

ATTACHMENT 15 - APPLICANT LIGHTING DESIGN REPORT

Perth Lighting Consultants

ABN:69 609 527 586

4/06/2025

Site address: **12 Cohn Street Carlisle**

Project Title

HOLCIM WELSHPOOL CONCRETE PLANT 12 Cohn Street Carlisle - Lighting Design report



1. Summary
2. Requirements
3. Maintained Illuminance, Uniformity and Glare
4. Calculation Results
5. Spill Light Compliance
6. Luminaire Product Details
7. Luminaire Location Summary
8. Pole Specification.
9. Supplier Details
10. Conclusions
11. Project Review and Signoff

1. Summary

The intent of this document only serves as a report to certify that the lighting design submitted by Perth Lighting Consultants complies with relevant standards. This report does not cover any part of the electrical installation. The report confirms that all lighting has been done to meet standards mentioned in point 2

2. Requirements.

The following standards have been nominated for the site as stated below for performance levels for all areas of work.

- AS/NZS1680.5 RECOMMENDED LIGHTING LEVELS OUTDOOR WORKPLACE LIGHTING

RECOMMENDED LIGHTING LEVELS OUTDOOR WORKPLACE LIGHTING						
AS/NZS1680.5	LOADING AND UNLOADING MANUAL	LOADING AND UNLOADING OF TRUCKS BY MANUAL LABOUR INCLUDING MOVING OBJECTS MANUALLY	AVG	Min Point Lux Level	Uniformity ratio Max/Avg	glare index
			40	5	5	45
RECOMMENDED LIGHTING LEVELS OUTDOOR WORKPLACE LIGHTING						
AS/NZS1680.5	LOADING AND UNLOADING FORKLIFT	LOADING AND UNLOADING OF TRUCKS BY FORKLIFT, AREA AROUND TRUCKS AND ROUTE OF FORKLIFT	AVG	Min Point Lux Level	Uniformity ratio Max/Avg	glare index
			40	5	5	45

- ASNZS4282-2023 Control of obtrusive effect of outdoor lighting. Area Classification A3 Medium district brightness-Suburban areas in town and cities Curfewed hrs
- Airport Lighting - Version 1.4 April 2008 s9.21 Lighting in the Vicinity of Aerodromes Zone D

3. Maintained Illuminance, Uniformity and Glare Normal Lighting

- All external lighting calculations was done at horizontal plane at 0.1m from floor level
- Obtrusive lighting done from ground level to 3m height in a vertical plane on residential properties

4. Calculation Results :

Calculation Summary					
CalcType	Units	Avg	Min	Max/Avg	Max
Illuminance	Lux	33.95	0	17.7	600.8
Glare Rating	N.A.	10.05	10	1.59	16
Illuminance	Lux	70.68	36.9	N.A.	96.4
Illuminance	Lux	70.68	36.9	1.36	96.4
Illuminance	Lux	70.68	36.9	1.36	96.4
Illuminance	Lux	70.68	36.9	1.36	96.4
Illuminance	Lux	70.68	36.9	1.36	96.4
Illuminance	Lux	53.9	36.5	N.A.	77.4
Illuminance	Lux	89.63	22.6	5.17	463.8
Obtrusive - Cd	N.A.	519.58	178	N.A.	1593
Obtrusive - Ill	Lux	0.36	0.1	N.A.	1
Obtrusive - TI	%	0.06	0	N.A.	1
Obtrusive - TI	%	0	0	N.A.	0
Obtrusive - TI	%	0	0	N.A.	0
Illuminance	Lux	83.21	5.5	7.03	585.1

5. Spill Lighting Compliance AS/NZS4282-2023

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A3 - Medium District Brightness, Curfew
Filename: HOLCIM WELSHPOOL CONCRETE RENDER 03062025
3/06/2025 5:45:12 PM

Illuminance

Maximum Allowable Value: 2 Lux

Calculations Tested (1):

Calculation Label	Test Results	Max. Illum.
ObtrusiveLight Cohn Street_Ill_Seg1	PASS	1.0

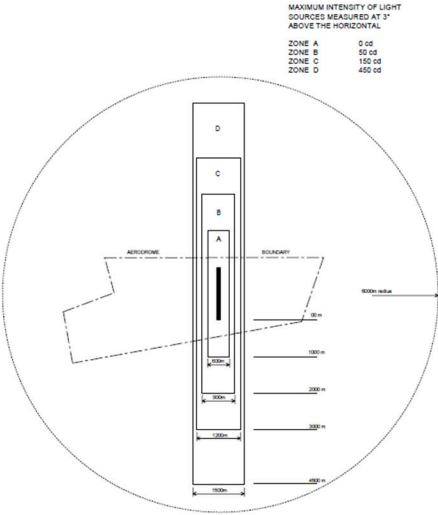
Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 2500 Cd

Calculations Tested (1):

Calculation Label	Test Results
ObtrusiveLight Cohn Street_Cd_Seg1	PASS

CASA Compliance



Obtrusive Light - Compliance Report

Manual of Standards Part 139 Aerodromes
Filename: HOLCIM WELSHPOOL CONCRETE 03062025
3/06/2025 6:09:07 PM

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 450 Cd

Control Angle: 93 Degrees

Luminaire Locations Tested (45)

Test Results: PASS

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 450 Cd

Calculations Tested (1):

Calculation Label	Test Results
ObtrusiveLight Cohn Street_Cd_Seg1	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (3):

Calculation Label	Adaptation Test Luminance	Results
ObtrusiveLight_TI_1	10	PASS
ObtrusiveLight_TI_2	10	PASS
ObtrusiveLight_TI_3	10	PASS

6. Luminaire Product Details.

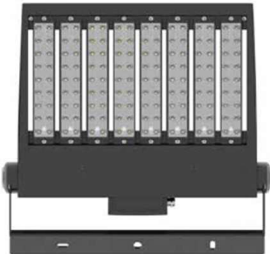
Luminaire Schedule								
Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts	Tag
2	F4	Single	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.9	64845	463.246	926.492	MOUNTED TO UNDERSIDE OF CONVEYOR
1	F3	Back-Back	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.9	64845	463.246	926.492	STRUCTURE MOUNT @ 10M
1	F2	2 @ 90 degrees	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.9	64845	463.246	926.492	POLE MOUNT @ 6M
33	B1	Single	TIGERLIGHT PESB120040 39W LED 1200mm 4000K IK10 IP66 BATTEN	0.7	6013	38.49865	1270.455	ROOF MOUNT
12	F1	Single	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.9	64845	463.246	5558.952	POLE MOUNT @ 6M



tigerlight | HIGH-PERFORMANCE INDUSTRIAL LIGHTING

MEGAFLOOD SERIES
AREA LIGHTS 40W - 1200W

**MEGA
FLOOD**



Model
Typ lumens
Current draw,
A @240VAC
LCP, W
Modules
Weight, kg
Dimensions

FLD480
60050
1.91
458
8
13.0
584x628x82mm



tigerlight | HIGH-PERFORMANCE INDUSTRIAL LIGHTING

SILVERBACK IK10 IP66 BATTEN
& INTEGRATED EMERGENCY



PERFORMANCE OVERVIEW

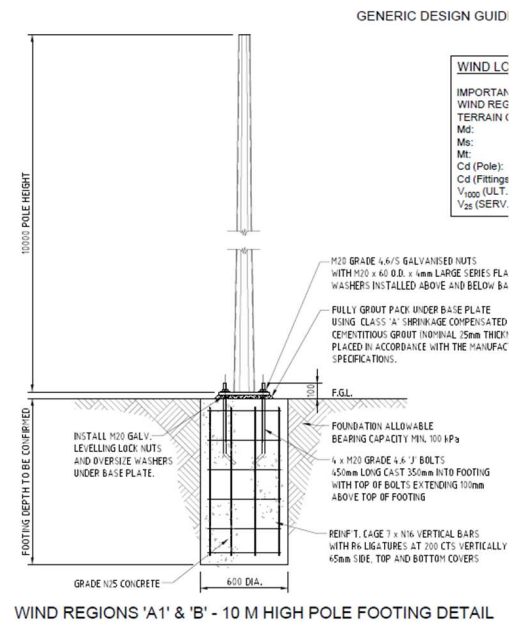
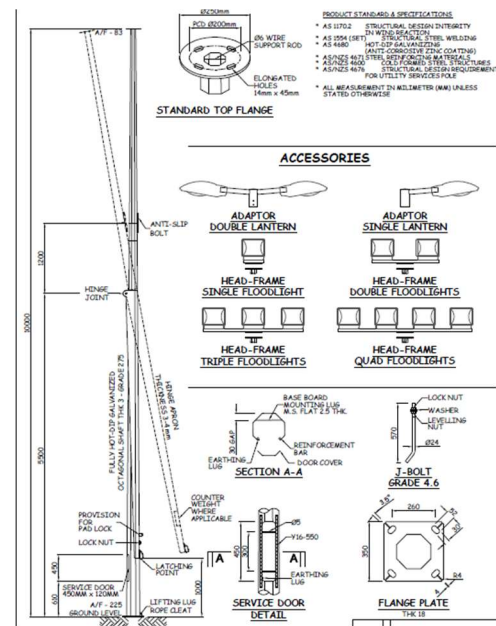
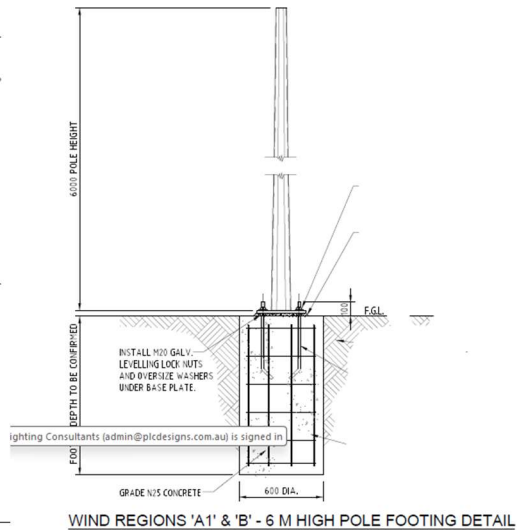
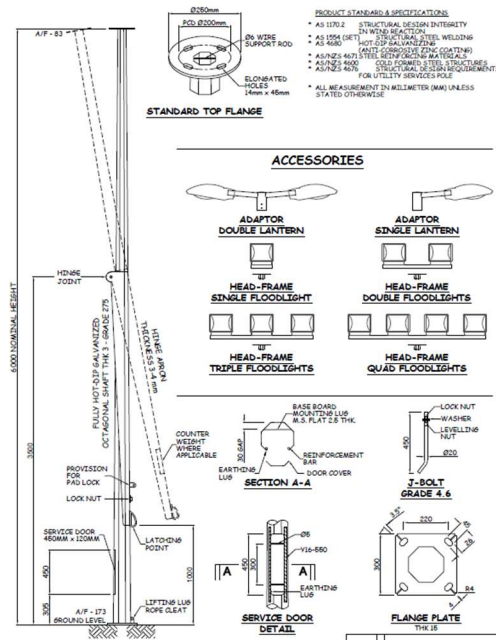
BATTEN SIZE	600mm	1200mm
Wattage	20W	40W
Lumen output	3000lm	6400 lm
Product code (Std)	PESB060040K	PESB120040K
(Emergency)	n/a	PESB120040K-EM
Voltage / PF / THD	220-240VA, 50/60Hz	>0.9 / <20%

7. Luminaire Location Summary

Luminaire Location Summary				
LumNo	Label	Orient	Tilt	Z
1	B1	45.655	5	4.8
2	F1	316.47	5	6
3	B1	45.655	5	4.8
4	B1	45.655	5	4.8
5	B1	45.655	5	4.8
6	B1	45.655	5	4.8
7	B1	45.655	5	4.8
8	B1	45.655	5	4.8
9	B1	45.655	5	4.8
10	B1	45.655	5	4.8
11	F1	225.245	5	6
12	F1	315.467	5	6
13	F1	225.245	5	6
14	F2	87.83	0	6
15	F3	135.957	0	10
16	B1	315.481	5	5.5
17	F1	44.915	5	6
18	F1	225.245	5	6
19	B1	315.481	5	5.5
20	B1	315.481	5	5.5
21	B1	315.481	5	5.5
22	B1	315.481	5	5.5
23	B1	315.481	5	5.5
24	B1	312.68	0	5
25	B1	315.481	5	5.5
26	B1	315.481	5	5.5
27	F4	44.915	0	8
28	F4	225.245	0	8
29	B1	283.042	5	5.5
30	F1	225.245	5	6
31	B1	283.042	5	5.5
32	B1	284.44	0	5
33	F1	44.915	5	6
34	B1	283.042	5	5.5
35	B1	283.042	5	5.5
36	B1	284.44	0	5
37	B1	283.042	5	5.5
38	B1	283.042	5	5.5
39	B1	284.44	0	5
40	B1	283.042	5	5.5
41	B1	283.042	5	5.5
42	B1	284.44	0	5
43	B1	283.042	5	5.5
44	B1	283.042	5	5.5
45	B1	284.44	0	5
46	F1	225.245	5	6
47	F1	44.915	5	6
48	F1	133.832	5	6
49	F1	44.915	5	6

8. Pole Specification

- All Pole Mount Luminaire to be mounted on 6m breakback poles for future maintenance
- Luminaire nr 15 on lighting design to be mounted on 10 breakback pole.



