

DATE: 8 March 2024
DESIGNER: MW
PROJECT No: 20240201
PROJECT NAME: Eagle Brewery Wharf

**LIGHTING
REALITY**

Outdoor Lighting Report

Design Summary:

- The proposed spotlights will utilize photocell sensors to automatically deactivate at pub closing hours. This minimizes unnecessary illumination during periods of low activity, thereby reducing disturbance to nearby dwellings or roads
- 3pcs of 8m columns will be installed, each supporting three high efficiency spotlights at varying mounting heights of 6.5m, 7m and 7.5m.
- Each spotlight, estimated at 20W, features a 19-degree beam angle and honeycomb louver to reduce light spill and protect nocturnal species.
- An average lux level of approx. 20-25 lux will be achieved when all lights are switched on. Post-pub closure, illumination will decrease to 10-15 lux through atmospheric lighting, focusing on localized areas.
- The simulation report indicates that the spotlights minimally affect unlit areas, ensuring minimal disturbance to nearby dwellings or roads.

This lighting report underscores our commitment to ecological stewardship by prioritizing wildlife conservation and habitat protection in our lighting design. By incorporating Dark Sky Principles and adopting environmentally conscious practices, we strive to achieve a harmonious balance between human needs and ecological sustainability.

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	517738.30	169012.92	37.79	38.15	1.45	1.47
2	High Street	517772.00	169045.00	24.00	5.00	1.50	1.25
3	Minima Yacht Club	517773.00	169021.00	29.27	5.00	1.46	1.25
4	Ram Pub Garden	517746.00	169050.00	26.31	5.00	1.46	1.25

Luminaires

Luminaire A Data

Supplier	
Type	Turn_19gM_honeycomb_830
Lamp(s)	V18_30E4000-C-83_900mA
LampFlux(klm)/Colour	4.98 3000/83.7
File Name	turn_19grm_honeycomb_830.ltd
Maintenance Factor	0.80
Lum. Int. Class	G3
No. in Project	9

Luminaire B Data

Supplier	
Type	[TEST] Calculated based on ColorGraze Compact Intellihue Power
Lamp(s)	[ISSUE DATE] 06/23/2022
Lamp Flux (klm)	0.19
File Name	Graze-Compact-gen2-Intellihue-60X60-LP-3000K-1ft.ies
Maintenance Factor	0.80
Lum. Int. Class	G3
No. in Project	80

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
1	A	517755.13	169042.09	7.50	148.00	40.00	0.00	0.00	50%			
2	A	517755.41	169041.66	7.00	225.00	40.00	0.00	0.00	50%			
3	A	517755.74	169042.11	6.50	12.00	40.00	0.00	0.00	50%			
4	A	517750.98	169027.05	7.50	135.00	40.00	0.00	0.00	50%			
5	A	517751.52	169027.27	6.50	38.00	40.00	0.00	0.00	50%			
6	A	517751.34	169026.77	7.00	253.00	40.00	0.00	0.00	50%			
7	A	517764.91	169033.49	7.00	33.00	40.00	0.00	0.00	50%			
8	A	517764.86	169033.01	6.50	226.00	40.00	0.00	0.00	50%			
9	A	517764.42	169033.27	7.50	141.00	40.00	0.00	0.00	50%			
10	B	517770.01	169041.02	0.60	187.18	0.00	0.00	0.00	100%			
11	B	517769.68	169040.98	0.60	187.18	0.00	0.00	0.00	100%			
12	B	517769.35	169040.94	0.60	187.18	0.00	0.00	0.00	100%			
13	B	517769.02	169040.90	0.60	187.18	0.00	0.00	0.00	100%			
14	B	517768.70	169040.85	0.60	187.18	0.00	0.00	0.00	100%			
15	B	517768.37	169040.81	0.60	187.18	0.00	0.00	0.00	100%			
16	B	517768.04	169040.77	0.60	187.18	0.00	0.00	0.00	100%			
17	B	517767.71	169040.73	0.60	187.18	0.00	0.00	0.00	100%			

