

SPECIAL PROJECT LUMINAIRES

Custom Made TCS429

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Non Stock

Special versions of standard stock luminaire types can be supplied to special order.

Typical deviations from standard include variations in:—

Operating voltage e.g. 220V

Operating frequency e.g. 60Hz

Light regulation (Dimmable) Control Gear

Special fixing arrangements

Electrical connections (e.g. large terminal blocks, flying leads etc.).

A guide to MINIMUM order quantities follows, but availability depends on technical feasibility and production economics. Enquiries to your local Lighting Sales Desk

Description	M.O.Q.
Streamlite	500
Feature	250
Featureline Trunking	100
Featureline Luminaires	200
Finesse	250
Polyprism	250
Planner	100
TCS429 Mirror Luminaires	100
Modifications to all Philips standard luminaires are possible subject to the above conditions. Please enquire.	

Custom Made

A number of High Output optical systems have been designed to fit into custom made metal work to suit a particular installation.

Types available are:—

Description	M.O.Q.
TZR: High Intensity Low Brightness	100
TCS: Batwing Mirror System	100
CRYSTAL LOUVRE: Air Handling	
Prismatic Louvres	100

Special Design

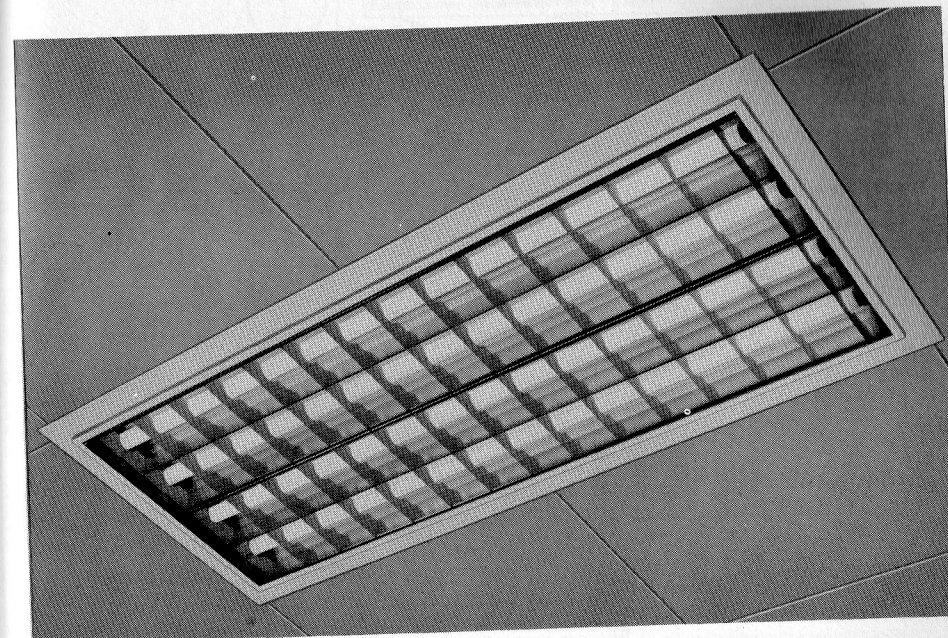
Individual designs to Customer's own needs and specifications can be undertaken subject to M.O.Q. of 200.

CI/SIB	(63.1)
UDC	696.6:628.972

TCS 429

Custom-made product -
built to special order

3



Recessed fluorescent luminaires with WideSpread TCS 429 mirror reflectors and, when required, integral facilities for airhandling.

An advanced range of recessed luminaires which combine high LOR with low brightness. Mirror reflectors spread the light to permit extended transverse spacing between luminaires. Installed as single luminaires or in continuous lines with infill spacer boxes for use between the luminaires to carry services such as ventilation, sound, standby lighting, fire detection and control, and time indication.

RANGE

Made in one, two, three and four lamp versions, in ratings of 40W 1200mm (4ft), 65W 1500mm (5ft), 85W 1800mm (6ft), 85W 2400mm (8ft) and 125W 2400mm (8ft). Luminaires are supplied complete with mirror controllers and associated control gear.

Spacer boxes are supplied with optional air extract grille or air diffuser panels, straight or right-angle stub duct attachments and cover blanking plates. An end plate for end-of-run or island luminaire use is available.

