

Exterior Lighting Report

Private – 14 Lower Shotover Road, Queenstown



Revision	A – Resource Consent
Date	17/07/2026
Designer	Dhushi Kamalan
Reviewer	Eranda Mahipala

Please find attached the lighting design for the external car parks and pedestrian and vehicle access areas proposed at 14 Lower Shotover Road, Ladies Mile, Queenstown. The design has been prepared to comply with the Queenstown Lakes District Council Southern Light Part Two Technical Specifications dated 12 May 2025 and AS/NZS 4282:2023 for the control of obtrusive outdoor lighting.

Illuminance predictions were completed using Lighting Analysts Illumination Engineering Software (AGI32), version 20.6.

The following appendices provide supporting information demonstrating compliance:

- Appendix A – Maintained Site Lighting Layout & Isolux plot
- Appendix B – Obtrusive Site Lighting Layout & Isolux plot
- Appendix C – Obtrusive Lighting Report
- Appendix D – Product Datasheets

Lighting calculations are subject to the accuracy and tolerances set out in AS/NZS 3827.1:1998 and AS/NZS 3827.2:1998. These include variations in building dimensions and obstructions, surface finishes, luminaire position and aiming, ambient temperature, atmospheric conditions, luminaire photometry, lamp output, lighting software, electrical supply, and instrument calibration. The results represent a reasonable prediction of a lighting design that complies with the stated standards.

The external lighting is intended to provide security and functional illumination of sufficient quality to allow the safe movement of vehicles and pedestrians at night, in accordance with the QLDC District Plan and Section 3 of AS/NZS 4282.

The site is classified as Environmental Zone A3 (Medium District Brightness) in accordance with Table 3.1 of AS/NZS 4282:2023.

The proposed luminaires include low-glare LED pole-top fittings and LED bollards for pedestrian and vehicle circulation areas.

Please note that lighting for the parks and courtyards will be finalised once the detailed building elements have been confirmed.

Summary of compliance:

1. Lighting limits have been assessed against AS 4282:2023.
2. A maintenance factor of 1.0 has been applied to all obtrusive and spill lighting calculations.
3. Lighting category A3 (medium brightness) has been adopted for the site.
4. Existing fittings have not been included in these calculations, in accordance with QLDC guidelines.
5. Lighting curfews follow QLDC guidelines: Monday to Thursday, dusk to 11:00 pm; Friday to Sunday, dusk to 2:00 am the following day.
6. No site activity is to create light spill greater than 3 lux, measured horizontally or vertically at any point within the boundary of another site during curfew hours.
7. Threshold increment limits for traffic travelling in both directions on Lower Shotover Road and Paper Road are not exceeded, based on an adaptation luminance of 20% at 1 cd/m².
8. Luminaires have been selected, positioned, aimed, and adjusted to remain below the 2,500cd luminous intensity limit for neighbouring residences.
9. The calculation methodology has been recorded, and AGI software has been used to model conditions in accordance with AS 4282 for the control of obtrusive outdoor lighting.

These calculations have been prepared with reasonable care and diligence in accordance with the required standards.

If you need any further information, please feel free to contact us.

Yours faithfully,



Dhushi Kamalan

Electrical Consulting Services Ltd

Appendix A – Maintained Illumination Results

GENERAL NOTES:

1. Lighting calculations are based upon initial lamp lumens with a maintenance factor applied & derived in accordance with AS/NZS 1158 as shown below.
- Obtrusive and spill lighting caculation results are based on a maintenance factor/ LLF of 1.
2. Isolux lines show illuminance values at grade.
3. Luminaires are mounted at the heights as indicated on the drawing. Tilts (upcast) = 0 for all proposed luminaires.
- The tilt for all luminaires shall be an angle of 0 measured from the horizontal unless otherwise stated.
The luminaires shall be installed parallel to the surface that is being lit.
4. Lighting calculations are subject to the accuracies & tolerances in accordance with AS/NZS 3827.1:1998 & AS/NZS 3827.2:1998. These accuracies & tolerances include variances in the building dimensions & obstructions, surface finishes, luminaire positioning & aiming, ambient temperature, atmospheric conditions, luminaire photometry, lamp output, lighting design software, electrical supply & instrument calibration.
5. The contractor shall ensure prior to installation, required clearances are met from underground services, especially high-voltage cables and high pressure gas lines.
6. The software used for the calculations is AGi32 by Lighting Analysts.

MAINTENANCE FACTOR (MF)

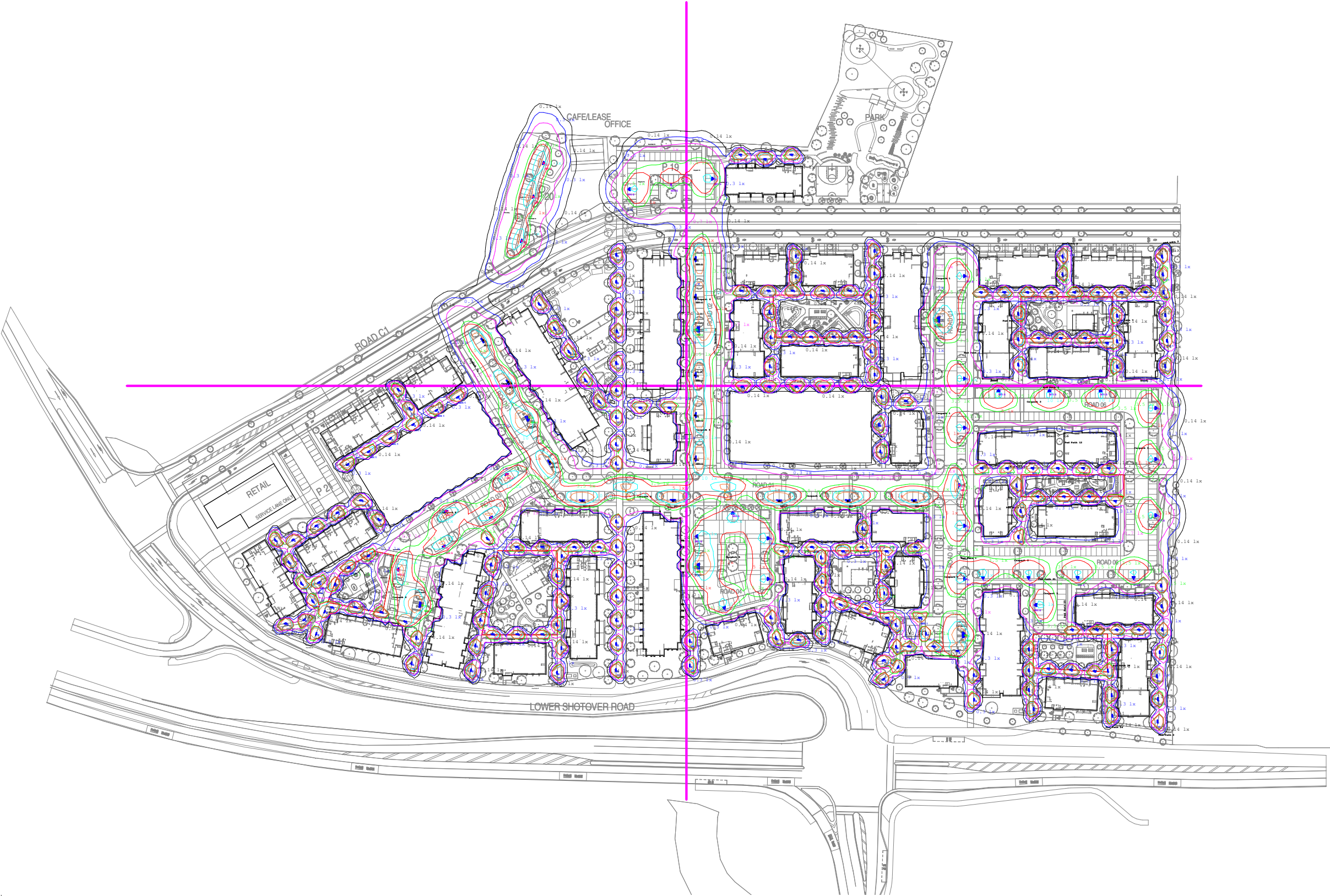
Lamp Lumen Maintenace Factor (LLMF)
* LED lamp lumen depreciation after 50,000 hours of operation
- In accordance with IESNA TM-21-11 & LM-80-08

Luminaire Maintenance Factor (LMF)
* IP6X Luminaire IP rating
* Urban Environmental Zone
* Luminaire cleaning every 72 months
- Maximum LMF allowed per table 3.2 of AS/NZS 1158.3.1:2020 is 0.84

Maintenance Factor (LABEL XX) = LLMF x LMF = 0.XX x 0.84 = 0.XX

**The maintenance factor (LLF) is rounded down to the lowest first decimal place
For example, if the LLF (LLMF x LMF) is 0.8235, it is rounded down to 0.8.*

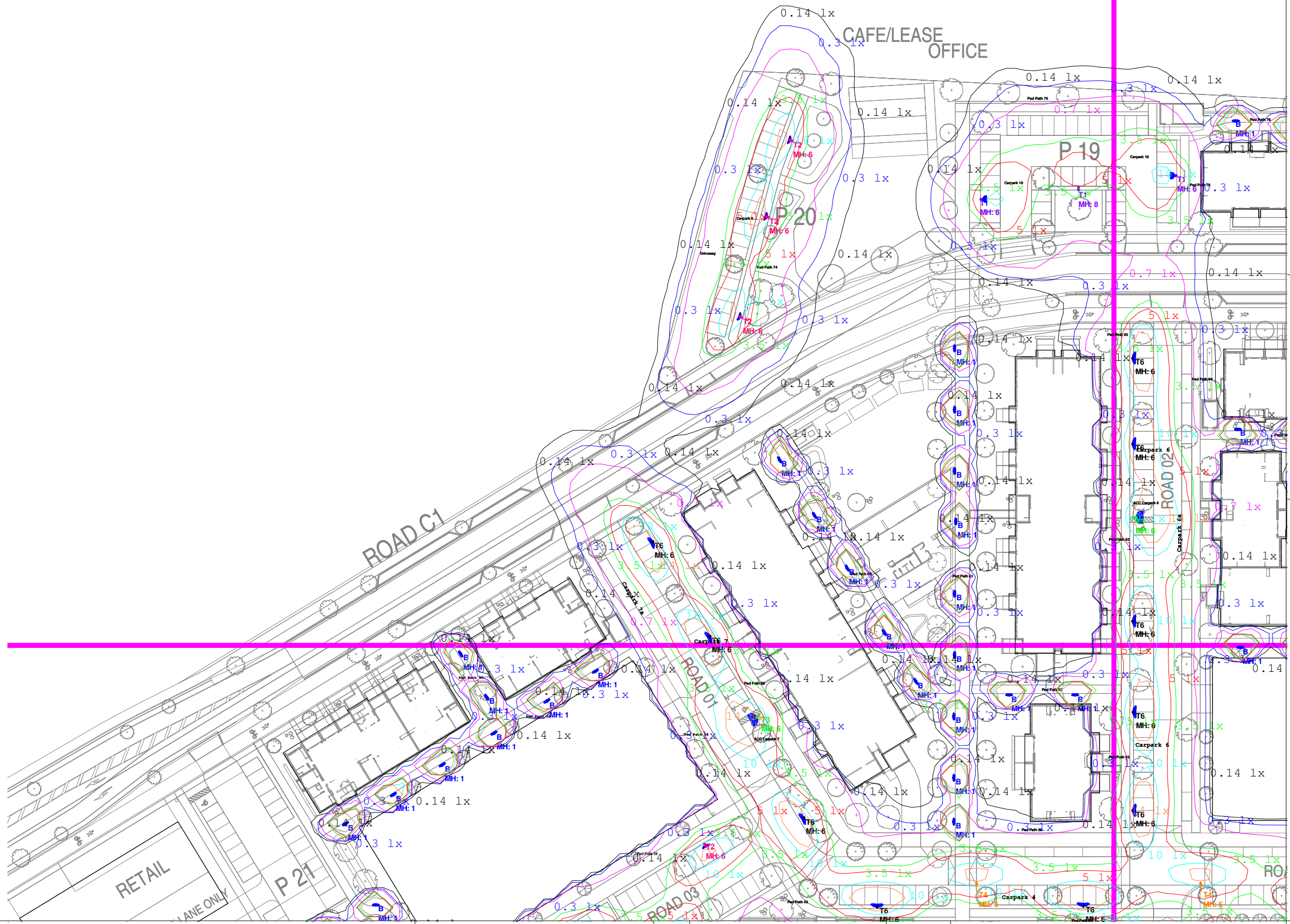
Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.14
	0.3
	0.7
	3.5
	5
	10
	14



Luminaire Schedule					
Symbol	Label	Qty	LLF	Arrangement	Description
	B	199	0.800	Single	HUNZA ARCH Bollard Type 2 Optic 3000K 26W LED Bollard
	T1	24	0.800	Single	ADLT Cree Energy Uno 200 (BLS) Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T2	9	0.800	Single	ADLT Cree Energy Uno SCP Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T3	6	0.800	Single	ADLT Cree Energy Uno 200 (BLS) Optic 41W 3000K, Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T4	2	0.800	Single	ADLT Cree Energy Uno SCP Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 1m arm 0 deg tilt
	T6	13	0.800	Single	ADLT Cree Energy Uno SCP Optic 30W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt

PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING MAINTAINED ISOLINES	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026
	CLIENT SIMPLICITY LIVING			
	TYPE PRIVATE LIGHTING DESIGN			
PROJECT ID 225439	 ELECTRICAL CONSULTING SERVICES LTD			

DESIGN DK	PURPOSE RESOURCE CONSENT	
CHECK EM	SCALE NTS	DATE 17/07/2026
	REV A	PAGE 1



- GENERAL NOTES:
- Lighting calculations are based upon initial lamp lumens with a maintenance factor applied & derived in accordance with AS/NZS 1158 as shown below.
 - Obtrusive and spill lighting calculation results are based on a maintenance factor/ LLF of 1.
 - Isolux lines show illuminance values at grade.
 - Luminaires are mounted at the heights as indicated on the drawing. Tilts (upcast) = 0 for all proposed luminaires.
 - The tilt for all luminaires shall be an angle of 0 measured from the horizontal unless otherwise stated. The luminaires shall be installed parallel to the surface that is being lit.
 - Lighting calculations are subject to the accuracies & tolerances in accordance with AS/NZS 3827.1:1998 & AS/NZS 3827.2:1998. These accuracies & tolerances include variances in the building dimensions & obstructions, surface finishes, luminaire positioning & aiming, ambient temperature, atmospheric conditions, luminaire photometry, lamp output, lighting design software, electrical supply & instrument calibration.
 - The contractor shall ensure prior to installation, required clearances are met from underground services, especially high-voltage cables and high pressure gas lines.
 - The software used for the calculations is AGI32 by Lighting Analysts.

MAINTENANCE FACTOR (MF)

Lamp Lumen Maintenance Factor (LLMF)
* LED lamp lumen depreciation after 50,000 hours of operation
- In accordance with IESNA TM-21-11 & LM-80-08

Luminaire Maintenance Factor (LMF)
* IP6X Luminaire IP rating
* Urban Environmental Zone
* Luminaire cleaning every 72 months
- Maximum LMF allowed per table 3.2 of AS/NZS 1158.3.1:2020 is 0.84

Maintenance Factor (LABEL XX) = LLMF x LMF = 0.XX x 0.84 = 0.XX

**The maintenance factor (LLF) is rounded down to the lowest first decimal place
For example, if the LLF (LLMF x LMF) is 0.8235, it is rounded down to 0.8.*

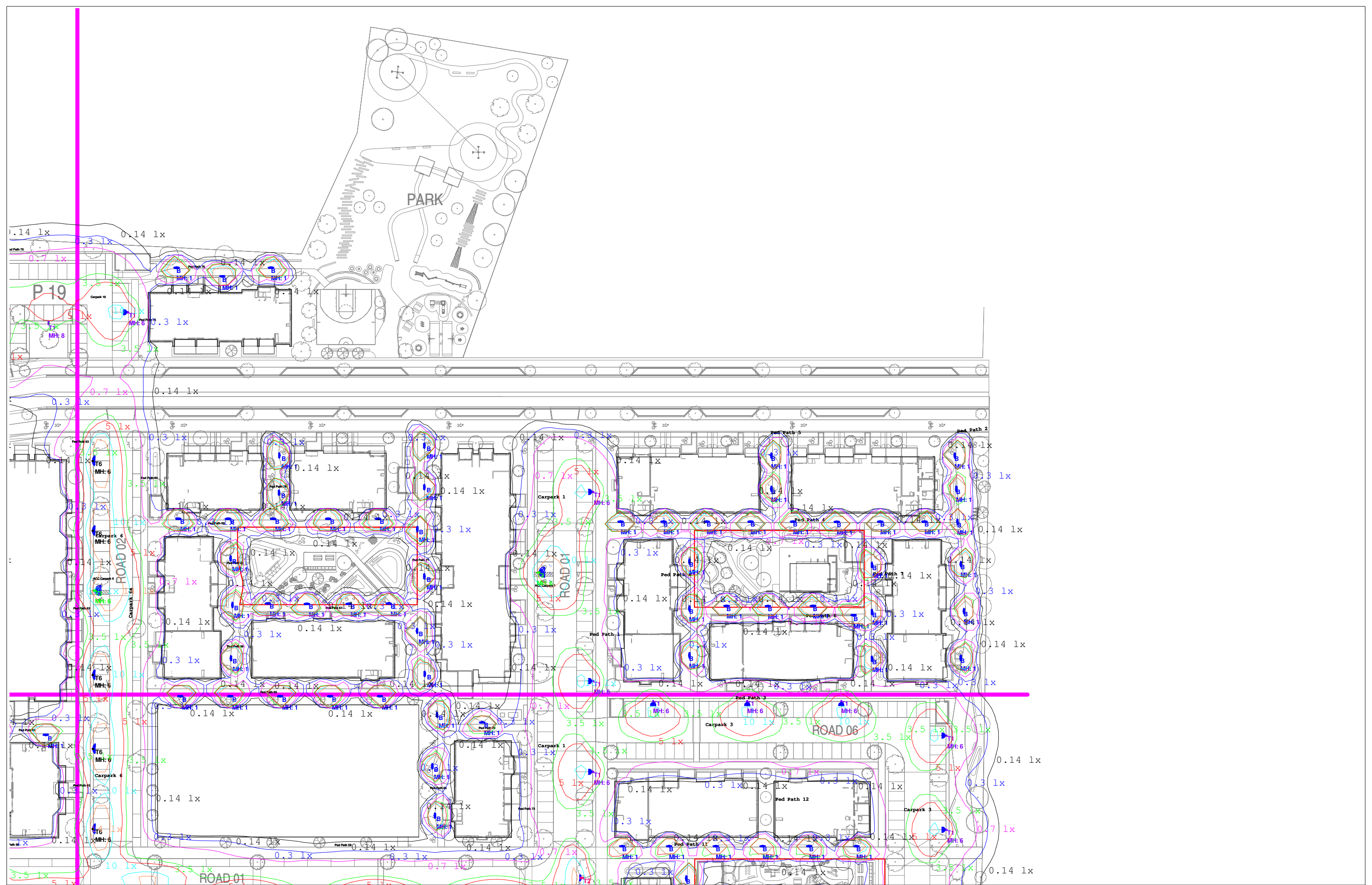
Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.14
	0.3
	0.7
	3.5
	5
	10
	14

PROJECT NAME	LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN
PROJECT ID	225439

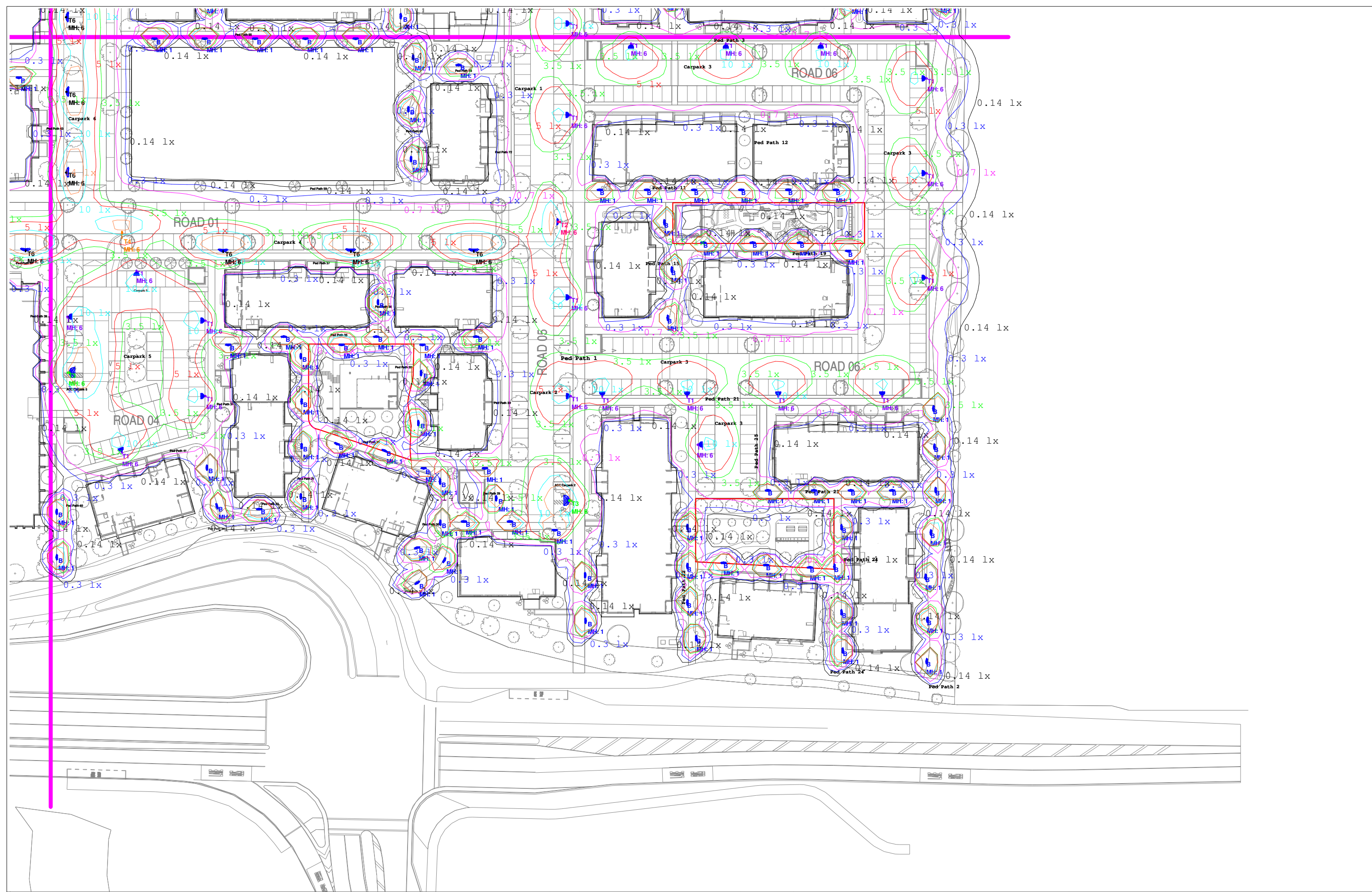
DRAWING	MAINTAINED ISOLINES	REV	COMMENTS	DATE
CLIENT	SIMPLICITY LIVING	A	RESOURCE CONSENT ISSUE	17/07/2026
TYPE	PRIVATE LIGHTING DESIGN			



DESIGN	DK	PURPOSE	RESOURCE CONSENT
CHECK	EM	SCALE	NTS
		REV	A
		DATE	17/07/2026
		PAGE	2



PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING MAINTAINED ISOLINES	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026	 ELECTRICAL CONSULTING SERVICES LTD	DESIGN DK	PURPOSE RESOURCE CONSENT	
	CLIENT SIMPLICITY LIVING					CHECK EM	SCALE NTS	DATE 17/07/2026
	PROJECT ID 225439	TYPE PRIVATE LIGHTING DESIGN						REV A



PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING MAINTAINED ISOLINES		REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026	ELECTRICAL CONSULTING SERVICES LTD	DESIGN DK		PURPOSE RESOURCE CONSENT	
	CLIENT SIMPLICITY LIVING						CHECK EM	SCALE NTS	DATE 17/07/2026	
	TYPE PRIVATE LIGHTING DESIGN								PAGE 4	
	PROJECT ID 225439								REV A	

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
ACC Carpark 1 - PCD	Illuminance	Lux	N.A.	20	14	N.A.
ACC Carpark 2 - PCD	Illuminance	Lux	N.A.	10	15	N.A.
ACC Carpark 5 - PCD	Illuminance	Lux	N.A.	21	14	N.A.
ACC Carpark 6 - PCD	Illuminance	Lux	N.A.	22	15	N.A.
ACC Carpark 7 - PCD	Illuminance	Lux	N.A.	21	14	N.A.
ACC Carpark 8 - PCD	Illuminance	Lux	N.A.	21	14	N.A.
Carpark 01 - PC3	Illuminance	Lux	4.1	16.0	1.1	3.9
Carpark 02 - PC3	Illuminance	Lux	4.4	14.6	1.2	3.4
Carpark 03 - PC3	Illuminance	Lux	4.0	12.1	0.9	3.1
Carpark 04 - PC3	Illuminance	Lux	7.8	22.5	0.8	2.9
Carpark 05 - PC3	Illuminance	Lux	5.7	15.2	1.4	2.7
Carpark 06 - PC3	Illuminance	Lux	11.6	23.6	1.2	2.0
Carpark 07 - PC3	Illuminance	Lux	9.5	22.2	0.8	2.3
Carpark 08 - PC3	Illuminance	Lux	6.9	15.5	1.0	2.3
Carpark 09 - PC3	Illuminance	Lux	8.3	15.5	3.3	1.9
Carpark 10 - PC3	Illuminance	Lux	4.7	11.7	1.1	2.5
Driveway - PR5	Illuminance	Lux	1.8	4.94	0.32	2.8
Ped Path 01 - PP5	Illuminance	Lux	2.3	9.20	0.20	4.1
Ped Path 02 - PP5	Illuminance	Lux	3.1	13.03	0.20	4.2
Ped Path 03 - PP5	Illuminance	Lux	2.3	5.17	0.75	2.2
Ped Path 04 - PP5	Illuminance	Lux	23.1	78.36	0.37	3.4
Ped Path 05 - PP5	Illuminance	Lux	24.2	86.49	0.28	3.6
Ped Path 06 - PP5	Illuminance	Lux	22.1	86.40	0.30	3.9
Ped Path 07 - PP5	Illuminance	Lux	20.1	84.89	0.29	4.2
Ped Path 08 - PP5	Illuminance	Lux	24.4	83.60	0.35	3.4
Ped Path 11 - PP5	Illuminance	Lux	6.3	19.43	0.36	3.1
Ped Path 15 - PP5	Illuminance	Lux	12.7	41.35	0.35	3.3
Ped Path 19 - PP5	Illuminance	Lux	29.4	103.36	0.28	3.5
Ped Path 21 - PP5	Illuminance	Lux	2.7	5.54	0.56	2.0
Ped Path 22 - PP5	Illuminance	Lux	16.2	65.18	0.28	4.0
Ped Path 23 - PP5	Illuminance	Lux	16.6	68.84	0.33	4.2
Ped Path 24 - PP5	Illuminance	Lux	22.9	72.39	0.36	3.2
Ped Path 25 - PP5	Illuminance	Lux	1.1	3.02	0.49	2.7
Ped Path 27 - PP5	Illuminance	Lux	23.4	74.95	0.41	3.2
Ped Path 29 - PP5	Illuminance	Lux	26.5	78.60	0.68	3.0
Ped Path 30 - PP5	Illuminance	Lux	112.1	520.43	0.47	4.6
Ped Path 31 - PP5	Illuminance	Lux	4.9	21.87	0.46	4.4
Ped Path 32 - PP5	Illuminance	Lux	5.3	25.85	0.33	4.9
Ped Path 33 - PP5	Illuminance	Lux	7.8	33.47	0.52	4.3
Ped Path 34 - PP5	Illuminance	Lux	2.9	5.66	0.57	2.0
Ped Path 35 - PP5	Illuminance	Lux	12.4	58.54	0.23	4.7
Ped Path 36 - PP5	Illuminance	Lux	11.4	46.78	0.50	4.1
Ped Path 37 - PP5	Illuminance	Lux	4.6	9.50	1.63	2.1
Ped Path 39 - PP5	Illuminance	Lux	3.6	7.61	1.02	2.1
Ped Path 40 - PP5	Illuminance	Lux	2.9	11.05	0.32	3.8
Ped Path 41 - PP5	Illuminance	Lux	1.8	4.52	0.28	2.5
Ped Path 42 - PP5	Illuminance	Lux	8.3	27.45	0.34	3.3
Ped Path 43 - PP5	Illuminance	Lux	5.2	11.93	2.00	2.3
Ped Path 44 - PP5	Illuminance	Lux	17.6	70.71	0.25	4.0
Ped Path 45 - PP5	Illuminance	Lux	5.4	21.13	0.25	3.9
Ped Path 47 - PP5	Illuminance	Lux	22.8	104.94	0.32	4.6
Ped Path 48 - PP5	Illuminance	Lux	15.7	41.81	0.30	2.7
Ped Path 49 - PP5	Illuminance	Lux	1.8	6.88	0.23	3.8
Ped Path 50 - PP5	Illuminance	Lux	18.4	65.50	0.43	3.6
Ped Path 51 - PP5	Illuminance	Lux	2.9	4.33	1.44	1.5
Ped Path 52 - PP5	Illuminance	Lux	2.9	10.33	0.37	3.6
Ped Path 53 - PP5	Illuminance	Lux	1.0	2.08	0.17	2.2
Ped Path 54 - PP5	Illuminance	Lux	6.3	25.92	0.29	4.1
Ped Path 55 - PP5	Illuminance	Lux	8.8	36.57	0.27	4.2
Ped Path 56 - PP5	Illuminance	Lux	3.6	13.45	0.28	3.7
Ped Path 57 - PP5	Illuminance	Lux	9.3	23.46	0.63	2.5
Ped Path 58 - PP5	Illuminance	Lux	1.8	4.42	0.41	2.4
Ped Path 59 - PP5	Illuminance	Lux	1.8	8.17	0.28	4.4
Ped Path 60 - PP5	Illuminance	Lux	10.7	42.97	0.35	4.0
Ped Path 61 - PP5	Illuminance	Lux	10.9	34.05	0.10	3.1
Ped Path 62 - PP5	Illuminance	Lux	18.9	54.38	0.31	2.9
Ped Path 63 - PP5	Illuminance	Lux	7.0	10.31	3.18	1.5
Ped Path 64 - PP5	Illuminance	Lux	1.3	3.42	0.54	2.7
Ped Path 65 - PP5	Illuminance	Lux	18.9	76.18	0.31	4.0
Ped Path 66 - PP5	Illuminance	Lux	3.0	7.71	0.27	2.6
Ped Path 67 - PP5	Illuminance	Lux	25.8	79.98	0.50	3.1
Ped Path 69 - PP5	Illuminance	Lux	18.8	70.01	0.39	3.7
Ped Path 70 - PP5	Illuminance	Lux	81.5	376.77	0.56	4.6
Ped Path 71 - PP5	Illuminance	Lux	43.3	149.75	0.41	3.5
Ped Path 73 - PP5	Illuminance	Lux	6.2	21.62	0.29	3.5
Ped Path 74 - PP5	Illuminance	Lux	9.4	15.63	3.37	1.7
Ped Path 75 - PP5	Illuminance	Lux	1.6	4.98	0.26	3.0
Ped Path 76 - PP5	Illuminance	Lux	10.4	34.98	0.29	3.4
Road 01 - PR5	Illuminance	Lux	6.3	21.94	1.01	3.5
Road 02 - PR5	Illuminance	Lux	7.0	20.33	2.14	2.9
Road 03 - PR5	Illuminance	Lux	6.0	20.28	1.80	3.4
Road 04 - PR5	Illuminance	Lux	6.3	19.55	1.85	3.1
Road 05 - PR5	Illuminance	Lux	5.9	15.92	2.31	2.7
Road 06 - PR5	Illuminance	Lux	4.4	9.85	1.12	2.3



TYPES T1, T2, T3, T4 & T5



TYPE B

AS/NZS 1158.3.1:2020 - TABLE 3.3			
VALUES OF LIGHT TECHNICAL PARAMETERS FOR ROADS IN LOCAL AREAS			
1	2	3	4
LIGHT TECHNICAL PARAMETERS (LTP)			
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE ($\bar{E}_h$) LUX	POINT HORIZONTAL ILLUMINANCE (E_{Ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U_{E2})
PR1	7	2	8
PR2	3.5	0.7	8
PR3	1.75	0.3	8
PR4	1.3	0.22	8
PR5	0.85	0.14	10
PR6	0.7	0.07	10

AS/NZS 1158.3.1:2020 - TABLE 3.4				
VALUES OF LIGHT TECHNICAL PARAMETERS FOR PATHWAYS AND CYCLIST PATHS				
1	2	3	4	5
LIGHT TECHNICAL PARAMETERS (LTP)				
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE ($\bar{E}_h$) LUX	POINT HORIZONTAL ILLUMINANCE (E_{Ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U_{E2})	POINT VERTICAL ILLUMINANCE (E_{Pv}) LUX
PP1	10	2	5	1
PP2	7	1	5	0.3
PP3	3	0.5	5	0.1
PP4	1.5	0.25	5	0.05
PP5	0.85	0.14	5	0.02

AS/NZS 1158.3.1:2020 - TABLE 3.5				
VALUES OF LIGHT TECHNICAL PARAMETERS FOR PUBLIC ACTIVITY AREAS (EXCLUDING CAR PARKS)				
1	2	3	4	5
LIGHT TECHNICAL PARAMETERS (LTP)				
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE ($\bar{E}_h$) LUX	POINT HORIZONTAL ILLUMINANCE (E_{Ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U_{E2})	POINT VERTICAL ILLUMINANCE (E_{Pv})
PA1	21	7	8	7
PA2	14	4	8	4
PA3	7	2	8	2

AS/NZS 1158.3.1:2020 - TABLE 3.7				
VALUES OF LIGHT TECHNICAL PARAMETERS FOR OUTDOOR CAR PARKS (INCLUDING ROOF-TOP CAR PARKS)				
1	2	3	4	5
LIGHT TECHNICAL PARAMETERS (LTP)				
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE ($\bar{E}_h$) LUX	POINT HORIZONTAL ILLUMINANCE (E_{Ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U_{E2})	POINT VERTICAL ILLUMINANCE (E_{Pv}) LUX
PC1	14	3	8	3
PC2	7	1.5	8	1
PC3	3.5	0.7	8	--
PCD	--	≥ 14 & $\geq (\bar{E}_h)$	--	--
PCX	21	5	8	--

AS/NZS 1158.3.1:2020 - TABLE 2.1				
LIGHTING SUBCATEGORIES FOR ROAD RESERVES IN LOCAL AREAS - LOCAL ROADS OR STREETS				
1	2	3	4	5
TYPE OF ROAD	SELECTION CRITERIA			APPLICABLE LIGHTING SUBCATEGORY
BASIC OPERATING CHARACTERISTICS	PEDESTRIAN OR CYCLE ACTIVITY	FEAR OF CRIME	NEED TO ENHANCE AMENITY	
LOCAL ROADS OR STREETS - MIXED VEHICLE AND PEDESTRIAN TRAFFIC	N/A	HIGH	N/A	PR1
	HIGH	MEDIUM	HIGH	PR2
	MEDIUM	LOW	MEDIUM	PR3 OR PR4
	LOW	LOW	LOW	PR5
	N/A	N/A	N/A	PR6

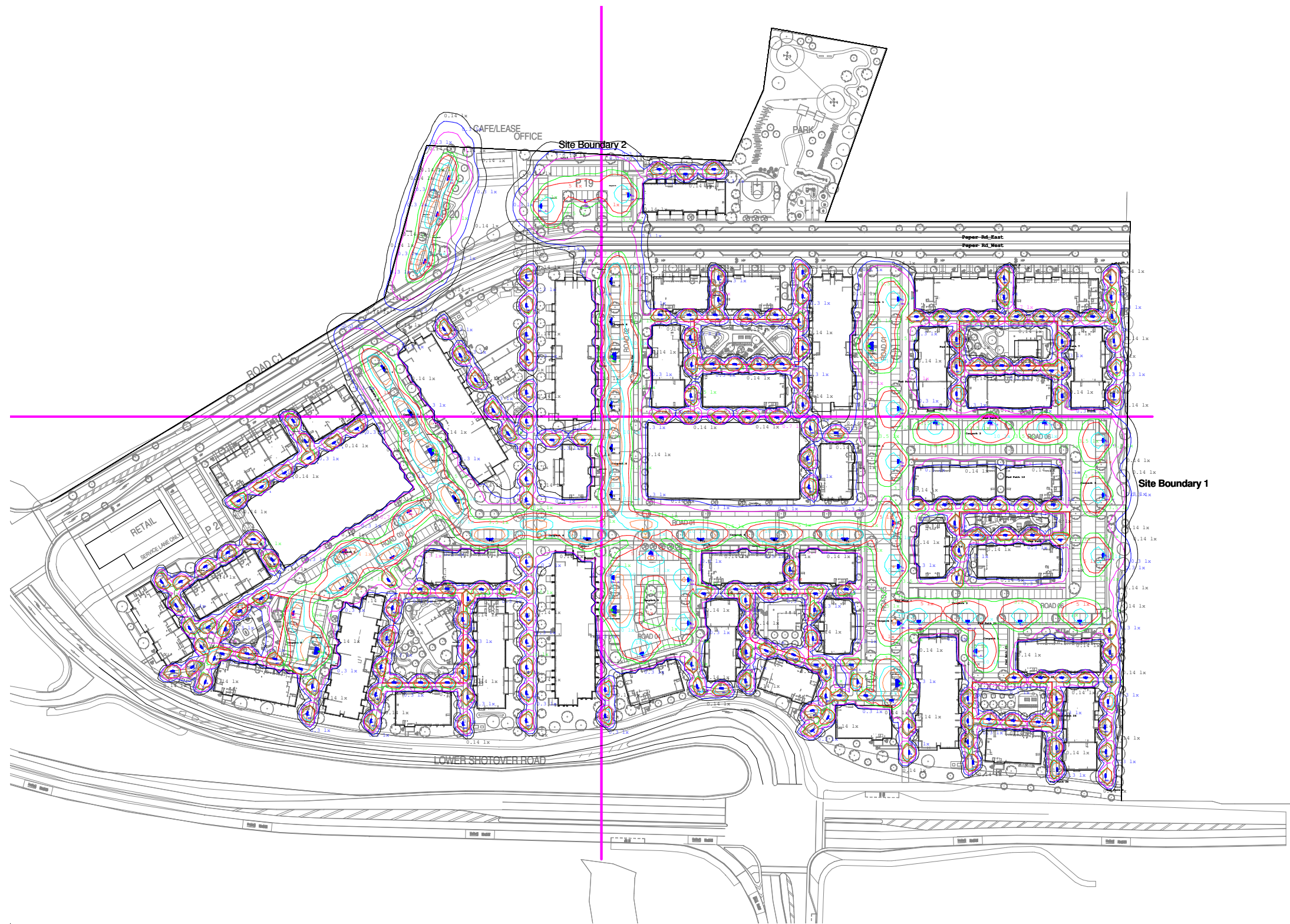
AS/NZS 1158.3.1:2020 - TABLE 2.2				
LIGHTING SUBCATEGORIES FOR PEDESTRIAN AND CYCLIST PATHS				
1	2	3	4	5
TYPE OF ROAD	SELECTION CRITERIA			APPLICABLE LIGHTING SUBCATEGORY
GENERAL DESCRIPTION	BASIC OPERATING CHARACTERISTICS	FEAR OF CRIME	NEED TO ENHANCE AMENITY	
PEDESTRIAN OR CYCLE ORIENTATED PATHWAY, E.G. FOOTPATHS, INCLUDING THOSE ALONG ROADS AND ARTERIAL ROADS, WALKWAYS, LANES, PARK PATHS, CYCLIST PATHS	PEDESTRIAN AND OR CYCLE TRAFFIC ONLY	N/A	HIGH	PP1
		HIGH	MEDIUM	PP2
		MEDIUM	MEDIUM	PP3
		MEDIUM	LOW	PP4
		LOW	LOW	PP5

AS/NZS 1158.3.1:2020 - TABLE 2.3					
LIGHTING SUBCATEGORIES FOR PUBLIC ACTIVITY AREAS (EXCLUDING CAR PARKS)					
1	2	3	4	5	6
TYPE OF AREA	SELECTION CRITERIA				APPLICABLE LIGHTING SUBCATEGORY
GENERAL DESCRIPTION	BASIC OPERATING CHARACTERISTICS	NIGHT TIME VEHICLE MOVEMENTS	FEAR OF CRIME	NEED TO ENHANCE AMENITY	
AREAS PRIMARILY FOR PEDESTRIAN USE, E.G. CITY, TOWN, SUBURBAN CENTRES, INCLUDING OUTDOOR SHOPPING PRECINCTS, MALLS, OPEN ARCADES, TOWN SQUARES, CIVIC CENTRES	GENERALLY PEDESTRIAN MOVEMENT ONLY	N/A	HIGH	HIGH	PA1
		MEDIUM	MEDIUM	MEDIUM	PA2
		LOW	LOW	N/A	PA3
TRANSPORT TERMINALS AND INTERCHANGES, SERVICE AREAS	MIXED PEDESTRIAN AND VEHICLE MOVEMENT	HIGH	HIGH	HIGH	PA1
		MEDIUM	MEDIUM	MEDIUM	PA2
		LOW	LOW	N/A	PA3

AS/NZS 1158.3.1:2020 - TABLE 2.5			
1	2	3	4
TYPE OF AREA	SELECTION CRITERIA		APPLICABLE LIGHTING SUBCATEGORY
	NIGHT TIME VEHICLE AND/OR PEDESTRIAN MOVEMENTS	FEAR OF CRIME	
PARKING SPACES, AISLES AND CALCULATION ROADWAYS	HIGH		PC1
	MEDIUM	MEDIUM	PC2
	LOW	LOW	PC3
DESIGNATED PARKING SPACES SPECIFICALLY INTENDED FOR PEOPLE WITH DISABILITIES	N/A	N/A	PCD
FOR ANY DESIGNATED AREAS FOR PEDESTRIANS TO CROSS	N/A	N/A	PCX

PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING CALCULATION RESULTS & REQUIREMENTS	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026	 ELECTRICAL CONSULTING SERVICES LTD	DESIGN DK	PURPOSE RESOURCE CONSENT	
	CLIENT SIMPLICITY LIVING					CHECK EM	SCALE NTS	DATE 17/07/2026
	TYPE PRIVATE LIGHTING DESIGN						REV A	PAGE 6

Appendix B – Obtrusive Lighting Isolux Plots



Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.14
	0.3
	0.7
	3.5
	5
	10
	14

Luminaire Schedule					
Symbol	Label	Qty	LLF	Arrangement	Description
	B	199	1.000	Single	HUNZA ARCH Bollard Type 2 Optic 3000K 26W LED Bollard
	T1	24	1.000	Single	ADLT Cree Energy Uno 200 (BLS) Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T2	9	1.000	Single	ADLT Cree Energy Uno SCP Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T3	6	1.000	Single	ADLT Cree Energy Uno 200 (BLS) Optic 41W 3000K, Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt
	T4	2	1.000	Single	ADLT Cree Energy Uno SCP Optic 20W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 1m arm 0 deg tilt
	T6	13	1.000	Single	ADLT Cree Energy Uno SCP Optic 30W 3000K, Direct Mounted on Vicpole Oxford Pole at 6m height 0m arm 0 deg tilt

PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING OBTRUSIVE & SPILL ISOLINES	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026	ELECTRICAL CONSULTING SERVICES LTD	DESIGN DK	PURPOSE RESOURCE CONSENT	
	CLIENT SIMPLICITY LIVING					CHECK EM	SCALE NTS	DATE 17/07/2026
PROJECT ID 225439	TYPE PRIVATE LIGHTING DESIGN						REV A	PAGE 1

AS/NZS 4282:2023 - TABLE 3.1 - ENVIRONMENTAL ZONES		
ENVIRONMENTAL ZONES	AMBIENT LIGHT CONDITIONS	DESCRIPTIONS / EXAMPLES
A0	INTRINSICALLY DARK	UNESCO STARLIGHT RESERVE IDA: DARK SKY PARKS, RESERVE OR SANCTUARIES MAJOR OPTICAL OBSERVATIONS OTHER ACCREDITATIONS FOR DARK SKY PLACES FOR EXAMPLE ASTROTOURISM, HERITAGE VALUE, ASTRONOMICAL IMPORTANCE, WILDLIFE/ECOSYSTEM PROTECTION LIGHTING FOR SAFE ACCESS MAY BE REQUIRED
A1	DARK	RELATIVELY UNINHABITED RURAL AREAS (INCLUDING TERRESTRIAL, MARINE, AQUATIC AND COASTAL AREAS) GENERALLY ROADWAYS WITHOUT STREETLIGHTING THROUGH RURAL AREAS
A2	LOW DISTRICT BRIGHTNESS	SPARSELY INHABITED RURAL AND SEMI - RURAL AREAS GENERALLY ROADWAYS WITHOUT STREETLIGHTING THROUGH SUBURBAN, RURAL OR SEMI-RURAL AREAS OTHER THAN INTERSECTIONS
A3	MEDIUM DISTRICT BRIGHTNESS	SUBURBAN AREAS IN TOWNS AND CITIES GENERALLY ROADWAYS WITH STREETLIGHTING THROUGH SUBURBAN, RURAL OR SEMI-RURAL AREAS
A4	HIGH DISTRICT BRIGHTNESS	TOWN AND CITY CENTRES AND OTHER COMMERCIAL AREAS RESIDENTIAL AREAS ABUTTING COMMERCIAL AREAS INDUSTRIAL AND PORT AREAS TRANSPORT INTERCHANGES
TV	HIGH DISTRICT BRIGHTNESS	VICINITY OF MAJOR SPORT AND EVENT STADIUMS DURING TV BROADCASTS

Calculation Summary			
Label	CalcType	Units	Max
ObtrusiveLight_Site Boundary_Cd_Seg1	Obtrusive - Cd	N.A.	95
ObtrusiveLight_Site Boundary_Cd_Seg2	Obtrusive - Cd	N.A.	11
ObtrusiveLight_Site Boundary_Cd_Seg3	Obtrusive - Cd	N.A.	5
ObtrusiveLight_Site Boundary_Cd_Seg4	Obtrusive - Cd	N.A.	5
ObtrusiveLight_Site Boundary_Cd_Seg5	Obtrusive - Cd	N.A.	5
ObtrusiveLight_Site Boundary_Cd_Seg6	Obtrusive - Cd	N.A.	5
ObtrusiveLight_Site Boundary_Cd_Seg7	Obtrusive - Cd	N.A.	1068
ObtrusiveLight_Site Boundary_Cd_Seg8	Obtrusive - Cd	N.A.	182
ObtrusiveLight_Site Boundary_Cd_Seg9	Obtrusive - Cd	N.A.	247
ObtrusiveLight_Site Boundary_Ill_Seg1	Obtrusive - Ill	Lux	1
ObtrusiveLight_Site Boundary_Ill_Seg2	Obtrusive - Ill	Lux	0
ObtrusiveLight_Site Boundary_Ill_Seg3	Obtrusive - Ill	Lux	0
ObtrusiveLight_Site Boundary_Ill_Seg4	Obtrusive - Ill	Lux	0
ObtrusiveLight_Site Boundary_Ill_Seg5	Obtrusive - Ill	Lux	0
ObtrusiveLight_Site Boundary_Ill_Seg6	Obtrusive - Ill	Lux	0
ObtrusiveLight_Site Boundary_Ill_Seg7	Obtrusive - Ill	Lux	2
ObtrusiveLight_Site Boundary_Ill_Seg8	Obtrusive - Ill	Lux	1
ObtrusiveLight_Site Boundary_Ill_Seg9	Obtrusive - Ill	Lux	0
ObtrusiveLight_Tl_Lower Shotover Rd_East	Obtrusive - Tl	%	0
ObtrusiveLight_Tl_Lower Shotover Rd_West	Obtrusive - Tl	%	0
ObtrusiveLight_Tl_Paper Rd_East	Obtrusive - Tl	%	0
ObtrusiveLight_Tl_Paper Rd_West	Obtrusive - Tl	%	0
Uplight	Illuminance	Lux	0.0

AS/NZS 4282:2023 - TABLE 3.2 - LIGHT TECHNICAL PARAMETER LIMITS					
ZONES	MAXIMUM VERTICAL ILLUMINANCE (E _v) LUX		THRESHOLD INCREMENT (TI)		UPWARD LIGHT RATIO
	NON - CURFEW	CURFEW	MAXIMUM TI %	DEFAULT ADAPTATION LEVEL (L _{ad}) cd/m ²	MAXIMUM ULR _S or ULR _L
A0	0 ^a	0.0	N/A	N/A	0.00
A1	2	0.1	20	0.1	0.00
A2	5	1	20	0.2 ^b	0.01
A3	10	2	20	1	0.02
A4	25	5	20	5	0.03
TV	N/A	N/A	20	10	0.08
^a FOR A0, E _v SHALL BE CLOSE TO ZERO AS PRACTICABLE WITHOUT IMPACTING SAFETY CONSIDERATIONS.					
^b FOR AN INTERNALLY ILLUMINATED SIGN IN A A2 ZONE, L _{ad} ≤ 0.25 cd/m ²					

AS/NZS 4282:2023 - TABLE 3.3 - MAXIMUM LUMINOUS INTENSITIES PER LUMINAIRE			
ZONES	LUMINOUS INTENSITY (I),cd		
	NON - CURFEW LEVEL 1 (L1)	NON - CURFEW LEVEL 2 (L2)	CURFEW
A0	SEE NOTE	SEE NOTE	0
A1	2 500	5 000	500
A2	7 500	12 500	1 000
A3	12 500	25 000	2 500
A4	25 000	50 000	2 500
TV	100 000	165 000	0
NOTE : FOR A0, I SHALL BE AS CLOSE TO ZERO AS PRACTICABLE WITHOUT IMPACTING SAFETY CONDITIONS			

PROJECT NAME LADIES MILE, 14 LOWER SHOTOVER ROAD, QUEENSTOWN	DRAWING AS/NZ 4282 REQUIREMENTS & RESULTS	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026		DESIGN DK	PURPOSE RESOURCE CONSENT	
	CLIENT SIMPLICITY LIVING					CHECK EM	SCALE NTS	DATE 17/07/2026
	TYPE PRIVATE LIGHTING DESIGN						REV A	PAGE 8
PROJECT ID 225439								

Appendix C – Obtrusive Lighting Report

1.0 Illuminance

The requirements of the QLDC Plan and AS/NZS 4282:2023 are summarised in the table below and will be followed for the specific lighting categories of the adjacent boundaries.

