

**DATE:** 5 July 2023  
**DESIGNER:** Declan Doyle  
**PROJECT No:** KE/RE/HCB/01 rev 1  
**PROJECT NAME:** Heathfield Carriganarra Ballincollig phase 3



Lighting to IS EN 13201-2: 2015  
Residential Lighting to class P3  
Dimming to U14, 4000k to match existing  
A) CREE Energy Uno TRSA-02-150-4L 4k, 3.04klm, 19w CLO  
6m columns - estate

## Outdoor Lighting Report

**ORDERING CODES:**

A) 32no. TRSA 3 150 4L 407 + A SV VMC N U 06/VMA10DAO-0010/ CLO 100,000 hours @80%.

**PREPARED BY:** Declan Doyle  
Lighting Design Manager

Kellihers Electrical  
M50 Business Park, Ballymount Road Upper, Dublin 12  
declan.doyle@rexel.ie  
Tel: +353 (0)1 4566717 Mob: +353 (0)86 8552936

[www.astrotek.ie](http://www.astrotek.ie) | [www.kellihers.com](http://www.kellihers.com) | [www.rexel.ie](http://www.rexel.ie)

## 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	4021.78	2064.82	141.14	266.31	1.49	1.50
2	Grid 2	4041.49	1885.87	108.65	179.02	1.49	1.49

### Luminaires

#### Luminaire A Data



Supplier	Cree Lighting
Type	TRSA-02-150-4L40719W
Lamp(s)	8Du4L19W4K
Lamp Flux (klm)	3.04
File Name	TRSA-02-150-4L-407 19W-481-QL21-S03.1 ES
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	476.2, 35.8, 0.0
No. in Project	32

#### EXISTING FITTING

#### -PHASE 2

#### Luminaire B Data



Supplier	Cree Lighting
Type	XSPME - B - Type 4ME - 21W 4K
Lamp(s)	3MD-SA1400 M 21W 4K
LampFlux(klm)/Colour	3.32 4000/70
File Name	XSPME024MEB40K_21W-PL12371-014A.LDT
Maintenance Factor	0.76
Lum. Int. Class	None
No. in Project	1

### Layout

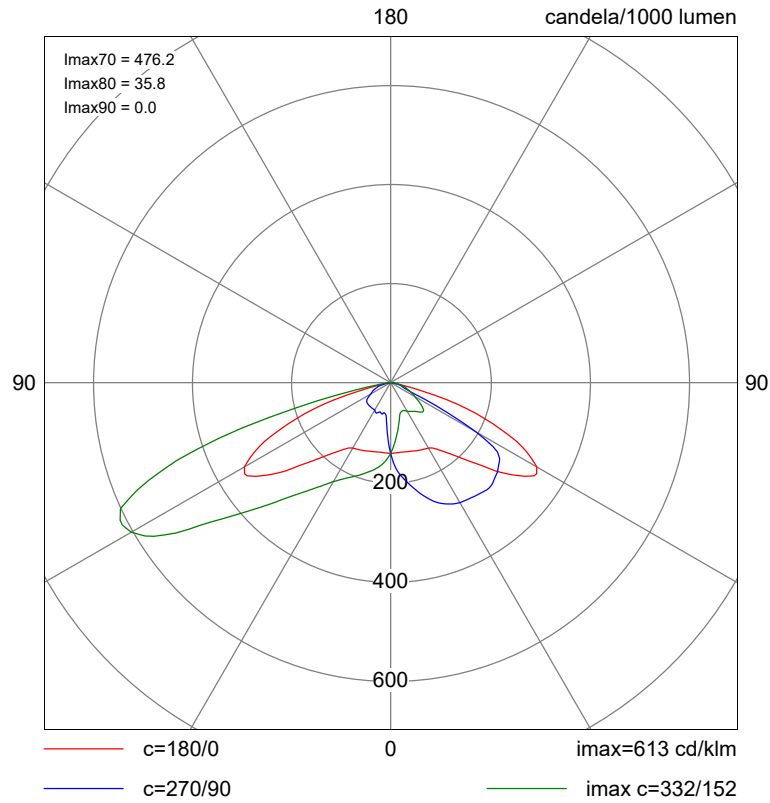
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	4027.00	2260.20	6.00	93.00	5.00	0.00	0.00	EXISTING FITTING - PHASE 2		
2	A	4043.56	2261.28	6.00	106.00	5.00	0.00	0.00			
3	A	4116.44	2272.04	6.00	276.00	5.00	0.00	0.00			
4	A	4113.52	2253.85	6.00	74.00	5.00	0.00	0.00			
5	A	4129.25	2259.35	6.00	272.00	5.00	0.00	0.00			
6	A	4088.01	2260.09	6.00	80.00	5.00	0.00	0.00			
7	A	4123.30	2195.08	6.00	272.00	5.00	0.00	0.00			
8	A	4127.68	1918.58	6.00	274.00	0.00	0.00	0.00			
9	B	4076.64	2202.87	6.00	275.00	5.00	0.00	0.00	EXISTING FITTING - PHASE 2		
10	A	4100.71	2194.31	6.00	273.00	5.00	0.00	0.00			
11	A	4107.45	2172.44	6.00	171.00	5.00	0.00	0.00			
12	A	4104.64	2142.67	6.00	172.00	5.00	0.00	0.00			
13	A	4101.69	2112.80	6.00	173.00	5.00	0.00	0.00			
14	A	4097.86	2089.38	6.00	89.00	5.00	0.00	0.00			
15	A	4114.05	2095.83	6.00	270.00	5.00	0.00	0.00			
16	A	4074.90	2102.63	6.00	271.00	5.00	0.00	0.00	EXISTING FITTING - PHASE 2		
17	A	4064.18	2033.42	6.00	269.00	5.00	0.00	0.00			
18	A	4088.44	2032.39	6.00	270.00	5.00	0.00	0.00			
19	A	4119.31	2032.37	6.00	273.00	5.00	0.00	0.00			