Layout Continued

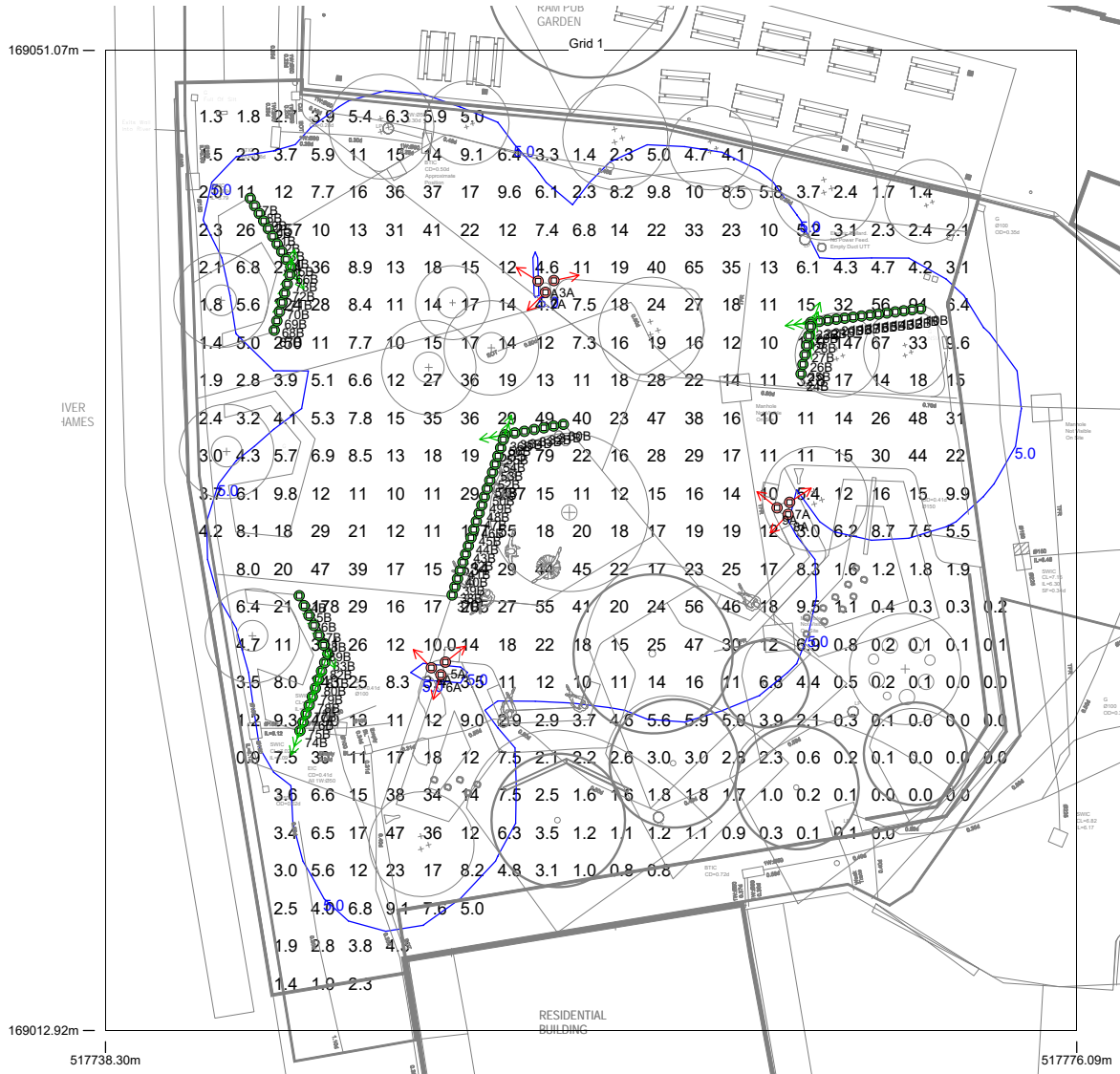
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
18	B	517767.38	169040.69	0.60	187.18	0.00	0.00	0.00	100%			
19	B	517767.05	169040.65	0.60	187.18	0.00	0.00	0.00	100%			
20	B	517766.73	169040.61	0.60	187.18	0.00	0.00	0.00	100%			
21	B	517766.40	169040.56	0.60	187.18	0.00	0.00	0.00	100%			
22	B	517766.07	169040.52	0.60	187.18	0.00	0.00	0.00	100%			
23	B	517765.74	169040.48	0.60	187.18	0.00	0.00	0.00	100%			
24	B	517765.36	169038.48	0.60	428.69	0.00	0.00	0.00	100%			
25	B	517765.43	169038.85	0.60	428.69	0.00	0.00	0.00	100%			
26	B	517765.51	169039.22	0.60	428.69	0.00	0.00	0.00	100%			
27	B	517765.58	169039.59	0.60	428.69	0.00	0.00	0.00	100%			
28	B	517765.65	169039.96	0.60	428.69	0.00	0.00	0.00	100%			
29	B	517765.73	169040.33	0.60	428.69	0.00	0.00	0.00	100%			
30	B	517756.11	169036.52	0.60	190.17	0.00	0.00	0.00	100%			
31	B	517755.73	169036.45	0.60	190.17	0.00	0.00	0.00	100%			
32	B	517755.35	169036.38	0.60	190.17	0.00	0.00	0.00	100%			
33	B	517754.97	169036.32	0.60	190.17	0.00	0.00	0.00	100%			
34	B	517754.60	169036.25	0.60	190.17	0.00	0.00	0.00	100%			
35	B	517754.22	169036.18	0.60	190.17	0.00	0.00	0.00	100%			
36	B	517753.84	169036.11	0.60	190.17	0.00	0.00	0.00	100%			
37	B	517751.79	169029.88	0.60	431.79	0.00	0.00	0.00	100%			
38	B	517751.89	169030.20	0.60	431.79	0.00	0.00	0.00	100%			
39	B	517752.00	169030.51	0.60	431.79	0.00	0.00	0.00	100%			
40	B	517752.10	169030.83	0.60	431.79	0.00	0.00	0.00	100%			
