



RAPHAEL

OUTDOOR PRODUCTS

Bollard



The RAPHAEL bollard is an elegant solution for your outdoor area lighting needs. Its robust and strong materials allow it to withstand the harshest of elements without a scratch. The Raphael features an innovative optical system providing illumination to your space while keeping the beam shielded from the eye

Project: _____

Location: _____

Cat. No: _____

Type: _____

Qty: _____

Notes: _____

OPERATING & ELECTRICAL

Input voltage: 120-277Vac
Power factor: 0.9
Total harmonic distortion (THD): <20%
Dimming: No dimming

PERFORMANCE

MECHANICAL & HOUSING

Housing: Corrosion-resistant aluminum-cast housing and plate for mounting. Concrete anchor for mounting.
Lens: Glass lens ring

Finish: Thermoset powder coat finish that provides superior resistance to corrosion and weathering. Minimum 3mm thickness for a finish that provides anti cracking and peeling from weather further enhanced with a marine finish coat.

APPLICATION CONDITION

Ambient temperature range: -25°C to 50°C
Dimming: N/A
Protection: IP65, thermally-insulated driver

COMPATIBLE MOUNTING

Mounting: Concrete anchor mounted on aluminum-cast plate

WARRANTY

System warranty: 5 years
Lumen maintenance: L70 at 50,000 hours

ORDERING GUIDE

EXAMPLE: AE-OD-RL23-C10-42-6-3-80-B-M

AE-OD-RL23	-C10-32-6	-3	-80	-B-M
FIXTURE FAMILY	POWER & SIZE	CCT	CRI	HOUSING & FINISH
AE-OD-RL23 Outdoor products Raphael Bollard Fixture	-C10-32-6 120-277Vac 10 watts: 267 lumens 32" height 6" diameter	-3 3000K CCT	-80 80 CRI	-B-M Thermoset powder coat graphite black aluminum-cast housing with marine corrosion resistant finish
	-C20-42-8 120-277Vac 20 watts: 796 lumens 42" height 8" diameter <i>*1-10V Dimming for 20W option only</i>	-4 4000K CCT		-Z-M Thermoset powder coat mineral bronze aluminum-cast housing with marine corrosion resistant finish
	-C35-42-8 120-277Vac 32 watts 42" height 8" diameter	-6 6000K CCT		-W-M Aeralux nebula white thermoset cast housing with marine corrosion resistant finish*
				-S-M Aluminum (RAL9006) thermoset cast housing with marine corrosion resistant finish*

*Contact for leadtimes and availability



IP 65



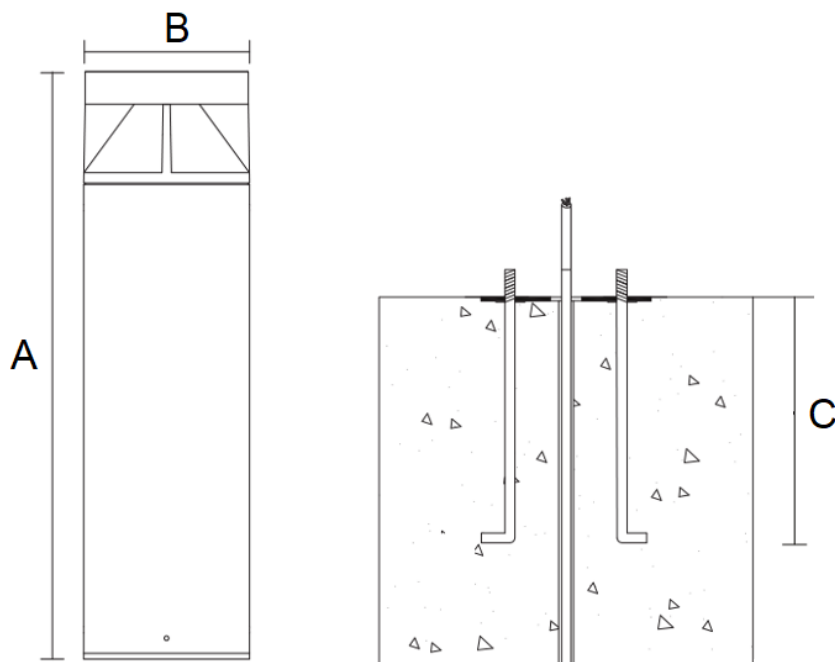
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PRODUCT DIMENSIONS

Product dimensions			
Power	A	B	C
10W	32" [813]	5.5" [140]	7.87" [200]
20W	42" [1067]	7.87" [200]	7.87" [200]
32W	42" [1067]	7.87" [200]	7.87" [200]



