special thermally conductive insulation material for heat dissipation and quiet operation.

Electrical (continued)

Ballast	ANSI Code	Voltage	Max. Amps	Input Watts
100W MH	M90	120/277	2.60/1.15	130
175W MH	M57	120/277	1.80/0.80	210
250W MH	M58	120/277	2.50/1.12	293

Options & Accessories

- Mounting Bars:** 1950 - 18" Set of (2), 1951 - 27" set of (2)
- T-Bar Anchor Clips:** 1956 (set of 4). For use with mounting bars.
- Auxiliary:** Add suffix **A** to Frame-In kit. See Spec. Sheet "A".
- Emergency Lamp:** Add suffix **E** to Frame-In kit. See Spec. Sheet "E".
- Fuse:** Add suffix **F1** or **F2** to Frame-In Kit (F1=120V, F2=277V)
- Chicago Air Plenum:** Add **LC** to Frame-In Kit (100W M. H. Consult Factory)
- Electronic MH Ballast (100W):** Consult Factory. **EB1**=120V **EB2**=277V

Labels

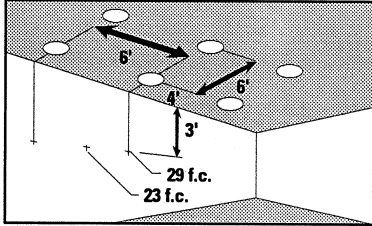
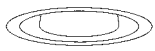
UL (Suitable for Damp Locations), CSA, I.B.E.W.

Alzak® is a registered trademark of ALCOA.

Job Information	Type:
Job Name:	
Cat. No.:	
Lamp(s):	
Notes:	

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Lighting Data

EXAMPLE: With multiple clear cone units located 4' from wall and 6' on center, (matching downlights 6' on center), the illumination on the wall 3' down from the ceiling is 29 f.c. beneath and 23 f.c. between fixtures.

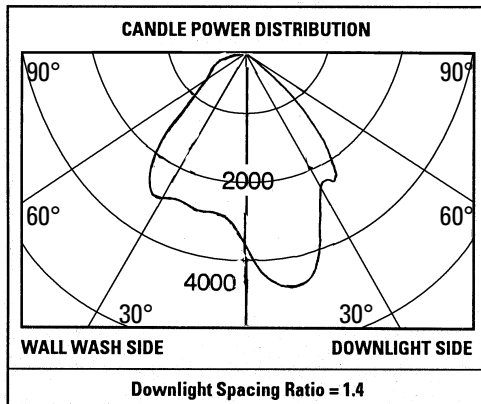
Footcandles on Wall From Multiple units - Clear Cone 175W E28 Metal Halide (*Coated)

		UNITS 3 FEET FROM WALL											
		3'			4'			5'			6'		
DISTANCE FROM CEILING, FT.	1	40	41	40	30	22	30	25	13	25	22	8	22
	2	58	58	58	51	43	51	50	30	50	50	19	50
	3	74	69	74	57	53	57	49	40	49	46	29	46
	4	84	79	84	61	59	61	48	46	48	41	36	41
	5	78	75	78	58	57	58	46	46	46	38	38	38
	6	66	65	66	51	51	51	41	42	41	35	36	35
	7	53	53	53	43	43	43	35	36	35	30	31	30
	8	43	42	43	35	35	35	29	30	29	25	26	25
	9	34	34	34	28	29	28	24	25	24	21	22	21
	10	27	27	27	23	23	23	20	20	20	17	18	17
	11	22	22	22	19	19	19	17	17	17	15	15	15
	12	18	18	18	16	16	16	14	14	14	12	13	12
	13	15	15	15	13	14	13	12	12	12	11	11	11
	14	13	13	13	11	12	11	10	10	10	9	9	9