Table 3.1 — Environmental zones

Environmental zones	Ambient light conditions	Descriptions/ Examples
A0	Intrinsically dark	UNESCO Starlight Reserve. IDA: Dark Sky Parks, Reserves or Sanctuaries Major optical observatories Other accreditations for dark sky places for example astrotourism, heritage value, astronomical importance, wildlife/ecosystem protection Lighting for safe access may be required
A1	Dark	Relatively uninhabited rural areas (including terrestrial, marine, aquatic and coastal areas) Generally roadways without streetlighting through rural areas
A2	Low district brightness	Sparsely inhabited rural and semi-rural areas Generally roadways without streetlighting through suburban, rural or semi-rural areas other than intersections
A3	Medium district brightness	Suburban areas in towns and cities Generally roadways with streetlighting through suburban, rural or semi-rural areas
A4	High district brightness	Town and city centres and other commercial areas Residential areas abutting commercial areas Industrial and Port areas Transport Interchanges
TV	High district brightness	Vicinity of major sport and event stadiums during TV broadcasts
NOTE Zones A0 and A1 would normally have a minimum area of 50 ha.(0.5 km ²). There may be smaller environmentally sensitive areas.		

Table 3.2 — Light technical parameter limits

Zones	Maximum vertical illuminance (E_v) lux		Threshold increment (TI)		Upward Light Ratio
	Non-curfew	Curfew	Maximum TI %	Default Adaptation level (L_{ad}) cd/m ²	Maximum ULR _S or ULR _L
A0	0 ^a	0.0	N/A	N/A	0.00
A1	2	0.1	20	0.1	0.00
A2	5	1	20	0.2 ^b	0.01
A3	10	2	20	1	0.02
A4	25	5	20	5	0.03
TV	N/A	N/A	20	10	0.08
^a For A0, E_v shall be as close to zero as practicable without impacting safety considerations.					
^b For an internally illuminated sign in a A2 zone, $L_{ad} \leq 0.25$ cd/m ²					

Table 3.3 — Maximum luminous intensities per luminaire

Zone	Luminous intensity (<i>I</i>), cd		
	Non-curfew Level 1 (L1)	Non-curfew Level 2 (L2)	Curfew
A0	See Note	See Note	0
A1	2 500	5 000	500
A2	7 500	12 500	1 000
A3	12 500	25 000	2 500
A4	25 000	50 000	2 500
TV	100 000	165 000	0
NOTE For A0, <i>I</i> shall be as close to zero as practicable without impacting safety considerations.			

Illuminance is the measure of luminous flux (light) falling onto a surface divided by the area.

Illuminance will be calculated for the proposed external lighting and will be represented by isolines graduated at 0.14, 0.3, 0.7, 3.5, 5, 10 and 14 lux contours on the calculation drawings.

The results below show that the proposed installation complies with the requirements of AS/NZS 4282:2023 and QLDC for all adjacent zones.

Lighting Category	Zone A3
AS/NZS 4282 Zone A3 Horizontal & Vertical illuminance at boundary (lux) Curfew - Not exceeding 2 Lux	1
Lower Shotover Road - Threshold Increment Not exceeding 20% of 1 cd/m ²	0
Paper Road - Threshold Increment Not exceeding 20% of 1 cd/m ²	0
Luminous Intensity (cd) for Zone A3 Curfew - Not exceeding 2,500 cd	780
Upward Lighting Ratio Not exceeding 0.02 lux	0.0

1.1 Spill Light Illuminance

The information provided with the application shows there are no existing residential or commercial properties that will be affected by spill light. Neighbouring occupants will not be adversely affected by the proposed upgrade for Lower Shotover Road, Ladies Mile, Queenstown.

1.2 Site Access – PR5

The site access lighting within the development has been designed to achieve an average illuminance of 0.85 lux maintained, a minimum illuminance of 0.14 lux maintained and a horizontal uniformity of less than or equal to 10 max/ave, when measured on the horizontal plane in accordance with recommended lighting sub-category PR5 as described in Lighting for Roads and Public Spaces Standard AS/NZS 1158.3.1:2020 Table 3.3.

1.3 Ped Pathway – PP5

The Pathway lighting within the development has been designed to achieve an average illuminance of 0.85 lux maintained, a minimum horizontal illuminance of 0.14 lux and a horizontal uniformity of less than or equal to 5 max/ave, when measured on the horizontal plane in accordance with recommended lighting sub-category PP5 as described in Lighting for Roads and Public Spaces Standard AS/NZS 1158.3.1:2020 Table 3.4.

1.4 Carparks – PC3

The Carpark lighting within the development has been designed to achieve an average illuminance of 3.5 lux maintained, a minimum horizontal illuminance of 0.7 lux and a horizontal uniformity of less than or equal to 8 max/ave, when measured on the horizontal plane in accordance with recommended lighting sub-category PC3 as described in Lighting for Roads and Public Spaces Standard AS/NZS 1158.3.1:2020 Table 3.7.

The designated parking space specifically intended for people with disabilities designed to achieve a minimum horizontal illuminance of 14 lux when measured on the horizontal plane in accordance with recommended lighting sub-category PCD as described in Lighting for Roads and Public Spaces Standard AS/NZS 1158.3.1:2020 Table 3.7.

The proposed external lighting solution for Lower Shotover Road, Queenstown has been designed to comply with maximum illuminance and maximum luminance requirements as stated in Lighting For Roads in Public Spaces AS/NZS 1158.3.1:2020, AS 4282:2023 Control Of Obtrusive Effects Of Outdoor Lighting and Queenstown Lake District Council Plan.

In our opinion, the proposed solutions provide sufficient lighting and have less than minor effects on the existing environment.

Report prepared by
D Kamalan Tech IES

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A3 - Medium District Brightness, Curfew
Filename: 225439 Simplicity Queenstown - Obstrusive Site Lighting Layout Rev 16-07-2026
17/07/2026 9:11:33 am

Illuminance

Maximum Allowable Value: 2 Lux

Calculations Tested (9):

Calculation Label	Test Results	Max. Illum.
ObtrusiveLight_Site Boundary_III_Seg1	PASS	1
ObtrusiveLight_Site Boundary_III_Seg2	PASS	0
ObtrusiveLight_Site Boundary_III_Seg3	PASS	0
ObtrusiveLight_Site Boundary_III_Seg4	PASS	0
ObtrusiveLight_Site Boundary_III_Seg5	PASS	0
ObtrusiveLight_Site Boundary_III_Seg6	PASS	0
ObtrusiveLight_Site Boundary_III_Seg7	PASS	2
ObtrusiveLight_Site Boundary_III_Seg8	PASS	1
ObtrusiveLight_Site Boundary_III_Seg9	PASS	0

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 1000 Cd
Control Angle: 83 Degrees

Luminaire Locations Tested (253)

Test Results: PASS

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 2500 Cd

Calculations Tested (9):

Calculation Label	Test Results
ObtrusiveLight_Site Boundary_Cd_Seg1	PASS
ObtrusiveLight_Site Boundary_Cd_Seg2	PASS
ObtrusiveLight_Site Boundary_Cd_Seg3	PASS
ObtrusiveLight_Site Boundary_Cd_Seg4	PASS
ObtrusiveLight_Site Boundary_Cd_Seg5	PASS
ObtrusiveLight_Site Boundary_Cd_Seg6	PASS
ObtrusiveLight_Site Boundary_Cd_Seg7	PASS
ObtrusiveLight_Site Boundary_Cd_Seg8	PASS
ObtrusiveLight_Site Boundary_Cd_Seg9	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (4):

Calculation Label	Adaptation Luminance	Test Results
ObtrusiveLight_TI_Lower Shotover Rd _East	2	PASS
ObtrusiveLight_TI_Lower Shotover Rd _West	2	PASS
ObtrusiveLight_TI_Paper Rd _East	2	PASS
ObtrusiveLight_TI_Paper Rd _West	2	PASS

Appendix D – Product Datasheets

Energy UNO

LED Street/Area Luminaire



Advanced
LIGHTING TECHNOLOGIES

CREE LIGHTING

Types T1, T2, T3, T4 & T6

Product Description

Designed as a complete street lighting system and optimized for LED light sources, it is distinguished by its extraordinary efficiency. Energy UNO provides the best lighting solution. Developed with three product sizes, four lumens package per size, a complete optical range, flux adjustment options and a wide range of light sources together with a comprehensive optical range, stand-alone flow control options and Zhaga connectivity. Energy can be mounted on a pole or bracket with an adjustability of 20° and with 5° increments. Adjustments can be done from outside without having to open the product cover

Applications: Urban and internal roads, pedestrian walkways and car parks.

Performance Summary

Efficacy: up to 160lm/W

Initial Delivered LED Lumens: up to 8600lm

Lifetime color consistency: 4SDM

Limited Warranty: 5 years on luminaire

Ordering Information

Eg: TRSA-2-K07-2L-407-+-A-SG-FX-S-S-00+ FXA10HA0-00001

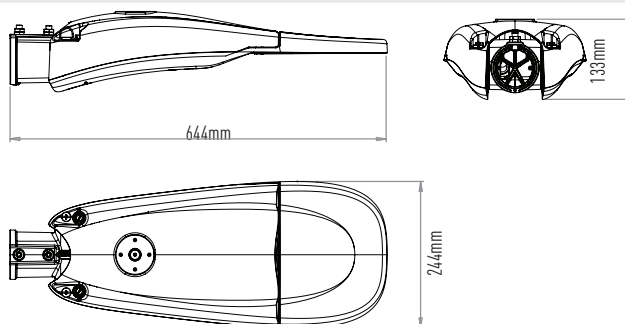
TRSA	-	2	-	K07	-	2L	-	228	-	+	-	A	-	SG	-	FX	-	S	-	S	-	00	
Product		Mounting		Optic		Lumen Package		CCT		Insulation Class		Voltage		Finish		Options		Variant		Protection		Cable length	
TRSA	-	2	-	K07	-	2L*	-	228*	-	+	-	A	-	SG	-	FX	-	S	-	S	-	00	
		horiz/vert tenon 60mm		NanoComfort Narrow Street		Up to 2100lm		2200K CRI80		Class 1		220-240V		Sapphire Gray		Fixed Output (setting on request)		No socket / No sensor		By Driver		Standard no cable	
				075						^				BK*		VM		N*		SF*		01	
		3		K10		4L		278*		Class 2				Black Textured		DL		Nema Socket 7 pin		Standard +Fuse		Exit Cable 1 m	
		horiz/vert tenon 76mm		NanoComfort Medium Street		Up to 4300lm		2700K CRI80						WH*		CL				U		03*	
				100		6L		308						White Textured		VMC		Constant Lumen		10 kV		Exit Cable 3 m	
				NanoComfort Broad Street		Up to 6500lm		3000K CRI80												UF*		06*	
				125		8L		407							SV*					10 kV +Fuse		Exit Cable 6 m	
				Broad Street 1.25 (T2S)		Up to 8600lm		4000K CRI70							Silver Textured								10*
				150				577*								FX		Z				Exit Cable 10 m	
				Wide Street 1.50 (T3S)				5700K CRI70									Fixed Output (setting on request)		Zhaga Socket/ D4i driver				
				200												VM							
			Extra Wide Street 2.00(T4S)												CL								
			SCP													Constant Lumen							
			Street & Cycle Path class P(T2S)																				
			NZP													VMC							
			Broad Street (T3S)													Virtual Midnight+ Constant Lumen							
			AFN*																				
			Area Flood Narrow																				
			ARS																				
			RotoSymmetric Area																				
			PCR*																				
			Pedestrian Crossing Right																				
			PCL*																				
			Pedestrian Crossing Left																				

*On request

ADAPTER

KIT-TRS-AP60-42-48-V0

Fitter kit to mount to 42 & 48 mm tenon



Advanced Lighting Technologies Australia Inc
Advanced Lighting Technologies New Zealand Ltd
Advanced Lighting Technologies Asia Pte Ltd

Australia
New Zealand
Singapore

+61 3 9800 5600
+64 9 415 6332
+65 6844 2338

www.adlt.com.au
www.adlt.co.nz
www.adlt.com.sg

FEATURES

- Available with **NanoComfort®** precision optical system
- LED Lumen output up to 8600lm
- Zhaga Book 15 compliant LED module efficiency (excluding optical system): ≥ 185 lm/W
- Luminaire efficiency (including optical losses): up to 160 lm/W
- CCT: 4000K Ra70, 3000K Ra80 (2200K, 2700K, 3000K Ra70 on request)
- CRI Standard min. 70, CRI80 @3000K
- Initial Chromatic Selection: ≤ 4 -Step MacAdam ellipse or $\Delta u'v' \leq 0.003$ (LM80:08)
- Luminous flux maintenance factor: L97B10 up to $>100,000$ hours $T_a=25^\circ\text{C}$ (According to IESNA TM-21)
- Degree of protection optical compartment and wiring compartment: IP66 (IEC 60529)
- Optical compartment and wiring compartment impact resistance: $\geq$ IK10 (EN 62262)
- Overvoltage protection: up to 10kV CM/DM according to EN 61000-4-5 and EN 61547
- Driver equipped with over-temperature protection for optimal performance and safety
- Power factor: ≥ 0.98 at full load
- Operating temperature: -40°C up to $+50^\circ\text{C}$
- Control options: Virtual Midnight and Constant Light Protocol are adjustable via the main, DALI 2, D4i
- Available with fuse and 20mm Zhaga Book 18 connector
- Backlight control accessory available on request for selected lenses
- SPD with LED fault indicator (Standard in class 1, available on request in Class 2)

CONSTRUCTION AND MATERIALS

- Die-cast aluminum body with low copper content
- Power supply compartment accessible without the use of tools
- Removable wiring plate
- Knife disconnecter
- 4mm thick ultra clear transparent glass protection screen
- Replaceable PMMA lenses
- Replaceable LED board equipped with ESD protection
- Cable type H07RN-F (Cable length up to 10m)
- Easy installation: wiring compartment installed on the cover and pre-assembled integrated joint - to install the luminaire it is not necessary to open it if outgoing cable version,
- Practicality in ordinary and extraordinary maintenance: power supply compartment accessible and component holder plate removable without tools; lenses and LEDs easily removable and replaceable using a single tool.
- Luminaire assembled without the use of adhesives, completely disassembled and recyclable

WARRANTY AND CERTIFICATIONS

- Warranty: 5 years / 10 years on request
- CE /CB /ENEC /RoHS/RCM
- Risk group exempt in accordance with Standard CEI EN 62471 for photobiological safety (Tested IEC/TR62778)
- Compliant to: EN 60598-1; EN 60598-2-3
- Lead-free powder coatings with excellent exterior durability, conforms to the requirements:
 - Adhesion - test comply with ISO 2409
 - Salt spray - test NSS comply with ISO 9227
 - Accelerated Weathering - test UV comply with ISO 16474-2 (ex ISO 11507)
 - Constant humidity - test comply with ISO 6270-1

ELECTRICAL DATA*

Lumen Package	System Watts 220-240V	Total Current	Power Factor
		@230V, 50Hz	
2L	15W	0,07	0,94
4L	28W	0,125	0,97
6L	41W	0,181	0,98
8L	54W	0,238	0,98

* Electrical data at 25°C (77°F)

WEIGHT

WEIGHT	6,5 Kg
--------	--------

LMF LUXEON - RECOMMENDED LUMEN MAINTENANCE FACTORS (LMF)¹

Ambient	LMF iniziale	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
25°C	1	0,97	0,94	0,92	0,90

LMF DURIS - RECOMMENDED LUMEN MAINTENANCE FACTORS (LMF)¹

Ambient	LMF iniziale	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
25°C	1	0,99	0,98	0,98	0,97

¹ Lumen maintenance values calculated at 25°C , with TM-21 based on LM-80 data and on-site testing. DURIS for SCP optic 150 - PCR- PCL and LUXEON for K07 - K10 - K12 - 075, 100, 125 - 200 - AFN - ARS optics

² In accordance with IESNA TM-21-11, the values shown in the "projected" column represent interpolated and arc values within six times (6X) the total duration in hours of the tests (performed according to IESNA LM-80-08) to which the device has been subjected ((DUT) e.g. the LED chip).

³ In accordance with IESNA TM-21-11, the values shown in the column "calculated" are calculated based on a time span greater than six times (6X) the total duration in hours of the tests (performed according to IESNA LM-80-08) to which the device has been subjected ((DUT) e.g. the LED chip).

ZHAGA OPTIONS AVAILABLE

FX-Z	Zhaga Book 18 connector & D4i driver combined with FX programs (Fixed Power)
VM-Z	Zhaga Book 18 connector & D4i driver combined with VM programs (Virtual Midnight)
CL-Z	Zhaga Book 18 connector & D4i driver combined with CL programs (Constant Light Output)
VMC-Z	Zhaga Book 18 connector & D4i driver combined with VM+CL

Control options - Variant S - N(Optics K07 - K10 - K12 - 075 - 100 - 125 - 200 - AFN - ARS)

FX - FIXED OUTPUT					
Setting Code	System Watts W	Nominal flux (lm)			Description
		2700K	3000K	4000K	
LUMEN PACKAGE 8L					
FXA10HA0-00001	54	6872	7782	8640	FIXED OUTPUT 54W
FXA10HA0-00002	36	4847	5489	6094	FIXED OUTPUT 36W
FXA10HA0-00003	27	3729	4223	4689	FIXED OUTPUT 27W
LUMEN PACKAGE 6L					
FXA10FA0-00001	41	5220	5911	6562	FIXED OUTPUT 41W
FXA10FA0-00002	27	3682	4169	4629	FIXED OUTPUT 27W
FXA10FA0-00003	21	2833	3208	3561	FIXED OUTPUT 21W
LUMEN PACKAGE 4L					
FXA10DA0-00001	28	3429	3883	4311	FIXED OUTPUT 28W
FXA10DA0-00002	19	2419	2739	3041	FIXED OUTPUT 19W
FXA10DA0-00003	14	1861	2107	2340	FIXED OUTPUT 14W
LUMEN PACKAGE 2L					
FXA10BA0-00001	15	1694	1918	2130	FIXED OUTPUT 15W
FXA10BA0-00002	10	1195	1353	1502	FIXED OUTPUT 10W
FXA10BA0-00003	8	919	1041	1156	FIXED OUTPUT 8W

VM - VIRTUAL MIDNIGHT (Lumen package 8L - 6L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 8L													
VMA10HA0-0013	54	6872	7782	8640	36	4847	5178	6094	27	3729	4223	4689	VM ON-54W / 21:00-36W / 24:00-27W / 04:00-36W/06:00-54W
VMA10HA0-0014	36	4847	5489	6094	24	3363	3592	4228	19	2543	2879	3197	VM ON-36W / 21:00-24W / 24:00-19W /04:00-24W/06:00- 36W
VMA10HA0-0015	27	3729	4223	4689	19	2543	2716	3197	15	1947	2205	2448	VM ON-27W / 21:00-19W / 24:00-15W / 04:00-19W/06:00-27W
VMA10HA0-0001	54	6872	7782	8640					27	3729	4223	4689	VM ON-54W / 22:00-27W / 06:00-54W
VMA10HA0-0002	54	6872	7782	8640					36	4847	5489	6094	VM ON-54W / 22:00-36W / 06:00-54W
VMA10HA0-0003	36	4847	5489	6094					19	2543	2879	3197	VM ON-36W / 22:00-19W / 06:00-36W
VMA10HA0-0004	36	4847	5489	6094					24	3363	3808	4228	VM ON-36W / 22:00-24W / 06:00-36W
VMA10HA0-0005	27	3729	4223	4689					15	1947	2205	2448	VM ON-27W / 22:00-15W / 06:00-27W
VMA10HA0-0006	27	3729	4223	4689					19	2543	2879	3197	VM ON-27W / 22:00-19W / 06:00-27W
VMA10HA0-0007	54	6872	7782	8640					27	3729	4223	4689	VM ON-54W / 00:00-27W / 06:00-54W
VMA10HA0-0008	54	6872	7782	8640					36	4847	5489	6094	VM ON-54W / 00:00-36W / 06:00-54W
VMA10HA0-0009	36	4847	5489	6094					19	2543	2879	3197	VM ON-36W / 00:00-19W / 06:00-36W
VMA10HA0-0010	36	4847	5489	6094					24	3363	3808	4228	VM ON-36W / 00:00-24W / 06:00-36W
VMA10HA0-0011	27	3729	4223	4689					15	1947	2205	2448	VM ON-27W / 00:00-15W / 06:00-27W
VMA10HA0-0012	27	3729	4223	4689					19	2543	2879	3197	VM ON-27W / 00:00-19W / 06:00-27W
LUMEN PACKAGE 6L													
VMA10FA0-0013	41	5220	5911	6562	27	3682	4169	4629	21	2833	3208	3561	VM ON-41W / 21:00-27W / 24:00-21W /04:00-27W/06:00- 41W
VMA10FA0-0014	27	3682	4169	4629	19	2554	2892	3211	14	1931	2187	2428	VM ON-27W / 21:00-19W / 24:00-14W /04:00-19W/06:00-27W
VMA10FA0-0015	21	2833	3208	3561	14	1931	2187	2428	11	1479	1675	1859	VM ON-21W / 21:00-14W / 24:00-11W /04:00-14W/06:00-21W
VMA10FA0-0001	41	5220	5220	6562					21	2833	3208	3561	VM ON-41W / 22:00-21W / 06:00-41W
VMA10FA0-0002	41	5220	5220	6562					27	3682	3682	4629	VM ON-41W / 22:00-27W / 06:00-41W
VMA10FA0-0003	27	3682	4169	4629					14	1931	2187	2428	VM ON-27W / 22:00-14W / 06:00-27W
VMA10FA0-0004	27	3682	4169	4629					19	2554	2892	3211	VM ON-27W / 22:00-19W / 06:00-27W
VMA10FA0-0005	21	2833	3208	3561					11	1479	1675	1859	VM ON-21W / 22:00-11W / 06:00-21W
VMA10FA0-0006	21	2833	3208	3561					14	1931	1931	2428	VM ON-21W / 22:00-14W / 06:00-21W
VMA10FA0-0007	41	5220	5220	6562					21	2833	3208	3561	VM ON-41W / 00:00-21W / 06:00-41W
VMA10FA0-0008	41	5220	5220	6562					27	3682	4169	4629	VM ON-41W / 00:00-27W / 06:00-41W
VMA10FA0-0009	27	3682	4169	4629					14	1931	2187	2428	VM ON-27W / 00:00-14W / 06:00-27W
VMA10FA0-0010	27	3682	4169	4629					19	2554	2892	3211	VM ON-27W / 00:00-19W / 06:00-27W
VMA10FA0-0011	21	2833	2833	3561					11	1479	1675	1859	VM ON-21W / 00:00-11W / 06:00-21W
VMA10FA0-0012	21	2833	2833	3561					14	1931	2187	2428	VM ON-21W / 00:00-14W / 06:00-21W

