Note: datasheets attached are for image and sizing.

1:6 Fill Batter grassed bank

bitumen sealed internal roads

3 x in-ground water tanks

Training 2

Store 1

Meeting 1

Store 2

Cleaner

Entry

Lobby 2

Reception

General Office

Zone Manager

Corridor 1

FIRE CONTROL CENTRE (FFL 424.20)

Female Change

Female WC

Access WC

Male WC

Male Change

Meals / Kitchen

Corridor 1

REGIONAL OFFICE

Manager

Quiet Room

Utility Room

Meeting Room

Lobby

Store / Compactus

Planning & Logistics

Quiet Room

IT Room

Store 3

Meeting 2

Light type C mounted on this wall

(OVERFLOW PARKING)

bitumen sealed internal roads

proposed fire hydrant booster assembly

trees to be removed

MRV – Medium Rigid Vehicle

Australian Standard Design 'Medium Ridgid Vehicle' turnpath produced using "AutoTrack"version 10.01 software by Savoy Computing.

concrete road surface area (25m x 16m) for truck manouvering

FUTURE BRIGADE STATION (FFL 425.10)

REGIONAL STORE

mesh enclosure

1.5m deep pallet racking

1.5m deep pallet racking

mesh enclosure

STORES SHED (FFL 424.60)

Stores

Clean Store

Access WC

PROPOSED SITE BOUNDARY 103.68m (existing fence line)

NATURAL FORMATION TRACK

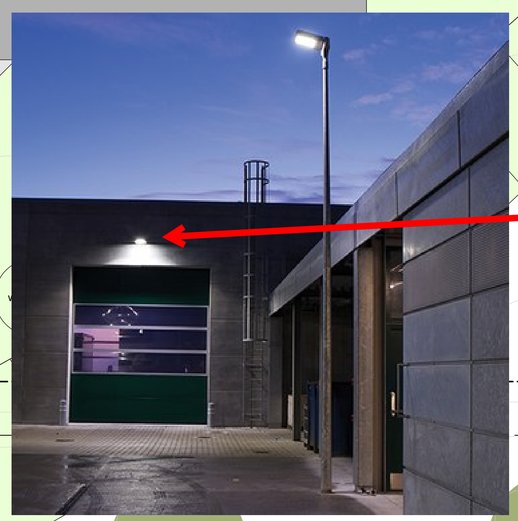
1:6 Cut Batter grassed bank

HOT FIRE TRAINING GROUND (slab RL 423.90)

bitumen sealed internal roads

MRV – Medium Rigid Vehicle

Australian Standard Design 'Medium Ridgid Vehicle' turnpath produced using "AutoTrack"version 10.01 software by Savoy Computing.



A	Thorn Weatherforce LED Batten or similar. Surface mount to ceiling on Night time sensor. (PE Cell)
B	Thorn Weatherforce LED Batten or similar. Surface mount to ceiling on local timer off button.
C	Thorn Polar LED Bulkhead or similar. Surface mount to wall on night time sensor. (PE Cell)
D	Thorn Olsys Area floodlight or similar (lower wattage). Surface mount to wall at high level on night time sensor. (PE Cell)
E	Thorn Olsys Area floodlight or similar (higher wattage). Horizontal mount to wall at roof/gutter line (with no tilt to limit glare) on night time sensor (PE Cell). See picture for example

0 1 3 5 10m

NO.	DATE	REVISION	NO.	DATE	REVISION
1	25.10.17	INITIAL LAYOUT FOR COMMENT	6	23.11.17	DA ISSUE
2	2.11.17	REVISED LAYOUT FOR COMMENT			
3	3.11.17	REVISED LAYOUT FOR COMMENT			
4	16.11.17	ISSUED FOR COMMENT			
5	21.11.17	ISSUED FOR COMMENT			

FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALING.

CHECK ALL DIMENSIONS ON SITE BEFORE FABRICATING ANY ITEM.

