

DESCRIPTION

Recessed lens downlight with 13 inch aperture for vertical ED28 mogul base metal halide lamp. Electronic ballast features end of life shutdown. Fixture is suitable for commercial construction. Insulation must be kept 3" from top and sides of housing. Universal housing also accepts regressed Fresnel, concave prismatic, and regressed prismatic lens trims.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Plaster Frame / Collar

Extruded aluminum collar accommodates ceiling materials up to 1-7/8" thick.

Conduit Fittings

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

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above the ceiling.

Junction Box

(6) 1/2" and (2) 3/4" 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 reflector with a specular clear Alzak® finish. Reflector can be removed from below the ceiling to access ballast and junction box.

Shielding

Molded concave prismatic clear, regressed prismatic or regressed fresnel glass lens is retained during lamp replacement. Extruded aluminum step baffle with gasket eliminates light leaks.

Trim Retention

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

Socket

Pulse rated mogul base socket accepts unprotected lamps.

Insulation Detector

Self resetting detector opens circuit if insulation is improperly installed.

Ballast

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. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 non consumer limits.



ML13250

10202
10212
10222

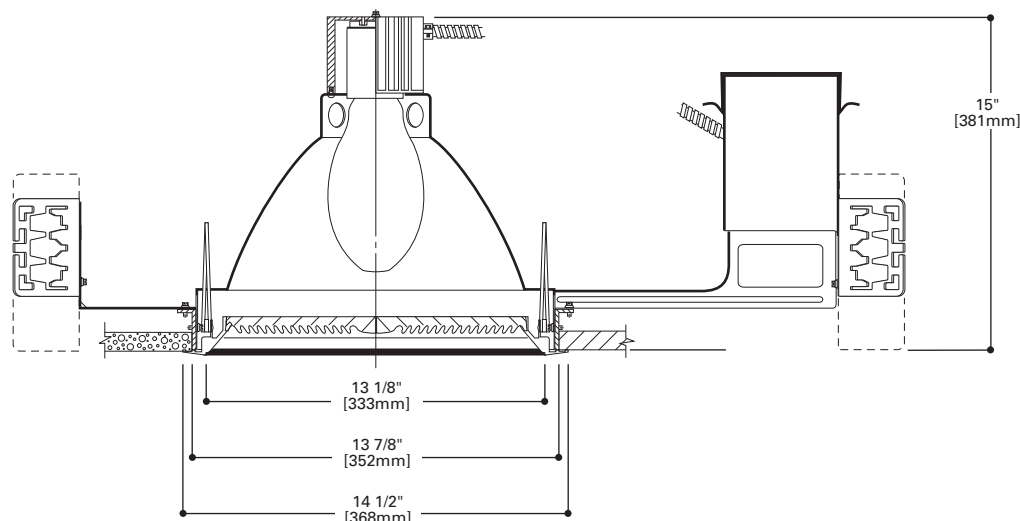
250W

ED28

Metal Halide

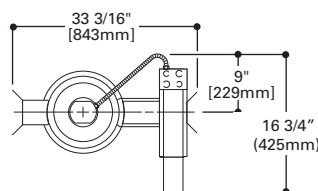
13 Inch

Lens Downlight



TOP VIEW

Top View



Energy Data

250W

277V Input Power: 274W	
277V Input Current: 0.99A	
Minimum Starting Temp: -30°C, -20°F	
THD: <20%	Power Factor: >0.90
Sound Rating: A	

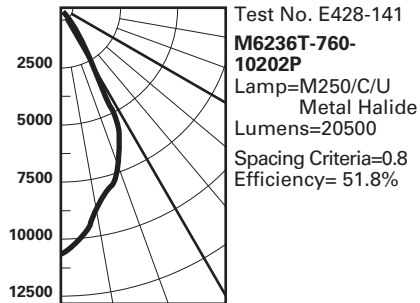
ORDERING INFORMATION

SAMPLE NUMBER: **131502E** = 13" housing with 120V electronic ballast for a 150W ED17 MH lamp
10212P = 13" concave prismatic lens, white trim ring, black baffle
 (Order universal housing and trim separately)

Housing	Wattage	Ballast	Options	Trim	Options	Accessories
ML13 = 13" lens MH housing ML13CP = 13" lens MH housing, CCEA listed for City of Chicago plenum requirements 250 = 250W MH lamp		2E = Electronic, 277V 50/60Hz Q = Quartz re-strike system X = Emergency circuit lamp			P = White trim ring black baffle PWH = White trim ring, white baffle HB26 = Bar hanger, 26" long, pair HB50 = Bar hanger, 50" long, pair	
		10202 = 13" Regressed fresnel lens 10212 = 13" Concave prismatic lens 10222 = 13" Regressed prismatic lens				