B-U-G RATING

BUG Rating	
Power	
10W	B0-U1-G0
20W	B0-U1-G0
32W	B0-U1-G0

LUMEN ESTIMATE

Lumen output varies based on CCT and CRI. An estimate of lumen output of the various CCT/CRI combinations, use correction factors as per table below:

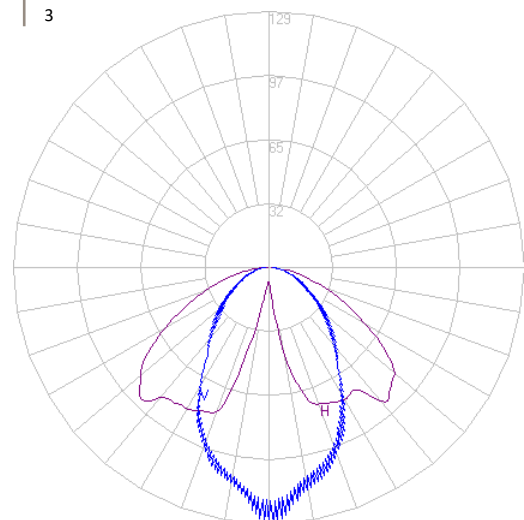
Lumen estimate adjustment factors				
CCT	2700K	3000K	3500K	4000K
NORMAL (70CRI)	0.91	0.94	0.97	1

PHOTOMETRIC DATA

AE-OD-RL23-C10-24-6-3-80-X-M

Coefficients of utilization											
Ceiling	80%				70%		50%		30%		0%
Wall	70%	50%	30%	10%	50%	10%	50%	10%	50%	10%	0
RCR	Zonal Cavity Method – Effective floor reflectance = 20%										
0	26	26	26	26	26	26	24	24	23	23	22
1	24	22	21	20	22	20	21	19	20	19	18
2	21	19	17	16	18	15	18	15	17	15	14
3	19	16	14	12	16	12	15	12	14	12	11
4	17	14	11	10	13	10	13	9	12	9	9
5	15	12	9	8	12	8	11	8	11	8	7
6	14	10	8	6	10	6	10	6	9	6	6
7	12	9	7	5	9	5	8	5	8	5	5
8	11	8	6	4	8	4	7	4	7	4	4
9	10	7	5	4	7	4	7	4	6	4	3
10	10	6	4	3	6	3	6	3	6	3	3

Zonal lumen			
Zone	Lumens	Zone	Lumens
0-10	0.06	90-100	0
10-20	0.33	100-110	0
20-30	11.52	110-120	0
30-40	50	120-130	0
40-50	69.27	130-140	0
50-60	62.95	140-150	0
60-70	43.21	150-160	0
70-80	21.64	160-170	0
80-90	7.12	170-180	0