GENERIC DESIGN GUID

WIND LC

IMPORTAN

WIND REG

TERRAIN (

Mid:

Mid:

Mid:

Cd (Pole):

Cd (Fittings)

V_{reg} (ULT:

V_{25} (SERV:

M20 GRADE 4.6/5 GALVANISED NUTS
WITH M20 x 60 O.D. x 1mm LARGE SERIES FLA
WASHERS INSTALLED ABOVE AND BELOW BA

FULLY GROUT PACK UNDER BASE PLATE
USING CLASS 'A' SHRINKAGE COMPENSATED
CENTRIFUGAL GROUT (MINIMUM 15mm THICK)
PLACED IN ACCORDANCE WITH THE MANUFAC
SPECIFICATIONS.

FOUNDATION ALLOWABLE
BEARING CAPACITY MIN. 100 kPa

4 x M20 GRADE 4.6 J BOLTS
450mm LONG CAST 350mm INTO FOOTING
WITH TOP OF BOLTS EXTENDING 100mm
ABOVE TOP OF FOOTING

REINFT. CAGE 7 x 16 VERTICAL BARS
WITH PL LIGATURES AT 200 CTS VERTICALLY
45mm SIDE, TOP AND BOTTOM COVERS

9. Supplier details :

Luminaires :

Pieter Viviers <Pieter@tigerlight.com.au>

Sales Engineer / Lighting Designer

IESANZ Member Grade - MIES - ID: 3127

Mob: 0488 998 234

3/1 Distinction Road

Wangara WA 6065

Poles:

pault@poleindustries.com.au

Regards,

Paul Trezise



POLE INDUSTRIES

08 9331 4455 | 0427 775 666
17 Simper Road Yangebup WA 6163
poleindustries.com.au

10. Conclusion

All lighting requirements have been achieved within the parameters of relevant standards and proven satisfactory for all areas. Compliance achieved for all spill light parameters.

FW Strydom Mies Lighting Engineer

Registration number 2367

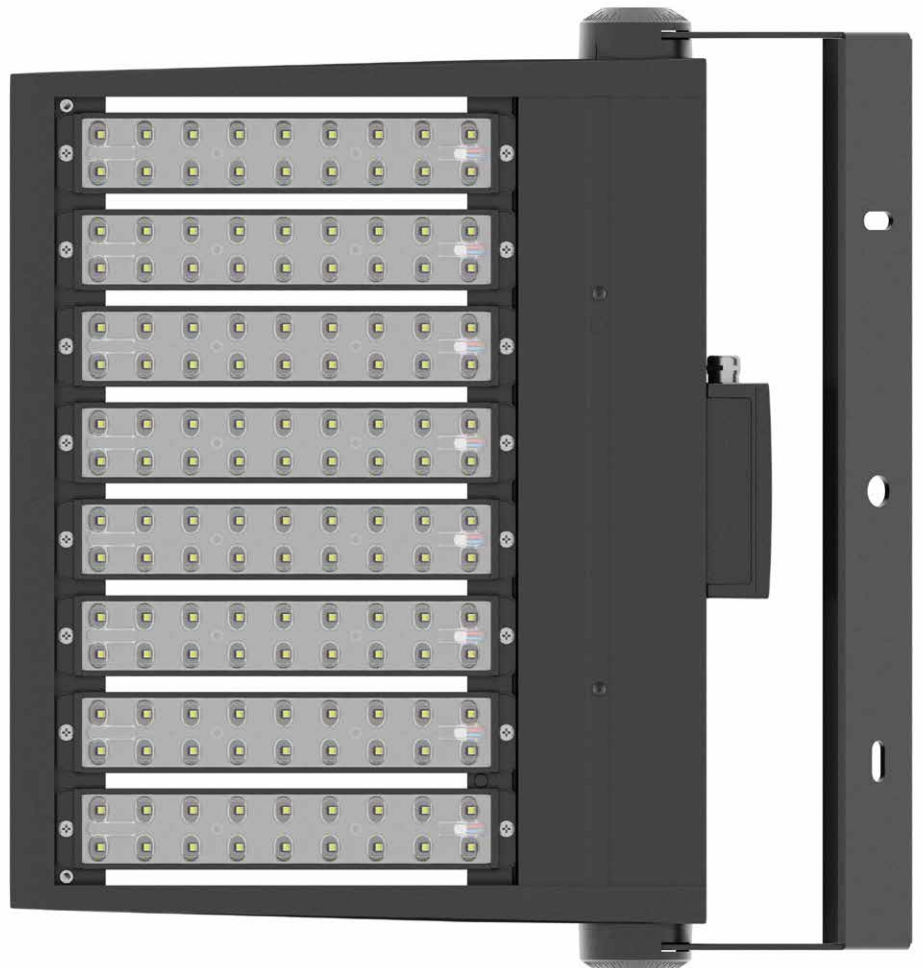


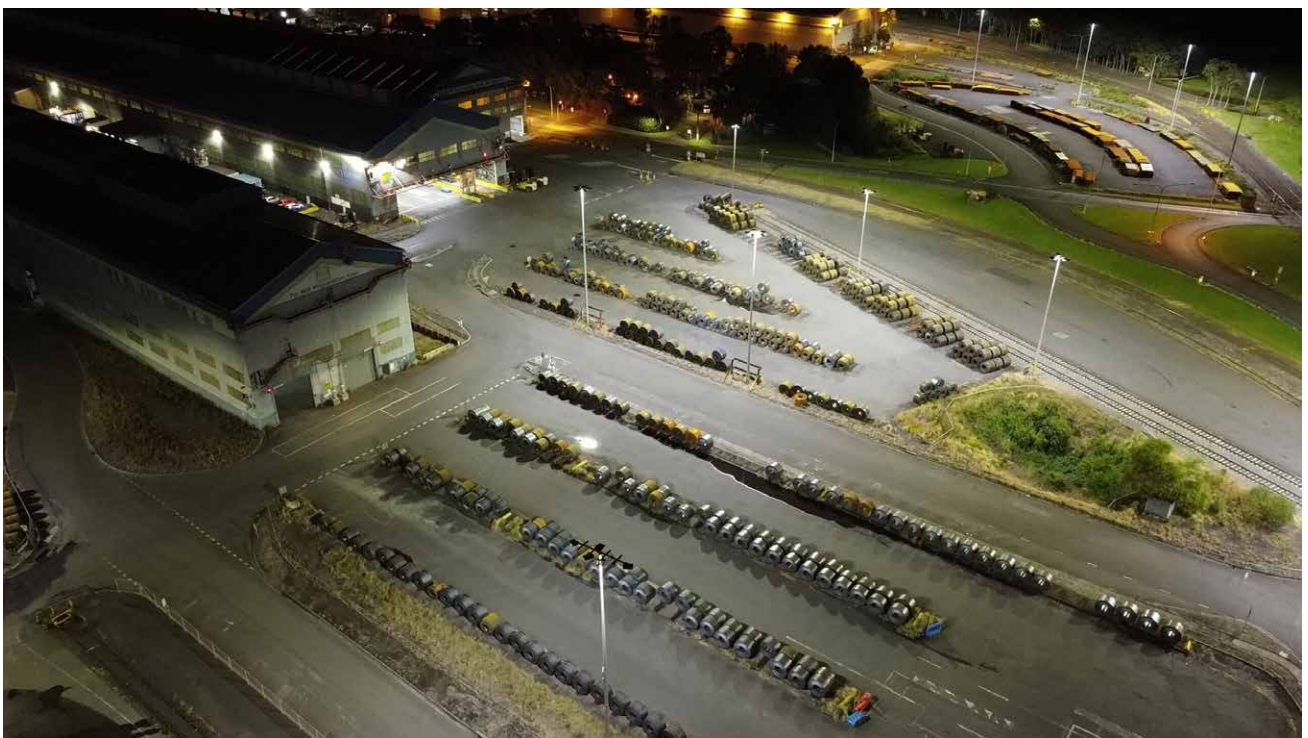
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HIGH-PERFORMANCE
INDUSTRIAL LIGHTING

MEGAFLOOD SERIES AREA LIGHTS 40W - 1200W

MEGA FLOOD







MODULAR DESIGN FOR SUPREME VERSATILITY

The MegaFlood range by Tigerlight is the most versatile lighting platform on the Australian market.

The modular platform enables an almost limitless array of options, which can be tailor-made to suit any particular application, anywhere, including: hardstands, ports, sporting precincts, mining, rail and carparks, as well as indoor applications.

