

DATE: 18 February 2022
DESIGNER: s.40
PROJECT No: 1000007892-PCL-LCP-2-01-01-V02
PROJECT NAME: Pudding Mill Lane

**PROJECT
CENTRE**

Proposed calculation
C3 Target Lighting Level for Pudding Mill Lane and Barber Lane
existing
M3 (C3 Comparable) for Marshgate Lane and Barley Lane
Eav (min) - 15.00 Lux
Emin/Eav (min) 0.40 uniformity

Environmental Zone E3,

Maintenance Factor 0.83: 72 months, >6m,
CCT 4000K
MF = 0.90 x 1.00 x 0.92 = 0.83

Luminaires on 0.5m or 1.0m brackets, 670mm to centre of
LEDs

Outdoor Lighting Report

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	Pudding Mill Lane	538008.83	183370.75	58.36	182.50	1.50	1.50
2	Marshgate Barley	538015.24	183369.29	106.41	178.12	1.50	1.50
3	Barbers Road	537872.01	183525.84	33.00	106.50	1.50	1.50

Luminaires



Luminaire A Data

Supplier	Urbis Schreder
Type	AXIA 2.2 5188 Integrated lenses 32 NVSL 219CT@890mA NW 740 2
Lamp(s)	32 NVSL219CT@890mA NW 740 230V
LampFlux(klm)/Colour	9.11 NW 4000K/70
File Name	AXIA 2.2 5188 32 NVSL219CT 890mA NW 740 89W 384192 Integrated lenses 230V ...
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	1023.1, 181.3, 0.0
No. in Project	24

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	537945.86	183576.88	10.00	39.00	0.00	0.00	1.17			
3	A	537973.79	183551.89	10.00	219.00	0.00	0.00	1.17			
4	A	537947.55	183553.32	10.00	124.00	10.00	0.00	1.67			
5	A	537932.79	183541.34	10.00	139.00	10.00	0.00	1.67			
6	A	537936.44	183521.52	10.00	226.00	0.00	0.00	1.67			
7	A	537992.72	183508.16	10.00	30.00	0.00	0.00	1.17			
8	A	537986.85	183534.32	10.00	219.00	0.00	0.00	1.17			
9	A	538059.97	183451.07	10.00	219.00	0.00	0.00	1.17			
10	A	538002.52	183495.43	10.00	30.00	0.00	0.00	1.17			
11	A	538022.28	183476.12	10.00	30.00	0.00	0.00	1.17			
12	A	538033.29	183464.41	10.00	30.00	0.00	0.00	1.17			
13	A	538044.50	183426.15	10.00	320.00	0.00	0.00	1.17			
14	A	538039.58	183403.88	10.00	140.00	10.00	0.00	1.17			
15	A	538019.51	183397.28	10.00	306.00	10.00	0.00	1.17			
16	A	538010.30	183379.74	10.00	30.00	0.00	0.00	1.67			
17	A	537995.52	183404.88	10.00	21.00	0.00	0.00	1.67			
18	A	537988.31	183430.59	10.00	30.00	0.00	0.00	1.67			
19	A	537976.15	183452.76	10.00	30.00	0.00	0.00	1.67			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
20	A	537942.05	183499.26	10.00	40.00	0.00	0.00	1.67			
21	A	537961.16	183475.53	10.00	33.00	0.00	0.00	1.67			
22	A	537909.02	183532.37	10.00	314.00	10.00	0.00	1.67			
23	A	537889.22	183513.67	10.00	317.00	10.00	0.00	1.67			
24	A	538060.84	183427.77	10.00	149.00	0.00	0.00	1.17			
24	A	537954.65	183591.67	10.00	314.00	0.00	0.00	1.17			

Horizontal Illuminance (lux)

Pudding Mill Lane



Results

Eav	15.00
Emin	7.33
Emax	25.64
Emin/Emax	0.29
Emin/Eav	0.49

Horizontal Illuminance (lux)