File name:RFS Harden Site Layout
Location: Z:\1717 RFS Harden Fire Control Centre\2. Drawings
Plotted: 29/11/2017 9:34:56 AM

HavenhandMather ARCHITECTSPLANNERS
127 Keppel Street (PO Box 208), Bathurst 2795
Tel 02-63317155 Fax 02-63322115
mail@havenhandmather.com.au
Architects Registration Board: 6799
Member Australian Institute of Architects

NSW GOVERNMENT PublicWorks Advisory

PROJECT:
SOUTH WEST SLOPES FIRE CONTROL CENTRE & REGIONAL OFFICE
BURLEY GRIFFIN WAY, HARDEN, NSW

DRAWING:
PART SITE PLAN
A1

JOB NO. 17/17

SCALE:	1: 200
DATE:	20.10.17
DRAWN:	VAP, CJG
CHECKED:	DFM
SHEET No:	A.02
REV.No:	6
NUMBER IN SET:	2 of 4

WeatherForce

96539545 WF LED 4800-840 L12 HF

LED 51W LED_4851	AS/NZS 60598		IP65			T_a25

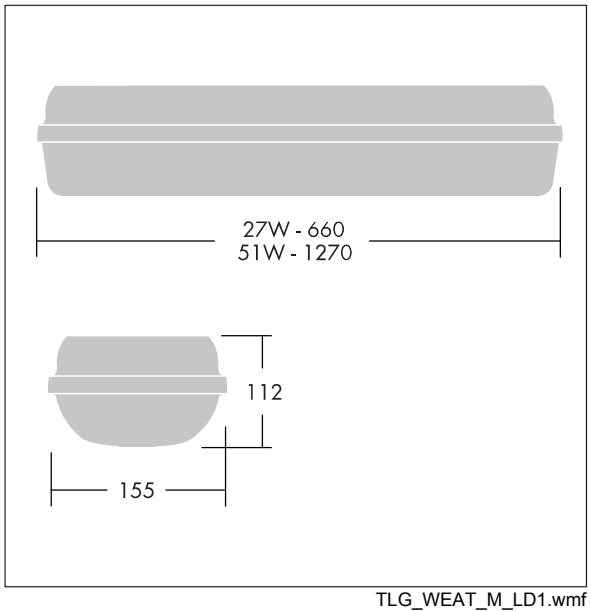
WeatherForce

A linear, water resistant LED luminaire, specifically designed for general outdoor applications. Electronic, fixed output control gear. Class I electrical, IP65. Body: light grey injection moulded polycarbonate. Diffuser: polycarbonate clear. Gear Tray: sheet steel, powder coated white. For surface or suspended mounting. Complete with 4000K LED.

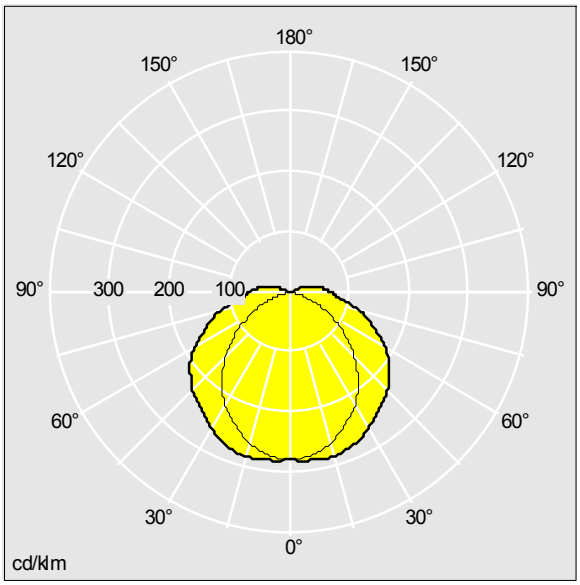
Dimensions: 1270 x 155 x 112 mm
Total power: 51 W