OPTIONS

Output from 40W to 1200W

Voltage - 240VAC / 415 VAC / DC

Drivers - built-in or remote drivers

Lighting controls / Dimming

Optical lenses - 19 options including back-light control lenses

CCT - 5 options from Amber to 5000K

CRI - 3 options, from Ra >70 to >90

Mounting brackets - 4 options

Powdercoating colour options

MEGA



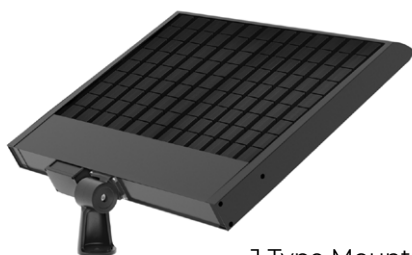
U Type Mounting



L Type Mounting



T Type Mounting



J Type Mounting

Optional
External Driver



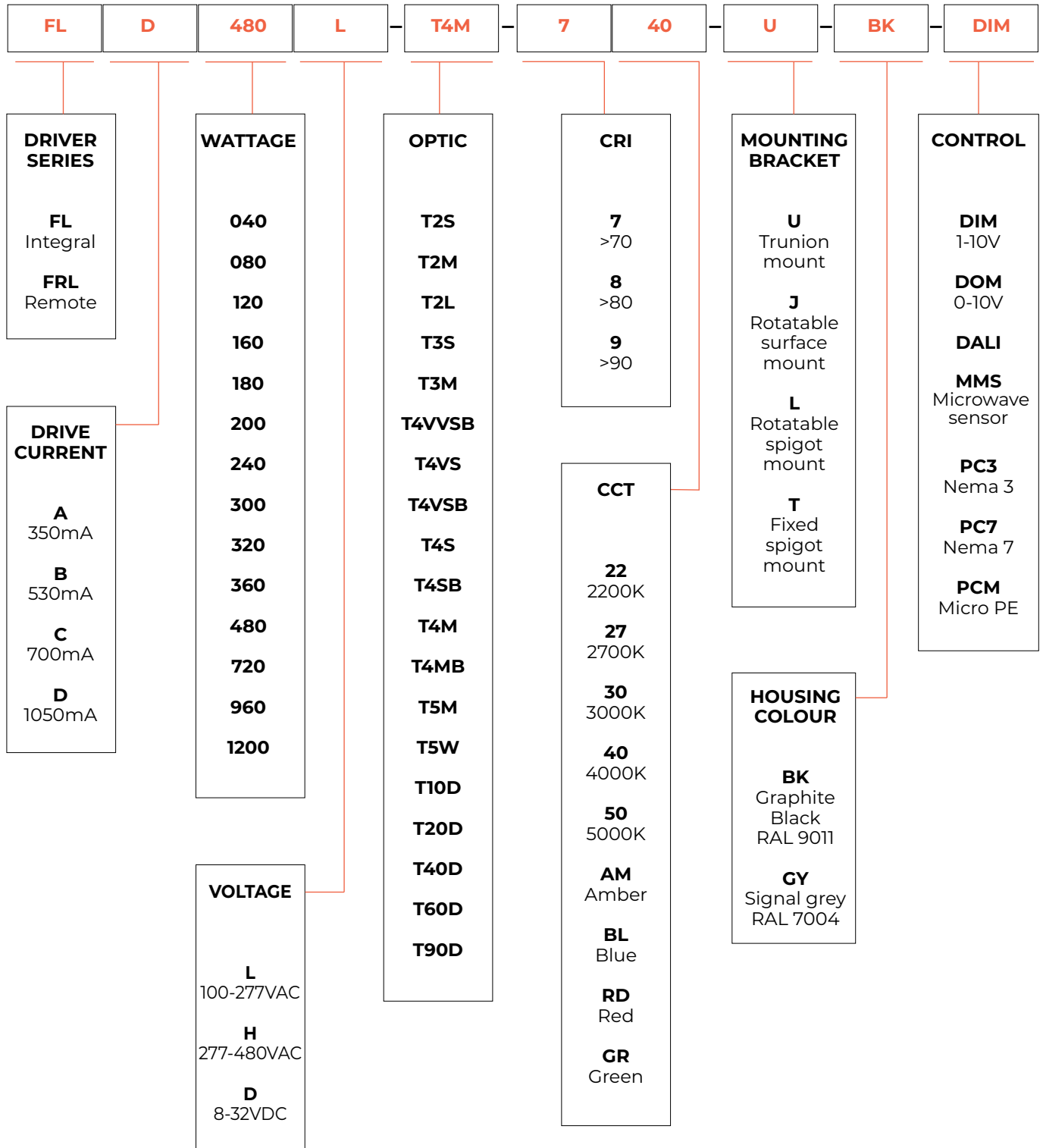


PERFORMANCE SUMMARY

Voltages	100-277VAC, 277-480VAC 50/60HZ. DC options
Power options	40W – 1200W
Drivers	Inventronics (EUM, SUM, ESM, SSM series)
Operating Temperatures	-40 to +50deg C
Efficacy	120 – 165lm/w
SDCM	MacAdam 5 (standard)
CCT	4000k (standard), 2200k, 2700, 3000k, 5000k
CRI options	Ra>70 (standard), Ra>80 , Ra>90
IK Rating	IK10
IP Rating	IP66
Power factor	>0.95 at full load
Surge Protection	I _{max} 20KA
L70B10 / L90B10	>200,000hrs. / >60,000hrs
Control Options	1-10V, 0-10VDC, DALI, NEMA 3 / 7, Motion Sensor
Housing	Die Cast Aluminium
Surface Treatment	Polyester Powdercoat min 100µm thickness
Housing colour	Black RAL 9011, Grey RAL 7004, custom on request
Junction box cable entry	40-360W - M20 gland (8-12mm cable diameter) 480-1200W - M25 gland (14-18mm cable diameter)
Certification	SAA, CE, CB
Warranty	5 years



MODEL NUMBER SYSTEM



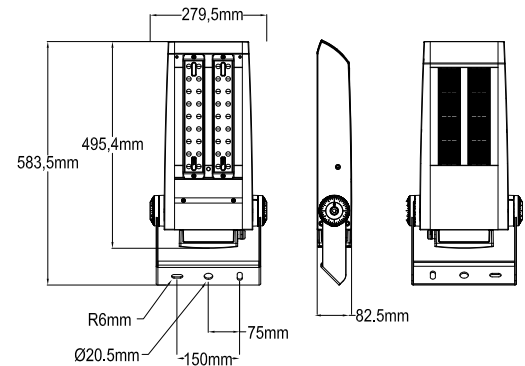
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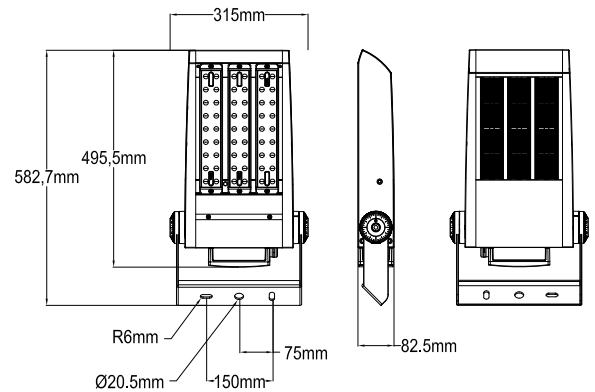
INTEGRATED DRIVER MODELS



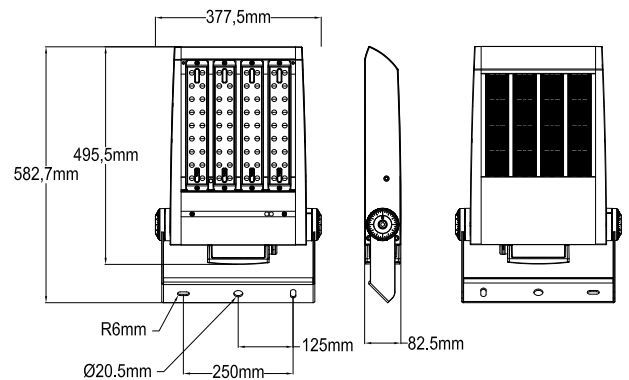
Model	FLA040	FLC080	FLD120
Typ lumens	6200	11050	14900
Current draw, A @240VAC	0.16	0.32	0.48
LCP, W	38	77	115
Modules	2	2	2
Weight, kg	6.0	6.0	6.1
Dimensions	583x278x82mm		



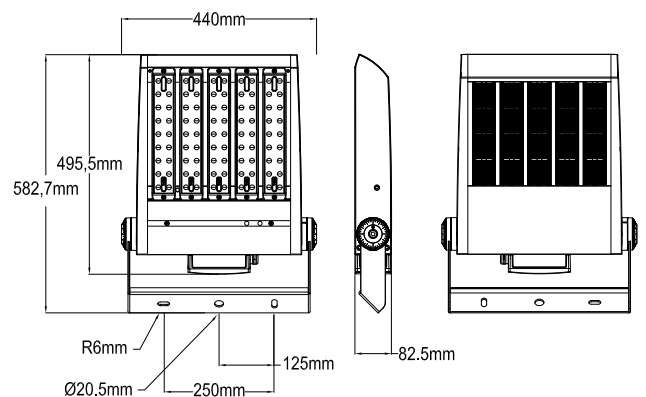
Model	FLC120	FLD180
Typ lumens	16600	22600
Current draw, A @240VAC	0.48	0.73
LCP, W	116	176
Modules	3	3
Weight, kg	6.9	7.1
Dimensions	583x315x82mm	



Model	FLC160	FLD240
Typ lumens	22145	32843
Current draw, A @240VAC	0.63	0.93
LCP, W	152	223
Modules	4	4
Weight, kg	7.9	8.1
Dimensions	583x378x82mm	

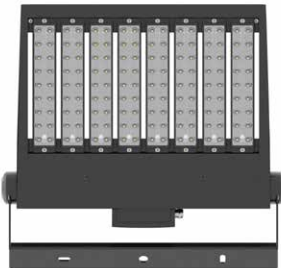
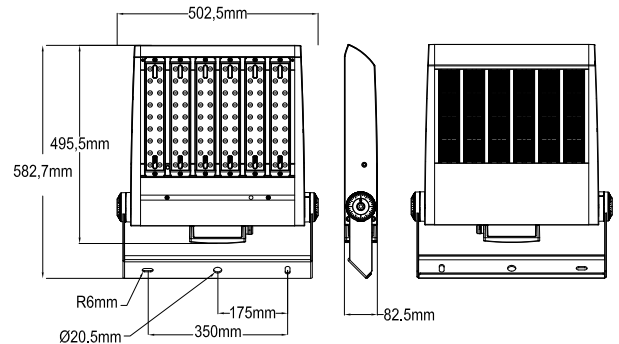


Model	FLC200	FLD300
Typ lumens	27500	37050
Current draw, A @240VAC	0.77	1.20
LCP, W	152	287
Modules	5	5
Weight, kg	8.9	9.6
Dimensions	583x440x82mm	

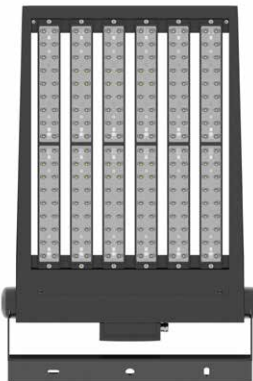
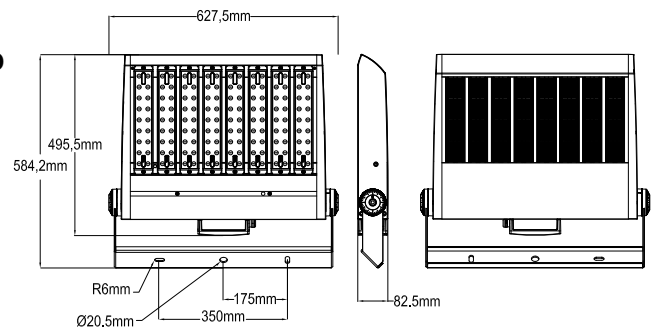




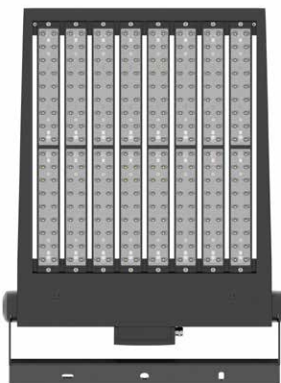
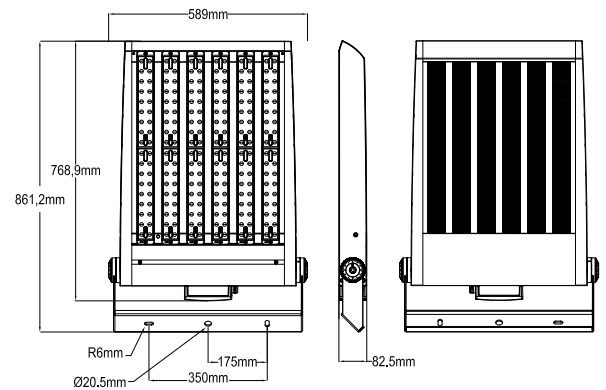
Model	FLC240	FLD360
Typ lumens	32843	44050
Current draw, A @240VAC	0.93	1.43
LCP, W	223	342
Modules	6	6
Weight, kg	10.2	10.9
Dimensions	583x502x82mm	



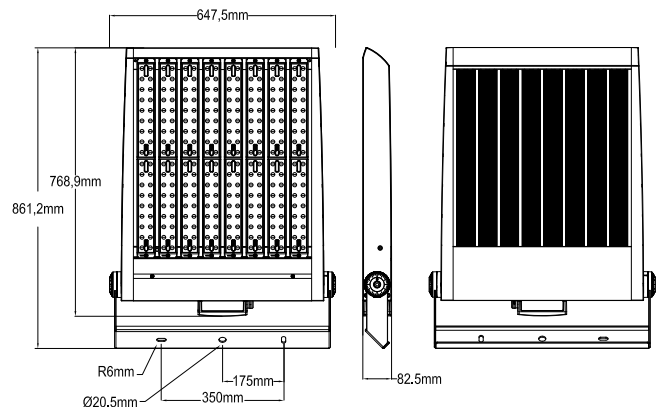
Model	FLC320	FLD480
Typ lumens	44170	60050
Current draw, A @240VAC	1.26	1.91
LCP, W	302	458
Modules	8	8
Weight, kg	12.7	13.0
Dimensions	584x627x82mm	



Model	FLD720
Typ lumens	89000
Current draw, A @240VAC	2.87
LCP, W	689
Modules	12
Weight, kg	17.4
Dimensions	861x589x82mm

