DESCRIPTION

Recessed lens downlight with 9 inch aperture for horizontal ED17 medium base metal halide lamp. Available with prismatic or Fresnel glass lens. Universal input electronic ballast features end of life shutdown. Fixture is suitable for commercial construction and shallow plenums. Insulation must be kept 3" from top and sides of housing.

PORTFOLIO™

energy solutions

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Plaster Frame / Collar
Die cast aluminum collar accommodates ceiling materials up to 1-1/2" thick.

Socket Cap
Die cast aluminum socket cap reduces lamp base temperatures for longer life.

Conduit Fittings
Die cast aluminum conduit fittings secure flex to socket housing and junction box.

Universal Mounting Bracket
Accepts ½" EMT, C channel and bar hangers and adjusts 5" vertically from above the ceiling.

Junction Box
(6) ½" and (2) ¾" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

Upper Reflector
Spun 0.050" thick aluminum upper reflector has vent holes for cooling.

Shielding
Available with molded concave prismatic or regressed Fresnel glass lens. Lens captive to die cast step baffle during lamp replacement.

Trim Retention
Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

Socket
Pulse rated E26 medium base socket accepts unprotected lamps.

Insulation Detector
Self resetting detector opens circuit if insulation is improperly installed.

Ballast
Universal input 120/277V electronic ballast provides noise free operation, improved efficiency and increased lamp life as compared with magnetic ballast. Regulated output power over a wide range of ANSI lamp voltages results in excellent color stability over time. End of lamp life shutdown – reset power to restore output.

Quartz Lamp Re-strike Time Delay System (Q Option)
Internal auxiliary 100W DC bayonet base T4 quartz lamp (included) provides low level illumination in the event of a momentary power interruption.

Emergency Circuit Lamp (X Option)
Emergency circuit lamp module for 100W DC bayonet base T4 quartz lamp (included) by emergency circuit.

Code Compliance
Thermally protected and cULus listed for protected wet locations. EMI/RFI emissions per FCC 47CFR Part 18 non consumer limits.

ML9S50
ML9S70
ML9S100

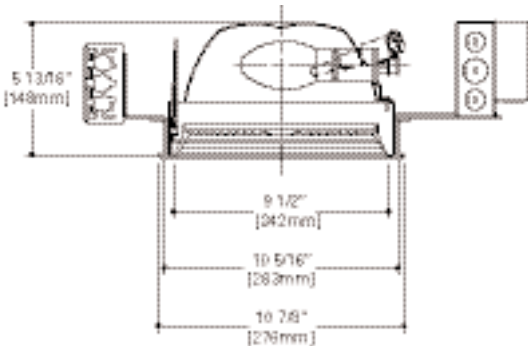
10002/10012

Metal Halide

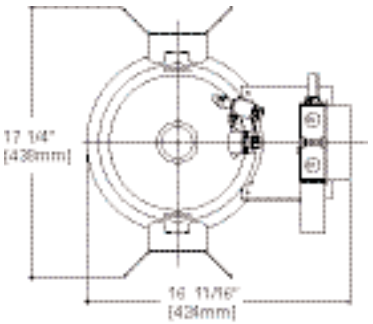
ED17

9 Inch

Lens Downlight



TOP VIEW



Energy Data	
50W	
120V Input Power: 60W	277V Input Power: 60W
120V Input Current: 0.51A	277V Input Current: 0.22A
Minimum Starting Temp: -15°C, +5°F	
THD: <20%	Power Factor: >0.90
Sound Rating: A	
70W	
120V Input Power: 86W	277V Input Power: 84W
120V Input Current: 0.72A	277V Input Current: 0.81A
Minimum Starting Temp: -20°C, -5°F	
THD: <20%	Power Factor: >0.90
Sound Rating: A	
100W	
120V Input Power: 115W	277V Input Power: 113W
120V Input Current: 0.96A	277V Input Current: 0.42A
Minimum Starting Temp: -20°C, -5°F	
THD: <20%	Power Factor: >0.90
Sound Rating: A	

ORDERING INFORMATION

SAMPLE NUMBER: ML9S70E = 9" lens shallow housing with UNV 120/277V electronic ballast for a 70W ED17 MH lamp
10002P = 9" regressed Fresnel lens, white trim ring, black baffle
(Order universal housing and trim separately)

Housing	Wattage	Ballast	Options	Trim	Options	Accessories

ML9S = 9" MH lens shallow housing

E= Electronic, UNV 120/277V 50/60Hz
1E= Electronic, 120V 50/60Hz
2E= Electronic, 277V 50/60Hz

Q = Quartz re-strike system
X = Emergency circuit lamp

10002 = 9" regressed Fresnel lens, die cast step baffle
10012 = 9" concave prismatic lens, die cast step baffle

P = White trim ring, black baffle
PWH = White trim ring, white baffle

HB26 = Bar hanger, 26" long, pair
HB50 = Bar hanger, 50" long, pair
RMB22 = Bar hanger for wooden joists, 22" long, pair
HSA9* = Slope adapter for 9" aperture, specify slope
H347 = 347V stepdown transformer, 75VA
H347200 = 347V stepdown transformer, 200VA

PHOTOMETRICS

Candlepower Distribution Curve

Cone of Light

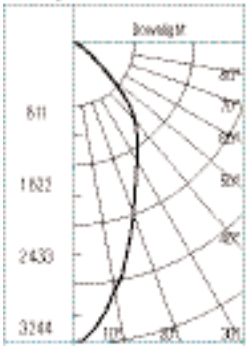
Distance Below to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
7'6"	88	3'0"
8'0"	73	3'6"
9'0"	57	4'0"
10'0"	46	4'6"
13'0"	27	5'6"
16'0"	18	7'0"

Coefficients of Utilization

Ceiling	80%				70%			50%	
Wall %	70	50	30	10	50	30	10	50	10
RCR	Zonal cavity method -- floor reflectance = 20%								
0	57	57	57	57	55	55	55	53	53
1	53	52	50	48	51	49	48	49	47
2	50	47	45	43	46	44	42	45	41
3	47	43	40	38	42	39	37	41	37
4	44	39	36	33	39	36	33	37	33
5	41	36	33	30	36	32	30	35	30
6	38	33	30	27	33	30	27	32	27
7	36	31	27	25	30	27	25	30	25
8	34	29	25	23	28	25	23	28	23
9	32	27	23	21	26	23	21	26	21
10	30	25	22	20	25	22	20	24	20

PHOTOMETRICS

Candlepower Distribution Curve



Cone of Light

Distance Below to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
4'0"	203	3'6"
5'0"	130	5'0"
7'0"	66	5'6"
8'0"	51	6'6"
9'0"	40	7'0"
10'0"	32	8'0"

Coefficients of Utilization

Ceiling	80%				70%			50%	
Wall %	70	50	30	10	50	30	10	50	10
RCR	Zonal cavity method -- floor reflectance = 20%								
0	73	73	73	73	71	71	71	68	68
1	69	66	64	63	65	63	62	62	60
2	64	60	57	54	59	56	53	57	53
3	59	54	50	47	53	50	47	52	46
4	55	49	45	42	49	44	41	47	41
5	51	45	40	37	44	40	37	43	36
6	48	41	37	33	41	36	33	40	33
7	45	38	33	30	37	33	30	37	30
8	43	35	30	27	35	30	27	34	27
9	40	32	28	25	32	28	25	32	25
10	37	30	26	23	30	26	23	29	23