

Appendix 14.2. Outdoor Lighting Report

DATE: 1 December 2025
DESIGNER: Sean Rafferty
PROJECT No: 5161805
PROJECT NAME: Mortarstown WWTP

**LIGHTING
REALITY**

FOR PLANNING

Design in Accordance with EN-13201 and WIMES 3.02E

Roads - 10 lux average 0.25 uniformity

Bat Roost Area: less than 1 lux, horizontal and vertical

Outdoor Lighting Report

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LIGHTING
REALITY

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 Roads	671140.65	674658.10	433.83	286.86	1.74	1.49
2	Bat Roost	671234.23	674901.99	21.69	42.46	1.45	1.46
3	Bat Roost Vertical Grid	671248.83	674905.51	11.01	5.00	1.38	1.25

Luminaires



Luminaire A Data

Supplier	Urbis Schreder
Type	AXIA 3.1 5384 Integrated lenses 16 OSLON SQUARE GIANT@700mA
Lamp(s)	16 OSLON SQUARE GIANT@700mA WW 7 27 230V 00-53-397
LampFlux(klm)/Colour	4.16 WW 2700K/70
File Name	AXIA 3.1 5384 16 OSLON SQUARE GIANT 7 00mA WW 727 35.6W 487502 Integrated le...
Maintenance Factor	0.89
Imax70,80,90(cd/klm)	1031.6, 225.6, 0.0
No. in Project	33

Luminaire B Data

Supplier	
Type	AXIA 3.1 5384 Integrated lenses Back Light 1 6 OSLON SQUARE GI
Lamp(s)	16 OSLON SQUARE GIANT@700mA WW 7 27 230V 01-11-814
LampFlux(klm)/Colour	4.75 WW 2700K/70
File Name	36.3W 487532 Integrated lenses BL 230V EF Ultra-Narrow ProFlex .ldt
Maintenance Factor	0.89
Imax70,80,90(cd/klm)	849.7, 184.2, 0.0
No. in Project	3

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	671531.52	674782.22	6.00	260.00	0.00	0.00	0.50			
3	A	671481.88	674792.90	6.00	265.00	0.00	0.00	0.50			
4	A	671455.27	674790.76	6.00	247.00	0.00	0.00	0.50			
5	A	671462.43	674762.53	6.00	337.00	0.00	0.00	0.50			
6	A	671458.58	674738.72	6.00	155.00	0.00	0.00	0.50			
7	A	671452.45	674722.52	6.00	159.00	0.00	0.00	0.50			
8	A	671435.77	674800.36	6.00	224.00	0.00	0.00	0.50			
9	A	671440.26	674814.01	6.00	157.00	0.00	0.00	0.50			
10	A	671494.66	674771.27	6.00	90.00	0.00	0.00	0.50			
11	A	671447.26	674833.01	6.00	155.00	0.00	0.00	0.50			
12	A	671420.76	674839.17	6.00	67.00	0.00	0.00	0.50			
13	B	671449.82	674847.81	6.00	246.00	0.00	0.00	0.50			
14	A	671411.05	674807.48	6.00	242.00	0.00	0.00	0.50			
15	A	671372.30	674824.44	6.00	248.00	0.00	0.00	0.50			
16	A	671390.49	674809.95	6.00	72.00	0.00	0.00	0.50			
17	A	671347.76	674829.56	6.00	333.00	0.00	0.00	0.50			
18	A	671367.44	674863.37	6.00	160.00	0.00	0.00	0.50			
19	A	671355.59	674850.44	6.00	332.00	0.00	0.00	0.50			