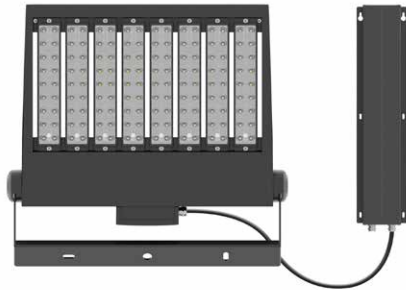


Model	FLD960
Typ lumens	118000
Current draw, A @240VAC	3.82
LCP, W	916
Modules	16
Weight, kg	19.9
Dimensions	861x647x82mm





REMOTE DRIVER MODELS



Model

Typ lumens

Current draw,
A @240VAC

LCP, W

Modules

Dimensions

Driver dimensions

FRLD480

60050

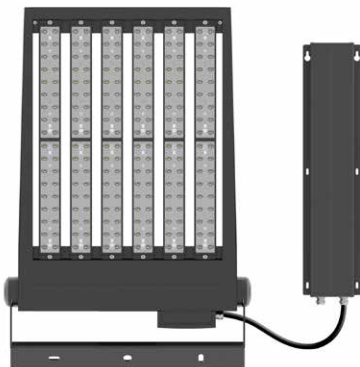
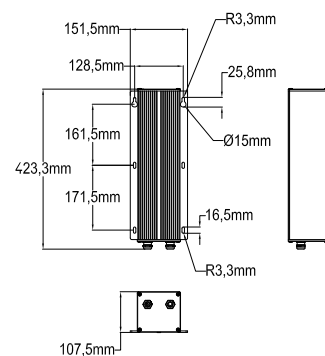
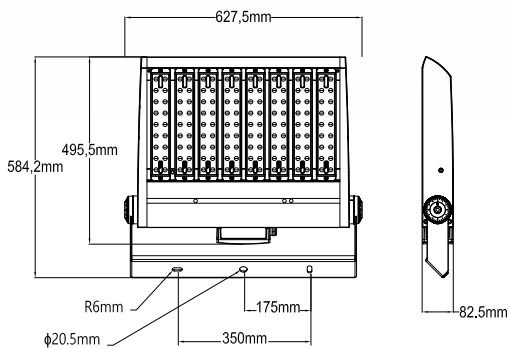
1.91

458

8

584x627x82mm. Weight 10.4kg

423x152x167mm. Weight 4.5kg.



Model

Typ lumens

Current draw,
A @240VAC

LCP, W

Modules

Dimensions

Driver dimensions

FRLD720

89000

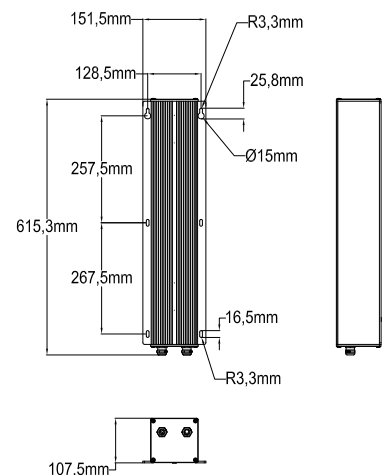
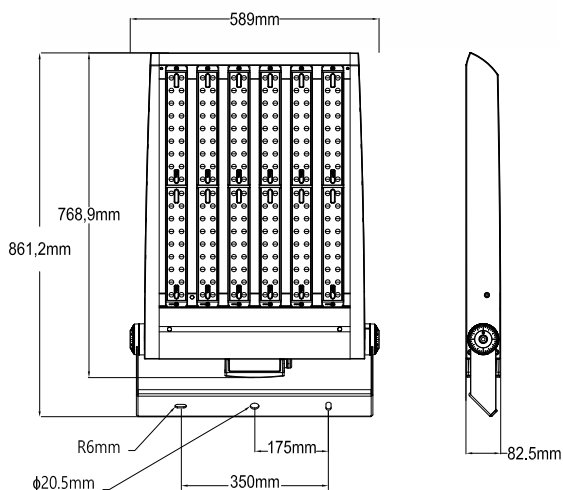
2.87

689

12

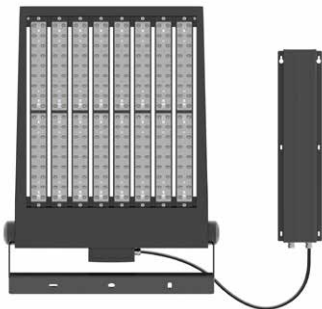
861x589x82mm. Weight 14.6kg

615x152x108mm. Weight 6.1kg.





REMOTE DRIVER MODELS



Model

FRLD960

Typ lumens

118000

Current draw,
A @240VAC

3.82

LCP, W

916

Modules

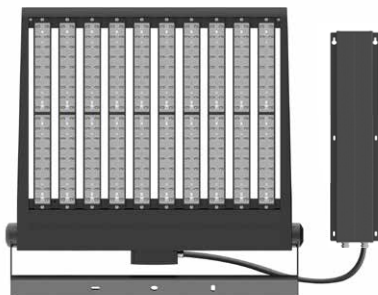
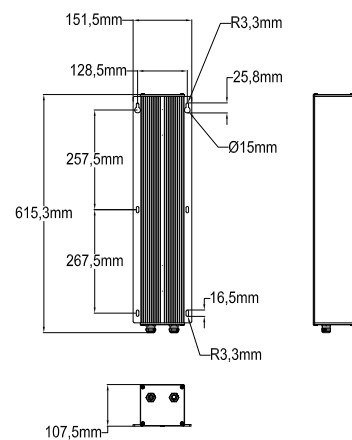
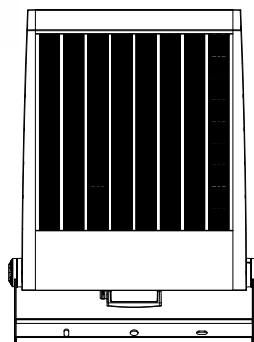
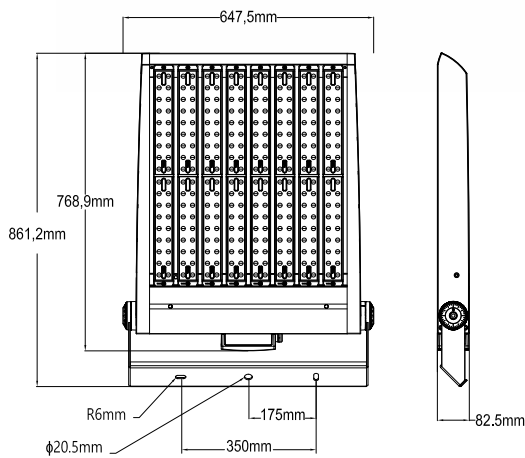
16

Dimensions

861x648x82mm. Weight 17.4kg

Driver dimensions

615x152x108mm. Weight 6.1kg



Model

FRLD1200

Typ lumens

175100

Current draw,
A @240VAC

4.77

LCP, W

1144

Modules

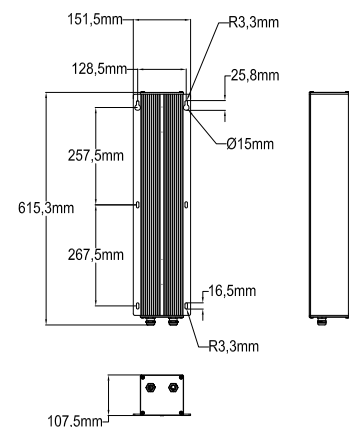
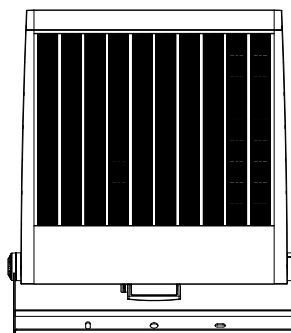
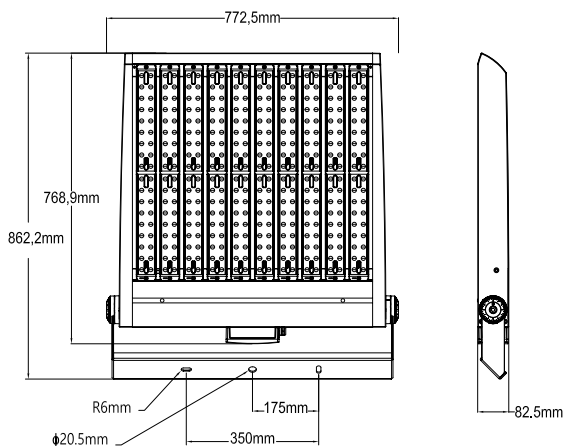
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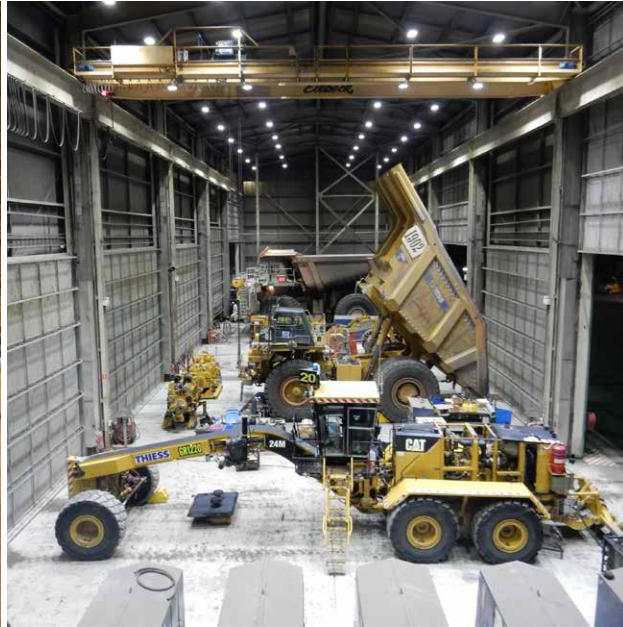
Dimensions

862x772x82mm. Weight 20.5kg

Driver dimensions

615x152x108mm. Weight 7.1kg.