		UNITS 4 FEET FROM WALL														
		4'			5'			6'			7'			8'		
DISTANCE FROM CEILING, FT.	1	18	18	18	15	11	15	12	8	12	11	6	11	10	4	10
	2	30	31	30	26	23	26	24	16	24	23	12	23	23	8	23
	3	35	34	35	35	32	35	29	23	29	29	18	29	29	13	29
	4	43	40	43	35	32	35	30	27	30	28	22	28	27	17	27
	5	48	45	48	38	36	38	31	30	31	27	25	27	24	21	24
	6	48	45	48	38	36	38	31	31	31	26	26	26	23	22	23
	7	44	42	44	35	34	35	29	29	29	25	25	25	22	22	22
	8	38	37	38	32	31	32	27	27	27	23	24	23	20	21	20
	9	33	32	33	28	27	28	24	24	24	21	21	21	18	19	18
	10	28	28	28	24	24	24	21	21	21	18	19	18	16	17	16
	11	24	23	24	20	21	20	18	18	18	16	16	16	14	15	14
	12	20	20	20	18	18	18	16	16	16	14	14	14	13	13	13
	13	17	17	17	15	15	15	14	14	14	12	12	12	11	11	11
	14	15	15	15	13	13	13	12	12	12	11	11	11	10	10	10

		UNITS 5 FEET FROM WALL																	
		5'			6'			7'			8'			9'			10'		
DISTANCE FROM CEILING, FT.	1	10	10	10	9	7	9	8	6	8	8	5	8	7	4	7	7	3	7
	2	18	19	18	15	14	15	13	10	13	12	8	12	12	6	12	11	5	11
	3	21	21	21	19	18	19	18	15	18	18	12	18	18	9	18	18	7	18
	4	24	23	24	21	20	21	20	17	20	19	15	19	19	12	19	19	10	19
	5	28	26	28	24	22	24	21	19	21	19	17	19	18	14	18	18	12	18
	6	31	29	31	26	24	26	22	21	22	19	18	19	17	16	17	16	13	16
	7	32	30	32	26	25	26	22	22	22	19	19	19	17	17	17	16	15	16
	8	31	29	31	25	25	25	22	21	22	19	19	19	17	17	17	15	15	15
	9	28	27	28	24	23	24	21	20	21	18	18	18	16	16	16	15	15	15
	10	25	25	25	22	21	22	19	19	19	17	17	17	15	15	15	14	14	14
	11	22	22	22	20	19	20	17	17	17	15	16	15	14	14	14	13	13	13
	12	20	20	20	17	17	17	15	16	15	14	14	14	13	13	13	12	12	12
	13	17	17	17	14	14	14	12	12	12	11	11	11	12	12	12	11	11	11
	14	15	15	15	14	14	14	12	12	12	11	11	11	10	11	10	10	10	10

Footcandle values are averaged and rounded off and are based on a minimum of five units



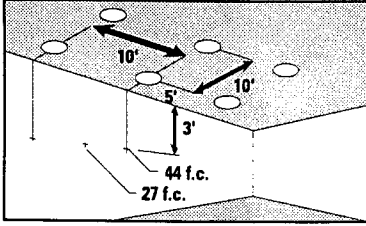
		COEFFICIENTS OF UTILIZATION																				
		% EFFECTIVE CEILING CAVITY REFLECTANCE																				
		80			70			50			30			10			0					
		% WALL REFLECTANCE																				
		50			30			10			50			30			10			0		
ROOM CAVITY RATIO	1	.67	.65	.64	.66	.64	.63	.63	.62	.61	.61	.60	.59	.59	.58	.57	.56	.56	.56			
	2	.62	.59	.56	.61	.58	.56	.59	.56	.55	.57	.55	.53	.55	.54	.52	.51	.51	.51			
	3	.56	.53	.50	.56	.52	.50	.54	.51	.49	.52	.50	.48	.51	.49	.47	.46	.46	.46			
	4	.52	.48	.45	.51	.48	.45	.50	.47	.44	.49	.46	.44	.47	.45	.43	.42	.42	.42			
	5	.48	.44	.41	.47	.43	.40	.46	.43	.40	.45	.42	.40	.44	.41	.39	.38	.38	.38			
	6	.44	.40	.37	.43	.39	.36	.42	.39	.36	.41	.38	.36	.41	.38	.36	.35	.35	.35			
	7	.40	.36	.33	.40	.36	.33	.39	.35	.32	.38	.35	.32	.37	.34	.32	.31	.31	.31			
	8	.37	.32	.29	.36	.32	.29	.35	.32	.29	.35	.31	.29	.34	.31	.29	.28	.28	.28			
	9	.34	.29	.26	.33	.29	.26	.32	.29	.26	.32	.28	.26	.31	.28	.26	.25	.25	.25			
	10	.31	.26	.23	.30	.26	.23	.30	.26	.23	.29	.26	.23	.29	.25	.23	.22	.22	.22			