Control options - Variant S - N (Optics K07 - K10 - K12 - 075 - 100 - 125 - 200 - AFN - ARS)

VM - VIRTUAL MIDNIGHT(Lumen package 4L - 2L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 4L													
VMA10DA0-0013	28	3429	3883	4311	19	2419	2739	3041	14	1861	2107	2340	VM ON-28W / 21:00-19W / 24:00-14W / 04:00-19W/06:00-28W
VMA10DA0-0014	19	2419	2739	3041	13	1678	1900	2110	10	1269	1437	1595	VM ON-19W / 21:00-13W / 24:00-10W / 04:00-13W/06:00-19W
VMA10DA0-0015	14	1861	2107	2340	10	1269	1437	1595	8	972	1100	1221	VM ON-14 / 21:00-10W / 24:00-8W / 04:00-10W/06:00-14W
VMA10DA0-0001	28	3429	3883	4311					14	1861	2107	2340	VM ON-28W / 22:00-14W / 06:00-28W
VMA10DA0-0002	28	3429	3883	4311					19	2419	2739	3041	VM ON-28W / 22:00-19W / 06:00-28W
VMA10DA0-0003	19	2419	2739	3041					10	1269	1437	1595	VM ON-19W / 22:00-10W / 06:00-19W
VMA10DA0-0004	19	2419	2739	3041					13	1678	1900	2110	VM ON-19W / 22:00-13W / 06:00-19W
VMA10DA0-0005	14	1861	2107	2340					8	972	1100	1221	VM ON-14W / 22:00-8W / 06:00-14W
VMA10DA0-0006	14	1861	2107	2340					10	1269	1437	1595	VM ON-14W / 22:00-10W / 06:00-14W
VMA10DA0-0007	28	3429	3883	4311					14	1861	2107	2340	VM ON-28W / 00:00-14W / 06:00-28W
VMA10DA0-0008	28	3429	3883	4311					19	2419	2739	3041	VM ON-28W / 00:00-19W / 06:00-28W
VMA10DA0-0009	19	2419	2739	3041					10	1269	1437	1595	VM ON-19W / 00:00-10W / 06:00-19W
VMA10DA0-0010	19	2419	2739	3041					13	1678	1900	2110	VM ON-19W / 00:00-13W / 06:00-19W
VMA10DA0-0011	14	1861	2107	2340					8	972	1100	1221	VM ON-14W / 00:00-8W / 06:00-14W
VMA10DA0-0012	14	1861	2107	2340					10	1269	1437	1595	VM ON-14W / 00:00-10W / 06:00-14W
LUMEN PACKAGE 2L													
VMA10BA0-0013	15	1694	1918	2130	10	1195	1353	1502	8	919	1041	1156	VM ON-15W / 21:00-10W / 24:00-8W / 04:00-10W/06:00-15W
VMA10BA0-0014	10	1195	1353	1502	7	829	939	1042	5	627	710	788	VM ON-10W / 21:00-7W / 24:00-5W / 04:00-7W /06:00-10W
VMA10BA0-0015	8	919	1041	1156	5	627	710	788	4	480	543	603	VM ON-8W / 21:00-5W / 24:00-4W / 04:00-5W /06:00-8W
VMA10BA0-0001	15	1694	1918	2130					8	919	1041	1156	VM ON-15W / 22:00-8W / 06:00-15W
VMA10BA0-0002	15	1694	1918	2130					10	1195	1353	1502	VM ON-15W / 22:00-10W / 06:00-15W
VMA10BA0-0003	10	1195	1353	1502					5	627	710	788	VM ON-10W / 22:00-5W / 06:00-10W
VMA10BA0-0004	10	1195	1353	1502					7	829	939	1042	VM ON-10W / 22:00-7W / 06:00-10W
VMA10BA0-0005	8	919	1041	1156					4	480	543	603	VM ON-8W / 22:00-4W / 06:00-7W
VMA10BA0-0006	8	919	1041	1156					5	627	710	788	VM ON-8W / 22:00-5W / 06:00-7W
VMA10BA0-0007	15	1694	1918	2130					8	919	1041	1156	VM ON-15W / 00:00-8W / 06:00-15W
VMA10BA0-0008	15	1694	1918	2130					10	1195	1353	1502	VM ON-15W / 00:00-10W / 06:00-15W
VMA10BA0-0009	10	1195	1353	1502					5	627	710	788	VM ON-10W / 00:00-5W / 06:00-10W
VMA10BA0-0010	10	1195	1353	1502					7	829	939	1042	VM ON-10W / 00:00-7W / 06:00-10W
VMA10BA0-0011	8	919	1041	1156					4	480	543	603	VM ON-8W / 00:00-4W / 06:00-7W
VMA10BA0-0012	8	919	1041	1156					5	627	710	788	VM ON-8W / 00:00-5W / 06:00-7W

Control options - Variant S - N (Optics K07 - K10 - K12 075 - 100 - 125 - 200 - AFN - ARS)

DL (DALI DIMMABLE)						
Lumen Package	Setting Code	System Watts W	Nominal flux (lm)			Description
			2700K	3000K	4000K	
8L	DLE10HA0-0001	54	6872	7782	8640	DALI MAX 54W
6L	DLE10FA0-0001	41	5220	5911	6562	DALI MAX 41W
4L	DLE10DA0-0001	28	3429	3883	4311	DALI MAX 28W
2L	DLE10BA0-0001	15	1694	1918	2130	DALI MAX 15W

CL*	
Setting Code	Description
CL####-****	CLO 50.000 HOURS START AT 90%
CL####-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to programme powers for FX option for S-N variants, please for information contact Cree Lighting Europe.

VMC*	
Setting Code	Description
VMC####-****	CLO 50.000 HOURS START AT 90%
VMC####-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to the wattage of the VM option programmes for S-N variants, please for information contact Cree Lighting Europe.

Control options - Variant Z (Optics K07 - K10 - K12 - 075 - 100 - 125 - 200 - AFN - ARS)

FX - FIXED OUTPUT					
Setting Code	System Watts W	Nominal flux (lm)			Description
		2700K	3000K	4000K	
LUMEN PACKAGE 8L					
FXP10HA0-0001	54	6872	7782	8640	FIXED OUTPUT 54W
FXP10HA0-0002	36	4847	5489	6094	FIXED OUTPUT 36W
FXP10HA0-0003	27	3729	4223	4689	FIXED OUTPUT 27W
LUMEN PACKAGE 6L					
FXP10FA0-0001	41	5220	5911	6562	FIXED OUTPUT 41W
FXP10FA0-0002	27	3682	4169	4629	FIXED OUTPUT 27W
FXP10FA0-0003	21	2833	3208	3561	FIXED OUTPUT 21W
LUMEN PACKAGE 4L					
FXP10DA0-0001	28	3429	3883	4311	FIXED OUTPUT 28W
FXP10DA0-0002	19	2419	2739	3041	FIXED OUTPUT 19W
FXP10DA0-0003	14	1861	2107	2340	FIXED OUTPUT 14W
LUMEN PACKAGE 2L					
FXP102B0-0001	15	1694	1918	2130	FIXED OUTPUT 15W
FXP102B0-0002	10	1195	1353	1502	FIXED OUTPUT 10W
FXP102B0-0003	8	919	1041	1156	FIXED OUTPUT 8W

VM - VIRTUAL MIDNIGHT (Lumen package 8L - 6L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 8L													
VMP10HA0-0013	54	6872	7782	8640	36	4847	5178	6094	27	3729	4223	4689	VM ON-54W / 21:00-36W / 24:00-27W / 04:00-36W/06:00-54W
VMP10HA0-0014	36	4847	5489	6094	24	3363	3592	4228	19	2543	2879	3197	VM ON-36W / 21:00-24W / 24:00-19W /04:00-24W/06:00- 36W
VMP10HA0-0015	27	3729	4223	4689	19	2543	2716	3197	15	1947	2205	2448	VM ON-27W / 21:00-19W / 24:00-15W / 04:00-19W/06:00-27W
VMP10HA0-0001	54	6872	7782	8640					27	3729	4223	4689	VM ON-54W / 22:00-27W / 06:00-54W
VMP10HA0-0002	54	6872	7782	8640					36	4847	5489	6094	VM ON-54W / 22:00-36W / 06:00-54W
VMP10HA0-0003	36	4847	5489	6094					19	2543	2879	3197	VM ON-36W / 22:00-19W / 06:00-36W
VMP10HA0-0004	36	4847	5489	6094					24	3363	3808	4228	VM ON-36W / 22:00-24W / 06:00-36W
VMP10HA0-0005	27	3729	4223	4689					15	1947	2205	2448	VM ON-27W / 22:00-15W / 06:00-27W
VMP10HA0-0006	27	3729	4223	4689					19	2543	2879	3197	VM ON-27W / 22:00-19W / 06:00-27W
VMP10HA0-0007	54	6872	7782	8640					27	3729	4223	4689	VM ON-54W / 00:00-27W / 06:00-54W
VMP10HA0-0008	54	6872	7782	8640					36	4847	5489	6094	VM ON-54W / 00:00-36W / 06:00-54W
VMP10HA0-0009	36	4847	5489	6094					19	2543	2879	3197	VM ON-36W / 00:00-19W / 06:00-36W
VMP10HA0-0010	36	4847	5489	6094					24	3363	3808	4228	VM ON-36W / 00:00-24W / 06:00-36W
VMP10HA0-0011	27	3729	4223	4689					15	1947	2205	2448	VM ON-27W / 00:00-15W / 06:00-27W
VMP10HA0-0012	27	3729	4223	4689					19	2543	2879	3197	VM ON-27W / 00:00-19W / 06:00-27W
LUMEN PACKAGE 6L													
VMP10FA0-0013	41	5220	5911	6562					21	2833	3208	3561	VM ON-41W / 21:00-27W / 24:00-21W /04:00-27W/06:00- 41W
VMP10FA0-0014	27	3682	4169	4629	27	3682	4169	4629	14	1931	2187	2428	VM ON-27W / 21:00-19W / 24:00-14W /04:00-19W/06:00-27W
VMP10FA0-0015	21	2833	3208	3561	19	2554	2892	3211	11	1479	1675	1859	VM ON-21W / 21:00-14W / 24:00-11W /04:00-14W/06:00-21W
VMP10FA0-0001	41	5220	5220	6562	14	1931	2187	2428	21	2833	3208	3561	VM ON-41W / 22:00-21W / 06:00-41W
VMP10FA0-0002	41	5220	5220	6562					27	3682	3682	4629	VM ON-41W / 22:00-27W / 06:00-41W
VMP10FA0-0003	27	3682	4169	4629					14	1931	2187	2428	VM ON-27W / 22:00-14W / 06:00-27W
VMP10FA0-0004	27	3682	4169	4629					19	2554	2892	3211	VM ON-27W / 22:00-19W / 06:00-27W
VMP10FA0-0005	21	2833	3208	3561					11	1479	1675	1859	VM ON-21W / 22:00-11W / 06:00-21W
VMP10FA0-0006	21	2833	3208	3561					14	1931	1931	2428	VM ON-21W / 22:00-14W / 06:00-21W
VMP10FA0-0007	41	5220	5220	6562					21	2833	3208	3561	VM ON-41W / 00:00-21W / 06:00-41W
VMP10FA0-0008	41	5220	5220	6562					27	3682	4169	4629	VM ON-41W / 00:00-27W / 06:00-41W
VMP10FA0-0009	27	3682	4169	4629					14	1931	2187	2428	VM ON-27W / 00:00-14W / 06:00-27W
VMP10FA0-0010	27	3682	4169	4629					19	2554	2892	3211	VM ON-27W / 00:00-19W / 06:00-27W
VMP10FA0-0011	21	2833	2833	3561					11	1479	1675	1859	VM ON-21W / 00:00-11W / 06:00-21W
VMP10FA0-0012	21	2833	2833	3561					14	1931	2187	2428	VM ON-21W / 00:00-14W / 06:00-21W

Control options - Variant Z (Optics K07 - K10 - K12 - 075 - 100 - 125 - 200 - AFN - ARS)

VM - VIRTUAL MIDNIGHT (Lumen package 4L - 2L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 4L													
VMP10DA0-0013	28	3429	3883	4311	19	2419	2739	3041	14	1861	2107	2340	VM ON-28W / 21:00-19W / 24:00-14W / 04:00-19W/06:00-28W
VMP10DA0-0014	19	2419	2739	3041	13	1678	1900	2110	10	1269	1437	1595	VM ON-19W / 21:00-13W / 24:00-10W / 04:00-13W/06:00-19W
VMP10DA0-0015	14	1861	2107	2340	10	1269	1437	1595	8	972	1100	1221	VM ON-14 / 21:00-10W / 24:00-8W / 04:00-10W/06:00-14W
VMP10DA0-0001	28	3429	3883	4311					14	1861	2107	2340	VM ON-28W / 22:00-14W / 06:00-28W
VMP10DA0-0002	28	3429	3883	4311					19	2419	2739	3041	VM ON-28W / 22:00-19W / 06:00-28W
VMP10DA0-0003	19	2419	2739	3041					10	1269	1437	1595	VM ON-19W / 22:00-10W / 06:00-19W
VMP10DA0-0004	19	2419	2739	3041					13	1678	1900	2110	VM ON-19W / 22:00-13W / 06:00-19W
VMP10DA0-0005	14	1861	2107	2340					8	972	1100	1221	VM ON-14W / 22:00-8W / 06:00-14W
VMP10DA0-0006	14	1861	2107	2340					10	1269	1437	1595	VM ON-14W / 22:00-10W / 06:00-14W
VMP10DA0-0007	28	3429	3883	4311					14	1861	2107	2340	VM ON-28W / 00:00-14W / 06:00-28W
VMP10DA0-0008	28	3429	3883	4311					19	2419	2739	3041	VM ON-28W / 00:00-19W / 06:00-28W
VMP10DA0-0009	19	2419	2739	3041					10	1269	1437	1595	VM ON-19W / 00:00-10W / 06:00-19W
VMP10DA0-0010	19	2419	2739	3041					13	1678	1900	2110	VM ON-19W / 00:00-13W / 06:00-19W
VMP10DA0-0011	14	1861	2107	2340					8	972	1100	1221	VM ON-14W / 00:00-8W / 06:00-14W
VMP10DA0-0012	14	1861	2107	2340					10	1269	1437	1595	VM ON-14W / 00:00-10W / 06:00-14W
LUMEN PACKAGE 2L													
VMP10BA0-0013	15	1694	1918	2130	10	1195	1353	1502	8	919	1041	1156	VM ON-15W / 21:00-10W / 24:00-8W / 04:00-10W/06:00-15W
VMP10BA0-0014	10	1195	1353	1502	7	829	939	1042	5	627	710	788	VM ON-10W / 21:00-7W / 24:00-5W / 04:00-7W /06:00-10W
VMP10BA0-0015	8	919	1041	1156	5	627	710	788	4	480	543	603	VM ON-8W / 21:00-5W / 24:00-4W / 04:00-5W /06:00-8W
VMP10BA0-0001	15	1694	1918	2130					8	919	1041	1156	VM ON-15W / 22:00-8W / 06:00-15W
VMP10BA0-0002	15	1694	1918	2130					10	1195	1353	1502	VM ON-15W / 22:00-10W / 06:00-15W
VMP10BA0-0003	10	1195	1353	1502					5	627	710	788	VM ON-10W / 22:00-5W / 06:00-10W
VMP10BA0-0004	10	1195	1353	1502					7	829	939	1042	VM ON-10W / 22:00-7W / 06:00-10W
VMP10BA0-0005	8	919	1041	1156					4	480	543	603	VM ON-8W / 22:00-4W / 06:00-7W
VMP10BA0-0006	8	919	1041	1156					5	627	710	788	VM ON-8W / 22:00-5W / 06:00-7W
VMP10BA0-0007	15	1694	1918	2130					8	919	1041	1156	VM ON-15W / 00:00-8W / 06:00-15W
VMP10BA0-0008	15	1694	1918	2130					10	1195	1353	1502	VM ON-15W / 00:00-10W / 06:00-15W
VMP10BA0-0009	10	1195	1353	1502					5	627	710	788	VM ON-10W / 00:00-5W / 06:00-10W
VMP10BA0-0010	10	1195	1353	1502					7	829	939	1042	VM ON-10W / 00:00-7W / 06:00-10W
VMP10BA0-0011	8	919	1041	1156					4	480	543	603	VM ON-8W / 00:00-4W / 06:00-7W
VMP10BA0-0012	8	919	1041	1156					5	627	710	788	VM ON-8W / 00:00-5W / 06:00-7W

CL*	
Setting Code	Description
CL###-****	CLO 50.000 HOURS START AT 90%
CL###-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to programme powers for FX option for Z variant, please for information contact Cree Lighting Europe.

VMC*	
Setting Code	Description
VMC###-****	CLO 50.000 HOURS START AT 90%
VMC###-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to the wattage of the VM option programmes for Z variant, please for information contact Cree Lighting Europe.

Control options - Variant S-N (Optics 150 - SCP - PCL - PCR)

FX - FIXED OUTPUT					
Setting Code	System Watts W	Nominal flux (lm)			Description
		2700K	3000K	4000K	
LUMEN PACKAGE 8L					
FXA10HA0-00001	54	7186	7341	8640	FIXED OUTPUT 54W
FXA10HA0-00002	36	5068	5178	6094	FIXED OUTPUT 36W
FXA10HA0-00003	27	3899	3984	4689	FIXED OUTPUT 27W
LUMEN PACKAGE 6L					
FXA10FA0-00001	41	5458	5576	6562	FIXED OUTPUT 41W
FXA10FA0-00002	27	3850	3933	4629	FIXED OUTPUT 27W
FXA10FA0-00003	21	2962	3026	3561	FIXED OUTPUT 21W
LUMEN PACKAGE 4L					
FXA10DA0-00001	28	3585	3663	4311	FIXED OUTPUT 28W
FXA10DA0-00002	19	2529	2583	3041	FIXED OUTPUT 19W
FXA10DA0-00003	14	1946	1988	2340	FIXED OUTPUT 14W
LUMEN PACKAGE 2L					
FXA10BA0-00001	15	1771	1809	2130	FIXED OUTPUT 15W
FXA10BA0-00002	10	1249	1276	1502	FIXED OUTPUT 10W
FXA10BA0-00003	8	961	982	1156	FIXED OUTPUT 8W

VM - VIRTUAL MIDNIGHT (Lumen package 8L - 6L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 8L													
VMA10HA0-0013	54	7186	7341	8640	36	5068	5178	6094	27	3899	3984	4689	VM ON-54W / 21:00-36W / 24:00-27W / 04:00-36W/06:00-54W
VMA10HA0-0014	36	5068	5178	6094	24	3516	3592	4228	19	2659	2716	3197	VM ON-36W / 21:00-24W / 24:00-19W /04:00-24W/06:00- 36W
VMA10HA0-0015	27	3899	3984	4689	19	2659	2716	3197	15	2036	2080	2448	VM ON-27W / 21:00-19W / 24:00-15W / 04:00-19W/06:00-27W
VMA10HA0-0001	54	7186	7341	8640					27	3899	3984	4689	VM ON-54W / 22:00-27W / 06:00-54W
VMA10HA0-0002	54	7186	7341	8640					36	5068	5178	6094	VM ON-54W / 22:00-36W / 06:00-54W
VMA10HA0-0003	36	5068	5178	6094					19	2659	2716	3197	VM ON-36W / 22:00-19W / 06:00-36W
VMA10HA0-0004	36	5068	5178	6094					24	3516	3592	4228	VM ON-36W / 22:00-24W / 06:00-36W
VMA10HA0-0005	27	3899	3984	4689					15	2036	2080	2448	VM ON-27W / 22:00-15W / 06:00-27W
VMA10HA0-0006	27	3899	3984	4689					19	2659	2716	3197	VM ON-27W / 22:00-19W / 06:00-27W
VMA10HA0-0007	54	7186	7341	8640					27	3899	3984	4689	VM ON-54W / 00:00-27W / 06:00-54W
VMA10HA0-0008	54	7186	7341	8640					36	5068	5178	6094	VM ON-54W / 00:00-36W / 06:00-54W
VMA10HA0-0009	36	5068	5178	6094					19	2659	2716	3197	VM ON-36W / 00:00-19W / 06:00-36W
VMA10HA0-0010	36	5068	5178	6094					24	3516	3592	4228	VM ON-36W / 00:00-24W / 06:00-36W
VMA10HA0-0011	27	3899	3984	4689					15	2036	2080	2448	VM ON-27W / 00:00-15W / 06:00-27W
VMA10HA0-0012	27	3899	3984	4689					19	2659	2716	3197	VM ON-27W / 00:00-19W / 06:00-27W
LUMEN PACKAGE 6L													
VMA10FA0-0013	41	5458	5576	6562					21	2962	3026	3561	VM ON-41W / 21:00-27W / 24:00-21W /04:00-27W/06:00- 41W
VMA10FA0-0014	27	3850	3933	4629	27	3850	3933	4629	14	2019	2063	2428	VM ON-27W / 21:00-19W / 24:00-14W /04:00-19W/06:00-27W
VMA10FA0-0015	21	2962	3026	3561	19	2671	2728	3211	11	1546	1580	1859	VM ON-21W / 21:00-14W / 24:00-11W /04:00-14W/06:00-21W
VMA10FA0-0001	41	5458	5576	6562	14	2019	2063	2428	21	2962	3026	3561	VM ON-41W / 22:00-21W / 06:00-41W
VMA10FA0-0002	41	5458	5576	6562					27	3850	3933	4629	VM ON-41W / 22:00-27W / 06:00-41W
VMA10FA0-0003	27	3850	3933	4629					14	2019	2063	2428	VM ON-27W / 22:00-14W / 06:00-27W
VMA10FA0-0004	27	3850	3933	4629					19	2671	2728	3211	VM ON-27W / 22:00-19W / 06:00-27W
VMA10FA0-0005	21	2962	3026	3561					11	1546	1580	1859	VM ON-21W / 22:00-11W / 06:00-21W
VMA10FA0-0006	21	2962	3026	3561					14	2019	2063	2428	VM ON-21W / 22:00-14W / 06:00-21W
VMA10FA0-0007	41	5458	5576	6562					21	2962	3026	3561	VM ON-41W / 00:00-21W / 06:00-41W
VMA10FA0-0008	41	5458	5576	6562					27	3850	3933	4629	VM ON-41W / 00:00-27W / 06:00-41W
VMA10FA0-0009	27	3850	3933	4629					14	2019	2063	2428	VM ON-27W / 00:00-14W / 06:00-27W
VMA10FA0-0010	27	3850	3933	4629					19	2671	2728	3211	VM ON-27W / 00:00-19W / 06:00-27W
VMA10FA0-0011	21	2962	3026	3561					11	1546	1580	1859	VM ON-21W / 00:00-11W / 06:00-21W
VMA10FA0-0012	21	2962	3026	3561					14	2019	2063	2428	VM ON-21W / 00:00-14W / 06:00-21W