41	B	517752.20	169031.15	0.60	431.79	0.00	0.00	0.00	100%			
42	B	517752.31	169031.47	0.60	431.79	0.00	0.00	0.00	100%			
43	B	517752.41	169031.79	0.60	431.79	0.00	0.00	0.00	100%			
44	B	517752.52	169032.11	0.60	431.79	0.00	0.00	0.00	100%			
45	B	517752.62	169032.42	0.60	431.79	0.00	0.00	0.00	100%			
46	B	517752.73	169032.74	0.60	431.79	0.00	0.00	0.00	100%			
47	B	517752.83	169033.06	0.60	431.79	0.00	0.00	0.00	100%			
48	B	517752.94	169033.38	0.60	431.79	0.00	0.00	0.00	100%			
49	B	517753.04	169033.70	0.60	431.79	0.00	0.00	0.00	100%			
50	B	517753.15	169034.01	0.60	431.79	0.00	0.00	0.00	100%			
51	B	517753.25	169034.33	0.60	431.79	0.00	0.00	0.00	100%			
52	B	517753.36	169034.65	0.60	431.79	0.00	0.00	0.00	100%			
53	B	517753.46	169034.97	0.60	431.79	0.00	0.00	0.00	100%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
54	B	517753.57	169035.29	0.60	431.79	0.00	0.00	0.00	100%			
55	B	517753.67	169035.61	0.60	431.79	0.00	0.00	0.00	100%			
56	B	517753.78	169035.92	0.60	431.79	0.00	0.00	0.00	100%			
57	B	517743.93	169045.32	0.60	300.53	0.00	0.00	0.00	100%			
58	B	517744.10	169045.02	0.60	300.53	0.00	0.00	0.00	100%			
59	B	517744.28	169044.72	0.60	300.53	0.00	0.00	0.00	100%			
60	B	517744.45	169044.43	0.60	300.53	0.00	0.00	0.00	100%			
61	B	517744.63	169044.13	0.60	300.53	0.00	0.00	0.00	100%			
62	B	517744.80	169043.83	0.60	300.53	0.00	0.00	0.00	100%			
63	B	517744.98	169043.54	0.60	300.53	0.00	0.00	0.00	100%			
64	B	517745.15	169043.24	0.60	300.53	0.00	0.00	0.00	100%			