20% FLOOR CAVITY REFLECTANCE

Job Information Type:

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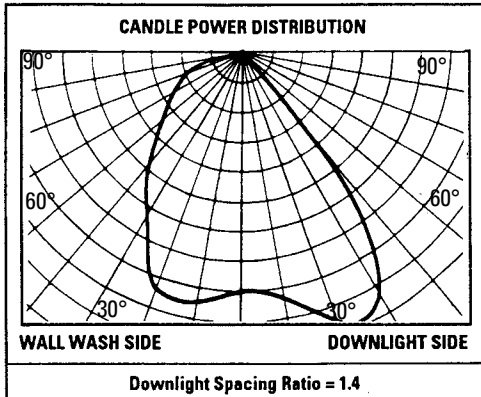


LIGHTING DATA

EXAMPLE: With multiple clear cone units located 5' from wall and 10' on center, (matching downlights 10' on center), the illumination on the wall 3' down from the ceiling is 44 f.c. beneath and 27 f.c. between fixtures.

FOOTCANDLES ON WALL FROM MULTIPLE UNITS - CLEAR CONE 175W E28 METAL HALIDE (COATED)																		
UNITS 3 FEET FROM WALL																		
DISTANCE FROM CEILING, FT.	3'			4'			5'			6'								
	1	96	89	96	86	62	85	80	45	80	78	32	78					
2	135	106	135	118	87	118	108	68	108	102	46	102						
3	159	167	159	132	124	132	123	90	123	116	59	116						
4	167	161	167	126	127	126	108	105	108	98	82	98						
5	143	145	143	115	113	115	100	93	100	85	76	85						
6	125	121	125	95	102	95	82	81	82	73	71	73						
7	101	111	101	83	90	83	68	78	68	61	58	61						
8	87	93	87	75	75	75	62	66	62	54	56	54						
9	72	79	72	64	68	64	54	58	54	47	49	47						
10	64	73	64	59	61	59	50	54	50	44	45	44						
11	58	65	58	53	56	53	45	50	45	39	43	39						
12	52	60	52	50	51	50	42	46	42	37	39	37						
13	46	54	46	43	47	43	38	42	38	34	36	34						
14	40	47	40	38	42	38	35	37	35	31	31	31						
UNITS 4 FEET FROM WALL																		
DISTANCE FROM CEILING, FT.	4'			5'			6'			7'			8'					
	1	53	52	53	47	42	47	44	34	44	42	28	42	39	22	39		
2	80	82	80	69	64	69	64	52	64	59	42	59	57	32	57			
3	100	95	100	90	72	90	83	55	83	78	44	78	74	35	74			
4	110	110	110	95	93	95	87	75	87	81	54	81	76	43	76			
5	110	110	110	93	91	93	80	78	80	72	67	72	67	52	67			
6	98	106	98	84	85	84	74	73	74	64	64	64	57	51	57			
7	89	97	89	75	81	75	66	68	66	58	54	58	51	47	51			
8	82	86	82	69	71	69	58	60	58	53	49	53	47	44	47			
9	73	74	73	60	62	60	53	54	53	46	45	46	42	39	42			
10	66	68	66	56	58	56	47	50	47	42	42	42	38	36	38			
11	60	61	60	49	53	49	43	49	43	38	38	38	34	34	34			
12	54	57	54	45	47	45	39	42	39	35	34	35	30	30	30			
13	47	51	47	40	43	40	35	36	35	31	30	31	28	27	28			
14	42	44	42	36	37	36	32	31	32	28	27	28	24	28	24			
UNITS 5 FEET FROM WALL																		