Marshgate Barley

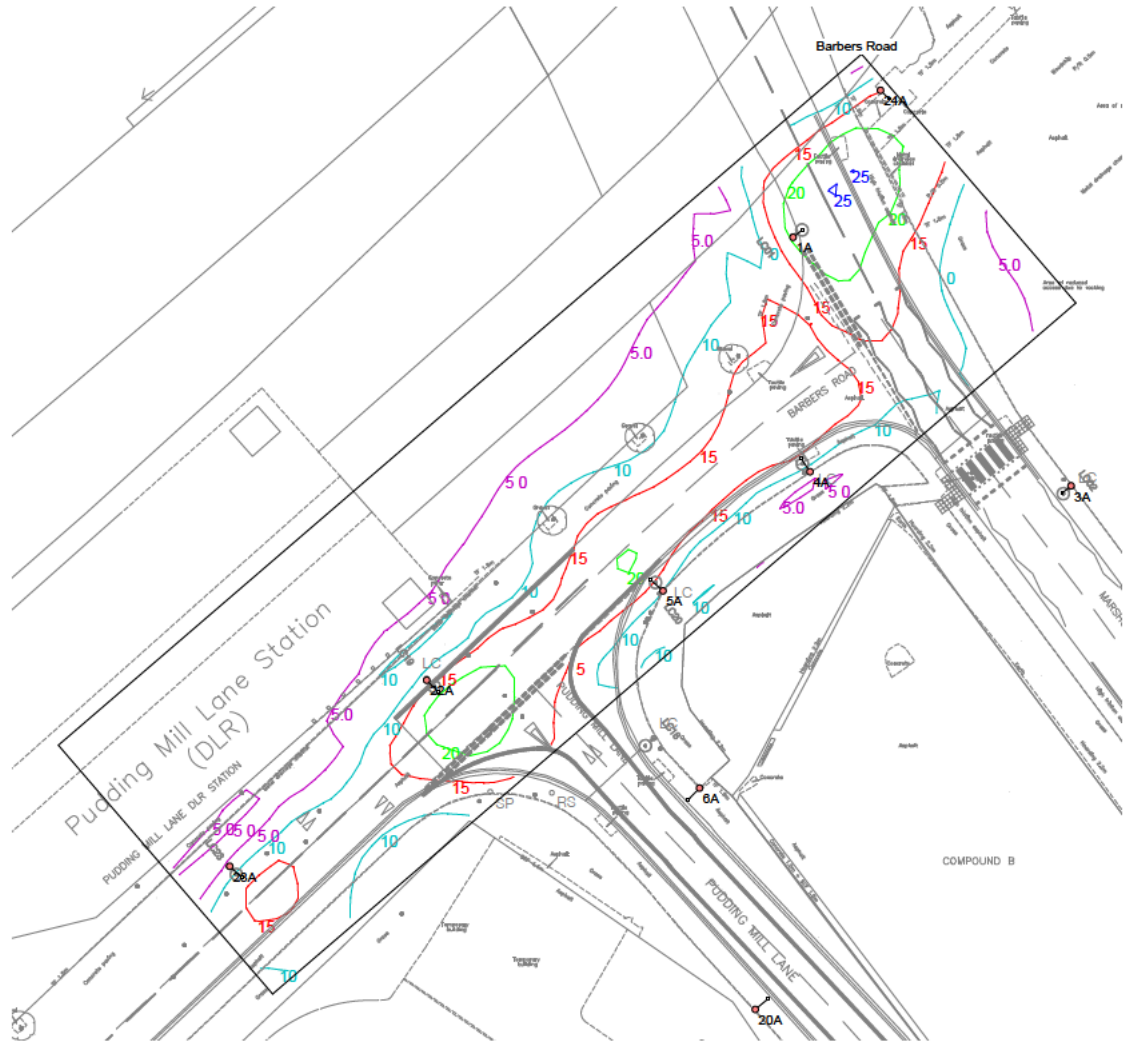


Results

Eav	17.70
Emin	7.40
Emax	26.11
Emin/Emax	0.28
Emin/Eav	0.42

Horizontal Illuminance (lux)