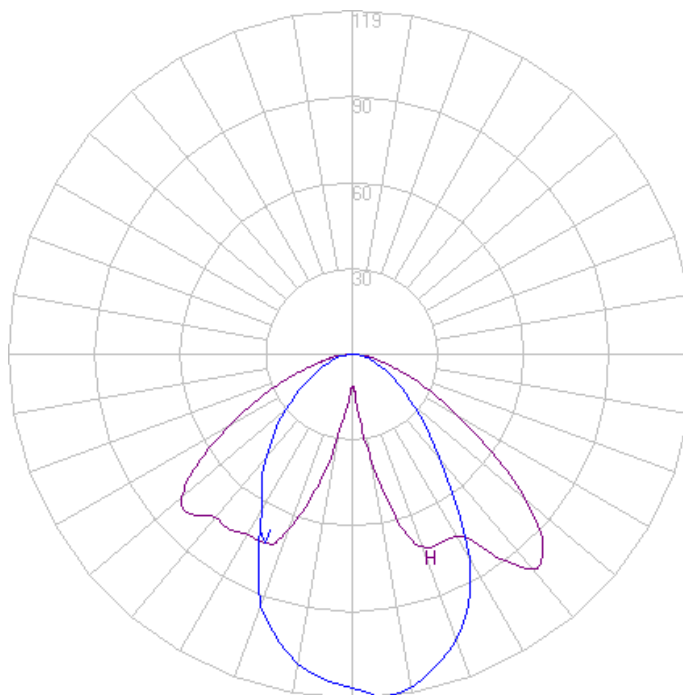
AE-OD-RL23-C10-24-6-3-80-X-M

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70%	50%	30%	10%	50%	10%	50%	10%	50%	10%	0
RCR	Zonal Cavity Method – Effective floor reflectance = 20%										
0	29	29	29	29	28	28	27	27	26	26	24
1	26	25	24	23	24	22	23	22	22	21	20
2	23	21	19	18	21	18	20	17	19	17	16
3	21	18	16	14	18	14	17	14	16	14	13
4	19	16	13	11	15	11	15	11	14	11	10
5	17	13	11	9	13	9	13	9	12	9	8
6	15	12	9	8	11	7	11	7	11	7	7
7	14	10	8	6	10	6	10	6	9	6	5
8	13	9	7	5	9	5	9	5	8	5	5
9	12	8	6	4	8	4	8	4	7	4	4
10	11	7	5	4	7	4	7	4	7	4	3

Zonal lumen

Zone	Lumens	Zone	Lumens
0-10	0.11	90-100	0
10-20	0.48	100-110	0
20-30	12.04	110-120	0
30-40	49.16	120-130	0
40-50	69.84	130-140	0
50-60	60.25	140-150	0
60-70	33.14	150-160	0
70-80	13.61	160-170	0
80-90	3.44	170-180	0



AE-OD-RL24-C20-36-8-3-80-X-M

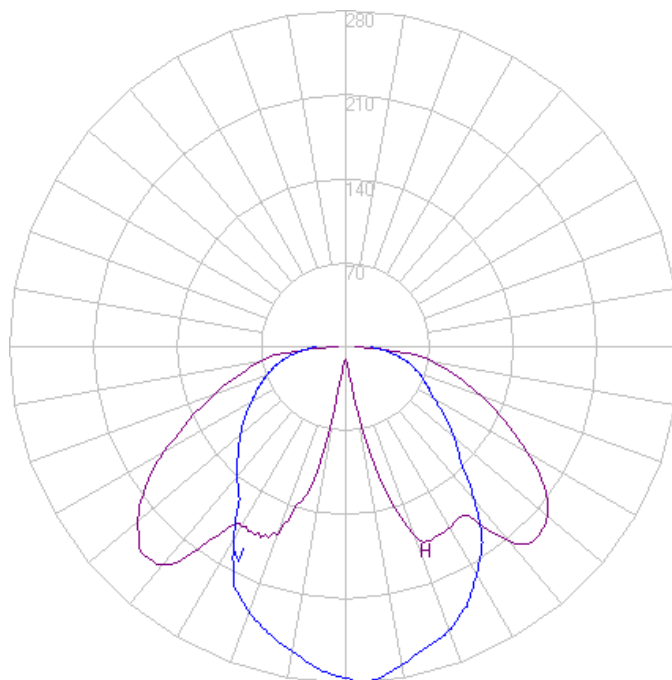
Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70%	50%	30%	10%	50%	10%	50%	10%	50%	10%	0
RCR	Zonal Cavity Method – Effective floor reflectance = 20%										
0	46	46	46	46	45	45	43	43	41	41	38
1	40	38	35	33	37	33	35	32	34	31	29
2	36	31	28	25	31	25	29	24	28	24	22
3	32	26	22	19	26	19	25	19	23	18	17
4	28	23	18	15	22	15	21	15	20	15	13
5	25	19	15	12	19	12	18	12	17	12	11
6	23	17	13	10	16	10	16	10	15	9	8
7	21	15	11	8	14	8	14	8	13	8	7
8	19	13	9	7	13	7	12	7	12	6	6
9	18	12	8	6	11	6	11	5	11	5	5
10	16	11	7	5	10	5	10	5	9	5	4

Room Cavity Ratio

Zonal lumen

Zone	Lumens	Zone	Lumens
0-10	0.21	90-100	0
10-20	1.17	100-110	0
20-30	27.75	110-120	0
30-40	120.36	120-130	0
40-50	169.48	130-140	0
50-60	169.06	140-150	0
60-70	136.87	150-160	0
70-80	93.75	160-170	0
80-90	50.28	170-180	0



MULTIPLE SIZES

Available in 6, and 8" diameter bore sizes, with heights of 33, and 44" depending on the lumen package selected.

CORROSION RESISTANT FINISH

Thermoset powder coat finish combined with anti-cracking marine grade corrosion resistant finish to withstand harsh environmental conditions.

PREMIUM MATERIALS

Aluminum die-cast housing and plate for enhanced thermal heat dissipation and structural integrity.



OPTICAL GLASS

Innovative optical system provides illumination to your space while keeping the beam shielded from eyes.

Aeralux Inc.

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