A B

TLG_WEAT_F_PDB.jpg



TLG_WEAT_M_LD1.wmf



TLAU_96539545.ldt

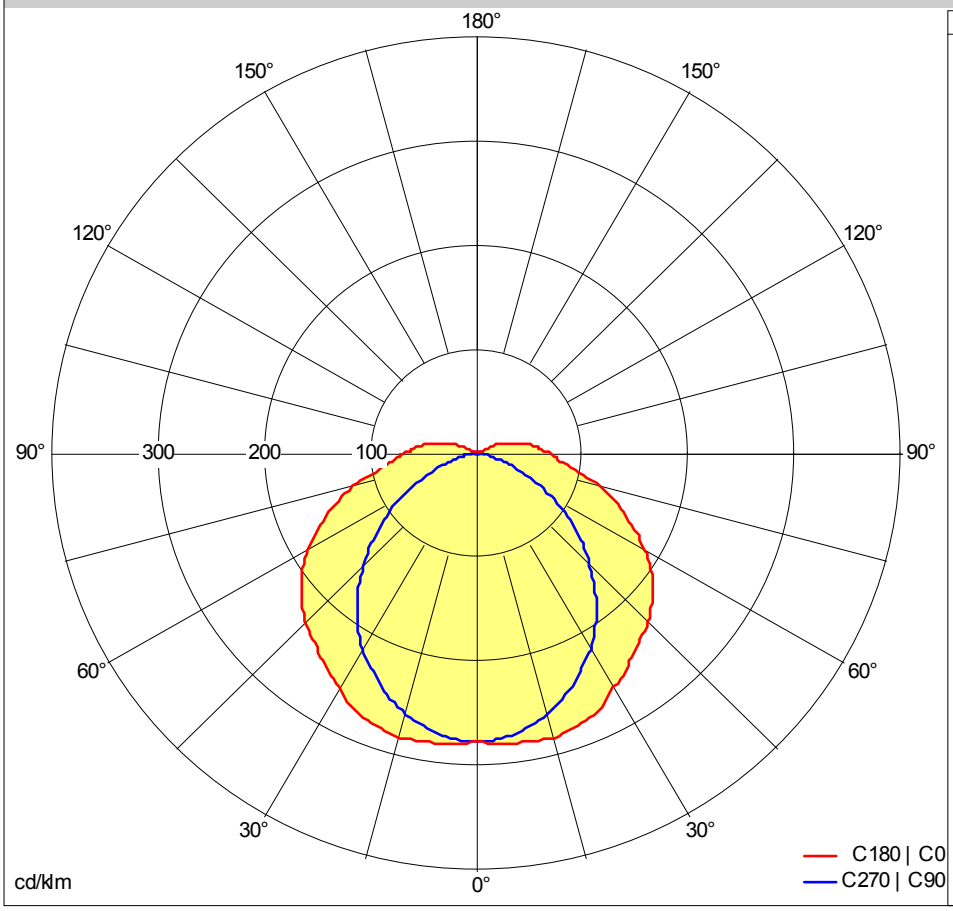
Lamp position: STD - standard
Light Source: LED
Luminaire luminous flux*: 4861 lm
Luminaire efficacy*: 95 lm/W
Lamp efficacy: 95 lm/W
LOR: 1,00 ULOR: 0,08 DLOR: 0,92

Correlated colour temperature*: 4000 Kelvin
Ballast: 1x HF_ Tridonic TalexxConverter LCI 030W 700mA
Luminaire input power*: 51 W
Dimming: TLD0
Maintenance category: E - Dust-proof IP5X

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated instances of technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connected load at ±10%. Colour temperature is subject to a tolerance of up to +/-150 Kelvin from the nominal value. Unless stated otherwise, the values apply to an ambient temperature of 25°C.
In most products the failure of one LED point causes no functional impairment to the lighting performance of the luminaire and is therefore no reason for complaint. Unless otherwise stated all Thorn LED products are suitable for unrestricted use (rated RG0 or RG1) with regard photobiological blue light safety (IEC/EN60598-1).

WeatherForce

96539545 WF LED 4800-840 L12 HF



	C 0	C90	C180	C270
0°	275	275	275	275
5°	280	273	280	273
10°	279	268	279	268
15°	282	258	282	258
20°	276	246	276	246
25°	271	230	271	230
30°	258	216	258	216
35°	248	196	248	196
40°	237	174	237	174
45°	228	151	228	151
50°	216	127	216	127
55°	202	104	202	104
60°	183	80	183	80
65°	162	58	162	58
70°	142	38	142	38
75°	121	23	121	23
80°	97	13	97	13
85°	79	8	79	8
90°	70	6	70	6
95°	59	6	59	6
100°	52	5	52	5
105°	41	4	41	4
110°	30	3	30	3
115°	19	2	19	2
120°	6	1	6	1
125°	5	1	5	1
130°	4	1	4	1
135°	4	1	4	1
140°	2	1	2	1
145°	2	1	2	1
150°	2	1	2	1
155°	2	1	2	1
160°	2	1	2	1
165°	1	1	1	1
170°	2	1	2	1
175°	2	1	2	1
180°	2	2	2	2