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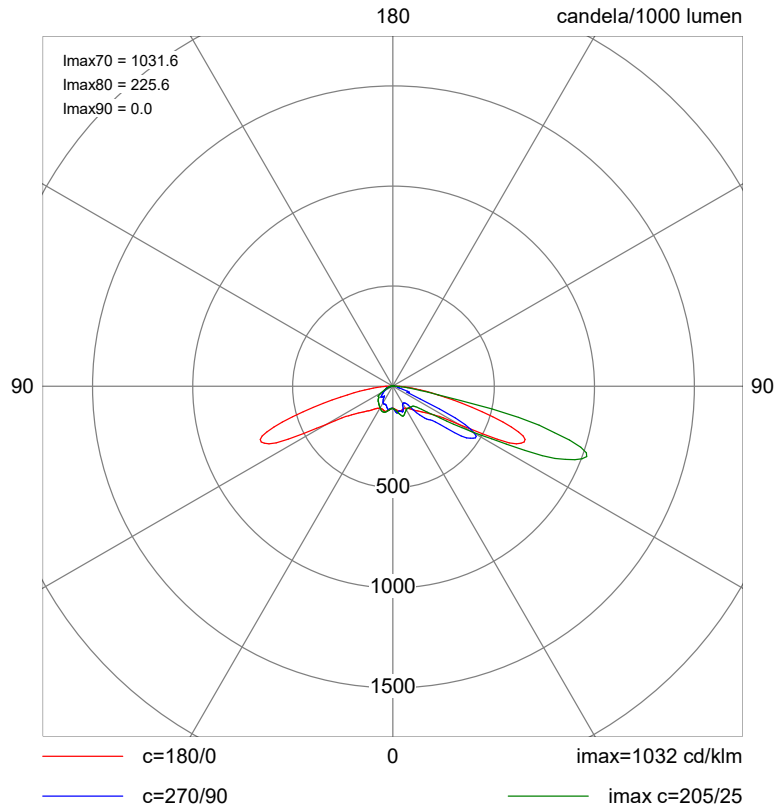
LIGHTING
REALITY

Layout Continued

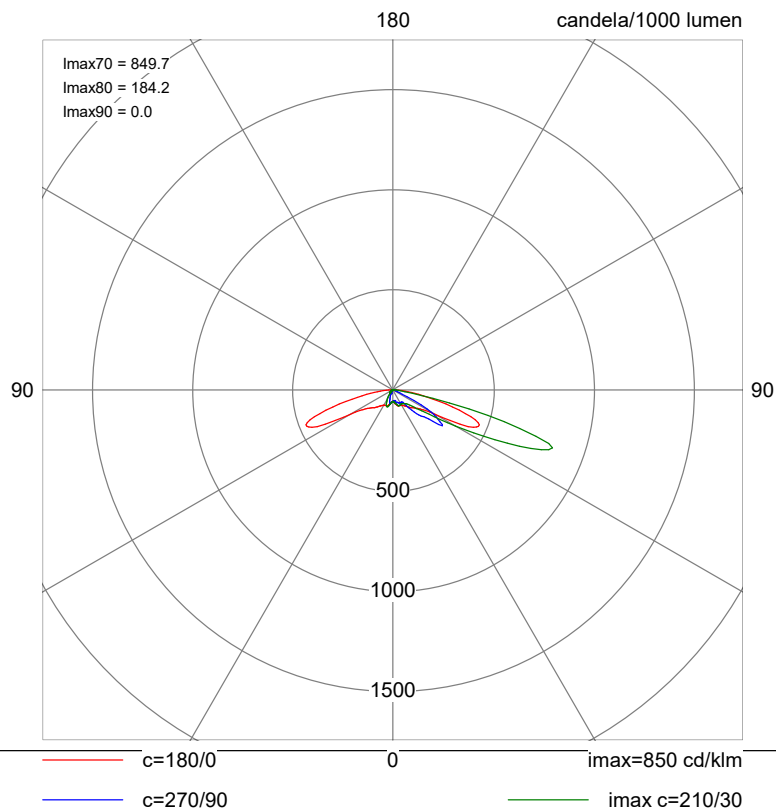
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
20	A	671367.42	674882.04	6.00	334.00	0.00	0.00	0.50			
21	A	671344.30	674868.82	6.00	73.00	0.00	0.00	0.50			
23	B	671311.78	674881.08	6.00	69.00	0.00	0.00	0.50			
24	B	671285.16	674891.29	6.00	69.00	0.00	0.00	0.50			
26	A	671279.28	674908.42	5.00	249.00	0.00	0.00	0.50			
27	A	671347.01	674807.55	6.00	155.00	0.00	0.00	0.50			
28	A	671325.56	674811.76	6.00	69.00	0.00	0.00	0.50			
29	A	671299.93	674821.77	6.00	69.00	0.00	0.00	0.50			
30	A	671340.26	674789.42	6.00	162.00	0.00	0.00	0.50			
31	A	671332.48	674768.71	6.00	153.00	0.00	0.00	0.50			
32	A	671325.48	674750.54	6.00	160.00	0.00	0.00	0.50			
33	A	671319.74	674733.73	6.00	69.00	0.00	0.00	0.50			
35	A	671345.51	674723.97	6.00	69.00	0.00	0.00	0.50			
36	A	671371.30	674714.34	6.00	69.00	0.00	0.00	0.50			
37	A	671391.52	674706.85	6.00	69.00	0.00	0.00	0.50			
38	A	671411.52	674699.23	6.00	69.00	0.00	0.00	0.50			
39	A	671507.70	674783.95	6.00	261.00	0.00	0.00	0.50			
40	A	671550.34	674772.40	6.00	85.00	0.00	0.00	0.50			