65	B	517745.33	169042.94	0.60	300.53	0.00	0.00	0.00	100%			
66	B	517745.51	169042.65	0.60	300.53	0.00	0.00	0.00	100%			
67	B	517744.86	169040.18	0.70	439.36	0.00	0.00	0.00	100%			
68	B	517744.97	169040.54	0.70	439.36	0.00	0.00	0.00	100%			
69	B	517745.07	169040.90	0.70	439.36	0.00	0.00	0.00	100%			
70	B	517745.17	169041.26	0.70	439.36	0.00	0.00	0.00	100%			
71	B	517745.27	169041.62	0.70	439.36	0.00	0.00	0.00	100%			
72	B	517745.37	169041.98	0.70	439.36	0.00	0.00	0.00	100%			
73	B	517745.47	169042.34	0.70	439.36	0.00	0.00	0.00	100%			
74	B	517745.86	169024.59	0.60	250.08	0.00	0.00	0.00	100%			
75	B	517745.98	169024.92	0.60	250.08	0.00	0.00	0.00	100%			
76	B	517746.10	169025.26	0.60	250.08	0.00	0.00	0.00	100%			
77	B	517746.22	169025.59	0.60	250.08	0.00	0.00	0.00	100%			
78	B	517746.34	169025.92	0.60	250.08	0.00	0.00	0.00	100%			
79	B	517746.46	169026.25	0.60	250.08	0.00	0.00	0.00	100%			
80	B	517746.58	169026.58	0.60	250.08	0.00	0.00	0.00	100%			
81	B	517746.70	169026.92	0.60	250.08	0.00	0.00	0.00	100%			
82	B	517746.83	169027.25	0.60	250.08	0.00	0.00	0.00	100%			
83	B	517746.95	169027.58	0.60	250.08	0.00	0.00	0.00	100%			
84	B	517745.83	169029.85	0.60	296.39	0.00	0.00	0.00	100%			
85	B	517746.02	169029.46	0.60	296.39	0.00	0.00	0.00	100%			
86	B	517746.22	169029.08	0.60	296.39	0.00	0.00	0.00	100%			
87	B	517746.41	169028.69	0.60	296.39	0.00	0.00	0.00	100%			
88	B	517746.60	169028.31	0.60	296.39	0.00	0.00	0.00	100%			
89	B	517746.79	169027.93	0.60	296.39	0.00	0.00	0.00	100%			