APPLICATIONS

For use wherever a recessed luminaire with low glare, WideSpread light distribution and optional air handling facility is appropriate, in situations such as:-

- Offices
- Shops and department stores
- Banking halls
- Showrooms
- Laboratories
- Assembly and lecture areas

Handbook Ref.	1.3.1
To reorder this data sheet quote	5.78 PL1786
Replaces	NEW

SPECIAL PROJECT LUMINAIRES

FEATURES

- Fully recessed into ceiling to give clean, uncluttered appearance.
- Aluminium mirror reflector system, specially designed to spread the light without glare, gives comfortable seeing conditions and permits the use of fewer luminaires, giving considerable savings in installation, maintenance and running costs.

- Air extract spigots or slots for air handling with positive or negative pressure plenum systems; keep lamps and control gear cool for efficient operation.
- Infill spacer boxes permit simple installation of services such as ventilation, sound, standby lighting, fire detection and control, and time indication.

- Separate circuits on three- and five-lamp versions permit different levels of lighting to be selected according to circumstances.
- Luminaires are tailor-made to suit ceiling detail.

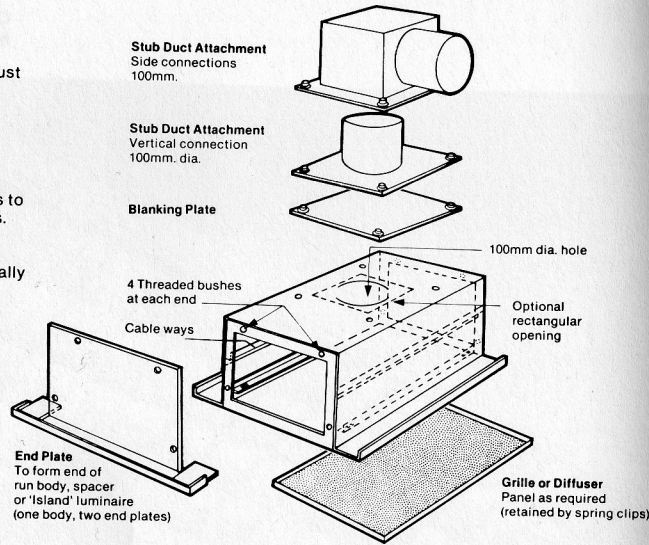
Dimensions

SPACER BOXES

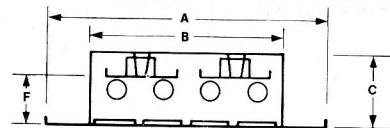
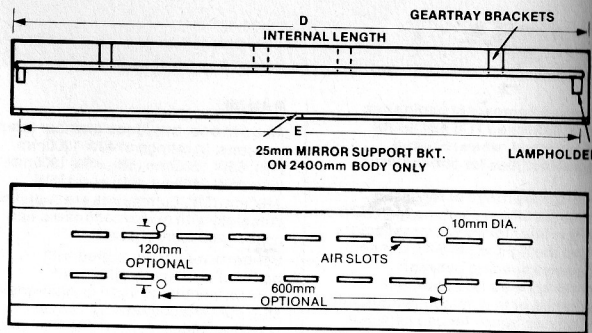
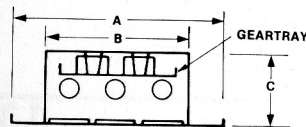
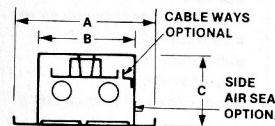
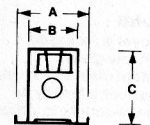
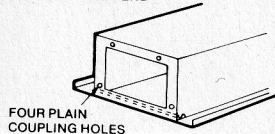
- Arranged for:
- Air Supply or Exhaust
 - Sound Equipment
 - Smoke Detection
 - Standby Lighting
 - Time Indication
 - Sprinklers

Sectional Dimensions to suit Luminaire Bodies.

Lengths to suit run dimensions but basically in units of 300mm.



DETAIL OF BODY END

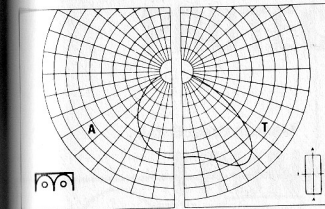


PHOTOMETRIC DATA

Since this product is built to customer's specification, the data given below is representative only and does not allow for air handling slots, or other design variations peculiar to an installation.