Light output ratio	
LOR	100 %
ULOR	8 %
DLOR	92 %
FFR	0.09 (8:92)
BLF	1.00

Glare Evaluation	
X = 4 H, Y = 8 H	S = 1.00 H
Reflection factors	70/50/20
UGR transversal	25
UGR axial	19
according to AS1680.1	

Classification	
LiTG	A31
EN	
BZ	BZ5
UTE	0.92 G + 0.08 T
CIE Flux Codes	41 70 90 92 100

Utilization Factors

Room Reflectance Ceiling/Walls/Floor	Room Index 0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
70 / 50 / 20	54	62	69	74	82	87	90	95	98
70 / 30 / 20	46	54	62	67	75	80	84	90	94
70 / 10 / 20	41	48	55	61	69	75	79	86	90
50 / 50 / 20	52	59	66	71	77	82	85	90	92
50 / 30 / 20	45	52	59	64	72	77	80	85	89
50 / 10 / 20	40	47	54	59	67	72	76	82	86
30 / 50 / 20	50	56	63	67	73	77	80	84	87
30 / 30 / 20	44	50	57	62	68	73	77	81	84
30 / 10 / 20	39	46	52	57	64	69	73	78	82
0 / 0 / 0	36	42	49	53	60	64	68	72	75

According to CIBSE Technical Memorandum No. 5 1980

SHR Nom = 1.50
SHR Max = 1.70
SHR Max TR = 2.09

Photometric data file: TLAU_96539545.ldt

Porto LED

96542308 PORTO LED 20W HF L840 GR

LED 20W LED_717	AS/NZS 60598	IP 54			T_a25	

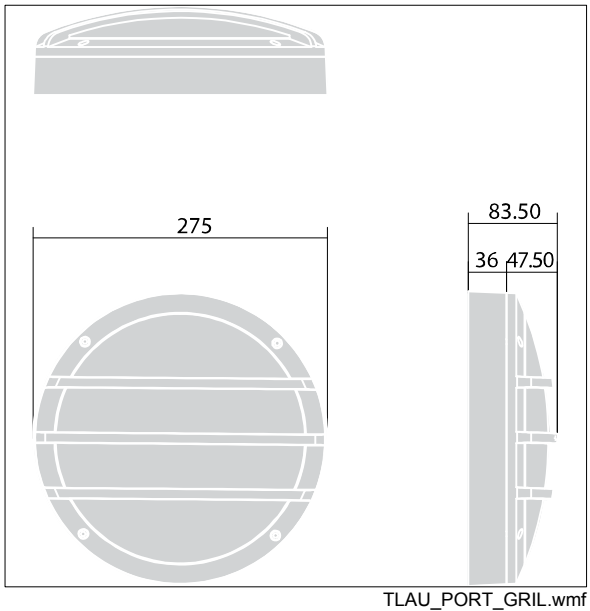
Porto LED

An eco-friendly LED surface mounted luminaire with grille Electronic, fixed output control gear. Body:die-cast aluminium painted black. Reflector: Polyethylene Terephthalate (PET). Diffuser: opal polycarbonate. Class I electrical. IP54. Electrical connection via 3 x 1mm² terminal block. Complete with 4000K LED.

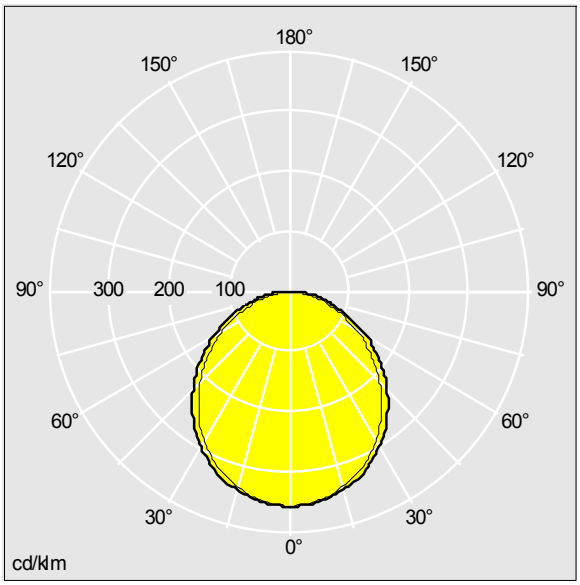
Dimensions: Ø275 x 75 mm
Total power: 20 W
Weight: 1 kg