**Layout Continued**

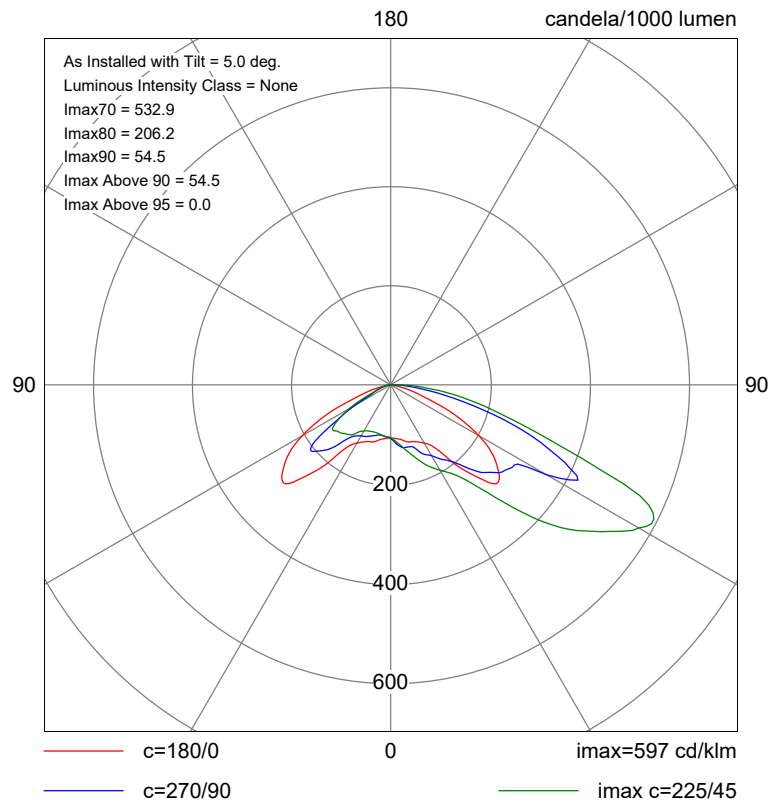
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
20	A	4101.32	2009.08	6.00	181.00	5.00	0.00	0.00			
21	A	4101.90	1989.42	6.00	180.00	5.00	0.00	0.00			
22	A	4109.08	1974.21	6.00	93.00	5.00	0.00	0.00			
23	A	4127.70	1974.72	6.00	92.00	5.00	0.00	0.00			
24	A	4068.68	1985.79	6.00	272.00	5.00	0.00	0.00	EXISTING	FITTING	PHASE 2
25	A	4078.33	1976.14	6.00	94.00	5.00	0.00	0.00			
26	A	4078.72	1919.55	6.00	273.00	5.00	0.00	0.00			
27	A	4111.92	1900.92	6.00	92.00	5.00	0.00	0.00			
28	A	4109.08	1918.04	6.00	272.00	5.00	0.00	0.00			
29	A	4057.92	2261.52	6.00	93.00	5.00	0.00	0.00			
30	A	4103.95	2032.43	6.00	270.00	0.00	0.00	0.00			
31	A	4072.91	2261.99	6.00	91.00	0.00	0.00	0.00			
32	A	4106.05	2157.58	6.00	177.00	0.00	0.00	0.00			
33	A	4103.09	2127.73	6.00	177.00	0.00	0.00	0.00			

