

DATE: 10 September 2025
DESIGNER: Pete Harris
PROJECT No: Design Check (R0)
PROJECT NAME: Goetre Lane. Gurnos. Merthyr



Lighting of Conflict Areas - Designed in Accordance with BS5489-1 2020

Conflict areas are typically junctions, intersections, roundabouts and pedestrian crossings, where significant streams of motorized traffic intersect with each other or with other road users such as pedestrians and cyclists. At conflict areas, the visual task is generally more difficult than on straight roads, and a higher luminance or illuminance class may be selected at the conflict area.

C4 – Eav = 10 Lux, Uo 0.40

>6.00m in environmental zones E1 or E2 from BS5489 LMF = 0.92
Maintenance factor = LLMF x LMF = 0.95 x 0.92 = 0.87

Outdoor Lighting Report

No account is taken for the blocking effect caused by buildings, trees etc.
The calculation shown by this drawing assumes that the whole area being considered is in the same plane, i.e. there are no changes in gradient or elevation.

This lighting design proposal is a suggested lighting layout to present how TRT products could be used to meet the design criteria. No design risk assessment has been conducted for the lighting layout and TRT may not have undertaken a site survey. The lighting design has been based entirely on information supplied by others and therefore TRT cannot be held responsible for any risk associated with implementation of the design. This lighting design proposal should be considered only as guidance and not as a final design for the purposes of Construction Design and Management Regs 2015.

PREPARED BY: Pete Harris
Lighting Applications Manager | TRT Lighting Ltd.
Heming Point | Claybrook Drive | Washford Ind. Est.
Redditch | B98 0FH
M: +44(0)7767 160 417
E: pete.harris@trtlighting.co.uk
W: www.trtlighting.co.uk

Layout Report

General Data

Dimensions in Metres Angles in Degrees
Grid Origin 304774.0m x 208178.0m
Area 175.0m x 151.0m
Sample Spacing 1.50m x 1.50m

Luminaires

Luminaire A Data



Supplier	TRT Lighting
Type	A32_GEN2_LED_60W_GR4_(Pink)_G0_4000K_FG
Lamp(s)	42 0060 0000 100
Lamp Flux (klm)	8.54
File Name	A32_GEN2_LED_60W_GR4_(Pink)_G0_4000K_FG.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	753.3, 402.1, 0.0
No. in Project	4

Luminaire B Data



Supplier	TRT Lighting
Type	A32_GEN2_LED_60W_GA2_(Yellow)_G1_4000K_FG
Lamp(s)	42 0060 0000 100
Lamp Flux (klm)	9.02
File Name	A32_GEN2_LED_60W_GA2_(Yellow)_G1_4000K_FG.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	684.7, 193.0, 0.0
No. in Project	2

Luminaire C Data



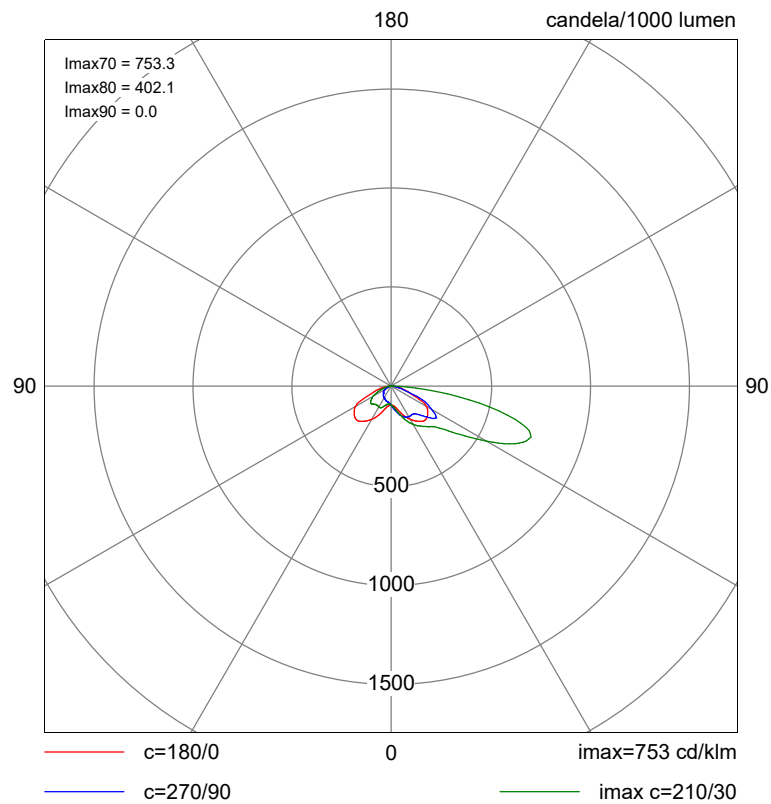
Supplier	TRT Lighting
Type	A32_GEN2_LED_38W_GR4_(Pink)_G0_4000K_FG
Lamp(s)	42 0038 0000 100
Lamp Flux (klm)	5.81
File Name	A32_GEN2_LED_38W_GR4_(Pink)_G0_4000K_FG.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	753.3, 402.1, 0.0
No. in Project	1