C

TLA_PORT_F_GRILL.jpg



TLAU_PORT_GRIL.wmf



TLAU_96542308.ldt

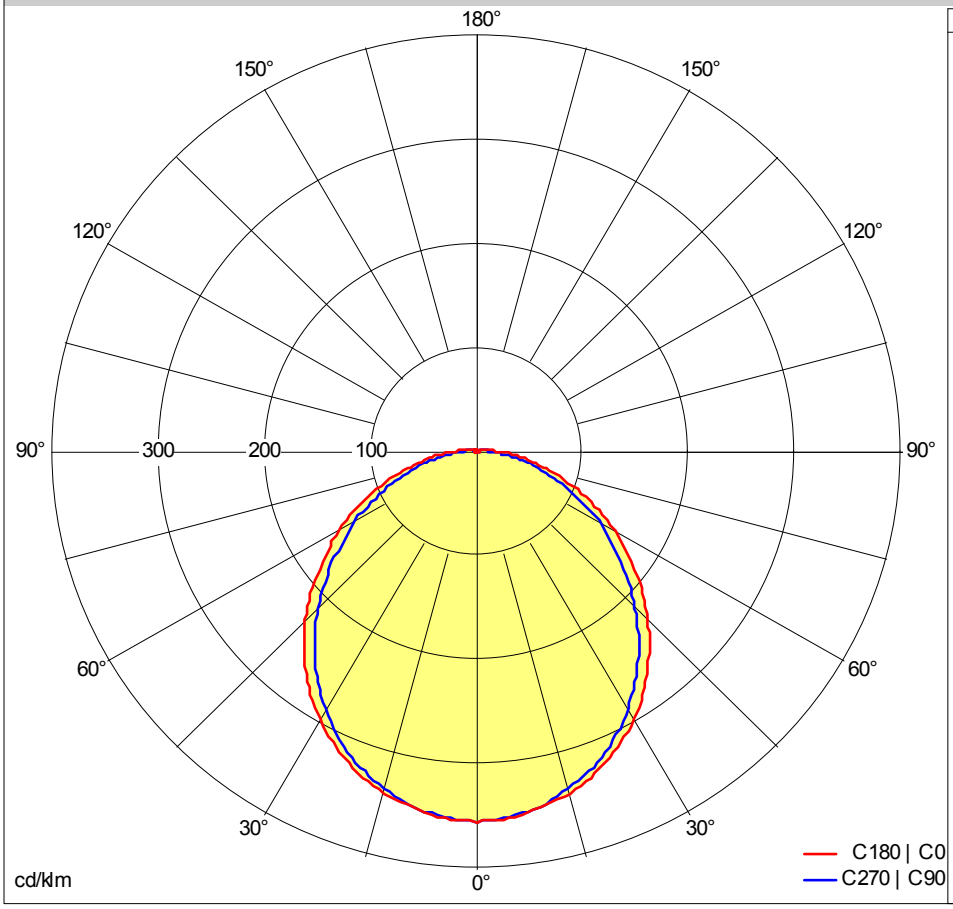
Lamp position: STD - standard
Light Source: LED
Luminaire luminous flux*: 716 lm
Luminaire efficacy*: 36 lm/W
Lamp efficacy: 36 lm/W
Colour Rendering Index min.: 80

Correlated colour temperature*: 4000 Kelvin
Rated median useful life*:
40000h at 25°C
Ballast: 1x HF_
Luminaire input power*: 20 W Lambda = 0.9
Dimming: TLD0
LOR: 1,00 ULOR: 0,02 DLOR: 0,97

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated instances of technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connected load at ±10%. Colour temperature is subject to a tolerance of up to +/-150 Kelvin from the nominal value. Unless stated otherwise, the values apply to an ambient temperature of 25°C.
In most products the failure of one LED point causes no functional impairment to the lighting performance of the luminaire and is therefore no reason for complaint. Unless otherwise stated all Thorn LED products are suitable for unrestricted use (rated RG0 or RG1) with regard photobiological blue light safety (IEC/EN60598-1).