Barbers Road



Results

Eav	15.46
Emin	6.28
Emax	25.06
Emin/Emax	0.25
Emin/Eav	0.41

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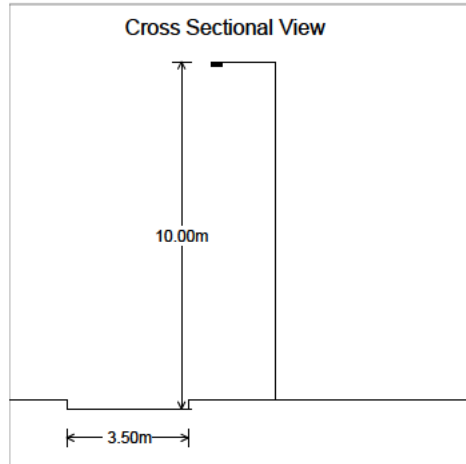
Proposed Pudding Mill Lane road calculation
C3 Target Lighting Level
Eav (min) - 15.00 Lux
Emin/Eav (min) 0.40 uniformity
Environmental Zone E3,
Maintenance Factor 0.83: 72 months, >6m,
CCT 4000K
 $MF = 0.90 \times 1.00 \times 0.92 = 0.83$

Luminaires on 0.5m or 1.0m brackets, 670mm to centre of LEDs
Existing luminaire information has not been confirmed, assumed optics have been used
Column spacings approximate to existing spacings on Marshgate Lane and Barley Lane
Maximum spacing 39m

Roadway Lighting Report

Roadway Report Summary

Layout



Road Data

Calculation Grid	EN13201 Luminance
Width (m)	3.50
No. of Lanes	1
Road Surface	R2
Q0	0.07
Lane Width (m)	3.50
Rei Width (m)	3.50

Main Lighting

Column Data

Configuration	Single Sided Right
Spacing (m)	27.00
Height (m)	10.00
Tilt (deg)	0.00
Setback (m)	2.50
Outreach (m)	1.67
Overhang (m)	-0.83

Luminaire Data



Supplier	Urbis Schreder
Type	AXIA 2.2 5166 Integrated lenses 32 NVSL 219CT@690mA NW 740 2
Lamp(s)	32 NVSL219CT@690mA NW 740 230V
LampFlux(klm)/Colour	9.11 NW 4000K/70
File Name	AXIA 2.2 5166 32 NVSL219CT 690mA NW 740 69W 384192 Integrated lenses 230V ...
Maintenance Factor	0.83
Lum. Int. Class	G1