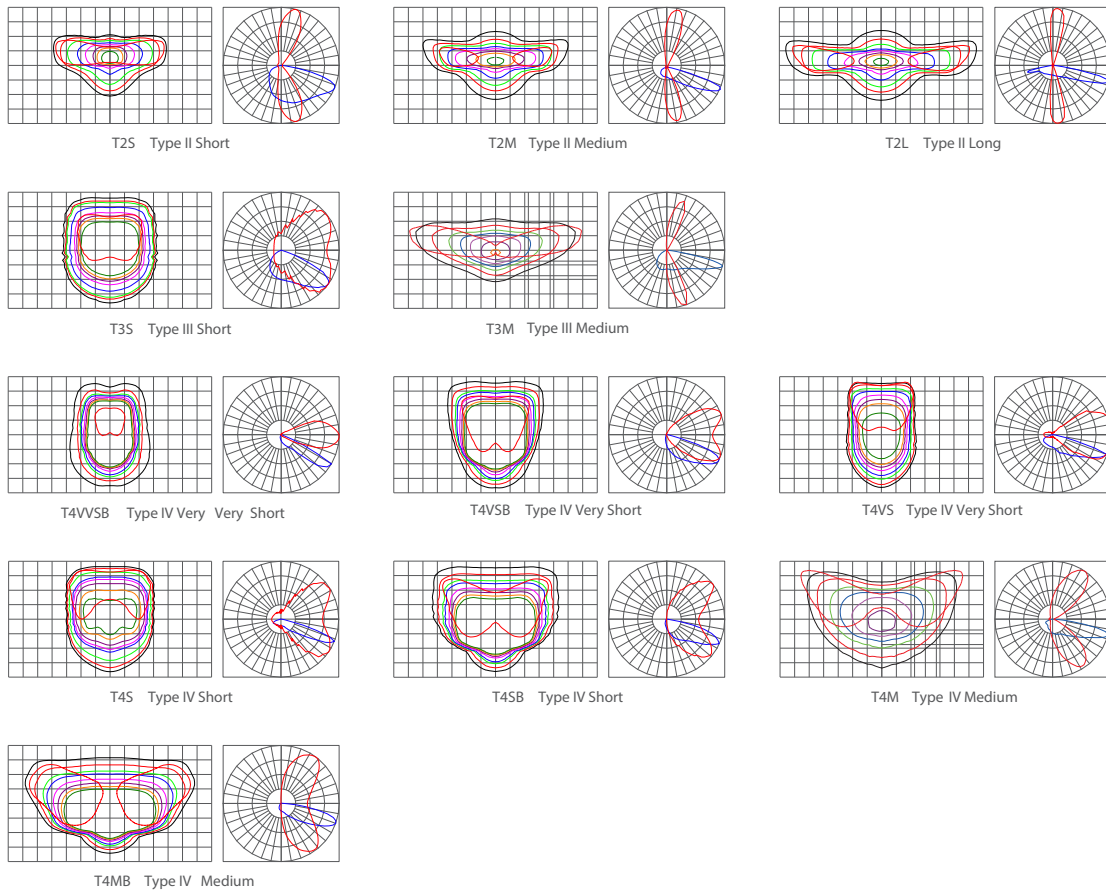




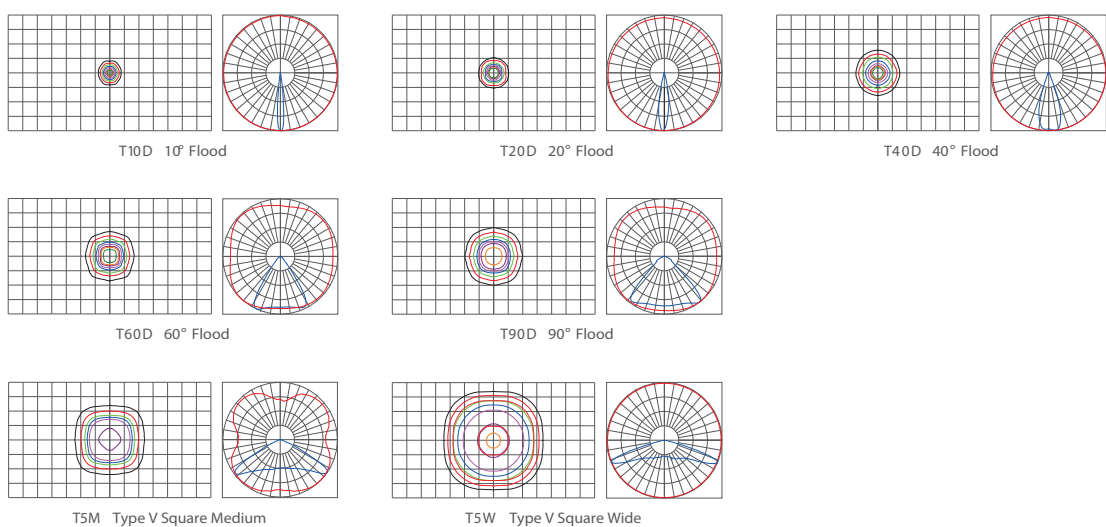
PHOTOMETRICS

Optical lensing options include 7 Symmetric and 12 Asymmetric lenses including back-light control options, to enable compliance with Australian Standard AS4282 Obtrusive Lighting.

ASYMMETRIC



SYMMETRIC



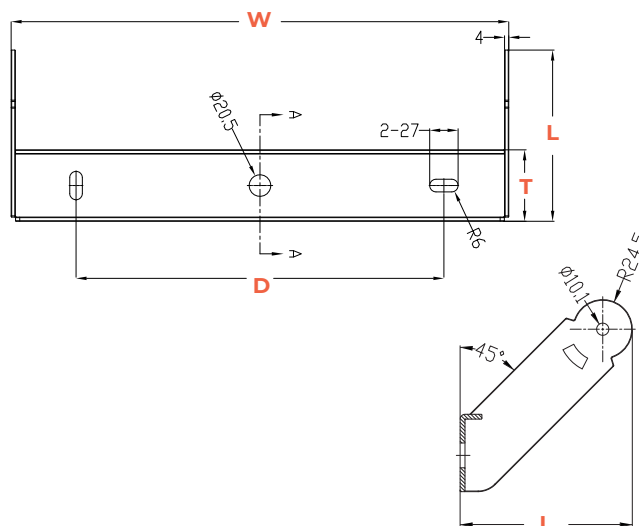
MOUNTING BRACKETS



Scan the QR code for a video animation on bracket usage and assembly



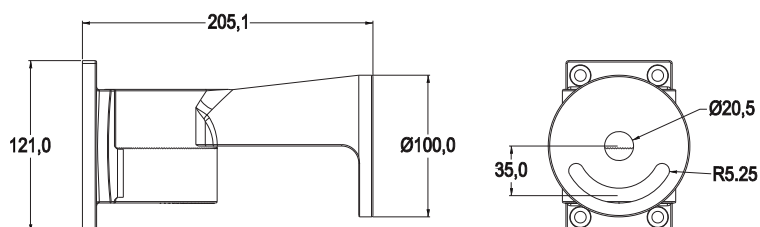
U Bracket - Trunion mount



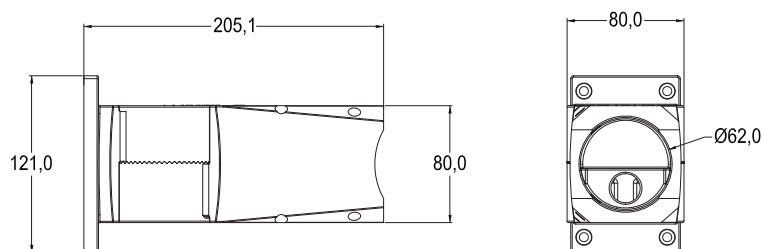
MODEL	W	L	T	D
FLA040 & FLC080	250	159	64	150
FLC120 / FLD180	286	159	64	150
FLC160 & FLD240	348	159	64	250
FLC200 / FLD300	411	159	64	250
FLC240 & FLD360	473	163	68	350
FLC320 & FLD480	598	163	68	350
FLD720	560	168	76	350
FLD960	618	168	76	350

Refer pages 6&7 for individual bracket line drawings for each model.

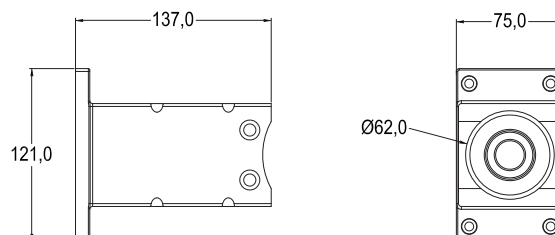
J Bracket - Rotatable surface mount



L Bracket - Rotatable spigot mount



T Bracket - Fixed spigot mount





SIMPLIFIED INSTALLATION



2.5 degree graduations on U-Bracket (trunion mount) for precision in setting tilt angles.



Terminal block showing simple DC wiring for dimming via Wago connectors.



Optional through-wiring via junction box to daisy chain the luminaires.

HOUSING COLOUR OPTIONS



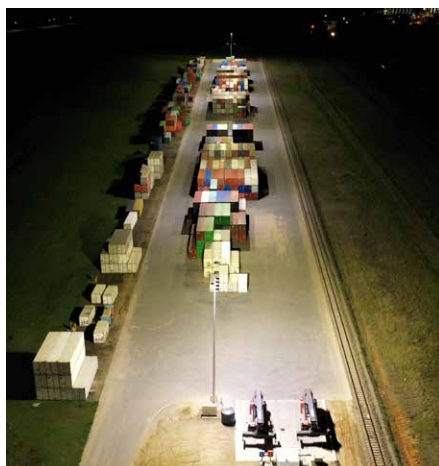
RAL 9011 Graphite Black

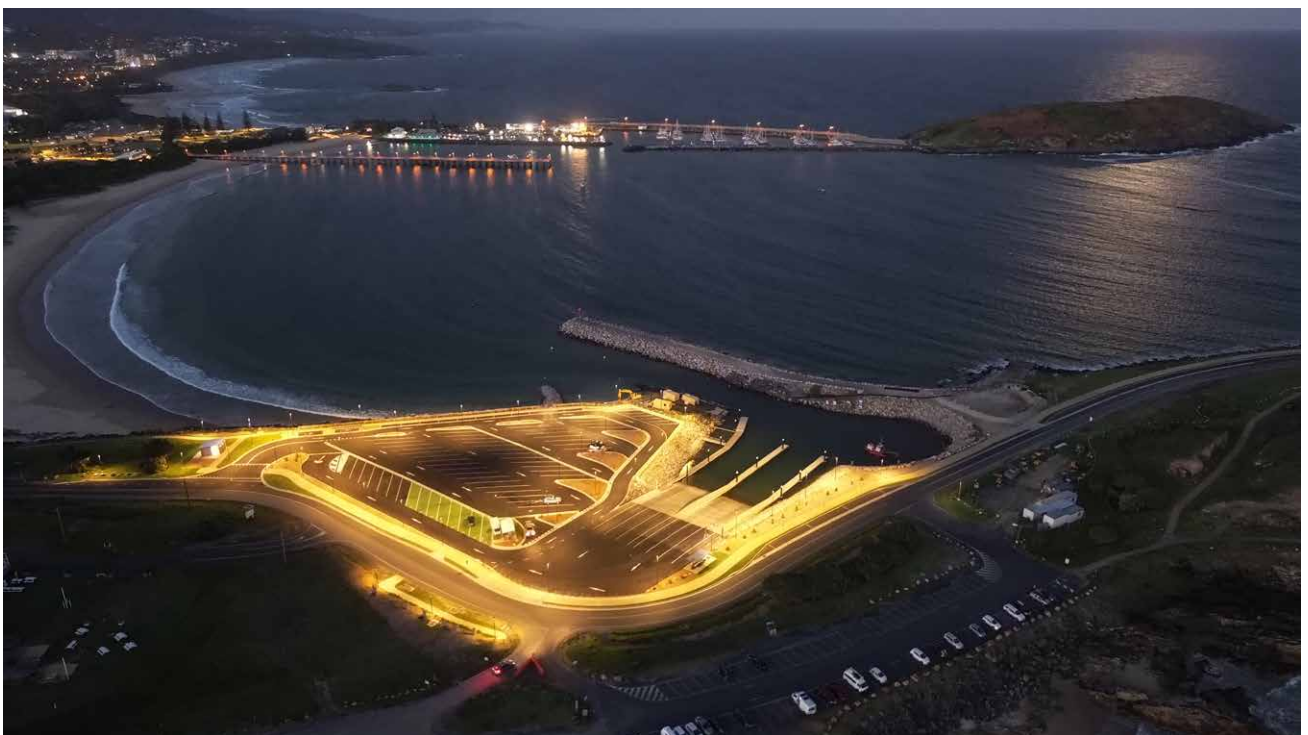


RAL 7004 Signal Grey



White and other RAL colours available on request

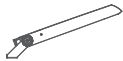
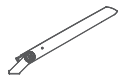