Porto LED

96542308 PORTO LED 20W HF L840 GR



	C 0	C90	C180	C270
0°	354	354	354	354
5°	352	350	352	350
10°	346	345	346	345
15°	338	334	338	334
20°	327	321	327	321
25°	313	304	313	304
30°	295	284	295	284
35°	276	262	276	262
40°	252	237	252	237
45°	228	211	228	211
50°	202	184	202	184
55°	175	156	175	156
60°	150	132	150	132
65°	123	104	123	104
70°	96	81	96	81
75°	72	59	72	59
80°	53	41	53	41
85°	36	24	36	24
90°	23	15	23	15
95°	13	10	13	10
100°	8	6	8	6
105°	4	3	4	3
110°	3	1	3	1
115°	1	1	1	1
120°	1	1	1	1
125°	1	1	1	1
130°	1	1	1	1
135°	1	1	1	1
140°	1	1	1	1
145°	1	1	1	1
150°	1	1	1	1
155°	2	2	2	2
160°	3	2	3	2
165°	2	2	2	2
170°	3	2	3	2
175°	3	1	3	1
180°	1	1	1	1

Light output ratio

LOR	100 %
ULOR	3 %
DLOR	97 %
FFR	0.03 (3:97)
BLF	1.00

Glare Evaluation

X = 4 H, Y = 8 H	S = 1.00 H
Reflection factors	70/50/20
UGR transversal	22
UGR axial	19
according to AS1680.1	

Classification

LiTG	A41
EN	
BZ	BZ4/2.5/BZ5
UTE	0.97 D + 0.02 T
CIE Flux Codes	47 78 94 98 100

Utilization Factors

Room Reflectance Ceiling/Walls/Floor	Room Index 0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
70 / 50 / 20	60	68	75	80	87	91	95	99	102
70 / 30 / 20	52	60	68	73	81	86	90	95	98
70 / 10 / 20	47	55	62	68	76	81	85	91	95
50 / 50 / 20	58	65	72	77	83	88	91	95	97
50 / 30 / 20	51	59	66	71	78	83	86	91	94
50 / 10 / 20	46	54	61	66	74	79	83	88	92
30 / 50 / 20	56	63	70	74	80	84	87	91	93
30 / 30 / 20	50	58	64	69	76	80	83	88	91
30 / 10 / 20	46	53	60	65	72	77	81	85	88
0 / 0 / 0	44	50	57	62	68	73	76	80	83

According to CIBSE Technical Memorandum No. 5 1980

SHR Nom = 1.50
SHR Max = 1.56
SHR Max TR = 1.76

Photometric data file: TLAU_96542308.ldt

Olsys Area

96274083 OLSYS1 20L70-730 A/S CL2

LED 47W OSYR_20L70_AS_3K	IP66	IK08			T_a50	

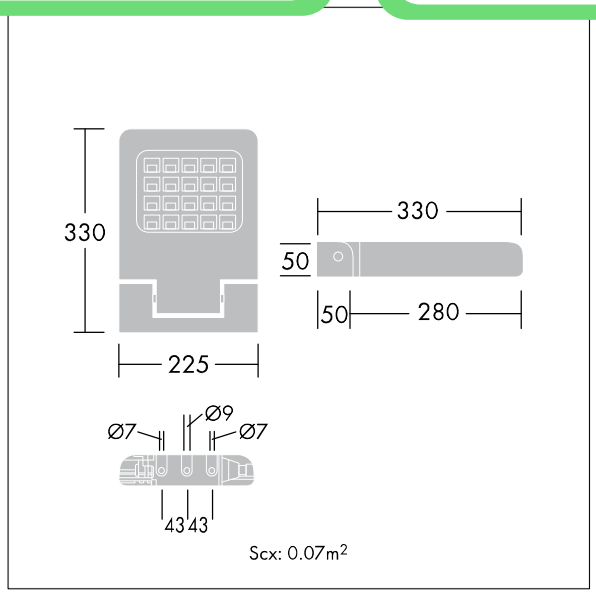
Olsys Area

An LED floodlight with asymmetric distribution for area lighting applications. Electronic,. Class II electrical, IP66, IK08. Body: die-cast aluminium (AS9U), powder coated silver-grey (RAL 9006). Enclosure: clear polycarbonate. Optics: polycarbonate. Supplied in one box, ready to install. Mounting attachments to be ordered separately. Complete with 3000K LED