TCS 429 WIDE SPREAD

TWO LAMP REFLECTOR	TCS 429 265S
Mounting: CEILING	



CIE Flux Number 366169

SHR MAX	(Square)	1.50
SHR MAX TR	(Transverse)	2.25

ULORL	.00	Multiply by each Service Correction Factor
DLORL	.70	
LORL	.70	

Glare Data (IES)

Flux Fraction Ratio	0
ACG Classification	ACG6 BZ3
For RI = 2.5 at SHR = NOM	
Luminous Area (sq cm)	
65W	
4050	

Measured: BS 5225 Part 1 1975 Calculated: I.E.S. TR 2 and TR 10 Test No: A764 Dated: 77.05.18

Photoset direct from Photometer tape output.

DIMENSIONS & WEIGHTS

Rating	Dimensions (mm)						Weight with lamps (kg)
	A	B	C	D	E	F	
1 x 40W 1200mm (4ft)	225	127	145	1285	1234	75	10.4
2 x 40W 1200mm (4ft)	380	283	145	1285	1234	75	13.6
3 x 40W 1200mm (4ft)	540	439	145	1285	1234	75	18.3
4 x 40W 1200mm (4ft)	695	596	145	1285	1234	75	23.7
1 x 65W 1500mm (5ft)	225	127	145	1595	1543	75	11.7
2 x 65W 1500mm (5ft)	380	283	145	1595	1543	75	15.4
3 x 65W 1500mm (5ft)	540	439	145	1595	1543	75	20.8
4 x 65W 1500mm (5ft)	695	596	145	1595	1543	75	27.2
1 x 85W 1800mm (6ft)	225	127	145	1797	1767	75	13.1
2 x 85W 1800mm (6ft)	380	283	145	1797	1767	75	17.6
3 x 85W 1800mm (6ft)	540	439	145	1797	1767	75	23.8
4 x 85W 1800mm (6ft)	695	596	145	1797	1767	75	31.1
1 x 85 or 125W 2400mm (8ft)	225	127	145	2545	2493	75	24.5
2 x 85 or 125W 2400mm (8ft)	380	283	145	2545	2493	75	27.9
3 x 85 or 125W 2400mm (8ft)	540	439	145	2545	2493	75	32.9
4 x 85 or 125W 2400mm (8ft)	695	596	145	2545	2493	75	36.3

Note:—The Philips TCS429 system is supplied custom-made for each installation. The dimensions above are given for guidance only, and it is necessary for customers to specify exact dimensions at the time of ordering.

RANGE OF OPERATION

240V 50Hz, normal indoor conditions.
Other voltages and frequencies to order.

Service Correction Factors

	65W 1500mm		
Rating Factor	1.00		
Amalgam Factor	1.04		
Ballast Lumen Factor SS	0.99		
Ballast Lumen Factor XS	0.95		

Utilization Factors UF (F)

Room Reflectances		Room Index									
C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
70	50	10	43	48	53	56	61	63	65	67	69
	30		39	44	49	53	58	61	63	65	68
	10		35	41	46	50	55	58	61	64	66
50	50	10	42	47	52	55	59	62	64	66	68
	30		38	44	49	52	57	60	62	64	67
	10		35	41	46	50	54	58	60	63	65
30	50	10	41	46	51	54	58	61	62	64	66
	30		38	43	48	51	56	59	61	63	65
	10		35	40	46	49	54	57	59	62	64
0	0	0	34	39	44	48	52	55	57	60	63

Utilization Factors UF (F)

Room Reflectances		Room Index									
C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
70	50	10	-	-	56	59	62	65	66	68	69
	30		-	-	52	55	60	62	64	67	68
	10		-	-	49	53	57	60	62	65	67
50	50	10	-	-	56	57	61	63	65	67	68
	30		-	-	52	55	59	61	63	65	67
	10		-	-	49	52	57	60	61	64	66
30	50	10	-	-	54	56	60	62	64	65	67
	30		-	-	51	54	58	60	62	64	66
	10		-	-	49	52	56	59	61	63	65
0	0	0	-	-	47	51	55	57	59	61	63

SPECIFICATION

■ Type compliance with BS 4533 2.2 Ordinary Indoor Class I.