Horizontal Illuminance (lux)

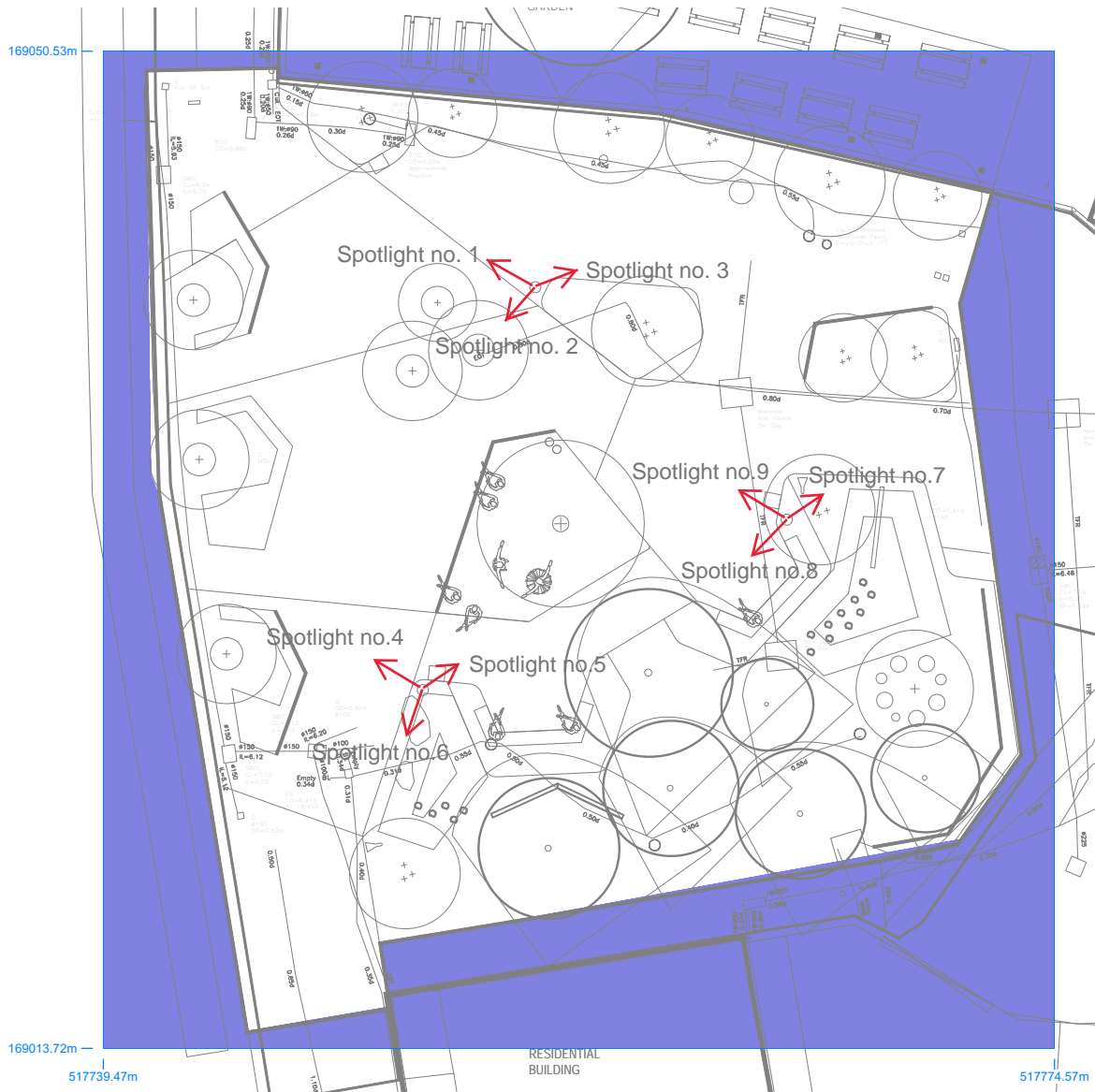
Grid 1



Results

Eav	23.34
Emin	0.01
Emax	584.92
Emin/Emax	0.00
Emin/Eav	0.00

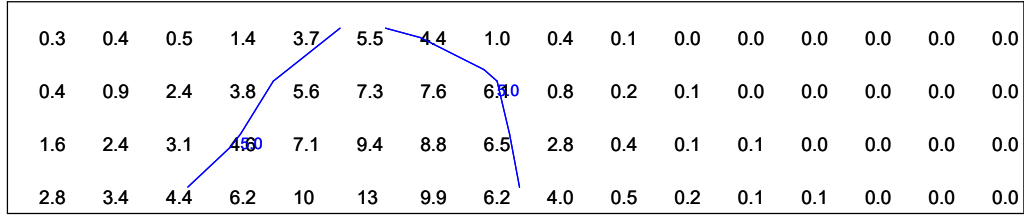
Location Plan - Columns & Spotlights



Spotlight ref.	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach
1	A	517755.13	169042.09	7.50	148.00	40.00	0.00	0.00
2	A	517755.41	169041.66	7.00	225.00	40.00	0.00	0.00
3	A	517755.74	169042.11	6.50	12.00	40.00	0.00	0.00
4	A	517750.98	169027.05	7.50	135.00	40.00	0.00	0.00
5	A	517751.52	169027.27	6.50	38.00	40.00	0.00	0.00
6	A	517751.34	169026.77	7.00	253.00	40.00	0.00	0.00
7	A	517764.91	169033.49	7.00	33.00	40.00	0.00	0.00
8	A	517764.86	169033.01	6.50	226.00	40.00	0.00	0.00
9	A	517764.42	169033.27	7.50	141.00	40.00	0.00	0.00

Vertical Illuminance (lux)

High Street

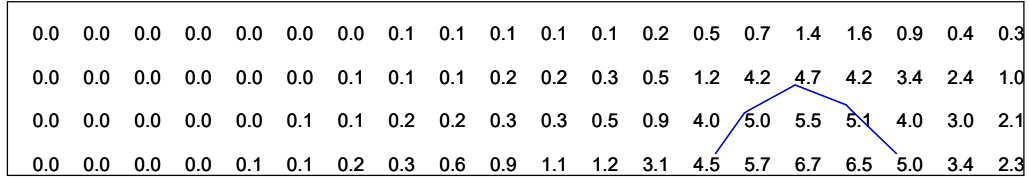


Results

Eav	2.52
Emin	0.01
Emax	13.29
Emin/Emax	0.00
Emin/Eav	0.00

Vertical Illuminance (lux)

