

Access Fixtures Bollard Efficiency Based on Light Source and Optics

Optics Type	Lamp			Lamp		Lamp		Luminaire		Luminaire	
	Lamp Watts	System Watts	Life in Hours	Initial Lumens	Mean Lumens	Initial LPW	Mean LPW	Initial Lumens	Mean Lumens	Initial LPW	Mean LPW
Reflector											
50w MH	50	70	10,000	3400	2000	48.6	28.6	816	480	11.7	6.9
70w MH	70	85	10,000	6000	4400	70.6	51.8	1440	1056	16.9	12.4
100w MH	100	129	10,000	8500	5500	65.9	42.6	2040	1320	15.8	10.2
50w HPS	50	64	16,000	4000	3600	62.5	56.3	960	864	15.0	13.5
70w HPS	70	91	24,000	6300	5350	69.2	58.8	1512	1284	16.6	14.1
100w HPS	100	129	24,000	9500	8550	73.6	66.3	2280	2052	17.7	15.9
42w PL Fluorescent	42	42	17,000	3200	2670	76.2	63.6	768	641	18.3	15.3
57w PL Fluorescent	57	57	12,000	4100	3587	71.9	62.9	984	861	17.3	15.1
84w PL Fluorescent	84	84	17,000	6400	5340	76.2	63.6	1536	1282	18.3	15.3
23w CFL	23	23	8,000	1700	1365	73.9	59.3	408	328	17.7	14.2
10w Directional LED	10	10	25000	860	688	86.0	68.8	602	482	60.2	48.2
12w LG LED	12	12	50,000	1345	1076	112.1	89.7	834	667	69.5	55.6
30w Xicato LED	30	30	50,000	2140	1712	71.3	57.1	1177	942	39.2	31.4
Louvers											
50w MH	50	70	10,000	3400	2000	48.6	28.6	748	440	10.7	6.3
70w MH	70	85	10,000	6000	4400	70.6	51.8	1320	968	15.5	11.4
100w MH	100	129	10,000	8500	5500	65.9	42.6	1870	1210	14.5	9.4
50w HPS	50	64	16,000	4000	3600	62.5	56.3	880	792	13.8	12.4
70w HPS	70	91	24,000	6300	5350	69.2	58.8	1386	1177	15.2	12.9
100w HPS	100	129	24,000	9500	8550	73.6	66.3	2090	1881	16.2	14.6
42w PL Fluorescent	42	42	17,000	3200	2670	76.2	63.6	704	587	16.8	14.0
57w PL Fluorescent	57	57	12,000	4100	3587	71.9	62.9	902	789	15.8	13.8
84w PL Fluorescent	84	84	17,000	6400	5340	76.2	63.6	1408	1175	16.8	14.0
23w CFL	23	23	8,000	1700	1365	73.9	59.3	374	300	16.3	13.1
Type V Glass											
50w MH	50	70	10,000	3400	2000	48.6	28.6	1768	1040	25.3	14.9
70w MH	70	85	10,000	6000	4400	70.6	51.8	3120	2288	36.7	26.9
100w MH	100	129	10,000	8500	5500	65.9	42.6	4420	2860	34.3	22.2
50w HPS	50	64	16,000	4000	3600	62.5	56.3	2080	1872	32.5	29.3
70w HPS	70	91	24,000	6300	5350	69.2	58.8	3276	2782	36.0	30.6
100w HPS	100	129	24,000	9500	8550	73.6	66.3	4940	4446	38.3	34.5
42w PL Fluorescent	42	42	17,000	3200	2670	76.2	63.6	1664	1388	39.6	33.1
57w PL Fluorescent	57	57	12,000	4100	3587	71.9	62.9	2132	1865	37.4	32.7
84w PL Fluorescent	84	84	17,000	6400	5340	76.2	63.6	3328	2777	39.6	33.1
23w CFL	23	23	8,000	1700	1365	73.9	59.3	884	710	38.4	30.9
12w Omnidirectional	12	12	25000	860	688	71.7	57.3	447	358	37.3	29.8
12w LG LED	12	12	50,000	1345	1076	112.1	89.7	605	484	50.4	40.4
30w Xicato LED	30	30	50,000	2140	1712	71.3	57.1	963	770	32.1	25.7

Lamp watts are the watts of the lamp.

System watts include the watts of the lamp and ballast.

Lamp Life is average rated life in hours.

Initial lumens are lumens emitted when the light source is new.

Mean Lumens is the average lumens emitted by the system.

LPW is lumens per watt, lumens of light emitted per watt of energy used