Control options - Variant S-N (Optics 150 - SCP - PCL - PCR)

VM - VIRTUAL MIDNIGHT (Lumen package 4L - 2L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 4L													
VMA10DA0-0013	28	3585	3663	4311	19	2529	2583	3041	14	1946	1988	2340	VM ON-28W / 21:00-19W / 24:00-14W / 04:00-19W/06:00-28W
VMA10DA0-0014	19	2529	2583	3041	13	1754	1792	2110	10	1327	1355	1595	VM ON-19W / 21:00-13W / 24:00-10W / 04:00-13W/06:00-19W
VMA10DA0-0015	14	1946	1988	2340	10	1327	1355	1595	8	1016	1038	1221	VM ON-14 / 21:00-10W / 24:00-8W / 04:00-10W/06:00-14W
VMA10DA0-0001	28	3585	3663	4311					14	1946	1988	2340	VM ON-28W / 22:00-14W / 06:00-28W
VMA10DA0-0002	28	3585	3663	4311					19	2529	2583	3041	VM ON-28W / 22:00-19W / 06:00-28W
VMA10DA0-0003	19	2529	2583	3041					10	1327	1355	1595	VM ON-19W / 22:00-10W / 06:00-19W
VMA10DA0-0004	19	2529	2583	3041					13	1754	1792	2110	VM ON-19W / 22:00-13W / 06:00-19W
VMA10DA0-0005	14	1946	1988	2340					8	1016	1038	1221	VM ON-14W / 22:00-8W / 06:00-14W
VMA10DA0-0006	14	1946	1988	2340					10	1327	1355	1595	VM ON-14W / 22:00-10W / 06:00-14W
VMA10DA0-0007	28	3585	3663	4311					14	1946	1988	2340	VM ON-28W / 00:00-14W / 06:00-28W
VMA10DA0-0008	28	3585	3663	4311					19	2529	2583	3041	VM ON-28W / 00:00-19W / 06:00-28W
VMA10DA0-0009	19	2529	2583	3041					10	1327	1355	1595	VM ON-19W / 00:00-10W / 06:00-19W
VMA10DA0-0010	19	2529	2583	3041					13	1754	1792	2110	VM ON-19W / 00:00-13W / 06:00-19W
VMA10DA0-0011	14	1946	1988	2340					8	1016	1038	1221	VM ON-14W / 00:00-8W / 06:00-14W
VMA10DA0-0012	14	1946	1988	2340					10	1327	1355	1595	VM ON-14W / 00:00-10W / 06:00-14W
LUMEN PACKAGE 2L													
VMA10BA0-0013	15	1771	1809	2130	10	1249	1276	1502	8	961	982	1156	VM ON-15W / 21:00-10W / 24:00-8W / 04:00-10W/06:00-15W
VMA10BA0-0014	10	1249	1276	1502	7	867	885	1042	5	655	669	788	VM ON-10W / 21:00-7W / 24:00-5W / 04:00-7W /06:00-10W
VMA10BA0-0015	8	961	982	1156	5	655	669	788	4	502	513	603	VM ON-8W / 21:00-5W / 24:00-4W / 04:00-5W /06:00-8W
VMA10BA0-0001	15	1771	1809	2130					8	961	982	1156	VM ON-15W / 22:00-8W / 06:00-15W
VMA10BA0-0002	15	1771	1809	2130					10	1249	1276	1502	VM ON-15W / 22:00-10W / 06:00-15W
VMA10BA0-0003	10	1249	1276	1502					5	655	669	788	VM ON-10W / 22:00-5W / 06:00-10W
VMA10BA0-0004	10	1249	1276	1502					7	867	885	1042	VM ON-10W / 22:00-7W / 06:00-10W
VMA10BA0-0005	8	961	982	1156					4	502	513	603	VM ON-8W / 22:00-4W / 06:00-7W
VMA10BA0-0006	8	961	982	1156					5	655	669	788	VM ON-8W / 22:00-5W / 06:00-7W
VMA10BA0-0007	15	1771	1809	2130					8	961	982	1156	VM ON-15W / 00:00-8W / 06:00-15W
VMA10BA0-0008	15	1771	1809	2130					10	1249	1276	1502	VM ON-15W / 00:00-10W / 06:00-15W
VMA10BA0-0009	10	1249	1276	1502					5	655	669	788	VM ON-10W / 00:00-5W / 06:00-10W
VMA10BA0-0010	10	1249	1276	1502					7	867	885	1042	VM ON-10W / 00:00-7W / 06:00-10W
VMA10BA0-0011	8	961	982	1156					4	502	513	603	VM ON-8W / 00:00-4W / 06:00-7W
VMA10BA0-0012	8	961	982	1156					5	655	669	788	VM ON-8W / 00:00-5W / 06:00-7W

Control options - Variant S-N (Optics 150 - SCP - PCL - PCR)

DL - DALI DIMMABLE						
Lumen Package	System Watts W	Nominal flux (lm)	Description			Description
			2700K	3000K	4000K	
8L	DLE10HA0-0001	54	7186	7341	8640	DALI MAX 54W
6L	DLE10FA0-0001	41	5458	5576	6562	DALI MAX 41W
4L	DLE10DA0-0001	28	3585	3663	4311	DALI MAX 28W
2L	DLE10BA0-0001	15	1771	1809	2130	DALI MAX 15W

CL*	
Setting Code	Description
CL####-****	CLO 50.000 HOURS START AT 90%
CL####-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to programme powers for FX option for S-N variants, please for information contact Cree Lighting Europe.

VMC*	
Setting Code	Description
VMC####-****	CLO 50.000 HOURS START AT 90%
VMC####-****	CLO 100.000 HOURS START AT 80%

*Standard CLO to be matched to the wattage of the VM option programmes for S-N variants, please for information contact Cree Lighting Europe.

Control options - Variant Z (Optics 150 - SCP - PCL - PCR)

FX - FIXED OUTPUT					
Setting Code	Potenza di sistema W	Nominal flux (lm)			Description
		2700K	3000K	4000K	
LUMEN PACKAGE 8L					
FXP10HA0-0001	54	7186	7341	8640	FIXED OUTPUT 54W
FXP10HA0-0002	36	5068	5178	6094	FIXED OUTPUT 36W
FXP10HA0-0003	27	3899	3984	4689	FIXED OUTPUT 27W
LUMEN PACKAGE 6L					
FXP10FA0-0001	41	5458	5576	6562	FIXED OUTPUT 41W
FXP10FA0-0002	27	3850	3933	4629	FIXED OUTPUT 27W
FXP10FA0-0003	21	2962	3026	3561	FIXED OUTPUT 21W
LUMEN PACKAGE 4L					
FXP10DA0-0001	28	3585	3663	4311	FIXED OUTPUT 28W
FXP10DA0-0002	19	2529	2583	3041	FIXED OUTPUT 19W
FXP10DA0-0003	14	1946	1988	2340	FIXED OUTPUT 14W
LUMEN PACKAGE 2L					
FXP102B0-0001	15	1771	1809	2130	FIXED OUTPUT 15W
FXP102B0-0002	10	1249	1276	1502	FIXED OUTPUT 10W
FXP102B0-0003	8	961	982	1156	FIXED OUTPUT 8W

VM - VIRTUAL MIDNIGHT (Lumen package 8L - 6L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 8L													
VMP10HA0-0013	54	7186	7341	8640	36	5068	5178	6094	27	3899	3984	4689	VM ON-54W / 21:00-36W / 24:00-27W / 04:00-36W/06:00-54W
VMP10HA0-0014	36	5068	5178	6094	24	3516	3592	4228	19	2659	2716	3197	VM ON-36W / 21:00-24W / 24:00-19W /04:00-24W/06:00- 36W
VMP10HA0-0015	27	3899	3984	4689	19	2659	2716	3197	15	2036	2080	2448	VM ON-27W / 21:00-19W / 24:00-15W / 04:00-19W/06:00-27W
VMP10HA0-0001	54	7186	7341	8640					27	3899	3984	4689	VM ON-54W / 22:00-27W / 06:00-54W
VMP10HA0-0002	54	7186	7341	8640					36	5068	5178	6094	VM ON-54W / 22:00-36W / 06:00-54W
VMP10HA0-0003	36	5068	5178	6094					19	2659	2716	3197	VM ON-36W / 22:00-19W / 06:00-36W
VMP10HA0-0004	36	5068	5178	6094					24	3516	3592	4228	VM ON-36W / 22:00-24W / 06:00-36W
VMP10HA0-0005	27	3899	3984	4689					15	2036	2080	2448	VM ON-27W / 22:00-15W / 06:00-27W
VMP10HA0-0006	27	3899	3984	4689					19	2659	2716	3197	VM ON-27W / 22:00-19W / 06:00-27W
VMP10HA0-0007	54	7186	7341	8640					27	3899	3984	4689	VM ON-54W / 00:00-27W / 06:00-54W
VMP10HA0-0008	54	7186	7341	8640					36	5068	5178	6094	VM ON-54W / 00:00-36W / 06:00-54W
VMP10HA0-0009	36	5068	5178	6094					19	2659	2716	3197	VM ON-36W / 00:00-19W / 06:00-36W
VMP10HA0-0010	36	5068	5178	6094					24	3516	3592	4228	VM ON-36W / 00:00-24W / 06:00-36W
VMP10HA0-0011	27	3899	3984	4689					15	2036	2080	2448	VM ON-27W / 00:00-15W / 06:00-27W
VMP10HA0-0012	27	3899	3984	4689					19	2659	2716	3197	VM ON-27W / 00:00-19W / 06:00-27W
LUMEN PACKAGE 6L													
VMP10FA0-0013	41	5458	5576	6562					21	2962	3026	3561	VM ON-41W / 21:00-27W / 24:00-21W /04:00-27W/06:00- 41W
VMP10FA0-0014	27	3850	3933	4629	27	3850	3933	4629	14	2019	2063	2428	VM ON-27W / 21:00-19W / 24:00-14W /04:00-19W/06:00-27W
VMP10FA0-0015	21	2962	3026	3561	19	2671	2728	3211	11	1546	1580	1859	VM ON-21W / 21:00-14W / 24:00-11W /04:00-14W/06:00-21W
VMP10FA0-0001	41	5458	5576	6562	14	2019	2063	2428	21	2962	3026	3561	VM ON-41W / 22:00-21W / 06:00-41W
VMP10FA0-0002	41	5458	5576	6562					27	3850	3933	4629	VM ON-41W / 22:00-27W / 06:00-41W
VMP10FA0-0003	27	3850	3933	4629					14	2019	2063	2428	VM ON-27W / 22:00-14W / 06:00-27W
VMP10FA0-0004	27	3850	3933	4629					19	2671	2728	3211	VM ON-27W / 22:00-19W / 06:00-27W
VMP10FA0-0005	21	2962	3026	3561					11	1546	1580	1859	VM ON-21W / 22:00-11W / 06:00-21W
VMP10FA0-0006	21	2962	3026	3561					14	2019	2063	2428	VM ON-21W / 22:00-14W / 06:00-21W
VMP10FA0-0007	41	5458	5576	6562					21	2962	3026	3561	VM ON-41W / 00:00-21W / 06:00-41W
VMP10FA0-0008	41	5458	5576	6562					27	3850	3933	4629	VM ON-41W / 00:00-27W / 06:00-41W
VMP10FA0-0009	27	3850	3933	4629					14	2019	2063	2428	VM ON-27W / 00:00-14W / 06:00-27W
VMP10FA0-0010	27	3850	3933	4629					19	2671	2728	3211	VM ON-27W / 00:00-19W / 06:00-27W
VMP10FA0-0011	21	2962	3026	3561					11	1546	1580	1859	VM ON-21W / 00:00-11W / 06:00-21W
VMP10FA0-0012	21	2962	3026	3561					14	2019	2063	2428	VM ON-21W / 00:00-14W / 06:00-21W

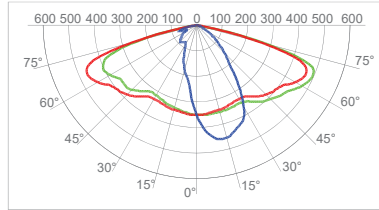
Control options - Variant Z (Optics 150 - SCP - PCL - PCR)

VM - VIRTUAL MIDNIGHT (Lumen package 4L - 2L)													
Setting Code	W Max	Nominal flux (lm)			W Med	Nominal flux (lm)			W Min	Nominal flux (lm)			Description
		2700K	3000K	4000K		2700K	3000K	4000K		2700K	3000K	4000K	
LUMEN PACKAGE 4L													
VMP10DA0-0013	28	3585	3663	4311	19	2529	2583	3041	14	1946	1988	2340	VM ON-28W / 21:00-19W / 24:00-14W / 04:00-19W/06:00-28W
VMP10DA0-0014	19	2529	2583	3041	13	1754	1792	2110	10	1327	1355	1595	VM ON-19W / 21:00-13W / 24:00-10W / 04:00-13W/06:00-19W
VMP10DA0-0015	14	1946	1988	2340	10	1327	1355	1595	8	1016	1038	1221	VM ON-14 / 21:00-10W / 24:00-8W / 04:00-10W/06:00-14W
VMP10DA0-0001	28	3585	3663	4311					14	1946	1988	2340	VM ON-28W / 22:00-14W / 06:00-28W
VMP10DA0-0002	28	3585	3663	4311					19	2529	2583	3041	VM ON-28W / 22:00-19W / 06:00-28W
VMP10DA0-0003	19	2529	2583	3041					10	1327	1355	1595	VM ON-19W / 22:00-10W / 06:00-19W
VMP10DA0-0004	19	2529	2583	3041					13	1754	1792	2110	VM ON-19W / 22:00-13W / 06:00-19W
VMP10DA0-0005	14	1946	1988	2340					8	1016	1038	1221	VM ON-14W / 22:00-8W / 06:00-14W
VMP10DA0-0006	14	1946	1988	2340					10	1327	1355	1595	VM ON-14W / 22:00-10W / 06:00-14W
VMP10DA0-0007	28	3585	3663	4311					14	1946	1988	2340	VM ON-28W / 00:00-14W / 06:00-28W
VMP10DA0-0008	28	3585	3663	4311					19	2529	2583	3041	VM ON-28W / 00:00-19W / 06:00-28W
VMP10DA0-0009	19	2529	2583	3041					10	1327	1355	1595	VM ON-19W / 00:00-10W / 06:00-19W
VMP10DA0-0010	19	2529	2583	3041					13	1754	1792	2110	VM ON-19W / 00:00-13W / 06:00-19W
VMP10DA0-0011	14	1946	1988	2340					8	1016	1038	1221	VM ON-14W / 00:00-8W / 06:00-14W
VMP10DA0-0012	14	1946	1988	2340					10	1327	1355	1595	VM ON-14W / 00:00-10W / 06:00-14W
LUMEN PACKAGE 2L													
VMP10BA0-0013	15	1771	1809	2130	10	1249	1276	1502	8	961	982	1156	VM ON-15W / 21:00-10W / 24:00-8W / 04:00-10W/06:00-15W
VMP10BA0-0014	10	1249	1276	1502	7	867	885	1042	5	655	669	788	VM ON-10W / 21:00-7W / 24:00-5W / 04:00-7W /06:00-10W
VMP10BA0-0015	8	961	982	1156	5	655	669	788	4	502	513	603	VM ON-8W / 21:00-5W / 24:00-4W / 04:00-5W /06:00-8W
VMP10BA0-0001	15	1771	1809	2130					8	961	982	1156	VM ON-15W / 22:00-8W / 06:00-15W
VMP10BA0-0002	15	1771	1809	2130					10	1249	1276	1502	VM ON-15W / 22:00-10W / 06:00-15W
VMP10BA0-0003	10	1249	1276	1502					5	655	669	788	VM ON-10W / 22:00-5W / 06:00-10W
VMP10BA0-0004	10	1249	1276	1502					7	867	885	1042	VM ON-10W / 22:00-7W / 06:00-10W
VMP10BA0-0005	8	961	982	1156					4	502	513	603	VM ON-8W / 22:00-4W / 06:00-7W
VMP10BA0-0006	8	961	982	1156					5	655	669	788	VM ON-8W / 22:00-5W / 06:00-7W
VMP10BA0-0007	15	1771	1809	2130					8	961	982	1156	VM ON-15W / 00:00-8W / 06:00-15W
VMP10BA0-0008	15	1771	1809	2130					10	1249	1276	1502	VM ON-15W / 00:00-10W / 06:00-15W
VMP10BA0-0009	10	1249	1276	1502					5	655	669	788	VM ON-10W / 00:00-5W / 06:00-10W
VMP10BA0-0010	10	1249	1276	1502					7	867	885	1042	VM ON-10W / 00:00-7W / 06:00-10W
VMP10BA0-0011	8	961	982	1156					4	502	513	603	VM ON-8W / 00:00-4W / 06:00-7W
VMP10BA0-0012	8	961	982	1156					5	655	669	788	VM ON-8W / 00:00-5W / 06:00-7W

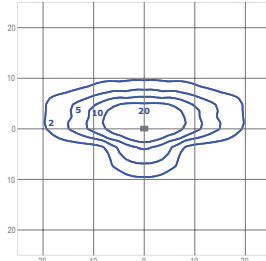
Photometry

All published luminaire photometric testing performed by an external certified ISO 17025 laboratory.
To obtain an IES file specific to your project consult: www.creelighting-europe.com

075 - Type II Short



Test Report #: 1088-QL20-R18



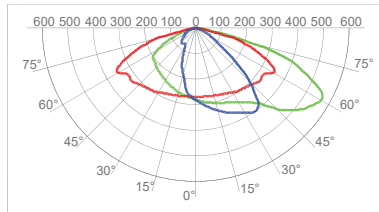
TRSA-2-075-8L-407
Mounting Height: 6m

LUMEN OUTPUT - 075 (Type II Short)

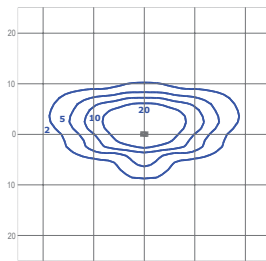
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1450	1650	1850
4L	2950	3400	3750
6L	4550	5150	5700
8L	5950	6800	7516

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

100 - Type II Short



Test Report #: 1088-QL20-R12



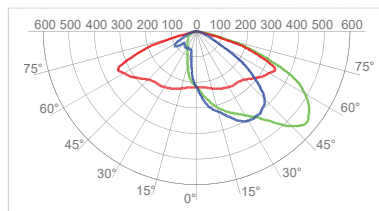
TRSA-2-100-8L-407
Mounting Height: 6m

LUMEN OUTPUT - 100 (Type II Short)

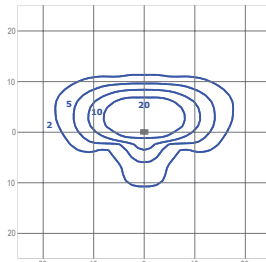
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1400	1600	1800
4L	2900	3300	3650
6L	4400	5000	5550
8L	5820	6590	7317

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

125 - Type II Short



Test Report #: 1088-QL20-R19



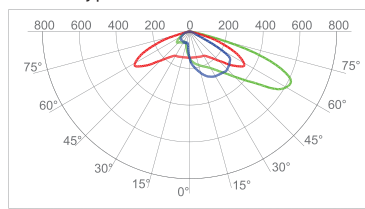
TRSA-2-125-8L-407
Mounting Height: 6m

LUMEN OUTPUT - 125 (Type II Short)

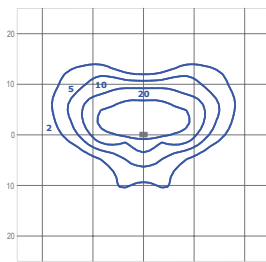
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1450	1650	1850
4L	2950	3400	3750
6L	4550	5150	5700
8L	5950	6800	7475

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

150 - Type III Short



Test Report #: 1088-QL21-S03



TRSA-2-150-8L-407
Mounting Height: 6m

LUMEN OUTPUT - 150 (Type III Short)

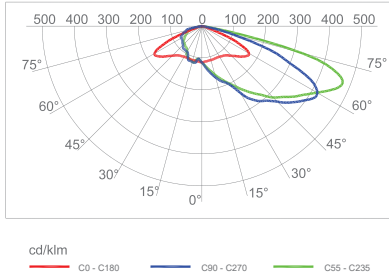
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1590	1625	1912
4L	3219	3289	3871
6L	4901	5006	5893
8L	6452	6591	7758

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

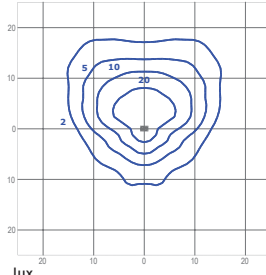
Photometry

All published luminaire photometric testing performed by an external certified ISO 17025 laboratory.
To obtain an IES file specific to your project consult: www.creelighting-europe.com

200 - Type II Short



Test Report #: 1088-QL20-S05



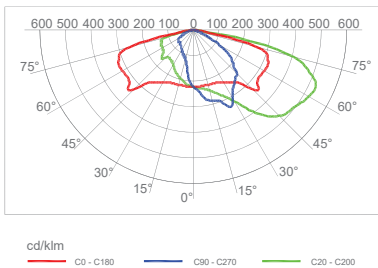
TRSA-2-200-8L-407
Mounting Height: 6m

LUMEN OUTPUT - 200 (Type II Short)

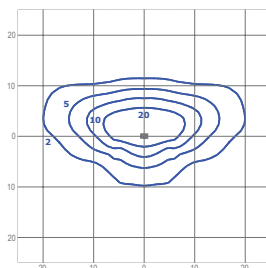
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1439	1629	1809
4L	2913	3299	3662
6L	4435	5021	5575
8L	5838	6611	7340

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

SCP - Type II Short



Test Report #: 1088-QL20-R15



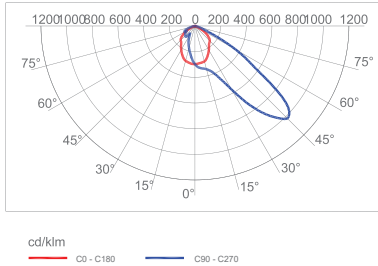
TRSA-2-SCP-8L-407
Mounting Height: 6m

LUMEN OUTPUT - SCP (Type II Short)

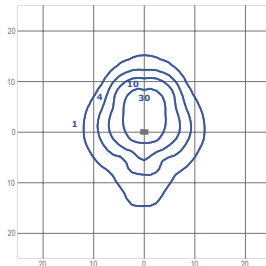
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1400	1600	1800
4L	2900	3300	3650
6L	4400	5000	5550
8L	5820	6590	7317

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

AFN - Area Flood Narrow



Test Report #: 1088-QL21-S04



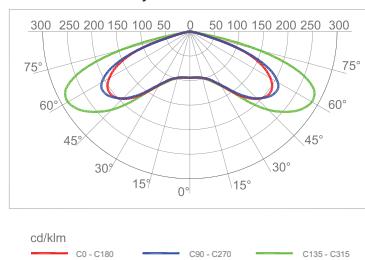
TRSA-2-AFN-8L-407
Mounting Height: 6m

LUMEN OUTPUT - AFN (Area Flood Narrow)

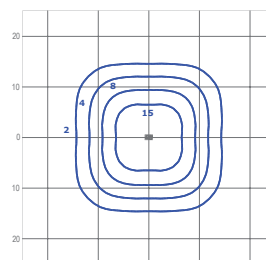
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1463	1656	1839
4L	2961	3353	3723
6L	4508	5104	5667
8L	5935	6720	7461

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

ARS - Roto-Symmetric Area



Test Report #: 1088-QL21-S05



TRSA-2-ARS-8L-407
Mounting Height: 6m

LUMEN OUTPUT - ARS (Roto-Symmetric Area)