# Polar Diagrams

## Luminaire A TRSA-02-150-4L40719W

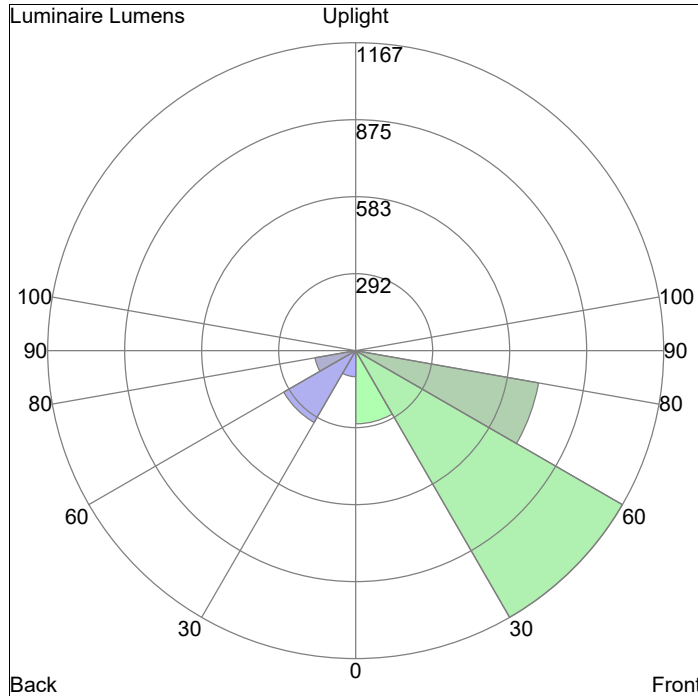


## Luminaire B XSPME - B - Type 4ME - 21W 4K



## Luminaire Classification System (LCS) Graphs

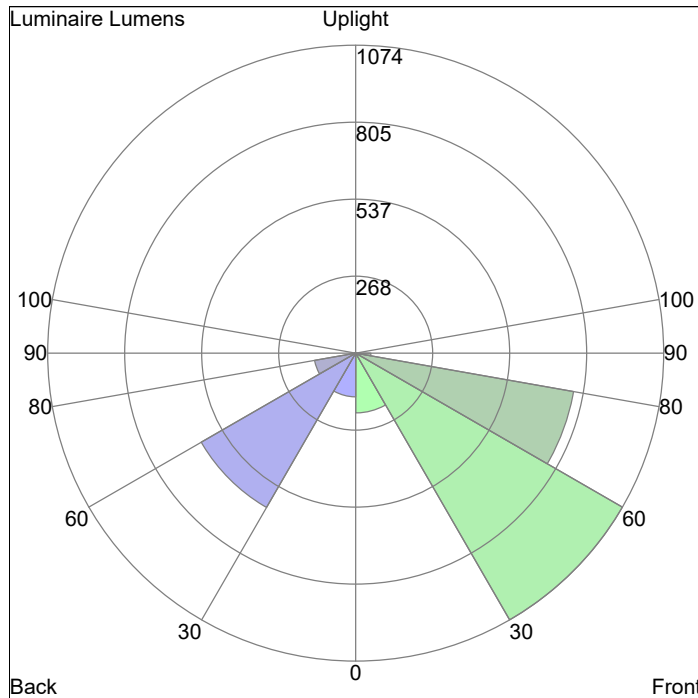
### Luminaire A TRSA-02-150-4L40719W



LCS	Lumens	%Lamp	%Lum
FL	277.5	9.1	10.2
FM	1166.8	38.4	42.7
FH	703.6	23.1	25.8
FVH	8.4	0.3	0.3
BL	98.9	3.3	3.6
BM	314.5	10.3	11.5
BH	156.0	5.1	5.7
BVH	4.8	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
<b>Total</b>	<b>2730.6</b>	<b>89.8</b>	<b>100.0</b>