PHOTOMETRICS

Candlepower Distribution



Candlepower

Deg.	CD
0	10188
5	9376
15	7514
25	6062
35	3224
45	1480
55	873
65	565
75	270
85	7
90	0

Average Luminance

Deg.	CD/SQ M
45	23944
55	17414
65	15285
75	11937
85	906

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
6'6"	241	5'6"
8'6"	141	7'6"
10'6"	92	9'6"
12'6"	65	10'6"
14'6"	48	12'6"
16'6"	37	13'6"

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.

Footcandle values are initial, apply appropriate light loss factors where necessary.

Lamp Wattage Multiplier
 175W Metal Halide x 0.68

Zonal Lumen Summary

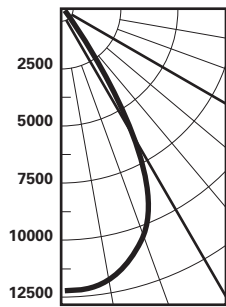
Zone	Lumens	%Lamp	%Luminaire
0-30	5743	28.1	54.1
0-40	7777	37.9	73.3
0-60	9723	47.4	91.6
0-90	10612	51.8	100.0
90-180	0	0.0	0.0
0-180	10612	51.8	100.0

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	62	62	62	62	60	60	60	58	58	55	55	53	53	52
1	58	57	55	54	55	54	53	53	51	53	51	50	48	47
2	55	52	50	48	51	49	47	50	46	48	45	47	44	43
3	52	48	45	43	48	45	43	46	42	45	41	44	41	40
4	49	45	42	39	44	41	30	43	39	42	38	41	38	37
5	46	42	38	36	41	38	36	40	35	39	35	38	35	34
6	44	39	36	33	38	35	33	38	33	37	33	36	32	32
7	41	36	33	30	36	33	30	35	30	34	30	34	30	29
8	39	34	31	28	34	30	28	33	28	32	28	32	28	27
9	37	32	28	26	31	28	26	31	26	30	26	30	26	25
10	35	30	26	24	29	26	24	29	24	29	24	28	24	23

rc=Ceiling reflectance, rw=Wall reflectance, rcr=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.

PHOTOMETRICS**Candlepower Distribution**

Test No. E428-142
M6236T-760-10212P
 Lamp=M250/C/U
 Metal Halide
 Lumens=20500
 Spacing Criteria=0.9
 Efficiency=58.1%

Candlepower

Deg.	CD
0	12435
5	12014
15	10942
25	7931
35	3868
45	1336
55	400
65	156
75	57
85	0
90	0

Average Luminance

Deg.	CD/SQ M
45	21629
55	7973
65	4219
75	2536
85	0

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
6'6"	294	6'0"
8'6"	172	8'0"
10'6"	113	9'6"
12'6"	80	11'6"
14'6"	59	13'6"
16'6"	46	15'0"

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.

Footcandle values are initial, apply appropriate light loss factors where necessary.

Lamp Wattage Multiplier
 175W Metal Halide x 0.683

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	7806	38.1	65.6
0-40	10246	50.0	86.1
0-60	11681	57.0	98.1
0-90	11906	58.1	100.0
90-180	0	0.0	0.0
0-180	11906	58.1	100.0

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	69	69	69	69	68	68	68	65	65	62	62	59	59	58
1	66	65	63	62	63	62	61	61	59	59	57	57	56	55
2	63	61	59	57	60	58	56	58	55	56	54	55	53	52
3	60	57	54	52	56	54	52	55	51	53	50	52	50	49
4	58	54	51	49	53	50	48	52	48	52	48	50	47	46
5	55	51	48	45	50	47	45	49	45	48	44	48	44	43
6	53	48	45	42	47	44	42	47	42	46	42	45	41	41
7	50	45	42	40	45	42	39	44	39	43	39	43	39	38
8	48	43	39	37	42	39	37	42	37	41	37	40	37	36
9	45	40	37	35	40	37	35	39	34	39	34	38	34	33
10	43	38	35	33	38	35	32	37	32	37	32	36	32	31

rc=Ceiling reflectance, rw=Wall reflectance, rcr=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.