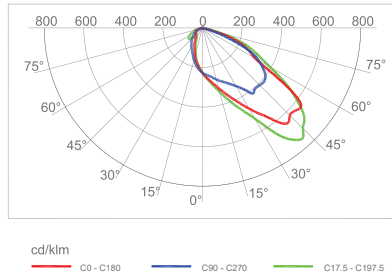
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1475	1670	1854
4L	2986	3381	3754
6L	4546	5147	5715
8L	5985	6777	7524

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

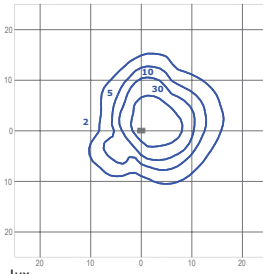
Photometry

All published luminaire photometric testing performed by an external certified ISO 17025 laboratory.
To obtain an IES file specific to your project consult: www.creelighting-europe.com

PCR - Pedestrian Crossing Right



Test Report #: 1088-QL21-S03



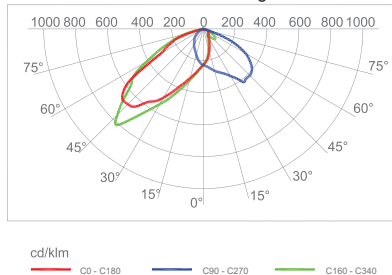
TRSA-2-PCR-8L-407
Mounting Height: 6m

LUMEN OUTPUT - PCR (Pedestrian Crossing Right)

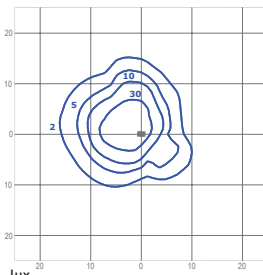
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1622	1657	1951
4L	3285	3355	3949
6L	5000	5108	6012
8L	6583	6725	7915

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

PCL - Pedestrian Crossing Left



Test Report #: 1088-QL21-S04



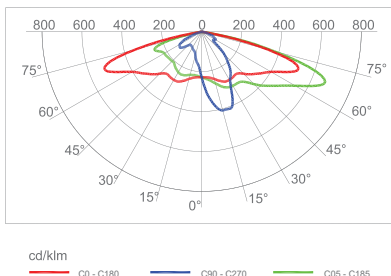
TRSA-2-PCL-8L-407
Mounting Height: 6m

LUMEN OUTPUT - PCL (Pedestrian Crossing Left)

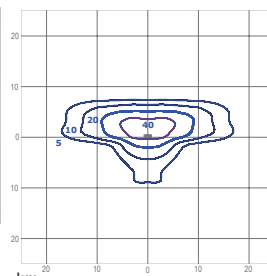
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1633	1668	1963
4L	3305	3377	3974
6L	5031	5140	6050
8L	6624	6767	7965

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

K07 - Narrow Street



Test Report #: 1088-QL21-S05



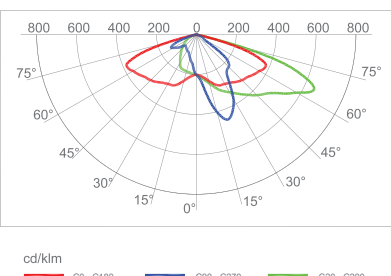
TRMA-2-K07-8L-407
Mounting Height: 6m

LUMEN OUTPUT - K07 (Narrow Street)

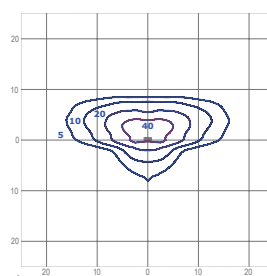
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1538	1742	1934
4L	3114	3526	3915
6L	4740	5367	5959
8L	6241	7067	7846

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

K10 - Medium Street



Test Report #: 1088-QL21-S06



TRMA-2-K10-8L-407
Mounting Height: 6m

LUMEN OUTPUT - K10 (Medium Street)

Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1540	1743	1936
4L	3117	3529	3918
6L	4745	5372	5965
8L	6247	7073	7853

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

Energy UNO

LED Street/Area Luminaire

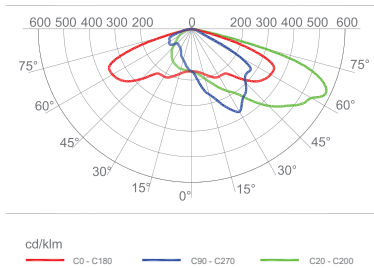


CREE LIGHTING

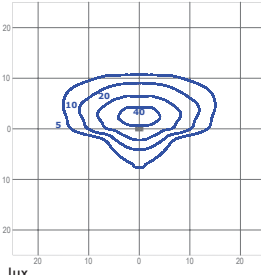
Photometry

All published luminaire photometric testing performed by an external certified ISO 17025 laboratory.
To obtain an IES file specific to your project consult: www.creelighting-europe.com

K12 - Broad Street



Test Report #:1088-QL21-S07

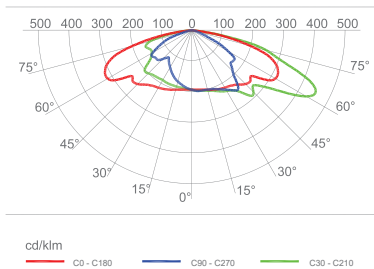


TRMA-2-K12-8L-407
Mounting Height: 6m

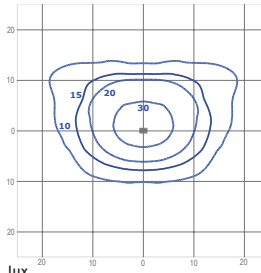
LUMEN OUTPUT - K12 (Broad Street)			
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1507	1706	1895
4L	3051	3455	3836
6L	4644	5259	5839
8L	6114	6924	7687

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

NZP - Broad Street



Test Report #:1088-QL21-S07



TRSA-2-NZP-8L-407
Mounting Height: 6m

LUMEN OUTPUT - NZP (Broad Street)			
Lumen Package	2700K	3000K	4000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
2L	1504	1703	1891
4L	3046	3449	3829
6L	4636	5249	5828
8L	6103	6911	7673

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

Arch Bollard Square

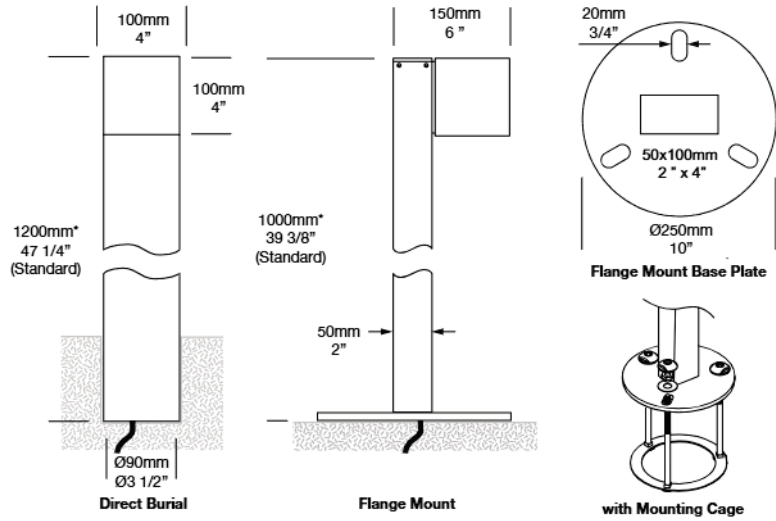
Type B

PROJECT:

TYPE:

SOURCE:

NOTES:



SPECIFICATIONS



IP66 IK10

*STANDARD LUMINAIRE HEIGHT. FOR CUSTOM LUMINAIRE HEIGHTS, PLEASE SPECIFY WHEN ORDERING.
MIN CUSTOM HEIGHT: 300mm (12"). MAX CUSTOM HEIGHT: 2000MM (6'6")

LED Chip	Cree CXB 1830 field replaceable LED board
Luminaire Output*	3000 lumens minimum @ 700mA (26 watts)
Lumens Per Watt*	100 lumens minimum @ 26 watts
LED Life Expectancy	50,000 hours L70

CRI (3000K)	80 standard, 90+ optional
Colour Temperatures	2700K, 3000K, 4000K, 3000K (90+CRI)
Beam Angles	Type 2, Type 4, 95°
Ingress Protection	IP66

*Delivered from the luminaire with unobstructed beam

Impact Resistance	IK10
Warranty	Electronics = 5 years Aluminium = 5 years
Standards	BS/EN 60598.2.2 cUL 1598 CE

PRODUCT CONFIGURATION

Please fill in appropriate codes into boxes provided

Cat. No. BOL/ARCSQ

Luminaire	Power	Material/Finish	Beam	Colour	Accessories
BOL/ARCSQ (Direct Burial) BOL/ARCSQFM (Flange Mount)	SR 700mA Input, Series Wired, 26W D24 24VDC 700mA Input, Parallel Wired, 26W R 90-264VAC Input, Parallel Wired, 26W	ALUMINIUM EBK BLACK EBZ BRONZE EOGR OLIVE GREEN EWB WHITE EDG DARK GREY ESTAR SILVER STAR ECT CORTEN EFS FINE SILVER	TYP2 Type 2 TYP4 Type 4 95 95°	2 2700K 3 3000K 4 4000K 39 3000K 90+ CRI	CJK Cable Joint Kit MOUNTCAGE Mounting Cage*

SR - Series Remote Driver
Power Supply: Constant Current Driver
INCLUDED - SUPPLIED SEPARATELY
Fixture Input: 37Vf @ 700mA maximum, 26W total
Wiring Method: Series

D24 - 24VDC Integral Driver
Power Supply: Line/Mains to 24VDC
Constant Voltage Power Supply
REQUIRED - NOT SUPPLIED
Fixture Input: 24VDC constant voltage, 26W total
Wiring Method: Parallel

R - Retro 90-264VAC Integral Driver
Power Supply: Line/Mains input to Integrated Driver INCLUDED
Fixture Input: 90-264VAC, 26W total
Wiring Method: Parallel

Additional Comments:

*Due to continued product enhancements, specifications may change without notification.

LUMINAIRE CONSTRUCTION

CNC machined from the following metals:

Aluminium:

Head: High corrosion resistant 100mm (4") square aluminium bar.

Pole: High corrosion resistant 100mm (4") x 50mm (2") aluminium tube.

Finished with chromate substrate, Epoxy layer and a UV resistant polyester powder coat colour.

Colours: Black, Bronze, Silver Star, White, White Birch, Olive Green, Dark Grey, Corten, Fine Silver.

Cable:

Water resistant rubber SWOOJ cable.

Gaskets:

Silicone, iron impregnated 220°C (428°F).

Lens:

Extra clear optical silicone TIR.

Mounting:

Pole is set directly into concrete.

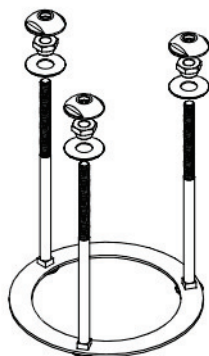
For flange mounting please refer to the Hunza website for mounting instructions.

Luminaire Weight:

6kg (13lbs 4oz) without flange mount.



ACCESSORIES

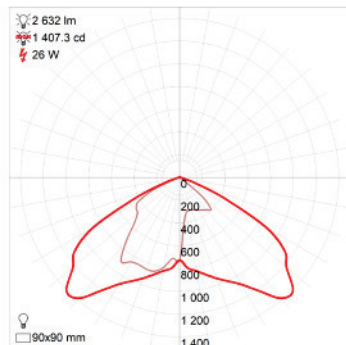


MOUNTCAGE

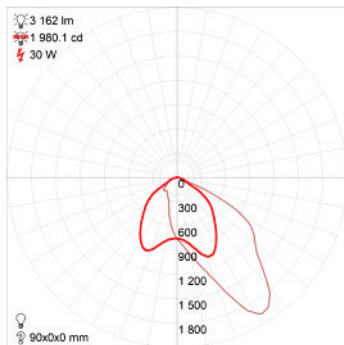
BEAM ANGLES

High efficiency Reflectors. Field replaceable

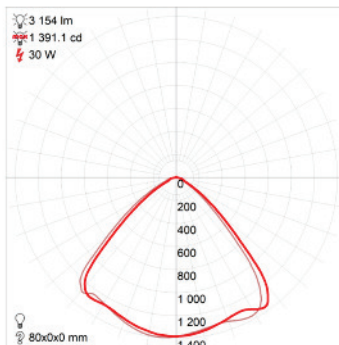
IES files available for download: hunzalighting.com/downloads



TYPE 2



TYPE 4



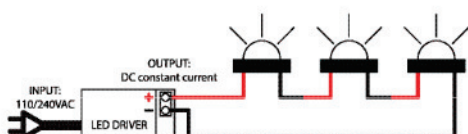
95°

WIRING GUIDE

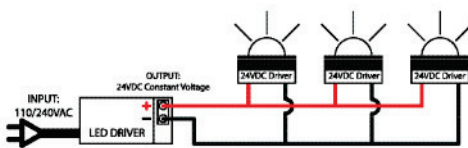
Available for download: hunzalighting.com/downloads

NOTE: Diagrams are a guide only, wire colours and polarity may change depending on fixture and country.

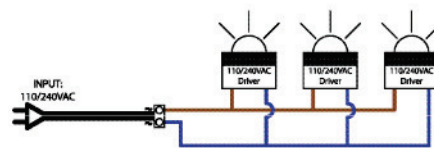
Series/Remote Driver



24VDC Integral Driver



90-264VAC Integral Driver



*Due to continued product enhancements, specifications may change without notification.

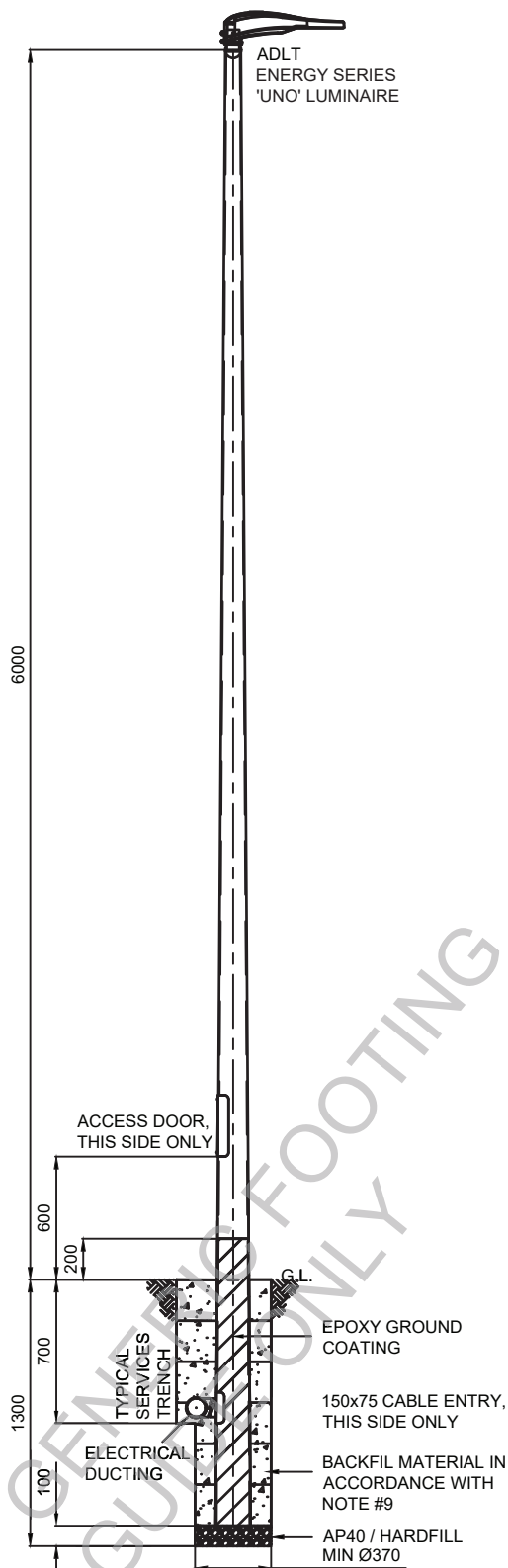
HUNZA™

HUNZA LIGHTING
130 Felton Mathew Ave
Saint Johns
Auckland 1072
New Zealand

Ph: +64-9-528 9471
hunza@hunza.co.nz
www.hunzalighting.com

INTERNATIONAL CONTACTS:
www.hunzalighting.com/contact

This document contains proprietary information of Hunza™. Its receipt or possession does not convey any rights to reproduce or disclose its content.



1. FAILURE TO REMOVE THE COLUMN'S TRANSPORT CARDBOARD PACKAGING UPON RECEIPT OF THE PRODUCT ONSITE. THIS PACKAGING IS NOT WATERPROOF AND IF LEFT IN PLACE MAY COMPROMISE THE PAINT SYSTEM WHEN PRODUCT IS LEFT OUTSIDE AND WILL **VOID THE MANUFACTURER'S PAINT WARRANTY**.
2. STEEL MATERIAL: GRADE 250 TO AS/NZS 3678.
3. ALL WELDS SP GRADE (STRUCTURAL PURPOSE) TO AS/NZ3404
4. COLUMN TO BE HOT DIP GALVANIZED TO AS/NZS 4860:2006
5. COLUMN DESIGNED TO AS/NZS 1170, AS/NZS 4676 AS/NZS 3404 AND NZTA M26.
6. POLE IS EPOXY COATED FROM 200mm AGL TO THE BASE OF COLUMN AS PER NZTA M26 AND AT-TDM SPECIFICATIONS
7. ALL GROUND IS ASSUMED TO BE GOOD GROUND, (MINIMUM ULTIMATE SOIL BEARING CAPACITY OF 100MPa) AS PER AS/NZS 3604:1999.
8. THE **CONTRACTOR** IS RESPONSIBLE FOR ENSURING SITE COMPLIANCE WITH AS/NZS 3604:1999 (NOTE #6).
9. MINIMUM HOLE DIAMETER = POLE BASE WIDTH + 200mm. BACKFILL EXCAVATED HOLE WITH WELL COMPACTED GAP40 MATERIAL IN 200mm LAYERS, OR SAND CEMENT MIX 4:1, OR CONCRETE, CHECK WITH FOR LOCAL AUTHORITY REQUIREMENTS.
10. WITHIN A RADIUS 3.0m OF THE POLE, (EXCEPT FOR TRENCHING, WHICH MUST BE BACKFILLED ACCORDINGLY TO RETURN GROUND TO AN UNDISTURBED CONDITION), THE GROUND MUST BE UNDISTURBED. AT NO TIME SHOULD THERE BE ANY EXCAVATIONS UNDERTAKEN WITHIN THIS RADIUS. IF REQUIRED, CONTRACTOR IS TO ENGAGE A CPENG REGISTERED STRUCTURAL ENGINEER FOR ADVICE.
11. CONTRACTOR MUST CHECK THE LOCATION OF ALL SERVICES PRIOR TO EXCAVATION.
12. NO EXISTING SERVICES CAN ENCROACH INTO THE POLE FOOTING. IF THIS OCCURS, CONSULT A CPENG REGISTERED STRUCTURAL ENGINEER FOR ADVICE.
13. THE POLE SHOWN IN THIS GUIDE IS RATED FOR THE FOLLOWING MAXIMUM LOADINGS:

MAX TOTAL LUMINAIRE SAIL AREA	0.24 m ²
CD	1.2
MAX WEIGHT	38 kg
MAX BASE OVERTURNING MOMENT	x.x kNm
MAX BASE SHEAR FORCE	x.x kN
14. SEEK ADVISE FROM A CPENG REGISTERED STRUCTURAL ENGINEER IF:
 1. GROUND EXCAVATIONS EXIST WITHIN 3.0m OF POLE LOCATION,
 2. FOOTING DEPTH CANNOT BE OBTAINED,
 3. FOOTING DIAMETER CANNOT BE OBTAINED.

ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD, ON REQUEST, WITH A CLIENT SUPPLIED GEOTECHNICAL REPORT, CAN DESIGN A SITE SPECIFIC POLE FOOTING / FOUNDATION TO COMPLY WITH AS/NZ 1170. THE ADDITIONAL CHARGE FOR THIS SERVICE WILL BE QUOTED PRIOR TO ANY WORK BEING UNDERTAKEN BY ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD.

SUPPLY:

ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD:

1. COLUMN

CLIENT:

1. EXCAVATION, ASSEMBLY AND INSTALL.
2. ELECTRICAL CONDUIT, CABLING ETC.

MINOR VARIATIONS TO THE ATTACHED PRODUCTS MAY OCCUR DUE TO SUPPLY CHAIN FACTORS BEYOND THE CONTROL OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD.

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
6.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1X ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:

JF

DWG NUMBER:

102075.1

DATE:

14.01.2026

SCALE:

1:30

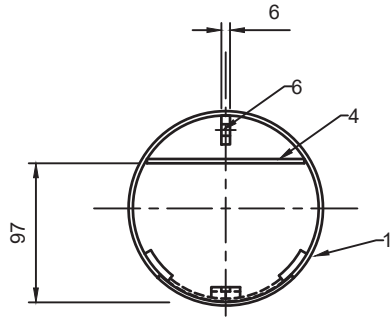
PRODUCT CODE:

REVISION:

02

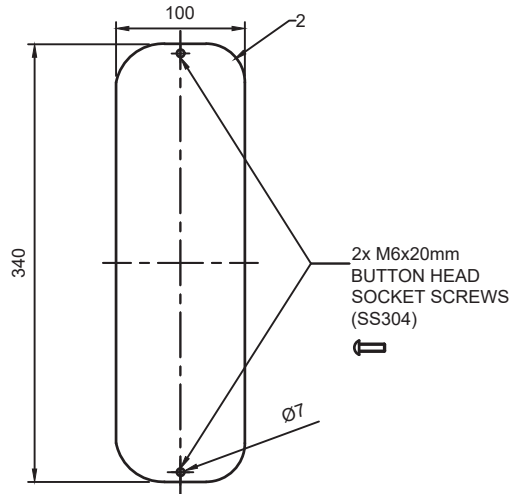


Advanced
LIGHTING TECHNOLOGIES



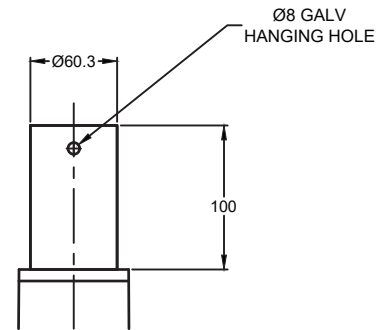
B - B
HAND HOLE - 300x85mm

SCALE 1:5



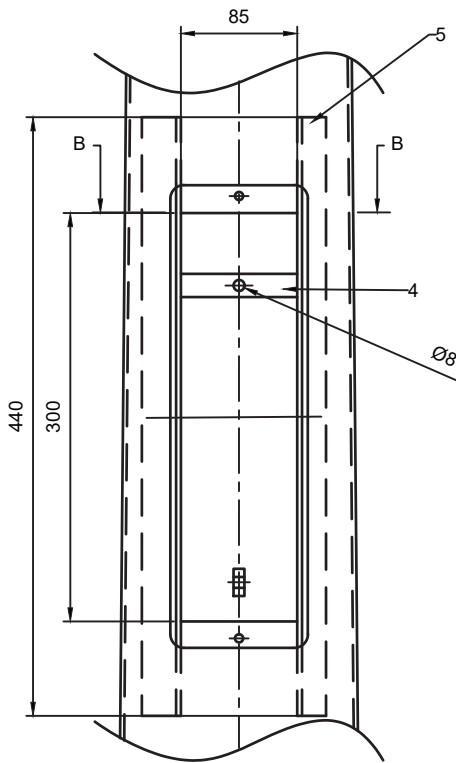
DOOR SIZE
340 x 100mm

SCALE 1:5



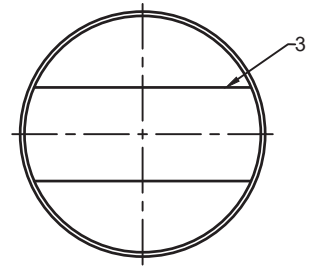
SPIGOT DETAIL

SCALE 1:5



DOOR HAND HOLE
300x85mm

SCALE 1:5



A - A
COLUMN BASE PLATE 160x65x5mm

SCALE 1:5

PART NO.	DESCRIPTION	QNTY
1	SHAFT ⁷⁶ / ₁₇₀ 7.2m LGNTH, 3mm	1
2	DOOR COVER	1
3	FLAT 160x65x5	1
4	FLAT 25x3x116mm, Ø8 HOLE	1
5	440x24x5 PLATE	2
6	FLAT 25x20x3mm THK, Ø8mm HOLE	1

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
6.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1X ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:

JF

DWG NUMBER:

102075.2

DATE:

14.01.2026

SCALE:

1:30

PRODUCT CODE:

-

REVISION:

02



Advanced
LIGHTING TECHNOLOGIES

HANDLING & STORAGE OF POLES FOR STEEL / ALUMINUM POLES

HANDLING:

THE PURCHASER / INSTALLER MUST ENSURE THE PROPER HANDLING OF THE PRODUCT AT THE CONSTRUCTION SITE TO ENSURE A DAMAGE-FREE PRODUCT WHEN INSTALLATION IS COMPLETE. CARE NEEDS TO BE TAKEN TO ENSURE THE INTEGRITY OF THE PRODUCT FINISH. DAMAGE TO THE FINISH SUCH AS SCRATCHES, GOUGES AND MARRED AREAS WILL REDUCE OR ELIMINATE THE CORROSIVE RESISTANCE OF PROTECTIVE COATINGS. DIRECT METAL TO METAL CONTACT, SUCH AS CHOKING A GALVANIZED OR PAINTED POLE WITH METAL CHAINS, WILL CAUSE DAMAGE TO THE FINISH. PROTECTIVE MATERIALS SUCH AS NYLON SLINGS OR CLOTH SLEEVES FOR CHAINS SHOULD BE UTILIZED DURING HANDLING TO PREVENT DAMAGE TO THE FINISH. DO NOT UTILIZE ANY BOLT HOLE OPENING IN EITHER A BASE PLATE OR SIMPLEX PLATE FOR LIFTING OR HANDLING ANY PRODUCTS, AS THIS WILL CAUSE DAMAGE TO THE FINISH. THE PROPER REPAIR OF ANY DAMAGE OR DETERIORATION TO THE PRODUCT FINISH DURING HANDLING AND INSTALLATION AT THE CONSTRUCTION SITE SHALL BE THE **INSTALLER'S RESPONSIBILITY**.