Minima Yacht Club



Results

Eav	1.28
Emin	0.01
E _{max}	6.73
Emin/E _{max}	0.00
Emin/Eav	0.01

Vertical Illuminance (lux)

Ram Pub Garden

0.5	0.9	1.1	0.9	0.7	0.5	0.2	0.1	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2
1.8	2.4	3.2	4.0	3.0	0.8	0.4	0.2	0.4	0.7	0.9	1.4	1.3	0.9	0.6	0.4	0.3	0.3
2.1	2.8	3.6	4.2	4.4	2.1	0.7	0.4	0.7	1.6	4.1	3.6	2.8	2.1	1.6	1.2	0.9	0.7
2.5	3.4	4.2	4.5	4.4	3.7	1.2	1.0	1.2	4.0	4.2	3.8	3.1	2.4	1.8	1.4	1.2	1.4

Results

Eav	1.66
Emin	0.15
E _{max}	4.51
Emin/E _{max}	0.03
Emin/Eav	0.09



TURN

A spot light luminaire in a minimalist, cylindrical design

Turn

IP66 | IK10 | CLASS I / CLASS II

Features:

- Part of the Focus by DW Windsor range
- Designed by Fris & Moltke Design, Denmark
- Flexible bracket allows Turn to be adjusted in any direction
- Available with a range of 3 distributions; narrow (12°), medium (19°), and wide (38°)

Light source:

Bridgelux Vero 18

Optical control:

Beam angle:

Wide beam reflector 38°
Medium beam reflector 19°
Narrow beam 12°

Light output:

Colour temp.	CRI	Lumen output
2700k	90Ra min.	1550 - 4400
3000k	90Ra min.	1650 - 4600
4000k	90Ra min.	1700 - 4700

L80 (B10) lifetime prediction:

Min. 100,000 hours (@ T_a max. 25 °C)

Driver

Xitanium Full Xi FP 40W 0.3-1.0 A programmable

CLO enabled

Surge protection: L/N-GND: 8kV
L-N: 6kV

Switching and control:

Remote switch via photocell / timeclock

Pre-programmed

Dimmable: Dali, 1-10V

Colours:

SW302G Graphite grey

MW300D Silver grey

SN351F Black (Noir 900 Sablé)

YX355F Corten brown (Mars 2525)

RAL colours available on request

Materials:

Body: High pressure die-cast aluminium

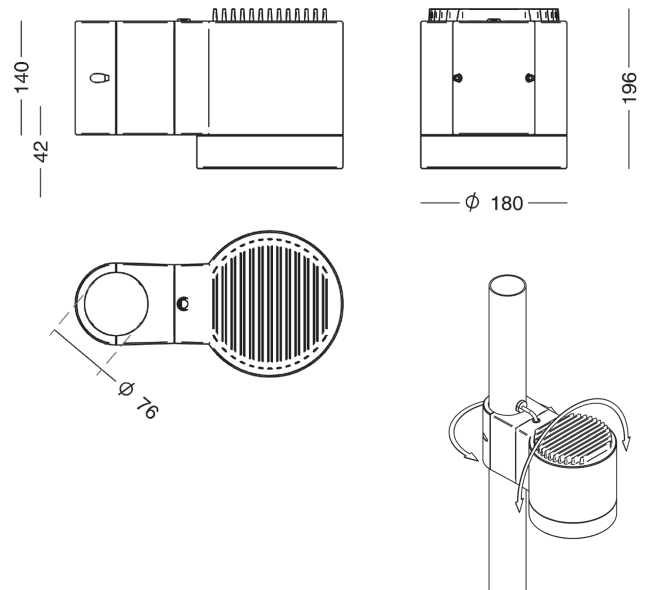
Glazing: Clear glass with silk coating at the edge

Mounting:

Clamp bracket for Ø76mm column shaft

Can be oriented in any direction

Dimensions:



Windage:

0.053m²

DW Windsor

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