DISTANCE FROM CEILING, FT.	5'			6'			7'			8'			9'			10'		
	1	38	36	38	35	31	35	31	27	31	29	23	29	27	19	27	26	17
2	61	59	61	54	49	54	51	40	51	43	27	43	43	27	43	42	23	42
3	66	64	66	59	53	59	53	44	53	46	31	46	46	31	46	44	27	44
4	79	76	79	71	59	71	66	47	66	58	32	58	58	32	58	56	28	56
5	82	85	82	71	73	71	65	58	65	57	39	57	57	39	57	54	31	54
6	80	85	80	67	69	67	58	58	58	49	43	49	49	43	49	46	47	46
7	74	80	74	65	65	65	56	56	56	44	44	44	44	44	44	41	38	41
8	67	73	67	57	61	57	51	51	51	41	41	41	41	41	41	36	36	36
9	64	65	64	56	57	56	49	47	49	39	37	39	39	37	39	35	35	35
10	58	61	58	51	51	51	44	44	44	37	36	37	37	36	37	32	31	32
11	53	57	53	45	51	45	40	54	40	35	32	35	35	32	35	30	29	30
12	49	52	49	43	49	43	38	37	38	35	30	35	35	30	35	27	27	27
13	43	46	43	38	42	38	34	34	34	29	27	29	29	27	29	23	24	23
14	38	41	38	35	36	35	30	29	30	25	23	25	25	23	25	20	22	20

Footcandle values are averaged and rounded off and are based on a minimum of five units
Conversion Factors: 250W Metal Halide: clear. F.C. x 1.5



COEFFICIENTS OF UTILIZATION																
% EFFECTIVE CEILING CAVITY REFLECTANCE																
ROOM CAVITY RATIO	% WALL REFLECTANCE															
	80				70				50				30			
	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0
1	.63	.62	.60	.62	.61	.59	.60	.58	.57	.57	.56	.56	.55	.55	.54	.53
2	.58	.56	.53	.57	.55	.53	.55	.53	.52	.53	.52	.50	.52	.50	.49	.49
3	.53	.50	.48	.53	.50	.48	.51	.48	.47	.49	.48	.47	.48	.47	.46	.45
4	.49	.46	.43	.48	.46	.43	.48	.45	.42	.47	.44	.42	.46	.43	.42	.41
5	.46	.42	.39	.45	.41	.39	.44	.41	.38	.43	.40	.38	.42	.39	.38	.37
6	.42	.38	.35	.42	.38	.35	.41	.37	.35	.40	.37	.34	.39	.36	.34	.33
7	.38	.34	.31	.38	.34	.31	.37	.34	.31	.36	.33	.31	.36	.33	.31	.30
8	.35	.30	.29	.34	.30	.29	.34	.30	.28	.33	.30	.28	.32	.29	.28	.27
9	.31	.28	.25	.31	.28	.25	.30	.28	.25	.30	.27	.25	.30	.27	.25	.24
10	.29	.25	.22	.29	.25	.22	.28	.25	.22	.28	.24	.22	.27	.24	.22	.21

20% FLOOR CAVITY REFLECTANCE
Conversion Factors: 175w and 250W Metal Halide: clear C.U. x 1.0. 175W and 250W Metal Halide

Job Information **Type:**

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