STORAGE:

WRAPPING MATERIAL **MUST** BE REMOVED, PARTICULARLY IF POLES ARE TO BE STORED FOR EXTENDED PERIODS OF TIME PRIOR TO INSTALLATION. **FAILURE TO DO THIS WILL VOID THE MANUFACTURER'S PAINT WARRANTY.**

THE PRODUCT SHOULD BE STORED IN A CLEAN, DRY AND WELL VENTILATED AREA. THE PRODUCT MUST BE STACKED IN AN ORDERLY MANNER ON SPACERS THAT RAISE THE PRODUCT OFF THE GROUND AND ABOVE ANY VEGETATION. SPACERS SHOULD ALSO BE USED WHILE STACKING THE PRODUCT TO KEEP INDIVIDUAL PIECES SEPARATED FROM EACH OTHER SO THAT AIR CAN FREELY ACCESS ALL SURFACES OF THE PRODUCT.

STACKED PRODUCT SHOULD BE INCLINED SO THAT MOISTURE CAN DRAIN OUT. SEE FIGURE 1 FOR AN ILLUSTRATION OF INCORRECT AND CORRECT STACKING OF PRODUCT. RESINOUS WOOD MUST NOT BE USED FOR SPACERS OR PACKING, SINCE THE RESIN ITSELF CAN DAMAGE ANY FINISH. USE WOOD MATERIAL THAT IS DRY AND UNTREATED (NO CHEMICALS) WHEN TRANSPORTING AND STORING ALL PRODUCTS.

INCORRECT & CORRECT STACKING OF PRODUCT:



CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
6.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1X ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. HANDLING AND STORAGE.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:

JF

DWG NUMBER:

102075.3

DATE:

14.01.2026

SCALE:

1:30

PRODUCT CODE:

-

REVISION:

02



Advanced
LIGHTING TECHNOLOGIES

THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. THESE DRAWINGS SHALL NOT BE COPIED, REPRODUCED, OR OTHERWISE USED WITHOUT THE WRITTEN APPROVAL OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. NO PRODUCT, WORK, OR PERSON SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE OR LOSS OF INFORMATION OR REPUTATION ARISING FROM THE USE OF THESE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. ANY REUSE OF THESE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. IS STRICTLY PROHIBITED.

VICPOLE STANDARD PAINT SPECIFICATION

Vicpole applies a comprehensive coating system to all poles that ensures the product can withstand the rigours of time. Finished in Dulux Acrathane, a protective coating with toughness to resist abuse, it doesn't suffer the chalking and fading that affects many paints and powder coat systems.

STANDARD:

TO AS2312, CATEGORY : LONG TERM.

NOTE:

THREE COATS MAY BE APPLIED FOR APPLICATIONS THAT HAVE EXTREME CONDITIONS OR FOR BRIGHT COLOURS THAT HAVE LOW OPACITY.

SURFACE:

GALVANIZED STEEL

PREPERATION:

CLEAN SURFACE AS PER ORICA "ULTRA ETCH" DATA SHEET "SURFACE PREPERATION".

1ST COAT:

ORICA "ULTRA ETCH" TO A DRY FILM THICKNESS OF 25 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICAL "ULTRA ETCH" DATA SHEET.

***2ND COAT:**

ORICA "ACRATHANE IF" TO DRY FILM THICKNESS OF 60 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICA "ACRATHANE IF" DATA SHEET.

***3RD COAT:**

ORICA "ACRATHANE IF" TO DRY FILM THICKNESS OF 60 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICA "ACRATHANE IF" DATA SHEET.



AFTER FABRICATION, THE ENTIRE POLE IS HOT DIP GALVANISED TO AS4680, WHICH COATS THE POLE WITH A PROTECTIVE LAYER OF ZINC.



VICPOLE THEN HAND LINISHES THE WHOLE POLE TO REMOVE BLEMISHES AND ZINC BUILD-UPS THAT WOULD MAR THE PAINT FINISH APPEARANCE.



APART FROM CREATING A SMOOTH SURFACE, THE LINISHING PROCESS ABRADES THE POLE SURFACE WHICH ENSURES OPTIMUM PAINT ADHESION.



AFTER CLEANING AND DEGREASING, VICPOLE SPRAYS THE POLE ALL OVER WITH DULUX ULTRA-ETCH PRIMER, PROVIDING A PREMIUM BASE FOR THE TOP COAT APPLICATION.



THE TOP COAT IS DULUX ACRATHANE, WHICH IS A 2-PACK, HIGH GLOSS, ACRYLIC THAT COMPLIES WITH AUST STANDARD AS2312. FULLY CURED, IT OFFERS HIGH RESISTANCE TO ABRASION, WEATHERING AND GRAFFITI, AND IS AVAILABLE IN A LARGE RANGE OF COLOURS.

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
6.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1X ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. PAINT.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:
JF

DATE:
14.01.206

PRODUCT CODE:
-

DWG NUMBER:
102075.4

SCALE:
1:30

REVISION:
02

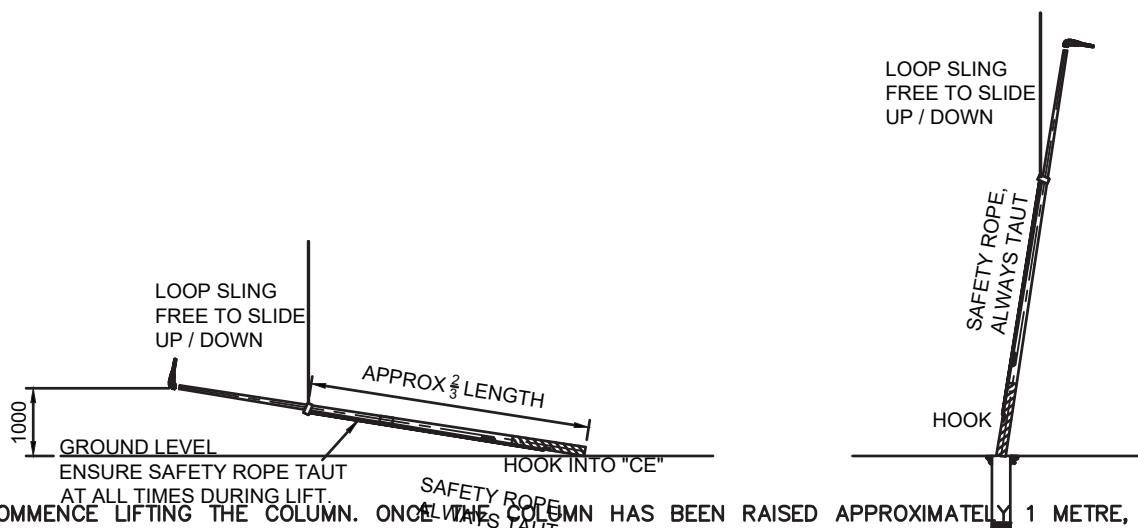


INSTALLATION INSTRUCTIONS

THIS DOCUMENT IS PROVIDED FOR INDICATIVE GUIDANCE ONLY IN RELATION TO THE INSTALLATION OF ADLT-SUPPLIED COLUMNS AND MUST NOT BE USED AS A SUBSTITUTE FOR APPROVED, SITE-SPECIFIC INSTALLATION INSTRUCTIONS. IN ALL CASES, COLUMN INSTALLATION MUST BE CARRIED OUT BY SUITABLY QUALIFIED INDUSTRY PROFESSIONALS IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS AND ANY PROJECT-SPECIFIC REQUIREMENTS (PS1) SPECIFIED BY RELEVANT LOCAL OR GOVERNMENT AUTHORITIES. THE AUTHORISED CONTRACTOR IS RESPONSIBLE FOR PREPARING AND IMPLEMENTING A COMPREHENSIVE, SITE-SPECIFIC SAFETY PLAN TO MITIGATE CONSTRUCTION-RELATED RISKS. CARE MUST BE TAKEN AT ALL STAGES OF INSTALLATION TO AVOID DAMAGE TO THE COLUMN PAINT FINISH.

1. CONTRACTOR IS TO PREPARE THE COLUMN FOOTING HOLE IN ACCORDANCE WITH THE APPROPRIATE GUIDE.
2. FIT LUMINAIRES IF BEING COMPLETED ON THE GROUND.
3. VERIFY THE LIFTING CAPACITY OF ALL EQUIPMENT TO ENSURE IT IS ADEQUATE FOR THE COMBINED WEIGHT OF THE COLUMN AND LUMINAIRE.
4. INSPECT ALL LIFTING EQUIPMENT AND RIGGING. IMMEDIATELY REPLACE ANY COMPONENT SHOWING SIGNS OF WEAR OR DAMAGE.
5. AT APPROXIMATELY TWO-THIRDS OF THE COLUMN LENGTH MEASURED FROM THE BASE, ATTACH A LOOP SLING AROUND THE COLUMN. DO NOT SECURE THE SLING TIGHTLY; IT MUST BE ABLE TO SLIDE ALONG THE COLUMN ONCE LIFTING IS COMPLETE.
6. ON THE SIDE OPPOSITE THE LIFTING FACE OF THE COLUMN, ATTACH A SAFETY ROPE TO THE SLING. RUN THE ROPE DOWN THE OUTSIDE OF THE COLUMN AND SECURE THE LOWER END TO A HOOK ENGAGED THROUGH THE DOOR OPENING.
7. ENSURE THE SAFETY ROPE REMAINS TAUT AT ALL TIMES.

THIS ARRANGEMENT PREVENTS THE SLING FROM SLIPPING ALONG THE LENGTH OF THE COLUMN, MAINTAINS A CONSISTENT LIFTING POINT, AND REDUCES THE RISK OF COLUMN SECTIONS SEPARATING UNDER GRAVITY. IT IS THE RESPONSIBILITY OF THE AUTHORISED OPERATOR TO ENSURE THE SAFETY ROPE REMAINS TAUT AT ALL TIMES. ALL LIFTING OPERATIONS MUST BE CARRIED OUT SMOOTHLY, AVOIDING SUDDEN OR JERKY MOVEMENTS.



8. COMMENCE LIFTING THE COLUMN. ONCE THE COLUMN HAS BEEN RAISED APPROXIMATELY 1 METRE, WITH THE BASE STILL SUPPORTED ON THE GROUND, STOP AND CHECK THE POSITION OF THE LOOP SLING AND SAFETY ROPE. LOWER THE COLUMN TO THE GROUND TO MAKE ANY NECESSARY ADJUSTMENTS.
9. CONTINUE LIFTING THE COLUMN. THE COLUMN SHOULD ROTATE IN LINE WITH THE DIRECTION OF THE LIFT, AND THE SLING SHOULD ROTATE ACCORDINGLY. ENSURE THE SAFETY ROPE REMAINS TAUT THROUGHOUT THE LIFTING OPERATION.
10. CAREFULLY SLEW THE CRANE BOOM TO ALIGN THE COLUMN WITH THE FOOTING HOLE.
11. CAREFULLY LOWER THE COLUMN TO WITH THE FOOTING HOLE
12. LOWER THE COLUMN UNTIL IT RESTS IN THE CENTRE AT THE BOTTOM OF THE FOOTING HOLE. DO NOT RELEASE THE CRANE LOAD AND ENSURE THE SAFETY ROPE REMAINS TAUT.
13. ROTATE THE COLUMN TO ENSURE ITS CORRECT ORIENTATION.
14. FIT RETICULATION CABLES THROUGH THE CABLE ENTRY AND OUT OF THE ACCESS DOOR.
15. ONCE THE COLUMN IS PLUMB, BACK FILL THE COLUMN FOOTING HOLE USING THE LOCAL AUTHORITY APPROVED METHOD.
16. ONCE THE BACKFILL HAS BEEN COMPLETED, RELEASE THE CRANE LOAD, ALLOWING THE LOOP SLING AND SAFETY ROPE TO SLIDE DOWN THE COLUMN SO THEY CAN BE SAFELY REMOVED.
17. THE AUTHORISED ELECTRICAL CONTRACTOR CAN NOW COMPLETE THEIR TASK.

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
6.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1X ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. INSTALATION.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

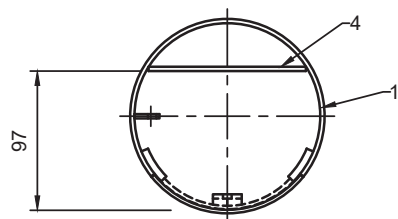
DRAWN BY:
JF
DATE:
1712.2025

DWG NUMBER:
102075.5
SCALE:
1:30
REVISION:
02



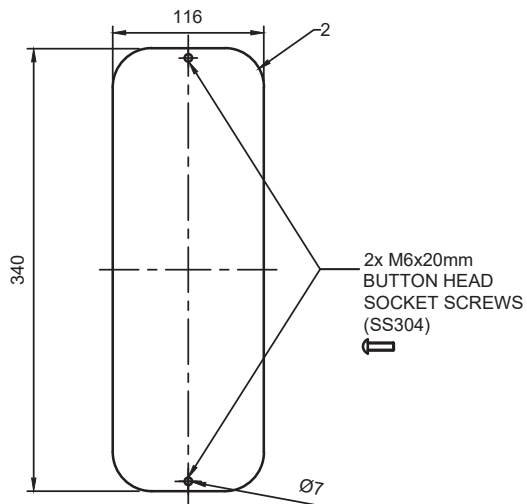
Advanced
LIGHTING TECHNOLOGIES





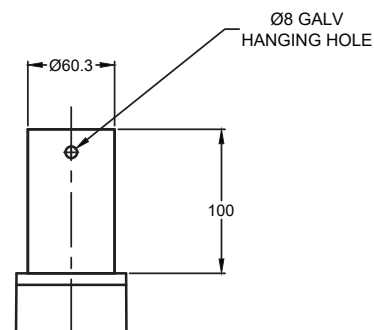
B - B
HAND HOLE - 300x100mm

SCALE 1:5



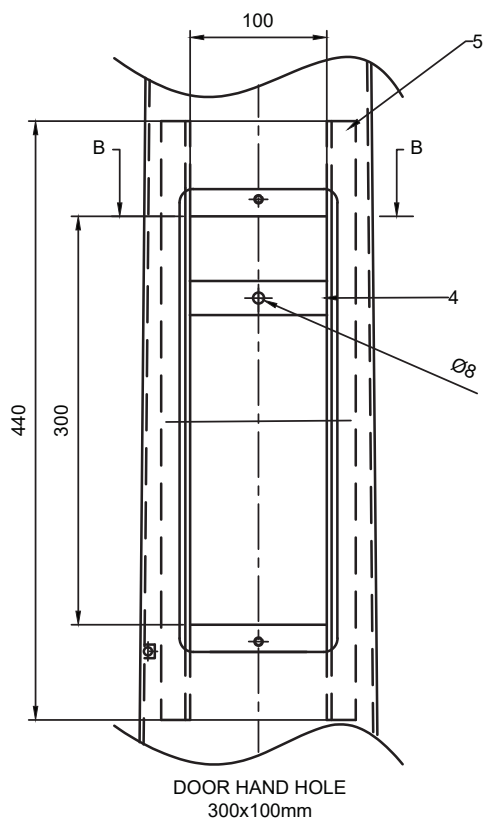
DOOR SIZE
340 x 116mm

SCALE 1:5



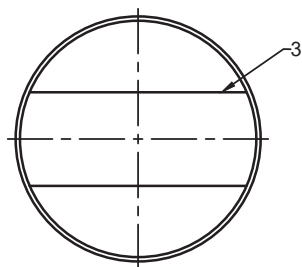
SPIGOT DETAIL

SCALE 1:5



DOOR HAND HOLE
300x100mm

SCALE 1:5



A - A
COLUMN BASE PLATE 190x65x5mm

SCALE 1:5

PART NO.	DESCRIPTION	QNTY
1	SHAFT ⁷⁶ / ₂₀₀ 9.5m LGNTH, 3mm	1
2	DOOR COVER	1
3	FLAT 190x65x5	1
4	FLAT 25x3x144mm, Ø8 HOLE	1
5	440x24x5 PLATE	2
6	FLAT 25x20x3mm THK, Ø8mm HOLE	1

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
8.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1x ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:

JF

DWG NUMBER:

102100.2

DATE:

02.12.2025

SCALE:

1:40

PRODUCT CODE:

-

REVISION:

02



Advanced
LIGHTING TECHNOLOGIES

HANDLING & STORAGE OF POLES FOR STEEL / ALUMINUM POLES

HANDLING:

THE PURCHASER / INSTALLER MUST ENSURE THE PROPER HANDLING OF THE PRODUCT AT THE CONSTRUCTION SITE TO ENSURE A DAMAGE-FREE PRODUCT WHEN INSTALLATION IS COMPLETE. CARE NEEDS TO BE TAKEN TO ENSURE THE INTEGRITY OF THE PRODUCT FINISH. DAMAGE TO THE FINISH SUCH AS SCRATCHES, GOUGES AND MARRED AREAS WILL REDUCE OR ELIMINATE THE CORROSIVE RESISTANCE OF PROTECTIVE COATINGS. DIRECT METAL TO METAL CONTACT, SUCH AS CHOKING A GALVANIZED OR PAINTED POLE WITH METAL CHAINS, WILL CAUSE DAMAGE TO THE FINISH. PROTECTIVE MATERIALS SUCH AS NYLON SLINGS OR CLOTH SLEEVES FOR CHAINS SHOULD BE UTILIZED DURING HANDLING TO PREVENT DAMAGE TO THE FINISH. DO NOT UTILIZE ANY BOLT HOLE OPENING IN EITHER A BASE PLATE OR SIMPLEX PLATE FOR LIFTING OR HANDLING ANY PRODUCTS, AS THIS WILL CAUSE DAMAGE TO THE FINISH. THE PROPER REPAIR OF ANY DAMAGE OR DETERIORATION TO THE PRODUCT FINISH DURING HANDLING AND INSTALLATION AT THE CONSTRUCTION SITE SHALL BE THE **INSTALLER'S RESPONSIBILITY**.

STORAGE:

WRAPPING MATERIAL **MUST** BE REMOVED, PARTICULARLY IF POLES ARE TO BE STORED FOR EXTENDED PERIODS OF TIME PRIOR TO INSTALLATION. **FAILURE TO DO THIS WILL VOID THE MANUFACTURER'S PAINT WARRANTY.**

THE PRODUCT SHOULD BE STORED IN A CLEAN, DRY AND WELL VENTILATED AREA. THE PRODUCT MUST BE STACKED IN AN ORDERLY MANNER ON SPACERS THAT RAISE THE PRODUCT OFF THE GROUND AND ABOVE ANY VEGETATION. SPACERS SHOULD ALSO BE USED WHILE STACKING THE PRODUCT TO KEEP INDIVIDUAL PIECES SEPARATED FROM EACH OTHER SO THAT AIR CAN FREELY ACCESS ALL SURFACES OF THE PRODUCT.

STACKED PRODUCT SHOULD BE INCLINED SO THAT MOISTURE CAN DRAIN OUT. SEE FIGURE 1 FOR AN ILLUSTRATION OF INCORRECT AND CORRECT STACKING OF PRODUCT. RESINOUS WOOD MUST NOT BE USED FOR SPACERS OR PACKING, SINCE THE RESIN ITSELF CAN DAMAGE ANY FINISH. USE WOOD MATERIAL THAT IS DRY AND UNTREATED (NO CHEMICALS) WHEN TRANSPORTING AND STORING ALL PRODUCTS.

INCORRECT & CORRECT STACKING OF PRODUCT:



CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
8.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1x ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. HANDLING AND STORAGE

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: N2
TERRAIN CATEGORY: 2

DRAWN BY:
JF
DATE:
02.12.2025

DWG NUMBER:
102100.3
SCALE:
1:40

PRODUCT CODE:
-

REVISION:
02



Advanced
LIGHTING TECHNOLOGIES

THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF ADVANCED LIGHTING TECHNOLOGIES (AL) LTD. THESE DRAWINGS SHALL NOT BE COPIED, REPRODUCED, TRANSMITTED OR IN ANY MANNER, OR REPRODUCED WITHOUT THE WRITTEN APPROVAL OF ADVANCED LIGHTING TECHNOLOGIES (AL) LTD. NO PRODUCT, WORK, PART OR RESEMBLY SHALL BE MADE FROM THESE DRAWINGS WITHOUT THE EXPRESS WRITTEN PERMISSION OF ADVANCED LIGHTING TECHNOLOGIES (AL) LTD. ANY PERSON, COMPANY OR ORGANIZATION VIOLATING THIS COPYRIGHT WILL BE THE SUBJECT OF LEGAL PROCEEDINGS. ALL RIGHTS RESERVED.

VICPOLE STANDARD PAINT SPECIFICATION

Vicpole applies a comprehensive coating system to all poles that ensures the product can withstand the rigours of time. Finished in Dulux Acrathane, a protective coating with toughness to resist abuse, it doesn't suffer the chalking and fading that affects many paints and powder coat systems.

STANDARD:

TO AS2312, CATEGORY : LONG TERM.

NOTE:

THREE COATS MAY BE APPLIED FOR APPLICATIONS THAT HAVE EXTREME CONDITIONS OR FOR BRIGHT COLOURS THAT HAVE LOW OPACITY.

SURFACE:

GALVANIZED STEEL

PREPERATION:

CLEAN SURFACE AS PER ORICA "ULTRA ETCH" DATA SHEET "SURFACE PREPERATION".

1ST COAT:

ORICA "ULTRA ETCH" TO A DRY FILM THICKNESS OF 25 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICAL "ULTRA ETCH" DATA SHEET.

***2ND COAT:**

ORICA "ACRATHANE IF" TO DRY FILM THICKNESS OF 60 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICA "ACRATHANE IF" DATA SHEET.