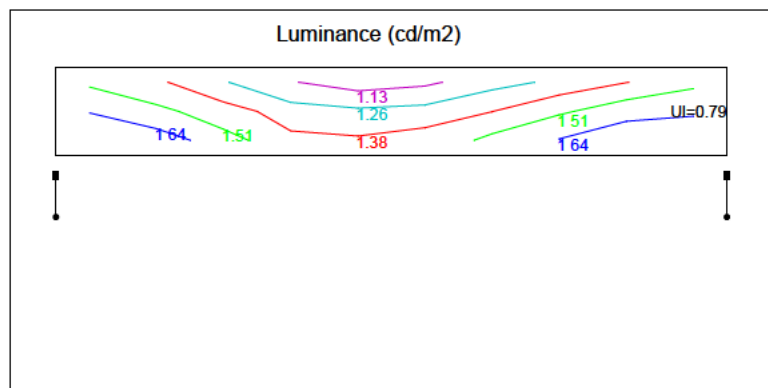
Results

Main

Complies with M3

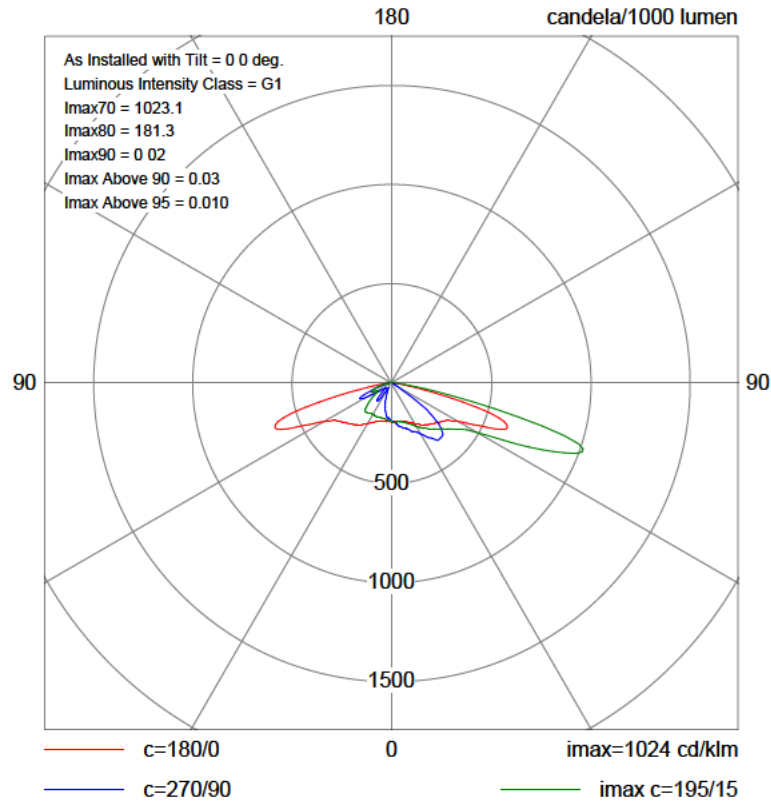
Lavmin	1.45 (1)
Lmin	1.07 (1)
Lmax	1.83 (1)
U0min	0.74 (1)
Ulmin	0.79 (1)
TI(%)	10.96 (1)
Rei	0.78

Number in brackets is the Observer Lane for Result shown.



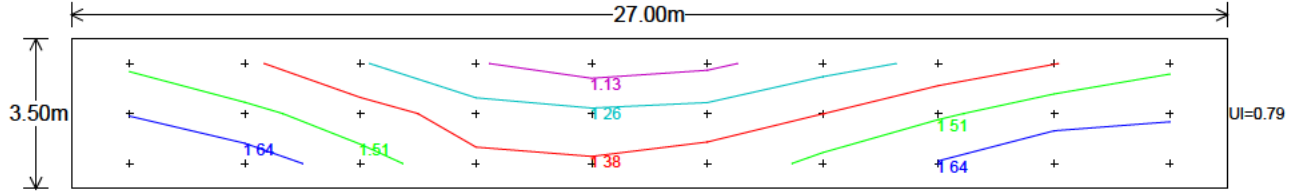
Polar Diagram

Main Luminaire AXIA 2.2 5166 Integrated lenses 32 NVSL219CT@690mA NW 740 2



Luminance (cd/m²)

Observer in Lane 1



Main Results

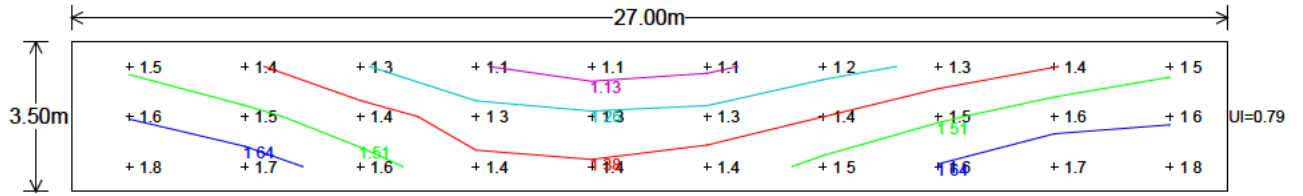
Observers in all Lanes

Lavmin	1.45 (1)
Lmin	1.07 (1)
Lmax	1.83 (1)
U0min	0.74 (1)
U1min	0.79 (1)
Tlmax(%)	10.96 (1)
Rei	0.78

Number in brackets is the Observer Lane for Result shown.

Luminance (cd/m²)

Observer in Lane 1



Main Results

Observer in Lane 1

Lav	1.45
Lmin	1.07
Lmax	1.83
U0	0.74
UI	0.79
TI(%)	10.96