Layout

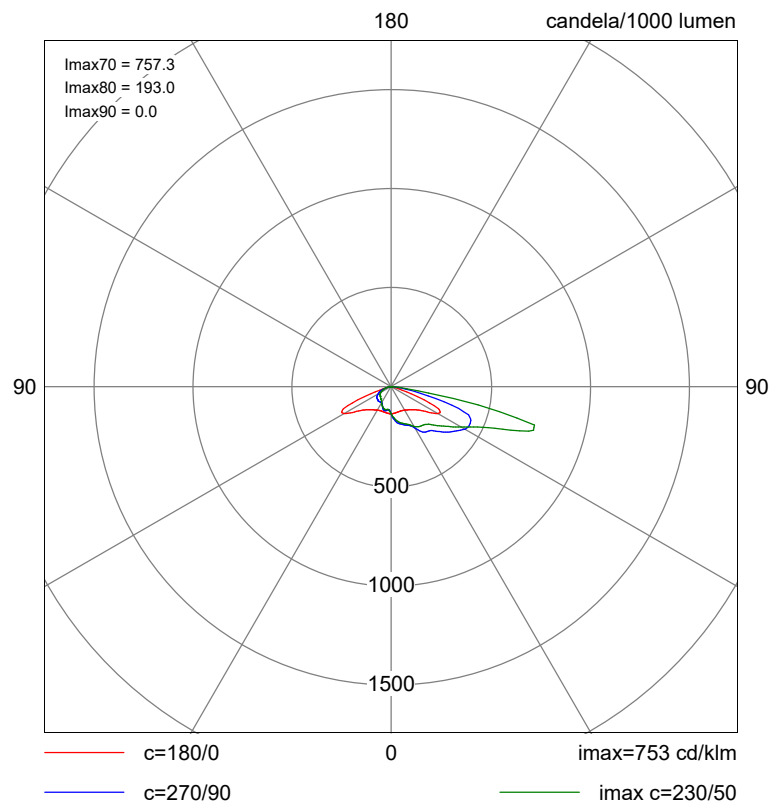
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	304944.03	208210.70	8.00	237.00	0.00	0.00	0.40			
2	A	304903.22	208220.00	8.00	61.00	0.00	0.00	0.40			
3	A	304894.56	208241.31	8.00	233.00	0.00	0.00	0.40			
4	A	304856.81	208251.46	8.00	56.00	0.00	0.00	0.40			
5	C	304833.23	208258.91	8.00	142.00	0.00	0.00	0.40			
6	B	304808.49	208280.43	8.00	50.00	0.00	0.00	0.40			
7	B	304838.79	208292.12	8.00	329.00	0.00	0.00	0.40			