To specify state:
Recessed luminaire for 1 (2) (3) (4) fluorescent lamp(s), with mirror reflector. To have an LOR of at least 0.70, to be suitable for an SHR (transverse) of at least 2.0, and to have 'batwing' light distribution. Substantially as Philips TCS 429.

MATERIALS & FINISH

Mirror reflector: Aluminium alloy with semi-specular reflecting finish; white painted aluminium cross louvres.

Luminaire bodies: Sheet steel, white stove enamel (other colours and finishes are available to order).

ELECTRICAL DATA

Gear tray capacity	Circuit	Typical electrical characteristics		
		Circuit Watts Running	Circuit Current Amperes	Minimum Power Factor
1 x 40W 1200mm (4ft)	Switchstart	51	0.23	0.85
2 x 40W 1200mm (4ft)	Switchstart	103	0.46	0.85
1 x 65W 1500mm (5ft)	Switchstart	77	0.34	0.85
2 x 65W 1500mm (5ft)	Switchstart	154	0.68	0.85
1 x 85W 1800mm (6ft)	Starterless	96	0.46	0.90
2 x 85W 1800mm (6ft)	Starterless	192	0.92	0.90
1 x 85W 2400mm (8ft)	Starterless	102	0.46	0.90
2 x 85W 2400mm (8ft)	Starterless	204	0.92	0.90
1 x 125W 2400mm (8ft)	Starterless	152	0.65	0.90
2 x 125W 2400mm (8ft)	Starterless	304	1.30	0.90

Notes:

Luminaires with three or four lampways carry two gear trays that can be independently switched.

On a balanced 3-phase, 4-wire supply, the current in the neutral conductor does not exceed 3 x 25% of that in any line conductor.

All information quoted relates to average luminaires on a 240V 50Hz supply at 25°C.

ORDERING DATA

Since Philips custom-made products are built to individual requirements, no stock is held and details such as product dimensions are finalised before manufacture. Enquiries for custom-made products should be directed to the Special Products Division, at the address on this leaflet.

Made in Great Britain.

- C = Control Gear
- L = Fluorescent Lamp
- M = Mirror System
- H = Housing
- S = Air Extract Spigot

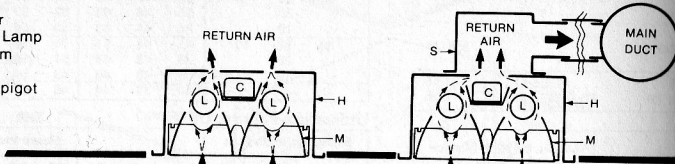


Diagram 1: showing movement of return air through the Luminaire to a negative pressure plenum.

Diagram 2: showing movement of return air through the Luminaire to be extracted by ducts in a positive pressure plenum system.

Note: Luminaire and duct should be insulated.

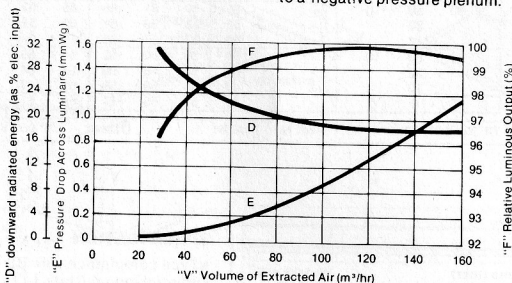


Diagram 3: Air Handling Characteristics Calorimetric Performance (Typical)

Performance shown in diagram is for typical twin fittings — for others use factors shown below:—

- 1 LAMP Ex0.5 Dx1.0 Fx1.0 Vx0.5
- 2 LAMP Ex1.0 Dx1.0 Fx1.0 Vx1.0
- 3 LAMP Ex1.5 Dx1.0 Fx1.0 Vx1.5
- 4 LAMP Ex2.0 Dx1.0 Fx1.0 Vx2.0

Diagram 4: luminous flux as a function of the ambient air temperature around fluorescent lamps.

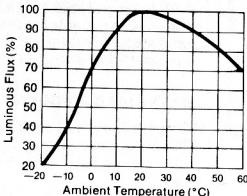


Diagram 5: Noise Level Characteristics

- A. Admissible Noise Level for Landscaped Offices.
- B. Admissible Noise Level for Cellular Offices.
- C. Typical Noise Curve for Philips Low Brightness Air Handling Luminaire.