Polar Diagrams

Luminaire A AXIA 3.1 5384 Integrated lenses 16 OSLON SQUARE GIANT@700mA

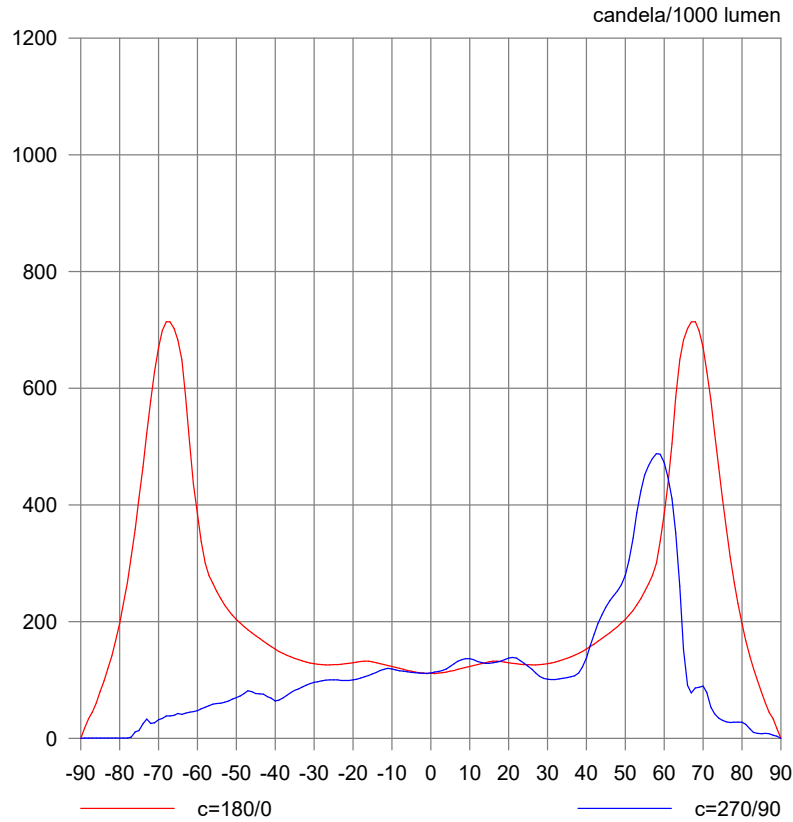


Luminaire B AXIA 3.1 5384 Integrated lenses Back Light 16 OSLON SQUARE GI

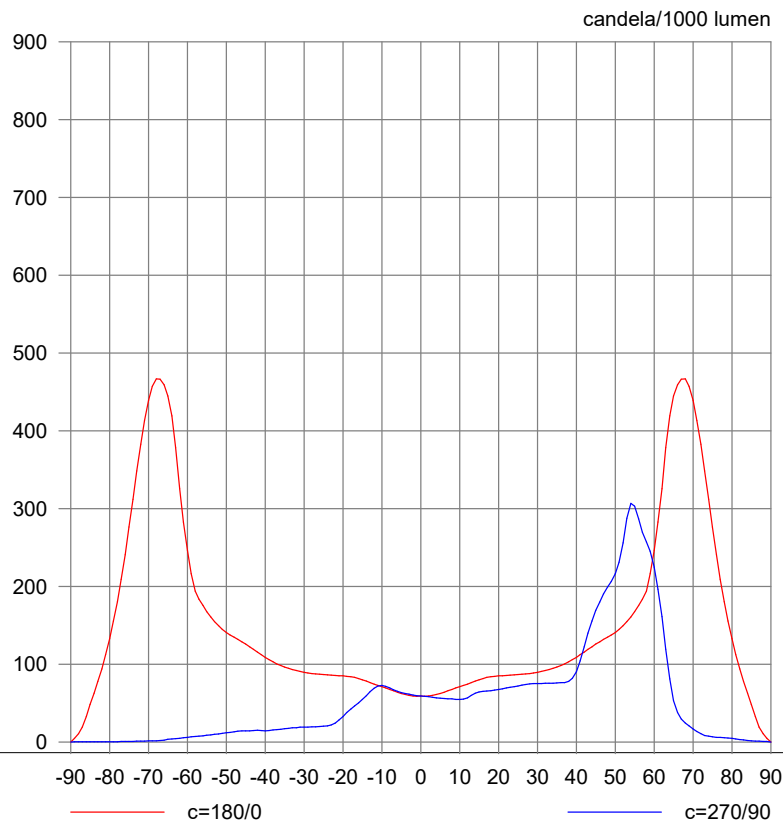