Polar Diagrams

Luminaire A A32 GEN2 LED 60W GR4 (Pink) G0 4000K FG

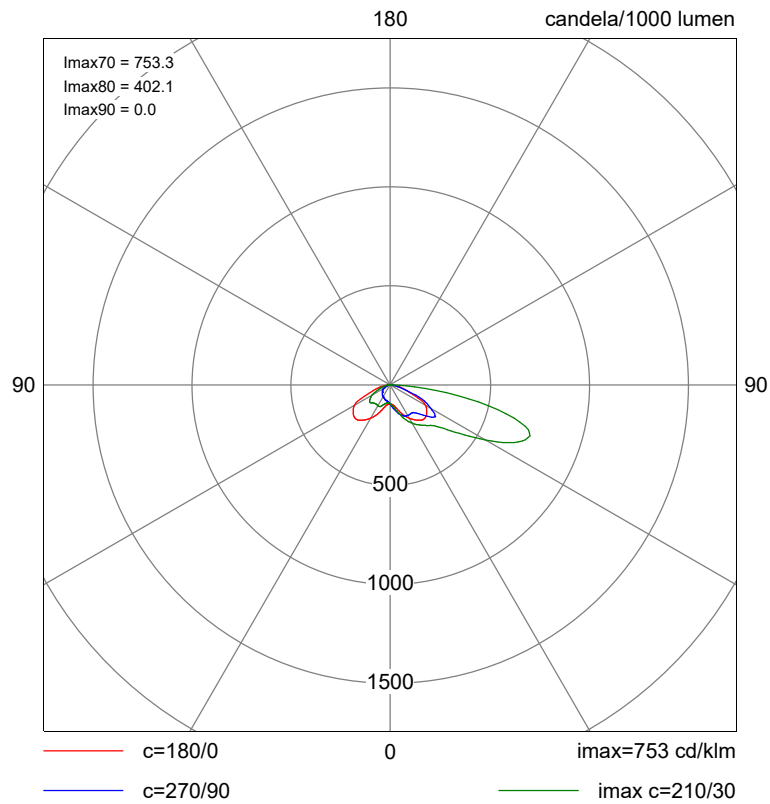


Luminaire B A32 GEN2 LED 60W GA2 (Yellow) G1 4000K FG



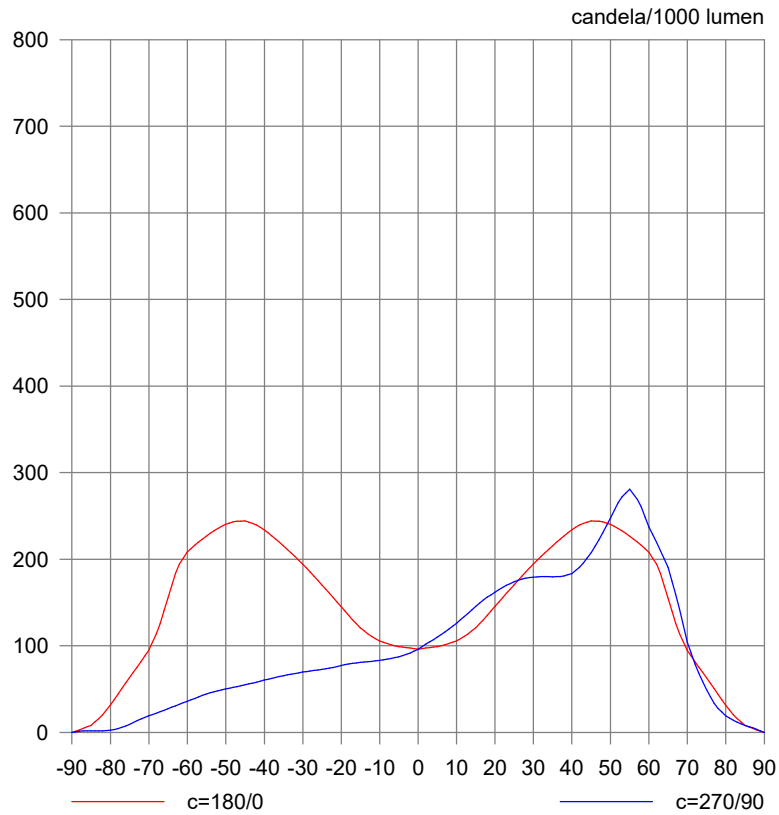
Polar Diagrams Continued