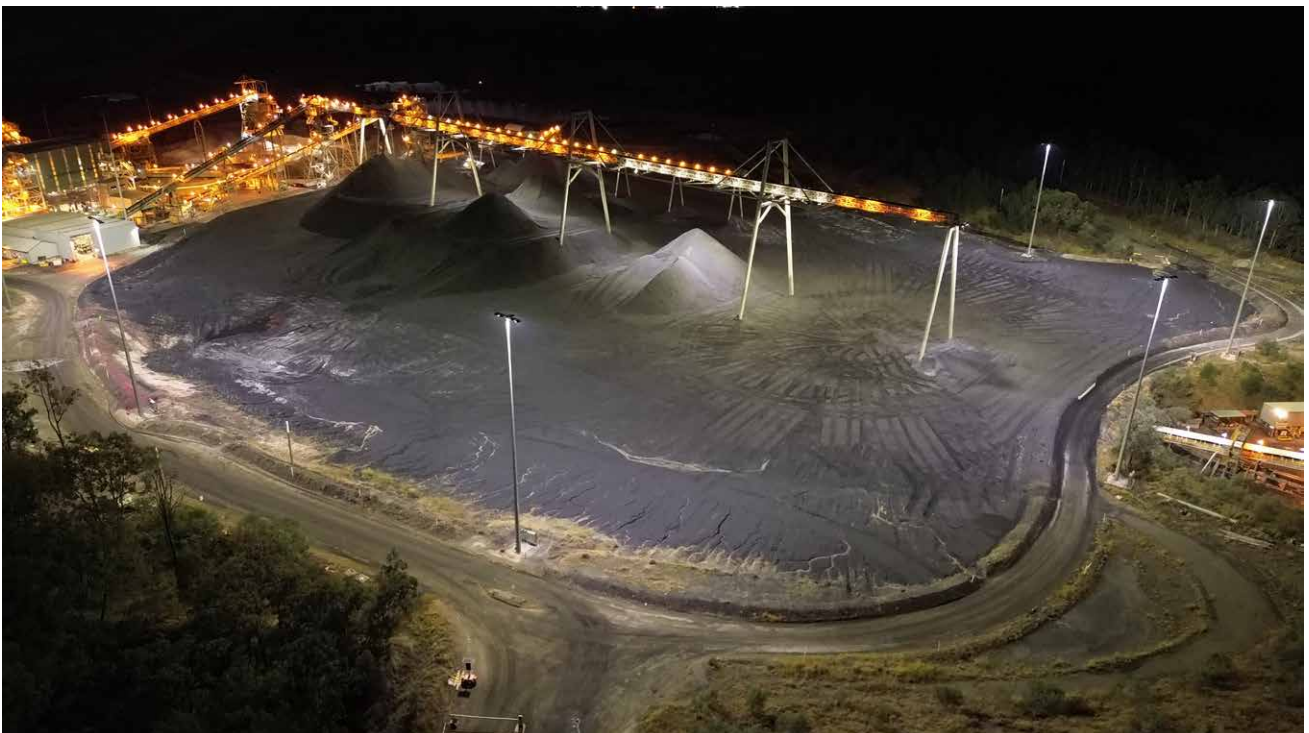


LUMINAIRE EPA



	0° TILT	10° TILT	20° TILT	30° TILT	45° TILT
					
FLA040 / FLC080 / FLD120	0.051	0.058	0.066	0.073	0.082
FLC120 / FLD180	0.052	0.061	0.070	0.078	0.087
FLC160 / FLD240	0.054	0.066	0.077	0.089	0.101
FLC200 / FLD300	0.059	0.074	0.089	0.104	0.119
FLC240 / FLD360	0.060	0.079	0.097	0.115	0.134
FLC320 / FLD480	0.067	0.092	0.117	0.141	0.166
FLD720	0.084	0.119	0.153	0.189	0.223
FLD960	0.089	0.136	0.182	0.229	0.276
FRLD1200	0.093	0.154	0.210	0.268	0.330

EPA measurements shown for U bracket, in m².



MEGA
FLOOD



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HIGH-PERFORMANCE
INDUSTRIAL LIGHTING

SILVERBACK IK10 IP66 BATTEN & INTEGRATED EMERGENCY





SUPER-STRONG IK10 BATTEN FOR DEMANDING CONDITIONS

Sleek in design and super-strong in construction

IK10 and IP66 for extra heavy duty applications

600mm 20W 3000 lm - 1200mm 40W 6400 lm, ~160 lm/W efficacy

Integrated Emergency - 1200mm 40W 6000 lm; 5W 637 lm in Emergency mode

Installer-friendly, rapid connect design. Linkable.

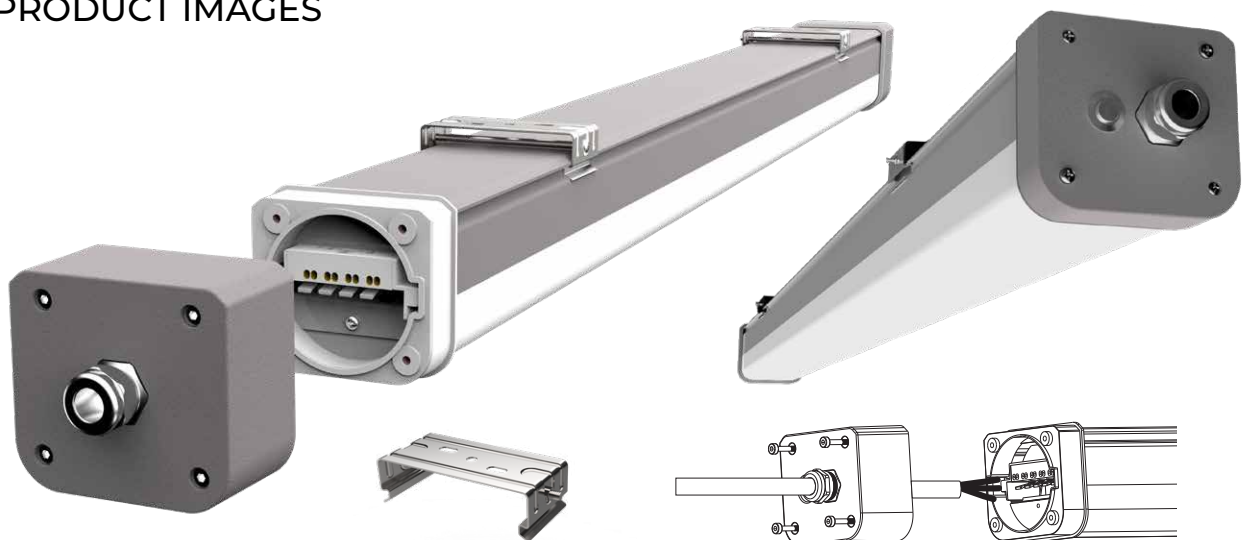
APPLICATIONS

For use in internal or external applications, where high a higher level of protection against water, particles, pressure and impact is required.

Modern hi-tech design makes it suitable to be installed in public and private spaces.

Manufacturing, warehouses & logistics, offices, car parks, service areas, tunnels, transport and security.

PRODUCT IMAGES



PRODUCT INTRODUCTION VIDEO



◀ Scan the QR code to view a brief introductory video on the SilverBack batten.

QUICK-CONNECT SYSTEM

Quick-connect terminal block is situated at the end of the batten for easy access and fast trouble-free installation.

Linkable - Comes with M20 cable glands at both ends for simple linkage.



PERFORMANCE OVERVIEW

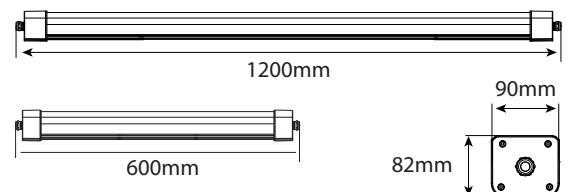
BATTEN SIZE	600mm	1200mm
Wattage	20W	40W
Lumen output	3000lm	6400 lm
Product code (Std)	PESB060040K	PESB120040K
(Emergency)	n/a	PESB120040K-EM
Voltage / PF / THD	220-240VA, 50/60Hz / >0.9 / <20%	
Efficacy	Standard ~160 lm/W, Emergency ~150 lm/W	
CCT / CRI	4000K / RA>80	
SCDM	<3	
Light distribution	120 degrees	
IK / IP Rating	IK10 / IP66	
Operating Temp	-20 to +40°C (0 to +40°C Emergency)	
Service life	>50,000hrs	
Diffuser	Polycarbonate	
Housing	Cast aluminium, RAL7035 grey	
Fixings	Nickel-plated brass M20 cable glands.	
Dimensions	82Wx90Hx600/1200mmL	
Weight	1.25kg (600mm) 2.1kg (1200mm)	
Mounting	Stainless ceiling-mount brackets supplied	
Cable Entry	Suits 2.5mm ² cable	
Linkability	Via cable entry both ends	
Certification	SAA, RCM 	
Warranty	3 years.	



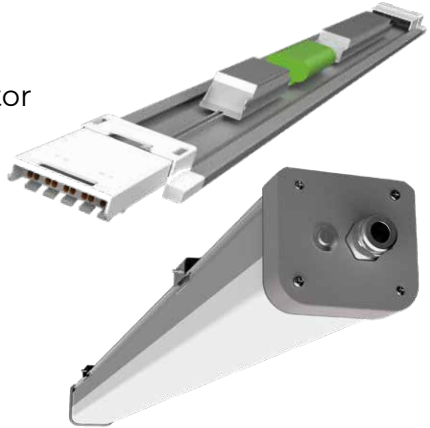
Report No. R2DG180928054-10-M1

TM-21 Projection:

Test Duration:	10000 hours
Failures Observed:	0
α:	2.042E-06
β:	1.006
Reported L₇₀:	>60000 hours
Reported L₉₀:	55000 hours



INTEGRATED MAINTAINED EMERGENCY SPECIFICATIONS

Emergency Type	Maintained	
Emergency Wattage	5W	
Emergency Lumen	637lm	
Testing System	Self test via button with LED indicator	
Operating Temp	0-40deg C	
Weight	2.4kg	
Battery	LiFePO4	
Battery Voltage	6.4V	
Battery Capacity	3000ma (19.2wh)	
Classification	C0: D100 C90: D50	
Certification	AS2293.3 & IEC60598-2-22	



