

**DATE:** 16 May 2019  
**DESIGNER:** Lee Walker  
**PROJECT No:** 14565-1-C [Braemer]  
**PROJECT NAME:** Trevelyan Close, Loughton



Braemar luminaire, post top mounted, 16 x 4K LED array, C2 [REF A] or A1 [REF B] optic as per schedule. 350mA, 35lux photocell, RAL 9005 finish. 4M TLS Chester column, root mounted, finished black.

Luminaires are positioned where possible on building boundaries and away from property frontages so as to minimise light pollution into the houses. All luminaires, optics and locations are designed to comply with the ILP Guidance Notes for the Reduction of Obtrusive Light. Should further measures of light control be required, the luminaire selected is capable of having a rearwards Obtrusive Light Shield (OLS) fitted.

Levels on the road comply with P4 class from BS EN13201

## Outdoor Lighting Report

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## 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	Road	1236.19	-957.59	57.94	62.87	1.49	1.50
2	Cut-through	1256.73	-923.97	66.89	21.15	1.49	1.41
3	Isoline Grid	1166.40	-1013.58	159.00	142.50	1.50	1.50

### Luminaires

#### Luminaire A Data

Supplier	
Type	Breamer-16LED-4k- C2 350mA UMSUG 42 0 019 0000 100
Lamp(s)	16x 4K LED
Lamp Flux (klm)	2.19
File Name	Breamer-16LED-4k- C2_350mA UMSUG 42 0 019 0000 100.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	942.6, 49.4, 16.7
No. in Project	5

#### Luminaire B Data

Supplier	
Type	Breamer-16LED-4k-A1 350mA UMSUG 42 00 19 0000 100
Lamp(s)	16 x 4K LED
Lamp Flux (klm)	2.21
File Name	Breamer-16LED-4k-A1_350mA UMSUG 42 0 019 0000 100.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	814.9, 54.7, 7.4
No. in Project	1

#### Luminaire C Data

Supplier	
Type	Sephora Bulkhead -16LED-4k-300mA-Narrow -12W
Lamp(s)	16x4k LED
Lamp Flux (klm)	1.49
File Name	Sephora Bulkhead-16LED-4k-300mA-Narrow- 12W.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	125.1, 43.1, 3.6
No. in Project	1

### Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out- reach	Target X	Target Y	Target Z
1	A	1230.93	-922.13	4.00	306.00	0.00	0.00	0.00			
2	A	1240.23	-940.35	4.00	45.00	0.00	0.00	0.00			
3	A	1256.81	-924.20	4.00	131.00	0.00	0.00	0.00			
4	A	1256.48	-904.19	4.00	221.00	0.00	0.00	0.00			
5	B	1299.06	-934.09	4.00	256.00	0.00	0.00	0.00			
6	C	1268.16	-915.37	2.00	221.00	0.00	0.00	0.00			
7	A	1249.04	-888.39	4.00	170.00	0.00	0.00	0.00			

# Horizontal Illuminance (lux)



### Results

Eav	6.67
Emin	1.15
E <sub>max</sub>	15.32
E <sub>min</sub> /E <sub>max</sub>	0.07
E <sub>min</sub> /E <sub>av</sub>	0.17

# Horizontal Illuminance (lux)

Cut-through



## Results

Eav	7.23
Emin	0.05
Emax	77.61
Emin/Emax	0.00
Emin/Eav	0.01