Luminaire C A32 GEN2 LED 38W GR4 (Pink) G0 4000K FG

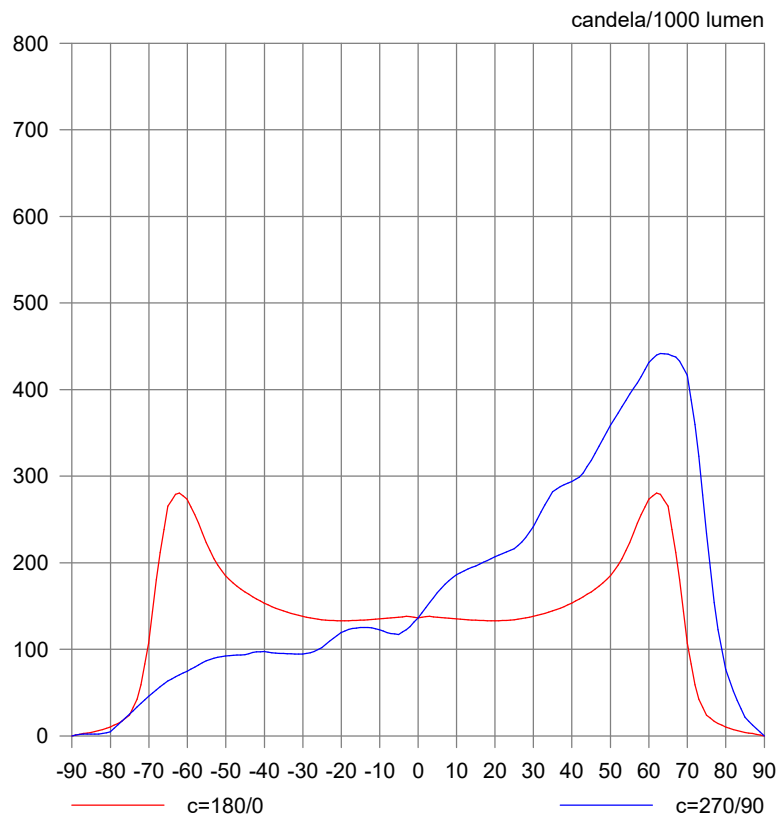


Cartesian Diagrams

Luminaire A A32 GEN2 LED 60W GR4 (Pink) G0 4000K FG

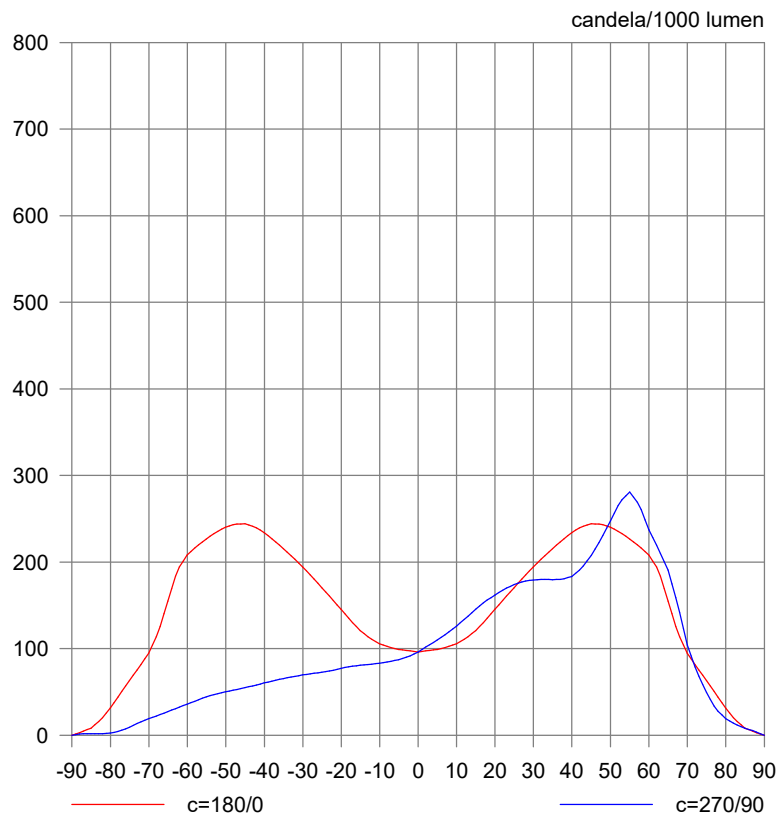


Luminaire B A32 GEN2 LED 60W GA2 (Yellow) G1 4000K FG