Cartesian Diagrams

Luminaire A AXIA 3.1 5384 Integrated lenses 16 OSLO SQUARE GIANT@700mA

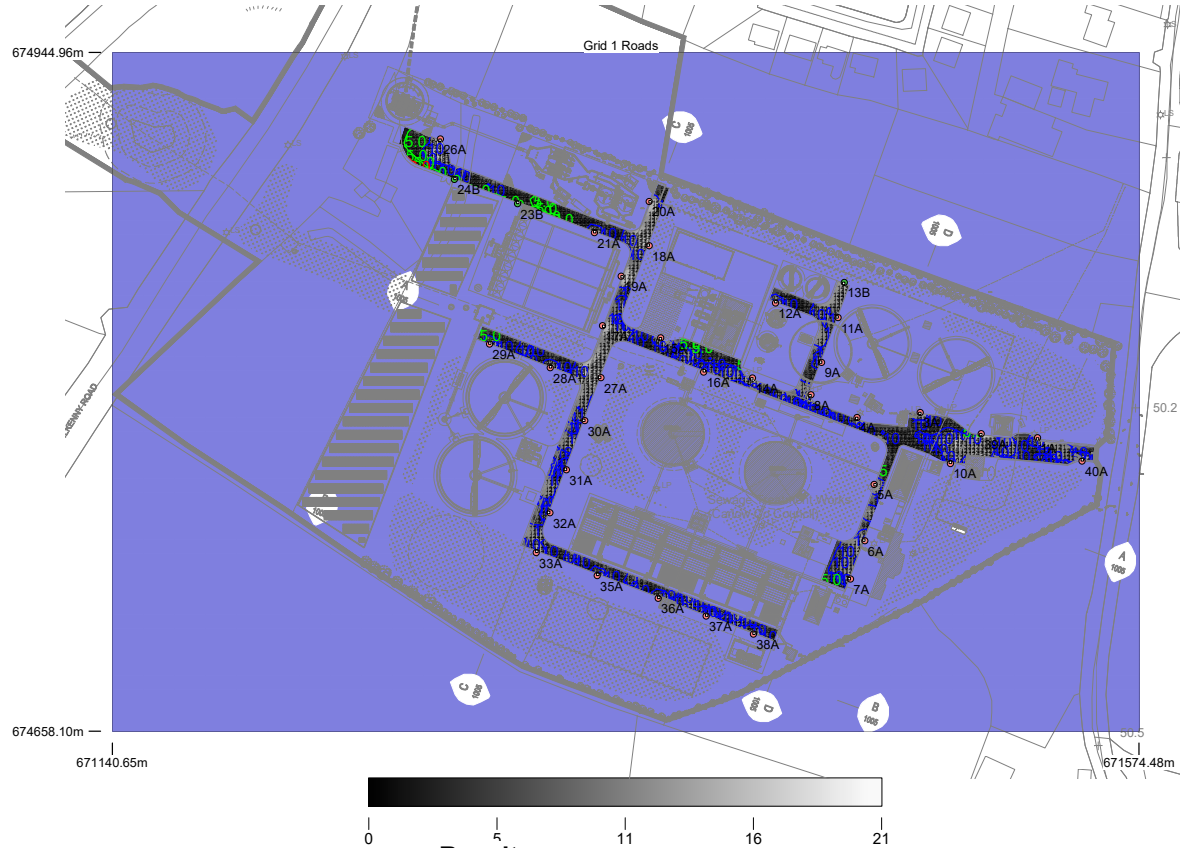


Luminaire B AXIA 3.1 5384 Integrated lenses Back Light 16 OSLO SQUARE GI



Horizontal Illuminance (lux)