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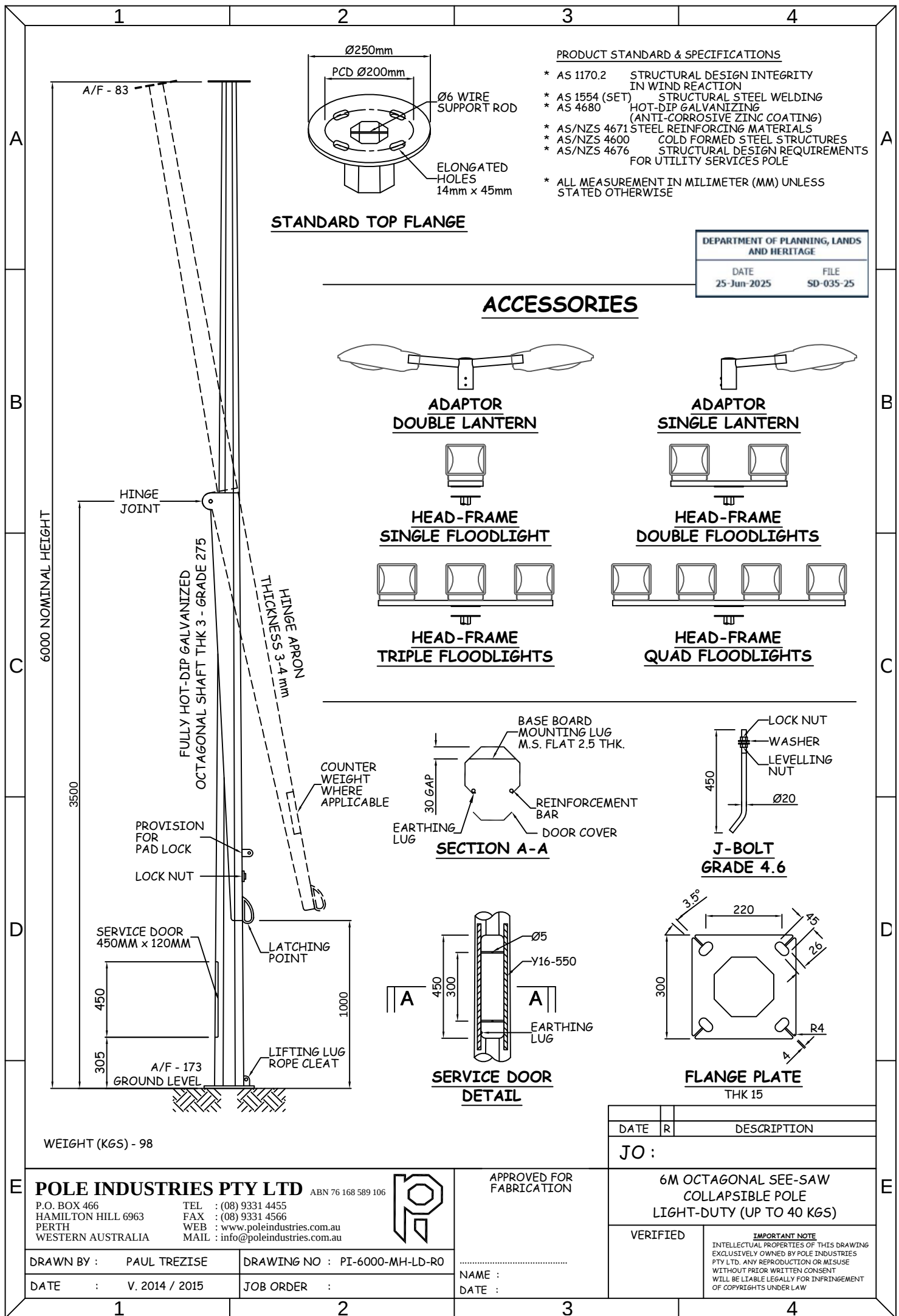
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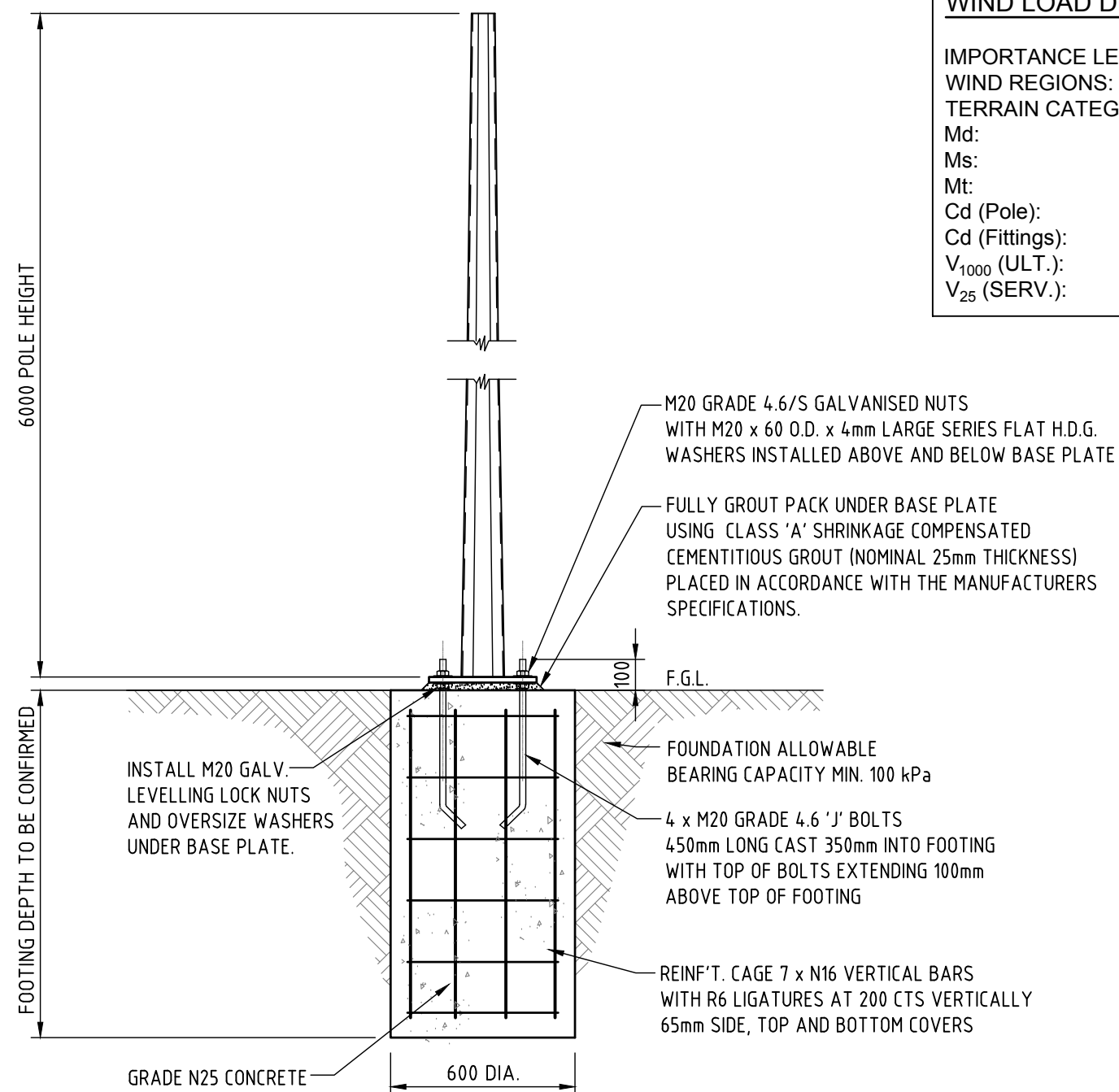
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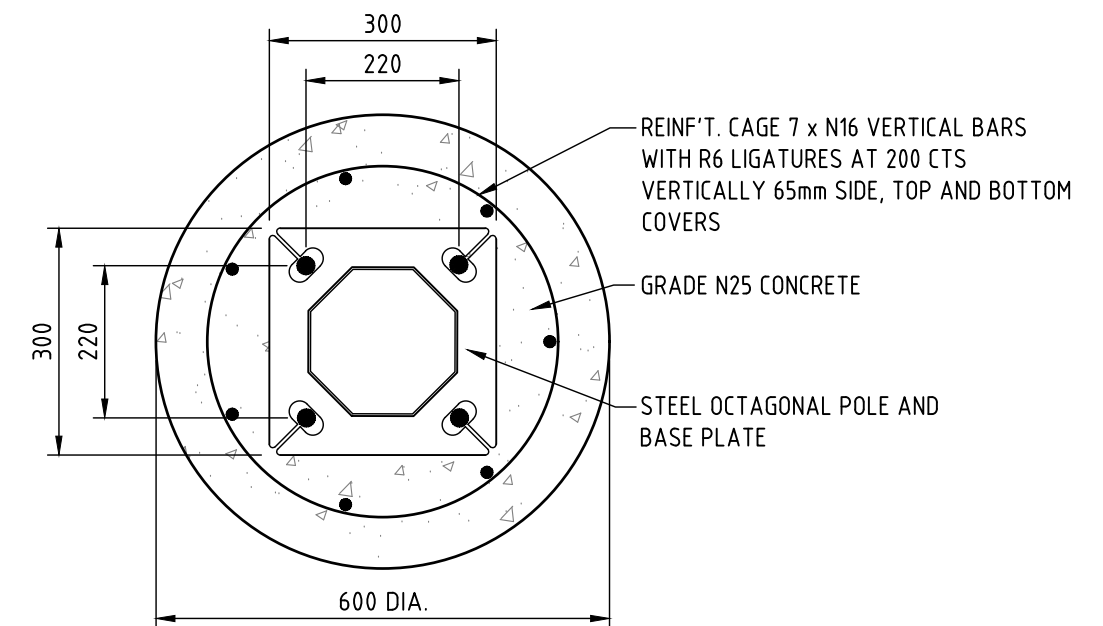


GENERIC DESIGN GUIDE ONLY - NOT FOR CONSTRUCTION

IMPORTANCE LEVEL:	3
WIND REGIONS:	A1 & B
TERRAIN CATEGORY:	2
Md:	1
Ms:	1
Mt:	1
Cd (Pole):	1.4
Cd (Fittings):	1.2
V ₁₀₀₀ (ULT.):	60 m/s
V ₂₅ (SERV.):	39 m/s



SCALE 1:20



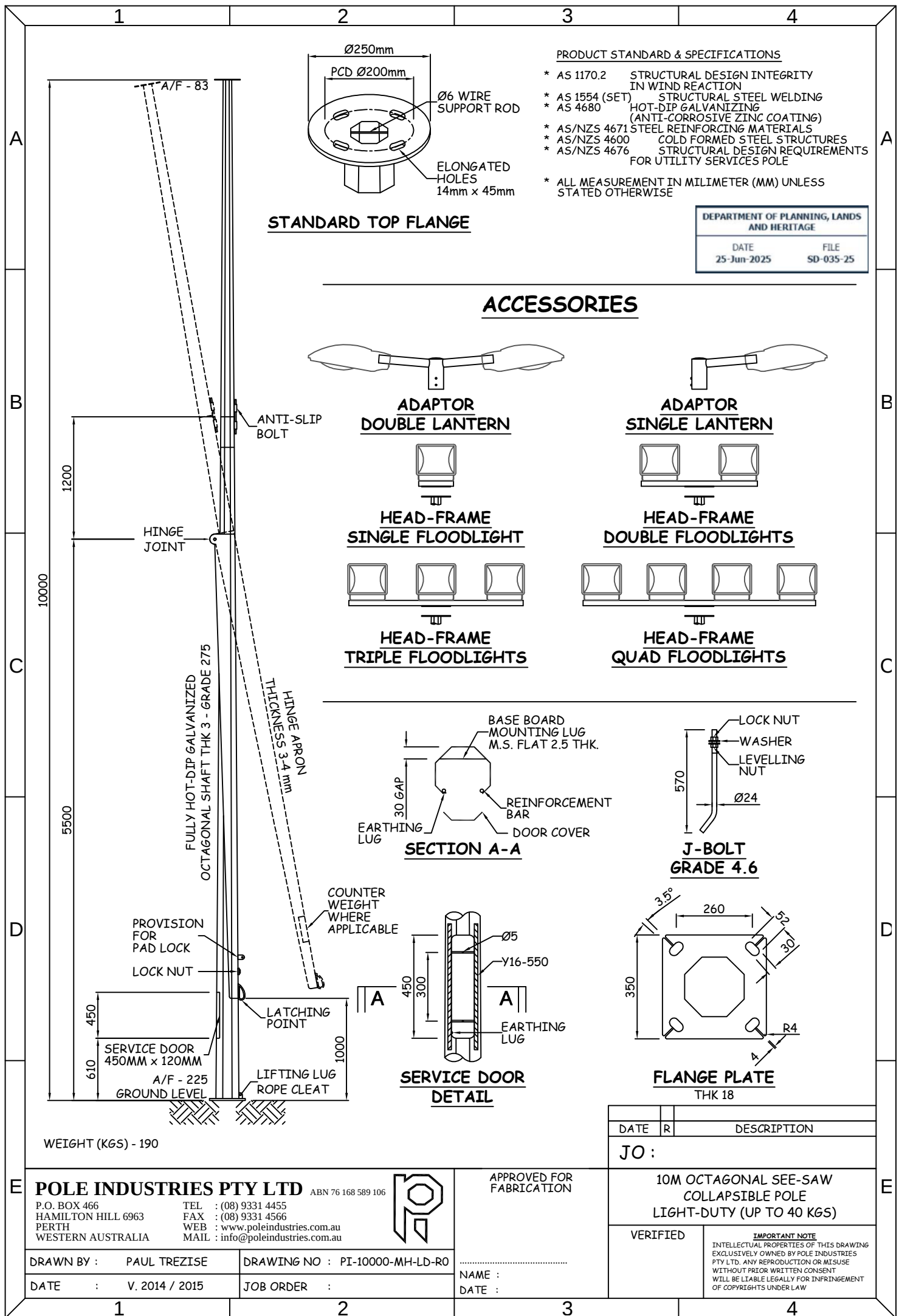
SCALE 1:10

					Project: GENERIC STRUCTURAL DESIGN GUIDE 6 METRE HIGH TAPERED OCTAGONAL LIGHT POLES STRUCTURAL FOOTING DETAILS							 RJL Engineering Services Civil & Structural Design & Drafting Phone: 0418 513 700 Email: rjldesign.rl@gmail.com ABN 22 437 456 019		
					Client: POLE INDUSTRIES									
					Scale at A3 size:		Date:	Checked:	Drawn:	JOB No.	SHEET			Rev:
					AS SHOWN		20-02-23	RH	RL	82023	S2			A
A					24-02-23	RL	Issued For Information & Estimating - Not for Construction					RH		
Revision					Date	Drawn	Description					Chkd		
DRAWING REVISION / ISSUE														