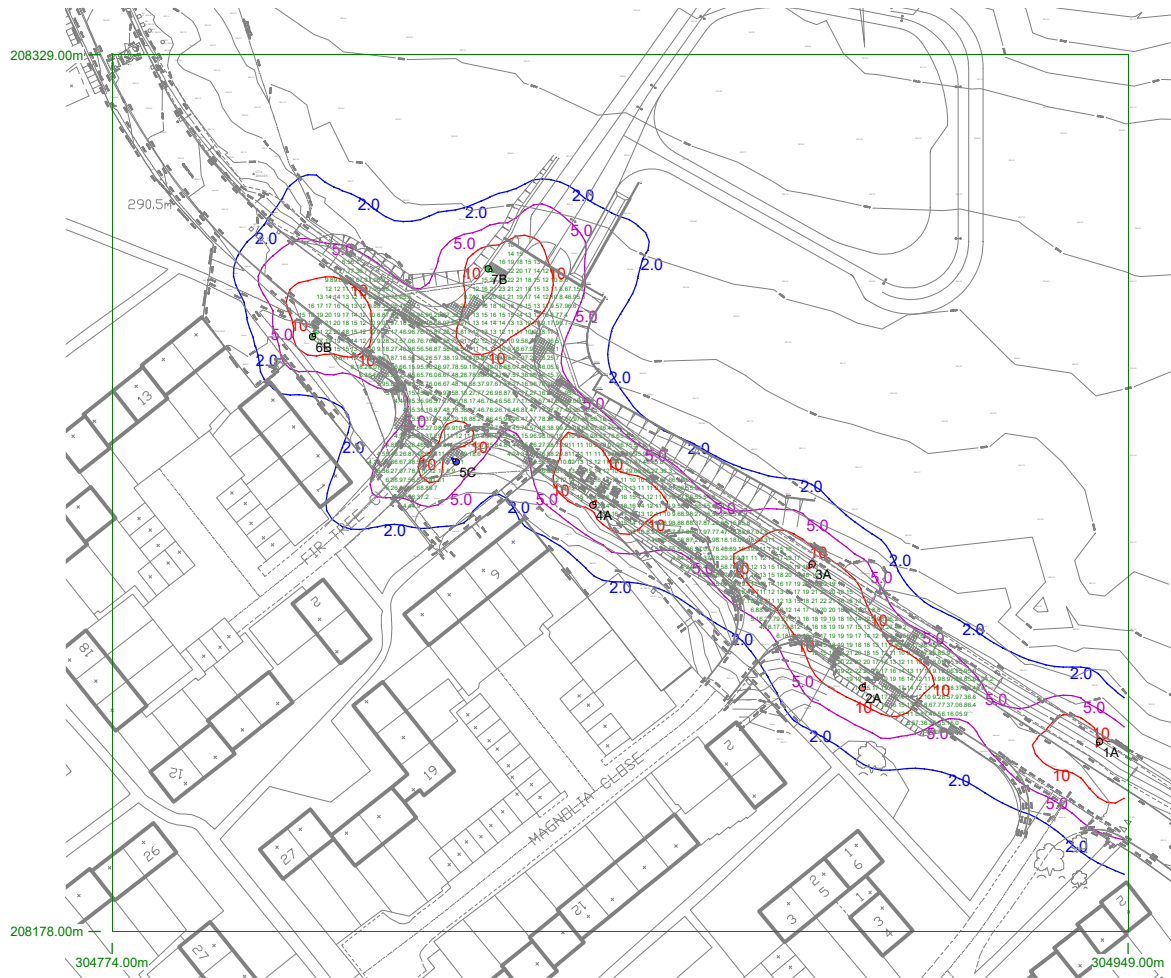
Cartesian Diagrams Continued

Luminaire C A32 GEN2 LED 38W GR4 (Pink) G0 4000K FG



Horizontal Illuminance (lux)

Grid 1



Results

Eav	10.18
Emin	4.10
Emax	23.49
Emin/Emax	0.17
Emin/Eav	0.40