Grid 1 Roads

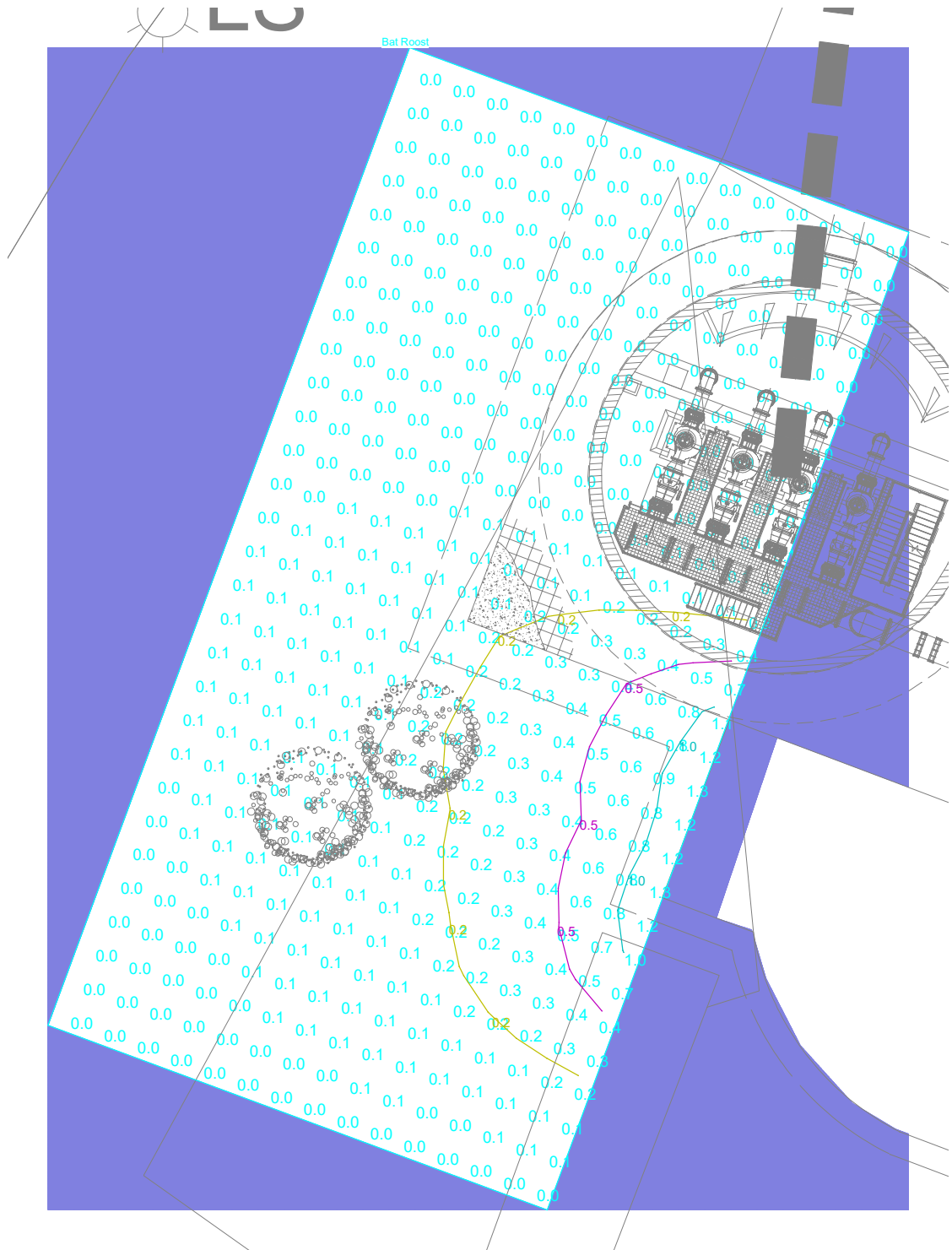


Results

Eav	10.08
Emin	2.60
Emax	21.12
Emin/Emax	0.12
Emin/Eav	0.26

Horizontal Illuminance (lux)

Bat Roost

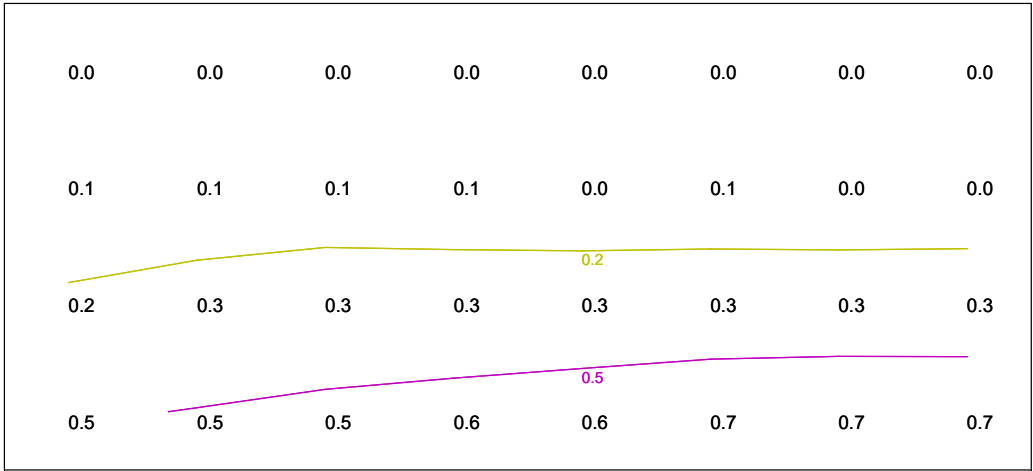


Results

Eav	0.13
Emin	0.01
Emax	7 1.29

Illuminance (lux)

Bat Roost Vertical Grid



Results

Eav	0.23
Emin	0.00
Emax	0.68
Emin/Emax	0.00
Emin/Eav	0.01

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