BUG rating=B1-U0-G1

### Luminaire B XSPME - B - Type 4ME - 21W 4K

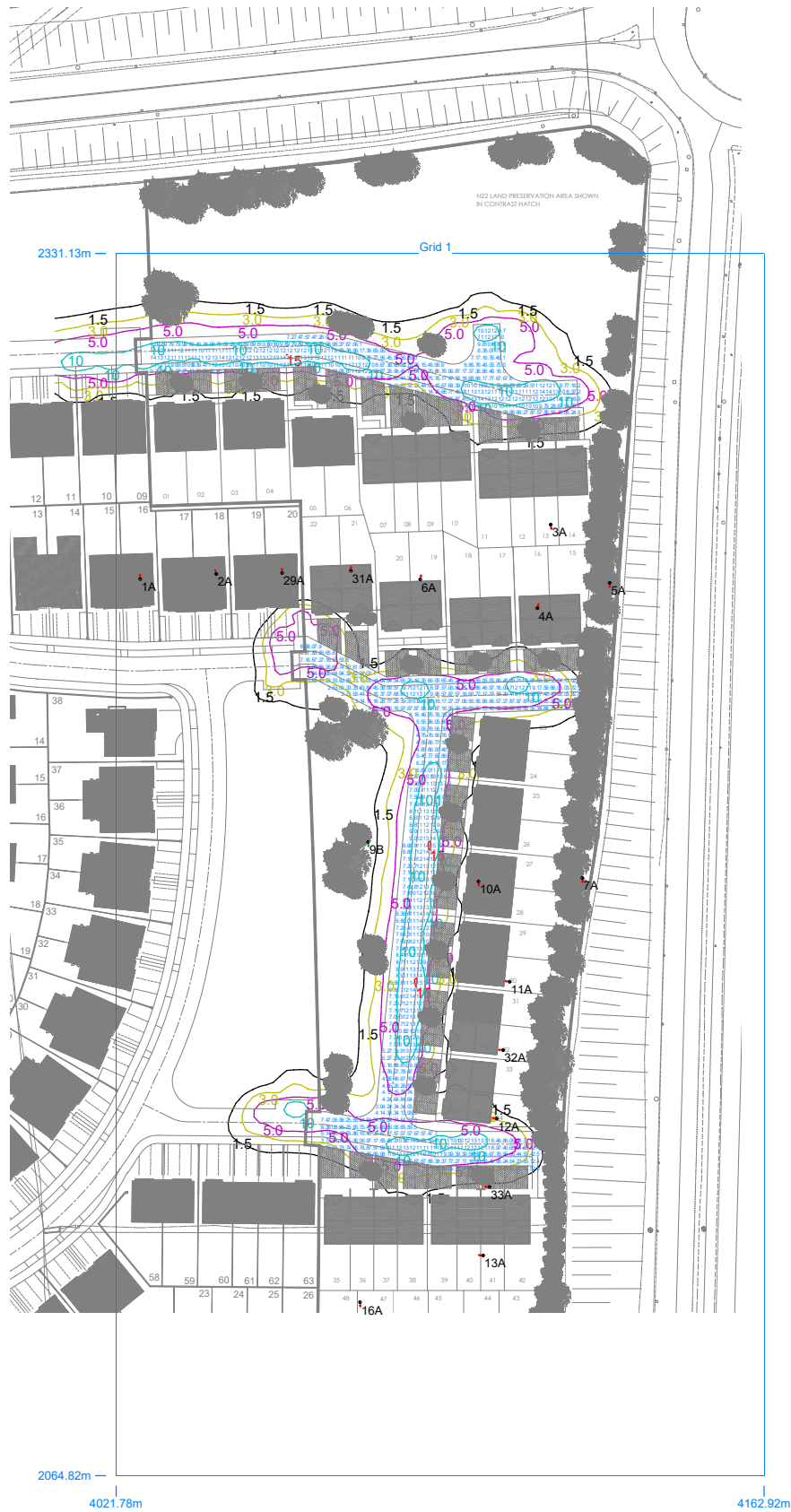


LCS	Lumens	%Lamp	%Lum
FL	208.7	6.3	6.9
FM	1073.9	32.3	35.4
FH	771.7	23.2	25.5
FVH	53.3	1.6	1.8
BL	152.6	4.6	5.0
BM	621.4	18.7	20.5
BH	145.1	4.4	4.8
BVH	5.5	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
<b>Total</b>	<b>3032.1</b>	<b>91.3</b>	<b>100.0</b>

BUG rating=B2-U0-G1

# Horizontal Illuminance (lux)

Grid 1



## Results

Eav	8.14
Emin	Kelliher's Lighting L 1.67
Emax	15.30
Emin/Emax	6 0.11

# Horizontal Illuminance (lux)

Grid 2



## Results

Eav	7.83
Emin	1.74
Emax	14.85
Emin/Emax	0.12
Emin/Eav	0.22
Emax/Eav	1.90