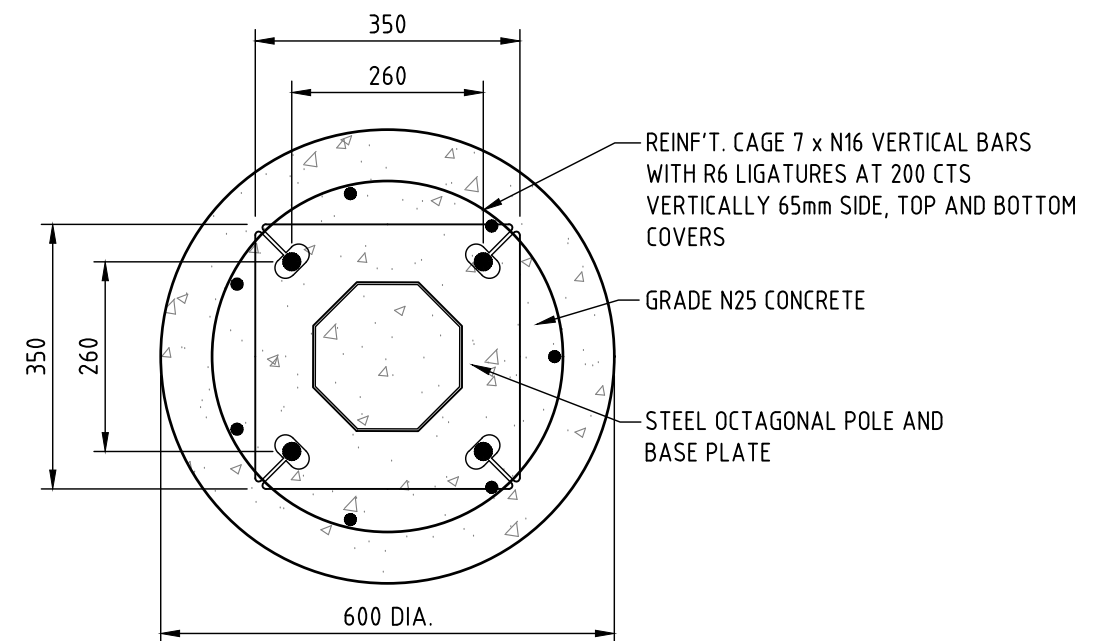
DEPARTMENT OF PLANNING, LANDS AND HERITAGE

FILE NO: 160-1933-25

DATE: 10/03/25



GENERIC DESIGN GUIDE ONLY - NOT FOR CONSTRUCTION



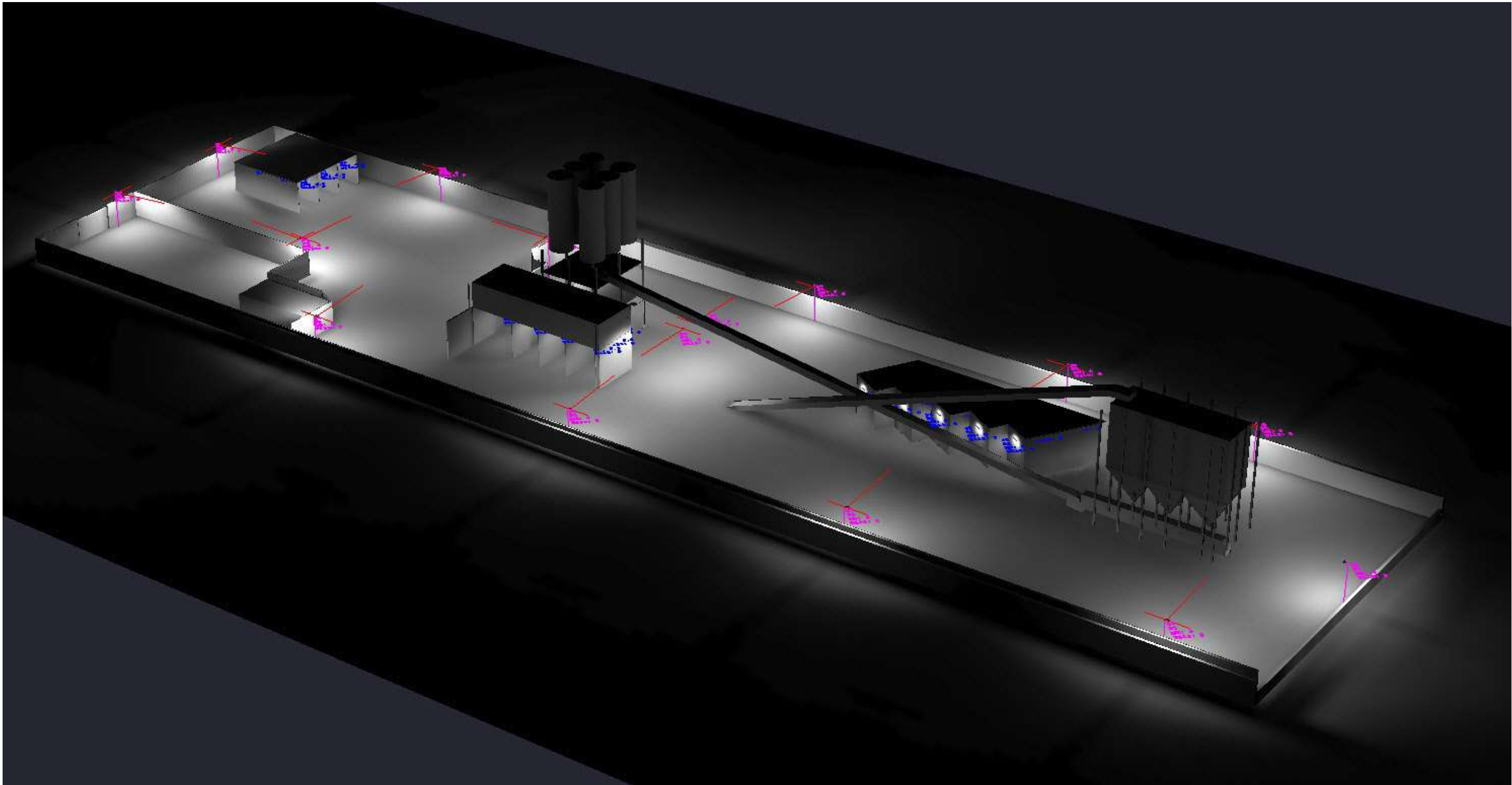
					Project: GENERIC STRUCTURAL DESIGN GUIDE 10 METRE HIGH TAPERED OCTAGONAL LIGHT POLES STRUCTURAL FOOTING DETAILS	 RJL Engineering Services Civil & Structural Design & Drafting Phone: 0418 513 700 Email: rjldesign.rl@gmail.com ABN 22 437 456 019						
A	24-02-23	RL	Issued For Information & Estimating - Not for Construction		RH	Client: POLE INDUSTRIES						
Revision	Date	Drawn	Description		Chkd	Scale at A3 size:	Date:	Checked:	Drawn:	JOB No.	SHEET	Rev:
DRAWING REVISION / ISSUE						AS SHOWN	20-02-23	RH	RL	82023	S4	A

PERTH LIGHTING CONSULTANTS PROJECT DESIGN CONTACT Eric Strydom Lighting Designer Mob: 0415774615 IESANZ Member Grade - MIES - ID: 3092 admin@plcdesigns.com.au		CLIENT	HOLCIM WELSHPOOL CONCRETE 03062025	PERTH LIGHTING CONSULTANTS WWW.PERTHLIGHTINGCONSULTANTS.COM	DESIGNER FWS	DATE 6/06/2025	PROJECT TITLE EXTERIOR LIGHTING DESIGN LUMINAIRE LAYOUT @ ILLUMINANCE CALCULATIONS	
VERIFIED BY	DATE	DISCLAIMER This calculation is based on specified parameters supplied by the customer, product manufacturer, other assumed design parameters as detailed in the relevant Australian Standards to this design. In practice, the accuracy of the values will differ due to environmental variations such as actual luminaire positioning, supply voltage, local luminaire ambient temperature, obstacles, etc. Thus, the results for these submitted designs we have assessed the tolerances and accuracies to be within 10% of photometric and 5% of main voltage fluctuations as in accordance with AS/NZS 3827.1:1996 & AS/NZS 3827.2:1996					CLIENT DRAWING NUMBER	SHEET Page 1 of 5

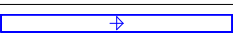


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DATE 25-Jun-2025	FILE SD-035-25

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				DATE		
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				REVISION 0	DATE		
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Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	2	F4	Single	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.900	64845	463.246	926.492
	1	F3	Back-Back	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.900	64845	463.246	926.492
	1	F2	2 @ 90 degrees	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.900	64845	463.246	926.492
	33	B1	Single	TIGERLIGHT PESB120040 39W LED 1200mm 4000K IK10 IP66 BATTEN	0.700	6013	38.49865	1270.455
	12	F1	Single	TIGERLIGHT FLD480-T4M-750 463W LED TYPE IV MEDIUM ASYM CRI70 5000K IP67	0.900	64845	463.246	5558.952

Calculation Summary						
Label	CalcType	Units	Avg	Min	Max/Avg	Max
GR_1	Illuminance	Lux	33.95	0.0	17.70	600.8
GR_1	Glare Rating	N.A.	10.05	10.0	1.59	16.0
LOADING BAYS 1	Illuminance	Lux	84.62	48.3	N.A.	108.4
LOADING BAYS 1	Illuminance	Lux	84.62	48.3	1.28	108.4
LOADING BAYS 1	Illuminance	Lux	84.62	48.3	1.28	108.4
LOADING BAYS 1	Illuminance	Lux	84.62	48.3	1.28	108.4
LOADING BAYS 1	Illuminance	Lux	84.62	48.3	1.28	108.4
LOADING BAYS 2	Illuminance	Lux	64.48	44.4	N.A.	87.8
LV PARKING	Illuminance	Lux	93.41	22.3	5.17	483.1
ObtrusiveLight Cohn Street_Cd_Seg1	Obtrusive - Cd	N.A.	519.58	178	N.A.	1593
ObtrusiveLight Cohn Street_Ill_Seg1	Obtrusive - Ill	Lux	0.42	0.1	N.A.	1.1
ObtrusiveLight_TI_1	Obtrusive - TI	%	0.06	0	N.A.	1
ObtrusiveLight_TI_2	Obtrusive - TI	%	0.00	0	N.A.	0
ObtrusiveLight_TI_3	Obtrusive - TI	%	0.00	0	N.A.	0
SITE LIGHTING	Illuminance	Lux	85.50	5.7	6.83	584.0

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DATE 25-Jun-2025	FILE SD-035-25

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Luminaire Location Summary				
LumNo	Label	Orient	Tilt	Z
1	B1	45.655	5	4.8
2	F1	316.47	5	6
3	B1	45.655	5	4.8
4	B1	45.655	5	4.8
5	B1	45.655	5	4.8
6	B1	45.655	5	4.8
7	B1	45.655	5	4.8
8	B1	45.655	5	4.8
9	B1	45.655	5	4.8
10	B1	45.655	5	4.8
11	F1	225.245	5	6
12	F1	315.467	5	6
13	F1	225.245	5	6
14	F2	87.83	0	6
15	F3	135.957	0	10
16	B1	315.481	5	5.5
17	F1	44.915	5	6
18	F1	225.245	5	6
19	B1	315.481	5	5.5
20	B1	315.481	5	5.5
21	B1	315.481	5	5.5
22	B1	315.481	5	5.5
23	B1	315.481	5	5.5
24	B1	312.68	0	5
25	B1	315.481	5	5.5
26	B1	315.481	5	5.5
27	F4	44.915	0	8
28	F4	225.245	0	8
29	B1	283.042	5	5.5
30	F1	225.245	5	6
31	B1	283.042	5	5.5
32	B1	284.44	0	5
33	F1	44.915	5	6
34	B1	283.042	5	5.5
35	B1	283.042	5	5.5
36	B1	284.44	0	5
37	B1	283.042	5	5.5
38	B1	283.042	5	5.5
39	B1	284.44	0	5
40	B1	283.042	5	5.5
41	B1	283.042	5	5.5
42	B1	284.44	0	5
43	B1	283.042	5	5.5
44	B1	283.042	5	5.5
45	B1	284.44	0	5
46	F1	225.245	5	6
47	F1	44.915	5	6
48	F1	133.832	5	6
49	F1	44.915	5	6

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PERTH LIGHTING CONSULTANTS PROJECT DESIGN CONTACT Eric Strydom Lighting Designer Mob: 0415774615 IESANZ Member Grade - MIES - ID: 3092 admin@plcdesigns.com.au		CLIENT HOLCIM WELSHPOOL CONCRETE 03062025	PERTH LIGHTING CONSULTANTS WWW.PERTHLIGHTINGCONSULTANTS.COM	DESIGNER FWS	DATE 6/06/2025	PROJECT TITLE EXTERIOR LIGHTING DESIGN LUMINAIRE LAYOUT @ ILLUMINANCE CALCULATIONS		
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