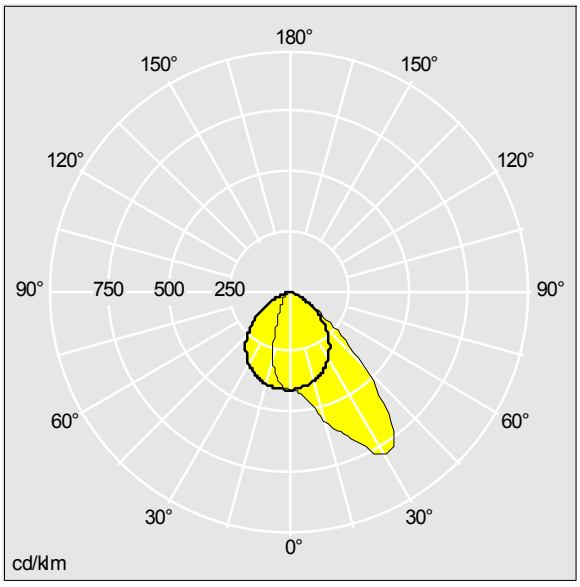
Dimensions: 330 x 225 x 59 mm
Total power: 47 W
Weight: 2.8 kg
Scx: 0.07 m²

D E

TLG_OSYS_F_1ASPDB.jpg



TLG_OSYS_M_AREA1.wmf



TLLA_OLSYS_1AREA_AS_XPG2_20_led_GLD0757_3K.ldt

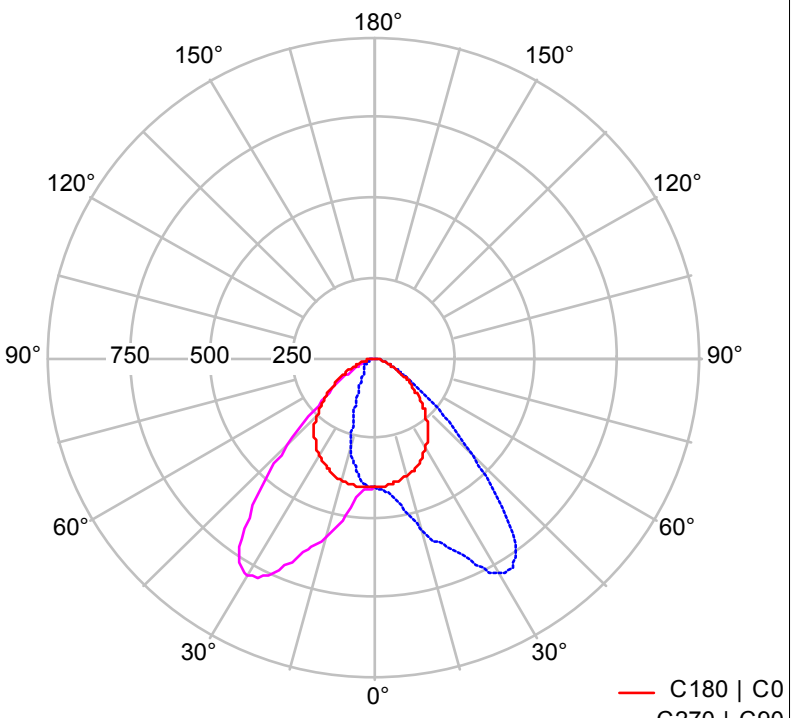
Lamp position: STD - standard
Light Source: LED
Luminaire luminous flux*: 4183 lm
Luminaire efficacy*: 89 lm/W
Lamp efficacy: 89 lm/W

Correlated colour temperature*: 3000 Kelvin
Rated median useful life*:
50000h L90 at 25°C
Ballast: 1x EL2
Luminaire input power*: 47 W
LOR: 1,00 ULOR: 0,00 DLOR: 1,00