***3RD COAT:**

ORICA "ACRATHANE IF" TO DRY FILM THICKNESS OF 60 MICRONS MINIMUM. FOR ANY FURTHER TECHNICAL INFORMATION PLEASE REFER TO ORICA "ACRATHANE IF" DATA SHEET.



AFTER FABRICATION, THE ENTIRE POLE IS HOT DIP GALVANISED TO AS4680, WHICH COATS THE POLE WITH A PROTECTIVE LAYER OF ZINC.



VICPOLE THEN HAND LINISHES THE WHOLE POLE TO REMOVE BLEMISHES AND ZINC BUILD-UPS THAT WOULD MAR THE PAINT FINISH APPEARANCE.



APART FROM CREATING A SMOOTH SURFACE, THE LINISHING PROCESS ABRADES THE POLE SURFACE WHICH ENSURES OPTIMUM PAINT ADHESION.



AFTER CLEANING AND DEGREASING, VICPOLE SPRAYS THE POLE ALL OVER WITH DULUX ULTRA-ETCH PRIMER, PROVIDING A PREMIUM BASE FOR THE TOP COAT APPLICATION.



THE TOP COAT IS DULUX ACRATHANE, WHICH IS A 2-PACK, HIGH GLOSS, ACRYLIC THAT COMPLIES WITH AUST STANDARD AS2312. FULLY CURED, IT OFFERS HIGH RESISTANCE TO ABRASION, WEATHERING AND GRAFFITI, AND IS AVAILABLE IN A LARGE RANGE OF COLOURS.

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
8.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1x ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. PAINT.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:
JF
DATE:
02.12.2025

DWG NUMBER:
102100.4
SCALE:
1:40

PRODUCT CODE:
-

REVISION:
02

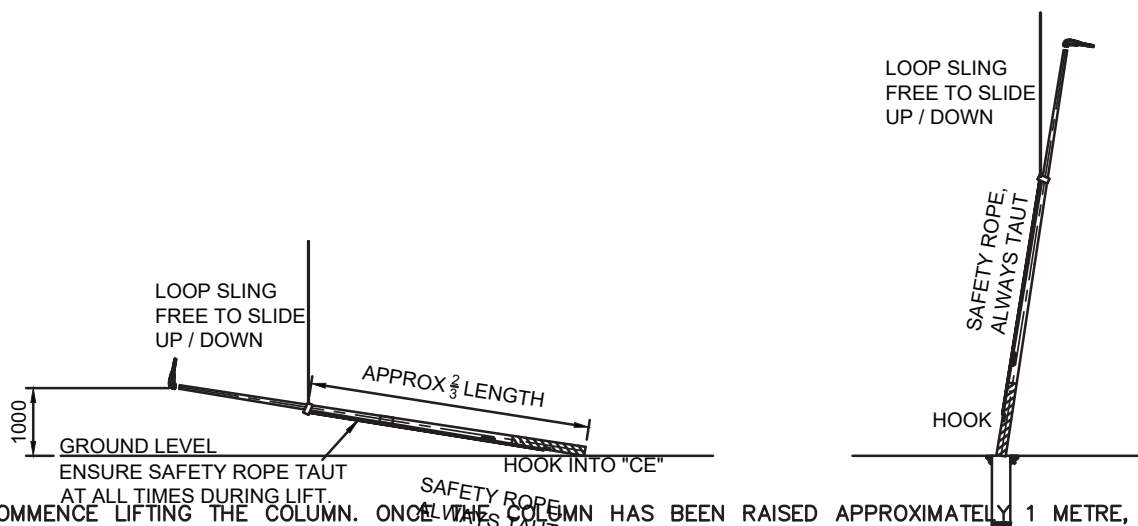


INSTALLATION INSTRUCTIONS

THIS DOCUMENT IS PROVIDED FOR INDICATIVE GUIDANCE ONLY IN RELATION TO THE INSTALLATION OF ADLT-SUPPLIED COLUMNS AND MUST NOT BE USED AS A SUBSTITUTE FOR APPROVED, SITE-SPECIFIC INSTALLATION INSTRUCTIONS. IN ALL CASES, COLUMN INSTALLATION MUST BE CARRIED OUT BY SUITABLY QUALIFIED INDUSTRY PROFESSIONALS IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS AND ANY PROJECT-SPECIFIC REQUIREMENTS (PS1) SPECIFIED BY RELEVANT LOCAL OR GOVERNMENT AUTHORITIES. THE AUTHORISED CONTRACTOR IS RESPONSIBLE FOR PREPARING AND IMPLEMENTING A COMPREHENSIVE, SITE-SPECIFIC SAFETY PLAN TO MITIGATE CONSTRUCTION-RELATED RISKS. CARE MUST BE TAKEN AT ALL STAGES OF INSTALLATION TO AVOID DAMAGE TO THE COLUMN PAINT FINISH.

1. CONTRACTOR IS TO PREPARE THE COLUMN FOOTING HOLE IN ACCORDANCE WITH THE APPROPRIATE GUIDE.
2. FIT LUMINAIRES IF BEING COMPLETED ON THE GROUND.
3. VERIFY THE LIFTING CAPACITY OF ALL EQUIPMENT TO ENSURE IT IS ADEQUATE FOR THE COMBINED WEIGHT OF THE COLUMN AND LUMINAIRE.
4. INSPECT ALL LIFTING EQUIPMENT AND RIGGING. IMMEDIATELY REPLACE ANY COMPONENT SHOWING SIGNS OF WEAR OR DAMAGE.
5. AT APPROXIMATELY TWO-THIRDS OF THE COLUMN LENGTH MEASURED FROM THE BASE, ATTACH A LOOP SLING AROUND THE COLUMN. DO NOT SECURE THE SLING TIGHTLY; IT MUST BE ABLE TO SLIDE ALONG THE COLUMN ONCE LIFTING IS COMPLETE.
6. ON THE SIDE OPPOSITE THE LIFTING FACE OF THE COLUMN, ATTACH A SAFETY ROPE TO THE SLING. RUN THE ROPE DOWN THE OUTSIDE OF THE COLUMN AND SECURE THE LOWER END TO A HOOK ENGAGED THROUGH THE DOOR OPENING.
7. ENSURE THE SAFETY ROPE REMAINS TAUT AT ALL TIMES.

THIS ARRANGEMENT PREVENTS THE SLING FROM SLIPPING ALONG THE LENGTH OF THE COLUMN, MAINTAINS A CONSISTENT LIFTING POINT, AND REDUCES THE RISK OF COLUMN SECTIONS SEPARATING UNDER GRAVITY. IT IS THE RESPONSIBILITY OF THE AUTHORISED OPERATOR TO ENSURE THE SAFETY ROPE REMAINS TAUT AT ALL TIMES. ALL LIFTING OPERATIONS MUST BE CARRIED OUT SMOOTHLY, AVOIDING SUDDEN OR JERKY MOVEMENTS.



8. COMMENCE LIFTING THE COLUMN. ONCE THE COLUMN HAS BEEN RAISED APPROXIMATELY 1 METRE, WITH THE BASE STILL SUPPORTED ON THE GROUND, STOP AND CHECK THE POSITION OF THE LOOP SLING AND SAFETY ROPE. LOWER THE COLUMN TO THE GROUND TO MAKE ANY NECESSARY ADJUSTMENTS.
9. CONTINUE LIFTING THE COLUMN. THE COLUMN SHOULD ROTATE IN LINE WITH THE DIRECTION OF THE LIFT, AND THE SLING SHOULD ROTATE ACCORDINGLY. ENSURE THE SAFETY ROPE REMAINS TAUT THROUGHOUT THE LIFTING OPERATION.
10. CAREFULLY SLEW THE CRANE BOOM TO ALIGN THE COLUMN WITH THE FOOTING HOLE.
11. CAREFULLY LOWER THE COLUMN TO WITH THE FOOTING HOLE
12. LOWER THE COLUMN UNTIL IT RESTS IN THE CENTRE AT THE BOTTOM OF THE FOOTING HOLE. DO NOT RELEASE THE CRANE LOAD AND ENSURE THE SAFETY ROPE REMAINS TAUT.
13. ROTATE THE COLUMN TO ENSURE ITS CORRECT ORIENTATION.
14. FIT RETICULATION CABLES THROUGH THE CABLE ENTRY AND OUT OF THE ACCESS DOOR.
15. ONCE THE COLUMN IS PLUMB, BACK FILL THE COLUMN FOOTING HOLE USING THE LOCAL AUTHORITY APPROVED METHOD.
16. ONCE THE BACKFILL HAS BEEN COMPLETED, RELEASE THE CRANE LOAD, ALLOWING THE LOOP SLING AND SAFETY ROPE TO SLIDE DOWN THE COLUMN SO THEY CAN BE SAFELY REMOVED.
17. THE AUTHORISED ELECTRICAL CONTRACTOR CAN NOW COMPLETE THEIR TASK.

CLIENT:
GENERAL ELECTRICAL
CONTRACTOR /
WHOLESALE

PRODUCT:
8.0m GROUND PLANTED ROUND TAPERED COLUMN. Ø60 POST TOP
SPIGOT. 1x ENERGY SERIES UNO LUMINAIRE. HDG. EPOXY GROUND
COATING. PAINTED GLOSS BLACK. INSTALLATION INSTRUCTIONS.

PROJECT ID:
ADLT - XXXXX

PROJECT NAME:
-

DESIGN: DESIGN WORKING LIFE: 25YRS
IMPORTANCE LEVEL: 1
WIND REGION: NZ2
TERRAIN CATEGORY: 2

DRAWN BY:
JF
DATE:
02.12.2025
PRODUCT CODE:
-

DWG NUMBER:
102100.5
SCALE:
1:40
REVISION:
02



Advanced
LIGHTING TECHNOLOGIES

ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. THESE DRAWINGS SHALL NOT BE COPIED BY ANY PERSON, TRANSMITTED OR RECORDED WITHOUT THE WRITTEN APPROVAL OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. NO PRODUCT, WORK, PART OR RESEMBLY SHALL BE MADE FROM THESE DRAWINGS WITHOUT THE EXPRESS WRITTEN PERMISSION OF ADVANCED LIGHTING TECHNOLOGIES (NZ) LTD. ANY PERSON, COMPANY OR ORGANISATION VIOLATING THIS COPYRIGHT WILL BE THE SUBJECT OF LEGAL PROCEEDINGS. ALL RIGHTS RESERVED.

Exterior Lighting Report

Public – Paper Road and Lover Shotover Road Updates 14 Lower Shotover Road, Ladies Mile, Queenstown

Revision	A – Resource Consent
Date	17/07/2026
Designer	Dhushi Kamalan
Reviewer	Eranda Mahipala

Please find attached the illumination designs for the proposed amendments to Lower Shotover Road and the collector road associated with the new Simplicity Living development at 14 Lower Shotover Road, Queenstown.

The SH6 intersections will also be included once the intersection design is finalised.

The lighting design is based on the following categories:

- PR3 – Collector Road
- V4 – Lower Shotover Road
- V3 – SH6

The Road Lighting for this new subdivision is designed in accordance with AS/NZS 1158.1.1:2022 & AS/NZS 1158.3.1:2020 to comply with relevant clause for a Categories V and P roads.

Illuminance predictions were carried out using Lighting Analysts Illumination Engineering Software (AGI32), Version 20.6.

Lighting calculations are subject to the accuracies and tolerances set out in AS/NZS 3827.1:1998 and AS/NZS 3827.2:1998. These include variations in building dimensions and obstructions, surface finishes, luminaire positioning and aiming, ambient temperature, atmospheric conditions, luminaire photometry, lamp output, lighting design software, electrical supply, and instrument calibration. The predictions represent a reasonable assessment of a lighting design that complies with the above standard.

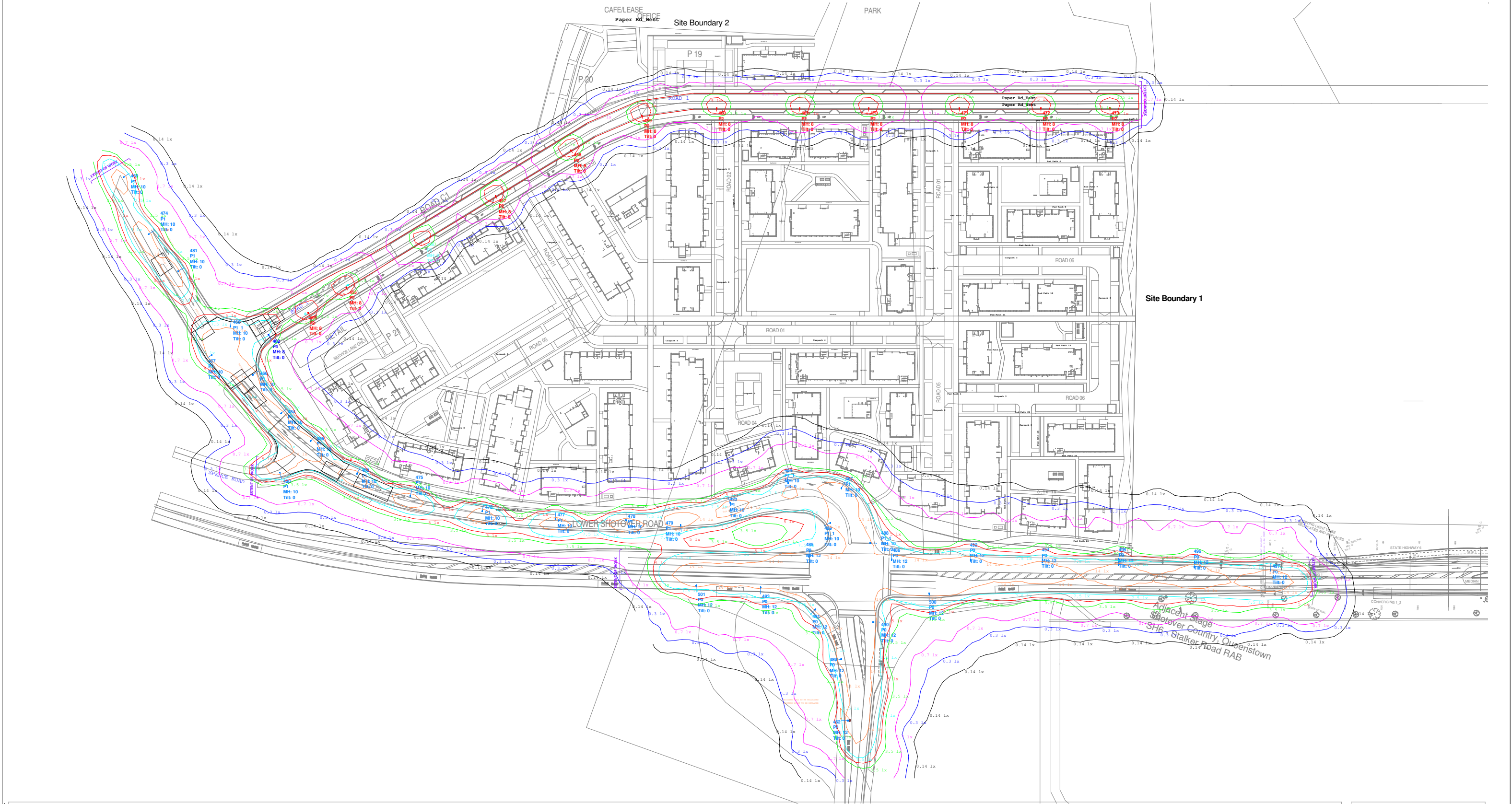
Should you require any further information, please do not hesitate to contact us.

Yours faithfully,



Dhushi Kamalan

Electrical Consulting Services Ltd



Luminaire Schedule

Symbol	Label	Qty	LLF	Flux	Watts	Description
	P0	14	0.800	19477	150	Cree Energy Tre SCP 26L 150W 3000K on relocated HDG Octagonal Steel pole at 12m height 3m arm 0deg tilt (1m setback from kerb)
	P1	16	0.800	9313	69	Cree Energy Due SCP 15L 69W 3000K on HDG Octagonal Steel pole at 10m height 3m arm 0deg tilt (1m setback from kerb)
	P1_1	4	0.800	9545	69	Cree Energy Due 200 15L 69W 3000K on HDG Octagonal Steel pole at 10m height 3m arm 0deg tilt (1m setback from kerb)
	P2	11	0.760	3184	23	Cree Energy Uno NZP 8L 23W 3000K on Vicpole Portland Pole at 8m height 1m arm 0deg tilt (1m setback from kerb) (G=80deg Candela=400)
	P3	1	0.760	2913	21	Cree Energy Uno NZP 8L 21W 3000K on Vicpole Portland Pole at 8m height 1m arm 0deg tilt (1m setback from kerb) (G=80deg Candela=366)
	P4	1	0.760	3747	28	Cree Energy Uno 200 8L 23W 3000K on Vicpole Portland Pole at 8m height 2m arm 0deg tilt (1m setback from kerb) for LATM

Isoline Legend

Illuminance (Lux)	
Color	Value
	0.14
	0.3
	0.7
	3.5
	5
	7.5
	14

PROJECT NAME Ladies Mile, 14 Lowet Shotover Road, Queenstown	DRAWING	REV	COMMENTS	DATE
	MAINTAINED ISOLINES	A	RESOURCE CONSENT ISSUE	17/07/2026
	CLIENT			
	SIMPLICITY LIVING			
PROJECT ID 225439	TYPE			
	PUBLIC LIGHTING DESIGN			



DESIGN DK	PURPOSE RESOURCE CONSENT ISSUE	
CHECK EM	SCALE NTS	DATE 17/07/2026
	REV A	PAGE 1

NOTES:

1. Lighting calculations are based upon initial lamp lumens with a maintenance factor derived in accordance with AS/NZS 1158 as shown below.
2. Isolux lines show illuminance values at grade.
3. Luminaires are mounted at the heights as indicated on the drawing. Tilts (upcast) = 0 for all proposed luminaires.
4. Road Lighting Categories

Road 1: PR3
Spence Road: V4 (to be confirmed)
Lower Shotover Road: V4
SH6: V3
5. Lighting design in accordance with AS/NZS 1158 wherever applicable.
6. Relevant street lights in adjacent areas immediately outside the scope of this project have been shown for co-ordination purposes and the lighting contribution taken into account where appropriate.
7. No overhead electric lines are believed to be within the scope of this project and thus co-ordination with overhead lines is not required.
8. The contractor shall ensure prior to installation clearances are met from underground services, especially high-voltage cables and high pressure gas lines.
9. The luminaires shall be supplied with a DALI Dimmable Constant Current Driver. Luminaires shall be supplied with a 7 Contact NEMA Socket (compliant with ANSI C136.41:2013) and shorting caps.

AS/NZS 1158.1.1:2022 - TABLE 3.1 - VALUES OF LIGHT TECHNICAL PARMETERS FOR CATEGORY V LIGHTING										
1	2	3	4	5	6	7	8	9	10	11
LIGHTING SUBCATEGORY	LIGHT TECHNICAL PARAMETERS									
	FOR STRAIGHT SECTIONS, CURVES AND INTERSECTIONS					FOR INTERSECTIONS AND OTHER SPECIFIED LOCATIONS		FOR NON-SSL LUMINAIRES	FOR SSL LUMINAIRES	
	AVERAGE CARRIAGEWAY LUMINANCE $\bar{L}$ cd/m ² >=	OVERALL UNIFORMITY MIN/AVG (Uo) >=	LONGITUDINAL UNIFORMITY (U _l) MIN/MAX >=		THRESHOLD INCREMENT (TI) <=	SURROUND VERGE ILLUMINANCE (E _{SV} AND E _{SP}) >= %	POINT HORIZONTAL ILLUMINANCE (E _{PH}) >= LX	ILLUMINANCE (HORIZONTAL) UNIFORMITY CAT V (U _{E1}) MAX/MIN <=	UPWARD WASTE LIGHT RATIO (UWLR) <=	UPWARD WASTE LIGHT RATIO (UWLR) <=
			AUSTRALIA	NEW ZEALAND						
V1	1.50	0.33	0.5	0.3	15	50	15	8	3	1
V2	1.00	0.33	0.5	0.3	15	50	10	8	3	1
V3	0.75	0.33	0.5	0.3	15	50	7.5	8	3	1
V4	0.50	0.33	0.5	0.3	15	50	5	8	3	1
V5	0.35	0.33	0.5	0.3	15	50	3.5	8	3	1

Calculation Summary						
Project: SL - Public ECS						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
Diverging 2	Illuminance	Lux	N.A.	15.9	9.2	N.A.
Median 1	Illuminance	Lux	N.A.	20	9	N.A.
Median 2	Illuminance	Lux	N.A.	19	5	N.A.
Median 3	Illuminance	Lux	N.A.	24	10	N.A.
Median 4	Illuminance	Lux	N.A.	21	9	N.A.
Median 7	Illuminance	Lux	N.A.	11	7	N.A.
Median 8	Illuminance	Lux	N.A.	7	4	N.A.
Median Refuge - 5 & 6	Illuminance	Lux	N.A.	21	6	N.A.
Road 1 - Cat PR3	Illuminance	Lux	3.0	8.2	0.5	2.8
Road 1 Intersection	Illuminance	Lux	N.A.	28	5	N.A.
Spence Road Intersection	Illuminance	Lux	N.A.	24	7	N.A.

MAINTENACE FACTOR (MF) (LLF) = LAMP LUMEN MAINTENANCE FACTOR (LLMF) (LLD) X LUMINAIRE MAINTENANCE FACTOR (LMF) (LDD)

Lamp Lumen Maintenace Factor (LLMF)
* LED lamp lumen depreciation after 85,000 hours of operation
- In accordance with IESNA TM-21-11 & LM-80-08

* 85,000 hours equates to 20 years of operation at 11.6 hours/day
365 days/year

Luminaire Maintenance Factor (LMF)
* IP6X Luminaire IP rating
* Urban Environmental zone
* Luminaire cleaning every 72 months
- Maximum LMF(LDD) allowed per table 3.2 of AS/NZS 1158.3.1:2020 is 0.84
- Maximum LMF allowed per Clause 3.4.2 of AS/NZS 1158.1.1:2022 is 0.92

MF (LABEL B) = LLMF x LMF = 0.91 x 0.84 = 0.76
MF (LABEL A) = LLMF x LMF = 0.98 x 0.92 = 0.90

AS/NZS 1158.3.1:2020 - TABLE 3.3			
VALUES OF LIGHT TECHNICAL PARAMETERS FOR ROADS IN LOCAL AREAS			
1	2	3	4
LIGHT TECHNICAL PARAMETERS (LTP)			
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE (E _h) LUX	POINT HORIZONTAL ILLUMINANCE (E _{ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U _{E2})
PR1	7	2	8
PR2	3.5	0.7	8
PR3	1.75	0.3	8
PR4	1.3	0.22	8
PR5	0.85	0.14	10
PR6	0.7	0.07	10

AS/NZS 1158.3.1:2020 - TABLE 3.4				
VALUES OF LIGHT TECHNICAL PARAMETERS FOR PATHWAYS AND CYCLIST PATHS				
1	2	3	4	5
LIGHT TECHNICAL PARAMETERS (LTP)				
LIGHTING SUBCATEGORY	AVERAGE HORIZONTAL ILLUMINANCE (E _h) LUX	POINT HORIZONTAL ILLUMINANCE (E _{ph}) LUX	ILLUMINANCE (HORIZONTAL) UNIFORMITY (U _{E2})	POINT VERTICAL ILLUMINANCE (E _{pv}) LUX
PP1	10	2	5	1
PP2	7	1	5	0.3
PP3	3	0.5	5	0.1
PP4	1.5	0.25	5	0.05
PP5	0.85	0.14	5	0.02

PROJECT NAME Ladies Mile, 14 Lowet Shotover Road, Queenstown	DRAWING NOTES, REQUIREMENTS, MF & RESULTS	REV A	COMMENTS RESOURCE CONSENT ISSUE	DATE 17/07/2026	 ELECTRICAL CONSULTING SERVICES LTD	DESIGN DK	PURPOSE RESOURCE CONSENT ISSUE	
	CLIENT SIMPLICITY LIVING					CHECK EM	SCALE NTS	DATE 17/07/2026
	TYPE PUBLIC LIGHTING DESIGN						REV A	PAGE 2