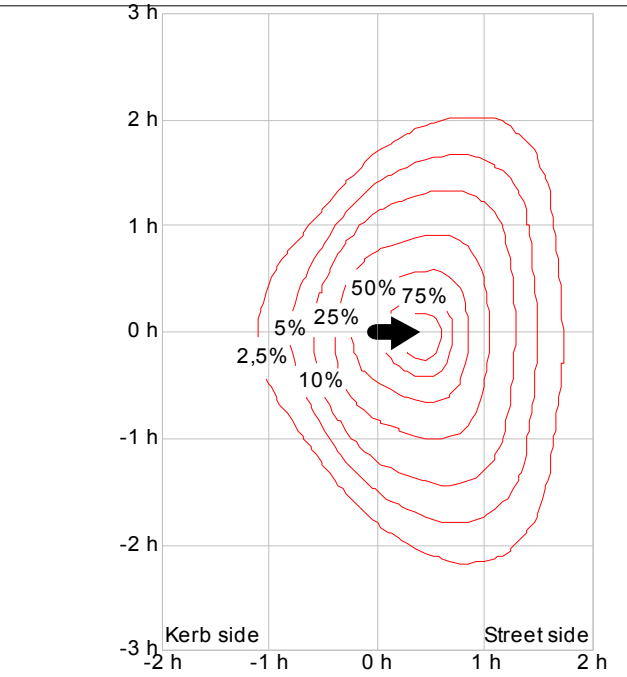
All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated instances of technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connected load at ±10%. Colour temperature is subject to a tolerance of up to +/-150 Kelvin from the nominal value. Unless stated otherwise, the values apply to an ambient temperature of 25°C.
In most products the failure of one LED point causes no functional impairment to the lighting performance of the luminaire and is therefore no reason for complaint. Unless otherwise stated all Thorn LED products are suitable for unrestricted use (rated RG0 or RG1) with regard photobiological blue light safety (IEC/EN60598-1).

Olsys Area

96274083 OLSYS1 20L70-730 A/S CL2



Measurement	GLD0757
Catalogue number	OLSYS 1 AS XPG2 AREA 3K
Lamps	1 x OPTICS ASY 47W 3K
Lamp adjustment	
IP	

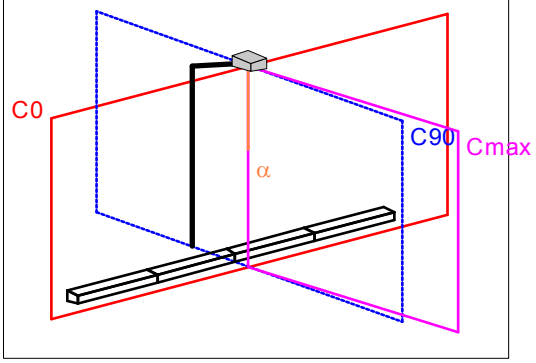


$$E\,(lux) = \frac{Emax \times E\% \times F}{h^2 \times 1000}$$

Emax = 519,2 / m / klm
luminous flux for the chosen lamp (lm)
Mounting height (m)

Luminaire design attitude

Tilt: α = 0.0 °



Maximum intensity

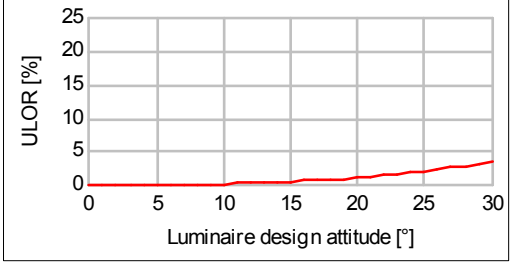
Imax	779 cd/klm
Cmax	95 °
γ max	30 °

Light Output Ratio

Luminaire design attitude	0.0 °
LOR	100.00
ULOR	0.00
DLOR	100.00

Upward light output ratio

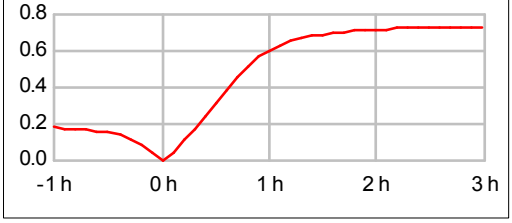
3% for a tilt = 28°	5% for a tilt = 33°
10% for a tilt = 41°	15% for a tilt = 46°
20% for a tilt = 49°	25% for a tilt = 53°



Utilization Factors

0.5H = 0.32 1H = 0.60 2H = 0.72

Kerb side Street side



Glare restriction Obtrusive light

Luminous intensity class G5

γ	Meas. Data Imax in cd/klm	Specified in EN 13201-2
70 °	193	350
80 °	64	100
90 °	1	10
>95 °	0	0

Photometric data file: TLLA_OLSYS_1AREA_AS_XPG2_20_led_GLD0757_3K.ldt